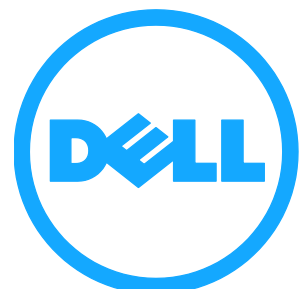


DELL PRECISION™ 7920 RACK



Technical
Guidebook



Dell Precision 7920 Rack

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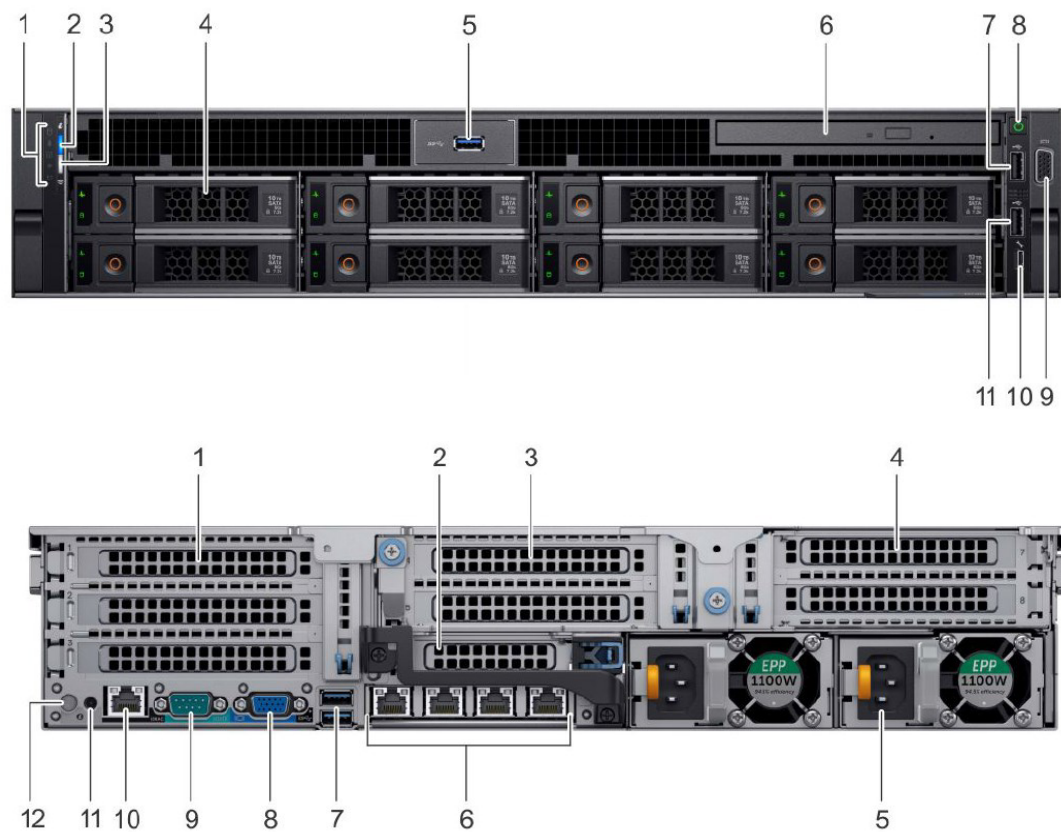
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Aug. 2023 -removed reference to USB 3.2 Gen 2 Type C Optional 2 port PCIe card—Subject to change without notice,

