

## Enabling NFC applications and simplifying connectivity in EMVCo, IoT, Wireless Charging and Mobile by a unique Universal Reader Technology

NFC WLC POLLER SOLUTIONS	Released	Released
PRODUCT	PTX100W	PTX130W
Product description	High-performance, high-power NFC Wireless Charging (WLC) Poller solution with multi-protocol reader functionality. Universal SW device integration.	High-efficiency, high-performance, high- power NFC Wireless Charging (WLC) Poller solution with multi-protocol reader functionality. Universal SW device integration.
Technology	180nm	180nm
NFC Wireless Charging standards & features		
NFC Forum certification	-	E: - / N: WLC, Reader compliance
NFC Wireless charging		
NFC Forum WLC Poller protocol	-	N: <b>√</b>
NFC WLC Poller exclusive protocol	✓	E: ✓
Listener counterpart	Discrete Listener (WLC-LDI)	Discrete Listener (WLC-LDI) / PTX30W-N
NFC WLC static charging protocol	✓	✓
NFC WLC negotiated charging protocol	✓	✓
Symmetric transparent data channel	-	✓
Data-exchange via NFC protocols	✓	✓
FOD (Foreign object detection)	bFOD	bFOD, Poll FOD
Power regulation in steps [no. of steps]	5	E: 5 / N: 100
Low Power Listener Detection current, typ. [µA], @ 2 Hz	100 μΑ	<100 μA
Reader standards		
Reader / Writer	ISO/IEC 14443 A/B up to 848 kbit/s, MFCC ISO/IEC 18092, FeliCa™ up to 424 kbit/s ISO/IEC 15693 up to 26,5 kbit/s ISO/IEC 18000-3 M1	ISO/IEC 14443 A/B up to 848 kbit/s, MFCC ISO/IEC 18092, FeliCa™ up to 424 kbit/s ISO/IEC 15693 up to 26,5 kbit/s ISO/IEC 18000-3 M1
Carrier frequency [MHz]	13,56 MHz	13,56 MHz
NFC Forum tag type support	2, 3, 4, 5	2, 3, 4, 5
Card emulation (HCE)	-	-
NFC Tag-Type emulation @ bitrate [kbit/s]	-	-
Peer-to-peer (ISO/IEC 18092)	✓	✓
Passive communication	Initiator	Initiator
Active communication	-	-
Product features		
Ultra-low power on-chip MCU with integrated Firmware	✓	✓
High power digital conversion sine wave RF frontend Digital dynamic power control (DDPC) DIRAC®: EMI filter-less solution Phase Accurate Active Load-Modulation HCE High receiver/LMA sensitivity [dBc] Very High Dynamic Range Receiver (VHDRR)	✓ ✓ - -80 dBc	✓ ✓ - -80 dBc
RF transmitter supply voltage [V]	2.7 V – 5.5 V	2.7 V – 5.5 V
Transmitter supply current, max. [mA]	650 mA	650 mA
Power harvested on the Listener <sup>1</sup> , max. [W]	1.0 W	1,0 W
Relative Poller efficiency improvement <sup>2</sup> , typ. [%]		+18%
Host interface	SPI, I <sup>2</sup> C, UART	SPI, I <sup>2</sup> C, UART
Supply voltage host interface [V]	1.8 V, 3.3 V, 5.0 V	1.8 V, 3.3 V, 5.0 V
Power-down mode current, typ. [μΑ]	3 μΑ	3 μΑ
Available packages	QFN56	QFN56
Temperature range [°C]	-40 to +70	-40 to +70
Field-detection signal output	IRQ	IRQ
Product support and ordering information	inite.	
