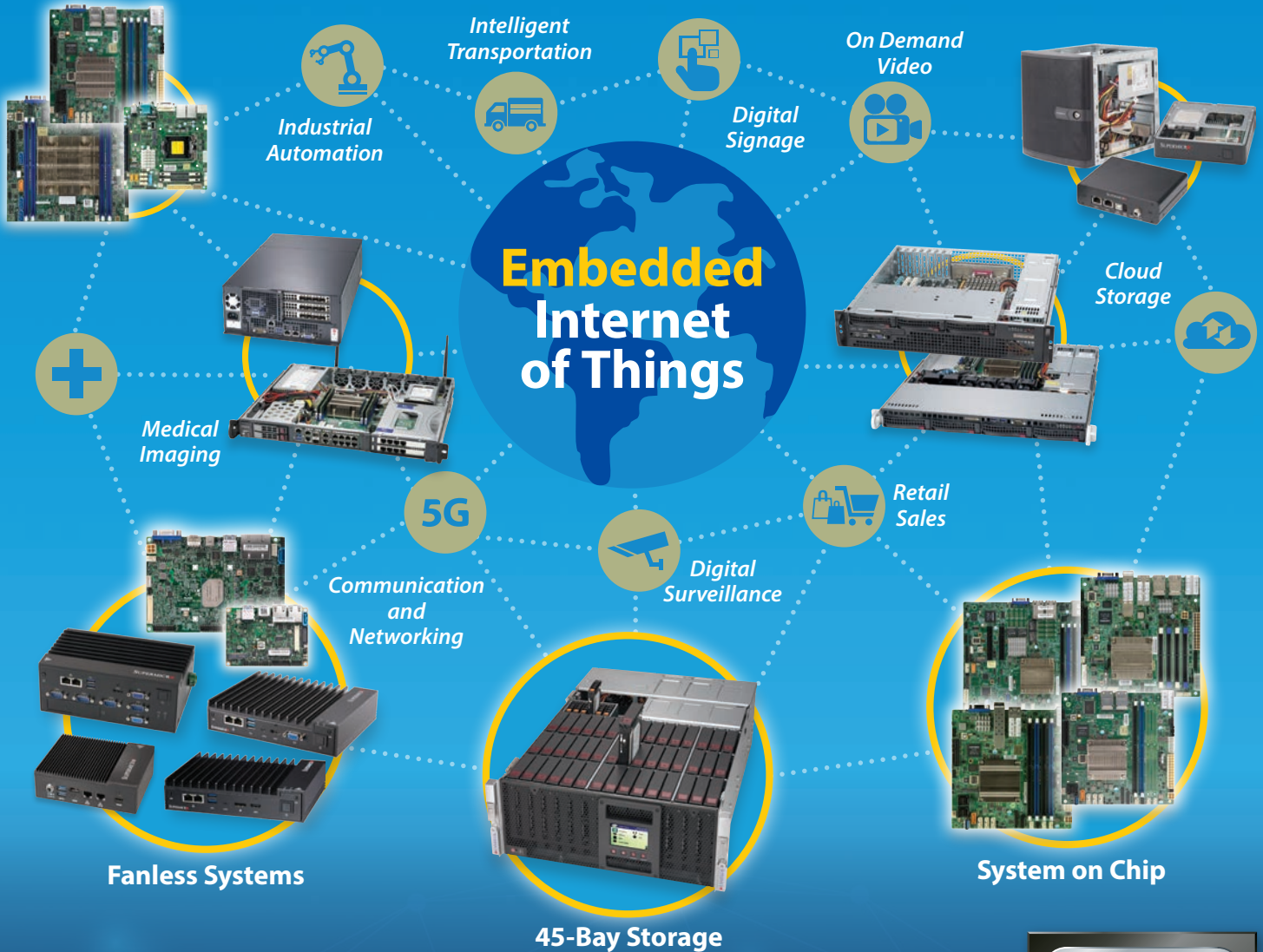




Embedded/IoT Solutions

Connecting the Intelligent World from Devices to the Cloud

Long Life Cycle · High-Efficiency · Compact Form Factor · High Performance · Global Services



**Supermicro Building Block Solutions
for Embedded Applications,
The Internet Of Things and
The Intelligent Edge**

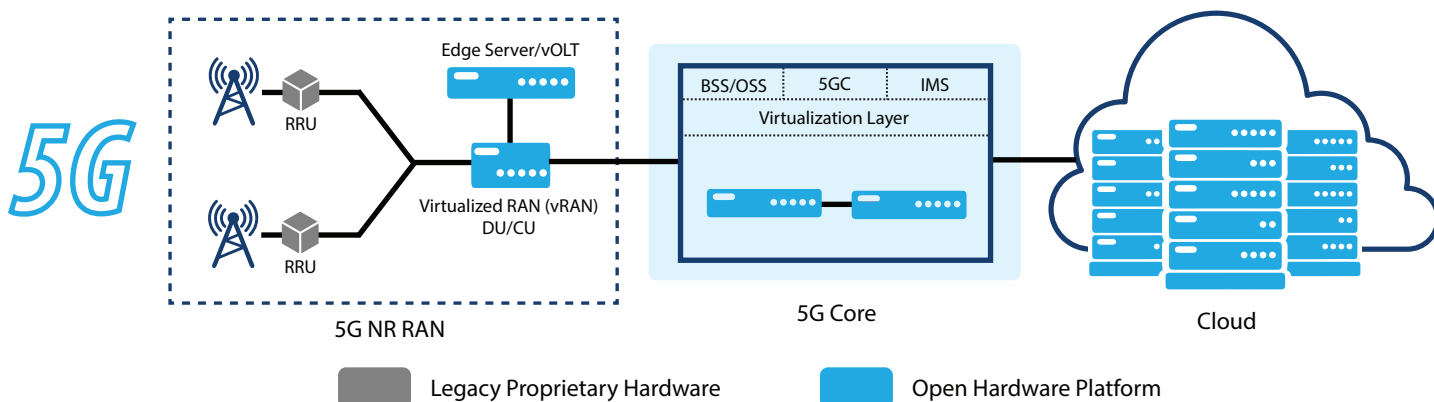


August 2020

5G Accelerates Network Transformation

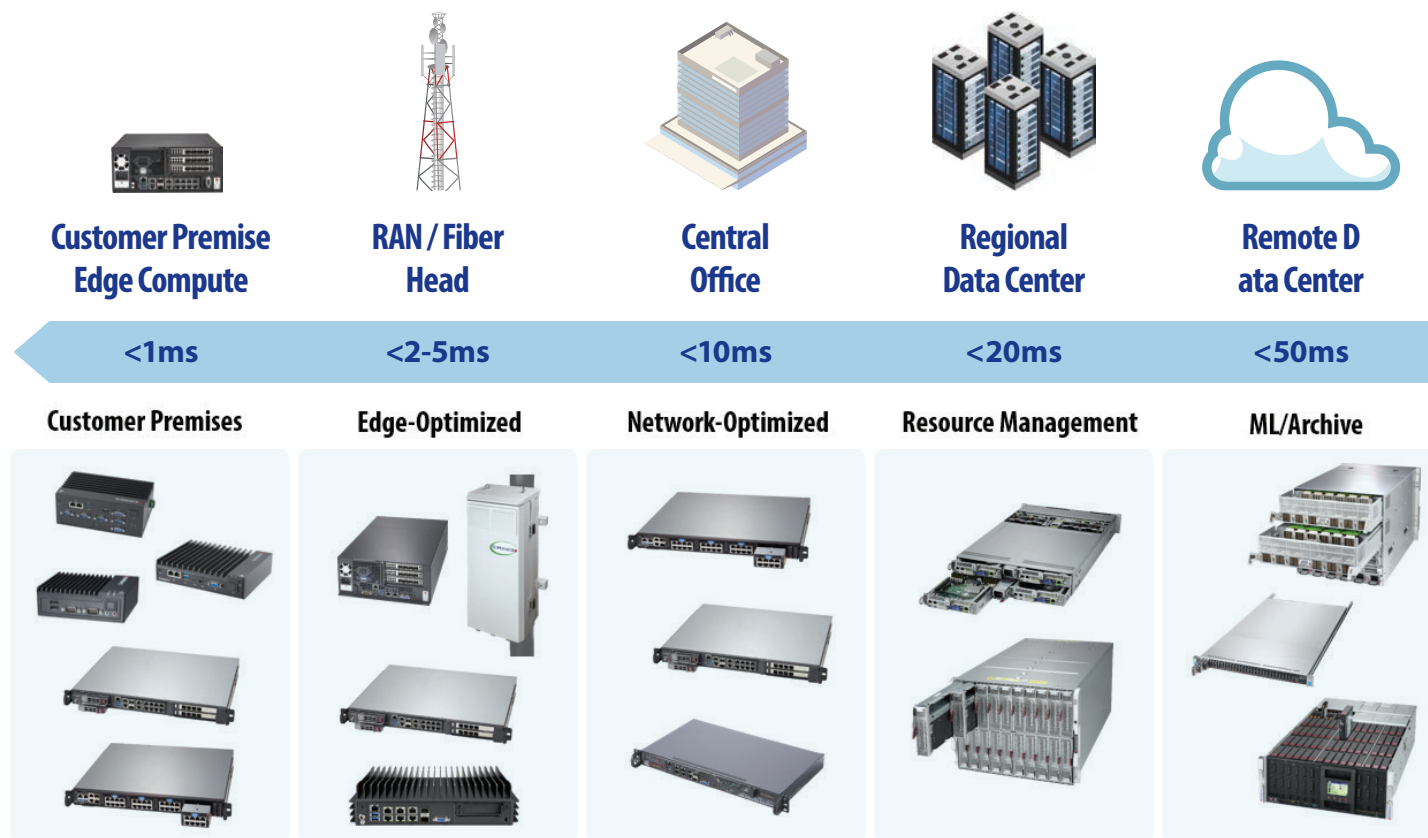
Supermicro Servers for 5G Infrastructure

Supermicro optimizes 5G virtual and container hybrid services from low-latency customer premises platforms to AI training, storage and network platforms in the data center



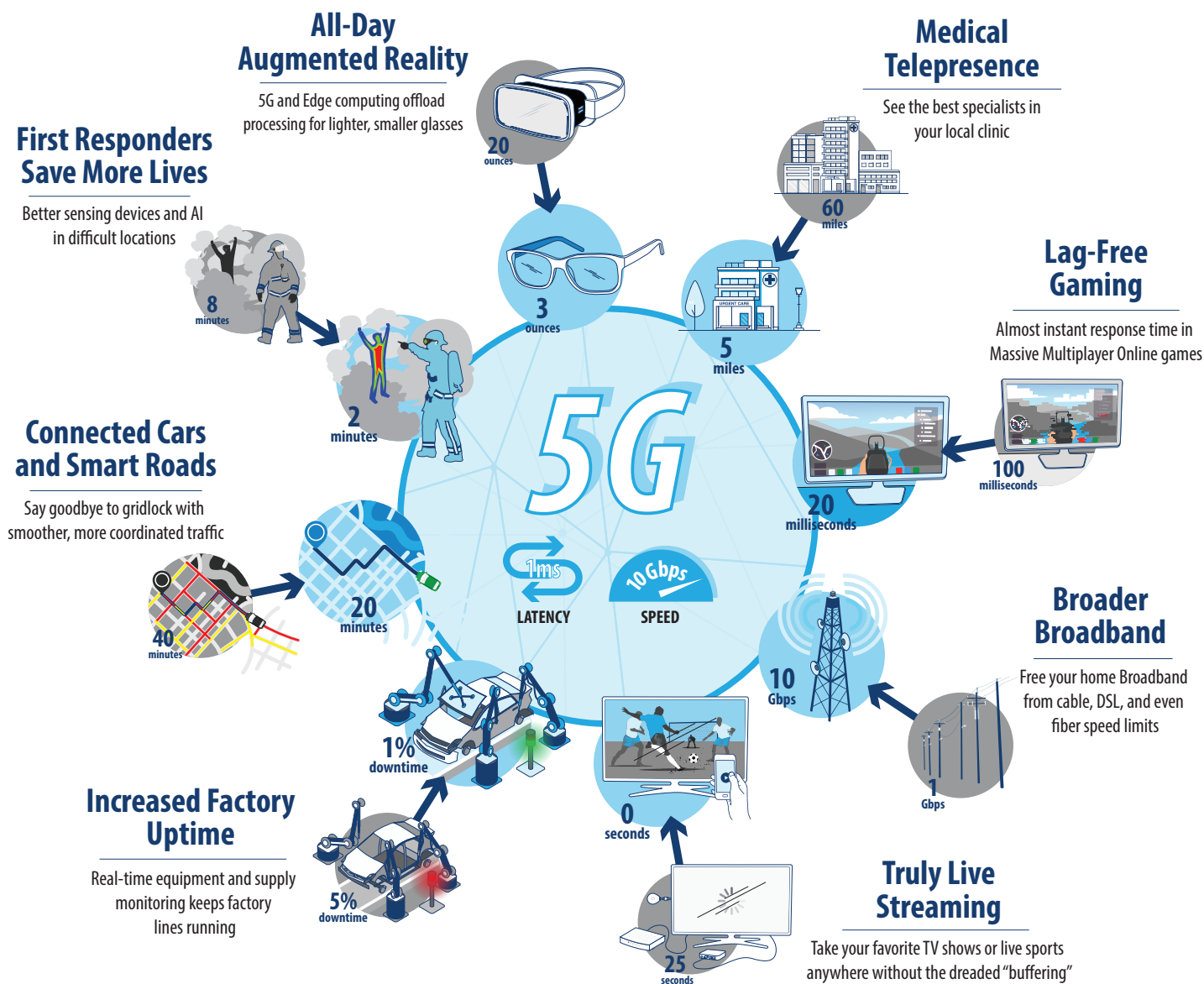
Our platforms are optimized for network virtualization and containerization of Network Functions - we enable heavier workloads onto single platforms distributed in the network with the focus of power savings, reduction of network gear and high availability in harsh conditions

Supermicro Supporting Edge-to-Cloud Infrastructure



5G and Edge Computing Power New Applications

- Open hardware and virtualization allow rapid, flexible network deployment
- Local AI inferencing for real-time, real-life services
- Streaming video content localized and optimized at the Edge
- Heterogeneous processing powers these applications right where they are needed



Outdoor Edge and 5G Use Cases



5G RAN

- For Mobile Network Operator (MNO) technical and procurement teams to roll out 5G networks
- Network Functions Virtualization (NFV) via virtual machines and containers provides vRAN functions to new (SA) and upgraded (NSA) 5G networks
- O-RAN Driven solutions for next generation 5G RAN
- Open-standard eCIPRI fronthaul connectivity via Intel® FPGA Network Acceleration Card N3000



Edge AI

- For operator services division, looking to deploy new applications
- Complements Supermicro's market-leading AI training systems
- Local AI Inferencing provides critical decision-making for real-time applications
- NVIDIA GPU cards supported
- EGX platform for rapid deployment across the network and multiple NGC-Ready for Edge certified systems
- Support of OpenVINO and Movidius AI technologies



Video Streaming

- For smart city, infrastructure, utilities, industry, and enterprise deploying localized content and services
- Maximum memory and storage
- Complete solutions including BigTwin in the data center and Red Hat® OpenShift® Container Platform
- Video transcoding infrastructure delivered and managed via containers
- Localization and local caching of content such as

Supermicro Enabling Edge IoT Services

- Wide variety of industry-leading hardware, built for the Edge and leveraging Intel® technologies
- Next-generation applications/technology will drive the need for flexible, reliable, Scalable, and easy to manage Edge operating platforms.
- Able to run any workload — VMs, containers, serverless
- Autonomous, self-managing, self-healing, self-optimizing, and low-touch deployment at scale
- Simple, secure networking with WAN optimization and zero-trust architecture
- Cost-compatible with IoT and Edge requirements

Outdoor System for Network Functions

For the Distributed Unit (DU) or Central Unit (CU), the system with additional PCIe cards can support LTE or 5G with baseband functions decoupled from the hardware and deployed on network functions virtualization (NFV) infrastructure. Specifically for DU, it will comply with O-RAN front haul LLS-C1, LLS-C2 and LLS-C3 configurations based on the different combination of PCIe cards provided in the system.



Figure 2.
1019P-FHN2T for controlled environment cards for FH and MH interfaces.



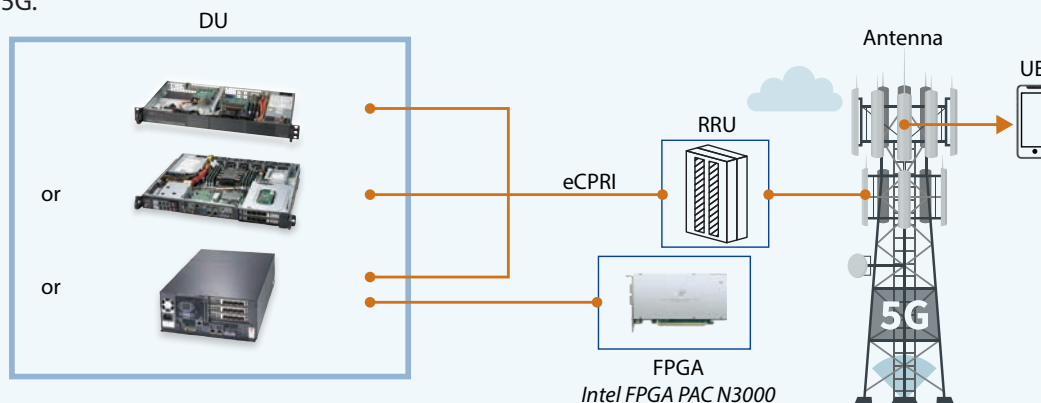
Figure 3.
E403-9P-FN2T for deployment in more demanding environments.

For the Distributed Unit (DU) or Central Unit (CU), the system with additional PCIe cards can support LTE or 5G with baseband functions decoupled from the hardware and deployed on network functions virtualization (NFV) infrastructure. Specifically for DU, it will comply with O-RAN front haul LLS-C1, LLS-C2 and LLS-C3 configurations based on the different combination of PCIe cards provided in the system.

Supermicro Supporting Edge-to-Cloud Infrastructure



The RAN DU sits between the Remote Radio Unit (RRU) and the Central Unit (CU) and includes real-time functions, baseband processing and radio frequency processing. Currently, Supermicro's is using Intel® N3000 PAC card for layer 1 FEC acceleration. Based on the O-RAN Front Haul LLS configuration, the DU can be connected to RRUs directly with SyncE and PTP support and acting as the PRTC for timing, or the DU can be connected to a cell site router which will be the PRTC. The DU/CU from Supermicro has been validated with vRAN software from AltioStar, Mavenir and Parallel Wireless for LTE and 5G.



Supermicro's Intelligent Retail Edge

Small cluster for most workloads

SYS E100-9W-H anywhere
Intel® Core i5/i7/i9 with fanless operation

Medium Cluster with AI capability

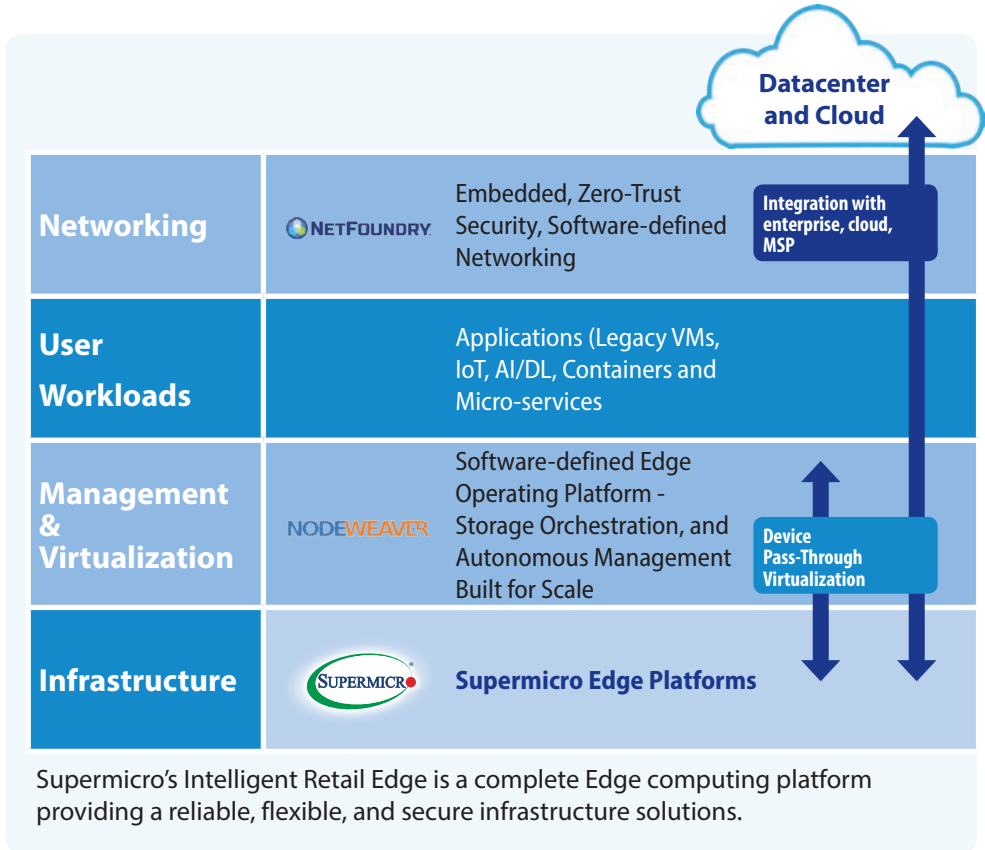
E300-9D-4CN8TP desktop
Intel® Xeon® D capable, PCI-E expansion

Rackmount cluster for extreme workloads

SYS-1019D-16C-FHN13TP
Intel® Xeon® D with 2x PCI-E expansion slots

Wallmount Cluster for extreme workloads

SYS-E403-9P-FN2T
Intel® Xeon® capable, expandable PCI expansion, hardened



Supermicro's Intelligent Retail Edge provides an integrated software-defined operating platform that significantly simplifies the deployment, management, orchestration, and networking of Edge infrastructure and applications.

The platform runs on Supermicro's IoT and Edge hardware, ranging from small Edge devices to full-scale rack-based Edge servers that can support GPU, FPGA, and other technologies.

Supermicro's Intelligent Retail Edge is offered in three different certified cluster configurations leveraging the industry-proven SuperServer platform that is optimized for specific sized stores, and application workload requirements.

- Entry-level cluster platform based on the E100, a small, powerful fanless IoT/Edge gateway server for small stores with space and power constraints, such as small convenience stores or restaurants, running basic workloads such as Point-of-Sale (POS), video surveillance, and inventory management.
- A mainstream cluster requiring a versatile, high-performance IoT/Edge server based on the E300, has a small physical footprint and superior acoustics for small to medium-sized stores running multiple applications at the Edge.
- High-end cluster configuration utilizing the 1019/5019, a short depth rack-mount Edge workhorse server with rich storage and networking options and support for accelerator and GPU technologies needed for AI/ML applications for medium to- large-sized stores, such as grocery stores and mid-sized size retailers.

Developed through a collaboration with NodeWeaver and NetFoundry, Supermicro's Integrated Retail Edge platform supports small-to-large clusters for retail applications.

Providing reliable and secure networking can be challenging in distributed Edge environments, and securing customer and point-of-sale (POS) data is critical in retail environments. Supermicro's Retail Edge platform provides simple, easy to deploy Network-as-a-Service (NaaS) connectivity powered by NetFoundry to deliver exceptional performance, zero-trust security, agility, and simplicity.

NodeWeaver's adaptive hypervisor provides secure and partitioned execution of any application without the traditional overhead of virtualization. Initial performance benchmarks show that the platform can run applications with performance near to that of bare metal execution, while maintaining the ability to provide for high availability and cloud-like flexibility.

Industrial Automation Use Cases

Factory Optimization:

Moving the industry toward Industry 4.0 through managed workloads, virtual machines, and real-time Edge compute response.

Flexible Automation and Controls:

Interoperability with existing devices and flexibility to allow for technology refresh via software defined systems.

Equipment Diagnostics:

Improve production and uptime through diagnostics & predictive maintenance via anomaly detection

Process Insights & Measurement:

Connecting the unconnected with visibility of data for enterprise insights. Ability for production to respond in real-time.

Quality Control:

Vision workloads + AI to improve production quality and reduce manufacturing defects with smart cameras + AI

Worker Safety:

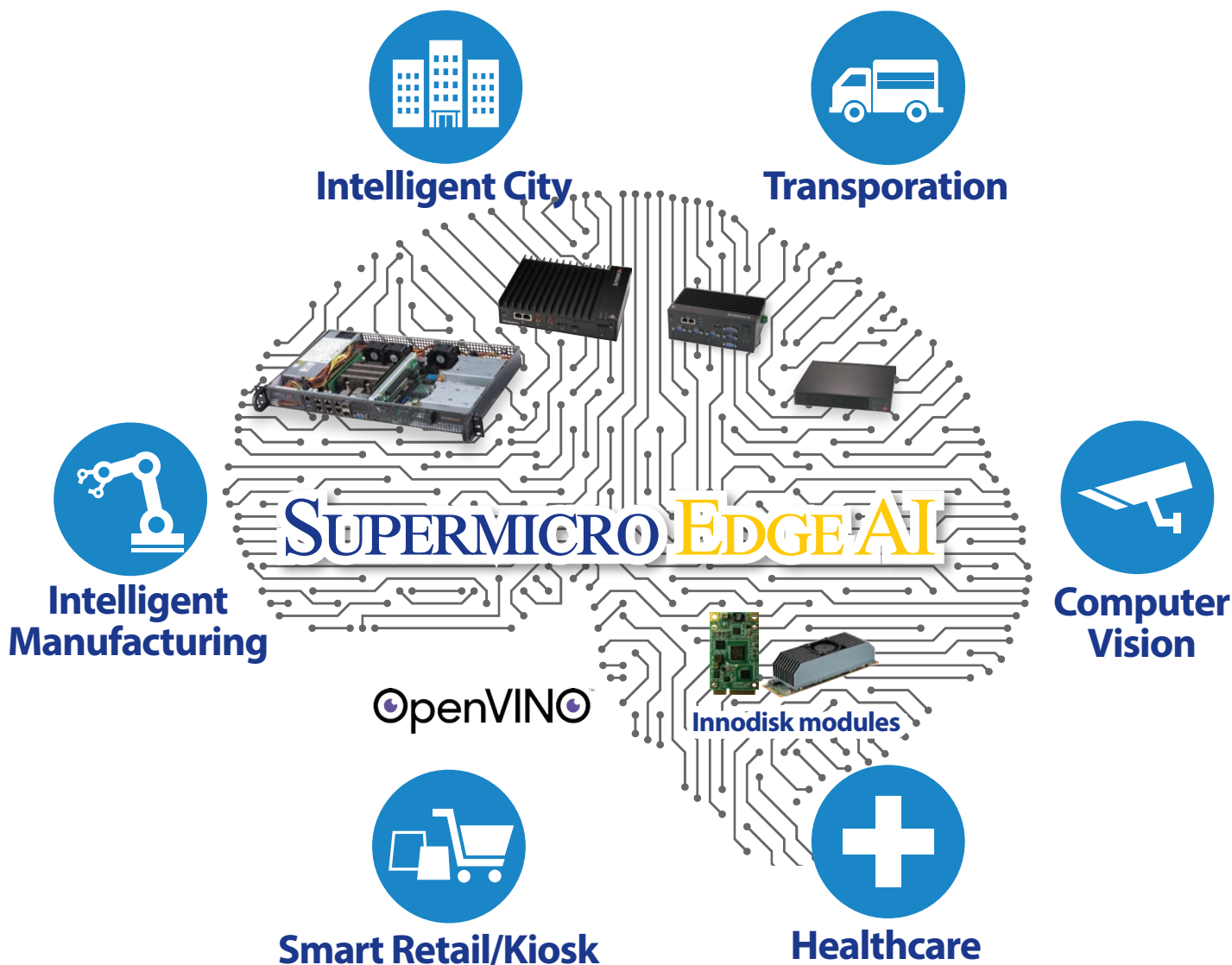
Connecting human interface via data aggregation and visual solutions for safety and productivity.



Customer Outcomes:

- Better response
- Reduced costs
- High availability
- Improved quality
- Flexible operations
- Reduced down time
- Higher yields
- Increased efficiencies

Supermicro's Intelligent Industrial IoT



Artificial Intelligence to the Edge

The biggest challenge of the connected future with smart devices is network and compute latency. Intelligent, connected devices can generate a tremendous amount of data across networks impeding the bandwidth required for quality of service while impacting the quality of experience. To reduce this impact, Supermicro is distributing the computing power at the Edge real time instead of relying on far end cloud-based datacenters for further processing.


Artificial Intelligence (AI) has the ability to innovate and advance conventional practices and business operations. To bring AI to the edge, Supermicro and our partners provide heterogeneous platforms offering a comprehensive solution portfolio of deep learning platforms, servers including acceleration engines, inference platforms, and training servers to provide the necessary workloads for all Edge to Cloud AI platforms.

Supermicro's approach to Intelligent Edge is to provide the building blocks of both hardware and software infrastructures enabling a common platform for implementing many AI models for IIoT, Healthcare, 5G, Renewable Energy, Oil/Gas and transportation. Our heterogeneous platforms provide a wide array of options based on the needs of the solution.

Supermicro Building Block Solutions for Embedded Applications, The Internet Of Things and The Intelligent Edge


Embedded Appliances

Connecting the Intelligent World from Devices to the Cloud




Intelligent Edge Servers

Expanding our Product Portfolio to address emerging Embedded/IoT Edge Market



Smart IoT Gateways

Offering a proven solution that delivers an application-ready platform



Cloud-managed Gateways: Secure, Scalable and Zero-Touch

The IoT is starting to become engrained in our everyday lives, as smart devices become commonplace, and soon it will be hard to imagine life before it. IoT gateways and industrial PCs are being deployed a masse, in order to bring compute power closer to the data. Beyond the staggering scale of growth, managing these devices results in a myriad of challenges for customers. Devices are spread across the field, often in locations that are difficult to secure and hard to reach. The scale and complexity of the Edge ecosystem means that many of the traditional processes for deploying and maintaining devices are not sufficient. Instead, customers need a solution that addresses complexities such as manage devices widely distributed, secure devices in a perimeter-less world and process data at remote locations even with unreliable connectivity and high latency.

With Supermicro cloud-managed gateways along with ZEDEDA management software, customers can streamline and simplify the management of Edge hardware across the landscape. Our high-powered, rugged devices enable the customers to move processing power out of the datacenter and closer to their Edge. New devices arrive out-of-the-box with pre-installed management software, allowing IT to remotely manage all initial and ongoing hardware orchestration.

Benefits of choosing Supermicro solutions:

- Central visibility and management over all Edge hardware
- Hardware integrity and security ensured with zero-trust model
- Zero-touch device provisioning
- Configure and manage applications at scale
- Agility and scalability with 100% cloud-based model

Microsoft Azure IoT Certified Systems



- SYS-E50-9AP
- SYS-E50-9AP-WIFI
- SYS-E100-9AP
- SYS-E100-9APP
- SYS-E100-9AP-IA
- SYS-E100-9S
- SYS-E100-9S-L
- SYS-E100-9S-E
- SYS-E102-9AP-L
- SYS-E300-8D
- SYS-E200-8D
- SYS-E200-9B
- SYS-5018A-TN4
- SYS-5018D-LN4T
- SYS-5018D-FN4T

Addressing Market needs with Products and Technology

Medical Imaging Scanners



Medical imaging is the ability to create visual representation of the interior organs and functions of the human body for clinical analysis. High performance image processing is critical for medical scanners and instrumentation such as CT, MRI, PET, OCT & Ultrasound.



Digital Signage



Digital signage provides projection display technologies such as digital images, video, streaming media, etc. found in public arenas such as stadiums, museums, hotels and restaurants, corporate buildings, airports, train and bus stations for marketing, advertising or informational purposes. Sophisticated and advanced solutions provide streaming video or multimedia content over high-speed connection services including remote management, large multiple-displays and highly interactive displays in public places for informational or advertising purposes.



Industrial Automation



Modern factories use several forms of control systems for operating mechanical sensors, switches, relays, conveyors, hydraulics, pneumatics and electrical devices. General purpose process control servers and IoT Gateways are increasingly being deployed to run industrial and business application software to help improve operations, simplify device management, and reduce maintenance costs.



Retail Kiosk, Point-of Sale, Banking ATM



Retail Kiosk, Point-of Sale, and Banking ATM are interactive computer terminals that feature embedded low-power, small form factor hardware and software that is self-contained within the machine. They provide access to information and applications for commerce, retail transaction, entertainment, information and education.



Communication Infrastructure



Network security servers monitor and control incoming and outgoing network traffic based on predetermined security rules. Intel® QAT provides cryptography engines for faster encryption and decryption of messages or information for authorized and intended use.

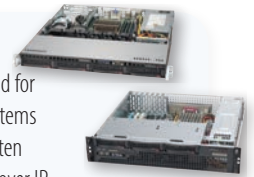


Software Defined Network (SDN), Network Functions Virtualization (NFV) (also known as Virtual Network Function (VNF)) offers new ways to design, deploy and manage data communication and networking services.

Digital Security & Surveillance



Advanced video surveillance systems are used for monitoring and observing an area. These systems include Analog or Digital cameras and are often connected to recording and Storage Devices over IP networks.



Video Surveillance as a Service refers to hosted cloud-based video surveillance. The service typically includes video recording, storage, remote viewing, management alerts, cyber security and more. Cloud technology advances and greater bandwidth availability are making VSaaS – also called cloud video surveillance – increasingly attractive.

Smart Cities



Smart Cities are a vision of new urban development that integrate multiple city resources and services using information technology and Internet of Things (IoT) solutions. The goal is to build a highly efficient system that integrates all local services such as public transportation, schools, libraries, malls, utilities, law enforcement, hospitals, and other community services.

