How to Use this Document

The 8A3xxxx Family Programming Guide contains information on how to access internal registers and what those registers do in detail for all devices in the 8A3xxxx family. Not all devices in the family support all the same features or quantities of logic blocks, however the register blocks all behave and are addressed at the same locations in all device. Some devices will not make use of all register blocks since the associated feature or block of circuitry may not be available in that particular device. A Programming Guide Addendum for each specific device will indicate which register modules are support in that device.

In addition, there are several other pieces of documentation that describe specific functions or details for the family or individual devices. Table 1 shows related documents.

Table 1: Related Documentation for Devices in the 8A3xxxx Family

Document Title	Document Description
<device name> Datasheet	Contains a functional overview of the device and hardware-design related details including pinouts, AC & DC specifications and applications information related to power filtering and terminations.
<device name>-<dash code> Datasheet Addendum	Indicates pre-programmed power-up / reset configurations of this specific 'dash code' part number
8A3xxxx Family Programming Guide (v5.3)	Contains detailed register descriptions and address maps for all members of the family of devices. Please check the <device name> datasheet to check the version used by that device. All devices that use this version number use some subset of this register map, as indicated in their device-specific Programming Guide Addendum document..
Evaluation Board Reference Manual	Describes the Evaluation Board. Evaluation boards are available for the 8A34001 (144BGA) or 8A34002 (72QFN) devices. These devices contain a superset of the functionality available in all other members of the 8A3xxxx Family. So they can serve as evaluation tools for any of the less fully-featured family members.
Timing Commander Personality User Manual	Detailed description of how to use IDT's Timing Commander configuration tool. At this time, a personality file is only available for 8A34001. This personality contains a superset of the functionality available in all other members of the 8A3xxxx family. Since all members of the 8A3xxxx family share register locations and resource numbering, configurations generated using the 8A34001 personality can be used in any member of the 8A3xxxx family. Functionality that is not available on the other family members will of course not respond to any configuration of it that is made.

This document discusses the registers supported by a particular version of the Firmware (FW) running on the internal micro-controller within the 8A3xxxx family of devices. Register maps may change between major releases of the FW, so please check the Revision History section of this document to ensure this document aligns with the FW revision being used on the device. FW version numbering follows the format:

v<major release number>.<minor release number>.<hotfix number>

This document is divided into several sections:

- Introduction (this section) - describes documentation structure for the 8A3xxxx
- Serial Port Overview - repeating selected information from the 8A3xxxx Datasheet to discuss how the serial ports function, overall device memory map and register addresses
- I2C Slave Operation - discusses register accessing topics related to I^2C operation on a serial port
- SPI Operation - discusses register accessing topics related to SPI operation on a serial port
- Register Table Overview - discusses register table format and abbreviations
- Register Set Descriptions - describes a set of registers that is made available for users to quickly and simply access the commonly-used features of the 8A3xxxx.
- Revision History
- IDT Contact information

Serial Port Overview

The 8A3xxxx family supports up to three serial ports. One is a dedicated I²C Master port used for loading configuration data at reset, and the other two are configurable slave I²C or SPI ports that can be used at any time after the reset sequence has completed to monitor and/or configure the device. In some variants of the device, the I²C Master port share pins with an I²C slave port.

Operation of the I²C Master Port is only used by the device to access an external serial EEPROM and so this is not relevant to device programming.

Two slave ports have been provided to allow independent access to any of the device's internal registers. This allows high-priority accesses not to be queued behind lower priority ones on a shared external serial interface. Note that internal to the device, both slave serial ports access a single instance of each register over a shared internal bus. The device ensures that a burst access on one bus will complete atomically once begun, before the other port can gain access to the shared internal bus or registers. However it does not guarantee the order in which the two serial ports will be granted access to any shared resource.

Please refer to the appropriate section below for details on the operation of the slave I²C or SPI ports.

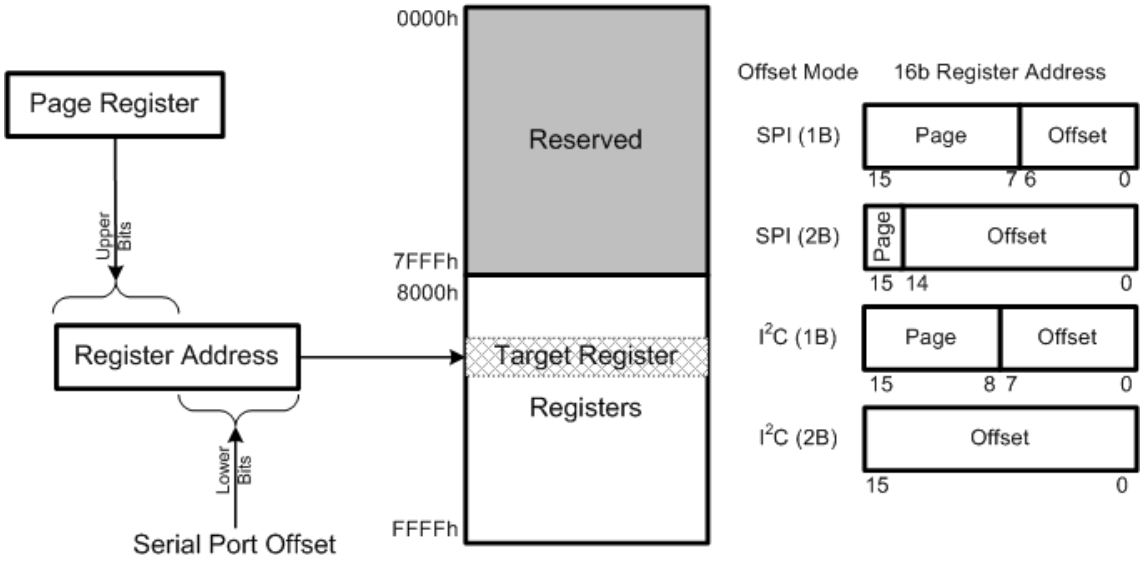
Either slave port can be reconfigured over either serial port at any time by accessing the appropriate registers. This includes both configuration options with each protocol or switching between protocols (I²C to SPI or vice versa). However it is recommended that the full operating mode configuration, including page sizes for registers, for each serial port be set in the initial configuration data read from OTP or external EEPROM (see Device Initial Configuration in the 8A3xxxx Datasheet for details).

Addressing Registers within a Device

The address space that is externally accessible within the device is 64k bytes in size, and therefore needs 16-bits of address offset information to be provided during slave serial port accesses. Of that 64k bytes, only the upper 32k bytes contains user accessible registers.

The user may choose to operate either serial port providing the full offset address within each burst, or to operate in a paged mode where part of the address offset is provided in each transaction and the other part comes from an internal page register in each serial port. The decision may be made independently on each slave serial port and each slave serial port has its own page register to avoid conflicts. Figure 1 shows how page register and offset bytes from each serial transaction interact to address a register within the 8A3xxxx.

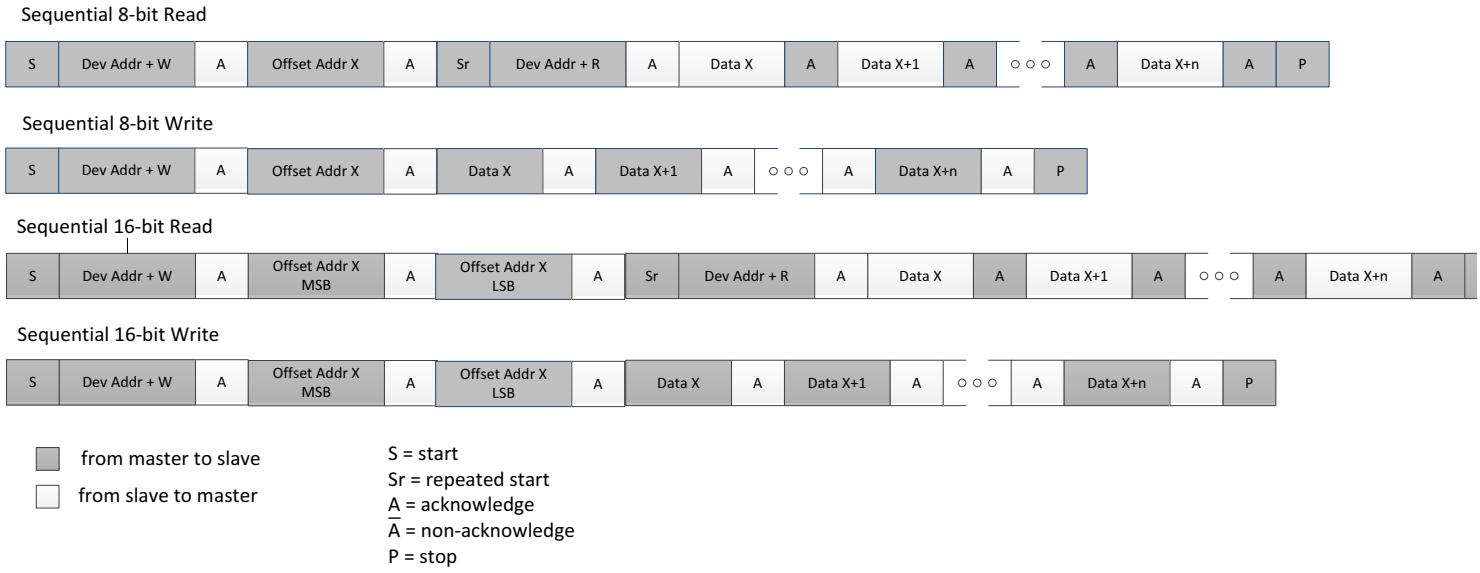
Figure 1: Register Addressing Modes via Serial Port



I²C Slave Operation

The I²C slave protocol of the 8A3xxx family complies with Version 2.1 of the I²C specification. Figure 2 shows the sequence of states on the I²C SDATA signal for the supported modes of operation.

Figure 2: I²C Slave Sequencing Diagram



The Dev Addr shown in the figure represents the base address of the 8A3xxxx device. This 7-bit value can be set in an internal register which can have a user-defined value loaded at reset from internal OTP memory or an external EEPROM. The default value if those methods are not used is 1011000b (binary). Note that the levels on the S_A0 and S_A1 inputs can be used to control Bit 0 and Bit 1 (respectively) of this address. These pins are available independently for each serial port. In I²C operation these inputs are expected to remain static. They have different functions when the part is in SPI mode. The resulting base address is the I²C bus address that this device will respond to. The default address may be overwritten at any time.

When I²C operation is selected for either slave serial port, selection of 1-byte (1B) or 2-byte (2B) offset addressing must also be selected independently for each slave serial port. These offsets are used in conjunction with the page register for each serial port to access registers internal to the device. Because the I²C protocol already includes a read/write bit with the Dev Addr, all bits of the 1B or 2B offset field can be used to address internal registers.

- In 1B mode, the lower 8 bits of the register offset address come from the Offset Addr byte and the upper 8 bits come from the page register (see Table 2 for description of the 8-bit I²C Page Register).
  The page register can be accessed at any time, no matter what page the serial port is currently on, using an offset byte value of FCh. This 4-byte register must be written in a single burst write transaction. The page register is replicated on every register page to always be accessible.
- In 2B mode, the full 16-bit register address can be obtained from the Offset Addr bytes, so the page register only needs to be set once after reset using a 3-byte burst access starting from address FFFDh (see Table 3 for description of the 16-bit I²C Page Register).

Table 2: I²C 1B Mode Page Register Bit Field Locations and Descriptions

Offset Address (Hex)	I²C 1B Mode Page Register Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
FC	PAGE_ADDR[7:0]							
FD	PAGE_ADDR[15:8]							
FE	PAGE_ADDR[23:16]							
FF	PAGE_ADDR[31:24]							

I²C 1B Mode Page Register Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAGE_ADDR[7:0]	R/W	00h	The values in this field are always replaced by the bits in I²C transaction itself and so have no meaning.
PAGE_ADDR[15:8]	R/W	00h	Select which register page to access. Forms the upper 8-bits of the 16-bit register address. Only values of 80h or higher should be used. Lower addresses are not user-accessible
PAGE_ADDR[23:16]	R/W	10h	Must be set to 10h in all cases
PAGE_ADDR[31:24]	R/W	20h	Must be set to 20h in all cases

Table 3: I²C 2B Mode Page Register Bit Field Locations and Descriptions

Offset Address (Hex)	I²C 2B Mode Page Register Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
FFFD[1]	PAGE_ADDR[15:8]							
FFFE	PAGE_ADDR[23:16]							
FFFF	PAGE_ADDR[31:24]							

1. Burst access must begin at this non-aligned offset and all 3 bytes must be written in the same I²C burst access. A burst beginning at the 32-bit aligned address of FFFCh will not correctly set this register.

I²C 2B Mode Page Register Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAGE_ADDR[15:8]	R/W	00h	The values in this field are always replaced by the bits in I²C transaction itself and so have no meaning.
PAGE_ADDR[23:16]	R/W	10h	Must be set to 10h in all cases
PAGE_ADDR[31:24]	R/W	20h	Must be set to 20h in all cases

I²C burst mode operation is required to ensure data integrity of multi-byte registers. When accessing a multi-byte register, all data bytes must be written or read in a single I²C burst access. Bursts may be of greater length if desired, but must not extend beyond the end of the register page (Offset Addr FFh in 1B mode, no limit in 2B mode). An internal address pointer is incremented automatically as each data byte is written or read.

²C 1-byte (1B) Addressing Examples

8A3xxxx I²C 7-bit I²C address is 0x5B with LSB=R/W

Example Write “0x50” to register 0xCBE4

```
B6* FC 00 CB 10 20      #Set Page Register, *I²C Address is left-shifted one bit.
B6 E4 50                #Write data 5B to CB E4
```

Example read from register 0xC024

B6* FC 00 C0 10 20	#Set Page Register, *I2C Address is left-shifted one bit.
B6 24*	#Set I2C pointer to 0xC024, *I2C instruction should use “No Stop”
B7 <read back data>	#Send address with Read bit set.

I2C 2-byte (2B) Addressing

8A3xxxx I2C 7-bit I2C address is 0x5B with LSB=R/W

Example Write “50” to register 0xCBE4

B6* FF FD 00 10 20	#Set Page Register, *I2C Address is left-shifted one bit.
B6 CB E4 50	#Write data to CB E4

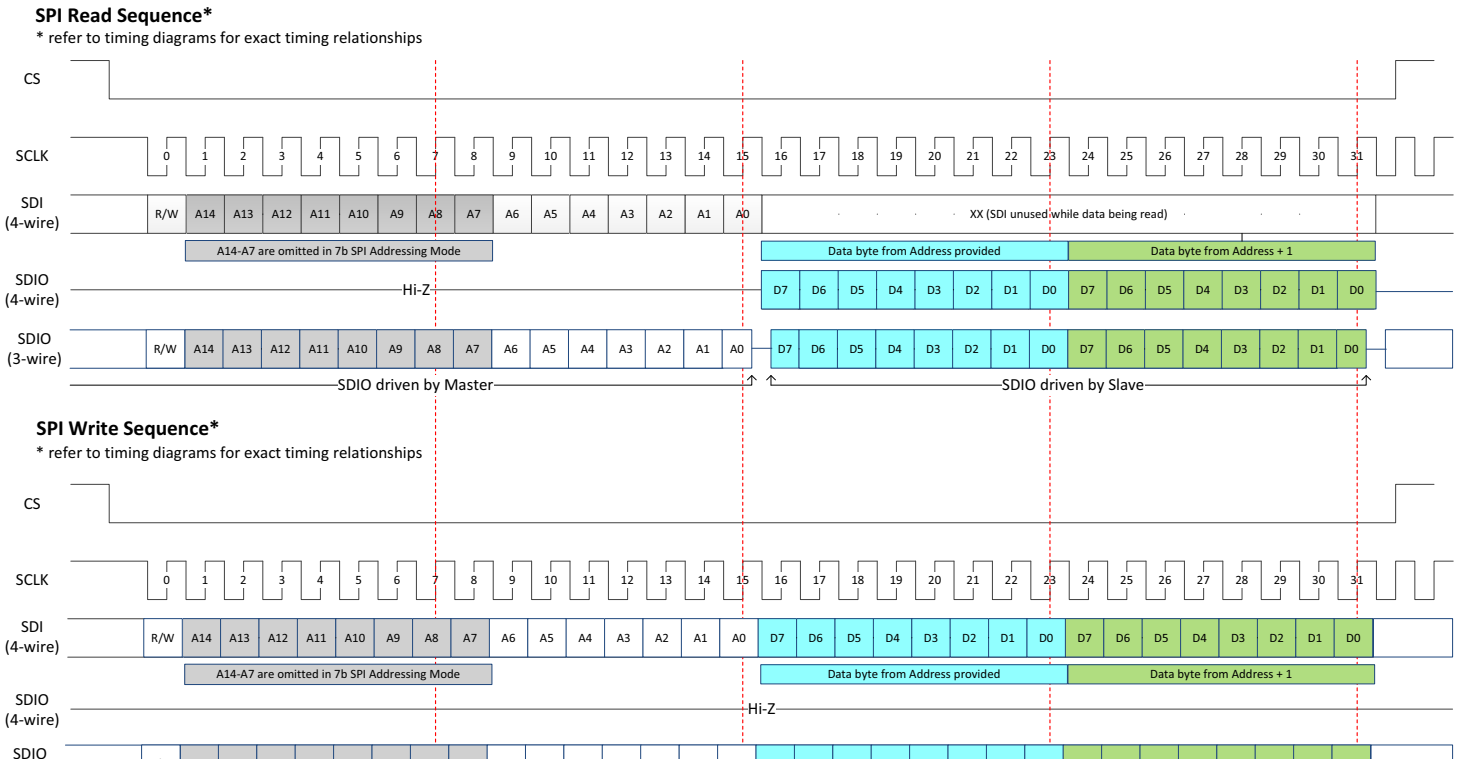
Example read from register 0xC024:

B6* FF FD 00 10 20	#Set Page Register (*I2C Address is left-shifted one bit.)
B6 C0 24*	#Set I2C pointer to 0xC024, *I2C instruction should use “No Stop”
B7 <read back data>	#Send address with Read bit set.

SPI Operation

The 8A3xxxx family of devices support SPI operation on their main and alternate serial ports. Figure 3 shows the sequencing of address and data on the serial port in SPI mode.

Figure 3: SPI Sequencing Diagram



Each serial port can be independently configured for the following settings. These settings can come from register defaults or from an internal OTP or external EEPROM configuration loaded at reset:

— 1-byte (1B) or 2-byte (2B) offset addressing (see Figure 1)

  - In 1B operation, the 16-bit register address is formed by using the 7 bits of address supplied in the SPI access and taking the upper 9 bits from the page register. The page register is accessed, no matter what page the serial port is currently on, using an Offset Address of 7Ch - 7Fh. It must be accessed in a single 4-byte burst write transaction. The page register is replicated on every register page to always be accessible.
  - In 2B operation, the 16-bit register address is formed by using the 15 bits of address supplied in the SPI access and taking the upper 1 bit from the page register. Note that this bit will always be '1' for register accesses, so the page register only needs to be set once in 2B operation. The page register can be accessed, no matter what page the serial port is currently on, using an Offset Address of 7FFDh - 7FFFh. It should be accessed in a single 3-byte burst write transaction to set it. The page register is replicated on every register page to always be accessible.
- Data sampling on falling or rising edge of SCLK
- Output (read) data positioning relative to active SCLK edge
- 4-wire (SCLK, SCSb, SDATA, SDO) or 3-wire (SCLK, SCSb, SDATA) operation
  - In 3-wire mode, SDATA is a bi-directional data pin.
- Output signal protocol compatibility / drive strength and termination voltage

Table 4: SPI 1B Mode Page Register Bit Field Locations and Descriptions

Offset Address (Hex)	SPI 1B Mode Page Register Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
7C	PAGE_ADDR [7]	PAGE_ADDR[6:0]						
7D	PAGE_ADDR[15:8]							
7E	PAGE_ADDR[23:16]							
7F	PAGE_ADDR[31:24]							

SPI 1BMode Page Register Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAGE_ADDR[6:0]	R/W	-	The values in this field are always replaced by the bits in SPI transaction itself and so have no meaning.
PAGE_ADDR[15:7]	R/W	000000000b	Select which register page to access. Forms the upper 9-bits of the 16-bit register address. Only values of 100000000b or higher should be used. Lower addresses are not user-accessible
PAGE_ADDR[23:16]	R/W	10h	Must be set to 10h in all cases
PAGE_ADDR[31:24]	R/W	20h	Must be set to 20h in all cases

Table 5: SPI 2B Mode Page Register Bit Field Locations and Descriptions

Offset Address (Hex)	SPI 2B Mode Page Register Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
7FFD[1]	PAGE_ADDR [15]	PAGE_ADDR[14:8]						
7FFE	PAGE_ADDR[23:16]							
7FFF	PAGE_ADDR[31:24]							

1. Burst access must begin at this non-aligned offset and all 3 bytes must be written in the same SPI burst access. A burst beginning at the 32-bit aligned address of 7FFCh will not correctly set this register.

SPI 2B Mode Page Register Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAGE_ADDR[14:8]	R/W	0000000b	The values in this field are always replaced by the bits in SPI transaction itself and so have no meaning.
PAGE_ADDR[15]	R/W	0b	Select which register page to access. Forms the most-significant bit of the 16-bit register address. Only a value of 1b should be used. Lower addresses are not user-accessible
PAGE_ADDR[23:16]	R/W	10h	Must be set to 10h in all cases
PAGE_ADDR[31:24]	R/W	20h	Must be set to 20h in all cases

SPI burst mode operation is required to ensure data integrity of multi-byte registers. When accessing a multi-byte register, all data bytes must be written or read in a single SPI burst access. Bursts may be of greater length if desired, but must not extend beyond the end of the register page. An internal address pointer is incremented automatically as each data byte is written or read.

SPI 1-byte (1B) Addressing Example

Example Write to “50” to register 0xCBE4

```
7C 80 CB 10 20          #Set Page register
64* 50                  #*MSB is 0 for write transactions
```

Example Read from 0xC024:

```
7C 00 C0 10 20          #Set Page register
A4* 00                  #*MSB is set, so this is a read command
```

SPI 2-byte (2B) Addressing Example

Example Write to “50” to register 0xCBE4

```
7F FD 80 10 20          #Set Page register
4B E4* 50               #*MSB is 0 for write transactions
```

Example Read from 0xC024:

```
7F FD 80 10 20          #Set Page register
C0* 24 00               #*MSB is set, so this is a read command
```

Register Table Overview

When programming an 8A3xxxx family device, it is necessary to read or write values to one or more *bit-fields* within the device. A bit-field provides status and/or control information on a single aspect of a single feature. A bit field may be as small as a single-bit or many bytes in length. A bit-field should be treated as an indivisible entity and all bytes of each bit-field should be read or written in a single serial port burst.

Access to bit-fields is performed using byte-oriented addressing. A bit-field may take up multiple byte address and/or multiple bit-fields may occupy a single byte. When there are multiple bit-fields within a single byte, all bit fields are read from or written to during an access to that byte address over the serial port. When a bit-field spans multiple byte addresses, all bytes should be read or written in the same serial port burst transaction to ensure consistency. For bit-fields spanning multiple bytes, the least-significant bits of that bit-field are contained in the byte with the lowest address.

Bit-fields are grouped into *registers* and registers are in turn grouped into *modules*. In the documentation that follows, bit-fields are shown mapped into register bytes in a table called a *Bit-Field Location* table. The function of each bit-field is shown in an associated *Bit-Field Description* table. One or more bit-fields are grouped into a register. Registers show an address offset for each byte within that register.

A number of registers are grouped together into a module. In general a module contains all the registers needed to interact with a functional block within the device. Each module in the standard register set is listed in a Register Module Index table showing its module base address, a brief description of the module's function and a link to that module's location in the document. In each module's sub-section is a similar table listing all the registers within that module, a brief description of the register and a link to that register's detailed description. This is shown in Figure 4

Many register modules include a trigger register that must be written to cause register changes within that module to take effect; the trigger register must be written even if the contents of the trigger register are not changed. Where present, the trigger register is always the last register in the module so that the last write of a burst will trigger any changes in the module. After a trigger register is written the user should wait 200 microseconds before reading or writing any register in the device.

Figure 4: Finding a Register's Detailed Description in this Document

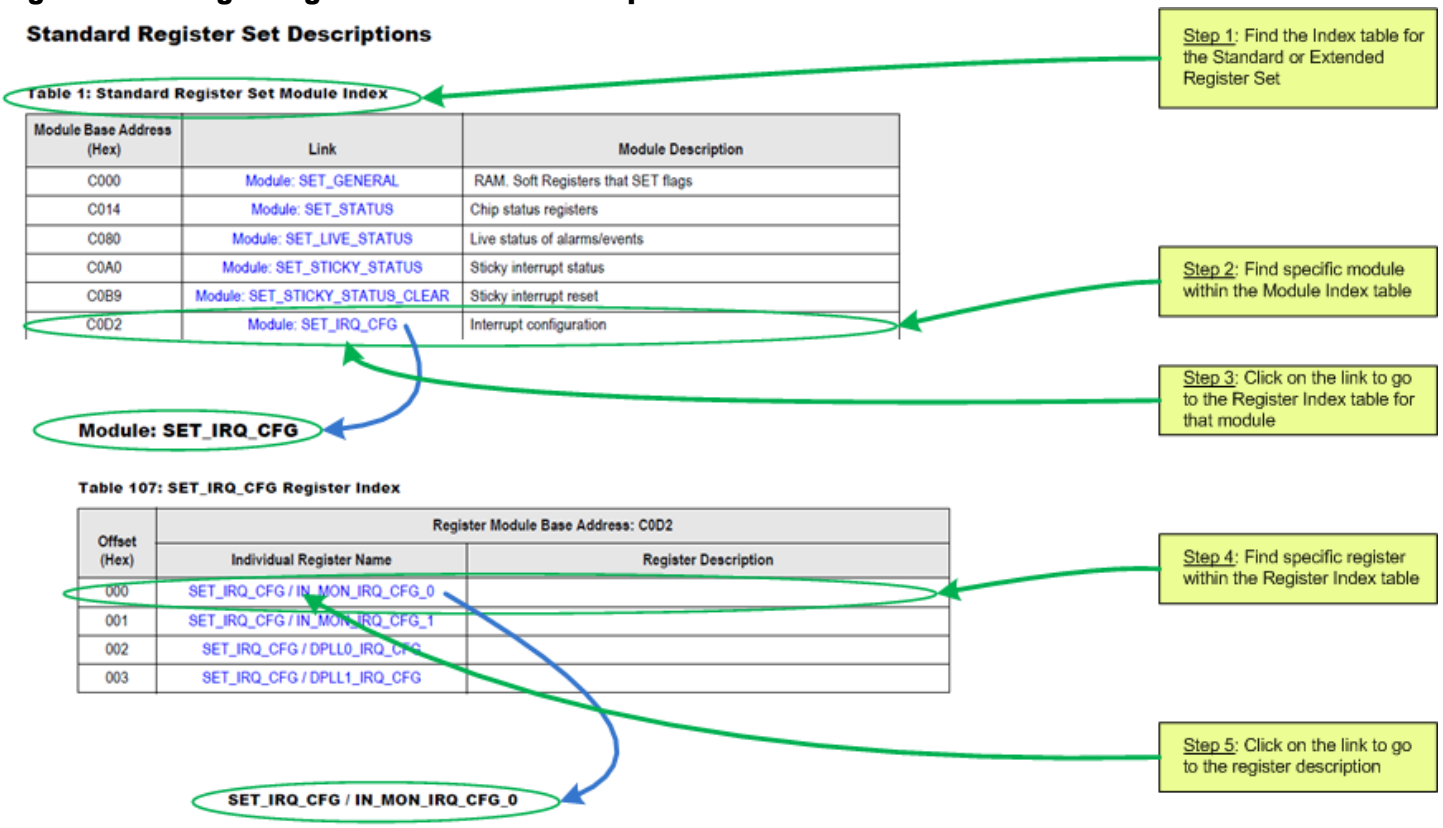


Table 108: SET_IRQ_CFG / IN_MON_IRQ_CFG_0 Bit Field Locations and Descriptions

Offset Address (Hex)	SET_IRQ_CFG / IN_MON_IRQ_CFG_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000	IN7_MON_EN	IN6_MON_EN	IN5_MON_EN	IN4_MON_EN	IN3_MON_EN	IN2_MON_EN	IN1_MON_EN	IN0_MON_EN

IN_MON_IRQ_CFG_0 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
IN7_MON_EN	R/W	0	0 = disabled 1 = enabled
IN6_MON_EN	R/W	0	0 = disabled 1 = enabled
IN5_MON_EN	R/W	0	0 = disabled 1 = enabled
IN4_MON_EN	R/W	0	0 = disabled 1 = enabled

The device contains multiple copies of many functional blocks and each has its own associated register module for status and control. To keep the documentation clear and concise, only the first instance of a register module for a specific functional block will be shown in detail. The module table will show all instantiations of the module with their unique base addresses, but the links will all point to the same descriptive section (see blue arrows in Figure 5). Please ensure that when addressing a register that the base address of the correct instantiation of the module is used (see red arrows in Figure 5). Note that the base address indicated in the table description is for the first instantiation of the module only (see green arrow in Figure 5). For example, as shown below, to access the DPLL_MANUAL_HOLDOVER_VALUE bit-field for DPLL4, take the base address of that instantiation (C480h) and add the register offset of that specific register (008h). Note that since this bit-field is more than one byte, all bytes should be accessed in a single serial port burst transaction starting at C488h.

Figure 5: Determining the Address to Access a Specific Register.

Table 1: Standard Register Set Module Index

Module Base Address (Hex)	Link	Module Description
C000	Module: SET_GENERAL	RAM. Soft Registers that SET flags
C280	Module: SET_DPLL	DPLL0 registers
C300	Module: SET_DPLL	DPLL1 registers
C380	Module: SET_DPLL	DPLL2 registers
C400	Module: SET_DPLL	DPLL3 registers
C480	Module: SET_DPLL	DPLL4 registers
C500	Module: SET_DPLL	DPLL5 registers
C580	Module: SET_DPLL	DPLL6 registers
C600	Module: SET_DPLL	DPLL7 registers
C680	Module: SET_SYS_DPLL	SYS_DPLL registers

Module: SET_DPLL

Table 142: SET_DPLL Register Index

Offset (Hex)	Register Module Base Address: C280[a]	
	Individual Register Name	Register Description
000	SET_DPLL / DPLL_COMBO_SW_VALUE_CNFG	
008	SET_DPLL / DPLL_MANUAL_HOLDOVER_VALUE	
010	SET_DPLL / DPLL_FOD_FREQ_B	
012	SET_DPLL / DPLL_FOD_FREQ_K	

Table 144: SET_DPLL / DPLL_MANUAL_HOLDOVER_VALUE Bit Field Locations and Descriptions

Offset Address (Hex)	SET_DPLL / DPLL_MANUAL_HOLDOVER_VALUE Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
008	DPLL_MANUAL_HOLDOVER_VALUE[7:0]							
009	DPLL_MANUAL_HOLDOVER_VALUE[15:8]							
00A	DPLL_MANUAL_HOLDOVER_VALUE[23:16]							
00B	DPLL_MANUAL_HOLDOVER_VALUE[31:24]							

Register Address = Module Base Address (for instance desired) + Register Offset

Terminology

The following terminology and abbreviations are used in the register tables.

- If a bit-field has more than a single bit, the bit-field will be written as BIT_FIELD_NAME[msb:lsb] (e.g. DPLL_MANUAL_HOLDOVER_VALUE[39:0]
- Binary numbers will be written with a lowercase ‘b’ after them (e.g. 0101b)
- Hexadecimal numbers will be written with a lowercase ‘h’ after them (e.g. C480h).
- R/W indicates a register is readable and writable by the user
- R/O indicates that a register should only be read by the user. Writing to a R/O register has an undefined effect.
- W/O indicates that a register should only be written to by the user. The read value is undefined and has no associated meaning.
- RW1C indicates a register that can be read, but a ‘1’ needs to be written to the bit to clear it back to 0. This is generally used for ‘sticky’ status bits that are latched high whenever a transient condition occurs. The user will need to write to clear the latched status.
- N/A means Not Applicable. This is only used for Reserved bit-fields who’s behaviour is not defined.

Register Set Descriptions

Table 6: Register Set Module Index

Module Base Address (Hex)	Link	Module Description
C000h	Module: RESET_CTRL	General reset management.
C014h	Module: GENERAL_STATUS	Chip hardware status registers.
C03Ch	Module: STATUS	Live status of alarms and events.
C160h	Module: GPIO_USER_CONTROL	GPIO user control.
C164h	Module: STICKY_STATUS_CLEAR	Sticky status clear.
C16Ch	Module: GPIO_TOD_NOTIFICATION_CLEAR	Clear GPIO output Time of Day read notification.
C170h	RESERVED	This module must not be modified from the read value
C180h	RESERVED	This module must not be modified from the read value
C188h	Module: ALERT_CFG	Notification configuration.
C194h	Module: SYS_DPLL_XO	System DPLL XO configuration.
C19Ch	Module: SYS_APLL	System APLL configuration.
C1B0h	Module: INPUT_0	Input 0 configuration.
C1C0h	INPUT_1	Input 1 configuration. Same as INPUT_0.
C1D0h	INPUT_2	Input 2 configuration. Same as INPUT_0.
C200h	INPUT_3	Input 3 configuration. Same as INPUT_0.
C210h	INPUT_4	Input 4 configuration. Same as INPUT_0.
C220h	INPUT_5	Input 5 configuration. Same as INPUT_0.
C230h	INPUT_6	Input 6 configuration. Same as INPUT_0.
C240h	INPUT_7	Input 7 configuration. Same as INPUT_0.
C250h	INPUT_8	Input 8 configuration. Same as INPUT_0.
C260h	INPUT_9	Input 9 configuration. Same as INPUT_0.
C280h	INPUT_10	Input 10 configuration. Same as INPUT_0.
C290h	INPUT_11	Input 11 configuration. Same as INPUT_0.

Table 6: Register Set Module Index

Module Base Address (Hex)	Link	Module Description
C2A0h	INPUT_12	Input 12 configuration. Same as INPUT_0.
C2B0h	INPUT_13	Input 13 configuration. Same as INPUT_0.
C2C0h	INPUT_14	Input 14 configuration. Same as INPUT_0.
C2D0h	INPUT_15	Input 15 configuration. Same as INPUT_0.
C2E0h	Module: REF_MON_0	Reference monitor 0.
C2ECh	REF_MON_1	Reference monitor 1. Same as REF_MON_0.
C300h	REF_MON_2	Reference monitor 2. Same as REF_MON_0.
C30Ch	REF_MON_3	Reference monitor 3. Same as REF_MON_0.
C318h	REF_MON_4	Reference monitor 4. Same as REF_MON_0.
C324h	REF_MON_5	Reference monitor 5. Same as REF_MON_0.
C330h	REF_MON_6	Reference monitor 6. Same as REF_MON_0.
C33Ch	REF_MON_7	Reference monitor 7. Same as REF_MON_0.
C348h	REF_MON_8	Reference monitor 8. Same as REF_MON_0.
C354h	REF_MON_9	Reference monitor 9. Same as REF_MON_0.
C360h	REF_MON_10	Reference monitor 10. Same as REF_MON_0.
C36Ch	REF_MON_11	Reference monitor 11. Same as REF_MON_0.
C380h	REF_MON_12	Reference monitor 12. Same as REF_MON_0.
C38Ch	REF_MON_13	Reference monitor 13. Same as REF_MON_0.
C398h	REF_MON_14	Reference monitor 14. Same as REF_MON_0.
C3A4h	REF_MON_15	Reference monitor 15. Same as REF_MON_0.

Table 6: Register Set Module Index

Module Base Address (Hex)	Link	Module Description
C3B0h	Module: DPLL_0	DPLL 0 configuration registers.
C400h	DPLL_1	DPLL 1 registers. Same as DPLL_0.
C43Ch	DPLL_2	DPLL 2 registers. Same as DPLL_0.
C480h	DPLL_3	DPLL 3 registers. Same as DPLL_0.
C4BCh	DPLL_4	DPLL 4 registers. Same as DPLL_0.
C500h	DPLL_5	DPLL 5 registers. Same as DPLL_0.
C53Ch	DPLL_6	DPLL 6 registers. Same as DPLL_0.
C580h	DPLL_7	DPLL 7 registers. Same as DPLL_0.
C5BCh	Module: SYS_DPLL	System DPLL registers.
C600h	Module: DPLL_CTRL_0	DPLL 0 control registers.
C63Ch	DPLL_CTRL_1	DPLL 1 control registers. Same as DPLL_CTRL_0.
C680h	DPLL_CTRL_2	DPLL 2 control registers. Same as DPLL_CTRL_0.
C6BCh	DPLL_CTRL_3	DPLL 3 control registers. Same as DPLL_CTRL_0.
C700h	DPLL_CTRL_4	DPLL 4 control registers. Same as DPLL_CTRL_0.
C73Ch	DPLL_CTRL_5	DPLL 5 control registers. Same as DPLL_CTRL_0.
C780h	DPLL_CTRL_6	DPLL 6 control registers. Same as DPLL_CTRL_0.
C7BCh	DPLL_CTRL_7	DPLL 7 control registers. Same as DPLL_CTRL_0.
C800h	Module: SYS_DPLL_CTRL	System DPLL control registers.
C818h	Module: DPLL_PHASE_0	DPLL 0 write phase.
C81Ch	DPLL_PHASE_1	DPLL 1 write phase. Same as DPLL_PHASE_0.
C820h	DPLL_PHASE_2	DPLL 2 write phase. Same as DPLL_PHASE_0.

Table 6: Register Set Module Index

Module Base Address (Hex)	Link	Module Description
C824h	DPLL_PHASE_3	DPLL 3 write phase. Same as DPLL_PHASE_0.
C828h	DPLL_PHASE_4	DPLL 4 write phase. Same as DPLL_PHASE_0.
C82Ch	DPLL_PHASE_5	DPLL 5 write phase. Same as DPLL_PHASE_0.
C830h	DPLL_PHASE_6	DPLL 6 write phase. Same as DPLL_PHASE_0.
C834h	DPLL_PHASE_7	DPLL 7 write phase. Same as DPLL_PHASE_0.
C838h	Module: DPLL_FREQ_0	DPLL 0 write frequency.
C840h	DPLL_FREQ_1	DPLL 1 write frequency. Same as DPLL_FREQ_0.
C848h	DPLL_FREQ_2	DPLL 2 write frequency. Same as DPLL_FREQ_0.
C850h	DPLL_FREQ_3	DPLL 3 write frequency. Same as DPLL_FREQ_0.
C858h	DPLL_FREQ_4	DPLL 4 write frequency. Same as DPLL_FREQ_0.
C860h	DPLL_FREQ_5	DPLL 5 write frequency. Same as DPLL_FREQ_0.
C868h	DPLL_FREQ_6	DPLL 6 write frequency. Same as DPLL_FREQ_0.
C870h	DPLL_FREQ_7	DPLL 7 write frequency. Same as DPLL_FREQ_0.
C880h	Module: DPLL_PHASE_PULL_IN_0	DPLL 0 phase pull-in control.
C888h	DPLL_PHASE_PULL_IN_1	DPLL 1 phase pull-in control. Same as DPLL_PHASE_PULL_IN_0.
C890h	DPLL_PHASE_PULL_IN_2	DPLL 2 phase pull-in control. Same as DPLL_PHASE_PULL_IN_0.
C898h	DPLL_PHASE_PULL_IN_3	DPLL 3 phase pull-in control. Same as DPLL_PHASE_PULL_IN_0.
C8A0h	DPLL_PHASE_PULL_IN_4	DPLL 4 phase pull-in control. Same as DPLL_PHASE_PULL_IN_0.
C8A8h	DPLL_PHASE_PULL_IN_5	DPLL 5 phase pull-in control. Same as DPLL_PHASE_PULL_IN_0.
C8B0h	DPLL_PHASE_PULL_IN_6	DPLL 6 phase pull-in control. Same as DPLL_PHASE_PULL_IN_0.

Table 6: Register Set Module Index

Module Base Address (Hex)	Link	Module Description
C8B8h	DPLL_PHASE_PULL_IN_7	DPLL 7 phase pull-in control. Same as DPLL_PHASE_PULL_IN_0.
C8C0h	Module: GPIO_CFG	GPIO global configuration.
C8C2h	Module: GPIO_0	GPIO 0 registers.
C8D4h	GPIO_1	GPIO 1 registers. Same as GPIO_0.
C8E6h	GPIO_2	GPIO 2 registers. Same as GPIO_0.
C900h	GPIO_3	GPIO 3 registers. Same as GPIO_0.
C912h	GPIO_4	GPIO 4 registers. Same as GPIO_0.
C924h	GPIO_5	GPIO 5 registers. Same as GPIO_0.
C936h	GPIO_6	GPIO 6 registers. Same as GPIO_0.
C948h	GPIO_7	GPIO 7 registers. Same as GPIO_0.
C95Ah	GPIO_8	GPIO 8 registers. Same as GPIO_0.
C980h	GPIO_9	GPIO 9 registers. Same as GPIO_0.
C992h	GPIO_10	GPIO 10 registers. Same as GPIO_0.
C9A4h	GPIO_11	GPIO 11 registers. Same as GPIO_0.
C9B6h	GPIO_12	GPIO 12 registers. Same as GPIO_0.
C9C8h	GPIO_13	GPIO 13 registers. Same as GPIO_0.
C9DAh	GPIO_14	GPIO 14 registers. Same as GPIO_0.
CA00h	GPIO_15	GPIO 15 registers. Same as GPIO_0.
CA12h	Module: OUT_DIV_MUX	Output divider multiplexers.
CA20h	Module: OUTPUT_0	Output 0 registers.
CA30h	OUTPUT_1	Output 1 register. Same as OUTPUT_0.

Table 6: Register Set Module Index

Module Base Address (Hex)	Link	Module Description
CA40h	OUTPUT_2	Output 2 register. Same as OUTPUT_0.
CA50h	OUTPUT_3	Output 3 register. Same as OUTPUT_0.
CA60h	OUTPUT_4	Output 4 register. Same as OUTPUT_0.
CA80h	OUTPUT_5	Output 5 register. Same as OUTPUT_0.
CA90h	OUTPUT_6	Output 6 register. Same as OUTPUT_0.
CAA0h	OUTPUT_7	Output 7 register. Same as OUTPUT_0.
CAB0h	OUTPUT_8	Output 8 register. Same as OUTPUT_0.
CAC0h	OUTPUT_9	Output 9 register. Same as OUTPUT_0.
CAD0h	OUTPUT_10	Output 10 register. Same as OUTPUT_0.
CAE0h	OUTPUT_11	Output 11 register. Same as OUTPUT_0.
CAF0h	Module: SERIAL	Serial Interfaces registers.
CB00h	Module: PWM_ENCODER_0	PWM 0 encoder registers.
CB08h	PWM_ENCODER_1	PWM 1 encoder registers. Same as PWM_ENCODER_0.
CB10h	PWM_ENCODER_2	PWM 2 encoder registers. Same as PWM_ENCODER_0.
CB18h	PWM_ENCODER_3	PWM 3 encoder registers. Same as PWM_ENCODER_0.
CB20h	PWM_ENCODER_4	PWM 4 encoder registers. Same as PWM_ENCODER_0.
CB28h	PWM_ENCODER_5	PWM 5 encoder registers. Same as PWM_ENCODER_0.
CB30h	PWM_ENCODER_6	PWM 6 encoder registers. Same as PWM_ENCODER_0.
CB38h	PWM_ENCODER_7	PWM 7 encoder registers. Same as PWM_ENCODER_0.
CB40h	Module: PWM_DECODER_0	PWM 0 decoder registers.
CB4Ah	PWM_DECODER_1	PWM 1 decoder registers. Same as PWM_DECODER_0.

Table 6: Register Set Module Index

Module Base Address (Hex)	Link	Module Description
CB54h	PWM_DECODER_2	PWM 2 decoder registers. Same as PWM_DECODER_0.
CB5Eh	PWM_DECODER_3	PWM 3 decoder registers. Same as PWM_DECODER_0.
CB68h	PWM_DECODER_4	PWM 4 decoder registers. Same as PWM_DECODER_0.
CB80h	PWM_DECODER_5	PWM 5 decoder registers. Same as PWM_DECODER_0.
CB8Ah	PWM_DECODER_6	PWM 6 decoder registers. Same as PWM_DECODER_0.
CB94h	PWM_DECODER_7	PWM 7 decoder registers. Same as PWM_DECODER_0.
CB9Eh	PWM_DECODER_8	PWM 8 decoder registers. Same as PWM_DECODER_0.
CBA8h	PWM_DECODER_9	PWM 9 decoder registers. Same as PWM_DECODER_0.
CBB2h	PWM_DECODER_10	PWM 10 decoder registers. Same as PWM_DECODER_0.
CBBCh	PWM_DECODER_11	PWM 11 decoder registers. Same as PWM_DECODER_0.
CBC6h	PWM_DECODER_12	PWM 12 decoder registers. Same as PWM_DECODER_0.
CBD0h	PWM_DECODER_13	PWM 13 decoder registers. Same as PWM_DECODER_0.
CBDAh	PWM_DECODER_14	PWM 14 decoder registers. Same as PWM_DECODER_0.
CBE4h	PWM_DECODER_15	PWM 15 decoder registers. Same as PWM_DECODER_0.
CBF0h	Module: PWM_USER_DATA	PWM user data registers.
CC00h	Module: TOD_0	TOD 0 registers.
CC02h	TOD_1	TOD 1 registers. Same as TOD_0.
CC04h	TOD_2	TOD 2 registers. Same as TOD_0.
CC06h	TOD_3	TOD 3 registers. Same as TOD_0.
CC10h	Module: TOD_WRITE_0	Write TOD 0 registers.
CC20h	TOD_WRITE_1	Write TOD 1 registers. Same as TOD_WRITE_0.

Table 6: Register Set Module Index

Module Base Address (Hex)	Link	Module Description
CC30h	TOD_WRITE_2	Write TOD 2 registers. Same as TOD_WRITE_0.
CC40h	TOD_WRITE_3	Write TOD 3 registers. Same as TOD_WRITE_0.
CC50h	Module: TOD_READ_PRIMARY_0	Read TOD 0 primary registers.
CC60h	TOD_READ_PRIMARY_1	Read TOD 1 primary registers. Same as TOD_READ_PRIMARY_0.
CC80h	TOD_READ_PRIMARY_2	Read TOD 2 primary registers. Same as TOD_READ_PRIMARY_0.
CC90h	TOD_READ_PRIMARY_3	Read TOD 3 primary registers. Same as TOD_READ_PRIMARY_0.
CCA0h	Module: TOD_READ_SECONDARY_0	Read TOD 0 secondary registers.
CCB0h	TOD_READ_SECONDARY_1	Read TOD 1 secondary registers. Same as TOD_READ_SECONDARY_0.
CCC0h	TOD_READ_SECONDARY_2	Read TOD 2 secondary registers. Same as TOD_READ_SECONDARY_0.
CCD0h	TOD_READ_SECONDARY_3	Read TOD 3 secondary registers. Same as TOD_READ_SECONDARY_0.
CCE0h	Module: OUTPUT_TDC_CFG	Output TDC global configuration.
CD00h	Module: OUTPUT_TDC_0	Output TDC 0.
CD08h	OUTPUT_TDC_1	Output TDC 1. Same as OUTPUT_TDC_0.
CD10h	OUTPUT_TDC_2	Output TDC 2. Same as OUTPUT_TDC_0.
CD18h	OUTPUT_TDC_3	Output TDC 3. Same as OUTPUT_TDC_0.
CD20h	Module: INPUT_TDC	Input TDC
CD28h	Module: SYSREF	SYSREF
CF3Ch	RESERVED	This module must not be modified from the read value
CF4Ch	Module: SCRATCH	User multipurpose registers.
CF5Ch	RESERVED	This module must not be modified from the read value
CF64h	Module: EEPROM	EEPROM.
CF70h	Module: OTP	OTP.
CF80h	Module: BYTE	OTP registers.
D000h	RESERVED	This module must not be modified from the read value

Module: RESET_CTRL

Reset configuration.

Table 7: RESET_CTRL Register Index

Offset (Hex)	Register Module Base Address: C000h	
	Individual Register Name	Register Description
000h	RESERVED	This register must not be modified from the read value
001h	RESERVED	This register must not be modified from the read value
002h	RESERVED	This register must not be modified from the read value
003h	RESERVED	This register must not be modified from the read value
004h	RESERVED	This register must not be modified from the read value
005h	RESERVED	This register must not be modified from the read value
006h	RESERVED	This register must not be modified from the read value
007h	RESERVED	This register must not be modified from the read value
008h	RESERVED	This register must not be modified from the read value
009h	RESERVED	This register must not be modified from the read value
00Ah	RESERVED	This register must not be modified from the read value
00Bh	RESERVED	This register must not be modified from the read value
00Ch	RESERVED	This register must not be modified from the read value
00Dh	RESERVED	This register must not be modified from the read value
00Eh	RESERVED	This register must not be modified from the read value
00Fh	RESERVED	This register must not be modified from the read value
010h	RESERVED	This register must not be modified from the read value
011h	RESERVED	This register must not be modified from the read value
012h	RESERVED	This register must not be modified from the read value
013h	RESET_CTRL.SM_RESET	Reset state machine.

RESET_CTRL.SM_RESET

Enable state machine reset.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the RESET_CTRL module.

Table 8: RESET_CTRL.SM_RESET Bit Field Locations and Descriptions

Offset Address (Hex)	RESET_CTRL.SM_RESET Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
013h	RESET[7:0]							

RESET_CTRL.SM_RESET Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESET[7:0]	R/W	0	Reset state machine. 0x5a = initiate state machine reset Write 0x5A to perform state machine reset. All other values are ignored. Self clearing. During a state machine reset, all registers starting from GENERAL_STATUS returns to reset values and the device proceeds with the start-up sequence as if the device was just powered on. The digital core is not reset.

Module: GENERAL_STATUS

Notification for hardware status.

Table 9: GENERAL_STATUS Register Index

Offset (Hex)	Register Module Base Address: C014h	
	Individual Register Name	**Register Description**
000h	RESERVED	This register must not be modified from the read value
001h	RESERVED	This register must not be modified from the read value
002h	RESERVED	This register must not be modified from the read value
003h	RESERVED	This register must not be modified from the read value
004h	GENERAL_STATUS.OTP_STATUS	Current status of OTP.
008h	GENERAL_STATUS.EEPROM_STATUS	Current status of EEPROM.
00Ah	GENERAL_STATUS.HW_REV_ID	Hardware Revision Identification code
00Bh	RESERVED	This register must not be modified from the read value
00Ch	RESERVED	This register must not be modified from the read value
00Dh	RESERVED	This register must not be modified from the read value
00Eh	RESERVED	This register must not be modified from the read value
00Fh	RESERVED	This register must not be modified from the read value
010h	GENERAL_STATUS.MAJ_REL	Major release number.
011h	GENERAL_STATUS.MIN_REL	Minor release number.
012h	GENERAL_STATUS.HOTFIX_REL	Hotfix release number.
014h	RESERVED	This register must not be modified from the read value
015h	RESERVED	This register must not be modified from the read value
016h	RESERVED	This register must not be modified from the read value
017h	RESERVED	This register must not be modified from the read value
018h	GENERAL_STATUS.DASH_CODE	Dash Code value.
01Ah	RESERVED	This register must not be modified from the read value
01Bh	RESERVED	This register must not be modified from the read value

Table 9: GENERAL_STATUS Register Index

Offset (Hex)	Register Module Base Address: C014h	
	Individual Register Name	Register Description
01Ch	GENERAL_STATUS.JTAG_DEVICE_ID	JTAG device identity.
01Eh	GENERAL_STATUS.PRODUCT_ID	Product identity.
020h	RESERVED	This register must not be modified from the read value
021h	RESERVED	This register must not be modified from the read value
022h	GENERAL_STATUS.OTP_SCSR_CONFIG_SELECT	Selected soft CSR configuration loaded from OTP.
023h	GENERAL_STATUS.OTP_CONFIG_STATUS	OTP soft CSR configuration status.
024h	GENERAL_STATUS.OTP_CSR_CONFIG_STATUS	OTP hard CSR configuration status.
025h	RESERVED	This register must not be modified from the read value
026h	GENERAL_STATUS.EEPROM_CONFIG_STATUS	EEPROM soft CSR configuration status.

GENERAL_STATUS.OTP_STATUS

Indicates status of OTP.

Table 10: GENERAL_STATUS.OTP_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.OTP_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	OTP_STATUS[7:0]							
005h	OTP_STATUS[15:8]							
006h	OTP_STATUS[23:16]							
007h	OTP_STATUS[31:24]							

GENERAL_STATUS.OTP_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
OTP_STATUS[31:0]	R/O	0	Current status of OTP. 0x0000000 = no status 0x1000000 = success 0x1000001 = corrupted header 0x1000002 = address out of range 0x1000003 = corrupted section 0x1000004 = invalid cluster index 0x1000005 = redundant cluster not available 0x1000006 = redundant cluster invalid index 0x1000007 = redundant cluster program fail 0x1000008 = cluster program fail 0x1000009 = cluster read fail 0x100000A = main memory program fail 0x100000B = no header available 0x100000C = not enough space 0x100000D = header fail 0x100000E = invalid boot row index 0x100000F = invalid header index 0x1000010 = header not found 0x1000011 = more data available 0x1000012 = wrong confirmation code 0x1000013 = OTP programming locked 0x10000FE = OTP access model is disabled 0x10000FF = unknown command

GENERAL_STATUS.EEPROM_STATUS

Indicates status of EEPROM.

Table 11: GENERAL_STATUS.EEPROM_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.EEPROM_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	EEPROM_STATUS[7:0]							
009h	EEPROM_STATUS[15:8]							

GENERAL_STATUS.EEPROM_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
EEPROM_STATUS[15:0]	R/O	0	Current status of EEPROM. 0x0000 = no status 0x8000 = ok 0x8001 = unknown command 0x8002 = wrong size 0x8003 = out of range 0x8004 = read failed 0x8005 = write failed 0x8006 = verification failed

GENERAL_STATUS.HW_REV_ID

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Table 12: GENERAL_STATUS.HW_REV_ID Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.HW_REV_ID Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ah	HW_REV_ID[7:0]							

GENERAL_STATUS.HW_REV_ID Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
HW_REV_ID[7:0]	R/O	0	HW Rev ID. 0x0 = N/A 0x1 = Rev-A 0x2 = Rev-B 0x3 = Rev-C 0x4 = Rev-D

GENERAL_STATUS.MAJ_REL

Major release number. e.g.. X.0.0

Table 13: GENERAL_STATUS.MAJ_REL Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.MAJ_REL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
010h	MAJOR[7:1]							PR_BUILD[0]

GENERAL_STATUS.MAJ_REL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MAJOR[7:1]	R/O	0101b	Numeric major release. e.g.. X.0.0
PR_BUILD[0]	R/O	0001b	Product release status. 1 if a product release or 0 if a development release..

GENERAL_STATUS.MIN_REL

Minor release number. e.g.. 1.Y.0

Table 14: GENERAL_STATUS.MIN_REL Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.MIN_REL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
011h	MINOR[7:0]							

GENERAL_STATUS.MIN_REL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MINOR[7:0]	R/O	0011b	Minor release number. e.g.. 1.Y.0

GENERAL_STATUS.HOTFIX_REL

Hotfix release number. e.g.. 1.2.Z

Table 15: GENERAL_STATUS.HOTFIX_REL Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.HOTFIX_REL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
012h	HOTFIX[7:0]							

GENERAL_STATUS.HOTFIX_REL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
HOTFIX[7:0]	R/O	0100b	Hotfix release number. e.g.. 1.2.Z

GENERAL_STATUS.DASH_CODE

16-bit Dash Code value.

