

**THE LENOVO® THINKSERVER® RD540**

**DENSITY MEETS PERFORMANCE**



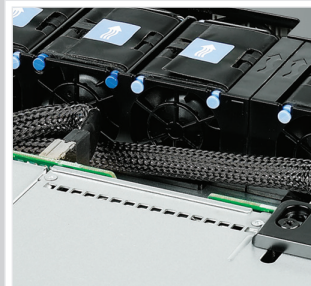
**BALANCED DESIGN**

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



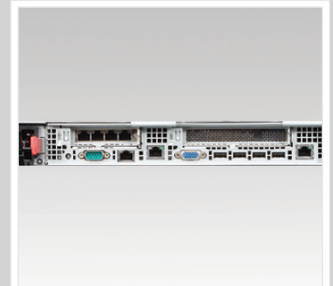
**GREATER SCALABILITY\***

25% greater storage, up to 16TB, 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, RD540 fits easily in heterogeneous environments

The ThinkServer® RD540 server combines expansive networking, storage and RAID choices to handle compute-intensive deployments in collaborative apps, heavy web traffic workloads. It features Xeon® E5-2600 v2 processors, up to 24 cores and 320GB memory for data analytics and virtualization. RD540 delivers impressive compute power per watt, with an energy-efficient 1U 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 offers a wide array of drive types and capacities. Whether you need value-focused SATA storage or lightning-fast SAS/SSD and advanced RAID for performance, ThinkServer RD540 is an outstanding choice. It's a great fit for space-constrained deployments where you need uncompromising performance.

\*Compared to previous generation ThinkServer RD530



**THINKSERVER® RD540**

## THINKSERVER® TECHNOLOGY

### TRULY OPEN MANAGEMENT

ThinkServer RD540 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 RD540 to run demanding apps. Or, consider Lenovo's enterprise solutions for truly end-to-end performance and scalability. Pair the ThinkServer RD540 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

<b>CHIPSET</b> Intel® C602-J Chipset TPM 1.2 Encryption	<b>PROCESSOR</b> Up to 2 x Intel® Xeon® E5-2600 v2 processors, up to 24 cores	<b>POWER AND COOLING</b> 1+1 Redundant Power – 800 W (80 PLUS Gold) ENERGY STAR Server 1.1 compliant 8 system fans, supports 7+1 non-HS redundant <sup>2</sup>
<b>PCIe EXPANSION</b> 1 x PCIe Gen3: LP x8 mechanical, x8 electrical (RAID adapter uses this slot) 1 x PCIe Gen3: FH/HL x16 mechanical, x16 electrical	<b>STORAGE CONTROLLER</b> Advanced hardware RAID is standard on every model. Choose from: <ul style="list-style-type: none"> <li>• ThinkServer RAID 500 II Adapter (6GB SAS/SATA HW RAID 0/1/10) with optional RAID 5 Upgrade Key</li> <li>• ThinkServer RAID 700 II Adapter (6GB SAS/SATA HW RAID 0/1/10/5/50/6/60) with 512MB cache and optional battery backup</li> <li>• 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.</li> </ul>	<b>MEMORY</b> 20 DIMM sockets – up to 320GB <sup>1</sup> – LV-RDIMMs: DDR3-1866 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)
<b>ENVIRONMENT</b> <ul style="list-style-type: none"> <li>• <b>Air temperature:</b>                Operating: 10°C to 35°C                Storage: -40°C to 70°C                in original shipping package</li> <li>• <b>Altitude:</b> 0 to 3048 m (0 to 10,000 ft) in an unpressurized environment</li> <li>• <b>Humidity:</b> Operating: 8% to 80% (non-condensing)                Storage without package: 8% to 80% (non-condensing)                Storage with package: 8% to 90% (non-condensing)</li> <li>• <b>Electrical input</b>                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</li> </ul>	<b>ETHERNET AND I/O</b> <p><b>Ethernet</b>            2 x 1GB integrated + dedicated management port</p> <p><b>I/O Ports</b>            Front : 2 x USB 2.0, 1 x VGA<sup>3</sup>            Rear : VGA, Serial, 4 x USB 2.0,            Internal : 2 x USB, 1 x TPM / TCM</p>	<b>SOFTWARE</b> Microsoft Windows Server 2012 R2 Microsoft Windows Server 2012 Microsoft Windows Server 2008 R2 Microsoft Windows Server 2008 Microsoft Windows Small Business Server 2011 Novell® SUSE Linux Enterprise Server Red Hat® Enterprise Linux Server VMware® ESXi Citrix® XenServer
<b>STORAGE</b> Up to 4 x 3.5" hot-swap HDD Up to 8 x 2.5" hot-swap HDD Slim optical drive available in 3.5" configurations	<b>MANAGEMENT / RAS / SERVICE</b> Intelligent Diagnostics Module TMM Remote Management / Optional TMM Premium (KVM) IPMI 2.0 / SOL / Node Manager / DCMI Configurable TPM (supports TCG 1.2) uEFI BIOS	<b>DIMENSIONS (W x H x D)</b> 436 mm x 43.6 mm x 720.6 mm (17.16" x 1.71" x 28.37") Weight (max.) 17 kg (37.5 lbs) 1U Rack mountable