Information and communication technology (ICT) is used to enhance community resources and services, improve response time, provide better and more efficient utilization of resources, reduce cost, and improve communication between citizens and government.

Cloud, Warm and Cold Storage



Cloud data storage is a service model in which information is remotely stored, managed, maintained and made accessible to users over the internet. Warm and cold data is data that is accessed less frequently and is usually stored on lower performing and less expensive storage environments either on premises or in the cloud.



Intelligent Transportation



Transport control systems provide innovative and advanced applications and services relating to different modes of transport and traffic management. These systems enable both transport authorities and commuters to be better informed, and make smarter and coordinated use of various public transport systems.



Electronic Test Equipment



Test equipment is used to generate signals and capture responses from semiconductor devices and electrical circuits, with the ability to diagnose faults and/or guarantee the proper operation of the electronic devices. Electronic test equipment ranges from the very simple to extremely complex and sophisticated instrumentation that are used during semiconductor manufacturing, inspection, test and debug.



Intel® Xeon® Scalable Processors **NEW!**

Single/Dual Processor System Solutions (Cascade Lake/Skylake, LGA 3647)



Supermicro's new generation X11 DP/UP Embedded Motherboards and Systems offer the highest levels of performance, efficiency, security and scalability in the industry with up to: 3TB DDR4 2666MHz in 24 DIMM slots per node, 7 PCI-E slots, SAS 3.0/SATA 3.0/NVMe hot-swap HDD/SSD support, 10GBase-T/10G SFP+/56Gbps FDR InfiniBand networking options, SATA Disk-on-Module (DOM), and IPMI 2.0 plus KVM with dedicated LAN, and can support new SKU of 2nd gen Intel® Xeon® Scalable processors. The embedded boards offer 7 year life cycle.

Intel® Xeon® Scalable Processor Systems



SYS-1019P-FHN2T

Compact • Front Access • 1U WIO System



SYS-E403-9P-FN2T

3-Slot • Box PC • Edge System



SYS-5019P-M Series

1U • 17.2" • Mainstream

UP Motherboard Solutions

C621 | 28 cores | 165W



X11SPL-F

C622 | 28 cores | 205W



X11SPH-nCTF/nCTPF

C622 | 28 cores | 205W



X11SPW-TF/CTF

C622 | 28 cores | 205W



X11SPi-TF

C622 | 28 cores | 165W



X11SPM-F/TF/TPF

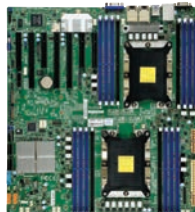
DP Motherboard Solutions

-N: C621 | 28 cores | 205W
-NT: C622 | 28 cores | 205W



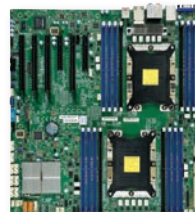
X11DPi-N/NT

C624 | 28 cores | 165W



X11DPH-T

C621 | 28 cores | 205W



X11DAi-N

C621 | 28 cores | 205W



X11DPX-T

X11 Intel® Xeon® Processor D-2100 **NEW!**

High Core, High Performance (FCBGA 2518, SoC)

Supermicro X11 Generation of Motherboards/Servers support Intel® Xeon® Processors D-2100 (Formerly Skylake-D) series system-on-chip (SoC) Processors.

Include up to four integrated ports of 10 Gigabit Intel® Ethernet, and up to 512 GB of a addressable memory with ErrorCorrecting Code (ECC), Intel® QuickAssist Technology (QAT) provides up to 100Gbps of hardware acceleration for compute-intensive, such as cryptography, encryption, and description.

Server Solutions

NEW!



SYS-1019D-16C-RAN13TP+
SYS-1019D-14CN-RAN13TP+
SYS-1019D-4C-RAN13TP+

Intel® Xeon® D-2100IT/2100NT series
14/16 cores

NEW!



SYS-1019D-16C-RDN13TP+
SYS-1019D-14CN-RDN13TP+
SYS-1019D-4C-RDN13TP+

Intel® Xeon® D-2100IT/2100NT series
14/16 cores

NEW!



SYS-E403-9D-16C-IPD2
SYS-E403-9D-14CN-IPD2

Intel® Xeon® D2100IT/D2100NT series
14/16 cores

NEW!



SYS-E302-9D
Intel® Xeon® D-2100IT series
4 cores

NEW!



SYS-E403-9D-4C-FRN13+
SYS-E403-9D-14CN-FRN13+
SYS-E403-9D-16C-FRN13+

Intel® Xeon® D-2100IT/2100NT series
4/14/16 cores



SYS-E403-9D-4C-FN13TP
SYS-E403-9D-12C-FN13TP
SYS-E403-9D-14C-FN13TP
SYS-E403-9D-16C-FN13TP
SYS-E403-9D-8CN-FN13TP
SYS-E403-9D-14CN-FN13TP

Intel® Xeon® D-2100IT/2100NT series
4/8/12/14/16 cores

NEW!



SYS-E403-9D-4C-FRDN13+
SYS-E403-9D-14CN-FRDN13+
SYS-E403-9D-16C-FRDN13+

Intel® Xeon® D-2100IT/2100NT series
4/14/16 cores



SYS-1019D-16C-FRN5TP
SYS-1019D-14C-FRN5TP
SYS-1019D-12C-FRN5TP
SYS-1019D-FRN5TP

Intel® Xeon® D-2100IT series
8/12/14/16 cores



SYS-1019D-FHN13TP
SYS-1019D-4C-FHN13TP
SYS-1019D-14CN-FHN13TP
SYS-1019D-16C-FHN13TP

Intel® Xeon® D-2100IT/2100NT series
4/8/14/16 cores



SYS-E300-9D-8CN8TP
SYS-E300-9D-4CN8TP
SYS-E301-9D-8CN8TP

Intel® Xeon® D-2100IT/2100NT series
4/8 cores



SYS-5019D-FN8TP
SYS-5019D-4C-FN8TP
SYS-5019D-RN8TP

Intel® Xeon® D-2100IT/2100NT series
4/8 cores



SYS-1019D-FRN8TP
Intel® Xeon® D-2146NT
8 cores

Motherboard Solutions

D-2123IT | 4 Core | 60W



X11SDV-4C-TLN2F

D-2141I | 8 Core | 65W



X11SDV-8C-TLN2F
X11SDV-8C+-TLN2F

D-2166NT | 12 Core | 85W



X11SDV-12C-TLN2F

D-2183IT | 16 Core | 100W



X11SDV-16C-TLN2F
X11SDV-16C+-TLN2F

D-2146NT | 8 Core | 80W



X11SDV-8C-TP8F

D-2166NT | 12 Core | 85W



X11SDV-12C-TP8F

D-2183IT | 16 Core | 100W



X11SDV-16C-TP8F

X11 Intel® Xeon® Processor E-2100 and E-2200 NEW!

High Core, High Performance (FCLGA 1151)

Supermicro X11 Generation MBD and Servers support Intel® Xeon® E-2100 and E-2200 (Coffee Lake / Refresh) Series processors with enterprise-class reliability and performance, offering server-class motherboards and entry-level servers. Intel® Xeon® E introduce the first 6-core/12-Thread processors with optimized 14 nm technology. These processors offer thermal design power (TDP) options of (35W - 95W) to fit specific designs configurations with performance and low-power requirements. The E series processors are ideally suited for a wide range of embedded/IoT, Networking and Storage Applications.

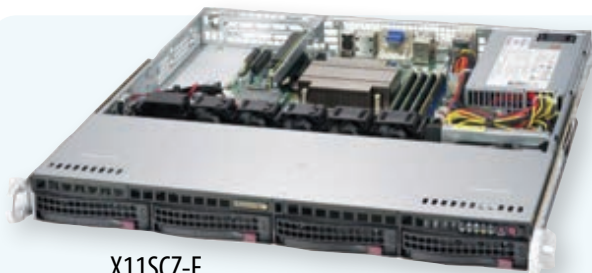
Server Solutions

SYS-1019C-FHTN8 1U • 15" depth

- Up to 128GB ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
- 8x 1GbE, 1 dedicated IPMI LAN
- 1 VGA, 2 USB 3.1, 2 USB 2.0
- 1 PCI-E 3.0 x16
- Dual M.2 M key (22110/2280)
- 2x 2.5" Hot Swap, 2x 2.5" Internal SATA3 Drive Bay



X11SCM-F
8 cores | 80W



SYS-5019C-MHN2 1U • 19.8" depth

- Up to 128GB ECC UDIMM, up to DDR4-2666MHz; 4 DIMM slots
- 1 PCI-E 3.0 x16 slot
- 4 Hot-swap 3.5" drive bays
- Dual LAN with Intel® Ethernet Controller i219LM and i210AT
- 1U 350W Multi-output Platinum Level power supply

X11SCZ-F
8 cores | 95W



SYS-1019C-HTN2
Up to 8 cores | 80W



SYS-5019C-WR
Up to 6 cores | 95W



SYS-E300-9C
Up to 8 cores | 65W

Motherboard Solutions

C246 | 6 cores | 95W

C246 | 6 cores | 95W

C246 | 6 cores | 95W

C246 | 6 cores | 95W

C246 | 6 cores | 95W

C246 | 6 cores | 95W



X11SCM-F



X11SCM-LN8F



X11SCH-F



X11SCH-LN4F



X11SCZ-F



X11SCW-F

X12 Intel® Xeon® W-1200/10th Gen Core Processors NEW!

Up to 10 Cores with W480E or Q470E Chipset (Comet Lake, LGA 1200)

Supermicro's newest generation X12 UP Embedded Motherboards with Intel's Xeon® W-1200 series and 10th Generation Core i9/i7/i5/i3/Pentium/Celeron series processor offer the highest levels of performance, efficiency, security and scalability in the industry with up to: 128GB DDR4 2933MHz in four DIMM slots, CPUs up to 10 cores, PCI-E slots with bifurcation support, USB 3.2 Gen 2, M.2 E/M-keys, and SATA 3.0 (6Gbps).

Designed with performance, reliability, manageability, and long life support in mind, Supermicro's single processor motherboards are the perfect solution for a variety of multitasking and heavy workload applications.

Motherboard Solutions

W480

Up to 10 cores | 125W



X12SAE

W480

Up to 10 cores | 125W



X12SCA-F

W480E

Up to 10 cores | 65W
2W Audio Amplifier



X12SCV-LVDS

W480E

Up to 10 cores | 125W
2 x 1G Base-T



X12SCZ-F

W480E

Up to 10 cores | 125W
2 x 10G Base-T + 2 x 1G Base-T



X12SCZ-TLN4F

Q470E

Up to 10 cores | 125W
VGA, HDMI, DVI-D, DP



X12SCQ

Q470E

Up to 10 cores | 125W
2 x 1G Base-T



X12SCZ-QF

X10 Intel® Xeon® Processor D-1500

High Core, High Performance, Low Power (FCBGA 1667, SoC)

Supermicro X10 Generation of Motherboards/Servers support Intel® Xeon® Processors D-1500 (Formerly Broadwell-DE) series system-on-chip (SoC) Processors. Based on Intel's third-generation 64-bit system on a chip (SOC) and 14 nm silicon technology, the Supermicro product lineup offers processor scalability from two up to sixteen cores, making it the perfect choice for a broad range of high-density, high-performing, midrange-power solutions (TDP ~25W to 65W) that brings superior design solutions to the intelligent Edge.

The Intel® Xeon® processor D-1500 product family is offered with a seven-year extended supply life and 10-year reliability for Internet of Things designs.

Mini-ITX Server & Motherboard Solutions

SYS-5018D-FN4T*1U • 9.8" depth

- Front I/O, Space-efficient, compact design
- Intel® Xeon® processor D-1541, Single socket FCBGA 1667; 8-Core, 45W
- 1 PCI-E 3.0 x 16, 1x M.2 PCI-E 3.0 x4 (Supports NVMe, AHCI) 2242/2280
- Up to 128GB ECC RDIMM DDR4 2400MHz or 64GB ECC/non-ECC UDIMM in 4 sockets
- Dual 10GbE LAN and Intel® i350-AM2 dual port GbE LAN



Intel® Xeon® D-1541
8 cores | 45W

D-1587 | 16 Core | 65W



X10SDV-16C+-TLN4F

D-1557 | 12 Core | 45W



X10SDV-12C-TLN4F

D-1528 | 6 Core | 35W



X10SDV-6C-TLN4F

D-1567 | 12 Core | 65W



X10SDV-12C+-TLN4F

D-1518 | 4 Core | 35W



X10SDV-4C+-TLN4F

D-1518 | 4 Core | 35W



X10SDV-TP8F

D-1508 | 2 Core | 25W



X10SDV-2C-TLN2F

D-1567 | 65W



X10SDV-12C+-TP8F

D-1541 | 8 Core | 45W



X10SDV-TLN4F

D-1541 | 8 Core | 45W



X10SDV-8C-TLN4F

D-1541 | 8 Core | 45W



X10SDV-F

D-1541 | 8 Core | 45W



X10SDV-8C+-LN2F

D-1518 | 4 Core | 35W



X10SDV-4C-TLN4F

D-1587 | 16 Core | 65W



X10SDV-7TP8F

D-1521 | 4 Core | 45W



X10SDV-4C-TLN2F

Flex-ATX Server & Motherboard Solutions

SYS-1018D-FRN8T1U • 16.9" depth

- Intel® Xeon® SoC 16 Core, 32 Threads, 65W, 1.7~2.3GHz
- VT-d/x, TXT, AES-NI, Intel® Xeon® RAS, Built-in 10GbE
- Up to 128GB 2133MHz DDR4 RDIMM or 64GB 2133MHz ECC/Non-ECC UDIMM
- IPMI 2.0 with KVM Dedicated port
- 6x GbE LAN and Dual 10G SFP+



Intel® Xeon® D-1587
16 cores | 65W

D-1587 | 16 Core | 65W



X10SDV-7TP8F

D-1518 | 4 Core | 35W



X10SDV-TP8F

D-1537 | 8 Core | 35W



X10SDV-7TP4F

D-1518 | 4 Core | 35W



X10SDV-4C-7TP4F

D-1508 | 2 Core | 25W



X10SDV-2C-7TP4F

D-1508 | 2 Core | 25W



X10SDV-2C-TP8F

D-1518 | 4 Core | 35W



X10SDV-4C+-TP4F

D-1508 | 2 Core | 25W



X10SDV-2C-TP4F



* Microsoft Azure Certified. Please see page 44 for complete list.

X11 Intel® Xeon® E3-1200 v6/v5

(Kabylake/Skylake, FCLGA 1151)

Supermicro X11 Single Processor servers now support E3-1200 v6/v5 (Kabylake/Skylake) series processors. Server motherboards coupled with the long life C236 PCH Chipset provide up to 7 years of extended life for embedded applications. These systems deliver breakthrough performance, high performance graphics, stronger security and power efficiency over previous generation products. The systems are ideal for a wide range of IoT applications, including industrial control and automation, retail kiosks and medical devices.

Server Solutions

Up to 4 cores | 80W



SYS-5019S-MN4

Up to 4 cores | 80W



SYS-5019S-MT

Up to 4 cores | 80W



SYS-1019S-MCOT



Up to 4 cores | 80W
SYS-1019S-WR

Up to 4 cores | 80W



SYS-5019S-WR

Up to 4 cores | 80W



SYS-5019S-L

Up to 4 cores | 80W



SYS-5019S-ML

Up to 4 cores | 80W



SYS-5019S-M

Up to 4 cores | 80W



SYS-5019S-MR

Motherboard Solutions

4 cores | 80W



X11SSH-F

4 cores | 80W



X11SSH-LN4F

4 cores | 80W



X11SSH-TF

4 cores | 80W



X11SSH-CTF

4 cores | 80W



X11SSM

4 cores | 80W



X11SSM-F

4 cores | 80W



X11SSL

4 cores | 80W



X11SSL-F

4 cores | 80W



X11SSL-CF

4 cores | 80W



X11SSL-nF

4 cores | 80W



X11SSW-F

4 cores | 80W



X11SSW-TF

4 cores | 80W



X11SSW-4TF

4 cores | 80W



X11SSi-LN4F

4 cores | 80W



X11SSA-F

4 cores | 80W



X11SAE

4 cores | 80W



X11SAE-F

4 cores | 80W



X11SAE-M

4 cores | 80W



X11SSZ-F

4 cores | 80W



X11SSZ-QF

4 cores | 80W



X11SSZ-TLN4F

A2 Intel® Atom™ C3000

High Density, Low Power Solutions (Denverton, FCBGA 1310)

Supermicro A2 Generation of Motherboards/Servers support Intel® Atom Processors C3000 (Formerly Denverton) series system-on-chip (SoC) Processors.

Based on low-power Goldmont microarchitecture and 14-nanometer process technology, this product family extends the scalability of Supermicro Products into industry-leading performance per watt, low thermal design power (TDP), and unprecedented levels of configurable high-speed I/O for accelerated innovation across networking, storage, Internet of Things (IoT), and Scalable solutions. It also offers hardware assist Intel® QuickAssist Technology (Intel® QAT) to accelerate storage compression and cryptographic workloads.

Server Solutions

SYS-5019A-FTN41U • 9.8" depth

- 1x 3.5" or 4x 2.5" internal drive bays
- 1 PCI-E 3.0 x4, 1 M.2 (M key for SSD, 2242/2280, PCI-E 3.0 x2 or SATA3)
- Up to 256GB ECC RDIMM DDR4 2400MHz or 64GB ECC/non-ECC UDIMM in 4 DIMM slots
- 4 GbE LAN, 1 dedicated IPMI LAN



Intel® Atom™ C3758
8 cores | 25W

SYS-5019A-FN5T1U • 9.8" depth

- 1 PCI-E 3.0 x8, 1 M-Key 2242/80 supports PCI-E 3.0 x2/SATA
1 B-Key 3042/2280 supports PCI-E 3.0 x2/SATA/USB
- 4x 10GbE LAN ports, 1x 1GbE LAN port (IPMI shared LAN), 1x COM, 4x USB 3.0
- SoC controller for 2 SATA3 (6Gbps) ports
- 1x 3.5" or 2x 2.5" HDD



Intel® Atom™ C3958
16 cores | 31W

Intel® Atom™ C3558
4 cores | 16W 



SYS-E302-9A

Intel® Atom™ C3558
4 cores | 16W



SYS-E200-9A

Intel® Atom™ C3858
8 cores | 25W



SYS-E300-9A-8CN10P

Intel® Atom™ 3850
12 core | 25W



SYS-5019A-12TN4

Intel® Atom™ C3338
2 core | 9W



SYS-5029A-2TN4

Motherboard Solutions

Mini-ITX

C3338: 2 cores | 9W C3558: 4 cores | 16W C3758: 8 cores | 25W C3858: 12 cores | 25W C3958: 16 cores | 31W C3958: 16 cores | 31W C3958: 16 cores | 31W



A2SDi-2C-HLN4F



A2SDi-4C-HLN4F



A2SDi-8C/8C+-HLN4F



A2SDi-12C-HLN4F



A2SDi-16C-HLN4F



A2SDi-H-TP4F



A2SDi-16C-TP8F

Mini-ITX

C3758: 8 cores | 25W C3858/C3850: 12 cores | 25W C3708: 8 cores | 17W C3858: 12 cores | 25W C3958: 16 cores | 31W C3558: 4 cores | 16W C3758: 8 cores | 25W



A2SDi-H-TF



A2SDi-TP8F/LN4F



A2SDV-8C-TLN5F



A2SDV-12C+-TLN5F



A2SDV-16C-TLN5F



A2SDV-4C-LN8F/LN10PF



A2SDV-8C-LN8F/LN10PF

A1 Intel® Atom™ C2000

High Density, Low Power Solutions (Rangeley & Avoton, FCBGA 1283)

Supermicro A1 Generation of Motherboards/Servers support Intel® Atom Processors C2000 (Formerly Avoton, Rangeley) series system-on-chip (SoC) Processors.

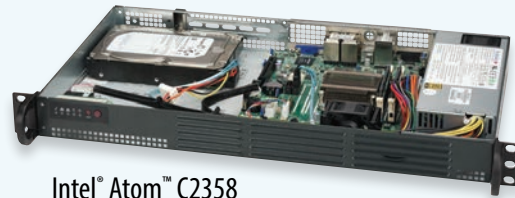
Based on low-power Silvermont microarchitecture and 22-nanometer process technology, this product family extends the scalability of Supermicro Products into smaller footprints, low power, and hardware assisted encryption/compression engines for networking communications, storage and intelligent systems applications.

This product family offers multi-core processing capabilities (from two cores to eight cores), a range of thermal design power (TDP) from 7 to 20 watts, supports energy-efficient network designs with dual 1G to Dual 10G LAN Ports, Multiple Display capabilities, including fanless embedded designs.

Server Solutions

SYS-5018A-LTN4 1U • 9.8" depth

- Up to 2 DIMMs, 16GB of DDR3 ECC SODIMM 1333MHz
- 2x 3.5" or optional 4x 2.5" internal SATA2 and SATA3 Drive Bays
- 1x PCI-E 2.0 x8 Slot, 2x USB 3.0, 2x USB 2.0, VGA, COM,
- **Quad** GbE LAN ports, IPMI 2.0 on Dedicated LAN port
- 200W Gold Level Low-Noise Power Supply



Intel® Atom™ C2358
2 cores | 7W



SYS-5028A-TN4 Mini Tower

- 4 DIMMs / 64GB of DDR3 ECC SODIMM 1600MHz
- 4x 3.5" hot-swap SATA trays: 2x 2.5" internal HDD Drive Bays
- 1 PCI-E 2.0 x8 Slot, 2 USB 3.0, 2 USB 2.0, VGA, COM,
- **Quad** GbE LAN ports, IPMI 2.0 on Dedicated LAN port
- 250W Bronze Level Low-Noise Power Supply

Intel® Atom™ C2758
8 cores | 20W



Intel® Atom™ C2550
4 cores | 14W

SYS-5018A-MLTN4



Intel® Atom™ C2758
8 cores | 20W

SYS-5018A-FTN4



Intel® Atom™ C2750
8 cores | 20W






SYS-5018A-TN4*



Intel® Atom™ C2758
8 cores | 20W

SYS-5018A-TN7B

Motherboard Solutions

Mini-ITX		Proprietary		mATX	
-2550F: C2550 4 cores 14W	C2358 2 cores 7W	-2558F: C2558 4 cores 15W	-2550F: C2550 4 cores 14W	-2550F: C2550 4 cores 14W	-2550F: C2550 4 cores 14W
-2750F: C2750 8 cores 20W		-2758F: C2758 8 cores 20W	-2750F: C2750 8 cores 20W	-2750F: C2750 8 cores 20W	-2750F: C2750 8 cores 20W
					
A1SAi-2550F/2750F	A1SRi-2358F	A1SRi-2558F/2758F	A1SA7-2550F/2750F	A1SAM-2550F/2750F	



* Microsoft Azure Certified. Please see page 44 for complete list.

Intel® Xeon® E3-1500 v5

Pro Graphics P580 GTe4 (FCBGA 1440)

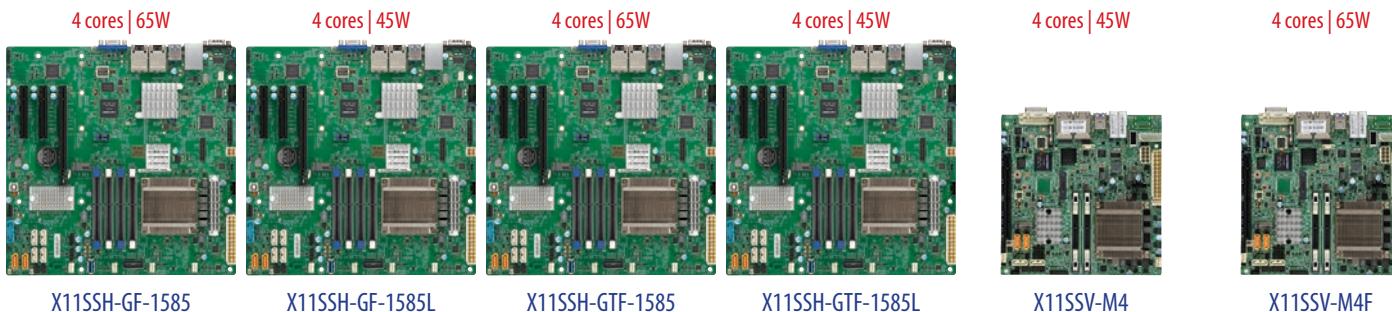
Supermicro X11 Single Processor servers with E3-1500 v5 (Skylake-H) series processors provide up to 26% more overall graphics performance than the previous-generation E3-1200 v4 processors. For dense and high-capacity media processing over the net, these systems can deliver up to 18 AVC streams or 8 HEVC streams at 1080p 30 frames per second (FPS), or 2 HEVC streams at 4K 30 FPS.

SYS-5019S-TN41U • 9.8" depth

- Single socket FCBGA 1440 supports Intel® Xeon® processor E3-1585 v5, 8 Threads
- Intel® C236 chipset
- 1x 3.5" or 4x 2.5" HDD
- Up to 32GB Unbuffered ECC SO-DIMM DDR4 2133MHz; 2 DIMM slots
- 1 PCI-E 3.0 x16, 1 Mini-PCI-E with mSATA, 1 M.2 (M Key, 2242/2280)



Intel® Xeon® E3-1585
4 cores | 65W



X11 Intel® Core™ i9, i7, i5, i3, 8th/9th Gen Single Processor

Up to 6 cores with Q370 Chip Set (Coffee-Lake, FCBGA 1151)

Supermicro single processor X11 designs feature the Intel® B360/Q370/H310 chipset which support the Intel® 8th Generation Core™ i7/i5/i3 processor family. With outstanding features that include up to 64GB non-ECC fast DDR4 DRAM in 4 DIMMs, USB 3.0/USB 3.1, PCI-E 3.0 M.2, and SATA 3.0 (6Gbps) HDD. With support for next generation graphics controller, 4K HD graphics resolution and multiple displays. Designed with performance, reliability, manageability and long life in mind, Supermicro's single processor motherboards are the perfect solution for a variety of multi-tasking, heavy workload applications.

SYS-E300-9C Mini-1U • 10" width

- 2 Internal 2.5" fixed drive bays with bracket
- 1 PCI-E 3.0 x16 AOC slot (LP) open slot (space share with top 2.5" drive bay)
- Up to 64GB unbuf. non-ECC SO-DIMM, DDR4-2666Mz; in 2 DIMM slots
- M.2 M key: SATA/PCI-E 3.0 x4, support 2242/2280 length
- M.2 E key: PCI-E 3.0 x1, support 2230 length
- 2x GbE LAN ports, 4 USB 3.1 (2 type A and 2 type C)



Intel® Q370
8 cores | 65W



Intel® Core™ i7, i5, i3 Single Processor

Higher Performance with improved graphics and better power efficiency (Skylake-S/Kabylake-S)



The 7th/6th Gen Intel® Core™ processors deliver significant improvements in graphics performance that offers stunning visuals for gaming as well as compelling 4K content creation and media playback via AVX 2.0. Offers enhanced security through AES instructions for faster encryption as well as BIOS/FW protection, new I/O connectivity and multiple independent display capabilities.

Server Solutions

SYS-1019S-M2 Compact 1U • 16.9" depth

- Up to 64GB Unbuffered non-ECC, DDR4-2400MHz in 4 DIMM slots
- Intel® 7th/6th Generation Core™ i7/i5/i3 series, Intel® Celeron®, Intel® Pentium®
- Remote management via IPMI or vPro | Q170
- 2 Gigabit LAN ports, 2x DP, DVI-I, 3 independent displays
- Full Height and Full Length add on card support
- Power redundancy or BBP® support



Intel® Q170
4 cores | 80W

SYS-5019S-M21U • 19.85" depth



Intel® C236
4 cores | 80W

- Up to 4 DIMMs, 64 GB of 2400MHz DDR4 UDIMM ECC/NON-ECC
- Intel® Xeon® E3-1200 v6/v5 & 7th/6th Gen Intel® Core™ i7, i5, i3, Pentium®, Celeron® processor in LGA1151 | C236
- 2 DP, DVI-I, total 3x independent display
- 4x 3.5" SATA3 hot-swap drive bays
- Intel® vPro™ and AMT
- 2 Gigabit LAN with AMT
- 1 PCI-E 3.0 x16 FH, FL slot
- 7 year life cycle

SYS-5029S-TN2 Mini Tower



Intel® Q170
4 cores | 65W

- Compact Mini Tower 7th/6th Gen. Intel® i7/i5/i3 Core™ Server
- 32GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
- 7th/6th Generation Intel® Core™ i7/i5/i3, Pentium and Celeron Processor in LGA1151 Socket | Q170
- Up to 4 Hot-Swap 3.5" SATA3 HDD, 1 internal 2.5" fixed HDD and 1 M.2 (M key 2242/80 PCI-E 3.0 x4)
- 2 Gigabit LAN ports
- Embedded long life
- Quiet Operation
- 1 slim DVD-ROM drive bay (shared with 1 internal 2.5" drive bay)

Motherboard Solutions

4 cores | 91W



X11SSQ/L

4 cores | 91W



X11SSZ-QF

4 cores | 91W



X11SSZ-TLN4F/F

4 cores | 91W



X11SSV-Q

4 cores | 91W



X11SSV-LVDS

Intel® Atom™ & Intel® Pentium Processors

(Apollo Lake)

Supermicro X11 Generation of Motherboards/Servers support Intel® Atom processor x5-E3900 and Pentium processor N4200 (Formerly Apollo Lake) series **system-on-chip (SoC)** Processors.

Based on Goldmont architecture and utilizing Intel's industry-leading 14 nm process technology, the Supermicro high density, low-power Motherboard/Server solutions provide great options for value-segment buyers who need basic functionality at an affordable price. The solutions are ideal as IoT Gateway/ Edge Computing, that stronger focus on data collection and real-time communication over networks, provide telemetry and usage information helping to drive predictive analytics, even perform inference locally to take actions without latency. Empowers real-time computing in intelligent AIoT applications for retail, industrial and medical, and more.

Server Solutions


SYS-E50-9AP-WIFI*

- Built-in Wifi/BT combo module and 2T2R antenna
- IP51 with plastic chassis design for water/dust proof
- Cable-less design for increased reliability and cost efficiency
- Fanless design with palm-size dimension




 Intel® Atom x5-E3940
4 cores | 9.5W




SYS-E50-9AP* 
Atom™ x5-E3940
4 cores | 9.5W




SYS-E50-9AP-L 
Atom™ x5-E3940
4 cores | 9.5W




SYS-E50-9AP-N5 
Atom™ x5-E3940
4 cores | 9.5W



SYS-E100-9AP* 
Atom™ x5-E3940
4 cores | 9.5W



SYS-E100-9AP-IA* 
Atom™ x5-E3940
4 cores | 9.5W



SYS-E102-9AP-L*
Atom™ x5-E3930
2 cores | 6.5W



SYS-E200-9AP
Atom™ x5 3940
4 cores | 9.5W



SYS-5029AP-TN2
Atom™ x5-E3940
4 cores | 9.5W



SYS-E100-9APP* 
Pentium™ N4200
4 cores | 6W



SYS-E200-9B
Pentium™ N3700
4 cores | 6W

Motherboard Solutions

A2SAP-H/-E: 4 cores | 9.5W
A2SAP-L: 2 cores | 6.5W



A2SAP-E/H/L

4 cores | 6W



X11SAN
with heatsink

A2SAN-H/-E: 4 cores | 9.5W
A2SAN-L: 2 cores | 6.5W



A2SAN-E/H/L

4 cores | 6W



X11SAN-WOHS
without heatsink

NEW!
A2SAN-LN4-C: 4 Cores, 10W
A2SAN-LN4-E: 4 Cores, 9.5W



A2SAN-LN4-E/C

4 cores | 6W



X11SAA

A2SAN-H/E-WOHS: 4 cores | 9.5W
A2SAN-L-WOHS: 2 cores | 6.5W



(without heatsink)
A2SAN-E/H/L-WOHS

4 cores | 9.5W



A2SAV

4 cores | 6W



X11SBA-F

A2SAV-L: 4 cores | 9.5W
A2SAV-2C-L: 2 cores | 6.5W



A2SAV(-2C)-L

4 cores | 6W



X11SBA-LN4F



*Microsoft Azure Certified. Please see page 44 for complete list.

X11 8th Generation Intel® Mobile Core Processor

Intel® Core™ U-Series multi-chip package (MCP FCBGA 1528)

Supermicro's single processor Socket FCBGA1528 MCP feature the Intel® 8th Generation Core™ i7/i5/i3/ Celeron® processor ultra-low-power U-series with 4 Cores/8 threads for balance of power and performance. Outstanding features include up to 64GB of fast DDR4 DRAM in 2 DIMMs, 4 USB 3.1 Gen2, 3 M.2 with B/M/E-key , 1 Nano-SIM Slot, 6 COM ports, 12-24V wide range power input and SATA 3.0 (6Gbps) HDD. Support for next generation graphics controller, 4K HD graphics resolution and 3 displays with LVDS, HDMI and DP++ ports. Ideal for small form factor, energy-efficient, reliability, manageability, fanless and long life applications.