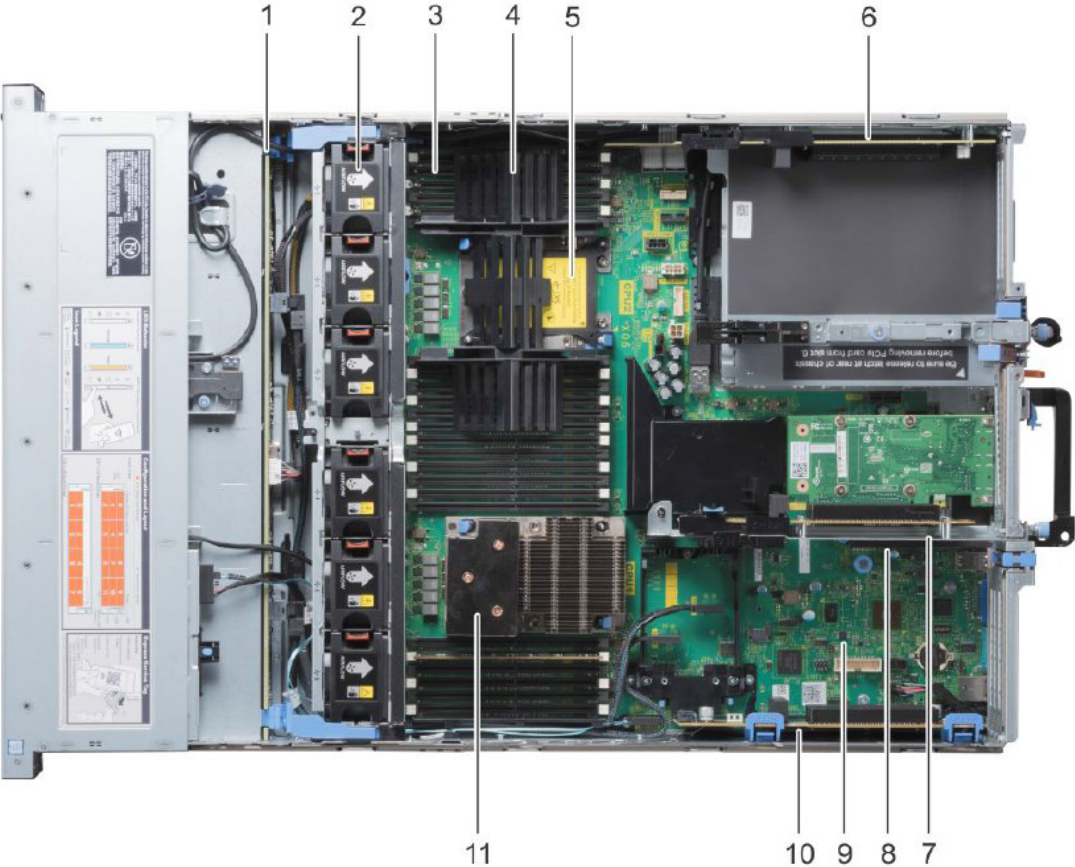
7920 RACK EXTERNAL CHASSIS VIEWS



FRONT VIEW			
1	System Status Indicator	7	USB 2.0 connector
2	System health and system ID	8	Power button/Power light
3	iDRAC Quick Sync 2 wireless indicator (Optional)	9	VGA connector
4	Hard drive (x8)	10	USB management port/iDRAC Direct
5	USB 3.0 connector	11	USB 2.0 connector
6	Slimline Optical drive (optional)		

BACK VIEW			
1	PCIe expansion card slots	7	USB 3.0 connectors (x2)
2	PCIe expansion card slots	8	VGA connector
3	PCIe expansion card slots	9	Serial connector
4	PCIe expansion card slots	10	iDRAC9 Enterprise Network connector
5	Power supply (x2)	11	System identification connector
6	RJ45 Network connectors (x4)	12	System identification button

7920 RACK - INSIDE THE SYSTEM



Number	Name	Number	Name
1	Hard drive backplane	7	Expansion card riser 2A
2	Cooling fan (6) in the cooling fan assembly	8	VFlash connector (VFlash not offered)
3	DIMM sockets	9	System board
4	CPU DIMM blank	10	Expansion card riser 1C
5	CPU 2	11	CPU 1
6	Expansion card riser 3A		Precision-7920 Rack Owner's Manual PDF

SYSTEM CONFIGURATION OPTIONS

NOTE: Offerings may vary by country. .

OPERATING SYSTEMS

Microsoft® Windows 10® operating system	Factory Installed Microsoft® Windows® 10 Pro for Workstations (64 bit)
Microsoft® Windows 7® operating system	Microsoft® Windows 7® Professional (64 bit), Available to customers with Windows Volume License Agreements as a Windows 10 Pro for Workstations downgrade option (while offered by Microsoft). Windows 7 Pro is not supported on systems with Xeon Cascade Lake SP CPUs
Red Hat® Enterprise Linux® 7.5/8.0	Factory installed RHEL workstation 7.5 and 8.0
Ubuntu 16.04/18.04	18.04 Factory Installed Limited options supported

CHIPSET

Chipset	Intel C621 Chipset (C620 Series)
Non-volatile memory on chipset	
BIOS Configuration SPI (Serial Peripheral Interface)	256Mbit (32MB)
TPM 1.2 Security Device (Trusted Platform Module) ¹ TPM 2.0 ships and is supported with Windows 10 only Note: All systems are field upgradable to TPM 2.0 (with firmware & BIOS updates plus Windows 10 Installation http://www.dell.com/support/article/us/en/04/SLN300914	18KB
Non-TPM	Available in select countries
NIC EEPROM	LOM configuration contained within SPI_FLASH – no dedicated LOM EEPROM

