

QE for Camera[RZ] V1.1.1, QE for Display[RZ] V3.1.1

Release Note

Thank you very much for your using the QE for Camera[RZ] V1.1.1 and QE for Display[RZ] V3.1.1.

This release documentation, we have indicated this product installation, restrictions and so on.

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1. About QE for Camera[RZ], QE for Display[RZ]

1.1 Summary

QE for Camera[RZ] and QE for Display[RZ] are one of several Solution Toolkit which operate under the e² studio integrated development environment. In development of embedded systems using Video Display Controller 5,6 (VDC5,6) installed in the MCUs of the RZ/A series, this product facilitates easy initial adjustment of the camera and display connection and camera module settings, thus, reducing development time.

QE for Camera[RZ] V1.1.1 and QE for Display[RZ] V3.1.1 are the same plug-in. Therefore, you can install both items by installing either one of the two. Download one of the following packages. The software would be installed in e² studio as "Renesas QE for Camera/Display[RZ] V3.1.1".

- ✓ QE for Camera V1.1.1: Development Assistance Tool for Camera
<https://www.renesas.com/qe-camera>
- ✓ QE for Display V1.3.0: Development Assistance Tool for Display
<https://www.renesas.com/qe-display>

Please refer to the Help for instructions on how to use this product.

1.2 Details of Change

The preset display name of LCD is corrected.

1.3 Supported Environment

Windows 8.1, Windows 10

Renesas e² studio V7.1.0 (or later)

* If you are using a version earlier than e² studio V 7.1.0, please update to V 7.1.0 or later.

1.4 Supported Microcontroller

RZ Family:

— RZ/A series (RZ/A2M, RZ/A1H, RZ/A1L, RZ/A1LU, RZ/A1M, RZ/A1LC)

1.5 Supported Sample Program

QE for Camera[RZ], QE for Display[RZ] works with the following sample program:

- RZ/A2M Group Simple Applications Package (V2.00 or later)
<https://www.renesas.com/search/keyword-search.html#genre=sampleprogram&q=r01an4494>
- RZ/A1LU Group RZ/A1 Software Package (V2.00 or later)
<https://www.renesas.com/search/keyword-search.html#genre=sampleprogram&q=r01an4310>
- RZ/A1H Group, RZ/A1M Group, RZ/A1LU Group, RZ/A1L Group, RZ/A1LC Group
RZ/A1 Framework (V2.00 or later)
<https://www.renesas.com/search/keyword-search.html#genre=sampleprogram&q=r01an3638>

2. Installation and Uninstallation

2.1 Installing This Product

Follow the procedure below to install this product.

1. Start e² studio.
2. From the [Help] menu, select [Install New Software...] to open the [Install] dialog box.
3. Click the [Add...] button to open the [Add Repository] dialog box.
4. Click the [Archive] button, select the installation file (zip file) in the opened dialog box, and click the [Open] button.
5. Click the [OK] button in the [Add Repository] dialog box.
6. Expand the [Renesas QE] item shown in the [Install] dialog box, select the [Renesas QE for Camera/Display[RZ]] check box, and then click the [Next>] button.
* If you check off the [Contact all update sites during install to find required software] checkbox, you can shorten the installation time.
7. Confirm that the installation target is correct, and then click on the [Next>] button.
8. After confirming the license agreements, select the [I accept the terms of the license agreements] radio button, and click the [Finish] button.
9. If the dialog of the trust certificate is displayed, check that certificate, and click the [OK] button to continue installation.
10. When prompted to restart e² studio, restart it.
11. Start this product from the [Renesas Views] - [Renesas QE] menu of e² studio. For details about how to use this product, see the [Help] menu of e² studio.

2.2 Updating This Product

If you have already installed this product, you can update it in the same way as the procedure for installation.

2.3 Uninstalling This Product

Follow the procedure below to uninstall this product.

1. Start e² studio.
2. Select [Help -> About e² studio] to open the [About e² studio] dialog box.
3. Click the [Installation Details] button to open the [e² studio Installation Details] dialog box.
4. Select [Renesas QE for Camera/Display[RZ]] displayed on the [Installed Software] tabbed page and click the [Uninstall...] button to open the [Uninstall] dialog box.
5. Check the displayed information and click the [Finish] button.
6. When prompted to restart e² studio, restart it.

