Aptio® V

The Next Generation UEFI BIOS
Moving Beyond BIOS

Aptio V is the "next generation of UEFI BIOS", featuring support for the latest UEFI specifications, such as Secure Boot for enhanced platform security and EDK II support, together with all of the previous experience, value-adds and improvements of Aptio® 4 and AMIBIOS®. Support for the latest UEFI specifications also means that Aptio V is fully ready to support Microsoft® Windows® 10 and the key security and pre-boot optimizations featured in the next-generation version of the operating system - making it the most powerful development solution available in the market today.

Aptio UEFI Firmware from AMI is built around a modular, flexible core of eModules that provide a wealth of customization and value add capabilities for today's tablet, touch-enabled and embedded devices. Together with pre-boot applications and developments and debug tools, AMI offers a complete range of products needed to handle the complete development cycle and taking you from prototype to product.

Aptio V is the pinnacle of a strong legacy of innovation, both inside the BIOS itself and from related areas within AMI. AMI brings its legacy of over 35 years as a leading BIOS vendor, installed in a large number of desktop, notebook, Ultrabook™, server and embedded systems worldwide, to the creation of this BIOS. AMI is the only BIOS vendor to offer a complete array of end-to-end products to support the entire computing infrastructure.

Features:

- Full UEFI and EDK II Support
- Full PI and ACPI Support
- Microsoft® Windows® 11 ready
- Highly modular design
- Multi-architecture support - can be used with both x86 and non-x86 systems, as well as in both Windows® and Linux® environments, to open up a wide range of new possibilities

Enhanced Flexibility

Like Aptio 4 before it, Aptio V has a common core and a high degree of modularity. It makes use of eModules to speed up development time and make projects more manageable. Aptio V also introduces several improvements over EDK II and has been designed to make the transition from EDK, EDK II and Aptio 4 as smooth and easy as possible, with little overhead.

The Aptio V user experience keeps everything that users have come to love about Aptio and takes it a step further. Setup retains the same options that existed in Aptio 4, with Text, Graphical/Text, and a feature rich and extensible Graphical setup with touch support. All diagnostic and debug capabilities from Aptio 4 – including AMIDiag® for UEFI, AMI Debug™ Rx and more - carry over seamlessly to Aptio V. To ensure AMI's commitment to an easy transition to Aptio V, AMI has a carefully designed transition plan to help customers ease into Aptio V from Aptio 4 or other BIOS solutions, with a minimum of effort.

Additions to VeB

When used in the Visual eBIOS (VeB) development environment, Aptio V also includes full support for EDK II, new wizards to manage EDK II data and a "Module Explorer" enhanced for EDK II packages. VeB for Aptio V also features user-friendly graphical wizards to help create and modify project settings to further ease development tasks, as well as multiple source control integration, multiple OS support and cross-platform support for x86, x64 and Arm® systems. Aptio can be expanded using a variety of drivers, development tools, support utilities and pre-boot application solutions:

Aptio V Development Applications:

- Visual eBIOS (VeB)
- AMI Debug™ for UEFI
- AMI Debug™ Rx

Features:

- NIST SP 800-147 Secure Flash enabled
- NIST SP 800-155 measured BIOS enabled
- Full touch screen support within BIOS
- AMI Text Setup Environment (TSE), provides advanced UEFI functionality with a familiar BIOS interface

Aptio V Support Utilities

The Aptio V support ecosystem also keeps the great utilities that developers have come to know and love, to speed customization and time-to-market (TTM):

- AMI Flash Utility (AFU) Suite

- Change Logo Utility - OEM splash logo management

- AMI BIOS Configuration Program (AMIBCP) – Change setup parameters and strings in Aptio ROM images

- MMTool - Manage modules, drivers and Option ROMs in Aptio ROM images

- Desktop Management Interface Edit (DMIEdit) – SMBIOS data management

- AMISLP - Enables the insertion of Microsoft System Locked Pre-Installation (SLP) key files into the BIOS image

- AMI Setup Control Environment (AMISCE) – Command line tool for simple update of NVRAM variables

- AMI Utility Configuration Program (AMIUCP) - Tool for customization and pre-configuration of Aptio Flash Utility (AFU)

- AMI Cloud Enabled Firmware Signing (CLEFS) – Enables post-build signing, expanded on-site HSM support, and offers a Thales cloud enabled HSM solution for ROM signing.

- AMI Debugger - Built in software debugger specifically designed for firmware debugging

Features:

- ESA provides a completely graphical and customizable setup designed for touch

- Graphical ROM layout user interface

- Efficient PCI Bus and Super I/O wizards that simplify complex changes
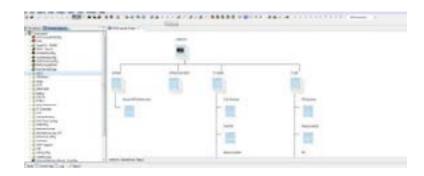
Fully Secured Firmware

Aptio V has native support for UEFI Secure Boot, TPM 1.2/2.0, a NIST 800-147 compliant secure firmware update, and measured BIOS support compliant with NIST 800-155. Aptio V also enables support for silicon vendor security features such as the Intel® BIOS Guard, Intel® Boot Guard, Intel® TXT, Intel® fTPM, AMD™ PSP and Arm® TrustZone®.

Features:

- Add-on debugger integrates seamlessly into development environment

- Complete diagnostic suite can be built in

For more information please visit: ami.com/aptio

Aptio® V Data Sheet