MS212AF-64B   Users Guide

1．General Description

MS212AF-64B is a writing target board for serial I/O mode used by connecting to EF1SRP-01U or EF1SRP-01US2.

Reading and writing data to R8C/2A and R8C/2B groups with built-in Renesas Electronics 16 bit Flash memory are enabled by using MS212AF-64B.

IC socket for 64-pin 0.65mm pitch TFLGA (PTLG0064JA-A) is mounted on MS212AF-64B.

＜Packing contents＞

1）MS212AF-64B

2）J5 Power cable

3）Users guide (this manual)
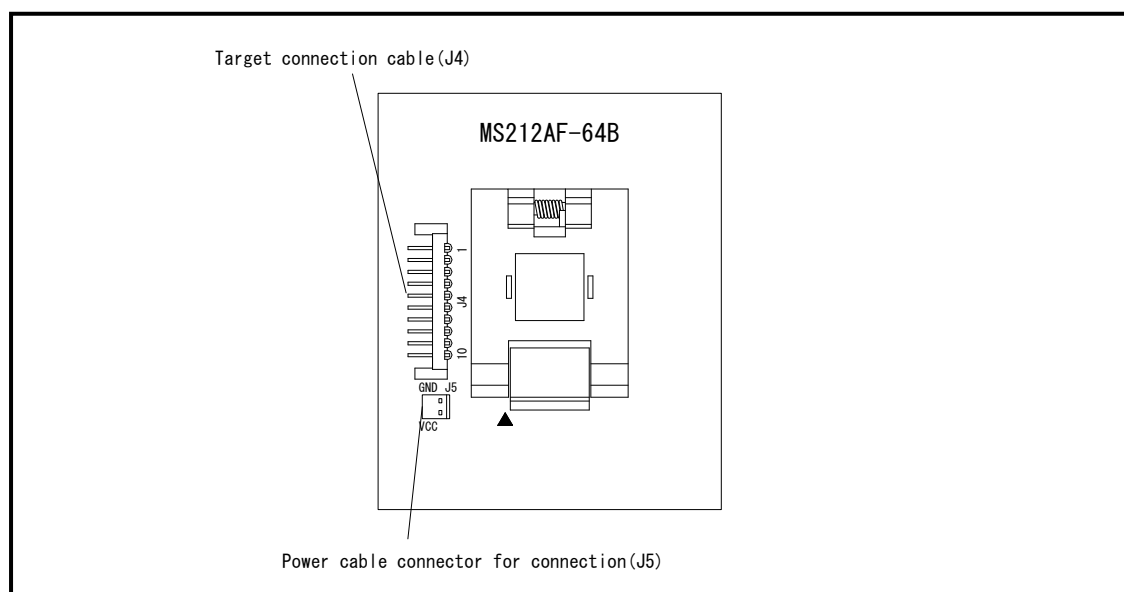
External Figure of MS212AF-64B is shown in Fig 1.1

Fig.1.1 MS212AF-64B External Figure

2．Device configuration and Connection Process

2.1 Device configuration

Table 2.1 shows the device configuration when MS212AF-64B is used.

Table2.1 device configuration

Main Body	Unit	Cable
EFP-I/1M	EF1SRP-01U	EF1TGCB-B (4-wire target connection cable)
EFP-S2/S2V	EF1SRP-01U＋EF1CNT-96P *1	
	EF1SRP-01US2	

*1) When EF1SRP-01U is used with EFP-S2/S2V, EF1CNT-96P (optional) is necessary.

2.2 Connection Process

In case MS212AF-64B is used, please connect EF1TGCB-01U or EF1SRP-01US2 to EF1TGCB-B (4-wire target connection cable) as shown in Fig.2.1.