3. Notes / Restrictions

3.1 Usage Considerations

3.1.1 Note on Modifying the Parameters of the Added Custom LCD

After modifying the parameters of the added custom LCD board, the GUI in the "Timing Adjustment (LCD)" tab does not refresh.

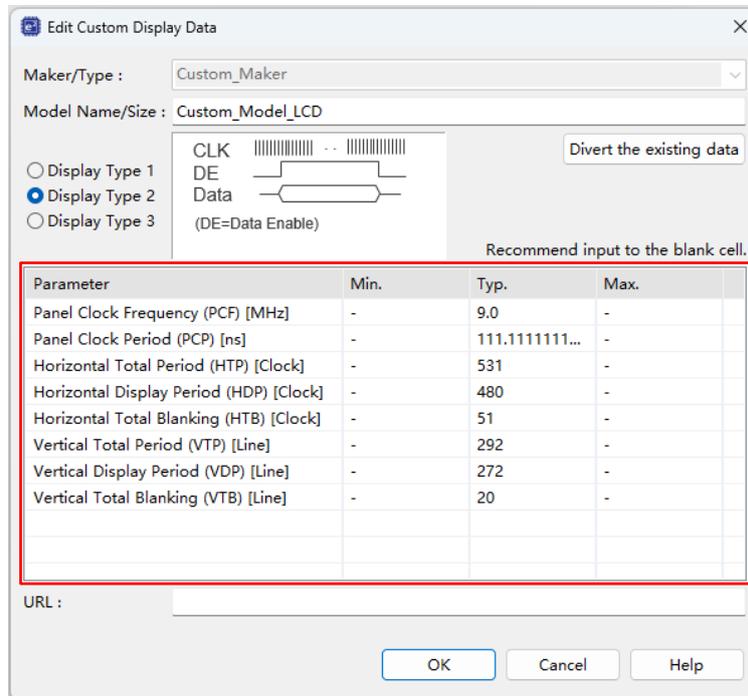


Figure 3-1 Parameters of the Added Custom LCD

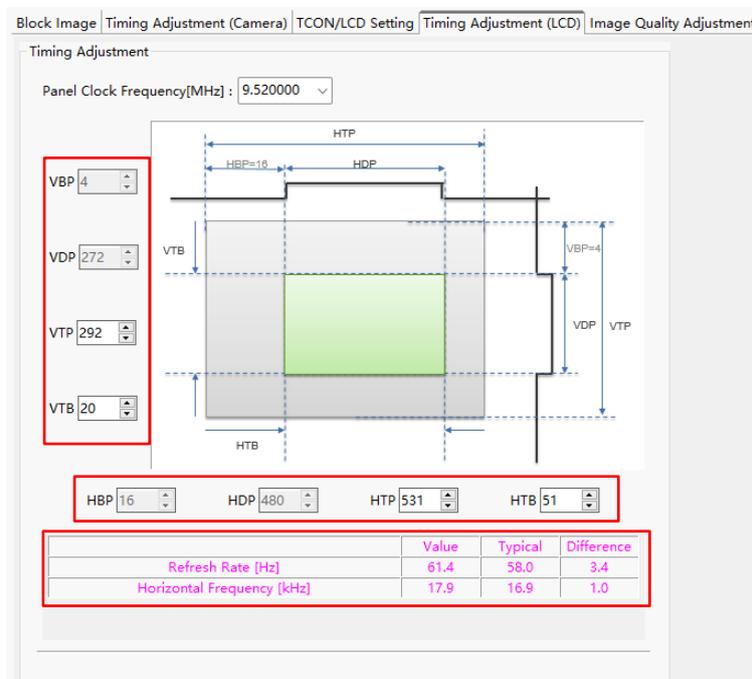


Figure 3-2 The GUI in the "Timing Adjustment (LCD)" Tab

[Workaround]

Please delete the custom LCD and then re-add the new custom LCD with the new parameters.

3.1.2 Note on “Generate Header File” Function When Camera or LCD is not Used

When the "Not Using" option is selected for "Camera Maker/Type" or "LCD Maker/Type", the code generation will fail after clicking the "Generate Header File" menu button.

