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ASUS

3rd Generation Intel Xeon Scalable

(Ice Lake Series)

Portfolio

intel®

ASUS

April 2021

Intel 3rd Gen Xeon Scalable

The latest 3rd Gen Intel Xeon Scalable processors feature core counts from 8 to 40 cores and an array of frequency and power supports, and deliver up to 40% better performance compared to the previous generations. The 3rd Gen Intel Xeon Scalable processor is also the only data-centre CPU with built-in AI acceleration to enable faster times to solution.

With built-in security features, this new platform delivers outstanding performance in security including encryption, authentication and data integrity across the breadth of standards that are prevalent in networking, enterprise and the cloud.

3rd Gen Xeon Scalable "Ice Lake" Family

Model	Cores	Threads	Base (GHz)	Single Core Turbo (GHz)	All Core Turbo (GHz)	Cache (MB)	TDP (W)	Support for Intel Optane Persistent Memory 200 Series	Intel SGX Envlave capacity per processor	Features
8380HL	28	56	2.9	4.3	3.8	38.5	250	Yes	512 GB	4 and 8 Socket Scalable Performance
8380H	28	56	2.9	4.3	3.8	38.5	250	Yes	512 GB	4 and 8 Socket Scalable Performance
8380	40	80	2.3	3.4	3	60	270	Yes	512 GB	Optimised for highest-per-core scalable performance and supports maximum Intel SGX Enclave Capacity
8376HL	28	56	2.6	4.3	3.5	38.5	205	Yes		4 and 8 Socket Scalable Performance
8376H	28	56	2.6	4.3	3.5	38.5	205	Yes		4 and 8 Socket Scalable Performance
8368Q	38	76	2.6	3.7	3.3	57	270	Yes	512 GB	Liquid Cooled, Supporting Maximum Intel SGX Enclave Capacity
8368	38	76	2.4	3.4	3.2	57	270	Yes	512 GB	Optimised for highest-per-core scalable performance and supports maximum Intel SGX Enclave Capacity
8362	32	64	2.8	3.6	3.5	48	265	Yes	64GB	Optimised for highest-per-core scalable performance
8360Y	36	72	2.4	3.5	3.1	54	250	Yes	64GB	Optimised for highest-per-core scalable performance
8360HL	24	48	3	4.2	3.8	33	225	Yes		4 and 8 Socket Scalable Performance
8360H	24	48	3	4.2	3.8	33	225	Yes		4 and 8 Socket Scalable Performance
8358P	38	76	2.6	3.7	3.3	57	270	Yes	512 GB	Cloud Optisized for VM Utilisation
8358	32	64	2.6	3.4	3.3	48	250	Yes	64GB	Optimised for highest-per-core scalable performance
8356H	8	16	3.9	4.4	4.3	35.75	190	Yes		4 and 8 Socket Scalable Performance
8354H	18	36	3.1	4.3	4	24.75	205	Yes		4 and 8 Socket Scalable Performance
8353H	18	36	2.5	3.8	3.3	24.75	150	Yes		4 and 8 Socket Scalable Performance
8352M	32	64	2.3	3.5	3.1	54	225	Yes	64GB	Media Processing Optimized
