

EF7910F-100H User's Guide

Suisei Electronics System Co., Ltd
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1. General Description

EF7910F-100H is a parallel writing unit used by connecting to EFP-I/1M.

Reading and writing data to microcomputer 7910 groups with MCU built-in Renesas Technology Flash memory is enabled by using EF7910F-100H.

IC socket for 100-pin 0.5mm pitch QFP (100p6Q-A) is mounted on EF7910F-100H.

<Packing contents>

- 1) EF7910F-100H
- 2) Users guide (this manual)

External Figure of EF7910F-100H is shown in Fig.1.1

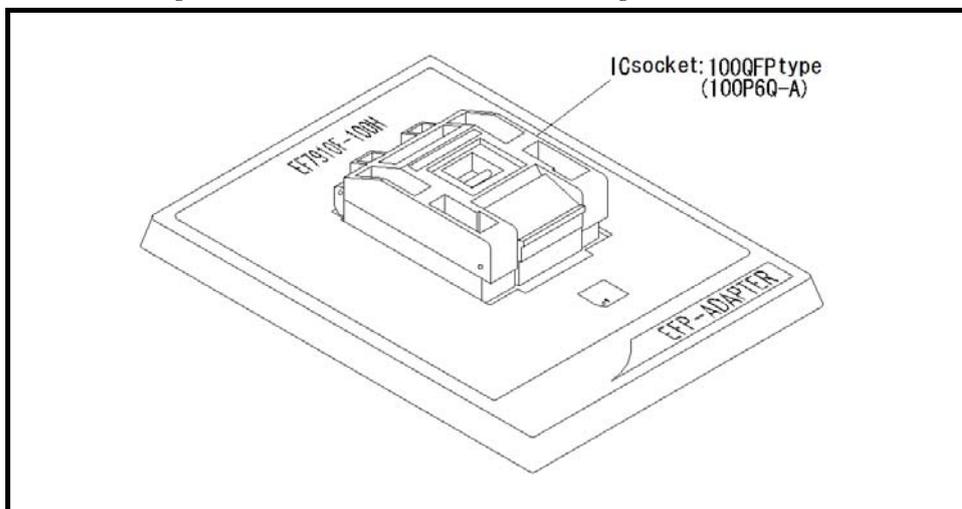


Fig 1.1 EF7910F-100H External Figure

2. 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 EF7910F-100H 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.

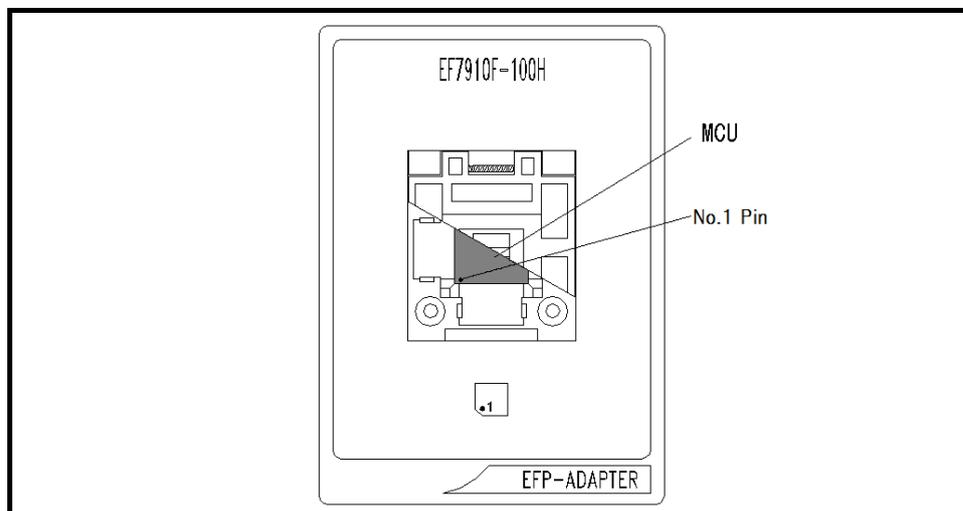


Fig 2.1 Insertion Direction of MCU

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

3. List of Corresponding MCU and corresponding version

3. 1 List of Corresponding MCU

A corresponding MCU list of EF7910F-100H is shown in Fig 3.1.

Fig 3.1 Corresponding MCU List for EF7910F-100H

MCU type	Memory type	Corresponding MCU Name	Program memory Area
M37910FE	Flash memory	M37910FEMHP	1000h~1FFFh 7D0000h~7FFFFFFh

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 when the S/W version such as EFP- I used is old.

