

Phoenix SecureCore Technology™

Embedded Solutions



Phoenix SecureCore Technology™ (Phoenix SCT) is the next-generation UEFI BIOS firmware for the embedded market with advanced features to enhance system security, connectivity and manageability. Designed with over 30 years of domain expertise in firmware architecture and engineering, Phoenix SCT is the first UEFI BIOS with native EDK II support that is also compatible with EDK 1117.

Intelligent Computing for Connected Devices

Embedded system developers today are striving to build innovative products that go beyond rugged and reliable industrial design. In the connected world, embedded systems are equipped with built-in intelligence to process large amounts of data and intrinsic security to prevent malicious attacks, or accidental damage. The importance of security, connectivity and manageability need to be addressed across different levels of embedded system development, including board, system, OS, application, and BIOS.

Phoenix SCT is an intelligent firmware solution for trusted embedded networked devices that goes far beyond the traditional standalone BIOS, providing vital features necessary to manage and secure today's connected devices. Supporting a wide array of embedded applications, Phoenix SCT comes with a scalable architecture specifically designed to make porting and customization easy.

Easy Customization



Architected with a clean code tree and modularized design, Phoenix SCT supports multi-platform, multi-OS enablement with easy customization and maintenance. The universal build system of Phoenix SCT allows setup menu customization with XML based scripts to update the VFR and driver code simultaneously.

Performance and I/O Flexibility



Supporting legacy and multiple simultaneous SIOs, Phoenix SCT provides comprehensive I/O and boot device support. Compliant with the latest network manageability features like IPMI, DASH, Intel vPro, and Serial Over Lan, Phoenix SCT enhances connectivity and control of networked devices while providing UEFI boot time optimization and power efficiency improvement services for mission critical applications.

Touch Optimization



Optimized for touchscreen applications, Phoenix SCT comes with a Window 8-style GUI BIOS Setup that is intuitive to use and aesthetically consistent with Windows 8. Phoenix SCT also supports BitLocker unlock via virtual keyboard and programmable touch hot zones that function as hotkeys.

Applications

Automotive
Communications
Energy
Manufacturing
Medical
Retail

Foundation

Native EDK II Support with EDK 1117 Backward Compatibility

- Supports Built Systems based on EDK 1117 Patch V7, V8, and UDK 2010 SR1

Full Compliance with the Latest Industry Standards

- UEFI 2.3.1, PI 1.2, TPM 2.0, ACPI 5.0, TCG 1.2, NIST-SP800-147 and SMBIOS 2.7

Feature Highlights

Clean Code Tree Layered by Modularized Structure

- Modular Source Tree Structure - SDK
- Quick Reference Code Drop-In
- Extensive Silicon Support Library

Feature-rich and Touch Optimized Design

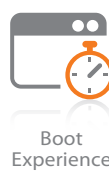
- Connected Standby Ready
- GUI Setup and Touch Hot Zone
- SMI free Runtime Service Support
- Safe Recovery BIOS²
- VFR Style Boot Page
- Non-volatile Capsule

Industry Leading UEFI Security Features

- Secure Boot: Signature Auto-Enroll
- Secure Boot: Windows 8 Key Management
- Secure BIOS: Lockdown SPI
- Security Variable Protection

Development Tools

- Phoenix CoreArchitect™
- Tool Development Kit
- Tools Subscription Program
- Phoenix Debug Device Reference Design



▶ Intelligent System Features

- ▶ IRQ Based Legacy USB Support
- ▶ Crisis Recovery from xHCI
- ▶ UEFI Boot from Legacy SCSI OPROM
- ▶ Boot from SD/eMMC
- ▶ Automatically Add Plug-in Card Devices to Boot Order
- ▶ Create Legacy Code Like CMOS Map during Build Process
- ▶ ATX Power Mimicking AT Power Supply
- ▶ Multiple Simultaneous SIOs
- ▶ Headless Support
- ▶ BIOS Flash Tool Support for Multiple OSes

▶ Boot Manager

- ▶ UEFI/Legacy Boot Option
- ▶ VFR Style Boot
- ▶ Boot Device Auto-Detection and Add into Boot Order
- ▶ Multiple Boot Device Support: HDD, CD-ROM, USB, LAN, SATA, ATA RAID, SD, eMMC

▶ Virtualization

- ▶ Intel VT-d, VT-x, PCIe SR-IOV

▶ General Features

- ▶ Built-in UEFI Shell and UEFI Protocols
- ▶ SMBIOS 2.6/2.7 Support
- ▶ Event Logging
- ▶ Multi-Version SMBIOS
- ▶ SLP 2.0/2.1 and OA3.0 Support
- ▶ Compatibility Support Module (CSM) Support
- ▶ Up-to-date I/O Support
- ▶ Legacy I/O Support: Floppy, LPT, Serial Port, PS/2
- ▶ Multi-Language Support
- ▶ Console Redirection
- ▶ Debug driver for PEI/DXE/SMM
- ▶ Crisis Recovery
- ▶ Touchscreen Support

▶ Security

- ▶ TPM 2.0
- ▶ TCG 1.2
- ▶ Microsoft Windows 8 Secure Boot
- ▶ Microsoft BitLocker
- ▶ Microsoft Windows 8 eDrive
- ▶ Multilevel BIOS Password
- ▶ Intel Identity Protection Technology (IPT), Intel Anti-Theft Technology (ATP), Trusted Execution Technology (TXT), Execute Disable (XD), AES

▶ Platform Management

- ▶ IPMI 2.0, DASH, Serial Over LAN, ASF, ECC Error Handler, BIOS Capsule Update, Intel AMT/vPro

▶ USB Support

- ▶ USB 1.1/2.0/3.0
- ▶ UHCI/OHCI/EHCI/XHCI Mode
- ▶ USB Device Hot Plugging
- ▶ IRQ-Based Legacy USB Devices
- ▶ SMI-Based Legacy USB Devices

▶ ACPI Support

- ▶ ACPI 3.0/4.0/5.0 Compliant
- ▶ Power States: S1/S3/S4/S5
- ▶ HPET
- ▶ Simple Boot Flag (SBF)

▶ BIOS Setup Support

- ▶ Text Mode Setup
- ▶ GUI Setup
- ▶ OEM Logo/Setting Customization

Why

ELTAN

**Professional Design support for your system solutions
Experienced European Development team**

- ✔ Superior UEFI BIOS engineering
- ✔ Direct engineering contacts for fast support and ensure you go to market
- ✔ Hundreds of embedded systems projects completed
- ✔ Hardware and Embedded Controller Design
- ✔ Device Driver and Operating System Experts
- ✔ Quality, Reliability, Extended lifetime support
- ✔ Co-operating with Intel, AMD and other Silicon Vendors



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