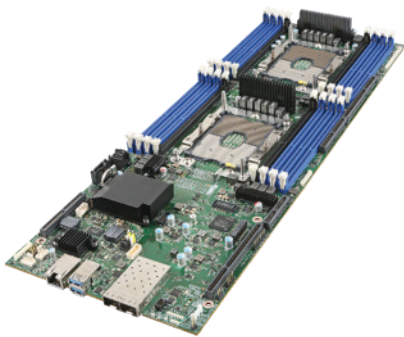


## PRODUCT BRIEF

High Performance Computing (HPC) and Hyper-Converged Infrastructure (HCI)  
Intel® Server Board S2600BP product family featuring  
the Intel® Xeon® processor Scalable family



# Density Optimized System Enabling Next-Gen Performance



### Performance Optimized for Compute Density

The Intel® Server Board S2600BP product family is a purpose built, rack-optimized server board ideal for use in hyper-converged, data analytics, storage, cloud and high performance computing applications. Designed to support the Intel® Xeon® processor Scalable family and up to 16 DDR4 DIMM slots per server board (8 DIMMs per processor), the S2600BP family maximizes memory and processor bandwidth to meet demanding compute use requirements.

### Density Optimized 2U Rack Server with High Speed Networking and I/O

- Up to four compute modules per 2U chassis with support for up to two Intel® Xeon® processor Scalable family per module
- Up to 165W processor TDP for high performance workloads in a 2U air-cooled chassis
- Networking flexibility with Dual 10GBase-T or 10G SFP+ modules
- x16 PCIe\* slot per module enabling additional network options
- Support for up to 2 NVMe\* SSDs per node in a 24 drive chassis
- Hot-swappable compute modules, storage and power supplies

### Future-Ready Platform for the Multi-Cloud, Data-Fueled Enterprise

The S2600BP product family is built with the latest Intel Xeon processor Scalable 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 S2600BP product family uses a number of key processor advancements:

- **Intel® QuickAssist Technology** (Intel® QAT) delivers up to 100Gbps performance for authentication, public key functions, and compression/decompression workloads, while freeing up CPU cycles and reducing demands on the server.
- **Intel® Omni-Path Architecture** integration, delivering 100Gbps port bandwidth for improved performance and lower latency in medium to large clusters.
- **Integrated 10G Ethernet with RDMA** eliminates TCP/IP overhead by offloading transport to NIC for faster switching and packet filtering.
- **Intel® AVX-512** enables tiering, de-dup, thin provisioning and exceptional processing of compute-intensive tasks.

## 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.

## Accelerating Time to Market with Innovative Data Center Solutions

The S2600BP product family is a foundational component of Intel® Data Center Blocks. These fully validated, unbranded server systems include Intel's latest data center technology—already optimized to work better together—allowing partners to accelerate time to market with reliable data center solutions. The process of configuring and validating the components of solutions that are tuned to meet specific customer requirements is a complex and resource intensive process. Intel Data Center Blocks based on the S2600BP product family can help reduce this complexity, making it easier to build innovative server solutions that can support the demands of today's data center workloads.

## Purpose Built for Outstanding Compute Density

Purpose built for breakthrough performance, compute density, high-speed networking and I/O with stability and increased uptime.

### Common use cases:

- HPC with real-time compute requirements
- HCI for scale out using network for agility and flexibility
- Data analytics requiring high compute power
- Storage for warm tier data
- Cloud Infrastructure with compute intense requirements

### HPC Workloads:

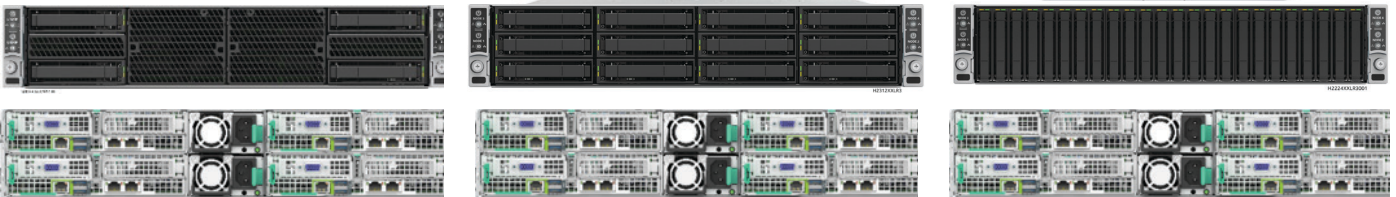
- Genomic sequencing
- Seismic modeling
- Computational fluid dynamics
- High frequency trading