Table 16: GENERAL_STATUS.DASH_CODE Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.DASH_CODE Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
018h	RESERVED[7:0]							
019h	RESERVED[15:8]							

GENERAL_STATUS.DASH_CODE Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value

GENERAL_STATUS.JTAG_DEVICE_ID

16-bit subset of JTAG ID as determined by BOND_ID.

Table 17: GENERAL_STATUS.JTAG_DEVICE_ID Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.JTAG_DEVICE_ID Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
01Ch	JTAG_DEVICE_ID[7:0]							
01Dh	JTAG_DEVICE_ID[15:8]							

GENERAL_STATUS.JTAG_DEVICE_ID Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
JTAG_DEVICE_ID[15:0]	R/O	0	16-bit ID code for this specific device, please refer to the Programming Guide Addendum for the specific device for expected value here.

GENERAL_STATUS.PRODUCT_ID

16-bit numeric value that correlates to the part number.

Table 18: GENERAL_STATUS.PRODUCT_ID Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.PRODUCT_ID Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
01Eh	PRODUCT_ID[7:0]							
01Fh	PRODUCT_ID[15:8]							

GENERAL_STATUS.PRODUCT_ID Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRODUCT_ID[15:0]	R/O	0	16-bit Product ID code for this specific device, please refer to the Programming Guide Addendum for the specific device for expected value here.

GENERAL_STATUS.OTP_SCSR_CONFIG_SELECT

The index of the soft CSR configuration loaded from OTP.

Table 19: GENERAL_STATUS.OTP_SCSR_CONFIG_SELECT Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.OTP_SCSR_CONFIG_SELECT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
022h	OTP_SCSR_CONFIG_SELECTION[7:0]							

GENERAL_STATUS.OTP_SCSR_CONFIG_SELECT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
OTP_SCSR_CONFIG_SELECTION[7:0]	R/O	0	Index of OTP SCSR configuration currently selected via startup GPIO function.

GENERAL_STATUS.OTP_CONFIG_STATUS

Status of soft CSR configuration loaded from OTP.

Table 20: GENERAL_STATUS.OTP_CONFIG_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.OTP_CONFIG_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
023h	OTP_SCSR_CONFIG_STATUS[7:0]							

GENERAL_STATUS.OTP_CONFIG_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
OTP_SCSR_CONFIG_STATUS[7:0]	R/O	0	Status code. 0 = success 1 = not found 2 = incomplete 3 = wrong offset 4 = wrong length 5 = SCSR out of range 6 = CRC error

GENERAL_STATUS.OTP_CSR_CONFIG_STATUS

Status of hard CSR configuration loaded from OTP.

Table 21: GENERAL_STATUS.OTP_CSR_CONFIG_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.OTP_CSR_CONFIG_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
024h	OTP_CSR_CONFIG_STATUS[7:0]							

GENERAL_STATUS.OTP_CSR_CONFIG_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
OTP_CSR_CONFIG_STATUS[7:0]	R/O	0	Status code. 0 = success 1 = not found 2 = incomplete 3 = wrong offset 4 = wrong length 5 = CSR out of range 6 = CRC error 7 = serializer wrong length 8 = serializer write fail

GENERAL_STATUS.EEPROM_CONFIG_STATUS

Status of configuration loaded from EEPROM.

Table 22: GENERAL_STATUS.EEPROM_CONFIG_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	GENERAL_STATUS.EEPROM_CONFIG_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
026h	EEPROM_CONFIG_STATUS[7:0]							

GENERAL_STATUS.EEPROM_CONFIG_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
EEPROM_CONFIG_STATUS[7:0]	R/O	0	Status code. 0x0 = success 0x1 = not found 0x2 = incomplete 0x3 = wrong offset 0x4 = wrong length 0x5 = SCSR out of range 0x6 = CRC error 0xA = corrupt header 0xB = EEPROM out of range

Module: STATUS

Live status of alarms and events.

Table 23: STATUS Register Index

Offset (Hex)	Register Module Base Address: C03Ch	
	Individual Register Name	Register Description
000h	STATUS.I2CM_STATUS	I2C master status.
001h	RESERVED	This register must not be modified from the read value
002h	STATUS.SER0_STATUS	Status of serial interface 0 (main serial port).
003h	STATUS.SER0_SPI_STATUS	Status of serial interface 0 (main serial port) SPI.
004h	STATUS.SER0_I2C_STATUS	Status of serial interface 0 (main serial port) I2C.
005h	STATUS.SER1_STATUS	Status of serial interface 1 (auxiliary serial port).
006h	STATUS.SER1_SPI_STATUS	Status of serial interface 1 (auxiliary serial port) SPI.
007h	STATUS.SER1_I2C_STATUS	Status of serial interface 1 (auxiliary serial port) I2C.
008h	STATUS.IN0_MON_STATUS	Input 0 reference monitor status.
009h	STATUS.IN1_MON_STATUS	Input 1 reference monitor status.
00Ah	STATUS.IN2_MON_STATUS	Input 2 reference monitor status.
00Bh	STATUS.IN3_MON_STATUS	Input 3 reference monitor status.
00Ch	STATUS.IN4_MON_STATUS	Input 4 reference monitor status.
00Dh	STATUS.IN5_MON_STATUS	Input 5 reference monitor status.
00Eh	STATUS.IN6_MON_STATUS	Input 6 reference monitor status.
00Fh	STATUS.IN7_MON_STATUS	Input 7 reference monitor status.
010h	STATUS.IN8_MON_STATUS	Input 8 reference monitor status.
011h	STATUS.IN9_MON_STATUS	Input 9 reference monitor status.
012h	STATUS.IN10_MON_STATUS	Input 10 reference monitor status.
013h	STATUS.IN11_MON_STATUS	Input 11 reference monitor status.
014h	STATUS.IN12_MON_STATUS	Input 12 reference monitor status.
015h	STATUS.IN13_MON_STATUS	Input 13 reference monitor status.
016h	STATUS.IN14_MON_STATUS	Input 14 reference monitor status.
017h	STATUS.IN15_MON_STATUS	Input 15 reference monitor status.
018h	STATUS.DPLL0_STATUS	DPLL 0 status.
019h	STATUS.DPLL1_STATUS	DPLL 1 status.
01Ah	STATUS.DPLL2_STATUS	DPLL 2 status.
01Bh	STATUS.DPLL3_STATUS	DPLL 3 status.
01Ch	STATUS.DPLL4_STATUS	DPLL 4 status.
01Dh	STATUS.DPLL5_STATUS	DPLL 5 status.

Table 23: STATUS Register Index

Offset (Hex)	Register Module Base Address: C03Ch	
	Individual Register Name	Register Description
01Eh	STATUS.DPLL6_STATUS	DPLL 6 status.
01Fh	STATUS.DPLL7_STATUS	DPLL 7 status.
020h	STATUS.DPLL_SYS_STATUS	System DPLL status.
021h	STATUS.SYS_APLL_STATUS	System APLL status.
022h	STATUS.DPLL0_REF_STAT	DPLL 0 input reference status.
023h	STATUS.DPLL1_REF_STAT	DPLL 1 input reference status.
024h	STATUS.DPLL2_REF_STAT	DPLL 2 input reference status.
025h	STATUS.DPLL3_REF_STAT	DPLL 3 input reference status.
026h	STATUS.DPLL4_REF_STAT	DPLL 4 input reference status.
027h	STATUS.DPLL5_REF_STAT	DPLL 5 input reference status.
028h	STATUS.DPLL6_REF_STAT	DPLL 6 input reference status.
029h	STATUS.DPLL7_REF_STAT	DPLL 7 input reference status.
02Ah	STATUS.DPLL_SYS_REF_STAT	System DPLL input reference status.
044h	STATUS.DPLL0_FILTER_STATUS	DPLL 0 loop filter status.
04Ch	STATUS.DPLL1_FILTER_STATUS	DPLL 1 loop filter status.
054h	STATUS.DPLL2_FILTER_STATUS	DPLL 2 loop filter status.
05Ch	STATUS.DPLL3_FILTER_STATUS	DPLL 3 loop filter status.
064h	STATUS.DPLL4_FILTER_STATUS	DPLL 4 loop filter status.
06Ch	STATUS.DPLL5_FILTER_STATUS	DPLL 5 loop filter status.
074h	STATUS.DPLL6_FILTER_STATUS	DPLL 6 loop filter status.
07Ch	STATUS.DPLL7_FILTER_STATUS	DPLL 7 loop filter status.
084h	STATUS.DPLL_SYS_FILTER_STATUS	System DPLL loop filter status.
08Ah	STATUS.USER_GPIO0_TO_7_STATUS	User controlled GPIO level.
08Bh	STATUS.USER_GPIO8_TO_15_STATUS	User controlled GPIO level.
08Ch	STATUS.IN0_MON_FREQ_STATUS	Input 0 reference monitor frequency status and unit.
08Eh	STATUS.IN1_MON_FREQ_STATUS	Input 1 reference monitor frequency status and unit.
090h	STATUS.IN2_MON_FREQ_STATUS	Input 2 reference monitor frequency status and unit.
092h	STATUS.IN3_MON_FREQ_STATUS	Input 3 reference monitor frequency status and unit.
094h	STATUS.IN4_MON_FREQ_STATUS	Input 4 reference monitor frequency status and unit.
096h	STATUS.IN5_MON_FREQ_STATUS	Input 5 reference monitor frequency status and unit.
098h	STATUS.IN6_MON_FREQ_STATUS	Input 6 reference monitor frequency status and unit.
09Ah	STATUS.IN7_MON_FREQ_STATUS	Input 7 reference monitor frequency status and unit.

Table 23: STATUS Register Index

Offset (Hex)	Register Module Base Address: C03Ch	
	Individual Register Name	Register Description
09Ch	STATUS.IN8_MON_FREQ_STATUS	Input 8 reference monitor frequency status and unit.
09Eh	STATUS.IN9_MON_FREQ_STATUS	Input 9 reference monitor frequency status and unit.
0A0h	STATUS.IN10_MON_FREQ_STATUS	Input 10 reference monitor frequency status and unit.
0A2h	STATUS.IN11_MON_FREQ_STATUS	Input 11 reference monitor frequency status and unit.
0A4h	STATUS.IN12_MON_FREQ_STATUS	Input 12 reference monitor frequency status and unit.
0A6h	STATUS.IN13_MON_FREQ_STATUS	Input 13 reference monitor frequency status and unit.
0A8h	STATUS.IN14_MON_FREQ_STATUS	Input 14 reference monitor frequency status and unit.
0AAh	STATUS.IN15_MON_FREQ_STATUS	Input 15 reference monitor frequency status and unit.
0ACh	STATUS.OUTPUT_TDC_CFG_STATUS	Output TDC global status.
0ADh	STATUS.OUTPUT_TDC0_STATUS	Output TDC 0 status.
0AEh	STATUS.OUTPUT_TDC1_STATUS	Output TDC 1 status.
0AFh	STATUS.OUTPUT_TDC2_STATUS	Output TDC 2 status.
0B0h	STATUS.OUTPUT_TDC3_STATUS	Output TDC 3 status.
0B4h	STATUS.OUTPUT_TDC0_MEASUREMENT	Output TDC 0 measurement status.
0BAh	RESERVED	This register must not be modified from the read value
0BBh	RESERVED	This register must not be modified from the read value
0C4h	STATUS.OUTPUT_TDC1_MEASUREMENT	Output TDC 1 measurement status.
0CAh	RESERVED	This register must not be modified from the read value
0CBh	RESERVED	This register must not be modified from the read value
0CCh	STATUS.OUTPUT_TDC2_MEASUREMENT	Output TDC 2 measurement status.
0D2h	RESERVED	This register must not be modified from the read value
0D3h	RESERVED	This register must not be modified from the read value
0D4h	STATUS.OUTPUT_TDC3_MEASUREMENT	Output TDC 3 measurement status.
0DAh	RESERVED	This register must not be modified from the read value
0DBh	RESERVED	This register must not be modified from the read value
0DCh	STATUS.DPLL0_PHASE_STATUS	Phase offset at output of decimator.
0E1h	RESERVED	This register must not be modified from the read value
0E2h	RESERVED	This register must not be modified from the read value
0E3h	RESERVED	This register must not be modified from the read value
0E4h	STATUS.DPLL1_PHASE_STATUS	Phase offset at output of decimator.
0E9h	RESERVED	This register must not be modified from the read value
0EAh	RESERVED	This register must not be modified from the read value

Table 23: STATUS Register Index

Offset (Hex)	Register Module Base Address: C03Ch	
	Individual Register Name	Register Description
0EBh	RESERVED	This register must not be modified from the read value
0ECh	STATUS.DPLL2_PHASE_STATUS	Phase offset at output of decimator.
0F1h	RESERVED	This register must not be modified from the read value
0F2h	RESERVED	This register must not be modified from the read value
0F3h	RESERVED	This register must not be modified from the read value
0F4h	STATUS.DPLL3_PHASE_STATUS	Phase offset at output of decimator.
0F9h	RESERVED	This register must not be modified from the read value
0FAh	RESERVED	This register must not be modified from the read value
0FBh	RESERVED	This register must not be modified from the read value
0FCh	STATUS.DPLL4_PHASE_STATUS	Phase offset at output of decimator.
101h	RESERVED	This register must not be modified from the read value
102h	RESERVED	This register must not be modified from the read value
103h	RESERVED	This register must not be modified from the read value
104h	STATUS.DPLL5_PHASE_STATUS	Phase offset at output of decimator.
109h	RESERVED	This register must not be modified from the read value
10Ah	RESERVED	This register must not be modified from the read value
10Bh	RESERVED	This register must not be modified from the read value
10Ch	STATUS.DPLL6_PHASE_STATUS	Phase offset at output of decimator.
111h	RESERVED	This register must not be modified from the read value
112h	RESERVED	This register must not be modified from the read value
113h	RESERVED	This register must not be modified from the read value
114h	STATUS.DPLL7_PHASE_STATUS	Phase offset at output of decimator.
119h	RESERVED	This register must not be modified from the read value
11Ah	RESERVED	This register must not be modified from the read value
11Bh	RESERVED	This register must not be modified from the read value
11Ch	STATUS.DPLL0_PHASE_PULL_IN_STATUS	DPLL0 phase pull-in status
11Dh	STATUS.DPLL1_PHASE_PULL_IN_STATUS	DPLL1 phase pull-in status
11Eh	STATUS.DPLL2_PHASE_PULL_IN_STATUS	DPLL2 phase pull-in status
11Fh	STATUS.DPLL3_PHASE_PULL_IN_STATUS	DPLL3 phase pull-in status

Table 23: STATUS Register Index

Offset (Hex)	Register Module Base Address: C03Ch	
	Individual Register Name	Register Description
120h	STATUS.DPLL4_PHASE_PULL_IN_STATUS	DPLL4 phase pull-in status
121h	STATUS.DPLL5_PHASE_PULL_IN_STATUS	DPLL5 phase pull-in status
122h	STATUS.DPLL6_PHASE_PULL_IN_STATUS	DPLL6 phase pull-in status
123h	STATUS.DPLL7_PHASE_PULL_IN_STATUS	DPLL7 phase pull-in status

STATUS.I2CM_STATUS

Status of the I2C master (port selection and speed).

Table 24: STATUS.I2CM_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.I2CM_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	RESERVED[7:4]				I2CM_SPEED[3:2]		I2CM_PORT_SEL[1:0]	

STATUS.I2CM_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
I2CM_SPEED[3:2]	R/O	0	I2C Master speed. Indicates the I2C speed. 0 = 100 KHz 1 = 400 KHz 2 = 1 MHz
I2CM_PORT_SEL[1:0]	R/O	0	I2C Master port pin selection. Indicates the pins the I2C master is connected to. 0 = I2C master 1 = serial interface 0 2 = serial interface 1

STATUS.SER0_STATUS

Status of serial interface 0 (main serial port).

Table 25: STATUS.SER0_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.SER0_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	RESERVED[7:3]					ADDRESS_SIZE[2]	MODE[1:0]	

STATUS.SER0_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
ADDRESS_SIZE[2]	R/O	0	Serial Interface 0 (main serial port) address size. Indicates the SSI address size. 0 = 1-byte 1 = 2-byte
MODE[1:0]	R/O	0	Serial interface 0 (main serial port) mode. Indicates the SSI protocol. 0 = undefined 1 = I2C 2 = SPI 3 = disabled

STATUS.SER0_SPI_STATUS

Status of serial interface 0 (main serial port) SPI.

Table 26: STATUS.SER0_SPI_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.SER0_SPI_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
003h	RESERVED[7:5]			SPI_SDO_DELAY[4]	SPI_CLOCK_SELECTION[3]	SPI_DUPLEX_MODE[2]	RESERVED[1:0]	

STATUS.SER0_SPI_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SPI_SDO_DELAY[4]	R/O	0	SPI delay SDO driving edge. 0 = driving edge used for SDO 1 = SDO driving edge delayed half-cycle of SCLK
SPI_CLOCK_SELECTION[3]	R/O	0	SPI Clock Selection for SDI sampling. Indicates if the SPI clock selection is on a rising or falling edge. 0 = rising edge 1 = falling edge
SPI_DUPLEX_MODE[2]	R/O	0	SPI 4-wire or 3-wire. Indicates if the SPI is in full duplex or half duplex mode. 0 = full duplex 1 = half duplex
RESERVED	N/A	-	This field must not be modified from the read value

STATUS.SER0_I2C_STATUS

Status of serial interface 0 (main serial port) I2C.

Table 27: STATUS.SER0_I2C_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.SER0_I2C_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	RESERVED[7]	DEVICE_ADDRESS[6:0]						

STATUS.SER0_I2C_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
DEVICE_ADDRESS[6:0]	R/O	0	I2C address of this I2C slave. 7-bit I2C address.

STATUS.SER1_STATUS

Status of serial interface 1 (auxiliary serial port).

Table 28: STATUS.SER1_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.SER1_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
005h	RESERVED[7:3]					ADDRESS_SIZE[2]	MODE[1:0]	

STATUS.SER1_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
ADDRESS_SIZE[2]	R/O	0	Serial interface 1 (auxiliary serial port) address size. Indicates the SSI address size. 0 = 1-byte 1 = 2-byte
MODE[1:0]	R/O	0	Serial interface 1 (auxiliary serial port) mode. Indicates the SSI protocol. 0 = undefined 1 = I2C 2 = SPI 3 = disabled

STATUS.SER1_SPI_STATUS

Status of serial interface 1 (auxiliary serial port) SPI.

Table 29: STATUS.SER1_SPI_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.SER1_SPI_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
006h	RESERVED[7:5]			SPI_SDO_DELAY[4]	SPI_CLOCK_SELECTION[3]	SPI_DUPLEX_MODE[2]	RESERVED[1:0]	

STATUS.SER1_SPI_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SPI_SDO_DELAY[4]	R/O	0	SPI delay SDO driving edge. 0 = driving edge used for SDO 1 = SDO driving edge delayed half-cycle of SCLK
SPI_CLOCK_SELECTION[3]	R/O	0	SPI Clock Selection for SDI sampling. Indicates if the SPI clock selection is on a rising or falling edge. 0 = rising edge 1 = falling edge
SPI_DUPLEX_MODE[2]	R/O	0	SPI 4-wire or 3-wire. Indicates if the SPI is in full duplex or half duplex mode. 0 = full duplex 1 = half duplex
RESERVED	N/A	-	This field must not be modified from the read value

STATUS.SER1_I2C_STATUS

Status of serial interface 1 (auxiliary serial port) I2C.

Table 30: STATUS.SER1_I2C_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.SER1_I2C_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
007h	RESERVED[7]	DEVICE_ADDRESS[6:0]						

STATUS.SER1_I2C_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DEVICE_ADDRESS[6:0]	R/O	0	I2C address of this I2C slave. 7-bit I2C address.

STATUS.IN0_MON_STATUS

Input 0 reference monitor status.

Table 31: STATUS.IN0_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN0_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
008h	IN0_TRANS_DETECT_STICKY[7]	IN0_FREQ_OFFS_LIM_STICKY[6]	IN0_NO_ACTIVITY_STICKY[5]	IN0_LOS_STICKY[4]	IN0_TRANS_DETECT_LIVE[3]	IN0_FREQ_OFFS_LIM_LIVE[2]	IN0_NO_ACTIVITY_LIVE[1]	IN0_LOS_LIVE[0]

STATUS.IN0_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN0_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in0_trans_detect_live bit. 0 = no change 1 = live status changed
IN0_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in0_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN0_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in0_no_activity_live bit. 0 = no change 1 = live status changed
IN0_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in0_los_live bit. 0 = no change 1 = live status changed
IN0_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 0. 0 = inactive 1 = active
IN0_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 0. 0 = inactive 1 = active
IN0_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 0. 0 = inactive 1 = active
IN0_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 0. 0 = inactive 1 = active

STATUS.IN1_MON_STATUS

Input 1 reference monitor status.

Table 32: STATUS.IN1_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN1_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
009h	IN1_TRANS_DETECT_STICKY[7]	IN1_FREQ_OFFS_LIM_STICKY[6]	IN1_NO_ACTIVITY_STICKY[5]	IN1_LOS_STICKY[4]	IN1_TRANS_DETECT_LIVE[3]	IN1_FREQ_OFFS_LIM_LIVE[2]	IN1_NO_ACTIVITY_LIVE[1]	IN1_LOS_LIVE[0]

STATUS.IN1_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN1_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in1_trans_detect_live bit. 0 = no change 1 = live status changed
IN1_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in1_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN1_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in1_no_activity_live bit. 0 = no change 1 = live status changed
IN1_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in1_los_live bit. 0 = no change 1 = live status changed
IN1_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 1. 0 = inactive 1 = active
IN1_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 1. 0 = inactive 1 = active
IN1_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 1. 0 = inactive 1 = active
IN1_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 1. 0 = inactive 1 = active

STATUS.IN2_MON_STATUS

Input 2 reference monitor status.

Table 33: STATUS.IN2_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN2_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ah	IN2_TRANS_DETECT_STICKY[7]	IN2_FREQ_OFFS_LIM_STICKY[6]	IN2_NO_ACTIVITY_STICKY[5]	IN2_LOS_STICKY[4]	IN2_TRANS_DETECT_LIVE[3]	IN2_FREQ_OFFS_LIM_LIVE[2]	IN2_NO_ACTIVITY_LIVE[1]	IN2_LOS_LIVE[0]

STATUS.IN2_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN2_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in2_trans_detect_live bit. 0 = no change 1 = live status changed
IN2_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in2_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN2_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in2_no_activity_live bit. 0 = no change 1 = live status changed
IN2_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in2_los_live bit. 0 = no change 1 = live status changed
IN2_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 2. 0 = inactive 1 = active
IN2_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 2. 0 = inactive 1 = active
IN2_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 2. 0 = inactive 1 = active
IN2_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 2. 0 = inactive 1 = active

STATUS.IN3_MON_STATUS

Input 3 reference monitor status.

Table 34: STATUS.IN3_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN3_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Bh	IN3_TRANS_DETECT_STICKY[7]	IN3_FREQ_OFFS_LIM_STICKY[6]	IN3_NO_ACTIVITY_STICKY[5]	IN3_LOS_STICKY[4]	IN3_TRANS_DETECT_LIVE[3]	IN3_FREQ_OFFS_LIM_LIVE[2]	IN3_NO_ACTIVITY_LIVE[1]	IN3_LOS_LIVE[0]

STATUS.IN3_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN3_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in3_trans_detect_live bit. 0 = no change 1 = live status changed
IN3_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in3_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN3_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in3_no_activity_live bit. 0 = no change 1 = live status changed
IN3_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in3_los_live bit. 0 = no change 1 = live status changed
IN3_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 3. 0 = inactive 1 = active
IN3_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 3. 0 = inactive 1 = active
IN3_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 3. 0 = inactive 1 = active
IN3_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 3. 0 = inactive 1 = active

STATUS.IN4_MON_STATUS

Input 4 reference monitor status.

Table 35: STATUS.IN4_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN4_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ch	IN4_TRANS_DETECT_STICKY[7]	IN4_FREQ_OFFS_LIM_STICKY[6]	IN4_NO_ACTIVITY_STICKY[5]	IN4_LOS_STICKY[4]	IN4_TRANS_DETECT_LIVE[3]	IN4_FREQ_OFFS_LIM_LIVE[2]	IN4_NO_ACTIVITY_LIVE[1]	IN4_LOS_LIVE[0]

STATUS.IN4_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN4_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in4_trans_detect_live bit. 0 = no change 1 = live status changed
IN4_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in4_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN4_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in4_no_activity_live bit. 0 = no change 1 = live status changed
IN4_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in4_los_live bit. 0 = no change 1 = live status changed
IN4_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 4. 0 = inactive 1 = active
IN4_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 4. 0 = inactive 1 = active
IN4_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 4. 0 = inactive 1 = active
IN4_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 4. 0 = inactive 1 = active

STATUS.IN5_MON_STATUS

Input 5 reference monitor status.

Table 36: STATUS.IN5_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN5_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Dh	IN5_TRANS_DETECT_STICKY[7]	IN5_FREQ_OFFS_LIM_STICKY[6]	IN5_NO_ACTIVITY_STICKY[5]	IN5_LOS_STICKY[4]	IN5_TRANS_DETECT_LIVE[3]	IN5_FREQ_OFFS_LIM_LIVE[2]	IN5_NO_ACTIVITY_LIVE[1]	IN5_LOS_LIVE[0]

STATUS.IN5_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN5_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in5_trans_detect_live bit. 0 = no change 1 = live status changed
IN5_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in5_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN5_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in5_no_activity_live bit. 0 = no change 1 = live status changed
IN5_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in5_los_live bit. 0 = no change 1 = live status changed
IN5_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 5. 0 = inactive 1 = active
IN5_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 5. 0 = inactive 1 = active
IN5_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 5. 0 = inactive 1 = active
IN5_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 5. 0 = inactive 1 = active

STATUS.IN6_MON_STATUS

Input 6 reference monitor status.

Table 37: STATUS.IN6_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN6_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Eh	IN6_TRANS_DETECT_STICKY[7]	IN6_FREQ_OFFS_LIM_STICKY[6]	IN6_NO_ACTIVITY_STICKY[5]	IN6_LOS_STICKY[4]	IN6_TRANS_DETECT_LIVE[3]	IN6_FREQ_OFFS_LIM_LIVE[2]	IN6_NO_ACTIVITY_LIVE[1]	IN6_LOS_LIVE[0]

STATUS.IN6_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN6_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in6_trans_detect_live bit. 0 = no change 1 = live status changed
IN6_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in6_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN6_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in6_no_activity_live bit. 0 = no change 1 = live status changed
IN6_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in6_los_live bit. 0 = no change 1 = live status changed
IN6_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 6. 0 = inactive 1 = active
IN6_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 6. 0 = inactive 1 = active
IN6_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 6. 0 = inactive 1 = active
IN6_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 6. 0 = inactive 1 = active

STATUS.IN7_MON_STATUS

Input 7 reference monitor status.

Table 38: STATUS.IN7_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN7_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Fh	IN7_TRANS_DETECT_STICKY[7]	IN7_FREQ_OFFS_LIM_STICKY[6]	IN7_NO_ACTIVITY_STICKY[5]	IN7_LOS_STICKY[4]	IN7_TRANS_DETECT_LIVE[3]	IN7_FREQ_OFFS_LIM_LIVE[2]	IN7_NO_ACTIVITY_LIVE[1]	IN7_LOS_LIVE[0]

STATUS.IN7_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN7_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in7_trans_detect_live bit. 0 = no change 1 = live status changed
IN7_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in7_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN7_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in7_no_activity_live bit. 0 = no change 1 = live status changed
IN7_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in7_los_live bit. 0 = no change 1 = live status changed
IN7_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 7. 0 = inactive 1 = active
IN7_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 7. 0 = inactive 1 = active
IN7_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 7. 0 = inactive 1 = active
IN7_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 7. 0 = inactive 1 = active

STATUS.IN8_MON_STATUS

Input 8 reference monitor status.

Table 39: STATUS.IN8_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN8_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
010h	IN8_TRANS_DETECT_STICKY[7]	IN8_FREQ_OFFS_LIM_STICKY[6]	IN8_NO_ACTIVITY_STICKY[5]	IN8_LOS_STICKY[4]	IN8_TRANS_DETECT_LIVE[3]	IN8_FREQ_OFFS_LIM_LIVE[2]	IN8_NO_ACTIVITY_LIVE[1]	IN8_LOS_LIVE[0]

STATUS.IN8_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN8_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in8_trans_detect_live bit. 0 = no change 1 = live status changed
IN8_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in8_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN8_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in8_no_activity_live bit. 0 = no change 1 = live status changed
IN8_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in8_los_live bit. 0 = no change 1 = live status changed
IN8_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 8. 0 = inactive 1 = active
IN8_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 8. 0 = inactive 1 = active
IN8_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 8. 0 = inactive 1 = active
IN8_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 8. 0 = inactive 1 = active

STATUS.IN9_MON_STATUS

Input 9 reference monitor status.

Table 40: STATUS.IN9_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN9_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
011h	IN9_TRANS_DETECT_STICKY[7]	IN9_FREQ_OFFS_LIM_STICKY[6]	IN9_NO_ACTIVITY_STICKY[5]	IN9_LOS_STICKY[4]	IN9_TRANS_DETECT_LIVE[3]	IN9_FREQ_OFFS_LIM_LIVE[2]	IN9_NO_ACTIVITY_LIVE[1]	IN9_LOS_LIVE[0]

STATUS.IN9_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN9_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in9_trans_detect_live bit. 0 = no change 1 = live status changed
IN9_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in9_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN9_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in9_no_activity_live bit. 0 = no change 1 = live status changed
IN9_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in9_los_live bit. 0 = no change 1 = live status changed
IN9_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 9. 0 = inactive 1 = active
IN9_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 9. 0 = inactive 1 = active
IN9_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 9. 0 = inactive 1 = active
IN9_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 9. 0 = inactive 1 = active

STATUS.IN10_MON_STATUS

Input 10 reference monitor status.

Table 41: STATUS.IN10_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN10_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
012h	IN10_TRANS_DETECT_STICKY[7]	IN10_FREQ_OFFS_LIM_STICKY[6]	IN10_NO_ACTIVITY_STICKY[5]	IN10_LOS_STICKY[4]	IN10_TRANS_DETECT_LIVE[3]	IN10_FREQ_OFFS_LIM_LIVE[2]	IN10_NO_ACTIVITY_LIVE[1]	IN10_LOS_LIVE[0]

STATUS.IN10_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN10_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in10_trans_detect_live bit. 0 = no change 1 = live status changed
IN10_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in10_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN10_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in10_no_activity_live bit. 0 = no change 1 = live status changed
IN10_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in10_los_live bit. 0 = no change 1 = live status changed
IN10_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 10. 0 = inactive 1 = active
IN10_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 10. 0 = inactive 1 = active
IN10_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 10. 0 = inactive 1 = active
IN10_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 10. 0 = inactive 1 = active

STATUS.IN11_MON_STATUS

Input 11 reference monitor status.

Table 42: STATUS.IN11_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN11_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
013h	IN11_TRANS_DETECT_STICKY[7]	IN11_FREQ_OFFS_LIM_STICKY[6]	IN11_NO_ACTIVITY_STICKY[5]	IN11_LOS_STICKY[4]	IN11_TRANS_DETECT_LIVE[3]	IN11_FREQ_OFFS_LIM_LIVE[2]	IN11_NO_ACTIVITY_LIVE[1]	IN11_LOS_LIVE[0]

STATUS.IN11_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN11_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in11_trans_detect_live bit. 0 = no change 1 = live status changed
IN11_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in11_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN11_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in11_no_activity_live bit. 0 = no change 1 = live status changed
IN11_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in11_los_live bit. 0 = no change 1 = live status changed
IN11_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 11. 0 = inactive 1 = active
IN11_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 11. 0 = inactive 1 = active
IN11_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 11. 0 = inactive 1 = active
IN11_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 11. 0 = inactive 1 = active

STATUS.IN12_MON_STATUS

Input 12 reference monitor status.

Table 43: STATUS.IN12_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN12_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
014h	IN12_TRANS_DETECT_STICKY[7]	IN12_FREQ_OFFS_LIM_STICKY[6]	IN12_NO_ACTIVITY_STICKY[5]	IN12_LOS_STICKY[4]	IN12_TRANS_DETECT_LIVE[3]	IN12_FREQ_OFFS_LIM_LIVE[2]	IN12_NO_ACTIVITY_LIVE[1]	IN12_LOS_LIVE[0]

STATUS.IN12_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN12_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in12_trans_detect_live bit. 0 = no change 1 = live status changed
IN12_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in12_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN12_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in12_no_activity_live bit. 0 = no change 1 = live status changed
IN12_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in12_los_live bit. 0 = no change 1 = live status changed
IN12_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 12. 0 = inactive 1 = active
IN12_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 12. 0 = inactive 1 = active
IN12_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 12. 0 = inactive 1 = active
IN12_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 12. 0 = inactive 1 = active

STATUS.IN13_MON_STATUS

Input 13 reference monitor status.

Table 44: STATUS.IN13_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN13_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
015h	IN13_TRANS_DETECT_STICKY[7]	IN13_FREQ_OFFS_LIM_STICKY[6]	IN13_NO_ACTIVITY_STICKY[5]	IN13_LOS_STICKY[4]	IN13_TRANS_DETECT_LIVE[3]	IN13_FREQ_OFFS_LIM_LIVE[2]	IN13_NO_ACTIVITY_LIVE[1]	IN13_LOS_LIVE[0]

STATUS.IN13_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN13_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in13_trans_detect_live bit. 0 = no change 1 = live status changed
IN13_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in13_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN13_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in13_no_activity_live bit. 0 = no change 1 = live status changed
IN13_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in13_los_live bit. 0 = no change 1 = live status changed
IN13_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 13. 0 = inactive 1 = active
IN13_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 13. 0 = inactive 1 = active
IN13_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 13. 0 = inactive 1 = active
IN13_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 13. 0 = inactive 1 = active

STATUS.IN14_MON_STATUS

Input 14 reference monitor status.

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Table 45: STATUS.IN14_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN14_MON_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
016h	IN14_TRANS_DETECT_STICKY[7]	IN14_FREQ_OFFS_LIM_STICKY[6]	IN14_NO_ACTIVITY_STICKY[5]	IN14_LOS_STICKY[4]	IN14_TRANS_DETECT_LIVE[3]	IN14_FREQ_OFFS_LIM_LIVE[2]	IN14_NO_ACTIVITY_LIVE[1]	IN14_LOS_LIVE[0]

STATUS.IN14_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN14_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in14_trans_detect_live bit. 0 = no change 1 = live status changed
IN14_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in14_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN14_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in14_no_activity_live bit. 0 = no change 1 = live status changed
IN14_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in14_los_live bit. 0 = no change 1 = live status changed
IN14_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 14. 0 = inactive 1 = active
IN14_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 14. 0 = inactive 1 = active

STATUS.IN14_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN14_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 14. 0 = inactive 1 = active
IN14_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 14. 0 = inactive 1 = active

STATUS.IN15_MON_STATUS

Input 15 reference monitor status.

Table 46: STATUS.IN15_MON_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN15_MON_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
017h	IN15_TRANS_DETECT_STICKY[7]	IN15_FREQ_OFFS_LIM_STICKY[6]	IN15_NO_ACTIVITY_STICKY[5]	IN15_LOS_STICKY[4]	IN15_TRANS_DETECT_LIVE[3]	IN15_FREQ_OFFS_LIM_LIVE[2]	IN15_NO_ACTIVITY_LIVE[1]	IN15_LOS_LIVE[0]

STATUS.IN15_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN15_TRANS_DETECT_STICKY[7]	R/O	0	Transient detector sticky bit. Indicates a change of in15_trans_detect_live bit. 0 = no change 1 = live status changed
IN15_FREQ_OFFS_LIM_STICKY[6]	R/O	0	Frequency offset limit sticky bit. Indicates a change of in15_freq_offs_lim_live bit. 0 = no change 1 = live status changed
IN15_NO_ACTIVITY_STICKY[5]	R/O	0	No activity sticky bit. Indicates a change of in15_no_activity_live bit. 0 = no change 1 = live status changed
IN15_LOS_STICKY[4]	R/O	0	LOS sticky bit. Indicates a change of in15_los_live bit. 0 = no change 1 = live status changed
IN15_TRANS_DETECT_LIVE[3]	R/O	0	Transient detector live bit. Indicates that a transient is detected for input 15. 0 = inactive 1 = active

STATUS.IN15_MON_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN15_FREQ_OFFS_LIM_LIVE[2]	R/O	0	Frequency offset limit live status. Indicates that the current frequency offset exceeds the limit for input 15. 0 = inactive 1 = active
IN15_NO_ACTIVITY_LIVE[1]	R/O	0	No activity live status. Indicates no activity on input 15. 0 = inactive 1 = active
IN15_LOS_LIVE[0]	R/O	0	LOS live status. Indicates loss of signal on input 15. 0 = inactive 1 = active

STATUS.DPLL0_STATUS

DPLL 0 status.

Table 47: STATUS.DPLL0_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL0_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
018h	RESERVED[7:6]		DPLL0_HOLDOVER_STATE_CHANGE_STICKY[5]	DPLL0_LOCK_STATE_CHANGE_STICKY[4]	DPLL0_STATE[3:0]			

STATUS.DPLL0_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL0_HOLDOVER_STATE_CHANGE_STICKY[5]	R/O	0	Holdover state change sticky bit. Indicates whether any transition to or from Holdover state occurred. 0 = no transition to or from Holdover state 1 = transition to or from Holdover state

STATUS.DPLL0_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL0_LOCK_STATE_CHANGE_STICKY[4]	R/O	0	Lock state change sticky bit. Indicates whether any transition to or from Locked state occurred. 0 = no transition to or from Locked state 1 = transition to or from Locked state
DPLL0_STATE[3:0]	R/O	0	Current state of DPLL0. 0 = freerun 1 = lockacq 2 = lockrec 3 = locked 4 = holdover 5 = open loop 6 = disabled

STATUS.DPLL1_STATUS

DPLL 1 status.

Table 48: STATUS.DPLL1_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL1_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
019h	RESERVED[7:6]		DPLL1_HOLDOVER_STATE_CHANGE_STICKY[5]	DPLL1_LOCK_STATE_CHANGE_STICKY[4]	DPLL1_STATE[3:0]			

STATUS.DPLL1_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL1_HOLDOVER_STATE_CHANGE_STICKY[5]	R/O	0	Holdover state change sticky bit. Indicates whether any transition to or from Holdover state occurred. 0 = no transition to or from Holdover state 1 = transition to or from Holdover state

STATUS.DPLL1_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL1_LOCK_STATE_CHANGE_STICKY[4]	R/O	0	Lock state change sticky bit. Indicates whether any transition to or from Locked state occurred. 0 = no transition to or from Locked state 1 = transition to or from Locked state
DPLL1_STATE[3:0]	R/O	0	Current state of DPLL1. 0 = freerun 1 = lockacq 2 = lockrec 3 = locked 4 = holdover 5 = open loop 6 = disabled

STATUS.DPLL2_STATUS

DPLL 2 status.

Table 49: STATUS.DPLL2_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL2_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Ah	RESERVED[7:6]		DPLL2_HOLDOVER_STATE_CHANGE_STICKY[5]	DPLL2_LOCK_STATE_CHANGE_STICKY[4]	DPLL2_STATE[3:0]			

STATUS.DPLL2_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL2_HOLDOVER_STATE_CHANGE_STICKY[5]	R/O	0	Holdover state change sticky bit. Indicates whether any transition to or from Holdover state occurred. 0 = no transition to or from Holdover state 1 = transition to or from Holdover state

STATUS.DPLL2_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL2_LOCK_STATE_CHANGE_STICKY[4]	R/O	0	Lock state change sticky bit. Indicates whether any transition to or from Locked state occurred. 0 = no transition to or from Locked state 1 = transition to or from Locked state
DPLL2_STATE[3:0]	R/O	0	Current state of DPLL2. 0 = freerun 1 = lockacq 2 = lockrec 3 = locked 4 = holdover 5 = open loop 6 = disabled

STATUS.DPLL3_STATUS

DPLL 3 status.

Table 50: STATUS.DPLL3_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL3_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Bh	RESERVED[7:6]		DPLL3_HOLDOVER_STATE_CHANGE_STICKY[5]	DPLL3_LOCK_STATE_CHANGE_STICKY[4]	DPLL3_STATE[3:0]			

STATUS.DPLL3_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL3_HOLDOVER_STATE_CHANGE_STICKY[5]	R/O	0	Holdover state change sticky bit. Indicates whether any transition to or from Holdover state occurred. 0 = no transition to or from Holdover state 1 = transition to or from Holdover state

STATUS.DPLL3_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL3_LOCK_STATE_CHANGE_STICKY[4]	R/O	0	Lock state change sticky bit. Indicates whether any transition to or from Locked state occurred. 0 = no transition to or from Locked state 1 = transition to or from Locked state
DPLL3_STATE[3:0]	R/O	0	Current state of DPLL3. 0 = freerun 1 = lockacq 2 = lockrec 3 = locked 4 = holdover 5 = open loop 6 = disabled

STATUS.DPLL4_STATUS

DPLL 4 status.

Table 51: STATUS.DPLL4_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL4_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Ch	RESERVED[7:6]		DPLL4_HOLDOVER_STATE_CHANGE_STICKY[5]	DPLL4_LOCK_STATE_CHANGE_STICKY[4]	DPLL4_STATE[3:0]			

STATUS.DPLL4_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL4_HOLDOVER_STATE_CHANGE_STICKY[5]	R/O	0	Holdover state change sticky bit. Indicates whether any transition to or from Holdover state occurred. 0 = no transition to or from Holdover state 1 = transition to or from Holdover state

STATUS.DPLL4_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL4_LOCK_STATE_CHANGE_STICKY[4]	R/O	0	Lock state change sticky bit. Indicates whether any transition to or from Locked state occurred. 0 = no transition to or from Locked state 1 = transition to or from Locked state
DPLL4_STATE[3:0]	R/O	0	Current state of DPLL4. 0 = freerun 1 = lockacq 2 = lockrec 3 = locked 4 = holdover 5 = open loop 6 = disabled

STATUS.DPLL5_STATUS

DPLL 5 status.

Table 52: STATUS.DPLL5_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL5_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Dh	RESERVED[7:6]		DPLL5_HOLDOVER_STATE_CHANGE_STICKY[5]	DPLL5_LOCK_STATE_CHANGE_STICKY[4]	DPLL5_STATE[3:0]			

STATUS.DPLL5_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL5_HOLDOVER_STATE_CHANGE_STICKY[5]	R/O	0	Holdover state change sticky bit. Indicates whether any transition to or from Holdover state occurred. 0 = no transition to or from Holdover state 1 = transition to or from Holdover state

STATUS.DPLL5_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL5_LOCK_STATE_CHANGE_STICKY[4]	R/O	0	Lock state change sticky bit. Indicates whether any transition to or from Locked state occurred. 0 = no transition to or from Locked state 1 = transition to or from Locked state
DPLL5_STATE[3:0]	R/O	0	Current state of DPLL5. 0 = freerun 1 = lockacq 2 = lockrec 3 = locked 4 = holdover 5 = open loop 6 = disabled

STATUS.DPLL6_STATUS

DPLL 6 status.

Table 53: STATUS.DPLL6_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL6_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Eh	RESERVED[7:6]		DPLL6_HOLDOVER_STATE_CHANGE_STICKY[5]	DPLL6_LOCK_STATE_CHANGE_STICKY[4]	DPLL6_STATE[3:0]			

STATUS.DPLL6_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL6_HOLDOVER_STATE_CHANGE_STICKY[5]	R/O	0	Holdover state change sticky bit. Indicates whether any transition to or from Holdover state occurred. 0 = no transition to or from Holdover state 1 = transition to or from Holdover state

STATUS.DPLL6_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL6_LOCK_STATE_CHANGE_STICKY[4]	R/O	0	Lock state change sticky bit. Indicates whether any transition to or from Locked state occurred. 0 = no transition to or from Locked state 1 = transition to or from Locked state
DPLL6_STATE[3:0]	R/O	0	Current state of DPLL6. 0 = freerun 1 = lockacq 2 = lockrec 3 = locked 4 = holdover 5 = open loop 6 = disabled

STATUS.DPLL7_STATUS

DPLL 7 status.

Table 54: STATUS.DPLL7_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL7_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Fh	RESERVED[7:6]		DPLL7_HOLDOVER_STATE_CHANGE_STICKY[5]	DPLL7_LOCK_STATE_CHANGE_STICKY[4]	DPLL7_STATE[3:0]			

STATUS.DPLL7_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL7_HOLDOVER_STATE_CHANGE_STICKY[5]	R/O	0	Holdover state change sticky bit. Indicates whether any transition to or from Holdover state occurred. 0 = no transition to or from Holdover state 1 = transition to or from Holdover state

STATUS.DPLL7_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL7_LOCK_STATE_CHANGE_STICKY[4]	R/O	0	Lock state change sticky bit. Indicates whether any transition to or from Locked state occurred. 0 = no transition to or from Locked state 1 = transition to or from Locked state
DPLL7_STATE[3:0]	R/O	0	Current state of DPLL7. 0 = freerun 1 = lockacq 2 = lockrec 3 = locked 4 = holdover 5 = open loop 6 = disabled

STATUS.DPLL_SYS_STATUS

System DPLL status.

Table 55: STATUS.DPLL_SYS_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL_SYS_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
020h	RESERVED[7:6]		DPLL_SYS_HOLDOVER_STATE_CHANGE_STICKY[5]	DPLL_SYS_LOCK_STATE_CHANGE_STICKY[4]	DPLL_SYS_STATE[3:0]			

STATUS.DPLL_SYS_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_SYS_HOLDOVER_STATE_CHANGE_STICKY[5]	R/O	0	Holdover state change sticky bit. Indicates whether any transition to or from Holdover state occurred. 0 = no transition to or from Holdover state 1 = transition to or from Holdover state

STATUS.DPLL_SYS_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL_SYS_LOCK_STATE_CHANGE_STICKY[4]	R/O	0	Lock state change sticky bit. Indicates whether any transition to or from Locked state occurred. 0 = no transition to or from Locked state 1 = transition to or from Locked state
DPLL_SYS_STATE[3:0]	R/O	0	Current state of SYS_DPLL. 0 = freerun 1 = lockacq 2 = lockrec 3 = locked 4 = holdover 5 = open loop

STATUS.SYS_APLL_STATUS

System APLL status.

Table 56: STATUS.SYS_APLL_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.SYS_APLL_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
021h	RESERVED[7:5]			SYS_APLL_LOSS_LOCK_STICKY[4]	RESERVED[3:1]			SYS_APLL_LOSS_LOCK_LIVE[0]

STATUS.SYS_APLL_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYS_APLL_LOSS_LOCK_STICKY[4]	R/O	0	System APLL loss lock sticky bit. Indicates that loss of lock was detected for system APLL. 0 = no change 1 = live status changed
RESERVED	N/A	-	This field must not be modified from the read value
SYS_APLL_LOSS_LOCK_LIVE[0]	R/O	0	System APLL loss lock live status. Indicates that loss of lock is currently detected for system APLL. 0 = locked 1 = unlocked

STATUS.DPLL0_REF_STAT

Indicates which reference is currently selected for tracking.

Table 57: STATUS.DPLL0_REF_STAT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL0_REF_STAT Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
022h	RESERVED[7:5]			DPLL0_INPUT[4:0]				

STATUS.DPLL0_REF_STAT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL0_INPUT[4:0]	R/O	0	Current reference input for DPLL 0. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x1F = no reference

STATUS.DPLL1_REF_STAT

Indicates which reference is currently selected for tracking.

Table 58: STATUS.DPLL1_REF_STAT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL1_REF_STAT Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
023h	RESERVED[7:5]			DPLL1_INPUT[4:0]				

STATUS.DPLL1_REF_STAT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL1_INPUT[4:0]	R/O	0	Current reference input for DPLL 1. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x1F = no reference

STATUS.DPLL2_REF_STAT

Indicates which reference is currently selected for tracking.

Table 59: STATUS.DPLL2_REF_STAT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL2_REF_STAT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
024h	RESERVED[7:5]			DPLL2_INPUT[4:0]				

STATUS.DPLL2_REF_STAT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL2_INPUT[4:0]	R/O	0	Current reference input for DPLL 2. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x1F = no reference

STATUS.DPLL3_REF_STAT

Indicates which reference is currently selected for tracking.

Table 60: STATUS.DPLL3_REF_STAT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL3_REF_STAT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
025h	RESERVED[7:5]			DPLL3_INPUT[4:0]				

STATUS.DPLL3_REF_STAT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL3_INPUT[4:0]	R/O	0	Current reference input for DPLL 3. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x1F = no reference

STATUS.DPLL4_REF_STAT

Indicates which reference is currently selected for tracking.

Table 61: STATUS.DPLL4_REF_STAT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL4_REF_STAT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
026h	RESERVED[7:5]			DPLL4_INPUT[4:0]				

STATUS.DPLL4_REF_STAT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL4_INPUT[4:0]	R/O	0	Current reference input for DPLL 4. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x1F = no reference

STATUS.DPLL5_REF_STAT

Indicates which reference is currently selected for tracking.

Table 62: STATUS.DPLL5_REF_STAT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL5_REF_STAT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
027h	RESERVED[7:5]			DPLL5_INPUT[4:0]				

STATUS.DPLL5_REF_STAT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL5_INPUT[4:0]	R/O	0	Current reference input for DPLL 5. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x1F = no reference

STATUS.DPLL6_REF_STAT

Indicates which reference is currently selected for tracking.

Table 63: STATUS.DPLL6_REF_STAT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL6_REF_STAT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
028h	RESERVED[7:5]			DPLL6_INPUT[4:0]				

STATUS.DPLL6_REF_STAT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL6_INPUT[4:0]	R/O	0	Current reference input for DPLL 6. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x1F = no reference

STATUS.DPLL7_REF_STAT

Indicates which reference is currently selected for tracking.

Table 64: STATUS.DPLL7_REF_STAT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL7_REF_STAT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
029h	RESERVED[7:5]			DPLL7_INPUT[4:0]				

STATUS.DPLL7_REF_STAT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL7_INPUT[4:0]	R/O	0	Current reference input for DPLL 7. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x1F = no reference

STATUS.DPLL_SYS_REF_STAT

Indicates which reference is currently selected for tracking.

Table 65: STATUS.DPLL_SYS_REF_STAT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL_SYS_REF_STAT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
02Ah	RESERVED[7:5]			DPLL_SYS_INPUT[4:0]				

STATUS.DPLL_SYS_REF_STAT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_SYS_INPUT[4:0]	R/O	0	Current reference input for system DPLL. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x1F = no reference

STATUS.DPLL0_FILTER_STATUS

DPLL 0 loop filter status.

Table 66: STATUS.DPLL0_FILTER_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL0_FILTER_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
044h	FILTER_STATUS[7:0]							
045h	FILTER_STATUS[15:8]							
046h	FILTER_STATUS[23:16]							
047h	FILTER_STATUS[31:24]							
048h	FILTER_STATUS[39:32]							
049h	FILTER_STATUS[47:40]							

STATUS.DPLL0_FILTER_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FILTER_STATUS[47:0]	R/O	0	DPLL loop filter status. If FILTER_STATUS_UPDATE_EN = "1", then FILTER_STATUS is a signed 48-bit FFO value in units of 2^(-53). If the DPLL is in phase measurement mode and the input TDC is configured for fine phase measurement, then the FILTER_STATUS is a signed 48-bit phase value in units of 50/128 picoseconds.

STATUS.DPLL1_FILTER_STATUS

DPLL 1 loop filter status.

Table 67: STATUS.DPLL1_FILTER_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL1_FILTER_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
04Ch	FILTER_STATUS[7:0]							
04Dh	FILTER_STATUS[15:8]							
04Eh	FILTER_STATUS[23:16]							
04Fh	FILTER_STATUS[31:24]							
050h	FILTER_STATUS[39:32]							
051h	FILTER_STATUS[47:40]							

STATUS.DPLL1_FILTER_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FILTER_STATUS[47:0]	R/O	0	DPLL loop filter status. If FILTER_STATUS_UPDATE_EN = "1", then FILTER_STATUS is a signed 48-bit FFO value in units of 2^(-53). If the DPLL is in phase measurement mode and the input TDC is configured for fine phase measurement, then the FILTER_STATUS is a signed 48-bit phase value in units of 50/128 picoseconds.

STATUS.DPLL2_FILTER_STATUS

DPLL 2 loop filter status.

Table 68: STATUS.DPLL2_FILTER_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL2_FILTER_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
054h	FILTER_STATUS[7:0]							
055h	FILTER_STATUS[15:8]							
056h	FILTER_STATUS[23:16]							
057h	FILTER_STATUS[31:24]							
058h	FILTER_STATUS[39:32]							
059h	FILTER_STATUS[47:40]							

STATUS.DPLL2_FILTER_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FILTER_STATUS[47:0]	R/O	0	DPLL loop filter status. If FILTER_STATUS_UPDATE_EN = "1", then FILTER_STATUS is a signed 48-bit FFO value in units of 2^(-53). If the DPLL is in phase measurement mode and the input TDC is configured for fine phase measurement, then the FILTER_STATUS is a signed 48-bit phase value in units of 50/128 picoseconds.

STATUS.DPLL3_FILTER_STATUS

DPLL 3 loop filter status.

Table 69: STATUS.DPLL3_FILTER_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL3_FILTER_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
05Ch	FILTER_STATUS[7:0]							
05Dh	FILTER_STATUS[15:8]							
05Eh	FILTER_STATUS[23:16]							
05Fh	FILTER_STATUS[31:24]							
060h	FILTER_STATUS[39:32]							
061h	FILTER_STATUS[47:40]							

STATUS.DPLL3_FILTER_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FILTER_STATUS[47:0]	R/O	0	DPLL loop filter status. If FILTER_STATUS_UPDATE_EN = "1", then FILTER_STATUS is a signed 48-bit FFO value in units of 2^(-53). If the DPLL is in phase measurement mode and the input TDC is configured for fine phase measurement, then the FILTER_STATUS is a signed 48-bit phase value in units of 50/128 picoseconds.

STATUS.DPLL4_FILTER_STATUS

DPLL 4 loop filter status.

Table 70: STATUS.DPLL4_FILTER_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL4_FILTER_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
064h	FILTER_STATUS[7:0]							
065h	FILTER_STATUS[15:8]							
066h	FILTER_STATUS[23:16]							
067h	FILTER_STATUS[31:24]							
068h	FILTER_STATUS[39:32]							
069h	FILTER_STATUS[47:40]							

STATUS.DPLL4_FILTER_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FILTER_STATUS[47:0]	R/O	0	DPLL loop filter status. If FILTER_STATUS_UPDATE_EN = "1", then FILTER_STATUS is a signed 48-bit FFO value in units of 2^(-53). If the DPLL is in phase measurement mode and the input TDC is configured for fine phase measurement, then the FILTER_STATUS is a signed 48-bit phase value in units of 50/128 picoseconds.

STATUS.DPLL5_FILTER_STATUS

DPLL 5 loop filter status.

Table 71: STATUS.DPLL5_FILTER_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL5_FILTER_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
06Ch	FILTER_STATUS[7:0]							
06Dh	FILTER_STATUS[15:8]							
06Eh	FILTER_STATUS[23:16]							
06Fh	FILTER_STATUS[31:24]							
070h	FILTER_STATUS[39:32]							
071h	FILTER_STATUS[47:40]							

STATUS.DPLL5_FILTER_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
FILTER_STATUS[47:0]	R/O	0	DPLL loop filter status. If FILTER_STATUS_UPDATE_EN = "1", then FILTER_STATUS is a signed 48-bit FFO value in units of 2^(-53). If the DPLL is in phase measurement mode and the input TDC is configured for fine phase measurement, then the FILTER_STATUS is a signed 48-bit phase value in units of 50/128 picoseconds.

