To our customers,

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April 1st, 2010
Renesas Electronics Corporation

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QB-78K0SKX1
(Control Code: A, B, C)

Operating Precautions

Be sure to read this document before using the product.

1. Product Version......................................................................................................................................2
2. Restrictions ............................................................................................................................................3
3. Additions and Changes to Specifications...............................................................................................4
4. Cautions .................................................................................................................................................4
5. Corrections to User’s Manual.................................................................................................................5
Operating Precautions for QB-78K0SKX1

This document describes the following items. Refer to the user’s manual for cautions on using an in-circuit emulator.

- Restrictions not applicable to the target device but applicable to an in-circuit emulator
- Restrictions applicable to both the target device and an in-circuit emulator but the correction is planned only for the in-circuit emulator

Also refer to the following documents for the restrictions in the target device.

- User’s manual of target device
- Restrictions notification document for target device

1. Product Version

The product versions of NEC Electronics in-circuit emulators are indicated by a control code. The control code is the second digit from the left in the 10-digit serial number. If the product has been upgraded, the control code can be checked by selecting [About] from the [Help] menu while the ID78K0S-QB is running. “X” in version information “IECUBE **** X F/W: V*.**” is the control code.

Figure 1. Checking Control Code (Label on QB-78K0SKX1)

In this case, the control code is C.

Figure 2. Checking Control Code (ID78K0S-QB)

In this case, the control code is C.
2. Restrictions

2.1 List of restrictions

<table>
<thead>
<tr>
<th>No.</th>
<th>Restrictions</th>
<th>Control Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1</td>
<td>A program does not stop at a software breakpoint</td>
<td>×</td>
</tr>
<tr>
<td>2</td>
<td>Restriction on A/D conversion</td>
<td>×</td>
</tr>
</tbody>
</table>

*: Not relevant, ×: Applicable, O: Corrected

2.2 Details of restrictions

No. 1  A program does not stop at a software breakpoint

[Description]
A program does not stop at a software breakpoint that is set to an instruction following the instruction whose instruction code is 0A0Axx. Moreover, the instruction is not executed correctly.

Example: Assemble window display

```
* 0180 0A0A0D SET1 P13.0H
B 0183 0A5A04 SET1 P4.5H
* 0186 0A3A0C SET1 P12.3H
```

[Workaround]
There is no workaround.

[Correction]
This issue will be corrected in QB-78K0SKX1 with control code B and later.

No. 2  Restriction on A/D conversion

[Description]
The result of the first A/D conversion may be invalid when either of the following conditions is satisfied.

1. The setting of the analog input channel specification register (ADS) is changed during A/D conversion
2. A/D conversion is stopped and then restarted

[Workaround]
Ignore the first A/D conversion result.

[Correction]
This issue will be corrected in QB-78K0SKX1 with control code C and later. In the case of (1), however, the first A/D conversion may take additional time (about 3 μs).
3. Additions and Changes to Specifications

3.1 List of additions and changes in specifications

<table>
<thead>
<tr>
<th>No.</th>
<th>Restrictions</th>
<th>Control Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Addition of support for $\mu$PD78F9500, $\mu$PD78F9501 and $\mu$PD78F9502</td>
<td>× O O</td>
</tr>
</tbody>
</table>

3.2 Details of additions and changes in specifications

No. 1 Addition of support for $\mu$PD78F9500, $\mu$PD78F9501 and $\mu$PD78F9502

[Description]
The $\mu$PD78F9500, $\mu$PD78F9501 and $\mu$PD78F9502 are supported in QB-78K0SKX1 with control code B and later.

[Caution]
When debugging the $\mu$PD78F9500, $\mu$PD78F9501 or $\mu$PD78F9502 as the target device by using QB-78K0SKX1 with control code B and later, use the device file included in the DF789234 (package version: V3.10 or later).

