SOLUTION BRIEF

Small and Medium Business, Storage, Networking, Web Hosting, and Security Appliances
Intel® Server Board S2600ST Product Family Featuring
the 2nd Generation Intel® Xeon® Processor Scalable Family

# Flexible General–Purpose Server Board in a Standard Form Factor

## Powerful Compute, Flexible I/O, Storage and Networking Capacity

The Intel® Server Board S2600ST product family delivers robust features and powerful performance in a standard 12" x 13" EEB form factor for flexibility and ease of adoption. Featuring the 2nd Generation Intel® Xeon® Scalable processor family, high PCIe* lane availability, and SAS/SATA/NVMe* flexibility, it provides a cost-effective option for pedestal, rack mount or custom systems. The S2600ST is ideal for use in small and medium business, storage, networking, web hosting, and security appliances where feature capacity and price-performance balance is key.

## Standard EEB Form Factor with Flexible I/O, Storage and Networking Capacity

- Dual CPU sockets with support for the 2nd Generation Intel® Xeon Scalable processor family

- 16 DDR4 DIMM slots

- Six 3.0 PCIe* slots, providing maximum configuration flexibility

- Up to four onboard PCIe* OCuLink connectors for direct attach NVMe* 2.5" SSD support

- Operating system boot option via two 80-mm M.2 connectors (x2 and x4 PCIe/SATA)

- Networking flexibility with dual 10GBase-T and dual 10G SFP+ modules

- Up to 150 Gbps high speed compression via three Intel® QuickAssist Technology (Intel® QAT) engines

## Ideal for Performance Storage, Networking, Web Hosting, and Security Appliances

The S2600ST product family is optimized for the 2nd Generation Intel® Xeon® Scalable processor family. This latest generation processor is designed for performance, with high scalability and resiliency with no I/O compromise, and supports a wide range of existing and emerging workloads. The S2600ST product family uses a number of key processor advancements:

- **Support for Intel® Speed Select‡** enables the optimization of processor resources to enhance workload performance, increase utilization, and optimize TCO.

- **NVMe* Enablement** alleviates the I/O bottleneck with high performance and capacity.

- **Integrated 10G Ethernet with RDMA** eliminates TCP/IP overhead by offloading transport to NIC for faster switching and packet filtering.

- **Intel® Virtual RAID on CPU (Intel® VROC)** enables high- performance, highly scalable CPU-based RAID with NVMe, with high IOPS and low latency.

‡ On supported 2nd Generation Intel® Xeon® Scalable processors

## Built with Intel® Quality, Reliability and Performance

Intel® Server Products are backed by Intel's design excellence and manufacturing expertise to deliver processing power with high levels of flexibility, manageability and reliability. Product and design quality is paired with 3-year standard warranties and robust technical and incident resolution support to ensure customer satisfaction.

## Flexible, Feature Rich, Powerful, and Cost-Effective

Intel® Sever Board S2600ST is available in two feature-optimized family SKUs:

- **S2600STBR** – Base SKU, including dual 10GbE integrated LAN ports

- **S2600STQR** – Integrated Intel® QAT support for bulk cryptography, public key cryptography, and up to 150 Gbps high speed compression

**Common use cases:**

- Powerful small and medium business servers

- Purpose-built appliances for networking, telecommunications, storage and security

