QB-MINI2-RF (Firmware: V1.03)

Release Note

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This document describes the following. See the Setup Guide for notes on using QB-MINI2-RF.

- Limitations and cautions for QB-MINI2-RF
- QB-MINI2-RF operation

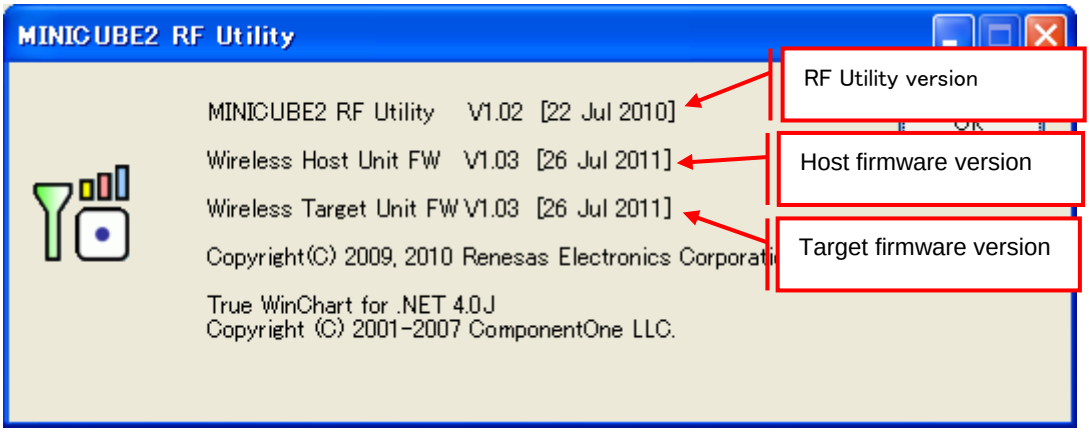
See the following documentation for cautions and restrictions regarding QB-MINI2 (MINICUBE2 system) and the target device.

- QB-MINI2 User's Manual
- QB-MINI2 Release Notes
- User's Manual for target device
- Documentation of limitations of target device

Chapter 1. Product Version

You can check the version of the QB-MINI2-RF using the MINICUBE2 RF Utility ("RF Utility"), as shown below. If wireless communication has been established, you can check the versions of both the host and target firmware. If wireless communication has not been established, you can only check the version of the host firmware.

Figure 1. Checking the Control Code and Firmware Version



When using QB-MINI2-RF, use the following combinations of the firmware and RF Utility versions. Use the same version of the firmware on the host and target. See Chapter 5 for information about updating the firmware.

Table 0-1 Combinations of Firmware and RF Utility Versions

No.	Firmware Version	RF Utility Version
1	V1.00	V1.00
2	V1.01	V1.01
3	V1.03	V1.02

Chapter 2. Product History

Table 2-1 shows the limitations of QB-MINI2-RF, and a history of the changes and additions to the specifications.

Table 2-1 Limitations and Changes/Additions to the Specifications

No.	Limitations and Changes/additions to specifications	Firmware Version		
		1. 00	1. 01	V1. 03
1	Changes to pairing specifications when configuring security	NO	YES	YES
2	Changes to frequency channel count specifications (support for SRRC (China)/KCC (South Korea))	NO	NO	YES

YES: Limitation does not apply or has been removed. Alternately, changes or additions have been made to the specification.

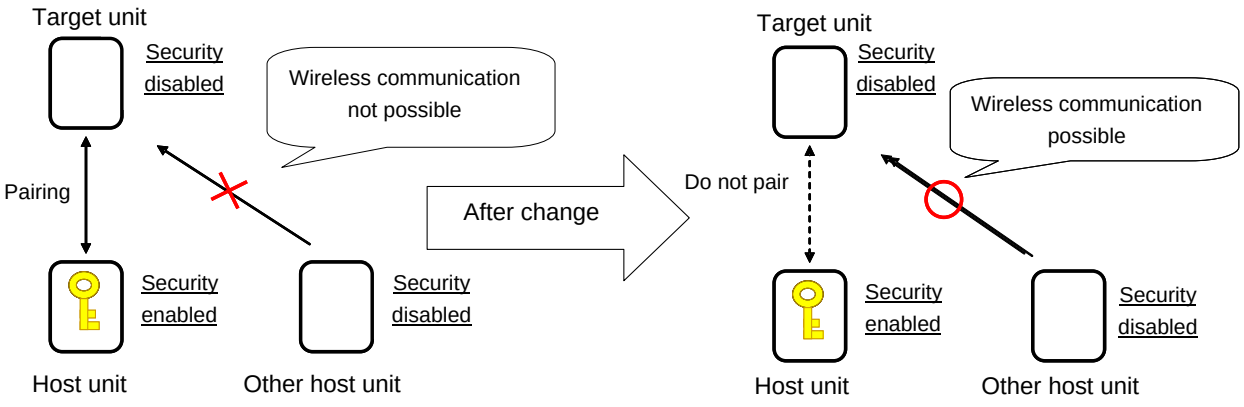
NO: The limitation applies. No changes or additions have been made to the specification.