STATUS.DPLL6_FILTER_STATUS

DPLL 6 loop filter status.

Table 72: STATUS.DPLL6_FILTER_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL6_FILTER_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
074h	FILTER_STATUS[7:0]							
075h	FILTER_STATUS[15:8]							
076h	FILTER_STATUS[23:16]							
077h	FILTER_STATUS[31:24]							
078h	FILTER_STATUS[39:32]							
079h	FILTER_STATUS[47:40]							

STATUS.DPLL6_FILTER_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FILTER_STATUS[47:0]	R/O	0	DPLL loop filter status. If FILTER_STATUS_UPDATE_EN = "1", then FILTER_STATUS is a signed 48-bit FFO value in units of 2^(-53). If the DPLL is in phase measurement mode and the input TDC is configured for fine phase measurement, then the FILTER_STATUS is a signed 48-bit phase value in units of 50/128 picoseconds.

STATUS.DPLL7_FILTER_STATUS

DPLL 7 loop filter status.

Table 73: STATUS.DPLL7_FILTER_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL7_FILTER_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
07Ch	FILTER_STATUS[7:0]							
07Dh	FILTER_STATUS[15:8]							
07Eh	FILTER_STATUS[23:16]							
07Fh	FILTER_STATUS[31:24]							
080h	FILTER_STATUS[39:32]							
081h	FILTER_STATUS[47:40]							

STATUS.DPLL7_FILTER_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FILTER_STATUS[47:0]	R/O	0	DPLL loop filter status. If FILTER_STATUS_UPDATE_EN = "1", then FILTER_STATUS is a signed 48-bit FFO value in units of 2^(-53). If the DPLL is in phase measurement mode and the input TDC is configured for fine phase measurement, then the FILTER_STATUS is a signed 48-bit phase value in units of 50/128 picoseconds.

STATUS.DPLL_SYS_FILTER_STATUS

Loop filter status of system DPLL .

Table 74: STATUS.DPLL_SYS_FILTER_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL_SYS_FILTER_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
084h	FILTER_STATUS[7:0]							
085h	FILTER_STATUS[15:8]							
086h	FILTER_STATUS[23:16]							
087h	FILTER_STATUS[31:24]							
088h	FILTER_STATUS[39:32]							
089h	FILTER_STATUS[47:40]							

STATUS.DPLL_SYS_FILTER_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
FILTER_STATUS[47:0]	R/O	0	System DPLL loop filter status. If FILTER_STATUS_UPDATE_EN = "1", then FILTER_STATUS is a signed 48-bit FFO value in units of 2^(-53).

STATUS.USER_GPIO0_TO_7_STATUS

GPIO 0 - 7 level status.

Table 75: STATUS.USER_GPIO0_TO_7_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.USER_GPIO0_TO_7_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
08Ah	GPIO7_LEVEL[7]	GPIO6_LEVEL[6]	GPIO5_LEVEL[5]	GPIO4_LEVEL[4]	GPIO3_LEVEL[3]	GPIO2_LEVEL[2]	GPIO1_LEVEL[1]	GPIO0_LEVEL[0]

STATUS.USER_GPIO0_TO_7_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
GPIO7_LEVEL[7]	R/O	0	Level of GPIO pin 7. 0 = low 1 = high
GPIO6_LEVEL[6]	R/O	0	Level of GPIO pin 6. 0 = low 1 = high
GPIO5_LEVEL[5]	R/O	0	Level of GPIO pin 5. 0 = low 1 = high

STATUS.USER_GPIO0_TO_7_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
GPIO4_LEVEL[4]	R/O	0	Level of GPIO pin 4. 0 = low 1 = high
GPIO3_LEVEL[3]	R/O	0	Level of GPIO pin 3. 0 = low 1 = high
GPIO2_LEVEL[2]	R/O	0	Level of GPIO pin 2. 0 = low 1 = high
GPIO1_LEVEL[1]	R/O	0	Level of GPIO pin 1. 0 = low 1 = high
GPIO0_LEVEL[0]	R/O	0	Level of GPIO pin 0. 0 = low 1 = high

STATUS.USER_GPIO8_TO_15_STATUS

GPIO 8 - 15 level status.

Table 76: STATUS.USER_GPIO8_TO_15_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.USER_GPIO8_TO_15_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
08Bh	GPIO15_LEVEL[7]	GPIO14_LEVEL[6]	GPIO13_LEVEL[5]	GPIO12_LEVEL[4]	GPIO11_LEVEL[3]	GPIO10_LEVEL[2]	GPIO9_LEVEL[1]	GPIO8_LEVEL[0]

STATUS.USER_GPIO8_TO_15_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
GPIO15_LEVEL[7]	R/O	0	Level of GPIO pin 15. 0 = low 1 = high
GPIO14_LEVEL[6]	R/O	0	Level of GPIO pin 14. 0 = low 1 = high
GPIO13_LEVEL[5]	R/O	0	Level of GPIO pin 13. 0 = low 1 = high
GPIO12_LEVEL[4]	R/O	0	Level of GPIO pin 12. 0 = low 1 = high

STATUS.USER_GPIO8_TO_15_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
GPIO11_LEVEL[3]	R/O	0	Level of GPIO pin 11. 0 = low 1 = high
GPIO10_LEVEL[2]	R/O	0	Level of GPIO pin 10. 0 = low 1 = high
GPIO9_LEVEL[1]	R/O	0	Level of GPIO pin 9. 0 = low 1 = high
GPIO8_LEVEL[0]	R/O	0	Level of GPIO pin 8. 0 = low 1 = high

STATUS.IN0_MON_FREQ_STATUS

Input 0 reference monitor frequency status and unit.

Table 77: STATUS.IN0_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN0_MON_FREQ_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
08Ch	FFO[7:0]							
08Dh	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN0_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN1_MON_FREQ_STATUS

Input 1 reference monitor frequency status and unit.

Table 78: STATUS.IN1_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN1_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
08Eh	FFO[7:0]							
08Fh	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN1_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN2_MON_FREQ_STATUS

Input 2 reference monitor frequency status and unit.

Table 79: STATUS.IN2_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN2_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
090h	FFO[7:0]							
091h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN2_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN3_MON_FREQ_STATUS

Input 3 reference monitor frequency status and unit.

Table 80: STATUS.IN3_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN3_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
092h	FFO[7:0]							
093h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN3_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN4_MON_FREQ_STATUS

Input 4 reference monitor frequency status and unit.

Table 81: STATUS.IN4_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN4_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
094h	FFO[7:0]							
095h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN4_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN5_MON_FREQ_STATUS

Input 5 reference monitor frequency status and unit.

Table 82: STATUS.IN5_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN5_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
096h	FFO[7:0]							
097h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN5_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN6_MON_FREQ_STATUS

Input 6 reference monitor frequency status and unit.

Table 83: STATUS.IN6_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN6_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
098h	FFO[7:0]							
099h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN6_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN7_MON_FREQ_STATUS

Input 7 reference monitor frequency status and unit.

Table 84: STATUS.IN7_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN7_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
09Ah	FFO[7:0]							
09Bh	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN7_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN8_MON_FREQ_STATUS

Input 8 reference monitor frequency status and unit.

Table 85: STATUS.IN8_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN8_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
09Ch	FFO[7:0]							
09Dh	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN8_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN9_MON_FREQ_STATUS

Input 9 reference monitor frequency status and unit.

Table 86: STATUS.IN9_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN9_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
09Eh	FFO[7:0]							
09Fh	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN9_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN10_MON_FREQ_STATUS

Input 10 reference monitor frequency status and unit.

Table 87: STATUS.IN10_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN10_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0A0h	FFO[7:0]							
0A1h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN10_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN11_MON_FREQ_STATUS

Input 11 reference monitor frequency status and unit.

Table 88: STATUS.IN11_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN11_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0A2h	FFO[7:0]							
0A3h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN11_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN12_MON_FREQ_STATUS

Input 12 reference monitor frequency status and unit.

Table 89: STATUS.IN12_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN12_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0A4h	FFO[7:0]							
0A5h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN12_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN13_MON_FREQ_STATUS

Input 13 reference monitor frequency status and unit.

Table 90: STATUS.IN13_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN13_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0A6h	FFO[7:0]							
0A7h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN13_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN14_MON_FREQ_STATUS

Input 14 reference monitor frequency status and unit.

Table 91: STATUS.IN14_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN14_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0A8h	FFO[7:0]							
0A9h	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN14_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.IN15_MON_FREQ_STATUS

Input 15 reference monitor frequency status and unit.

Table 92: STATUS.IN15_MON_FREQ_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.IN15_MON_FREQ_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0AAh	FFO[7:0]							
0ABh	FFO_UNIT[15:14]		FFO[13:8]					

STATUS.IN15_MON_FREQ_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[15:14]	R/O	0	Input clock FFO unit enumeration. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO[13:0]	R/O	0	Signed 14-bit input clock fractional frequency offset.

STATUS.OUTPUT_TDC_CFG_STATUS

Indicates when the output TDC is ready for use.

Table 93: STATUS.OUTPUT_TDC_CFG_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.OUTPUT_TDC_CFG_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0ACh	RESERVED[7:2]						STATE[1:0]	

STATUS.OUTPUT_TDC_CFG_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
STATE[1:0]	R/O	0	Indicates whether the output TDC is ready to be used. Output TDC is by default disabled. Need to enable with OUTPUT_TDC_CFG_GBL_2.enable. After enabling, it takes time for the output TDC clock to stabilize. Output TDC is ready for use when in Ready state. 0 = disabled 1 = initializing 2 = ready

STATUS.OUTPUT_TDC0_STATUS

Indicates the hardware output TDC instance assigned and the status code.

Table 94: STATUS.OUTPUT_TDC0_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.OUTPUT_TDC0_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0ADh	VALID[7]	RESERVED[6:4]			STATUS[3:0]			

STATUS.OUTPUT_TDC0_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
VALID[7]	R/O	0	Indicates a valid measurement or alignment has met target phase offset. When go bit is set, valid is cleared. Measurement mode: Indicates when OUTPUT_TDCn_MEASUREMENT is valid. Alignment mode: Indicates when all the alignment targets are within the OUTPUT_TDC_CTRL_1.TARGET_PHASE_OFFSET. 0 = invalid 1 = valid
RESERVED	N/A	-	This field must not be modified from the read value
STATUS[3:0]	R/O	0	Status code. When output TDC is not enabled, this shows 'Disabled'. When OUTPUT_TDC_CTRL_4.GO is set and the configuration is valid, this transitions to 'In progress'. When the operation completes successfully, status transitions back to 'Idle' and OUTPUT_TDC_CTRL_4.GO will be cleared. When OUTPUT_TDC_CTRL_4.GO is set and there is an invalid configuration, then OUTPUT_TDC_CTRL_4.GO will be cleared and this will indicate the error condition encountered. 0 = disabled 1 = idle 2 = in progress 3 = error - invalid source/target 4 = error - non-uniform master divider freq 5 = error - start failed 6 = error - measurement timeout

STATUS.OUTPUT_TDC1_STATUS

Indicates the hardware output TDC instance assigned and the status code.

Table 95: STATUS.OUTPUT_TDC1_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.OUTPUT_TDC1_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0AEh	VALID[7]	RESERVED[6:4]			STATUS[3:0]			

STATUS.OUTPUT_TDC1_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
VALID[7]	R/O	0	Indicates a valid measurement or alignment has met target phase offset. When go bit is set, valid is cleared. Measurement mode: Indicates when OUTPUT_TDCn_MEASUREMENT is valid. Alignment mode: Indicates when all the alignment targets are within the OUTPUT_TDC_CTRL_1.TARGET_PHASE_OFFSET. 0 = invalid 1 = valid
RESERVED	N/A	-	This field must not be modified from the read value
STATUS[3:0]	R/O	0	Status code. When output TDC is not enabled, this shows 'Disabled'. When OUTPUT_TDC_CTRL_4.GO is set and the configuration is valid, this transitions to 'In progress'. When the operation completes successfully, status transitions back to 'Idle' and OUTPUT_TDC_CTRL_4.GO will be cleared. When OUTPUT_TDC_CTRL_4.GO is set and there is an invalid configuration, then OUTPUT_TDC_CTRL_4.GO will be cleared and this will indicate the error condition encountered. 0 = disabled 1 = idle 2 = in progress 3 = error - invalid source/target 4 = error - non-uniform master divider freq 5 = error - start failed 6 = error - measurement timeout

STATUS.OUTPUT_TDC2_STATUS

Indicates the hardware output TDC instance assigned and the status code.

Table 96: STATUS.OUTPUT_TDC2_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.OUTPUT_TDC2_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
0AFh	VALID[7]	RESERVED[6:4]			STATUS[3:0]			

STATUS.OUTPUT_TDC2_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
VALID[7]	R/O	0	Indicates a valid measurement or alignment has met target phase offset. When go bit is set, valid is cleared. Measurement mode: Indicates when OUTPUT_TDCn_MEASUREMENT is valid. Alignment mode: Indicates when all the alignment targets are within the OUTPUT_TDC_CTRL_1.TARGET_PHASE_OFFSET. 0 = invalid 1 = valid
RESERVED	N/A	-	This field must not be modified from the read value
STATUS[3:0]	R/O	0	Status code. When output TDC is not enabled, this shows 'Disabled'. When OUTPUT_TDC_CTRL_4.GO is set and the configuration is valid, this transitions to 'In progress'. When the operation completes successfully, status transitions back to 'Idle' and OUTPUT_TDC_CTRL_4.GO will be cleared. When OUTPUT_TDC_CTRL_4.GO is set and there is an invalid configuration, then OUTPUT_TDC_CTRL_4.GO will be cleared and this will indicate the error condition encountered. 0 = disabled 1 = idle 2 = in progress 3 = error - invalid source/target 4 = error - non-uniform master divider freq 5 = error - start failed 6 = error - measurement timeout

STATUS.OUTPUT_TDC3_STATUS

Indicates the hardware output TDC instance assigned and the status code.

Table 97: STATUS.OUTPUT_TDC3_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.OUTPUT_TDC3_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
0B0h	VALID[7]	RESERVED[6:4]			STATUS[3:0]			

STATUS.OUTPUT_TDC3_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
VALID[7]	R/O	0	Indicates a valid measurement or alignment has met target phase offset. When go bit is set, valid is cleared. Measurement mode: Indicates when OUTPUT_TDCn_MEASUREMENT is valid. Alignment mode: Indicates when all the alignment targets are within the OUTPUT_TDC_CTRL_1.TARGET_PHASE_OFFSET. 0 = invalid 1 = valid
RESERVED	N/A	-	This field must not be modified from the read value
STATUS[3:0]	R/O	0	Status code. When output TDC is not enabled, this shows 'Disabled'. When OUTPUT_TDC_CTRL_4.GO is set and the configuration is valid, this transitions to 'In progress'. When the operation completes successfully, status transitions back to 'Idle' and OUTPUT_TDC_CTRL_4.GO will be cleared. When OUTPUT_TDC_CTRL_4.GO is set and there is an invalid configuration, then OUTPUT_TDC_CTRL_4.GO will be cleared and this will indicate the error condition encountered. 0 = disabled 1 = idle 2 = in progress 3 = error - invalid source/target 4 = error - non-uniform master divider freq 5 = error - start failed 6 = error - measurement timeout

STATUS.OUTPUT_TDC0_MEASUREMENT

Indicates output TDC 0 measurement.

Table 98: STATUS.OUTPUT_TDC0_MEASUREMENT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.OUTPUT_TDC0_MEASUREMENT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
0B4h	PHASE[7:0]							
0B5h	PHASE[15:8]							
0B6h	PHASE[23:16]							
0B7h	PHASE[31:24]							
0B8h	PHASE[39:32]							
0B9h	PHASE[47:40]							

STATUS.OUTPUT_TDC0_MEASUREMENT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PHASE[47:0]	R/O	0	Output TDC measurement. Signed 48-bit integer in picoseconds. Measurement = sum of samples / number of samples A sample is collected every 100us. Positive value indicates the target edge leads the source edge. i.e.. source edge is to the left of the target edge

STATUS.OUTPUT_TDC1_MEASUREMENT

Indicates output TDC 1 measurement.

Table 99: STATUS.OUTPUT_TDC1_MEASUREMENT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.OUTPUT_TDC1_MEASUREMENT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
0C4h	PHASE[7:0]							
0C5h	PHASE[15:8]							
0C6h	PHASE[23:16]							
0C7h	PHASE[31:24]							
0C8h	PHASE[39:32]							
0C9h	PHASE[47:40]							

STATUS.OUTPUT_TDC1_MEASUREMENT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PHASE[47:0]	R/O	0	Output TDC measurement. Signed 48-bit integer in picoseconds. Measurement = sum of samples / number of samples A sample is collected every 100us. Positive value indicates the target edge leads the source edge. i.e.. source edge is to the left of the target edge

STATUS.OUTPUT_TDC2_MEASUREMENT

Indicates output TDC 2 measurement.

Table 100: STATUS.OUTPUT_TDC2_MEASUREMENT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.OUTPUT_TDC2_MEASUREMENT Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0CCh	PHASE[7:0]							
0CDh	PHASE[15:8]							
0CEh	PHASE[23:16]							
0CFh	PHASE[31:24]							
0D0h	PHASE[39:32]							
0D1h	PHASE[47:40]							

STATUS.OUTPUT_TDC2_MEASUREMENT Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
PHASE[47:0]	R/O	0	Output TDC measurement. Signed 48-bit integer in picoseconds. Measurement = sum of samples / number of samples A sample is collected every 100us. Positive value indicates the target edge leads the source edge. i.e.. source edge is to the left of the target edge

STATUS.OUTPUT_TDC3_MEASUREMENT

Indicates output TDC 3 measurement.

Table 101: STATUS.OUTPUT_TDC3_MEASUREMENT Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.OUTPUT_TDC3_MEASUREMENT Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0D4h	PHASE[7:0]							
0D5h	PHASE[15:8]							
0D6h	PHASE[23:16]							
0D7h	PHASE[31:24]							
0D8h	PHASE[39:32]							
0D9h	PHASE[47:40]							

STATUS.OUTPUT_TDC3_MEASUREMENT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PHASE[47:0]	R/O	0	Output TDC measurement. Signed 48-bit integer in picoseconds. Measurement = sum of samples / number of samples A sample is collected every 100us. Positive value indicates the target edge leads the source edge. i.e.. source edge is to the left of the target edge

STATUS.DPLL0_PHASE_STATUS

Phase offset at output of decimator.

Table 102: STATUS.DPLL0_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL0_PHASE_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
0DCh	DPLL0_PHASE_STATUS[7:0]							
0DDh	DPLL0_PHASE_STATUS[15:8]							
0DEh	DPLL0_PHASE_STATUS[23:16]							
0DFh	DPLL0_PHASE_STATUS[31:24]							
0E0h	RESERVED[39:36]				DPLL0_PHASE_STATUS[35:32]			

STATUS.DPLL0_PHASE_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL0_PHASE_STATUS[35:0]	R/O	0	Signed 36-bit phase offset in ITDC_UIs. When used for phase measurement mode, the range is from (-2^34) to (2^34 - 1) ITDC_UI. If PHASE_STATUS is saturated, it is recommended to swap the two clocks being measured.

STATUS.DPLL1_PHASE_STATUS

Phase offset at output of decimator.

Table 103: STATUS.DPLL1_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL1_PHASE_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
0E4h	DPLL1_PHASE_STATUS[7:0]							

Table 103: STATUS.DPLL1_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL1_PHASE_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0E5h	DPLL1_PHASE_STATUS[15:8]							
0E6h	DPLL1_PHASE_STATUS[23:16]							
0E7h	DPLL1_PHASE_STATUS[31:24]							
0E8h	RESERVED[39:36]				DPLL1_PHASE_STATUS[35:32]			

STATUS.DPLL1_PHASE_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL1_PHASE_STATUS[35:0]	R/O	0	Signed 36-bit phase offset in ITDC_UIs. When used for phase measurement mode, the range is from (-2^34) to (2^34 - 1) ITDC_UI. If PHASE_STATUS is saturated, it is recommended to swap the two clocks being measured.

STATUS.DPLL2_PHASE_STATUS

Phase offset at output of decimator.

Table 104: STATUS.DPLL2_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL2_PHASE_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0ECh	DPLL2_PHASE_STATUS[7:0]							
0EDh	DPLL2_PHASE_STATUS[15:8]							
0EEh	DPLL2_PHASE_STATUS[23:16]							
0EFh	DPLL2_PHASE_STATUS[31:24]							
0F0h	RESERVED[39:36]				DPLL2_PHASE_STATUS[35:32]			

STATUS.DPLL2_PHASE_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL2_PHASE_STATUS[35:0]	R/O	0	Signed 36-bit phase offset in ITDC_UIs. When used for phase measurement mode, the range is from (-2^34) to (2^34 - 1) ITDC_UI. If PHASE_STATUS is saturated, it is recommended to swap the two clocks being measured.

STATUS.DPLL3_PHASE_STATUS

Phase offset at output of decimator.

Table 105: STATUS.DPLL3_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL3_PHASE_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0F4h	DPLL3_PHASE_STATUS[7:0]							
0F5h	DPLL3_PHASE_STATUS[15:8]							
0F6h	DPLL3_PHASE_STATUS[23:16]							
0F7h	DPLL3_PHASE_STATUS[31:24]							
0F8h	RESERVED[39:36]				DPLL3_PHASE_STATUS[35:32]			

STATUS.DPLL3_PHASE_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL3_PHASE_STATUS[35:0]	R/O	0	Signed 36-bit phase offset in ITDC_UIs. When used for phase measurement mode, the range is from (-2^34) to (2^34 - 1) ITDC_UI. If PHASE_STATUS is saturated, it is recommended to swap the two clocks being measured.

STATUS.DPLL4_PHASE_STATUS

Phase offset at output of decimator.

Table 106: STATUS.DPLL4_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL4_PHASE_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
0FCh	DPLL4_PHASE_STATUS[7:0]							
0FDh	DPLL4_PHASE_STATUS[15:8]							
0FEh	DPLL4_PHASE_STATUS[23:16]							
0FFh	DPLL4_PHASE_STATUS[31:24]							
100h	RESERVED[39:36]				DPLL4_PHASE_STATUS[35:32]			

STATUS.DPLL4_PHASE_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL4_PHASE_STATUS[35:0]	R/O	0	Signed 36-bit phase offset in ITDC_UIs. When used for phase measurement mode, the range is from (-2^34) to (2^34 - 1) ITDC_UI. If PHASE_STATUS is saturated, it is recommended to swap the two clocks being measured.

STATUS.DPLL5_PHASE_STATUS

Phase offset at output of decimator.

Table 107: STATUS.DPLL5_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL5_PHASE_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
104h	DPLL5_PHASE_STATUS[7:0]							
105h	DPLL5_PHASE_STATUS[15:8]							
106h	DPLL5_PHASE_STATUS[23:16]							
107h	DPLL5_PHASE_STATUS[31:24]							
108h	RESERVED[39:36]				DPLL5_PHASE_STATUS[35:32]			

STATUS.DPLL5_PHASE_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL5_PHASE_STATUS[35:0]	R/O	0	Signed 36-bit phase offset in ITDC_UIs. When used for phase measurement mode, the range is from (-2^34) to (2^34 - 1) ITDC_UI. If PHASE_STATUS is saturated, it is recommended to swap the two clocks being measured.

STATUS.DPLL6_PHASE_STATUS

Phase offset at output of decimator.

Table 108: STATUS.DPLL6_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL6_PHASE_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
10Ch	DPLL6_PHASE_STATUS[7:0]							

Table 108: STATUS.DPLL6_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL6_PHASE_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
10Dh	DPLL6_PHASE_STATUS[15:8]							
10Eh	DPLL6_PHASE_STATUS[23:16]							
10Fh	DPLL6_PHASE_STATUS[31:24]							
110h	RESERVED[39:36]				DPLL6_PHASE_STATUS[35:32]			

STATUS.DPLL6_PHASE_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL6_PHASE_STATUS[35:0]	R/O	0	Signed 36-bit phase offset in ITDC_UIs. When used for phase measurement mode, the range is from (-2^34) to (2^34 - 1) ITDC_UI. If PHASE_STATUS is saturated, it is recommended to swap the two clocks being measured.

STATUS.DPLL7_PHASE_STATUS

Phase offset at output of decimator.

Table 109: STATUS.DPLL7_PHASE_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL7_PHASE_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
114h	DPLL7_PHASE_STATUS[7:0]							
115h	DPLL7_PHASE_STATUS[15:8]							
116h	DPLL7_PHASE_STATUS[23:16]							
117h	DPLL7_PHASE_STATUS[31:24]							
118h	RESERVED[39:36]				DPLL7_PHASE_STATUS[35:32]			

STATUS.DPLL7_PHASE_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL7_PHASE_STATUS[35:0]	R/O	0	Signed 36-bit phase offset in ITDC_UIs. When used for phase measurement mode, the range is from (-2^34) to (2^34 - 1) ITDC_UI. If PHASE_STATUS is saturated, it is recommended to swap the two clocks being measured.

STATUS.DPLL0_PHASE_PULL_IN_STATUS

DPLL0 phase pull-in status

Table 110: STATUS.DPLL0_PHASE_PULL_IN_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL0_PHASE_PULL_IN_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
11Ch	REMAINING_TIME[7:0]							

STATUS.DPLL0_PHASE_PULL_IN_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
REMAINING_TIME[7:0]	R/O	0	Unsigned 8-bit phase pull-in time to finish in seconds. If the value of this field < 255, the actual remaining time is between (remaining_time) and (remaining_time + 1) seconds. If the value = 255, it implies the actual remaining time >= 255 seconds.

STATUS.DPLL1_PHASE_PULL_IN_STATUS

DPLL1 phase pull-in status

Table 111: STATUS.DPLL1_PHASE_PULL_IN_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL1_PHASE_PULL_IN_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
11Dh	REMAINING_TIME[7:0]							

STATUS.DPLL1_PHASE_PULL_IN_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
REMAINING_TIME[7:0]	R/O	0	Unsigned 8-bit phase pull-in time to finish in seconds. If the value of this field < 255, the actual remaining time is between (remaining_time) and (remaining_time + 1) seconds. If the value = 255, it implies the actual remaining time >= 255 seconds.

STATUS.DPLL2_PHASE_PULL_IN_STATUS

DPLL2 phase pull-in status

Table 112: STATUS.DPLL2_PHASE_PULL_IN_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL2_PHASE_PULL_IN_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
11Eh	REMAINING_TIME[7:0]							

STATUS.DPLL2_PHASE_PULL_IN_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
REMAINING_TIME[7:0]	R/O	0	Unsigned 8-bit phase pull-in time to finish in seconds. If the value of this field < 255, the actual remaining time is between (remaining_time) and (remaining_time + 1) seconds. If the value = 255, it implies the actual remaining time >= 255 seconds.

STATUS.DPLL3_PHASE_PULL_IN_STATUS

DPLL3 phase pull-in status

Table 113: STATUS.DPLL3_PHASE_PULL_IN_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL3_PHASE_PULL_IN_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
11Fh	REMAINING_TIME[7:0]							

STATUS.DPLL3_PHASE_PULL_IN_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
REMAINING_TIME[7:0]	R/O	0	Unsigned 8-bit phase pull-in time to finish in seconds. If the value of this field < 255, the actual remaining time is between (remaining_time) and (remaining_time + 1) seconds. If the value = 255, it implies the actual remaining time >= 255 seconds.

STATUS.DPLL4_PHASE_PULL_IN_STATUS

DPLL4 phase pull-in status

Table 114: STATUS.DPLL4_PHASE_PULL_IN_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL4_PHASE_PULL_IN_STATUS Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
120h	REMAINING_TIME[7:0]							

STATUS.DPLL4_PHASE_PULL_IN_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
REMAINING_TIME[7:0]	R/O	0	Unsigned 8-bit phase pull-in time to finish in seconds. If the value of this field < 255, the actual remaining time is between (remaining_time) and (remaining_time + 1) seconds. If the value = 255, it implies the actual remaining time >= 255 seconds.

STATUS.DPLL5_PHASE_PULL_IN_STATUS

DPLL5 phase pull-in status

Table 115: STATUS.DPLL5_PHASE_PULL_IN_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL5_PHASE_PULL_IN_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
121h	REMAINING_TIME[7:0]							

STATUS.DPLL5_PHASE_PULL_IN_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
REMAINING_TIME[7:0]	R/O	0	Unsigned 8-bit phase pull-in time to finish in seconds. If the value of this field < 255, the actual remaining time is between (remaining_time) and (remaining_time + 1) seconds. If the value = 255, it implies the actual remaining time >= 255 seconds.

STATUS.DPLL6_PHASE_PULL_IN_STATUS

DPLL6 phase pull-in status

Table 116: STATUS.DPLL6_PHASE_PULL_IN_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL6_PHASE_PULL_IN_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
122h	REMAINING_TIME[7:0]							

STATUS.DPLL6_PHASE_PULL_IN_STATUS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
REMAINING_TIME[7:0]	R/O	0	Unsigned 8-bit phase pull-in time to finish in seconds. If the value of this field < 255, the actual remaining time is between (remaining_time) and (remaining_time + 1) seconds. If the value = 255, it implies the actual remaining time >= 255 seconds.

STATUS.DPLL7_PHASE_PULL_IN_STATUS

DPLL7 phase pull-in status

Table 117: STATUS.DPLL7_PHASE_PULL_IN_STATUS Bit Field Locations and Descriptions

Offset Address (Hex)	STATUS.DPLL7_PHASE_PULL_IN_STATUS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
123h	REMAINING_TIME[7:0]							

STATUS.DPLL7_PHASE_PULL_IN_STATUS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
REMAINING_TIME[7:0]	R/O	0	Unsigned 8-bit phase pull-in time to finish in seconds. If the value of this field < 255, the actual remaining time is between (remaining_time) and (remaining_time + 1) seconds. If the value = 255, it implies the actual remaining time >= 255 seconds.

Module: GPIO_USER_CONTROL

Configures the controls of the GPIO .

Table 118: GPIO_USER_CONTROL Register Index

Offset (Hex)	Register Module Base Address: C160h	
	Individual Register Name	**Register Description**
000h	RESERVED	This register must not be modified from the read value
001h	RESERVED	This register must not be modified from the read value
002h	GPIO_USER_CONTROL.GPIO0_TO_7_OUT	GPIO output control.
003h	GPIO_USER_CONTROL.GPIO8_TO_15_OUT	GPIO output control.

GPIO_USER_CONTROL.GPIO0_TO_7_OUT

Write these bits to define the level on a GPIO output pin when configured for user output control.

Table 119: GPIO_USER_CONTROL.GPIO0_TO_7_OUT Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_USER_CONTROL.GPIO0_TO_7_OUT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	GPIO7_DRIVE_LEVEL[7]	GPIO6_DRIVE_LEVEL[6]	GPIO5_DRIVE_LEVEL[5]	GPIO4_DRIVE_LEVEL[4]	GPIO3_DRIVE_LEVEL[3]	GPIO2_DRIVE_LEVEL[2]	GPIO1_DRIVE_LEVEL[1]	GPIO0_DRIVE_LEVEL[0]

GPIO_USER_CONTROL.GPIO0_TO_7_OUT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
GPIO7_DRIVE_LEVEL[7]	R/W	0	GPIO pin 7 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO6_DRIVE_LEVEL[6]	R/W	0	GPIO pin 6 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high

GPIO_USER_CONTROL.GPIO0_TO_7_OUT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
GPIO5_DRIVE_LEVEL[5]	R/W	0	GPIO pin 5 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO4_DRIVE_LEVEL[4]	R/W	0	GPIO pin 4 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO3_DRIVE_LEVEL[3]	R/W	0	GPIO pin 3 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO2_DRIVE_LEVEL[2]	R/W	0	GPIO pin 2 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO1_DRIVE_LEVEL[1]	R/W	0	GPIO pin 1 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO0_DRIVE_LEVEL[0]	R/W	0	GPIO pin 0 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high

GPIO_USER_CONTROL.GPIO8_TO_15_OUT

Write these bits to define the level on a GPIO output pin when configured for user output control.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the GPIO_USER_CONTROL module.

Table 120: GPIO_USER_CONTROL.GPIO8_TO_15_OUT Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_USER_CONTROL.GPIO8_TO_15_OUT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
003h	GPIO15_DRIVE_LEVEL[7]	GPIO14_DRIVE_LEVEL[6]	GPIO13_DRIVE_LEVEL[5]	GPIO12_DRIVE_LEVEL[4]	GPIO11_DRIVE_LEVEL[3]	GPIO10_DRIVE_LEVEL[2]	GPIO9_DRIVE_LEVEL[1]	GPIO8_DRIVE_LEVEL[0]

GPIO_USER_CONTROL.GPIO8_TO_15_OUT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
GPIO15_DRIVE_LEVEL[7]	R/W	0	GPIO pin 15 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO14_DRIVE_LEVEL[6]	R/W	0	GPIO pin 14 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO13_DRIVE_LEVEL[5]	R/W	0	GPIO pin 13 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO12_DRIVE_LEVEL[4]	R/W	0	GPIO pin 12 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO11_DRIVE_LEVEL[3]	R/W	0	GPIO pin 11 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO10_DRIVE_LEVEL[2]	R/W	0	GPIO pin 10 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO9_DRIVE_LEVEL[1]	R/W	0	GPIO pin 9 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high
GPIO8_DRIVE_LEVEL[0]	R/W	0	GPIO pin 8 drive level. Valid only if GPIO_FUNCTION is disabled and 'gpio_control_dir' is output. 0 = drive low 1 = drive high

Module: STICKY_STATUS_CLEAR

TRIGGER: Every register in this module is a trigger register. In the case of a multibyte register the highest address register byte is the trigger byte.

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Table 121: STICKY_STATUS_CLEAR Register Index

Offset (Hex)	Register Module Base Address: C164h	
	Individual Register Name	Register Description
000h	STICKY_STATUS_CLEAR.IN0_TO_7_MON_STICKY_STATUS_CLEAR	Clear sticky reference monitor status.
001h	STICKY_STATUS_CLEAR.IN8_TO_15_MON_STICKY_STATUS_CLEAR	Clear sticky reference monitor status.
002h	STICKY_STATUS_CLEAR.DPLL_STICKY_STATUS_CLEAR	Clear sticky DPLL status.
003h	STICKY_STATUS_CLEAR.DPLL_SYS_STICKY_STATUS_CLEAR	Clear sticky system DPLL status.
004h	STICKY_STATUS_CLEAR.SYS_APLL_STICKY_STATUS_CLEAR	Clear sticky system APLL status.
005h	STICKY_STATUS_CLEAR.ALL_STICKY_STATUS_CLEAR	Clear all sticky status bits.

STICKY_STATUS_CLEAR.IN0_TO_7_MON_STICKY_STATUS_CLEAR

Clear sticky reference monitor bits for a particular input.

Table 122: STICKY_STATUS_CLEAR.IN0_TO_7_MON_STICKY_STATUS_CLEAR Bit Field Locations and Descriptions

Offset Address (Hex)	STICKY_STATUS_CLEAR.IN0_TO_7_MON_STICKY_STATUS_CLEAR Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	IN7_MON_STICKY_CLEAR[7]	IN6_MON_STICKY_CLEAR[6]	IN5_MON_STICKY_CLEAR[5]	IN4_MON_STICKY_CLEAR[4]	IN3_MON_STICKY_CLEAR[3]	IN2_MON_STICKY_CLEAR[2]	IN1_MON_STICKY_CLEAR[1]	IN0_MON_STICKY_CLEAR[0]

STICKY_STATUS_CLEAR.IN0_TO_7_MON_STICKY_STATUS_CLEAR Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
IN7_MON_STICKY_CLEAR[7]	RW1C	0	Write 1 to clear the sticky bits of input 7.
IN6_MON_STICKY_CLEAR[6]	RW1C	0	Write 1 to clear the sticky bits of input 6.
IN5_MON_STICKY_CLEAR[5]	RW1C	0	Write 1 to clear the sticky bits of input 5.
IN4_MON_STICKY_CLEAR[4]	RW1C	0	Write 1 to clear the sticky bits of input 4.
IN3_MON_STICKY_CLEAR[3]	RW1C	0	Write 1 to clear the sticky bits of input 3.

STICKY_STATUS_CLEAR.IN0_TO_7_MON_STICKY_STATUS_CLEAR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN2_MON_STICKY_CLEAR[2]	RW1C	0	Write 1 to clear the sticky bits of input 2.
IN1_MON_STICKY_CLEAR[1]	RW1C	0	Write 1 to clear the sticky bits of input 1.
IN0_MON_STICKY_CLEAR[0]	RW1C	0	Write 1 to clear the sticky bits of input 0.

STICKY_STATUS_CLEAR.IN8_TO_15_MON_STICKY_STATUS_CLEAR

Clear sticky reference monitor bits for a particular input.

Table 123: STICKY_STATUS_CLEAR.IN8_TO_15_MON_STICKY_STATUS_CLEAR Bit Field Locations and Descriptions

Offset Address (Hex)	STICKY_STATUS_CLEAR.IN8_TO_15_MON_STICKY_STATUS_CLEAR Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
001h	IN15_MON_STICKY_CLEAR[7]	IN14_MON_STICKY_CLEAR[6]	IN13_MON_STICKY_CLEAR[5]	IN12_MON_STICKY_CLEAR[4]	IN11_MON_STICKY_CLEAR[3]	IN10_MON_STICKY_CLEAR[2]	IN9_MON_STICKY_CLEAR[1]	IN8_MON_STICKY_CLEAR[0]

STICKY_STATUS_CLEAR.IN8_TO_15_MON_STICKY_STATUS_CLEAR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN15_MON_STICKY_CLEAR[7]	RW1C	0	Write 1 to clear the sticky bits of input 15.
IN14_MON_STICKY_CLEAR[6]	RW1C	0	Write 1 to clear the sticky bits of input 14.
IN13_MON_STICKY_CLEAR[5]	RW1C	0	Write 1 to clear the sticky bits of input 13.
IN12_MON_STICKY_CLEAR[4]	RW1C	0	Write 1 to clear the sticky bits of input 12.
IN11_MON_STICKY_CLEAR[3]	RW1C	0	Write 1 to clear the sticky bits of input 11.
IN10_MON_STICKY_CLEAR[2]	RW1C	0	Write 1 to clear the sticky bits of input 10.
IN9_MON_STICKY_CLEAR[1]	RW1C	0	Write 1 to clear the sticky bits of input 9.
IN8_MON_STICKY_CLEAR[0]	RW1C	0	Write 1 to clear the sticky bits of input 8.

STICKY_STATUS_CLEAR.DPLL_STICKY_STATUS_CLEAR

Clear sticky state change bits for a particular DPLL.

Table 124: STICKY_STATUS_CLEAR.DPLL_STICKY_STATUS_CLEAR Bit Field Locations and Descriptions

Offset Address (Hex)	STICKY_STATUS_CLEAR.DPLL_STICKY_STATUS_CLEAR Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	DPLL7_STICKY_CLEAR[7]	DPLL6_STICKY_CLEAR[6]	DPLL5_STICKY_CLEAR[5]	DPLL4_STICKY_CLEAR[4]	DPLL3_STICKY_CLEAR[3]	DPLL2_STICKY_CLEAR[2]	DPLL1_STICKY_CLEAR[1]	DPLL0_STICKY_CLEAR[0]

STICKY_STATUS_CLEAR.DPLL_STICKY_STATUS_CLEAR Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DPLL7_STICKY_CLEAR[7]	RW1C	0	Write 1 to clear the sticky bits of DPLL 7.
DPLL6_STICKY_CLEAR[6]	RW1C	0	Write 1 to clear the sticky bits of DPLL 6.
DPLL5_STICKY_CLEAR[5]	RW1C	0	Write 1 to clear the sticky bits of DPLL 5.
DPLL4_STICKY_CLEAR[4]	RW1C	0	Write 1 to clear the sticky bits of DPLL 4.
DPLL3_STICKY_CLEAR[3]	RW1C	0	Write 1 to clear the sticky bits of DPLL 3.
DPLL2_STICKY_CLEAR[2]	RW1C	0	Write 1 to clear the sticky bits of DPLL 2.
DPLL1_STICKY_CLEAR[1]	RW1C	0	Write 1 to clear the sticky bits of DPLL 1.
DPLL0_STICKY_CLEAR[0]	RW1C	0	Write 1 to clear the sticky bits of DPLL 0.

STICKY_STATUS_CLEAR.DPLL_SYS_STICKY_STATUS_CLEAR

Clear sticky state change bits for system DPLL.

Table 125: STICKY_STATUS_CLEAR.DPLL_SYS_STICKY_STATUS_CLEAR Bit Field Locations and Descriptions

Offset Address (Hex)	STICKY_STATUS_CLEAR.DPLL_SYS_STICKY_STATUS_CLEAR Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
003h	RESERVED[7:1]							DPLL_SYS_STICKY_CLEAR[0]

STICKY_STATUS_CLEAR.DPLL_SYS_STICKY_STATUS_CLEAR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_SYS_STICKY_CLEAR[0]	RW1C	0	Write 1 to clear the sticky bits of system DPLL.

STICKY_STATUS_CLEAR.SYS_APLL_STICKY_STATUS_CLEAR

Clear sticky loss-of-lock bit for system APLL.

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Table 126: STICKY_STATUS_CLEAR.SYS_APLL_STICKY_STATUS_CLEAR Bit Field Locations and Descriptions

Offset Address (Hex)	STICKY_STATUS_CLEAR.SYS_APLL_STICKY_STATUS_CLEAR Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	RESERVED[7:1]							SYS_APLL_STICKY_CLEAR[0]

STICKY_STATUS_CLEAR.SYS_APLL_STICKY_STATUS_CLEAR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
SYS_APLL_STICKY_CLEAR[0]	RW1C	0	Write 1 to clear the sticky bit of system APLL.

STICKY_STATUS_CLEAR.ALL_STICKY_STATUS_CLEAR

Clear all sticky status bits in the STATUS module.

Table 127: STICKY_STATUS_CLEAR.ALL_STICKY_STATUS_CLEAR Bit Field Locations and Descriptions

Offset Address (Hex)	STICKY_STATUS_CLEAR.ALL_STICKY_STATUS_CLEAR Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
005h	RESERVED[7:1]							ALL_STICKY_CLEAR[0]

STICKY_STATUS_CLEAR.ALL_STICKY_STATUS_CLEAR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
ALL_STICKY_CLEAR[0]	RW1C	0	Write 1 to clear all sticky bits.

Module: GPIO_TOD_NOTIFICATION_CLEAR

TRIGGER: Writing to any byte of this module triggers a read and activation in hardware of all the bytes of the SYS_TOD_NOTIFICATION_CLEAR module.

Table 128: GPIO_TOD_NOTIFICATION_CLEAR Register Index

Offset (Hex)	Register Module Base Address: C16Ch	
	Individual Register Name	Register Description
000h	GPIO_TOD_NOTIFICATION_CLEAR.GPIO0_TO_7_CLEAR	Clear GPIO output time of day read notification.
001h	GPIO_TOD_NOTIFICATION_CLEAR.GPIO8_TO_15_CLEAR	Clear GPIO output time of day read notification.

GPIO_TOD_NOTIFICATION_CLEAR.GPIO0_TO_7_CLEAR

Clear GPIO output time of day read notification.

Table 129: GPIO_TOD_NOTIFICATION_CLEAR.GPIO0_TO_7_CLEAR Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_TOD_NOTIFICATION_CLEAR.GPIO0_TO_7_CLEAR Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	GPIO7_CLEAR[7]	GPIO6_CLEAR[6]	GPIO5_CLEAR[5]	GPIO4_CLEAR[4]	GPIO3_CLEAR[3]	GPIO2_CLEAR[2]	GPIO1_CLEAR[1]	GPIO0_CLEAR[0]

GPIO_TOD_NOTIFICATION_CLEAR.GPIO0_TO_7_CLEAR Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
GPIO7_CLEAR[7]	RW1C	0	Write 1 to clear GPIO7 assertion.
GPIO6_CLEAR[6]	RW1C	0	Write 1 to clear GPIO6 assertion.
GPIO5_CLEAR[5]	RW1C	0	Write 1 to clear GPIO5 assertion.
GPIO4_CLEAR[4]	RW1C	0	Write 1 to clear GPIO4 assertion.
GPIO3_CLEAR[3]	RW1C	0	Write 1 to clear GPIO3 assertion.
GPIO2_CLEAR[2]	RW1C	0	Write 1 to clear GPIO2 assertion.
GPIO1_CLEAR[1]	RW1C	0	Write 1 to clear GPIO1 assertion.
GPIO0_CLEAR[0]	RW1C	0	Write 1 to clear GPIO0 assertion.

GPIO_TOD_NOTIFICATION_CLEAR.GPIO8_TO_15_CLEAR

Clear GPIO output time of day read notification.

Table 130: GPIO_TOD_NOTIFICATION_CLEAR.GPIO8_TO_15_CLEAR Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_TOD_NOTIFICATION_CLEAR.GPIO8_TO_15_CLEAR Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	GPIO15_CLEAR[7]	GPIO14_CLEAR[6]	GPIO13_CLEAR[5]	GPIO12_CLEAR[4]	GPIO11_CLEAR[3]	GPIO10_CLEAR[2]	GPIO9_CLEAR[1]	GPIO8_CLEAR[0]

GPIO_TOD_NOTIFICATION_CLEAR.GPIO8_TO_15_CLEAR Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
GPIO15_CLEAR[7]	RW1C	0	Write 1 to clear GPIO15 assertion.
GPIO14_CLEAR[6]	RW1C	0	Write 1 to clear GPIO14 assertion.
GPIO13_CLEAR[5]	RW1C	0	Write 1 to clear GPIO13 assertion.
GPIO12_CLEAR[4]	RW1C	0	Write 1 to clear GPIO12 assertion.
GPIO11_CLEAR[3]	RW1C	0	Write 1 to clear GPIO11 assertion.
GPIO10_CLEAR[2]	RW1C	0	Write 1 to clear GPIO10 assertion.
GPIO9_CLEAR[1]	RW1C	0	Write 1 to clear GPIO9 assertion.
GPIO8_CLEAR[0]	RW1C	0	Write 1 to clear GPIO8 assertion.

Module: ALERT_CFG

Global alert configuration.

Table 131: ALERT_CFG Register Index

Offset (Hex)	Register Module Base Address: C188h	
	Individual Register Name	Register Description
000h	RESERVED	This register must not be modified from the read value
001h	ALERT_CFG.IN1_0_MON_ALERT_MASK	GPIO alert enable masks for reference monitors 0 and 1.
002h	ALERT_CFG.IN3_2_MON_ALERT_MASK	GPIO alert enable masks for reference monitors 2 and 3.
003h	ALERT_CFG.IN5_4_MON_ALERT_MASK	GPIO alert enable masks for reference monitors 4 and 5.
004h	ALERT_CFG.IN7_6_MON_ALERT_MASK	GPIO alert enable masks for reference monitors 6 and 7.
005h	ALERT_CFG.IN9_8_MON_ALERT_MASK	GPIO alert enable masks for reference monitors 8 and 9.
006h	ALERT_CFG.IN11_10_MON_ALERT_MASK	GPIO alert enable masks for reference monitors 10 and 11.
007h	ALERT_CFG.IN13_12_MON_ALERT_MASK	GPIO alert enable masks for reference monitors 12 and 13.

Table 131: ALERT_CFG Register Index

Offset (Hex)	Register Module Base Address: C188h	
	Individual Register Name	Register Description
008h	ALERT_CFG.IN15_14_MON_ALERT_MASK	GPIO alert enable masks for reference monitors 14 and 15.
009h	ALERT_CFG.DPLL3_2_1_0_ALERT_MASK	GPIO alert enable masks for DPLL 0,1, 2 and 3.
00Ah	ALERT_CFG.DPLL7_6_5_4_ALERT_MASK	GPIO alert enable masks for DPLLs 4, 5, 6 and 7.
00Bh	ALERT_CFG.SYS_ALERT_MASK	GPIO alert enable masks for system DPLL and system APLL.

ALERT_CFG.IN1_0_MON_ALERT_MASK

GPIO alert enable masks (transient, frequency offset, no activity, loss of signal) for reference monitors 0 and 1.

Table 132: ALERT_CFG.IN1_0_MON_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.IN1_0_MON_ALERT_MASK Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	IN1_TRANS_DETECT_MASK[7]	IN1_FREQ_OFFS_LIM_MASK[6]	IN1_NO_ACTIVITY_MASK[5]	IN1_LOS_MASK[4]	IN0_TRANS_DETECT_MASK[3]	IN0_FREQ_OFFS_LIM_MASK[2]	IN0_NO_ACTIVITY_MASK[1]	IN0_LOS_MASK[0]

ALERT_CFG.IN1_0_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
IN1_TRANS_DETECT_MASK[7]	R/W	0	Input 1 transient detector mask. If enabled, GPIO alert becomes active when in1_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN1_FREQ_OFFS_LIM_MASK[6]	R/W	0	Input 1 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in1_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN1_NO_ACTIVITY_MASK[5]	R/W	0	Input 1 no activity enable mask. If enabled, GPIO alert becomes active when in1_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN1_LOS_MASK[4]	R/W	0	Input 1 LOS enable mask. If enabled, GPIO alert becomes active when in1_los_sticky bit is set. 0 = disabled 1 = enabled
IN0_TRANS_DETECT_MASK[3]	R/W	0	Input 0 transient detector mask. If enabled, GPIO alert becomes active when in0_trans_detect_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN1_0_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN0_FREQ_OFFS_LIM_MASK[2]	R/W	0	Input 0 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in0_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN0_NO_ACTIVITY_MASK[1]	R/W	0	Input 0 no activity enable mask. If enabled, GPIO alert becomes active when in0_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN0_LOS_MASK[0]	R/W	0	Input 0 LOS enable mask. If enabled, GPIO alert becomes active when in0_los_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN3_2_MON_ALERT_MASK

GPIO alert enable masks (transient, frequency offset, no activity, loss of signal) for reference monitors 2 and 3.

Table 133: ALERT_CFG.IN3_2_MON_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.IN3_2_MON_ALERT_MASK Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	IN3_TRANS_DETECT_MASK[7]	IN3_FREQ_OFFS_LIM_MASK[6]	IN3_NO_ACTIVITY_MASK[5]	IN3_LOS_MASK[4]	IN2_TRANS_DETECT_MASK[3]	IN2_FREQ_OFFS_LIM_MASK[2]	IN2_NO_ACTIVITY_MASK[1]	IN2_LOS_MASK[0]

ALERT_CFG.IN3_2_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN3_TRANS_DETECT_MASK[7]	R/W	0	Input 3 transient detector mask. If enabled, GPIO alert becomes active when in3_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN3_FREQ_OFFS_LIM_MASK[6]	R/W	0	Input 3 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in3_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN3_NO_ACTIVITY_MASK[5]	R/W	0	Input 3 no activity enable mask. If enabled, GPIO alert becomes active when in3_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN3_LOS_MASK[4]	R/W	0	Input 3 LOS enable mask. If enabled, GPIO alert becomes active when in3_los_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN3_2_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN2_TRANS_DETECT_MASK[3]	R/W	0	Input 2 transient detector mask. If enabled, GPIO alert becomes active when in2_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN2_FREQ_OFFS_LIM_MASK[2]	R/W	0	Input 2 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in2_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN2_NO_ACTIVITY_MASK[1]	R/W	0	Input 2 no activity enable mask. If enabled, GPIO alert becomes active when in2_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN2_LOS_MASK[0]	R/W	0	Input 2 LOS enable mask. If enabled, GPIO alert becomes active when in2_los_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN5_4_MON_ALERT_MASK

GPIO alert enable masks (transient, frequency offset, no activity, loss of signal) for reference monitors 4 and 5.

Table 134: ALERT_CFG.IN5_4_MON_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.IN5_4_MON_ALERT_MASK Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
003h	IN5_TRANS_DETECT_MASK[7]	IN5_FREQ_OFFS_LIM_MASK[6]	IN5_NO_ACTIVITY_MASK[5]	IN5_LOS_MASK[4]	IN4_TRANS_DETECT_MASK[3]	IN4_FREQ_OFFS_LIM_MASK[2]	IN4_NO_ACTIVITY_MASK[1]	IN4_LOS_MASK[0]

ALERT_CFG.IN5_4_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN5_TRANS_DETECT_MASK[7]	R/W	0	Input 5 transient detector mask. If enabled, GPIO alert becomes active when in5_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN5_FREQ_OFFS_LIM_MASK[6]	R/W	0	Input 5 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in5_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN5_NO_ACTIVITY_MASK[5]	R/W	0	Input 5 no activity enable mask. If enabled, GPIO alert becomes active when in5_no_activity_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN5_4_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN5_LOS_MASK[4]	R/W	0	Input 5 LOS enable mask. If enabled, GPIO alert becomes active when in5_los_sticky bit is set. 0 = disabled 1 = enabled
IN4_TRANS_DETECT_MASK[3]	R/W	0	Input 4 transient detector mask. If enabled, GPIO alert becomes active when in4_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN4_FREQ_OFFS_LIM_MASK[2]	R/W	0	Input 4 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in4_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN4_NO_ACTIVITY_MASK[1]	R/W	0	Input 4 no activity enable mask. If enabled, GPIO alert becomes active when in4_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN4_LOS_MASK[0]	R/W	0	Input 4 LOS enable mask. If enabled, GPIO alert becomes active when in4_los_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN7_6_MON_ALERT_MASK

GPIO alert enable masks (transient, frequency offset, no activity, loss of signal) for reference monitors 7 and 6.

Table 135: ALERT_CFG.IN7_6_MON_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.IN7_6_MON_ALERT_MASK Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	IN7_TRANS_DETECT_MASK[7]	IN7_FREQ_OFFS_LIM_MASK[6]	IN7_NO_ACTIVITY_MASK[5]	IN7_LOS_MASK[4]	IN6_TRANS_DETECT_MASK[3]	IN6_FREQ_OFFS_LIM_MASK[2]	IN6_NO_ACTIVITY_MASK[1]	IN6_LOS_MASK[0]

ALERT_CFG.IN7_6_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN7_TRANS_DETECT_MASK[7]	R/W	0	Input 7 transient detector mask. If enabled, GPIO alert becomes active when in7_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN7_FREQ_OFFS_LIM_MASK[6]	R/W	0	Input 7 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in7_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN7_6_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN7_NO_ACTIVITY_MASK [5]	R/W	0	Input 7 no activity enable mask. If enabled, GPIO alert becomes active when in7_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN7_LOS_MASK[4]	R/W	0	Input 7 LOS enable mask. If enabled, GPIO alert becomes active when in7_los_sticky bit is set. 0 = disabled 1 = enabled
IN6_TRANS_DETECT_MASK[3]	R/W	0	Input 6 transient detector mask. If enabled, GPIO alert becomes active when in6_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN6_FREQ_OFFS_LIM_MASK[2]	R/W	0	Input 6 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in6_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN6_NO_ACTIVITY_MASK [1]	R/W	0	Input 6 no activity enable mask. If enabled, GPIO alert becomes active when in6_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN6_LOS_MASK[0]	R/W	0	Input 6 LOS enable mask. If enabled, GPIO alert becomes active when in6_los_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN9_8_MON_ALERT_MASK

GPIO alert enable masks (transient, frequency offset, no activity, loss of signal) for reference monitors 8 and 9.

