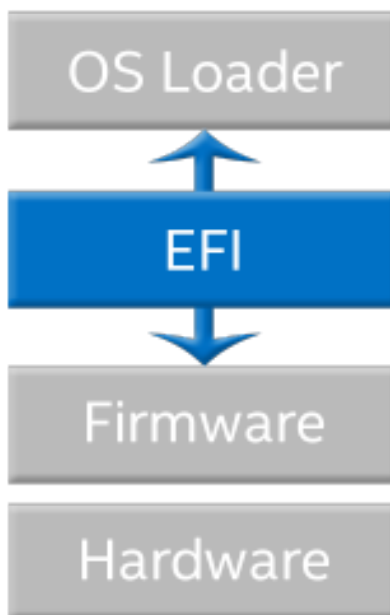Extensible Firmware Interface (EFI) and Unified EFI (UEFI)

DEFINING THE INTERFACE BETWEEN THE OPERATING SYSTEM AND PLATFORM FIRMWARE

Background

The Unified EFI (UEFI) Specification (previously known as the EFI Specification) defines an interface between an operating system and platform firmware.

The interface consists of data tables that contain platform-related information, boot service calls, and runtime service calls that are available to the operating system and its loader. These provide a standard environment for booting an operating system and running pre-boot applications.

The UEFI Specification was primarily intended for the next generation of IA architecture–based computers, and is an outgrowth of the "Intel® Boot Initiative" (IBI) program that began in 1998.

Intel's original version of this specification was publicly named EFI, ending with the EFI 1.10 version.

In 2005, The Unified EFI Forum was formed as an industry-wide organization to promote adoption and continue the development of the EFI Specification. Using the EFI 1.10 Specification as the starting point, this industry group released the following specifications, renamed Unified EFI.

The current version of the UEFI Specification can be found at the UEFI web site (http://www.uefi.org/).

Intel® Platform Innovation Framework for EFI and UEFI specifications
(/content/www/us/en/architecture-and-technology/unified-extensible-firmware-interface/efi-
specifications-general-technology.html)

Helpful Resources

Independent Hardware Vendor UEFI Enabling Center
Find the latest tools resources and training to get started developing drivers and applications
(/content/www/us/en/architecture-and-technology/unified-extensible-firmware-interface/uefi-
driver-and-application-tool-resources.html).

UEFI and framework history
For information on the history of UEFI and the framework, please contact us
(mailto:efi.specification.feedback@intel.com).

UEFI industry group
The Unified EFI Forum (http://www.uefi.org/home/)

Latest UEFI and foundation code for EFI implementations
TianoCore.org (http://www.tianocore.org/)

Intel® UEFI Community Resource Center
Your gateway for developing UEFI firmware, drivers, and applications for use on Intel® architecture
platforms (https://firmware.intel.com/)

Linux* ELILO* Sources

Source for new ELILO requires gcc3.x and binutils 2.11.90 or higher binaries already compiled
Linux* kernel with EFI support for IA-32 is available at www.kernel.org (http://www.kernel.org/) in
any of the kernels starting from 2.6.1 or higher.

EGRUB—Available upon request, send e-mail to EFI general feedback
(mailto:Efi.general.feedback@intel.com%20)

Novell*—UEFI SLES/SLED 11 partitioning recommendations for installing X64
(http://www.novell.com/support/documentLink.do?externalID=7003263)

Fedora*—EFI Fedora 9 wiki (http://fedoraproject.org/wiki/Features/EFI)

Training

Contact your UEFI Firmware provider for local training in your geography. To set up your own
training, contact us (mailto:efi.specification.feedback@intel.com) for material.

Download presentations from recent Intel Developer Forums
(/content/www/us/en/library/viewmore.results.html?prTag=rauthorship:inteldeveloperforum)

Tools and Utilities   Microsoft EFI

› Intel® C Compiler for EFI Byte Code
(http://software.intel.com/en-us/intel-
compilers/)

› Application toolkit project
(http://www.tianocore.org/)

› EFI Development Kit
(http://www.tianocore.org/)

› EFI Development Kit II
(http://www.tianocore.org/)

› Intel® UEFI Development Kit Debugger Tool
(Intel® UDK Debugger Tool)
(https://firmware.intel.com/develop/intel-
uefi-tools-and-utilities/intel-uefi-
development-kit-debugger-tool#overlay-
context=develop)

› UEFI Disk Utilities*
(https://firmware.intel.com/content/uefidiskutilitiesagreement)

› UEFI tools, resources, drivers, and training
(http://www.intel.com/technology/efi/uefi-
ihv.htm#UEFI_DRIVER_GUIDES)

› Microsoft-related UEFI/EFI link
(http://www.microsoft.com/whdc/system/platform/firmware/d

› UEFI support and requirements
(http://www.microsoft.com/whdc/system/platform/firmware/u

Firmware Providers

› American Megatrends Inc.
(http://www.ami.com/)

› Insyde Software Corp.
(http://www.insydesw.com/)

› Nanjing ByoSoft Co., Ltd.
(http://www.byosoft.com.cn/)

› Phoenix Technologies, Ltd.
(http://www.phoenix.com/)

Video Tutorials for Intel® Firmware Engine
(Intel® FE)

› How to update BIOS/Firmware using a
Dediprog*
(/content/www/us/en/architecture-and-
technology/unified-extensible-firmware-
interface/bios-firmware-update-video-
tutorial.html)

› How to update Firmware using Capsule
(/content/www/us/en/architecture-and-

Third-party EFI Hardware Debuggers

› Arium
(http://www.arium.com/products/frameworkefi.html)

technology/unified-extensible-firmware-
interface/capsule-update-video-tutorial.html)

› How to flash BIOS/Firmware for the first time
(/content/www/us/en/architecture-and-
technology/unified-extensible-firmware-
interface/update-first-flash-image-video-
tutorial.html)

› How to add BIOS/Firmware setup
(/content/www/us/en/architecture-and-
technology/unified-extensible-firmware-
interface/add-bios-setup-video-tutorial.html)

› How to change out the flash part
(/content/www/us/en/architecture-and-
technology/unified-extensible-firmware-
interface/change-firmware-flash-part-video-
tutorial.html)

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📷 (http://www.instagram.com/intel)

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