To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

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GRADE A

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M16C/62, M16C/6N Flash Memory Versions

Precautions for Boot Mode

1. Related devices

Flash Memory 5V Versions : M30624FGFP, M30624FGGP, M30625FGGP,
M306N0FGTFP
Flash Memory 3V Versions : M30624FGLFP, M30624FGLGP, M30625FGLGP

2. Precautions

When executing onboard write using boot mode, some of the ports do not keep high impedance and output “H” data or unknown data momentarily during reset.

Following is related ports.

Related ports	Output value	Output timing
P0-P3, P4$_0$-P4$_3$, P5	Unknown	About 20ns from reset signal falling edge
P4$_4$-P4$_7$, P6, P7$_4$-P7$_7$, P9$_0$, P9$_1$(Note), P9$_2$-P9$_7$, P10	“H”	During reset signal is “L”

Note : P9$_1$ is related to only M16C/62 flash memory version, not M16C/6N flash memory version.

3. Cause

3.1 Cause of output unknown data output

When switching to boot mode with CNVss pin as “H”, P5$_0$ pin as “H”, and P5$_5$ pin as “L”, or $\overline{\text{RESET}}$ pin switch from “H” to “L” during boot mode, MCU will be in microprocessor mode momentarily.
So above port data will be unknown data.

3.2 Cause of output “H” data output

When $\overline{\text{RESET}}$ is initiated for boot mode, MCU will be in parallel I/O mode momentarily and internal pull up resistors are enabled while $\overline{\text{RESET}}$ pin is “L”.
Therefore above port will be “H”.

4. Countermeasures

Please add switching circuits or assign to other ports if above situation occurs.
Also, in cases where ports are connected to internal pull up resistors, you can add a pull down resistor of several K ohm externally.