

GENIA-PPC Networked Emulator

High-Speed Emulator and Source Debugger for MPC55xx, MPC56x, and MPC555 PowerPC NEXUS embedded systems

Overview



The Ashling Genia Emulator.

Ashling's Genia-PPC Emulator is a powerful networked Emulator for embedded development with Freescale's PowerPC RISC cores, using the NEXUS 5001™ on-chip debug interface.

Genia debugging is completely non-intrusive and requires no target system resources. Together with Ashling's PathFinder source debugger, Genia provides powerful run/stop control of embedded software, with 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 incorporates high speed Ethernet, USB and serial connections to the host PC.

Genia also supports Freescale's MPC555 PowerPC automotive and industrial-control microprocessor, using the PowerPC BDM debug interface.

As an active participant in the Nexus 5001 Forum, Ashling has worked with Freescale Semiconductors and the other forum members to produce Emulator and Real-time Trace system for Freescale's MPC56x and MPC55xx automotive microprocessor families, the first microprocessors to incorporate the IEEE-ISTO 5001 (NEXUS 5001™) Global Embedded Processor Debug Interface.

System Specification

Source-level debugger:

PathFinder is Ashling's C Source-Level Debugger for PowerPC 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 PowerPC 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 Vitra, Genia and Opella Emulators for PowerPC.

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Compiler support:

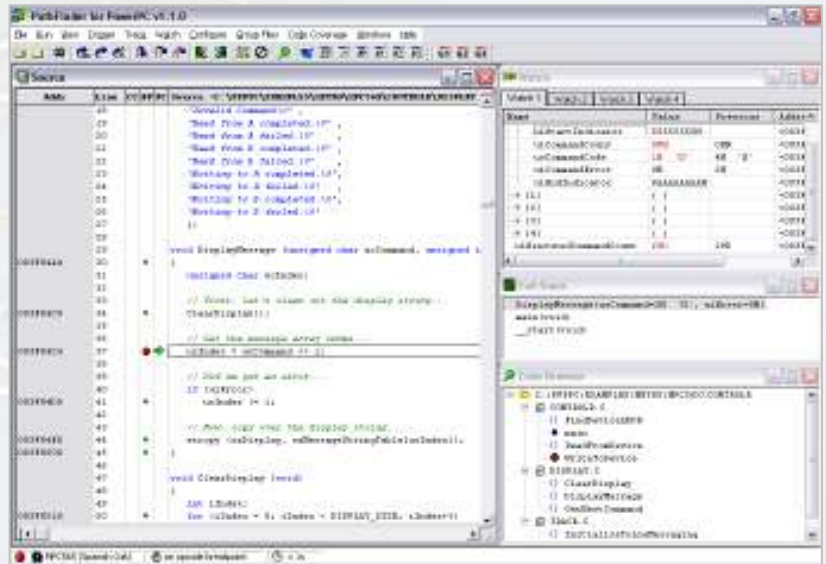
Supports all popular PowerPC C/C++ compilers, including GNU, Green Hills Systems, ARC MetaWare, Freescale Metrowerks, Altium-Tasking, Wind River Systems (Diab Data) and all other ELF/DWARF compliant compilers.

Host:

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

Script language:

Powerful macro language to control, monitor and log all Emulator functions.



PathFinder provides source-level debugging for PowerPC systems, with mouse, command-line, accelerator-key and button-bar controls

Genia Emulator Specification

- Run/stop control of target application including go, halt, step over, step into and step out of.
- Full variable expression handling.
- Display/read/write of target system memory, peripheral registers and IO space.
- 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 target systems.
- Target Reset control and Remote Reset detect.
- PathFinder Flash Programming Utilities Package.

Target connection: 14-pin IDC Primary debug cable for MPC55xx derivatives, 10-pin BDM connector for MPC5xx. Supports 1.8V, 2.5V, 3.3V and 5V targets.

Auxiliary inputs/outputs: 4 auxiliary control outputs to target and 4 inputs, all under user control from PathFinder.

Device Support: All Freescale PowerPC devices with NEXUS on-chip debug interface, including: MPC5533, MPC5534, MPC5553, MPC5554, MPC5561, MPC5565, MPC5566, MPC5567. MPC561, MPC562, MPC563, MPC564, MPC565, MPC566 and Freescale MPC555 with BDM debug interface.

Order Codes

Product	Order Code
Genia Networked Emulator	Genia-PPC
PathFinder-for MPC5500 Source Debugger for MPC55xx	PF-MPC5500
PathFinder for PowerPC Source Debugger for MPC56x, MPC555	PF-PPC
14-pin IDC primary debug cable for MPC55xx	TPA-MPC5500-JTAG-14
10-pin BDM primary debug cable for MPC5xx	TPA-PPC-BDM-10
General Purpose User I/O Cable	TPA-GENIO

DS223 V7

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

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