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Chapter 1. Overview

This document describes the method for user-implemented upgrading of the QB-78K0IX2 to control code C.

Target product: QB-78K0IX2 (control code: B)

The method of upgrade is as follows:

| Product | Control Code Before Upgrade | Upgrade Method | Control Code After Upgrade |
|------------|-----------------------------|---|----------------------------|
| QB-78K0IX2 | A | Upgrade by sending the product to Renesas Electronics | C |
| | B | Upgrade by user or sending the product to Renesas Electronics | |

Refer to QB-78K0IX2 (Control Code: A, B, C) Release note (R20UT0738E) for upgrade details.

Chapter 2. Upgrade Procedure

The following is the flow until completion of upgrade.

- (1) Preparation of upgrade file
Download and decompress the upgrade file.
- (2) Execution of upgrade
Upgrade IECUBE.
- (3) Confirmation of version after upgrade
Confirm that IECUBE has been upgraded normally.

2.1 Preparation of upgrade file

- (1) Download the upgrade file *qb-78k0ix2_c.zip* from the Renesas Electronics website.

URL: <http://www.renesas.com/iecube>

-> Click "IECUBE for 78K0" -> "Downloads".

Product Category: IECUBE

Product Name: Upgrade tool for QB-78K0IX2 Rev.C

Issue Date: Feb.17.14

- (2) Decompress *qb-78k0ix2_c.zip*; the following files will then be decompressed.

- *qb-78k0ix2_c_dl.exe*: IECUBE upgrade tool
- *r20ut2897jj0100_qb78k0ix2.pdf*: How to Upgrade QB-78K0IX2 (Japanese)
- *r20ut2897ej0100_qb78k0ix2.pdf*: How to Upgrade QB-78K0IX2 (English) * This document
- *r20ut0738jj0200_qb78k0ix2.pdf*: Release note (Japanese)
- *r20ut0738ej0200_qb78k0ix2.pdf*: Release note (English)

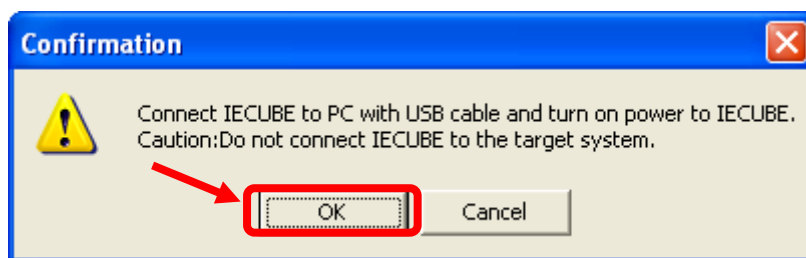
2.2 Execution of upgrade

- (1) Connect IECUBE to the host machine, using a USB interface cable.
- (2) Connect the AC adapter and turn on the power to IECUBE.

Caution

- The USB driver for IECUBE must be installed in the host machine.
- The USB driver for IECUBE is included with the installer of the debugger.
- Do not connect IECUBE to the target system at this time. If connected, disconnect it from the target system before power-on.

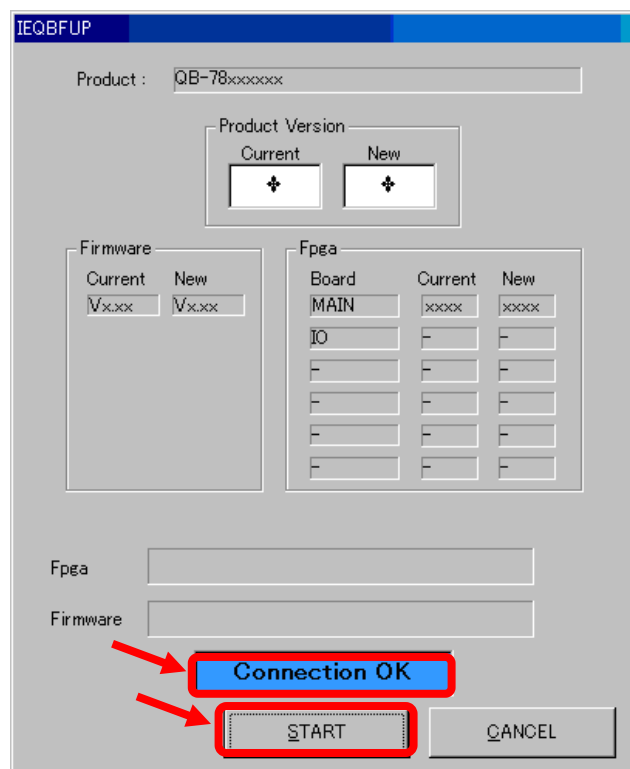
- (3) Start *qb-78k0ix2_c_dl.exe* that has been decompressed in 2.1 Preparation of upgrade file; the following window will then appear, so click the OK button.