7920 RACK PROCESSOR OPTIONS

INTEL XEON CASCADE LAKE 2ND GEN SCALABLE PROCESSOR FAMILY - SP

Note: Global Standard Products (GSP) are a subset of Dell's relationship products that are managed for availability and synchronized transitions on a worldwide basis. They ensure the same platform is available for purchase globally. This allows customers to reduce the number of configurations managed on a worldwide basis, thereby reducing their costs. They also enable companies to implement global IT standards by locking in specific product configurations worldwide. The following GSP processors identified below will be made available to Dell customers.

Note: Processor numbers are not a measure of performance. Processor availability subject to change and may vary by region/country.

- 2993MHz DDR4 ECC RDIMM memory will scale down to 2666MHz with Xeon Cascade Lake Gold 52XX Series and Silver 42XX Series. Maximum 2933 MHz memory configuration is 768GB with dual CPUs. **2933MHz memory scales down to 2666MHz with 2 DIMMs per channel.** Future BIOS update will enable 2 DIMMs per channel 2933MHz configs to run at 2933MHz with supported CPUs (Aug.-Sept.)
- 2666MHz DDR4 ECC RDIMM/LRDIMM memory will scale down to 2400MHz with Xeon Silver 42XX Series and down to 2133MHz with Xeon Bronze 32XX Series Processors.

Precision 7820/7920 Towers and 7920 Rack

Intel Xeon® Cascade Lake Processor Scalable Family - SP

Gold

Xeon Gold 52XX
•2 UPI links @ 10.4GT/s
•DDR4-2666 RDIMM ECC
•Base GHz- Max Turbo
•Hyper-Threading/ Turbo Boost

5222* ² 4C 3.8-3.9GHz 105W
5220* 18C 2.2-3.9GHz 125W
5218* 16C 2.3-3.9GHz 125W
5217* (M) ¹ 8C 3.0-3.7GHz 115W
5215 (M) ¹ 10C 2.5-3.4GHz 85W

Silver

Xeon Silver
•2 UPI links @ 9.6 GT/s
•DDR4-2400 RDIMM ECC
•Base GHz- Max Turbo
•Hyper-Threading/ Turbo Boost

4216* 16C 2.1-3.2GHz 100W
4215* 8C 2.5-3.5GHz 85W
4214* 12C 2.2-3.2GHz 85W
4210* 10C 2.2-3.2GHz 85W
4208* 8C 2.1-3.2GHz 85W

Bronze

•Xeon Bronze
•2 UPI Links @ 9.6 GT/s
•DDR4-2133 RDIMM ECC
•No Turbo/No HT

3204* 6C 1.9GHz 85W

Platinum

Xeon 82XX Platinum
•3 UPI links @10.4 GT/s
•DDR4-2993 RDIMM ECC
•Base GHz- Max Turbo
•Hyper-Threading/Turbo Boost

8280 (M) ¹ 28C 2.7-4.0GHz 205W
8276 (M) ¹ 28C 2.2-4.0GHz 165W
8270 26C 2.7-4.0GHz 205W
8268* 24C 2.9-3.9GHz 205W
8260* (M) ¹ 24C 2.4-3.9GHz 165W
8256 4C 3.8-3.9GHz 105W
8253 16C 2.2-3.0GHz 125W

Gold

Xeon Gold 62XX
•3 UPI links @10.4 GT/s UPI
•DDR4-2933 RDIMM ECC
•Base GHz- Max Turbo
•Hyper-Threading/Turbo Boost

6254 18C 3.1-4.0GHz 200W
6252* 24C 2.1-3.7GHz 150W
6248* 20C 2.5-3.9GHz 150W
6244* 8C 3.6-4.4GHz 150W
6242* 16C 2.8-3.9GHz 150W
6240* (M) ¹ 18C 2.6-3.9GHz 150W
6238 (M) ¹ 22C 2.1-2.8GHz 140W
6234 8C 3.3-4.0GHz 130W
6230* 20C 2.1-3.9GHz 125W
6226 12C 2.7-3.7GHz 125W

Notes:

¹ Standard CPUs support up to 1TB RDIMM memory per CPU. Optional "M" CPU & "L" SKUs support up to 1.5TB of RDIMM memory per CPU on 7920 Tower and Rack, (N/A on 7820)

² 2933MHz & 2666MHz memory clocks down to lower speeds depending upon the CPU.

