

ROMiCE mini ROMiCEmini H8



ROMiCEmini is a real-time debugging tool incorporating ROM-in-circuit method. ROMiCEmini has been materialized to ultra compact body by the new technology incorporated while maintaining functionalities of existing ROMICE64. The use of USB2.0 (high-speed) as a host interface allows faster processing of various tasks such as high-speed downloading at 10MByte/S or higher rate. Furthermore, it is equipped with dedicated connector for connection to the target as standard, which was optional to existing ROMICE64. This allows instant connection. Yet, it supports ROM socket connection. "CSIDE", Computex-made debugger software provided as standard, surely provides a user-friendly debugging environment and supports not only high-level language debugging of a range of C languages but also fully prepared for the debugging of a range of RTOSs.

- Compact and instant connection to the target with dedicated connector^{*1}
- Takes less than 50ns to access emulation memory
- Equipped with hardware break and real-time tracing features as standard
- Automatically follows the target voltage 1.8V - 3.3V; 5V-tolerant
- Perfect for debugging of ASIC microcomputer without on-chip debugging feature
- Supports debugging of a range of RTOSs (Optional)
- Supports USB2.0 (High-speed), allowing high-speed processing
- Installed with emulation memory of 4MBytes
- Palm-sized ultra compact body
- Supports all of Renesas-made H8/300H and H8S series
- Supports MITSUMI-made MM8000 (Optional)

*1: 32/40/42-pinned ROM socket type are also available

Main Specifications

Supported CPU

All of Renesas-made H8/300H series, all of H8S series
(Does not support debugging of the target used in single-chip mode.)
MITSUMI-made MM8000[†]

Target Specifications

Target I/F	Dedicated connector	50-pinned dedicated connector
	ROM socket	32/40/42-pinned ROM socket (any 1 set of your choice)
Supported ROM	Bus size	8/16-bit
	Full capacity	4Mbytes
	Access speed	50ns
Supported voltage	NMIOU: 1.8V-5V (Automatic adaptive type); RSTOUT: Open-collector Other signals: 1.8V-3.3V (Automatic adaptive type, but 5V-tolerant for input)	

Functional Specifications

Debugger provided as standard	CSIDE for ROMiCEmini H8-E	
Break features	Event break	2 points (Point conditions for Address, Data, and Status)
	Software break	256 points
	Force break	Utilizes NMI signal.
	External force break	Breaks at rising/trailing edge of external signal.
	Other breaks	Trace-end break/Interval timeout break/Write-protection break/Sequential break by 2 events
Tracing feature	Memory capacity	8K cycles x 50 bits
	Tracing mode	Free /Multiple/Normal/Sample
	Trace clock	20MHz(MAX)/50MHz asynchronous
Execution time measurement	Measures from execution to break by 1us unit up to 4294s for the maximum.	
Profiling feature	Measures frequency of function execution in real time and shows in graph.	
Interval execution time measurement feature	Measures time interval of execution between 2 points and shows the maximum/minimum value.	
Module execution time measurement	1 module 1Shot/Continue	

Main Unit Specifications

Model	16M161
Outside dimensions	106mm(W) x 78mm(D) x 29.5mm(H)
Host I/F	USB mini-B (5-pinned) connector
Current consumption	DC5V Approx. 600mA MAX.
Weight	Approximately 160g
Operating environment	Operating temperature: 5 to 40 degrees Celsius Operating humidity: 35 to 85%RH No condensation
AC adapter (Accessory)	5V/2A

*†: CPU library is required.

Product composition contents	<ul style="list-style-type: none"> • ROMiCEmini main unit • Dedicated debugger (CD-ROM) • ROMiCEmini H8 User's Manual • License Tool Manual • Status 1-8CP probe (200mm) • ROM socket (Any 1 set: 32/40/42-pinned type) • USB2.0 cable (2m) • Stand • AC adapter(5V/2A)
Support System	Yes

Operating environment	
Host computer	The computers running on the supported OSs
CD drive	Required at the time of installation
USB	USB2.0
OS	Windows 2000 / Windows XP 32-bit version / Windows Vista 32-bit version

Supported languages, supported RTOSs	
Supported compiler (H8 series)^{*1}	Renesas C, XCC-V/H8, EW H8
Supported RTOS (H8 series)^{*2}	HI2000/3, NORTi Version4

^{*1}: For supported versions and other details, please contact us.
^{*2}: Optional dedicated debug libraries for respective RTOSs are required.

Optional CSIDE	
Product name	Description
CSIDE for ROMiCEmini 80-E	Optional CSIDE for debugging of 80 series CPUs.

Optional products	
Product name	Description
RIM-ROMS32P	32-pinned ROM socket set (MAIN socket, SUB socket, MAIN-SUB connection cable)
RIM-ROMS40P	40-pinned ROM socket
RIM-ROMS42P	42-pinned ROM socket
RIM-STPRB2-15CP	Status 2-15CP probe (Probe for event/trace signal connection, 500mm, connector-clip design, number of clips: 15)
RIM-STPRB2-15CN	Status 2-15CN probe (Probe for event/trace signal connection, 500mm, connector-connector design)
RIM-EXPRB-4CP	External -4CP probe (Probe for trigger output/external break input connection, 500mm, connector-clip design, number of clips: 4)
RIM-EXPRB-4CN	External -4CN probe (Probe for trigger output/external break input connection, 500mm, connector-connector design)
MIT8-CPULIB-H8/RIM^{*1}	CPU library for MITSUMI-made MM8000
NORTiV4-DBGLIB-H8/RIM^{*1}	RTOS debug library NORTi Version4
HI2000-DBGLIB-H8/RIM^{*1}	RTOS debug library HI2000/3

^{*1}: To use CPU library/RTOS debug libraries, you need to acquire license keys. License key is required for each ROMiCEmini main unit.

Notes on the use
<ol style="list-style-type: none"> 1. Basically requires the target system that can run on ROM/RAM basis at least. 2. Must allow the monitor program of 2K bytes always resident in the user memory. 3. Must allow allocation of working RAM for monitor program use (H8S: 60 bytes (MIN), H8/300H: 48 bytes (MIN)). 4. Must allow NMI pin connection.(Essential for hardware break feature) 5. Must have 1 exception vector free (for use in software break feature) 6. Advisable to connect reset output signal from ROMiCEmini to the target

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