

## ECM-50 EMULATOR

**T**HE ECM-50 REPRESENTS ONE OF ARIUM'S LATEST BEST-OF-BREED HARDWARE-ASSISTED DEBUG SOLUTIONS FOR BIOS, THE INTEL® PLATFORM INNOVATION FRAMEWORK FOR EFI, DEVICE DRIVERS, OS KERNELS, AND EMBEDDED APPLICATIONS.

THE EMULATOR WAS DEVELOPED SPECIFICALLY FOR USE WITH INTEL IA-32 AND IA-64 PROCESSORS, INTEL 32- TO 64-BIT EXTENSIONS, AND AMD 64 PROCESSORS, INCLUDING ATHLON™, OPTERON™, TURION™, AND SEMPRON™ PROCESSORS. THE ECM-50 FEATURES OUTSTANDING RUN CONTROL AND EXECUTION TRACE FUNCTIONALITY FOR SUPERIOR VISIBILITY TO AND MANIPULATION OF YOUR CODE.

### SUPPORTED TOOLCHAINS:

- Wind River® Tornado® II C/C++
- Microsoft® Visual C/C++® V6/V7
- Borland® C
- CAD-UL C
- GNU C/C++
- Metaware® C

### BREAKPOINT TYPES:

- Up to 32 debug register (depending on processor)
- Unlimited software
- SMM entry/exit
- Reset
- BNC external trigger in/out

### SOURCE CODE/SYMBOLIC DEBUG:

- Boot-loadable OMF-386
- DWARF2
- Intel Textsym
- Codeview
- a.out/Stabs

### DOWNLOAD FORMATS:

- BIN
- OMF-386
- ELF32
- DOS EXE
- INTEL HEX
- PE32/PE32+

### CONNECTION OPTIONS:

- USB 1.1
- 10/100Base-T ethernet

### ADDRESS TRANSLATION OPTIONS:

- Real
- Virtual-86
- BigReal
- Protected
- System Management Mode (SMM)

### REGISTER TYPES:

- 386
- System
- Control
- Debug
- MSRs
- Floating point
- MMX™ technology
- SSE

### OTHER IMPORTANT FEATURES:

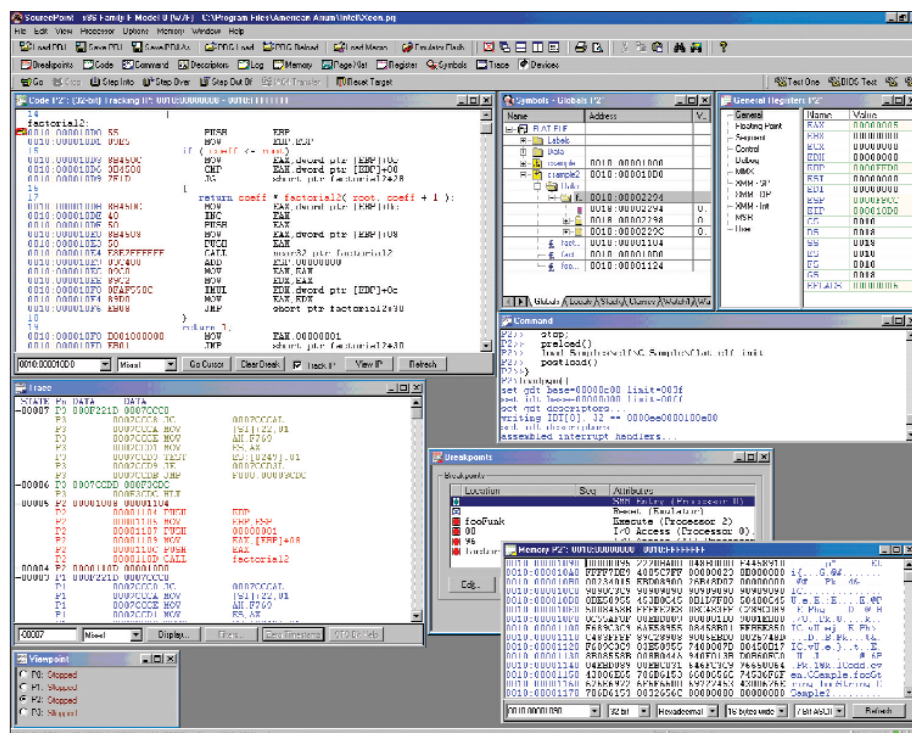
- Execution trace
- Real time operation
- Multi-processor (SMP) support
- Multi-cluster support
- In-line assembly
- Robust scripting language
- Code/data search and replace
- Self-diagnostic test suite
- Designed to accommodate future debug port requirements



