SourcePoint™ for Intel® Processors with UEFI Support

ASSET InterTech's SourcePoint™ for Intel® is designed for use with all Arium run-control probes and Arium trace port analyzers. SourcePoint for Intel offers exceptional visibility to and manipulation of code via a series of intuitive screens and dialog boxes with numerous viewing options, not only debug visibility but tightly integrated trace for run-time code analysis. SourcePoint for Intel deliver the only real-time debug interface that works straight out of reset and was the first to offer Intel® Unified Extensible Firmware Interface (UEFI) debug. SourcePoint for Intel debug solutions support nearly all Intel laptop, desktop (Core), server (Xeon) and Atom SoC processors and are designed to minimize the time and stress associated with the debug phase of project development, helping companies get to market faster and with greater ease.

Support for Intel Framework for UEFI

SourcePoint for Intel offers native debug support for Framework for UEFI platforms. Users can set breakpoints, single step, view variables, see the call stack, and access all of the feature-rich functionality SourcePoint normally provides. This includes source-level debugging during all phases of EFI.

Features and Benefits

Powerfully:
- Supports Intel® Core®, Xeon® and Atom®
- C or C++ source, symbol, and mixed views
- Supports .elf, .hex, .sym, and .bin file formats
- Supports MS .exe, .dll, .efi (PE Format)
- Linux OS-Aware with kernel and insmod debug
- Powerful C-like and Python command languages
- Multi-processor and multi-cluster support
- Execution trace capabilities (where available). Including IPT (Intel Processor Trace)
- Reliable run control from reset on
- Full support fo UEFI debug at the source level i PEIM, Framework and EFI
- Windows or Linux Hosted
- Very fast symbol finder and browsers
- Stack frame display
- Full page translation support
- PCU and PCIe GUIs
- Independent processor views

Versatile:
- Debugs low-level code, device drivers, diagnostics, RTOS, Macros for UEFI, and board support packages
- Supports most popular toolchains

Code Window
The Code window is designed to promote quick navigation of the code. Enables setting of both hardware and software breakpoints. As you browse you can instantly find where in the code the instruction pointer is with a click of a button. UEFI navigation is also provide with macro support.

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Trace Window
Cycle accurate time stamps... **powerful.**
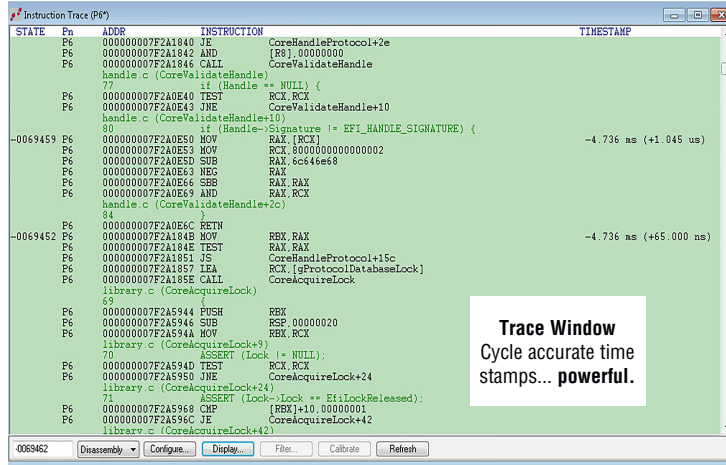
Several intuitive windows can be opened to view the state of the processor(s) and make modifications to values, including Symbols windows, Registers windows, Memory windows, PCI Devices windows, and user-defined Watch windows. In multi-core environments, developers can view each processor state. The list of capabilities goes on and on.

ASSET's debug solutions are designed with time in mind. Whether downloading files or images, stepping through code, or coming back after hitting stop, the event executes with incredible speed.

Real-Time Trace
Being able to browse/debug code is one thing but viewing code execution is critical to view the whole picture.

Trace Search
A picture is worth a thousand word and this is self evident when examining program flow. Often a high-level view of code execution provides more insight that an examining the bark on the tree. With time stamp information execution speed analysis jumps off the page.

