

NEW 2ND GEN INTEL® XEON® SCALABLE DUAL SOCKET PROCESSORS

Introducing the **NEW** 2nd Generation Intel® Xeon® Scalable processors built for advanced Workstation professionals. The 2nd Gen Intel® Xeon® Scalable processors are optimized for purpose-built platforms across architecture, engineering, and construction (AEC), media and entertainment (M&E), artificial intelligence (AI), oil & gas, and life sciences.

- **NEW** up to 4.5 GHz with Intel® Turbo Boost Technology
- **NEW** up to 1 TB DDR4-2933 per socket with ECC memory
- **NEW** Intel® Deep Learning Boost
- **NEW** Intel® Optane™ persistent memory
- Scalable options of 8-56¹ cores with Intel® Hyper-Threading Technology
- Up to 116 platform PCIe* lanes
- Error-correcting code (ECC) support
- Built-in reliability, availability, and serviceability (RAS)
- Intel® Virtual RAID On CPU (Intel® VROC) support
- Intel® vPro™ platform support



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BREAKTHROUGH PERFORMANCE

For heavily threaded I/O-intensive workloads, get the maximum performance that workstation professionals demand.

UNLEASHED SCALABILITY

With SKU offerings from 8 to 28 cores per socket, customize your workstation solutions for a wide variety of usage models.

ENTERPRISE-GRADE SECURITY & RELIABILITY

Give workstation professionals a solutions providing peace of mind with built in features to keep their systems up and running; With support for ECC memory, RAS features, and Intel® vPro™ functionality.



UP TO **28%**¹
BETTER SYSTEM PERFORMANCE

UP TO **19%**²
HIGHER FLOATING-POINT COMPUTE
INTENSIVE THROUGHPUT

UP TO **25%**³
BETTER ARTIFICIAL INTELLIGENCE
INFERENCE THROUGHPUT



1. As measured by SPECrate*2017_int_base (n copy) on Intel® Xeon® Gold 6258R processor vs. Intel® Xeon® Gold 6254 processor
2. As measured by SPECrate*2017_fp_base (n copy) on Intel® Xeon® Gold 6258R processor vs. Intel® Xeon® Gold 6254 processor
3. As measured by AI inference throughput on AIXPRT v1.0.1 with the Int8 precision scores on ResNet-50 on Intel® Xeon® Gold 6258R processor vs. Intel® Xeon® Gold 6254 processor



NEW 2ND GEN INTEL® XEON® SCALABLE PROCESSOR SELECTION



	Intel® Xeon® Bronze 3206R	Intel® Xeon® Silver 4215R	Intel® Xeon® Gold 6250	Intel® Xeon® Silver 4210R	Intel® Xeon® Silver 4214R	Intel® Xeon® Gold 6256	Intel® Xeon® Gold 6226R	Intel® Xeon® Gold 6246R
Cores/Threads	8/8	8/16	8/16	10/20	12/24	12/24	16/32	16/32
Base Frequency (Ghz)	1.9	3.2	3.9	2.4	2.4	3.6	2.9	3.4
Intel® Turbo Boost 2.0 Frequency Single Core (Ghz)	1.9	4.0	4.5	3.2	3.5	4.5	3.9	4.1
Intel® Turbo Boost 2.0 Frequency All Core (Ghz)	1.9	3.6	4.5	2.9	3.0	4.3	3.6	4.0
Intel® Smart Cache	11M	11M	35.75M	13.75M	16.5M	33M	22M	35.75M
Memory Speed Support DDR4 w/ECC RDIMM/UDIMM (Mhz)	DDR4 2400	DDR4 2400	DDR4 2933	DDR4 2400	DDR4 2400	DDR4 2933	DDR4 2933	DDR4 2933

Intel® processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. This list is not comprehensive of all available Intel® Xeon® Scalable processor SKUs. Contact your Intel® Field Representative for details.



NEW 2ND GEN INTEL® XEON® SCALABLE PROCESSOR SELECTION – CONT.



	Intel® Xeon® Gold 5218R	Intel® Xeon® Gold 6242R	Intel® Xeon® Gold 5220R	Intel® Xeon® Gold 6240R	Intel® Xeon® Gold 6248R	Intel® Xeon® Gold 6230	Intel® Xeon® Gold 6238	Intel® Xeon® Gold 6258R
Cores/Threads	20/40	20/40	24/48	24/48	24/48	26/52	28/56	28/56
Base Frequency (Ghz)	2.1	3.1	2.2	2.4	3.0	2.1	2.2	2.7
Intel® Turbo Boost 2.0 Frequency Single Core (Ghz)	4.0	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Intel® Turbo Boost 2.0 Frequency All Core (Ghz)	2.9	3.8	2.9	3.2	3.6	3.0	3.0	3.4
Intel® Smart Cache	27.5M	35.75M	35.75M	35.75M	35.75M	35.75M	38.5M	38.5M
Memory Speed Support DDR4 w/ECC RDIMM/UDIMM (Mhz)	DDR4 2933							

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All information provided here is subject to change without notice. Contact your Intel representative to obtain the latest Intel product specifications, roadmaps, and related information.

