

PORTABLE SYSTEMS GROUP



APM 2.0: BIOS independent power management under Windows NT 4.0 or 3.51

APM 2.0 for NT

- ◆ Support for Windows NT 4.0 and 3.51
- ◆ BIOS independent implementation
- ◆ Works with APM 1.x BIOSes
- ◆ CPU Idle support
- ◆ Updates system clock on resume
- ◆ User interface provides:
 - ◆ Power and battery status
 - ◆ Standby and suspend
 - ◆ User settings
- ◆ Instant suspend feature
- ◆ Supports Win32 API, so that Windows 95 power management aware applications continue to be under Windows NT
- ◆ Designed to work with Card Executive for NT, so that Suspend and Resume can be supported under Windows NT when PC Cards are in their slots
- ◆ National Language Support (NLS): German, French, Spanish Japanese

Phoenix Technologies, the world-wide leader of system software for portable PCs, is introducing APM 2.0 for NT. APM 2.0 for NT fills a critical need by providing BIOS independent power management under Windows NT 4.0 and 3.51.

APM 2.0 for NT features an Operating System APM-like User Interface, support for CPU Idle, and it updates the system time on a resume from suspend. APM 2.0 for NT supports the Win32 Power Management API, so that power management aware applications under Windows 95 will now be power management aware under Windows NT. APM 2.0 is BIOS independent, as such, the drivers can be loaded onto any APM 1.x compliant system. National Language Support (NLS) is provided.

User Interface

APM 2.0 for NT features a user interface that has two major components:

1. Power management icon in the task tray. The icon will change from a battery to a power cord when an AC adapter is plugged into the portable. The battery icon changes colors as the system discharges. The tool tip displays time and % remaining.



2. The Power Management Control Panel. The Power Management Control Panel has four tabs:
 - ◆ Power Status - Provides the system status (battery or AC power), whether the AC power is actually providing power, and a battery gauge that provides status for up to 2 batteries (with an APM 1.2 BIOS).
 - ◆ Power Control - Allows the user to initiate a standby or suspend command
 - ◆ Settings - Allows the user to control the power management level (Advanced, Standard, Off) in a manner consistent with APM implementations, and enable a Low Battery Warning or Suspend Confirmation which will display appropriate warning messages.
 - ◆ About - Provides vendor information and the version number of the product

When double clicking with the right mouse button on the Power Management icon in the task tray, the system will be suspended.

CPU Idle

APM 2.0 for NT supports a CPU Idle routine. This routine allows power to be saved during any period of CPU inactivity, including the milliseconds between keystrokes. This routine calls the APM BIOS, which will slow or stop the CPU when this call is received.

System Clock Update on Resume

Windows NT 4.0 does not currently update the system clock on a resume from suspend. This causes the system clock to be inaccurate.

APM 2.0 for NT solves this problem by updating the time when the system resumes from suspend.

Win32 API Compliance

Under Windows 95, there is a power management API, which is part of the Win32 interface. This API is not available under Windows NT 4.0 or 3.51.

APM 2.0 for NT provides this support. This means that applications will receive the WM_POWER and WM_POWERBROADCAST messages based on the power management events occurring in the system.

The net effect is that Windows 95 applications that are power management aware under Windows 95 will be power management aware when run under Windows NT.

APM 1.x Required

APM 2.0 for NT will operate with APM 1.x compliant BIOSes. Under APM 1.2, up to two batteries can be supported. Under APM 1.1 or 1.0, only one battery can be supported.

Although the system must provide an APM 1.x compliant BIOS (and today, virtually all systems do), APM 2.0 for NT is a simple driver to load, and it requires no BIOS modifications. This makes this product suitable for tight development schedules or field upgrades to existing systems.

National Language Support (NLS)

APM 2.0 for NT dynamically conforms Windows NT 4.0 in the following languages: German, French, Spanish, and Japanese.

Phoenix Service and Support

APM 2.0 for NT is supported by Phoenix Technologies' worldwide network of engineering, sales and support personnel.

Questions or comments? Please contact your local Phoenix representative.

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