< EFP- I S/W the latest free download site >

http://www.suisei.co.jp/download_e/productdata_efp1_e.html

4. ID Code Area

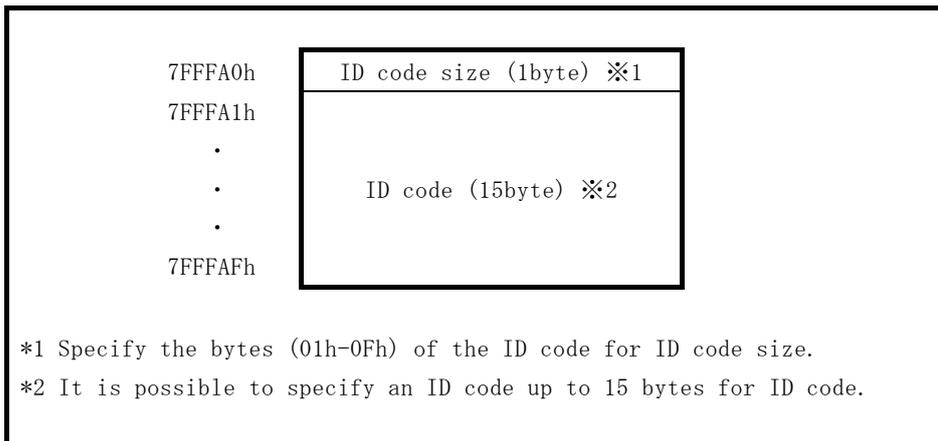
7910 Group MCUs is provided ID code area in 7FFFA0h-7FFFFFF of the internal flash memory.

When it writes an optional ID code and its byte into the ID code area, it can prohibit writing and reading of MCU built-in Flash memory.

About MCU which became the protection state by writing of ID cord, it can remove a protection state to use ID collation function of WinEFP.

Please refer to (5. ID collation) about the ID collation function.

* This function is to prevent unjust data reading of the user's program.



*1 Specify the bytes (01h-0Fh) of the ID code for ID code size.

*2 It is possible to specify an ID code up to 15 bytes for ID code.

Fig. 4.1: ID Code Area Configuration

5. ID Collation Function

The ID code collation is carried out by inputting the ID code etc. for the ID collation parameter of the WinEFP environment setting dialog. Be sure to carry out the ID code collation if an ID has been written in the ID code area of the target MCU.

The commands of [Device] of the WinEFP window menu cannot be used if the ID code does not match.

* If the ID code area is blank, the ID collation is not carried out even if you input the ID code.

The ID collation parameter configuration is shown in Fig. 5.1.



The image shows a dialog box titled "ID Collation". It has three rows of controls. The first row is "Input Format(I):" with two radio buttons: "ASCII" (which is selected) and "HEX". The second row is "Start Address(A):" with a text input field containing the hexadecimal value "7FFFA0". The third row is "ID Code(C):" with an empty text input field.

Fig. 5.1: ID Collation Parameter Configuration

(1) Input format

The ID code input format is specified as ASCII or HEX.

(2) Start address

Specify the top address of ID code area.

ID code top address of MCU is set in this parameter automatically.

(3) ID code

Input the ID code.

6. ID collation operation process

When it is used MCU having ID code area, please be careful to the wrong writing of ID code area.

Please manage it in the user side not to forget ID code written in.

In this item, it mention about use example and the procedure of the ID cord.

It shows the following a series of procedures from writing of ID cord to cancellation.

1 ID code setting

In the domain equivalent to the ID coding area of the buffer RAM in the main body of EFP-I, set ID cord size and ID cord.

It set ID cord "SUISEI" in the example. (Cf. figure 6.2)

Addr...	Set...	Byte	Word	DWord														
Address	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	ASCII	
7FFF90	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
7FFFA0	06	53	55	49	53	45	49	FF	.SUISEI.....									
7FFFB0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
7FFFC0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
7FFFD0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
7FFFE0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
7FFFF0	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
800000	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

Fig.6.2 dump window (ID cord setting data)

※Buffer RAM setting data

7 F F F A 0 h : 0 6 h

7 F F F A 1 h ~ 7 F F F A F h : 5 3 h、5 5 h、4 9 h、5 3 h、4 5 h、4 9 h

2 Writing to the ID coding area

Write in data of the buffer RAM in the main body of EFP-I to flash memory in MCU.

Use a program command in the example and write in the domain including ID coding area.



Fig.6.3 writing to ID code area

※Program command designated address

S t a r t A d d r e s s : 7 F F F 0 0 h

E n d a d d r e s s : 7 F F F F F h

3 The confirmation of the protection state and cancellation

For MCU which ID cord was written in at, error message dialogue to carry out a command in the [Device] in the WinEFP window menu is displayed and cancels a command. (Figure 6.4)



Figure6.4 ID error

Collate the ID cord with ID collation command and remove a protection state of MCU side. It is shown in Fig.6.5, 6.6 about ID input by code in each input form.



