

# **S1C8F/6F Flash Microcomputer Programming Tool Package Specifications**

- **Universal ROM Writer II (S5U1C88000W1)**
- **S1C88/S1C63 Serial Connector (S5U1C88000X1)**
- **S1C8F360 Adapter Socket (S5U1C88360X1)**
- **S1C6P366 Adapter Socket (S5U1C63366X1)**
- **S1C6P466 Adapter Socket (S5U1C63466X1)**
- **S1C6F567 Adapter Socket (S5U1C6F567X1)**
- **S1C8F360 Control Software (S5U1C8F360Y1)**
- **Multiple-Programming ROM Writer (S5U1C88000W2)**
- **Multiple-Programming ROM Writer Control Software (S5U1C8F360Y2)**



# Universal ROM Writer II

## S5U1C8800W1 Package Specifications

### DESCRIPTION

The Universal ROM Writer II (S5U1C8800W1) is the PROM writer for the Seiko Epson built-in Flash microcomputers. By attaching the S1C88/S1C63 Serial Connector to this PROM writer, the device in chip form or plastic package on the target board can be programmed. The plastic package device alone can also be programmed by attaching the Adapter Socket provided for each model. Data writing and other operations are controlled by a personal computer via an RS-232C.

### COMPONENTS

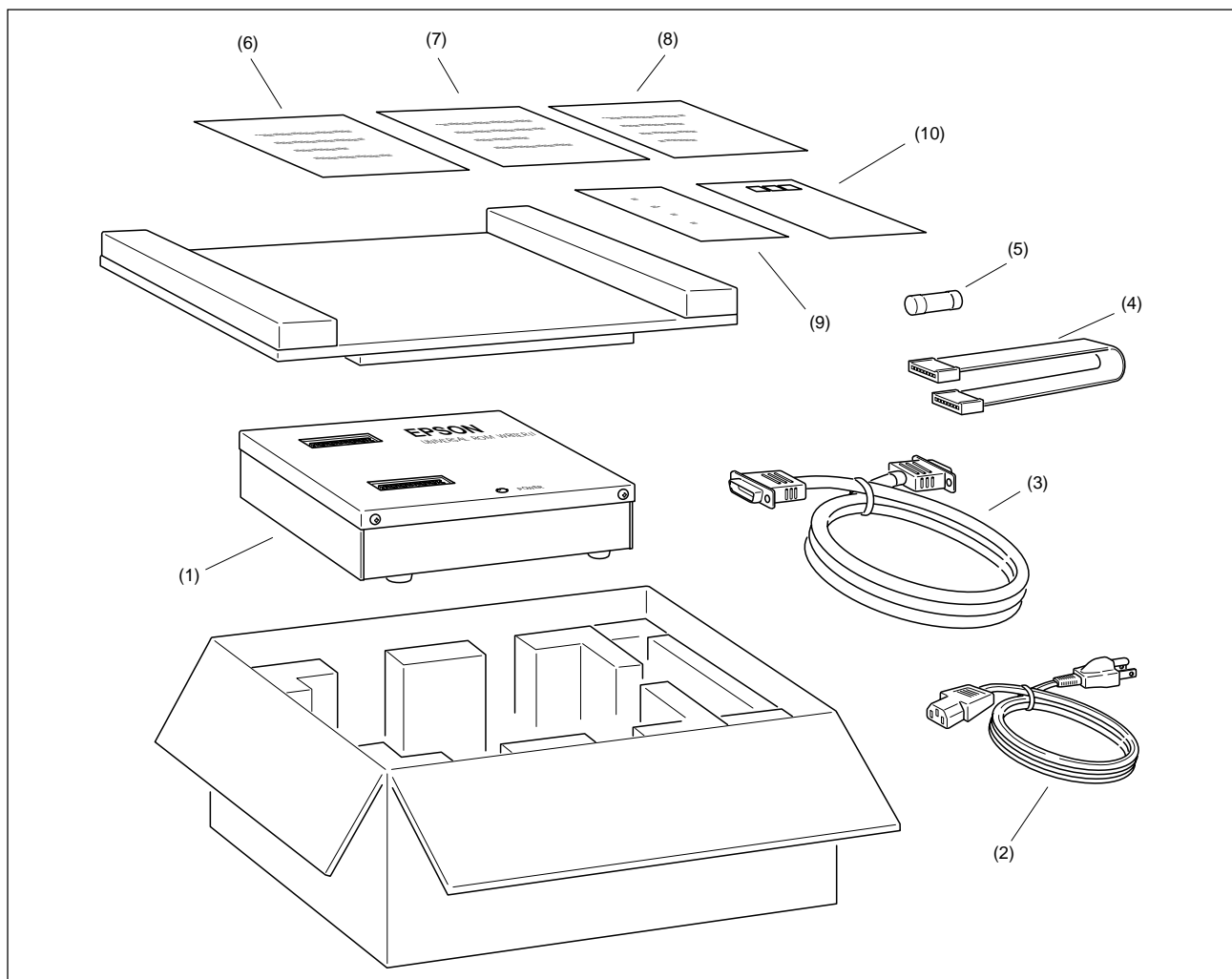
The Universal ROM Writer II Package contains the following components:

|  |   |
|--|---|
| (1) Universal ROM Writer II (S5U1C8800W1) main unit.....                               | 1 |
| (2) Power cable .....  | 1 |
| (3) RS-232C cable (for IBM-PC/AT) .....  | 1 |
| (4) SIO cable .....  | 1 |
| (5) Spare fuse .....   | 1 |
| (6) Universal ROM Writer II (S5U1C8800W1)<br>Package Specifications (this sheet) ..... | 1 |
| (7) Notes for using .....  | 1 |
| (8) Warranty certificate .....   | 1 |
| (9) Warranty registration card .....   | 1 |
| (10) Envelope .....  | 1 |

Refer to the "Technical Manual" of the built-in Flash microcomputer for how to use the Universal ROM Writer II.

This package does not contain the following tools:

- (A) Adapter Socket
- (B) S1C88/S1C63 Serial Connector
- (C) Universal ROM Writer II Control Software



# Universal ROM Writer II

## ■ SPECIFICATIONS OF COMPONENTS

| No. | Component name                   | Item                      | Specifications                       | Remarks              |
|-----|----------------------------------|---------------------------|--------------------------------------|----------------------|
| 1   | Main unit                        | Dimensions                | 210 mm (L) x 150 mm (W) x 49 mm (H)  | Rubber feet included |
|     |                                  | Weight                    | Approx. 1.3 kg (main body)           |                      |
|     |                                  | External color            | Cygnus white                         |                      |
|     |                                  | Input voltage             | 85 to 265 V, AC                      |                      |
|     |                                  | Input frequency           | 47 to 440 Hz, single phase           |                      |
|     |                                  | Power consumption         | 10 VA, max.                          |                      |
|     |                                  | Board                     | Main board x 1                       |                      |
| 2   | RS-232C cable<br>(for IBM-PC/AT) | Length                    | 3 m                                  |                      |
|     |                                  | Interface level           | EIA-RS232C level                     |                      |
|     |                                  | Cable                     | 12-pair shielded cable               |                      |
|     |                                  | Cable connector           | DBC-9P-F                             |                      |
|     |                                  | PC connector              | DBC-9S                               | or equivalent        |
| 3   | Serial cable                     | Length                    | 30 cm                                |                      |
|     |                                  | Interface level           | 5 V, V <sub>PP</sub> is 12.5 V       |                      |
|     |                                  | Cable connector           | IL-S-8S-S2C2-S (JAE)                 |                      |
|     |                                  | Main unit, user connector | IL-S-8P-S2L2-EF (JAE), light angle   |                      |
| 4   | Power cable                      | Length                    | 2 m                                  |                      |
|     |                                  | Plug type                 | Three-wire grounding plug            |                      |
| 5   | Spare fuse                       | Type, rating              | 250 V, 1 A                           | Tubular fuse         |
| 6   | Package                          | Dimensions                | 380 mm (L) x 260 mm (W) x 190 mm (H) |                      |
|     |                                  | Materials                 | W carton, cardboard                  |                      |
|     |                                  | Total weight of package   | Approx. 2.5 kg                       |                      |

