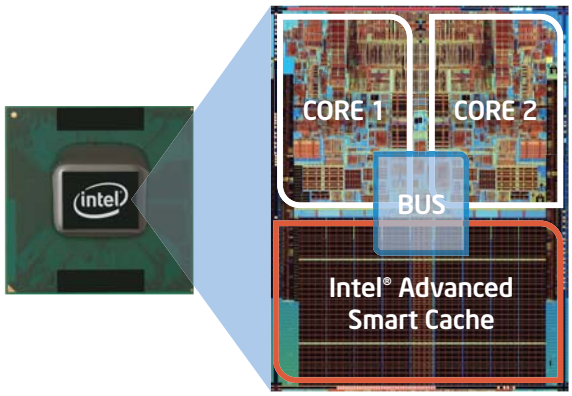
Intel® Core™2 Duo Processor

The world's best mobile processor[1]

The Intel® Core™2 Duo processor is Intel's second-generation mobile dual-core processor designed to deliver breakthrough performance and great power savings. With an Intel® Centrino® Duo mobile technology-based laptop with the new Intel Core 2 Duo processor and 4 MB cache, you can enjoy a greater than 20% performance increase when doing processor-intensive tasks like multitasking compared to previous-generation laptops with Intel® Core™ Duo processors.[2]



And you can enjoy greater than twice the CPU performance when doing processor-intensive tasks like multitasking compared to last year's Intel® Centrino® mobile technology-based laptops.[3] At the same time, the Intel Core 2 Duo processor is tuned for power savings, making it a key ingredient in the latest Intel Centrino Duo mobile technology-based notebooks.[+]

Optimized Performance Technologies

Dual-Core Technology
Two mobile-optimized execution cores in a single processor designed to increase performance and power savings.

Intel® Wide Dynamic Execution
Improves performance and efficiency as each core can complete up to four full instructions simultaneously using an efficient 14-stage pipeline.

Intel® Advanced Smart Cache
With up to 4 MB L2 shared cache, the Intel Core 2 Duo processor offers even more efficient data sharing, providing enhanced performance, responsiveness and power savings.

Intel® Advanced Digital Media Boost
Effectively doubles the execution speed for instructions used widely in multimedia and graphics applications.

Intel® Smart Memory Access
Improves system performance by hiding memory latency and thus optimizing the use of available computer data bandwidth to provide data to the processor *when* and *where* it is needed.

Intel® 64[Δ]
An enabling technology that can take advantage of 64-bit operating systems (like Microsoft Vista*) and applications as they become available.[¤]

Power-Optimized 667 MHz Front Side Bus
Provides increased data bus bandwidth, vs. prior generations, for faster data transfer to help meet the requirements of demanding applications.

Intelligent Power Capability

Mobile Unique Features

Intel® Dynamic Power Coordination

Coordinates Enhanced Intel SpeedStep® technology and idle power-management state (C-states) transitions independently per core to help save power.

Enhanced Intel® Deeper Sleep with Dynamic Cache Sizing

Saves power by flushing cache data to system memory during periods of inactivity to lower CPU voltage.

Intel® Dynamic Bus Parking

Enables platform power savings by allowing the chipset to power down with the processor in low-frequency mode states to enable extended battery life.

Other Features

Advanced Power Gating

Allows parts of the CPU core to be shut down even during periods of high-performance execution to optimize performance per watt.

Enhanced Deep C4 Sleep State

Extends power-saving capabilities by further reducing core voltage when the L2 cache is off.

Split Bus Array

Many buses and arrays are split so data required in some modes of operation can be put in a low-power state when not needed for improved power savings.

Discover more about the Intel® Core™2 Duo processor at intel.com/products/processor.

[1] For more information on why Intel® Core™2 Duo processors are the world's best overall processors, please visit www.intel.com/core2duo.

[2] As measured by SPEC* CPU2000* (SPECfp*_rate_base2000 and SPECint*_rate_base2000) comparing Intel® Core™ Duo Processor T2700 with Intel® Core™2 Duo Processor T7600. Actual performance may vary.

[3] As measured by SPEC* CPU2000* (SPECfp*_rate_base2000 and SPECint_ rate_base2000) comparing Intel® Pentium® M Processors 780 and 750 with Intel Core 2 Duo processors T7600 and T5600. Actual performance may vary.

[*] System performance, battery life, high-definition quality and functionality, and wireless performance and functionality will vary depending on your specific operating system, hardware and software configurations. References to enhanced performance as measured by SYSmark* 2004 SE, PCMark*05, 3DMark*05, 3DMark*06, SPEC* CPU2000* refer to comparisons with previous generation Intel® Centrino® mobile technology platforms. References to improved battery life as measured by MobileMark* 2005, if applicable, refer to previous generation Intel Centrino mobile technology platforms. See www.intel.com/products/centrino/index.htm for more information. SPEC, SPECint, SPECfp, SPECrate, SPECweb, SPECjbb are trademarks of the Standard Performance Evaluation Corporation. See www.spec.org for more information on the benchmarks.

[^] 64-bit computing on Intel architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Consult with your system vendor for more information.

[▫] All Intel® Centrino® brand family-based notebooks, using Intel graphics, meet Microsoft's Windows Vista* Capable PC program requirements. Check with your PC Manufacturer for details on discrete graphics solutions. Microsoft program requirements, availability and timelines are subject to change. Please contact Microsoft for details of the Windows Vista Capable PC program.

*Other names and brands may be claimed as the property of others.

Printed in USA 0806/LK/OCG/PP/6K ♻ Please Recycle 310835-002US