



## *EJ-Writer for SH-Series*


EJ-Writer is the first ROM writer that has the ability to write directly into Flash ROM while already installed on the User's board via the JTAG port. Its small size (Width 86mm X 101mm, Height 23mm) and versatility make it a perfect solution for use in the field or on the manufacturing line.



- Supports Renesas Technology SH2/3/4 and SH-Mobile series
- Supports H-UDI interface
- Special writer for Flash memory
- Useful for field maintenance such as upgrading target firmware.
  - Powered by USB bus (No AC adapter required)
  - Small size(86mm X 101mm X 23mm)
- Automatic script execution via the WRITE button
  - Useful for automatic writing / upgrading in mass production
- WATCHPOINT Flash Writer software is included
- USB interface for high-speed communication with host computer

\* Please confirm your desired CPU type with Sophia Systems.

### Specifications

<b>Supported CPU</b> 	SH2/ SH2-DSPseries (SH7615, SH7616, SH7618, SH7619, SH7622, SH7047, SH7124, SH7125, SH7144, SH7146, SH7147, SH7149, SH7083, SH7084, SH7085, SH7086), SH-2A series (SH7201 <sup>*2</sup> , SH7206, SH7211 <sup>*2</sup> , SH7261 <sup>*1</sup> ) SH3-DSPseries (SH7729, SH7729R, SH7709A, SH7709S, SH7706, SH7727, SH7705, SH7710, SH7720) SH-4 series (SH7750, SH7750S, SH7750R, SH7751, SH7751R) SH-4 A series <sup>*2</sup> (SH7763, SH7770, SH7780, SH77730) SH-Mobile series (SH-Mobile 1(SH7290), SH-Mobile 3, SH-Mobile J(SH7294), SH-Mobile J3, SH-Mobile V(SH7300), SH-Mobile V2(SH7310))  * Please contact Sophia Systems regarding the availability of any other CPU types.		
<b>Power Supply</b>	Vcc 3.3V ; optionally 5v I/O <sup>*3</sup>		
<b>Flash Memory Write Capability</b>	Memory DUMP capability. Data download from files. Over 180 Flash memory types are supported, including regular software updates to include the latest Flash types. Flash memories not included in the supported list may be supported by describing the writing program instruction. By specifying a batch file to write and by using the write button on the unit (hardware) allows for easy writing. Block erase capability. <table style="width: 100%; border: none;"> <tbody> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>● Execution</li> <li>- Program execution</li> <li>- Forced break</li> <li>- Reset</li> <li>- Batch program execution</li> </ul> </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>● Memory</li> <li>- Download</li> <li>- Upload</li> <li>- Fill up/check/copy of memory</li> <li>- Clear/fill up/download of Flash memory</li> </ul> </td> </tr> </tbody> </table>	<ul style="list-style-type: none"> <li>● Execution</li> <li>- Program execution</li> <li>- Forced break</li> <li>- Reset</li> <li>- Batch program execution</li> </ul>	<ul style="list-style-type: none"> <li>● Memory</li> <li>- Download</li> <li>- Upload</li> <li>- Fill up/check/copy of memory</li> <li>- Clear/fill up/download of Flash memory</li> </ul>
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<b>Supported Flash manufacturers</b>	Renesas Technology, Intel, MACRONICS, Sharp, Toshiba, NEC, Sanyo, ATMEL, SST, ST, OKI, SPANSION (Fujitsu, AMD), EON *More than 180 Flash memories and memories not included in the list are supported by describing the writing program instruction. * Please contact Sophia Systems regarding any other Flash types that are not listed in the above.		

\*1 Windows XP Professional x64 Edition(64bit version) and Windows \*Vista(32bit version) are supported.

Contact Sophia Systems if you have additional Windows OS support questions.

\*2 Planned support with updates.

\*3 5v I/O is able to support SH7047, SH7080 series using optional cable.

# Configuration

## Hardware

This system can construct the development system only with the connection to USB on the personal computer.

