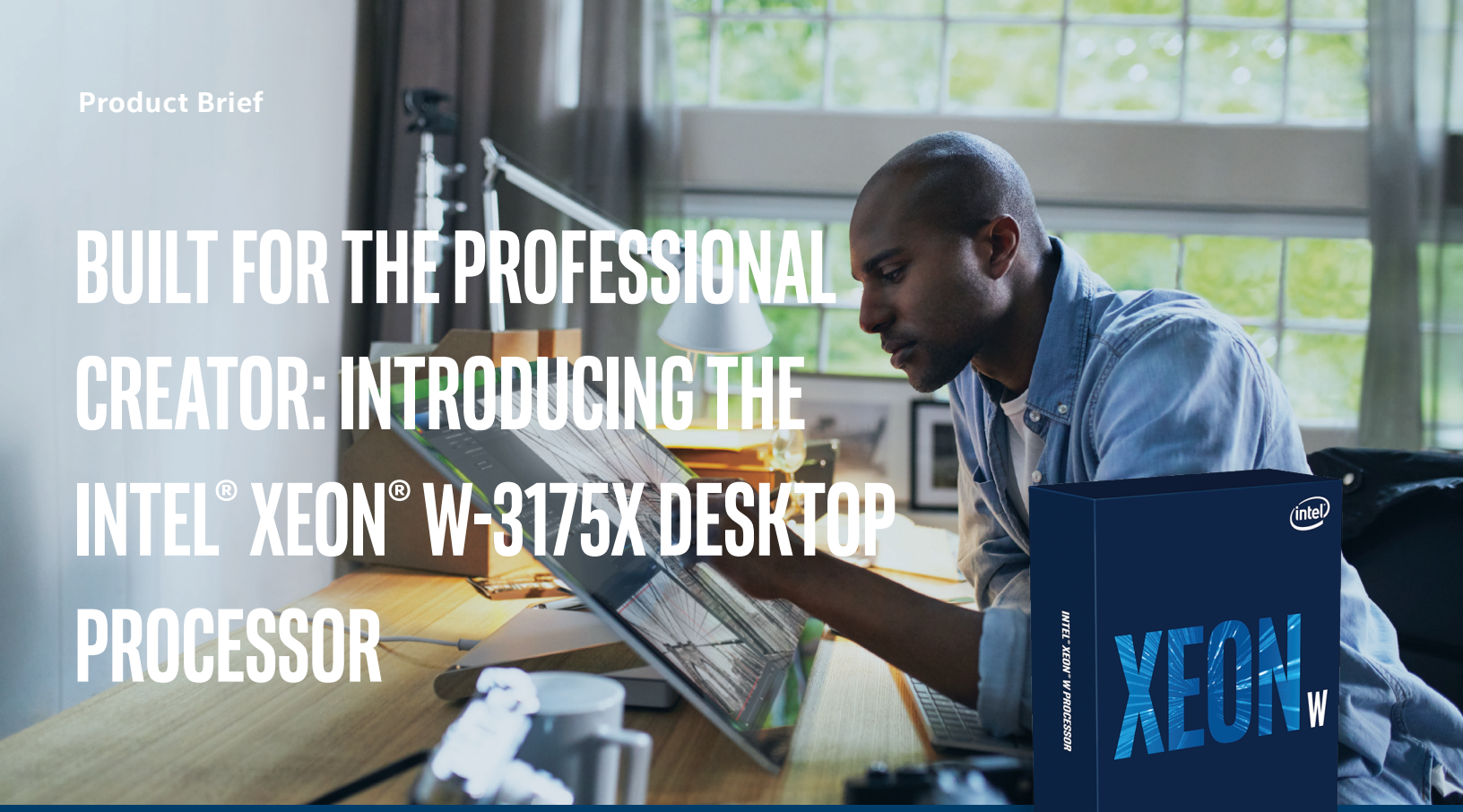
Product Brief

BUILT FOR THE PROFESSIONAL CREATOR: INTRODUCING THE INTEL® XEON® W-3175X DESKTOP PROCESSOR



Introducing the 28-core Intel® Xeon® W-3175X desktop processor!

When your work is on the line, you want a processor built for Creators to power your most demanding projects. Designed with 28 high-performance cores and 56 threads, the Intel® Xeon® W-3175X processor is in a class by itself.

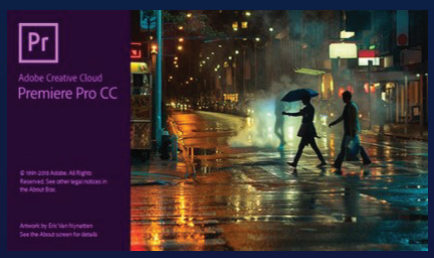
The Intel® Xeon® W-3175X desktop processor: Built for ...

3D Artists

When your art is your livelihood, don't compromise on power. The new Intel® Xeon® W-3175X processor delivers optimized performance for today's top tools.