### Storage Workloads:

- Scale-Up high performance storage
- Scale-out storage for HCI

### Cloud Workloads:

- Telco datacenter
- Public and Hybrid Cloud Infrastructure



## INTEL® SERVER BOARD S2600BP FAMILY

SERVER BOARD SPECIFICATION	DETAILS
Board SKUs	<b>S2600BPB, S2600BPS, S2600BPQ</b>
Board Dimensions	6.8" x 19.1"
Intel Processor	Intel® Xeon® processor Scalable family (Platinum, Gold, Silver, and Bronze)
Processor Socket Type	Two Socket-P LGA3647
Maximum Processor TDP	165W –Board, 140/165W** - Intel Chassis
Intel Chipset	Intel® C621 Chipset – S2600BPB
	Intel® C622 Chipset – S2600BPS
	Intel® C628 Chipset – S2600BPQ
Max DIMM slots	16 DIMMs Total – 2-1-1 configuration
Memory Type	DDR4 RDIMMs or LRDIMMs
Memory Capacity	Up to 1.5TB for Gold/Platinum CPUs. 768GB for Silver/Bronze CPUs
Memory Speed	2666 <sup>1</sup> MT/s @ 1 DPC and 2 DPC, DPC = DIMMs per channel
Memory Voltage	1.2V, DDR4 Standard I/O voltage
Networking	Dual 10GBase-T ports- S2600BPB and S2600BPQ
	Dual 10GbE SFP+ ports - S2600BPS
Intel® QuickAssist Technology	Supported on S2600BPQ
Board Weight	1.5 kg, 1.6 kg
Packaging Dimensions	578 x 438 x 301mm, 10 boards per box
Packaging Weight	20.7 kg, 21.4 kg
Warranty	3-year limited warranty

\*\* Note: Supported in enhanced air-cooled Intel® Server Chassis H2204XXLRE only

INPUT/OUTPUT	DETAILS
USB	Dual stacked rear panel USB 3.0 ports
IPMB	One 1x4 pin IPMB header
Serial	One DH-10 Serial Port A connector
Video	One 1x12 pin video header, 16MB of DDR4 video memory
Control Panel	One 1x12 pin control panel header
SATA	(4) SATA 6Gbps ports via Mini-SAS HD connector - S2600BPB and S2600BPS
System Fan Support	One managed 2x7 pin header for system fan module (Intel Chassis)
Power	One 1x8 pin Backup Power connector

EXPANSION OPTIONS	DETAILS
Bridge Board Slot	See supported Bridge Board Options under Compute Module Specs
Riser Slot 1 (CPU1)	x16 PCIe* 3.0 lanes (Riser slot 1 not available on S2600BPQ)
Riser Slot 2 (CPU1)	x24 PCIe* 3.0 lanes
Riser Slot 3 (CPU2)	x24 PCIe* 3.0 lanes
Riser Slot 4 (CPU2)	x16 PCIe* 3.0 lanes



SERVER MANAGEMENT	DETAIL
Embedded Server Management Features	Integrated Baseboard Management Controller, IPMI 2.0 compliant
	One dedicated RJ45 1GbE server management port
	One 2x4 pin header for optional Intel® Remote Management Module 4 Lite (Intel® RMM4 Lite2) with support for Remote KVM
	On-board LEDs: System Status, System ID, POST Code Diagnostic, BMC Error Code
	On-Board LEDs: System Status, System ID, POST Code Diagnostic, BMC Error Code
BIOS	uEFI based BIOS