## ■ OPERATING ENVIRONMENT CONDITIONS

| No. | Item                    | Specifications                            | Remarks         |
|-----|-------------------------|---|-----------------|
| 1   | Operating temperature   | 5 to 40°C                                 |                 |
| 2   | Storage temperature     | -20 to 60°C                               |                 |
| 3   | Operating humidity      | 35 to 80%                                 |                 |
| 4   | Storage humidity        | 20 to 90%                                 | No condensation |
| 5   | Resistance to vibration | Operating: 2.45 m/S <sup>2</sup> max.     |                 |
|     |                         | Transportation: 9.8 m/S <sup>2</sup> max. |                 |
| 6   | Resistance to impulse   | Operating: 4.9 m/S <sup>2</sup> max.      |                 |
|     |                         | Standby: 9.8 m/S <sup>2</sup> max.        |                 |

## S1C88/S1C63 Serial Connector S5U1C88000X1 Package Specifications

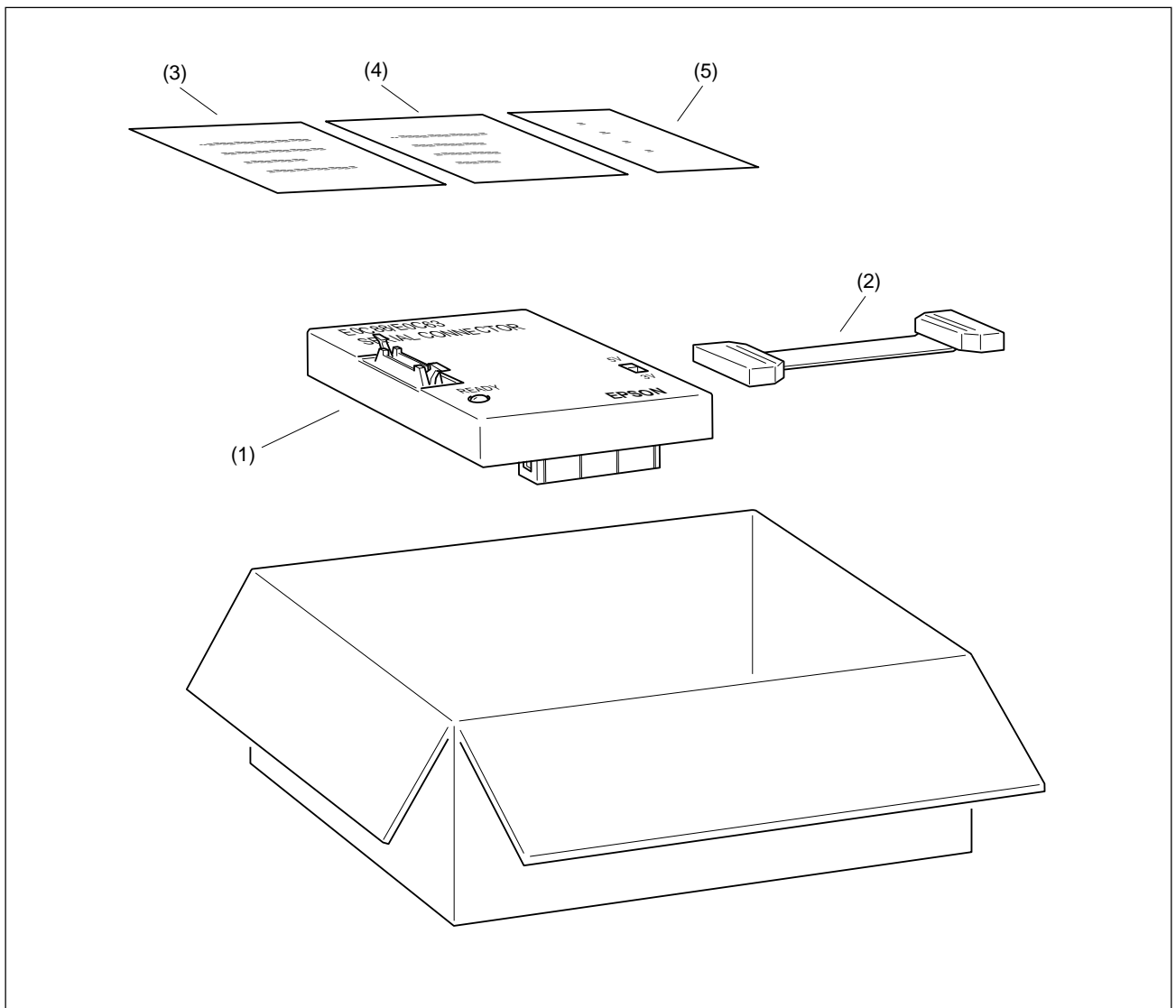
### ■ DESCRIPTION

S1C88/S1C63 Serial Connector (S5U1C88000X1) is used by installing on the Universal ROM Writer II (S5U1C88000W1). It can be used for serial programming of all the S1C88 Family and S1C63 Family Flash built-in microcomputers.

### ■ COMPONENTS

The S1C88/S1C63 Serial Connector Package contains the following components:

- (1) S1C88/S1C63 Serial Connector (S5U1C88000X1) main unit ..... 1
- (2) SIO cable ..... 1
- (3) S1C88/S1C63 Serial Connector (S5U1C88000X1) Package Specifications (this sheet) .... 1
- (4) Notes on use ..... 1
- (5) Warranty registration card ..... 1



Refer to the "Technical Manual" of each model for how to use the S1C88/S1C63 Serial Connector.

# S1C88/S1C63 Serial Connector

## ■ COMPONENT SPECIFICATIONS

| No. | Component        | Item           | Specifications                      | Remarks |
|-----|------------------|----------------|-------------------------------------|---------|
| 1   | Serial Connector | Dimensions     | 106 mm (L) × 100 mm (W) × 42 mm (H) |         |
|     |                  | Weight         | Approx. 200 g (main body)           |         |
|     |                  | External color | Cygnus white                        |         |
|     |                  | Board          | Main board × 1                      |         |

## ■ OPERATING ENVIRONMENT CONDITIONS

| No. | Item                    | Specifications   | Remarks         |
|-----|-------------------------|--|-----------------|
| 1   | Operating temperature   | 5 to 40°C  |                 |
| 2   | Storage temperature     | -20 to 60°C  |                 |
| 3   | Operating humidity      | 35 to 80%  |                 |
| 4   | Storage humidity        | 20 to 90%  | No condensation |
| 5   | Resistance to vibration | Operating: 2.45 m/S <sup>2</sup> max.<br>Transportation: 9.8 m/S <sup>2</sup> max. |                 |
| 6   | Resistance to impulse   | Operating: 4.9 m/S <sup>2</sup> max.<br>Standby: 9.8 m/S <sup>2</sup> max.         |                 |

