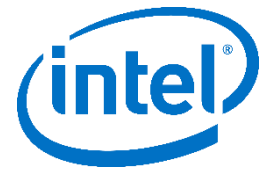


PRODUCT BRIEF



High Performance for Parallelized Workflows with Easy Serviceability and High Availability

Intel® Server Board S7200AP Product Family featuring a bootable Intel® Xeon Phi™ processor and Intel® Omni-Path Fabric
High Performance Computing (HPC) and Data Analytics



Peak Performance and Efficiency for Parallelized Workflows

The Intel® Server Board S7200AP Product family is a purpose built, single socket, half-width board ideal for HPC workloads demanding a high level of parallel compute processing performance. This product family features support for bootable Intel® Xeon Phi™ processors with 6 DIMMs (1DPC), up to 72 cores, and optional support for Intel® Omni-Path Fabric Technology for up to 100Gb/s of node interconnect throughput. Supported by a 2U/4 node chassis, S7200AP features easy serviceability and high availability, with hot-swappable compute modules, 2.5" or 3.5" drive bays, and redundant 2130W power supply modules.

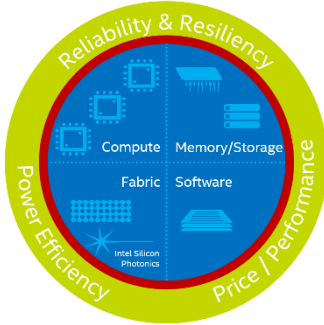
Purpose built for HPC with Flexible I/O and Storage options

- Featuring Intel® Xeon Phi™ product family
- Supports Intel® Omni-Path Fabric via integrated silicon (-F processor) or PCIe*-based Add-In-Card
- Up to six DDR4-2400 Registered ECC memory modules (RDIMM/LRDIMM) for maximum 384GB capacity
- Two PCIe Gen 3 x16 low profile slots, two USB 3.0 ports, four SATA Ports and mSATA port connector
- Dual 1GbE Base-T ports for network and manageability
- Optional 2U/4 node chassis with dual 2130W power supplies

Delivering the Power of Intel® Xeon Phi™ and Intel® Omni-Path Fabric

Intel Xeon Phi offers the ability to deploy Intel's next-generation fabric architecture, Intel® Omni-Path, as a standard, integrated option. The combination provides the foundation for powerful and efficient data traffic control by using an advanced "on-load" design that cost-effectively maximizes performance. Intel Omni-Path automatically scales to tens of thousands of nodes with extremely low power consumption, making the solution ideal for increasingly demanding high performance computing (HPC) and analytics workloads.





Accelerate Time to Marketing with HPC Solutions

The process of configuring and validating the foundational components of an HPC solution that is tuned to meet specific customer requirements is a complex and resource intensive process. To help address these challenges, the S7200AP board is also available in an unbranded, pre-integrated, fully-validated HPC Compute Block that is based on Intel's latest data center technologies.

Already optimized to work better together, these S7200AP-based compute blocks embody the Intel® Scalable System Framework - a flexible blueprint for developing high performance, efficient and reliable HPC systems – and help speed time to market for innovative HPC solutions. Available in pre-set SKU or build-to-order configurations, partners can take advantage of Intel's engineering and validation expertise to build HPC solutions faster and with a lower TCO.

Mix and Match: Build Your Own Rack

- 1U and 2U Rack form factors
 - HNS2600KPR, HNS2600KPFR
 - HNS2600TPR, HNS2600TP24R, HNS2600TP24SR, HNS2600TPFR
 - R1304WT2GSR, R1304WTTGSR
 - R1208WT2GSR, R1208WTTGSR
 - R2208WT2YSR, R2208WTTYC1R, R2208WTTYSR
 - R2224WTTYSR
 - R2308WTTYSR
 - R2312WTTYSR
 - HNS7200AP
- Intel® Xeon® processor family
- Intel® Xeon Phi® Processor
- Intel® Xeon Phi® Coprocessor
- Intel Omni-Path Fabric
- Intel Fabric, Ethernet and RAID adapters
- Intel® Server Products hardware and accessories from supported families

Verify Authenticity with Intel® Transparent Supply Chain

To address customer security concerns and guard against counterfeiting and malware, the S7200AP family features the Intel Transparent Supply Chain which enables the ability to verify the authenticity of board components and firmware. Features include:

- Digitally signed statement of conformance
- Platform Certificates provided with a secured Trusted Platform Module (TPM)
- Server component data tracked and saved for 20 years
- Firmware load verification

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.

