Ashling Opella-XD for MIPS

Ultra-high-speed EJTAG Debug Probe

Ashling's **Opella-XD EJTAG Debug Probe**, supplied and supported by Arcadi Systems, is the fastest-available debug probe for embedded development on MIPS™ RISC cores.

Advanced features of Opella-XD include:

- Fast, easy-to-install USB 2.0 High-Speed Interface (480Mb/s)
- Supports all popular hardware debug protocols
- Works with Windows and Linux hosts
- Hot-plug support allows post-mortem debugging
- Fast, trouble-free Plug-and-Play installation
- Small, versatile Target Probe Cable fits on any target board
- Fast in-target Flash Programming
- Wide target voltage range: 0.9V to 3.6V
- Supports latest EJTAG 4.10 MIPS™ debug protocol
- Versatile Target-Reset and Test-Port-Reset support
- Unique Auto-conditioning Probe provides maximum possible download speed to target with fastest JTAG clock frequencies
- Built-in diagnostics instantly show status of Target, Debug Probe and USB link
- Universal Hardware-Debug platform for all popular target architectures and compilers

Benefits of **Opella-XD** to the embedded hardware developer include:

- Accelerates the entire embedded-hardware debug process: ultra-fast installation, code download and flash programming saves time at every code rebuild
- Instantly auto-configures to target system
- Long-term investment: works with all popular target architectures and compilers
- Helps with the most difficult debugging tasks: hardware bring-up, operating-system boot, post-mortem debugging
- Future-proof: works with latest hardware-debug protocols, all popular host operating-systems
- Compact, easy-to-install target probe cables support all popular debug interfaces

Opella-XD Debug Probe Specification

- High-speed USB2.0 (480Mb/s) interface to host PC or Linux (x86) workstation
- Target JTAG clock rates up to 100MHz
- Auto-conditioning for fast EJTAG clock frequencies
- Sustained code download to target at over 3MB/s (using 100MHz EJTAG clock)
- Supports all MIPS™ hardware-debug standards: EJTAG 4.10, 3.10, 2.6x, 2.5x, 2.0x and 1.5x
- 14-way or 20-way IDC target EJTAG connectors
- Configurable Target-Reset and Test-Port-Reset, under full user control
- Fine-grained adjustment of EJTAG clock frequency from 1KHz to 100MHz
- Supports target operating voltages from 0.9V to 3.6V. Opella-XD detects and automatically configures for the appropriate target voltage.
- Supports RTCK adaptive clocking of debug data from target (EJTAG 4.10)
- "Hot-plug" support; allows connection to a running target without resetting or halting
- Fully powered by USB interface; no external power-supply needed
- Support for all on-chip hardware breakpoints; unlimited number of software breakpoints
- Big-endian and little-endian target architectures supported
- Full support for MIPS16™/MIPS16e™ code compression

