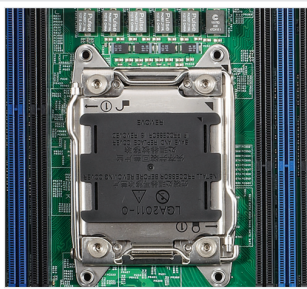lenovo® **FOR THOSE WHO DO.**™

THE LENOVO® THINKSERVER® RD640
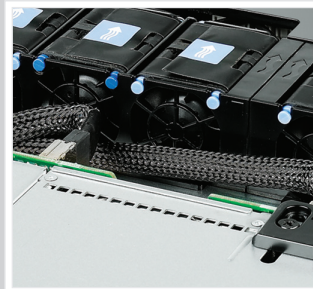
HIGHLY FLEXIBLE. WORLD-CLASS PERFORMANCE.

BALANCED DESIGN

27% greater performance with optimized memory and IO for demanding workloads
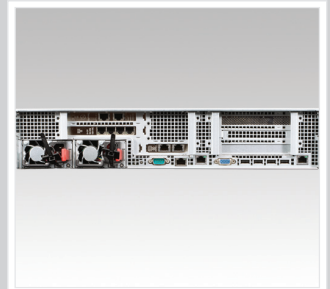
GREATER SCALABILITY*

25% greater storage, up to 32TB, to support your database, virtualization and email workloads

ENHANCED RELIABILITY

Features redundant fans and power. Offers new advanced RAID choices with 1GB write-back cache and FastPath technology

TRULY OPEN

Completely open. Based on open standards and protocols, RD640 fits easily in heterogeneous environments

The ThinkServer® RD640 server combines expansive networking, storage and RAID choices to run line-of-business applications or heavy web traffic workloads. It features Xeon® E5-2600 v2 processors, up to 24 cores and 320GB memory for data analytics and virtualization. RD640 delivers impressive compute power per watt, with an energy-efficient 2U design featuring 80 PLUS Gold redundant power supplies, low volt memory choices and innovative Lenovo® Smart Grid power management technology. Its flexible configuration choices provide great value to scale as your business needs grow, and offer a wide array of drive types and capacities. 5 PCI slots provide room to expand as you need it and an array of powerful new HBA, CNA and 10Gbps Ethernet choices help you to address growing network bandwidth requirements. Whether you need value-focused SATA storage or lightning-fast SAS/SSD and advanced RAID for performance, ThinkServer RD640 is an outstanding choice.

*Compared to previous generation ThinkServer RD630

iF product design award 2013

CITRIX ready   vmware   Windows Server 2012

intel inside™ XEON®

THINKSERVER® RD640

THINKSERVER® TECHNOLOGY

TRULY OPEN MANAGEMENT

ThinkServer RD640 provides easy setup, intelligent diagnostics, useful management tools and truly open and industry standard management interfaces for worry-free integration into hybrid deployments. Use your preferred SAN, storage and console and rely on the compute-intensive performance of the RD640 to run demanding apps. Or, consider Lenovo's enterprise solutions for truly end-to-end performance and scalability. Pair the ThinkServer RD640 with the LenovoEMC™ px12-450r storage and VMware Operations Management for a comprehensive solution for production environments, enterprise virtualization, backup and data protection. Leading performance, legendary Think quality, open standards and outstanding value – that's what makes a ThinkServer Think.

INNOVATIVE POWER MANAGEMENT

Enjoy impressive power savings with ThinkServer Smart Grid power management technology. Based on Intel® Power Node Manager® technology, Smart Grid scales power management to the datacenter level, simultaneously managing as many as 1,000 nodes. Use Smart Grid at any level of your datacenter hierarchy: rack, row, room, group, etc. It provides sophisticated, policy-based, dynamic power capping tools to help you best manage power to changing server workloads. It's innovation that matters, ThinkServer technology that pays you back.