³ 2933MHz memory clocks down to 2666MHz with 2 DIMMs per channel – the Intel spec.

⁴ Future BIOS update will enable 2 DIMMs per channel 2933MHz configs to run at 2933MHz with supported CPUs (Aug.-Sept.)

June 2020

² 5222 supports memory up to 2933MHz

* GSP CPUs – refer to base SKUs only, not M or L variants

7920 RACK PROCESSOR OPTIONS

INTEL XEON CASCADE LAKE 2ND GEN SCALABLE PROCESSOR FAMILY - SP REFRESH

Note: Global Standard Products (GSP) are a subset of Dell’s relationship products that are managed for availability and synchronized transitions on a worldwide basis. They ensure the same platform is available for purchase globally. This allows customers to reduce the number of configurations managed on a worldwide basis, thereby reducing their costs. They also enable companies to implement global IT standards by locking in specific product configurations worldwide. The following GSP processors identified below will be made available to Dell customers.

Note: Processor numbers are not a measure of performance. Processor availability subject to change and may vary by region/ country.

- 2993MHz DDR4 ECC RDIMM memory will scale down to 2666MHz with Xeon Cascade Lake Gold 52XX Series and Silver 42XX Series. Maximum 2933 MHz memory configuration is 768GB with dual CPUs. **2933MHz memory scales down to 2666MHz with 2 DIMMs per channel.** Future BIOS update will enable 2 DIMMs per channel 2933MHz configs to run at 2933MHz with supported CPUs (Aug.-Sept.)
- 2666MHz DDR4 ECC RDIMM/LRDIMM memory will scale down to 2400MHz with Xeon Silver 42XX Series and down to 2133MHz with Xeon Bronze 32XX Series Processors.

Precision 7820/7920 Towers and 7920 Rack
Intel Xeon® Cascade Lake Processor Scalable Family – SP Refresh¹

Gold

Xeon Gold 52XX
•2 UPI links @ 10.4GT/s
•DDR4-2666 RDIMM ECC
•Base GHz- Max Turbo
•Hyper-Threading/ Turbo Boost

5220R* 24C 2.2-4.0GHz 150W
5218R* 20C 2.1-4.0GHz 125W

Silver

Xeon Silver
•2 UPI links @ 9.6 GT/s
•DDR4-2400 RDIMM ECC
•Base GHz- Max Turbo
•Hyper-Threading/ Turbo Boost

4215R* 8C 3.2-4.0GHz 130W
4214R* 12C 2.4-3.5GHz 100W
4210R* 10C 2.4-3.2GHz 100W

Bronze

Xeon Bronze
•2 UPI Links @ 9.6 GT/s
•DDR4-2133 RDIMM ECC
•No Turbo/No HT

3206R* 8C 1.9GHz 85W

Gold

Xeon Gold 62XX
•3 UPI links @10.4 GT/s UPI
•DDR4-2933 RDIMM ECC
•Base GHz- Max Turbo
•Hyper-Threading/Turbo Boost

6258R* 28C 2.7-4.0GHz 205W
6256*1 12C 3.6-4.5GHz 205W

6250*1 8C 3.9-4.4GHz 185W
6248R* 24C 3.0-4.0GHz 205W
6246R* 16C 3.4-4.1GHz 205W

6242R* 20C 3.1-4.1GHz 205W
6240R* 24C 2.4-4.0GHz 165W
6238R 28C 2.2-4.0GHz 165W

6230R* 26C 2.1-4.0GHz 150W
6226R* 16C 2.9-3.9GHz 150W

R SKUs will eventually replace corresponding Cascade Lake SKUs.

*GSP CPUs

Notes:
1. Available on 7920 and 7820 Towers only
2. 2933MHz & 2666 MHz memory clocks down to lower speeds depending upon the CPU.
3. 2933MHz memory clocks down to 2666MHz with 2 DIMMs per channel – the Intel spec.
4. Future BIOS update will enable 2 DIMMs per channel 2933MHz configs to run at 2933MHz with supported CPUs (Aug.-Sept.)

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7920 RACK PROCESSOR OPTIONS

7920 RACK PROCESSORS—INTEL XEON SKYLAKE SCALABLE PROCESSOR FAMILY - SP

Note: Global Standard Products (GSP) are a subset of Dell's relationship products that are managed for availability and synchronized transitions on a worldwide basis. They ensure the same platform is available for purchase globally. This allows customers to reduce the number of configurations managed on a worldwide basis, thereby reducing their costs. They also enable companies to implement global IT standards by locking in specific product configurations worldwide. The following GSP processors identified below will be made available to Dell customers.

