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RENESAS TECHNICAL UPDATE

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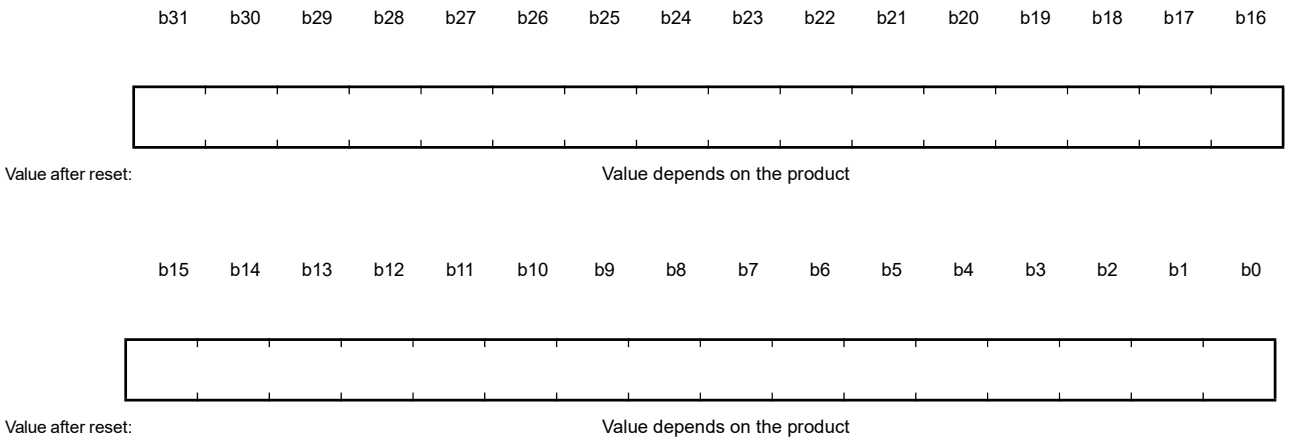
Product Category	MPU/MCU		Document No.	TN-RA*-A0009A/E	Rev.	1.00
Title	RA family, Addition of register definition for Flash		Information Category	Technical Notification		
Applicable Product	RA2A1 Group RA4M1 Group RA4W1 Group RA6M1 Group RA6M2 Group RA6M3 Group RA6T1 Group	Lot No. All	Reference Document	RA2A1 Group User's Manual Hardware Rev.1.00 RA4M1 Group User's Manual Hardware Rev.1.00 RA4W1 Group User's Manual Hardware Rev.1.00 RA6M1 Group User's Manual Hardware Rev.1.00 RA6M2 Group User's Manual Hardware Rev.1.00 RA6M3 Group User's Manual Hardware Rev.1.00 RA6T1 Group User's Manual Hardware Rev.1.00		

The following register definitions should be added.

1. Factory MCU Information Flash Root Table (FMIFRT)

Address(es): 407F B19Ch



The FMIFRT is a read-only register that stores a base address of the Unique ID register, Part Numbering register and MCU Version register. The FMIFRT should be read in 32-bit units.

Table 1 Value of FMIFRT

Product group	Value of FMIFRT
RA2A1, RA4M1, RA4W1	0x0100_3C00
RA6M1, RA6M2, RA6M3, RA6T1	0X0100_7000

2. Unique ID Register n (UIDRn) (n = 0 to 3)

Address(es): UIDR0 FMIFRT+14h, UIDR1 FMIFRT+18h, UIDR2 FMIFRT+1Ch, UIDR3 FMIFRT+20h

b31	b30	b29	b28	b27	b26	b25	b24	b23	b22	b21	b20	b19	b18	b17	b16

Value after reset: Unique value for each chip

b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0

Value after reset: Unique value for each chip

The UIDRn is a read-only register that stores a 16-byte ID code (unique ID) for identifying the individual MCU. The UIDRn register should be read in 32-bit units.

3. Part Numbering Register n (PNRn) (n = 0 to 3)

Address(es): PNR0 FMIFRT+24h, PNR1 FMIFRT+28h, PNR2 FMIFRT+2Ch, PNR3 FMIFRT+30h

b31	b30	b29	b28	b27	b26	b25	b24	b23	b22	b21	b20	b19	b18	b17	b16

Value after reset: Value depends on the product

b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0

Value after reset: Value depends on the product

The PNRn is a read-only register that stores a 16-byte part numbering. The PNRn register should be read in 32-bit units. Each byte corresponds to the ASCII code representation of the product part number as detailed in product list. The first character ("R", 0x52 in ASCII code) of the part number is stored in the byte with the smallest address (FMIFRT+24h).

Example of product part number: R7FA4M1AB3CFP

4. MCU Version Register (MCUVER)

Address(es): FMIFRT+44h

	b7	b6	b5	b4	b3	b2	b1	b0
Value after reset:	Value depends on the chip							

The MCUVER is a read-only register that stores an MCU version. The MCUVER register should be read in 8-bit units.

The higher the value, the newer the MCU version.