RENESAS

R0E33062PMSRC0

Emulation Memory Board for M16C/60 Series Compact Emulator

User's Manual

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⚠ WARNING	**WARNING** indicates a potentially dangerous situation that will cause death or heavy wound unless it is avoided.
⚠ CAUTION	**CAUTION** indicates a potentially dangerous situation that will cause a slight injury or a medium-degree injury unless it is avoided.
IMPORTANT	This is used in operation procedures or explanatory descriptions to convey exceptional conditions or cautions to the user.

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Rev.1.00
Sep. 16, 2005
REJ10J1121-0100

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1. Outline

The R0E33062PMSRC0 is an emulation memory board for the M16C/60 Series compact emulator. The memory space can be allocated to the emulation memory by using with the M16C/60 Series compact emulator M3062PT3-CPE etc.

2. Package Components

Table 1 Package Components

Item	Quantity
R0E33062PMSRC0 emulation memory board	1
Spacers for fixing the emulation memory board	4
R0E33062PMSRC0 User's Manual (this document)	1
R0E33062PMSRC0 User's Manual (Japanese)	1

3. Connection Procedure

The procedure for connecting the R0E33062PMSRC0 is shown in Figure 1.

(1) Unscrew the four screws securing the emulation probe.
(2) Pull out the M3062PT2-EPBM from the compact emulator control board (hereafter, upper board) vertically, otherwise the connectors may be damaged.

(3) Attach connectors J1 and J2 of the new R0E33062PMSRC0 to connectors J3 and J4 of the upper board, respectively.
(4) Tighten the spacers (included) in an even, crisscross pattern to secure the R0E33062PMSRC0 with such as box wrench.

(5) Attach connectors J1 and J2 of the M3062PT2-EPBM to connectors J3 and J4 of the R0E33062PMSRC0, respectively.
(6) Tighten the four screws (which are unscrewed in the procedure 1) in an even, crisscross pattern to secure the M3062PT2-EPBM with a screwdriver.
(7) After replacing the board, perform the self-check to make sure that the R0E33062PMSRC0 has been installed properly.

Figure 1 Connecting procedure of the emulation memory board

⚠ CAUTION

Cautions to Be Taken for This Product:

- Before you replace the emulation memory board, shut off the power, otherwise internal circuits may be damaged.
- Insert or pull out the connectors vertically, otherwise the connectors may be damaged.

4. Usage (Emulator Debugger)

The required operating environmental is described below.
- Integrated development environment: High-performance Embedded Workshop
- Emulator debugger: M16C R8C Compact emulator debugger Ver.1.01 Release 00 or later

Set the emulation memory in the MCU setting dialog box of the emulator debugger.

(1) MCU tab

Specifying the processor mode
Select the appropriate processor mode that suits your system.

Specifying the bus width
When specifying memory expansion mode or microprocessor mode, select "16-bit" or "8-bit" for "External Data Bus Width".

Using or not using the memory space expansion function
Specifies whether or not to use the memory space expansion function when selecting memory expansion mode or microprocessor mode. When using the memory space expansion function, select "4MB Mode". When not, select "Normal Mode"

Using or not using the internal reserved area expansion
Specifies whether or not to expand the internal reserved area. Check the box if the internal reserved area expansion bit (PM13) is "1".
PM13=Set to 0:
Internal RAM area: 00400h--03FFFh
Internal ROM area: D0000h--FFFFFh
PM13=Set to 1:
Internal RAM area: 00400h--07FFFh
Internal ROM area: 80000h--FFFFFh

Specifying the PM10 (bit 0 of the address 0005h)
When using the CS2 Area Switch Bit (PM10) as "1", check this box. Specify the processor mode according to the user system.

IMPORTANT

Notes on Selecting a Processor Mode:
- When setting memory expansion mode, the level of pin CNVSS of the MCU status should be "L". The MCU status shows the pin level of the user system.
- When setting microprocessor mode, the level of pin CNVSS of the MCU status should be "H".
- When setting memory expansion mode or microprocessor mode, pins RDY* and HOLD* of the user system should be "H".

(2) MAP tab

Specifying the emulation memory allocation
Sets the memory area assigned to the emulation memory by 4KB. Up to four areas can be set.
An area set to [INTERNAL] will be allocated to the emulation memory. An unchecked area or an unset area will be allocated to external area.
The MAP setting is effective only in the CS3*, CS2*, CS1* and CS0*. The maps of SFR, internal ROM and RAM are set automatically.

* MAP tab is displayed only when connecting the emulation memory board.

5. Specifications of the Emulation Memory Board

Applicable compact emulator	M3062PT3-CPE		
Applicable MCU mode	Memory expansion mode (NORMAL, 4MB)		
	Microprocessor mode (NORMAL, 4MB)		
Applicable power supply	2.7 -- 5.5 V		
Maximum operating frequency	- Maximum operating frequency (at 5.0 V)	0 wait:	7 MHz
		1 wait:	20 MHz
		2 wait and 3 wait:	24 MHz
	- Maximum operating frequency (at 3.0 V)	0 wait:	6 MHz
		1 wait:	17 MHz
		2 wait and 3 wait:	24 MHz

6. Precautions

⚠ WARNING

Warnings to Be Taken for This Product:
- Do not disassemble or modify this product. Personal injury due to electric shock may occur if this product is disassembled and modified. Disassembling and modifying the product will void your warranty.

Warning for Installation:
- Do not set this product in water or areas of high humidity. Make sure that the product does not get wet. Spilling water or some other liquid into the product may cause unrepairable damage.

Warning for Use Environment:
- This equipment is to be used in an environment with a maximum ambient temperature of 35°C. Care should be taken that this temperature is not exceeded.

⚠ CAUTION

Cautions to Be Taken for This Product:
- Use caution when handling this product. Be careful not to apply a mechanical shock.
- Do not touch the connector pins of this product directly. Static electricity may damage the internal circuits.

Caution to Be Taken for System Malfunctions:
- If the emulator malfunctions because of interference like external noise, do the following to remedy the trouble.
  (1) Press the RESET button on the emulator upper panel.
  (2) If normal operation is not restored after step (1), shut OFF the emulator once and then reactivate it.

7. Inquiries

For the technical question about this product, fill in the text file which is downloaded from the following page, then send the information to your local distributor.
http://tool-support.renesas.com/eng/toolnews/registration/support.txt

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