Product support and ordering information  Product packages	QFN56	QFN56
Product type	PTX100WDQ56	PTX130WDQ56
Order code single tray (dry pack)	PTX100WDQ36 PTX100WDQ56B	PTX130WDQ56B
- 11 11 1	PTX100WDQ56B	PTX130WDQ56B PTX130WDQ56D13
Order code reel (TR dry reel 13")	P1V100MDG20D13	F1VT20MDG20DT3
Evaluation boards	DTV400W NEG WILCE THE	DTV4.2014/2014 1:50 1:11 0.5 1 1:11
Name of evaluation kit	PTX100W NFC WLC Eval Kit	PTX130W/30W NFC WLC Eval Kit
Order number of evaluation kit	10009200	10009230
Software / SDKs / GUI	NFC WLC reader libraries for easy integration into MCUs and RTOS. SDK's for WLC for Non-OS. WLC Config Tool GUI for evaluation of IC features, power transfer and RF optimization, NFC Tag reading (Windows* and Linux).	

 $<sup>^{1}</sup>$  Regarding placement deviation in a coupling-volume of  $\pm 5 mm$  in x/y/z directions (with Eval Kits)

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Highly integrated, scalable NFC WLC Listen with PiC interface and on-boar PMIC and LDO. Operating devices with or without battery using standalone or MCU controlled operation.  Fechnology 130nm  **Cerchnology 130nm  **C	NFC WLC LISTENER SOLUTIONS	Customer samples available
with I/C interface and on-boar PMIC and LDO. Operating devices with or without battery using standalone or MCU controlled operation.  130nm  130nm  Standards & protocols  NFC Forum compliance  Wireless charging (WLC Listener)  WLC exclusive protocol  NFC Forum WLC static charging protocol  NFC Forum WLC agotiated charging protocol  NFC Forum WLC agotiated charging protocol  Operating frequency [MHz]  13,56 MHz  NFC Forum tag type support  Type 2 Tag  SO/IEC 14443-3A bitrate [kbit/s]  106 kbit/s  Host interface  Product features  Ultra-low power on-chip embedded core integrated PMIC solution Integrated PMIC solution Integrated PMIC solution  Integrated flexible battery charger with reverse current limiter integrated pMic High efficient active rectifier Standalone mode of operation (without Host MCU)  Embedded power regulation control  Required PCB integration area (est.)  Rectification efficiency (AC to DC)  up to 92%  Energy harvesting [W]  charging current range [mA]  Charging current range [mA]  Charging current range [mA]  Charging current range [mA]  S-250 mA  Li-Ion and Li-Polymer batteries support  Charge status monitor  On-chip over-temperature detection/protection  I ransparent data exchange channel  Y  Shipping mode (support for battery protection)  Y  System MCU supply output voltage, typ. [V]  Battery-less power supply output voltage, typ. [V]  18, 3, 3 V  Battery-less power supply output voltage, typ. [V]  Shipping mode current consumption, typ. [nA]  25 nA  10 to 1 MHz  Available packages  CSP16  Temperature and ordering information  Product packages  CSP16  VDMCU as input: PIX30WCC1607A1  VDMCU as output 1.89. PIX30WCC1607C1  Evaluation kits and boards  Name of evaluation kit  PYX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  DOMC1000000000000000000000000000000000000	PRODUCT	PTX30W
Standards & protocols  NFC Forum compliance  Wireless charging (WLC Listener)  Wice sclusive protocol  NFC Forum WLC static charging protocol  NFC Forum WLC static charging protocol  NFC Forum WLC negotiated charging protocol  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  Host interface  POST NEC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  Host interface  POST NEC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  Ito 6 kbit/s  Host interface  POST NEC Forum tag type 2 Tag  ISO/IEC 14443-3A bitrate [kbit/s]  Ito 6 kbit/s  Host interface  POST NEC Forum tag type 2 Tag  ISO/IEC 14443-3A bitrate [kbit/s]  Ito 6 kbit/s  Ito 6 kbit/s  Ito 6 kbit/s  Ito 7 Look interface  POST NEC Forum tag 1 Nec Forum t	Product description	without battery using standalone or MCU
