

# EF1SRP-05U Supplement (4283Group Edition)

Seventh Edition June 2008  
Susei Electronics System Co., Ltd.

## 1 . General Description

This supplement contains information on matters that require attention for reading and writing data to Renesas Technology Corp. 4283 Group MCU with built-in QzROM.

## 2 . Operating Environment

Please use the MCU mentioned in this supplement in the environment as follows.

< EFP-I >

Monitor Version : Ver.4.18.15 or later

< EFP-1M >

Monitor Version : Ver.4.A8.15 or later

< WinEfpRE Control Software >

WinEfpRE Version : Ver.1.30.05 or later

< EFP-S2 or EFP-S2V >

Monitor Version : Ver.1.00.54 or later

< EFP-S2 or S2V Control Software >

WinEFP2 Version : Ver.1.02.23b or later

### 3 .Pin Connection

Table 3.1 lists the connection of target connection cable pin of the 4283 Group.

Table 3.1: List of Target Connection Pin

Connection Pin No. (EF1SRP-05U side)	Target End Wire Color	Signal	3-Wire Cable Pin No.	MCU Connection Pin in Serial I/O Mode	I/O (Writer side)
1	Orange/red dotted 1	GND	NC	Connects to VSS pin *2	-
2	Orange/black dotted 1				
3	Gray/red dotted 1	T_VPP	2	Connects to CNVSS pin	Output
4	Gray/black dotted 1	T_VDD	3	Connects to VDD pin *1	I/O
8	White/black dotted 1	T_PGM/OE/MD	6	Connects to D3/AIN5 pin	Output
9	Yellow/red dotted 1	T_SCLK	4	P21/A1N1	Output
10	Yellow/black dotted 1	T_TXD	5	Connects to P20/A1N0 pin *3	Output
11	Pink/red dotted 1	T_RXD			Input
12	Pink/black dotted 1	T_BUSY	1	Unconnected	NC
14	Orange/black dotted 2	T_RESET	7	Connects to RESET pin *4	Output
15	Gray/red dotted 2	GND	8	Connects to VSS pin *2	-
16	Gray/black dotted 2				

#### Supplement of Pin Treatment:

##### \*1 Power Supply Connection

In case user consumption current is high (20mA or more except MCU), please provide VDD power from user target side. VDD power should not be supplied from EFP-I.

Moreover VDD power supply range during serial EPROM mode is to be 2.7V to 4.7V.

##### \*2 GND Connection

The signal GND has 4 pins (No.1, 2, 15 and 16) of EF1SRP-05U side connector. When connecting to the target board, you can connect with using only 1 pin, but connecting 2 or more pins is recommended.

##### 3 XIN Connection

Connect XIN terminal to VSS whether you connect a ceramic resonance circuit, and please throw XOUT terminal open.

##### 4 SDA Connection

Please pull up with 1k resistance during serial I/O mode.

(1) Fig3.1 shows an example of target MCU peripheral circuit when using 4283 group.

