

## Contents

Chapter 1.	Overview.....	2
Chapter 2.	Upgrade Procedure.....	3
2.1	Preparation of upgrade file .....	3
2.2	Execution of upgrade .....	4
2.3	Confirmation of version after upgrade .....	6
Chapter 3.	Message .....	7
Chapter 4.	Revision History.....	7

## 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)

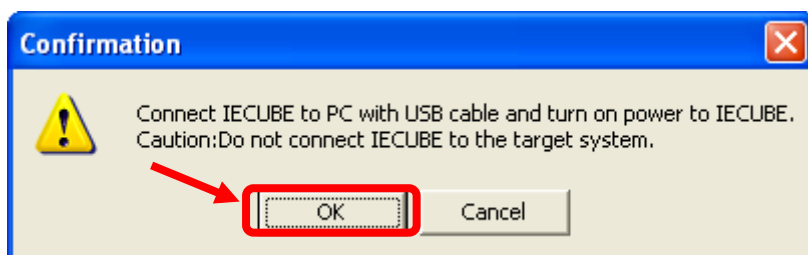
## 2.2 Execution of upgrade

- (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.

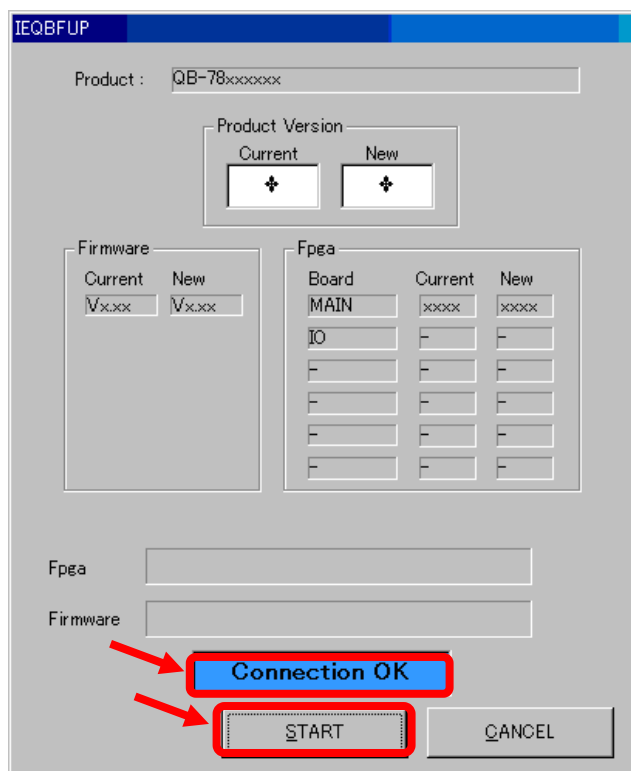
- The USB driver for IECUBE is included with the installer of the debugger.
- Do not connect IECUBE to the target system at this time. If connected, disconnect it from the target system before power-on.

- (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.

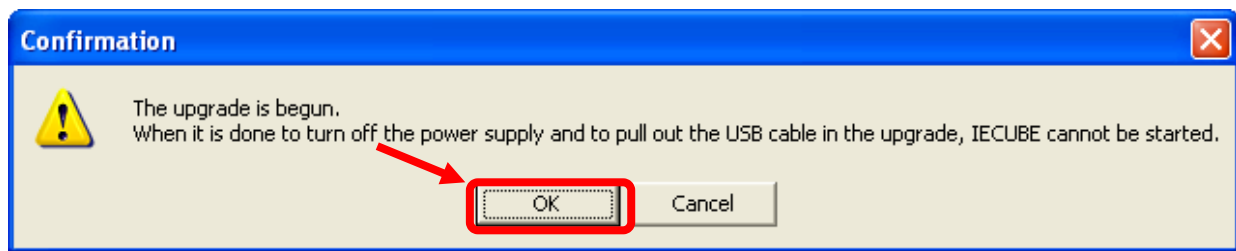


- (4) The following window will appear. Confirm that the message "Connection OK" is displayed and then click the START button.

**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.

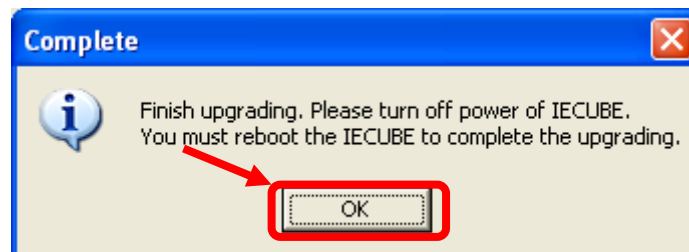


- Caution**
- Since initial processing takes some time, the progress bar may seem to be stopped.
  - Do not turn off the power to IECUBE nor disconnect the USB interface cable during upgrading.
  - The time required for downloading varies depending on the host interface, as shown below.