Note: Processor numbers are not a measure of performance. Processor availability subject to change and may vary by region/country.

- 2666MHz DDR4 ECC RDIMM/LRDIMM memory will scale down to 2400MHz with Xeon Gold 51XX Series (excluding 5122) and Xeon Silver 41XX Series and down to 2133MHz with Xeon Bronze 31XX Series Processors.
- 2933MHz DDR4 ECC RDIMM memory is not supported with Xeon Skylake SP processors

Precision 7820/7920 Towers and 7920 Rack

Intel Xeon® Skylake Processor Scalable Family - SP

**End of Life excluding
OEM XL systems**

	Processor Options	Processor Options
Gold	Xeon Gold 51XX • 2 UPI links @ 10.4GT/s • DDR4-2400 RDIMM ECC • Base GHz- Max Turbo • Hyper-Threading/ Turbo Boost	Xeon Gold 61XX • 3 UPI links @10.4 GT/s UPI • DDR4-2666 RDIMM ECC • Base GHz- Max Turbo • Hyper-Threading/ Turbo Boost
	25122* 5120* 35118*	6154 18C 3.0-3.7GHz 200W 6152 22C 2.1-3.7GHz 140W 36148* 20C 2.4-3.7GHz 150W 6146 12C 3.2-4.2GHz 165W 6144 8C 3.5-4.2GHz 165W 6140* (M) ¹ 18C 2.3-3.7GHz 125W 6138 20C 2.0-3.7GHz 125W 6136* 12C 3.0-3.7GHz 150W 6134* (M) ¹ 8C 3.2-3.7GHz 130W 6130* 16C 2.1-3.7GHz 125W 6128* 6C 3.4-3.7GHz 115W 36126 12C 2.6-3.7GHz 125W
Silver	Xeon Silver • 2 UPI links @ 9.6 GT/s • DDR4-2400 RDIMM ECC • Base GHz- Max Turbo • Hyper-Threading/ Turbo Boost	
	4116* 12C 2.1-3.0GHz 85W 4114* 10C 2.2-3.0GHz 85W 4112* 4C 2.6-3.0GHz 85W 4110* 8C 2.1-3.0GHz 85W	
Bronze	Xeon Bronze • 2 UPI Links @ 9.6 GT/s • DDR4-2133 RDIMM ECC • Base GHz- Max Turbo • No Turbo/No HT	
	3106* 8C 1.7GHz 85W 3104* 6C 1.7GHz 85W	

Notes:

¹ Standard CPUs support up to 768MB per CPU. Optional "M" SKU CPUs (N/A on 7820) support up to 1.5TB of memory per CPU,

² Xeon 5122 CPU supports memory at 2666MHz

³ N/A on 7820 Tower and 7920 Rack

* = GSP CPUs

MEMORY - 2666MHZ

Note: The Precision 7920 Rack workstation has a six channel memory bus architecture and two memory controllers per CPU. Dell recommends that where possible, all six memory channels be populated with DIMMS for maximum memory performance.

Note: With certain processors, 2666MHz DDR4 ECC RDIMM/LRDIMM memory scales down to 2400MHz or 2133MHz. See processor page for details.

Type:	DDR4 SDRAM RDIMM/LRDIMM ECC
Max Frequency	2666/2400/2133MHz
DIMM Slots	24 (12 per CPU)
DIMM Capacities	8GB, 16GB,32GB RDIMM, 64GB,128GB LRDIMM
Maximum System Memory	3.0TB with 2x "M" CPU SKUs installed)

FACTORY INSTALLED 2666MHZ MEMORY CONFIGURATIONS:

Note: Other configurations are possible via CFI or memory customer kits, but are not available as standard factory installed options.

