



# Dell EMC PowerEdge R840 and R830 server comparison matrix

The PowerEdge R840 system has the following features compared with the R830 system.

Feature	PowerEdge R840	PowerEdge R830
<b>Processor</b>	Up to four 2nd Generation Intel® Xeon® Scalable processors with up to 28 cores per processor	Up to four Intel® Xeon® processor E5-4600 v4 product family with up to 22 cores per processor
<b>Chipset</b>	Intel® C620 series chipset	Intel® C610 series chipset
<b>Accelerators</b>	Up to two double-width 300W GPUs	NA
	Up to two full-height FPGAs	NA
<b>Memory</b>		
DIMM Speed	Up to 2933MT/s	Up to 2400MT/s
Memory Type	<ul style="list-style-type: none"> <li>RDIMM</li> <li>LRDIMM</li> <li>NVDIMM</li> <li>DCPMM (Intel® Optane™ DC persistent memory)</li> </ul>	<ul style="list-style-type: none"> <li>RDIMM</li> <li>LRDIMM</li> </ul>
Memory Module Slots	48 DDR4 DIMM slots (12 NVDIMM or 24 DCPMM slots only) Supports registered ECC DDR4 DIMMs only	48 DDR4 DIMM slots
Maximum RAM	RDIMM 3TB	RDIMM 786GB
	LRDIMM 6TB	LRDIMM 1.5TB
	NVDIMM 384GB	
	DCPMM 12.28TB (15.36TB with LRDIMM)	
<b>Storage</b>		
Front Bays	Up to 24 x 2.5" SAS/SATA (HDD/SSDs) with up to 12 NVMe PCIe SSDs max 184.32TB	Up to 16 x 2.5" SAS/SATA/SSD, max 29TB
	Up to 24 x NVMe PCIe SSDs max 153TB	
	Up to 8 x 2.5" SAS/SATA (HDD/SSD) max 61.44TB	
Rear Bays	Up to 2 x 2.5" SAS/SATA (HDD/SSD), max 15.36TB	
<b>Storage Controllers</b>		
Internal Controllers	<ul style="list-style-type: none"> <li>HBA330</li> <li>H330</li> <li>H730P</li> <li>H740P</li> </ul>	<ul style="list-style-type: none"> <li>H330</li> <li>H730</li> <li>H730P</li> </ul>

Feature	PowerEdge R840	PowerEdge R830
External Controllers	<ul style="list-style-type: none"> <li>• H840P</li> <li>• 12Gbps SAS HBA</li> </ul>	<ul style="list-style-type: none"> <li>• H830</li> <li>• 12Gbps SAS HBA</li> </ul>
Software RAID	S140	S130
Internal Boot	Boot Optimized Storage Subsystem (BOSS): HW RAID 2 x M.2 SSDs 240GB or 480GB	NA
	Internal USB	Internal USB
	Internal Dual SD Module and vFlash*  <b>NOTE: *ESXi (only OS supported)</b>	Internal Dual SD Module and vFlash*  <b>NOTE: *ESXi (only OS supported)</b>
<b>Operating Systems</b>	<ul style="list-style-type: none"> <li>• Canonical® Ubuntu® Server LTS</li> <li>• Citrix® Hypervisor®</li> <li>• Microsoft® Windows Server® with Hyper-V</li> <li>• Oracle® Linux</li> <li>• Red Hat® Enterprise Linux</li> <li>• SUSE® Linux Enterprise Server</li> <li>• VMware® ESXi®</li> </ul>	<ul style="list-style-type: none"> <li>• Canonical® Ubuntu® Server LTS</li> <li>• Citrix® Hypervisor®</li> <li>• Microsoft® Windows Server® with Hyper-V</li> <li>• Red Hat® Enterprise Linux</li> <li>• SUSE® Linux Enterprise Server</li> <li>• VMware® ESXi®</li> </ul>
<b>Security</b>	Cryptographically signed firmware	Cryptographically signed firmware
	Secure Boot	Secure Erase
	Secure Erase	
	Silicon Root of Trust	System Lockdown (requires iDRAC Enterprise)
	System Lockdown (requires iDRAC Enterprise)	
	TPM 1.2/2.0, TCM 2.0 (optional)	TPM 1.2/2.0, TCM 2.0 (optional)
<b>Management</b>		
Embedded/At-the-Server	iDRAC9	iDRAC8 with Lifecycle controller
	iDRAC RESTful API with Redfish	iDRAC RESTful API with Redfish
	iDRAC Direct	iDRAC Direct
	Quick Sync 2 BLE/wireless module	iDRAC Quick Sync
Consoles	OpenManage Enterprise	OpenManage Enterprise
	OpenManage Enterprise Power Manager	OpenManage Enterprise Power Manager
Mobility	OpenManage Mobile	OpenManage Mobile
Tools	Dell EMC RACADM CLI	Dell EMC RACADM CLI
	Dell EMC Repository Manager	Dell EMC Repository Manager
	Dell EMC System Update	Dell EMC System Update
	Dell EMC Server Update Utility	Dell EMC Server Update Utility
	Dell EMC Update Catalogs	Dell EMC Update Catalogs
	iDRAC Service Module	iDRAC Service Module
	IPMI Tool	IPMI Tool
	OpenManage Server Administrator	OpenManage Server Administrator
OpenManage Integrations	BMC Truesight	Microsoft® System Center

