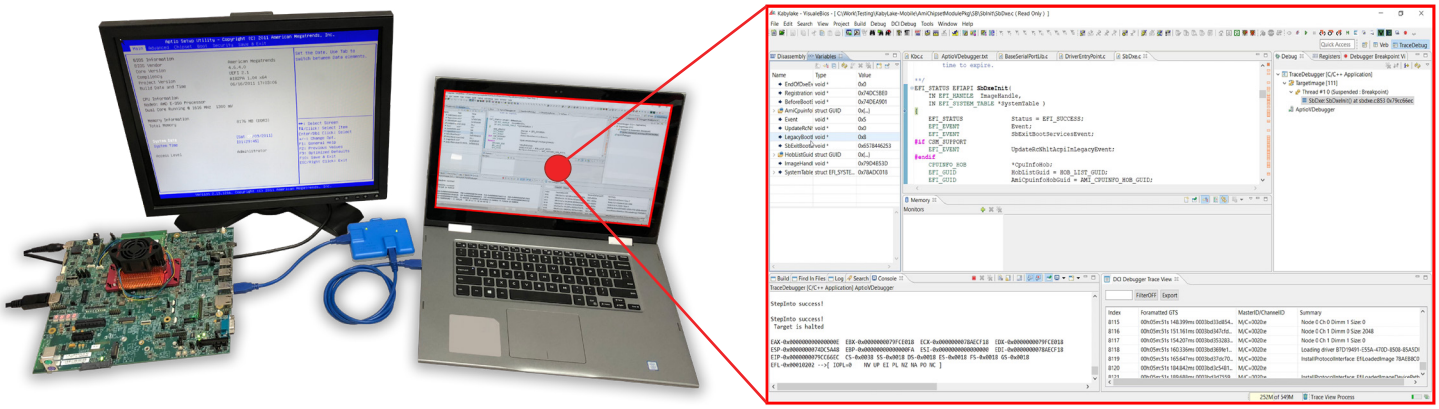
AMI Hardware Debugger Solution

Data Sheet

A very powerful debugging solution for Intel® platforms

AMI HW Debugger™



HARDWARE DEBUGGER FOR INTEL PLATFORMS

For OEM/ODMs working on Hardware capable Intel® platforms, AMI's Hardware Debugger solution is a cost-effective hardware debugger that provides UEFI firmware-specific debugging features that other hardware debuggers do not include. AMI Hardware Debugger uses Intel's Direct Connect Interface (DCI) and connects with Intel's Silicon View Technology (SVT) Closed Chassis Adapter (CCA)/ USB 3.0 Debug cable to provide in-depth, source-level debugging capabilities over USB.

Note: To use Intel's CCA, the OEM/ODMs' chipset must support Intel Hardware technology. Consult Intel documentation for information on chipsets with native Hardware support.

ASD - AT-SCALE DEBUG

AMI also offers solution for At-scale remote debugging solution via MegaRAC BMC and AMI Hardware Debugger. AMI Hardware Debugger communicates over network with BMC to perform Host debugging operation.

INTEGRATION WITH VEB

AMI provides all the necessary software tools for debugging through AMI's Visual eBIOS (VeB) development environment. Before OEM/ODMs can begin the debugging process, OEM/ODMs must download the latest Aptio® V tools from AMI's Customer Portal and Debugger module from AMI's source control. Having the current version of tools ensures the best debugging experience with the newest features. The debugger eModule comes with all plugins required to enable the debugger experience within the VeB development environment.

CONNECTION REQUIREMENTS

To use the AMI Hardware Debugger, OEM/ODMs should ensure that they have the Intel Hardware properly wired to a USB 3.0 port on their platform. OEM/ODMs are encouraged to consult with their Intel documentation for additional information.

Note: Requires the DCI chipset feature enabled (Suitable for development pre-production platforms)

FEATURES:

- JTAG-like debugging capabilities
- Comprehensive debugging of Intel® platforms
- Drop-in, source-level debug support
- TraceHub USB 3.0 connection between target board and Closed Chassis Adapter
- At-Scale Debugging support
- Integrated with AMI's Visual eBIOS (VeB) development environment
- Debugging all firmware execution phases
  - SEC, PEI, DXE, CSM and SMM
- Add, remove and view individual breakpoints
  - Setup hardware & software breakpoints
- Execution control: reset, start, stop, step, step-in, step-out, step-over
- C-source level window
- Callstack window
- Debug/Trace message and checkpoints
- Local/Global Variable Window
- CPU registers
- Memory window
- Status window
- Disassembly window
- Traceview

REMOTE DEBUGGING

Remote debugging is possible by connecting through RDP to a remote host system and target system.

- CCA/USB 3.0 debug cable
- Serial Cable/AMIDebugRx for console redirection
- Power control
- SPI Programmer

Using Remote RDP/VNC client any remote user can connect to remote host system and perform debugging operations remotely.

ADDITIONAL AMI VALUE-ADDS

With AMI's Hardware Debugger solution, OEM/ODMs have access to additional UEFI firmware specific debugging capabilities, which include:

- Support for "__debugBreak()" in code
- View trace messages simultaneously while debugging
- View loaded image notifications
- Auto load sources using target module for faster loading of sources

With these value-adds and extended debugging features, AMI Hardware Debugger is a powerful hardware debugger solution that provides superior debugging capabilities.

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