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Renesas Electronics Corporation

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**E10A-USB Optional 38-Pin
User System Interface Cable
HS0005ECK01H User's Manual
Renesas Microcomputer
Development Environment
System**

HS0005ECK01HE

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- Emulator
- User system interface cable

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Purpose of the User System Interface Cable:

This user system interface cable is for connecting the emulator unit and user system. The system interface cable must only be used for the above purpose.

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Figures:

Some figures in this user's manual may show items different from your actual system.

Limited Anticipation of Danger:

Renesas cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this user's manual and on the emulator product are therefore not all inclusive. Therefore, you must use the emulator product safely at your own risk.





This is the safety alert symbol. It is used to alert you to potential injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE emphasizes essential information.

yourself for electric shock prevention and quality assurance.

2. Always switch OFF the host computer and user system before connecting or disconnecting any CABLES or PARTS.
3. Connect the connectors in the user system and in the user system interface cable by confirming the correct direction.

Failure to do so will result in a FIRE HAZARD and will damage the user system and the emulator product or will result in PERSONAL INJURY. The USER PROGRAM will be LOST.

CAUTION

Place the host computer and user system so that no cable is bent or twisted. A bent or twisted cable will impose stress on the user interface leading to connection or contact failure.

Make sure that the host computer and the user system are placed in a secure position so that they do not move during use nor impose stress on the user interface.

Section 4 Pin Assignments of the H-UDI Port Connector.....

Section 5 Restriction on Component Mounting.....

Section 6 Notes



User System Interface Cable
E10A-USB Optional 38-Pin
User System Interface Cable
User's Manual



1

38 pin type
Length: 30 cm, Mass: 62 g
HS0005ECK01HJ and
HS0005ECK01HE



Note: When designing the placement of the 38-pin connector layout on the user board cross-talk noise etc. by keeping other signal lines out of the region where the H-connector is situated.



9	RESET# ^{*2}	Output	User reset	28	AUDATA1	
10	N.C.	—		29	N.C.	—
11	TDO	Output		30	AUDATA0	
12	UVCC_AUD	Output		31	N.C.	—
13	N.C.	—		32	AUDSYNC# ^{*2}	Output
14	UVCC	Output		33	N.C.	—
15	TCK	Input		34	AUDRST# ^{*2}	—
16	N.C.	—		35	N.C.	—
17	TMS	Input		36	AUDMD	—
18	N.C.	—		37	N.C.	—
19	TDI	Input		38	N.C.	—

Notes: 1. Input to or output from the user system.

2. The symbol "#" means that the signal is active-low.

3. The emulator monitors the GND signal of the user system to detect whether or not the user system is connected.

4. Signal names are not intended to correspond to those for the actual MCU. Refer to recommended circuits and notes described in Supplementary Information on Using the SHxxxx and connect only the required signals. Other than UVCC_AUD, the signal names are the same as those for the 36-pin interface. Supply the operating voltage of the AUD to UVCC_AUD.

5. The GND bus leads, which are allocated on the center of the H-UDI port connector, must be connected to GND.

6. When an MCU incorporating the AUD with the SSTL18 specification (e.g., the SH7785) is used, the emulator is used with the circuit as for the E200F. For details, refer to the E200F emulator additional document (Supplementary Information on Using the E200F).

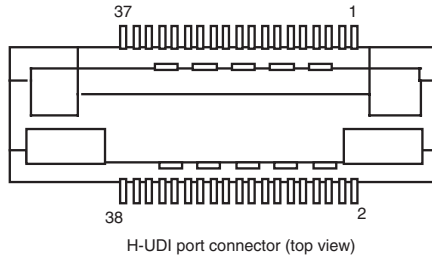


Figure 4.1 Pin Assignments of the H-UDI Port Connector (38 Pins)

AUDCK	6	-----	1	
	7	-----		
ASEBRK#/BRKACK	8	-----	27	
RESET#	9	-----	31	
	10	-----		
TDO	11	-----	25	
UVCC_AUD	12	-----		Specific 38-pin c
	13	-----		
UVCC	14	-----	29	
TCK	15	-----	17	
	16	-----		
TMS	17	-----	19	
	18	-----		
TDI	19	-----	23	
	20	-----		
TRST#	21	-----	21	
	22	-----		
	23	-----		
AUDATA3	24	-----	9	
	25	-----		

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AUDRS1#	34	-----	13
	35	-----	
AUDMD	36	-----	15
	37	-----	
Reserved	38	-----	35

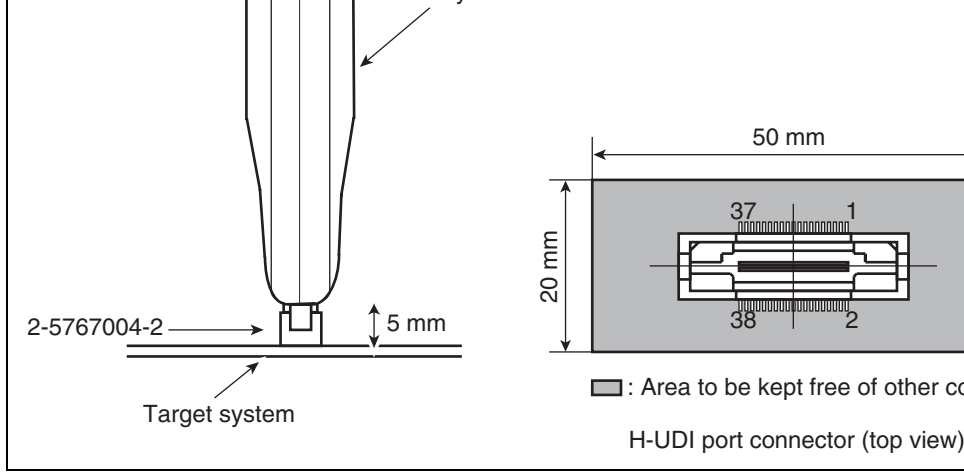


Figure 5.1 Restriction on Component Mounting

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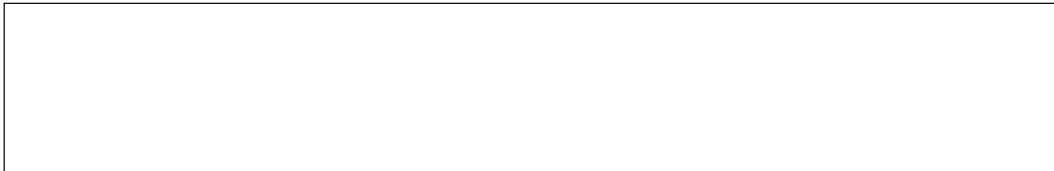
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User System Interface Cable
HS0005ECK01H User's Manual**



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