Table 136: ALERT_CFG.IN9_8_MON_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.IN9_8_MON_ALERT_MASK Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
005h	IN9_TRANS_DETECT_MASK[7]	IN9_FREQ_OFFS_LIM_MASK[6]	IN9_NO_ACTIVITY_MASK[5]	IN9_LOS_MASK[4]	IN8_TRANS_DETECT_MASK[3]	IN8_FREQ_OFFS_LIM_MASK[2]	IN8_NO_ACTIVITY_MASK[1]	IN8_LOS_MASK[0]

ALERT_CFG.IN9_8_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN9_TRANS_DETECT_MASK[7]	R/W	0	Input 9 transient detector mask. If enabled, GPIO alert becomes active when in9_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN9_FREQ_OFFS_LIM_MASK[6]	R/W	0	Input 9 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in9_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN9_NO_ACTIVITY_MASK[5]	R/W	0	Input 9 no activity enable mask. If enabled, GPIO alert becomes active when in9_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN9_LOS_MASK[4]	R/W	0	Input 9 LOS enable mask. If enabled, GPIO alert becomes active when in9_los_sticky bit is set. 0 = disabled 1 = enabled
IN8_TRANS_DETECT_MASK[3]	R/W	0	Input 8 transient detector mask. If enabled, GPIO alert becomes active when in8_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN8_FREQ_OFFS_LIM_MASK[2]	R/W	0	Input 8 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in8_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN8_NO_ACTIVITY_MASK[1]	R/W	0	Input 8 no activity enable mask. If enabled, GPIO alert becomes active when in8_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN8_LOS_MASK[0]	R/W	0	Input 8 LOS enable mask. If enabled, GPIO alert becomes active when in08_los_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN11_10_MON_ALERT_MASK

GPIO alert enable masks (transient, frequency offset, no activity, loss of signal) for reference monitors 10 and 11.

Table 137: ALERT_CFG.IN11_10_MON_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.IN11_10_MON_ALERT_MASK Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
006h	IN11_TRANS_DETECT_MASK[7]	IN11_FREQ_OFFS_LIM_MASK[6]	IN11_NO_ACTIVITY_MASK[5]	IN11_LOS_MASK[4]	IN10_TRANS_DETECT_MASK[3]	IN10_FREQ_OFFS_LIM_MASK[2]	IN10_NO_ACTIVITY_MASK[1]	IN10_LOS_MASK[0]

ALERT_CFG.IN11_10_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN11_TRANS_DETECT_MASK[7]	R/W	0	Input 11 transient detector mask. If enabled, GPIO alert becomes active when in11_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN11_FREQ_OFFS_LIM_MASK[6]	R/W	0	Input 11 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in11_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN11_NO_ACTIVITY_MASK[5]	R/W	0	Input 11 no activity enable mask. If enabled, GPIO alert becomes active when in11_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN11_LOS_MASK[4]	R/W	0	Input 11 LOS enable mask. If enabled, GPIO alert becomes active when in11_los_sticky bit is set. 0 = disabled 1 = enabled
IN10_TRANS_DETECT_MASK[3]	R/W	0	Input 10 transient detector mask. If enabled, GPIO alert becomes active when in10_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN10_FREQ_OFFS_LIM_MASK[2]	R/W	0	Input 10 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in10_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN10_NO_ACTIVITY_MASK[1]	R/W	0	Input 10 no activity enable mask. If enabled, GPIO alert becomes active when in10_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN10_LOS_MASK[0]	R/W	0	Input 10 LOS enable mask. If enabled, GPIO alert becomes active when in10_los_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN13_12_MON_ALERT_MASK

GPIO alert enable masks (transient, frequency offset, no activity, loss of signal) for reference monitors 12 and 13.

Table 138: ALERT_CFG.IN13_12_MON_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.IN13_12_MON_ALERT_MASK Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
007h	IN13_TRANS_DETECT_MASK[7]	IN13_FREQ_OFFS_LIM_MASK[6]	IN13_NO_ACTIVITY_MASK[5]	IN13_LOS_MASK[4]	IN12_TRANS_DETECT_MASK[3]	IN12_FREQ_OFFS_LIM_MASK[2]	IN12_NO_ACTIVITY_MASK[1]	IN12_LOS_MASK[0]

ALERT_CFG.IN13_12_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN13_TRANS_DETECT_MASK[7]	R/W	0	Input 13 transient detector mask. If enabled, GPIO alert becomes active when in13_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN13_FREQ_OFFS_LIM_MASK[6]	R/W	0	Input 13 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in13_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN13_NO_ACTIVITY_MASK[5]	R/W	0	Input 13 no activity enable mask. If enabled, GPIO alert becomes active when in13_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN13_LOS_MASK[4]	R/W	0	Input 13 LOS enable mask. If enabled, GPIO alert becomes active when in13_los_sticky bit is set. 0 = disabled 1 = enabled
IN12_TRANS_DETECT_MASK[3]	R/W	0	Input 12 transient detector mask. If enabled, GPIO alert becomes active when in12_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN12_FREQ_OFFS_LIM_MASK[2]	R/W	0	Input 12 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in12_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN12_NO_ACTIVITY_MASK[1]	R/W	0	Input 12 no activity enable mask. If enabled, GPIO alert becomes active when in12_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN12_LOS_MASK[0]	R/W	0	Input 12 LOS enable mask. If enabled, GPIO alert becomes active when in12_los_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.IN15_14_MON_ALERT_MASK

GPIO alert enable masks (transient, frequency offset, no activity, loss of signal) for reference monitors 14 and 15.

Table 139: ALERT_CFG.IN15_14_MON_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.IN15_14_MON_ALERT_MASK Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	IN15_TRANS_DETECT_MASK[7]	IN15_FREQ_OFFS_LIM_MASK[6]	IN15_NO_ACTIVITY_MASK[5]	IN15_LOS_MASK[4]	IN14_TRANS_DETECT_MASK[3]	IN14_FREQ_OFFS_LIM_MASK[2]	IN14_NO_ACTIVITY_MASK[1]	IN14_LOS_MASK[0]

ALERT_CFG.IN15_14_MON_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN15_TRANS_DETECT_MASK[7]	R/W	0	Input 15 transient detector mask. If enabled, GPIO alert becomes active when in15_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN15_FREQ_OFFS_LIM_MASK[6]	R/W	0	Input 15 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in15_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN15_NO_ACTIVITY_MASK[5]	R/W	0	Input 15 no activity enable mask. If enabled, GPIO alert becomes active when in15_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN15_LOS_MASK[4]	R/W	0	Input 15 LOS enable mask. If enabled, GPIO alert becomes active when in15_los_sticky bit is set. 0 = disabled 1 = enabled
IN14_TRANS_DETECT_MASK[3]	R/W	0	Input 14 transient detector mask. If enabled, GPIO alert becomes active when in14_trans_detect_sticky bit is set. 0 = disabled 1 = enabled
IN14_FREQ_OFFS_LIM_MASK[2]	R/W	0	Input 14 frequency offset limit enable mask. If enabled, GPIO alert becomes active when in14_freq_offs_lim_sticky bit is set. 0 = disabled 1 = enabled
IN14_NO_ACTIVITY_MASK[1]	R/W	0	Input 14 no activity enable mask. If enabled, GPIO alert becomes active when in14_no_activity_sticky bit is set. 0 = disabled 1 = enabled
IN14_LOS_MASK[0]	R/W	0	Input 14 LOS enable mask. If enabled, GPIO alert becomes active when in14_los_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.DPLL3_2_1_0_ALERT_MASK

GPIO alert enable masks (holdover, lock) for DPLL 0, 1, 2 and 3.

Table 140: ALERT_CFG.DPLL3_2_1_0_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.DPLL3_2_1_0_ALERT_MASK Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
009h	DPLL3_HOLDOVER_MASK[7]	DPLL3_LOCK_MASK[6]	DPLL2_HOLDOVER_MASK[5]	DPLL2_LOCK_MASK[4]	DPLL1_HOLDOVER_MASK[3]	DPLL1_LOCK_MASK[2]	DPLL0_HOLDOVER_MASK[1]	DPLL0_LOCK_MASK[0]

ALERT_CFG.DPLL3_2_1_0_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL3_HOLDOVER_MASK[7]	R/W	0	DPLL 3 holdover state transition event enable mask. If enabled, GPIO alert becomes active when dpll3_holdover_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL3_LOCK_MASK[6]	R/W	0	DPLL 3 lock state transition event enable mask. If enabled, GPIO alert becomes active when dpll3_lock_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL2_HOLDOVER_MASK[5]	R/W	0	DPLL 2 holdover state transition event enable mask. If enabled, GPIO alert becomes active when dpll2_holdover_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL2_LOCK_MASK[4]	R/W	0	DPLL 2 lock state transition event enable mask. If enabled, GPIO alert becomes active when dpll2_lock_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL1_HOLDOVER_MASK[3]	R/W	0	DPLL 1 holdover state transition event enable mask. If enabled, GPIO alert becomes active when dpll1_holdover_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL1_LOCK_MASK[2]	R/W	0	DPLL 1 lock state transition event enable mask. If enabled, GPIO alert becomes active when dpll1_lock_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL0_HOLDOVER_MASK[1]	R/W	0	DPLL 0 holdover state transition event enable mask. If enabled, GPIO alert becomes active when dpll0_holdover_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL0_LOCK_MASK[0]	R/W	0	DPLL 0 lock state transition event enable mask. If enabled, GPIO alert becomes active when dpll0_lock_state_change_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.DPLL7_6_5_4_ALERT_MASK

GPIO alert masks (holdover, lock) for DPLL 4, 5, 6 and 7.

Table 141: ALERT_CFG.DPLL7_6_5_4_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.DPLL7_6_5_4_ALERT_MASK Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ah	DPLL7_HOLDOVER_MASK[7]	DPLL7_LOCK_MASK[6]	DPLL6_HOLDOVER_MASK[5]	DPLL6_LOCK_MASK[4]	DPLL5_HOLDOVER_MASK[3]	DPLL5_LOCK_MASK[2]	DPLL4_HOLDOVER_MASK[1]	DPLL4_LOCK_MASK[0]

ALERT_CFG.DPLL7_6_5_4_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL7_HOLDOVER_MASK[7]	R/W	0	DPLL 7 holdover state transition event enable mask. If enabled, GPIO alert becomes active when dpll7_holdover_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL7_LOCK_MASK[6]	R/W	0	DPLL 7 lock state transition event enable mask. If enabled, GPIO alert becomes active when dpll7_lock_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL6_HOLDOVER_MASK[5]	R/W	0	DPLL 6 holdover state transition event enable mask. If enabled, GPIO alert becomes active when dpll6_holdover_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL6_LOCK_MASK[4]	R/W	0	DPLL 6 lock state transition event enable mask. If enabled, GPIO alert becomes active when dpll6_lock_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL5_HOLDOVER_MASK[3]	R/W	0	DPLL 5 holdover state transition event enable mask. If enabled, GPIO alert becomes active when dpll5_holdover_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL5_LOCK_MASK[2]	R/W	0	DPLL 5 lock state transition event enable mask. If enabled, GPIO alert becomes active when dpll5_lock_state_change_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.DPLL7_6_5_4_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL4_HOLDOVER_MASK[1]	R/W	0	DPLL 4 holdover state transition event enable mask. If enabled, GPIO alert becomes active when dpll4_holdover_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL4_LOCK_MASK[0]	R/W	0	DPLL 4 lock state transition event enable mask. If enabled, GPIO alert becomes active when dpll4_lock_state_change_sticky bit is set. 0 = disabled 1 = enabled

ALERT_CFG.SYS_ALERT_MASK

GPIO alert enable masks (holdover, lock) for system DPLL, and loss-of-lock mask for system APLL.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the SYS_ALERT_CFG module.

Table 142: ALERT_CFG.SYS_ALERT_MASK Bit Field Locations and Descriptions

Offset Address (Hex)	ALERT_CFG.SYS_ALERT_MASK Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Bh	RESERVED[7:3]					SYS_APLL_LOSS_LOCK_MASK[2]	DPLL_SYS_HOLDOVER_MASK[1]	DPLL_SYS_LOCK_MASK[0]

ALERT_CFG.SYS_ALERT_MASK Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
SYS_APLL_LOSS_LOCK_MASK[2]	R/W	0	System APLL loss lock event enable mask. If enabled, GPIO alert becomes active when sys_apll_loss_lock_sticky bit is set. 0 = disabled 1 = enabled
DPLL_SYS_HOLDOVER_MASK[1]	R/W	0	System DPLL holdover transition event enable mask. If enabled, GPIO alert becomes active when dpll_sys_holdover_state_change_sticky bit is set. 0 = disabled 1 = enabled
DPLL_SYS_LOCK_MASK[0]	R/W	0	System DPLL locked transition event enable mask. If enabled, GPIO alert becomes active when dpll_sys_lock_state_change_sticky bit is set. 0 = disabled 1 = enabled

Module: SYS_DPLL_XO

Configure the system DPLL oscillator XO_DPLL frequency.

Note: The order of configuring three SCSR modules, SCSR_SYS_DPLL_XO, SCSR_SYS_APLL, SCSR_SYS_DPLL, are critical. The correct configuration order should be: SCSR_SYS_DPLL_XO, SCSR_SYS_APLL, SCSR_SYS_DPLL, and followed by other modules. Each of these three SCSR modules should be configured completely before configuring the next module.

Table 143: SYS_DPLL_XO Register Index

Offset (Hex)	Register Module Base Address: C194h	
	Individual Register Name	Register Description
000h	SYS_DPLL_XO.XO_FREQ	XO_DPLL frequency in Hz.

SYS_DPLL_XO.XO_FREQ

System oscillator (XO_DPLL) Frequency in Hz is M / N.

Table 144: SYS_DPLL_XO.XO_FREQ Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_XO.XO_FREQ Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	M[7:0]							
001h	M[15:8]							
002h	M[23:16]							
003h	M[31:24]							
004h	M[39:32]							
005h	M[47:40]							
006h	N[7:0]							
007h	N[15:8]							

SYS_DPLL_XO.XO_FREQ Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
N[15:0]	R/W	0	XO_DPLL frequency N. N is unsigned 16-bit. A value of 0 for this field will be interpreted as 1.
M[47:0]	R/W	0	XO_DPLL frequency M. M is unsigned 48-bit.

Module: SYS_APLL

Configure the system APLL.

Note: The order of configuring three SCSR modules, SCSR_SYS_DPLL_XO, SCSR_SYS_APLL, SCSR_SYS_DPLL, are critical. The correct configuration order should be: SCSR_SYS_DPLL_XO, SCSR_SYS_APLL, SCSR_SYS_DPLL, and followed by other modules. Each of these three SCSR modules should be configured completely before configuring the next module.

Table 145: SYS_APLL Register Index

Offset (Hex)	Register Module Base Address: C19Ch	
	Individual Register Name	Register Description
000h	SYS_APLL.SYS_APLL_CP_SS_CURRENT_1	System APLL charge pump current register.
001h	SYS_APLL.SYS_APLL_CP_SS_CURRENT_2	System APLL charge pump current register.
002h	SYS_APLL.SYS_APLL_CFG_1	System APLL configuration register 1.
003h	SYS_APLL.SYS_APLL_CFG_2	System APLL configuration register 2.
004h	SYS_APLL.SYS_APLL_VREG_CTRL	VREG control register.
005h	SYS_APLL.SYS_APLL_CP_CTRL_0	System APLL charge pump control register.
006h	SYS_APLL.SYS_APLL_CP_CTRL_1	System APLL charge pump control register.
007h	SYS_APLL.SYS_APLL_CP_CTRL_2	System APLL charge pump control register.
008h	SYS_APLL.SYS_APLL_XTAL_FREQ	System APLL crystal frequency in Hz.
010h	RESERVED	This register must not be modified from the read value
011h	RESERVED	This register must not be modified from the read value
012h	SYS_APLL.SYS_APLL_CTRL	System APLL control register.

SYS_APLL.SYS_APLL_CP_SS_CURRENT_1

Set the charge pump source switching currents and enable for config.

Table 146: SYS_APLL.SYS_APLL_CP_SS_CURRENT_1 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_CP_SS_CURRENT_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	GLOBAL_ENABLE[7]	RESERVED[6]	CP_1_SS_CURRENT[5:3]			CP_2_SS_CURRENT[2:0]		

SYS_APLL.SYS_APLL_CP_SS_CURRENT_1 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
GLOBAL_ENABLE[7]	R/W	0	0 = disabled, 1 = enabled. Write '1' to this bit to apply the SCSR charge pump settings. No changes will be applied while this bit is disabled.
RESERVED	N/A	-	This field must not be modified from the read value

SYS_APLL.SYS_APLL_CP_SS_CURRENT_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
CP_1_SS_CURRENT[5:3]	R/W	0	0x0 = 125uA, 0x3 = 500uA, 0x7 = 1000uA. Reference current for Charge Pump #1. 125uA steps. For use in 3.3V VDDA operation. cp_1_ss_current + cp_2_ss_current + cp_3_ss_current + cp_4_ss_current = total cp current used to set APLL bandwidth.
CP_2_SS_CURRENT[2:0]	R/W	0	0x0 = 125uA, 0x3 = 500uA, 0x7 = 1000uA. Reference current for Charge Pump #2. 125uA steps. For use in 3.3V VDDA operation. cp_1_ss_current + cp_2_ss_current + cp_3_ss_current + cp_4_ss_current = total cp current used to set APLL bandwidth.

SYS_APLL.SYS_APLL_CP_SS_CURRENT_2

Set the charge pump source switching currents .

Table 147: SYS_APLL.SYS_APLL_CP_SS_CURRENT_2 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_CP_SS_CURRENT_2 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
001h	RESERVED[7:6]		CP_3_SS_CURRENT[5:3]			CP_4_SS_CURRENT[2:0]		

SYS_APLL.SYS_APLL_CP_SS_CURRENT_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
CP_3_SS_CURRENT[5:3]	R/W	0	0x0 = 125uA, 0x3 = 500uA, 0x7 = 1000uA. Reference current for Charge Pump #3. 125uA steps. For use in 3.3V VDDA operation. cp_1_ss_current + cp_2_ss_current + cp_3_ss_current + cp_4_ss_current = total cp current used to set APLL bandwidth.
CP_4_SS_CURRENT[2:0]	R/W	0	0x0 = 125uA, 0x3 = 500uA, 0x7 = 1000uA. Reference current for Charge Pump #4. 125uA steps. For use in 3.3V VDDA operation. cp_1_ss_current + cp_2_ss_current + cp_3_ss_current + cp_4_ss_current = total cp current used to set APLL bandwidth.

SYS_APLL.SYS_APLL_CFG_1

Sets APLL configuration register 1.

Table 148: SYS_APLL.SYS_APLL_CFG_1 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_CFG_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	PFD_FORCE_VC_LOW_CS[7]	PFD_FORCE_VC_HIGH_CS[6]	CP_CS_OFFSET_ENABLE[5]	XTAL_DOUBLE_CS[4]	CP_CS_OTA_ENABLE[3]	CP_CS_ENABLE[2]	PFD_RESET_CS[1]	PFD_RESET_SS_1[0]

SYS_APLL.SYS_APLL_CFG_1 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
PFD_FORCE_VC_LOW_CS[7]	R/W	0	Force control voltage to low. Used only as a test condition.
PFD_FORCE_VC_HIGH_CS[6]	R/W	0	Force control voltage to high. Used only as a test condition.
CP_CS_OFFSET_ENABLE[5]	R/W	0	Enable current steering offset current in 2.5V VDDA mode. Only used for trim.
XTAL_DOUBLE_CS[4]	R/W	0	Double XTAL frequency for 2.5V power supply. Set high if doubler is enabled. For both 2.5V and 3.3V VDDA operation.
CP_CS_OTA_ENABLE[3]	R/W	0	Enable operational transconductance amplifier (OTA) in CP. 1 = 2.5V VDDA operation. 0 = 3.3V VDDA operation.
CP_CS_ENABLE[2]	R/W	0	Enable current steering charge pump. Must be high for 2.5V VDDA operation, low for 3.3V VDDA operation.
PFD_RESET_CS[1]	R/W	0	Reset to 2.5V current steering PFD. Reset must be high for 3.3V VDDA operation, low for 2.5V VDDA operation.
PFD_RESET_SS_1[0]	R/W	0	Reset to 3.3V source switching PFD #1. Reset must be high for 2.5V VDDA operation, low for 3.3V VDDA operation.

SYS_APLL.SYS_APLL_CFG_2

Sets APLL configuration register 2.

Table 149: SYS_APLL.SYS_APLL_CFG_2 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_CFG_2 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
003h	RESERVED[7]	PFD_RESET_SS_2[6]	CP_CS_500U_ENABLE[5]	CP_CS_250U_ENABLE[4]	CP_CS_125U_ENABLE[3]	CP_CS_CURRENT[2:0]		

SYS_APLL.SYS_APLL_CFG_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
PFD_RESET_SS_2[6]	R/W	0	Reset to 3.3V source switching PFD #2. Reset must be high for 2.5V VDDA operation, low for 3.3V VDDA operation.
CP_CS_500U_ENABLE[5]	R/W	0	Enable current steering charge pump 500uA gain control. Enable 500uA current source for cs charge pump. For use in 2.5V VDDA operation.
CP_CS_250U_ENABLE[4]	R/W	0	Enable current steering charge pump 250uA gain control. Enable 250uA current source for cs charge pump. For use in 2.5V VDDA operation
CP_CS_125U_ENABLE[3]	R/W	0	Enable current steering charge pump 125uA gain control. Enable 125uA current source for cs charge pump. For use in 2.5V VDDA operation.
CP_CS_CURRENT[2:0]	R/W	0	Control bias current for current steering charge pump. Reference current for 2.5V VDDA operation. 125uA steps. 0 = 125uA, 7 = 1000uA.

SYS_APLL.SYS_APLL_VREG_CTRL

VREG control register.

Table 150: SYS_APLL.SYS_APLL_VREG_CTRL Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_VREG_CTRL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	RESERVED[7:1]							VREG_VCAL_0[0]

SYS_APLL.SYS_APLL_VREG_CTRL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
VREG_VCAL_0[0]	R/W	0	VREG volt calibration control register bit 0. When "1", PDCP and VCO regulators are set for 2.5V VDDA power supply application. When "0" PDCP and VCO regulators are set for 3.3V VDDA application.

SYS_APLL.SYS_APLL_CP_CTRL_0

Sets the charge pump and 500uA enables for control 0.

Table 151: SYS_APLL.SYS_APLL_CP_CTRL_0 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_CP_CTRL_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
005h	CP_4_SS_ENABLE[7]	CP_3_SS_ENABLE[6]	CP_2_SS_ENABLE[5]	CP_1_SS_ENABLE[4]	SYS_APLL_CP_4_SS_500U_ENABLE[3]	SYS_APLL_CP_3_SS_500U_ENABLE[2]	SYS_APLL_CP_2_SS_500U_ENABLE[1]	SYS_APLL_CP_1_SS_500U_ENABLE[0]

SYS_APLL.SYS_APLL_CP_CTRL_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
CP_4_SS_ENABLE[7]	R/W	0	Enable source switching charge pump #4. Must be low for 2.5V VDDA. 0 = disabled 1 = enabled.
CP_3_SS_ENABLE[6]	R/W	0	Enable source switching charge pump #3. Must be low for 2.5V VDDA. 0 = disabled 1 = enabled.
CP_2_SS_ENABLE[5]	R/W	0	Enable source switching charge pump #2. Must be low for 2.5V VDDA. 0 = disabled 1 = enabled.
CP_1_SS_ENABLE[4]	R/W	0	Enable source switching charge pump #1. Must be low for 2.5V VDDA. 0 = disabled 1 = enabled.
SYS_APLL_CP_4_SS_500U_ENABLE[3]	R/W	0	Enable source switching 500mA gain control for Charge Pump #4. For use in 3.3V VDDA operation. 0 = disabled 1 = enabled.
SYS_APLL_CP_3_SS_500U_ENABLE[2]	R/W	0	Enable source switching 500mA gain control for Charge Pump #3. For use in 3.3V VDDA operation. 0 = disabled 1 = enabled.

SYS_APLL.SYS_APLL_CP_CTRL_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYS_APLL_CP_2_SS_500U_ENABLE[1]	R/W	0	Enable source switching 500mA gain control for Charge Pump #2. For use in 3.3V VDDA operation. 0 = disabled 1 = enabled.
SYS_APLL_CP_1_SS_500U_ENABLE[0]	R/W	0	Enable source switching 500mA gain control for Charge Pump #1. For use in 3.3V VDDA operation. 0 = disabled 1 = enabled.

SYS_APLL.SYS_APLL_CP_CTRL_1

Sets the charge pump and 500uA enables for control 1.

Table 152: SYS_APLL.SYS_APLL_CP_CTRL_1 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_CP_CTRL_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
006h	SYS_APLL_CP_4_SS_125U_ENABLE[7]	SYS_APLL_CP_3_SS_125U_ENABLE[6]	SYS_APLL_CP_2_SS_125U_ENABLE[5]	SYS_APLL_CP_1_SS_125U_ENABLE[4]	SYS_APLL_CP_4_SS_250U_ENABLE[3]	SYS_APLL_CP_3_SS_250U_ENABLE[2]	SYS_APLL_CP_2_SS_250U_ENABLE[1]	SYS_APLL_CP_1_SS_250U_ENABLE[0]

SYS_APLL.SYS_APLL_CP_CTRL_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYS_APLL_CP_4_SS_125U_ENABLE[7]	R/W	0	Enable source switching 125mA gain control for Charge Pump #4. For use in 3.3V VDDA operation 0 = disabled 1 = enabled.
SYS_APLL_CP_3_SS_125U_ENABLE[6]	R/W	0	Enable source switching 125mA gain control for Charge Pump #3. For use in 3.3V VDDA operation 0 = disabled 1 = enabled.
SYS_APLL_CP_2_SS_125U_ENABLE[5]	R/W	0	Enable source switching 125mA gain control for Charge Pump #2. For use in 3.3V VDDA operation 0 = disabled 1 = enabled.
SYS_APLL_CP_1_SS_125U_ENABLE[4]	R/W	0	Enable source switching 125mA gain control for Charge Pump #1. For use in 3.3V VDDA operation 0 = disabled 1 = enabled.

SYS_APLL.SYS_APLL_CP_CTRL_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYS_APLL_CP_4_SS_250U_ENABLE[3]	R/W	0	Enable source switching 250mA gain control for Charge Pump #4. For use in 3.3V VDDA operation. 0 = disabled 1 = enabled.
SYS_APLL_CP_3_SS_250U_ENABLE[2]	R/W	0	Enable source switching 250mA gain control for Charge Pump #3. For use in 3.3V VDDA operation. 0 = disabled 1 = enabled.
SYS_APLL_CP_2_SS_250U_ENABLE[1]	R/W	0	Enable source switching 250mA gain control for Charge Pump #2. For use in 3.3V VDDA operation. 0 = disabled 1 = enabled.
SYS_APLL_CP_1_SS_250U_ENABLE[0]	R/W	0	Enable source switching 250mA gain control for Charge Pump #1. For use in 3.3V VDDA operation. 0 = disabled 1 = enabled.

SYS_APLL.SYS_APLL_CP_CTRL_2

Sets the charge pump and 500uA enables for control 2.

Table 153: SYS_APLL.SYS_APLL_CP_CTRL_2 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_CP_CTRL_2 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
007h	SYS_APLL_CP_4_SS_OTA_ENABLE[7]	SYS_APLL_CP_3_SS_OTA_ENABLE[6]	SYS_APLL_CP_2_SS_OTA_ENABLE[5]	SYS_APLL_CP_1_SS_OTA_ENABLE[4]	SYS_APLL_CP_4_SS_OFFSET_ENABLE[3]	SYS_APLL_CP_3_SS_OFFSET_ENABLE[2]	SYS_APLL_CP_2_SS_OFFSET_ENABLE[1]	SYS_APLL_CP_1_SS_OFFSET_ENABLE[0]

SYS_APLL.SYS_APLL_CP_CTRL_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYS_APLL_CP_4_SS_OTA_ENABLE[7]	R/W	0	Enable source switching ota for Charge Pump #4. 0 = disabled 1 = enabled.
SYS_APLL_CP_3_SS_OTA_ENABLE[6]	R/W	0	Enable source switching ota for Charge Pump #3. 0 = disabled 1 = enabled.
SYS_APLL_CP_2_SS_OTA_ENABLE[5]	R/W	0	Enable source switching ota for Charge Pump #2. 0 = disabled 1 = enabled.

SYS_APLL.SYS_APLL_CP_CTRL_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYS_APLL_CP_1_SS_OTA_ENABLE[4]	R/W	0	Enable source switching ota for Charge Pump #1. 0 = disabled 1 = enabled.
SYS_APLL_CP_4_SS_OFFSET_ENABLE[3]	R/W	0	Enable source switching offset current for Charge Pump #4. Used only for trim. 0 = disabled 1 = enabled.
SYS_APLL_CP_3_SS_OFFSET_ENABLE[2]	R/W	0	Enable source switching offset current for Charge Pump #3. Used only for trim. 0 = disabled 1 = enabled.
SYS_APLL_CP_2_SS_OFFSET_ENABLE[1]	R/W	0	Enable source switching offset current for Charge Pump #2. Used only for trim. 0 = disabled 1 = enabled.
SYS_APLL_CP_1_SS_OFFSET_ENABLE[0]	R/W	0	Enable source switching offset current for Charge Pump #1. Used only for trim. 0 = disabled 1 = enabled.

SYS_APLL.SYS_APLL_XTAL_FREQ

Crystal (XTAL) Frequency in Hz M/N.

Table 154: SYS_APLL.SYS_APLL_XTAL_FREQ Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_XTAL_FREQ Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	M[7:0]							
009h	M[15:8]							
00Ah	M[23:16]							
00Bh	M[31:24]							
00Ch	M[39:32]							
00Dh	M[47:40]							
00Eh	N[7:0]							
00Fh	N[15:8]							

SYS_APLL.SYS_APLL_XTAL_FREQ Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
N[15:0]	R/W	0	SYS_APLL crystal frequency N. N is unsigned 16-bit. A value of 0 for this field will be interpreted as 1.
M[47:0]	R/W	0	SYS_APLL crystal frequency M. M is unsigned 48-bit.

SYS_APLL.SYS_APLL_CTRL

System APLL control register.

Table 155: SYS_APLL.SYS_APLL_CTRL Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_APLL.SYS_APLL_CTRL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
012h	APLL_FBDIV_DIVIDER[7:0]							
013h	VCCA_SEL[15]	DOUBLER_ENABLE[14]	APLL_FBDIV_DIVIDER[13:8]					

SYS_APLL.SYS_APLL_CTRL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
VCCA_SEL[15]	R/W	0	VCCA selection. If SYS_APLL_CP_SS_CURRENT_1.GLOBAL_ENABLE is set to "0", this field selects 2.5V or 3.3V VDDA operation with default charge pump values. If SYS_APLL_CP_SS_CURRENT_1.GLOBAL_ENABLE is set to "1", this field will be ignored and the charge pump fields can be programmed to customized values. 0 = 3.3 V 1 = 2.5 V
DOUBLER_ENABLE[14]	R/W	0	Enable the crystal input frequency doubler. Enable = 1. Doubles the Input frequency of the SYS_APLL. 0 = disabled 1 = enabled
APLL_FBDIV_DIVIDER[13:0]	R/W	0	Feedback divider value. Sets the divider value of the feedback divider.

Module: INPUT_0

Input 0 configuration.

Table 156: INPUT_0 Register Index

Offset (Hex)	Register Module Base Address: C1B0h[1]	
	Individual Register Name	Register Description
000h	INPUT_0.IN_FREQ	Input frequency in Hz.
008h	INPUT_0.IN_DIV	Input divider value.
00Ah	INPUT_0.IN_PHASE	Input phase offset configuration.
00Ch	INPUT_0.IN_SYNC	Frame pulse and sync pulse configuration.
00Dh	RESERVED	This register must not be modified from the read value
00Eh	INPUT_0.IN_MODE_0	Input configuration 0
00Fh	INPUT_0.IN_MODE_1	Input configuration 1

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

INPUT_0.IN_FREQ

Input frequency in Hz is M / N.

Table 157: INPUT_0.IN_FREQ Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_0.IN_FREQ Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	M[7:0]							
001h	M[15:8]							
002h	M[23:16]							
003h	M[31:24]							
004h	M[39:32]							
005h	M[47:40]							
006h	N[7:0]							
007h	N[15:8]							

INPUT_0.IN_FREQ Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
N[15:0]	R/W	0	Input frequency N. N is unsigned 16-bit. A value of 0 for this field will be interpreted as 1.
M[47:0]	R/W	0	Input frequency M. M is unsigned 48-bit. In differential mode, maximum speed is 1 GHz. In CMOS mode (single-ended), maximum speed is 325 MHz.

INPUT_0.IN_DIV

Input divider value.

Table 158: INPUT_0.IN_DIV Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_0.IN_DIV Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	IN_DIV[7:0]							
009h	IN_DIV[15:8]							

INPUT_0.IN_DIV Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN_DIV[15:0]	R/W	0	Divide IN_FREQ down to send to the DPLL. Unsigned 16-bit number. Maximum speed for the references sent to the DPLL is 150 MHz. 0 and 1 both indicate bypass.

INPUT_0.IN_PHASE

Input phase offset configuration.

Table 159: INPUT_0.IN_PHASE Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_0.IN_PHASE Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ah	IN_PHASE[7:0]							
00Bh	IN_PHASE[15:8]							

INPUT_0.IN_PHASE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN_PHASE[15:0]	R/W	0	Phase offset value. Signed 16-bit phase offset value in ITDC_UIs.

INPUT_0.IN_SYNC

Specify another input to be used as the frame pulse or sync pulse for the current input.

Table 160: INPUT_0.IN_SYNC Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_0.IN_SYNC Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ch	FRAME_SYNC_PULSE_EN[7]	FRAME_SYNC_RESAMPLE_EDGE[6]	FRAME_SYNC_RESAMPLE_EN[5]	FRAME_SYNC_PULSE[4:0]				

INPUT_0.IN_SYNC Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
FRAME_SYNC_PULSE_EN[7]	R/W	0	Enable or disable the frame pulse or sync pulse mode for this input. Mode selection is determined by frame_sync_mode in SCSR_DPLL_CTRL_2. 0 = disabled 1 = enabled
FRAME_SYNC_RESAMPLE_EDGE[6]	R/W	0	Re-sample edge selection. 0 = positive edge 1 = negative edge

INPUT_0.IN_SYNC Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FRAME_SYNC_RESAMPLE_EN[5]	R/W	0	Re-sample enable. Enabling re-sample will have the frame/sync input signal being re-sampled by the input reference clock (refclk). It can help to re-align the frame/sync with respect to the refclk. Ex. If the frame/sync input is aligned to the rising edge of the refclk, it might get into the situation where it is uncertain whether the phase detector sees the frame edge before or after the refclk edge. Re-sampling the frame/sync with the falling edge of the refclk will get the frame/sync out of this situation. 0 = disabled 1 = enabled
FRAME_SYNC_PULSE[4:0]	R/W	0	Select the reference input that is a frame or sync pulse to this input. Selects either the input clock or PPS from the PWM decoder. Selecting itself puts the DPLL back to normal tracking mode (i.e.. not in frame/pulse mode). 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = PPS from PWM Decoder 0 0x11 = PPS from PWM Decoder 1 0x12 = PPS from PWM Decoder 2 0x13 = PPS from PWM Decoder 3 0x14 = PPS from PWM Decoder 4 0x15 = PPS from PWM Decoder 5 0x16 = PPS from PWM Decoder 6 0x17 = PPS from PWM Decoder 7 0x18 = PPS from PWM Decoder 8 0x19 = PPS from PWM Decoder 9 0x1A = PPS from PWM Decoder 10 0x1B = PPS from PWM Decoder 11 0x1C = PPS from PWM Decoder 12 0x1D = PPS from PWM Decoder 13 0x1E = PPS from PWM Decoder 14 0x1F = PPS from PWM Decoder 15

INPUT_0.IN_MODE_0

Configure the electrical properties of this input

Table 161: INPUT_0.IN_MODE_0 Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_0.IN_MODE_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Eh	RESERVED[7]	RESERVED[6]	RESERVED[5]	RESERVED[4]	RESERVED[3]	RESERVED[2]	RESERVED[1]	IN_LVDS[0]

INPUT_0.IN_MODE_0 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
IN_LVDS[0]	R/W	0	Enable 300mV LVDS input mode. AC-coupled, without external resistor bias. Only applicable in single-ended mode, differential mode must be disabled (in_diff). When applied to either Input in following pairs, both Inputs will have LVDS mode enabled/disabled: input pin 0 and 8, input pin 1 and 9, input pin 2 and 10, input pin 3 and 11, input pin 4 and 12, input pin 5 and 13, input pin 6 and 14, input pin 7 and 15 0 = disable 1 = enable

INPUT_0.IN_MODE_1

Configure the electrical properties of this input and select the predefined DPLL loop filter configuration.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the INPUT module.

Table 162: INPUT_0.IN_MODE_1 Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_0.IN_MODE_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Fh	DPLL_PRED[7]	MUX_GPIO_IN[6]	IN_DIFF[5]	IN_PNMODE[4]	IN_INVERSE[3]	RESERVED[2:1]		IN_EN[0]

INPUT_0.IN_MODE_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL_PRED[7]	R/W	0	Select predefined configuration to be applied to DPLL when this input is selected, if predefined configuration is enabled in DPLL. 0 = pred0 1 = pred1
MUX_GPIO_IN[6]	R/W	0	Select GPIO pin to multiplex into input divider instead of input pin. Only applicable to INPUT_13-15. Set to 1 to apply the following mapping: GPIO0 pin -> CLK13 GPIO9 pin -> CLK14 GPIO3 pin -> CLK15 Applied only on a per input module basis (e.g. setting INPUT_13_INPUT_MODE_MUX_GPIO_IN to 1 results only in GPIO0 pin being multiplexed into input divider 13). 0 = clock Input 1 = GPIO-configured input clock
IN_DIFF[5]	R/W	0	Select differential input. Only applicable to INPUT_0-7. INPUT_8-15 are always in single-ended mode. When 0, the input pin will be single-ended: CLK[7:0] -> INPUT_[7:0] nCLK0 = CLK8 -> INPUT_8 nCLK1 = CLK9 -> INPUT_9 nCLK2 = CLK10 -> INPUT_10 nCLK3 = CLK11 -> INPUT_11 nCLK4 = CLK12 -> INPUT_12 nCLK5 = CLK13 -> INPUT_13 nCLK6 = CLK14 -> INPUT_14 nCLK7 = CLK15 -> INPUT_15 When set to 1, the two input pins will be paired up as the differential inputs. For INPUT_8-15, this single ended input may come from GPIO (see MUX_GPIO_IN[6]): CLK/nCLK[7:0] -> INPUT_[7:0] 0 = single-ended 1 = differential
IN_PNMODE[4]	R/W	0	Select PMOS or NMOS differential mode. Only applicable in differential mode. 0 = NMOS 1 = PMOS
IN_INVERSE[3]	R/W	0	Invert input. 0 = normal 1 = inverse
RESERVED	N/A	-	This field must not be modified from the read value
IN_EN[0]	R/W	0	Enable input. 0 = disabled 1 = enabled

Module: REF_MON_0

Reference monitor 0.

Table 163: REF_MON_0 Register Index

Offset (Hex)	Register Module Base Address: C2E0h[1]	
	Individual Register Name	Register Description
000h	REF_MON_0.IN_MON_FREQ_CFG	Reference monitor frequency configuration.
001h	REF_MON_0.IN_MON_FREQ_VLD_INTV	Frequency validation short interval.
002h	REF_MON_0.IN_MON_TRANS_THRESHOLD	Reference clock phase transient threshold.
004h	REF_MON_0.IN_MON_TRANS_PERIOD	Reference clock phase transient detection period.
006h	REF_MON_0.IN_MON_ACT_CFG	Activity limit, qualification and disqualification timers.
008h	REF_MON_0.IN_MON_LOS_TOLERANCE	Loss of signal tolerance configuration.
00Ah	REF_MON_0.IN_MON_LOS_CFG	Loss of signal configuration.
00Bh	REF_MON_0.IN_MON_CFG	Reference monitor configuration.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

REF_MON_0.IN_MON_FREQ_CFG

Frequency validation interval and frequency offset limit.

Table 164: REF_MON_0.IN_MON_FREQ_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	REF_MON_0.IN_MON_FREQ_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	RESERVED[7]	VLD_INTERVAL[6:3]				FREQ_OFFS_LIM[2:0]		

REF_MON_0.IN_MON_FREQ_CFG Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value

REF_MON_0.IN_MON_FREQ_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
VLD_INTERVAL[6:3]	R/W	0	Frequency validation interval. Frequency validation interval in seconds. The long term reference monitor uses VLD_INTERVAL as the period to measure the frequency offset. 0 means using IN_MON_FREQ_VLD_INTV.VLD_INTERVAL_SHORT as validation measurement interval.
FREQ_OFFS_LIM[2:0]	R/W	0	Frequency offset limit enumeration. VLD_INTERVAL and FREQ_OFFS_LIM define the long term reference monitor parameters. IN_MON_CFG.MASK_FREQ enables/disables the long term reference monitor. 0 = 9.2 ppm(A), 12 ppm(R) 1 = 13.8 ppm(A), 18 ppm(R) 2 = 24.6 ppm(A), 32 ppm(R) 3 = 36.6 ppm(A), 47.5 ppm(R) 4 = 40 ppm(A), 52 ppm(R) 5 = 52 ppm(A), 67.5 ppm(R) 6 = 64 ppm(A), 83 ppm(R) 7 = 100 pm(A), 130 ppm(R)

REF_MON_0.IN_MON_FREQ_VLD_INTV

Frequency validation interval in units of 10 milliseconds.

Table 165: REF_MON_0.IN_MON_FREQ_VLD_INTV Bit Field Locations and Descriptions

Offset Address (Hex)	REF_MON_0.IN_MON_FREQ_VLD_INTV Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
001h	VLD_INTERVAL_SHORT[7:0]							

REF_MON_0.IN_MON_FREQ_VLD_INTV Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
VLD_INTERVAL_SHORT[7:0]	R/W	0	Reference frequency validation short interval in units of 10 milliseconds. Used as freq measurement period when IN_MON_FREQ_CFG.VLD_INTERVAL = 0. 0 means 5 seconds.

REF_MON_0.IN_MON_TRANS_THRESHOLD

Unsigned 16-bit value in nanoseconds.

Table 166: REF_MON_0.IN_MON_TRANS_THRESHOLD Bit Field Locations and Descriptions

Offset Address (Hex)	REF_MON_0.IN_MON_TRANS_THRESHOLD Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	IN_MON_TRANS_THRESHOLD[7:0]							
003h	IN_MON_TRANS_THRESHOLD[15:8]							

REF_MON_0.IN_MON_TRANS_THRESHOLD Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
IN_MON_TRANS_THRESHOLD[15:0]	R/W	0	Reference phase transient detection threshold in nanoseconds.

REF_MON_0.IN_MON_TRANS_PERIOD

Unsigned 16-bit value in units of 100 microseconds.

Table 167: REF_MON_0.IN_MON_TRANS_PERIOD Bit Field Locations and Descriptions

Offset Address (Hex)	REF_MON_0.IN_MON_TRANS_PERIOD Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	IN_MON_TRANS_PERIOD[7:0]							
005h	IN_MON_TRANS_PERIOD[15:8]							

REF_MON_0.IN_MON_TRANS_PERIOD Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
IN_MON_TRANS_PERIOD[15:0]	R/W	0	Reference phase transient detection period in unit of 100 microseconds.

REF_MON_0.IN_MON_ACT_CFG

Activity limit, qualification and disqualification timers.

Table 168: REF_MON_0.IN_MON_ACT_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	REF_MON_0.IN_MON_ACT_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
006h	RESERVED[7]	QUAL_TIMER[6:5]		DSQUAL_TIMER[4:3]		ACT_LIM[2:0]		

REF_MON_0.IN_MON_ACT_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
QUAL_TIMER[6:5]	R/W	0	Reference activity qualification timer enumeration. Qualification timer value = qual_timer * dsqual_timer. 0 = 4x 1 = 2x 2 = 8x 3 = 16x
DSQUAL_TIMER[4:3]	R/W	0	Reference activity disqualification timer enumeration. 0 = 2.5 s 1 = 1.25 ms 2 = 25 ms 3 = 50 ms
ACT_LIM[2:0]	R/W	0	Activity limit +/- 1000 ppm to +/- 12 ppm. 0 = 1000 ppm 1 = 260 ppm 2 = 130 ppm 3 = 83 ppm 4 = 65 ppm 5 = 52 ppm 6 = 18 ppm 7 = 12 ppm

REF_MON_0.IN_MON_LOS_TOLERANCE

Loss of signal tolerance configuration.

Table 169: REF_MON_0.IN_MON_LOS_TOLERANCE Bit Field Locations and Descriptions

Offset Address (Hex)	REF_MON_0.IN_MON_LOS_TOLERANCE Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	IN_MON_LOS_TOLERANCE[7:0]							
009h	IN_MON_LOS_TOLERANCE[15:8]							

REF_MON_0.IN_MON_LOS_TOLERANCE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
IN_MON_LOS_TOLERANCE[15:0]	R/W	0	LOS tolerance. Unsigned 16-bit value in milliseconds. 0 means a reference switch is triggered immediately upon reference LOS detection. Non zero value means that if the reference LOS duration is less than IN_MON_LOS_TOLERANCE, the DPLL will not trigger a reference switch.

REF_MON_0.IN_MON_LOS_CFG

Gap and margin configuration.

Table 170: REF_MON_0.IN_MON_LOS_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	REF_MON_0.IN_MON_LOS_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ah	RESERVED[7:3]					LOS_GAP[2:1]		LOS_MARGIN[0]

REF_MON_0.IN_MON_LOS_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
LOS_GAP[2:1]	R/W	0	Number consecutive missing clocks to declare LOS. 0 means short term monitor will use LOS_MARGIN to detect LOS. 0 = LOS gap disabled 1 = 1 2 = 2 3 = 5
LOS_MARGIN[0]	R/W	0	Configure the LOS detection margin. Tight margin aims for 1% freq error. Loose margin aims for 25% freq error. 0 = tight margin 1 = loose margin

REF_MON_0.IN_MON_CFG

Reference monitor configuration.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the REF_MON module.

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Table 171: REF_MON_0.IN_MON_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	REF_MON_0.IN_MON_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Bh	RESERVED[7:6]		DIV_OR_NON_DIV_CLK_SELECT[5]	TRANS_DETECTOR_EN[4]	MASK_ACTIVITY[3]	MASK_FREQ[2]	MASK_LOS[1]	EN[0]

REF_MON_0.IN_MON_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DIV_OR_NON_DIV_CLK_SELECT[5]	R/W	0	Select the divided clock or the non-divided clock as an input for the reference monitor. Only applies to reference monitors 2, 3, 10 and 11. 0 = divided clock 1 = non-divided clock
TRANS_DETECTOR_EN[4]	R/W	0	Phase transient detector enable/disable. 0 = disabled 1 = enabled
MASK_ACTIVITY[3]	R/W	0	Include or exclude activity monitor from reference qualification or disqualification. 0 = excluded 1 = included
MASK_FREQ[2]	R/W	0	Include or exclude frequency offset monitor from reference qualification or disqualification. 0 = excluded 1 = included
MASK_LOS[1]	R/W	0	Include or exclude LOS from reference qualification or disqualification. 0 = excluded 1 = included
EN[0]	R/W	0	Enable or disable reference monitor. When disabled and the corresponding input clock is enabled, this input is always qualified to be a reference. When enabled and MASK_ACTIVITY = 0, MASK_FREQ = 0, and MASK_LOS = 0, this input is always qualified to be a reference. 0 = disabled 1 = enabled

Module: DPLL_0

Configures the DPLL.

Table 172: DPLL_0 Register Index

Offset (Hex)	Register Module Base Address: C3B0h[1]	
	Individual Register Name	**Register Description**
000h	DPLL_0.DPLL_DCO_INC_DEC_SIZE	Configure frequency step size for GPIO increment/decrement mode.
002h	DPLL_0.DPLL_CTRL_0	Reference switching configuration and forced lock reference selection.
003h	DPLL_0.DPLL_CTRL_1	Configure other hitless switch features and DPLL feedback as a reference.
004h	DPLL_0.DPLL_CTRL_2	External feedback and frame/sync pulse configuration.
005h	DPLL_0.DPLL_CTRL_3	Configure DPLL loop filter update rate and maximum number of fast lock retry.

Table 172: DPLL_0 Register Index

Offset (Hex)	Register Module Base Address: C3B0h[1]	
	Individual Register Name	Register Description
006h	DPLL_0.DPLL_FILTER_STATUS_UPDATE_CFG	DPLL loop filter status update configuration.
007h	DPLL_0.DPLL_HO_ADVCD_HISTORY	Advanced holdover history configuration.
008h	DPLL_0.DPLL_HO_ADVCD_BW	DPLL advanced holdover bandwidth configuration.
00Ah	DPLL_0.DPLL_HO_CFG	Holdover configuration.
00Bh	DPLL_0.DPLL_LOCK_0	Phase lock threshold.
00Ch	DPLL_0.DPLL_LOCK_1	Phase lock monitor duration.
00Dh	DPLL_0.DPLL_LOCK_2	Frequency lock threshold.
00Eh	DPLL_0.DPLL_LOCK_3	Frequency lock monitor duration.
00Fh	DPLL_0.DPLL_REF_PRIORITY_0	Select input for highest (0) priority.
010h	DPLL_0.DPLL_REF_PRIORITY_1	Select input for priority 1.
011h	DPLL_0.DPLL_REF_PRIORITY_2	Select input for priority 2.
012h	DPLL_0.DPLL_REF_PRIORITY_3	Select input for priority 3.
013h	DPLL_0.DPLL_REF_PRIORITY_4	Select input for priority 4.
014h	DPLL_0.DPLL_REF_PRIORITY_5	Select input for priority 5.
015h	DPLL_0.DPLL_REF_PRIORITY_6	Select input for priority 6.
016h	DPLL_0.DPLL_REF_PRIORITY_7	Select input for priority 7.
017h	DPLL_0.DPLL_REF_PRIORITY_8	Select input for priority 8.
018h	DPLL_0.DPLL_REF_PRIORITY_9	Select input for priority 9.
019h	DPLL_0.DPLL_REF_PRIORITY_10	Select input for priority 10.
01Ah	DPLL_0.DPLL_REF_PRIORITY_11	Select input for priority 11.
01Bh	DPLL_0.DPLL_REF_PRIORITY_12	Select input for priority 12.
01Ch	DPLL_0.DPLL_REF_PRIORITY_13	Select input for priority 13.
01Dh	DPLL_0.DPLL_REF_PRIORITY_14	Select input for priority 14.
01Eh	DPLL_0.DPLL_REF_PRIORITY_15	Select input for priority 15.
01Fh	DPLL_0.DPLL_REF_PRIORITY_16	Select input for priority 16.
020h	DPLL_0.DPLL_REF_PRIORITY_17	Select input for priority 17.
021h	DPLL_0.DPLL_REF_PRIORITY_18	Select input for priority 18.
022h	DPLL_0.DPLL_TRANS_CTRL	Phase transient configuration.
023h	DPLL_0.DPLL_FASTLOCK_CFG_0	Fast lock configuration.
024h	DPLL_0.DPLL_FASTLOCK_CFG_1	Fast lock configuration.
025h	DPLL_0.DPLL_MAX_FREQ_OFFSET	DPLL maximum frequency offset limit.
026h	DPLL_0.DPLL_FASTLOCK_PSL	Fast lock phase slope limit.

Table 172: DPLL_0 Register Index

Offset (Hex)	Register Module Base Address: C3B0h[1]	
	Individual Register Name	Register Description
028h	DPLL_0.DPLL_FASTLOCK_FSL	Fast lock frequency slope limit.
02Ah	DPLL_0.DPLL_FASTLOCK_BW	Fast lock loop filter bandwidth.
02Ch	DPLL_0.DPLL_WRITE_FREQ_TIMER	Write frequency timer.
02Eh	DPLL_0.DPLL_WRITE_PHASE_TIMER	Write phase timer.
030h	DPLL_0.DPLL_PRED_CFG	Predefined configuration selection.
031h	DPLL_0.DPLL_TOD_SYNC_CFG	DPLL ToD synchronization configuration.
032h	DPLL_0.DPLL_COMBO_SLAVE_CFG_0	Combo mode slave primary source configuration.
033h	DPLL_0.DPLL_COMBO_SLAVE_CFG_1	Combo mode slave secondary source configuration.
034h	DPLL_0.DPLL_SLAVE_REF_CFG	Slave mode configuration.
035h	DPLL_0.DPLL_REF_MODE	Reference selection configuration and XO DPLL monitor enable.
036h	DPLL_0.DPLL_PHASE_MEASUREMENT_CFG	Phase measurement mode configuration.
037h	DPLL_0.DPLL_FASTLOCK_FREQ_SNAP_WINDOW	Fastlock frequency snap window.
038h	DPLL_0.DPLL_FASTLOCK_PHASE_PULL_IN_AND_FAST_ACQ_WINDOW	Fastlock phase pull-in and fast-acquisition window.
039h	DPLL_0.DPLL_FASTLOCK_PHASE_SNAP_WINDOW	Fastlock phase snap window.
03Ah	DPLL_0.DPLL_SINGLE_PULSE_SYNC_CFG	Single pulse synchronization configuration.
03Bh	DPLL_0.DPLL_MODE	DPLL operating modes.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

DPLL_0.DPLL_DCO_INC_DEC_SIZE

Configure frequency step size for GPIO increment/decrement mode.

Table 173: DPLL_0.DPLL_DCO_INC_DEC_SIZE Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_DCO_INC_DEC_SIZE Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	DCO_INC_DEC_SIZE[7:0]							
001h	DCO_INC_DEC_SIZE[15:8]							

DPLL_0.DPLL_DCO_INC_DEC_SIZE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DCO_INC_DEC_SIZE[15:0]	R/W	0	Size of frequency increment/decrement in 0.01 ppb. Unsigned 16-bit. 0 means no change. GPIO increment/decrement mode is by setting GPIO_n.GPIO_CTRL.GPIO_FUNCTION = 0x4 increment / 0x5 decrement. The DPLL to increment/decrement is configured in GPIO_n.GPIO_DCO_INC_DEC.DPLL_INDEX.

DPLL_0.DPLL_CTRL_0

Enable revertive switching, hitless switching and global sync mode.

Table 174: DPLL_0.DPLL_CTRL_0 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_CTRL_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	FORCE_LOCK_INPUT[7:3]					GLOBAL_SYNC_EN[2]	REVERTIVE_EN[1]	HITLESS_EN[0]

DPLL_0.DPLL_CTRL_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FORCE_LOCK_INPUT[7:3]	R/W	0	DPLL reference input index when force lock applied. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input (NA in this mode) 0x12 = XO_DPLL 0x13 = fb clk of DPLL 0 0x14 = fb clk of DPLL 1 0x15 = fb clk of DPLL 2 0x16 = fb clk of DPLL 3 0x17 = fb clk of DPLL 4 0x18 = fb clk of DPLL 5 0x19 = fb clk of DPLL 6 0x1A = fb clk of DPLL 7 0x1B = fb clk of SYS DPLL.
GLOBAL_SYNC_EN[2]	R/W	0	Enable global sync trigger to synchronize multiple DPLLs. When this bit is set to 1, the phase of this DPLL's outputs will be aligned with the phase of other DPLLs' outputs, whose global_sync_en bit is also set to 1. When one of the DPLLs with this bit set to 1 requires phase synchronization, all DPLLs with this bit set to 1 will perform a phase synchronization procedure. 0 = disabled 1 = enabled
REVERTIVE_EN[1]	R/W	0	Enable revertive mode. 0 = disabled 1 = enabled
HITLESS_EN[0]	R/W	0	Enable hitless switch mode. 0 = disabled 1 = enabled

DPLL_0.DPLL_CTRL_1

Enable other hitless switch features and select feedback clock.

