

EF3021F-100G User's Guide

Suisei Electronics System Co., Ltd

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1. General Description

EF3021F-100G is a parallel writing unit to use to set to EFP-I.

Reading and writing data to MCU Renesas Technology M16C/21 series with built-in Flash memory are enabled by using EF3021F-100G.

IC socket for 100-pin 0.65mm pitch QFP (100P6S-A) is mounted on EF3021F-100G.

<Packing contents>

- 1) EF3021F-100G
- 2) Users guide (this manual)

Fig 1.1 shows the adapter appearance.

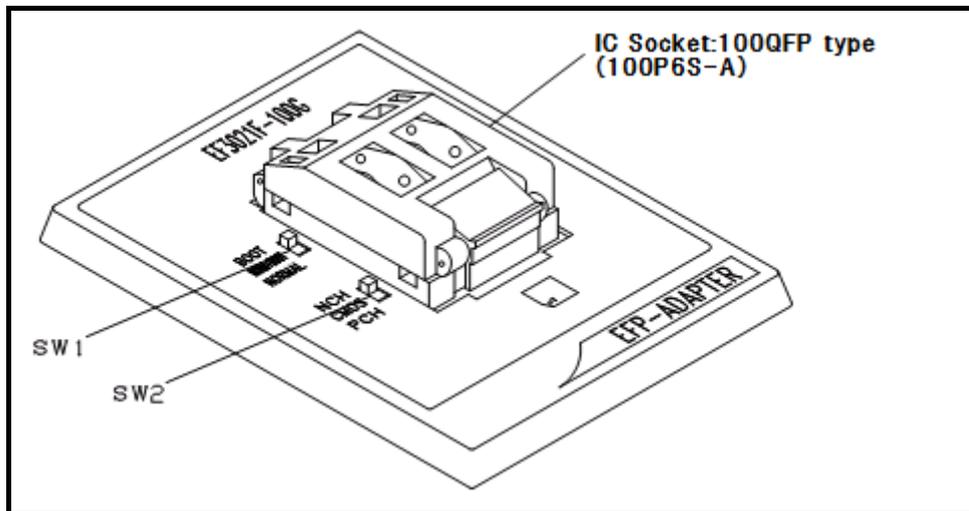


Fig.1.1: Appearance of EF3021F-100G

2. Insertion Direction of MCU and cleaning of IC socket

2.1 Insertion Direction of MCU

When MCU is inserted, No.1 pin of the IC socket on EF3021F-100G 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.2.1.

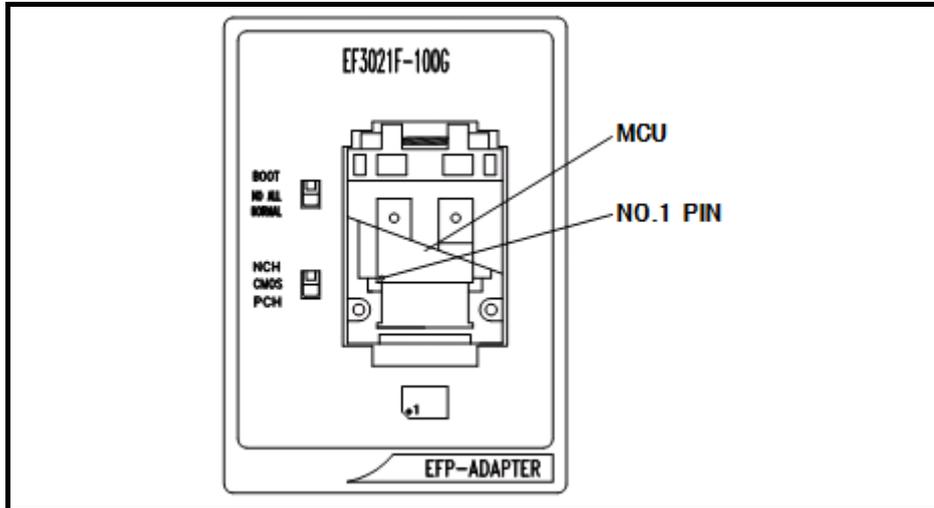


Figure 2.1: Pin Orientation of The socket

2.2 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.

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.

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.

【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

3. List of Corresponding MCU and corresponding version

3.1 Corresponding MCU

The correspondence list of EF3021F-100G

MCU type	Memory type	Correspondence MCU Name	Program memory area	SW1	SW2
M3021xFC (BOOT)	Flash memory	M30218FCxFP	DF000H~DFDFFH	BOOT	Pch
M3021xFC (NORMAL)	Flash memory	M30218FCxFP	E0000H~FFFFFFH	NORMAL	Pch

3.2 About Software version(S/W)

Please download the latest version up data on the following site when the S/W version.
Please use S/W of the latest version and confirm S/W version regularly.

【S/W version confirmation method】

The version numbers are displayed by [Help]→[About] in the WinEFP or WinEFP2 window menu.

< EFP-I/IM 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.

4. About setting of SW1

It can perform writing to BOOT domain and NORMAL domain and reading by setting SW1 of EF3021F-100G. The setting method of each domain is shown below.

1) The setting of BOOT domain

Set SW1 of EF3021F-100G in BOOT side and set a use device parameter in the environmental setting dialogue of WinEFP in "M3021xFC (BOOT)".

2) The setting of NORMAL domains

Set SW1 of EF3021F-100G in NORMAL side and set a use device parameter in the environmental setting dialogue of WinEFP in "M3021xFC (NORMAL)".

※ When the device LED (red) of the main body of EFP-I turns on, please do not set SW1.

* When you set SW1 in "NORM + BOOT" and it performs to read and write NORMAL domain and BOOT domain, please refer to **6. Device batch macroinstruction.**

5. About setting of SW2

SW2 of EF3021F-100G sets an output form of port P0 of MCU.