## S1C8F360 Adapter Socket S5U1C88360X1 Package Specifications

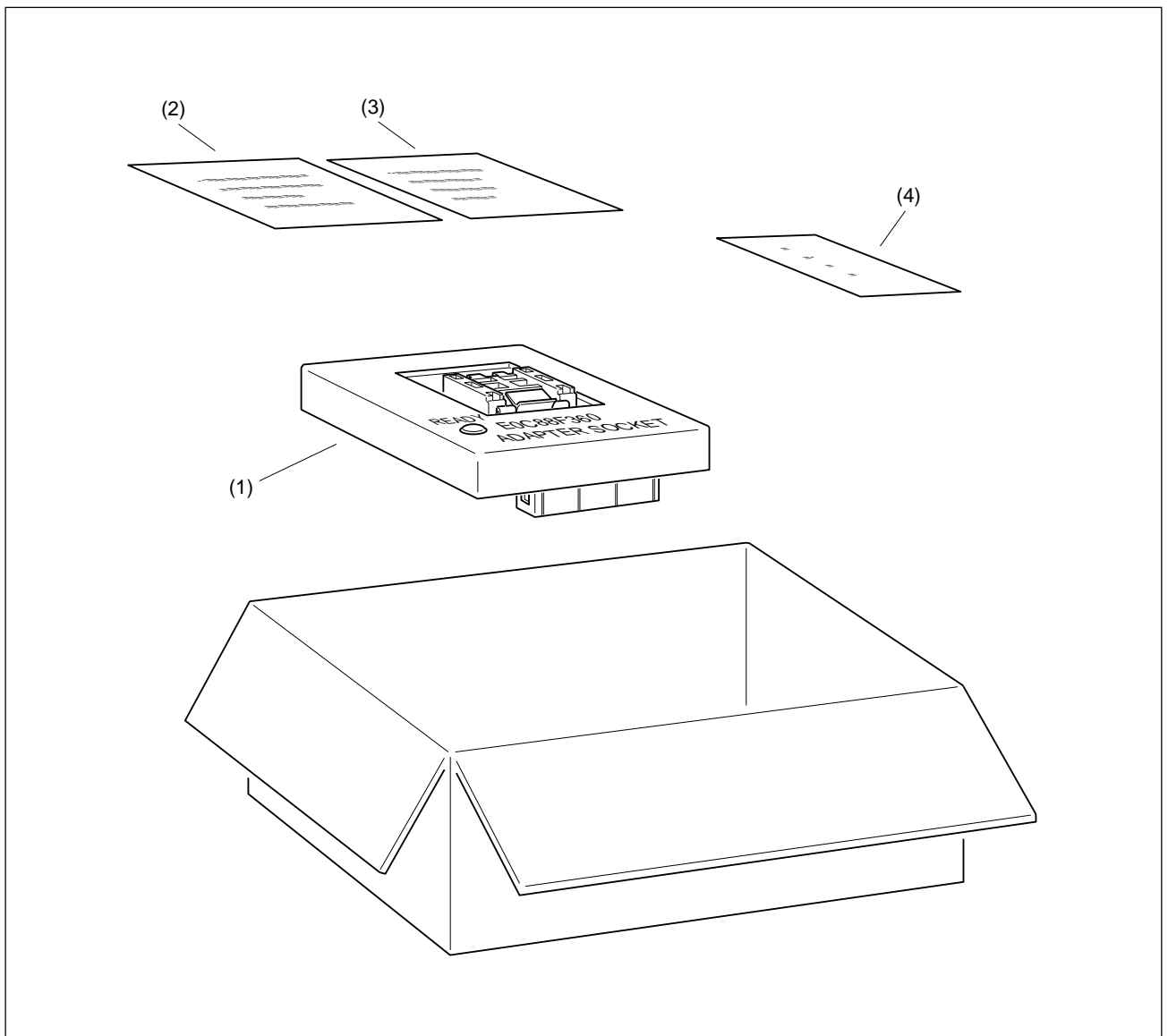
### ■ DESCRIPTION

The S1C8F360 Adapter Socket (S5U1C88360X1) is used to mount the S1C8F360 to the Universal ROM Writer II (S5U1C88000W1) when programming the S1C8F360 through parallel data writing.

### ■ COMPONENTS

The S1C8F360 Adapter Socket Package contains the following components:

- (1) Adapter Socket (S5U1C88360X1) main unit ..... 1
- (2) S1C8F360 Adapter Socket (S5U1C88360X1) Package Specifications (this sheet) .. 1
- (3) Notes on use ..... 1
- (4) Warranty registration card ..... 1



Refer to the "S1C8F360 Technical Manual" for how to use the S1C8F360 Adapter Socket.

# S1C8F360 Adapter Socket

## ■ COMPONENT SPECIFICATIONS

| No. | Component      | Item           | Specifications                      | Remarks |
|-----|----------------|----------------|-------------------------------------|---------|
| 1   | Adapter Socket | Dimensions     | 106 mm (L) × 100 mm (W) × 36 mm (H) |         |
|     |                | Weight         | Approx. 200 g (main body)           |         |
|     |                | External color | Cygnus white                        |         |
|     |                | Board          | Main board × 1                      |         |

## ■ OPERATING ENVIRONMENT CONDITIONS

| No. | Item                    | Specifications   | Remarks         |
|-----|-------------------------|--|-----------------|
| 1   | Operating temperature   | 5 to 40°C  |                 |
| 2   | Storage temperature     | -20 to 60°C  |                 |
| 3   | Operating humidity      | 35 to 80%  |                 |
| 4   | Storage humidity        | 20 to 90%  | No condensation |
| 5   | Resistance to vibration | Operating: 2.45 m/S <sup>2</sup> max.<br>Transportation: 9.8 m/S <sup>2</sup> max. |                 |
| 6   | Resistance to impulse   | Operating: 4.9 m/S <sup>2</sup> max.<br>Standby: 9.8 m/S <sup>2</sup> max.         |                 |



## S1C6P366 Adapter Socket S5U1C63366X1 Package Specifications

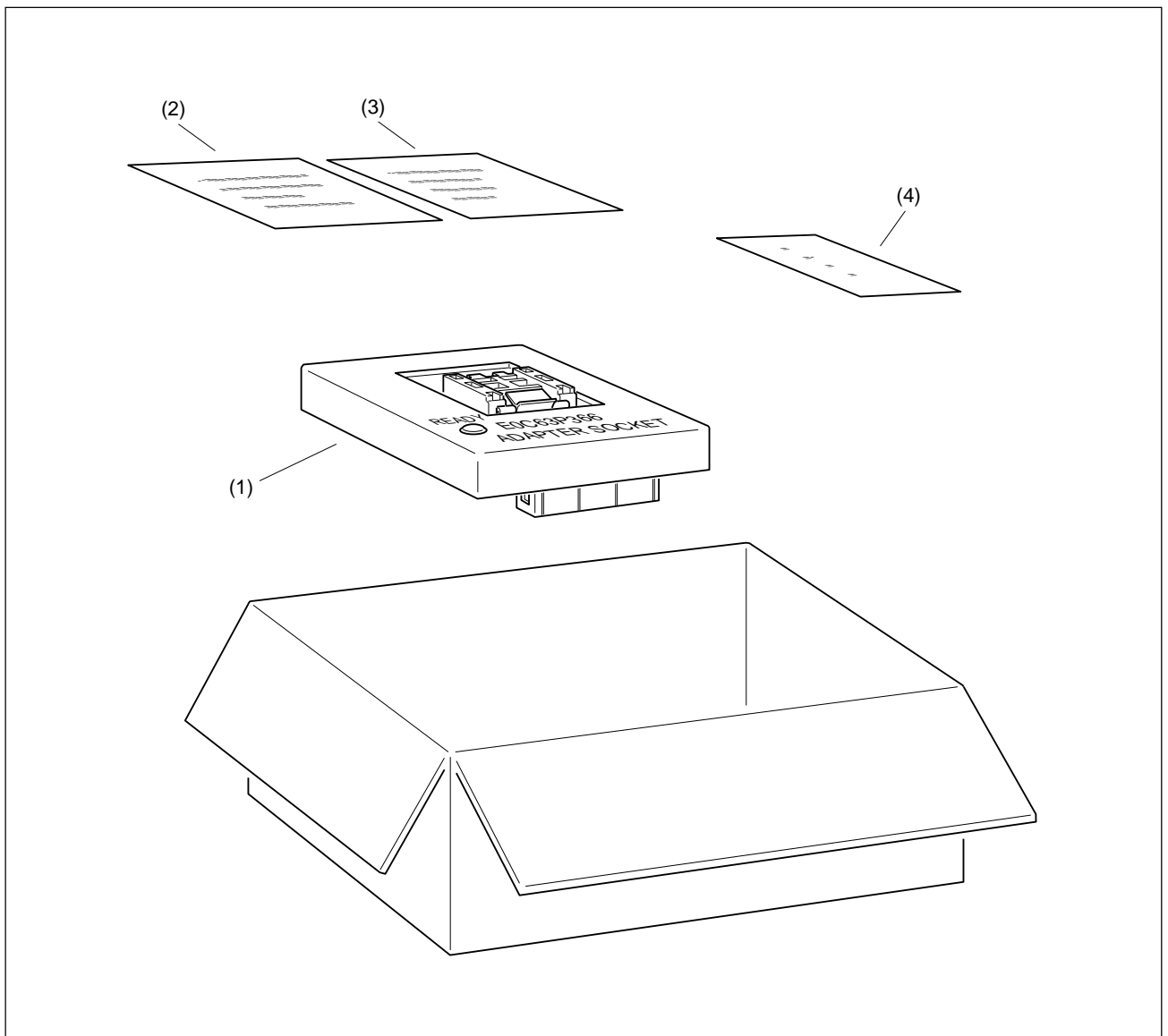
### ■ DESCRIPTION

The S1C6P366 Adapter Socket (S5U1C63366X1) is used to mount the S1C6P366 to the Universal ROM Writer II (S5U1C88000W1) when programming the S1C6P366 through parallel data writing.

