



Intel® Xeon® Silver 4210 Processor

13.75M Cache, 2.20 GHz

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Product Collection	2nd Generation Intel® Xeon® Scalable Processors
Code Name	Products formerly Cascade Lake
Vertical Segment	Server
Processor Number	4210
Status	Launched
Launch Date	Q2'19
Lithography	14 nm
Use Conditions	Server/Enterprise
Recommended Customer Price	-

CPU Specifications

# of Cores	10
# of Threads	20
Processor Base Frequency	2.20 GHz
Max Turbo Frequency	3.20 GHz
Cache	13.75 MB
# of UPI Links	2
TDP	85 W

Supplemental Information

Embedded Options Available	Yes
Product Brief	View now

Memory Specifications

Max Memory Size (dependent on memory type) ?	1 TB
Memory Types ?	DDR4-2400
Maximum Memory Speed	2400 MHz
Max # of Memory Channels ?	6
ECC Memory Supported ‡ ?	Yes
Intel® Optane™ DC Persistent Memory Supported ?	No

Expansion Options

Scalability	2S
PCI Express Revision ?	3.0
Max # of PCI Express Lanes ?	48

Package Specifications

Sockets Supported ?	FCLGA3647
T _{CASE} ?	78°C
Package Size	76.0mm x 56.5mm

Advanced Technologies

Intel® Deep Learning Boost (Intel® DL Boost) ?	Yes
Intel® Speed Select Technology - Performance Profile ?	No
Intel® Speed Select Technology - Base Frequency ?	No
Intel® Resource Director Technology (Intel® RDT) ?	Yes
Intel® Speed Shift Technology ?	Yes
Intel® Turbo Boost Max Technology 3.0 ‡ ?	No
Intel® Turbo Boost Technology ‡ ?	2.0
Intel vPro® Platform Eligibility ‡ ?	Yes
Intel® Hyper-Threading Technology ‡ ?	Yes
Intel® Virtualization Technology (VT-x) ‡ ?	Yes
Intel® Virtualization Technology for Directed I/O (VT-d) ‡ ?	Yes
Intel® VT-x with Extended Page Tables (EPT) ‡ ?	Yes
Intel® Transactional Synchronization Extensions ?	Yes
Intel® 64 ‡ ?	Yes
Instruction Set Extensions ?	Intel® SSE4.2, Intel® AVX, Intel® AVX2, Intel® AVX-512
# of AVX-512 FMA Units ?	1
Enhanced Intel SpeedStep® Technology ?	Yes
Intel® Volume Management Device (VMD) ?	Yes

Security & Reliability

..intel® AES New Instructions ?	Yes
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Intel® Trusted Execution Technology ‡ ?	Yes
Execute Disable Bit ‡ ?	Yes
Intel® Run Sure Technology ?	No
Mode-based Execute Control (MBE) ?	Yes

More support options for Intel® Xeon® Silver 4210 Processor (13.75M Cache, 2.20 GHz)



Product Support



Downloads and Software



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Warranty and Replacement



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Refer to Datasheet for formal definitions of product properties and features.

‡ This feature may not be available on all 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.

Max Turbo Frequency refers to the maximum single-core processor frequency that can be achieved with Intel® Turbo Boost Technology. See www.intel.com/technology/turboboost/ for more information.

System and Maximum TDP is based on worst case scenarios. Actual TDP may be lower if not all I/Os for chipsets are used.

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/content/www/us/en/processors/processor-numbers.html> for details.

"Announced" SKUs are not yet available. Please refer to the Launch Date for market availability.

Some products can support AES New Instructions with a Processor Configuration update, in particular, i7-2630QM/i7-2635QM, i7-2670QM/i7-2675QM, i5-2430M/i5-2435M, i5-2410M/i5-2415M. Please contact OEM for the BIOS that includes the latest Processor configuration update.

See <http://www.intel.com/content/www/us/en/architecture-and-technology/hyper-threading/hyper-threading-technology.html?wapkw=hyper+threading> for more information including details on which processors support Intel® HT Technology.

Processors that support 64-bit computing on Intel® architecture require an Intel 64 architecture-enabled BIOS.