8352Y	32	64	2.2	3.4	2.8	48	205	Yes	64GB	Scalable Performance
8352V	36	72	2.1	3.5	2.5	54	1995	Yes	8 GB	Cloud Optisized for VM Utilisation
8352S	32	64	2.2	3.4	2.8	48	205	Yes	512 GB	Supporting Maximum Intel SGX Enclave Capacity
8351N	36	72	2.4	3.5	3.1	54	225	Yes	64GB	Single Socket Optimized, Networking/NFV Optimized
6348H	24	48	2.3	4.2	3.1	33	165	Yes		4 and 8 Socket Scalable Performance
6348	28	56	2.6	3.5	3.4	42	235	Yes	64 GB	Optimised for highest-per-core scalable performance
6354	18	36	3	3.6	3.6	39	205	Yes	64 GB	Optimised for highest-per-core scalable performance
6346	16	32	3.1	3.6	3.6	36	205	Yes	64 GB	Optimised for highest-per-core scalable performance
6342	24	48	2.8	3.5	3.3	36	230	Yes	64 GB	Optimised for highest-per-core scalable performance
6338	32	64	2	3.2	2.6	48	205	Yes	64 GB	Scalable Performance
6338T	24	48	2.1	3.4	2.7	36	165	Yes	64 GB	Long-life use and NEBS-Thermal Friendly
6338N	32	64	2.2	3.5	2.7	48	185	Yes	64 GB	Networking/NFV Optimized
6336Y	24	48	2.4	3.6	3	36	185	Yes	64 GB	Scalable Performance
6334	18	36	3.6	3.7	3.6	18	165	Yes	64 GB	Optimised for highest-per-core scalable performance
6330	28	56	2	3.1	2.6	42	205	Yes	64 GB	Scalable Performance
6330N	28	56	2.2	3.4	2.6	42	165	Yes	64 GB	Networking/NFV Optimized
6330H	24	48	2	3.7	2.8	33	150	Yes		4 and 8 Socket Scalable Performance
6328HL	16	32	2.8	4.3	3.7	22	165	Yes		4 and 8 Socket Scalable Performance
6328HL	16	32	2.8	4.3	3.7	22	165	Yes		4 and 8 Socket Scalable Performance
6326	16	32	2.9	3.5	3.3	24	185	Yes	64 GB	Optimised for highest-per-core scalable performance
6314U	32	64	2.3	3.4	2.9	48	205	Yes	64 GB	Single Socket Optimized
6312U	24	48	2.4	3.6	3.1	36	185	Yes	64 GB	Single Socket Optimized
5320	26	52	2.2	3.4	2.8	39	185	Yes	64 GB	Scalable Performance
5320H	20	40	2.4	4.2	3.3	27.5	150	Yes		4 and 8 Socket Scalable Performance
5320T	20	40	2.3	3.5	2.9	30	150	Yes	64 GB	Long-life use and NEBS-Thermal Friendly
5318Y	24	48	2.1	3.4	2.6	36	165	Yes	64 GB	Scalable Performance
5318H	18	36	2.5	3.8	3.3	24.75	150	Yes		4 and 8 Socket Scalable Performance
5318N	24	48	2.1	3.4	2.7	36	150	Yes	64 GB	Networking/NFV Optimized
5318S	24	48	2.1	3.4	2.6	36	165	Yes	512 GB	Supporting Maximum Intel SGX Enclave Capacity
4316	20	40	2.3	3.4	2.8	30	150		8 GB	Scalable Performance
4314	16	32	2.4	3.4	2.9	24	135	Yes	8 GB	Scalable Performance
4310	12	24	2.1	3.3	2.7	18	120		8 GB	Scalable Performance
4310T	10	20	2.3	3.4	2.9	15	105		8 GB	Long-life use and NEBS-Thermal Friendly
4309Y	8	16	2.8	3.6	3.4	12	105		8 GB	Scalable Performance