Game Developers

Serious game design requires serious power. Build out your game with 28 high-performing cores, 56 threads, and Intel® AVX-512 support[1] for ray tracing and encoding.



Filmmakers and Editors

Make monster projects manageable with the most cores, most CPU PCIe lanes, and most memory capacity available on any Intel desktop processor.

Power Creation Platform

Need to edit, render, and encode on a tight deadline? Need to use multiple input and output devices at the same time? Support your peripherals and high-speed tools with up to 68 platform PCIe lanes[2], 38.5 MB of Intel® Smart Cache, 6-Channel DDR4 memory support, ECC memory support, and standard RAS support.[3]

Multi-Threaded Performance

The new Intel® Xeon® W-3175X processor features 28 high-performance cores and 56 threads, perfect for handling your most demanding multithreaded applications and tasks. When your application demands single-threaded performance, Intel® Turbo Boost Technology 2.0 delivers frequencies up to 4.3 GHz.[3]

Overclocking

Looking for even more performance? The new Intel® Xeon® W-3175X processor is unlocked, and supports expert overclocking tools such as Intel® Extreme Tuning Utility and Intel® Extreme Memory Profile. When you need even more CPU and memory optimization, the Intel® Advanced Vector Extensions 512 (Intel® AVX-512) ratio offset and memory controller trim voltage control can give you more control.[4]

Now you can overclock with confidence as your purchase of an Intel® Xeon® X-3175X processor includes the Performance Tuning Protection Plan; allowing for a one-time replacement from damage caused when operating outside of Intel's published specification.

The Creator Platform

The Intel® C621 chipset paired with the Intel® Xeon™ W-3175X processor provides power-user features designed for the enthusiast. Whether it is connectivity, expandability or performance you need, this platform has you covered:

- Integrated USB 3.0 controller with up to 10 ports makes moving files to your portable storage solutions with blazing fast speeds.[2]
- Support for gigabit network speeds with an integrated Gigabit Ethernet controller.[3]
- Configure large storage arrays with support for Intel® Virtual Raid on CPU (Intel® VROC)* and Intel® Rapid Storage Technology with support for RAID configuration on PCI Express* and Serial ATA storage devices.[3]

With this workstation-class platform, the Intel® C621 chipset and unlocked Intel® Xeon™ W-3175X processor allows professional content creators to achieve a new level of performance.