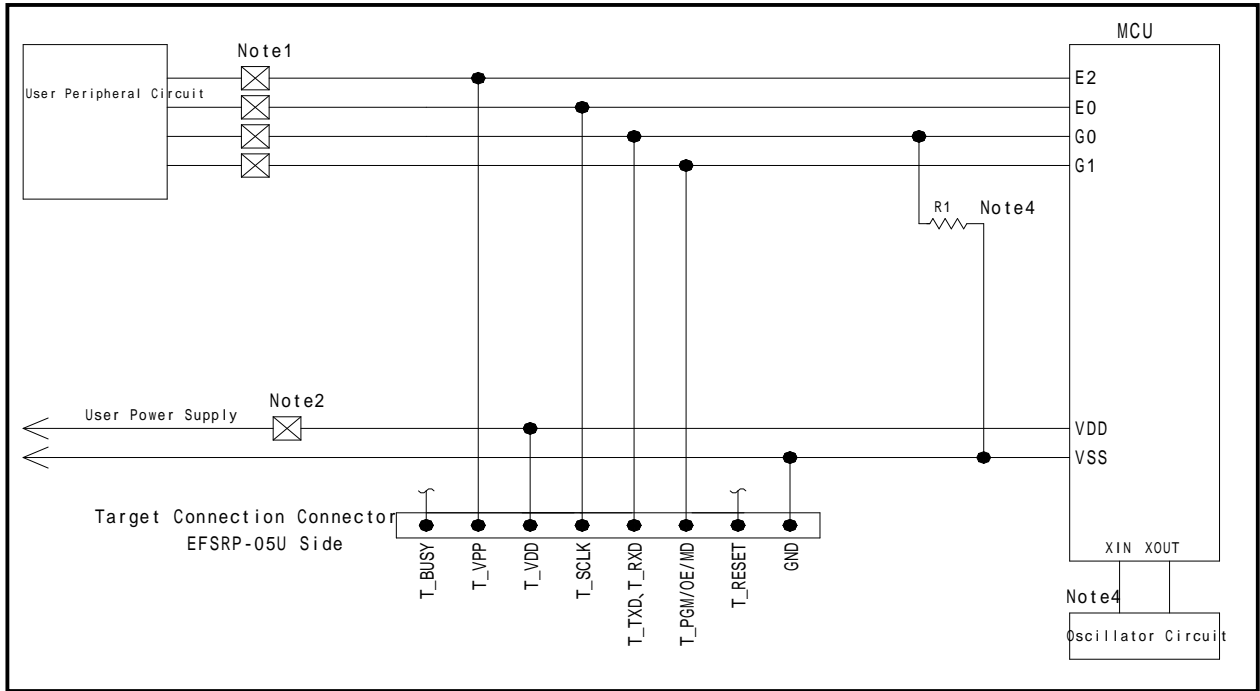


Fig3.1: Target MCU Peripheral Circuit Example

**\*Notes:**

- 1: If the user peripheral circuit is an output circuit, you should disconnect by jumper to avoid output collision when executing serial I/O mode.  
The VDD power supply supply range in the serial EPROM mode becomes it to 2.7V-4.7V.
- 2: In case user consumption current is high (20mA or more except MCU), user power supply should be separated. Please connect so that EFP-I side T\_VDD is to be supplied to MCU.  
Please pull up with 1k resistance during serial I/O mode.
- 3: Please connect XIN terminal to VSS whether you connect a ceramic resonance circuit. Please throw XOUT terminal open.
- 4: In a serial input and output mode, please make pull-down by resistance of 1kΩ.

#### 4. Relation Between VDD Voltage and Clock Timing

Transfer rate of clock synchronization type communication for T\_SCLK signal needs to be changed according to the level of VDD voltage supplied to target MCU. In case VDD power is supplied from writer, baud rate should be set automatically. On the other hand, the baud rate should be set manually in case VDD power is supplied from user target.

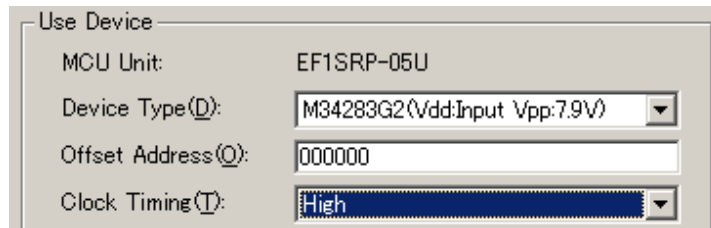
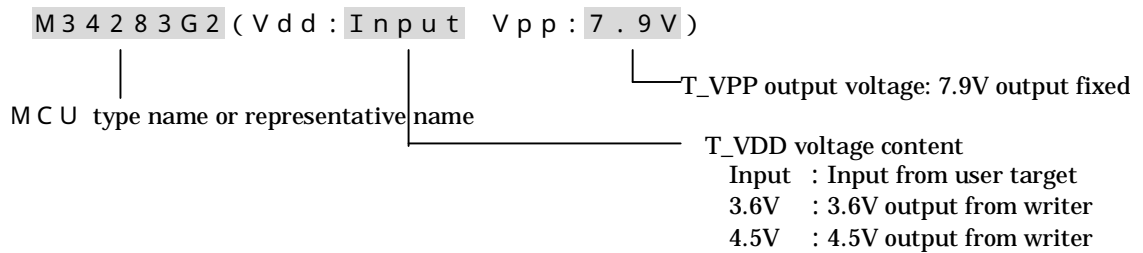


Fig.4.1: Clock Timing Setting Screen

#### < How to Switch T\_VDD Power Supply >

VDD I/O can be switched with the setting of Device Type in Environment Setting dialog.



#### < Switch Condition and Setting Method of T\_SCLK Baud Rate >

Please switch the setting of Clock Timing in Environment Setting dialog, according to voltage value of T\_VDD supplied as MCU operation power.

- 2.7V to 4.7V: Clock transfer rate should be 500kbps or below. Clock Timing setting should be Low.
- 4.0V to 4.7V: Clock transfer rate should be 1Mbps or below. Clock Timing setting should be High.

## 5 . Read Protect Function

4283 group MCU is equipped with a read protect function to prevent unauthorized data read, and thereby the protect function can be set on writer side. The below shows how to set the read protect function.

### <How to Set Read Protect>

The command can be executed after a box of "Writing of a Protection bit (W)" in the execution dialog of Program, Verify and Device Micro Command is checked.

Only when each command is terminated normally, the read function is set to take effect. (Refer to Fig5.1).

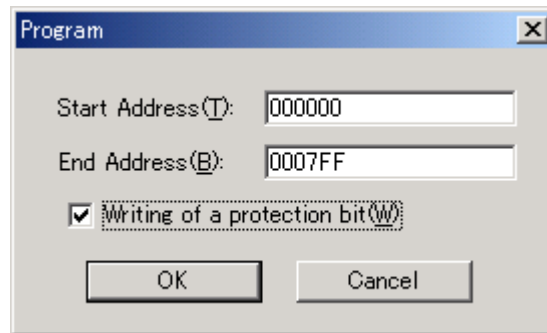


Fig5.1: Read Protect Function Setting Screen

## 6 . MS Series board

In order for MCU single writing, writing adapter for serial I/O mode is on sale.

Fig6.1 lists products of writing adapter.

Fig.6.1 : Writing Adapters for 4283 group Serial I/O mode

Product Type	Corresponding Package	Corresponding MCU
MS4508-20G	20P2F-A	M34283G2GP

\* For price, etc. of each writing adapter, please contact our distributor or us.