

EF7906F-42E User's Guide

Suisei Electronics System Co., Ltd
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1. General Description

The EF7906F-42E parallel writing unit is specially designed for the EFP-I and is mounted on the EFP-I.

Using the EF7906F-42E enables you to write and read to/from the 7900 Series Mitsubishi Electric flash memory built-in MCU.

The EF7906F-42E is mounted with an IC socket for a 42-pin 0.8mm-pitch SSOP (42P2R-A).

<Packing contents>

- 1) EF7906F-42E
- 2) Users guide (this manual)

External Figure of EF7906F-42E is shown in Fig.1.1

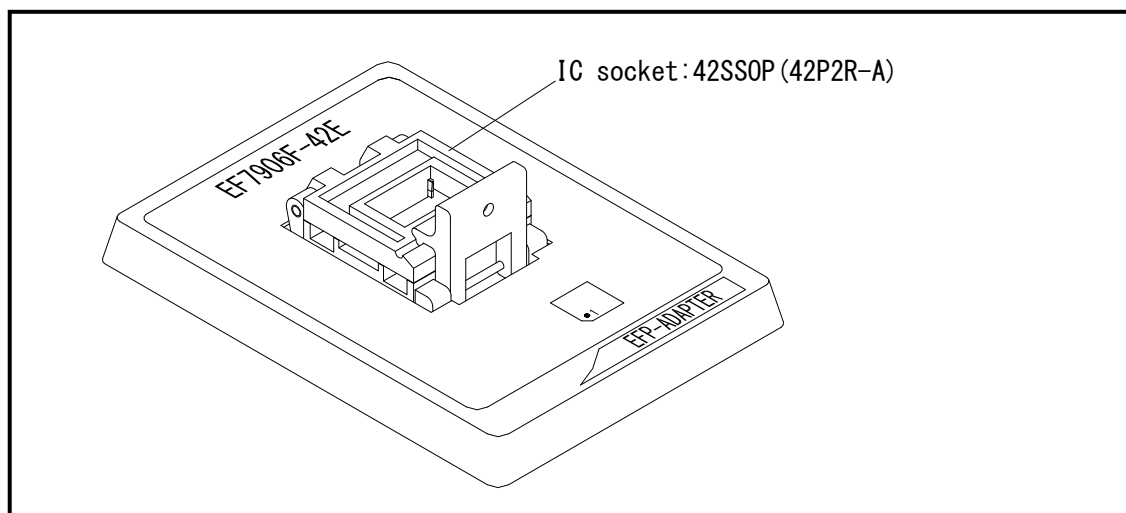


Fig 1.1 EF7906F-42E External Figure

2. List of Corresponding MCU and corresponding version

2. 1 List of Corresponding MCU

Specifications of the EF7906F-42S are listed in Table 3.1.

Table 3.1: EF7906F-42E Specifications

MCU Type	Memory Type	Corresponding MCU Name	Program Memory Area
M37906F8 (NORMAL)	Flash memory	M37906F8CSP	0 h -107FF h
M37906F8 (BOOT)	Flash memory	M37906F8CSP	0 h -1FFF h
Remarks Operation clock: 2MHz (Supplied from ceramic oscillator on EF7906F-42E) Power source: Supplied from EFP-I			

2. 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.susei.co.jp/download_e/productdata_efp1_e.html

< EFP-S2 S/W the latest free download site >

http://www.susei.co.jp/download_e/productdata_s2_e.html

< EFP-S2V S/W the latest free download site >

http://www.susei.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.

3. Insertion Direction of MCU and cleaning of IC socket

3. 1 Insertion Direction of MCU

When MCU is inserted, No.1 pin of the IC socket on EF7906F-42E 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.3.1.

