[Upgrade to revision]

Solution Toolkit

QE: Development Assistance Tool for Applications

QE for Capacitive Touch[RA] V1.1.0: Development Assistance Tool for Capacitive Touch Sensor

Outline

RA Family QE for Capacitive Touch[RA] has been updated from V1.0.0 to V1.1.0.

1. Products and Versions to Be Updated

➢ QE for Capacitive Touch[RA] V1.0.0

To check the version: From the [Help] menu of e^2 studio, select [e2 studio Installation details] menu > [Installed Software] tab and you will see the version of the 'Renesas QE for Capacitive Touch[RA]'.
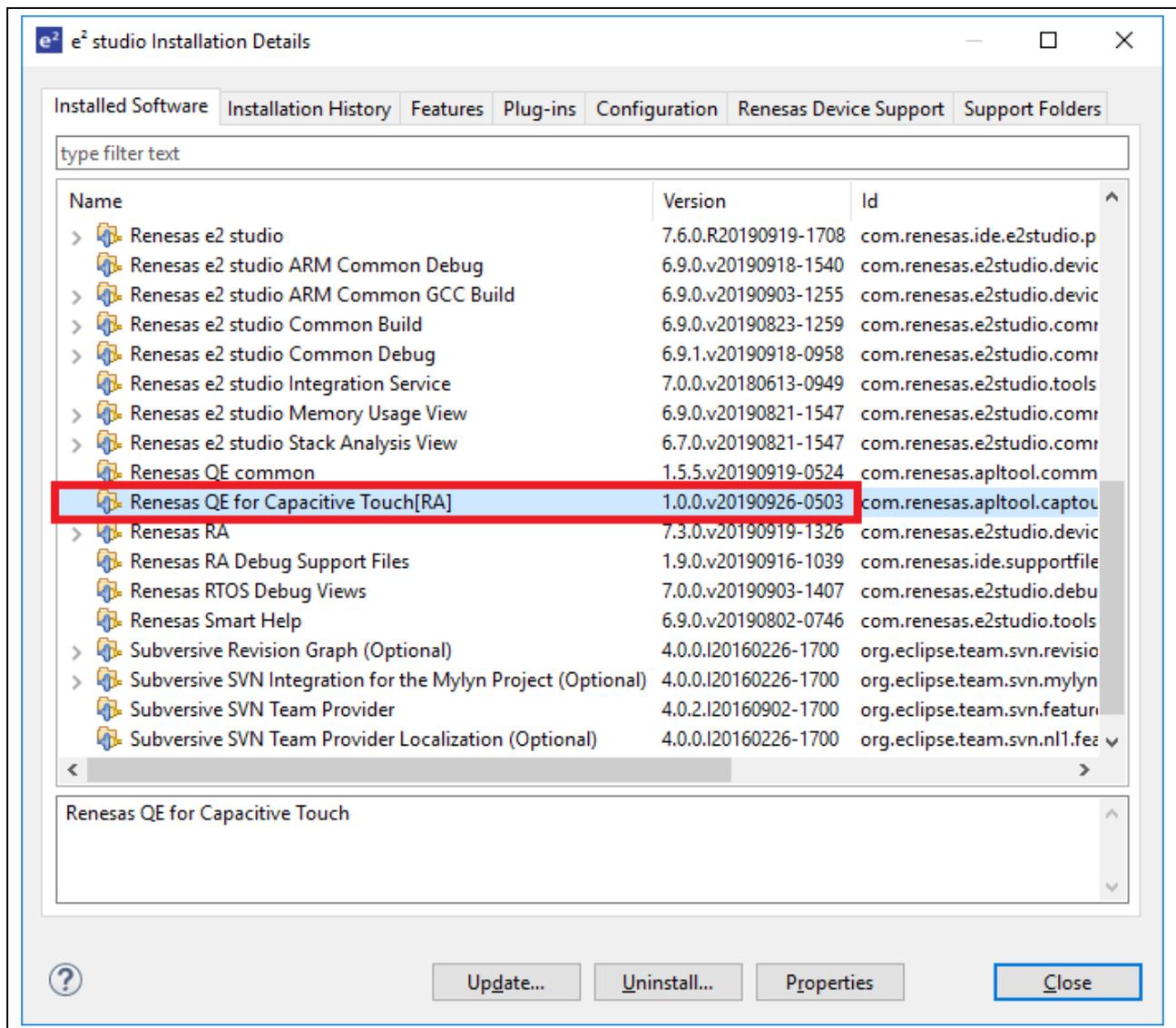

Figure 1   Checking the version of QE for Capacitive Touch[RA]

2. Description of the Update

The main features of the update are described in the following sections. For more details, refer to the following release note.