Wireless charging (WLC Listener)  Wireless charging (WLC Listener)  WLC exclusive protocol  NFC Forum WLC static charging protocol  NFC Forum WLC static charging protocol  NFC Forum WLC static charging protocol  Operating frequency [MHz]  NFC Forum WLC static charging protocol  NFC Forum WLC static charging protocol  Operating frequency [MHz]  NFC Forum tag type support  NFC Forum tag type support  NFC Slave  Product features  Ultra-low power on-chip embedded core Integrated PMIC solution Integrated PMIC solution Integrated PMIC solution Integrated highly efficient active rectifier Standalone mode of operation (without Host MCU) Embedded power regulation control  Required PCB integration area (est.)  Required PCB integration from the work of the work	Technology	130nm
Wireless charging (WLC Listener)  WLC exclusive protocol  NFC Forum WLC static charging protocol  NFC Forum WLC negotiated charging protocol  Operating frequency [MHz]  NFC Forum tag type support  Sto/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  Sto/IEC 14443-3A bitrate [kbit/s]  Io6 kbit/s  Host interface  Product features  Ultra-low power on-chip embedded core integrated PMIC solution integrated flexible battery charger with reverse current limiter integrated flexible battery charger with reverse current limiter integrated highly efficient active rectifier standalone mode of operation (without Host MCU)  Embedded power regulation control  Required PCB integration area (est.)  Rectification efficiency (AC to DC)  Energy harvesting [W]  Charging current range [mA]  Li-lon and Li-Polymer batteries support  Charge status monitor  Charge status monitor  Transparent data exchange channel  Shipping mode (support for battery protection)  Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JETTA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Vpt to 1 MHz  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  Order number of evaluation kit		
WLC exclusive protocol  NFC Forum WLC static charging protocol  NFC Forum WLC negotiated charging protocol  Operating frequency [MHz]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  ISO/IEC 1443-3A bitrate [kbit/s]  ISO/IEC 14443-3A bitrate [kbit/s]  ISO/IEC 14443-3A bitrate [kbit/s]  ISO/IEC 14443-3A bitrate [kbit/s]  ISO/IEC 1443-3A bitrate [kbit/s]  ISO/IEC 14443-3A bitrate [kbit/s]  IS	·	✓ (Type 2 Tag, WLC Listener)
NFC Forum WLC static charging protocol  NFC Forum WLC negotiated charging protocol  Operating frequency [MHz]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  NFC Forum tag type support  ISO/IEC 14443-3A bitrate [kbit/s]  IOS kbit/s  IOS kbit/		
NFC Forum WLC negotiated charging protocol  Operating frequency [MHz]  NFC Forum tag type support  Type 2 Tag  ISO/IEC 14443-3A bitrate [kbit/s]  106 kbit/s  Host interface  Product features  Ultra-low power on-chip embedded core integrated PMIC solution integrated flexible battery charger with reverse current limiter	-	-
NPC Forum tag type support  NPC Forum tag type support  NPC Forum tag type support  SO/IEC 14443-3A bitrate [kbit/s]  Host interface  Product features  Ultra-low power on-chip embedded core integrated PMIC solution Integrated flexible battery charger with reverse current limiter Integrated lighly efficient active rectifier Standalone mode of operation (without Host MCU) Embedded power regulation control  Required PCB integration area (est.)  Required PCB integration area (est.)  Required PCB integration area (est.)  Repair and Li-Polymer batteries support  Charging current range [MA]  Li-lon and Li-Polymer batteries support  Charge status monitor  On-chip over-temperature detection/protection  Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  POMICU as input: PTX30WCC16D7A1  VDMCU as output 1.8½: PTX30WCC16D7A1  VDMCU as output 1.8½: PTX30WCC16D7A1  VDMCU as output 1.8½: PTX30WCC16D7A1  VDMCU as output 3.3½: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit	5 5.	