- Web hosting and virtualization

# INTEL® SERVER BOARD S2600ST PRODUCT FAMILY SPECIFICATIONS

| SERVER BOARD SPECIFICATION | DETAILS |
|---|---|
| Board SKUs | S2600STBR, S2600STQR |
| Board Dimensions | 12" x 13" SSI EEB form factor |
| Intel Processor | 2nd Generation Intel® Xeon® Scalable processor family (Platinum, Gold, Silver, and Bronze) |
| Processor Socket Type | Two Socket-P LGA3647 |
| Maximum Processor TDP | 205W |
| Intel Chipset | • Intel® C624 Chipset – S2600STBR<br>• Intel® C628 Chipset – S2600STQR |
| Max DIMM slots | 16 DIMMs Total - six channels per processor, 2-1-1 configuration |
| Memory Type | DDR4 RDIMMs or LRDIMMs |
| Memory Capacity | Up to 1.0 TB for Gold/Platinum CPUs, 512 GB for Silver/Bronze CPUs |
| Memory Speed[1] | 2933 MT/s @ 1 DPC, 2666 MT/s @ 1 DPC and 2 DPC (DPC = DIMMs per channel) |
| Memory Voltage | 1.2V, DDR4 Standard I/O voltage |
| Video | Integrated 2D video controller with 128MB DDR4 memory |
| Networking | • Dual onboard 10GBase-T ports<br>• Dual SFP+ via optional accessory riser card |
| Intel® QuickAssist Technology | Supported on S2600STQR |
| TPM Support | One connector for optional TPM 2.0 module |
| Board Weight | 1.5 kg (3.31 lbs.) |
| Packaging Dimensions | Single Pack: 460(L) x 376(W) x 108(H) mm<br>Bulk Pack: 586(L) x 464(W) x 480(H) mm (10 boards per pack) |
| Packaging Dimensions | 0.87 kg (single pack), 5.2 kg (bulk pack) |
| Warranty | 3-year limited warranty |

| I/O CONNECTORS | DETAILS |
|---|---|
| USB | Two external USB 3.0 ports<br>Two external USB 2.0 ports<br>One internal Type-A USB 2.0 port<br>One internal 20-pin connector for optional 2x USB 3.0 port front panel support |
| Serial | One internal DH-10 Serial-A port header for optional rear serial port support |
| Video | One DB-15 VGA external connector |
| Front Panel SSI-EEB | One 2x15 pin SSI-EEB compliant front panel header |
| Storage | Two single port 7-pin SATA 6 Gbps connectors |
| | Two 4-port SATA Mini-SAS HD Connectors |
| | Two 80-mm M.2 connectors (x2 and x4 PCIe* & SATA) |
| | PCIe* OCuLink* connectors for direct attach NVMe* 2.5" SSDs<br>• 4 connectors – S2600STBR<br>• 2 connectors – S2600STQR |
| Network | Two integrated 10GbE Ports |

| EXPANSION OPTIONS | DETAILS |
|---|---|
| PCIe* Add-in Card Support | Six PCIe* slots with support for up to six PCIe 3.0 add-in cards – See product TPS<br>(Use of all PCIe slots requires dual processors populated.) |
| LAN Riser | SFP+ card for onboard Ethernet/Fiber controller physically aligned to Slot 5 |

| SERVER MANAGEMENT & SECURITY FEATURES | DETAILS |
|---|---|
| Embedded Server Management Features | Integrated Baseboard Management Controller, IPMI 2.0 compliant<br>Dedicated RJ45 1GbE server management port<br>Includes Standard Server Management Features – See product TPS<br>Support for Intel® Server Management Software |
| Advanced Server Management Features | Support for Intel® Remote Management Module 4 Lite accessory option enabling Integrated KVM and Remote Media Redirection |
| Intel® Transparent Supply Chain | Includes Statement of Conformance and Platform Certificate |

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# INTEL® SERVER CHASSIS P4000 SPECIFICATIONS

| SERVER BOARD SPECIFICATION | DETAILS |
|---|---|
| Type | Pedestal chassis, optional 4U rack mount |
| Max Processor TDP | Up to 205 W depending on configuration |
| Chassis Dimensions | 17.24" x 6.81" x 24.9" (438 x 173 x 612 mm) |
| Packaging Dimensions | 825 x 610 x 370 mm |
| Server Board Support | Intel® Server Board S2600ST product family (not included) |
| Power Supply Options | IP4304XXMFEN2: single non-redundant 550 W PSU included<br>P4304XXMUXX: supports redundant 750 W or 1600 W PSU (not included) |
| System Fan Support | P4304XXMFEN2: Two 120 x 38 mm non-redundant fans<br>P4304XXMUXX : Five 80 x 38 mm redundant hot-swap fans |