Feature	PowerEdge R840	PowerEdge R830
	Microsoft® System Center	
	RedHat® Ansible® Modules	VMware® vCenter
	VMware® vCenter	
OpenManage Connections	IBM Tivoli® Netcool/OMNibus	IBM Tivoli® Netcool/OMNibus
	IBM Tivoli® Network Manager IP Edition	HP Operations Manager
	Micro Focus® Operations Manager I	Dell OpenManage Plug-in for Oracle® Database Manager
	Nagios® Core	
	Nagios® XI	
<b>Power Supply</b>	750W AC Platinum/Titanium	750W AC Platinum
	750W 240V HVDC Platinum	
	1100W AC Platinum	1100W AC Platinum
	1100W 240V HVDC Platinum	1100W 240V HVDC Platinum
	1100W 48VDC Gold	
	1600W AC Platinum	1600W AC Platinum
	2000W AC Platinum	
	2400W AC Platinum	
	Up to 6 hot plugs fans with N +1 redundancy	Up to 6 hot plugs fans with full redundancy
<b>Ports</b>		
Network Options	4 x 1GbE	4 x 1GbE
	2 x 10GbE + 2 x 1GbE	2 x 10GbE
	4 x 10GbE	
	2 x 25GbE	
Front Ports	1 x Dedicated iDRAC direct USB	1 x Dedicated iDRAC USB Type A
	2 x USB 2.0	1 x USB 2.0
	1 x USB 3.0 (optional)	NA
	1 x VGA	1 x VGA
Rear Ports	4 x 1GbE	4 x 1GbE
	1 x Dedicated iDRAC network	1 x Dedicated iDRAC network
	1 x Serial	1 x Serial
	2 x USB 3.0	2 x USB 3.0
	1 x VGA	1 x VGA
Internal Ports	1 x USB 3.0	1 x USB 3.0
<b>Slots</b>		
PCIe	6 x Gen3 slots	7 x Gen3 slots
Video Card	1 x VGA	1 x VGA
<b>Bezel</b>	Optional LCD bezel or security bezel	Optional LCD bezel or security bezel
<b>Form Factor</b>	2U Rack Server	2U Rack Server

<b>Feature</b>	<b>PowerEdge R840</b>	<b>PowerEdge R830</b>
<b>Dimensions and Weight</b>		
Height	86.8mm (3.4")	86.8mm (3.4")
Width	434.0mm (17.8")	482.4mm (18.99")
Depth	835.9mm (32.9")	811.06mm (31.93")
Weight	36.6kg (80.7lbs.)	31.7kg (69.89lbs.)

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