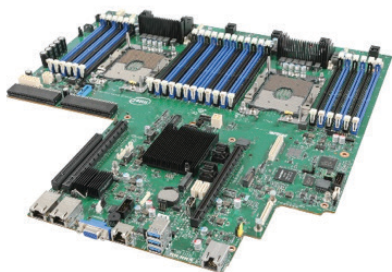Data Center, Cloud, High Performance Computing
**Intel® Server Board S2600WF Product Family
Featuring the Intel® Xeon® Processor Scalable Family**

Full Featured with Maximum Flexibility for Expansion

Fig. 1. Compatible 1U Intel® Server Chassis in 4 and 8 drive configurations

Compute Performance, Large Memory Capacity and High Efficiency

Intel® Server Board S2600WF product family delivers power and performance at peak efficiency in a 1U and 2U rack mount server form factor that features the energy- efficient dual Intel® Xeon® processor Scalable family. High memory capacity, networking, storage and I/O flexibility combine with innovative design to provide an exceptional and reliable server for business IT, appliance, data center, cloud and high performance computing applications.

Powerful Compute Combined with Flexible I/O, Storage and Networking Capacity

- Dual CPU sockets with support for the Intel® Xeon processor Scalable family
- Up to 24 DDR4 DIMMs
- Three riser card slots with support for up to eight PCIe* 3.0 add-in cards for high configuration flexibility
- Four on-board PCIe* OCuLink* connectors for direct attach NVMe* 2.5" SSD support
- Networking flexibility via 10G SFP+ and 10GBase-T OCP mezzanine modules
- Available in 1U and 2U systems with support for up to 24 NVMe* drives in a 2U chassis
- Support for the full line of Intel® RAID Modules

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

The S2600WF 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 S2600WF 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
- **NVMe* Enablement** alleviates the I/O bottleneck with high performance and capacity
- **Intel® Omni-Path Architecture** integration delivering 100Gb/s 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

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

Accelerating Time to Market with Innovative Data Center Solutions

The S2600WF 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 S2600WF 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.

Verify Authenticity with Intel® Transparent Supply Chain

To address customer security concerns and guard against counterfeiting and malware, the S2600WF family features the Intel® Transparent Supply Chain which enables the ability to
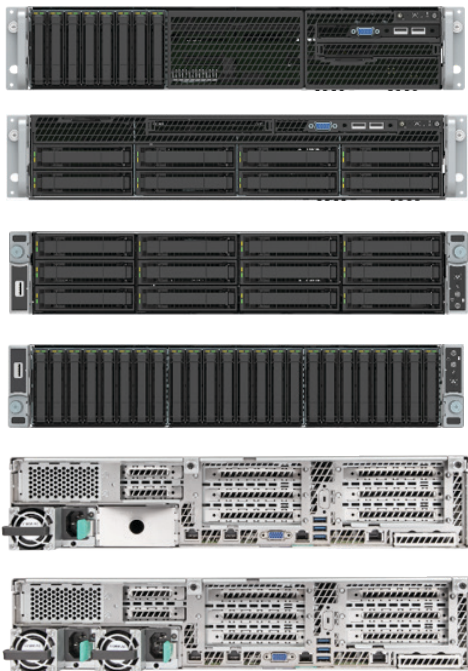

Fig.2. Compatible 2U Intel® Server Chassis in 8, 12, 16 and 24 drive configurations.

verify the authenticity of board components and firmware. Features include:

- Digitally signed statement of conformance
- Platform Certificates provided with a secured Firmware 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 three-year standard warranties and robust technical and incident resolution support to ensure customer satisfaction.