Fanless Compact Server Solutions

SYS-E100-9W-H/E/L/C, 3.5" SBC

- 8th Gen Intel® Core™ i7-8665UE/i5-8365UE/i3-8145UE/Celeron® 4305UE
- 1 HDMI and 1 Display Port
- 4 USB 3.1 Gen2, 4 USB 2.0, 4 COM (RS-232/422/485), 1 DIO via DB9
- 2 Gigabit Ethernet Ports
- TPM 2.0 onboard
- Up to 64GB Unbuffered non-ECC SO-DIMM,
- DDR4-2400MHz, in 2 DIMM slots
- M.2 2242/3042/2280 B-Key (USB 3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder for LTE/5G
- M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) for WIFI/BT
- M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), for SATA/NVMe SSD
- +12-24V wide range power input
- Lockable 12V DC 60W power adapter
- Fanless Cooling System
- Dimensions: 195 x 44 x 151mm (7.68" x 1.73" x 5.94")



SYS-E102-9W-C, 3.5" SBC

- Intel® Celeron® Processor 4305UE. Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP
- 1 HDMI and 1 Display Port, 4 USB 3.1 Gen2, 4 COM (RS-232/422/485), 1 DIO via DB9
- 2 Gigabit Ethernet Ports
- 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key
- 3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
- Single LAN with Intel® Ethernet Controller I210IT
- Single LAN with Intel® PHY I219LM LAN controller



Motherboard Solutions



with Heatsink

X11SWN-H/-E/-L/-C

- 8th Gen Intel® Core™ i7-8665UE/i5-8365UE/i3-8145UE/Celeron® 4305UE
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
- Dual LAN with Intel® Ethernet Controller i210IT & Intel® PHY I219LM LAN controller
- 3 independent displays, Dual channel 48-bit LVDS, HDMI 1.4, DP++
- M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder for LTE/5G
- M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) for WIFI/BT
- M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), for SATA/NVMe SSD
- 4 USB 3.1 Gen2 ports (4 rear, Type A), 4 USB 2.0 ports (4 header),
- 6 COM (2 RS-232/422/485, 4 RS-232)
- 1 Audio (Line-out/Mic-in) , 1 8-bit GPIO header
- TPM 2.0 onboard



without Heatsink

X11SWN-H/-E/-L/-C-WOHS

- 8th Gen Intel® Core™ i7-8665UE/i5-8365UE/i3-8145UE/Celeron® 4305UE
- Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
- Dual LAN with Intel® Ethernet Controller i210IT & Intel® PHY I219LM LAN controller
- 3 independent displays, Dual channel 48-bit LVDS, HDMI 1.4, DP++
- M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder for LTE/5G
- M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) for WIFI/BT
- M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), for SATA/NVMe SSD
- 4 USB 3.1 Gen2 ports (4 rear, Type A), 4 USB 2.0 ports (4 header),
- 6 COM (2 RS-232/422/485, 4 RS-232)
- 1 Audio (Line-out/Mic-in) , 1 8-bit GPIO header
- TPM 2.0 onboard



* Microsoft Azure Certified. Please see page 44 for complete list.

X10 Intel® Xeon® E5-2600 v4/v3 Processors

Dual Processor System Solutions (Broadwell)



Broadwell Support

All X10 Dual Processor motherboards now support Intel's latest E5-2600 v4 series (Broadwell) processor for even faster performance. Coupled with the long life C612 PCH that provides up to 7 years of extended availability, the E5-2600 v4 processor brings unparalleled performance, efficiency, scalability, and flexibility to handle the most demanding of embedded and embedded cloud workloads for years to come.

NVMe Capability

Many X10 models now support U.2 (NVMe) storage capabilities for unmatched performance (throughput and latency), true hot-swap capability, and cost-effectiveness that beats using traditional add-on card based flash storage solutions.

Server Solutions

Intel® Xeon® E5-2600
22 cores | 145W



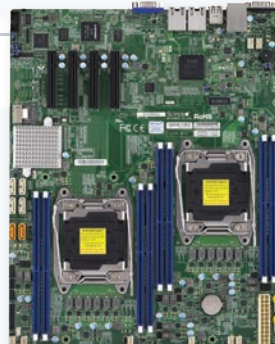
SYS-6018R-MD Compact • 16.9"

- Short-Depth Chassis for X11/X10 DP Solutions
- 500W **Platinum Level** High-efficiency Power Supply
- 1x 3.5" or 4x 2.5" HDD
- 4x 40x56mm PWM fans
- 2 Full-Height I/O Expansion slot

Motherboard Solutions

X10DRD-i(N)T 22 cores | 145W

- Dual E5-2600 v4/v3 CPUs up to 145W
- 8 DIMM DDR4 2133MHz (Up to 1TB)
- 10 SATA 3.0 HDD/SSD ports
- 4 PCI-E 3.0 x16 + 3 PCI-E 3.0 x8 + 1 PCI-E 3.0 x4 in x8 + 1 PCI-E 2.0 x4 in x8
- 7 USB 3.0, 2 SuperDOM, TPM support
- 13.05" x 10.5" ATX Form Factor
- 10 SATA3 HDD/SDD ports, Optional dual NVMe Ports (-N Option)



22 cores | 145W



X10DRL-i

22 cores | 145W



X10DAi/C

22 cores | 145W



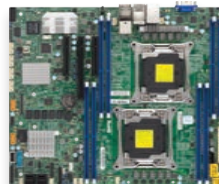
X10DAi/C

22 cores | 145W



X10DAi/C

22 cores | 145W



X10DRL-CT

22 cores | 145W



X10DDW-i

22 cores | 145W



X10DRD-iTP

22 cores | 145W



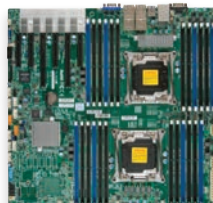
X10DRC-T4+/LN4+

22 cores | 145W



X10DRi(-T)

22 cores | 145W



X10DRi-T4+/LN4+

22 cores | 145W



X10DRW-i(T)

22 cores | 145W



X10DRX

IoT/Embedded
IP51 Fanless PC



IoT/Embedded
Fanless PC, Cost Effective



IoT/Embedded
Fanless PC, 5 LANs Ports



MODEL	SYS-E50-9AP	SYS-E50-9AP-L	SYS-E50-9AP-N5
Processor Support	Intel® Atom™ Processor x5-E3940	Intel® Atom™ Processor x5-E3940	Intel® Atom™ Processor x5-E3940
Key Applications	<ul style="list-style-type: none"> • IoT Gateway • Commercial Appliance • Support Cloud-based Management Software 	<ul style="list-style-type: none"> • Cost Optimized IoT Gateway • Commercial Appliance 	<ul style="list-style-type: none"> • 5 LAN Fanless Embedded System • Entry Networking Appliance • IoT Gateway
Outstanding Features	<ul style="list-style-type: none"> • IP51 with plastic chassis design for water/dust proof • Palm-size for space-limited environment • Built-in Antenna 	<ul style="list-style-type: none"> • Palm-size for space-limited environment • Cost optimized 	<ul style="list-style-type: none"> • 5 LAN Fanless Embedded System • TPM 2.0 onboard • Built-in Antenna
Serverboard	SUPER● A2SAP-H	SUPER● A2SAP-H	SUPER● A2SAP-H
Chipset	System on Chip	System on Chip	System on Chip
System Memory (Max.)*	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket
Expansion Slots	1 Full size Mini-PCIe; 1 Half size Mini-PCIe; 1 M.2 B-Key 2242; 1 M.2 E-Key 2230	1 Half size Mini-PCIe; 1 M.2 B-Key 2242	1 Half size Mini-PCIe; 1 M.2 B-Key 2242; 1 M.2 E-Key 2230
Onboard Storage Controller	1 M.2 B-Key 2242 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD	1 M.2 B-Key 2242 for SATA SSD	1 M.2 B-Key 2242 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD
Connectivity	Dual LAN with Intel® I210-IT, 2 USB3.0, 2 USB2.0, 2 COM (RS-232/422/485), TPM2.0 onboard	Dual LAN with Intel® I210-IT, 2 USB3.0	5 LAN with Intel® I210-IT, 2 USB3.0, 2 USB2.0, 1 COM, TPM2.0 onboard
VGA/Audio	2 HDMI	1 HDMI	2 HDMI
Management	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog
Drive Bays	1 SATA 3.0 for 7mm 2.5" SATA SSD	N/A	1 SATA 3.0 for 7mm 2.5" SATA SSD
Peripheral Bays	N/A	N/A	N/A
Power Supply	Lockable 12V DC 40W power adapter	Lockable 12V DC 40W power adapter	Lockable 12V DC 40W power adapter
Cooling System	Fanless	Fanless	Fanless
Form Factor	1U Box; Enclosure: 148 x 44 x 118mm (5.82" x 1.72" x 4.64") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8") Gross Weight: 3.52lbs (1.6kg) Net Weight: 2.2lbs (1kg)	1U Box; Enclosure: 148 x 44 x 118mm (5.82" x 1.72" x 4.64") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8") Gross Weight: 3.52lbs (1.6kg) Net Weight: 2.2lbs (1kg)	1U Box; Enclosure: 148 x 44 x 118mm (5.82" x 1.72" x 4.64") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8") Gross Weight: 3.52lbs (1.6kg) Net Weight: 2.2lbs (1kg)

* Please check with your Supermicro sales representative and website for compatibility and configuration details

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Supports Wireless
communication



IoT/Embedded
Compact Embedded
Box PC

IoT/Embedded
Extended Temperature
Fanless 3.5" SBC



IoT/Embedded
8th Gen Intel® Core™ i Processor
Edge Computing



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MODEL	SYS-E50-9AP-Wifi**	SYS-E102-9AP-L	SYS-E100-9AP	SYS-E300-9C
Processor Support	Intel® Atom® processor x5-E3940	Intel® Atom® Processor x5-E3930	Intel® Atom® Processor x5-E3940	8th Generation Intel® Core™ i7/i5/i3/ Pentium®/Celeron® Processor
Key Applications	<ul style="list-style-type: none"> IoT Gateway Commercial Appliance 	<ul style="list-style-type: none"> Embedded Applications 	<ul style="list-style-type: none"> IoT Gateway for Smart Factory, Smart Building, Smart Home Kiosk, Interactive information system Environmental Monitor Industrial Application 	<ul style="list-style-type: none"> IoT Edge Computing DVR/NVR Machine Automation Digital Signage Medical Applications IoT Gateway
Outstanding Features	<ul style="list-style-type: none"> Built-in Antenna and Dual band Wireless/Bluetooth combo module IP51 with plastic chassis design for water/dust proof Cable-less design for easy maintenance Fanless design with palm-size dimension Support Cloud-based Management Software 	<ul style="list-style-type: none"> Building Block Solution for Embedded Applications Easy integration 	<ul style="list-style-type: none"> Low power Apollo Lake Atom E3940, 4C Fanless Compact Ruggedized Box PC Supports wide-temp: -20~60°C TPM2.0 onboard Operational vibration: 5Grms, IEC 60068-2-64 Operational Shock: 30G, IEC 60068-2-27 	<ul style="list-style-type: none"> Coffee Lake 8th Gen Core i3/i5/i7 Embedded long life 1U Box Edge Devices TPM onboard
Serverboard	SUPER● A2SAP-H	SUPER● A2SAN-L	SUPER● A2SAN-E-WOHS	SUPER● X11SCV-Q
Chipset	System on Chip	System on Chip	System on Chip	Intel® Q370 chipset
System Memory (Max.)*	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM slot	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3L-1866MHz, in 1 DIMM socket	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2666MHz, in 2 DIMM slots
Expansion Slots	1 Full size Mini-PCIe; 1 Half size Mini-PCIe; 1 M.2 B-Key 2242	1 Full Size Mini-PCI-E; 1 M.2 2280 B-Key	1 Full size Mini-PCIe; 1 M.2 2280 B-Key	1 PCI-E 3.0 x16 AOC slot (LP) and M.2 M key; SATA/PCI-E 3.0 x4, support 2242/2280 length; M.2 E KEY: PCI-E 3.0 x1, support 2230 length
Onboard Storage Controller	1 M.2 B-Key 2242 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD	1 M.2 B-Key 2280 for SATA SSD, 1 SATA 3.0 for 7mm 2.5" SATA SSD	1 M.2 2280 B-Key for SATA SSD	Q370 controller for 2 SATA3 ports; RAID 0,1
Connectivity	Dual LAN with Intel® I210-IT, 2 USB3.0, 2 USB2.0, 2 COM (RS-232/422/485), TPM 2.0 onboard, Dual Band Wireless and Bluetooth 4.2	Dual LAN with Intel® I210-IT, 2 USB3.0, TPM2.0 onboard	Dual LAN with Intel® I210-IT, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 DIO via DB9, TPM2.0 onboard	2x 1GbE LAN with AMT, 4 USB 3.1 (2 type A & 2 type C in rear), HD Audio (Mic In/Line Out)
VGA/Audio	2 HDMI	1 VGA 1 HDMI	1 VGA 1 HDMI	1 DVI-D, 1HDMI, 1DP(DisplayPort), 3 Independent displays; 1 eDP(Embedded DisplayPort)
Management	SuperDoctor® 5, Watchdog	SuperDoctor® 5; Watchdog	SuperDoctor® 5, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog
Drive Bays	1 SATA 3.0 for 7mm 2.5" SATA SSD	1 SATA 3.0 for 7mm 2.5" SATA SSD	N/A	2x 2.5" fixed drive bay
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 40W power adapter	Lockable 12V DC 40W power adapter	Lockable 12V DC 40W power adapter	Lockable 12V DC 150W power adapter
Cooling System	Fanless	Passive CPU heat sink and 1x 40mm chassis fans	Fanless	2x 4cm high performance PWM fan; optional for 1x fan to add-on card area cooling
Form Factor	1U Box; Enclosure: 148 x 44 x 118mm (5.82" x 1.72" x 4.64") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8") Gross Weight: 3.52lbs (1.6kg) Net Weight: 2.2lbs (1kg)	1U Box; Enclosure: 190 x 44 x 120mm (7.48" x 1.72" x 4.72") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8")	1U Box; Enclosure: 195 x 44 x 151mm (7.68" x 1.73" x 5.94") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8") Gross Weight: 4.35lbs (1.97kg) Net Weight: 2.5lbs (1.13kg)	254 x 43 x 226mm (10" x 1.7" x 8.9")

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MODEL	SYS-E302-9D	SYS-E302-9A	SYS-E102-9W-C
Processor Support	Intel® Xeon® Processor D-2123IT, CPU TDP support up to 60W TDP † BIOS version 2.0 or above is required	Intel® Atom® Processor C3558. Single Socket FCBGA-1310 supported, CPU TDP support up to 16W TDP † BIOS version 2.0 or above is required	Intel® Celeron® Processor 4305UE. Single Socket FCBGA-1528 supported, CPU TDP support up to 15W TDP † BIOS version 2.0 or above is required
Key Applications	<ul style="list-style-type: none"> • IoT Edge Computing Industrial Automation, Retail, Smart Medical Expert Systems • Artificial Intelligence (AI) on Edge, Machine Learning (ML) • FireWall Applications Networking Appliance 	<ul style="list-style-type: none"> • IoT Edge Computing Retail, Smart Medical Expert Systems Networking Appliance • Industrial Automation & Control • Embedded IoT Gateway 	<ul style="list-style-type: none"> • Industrial Automation, Retail, Smart Medical Expert Systems • Kiosk, Interactive information system • Digital Signage Retail, Smart Medical Expert Systems
Outstanding Features	<ul style="list-style-type: none"> • Supports up to 4C high Density Intel® Xeon® SoC processor for edge network computing High Memory Bandwidth • Supports 4 DDR4 channel DIMMs (ECC LRDIMM or ECC RDIMM) with up to 2133 MHz memory speed • Max memory capacity up to 512GB on LRDIMM • 8 LAN ports support (2 x 10G SFP+, 2 x 10GbE-T, 4 x 1GbE) • 2 USB 3.0 2x 2.5" SATA drives 	<ul style="list-style-type: none"> • 7 year life cycle • IPMI 2.0 management with dedicated LAN • Fanless compact design 	<ul style="list-style-type: none"> • 1 HDMI and 1 Display Port • 4 USB 3.1 4 COM (RS-232/422/485), • 1 DIO via DB9 2 Gigabit Ethernet Ports • 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM
Serverboard	SUPER● X11SDV-4C-TP8F-01	SUPER● A2SDi-4C-HLN4F	SUPER● X11SWN-C
Chipset	System on Chip chipset	System on Chip chipset	System on Chip chipset
System Memory (Max.)*	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; Up to 512GB LRDIMM LRDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8	1x M.2 M Key 2242/2280(PCI-E 3.0 x2)	N/A
Onboard Storage Controller	SoC controller for 2 SATA3 ports; RAID 0,1	SoC controller for 2x SATA 3.0	N/A
Connectivity	2x 10G SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0	4x 1GbE, 1x dedicated IPMI LAN, 2 USB 2.0	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller
VGA/Audio	Aspeed AST2500 BMC	Aspeed AST2400 BMC	Intel® UHD Graphics 610
Management	IPMI2.0, KVM with dedicated LAN, Watchdog	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog
Drive Bays	2x 2.5" fixed drive bay with bracket	2x 2.5" 7mm fixed drive bay	1 SATA 3.0 for 2.5" 7mm SATA HDD/SSD 1 M.2 2242/3042/2280 B-Key (USB3.0/2.0x 1, SATA Gen3x 1) 1 M.2 2242/2280 M-Key (PCI-E 3.0x4, SATA Gen3x 1), NVMe support
Peripheral Bays	N/A	N/A	N/A
Power Supply	150W 12V Lockable DC Power Adapter (Optional: 180W 12V Lockable DC Power Adapter)	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter
Cooling System	Fanless	Fanless	Passive CPU Heat Sink and 1x 40mm Chassis Fan
Form Factor	295 x 76 x 206mm (11.6" x 3" x 8.1")	295 x 76 x 206mm (11.6" x 3" x 8.1")	190 x 44 x 120mm (7.48" x 1.72" x 4.72")

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MODEL	SYS-E100-9W-H	SYS-E100-9W-E	SYS-E100-9W-L	SYS-E100-9W-C
Processor Support	8th Generation Intel® Core™ i7-8665UE Processor. Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP	8th Generation Intel® Core™ i5-8365UE Processor. Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP	8th Generation Intel® Core™ i3-8145UE Processor. Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP	Intel® Celeron® Processor 4305UE. Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP
Key Applications	<ul style="list-style-type: none"> Industrial Automation, Retail, Smart Medical Expert Systems Kiosk, Interactive information system Digital Signage 	<ul style="list-style-type: none"> Industrial Automation, Retail, Smart Medical Expert Systems Kiosk, Interactive information system Digital Signage 	<ul style="list-style-type: none"> Industrial Automation, Retail, Smart Medical Expert Systems Kiosk, Interactive information system Digital Signage 	<ul style="list-style-type: none"> Industrial Automation, Retail, Smart Medical Expert Systems Kiosk, Interactive information system Digital Signage
Outstanding Features	<ul style="list-style-type: none"> 1 HDMI and 1 Display Port 4 USB 3.1 4 COM (RS-232/422/485), 1 DIO via DB9 2 Gigabit Ethernet Ports 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key 	<ul style="list-style-type: none"> 1 HDMI and 1 Display Port 4 USB 3.1 4 COM (RS-232/422/485), 1 DIO via DB9 2 Gigabit Ethernet Ports 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key 	<ul style="list-style-type: none"> 1 HDMI and 1 Display Port 4 USB 3.1 4 COM (RS-232/422/485), 1 DIO via DB9 2 Gigabit Ethernet Ports 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key 	<ul style="list-style-type: none"> 1 HDMI and 1 Display Port 4 USB 3.1 4 COM (RS-232/422/485), 1 DIO via DB9 2 Gigabit Ethernet Ports 1 M.2 M-Key, 1 M.2 B-Key with Nano SIM, 1 M.2 E-Key
Serverboard	SUPER● X11SWN-H-WOHS	SUPER● X11SWN-E-WOHS	SUPER● X11SWN-L-WOHS	SUPER● X11SWN-C-WOHS
Chipset	System on Chip chipset	System on Chip chipset	System on Chip chipset	System on Chip chipset
System Memory (Max.)*	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots
Expansion Slots	Key: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (1 USB 3.0/2.0, 1 SATA Gen. 3) with nano SIM holder	Key: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (1 USB 3.0/2.0, 1 SATA Gen. 3) with nano SIM holder	Key: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (1 USB 3.0/2.0, 1 SATA Gen. 3) with nano SIM holder	Key: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (1 USB 3.0/2.0, 1 SATA Gen. 3) with nano SIM holder
Onboard Storage Controller	N/A	N/A	N/A	N/A
Connectivity	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller
VGA/Audio	Intel® UHD Graphics 620 ALC 888S HD Audio	Intel® UHD Graphics 620	Intel® UHD Graphics 620 ALC 888S HD Audio	Intel® UHD Graphics 610 ALC 888S HD Audio
Management	AMT, SuperDoctor® 5, vPro, Watchdog	AMT, SuperDoctor® 5, vPro, Watchdog	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog
Drive Bays	N/A	N/A	N/A	N/A
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter
Cooling System	Fanless	Fanless	Fanless	Fanless
Form Factor	195 x 44 x 159mm (7.68" x 1.73" x 5.94")	195 x 44 x 159mm (7.68"x1.73"x5.94")	195 x 44 x 159mm (7.68"x1.73"x5.94")	195 x 44 x 159mm (7.68"x1.73"x5.94")

* Please check with your Supermicro sales representative and website for compatibility and configuration details
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IoT Gateway with
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MODEL	SYS-E100-8Q	SYS-E100-9S	SYS-E100-9S-E	SYS-E100-9S-L
Processor Support	Intel® Quark™ SoC X1021; CPU TDP support 2.2W	7th Generation Intel® Core™ i7-7600U Processor	7th Generation Intel® Core™ i5-7300U Processor	7th Generation Intel® Core™ i3-7100U Processor
Key Applications	<ul style="list-style-type: none"> IoT Gateway for Smart Factory, Smart Building, Smart Home Long Life Cycle Support Intel® Moon Island Intel® Gateway Solution of Internet of Things (formerly Moon Island) 2x 1GbE LAN 	<ul style="list-style-type: none"> IoT Edge Computing Kiosk, Interactive information system Environmental Monitor Core i Fanless Compact Ruggedized Box PC 1 HDMI and 1 Display Port 1 USB3.1, 2 USB 3.0, 4 USB 2.0 4 COM (RS-232/422/485), 1 DIO via DB9 2 Gigabit Ethernet Ports TPM2.0 onboard 	<ul style="list-style-type: none"> AIoT Edge Computing Kiosk, Interactive information system Environmental Monitor Core i Fanless Compact Ruggedized Box PC Support Cloud-based Management Software Support Dual Independent Displays by HDMI & DP Fanless compact design 	<ul style="list-style-type: none"> IoT Edge Computing Kiosk, Interactive information system Environmental Monitor 1 HDMI and 1 Display Port 1 USB3.1, 2 USB 3.0, 4 USB 2.0 4 COM (RS-232/422/485), 1 DIO via DB9 2 Gigabit Ethernet Ports TPM2.0 onboard
Outstanding Features	<ul style="list-style-type: none"> 2 Mini PCIe sockets, 1 Zigbee socket 2 USB2.0 (device and host) 1 RS232, 1 RS485 Analog Inputs 8 channel 12 bits and Digital I/O 8 bit through screw terminal connector 			
Serverboard	SUPER● A1SQN	SUPER● X11SSN-H-WOHS	SUPER● X11SSN-E-WOHS	SUPER● X11SSN-L-WOHS
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
System Memory (Max.)*	Onboard 512MB DDR3 ECC memory	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
Expansion Slots	2x Mini-PCI-E slots and 1x ZigBee module socket	1 Full size Mini-PCIe; 1 M.2 2280 B-Key	1 Full size Mini-PCIe; 1 M.2 2280 B-Key	1 Full size Mini-PCIe; 1 M.2 2280 B-Key
Onboard Storage Controller	Micro SDHC up to 32GB slot	1 M.2 2280 B-Key for SATA SSD	1 M.2 2280 B-Key for SATA SSD	1 M.2 2280 B-Key for SATA SSD
Connectivity	2x 1GbE LAN, 2 USB2.0 (device and host), RS485 & Analog Inputs 8 channel 12 bits & Digital I/O 8 bit through screw terminal connector, 1 RS232	Dual LAN with Intel®PHY I219LM, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 DIO via DB9, TPM2.0 onboard	Dual LAN with Intel®PHY I219LM, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 DIO via DB9, TPM2.0 onboard	Dual LAN with Intel®PHY I219LM, 1 USB3.1, 2 USB3.0, 4 USB2.0, 4 COM (RS-232/422/485), 1 DIO via DB9, TPM2.0 onboard
VGA/Audio	N/A	1 DisplayPort, 1 HDMI	1 DisplayPort, 1 HDMI	1 DisplayPort, 1 HDMI
Management	Watchdog	AMT, SuperDoctor® 5, vPro, Watchdog		SuperDoctor® 5, Watchdog
Drive Bays	N/A	N/A	N/A	N/A
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 15W power adapter(international outlet support)	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter	Lockable 12V DC 60W power adapter
Cooling System	Fanless	Fanless	Fanless	Fanless
Form Factor	IOT Gateway; Enclosure: 135 x 33 x 109mm (5.3" x 1.3" x 4.3") Package: 287 x 69 x 201mm (11.3" x 2.7" x 7.9") Gross Weight: 1.8lbs (0.82kg) Net Weight: 0.9lbs (0.41kg)	1U Box; Enclosure: 195 x 44 x 151mm (7.68" x 1.73" x 5.94") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8") Net Weight: 2.65lbs (1.2kg)	1U Box; Enclosure: 195 x 44 x 151mm (7.68" x 1.73" x 5.94") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8") Net Weight: 2.65lbs (1.2kg)	1U Box; Enclosure: 195 x 44 x 151mm (7.68" x 1.73" x 5.94") Package: 241 x 140 x 203mm (9.5" x 5.5" x 8") Net Weight: 2.65lbs (1.2kg)

*Please check with your Supermicro sales representative and website for compatibility and configuration details



Embedded
Intel® Atom™ C3958
SoC, 16 Cores



IoT/Embedded
Intel® Atom™ C3558/C3758,
SoC, 4/8 Cores



IoT/Embedded
Intel® Atom™ C3558/C3758,
SoC, 4/8 Cores



IoT/Embedded
Intel® Atom™ C3558/C3758,
SoC, 4/8 Cores



MODEL	SYS-E300-9A-16CN8TP	SYS-E300-9A-4CN10P SYS-E300-9A-8CN10P	SYS-E300-9A-4CN8 SYS-E300-9A-8CN8	SYS-E300-9A-4C SYS-E300-9A-8C
Processor Support	Intel® Atom™ Processor Denverton C3958, SoC 16 Cores, 31W, 2.0 GHz	-4CN10P: Intel® Atom™ Processor Denverton C3558, SoC 4 Cores, 16W, 2.2 GHz -8CN10P: Intel® Atom™ Processor Denverton C3758, SoC 8 Cores, 25W, 2.2 GHz	-4CN8: Intel® Atom™ Processor Denverton C3558, SoC 4 Cores, 16W, 2.2 GHz -8CN8: Intel® Atom™ Processor Denverton C3758, SoC 8 Cores, 25W, 2.2 GHz	-4C: Intel® Atom™ Processor Denverton C3558, SoC 4 Cores, 16W, 2.2 GHz -8C: Intel® Atom™ Processor Denverton C3758, SoC 8 Cores, 25W, 2.2 GHz
Key Applications	• Embedded Networking Applications Network Security Appliance FireWall Applications Virtualization Server	• Virtual-CPE White Box Solution • Network Security Appliance • Embedded IoT Gateway • Networking Edge Device	• Virtual-CPE White Box Solution • Network Security Appliance • Embedded IoT Gateway • Networking Edge Device	• Network Security Appliance • Embedded IoT Gateway • Networking Edge Device
Outstanding Features	• Best Performance per Watt 7 year life cycle IPMI 2.0 management with dedicated LAN	• Best Performance per Watt • 7 year life cycle • IPMI 2.0 management with dedicated LAN	• 8x 1G LAN port onboard • LED indicator for each LAN port • Best Performance per Watt • 7 year life cycle • IPMI 2.0 management with dedicated LAN	• Best Performance per Watt • 7 year life cycle • IPMI 2.0 management with dedicated LAN
Serverboard	SUPER● A2SDi-16C-TP8F	-4CN10P: SUPER● A2SDV-4C-LN10PF -8CN10P: SUPER● A2SDV-8C-LN10PF	-4CN8: SUPER● A2SDV-4C-LN8F -8CN8: SUPER● A2SDV-8C-LN8F	-4C: SUPER● A2SDi-4C-HLN4F -8C: SUPER● A2SDi-8C-HLN4F
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
System Memory (Max.)*	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC DDR4-2400MHz, Up to 64GB Unbuffered ECC/Non-ECC DDR4-2400MHz; in 4 DIMM slots	Up to 256GB Registered ECC DDR4-2400MHz, Up to 64GB Unbuffered ECC/Non-ECC DDR4-2400MHz; in 4 DIMM slots	Up to 256GB Registered ECC DDR4-2400MHz, Up to 64GB Unbuffered ECC/Non-ECC DDR4-2400MHz; in 4 DIMM slots
Expansion Slots	1 PCI Express 3.0 x4 AOC slot (LP), 1 M.2(M Key for SSD 2242/80, PCI-E/SATA3.0), 1 Mini-PCI-E/w mSATA Half Size	-4CN10P: 1 PCI Express 3.0 x2 AOC slot (LP) when SSD isn't populated, 1 M.2 B Key 3042/2280(PCI-E 3.0 x2) -8CN10P: 1 PCI Express 3.0 x4 AOC slot (LP) when SSD isn't populated, 1x M.2 M Key 2242/2280 (PCI-E 3.0 x2 or SATA3.0), 1x M.2 B Key 3042/2280(PCI-E 3.0 x2)	-4CN8: 1x PCI Express 3.0 x2 AOC slot (LP) when only 1 SSD populated, 1 M.2 B Key 3042/2280(PCI-E 3.0 x2) -8CN8: 1x PCI Express 3.0 x4 AOC slot (LP) when only 1 SSD populated, 1x M.2 M Key 2242/2280 (PCI-E 3.0 x2 or SATA3.0), 1x M.2 B Key 3042/2280(PCI-E 3.0 x2)	1 PCI Express 3.0 x4 AOC slot (LP), 1x M.2 M Key 2242/2280(PCI-E 3.0 x2)
Onboard Storage Controller	SoC controller for 2x SATA3.0	SoC controller for 3x SATA3.0	SoC controller for 4x SATA3.0	SoC controller for 4x SATA3.0
Connectivity	2x 10GbE SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB 3.0	8x 1GbE RJ45 and 2x 1G SFP, 1 dedicated IPMI LAN, 2 USB3.0, Optional Console port by request	8x 1GbE, 1 dedicated IPMI LAN, 2 USB3.0, Optional Console port by request	4x 1GbE, 1 dedicated IPMI LAN, 2 USB 2.0, Optional Console port by request
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC	VGA via BMC
Management	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	OOB, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	2x 2.5" fixed drive bay: one with bracket, one on base mount. (1x 2.5" fixed drive bay when AOC area is occupied.)	1x 2.5" fixed drive bay when AOC area is not occupied.	1x 2.5" fixed drive bay when AOC area is not occupied.	1x 2.5" fixed drive bay (2x 2.5" fixed drive bay when AOC area is not occupied.)
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	Lockable 12V DC 84W power adapter	Lockable 12V DC 84W power adapter	Lockable 12V DC 84W power adapter	Lockable 12V DC 84W power adapter
Cooling System	2x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)	1x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM) , Optional 1x Fan by request	1x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM) , Optional 1x Fan by request	1x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM), Optional 1x Fan by request
Form Factor	254 x 43 x 226mm (10" x 1.7" x 8.9")	254 x 43 x 226mm (10" x 1.7" x 8.9")	254 x 43 x 226mm (10" x 1.7" x 8.9")	254 x 43 x 226mm (10" x 1.7" x 8.9")

* Please check with your Supermicro sales representative and website for compatibility and configuration details

Embedded

Intel® Atom™ Processor Denverton
C3958, SoC, 16 Cores, 31W
Front I/O, Short-Depth Server



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Intel® Atom™ Processor Denverton
C3758, SoC, 8 Cores
Front I/O, Short-Depth Server



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Intel® Atom™ Processor Denverton
C3850, SoC, 12 Cores
Rear I/O, Short-Depth Server



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Intel® Atom™ Processor Denverton
C3758, SoC, 8 Cores
support QAT



MODEL	SYS-5019A-FN5T	SYS-5019A-FTN4	SYS-5019A-12TN4	SYS-5019A-FTN10P
Processor Support	Intel® Atom™ Processor Denverton C3958, SoC, 16 Cores, 31W	Intel® Atom™ Processor Denverton C3758, SoC, 8 Cores, 25W	Intel® Atom™ Processor Denverton C3850, SoC, 12 Cores, 25W	Intel® Atom™ Processor Denverton C3758, SoC, 8 Cores
Key Applications	<ul style="list-style-type: none"> • Network Security Appliance • Edge Computing Server • Virtualization Server 	<ul style="list-style-type: none"> • Network Security Appliance • Edge Computing Server • Virtualization Server 	<ul style="list-style-type: none"> • Virtual Router • FireWall Applications • Virtualization • Low Power, Low Cost Applications 	<ul style="list-style-type: none"> • Edge Computing Server • Virtualization Server • Network Security Appliance
Outstanding Features	<ul style="list-style-type: none"> • Intel® QAT up to 20Gbps crypto + 20Gbps compression • Intel® Quick Assist Technology • 256GB DDR4 ECC RDIMM/64GB ECC UDIMM 	<ul style="list-style-type: none"> • Intel® QAT up to 20Gbps crypto + 20Gbps compression • Intel® Quick Assist Technology • 256GB DDR4 ECC RDIMM/64GB ECC UDIMM 	<ul style="list-style-type: none"> • Short Depth • Low Power 	<ul style="list-style-type: none"> • Intel® Quick Assist Technology (QAT) • Intel® Single-Root I/O Virtualization (SR-IOV)
Serverboard	SUPER● A2SDV-16C-TLN5F	SUPER● A2SDI-8C-HLN4F	SUPER● A2SDI-LN4F	SUPER● A2SDV-8C-LN10PF
Chipset	System on Chip	System on Chip	System on Chip	System on Chip
System Memory (Max.)*	Up to 256GB Registered ECC DDR4-2400MHz or 64GB Unbuffered ECC/ Non-ECC DDR4-2400MHz; in 4 DIMM slots	Up to 256GB Registered ECC DDR4-2400MHz or 64GB Unbuffered ECC/ Non-ECC DDR4-2400MHz; in 4 DIMM slots	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x8, 1 M-Key 2242/2280, PCI-E 3.0 x2/SATA, 1 B-Key 3042/2280, PCI-E 3.0 x2/SATA/USB	1 PCI-E 3.0 x4, 1 x M.2 (M key for SSD, 2242/80, PCIe3.0 x2 or SATA3)	1 PCI-E 3.0 x4, 1 mini-PCIe with mSATA supports (half card only), 1 M.2(M Key for SSD 2242/80, PCIe/SATA3.0)	1 PCI-E 3.0 x4 M.2 Option for Slot 6 or Slot 7
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports	SoC controller for 4 SATA3 (6 Gbps) ports	SoC controller for 4 SATA3 (6 Gbps) ports	SoC controller for 5 SATA3 (6 Gbps) ports; RAID ;
Connectivity	4x 10GbE LAN, 1x 1GbE LAN (IPMI shared LAN), 4x USB3.0	4x 1GbE LAN, 1x dedicated IPMI LAN, 2x USB 2.0	4x 1GbE LAN, 1 dedicated management port, 2 USB3.0	4x 1GbE LAN, 1 dedicated management port, 2 USB3.0
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC	VGA via BMC
Management	IPMI 2.0	IPMI 2.0	IPMI 2.0	IPMI2.0, NMI, SuperDoctor® 5, Watchdog
Drive Bays	1x 3.5" or 2x 2.5" internal drive bays	1x 3.5" or 4x 2.5" HDD	1x 3.5" or 4x 2.5" HDD	1x 3.5" Internal Drive Bay with 1 Full-height, Half-length PCI 2x 3.5" Internal Drive Bay 2x 2.5" Internal Drive Bay with 1 Full-height, Half-length PCI 4x 2.5" Internal Drive
Peripheral Bays	N/A	N/A	N/A	N/A
Power Supply	200W Low Noise AC-DC power supply with PFC	200W Low Noise AC-DC power supply with PFC	200W Low Noise AC-DC power supply with PFC	200W Low Noise AC-DC power supply with PFC
Cooling System	3x 40x28mm 4-PIN PWM Fan (FAN-0065L4, 13K RPM)	2x 40x28mm 4-PIN PWM Fan (FAN-0065L4, 13K RPM), Optional 1x 40x28mm 4-PIN PWM Fan	2x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)	2x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)
Form Factor	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")	437 x 43 x 249mm (17.2" x 1.7" x 9.8")

* Please check with your Supermicro sales representative and website for compatibility and configuration details

NEW!