SPECIFICATIONS

CHIPSET

Intel® C602-J Chipset
TPM 1.2 Encryption

PROCESSOR

Up to 2 x Intel® Xeon® E5-2600 v2 processors, up to 24 cores[2]

POWER AND COOLING

1+1 Redundant Power – 800W (80 PLUS Gold)
ENERGY STAR Server 1.1 compliant
6 system fans, supports 5 + 1 HS redundant

PCIe EXPANSION

PCIe GEN3 with 1 CPU
- 1 x PCIe GEN3: LP x8 mechanical, x8 electrical
- 1 x PCIe GEN3: FH/HL x16 mechanical, x16 electrical*
- 1 x PCIe GEN3: FH/HL x8 mechanical, x8 electrical

PCIe GEN3 with 2 CPU
- 1 x PCIe GEN3: LP x8 mechanical, x8 electrical (if second CPU is added)
- 1 x PCIe GEN3: FH/HL x16 mechanical, x16 electrical (if second CPU is added)*
- 1 x PCIe GEN3: FH/HL x16 mechanical, x8 electrical (if second CPU is added)
- 2 x PCIe GEN3: FH/HL x8 mechanical, x8 electrical (if second CPU is added)

STORAGE CONTROLLER

Advanced hardware RAID is standard on every model. Choose from:

- ThinkServer RAID 500 II Adapter (6GB SAS/SATA HW RAID 0/1/10) with optional RAID 5 Upgrade Key
- ThinkServer RAID 700 II Adapter (6GB SAS/SATA HW RAID 0/1/10/5/50/6/60) with 512MB cache and optional battery backup
- ThinkServer RAID 710 Adapter (6GB SAS/SATA 0/1/10/5/50/6/60) with 1GB cache and optional CacheCade technology, optional Super Capacitor Module, and Fast Path data protection.

MEMORY

20 DIMM sockets – up to 320GB[1]
- LV-RDIMMs: DDR3-1600 MHz ECC, 4G, 8GB, or 16GB choices
RAS: ECC, Lock step, Mirroring, Sparing
CPU 1: 12 memory slots (4 channel)
CPU 2: 8 memory slots (4 channel)

ENVIRONMENT

- **Air temperature:**
  Operating: 10°C to 35°C (50°F to 95°F)
  Storage: -40°C to 70°C (-104°F to 158°F) in original shipping package
- **Altitude:** 0 to 3048 m (0 to 10,000 ft) in an unpressurized environment
- **Humidity:**
  Operating: 8% to 80% (non-condensing)
  Storage without package: 8% to 80% (non-condensing)
  Storage with package: 8% to 90% (non-condensing)
- **Electrical input**
  Universal input:
  – Low range:
  Minimum: 100 VAC   Maximum: 127 VAC
  Input frequency range: 50 to 60 Hz
  – High range:
  Minimum: 200 VAC   Maximum: 240 VAC
  Input frequency range: 50 to 60 Hz

ETHERNET AND I/O

Ethernet
2 x 1GB integrated + dedicated MGMT port
Optional Intel® Ethernet Server Adapter I350-T4
Optional Intel® Ethernet Server Adapter I350-T2
Optional Intel® 10G SFP+ X520-SR2 Ethernet adapter
Optional Intel® 10G copper X520-DA2 Ethernet adapter
Optional Intel® 10G dual-port x540-T2 Ethernet adapter

I/O Ports
Front connectors   : 2 x USB 2.0, 1 x VGA, DIT module
Rear connectors   : 1 x VGA, 4 x USB 2.0, 1 x serial
Internal connectors : 2 x USB, 1 x TCM/TPM

SOFTWARE

Windows Server 2012 (including Hyper-V)
Windows Server 2008 (x64) (including Hyper-V)
Windows Server 2008 R2 (including Hyper-V)
Windows Small Business Server 2011
SLES 11 SP2
RedHat 5.9 / 6.4
VMware ESXi 5.1 U1
Citrix XenServer 6.0.2 / 6.1

STORAGE

8 x 3.5" HDD – up to 32TB internal SATA storage or 24TB internal SAS storage
8 x 2.5" HS HDD – up to 7.2TB internal SAS storage
16 x 2.5" HS HDD – up to 14.4TB internal SAS storage
- Supports SATA/SAS/SSD hard drives

MANAGEMENT

Optional Remote Management / KVM
IPMI 2.0 / SOL / Node Manager / DCMI
Configurable TPM (Supports TCG 1.2)
uEFI BIOS
Intelligent Diagnostics Module with optional Premium Module

DIMENSIONS (W x H x D)

442 mm x 87.6 mm x 720.6 mm
(17.4" x 3.45" x 28.9")
Weight (max.) 26.5 kg (58.6 lbs)
2U Rack mountable

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1 When installing LV RDIMM memory, a maximum of 16 DIMMs can be populated
2 Fans are not redundant when using 130 W 4C/6C processors (E5-2637 V2/E5-2643 V2)

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