Full-Featured and Versatile with Power and Performance at Peak Efficiency

Intel® Server Board S2600WF is available in three feature-optimized family SKUs for maximum flexibility in configuration:

- S2600WFT – Dual 10GbE integrated LAN ports
- S2600WFQ† – Integrated QAT support, no integrated LAN Ports
- S2600WF0 – No integrated LAN ports, no integrated QAT support

Common use cases:

- HPC service node and burst buffer node
- HCI for scale out using network for agility and flexibility
- Databases requiring optimal compute to storage ratio
- Storage for NVMe* hot and warm tier data
- Cloud Infrastructure at scale

HPC Service Node Workloads:

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

Storage Workloads:

- Scale-Up high performance storage
- Scale-out storage for HCI
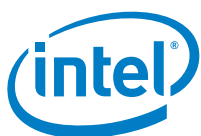
Cloud Workloads:

- Virtualization and multi-tenancy
- Private and hybrid cloud

INTEL® SERVER BOARD S2600WF PRODUCT FAMILY SPECIFICATIONS

SERVER BOARD SPECIFICATION	DETAILS
Board SKUs	S2600WF0, S2600WFT, S2600WFQ†
Board Dimensions	16.7" W x 17" L
Intel Processor	Intel® Xeon® processor Scalable family (Platinum, Gold, Silver, and Bronze)
Processor Socket Type	Two Socket-P LGA3647
Maximum Processor TDP	205W
Intel Chipset	Intel® C624 Chipset – S2600WFT & S2600WF0
	Intel® C628 Chipset – S2600WFQ†
Max DIMM slots	24 DIMMs Total - 6 channels per processor, 2 DIMMs per channel
Memory Type	DDR4 RDIMMs or LRDIMMs
Memory Capacity	Up to 1.5TB for Gold/Platinum CPUs. 768GB for Silver/Bronze CPUs
Memory Speed	2667 MT/s^2 @ 1 DPC and 2 DPC (DPC = DIMMs per channel)
Memory Voltage	1.2V, DDR4 Standard I/O voltage
Networking	Dual 10GBase-T ports- S2600WFT
	OCP Mezzanine Modules (10GBase-T, SFP+ and1GBase-T options): S2600WF0 and S2600WFQ†
Intel® Quick Assist Technology	Supported on S2600WFQ†
TPM Support	1 connector for optional Intel® TPM 2.0 Module
Board Weight	1.7kg
Packaging Dimensions	561 x 489 x 108 mm
Packaging Weight	3.3 kg
Warranty	3-year limited warranty

INPUT/OUTPUT	DETAILS
USB	Three external USB 3.0 ports One internal Type-A USB 2.0 port One internal 20-pin connector for optional 2x USB 3.0 port Front Panel support One Internal 10-pin connector for optional 2x USB 2.0 port Front Panel support
Serial	One External RJ45 Serial Port A connector One internal DH-10 Serial-B port header for optional rear serial port support
Video	One DB-15 External connector One 14-Pin Internal connector for optional Front Panel Video support
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 – (S2600WFT and S2600WF0 only) Two 80mm M.2 connectors – (x2 and x4 PCIe* & SATA) PCIe* OCuLink Connectors for direct attach NVMe* 2.5" SSDs • 4 connectors – S2600WFT and S2600WF0 • 2 connectors – S2600WFQ†
Network	Two Integrated 10GbE Ports – S2600WFT Only

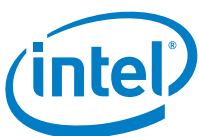| EXPANSION OPTIONS	DETAILS
PCIe Add-in Card Support	Three Riser card slots supporting up to 8 PCIe* 3.0 add-in cards
OCP Module support	Support for one of several available PCIe* x2 OCP KR based mezzanine module options - 1GbE Cu, 10GbE Cu/SFP+
SAS RAID Support	Support for one of several available 12 GB/s Intel® Integrated RAID Module options

SERVER MANAGEMENT & SECURITY	DETAILS
Embedded Server Management Features	Integrated Baseboard Management Controller, IPMI 2.0 compliant Dedicated RJ45 1GbE server management port Includes Standard Server Management Features – See product TPS 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

1U INTEL® SERVER BOARD SYSTEM R1000WF PRODUCT FAMILY SPECIFICATIONS

SPECIFICATIONS	DETAILS
Chassis Form Factor	1U
1U Rack Dimensions	17.25" width x 28" length x 1.72" height
1U Packaging Dimensions	22.7" width x 38.7" length x 10.2" height
Server Board	Intel® Server Board S2600WF Product Family
Max. Processor TDP	165W
Power Supply Support	Dual Power Supply Module Bays Supported Power Configurations : 1+0, 1+1 Redundant, and 2+0 Combined (non-redundant) Hot Swap capable in Redundant 1+1 power configuration
1U Power Supply Options	1100W AC 80 PLUS Platinum (Standard), 750W DC 80 PLUS Gold (Available option)
System Fan Support	Six managed 40mm system fans Integrated fan included with each installed power supply module