https://www.renesas.com/search/keyword-search.html#genre=document&q=r20ut4800

2.1 New Features

➢ Monitoring through a serial port

The sensitivity monitoring function of QE for Capacitive Touch[RA] can be used without an emulator.
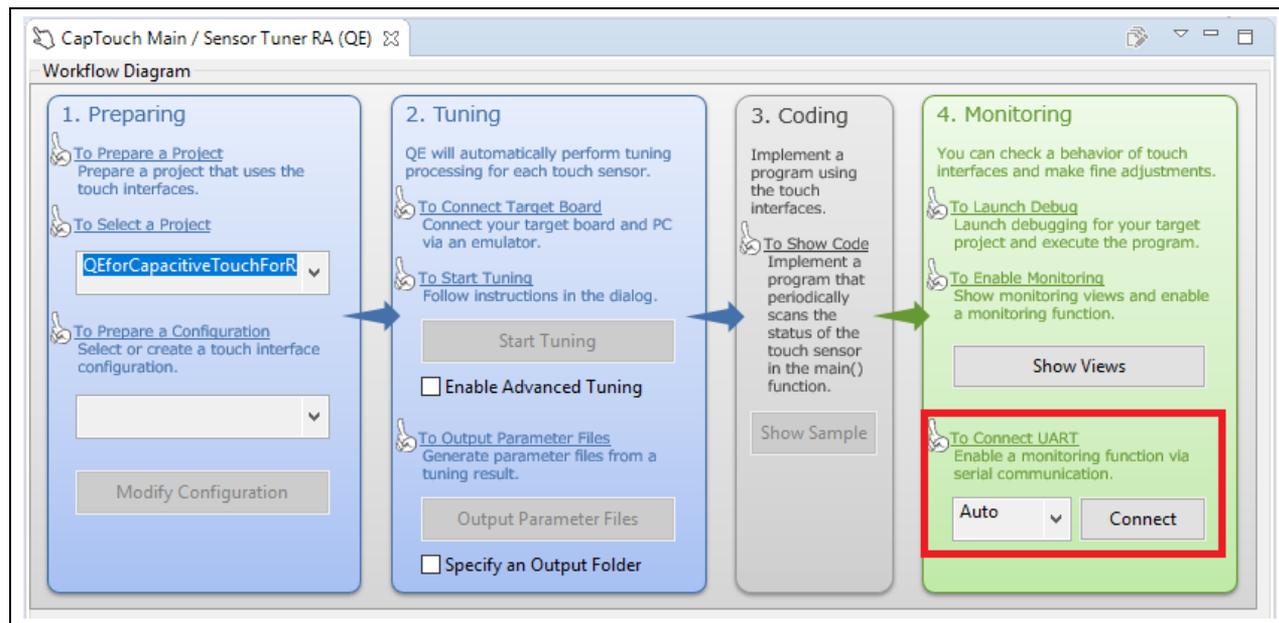

Figure 2   Serial Port Connection Menu

2.2 Feature Improvements

➢ Support for Flexible Software Package (FSP) V1.0.0

FSP V1.0.0 middleware for RA family is now supported.
The FSP components related to QE for Capacitive Touch[RA] are as follows.

Table 1 QE for Capacitive Touch[RA] V1.1.0 Supported FSP Components

FSP component name	FSP component version
CSTU (Capacitive Touch Sensing Unit) Driver FSP component for RA family Component name: r_ctsu	V1.0.0
Touch Driver FSP component for RA family Component name: rm_touch	V1.0.0

➢ Reduction of the touch device tuning time

Two tuning types are now available: initial tuning and tuning of sensitivity only. Selecting [Tuning of sensitivity only] after initial tuning of all items skips non-essential steps, allowing only the required tuning to be performed. This shortens the tuning time compared with the previous version.

3. Feature Introduction

➢ Noise monitoring through [Standard deviation measured and display]

Securing noise immunity is critical in development of touch devices. For this reason, QE for Capacitive Touch[RA] provides the [Standard deviation measured and display] function. This function enables convenient noise monitoring by calculating and displaying averages of noise-related values based on the data collected during a specified time.