In case EF1SRP-01U is used with EFP-S2/S2V, EF1CNT-96P (optional) is necessary.
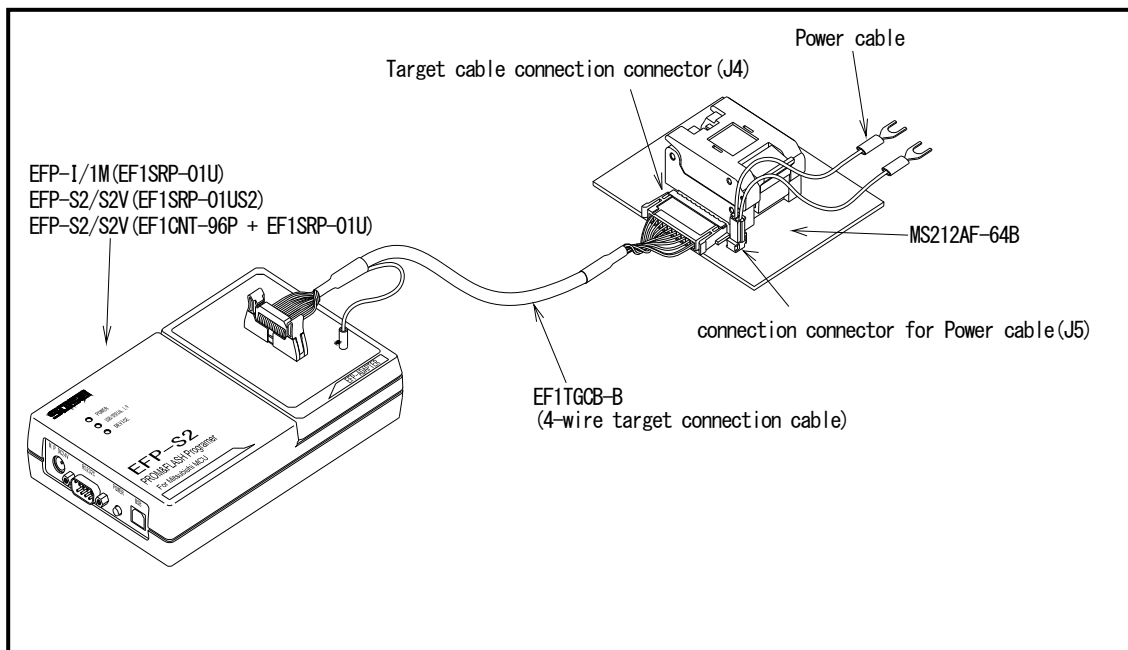

Fig.2.1 Connection of MS212AF-64B

2.3 VDD supply and power supply cable connection
(1) In case of EFP-I/1M main body (Only VDD input :)
VDD is not supplied to MS212AF-64B by EFPI/1M. Please connect the power cable (attachment) with J5 of MS212AF-64B, and supply VDD by the power cable.

(2) In case of EFP-S2/S2V main body
1. EFPS2/S2V VDD input
When it is set "Input" as for "MCU Voltage Setting", in "Environment Setting" dialog of WinEFP2 (control software) is not supplied to MS212AF-64B from EFP-S2/S2V to VDD.
Please connect the power cable (attachment) with J5 of MS212AF-64B, and supply VDD by the power cable.

2. EFPS2/S2V VDD output
When "MCU Voltage Setting" is set to "Output" by the "Environment Setting" dialog of WinEFP2 (control software), voltage (5V or 3.3V) of "Output Voltage" is supplied to VDD of MS212AF-64B by EFP-S2/S2V.
The VDD supply by the power cable is unnecessary.

Figure 2.2 shows the composition of the "MCU Voltage Setting" tab.

Fig. 2.2 "MCU Voltage Setting" tab screen composition

3．List of Corresponding MCU and corresponding version

3．1　List of Corresponding MCU

A corresponding MCU list of MS2LA6F-64H is shown in List.1.1.

List.1.1　List of Corresponding MCU of MS212AF-64B

Main body	Device type	Corresponding MCU name	Program memory area
EFP-I/1M	R5F211x7(1 line type,48K)	R5F212A7SNLG	4000h～FFFFh
	R5F211x8(1 line type,64K)	R5F212A8SNLG	4000h～13FFFh
	R5F211x7(1 line type,48K+2K)	R5F212B7SNLG	2400h～2BFFh 4000h～FFFFh
	R5F211x8(1 line type,64K+2K)	R5F212B8SNLG	2400h～2BFFh 4000h～13FFFh
EFP-S2 EFP-S2V	R5F212x7(1 line type,48K)	R5F212A7SNLG	4000h～FFFFh
	R5F212x8(1 line type,64K)	R5F212A8SNLG	4000h～13FFFh
	R5F212x7(1 line type,48K+2K)	R5F212B7SNLG	2400h～2BFFh 4000h～FFFFh
	R5F212x8(1 line type,64K+2K)	R5F212B8SNLG	2400h～2BFFh 4000h～13FFFh

3．2　Corresponding S/W version

Please use it in the following environment when you use MS212AF-64B.

Main body	Monitor version	Control software	TBL Version
EFP-I	Ver.4.18.37 or more	WinEfpRE Version： Ver.1.30.19b or more	SRPMCU12.TBL Version： Ver.2.00.10 or more
EFP-1M	Ver.4.A8.37 or more		SRPMCU1M.TBL Version： Ver.2.00.10 or more
EFP-S2 EFP-S2V	Ver.1.00.81 or more	WinEFP2 Version： Ver.1.20.29 or more	EF1SRP_01U.TBL Version： Ver.1.02.20a or more
			EF1SRP_01US2.TBL Version： Ver.1.03.40b or more

３．２　About Software version (S/W)

The version numbers such as EFP-1 and WinEFP are displayed by [Help] → [About] in the WinEFP window menu. Please download the latest version up data on the following site.

< EFP- I S/W the latest free download site >
http://www.suisei.co.jp/download_e/productdata_efp1_e.html

< EFP-S2 S/W the latest free download site >
http://www.suisei.co.jp/download_e/productdata_s2_e.html

< EFP-S2V S/W the latest free download site >
http://www.suisei.co.jp/download_e/productdata_s2_e.html

Note on Corresponding Versions

Above corresponding versions might change without notice on account of the future capability improvement, etc.　Furthermore in case the upgrade procedure manual is attached when this product is purchased, please refer to that manual as a priority.