Fig. 6.5 ID collation (input form : ASCII)

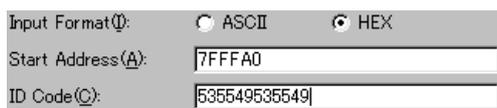


Fig. 6.6 ID collation (input form : HEX)

When ID cord accords, the protection state of MCU is removed, and renewal of MCU, reading are enabled.

When an error occurred after ID collation command is practiced, please carry out ID collation command after confirmation with ID cord once again.

7. Block Set Command

The block set command handles the lock bit of each block.

Block renewal prohibition bit called a lock bit every each block is set.

Block set command is the reference of the lock bit and a command to perform the setting.

It can prohibit writing of the block and erase when you set to Lock the lock bit of each block.

7. 1 Block set screen constitution

It is shown the screen constitution of the block set command in Fig 7.1.

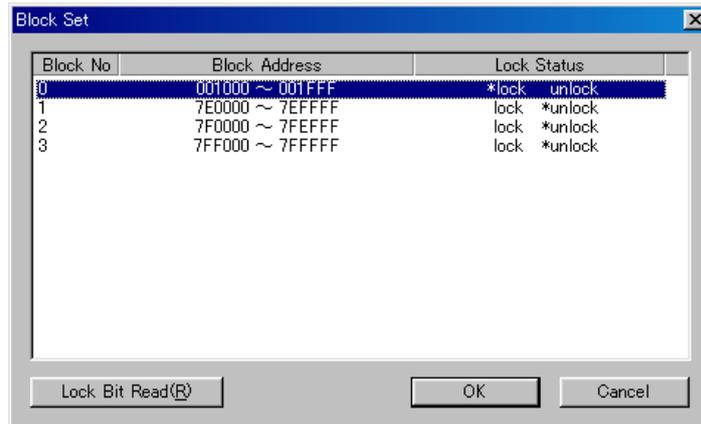


Fig7.1 Block set command screen constitution

1) Block No. (block number)

Display the block number of each block.

2) Block Address

Display top and end address of each block

3) Lock Status (lock bit status)

Indicate the status of Lock bit state of each block

Lock bit state indication contents>

*lock unlock : The state that is locked

lock *unlock : The state that is unlocked

4) Lock Bit Read

It reads the state of all the locks bit from MCU and displays the state of the lock bit in lock status according to the contents.

5) OK button

Perform lock bit setting.

Set to Lock that lock bit of a block displayed lock state in lock bit status. (*lock unlock)

6) Cansel button

Cancel commands.

7. 2 Lock bit setting operation

It shows below about a procedure to set lock bit of the block to lock.

In this part, it is written about a procedure to set the non-lock lock bit that is in a state in a lock state

Please refer to **8.1 Lock bit cancellation operation** about the procedure to return the lock lock bit that is in a state to a non-lock state.

1 The setting of the lock type

Lock type parameter is the parameter that is to be availability or invalidates the setting of the lock bit.

Lock type parameter is in Use Device in the Environment Setting dialogue of WinEFP.

When the setting of the lock type parameter is not performed, protection function by the lock bit is not performed normally.



Fig 7.2 Lock type parameter

※Lock type setting contents

Lock bit effective : Lock bit is effective

2 The setting of Lock bit

Carry out block set command and display Block set command dialogue.

Double-click a mouse in the line that wants to set Lock bit to Lock.

And it changes indication of the lock status.

Block...	Block Address	Lock Status
0	001000 ~ 001FFF	lock *unlock
1	7E0000 ~ 7EFFFF	lock *unlock
2	7F0000 ~ 7FEFFF	lock *unlock
3	7FF000 ~ 7FFFFFFF	lock *unlock

↓ Indication reshuffling when double-clicked a mouse

Block...	Block Address	Lock Status
0	001000 ~ 001FFF	*lock unlock
1	7E0000 ~ 7EFFFF	lock *unlock
2	7F0000 ~ 7FEFFF	lock *unlock
3	7FF000 ~ 7FFFFFFF	lock *unlock

Fig 7.3 Setting of Lock bit

Click the OK button and carry out a block set command.

When it writes and Block Erase to the block which became the protection state by Lock bit, error occurs and cancels a command.

In addition, All Erase command (all blocks elimination) does not occur the error, but only the block of the non-lock state is erased.

8. Erase

It can perform block elimination and the collective elimination of all blocks in Erase type parameter in Erase command.

Parameter input dialogue of Erase command is shown in Fig. 8.1.