## INTEL® COMPUTE MODULE HNS2600BP FAMILY

COMPUTE MODULE SPECIFICATION	DETAIL
Form Factor	1U Module
Module Weight	~ 3.6kg
Packaging Dimensions	716 x 269 x 158mm
Packaging Weight	~ 4.8kg
Warranty	3-year limited warranty

COMPUTE MODULE FEATURES	DETAIL		
Compute Module SKUs	<b>HNS2600BPB</b> <b>HNS2600BPB24</b>	<b>HNS2600BPS</b> <b>HNS2600BPS24</b>	<b>HNS2600BPQ</b> <b>HNS2600BPQ24</b>
Processor	<ul style="list-style-type: none"> <li>Up to two (2) Intel® Xeon® processor Scalable family</li> <li>Support for Intel Xeon processor Scalable Family with Intel® Omni-Path Architecture integrated fabric connectors—One 100Gb/s port per processor</li> </ul>		
Maximum Processor TDP	Board & Compute Module: 165W	Intel Chassis: 140W / 165W**	
Chipset	Intel® C621 chipset	Intel® C622 chipset	Intel® C628 chipset
Memory	16 DIMM Slots (8 per CPU) – DDR4 RDIMM/LRDIMM, Up to 2666 <sup>1</sup> MT/s, 1.2V		
Storage Support	Dependent on optional Bridge Board accessory. See supported Bridge Board options		
M.2	One (1) on-board 42mm M.2 SATA/PCIe* x4 + One (1) Riser 2 80mm M.2 SATA/PCIe* x4		
Networking	Dual 10GBase-T ports	Dual 10GbE SFP+ ports support	Dual 10GBase-T ports
Intel® QuickAssist Technology	No	No	Yes
USB	Dual stacked rear panel USB 3.0 ports		
Video	DB-15 Rear Panel VGA Video connector on Riser 2, 16MB of DDR4 video memory		
Expansion Options			
Bridge Board Slot	See supported Bridge Board Options		
Riser Slot 1 (CPU1)	<b>Default:</b> Video Adapter <b>Optional:</b> One (1) PCIe* Slot x16 Elec / x16 Mech Low profile cards only	<b>Default:</b> Video Adapter <b>Optional:</b> Support for Intel® Omni-Path fabric through carrier card option only—no PCIe* slot support	<b>Default:</b> Video Adapter <b>Optional:</b> Support for Intel Omni-Path fabric through carrier card option only—no PCIe* slot support
Riser Slot 2 (CPU1)	One (1) PCIe* Slot x16 Elec / x16 Mech Low profile cards only.	One (1) PCIe* Slot x16 Elec / x16 Mech Low profile cards only.	One (1) PCIe* Slot x16 Elec / x16 Mech Low profile cards only.
Riser Slot 3	Not Available with Bridge Board installed	Not Available with Bridge Board installed	Not Available with Bridge Board installed



Riser Slot 4	Not Available with Bridge Board installed	Not Available with Bridge Board installed	Not Available with Bridge Board installed
Server Management	<ul style="list-style-type: none"> <li>• Integrated Baseboard Management Controller, IPMI 2.0 compliant</li> <li>• One Dedicated RJ45 Management Port</li> <li>• One 2x4 pin header for optional Intel® Remote Management Module 4 Lite (Intel® RMM4 Lite2) with support for Remote KVM and</li> <li>• On-Board LEDs: System Status, System ID, POST Code Diagnostic, BMC Error Code</li> </ul>		
Fans	Three 40x56mm dual rotor system fans		

\*\* Note: Supported in enhanced air cooled Intel® Server Chassis H2204XXLRE only

