

# NEC Microcomputer Technical Information

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|  |                               |                         |   |                    |
|--|-------------------------------|-------------------------|---|--------------------|
| IE-780338-NS-EM1<br>Emulation Board for $\mu$ PD780318, 780328,<br>780338 Subseries<br><br>Upgrade |                               | Document No.            | SBG-TT-0051-E   | 1/1                |
|  |                               | Date issued             | January 24, 2002  |                    |
|  |                               | Issued by               | Microcomputer Tool Group<br>Sales Engineering Div.<br>NEC Electron Devices<br>NEC Corporation |                    |
|  |                               | Document classification |   | Usage restriction  |
| √  | Upgrade                       |                         |   |                    |
|  | Document modification         |                         |   |                    |
| Related documents  | User's manual: SUD-T-4772-1-E |                         |   | Other notification |

## 1. Affected product

| Product          | Outline   | Control code <sup>Note</sup> |
|------------------|---|------------------------------|
| IE-780338-NS-EM1 | Emulation board for $\mu$ PD780318,<br>780328, 780338 Subseries | A, B                         |

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

## 2. Details of upgrade

The restriction described below will be corrected. After upgrading, the control code will be C.

No.3 The specification change (change in A/D conversion time selection) in the  $\mu$ PD78F0338, 780336, 780338, 780326, 780328, 780316, and 780318 is not supported.

Control code: A, B

| FR02             | FR01 | FR00 | Selection of A/D Conversion Time |                   |
|------------------|------|------|----------------------------------|-------------------|
|                  |      |      | Old Specification                | New Specification |
| 0                | 0    | 0    | 144/fx                           | 144/fx            |
| 0                | 0    | 1    | 120/fx                           | 120/fx            |
| 0                | 1    | 0    | 96/fx                            | 96/fx             |
| 1                | 0    | 0    | 72/fx                            | 576/fx            |
| 1                | 0    | 1    | 60/fx                            | 480/fx            |
| 1                | 1    | 0    | 48/fx                            | 384/fx            |
| Other than above |      |      | Setting prohibited               |                   |

## 3. Upgrade petition period

From February 25, 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-780338-NS-EM1

### 1. Product Version

| Control Code | Remark  |
|--------------|---|
| A            |   |
| B, C         | Use the IE-78K0-NS with control code L or later, and IE-78K0-NS-A with control code E or later. |

### 2. Product History

| No. | Bugs and Changes/Additions to Specification   | Control Code <sup>Note</sup> |   |   |
|-----|---|------------------------------|---|---|
|     |   | A                            | B | C |
| 1   | The LCD function cannot be emulated.  | ×                            | √ | √ |
| 2   | The D/A converter function cannot be emulated.  | ×                            | √ | √ |
| 3   | The specification change (change in A/D conversion time selection) in the $\mu$ PD78F0338, 780336, 780338, 780326, 780328, 780316, and 780318 is not supported. | –                            | – | √ |

×: Applicable, √: Not applicable

**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.

### 3. Details of Bugs and Additions to Specification

No. 1 The LCD function cannot be emulated.

[Description]

The LCD function cannot be emulated.

[Workaround]

There is no workaround.

This restriction has been corrected in control code B.

Use the IE-78K0-NS with control code L or later, and IE-78K0-NS-A with control code E or later.

No. 2 The D/A converter function cannot be emulated.

[Description]

The D/A converter function cannot be emulated.

[Workaround]

There is no workaround.

This restriction has been corrected in control code B.

Use the IE-78K0-NS with control code L or later, and IE-78K0-NS-A with control code E or later.

No. 3 The specification change (change in A/D conversion time selection) in the  $\mu$ PD78F0338, 780336, 780338, 780326, 780328, 780316, and 780318 is not supported.

[Description]

The specification change (change in A/D conversion time selection) in the  $\mu$ PD78F0338, 780336, 780338, 780326, 780328, 780316, and 780318 is not supported.

| FR02             | FR01 | FR00 | Selection of A/D Conversion Time |                   |
|------------------|------|------|----------------------------------|-------------------|
|                  |      |      | Old Specification                | New Specification |
| 0                | 0    | 0    | 144/fx                           | 144/fx            |
| 0                | 0    | 1    | 120/fx                           | 120/fx            |
| 0                | 1    | 0    | 96/fx                            | 96/fx             |
| 1                | 0    | 0    | 72/fx                            | 576/fx            |
| 1                | 0    | 1    | 60/fx                            | 480/fx            |
| 1                | 1    | 0    | 48/fx                            | 384/fx            |
| Other than above |      |      | Setting prohibited               |                   |

[Workaround]

There is no workaround.

This restriction has been corrected in control code C.

Use the IE-78K0-NS with control code L or later, and IE-78K0-NS-A with control code E or later.

#### 4. Other Cautions

This product has the following restrictions.

- (1) Use the IE-78K0-NS with control code L or later, and IE-78K0-NS-A with control code E or later.
- (2) The switching function for number of key returns (KRSEL register (FF8FH)) cannot be emulated.

Workaround: None

- (3) When emulating port 8 of the  $\mu$ PD780316, 7800318, 780326, 780328, 780336 and 780338, set PF8 and PM8 to the following values once after reset in the same way as for port 8 of the  $\mu$ PD78F0338.

| SFR Name | Value [H] |
|----------|-----------|
| PM8      | 00        |
| PF8      | FF        |

- (4) When emulating port 9 of the  $\mu$ PD780316, 7800318, 780326, 780328, 780336 and 780338, set PF9 and PM9 to the following values once after reset in the same way as for port 9 of the  $\mu$ PD78F0338.

| SFR Name | Value [H] |
|----------|-----------|
| PM9      | 00        |
| PF9      | FF        |

- (5) The ROM correction function cannot be emulated.