ASUS 3rd Gen Intel Xeon Scalable Servers

The new ASUS series servers with 3rd Gen Intel Xeon Scalable processors help customers reduce the time to solution for a wide range of applications, add enhanced security features, and allow all workloads to be run in the cloud, on-premises or a private cloud. The RS720, RS700 and RS720Q-E10 series servers feature market-leading system flexibility and scalability in computing, storage and networking, enabling modern businesses to reduce costs and scale-up.

The ESC4000-E10 series servers are optimized for AI, data science, deep learning and HPC workloads. In addition, ASUS delivers enhanced server and infrastructure security by integrating PFR FPGA as the platform Root-of-Trust solution for firmware resiliency, plus regular firmware threat detection guard against and recover from security attacks.

The World’s First Real-Time RAM-Assessment Server

ASUS worked with firmware partners to improve both the efficiency of system-memory usage and management based on the 3rd Gen Intel Xeon Scalable platform. Intel Memory Failure Prediction (MFP) technology is built in to ASUS ASMB10-iKVM to minimize memory-failure rates and optimize migration when running critical workloads on virtual machines. This reduces the need for replacement DDR4 DIMMs, which in turn leads to significant cost benefits.

Improves SLA by reducing failure rates through proactive memory health evaluation

Enhances memory page offline policies

Optimises workload and VM migration decision-making

Improves DIMM loss policy which can reduce DIMM replacement costs

These new ASUS Server features:

Improved TCO with Memory Failure Prediction technology

A key factor in server downtime in data centres is errors caused by the high rate of memory failure. ASUS worked with firmware partners to improve both the efficiency of system-memory usage and management based on the 3rd Gen Intel Xeon Scalable platform. Intel Memory Failure Prediction (MFP) technology is built in to ASUS ASMB10-iKVM to minimize memory-failure rates and optimize migration when running critical workloads on virtual machines. This reduces the need for replacement DDR4 DIMMs, which in turn leads to significant cost benefits.

Intel Select Solutions

For this launch, ASUS continues working closely with Intel and the company's Intel Select Solutions program that develops solution recipes for optimized performance, speeding time to deployment and increasing confidence in solution performance on HCI, storage, network, edge and HPC. All ASUS servers with 3rd Gen Intel Xeon Scalable processors deliver greater system efficiency with support for Intel Optane persistent memory 200 series, as well as support 100 Gb or 25 Gb Intel Ethernet 800 Series to meet the high networking demands of modern data centres.

These new servers are ready to incorporate into ASUS solutions that, once verified by Intel, will be offered as a part of the ASUS Intel Select Solutions portfolio. Intel Select Solutions are verified for performance using stringent testing procedures to ensure hardware and software compatibility, simplifying the decision-making process for enterprise and data-centre customers.

Scalable storage solutions

ASUS servers based on 3rd Gen Intel Xeon Scalable processors feature scalable storage solutions to support maximum performance for data-centre flexibility, and enable industry-standard SAS/SATA/NVMe interfacing through Broadcom Tri-Mode RAID adapters for increased connectivity and security. Flexible NVMe drives on the front panel enable extensive storage and high-throughput performance, with more storage placements on middle and rear panels available for further capacity expansion.

Remote IT-infrastructure management

With this generation, ASUS is also introducing the new ASUS ASMB10-iKVM server-management solution to support the latest Intel platforms. Building upon the ASPEED 2600 chipset running on the latest AMI MegaRAC SP-X that delivers faster BMC boot time up to 39% compared to the 2500 chipset and featuring enhanced BMC networking performance, all ASUS servers come with this solution and enable out-of-band server management through WebGUI, Intelligent Platform Management Interface (IPMI) and Redfish® API interfaces.

ASUS Control Center (ACC) is an integrated IT software enabling remote BIOS updates, monitoring of multiple systems via mobile devices, and one-click software updates and dispatching, allowing easier server management for any IT infrastructure.

ASUS 3rd Gen Intel Xeon Scalable Portfolio

This range of ASUS servers provide powerful performance and help customers reduce the time to solution for a wide range of applications such as high performance computing, hyper-converged infrastructure and GPU-intensive workloads.

RS700-E10-RS4U

Scalable, High Performance 1U Server

1U form factor dual socket system supports the following:
GPU: Supports one dual-slot GPU for AI workloads
CPU: Dual 3rd Gen Intel Xeon Scalable Processor Family
RAM: 32 DIMMs; up to 512GB DDR4-3200MHz Optane DC Pmem 200 series
PCIE: Up to 3+1 slots
Drive: Up to 4x 3.5" hybrid NVMe/SAS/SATA Hot-swap drive bays
Networking: Optional 1x Quad Port Intel i350-AM4 1G LAN Controller, 1x Dual Port Intel X710-AT2 Gigabit 10G LAN Controller
Power Supply: 1600/1200W Redundant Power Supplies Titanium/Platinum level