*Requires Intel® VROC HW key

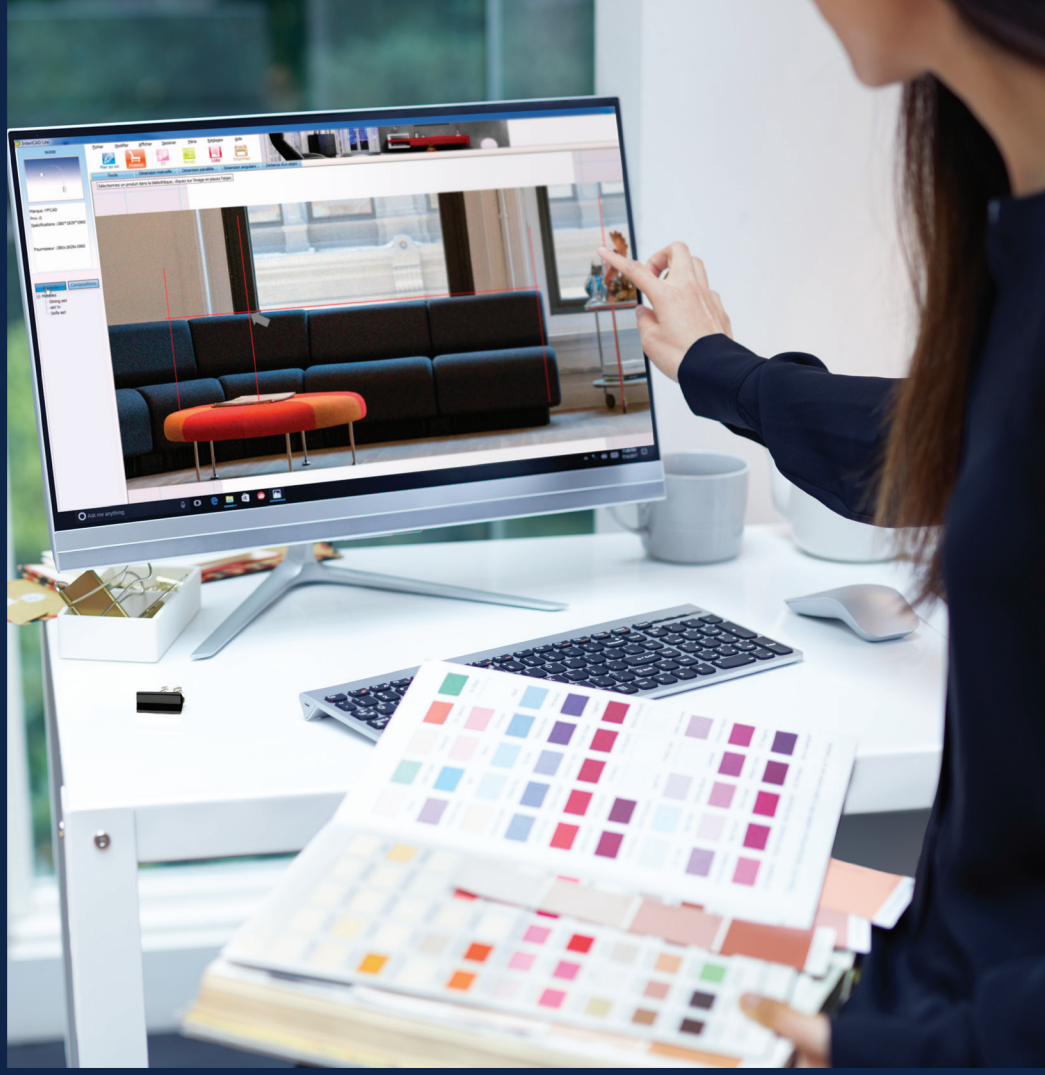
Intel® Xeon® W-3175X Processor

FEATURES AT A GLANCE

FEATURES[1]	BENEFITS
Intel® Turbo Boost Technology 2.0[3]	Dynamically increases the processor's frequency, as needed, by taking advantage of thermal and power headroom when operating below specified limits.
Intel® Hyper-Threading Technology[3]	Delivers two processing threads per physical core. Highly threaded applications can get more work done in parallel, completing tasks sooner.
Integrated Memory Controller	Supports up to 6 channels of DDR4-2666 memory with 2 DIMM per channel. Support for the Intel® Extreme Memory Profile (Intel® XMP) specification, revision 2.0 for DDR4.
Intel® Smart Cache	Up to 38.5MB of shared cached allows fast access to your data by enabling dynamic and efficient allocation of the cache to match the needs of each core significantly reducing latency to frequently used data and improving performance.
Overclocking Enabled[4]	Fully unlocked core multipliers, power, and DDR4 memory ratios for amazing flexibility in setting frequencies above the specification frequency of the processor resulting in higher performance.[4]
Chipset/Motherboard Compatibility	Supported by the Intel® C621 Chipset.
Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI)[3]	A set of instructions that can be used to accelerate a variety of encryption apps, including whole disk encryption, file storage encryption, conditional access of 4K UHD content, Internet security, and VoIP. Consumers benefit from internet and email content protection, plus fast, responsive disk encryption.
Intel® Virtualization Technology[3]	Allows one hardware platform to function as multiple "virtual" platforms. Offers improved manageability by limiting downtime and helping maintain productivity by isolating computing activities into separate partitions.
Intel® Advanced Vector Extensions 512 (Intel® AVX-512)[1]	A set of 512-bit instructions to deliver enhanced performance on floating point- and integer-intensive apps. Includes instructions for FMA (Fused Multiply Add) which can deliver better performance on media and floating point computations, including face recognition, professional imaging, high-performance computing, consumer video and imaging, compression, and encryption.
PCI Express* 3.0 Interface	Offers up to 8GT/s for fast access to peripheral devices and networking with up to 48 lanes.[2]

Intel® Xeon® W-3175X
Processor Details

Cores/Threads	28/56
Base Speed (Ghz)	3.1
Intel® Turbo Boost 2.0 Frequency (Ghz)	4.3
TDP	255W
Intel® Smart Cache	38.5MB
Unlocked[4]	Yes
Platform PCI Lanes	Up to 68
Memory Support	Six Channel DDR4-2666
Standard RAS Support	Yes
ECC Support	Yes
Recommended Intel® Chipset	C621



For more information, visit www.intel.com/content

[1] Intel® Advanced Vector Extensions (Intel® AVX) are designed to achieve higher throughput to certain integer and floating-point operations. Due to varying processor power characteristics, utilizing AVX instructions may cause a) some parts to operate at less than the rated frequency and b) some parts with Intel® Turbo Boost Technology 2.0 to not achieve any or maximum turbo frequencies. Performance varies depending on hardware, software, and system configuration and you should consult your system manufacturer for more information. *Intel® Advanced Vector Extensions refers to Intel® AVX, Intel® AVX2 or Intel® AVX-512. For more information on Intel® Turbo Boost Technology 2.0, visit http://www.intel.com/go/turbo.

[2] Actual number of lanes available may vary by processor number and system configuration. Please refer to the specifications corresponding to the processor number of interest or consult your system vendor for more information

[3] Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration. No computer system can be absolutely secure. Check with your system manufacturer or retailer or learn more at www.intel.com.

[4] Altering clock frequency or voltage may damage or reduce the useful life of the processor and other system components, and may reduce system stability and performance. Product warranties may not apply if the processor is operated beyond its specifications. Check with the manufacturers of system and components for additional details.

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

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