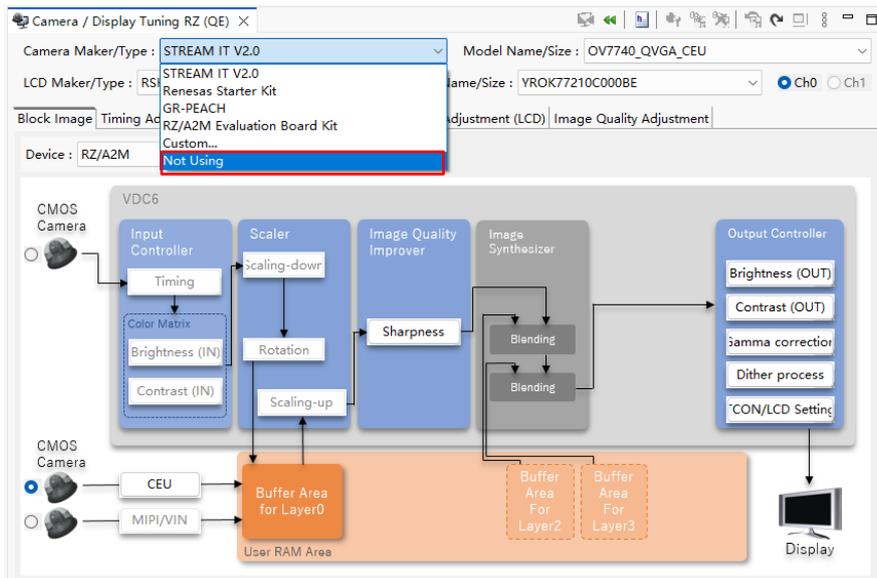


Figure 3-3 The “Not Using” Option in Camera/Display Tuning RZ (QE) View

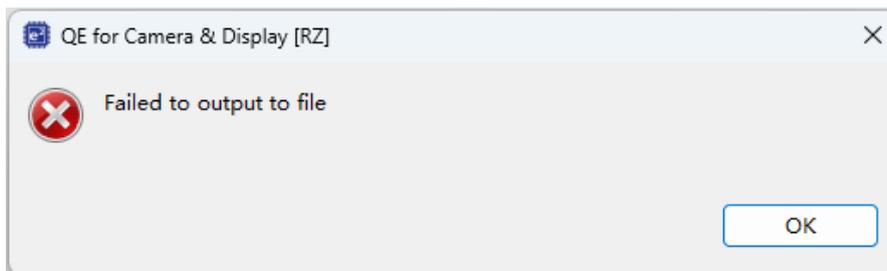


Figure 3-4 Code Generation Failed Dialog

[Workaround]

1. Select a camera and an LCD from "Camera Maker/Type" and "LCD Maker/Type" respectively.
2. Click the “Generate Header File” menu button to open “Select the Header File” dialog.
 - a) When you are only using the camera board, select only the camera header file as shown in the image below.

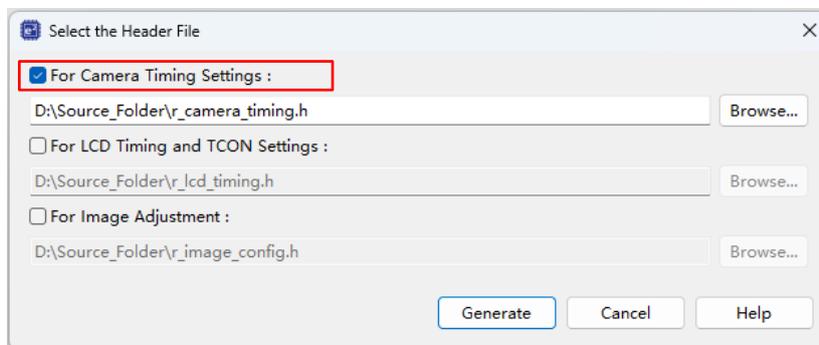


Figure 3-5 Select the Camera Header File

- b) When you are only using the LCD board, select only the LCD header files as shown in the image below.

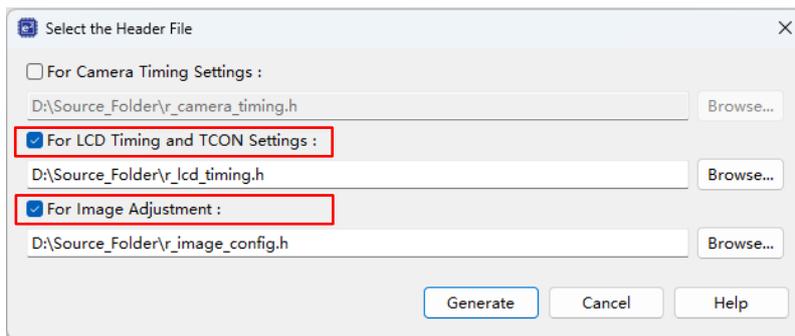


Figure 3-6 Select the LCD Header Files

- 3. Click the "Generate" button to generate the header files.