| EXPANSION OPTIONS | PCIe* SOURCE | DETAILS |
|---|---|---|
| PCIe Slot 1 | CPU1 | x8 PCIe* Gen 3 electrical and mechanical |
| PCIe Slot 2 | CPU1 | x16 PCIe Gen 3 electrical and mechanical (riser capable) |
| PCIe Slot 3 | CPU1 | x8 PCIe Gen 3 electrical and mechanical |
| PCIe Slot 4 | CPU1 | x16 PCIe Gen 3 electrical and mechanical |
| PCIe Slot 5 | CPU0 | x8 PCIe Gen 3 electrical and mechanical |
| PCIe Slot 6 | CPU0 | x16 PCIe Gen 3 electrical and mechanical (riser capable) |
| LAN Riser | CPU0 | SFP+ card for onboard Ethernet/Fiber controller physically aligned to Slot 5 |

PCIe Gen 3.0 unless noted. Use of all PCIe slots requires dual processors populated.

| STORAGE | TOTAL # OF DRIVES | TYPE |
|---|---|---|
| Front Peripheral Bays | Three at 5.25" half-height | Half-height drive bays for CD/DVD-ROM or tape drives<br>Can be used as one 3.5" removable media drive bay |
| Fixed Drive Support | Four at 3.5" or 2.5" | Up to four 3.5"or 2.5" fixed SATA drives, cabled SAS drives not supported |
| LAN Riser | CPU0 | SFP+ card for onboard Ethernet/Fiber controller physically aligned to Slot 5 |

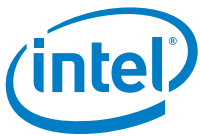| ADDITIONAL STORAGE OPTIONS | TOTAL # OF DRIVES | TYPE |
|---|---|---|
| Hot-Swap Drive Bay<br>AUP4X35S3HSDK | Eight at 3.5" or 2.5" | 4x3.5", two per system, also supports 2.5" |
| Hot-Swap Drive Bay<br>AUP8X25S3DPDK | 16 at 2.5" | 8x2.5", two per system, dual-port SAS |
| Hot-Swap Drive Bay<br>AUP8X25S3NVDK | 16 at 2.5" | 8x2.5", two per system, combo drive bay<br>Note: P4000 chassis is limited to four NVMe* SSDs |
| SAS Expander<br>RES3TV360 | 16 at 2.5" | 36-port 12G SAS expander, use with 8-port Intel® RAID Adapter |

Mixing of SAS/SATA/NVMe drives is permitted.

Mixing of 3.5" and 2.5" drives is supported; however, mixing of 3.5" and 2.5" drive cage upgrade kits is not supported

# INTEL® SERVER BOARD AND CHASSIS ORDER CODES

| ORDER CODE | TYPE | DESCRIPTION |
|---|---|---|
| S2600STBR | Server Board | Server board supports two Intel® Xeon® processor Scalable family up to 165 W TDP each, 16 DIMMs, two 10Gb Ethernet ports, 6 PCIe* slots |
| BBS2600STBR | Server Board | 10 pack of S2600STBR boards |
| S2600STQR | Server Board | Server board supports two 2ⁿᵈ Generation Intel Xeon processor Scalable family up to 165 W TDP each, 16 DIMMs, two 10Gb Ethernet ports, 6 PCIe* slots, Intel® QuickAssist Technology (Intel® QAT) |
| P4304XXMFEN2 | 4U Pedestal Chassis | 4U pedestal chassis, fixed 4x 3.5" HDD support, optimized for configurations with fixed fans and PSU |
| P4304XXMUXX | 4U Pedestal Chassis | 4U pedestal chassis, fixed 4x 3.5" HDD support, optimized for configurations with hot-swap fans, PSUs, and drives (PSUs and drive cages not included) |

¹ The maximum memory speed supported depends on the processor used.

See Intel® Server S2600ST Product Family Configuration Guide for accessory kit and spare order codes.

For more information on Intel Server Products and Solutions visit: intel.com/serverproducts

For more information on Intel® RAID visit: intel.com/RAID

For product specifications visit: ark.intel.com