<table>
<thead>
<tr>
<th>Control Code</th>
<th>Device File (DF789234)</th>
<th>Package Version</th>
<th>Target Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>B and later</td>
<td>78K0S/KU1+</td>
<td>V3.10 or later</td>
<td>$\mu$PD78F9200, $\mu$PD78F9201, $\mu$PD78F9202, $\mu$PD78F9500, $\mu$PD78F9501, $\mu$PD78F9502</td>
</tr>
<tr>
<td></td>
<td>78K0S/KY1+</td>
<td></td>
<td>$\mu$PD78F9210, $\mu$PD78F9211, $\mu$PD78F9212, $\mu$PD78F9510, $\mu$PD78F9511, $\mu$PD78F9512</td>
</tr>
<tr>
<td></td>
<td>78K0S/KA1+</td>
<td></td>
<td>$\mu$PD78F9221, $\mu$PD78F9222</td>
</tr>
<tr>
<td></td>
<td>78K0S/KB1+</td>
<td></td>
<td>$\mu$PD78F9232, $\mu$PD78F9234</td>
</tr>
<tr>
<td>A</td>
<td>78K0S/KU1+</td>
<td>V3.00</td>
<td>$\mu$PD78F9200, $\mu$PD78F9201, $\mu$PD78F9202</td>
</tr>
<tr>
<td></td>
<td>78K0S/KY1+</td>
<td></td>
<td>$\mu$PD78F9210, $\mu$PD78F9211, $\mu$PD78F9212, $\mu$PD78F9510, $\mu$PD78F9511, $\mu$PD78F9512</td>
</tr>
<tr>
<td></td>
<td>78K0S/KA1+</td>
<td></td>
<td>$\mu$PD78F9221, $\mu$PD78F9222, $\mu$PD78F9521, $\mu$PD78F9522</td>
</tr>
<tr>
<td></td>
<td>78K0S/KB1+</td>
<td></td>
<td>$\mu$PD78F9232, $\mu$PD78F9234, $\mu$PD78F9532, $\mu$PD78F9534</td>
</tr>
</tbody>
</table>

4. Cautions

No. 1 Supported debugger version

[Description]
Use ID78K0S-QB V3.00 or later and DF789234 V3.10 or later for the QB-78K0SKX1 with control code B and later.
5. Corrections to User’s Manual

Corrections to the QB-78K0SKX1 User’s Manual (document number: U18219EJ, 3rd edition) are described below.

Correction of restrictions

- Location
  CHAPTER 4 RESTRICTIONS on page 30

- Description

Before correction:
- Clock oscillation or clock input via a resonator on the target system is not supported. The clock differs between the device and the tool (QB-78K0SKX1) according to the option byte (OSCSEL1, OSCSEL0) setting as follows.

When the target device is other than the μPD78F950x

<table>
<thead>
<tr>
<th>Option Byte</th>
<th>Device</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 0</td>
<td>Crystal/ceramic oscillation clock</td>
<td>System clock on QB-78K0SKX1</td>
</tr>
<tr>
<td>0 1</td>
<td>External clock input</td>
<td>System clock on QB-78K0SKX1</td>
</tr>
<tr>
<td>1 x</td>
<td>Internal high-speed oscillation clock</td>
<td>Internal high-speed oscillation clock of QB-78K0SKX1</td>
</tr>
</tbody>
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When the target device is the μPD78F950x

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<td></td>
<td></td>
<td></td>
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<tr>
<td>0 0</td>
<td>Internal high-speed oscillation clock</td>
<td>System clock on QB-78K0SKX1</td>
</tr>
<tr>
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<tr>
<td>1 x</td>
<td>Internal high-speed oscillation clock</td>
<td>Internal high-speed oscillation clock of QB-78K0SKX1</td>
</tr>
</tbody>
</table>

Note If OSCSEL1 and 0 are set to 0 and 0, set the setting in the Configuration dialog box of the debugger to “None” or “8 MHz”.
After correction:

- Clock oscillation or clock input via a resonator on the target system is not supported. The clock differs between the device and the tool (QB-78K0SKX1) according to the option byte (OSCSEL1, OSCSEL0) setting as follows.

### When the target device is other than the \( \mu PD78F950x \)

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<td></td>
</tr>
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<td></td>
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### When the target device is the \( \mu PD78F950x \)

<table>
<thead>
<tr>
<th>Option Byte</th>
<th>Device</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 0</td>
<td>Setting prohibited</td>
<td>Setting prohibited</td>
</tr>
<tr>
<td>0 1</td>
<td>External clock input</td>
<td>System clock on QB-78K0SKX1</td>
</tr>
<tr>
<td>1 x</td>
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