### ■ COMPONENTS

The S1C6P366 Adapter Socket Package contains the following components:

- (1) Adapter Socket (S5U1C63366X1) main unit ..... 1
- (2) S1C6P366 Adapter Socket (S5U1C63366X1) Package Specifications (this sheet) ..... 1
- (3) Notes on use ..... 1
- (4) Warranty registration card ..... 1



Refer to the "S1C6P366 Technical Manual" for how to use the S1C6P366 Adapter Socket.

# S1C6P366 Adapter Socket

## ■ COMPONENT SPECIFICATIONS

| No. | Component      | Item           | Specifications                      | Remarks |
|-----|----------------|----------------|-------------------------------------|---------|
| 1   | Adapter Socket | Dimensions     | 106 mm (L) × 100 mm (W) × 34 mm (H) |         |
|     |                | Weight         | Approx. 200 g (main body)           |         |
|     |                | External color | Cygnus white                        |         |
|     |                | Board          | Main board × 1                      |         |

## ■ OPERATING ENVIRONMENT CONDITIONS

| No. | Item                    | Specifications   | Remarks         |
|-----|-------------------------|--|-----------------|
| 1   | Operating temperature   | 5 to 40°C  |                 |
| 2   | Storage temperature     | -20 to 60°C  |                 |
| 3   | Operating humidity      | 35 to 80%  |                 |
| 4   | Storage humidity        | 20 to 90%  | No condensation |
| 5   | Resistance to vibration | Operating: 2.45 m/S <sup>2</sup> max.<br>Transportation: 9.8 m/S <sup>2</sup> max. |                 |
| 6   | Resistance to impulse   | Operating: 4.9 m/S <sup>2</sup> max.<br>Standby: 9.8 m/S <sup>2</sup> max.         |                 |

## S1C6P466 Adapter Socket S5U1C63466X1 Package Specifications

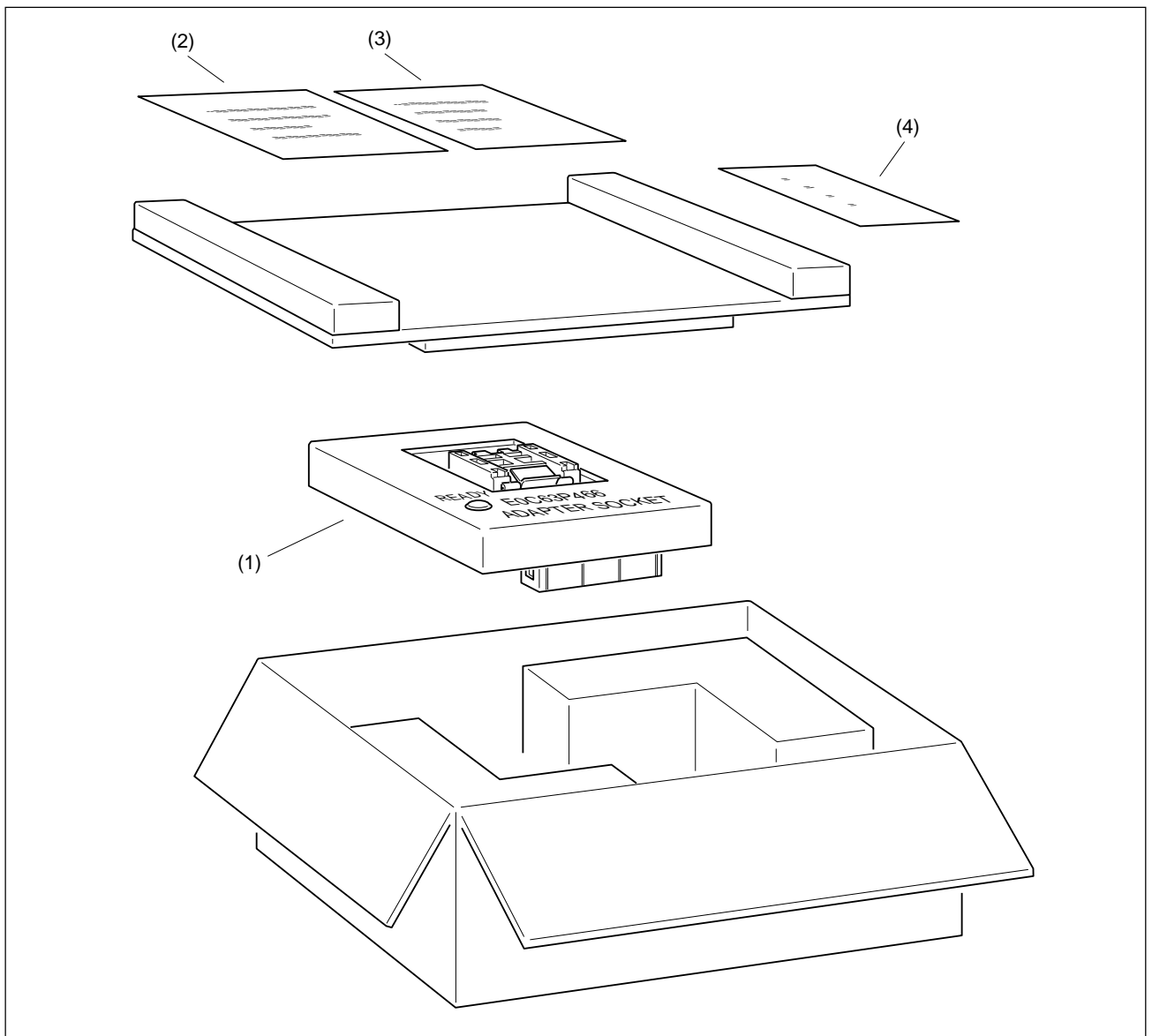
### DESCRIPTION

The S1C6P466 Adapter Socket (S5U1C63466X1) is used to mount the S1C6P466 to the Universal ROM Writer II (S5U1C88000W1) when programming the S1C6P466 through parallel data writing.

### COMPONENTS

The S1C6P466 Adapter Socket Package contains the following components:

- (1) Adapter Socket (S5U1C63466X1) main unit ..... 1
- (2) S1C6P466 Adapter Socket (S5U1C63466X1) Package Specifications (this sheet) ..... 1
- (3) Notes on use ..... 1
- (4) Warranty registration card ..... 1



Refer to the "S1C6P466 Technical Manual" for how to use the S1C6P466 Adapter Socket.

# S1C6P466 Adapter Socket

## ■ COMPONENT SPECIFICATIONS

| No. | Component      | Item           | Specifications                     | Remarks |
|-----|----------------|----------------|------------------------------------|---------|
| 1   | Adapter Socket | Dimensions     | 106 mm (L) × 80 mm (W) × 17 mm (H) |         |
|     |                | Weight         | Approx. 200 g (main body)          |         |
|     |                | External color | Cygnus white                       |         |
|     |                | Board          | Main board × 1                     |         |

## ■ OPERATING ENVIRONMENT CONDITIONS

| No. | Item                    | Specifications   | Remarks         |
|-----|-------------------------|--|-----------------|
| 1   | Operating temperature   | 5 to 40°C  |                 |
| 2   | Storage temperature     | -20 to 60°C  |                 |
| 3   | Operating humidity      | 35 to 80%  |                 |
| 4   | Storage humidity        | 20 to 90%  | No condensation |
| 5   | Resistance to vibration | Operating: 2.45 m/S <sup>2</sup> max.<br>Transportation: 9.8 m/S <sup>2</sup> max. |                 |
| 6   | Resistance to impulse   | Operating: 4.9 m/S <sup>2</sup> max.<br>Standby: 9.8 m/S <sup>2</sup> max.         |                 |

