DELL Technologies

Specification Sheet

PowerEdge R770AP

Scalable Compute for Enterprise Innovation

The Dell PowerEdge R770AP is engineered to consolidate demanding enterprise workloads at scale. With dense compute capacity, advanced memory bandwidth, and secure lifecycle management, it supports large-scale virtualization, mission-critical databases, analytics, and AI-driven applications-all with the proven reliability of PowerEdge.

Key Advantages

Unmatched Compute Density

- Up to 2x Intel® Xeon® 6 6900-series processors, with up to 128 P-cores each
- Supports thousands of concurrent users, real-time analytics, and high-performance simulations

Advanced Memory and Storage Architecture

- 12 DDR5 DIMMs per socket (up to 3TB and 6400 MT/s)
- Up to 16 2.5-inch NVMe drives with PCIe Gen 5.0
- Up to 32 E3.S NVMe drives with PCIe Gen 5.0
- Delivers 1.87x faster memory access and up to 2x storage bandwidth compared to prior generations

Flexible Expansion and Connectivity

- Up to 5 PCIe Gen 5.0 slots plus dual OCP NIC 3.0
- High-speed server-to-server communication and easy scaling as workloads evolve

Secure Simplified Management

- Hardware-based silicon root of trust and cryptographically signed firmware
- System lockdown and self-encrypting drives for data-at-rest protection
- Integrated iDRAC with OpenManage for secure, end-to-end lifecycle management

Designed for Sustainable Efficiency

- Optimized for advanced air cooling with support for efficient power management
- Enables lower operating costs while supporting sustainable data center growth

Why PowerEdge R770AP?

By combining high core density, advanced memory bandwidth, and trusted PowerEdge resilience, the R770AP is purpose-built for enterprise environments that demand both performance and reliability. It delivers the scale to run massive workloads, the efficiency to control operational costs, and the security to protect critical data—making it a foundational server for enterprise innovation.

This document provides a comprehensive list of product features. However, features marked with an asterisk (*) may not be available at launch but introduced in future updates. Please note that this document does not confirm the availability or release timeline of any feature. For the most accurate and up-to-date information on feature availability, please refer to the product configurator page on dell.com.

Feature	Technical Specifications
Processor	Two Intel® Xeon® 6 6900-series processors with P-Cores with up to 128 Cores.
Memory	• 24 DDR5 DIMM slot, supports RDIMM 3 TB max, speeds up to 6400 MT/s • Supports registered ECC DDR5 DIMMs only Note: The installed processor may reduce the operating speed of the DIMM
Storage controllers	• Internal Controllers (RAID): PERC H975i DC-MHS front • External Controllers: N/A • Internal Boot: Boot Optimized Storage Subsystem (BOSS-N1 DC-MHS): HWRAID 1, 2 x M.2 NVMeSSDs or USB
Drive Bays	Front bays: • No backplane configuration • Up to 16 x 2.5-inch G5 x4 NVMe (SSD) max 245.76 TB • Up to 16 x 2.5-inch G5 x2 NVMe (SSD) max 245.76 TB • Up to 32 x EDSFF E3.S Gen5 NVMe (SSD) max 491.52 TB Rear bays: N/A
Power Supplies	• 1500 W Titanium 100-120 LLAC or 200-240 HLAC, 240 VDC, hot swap redundant • 1800 W Titanium 200-240 HLAC, 240 VDC, hot swap redundant • 2400 W Titanium 100-120 LLAC or 200-240 HLAC, 240 VDC, hot swap redundant • 3200 W Titanium 200-220 HLAC or 220.1-240 HLAC, 240 VDC, hot swap redundant • 3200 W Titanium 277Vac & HVDC, hot swap redundant*
Cooling Options	Air cooling
Fans	• Up to 6 hot swappable fans
Dimensions	• Height – 86.8 mm (3.42 inches) • Width – 482 mm (19.0 inches) • Depth – 802.40 mm (31.59 inches) with bezel • Depth – 801.51 mm (31.56 inches) without bezel
Form Factor	2U rack server
Embedded Management	• iDRAC10 • iDRAC Direct • iDRAC RESTfull API with redfish • RACADM CLI • iDRAC Service Module
Bezel	Optional metal bezel
Security	• Cryptographically signed firmware • Data at Rest Encryption (SEDs with local or external key mgmt) • Secure Boot • Secured Component Verification (Hardware integrity check) • Secure Erase • Silicon Root of Trust • System Lockdown (requires iDRAC10 Enterprise or Datacenter) • TPM 2.0 FIPS, CC-TCG certified • Chassis Intrusion Detection
OCP network options	Up to two OCP NIC card 3.0 • Slot 4 1 x8 or 1 x16 Gen5 OCP 3.0 • Slot 10 1 x16 Gen5 OCP 3.0
Embedded NIC	• 1 Gb dedicated BMC Ethernet port
GPU Options	N/A
Ports	Front Ports • 1 x USB 2.0 Type - C port Rear Ports • 1 x Dedicated BMC Ethernet port • 2 x USB 3.1 Type A ports • 1 x VGA
	Internal Ports • 1 x USB 3.1 Type A port
PCIe	Up to 5 Gen5 PCIe slots (x16 connectors) • Slot 2 1 x16 Gen5 (x16 connector) full height, half length • Slot 3 1x16 Gen5 (x16 connector) full height/low profile, half length • Slot 9 1x16 Gen5 (x16 connector) full height/low profile, half length • Slot 7 1 x16 Gen5 (x16 connector) full height, half length • Slot 5 1 x16 Gen5 (x16 connector) full height, half length
Operating System and Hypervisors	• Canonical Ubuntu Server LTS • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • VMware vSAN / VMware ESXi* • Microsoft Windows • Microsoft Windows Server • Microsoft Windows Server Datacenter For specifications and interoperability details, see **Dell.com/OSsupport**.
OEM-ready version available	From bezel to BIOS to packaging, your servers can look and feel as if they were designed and built by you. For more information, visit **Dell.com/OEM**.

*Feature not available at product launch. Please refer to the product configurator page on Dell.com to confirm feature availability.

NOTE: From bezel to BIOS to packaging, your servers can look and feel as if they were designed and built by you with our OEMR platforms, while XL platforms provide extended transitions and stability for OEM Solutions customers. For more information, visit Dell.com -> Solutions -> OEM Solutions.

APEX on Demand

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