

## ETM + RTP + LTT (100GIG) full feature Emulator EJ-Extreme for TI TMS Automotive



1GIG & 100GIG Trace options available.

- Code Composer Studio™ IDE Support**
- Supports TI TMS series: TMS470, TMS570\*
- ARM®/Thumb® state debugging supported
- Hardware breakpoints can be set for address and status conditions
- Unlimited software breakpoints
- Download to Flash Memory capability
- ETM trace capability (512K frames) is supported (Including ETB)
- Supports the semi-hosting capability
- ETM trace up to 200MHz clock is available
- Low voltage from 1.8V up to 3.6V
- USB host interfaces for high-speed communication with host computer
- Sophia's high-level language debugger, Watchpoint®, is included with all Sophia Systems emulators

### Specifications

|   |  |
|---|--|
| <b>Target CPU</b>                                 | T.I. series( <b>TMS470, TMS570*</b> , etc.) *TMS570 is an additional Option: Check with T.I. for availability.<br>--- ARM cores ---<br>T.I./ARM Cortex series(TMS570*, and so on)<br>T.I./ARM11 core series( <b>OMAP2430, OMAP2420, OMAPV2230</b> , and so on),<br>ARM11 core series(ARM1176, ARM1156, <b>ARM1136</b> , and so on)<br>T.I./ARM9 core series(OMAP17xx, <b>OMAP16xx, OMAP15xx, OMAP59xx</b> )<br>(OMAPV2230, <b>OMAPV1030</b> , OMAP-DM270, OMAP850, OMAP7xx ).<br>ARM9 core series( <b>ARM9TDMI, ARM9TDMI-S, ARM910T, ARM920T, ARM940T, ARM9E, ARM946E, ARM966E, ARM922, ARM925, ARM926</b> , and so on)<br>T.I./ARM7 core series(TMS320, <b>TMS470</b> series, and so on),<br>(OMAP-DM270, OMAP850, OMAP7xx ).<br>ARM7 core series ( <b>ARM7TDMI, ARM7TDMI-S, ARM710T, ARM720T, ARM740T</b> , and so on) |
| <b>Clock</b>                                      | Supports the CPU's maximum clock speed   |
| <b>Target Vcc</b>                                 | Vcc= +1.8 V to 3.6 V   |
| <b>Memory and I/O</b>                             | Entire space is available to user  |
| <b>Interrupts</b>                                 | Both internal and external interrupts are available to user  |
| <b>Breakpoints and Break Options</b>              | <ul style="list-style-type: none"> <li>● Hardware breakpoints <ul style="list-style-type: none"> <li>- ARM11: Max 7 hardware breakpoints: Instruction execution address(3 points), memory access(2 points), others(2 points)</li> <li>- ARM7/ARM9: Max 2 points*2 : Instruction execution address, memory access, others can be specified.</li> </ul> </li> <li>● Unlimited Software breakpoints</li> <li>● Other break options: Forced break from Debug Monitor</li> </ul> <p>Note: *2 = In ARM7/9, when the Software Breakpoint, Step Over, Step Out, Come to function is used , release 1 hardware breakpoint.</p>  |
| <b>ETM Trace + ETB (Embedded Trace Macrocell)</b> | <ul style="list-style-type: none"> <li>● Supported clock: 200MHz</li> <li>● Data trace available</li> <li>● ETM trigger break available</li> <li>● ETB capability (OPTIONAL)</li> <li>● Trace memory capacity: 512K STEP (4.5 Mbytes)</li> <li>● ETM trigger can be specified(such as point, area, sequential, count)</li> <li>● Time stamp capability</li> </ul>  |
| <b>Long time Trace</b>                            | The following trace memory configurations are available.<br>1. Trace memory capacity 1G byte<br>2. Trace memory capacity 2G bytes + 100 Giga bytes HDD   |
| <b>Flash Memory</b>                               | Download the program from the debugger directly to the target external Flash memory  |

# Configuration

## Hardware

The EJ-Extreme ETM/ ARM7/9/11/Cortex Emulation System consists of the EJ-Extreme ARM7/9/11/Cortex Probe Set with USB2.0 host interface.

\*\* This product cannot be used for CPU cores other than listed.

## Software

Watchpoint®, a high-level language debugger for Windows®XP/2000, is included with the EJE-ARM7/9/11/Cortex.

\*\* Interim Vista (32-bit version) is now available.

## Media:

CD-ROM

## Supported Tool Chains:

Watchpoint supports the following compilers and supported OS:

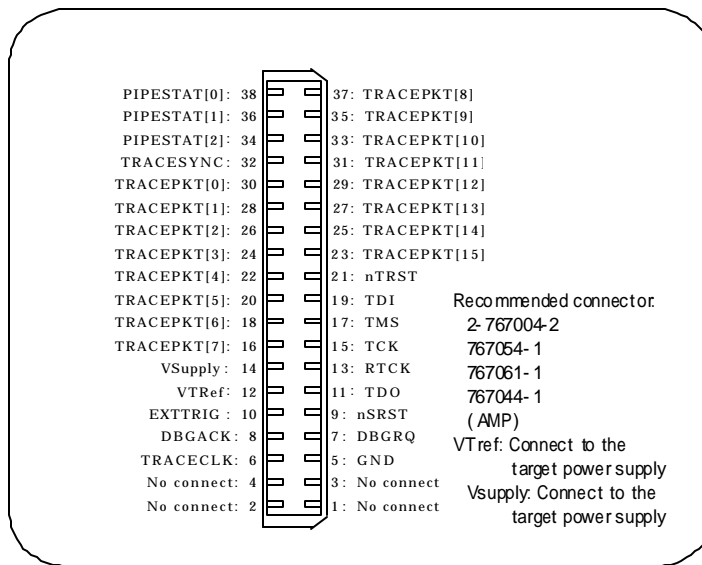
### Compiler:

TI: Code Composer Studio™  
 ARM: ADS, SDT, RVCT  
 Metaware: High C/C++/EC++ for ARM  
 Green Hills: GHS  
 GAIO: XCC-V  
 GNU:  
 IAR: EWARM

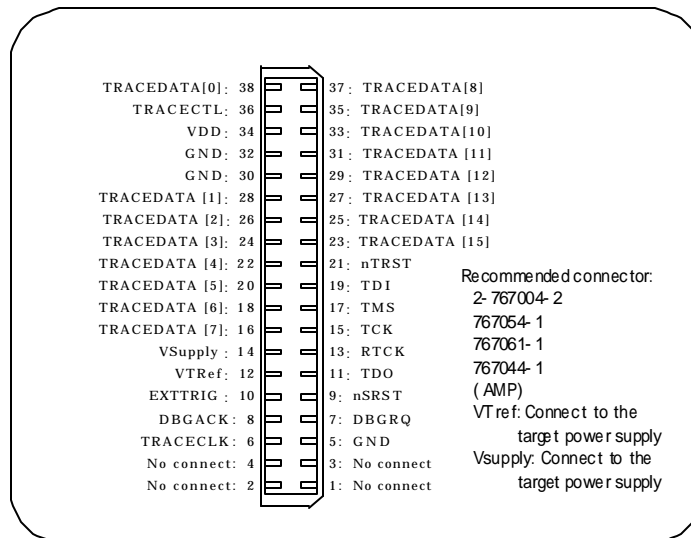
### Supported OS:

|         |             |             |
|---------|-------------|-------------|
| Linux   | Windows CE™ | Symbian OS™ |
| NORTI   | G-OS        | PrKERNEL    |
| VxWorks | ITRON       | Other       |

# Target Connection 1

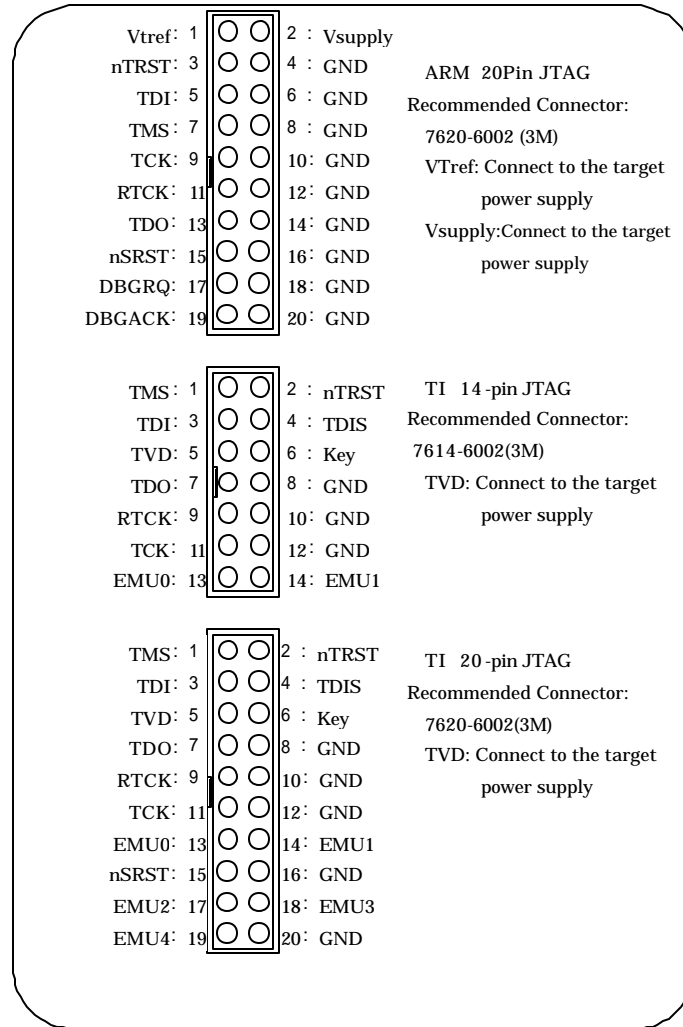


Single ETM target connector pin assignment ( Top View )  
( ARM7/ARM9 )



Single ETM target connector pin assignment ( Top View )  
( ARM11 )

## Target Connection 2



JTAG header connector pin assignment ( Top View)

## Ordering Information

| Part No.            | Description   |
|---------------------|---|
| AK72303E (1GIG)     | Probe Set, EJ-Extreme ARM7/9/11-ETM-RTP-LTT(1GIG) with USB2.0 interface, and Watchpoint® debugger   |
| AK72302E (100GIG)   | Probe Set, EJ-Extreme ARM7/9/11-ETM-RTP-LTT(100GIG) with USB2.0 interface, and Watchpoint® debugger |
| U4C400E (CCS I/F)   | WP4CCS (Watchpoint for Code Composer Studio) for T.I. (Included with T.I. package)                  |
| AK78000E (Optional) | *TMS570 (Cortex core) *Check with T.I. for availability.  |

Minimum Host System requirements for EJ-Extreme with Watchpoint Debugger:

**OS:** Windows XP/2000, \*Vista      **Memory:** 64 MB for XP/2000, 512MB for Vista      **Hard Disk:** 25MB for installation

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All configurations are subject to change without notice.