### KEY BENEFITS

- **POWERFUL** - Arium emulators are the only debug tools that give you real time debugging solutions directly out of system reset.
- **INNOVATIVE** - Arium focuses on you, the customer when crafting our tools. A quick symbols finder, a single view for displaying devices, current viewpoint tracking - the little things that add up to so much more.
- **FLEXIBLE** - The ECM-50 offers a number of firmware- and software-related customizable options to provide you with the type of debug environment that best meets your needs.
- **INTEGRATED & INTUITIVE** - The ECM-50, with its companion SourcePoint™ interface, provides a highly integrated, intuitive tool designed with your needs in mind.
- **FULLY SUPPORTED** - Our highly trained staff of design engineers provide telephone, e-mail, and web-based interactive support. In addition, installation guides, technical papers, and software downloads are available via our Web site.

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## SOURCEPOINT INTERFACE

Included with the ECM-50 is American Arium's SourcePoint debugging software. The debugger interface is part of the company's core technology, developed specifically for high-end 32/64-bit processor design and debug. The application runs on Microsoft® Windows® 2000 and XP.

SourcePoint is used with all American Arium emulators. Because we designed and developed the software specifically for the equipment, the tight integration of the hardware and software gives you one of the most robust debug interfaces on the market. Easy to install and use, SourcePoint has a number of features that cannot be found in any other debugger. Multi-processor control, complex breakpoints, source-level visibility, and other key features all add up to make SourcePoint one of the most powerful tools in the industry today.

## PC HOST REQUIREMENTS

- PC host (Intel Pentium/AMD processor or higher)
- Microsoft Windows NT 4.0 (SP4 or later), 2000, XP
- SVGA monitor (1024 x 768 or higher)
- 60 MB hard disk space
- 128 MB RAM
- 10/100Base-T ethernet or USB 1.1 connection port

## SPECIFICATIONS

### Environmental

32-90° F (0-31° C)  
Maximum humidity - 85%

### Communications

10/100Base-T ethernet connection  
USB 1.1 connection

### BNC Trig In

50 Ohm, 155 ns maximum delay

### BNC Trig Out

50 Ohm, 125 ns maximum delay

### Dimensions (in/cm)

(H) 1.98/5.08  
(W) 5.45/13.98  
(L) 7.56/19.38

## ORDERING INFORMATION

### STANDARD

Includes base unit, appropriate cables, power supply, SourcePoint software, documentation, and one year service agreement.

### OPTIONS

#### TAP adapters:

- TAP-WT** Intel Pentium 4 processor TAP adapter (423-pin package)
- TAP-PSC** Intel Pentium 4 processor TAP adapter (478-pin package)
- TAP-S1** Intel Pentium II/III processor TAP adapter (Slot 1, 66/100/133 MHz FSB)
- TAP-S2** Intel Pentium II/III Xeon processor TAP adapter (Slot 2, 66/100/133 MHz FSB)
- TAP-TU** Intel Pentium III (including the 1.13A-120+ GHz on 0.13 micron process), Celeron processor TAP adapter (370-pin PGA)
- TAP-MT** Intel Mobile Pentium III Processor-M TAP adapter (uFCPGA)
- TAP-BN** Intel Pentium M processor TAP adapter (478-pin package)

#### Personality modules:

- PBD-AJ** Personality board for AMD Athlon 64 and Opteron processors
- PBD-PC** Personality board for Intel Pentium II/III (Slot 1, 66/100/133 MHz FSB), Pentium III - 1/13A-120+ GHz on 0.13 micron process (370-pin PGA), Pentium III Xeon (Slot 2, 66/100/133 MHz), Mobile Pentium III (uPGA2), Mobile Pentium III Processor-M (uFCPGA), Celeron (uPGA2 or 370-pin PGA) processors (lower processor voltages, different clocking)
- PBDS-700M** Personality board for Intel Pentium M, Celeron M, and certain mobile processors
- PBDS-700** Personality board for Intel Xeon, Pentium 4, and Celeron D processors
- PBDS-XDP** Personality board for certain future processors

#### Other:

- STAR-1** Extended service agreement