NFC Forum tag type support  Type 2 Tag  ISO/IEC 14443-3A bitrate [kbit/s]  Host interface  Product features  Ultra-low power on-chip embedded core Integrated PMIC solution Integrated Risible battery charger with reverse current limiter Integrated highly efficient active rectifier Standalone mode of operation (without Host MCU) Embedded power regulation control Required PCB integration area (est.)  Required PCB integration area (est.)  Required PCB integration area (est.)  Retification efficiency (AC to DC)  Energy harvesting [W]  Charging current range [mA]  Li-lon and Li-Polymer batteries support  Charge status monitor  Charge status monitor  Charge status monitor  Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [°C]  -40 to +85  Product support and ordering information  Product support and ordering information  Order code reel (TR dry reel 7")  VDMCU as output 1.8V: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7A1  VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit	NFC Forum WLC negotiated charging protocol	✓
ISO/IEC 14443-3A bitrate [kbit/s]  Host interface  Product features  Ultra-low power on-chip embedded core Integrated PMIC solution Integrated PMIC solution Integrated PMIC solution Integrated flexible battery charger with reverse current limiter Integrated highly efficient active rectifier Standalone mode of operation (without Host MCU) Embedded power regulation control Required PCB integration area (est.)  Rectification efficiency (AC to DC)  Energy harvesting [W]  Li-lon and Li-Polymer batteries support  Charging current range [mA]  Li-lon and Li-Polymer batteries support  Charge status monitor  On-chip over-temperature detection/protection  'Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  Order code reel (TR dry reel 7")  VDMCU as output 1.8V: PTX30WCC16D781  VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit	Operating frequency [MHz]	13,56 MHz
Host interface PPC Slave  Product features  Ultra-low power on-chip embedded core Integrated PMIC solution Integrated highly efficient active rectifier Standalone mode of operation (without Host MCU)		., -
Product features  Ultra-low power on-chip embedded core Integrated PMIC solution Integrated PMIC solution Integrated flexible battery charger with reverse current limiter Integrated highly efficient active rectifier Standalone mode of operation (without Host MCU) Embedded power regulation control Required PCB integration area (est.) Required PCB integration area (est.) I7 mm² Rectification efficiency (AC to DC) Up to 92% Energy harvesting [W] Up to 1W Charging current range [mA] Li-lon and Li-Polymer batteries support  Charge status monitor On-chip over-temperature detection/protection Transparent data exchange channel Shipping mode (support for battery protection) System MCU supply output voltage, typ. [V] Battery-less power supply output JEITA support Shipping mode current consumption, typ. [nA] 12C clock frequency [kHz] Up to 1 MHz Available packages CSP16 Product support and ordering information Product packages CSP16 Order code reel (TR dry reel 7") VDMCU as output 1.8V: PTX30WCC16D781 VDMCU as output 1.8V: PTX30WCC16D781 VDMCU as output 1.8V: PTX30WCC16D781 VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards Name of evaluation kit PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit		·
Ultra-low power on-chip embedded core Integrated PMIC solution   Integrated PIC Solution   Integrated flexible battery charger with reverse current limiter   Integrated highly efficient active rectifier   Standalone mode of operation (without Host MCU)   Embedded power regulation control   Required PCB integration area (est.)   I7 mm²   Rectification efficiency (AC to DC)   Integrated parcent range [M]   Integrated parcent range parcent range parcent range parcent parcent range parcent parc		I <sup>2</sup> C Slave
Integrated PMIC solution Integrated flexible battery charger with reverse current limiter Integrated flighly efficient active rectifier Standalone mode of operation (without Host MCU) Embedded power regulation control Required PCB integration area (est.) Rectification efficiency (AC to DC) Energy harvesting [W] Li-lon and Li-Polymer batteries support Charge status monitor On-chip over-temperature detection/protection Transparent data exchange channel Shipping mode (support for battery protection) System MCU supply output voltage, typ. [V] Battery-less power supply output  JEITA support Shipping mode current consumption, typ. [nA] 12C clock frequency [kHz] Available packages CSP16 Temperature range [°C] Product support and ordering information Product packages CSP16  VDMCU as input: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7A1 VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards Name of evaluation kit PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit PTX130W/30W NFC WLC Eval Kit		
Integrated flexible battery charger with reverse current limiter integrated highly efficient active rectifier		√ ./
Integrated highly efficient active rectifier Standalone mode of operation (without Host MCU) Embedded power regulation control  Required PCB integration area (est.)  Rectification efficiency (AC to DC)  In up to 92% Energy harvesting [W]  Charging current range [mA] Li-lon and Li-Polymer batteries support  Charge status monitor  On-chip over-temperature detection/protection  Transparent data exchange channel Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Vip to 1 MHz  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  Order code reel (TR dry reel 7")  VDMCU as output 3.3V: PTX30WCC16D7B1		<b>*</b>
Embedded power regulation control  Required PCB integration area (est.)  Rectification efficiency (AC to DC)  Energy harvesting [W]  Charging current range [mA]  Li-lon and Li-Polymer batteries support  Charge status monitor  On-chip over-temperature detection/protection  Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  CSP16  Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7B1 VDMCU as output 1.8V: PTX30WCC16D7B1 VDMCU as output 1.8V: PTX30WCC16D7B1 VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit	Integrated highly efficient active rectifier	✓.