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Intel® Atom™ Processor Denverton C3338 SoC, 2 Cores



NEW!

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Atom™ E3940 Apollo Lake SoC, 4 Cores



MODEL	SYS-5029A-2TN4	SYS-5029AP-TN2
Processor Support	Intel® Atom™ C3338 Denverton Processor, SoC 2 Core, 9W, 1.5 GHz	• Intel® Atom™ E3940 Apollo Lake Processor, SoC 4 Cores, 9.5W, 1.6 GHz
Key Applications	<ul style="list-style-type: none"> • 7 Years Life Cycle • Compact Cloud Server • Edge Computing Device 	<ul style="list-style-type: none"> • Database Processing & Storage • High Performance NAS Servers • Medical Applications • Security Appliance and Video Surveillance • Web Server for Small and Medium Business • Indoor Kiosk
Outstanding Features	<ul style="list-style-type: none"> • Quad Gigabit Ethernet LAN • Up to 4x hot-swap 3.5" SATA3 drives • IPMI 2.0 (dedicated LAN) with Virtual Media/KVM over LAN • 7 year life cycle 	<ul style="list-style-type: none"> • Up to 4 Hot-Swap 3.5" SATA3 HDD, 2 internal 2.5" fixed HDD and 1 M.2 (M key 2242/80 PCIe 2.0x2) • Embedded long life • 2x Gigabit LAN ports • Quiet Operation
Serverboard	SUPER● A2SDi-2C-HLN4F	SUPER● A2SAV
Chipset	System on Chip	System on Chip
System Memory (Max.)*	Up to 128GB RDIMM or 32GB ECC/NON ECC UDIMM, DDR4-1866MHz in 2 DIMM slots	8GB Unbuffered non-ECC DDR3-1866MHz SO-DIMM in 1 DIMM slot
Expansion Slots	1x PCIe 3.0 x4 (in x4 open ended slot)	1 PCIe 2.0 x2 in x8 slot, 1 M.2 (M key 2242/80 PCIe 2.0x2), 1 Mini-PCIe with mSATA support
Onboard Storage Controller	SoC controller for 6 SATA3 (6 Gbps) ports	Marvel 88SE9230 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10; SoC controller for 2 SATA3 (6 Gbps) ports
Connectivity	4 x 1GbE LAN, 1 dedicated IPMI LAN, 2 USB2.0	2x 1GbE LAN, 2 USB 3.0 (rear), 4 USB 2.0 (2 rear, 2 front, 1 USB 2.0 Type A), 1 Serial Port (RJ45) ALC 8885 HD Audio
VGA/Audio	VGA via BMC	1 HDMI, 1 DP, 1 VGA or 1 eDP, Intel® HD Graphic 3 independent displays
Management	IPMI2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	vPro and AMT
Drive Bays	4x 3.5" hot-swap drive bay, 2x 2.5" fixed drive bay	4x 3.5" hot-swap SAS/SATA 2x 2.5" fixed drive bay
Peripheral Bays	1x slim DVD-ROM drive bay (shared with 1 x 2.5" fixed drive bay)	1x slim DVD-ROM drive bay (shared with 1 x 2.5" fixed drive bay)
Power Supply	PWS-251-1H 250W Flex ATX Multi-output Bronze Power Supply	PWS-251-1H 250W Flex ATX Multi-output Bronze Power Supply
Cooling System	1x 12cm rear exhaust fan;	1x 12cm rear exhaust fan;
Form Factor	Mini-Tower; Enclosure: 210 x 240 x 279mm (8.27" x 9.45" x 11") Package: 315 x 350 x 410mm (12.4" x 13.78" x 16.14")	Mini-Tower; Enclosure: 210 x 240 x 279mm (8.27" x 9.45" x 11") Package: 315 x 350 x 410mm (12.4" x 13.78" x 16.14") Net Weight: 15lbs (6.8kg)

* Please check with your Supermicro sales representative and website for compatibility and configuration details

NEW!

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Intel® Xeon® Processor D
Compact Front Access 1U 2-Slot,
Redundant AC PSUs, and Hot Swappable Fans System



NEW!

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Intel® Xeon® Processor D
Compact Front Access 1U 2-Slot,
Redundant DC PSUs, and Hot Swappable Fans System



We Power the Cloud

MODEL	SYS-1019D-4C-RAN13TP+ SYS-1019D-14CN-RAN13TP+ SYS-1019D-16C-RAN13TP+	SYS-1019D-4C-RDN13TP+ SYS-1019D-14CN-RDN13TP+ SYS-1019D-16C-RDN13TP+
Processor Support	-4C: Intel® Xeon® Processor D-2123IT, Single Socket FCBGA-2518 supported, CPU TDP support Up to 60W TDP. -14CN: Intel® Xeon® Processor D-2177NT, Single Socket FCBGA-2518 supported, CPU TDP support Up to 105W TDP -16C: Intel® Xeon® Processor D-2183IT Single Socket FCBGA-2518 supported, CPU TDP support Up to 100W TDP	-4C: Intel® Xeon® Processor D-2123IT, Single Socket FCBGA-2518 supported, CPU TDP support Up to 60W TDP. -14CN: Intel® Xeon® Processor D-2177NT, Single Socket FCBGA-2518 supported, CPU TDP support Up to 105W TDP. -16C: Intel® Xeon® Processor D-2183IT, Single Socket FCBGA-2518 supported, CPU TDP support Up to 100W TDP.
Key Applications	<ul style="list-style-type: none"> • Multi-Access Edge Computing (MEC) • Centralized/Cloud Radio Access Network (C-RAN) • Universal Customer Premise Equipment (uCPE) • Software Defined WAN (SD-WAN) • Network Function Virtualization (NFV) • Artificial Intelligence (AI) 	<ul style="list-style-type: none"> • Multi-Access Edge Computing (MEC) • Centralized/Cloud Radio Access Network (C-RAN) • Universal Customer Premise Equipment (uCPE) • Software Defined WAN (SD-WAN) • Network Function Virtualization (NFV) • Artificial Intelligence (AI)
Outstanding Features	<ul style="list-style-type: none"> • 2x PCIe 3.0 x16 FHFL • 4x 10GbE SFP+, 9x GbE (one for management) • 1x dedicated IPMI LAN, 1x COM via RJ45, 1x VGA Port • 1x M.2 M-Key 2280/22110, 1x M.2 B-Key 2242, 1x M.2 E-Key 2230 • 2x 2.5" Internal Drive Bay • 800W AC Redundant PSU, 5x Hot-Swappable Fans 	<ul style="list-style-type: none"> • 2x PCIe 3.0 x16 FHFL • 4x 10GbE SFP+, 9x GbE (one for management) • 1x dedicated IPMI LAN, 1x COM via RJ45, 1x VGA Port • 1x M.2 M-Key 2280/22110, 1x M.2 B-Key 2242, 1x M.2 E-Key 2230 • 2x 2.5" Internal Drive Bay • 600W DC Redundant PSU, 5x Hot-Swappable Fans
Serverboard	-4C: SUPER● X11SDW-4C-TP13F+ -14CN: SUPER● X11SDW-14CN-TP13F+ -16C: SUPER● X11SDW-16C-TP13F+	-4C: SUPER● X11SDW-4C-TP13F+ -14CN: SUPER● X11SDW-14CN-TP13F+ -16C: SUPER● X11SDW-16C-TP13F+
Chipset	System on Chip (SoC)	System on Chip chipset
System Memory (Max.)*	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; Up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; Up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	2 PCI-E 3.0 x16 FHFL	2 PCI-E 3.0 x16 FHFL
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Connectivity	4 SFP+, 9 GbE (one for Ethernet management), 1 dedicated IPMI LAN, 1 COM via RJ45, 2 USB 3.0	4 SFP+, 9 GbE (one for Ethernet management), 1 dedicated IPMI LAN, 1 COM via RJ45, 2 USB 3.0
VGA/Audio	VGA via Aspeed AST2500 BMC	VGA via Aspeed AST2500 BMC
Management	IPMI 2.0	IPMI 2.0
Drive Bays	2x 2.5" Internal Drive Bays	2x 2.5" Internal Drive Bays
Peripheral Bays	N/A	N/A
Power Supply	800W 1U Redundant Power Supply	600W DC48V 1U Redundant Power Supply
Cooling System	5x 40x56mm Hot Swappable Counter-Rotation PWM Fans	5x 40x56mm Hot Swappable Counter-Rotation PWM Fans
Form Factor	437 x 43 x 399mm (17.2" x 1.7" x 15.7")	437 x 43 x 399mm (17.2" x 1.7" x 15.7")

* Please check with your Supermicro sales representative and website for compatibility and configuration details

** Only available for NA and EU region. For other regions, please contact your sale representatives



NEW!

Embedded
Intel® Xeon® D System with
3 PCIe slots and
1+1 800W-48V DC Redundant Power Supply



NEW!

Embedded
Intel® Xeon® D System with
3 PCIe slots and
1+1 600W-48V DC Redundant Power



MODEL	SYS-E403-9D-4C-FRN13+ SYS-E403-9D-14CN-FRN13+ SYS-E403-9D-16C-FRN13+	SYS-E403-9D-4C-FRDN13+ SYS-E403-9D-14CN-FRDN13+ SYS-E403-9D-16C-FRDN13+
Processor Support	-4C: Intel® Xeon® D-2123IT Processor, 4 Cores, 8 Threads, 2.2 GHz, 60W -14CN: Intel® Xeon® D-2177NT Processor, 14 Cores, 28 Threads, 1.9 GHz, 105W -16C: Intel® Xeon® D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W	-4C: Intel® Xeon® D-2123IT Processor, 4 Cores, 8 Threads, 2.2 GHz, 60W -14CN: Intel® Xeon® D-2177NT Processor, 14 Cores, 28 Threads, 1.9 GHz, 105W -16C: Intel® Xeon® Processor D-2183IT, 16 Cores, 32 Threads, 2.2 GHz, 100W
Key Applications	<ul style="list-style-type: none"> Multi-Access Edge Computing (MEC) Universal Customer Premise Equipment (uCPE) Network Function Virtualization (NFV) Edge Computing, Vehicle to Everything Application (C-V2X / V2X) 	<ul style="list-style-type: none"> Multi-Access Edge Computing (MEC) Universal Customer Premise Equipment (uCPE) Network Function Virtualization (NFV) Edge Computing, Vehicle to Everything Application (C-V2X / V2X)
Outstanding Features	<ul style="list-style-type: none"> Dual PCIe 3.0 x16 or Dual x8, 1 x16 PCIe 3.0 (FH3/4L) Operating Temperature 0°C ~ 50°C (32°F ~ 122°F) 800W 240VDC redundant power 	<ul style="list-style-type: none"> Dual PCIe3.0 x16 or Dual x8, One x16 PCIe3.0 (FH3/4L) Operating Temperature 0°C ~ 50°C (32°F ~ 122°F) 600W -48VDC redundant power
Serverboard	-4C: SUPER● X11SDW-4C-TP13F+ -14CN: SUPER● X11SDW-14CN-TP13F+ -16C: SUPER● X11SDW-16C-TP13F+	-4C: SUPER● X11SDW-4C-TP13F+ -14CN: SUPER● X11SDW-14CN-TP13F+ -16C: SUPER● X11SDW-16C-TP13F+
Chipset	System on Chip (SoC)	System on Chip (SoC)
System Memory (Max.)*	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400 MHz; in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400 MHz; in 4 DIMM slots
Expansion Slots	Dual x16 or Dual x8, 1 x16 PCI-E3.0 full height 3/4 length expansion slot	Dual x16 or Dual x8, 1 x16 PCI-E3.0 full height 3/4 length expansion slot
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Connectivity	4x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0	4x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0
VGA/Audio	VGA via BMC	VGA via BMC
Management	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	4x Internal 2.5" Drive Bays	4x Internal 2.5" Drive Bays
Peripheral Bays	N/A	N/A
Power Supply	800W 240V AC redundant power supply w/ PMbus (94% Efficiency)	600W -48Vdc redundant power supply w/ PMbus (92% Efficiency)
Cooling System	3x 80x80mm PWM redundant fans	3x 80x80mm PWM redundant fans
Form Factor	267 x 117 x 406mm (10.5" x 4.62" x 16")	267 x 117 x 406mm (10.5" x 4.62" x 16")

* Please check with your Supermicro sales representative and website for compatibility and configuration details



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Weatherproof
Intel® Xeon® D Server



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Weatherproof
Intel® Xeon® D Server



MODEL	SYS-E403-9P-16C-IP	SYS-E403-9D-16C-IPD2
Processor Support	Intel® Xeon® D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W	Intel® Xeon® D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W
Key Applications	<ul style="list-style-type: none"> Multi-Access Edge Computing (MEC) Universal Customer Premise Equipment (uCPE) Network Function Virtualization (NFV) Edge Computing, Vehicle to Everything Application (C-V2X / V2X) 	<ul style="list-style-type: none"> 5G Radio Access Network (RAN) Multi-Access Edge Computing (MEC) Edge AI Inferencing Vehicle to Everything (C-V2X/V2X) Virtualized Functions and Services
Outstanding Features	<ul style="list-style-type: none"> Operating Temperature -40°C ~ 46°C (-40°F ~ 114.8°F) GR-487-CORE compliant Temper-proof design Noise 71 dBA 100-240 Vac, Est. Max Power consumption: 1200W (instantaneous)/ 900W (stable) 620W heater (Initiating power: 900W) 	<ul style="list-style-type: none"> IP65 enclosure for harsh outdoor environments GR-3108-CORE / GR-487-CORE compliant Operating Temperature -40°C ~ 50°C (-40°F ~ 122°F) Cabinet intrusion detection and self-diagnosis Redundant power supplies and cooling fans
Serverboard	SUPERMICRO X11SDW-16C-TP13F	SUPERMICRO X11SDW-16C-TP13F+
Chipset	System on Chip (SoC)	System on Chip (SoC)
System Memory (Max.)*	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400 MHz; in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2400 MHz; in 4 DIMM slots
Expansion Slots	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Connectivity	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0	4x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0
VGA/Audio	VGA via BMC	VGA via BMC
Management	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	4x Internal 2.5" Drive Bays	4x Internal 2.5" Drive Bays
Peripheral Bays	N/A	N/A
Power Supply	1200W 100-240 VAC, Multi-output power supply w/ PMbus, 80Plus Gold	Design Capacity: -40Vdc to -59Vdc, 900W
Cooling System	3x 80x80mm PWM redundant fans	3x 80x80mm PWM redundant fans (Server), 6x 80x38mm IP68 Fans (Cabinet)
Form Factor	516 x 650 x 450mm (20.3" x 25.6" x 17.7")	319 x 821 x 258mm (12.56" x 32.31" x 10.16")

* Please check with your Supermicro sales representative and website for compatibility and configuration details

Embedded
Intel® Xeon® D Box PC
with 3 PCI-E slots

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Intel® Xeon® D Box PC
with 3 PCI-E slots



MODEL	SYS-E403-9D-4C-FN13TP SYS-E403-9D-12C-FN13TP SYS-E403-9D-14C-FN13TP SYS-E403-9D-16C-FN13TP	SYS-E403-9D-8CN-FN13TP SYS-E403-9D-14CN-FN13TP
Processor Support	-4C: Intel® Xeon® D-2123IT Processor, 4 Cores, 8 Threads, 2.2 GHz, 60W -12C: Intel® Xeon® D-2163IT Processor, 12 Cores, 24 Threads, 2.1 GHz, 75W -14C: Intel® Xeon® D-2173IT Processor, 14 Cores, 28 Threads, 1.7 GHz, 70W -16C: Intel® Xeon® D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W	-8CN: Intel® Xeon® D-2146NT Processor, 8 Cores, 16 Threads, 2.3 GHz, 80W -14CN: Intel® Xeon® D-2177NT Processor, 14 Cores, 28 Threads, 1.9 GHz, 105W
Key Applications	<ul style="list-style-type: none"> Multi-Access Edge Computing (MEC) Universal Customer Premise Equipment (uCPE) Network Function Virtualization (NFV) Edge Computing, Vehicle to Everything Application (C-V2X / V2X) 	<ul style="list-style-type: none"> Multi-Access Edge Computing (MEC) Universal Customer Premise Equipment (uCPE) Network Function Virtualization (NFV) Edge Computing, Vehicle to Everything Application (C-V2X / V2X)
Outstanding Features	<ul style="list-style-type: none"> Dual PCI-E 3.0 x16 or Dual x8, One x16 PCI-E 3.0 (FH3/4L) 2x 10GbE, 2x SFP+, 9x GbE (one for management) 1x dedicated IPMI LAN, 1x COM via RJ45 2x USB 3.0, 2x USB 2.0 1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key 2230 	<ul style="list-style-type: none"> Dual PCI-E 3.0 x16 or Dual x8, One x16 PCI-E 3.0 (FH3/4L) 2x 10GbE, 2x SFP+, 9x GbE (one for management) 1x dedicated IPMI LAN, 1x COM via RJ45 2x USB 3.0, 2x USB 2.0 1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key 2230
Serverboard	-4C: SUPERMICRO X11SDW-4C-TP13F -12C: SUPERMICRO X11SDW-12C-TP13F -14C: SUPERMICRO X11SDW-14C-TP13F -16C: SUPERMICRO X11SDW-16C-TP13F	-8CN: SUPERMICRO X11SDW-8C-TP13F -14CN: SUPERMICRO X11SDW-14CNT-TP13F
Chipset	System on Chip (SoC)	System on Chip (SoC)
System Memory (Max.)*	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2133 MHz; in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, or up to 512GB LRDIMM, DDR4-2667 MHz; in 4 DIMM slots
Expansion Slots	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot	Dual x16 or Dual x8, One x16 PCI-E3.0 full height 3/4 length expansion slot
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Connectivity	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0, 2 USB 2.0
VGA/Audio	VGA via BMC	VGA via BMC
Management	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Drive Bays	4x Internal 2.5" Drive Bays	4x Internal 2.5" Drive Bays
Peripheral Bays	N/A	N/A
Power Supply	600W Multi-output power supply, 80Plus Gold	600W Multi-output power supply, 80Plus Gold
Cooling System	3x 80x80mm PWM redundant fans	3x 80x80mm PWM redundant fans
Form Factor	267 x 109 x 406mm (10.5" x 4.3" x 16")	267 x 109 x 406mm (10.5" x 4.3" x 16")

* Please check with your Supermicro sales representative and website for compatibility and configuration details



We Power the Cloud

Embedded
Intel® Xeon® D-2146NT
SoC 8 Core 16 Thread



Embedded
Intel® Xeon® D-2146NT
SoC 8 Core 16 Thread



MODEL	SYS-E300-9D-8CN8TP	SYS-E301-9D-8CN8TP
Processor Support	Intel® Xeon® D-2146NT SoC, 2.3GHz, 8 Core, 80W † BIOS version 2.0 or above is required	Intel® Xeon® D-2146NT SoC, 2.3GHz, 8 Core, 80W † BIOS version 2.0 or above is required
Key Applications	<ul style="list-style-type: none"> • SDN-WAN, vCPE controller box • NFV Edge Computing Server • Virtualization Server • FireWall Applications • IoT Edge Computing 	<ul style="list-style-type: none"> • SDN-WAN, vCPE controller box • NFV Edge Computing Server • Virtualization Server • FireWall Applications • IoT Edge ComputingSDN-WAN, vCPE controller box • NFV Edge Computing Server • Virtualization Server • FireWall Applications • IoT Edge Computing
Outstanding Features	<ul style="list-style-type: none"> • Built in Intel® QAT up to 40Gbps Crypto/Compression • Supports up to 8C high Density SKL-D SoC processor for edge network computing • High Memory Bandwidth-Supports 4 DDR4 channel DIMMs(ECC LRDIMM or ECC RDIMM) with up to 2133 MHz memory speed , Max memory capacity up to 512GB on LRDIMM • 8 LAN ports support(2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE) • Support on board 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support • 2 x USB 3.0, 4 x SATA 3.0 ports(SATA/SAS HDD/SSD) 	<ul style="list-style-type: none"> • Built in Intel® QAT up to 40Gbps Crypto/Compression • Supports up to 8C high Density SKL-D SoC processor for Edge network computing • High Memory Bandwidth-Supports 4 DDR4 channel DIMMs(ECC LRDIMM or ECC RDIMM) with up to 2133 MHz memory speed , Max memory capacity up to 512GB on LRDIMM • 8 LAN ports support(2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE) • Support on board 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support • 2 x USB 3.0, 4 x SATA 3.0 ports(SATA/SAS HDD/SSD)
Serverboard	SUPER● X11SDV-8C-TP8F	SUPER● X11SDV-8C-TP8F
Chipset	System On Chip	System On Chip
System Memory (Max.)*	DDR4-2666 512GB LRDIMM or 256GB Registered ECC RDIMM in 4 DIMM slots	DDR4-2666 512GB LRDIMM or 256GB Registered ECC RDIMM in 4 DIMM slots
Expansion Slots	1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots,	1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots,
Onboard Storage Controller	SoC controller for 4x SATA3 (6 Gbps) ports, (or 2x NVMe U.2 / 8x SATA3 through two Port Eight Intel® PCH SATA 3.0 Ports or Two MINI-SAS HD ports)	SoC controller for 4x SATA3 (6 Gbps) ports, (or 2x NVMe U.2 / 8x SATA3 through two Port Eight Intel® PCH SATA 3.0 Ports or Two MINI-SAS HD ports)
Connectivity	2x 10G SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0	2x 10G SFP+, 2x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0
VGA/Audio	VGA via BMC	VGA via BMC
Management	IPMI 2.0, KVM with dedicated LAN, Watchdog	IPMI 2.0, KVM with dedicated LAN, Watchdog
Drive Bays	1x 2.5" fixed drive bay with bracket. (No 2.5" fixed drive bay when AOC area is occupied.)	Support up to 4x 7mm SSD
Peripheral Bays	N/A	N/A
Power Supply	DC power adapter	DC power adapter
Cooling System	Passive CPU heat sink, 3x 40x28mm 4-PIN PWM Fan for System level (FAN-0100L4, 8.5K RPM)	Passive CPU heat sink, 3x 40x28mm 4-PIN PWM Fan for System level (FAN-0100L4, 8.5K RPM)
Form Factor	254 x 43 x 226mm (10" x 1.7" x 8.9")	254 x 66 x 226mm (10" x 2.6" x 8.9")

* Please check with your Supermicro sales representative and website for compatibility and configuration details

IoT/Embedded

Intel® Xeon® D
SoC, 8 Cores

Embedded

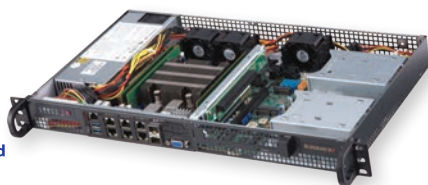
Intel® Xeon® D
Compact 1U Front Access
1U 2-Slot System

Embedded

Intel® Xeon® D
Compact 1U Front Access
Modular I/O Edge Platform



We Power the Cloud



MODEL	SYS-5019D-FN8TP	SYS-1019D-FHN13TP SYS-1019D-4C-FHN13TP SYS-1019D-14CN-FHN13TP SYS-1019D-16C-FHN13TP	SYS-1019D-FRN5TP SYS-1019D-12C-FRN5TP SYS-1019D-16C-FRN5TP SYS-1019D-14C-FRN5TP
Processor Support	Intel® Xeon® D-2146NT SoC, 2.3GHz, 8 Core, 80W	Intel® Xeon® D-2146NT Processor, 8 Cores, 16 Threads, 2.3 GHz, 80W -4C: Intel® Xeon® D-2123IT Processor, 4 Cores, 8 Threads, 2.2 GHz, 60W -14CN: Intel® Xeon® D-2177NT Processor, 14 Cores, 28 Threads, 1.9 GHz, 105W -16C: Intel® Xeon® D-2183IT Processor, 16 Cores, 32 Threads, 2.2 GHz, 100W	Intel® Xeon® D-2146NT Processor, 8C/16T, 2.3GHz, 80W -12C: Intel® Xeon® D-2163IT Processor, 12C/24T, 2.1GHz, 75W -14C: Intel® Xeon® D-2173IT Processor, 14C/28T, 1.7GHz, 70W -16C: Intel® Xeon® D-2183IT Processor, 16C/32T, 2.2GHz, 100W
Key Applications	<ul style="list-style-type: none"> Network Security Appliance SDN-WAN, vCPE controller box NFV Edge Computing Server Virtualization Server IoT Edge Computing 	<ul style="list-style-type: none"> Multi-Access Edge Computing (MEC) Centralized Cloud Radio Access Network (C-RAN) Universal Customer Premise Equipment (uCPE) Software Defined WAN (SD-WAN) Network Function Virtualization (NFV) Artificial Intelligence (AI) 	<ul style="list-style-type: none"> Centralized/Cloud Radio Access Network (C-RAN) Universal Customer Premise Equipment (uCPE) Software Defined WAN (SD-WAN) Network Function Virtualization (NFV)
Outstanding Features	<ul style="list-style-type: none"> Built in Intel® QAT up to 40Gbps Crypto/Compression Supports up to 8C high Density SKL-D SoC processor for edge network computing High Memory Bandwidth-Supports 4 DDR4 channel DIMMs(ECC LRDIMM or ECC RDIMM) with up to 2133 MHz memory speed , Max memory capacity up to 512GB on LRDIMM 8 LAN ports support(2 x 10G SFP+, 2 x 10GBase-T, 4 x GbE) Support on board 1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support 2 x USB 3.0, 4 x SATA 3.0 ports(SATA/SAS HDD/SSD) 	<ul style="list-style-type: none"> Intel® Xeon® D-2100 Process Intel® Xeon® D-2146NT Processor, 8 Cores, 16 Threads, 2.3 GHz, 80W Dual PCIe3.0 x16 FHFL 2x 10GbE, 2x SFP+, 9x GbE (one for management), 1x dedicated IPMI LAN, 1x COM via RJ45 1x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key 	<ul style="list-style-type: none"> Intel® Xeon® D-2146NT Processor, 8 Cores, 16 Threads, 2.3 GHz, 80W 4x PCIe3.0 x8 slots for AIOM 2x 10GbE (share with IPMI), 2x SFP+, 1x Ethernet Management Port, 1x COM via RJ45/micro USB 2x M.2 M-Key 2280/110, 1x M.2 B-Key 3042, 1x M.2 E-Key 2x EDSFF
Serverboard	SUPER® X11SDV-8C-TP8F	SUPER® X11SDW-8C-TP13F -4C: SUPER® X11SDW-16C-TP13F -14CN: SUPER® X11SDW-14CNT-TP13F -16C: SUPER® X11SDW-16C-TP13F	SUPER® X11SDS-8C -12C: SUPER® X11SDS-12C -14C: SUPER® X11SDS-14C -16C: SUPER® X11SDS-16C
Chipset	System On Chip	System on Chip (SoC)	System on Chip (SoC)
System Memory (Max.)*	4 x DDR4 DIMM 512 GB up to 2667MHz LRDIMM or 256GB RDIMM, ECC	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; Up to 512GB LRDIMM LRDIMM, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; Up to 512GB LRDIMM, in 4 DIMM slots
Expansion Slots	1 M.2 slot M key for SSD, 2242/80, 1 M.2 B Key for SSD/ WAN card, 1 Mini-PCI-E with mSATA Support, 1 PCI-E 3.0x8 slots,	Dual PCI-E 3.0 x 16 full height full length expansion slot	4 PCI-E3.0 x8 slots for AIOM** ** AIOM sold separately
Onboard Storage Controller	SoC controller for 4 SATA3 (6 Gbps) ports	SoC controller for 4 SATA3 (6 Gbps) ports	SoC controller for 2 SATA3 (6 Gbps) ports
Connectivity	2 x 10G SFP+, 2 x 10GbE LAN, 4x 1GbE LAN, 1x dedicated IPMI LAN, 2 USB 3.0	2x 10GbE, 2x SFP+, 9x GbE (one for Ethernet management), 1x dedicated IPMI LAN, 1x COM via RJ45, 2 USB 3.0	2x 10GbE(share with IPMI), 2x SFP+, 1x Ethernet Management Port, 1x COM via RJ45/micro USB, 2 USB 3.0
VGA/Audio	VGA via BMC	VGA via BMC	VGA via BMC
Management	IPMI 2.0	IPMI 2.0	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor™ 5, Watchdog
Drive Bays	1x 3.5" or 4x 2.5"	2x External Hot-swap 2.5" Drive Bays, 2x Internal 2.5" Drive Bays	2x 2.5" Drive Bays(one drive space shares with M.2), 2x E1.5(35°C ambient temperature only)
Peripheral Bays	N/A	N/A	N/A
Power Supply	200W Low Noise AC-DC power supply with PFC	1019D-FHN13TP / -4C: 350W Multi-output Platinum Level power supply; -14CN / -16C: 500W Multi-output Platinum Level power supply	Redundant 400W Platinum level power supply
Cooling System	3x 40x28mm 4-PIN PWM Fan(FAN-0065L4, 13K RPM)	4x 40x28mm PWM fans (up to 6)	5x 40x40x56 mm 13K-11K RPM Counter-rotating Fans
Form Factor	1U Short Depth Rackmount; Enclosure: 437 x 43 x 249mm (17.2" x 1.7" x 9.8")	1U Rackmount 437 x 43 x 381mm (17.2" x 1.7" x 15")	1U Rackmount 437 x 43 x 381mm (17.2" x 1.7" x 15")

* Please check with your Supermicro sales representative and website for compatibility and configuration details

Embedded
Cascade Lake-SP
Compact Front Access 1U WIO System

Embedded
Cascade Lake-SP, Box PC
with 3 PCI-E slots

IoT/Embedded
Intel® Gen 8th Coffee Lake-S,
Compact Mini-Tower,
HD Audio connector