Table 175: DPLL_0.DPLL_CTRL_1 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_CTRL_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
003h	RESERVED[7]	RESERVED[6]	HITLESS_TYPE[5]	FB_SELECT_REF[4:1]				FB_SELECT_REF_EN[0]

DPLL_0.DPLL_CTRL_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
HITLESS_TYPE[5]	R/W	0	Select hitless switch type. 0 = HS type 1 1 = HS type 2
FB_SELECT_REF[4:1]	R/W	0	Feedback from other DPLL selected as reference for this DPLL. Select other DPLL feedback to be used as reference for this DPLL. If the other DPLL is in PLL mode and not in the LOCK state, then the feedback clock as a reference is disqualified. Upon disqualification, the DPLL will enter the configured holdover mode. 0 = fb clk of DPLL 0 1 = fb clk of DPLL 1 2 = fb clk of DPLL 2 3 = fb clk of DPLL 3 4 = fb clk of DPLL 4 5 = fb clk of DPLL 5 6 = fb clk of DPLL 6 7 = fb clk of DPLL 7 8 = fb clk of SYS DPLL
FB_SELECT_REF_EN[0]	R/W	0	Enable selected feedback as reference. 0 = disabled 1 = enabled

DPLL_0.DPLL_CTRL_2

Configure external feedback and frame or sync pulse.

Table 176: DPLL_0.DPLL_CTRL_2 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_CTRL_2 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	FRAME_SYNC_PULSE_RESYNC_EN[7]	FRAME_SYNC_MODE[6:5]		EXT_FB_REF_SELECT[4:1]				EXT_FB_EN[0]

DPLL_0.DPLL_CTRL_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FRAME_SYNC_PULSE_RESYNC_EN[7]	R/W	0	Enable frame pulse or sync pulse periodic re-synchronization in locked state. 0 = disabled 1 = enabled
FRAME_SYNC_MODE[6:5]	R/W	0	Select frame pulse mode or sync pulse mode. 0 = disabled 1 = frame pulse mode 2 = sync pulse mode
EXT_FB_REF_SELECT[4:1]	R/W	0	Select index of input reference selected as external feedback for this DPLL. External feedback must be same frequency as all input references that this DPLL locks to. Input reference selected can be regular input clock, or GPIO-configured input clock by configuring INPUT_n.IN_MODE.MUX_GPIO_IN, where n = 13, 14, and 15, since this configuration is only applicable to input dividers 13-15 (INPUT_13-15). If INPUT_n.IN_MODE.MUX_GPIO_IN = 1, then the corresponding GPIO pin to input divider mapping is in effect. Ex. If INPUT_13.IN_MODE.MUX_GPIO_IN = 1, then input divider 13 uses signal from GPIO0. 0x0 = CLK0 0x1 = CLK1 0x2 = CLK2 0x3 = CLK3 0x4 = CLK4 0x5 = CLK5 0x6 = CLK6 0x7 = CLK7 0x8 = CLK8 0x9 = CLK9 0xA = CLK10 0xB = CLK11 0xC = CLK12 0xD = CLK13 (GPIO 0) 0xE = CLK14 (GPIO 9) 0xF = CLK15 (GPIO 3)
EXT_FB_EN[0]	R/W	0	Enable external feedback mode. 0 = disabled 1 = enabled

DPLL_0.DPLL_CTRL_3

Configure DPLL loop filter update rate and maximum number of fast lock retry.

Table 177: DPLL_0.DPLL_CTRL_3 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_CTRL_3 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
005h	RESERVED[7]	RESERVED[6]	RESERVED[5]	FASTLOCK_MAX_RETRY[4:2]			UPDATE_RATE_CFG[1:0]	

DPLL_0.DPLL_CTRL_3 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FASTLOCK_MAX_RETRY[4:2]	R/W	0	Maximum number fastlock retries. Value 0 means no fast lock retry, 7 means always retry until phase offset reaches the retry threshold. If the fast lock threshold window is set, the window is used as the retry threshold; otherwise two times phase lock threshold with a minimum of 50ns is used as the retry threshold.
UPDATE_RATE_CFG[1:0]	R/W	0	DPLL loop filter update rate configuration. Used to avoid spurs at a specific frequency. 0 = 2.777 MHz 1 = 694 kHz 2 = 174 kHz 3 = 43 kHz

DPLL_0.DPLL_FILTER_STATUS_UPDATE_CFG

DPLL loop filter status update configuration.

Table 178: DPLL_0.DPLL_FILTER_STATUS_UPDATE_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_FILTER_STATUS_UPDATE_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
006h	RESERVED[7:3]					FILTER_STATUS_UPDATE_EN[2]	FILTER_STATUS_SELECT_CNFG[1:0]	

DPLL_0.DPLL_FILTER_STATUS_UPDATE_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value

DPLL_0.DPLL_FILTER_STATUS_UPDATE_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FILTER_STATUS_UPDATE_EN[2]	R/W	0	DPLL loop filter status SCSR update enable. 0 = disabled 1 = enabled
FILTER_STATUS_SELECT_CNFG[1:0]	R/W	0	DPLL filter status SCSR source select configuration. 0 = integrator 1 = proportional + integrator 2 = holdover value 3 = delta_frequency (final ffo incl. combo mode additions)

DPLL_0.DPLL_HO_ADVCD_HISTORY

Advanced holdover history configuration.

Table 179: DPLL_0.DPLL_HO_ADVCD_HISTORY Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_HO_ADVCD_HISTORY Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
007h	RESERVED[7:6]		HISTORY[5:0]					

DPLL_0.DPLL_HO_ADVCD_HISTORY Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
HISTORY[5:0]	R/W	0	Configure DPLL holdover history.

DPLL_0.DPLL_HO_ADVCD_BW

DPLL advanced holdover bandwidth configuration.

Table 180: DPLL_0.DPLL_HO_ADVCD_BW Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_HO_ADVCD_BW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	DPLL_HO_ADVCD_BW[7:0]							
009h	BW_UNIT[15:14]		DPLL_HO_ADVCD_BW[13:8]					

DPLL_0.DPLL_HO_ADVCD_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	DPLL advanced holdover bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
DPLL_HO_ADVCD_BW[13:0]	R/W	0	Unsigned 14 bit DPLL advanced holdover bandwidth value.

DPLL_0.DPLL_HO_CFG

Select type of holdover to be used.

Table 181: DPLL_0.DPLL_HO_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_HO_CFG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ah	RESERVED[7:3]					HOLDOVER_MODE[2:0]		

DPLL_0.DPLL_HO_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
HOLDOVER_MODE[2:0]	R/W	0	Holdover type configuration. simple: holds DPLL with latest integrator value manual: holds DPLL with value from DPLL_CTRL_n.DPLL_MANUAL_HOLDOVER_VALUE advanced: holds DPLL with value derived from filtered DPLL frequency history 0 = simple 1 = manual 2 = advanced

DPLL_0.DPLL_LOCK_0

Phase lock threshold.

Table 182: DPLL_0.DPLL_LOCK_0 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_LOCK_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Bh	PHASE_UNIT[7:6]		PHASE_LOCK_MAX_ERROR[5:0]					

DPLL_0.DPLL_LOCK_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PHASE_UNIT[7:6]	R/W	0	Phase lock threshold unit. 0 = 1 ns 1 = 10 ns 2 = 100 ns 3 = 1 us
PHASE_LOCK_MAX_ERROR[5:0]	R/W	0	Phase lock threshold value. If 0, then phase check is disabled.

DPLL_0.DPLL_LOCK_1

Phase lock monitor duration.

Table 183: DPLL_0.DPLL_LOCK_1 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_LOCK_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ch	PHASE_MON_DUR[7:0]							

DPLL_0.DPLL_LOCK_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PHASE_MON_DUR[7:0]	R/W	0	Duration of phase error monitoring before lock is declared, in seconds. 0 means 4000 microseconds.

DPLL_0.DPLL_LOCK_2

Frequency lock threshold.

Table 184: DPLL_0.DPLL_LOCK_2 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_LOCK_2 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Dh	FFO_UNIT[7:6]		FFO_LOCK_MAX_ERROR[5:0]					

DPLL_0.DPLL_LOCK_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[7:6]	R/W	0	FFO error unit. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO_LOCK_MAX_ERROR [5:0]	R/W	0	Integer maximum FFO error for lock criteria. If 0, then Fractional Frequency Offset check is disabled.

DPLL_0.DPLL_LOCK_3

The duration in seconds the frequency has to be locked before declaring locked.

Table 185: DPLL_0.DPLL_LOCK_3 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_LOCK_3 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Eh	FFO_MON_DUR[7:0]							

DPLL_0.DPLL_LOCK_3 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_MON_DUR[7:0]	R/W	0	Duration of FFO error monitoring before lock declared (seconds). 0 means that the frequency is declared locked immediately after FFO lock criteria is met.

DPLL_0.DPLL_REF_PRIORITY_0

Lowest priority index is highest priority.

Table 186: DPLL_0.DPLL_REF_PRIORITY_0 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Fh	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. Used to group multiple clocks as equal priority. References in the same priority group number use non-revertive switching.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 0. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 0. Enable reference priority 0 for the automatic reference selection. Gaps in the priority table are supported. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_1

Lower priority index is higher priority.

Table 187: DPLL_0.DPLL_REF_PRIORITY_1 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
010h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 1. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 1. Enable reference priority 1 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_2

Lower priority index is higher priority.

Table 188: DPLL_0.DPLL_REF_PRIORITY_2 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_2 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
011h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 2. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 2. Enable reference priority 2 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_3

Lower priority index is higher priority.

Table 189: DPLL_0.DPLL_REF_PRIORITY_3 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_3 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
012h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_3 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 3. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 3. Enable reference priority 3 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_4

Lower priority index is higher priority.

Table 190: DPLL_0.DPLL_REF_PRIORITY_4 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_4 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
013h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_4 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 4. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 4. Enable reference priority 4 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_5

Lower priority index is higher priority.

Table 191: DPLL_0.DPLL_REF_PRIORITY_5 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_5 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
014h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_5 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 5. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 5. Enable reference priority 5 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_6

Lower priority index is higher priority.

Table 192: DPLL_0.DPLL_REF_PRIORITY_6 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_6 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
015h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_6 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 6. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 6. Enable reference priority 6 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_7

Lower priority index is higher priority.

Table 193: DPLL_0.DPLL_REF_PRIORITY_7 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_7 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
016h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_7 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 7. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 7. Enable reference priority 7 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_8

Lower priority index is higher priority.

Table 194: DPLL_0.DPLL_REF_PRIORITY_8 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_8 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
017h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_8 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 8. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 8. Enable reference priority 8 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_9

Lower priority index is higher priority.

Table 195: DPLL_0.DPLL_REF_PRIORITY_9 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_9 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
018h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_9 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 9. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 9. Enable reference priority 9 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_10

Lower priority index is higher priority.

Table 196: DPLL_0.DPLL_REF_PRIORITY_10 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_10 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
019h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_10 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 10. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 10. Enable reference priority 10 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_11

Lower priority index is higher priority.

Table 197: DPLL_0.DPLL_REF_PRIORITY_11 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_11 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Ah	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_11 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 11. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 11. Enable reference priority 11 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_12

Lower priority index is higher priority.

Table 198: DPLL_0.DPLL_REF_PRIORITY_12 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_12 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Bh	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_12 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 12. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 12. Enable reference priority 12 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_13

Lower priority index is higher priority.

Table 199: DPLL_0.DPLL_REF_PRIORITY_13 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_13 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Ch	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_13 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 13. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 13. Enable reference priority 13 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_14

Lower priority index is higher priority.

Table 200: DPLL_0.DPLL_REF_PRIORITY_14 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_14 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Dh	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_14 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 14. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 14. Enable reference priority 14 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_15

Lower priority index is higher priority.

Table 201: DPLL_0.DPLL_REF_PRIORITY_15 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_15 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Eh	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_15 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 15. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 15. Enable reference priority 15 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_16

Lower priority index is higher priority.

Table 202: DPLL_0.DPLL_REF_PRIORITY_16 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_16 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Fh	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_16 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 16. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 16. Enable reference priority 16 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_17

Highest priority index is lowest priority.

Table 203: DPLL_0.DPLL_REF_PRIORITY_17 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_17 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
020h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_17 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 17. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 17. Enable reference priority 17 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_REF_PRIORITY_18

Highest priority index is lowest priority.

Table 204: DPLL_0.DPLL_REF_PRIORITY_18 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_PRIORITY_18 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
021h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

DPLL_0.DPLL_REF_PRIORITY_18 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. For references in the same priority group, revertive switching is disabled.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 18. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 18. Enable reference priority 18 for the automatic reference selection. 0 = disabled 1 = enabled

DPLL_0.DPLL_TRANS_CTRL

DPLL phase transient (phase build-out) configuration.

Table 205: DPLL_0.DPLL_TRANS_CTRL Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_TRANS_CTRL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
022h	RESERVED[7:2]						TRANS_SUPPRESS_EN[1]	TRANS_DETECT_EN[0]

DPLL_0.DPLL_TRANS_CTRL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
TRANS_SUPPRESS_EN[1]	R/W	0	Transient suppress enable. 0 = disabled 1 = enabled
TRANS_DETECT_EN[0]	R/W	0	Transient detect enable. 0 = disabled 1 = enabled

DPLL_0.DPLL_FASTLOCK_CFG_0

Enable different fast lock methods.

Fast lock stages in order:

1. Frequency snap
2. Phase snap
3. Pre-fast acquisition - bandwidth is set to maximum for PRE_FAST_ACQ_TIMER duration (LOCK_ACQ only)
4. Fast acquisition - bandwidth is set to DPLL_FASTLOCK_BW until lock achieved

Table 206: DPLL_0.DPLL_FASTLOCK_CFG_0 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_FASTLOCK_CFG_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
023h	LOCK_REC_PULL_IN_EN[7]	LOCK_REC_FAST_ACQ_EN[6]	LOCK_REC_PHASE_SNAP_EN[5]	LOCK_REC_FREQ_SNAP_EN[4]	LOCK_ACQ_PULL_IN_EN[3]	LOCK_ACQ_FAST_ACQ_EN[2]	LOCK_ACQ_PHASE_SNAP_EN[1]	LOCK_ACQ_FREQ_SNAP_EN[0]

DPLL_0.DPLL_FASTLOCK_CFG_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
LOCK_REC_PULL_IN_EN[7]	R/W	0	Enable pull_in for LOCKREC state. If DPLL_FASTLOCK_PSL = 0, then use DPLL_MAX_FREQ_OFFSET_max_ffo to control the open-loop phase pull-in rate, otherwise use DPLL_FASTLOCK_PSL to apply closed-loop phase pull-in. The timeout for the closed-loop procedure is 10,000 seconds. To enable pull-in, lock_rec_phase_snap_en must also be enabled. 0 = disabled 1 = enabled
LOCK_REC_FAST_ACQ_EN[6]	R/W	0	Enable fast acquisition stage for LOCKREC state. During the fast acquisition stage, the bandwidth is temporarily set to DPLL_FASTLOCK_BW to facilitate faster lock acquisition. 0 = disabled 1 = enabled

DPLL_0.DPLL_FASTLOCK_CFG_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
LOCK_REC_PHASE_SNAP_EN[5]	R/W	0	Enable phase snap for LOCKREC state. When lock_rec_pull_in_en is also enabled, instead phase snap, phase pull-in will be performed. 0 = disabled 1 = enabled
LOCK_REC_FREQ_SNAP_EN[4]	R/W	0	Enable frequency snap for LOCKREC state. 0 = disabled 1 = enabled
LOCK_ACQ_PULL_IN_EN[3]	R/W	0	Enable pull_in for LOCKACQ state. If DPLL_FASTLOCK_PSL = 0, then use DPLL_MAX_FREQ_OFFSET_max_ffo to control the open-loop phase pull-in rate, otherwise use DPLL_FASTLOCK_PSL to apply closed-loop phase pull-in. The timeout for the closed-loop procedure is 10,000 seconds. To enable pull-in, lock_acq_phase_snap_en must also be enabled. 0 = disabled 1 = enabled
LOCK_ACQ_FAST_ACQ_EN[2]	R/W	0	Enable fast acquisition stage for LOCKACQ state. During the fast acquisition stage, the bandwidth is temporarily set to DPLL_FASTLOCK_BW to facilitate faster lock acquisition. 0 = disabled 1 = enabled
LOCK_ACQ_PHASE_SNAP_EN[1]	R/W	0	Enable phase snap for LOCKACQ state. When lock_acq_pull_in_en is also enabled, instead phase snap, phase pull-in will be performed. 0 = disabled 1 = enabled
LOCK_ACQ_FREQ_SNAP_EN[0]	R/W	0	Enable frequency snap for LOCKACQ state. 0 = disabled 1 = enabled

DPLL_0.DPLL_FASTLOCK_CFG_1

Configure pre fast acquisition timer, damping factor.

Table 207: DPLL_0.DPLL_FASTLOCK_CFG_1 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_FASTLOCK_CFG_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
024h	PRE_FAST_ACQ_TIMER[7:4]				DAMP_FTR[3:0]			

DPLL_0.DPLL_FASTLOCK_CFG_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRE_FAST_ACQ_TIMER[7:4]	R/W	0	Pre-fast acquisition stage timer. If the value n > 0, the DPLL opens up the bandwidth to the maximum for a duration of 2^(n-1) milliseconds. If the value n = 0, then pre-fast-acquisition stage is disabled. Only applied to LOCKACQ state.
DAMP_FTR[3:0]	R/W	0	DPLL damping factor for fast acquisition stage. 0 = 1.002, 0.02 dB, overdamp; 1 = 1.006, 0.05 dB, < 0.05dB; 2 = 1.008, 0.07 dB, < 1%; 3 = 1.012, 0.10 dB, < 0.1dB; 4 = 1.015 , 0.13 dB, < 2%; 5 = 1.022, 0.19 dB, < 0.2dB; 6 = 1.053 , 0.45 dB, < 0.5dB; 7 = 1.172 , 1.38 dB, underdamp;

DPLL_0.DPLL_MAX_FREQ_OFFSET

DPLL maximum frequency offset limit

Table 208: DPLL_0.DPLL_MAX_FREQ_OFFSET Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_MAX_FREQ_OFFSET Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
025h	MAX_FFO[7:0]							

DPLL_0.DPLL_MAX_FREQ_OFFSET Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MAX_FFO[7:0]	R/W	0	Unsigned 8-bit maximum frequency offset limit in ppm. Value 0 implies maximum of FFO limit of 244 ppm.

DPLL_0.DPLL_FASTLOCK_PSL

Fast lock phase slope limit.

Table 209: DPLL_0.DPLL_FASTLOCK_PSL Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_FASTLOCK_PSL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
026h	DPLL_FASTLOCK_PSL[7:0]							
027h	DPLL_FASTLOCK_PSL[15:8]							

DPLL_0.DPLL_FASTLOCK_PSL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL_FASTLOCK_PSL[15:0]	R/W	0	Unsigned 16-bit phase slope limit in ns/s. Applied during fast acquisition and phase pull-in, if enabled. In fast acquisition stage, value 0 implies no phase slope limit. The phase pull-in is applied in closed-loop mode with this phase slope limit if the value is non-zero, otherwise it is applied in open-loop mode with DPLL_MAX_FREQ_OFFSET_max_ffo limit.

DPLL_0.DPLL_FASTLOCK_FSL

Fast lock frequency slope limit.

Table 210: DPLL_0.DPLL_FASTLOCK_FSL Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_FASTLOCK_FSL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
028h	DPLL_FASTLOCK_FSL[7:0]							
029h	DPLL_FASTLOCK_FSL[15:8]							

DPLL_0.DPLL_FASTLOCK_FSL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL_FASTLOCK_FSL[15:0]	R/W	0	Unsigned 16-bit frequency slope limit in ppb/s. Value 0 implies no frequency slope limit. Applied only on frequency snap.

DPLL_0.DPLL_FASTLOCK_BW

Fast lock loop filter bandwidth.

Table 211: DPLL_0.DPLL_FASTLOCK_BW Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_FASTLOCK_BW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
02Ah	DPLL_FASTLOCK_BW[7:0]							
02Bh	BW_UNIT[15:14]		DPLL_FASTLOCK_BW[13:8]					

DPLL_0.DPLL_FASTLOCK_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	Fast lock DPLL bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
DPLL_FASTLOCK_BW[13:0]	R/W	0	Unsigned 14-bit DPLL bandwidth value. Applied during fast acquisition stage.

DPLL_0.DPLL_WRITE_FREQ_TIMER

Write frequency timer.

Table 212: DPLL_0.DPLL_WRITE_FREQ_TIMER Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_WRITE_FREQ_TIMER Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
02Ch	WRITE_FREQ_TIMEOUT_CNFG[7:0]							
02Dh	WRITE_FREQ_TIMEOUT_CNFG[15:8]							

DPLL_0.DPLL_WRITE_FREQ_TIMER Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
WRITE_FREQ_TIMEOUT_CNFG[15:0]	R/W	0	Unsigned 16-bit write frequency timeout value in milliseconds. When in write frequency mode, the DPLL_WR_FREQ must be periodically written to within WRITE_FREQ_TIMEOUT_CNFG ms. If the write frequency timer expires, the write frequency as a reference is disqualified. Upon disqualification, depending on the configuration, a reference switch may occur the DPLL may enter the configured holdover mode. Value 0 implies no timeout.

DPLL_0.DPLL_WRITE_PHASE_TIMER

Write phase timer.

Table 213: DPLL_0.DPLL_WRITE_PHASE_TIMER Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_WRITE_PHASE_TIMER Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
02Eh	WRITE_PHASE_TIMEOUT_CNFG[7:0]							
02Fh	WRITE_PHASE_TIMEOUT_CNFG[15:8]							

DPLL_0.DPLL_WRITE_PHASE_TIMER Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
WRITE_PHASE_TIMEOUT_CNFG[15:0]	R/W	0	Unsigned 16-bit write phase timeout value in milliseconds. When in write phase mode, the DPLL_WRITE_PH must be periodically written to within WRITE_PHASE_TIMEOUT_CNFG ms. If the write phase timer expires, the write phase as a reference is disqualified. Upon disqualification, depending on the configuration, a reference switch may occur the DPLL may enter the configured holdover mode. Value 0 implies no timeout.

DPLL_0.DPLL_PRED_CFG

Predefined configuration selection.

Table 214: DPLL_0.DPLL_PRED_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_PRED_CFG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
030h	RESERVED[7:2]						WP_PRED[1]	PRED_EN[0]

DPLL_0.DPLL_PRED_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
WP_PRED[1]	R/W	0	Predefined configuration to be used for write phase input. Write phase predefined configuration selection (0 or 1). 0 = pred0 1 = pred1
PRED_EN[0]	R/W	0	Enable predefined configurations. 0 = disabled 1 = enabled

DPLL_0.DPLL_TOD_SYNC_CFG

DPLL ToD synchronization configuration.

Table 215: DPLL_0.DPLL_TOD_SYNC_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_TOD_SYNC_CFG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
031h	RESERVED[7:3]					TOD_SYNC_SOURCE[2:1]		TOD_SYNC_EN[0]

DPLL_0.DPLL_TOD_SYNC_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
TOD_SYNC_SOURCE[2:1]	R/W	0	The ToD synchronization source. The ToD index this DPLL synchronize to. 0 = ToD0 1 = ToD1 2 = ToD2 3 = ToD3
TOD_SYNC_EN[0]	R/W	0	Enable the DPLL synchronizing to a ToD. If enabled, when the source TOD write event happens, a phase snap on this DPLL will be triggered and the phase of the DPLL output will align with the ToD second boundary. 0 = disabled 1 = enabled

DPLL_0.DPLL_COMBO_SLAVE_CFG_0

Combo mode slave primary source configuration.

Table 216: DPLL_0.DPLL_COMBO_SLAVE_CFG_0 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_COMBO_SLAVE_CFG_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
032h	RESERVED[7:6]		PRI_COMBO_SRC_EN[5]	PRI_COMBO_SRC_FILTERED_CNFG[4]	PRI_COMBO_SRC_ID[3:0]			

DPLL_0.DPLL_COMBO_SLAVE_CFG_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
PRI_COMBO_SRC_EN[5]	R/W	0	Enable this source. 0 = disabled 1 = enabled
PRI_COMBO_SRC_FILTERED_CNFG[4]	R/W	0	Use filtered source. 0 = use un-filtered source 1 = use filtered source
PRI_COMBO_SRC_ID[3:0]	R/W	0	Primary combo source DPLL index.

DPLL_0.DPLL_COMBO_SLAVE_CFG_1

Combo mode slave secondary source configuration.

Table 217: DPLL_0.DPLL_COMBO_SLAVE_CFG_1 Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_COMBO_SLAVE_CFG_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
033h	RESERVED[7:6]		SEC_COMBO_SRC_EN[5]	SEC_COMBO_SRC_FILTERED_CNFG[4]	SEC_COMBO_SRC_ID[3:0]			

DPLL_0.DPLL_COMBO_SLAVE_CFG_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
SEC_COMBO_SRC_EN[5]	R/W	0	Enable this source. 0 = disabled 1 = enabled
SEC_COMBO_SRC_FILTERED_CNFG[4]	R/W	0	Use filtered source. 0 = use un-filtered source 1 = use filtered source
SEC_COMBO_SRC_ID[3:0]	R/W	0	Secondary combo source DPLL index.

DPLL_0.DPLL_SLAVE_REF_CFG

Slave mode configuration.

Table 218: DPLL_0.DPLL_SLAVE_REF_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_SLAVE_REF_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
034h	RESERVED[7:5]			SLAVE_REFERENCE[4:0]				

DPLL_0.DPLL_SLAVE_REF_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
SLAVE_REFERENCE[4:0]	R/W	0	Reference index used by DPLL when reference mode is 'slave' or 'GPIO_slave'. 0x0 = CLK0 0x1 = CLK1 0x2 = CLK2 0x3 = CLK3 0x4 = CLK4 0x5 = CLK5 0x6 = CLK6 0x7 = CLK7 0x8 = CLK8 0x9 = CLK9 0xA = CLK10 0xB = CLK11 0xC = CLK12 0xD = CLK13 0xE = CLK14 0xF = CLK15

DPLL_0.DPLL_REF_MODE

Reference selection configuration and an enable bit to monitor the XO DPLL reference.

Table 219: DPLL_0.DPLL_REF_MODE Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_REF_MODE Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
035h	RESERVED[7:5]			XO_DPLL_MONITOR_EN[4]	MODE[3:0]			

DPLL_0.DPLL_REF_MODE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value

DPLL_0.DPLL_REF_MODE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
XO_DPLL_MONITOR_EN[4]	R/W	0	Enable monitoring of XO DPLL reference. 0 = disabled 1 = enabled
MODE[3:0]	R/W	0	Reference selection mode. Automatic: DPLL_0.DPLL_REF_PRIORITY_[0:16] Manual: DPLL_CTRL_0.DPLL_MANU_REF_CFG.MANUAL_REFERENCE GPIO: GPIO_0.GPIO_MAN_CLK_SEL_0/1/2, GPIO_FUNCTION = 0x7 manual clock select Slave: DPLL_0.DPLL_SLAVE_REF_CFG GPIO_slave: DPLL_0.DPLL_SLAVE_REF_CFG, GPIO_FUNCTION = 0xC master/slave signal 0 = automatic 1 = manual 2 = GPIO 3 = slave 4 = GPIO_slave

DPLL_0.DPLL_PHASE_MEASUREMENT_CFG

Measure phase offset between two inputs using phase detector. Both single-ended and differential inputs are available for selection.

Coarse phase measurement or unfiltered reading (in ITDC_UI) is stored in DPLLx_PHASE_STATUS and is represented by 36-bit signed integer. Fine phase measurement or filtered reading (in ITDC_UI/128) is stored in DPLLx_FILTER_STATUS and is represented by 48-bit signed integer.

After selecting inputs, configure DPLL for phase measurement mode (i.e. set DPLL_MODE.pll_mode to 0x5).

If there is LOS condition present on either inputs selected, then said status registers will report error codes: DPLLx_PHASE_STATUS will report 0x7fffffff and DPLLx_FILTER_STATUS will report 0x7fffffffffff.

Set INPUT_TDC_FBD_CTRL.fbd_user_config_en field to 0 to enable write frequency capability. Note that doing this will disable fine phase measurements. To stop supporting write frequency capability and start supporting fine phase measurements again, set said field to 1, retrigger INPUT_TDC module (i.e. write to INPUT_TDC_CTRL), and then retrigger DPLL module (i.e. write to DPLL_MODE).

Note: In cases where phase detector factors in one or more periods into phase measurement (e.g. when feedback clock drifts and phase detector takes one or more cycles to calculate phase offset), retrigger DPLL module (i.e. write to DPLL_MODE) to restart phase measurement.

Table 220: DPLL_0.DPLL_PHASE_MEASUREMENT_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_PHASE_MEASUREMENT_CFG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
036h	PFD_FB_CLK_SEL[7:4]				PFD_REF_CLK_SEL[3:0]			

DPLL_0.DPLL_PHASE_MEASUREMENT_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PFD_FB_CLK_SEL[7:4]	R/W	0	Select feedback clock going into phase detector. Feedback clock selected must have same frequency as reference clock selected. 0x0 = CLK0 0x1 = CLK1 0x2 = CLK2 0x3 = CLK3 0x4 = CLK4 0x5 = CLK5 0x6 = CLK6 0x7 = CLK7 0x8 = CLK8 0x9 = CLK9 0xA = CLK10 0xB = CLK11 0xC = CLK12 0xD = CLK13 0xE = CLK14 0xF = CLK15
PFD_REF_CLK_SEL[3:0]	R/W	0	Select reference clock going into phase detector. Reference clock selected must have same frequency as feedback clock selected. 0x0 = CLK0 0x1 = CLK1 0x2 = CLK2 0x3 = CLK3 0x4 = CLK4 0x5 = CLK5 0x6 = CLK6 0x7 = CLK7 0x8 = CLK8 0x9 = CLK9 0xA = CLK10 0xB = CLK11 0xC = CLK12 0xD = CLK13 0xE = CLK14 0xF = CLK15

DPLL_0.DPLL_FASTLOCK_FREQ_SNAP_WINDOW

Fastlock frequency snap window.

Table 221: DPLL_0.DPLL_FASTLOCK_FREQ_SNAP_WINDOW Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_FASTLOCK_FREQ_SNAP_WINDOW Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
037h	FREQ_SNAP_WINDOW_UNIT[7:6]		FREQ_SNAP_WINDOW[5:0]					

DPLL_0.DPLL_FASTLOCK_FREQ_SNAP_WINDOW Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
FREQ_SNAP_WINDOW_UNIT[7:6]	R/W	0	Frequency snap window unit. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FREQ_SNAP_WINDOW[5:0]	R/W	0	Unsigned 6-bit frequency snap window. See DPLL_FASTLOCK_CFG_0 for fastlock configurations. If frequency offset is less than freq_snap_window, then frequency snap is skipped. Otherwise, it is executed when enabled. Value of zero indicates that no window is configured and frequency snap will be executed when enabled.

DPLL_0.DPLL_FASTLOCK_PHASE_PULL_IN_AND_FAST_ACQ_WINDOW

Fastlock phase pull-in and fast-acquisition window.

Table 222: DPLL_0.DPLL_FASTLOCK_PHASE_PULL_IN_AND_FAST_ACQ_WINDOW Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_FASTLOCK_PHASE_PULL_IN_AND_FAST_ACQ_WINDOW Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
038h	PULL_IN_WINDOW_UNIT[7:6]		PULL_IN_WINDOW[5:0]					

DPLL_0.DPLL_FASTLOCK_PHASE_PULL_IN_AND_FAST_ACQ_WINDOW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PULL_IN_WINDOW_UNIT[7:6]	R/W	0	Phase pull-in and fast-acqusition window unit. 0 = 1 ns 1 = 10 ns 2 = 100 ns 3 = 1 us
PULL_IN_WINDOW[5:0]	R/W	0	Unsigned 6-bit phase pull-in and fast-acqusition window. See DPLL_FASTLOCK_CFG_0 for fastlock configurations. If absolute phase offset is less than pull_in_window, then phase pull-in and fast-acquisition are skipped. Otherwise, they are executed when enabled. If both phase pull-in and phase snap are enabled, then pull_in_window must be zero or less than DPLL_FASTLOCK_PHASE_SNAP_WINDOW.phase_snap_window. Value of zero indicates that no window is configured and phase pull-in and fast-acquisition will be executed when enabled.

DPLL_0.DPLL_FASTLOCK_PHASE_SNAP_WINDOW

Fastlock phase snap window.

Table 223: DPLL_0.DPLL_FASTLOCK_PHASE_SNAP_WINDOW Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_FASTLOCK_PHASE_SNAP_WINDOW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
039h	PHASE_SNAP_WINDOW_UNIT[7:6]		PHASE_SNAP_WINDOW[5:0]					

DPLL_0.DPLL_FASTLOCK_PHASE_SNAP_WINDOW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PHASE_SNAP_WINDOW_UNIT[7:6]	R/W	0	Phase snap window unit. 0 = 1 ns 1 = 10 ns 2 = 100 ns 3 = 1 us
PHASE_SNAP_WINDOW[5:0]	R/W	0	Unsigned 6-bit phase snap window. See DPLL_FASTLOCK_CFG_0 for different fastlock configurations. If absolute phase offset is less than phase_snap_window, then phase snap is skipped. Otherwise, it is executed when enabled. If both phase snap and phase pull-in are enabled, then phase snap will be executed if absolute phase offset is greater than phase_snap_window. Otherwise, phase pull-in will be executed instead. Value of zero indicates that no window is configured and phase snap will be executed when enabled.

DPLL_0.DPLL_SINGLE_PULSE_SYNC_CFG

Configure single pulse synchronization signals used to trigger output channel alignment.

Set GPIO_CTRL.gpio_function field to single pulse sync signal for GPIO intended to be used as single pulse sync GPIO signal.

Set GPIO_CTRL.gpio_function_en field to 0x1 to enable GPIO function mode.

Set DPLL_MODE.single_pulse_sync_en to 0x1 to enable single pulse synchronization (applied on a per DPLL module basis to indicate which output channels to be aligned).

Multiple single pulse synchronization configurations can be supported at the same time.

Note: Input to be used as single pulse synchronization input signal must be single-ended (CMOS), non-inverted, and non-divided (see IN_MODE_0/1).

Ex: Suppose INPUT4 and GPIO11 are to be used as single pulse synchronization signals to align OUT0 and OUT1 (output channel 0) and OUT4 and OUT5 (output channel 2). Assume default output divider multiplexer configurations are in effect. Set GPIO_CTRL.gpio_function field to single pulse sync signal for GPIO11, GPIO_CTRL.gpio_function_en field to 0x1 for GPIO11, SCSR_SINGLE_PULSE_SYNC_CFG.single_pulse_sync_input_signal_sel field to 0x4 for DPLL0 and DPLL2, SCSR_SINGLE_PULSE_SYNC_CFG.single_pulse_sync_gpio_signal_sel field to 0x11 for DPLL0 and DPLL2, and DPLL_MODE.single_pulse_sync_en field to 0x1 for DPLL0 and DPLL2.

Table 224: DPLL_0.DPLL_SINGLE_PULSE_SYNC_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_SINGLE_PULSE_SYNC_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
03Ah	SINGLE_PULSE_SYNC_GPIO_SIGNAL_SEL[7:4]				SINGLE_PULSE_SYNC_INPUT_SIGNAL_SEL[3:0]			

DPLL_0.DPLL_SINGLE_PULSE_SYNC_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SINGLE_PULSE_SYNC_GPIO_SIGNAL_SEL[7:4]	R/W	0	Select single pulse synchronization GPIO signal. 0x0 = GPIO0 0x1 = GPIO1 0x2 = GPIO2 0x3 = GPIO3 0x4 = GPIO4 0x5 = GPIO5 0x6 = GPIO6 0x7 = GPIO7 0x8 = GPIO8 0x9 = GPIO9 0xA = GPIO10 0xB = GPIO11 0xC = GPIO12 0xD = GPIO13 0xE = GPIO14 0xF = GPIO15
SINGLE_PULSE_SYNC_INPUT_SIGNAL_SEL[3:0]	R/W	0	Select single pulse synchronization input signal. 0x0 = CLK0 0x1 = CLK1 0x2 = CLK2 0x3 = CLK3 0x4 = CLK4 0x5 = CLK5 0x6 = CLK6 0x7 = CLK7 0x8 = CLK8 0x9 = CLK9 0xA = CLK10 0xB = CLK11 0xC = CLK12 0xD = CLK13 0xE = CLK14 0xF = CLK15

DPLL_0.DPLL_MODE

Set DPLL state machine transition mode, DPLL mode of operation, and write phase and frequency timer modes. Enable single pulse sync mode.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the DPLL module.

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Table 225: DPLL_0.DPLL_MODE Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_0.DPLL_MODE Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
03Bh	SINGLE_PULSE_SYNC_EN[7]	WRITE_TIMER_MODE[6]	PLL_MODE[5:3]			STATE_MODE[2:0]		

DPLL_0.DPLL_MODE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SINGLE_PULSE_SYNC_EN[7]	R/W	0	Single pulse synchronization enable. Set to 0x1 to enable single pulse synchronization for output channel associated with this DPLL.
WRITE_TIMER_MODE[6]	R/W	0	Write phase or write frequency timer mode. This bit selects simple holdover or advanced holdover for DPLL once the write timer expires. 0 = simple holdover mode 1 = advanced holdover mode
PLL_MODE[5:3]	R/W	0	DPLL operation mode. When switching from disabled mode to one of the other modes, appropriate trigger registers must be written to activate pertinent DPLL and output related SCSRs configurations. 0 = PLL mode 1 = write phase mode 2 = write frequency mode 3 = GPIO inc/dec mode 4 = synthesizer mode 5 = phase measurement mode 6 = disabled mode (reduced phase noise)
STATE_MODE[2:0]	R/W	0	DPLL state machine transition mode. 0 = automatic 1 = force lock 2 = force freerun 3 = force holdover

Module: SYS_DPLL

Configure the system DPLL.

Note: The order of configuring three SCSR modules, SCSR_SYS_DPLL_XO, SCSR_SYS_APLL, SCSR_SYS_DPLL, are critical. The correct configuration order should be: SCSR_SYS_DPLL_XO, SCSR_SYS_APLL, SCSR_SYS_DPLL, and followed by other modules. Each of these three SCSR modules should be configured completely before configuring the next module.

Table 226: SYS_DPLL Register Index

Offset (Hex)	Register Module Base Address: C5BCh	
	Individual Register Name	Register Description
000h	SYS_DPLL.SYS_DPLL_CTRL_0	Reference switching configuration and forced lock reference selection.
001h	SYS_DPLL.SYS_DPLL_CTRL_3	System DPLL loop filter update rate configuration.
002h	SYS_DPLL.SYS_DPLL_FILTER_STATUS_UPDATE_CFG	System DPLL loop filter status update configuration.
003h	SYS_DPLL.SYS_DPLL_LOCK_0	Phase lock threshold.
004h	SYS_DPLL.SYS_DPLL_LOCK_1	Phase lock monitor duration.
005h	SYS_DPLL.SYS_DPLL_LOCK_2	Frequency lock threshold.
006h	SYS_DPLL.SYS_DPLL_LOCK_3	Frequency lock monitor duration.
007h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_0	Select input for highest (0) priority.
008h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_1	Select input for priority 1.
009h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_2	Select input for priority 2.
00Ah	SYS_DPLL.SYS_DPLL_REF_PRIORITY_3	Select input for priority 3.
00Bh	SYS_DPLL.SYS_DPLL_REF_PRIORITY_4	Select input for priority 4.
00Ch	SYS_DPLL.SYS_DPLL_REF_PRIORITY_5	Select input for priority 5.
00Dh	SYS_DPLL.SYS_DPLL_REF_PRIORITY_6	Select input for priority 6.
00Eh	SYS_DPLL.SYS_DPLL_REF_PRIORITY_7	Select input for priority 7.
00Fh	SYS_DPLL.SYS_DPLL_REF_PRIORITY_8	Select input for priority 8.
010h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_9	Select input for priority 9.
011h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_10	Select input for priority 10.
012h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_11	Select input for priority 11.
013h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_12	Select input for priority 12.
014h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_13	Select input for priority 13.
015h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_14	Select input for priority 14.
016h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_15	Select input for priority 15.
017h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_16	Select input for priority 16.
018h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_17	Select input for priority 17.
019h	SYS_DPLL.SYS_DPLL_REF_PRIORITY_18	Select input for priority 18.
01Ah	RESERVED	This register must not be modified from the read value

Table 226: SYS_DPLL Register Index

Offset (Hex)	Register Module Base Address: C5BCh	
	Individual Register Name	Register Description
01Bh	SYS_DPLL.SYS_DPLL_REF_MODE	Reference selection configuration and XO DPLL monitor enable.
01Ch	RESERVED	This register must not be modified from the read value
01Dh	RESERVED	This register must not be modified from the read value
01Eh	SYS_DPLL.SYS_DPLL_MODE	System DPLL state machine transition mode.

SYS_DPLL.SYS_DPLL_CTRL_0

Reference switching configuration and forced lock reference selection.

Table 227: SYS_DPLL.SYS_DPLL_CTRL_0 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_CTRL_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	FORCE_LOCK_INPUT[7:3]					RESERVED[2]	REVERTIVE_EN[1]	RESERVED[0]

SYS_DPLL.SYS_DPLL_CTRL_0 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
FORCE_LOCK_INPUT[7:3]	R/W	0	System DPLL reference input index when force lock applied. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL.
REVERTIVE_EN[1]	R/W	0	Enable revertive mode. 0 = disabled 1 = enabled
RESERVED	N/A	-	This field must not be modified from the read value

SYS_DPLL.SYS_DPLL_CTRL_3

System DPLL loop filter update rate configuration.

Table 228: SYS_DPLL.SYS_DPLL_CTRL_3 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_CTRL_3 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	RESERVED[7:2]						UPDATE_RATE_CFG[1:0]	

SYS_DPLL.SYS_DPLL_CTRL_3 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
UPDATE_RATE_CFG[1:0]	R/W	0	System DPLL loop filter update rate configuration. Used to avoid spurs at a specific frequency. 0 = 2.777 MHz 1 = 694 kHz 2 = 174 kHz 3 = 43 kHz

SYS_DPLL.SYS_DPLL_FILTER_STATUS_UPDATE_CFG

System DPLL loop filter status update configuration.

Table 229: SYS_DPLL.SYS_DPLL_FILTER_STATUS_UPDATE_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_FILTER_STATUS_UPDATE_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	RESERVED[7:3]					FILTER_STATUS_UPDATE_EN[2]	FILTER_STATUS_SELECT_CNFG[1:0]	

SYS_DPLL.SYS_DPLL_FILTER_STATUS_UPDATE_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FILTER_STATUS_UPDATE_EN[2]	R/W	0	System DPLL loop filter status SCSR update enable. 0 = disabled 1 = enabled
FILTER_STATUS_SELECT_CNFG[1:0]	R/W	0	System DPLL filter status SCSR source select configuration. 0 = integrator 1 = proportional + integrator 2 = holdover value 3 = delta_frequency (final ffo incl. combo mode additions)

SYS_DPLL.SYS_DPLL_LOCK_0

Phase lock threshold.

Table 230: SYS_DPLL.SYS_DPLL_LOCK_0 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_LOCK_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
003h	PHASE_UNIT[7:6]		PHASE_LOCK_MAX_ERROR[5:0]					

SYS_DPLL.SYS_DPLL_LOCK_0 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
PHASE_UNIT[7:6]	R/W	0	Phase lock threshold unit. 0 = 1 ns 1 = 10 ns 2 = 100 ns 3 = 1 us
PHASE_LOCK_MAX_ERROR[5:0]	R/W	0	Phase lock threshold value. If 0, then Fractional Frequency Offset check is disabled.

SYS_DPLL.SYS_DPLL_LOCK_1

Phase lock monitor duration.

Table 231: SYS_DPLL.SYS_DPLL_LOCK_1 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_LOCK_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	PHASE_MON_DUR[7:0]							

SYS_DPLL.SYS_DPLL_LOCK_1 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
PHASE_MON_DUR[7:0]	R/W	0	Duration of phase error monitoring before lock is declared, in seconds. 0 means 4000 microseconds.

SYS_DPLL.SYS_DPLL_LOCK_2

Frequency lock threshold.

Table 232: SYS_DPLL.SYS_DPLL_LOCK_2 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_LOCK_2 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
005h	FFO_UNIT[7:6]		FFO_LOCK_MAX_ERROR[5:0]					

SYS_DPLL.SYS_DPLL_LOCK_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_UNIT[7:6]	R/W	0	FFO error unit. 0 = 1 ppb 1 = 10 ppb 2 = 100 ppb 3 = 1 ppm
FFO_LOCK_MAX_ERROR [5:0]	R/W	0	Integer maximum FFO error for lock criteria. If 0, then Fractional Frequency Offset check is disabled.

SYS_DPLL.SYS_DPLL_LOCK_3

The duration in seconds the frequency has to be locked before declaring locked.

Table 233: SYS_DPLL.SYS_DPLL_LOCK_3 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_LOCK_3 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
006h	FFO_MON_DUR[7:0]							

SYS_DPLL.SYS_DPLL_LOCK_3 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FFO_MON_DUR[7:0]	R/W	0	Duration of FFO error monitoring before lock declared (seconds). 0 means that the frequency is declared locked immediately after FFO lock criteria is met.

SYS_DPLL.SYS_DPLL_REF_PRIORITY_0

Lowest priority index is highest priority.

Table 234: SYS_DPLL.SYS_DPLL_REF_PRIORITY_0 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
007h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 0. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 0. Enable reference priority 0 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_1

Lower priority index is higher priority.

Table 235: SYS_DPLL.SYS_DPLL_REF_PRIORITY_1 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 1. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 1. Enable reference priority 1 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_2

Lower priority index is higher priority.

Table 236: SYS_DPLL.SYS_DPLL_REF_PRIORITY_2 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_2 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
009h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 2. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 2. Enable reference priority 2 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_3

Lower priority index is higher priority.

Table 237: SYS_DPLL.SYS_DPLL_REF_PRIORITY_3 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_3 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ah	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_3 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 3. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 3. Enable reference priority 3 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_4

Lower priority index is higher priority.

Table 238: SYS_DPLL.SYS_DPLL_REF_PRIORITY_4 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_4 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Bh	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_4 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 4. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 4. Enable reference priority 4 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_5

Lower priority index is higher priority.

Table 239: SYS_DPLL.SYS_DPLL_REF_PRIORITY_5 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_5 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ch	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_5 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 5. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 5. Enable reference priority 5 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_6

Lower priority index is higher priority.

Table 240: SYS_DPLL.SYS_DPLL_REF_PRIORITY_6 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_6 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Dh	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_6 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 6. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 6. Enable reference priority 6 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_7

Lower priority index is higher priority.

Table 241: SYS_DPLL.SYS_DPLL_REF_PRIORITY_7 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_7 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Eh	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_7 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 7. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 7. Enable reference priority 7 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_8

Lower priority index is higher priority.

Table 242: SYS_DPLL.SYS_DPLL_REF_PRIORITY_8 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_8 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Fh	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_8 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 8. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 8. Enable reference priority 8 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_9

Lower priority index is higher priority.

Table 243: SYS_DPLL.SYS_DPLL_REF_PRIORITY_9 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_9 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
010h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_9 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 9. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 9. Enable reference priority 9 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_10

Lower priority index is higher priority.

Table 244: SYS_DPLL.SYS_DPLL_REF_PRIORITY_10 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_10 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
011h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_10 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 10. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 10. Enable reference priority 10 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_11

Lower priority index is higher priority.

Table 245: SYS_DPLL.SYS_DPLL_REF_PRIORITY_11 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_11 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
012h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_11 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 11. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 11. Enable reference priority 11 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_12

Lower priority index is higher priority.

Table 246: SYS_DPLL.SYS_DPLL_REF_PRIORITY_12 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_12 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
013h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_12 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 12. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 12. Enable reference priority 12 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_13

Lower priority index is higher priority.

Table 247: SYS_DPLL.SYS_DPLL_REF_PRIORITY_13 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_13 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
014h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_13 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 13. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 13. Enable reference priority 13 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_14

Lower priority index is higher priority.

Table 248: SYS_DPLL.SYS_DPLL_REF_PRIORITY_14 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_14 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
015h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_14 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 14. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 14. Enable reference priority 14 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_15

Lower priority index is higher priority.

Table 249: SYS_DPLL.SYS_DPLL_REF_PRIORITY_15 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_15 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
016h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_15 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 15. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 15. Enable reference priority 15 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_16

Lower priority index is higher priority.

Table 250: SYS_DPLL.SYS_DPLL_REF_PRIORITY_16 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_16 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
017h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_16 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 16. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 16. Enable reference priority 16 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_17

Lower priority index is higher priority.

Table 251: SYS_DPLL.SYS_DPLL_REF_PRIORITY_17 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_17 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
018h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_17 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 17. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 17. Enable reference priority 17 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_PRIORITY_18

Lower priority index is higher priority.

Table 252: SYS_DPLL.SYS_DPLL_REF_PRIORITY_18 Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_PRIORITY_18 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
019h	PRIORITY_GROUP_NUMBER[7:6]		PRIORITY_REF[5:1]					PRIORITY_EN[0]

SYS_DPLL.SYS_DPLL_REF_PRIORITY_18 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PRIORITY_GROUP_NUMBER[7:6]	R/W	0	Priority group number. This parameter creates a priority group from two or more references when set to 1, 2, or 3. A priority group number is used to specify 2 or more input references having the same priority. References within the same priority group will use non-revertive switching, regardless of the revertive_en setting. When the priority group is set to zero (default), this reference does not belong to a priority group, and normal revertive switching will occur. The priority group should be continuous in the table and will inherit the priority of the lowest priority table entry that is part of the group number.
PRIORITY_REF[5:1]	R/W	0	Input reference index for priority 18. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x12 = XO_DPLL
PRIORITY_EN[0]	R/W	0	Enable reference priority 18. Enable reference priority 18 for the automatic reference selection. 0 = disabled 1 = enabled

SYS_DPLL.SYS_DPLL_REF_MODE

Reference selection configuration and an enable bit to monitor the XO DPLL reference.

Table 253: SYS_DPLL.SYS_DPLL_REF_MODE Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_REF_MODE Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Bh	RESERVED[7:5]			XO_DPLL_MONITOR_EN[4]	MODE[3:0]			

SYS_DPLL.SYS_DPLL_REF_MODE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
XO_DPLL_MONITOR_EN[4]	R/W	0	Enable monitoring of XO DPLL reference. 0 = disabled 1 = enabled
MODE[3:0]	R/W	0	Reference selection mode. Automatic: SYS_DPLL_0.DPLL_REF_PRIORITY_[0:16] Manual: SYS_DPLL_MANU_REF_CFG.MANUAL_REFERENCE 0 = automatic 1 = manual

SYS_DPLL.SYS_DPLL_MODE

Select state machine transition mode.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the system DPLL module.

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Table 254: SYS_DPLL.SYS_DPLL_MODE Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL.SYS_DPLL_MODE Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Eh	RESERVED[7:6]		RESERVED[5:3]			STATE_MODE[2:0]		

SYS_DPLL.SYS_DPLL_MODE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
STATE_MODE[2:0]	R/W	0	System DPLL state machine transition mode. 0 = automatic 1 = force lock 2 = force freerun 3 = force holdover

Module: DPLL_CTRL_0

TRIGGER: Every register in this module is a trigger register. In the case of a multibyte register the highest address register byte is the trigger byte.

Table 255: DPLL_CTRL_0 Register Index

Offset (Hex)	Register Module Base Address: C600h[1]	
	Individual Register Name	Register Description
000h	DPLL_CTRL_0.DPLL_HS_TIE_RESET	Reset hitless switching time interval error.
001h	DPLL_CTRL_0.DPLL_MANU_REF_CFG	Manual reference mode configuration.
002h	DPLL_CTRL_0.DPLL_DAMPING	DPLL loop filter damping factor.
003h	DPLL_CTRL_0.DPLL_DECIMATOR_BW_MULT	DPLL loop filter decimator bandwidth multiplier.
004h	DPLL_CTRL_0.DPLL_BW	DPLL loop filter bandwidth.
006h	DPLL_CTRL_0.DPLL_PSL	DPLL loop filter phase slope limit.
008h	DPLL_CTRL_0.DPLL_PRED0_DAMPING	Predefined configuration 0 loop filter damping factor.
009h	DPLL_CTRL_0.DPLL_PRED0_DECIMATOR_BW_MULT	Predefined configuration 0 loop filter decimator bandwidth multiplier.
00Ah	DPLL_CTRL_0.DPLL_PRED0_BW	Predefined configuration 0 loop filter bandwidth.
00Ch	DPLL_CTRL_0.DPLL_PRED0_PSL	Predefined configuration 0 loop filter phase slope limit.
00Eh	DPLL_CTRL_0.DPLL_PRED1_DAMPING	Predefined configuration 1 loop filter damping factor.
00Fh	DPLL_CTRL_0.DPLL_PRED1_DECIMATOR_BW_MULT	Predefined configuration 1 loop filter decimator bandwidth multiplier.
010h	DPLL_CTRL_0.DPLL_PRED1_BW	Predefined configuration 1 loop filter bandwidth.
012h	DPLL_CTRL_0.DPLL_PRED1_PSL	Predefined configuration 1 loop filter phase slope limit.
014h	DPLL_CTRL_0.DPLL_PHASE_OFFSET_CFG	DPLL phase offset configuration.
019h	DPLL_CTRL_0.DPLL_HO_HISTORY_RESET	Reset advanced holdover history.
01Ah	DPLL_CTRL_0.DPLL_FINE_PHASE_ADV_CFG	DPLL fine phase advance adjustment configuration.
01Ch	DPLL_CTRL_0.DPLL_FOD_FREQ	Fractional Output Divider (FOD) frequency in Hz.
024h	DPLL_CTRL_0.DPLL_MASTER_DIV	Master divider value.
028h	DPLL_CTRL_0.DPLL_COMBO_SW_VALUE_CNFG	DCO value to be added to the combo bus in SW combo mode.
030h	DPLL_CTRL_0.DPLL_MANUAL_HOLDOVER_VALUE	DCO value to be used in manual holdover mode.
036h	DPLL_CTRL_0.DPLL_DCD_FILTER_CNFG	DPLL DCD filter configuration.
038h	DPLL_CTRL_0.DPLL_COMBO_MASTER_BW	DPLL combo filter bandwidth.
03Ah	DPLL_CTRL_0.DPLL_COMBO_MASTER_CFG	DPLL combo master configuration.
03Bh	DPLL_CTRL_0.DPLL_FRAME_PULSE_SYNC	Frame pulse sync trigger

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

DPLL_CTRL_0.DPLL_HS_TIE_RESET

Reset hitless switching time interval error.

Table 256: DPLL_CTRL_0.DPLL_HS_TIE_RESET Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_HS_TIE_RESET Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	RESERVED[7:1]							TIE_RESET[0]

DPLL_CTRL_0.DPLL_HS_TIE_RESET Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
TIE_RESET[0]	R/W	0	Hitless reference switch TIE reset. 1 = reset. This is a self clear bit.

DPLL_CTRL_0.DPLL_MANU_REF_CFG

Select reference to be used for manual reference selection mode.

Table 257: DPLL_CTRL_0.DPLL_MANU_REF_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_MANU_REF_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	RESERVED[7:5]			MANUAL_REFERENCE[4:0]				

DPLL_CTRL_0.DPLL_MANU_REF_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
MANUAL_REFERENCE[4:0]	R/W	0	Index of manually selected reference input when 'manual' reference mode is enabled. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = write-phase input 0x11 = write-frequency input 0x12 = XO_DPLL 0x13 = fb clk of DPLL 0 0x14 = fb clk of DPLL 1 0x15 = fb clk of DPLL 2 0x16 = fb clk of DPLL 3 0x17 = fb clk of DPLL 4 0x18 = fb clk of DPLL 5 0x19 = fb clk of DPLL 6 0x1A = fb clk of DPLL 7 0x1B = fb clk of SYS DPLL.

