



Mobile Pentium® II Processor at 266/233 MHz Backgrounder



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INTRODUCTION

Utilizing state-of-the-art 0.25 micron technology, Intel has extended its family of mobile processors with outstanding multimedia and communications performance and enhanced power-management features in the latest 266- and 233-MHz mobile Pentium® II processors. With its new Dual Independent Bus architecture and support for the Intel MMX™ technology, Intel has enabled improved levels of performance, while with the new Deep-Sleep mode the processor can enter its lowest power state while maintaining its contents .

Intel's 266- and 233- MHz mobile Pentium II processors are software compatible with the existing mobile Pentium processors with MMX technology but offer additional performance and power-management features, including a Low Power GTL+ Processor System Bus, two new low-power states — Quick Start and Deep Sleep, and a larger L1 cache size (32 Kbytes). The mobile Pentium II processors are available either in a 240-pin BGA mini-cartridge for better design flexibility and smaller form factor or a 280-pin Intel mobile module for accelerated delivery of future processors. The mini-cartridge is a new form factor, while the mobile module connector is backwards compatible with previous module connectors.

PERFORMANCE

The 266- and 233-MHz mobile Pentium II Processors offer a 10 to 35 percent performance increase over current mobile Pentium processors with MMX technology. The mobile Pentium II processor delivers a 20 to 24 percent performance increase over the mobile Pentium Processor with MMX technology running at the same clock speed on the Norton* Multimedia Benchmark.¹

INTEL'S NEW MOBILE PENTIUM® II PROCESSOR TECHNOLOGY AT A GLANCE

The mobile Pentium II Processor has incorporated a Dual Independent Bus (D.I.B.) architecture with an integrated L2 cache controller that uses a private cache bus, allowing a high performance 64-bit wide cache subsystem to be gluelessly implemented using a Tag RAM and two Burst SRAM devices. This private L2 cache bus complements the Processor System Bus by providing critical data faster to the CPU and improving its performance. The mobile Pentium II processor's 64-bit wide Low Power GTL+ system bus reduces system cost and power consumption by raising the termination voltage and termination resistance and changing the termination from dual ended to single ended. This Low Power GTL+ system bus is compatible with the 440BX PCIset and provides a glueless, point-to-point interface for an I/O bridge/memory controller.

¹ Differences in hardware and software configurations will affect actual performance. For further information, refer to the Mobile Pentium® II Processor Performance Brief, March 1998.

Configurations: Gateway* 2000 Solo 9100 with Pentium processor with MMX™ technology, 166-, 200-, 233- and 266-MHz module platforms, 32 MB RAM, 512K cache, Gateway* 2000 Mobile Pentium II processor 266- and 233-MHz module platforms with Intel 440BX/PCIset, 32 MB RAM, 512K cache



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