7920 Rack Memory				CPU0												CPU1											
				iMC1						iMC0						iMC1						iMC0					
				Ch5		Ch4		Ch3		Ch0		Ch1		Ch2		Ch5		Ch4		Ch3		Ch0		Ch1		Ch2	
Config	Total (GB)	DPC	Frequency	0	1	0	1	0	1	1	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	1	0
S192B	192	1DPC	2666	32		32		32			32		32		32												
S256	256	2DPC	2666			32	32	32	32	32	32	32	32														
S384	384	2DPC	2666	32	32	32	32	32	32	32	32	32	32	32	32												
S384B	384	1DPC	2666	64		64		64			64		64		64												
S512	512	2DPC	2666			64	64	64	64	64	64	64	64														
S768	768	2DPC	2666	64	64	64	64	64	64	64	64	64	64	64	64												
S768B	768	1DPC	2666	128		128		128			128		128		128												
S1024	1024	2DPC	2666			128	128	128	128	128	128	128	128	128													
S1536	1536	2DPC	2666	128	128	128	128	128	128	128	128	128	128	128	128												
S64LR	64	1DPC	2666								64																
S128LR	128	1DPC	2666					64			64																
S384LR	384	1DPC	2666	64		64		64			64		64		64												
S512LR	512	2DPC	2666			64	64	64	64	64	64	64	64														
S768LR	768	2DPC	2666	64	64	64	64	64	64	64	64	64	64	64	64												
S128LRB	128	1DPC	2666								128																
S256LR	256	1DPC	2666					128			128																
S768LRB	768	1DPC	2666	128		128		128			128		128		128												
S1024LR	1024	2DPC	2666			128	128	128	128	128	128	128	128														
S1536LR	1536	2DPC	2666	128	128	128	128	128	128	128	128	128	128	128	128												

MEMORY - 2666MHZ

Note: The Precision 7920 Rack workstation has a six channel memory bus architecture and two memory controllers per CPU. Dell recommends that where possible, all six memory channels be populated with DIMMS for maximum memory performance.

Note: With certain processors, 2666MHz DDR4 ECC RDIMM/LRDIMM memory scales down to 2400MHz or 2133MHz. See processor page for details.

Type:	DDR4 SDRAM RDIMM/LRDIMM ECC
Max Frequency	2666/2400/2133MHz
DIMM Slots	24 (12 per CPU)
DIMM Capacities	8GB, 16GB,32GB RDIMM, 64GB,128GB LRDIMM
Maximum System Memory	3.0TB with 2x "M" CPU SKUs installed)

FACTORY INSTALLED 2666MHZ MEMORY CONFIGURATIONS:

Note: Other configurations are possible via CFI or memory customer kits, but are not available as standard factory installed options.

7920 Rack Memory				CPU0												CPU1											
				iMC1						iMC0						iMC1						iMC0					
				Ch5		Ch4		Ch3		Ch0		Ch1		Ch2		Ch5		Ch4		Ch3		Ch0		Ch1		Ch2	
Config	Total (GB)	DPC	Frequency	0	1	0	1	0	1	1	0	1	0	1	0	1	0	1	0	1	1	0	1	0	1	0	
D16	16	1DPC	2666								8														8		
D32	32	1DPC	2666						8		8							8							8		
D64	64	1DPC	2666				8		8		8		8					8		8					8		
D96	96	1DPC	2666	8			8		8		8		8		8	8		8		8				8	8	8	
D128	128	2DPC	2666				8	8	8	8	8	8	8	8				8	8	8	8	8	8	8	8	8	
D192	192	2DPC	2666	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
D192B	192	1DPC	2666	16			16		16		16		16		16	16		16		16		16		16		16	
D256	256	2DPC	2666				16	16	16	16	16	16	16	16				16	16	16	16	16	16	16	16	16	
D384	384	2DPC	2666	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
D384B	384	1DPC	2666	32			32		32		32		32		32	32		32		32		32		32		32	
D512	512	2DPC	2666				32	32	32	32	32	32	32	32				32	32	32	32	32	32	32	32	32	
D768	768	2DPC	2666	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	
D768B	768	1DPC	2666	64			64		64		64		64		64	64		64		64		64		64		64	
D1024	1024	2DPC	2666				64	64	64	64	64	64	64	64				64	64	64	64	64	64	64	64	64	
D1536	1536	2DPC	2666	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	
D1536B	1536	1DPC	2666	128			128		128		128		128		128	128		128		128		128		128		128	
D2048	2048	2DPC	2666				128	128	128	128	128	128	128	128				128	128	128	128	128	128	128	128	128	
D3072	3072	2DPC	2666	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	
D128LR	128	1DPC	2666								64														64		
D256LR	256	1DPC	2666						64		64									64				64			
D512LR	512	1DPC	2666				64		64		64		64					64		64			64		64		
D768LR	768	1DPC	2666	64			64		64		64		64		64	64		64		64		64		64		64	
D1024LR	1024	2DPC	2666				64	64	64	64	64	64	64	64				64	64	64	64	64	64	64	64	64	
D1536LR	1536	2DPC	2666	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	
D256LRB	256	1DPC	2666								128														128		
D512LRB	512	1DPC	2666						128		128									128				128			
D1024LRB	1024	1DPC	2666				128		128		128		128					128		128		128		128		128	
D1536LRB	1536	1DPC	2666	128			128		128		128		128		128	128		128		128		128		128		128	
D2048LR	1024	2DPC	2666				128	128	128	128	128	128	128					128	128	128	128	128	128	128			
D3072LR	3072	2DPC	2666	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	