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ESC4000-E10

NVIDIA RTX Validated GPU System

Use Case: AI, data science, DL and HPC workloads

2U form factor dual socket system supports the following:
GPU: Supports 4x double-slot or 8x single-spot GPUs, validated by NVIDIA RTX
CPU: Dual 3rd Gen Intel Xeon Scalable Processor Family
RAM: 16 DIMMs; up to 2TB DDR4-3200MHz
PCIE: Up to 11x PCIe x16 4.0 slots
Drive: Up to 8x all-flash NVMe + 8x SATA/SAS hot-swap drive bays
Networking: 1 x Dual Port Intel I350-AM2 Gigabit LAN controller + 1 x Mgmt LAN
Power Supply: 1600/2200W Redundant Power Supplies Platinum level

RS720-E10-RS12E

Use Case: HPC; Ubuntu Kubernetes, Red Hat OpenShift, AI training and data analytics

2U form factor dual socket system supports the following:
GPU: Supports 4x double-slot GPUs for AI workloads, NVIDIA Quadro RTX 6000/8000
CPU: Dual 3rd Gen Intel Xeon Scalable Processor Family
RAM: 32 DIMMs; up to 512GB DDR4-3200MHz Optane DC Pmem 200 series
PCIE: Up to 9x PCIe 4.0 slots
Drive: Up to 8x 3.5”/2.5” all-flash NVMe + 4x SATA/SAS Hot-swap drive bays
Networking: 4x Quad Port Intel i350-AM4 1G LAN Controller, 2x Dual Port Intel X710-AT2 Gigabit 10G LAN Controller
Power Supply: 2400W Redundant Power Supplies Platinum level

RS720Q-E10-RS24U

Use Case: Hyper-Converged Infrastructure; Microsoft Azure Stack KCI, VMware vSAN Ready Node, CDN, cloud gaming, video streaming

2U form factor quad-node system supports the following:
CPU: Dual 3rd Gen Intel Xeon Scalable Processor Family
RAM: 16 DIMMs; DDR4-3200MHz, up to 512GB DDR4-3200MHz Optane DC Pmem 200 series
PCIE: Rear: 1x PCIe x16 slots per node
Drive: Up to 24x all-flash NVMe hot-swap drive bays
Networking: 1 x Dual Port Intel I350-AM2 Gigabit LAN controller
Power Supply: 3000W Redundant Power Supplies Platinum level

Our Partnership with ASUS

Established in 1989, ASUS is a multinational company that is well known for the world's best motherboards and high-quality servers. The company has revolutionized the PC and mobile industry, looking to rapidly develop virtual and augmented reality solutions as well as IOT devices and robotics technologies. In addition, ASUS is worldly renowned for their contribution to technology, awarded with many significant titles and certifications.
Configure ASUS Intel based workstations and ASUS AMD based servers on our website to meet your business application. We locally build, deploy our solutions and provide support, within Australia and New Zealand.

TALK TO US TODAY

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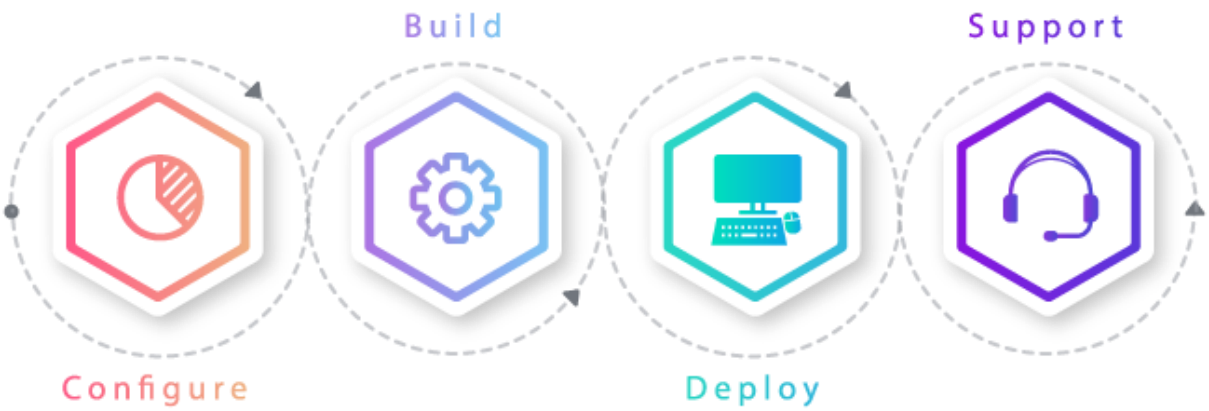