PathFinder-MIPS Source Debugger

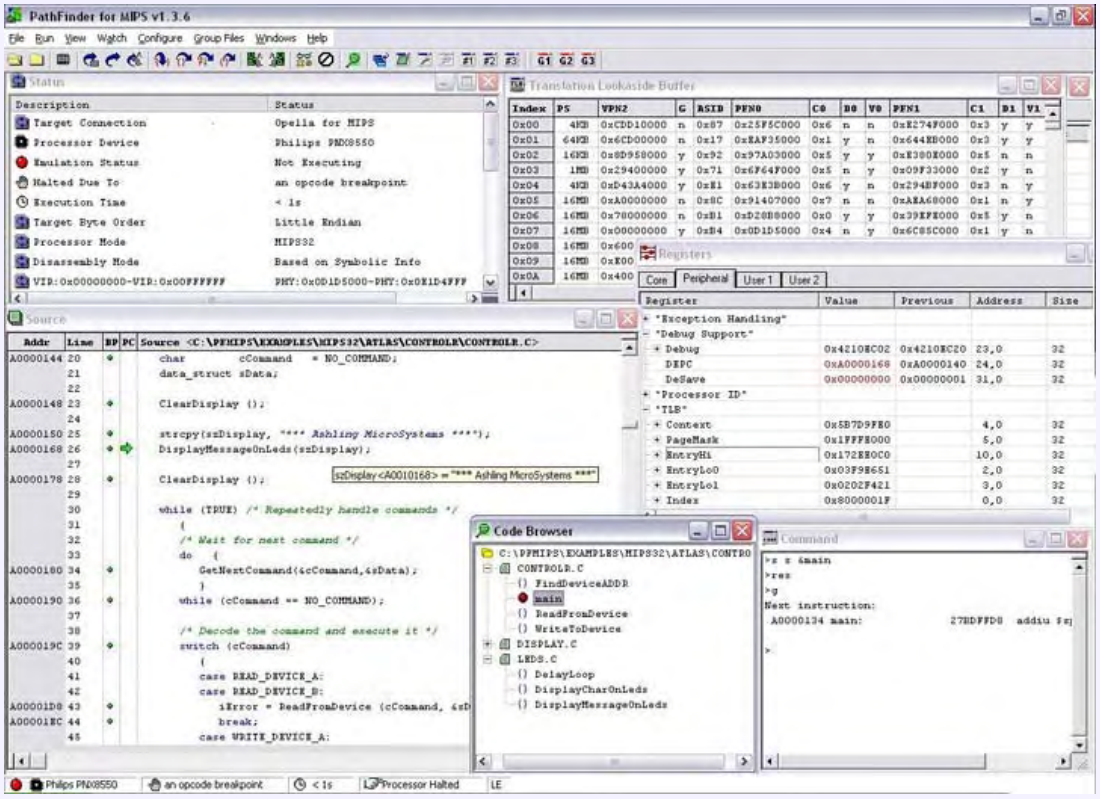
PathFinder-MIPS is Ashling's Source-level Debugger for MIPS™-core devices, with multiple user-configurable windows and intuitive operation.

Full target debug control is supported, including program download, go/halt/step and setting/clearing of breakpoints. Variables, target memory and registers may also be viewed and modified.

A built-in script (macro) language allows automation of repetitive tasks.

Target flash programming support for a broad range of devices is also provided.

Compiler support:
All popular MIPS™ C/C++ compilers are supported, including GNU GCC, Green Hills Software, Wind River and all other ELF/DWARF-compliant compilers.



GDB-Server-MIPS

Ashling's GDB-Server-MIPS software package allows Ashling's Target Debug Probes to be used with the GNU GDB MIPS open-source debugger. The Ashling GNU GDB Server is available for Windows and Linux (x86-based) hosts and supports GNU GDB and all Eclipse CDT-based debuggers, including MontaVista Devrocket.

Order Codes

Product	Order Code
Opella-XD-MIPS Debug Probe. Includes USB 2.0 cable, documentation and diagnostic software	Opella-XD-MIPS
14-pin Target Probe Cable with 0.1"-pitch IDC connector. EJTAG versions 2.5 – 4.10. Supports target voltages 0.9V to 3.3V	TPAOP-MIPS14
Adapter with 20-pin 0.05"-pitch IDC connector for use with TPAOP-MIPS14 Target Probe Cable. EJTAG versions 1.5x – 2.0x.	AD-EJTAG20
Low-profile ribbon cable assembly for use with TPAOP-MIPS14 Target Probe Cables in restricted-height targets	WC0078
PathFinder-MIPS Source Debugger software for Windows hosts; supports all popular MIPS compilers.	PF-XD-MIPS
GDB-Server-MIPS drivers: To connect GNU GDB-Server-compliant Source Debugger (Windows and Linux hosts) to Opella-XD Probe	GDB-Server-MIPS-XD

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ASHLING
THE DEVELOPMENT SYSTEMS COMPANY

Arcadi Systems

Ashling Sales & Support Center
Arcadi Systems
8345 NW 66th. St., Suite 9122
Miami, FL 33166-2626
USA

Tel: (408) 884 3020
Fax: (267) 654 3026
Email: **info@arcadisystems.com**
www.arcadisystems.com