Please set it according to the contents of EF3021F-100G specifications.

* When the device LED (red) of the main body of EFP-I turns on, please do not set SW2.

6. Device batch macroinstruction

Device batch macro command is a command writing and reading that NORMAL domain of MCU and a BOOT domain by batch. When it uses Device batch macro command, please set SW1 in MCU unit in "NORM + BOOT".

Please use this command when it work to write in reading data at MCU of the blank after it reads data from MCU which is finished writing.

The parameter input dialogue of the device batch macro command is shown in Fig.6.1.

Device batch macroinstruction

BOOT Area

Start Address(T): 05F000

End Address(B): 05FDFF

NORMAL Area

Start Address(S): 0E0000

End Address(Q): 0FFFFFF

Device Type(D): Erase

Include Block Information(L)

OK Cancel

Fig.6.1 Device batch macro command parameter input dialogue

1) Start、End Address

Appoint a domain reading or writing in the BOOT domain.

Please appoint domains from 5F000H to 5FDFFH in this parameter.

※In the BOOT domain, NORMAL domain and address space repeat.

From 5FDFFH to 5F000H of the EFP-I Installed RAM is assigned to the work domain for the BOOT domain.

The diagrammatical view of the work domain is shown in Fig. 6.2.

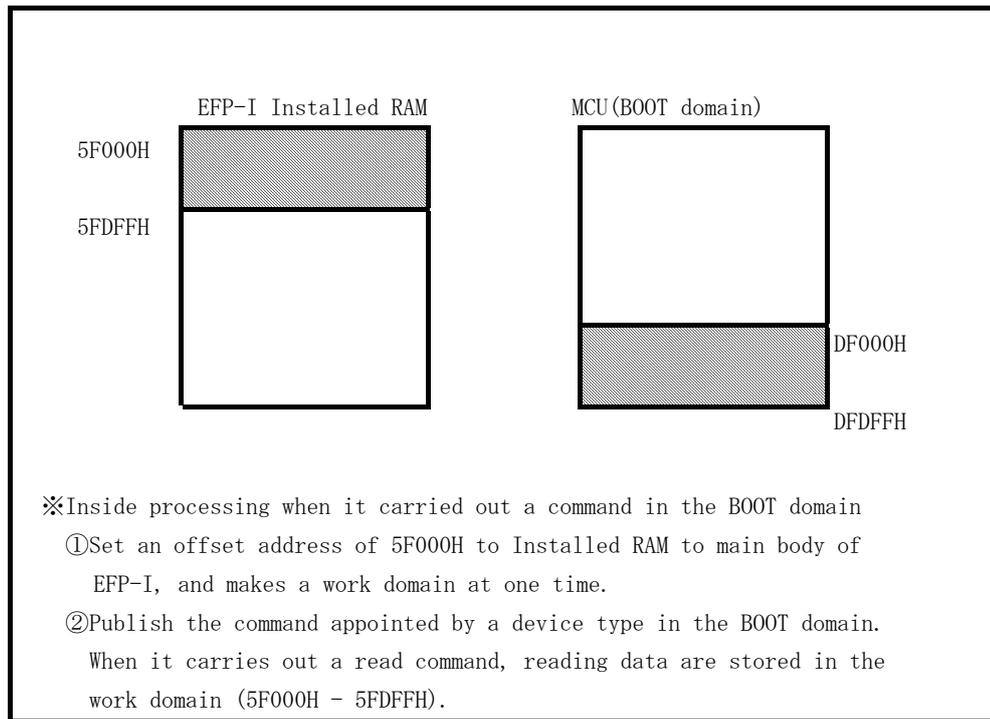


Fig.6.2 Work domain diagrammatical view

2) Start、End Address (NORMAL Domain)

Appoint a domain reading or writing in the NORMAL domain.

Please use address in NORMAL domain of the device.

3) Device Type

Appoint a command to publish. Please choose from drop-downs list in this parameter displayed area right side.

It is displayed when it click a downward arrow with a mouse.

4) Include Block Information (including block information)

It can not in this unit.

5) OK button

Carry out a device batch macro command.

6) Cancel button

Cancel the command

※ the use example of the device batch macro command

It shows in the follow example that it uses a device batch macro command, and begin to read data from MCU which is finished writing and write in data to MCU of the blank article.

1) Set SW1 of EF3021F-100G in "NORM + BOOT" and choose [Device]→[Device batch macroinstruction] in the WinEFP menu.

2) Insert MCU which is finished writing in EF3021F-100G.

Start a device batch macro command, the end address set an arbitrary address and set "read" a device type and click the OK button.

When a command was finished normally, it takes out MCU from EF3021F-100G.

3) Insert MCU of the blank article in EF3021F-100G.

Set an arbitrary address in a start of the device batch macro and the end address, and set a device type in "program" and click the OK button.

7. Automatic offset address for EFP-I internal RAM

EFP-I has built-in 512k Byte user buffer RAM. In EFP-I, address space of buffer RAM are normally set from 0h to 7FFFFFFh. However, some MCU used in this unit automatically set offset address in buffer RAM and allocate address space from 80000h to FFFFFFFh.

*Please set domain of FFFFFFFh - 80,000h the command in the [Edit] in the WinEFP window menu.

For automatic offset setting, it cannot use the domain of 7FFFFFFh - 0h.

* When you input indication value into the Offset Address parameters such as Download, Upload command, a value of "the input value + automatic offset value" (80,000h) becomes offset value for the buffer RAM.

* The explanation about the offset of the buffer RAM is mentioned in "the way of thinking of offset addresses" of EFP-I control software WinEFP instruction manual.