MEMORY - 2933MHZ

Note: 2933MHz memory runs at 2933MHz speed in **single** DIMM per channel configs with Xeon Cascade Lake 82XX Platinum and 62XX Gold processors. With Xeon Cascade Lake Gold 52XX, Silver 42XX and Bronze 32XX processors, 2933MHz memory will clock down to 2666MHz, 2400MHz and 2133MHz speeds respectively. See processor page for details. 2933MHz memory is not supported with Xeon Skylake SP processors

Type:	DDR4 SDRAM RDIMM ECC
Max Frequency	2933MHz
DIMM Slots	24 (12 per CPU)
DIMM Capacities	8GB, 16GB, 32GB, 64GB
Maximum System Memory	768GB with 2 CPUs

FACTORY INSTALLED 2933MHZ MEMORY CONFIGURATIONS:

Note: Other configurations are possible via CFI or memory customer kits, but are not available as standard factory installed options.

7920 Rack Memory				CPU0												CPU1											
				iMC1						iMC0						iMC1						iMC0					
				Ch5		Ch4		Ch3		Ch0		Ch1		Ch2		Ch5		Ch4		Ch3		Ch0		Ch1		Ch2	
Config	Total (GB)	DPC	Frequency	0	1	0	1	0	1	1	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	1	0
S8N	8	1DPC	2933								8																
S16	16	1DPC	2933						8		8																
S32	32	1DPC	2933						8		8		8														
S48	48	1DPC	2933	8		8		8		8		8		8													
S96	96	1DPC	2933	16		16		16		16		16		16													
S192	192	1DPC	2933	32		32		32		32		32		32													
S384	384	1DPC	2933	64		64		64		64		64		64													
S64	64	1DPC	2933								64																
S128	128	1DPC	2933						64		64																
D16	16	1DPC	2933								8												8				
D32	32	1DPC	2933						8		8								8			8					
D64	64	1DPC	2933			8		8		8		8						8		8		8		8			
D96	96	1DPC	2933	8		8		8		8		8		8	8			8		8		8		8		8	
D192	192	1DPC	2933	16		16		16		16		16		16	16			16		16		16		16		16	
D384	384	1DPC	2933	32		32		32		32		32		32	32			32		32		32		32		32	
D128	128	1DPC	2933								64												64				
D256	256	1DPC	2933						64		64								64		64		64				
D512	512	1DPC	2933			64		64		64		64						64		64		64		64			
D768	768	1DPC	2933	64		64		64		64		64		64	64			64		64		64		64		64	

MEMORY - INTEL OPTANE DC PERSISTENT MEMORY 2666MHZ (MEMORY MODE)

Intel Optane DC Persistent Memory is offered with select Xeon Cascade Lake processors. It runs at 2666MHz and requires standard RDIMM memory as cache— which is not included in overall memory capacity. Intel DCPMM is supported in memory mode only and is not “Persistent” in memory mode.

Type:	Intel Optane DC Persistent Memory modules
Max Frequency	2666MHz
DCPMM Capacities	128GB, 256GB, 512GB
Maximum Memory with DCPMM	1.5TB with 1 CPU, 6.0TB with 2 CPUs

FACTORY INSTALLED DCPMM MEMORY CONFIGURATIONS:

Note: Other configurations are possible via CFI or memory customer kits, but are not available as standard factory installed options.