For details, refer to [Standard deviation measured and display] from the Help menu of e^2 studio.
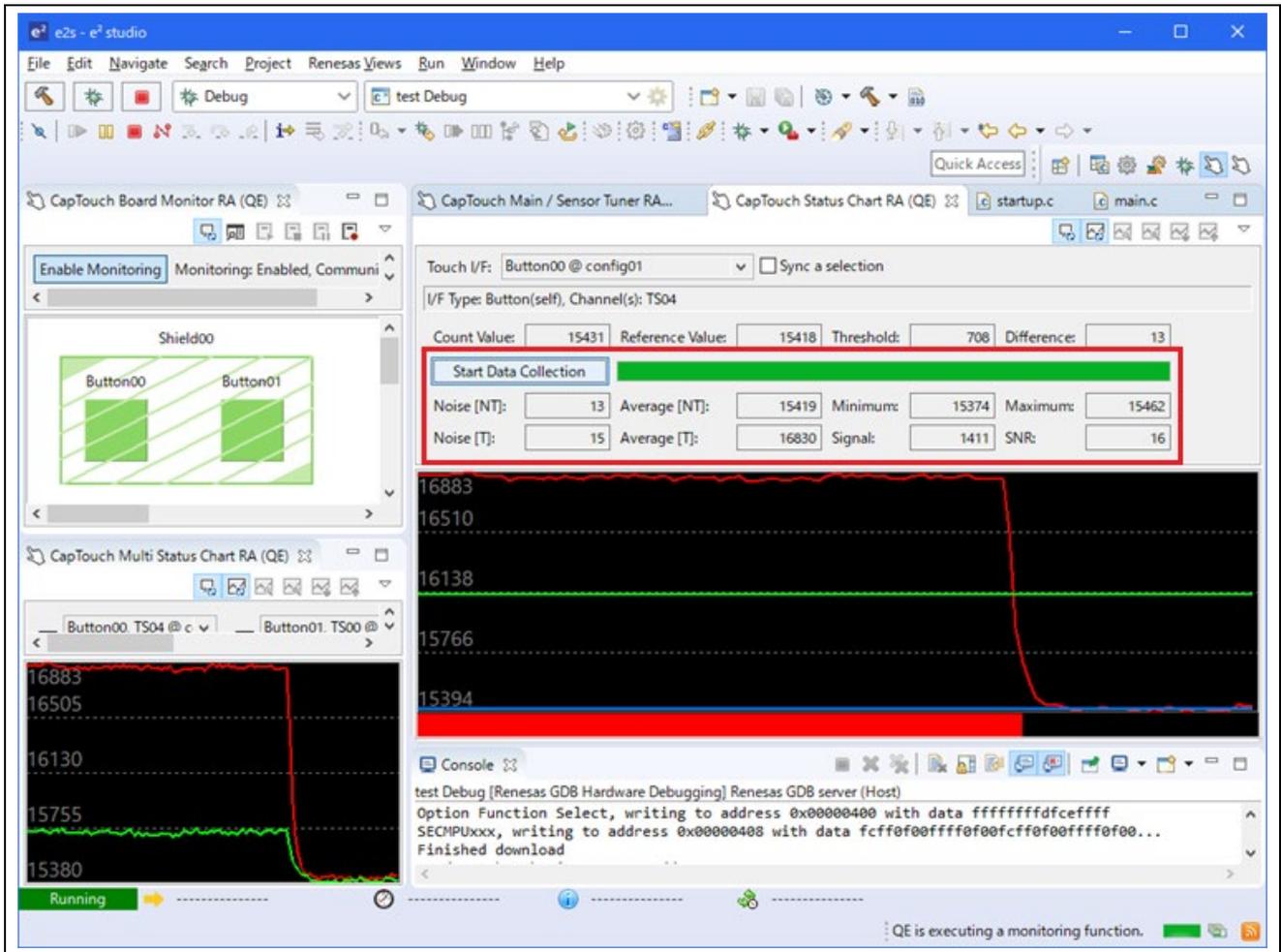

Figure 3   Standard deviation measured and display: Starting data collection and display of measurement results

4. Operating Environment

➢ e^2 studio integrated development environment V7.8.0 or later (Scheduled to be released on April 20.)

5. Obtaining the Product

Download the installer for QE for Capacitive Touch[RA] V1.1.0 from the URL below.

https://www.renesas.com/qe-capacitive-touch

6. Installation

The installation procedure is shown below.

(1) Activate e^2 studio.

(2) Click [Help], and then click the [Install New Software...] menu 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 file selection dialog box, and then 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 Capacitive Touch[RA] check box.
Unselect the checkbox for the [Contact all update sites during install to find required software] [Note], and then click on the [Next>] button.

(7) Confirm that the installation target is correct, and then click the [Next>] button.

(8) After checking the license, select the [I agree accept the terms of the license agreements] radio button if you agree it, and then click on the [Finish] button.

(9) When the dialog box for selecting a trusted certificate appears, check the displayed certificate, and then click on the [OK] button to continue installation.

(10) Restart e^2 studio by following the instructions on the screen.

(11) Start this product from the [Renesas Views] - [Renesas QE] menu of e^2 studio.

For details about how to use this product, refer to the QE items from the [Help] menu of e^2 studio.

Note: To install plug-ins for e^2 studio other than QE, select [Contact all update sites during install to find required software] before proceeding with the following steps.

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Apr.01.20	-	First edition issued

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