



Intel® Xeon® Gold 6138 Processor

27.5M Cache, 2.00 GHz

Add to Compare

Specifications

Essentials

Performance

Supplemental Information

Memory Specifications

Expansion Options

Package Specifications

Advanced Technologies

Security & Reliability

Ordering and Compliance





Product Images

Compatible Products








Downloads and Software

Essentials


 Export specifications

| | |
|--|----------------------------------|
| Product Collection | Intel® Xeon® Scalable Processors |
| Code Name | Products formerly Skylake |
| Vertical Segment | Server |
| Processor Number | 6138 |
| Status | Launched |
| Launch Date  | Q3'17 |
| Lithography  | 14 nm |
| Recommended Customer Price  | - |
| Use Conditions  | Server/Enterprise |





Performance

| | |
|--|------------|
| # of Cores  | 20 |
| # of Threads  | 40 |
| Processor Base Frequency  | 2.00 GHz |
| Max Turbo Frequency  | 3.70 GHz |
| Cache  | 27.5 MB L3 |
| # of UPI Links  | 3 |
| TDP  | 125 W |



Supplemental Information

| | |
|--|--------------------------|
| Embedded Options Available  | Yes |
| Datasheet | View now |
| Product Brief | View now |



Memory Specifications

| | |
|---|-----------|
| Max Memory Size (dependent on memory type)  | 768 GB |
| Memory Types  | DDR4-2666 |
| Maximum Memory Speed | 2666 MHz |
| Max # of Memory Channels  | 6 |
| ECC Memory Supported †  | Yes |
















Expansion Options

| | |
|--|-----|
| Scalability | S4S |
| PCI Express Revision  | 3.0 |
| Max # of PCI Express Lanes  | 48 |






Package Specifications

| | |
|---|-----------------|
| Sockets Supported  | FCLGA3647 |
| T _{CASE}  | 86°C |
| Package Size | 76.0mm x 56.5mm |

Advanced Technologies

| | |
|--|----------------|
| Intel® Optane™ Memory Supported †  | No |
| 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® TSX-NI  | Yes |
| Intel® 64 †  | Yes |
| Instruction Set Extensions  | Intel® AVX-512 |
| # of AVX-512 FMA Units  | 2 |
| Enhanced Intel SpeedStep® Technology  | Yes |
| Intel® Volume Management Device (VMD)  | Yes |

Security & Reliability

| | |
|---|-----|
| Intel® AES New Instructions  | Yes |
| Intel® Trusted Execution Technology †  | Yes |
| Execute Disable Bit †  | Yes |
| Intel® Run Sure Technology  | Yes |
| Mode-based Execute Control (MBE)  | Yes |

More support options for Intel® Xeon® Gold 6138 Processor (27.5M Cache, 2.00 GHz)



Product Support



Downloads and Software



Support Community



Warranty and Replacement



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

"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.

‡ 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.

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.

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.

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

For benchmarking data see <http://www.intel.com/performance>.

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.

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



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