

ROMiCE mini ROMiCEmini 80



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 high-level language debugging of a range of C languages.

- 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
- Supports shadow monitor
- Supports Z80 series
- Supports USB2.0 (High-speed), allowing high-speed processing
- Product available in 2 models, each with different emulation memory size
16M161 model: Installed with 4MBytes
16M321 model: Installed with 8MByte
- Palm-sized ultra compact body
- Supports Sharp-made LR35501/03

*1: 32/42-pin type ROM sockets are available

Main Specifications

Supported CPU		Z80 series Sharp-made LR35501/03
Target Specifications		
Target I/F	Dedicated connector	50-pin dedicated connector
	ROM socket	32/42-pin ROM socket ^{*1}
Supported ROM	Bus size	8bit
	Full capacity	16M161 model:4Mbytes /16M321 model:8Mbytes
	Access speed	50ns
Supported voltage		NMIOUT: 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 80-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	16M161/16M321(Differ in the sizes of emulation memory with which they are installed.)
Outside dimensions	106mm(W) x 78mm(D) x 29.5mm(H)
Host I/F	USB mini-B (5-pin) 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

*1: As a product component, one of the ROM sockets is included.

	16M161 model	16M321 model
Product composition contents	<ul style="list-style-type: none"> •ROMiCEmini 16M161 model main unit •Dedicated debugger (CD-ROM) •ROMiCEmini 80 User's Manual •License Tool Manual •Status 1-8CP probe (200mm) •ROM socket (Any 1 set: 32/42-pin type) •USB2.0 cable (2m) •Stand •AC adapter(5V/2A) 	<ul style="list-style-type: none"> •ROMiCEmini 16M321 model main unit •Dedicated debugger (CD-ROM) •ROMiCEmini 80 User's Manual •License Tool Manual •Status 1-8CP probe (200mm) •ROM socket (Any 1 set: 32/42-pin 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 / Windows 7 32-bit version


Supported languages, supported RTOSs	
Supported compilers	EW Z80, LSIC80

*: For supported versions and other details, please contact us.

Optional CSIDE	
Product name	Description
CSIDE for ROMiCEmini H8-E	Optional CSIDE for debugging of H8 series CPUs.

Optional products	
Product name	Description
RIM-ROMS32P	32-pin ROM socket set (MAIN socket, SUB socket, MAIN-SUB connection cable)
RIM-ROMS42P	42-pin 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)

- Notes on the use**
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.
If you use shadow monitor, Monitor area can be used for program area. However, Interrupt/Exception handling routines cannot be placed there.
 3. Must allow allocation of working RAM for monitor program use (30 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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