

E1 Emulator

Additional Document for User's Manual
(Notes on Connection for RL78)

Supported Devices:

RL78 Family

RL78/G13

RL78/G14

RL78/I1A

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1. Outline

1.1 Features

E1 Emulator is an on-chip debug emulator with flash programming function, which is used for debugging and programming a program to be embedded in on-chip flash memory microcontrollers. This product can debug with the target microcontroller connected to the user system, and can write programs to the on-chip flash memory of microcontrollers.

1.2 Configuration of Manuals

Documentation for the E1/E20 emulator manual is in two parts: the E1/E20 Emulator User's Manual and the E1/E20 Emulator Supplementary Document for the User's Manual (this manual). Different versions of the latter correspond to different sets of MCU. Be sure to read both of the manuals before using the E1/E20 emulator (hereinafter referred to as "the emulator").

(1) The E1/E20 emulator user's manual has the following contents:

- Components of the emulators
- Emulator hardware specification
- Connection to the emulator and the host computer and user system

(2) The E1/E20 Emulator Supplementary Document for the User's Manual has the following contents:

- For use in hardware design, an example of connection and the interface circuit required to connect the emulator.
- Notes on using the emulator
- Software specifications and so on for using each microcomputers

2. Designing the User System

To connect the E1 emulator (hereinafter referred to as the emulator), a connector for the user system interface cable must be mounted on the user system. When designing the user system, read this section of this manual and the hardware manual for the MCUs.

2.1 Connecting the Emulator with the User System

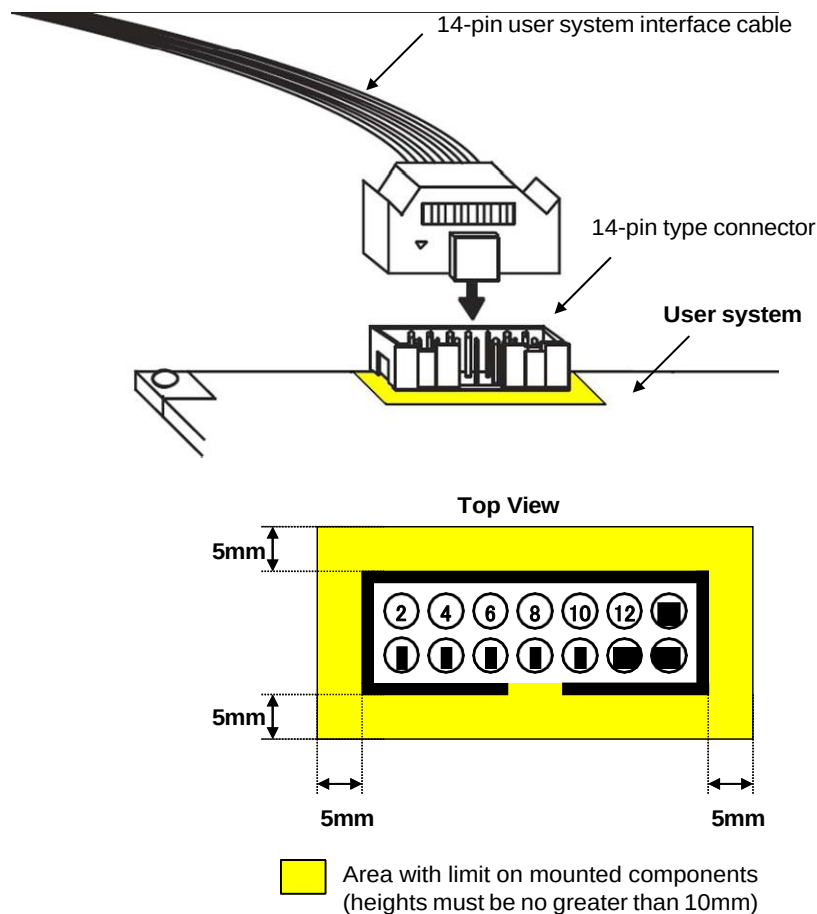
Table 2-1 shows the connector type numbers of the E1 emulators

Table 2-1 Connector Type Numbers

	Type Number	Manufacturer	Specifications
14-pin Connector	7614-6002	Sumitomo 3M Limited	14-pin straight type (Japan)
	2514-6002	3M Limited	14-pin straight type (other countries)

Figures 2.1 show examples of the connection between a user system interface cable of the 14-pin type. Do not mount other components with a height exceeding 10 mm within 5 mm of the connector on the user system.

Figure 2-1 Connecting the User System Interface Cable to the 14-pin Connector of the E1 Emulator



2.2 Pin Assignments of the Connector on the User System

Table 2-2 shows the pin assignments of the 14-pin connectors.

Table 2-2 Pin assignments of the connector (14-pin)

Pin No.	Signal	Input/Output ^{note}
1	R.F.U	-
2	GND	-
3	R.F.U	-
4	R.F.U	-
5	TOOL0	Input/Output
6	$\overline{\text{TRESET}}$	Input
7	R.F.U	-
8	VDD	-
9	EMVDD	-
10	$\overline{\text{RESET}}$	Output
11	R.F.U	-
12	GND	-
13	$\overline{\text{RESET}}$	Output
14	GND	-

Note: Input to or output from the emulator

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