Required PCB integration area (est.)  Rectification efficiency (AC to DC)  Energy harvesting [W]  Charging current range [mA]  Li-lon and Li-Polymer batteries support  Charge status monitor  On-chip over-temperature detection/protection  Transparent data exchange channel  Shipping mode (support for battery protection)  Battery-less power supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit	• • • • • • • • • • • • • • • • • • • •	<b>∀</b>
Rectification efficiency (AC to DC)  Energy harvesting [W]  Charging current range [mA]  Li-lon and Li-Polymer batteries support  Charge status monitor  On-chip over-temperature detection/protection  Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  Order code reel (TR dry reel 7")  VDMCU as output 1.8V: PTX30WCC16D781  VDMCU as output 1.8V: PTX30WCC16D781  VDMCU as output 1.8V: PTX30WCC16D781  VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit	· -	47?
Energy harvesting [W] up to 1W  Charging current range [mA] 5-250 mA  Li-lon and Li-Polymer batteries support  Charge status monitor  On-chip over-temperature detection/protection  Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Up to 1 MHz  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  Order code reel (TR dry reel 7")  VDMCU as output 1.8V: PTX30WCC16D7B1  VDMCU as output 1.8V: PTX30WCC16D7B1  VDMCU as output 3.3V: PTX30WCC16D7B1  VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  PTX130W/30W NFC WLC Eval Kit		
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Li-lon and Li-Polymer batteries support  Charge status monitor  On-chip over-temperature detection/protection  Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  CSP16  Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  10009230		·
Charge status monitor  On-chip over-temperature detection/protection  Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  CSP16  Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7B1  VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  10009230		
Charge status monitor  On-chip over-temperature detection/protection  Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Up to 1 MHz  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  CSP16  VDMCU as input: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  10009230	,	
Transparent data exchange channel  Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  Temperature range [*C]  Product support and ordering information  Product packages  CSP16  Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  10009230		,
Shipping mode (support for battery protection)  System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [°C]  Product support and ordering information  Product packages  CSP16  VDMCU as input: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  10009230		· ·
System MCU supply output voltage, typ. [V]  Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  CSP16  CSP16  Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7B1  VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  10009230	· -	·
Battery-less power supply output  JEITA support  Shipping mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [°C]  Product support and ordering information  Product packages  CSP16  CSP16  Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  10009230		·
Shitpring mode current consumption, typ. [nA]  12C clock frequency [kHz]  Available packages  CSP16  Temperature range [*C]  Product support and ordering information  Product packages  CSP16  CSP16  VDMCU as input: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7A1  VDMCU as output 1.8V: PTX30WCC16D7B1  VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  10009230		-,
Shipping mode current consumption, typ. [nA] 25 nA  12C clock frequency [kHz] Up to 1 MHz  Available packages CSP16  Temperature range [°C] -40 to +85  Product support and ordering information  Product packages CSP16  Order code reel (TR dry reel 7") VDMCU as input: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7B1 VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit 10009230		·
12C clock frequency [kHz] Up to 1 MHz  Available packages CSP16  Temperature range [*C] -40 to +85  Product support and ordering information  Product packages CSP16  Order code reel (TR dry reel 7") VDMCU as input: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7B1 VDMCU as output 1.8V: PTX30WCC16D7B1 VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit 10009230	**	25 nA