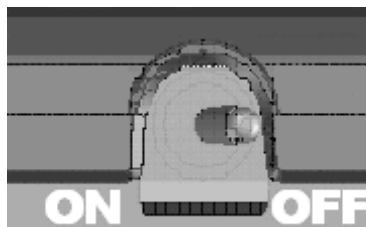
Host Interface	Time Required for Downloading
USB 2.0	Approximately 6 minutes
USB 1.1	Approximately 8 minutes

- 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.

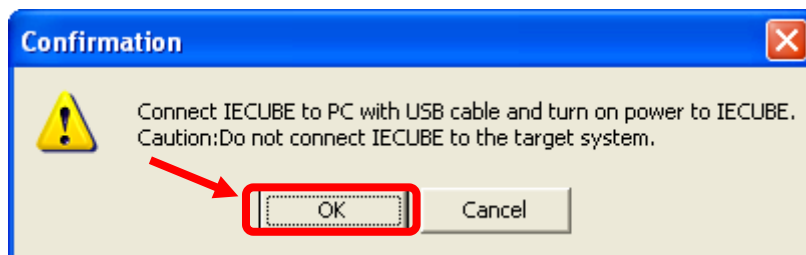


- Caution**
- Be sure to turn off the power to IECUBE after upgrading is complete, then proceed to 2.3 Confirmation of version after upgrade.

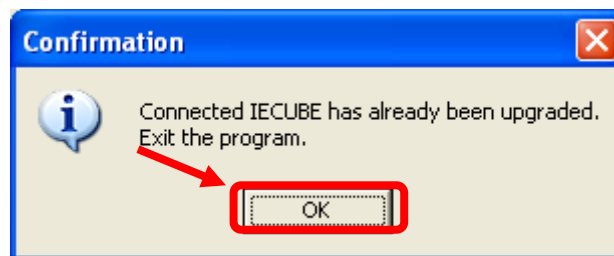
## 2.3 Confirmation of version after upgrade

※ 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.

## Notice

1. Descriptions of circuits, software and other related information in this document are provided only to illustrate the operation of semiconductor products and application examples. You are fully responsible for the incorporation of these circuits, software, and information in the design of your equipment. Renesas Electronics assumes no responsibility for any losses incurred by you or third parties arising from the use of these circuits, software, or information.
  2. Renesas Electronics has used reasonable care in preparing the information included in this document, but Renesas Electronics does not warrant that such information is error free. Renesas Electronics assumes no liability whatsoever for any damages incurred by you resulting from errors in or omissions from the information included herein.
  3. Renesas Electronics does not assume any liability for infringement of patents, copyrights, or other intellectual property rights of third parties by or arising from the use of Renesas Electronics products or technical information described in this document. No license, express, implied or otherwise, is granted hereby under any patents, copyrights or other intellectual property rights of Renesas Electronics or others.
  4. You should not alter, modify, copy, or otherwise misappropriate any Renesas Electronics product, whether in whole or in part. Renesas Electronics assumes no responsibility for any losses incurred by you or third parties arising from such alteration, modification, copy or otherwise misappropriation of Renesas Electronics product.
  5. Renesas Electronics products are classified according to the following two quality grades: "Standard" and "High Quality". The recommended applications for each Renesas Electronics product depends on the product's quality grade, as indicated below.  
"Standard": Computers; office equipment; communications equipment; test and measurement equipment; audio and visual equipment; home electronic appliances; machine tools; personal electronic equipment; and industrial robots etc.  
"High Quality": Transportation equipment (automobiles, trains, ships, etc.); traffic control systems; anti-disaster systems; anti-crime systems; and safety equipment etc.  
Renesas Electronics products are neither intended nor authorized for use in products or systems that may pose a direct threat to human life or bodily injury (artificial life support devices or systems, surgical implantations etc.), or may cause serious property damages (nuclear reactor control systems, military equipment etc.). You must check the quality grade of each Renesas Electronics product before using it in a particular application. You may not use any Renesas Electronics product for any application for which it is not intended. Renesas Electronics shall not be in any way liable for any damages or losses incurred by you or third parties arising from the use of any Renesas Electronics product for which the product is not intended by Renesas Electronics.
  6. You should use the Renesas Electronics products described in this document within the range specified by Renesas Electronics, especially with respect to the maximum rating, operating supply voltage range, movement power voltage range, heat radiation characteristics, installation and other product characteristics. Renesas Electronics shall have no liability for malfunctions or damages arising out of the use of Renesas Electronics products beyond such specified ranges.
  7. Although Renesas Electronics endeavors to improve the quality and reliability of its products, semiconductor products have specific characteristics such as the occurrence of failure at a certain rate and malfunctions under certain use conditions. Further, Renesas Electronics products are not subject to radiation resistance design. Please be sure to implement safety measures to guard them against the possibility of physical injury, and injury or damage caused by fire in the event of the failure of a Renesas Electronics product, such as safety design for hardware and software including but not limited to redundancy, fire control and malfunction prevention, appropriate treatment for aging degradation or any other appropriate measures. Because the evaluation of microcomputer software alone is very difficult, please evaluate the safety of the final products or systems manufactured by you.
  8. Please contact a Renesas Electronics sales office for details as to environmental matters such as the environmental compatibility of each Renesas Electronics product. Please use Renesas Electronics products in compliance with all applicable laws and regulations that regulate the inclusion or use of controlled substances, including without limitation, the EU RoHS Directive. Renesas Electronics assumes no liability for damages or losses occurring as a result of your noncompliance with applicable laws and regulations.
  9. Renesas Electronics products and technology may not be used for or incorporated into any products or systems whose manufacture, use, or sale is prohibited under any applicable domestic or foreign laws or regulations. You should not use Renesas Electronics products or technology described in this document for any purpose relating to military applications or use by the military, including but not limited to the development of weapons of mass destruction. When exporting the Renesas Electronics products or technology described in this document, you should comply with the applicable export control laws and regulations and follow the procedures required by such laws and regulations.
  10. It is the responsibility of the buyer or distributor of Renesas Electronics products, who distributes, disposes of, or otherwise places the product with a third party, to notify such third party in advance of the contents and conditions set forth in this document, Renesas Electronics assumes no responsibility for any losses incurred by you or third parties as a result of unauthorized use of Renesas Electronics products.
  11. This document may not be reproduced or duplicated in any form, in whole or in part, without prior written consent of Renesas Electronics.
  12. Please contact a Renesas Electronics sales office if you have any questions regarding the information contained in this document or Renesas Electronics products, or if you have any other inquiries.
- (Note 1) "Renesas Electronics" as used in this document means Renesas Electronics Corporation and also includes its majority-owned subsidiaries.
- (Note 2) "Renesas Electronics product(s)" means any product developed or manufactured by or for Renesas Electronics.