E/J Writer for SH-Series consists of E/J Writer and USB host interface. (This unit can not be used for other CPU)

**Media:** CD-ROM

## Read-in Object

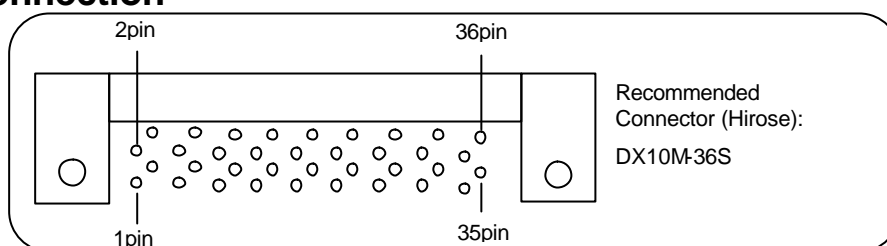
The following compilers are supported for the objects to write into Flash memory.

- Renesas SHC
- GreenHills GreenHills
- Gaio Technology XCC-V
- IAR EW/S SH
- GNU

## Software

WATCHPOINT® Flash Writer software for Windows is included with the EJ-Writer JTAG/H-UDI unit.

## Target Connection



### CS2802

### AUD connector pin assignment

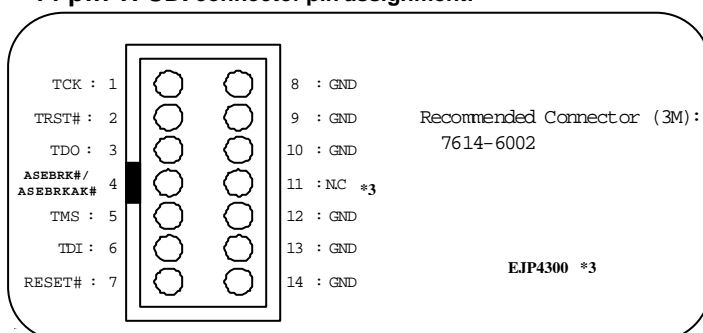
### CS2803, CS2808

Pin No.	Signal name	I/O	Pin No.	Signal name	I/O
1	N.C.		19	TMS	Input
2	GND		20	GND	
3	N.C.		21	TRST.	Input
4	GND		22	GND	
5	N.C.		23	TDI	Input
6	GND		24	GND	
7	N.C.		25	TDO	Input
8	GND		26	GND	
9	N.C.		27	ASEBRK#	Input
10	GND		28	GND	
11	N.C.		29	N.C.	*3
12	GND		30	GND	
13	N.C.		31	RESET#	Output
14	GND		32	GND	
15	N.C.		33	GND	
16	GND		34	GND	
17	TCK	Input	35	N.C.	
18	GND		36	GND	

Pin No.	Signal name	I/O	Pin No.	Signal name	I/O
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2	GND		20	GND	
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4	GND		22	GND	
5	N.C.		23	TDI	Input
6	GND		24	GND	
7	N.C.		25	TDO	Output
8	GND		26	GND	
9	N.C.		27	N.C.	
10	GND		28	GND	
11	N.C.		29	N.C.	*3
12	GND		30	GND	
13	N.C.		31	RESET#	Output
14	GND		32	GND	
15	N.C.		33	GND	
16	GND		34	GND	
17	TCK	Output	35	N.C.	
18	GND		36	GND	

The direction to Input/output the signal is based on the target system.

### 14-pin H-UDI connector pin assignment:



\*3 Connect 5V of the target when you use 5V in the user power supply to SH7047/SH708x. Adjust 29 pins to 5V when target sides are 36 H-UDI connector pins.

## Ordering Information

Part No.	Description
EJW4301E	E/J Writer SH-Series with WATCHPOINT® flash writer H-UDI cable included

\*1 When 5V in the user power supply is used with SH7047/SH708x, this option is needed.

Option: H-UDI cable 14pin : EJP4300 (EJP SH-UVCC), includes \*3

\*2 Connection of H-UDI connector 36 pin is option and below items is needed.

SH4 series:	CS2802: EJ-SH4- PB-AUD36-AD
SH2A, SH2, SH3, SH-Mobile series:	CS2803: EJ-SH3- DSP-PB-AUD36-AD
SH7047/SH7080(5V)	CS2808: EJ SH7047-PB-AUD36-UVCCAD, includes *3

### System Requirements

OS: Windows XP/2000, and Vista\* ; Memory: Minimum 64+ Mbytes recommended; Hard Disk space: 20Mbytes for installation.

All configurations are subject to change without notice.

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