Available packages CSP16 Temperature range [°C] -40 to +85  Product support and ordering information  Product packages CSP16 Order code reel (TR dry reel 7") VDMCU as input: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7B1 VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards Name of evaluation kit PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit 10009230		
Temperature range [*C] -40 to +85  Product support and ordering information  Product packages CSP16  Order code reel (TR dry reel 7") VDMCU as input: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7B1 VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit 10009230		· ·
Product support and ordering information  Product packages CSP16  Order code reel (TR dry reel 7")  Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7B1 VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit 10009230		
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Order code reel (TR dry reel 7")  VDMCU as input: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7B1 VDMCU as output 3.3V: PTX30WCC16D7C1  Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit  10009230		CSP16
Evaluation kits and boards  Name of evaluation kit  PTX130W/30W NFC WLC Eval Kit  Order number of evaluation kit  10009230		VDMCU as input: PTX30WCC16D7A1 VDMCU as output 1.8V: PTX30WCC16D7B1
Name of evaluation kit PTX130W/30W NFC WLC Eval Kit Order number of evaluation kit 10009230	Evaluation kits and boards	. Since as datput 3.5v. 1 1/35vvcc13b/C1
Order number of evaluation kit 10009230		PTX130W/30W NFC WLC Eval Kit
	Software	PTX30W SDK for host MCU.

<sup>&</sup>lt;sup>2</sup> Relative to PTX100\



## Enabling NFC applications and simplifying connectivity in EMVCo, IoT, Wireless Charging and Mobile by a unique Universal Reader Technology

EVALUATION KITS	NFC Wireless Charging
Evaluation Kit / Board (Order number)	PTX130W/30W NFC WLC Eval Kit (10009230)
Supported products	PTX130W, PTX30W
Contents (Order number of boards)	<ul> <li>1 PTX130W-EB-ST-QFN56-POLLER (10009020)</li> <li>1 PTX30W-EB-ST-CSP16-LISTENER (10009021)</li> <li>1 PTX30W-EB-CB-LISTENER MCU (10009022)</li> <li>1 PTX H-Filed Detector Card</li> <li>2 USB-A to USB-C cable</li> <li>1 WLC Spacer</li> </ul>
Key features	NFC Wireless Charging evaluation kit for high-efficiency, high-power PTX130W NFC WLC IC Fully integrated high-power harvesting WLC Listener (PTX30W) with integrated PMIC and LDO Support of NFC Forum NFC Wireless Charging protocol Easy-to-use, ready-to-go SW integration Reader functions supporting all type of NFC and standard protocols (ISO14443 A/B, ISO18092, ISO15693, FeliCa and NFC P2P-Initiator) Bi-directional transparent data channel EMI filter less (DiRAC®) for high-power end-application RF-design supported with Config Tool and SDKs
Certifications	-
Software and tools	SDK "Non-OS" WLC for Poller (PTX130W) and optionally for Listener (PTX30W): NFC Wireless Charging libraries in C source code with compact code size. Applicable for any host MCU/RTOS integration.     Config Tool (PTX130W/30W) for evaluation:     Demonstration and evaluation of WLC IC-features, RF/antenna optimization     Antenna design support with open-source tool Qucs Studio.
Target applications	High-power NFC Forum WLC compliant wireless charging solution with Poller and Listener system:  Wireless charging in combination with universal reader solution supporting all types of NFC reader protocols and applications.  Integrated system for battery based and battery-less applications  Applications:  Stylus  Smart rings  Smart glasses  Smart watches, fitness trackers  Hearing aids  Small accessories
Application team support for registered customers	SW-expert team supports you with target system Software/Firmware integration     Finalized product antenna design support dedicated to your NFC Wireless charging devices     Retrofit support: Customer antenna retrofitted with customer antenna design     Possibility to optimize and verify charging performance on end device form factor
For registration, ordering of boards and SDK's please contact sales@panthronics.com	PTX30W-EB-CB LISTENER MCU  PT30W-EB-ST-CSP16-LISTENER  PTX130W-EB-ST-QFN56-POLLER