

Genia-ARM Emulator

High-Speed Networked Emulator and Source-Level Debugger for ARM™-powered embedded systems

Overview

Ashling's Genia-ARM Emulator is a powerful networked emulation system for embedded development based on the ARM™ RISC cores. Genia debugging is completely non-intrusive and requires no target system resources. Together with Ashling's PathFinder source-level debugger, Genia provides powerful run/stop control of ARM™ embedded software, supporting hardware and software breakpoints. GENIA provides fast code download to the target system, and allows control and interrogation of all core processor and system resources. Genia offers the user Ethernet, USB and serial connection options to the host PC, and can be upgraded to Ashling's Vitra Networked Emulator with Real-time Trace (see Ashling Vitra datasheet DS218).



SYSTEM SPECIFICATION

Source-level debugger:

PathFinder is Ashling's C Source-Level Debugger for ARM™ core devices, with multiple user-configurable windows, point-and-click, drag-and-drop, hover help and hover data display, splitter windows, 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 other co-processors with a logical and friendly Win2000-style display.

PathFinder is the user Interface for all Ashling products including the Ashling Vitra, Genia and Opella Emulators. In addition, PathFinder supports the ARMulator™ Instruction Set Simulator. ARMulator™ is supplied with the ARM Ltd. Development Suite (ADS). PathFinder uses the ARM™ Remote Debug Interface (RDI) standard at version 1.5.1 for all target communication. An optional RDI compliant Genia driver (Windows .DLL) allows Genia to be used with RDI-compliant third party debuggers or user-developed application.

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RTOS Monitoring

Integrated RTOS Monitoring Window.

Multi-core/Coprocessor support

Full debug support capability for multi-core and coprocessor-assisted ARM™ systems.

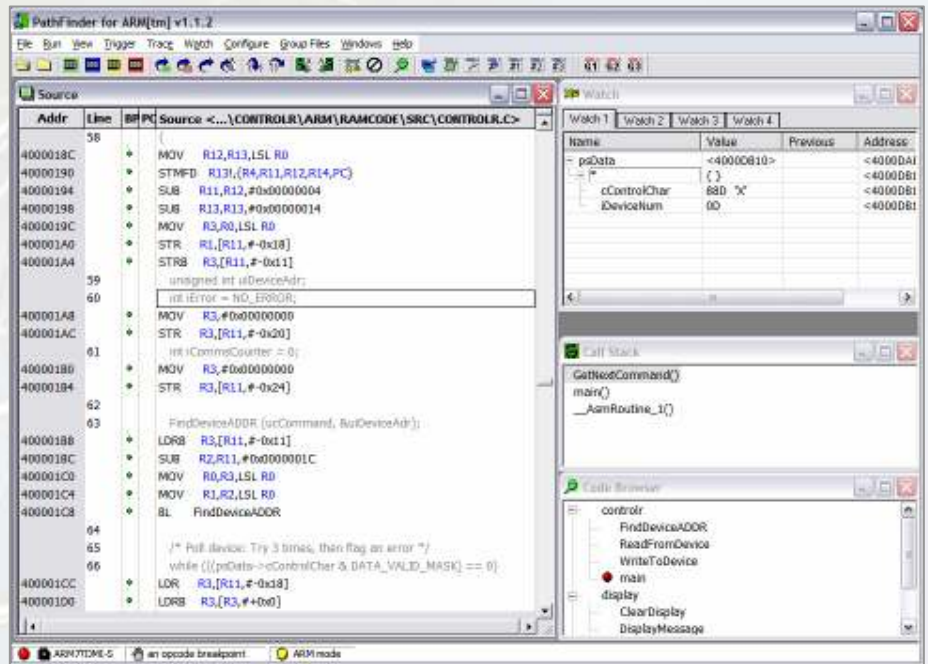
Compiler support

All popular ARM™ C/C++ compilers are supported including ARM Ltd's ADS, GNU, Green Hills Software, IAR, MetaWare and all other ELF/DWARF compliant compilers.

Host

PC with Windows9x/NT/2000/XP. Ethernet, USB and RS232 serial connection to host PC.

Macro language: Powerful script language to control, monitor and log all of the functions of the Emulator.



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

Genia-ARM Emulator Specification

Feature Set

- Run/stop control of target application
- Display/modification of processor registers
- Full variable expression handling.
- 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
- High speed application code download
- Support for all on-chip hardware breakpoints; unlimited software breakpoints
- Automatic sensing of target operating voltage; support for low-voltage targets.
- Target Reset control and Remote Reset detect

Device Support: All ARM™ cores with EmbeddedICE™, including ARM7DI, ARM7TDMI, ARM710T, ARM720T, ARM740T, ARM9TDMI, ARM920T, ARM922T, ARM926EJ-S, ARM940T, ARM9E, ARM946E, ARM966ES. Contact Ashling for support on new ARM™ cores.

Target EmbeddedICE connection: ARM™-standard 20-way IDC connector. Supports 1.8V, 2.5V 3.3V and 5V target systems.

User I/O: 8 auxiliary target control signals: 4 outputs to target and 4 inputs, under user control from PathFinder.

Power Source: Supplied with 100V-240V a.c 50/60Hz Universal Power Supply.

Upgrade Path: Genia can be quickly and easily upgraded to Vitra to add Real-Time Trace debugging for ARM™ cores with the Embedded Trace Macrocell™ (see Vitra datasheet DS218).

Order Codes

Product	Order Code
Genia Emulator (includes power-supply)	GENIA-ARM
General Purpose User I/O Cable	TPA-GENIO
Genia RDI Driver	RDI-ARM
PathFinder for ARM Source-Level Debugger	PF-ARM

DS216 V12

Ashling Microsystems Ltd. is Certified to I.S. EN ISO 9001:2000, NSAI Registration No. 19.09069.

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