DPLL_CTRL_0.DPLL_DAMPING

DPLL loop filter damping factor.

Table 258: DPLL_CTRL_0.DPLL_DAMPING Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_DAMPING Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	RESERVED[7:4]				DAMP_FTR[3:0]			

DPLL_CTRL_0.DPLL_DAMPING Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DAMP_FTR[3:0]	R/W	0	DPLL loop filter damping factor. 0 = 1.002, 0.02 dB, overdamp; 1 = 1.006, 0.05 dB, < 0.05 dB; 2 = 1.008, 0.07 dB, < 1%; 3 = 1.012, 0.10 dB, < 0.1 dB; 4 = 1.015 , 0.13 dB, < 2%; 5 = 1.022, 0.19 dB, < 0.2 dB; 6 = 1.053 , 0.45 dB, < 0.5 dB; 7 = 1.172 , 1.38 dB, underdamp

DPLL_CTRL_0.DPLL_DECIMATOR_BW_MULT

DPLL loop filter decimator bandwidth multiplier.

Table 259: DPLL_CTRL_0.DPLL_DECIMATOR_BW_MULT Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_DECIMATOR_BW_MULT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
003h	MULT[7:0]							

DPLL_CTRL_0.DPLL_DECIMATOR_BW_MULT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MULT[7:0]	R/W	0	Unsigned 8-bit DPLL loop filter decimator bandwidth multiplier. The decimator BW = decimator BW mult * DPLL BW. Value 0 implies maximum decimator bandwidth. This is not the DPLL bandwidth.

DPLL_CTRL_0.DPLL_BW

DPLL loop filter bandwidth.

Table 260: DPLL_CTRL_0.DPLL_BW Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_BW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	DPLL_BW[7:0]							
005h	BW_UNIT[15:14]		DPLL_BW[13:8]					

DPLL_CTRL_0.DPLL_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	DPLL loop filter bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
DPLL_BW[13:0]	R/W	0	Unsigned 14-bit DPLL loop filter bandwidth value.

DPLL_CTRL_0.DPLL_PSL

DPLL loop filter phase slope limit.

Table 261: DPLL_CTRL_0.DPLL_PSL Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PSL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
006h	DPLL_PSL[7:0]							
007h	DPLL_PSL[15:8]							

DPLL_CTRL_0.DPLL_PSL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL_PSL[15:0]	R/W	0	Unsigned 16-bit loop filter phase slope limit in ns/s.

DPLL_CTRL_0.DPLL_PRED0_DAMPING

Predefined configuration 0 loop filter damping factor.

Table 262: DPLL_CTRL_0.DPLL_PRED0_DAMPING Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PRED0_DAMPING Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	RESERVED[7:4]				DAMP_FTR[3:0]			

DPLL_CTRL_0.DPLL_PRED0_DAMPING Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DAMP_FTR[3:0]	R/W	0	DPLL loop filter damping factor. 0 = 1.002, 0.02 dB, overdamp; 1 = 1.006, 0.05 dB, < 0.05 dB; 2 = 1.008, 0.07 dB, < 1%; 3 = 1.012, 0.10 dB, < 0.1 dB; 4 = 1.015 , 0.13 dB, < 2%; 5 = 1.022, 0.19 dB, < 0.2 dB; 6 = 1.053 , 0.45 dB, < 0.5 dB; 7 = 1.172 , 1.38 dB, underdamp

DPLL_CTRL_0.DPLL_PRED0_DECIMATOR_BW_MULT

Predefined configuration 0 loop filter decimator bandwidth multiplier.

Table 263: DPLL_CTRL_0.DPLL_PRED0_DECIMATOR_BW_MULT Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PRED0_DECIMATOR_BW_MULT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
009h	MULT[7:0]							

DPLL_CTRL_0.DPLL_PRED0_DECIMATOR_BW_MULT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MULT[7:0]	R/W	0	Unsigned 8-bit DPLL loop filter decimator bandwidth multiplier. The decimator BW = decimator BW mult * DPLL BW. Value 0 implies maximum decimator bandwidth.

DPLL_CTRL_0.DPLL_PRED0_BW

Predefined configuration 0 loop filter bandwidth.

Table 264: DPLL_CTRL_0.DPLL_PRED0_BW Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PRED0_BW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ah	DPLL_PRED0_BW[7:0]							
00Bh	BW_UNIT[15:14]		DPLL_PRED0_BW[13:8]					

DPLL_CTRL_0.DPLL_PRED0_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	DPLL loop filter bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
DPLL_PRED0_BW[13:0]	R/W	0	Unsigned 14-bit DPLL loop filter bandwidth value.

DPLL_CTRL_0.DPLL_PRED0_PSL

Predefined configuration 0 loop filter phase slope limit.

Table 265: DPLL_CTRL_0.DPLL_PRED0_PSL Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PRED0_PSL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ch	DPLL_PRED0_PSL[7:0]							
00Dh	DPLL_PRED0_PSL[15:8]							

DPLL_CTRL_0.DPLL_PRED0_PSL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL_PRED0_PSL[15:0]	R/W	0	Unsigned 16-bit loop filter phase slope limit in ns/s. Value 0 implies no phase slope limit.

DPLL_CTRL_0.DPLL_PRED1_DAMPING

Predefined configuration 1 loop filter damping factor.

Table 266: DPLL_CTRL_0.DPLL_PRED1_DAMPING Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PRED1_DAMPING Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Eh	RESERVED[7:4]				DAMP_FTR[3:0]			

DPLL_CTRL_0.DPLL_PRED1_DAMPING Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DAMP_FTR[3:0]	R/W	0	DPLL loop filter damping factor. 0 = 1.002, 0.02 dB, overdamp; 1 = 1.006, 0.05 dB, < 0.05 dB; 2 = 1.008, 0.07 dB, < 1%; 3 = 1.012, 0.10 dB, < 0.1 dB; 4 = 1.015 , 0.13 dB, < 2%; 5 = 1.022, 0.19 dB, < 0.2 dB; 6 = 1.053 , 0.45 dB, < 0.5 dB; 7 = 1.172 , 1.38 dB, underdamp

DPLL_CTRL_0.DPLL_PRED1_DECIMATOR_BW_MULT

Predefined configuration 1 loop filter decimator bandwidth multiplier.

Table 267: DPLL_CTRL_0.DPLL_PRED1_DECIMATOR_BW_MULT Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PRED1_DECIMATOR_BW_MULT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Fh	MULT[7:0]							

DPLL_CTRL_0.DPLL_PRED1_DECIMATOR_BW_MULT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MULT[7:0]	R/W	0	Unsigned 8-bit DPLL loop filter decimator bandwidth multiplier. The decimator BW = decimator BW mult * DPLL BW. Value 0 implies maximum decimator bandwidth.

DPLL_CTRL_0.DPLL_PRED1_BW

Predefined configuration 1 loop filter bandwidth.

Table 268: DPLL_CTRL_0.DPLL_PRED1_BW Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PRED1_BW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
010h	DPLL_PRED1_BW[7:0]							
011h	BW_UNIT[15:14]		DPLL_PRED1_BW[13:8]					

DPLL_CTRL_0.DPLL_PRED1_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	DPLL loop filter bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
DPLL_PRED1_BW[13:0]	R/W	0	Unsigned 14-bit DPLL loop filter bandwidth value.

DPLL_CTRL_0.DPLL_PRED1_PSL

Predefined configuration 1 loop filter phase slope limit.

Table 269: DPLL_CTRL_0.DPLL_PRED1_PSL Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PRED1_PSL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
012h	DPLL_PRED1_PSL[7:0]							
013h	DPLL_PRED1_PSL[15:8]							

DPLL_CTRL_0.DPLL_PRED1_PSL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL_PRED1_PSL[15:0]	R/W	0	Unsigned 16-bit loop filter phase slope limit in ns/s. Value 0 implies no phase slope limit.

DPLL_CTRL_0.DPLL_PHASE_OFFSET_CFG

DPLL phase offset configuration.

Table 270: DPLL_CTRL_0.DPLL_PHASE_OFFSET_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_PHASE_OFFSET_CFG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
014h	DPLL_PHASE_OFFSET_CFG[7:0]							
015h	DPLL_PHASE_OFFSET_CFG[15:8]							
016h	DPLL_PHASE_OFFSET_CFG[23:16]							
017h	DPLL_PHASE_OFFSET_CFG[31:24]							
018h	RESERVED[39:36]				DPLL_PHASE_OFFSET_CFG[35:32]			

DPLL_CTRL_0.DPLL_PHASE_OFFSET_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_PHASE_OFFSET_CFG[35:0]	R/W	0	Signed 36-bit phase offset in ITDC_UIs. ITDC_UI is input TDC unit interval. Please refer to the SCSR_INPUT_TDC module for details on input TDC settings and ITDC_UI value. The default input TDC settings yield 50ps ITDC_UI. A positive value here will cause an output clock phase delay relative to the input clock phase and a negative value will cause an output phase advance relative to the input clock phase. Note that this phase offset configuration applies to both DPLL mode and write phase mode.

DPLL_CTRL_0.DPLL_HO_HISTORY_RESET

Reset advanced holdover history.

Table 271: DPLL_CTRL_0.DPLL_HO_HISTORY_RESET Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_HO_HISTORY_RESET Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
019h	RESERVED[7:1]							HO_HISTORY_RESET[0]

DPLL_CTRL_0.DPLL_HO_HISTORY_RESET Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
HO_HISTORY_RESET[0]	R/W	0	Reset advanced holdover history. 1 = enable reset, 0 = cancel reset. This bit is a self-clear bit. When the HO history is cleared, this bit will be cleared to 0 by FW.

DPLL_CTRL_0.DPLL_FINE_PHASE_ADV_CFG

Configure the fine phase advance to be applied to the DPLL.

Table 272: DPLL_CTRL_0.DPLL_FINE_PHASE_ADV_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_FINE_PHASE_ADV_CFG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Ah	FINE_PHASE_ADVANCE[7:0]							
01Bh	RESERVED[15:13]			FINE_PHASE_ADVANCE[12:8]				

DPLL_CTRL_0.DPLL_FINE_PHASE_ADV_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FINE_PHASE_ADVANCE[12:0]	R/W	0	Unsigned (i.e. positive) 13-bit fine phase advance. Note: This register must be set to 0 if the DPLL feedback clock has a fractional component. Resolution is in units of input TDC period/4096. The default input TDC clock is 625 MHz, so the default input TDC period is 1.6 ns which results in a resolution of approximately 391 fs. Ex. 0x0002 translates to 782 fs (0.782 ps) phase advance applied to the DPLL. Conversely, 0x0000 means no phase advance is applied to the DPLL. Note: Phase advance is defined as the phase of the output that is measured relative to another reference and the output clocks rising edge comes after the rising edge of the reference signal, by some amount X, then a phase advance on the output clock will result in a measurement of X - fine_phase_advance. Note: The DPLL fractional feedback clock frequency correction is lost when a non zero phase advance is applied. To restore previous DPLL configuration, need to set 'fine_phase_advance' to 0 and re-trigger the DPLL configuration.

DPLL_CTRL_0.DPLL_FOD_FREQ

DPLL FOD frequency is determined by M / N.

Table 273: DPLL_CTRL_0.DPLL_FOD_FREQ Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_FOD_FREQ Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
01Ch	M[7:0]							
01Dh	M[15:8]							
01Eh	M[23:16]							
01Fh	M[31:24]							
020h	M[39:32]							
021h	M[47:40]							
022h	N[7:0]							
023h	N[15:8]							

DPLL_CTRL_0.DPLL_FOD_FREQ Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
N[15:0]	R/W	0	Unsigned 16-bit frequency N field. N is unsigned 16-bit. A value of 0 for this field will be interpreted as 1.
M[47:0]	R/W	0	Unsigned 48-bit frequency M field. A setting of 0 will disable the FOD, but not other parts of the DPLL. This will significantly reduce the power consumption of this DPLL. As there is no clock output from the FOD when this field is set to 0, it is suggested to disable the outputs which are associated with this FOD by setting SCSR_OUTPUT_0.PAD_MODE to 0 (high-Z mode).

DPLL_CTRL_0.DPLL_MASTER_DIV

Master divider value.

Table 274: DPLL_CTRL_0.DPLL_MASTER_DIV Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_MASTER_DIV Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
024h	DPLL_MASTER_DIV[7:0]							
025h	DPLL_MASTER_DIV[15:8]							
026h	DPLL_MASTER_DIV[23:16]							
027h	DPLL_MASTER_DIV[31:24]							

DPLL_CTRL_0.DPLL_MASTER_DIV Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL_MASTER_DIV[31:0]	R/W	0	Unsigned 32-bit master divider value. For each of the 8 output channels, there is a master divider circuit that divides down the FOD clock. The purpose of this divider is to send sync signals to the output channel's important dividers, such as the integer output divider(s), the DPLL feedback divider, the DPLL feedback frame divider and the ToD (for those channels that have a ToD). 0 means the master divider is automatically set to a value that results in an 8 KHz signal coming out of the master divider block. If any of the outputs are lower than 8kHz or any of the outputs/inputs are not a multiple of 8kHz, this needs to be updated to reflect the lowest common multiple (of all outputs/inputs). If ToD[3:0] is being used (i.e. enabled), then the master divider for the associated DPLL[3:0] must be programmed to 1PPS (1Hz) or PPES (0.5Hz) (i.e. to match the ToD internal output).

DPLL_CTRL_0.DPLL_COMBO_SW_VALUE_CNFG

DCO value to be added to the combo bus in SW combo mode.

Table 275: DPLL_CTRL_0.DPLL_COMBO_SW_VALUE_CNFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_COMBO_SW_VALUE_CNFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
028h	DPLL_COMBO_SW_VALUE_CNFG[7:0]							
029h	DPLL_COMBO_SW_VALUE_CNFG[15:8]							
02Ah	DPLL_COMBO_SW_VALUE_CNFG[23:16]							
02Bh	DPLL_COMBO_SW_VALUE_CNFG[31:24]							
02Ch	DPLL_COMBO_SW_VALUE_CNFG[39:32]							
02Dh	DPLL_COMBO_SW_VALUE_CNFG[47:40]							

DPLL_CTRL_0.DPLL_COMBO_SW_VALUE_CNFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL_COMBO_SW_VALUE_CNFG[47:0]	R/W	0	Signed 48-bit DPLL Combo SW value in units of 2^(-53).

DPLL_CTRL_0.DPLL_MANUAL_HOLDOVER_VALUE

DCO value to be used in manual holdover mode.

Table 276: DPLL_CTRL_0.DPLL_MANUAL_HOLDOVER_VALUE Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_MANUAL_HOLDOVER_VALUE Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
030h	DPLL_MANUAL_HOLDOVER_VALUE[7:0]							
031h	DPLL_MANUAL_HOLDOVER_VALUE[15:8]							
032h	DPLL_MANUAL_HOLDOVER_VALUE[23:16]							
033h	DPLL_MANUAL_HOLDOVER_VALUE[31:24]							
034h	DPLL_MANUAL_HOLDOVER_VALUE[39:32]							
035h	RESERVED[47:42]						DPLL_MANUAL_HOLDOVER_VALUE[41:40]	

DPLL_CTRL_0.DPLL_MANUAL_HOLDOVER_VALUE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_MANUAL_HOLDOVER_VALUE[41:0]	R/W	0	Signed 42-bit FFO in units of 2^(-53). The holdover value used when DPLL_n.DPLL_HI_CFG.HOLDOVER_MODE is configured to manual holdover.

DPLL_CTRL_0.DPLL_DCD_FILTER_CNFG

DPLL DCD filter configuration.

Table 277: DPLL_CTRL_0.DPLL_DCD_FILTER_CNFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_DCD_FILTER_CNFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
036h	DCD_MANU_UPDATE_RATE_CNFG[7:6]		DCD_MANU_GAIN_SHIFT[5:1]					DCD_MANU_EN[0]
037h	RESERVED[15]	DCD_LPF_COE[14:10]					DCD_MANU_UPDATE_RATE_CNFG[9:8]	

DPLL_CTRL_0.DPLL_DCD_FILTER_CNFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DCD_LPF_COE[14:10]	R/W	1010b	DCD low pass filter coefficient.
DCD_MANU_UPDATE_RATE_CNFG[9:6]	R/W	202h	Configure DCD manual calibration mode updating rate. Updating rate = 10000/(2^dcd_manu_update_rate_cnfg) in Hz.
DCD_MANU_GAIN_SHIFT[5:1]	R/W	10h	DCD manual calibration mode gain down shift bits.
DCD_MANU_EN[0]	R/W	0001b	Enable DCD manual calibration mode. 0 = disabled 1 = enabled

DPLL_CTRL_0.DPLL_COMBO_MASTER_BW

DPLL combo filter bandwidth.

Table 278: DPLL_CTRL_0.DPLL_COMBO_MASTER_BW Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_COMBO_MASTER_BW Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
038h	DPLL_COMBO_MASTER_BW[7:0]							
039h	BW_UNIT[15:14]		DPLL_COMBO_MASTER_BW[13:8]					

DPLL_CTRL_0.DPLL_COMBO_MASTER_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	Combo filter bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
DPLL_COMBO_MASTER_BW[13:0]	R/W	0	Unsigned 14-bit Combo filter bandwidth value.

DPLL_CTRL_0.DPLL_COMBO_MASTER_CFG

DPLL combo master configuration.

Table 279: DPLL_CTRL_0.DPLL_COMBO_MASTER_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_COMBO_MASTER_CFG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
03Ah	RESERVED[7:2]						FILTER_IN_SELECT[1]	HOLD_EN[0]

DPLL_CTRL_0.DPLL_COMBO_MASTER_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FILTER_IN_SELECT[1]	R/W	0	Select filtered DCO value as combo source. 0 = integrator value only 1 = sum of proportional and integrator
HOLD_EN[0]	R/W	0	Combo bus output hold (freeze). 0 = no hold 1 = hold (freeze).

DPLL_CTRL_0.DPLL_FRAME_PULSE_SYNC

Frame pulse sync trigger

Table 280: DPLL_CTRL_0.DPLL_FRAME_PULSE_SYNC Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_CTRL_0.DPLL_FRAME_PULSE_SYNC Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
03Bh	RESERVED[7:1]							FRAME_PULSE_SYNC[0]

DPLL_CTRL_0.DPLL_FRAME_PULSE_SYNC Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FRAME_PULSE_SYNC[0]	R/W	0	Trigger a frame pulse sync Write 1 to trigger a frame pulse sync procedure. This bit will be self-cleared after the sync finished. Write 0 will have no effect. 0 = no effect 1 = trigger a frame pulse sync

Module: SYS_DPLL_CTRL

TRIGGER: Every register in this module is a trigger register. In the case of a multibyte register the highest address register byte is the trigger byte.

Table 281: SYS_DPLL_CTRL Register Index

Offset (Hex)	Register Module Base Address: C800h	
	Individual Register Name	**Register Description**
000h	SYS_DPLL_CTRL.SYS_DPLL_MANU_REF_CFG	Manual reference mode configuration.
001h	SYS_DPLL_CTRL.SYS_DPLL_DAMPING	System DPLL loop filter damping factor.
002h	SYS_DPLL_CTRL.SYS_DPLL_DECIMATOR_BW_MULT	System DPLL loop filter decimator bandwidth multiplier.
004h	SYS_DPLL_CTRL.SYS_DPLL_BW	System DPLL loop filter bandwidth.
006h	SYS_DPLL_CTRL.SYS_DPLL_PSL	System DPLL loop filter phase slope limit.
008h	SYS_DPLL_CTRL.SYS_DPLL_PRED0_DAMPING	Predefined configuration 0 loop filter damping factor.
009h	SYS_DPLL_CTRL.SYS_DPLL_PRED0_DECIMATOR_BW_MULT	Predefined configuration 0 loop filter decimator bandwidth multiplier.
00Ah	SYS_DPLL_CTRL.SYS_DPLL_PRED0_BW	Predefined configuration 0 loop filter bandwidth.
00Ch	SYS_DPLL_CTRL.SYS_DPLL_PRED0_PSL	Predefined configuration 0 loop filter phase slope limit.
00Eh	SYS_DPLL_CTRL.SYS_DPLL_PRED1_DAMPING	Predefined configuration 1 loop filter damping factor.
00Fh	SYS_DPLL_CTRL.SYS_DPLL_PRED1_DECIMATOR_BW_MULT	Predefined configuration 1 loop filter decimator bandwidth multiplier.
010h	SYS_DPLL_CTRL.SYS_DPLL_PRED1_BW	Predefined configuration 1 loop filter bandwidth.
012h	SYS_DPLL_CTRL.SYS_DPLL_PRED1_PSL	Predefined configuration 1 loop filter phase slope limit.
014h	SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_BW	System DPLL combo filter bandwidth.
016h	SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_CFG	DPLL combo master configuration.

SYS_DPLL_CTRL.SYS_DPLL_MANU_REF_CFG

Select reference to be used for manual reference selection mode.

Table 282: SYS_DPLL_CTRL.SYS_DPLL_MANU_REF_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_MANU_REF_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	RESERVED[7:5]			MANUAL_REFERENCE[4:0]				

SYS_DPLL_CTRL.SYS_DPLL_MANU_REF_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
MANUAL_REFERENCE[4:0]	R/W	0	Index of manually selected reference input when 'manual' reference mode is enabled. 0x00 = CLK0 0x01 = CLK1 0x02 = CLK2 0x03 = CLK3 0x04 = CLK4 0x05 = CLK5 0x06 = CLK6 0x07 = CLK7 0x08 = CLK8 0x09 = CLK9 0x0A = CLK10 0x0B = CLK11 0x0C = CLK12 0x0D = CLK13 0x0E = CLK14 0x0F = CLK15 0x10 = reserved 0x11 = reserved 0x12 = XO_DPLL

SYS_DPLL_CTRL.SYS_DPLL_DAMPING

System DPLL loop filter damping factor.

Table 283: SYS_DPLL_CTRL.SYS_DPLL_DAMPING Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_DAMPING Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	RESERVED[7:4]				DAMP_FTR[3:0]			

SYS_DPLL_CTRL.SYS_DPLL_DAMPING Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DAMP_FTR[3:0]	R/W	0	System DPLL loop filter damping factor 0 = 1.002, 0.02 dB, overdamp; 1 = 1.006, 0.05 dB, < 0.05 dB; 2 = 1.008, 0.07 dB, < 1%; 3 = 1.012, 0.10 dB, < 0.1 dB; 4 = 1.015 , 0.13 dB, < 2%; 5 = 1.022, 0.19 dB, < 0.2 dB; 6 = 1.053 , 0.45 dB, < 0.5 dB; 7 = 1.172 , 1.38 dB, underdamp

SYS_DPLL_CTRL.SYS_DPLL_DECIMATOR_BW_MULT

System DPLL loop filter decimator bandwidth multiplier.

Table 284: SYS_DPLL_CTRL.SYS_DPLL_DECIMATOR_BW_MULT Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_DECIMATOR_BW_MULT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	MULT[7:0]							

SYS_DPLL_CTRL.SYS_DPLL_DECIMATOR_BW_MULT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MULT[7:0]	R/W	0	Unsigned 8-bit system DPLL loop filter decimator bandwidth multiplier. The decimator BW = decimator BW mult * DPLL BW. Value 0 implies maximum decimator bandwidth. This is not the system DPLL bandwidth.

SYS_DPLL_CTRL.SYS_DPLL_BW

System DPLL loop filter bandwidth.

Table 285: SYS_DPLL_CTRL.SYS_DPLL_BW Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_BW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	SYS_DPLL_BW[7:0]							
005h	BW_UNIT[15:14]		SYS_DPLL_BW[13:8]					

SYS_DPLL_CTRL.SYS_DPLL_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	System DPLL loop filter bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
SYS_DPLL_BW[13:0]	R/W	0	Unsigned 14-bit system DPLL loop filter bandwidth value.

SYS_DPLL_CTRL.SYS_DPLL_PSL

System DPLL loop filter phase slope limit.

Table 286: SYS_DPLL_CTRL.SYS_DPLL_PSL Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_PSL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
006h	SYS_DPLL_PSL[7:0]							
007h	SYS_DPLL_PSL[15:8]							

SYS_DPLL_CTRL.SYS_DPLL_PSL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYS_DPLL_PSL[15:0]	R/W	0	Unsigned 16-bit loop filter phase slope limit in ns/s.

SYS_DPLL_CTRL.SYS_DPLL_PRED0_DAMPING

Predefined configuration 0 loop filter damping factor.

Table 287: SYS_DPLL_CTRL.SYS_DPLL_PRED0_DAMPING Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_PRED0_DAMPING Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	RESERVED[7:4]				DAMP_FTR[3:0]			

SYS_DPLL_CTRL.SYS_DPLL_PRED0_DAMPING Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DAMP_FTR[3:0]	R/W	0	System DPLL loop filter damping factor. 0 = 1.002, 0.02 dB, overdamp; 1 = 1.006, 0.05 dB, < 0.05 dB; 2 = 1.008, 0.07 dB, < 1%; 3 = 1.012, 0.10 dB, < 0.1 dB; 4 = 1.015 , 0.13 dB, < 2%; 5 = 1.022, 0.19 dB, < 0.2 dB; 6 = 1.053 , 0.45 dB, < 0.5 dB; 7 = 1.172 , 1.38 dB, underdamp

SYS_DPLL_CTRL.SYS_DPLL_PRED0_DECIMATOR_BW_MULT

Predefined configuration 0 loop filter decimator bandwidth multiplier.

Table 288: SYS_DPLL_CTRL.SYS_DPLL_PRED0_DECIMATOR_BW_MULT Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_PRED0_DECIMATOR_BW_MULT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
009h	MULT[7:0]							

SYS_DPLL_CTRL.SYS_DPLL_PRED0_DECIMATOR_BW_MULT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MULT[7:0]	R/W	0	Unsigned 8-bit system DPLL loop filter decimator bandwidth multiplier. The decimator BW = decimator BW mult * DPLL BW. Value 0 implies maximum decimator bandwidth.

SYS_DPLL_CTRL.SYS_DPLL_PRED0_BW

Predefined configuration 0 loop filter bandwidth.

Table 289: SYS_DPLL_CTRL.SYS_DPLL_PRED0_BW Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_PRED0_BW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ah	SYS_DPLL_PRED0_BW[7:0]							
00Bh	BW_UNIT[15:14]		SYS_DPLL_PRED0_BW[13:8]					

SYS_DPLL_CTRL.SYS_DPLL_PRED0_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	System DPLL loop filter bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
SYS_DPLL_PRED0_BW[13:0]	R/W	0	Unsigned 14-bit system DPLL loop filter bandwidth value.

SYS_DPLL_CTRL.SYS_DPLL_PRED0_PSL

Predefined configuration 0 loop filter phase slope limit.

Table 290: SYS_DPLL_CTRL.SYS_DPLL_PRED0_PSL Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_PRED0_PSL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ch	SYS_DPLL_PRED0_PSL[7:0]							
00Dh	SYS_DPLL_PRED0_PSL[15:8]							

SYS_DPLL_CTRL.SYS_DPLL_PRED0_PSL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYS_DPLL_PRED0_PSL[15:0]	R/W	0	Unsigned 16-bit loop filter phase slope limit in ns/s. Value 0 implies no phase slope limit.

SYS_DPLL_CTRL.SYS_DPLL_PRED1_DAMPING

Predefined configuration 1 loop filter damping factor.

Table 291: SYS_DPLL_CTRL.SYS_DPLL_PRED1_DAMPING Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_PRED1_DAMPING Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Eh	RESERVED[7:4]				DAMP_FTR[3:0]			

SYS_DPLL_CTRL.SYS_DPLL_PRED1_DAMPING Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DAMP_FTR[3:0]	R/W	0	System DPLL loop filter damping factor. 0 = 1.002, 0.02 dB, overdamp; 1 = 1.006, 0.05 dB, < 0.05 dB; 2 = 1.008, 0.07 dB, < 1%; 3 = 1.012, 0.10 dB, < 0.1 dB; 4 = 1.015 , 0.13 dB, < 2%; 5 = 1.022, 0.19 dB, < 0.2 dB; 6 = 1.053 , 0.45 dB, < 0.5 dB; 7 = 1.172 , 1.38 dB, underdamp

SYS_DPLL_CTRL.SYS_DPLL_PRED1_DECIMATOR_BW_MULT

Predefined configuration 1 loop filter decimator bandwidth multiplier.

Table 292: SYS_DPLL_CTRL.SYS_DPLL_PRED1_DECIMATOR_BW_MULT Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_PRED1_DECIMATOR_BW_MULT Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Fh	MULT[7:0]							

SYS_DPLL_CTRL.SYS_DPLL_PRED1_DECIMATOR_BW_MULT Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MULT[7:0]	R/W	0	Unsigned 8-bit system DPLL loop filter decimator bandwidth multiplier. The decimator BW = decimator BW mult * DPLL BW. Value 0 implies maximum decimator bandwidth.

SYS_DPLL_CTRL.SYS_DPLL_PRED1_BW

Predefined configuration 1 loop filter bandwidth.

Table 293: SYS_DPLL_CTRL.SYS_DPLL_PRED1_BW Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_PRED1_BW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
010h	SYS_DPLL_PRED1_BW[7:0]							
011h	BW_UNIT[15:14]		SYS_DPLL_PRED1_BW[13:8]					

SYS_DPLL_CTRL.SYS_DPLL_PRED1_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	System DPLL loop filter bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
SYS_DPLL_PRED1_BW[13:0]	R/W	0	Unsigned 14-bit system DPLL loop filter bandwidth value.

SYS_DPLL_CTRL.SYS_DPLL_PRED1_PSL

Predefined configuration 1 loop filter phase slope limit.

Table 294: SYS_DPLL_CTRL.SYS_DPLL_PRED1_PSL Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_PRED1_PSL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
012h	SYS_DPLL_PRED1_PSL[7:0]							
013h	SYS_DPLL_PRED1_PSL[15:8]							

SYS_DPLL_CTRL.SYS_DPLL_PRED1_PSL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYS_DPLL_PRED1_PSL[15:0]	R/W	0	Unsigned 16-bit loop filter phase slope limit in ns/s. Value 0 implies no phase slope limit.

SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_BW

System DPLL combo filter bandwidth.

Table 295: SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_BW Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_BW Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
014h	SYS_DPLL_COMBO_MASTER_BW[7:0]							
015h	BW_UNIT[15:14]		SYS_DPLL_COMBO_MASTER_BW[13:8]					

SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_BW Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BW_UNIT[15:14]	R/W	0	Combo filter bandwidth unit. 0 = uHz 1 = mHz 2 = Hz 3 = kHz
SYS_DPLL_COMBO_MASTER_BW[13:0]	R/W	0	Unsigned 14-bit Combo filter bandwidth value.

SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_CFG

DPLL combo master configuration.

Table 296: SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_CFG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
016h	RESERVED[7:2]						FILTER_IN_SELECT[1]	HOLD_EN[0]

SYS_DPLL_CTRL.SYS_DPLL_COMBO_MASTER_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FILTER_IN_SELECT[1]	R/W	0	Select filtered DCO value as combo source. 0 = integrator value only 1 = sum of proportional and integrator
HOLD_EN[0]	R/W	0	Combo bus output hold (freeze). 0 = no hold 1 = hold (freeze).

Module: DPLL_PHASE_0

Configures the DPLL phase.

Table 297: DPLL_PHASE_0 Register Index

Offset (Hex)	Register Module Base Address: C818h[1]	
	Individual Register Name	**Register Description**
000h	DPLL_PHASE_0.DPLL_WRITE_PH	Set phase offset in write phase mode.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

DPLL_PHASE_0.DPLL_WRITE_PH

Set phase offset in write phase mode.

Table 298: DPLL_PHASE_0.DPLL_WRITE_PH Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_PHASE_0.DPLL_WRITE_PH Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	DPLL_WRITE_PH[7:0]							
001h	DPLL_WRITE_PH[15:8]							
002h	DPLL_WRITE_PH[23:16]							
003h	DPLL_WRITE_PH[31:24]							

DPLL_PHASE_0.DPLL_WRITE_PH Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DPLL_WRITE_PH[31:0]	R/W	0	Signed 32-bit phase offset in ITDC_UIs. When DPLL_n.DPLL_MODE.PLL_MODE = write phase mode, this value inputs to the loop filter and controls the DPLL phase.

Module: DPLL_FREQ_0

Configures the DPLL phase.

Table 299: DPLL_FREQ_0 Register Index

Offset (Hex)	Register Module Base Address: C838h[1]	
	Individual Register Name	Register Description
000h	DPLL_FREQ_0.DPLL_WR_FREQ	Set DPLL frequency offset in write frequency mode.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

DPLL_FREQ_0.DPLL_WR_FREQ

Set DPLL frequency offset in write frequency mode.

Table 300: DPLL_FREQ_0.DPLL_WR_FREQ Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_FREQ_0.DPLL_WR_FREQ Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	DPLL_WR_FREQ[7:0]							
001h	DPLL_WR_FREQ[15:8]							

Table 300: DPLL_FREQ_0.DPLL_WR_FREQ Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_FREQ_0.DPLL_WR_FREQ Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	DPLL_WR_FREQ[23:16]							
003h	DPLL_WR_FREQ[31:24]							
004h	DPLL_WR_FREQ[39:32]							
005h	RESERVED[47:42]						DPLL_WR_FREQ[41:40]	

DPLL_FREQ_0.DPLL_WR_FREQ Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_WR_FREQ[41:0]	R/W	0	Signed 42-bit FFO in units of 2^(-53). Used when DPLL_n.DPLL_MODE.PLL_MODE = write frequency mode.

Module: DPLL_PHASE_PULL_IN_0

Configures the DPLL phase pull-in.

Table 301: DPLL_PHASE_PULL_IN_0 Register Index

Offset (Hex)	Register Module Base Address: C880h[1]	
	Individual Register Name	Register Description
000h	DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_OFFSET	Phase pull-in offset.
004h	DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_SLOPE_LIMIT	Phase pull-in slope limit.
007h	DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_CTRL	Phase pull-in configuration.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_OFFSET

Phase pull-in offset.

Table 302: DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_OFFSET Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_OFFSET Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	DPLL_PHASE_PULL_IN_OFFSET[7:0]							
001h	DPLL_PHASE_PULL_IN_OFFSET[15:8]							
002h	DPLL_PHASE_PULL_IN_OFFSET[23:16]							
003h	DPLL_PHASE_PULL_IN_OFFSET[31:24]							

DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_OFFSET Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DPLL_PHASE_PULL_IN_OFFSET[31:0]	R/W	0	Signed 32-bit phase pull-in offset in nanoseconds. The phase offset for the phase pull-in operation.

DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_SLOPE_LIMIT

Phase pull-in slope limit.

Table 303: DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_SLOPE_LIMIT Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_SLOPE_LIMIT Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	DPLL_PHASE_PULL_IN_SLOPE_LIMIT[7:0]							
005h	DPLL_PHASE_PULL_IN_SLOPE_LIMIT[15:8]							
006h	DPLL_PHASE_PULL_IN_SLOPE_LIMIT[23:16]							

DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_SLOPE_LIMIT Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DPLL_PHASE_PULL_IN_SLOPE_LIMIT[23:0]	R/W	0	Unsigned 24-bit max FFO in ppb. The maximum FFO value for calculating phase pull-in time. This value should not exceed 244000 ppb. Value 0 implies that the maximum FFO 244000 ppb will be applied.

DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_CTRL

Phase pull-in configuration.

Table 304: DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_CTRL Bit Field Locations and Descriptions

Offset Address (Hex)	DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_CTRL Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
007h	RESERVED[7:1]							PHASE_PULL_IN_REQUEST[0]

DPLL_PHASE_PULL_IN_0.DPLL_PHASE_PULL_IN_CTRL Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
PHASE_PULL_IN_REQUEST[0]	R/W	0	Phase pull-in request. Setting this bit to "1" starts a phase pull-in if there is no one in progress. Otherwise, it will be ignored. Setting this bit to "0" terminates the on-going phase pull-in. This request is only applicable to pll_mode: "write phase mode", "write frequency mode", "GPIO inc/dec mode", and "synthesizer mode". It will be ignored if the DPLL is in other modes. A pll-mode change will trigger a termination of on-going phase pull-in. This bit will be self-cleared after the phase pull-in finished.

Module: GPIO_CFG

Global GPIO configuration.

Table 305: GPIO_CFG Register Index

Offset (Hex)	Register Module Base Address: C8C0h	
	Individual Register Name	Register Description
000h	GPIO_CFG.GPIO_CFG_GBL	Global GPIO parameters.

GPIO_CFG.GPIO_CFG_GBL

Enable the GPIO drive supply mode.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the GPIO_DC_CFG module.

Table 306: GPIO_CFG.GPIO_CFG_GBL Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_CFG.GPIO_CFG_GBL Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	RESERVED[7:2]						SUPPLY_MODE[1:0]	

GPIO_CFG.GPIO_CFG_GBL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
SUPPLY_MODE[1:0]	R/W	0	Select GPIO supply rail configuration. Select GPIO drive voltage. 0 = 1.8 V 1 = 2.5 V/3.3 V 2 = 1.5 V

Module: GPIO_0

Configure the GPIO registers.

Table 307: GPIO_0 Register Index

Offset (Hex)	Register Module Base Address: C8C2h[1]	
	Individual Register Name	**Register Description**
000h	GPIO_0.GPIO_DCO_INC_DEC	Increment/decrement DCO FFO configuration.
001h	GPIO_0.GPIO_OUT_CTRL_0	GPIO controlled output squelch for outputs 0-7.
002h	GPIO_0.GPIO_OUT_CTRL_1	GPIO controlled output squelch for outputs 8-11.
003h	GPIO_0.GPIO_TOD_TRIG	GPIO controlled TOD trigger input.
004h	GPIO_0.GPIO_DPLL_INDICATOR	GPIO indicator for DPLL lock and holdover states.
005h	GPIO_0.GPIO_LOS_INDICATOR	GPIO loss of signal (LOS) indicator.
006h	GPIO_0.GPIO_REF_INPUT_DSQ_0	GPIO controlled input disqualification for inputs 0-7.
007h	GPIO_0.GPIO_REF_INPUT_DSQ_1	GPIO controlled input disqualification for inputs 8-15.
008h	GPIO_0.GPIO_REF_INPUT_DSQ_2	GPIO controlled input disqualification for DPLLs.
009h	GPIO_0.GPIO_REF_INPUT_DSQ_3	GPIO controlled input disqualification for system DPLL and disqualification level.
00Ah	GPIO_0.GPIO_MAN_CLK_SEL_0	Configure inputs for GPIO manual clock selection.
00Bh	GPIO_0.GPIO_MAN_CLK_SEL_1	Select DPLLs for GPIO manual clock selection.
00Ch	GPIO_0.GPIO_MAN_CLK_SEL_2	Select system DPLL for GPIO manual clock selection.
00Dh	GPIO_0.GPIO_SLAVE	GPIO controlled device slave configuration.
00Eh	GPIO_0.GPIO_ALERT_OUT_CFG	GPIO alert notification.
00Fh	GPIO_0.GPIO_TOD_NOTIFICATION_CFG	GPIO configuration for DPLL TOD read notification.
010h	RESERVED	This register must not be modified from the read value
011h	GPIO_0.GPIO_CTRL	GPIO control.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

GPIO_0.GPIO_DCO_INC_DEC

Increment/decrement DCO FFO configuration. Applies when GPIO_FUNCTION is equal to 'inc DCO FFO' or 'dec DCO FFO'. The squelch level is determined by the configuration per output by OUTPUT_n.OUT_CTR_1.SQUELCH_VALUE.

Table 308: GPIO_0.GPIO_DCO_INC_DEC Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_DCO_INC_DEC Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	RESERVED[7:3]					DPLL_INDEX[2:0]		

GPIO_0.GPIO_DCO_INC_DEC Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_INDEX[2:0]	R/W	0	DPLL index. Select the DPLL to be controlled by this GPIO in incremental/decremental mode. 0 = DPLL0 1 = DPLL1 2 = DPLL2 3 = DPLL3 4 = DPLL4 5 = DPLL5 6 = DPLL6 7 = DPLL7

GPIO_0.GPIO_OUT_CTRL_0

Define the set of outputs to be squelched by this GPIO input. Applies when GPIO_FUNCTION is equal to 'clock output control'. The squelch level is determined by OUTPUT_n.OUT_CTRL_1.SQUELCH_VALUE. One output cannot be controlled by more than one GPIO.

Table 309: GPIO_0.GPIO_OUT_CTRL_0 Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_OUT_CTRL_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	CTRL_OUT_7[7]	CTRL_OUT_6[6]	CTRL_OUT_5[5]	CTRL_OUT_4[4]	CTRL_OUT_3[3]	CTRL_OUT_2[2]	CTRL_OUT_1[1]	CTRL_OUT_0[0]

GPIO_0.GPIO_OUT_CTRL_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
CTRL_OUT_7[7]	R/W	0	Select output 7 to be controlled by this GPIO. GPIO is used to disable (squelch) output 7. 0 = disabled 1 = enabled
CTRL_OUT_6[6]	R/W	0	Select output 6 to be controlled by this GPIO. GPIO is used to disable (squelch) output 6. 0 = disabled 1 = enabled
CTRL_OUT_5[5]	R/W	0	Select output 5 to be controlled by this GPIO. GPIO is used to disable (squelch) output 5. 0 = disabled 1 = enabled
CTRL_OUT_4[4]	R/W	0	Select output 4 to be controlled by this GPIO. GPIO is used to disable (squelch) output 4. 0 = disabled 1 = enabled
CTRL_OUT_3[3]	R/W	0	Select output 3 to be controlled by this GPIO. GPIO is used to disable (squelch) output 3. 0 = disabled 1 = enabled
CTRL_OUT_2[2]	R/W	0	Select output 2 to be controlled by this GPIO. GPIO is used to disable (squelch) output 2. 0 = disabled 1 = enabled
CTRL_OUT_1[1]	R/W	0	Select output 1 to be controlled by this GPIO. GPIO is used to disable (squelch) output 1. 0 = disabled 1 = enabled
CTRL_OUT_0[0]	R/W	0	Select output 0 to be controlled by this GPIO. GPIO is used to disable (squelch) output 0. 0 = disabled 1 = enabled

GPIO_0.GPIO_OUT_CTRL_1

Define the set of outputs to be squelched by this GPIO input. Applies when GPIO_FUNCTION is equal to 'clock output control'. The squelch level is determined by OUTPUT_n.OUT_CTRL_1.SQUELCH_VALUE. One output cannot be controlled by more than one GPIO.

Table 310: GPIO_0.GPIO_OUT_CTRL_1 Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_OUT_CTRL_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	RESERVED[7:4]				CTRL_OUT_11[3]	CTRL_OUT_10[2]	CTRL_OUT_9[1]	CTRL_OUT_8[0]

GPIO_0.GPIO_OUT_CTRL_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
CTRL_OUT_11[3]	R/W	0	Select output 11 to be controlled by this GPIO. GPIO is used to disable (squelch) output 11. 0 = disabled 1 = enabled
CTRL_OUT_10[2]	R/W	0	Select output 10 to be controlled by this GPIO. GPIO is used to disable (squelch) output 10. 0 = disabled 1 = enabled
CTRL_OUT_9[1]	R/W	0	Select output 9 to be controlled by this GPIO. GPIO is used to disable (squelch) output 9. 0 = disabled 1 = enabled
CTRL_OUT_8[0]	R/W	0	Select output 8 to be controlled by this GPIO. GPIO is used to disable (squelch) output 8. 0 = disabled 1 = enabled

GPIO_0.GPIO_TOD_TRIG

Select which TOD register to be triggered by this GPIO. Applies when GPIO_FUNCTION is equal to 'TOD trigger'.

Table 311: GPIO_0.GPIO_TOD_TRIG Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_TOD_TRIG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
003h	RESERVED[7:4]				TOD_TRIG_3[3]	TOD_TRIG_2[2]	TOD_TRIG_1[1]	TOD_TRIG_0[0]

GPIO_0.GPIO_TOD_TRIG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
TOD_TRIG_3[3]	R/W	0	Select TOD of DPLL 3 to be triggered by this GPIO. The TOD read/write operation is triggered on the rising edge of this GPIO. The tod_write_selection or tod_read_trigger for TOD 3 has to be equal to 'Selected GPIO'. CAUTION: if more than one GPIO is used to trigger the same TOD, the behaviour is undefined. 0 = disabled 1 = enabled

GPIO_0.GPIO_TOD_TRIG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
TOD_TRIG_2[2]	R/W	0	Select TOD of DPLL 2 to be triggered by this GPIO. The TOD read/write operation is triggered on the rising edge of this GPIO. The tod_write_selection or tod_read_trigger for TOD 2 has to be equal to 'Selected GPIO'. CAUTION: if more than one GPIO is used to trigger the same TOD, the behaviour is undefined. 0 = disabled 1 = enabled
TOD_TRIG_1[1]	R/W	0	Select TOD of DPLL 1 to be triggered by this GPIO. The TOD read/write operation is triggered on the rising edge of this GPIO. The tod_write_selection or tod_read_trigger for TOD 1 has to be equal to 'Selected GPIO'. CAUTION: if more than one GPIO is used to trigger the same TOD, the behaviour is undefined. 0 = disabled 1 = enabled
TOD_TRIG_0[0]	R/W	0	Select TOD of DPLL 0 to be triggered by this GPIO. The TOD read/write operation is triggered on the rising edge of this GPIO. The tod_write_selection or tod_read_trigger for TOD 0 has to be equal to 'Selected GPIO'. CAUTION: if more than one GPIO is used to trigger the same TOD, the behaviour is undefined. 0 = disabled 1 = enabled

GPIO_0.GPIO_DPLL_INDICATOR

Select the DPLL to be used to drive this GPIO. Applies when GPIO_FUNCTION is equal to 'lock indicator' or 'holdover indicator'. In case of 'lock indicator', if the DPLL is in synthesizer mode, then the GPIO indicates the live status of the System APLL.

Table 312: GPIO_0.GPIO_DPLL_INDICATOR Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_DPLL_INDICATOR Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	RESERVED[7:4]				DPLL_INDEX[3:0]			

GPIO_0.GPIO_DPLL_INDICATOR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_INDEX[3:0]	R/W	0	DPLL index used by lock indicator or holdover indicator function. The GPIO level is active when the DPLL is in locked state when GPIO_n.GPIO_FUNCTION = lock indicator. The GPIO level is active when the DPLL is in holdover state when GPIO_n.GPIO_FUNCTION = holdover indicator. 0 = DPLL0 1 = DPLL1 2 = DPLL2 3 = DPLL3 4 = DPLL4 5 = DPLL5 6 = DPLL6 7 = DPLL7 8 = SYS_DPLL

GPIO_0.GPIO_LOS_INDICATOR

Configure the GPIO LOS indicator. Applies when GPIO_FUNCTION is equal to 'LOS indicator'.

Table 313: GPIO_0.GPIO_LOS_INDICATOR Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_LOS_INDICATOR Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
005h	RESERVED[7:5]			ACTIVE_LEVEL[4]	REFMON_INDEX[3:0]			

GPIO_0.GPIO_LOS_INDICATOR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
ACTIVE_LEVEL[4]	R/W	0	Level of active GPIO LOS indicator. 0 = active low 1 = active high
REFMON_INDEX[3:0]	R/W	0	Reference monitor index. Select the reference monitor which raises the LOS alarm.

GPIO_0.GPIO_REF_INPUT_DSQ_0

Select the set of inputs to be disqualified when the GPIO is at the configured level. Applies when GPIO_FUNCTION is equal to 'input clock disqualify'.

Table 314: GPIO_0.GPIO_REF_INPUT_DSQ_0 Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_REF_INPUT_DSQ_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
006h	DSQ_INP_7[7]	DSQ_INP_6[6]	DSQ_INP_5[5]	DSQ_INP_4[4]	DSQ_INP_3[3]	DSQ_INP_2[2]	DSQ_INP_1[1]	DSQ_INP_0[0]

GPIO_0.GPIO_REF_INPUT_DSQ_0 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DSQ_INP_7[7]	R/W	0	Select input 7 to be disqualified by this GPIO. GPIO is used to disqualify input 7. 0 = disabled 1 = enabled
DSQ_INP_6[6]	R/W	0	Select input 6 to be disqualified by this GPIO. GPIO is used to disqualify input 6. 0 = disabled 1 = enabled
DSQ_INP_5[5]	R/W	0	Select input 5 to be disqualified by this GPIO. GPIO is used to disqualify input 5. 0 = disabled 1 = enabled
DSQ_INP_4[4]	R/W	0	Select input 4 to be disqualified by this GPIO. GPIO is used to disqualify input 4. 0 = disabled 1 = enabled
DSQ_INP_3[3]	R/W	0	Select input 3 to be disqualified by this GPIO. GPIO is used to disqualify input 3. 0 = disabled 1 = enabled
DSQ_INP_2[2]	R/W	0	Select input 2 to be disqualified by this GPIO. GPIO is used to disqualify input 2. 0 = disabled 1 = enabled
DSQ_INP_1[1]	R/W	0	Select input 1 to be disqualified by this GPIO. GPIO is used to disqualify input 1. 0 = disabled 1 = enabled
DSQ_INP_0[0]	R/W	0	Select input 0 to be disqualified by this GPIO. GPIO is used to disqualify input 0. 0 = disabled 1 = enabled

GPIO_0.GPIO_REF_INPUT_DSQ_1

Select the set of inputs to be disqualified when the GPIO is at the configured level. Applies when GPIO_FUNCTION is equal to 'input clock disqualify'.

Table 315: GPIO_0.GPIO_REF_INPUT_DSQ_1 Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_REF_INPUT_DSQ_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
007h	DSQ_INP_15 [7]	DSQ_INP_14 [6]	DSQ_INP_13 [5]	DSQ_INP_12 [4]	DSQ_INP_11 [3]	DSQ_INP_10 [2]	DSQ_INP_9[1]	DSQ_INP_8[0]

GPIO_0.GPIO_REF_INPUT_DSQ_1 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DSQ_INP_15[7]	R/W	0	Select input 15 to be disqualified by this GPIO. GPIO is used to disqualify input 15. 0 = disabled 1 = enabled
DSQ_INP_14[6]	R/W	0	Select input 14 to be disqualified by this GPIO. GPIO is used to disqualify input 14. 0 = disabled 1 = enabled
DSQ_INP_13[5]	R/W	0	Select input 13 to be disqualified by this GPIO. GPIO is used to disqualify input 13. 0 = disabled 1 = enabled
DSQ_INP_12[4]	R/W	0	Select input 12 to be disqualified by this GPIO. GPIO is used to disqualify input 12. 0 = disabled 1 = enabled
DSQ_INP_11[3]	R/W	0	Select input 11 to be disqualified by this GPIO. GPIO is used to disqualify input 11. 0 = disabled 1 = enabled
DSQ_INP_10[2]	R/W	0	Select input 10 to be disqualified by this GPIO. GPIO is used to disqualify input 10. 0 = disabled 1 = enabled
DSQ_INP_9[1]	R/W	0	Select input 9 to be disqualified by this GPIO. GPIO is used to disqualify input 9. 0 = disabled 1 = enabled
DSQ_INP_8[0]	R/W	0	Select input 8 to be disqualified by this GPIO. GPIO is used to disqualify input 8. 0 = disabled 1 = enabled

GPIO_0.GPIO_REF_INPUT_DSQ_2

Select the set of DPLLs to have inputs disqualified when the GPIO is at the configured level. Applies when GPIO_FUNCTION is equal to 'input clock disqualify'.

Table 316: GPIO_0.GPIO_REF_INPUT_DSQ_2 Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_REF_INPUT_DSQ_2 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
008h	DSQ_DPLL_7[7]	DSQ_DPLL_6[6]	DSQ_DPLL_5[5]	DSQ_DPLL_4[4]	DSQ_DPLL_3[3]	DSQ_DPLL_2[2]	DSQ_DPLL_1[1]	DSQ_DPLL_0[0]

GPIO_0.GPIO_REF_INPUT_DSQ_2 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DSQ_DPLL_7[7]	R/W	0	Select DPLL 7. GPIO is used to disqualify selected inputs for DPLL 7. 0 = disabled 1 = enabled
DSQ_DPLL_6[6]	R/W	0	Select DPLL 6. GPIO is used to disqualify selected inputs for DPLL 6. 0 = disabled 1 = enabled
DSQ_DPLL_5[5]	R/W	0	Select DPLL 5. GPIO is used to disqualify selected inputs for DPLL 5. 0 = disabled 1 = enabled
DSQ_DPLL_4[4]	R/W	0	Select DPLL 4. GPIO is used to disqualify selected inputs for DPLL 4. 0 = disabled 1 = enabled
DSQ_DPLL_3[3]	R/W	0	Select DPLL 3. GPIO is used to disqualify selected inputs for DPLL 3. 0 = disabled 1 = enabled
DSQ_DPLL_2[2]	R/W	0	Select DPLL 2. GPIO is used to disqualify selected inputs for DPLL 2. 0 = disabled 1 = enabled
DSQ_DPLL_1[1]	R/W	0	Select DPLL 1. GPIO is used to disqualify selected inputs for DPLL 1. 0 = disabled 1 = enabled
DSQ_DPLL_0[0]	R/W	0	Select DPLL 0. GPIO is used to disqualify selected inputs for DPLL 0. 0 = disabled 1 = enabled

GPIO_0.GPIO_REF_INPUT_DSQ_3

Select the system DPLL to have its input disqualified when the GPIO is at the configured level. Applies when GPIO_FUNCTION is equal to 'input clock disqualify'.

Table 317: GPIO_0.GPIO_REF_INPUT_DSQ_3 Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_REF_INPUT_DSQ_3 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
009h	RESERVED[7:2]						GPIO_DSQ_LEVEL[1]	DSQ_DPLL_SYS[0]

GPIO_0.GPIO_REF_INPUT_DSQ_3 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
GPIO_DSQ_LEVEL[1]	R/W	0	Indicates the GPIO level used to disqualify the selected inputs. 0 = low 1 = high
DSQ_DPLL_SYS[0]	R/W	0	Select system DPLL. GPIO is used to disqualify selected inputs for system DPLL. 0 = disabled 1 = enabled

GPIO_0.GPIO_MAN_CLK_SEL_0

Switch between the configured input using this GPIO. Applies when GPIO_FUNCTION is equal to 'manual clock select'.

Table 318: GPIO_0.GPIO_MAN_CLK_SEL_0 Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_MAN_CLK_SEL_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ah	ACTIVE_CLK_INDEX[7:4]				INACTIVE_CLK_INDEX[3:0]			

GPIO_0.GPIO_MAN_CLK_SEL_0 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
ACTIVE_CLK_INDEX[7:4]	R/W	0	Input index. Select input to be used when GPIO input is one (high).
INACTIVE_CLK_INDEX[3:0]	R/W	0	Input index. Select input to be used when GPIO input is zero (low).

GPIO_0.GPIO_MAN_CLK_SEL_1

Applies when GPIO_FUNCTION is equal to 'manual clock select'.

Table 319: GPIO_0.GPIO_MAN_CLK_SEL_1 Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_MAN_CLK_SEL_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Bh	DPLL7[7]	DPLL6[6]	DPLL5[5]	DPLL4[4]	DPLL3[3]	DPLL2[2]	DPLL1[1]	DPLL0[0]

GPIO_0.GPIO_MAN_CLK_SEL_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DPLL7[7]	R/W	0	Select DPLL 7. GPIO is used to select the input for DPLL 7. 0 = disabled 1 = enabled
DPLL6[6]	R/W	0	Select DPLL 6. GPIO is used to select the input for DPLL 6. 0 = disabled 1 = enabled
DPLL5[5]	R/W	0	Select DPLL 5. GPIO is used to select the input for DPLL 5. 0 = disabled 1 = enabled
DPLL4[4]	R/W	0	Select DPLL 4. GPIO is used to select the input for DPLL 4. 0 = disabled 1 = enabled
DPLL3[3]	R/W	0	Select DPLL 3. GPIO is used to select the input for DPLL 3. 0 = disabled 1 = enabled
DPLL2[2]	R/W	0	Select DPLL 2. GPIO is used to select the input for DPLL 2. 0 = disabled 1 = enabled
DPLL1[1]	R/W	0	Select DPLL 1. GPIO is used to select the input for DPLL 1. 0 = disabled 1 = enabled
DPLL0[0]	R/W	0	Select DPLL 0. GPIO is used to select the input for DPLL 0. 0 = disabled 1 = enabled

GPIO_0.GPIO_MAN_CLK_SEL_2

Applies when GPIO_FUNCTION is equal to 'manual clock select'.