## S1C6F567 Adapter Socket S5U1C6F567X1 Package Specifications

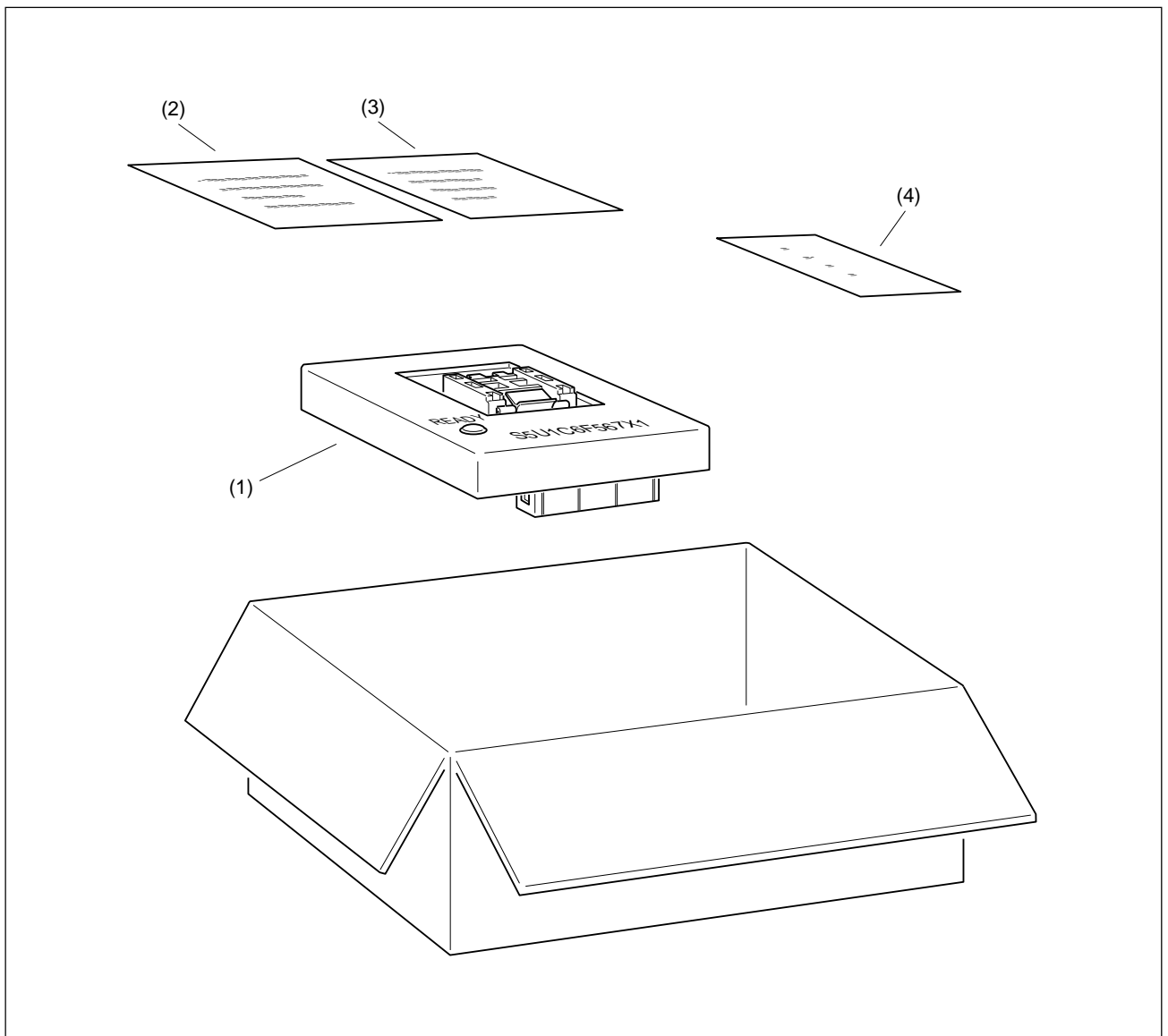
### ■ DESCRIPTION

The S1C6F567 Adapter Socket (S5U1C6F567X1) is used to mount the S1C6F567 to the Universal ROM Writer II (S5U1C88000W1) when programming the S1C6F567 through parallel data writing.

### ■ COMPONENTS

The S1C6F567 Adapter Socket Package contains the following components:

- (1) Adapter Socket (S5U1C6F567X1) main unit ..... 1
- (2) S1C6F567 Adapter Socket (S5U1C6F567X1) Package Specifications (this sheet) ..... 1
- (3) Notes on use ..... 1
- (4) Warranty registration card ..... 1



Refer to the "S1C6F567 Technical Manual" for how to use the S1C6F567 Adapter Socket.

# S1C6F567 Adapter Socket

## ■ COMPONENT SPECIFICATIONS

| No. | Component      | Item           | Specifications                      | Remarks |
|-----|----------------|----------------|-------------------------------------|---------|
| 1   | Adapter Socket | Dimensions     | 106 mm (L) × 100 mm (W) × 36 mm (H) |         |
|     |                | Weight         | Approx. 200 g (main body)           |         |
|     |                | External color | Cygnus white                        |         |
|     |                | Board          | Main board × 1                      |         |

## ■ OPERATING ENVIRONMENT CONDITIONS

| No. | Item                    | Specifications   | Remarks         |
|-----|-------------------------|--|-----------------|
| 1   | Operating temperature   | 5 to 40°C  |                 |
| 2   | Storage temperature     | -20 to 60°C  |                 |
| 3   | Operating humidity      | 35 to 80%  |                 |
| 4   | Storage humidity        | 20 to 90%  | No condensation |
| 5   | Resistance to vibration | Operating: 2.45 m/S <sup>2</sup> max.<br>Transportation: 9.8 m/S <sup>2</sup> max. |                 |
| 6   | Resistance to impulse   | Operating: 4.9 m/S <sup>2</sup> max.<br>Standby: 9.8 m/S <sup>2</sup> max.         |                 |

# S5U1C8F360Y1

## S1C8F360 Universal ROM Writer II Control Software Package Specifications

### ■ DESCRIPTION

The S5U1C8F360Y1 is software for the S1C8F360 that controls the Universal ROM Writer II (S5U1C88000W1) using a personal computer. It supports the following functions equivalent to a general PROM writer: writing PROM data to the Flash EEPROM in the S1C8F360, erasing the Flash EEPROM, loading PROM data files, saving PROM data to files and displaying PROM data. All the functions can be executed from the personal computer.

### ■ COMPONENTS

The S1C8F360 Universal ROM Writer II Control Software Package contains the following components:

|   |   |
|---|---|
| (1) 3.5 inch floppy disk .....  | 1 |
| (2) S5U1C8F360Y1  |   |
| S1C8F360 Universal ROM Writer II Control Software Package Specifications (this sheet) ..... | 1 |
| (3) Warranty registration card .....  | 1 |
| (4) Software license agreement .....  | 1 |
| (5) Warranty .....  | 1 |
| (6) Notes on use .....  | 1 |

The files included in the floppy disk are as follows:

- (A) RW88F360.EXE (Universal ROM Writer II Control Software for Windows95/98 English/Japanese version)
- (B) 88F360.FRM (E0C8F360 PROM Data Writing Firmware for Windows95/98 English/Japanese version)

### ■ SYSTEM ENVIRONMENT

- (1) Personal computer
  - IBM-PC/AT or compatible
- (2) OS
  - Windows95/98 English or Japanese version (MS-DOS prompt is used)
- (3) Hardware PROM writing tools
  - Universal ROM Writer II
  - S1C8F360 Adapter Socket (required only for parallel programming)
  - S1C88/S1C63 Serial Connector (required only for serial programming)

Refer to the "S1C8F360 Technical Manual" for how to use the S1C8F360 Universal ROM Writer II Control Software.

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## Multiple-Programming ROM Writer (S5U1C88000W2)

### ■ MULTIPLE-PROGRAMMING ROM WRITER SPECIFICATIONS

The Multiple-Programming ROM Writer (S5U1C88000W2) allows writing of user data to the flash memory in the micro-computers up to 8 channels at a time through serial communication.

Multiple-Programming ROM Writer supports the built-in flash microcomputers in the S1C63 Family and S1C88 Family and the Multiple-Programming ROM Writer Control Software is provided for each model. A memory card is used for loading the Control Software and user data to the Multiple-Programming ROM Writer.

