



# POWEREDGE C6420

## Purpose-built for high performance hyperscale workloads

PowerEdge C6420 is ideal for high performance hyperscale workloads. With 4 nodes in a 2U form factor, it maximizes density, scalability, and energy efficiency per U.

### Ideal server for high performance, hyperscale workloads

The C6420 server supports dynamic business needs in scale-out environments where performance and density go hand in hand. The PowerEdge C6420 supports up to 4 dual socket compute nodes in a 2U form factor and with Direct Liquid Cooling options, supports high wattage processors for even higher performance. NonVolatile Memory express (NVMe) drives and fabrics such as InfiniBand and Omnipath can be added for even higher scalability. This makes C6420 an ideal solution for hyperscale compute workloads requiring high scalability and high performance such as High Performance Computing (HPC), high performance data analytics, financial modeling and high frequency trading, SaaS/IaaS and web scale applications, visual effects rendering nodes, Hyper Converged Infrastructure (HCI), Software Defined Storage, etc.

### Intuitive system management with intelligent automation

With intelligent automation features, C6420 simplifies systems management and helps you free up precious IT skilled resources for business-critical activities. Designed for web-scale infrastructure, the C6420 does not forget management.

- Basic management is available with a base BMC option including a virtual console & virtual media.
- Optionally, leverage the integrated iDRAC9 with Lifecycle Controller and Redfish API for advanced management and scripting support.

### Robust security spanning across the server ecosystem and life cycle

Every PowerEdge server is designed as part of a cyber-resilient architecture, integrating security into the full server life cycle. The C6420 leverages new security features built-into every new PowerEdge server strengthening protection so you can reliably and securely deliver accurate data to your customers no matter where they are. By considering each aspect of system security, from design to retirement, Dell EMC ensures trust and delivers a worry-free, secure infrastructure without compromise.

- Rely on built-in hardware root of trust and a secure component supply chain to ensure protection from factory to the data center.
- Maintain data safety with cryptographically signed firmware packages and Secure Boot.
- Prevent unauthorized or malicious change with Server Lockdown.
- Wipe all data from storage media including hard drives, SSDs and system memory quickly and securely with System Erase.

### PowerEdge C6420

- High performance server for hyperscale workload
- Maximizes density, scalability and efficiency
- Ideal for HPC, high performance data analytics, high frequency trading and financial modeling, SaaS/IaaS, VFX render nodes, HCI and SDS

