

## Customer Notification

# Applilet3 for 78K0R/Kx3-L

## Applilet3 for 78K0R/Kx3-L

### Operating Precautions

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**78K0R/KC3-L:  $\mu$ PD78F1000, 78F1001, 78F1002, 78F1003**

**78K0R/KD3-L:  $\mu$ PD78F1004, 78F1005, 78F1006**

**78K0R/KE3-L:  $\mu$ PD78F1007, 78F1008, 78F1009**

**78K0R/KF3-L:  $\mu$ PD78F1010, 78F1011, 78F1012**

**78K0R/KG3-L:  $\mu$ PD78F1013, 78F1014**

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## A) Table of Operating Precautions for AP3-78K0RKX3L-EE

Table A-1 Table description

| No.                | Outline   | Version | AP3-78K0RKX3A-EE |       |       |
|--------------------|---|---------|------------------|-------|-------|
|                    |   |         | V1.10            | V2.00 | V2.01 |
| <a href="#">A1</a> | Missing API Reference   |         | ✓                | ✓     | ✓     |
| <a href="#">A2</a> | A/D GUI setting not saved correctly   |         | -                | ✗     | ✓     |
| <a href="#">A3</a> | TAUx: 0% and 100% duty cycle on PWM not selectable  |         | -                | ✗     | ✗     |
| <a href="#">A4</a> | Maximum Baudrate for CSImn is set to wrong value  |         | -                | ✗     | ✗     |
| <a href="#">A5</a> | Unused modules not erased from project file   |         | -                | ✗     | ✗     |
| <a href="#">A6</a> | TAUx Channel 7 Output Pin configuration in slave mode missing   |         | -                | ✗     | ✗     |
| <a href="#">A7</a> | Generated I <sup>2</sup> C Start condition of SAU function may violate I <sup>2</sup> C specification |         | -                | ✗     | ✗     |
| <a href="#">A8</a> | Generated I <sup>2</sup> C Stop condition of SAU function may violate I <sup>2</sup> C specification  |         | -                | ✗     | ✗     |

- ✓: Not applicable
- ✗: Applicable
- : Not checked

## B) Description of Operating Precautions for AP3-78K0RKX3L-EE

Table B-1 No. A1 Missing API Reference

|   |
|---|
| <p><u>Details</u></p> <p>The online help consisting of User Guide and API reference is not available.</p> <p><u>Workaround</u></p> <p>To get a list of the possible API functions, please generate an output report. The output report includes two files generated in the project folder:</p> <ul style="list-style-type: none"><li>- function.html -&gt; summary of all API functions<br/>(used and unused functions of the current application)</li><li>- macro.html -&gt; summary of all preprocessor symbols</li></ul> |
|---|

Table B-2 No. A2 A/D GUI setting not saved correctly

|   |
|---|
| <p><u>Details</u></p> <p>The GUI setting of "Conversion time" is not saved correctly in the project file. When restarting Applilet3 the setting is set back to the default value.</p> <p><u>Workaround</u></p> <p>Manually select the correct value before generating new code.</p> |
|---|

Table B-3 No. A3 TAUx: 0% and 100% duty cycle on PWM not selectable

|   |
|---|
| <p><u>Details</u></p> <p>When selecting (multiple) PWM output a duty cycle of 0% or 100% can not be selected in the slave channel menu.</p> <p><u>Workaround</u></p> <p>Call "TAU<sub>x</sub>_Channely_ChangeDuty" with the duty cycle of 0 or 100 as parameter at the beginning of the program.</p> <p>Where <b>x</b> is the TAU and <b>y</b> is the TAU channel number.</p> |
|---|

**Table B-4 No. A4 Maximum Baudrate for CSImn is set to wrong value**

|   |
|---|
| <p><u>Details</u></p> <p>The maximal configurable Baudrate is set to 400000 bps, even if faster Baudrate is possible by the controller settings.</p> <p><u>Workaround</u></p> <p>Manually set up the correct Baudrate after generating Applilet code.</p> |
|---|

**Table B-5 No. A5 Unused modules not erased from project file**

|   |
|---|
| <p><u>Details</u></p> <p>If a peripheral is disabled after it was used and code was generated at least once, the regarding source files are not excluded from the project.</p> <p><u>Workaround</u></p> <p>Manually exclude / erase the source files from the IAR Embedded Workbench project.</p> |
|---|

**Table B-6 No. A6 TAU0 Channel 7 Output Pin configuration in slave mode missing**

|  |
|--|
| <p><u>Details</u></p> <p>When using TAU0 channel 7 in any kind of possible slave output pin the Port Pin configuration is missing.</p> <p><u>Workaround</u></p> <p>Manually adept the right output pin configuration to the TAUx_Init() function</p> |
|--|

**Table B-7 No. A7 Generated I<sup>2</sup>C Start condition function of SAU may violate I<sup>2</sup>C specification**

|  |
|--|
| <p><u>Details</u></p> <p>Applilet generated code to send the start condition (<code>void IICxy_StartCondition(void)</code>) of an I<sup>2</sup>C frame does not take care to wait for <math>t_{HD,STA}</math>, specified by the I<sup>2</sup>C specification. The specified wait times are 4<math>\mu</math>s for Normal and 0.6<math>\mu</math>s for Fast mode.</p> <p><u>Workaround</u></p> <p>Set up a wait loop between “clear IICxy SDA” and “clear IICxy SCL”, which meets the I<sup>2</sup>C specification, manually.</p> |
|--|

**Table B-8 No. A8** Generated I<sup>2</sup>C Stop condition function of SAU may violate I<sup>2</sup>C specification

Details

Applilet generated code to send the stop condition (`void IICxy_StopCondition(void)`) of an I<sup>2</sup>C frame does not take care to wait for  $t_{SU;STO}$ , specified by the I<sup>2</sup>C specification. The specified wait times are 4 $\mu$ s for Normal and 0.6 $\mu$ s for Fast mode.

