[Released on the Web]

## Solution Toolkit

R20TS0867EJ0100 Rev.1.00 Aug. 01, 2022

Development Assistance Tool for Cloud

# QE for OTA V1.0.0 [Technical Preview Version]

#### Outline

QE for OTA V1.0.0 (technical preview version), a development assistance tool for cloud, has been released on the web.

This product is available free of charge.

#### 1. Product Features

QE for OTA (technical preview version) is one of the solution toolkits that operate on the e<sup>2</sup> studio integrated development environment.

This development assistance tool helps you easily try OTA (Over the Air) using AWS, which is a cloud service. By performing operations according to the workflow diagram, you can obtain cloud-related information, register the information necessary for performing OTA to the cloud system, embed security information into the MCU, and then perform OTA.

#### 1.1 Workflow Diagram

Setup for Cloud

Specify the settings to sign in to the cloud and set the device authentication information.

Prepare OTA project

Import an OTA project.

Manage IoT devices

You can add and delete IoT devices and view the IoT device information. You can also create initial firmware and write it into an IoT device.

> OTA

Create update firmware and execute OTA.

1. Setup for Cloud	2. Prepare OTA project	3. Manage IoT devices	4. OTA
Set information for Cloud and sign-in Joud System.	Create boot loader project and firmware project.	Create IoT devices and initial firmware.	Update new firmware using Cloud system
Get information for Cloud      Get information for evaluation board      and development tools.      Get Information      Get Information      Sign-in to Cloud System      Target    AWS      Sign-in    Setting      Select Credential    (device authentication keys)      Storing Style    Select provisioning you want to use.      Source code includes credentiz	Select OTA project Import the OTA projects and select boot loader and firmware. Import OTA project Boot loader: boot_loader Firmware: aws_demos How to set up project Device : RSF56SNE_DUAL Board : RX65N Cloud Kit	Manage IoT devices      Entry IoT devices to Cloud system and confirm state of IoT devices.      Manage IoT devices      Oreate Initial firmware      Build boot Ioader and firmware, create initial firmware.      Create initial firmware      Mitte program to IoT devices      Write Initial firmware to each IoT devices.      Write Initial firmware to each IoT devices.	Create firmware for update Greate firmware for update using cloud system. Create update firmware Execute OTA and check state Execute OTA for selected IoT devices and check state of IoT devices. Execute OTA and check status



#### 1.2 Manage IoT Device View

This view displays a list of IoT devices registered on the cloud. You can also add and delete IoT devices.

This view has five features: IoT Device, Initial Firmware, Update Firmware, OTA, and Firmware Log.

IoT Device

You can view IoT device information including the device certificate and security key set during creation of an IoT device.

Initial Firmware

You can create initial firmware by embedding information for each IoT device into the source code.

Update firmware

You can create update firmware by embedding information for each IoT device into the source code.

- > OTA
  - Execute OTA.
- Firmware Log

You can view the operation log of the target board.

In the second s								
All loT devices	loT Device	Initial Firmwar	e Update Firmware	OTA Firm	nware Log			
🕂 👻 🗶 👻	(1) Select IoT devices for which want to create initial firmware							
aws_demos_2	🔀 Ado	d all loT D	evice Name	Private Key	Public Key	Device Certificate		
aws_demos_1		av av	vs_demos_0	0	0	<b>I</b>		
aws_demos_0	🕞 🔁 🕹	d						
	Odd Del	ete						
	📢 Dele	ata all						
	W Den	ete all						
	🎄 Deb	ug						
		-						
	(2) Specify version of firmware							
	(3) Create initial firmware							
	Create ini	tial firmware						
	Create fir	mware is compl	ete.					

#### 2. Operating Environment

- > Windows 8.1, Windows 10, Windows 11 (all are 64-bit version)
- Renesas e<sup>2</sup> studio 2022-04 (or later)
  Note: If your e<sup>2</sup> studio is earlier than 2022-04, update it to 2022-04 or later.
- Renesas Flash Programmer V3.09 (or later)
- OpenSSL: Win64 OpenSSL v3.0.4 Light (or later)
- > Device: RX Family RX65N group
- > Board: RX65N-2MB-Starter-Kit-Plus, RX65N-Cloud-Kit

An AWS account is required to use QE for OTA (technical preview version).



# 3. Obtaining the Product

Download the product from the URL below.

https://www.renesas.com/qe-ota

For how to use the product, refer to the  $e^2$  studio [Help] menu.



## **Revision History**

		Description		
Rev.	Date	Page	Summary	
1.00	Aug.01.22	-	First edition issued	

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