EXPANSION OPTIONS	PCIe SOURCE	SLOT	DETAILS
Riser Card 1	CPU1	One PCIe* 3.0 Slot	x16 Electrical, x16 Mechanical
Riser Card 2[3]	CPU2	One PCIe* 3.0 Slot	x16 Electrical, x16 Mechanical
OCP Mezzanine Module	Chipset	One Mezzanine card	Support for one of several available PCIe* x2 OCP KR based mezzanine module options - 1GbE Cu, 10GbE Cu/SFP+
Intel® Integrated SAS RAID Module	CPU1	One Mezzanine card	x8 Electrical, proprietary connection

3 Requires dual processor configuration

STORAGE OPTIONS	DRIVE CONFIG.	DRIVE TYPE	DETAILS
Front Hot-swap Drive Bay Options	4 x 3.5"	SAS / SATA	6 Gbps SATA or 12Gbps SAS w/ SAS controller 3.5" Drive trays compatible with 2.5" SSDs
	8 x 2.5"	NVMe / SAS / SATA	Up to eight 6 Gbps SATA or 12 Gbps SAS w/ SAS controller Up to eight 2.5" PCIe* NVMe SSDs Drive population rules apply when mixing drive types. See product TPS
Internal M.2	2 x 80mm	PCIe / SATA	Two 80mm M.2 (x2 and x4 PCIe* & SATA)

INPUT/OUTPUT	DETAILS
USB	Three external USB 3.0 ports – (Rear Panel) Two external USB 3.0 ports – (Front Panel) One internal Type-A USB 2.0 port
Serial	One External RJ45 Serial Port A connector – (Rear Panel)
Video	One DB-15 External connector – (Rear Panel) One DB-15 External connector – (Front Panel)
Network	Two 10GbE Ports – (Rear panel) – Intel® Server Board S2600WFT Only
Management Port	One RJ45 Dedicated Management Port – (Rear Panel)

INTEL® SERVER SYSTEM R2000WF PRODUCT FAMILY SPECIFICATIONS

2U SPECIFICATIONS	DETAILS
Chassis Form Factor	2U
2U Rack Dimensions	17.25" width x 28"length x 3.44" height
2U Packaging Dimensions	22.7" width x 38.7" length x 10.2" height
Server Board	Intel® Server Board S2600WF Product Family
Max. Processor TDP	140W for all SKUs, 165W for select SKUs – See product TPS
Power Supply Support	Dual Power Supply Module Bays Supported Power Configurations : 1+0, 1+1 Redundant, and 2+0 Combined (non-redundant) Hot Swap capable in Redundant 1+1 power configuration
Power Supply Options	1300W AC 80 PLUS Titanium, 1100W AC 80 PLUS Platinum, 750W DC 80 PLUS Gold
System Fan Support	Six managed 60mm hot-swap capable system fans Integrated fan included with each installed power supply module

2U EXPANSION	PCIe* SOURCE	PCIe 3.0 RISER CARD OPTIONS	
Riser Slot 1:		**3-Slot Riser Card:**	**2-Slot Riser Card:**
	Top Slot – CPU 1	x8 Electrical, x16 Mechanical	x16 Electrical, x16 Mechanical
	Middle Slot – CPU 1	x8 Electrical, x16 Mechanical	N/A
	Bottom Slot – CPU 2	x8 Electrical, x8 Mechanical	x8 Electrical, x8 Mechanical
Riser Slot 2:		**3-Slot Riser Card:**	**2-Slot Riser Card:**
	Top Slot – CPU 2	x8 Electrical, x16 Mechanical	x16 Electrical, x16 Mechanical
	Middle Slot – CPU 2	x8 Electrical, x16 Mechanical	N/A
	Bottom Slot – CPU 2	x8 Electrical, x8 Mechanical	x8 Electrical, x8 Mechanical
Riser Slot 3: Low Profile		**Low profile riser:**	
	Top Slot – CPU 2	x4 Electrical, x8 Mechanical	
	Bottom Slot – CPU 2	x8 Electrical, x8 Mechanical	
OCP Mezzanine Module	Chipset	Onboard KR-based OCP Connector x2 or x4 Electrical depending on board	
Intel® Integrated SAS RAID Module	CPU 1	Onboard proprietary connector - x8 Electrical	