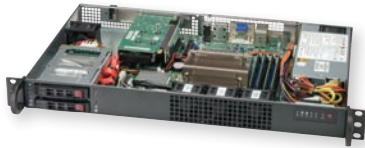
MODEL	SYS-1019P-FHN2T	SYS-E403-9P-FN2T	SYS-5029C-TN2
Processor Support	2nd Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP), Intel® Xeon® Scalable Processors. Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP	2nd Generation Intel® Xeon® Scalable Processors (Cascade Lake-SP), Intel® Xeon® Scalable Processors. Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP	Intel® 8th/9th Generation Core™ i9/Core™ i7/Core™ i5/Core™ i3/Pentium™/Celeron™ series Processor. Single Socket LGA-1151 (Socket H4) supported, CPU TDP support Up to 65W TDP
Key Applications	<ul style="list-style-type: none"> Multi-Access Edge Computing (MEC) Centralized/Cloud Radio Access Network (C-RAN) Universal Customer Premise Equipment (uCPE), Advanced Network Security Network Function Virtualization (NFV) Artificial Intelligence (AI) on Edge, Machine Learning (ML) Retail, Smart Medical Expert Systems 	<ul style="list-style-type: none"> Multi-Access Edge Computing (MEC) Universal Customer Premise Equipment (uCPE) Network Function Virtualization (NFV) Artificial Intelligence (AI) on Edge, Machine Learning (ML) Industrial Automation, Retail, Smart Medical Expert Systems 	<ul style="list-style-type: none"> Surveillance Security Server Compact Storage Appliance Video processing and streaming Small Medium Business Edge Server
Outstanding Features	<ul style="list-style-type: none"> Intel® Cascade Lake-SP Scalable Processors 2x PCIe 3.0 x16 FHFL 2x 10 Gigabit Ethernet Ports 2x USB 3.0, 2x USB 2.0 2x 2.5" Hot Swap SATA3 Drive Bays, 2x 2.5" Internal SATA3 Drive Bays (optional) 	<ul style="list-style-type: none"> Intel® Cascade Lake-SP Scalable Processors 1x PCIe 3.0 x16 + 2x PCIe 3.0 x8, or 2x PCIe 3.0 x16 (FH3/4L) 2x 10 Gigabit Ethernet Ports 4x USB 3.0, 2x USB 2.0 4x 2.5" Internal Drive Bays 	<ul style="list-style-type: none"> Up to 64GB Non ECC SO-DIMM DDR4 2666 MHz TPM chip onboard with jumper disable Up to 4 Hot-Swap 3.5" SATA3 HDD and 2 internal 2.5" fixed HDD 4 x USB 3.1 (2 type A & 2 type C in rear) M.2 Key: M-Key, E-Key for WiFi (or CNVi) card
Serverboard	SUPER● X11SPW-TF	SUPER● X11SPW-TF	SUPER● X11SCV-Q
Chipset	Intel® C622 chipset	Intel® C622 chipset	System on Chip
System Memory (Max.)*	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2666MHz, in 2 DIMM slots
Expansion Slots	2 PCI-E 3.0 x16 FHFL	1 PCI-E 3.0 x16 + 2 PCI-E 3.0 x8, or 2 PCI-E 3.0 x16 (FH3/4L)	1 PCI-E 3.0 x16(Low Profile); 1 M.2 PCI-E 3.0x4 M Key 2242/2280
Onboard Storage Controller	Intel® C622 controller; RAID 0,1,5,10	Intel® C622 controller; RAID 0,1,5,10	Intel® Q370 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10X11SCV-Q: Q370 controller for 5SATA3 ports;RAID 0,1,5,10 ;
Connectivity	2x 10GbE, 1x Dedicated IPMI LAN, 2 USB 3.0, 2 USB 2.0, 1x COM, 1x VGA	2x 10GbE, 1x Dedicated IPMI LAN, 4 USB 3.0, 2 USB 2.0, 1x COM, 1x VGA	4 USB 3.1 (2 type A & 2 type C in rear)
VGA/Audio	Aspeed AST2500 BMC	Aspeed AST2500 BMC	Intel® HD Graphics
Management	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog
Drive Bays	2x 2.5" Hot Swap SATA3 Drive Bays, 2x 2.5" Internal SATA3 Drive Bays (optional)	4x 2.5" Internal Drive Bays	4x 3.5" SATA Hot Swap drive bay and 2x2.5" internal drive bay
Peripheral Bays	N/A	N/A	1x slim DVD-ROM drive bay
Power Supply	1U 500W Multi-output power supply w/ PMbus, 80Plus Platinum	600W Multi-output power supply, 80Plus Gold	1U 250W Flex ATX Multi-output Bronze Power Supply, FSP FSP250-50LC
Cooling System	6x 40x28mm PWM fans	3x 80x38mm PWM hot swap fans	1x 12cm rear exhaust fan,, 1x Active CPU cooler
Form Factor	Short-depth 1U Rackmount 437 x 43 x 381mm (17.2" x 1.7" x 15")	267 x 109 x 406mm (10.5" x 4.3" x 16")	210 x 240 x 279mm (8.27" x 9.45" x 11")

* Please check with your Supermicro sales representative and website for compatibility and configuration details

IoT/Embedded
Intel® Gen 8th Coffee Lake-S
Compact 1U Embedded System

IoT/Embedded
Intel® Gen 8th Coffee Lake-S
Compact

Embedded
UP System



MODEL	SYS-1019C-HTN2	SYS-1019C-FHTN8	SYS-5019C-MHN2
Processor Support	Intel® 8th/9th Generation Core™ i9/Core™ i7/Core™ i5/ Core™ i3/Pentium™/Celeron™ series Processor, Intel® Xeon® E processor (Coffee Lake-S) Server, Intel® Xeon® E processor (Coffee Lake-S) Workstation. Single Socket H4 (LGA 1151) supported, CPU TDP support Up to 80W TDP * A graphic integrated CPU is required to have onboard video from the DVI and DP ports	8th Generation Intel® Core™ i3 Processors, Intel® Xeon® E-2100/2200 processor Server. Socket LGA 1151 supported, CPU TDP support Up to 80W TDP	8th/9th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Core™ i3/Pentium™/Celeron™ Processor, Intel® Xeon® E-2100 Processor, Intel® Xeon® E-2200 Processor. Single Socket LGA-1151 (Socket H4) supported, CPU TDP support Up to 95W TDP A graphic integrated CPU is required to have onboard video from the DVI and DP ports
Key Applications	<ul style="list-style-type: none"> Digital Signage DVR/NVR POS Office Server Network Security Security Appliance and Video Surveillance 	<ul style="list-style-type: none"> uCPE Network Appliance Network Security Appliance Virtualization Server 	<ul style="list-style-type: none"> General purpose, SMB, Web Hosting Application and data serving Archiving, Mail/Finance, Security
Outstanding Features	<ul style="list-style-type: none"> Intel® Xeon® processor E-2100 /E-2200 series, 8th/9th Gen. Intel® Core™ i9/i7/i5/i3 Processors 2x 2.5" Hot Swap SATA3 Drive Bay M.2 (M key), Onboard TPM Coffee Lake-S, Xeon® E-2100, 8th Gen Core i3, Pentium, Celeron Remote management via dedicated IPMI BMC 4 USB 3.1 2 DP, DVI-I, VGA, Audio PCIe 3.0 x16, 	<ul style="list-style-type: none"> 8th Generation Intel® Core™ i3 Processors, Intel® Xeon® E-2100/2200 processor 8x 1GbE, 1 dedicated IPMI LAN 1 VGA, 2 USB3.1, 2 USB2.0 1 PCIe3.0 x16 Dual M.2 M key (22110/2280) 2x 2.5" Hot Swap, 2x 2.5" Internal SATA3 Drive Bay 	<ul style="list-style-type: none"> Short-Depth(19.8"D) Quick Release Rails
Serverboard	SUPER® X11SCZ-F	SUPER® X11SCM-LN8F	SUPER® X11SCZ-F
Chipset	Intel® C246 chipset	Intel® C246 chipset	Intel® C246 chipset
System Memory (Max.)*	Up to Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 64GB ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
Expansion Slots	PCIe 3.0 x 16 half height half length expansion slot; M.2 (M key, 22110/80, PCIe3.0 x4/SATA)	PCIe 3.0 x 16 full height full length expansion slot (limited to two drives populated);	1 PCI-E 3.0 x16
Onboard Storage Controller	Intel® C246 controller for 2 SATA3 (6 Gbps) ports; RAID 0,1;	Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10;	Intel® C246 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10;
Connectivity	Dual GbE LAN, 1 dedicate IPMI, 4 USB3.1 (3 TYPE A and 1 TYPE C)	8x 1GbE LAN, 1 dedicate IPMI LAN, 2 USB3.1, 2 USB2.0	Dual LAN with Intel® Ethernet Controller I210-AT
VGA/Audio	2x DP, 1xDVI-I, 1xVGA	VGA via BMC	Asped AST2500 BMC, Intel® HD Graphics
Management	IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® 5, Watchdog
Drive Bays	2 x 2.5" hot swap HDD (SATA3)	2x 2.5" Hot Swap, 2x 2.5" Internal(SSD recommended) SATA3 Drive Bay	4x 3.5" hot-swap SAS/SATA
Peripheral Bays	N/A	N/A	1x Slim DVD-ROM Drive
Power Supply	200W Low Noise AC-DC power supply with PFC, Gold Certified	350W AC-DC multiple output power supply, Platinum Level	350W AC-DC multiple output Platinum Level power supply
Cooling System	4x 40x28mm chassis fan 4-PIN PWM FAN	4x 40x28mm PWM fan	5x 40x28mm PWM fan
Form Factor	1U Rackmount 17.2" (437mm) x 1.7" (43mm) x 11.3" (287mm); Enclosure: 437 x 43 x 287mm (17.2" x 1.7" x 11.3") Package: 645 x 155 x 503mm (25.4" x 6.1" x 19.8") Gross Weight: 14.1lbs (6.4kg) Net Weight: 10.0lbs (4.54kg)	1U Rackmount; Enclosure: 437 x 43 x 381mm (17.2" x 1.7" x 15") Package: 610 x 203 x 686mm (24" x 8" x 27") Gross Weight: 50lbs (22.68kg) Net Weight: 25lbs (11.34kg)	1U Rackmount 437 x 43 x 483mm (17.2" x 1.7" x 19.8")

* Please check with your Supermicro sales representative and website for compatibility and configuration details

Embedded Chassis Selection Guide



Fanless/IoT Gateway

- Fanless & robust design
- Low power consumption
- Wide-range working temperature & voltage



Compact Dual Node System Trays

- Rackmount kit available for Xeon® D and Denverton Systems
- Mounting kits for Single Node



Compact Mini Tower

- Support up to 80W TDP processor
- Hot-swap 3.5" HDD for RAID
- Low profile expansion slot for diversified application



Compact Box System

- Building block design
- Commercial off-the-shelf with extended product life cycle
- Easy deployment



IPC

- Rackmount with expansion capabilities
- Flexible Front I/O
- Up to 11 PCI-E Expansion slots



1U Rack System

- 1U Rackmount with advanced cooling design
- Flexible I/O at front and rear
- Remote Management & FW upgrade via IPMI 2.0

Front Bezel/LCD



Model	MCP-220-00095-0B	MCP-220-00095-0B	MCP-210-00007-01	SCPTFB-813LB	MCP-210-82502-0B	MCP-210-84201-0B
Feature	LCD display kits	Full-color OLED kit	Front bezel with LCD display	Front bezel with lock	Front bezel with lock	Front bezel with lock
Form Factor/ Chassis	5.25" bay	3.5"HDD bay	SC813/813M series	SC813/813M series	SC825M series	SC842 series

Chassis



Model	SCE102	SCE301	SCE4031F	SCE300-LED	SCE300	SC101F	SC101S	SC101i	SC101iF	SC721TQ-250B
Form Factor	3.5" SBC/Pico-ITX	Compact Box	Box PC	Compact Box	Compact Box	Compact Box	Compact Box	Compact Box	Compact Box	Compact Mini Tower
Compatible Motherboard	3.5" SBC, PICO-ITX	Flex-ATX 9.0" x 7.25"	Flex-ATX 9.0" x 7.25"	Flex-ATX 9.0" x 7.25", Mini-ITX	Flex-ATX 9.0" x 7.25", Mini-ITX	Mini-ITX	Mini ITX	Mini-ITX	Mini-ITX	Mini ITX
CPU Support	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor	Single processor
Drive Bays	1x 2.5" fixed drive bay	8x 2.5" fixed drive bay	4x 2.5" fixed drive bay	1x fixed 2.5" SATA	1x 2.5" fixed drive bay	1x 2.5" fixed drive bay	1x Fixed 2.5" SATA	1x Fixed 2.5" SATA	1x Fixed 2.5" SATA	4x 3.5" Hot-Swap SATA HDD 2x internal 2.5" SATA HDD
Expansion Slots	Onboard Mini PCI-E or M.2	-	3x low profile AOC	1x low profile, half length	1x low profile, half length	Onboard Mini PCI-E or M.2	Onboard Mini PCI-E or M.2	Onboard Mini PCI-E or M.2	Onboard Mini PCI-E or M.2	1x low profile, half-length
Power Supply	40W Power Adapter	60W/84W DC Power Adapter	60W/84W DC Power Adapter	60W/80W/120W/150W DC Power Adapter	60W/80W/120W/150W DC Power Adapter	60W/80W/120W/150W DC Power Adapter	60W Power Adapter	60W / 80W Power Adapter	60W / 84W Power Adapter	250W Flex ATX Multi-output Bronze Power Supply
Dimensions (WxDxH)	7.48" x 1.72" x 4.72" 190 x 44 x 120mm	10.43" x 2.57" x 8.9" 265 x 65.4 x 226mm	10" x 8.9" x 1.7" 254 x 226 x 43mm	10" x 8.9" x 1.7" 254 x 226 x 43mm	10" x 8.9" x 1.7" 254 x 226 x 43mm	7.6" x 8.9" x 1.7" 381 x 226 x 43mm	7.68" x 7.68" x 1.7" 195 x 195 x 43mm	7.68" x 7.68" x 2.68" 195 x 195 x 68mm	7.68" x 7.68" x 2.68" 195 x 195 x 68mm	11" x 8.27" x 9.45" 280 x 210 x 240mm



Model	SC504-203B	SC505-203B	SC510T-203B	SC510-203B	SC512L-260B-LCD
Form Factor	1U Rackmount	1U Rackmount Front I/O	1U Rackmount	1U Rackmount	1U Rackmount
Compatible Motherboard	Flex ATX, Mini-ITX	Flex ATX, Mini-ITX	MicroATX	MicroATX	ATX, MicroATX
CPU Support	Single processor	Single processor	Single processor	Single processor	Single processor
Drive Bays	2 x Fixed 3.5" or 4 x Fixed 2.5" SATA	2 x Fixed 3.5" or 4 x Fixed 2.5" SATA	2x hot-swap 2.5"SATA	Up to 4x Fixed 2.5" SATA*	1x Fixed 2.5" or 3.5" SATA
Expansion Slots	1x full-height, half-length	1x full-height, half-length	1x low profile, half-length	1x full-height, half-length**	1x full-height, half-length
Power Supply	200W High-Efficiency	200W High-efficiency	200W High-efficiency	200W Power Supply	260W Power Supply
Dimensions (WxDxH)	17.2"x9.8"x1.7" 437 x 249 x 43 mm	17.2"x9.8"x1.7" 437 x 249 x 43 mm	17.2"x11.3"x1.7" 437 x 287 x 43 mm	17.2"x9.8"x1.7" 437 x 249 x 43 mm	16.8"x14"x1.7" 437 x 356 x 43 mm

* When AOC area not occupied
 ** When HDD area not occupied



Model	SC513BTQC-350B	SC512F-350B	SC513BTQC-505WB	SC514-R400W SC514-R400C	SC514-505	SC515-R407
Form Factor	15" Mini 1U	1U Rackmount	15" Mini 1U	1U Rackmount	1U Rackmount	1U Rackmount
Compatible Motherboard	12" x 13" E-ATX	ATX, MicroATX	12" x 13" E-ATX	WIO E-ATX 12.3"x13"	E-ATX, ATX, MicroATX/WIO	ATX, Micro ATX/WIO
CPU Support	Dual and single processors	Single processors	Dual and single processors	Dual and single processors	Dual and single processors	Single processors
Drive Bays	2x 2.5" hot-swap drive bay, Optional 4x 2.5" fixed with bracket	2x Fixed 2.5" or 3.5" SATA	2x 2.5" hot-swap drive bay Optional 4x 2.5" fixed with bracket	2 x Fixed 2.5" HDD	Up to 2x 2.5" fixed with bracket • SAS or enterprise SATA HDD	2x Fixed 2.5" HDD***
Expansion Slots	1 full-height, Half-length (Riser Card Required)	1 full-height, 1 half-length	2 full-height 1 half-length	2 full-height, 1 low profile 1 full height	2 full-height	2 full-height
Power Supply	1U 350W Multi-output Platinum Level power supply	350W High-efficiency Gold Level power supply	1U 500W Multi-output Platinum Level power supply	400W (1+1) Redundant SuperCompact Gold-Level power supply with PMBus and I ² C	500W High-efficiency Power Supply 80 PLUS [®] Platinum Certified	400W (1+1) Redundant SuperCompact Platinum-level power supply with PMBus and I ² C
Dimensions (WxDxH)	17.2"x15"x1.7" 437 x 381 x 43 mm	17.2"x14.5"x1.7" 437 x 369 x 43 mm	17.2"x15"x1.7" 437 x 381 x 43 mm	17.2"x16.9"x1.7" 437 x 429 x 43 mm	17.2"x16.9"x1.7" 437 x 429 x 43 mm	17.2"x16.9"x1.7" 437 x 429 x 43 mm

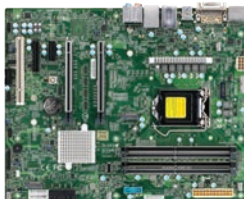
*** Extra 2x 2.5" Fixed HDD with ATX MB or Extra 1x 3.5" or 2x2.5 Fixed HDD with WIO and Half Length Add on Card.



Model	SC213XAC-R1K05LP	SC825MBTQC-R802LPB	SC825XTQC-R1K05	SC835TQC-R802B	SC842XTQC-R804B
Form Factor	2U Rackmount	2U 17.7" Short-Depth Compact	2U Rackmount	3U Rackmount	4U Rackmount
Compatible Motherboard	E-ATX, ATX, MicroATX ; Max. size 15.2" x 13.2	EE-ATX 13.68" x 13", E-ATX 12" x 13", ATX 12" x 10"	E-ATX 12"x13", ATX 12"x10"	E-ATX, ATX	E-ATX, ATX, MicroATX ; Max. size 15.2" x 13.2
CPU Support	Dual and single processors	Dual and single processors	Dual and single processors	Dual and single processors	Dual and single processors
Drive Bays	16x 2.5" hot-swap SAS3/SATA	3x 3.5" hot-swap SAS/SATA with SGPIO; Optional 2x 2.5" hot-swap SAS/SATA	8x 3.5" hot-swap SAS/SATA with SGPIO, and 2x 3.5" fixed drive bay	8x 3.5" Hot-swap SAS/SATA	5x 3.5" Hot-swap SAS/SATA
Expansion Slots	11x low-profile	7x low-profile	7x low-profile	7x full-height, full-length	7x full-height, full-length and 4x full-height, half-length
Power Supply	2x 1U 800/1000W Redundant Power Supplies 38mm Width	800W Redundant Titanium Level Power Supplies	2x 1U 740W Redundant Platinum Power Supply w/ PMbus	800W Redundant Titanium Level Power Supplies	800W Redundant Platinum Level Power Supplies
Dimensions (WxDxH)	17.2" x 25.6" x 3.5" 437 x 650 x 89mm	17.2"x17.7" x 3.5" 437x 450 x 89 mm	17.2" x 25.5" x 3.5" 437 x 647 x 89mm	17.2" x 25.5" x 5.2" 437 x 647 x 132mm	17.2" x 20.5" x 7" 437 x 521 x 178mm

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MODEL	X12SAE	X12SCA-F	X12SCQ	X12SCZ-QF
Processor	10th Generation Intel® Core™ i9/Core™ i7/Core™/Pentium®/Celeron® Processor, Intel® Xeon® W-1200 Processors Single Socket LGA-1200 (Socket H5) supported, CPU TDP support Up to 125W TDP	10th Generation Intel® Core™ i9/Core™ i7/Core™/Pentium®/Celeron® Processor, Intel® Xeon® W-1200 Processors Single Socket LGA-1200 (Socket H5) supported, CPU TDP support Up to 125W TDP	10th Generation Intel® Core™ i9/Core™ i7/Core™i5/Core™i3/Pentium®/Celeron® Processor Single Socket LGA-1200 (Socket H5) supported, CPU TDP support Up to 125W TDP	10th Generation Intel® Core™ i9/Core™ i7/Core™i5/Core™i3/Pentium®/Celeron® Processor Single Socket LGA-1200 (Socket H5) supported, CPU TDP support Up to 125W TDP
Chipset/System Bus	Intel® W480	Intel® W480	Intel® Q470E	Intel® Q470E
Form Factor	ATX, 12" x 9.6" (30.48cm x 24.38cm)	ATX, 12" x 9.6" (30.48cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)
Memory Capacity & Slots	128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots	128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots	Up to 128GB Unbuffered non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots	Up to 128GB Unbuffered non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x4, 2 PCI-E 3.0 x16 slots (16/NA or 8/8), 1 PCI-E 3.0 x1 1 - 5V PCI 32bit	1 PCI-E 3.0 x4, 2 PCI-E 3.0 x16 slots (16/NA or 8/8) 1 - 5V PCI 32bit	1 PCI-E 3.0 x16 (in x16 slot), 1 PCI-E 3.0 x8 (Shared with x16 SLOT7), 2 PCI-E 3.0 x4 M.2 Interface: 1 PCI-E 3.0 x4, RAID 0 & 1 M.2 Form Factor: 2242/2280 M.2 Key: M-Key	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x4 (in x8 slot), 1 PCI-E 3.0 x4 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key CNVI/PCI-E 3.0 x1, 2230
Onboard RAID Controller	M.2 Interface: 2 PCI-E 3.0 x4, RAID 0 & 1 M.2 Form Factor: 2280/22110 M.2 Key: M-Key Intel® W480 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	M.2 Interface: 2 PCI-E 3.0 x4, RAID 0 & 1 M.2 Form Factor: 2280/22110 M.2 Key: M-Key Intel® W480 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® Q470E controller for 6 RAID 0,1,5,10	Intel® Q470E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Single LAN with Intel® PHY I219LM LAN controller for AMT/vPro Single LAN with Intel® Ethernet i225V	Single LAN with Intel® PHY I219LM LAN controller for AMT/vPro Single LAN with Intel® Ethernet i225LM	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT 1 VGA port	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT 1 VGA D-Sub Connector port
Onboard VGA/Display Ports	1 DP (DisplayPort) port, 1 HDMI port, 1 DVI - D port,	1 DP (DisplayPort) port, 1 HDMI port, 1 DVI - D port, 1 VGA port, VGA port is dedicated for IPMI,	1 HDMI port 1 DisplayPort 1 DVD-D port Intel® HD Graphics	2 DP++ (Dual-Mode DisplayPort) ports 1 DVI-D port Aspeed AST2500 BMC Intel® HD Graphics
USB Ports	2 USB 2.0 ports (2 via headers) 3 USB 3.2 Gen1 ports (1 via header + 2 Type A) 5 USB 3.2 Gen2 ports (3 Rear Type A + 1 Rear Type C, 1 via header) ALC 8885 HD Audio	2 USB 2.0 ports (2 via headers) 3 USB 3.2 Gen1 ports (1 via header + 2 Type A) 5 USB 3.2 Gen2 ports (3 Rear Type A + 1 Rear Type C, 1 via header) ALC 8885 HD Audio	6 USB 2.0 ports (2 rear + 4 via headers) 6 USB 3.1 Gen2 ports (2 Rears Type A + 2 Rears Type C, 2 via headers)	6 USB 2.0 ports (6 via headers) 6 USB 3.2 Gen2 ports (4 Rear Type A, 2 via headers)
Other Onboard I/O Devices	TPM 2.0 Header 1 COM Port (1 header)	TPM 2.0 Header 1 COM Port (1 header)	1 Port SuperDOM TPM 2.0 Header & Chip both 4 COM Ports (4 via headers)	ALC 8885 HD Audio TPM Header & Chip both 2 COM Ports (1 via header)
Manageability	AMT, SSM, SUM, SuperDoctor® 5, vPro, Watchdog	AMT, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SSM, SUM, SuperDoctor® 5, vPro, Watchdog	AMT, SuperDoctor® 5, vPro, Watchdog	AMT, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SUM, SuperDoctor® 5, vPro, Watchdog
Health Monitoring	+1.0V PCH, +1.8V PCH, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 3.3V standby, CPU temperature, CPU thermal trip support, LAN temperature, Memory temperature, PCH temperature, System temperature, VBAT, VRM temperature	+1.0V PCH, +1.8V PCH, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 3.3V standby, CPU temperature, CPU thermal trip support, LAN temperature, Memory temperature, PCH temperature, System temperature, VBAT, VRM temperature	+1.35V, +1.5V, +1.8V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 4 -fan status, 4 fans with tachometer monitoring, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 5 -fan status, Chassis intrusion header, CPU, Memory, VBAT
Thermal Control	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication Single cooling zone	5x 4-pin fan headers (up to 5 fans), Fan speed control, Overheat LED indication Single cooling zone	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control
Other Features	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, RoHS, WOL	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, RoHS, UID, WOL	ACPI power management, ATX Power connector, Chassis intrusion detection, M.2 NGFF connector, RoHS	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, M.2 NGFF connector, RoHS, UID

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vPro AMT, IPMI



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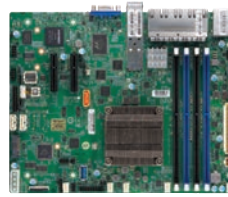


MODEL	X12SCV-LVDS	X12SCZ-TLN4F	X12SCZ-F
Processor	10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Pentium®/Celeron® Processor, Intel® Xeon® W-1200 Processors Single Socket LGA-1200 (Socket H5) supported, CPU TDP support Up to 65W TDP	10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® W-1200 Processors Single Socket LGA-1200 (Socket H5) supported, CPU TDP support Up to 125W TDP	10th Generation Intel® Core™ i9/Core™ i7/Core™ i5/ Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® W-1200 Processors Single Socket LGA-1200 (Socket H5) supported, CPU TDP support Up to 125W TDP
Chipset/System Bus	Intel® W480E	Intel® W480E	Intel® W480E
Form Factor	Mini-ITX 6.7" x 6.7" (17.02cm x 17.02cm)	microATX9.6" x 9.6" (24.38cm x 24.38cm)	microATX9.6" x 9.6" (24.38cm x 24.38cm)
Memory Capacity & Slots	Up to 64GB DDR4 ECC/non-ECC SO-DIMM, SO-DDR4-2933MHz, in 2 DIMM slots	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots	Up to 128GB Unbuffered ECC/non-ECC UDIMM, DDR4-2933MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 slots (16/NA or 8/8) 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2242/2280 1 M.2 E-Key CNVi/PCI-E 3.0 x1, 3042	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x4 (in x8 slot), 1 PCI-E 3.0 x4 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key CNVi/PCI-E 3.0 x1, 2230	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x4 (in x8 slot), 1 PCI-E 3.0 x4 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key CNVi/PCI-E 3.0 x1, 2230
Onboard RAID Controller	Intel® W480E controller for 2 SATA3 (6 Gbps) ports; RAID 0,1	Intel® W480E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® W480E controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT	Dual LAN with Intel® X550 10GBase-T Ethernet Controller Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller I210-AT
Onboard VGA/ Display Ports	2 HDMI ports, 1 DisplayPort 1 LVDS port, 3 Independent Displays	1 VGA D-Sub Connector port 2 DP++ (Dual-Mode DisplayPort) ports 1 DVI-D port Aspeed AST2500 BMC Intel® HD Graphics	1 VGA D-Sub Connector port 2 DP++ (Dual-Mode DisplayPort) ports 1 DVI-D port Aspeed AST2500 BMC Intel® HD Graphics
USB Ports	4 USB 2.0 ports (4 via headers) 4 USB 3.2 Gen2 ports (4 Rear Type A)	6 USB 2.0 ports (6 via headers) 6 USB 3.2 Gen2 ports (4 Rear Type A, 2 via headers)	6 USB 2.0 ports (6 via headers) 6 USB 3.2 Gen2 ports (4 Rear Type A, 2 via headers)
Other Onboard I/O Devices	ALC 8885 HD Audio TPM Header & Chip both 2 COM Port (1 via header)	ALC 8885 HD Audio TPM Header & Chip both 2 COM Port (1 via header)	ALC 8885 HD Audio TPM Header & Chip both 2 COM Ports (1 via header)
Manageability	AMT, SuperDoctor® 5, vPro, Watchdog	AMT, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SUM, SuperDoctor® 5, vPro, Watchdog	AMT, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SUM, SuperDoctor® 5, vPro, Watchdog
Health Monitoring	+1.8V, +3.3V, 3 -fan status, Chipset Voltage, CPU temperature, HT, Monitors CPU voltages, PCH temperature, System level control, System temperature, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 5 -fan status, Chassis intrusion header, CPU, Memory temperature, PCH temperature, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 5 -fan status, Chassis intrusion header, CPU, Memory, PCH temperature, VBAT
Thermal Control	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Fan speed control, PWM fan speed control, System level control	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, M.2 NGFF connector, RoHS, System level control, WOL	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Dual Cooling Zones, M.2 NGFF connector, RoHS, UID	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, M.2 NGFF connector, RoHS, UID

Denverton
8-Core, 8 GbE RJ45,
Intel® Quick Assist Technology



Denverton
4-Core, 8 GbE RJ45,
Intel® Quick Assist Technology



Denverton
2-Core,
Quad GbE LAN, IPMI



MODEL	A2SDV-8C-LN8F A2SDV-8C-LN10PF	A2SDV-4C-LN8F A2SDV-4C-LN10PF	A2SDi-2C-HLN4F
Processor	Intel® Atom™ Processor C3758. Single Socket FCBGA1310 supported, CPU TDP support 25W	Intel® Atom™ Processor C3558. Single Socket FCBGA1310 supported, CPU TDP support 16W	Intel® Atom™ Processor C3338. Single Socket FCBGA1310 supported, CPU TDP support 9W
Chipset/System Bus	System on Chip	System on Chip	System on Chip
Form Factor	Flex ATX 9.0" x 7.25" (22.86cm x 18.42cm)	Flex ATX 9.0" x 7.25" (22.86cm x 18.42cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)
Memory Capacity & Slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 128GB Register DIMM RDIMM, DDR4-1866MHz; or, 32GB Unbuffered ECC/non-ECC UDIMM, DDR4-1866MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 x4 Option for Slot 6 or Slot 7 1 M.2 M-Key SATA/PCI-E 3.0 x2, 2242/2280 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 3042/2280	1 PCI-E 3.0 up to x2 (in x4 slot) *Number of PCI-E lane (option for Slot 6 or Slot 7) is configurable in BIOS: 0 or 2. PCI-E expansion slot is disabled when number of SATA ports is set to 3. M.2 Interface: 1 SATA/PCI-E 3.0 x2/USB 3.0 M.2 Form Factor: 3042, 2280 M.2 Key: B-Key	1 PCI-E 3.0 up to x4 (in x4 slot) *Number of PCI-E lane is configurable via BIOS setup: 0, 2, or 4. Total combined PCI-E lanes and SATA ports is up to 8
Onboard RAID Controller	SoC controller for 5 SATA3 (6 Gbps) ports	Up to 3 SATA3(6 Gbps) ports via SoC * Number of SATA ports is configurable in BIOS: 1 or 3. One SATA port is available when PCI-E x2 expansion slot is enabled	Up to 8 SATA3(6 Gbps) ports via SoC. *Number of SATA ports is configurable via BIOS setup: 4, 6, or 8. Total combined PCI-E lanes and SATA ports is up to 8.
Onboard LAN	Quad LAN with Intel® C3000 SoC Quad LAN with Intel® Ethernet Controller i350-AM4 Dual LAN with Intel® i210-IS 1G SFP (-LN10PE only)	Quad LAN with Intel® C3000 SoC Quad LAN with Intel® Ethernet Controller i350-AM4 Dual LAN with Intel® i210-IS 1G SFP (-LN10PE only)	Quad LAN with Intel® C3000 SoC, GbE
Onboard VGA/ Display Ports	1 VGA port, 1 Aspeed AST2400 BMC	1 VGA port, 1 Aspeed AST2400 BMC	1 VGA port, 1 Aspeed AST2400 BMC
USB Ports	2 USB 2.0 ports (2 headers), 3 USB 3.0 ports (2 rear + 1 Type A)	2 USB 2.0 ports (2 headers), 3 USB 3.0 ports (2 rear + 1 Type A)	4 USB 2.0 ports (2 rear + 2 via headers), 1 USB 3.0 ports (via header + 1 Type A)
Other Onboard I/O Devices	TPM Header, 1 COM Port (1 header)	TPM Header, 1 COM Port (1 header)	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header)
Manageability	IPMI 2.0, NMI, SuperDoctor® 5, Watchdog	IPMI 2.0, NMI, SuperDoctor® 5, Watchdog	IPMI 2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog
Health Monitoring	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 5 -fan status, Chassis intrusion header, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 5 -fan status, Chassis intrusion header, VBAT	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT
Thermal Control	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors
Other Features	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, UID	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, UID	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, RoHS, SDDC, System level control, UID, WOL