# PowerEdge C6420

Features	Technical Specification		
Processor	Up to two Intel® Xeon® Scalable processors, up to 205W and 28 cores per processor		
Memory	16 DIMM slots with max of 1024GB with options for 8GB/16GB/32GB/64GB/128GB DDR4 2666MT/s RDIMMs and LRDIMMs ECC Registered DDR4		
Storage	One 120/240GB M.2 SATA RI SSD boot drive or Two 120/240GB M.2 SATA RI SSD boot drives in RAID 1, One 16/32/64GB MicroSD card Controllers: S140 Software RAID with Intel C620 Chipset SATA controller (RAID 0, 1, 5, 10) Hardware RAID using PERC H330 Mezzanine (RAID 0, 1, 5, 10, 50), PERC H730p Mezzanine (RAID 0, 1, 5, 6, 10, 50, 60) Non RAID: HBA330 Mezzanine, 12Gbps SAS LP PCIe HBA		
Drive options	Hard Drives: 300/600/900GB 2.5" 15K 12Gb SAS Drives 300/600GB/1.2TB/1.8TB/2.4TB 2.5" 10K 12Gb SAS Drives 1TB/2TB 2.5" 7.2K 12Gb SAS Drives 1/2/4/8/10/12TB 3.5" 7.2K 12Gb SAS/ 6Gbps SATA Drives	FIPS-140 Self Encrypting Drives: 900GB/1.2TB/2.4TB 2.5" 10K 12Gb SAS FIPS-140 SED HDD 2TB 2.5" 7.2K 12Gb SAS FIPS-140 SED HDD 4TB/8TB 12Gbps SAS FIPS-140 SED HDD 1.92TB Mixed Use SATA SED SSD	
	Solid State Drives: 120GB 2.5" 6Gbps SATA Boot SSD 240/480GB/800GB/960GB/1.6TB/1.92TB/3.84TB 6Gbps SATA Read Intensive SSDs 200/240/400/480/800/960GB/1600/1962GB 6Gbps SATA Mixed Use SSDs 480/960/1920/3840/7680 GB 12Gb SAS Read Intensive SSDs 400/480/960/1600/1920/3840GB 12Gbps SAS Mixed Use SSDs 400/800/1600/3200GB 12Gb SAS Write Intensive SSDs	2.5" NVMe Drives and Add-in PCIe cards: 800GB/1TB/1.6TB/2TB/3.2TB/4TB/6.4TB Mixed Use 1/2/4/TB Read Intensive	
Power and cooling options	Dual Hot-plug fault-tolerant, fully redundant or non-redundant 1600W AC Power Supply Dual Hot-plug fault-tolerant or fully redundant 2000W and 2400W AC Power Supply Four dual rotor redundant, non-hot swappable fans Air and Direct Contact Liquid Cooling (DCLC) options		
Dimensions (HxWxD)	86.8mm x 448mm x 790mm	Weight: 3.5" Direct Backplane Chassis: 43.62 Kg 2.5" Direct/Expander/NVMe Backplane Chassis: 41.46 Kg No Backplane Chassis: 34.56 Kg	Form factor: Rack (2U)
Chassis options	24 x 2.5" Direct Backplane with up to 6 SAS/SATA drives per C6420 sled 24 x 2.5" Expander Backplane with up to 12 SAS/SATA drives per C6420 sled and 2 C6420 sleds per C6400 chassis 24 x 2.5" NVMe Backplane with up to 2 SAS/SATA/NVMe drives and 4 SAS/SATA drives per C6420 sled 12 x 3.5" Direct Backplane with up to 3 SAS/SATA drives per C6420 sled No Backplane option with no external drives per C6420 sled		
Embedded / At-Server	iDRAC9 with Lifecycle Controller iDRAC Direct	iDRAC REST API with Redfish	
Consoles & Mobile	OpenManage Enterprise OpenManage Essentials	OpenManage Mobile OpenManage Power Center	
Integrations	OpenManage integrations: Microsoft® System Center, VMware® vCenter™, BMC Software (available from BMC)		
Connections	Nagios Core and Nagios XI, Oracle Enterprise Manager, HPE Operations Manager i (OMi)		
Tools	iDRAC Service Module OpenManage Server Administrator OpenManage Storage Services	Dell EMC Repository Manager Dell EMC System Update Dell EMC Server Update Utility Dell EMC Update Catalogs	
Security	TPM 1.2/2.0 optional Cryptographically signed firmware Secure Boot	Hardware Root of Trust System Lockdown Secure Erase	
I/O & Ports	Rear ports: 2 x USB 3.0 ports, 1 Micro USB port for iDRAC Direct One x16 PCIe Gen3 riser (low profile, half height and half length) One x8 PCIe Gen3 Mezzanine (for storage controller) One x16 PCIe Gen3 OCP Mezzanine (for network controller) One x16 PCIe Gen3 riser (for M.2 Boot Device)		

