

# RENESAS TECHNICAL UPDATE

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|                    |   |          |                      |                        |      |      |
|--------------------|---|----------|----------------------|------------------------|------|------|
| Product Category   | MPU/MCU   |          | Document No.         | TN-SH7-A911A/E         | Rev. | 1.00 |
| Title              | Additional precaution on store buffer of OL memory. |          | Information Category | Technical Notification |      |      |
| Applicable Product | See below.  | Lot No.  | Reference Document   | See below.             |      |      |
|                    |   | All lots |                      |                        |      |      |

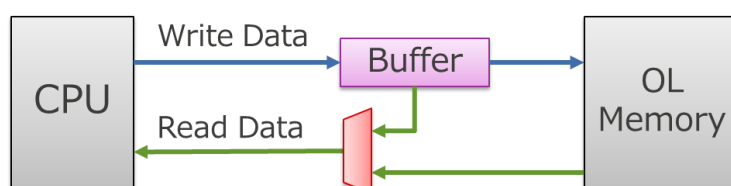
We added precaution to OL memory section in User's Manual for Hardware for the applicable products stated below.

#### [Additional Description]

On path between OL memory and CPU described follows, buffers are implemented to realize fast OL memory access.

When a load instruction is executed from the same address after a store instruction to OL memory, the load instruction may read out data from buffers instead of data on OL memory.

Either of following procedures can be used to surely read data on Local OL memory.



Take the following procedures to ensure to read out data from OL Memory:

First, "write" instruction is given to an OL memory address.

Then, read out the data from the OL memory after SYNCO+NOP × 2 instructions are executed.

※SYNCO : This instruction is used to synchronize data operations. When this instruction is executed,

the subsequent data accesses are not executed until the execution of all preceding bus accesses has been completed.

#### [Applicable Products and Reference Documents]

| Series | Group  | Related documents                                  | Rev. | Ref. No.        |
|--------|--------|--|------|-----------------|
| SH7450 | SH7450 | SH7450 Group, SH7451 Group User's Manual: Hardware | 1.10 | R01UH0286EJ0110 |
|        | SH7451 |  |      |                 |
| SH7455 | SH7455 | SH7455 Group, SH7456 Group User's Manual: Hardware | 1.10 | R01UH0030EJ0110 |
|        | SH7456 |  |      |                 |
| SH7457 | SH7457 | SH7457 Group, SH7459 Group User's Manual: Hardware | 1.20 | R01UH0420EJ0120 |
|        | SH7459 |  |      |                 |

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