Chapter 3. Details of Limitations and Additions to the Specifications

No. 1: Changes to pairing specifications when configuring security

[Description] Under the previous specifications, if an attempt was made to establish wireless communication when the security settings of the target and host unit differed, pairing was only performed between these two units, and wireless communication from other hosts was not possible. The specifications have been change to enable such connections.

The specifications were changed in firmware version 1.01 and RF Utility version 1.01.



No. 2 Changes to frequency channel count specifications (support for SRRC (China)/KCC (South Korea)

[Description] Changes have been made to the number of frequency channels as follows so that the product can conform to the regulations of SRRC and KCC on radio-frequency interference:

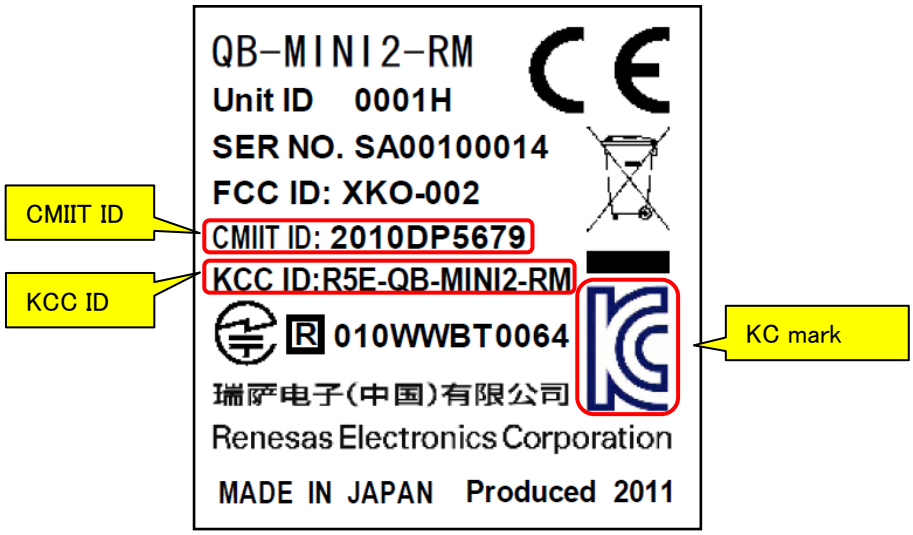
- Before : 15 channels (from Channel 11 through Channel 25)

- After : 14 channels (from Channel 12 through Channel 25)

Here SRRC is the abbreviation of State Radio Regulatory Commission in China, and KCC is that of Korea Communications Commission in South Korea.

Note, however, that for customers to use the QB-MINI2-RF in China or South Korea, these product must conform to the regulations on radio-frequency interference in the country concerned. Whether each product conforms to the regulations can be checked by the markings inscribed on its backside.

- Products with CMIIT ID : Compliant with SRRC (China) regulations
- Products with KCC ID and KC mark : Compliant with KCC (South Korean) regulations



Note: Do not use the product in China or South Korea unless it has these markings.

Chapter 4. Cautions

This chapter describes cautions for the use of the QB-MINI2-RF.

No. 1: OCD0A/OCD0B pins of 78K0 microcontroller

If you use the OCD0A/OCD0B pins (dual use as clock) of a 78K0 microcontroller, as the on-chip debugging interface operation is supported using the built-in oscillator clock and external 4 MHz, 8 MHz, and 16 MHz clocks. Operation with other external clock frequencies is not supported.

No. 2: Operation of software tools when wireless communication is not connected

When performing debugging and other tasks using the QB-MINI2-RF, software tool tasks will sometimes fail to complete when wireless communication is not connected (including when the target system is powered down), leaving the system unresponsive. For example, when you are using the real-time RAM monitoring feature with the debugger, it may not be possible to read variable values. If this happens, you can recover the software tool by restoring wireless communication.
If it is not possible to recover wireless communication, then you will need to kill the software tool's process.

No. 3: Operation when powering up the target system

If you power down the target system while it is connected to a wireless unit, wait until the power voltage falls to the earth potential before powering the target system back up. The wireless unit may fail to boot.

Self diagnostics and firmware updates

You can use the MINICUBE2 diagnostics tool to perform self diagnostics for faults in the QB-MINI2-RF, and update the firmware.