### ● Components Confirmation

After unpacking the Multiple-Programming ROM Writer, check that the following components are included:

Figure 1 is an unpacking diagram for the Multiple-Programming ROM Writer Package.

|  |   |
|--|---|
| (1) Multiple-Programming ROM Writer (S5U1C88000W2) main unit .....       | 1 |
| (2) Power cable .....  | 1 |
| (3) Target connection cable .....  | 8 |
| (4) Target connector .....   | 8 |
| (5) Compact flash card (16MB) .....                                      | 1 |
| (6) PCMCIA adapter .....   | 1 |
| (7) FAIL ALERT signal cable .....  | 1 |
| (8) FAIL ALERT signal connector .....                                    | 1 |
| (9) Multiple-Programming ROM Writer (S5U1C88000W2) Hardware Manual ..... | 1 |
| (10) Notes for use .....   | 1 |
| (11) Warranty certificate .....  | 1 |
| (12) Warranty registration card .....                                    | 1 |

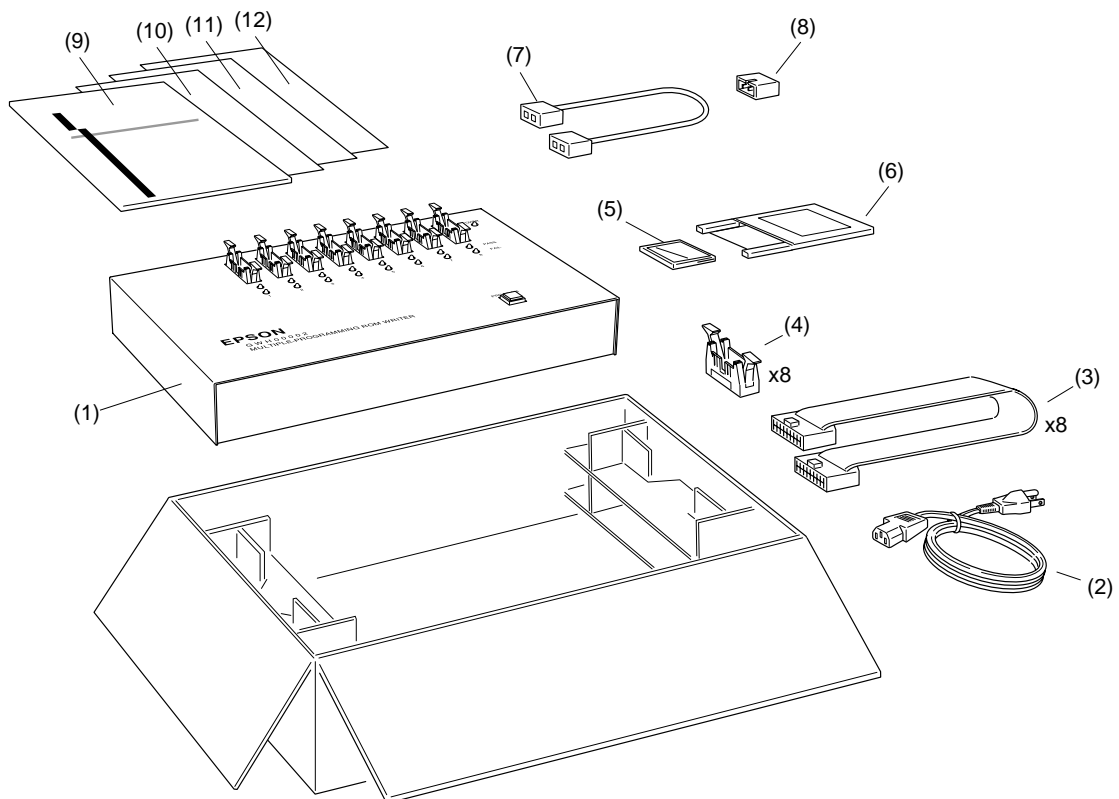


Fig. 1 Multiple-Programming ROM Writer Package

The following components are not included in this package, since they are in another package.

- (A) Multiple-Programming ROM Writer Control Software
- (B) S1Cxx Family Assembler Package
- (C) S1Cxx Family Development Tool Package

# Multiple-Programming ROM Writer

## ● Specifications of Components

Table 1 lists the specifications of components included in the Multiple-Programming ROM Writer Package.

Table 1 Component specifications of Multiple-Programming ROM Writer Package

| No. | Component name             | Item                    | Specifications                                      | Remarks                             |
|-----|----------------------------|-------------------------|---|-------------------------------------|
| 1   | Main unit                  | Dimensions              | 323 mm (L) × 210 mm (W) × 70 mm (H)                 | Rubber feet and connectors included |
|     |                            | Weight                  | Approx. 2.1 kg (main body)                          |                                     |
|     |                            | External color          | Cygnus white  |                                     |
|     |                            | Input voltage           | AC 100 V / 220 V                                    |                                     |
|     |                            | Power consumption       | 15 VA, max.   |                                     |
| 2   | Power cable                | Length                  | 2.5 m   |                                     |
|     |                            | Plug type               | Three-wire grounding plug                           |                                     |
| 3   | Target interface cable     | Length                  | 30 cm   |                                     |
|     |                            | Cable connector         | Configured with 7916-B500FL (3M) and 3448-7916 (3M) |                                     |
| 4   | Target interface connector | User connector          | 3408-6002LCFL (3M)                                  |                                     |
| 5   | Memory card                | Compact flash           | 16MB  |                                     |
|     |                            | Adapter                 | PCMCIA adapter                                      |                                     |
| 6   | FAIL ALERT cable           | Length                  | 30 cm   |                                     |
|     |                            | Cable connector         | IL-S-2S-S2C2-S (JAE)                                |                                     |
| 7   | FAIL ALERT connector       | User connector          | IL-S-2P-S2L2-EF (JAE)                               |                                     |
| 8   | Package                    | Dimensions              | 460 mm (L) × 300 mm (W) × 160 mm (H)                |                                     |
|     |                            | Materials               | W carton, cardboard                                 |                                     |
|     |                            | Total weight of package | Approx. 3.0 kg                                      |                                     |

## ● Operating Environment Conditions

Table 2 lists the operating environment conditions for the Multiple-Programming ROM Writer. When using the Multiple-Programming ROM Writer, observe the range given in Table 2.

Table 2 Operating environment conditions

| No. | Item                  | Specifications | Remarks         |
|-----|-----------------------|----------------|-----------------|
| 1   | Operating temperature | 5 to 50°C      |                 |
| 2   | Storage temperature   | -10 to 65°C    |                 |
| 3   | Operating humidity    | 30 to 80%      | No condensation |
| 4   | Storage humidity      | 20 to 90%      |                 |

# Multiple-Programming ROM Writer

## ● Specifications of Control Section

This section describes the switches and connectors on the Multiple-Programming ROM Writer. Figure 2 shows an external view of the Multiple-Programming ROM Writer.

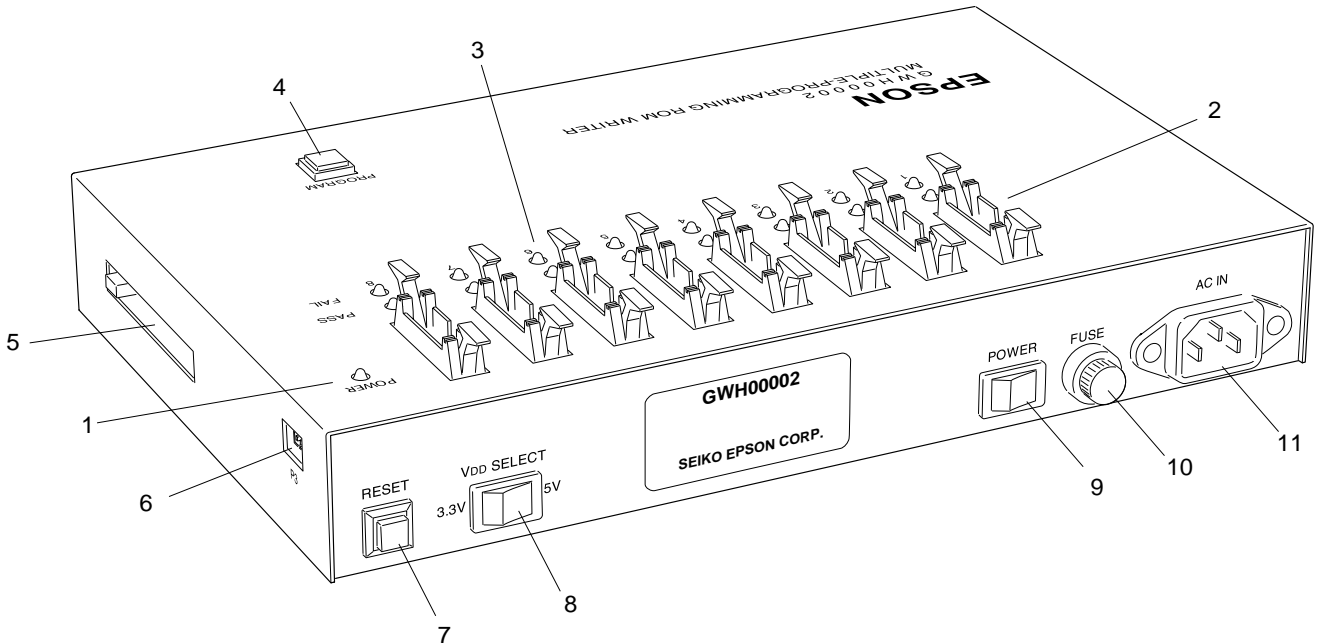


Fig. 2 External view of Multiple-Programming ROM Writer

Table 3 lists the functions of the control section.