Managing Run-Control
The key to a successful run-control debug strategy lies in the ability to set accurate breakpoints and step easily through code. SourcePoint for Intel uses the usual stepping commands along with go and halt to step through source or assembly-level code. SourcePoint's C-like command language includes not only industry-standard run-control commands, but lets the developer execute loops, use data and array variables, access file I/O and more. Unlike some command languages, SourcePoint is intuitive; developers do not need to know a two-letter code for each command. SourcePoint for Intel offers processor and soft breaks via simple GUIs. Breaks can also be set from the Code window or a command line.

Shortcuts Within Shortcuts
SourcePoint for Intel offers a number of user-defined options. This includes a window that allows definition of memory-mapped I/O devices and related registers and areas of memory in one view. Users can keep track of multiple devices without having to keep multiple views on their screen.
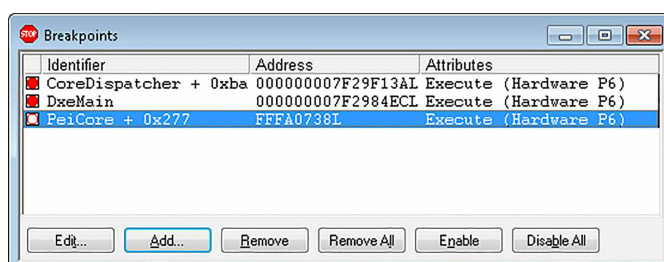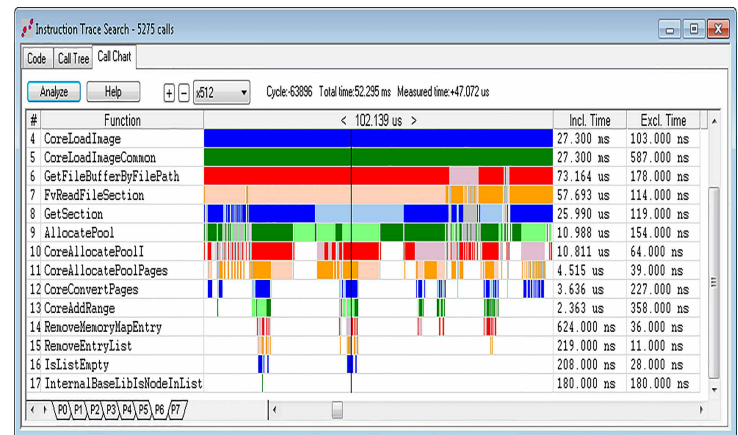
Arium Probe & Trace Port Analyser
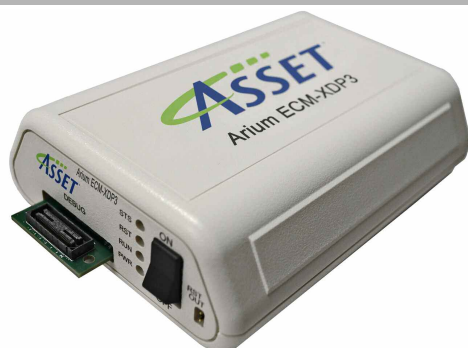
ECM-XDP3:
- Full run-control via Intel XDP connector
- USB 1.1/2.0
- 10/100/Ge Base-T Ethernet
- Detects target power state changes
- Does NOT support AET
- Self-diagnostic test suite

Breakpoint types:
- Up to 32 debug registers
  (depending on processor)
- Unlimited software
- SMM entry/exit
- Reset
- External trigger in/out pins
- Interrupt acknowledge
- Special transition
  - Shutdown
  - Flush
- Three-level complex events
  - Includes break on data values

Download formats:
- BIN
- OMF-386
- ELF32
- DOS EXE
- Intel Hex
- PE32/PE32+

LX-1000 for Intel:
- Records AET XDP-OBS pin trace data
- 2G byte trace data
- USB 1.1/2.0
- 10/100/Ge Base-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 Features:
- Multi-processor (SMP) support
- In-line assembly
- Robust scripting language
- Code/data search and replace

Source code/symbolic debug:
- Boot-loadable OMF-386
- DWARF2
- Intel Textsym
- Codeview
- a.out/Stabs

For more information, contact your sales representative or ASSET InterTech tools distributor or visit our ASSET Web site at www.asset-intertech.com.