



HYPERSCALE-INSPIRED DESIGN

PowerEdge C6145

One of the highest performing servers ever, with two 4-socket AMD® Opteron® 6200 series processor-based servers in a hyper-efficient 2U; with 10 PCIe slots to ramp up expansion possibilities

Designed with your needs in mind

With complex problems to solve in mapping, visualization, simulations and rendering, the number of cores, amount of memory and bandwidth can influence whether you see results first or last.

The Dell™ PowerEdge™ C6145 server is the only server in its class with the performance of two 4-socket AMD Magny-Cours processor-based servers in a 2U. It has up to 128 cores, 1TB memory, and 40Gb/second I/O per card slot. It has six PCIe Gen 2 x16 slots, two x8 mezzanine and two dedicated x16 host interface card slots (HICs), so you have 10 total slots to flex with your needs. Best of all, it's all in a hyper-efficient shared infrastructure 2U, so it saves space, weight and energy.

Satisfy the need for speed

The pure volume of calculations calls for performance, all the way from the processor to the I/O bandwidth. The PowerEdge C6145 is one of the highest performing 2U rack servers ever, with two 4-socket AMD Opteron® 6200 series processors. These processors have up to 84 percent higher performance with up to 73 percent more memory bandwidth.¹

It's not just the FLOPS in the PowerEdge C6145 server that make the difference. It can also accommodate up to 1T of memory.

Satisfy the need for efficiency

The PowerEdge C6145 server packs two high-performance servers in the same 2U space, while its shared infrastructure design can reduce the number individual fans by 1/4 compared to a traditional 2U, and the associated power to cool. Those two 4-socket servers also use less floor space, cabling, and racks.

At the processor level, the AMD Opteron 6200 series uses half the power per core, requiring 2/3 less floor space and up to 2/3 lower platform price.¹

Select Samsung's® latest low-voltage high-density DDR3 memory and you can save more than 70% in energy over previous generation memory solutions.

Mix, match and maximize connections

Cores and memory just aren't enough without the I/O bandwidth to quickly compile data and results, and connect to other resources.

The PowerEdge C6145 server ramps up the I/O with 40Gb/second throughput per x16 slot. Each node has five slots: three PCIe Gen 2 x16 slots, one dedicated x16 HIC slot and one x8 slot for a mezzanine card. With two nodes per server, 10 total PCIe slots, you can mix and match RAID controllers, Infiniband cards, 10GE cards, and HIC cards all in the same server.

You can even drive your workloads to the cutting edge. For example, combine the PowerEdge C6145 server with the PowerEdge C410x PCIe expansion chassis and you can double the server to graphics processing unit (GPU) ratio to 1:8 to create a number-crunching powerhouse.

Global services and support

Dell is dedicated to simplifying IT, and Dell Services can help you manage the complexities of growing and maintaining your scale-out environments. Dell's broad portfolio of planning, implementation and maintenance services can help accelerate your IT initiatives and help grow your business. Options include, but are not limited to, consulting services to help you optimize your data center,

PowerEdge C6145

- 2x the performance and density of a traditional 2U
- Up to 281% more performance per U compared the HP Proliant DL980 G7, in a quarter of the rack space²
- Shared infrastructure uses less floor space, power and cooling
- 5 PCIe slots/server node, 10 total

custom rack integration specific to your IT environment, and expert-level solution support with Dell Online Self Dispatch.