Configure

- Our system configurator helps customers design a computing solution that best fits their needs.
- The smart configurator provides helpful prompts to ensure that any design is validated.

Build

- Our strict quality assurance process during assembly and testing ensures that systems leaving our build centre are free-from-defect and are operating as designed.

Deploy

- Our Australia & New Zealand wide deployment services and support network means that where ever you are, you experience a smooth deployment.

Support

- Our support team is available to assist in resolving and troubleshooting any issues with additional warranty support options such as Next Business Day or 24/7 service are available should you need it.

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3rd Gen Xeon Scalable "Ice Lake" Family

Model	Cores	Threads	Base (GHz)	Single Core Turbo (GHz)	All Core Turbo (GHz)	Cache (MB)	TDP (W)	Support for Intel Optane Persistent Memory 200 Series	Intel SGX Envlave capacity per processor	Features
8380HL	28	56	2.9	4.3	3.8	38.5	250	Yes	512 GB	4 and 8 Socket Scalable Performance
8380H	28	56	2.9	4.3	3.8	38.5	250	Yes	512 GB	4 and 8 Socket Scalable Performance
8380	40	80	2.3	3.4	3	60	270	Yes	512 GB	Optimised for highest-per-core scalable performance and supports maximum Intel SGX Enclave Capacity
8376HL	28	56	2.6	4.3	3.5	38.5	205	Yes		4 and 8 Socket Scalable Performance
8376H	28	56	2.6	4.3	3.5	38.5	205	Yes		4 and 8 Socket Scalable Performance
8368Q	38	76	2.6	3.7	3.3	57	270	Yes	512 GB	Liquid Cooled, Supporting Maximum Intel SGX Enclave Capacity
8368	38	76	2.4	3.4	3.2	57	270	Yes	512 GB	Optimised for highest-per-core scalable performance and supports maximum Intel SGX Enclave Capacity
8362	32	64	2.8	3.6	3.5	48	265	Yes	64GB	Optimised for highest-per-core scalable performance
8360Y	36	72	2.4	3.5	3.1	54	250	Yes	64GB	Optimised for highest-per-core scalable performance
8360HL	24	48	3	4.2	3.8	33	225	Yes		4 and 8 Socket Scalable Performance
8360H	24	48	3	4.2	3.8	33	225	Yes		4 and 8 Socket Scalable Performance
8358P	38	76	2.6	3.7	3.3	57	270	Yes	512 GB	Cloud Optisized for VM Utilisation
8358	32	64	2.6	3.4	3.3	48	250	Yes	64GB	Optimised for highest-per-core scalable performance
8356H	8	16	3.9	4.4	4.3	35.75	190	Yes		4 and 8 Socket Scalable Performance
8354H	18	36	3.1	4.3	4	24.75	205	Yes		4 and 8 Socket Scalable Performance
8353H	18	36	2.5	3.8	3.3	24.75	150	Yes		4 and 8 Socket Scalable Performance
8352M	32	64	2.3	3.5	3.1	54	225	Yes	64GB	Media Processing Optimized
8352Y	32	64	2.2	3.4	2.8	48	205	Yes	64GB	Scalable Performance
8352V	36	72	2.1	3.5	2.5	54	1995	Yes	8 GB	Cloud Optisized for VM Utilisation
8352S	32	64	2.2	3.4	2.8	48	205	Yes	512 GB	Supporting Maximum Intel SGX Enclave Capacity
8351N	36	72	2.4	3.5	3.1	54	225	Yes	64GB	Single Socket Optimized, Networking/NFV Optimized