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Features	Technical Specification	
Network cards	<p>One 1Gb Ethernet LOM port for systems management or shared with host</p> <p>1Gb Ethernet</p> <ul style="list-style-type: none"> <li>• Intel i350 1Gb Dual Port Ethernet LP PCIe Adapter</li> <li>• Broadcom 5720 1Gb Dual Port Ethernet LP PCIe Adapter</li> </ul> <p>10Gb Ethernet</p> <ul style="list-style-type: none"> <li>• Intel X710 Dual Port 10Gb SFP+ OCP Mezzanine Adapter</li> <li>• Intel X710 Dual Port 10Gb SFP+ LP PCIe Adapter</li> <li>• Intel X520 Dual Port 10Gb SFP+ LP PCIe Adapter</li> <li>• Intel X710 Dual Port 10Gb BASE-T LP PCIe Adapter</li> <li>• Intel X550 Dual Port 10Gb BASE-T LP PCIe Adapter</li> <li>• Intel X710 Quad Port 10Gb BASE-T LP PCIe Adapter</li> <li>• Broadcom 57412 10Gb SFP+ LP PCIe Adapter</li> <li>• Broadcom 57416 10Gb BASE-T LP LP PCIe Adapter</li> <li>• QLogic 41162 Dual Port 10Gb BASE-T LP PCIe Adapter</li> <li>• QLogic 41112 Dual Port 10Gb SFP+ LP PCIe Adapter</li> <li>• SolarFlare 8522 Dual Port 10Gb SFP+ LP PCIe Adapter</li> <li>• Mellanox ConnectX-3 Pro 10Gb Dual Port LP PCIe Adapter</li> </ul> <p>25Gb Ethernet</p> <ul style="list-style-type: none"> <li>• Broadcom 57414 Dual Port 25Gbps SFP28 PCIe LP Adapter</li> <li>• QLogic 41262 Dual Port 25Gbps SFP28 LP PCIe Adapter</li> <li>• Intel® 25GBE 2P XXV710 Adapter</li> <li>• Mellanox ConnectX-4 Lx Dual Port 25Gbps SFP28 LP PCIe Adapter</li> </ul> <p>40Gb Ethernet</p> <ul style="list-style-type: none"> <li>• Mellanox ConnectX-3 Pro Dual Port 40Gbps QSFP+ LP PCIe Adapter</li> <li>• Intel XL710 Dual Port 40Gbps QSFP+ LP PCIe Adapter</li> </ul> <p>100Gb Ethernet/InfiniBand / Omni-Path</p> <ul style="list-style-type: none"> <li>• Mellanox ConnectX-4 Dual Port 100Gb QSFP+ LP PCIe Adapter</li> <li>• Mellanox ConnectX-3 VPI QSFP+ Single Port FDR LP PCIe Adapter</li> <li>• Mellanox ConnectX-4 Single Port VPI QSFP28 EDR LP PCIe Adapter</li> <li>• Mellanox ConnectX-4 Dual Port VPI QSFP28 EDR LP PCIe Adapter</li> <li>• Intel Omni-Path Single Port Host Fabric Adapter 100 Series LP PCIe Adapter</li> <li>• Dual port QSFP carrier card for processors with integrated Intel Omni-Path Fabric</li> <li>• ConnectX-5 Single Port VPI EDR QSFP28 Adapter</li> </ul>	
Supported operating systems	Canonical® Ubuntu® LTS Citrix® XenServer® Microsoft Windows Server® with Hyper-V Red Hat® Enterprise Linux SUSE Linux Enterprise Server VMware® ESXi	For specifications and interoperability details see <a href="http://Dell.com/OSsupport">Dell.com/OSsupport</a>
Recommended support	Dell ProSupport Plus for critical systems or Dell ProSupport for premium hardware and software support for your PowerEdge 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 <a href="http://Dell.com/ServiceDescriptions">Dell.com/ServiceDescriptions</a> .	

## Learn more at [Dell.com/PowerEdge](http://Dell.com/PowerEdge)

### Recommended services

ProSupport Plus with SupportAssist provides proactive and predictive support for critical systems. ProSupport provides comprehensive hardware and software support. Get more from your technology starting on day one with ProDeploy Enterprise Suite deployment offers. For more information, visit [Dell.com/itlifecycleservices](http://Dell.com/itlifecycleservices).

### End-to-end technology solutions

Reduce IT complexity, lower costs and eliminate inefficiencies by making IT and business solutions work harder for you. You can count on Dell EMC for end-to-end solutions to maximize your performance and uptime. A proven leader in Servers, Storage and Networking, Dell EMC Services deliver innovation at any scale. And if you're looking to preserve cash or increase operational efficiency, Dell Financial Services™ has a wide range of options to make technology acquisition easy and affordable. Contact your Dell Sales Representative for more information.\*

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