

Ashling Genia for Freescale MPC5554, MPC565, MPC555

Networked NEXUS and BDM Emulator for Freescale Power Architecture

Ashling's Genia-MPC55xx Emulator, supplied and supported by Arcadi Systems, is a powerful Networked Emulator for Freescale's MPC5554, MPC56xx, MPC565 and MPC555 Power Architecture embedded microprocessors.



Ashling Genia NEXUS and BDM Emulator for MPC5554, MPC565 and MPC555 shown here connected to Freescale's MPC565 development board using the NEXUS (IEEE-ISTO-5001™) interface

Genia-MPC55xx connects to the NEXUS or BDM debug interface port on the target embedded microprocessor.

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.

As an active participant in the Nexus 5001 Forum, Ashling has worked with Freescale Semiconductor and the other forum members to produce Emulator and Real-time Trace systems for Freescale's MPC55xx, MPC56xx, MPC56x and MPC53x automotive microprocessor families, the first microprocessors to incorporate the IEEE-ISTO 5001 (NEXUS 5001™) Global Embedded Processor Debug Interface.

The Genia Emulator and PathFinder debugger provide full multi-core debug support for the Power Architecture **eTPU Enhanced Timer Processor Unit**, with individual windows for disassembled eTPU instructions, eTPU memory and registers.

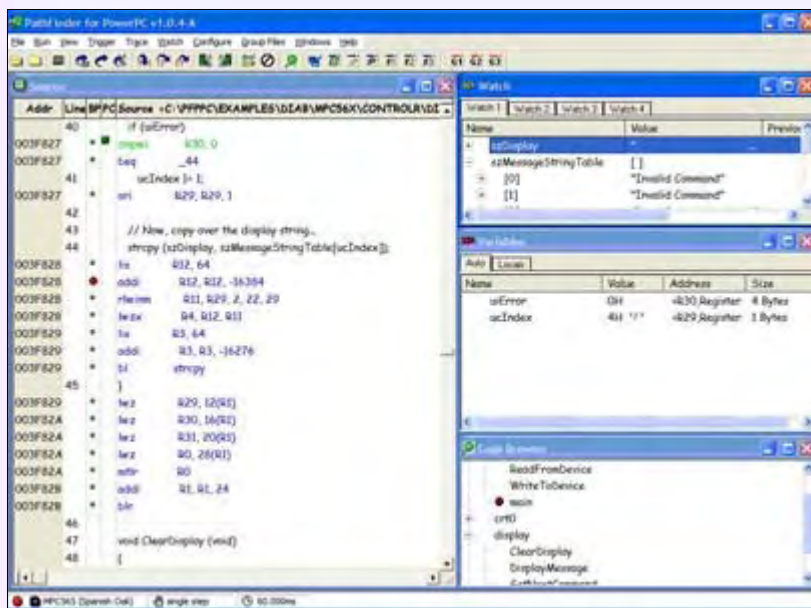
In addition to NEXUS support for the MPC5554, MPC56xx, MPC565 and MPC53x families, Genia supports Freescale's MPC555 Power Architecture automotive and industrial-control microprocessor, using the MPC555's BDM debug interface.

Source-level Debugger

PathFinder is Ashling's C Source-Level Debugger for Power Architecture 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 current 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 Power Architecture core and co-processors with a logical and friendly Windows display.

PathFinder is the user-interface for the Ashling Genia-MPC55xx and Vitra-MPC55xx Emulators for Freescale's MPC5554, MPC56xx, MPC565, MPC53x and MPC555 embedded microprocessor families.

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Compiler support:

Supports all popular Power Architecture C compilers, including GNU GCC, Green Hills Systems, ARC MetaWare, Freescale Metrowerks, Altium-Tasking, Wind River Systems and all other ELF/DWARF compliant compilers. Supports Byte Craft and Freescale Metrowerks **eTPU Assemblers**.

Host:

PC with Windows Vista/XP/2000. Ethernet (RJ45), USB and RS232 serial connections to host PC.

Script language:

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

Flash Programming:

For On-Chip and external Flash memory.

PathFinder (left) provides source-level debugging for Power Architecture embedded 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: Choice of Nexus 50-pin, 38-pin or Robust 51-pin debug and trace connectors; 10-pin BDM connector for MPC555; or 14-pin JTAG connector for MPC55xx. 4 auxiliary control outputs to target and 4 inputs, all under user control from PathFinder. 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 Power Architecture cores with NEXUS on-chip debug interfaces, including MPC5554, MPC5553; MPC5632, MPC5633, MPC5634; MPC561, MPC562, MPC563, MPC564, MPC565, MPC566, MPC53x; and Freescale MPC555 with BDM debug interface. Contact Arcadi for support on new Power Architecture cores.

Order Codes

Product	Order Code
Genia Networked Emulator	Genia-MPC55xx
PathFinder-MPC5500 Source Debugger for MPC555x, MPC56xx	PathFinder-MPC5500
PathFinder-MPC5xx Source Debugger for MPC56x, MPC53x, MPC555	PathFinder-MPC5xx
NEXUS 50-way debug and trace connector for MPC56x	TPA-PPC-NEXUS-50
NEXUS 38-way debug and trace connector for MPC55xx, MPC56xx	TPA-NEXUS-M38C
10-way BDM debug cable for Freescale MPC555, MPC56x	TPA-PPC-BDM10
14-way JTAG debug cable for Freescale MPC55xx, MPC56xx	TPA-MPC5500-JTAG-14

Ashling Microsystems Ltd. reserves the right to alter product specifications at any time and without notice



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