Table 3 Functions of control section

| No. | Position | Marking    | Name                        | Function  |
|-----|----------|------------|-----------------------------|---|
| 1   | Top      | POWER      | Power-on LED                | This red LED lights when the Multiple-Programming ROM Writer is turned on.                              |
| 2   | Top      |            | Target connector            | These connectors are used to connect the target systems.  |
| 3   | Top      | PASS/FAIL  | PASS/FAIL LED               | These LEDs indicate write statuses and communication error.   |
| 4   | Top      | PROGRAM    | Program button              | Pressing this button starts writing data.   |
| 5   | Side     |            | Memory card slot            | A memory card is set in this slot. (*1)<br>Insert the memory card in facedown.                          |
| 6   | Side     | P3         | FAIL ALERT output connector | This connector outputs the ALERT signal when an initialize error or a write error occurs.               |
| 7   | Rear     | RESET      | Reset button                | This button is used to abort writing or to reset the Multiple-Programming ROM Writer.                   |
| 8   | Rear     | VDD SELECT | Voltage select switch       | This switch selects either 3.3 V or 5.0 V as the voltage to be supplied to the target.                  |
| 9   | Rear     | POWER      | Power switch                | This switch turns the Multiple-Programming ROM Writer on and off.<br>Power on with I; power off with O. |
| 10  | Rear     | FUSE       | Fuse holder                 | A 2-A cartridge fuse is included.   |
| 11  | Rear     | AC IN      | Power connector             | This connector is used to connect the power cable.  |

\*1) Use the PCMCIA adapter to set a compact flash card to the Multiple-Programming ROM Writer.

# Multiple-Programming ROM Writer

## ■ OPERATION

### ● Preparing a Memory Card

The Multiple-Programming ROM Writer works by loading the Multiple-Programming ROM Writer Control Software and user data. Therefore, a personal computer system that can write data to memory cards is required.

Table 4 lists the files necessary to copy to the memory card.

Table 4 Files to be copied

|  | S1C63 Family                              | S1C88 Family  |
|--|---|---|
| Multiple-Programming ROM Writer Control Software | G6FxxxxA.EXE (for asynchronous transfer)  | G8FxxxxA.EXE (for asynchronous transfer)<br>G8FxxxxC.EXE (for clock synchronous transfer) |
| User data  | xxxxxxx.HSA<br>xxxxxxx.LSA<br>xxxxxxx.CSA | xxxxxxx.PSA   |

- The Multiple-Programming ROM Writer Control Software exists in the A:\MPRW folder of the Writer Control Software Package.
- The Multiple-Programming ROM Writer Control Software is provided for different Family model and transfer type. Use G6FxxxxA.EXE for the S1C63 Family model. For the S1C88 Family model, use G8FxxxxA.EXE when programming with asynchronous transfer, or G8FxxxxC.EXE when programming with clock synchronous transfer.
- The clock synchronous transfer allows a higher writing speed than asynchronous transfer, but it needs more signals to be connected.
- The memory card format supported by the Multiple-Programming ROM Writer supports are FAT12, FAT16 and VFAT16.
- For user data in the S1C63 Family and the S1C88 Family, refer to the S5U1C63000A Manual and the S5U1C88000C Manual, respectively.

**Note:** Do not copy two or more Multiple-Programming ROM Writer Control Software files and/or two or more user data with the same extension to the memory card.

### ● Target Data Writing Procedure

- (1) A dedicated power cable (three-wire type) is included in the Multiple-Programming ROM Writer Package. Connect it to the AC IN connector on the rear panel of the Multiple-Programming ROM Writer.
- (2) Attach the PCMCIA adapter to the memory card and insert it to the memory card slot of the Multiple-Programming ROM Writer.

**Note:** Memory card must be inserted to the Multiple-Programming ROM Writer facedown.

- (3) Select a power voltage (3.3 V or 5.0 V) to be supplied to the target using the V<sub>DD</sub> SELECT switch on the rear panel of the Multiple-Programming ROM Writer.

**Note:** Refer to the Flash write/erase characteristic (in Electrical Characteristics) of each model for the supply voltage.

- (4) Turn the Multiple-Programming ROM Writer on using the POWER switch located at the rear panel of the Multiple-Programming ROM Writer. Before the Multiple-Programming ROM Writer goes write ready status, all the PASS/FAIL LEDs light and then, after a few seconds they go off. The FAIL LEDs blink if an initialize error occurs. Refer to "● Status and Error Indicator" for the initialize error. Furthermore, in this case the FAIL ALERT signal is output. Refer to "● FAIL ALERT" for more information.
- (5) Connect the target(s) to the Multiple-Programming ROM Writer. (Any channel can be used.)
- (6) Push the PROGRAM button.  
When writing starts, all the PASS/FAIL LEDs light once. While writing, only the PASS/FAIL LEDs of the channels in which the target is connected keep lit.  
To abort writing, push the RESET button located at the rear panel of the Multiple-Programming ROM Writer.
- (7) When the writing has completed normally, the PASS LEDs light and the FAIL LEDs go off.  
When a write error has occurred, the PASS LEDs go off and the FAIL LEDs light. In this case, also the FAIL ALERT signal is output. Refer to "● FAIL ALERT" for more information.
- (8) To continue writing for the next targets, repeat from Step 5.

# Multiple-Programming ROM Writer

## ● Wiring to the Target

Figures 3 and 4 show the wiring diagram between the Multiple-Programming ROM Writer and the target. Table 5 lists the signal specifications.

### (1) Asynchronous transfer (S1C63 Family/S1C88 Family)

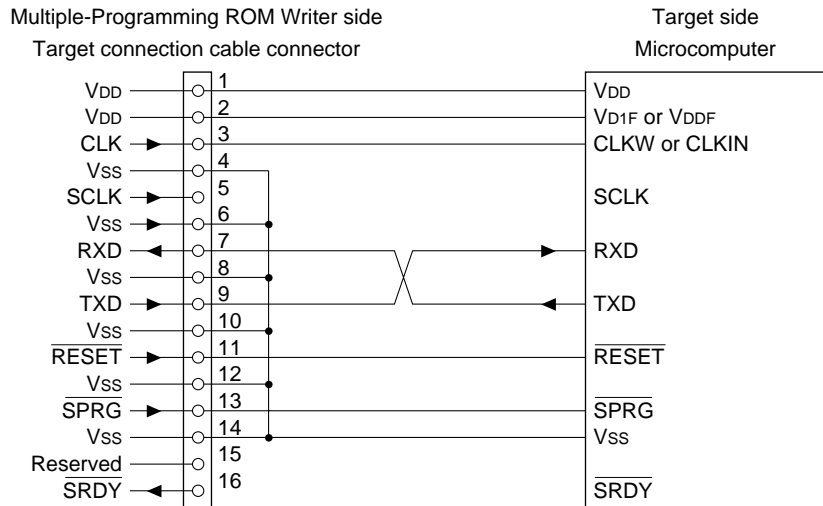


Fig. 3 Wiring diagram of Multiple-Programming ROM Writer (asynchronous transfer)