Model	Cores	Threads	Base (GHz)	Single Core Turbo (GHz)	All Core Turbo (GHz)	Cache (MB)	TDP (W)	Support for Intel Optane Persistent Memory 200 Series	Intel SGX Envlave capacity per processor	Features
6348H	24	48	2.3	4.2	3.1	33	165	Yes		4 and 8 Socket Scalable Performance
6348	28	56	2.6	3.5	3.4	42	235	Yes	64 GB	Optimised for highest-per-core scalable performance
6354	18	36	3	3.6	3.6	39	205	Yes	64 GB	Optimised for highest-per-core scalable performance
6346	16	32	3.1	3.6	3.6	36	205	Yes	64 GB	Optimised for highest-per-core scalable performance
6342	24	48	2.8	3.5	3.3	36	230	Yes	64 GB	Optimised for highest-per-core scalable performance
6338	32	64	2	3.2	2.6	48	205	Yes	64 GB	Scalable Performance
6338T	24	48	2.1	3.4	2.7	36	165	Yes	64 GB	Long-life use and NEBS-Thermal Friendly
6338N	32	64	2.2	3.5	2.7	48	185	Yes	64 GB	Networking/NFV Optimized
6336Y	24	48	2.4	3.6	3	36	185	Yes	64 GB	Scalable Performance
6334	18	36	3.6	3.7	3.6	18	165	Yes	64 GB	Optimised for highest-per-core scalable performance
6330	28	56	2	3.1	2.6	42	205	Yes	64 GB	Scalable Performance
6330N	28	56	2.2	3.4	2.6	42	165	Yes	64 GB	Networking/NFV Optimized
6330H	24	48	2	3.7	2.8	33	150	Yes		4 and 8 Socket Scalable Performance
6328HL	16	32	2.8	4.3	3.7	22	165	Yes		4 and 8 Socket Scalable Performance
6328HL	16	32	2.8	4.3	3.7	22	165	Yes		4 and 8 Socket Scalable Performance
6326	16	32	2.9	3.5	3.3	24	185	Yes	64 GB	Optimised for highest-per-core scalable performance
6314U	32	64	2.3	3.4	2.9	48	205	Yes	64 GB	Single Socket Optimized
6312U	24	48	2.4	3.6	3.1	36	185	Yes	64 GB	Single Socket Optimized
5320	26	52	2.2	3.4	2.8	39	185	Yes	64 GB	Scalable Performance
5320H	20	40	2.4	4.2	3.3	27.5	150	Yes		4 and 8 Socket Scalable Performance
5320T	20	40	2.3	3.5	2.9	30	150	Yes	64 GB	Long-life use and NEBS-Thermal Friendly
5318Y	24	48	2.1	3.4	2.6	36	165	Yes	64 GB	Scalable Performance
5318H	18	36	2.5	3.8	3.3	24.75	150	Yes		4 and 8 Socket Scalable Performance
5318N	24	48	2.1	3.4	2.7	36	150	Yes	64 GB	Networking/NFV Optimized
5318S	24	48	2.1	3.4	2.6	36	165	Yes	512 GB	Supporting Maximum Intel SGX Enclave Capacity

Model	Cores	Threads	Base (GHz)	Single Core Turbo (GHz)	All Core Turbo (GHz)	Cache (MB)	TDP (W)	Support for Intel Optane Persistent Memory 200 Series	Intel SGX Envlave capacity per processor	Features
4316	20	40	2.3	3.4	2.8	30	150		8 GB	Scalable Performance
4314	16	32	2.4	3.4	2.9	24	135	Yes	8 GB	Scalable Performance
4310	12	24	2.1	3.3	2.7	18	120		8 GB	Scalable Performance
4310T	10	20	2.3	3.4	2.9	15	105		8 GB	Long-life use and NEBS-Thermal Friendly
4309Y	8	16	2.8	3.6	3.4	12	105		8 GB	Scalable Performance