Note – The population of two or three riser cards requires dual processors populated

2U STORAGE OPTIONS	DRIVE CONFIG.	DRIVE TYPE	DETAILS
Front Hot-swap Drive Bays Options	8 x 3.5"	SAS / SATA	Up to eight 6 Gbps SATA or 12Gbps SAS w/ SAS controller 3.5" Drive trays compatible with 2.5" SSDs
	12 x 3.5"	NVMe / SAS / SATA	Up to twelve 6 Gbps SATA or 12Gbps SAS w/ SAS controller Up to two PCIe* NVMe 2.5" SSDs (Drive Bays 10 and 11only) 3.5" Drive trays compatible with 2.5" SSDs
	8 x 2.5"	NVMe / SAS / SATA	Up to eight 6Gbps SATA or 12Gbps SAS drives with SAS controller Up to eight PCIe NVMe 2.5" SSDs Drive population rules apply when mixing drive types.
	16 x 2.5"	NVMe / SAS / SATA	Up to sixteen 6Gbps SATA or 12Gbps SAS drives with SAS controller Up to sixteen PCIe NVMe 2.5" SSDs Drive population rules apply when mixing drive types.
	24 x 2.5"	NVMe / SAS / SATA	Up to twenty four 6Gbps SATA or 12Gbps SAS drives with SAS controller Up to twenty four PCIe NVMe 2.5" SSDs Drive population rules apply when mixing drive types.
Rear SSD, Hot-swap	2 x 2.5"	SATA SSD	2.5" Rear mount 6Gbps SATA Hot-swap bay accessory option
Internal SSD	2 x 2.5"	SATA	Two fixed mount 6Gbps SATA SSDs mounted on air
Internal M.2	2 x 80mm	SATA / PCIe	Two 80mm M.2 (x2 and x4 PCIe/SATA)

INPUT/OUTPUT	DETAILS
USB	Three external USB 3.0 ports – (Rear Panel) Two external USB 3.0 ports – (Front Panel) – R2308, R2208, and R2216 SKUs only One external USB 2.0 port – (Front Rack Handle) – R2312 and R2224 SKUs only One internal Type-A USB 2.0 port
Serial	One external RJ45 Serial Port A connector – (Rear Panel) One external Serial B port connector – (Rear Panel) – Accessory option
Video	One DB-15 External connector – (Rear Panel) One DB-15 External connector – (Front Panel) – R2308, R2208, and R2216 SKUs only
Network	Two 10GbE Ports – (Rear panel) – Intel® Server Board S2600WFT Only
Management Port	One RJ45 Dedicated Management Port – (Rear Panel)