### (2) Clock synchronous transfer (S1C88 Family)

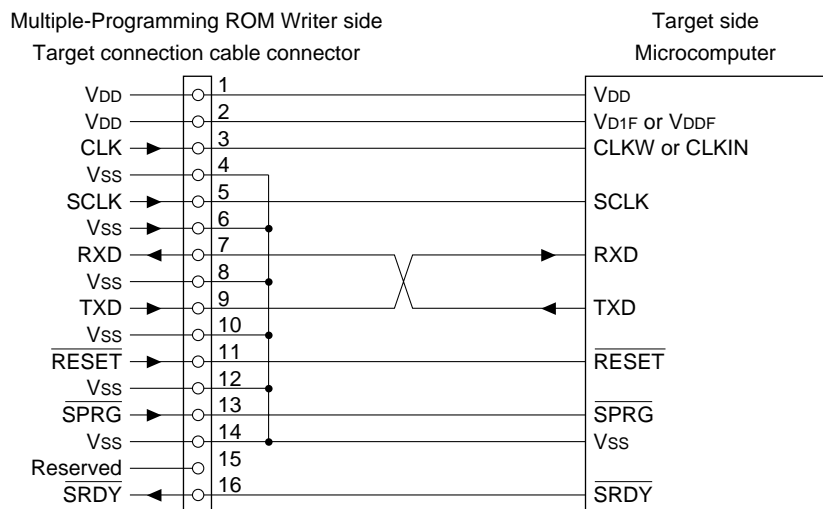


Fig. 4 Wiring diagram of Multiple-Programming ROM Writer (clock synchronous transfer)

Table 5 Signal specifications

| Connector pin No.   | Signal name | Function                      | Microcomputer pin to be connectrd |
|---------------------|-------------|-------------------------------|-----------------------------------|
| 1                   | VDD         | Power supply pin              | VDD pin                           |
| 2                   | VDD         | Power supply pin              | VD1F or VDDF pin                  |
| 3                   | CLK         | Sistem clock output           | CLKW or CLKIN pin                 |
| 5                   | SCLK        | Serial I/F clock output       | SCLK pin                          |
| 7                   | RXD         | Serial I/F data input         | TXD pin                           |
| 9                   | TXD         | Serial I/F data output        | RXD pin                           |
| 11                  | RESET       | Initial reset output          | RESET pin                         |
| 13                  | SPRG        | Programming mode setup output | SPRG pin                          |
| 15                  | Reserved    |                               | N.C.                              |
| 16                  | SRDY        | Serial I/F ready signal input | SRDY pin                          |
| 4, 6, 8, 10, 12, 14 | Vss         | Ground pin                    | Vss pin                           |

# Multiple-Programming ROM Writer

## ● Status and Error Indicator

The Multiple-Programming ROM Writer indicates the status and errors using the PASS/FAIL LEDs. Figure 5 shows the indicator status.

### After the Multiple-Programming ROM Writer is turned on or reset:

|                                 |   |   |   |   |   |   |   |      |
|---------------------------------|---|---|---|---|---|---|---|------|
| • During initialization         | ○ | ○ | ○ | ○ | ○ | ○ | ○ | PASS |
| • No memory card is presented   | ○ | ○ | ○ | ○ | ○ | ○ | ○ | FAIL |
|                                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |
| • During standby                | ● | ● | ● | ● | ● | ● | ● | PASS |
|                                 | ● | ● | ● | ● | ● | ● | ● | FAIL |
|                                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |
| • Initialize error has occurred | ● | ● | ● | ● | ● | ● | ● | PASS |
|                                 | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | FAIL |
|                                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |

### When user data is written (all channels)

|   |   |   |   |   |   |   |   |      |
|---|---|---|---|---|---|---|---|------|
| • During writing                          | ○ | ○ | ○ | ○ | ○ | ○ | ○ | PASS |
|   | ○ | ○ | ○ | ○ | ○ | ○ | ○ | FAIL |
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |
| • Completed normally (all channels)       | ○ | ○ | ○ | ○ | ○ | ○ | ○ | PASS |
|   | ● | ● | ● | ● | ● | ● | ● | FAIL |
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |
| • Write error has occurred (all channels) | ● | ● | ● | ● | ● | ● | ● | PASS |
|   | ○ | ○ | ○ | ○ | ○ | ○ | ○ | FAIL |
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |
| • Target is not connected                 | ● | ● | ● | ● | ● | ● | ● | PASS |
| • Communication error has occurred        | ● | ● | ● | ● | ● | ● | ● | FAIL |
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |

### When user data is written (only channels 3 and 6 are used)

|                            |   |   |   |   |   |   |   |      |
|----------------------------|---|---|---|---|---|---|---|------|
| • During writing           | ● | ● | ○ | ● | ● | ○ | ● | PASS |
|                            | ● | ● | ○ | ● | ● | ○ | ● | FAIL |
|                            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |
| • Completed normally       | ● | ● | ○ | ● | ● | ○ | ● | PASS |
|                            | ● | ● | ● | ● | ● | ● | ● | FAIL |
|                            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |
| • Write error has occurred | ● | ● | ● | ● | ● | ● | ● | PASS |
|                            | ● | ● | ○ | ● | ● | ○ | ● | FAIL |
|                            | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8    |

○: LED is lit ●: LED is not lit ☆: LED is blinking

Fig. 5 Status and error indicator

When an initialize error has occurred, turn the Multiple-Programming ROM Writer off and be sure the following error condition do not exist before retrying.

### Initialize error list

- No memory card is detected.
- The memory card format is illegal.
- There is no control software or two or more control software are recorded.
- The control software is incorrect.
- There is no user data or two or more of the same type of user data are recorded.
- An data read error has occurred.

# Multiple-Programming ROM Writer

## ● FAIL ALERT

The FAIL ALERT pin goes to High level (5 V) when an initialize error or a write error has occurred. The FAIL ALERT connector and signal is shown in Figure 6 and Table 6.

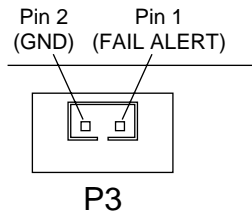


Fig. 6 FAIL ALERT connector

Table 6 FAIL ALERT signal

| Pin No. | Signal name | Description  |
|---------|-------------|--|
| 1       | FAIL ALERT  | Goes to High level (5 V) when an initialize error or a write error has occurred. |
| 2       | GND         | Ground pin   |

# Multiple-Programming ROM Writer

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## ■ PRECAUTIONS

To use the Multiple-Programming ROM Writer properly, observe the following:

- Do not copy two or more Multiple-Programming ROM Writer Control Software to a memory card.
- Do not copy two or more user data files that have the same extension to a memory card.
- The memory card must be inserted to the Multiple-Programming ROM Writer facedown.
- The compact flash card must be used with the PCMCIA adapter.
- Refer to the Flash write/erase characteristic (in Electrical Characteristics) of each model for the supply voltage.
- Do not change the V<sub>DD</sub> SELECT switch (supply voltage) while data is writing.
- Be sure to turn the Multiple-Programming ROM Writer off before removing the memory card from the slot.
- Be sure to use the supplied compact flash card or equivalent.



# S5U1C8F360Y2

## S1C8F360 Multiple-Programming ROM Writer Control Software Package Specifications

### ■ DESCRIPTION

The S5U1C8F360Y2 is software for the S1C8F360 that controls the Multiple-Programming ROM Writer (S5U1C88000W2). It is used to write data to the Flash EEPROM in the S1C8F360.

### ■ COMPONENTS

The S1C8F360 Multiple-Programming ROM Writer Control Software Package contains the following components:

|  |   |
|--|---|
| (1) 3.5 inch floppy disk .....   | 1 |
| (2) S5U1C8F360Y2   |   |
| S1C8F360 Multiple-Programming ROM Writer Control Software Package Specifications (this sheet) .. | 1 |
| (3) Warranty registration card .....   | 1 |
| (4) Software license agreement .....   | 1 |
| (5) Warranty .....   | 1 |
| (6) Notes on use .....   | 1 |

The files included in the floppy disk are as follows:

(A) G8F3603A.EXE

(B) G8F3603C.EXE

(Multiple-Programming ROM Writer Control Software for Windows95/98 English/Japanese version)

### ■ SYSTEM ENVIRONMENT

- (1) Hardware PROM writing tools
  - Multiple-Programming ROM Writer (S5U1C88000W2)

Refer to the "Multiple-Programming ROM Writer (S5U1C88000W2) Hardware Manual" for how to use the S1C8F360 Multiple-Programming ROM Writer Control Software.

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# S1C8F/6F Flash Microcomputer Programming Tool Package Specifications

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