



Dell S5000 Series servers

Performance and scale for large SAP HANA® TDI environments

Dell S5000 Series servers offer exceptional real-time performance, unique modular architecture, and the security and reliability needed for the largest, most demanding SAP HANA landscapes using TDI deployment model.

Power the largest, most demanding SAP HANA landscapes

Dell S5000 Series servers, powered by the 2nd Generation Intel® Xeon® Scalable (Cascade Lake) processors, deliver modern performance and security that smoothly scales-up with your changing business needs. The up to 8-socket Dell S5408 8U rack server supports a maximum of 224 cores and 12TB of memory and the up to 16-socket Dell S5416 21U rack server supports a maximum of 448 cores and 24TB of memory. Dell S5000 Series servers are available with a choice of processors for the best fit in terms of frequency, number of cores or power consumption. Combined with the expertise and value-add services from Dell Technologies, the Dell S5000 is the optimal platform for the in-memory demands of SAP HANA® workloads in Tailored Data-center Integration (TDI) environments.

Scale-up with 2-socket granularity for maximum flexibility

When capacity needs to be increased, there is no need to invest in a new blade chassis. Based on a very flexible architecture, Dell S5000 Series servers are built around a 2U 2-socket compute module, with up to 56 cores and 3TB memory, that allow the assembly of 3 to 8 modules for a total of 16-sockets thanks to two types of interconnects. An Intel® “glueless” interconnect for 3 or 4 modules allowing a glueless topology up to 8-sockets with up to 3 Ultra Path Interconnect (UPI) links per processor. For larger configurations, an eXternal Node Controller (XNC) technology for scalability from 8- to 16-sockets. A connecting box, a column that assembles modules within a single server, on the rear side, easily with no apparent cabling, makes reconfiguration and scaling simple. And each compute module can be extracted from the server for easy maintenance.

Meet demanding service level agreements


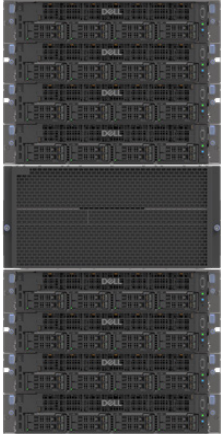
In demanding SAP HANA TDI environments, the Dell S5000 Series offers unique level of reliability and availability, with several thousand control points per rack and early warning features that anticipate potential failures and simplify preventive maintenance. In addition to the RAS features such as critical component redundancy, hot-pluggable critical components, and existing Intel® RAS features, including the Run Sure® technology, a set of methods to improve RAM and platform reliability, several innovative memory protection features are included. These RAS features make the Dell S5000 Series an ideal scale-up platform for in-memory computing.

Dell S5000 Series servers

The market-proven Dell S5408 and S5416 servers offer streamlined productivity, powerful compute, and high-speed memory and capacity for the most demanding SAP HANA landscapes.

- SAP-certified up to 24TB for SAP HANA TDI
- Scale from 6- to 16-sockets, with 2-socket upgrade modularity
- Dell ProSupport and ProSupport Plus IT support and services

Dell S5000 Series server technical specifications

Feature	Dell S5408	Dell S5416
Product		
Processor	6 or 8 Intel® Xeon® Scalable processors, Gen 2 (Cascade Lake), 8276, 8276L and 8280L	8, 10, 12, 14 or 16 Intel® Xeon® Scalable processors, Gen 2 (Cascade Lake), 8276 and 8280L
Maximum number of cores / threads	224 cores / 448 threads	448 cores / 896 threads
Maximum number of compute modules	3-4 modules with 2 x sockets	4-8 modules with 2 x sockets
Hardware partitioning	Yes	Yes
Memory	<ul style="list-style-type: none"> • 96 maximum memory slots • 64GB, 128GB with choice of 128GB with Intel® Optane™ persistent memory 256GB • up to 12TB RAM or 18TB RAM with Intel® Optane™ persistent memory 	<ul style="list-style-type: none"> • 192 maximum memory slots • 64GB, 128GB • up to 24TB RAM
Power Supplies	1 + 1 per module; 2 redundant PSU per compute module 2000 watts auto sensing 220V 60/50HX, label 80+ Titanium and Platinum, 96% efficient	
Fans	Up to 56 hot-plug, N+1 redundant	Up to 112 hot-plug, N+1 redundant
Dimensions (LxWxD) in mm (2U 2-socket compute module)	<ul style="list-style-type: none"> • Height – 352 mm (8U) • Width - 446 mm (19") • Depth - 850 mm 	<ul style="list-style-type: none"> • Height – 352mm (8U) • Width – 446 mm (19") • Depth - 850 mm
Weight (maximum)	Up to 160kg	Up to 415kg
Form factor	19" 8U rack server	19" 21U rack server
Embedded Management	Server Hardware Console (SHC) for graphical access to main BMC features or LDAP user authentication. Redfish support available.	
Type of interconnect	Glueless interconnect for 4 modules, up to 8 sockets with up to 3 Ultra Path Interconnect (UPI) links per processor	External Node Controller (XNC) to ultra-scalability from 8 to 16 processors
Security	Secure boot, 2-level password	
RAS Features	Advanced Error Detection and Correction (AEDC), Viral Mode of error containment, PCIe "Stop and Scream", Virtual (soft) Partitioning, PCI Express ECRC, PCIe Corrupt Data Containment (Data Poisoning), PCIe Link CRC Error Check and Retry, PCIe Link Retraining and Recovery, PCI Express Live Error Recovery, DDR4 Wr Data CRC check/retry, DDR4 Command/ Address Parity Check and Retry, Intel® UPI Link Level Retry, Intel® UPI Protocol Protection via 16 bit Rolling CRC, Intel® UPI Dynamic Link width reduction, Core disable for Fault Resilient Boot, Power up, Post Package Repair, Failed DIMM Isolation, PCIe Card Hot Plug (Add/Remove/Swap), PIROM for System Information Storage	
Embedded NIC	16x 10Gb EoC ports	32x 10Gb EoC ports
Ports	Up to 5 Gen3 PCIe x 8 hot pluggable slots (or 2 x 16 + 1 x 8) per compute module	
PCIe	Up to 28 PCIe Gen3 slots	Up to 56 PCIe Gen3 slots
Operating system	Red Hat® Enterprise Linux® (RHEL) for SAP Solutions, SUSE® Linux Enterprise Server (SLES) for SAP Applications	