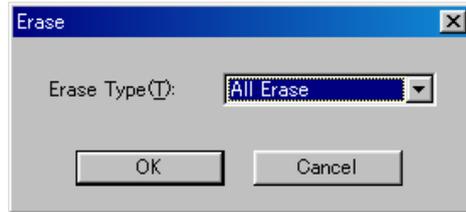


Fig.8.1 Erase command parameter input dialog

1) Erase Type

In a list of drop-downs(displayed it when it click a lower arrow with a mouse) of the Erase type parameter view area right side, the address domain (xxxxxxh - xxxxxxh) of All Erase and each block is displayed.

Please choose an elimination method.

2) OK button

Carry out Erase command.

3) Cancel button

Cancel a command.

8. 1 Lock bit cancellation operation process

Cancellation procedure of the block which became the protection state by Lock bit is shown the following.

1 Setting of Lock type

Lock type parameter invalidates and effective the setting of the lock bit.

There is Lock type parameter in Use Device in the Environment Setting dialogue of WinEFP.

When the setting of Lock type parameter is not performed, protection function by Lock bit is not performed normally.



Fig.8.2 Lock bit parameter

※Lock type setting contents

Lock bit ineffective : Lock bit is ineffective

2 Erase of Lock bit

Carry out Erase command and display Erase command parameter input dialogue.

Appoint block which became the protection state by Lock bit in Erase type parameter or All Erase.

Carry out Erase command.

9. Parameter input by the device command

MCU to use at this MCU unit performs writing and reading of data by a page unit.

One page of data size is 256 bytes.

About Start and End Address of each command, obey the following input forms, and please input an address.

※Input forms

Start Address : x x x x 0 0 h

End Address : x x x x F F h

Parameter error occurs and cancels command when you input an address except the page unit into Start, End Address.

10. Parameter input at the time of the NORMAL domain use in 7910 groups

Parameter input method is shown in Fig 10.1 when it perform writing and reading to NORMAL domain in 7910 groups.

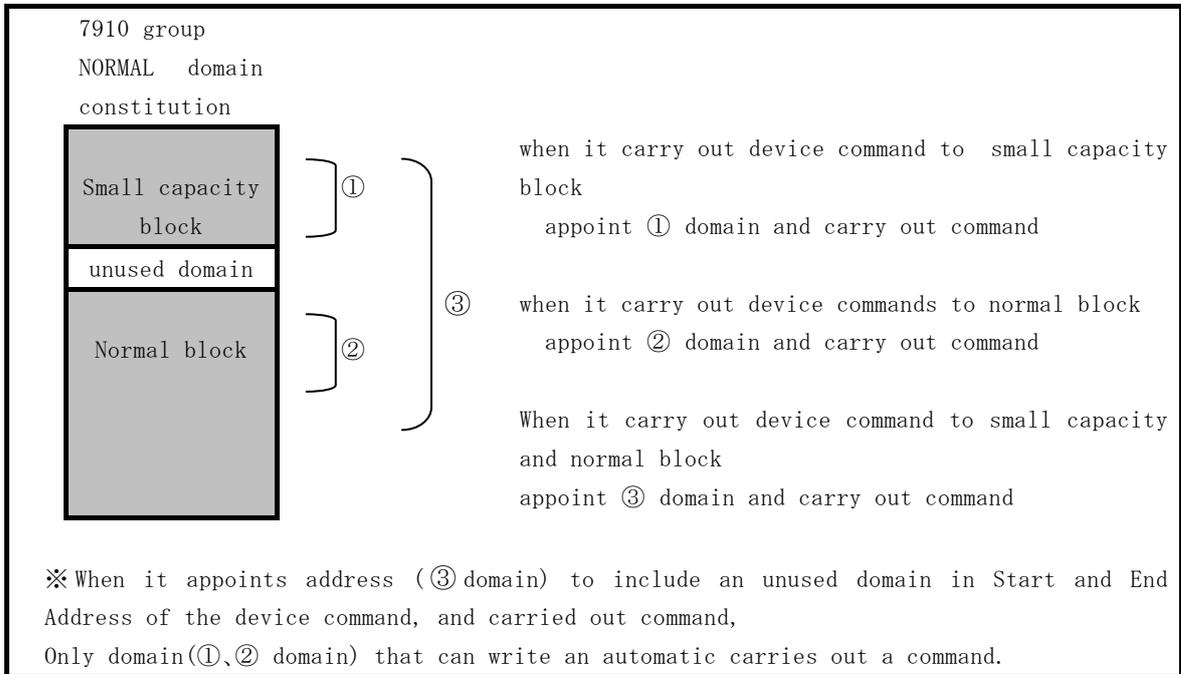


Fig.10.1 Parameter Input when it uses NORMAL domain