Denverton
4-Core, Quad GbE LAN, IPMI,
Intel® Quick Assist Technology



Denverton
8/12/16-Core,
Quad GbE LAN, IPMI,
Intel® Quick Assist Technology



Denverton
12-Core, Dual/Quad 10GbE LAN,
Intel® QAT, IPMI



MODEL	A2SDi-4C-HLN4F	A2SDi-8C-HLN4F A2SDi-8C+-HLN4F A2SDi-12C-HLN4F A2SDi-16C(+)-HLN4F	A2SDi-TP8F A2SDi-LN4F
Processor	Intel® Atom™ Processor C3558. Single Socket FCBGA1310 supported, CPU TDP support 16W	Single Socket FCBGA1310 supported; -8C: Intel® Atom™ Processor C3758, 25W; -8C+: Intel® Atom™ Processor C3858, 25W; -12C: Intel® Atom™ Processor C3558, 25W; -16C(+): Intel® Atom™ Processor C3955, 31W	-TP8F: Intel® Atom™ Processor C3858; -LN4F: Intel® Atom™ Processor C3850; Single Socket FCBGA1310 supported, CPU TDP support 25W
Chipset/System Bus	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)
Memory Capacity & Slots	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4- 2133MHz, in 4 DIMM slots 1 PCI-E 3.0 up to x4 (in x4 slot) *Number of PCI-E lane is configurable via BIOS setup: 0, 2, or 4. Total combined PCI-E lanes and SATA ports is up to 8.	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4- 2400MHz, in 4 DIMM slots	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 up to x4 (in x4 slot) *Number of PCI-E lane is configurable via BIOS setup: 0, 2, or 4. Total combined PCI-E lanes and SATA ports is up to 8. M.2 Interface: PCI-E 3.0 x2 and SATA M.2 Form Factor: 2242, 2280 M.2 Key: M-Key	1 PCI-E 3.0 x4 M.2 Interface: PCI-E 3.0 x2 and SATA M.2 Form Factor: 2242, 2280 M.2 Key: M-Key	1 PCI-E 3.0 x4 1 miniPCI-E with mSATA supports (half card only) M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2242, 2280 M.2 Key: M-Key
Onboard RAID Controller	Up to 8 SATA3(6 Gbps) ports via SoC. *Number of SATA ports is configurable via BIOS setup: 4, 6, or 8. Total combined PCI-E lanes and SATA ports is up to 8	SoC controller for 12 SATA3 (6 Gbps) ports	SoC controller for 4 SATA3 (6 Gbps) ports;
Onboard LAN	Quad LAN with Intel® C3000 SoC, GbE	Quad LAN with Intel® C3000 SoC, GbE	-TP8F: Quad LAN with Intel® C3000 SoC 2 10G BaseT, 2 10Gb SFP+ -LN4F: Quad LAN with Intel® Ethernet Controller i350- AM4 GbE
Onboard VGA/Display Ports	1 VGA port, 1 Aspeed AST2400 BMC	1 VGA port, 1 Aspeed AST2400 BMC	1 VGA port, 1 Aspeed AST2400 BMC
USB Ports	4 USB 2.0 ports (2 rear + 2 via headers, 1 USB 3.0 ports (via header + 1 Type A)	4 USB 2.0 ports (2 rear + 2 via headers, 1 USB 3.0 ports (via header + 1 Type A)	4 USB 2.0 ports (4 headers), 2 USB 3.0 ports (2 rear)
Other Onboard I/O Devices	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header)	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header)	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header),
Manageability	IPMI 2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	IPMI 2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	IPMI 2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog
Health Monitoring	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT 4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT 4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	+1.8V, +12V, +5V, 1.05 (PCH), 1.2V (VDIMM), 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT, VCGI
Thermal Control	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power- on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power- on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, RoHS, SDDC, System level control, UID, WOL. Intel® QuickAssist Technology	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors
Other Features	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power- on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power- on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, RoHS, SDDC, System level control, UID, WOL. Intel® QuickAssist Technology	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power- on for recovery from AC power loss, CPU thermal trip support for processor protection, Innovation Engine, RoHS, SDDC, System level control, UID, WOL

Denverton
8/16-Core, Quad 10GbE LAN,
Intel® QAT, IPMI



Denverton
16-Core, 2 10GBaseT, 2 10Gb SFP+
Intel® Quick Assist Technology, IPMI



Denverton
8/12/16-Core Quad 10GbE LAN,
Intel® QAT, IPMI



MODEL	A2SDi-H-TP4F A2SDi-H-TF	A2SDi-16C-TP8F	A2SDV-8C-TLN5F A2SDV-12C+-TLN5F A2SDV-16C-TLN5F
Processor	-TF: Intel® Atom™ Processor C3758, 31W; -TP4F: Intel® Atom™ Processor C3958, 25W; Single Socket FCBGA1310 supported	Intel® Atom™ Processor C3958. Single Socket FCBGA1310 supported, CPU TDP support 31W TDP	-8C: Intel® Atom Processor C3708, 17W -12C+: Intel® Atom™ Processor C3858, 25W -16C: Intel® Atom™ Processor C3958, 31W Single Socket FCBGA1310 supported
Chipset/System Bus	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Flex ATX 9.0" x 7.25" (22.86cm x 18.42cm)
Memory Capacity & Slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 64GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2400 MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz Or 64GB Unbuffered ECC/non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x4 M.2 Interface: PCI-E 3.0 x2 and SATA M.2 Form Factor: 2242, 2280 M.2 Key: M-Key	1 PCI-E 3.0 x4 1 miniPCI-E with mSATA supports (half card only) M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2242, 2280 M.2 Key: M-Key	1 PCI-E 3.0 x8 Option for Slot 6 or Slot 7 M.2 Interface: 1 PCI-E 3.0 x4 and 1 SATA/PCI-E 3.0 x2 and 1 SATA/USB 3.0 M.2 Form Factor: 2242/2280/3042 M.2 Key: M-Key, B-Key
Onboard RAID Controller	SoC controller for 12 SATA3 (6 Gbps) ports; 4 SATA3 ports, 2 MiniSAS HD ports	SoC controller for 4 SATA3 (6 Gbps) ports;	SoC controller for 2 SATA3 (6 Gbps) ports;
Onboard LAN	-TP4F: Quad LAN with Intel® C3000 SoC 2 10G BaseT, 2 10Gb SFP+ -TF: 2 10Gb SFP+	Quad LAN with Intel® C3000 SoC 2 10GBaseT, 2 10Gb SFP+ Quad LAN with Intel® Ethernet Controller i350-AM4 1GbE	Quad LAN with 10GBase-T with Intel® C3000 SoC Single LAN with Intel® i210 Gigabit Ethernet Controller
Onboard VGA/ Display Ports	1 VGA port, 1 Aspeed AST2400 BMC	1 VGA port, Aspeed AST2400 BMC	1 VGA port, 1 Aspeed AST2400 BMC
USB Ports	4 USB 2.0 ports (2 rear + 2 headers), 1 USB 3.0 ports (+ 1 Type A)	4 USB 2.0 ports (4 headers, Type A)) 2 USB 3.0 ports (2 rear)	2 USB 2.0 ports (+ 2 via headers), 5 USB 3.0 ports (4 rear via headers + 1 Type A)
Other Onboard I/O Devices	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header),	1 Port SuperDOM TPM Header 1 COM Port (1 header)	TPM Header, 1 COM Ports (1 header), 1 COM Port in RJ45 Socket,
Manageability	IPMI 2.0, KVM with dedicated LAN, NMI, SuperDoctor® 5, Watchdog	IPMI 2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	IPMI 2.0, NMI, SuperDoctor® 5, Watchdog
Health Monitoring	+1.8V, +12V, +5V, 1.05 (PCH), 1.2V (VDIMM), 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT, VCGI	+1.8V, +12V, +5V, 1.05 (PCH), 1.2V (VDIMM), 4 -fan status, 4 fans with tachometer monitoring, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT, VCGI	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 6 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, System temperature, VBAT
Thermal Control	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors
Other Features	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Innovation Engine, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Innovation Engine, RoHS, SDDC, System level control, UID, WOL	12V DC or ATX Power Source, 4-pin 12v DC power connector, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, Innovation Engine, Intel® QuickAssist Technology, M.2 NGFF connector, RoHS, SDDC, System level control, UID, WOL

Avoton™/Rangeley
Low Power, mini ITX



Avoton™/Rangeley
Low Power, mini ITX



Avoton™/Rangeley
Low Power, uATX



Avoton™/Rangeley
Low Power, uATX



Rangeley
3 pairs LAN bypass, Intel® QAT, uATX



MODEL	A1SAi-2750F A1SAi-2550F	A1SRi-2758F A1SRi-2558F A1SRi-2358F	A1SAM-2750F A1SAM-2550F	A1SRM-2758F A1SRM-2558F	A1SRM-LN7F-2758 A1SRM-LN7F-2358
Processor	Intel® Avoton Atom™ Processor -2750F: C2750 (8C/20W); -2550F: C2550 (4C/14W)	Intel® Rangeley Atom™ Processor -2758F: C2758 (8C/20W); -2558F: C2558 (4C/15W); -2358F: C2358 (2C/7W) Socket FCBGA1283 CPU	Intel® Avoton Atom™ Processor -2750F: C2750 (8C/20W); -2550F: C2550 (4C/14W) Socket FCBGA1283 CPU	Intel® Avoton Atom™ Processor -2758F: C2758 (8C/20W); -2558F: C2558 (4C/15W) Socket FCBGA1283 CPU	Intel® Atom™ Processor -2758F: C2758 (8C/20W); -2358F: C2358 (2C/7W) Socket FCBGA1283 CPU
Chipset/System Bus	System on Chip				System on Chip
Form Factor	Mini-ITX 6.75" x 6.75"		MicroATX 9.6" x 7.5"		MicroATX 8.0" x 9.6"
Memory Capacity & Slots	Up to 64GB ECC SODIMM in 4 slots	-2758/2558: Up to 64GB Unbuffered ECC SO-DIMM, DDR3-1600 MHz, in 4 slots; -2358: Up to 16GB Unbuffered ECC SO-DIMM, DDR3-1333MHz, in 2 slots	Up to 64GB Unbuffered ECC/non-ECC UDIMM, DDR3-1600 MHz, in 4 DIMM slots x8 width only		Up to 64GB ECC/Non ECC UDIMM in 4 slots (-2358 up to 16GB in 2 slots)
Expansion Slots	1 PCI-E 2.0 x8		1 PCI-E 2.0 x8 1 PCI-E 2.0 x4		1 PCI-E 2.0 x4 (in x8 slot)
Onboard RAID Controller	SoC controller for 4 SATA2 (3Gb/s) ports; 2 SATA3 (6Gb/s)	-2758/2558: SoC controller for 4 SATA2 (3Gb/s) ports; 2 SATA3 (6Gb/s) -2358: 2 SATA3 (6Gb/s); 2 SATA2 (3Gb/s)	SoC controller for 4 SATA2 (3 Gbps) ports; 2 SATA3 (6 Gbps); A1SRi-2358F: 2 SATA3 + 2 SATA2		SoC controller for 4 SATA2 (3 Gbps) ports; 2 SATA3 (6 Gbps)
Onboard LAN	Quad LAN with Intel® C2000 SoC (Intel® i354)				Quad GbE LAN (Intel® i354) Dual GbE LAN (Intel® i350-AM2), Single GbE LAN (Intel® i210-AT)
Onboard VGA/ Display Ports	1 VGA via Aspeed AST2400 BMC				1 VGA via Aspeed AST2400 BMC
USB Ports	4 USB 3.0 ports (2 rear + 1 via header + 1 Type A). 2 USB 2.0 ports (2 rear)		7 USB 2.0 ports (4 rear + 2 via headers + 1 Type A)		7 USB 2.0 ports (4 rear + 2 via headers + 1 Type A)
Other Onboard I/O Devices	1 SATA DOM power connector 2 fast UART 16550 serial (1 rear, 1 header); TPM 1.2 Header		1 SATA DOM power connector 2 fast UART 16550 serial; TPM 1.2 Header, 1 SuperDOM, 1 mSATA slot		
Manageability					IPMI 2.0, SuperDoctor 5, Watchdog
Health Monitoring	Monitors CPU voltages, +1.8V, +12V, +3.3V, +5V, +5V Standby, Chassis intrusion header, Supports system management utility, System level control				Monitors CPU voltages, +1.8V, +12V, +3.3V, +5V, +5V standby and total of three 4-pin fan headers with tachometer monitoring, supports system management utility, chassis intrusion header
Thermal Control	3 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors				3 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® Turbo Boost Technology or Intel® QuickAssist Technology, System level control, UID, WOL, 0°C -60°C operating temperature				4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® QuickAssist Technology, System level control, UID, WOL, 0°C -60°C operating temperature

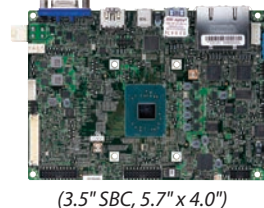
Apollo Lake
E3940/E3930, Mini-ITX



Apollo Lake
Pentium N4200, Mini-ITX



Apollo Lake
Pentium N4200, 3.5" SBC



(3.5" SBC, 5.7" x 4.0")

Embedded
SoC, Quad LAN, IPMI
mini-ITX



MODEL	A2SAV A2SAV-L A2SAV-2C-L	X11SAA	X11SAN X11SAN-WOHS	X11SBA-LN4F X11SBA-F
Processor	A2SAV(-L): Intel® Atom™ Processor x5-E3940. Socket FCBGA1296 supported A2SAV-2C-L: Intel® Atom™ Processor x5-E3930, Single Socket FCBGA1296 supported, CPU TDP support 6.5W	Intel® Pentium™ Processor N4200. Socket FCBGA1296 supported	Intel® Pentium™ Processor N4200. Single Socket FCBGA1296 supported, CPU TDP support 6W	Intel® Pentium™ Processor N3700 Socket FCBGA1170 supported; CPU TDP support 6W 1.6-2.4GHz 2MB
Chipset/System Bus	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	Mini-ITX 6.7" x 6.7"
Memory Capacity & Slots	Up to 8GB 1866MHz DDR3L Non-ECC SO-DIMM in 1 socket	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866MHz, in 1 DIMM slots	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866MHz, in 1 DIMM slots	8GB Unbuffered non-ECC SO-DIMM, DDR3-1600MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 2.0 x2 (in x8 slot), M.2 Interface: PCI-E 2.0 x2 M.2 Form Factor: 2242, 2280 A2SAV: 1x Mini-PCI-E with mSATA	1 PCI-E 2.0 x2 (in x8 slot), 1x Mini-PCI-E with mSATA M.2 Interface: PCI-E 2.0 x2 M.2 Form Factor: 2242, 2280	1 Full size Mini-PCI-E (USB 2.0 1, PCI-E Gen2 x 1), 1 M.2 2280 B-Key for SATA or PCI-E SSD (2242/3042 B-key M.2 module is supported by extender bracket) M.2 Interface: SATA and PCI-E 2.0 x1 and USB 2.0 M.2 Form Factor: 2280 M.2 Key: B-Key	1 PCI-E 2.0 x1 (in x8 slot) 1 Mini-PCI-E with mSATA support
Onboard RAID Controller	SoC controller for 2 SATA3 (6 Gbps) ports; Marvel 88SE9230 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 2 SATA3 (6 Gbps) ports; Marvel 88SE9230 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,10	SoC controller for 1 SATA3 (6 Gbps) port	SoC controller for 2 SATA3 (6 Gbps) ports
Onboard LAN	Dual LAN with Intel® Ethernet Controller i210-AT	Dual LAN with Intel® Ethernet Controller i210-AT	Dual LAN with Intel® Ethernet Controller i210-AT	-LN4F: Quad GbE LAN with Intel® i210AT -F: Dual GbE LAN with Intel® i210AT
Onboard VGA/Display Ports	1 DP (DisplayPort) port, 1 HDMI port, 1 VGA port, 1 eDP (Embedded DisplayPort) port, 1 Intel® HD Graphics	1 DP (DisplayPort) port, 1 HDMI port, 1 eDP (Embedded DisplayPort) port, 1 Intel® HD Graphics	1 VGA port, 1 LVDS port, 1 HDMI port, 1 Intel® HD Graphics,	1 DP (DisplayPort) 1 HDMI Intel® HD Graphics 1 Aspeed AST2400 BMC VGA Port
USB Ports	4 USB 2.0 ports (2 rear + 2 via headers) A2SAV: + 1 Type A, 2 USB 3.0 ports (2 rear via headers)	8 USB 2.0 ports (2 rear + 5 via headers + 1 Type A), 2 USB 3.0 ports (2 rear via headers)	4 USB 2.0 ports (+ 4 via headers), 2 USB 3.0 ports (2 rear via headers), 1 USB 3.1 ports (+ 1 Type C)	2 USB 3.0 ports (2 rear) 7 USB 2.0 ports (2 rear + 4 via headers + 1 Type A)
Other Onboard I/O Devices	1 Port SuperDOM, 3 COM Ports (1 rear, 2 headers), 1x COM in RJ45, 1x COM in RS232, and 1x COM in RS485. A2SAV: ALC 888S HD Audio,	1 Port SuperDOM, ALC 888S HD Audio, TPM Header, 3 COM Ports (1 rear, 2 headers), 1x COM in RJ45, 1x COM in RS232, and 1x COM in RS485.	ALC 888S HD Audio, TPM 2.0 Chip, 4 COM Ports (4 headers), (2 RS232, 2 RS232/422/485, RS-485 supports Auto flow control), 1 HD Audio header (Mic-in/Line-Out) ,1 8-bit GPIO header, 1 SMBus header ,1 panel backlight power header ,1 speaker ,1 system Fan	1 Port SuperDOM ALC 888S HD Audio TPM Header 2 COM Ports (2 headers)
Manageability	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog	SuperDoctor® 5, Watchdog	IPMI 2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog
Health Monitoring	A2SAV: +1.8V, +12V, +3.3V, +5V, +5V standby, Monitors CPU voltages, System level control -2C-L/-L: +12V, +5V, +5V standby	+1.8V, +12V, +3.3V, +5V, +5V standby, Monitors CPU voltages, System level control	+1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Supports system management utility, System level control
Thermal Control	2x 4-pin fan headers (up to 2 fans), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	2x 4-pin fan headers (up to 2 fans), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	1x 4-pin fan header (up to 1 fan)	2x 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	4-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL	4-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL	X11SAN: 0°C -60°C operating temperature, with heatsink X11SAN-WOHS: 0°C -60°C operating temperature, without heatsink 4-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL, Force power on by jumper	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, System level control, UID, WOL, 0°C -60°C operating temperature

NEW!

Embedded
x5-E3940/x5-E3930
2.5" Pico ITX



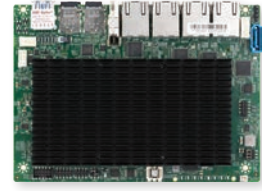
(2.5" SBC, 4" x 2.83")

Embedded
x5-E3940/x5-E3930
3.5" SBC



(3.5" SBC, 5.7" x 4.0")

Embedded
x5-E3940/Celeron J3455
3.5" SBC



(3.5" SBC, 5.866" x 4.212")

Embedded
Embedded
Low Power

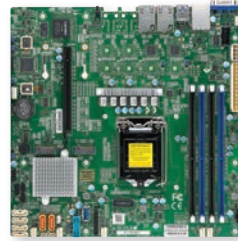


MODEL	A2SAP-H A2SAP-E A2SAP-L	A2SAN-H(-WOHS) A2SAN-E(-WOHS) A2SAN-L(-WOHS)	A2SAN-LN4-E A2SAN-LN4-C	X9SCAA X9SCAA-L
Processor	-H/-E: Intel® Atom™ Processor x5-E3940, Single Socket FCBGA1296 supported, CPU TDP support 9.5W -L: Intel® Atom™ Processor x5-E3930, Single Socket FCBGA1296 supported, CPU TDP support 6.5W System on Chip	-H/-E: Intel® Atom™ Processor x5-E3940, Single Socket FCBGA1296 supported, CPU TDP support 9.5W -L: Intel® Atom™ Processor x5-E3930, Single Socket FCBGA1296 supported, CPU TDP support 6.5W System on Chip	-E: Intel® Atom™ Processor x5-E3940, Single Socket FCBGA1296 supported, CPU TDP support 9.5W -C: Intel® Celeron® Processor J3455, Single Socket FCBGA-1296 supported, CPU TDP support Up to 10W TDP System on Chip	Intel® Atom™ Processor N2800. Socket FCBGA559 supported, CPU TDP support 6.5W
Chipset/System Bus	System on Chip	System on Chip	System on Chip	Intel® NM10 Express
Form Factor	Pico-ITX 2.5" SBC, 4" x 2.83" (10.16cm x 7.19cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.866" x 4.212" (14.9cm x 10.7cm)	Mini-ITX 6.7" x 6.7"
Memory Capacity & Slots	Up to 8GB Unbuffered non-ECC SO-DIMM, DDR3-1866MHz, in 1 DIMM slots			
Expansion Slots	1 Half size Mini-PCI-E (USB 2.0 x 1, PCI-E Gen2 x 1) 1 SMCI EI/O (1 DP/HDMI, 2 PCI-E x1, 2 USB 2.0, LPC, SATA3, SMBus, Power) M.2 Interface: SATA and PCI-E 2.0 x1 and USB 2.0 M.2 Form Factor: 2242, 3042 M.2 Key: B-Key	1 x Full size Mini-PCI-E (USB 2.0 x 1, PCI-E Gen2 x 1), 1 x M.2 2280 B-Key for SATA or PCI-E SSD (2242/3042 B-key M.2 module is supported by extender bracket) M.2 Interface: SATA and PCI-E 2.0 x1 and USB 2.0 M.2 Form Factor: 2280 M.2 Key: B-Key	M.2 Key: B-Key, E-Key 1 M.2 2242/3042 B-Key (USB3.0/2.0 x 1) with nano SIM holder (support SATA upon request) 2 M.2 2242/3042 B-Key (USB3.0/2.0 x 1) with nano SIM holder 1 M.2 2230 E-Key (PCI-E 2.0 x1/USB2)	1 - 5V PCI 32bit X9SCAA: Mini-PCI-E with mSATA
Onboard RAID Controller	SoC controller for 1 SATA3 (6 Gbps) port -H: without SATA port -E/L: 1 SATA3 port	SoC controller for 1 SATA3 (6 Gbps) port	SoC controller for 1 SATA3 (6 Gbps) port	Intel® NM10 Express controller for 2 SATA2 (3 Gbps) ports;
Onboard LAN	Dual LAN with Intel® Ethernet Controller i210IT	Dual LAN with Intel® Ethernet Controller i210IT	Quad GbE LAN with Intel® Ethernet Controller I210IT(-E)/ I211AT(-C)	Dual LAN with Intel® 82574L Ethernet Controller
Onboard VGA/Display Ports	1 Intel® HD Graphics, 1 Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI (max. resolution up to 3840x2160@30Hz)	1 VGA port, 1 LVDS port, 1 HDMI port, 1 Intel® HD Graphics,	1 HDMI port 1 Intel® HD Graphics	1 port, 1 port, 1 port, 1 Intel® GMA 3650
USB Ports	2 USB 3.0 ports (rear I/O) -E/L: 2 USB 2.0 ports (+ 2 via headers)	4 USB 2.0 ports (+ 4 via headers), 2 USB 3.0 ports (rear I/O) -H: 1 USB 3.1 ports (+ 1 Type C)	2 USB 2.0 ports (2 via headers) 2 USB 3.0 Gen1 ports (2 rear)	6 USB 2.0 ports (2 rear + 4 headers), X9SCAA: 2 USB 3.0 ports (2 rear)
Other Onboard I/O Devices	-H: 1 x lockable DC Jack 1 x Stackable pin header A (34P): Power/Reset; button, HDD/ Power LED, 8-bit GPIO, 2 USB 2.0; 1 x Stackable pin header B (32P); 2 RS232/422/485, HD AUDIO Mic-in /Line-out; 1 x SMBus/SATA Power box header -E/L: 1 x 2x4pin 12V power input (1 box header) 1 x HD Audio Mic-in/Line-Out (1 header); 1 x 8-bit GPIO header (1 header); 2 x RS232/422/485 (1 header); 2 x USB 2.0 (1 header); 1 x GPIO 8-bit (1 header); 1 x SMBus/SATA Power box header; 1 x Front panel header (Power/Reset button, HDD/ Power LED)	1x ALC 8885 HD Audio(Mic-in/Line-Out) 4x COM Ports (2 headers), (2 x RS232, 2 RS232/422/485, RS-485 supports Auto Flow Control) 1x 8-bit GPIO header 1x SMBus header 1x System Fan 1x panel backlight power header 1x Speaker 1x TPM 2.0 chip on board (only on -H/-E)	1 COM Port (1 via header) (1 x RS232) (-E only) 1 8-bit GPIO header (-E only) 1 SMBus header 1 System Fan 4 onboard M.2 active LED 4 onboard GbE LAN active LED	1 SATA DOM power connector, Yes, ALC 8885 HD Audio, X9SCAA: 4 fast UART 16550 serialTPM Headers, 4 COM Ports (4 headers), One COM port support RS422/485 -L: 2 fast UART 16550 serialTPM Header, 2 COM Ports (2 headers),
Manageability	SuperDoctor® 5, Watchdog +1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI	SuperDoctor® 5, Watchdog +1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI	SuperDoctor® 5, Watchdog +1.35V, +12V, +3.3V, +5V, 3.3V standby, System level control, System temperature, VBAT, VCGI x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	SuperDoctor® III, Watchdog Supports system management utility, System level control
Health Monitoring	standby, System level control, System temperature, VBAT, VCGI	standby, System level control, System temperature, VBAT, VCGI	standby, System level control, System temperature, VBAT, VCGI x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	1x 4-pin fan header (up to 1 fan), Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Thermal Control	N/A	1x 4-pin fan header (up to 1 fan)	1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	1x 4-pin fan header (up to 1 fan), Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	-H/-E: -30°C -75°C operating temperature -L: 0°C -60°C operating temperature ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL, Force power on jumper	-H/E/L: With Heatsink -WOHS: Without Heatsink -E/L: -30°C -75°C operating temperature -H: 0°C -60°C operating temperature ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL, Force power on jumper	-E/C: 0°C -60°C operating temperature, 8-pin 12v DC power connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, System level control, WOL

Celeron®
Low Power Bay Trail
4-Core, SoC, Mini-ITX



Xeon® E-2100 and E-2200



Xeon® E-2100 and E-2200



Xeon® E-2100 and E-2200



MODEL	X10SBA X10SBA-L	X11SCM-F X11SCM-LN8F	X11SCH-F X11SCH-LN4F	X11SCW-F
Processor	Intel® Celeron® Processor J1900 10W FCBGA1170, 2.0-2.42GHz	8th Generation Intel® Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® Processor E-2100 and E-2200 series. Socket LGA 1151 supported, CPU TDP support Up to 95W TDP	8th Generation Intel® Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® Processor E-2100 and E-2200 series. Socket LGA 1151 supported, CPU TDP support Up to 95W TDP	8th Generation Intel® Core™ i3/Pentium®/Celeron® Processor, Intel® Xeon® Processor E-2100 and E-2200 series. Socket LGA 1151 supported, CPU TDP support Up to 95W TDP
Chipset/System Bus	System on Chip	Intel® C246	Intel® C246	Intel® C246
Form Factor	Mini-ITX 6.7" x 6.7"	Micro-ATX 9.6" x 9.6" (24.38cm x 24.38cm)	Micro-ATX 9.6" x 9.6" (24.38cm x 24.38cm)	Proprietary WIO 8" x 13" (20.32cm x 33.02cm)
Memory Capacity & Slots	2 DIMM slots, 8GB with two 4GB SODIMM configuration, 1.35V only	Up to 128GB DDR4 ECC UDIMM, in 4 DIMM slots	Up to 128GB DDR4 ECC UDIMM, in 4 DIMM slots	Up to 128GB Unbuffered ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 2.0 x2 1 Mini-PCI-E slot, 1 mSATA slot	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8, M.2 Interface: PCI-E 3.0 x4 M.2 Form Factor: 2280, 22110 M.2 Key: M-Key Double Height Connector	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8 M.2 Interface: PCI-E 3.0 x4 M.2 Form Factor: 2280, 22110 M.2 Key: M-Key Double Height Connector	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x4 (in x8 slot) M.2 Interface: 1 SATA/PCI-E 3.0 x4 and 1 PCI-E 3.0 x4 M.2 Form Factor: 2260/2280/22110 M.2 Key: M-Key Double Height Connector
Onboard RAID Controller	Marvel 88SE9230 for 4x SATA3 (6 Gbps) with RAID 0,1,10; -L: SoC controller for 2 SATA2 (3 Gbps) ports	Intel® C246 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C246 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C246 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® Ethernet Controller i210-AT	-F: Dual LAN with Intel® Ethernet Controller i210-AT -LN8F: 8 LAN with Intel® Ethernet Controller i210-AT	-F: Dual LAN with Intel® Ethernet Controller i210 -LN4F: Quad LAN with Intel® Ethernet Controller i210	Dual LAN with Intel® Ethernet Controller i210-AT
Onboard VGA/ Display Ports	Intel® HD Graphic VGA + HDMI + DisplayPort + eDP	1 VGA port 1 Aspeed AST2500 BMC	1 VGA port 1 Aspeed AST2500 BMC	1 VGA port 1 Aspeed AST2500 BMC
USB Ports	1 USB 3.0 ports (1 rear) 6 USB 2.0 ports (1 rear, 4 via headers, 1 type A)	6x USB 2.0 ports (2 rear, 4 via headers); 2x USB 3.1 Gen2 ports (rear); 3x USB 3.1 Gen1 ports (1 Type-A, 2 via header)	6x USB 2.0 ports (2 rear, 4 via headers); 2x USB 3.1 Gen2 ports (rear); 3x USB 3.1 Gen1 ports (1 Type-A, 2 via header)	6 USB 2.0 ports (2 rear + 4 headers) 1 USB 3.1 Gen1 ports, 1 Type A) 4 USB 3.1 Gen2 ports (2 rears, 2 headers)
Other Onboard I/O Devices	4 COM ports support RS-232 (4 headers), TPM header, Audio Header	TPM 2.0 Header, 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header, 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header, 2 COM Ports (1 rear, 1 header)
Manageability	Watchdog, SuperDoctor® 5	Intel® Node Manager, IPMI 2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT	Intel® Node Manager, IPMI 2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT	Intel® Node Manager, IPMI 2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, Chipset Voltage, Memory Voltages, Monitors CPU voltages, Supports system management utility, System level control, VBAT
Health Monitoring	Monitors CPU voltages, +3.3V, +5V, +12V & +5V standby and total of two 4-pin fan headers with tachometer monitoring, supports system management utility, chassis intrusion header	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors
Thermal Control	Overheat LED indication, thermal control tachometer fan connectors	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, UID, WOL	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, UID, WOL	ACPI power management, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, Node Manager Support, UID, WOL
Other Features	ACPI power management, WOL, control of power-on for recovery from AC power loss, Adaptive Thermal Monitor & CPU thermal trip support for processor protection, 0°C – 60°C operating temperature			

i7/i5/i3/Pentium®/Celeron®
vPro AMT, 2666MHz DDR4,
6-Core

i7/i5/i3/Pentium®/Celeron®
High Performance, 6-Core

i7/i5/i3/Pentium®/Celeron®
High Performance, vPro AMT,
2666MHz DDR4

i7/i5/i3/Pentium®/Celeron®
High Performance,
2666MHz DDR4



MODEL	X11SCV-Q	X11SCV-L	X11SCQ	X11SCQ-L
Processor	8th/9th Generation Intel® Core™ i9/Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP support Up to 65W TDP		8th/9th Generation Intel® Core™ i9/Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® Processor Single Socket LGA-1151 (Socket H4) supported, CPU TDP support Up to 65W TDP	
Chipset/System Bus	Intel® Q370		Intel® Q370	Intel® H310
Form Factor	Mini-ITX 6.7" x 6.7" (17.02cm x 17.02cm)	Mini-ITX 6.7" x 6.7" (17.02cm x 17.02cm)	uATX 9.6" x 9.6" (24.38cm x 24.38cm)	
Memory Capacity & Slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2666MHz, in 2 DIMM slots		Up to 128GB Unbuffered non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 64GB Unbuffered non-ECC UDIMM, DDR4-2666MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 M.2 Interface: 1 PCI-E 3.0 x2 and 1 CNVi/PCI-E 3.0 x1 M.2 Form Factor: 2242/2280 M.2 Key: M-Key, E-Key M.2 E key: CNVi/PCI-E 2.0 x1, support 2230 length		1 PCI-E 3.0 x16, 1 PCI-E 3.0 x1, 2 PCI-E 3.0 x4 M.2 Interface: 1 PCI-E 3.0 x4 M.2 Form Factor: 2242/2280/22110 M.2 Key: M-Key	1 PCI-E 3.0 x16 1 PCI-E 2.0 x4 1 PCI-E 2.0 x1
Onboard RAID Controller	Intel® Q370 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® H310 controller for 4 SATA3 (6 Gbps) ports;	Intel® Q370 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® H310 controller for 4 SATA3 (6 Gbps) ports;
Onboard LAN	Single LAN with Intel® Ethernet Controller i210-AT Single LAN with Intel® PHY I219LM		Single LAN with Intel® Ethernet Controller i210-AT Single LAN with Intel® PHY I219LM	Single LAN with Intel® Ethernet Controller i210-AT Single LAN with Intel® PHY I219LM
Onboard VGA/Display Ports	1 DVI - D port, 1 HDMI port, 1 DP (DisplayPort) port, 1 eDP (Embedded DisplayPort) port, 1 Intel® HD Graphics, 3 Independent Displays	1 DVI - D port, 1 HDMI port, 1 DP (DisplayPort) port, 1 eDP (Embedded DisplayPort) port, 2 Independent Displays	1 DVI - D port, 1 HDMI port, 1 DP (DisplayPort) port, 1 eDP (Embedded DisplayPort) port, 1 Intel® HD Graphics, 3 Independent Displays	1 DVI - D port, 1 HDMI port, 1 DP (DisplayPort) port, 1 eDP (Embedded DisplayPort) port, 1 Intel® HD Graphics, 2 Independent Displays
USB Ports	4 USB 2.0 ports (4 headers), 6 USB 3.1 ports (4 rears (2 Type A + 2 Type C) + 2 headers)	4 USB 2.0 ports (4 headers), 4 USB 3.0 ports (4 rear)	6 USB 2.0 ports (2 rear + 4 headers), 6 USB 3.1 ports (4 rears (2 Type A + 2 Type C) + 2 headers)	6 USB 2.0 ports (2 rear + 4 headers), 4 USB 3.1 ports (4 rears (2 Type A + 2 Type C))
Other Onboard I/O Devices	ALC 8885 HD Audio, TPM 2.0 Header & Chip both 6 COM Ports (2 rear, 4 headers); 4 COM port support RS-232 thru pin header; 2COM support RS-232/422/485 in rear		7.1 HD Audio, TPM Header & Chip both 6 COM Ports (6 headers), support RS-232	7.1 HD Audio, TPM Header, 6 COM Ports (6 headers), support RS-232
Manageability	AMT, NMI, vPro, Watchdog	NMI, SuperDoctor® 5, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	NMI, SuperDoctor® 5, Watchdog
Health Monitoring	+1.8V, +3.3V, +5V, +5V standby, 3 -fan status, Chassis intrusion header, HT, VBAT		+12V, +3.3V, +5V, 1.2V (VDIMM), 4 fans with tachometer monitoring, Chassis intrusion header, Memory Voltages, Monitors CPU voltages, System temperature, VBAT	+12V, +3.3V, +5V, 1.2V (VDIMM), 4 fans with tachometer monitoring, Chassis intrusion header, Memory Voltages, Monitors CPU voltages, System temperature, VBAT
Thermal Control	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Fan speed control, Low noise fan speed control, Overheat LED indication, PWM fan speed control, Thermal control tachometer fan connectors	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring	4x 4-pin fan headers (up to 4 fans), 4 fans with tachometer monitoring, Fan speed control
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, RoHS, Halogen Free, WOL		ACPI power management, ATX Power connector, Chassis intrusion header, M.2 NGFF connector, RoHS	ACPI power management, ATX Power connector, Chassis intrusion header, RoHS, WOL

