NEC Microcomputer Technical Information

CP(K), O

IE-780034-NS-EM1 Emulation Board for μPD780024A, 780034A, 780024AY, 780034AY Subseries Upgrade		Document No.	SBG-TT-0076-E	1/1
		Date issued	March 19, 2002	
		Issued by	Microcomputer Tool Group Sales Engineering Div. NEC Electron Devices NEC Corporation	
		Document classification		Usage restriction
			√	Upgrade
Related documents	User's manual: U14642EJ2V0UM00 SUD-TT-0104-1-E			Document modification
				Other notification

1. Affected product

Product	Outline	Control code [Note]
IE-780034-NS-EM1	Emulation board for μ PD780024A, 780034A, 780024AY, 780034AY Subseries	A to H

It is not necessary to upgrade a control code J product.

2. Details of upgrade

The specification described below will be added. After upgrading, the control code will be J.

No. 9 52-pin LQFP (10 x 10 mm) GB package newly added to the μPD780024A, 780034A Subseries now supported

Control code: A to H

It is not necessary to upgrade the IE-780034-NS-EM1 to control code J if the 52-pin LQFP (10 x 10 mm) GB package is not used.

3. Upgrade petition period

From April 20, 2002.

The upgrade described herein will be provided for free for a period of one year from the above date. After the free upgrade period expires, upgrade will be available for a fee. You are advised to take advantage of the free upgrade offer during the free upgrade period.

Note The "control code" is the second digit from the left in the 10-digit serial number in the warranty supplied with the in-circuit emulator you purchased (if it has not been upgraded). If the in-circuit emulator has been upgraded, a label indicating the new version is attached to the in-circuit emulator and the x in V-UP LEVEL x on this label indicates the control code.

Notes on Using IE-780034-NS-EM1

1. Product Version

Control Code	Peripheral EVA Chip
A, B	uPD78F0034CW (ES 3.1)
C, D	uPD78F0034CW (DS 3.0 or later)
E, F, G, H, J	uPD78F0034ACW (1.0)

2. Product History

No.	Bugs and Changes/Additions to Specifications	Control Code [Note]								
		A	B	C	D	E	F	G	H	J
1	The emulator may be damaged if a voltage exceeding the VDD rating is applied to the VPP pin.	×	√	√	√	√	√	√	√	√
2	The integrated debugger does not start when the IE-780034-NS-EM1 is used with the IE-78001-R-A.	×	×	√	√	√	√	√	√	√
3	A/D conversion may stop if repeatedly performed when the IE-780034-NS-EM1 is used with the IE-78001-R-A.	×	×	×	√	√	√	√	√	√
4	Bugs up to and including μPD78F0034CW (ES 3.2): • Key return interrupt • Incorrect operation of TM5 • A/D conversion when operating at 2.7 V or lower. • Other bugs	×	×	×	×	√	√	√	√	√
5	An illegal interrupt may be generated.	×	×	×	×	×	√	√	√	√
6	A/D conversion may stop when operating at 2.7 V or lower.	√	√	√	√	×	√	√	√	√
7	An UART0 transmission interrupt may not occur during UART transmission when the IE-780034-NS-EM1is used with the IE-78001-R-A, even if data is written to the TXS0 register.	×	×	×	×	×	×	√	√	√
8	The key return interrupt request flag (KRIF) may be set illegally.	×	×	×	×	×	×	×	√	√
9	52-pin LQFP (10 x 10 mm) GB package newly added to the μPD780024A, 780034A Subseries now supported	–	–	–	–	–	–	–	–	√

×: Applicable, √: Not applicable (addition of specification), –: Not relevant

3. Details of Bugs and Additions to Specifications

No. 1 The emulator may be damaged if a voltage exceeding the V_{DD} rating is applied to the V_{PP} pin.

[Description]

The emulator may be damaged if a voltage exceeding the V_{DD} rating is applied to the V_{PP} pin and overcurrent flows.

[Workaround]

Do not apply a voltage exceeding the V_{DD} rating.

This bug has been corrected in products with control code B and later.

No. 2 The integrated debugger does not start when the IE-780034-NS-EM1 is used with the IE-78001-R-A.

[Description]

The internal reset circuit becomes illegal and the integrated debugger does not start when the IE-780034-NS-EM1 is used with the IE-78001-R-A.

[Workaround]

There is no workaround.

This bug has been corrected in products with control code C and later.

No. 3 A/D conversion may stop if repeatedly performed when the IE-780034-NS-EM1 is used with the IE-78001-R-A.

[Description]

A/D conversion may stop if repeatedly performed when the IE-780034-NS-EM1 is used with the IE-78001-R-A.

[Workaround]

There is no workaround.

This bug has been corrected in products with control code D and later.

No. 4 Bugs up to and including μPD78F0034CW (ES 3.2):

- Key return interrupt
- Incorrect operation of TM5
- A/D conversion when operating at 2.7 V or lower.
- Other bugs

[Description]

The same bugs as those of the device occur in products with control code D or earlier.

For details, please see the Precautions on Use (Document No.: SBG-T-0613-E).

[Workaround]

For details, please see the Precautions on Use (Document No.: SBG-T-0613-E).

These bugs have been corrected in products with control code E and later.

No. 5 An illegal interrupt may be generated.

[Description]

- When an interrupt is generated, a reset vector may be referenced instead of the specified vector.
- When an interrupt is generated, the ISP flag may illegally cleared to 0.

[Workaround]

There is no workaround.

This bug has been corrected in products with control code F and later.

No. 6 A/D conversion may stop when operating at 2.7 V or lower.

[Description]

A/D conversion may stop when operating at 2.7 V or lower.

This bug only occurs in products with control code E.

[Workaround]

There is no workaround.

Use products with a control code other than E.

No. 7 A UART0 transmission interrupt may not occur during UART transmission when this device is used with the IE-78001-R-A, even if data is written to the TXS0 register.

[Description]

A UART0 transmission interrupt may not occur during UART transmission when this device is used with the IE-78001-R-A, even if data is written to the TXS0 register.

This bug does not occur when using this device with the IE-78K0-NS(-A).

[Workaround]

There is no workaround.

Use products with control code G and later.

No. 8 The key return interrupt request flag (KRIF) may be set illegally.

[Description]

The key return interrupt request flag (KRIF) may be set illegally if a low-level signal is input when any of the PORT40 to PORT47 bits is in the input mode, and the memory expansion mode register is in the port 4 rising edge detection mode (MEM = 01h).

[Workaround]

There is no workaround.

Use products with control code H and later.

No. 9 52-pin LQFP (10 x 10 mm) GB package newly added to the μPD780024A, 780034A Subseries now supported

[Description]

The 52-pin LQFP (10 x 10 mm) GB package newly added to the μPD780024A, 780034A Subseries is now supported in the IE-780034-NS-EM1 with control code J and later.

[Caution]

There is no workaround.

It is not necessary to upgrade the IE-780034-NS-EM1 to control code J if the 52-pin LQFP (10 x 10 mm) GB package is not used.

4. Other Cautions

This product has the following restrictions.

No.	Restrictions
1	The read data of address XX24 of external memory becomes invalid in external expansion mode. Workaround: Use control code L or later of the IE-78K0-NS or the control code E or later of the IE-78K0-NS-A. Set PM4 (port 4 output mode) to 0H when using a control code earlier than L of the IE-78K0-NS or a control code earlier than E of the IE-78K0-NS-A.