Phoenix Technologies Ltd. introduces SecureCore Tiano, 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. The SecureCore Tiano SDK (Software Development Kit) allows third-party ISVs to develop plug-ins and deploy to systems even after they have been manufactured.

SecureCore Tiano’s build environment supports multiple projects and versions of those projects within the same directory structure. SecureCore Tiano, along with our leading-edge tools framework, dramatically reduces customer time to production, lowers costs, and facilitates an environment of innovation for OEMs and ODMs. With SecureCore Tiano, customers have access to the most sophisticated and comprehensive solution for innovation, encompassing the entire development cycle.

Fast-booting UEFI BIOS with high reliability and easy customization

**Key Attributes**

The design philosophy behind SecureCore Tiano was to create an unequivocal firmware platform that accelerates UEFI transition to market.

1. **Fastest UEFI BIOS** - At the start of 2009, our benchmarking identified that the typical industry UEFI POST time was approximately 5 seconds, as defined by the Microsoft® “Velocity” program. We firmly believe that boot time is of paramount importance to users, as they demand access to their information instantly. Quick boot is a standard feature of the SecureCore Tiano BIOS, offering the fastest boot time in the industry.

2. **Best Power-on** - SecureCore Tiano’s robust architecture and advanced debugging tools provide engineers with the best power-on experience. Phoenix’s comprehensive toolkit allows for rapid firmware modification, build, and deployment during the most time-critical period in a project.

3. **Easy Customization** - Transitioning to a UEFI-based firmware platform presents a unique challenge to OEMs as they need to:
   - Rapidly add their customizations
   - Manage the increased complexity at the hardware level
   - Integrate the additional features from the firmware

   SecureCore Tiano and its advanced development tools provide OEMs with the flexibility they demand while also optimizing the overall performance of the platform.

4. **Continuous Innovation** – The SecureCore Tiano firmware platform, SDK, and advanced development tools provide the best ecosystem for continuous innovating at the firmware layer.

5. **Highest Reliability** - SecureCore Tiano offers OEMs the most reliable firmware in the industry. At Phoenix, we defined reliability to mean no unexpected or unwanted behavior, no unexpected crashes, and no boot-speed issues. With quality assurance at 4Xs the industry average, SecureCore Tiano offers the only industrial-strength UEFI BIOS.

6. **Green H and UEFI Compliance** - SecureCore Tiano uses the pristine version of Intel’s Green H (EDK1117), including future variations of the UEFI-based framework. In addition, SecureCore Tiano follows the industry’s UEFI standards, including PI standards.

SecureCore Tiano supports key industry standards and a broad range of third-party peripherals and chipsets, allowing developers to customize their platforms for specialized designs and target markets.
Key Customer Benefits

- **Best End User Experience**
  SecureCore Tiano offers end users with the fastest BIOS in the industry. SecureCore Tiano has demonstrated sub-second POST times when not restricted by OEM hardware choices.

- **Faster Time to Market**
  SecureCore Tiano provides a layered architecture that masks the complexity of UEFI. The amount of code exposed to the line engineers is reduced considerably. SecureCore Tiano has a suite of build options to rapidly tune and deploy the BIOS. These aspects ensure that SecureCore Tiano delivers several factors of reduction in time to market for the customer. With complete control over BIOS operations and significantly reduced complexity, SecureCore Tiano along with Phoenix UEFI tools enhances productivity and considerably reduces BIOS development costs.

- **Maximize Operational Efficiencies**
  SecureCore Tiano improves the efficiency of customer operations by being fully Green H compliant and UEFI compliant. SecureCore Tiano uses the pristine version of the Intel Green H and allows for variations that Intel may supply in the future. SecureCore Tiano also follows the industry's UEFI standards, including PI standards. Intel will evolve Green H over time, and as it does, SecureCore Tiano will always track it. Customers can be assured that they are always working with the right version of Green H when they work with SecureCore Tiano.

- **Innovate Differentiated Products**
  SecureCore Tiano offers a platform for innovation by enabling customers, partners, and the entire ecosystem with new and unique ways to innovate at the firmware layer. The SecureCore Tiano SDK makes it easy for OEM customers, ISVs and IHVs to rapidly develop new prototypes and take firmware innovation to the next level.

Comprehensive UEFI Toolkit

The SecureCore Tiano developer's toolkit offers the complete solution for all aspects of firmware development from rapid power-on up to production and validation. Some of the powerful features of the toolkit include:

- **Phoenix CoreArchitect (PCA)**. A graphical development environment that provides source code management, code editing, building, and debugging to enable engineers to build and test their own code quickly.

- **Phoenix Flash**. A powerful tool that supports real mode flashing, crisis recovery backup, and system BIOS restoration.

- **Phoenix BIOS Editor**. A versatile tool for customizing the BIOS binary.

SecureCore Tiano™ BIOS Architecture - Layered Components and Plug-ins

Executive

- Exec.H, Exec.LIB
- Customization

Foundation

- Green H

System

- Tiano & Phoenix PEI, DXE, and BDS Drivers
- Common PEIMs and DXE drivers

UEFI Shell and Applications

Legacy OS

UEFI OS Loaders

Phoenix EFI Plug-ins

OEM Plug-ins

Si Modules from SV

Phoenix Platform Module

Exec Board Lib

OEM Board Module

SecureCore Tiano

Architected By Phoenix for Innovation

Foundation (EDK1 with patches and EDK2)