Workaround

Set up a wait loop between “set IICxy SCL” and “set IICxy SDA”, that meets the I<sup>2</sup>C specification, manually.



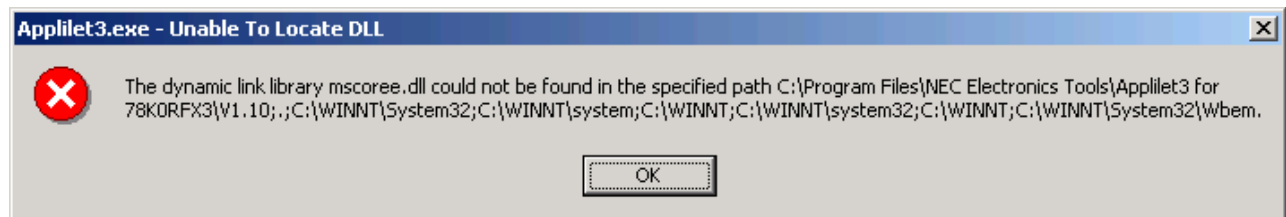
### C) Supported Devices

| ROM [KB] | 78K0R/KC3-L |            | 78K0R/KD3-L | 78K0R/KE3-L | 78K0R/KF3-L | 78K0R/KG3-L |
|----------|-------------|------------|-------------|-------------|-------------|-------------|
|          | 44 pins     | 48 pins    | 52 pins     | 64 pins     | 80 pins     | 100 pins    |
| 128      | -           | -          | -           | -           | μPD78F1012  | μPD78F1014  |
| 96       | -           | -          | -           | -           | μPD78F1011  | μPD78F1013  |
| 64       | μPD78F1003  | μPD78F1003 | μPD78F1006  | μPD78F1009  | μPD78F1010  | -           |
| 48       | μPD78F1002  | μPD78F1002 | μPD78F1005  | μPD78F1008  | -           | -           |
| 32       | μPD78F1001  | μPD78F1001 | μPD78F1004  | μPD78F1007  | -           | -           |
| 16       | μPD78F1000  | -          | -           | -           | -           | -           |

|               |
|---------------|
| Supported     |
| Not supported |

### D) Supported Operating Systems

Applilet supports Windows XP, Windows Vista and Windows 7.  
 For operation the Microsoft .NET Framework Version 2.0 Redistributable Package is necessary.  
 If the Microsoft .NET Framework Version 2.0 Redistributable Package is not installed, the following Windows error message will occur during application start:



The Microsoft .NET Framework Version 2.0 Redistributable Package can be downloaded from the Microsoft Corporation WEB Site: <http://www.microsoft.com/downloads>

Download Package: .NET Framework Version 2.0 Redistributable Package (x86)

And, please use .NET Framework version 2.0 Redistributable package with latest patches.

## E) Supported Development Environments

| <b>Renesas Electronics Development Tools</b> |                |
|--|----------------|
| <b>Product Name</b>                          | <b>Version</b> |
| Project Manager PM+                          | V6.30 or later |
| CC78K0                                       | V4.00 or later |
| RA78K0                                       | V4.01 or later |
| ID78K0R-QB                                   | V3.10 or later |
| Device File Package DF78F0588                | V2.00 or later |

| <b>IAR Systems Development Tools</b> |                 |
|--------------------------------------|-----------------|
| <b>Product Name</b>                  | <b>Version</b>  |
| Embedded Workbench for 78K EW78K     | V4.62a or later |

## F) Valid Specification

| <b>Item</b> | <b>Date published</b> | <b>Document No.</b> | <b>Document Title</b>     |
|-------------|-----------------------|---------------------|---------------------------|
| 1           | March 2010            | U20024EJ2V0UD00     | 78K0R/Kx3-L User's Manual |
|             |                       |                     |                           |

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## H) Revision History

| Item | Date published | Document No.               | Comment  |
|------|----------------|----------------------------|--|
| 1    | 04-Feb-2009    | U20143EE1V0IF00            | First release.   |
| 2    | 31-May-2010    | R20TU0007ED0200_K0RKx3LURN | Update   |
| 3    | 28-Jul-2010    | R20TU0007ED0201_K0RKx3LURN | Item <a href="#">A2</a> added, Item <a href="#">A1</a> fixed |
| 4    | 06-Sep-2010    | R20TU0007ED0202_K0RKx3LURN | Item <a href="#">A2</a> fixed                                |
| 5    | 05-Oct-2010    | R20TU0007ED0203_K0RKx3LURN | Item <a href="#">A3</a> added                                |
| 6    | 05-Jan-2011    | R20TU0007ED0204_K0RKx3LURN | Item <a href="#">A4</a> and <a href="#">A5</a> added         |
| 7    | 01-Feb-2011    | R20TU0007ED0205_K0RKx3LURN | Item <a href="#">A6</a> added                                |
| 8    | 20-Jun-2011    | R20TU0007ED0206_K0RKx3LURN | Item <a href="#">A7</a> and <a href="#">A8</a> added         |