- Performing self diagnostics

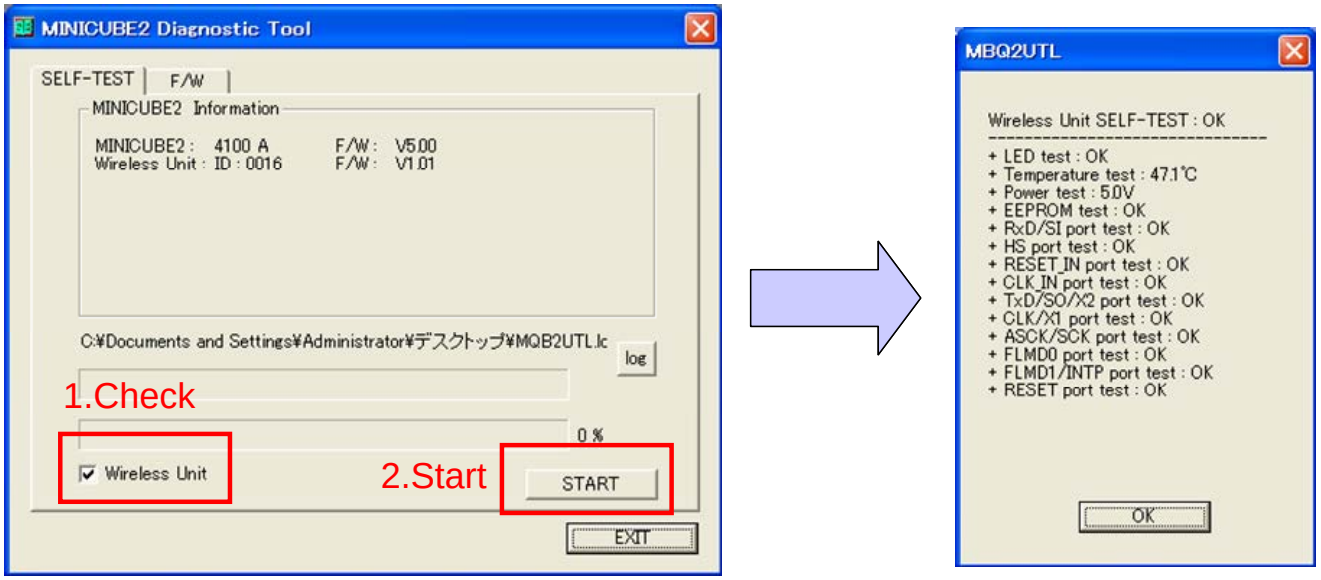
(1) Set the QB-MINI2-RF switch configuration to H, and connect to the MINICUBE2.

(2) Connect the host machine and MINICUBE2 with a USB cable.

(3) Start the MINICUBE2 diagnostics tool, and open the SELF-TEST tab.

(4) As shown below, select the [Wireless Unit] checkbox, and click [START]. The results are displayed. The figure below shows the results when all tests pass. If any of the tests fail, the unit may be malfunctioning, consult a distributor or a Renesas Electronics Corporation sales representative.

(5) After the self diagnostics are complete, unplug the USB cable from the MINICUBE2.



-Updating the firmware

(1) Set the QB-MINI2-RF switch configuration to H, and connect to the MINICUBE2.

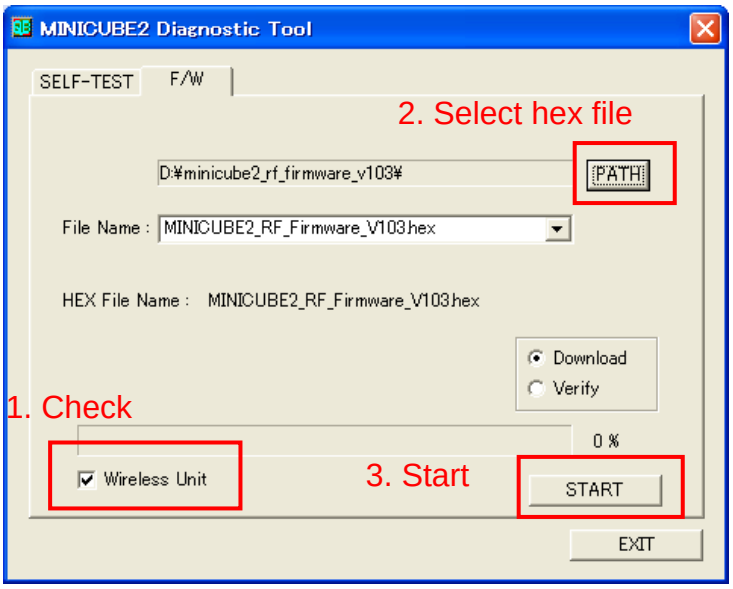
(2) Connect the host machine and MINICUBE2 with a USB cable.

(3) Start the MINICUBE2 diagnostics tool, and open the F/W tab.

(4) As shown below, select the [Wireless Unit] checkbox, click [PATH], and then specify the firmware (HEX file). You can download the latest firmware from the upgrade service indicated in the setup manual.

(5) Click [START], and follow the instructions in the wizard. The firmware update begins.

(6) After the firmware update is complete, unplug the USB cable from the MINICUBE2.



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