Embedded
Low Power
Quad Core

Embedded
Low Power
Quad Core

Embedded
Low Power

Embedded
Low Power



MODEL	X11SWN-E X11SWN-E-WOHS	X11SWN-H X11SWN-H-WOHS	X11SWN-L X11SWN-L-WOHS	X11SWN-C X11SWN-C-WOHS
Processor ¹	8th Generation Intel® Core™ i5-8365UE Processor Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP System on Chip	8th Generation Intel® Core™ i7-8665UE Processor Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP System on Chip	8th Generation Intel® Core™ i3-8145UE Processor Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP System on Chip	Intel® Celeron® Processor 4305UE Single Socket FCBGA-1528 supported, CPU TDP support Up to 15W TDP System on Chip
Chipset	SCE102	SCE102	SCE102	SCE102
Form Factor	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)
Optimized Chassis / SuperServer Memory Capacity & Slots*	SYS-E100-9W-E	SYS-E100-9W-H	SYS-E100-9W-L	SYS-E102-9W-C
Expansion Slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 64GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
Onboard RAID Controller	M.2 Key: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 Key: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 Key: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support	M.2 Key: B-Key, M-Key, E-Key M.2 2242/3042/2280 B-Key (USB3.0/2.0 x 1, SATA Gen3 x 1) with nano SIM holder M.2 2230 E-Key (CNVi/PCI-E 3.0 x1/USB2) M.2 2242/2280 M-Key (PCI-E 3.0 x4, SATA Gen3 x 1), NVMe support
Onboard LAN	I-SATA0 (1x SATA 3.0 Port)	I-SATA0 (1x SATA 3.0 Port)	I-SATA0 (1x SATA 3.0 Port)	I-SATA0 (1x SATA 3.0 Port)
Onboard VGA	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller I210IT Single LAN with Intel® PHY I219LM LAN controller
USB Ports	1 DP++(Dual-Mode DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 1.4 (max. resolution up to 4096x2160@30Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 620	1 DP++(Dual-Mode DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 1.4 (max. resolution up to 4096x2160@30Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 620	1 DP++(Dual-Mode DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 1.4 (max. resolution up to 4096x2160@30Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 620	1 DP++(Dual-Mode DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, Dual channel 48-bit LVDS(max. resolution up to 1920x1200@60Hz), HDMI 1.4 (max. resolution up to 4096x2160@30Hz), DP++ (max. resolution up to 4096x2304@60Hz), Intel® UHD Graphics 610
Other Onboard I/O Devices	4 USB 2.0 ports (4 via headers) 4 USB 3.1 Gen2 ports (4 Rears Type A) ALC 8885 HD Audio TPM 2.0 Chip 6 COM Ports (6 headers); (4 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control)	4 USB 2.0 ports (4 via headers) 4 USB 3.1 Gen2 ports (4 Rears Type A) ALC 8885 HD Audio TPM 2.0 Chip 6 COM Ports (6 headers); (4 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control)	4 USB 2.0 ports (4 via headers) 4 USB 3.1 Gen2 ports (4 Rears Type A) ALC 8885 HD Audio TPM 2.0 Chip 6 COM Ports (6 headers); (4 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control)	4 USB 2.0 ports (4 via headers) 4 USB 3.1 Gen2 ports (4 Rears Type A) ALC 8885 HD Audio TPM 2.0 Chip 6 COM Ports (6 headers); (4 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control)
Manageability	1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 System Fan	1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 System Fan	1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 System Fan	1 HD Audio header Mic-in/Headphone-out (Audio only support at 0~60C) 1 8-bit GPIO header 1 SMBus header 1 System Fan
PC Health Monitoring	-WOHS: w/o Heat Sink AMT, SuperDoctor™ 5, Watchdog +12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors CPU voltages, System level control, System temperature, VBAT 1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	-WOHS: w/o Heat Sink AMT, SuperDoctor™ 5, vPro, Watchdog +12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors CPU voltages, System level control, System temperature, VBAT 1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	SuperDoctor™ 5, Watchdog +12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors CPU voltages, System level control, System temperature, VBAT 1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors	-WOHS: w/o Heat Sink SuperDoctor™ 5, Watchdog +12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors CPU voltages, System level control, System temperature, VBAT 1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Thermal Control	-E: 0°C -60°C operating temperature -E-WOHS: 0°C -70°C operating temperature (Need customer thermal solution)	-H: 0°C -60°C operating temperature -H-WOHS: 0°C -70°C operating temperature (Need customer thermal solution)	-L: 0°C -60°C operating temperature -L-WOHS: 0°C -70°C operating temperature (Need customer thermal solution)	-C: 0°C -60°C operating temperature -C-WOHS: 0°C -70°C operating temperature (Need customer thermal solution)
Other Features	8-pin 12-24V DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL AMI UEFI	8-pin 12-24V DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL AMI UEFI	8-pin 12-24V DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL AMI UEFI	8-pin 12-24V DC Power Connector, ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, System level control, WOL AMI UEFI

¹ Supermicro chassis required for optimal functionality and performance.
* For detailed memory configurations please refer to Supermicro website.

Intel® Xeon® E
Embedded, High Performance,
IPMI



i7/i5/i3/Pentium®/Celeron®
vPro AMT, Workstation,
2666MHz DDR4



i7/i5/i3/Pentium®/Celeron®
vPro AMT,
Embedded



i7/i5/i3/Pentium®/Celeron®
vPro AMT,
Embedded



MODEL	X11SCZ-F	X11SCZ-Q	X11SSQ	X11SSQ-L
Processor	Intel® Xeon® E-2100 Processor/E-2200 Processor, 8th/9th Generation Intel® Core™ i9/Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® Processor. Single Socket LGA-1151 (Socket H4) supported, CPU TDP support Up to 95W TDP	8th/9th Generation Intel® Core™ i9/Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® Processor. Single Socket LGA-1151 (Socket H4) supported, CPU TDP support Up to 95W TDP	Intel® 7th/6th Gen Core™ i7/i5/i3 series, Intel® Celeron®, Intel® Pentium® processors; Single Socket H4 (LGA 1151) supported; CPU TDP support up to 95W	Intel® 7th/6th Gen Core™ i7/i5/i3 series, Intel® Celeron®, Intel® Pentium® processors; Single Socket H4 (LGA 1151) supported; CPU TDP support up to 95W
Chipset/System Bus	Intel® C246	Intel® Q370	Intel® Q170	Intel® H110
Form Factor	uATX 9.6" x 9.6" (24.38cm x 24.38cm)	uATX 9.6" x 9.6" (24.38cm x 24.38cm)	microATX 9.6" x 9.6"	microATX 9.6" x 9.6"
Memory Capacity & Slots	Up to 128GB Unbuffered non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	Up to 128GB Unbuffered non-ECC UDIMM, DDR4-2666MHz, in 4 DIMM slots	4x 288-pin DDR4 DIMM slots Up to 64GB DDR4 Non-ECC UDIMM	4x 288-pin DDR4 DIMM slots Up to 64GB DDR4 Non-ECC UDIMM Up to 32GB in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16, 2 PCI-E 3.0 x4 (in x8 slot) M.2 Interface: 1 SATA/PCI-E 3.0 x4 M.2 Form Factor: 2280/22110 M.2 Key: M-Key	1 PCI-E 3.0 x16, 2 PCI-E 3.0 x4 (in x8 slot) M.2 Interface: 1 SATA/PCI-E 3.0 x4 M.2 Form Factor: 2280/22110 M.2 Key: M-Key	1 PCI-E 3.0 x16, 2 PCI-E 3.0 x4, 1 PCI-E 3.0 x1, M.2 PCI-E x2 2242/60/80	1 PCI-E 3.0 x16, 1 PCI-E 2.0 x1, 1 PCI-E 2.0 x1
Onboard RAID Controller	Intel® C246 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® Q370 controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Q170 controller for 6 SATA3 ports: RAID 0,1,5,10	H110 controller for 4 SATA3 ports
Onboard LAN	Single LAN with Intel® Ethernet Controller i210-AT Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® Ethernet Controller i210-AT Single LAN with Intel® PHY I219LM	Dual GbE LAN with Intel® i219LM and i210AT	Single GbE LAN with Intel® i219LM
Onboard VGA/Display Ports	1 VGA D-Sub Connector port 1 DVI - I port 2 DP (DisplayPort) ports 1 Aspeed AST2500 BMC 1 Intel® HD Graphics 3 Independent Displays	1 DVI - I port, 2 DP (DisplayPort) ports, 1 Intel® HD Graphics, 3 Independent Displays	1 HDMI, 1 DVI-D 1 DP (Display Port) 1 eDP (X11SSQ only) 3 Independent Displays	1 HDMI, 1 DVI-D 1 DP (Display Port) 1 eDP (X11SSQ only) 2 Independent Displays
USB Ports	7 USB 2.0 ports (6 headers, 1 Type A) 2 USB 3.1 Gen1 ports(2 headers) 6 USB 3.1 Gen2 ports (3 Rears Type A + 1 Rear Type C, 2 headers)	7 USB 2.0 ports (6 headers + 1 Type A), 2 USB 3.0 ports (2 headers), 6 USB 3.1 ports (4 rears (3 Type A + 1 Type C) + 2 headers)	4x USB 3.0 ports (2 rear + 2 via header) 6x USB 2.0 ports (2 rear + 4 via headers) X11SSQ: 2x additional rear USB 2.0 ports	4x USB 3.0 ports (2 rear + 2 via header) 6x USB 2.0 ports (2 rear + 4 via headers) X11SSQ: 2x additional rear USB 2.0 ports
Other Onboard I/O Devices	ALC 888S HD Audio TPM Header & Chip both 4 COM Ports (4 headers)	1 Port SuperDOM, ALC 888S HD Audio, TPM Header & Chip both 4 COM Ports (4 headers)	1x SuperDOM ports with built-in power; SMBus header; SGPIO Header	1x SuperDOM ports with built-in power; SMBus header
Manageability	IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SuperDoctor® 5, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	SuperDoctor 5, NMI, Watchdog; AMT vPRO	SuperDoctor 5, NMI, Watchdog;
Health Monitoring	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 3.3V standby, 6 -fan status, Chassis intrusion header, Memory Voltages, Monitors CPU voltages, System temperature, VBAT	+1.35V, +1.5V, +1.8V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 5 -fan status	Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +5V Standby, VBAT, HT, Memory, Chipset Voltages.	Monitors for CPU Cores, +1.8V, +3.3V, +5V, +12V, +5V Standby, VBAT, HT, Memory, Chipset Voltages.
Thermal Control	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control	5x 4-pin fan headers, 5 fans with tachometer status monitoring, Dual Cooling Zone	Monitoring for CPU and chassis environment CPU thermal trip support I°C temperature sensing logic Thermal Monitor 2 (TM2) support PECI	Monitoring for CPU and chassis environment CPU thermal trip support I°C temperature sensing logic Thermal Monitor 2 (TM2) support PECI
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, M.2 NGFF connector, RoHS, UID	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Dual Cooling Zones, M.2 NGFF connector, RoHS	Chassis intrusion detection Chassis intrusion header RoHS, RST	Chassis intrusion detection Chassis intrusion header RoHS, RST

i7/i5/i3/Pentium®/Celeron®
vPro AMT IPMI Embedded
1U Optimized Core i7 uATX



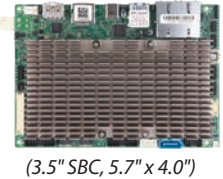
i7/i5/i3/Pentium®/Celeron®
vPro AMT IPMI, Dual 10GbE Embedded
1U Optimized uATX



i7/i5/i3/Pentium®/Celeron®
vPro AMT,
mini-ITX



i7/i5/i3
High Performance,
15W, 3.5" SBC

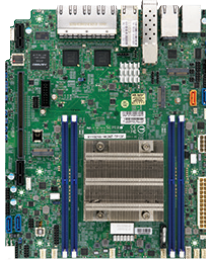


MODEL	X11SSZ-QF	X11SSZ-F X11SSZ-TLN4F	X11SSV-LVDS X11SSV-Q	X11SSN-H(-VDC/-WOHS) X11SSN-E(-VDC/-WOHS) X11SSN-L(-VDC/-WOHS)
Processor	Intel® 7th/6th Generation Core™ i7/i5/i3 series, Intel® Celeron®, Intel® Pentium®, Socket H4 (LGA 1151) supported; CPU TDP support 95W	Intel® Xeon® processor E3-1200 v6/v5 product family, Intel® 7th /6th Generation Core™ i7/i5/i3 series, Intel® Celeron®, Intel® Pentium®, Socket H4 (LGA 1151) supported; CPU TDP support 95W	Intel® 7th/6th Generation Core™ i7/i5/i3 series, Intel® Celeron®, Intel® Pentium®, Socket H4 (LGA 1151) supported; CPU TDP support 91W	Single Socket FCBGA1356 supported, CPU TDP support 15W -H: 7th Generation Intel® Core™ i7-7600U Processor -E: 7th Generation Intel® Core™ i5-7300U Processor -L: 7th Generation Intel® Core™ i3-7100U Processor
Chipset/System Bus	Intel® Q170	Intel® C236	Intel® Q170 Express	System on Chip
Form Factor	uATX 9.6" x 9.6"	uATX 9.6" x 9.6"	Mini-ITX, 6.7" x 6.7" (17.02cm x 17.02cm)	3.5" SBC, 5.7" x 4.0" (14.6cm x 10.16cm)
Memory Capacity & Slots	64GB Unbuffered Non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	64GB Unbuffered Non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2400MHz, in 2 DIMM slots	Up to 32GB Unbuffered non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 (in x16 slot) 2 PCI-E 3.0 x4 (in x8 slot)	1 PCI-E 3.0 x16 (in x16 slot) 2 PCI-E 3.0 x4 (in x8 slot)	1 PCI-E 3.0 x16 Mini-PCI-E with mSATA support, M.2 PCI-E 3.0 x4 with SATA support, M Key M.2 Form Factor: 2242, 2280	1 Full size Mini-PCI-E with mSATA (USB 2.0 x 1, PCI-E Gen2 x 1, SATA Gen3 x 1) 1 M.2 2242/3042/2280 B-Key (USB 2.0 x 1, PCI-E Gen2 x 1, SATA Gen3 x 1) M.2 Interface: SATA and PCI-E 3.0 x1 and USB 2.0 M.2 Form Factor: 2242, 2280, 3042 M.2 Key: B-Key
Onboard RAID Controller	Intel® Q170 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C236 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® Q170 Express controller for 5 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Intel® RST Single LAN with Intel® PHY I219LM LAN controller	Single LAN with Intel® PHY I219LM Single LAN with Intel® Ethernet Controller i210IT
Onboard LAN	Dual GbE LAN with Intel® i219LM and i210AT	Dual GbE LAN with Intel® i219LM and i210AT Dual 10GbE with Intel® X550 (-TLN4F Only)	Single LAN with Intel® Ethernet Controller i210-AT 1 HDMI port, 1 DP (DisplayPort) port, 3 Independent Displays, Intel® HD Graphics, 1 DVI-I port (-Q only), 1 LVDS port (-LVDS only)	1 DP (DisplayPort) port, 1 48-bit LVDS port, 1 HDMI port, 1 Intel® HD Graphics, Dual channel 48-bit LVDS, HDMI 2.0a, DP++
Onboard VGA/Display Ports	2 DP (DisplayPort) 1 DVI-I Intel® HD Graphics 3 Independent Displays 1 Aspeed AST2400 BMC VGA port	2 DP (DisplayPort) 1 DVI-I Intel® HD Graphics 3 Independent Displays 1 Aspeed AST2400 BMC VGA port	1 SuperDOM 1 SATA DOM power connector ALC 8885 HD Audio TPM Header 2 COM Ports (2 headers)	1 SuperDOM 1 SATA DOM power connector ALC 8885 HD Audio TPM Header 2 COM Ports (2 headers)
USB Ports	4 USB 3.0 ports (2 rear + 2 via header) 9 USB 2.0 ports (2 rear + 6 via headers + 1 Type A)	4 USB 3.0 ports (2 rear + 2 via header) 9 USB 2.0 ports (4 rear + 4 via headers + 1 Type A)	5 USB 2.0 ports (4 via headers, 1 Type A) 6 USB 3.2 Gen1 ports (4 rear + 2 via headers)	4 USB 2.0 ports (+ 4 via headers), 2 USB 3.0 ports (rear I/O), 1 USB 3.1 ports (+ 1 Type C) 1 USB 3.0 OTG Header ALC 8885 HD Audio, 4 COM Ports (4 headers), (2 x RS232, 2 RS232/422/485, RS-485 supports Auto flow control), 1 HD Audio header (Mic-in/Line-Out) 1 8-bit GPIO header 1 SMBus header 1 Speaker -H/E: TPM 2.0 Chip
Other Onboard I/O Devices	1 Port SuperDOM 1 SATA DOM power connector ALC 8885 HD Audio TPM Header 2 COM Ports (2 headers)	1 Port SuperDOM 1 SATA DOM power connector ALC 8885 HD Audio TPM Header 2 COM Ports (2 headers)	2 ports SuperDOM ALC 8885 HD Audio TPM Header 2 COM Ports (2 rear) SGPIO Header, SMBus header, GPIO	SuperDoctor® 5, Watchdog -H/E: AMT, vPro
Manageability	IPMI 2.0 + KVM with dedicated LAN, AMT/vPRO, NMI, SuperDoctor 5, Watchdog	IPMI 2.0 + KVM with dedicated LAN, AMT/vPRO, NMI, SuperDoctor 5, Watchdog	AMT, NMI, SuperDoctor® 5, vPro, Watchdog	SuperDoctor® 5, Watchdog -H/E: AMT, vPro
Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	+1.8V, +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 1.2V (VDIMM), 4-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, 1.2V (VDIMM), 3.3V standby, Monitors for CPU Cores, System level control, System temperature, VBAT
Thermal Control	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	4x 4-pin fan headers (up to 4 fans), Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, System level control, Thermal control tachometer fan connectors	1x 4-pin fan header (up to 1 fan), Fan speed control, Low noise fan speed control, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® Smart Response Technology, System level control, UID, WOL, RSTe	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® Smart Response Technology, System level control, UID, WOL, RSTe	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® Smart Response Technology, M.2 NGFF connector, RoHS, System level control, WOL	-H/E/L: 4-pin 12V R/A Type DC Power Connector; -VDC: 4-pin 12V DC Power Input Vertical Type Connector; -WOHS: without heatsink; -H/E: 0°C -70°C operating temperature; -L: 0°C -60°C operating temperature; ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, WOL, Force Power On by Jumper

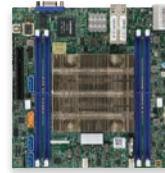
Intel® Xeon® D
SoC, 4/14/16-Core,
Quad 10GbE LAN
Intel® Quick Assist Technology



Intel® Xeon® D
SoC, 2/4/8/12/16-Core,
Quad 10GbE LAN
Intel® Quick Assist Technology



Intel® Xeon® D
SoC, 2/4/8/12/16-Core,
NVMe, Dual 10GbE

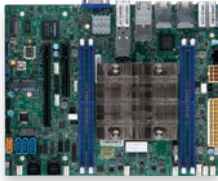


Intel® Xeon® D
SoC, 4/6/8/12/16-Core,
128GB Memory,
Dual 10GbE, Dual GbE



MODEL	X11SDW-4C-TP13F+ X11SDW-8C-TP13F X11SDW-12C-TP13F X11SDW-14C-TP13F X11SDW-14CNT-TP13F X11SDW-16C-TP13F	X11SDV-4C-TLN2F X11SDV-8C(+)-TLN2F X11SDV-12C-TLN2F X11SDV-16C(+)-TLN2F	X10SDV-4C-TLN4F X10SDV-6C(+)-TLN4F X10SDV-8C-TLN4F X10SDV-12C-TLN4F X10SDV-16C(+)-TLN4F	
Processor	Single Socket FCBGA-2518 supported; -4C: Intel® Xeon® Processor D-2123IT, CPU TDP 60W; -8C: Intel® Xeon® Processor D-2146NT, CPU TDP 80W; -12C: Intel® Xeon® Processor D-2163IT, CPU TDP 80W; -14C: Intel® Xeon® Processor D-2173IT; -14CNT: Intel® Xeon® Processor D-2177NT, CPU TDP 105W; -16C: Intel® Xeon® Processor D-2183IT, CPU TDP 100W	Single Socket FCBGA-2518 supported; -4C: Intel® Xeon® Processor D-2123IT, CPU TDP 60W; -8C: Intel® Xeon® Processor D-2146NT, CPU TDP 80W; -12C: Intel® Xeon® Processor D-2163IT, CPU TDP 80W; -14C: Intel® Xeon® Processor D-2173IT; -14CNT: Intel® Xeon® Processor D-2177NT, CPU TDP 105W; -16C: Intel® Xeon® Processor D-2183IT, CPU TDP 100W	Intel® Xeon® Processor D series, Socket FCBGA 1667 supported; -4C: Intel® Xeon® Processor D-2123IT, CPU TDP support up to 60W TDP; -8C(+): Intel® Xeon® Processor D-2141I, CPU TDP support up to 65W TDP; -12C: Intel® Xeon® Processor D-2166NT, CPU TDP support up to 85W TDP; -16C(+): Intel® Xeon® Processor D-2183IT, CPU TDP support up to 100W TDP	Intel® Xeon® Processor D series, Socket FCBGA 1667 supported; -4C(+): D-1518, 6MB, 4 Core, 35W; -6C(+): D-1528, 9MB, 6 Core, 35W; -8C: D-1541, 12MB, 8 Core, 45W; -12C: D-1557, 18MB, 12 Core, 45W; -16C(+): D-1587, 24MB, 16 Core, 65W; with Passive Heatsink
Chipset/System Bus Form Factor	System on Chip Proprietary WIO, 8" x 10" (20.32cm x 25.4cm)	System on Chip Proprietary WIO, 8" x 10" (20.32cm x 25.4cm)	System on Chip Mini-ITX 6.75" x 6.75" (17.15cm x 17.15cm)	System on Chip Mini-ITX 6.7" x 6.7"
Memory Capacity & Slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; Up to 512GB LRDIMM LRDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2133MHz; Up to 512GB LRDIMM LRDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; Up to 512GB ECC LRDIMM, DDR4-2400MHz, in 4 DIMM slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242	In WIO connector 1 PCI-E 3.0 x32 Left Riser Slot 1 M.2 M-Key SATA/PCI-E 3.0 x4, 2280/22110 1 M.2 E-Key PCI-E 3.0 x1, 2230 1 M.2 B-Key SATA/PCI-E 3.0 x2/USB 3.0, 2242	1 PCI-E 3.0 x8 1 PCI-E 3.0 x4 NVMe Internal Port via OCuLink	1 PCI-E 3.0 x16 M.2 PCI-E 3.0 x4, M Key 2242/2280
Onboard RAID Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10	SoC controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10 4 SATA ports via OCuLink (or PCI-E3.0 x4 for NVMe)	SoC controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10 RSTe
Onboard LAN	Quad LAN with Intel® Ethernet Controller I350-AM4 Quad LAN with 1GbE with Intel® I350-AM4 Quad LAN with 10G SFP+ LAN via SoC Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8201N PHY (dedicated IPMI)	Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10Gbase-T Quad LAN with Intel® Ethernet Controller I350-AM4 Quad LAN with 1GbE with Intel® I350-AM4 Single LAN with 1GbE with Intel® I210 Total 13 LAN ports Single LAN with Realtek RTL8211E PHY (dedicated IPMI)	Dual LAN with 10GBase-T with Intel® X557	Dual 10GBase-T with SoC Dual GbE LAN with Intel® i350-AM2;
Onboard VGA/Display Ports	1 VGA port, Header Only, ASPEED AST2500 BMC	1 VGA port, Header Only, ASPEED AST2500 BMC	1 VGA port, 1 Aspeed AST2500 BMC	1 VGA via Aspeed AST2400 BMC
USB Ports	4 USB 2.0 ports (4 via headers) 2 USB 3.1 Gen1 ports (2 Rear Type A)	4 USB 2.0 ports (4 headers, Type A) 2 USB 3.1 Gen1 ports (2 Rear Type A)	2 USB 2.0 ports (2 headers), 2 USB 3.0 ports (2 rear) Type A	4 USB 2.0 ports (4 via headers); 2 USB 3.0 ports (2 rear)
Other Onboard I/O Devices	1 TPM Header & Chip both 2 COM Ports (1 rear, 1 header)	TPM 2.0 Header & Chip both 2 COM Ports (1 rear, 1 header)	TPM Header	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header), GPIO and SMBus headers
Manageability	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, IPMI2.0, KVM with dedicated LAN, NMI, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SUM, SuperDoctor® 5, Watchdog
Health Monitoring	+1.5V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Memory, Memory Voltages, Supports system management utility, System level control, System temperature	+1.5V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Memory, Memory Voltages, Supports system management utility, System level control, System temperature	+1.5V, +12V, +3.3V, +5V, +5V standby, 5 (4-pin), 5 -fan status, Monitors CPU voltages, System level control	-16C/12C/4C: +1.8V, +12V, +3.3V, +5V, Chassis intrusion header, Monitors for CPU Cores, System level control -8C: +12V, +3.3V, +5V, 1.2V (VDIMM), Chassis intrusion header, System level control -6C: +1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 4 -fan status, Chassis intrusion header, Monitors for CPU Cores, Supports system management utility, System level control
Thermal Control	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Low noise fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, Status monitoring for speed control, System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans), 6 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Low noise fan speed control, Overheat LED indication, Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, Status monitoring for speed control, System level control, Thermal control tachometer fan connectors	3x 4-pin fan headers (up to 3 fans), 3 fans with tachometer monitoring, Dual Cooling Zone, Fan speed control, Pulse Width Modulated (PWM) fan connectors, Support 3-pin fans (w/o speed control)	4x 4-pin fan headers (up to 4 fans), Dual Cooling Zone, Low noise fan speed control, Pulse Width Modulated (PWM) fan connectors, Status monitoring for on/off control, Status monitoring for speed control -12C/4C: 4 fans with tachometer monitoring -6C: Overheat LED indication
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL; Intel® QuickAssist Technology (For -14CN only)	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, Node Manager Support, RoHS, SDDC, System level control, UID, WOL; Intel® QuickAssist Technology (For -8C / -14CNT only)	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Dual Cooling Zones, Node Manager Support, RoHS, UID	12V DC or ATX Power Source, Chassis intrusion detection, Chassis intrusion header, RoHS

Intel® Xeon® D
8/12/16-Core, Dual 10GbE, Dual 10G SFP+, Quad GbE LANs



Intel® Xeon® D
SoC, 16-Core, 128GB Memory, 22x SATA Storage Device, 2x 10GbE SFP+, 6x GbE



Intel® Xeon® D
SoC, 2/4/8 Core, 128GB Memory, 22x SATA Storage Device, 2x 10GbE SFP+, 2x GbE



Broadwell-DE
SoC, 8-Core, 128GB Memory, Dual GbE



MODEL	X11SDV-4C-TP8F X11SDV-8C-TP8F X11SDV-12C-TP8F X11SDV-16C-TP8F	X10SDV-7TP8F	X10SDV-7TP4F X10SDV-2C-7TP4F X10SDV-4C-7TP4F	X10SDV-F X10SDV-8C+-LN2F
Processor	-4C: Intel® Xeon® Processor D-2123IT, 4 Core, CPU TDP support 60W -8C: Intel® Xeon® Processor D-2146NT, 8 Core, CPU TDP support 80W -12C: Intel® Xeon® Processor D-2166NT, 12 Core, CPU TDP support 85W -16C: Intel® Xeon® Processor D-2183IT, 16 Core, CPU TDP support 100W	Intel® Xeon® Processor D-1587 product family; 16 Core, 32 Threads, Socket FCBGA1667 supported; CPU TDP support 65W	Socket FCBGA 1667 supported; -7TP4F: Intel® Xeon® Processor D-1537, 8 Core; CPU TDP support 35W -2C-7TP4F: D-1508, 3MB, 2 Core, 25W -4C-7TP4F: D-1518, 6MB, 4 Core, 35W	Intel® Xeon® Processor D-1541, 8 Core; Socket FCBGA 1667 supported; CPU TDP support 45W; -F: with Passive Heatsink -8C+-LN2F: with Active Heatsink
Chipset/System Bus	System on Chip	System on Chip	System on Chip	System on Chip
Form Factor	Flex ATX 9" x 7.25" (22.86cm x 18.42cm)	Flex ATX 9.0" x 7.25"	Flex ATX 9.0" x 7.25"	Mini-ITX 6.75" x 6.75" (17.15cm x 17.15cm)
Memory Capacity & Slots	Up to 256GB Registered ECC RDIMM, DDR4-2400MHz; Up to 512GB LRDIMM, in 4 DIMM slots 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x16	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots
Expansion Slots	M.2 Interface: 1 PCI-E 3.0 x4 and 1 SATA/PCI-E 3.0 x2 and 1 SATA/PCI-E 3.0 x2 M.2 Form Factor: 2242/2280 M.2 Key: M-Key, B-Key U.2 Interface: 2 PCI-E 3.0 x4, 2 PCI-E 3.0 NVMe x4 Internal Ports	2 PCI-E 3.0 x8 M.2 PCI-E 3.0 x4, M Key 2242/2280/22110; Mini-PCI-E with mSATA support	2 PCI-E 3.0 x8, M.2 PCI-E 3.0 x4, M Key 2242/2280/22110; Mini-PCI-E with mSATA support	1 PCI-E 3.0 x16 M.2 PCI-E 3.0 x4, M Key 2242/2280
Onboard RAID Controller	SoC controller for 12 SATA3 (6 Gbps) ports; RAID 0, 1, 5, 10 Quad LAN with Intel® Ethernet Controller i350-AM4	SoC controller for 4 SATA3 (6 Gbps) ports; LSI® 2116 SW controller for 16 SATA3 (6 Gbps) ports; SAS2 and SATA3;	RSTe, Intel® Raid 0, 1, 5, 10;	SoC controller for 6 SATA3 (6 Gbps) ports; RSTe, Intel® Raid 0, 1, 5, 10
Onboard LAN	Dual LAN with 10G SFP+ LAN via SoC Dual LAN with 10 Base-T	Dual 10GbE SFP+ from SoC; Dual GbE LAN with Intel® i210; Quad GbE LAN with Intel® i350-AM4	Dual 10GbE SFP+ from SoC; Dual GbE LAN with Intel® i210	Dual GbE LAN with Intel® i350-AM2
Onboard VGA/Display Ports	1 VGA D-Sub Connector port, 1 Aspeed AST2500 BMC	1 VGA via Aspeed AST2400 BMC	1 VGA via Aspeed AST2400 BMC	1 VGA via Aspeed AST2400 BMC
USB Ports	2 USB 2.0 ports (2 headers), 2 USB 3.0 ports (2 rear) Type A	2 USB 3.0 ports (2 rear); 5 USB 2.0 ports (+ 4 via headers + 1 Type A)	2 USB 3.0 ports (2 rear), 5 USB 2.0 ports (+ 4 via headers + 1 Type A)	4 USB 2.0 ports (4 via headers) 2 USB 3.0 ports (2 rear)
Other Onboard I/O Devices	TPM 2.0 Header, 1 COM Port (1 header),	2 ports SuperDOM, TPM 2.0 Header, 1 COM Ports (1 header), GPIO and SMBus headers	2 ports SuperDOM, TPM 2.0 Header, 1 COM Ports (1 header), GPIO and SMBus headers	1 Port SuperDOM, TPM Header, 1 COM Ports (1 header), GPIO and SMBus headers
Manageability	IPMI 2.0, KVM with dedicated LAN, Watchdog	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SUM, SuperDoctor® 5, Watchdog	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SUM, SuperDoctor® 5, Watchdog	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, NMI, SSM, SUM, SuperDoctor® 5, Watchdog
Health Monitoring	+1.5V, +12V, +3.3V, +5V, +5V standby, 5 (4-pin), 5-fan status, Monitors CPU voltages, System level control	+1.8V, +12V, +3.3V, +5V, Chassis intrusion header, Monitors for CPU Cores, System level control, VBAT	+1.8V, +12V, +3.3V, +5V, Chassis intrusion header, Monitors for CPU Cores, System level control, VBAT	+1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 4-fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT
Thermal Control	5x 4-pin fan headers (up to 5 fans), 5 fans with tachometer status monitoring, Dual Cooling Zone, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	4 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, CPU thermal trip support for processor protection, Dual Cooling Zones, M.2 NGFF connector, RoHS, Intel® QuickAssist Technology	12V DC or ATX Power Source, Chassis intrusion detection, Chassis intrusion header, RoHS	12V DC or ATX Power Source, Chassis intrusion detection, Chassis intrusion header, RoHS	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL

Intel® Xeon® D
SoC, 2/4 Core, 128GB Memory,
2x 10GbE SFP+, 6x GbE



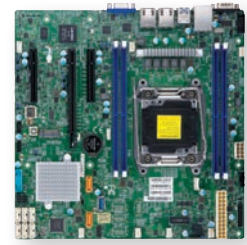
Intel® Xeon® D
SoC, 2/4 Core, 128GB Memory,
2x 10GbE SFP+, 2x GbE



