

# YH620

## advicePLUS for SH-Mobile

### Key Features

- Scalable from the H-UDI tool to the full featured emulator
- High-Speed Page Mode Emulation
- External Bus Trace
- MFI Bus Trace
- Multi-CPU Debugging (SH-Mobile and others)



### Specifications

Common Part	
Target Processor	SH-Mobile 1/J/V/V2/J2/L SH7290/7294/7300/7311/7316/7322
Operation Voltage	1.8V to 3.6V
Operating Clock	Input Clock: 10MHz to 66MHz Internal Clock: 10MHz to 133MHz External Bus Clock: 10MHz to 33MHz
Memory Space	All memory space is released to a user's system.
Interrupts	All interrupts are released to a user's system
Target System Interface	<ul style="list-style-type: none"> <li>• HUDI Interface (14pin, 2.54mm pitch ) Socket on target: 7614-6002FL (Sumitomo 3M)</li> <li>• HUDI/AUD Interface (36pin) Socket on target: DX10M-36S or DX10GM-36SE (Hirose)</li> <li>• External Bus Trace Interface (140pin, 0.5mm pitch) Socket on target: DG01FS-140-4110 (KEL)</li> <li>• MFI Interface (50pin, 1.47mm pitch) Socket on target: DG01FS-140-4110 (KEL)</li> <li>• External Bus Emulation Interface (140pin, 0.5mm pitch) This interface is connected on the probe of the external Bus Trace</li> </ul>
Software Break	Point break: 1024 points by replacing instructions with software break Countable break: 1 point
Hardware Break	Event Break: 2 points (Max.) Temporary break: 1 point (by using On-Chip Resource)
OCD Break	1 point (Fetch Break/Data Access Break in cache/user ROM area)
Flash Programming	Flash memory programmable with the standard commands (block erasing/programming) of JEDEC (compliant) & INTEL (equivalent) methods is supported.

External Bus Trace	
	For External Bus Trace (140-pin); Probe Head Connector: DG01MS-140-4110 (KEL) Connector on Target: DG01FS-140-4110 (KEL)
	Number of Events: 15 points (Maximum) Number of Event Counter/Data: 6 points (included 15 points of events) Sequential Switch: 8bit (4 levels on debugger) Trigger Condition: Address: Match/not match/Range/Out of Range Data: Match/not match/Range/Out of Range Access Status: R/W/RW
	Event Break: 15 Points
External Bus Trace	Size: 32K Samples Mode: Normal Mode/Multi Sample Mode Time Stamp Resolution: 20ns/100ns
MFI Bus Trace	Report is displayed in External Trace Display ( indicated as "MFI")
Performance	20ns (Minimum) Time Over/Time Under

External ROM Emulation	
Target System I/F	For External ROM Emulation (140pin): Probe Head Connector: DG01MS-140-4110 (KEL) Connector on Target: DG01FS-140-4110 (KEL)
External ROM Emulation	Emulation size: 16MB or 32MB (depends on the options to be chosen) Access time: 25ns – 50ns Bus width: 8bit/16bit/32bit Memory type: ROM/RAM

Coverage Measurement Board (embedded in External Bus Trace Module)	
Coverage Measurement	Coverage size: 8MB or 16MB (depends on the options to be chosen) Block Size: 2MB or 4MB (depends on the options to be chosen) Method: Random sampling at execution address Access status: R/W/RW

Profile Measurement	
Profile Measurement	Measurement section: 1000 sections Measurement cycle: 10us Method: Random sampling at execution address Output: Time histogram

Other Specifications	
Host PC	PC/AT Compatible, Microsoft Windows 98SE, Me, XP, NT4.0, 2000 10BASE-T/100BASE-TX, USB1.1
Debugger	MicroVIEW-PLUS (DH620)
Compiler	Renesas Technology C/C++ compiler Green Hills C/C++ compiler Gaio Technology C compiler

## System Configuration

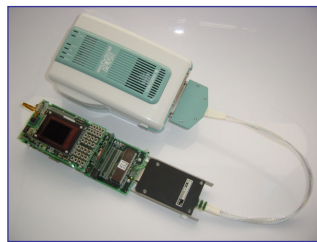
Model		Descriptions
1	YH620-STD	Main Module, Ethernet I/F, AC Adapter
	YH620-USB	Main Module, USB I/F, AC Adapter, USB cable
2	YH620-BTR	For 3.3v: Branch PC Trace Module, HUDI + AUD probe
	YH620-BTRL	For 1.8v: Branch PC Trace Module, HUDI + AUD probe
3	YH620-EXB	External Bus Trace Module, Bus Trace Probe (for 3.3V)
	YH620-EXB/COV08	External Bus Trace Module, Bus Trace Probe, 8 MB Coverage Board (for 3.3V)
	YH620-EXB/COV16	External Bus Trace Module, Bus Trace Probe, 16 MB Coverage Board (for 3.3V)
	YH620-EXBL	External Bus Trace Module, Bus Trace Probe (for 1.8V)
	YH620-EXBL/COV08	External Bus Trace Module, Bus Trace Probe, 8 MB Coverage Board (for 1.8V)
	YH620-EXBL/COV16	External Bus Trace Module, Bus Trace Probe, 16 MB Coverage Board (for 1.8V)
4	YH620-EM016	External ROM Emulation Module, Memory Board (16MB)
	YH620-EM032	External ROM Emulation Module, Memory Board (32MB)
5	YH620-PFL	Profile Measurement Module
6	DH620	Debugger (microVIEW-PLUS) for SH-Mobile

## Configuration Examples

H-UDI + AUD



1. YH620-STD (or USB)
2. YH620-BTRx



Connection to Hitachi  
Solution Engine

H-UDI + AUD + External Bus Trace



1. YH620-STD (or USB)
2. YH620-BTRx
3. YH620-EXBx

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