COMPUTE MODULE SKUS	DETAIL
HNS2600BPB	Module integrated with an Intel® Server Board S2600BPB. Compatible with Intel® Server Chassis H2312XXLR3 & H2204XXLRE
HNS2600BPS	Module integrated with an Intel® Server Board S2600BPS. Compatible with Intel® Server Chassis H2312XXLR3 & H2204XXLRE
HNS2600BPQ	Module integrated with an Intel® Server Board S2600BPQ. Compatible with Intel® Server Chassis H2312XXLR3 & H2204XXLRE
HNS2600BPB24	Module integrated with an Intel® Server Board S2600BPB. Compatible with Intel® Server Chassis H2224XXLR3
HNS2600BPS24	Module integrated with an Intel® Server Board S2600BPS. Compatible with Intel® Server Chassis H2224XXLR3
HNS2600BPQ24	Module integrated with an Intel® Server Board S2600BPQ. Compatible with Intel® Server Chassis H2224XXLR3

EXPANSION OPTIONS	DETAIL	
Intel® Compute Module Bridge Board Option Compatibility	<b>HNS2600BPB</b> <b>HNS2600BPS</b> <b>HNS2600BPQ</b>	<b>HNS2600BPB24</b> <b>HNS2600BPS24</b> <b>HNS2600BPQ24</b>
	<ul style="list-style-type: none"> <li>• <b>AHWBPBGB</b> - 4-Port SATA SW RAID Bridge Board, 6G SATA Only (No RAID)</li> <li>• <b>AHWBP12GBGB</b> - 4-Port Bridge Board w/ LSI* 3008 IOC, 6G SATA / 12G SAS (RAID 0/1/10)</li> <li>• <b>AHWBP12GBGBR5</b> - 4-Port iMR Bridge Board w/ LSI 3008 IOC, 6G SATA / 12G SAS (RAID 0/1/5/10)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>AHWBPBGB24</b> - 6-Port IT Bridge Board w/ LSI 3008 IOC, 6G SATA / 12G SAS, 2 NVMe* drives (Pass-Through) (No RAID)</li> <li>• <b>AHWBPBGB24R</b> - 6-Port iMR Bridge Board w/ LSI 3408 IOC, 6G SATA / 12G SAS, RAID, 2 NVMe drives (Pass-Through) (RAID 0/1/10)</li> <li>• <b>AHWBPBGB24P</b> - 6-Port Add-In-Card (AIC) Pass-Through Bridge Board Must be used in combination with an add-in RAID card to be functional</li> </ul>

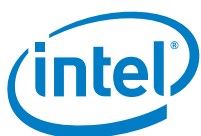


## INTEL® SERVER CHASSIS H2000G FAMILY

SPECIFICATION	H2312XXLR3	H2224XXLR3	H2204XXLRE
Intel® Compute Module support	HNS2600BPB HNS2600BPS HNS2600BPQ	HNS2600BPB24 HNS2600BPS24 HNS2600BPQ24	HNS2600BPB HNS2600BPS HNS2600BPQ
Number of modules	Up to 4	Up to 4	Up to 4
Chassis Dimensions	3.46" x 17.24" x 30.35" 87.9 x 438 x 771mm	3.46 x 17.24" x 28.86" 87.9 x 438 x 733mm 86.9 x 438 x 733mm	3.46" x 17.24" x 30.35" 87.9 x 438 x 771mm
Package Dimensions	983 x 577 x 260mm		
Chassis Weight	21.5kg	20.6kg	20.6kg
Package Weight	29.5kg	28.9kg	28.9kg
Power Supply	Two (2) x 2130W AC Common Redundant Power Supply (CRPS)		
Power Supply Efficiency Rating	80 Plus Platinum		
Power Configurations	1+0 – No power redundancy 1+1 – Redundant power 2+0 – Combined power, no redundancy		
Fans	<ul style="list-style-type: none"> <li>• Three (3) system fans per module</li> <li>• One (1) fan per power supply</li> </ul>		
2.5" PCIe* NVMe* SSD Support	None	8 total, max 2 per module	None
Hot Swap Drive Bays	<ul style="list-style-type: none"> <li>• Twelve (12) x 3.5" bays</li> <li>• 6Gbps SATA / 12Gbps SAS</li> <li>• With optional Bridge Board</li> </ul>	<ul style="list-style-type: none"> <li>• Twenty-four (24) x 2.5" bays</li> <li>• 6Gbps SATA / 12Gbps SAS / PCIe* NVMe</li> <li>• With optional Bridge Board</li> </ul>	<ul style="list-style-type: none"> <li>• Four (4) x 2.5" bays</li> <li>• 6Gbps SATA / 12Gbps SAS</li> <li>• With optional Bridge Board</li> </ul>