Performance results are based on testing as of February 21, 2020 and may not reflect all publicly available security updates. **See configuration disclosure for details.** No product can be absolutely secure.

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. For more complete information about performance and benchmark results, visit <http://www.Intel.com/benchmarks>

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 Intel.com.

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SYSTEM CONFIGURATION & BENCHMARK DETAILS

1. Estimated on platforms with:

Intel® Xeon® Gold 6258R processor, PL1= 205W TDP, 28C56T, #2 Sockets, Turbo up to 4.0GHz, Platform: Cascade Lake-SP Refresh, Motherboard Name: C621 Wolf Pass, Graphics: Nvidia Quadro P2000, Memory: 12x16GB RDIMM-2933MHz, Storage: DC S4600, OS: Microsoft Windows* 10 PRO, Build Version 1909 (v476)

VS.

Intel® Xeon® Gold 6254 processor, PL1= 200W TDP, 18C36T, #2 Sockets, Turbo up to 4.0GHz, Platform: Cascade Lake-SP, Motherboard Name: C621 Wolf Pass, Graphics: Nvidia Quadro P2000, Memory: 12x16GB RDIMM-2600MHz, Storage: DC S4600, OS: Microsoft Windows* 10 PRO, Build Version 1909 (v476)

2. Estimated on platforms with:

Intel® Xeon® Gold 6258R processor, PL1= 205W TDP, 28C56T, #2 Sockets, Turbo up to 4.0GHz, Platform: Cascade Lake-SP Refresh, Motherboard Name: C621 Wolf Pass, Graphics: Nvidia Quadro P2000, Memory: 12x16GB RDIMM-2933MHz, Storage: DC S4600, OS: Microsoft Windows* 10 PRO, Build Version 1909 (v476)

VS.

Intel® Xeon® Gold 6254 processor, PL1= 200W TDP, 18C36T, #2 Sockets, Turbo up to 4.0GHz, Platform: Cascade Lake-SP, Motherboard Name: C621 Wolf Pass, Graphics: Nvidia Quadro P2000, Memory: 12x16GB RDIMM-2600MHz, Storage: DC S4600, OS: Microsoft Windows* 10 PRO, Build Version 1909 (v476)

3. AIXPRT v1.0.1 measured on platforms with:

Intel® Xeon® Gold 6258R processor, PL1= 205W TDP, 28C56T, #2 Sockets, Turbo up to 4.0GHz, Platform: Cascade Lake-SP Refresh, Motherboard Name: C621 Wolf Pass, Graphics: Nvidia Quadro P2000, Memory: 12x16GB RDIMM-2933MHz, Storage: DC S4600, OS: Microsoft Windows* 10 PRO, Build Version 1909 (v476)

VS.

Intel® Xeon® Gold 6254 processor, PL1= 200W TDP, 18C36T, #2 Sockets, Turbo up to 4.0GHz, Platform: Cascade Lake-SP, Motherboard Name: C621 Wolf Pass, Graphics: Nvidia Quadro P2000, Memory: 12x16GB RDIMM-2600MHz, Storage: DC S4600, OS: Microsoft Windows* 10 PRO, Build Version 1909 (v476)

SPEC CPU*2017 is published by the Standard Performance Evaluation Corporation (SPEC), a benchmarking consortium. SPEC CPU tests Compute Intensive Application Performance using integer and floating point subtests based on real programs. SPECspeed*2017_int_base and SPECspeed2017_fp_base measure how fast a processor completes a single integer or floating point compute task. SPECrate*2017_int_base and SPECrate2017_fp_base measure throughput, or how many integer or floating point compute tasks a processor can accomplish in a given amount of time. For Windows*, SPEC CPU2017 supports Win64.

AIXPRT is a community driven AI benchmark from BenchmarkXPRT moderated by Principled Technologies. AIXPRT consists of 2 inference workloads (ResNet-50v1 – Classification; SSD-MobileNet – Object detection). BenchmarkXPRT community includes over 70 organizations representing major PC, tablet, and smartphone manufacturers, chip vendors, and tech press leaders.