



Product Brief

Intel® Pentium® Processor
Extreme Edition 900
Sequence

Intel® Pentium® Processor Extreme Edition 900 Sequence

Increase Desktop Performance with
Dual-Core, Four-Thread Technology



Product Description

PC enthusiasts today want exceptional performance for video and audio encoding/decoding, digital media creation and multi-threaded gaming applications. Intel designed the most technologically advanced Pentium® processor, the Intel® Pentium® processor Extreme Edition 900 sequence, for users who expect more from their PC.

The Pentium processor Extreme Edition 900 sequence features a dual-core design providing two complete processor cores. Each runs at the same speed, in one physical package, to bring parallel computing capabilities to the desktop PC platform. With support for Hyper-Threading Technology¹, each processor core functions as two logical processors, enabling four-thread functionality. This innovation takes processor design beyond frequency, delivering enhanced processor performance. The processor has the power to run multiple demanding applications simultaneously with



background tasks such as real-time computing security and system maintenance. Additionally, the Pentium processor Extreme Edition 900 sequence features Intel® Virtualization Technology¹ enabling platforms to run multiple operating systems and/or applications in independent partitions or environments for improved security and remote manageability.

Experienced enthusiasts expect processor capability that goes beyond the specification limits.¹ For added technical flexibility, the processor bus ratio locks (overspeed protection) have been removed from this Pentium processor Extreme Edition.

Combine the Pentium processor Extreme Edition 900 sequence with the Intel® Desktop Board D975XBX based on the Intel® 975X Express Chipset for maximum performance. Dual-channel DDR2 667 memory, multiple simultaneous PCI Express* x16 graphics cards, Intel® Matrix Storage Technology (RAID), 1394a, and Intel® High Definition Audio with support for 7.1 surround sound combine to create a dynamic and powerful system. With this next-generation PC, you have the performance and features to accomplish more and enjoy an outstanding computing experience today with the ability to grow with tomorrow's applications and operating systems.

¹ Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional damage; and (v) affect system data integrity. Intel has not tested, and does not warranty, the operation of the processor beyond its specifications.

¹ Hyper-Threading Technology, Intel® Virtualization Technology (Intel® VT), and Intel® Extended Memory 64 Technology (Intel® EM64T) require a computer system with a processor, chipset, BIOS, enabling software and/or operating system, device drivers and applications designed for these features. Performance will vary depending on your configuration. Contact your vendor for more information.

² Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See www.intel.com/products/processor_number/ for details.

Features and Benefits of the Intel® Pentium® Processor Extreme Edition 900 Sequence

Features	Benefits
Dual-Core Processing	Intel dual-core processors have two complete processor cores in one physical package running at the same frequency. The cores share the same interface with chipset and memory, but each core has its own set of registers and cache for truly parallel computing.
Hyper-Threading (HT) Technology¹	HT Technology takes advantage of threaded applications by allowing each processor core to function as two logical processors to provide increased system responsiveness in multi-tasking environments. Threading divides workloads into processes and software threads that can be independently scheduled and dispatched.
Intel® Virtualization Technology (Intel® VT)¹	Intel VT enables one hardware platform to function as multiple "virtual" platforms. For businesses, Intel VT offers improved manageability, limiting downtime and maintaining worker productivity by isolating computing activities into separate partitions. In the home, Intel VT allows creating unique user environments for multiple family members looking to use the same platform simultaneously.
2 x 2MB Level 2 Cache	Each processor core is equipped with its own 2MB L2 cache (4MB total) enabling improved overall system performance by allowing each core to have faster access to larger amounts of the most often used data.
1066 MHz Front Side Bus	Delivers exceptional system bandwidth for maximizing efficiency and improving system performance.
Execute Disable Bit³	When enabled with a supported operating system, the Execute Disable Bit allows memory to be marked as executable or non-executable. If code attempts to run in non-executable memory, such as when malware exploits buffer overrun vulnerabilities, the processor raises an error to the operating system.
Intel® Extended Memory 64 Technology (Intel® EM64T)¹	Intel EM64T provides an enhancement to Intel's 32-bit architecture by enabling the desktop processor platform to access larger amounts of memory. With appropriate 64-bit supporting hardware and software, platforms based on an Intel processor supporting Intel EM64T can enable use of extended virtual and physical memory.
Streaming SIMD Extensions	Single Instruction Multiple Data (SIMD) technology to accelerate performance on a wide variety of applications including multimedia, video and audio encoding/decoding, 3-D graphics and image processing.

³ Enabling Execute Disable Bit functionality requires a PC with a processor with Execute Disable Bit capability and a supporting operating system. Check with your PC manufacturer on whether your system delivers Execute Disable Bit functionality.

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