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４. Insertion Direction of MCU and cleaning of IC socket

４．１　Insertion Direction of MCU

When MCU is inserted, No.1 pin of the IC socket on MS212AF-64B and MCU's No.1 pin should be connected. The wrong insertion would cause a serious breakage of MCU.

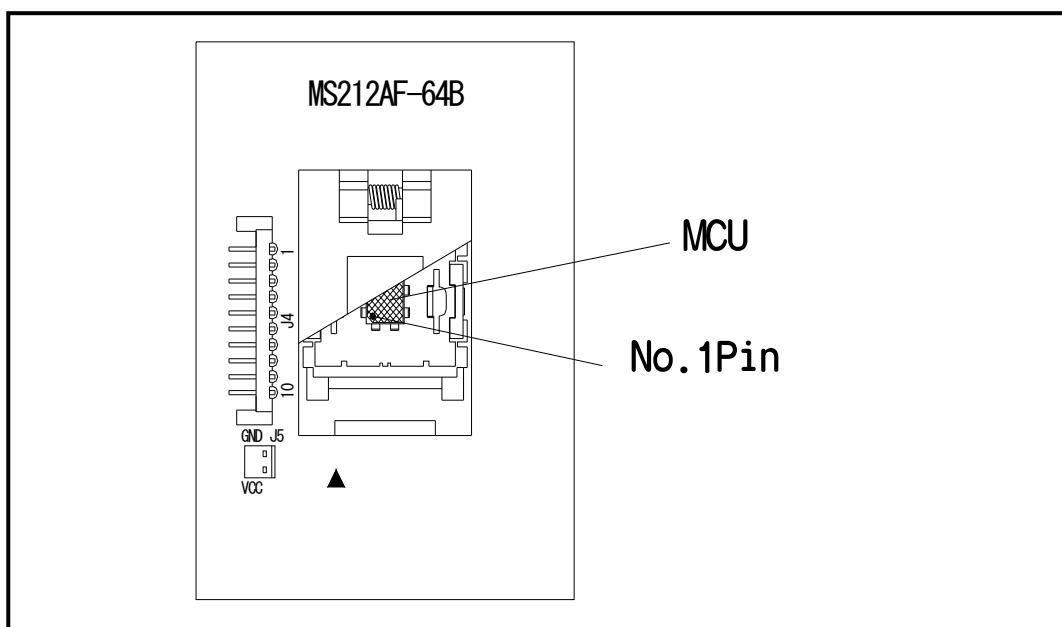Insertion direction of MCU is shown in Fig ４.1.

Fig ４.1 Insertion Direction of MCU

４．２　Cleaning of IC Socket

A contact pin inside of the IC socket of the MCU unit might deteriorate and a contact failure might occur because of the number of times used and its age of service.　As the contact failure may cause incorrect writing of MCU and malfunction of the writer, please take the below measures.

Measures against IC Socket Contact Failure

(i) Please clean the contact pin surface inside of IC socket with a brush, etc. regularly, depending on the number of times used.

(ii) If the product is not to be used for a long period, please keep it with less humidity in a plastic bag, etc.

Though enquiries on contact failures can be made, we regard IC sockets as consumable supplies.　We may recommend you to replace them if a contact failure of IC socket occurs due to its use deterioration.

【Recommended item for cleaning】

About the cleaning of the contact pin in the IC socket, we recommend the use of the nanotech brush (Kita Mfg Co., Ltd).

The nanotech brush can remove the dirt which stuck to a contact pin, a very small amount of metastasis of solder. When a contact poor problem occurred, please try it.

About nanotech brush, please ask us or Kita Mfg Co., Ltd (refer to the following site).

Nanotech brush (Kita Mfg Co., Ltd.) http://www.kita-mfg.com/pro_nanotech_e.html

５．List of Pin Connection

CN2 Connector terminal names of MS212AF-64B are shown in List 5.1.

CN3 Connector terminal names of MS212AF-64B are shown in List 5.1.

Table 5.1 J4 connector connection terminal table

Pin No.	Terminal Name	I/O	PIN No.	Terminal Name	I/O
1	ＧＮＤ	-	6	ＳＣＬＫ	OUTPUT
2	ＲＸＤ	INPUT	7	ＴＸＤ	OUTPUT
3	ＢＵＳＹ	INPUT	8	ＰＧＭ／ＯＥ	OUTPUT
4	ＶＰＰ	OUTPUT	9	ＲＥＳＥＴ	OUTPUT
5	ＶＤＤ	OUTPUT	１０	ＧＮＤ	-

Table 5.2 J5 connector connection terminal table

Pin No.	Terminal Name	PIN No.	Terminal Name
1	VDD/VCC	2	ＧＮＤ