Intel® Xeon® D
SoC, 8/12/16 Core, 128GB Memory,
2x 10GbE SFP+, 2x GbE



Intel® Xeon® W



MODEL	X10SDV-TP8F X10SDV-2C-TP8F	X10SDV-4C+-TP4F X10SDV-2C-TP4F	X10SDV-8C-TLN4F+ X10SDV-12C-TLN4F+ X10SDV-16C-TLN4F+	X11SRM-F
Processor	Intel® Xeon® Processor D-1518, 4 Core; Socket FCBGA 1667 supported; CPU TDP support 35W; 2C: D-1508, 3MB, 2 Core, 25W	Intel® Xeon® Processor D-1518, 4 Core; Socket FCBGA 1667 supported; CPU TDP support 35W; 2C: D-1508, 3MB, 2 Core, 25W	Intel® Xeon® Processor D series, Socket FCBGA 1667 supported; 8C: D-1537, 12MB, 8 Core, 35W; 12C: D-1557, 18MB, 12 Core, 45W; 16C: D-1587, 24MB, 16 Core, 65W; with Passive Heatsink	Intel® Xeon® Processor W Family. Single Socket R4 (LGA 2066) supported; CPU TDP support Up to 140W
Chipset/System Bus	System on Chip			Intel® C422
Form Factor	Flex ATX 9.0" x 7.25"	Flex ATX 9.0" x 7.25"	Mini-ITX 6.7" x 6.7"	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)
Memory Capacity & Slots	Up to 128GB ECC RDIMM, or 64GB ECC/non-ECC UDIMM, DDR4-2133MHz, in 4 DIMM slots			Up to 128GB Registered ECC RDIMM, DDR4-2666MHz Up to, 256GB Load Reduced ECC LRDIMM, DDR4-2666MHz, in 4 DIMM slots
Expansion Slots	2 PCI-E 3.0 x8, M.2 PCI-E 3.0 x4, M Key 2242/2280/22110; Mini-PCI-E with mSATA support	2 PCI-E 3.0 x8 M.2 PCI-E 3.0 x4, M Key 2242/2280/22110; Mini-PCI-E with mSATA support	1 PCI-E 3.0 x16 M.2 PCI-E 3.0 x4, M Key 2242/2280	1 PCI-E 3.0 x16, 2 PCI-E 3.0 x8 M.2 Interface: PCI-E 3.0 x4 M.2 Form Factor: 2280, 4 PCI-E 3.0 NVMe x4
Onboard RAID Controller	SoC controller for 4 SATA3 (6 Gbps) ports; RSTe, Intel® Raid 0,1,5,10			Intel® C422 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual 10GbE SFP+ from SoC; Dual GbE LAN with Intel® i210; Quad GbE LAN with Intel® i350-AM4	Dual 10GbE SFP+ from SoC; Dual GbE LAN with Intel® i210	Dual 10GbE SFP+ from SoC Dual GbE LAN with Intel® i350-AM2;	Dual LAN with Intel® i210 Gigabit Ethernet Controller
Onboard VGA/ Display Ports	1 VGA via Aspeed AST2400 BMC			1 VGA port, 1 Aspeed AST2500 BMC
USB Ports	2 USB 3.0 ports (2 rear), 5 USB 2.0 ports (+ 4 via headers + 1 Type A)	2 USB 3.0 ports (2 rear), 5 USB 2.0 ports (+ 4 via headers + 1 Type A)	2 USB 2.0 ports (2 via headers) 2 USB 3.0 ports (2 rear)	6 USB 2.0 ports (2 rear + 4 headers), 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)
Other Onboard I/O Devices	2 ports SuperDOM TPM 2.0 Header 1 COM Ports (1 header) GPIO and SMBus headers		1 Port SuperDOM, TPM Header, 1 COM Port (1 header), GPIO and SMBus headers	TPM Header, 2 COM Ports (1 rear, 1 header)
Manageability	Redfish 1.0 + IPMI 2.0 + KVM with dedicated LAN, AMT, NMI, SSM, SUM, SuperDoctor® 5, Watchdog			IPMI 2.0, KVM with dedicated LAN, SUM, SuperDoctor® 5, Watchdog
Health Monitoring	+1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 6 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT		+1.8V, +12V, +3.3V, +5V, 1.2V (VDIMM), 6 -fan status, Chassis intrusion header, Supports system management utility, System level control, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 6 -fan status, Chassis intrusion header, HT, Monitors CPU voltages, System temperature, VBAT
Thermal Control	6 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors		4 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	6x 4-pin fan headers (up to 6 fans)
Other Features	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL		4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, Node Manager Support, SDDC, System level control, UID, WOL	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, RoHS, UID

Skylake-H

Intel® Iris Pro Graphics P580,
Intel® AMT vPro



Skylake-H

Intel® Iris Pro Graphics P580 (VHD),
IPMI 2.0



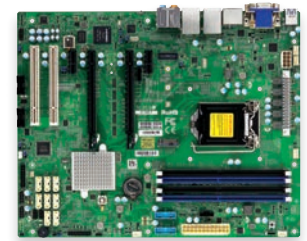
Xeon® E3-1200

QSV and VHD Support



Xeon® E3-1200

Workstation
ATX PCI-32



MODEL	X11SSV-M4	X11SSV-M4F	X11SSH-F X11SSH-LN4F	X11SAE X11SAE-F
Processor	Intel® Xeon® processor E3-1515M v5; Single Socket FCBGA1440 supported; QPI up to 8.0GT/s; CPU TDP support 45W, 2.8-3.7GHz, 8MB	Intel® Xeon® processor E3-1585 v5; Single Socket FCBGA1440 supported; QPI up to 8.0GT/s; CPU TDP support 65W, 3.5-3.9GHz, 8MB	Intel® Xeon® processor E3-1200 v6/v5 product family, Intel® 7th/6th Generation Core™ i3 series, Intel® Celeron®, Intel® Pentium®, Socket H4 (LGA 1151) supported; CPU TDP support 80W	Intel® Xeon® processor E3-1200 v6/v5; product family, Intel® 7th/6th Generation Core™ i7/i5/i3 series, Intel® Celeron®, Intel® Pentium®, Socket H4 (LGA 1151) supported; CPU TDP support 95W
Chipset/System Bus Form Factor	Intel® CM236 Mini-ITX 6.7" x 6.7"	Intel® C236 Mini-ITX 6.7" x 6.7"	micoATX 9.6" x 9.6"	ATX 12" x 9.6"
Memory Capacity & Slots	Up to 32GB Unbuffered ECC/non-ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots	Up to 32GB Unbuffered ECC SO-DIMM, DDR4-2133MHz, in 2 DIMM slots	64GB Unbuffered ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots	64GB Unbuffered ECC/Non-ECC UDIMM, DDR4-2400MHz, in 4 DIMM slots
Expansion Slots	1 PCI-E 3.0 x16 (Bifurcation support on PCI-E x16 slot) Mini PCI-E with mSATA support M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2242, 2280		1 PCI-E 3.0 x8 (in x16 slot) 1 PCI-E 3.0 x8 1 PCI-E 3.0 x4 (in x8 slot)	X11SAE: 2 PCI-E 3.0 x16*, 3 PCI-E 3.0 x1, 2 - 5VPCI 32bit; X11SAE-F: 2 PCI-E 3.0 x16*, 2 PCI-E 3.0 x1, 2 - 5V PCI 32bit; 2 PCI-E x16 slots are running at 16/NA or 8/8 Intel® C236 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10 + 1 PCI-E M.2 (PCI-E x4, 2242/2260/2280)(No Raid support)
Onboard RAID Controller	Intel® C236 controller for 4 SATA3 (6 Gbps) ports; RAID 0,1,5,10; Intel® RSTe		Intel® C236 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	
Onboard LAN	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller i210-AT Dual LAN with Intel® Ethernet Controller i350-AM2	Single LAN with Intel® PHY I219LM LAN controller Single LAN with Intel® Ethernet Controller i210-AT Dual LAN with Intel® Ethernet Controller i350-AM2 IPMI Shared LAN with i210-AT 1 DVI - A	-F: Dual LAN with Intel® Ethernet Controller i210-AT -LN4F: Quad LAN with Intel® Ethernet Controller i210-AT	Single LAN with Intel® Ethernet Controller i210-AT (Share with IPMI); Single LAN with Intel® PHY i219LM LAN controller
Onboard VGA/Display Ports	1 HDMI, 1 DP (DisplayPort), 1 DVI - I 1 Intel® Iris Pro Graphics P580	1 Aspeed AST2400 BMC *Intel® Iris Pro P580 for VHD*	1 VGA (from Aspeed AST2400 BMC)	1 DVI-I, 1 DP (DisplayPort), 1 HDMI, 1 VGA ***VGA is for IPMI only***
USB Ports	5 USB 2.0 ports (+ 4 via headers + 1 Type A) 4 USB 3.0 ports (4 rear)	5 USB 2.0 ports (+ 4 via headers + 1 Type A) 4 USB 3.0 ports (4 rear)	5 USB 3.0 ports (2 rear + 2 via header+ 1 Type A) 6 USB 2.0 ports (2 rear + 4 via headers)	6 USB 3.0 ports (2 rear + 4 via header) 2 USB 3.1 ports (2 rear) X11SAE: 8 USB 2.0 ports (2 rear + 6 via headers) X11SAE-F: 6 USB 2.0 ports (2 rear + 4 via headers)
Other Onboard I/O Devices	2 ports SuperDOM ALC 8885 HD Audio TPM Header 1 COM Port in RJ45 Socket		2 ports SuperDOM TPM 1.2 onboard Header 2 COM Ports (1 rear, 1 header)	Ext. Power Connector Only ALC 8885 HD Audio TPM 1.2 onboard Header 2 COM Ports (2 headers)
Manageability	AMT, SuperDoctor® 5, vPro, Watchdog	Intel® Node Manager, IPMI 2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	IPMI 2.0 + KVM with dedicated LAN, Intel® Node Manager, NMI, SPM, SUM, SuperDoctor® 5, Watchdog +12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	-F: IPMI 2.0 + KVM; Intel® Node Manager, NMI SPM, SUM, SuperDoctor® 5, Watchdog, AMT vPro (non-F)
Health Monitoring	+12V, +3.3V, +5V, +5V standby, 3 -fan status, Chassis intrusion header, Monitors CPU voltages	+12V, +3.3V, +5V, +5V standby, 1.05 (PCH), 3 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control, VBAT	+12V, +3.3V, +5V, +5V standby, Chassis intrusion header, Monitors CPU voltages, VBAT
Thermal Control	3x 4-pin fan headers (up to 3 fans), Fan speed control, Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, Thermal control tachometer fan connectors	3x 4-pin fan headers (up to 3 fans), Fan speed control, Pulse Width Modulated (PWM) fan connectors, PWM fan speed control, Status monitoring for speed control, Support 3-pin fans (w/o speed control), System level control, Thermal control tachometer fan connectors	5 4-pin, Fan speed control, Overheat LED indication, Thermal control tachometer fan connectors	5 4-pin, Fan speed control, Overheat LED indication
Other Features	12V DC or ATX Power Source, 8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® Smart Response Technology, M.2 NGFF connector, RoHS, System level control, WOL		Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, VHD, WOL, M.2 NGFF connector	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® Smart Response Technology, WOL

i7/i5/i3/Pentium®/Celeron®
Triple Display, mini-ITX



i7/i5/i3/Pentium®/Celeron®
vPro AMT, mSATA Slot, uATX



Intel® Xeon® E3-1200
VHD Support, uATX



i7/i5/i3/Pentium®/Celeron®
Workstation and Desktop
ATX PCI-32



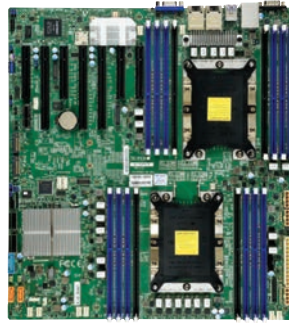
MODEL	X10SLV X10SLV-Q	X10SLQ X10SLQ-L	X10SLH-F	X10SAE
Processor	Intel® 4th Generation Core™ ; i7/i5/i3 series, Intel® Celeron®, Pentium® series; Socket LGA 1150 supported; CPU TDP support Up to 84W TDP	Intel® 4th Generation Core™ ; i7/i5/i3 series, Intel® Celeron®, Pentium® series; Socket LGA 1150 supported; CPU TDP support Up to 84W TDP	Intel® Xeon® processor E3-1200 v4/v3 series, Intel® 4th Generation Core™ i3 series, Intel® Pentium®, Celeron®; Socket LGA 1150 supported	Intel® 4th Generation Core™ i3 series; Intel® 4th Generation Core™ i5 series; Intel® 4th Generation Core™ i7 series; Intel® Xeon® processor E3-1200 v4/v3 series. Socket LGA 1150 supported; CPU TDP support Up to 135W TDP
Chipset/System Bus	X10SLV: Intel® H81 X10SLV-Q: Intel® Q87	Intel® Q87 Express	Intel® C226	Intel® C226
Form Factor	Mini-ITX 6.7" x 6.7"	MicroATX 9.6" x 9.6"	MicroATX 9.6" x 9.6"	ATX 12" x 9.6"
Memory Capacity & Slots	Up to 16GB DDR3 1600MHz Non ECC SODIMM in 2 slots	Up to 32GB Unbuffered non-ECC, DDR3-1600MHz in 4 DIMM slots 1 PCI-E 3.0 x16 (in x16 slot), 1 PCI-E 2.0 x4, 1 PCI-E 2.0 x1, Mini-PCI-E with mSATA support (N/A in -L)	2 DIMM slots, 8GB with two 4GB SODIMM configuration, 1.35V only	32GB Unbuffered ECC/non-ECC, DDR3-1600MHz in 4 DIMM slots
Expansion Slots	1 PCI-E 2.0 x16 (3.0 for -Q) Mini-PCI-E with mSATA support	1 PCI-E 3.0 x16 (in x16 slot), 1 PCI-E 2.0 x4, 1 PCI-E 2.0 x1, Mini-PCI-E with mSATA support (N/A in -L)	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x8, 1 PCI-E 2.0 x4 (in x8 slot)	2 PCI-E 3.0 x16 slots (16/NA or 8/8) 3 PCI-E 2.0 x1 2 - 5V PCI 32bit
Onboard RAID Controller	Intel® H81/Q87 controller for 2 SATA3 (6 Gbps) ports; 2 SATA2 (3 Gbps)	Intel® Q87 controller for 5 SATA3 (6Gbps) ports; 0,1,5,10	Intel® C226 controller for 6 SATA3 (6Gbps) ports; 0,1,5,10	Intel® C226 controller for 6 SATA3 (6 Gbps) ports; RAID 0,1,5,10 ASM1061 controller for 2 SATA3 (6 Gbps) ports; Single LAN with Intel® Ethernet Controller I210
Onboard LAN	Dual LAN with Intel® i217V & i210AT	Dual LAN with Intel® i217LM & i210AT	Dual LAN with Intel® Ethernet Controller i210AT	Single LAN with Intel® Ethernet Controller I210
Onboard VGA/Display Ports	1 HDMI, 1 DP (DisplayPort), 1 DVI-I, 1 Intel® HD 4600 Graphics, 2 Independent Displays (3 for -Q)	HDMI, DP (DisplayPort), DVI-D, VGA Intel® HD 4600 Graphics, 3 Independent Displays	VGA, Aspeed AS2400 BMC	1 VGA, 1 DVI -I, 1 DP (DisplayPort), 1 HDMI
USB Ports	2 USB 3.0 ports (2 rear +) 5 USB 2.0 ports (2 rear + 2 via headers + 1 Type A)	4 USB 3.0 ports (2 rear + 2 via header + 8 USB 2.0 ports (4 rear + 4 via headers) -L with 2 USB 3.0 rear header and 6 USB 2.0 ports	4 USB 3.0 ports (2 rear + 1 via header + 1 Type A); 6 USB 2.0 ports (2 rear + 4 via headers)	6 USB 3.0 ports (2 rear + 4 via header) 10 USB 2.0 ports (4 rear + 6 via headers)
Other Onboard I/O Devices	1 SATA DOM power connector, ALC 888S HD Audio Front panel header, 5 COM ports (1 with RS422/485), TPM 1.2 Header	1 SATA DOM power connector ALC 888S, 7.1 HD Audio 4 COM port headers (1 with RS422/485), PS/2 Combo mouse and keyboard; (-L: w/o PS/2 KB/MS) TPM 1.2 Header	1 SATA DOM power connector 1 fast UART 16550 serial COM port headers (1 rear 1 header); 2 Total COM Ports; TPM 1.2 Header	1 SATA DOM power connector 7.1 HD Audio PS/2 mouse and keyboard; Type B of 1394a TPM 1.2 onboard Header 2 COM Ports (2 headers)
Manageability	SuperDoctor 5, Watchdog	SuperDoctor 5, Watchdog, AMT 9.0, vPro	IPMI 2.0 + KVM with dedicated LAN, NMI, SuperDoctor 5, Watchdog Monitors CPU voltages, +12V, +3.3V, +5V, +5V Standby and total of 5 4-pin fan headers with tachometer monitoring, supports system management utility, chassis intrusion header	AMT, SuperDoctor 5, vPro, Watchdog
Health Monitoring	Monitors CPU voltages, +1.8V, +12V, +3.3V, +5V, +5V Standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	Monitors CPU voltages, +1.8V, +12V, +3.3V, +5V, +5V Standby, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, System level control	Monitors CPU voltages, +12V, +3.3V, +5V, +5V Standby and total of 5 4-pin fan headers with tachometer monitoring, supports system management utility, chassis intrusion header	+1.8V, +12V, +3.3V, +5V, +5V standby, 5 (4-pin), Chassis intrusion header, Monitors CPU voltages, Supports system management utility
Thermal Control	3 4-pin, Fan speed control, Overheat LED indication, PWM fan speed control, System level control, Thermal control tachometer fan connectors	Overheat LED indication, fan speed control, Thermal control tachometer fan connectors	Overheat LED indication, fan speed control, 5x 4-pin fan headers with tachometer monitoring	5 4-pin, Fan speed control, Overheat LED indication
Other Features	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, Adaptive Thermal Monitor & CPU thermal trip support for processor protection, System level control, WOL, 0°C -60°C operating temperature	ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, Adaptive Thermal Monitor & CPU thermal trip support for processor protection, Intel® Smart Response Technology, System level control, WOL, 0°C -60°C operating temperature	ACPI power management, control of power-on mode for recovery from AC power loss, Adaptive Thermal Monitor & CPU thermal trip support for processor protection. Node Manager support	4-pin 12v DC power connector, ACPI power management, ATX Power connector, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Intel® Smart Response Technology, WOL

2nd Gen Intel® Xeon® Scalable Processors

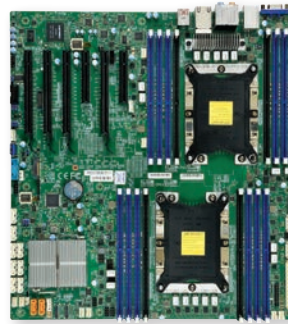
X11 DP
Mainstream,
PCI-E 3.0, 14 SATA3, Dual 1GbE



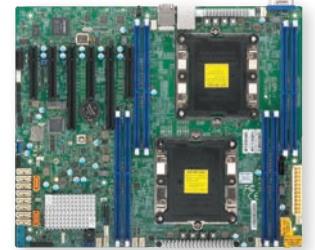
X11 DP
Resource Optimized



X11 DP
Thunderbolt 3.0 / NVMe
Dual 1GbE, PCI-E 3.0 slots



X11 DP
Mainstream,
ATX, M.2 NVMe, 6 PCI-E slots



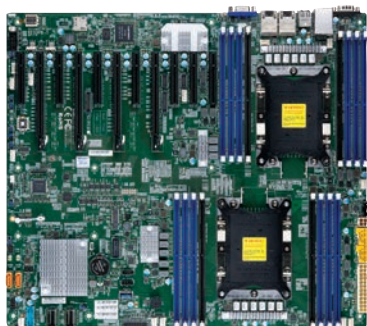
MODEL	X11DPi-N X11DPi-NT	X11DPH-i X11DPH-T X11DPH-Tq	X11DAi-N	X11DPL-i
Processor	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 2 UPI up to 10.4 GT/s	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3 UPI up to 10.4 GT/s	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 2 UPI up to 10.4 GT/s	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 140W TDP, 2 UPI up to 10.4 GT/s
Chipset/System Bus	-N: Intel® C621 -NT: Intel® C622	-i: Intel® C621 -T: Intel® C622 -Tq: Intel® C627	Intel® C621	Intel® C621
Form Factor	E-ATX, 12" x 13" (30.48cm x 33.02cm)	E-ATX, 12" x 13" (30.48cm x 33.02cm)	E-ATX, 12" x 13" (30.48cm x 33.02cm)	ATX, 12.076" x 10.15" (30.67cm x 25.78cm)
Memory Capacity & Slots	16 DIMM slots; Up to 4TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM** (128/256/512GB) 4 PCI-E 3.0 x16, 2 PCI-E 3.0 x8, 2 PCI-E 3.0 NVMe x4 Internal Port(s) M.2 Interface: PCI-E 3.0 x4 M.2 Form Factor: 2260, 2280, 22110 M.2 Key: M-Key	16 DIMM slots; Up to 4TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM** (128/256/512GB) 3 PCI-E 3.0 x16, 4 PCI-E 3.0 x8 M.2 Interface: 2 PCI-E 3.0 x4 M.2 Form Factor: 2242/2260/2280/22110 M.2 Key: M-Key (RAID 0,1 support) -i: Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 -T: Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 -Tq: Intel® C627 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	16 DIMM slots; Up to 4TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM** (128/256/512GB) 4 PCI-E 3.0 x16, 2 PCI-E 3.0 x8, 2 PCI-E 3.0 NVMe x4 Internal Port(s) M.2 Interface: PCI-E 3.0 x4 M.2 Form Factor: 2260, 2280, 22110 M.2 Key: M-Key	8 DIMM slots; Up to 2TB DDR4-2933 MHz* with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM** (128/256/512GB) 2 PCI-E 3.0 x16, 3 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot) M.2 Interface: 1 SATA/PCI-E 3.0 x4 M.2 Form Factor: 2260, 2280 M.2 Key: M-Key
Expansion Slots				
Onboard RAID Controller	-N: Intel® C621 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10 -NT: Intel® C622 controller for 14 SATA3 (6 Gbps) ports; RAID 0,1,5,10	-i: Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 -T: Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 -Tq: Intel® C627 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	-N: Dual LAN with 1GbE LAN with Intel® X722 -NT: Dual LAN with 10GBase-T with Intel® X722 + X557	-i: Dual LAN with 1GbE with Intel® X722 + Marvell 88E1512 -T/-Tq: Dual LAN with 10GBase-T with Intel® X722 + X557	Dual LAN with GbE from C621	Dual LAN with 1GbE with Intel® X722 + Marvell 88E1512
Onboard VGA/Display Ports	1 VGA port, ASPEED AST2500 BMC	1 VGA port	1 VGA port, ASPEED AST2500 BMC	1 VGA port, ASPEED AST2500 BMC
USB Ports	4 USB 2.0 ports (2 rear + 2 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	7 USB 3.2 Gen1 ports (4 rear + 2 via headers + 1 Type A)	7 USB 3.2 Gen1 ports (4 rear + 2 via headers + 1 Type A) 2 USB 3.2 Gen2 ports (2 rears (1 Rear Type A + 1 Rear Type C))	4 USB 2.0 ports (2 rear + 2 via headers) 3 USB 3.2 Gen1 ports (2 via headers + 1 Type A)
Other Onboard I/O Devices	2 ports SuperDOM TPM 2.0 Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM TPM 2.0 Header 1 COM Port (1 rear)	2 ports SuperDOM 7.1 HD Audio TPM 2.0 Header 1 COM Port (1 header)	2 ports SuperDOM TPM 2.0 Header 1 COM Port (1 header)
Manageability	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI2.0, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog
Health Monitoring	+12V, +3.3V, +5V, +5V standby, 3.3V standby, Monitors CPU voltages	+1.8V, +12V, +3.3V, +5V, +5V standby, 1.05 (PCH), Chipset Voltage, Memory Voltages, Monitors CPU voltages	+12V, +3.3V, +5V, +5V standby, Memory Voltages, Monitors CPU voltages	+12V, +3.3V, +5V, +5V standby, 3.3V standby, 8-fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility
Thermal Control	8x 4-pin fan headers (up to 8 fans), PWM fan speed control	8x 4-pin fan headers (up to 8 fans), PWM fan speed control	7x 4-pin fan headers (up to 7 fans), 7 fans with tachometer status monitoring, PWM fan speed control, Status monitoring for speed control	8x 4-pin fan headers (up to 8 fans), Overheat LED indication, PWM fan speed control
Other Features	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, NCSI header, Node Manager Support, RoHS, SDDC, UID	8-pin 12v DC power connector, ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, CPU thermal trip support for processor protection, NCSI header, RoHS, SDDC, UID, WOL	Chassis intrusion detection, CPU thermal trip support for processor protection, Node Manager Support, RoHS	ACPI power management, ATX Power connector, Chassis intrusion detection, Chassis intrusion header, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, Node Manager Support, SDDC, UID

* † 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

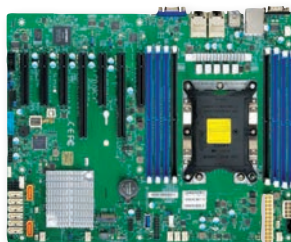
** †† For 2nd Generation Intel® Xeon® Scalable processors (Cascade Lake-SP Refresh / Cascade Lake-SP) only. Contact your Supermicro sales rep for more info.

2nd Gen Intel® Xeon® Scalable Processors

X11 DP
11 PCI-E Slots, 3 UPI



X11 DP
VROC support



X11 DP
High Performance, VROC support



MODEL	X11DPX-T	X11SPL-F	X11SPi-TF
Processor	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Dual Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP, 3 UPI up to 10.4 GT/s	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 165W TDP	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP
Chipset/System Bus	Intel® C621	Intel® C621	Intel® C622
Form Factor	Proprietary, 15.12" x 13.2" (38.4cm x 33.53cm)	ATX, 12" x 9.6" (30.48cm x 24.38cm)	
Memory Capacity & Slots	16 DIMM slots; Up to 4TB DDR4-2933 MHz† with 256GB memory modules; Supports RDIMM, LRDIMM, 3DS RDIMM, and 3DS LRDIMM; Supports Intel® Optane™ DCPMM†† (128/256/512GB)	Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots; Up to 1TB Intel® Optane DC Persistent Memory in memory mode (Cascade Lake Only)	
Expansion Slots	2 PCI-E 3.0 x16, 8 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot) Or 4 PCI-E 3.0 x16 and 4 PCI-E 3.0 x8 and 1 PCI-E 3.0 x4 (in x8 slot) M.2 Interface: 1 PCI-E 3.0 x4 M.2 Form Factor: 2280, 22110 M.2 Key: M-Key	2 PCI-E 3.0 x8 (in x16 slot), 4 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot) M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2280, 22110 M.2 Key: M-Key Double Height Connector	1 PCI-E 3.0 x16, 1 PCI-E 3.0 x16 (x16 or x8), 1 PCI-E 3.0 x8 (x0 or x8), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot) M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2280, 22110 M.2 Key: M-Key Double Height Connector
Onboard RAID Controller	Intel® C621 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C621 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10	Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10
Onboard LAN	Dual LAN with Intel® X550 10GBase-T Ethernet Controller	Dual LAN with GbE with Intel® i210	Dual LAN with 10GBase-T with Intel® X722 + X557
Onboard VGA/ Display Ports	1 VGA D-Sub Connector port, ASPEED AST2500 BMC	1 VGA port	
USB Ports	4 USB 2.0 ports (2 rear + 2 via headers) 5 USB 3.2 Gen1 ports (2 rear + 2 via headers + 1 Type A)	8 USB 2.0 ports (2 rear + 6 headers), 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers), 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)
Other Onboard I/O Devices	2 ports SuperDOM TPM 2.0 Header 2 COM Ports (1 rear, 1 header)	2 ports SuperDOM, TPM Header, 2 COM Ports (1 rear, 1 header)	
Manageability	Intel® Node Manager, IPMI (Intelligent Platform Management Interface) v2.0 with KVM support, KVM with dedicated LAN, NMI, SPM, SSM, SUM, SuperDoctor® 5, Watchdog	Intel® Node Manager, IPMI 2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog	
Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, 10 -fan status, 5+1 Phase-switching voltage regulator, Chassis intrusion header, HT, Supports system management utility, VBAT	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, Supports system management utility, VBAT	
Thermal Control	10x 4-pin fan headers (up to 10 fans)	7x 4-pin fan headers (up to 7 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control	
Other Features	Chassis intrusion detection, CPU thermal trip support for processor protection, Node Manager Support, RoHS	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL	

* For detailed memory configurations please refer to Supermicro website.

** For integration into SuperServer® systems only, not available for sale as subsystems.

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Generation Intel® Xeon® Scalable processors (Cascade Lake-SP) only. Contact your Supermicro sales rep for more info.

2nd Gen Intel® Xeon® Scalable Processors

X11 UP
High Performance



X11 UP



X11 UP



MODEL	X11SPH-nCTF X11SPH-nCTPF	X11SPM-F X11SPM-TF X11SPM-TPF	X11SPW-TF X11SPW-CTF
Processor	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Single Socket P (LGA 3647) supported, CPU TDP support up to 165W TDP	2nd Gen Intel® Xeon® Scalable Processors and Intel® Xeon® Scalable Processors, Single Socket LGA-3647 (Socket P) supported, CPU TDP support Up to 205W TDP
Chipset/System Bus	Intel® C622	-F: Intel® C621 -TF/-TPF: Intel® C622	Intel® C622
Form Factor	ATX, 12" x 9.6" (30.48cm x 24.38cm)	microATX, 9.6" x 9.6" (24.38cm x 24.38cm)	Proprietary WIO, 8" x 13" (20.32cm x 33.02cm)
Memory Capacity & Slots	Up to 2TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 2TB 3DS ECC LRDIMM, DDR4-2933MHz, in 8 DIMM slots	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots; Up to 1TB Intel® Optane DC Persistent Memory in memory mode (Cascade Lake Only) ^{††}	Up to 1.5TB 3DS ECC RDIMM, DDR4-2933MHz; Up to 1.5TB 3DS ECC LRDIMM, DDR4-2933MHz, in 6 DIMM slots; Up to 1TB Intel® Optane DC Persistent Memory in memory mode (Cascade Lake Only) ^{††}
Expansion Slots	1 PCI-E 3.0 x16 (x16 or x8), 1 PCI-E 3.0 x8 (x0 or x8), 1 PCI-E 3.0 x8, 1 PCI-E 3.0 x4 (in x8 slot) M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2280, 2 PCI-E 3.0 NVMe x4	2 PCI-E 3.0 x16, 1 PCI-E 3.0 x8 M.2 Interface: PCI-E 3.0 x4 M.2 Form Factor: 2242, 2280	1 PCI-E 3.0 x8 (in x16 slot), 1 PCI-E 3.0 x32 Left Riser Slot M.2 Interface: PCI-E 3.0 x4 and SATA M.2 Form Factor: 2280, 22110
Onboard RAID Controller	Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Broadcom® 3008 SW controller for 8 SAS3 (12Gbps) ports; RAID 0,1,10	-F: Intel® C621 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10 -TF/-TPF: Intel® C622 controller for 12 SATA3 (6 Gbps) ports; RAID 0,1,5,10	-TF: Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 -CTF: Intel® C622 controller for 10 SATA3 (6 Gbps) ports; RAID 0,1,5,10 Broadcom® 3008 SW controller for 4 SAS3 (12Gbps) ports; RAID 0,1,10
Onboard LAN	-nCTF: Dual LAN with 10GBase-T with Intel® X722 + X557 -nCTPF: Dual LAN with 10G SFP+ with Intel® X722 + Inphi CS4227	-F: Dual LAN with 1GbE with Intel® X722 + Marvell 88E1512 -TF: Dual LAN with 10GBase-T with Intel® X722 + X557 -TPF: Dual LAN with 10G SFP+ with Intel® X722 + Inphi CS4227	Dual LAN with 10GBase-T with Intel® X722 + X557
Onboard VGA/Display Ports	1 VGA port	1 VGA port	1 VGA port, 1 Aspeed AST2500 BMC
USB Ports	8 USB 2.0 ports (2 rear + 6 headers), 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	6 USB 2.0 ports (2 rear + 4 headers), 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)	7 USB 2.0 ports (2 rear + 5 headers), 5 USB 3.0 ports (2 rear + 2 headers + 1 Type A)
Other Onboard I/O Devices	2 ports SuperDOM, TPM Header, 2 COM Ports (1 rear, 1 header),		
Manageability	Intel® Node Manager, IPMI 2.0, KVM with dedicated LAN, NMI, SPM, SUM, SuperDoctor® 5, Watchdog		
Health Monitoring	+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 8 -fan status, Chassis intrusion header, Monitors CPU voltages, Supports system management utility, VBAT		+1.8V, +12V, +3.3V, +5V, +5V standby, 3.3V standby, 7-fan status, Chassis intrusion header, HT, Monitors CPU voltages, Supports system management utility, VBAT
Thermal Control	8x 4-pin fan headers (up to 8 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control		7x 4-pin fan headers (up to 7 fans), Fan speed control, Overheat LED indication, PWM fan speed control, System level control
Other Features	ACPI power management, Control of power-on for recovery from AC power loss, RoHS, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, CPU thermal trip support for processor protection, M.2 NGFF connector, RoHS, UID, WOL	ACPI power management, Control of power-on for recovery from AC power loss, RoHS, UID, WOL

* For detailed memory configurations please refer to Supermicro website.

** For integration into SuperServer® systems only, not available for sale as subsystems.

† 2933 MHz in two DIMMs per channel can be achieved by using memory purchased from Supermicro.

†† For 2nd Gen Intel® Xeon® Scalable Processors only. Contact your Supermicro sales rep for more info.



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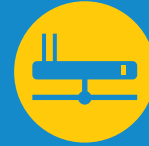
Industrial Automation



SD-WAN (uCPE/vCPE)



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IoT Gateway



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