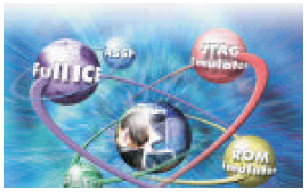
Sophia systems™

Product Brief

Version 1.06-E1



ETM JTAG Emulator EJ-Debug for ARM7/9/11

- Works with Code Composer Studio® IDE
- Supports ARM7TDMI® ARM9TDMI® ARM11*
- ARM®/Thumb® state debugging supported
- Set hardware breakpoints on address and status
- Unlimited software breakpoints
- Clear, read and program FLASH
- 512 K-step ETM trace including ETB
- Available ETM trace up to 200MHz clock
- 1.8V up to 3.6V target voltage support
- Perfect for field debugging or maintenance.
  - USB bus powered - No AC adapter required.
  - Pocket sized, 86x101x23mm
- JTAG pod button runs User macro scripts
  - Perfect for hardware test, small run programming and automatic field upgrades.
- Fast USB PC interface.
- EJ-Debug includes Watchpoint® for Windows®

* Multi-core debugging available as an optional feature.

Specifications

Target CPU	ARM7/9/11 cores from all vendors: ARM11 ARM1156, ARM1136, etc. ARM9 ARM9TDMI, ARM9TDMI-S, ARM910T, ARM920T, ARM940T ARM9E, ARM946E, ARM966E, ARM922, ARM925, ARM926, etc. ARM7 ARM7TDMI, ARM7TDMI-S, ARM710T, ARM720T, ARM740T, etc.
Clock	200 MHz Maximum CPU clock
Target Vcc	Target Vcc from +1.8 V to 3.6 V
Memory & I/O	Entire space is available to the User
Interrupts	Both internal and external interrupts are available to user
Breakpoints and Break Options	Hardware breakpoints 2 hardware breakpoints in ARM7 and ARM9)* Instruction execution address, memory access, data can be specified. 7 hardware breakpoints(ARM11): Instruction execution address(3 points), memory access(2 points), others(2 points) Unlimited software breakpoints Other break options: Forced break from Debug Monitor *ARM7 & 9, Step Over, Step Out, & Run to Cursor functions use one core hardware breakpoint.
ETM Trace + ETB Embedded Trace Macro cell	200Mhz clock support 512 K-step trace memory The following conditions can be specified: Set area start and stop trace triggers Time stamp capability ETB capability
Flash Memory	JTAG target FLASH read, test, clear and programming functions

Configuration

Hardware

The EJ-Debug ETM for ARM7/9/11 system consists of a ARM7/9/11 JTAG pod with a USB to PC interface.
This JTAG emulator is for ARM7/9/11 only.

Software

Watchpoint®, a high-level language debugger for Windows® Vista*/XP/2000, is included with the EJ-Debug for ARM7/9/11.

Media

CD-ROM

Supported Tool Chains

Watchpoint supports the following compilers and OS

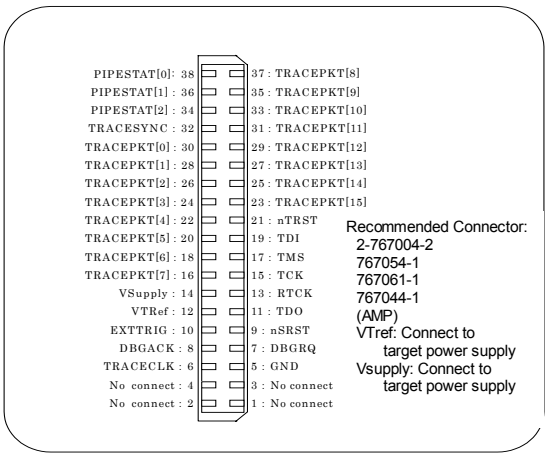
Compliers

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

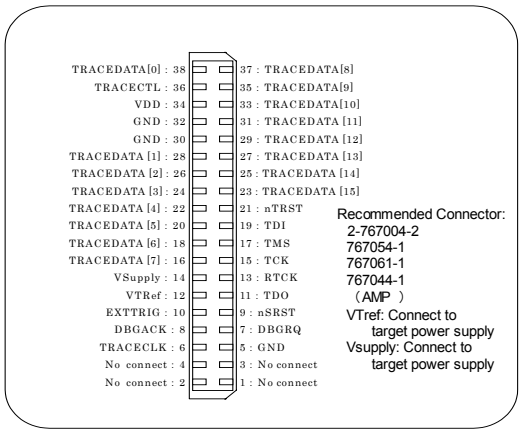
Supported OS

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

Target JTAG Connections

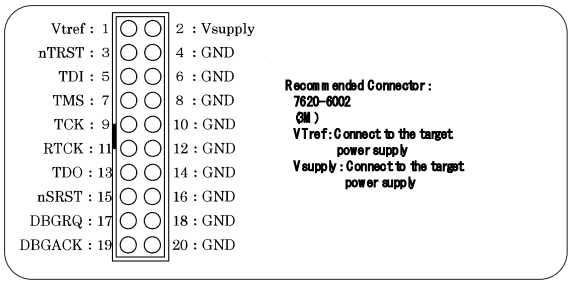


Single ETM Target connector pins for ARM7/9 - Top View



Single ETM connector pins for ARM11 – Top View

JTAG Connector pins – Top View



Ordering Information

Part No.	Description
EJD7201E	JTAG Emulator, EJ-Debug ETM for ARM7/9/11 with USB host interface. Includes Watchpoint® debugger for Windows®XP/2000

System requirements for Watchpoint® Debugger:

OS	Memory	Hard Disk
Windows XP/2000	64 Mbytes	25 Mbytes for installation
Windows Vista	512 Mbytes	25 Mbytes for installation

Notes:
*** Vista (32-bit version): driver software update is required.**
*** Vista (64-bit version): not supported by current version of Watchpoint.**
*** XP (64-bit version): driver software update is required.**
Earlier versions of Watchpoint do not support Windows Vista.
An interim version is available now. Please contact your local Rep/Distributor.

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