ROMiCE mini

## ROM-in-circuit debugger
# 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<br>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<br>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<br>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** | ・ROMiCEmini 16M161 model main unit<br>・Dedicated debugger (CD-ROM)<br>・ROMiCEmini 80 User's Manual<br>・License Tool Manual<br>・Status 1-8CP probe (200mm)<br>・ROM socket (Any 1 set: 32/42-pin type)<br>・USB2.0 cable (2m)<br>・Stand<br>・AC adapter(5V/2A) | ・ROMiCEmini 16M321 model main unit<br>・Dedicated debugger (CD-ROM)<br>・ROMiCEmini 80 User's Manual<br>・License Tool Manual<br>・Status 1-8CP probe (200mm)<br>・ROM socket (Any 1 set: 32/42-pin type)<br>・USB2.0 cable (2m)<br>・Stand<br>・AC adapter(5V/2A) |
| **Support System** | Yes | |

## Operating environment

| | Recommended operating environment |
|---|---|
| **CPU** | Core2Duo equivalent or higher |
| **Installed memory** | 2048MBytes or larger*1 |
| **Hard disk** | Free space of 150MBytes or more is required. |
| **Supported USB** | USB2.0 |

*1: Preferable to allow a triple size of a file for debugging.

## Supported OSs (English)

| Supported OS | Remarks |
|---|---|
| **Windows 2000 Professional** | 64-bit version is not supported. |
| **Windows XP** | 64-bit version is not supported. |
| **Windows Vista** | 64-bit version is not supported. |
| **Windows 7** | 64-bit version is not supported. |

## 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 80** | Optional CSIDE for debugging of 80 series CPUs(Japanese Edition). |
| **CSIDE for ROMiCEmini H8** | Optional CSIDE for debugging of H8 series CPUs(Japanese Edition). |
| **CSIDE for ROMiCEmini H8-E** | Optional CSIDE for debugging of H8 series CPUs(English Edition). |
| **CSIDE for ROMiCEmini TX19A** | Optional CSIDE for debugging of TX19 series CPUs(Japanese Edition). |
| **CSIDE for ROMiCEmini TLCS900H1** | Optional CSIDE for debugging of TLCS900H1 series CPUs(Japanese Edition). |

## 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<br>(Probe for event/trace signal connection, 500mm, connector-connector design) |
| **RIM-EXPRB-4CP** | External –4CP probe<br>(Probe for trigger output/external break input connection, 500mm, connector-clip design, number of clips: 4) |
| **RIM-EXPRB-4CN** | External -4CN probe<br>(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

Computex Co., Ltd.

Sales division (Contact)
Uchikanda DNK Bldg.,
2-15-2 Uchikanda, Chiyoda-ku, TOKYO 1010047 Japan
E-mail: sales@computex.co.jp

Main office
Tairanbo Bldg.,
4-432-13 Gojobashi-Higashi, Higashiyama-ku, Kyoto, KYOTO 6050846 Japan

<Send inquiries to: >