3.2 Functional Restrictions

There are no functional restrictions for this product.

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Apr.07.20	-	First edition issued.
1.01	Mar.20.26	Page 4	Add [3.1.1 Note on Modifying the Parameters of the Added Custom LCD] chapter.
		Page 5	Add [3.1.2 Note on “Generate Header File” Function] chapter.

General Precautions in the Handling of Microprocessing Unit and Microcontroller Unit Products

The following usage notes are applicable to all Microprocessing unit and Microcontroller unit products from Renesas. For detailed usage notes on the products covered by this document, refer to the relevant sections of the document as well as any technical updates that have been issued for the products.

1. Precaution against Electrostatic Discharge (ESD)

A strong electrical field, when exposed to a CMOS device, can cause destruction of the gate oxide and ultimately degrade the device operation. Steps must be taken to stop the generation of static electricity as much as possible, and quickly dissipate it when it occurs. Environmental control must be adequate. When it is dry, a humidifier should be used. This is recommended to avoid using insulators that can easily build up static electricity.

Semiconductor devices must be stored and transported in an anti-static container, static shielding bag or conductive material. All test and measurement tools including work benches and floors must be grounded. The operator must also be grounded using a wrist strap. Semiconductor devices must not be touched with bare hands. Similar precautions must be taken for printed circuit boards with mounted semiconductor devices.

2. Processing at power-on

The state of the product is undefined at the time when power is supplied. The states of internal circuits in the LSI are indeterminate and the states of register settings and pins are undefined at the time when power is supplied. In a finished product where the reset signal is applied to the external reset pin, the states of pins are not guaranteed from the time when power is supplied until the reset process is completed. In a similar way, the states of pins in a product that is reset by an on-chip power-on reset function are not guaranteed from the time when power is supplied until the power reaches the level at which resetting is specified.

3. Input of signal during power-off state

Do not input signals or an I/O pull-up power supply while the device is powered off. The current injection that results from input of such a signal or I/O pull-up power supply may cause malfunction and the abnormal current that passes in the device at this time may cause degradation of internal elements. Follow the guideline for input signal during power-off state as described in your product documentation.

4. Handling of unused pins

Handle unused pins in accordance with the directions given under handling of unused pins in the manual. The input pins of CMOS products are generally in the high-impedance state. In operation with an unused pin in the open-circuit state, extra electromagnetic noise is induced in the vicinity of the LSI, an associated shoot-through current flows internally, and malfunctions occur due to the false recognition of the pin state as an input signal become possible.

5. Clock signals

After applying a reset, only release the reset line after the operating clock signal becomes stable. When switching the clock signal during program execution, wait until the target clock signal is stabilized. When the clock signal is generated with an external resonator or from an external oscillator during a reset, ensure that the reset line is only released after full stabilization of the clock signal. Additionally, when switching to a clock signal produced with an external resonator or by an external oscillator while program execution is in progress, wait until the target clock signal is stable.

6. Voltage application waveform at input pin

Waveform distortion due to input noise or a reflected wave may cause malfunction. If the input of the CMOS device stays in the area between V_{IL} (Max.) and V_{IH} (Min.) due to noise, for example, the device may malfunction. Take care to prevent chattering noise from entering the device when the input level is fixed, and also in the transition period when the input level passes through the area between V_{IL} (Max.) and V_{IH} (Min.).

7. Prohibition of access to reserved addresses

Access to reserved addresses is prohibited. The reserved addresses are provided for possible future expansion of functions. Do not access these addresses as the correct operation of the LSI is not guaranteed.

8. Differences between products

Before changing from one product to another, for example to a product with a different part number, confirm that the change will not lead to problems. The characteristics of a microprocessing unit or microcontroller unit products in the same group but having a different part number might differ in terms of internal memory capacity, layout pattern, and other factors, which can affect the ranges of electrical characteristics, such as characteristic values, operating margins, immunity to noise, and amount of radiated noise. When changing to a product with a different part number, implement a system-evaluation test for the given product.

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