Table 320: GPIO_0.GPIO_MAN_CLK_SEL_2 Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_MAN_CLK_SEL_2 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ch	RESERVED[7:1]							DPLL_SYS[0]

GPIO_0.GPIO_MAN_CLK_SEL_2 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_SYS[0]	R/W	0	Select system DPLL. GPIO is used to select the input for system DPLL. 0 = disabled 1 = enabled

GPIO_0.GPIO_SLAVE

Configure the GPIO slave active level.

Table 321: GPIO_0.GPIO_SLAVE Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_SLAVE Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Dh	RESERVED[7:1]							GPIO_SLAVE_LEVEL[0]

GPIO_0.GPIO_SLAVE Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
GPIO_SLAVE_LEVEL[0]	R/W	0	Indicates the GPIO level for slave mode. 0 = switch to slave mode when GPIO is low 1 = switch to slave mode when GPIO is high

GPIO_0.GPIO_ALERT_OUT_CFG

Configure the GPIO alert active level.

Table 322: GPIO_0.GPIO_ALERT_OUT_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_ALERT_OUT_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Eh	RESERVED[7:1]							GPIO_ALERT_OUT_LEVEL[0]

GPIO_0.GPIO_ALERT_OUT_CFG Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
GPIO_ALERT_OUT_LEVEL[0]	R/W	0	GPIO alert out active level. 0 = active low 1 = active high

GPIO_0.GPIO_TOD_NOTIFICATION_CFG

Enable the TOD Read notification for a GPIO.

Table 323: GPIO_0.GPIO_TOD_NOTIFICATION_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_TOD_NOTIFICATION_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Fh	RESERVED[7:4]				GPIO_ASSERT_LEVEL[3]	TOD_READ_SECONDARY[2]	DPLL_TOD[1:0]	

GPIO_0.GPIO_TOD_NOTIFICATION_CFG Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
GPIO_ASSERT_LEVEL[3]	R/W	0	Indicates the level to drive the GPIO pin when a TOD read trigger event has occurred. 0 = active low 1 = active high

GPIO_0.GPIO_TOD_NOTIFICATION_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
TOD_READ_SECONDARY[2]	R/W	0	Select the primary or secondary TOD read registers. The GPIO level becomes active after the TOD register is updated. 0 = ToD read primary 1 = ToD read secondary
DPLL_TOD[1:0]	R/W	0	DPLL TOD index. Select the DPLL whose TOD register has been read. 0 = DPLL0 1 = DPLL1 2 = DPLL2 3 = DPLL3

GPIO_0.GPIO_CTRL

Enable GPIO and configure GPIO mode and direction.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the GPIO module.

Table 324: GPIO_0.GPIO_CTRL Bit Field Locations and Descriptions

Offset Address (Hex)	GPIO_0.GPIO_CTRL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
011h	GPIO_FUNCTION[7:4]				GPIO_PU_PD_MODE[3]	GPIO_CONTROL_DIR[2]	GPIO_CMOS_OD_MODE[1]	GPIO_FUNCTION_EN[0]

GPIO_0.GPIO_CTRL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
GPIO_FUNCTION[7:4]	R/W	0	Select GPIO function. Selects which GPIO function to perform. 0x0 = lock indicator (out) 0x1 = holdover indicator (out) 0x2 = LOS indicator (out) 0x3 = alert out (out) 0x4 = inc DCO FFO (in) 0x5 = dec DCO FFO (in) 0x6 = input clock disqualify (in) 0x7 = manual clock select (in) 0x8 = reserved 0x9 = clock output control (in) 0xA = ToD trigger (in) 0xB = ToD read notification (out) 0xC = master/slave signal (in) 0xD = single pulse sync signal (in)
GPIO_PU_PD_MODE[3]	R/W	0	Select pull-up or pull-down. Applies when GPIO direction is Input. 0 = pu 1 = pd
GPIO_CONTROL_DIR[2]	R/W	0	Select GPIO direction. Applies when GPIO function mode is disabled. 0 = input 1 = output
GPIO_CMOS_OD_MODE[1]	R/W	0	Select CMOS or open drain. 0 = cmos 1 = open drain
GPIO_FUNCTION_EN[0]	R/W	0	Enable GPIO function mode. 0 = disabled 1 = enabled

Module: OUT_DIV_MUX

TRIGGER: Every register in this module is a trigger register. In the case of a multibyte register the highest address register byte is the trigger byte.

Table 325: OUT_DIV_MUX Register Index

Offset (Hex)	Register Module Base Address: CA12h	
	Individual Register Name	**Register Description**
000h	OUT_DIV_MUX.OUT_DIV0_MUX	Output divider 0 multiplexer.
001h	OUT_DIV_MUX.OUT_DIV1_MUX	Output divider 1 multiplexer.
002h	OUT_DIV_MUX.OUT_DIV2_MUX	Output divider 2 multiplexer.
003h	OUT_DIV_MUX.OUT_DIV3_MUX	Output divider 3 multiplexer.

Table 325: OUT_DIV_MUX Register Index

Offset (Hex)	Register Module Base Address: CA12h	
	Individual Register Name	Register Description
004h	OUT_DIV_MUX.OUT_DIV4_MUX	Output divider 4 multiplexer.
005h	OUT_DIV_MUX.OUT_DIV5_MUX	Output divider 5 multiplexer.
006h	OUT_DIV_MUX.OUT_DIV6_MUX	Output divider 6 multiplexer.
007h	OUT_DIV_MUX.OUT_DIV7_MUX	Output divider 7 multiplexer.
008h	OUT_DIV_MUX.OUT_DIV8_MUX	Output divider 8 multiplexer.
009h	OUT_DIV_MUX.OUT_DIV9_MUX	Output divider 9 multiplexer.
00Ah	OUT_DIV_MUX.OUT_DIV10_MUX	Output divider 10 multiplexer.
00Bh	OUT_DIV_MUX.OUT_DIV11_MUX	Output divider 11 multiplexer.

OUT_DIV_MUX.OUT_DIV0_MUX

Output divider 0 multiplexer configuration.

Table 326: OUT_DIV_MUX.OUT_DIV0_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV0_MUX Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV0_MUX Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 0. 0=ch0 1=ch4 7=none

OUT_DIV_MUX.OUT_DIV1_MUX

Output divider 1 multiplexer configuration.

Table 327: OUT_DIV_MUX.OUT_DIV1_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV1_MUX Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV1_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 1. 0=ch0 1=ch1 2=ch4 7=none

OUT_DIV_MUX.OUT_DIV2_MUX

Output divider 2 multiplexer configuration.

Table 328: OUT_DIV_MUX.OUT_DIV2_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV2_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV2_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 2. 0=ch1 1=ch5 2=ch4 7=none

OUT_DIV_MUX.OUT_DIV3_MUX

Output divider 3 multiplexer configuration.

Table 329: OUT_DIV_MUX.OUT_DIV3_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV3_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
003h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV3_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 3. 0=ch1 1=ch3 2=ch2 3=ch6 4=ch5 5=ch0 7=none

OUT_DIV_MUX.OUT_DIV4_MUX

Output divider 4 multiplexer configuration.

Table 330: OUT_DIV_MUX.OUT_DIV4_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV4_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV4_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 4. 0=ch2 1=ch3 2=ch6 3=ch5 4=ch1 5=ch0 7=none

OUT_DIV_MUX.OUT_DIV5_MUX

Output divider 5 multiplexer configuration.

Table 331: OUT_DIV_MUX.OUT_DIV5_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV5_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
005h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV5_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 5. 0=ch2 1=ch3 2=ch6 3=ch5 4=ch1 5=ch0 7=none

OUT_DIV_MUX.OUT_DIV6_MUX

Output divider 6 multiplexer configuration.

Table 332: OUT_DIV_MUX.OUT_DIV6_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV6_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
006h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV6_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 6. 0=ch3 1=ch7 2=ch2 7=none

OUT_DIV_MUX.OUT_DIV7_MUX

Output divider 7 multiplexer configuration.

Table 333: OUT_DIV_MUX.OUT_DIV7_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV7_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
007h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV7_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 7. 0=ch3 1=ch7 7=none

OUT_DIV_MUX.OUT_DIV8_MUX

Output divider 8 multiplexer configuration.

Table 334: OUT_DIV_MUX.OUT_DIV8_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV8_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
008h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV8_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 8. 0=ch4 1=ch5 7=none

OUT_DIV_MUX.OUT_DIV9_MUX

Output divider 9 multiplexer configuration.

Table 335: OUT_DIV_MUX.OUT_DIV9_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV9_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
009h	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV9_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 9. 0=ch5 1=ch3 2=ch2 3=ch6 4=ch1 5=ch0 7=none

OUT_DIV_MUX.OUT_DIV10_MUX

Output divider 10 multiplexer configuration.

Table 336: OUT_DIV_MUX.OUT_DIV10_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV10_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ah	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV10_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 10. 0=ch6 1=ch3 2=ch2 3=ch5 4=ch1 5=ch0 7=none

OUT_DIV_MUX.OUT_DIV11_MUX

Output divider 11 multiplexer configuration.

Table 337: OUT_DIV_MUX.OUT_DIV11_MUX Bit Field Locations and Descriptions

Offset Address (Hex)	OUT_DIV_MUX.OUT_DIV11_MUX Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Bh	RESERVED[7:3]					FOD_SEL[2:0]		

OUT_DIV_MUX.OUT_DIV11_MUX Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FOD_SEL[2:0]	R/W	0	Select which FoD connect to output divider 11. 0=ch7 1=ch6 7=none

Module: OUTPUT_0

TRIGGER: Every register in this module is a trigger register. In the case of a multibyte register the highest address register byte is the trigger byte.

Table 338: OUTPUT_0 Register Index

Offset (Hex)	Register Module Base Address: CA20h[1]	
	Individual Register Name	**Register Description**
000h	OUTPUT_0.OUT_DIV	Output divider value.
004h	OUTPUT_0.OUT_DUTY_CYCLE_HIGH	Output duty cycle.
008h	OUTPUT_0.OUT_CTRL_0	Output electrical characteristics.
009h	OUTPUT_0.OUT_CTRL_1	Output electrical characteristics.
00Ch	OUTPUT_0.OUT_PHASE_ADJ	Output phase adjustment.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

OUTPUT_0.OUT_DIV

The output clock frequency is the FOD frequency divided by the output divider value.

Table 339: OUTPUT_0.OUT_DIV Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_0.OUT_DIV Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
000h	OUT_DIV[7:0]							
001h	OUT_DIV[15:8]							
002h	OUT_DIV[23:16]							
003h	OUT_DIV[31:24]							

OUTPUT_0.OUT_DIV Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
OUT_DIV[31:0]	R/W	0	Unsigned 32-bit output divider value.

OUTPUT_0.OUT_DUTY_CYCLE_HIGH

Sets the output duty cycle high value

Table 340: OUTPUT_0.OUT_DUTY_CYCLE_HIGH Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_0.OUT_DUTY_CYCLE_HIGH Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	OUT_DUTY_CYCLE_HIGH[7:0]							
005h	OUT_DUTY_CYCLE_HIGH[15:8]							
006h	OUT_DUTY_CYCLE_HIGH[23:16]							
007h	OUT_DUTY_CYCLE_HIGH[31:24]							

OUTPUT_0.OUT_DUTY_CYCLE_HIGH Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
OUT_DUTY_CYCLE_HIGH[31:0]	R/W	0	Unsigned 32-bit divider high value. The divider high value determines the high pulse width. The duty cycle is: dc_high / (out_div - dc_high). If dc_high = 0, the duty cycle is 50 / 50.

OUTPUT_0.OUT_CTRL_0

Configure output pad electrical characteristics.

Meet JEDEC compliance with LVDS operation by setting OUT_CTRL_0.PAD_VSWING = 0 and OUT_CTRL_0.PAD_VOS = 2.

Meet JEDEC compliance with 2.5 LVPECL operation by setting OUT_CTRL_0.PAD_VSWING = 2 and OUT_CTRL_0.PAD_VOS = 0.

Meet JEDEC compliance with 3.3 LVPECL operation by setting OUT_CTRL_0.PAD_VSWING = 2 and OUT_CTRL_0.PAD_VOS = 4.

Table 341: OUTPUT_0.OUT_CTRL_0 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_0.OUT_CTRL_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
008h	PAD_VOS[7:5]			PAD_VSWING[4:3]		PAD_MODE[2:0]		

OUTPUT_0.OUT_CTRL_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAD_VOS[7:5]	R/W	0	Output common mode voltage. 0 = 0.9V 1 = 1.1V 2 = 1.3V 3 = 1.5V 4 = 1.7V 5 = 1.9V 6 = 2.1V 7 = 2.3V
PAD_VSWING[4:3]	R/W	0	Output single-ended voltage swing. 0 = 410mV 1 = 600mV 2 = 750mV 3 = 900mV
PAD_MODE[2:0]	R/W	0	Output mode. 0 = high-Z 1 = differential 2 = LVCMOS, inverted 3 = LVCMOS, in-phase 4 = reserved 5 = reserved 6 = LVCMOS, Q enabled, nQ High-Z 7 = reserved

OUTPUT_0.OUT_CTRL_1

Configure output pad electrical characteristics.

Table 342: OUTPUT_0.OUT_CTRL_1 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_0.OUT_CTRL_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
009h	OUT_SYNC_DISABLE[7]	SQUELCH_VALUE[6]	SQUELCH_DISABLE[5]	PAD_VDDO[4:2]			PAD_CMOSDRV[1:0]	

OUTPUT_0.OUT_CTRL_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
OUT_SYNC_DISABLE[7]	R/W	0	Output phase synchronization disable. 0 = enable 1 = disable
SQUELCH_VALUE[6]	R/W	0	Squelch value. 0 = low 1 = high

OUTPUT_0.OUT_CTRL_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SQUELCH_DISABLE[5]	R/W	0	Enable or disable output squelch. 0 = squelch enabled 1 = squelch disabled
PAD_VDDO[4:2]	R/W	0	VDDO level. 0 = 1.8V 1 = 3.3V 2 = 2.5V 3 = 1.5V 4 = 1.2V
PAD_CMOSDRV[1:0]	R/W	0	LVCMOS output impedance enumeration (Ohm). 0 = 38 (3.3V), 44 (2.5V), 60 (1.8V), 85 (1.5V), 140 (1.2V) 1 = 25 (3.3V), 29 (2.5V), 40 (1.8V), 48 (1.5V), 100 (1.2V) 2 = 18 (3.3V), 20 (2.5V), 29 (1.8V), 40 (1.5V), 65 (1.2V) 3 = 15 (3.3V), 16 (2.5V), 23 (1.8V), 29 (1.5V), 50 (1.2V)

OUTPUT_0.OUT_PHASE_ADJ

Output phase adjustment in FOD cycles.

Table 343: OUTPUT_0.OUT_PHASE_ADJ Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_0.OUT_PHASE_ADJ Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ch	OUT_PHASE_ADJ[7:0]							
00Dh	OUT_PHASE_ADJ[15:8]							
00Eh	OUT_PHASE_ADJ[23:16]							
00Fh	OUT_PHASE_ADJ[31:24]							

OUTPUT_0.OUT_PHASE_ADJ Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
OUT_PHASE_ADJ[31:0]	R/W	0	Signed 32-bit value in FOD cycles to apply a phase shift to the output clock.

Module: SERIAL

Configure the serial communication ports.

Table 344: SERIAL Register Index

Offset (Hex)	Register Module Base Address: CAF0h	
	Individual Register Name	Register Description
000h	SERIAL.I2CM	I2C Master configuration.
001h	RESERVED	This register must not be modified from the read value
002h	SERIAL.SER0	Slave serial interface 0 (main serial port) configuration.
003h	SERIAL.SER0_SPI	SPI configuration for serial interface 0 (main serial port).
004h	SERIAL.SER0_I2C	I2C configuration for serial interface 0 (main serial port).
005h	SERIAL.SER1	Slave serial interface 1 (auxiliary serial port) configuration.
006h	SERIAL.SER1_SPI	SPI configuration for serial interface 1 (auxiliary serial port).
007h	SERIAL.SER1_I2C	I2C configuration for serial interface 1 (auxiliary serial port).
008h	RESERVED	This register must not be modified from the read value
009h	RESERVED	This register must not be modified from the read value
00Ah	RESERVED	This register must not be modified from the read value
00Bh	SERIAL.SER_APPLY_CONFIG	Trigger serial configuration changes.

SERIAL.I2CM

I2C Master configuration.

Table 345: SERIAL.I2CM Bit Field Locations and Descriptions

Offset Address (Hex)	SERIAL.I2CM Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	RESERVED[7:2]						I2CM_PORT_SEL[1:0]	

SERIAL.I2CM Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
I2CM_PORT_SEL[1:0]	R/W	0	I2C Master port pin selection. Configure the pins the I2C master block should connect to. 0 = I2C master 1 = serial interface 0 2 = serial interface 1

SERIAL.SER0

Slave serial interface 0 (main serial port) configuration.

Table 346: SERIAL.SER0 Bit Field Locations and Descriptions

Offset Address (Hex)	SERIAL.SER0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	RESERVED[7:3]					ADDRESS_SIZE[2]	MODE[1:0]	

SERIAL.SER0 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
ADDRESS_SIZE[2]	R/W	0	Serial interface 0 (main serial port) address size. 0 = 1-byte 1 = 2-byte
MODE[1:0]	R/W	0	Serial interface 0 (main serial port) mode. Set MODE = 0 to maintain current configuration (e.g. mode indicated by SER0_STATUS_MODE field will remain the same). 0 = no change 1 = I2C 2 = SPI 3 = disabled

SERIAL.SER0_SPI

SPI configuration for serial interface 0 (main serial port).

Table 347: SERIAL.SER0_SPI Bit Field Locations and Descriptions

Offset Address (Hex)	SERIAL.SER0_SPI Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
003h	RESERVED[7:5]			SPI_SDO_DELAY[4]	SPI_CLOCK_SELECTION[3]	SPI_DUPLEX_MODE[2]	RESERVED[1:0]	

SERIAL.SER0_SPI Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
SPI_SDO_DELAY[4]	R/W	0	SPI delay SDO driving edge. 0 = driving edge used for SDO 1 = SDO driving edge delayed half-cycle of SCLK
SPI_CLOCK_SELECTION[3]	R/W	0	SPI Clock Selection for SDI sampling. 0 = rising edge 1 = falling edge

SERIAL.SER0_SPI Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SPI_DUPLEX_MODE[2]	R/W	0	SPI 4-wire or 3-wire. Select either 4-wire full duplex mode or 3-wire half duplex mode. 0 = full duplex 1 = half duplex
RESERVED	N/A	-	This field must not be modified from the read value

SERIAL.SER0_I2C

I2C configuration for serial interface 0 (main serial port).

Table 348: SERIAL.SER0_I2C Bit Field Locations and Descriptions

Offset Address (Hex)	SERIAL.SER0_I2C Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	APPLY[7]	DEVICE_ADDRESS[6:0]						

SERIAL.SER0_I2C Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
APPLY[7]	R/W	0	Apply the new I2C address when the confirmation code triggers configuration to serial interface 0 (main serial port). 0 = do not change 1 = apply new address
DEVICE_ADDRESS[6:0]	R/W	0	7-bit I2C address.

SERIAL.SER1

Slave serial interface 1 (auxiliary serial port) configuration.

Table 349: SERIAL.SER1 Bit Field Locations and Descriptions

Offset Address (Hex)	SERIAL.SER1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
005h	RESERVED[7:3]					ADDRESS_SIZE[2]	MODE[1:0]	

SERIAL.SER1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value

SERIAL.SER1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
ADDRESS_SIZE[2]	R/W	0	Serial interface 1 (auxiliary serial port) address size. 0 = 1-byte 1 = 2-byte
MODE[1:0]	R/W	0	Serial interface 1 (auxiliary serial port) mode. Set MODE = 0 to maintain current configuration (e.g. mode indicated by SER1_STATUS_MODE field will remain the same). 0 = no change 1 = I2C 2 = SPI 3 = disabled

SERIAL.SER1_SPI

SPI configuration for serial interface 1 (auxiliary serial port).

Table 350: SERIAL.SER1_SPI Bit Field Locations and Descriptions

Offset Address (Hex)	SERIAL.SER1_SPI Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
006h	RESERVED[7:5]			SPI_SDO_DELAY[4]	SPI_CLOCK_SELECTION[3]	SPI_DUPLEX_MODE[2]	RESERVED[1:0]	

SERIAL.SER1_SPI Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SPI_SDO_DELAY[4]	R/W	0	SPI delay SDO driving edge. 0 = driving edge used for SDO 1 = SDO driving edge delayed half-cycle of SCLK
SPI_CLOCK_SELECTION[3]	R/W	0	SPI Clock Selection for SDI sampling. 0 = rising edge 1 = falling edge
SPI_DUPLEX_MODE[2]	R/W	0	SPI 4-wire or 3-wire. Select either 4-wire full duplex mode or 3-wire half duplex mode. 0 = full duplex 1 = half duplex
RESERVED	N/A	-	This field must not be modified from the read value

SERIAL.SER1_I2C

I2C configuration for serial interface 1 (auxiliary serial port).

Table 351: SERIAL.SER1_I2C Bit Field Locations and Descriptions

Offset Address (Hex)	SERIAL.SER1_I2C Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
007h	APPLY[7]	DEVICE_ADDRESS[6:0]						

SERIAL.SER1_I2C Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
APPLY[7]	R/W	0	Apply the new I2C address when the confirmation code triggers configuration to serial interface 1 (auxiliary serial port). 0 = do not change 1 = apply new address
DEVICE_ADDRESS[6:0]	R/W	0	7-bit I2C address.

SERIAL.SER_APPLY_CONFIG

Confirm serial interface update.

TRIGGER: Writing to this byte triggers a read and activation of all the bytes of the SERIAL module.

Table 352: SERIAL.SER_APPLY_CONFIG Bit Field Locations and Descriptions

Offset Address (Hex)	SERIAL.SER_APPLY_CONFIG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Bh	SER0_CONFIRM_CODE[7:4]				SER1_CONFIRM_CODE[3:0]			

SERIAL.SER_APPLY_CONFIG Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
SER0_CONFIRM_CODE[7:4]	R/W	0	Confirmation code for serial interface 0 (main serial port). Confirmation code must be set to 0xA to apply the new configuration to serial interface 0 (main serial port). After this register has been written, wait 500 us before re-accessing the serial interface.
SER1_CONFIRM_CODE[3:0]	R/W	0	Confirmation code for serial interface 1 (auxiliary serial port). Confirmation code must be set to 0xA to apply the new configuration to serial interface 1 (auxiliary serial port). After this register has been written, wait 500 us before re-accessing the serial interface.

Module: PWM_ENCODER_0

Configure the PWM encoder.

Table 353: PWM_ENCODER_0 Register Index

Offset (Hex)	Register Module Base Address: CB00h[1]	
	Individual Register Name	Register Description
000h	PWM_ENCODER_0.PWM_ENCODER_ID	PWM encoder identifier.
001h	PWM_ENCODER_0.PWM_ENCODER_CNFG	PWM encoder configuration.
002h	PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_0	PWM encoder signature configuration.
003h	PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_1	PWM encoder signature configuration.
004h	PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_CNFG	PWM encoder sync payload channel configuration.
005h	PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_SQUELCH_CNFG	PWM encoder sync payload channel squelch configuration.
006h	RESERVED	This register must not be modified from the read value
007h	PWM_ENCODER_0.PWM_ENCODER_CMD	PWM encoder command.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

PWM_ENCODER_0.PWM_ENCODER_ID

Unique identifier defined by user.

Table 354: PWM_ENCODER_0.PWM_ENCODER_ID Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_ENCODER_0.PWM_ENCODER_ID Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	ENCODER_ID[7:0]							

PWM_ENCODER_0.PWM_ENCODER_ID Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
ENCODER_ID[7:0]	R/W	0	Unique PWM encoder ID in the PWM network.

PWM_ENCODER_0.PWM_ENCODER_CNFG

Configure the outputs to be used for transmission.

Table 355: PWM_ENCODER_0.PWM_ENCODER_CNFG Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_ENCODER_0.PWM_ENCODER_CNFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	RESERVED[7:4]				PPS_SEL[3]	SECONDARY_OUTPUT[2]	TOD_SEL[1:0]	

PWM_ENCODER_0.PWM_ENCODER_CNFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
PPS_SEL[3]	R/W	0	Select source to trigger transmission of PWM PPS frame. For dual-channel PWM encoders[0:3], a value of 0 means that TOD engine selected in tod_sel field is used as a trigger source, a value of 1 means that the output not used for PWM carrier is used as a trigger source. For single-channel PWM encoders[4:7], a value of 1 indicates that the Q5 output divider is used as the PPS trigger source. Please note that in this case you also need to set secondary_output = 1. 0 = ToD PPS 1 = alternate PPS
SECONDARY_OUTPUT[2]	R/W	0	Select output to be used for PWM carrier. For dual-channel PWM encoders[0:3], a value of 1 indicates that the secondary output is used for PWM carrier. For single-channel PWM encoders[4:7], a value of 1 indicates that the Q5 output divider is used as the PPS source. Please note that in this case you also need to set pps_sel = 1. 0 = primary output 1 = alternate output
TOD_SEL[1:0]	R/W	0	DPLL TOD index. DPLL index from which the TOD PPS is to be used for transmission (when pps_sel field = 0). 0 = ToD index 0 1 = ToD index 1 2 = ToD index 2 3 = ToD index 3

PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_0

Select signature symbols to be transmitted in PWM signature mode. Same signature must be applied at both encoder and decoder.

Table 356: PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_0 Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	FIFTH_SYMBOL[7:6]		SIXTH_SYMBOL[5:4]		SEVENTH_SYMBOL[3:2]		EIGHTH_SYMBOL[1:0]	

PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FIFTH_SYMBOL[7:6]	R/W	0	The fifth symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
SIXTH_SYMBOL[5:4]	R/W	0	The sixth symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
SEVENTH_SYMBOL[3:2]	R/W	0	The seventh symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
EIGHTH_SYMBOL[1:0]	R/W	0	The eighth symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space

PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_1

Select signature symbols to be transmitted in PWM signature mode. Same signature must be applied at both encoder and decoder.

Table 357: PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_1 Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
003h	RESERVED[7]	FIRST_SYMBOL[6]	SECOND_SYMBOL[5:4]		THIRD_SYMBOL[3:2]		FOURTH_SYMBOL[1:0]	

PWM_ENCODER_0.PWM_ENCODER_SIGNATURE_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FIRST_SYMBOL[6]	R/W	0	The first symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period) 0 = zero 1 = one
SECOND_SYMBOL[5:4]	R/W	0	The second symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
THIRD_SYMBOL[3:2]	R/W	0	The third symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
FOURTH_SYMBOL[1:0]	R/W	0	The fourth symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space

PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_CNFG

Configure which DPLL channel to be the PWM_SYNC payload channels.

Table 358: PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_CNFG Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_CNFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	PAYLOAD_CH_EN_7[7]	PAYLOAD_CH_EN_6[6]	PAYLOAD_CH_EN_5[5]	PAYLOAD_CH_EN_4[4]	PAYLOAD_CH_EN_3[3]	PAYLOAD_CH_EN_2[2]	PAYLOAD_CH_EN_1[1]	PAYLOAD_CH_EN_0[0]

PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_CNFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAYLOAD_CH_EN_7[7]	R/W	0	Enable DPLL channel 7 as a payload channel. If this payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be a payload channel. 0 = disabled 1 = enabled
PAYLOAD_CH_EN_6[6]	R/W	0	Enable DPLL channel 6 as a payload channel. If this payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be a payload channel. 0 = disabled 1 = enabled
PAYLOAD_CH_EN_5[5]	R/W	0	Enable DPLL channel 5 as a payload channel. If this payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be a payload channel. 0 = disabled 1 = enabled
PAYLOAD_CH_EN_4[4]	R/W	0	Enable DPLL channel 4 as a payload channel. If this payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be a payload channel. 0 = disabled 1 = enabled
PAYLOAD_CH_EN_3[3]	R/W	0	Enable DPLL channel 3 as a payload channel. If this payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be a payload channel. 0 = disabled 1 = enabled
PAYLOAD_CH_EN_2[2]	R/W	0	Enable DPLL channel 2 as a payload channel. If this payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be a payload channel. 0 = disabled 1 = enabled

PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_CNFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAYLOAD_CH_EN_1[1]	R/W	0	Enable DPLL channel 1 as a payload channel. If this payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be a payload channel. 0 = disabled 1 = enabled
PAYLOAD_CH_EN_0[0]	R/W	0	Enable DPLL channel 0 as a payload channel. If this payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be a payload channel. 0 = disabled 1 = enabled

PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_SQUELCH_CNFG

Configure the PWM_SYNC payload channel sync frame transmission to be squelched when the channel is not locked.

Table 359: PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_SQUELCH_CNFG Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_SQUELCH_CNFG Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
005h	PAYLOAD_SQUELCH_7[7]	PAYLOAD_SQUELCH_6[6]	PAYLOAD_SQUELCH_5[5]	PAYLOAD_SQUELCH_4[4]	PAYLOAD_SQUELCH_3[3]	PAYLOAD_SQUELCH_2[2]	PAYLOAD_SQUELCH_1[1]	PAYLOAD_SQUELCH_0[0]

PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_SQUELCH_CNFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAYLOAD_SQUELCH_7[7]	R/W	0	Enable DPLL channel 7 payload frame transmission squelch. 0 = disabled 1 = enabled
PAYLOAD_SQUELCH_6[6]	R/W	0	Enable DPLL channel 6 payload frame transmission squelch. 0 = disabled 1 = enabled
PAYLOAD_SQUELCH_5[5]	R/W	0	Enable DPLL channel 5 payload frame transmission squelch. 0 = disabled 1 = enabled
PAYLOAD_SQUELCH_4[4]	R/W	0	Enable DPLL channel 4 payload frame transmission squelch. 0 = disabled 1 = enabled
PAYLOAD_SQUELCH_3[3]	R/W	0	Enable DPLL channel 3 payload frame transmission squelch. 0 = disabled 1 = enabled

PWM_ENCODER_0.PWM_ENCODER_SYNC_PAYLOAD_SQUELCH_CNFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAYLOAD_SQUELCH_2[2]	R/W	0	Enable DPLL channel 2 payload frame transmission squelch. 0 = disabled 1 = enabled
PAYLOAD_SQUELCH_1[1]	R/W	0	Enable DPLL channel 1 payload frame transmission squelch. 0 = disabled 1 = enabled
PAYLOAD_SQUELCH_0[0]	R/W	0	Enable DPLL channel 0 payload frame transmission squelch. 0 = disabled 1 = enabled

PWM_ENCODER_0.PWM_ENCODER_CMD

Enable PWM encoder, signature mode, TOD transmission and PWM_SYNC message transmission.

TRIGGER: Writing to this byte triggers a read and activation of all the bytes of the PMW_ENCODER module.

Table 360: PWM_ENCODER_0.PWM_ENCODER_CMD Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_ENCODER_0.PWM_ENCODER_CMD Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
007h	RESERVED[7:6]		TOD_AUTO_UPDATE[5]	PWM_SYNC_PHASE_CORR_DISABLE[4]	PWM_SYNC[3]	TOD_TX[2]	SIGNATURE_MODE[1]	ENABLE[0]

PWM_ENCODER_0.PWM_ENCODER_CMD Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
TOD_AUTO_UPDATE[5]	R/W	0	Enable/disable TOD value automatic update Enable/disable TOD value automatic update from SCSR_PWM_ENCODER_CNFG.tod_sel specified TOD for TOD transmission 0 = disabled 1 = enabled
PWM_SYNC_PHASE_CORR_DISABLE[4]	R/W	0	Enable/disable PWM_SYNC phase correction 0 = enabled 1 = disabled
PWM_SYNC[3]	R/W	0	Enable PWM_SYNC message transmission. Enabling PWM_SYNC message transmission implies this output channel is a PWM carrier channel. 0 = disabled 1 = enabled

PWM_ENCODER_0.PWM_ENCODER_CMD Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
TOD_TX[2]	R/W	0	Enable TOD transmission. The TOD transmission can be enabled only if signature mode is disabled. 0 = disabled 1 = enabled
SIGNATURE_MODE[1]	R/W	0	Enable signature mode. 0 = disabled 1 = enabled
ENABLE[0]	R/W	0	Enable PWM encoder. 0 = disabled 1 = enabled

Module: PWM_DECODER_0

Configure PWM decoder.

Table 361: PWM_DECODER_0 Register Index

Offset (Hex)	Register Module Base Address: CB40h[1]	
	Individual Register Name	**Register Description**
000h	PWM_DECODER_0.PWM_DECODER_CNFG	PWM_PPS configuration.
002h	PWM_DECODER_0.PWM_DECODER_ID	PWM decoder identifier.
003h	PWM_DECODER_0.PWM_DECODER_SIGNATURE_0	PWM decoder signature configuration.
004h	PWM_DECODER_0.PWM_DECODER_SIGNATURE_1	PWM decoder signature configuration.
005h	PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_0	PWM decoder sync payload channel configuration.
006h	PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_1	PWM decoder sync payload channel configuration.
007h	PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_2	PWM decoder sync payload channel configuration.
008h	PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_3	PWM decoder sync payload channel configuration.
009h	PWM_DECODER_0.PWM_DECODER_CMD	PWM decoder command.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

PWM_DECODER_0.PWM_DECODER_CNFG

Set the rate of the PWM PPS frames and enable the internal PWM PPS signal.

Table 362: PWM_DECODER_0.PWM_DECODER_CNFG Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_DECODER_0.PWM_DECODER_CNFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	PPS_RATE[7:0]							
001h	GENERATE_PPS[15]	PPS_RATE[14:8]						

PWM_DECODER_0.PWM_DECODER_CNFG Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
GENERATE_PPS[15]	R/W	0	Generate PPS pulse. 0 = do not generate internal PPS 1 = generate internal PPS
PPS_RATE[14:0]	R/W	0	PWM PPS rate in units of 0.5 Hz.

PWM_DECODER_0.PWM_DECODER_ID

Unique identifier defined by user.

Table 363: PWM_DECODER_0.PWM_DECODER_ID Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_DECODER_0.PWM_DECODER_ID Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	DECODER_ID[7:0]							

PWM_DECODER_0.PWM_DECODER_ID Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DECODER_ID[7:0]	R/W	0	Unique PWM decoder ID in the PWM network. 0xFF should not be used because it is reserved for broadcast.

PWM_DECODER_0.PWM_DECODER_SIGNATURE_0

Select signature symbols to be received in PWM signature mode. Same signature must be applied at both encoder and decoder.

Table 364: PWM_DECODER_0.PWM_DECODER_SIGNATURE_0 Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_DECODER_0.PWM_DECODER_SIGNATURE_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
003h	FIFTH_SYMBOL[7:6]		SIXTH_SYMBOL[5:4]		SEVENTH_SYMBOL[3:2]		EIGHTH_SYMBOL[1:0]	

PWM_DECODER_0.PWM_DECODER_SIGNATURE_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FIFTH_SYMBOL[7:6]	R/W	0	The fifth symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
SIXTH_SYMBOL[5:4]	R/W	0	The sixth symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
SEVENTH_SYMBOL[3:2]	R/W	0	The seventh symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
EIGHTH_SYMBOL[1:0]	R/W	0	The eighth symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space

PWM_DECODER_0.PWM_DECODER_SIGNATURE_1

Select signature symbols to be received in PWM signature mode. Same signature must be applied at both encoder and decoder.

Table 365: PWM_DECODER_0.PWM_DECODER_SIGNATURE_1 Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_DECODER_0.PWM_DECODER_SIGNATURE_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	RESERVED[7]	FIRST_SYMBOL[6]	SECOND_SYMBOL[5:4]		THIRD_SYMBOL[3:2]		FOURTH_SYMBOL[1:0]	

PWM_DECODER_0.PWM_DECODER_SIGNATURE_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
FIRST_SYMBOL[6]	R/W	0	The first symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period) 0 = zero 1 = one
SECOND_SYMBOL[5:4]	R/W	0	The second symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
THIRD_SYMBOL[3:2]	R/W	0	The third symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space
FOURTH_SYMBOL[1:0]	R/W	0	The fourth symbol of the signature. zero (25 on/75 off duty cycle clock period), one (75 on/25 off duty cycle clock period), space (50 on/50 off duty cycle clock period) 0 = zero 1 = one 2 = space

PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_0

Configure which source DPLL sync payload channel map to destination DPLL sync payload channel.

User must configure the DPLL sync payload channel in write frequency mode and use the PWM sync carrier channel as one of the combo masters.

Table 366: PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_0 Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
005h	PAYLOAD_CH_EN_1[7]	SRC_CH_IDX_1[6:4]			PAYLOAD_CH_EN_0[3]	SRC_CH_IDX_0[2:0]		

PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAYLOAD_CH_EN_1[7]	R/W	0	Enable DPLL channel 1 as a destination payload channel. If this destination payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be the destination payload channel. 0 = disabled 1 = enabled
SRC_CH_IDX_1[6:4]	R/W	0	Source payload DPLL channel index. The source payload DPLL channel index map to destination DPLL payload channel 1.
PAYLOAD_CH_EN_0[3]	R/W	0	Enable DPLL channel 0 as a destination payload channel. If this destination payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be the destination payload channel. 0 = disabled 1 = enabled
SRC_CH_IDX_0[2:0]	R/W	0	Source payload DPLL channel index. The source payload DPLL channel index map to destination DPLL payload channel 0.

PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_1

Configure which source DPLL sync payload channel map to destination DPLL sync payload channel.

User must configure the DPLL sync payload channel in write frequency mode and use the PWM sync carrier channel as one of the combo masters.

Table 367: PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_1 Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
006h	PAYLOAD_CH_EN_3[7]	SRC_CH_IDX_3[6:4]			PAYLOAD_CH_EN_2[3]	SRC_CH_IDX_2[2:0]		

PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAYLOAD_CH_EN_3[7]	R/W	0	Enable DPLL channel 3 as a destination payload channel. If this destination payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be the destination payload channel. 0 = disabled 1 = enabled
SRC_CH_IDX_3[6:4]	R/W	0	Source payload DPLL channel index. The source payload DPLL channel index map to destination DPLL payload channel 3.

PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAYLOAD_CH_EN_2[3]	R/W	0	Enable DPLL channel 2 as a destination payload channel. If this destination payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be the destination payload channel. 0 = disabled 1 = enabled
SRC_CH_IDX_2[2:0]	R/W	0	Source payload DPLL channel index. The source payload DPLL channel index map to destination DPLL payload channel 2.

PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_2

Configure which source DPLL sync payload channel map to destination DPLL sync payload channel.

User must configure the DPLL sync payload channel in write frequency mode and use the PWM sync carrier channel as one of the combo masters.

Table 368: PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_2 Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_2 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
007h	PAYLOAD_CH_EN_5[7]	SRC_CH_IDX_5[6:4]			PAYLOAD_CH_EN_4[3]	SRC_CH_IDX_4[2:0]		

PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PAYLOAD_CH_EN_5[7]	R/W	0	Enable DPLL channel 5 as a destination payload channel. If this destination payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be the destination payload channel. 0 = disabled 1 = enabled
SRC_CH_IDX_5[6:4]	R/W	0	Source payload DPLL channel index. The source payload DPLL channel index map to destination DPLL payload channel 5.
PAYLOAD_CH_EN_4[3]	R/W	0	Enable DPLL channel 4 as a destination payload channel. If this destination payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be the destination payload channel. 0 = disabled 1 = enabled
SRC_CH_IDX_4[2:0]	R/W	0	Source payload DPLL channel index. The source payload DPLL channel index map to destination DPLL payload channel 4.

PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_3

Configure which source DPLL sync payload channel map to destination DPLL sync payload channel.

User must configure the DPLL sync payload channel in write frequency mode and use the PWM sync carrier channel as one of the combo masters.

Table 369: PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_3 Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_3 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
008h	PAYLOAD_CH_EN_7[7]	SRC_CH_IDX_7[6:4]			PAYLOAD_CH_EN_6[3]	SRC_CH_IDX_6[2:0]		

PWM_DECODER_0.PWM_DECODER_SYNC_PAYLOAD_CNFG_3 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
PAYLOAD_CH_EN_7[7]	R/W	0	Enable DPLL channel 7 as a destination payload channel. If this destination payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be the destination payload channel. 0 = disabled 1 = enabled
SRC_CH_IDX_7[6:4]	R/W	0	Source payload DPLL channel index. The source payload DPLL channel index map to destination DPLL payload channel 7.
PAYLOAD_CH_EN_6[3]	R/W	0	Enable DPLL channel 6 as a destination payload channel. If this destination payload channel is also the PWM carrier channel, it implies the SYS_DPLL channel will be the destination payload channel. 0 = disabled 1 = enabled
SRC_CH_IDX_6[2:0]	R/W	0	Source payload DPLL channel index. The source payload DPLL channel index map to destination DPLL payload channel 6.

PWM_DECODER_0.PWM_DECODER_CMD

Enable PWM decoder and PWM modes.

TRIGGER: Writing to this byte triggers a read and activation of all the bytes of the PMW_DECODER module.

Table 370: PWM_DECODER_0.PWM_DECODER_CMD Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_DECODER_0.PWM_DECODER_CMD Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
009h	PWM_SYNC_CR_IDX[7:4]				PWM_SYNC[3]	TOD_FRAME_ACCESS_EN[2]	SIGNATURE_MODE[1]	ENABLE[0]

PWM_DECODER_0.PWM_DECODER_CMD Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PWM_SYNC_CR_IDX[7:4]	R/W	0	PWM decoder sync carrier DPLL index. Indicate which DPLL is tracking this PWM carrier. If it is unknown, then set to 0xF to find it automatically. 0x0 = DPLL0 0x1 = DPLL1 0x2 = DPLL2 0x3 = DPLL3 0x4 = DPLL4 0x5 = DPLL5 0x6 = DPLL6 0x7 = DPLL7 0x8 = SYS_DPLL 0xF = unknown
PWM_SYNC[3]	R/W	0	Enable PWM_SYNC mode. 0 = disabled 1 = enabled
TOD_FRAME_ACCESS_EN[2]	R/W	0	TOD frame external access enable. When this bit of all PWM decoders (decoder 0 to decoder 15) are set to 0, the received TOD frame will be discarded immediately. Otherwise, the TOD frame will be held in the FIFO for 1 second to allow external access. 0 = TOD frame is discarded immediately 1 = TOD frame is helded in FIFO for 1 second
SIGNATURE_MODE[1]	R/W	0	Enable signature mode. 0 = disabled 1 = enabled
ENABLE[0]	R/W	0	Enable PWM decoder. 0 = disabled 1 = enabled

Module: PWM_USER_DATA

Configures PWM user data.

Table 371: PWM_USER_DATA Register Index

Offset (Hex)	Register Module Base Address: CBF0h	
	Individual Register Name	**Register Description**
000h	PWM_USER_DATA.PWM_SRC_ENCODER_ID	Source PWM encoder.
001h	PWM_USER_DATA.PWM_DST_DECODER_ID	Destination PWM decoder.
002h	PWM_USER_DATA.PWM_USER_DATA_SIZE	The PWM user data length in bytes.
003h	RESERVED	This register must not be modified from the read value

Table 371: PWM_USER_DATA Register Index

Offset (Hex)	Register Module Base Address: CBF0h	
	Individual Register Name	Register Description
004h	RESERVED	This register must not be modified from the read value
005h	RESERVED	This register must not be modified from the read value
006h	RESERVED	This register must not be modified from the read value
007h	PWM_USER_DATA.PWM_USER_DATA_CMD_STS	PWM user data command and status register.

PWM_USER_DATA.PWM_SRC_ENCODER_ID

The ID of the source PWM encoder.

Table 372: PWM_USER_DATA.PWM_SRC_ENCODER_ID Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_USER_DATA.PWM_SRC_ENCODER_ID Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	ENCODER_ID[7:0]							

PWM_USER_DATA.PWM_SRC_ENCODER_ID Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
ENCODER_ID[7:0]	R/W	0	PWM encoder identification.

PWM_USER_DATA.PWM_DST_DECODER_ID

The ID of the destination PWM decoder.

Table 373: PWM_USER_DATA.PWM_DST_DECODER_ID Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_USER_DATA.PWM_DST_DECODER_ID Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	DECODER_ID[7:0]							

PWM_USER_DATA.PWM_DST_DECODER_ID Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DECODER_ID[7:0]	R/W	0	PWM decoder identification. Use 0xFF for broadcast transmission.

PWM_USER_DATA.PWM_USER_DATA_SIZE

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Table 374: PWM_USER_DATA.PWM_USER_DATA_SIZE Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_USER_DATA.PWM_USER_DATA_SIZE Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	BYTES[7:0]							

PWM_USER_DATA.PWM_USER_DATA_SIZE Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
BYTES[7:0]	R/W	0	The PWM user data length in bytes, from 1 to 128. Indicates the number of bytes received or to be transmitted through OTP_EEPROM_PWM_BUFF.

PWM_USER_DATA.PWM_USER_DATA_CMD_STS

PWM user data command and status register.

TRIGGER: Writing to this byte triggers a read and activation of all the bytes of the PMW_USER_DATA module.

Table 375: PWM_USER_DATA.PWM_USER_DATA_CMD_STS Bit Field Locations and Descriptions

Offset Address (Hex)	PWM_USER_DATA.PWM_USER_DATA_CMD_STS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
007h	COMMAND_STATUS[7:0]							

PWM_USER_DATA.PWM_USER_DATA_CMD_STS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
COMMAND_STATUS[7:0]	R/W	0	The user must set this field to 'Idle' whenever it is ready to receive new data. Before transmitting, the user has to set the 'Tx request' command and then wait for the 'Tx ack'. After this, the user can copy the data into OTP_EEPROM_PWM_BUF buffer and initiate a 'Start transmission' command. 0, 1, and 2 are set by the user. All the other status codes are set by the device. 0x00 = idle 0x01 = tx request 0x02 = start transmission 0x03 = tx ack 0x04 = tx in progress 0x05 = tx success 0x06 = tx invalid encoder ID 0x07 = tx wrong data size 0x08 = tx encoder error 0x09 = tx cancelled 0x0A = rx in progress 0x0B = rx success 0x0C = rx wrong data size 0x0D = rx lost frames 0x0E = rx timeout 0x0F = rx decoder error 0x10 = rx cancelled

Module: TOD_0

Configure the TOD registers.

Table 376: TOD_0 Register Index

Offset (Hex)	Register Module Base Address: CC00h[1]	
	Individual Register Name	**Register Description**
000h	RESERVED	This register must not be modified from the read value
001h	TOD_0.TOD_CFG	TOD configuration register.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

TOD_0.TOD_CFG

Enable TOD counter, output channel sync and even-PPS mode.

TRIGGER: Writing to this byte triggers a read and activation of all the bytes of the TOD module.

Table 377: TOD_0.TOD_CFG Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_0.TOD_CFG Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	RESERVED[7:3]					TOD_EVEN_PPS_MODE[2]	TOD_OUT_SYNC_DISABLE[1]	TOD_ENABLE[0]

TOD_0.TOD_CFG Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
TOD_EVEN_PPS_MODE[2]	R/W	0	Enable even-PPS mode. If enabled, then the pulse is generated every 2 seconds. 0 = disabled 1 = enabled
TOD_OUT_SYNC_DISABLE[1]	R/W	0	Disable the TOD output channel synchronization. Set this flag to 1 to disable the TOD output channel synchronization. 0 = enabled 1 = disabled
TOD_ENABLE[0]	R/W	0	Enable TOD. 0 = disabled 1 = enabled

Module: TOD_WRITE_0

Configure the write registers.

Table 378: TOD_WRITE_0 Register Index

Offset (Hex)	Register Module Base Address: CC10h[1]	
	Individual Register Name	Register Description
000h	TOD_WRITE_0.TOD_WRITE	TOD write registers.
00Bh	RESERVED	This register must not be modified from the read value
00Ch	TOD_WRITE_0.TOD_WRITE_COUNTER	Indicates when TOD write is completed.
00Dh	TOD_WRITE_0.TOD_WRITE_SELECT_CFG_0	TOD write trigger configuration.
00Eh	RESERVED	This register must not be modified from the read value
00Fh	TOD_WRITE_0.TOD_WRITE_CMD	TOD write trigger selection.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

TOD_WRITE_0.TOD_WRITE

The maximum frequency of the clock driving the TOD accumulator is 1 GHz for DPLL 0 and 1, and 770 MHz for DPLL 2 and 3 .

Table 379: TOD_WRITE_0.TOD_WRITE Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_WRITE_0.TOD_WRITE Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	SUBNS[7:0]							
001h	NS[15:8]							
002h	NS[23:16]							
003h	NS[31:24]							
004h	NS[39:32]							
005h	SECONDS[47:40]							
006h	SECONDS[55:48]							
007h	SECONDS[63:56]							
008h	SECONDS[71:64]							
009h	SECONDS[79:72]							
00Ah	SECONDS[87:80]							

TOD_WRITE_0.TOD_WRITE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SECONDS[87:40]	R/W	0	Seconds part of TOD. Unsigned 48-bit value in seconds.
NS[39:8]	R/W	0	Nanoseconds part of TOD. Unsigned 32-bit value in nanoseconds. The maximum value is 0x3b9ac9ff = 999,999,999 ns.
SUBNS[7:0]	R/W	0	Sub-nanoseconds part of TOD. Unsigned 8-bit value in units of 1/256 nanoseconds.

TOD_WRITE_0.TOD_WRITE_COUNTER

This counter increments to indicate completion.

Table 380: TOD_WRITE_0.TOD_WRITE_COUNTER Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_WRITE_0.TOD_WRITE_COUNTER Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ch	WRITE_COUNTER[7:0]							

TOD_WRITE_0.TOD_WRITE_COUNTER Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
WRITE_COUNTER[7:0]	R/O	0	TOD write counter. This counter increments after the TOD is written to.

TOD_WRITE_0.TOD_WRITE_SELECT_CFG_0

Select the PWM decoder or the input index used as a trigger for TOD write.

Table 381: TOD_WRITE_0.TOD_WRITE_SELECT_CFG_0 Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_WRITE_0.TOD_WRITE_SELECT_CFG_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Dh	PWM_DECODER_INDEX[7:4]				REF_INDEX[3:0]			

TOD_WRITE_0.TOD_WRITE_SELECT_CFG_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PWM_DECODER_INDEX[7:4]	R/W	0	PWM decoder index used as trigger. Applicable when tod_write_selection = 3
REF_INDEX[3:0]	R/W	0	Input reference index used as trigger. Applicable when tod_write_selection = 2

TOD_WRITE_0.TOD_WRITE_CMD

Select the TOD mode and trigger source.

TRIGGER: Writing to this byte triggers a read and activation of all the bytes of the TOD_WRITE module.

Table 382: TOD_WRITE_0.TOD_WRITE_CMD Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_WRITE_0.TOD_WRITE_CMD Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Fh	RESERVED[7:6]		TOD_WRITE_TYPE[5:4]		TOD_WRITE_SELECTION[3:0]			

TOD_WRITE_0.TOD_WRITE_CMD Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value

TOD_WRITE_0.TOD_WRITE_CMD Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
TOD_WRITE_TYPE[5:4]	R/W	0	TOD write type. 0 = absolute TOD 1 = delta TOD plus 2 = delta TOD minus.
TOD_WRITE_SELECTION [3:0]	R/W	0	TOD write trigger selection. Applicable when tod_write_type = 0 (absolute ToD). For options 2, 3, 4 and 6, the trigger is always on the rising edge of the selected signal. This field will be cleared when the command is finished. 0 = disabled, no trigger 1 = immediate 2 = selected reference clock input 3 = selected PWM decoder's 1 PPS output 4 = rising edge of the ToD PPS signal 5 = feedback from FOD 6 = selected GPIO

Module: TOD_READ_PRIMARY_0

Configure the TOD read primary registers

Table 383: TOD_READ_PRIMARY_0 Register Index

Offset (Hex)	Register Module Base Address: CC50h[1]	
	Individual Register Name	**Register Description**
000h	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY	TOD read primary registers.
00Bh	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_COUNTER	Indicates when TOD read is completed.
00Ch	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_0	TOD read trigger configuration.
00Dh	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_1	TOD read trigger configuration.
00Eh	RESERVED	This register must not be modified from the read value
00Fh	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_CMD	TOD read trigger selection.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY

The maximum frequency of the clock driving the TOD accumulator is 1 GHz for DPLL 0 and 1, and 770 MHz for DPLL 2 and 3 .

Table 384: TOD_READ_PRIMARY_0.TOD_READ_PRIMARY Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	SUBNS[7:0]							
001h	NS[15:8]							
002h	NS[23:16]							
003h	NS[31:24]							
004h	NS[39:32]							
005h	SECONDS[47:40]							
006h	SECONDS[55:48]							
007h	SECONDS[63:56]							
008h	SECONDS[71:64]							
009h	SECONDS[79:72]							
00Ah	SECONDS[87:80]							

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SECONDS[87:40]	R/O	0	Seconds part of TOD. Unsigned 48-bit value in seconds.
NS[39:8]	R/O	0	Nanoseconds part of TOD. Unsigned 32-bit value in nanoseconds. The maximum value is 0x3b9ac9ff = 999,999,999 ns.
SUBNS[7:0]	R/O	0	Sub-nanoseconds part of TOD. Unsigned 8-bit value in units of 1/256 nanoseconds.

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_COUNTER

This counter increments to indicate completion.

Table 385: TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_COUNTER Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_COUNTER Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Bh	READ_COUNTER[7:0]							

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_COUNTER Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
READ_COUNTER[7:0]	R/O	0	TOD read counter. This counter increments after the TOD is read from.

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_0

Select the PWM decoder or the input index used as a trigger for TOD read.

Table 386: TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_0 Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ch	PWM_DECODER_INDEX[7:4]				REF_INDEX[3:0]			

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PWM_DECODER_INDEX[7:4]	R/W	0	PWM decoder index used as trigger.
REF_INDEX[3:0]	R/W	0	Input reference index used as trigger.

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_1

Select the DPLL for WR_FREQ event to be used as a trigger for TOD read.

Table 387: TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_1 Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Dh	RESERVED[7:3]					DPLL_INDEX[2:0]		

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_SEL_CFG_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_INDEX[2:0]	R/W	0	DPLL index used as trigger

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_CMD

Read TOD read primary trigger selection.

TRIGGER: Writing to this byte triggers a read and activation of all the bytes of the TOD_READ_PRIMARY module.

Table 388: TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_CMD Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_CMD Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Fh	RESERVED[7:5]			TOD_READ_TRIGGER_MODE[4]	TOD_READ_TRIGGER[3:0]			

TOD_READ_PRIMARY_0.TOD_READ_PRIMARY_CMD Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
TOD_READ_TRIGGER_MODE[4]	R/W	0	Select single shot TOD read or continuous TOD read. 0 = single shot 1 = continuous
TOD_READ_TRIGGER[3:0]	R/W	0	Read TOD trigger. For options 2, 3, 4 and 7, the trigger is always on the rising edge of the selected signal. This field will be cleared when the command is finished. 0 = disabled, no trigger 1 = immediate 2 = internal TOD PPS signal 3 = selected reference clock input 4 = selected PWM decoder's 1 PPS output 5 = reserved 6 = a write to DPLL_WR_FREQ 7 = selected GPIO

Module: TOD_READ_SECONDARY_0

Configure the TOD read secondary registers

Table 389: TOD_READ_SECONDARY_0 Register Index

Offset (Hex)	Register Module Base Address: CCA0h[1]	
	Individual Register Name	Register Description
000h	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY	TOD read secondary registers.
00Bh	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_COUNTER	Indicates when TOD read is completed.