7920 Rack Intel Optane DCPMM			CPU0												CPU1											
			iMC1						iMC0						iMC0						iMC1					
			Ch5		Ch4		Ch3		Ch0		Ch1		Ch2		Ch5		Ch4		Ch3		Ch0		Ch1		Ch2	
			0	1	0	1	0	1	1	0	1	0	1	0	0	1	0	1	0	1	1	0	1	0	1	0
DDR4 Cache (GB)	Total Memory AEP (GB)	DPC	DIMM2	DIMM8	DIMM4	DIMM10	DIMM6	DIMM12	DIMM11	DIMM5	DIMM9	DIMM3	DIMM7	DIMM1	DIMM1	DIMM7	DIMM3	DIMM9	DIMM5	DIMM11	DIMM12	DIMM6	DIMM10	DIMM4	DIMM8	DIMM2
64	256	111	128		16		16			16		16		128												
96	512	221	16	128	16	128	16			16	128	16	128	16												
192	1024	221	32	256	32	256	32			32	256	32	256	32												
192	2048	221	32	512	32	512	32			32	512	32	512	32												
96	768	222	16	128	16	128	16	128	128	16	128	16	128	16												
192	1536	222	32	256	32	256	32	256	256	32	256	32	256	32												
128	512	111	128		16		16			16		16		128	128		16		16			16		16		128
256	2048	111	512		32		32			32		32		512	512		32		32			32		32		512
192	1024	221	16	128	16	128	16			16	128	16	128	16	16	128	16	128	16			16	128	16	128	16
384	2048	221	32	256	32	256	32			32	256	32	256	32	32	256	32	256	32			32	256	32	256	32
768	4096	221	64	512	64	512	64			64	512	64	512	64	64	512	64	512	64			64	512	64	512	64
192	1536	222	16	128	16	128	16	128	128	16	128	16	128	16	16	128	16	128	16	128	128	16	128	16	128	16
384	3072	222	32	256	32	256	32	256	256	32	256	32	256	32	32	256	32	256	32	256	256	32	256	32	256	32
768	3072	222	64	256	64	256	64	256	256	64	256	64	256	64	64	256	64	256	64	256	256	64	256	64	256	64
1536	6144	222	128	512	128	512	128	512	512	128	512	128	512	128	128	512	128	512	128	512	512	128	512	128	512	128

GRAPHICS

NOTE: Up to 4 single wide or 3 double wide graphics cards can be supported with the 2nd CPU installed.

NOTE: All slots are full height (except slot 6) and full length (except slot 3). Please see the slot matrix page to see which slots are enabled with which CPU. The system ships with 1x 6+2 pin and 1x 6 pin aux power connectors per riser (3 risers).

Graphics Options	
High End 3D Cards	
Options	Graphics card PCIe AUX power connectors/dongles
Radeon Pro W5700 – August 2020	1x 8 pin 1x 6 pin
Radeon Pro WX 9100	1x 8 pin 1x 6 pin
NVIDIA Quadro GV100	1x 8 pin
NVIDIA Quadro RTX 8000	1x 8 pin 1x 6 pin
NVIDIA Quadro RTX 6000	1x 8 pin 1x 6 pin
NVIDIA Quadro P6000 - EOL	1x 8 pin
NVIDIA Quadro RTX 5000	1x 8 pin 1x 6 pin
NVIDIA Quadro P5000 - EOL	1x 8 pin
Mid-range 3D Cards	
Options	Graphics card PCIe AUX power inputs
Radeon Pro W5500 – August 2020	1x 6 pin
Radeon Pro WX 7100	1x 6 pin
Radeon Pro WX 5100	
Radeon Pro WX 4100 - EOL	
NVIDIA Quadro RTX 4000	1x 8 pin
NVIDIA Quadro P4000 - EOL	1x 6 pin
NVIDIA Quadro P2200	
NVIDIA Quadro P2000 - EOL	
Entry 3D Cards	
Options	Graphics card PCIe AUX power inputs
NVIDIA Quadro P620	
NVIDIA Quadro P400	
Professional 2D Cards	

GRAPHICS - PSU REQUIREMENTS FOR MULTI CARD CONFIGS

NOTE: Some configs require 2x 1100W PSUs in non-redundant mode for additional power (load sharing) or 2x 1600W PSUs @220V in non redundant mode. This is because the Enterprise Server IDRAC database PSU requirements were changed from vendor TDP specs to peak power specs for the new generation CPUs, graphics etc.

Note: These are estimates based on CPU + GPU combination only & can change depending on other components populated.
There is some margin for additional components, so these values should be okay except for the most extreme configs.
All items highlighted green are okay with 1x 1100W PSU
All items highlighted blue require 2x 1100W (non redundant) or 1x 1600W @220V or 2x 1600W @110V (non redundant), 2x 1600W @220V (redundant) OK
All items highlighted red require 2x 1600W @220V non redundant

CPU TDP	Cumulative CPU Pmax (W)	1x										2x										3x										4x										Cumulative GPU Peak Power (W)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300		AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD R7300	AMD 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