## SERVER BOARD, COMPUTE MODULE AND CHASSIS ORDER CODES

ORDER CODE	TYPE	DESCRIPTION
BBS2600BPB	Server Board	Intel® Server Board S2600BPB, dual 10GBaseT Support for Intel® Xeon® processor Scalable family and 16 DIMMs
BBS2600BPS	Server Board	Intel® Server Board S2600BPS, dual 10 GbE SFP+ Support for Intel Xeon processor Scalable family and 16 DIMMs
BBS2600BPQ	Server Board	Intel® Server Board S2600BPQ, dual 10GBaseT, Intel® QuickAssist Technology Support for Intel Xeon processor Scalable family and 16 DIMMs
HNS2600BPB	Compute Module	Intel® Compute Module HNS2600BPB, 1U, includes Intel® Server Board S2600BPB. Support for Intel Xeon processor Scalable family and 16 DIMMs
HNS2600BPS	Compute Module	Intel® Compute Module HNS2600BPS, 1U, includes Intel® Server Board S2600BPS. Support for Intel Xeon processor Scalable family and 16 DIMMs



HNS2600BPQ	Compute Module	Intel® Compute Module HNS2600BPQ, 1U, includes Intel® Server Board S2600BPQ. Support for Intel Xeon processor Scalable family and 16 DIMMs
HNS2600BPB24	Compute Module	Intel® Compute Module HNS2600BPB24, 1U, includes Intel® Server Board S2600BPB, dual 10GbBaseT. Support for Intel Xeon processor Scalable family and 16 DIMMs
HNS2600BPS24	Compute Module	Intel® Compute Module HNS2600BPS24, 1U, includes Intel® Server Board S2600BPS, dual 10 GbE SFP+. Support for Intel Xeon processor Scalable family and 16 DIMMs
HNS2600BPQ24	Compute Module	Intel® Compute Module HNS2600BPS24, 1U, includes Intel® Server Board S2600BPQ, dual 10GbBaseT, Intel® QuickAssist Technology support for Intel Xeon processor Scalable family and 16 DIMMs
H2312XXLR3	2U Chassis	Intel® Server Chassis H2312XXLR3 includes dual 2130W PSUs. Supports 12x 3.5" 6Gb SAS/SATA drives
H2204XXLRE	Enhanced Air cooled 2U Chassis	Intel® Server Chassis H2204XXLRE includes dual 2130W PSUs. Supports 4 x 2.5" 12Gb SAS drives and SATA-based Intel® SSD <sup>2</sup>
H2224XXLR3	2U Chassis	Intel® Server Chassis H2224XXLR3 includes dual 2130W PSUs. Supports 24 x 2.5" 12Gb SAS drives and SATA-based Intel SSD <sup>2</sup>

## SAS INTEL® INTEGRATED RAID CONTROLLERS

SAS ORDER CODE	DESCRIPTION
RS25SB008	Intel® RAID Controller, 6Gbps, 8P External, LSI 2208, DDR3 1GB
RS3GC008	Intel RAID Controller, 12Gbps, 8P External, LSI3108, DDR3 1GB
RS3SC008	Intel RAID Controller, 12Gbps, 8P External, LSI3108, DDR3 1GB

Product does not include memory, processors, or hard drives. For compatibility information please refer to the Product Family Configuration Guide at [www.intel.com/support](http://www.intel.com/support).

For additional RAID modules and add-in-cards, visit: [intel.com/RAID](http://intel.com/RAID).

For more information on Intel® Server Products & Solutions visit: [intel.com/serverproducts](http://intel.com/serverproducts).

For product specifications visit: [ark.intel.com](http://ark.intel.com).

<sup>1</sup> The maximum memory speed supported depends on the processor used.

<sup>2</sup> Refer to Intel® Server Configurator Tool (<https://serverconfigurator.intel.com>)

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