PRODUCT SPECIFICATIONS

Server Board Specification	Details
Processor Support	Intel® Xeon Phi™ processor (KNL-D) Bootable Single processor socket P (3647 pins) 36 lanes of Integrated PCI Express® 3.0 low-latency I/O or Intel® Xeon Phi™ processor (KNL-F) Host Fabric Interface Bootable Single processor socket P (3647 pins) Integrated 100 Gb/s Host Fabric Interface 4 lanes of Integrated PCI Express® 3.0 low-latency I/O
Chipset	Intel® C610 “Wellsburg” Platform Controller Hub (PCH)
Memory Support	Six DIMM slots in total across six memory channels Registered DDR4 (RDIMM), Load Reduced DDR4 (LRDIMM) Memory DDR4 data transfer rates of 2133/2400 MT/s 1 DIMM per channel MAX MEMORY 384GB USING 64GB DIMMS
External I/O Connectors	Two USB 3.0 ports on rear Two RJ-45 10/100/1000 Mbit Network Interface Controller (NIC) ports
Internal I/O Connectors/ headers	One USB 2.0 header One TPM header One Intel® Omni-Path Fabric Misc. signal connector One mSATA connector (Board SKU only) One bridge Board Connector One 2x7 pin header for system fan module One Aux front panel connector Three 8-pin fan headers for third party chassis support One 4 pin CPU fan or water pump header One PSU control header One header for Intel® RMM4 Lite One RGMII header for 3rd party use One RGB video header One Serial Port A header
PCIe* support	PCIe* 3.0 (2.5, 5, 8 GT/s)
Power Connections	2x2 and 2x4 power connectors One 8 pin power control connector One 4 pin Power connector for disk drive support
System fan support	Three 40x56mm double rotor fans One 4 pin CPU fan or water pump header
Video	Integrated 2D video graphics controller 128MB DDR3 memory
Riser support	One PCIe Gen3 x16 standard riser connector: supports a low profile adapter in riser slot 1 One PCIe Gen3 x20 HSEC-8 fine pitch riser connector: supports a x16 low-profile adapter in riser slot 2 or supports a x4 low-profile adapter in Riser 2, when fabric CPU is used
One-board storage controllers and options	Integrated 10-port SATA 5 ports to bridge board 1 port to mSATA (Board SKU only) 4 ports to MiniSAS HD connector
Fabric	Dual port Intel® Omni-Path Fabric via KNL-F processor Or Single port Intel® Omni-Path Fabric via x16 Gen 3 PCIe adapter

Server Board Specification	Details
Network (LAN)	Dual i210 Springville Dual 10/100/1000MbE RJ45 connectors NC_SI sideband to BMC. Option to host share or dedicate a network port to management traffic
RAID Support	Intel® Embedded Server RAID Technology 2 (ESRT2)
Server Management	Onboard Emulex* Pilot III* Controller Support for Intel® Remote Management Module 4 Lite solutions Support for Intel® System Management Software Support for Intel® Intelligent Power Node Manager (Need PMBus*-compliant power supply)
Security	Trusted Platform Module (TPM) 1.2/2.0 Compliant
Board Form Factor	6.81" W x 14.17" L

Intel® Compute Module HNS7200AP Product Family Feature Set

Compute Module Specifications	Details
Server Board	Intel® Server Board S7200AP product family
Processor Support	Intel® Xeon Phi™ processor (KNL-D) Bootable Intel® Xeon Phi™ processor (KNL-F) Host Fabric Interface Bootable
Heatsink	One 80x107mm 1U Heatsink
Fans	Three 40x56mm dual rotor system fans
Riser Support	One PCIe Gen3 x16 standard riser connector Supports a low-profile adapter in Riser slot 1 One PCIe Gen3 x20 HSEC-8 fine-pitch riser connector Supports a x16 low-profile adapter in Riser slot 2 Supports a x4 low-profile adapter in Riser 2 when fabric is used
Compute Module Board	Bridge Boards: 6G SATA Bridge Board (default) One compute module power docking board
Air Duct	One transparent air duct
Form Factor	Length 14.17" (360m), width 6.81" (173mm)

Intel® Server Chassis H2000XXLR2

2U Specifications	Details
Server Board Support	4-Node System with support for four Intel® Compute Module HNS7200AP
I/O Support	(8) I/O PCIe x16 LP cards
HDD Support	16 x 2.5" (H2216XXLR2) or 12 x 3.5" (H2312XXLR2) SATA Hot-swap HDDs
Dimensions	2U x 30" Deep
2U Power Supply	Two 2130W (@240VAC) Redundant 80Plus Platinum efficiency PSUs included
2U Fans	6 managed hot swap system fans

Intel® Transparent Supply Chain	Details
Includes Statement of Conformance	Yes
Includes Platform Certificate	Yes
TPM Version	2.0

Intel® Server Board S7200AP Product Family Order Codes

Order Code	TYPE	MM NUMBER	DESCRIPTION
BBS7200AP	Server Board	942367	Intel® Server Board S7200AP, OEM 10 pack
BBS7200APL	Server Board	950090	Intel® Server Board S7200AP, OEM 10 pack liquid-cooling friendly
HNS7200AP	Compute Module	942355	Intel® Compute Module HNS7200AP
HNS7200APL	Compute Module	950091	Intel® Compute Module HNS7200AP liquid-cooling friendly
AXX2PFABKIT	Fabric Upgrade Kit	945579	Intel IFT Carrier Fabric Upgrade Kit (required for KNL-F Processors)
H2312XXLR2	Server Chassis	942352	Intel® Server Chassis H2000G with 12x3.5" HS HDD and 2130W Redundant PS
H2216XXLR2	Server Chassis	942353	Intel® Server Chassis H2000G with 16x3.5" HS HDD and 2130W Redundant PS

See Configuration Guide for Accessory Kit and Spare Order Codes

For more information on Intel® server solutions visit: intelserveredge.com

For more information on Intel® Server Products visit: intel.com/intelserverproducts

For product specifications visit: ark.intel.com

Product does not include memory, processors, or hard drives. For compatibility information please refer to the configuration guide at www.intel.com/support.



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