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Notice of the free replacement of E1 emulator

When using on-chip debugging emulator E1, take note of the problems described below.

1. Product Concerned

On-chip debugging emulator E1

Type name: ROE000010KCE00

Serial numbers: **S009985 through **S012740

NOTES:

1. The serial number is printed on the E1 or on the label stuck to the side of the packaging.
2. Symbol ** denotes a combination of two alphanumeric characters: a numeral and a letter.
3. Each product in which "RSK" is attached to the serial number is included in Renesas Starter Kits. These products also concern the free replacement.

2. Problems

Depending on the MCU, the following problems arise when the target system is powered from an external supply:

NOTE: If the target system is powered by the E1, the problem does not arise.

- 2.1 If the target MCU is a V850 and the E1 is using the JTAG interface, a communication error may arise. As a result the connection may fail.
- 2.2 If the target MCU is an RX MCU with an operating voltage in the range of $5\text{ V} \pm 10\%$ and the target connection is using JTAG, a communication error may arise. As a result the connection may fail.
NOTE: Under the above conditions, only MCUs of RX62T and RX62G groups

are involved in this problem.

2.3 If the target MCU is an RL78 MCU which can use a Dual-power supply (EVDD and VDD). When the target system is connected to the E1, and the voltage of the VDD pin is higher than that of the EVDD pin and 5.0 V, a leakage current may flow from VDD to EVDD.

NOTE: Under the above conditions, only MCUs of RL78/G13 and RL78/G14 groups are involved in this problem.

Example of the amount of leakage:

VDD voltage	VBUS voltage	Leakage from VDD to EVDD

5.0 V or less	4.5 V or more	None
5.5 V	4.75 V (NOTE)	about 0.3 mA

NOTE: According to the USB standard, the E1 is designed to operate with the voltage of the VBUS pin which is in a range of 4.75 V to 5.25 V ($5.0\text{ V} \pm 5\%$). However, even if the voltage of the VBUS pin is in the range, when the voltage of the VDD pin is 5.5 V a leakage current of 0.3 mA flows from VDD to EVDD.

If the voltage of the VBUS pin is less than 4.75 V, the leakage current increases.

3. Temporary Measures

To prevent the problems, take the following temporary measures:

3.1 For 2.1 and 2.2 above

If you can operate by the power from E1, use the target system with the power from E1.

3.2 For 2.3 above

Operate the voltage of the VDD pin at 5 V or less.

4. Schedule of Fixing the Problems

We will replace your E1 with new E1.

Contact your local Renesas Electronics marketing office.

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