Renesas Electronics Corporation

### SALES OFFICES

<http://www.renesas.com>

Refer to "<http://www.renesas.com/>" for the latest and detailed information.

#### **Renesas Electronics America Inc.**

2880 Scott Boulevard Santa Clara, CA 95050-2554, U.S.A.  
Tel: +1-408-588-6000, Fax: +1-408-588-6130

#### **Renesas Electronics Canada Limited**

1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada  
Tel: +1-905-898-5441, Fax: +1-905-898-3220

#### **Renesas Electronics Europe Limited**

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.  
Tel: +44-1628-651-700, Fax: +44-1628-651-804

#### **Renesas Electronics Europe GmbH**

Arcadiastrasse 10, 40472 Düsseldorf, Germany  
Tel: +49-211-65030, Fax: +49-211-6503-1327

#### **Renesas Electronics (China) Co., Ltd.**

7th Floor, Quantum Plaza, No.27 ZhiChunLu Haidian District, Beijing 100083, P.R.China  
Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

#### **Renesas Electronics (Shanghai) Co., Ltd.**

Unit 301, Tower A, Central Towers, 555 LanGao Rd., Putuo District, Shanghai, China  
Tel: +86-21-2226-0888, Fax: +86-21-2226-0999

#### **Renesas Electronics Hong Kong Limited**

Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong  
Tel: +852-2886-9318, Fax: +852 2886-9022/9044

#### **Renesas Electronics Taiwan Co., Ltd.**

13F, No. 363, Fu Shing North Road, Taipei, Taiwan  
Tel: +886-2-8175-9600, Fax: +886 2-8175-9670

#### **Renesas Electronics Singapore Pte. Ltd.**

80 Bendemeer Road, Unit #06-02 Hyflux Innovation Centre Singapore 339949  
Tel: +65-6213-0200, Fax: +65-6213-0300

#### **Renesas Electronics Malaysia Sdn.Bhd.**

Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jln Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia  
Tel: +60-3-7955-9390, Fax: +60-3-7955-9510

#### **Renesas Electronics Korea Co., Ltd.**

12F., 234 Teheran-ro, Gangnam-Gu, Seoul, 135-080, Korea  
Tel: +82-2-558-3737, Fax: +82-2-558-5141