

HyperSTAC™ H8/300H Tiny Series In-Circuit Emulator



- ❑ Supports Renesas Technology H8/300H Tiny Series
- ❑ Supports MCU clock speed from 2 ~ 20MHz
- ❑ Unlimited software breakpoints
- ❑ Real-time Trace (64K cycle)
- ❑ View/modify internal peripheral register
- ❑ Selection of on-chip debugging by either Sophia original connector(or FP conversion adapter) or Hitachi 14-pin connector.
- ❑ Download to internal Flash Memory capability
- ❑ Watchpoint®, a powerful high-level language debugger for Windows®, provides common user interface for all Sophia Systems emulators
(USB: Windows98/Me/2000/XP)
(TCP/IP: Windows98/Me/NT/2000/XP)
- ❑ USB host interface supported for high-speed communication with host computer

Specifications

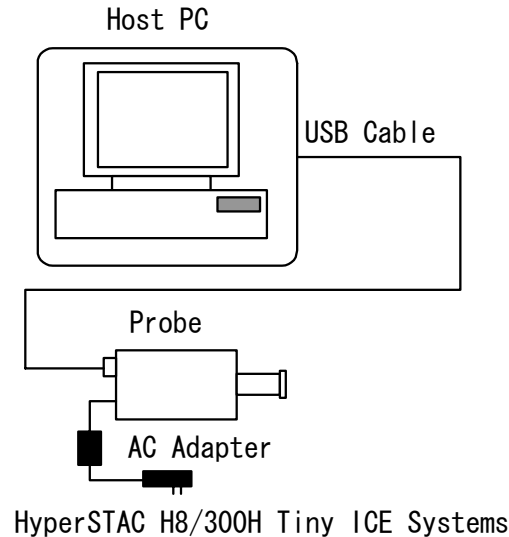
Target CPU	H8/3664 Series: H8/3664F/64N/64/63/62/61/60 H8/3672 Series: H8/3672F/70F H8/3687 Series: H8/3687F/87/86/85/84/84F/83/82 H8/3694 Series: H8/3694F/94/93/92/91/90	Real-time Trace	-64K bus cycles storage capacity. <u>Real-time Trace Modes:</u> (Delay Count: Max 65536 cycles) Free run- Continuously records Trace data Points/Areas- Max. 5 points Or- Triggers when one of the points is satisfied And- Triggers when all of the points are satisfied (any sequence) Sequential- Trigger points must occur in the specified order (max. 8 steps). You can add RESTART point to And , Sequential conditions. Sampling- Records specific trigger cycles
Emulation CPU	H8/3664 EVA QFP256pin		<u>Trigger Point / Area conditions:</u> Set trigger point conditions by specifying, CPU Bus Status, Address, and Data Value: Address: Specifies a trigger address (MASKable) Data: Specifies a trigger data value (MASKable) Data Size: Specifies data access size Status: CPU status (Read, Write, Memory Access, Interrupt Acknowledge)
Package type	H8/3664 Series: FP64E/48B/64A/48F H8/3672 Series: FP64E/48F/48B H8/3687 Series: FP64E/64A H8/3694 Series: FP64E/48B/64A/48F		<u>Other Trigger Conditions:</u> -Trigger on Write-protect error
CPU Clock	16MHz(OSC included)	Specifications of on-chip debugging (Hitachi connector)	- 1 hardware breakpoint(address, data, read/write cycle), forced break from Debug Monitor - Download to internal Flash memory capability
Target Vcc	+3 VDC ~ +5 VDC	<Target CPU> H8/3664F/64N H8/3672F/70F H8/3687F/84F H8/3694F	Note: Some space is required for memory as monitor program. Real-time trace, 4 branch trace, CPA, and RRM capability are not supported for on-chip debugging.
Memory and I/O	Entire space is available to user		
Interrupts	Both internal and external interrupts are available for real-time CPU execution.		
Breakpoints and Break options	Execution address break options <ul style="list-style-type: none"> • 7 hardware breakpoints • Unlimited software breakpoints Other break options <ul style="list-style-type: none"> • Forced break from Debug Monitor • Write-protect error • Trace End 		
ICE Environment Settings	Enable/disable target control signals: RESET, NMI		
Reset	Reset the CPU during program execution		
Emulation Memory	64 K bytes internal ROM and 16 K bytes emulation memory as standard		
RRM	View/modify the memory data for internal RAM area without stopping the CPU execution		
CPA	The following measurements can be performed Profile: Measures the frequency of the program cycle, or the module cycle within the respected address spaces. Performance: Measures the time of the program execution cycles, and the function execution time.		

