

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.

Renesas Electronics website: <http://www.renesas.com>

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Renesas Electronics Corporation

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RENESAS TECHNICAL UPDATE

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Product Category	MPU&MCU		Document No.	TN-760-A016A/E	Rev.	1.00
Title	7640 Group, 7641 Group, 7643 Group: Usage Precautions for USB AUTOSSET Function		Information Category	Technical Notification		
Applicable Product	7640 Group, 7641 Group, 7643 Group	Lot No.	Reference Document			

The USB function included in the above applicable products has had usage precautions.

[Precautionary Note]

To execute an IN transfer (transmission) of Endpoint1 to 4 (Endpoint1 and 2 for the 7643 Group), transmission output may not be executed under the following conditions(*1).

Conditions (conditions combined (1) and (2))

- (1) The AUTO_SET bit in the USB Endpoint x IN control register (IN_CSR) is enabled (AUTO_SET function enabled).
- (2) The setting value to the USB Endpoint x IN maximum packet size register (IN_MAXP) is half or less FIFO capacity of the corresponding Endpoint (double buffer mode).

When either (1) or (2) do not meet the above conditions, this precautionary note is not applied.

*1: Depending on IN token generation frequency by host, transmission output may not be executed once in several tens of thousands to hundreds of thousands of packets (rough frequency).

When the case applies to the above conditions and the above may cause a problem for a system, provide either countermeasure of (1) or (2).

- (1) Do not use the AUTO_SET function (to complete packet preparation, set the IN_PKT_RDY bit in the IN_CSR register by software).

Or

- (2) Do not use double buffer mode for FIFO targeting the corresponding Endpoint and use FIFO as single buffer mode (set the value to the IN_MAXP register which is greater than half of FIFO capacity).