

THE NEW INTEL® PENTIUM®



DISCOVER DEVELOP DELIVER

Performance meets value, welcome our new Intel® Pentium® processor. The new Intel Pentium processor is ideal for a desktop system that can handle all your everyday computing needs. With the attributes of Intel's latest 14nm processor technology, newest microarchitecture, an Intel Pentium processor-based PC is not only reliable, but offers the solid performance needed to run daily applications simultaneously and efficiently. PCs based on the new Intel Pentium processor are great for both home and office offering excellent productivity and exceptional visual experience. With power efficiency, an Intel Pentium processor system can be built to meet new global energy standards, making it an excellent choice for government and education.



**GREAT
FOR BOTH
HOME
AND OFFICE**

TECHNOLOGY

The new 14nm Intel Pentium processor brings the latest technologies such as DDR4 RAM memory allowing system to have higher memory data transfer speed at a low power when compared to DDR3; the new DMI 3.0 design has increase the bandwidth between the processor and the 100 series chipset making it possible to connect different peripherals at higher efficiency. Other technology includes Intel Smart Cache with shared L3 cache, which improves communication efficiency between the processor core and system. The Integrated Memory Controller provides a high memory bandwidth for fast data access. Intel® HD Graphics 530 is now available on selected new Pentium processors offering seamless visual experience and makes the new Pentium processor ideal graphics solution for your everyday visual computing needs. Intel® Quick Sync Video technology on Intel Pentium Processor delivers breakthrough hardware acceleration that makes video creation and conversion faster and easier.

THE NEW INTEL® PENTIUM® PROCESSOR COMPARISON

COMPARISON TABLE	THE NEW INTEL® PENTIUM® PROCESSOR	INTEL® PENTIUM® PROCESSOR	INTEL® PENTIUM® PROCESSOR
	Intel Pentium G4XXX	Intel Pentium G3XXX	Intel Pentium G2XXX
Socket	LGA1151	LGA1150	LGA1155
Manufacturing Process	14nm	22nm	22nm
Processor Base Frequency	Up to 3.6 GHz on G4XXX	Up to 3.6 GHz on G3XXX	Up to 3.3 GHz on G2XXX
Intel® Smart Cache Technology	3 MB L3 shared on G4XXX	3 MB L3 shared on G3XXX	3 MB L3 shared on G2XXX
Integrated Memory Controller	Yes	Yes	Yes
Memory Speed	DDR4 2133 MHz DDR3L 1866 MHz	DDR3/DDR3L 1333/1600 MHz	DDR3 1333/1600 MHz
Processor Graphics	Intel® HD Graphics 530 ¹ Intel HD Graphics 510 DirectX*12, OpenCL 2.0, OpenGL* 4.3/4.4	Intel® HD Graphics with DirectX* 11.1, OpenCL* 1.2, OpenGL* 4.0	Intel® HD Graphics DirectX* 11, OpenCL* 1.1 (1.2 with latest graphics driver), OpenGL* 4.0
Processor Graphics Execution Units	23 on Intel® HD Graphics 530 ¹ 10 on Intel HD Graphics 510	10	6
Intel® Quick Sync Video Technology	Yes	Yes	No
# of Display Supported ¹	3 eDP* 1.3, HDMI* 1.4b, DisplayPort* 1.2	3 eDP* 1.2, HDMI* 1.4, DisplayPort* 1.2, DVI	3 eDP* 1.1, HDMI* 1.4, DisplayPort* 1.1, DVI
PCI Express Revision	3.0 ¹	2.0	2.0
Intel® Virtualization Technology (Intel® VT-x) ²	Yes	Yes	Yes
Recommended Intel® Express Chipset	Intel® H170 and H110 ¹ Express Chipset	Intel® H97, H87, and H81 Express Chipset ³	Intel® H77 and H61 Express Chipset

INTEL® PENTIUM® PROCESSOR FEATURES AT A GLANCE

FEATURES	BENEFITS
Dual-Core Processing	Runs two independent processor cores in one physical package at the same frequency.
Intel® Smart Cache	The shared cache is dynamically allocated to each processor core, based on workload. Efficient last-level cache data usage and instant communication between the core and memory.
Integrated Memory Controller	Offers stunning memory read/write performance through efficient prefetching algorithms, low latency, and high memory bandwidth.
Intel® HD Graphics 530 and Intel HD Graphics	The new Intel® Pentium® processors now offers Intel HD Graphics 530 on selected skus with more execution units, provides an excellent graphics experience. This new architecture delivers casual and online gaming capabilities through support of Microsoft* DirectX* 11.1 and OpenGL* 4.x Provides Blu-ray* and HD playback with full HW decode acceleration, sharp images, rich color, and immersive browsing.
Intel® Quick Sync Video	Intel® Quick Sync Video makes fast work of creating, editing, syncing, and sharing your videos—at home and online. Intel® Quick Sync Video, built into the new Intel Pentium processors, delivers breakthrough hardware acceleration that lets you complete in minutes what used to take hours. Create DVDs or Blu-ray* discs, edit videos, convert video files for your portable media device, and convert videos for upload to your favorite social networking sites—all in a flash.
Intel® Virtualization Technology (Intel® VT-x) ²	Allows one hardware platform to function as multiple “virtual” platforms. Offers improved manageability by limiting downtime and maintaining productivity by isolating computing activities into separate partitions.
Intel® Designed Thermal Solution for Boxed Processors	Includes a fan speed control to help minimize the acoustic noise levels generated from running the fan at higher speeds for thermal performance ⁴ and power usage.

For more information on the new Intel® Pentium® processor, visit www.intel.com/products/desktop/processors

- 1 This feature may not be available on all processors or computing systems. Please check with the system vendor to determine if your system delivers this feature, or reference the system specifications (motherboard, processor, chipset, power supply, HDD, graphics controller, memory, BIOS, drivers, virtual machine monitor-VMM, platform software, and/or operating system) for feature compatibility. Functionality, performance, and other benefits of this feature may vary depending on system configuration.
- 2 Intel® Virtualization Technology requires a computer system with a processor, chipset, BIOS, enabling software and/or operating system, device drivers, and applications designed for this feature. Performance will vary depending on your configuration. Contact your vendor for more information.
- 3 Intel® Z97 and Z87 Express Chipset recommended for Intel® Pentium® Processor G3258
- 4 The acoustic benefits of the four-pin header are reliant on a properly designed motherboard. Contact your board manufacturer for compatibility.

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. Check with your system manufacturer or retailer or learn more at intel.com.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

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