

CUSTOMER NOTIFICATION

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**IE-789803-NS-EM1
(Control Code: A)**

Operating Precautions

Be sure to read this document before using the product.

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Notes on Using IE-789803-NS-EM1

1. Product Version

Product name: IE-789803-NS-EM1

Control Code ^{Note}	Remark
A	μPD78F9803 Ver.1.2

Note The control code is the second digit from the left of 10-digit production code (serial No.) that start from E.

2. Product History

No.	Bugs and Changes/Additions to Specification	Control Code
		A
1	Bug in data toggle when two interrupt transfers are performed at the same time	×
2	Status error in built-in down port 1 (1)	×
3	Status error in built-in down port 1 (1)	×
4	Bug in remote wakeup control	×

×: Applicable, √: Not applicable

3. Details of Bugs and Additions to Specification

No.1 Bug in data toggle when two interrupt transfers are performed at the same time

[Description]

If an interrupt transfer to endpoint 1 is performed while endpoint 0 is performing a control transfer, data 0 and 1 of the control transfer cannot be toggled correctly.

[Caution]

This bug does not occur when the device communicates with the device driver incorporated in the operation system, because an interrupt transfer to endpoint 1 is not performed while endpoint 0 is performing a control transfer.

[Workaround]

There is no workaround.

This bug is planned to be corrected in products with control code B.

No.2 Status error in built-in down port 1 (1)

[Description] Status bit error in global suspend status

If the status shifts from global suspend (hub operation stopped) to global resume (hub operation resumed) while built-in down port 1 is enabled, the port status change bit in the port status change bit field of built-in down port 1 is set to 1.

[Caution]

This bug does not occur when the device communicates with the device driver incorporated in the operation system, because the status does not shift to the global suspend status while built-in down port 1 is enabled. However, the connection test using the USB certified tool (USB core spec Chapter 11 Test) will not be passed.

[Workaround]

There is no workaround.

This bug is planned to be corrected in products with control code B.

No.3 Status error in built-in down port 1 (2)

[Description] Status bit error in selective suspend status

If the status shifts from global suspend (hub operation stopped) to global resume (hub operation resumed) while built-in down port 1 is set to selective suspend, the suspend bit in the port status field is cleared.

[Caution]

The same kind of problem may occur in application development, including development of software.

[Workaround]

There is no workaround.

This bug is planned to be corrected in products with control code B.

No.4 Bug in remote wakeup control

[Description]

If the status is set to global suspend while the hub is set to the device remote wakeup prohibition status, and each down port is enabled, performing a plug-in or plug-out operation at the down port causes a global resume.

[Caution]

This bug does not occur when the device communicates with the device driver incorporated in the operation system, because the status does not shift to the global suspend status while built-in down port 1 is enabled. However, the connection test using the USB certified tool (USB core spec Chapter 11 Test) will not be passed.

[Workaround]

There is no workaround.

This bug is planned to be corrected in products with control code B.

4. Other Cautions

Observe the following cautions related to No. 1 to No.4 in previous section. Confirm correct operation using software on the mask ROM version ES product of the target device.

This product has the following restrictions.

- The emulator hangs up if the debugger is activated in a setting to stop the peripheral operation clock during a break.

<Workaround>

Set the ID78K0S-NS so that Non Break (default setting) is selected for “Peripheral Break” in the configuration dialog box.

- A read/write operation to the endpoint 0 transmit/receive buffer (EP0) and endpoint 1 monitor buffer (EP1) cannot be performed during a break. In addition, the values displayed in the memory window during a break differ from the actual values.

<Workaround>

Save the values of EP0 and EP1 in the RAM in the program and confirm that they are the actual values.

The following is an example in the case of EP0.

- 1) An interrupt corresponding to the request sent from the host occurs.
- 2) After the interrupt occurs, read all the values in the EP0 transmit/receive buffer and save them in the RAM.
- 3) Judge if the read request is the target request.
- 4) If the request is the targeted one, generate a break.
- 5) Confirm that the saved RAM value is the EP0 buffer value.