Configuration

The HyperSTAC is the latest state of the art emulator, which connects directly to your PC/AT or notebook computer and provides a high level of software debugging for embedded systems development.

Hardware

The HyperSTAC H8/300H Tiny Emulation Systems consists of the HyperSTAC H8/300H Probe Set with USB host interface.



Software

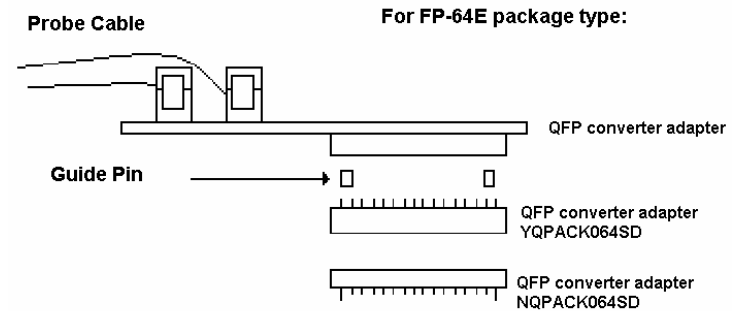
Watchpoint®, a high-level language debugger for Windows®, is included with the H8/300 Tiny Probe Set.

Media: CD-ROM

Supported Tool Chains:

Watchpoint supports the following compilers and assemblers:
 Renesas :H8S, H8/300H Series C/C++ Compiler Assembler
 IAR: ICC H8300

Target Connection



Solder on the target

* For some adapters, guide holes on the target are recommended in order to better position the adapter with the target to be soldered.

Ordering Information

Part No.	Description
HY43010E	HyperSTAC H8/300H-Tiny-U-E Probe Set, (includes Watchpoint debugger for Windows®)

Probe End Adapters:

Package	*1 FP-64A	*2 FP-64E	*3 FP-48B	*4 FP-48F
3664/94 Series	CS2641V 3664/94-PB-FP64A-AD	CS2641D 3664/94-PB-FP64E-AD	CS2641Z 3664/94-PB-FP48B AD	CS2641Q 3664/94-PB-FP48F-AD
3672 Series	N/A	CS2642D 3672-PB-FP64E-AD	CS2642Z 3672-PB-FP48B AD	CS2642Q 3672-PB-FP48F-AD
3687 Series	CS2643V 3687-PB-FP64A-AD	CS2643D 3687-PB-FP64E-AD	N/A	N/A

*1, *2, *3, *4 package type requires the following conversion adapter

Conversion Adapter

*1 FP-64A(0.8mm pitch)		*2 FP-64E(0.5mm pitch)		*3 FP-48B(0.5mm pitch)		*4 FP-48F(0.65mm pitch)	
CS2641T	YQPACK 064SA	CS2641B	YQPACK 064SD	CS2641X	YQPACK 048SD	CS2641N	YQPACK 48SB
CS2641U	NQPACK 064SA	CS2641C	NQPACK 064SD	CS2641Y	NQPACK 048SD	CS2641P	NQPACK 48SB
CS2641S	HQPACK 064SA	CS2641H	HQPACK 064SD	CS2641W	HQPACK 048SD	CS2641L	HQPACK 48SB

Host System requirements for HyperSTAC with Watchpoint Debugger:

OS: <USB>Windows98/Me/2000/XP
 <TCP/IP>Window98/Me/NT/2000/XP
 Memory: 32 MB (64 MB recommended)
 Hard Disk: 20 MB

All configurations are subject to change without notice.

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