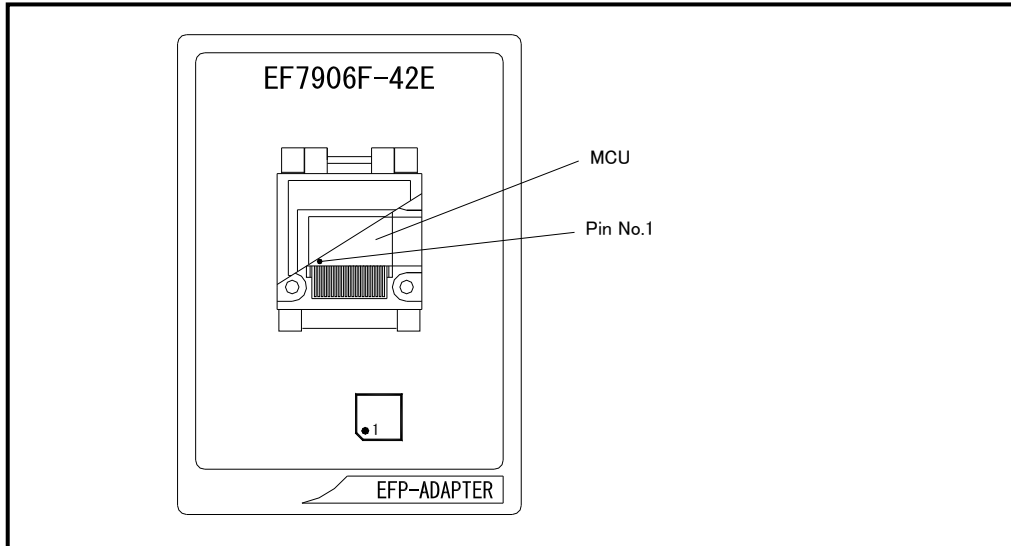


Fig 3.1: Pin Orientation of The socket

3. 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

4. ID Code Area

ID code area is provided in the internal flash memory of 7900 Series MCUs.

Write an optional ID code and its byte into the ID code area. MCUs for which an ID code has been written in the ID code area carry out ID code collation and the MCU's internal flash memory cannot be read, written in or cleared unless the ID code matches.

* Does not include when the ID code area is blank..

ID code area configuration is shown in Fig. 4.1.

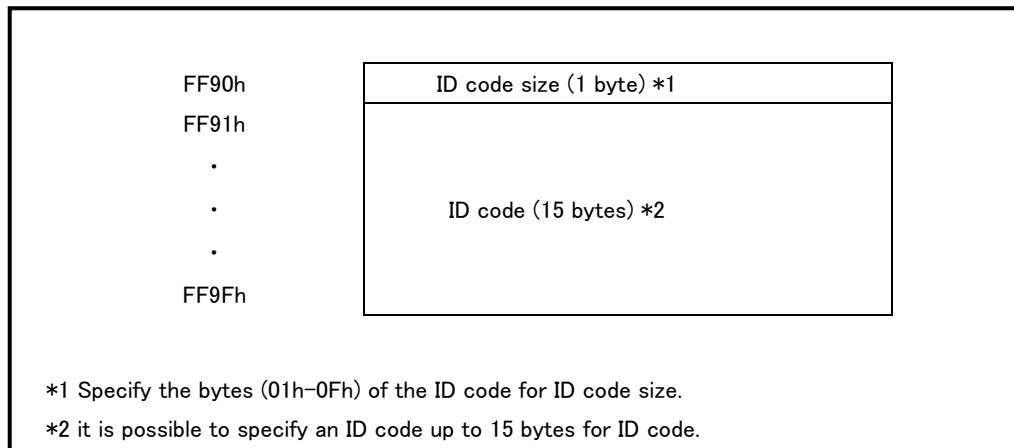


Fig. 4.1: ID Code Area Configuration

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.

Fig. 5.1: ID Collation Parameter Configuration

(1) Input format

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

(2) Top address

Specifies the top address of ID code area.

The top address is fixed at FF90h for the 7906 group.

(3) ID code

Input the ID code.

(4) Save button

Saves input ID collation parameters in a file. When the save button is clicked, the file section dialog appears, so input the file name of your choice.

(5) Refer button

Reads the file in which ID collation parameters are saved and sets parameters according to the contents of the file. When the refer button is clicked, the file section dialog appears, so select the file of your choice.

An example of the operating procedure for ID collation is shown below. The ID code area of the target MCU's internal flash memory is set as follows.

Device type	7906 group
ID code (FF91h-FF96h)	53h, 55h, 49h, 53h, 45h, 49h
ID code size (FF90h)	06h

- (1) Check if FF90h is set for the top address parameter. If the device type parameter is set to "M37906Fx", FF90h is automatically set as the top address of the code collation parameter.

The ID code will not match if an address other than FF90h is set.

- (2) Set ASCII or HEX for the input format parameter, and input an ID code for the ID code parameter.
- An example of ID code parameter setting is given below.

* As the ID code size is calculated automatically, it is not necessary to input into the ID code parameter.

For ASCII:

ID Code: SUISEI

For HEX:

ID Code: 53 55 49 53 45 49
S U I S E I

6. Erase Command

The erase type parameter contained in the erase command enables you to erase by block or erase all blocks. The erase command parameter input dialog is shown in Figure 6.1.

*This command has not been described in the WinEFP manual.



Fig 6.1: Erase Command Parameter Input Dialog

(1) Erase type

All Erase and block address area (xxxxxxH - xxxxxxH) are displayed in the drop-down list to the right of the erase type parameter display field (displayed by clicking the arrow pointing downward with the mouse). Select the block erase method.

(2) OK button

Execute the block erase command.

(3) Cancel button

Cancel the command.