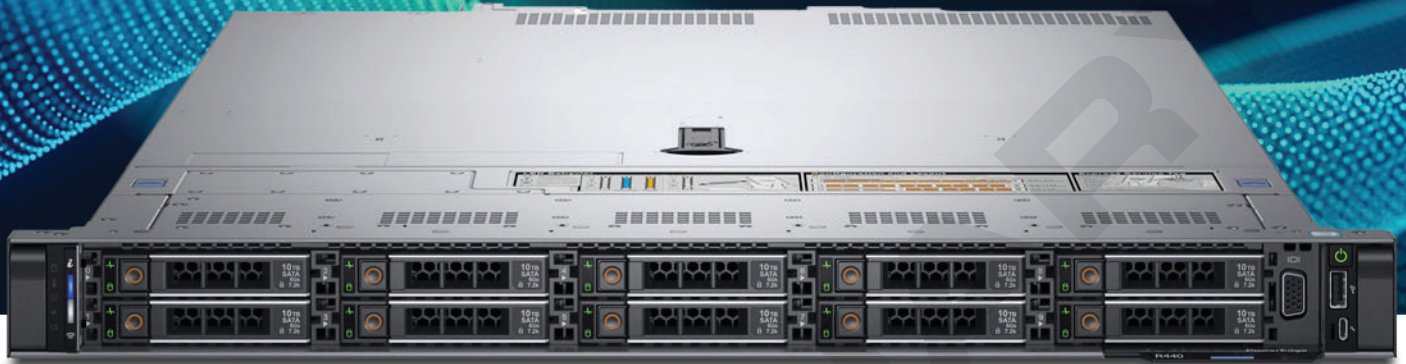# R650-IR (Immersion Ready)

Compelling performance, high scalability, and density

The Dell EMC PowerEdge R650 optimized for Immersion by UNICOM Engineering, R650-IR, powered by the 3rd Generation Intel Xeon Scalable processors is the optimal rack server to address application performance and acceleration. R650-IR is a dual-socket/1U rack server that delivers outstanding performance for the most demanding workloads. It supports 8 channels of memory per CPU, and up to 32 DDR4 DIMMs @ 3200 MT/s speeds.

In addition, to address substantial throughput improvements the R650-IR supports PCIe Gen 4 and up to 10 SSD drives with liquid immersion cooling features to support increasing power and thermal requirements. This makes the R650-IR an ideal server for data center standardization on a wide range of workloads including Database and Analytics, High-Frequency Trading, Traditional corporate IT, Virtual Desktop Infrastructure, and even HPC or AI/ML environments that require performance, and GPU support in a dense 1U form factor.

Gain a Competitive Advantage

Many times, the best way to deliver a truly competitive solution is to leverage the products, skills, and resources of proven partners. Building on innovative Intel technology, UNICOM Engineering's design, integration, logistics and support expertise helps customers streamline software application deployment and shorten time to revenue. Our strong foundation of engineering expertise, process-driven manufacturing, technology partner relationships, and an unrelenting commitment to quality has made UNICOM Engineering one of the most trusted deployment partners in the industry.

R650-IR (Immersion Ready)
technical specifications

R650-IR Rear View

Form Factor
- 1U rack server

Dimensions
- Height – 42.8 mm (1.7 inches)
- Width – 482 mm (18.97 inches)
- Depth – 809 mm (31.85 inches)

Processor
- Up to two 3rd Generation Intel Xeon Scalable processors, with up to 40 cores per processor

Memory
- 32 DDR4 DIMM slots, supports RDIMM 2 TB max or LRDIMM 4 TB max, speeds up to 3200 MT/s
- Up to 16 Intel Persistent Memory 200 series (BPS) slots, 8 TB max
- Supports registered ECC DDR4 DIMMs only

Storage Controllers
- Internal controllers: PERC H745, HBA355I, S150, H345, H755, H755N
- Boot Optimized Storage Subsystem (BOSS-S2): HW RAID 2 x M.2 SSDs 240 GB or 480 GB
- External PERC (RAID): PERC H840, HBA355E

Drive Bays (SSD Only)
Front Bays:
- Up to 10 x 2.5-inch SSD max 153 TB
- Up to 8 x 2.5-inch SSD max 122.8 TB
Rear Bays:
- Up to 2 x 2.5-inch SSD max 30.7 TB

Power Supplies
- 1400 W Platinum AC/240 HVDC

Cooling
- Optimized for Immersion Cooling Systems

Fans
- Optimized for Immersion Cooling Systems

Embedded Management
- iDRAC9
- iDRAC Service Module
- iDRAC Direct
- Quick Sync 2 wireless module

Embedded NIC
- 2 x 1 GbE LOM riser

Networking Options
- 1 x OCP 3.0 (x8 PCIe lanes)

GPU Options
- Up to three 75 W single-width GPU

Ports
Front Ports:
- 1 x Dedicated iDRAC Direct micro-USB
- 1 x USB 2.0
- 1 x VGA
Rear Ports:
- 1 x USB 2.0
- 1 x Serial (optional)
- 1 x USB 3.0
- 2 x RJ-45
- 1 x VGA
Internal Ports
- 1 x USB 3.0

PCIe
- Up to 3 x PCIe Gen4 low profile slots (all x16 except one x8 slot with SNAP I/O modules) or 2 x PCIe (Gen4) full height slots

Operating System and Hypervisors
- Canonical Ubuntu Server LTS
- Citrix Hypervisor
- Microsoft Windows Server with Hyper-V
- Red Hat Enterprise Linux
- SUSE Linux Enterprise Server
- VMware ESXi

Note: These specifications should be viewed as preliminary and final specifications may vary.

Support and Maintenance Services

UNICOM Engineering offers a variety of support and maintenance service programs to ensure high availability, rapid response, effective troubleshooting, fast parts replacement and 24-hour support.

Please visit **www.unicomengineering.com/supportservices** for more information.

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