SERVER BOARD AND 1U/2U SYSTEM ORDER CODES

INTEL PRODUCT CODE	TYPE	DESCRIPTION
S2600WFT	Server Board Only	Server board supports two Intel® Xeon® processor Scalable family up to 205W TDP each, 24 DIMMs, two 10Gb Ethernet ports
S2600WF0	Server Board Only	Server board supports two Intel Xeon processor Scalable family up to 205W TDP each, 24 DIMMs, no LAN on board
S2600WFQ†	Server Board Only	Server board supports two Intel Xeon processor Scalable family up to 205W TDP each, 24 DIMMs, no LAN on board, QuickAssist Technology (QAT).
R1304WFXXX	1U Chassis Only	1U chassis with support for four 3.5" drives, no Server Board, no PSU, includes riser
R2000WFXXX	2U Chassis Only	2U chassis, no drive bays, no server board, no PSU, no risers, no drives
R1208WFTYS	1U System	System includes: Intel® Server Board S2600WFT, Dual 10GbE ports, Single 1100W PSU Support for 8x 2.5" drives, 24 DDR4 DIMMs
R1304WF0YS	1U System	System includes: Intel Server Board S2600WF0, No LOM, Single 1100W PSU. Support for 4x 3.5" drives, 24 DDR4 DIMMs
R1304WFTYS	1U System	System includes: Intel Server Board S2600WFT, Dual 10GbE ports, Single 1100W PSU Support for 4x 3.5" drives, 24 DDR4 DIMMs
R2208WFTZS	2U System	System includes: Intel Server Board S2600WFT, Dual 10GbE ports, Single 1300W PSU Support for 8x 2.5" drives, 24 DDR4 DIMMs
R2208WF0ZS	2U System	System includes: Intel Server Board S2600WF0, No LOM, Single 1300W PSU Support for 8x 2.5" drives, 24 DDR4 DIMMs
R2208WFQZS†	2U System	System includes: Intel Server Board S2600WFQ, No LOM, Single 1300W PSU, Support for 8x 2.5" drives, 24 DDR4 DIMMs, QuickAssist Technology (QAT)
R2224WFTZS	2U System	System includes: Intel Server Board S2600WFT, Dual 10GbE ports, Single 1300W PSU Support for 24x 2.5" drives, 24 DDR4 DIMMs
R2224WFQZS†	2U System	System includes: Intel Server Board S2600WFQ, No LOM, Single 1300W PSU, Support for 24x 2.5" drives, 24 DDR4 DIMMs, QuickAssist Technology (QAT)
R2308WFTZS	2U System	System includes: Intel Server Board S2600WFT, Dual 10GbE ports, Single 1300W PSU Support for 8x 3.5" drives, 24 DDR4 DIMMs

R2312WFTZS	2U System	System includes: Intel Server Board S2600WFT, Dual 10GbE ports, Single 1300W PSU Support for 12x 3.5" drives, 24 DDR4 DIMMs
R2312WF0NP	2U System	System includes: Intel Server Board S2600WF0, No LOM, No PSU, Support for 12x 3.5" drives, 24 DDR4 DIMMs
R2312WFQZS†	2U System	System includes: Intel Server Board S2600WFQ, Single 1300W PSU, Support for 12x 3.5" drives, 24 DDR4 DIMMs, QuickAssist Technology (QAT)

Note: 1U/2U System SKUs do not include: Processors, Memory, Storage, Rack Mount Kits, and other optional peripherals and accessories. See the Product Family Configuration Guide for all available accessory kit and spare part order codes.

† Launching Q4 '17

INTEL® RAID MODULE ORDER CODES

12GBPS SAS ORDER CODE	DESCRIPTION
RMS3HC080	12 Gb/s SAS/SATA Entry-Level RAID Mezzanine Module with 8 Internal Ports
RMSP3HD080E	Tri-Mode SAS/SATA/PCIe Entry-Level RAID Mezzanine Module with 8 Internal Ports
RMS3JC080	12 Gb/s SAS/SATA Entry-Level RAID Mezzanine Module with 8 Internal Ports
RMS3AC160	12 Gb/s SAS/SATA Full-Featured RAID Mezzanine Module with 16 Internal Ports
RMS3CC040	12 Gb/s SAS/SATA Full-Featured RAID Mezzanine Module with 4 Internal Ports
RMS3CC080	12 Gb/s SAS/SATA Full-Featured RAID Mezzanine Module with 8 Internal Ports
RMSP3AD160F	Tri-Mode SAS/SATA/PCIe Full-Featured RAID Mezzanine Module with 16 Internal Ports
RMSP3CD080F	Tri-Mode SAS/SATA/PCIe Full-Featured RAID Mezzanine Module with 8 Internal Ports
RMS3VC160	12 Gb/s SAS/SATA JBOD Mezzanine Module with 16 Internal Ports
RMSP3JD160J	Tri-Mode SAS/SATA/PCIe JBOD Mezzanine Module with 16 Internal Ports

For additional RAID modules and add-in-cards, visit **intel.com/RAID**

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

For product specifications visit: **ark.intel.com**