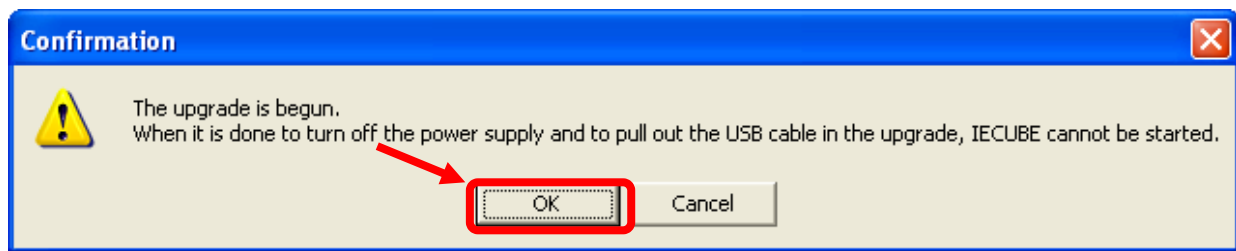
- (4) The following window will appear. Confirm that the message "Connection OK" is displayed and then click the START button.

Caution

- The following screen is an example. The display may be different depending on the IECUBE used.



(5) The following message will be displayed. Click the OK button.

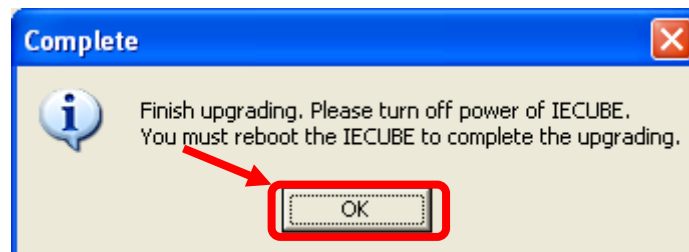


- Caution**
- Since initial processing takes some time, the progress bar may seem to be stopped.
 - Do not turn off the power to IECUBE nor disconnect the USB interface cable during upgrading.
 - The time required for downloading varies depending on the host interface, as shown below.

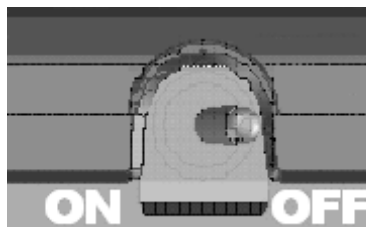
| Host Interface | Time Required for Downloading |
|----------------|-------------------------------|
| USB 2.0 | Approximately 6 minutes |
| USB 1.1 | Approximately 8 minutes |

- If an abnormal state occurs, such as no response getting sent from upgrade tool for more than 20 minutes, forcibly terminate upgrade tool, turn off the power to IECUBE, and then start from step (1) again. If it does not resolve the problem, consult a distributor or a Renesas Electronics Corporation sales representative.

(6) The following message will be displayed when upgrading is complete. Click the OK button.



(7) Turn off the power to IECUBE.

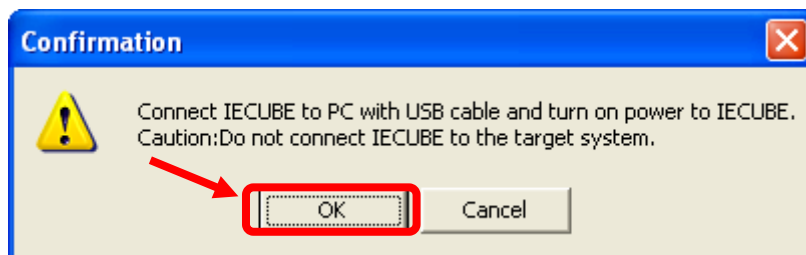


- Caution**
- Be sure to turn off the power to IECUBE after upgrading is complete, then proceed to 2.3 Confirmation of version after upgrade.

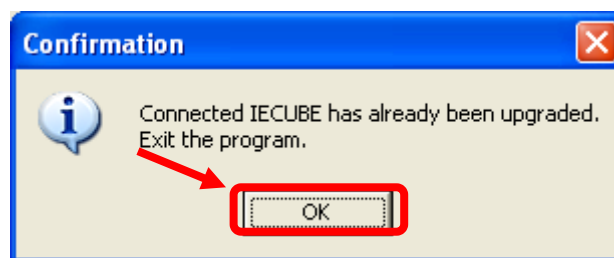
2.3 Confirmation of version after upgrade

※ If you have already finished following 1) and 2), please begin with 3).

- (1) Connect IECUBE to the host machine, using a USB interface cable.
- (2) Connect the AC adapter and IECUBE.
- (3) Turn on the power to IECUBE.
- (4) Start *qb-78k0ix2_c_dl.exe* that has been decompressed in **2.1 Preparation of upgrade file**; the following window will then appear, so click the OK button.



- (5) The following window will appear. Click the OK button.



- (6) Turn off the power to IECUBE.
Upgrade is thus completed.

Chapter 3. Message

If an error message is displayed, take an appropriate measure according to the method described in the message. If it does not resolve the problem, consult a distributor or a Renesas Electronics Corporation sales representative.

Chapter 4. Revision History

| Document Number | Issued on | Description |
|-----------------|-------------------|----------------|
| R20UT2897EJ0100 | February 17, 2014 | Newly created. |

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