OPELLA-ARM Emulator

Entry-level Emulator and Source Debugger for ARM™-core embedded microprocessors, with USB host connection

DESCRIPTION

*Ashling's **OPELLA EMULATOR** with USB host connection*

Ashling's **OPELLA-ARM EMULATOR** is a powerful JTAG Emulator for embedded development based on ARM™ RISC cores, with a USB connection to the host PC.

OPELLA debugging is completely non-intrusive and requires no target system resources.

Together with Ashling's **PATHFINDER** source debugger, **OPELLA** provides powerful run/stop control of embedded software, with hardware and software breakpoints.

OPELLA provides fast code download to the target system, and allows control and interrogation of all core-processor and system resources.

OPELLA provides **Flash Programming** for On-Chip and external Flash memory.

OPELLA supports all popular ARM™ cores, using ARM Ltd.'s EmbeddedICE™ or EmbeddedICE-RT™ on-chip debug interfaces.

OPELLA connects to the host PC via a standard USB full-speed connection.

The **PATHFINDER** Source Debugger, used with **OPELLA**, supports Non-Stop Debugging on ARM target systems that incorporate RealMonitor™.

OPELLA also operates with the GNU GDB and ARM AXD, ADW and RealView debuggers

SYSTEM SPECIFICATION

Source debugger

PATHFINDER is Ashling's C Source Debugger for ARM-core devices, with multiple user-configurable windows, point-and-click, drag-and-drop, hover help and hover data display, splitter windows, right-mouse menus, tabbed dialogs, and menu-bar, button, hot-key and script (macro)-file controls. PathFinder runs on all 32-bit versions of Windows. PathFinder's Object-Oriented Monitoring and Editing System provides tree-structured "click to expand" access to all memory-areas, register sets, registers and bits of the ARM™ core and co-processors, with a logical and friendly Windows-XP-style display.

PathFinder is the user Interface for all Ashling products including the Ashling Opella, Genia and Vitra Emulators. An RDI compliant driver (Windows .DLL) and GNU Debug server are available as a separate option, allowing **OPELLA** to be used with RDI- or GDS-compliant third party debuggers or user-developed applications. PathFinder also supports the ARMulator™ Instruction Set Simulator, which is supplied with ARM™ Ltd.'s ADS.
PathFinder uses the ARM™ Remote Debug Interface (RDI) at version 1.5.1 for all target communication.

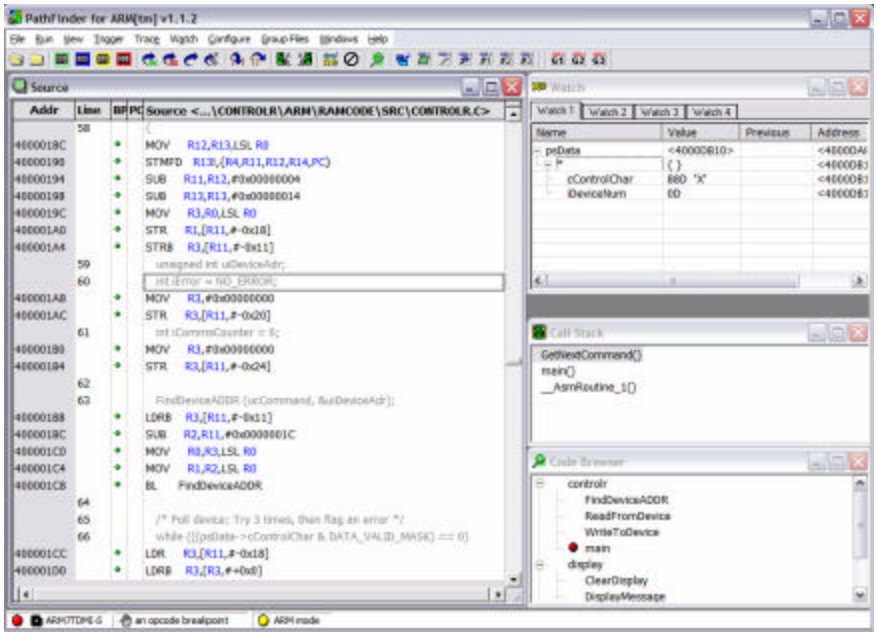
PathFinder compiler support
All popular ARM™ C compilers are supported, including ARM™ Ltd., GNU GCC, Ashling AsIDE, Motorola Metrowerks, GHS, IAR, ARC MetaWare and all other ELF/DWARF compliant compilers.

Host
PC with Windows-XP/2000/Me/ 9x/ NT. USB 1.1 connection to host PC.

Multi-core/Coprocessor support
Debug support capability for multi-core and coprocessor-assisted ARM™ systems.

Script language: powerful macro language to control, monitor and log all Emulator functions

RTOS Monitoring: Open API for integration of RTOS Monitoring Window(s).



PathFinder provides source debugging for ARM™-core devices, with mouse, command-line, accelerator-key or button-bar controls

OPELLA-ARM EMULATOR SPECIFICATION

Features

- Run/stop control of target application
- Display/modification of target processor registers
- Full expression-handling for variables
- Read/write access target system memory, peripheral registers and I/O space
- Single step, function step-into, step-over
- Simultaneous display of source and assembly application code
- Support for all on-chip hardware breakpoints; unlimited software breakpoints
- Semi-hosting, DCC, RT and RealMonitor debug support
- Automatic sensing of target operating voltage; support for 1.8V/2.5V/3.3V/5V targets.
- Target Reset control and Remote Reset detect

Device Support

All ARM™ cores with EmbeddedICE™ or EmbeddedICE-RT™, including ARM7DI, ARM7TDMI, ARM7TDMI-S, ARM710T, ARM720T, ARM740T, ARM9TDMI, ARM920T, ARM926EJ-S, ARM940T, ARM9E, ARM922T, ARM946E, ARM946E-S, ARM966E, ARM966E-S. Contact Ashling for support on new ARM™ cores.

Target connection
ARM™-standard 20-way IDC EmbeddedICE connector

User I/O
Auxiliary target control signals; 2 outputs to the target and 1 input, under user control from PathFinder.

Power Source
Powered by USB port (consumes 120mA); optional Universal DC power supply for independent powering.

UPGRADE PATH

Also available: **GENIA-ARM EMULATOR** (with Ethernet, USB and serial host connections) and **VITRA-ARM EMULATOR** with support for Real-Time Trace debugging for ARM™ cores with the Embedded Trace Macrocell™.

ORDER CODES

Product	*Order Code*	*Product*	*Order Code*
OPELLA-USB-ARM Emulator with USB host port	Opella-USB-ARM	**OPELLA** RDI Driver and GDB Server	DRI-RDI-ARM
Optional Universal Power Supply	PSU-Opella	**PATHFINDER** Source Debugger	PathFinder-ARM

DS261 V3U

Ashling Microsystems Ltd. is Certified to EN ISO 9001:2000, NSAI Registration 19.09069

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