

# PORTABLE SYSTEMS GROUP

## Phoenix NoteBIOS 4.0 : OPTi Viper N and NK Chipsets

- ◆ **Phoenix NoteBIOS 4.0**
  - ◆ Object-oriented 32 bit firmware
  - ◆ Advanced security features
  - ◆ Small footprint PCI kernel
  - ◆ Easy to use SETUP with a generic UI engine
- ◆ **Phoenix Power Management**
  - ◆ Phoenix PowerPANEL™ Windows Application
  - ◆ High speed Save To Disk
  - ◆ Plug and Play aware device power management
- ◆ **Plug and Play Support**
  - ◆ Plug and Play Run-Time Services Ver 1.0a
  - ◆ Conflict Detection and Resolution support
  - ◆ Warm and Hot Docking
- ◆ **PhoenixView/LC™**
  - ◆ 32kb memory footprint
  - ◆ High performance
  - ◆ VESA 2.0, DDC support
  - ◆ Supports Cirrus, C&T, WD, Opti and others
- ◆ **Phoenix MultiKey™**
  - ◆ Support for Intel, Hitachi, and Mitsubishi devices
  - ◆ MATRIX utility to modify and download keyboard matrices
  - ◆ Active Thermal Management support tailored per platform
  - ◆ SM Bus support available
- ◆ **PhoenixCard™ Manager Plus v3.1**
  - ◆ PCMCIA v2.10 support for Windows and OS/2
  - ◆ Small footprint solution
  - ◆ Plug and Play support
- ◆ **PhoenixFLASH™**



- ◆ Flash upgrade utility

## Phoenix® NoteBIOS 4.0™ for Pentium™ OPTi Viper™ N and NK Chipset Support

The Phoenix NoteBIOS 4.0 for Pentium firmware solution for the OPTi Viper N and NK chipsets supports the high performance and power saving features of the OPTi 82C556/556M Data Buffer Controller, 82C557/557M System Controller, and OPTi 82C558N Integrated Peripheral Controller for notebooks. Phoenix NoteBIOS 4.0 provides a robust and flexible feature set that allows OEMs to get to market quickly with the latest technologies and provide easy to use portable systems for their markets.

### Full Support for Intel® Pentium Processor

The Phoenix NoteBIOS 4.0 for Pentium solution provides support for the new Intel Pentium Processors. These new processors break new performance barriers while incorporating key power saving capabilities.

Power saving capabilities of the new Intel Pentium processor family includes full SMM support, fractional bus speeds, Stop Clock, and low heat dissipation. Phoenix's long experience in supporting Intel SL Enhanced power management is leveraged in supporting the Pentium processor. Phoenix leverages its unique experience and expertise in supporting PCI technology as well as Intel processor technology in developing and deploying this high performance solution to your platform.

### Complete Plug and Play and PC'95 Support

The NoteBIOS 4.0 for Pentium solution provides complete support for Plug and Play. Tailored specifically for portable systems, Phoenix NoteBIOS 4.0 for Pentium includes Phoenix's small memory footprint Run Time Services v1.0a, POST CDR code, and code for PnP/Power Management coordination ported for your specific platform. Complete support for PnP and PC'95 allows you to quickly qualify your portable system for Windows® 95 certification.

### Phoenix NoteBIOS 4.0 for Pentium for OPTi Viper N/NK - Features

Regardless of your overall system objectives, this base product is easily ported, using the new Phoenix NoteBIOS 4.0 object-oriented architecture, to meet the requirements of your design. Some of the key features are:

- ◆ Intel Pentium Processor support w/ Thermal Management
- ◆ Plug and Play and PCI support
  - ◆ PnP Run Time Services Ver 1.0A
  - ◆ PCI to PCI Bridge support (Needs porting to specific PPB's)
- ◆ Dynamic Memory and Cache Configuration
  - ◆ Write-back/Write-through direct-mapped cache
  - ◆ Level 1 and Level 2 Write-Back Cache Support
  - ◆ Fast page mode and EDO DRAM support
- ◆ Enhanced Drive Support
  - ◆ Local Bus IDE Hard Disk Auto-Detection
  - ◆ Support up to four drives over 528MB
  - ◆ LBA and Fast PIO supported
  - ◆ Mode 4 PIO support
- ◆ PhoenixFLASH utility for flash memory upgrades
- ◆ Phoenix PhDisk HDD partition utility for Save To Disk™

## Full Phoenix NoteBIOS 4.0 Power Management support for the OPTi Viper and Intel Pentium Processors :

Using Phoenix's many years of experience in power management, as well as Phoenix NoteBIOS 4.0's object-oriented power management architecture, complete and robust power management support is easily integrated into the NoteBIOS 4.0 for Pentium OPTi Viper solution for precise power control and extended system battery life.

- ◆ Phoenix PowerPANEL™ - a powerful and simple interface to control the power management behavior of the system



- ◆ System Management Interrupt (SMI) Triggered Power Management
- ◆ Intelligent CPU Stop Clock Support while APM is connected
- ◆ CPU Heat regulation support
- ◆ Advanced Power Management (APM) v1.1 Compliant
  - ◆ Real, 16 Bit, and 32 Bit Interface
- ◆ System and Device Power Management support
  - ◆ System State Machine provides table driven state definitions/transitions
  - ◆ Device Supervisor provides system-wide device power management coordination with APM 1.1 and Plug and Play
  - ◆ PCI device power management including CLKRUN# control
- ◆ Phoenix Smart Battery Manager provides accurate battery information
- ◆ Global Standby support
- ◆ Suspend Options
  - ◆ Suspend to Memory
  - ◆ System Suspend with Time-out
  - ◆ System Suspend on Low Battery
  - ◆ System Suspend on LID CLOSE / SUSPEND Button
  - ◆ System Suspend on HotKey Sequence
- ◆ Save to Disk™
  - ◆ Infinite SUSPEND time through system state saving to static storage
  - ◆ New high speed architecture for fast saving and restoring
- ◆ Resume Event Support
  - ◆ System Resume on RESUME Button Push, Modem Ring, Time/Date
  - ◆ System Resume on Any Key or Hot Key Sequence

### Customization Services Available :

- ◆ User Interface Modifications
- ◆ Phoenix Smart Battery Management
- ◆ Customer Specified

Questions or comments? Please contact your local Phoenix representative, email us at [notebios@ptltd.com](mailto:notebios@ptltd.com).