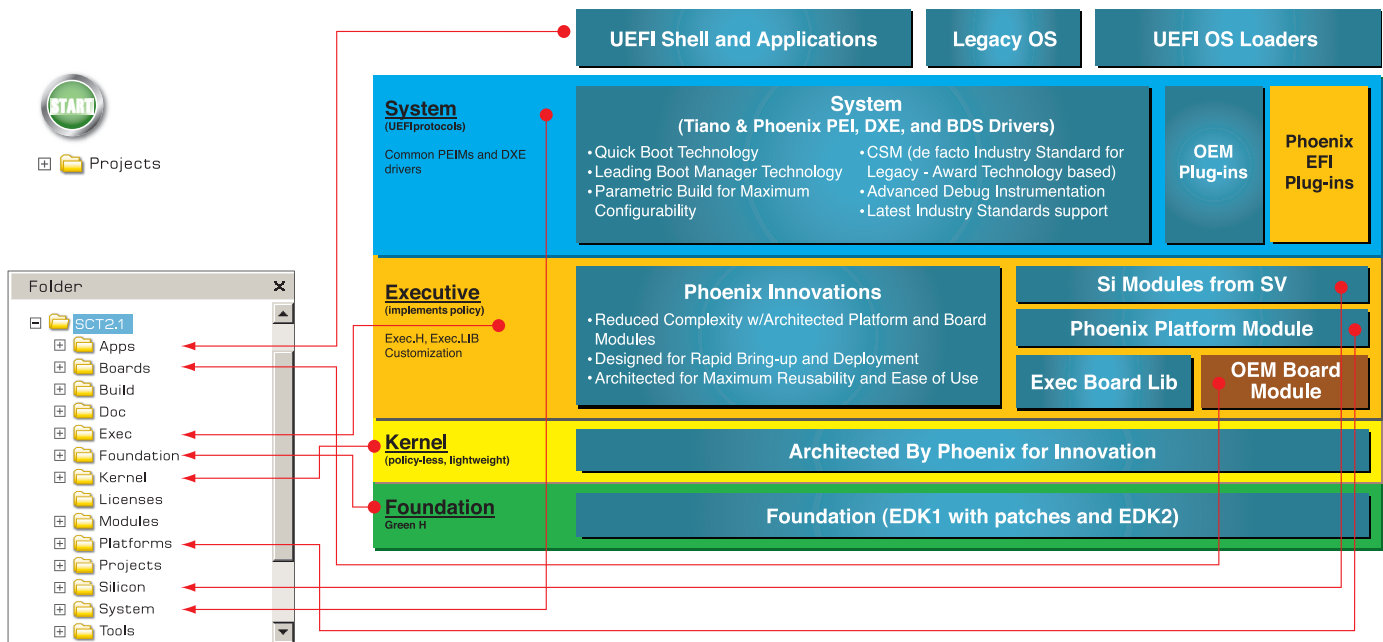


# SecureCore Tiano™

Phoenix Technologies Ltd.® introduces SecureCore Tiano™ (SCT), the next-generation BIOS firmware based on UEFI specifications and the Intel® Platform Innovation Framework for EFI. SecureCore Tiano is the most technologically advanced implementation of Tiano, offering a high-performance, layered architecture to achieve shorter boot times, greater reliability, improved bring-up and easy customization.

## SCT Architecture

SCT is organized as a multi-layered operating environment, with each layer exposing an interface to the higher layers and drawing on services of layers beneath.



This layered architecture provides cleaner structures and interfaces. The value of 1-to-1 mapping of the SDK architecture contributes to modularization and results in easy customization and the reduction of human errors.

Each of the SCT layers is specifically included by a project definition, and each is versioned on its own. Thus, it is possible for one project to refer to an earlier version of the Foundation if the Silicon modules for that project need the earlier version, while other projects can refer to later versions of the Foundation.

An additional reason that SCT layers are versioned is that it is possible for new versions to be created while supporting prior versions, and customers can decide which versions to use in their projects.

Layered architectures work well in systems where the lower layers (upon which the layers above them depend for resources or services) are slower to evolve than those on the top. If this is not the case, then upper layers can be disturbed by rapid changes at the lower layers, causing unforeseen instabilities. In SCT, the lower layers are architecturally slower moving than the upper layers, providing stability at the bottom of the stack and nimble competitiveness at the top of the stack.