Find the configuration that fits your need

Dell Technologies offers a range of predefined S5408 and S5416 server configurations that are optimized for SAP HANA TDI, for quicker deployment and faster time to value. Additionally, there are predefined configuration upgrade offers to add modular 2-socket sleds, and to upgrade to an additional chassis for 16-socket capacity. For these and all Dell Technologies solutions that are SAP-certified for SAP HANA TDI see [Certified and Supported SAP HANA Hardware](#) and [SAP-Certified Dell Solutions](#). See [Dell Technologies InfoHub](#) for design/validation guides, solution guides and other technical guides that describe solutions for SAP HANA TDI. If you have questions about specific configurations and/or upgrades, consult with your Dell Technologies sales representative.

Dell S5000 Series Predefined / Certified Configurations for SAP HANA TDI

Model	Num CPU	Intel® Xeon® processor	Memory size (DRAM or DRAM:DCPMM)	Total Memory	Weight of rack included where applicable	Use Case
S5408	6-Socket	8276	64GB	4.5TB	115 KG	S4H & BW4H
		8280L	128GB	9TB	115 KG	SoH/S4H
		8276L	128GB:256GB (DRAM:DCPMM)	13.5TB	115 KG	SoH/S4H
		8280L	128GB:256GB (DRAM:DCPMM)	13.5TB	115 KG	SoH/S4H
	8-Socket	8276	64GB	6TB	160 KG	S4H & BW4H
		8280L	128GB	12TB	160 KG	SoH/S4H
		8276L	128GB:256GB (DRAM:DCPMM)	18TB	160 KG	SoH/S4H
		8280L	128GB:256GB (DRAM:DCPMM)	18TB	160 KG	SoH/S4H
S5416	10-Socket	8280L	128GB	15TB	500 KG	SoH/S4H Euro Rack PDU
		8280L	128GB	15TB	500 KG	SoH/S4H US Rack PDU
		8276	64GB	7.5TB	500 KG	BW/BW4H Euro Rack PDU
		8276	64GB	7.5TB	500 KG	BW/BW4H US Rack PDU
	12-Socket	8280L	128GB	18TB	545 KG	SoH/S4H Euro Rack PDU
		8280L	128GB	18TB	545 KG	SoH/S4H US Rack PDU
		8276	64GB	9TB	545 KG	BW/BW4H Euro Rack PDU
		8276	64GB	9TB	545 KG	BW/BW4H US Rack PDU
	14-Socket	8280L	128GB	21TB	595 KG	SoH/S4H Euro Rack PDU
		8280L	128GB	21TB	595 KG	SoH/S4H US Rack PDU
		8276	64GB	10.5GB	595 KG	BW/BW4H Euro Rack PDU
		8276	64GB	10.5GB	595 KG	BW/BW4H US Rack PDU
	16-Socket	8280L	128GB	24TB	640 KG	SoH/S4H Euro Rack PDU
		8280L	128GB	24TB	640 KG	SoH/S4H US Rack PDU
		8276	64GB	12TB	640 KG	BW/BW4H Euro Rack PDU
		8276	64GB	12TB	640 KG	BW/BW4H US Rack PDU

Notes:

BW is SAP Business Warehouse suite

BWoH is SAP Business Warehouse suite that operates on the SAP HANA database

SoH is the traditional SAP Suite on HANA solution that operates on the SAP HANA database

S4H is SAP S/4HANA that operates on the SAP HANA database

Recommended support and services

Dell ProSupport Plus for critical systems or Dell ProSupport for premium hardware and software support for your Dell S5000 Series solution. Consulting and deployment offerings are also available. Contact your Dell representative today for more information. Availability and terms of Dell Services vary by region. For more information, visit Dell.com/Services.

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