Feature	PowerEdge C6145 Technical Specifications	
Chassis	2U rack mount	
Processors	Up to two 4-socket servers, 8, 12 or 16 cores per processor AMD® Opteron® 6200 processor series, with L3 cache: 12MB	
Memory	4GB/8GB LV DDR3 (1333/1600 MHz), 16GB (1066 MHz), 32 DIMM slots for up to 512GB per node 4GB/8GB/16GB Low-volt DDR3 Samsung® Green Memory available	
Chipset	AMD SR5670 and AMD SR5690	
Video	Integrated AST2050 with 64MB RAM	
Primary Storage	Maximum internal storage: 48TB SATA or NL 48TB SAS	
Drive Bays and Hard Drives	24 x 2.5" or 12 x 3.5" hard drive options 2.5" SAS (15K RPM): 146GB, 300GB 2.5" SAS (10K RPM): 300GB, 600GB, 900GB 2.5" SATA II and NL SAS (7.2K RPM): 500GB, 1TB 2.5" SATA SSD (SLC)(MLC RTS+): 50GB, 100GB	3.5" SATA (7.2K): 250GB, 500GB, 1TB, 2TB, 3TB 3.5" SAS (15K): 300GB, 600GB 3.5" NL SAS (7.2K): 1TB, 2TB, 3TB
Connectivity	Embedded dual port Intel® Kawela™ 82576 1 Gb Ethernet network interface card	
Ports - USB	2 USB ports external (rear)	
I/O Slots	1 PCIe x8 mezzanine daughtercard slot, 3 x PCIe x16 riser slot, 1 dedicated x16 host interface card (HIC) card per server node Mellanox® ConnectX-2 40Gb/s dual-port QDR IB adapter (optional) Intel® 82559 dual-port 10GbE adapter (optional)	
Drive Controller	LSI® 2008 6Gb SAS mezzanine (optional)	
RAID Controller	LSI 9260-8i add-in RAID controller	
Power Supplies	Dual hot-plug redundant high-efficiency 1100W/1400W power supplies	
Fans	Shared redundant cooling with 4 x 80mm speed fans detectable with PWM control	
Operating Systems	Novell® SUSE® Linux® Enterprise Server 11 SP1 Red Hat® Enterprise Linux 6.0 Windows® Server® 2008 R2 Enterprise x64 Windows Server 2008 R2 Hyper-V™ Windows HPC Server® 2008 R2 x64	
Server Management	Embedded BMC with IPMI 2.0 support with 1 x 10/100 Mbps RJ45 connector	
Hypervisors (Optional)	Citrix® XenServer® 5.6 VMware® ESXi v5.0 Windows Server 2008 Hyper-V	
Services (Availability varies by region. Please contact your sales representative for details.)	Infrastructure Consulting Services Rack Integration (U.S. only, not available in China) Onsite Deployment Basic Support, ProSupport for IT 4-Hour Support Keep Your Hard Drive Enterprise Wide Contract Specialized Onsite Services	
Dimensions and Weight	Width: 44.8 cm. (17.6 inches) Depth: 79 cm. (31.1 inches) Weight minimum/maximum: 16.5 kg. (36.38 lb.), 42 kg. (92.61 lb.)	

The PowerEdge C6145 server is part of Dell's hyperscale-inspired PowerEdge C server line designed to bring the most compute power in the least amount of space with the least energy draw to lower operational costs. These servers have the right combination of what you need and nothing more. They are purpose-built servers designed for high performance computing, Web 2.0, hosting, data analytics, and cloud building. They are best for rack deployments, large homogenous cluster/cloud application environments where the software stack provides primary platform availability and resiliency. The PowerEdge C server line does not come with features you don't need in a scale-out environment like comprehensive systems management, or broad enterprise storage.

¹ <http://www.amd.com/us/press-releases/Pages/new-amd-opteron-processor-2011nov14.aspx>

² Based on the SPECint_rate2006 benchmark test performed by Dell SPA Labs in Nov. 2011. Dell PowerEdge C6145: SPECint_rate2006 of 2080 in 2U as compared to HP ProLiant DL980 G7: SPECint_rate2006 of 2180 in 8U. Actual performance will vary based on configuration, usage and manufacturing variability. SPEC® and the benchmark name SPECint® are registered trademarks of the Standard Performance Evaluation Corporation. Competitive benchmarks stated above reflect results published or submitted to www.spec.org as of Nov. 1, 2011. The comparison presented is based on the best performing 8-chip x86 servers. For the latest SPECint_rate2006 benchmark results, visit <http://www.spec.org/cpu2006>

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