## Key Features

- ✓ Based on EDK-1117
- ✓ Build Configuration System
- ✓ Modular source tree structure - SDK
- ✓ Module versioning
- ✓ Added Board and Project modules
- ✓ Extensive Silicon support library
- ✓ OEM Identity Library (OIL)
- ✓ Kernel and Executive architectural layers
- ✓ Integrated Development Environment (PCA)
- ✓ Enhanced EDK-I and added new build tools
- ✓ Tools Subscription Program

## Advantages



### Easy Power-On

#### Power-on in less than 48 hours!

- ✓ Array of SIOs, Flash, etc.
- ✓ Advanced development and debugging tools
- ✓ Successfully brought up in over 100 projects



### Easy Customization

#### Customize in 3 – 4 Weeks!

- ✓ Customization reduced from 3 months to 3-4 weeks to optimize development
- ✓ Create customer hooks
  - POST hooks
  - Easy S3 hooks
- ✓ Standardized SMBIOS interface
- ✓ Common EC interface



### Fast-Boot Experience

#### The Best Fast-Boot Experience BIOS!

- ✓ Breaks speed barriers on Huron River
- ✓ Great optimizations
- ✓ Ultra-Parallel device initialization



### Highest Reliability

#### 4X Reliability Testing!

- ✓ Best in industrial strength and quality
  - 4 times the Long Run Testing when compared to other BIOS vendors
  - Investments in storage, LAN, video, USB, etc.
  - Over 50 PCI and PCIe cards tested
  - Complete QA test plan



### Platform for Innovation

#### Beyond the Core!

- ✓ BIOS plug-ins provide value-added differentiation, functionality, and services beyond the core BIOS functionality
- ✓ **In-ROM Diagnostics** - Diagnose your platform even when Windows® cannot boot
- ✓ **SecureGuard™** - Injects software applications/services from the BIOS into the OS to make applications persistent

## Total Solution

#### Plug-Ins

- ✓ Premium features

#### Professional Services

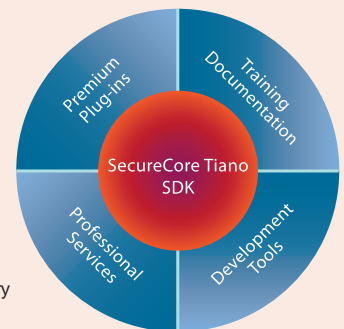
- ✓ FAE
- ✓ Program Management
- ✓ Customer Engineering

#### Training and Documentation

- ✓ UEFI 101, SCT Basic, and Advanced Classes
- ✓ On-site and Web-based delivery
- ✓ SCT Documentation Set

#### Complete Tools

- ✓ Phoenix PCA
- ✓ BIOS Editor
- ✓ Flash Utilities
- ✓ Phoenix Debugger



## Available Documentation

- ✓ Build Options Guide
- ✓ Technical Reference Manual
- ✓ User Guide
- ✓ Quick Start Guide
- ✓ User Guides for Tools
- ✓ PCA4 for SCT – User Guide and Online Help system
- ✓ BIOS Editor – User Guide and Online Help system

## Key Benefits

### Variable Enhancements

- In EFI, all variables are stored in flash. To improve system reliability, SCT provides a new extensible interface that allows you to store variables to a second media (like CMOS).

### Flash Proof

- Provides a secure sub-region inside the flash part to preserve important data (such as password, UUID, etc.) that won't be overwritten by a BIOS flash update.

### UEFI Boot from Legacy RAID OPROM

- SCT provides an interface that allows booting to a UEFI OS when the HDD is connected to RAID with legacy OPROM.

### 2.2 TB HDD Support

- SCT supports the GUID Partition Table (GPT). Computers with Phoenix SCT can support HDD sizes larger than 2.2 TB.

### Advanced Legacy Boot

- Allows drop-in CSM as a boot option and supports booting from a non-primary partition.

### Touch Panel

- Offers touch screen support for Panel PC, Digital Signage, POS, and ATM/KIOSK. Ease of use on POST setup with a virtual keyboard. No more hassling with a standard keyboard and mouse!

### CSM, Compatibility Support Module

- Phoenix's most accredited Award CSM is now available on a UEFI BIOS. A fully configurable CSM module carries unique features to new platforms. CSM source code is also accessible for easy customization.

### Capsule Update

- Modularized and protected update information is provided by a Capsule Update to avoid unexpected OS behavior changes or incidental interruption. Capsule Update also supports Crisis Recovery.



Innovation at the CORE™

**Americas**  
**Phoenix Technologies Ltd.**  
915 Murphy Ranch Road  
Milpitas, CA 95035  
Toll Free: +1-800-446-9202  
Fax: +1-408-570-1001  
americas\_sales@phoenix.com

www.phoenix.com

**Taiwan**  
7F., No.88, Rueihu St., Neihu  
District, Taipei City 114,  
Taiwan, R.O.C.  
Tel: +886-2-7745-5600  
Fax: +886-2-7745-5699  
gc\_sales@phoenix.com

**Korea**  
14F Samsung Financial Plaza  
142-43 Samsung2-dong,  
Gangnam-gu 135-876,  
Seoul, Korea  
Tel: +822-3014-4700  
Fax: +822-3461-8676

**Japan**  
**Phoenix Technologies KK**  
Gotanda NN Building, 8th Floor  
2-12-19, Nishi-Gotanda,  
Shinagawa-ku,  
Tokyo 141-0031 Japan  
Tel: +81-3-5435-6700  
Fax: +81-3-5435-6701  
japan\_sales@phoenix.com