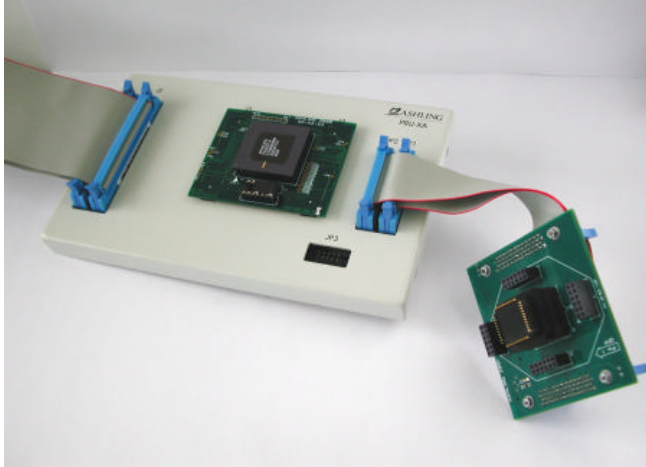


Ultra-51XA

Real-time In-Circuit Emulator for Philips XA and all derivatives



Ashling's Ultra-51XA Microprocessor Development Systems provides a complete development environment for the Philips XA microcontroller family (including PXA-G3, PXA-S3, PXA-G49, PXA-C3 and SmartXA2 devices), hosted under Windows. Ashling's XA emulators provide full real-time In-Circuit Emulation, Source Debugging, Performance Analysis and software quality assurance tools for rapid and reliable development of Philips XA applications.

The Philips XA microcontroller family is fully supported in on-chip ROM, Flash or EPROM (single-chip) and ROMless (external memory) modes.

System Specification

Source Debugging

PathFinder source debugger for C and Assembly. Automatic synchronization of Source Code, Traced Executed Source Code, Disassembled Code Memory, Port Activity and Code Browser windows; on-chip RAM, External Data memory, Special-function Registers, System Stack, User Stack, Status and Variables windows.

Software Quality Assurance

Built-in options for high-speed, non-intrusive real-time Performance Analysis and report generation. Symbolic function trace, time-stamping, timing analysis and automatic software-verification reports, using a dedicated real-time measurement subsystem.

In-Circuit Emulator

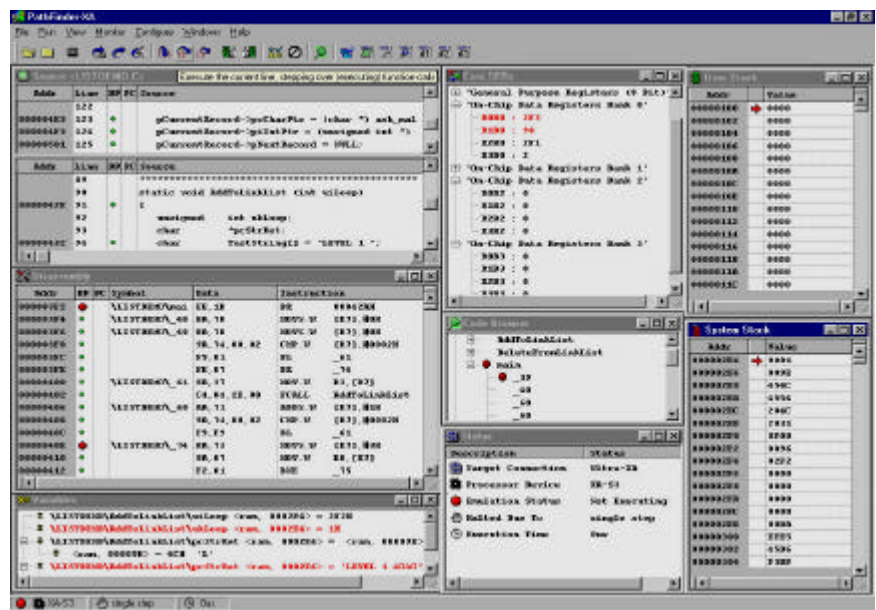
Ashling Ultra-51XA real-time in-circuit emulator for Philips XA and derivatives, supporting single-chip (on-chip ROM, Flash, EPROM) and expanded modes. Up to 30MHz clocks; support for Bus Wait State operation.

Languages Supported

Supports Altium-Tasking, Hi-Tech, Hiware and Raisonance XA compilers.

Host

PC with Windows™9x/Me/NT/2K/XP, standard RS232 Serial Port.



PathFinder provides real-time in-circuit emulation and source-level debugging for the XA family and all derivatives, with mouse, command-line, accelerator-key and button-bar controls.

Emulator Specification

Emulator Memory	256KB Emulator Code Overlay Memory and 256KB Emulator Xdata Overlay memory. Memory expansion options to 16MB. 8 and 16-bit bus widths supported.
On-the-Fly Debugging	Full On-the-Fly, non-intrusive debugging: You can set breakpoints, define a trigger, view trace contents and monitor variables while your program is executing.
Memory Interrogation	Internal RAM and Special Function registers. User Stack and System Stack. External data memory and code memory. Emulator and target memory. Symbolic disassembly supported. All additional input-output ports supported, In-Line Assembler with full instruction set and symbols supported, including Philips XA derivatives' SFR symbols and ports. On-the-fly monitoring of variables.
Trace Display	32K-Frames by 96 bits, with variable trace length. Time-stamp on every traced frame. Optional trace expansion to 512K Frames. Display signals in cycle-by-cycle, hex, or source code. Full real-time tracing of address, data, ports, control and external buses. Save/load trace display. Compare trace against reference traces.
Triggering	Six multiple trigger Event recognizers; symbolic, binary, or hex values. Trigger on Boolean combinations of the Event recognizers. Trigger on address and/or data values or range(s). Pre/center/post trace triggers. Pre-scaling to 65535. Save/load trigger definition files. Modify triggers On-the-Fly.
Breakpoints	256K hardware Code breakpoints, 256K hardware Xdata read and 256K hardware Xdata write breakpoints. Each 256K block of breakpoints can be (independently) located on any 256K boundary within the XA's memory-space. Software breakpoints throughout the Code Overlay Memory space. Break on frames after stop trigger. Break on Trace buffer full. Execution timer breakpoint. External signal breakpoint. All breakpoints are non-intrusive, real-time.
Variables	Full expression handling for C and assembly. Variable monitoring, including complex arrays and structures. On-the-fly variable monitoring.
Performance Analyzer	STARS (Software Test, Analysis and Reporting System) high-speed, non-intrusive real-time performance analysis system option with full bank-memory support (STARS-51XA). Symbolic Function Trace, timing analysis and automatic software-verification reports.
Power Supply	Stand-alone in-circuit emulator with standard 115Kbits/s serial connection to PC. Supplied with 100V-230V 50/60Hz Universal power unit.

Ultra-51XA Device Support Range *please specify device-type when ordering*

<u>XA-G3</u>	<u>XA-G4</u>	<u>XA-S3</u>	<u>XA-C3</u>
PXAG30	PXAG49	PXAS30	PXAC37
PXAG33		PXAS33	
PXAG37		PXAS37	

Upgrade Path

All Ultra-51XA systems can be easily field-upgraded to a different XA, 80C51 or 80C51Mx2 processor type. Ashling's continuing technical co-operation with Philips Semiconductors ensures that development support is provided for each new XA, 80C51, 80C51Mx2 and Smart Card derivative introduced by Philips.

See DS220 (SmartXA2) for SmartXA2 Smart Card support.

DS176 V14

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

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