



# Intel® Pentium® M Processor

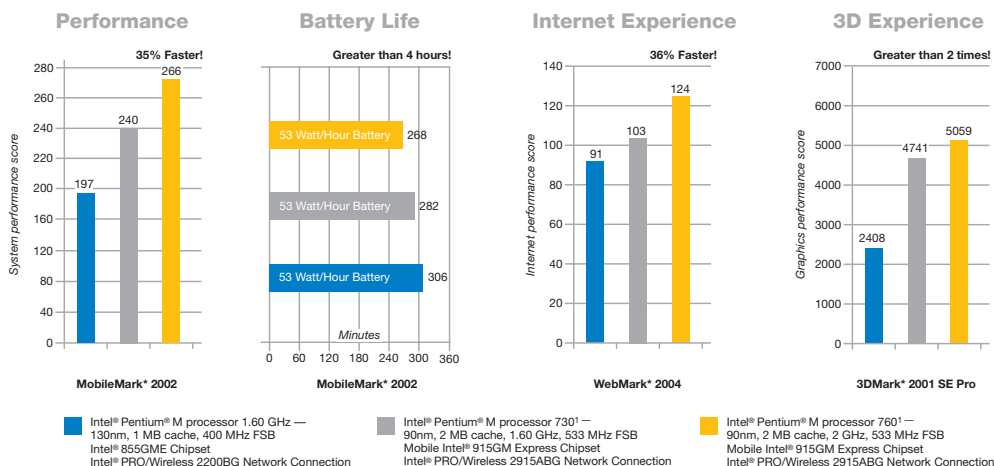
The Intel® Pentium® M processor uses an architecture, built from the ground up specifically for mobile computing applications.



The Intel® Pentium® M processor enables extended battery life in high-performance notebooks for greater freedom without compromising the user's computing experience.\* Available with a power-optimized 533 MHz system bus and 2 MB cache, the processor provides higher CPU performance as compared to the previous generation 400 MHz system bus. Support for Enhanced Intel SpeedStep® technology (with multiple voltage and frequency operating points) dynamically matches processor

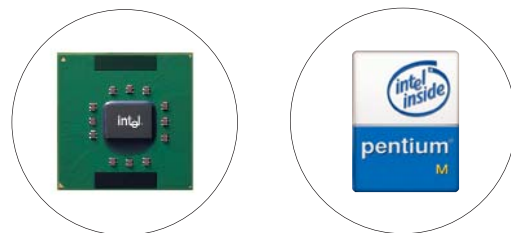
performance to application demand, capitalizing on reduced power consumption whenever possible. These and a host of other power-reducing capabilities make the Intel Pentium M processor the right choice for thin and light notebooks—without sacrificing performance.\*

## Measuring mobile performance



**Source: Intel Corporation**

Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. Buyers should consult other sources of information to evaluate the performance of systems or components they are considering purchasing. For more information on performance tests and on the performance of Intel products, visit <http://www.intel.com/performance/resources/limits.htm>.



# Intel® Pentium® M Processor Features and Benefits

## Outstanding Mobile Performance\*

Feature	Benefit
90nm process technology	Higher performance in the same form factor as compared to previous generation
Strained silicon process technology	More frequency headroom for higher performance
2 MB power-optimized L2 cache; Enhanced register access manager; Enhanced data pre-fetcher	Higher performance due to reduced off-chip memory accesses, more efficient register management, and increased availability of valid data in L2 cache
Power-optimized 533 MHz processor system bus	Up to 33% faster transfer rate compared to 400 MHz supported on previous generation for increased performance
Dedicated stack manager	Improves processing efficiency by performing general "housekeeping" functions so that program operations can be processed without delay
Micro-ops fusion	Combines operations to reduce time and power required to execute instructions resulting in increased performance at lower power
Advanced instruction prediction	Studies the past behavior of programs and intelligently anticipates what instructions will be needed next, resulting in increased performance
Second-generation Streaming SIMD Extensions (Streaming SIMD Extensions 2)	Reduces the overall number of instructions required to execute a particular program task, which can accelerate a broad range of applications
Optional Execute Disable Bit support	Can help prevent certain classes of malicious "buffer overflow" attacks when combined with a supporting operating system

## Enables Extended Battery Life\*

Support for Enhanced Intel SpeedStep® technology with multiple voltage and frequency operating points	Allows matching of performance to application demand
Power-optimized logic design, enabling low voltage capabilities	Power-efficient transistor technology optimizes power consumption/dissipation for lower CPU power
Intelligent power distribution	Reduces power to processor components not being used

## Thinner, Lighter Design

Support for Intel® Mobile Voltage Positioning (Intel® MVP IV)	Dynamically lowers voltage based on processor activity to lower thermal design power, enabling smaller notebooks
Micro FCPGA packaging technology	Optimized for a range of thinner, lighter designs, including <1" thick, that deliver outstanding performance*

## Intel® Pentium® M Processor Specifications

### Features

Processor number	700 sequence of numbers <sup>1</sup>
90nm process technology	Yes
On-die L2 cache	2 MB
Processor system bus	533 MHz
Processor frequency up to	2.26 GHz
Power-optimized processor system bus, dedicated stack manager, micro-ops fusion	Yes
Support for Enhanced Intel SpeedStep® technology	Yes
Support for Intel® Mobile Voltage Positioning (Intel® MVP IV)	Yes

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\* Wireless connectivity and some features may require you to purchase additional software, services or external hardware. Availability of public wireless LAN access points is limited, wireless functionality may vary by country and some hotspots may not support Linux-based Intel Centrino mobile technology systems. System performance measured by MobileMark® 2002. System performance, battery life, wireless performance and functionality will vary depending on your specific operating system, hardware and software configurations. See <http://www.intel.com/products/notebook/centrino/index.htm> for more information.

<sup>1</sup> Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See [http://www.intel.com/products/processor\\_number/](http://www.intel.com/products/processor_number/) for details.

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