Table 389: TOD_READ_SECONDARY_0 Register Index

Offset (Hex)	Register Module Base Address: CCA0h[1]	
	Individual Register Name	Register Description
00Ch	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_0	TOD read trigger configuration.
00Dh	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_1	TOD read trigger configuration.
00Eh	RESERVED	This register must not be modified from the read value
00Fh	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_CMD	TOD read trigger selection.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY

The maximum frequency of the clock driving the TOD accumulator is 1 GHz for DPLL 0 and 1, and 770 MHz for DPLL 2 and 3 .

Table 390: TOD_READ_SECONDARY_0.TOD_READ_SECONDARY Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	SUBNS[7:0]							
001h	NS[15:8]							
002h	NS[23:16]							
003h	NS[31:24]							
004h	NS[39:32]							
005h	SECONDS[47:40]							
006h	SECONDS[55:48]							
007h	SECONDS[63:56]							
008h	SECONDS[71:64]							
009h	SECONDS[79:72]							
00Ah	SECONDS[87:80]							

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
SECONDS[87:40]	R/O	0	Seconds part of TOD. Unsigned 48-bit value in seconds.

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
NS[39:8]	R/O	0	Nanoseconds part of TOD. Unsigned 32-bit value in nanoseconds. The maximum value is 0x3b9ac9ff = 999,999,999 ns.
SUBNS[7:0]	R/O	0	Sub-nanoseconds part of TOD. Unsigned 8-bit value in units of 1/256 nanoseconds.

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_COUNTER

This counter increments to indicate completion.

Table 391: TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_COUNTER Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_COUNTER Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Bh	READ_COUNTER[7:0]							

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_COUNTER Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
READ_COUNTER[7:0]	R/O	0	TOD read counter. This counter increments after the TOD is read from.

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_0

Select the PWM decoder or the input index used as a trigger for TOD read.

Table 392: TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_0 Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
00Ch	PWM_DECODER_INDEX[7:4]				REF_INDEX[3:0]			

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
PWM_DECODER_INDEX[7:4]	R/W	0	PWM decoder index used as trigger.
REF_INDEX[3:0]	R/W	0	Input reference index used as trigger.

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_1

Select the DPLL for WR_FREQ event to be used as a trigger for TOD read.

Table 393: TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_1 Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Dh	RESERVED[7:3]					DPLL_INDEX[2:0]		

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_SEL_CFG_1 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
DPLL_INDEX[2:0]	R/W	0	DPLL index used as trigger

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_CMD

Read TOD read secondary trigger selection.

TRIGGER: Writing to this byte triggers a read and activation of all the bytes of the TOD_READ_SECONDARY module.

However, if this TOD secondary read is configured to support PWM TOD update (SCSR_PWM_ENCODER_CMD.tod_auto_update = 1 and SCSR_PWM_ENCODER_CNFG.tod_sel = this TOD), the configuration of this module will be ignored.

Table 394: TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_CMD Bit Field Locations and Descriptions

Offset Address (Hex)	TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_CMD Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Fh	RESERVED[7:5]			TOD_READ_TRIGGER_MODE[4]	TOD_READ_TRIGGER[3:0]			

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_CMD Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value

TOD_READ_SECONDARY_0.TOD_READ_SECONDARY_CMD Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
TOD_READ_TRIGGER_MODE[4]	R/W	0	Select single shot TOD read or continuous TOD read. 0 = single shot 1 = continuous
TOD_READ_TRIGGER[3:0]	R/W	0	Read TOD trigger. For options 2, 3, 4 and 7, the trigger is always on the rising edge of the selected signal. This field will be cleared when the command is finished. 0 = disabled, no trigger 1 = immediate 2 = internal TOD PPS signal 3 = selected reference clock input 4 = selected PWM decoder's 1 PPS output 5 = reserved 6 = a write to DPLL_WR_FREQ 7 = selected GPIO

Module: OUTPUT_TDC_CFG

Configure the global parameters of the output TDC.

Table 395: OUTPUT_TDC_CFG Register Index

Offset (Hex)	Register Module Base Address: CCE0h	
	Individual Register Name	**Register Description**
000h	OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_0	Fastlock enable delay.
002h	OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_1	Fastlock disable delay.
004h	RESERVED	This register must not be modified from the read value
005h	RESERVED	This register must not be modified from the read value
006h	RESERVED	This register must not be modified from the read value
007h	OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_2	Output TDC configuration.

OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_0

Configure the fast lock enable delay.

Table 396: OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_0 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
000h	FAST_LOCK_ENABLE_DELAY[7:0]							
001h	FAST_LOCK_ENABLE_DELAY[15:8]							

OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FAST_LOCK_ENABLE_DELAY[15:0]	R/W	0	Duration to wait after enabling output TDC fast lock. Unsigned 16-bit value in microseconds. 0 = default 500 microseconds. When output TDC is enabled, it needs time for the reference clock to settle to the correct frequency. Fast lock is used to shorten the settling time to within microseconds compared to milliseconds.

OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_1

Configure the fast lock disable delay.

Table 397: OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_1 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	FAST_LOCK_DISABLE_DELAY[7:0]							
003h	FAST_LOCK_DISABLE_DELAY[15:8]							

OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FAST_LOCK_DISABLE_DELAY[15:0]	R/W	0	Duration to wait after disabling fast lock to allow the output TDC reference clock time to settle. Unsigned 16-bit value in microseconds. 0 = default 500 microseconds. Fast lock is disabled prior to measurement and needs time to settle afterwards.

OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_2

Configure the output TDC .

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the OUTPUT_TDC_CFG module.

Table 398: OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_2 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_2 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
007h	RESERVED[7:2]						REF_SEL[1]	ENABLE[0]

OUTPUT_TDC_CFG.OUTPUT_TDC_CFG_GBL_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
REF_SEL[1]	R/W	0	Select reference clock for output TDC. ref_sel change takes effect when 'enable' transitions from 0 -> 1. If ref_sel is changed when 'enable' = 1, the change is ignored. 0 = XTAL 1 = XO_DPLL
ENABLE[0]	R/W	0	Enable or disable output TDC. Output TDC is disabled by default to save power when not in use. Ready state is indicated by OUTPUT_TDC_CFG_STATUS.state. 0 = disabled 1 = enabled

Module: OUTPUT_TDC_0

Configure the output TDC.

Table 399: OUTPUT_TDC_0 Register Index

Offset (Hex)	Register Module Base Address: CD00h[1]	
	Individual Register Name	**Register Description**
000h	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_0	Output TDC control register.
002h	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_1	Output TDC control register.
004h	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_2	Output TDC control register.
005h	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_3	Output TDC control register.
006h	RESERVED	This register must not be modified from the read value
007h	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_4	Output TDC control register.

1. This register module is instantiated multiple times. This is the base address of the first instantiation of this module. For later instantiations, use the appropriate module base address.

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_0

Configure output TDC.

Table 400: OUTPUT_TDC_0.OUTPUT_TDC_CTRL_0 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
000h	SAMPLES[7:0]							
001h	SAMPLES[15:8]							

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SAMPLES[15:0]	R/W	0	Unsigned 16-bit value indicating the number of samples to use for measurement. 0 = 4096 samples. When using more than one sample, the final measurement is an average.

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_1

Configure output TDC.

Table 401: OUTPUT_TDC_0.OUTPUT_TDC_CTRL_1 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_1 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	TARGET_PHASE_OFFSET[7:0]							
003h	TARGET_PHASE_OFFSET[15:8]							

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_1 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
TARGET_PHASE_OFFSET[15:0]	R/W	0	Target phase offset for alignment operation. Signed 16-bit target phase offset in picoseconds. Used in alignment mode, ignored in measurement mode.

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_2

Configure output TDC.

Table 402: OUTPUT_TDC_0.OUTPUT_TDC_CTRL_2 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_2 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	ALIGN_TARGET_MASK[7:0]							

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_2 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
ALIGN_TARGET_MASK[7:0]	R/W	0	Used in alignment mode to indicate the target DPLL(s). The outputs of these DPLL(s) will be aligned to the outputs of the source DPLL. DPLL alignment target mask index. Alignment mode: Each set bit represents the DPLLs to be aligned with the 'source_index' DPLL. Bit 0 corresponds to DPLL0, bit 1 DPLL1, etc. 0b00000001 = DPLL0 . . . 0b10000000 = DPLL7 . . . 0b00000011 = DPLL0 and DPLL1 . . .

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_3

Configure output TDC.

Table 403: OUTPUT_TDC_0.OUTPUT_TDC_CTRL_3 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_3 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
005h	TARGET_INDEX[7:4]				SOURCE_INDEX[3:0]			

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_3 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
TARGET_INDEX[7:4]	R/W	0	Used in measurement mode to indicate the target clock. Indicates the target to measure against 'source_index'. If the target is a DPLL index, then the Master Sync signal from that DPLL is used for measurement. The delay between the Master Sync and the output clock is 9 FOD cycles. 0x0 = DPLL0 0x1 = DPLL1 0x2 = DPLL2 0x3 = DPLL3 0x4 = DPLL4 0x5 = DPLL5 0x6 = DPLL6 0x7 = DPLL7 0x8 = GPIO6 0x9 = GPIO1 0xA = GPIO2 0xB = GPIO7
SOURCE_INDEX[3:0]	R/W	0	Used in measurement and alignment mode to indicate the source clock. In measurement mode, indicates the source to be used as the measurement reference. If the source is a DPLL index, then the Master Sync signal from that DPLL is used for measurement. The delay between the Master Sync and the output clock is 9 FOD cycles. In alignment mode, the source must be a DPLL index. 0x0 = DPLL0 0x1 = DPLL1 0x2 = DPLL2 0x3 = DPLL3 0x4 = DPLL4 0x5 = DPLL5 0x6 = DPLL6 0x7 = DPLL7 0x8 = GPIO6 0x9 = GPIO1 0xA = GPIO2 0xB = GPIO7

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_4

Configure output TDC.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the OUTPUT_TDC module.

Table 404: OUTPUT_TDC_0.OUTPUT_TDC_CTRL_4 Bit Field Locations and Descriptions

Offset Address (Hex)	OUTPUT_TDC_0.OUTPUT_TDC_CTRL_4 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
007h	DISABLE_MEASUREMENT_FILTER[7]	ALIGN_THRESHOLD_COUNT[6:4]			ALIGN_RESET[3]	TYPE[2]	MODE[1]	GO[0]

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_4 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
DISABLE_MEASUREMENT_FILTER[7]	R/W	0	Large measurements are considered outliers and filtered out. If 'source_index' is a DPLL index, measurements larger than 1/2 the master divider frequency are filtered out. To disable this filtering, set 'disable_measurement_filter' = 1. If 'source_index' is a GPIO, the filtering is always disabled. 0 = filter enabled 1 = filter disabled
ALIGN_THRESHOLD_COUNT[6:4]	R/W	0	Threshold count to determine when alignment is done. In single shot alignment mode, this determines the number of sequential measurement readings that match 'target_phase_offset' before declaring alignment is done. Value of 0 means count of 1.
ALIGN_RESET[3]	R/W	0	Reset output TDC accumulated adjustments to zero prior to starting output TDC operation. (i.e. clear accumulated coarse phase delay and fine phase advance adjustments) Measurement mode: Set to '1' to reset the output TDC alignment of the target specified by the 'target_index' field. Alignment mode: Set to '1' to reset the output TDC alignment of the target(s) specified by the 'alignment_target_mask' field. Takes effect when 'go' field is set to '1' at the start the output TDC operation. 0 = keep accumulated 1 = clear accumulated
TYPE[2]	R/W	0	Type of output TDC operation, single shot or continuous. Single shot: Collect the number of samples (average if necessary) and clear 'go' when completed. Continuous: Same as single shot mode, except the operation will be repeated continuously. To stop operation, clear 'go'. 0 = single shot 1 = continuous

OUTPUT_TDC_0.OUTPUT_TDC_CTRL_4 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
MODE[1]	R/W	0	Select mode of output TDC operation. Measurement mode: Take a measurement at approx. 100 us intervals. When 'samples' measurements is reached, the average measurement is stored it in OUTPUT_TDCn_MEASUREMENT. Alignment mode: Aligns the targets in 'align_target_mask' to 'source_index' to match 'target_phase_offset' picoseconds. 0 = measurement 1 = alignment
GO[0]	R/W	0	Start or stop output TDC operation. Write 1 to start output TDC operation and clear OUTPUT_TDCn_STATUS.valid. OUTPUT_TDCn_STATUS.valid will be set when the measurement is valid or when the alignment operation reaches the 'target_phase_offset' picoseconds. OUTPUT_TDCn_STATUS.status can be used to check output TDC operational status. For 'type' = single shot, when the operation is complete, 'go' will be cleared to 0 and OUTPUT_TDC0_STATUS.status will be set to 'Idle' on success and an error status on failure. For 'type' = continuous, on success, 'go' will stay set and the operation continues until user clears 'go' to cancel the alignment operations. On failure, the operation stops and 'go' will be cleared. 0 = stop output TDC operation 1 = start output TDC operation

Module: INPUT_TDC

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Table 405: INPUT_TDC Register Index

Offset (Hex)	Register Module Base Address: CD20h	
	Individual Register Name	**Register Description**
000h	INPUT_TDC.INPUT_TDC_SDM_FRAC	Input TDC feedback divider fractional value.
002h	INPUT_TDC.INPUT_TDC_SDM_MOD	Input TDC feedback divider modulus value.
004h	INPUT_TDC.INPUT_TDC_FBD_CTRL	Input TDC feedback divider control.
005h	RESERVED	This register must not be modified from the read value
006h	RESERVED	This register must not be modified from the read value
007h	INPUT_TDC.INPUT_TDC_CTRL	Input TDC control

INPUT_TDC.INPUT_TDC_SDM_FRAC

Input TDC feedback divider fractional value.

Table 406: INPUT_TDC.INPUT_TDC_SDM_FRAC Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_TDC.INPUT_TDC_SDM_FRAC Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	SDM_FRAC[7:0]							
001h	SDM_FRAC[15:8]							

INPUT_TDC.INPUT_TDC_SDM_FRAC Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
SDM_FRAC[15:0]	R/W	0	Input TDC feedback divider fractional value.

INPUT_TDC.INPUT_TDC_SDM_MOD

Input TDC feedback divider modulus value.

Table 407: INPUT_TDC.INPUT_TDC_SDM_MOD Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_TDC.INPUT_TDC_SDM_MOD Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	SDM_MOD[7:0]							
003h	SDM_MOD[15:8]							

INPUT_TDC.INPUT_TDC_SDM_MOD Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
SDM_MOD[15:0]	R/W	0	Input TDC feedback divider modulus value.

INPUT_TDC.INPUT_TDC_FBD_CTRL

Input TDC feedback divider control.

Table 408: INPUT_TDC.INPUT_TDC_FBD_CTRL Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_TDC.INPUT_TDC_FBD_CTRL Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	FBD_USER_CONFIG_EN [7]	FBD_INTEGER[6:0]						

INPUT_TDC.INPUT_TDC_FBD_CTRL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
FBD_USER_CONFIG_EN[7]	R/W	0	Input TDC feedback divider user config enable. When set to '0', the input TDC feedback divider will be programmed internally and the input TDC frequency will be configured as 625 MHz. When set to '1', all parameters apply (sdm_frac, sdm_mod, fbd_integer, and sdm_order). 0 = disabled 1 = enabled
FBD_INTEGER[6:0]	R/W	0	Input TDC feedback divider integer value. ITDC_UI = 1 / (32 * input TDC frequency).

INPUT_TDC.INPUT_TDC_CTRL

Input TDC control

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the INPUT_TDC module.

Table 409: INPUT_TDC.INPUT_TDC_CTRL Bit Field Locations and Descriptions

Offset Address (Hex)	INPUT_TDC.INPUT_TDC_CTRL Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
007h	RESERVED[7:3]					SDM_ORDER[2:1]		REF_SEL[0]

INPUT_TDC.INPUT_TDC_CTRL Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
SDM_ORDER[2:1]	R/W	0	Input TDC SDM order. If sdm_frac = 0, then sdm_order is ignored and treated as zero. 0 = integer 1 = 1st order 2 = 2nd order 3 = 3rd order
REF_SEL[0]	R/W	0	Control mux to forward either a XTAL or XO_DPLL reference towards Input TDC. By default, a XTAL reference is forwarded towards it. 0 = XTAL 1 = XO_DPLL

Module: SYSREF

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Table 410: SYSREF Register Index

Offset (Hex)	Register Module Base Address: CD28h	
	Individual Register Name	Register Description
000h	SYSREF.SYSREF_OUTPUTS	SYSREF outputs.
002h	SYSREF.SYSREF_PULSES	SYSREF pulses.

SYSREF.SYSREF_OUTPUTS

Select the SYSREF outputs.

Table 411: SYSREF.SYSREF_OUTPUTS Bit Field Locations and Descriptions

Offset Address (Hex)	SYSREF.SYSREF_OUTPUTS Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	SYSREF_OUT_7[7]	SYSREF_OUT_6[6]	SYSREF_OUT_5[5]	SYSREF_OUT_4[4]	SYSREF_OUT_3[3]	SYSREF_OUT_2[2]	SYSREF_OUT_1[1]	SYSREF_OUT_0[0]
001h	RESERVED[15:12]				SYSREF_OUT_11[11]	SYSREF_OUT_10[10]	SYSREF_OUT_9[9]	SYSREF_OUT_8[8]

SYSREF.SYSREF_OUTPUTS Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
RESERVED	N/A	-	This field must not be modified from the read value
SYSREF_OUT_11[11]	R/W	0	- Select output 11 as SYSREF output. 0 = disabled 1 = enabled
SYSREF_OUT_10[10]	R/W	0	- Select output 10 as SYSREF output. 0 = disabled 1 = enabled
SYSREF_OUT_9[9]	R/W	0	- Select output 9 as SYSREF output. 0 = disabled 1 = enabled
SYSREF_OUT_7[7]	R/W	0	- Select output 7 as SYSREF output. 0 = disabled 1 = enabled

SYSREF.SYSREF_OUTPUTS Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYSREF_OUT_6[6]	R/W	0	- Select output 6 as SYSREF output. 0 = disabled 1 = enabled
SYSREF_OUT_5[5]	R/W	0	- Select output 5 as SYSREF output. 0 = disabled 1 = enabled
SYSREF_OUT_4[4]	R/W	0	- Select output 4 as SYSREF output. 0 = disabled 1 = enabled
SYSREF_OUT_3[3]	R/W	0	- Select output 3 as SYSREF output. 0 = disabled 1 = enabled
SYSREF_OUT_2[2]	R/W	0	- Select output 2 as SYSREF output. 0 = disabled 1 = enabled
SYSREF_OUT_1[1]	R/W	0	- Select output 1 as SYSREF output. 0 = disabled 1 = enabled
SYSREF_OUT_0[0]	R/W	0	- Select output 0 as SYSREF output. 0 = disabled 1 = enabled

SYSREF.SYSREF_PULSES

Set the number of consecutive pulses to be generated on the selected SYSREF outputs.

TRIGGER: Writing to this byte triggers a read and activation in hardware of all the bytes of the SYSREF module.

Table 412: SYSREF.SYSREF_PULSES Bit Field Locations and Descriptions

Offset Address (Hex)	SYSREF.SYSREF_PULSES Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	SYSREF_PULSES[7:0]							

SYSREF.SYSREF_PULSES Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SYSREF_PULSES[7:0]	R/W	0	- The number of pulses from 0 to 255. If zero, then turn the selected outputs into SYSREF mode without generating pulses.

Module: SCRATCH

These multipurpose registers are not used by FW and are intended to for users to maintain their own data.

Table 413: SCRATCH Register Index

Offset (Hex)	Register Module Base Address: CF4Ch	
	Individual Register Name	**Register Description**
000h	SCRATCH.SCRATCH0	Multipurpose register
004h	SCRATCH.SCRATCH1	Multipurpose register
008h	SCRATCH.SCRATCH2	Multipurpose register
00Ch	SCRATCH.SCRATCH3	Multipurpose register

SCRATCH.SCRATCH0

User read or write data. The HW reset value will be restored on soft reset.

Table 414: SCRATCH.SCRATCH0 Bit Field Locations and Descriptions

Offset Address (Hex)	SCRATCH.SCRATCH0 Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
000h	SCRATCH0[7:0]							
001h	SCRATCH0[15:8]							
002h	SCRATCH0[23:16]							
003h	SCRATCH0[31:24]							

SCRATCH.SCRATCH0 Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
SCRATCH0[31:0]	R/W	0	User data.

SCRATCH.SCRATCH1

User read or write data. The HW reset value will be restored on soft reset.

Table 415: SCRATCH.SCRATCH1 Bit Field Locations and Descriptions

Offset Address (Hex)	SCRATCH.SCRATCH1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	SCRATCH1[7:0]							
005h	SCRATCH1[15:8]							
006h	SCRATCH1[23:16]							
007h	SCRATCH1[31:24]							

SCRATCH.SCRATCH1 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
SCRATCH1[31:0]	R/W	0	User data.

SCRATCH.SCRATCH2

User read or write data. The HW reset value will be restored on soft reset.

Table 416: SCRATCH.SCRATCH2 Bit Field Locations and Descriptions

Offset Address (Hex)	SCRATCH.SCRATCH2 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
008h	SCRATCH2[7:0]							
009h	SCRATCH2[15:8]							
00Ah	SCRATCH2[23:16]							
00Bh	SCRATCH2[31:24]							

SCRATCH.SCRATCH2 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
SCRATCH2[31:0]	R/W	0	User data.

SCRATCH.SCRATCH3

User read or write data. The HW reset value will be restored on soft reset.

Table 417: SCRATCH.SCRATCH3 Bit Field Locations and Descriptions

Offset Address (Hex)	SCRATCH.SCRATCH3 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ch	SCRATCH3[7:0]							
00Dh	SCRATCH3[15:8]							
00Eh	SCRATCH3[23:16]							
00Fh	SCRATCH3[31:24]							

SCRATCH.SCRATCH3 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
SCRATCH3[31:0]	R/W	0	User data.

Module: EEPROM

Access EEPROM.

Table 418: EEPROM Register Index

Offset (Hex)	Register Module Base Address: CF64h	
	Individual Register Name	Register Description
000h	EEPROM.EEPROM_I2C_ADDR	EEPROM I2C address.
001h	EEPROM.EEPROM_SIZE	EEPROM data transfer size.
002h	EEPROM.EEPROM_OFFSET	EEPROM offset.
004h	RESERVED	This register must not be modified from the read value
005h	RESERVED	This register must not be modified from the read value
006h	EEPROM.EEPROM_CMD	EEPROM command.

EEPROM.EEPROM_I2C_ADDR

EEPROM I2C address.

Table 419: EEPROM.EEPROM_I2C_ADDR Bit Field Locations and Descriptions

Offset Address (Hex)	EEPROM.EEPROM_I2C_ADDR Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	RESERVED[7]	I2C_ADDR[6:0]						

EEPROM.EEPROM_I2C_ADDR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
RESERVED	N/A	-	This field must not be modified from the read value
I2C_ADDR[6:0]	R/W	0	I2C address of the EEPROM.

EEPROM.EEPROM_SIZE

Configure the number of bytes to read or write.

Table 420: EEPROM.EEPROM_SIZE Bit Field Locations and Descriptions

Offset Address (Hex)	EEPROM.EEPROM_SIZE Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
001h	BYTES[7:0]							

EEPROM.EEPROM_SIZE Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
BYTES[7:0]	R/W	0	Number of bytes to read or write. These bytes are transferred through OTP_EEPROM_BUFF. Valid range is 0 to 128.

EEPROM.EEPROM_OFFSET

Address offset inside the EEPROM.

Table 421: EEPROM.EEPROM_OFFSET Bit Field Locations and Descriptions

Offset Address (Hex)	EEPROM.EEPROM_OFFSET Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
002h	EEPROM_OFFSET[7:0]							
003h	EEPROM_OFFSET[15:8]							

EEPROM.EEPROM_OFFSET Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
EEPROM_OFFSET[15:0]	R/W	0	Unsigned 16-bit value in bytes indicating the offset inside the EEPROM.

EEPROM.EEPROM_CMD

Initiate EEPROM read or write.

Table 422: EEPROM.EEPROM_CMD Bit Field Locations and Descriptions

Offset Address (Hex)	EEPROM.EEPROM_CMD Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
006h	EEPROM_CMD[7:0]							
007h	EEPROM_CMD[15:8]							

EEPROM.EEPROM_CMD Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
EEPROM_CMD[15:0]	R/W	0	Command. 0xEE01 = Read from EEPROM 0xEE02 = Write to EEPROM 0xEE03 = Write (no verify)

Module: OTP

Configure OTP. Please contact IDT for details.

Table 423: OTP Register Index

Offset (Hex)	Register Module Base Address: CF70h	
	Individual Register Name	Register Description
000h	OTP.OTP_CMD	OTP command.
004h	OTP.OTP_CM_CTR	Device counter.
006h	OTP.OTP_HOST_CTR	Update counter.

OTP.OTP_CMD

Initiate OTP transaction. Please contact IDT for details.

Table 424: OTP.OTP_CMD Bit Field Locations and Descriptions

Offset Address (Hex)	OTP.OTP_CMD Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	OTP_CMD[7:0]							
001h	OTP_CMD[15:8]							
002h	OTP_CMD[23:16]							
003h	OTP_CMD[31:24]							

OTP.OTP_CMD Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
OTP_CMD[31:0]	R/W	0	-

OTP.OTP_CM_CTR

Word counter updated by the device. Please contact IDT for details.

Table 425: OTP.OTP_CM_CTR Bit Field Locations and Descriptions

Offset Address (Hex)	OTP.OTP_CM_CTR Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
004h	OTP_CM_CTR[7:0]							
005h	OTP_CM_CTR[15:8]							

OTP.OTP_CM_CTR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
OTP_CM_CTR[15:0]	R/O	0	Total number of 32-bit words transferred through the OTP buffer during the current command This 16-bit counter is updated by the internal processor, and represents the total number of 32-bit words transferred through the OTP buffer during the current command. Please contact IDT for details.

OTP.OTP_HOST_CTR

Word counter updated by the user. Please contact IDT for details.

Table 426: OTP.OTP_HOST_CTR Bit Field Locations and Descriptions

Offset Address (Hex)	OTP.OTP_HOST_CTR Bit Field Locations							
	D7	**D6**	**D5**	**D4**	**D3**	**D2**	**D1**	**D0**
006h	OTP_HOST_CTR[7:0]							
007h	OTP_HOST_CTR[15:8]							

OTP.OTP_HOST_CTR Bit Field Descriptions			
Bit Field Name	**Field Type**	**Default Value**	**Description**
OTP_HOST_CTR[15:0]	R/W	0	Total number of 32-bit words transferred through the OTP buffer during the current command This 16-bit counter is updated by the external host processor, and represents the total number of 32-bit words transferred through the OTP buffer during the current command. Please contact IDT for details.

Module: BYTE

Configure the OTP registers. Please contact IDT for details.

Table 427: BYTE Register Index

Offset (Hex)	Register Module Base Address: CF80h	
	Individual Register Name	Register Description
000h	BYTE.OTP_EEPROM_PWM_BUFF_0	OTP/EEPROM/PWM buffer.
001h	BYTE.OTP_EEPROM_PWM_BUFF_1	
002h	BYTE.OTP_EEPROM_PWM_BUFF_2	
003h	BYTE.OTP_EEPROM_PWM_BUFF_3	
004h	BYTE.OTP_EEPROM_PWM_BUFF_4	
005h	BYTE.OTP_EEPROM_PWM_BUFF_5	
006h	BYTE.OTP_EEPROM_PWM_BUFF_6	
007h	BYTE.OTP_EEPROM_PWM_BUFF_7	
008h	BYTE.OTP_EEPROM_PWM_BUFF_8	
009h	BYTE.OTP_EEPROM_PWM_BUFF_9	
00Ah	BYTE.OTP_EEPROM_PWM_BUFF_10	
00Bh	BYTE.OTP_EEPROM_PWM_BUFF_11	
00Ch	BYTE.OTP_EEPROM_PWM_BUFF_12	
00Dh	BYTE.OTP_EEPROM_PWM_BUFF_13	
00Eh	BYTE.OTP_EEPROM_PWM_BUFF_14	
00Fh	BYTE.OTP_EEPROM_PWM_BUFF_15	
010h	BYTE.OTP_EEPROM_PWM_BUFF_16	
011h	BYTE.OTP_EEPROM_PWM_BUFF_17	
012h	BYTE.OTP_EEPROM_PWM_BUFF_18	
013h	BYTE.OTP_EEPROM_PWM_BUFF_19	
014h	BYTE.OTP_EEPROM_PWM_BUFF_20	
015h	BYTE.OTP_EEPROM_PWM_BUFF_21	
016h	BYTE.OTP_EEPROM_PWM_BUFF_22	
017h	BYTE.OTP_EEPROM_PWM_BUFF_23	
018h	BYTE.OTP_EEPROM_PWM_BUFF_24	
019h	BYTE.OTP_EEPROM_PWM_BUFF_25	
01Ah	BYTE.OTP_EEPROM_PWM_BUFF_26	
01Bh	BYTE.OTP_EEPROM_PWM_BUFF_27	
01Ch	BYTE.OTP_EEPROM_PWM_BUFF_28	
01Dh	BYTE.OTP_EEPROM_PWM_BUFF_29	

Table 427: BYTE Register Index

Offset (Hex)	Register Module Base Address: CF80h	
	Individual Register Name	Register Description
01Eh	BYTE.OTP_EEPROM_PWM_BUFF_30	
01Fh	BYTE.OTP_EEPROM_PWM_BUFF_31	
020h	BYTE.OTP_EEPROM_PWM_BUFF_32	
021h	BYTE.OTP_EEPROM_PWM_BUFF_33	
022h	BYTE.OTP_EEPROM_PWM_BUFF_34	
023h	BYTE.OTP_EEPROM_PWM_BUFF_35	
024h	BYTE.OTP_EEPROM_PWM_BUFF_36	
025h	BYTE.OTP_EEPROM_PWM_BUFF_37	
026h	BYTE.OTP_EEPROM_PWM_BUFF_38	
027h	BYTE.OTP_EEPROM_PWM_BUFF_39	
028h	BYTE.OTP_EEPROM_PWM_BUFF_40	
029h	BYTE.OTP_EEPROM_PWM_BUFF_41	
02Ah	BYTE.OTP_EEPROM_PWM_BUFF_42	
02Bh	BYTE.OTP_EEPROM_PWM_BUFF_43	
02Ch	BYTE.OTP_EEPROM_PWM_BUFF_44	
02Dh	BYTE.OTP_EEPROM_PWM_BUFF_45	
02Eh	BYTE.OTP_EEPROM_PWM_BUFF_46	
02Fh	BYTE.OTP_EEPROM_PWM_BUFF_47	
030h	BYTE.OTP_EEPROM_PWM_BUFF_48	
031h	BYTE.OTP_EEPROM_PWM_BUFF_49	
032h	BYTE.OTP_EEPROM_PWM_BUFF_50	
033h	BYTE.OTP_EEPROM_PWM_BUFF_51	
034h	BYTE.OTP_EEPROM_PWM_BUFF_52	
035h	BYTE.OTP_EEPROM_PWM_BUFF_53	
036h	BYTE.OTP_EEPROM_PWM_BUFF_54	
037h	BYTE.OTP_EEPROM_PWM_BUFF_55	
038h	BYTE.OTP_EEPROM_PWM_BUFF_56	
039h	BYTE.OTP_EEPROM_PWM_BUFF_57	
03Ah	BYTE.OTP_EEPROM_PWM_BUFF_58	
03Bh	BYTE.OTP_EEPROM_PWM_BUFF_59	
03Ch	BYTE.OTP_EEPROM_PWM_BUFF_60	
03Dh	BYTE.OTP_EEPROM_PWM_BUFF_61	

Table 427: BYTE Register Index

Offset (Hex)	Register Module Base Address: CF80h	
	Individual Register Name	Register Description
03Eh	BYTE.OTP_EEPROM_PWM_BUFF_62	
03Fh	BYTE.OTP_EEPROM_PWM_BUFF_63	
040h	BYTE.OTP_EEPROM_PWM_BUFF_64	
041h	BYTE.OTP_EEPROM_PWM_BUFF_65	
042h	BYTE.OTP_EEPROM_PWM_BUFF_66	
043h	BYTE.OTP_EEPROM_PWM_BUFF_67	
044h	BYTE.OTP_EEPROM_PWM_BUFF_68	
045h	BYTE.OTP_EEPROM_PWM_BUFF_69	
046h	BYTE.OTP_EEPROM_PWM_BUFF_70	
047h	BYTE.OTP_EEPROM_PWM_BUFF_71	
048h	BYTE.OTP_EEPROM_PWM_BUFF_72	
049h	BYTE.OTP_EEPROM_PWM_BUFF_73	
04Ah	BYTE.OTP_EEPROM_PWM_BUFF_74	
04Bh	BYTE.OTP_EEPROM_PWM_BUFF_75	
04Ch	BYTE.OTP_EEPROM_PWM_BUFF_76	
04Dh	BYTE.OTP_EEPROM_PWM_BUFF_77	
04Eh	BYTE.OTP_EEPROM_PWM_BUFF_78	
04Fh	BYTE.OTP_EEPROM_PWM_BUFF_79	
050h	BYTE.OTP_EEPROM_PWM_BUFF_80	
051h	BYTE.OTP_EEPROM_PWM_BUFF_81	
052h	BYTE.OTP_EEPROM_PWM_BUFF_82	
053h	BYTE.OTP_EEPROM_PWM_BUFF_83	
054h	BYTE.OTP_EEPROM_PWM_BUFF_84	
055h	BYTE.OTP_EEPROM_PWM_BUFF_85	
056h	BYTE.OTP_EEPROM_PWM_BUFF_86	
057h	BYTE.OTP_EEPROM_PWM_BUFF_87	
058h	BYTE.OTP_EEPROM_PWM_BUFF_88	
059h	BYTE.OTP_EEPROM_PWM_BUFF_89	
05Ah	BYTE.OTP_EEPROM_PWM_BUFF_90	
05Bh	BYTE.OTP_EEPROM_PWM_BUFF_91	
05Ch	BYTE.OTP_EEPROM_PWM_BUFF_92	
05Dh	BYTE.OTP_EEPROM_PWM_BUFF_93	

Table 427: BYTE Register Index

Offset (Hex)	Register Module Base Address: CF80h	
	Individual Register Name	Register Description
05Eh	BYTE.OTP_EEPROM_PWM_BUFF_94	
05Fh	BYTE.OTP_EEPROM_PWM_BUFF_95	
060h	BYTE.OTP_EEPROM_PWM_BUFF_96	
061h	BYTE.OTP_EEPROM_PWM_BUFF_97	
062h	BYTE.OTP_EEPROM_PWM_BUFF_98	
063h	BYTE.OTP_EEPROM_PWM_BUFF_99	
064h	BYTE.OTP_EEPROM_PWM_BUFF_100	
065h	BYTE.OTP_EEPROM_PWM_BUFF_101	
066h	BYTE.OTP_EEPROM_PWM_BUFF_102	
067h	BYTE.OTP_EEPROM_PWM_BUFF_103	
068h	BYTE.OTP_EEPROM_PWM_BUFF_104	
069h	BYTE.OTP_EEPROM_PWM_BUFF_105	
06Ah	BYTE.OTP_EEPROM_PWM_BUFF_106	
06Bh	BYTE.OTP_EEPROM_PWM_BUFF_107	
06Ch	BYTE.OTP_EEPROM_PWM_BUFF_108	
06Dh	BYTE.OTP_EEPROM_PWM_BUFF_109	
06Eh	BYTE.OTP_EEPROM_PWM_BUFF_110	
06Fh	BYTE.OTP_EEPROM_PWM_BUFF_111	
070h	BYTE.OTP_EEPROM_PWM_BUFF_112	
071h	BYTE.OTP_EEPROM_PWM_BUFF_113	
072h	BYTE.OTP_EEPROM_PWM_BUFF_114	
073h	BYTE.OTP_EEPROM_PWM_BUFF_115	
074h	BYTE.OTP_EEPROM_PWM_BUFF_116	
075h	BYTE.OTP_EEPROM_PWM_BUFF_117	
076h	BYTE.OTP_EEPROM_PWM_BUFF_118	
077h	BYTE.OTP_EEPROM_PWM_BUFF_119	
078h	BYTE.OTP_EEPROM_PWM_BUFF_120	
079h	BYTE.OTP_EEPROM_PWM_BUFF_121	
07Ah	BYTE.OTP_EEPROM_PWM_BUFF_122	
07Bh	BYTE.OTP_EEPROM_PWM_BUFF_123	

Table 427: BYTE Register Index

Offset (Hex)	Register Module Base Address: CF80h	
	Individual Register Name	Register Description
07Ch	BYTE.OTP_EEPROM_PWM_BUFF_124	
07Dh	BYTE.OTP_EEPROM_PWM_BUFF_125	
07Eh	BYTE.OTP_EEPROM_PWM_BUFF_126	
07Fh	BYTE.OTP_EEPROM_PWM_BUFF_127	

BYTE.OTP_EEPROM_PWM_BUFF_0

Holds data to be used to be transferred into the OTP or EEPROM. Please contact IDT for details.

Table 428: BYTE.OTP_EEPROM_PWM_BUFF_0 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_0 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
000h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_0 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_1

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Table 429: BYTE.OTP_EEPROM_PWM_BUFF_1 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_1 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
001h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_1 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_2

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Table 430: BYTE.OTP_EEPROM_PWM_BUFF_2 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_2 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
002h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_2 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_3

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Table 431: BYTE.OTP_EEPROM_PWM_BUFF_3 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_3 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
003h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_3 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_4

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Table 432: BYTE.OTP_EEPROM_PWM_BUFF_4 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_4 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
004h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_4 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_5

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Table 433: BYTE.OTP_EEPROM_PWM_BUFF_5 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_5 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
005h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_5 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_6

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Table 434: BYTE.OTP_EEPROM_PWM_BUFF_6 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_6 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
006h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_6 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_7

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Table 435: BYTE.OTP_EEPROM_PWM_BUFF_7 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_7 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
007h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_7 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_8

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Table 436: BYTE.OTP_EEPROM_PWM_BUFF_8 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_8 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
008h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_8 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_9

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Table 437: BYTE.OTP_EEPROM_PWM_BUFF_9 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_9 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
009h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_9 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_10

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Table 438: BYTE.OTP_EEPROM_PWM_BUFF_10 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_10 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ah	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_10 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_11

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Table 439: BYTE.OTP_EEPROM_PWM_BUFF_11 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_11 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Bh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_11 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_12

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Table 440: BYTE.OTP_EEPROM_PWM_BUFF_12 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_12 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Ch	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_12 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_13

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Table 441: BYTE.OTP_EEPROM_PWM_BUFF_13 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_13 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Dh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_13 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_14

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Table 442: BYTE.OTP_EEPROM_PWM_BUFF_14 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_14 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Eh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_14 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_15

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Table 443: BYTE.OTP_EEPROM_PWM_BUFF_15 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_15 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
00Fh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_15 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_16

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Table 444: BYTE.OTP_EEPROM_PWM_BUFF_16 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_16 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
010h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_16 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_17

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Table 445: BYTE.OTP_EEPROM_PWM_BUFF_17 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_17 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
011h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_17 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_18

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Table 446: BYTE.OTP_EEPROM_PWM_BUFF_18 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_18 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
012h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_18 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_19

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Table 447: BYTE.OTP_EEPROM_PWM_BUFF_19 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_19 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
013h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_19 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_20

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Table 448: BYTE.OTP_EEPROM_PWM_BUFF_20 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_20 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
014h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_20 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_21

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Table 449: BYTE.OTP_EEPROM_PWM_BUFF_21 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_21 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
015h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_21 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_22

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Table 450: BYTE.OTP_EEPROM_PWM_BUFF_22 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_22 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
016h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_22 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_23

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Table 451: BYTE.OTP_EEPROM_PWM_BUFF_23 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_23 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
017h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_23 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_24

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Table 452: BYTE.OTP_EEPROM_PWM_BUFF_24 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_24 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
018h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_24 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_25

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Table 453: BYTE.OTP_EEPROM_PWM_BUFF_25 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_25 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
019h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_25 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_26

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Table 454: BYTE.OTP_EEPROM_PWM_BUFF_26 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_26 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
01Ah	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_26 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_27

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Table 455: BYTE.OTP_EEPROM_PWM_BUFF_27 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_27 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
01Bh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_27 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_28

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Table 456: BYTE.OTP_EEPROM_PWM_BUFF_28 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_28 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
01Ch	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_28 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_29

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Table 457: BYTE.OTP_EEPROM_PWM_BUFF_29 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_29 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
01Dh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_29 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_30

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Table 458: BYTE.OTP_EEPROM_PWM_BUFF_30 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_30 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
01Eh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_30 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_31

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Table 459: BYTE.OTP_EEPROM_PWM_BUFF_31 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_31 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
01Fh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_31 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_32

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Table 460: BYTE.OTP_EEPROM_PWM_BUFF_32 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_32 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
020h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_32 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_33

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Table 461: BYTE.OTP_EEPROM_PWM_BUFF_33 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_33 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
021h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_33 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_34

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Table 462: BYTE.OTP_EEPROM_PWM_BUFF_34 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_34 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
022h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_34 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_35

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Table 463: BYTE.OTP_EEPROM_PWM_BUFF_35 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_35 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
023h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_35 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_36

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Table 464: BYTE.OTP_EEPROM_PWM_BUFF_36 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_36 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
024h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_36 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_37

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Table 465: BYTE.OTP_EEPROM_PWM_BUFF_37 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_37 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
025h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_37 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_38

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Table 466: BYTE.OTP_EEPROM_PWM_BUFF_38 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_38 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
026h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_38 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_39

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Table 467: BYTE.OTP_EEPROM_PWM_BUFF_39 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_39 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
027h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_39 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_40

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Table 468: BYTE.OTP_EEPROM_PWM_BUFF_40 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_40 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
028h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_40 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_41

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Table 469: BYTE.OTP_EEPROM_PWM_BUFF_41 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_41 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
029h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_41 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_42

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Table 470: BYTE.OTP_EEPROM_PWM_BUFF_42 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_42 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
02Ah	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_42 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_43

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Table 471: BYTE.OTP_EEPROM_PWM_BUFF_43 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_43 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
02Bh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_43 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_44

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Table 472: BYTE.OTP_EEPROM_PWM_BUFF_44 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_44 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
02Ch	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_44 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_45

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Table 473: BYTE.OTP_EEPROM_PWM_BUFF_45 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_45 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
02Dh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_45 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_46

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Table 474: BYTE.OTP_EEPROM_PWM_BUFF_46 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_46 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
02Eh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_46 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_47

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Table 475: BYTE.OTP_EEPROM_PWM_BUFF_47 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_47 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
02Fh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_47 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_48

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Table 476: BYTE.OTP_EEPROM_PWM_BUFF_48 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_48 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
030h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_48 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_49

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Table 477: BYTE.OTP_EEPROM_PWM_BUFF_49 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_49 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
031h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_49 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_50

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Table 478: BYTE.OTP_EEPROM_PWM_BUFF_50 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_50 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
032h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_50 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_51

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Table 479: BYTE.OTP_EEPROM_PWM_BUFF_51 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_51 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
033h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_51 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_52

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Table 480: BYTE.OTP_EEPROM_PWM_BUFF_52 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_52 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
034h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_52 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_53

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Table 481: BYTE.OTP_EEPROM_PWM_BUFF_53 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_53 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
035h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_53 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_54

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Table 482: BYTE.OTP_EEPROM_PWM_BUFF_54 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_54 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
036h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_54 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_55

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Table 483: BYTE.OTP_EEPROM_PWM_BUFF_55 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_55 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
037h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_55 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_56

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Table 484: BYTE.OTP_EEPROM_PWM_BUFF_56 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_56 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
038h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_56 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_57

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Table 485: BYTE.OTP_EEPROM_PWM_BUFF_57 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_57 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
039h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_57 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_58

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Table 486: BYTE.OTP_EEPROM_PWM_BUFF_58 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_58 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
03Ah	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_58 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_59

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Table 487: BYTE.OTP_EEPROM_PWM_BUFF_59 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_59 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
03Bh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_59 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_60

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Table 488: BYTE.OTP_EEPROM_PWM_BUFF_60 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_60 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
03Ch	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_60 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_61

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Table 489: BYTE.OTP_EEPROM_PWM_BUFF_61 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_61 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
03Dh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_61 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_62

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Table 490: BYTE.OTP_EEPROM_PWM_BUFF_62 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_62 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
03Eh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_62 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_63

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Table 491: BYTE.OTP_EEPROM_PWM_BUFF_63 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_63 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
03Fh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_63 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_64

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Table 492: BYTE.OTP_EEPROM_PWM_BUFF_64 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_64 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
040h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_64 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_65

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Table 493: BYTE.OTP_EEPROM_PWM_BUFF_65 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_65 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
041h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_65 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_66

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Table 494: BYTE.OTP_EEPROM_PWM_BUFF_66 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_66 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
042h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_66 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_67

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Table 495: BYTE.OTP_EEPROM_PWM_BUFF_67 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_67 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
043h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_67 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_68

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Table 496: BYTE.OTP_EEPROM_PWM_BUFF_68 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_68 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
044h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_68 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_69

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Table 497: BYTE.OTP_EEPROM_PWM_BUFF_69 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_69 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
045h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_69 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_70

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Table 498: BYTE.OTP_EEPROM_PWM_BUFF_70 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_70 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
046h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_70 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_71

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Table 499: BYTE.OTP_EEPROM_PWM_BUFF_71 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_71 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
047h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_71 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_72

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Table 500: BYTE.OTP_EEPROM_PWM_BUFF_72 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_72 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
048h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_72 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_73

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Table 501: BYTE.OTP_EEPROM_PWM_BUFF_73 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_73 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
049h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_73 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_74

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Table 502: BYTE.OTP_EEPROM_PWM_BUFF_74 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_74 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
04Ah	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_74 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_75

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Table 503: BYTE.OTP_EEPROM_PWM_BUFF_75 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_75 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
04Bh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_75 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_76

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Table 504: BYTE.OTP_EEPROM_PWM_BUFF_76 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_76 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
04Ch	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_76 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_77

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Table 505: BYTE.OTP_EEPROM_PWM_BUFF_77 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_77 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
04Dh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_77 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_78

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Table 506: BYTE.OTP_EEPROM_PWM_BUFF_78 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_78 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
04Eh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_78 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_79

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Table 507: BYTE.OTP_EEPROM_PWM_BUFF_79 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_79 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
04Fh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_79 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_80

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Table 508: BYTE.OTP_EEPROM_PWM_BUFF_80 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_80 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
050h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_80 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_81

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Table 509: BYTE.OTP_EEPROM_PWM_BUFF_81 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_81 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
051h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_81 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_82

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Table 510: BYTE.OTP_EEPROM_PWM_BUFF_82 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_82 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
052h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_82 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_83

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Table 511: BYTE.OTP_EEPROM_PWM_BUFF_83 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_83 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
053h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_83 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_84

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Table 512: BYTE.OTP_EEPROM_PWM_BUFF_84 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_84 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
054h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_84 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_85

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Table 513: BYTE.OTP_EEPROM_PWM_BUFF_85 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_85 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
055h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_85 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_86

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Table 514: BYTE.OTP_EEPROM_PWM_BUFF_86 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_86 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
056h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_86 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_87

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Table 515: BYTE.OTP_EEPROM_PWM_BUFF_87 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_87 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
057h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_87 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_88

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Table 516: BYTE.OTP_EEPROM_PWM_BUFF_88 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_88 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
058h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_88 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_89

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Table 517: BYTE.OTP_EEPROM_PWM_BUFF_89 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_89 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
059h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_89 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_90

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Table 518: BYTE.OTP_EEPROM_PWM_BUFF_90 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_90 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
05Ah	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_90 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_91

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Table 519: BYTE.OTP_EEPROM_PWM_BUFF_91 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_91 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
05Bh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_91 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_92

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Table 520: BYTE.OTP_EEPROM_PWM_BUFF_92 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_92 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
05Ch	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_92 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_93

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Table 521: BYTE.OTP_EEPROM_PWM_BUFF_93 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_93 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
05Dh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_93 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_94

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Table 522: BYTE.OTP_EEPROM_PWM_BUFF_94 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_94 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
05Eh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_94 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_95

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Table 523: BYTE.OTP_EEPROM_PWM_BUFF_95 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_95 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
05Fh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_95 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_96

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Table 524: BYTE.OTP_EEPROM_PWM_BUFF_96 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_96 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
060h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_96 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_97

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Table 525: BYTE.OTP_EEPROM_PWM_BUFF_97 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_97 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
061h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_97 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_98

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Table 526: BYTE.OTP_EEPROM_PWM_BUFF_98 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_98 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
062h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_98 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_99

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Table 527: BYTE.OTP_EEPROM_PWM_BUFF_99 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_99 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
063h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_99 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_100

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Table 528: BYTE.OTP_EEPROM_PWM_BUFF_100 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_100 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
064h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_100 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_101

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Table 529: BYTE.OTP_EEPROM_PWM_BUFF_101 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_101 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
065h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_101 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_102

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Table 530: BYTE.OTP_EEPROM_PWM_BUFF_102 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_102 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
066h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_102 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_103

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Table 531: BYTE.OTP_EEPROM_PWM_BUFF_103 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_103 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
067h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_103 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_104

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Table 532: BYTE.OTP_EEPROM_PWM_BUFF_104 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_104 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
068h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_104 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_105

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Table 533: BYTE.OTP_EEPROM_PWM_BUFF_105 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_105 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
069h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_105 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_106

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Table 534: BYTE.OTP_EEPROM_PWM_BUFF_106 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_106 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
06Ah	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_106 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_107

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Table 535: BYTE.OTP_EEPROM_PWM_BUFF_107 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_107 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
06Bh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_107 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_108

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Table 536: BYTE.OTP_EEPROM_PWM_BUFF_108 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_108 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
06Ch	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_108 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_109

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Table 537: BYTE.OTP_EEPROM_PWM_BUFF_109 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_109 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
06Dh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_109 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_110

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Table 538: BYTE.OTP_EEPROM_PWM_BUFF_110 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_110 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
06Eh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_110 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_111

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Table 539: BYTE.OTP_EEPROM_PWM_BUFF_111 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_111 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
06Fh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_111 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_112

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Table 540: BYTE.OTP_EEPROM_PWM_BUFF_112 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_112 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
070h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_112 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_113

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Table 541: BYTE.OTP_EEPROM_PWM_BUFF_113 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_113 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
071h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_113 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_114

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Table 542: BYTE.OTP_EEPROM_PWM_BUFF_114 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_114 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
072h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_114 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_115

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Table 543: BYTE.OTP_EEPROM_PWM_BUFF_115 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_115 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
073h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_115 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_116

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Table 544: BYTE.OTP_EEPROM_PWM_BUFF_116 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_116 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
074h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_116 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_117

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Table 545: BYTE.OTP_EEPROM_PWM_BUFF_117 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_117 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
075h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_117 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_118

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Table 546: BYTE.OTP_EEPROM_PWM_BUFF_118 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_118 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
076h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_118 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_119

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Table 547: BYTE.OTP_EEPROM_PWM_BUFF_119 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_119 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
077h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_119 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_120

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Table 548: BYTE.OTP_EEPROM_PWM_BUFF_120 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_120 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
078h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_120 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_121

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Table 549: BYTE.OTP_EEPROM_PWM_BUFF_121 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_121 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
079h	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_121 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_122

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Table 550: BYTE.OTP_EEPROM_PWM_BUFF_122 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_122 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
07Ah	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_122 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_123

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Table 551: BYTE.OTP_EEPROM_PWM_BUFF_123 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_123 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
07Bh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_123 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_124

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Table 552: BYTE.OTP_EEPROM_PWM_BUFF_124 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_124 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
07Ch	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_124 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_125

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Table 553: BYTE.OTP_EEPROM_PWM_BUFF_125 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_125 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
07Dh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_125 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_126

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Table 554: BYTE.OTP_EEPROM_PWM_BUFF_126 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_126 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
07Eh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_126 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

BYTE.OTP_EEPROM_PWM_BUFF_127

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Table 555: BYTE.OTP_EEPROM_PWM_BUFF_127 Bit Field Locations and Descriptions

Offset Address (Hex)	BYTE.OTP_EEPROM_PWM_BUFF_127 Bit Field Locations							
	D7	D6	D5	D4	D3	D2	D1	D0
07Fh	DATA[7:0]							

BYTE.OTP_EEPROM_PWM_BUFF_127 Bit Field Descriptions			
Bit Field Name	Field Type	Default Value	Description
DATA[7:0]	R/W	0	Data to be transferred into OTP, EEPROM or PWM.

Revision History

Revision Date	Description of Change
April 13, 2022	Completed minor changes.
December 9, 2021	First release of v5.3 ROM Updated to match v5.3(.4) register map / descriptions and Timing Commander Personality v10.4 Added new SCSR details for SYSREF module
June 15, 2021	Updated to match v5.3(.1) register map / descriptions and Timing Commander Personality v9.0 Fix description of tod_out_sync_enable Fix inconsistent use of INPUTn and CLKm Fix typo in description of SCSR_DPLL_PHASE_MEASUREMENT_CFG Improve the description of GPIO_DPLL_INDICATOR Improve the description of DPLL_MASTER_DIV Fix the options of SCSR_OTP_STATUS Improve the description of phase_lock_max_error Improve the description of "fb_select_ref" in regards to qual/disqual of the input to the DPLL Expanded options of FORCE_LOCK_INPUT[7:3] and MANUAL_REFERENCE[4:0] to include fb_clk Fix description of register SCSR_IN_DIV Improve the description of DPLLx_FILTER_STATUS Improve the description of fbd_integer_mode_en Improve the description of sdm_order
May 4, 2020	Updated to match v5.3 register map / descriptions and Timing Commander Personality v8.2
May 4, 2020	Updated trigger register description to include 200 microsecond wait time after writing a trigger register. Add missing text for MUX fod_sel that option 7 = none. Added missing DPLL_TRANS_CTRL. Change GPIO_MAN_CLK_SEL_0 description from "input clock disqualify" to "manual clock select". Change MAJ_REL, MIN_REL and HOTFIX_REL reset values to match the firmware version. Fix DPLL_SYS_STATUS that RESERVED is bits [7:6]. Fix various typos.
December 17, 2019	Updated to match v5.2(.2) register map / descriptions and Timing Commander Personality v8.1
November 29, 2019	Updated to match v5.2 register map / descriptions and Timing Commander Personality v8.0 Updated default value for I2C in page 4.
January 11, 2019	Updated to match v5.1 register map and Timing Commander Personality v7.2
December 21, 2018	Updated to match v5.1 (preliminary) register map and Timing Commander Personality v7.1.1
November 28, 2018	Updated to match v5.0 register map and Timing Commander Personality v7.0
August 27, 2018	Improved and clarified many register descriptions
June 11, 2018	Updated Additional Documents table to match current datasheets

Revision Date	Description of Change
February 21, 2018	Updated introductory text to highlight trigger register functionality. Removed older history associated with Rev A silicon that is not being used any more. Updated the version numbering to match other documentation.
November 2, 2017	First release of this document for the Revision B silicon. Updated to match v4.0.0 / v4.0.1 (Pipeline 7017) and Timing Commander Personality v3.x

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