1 When installing LV RDIMM memory, a maximum of 16 DIMMs can be populated

2 Fans are not redundant when using 130 W processors or greater

3 Front VGA not available for 4 x 3.5" chassis configurations

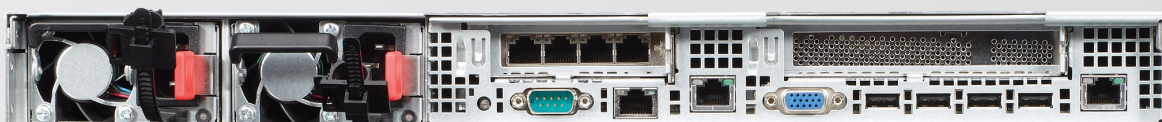


## MICROSOFT® WINDOWS® SERVER® 2012 OS CHOICES

Reseller Options Kits (ROKs)	Part No.
Microsoft® Windows® 2012 Foundations ROK – Multilingual User Interface – English/French/German/Italian/Spanish	82972FM
Microsoft® Windows® 2012 Essentials ROK – Multilingual User Interface – English/French/German/Italian/Spanish	82972EM
Microsoft® Windows® 2012 Standard ROK – Multilingual User Interface – English/French/German/Italian/Spanish	82972SM
Client Access Licenses (CALs)	Part No.
Microsoft® Windows® Server® 2012 Client Access License (1 Device)	0C19601
Microsoft® Windows® Server® 2012 Client Access License (1 User)	0C19602
Microsoft® Windows® Server® 2012 Client Access License (5 Device)	0C19603
Microsoft® Windows® Server® 2012 Client Access License (5 User)	0C19604
Microsoft® Windows® Server® 2012 Client Access License (10 Device)	0C19605
Microsoft® Windows® Server® 2012 Client Access License (10 User)	0C19606
Microsoft® Windows® Server® 2012 Client Access License (50 Device)	0C19607
Microsoft® Windows® Server® 2012 Client Access License (50 User)	0C19608
Windows® Server® 2012 Remote Desktop Services Client Access License (5 Device)	0C19609
Windows® Server® 2012 Remote Desktop Services Client Access License (5 User)	0C19610
Windows® Server® 2012 Remote Desktop Services Client Access License (1 Device)	0C19611
Windows® Server® 2012 Remote Desktop Services Client Access License (1 User)	0C19612

## VMware CHOICES

	Part No.
VMware vCenter Server 5 Foundation for vSphere up to 3 hosts (per instance) with 1-year subscription support	0C19575
VMware vCenter Server 5 Foundation for vSphere up to 3 hosts (per instance) with 3-year subscription support	0C19576
VMware vCenter Server 5 Standard for vSphere 5 (per instance) with 1-year subscription support	0C19577
VMware vCenter Server 5 Standard for vSphere 5 (per instance) with 3-year subscription support	0C19578
VMware vCenter Server Heartbeat 6 for 1 vCenter Server with 1-year subscription support	0C19579
VMware vCenter Server Heartbeat 6 for 1 vCenter Server with 3-year subscription support	0C19580
VMware vSphere 5 Enterprise Acceleration Kit for 6 processors with 1-year subscription support	0C19581
VMware vSphere 5 Enterprise Acceleration Kit for 6 processors with 3-year subscription support	0C19582
VMware vSphere 5 Enterprise for 1 processor with 1-year subscription support	0C19583
VMware vSphere 5 Enterprise for 1 processor with 3-year subscription support	0C19584
VMware vSphere 5 Enterprise Plus Acceleration Kit for 6 processors with 1-year subscription support	0C19585
VMware vSphere 5 Enterprise Plus Acceleration Kit for 6 processors with 3-year subscription support	0C19586
VMware vSphere 5 Enterprise Plus for 1 processor with 1-year subscription support	0C19587
VMware vSphere 5 Enterprise Plus for 1 processor with 3-year subscription support	0C19588
VMware vSphere 5 Essentials Kit for 3 hosts (Max 2 processors per host) with 1-year subscription support	0C19589
VMware vSphere 5 Essentials Kit for 3 hosts (Max 2 processors per host) with 3-year subscription support	0C19590
VMware vSphere 5 Essentials Plus Kit for 3 hosts (Max 2 processors per host) with 1-year subscription support	0C19591
VMware vSphere 5 Essentials Plus Kit for 3 hosts (Max 2 processors per host) with 3-year subscription support	0C19592
VMware vSphere 5 Standard Acceleration Kit for 6 processors with 1-year subscription support	0C19593
VMware vSphere 5 Standard Acceleration Kit for 6 processors with 3-year subscription support	0C19594
VMware vSphere 5 Standard for 1 processor with 1-year subscription support	0C19595
VMware vSphere 5 Standard for 1 processor with 3-year subscription support	0C19596
VMware vSphere 5 Standard with Operations Management Acceleration Kit for 6 processors with 1-year subscription support	0C19597
VMware vSphere 5 Standard with Operations Management Acceleration Kit for 6 processors with 3-year subscription support	0C19598
VMware vSphere 5 Standard with Operations Management and 1-year subscription support	0C19599
VMware vSphere 5 Standard with Operations Management and 3-year subscription support	0C19600



## ACCESSORIES FOR THINKSERVER® RD540

### PROCESSORS

0C19546 – Intel® Xeon® E5-2697 v2 processor option for ThinkServer RD540/RD640  
 0C19547 – Intel® Xeon® E5-2695 v2 processor option for ThinkServer RD540/RD640  
 0C19548 – Intel® Xeon® E5-2690 v2 processor option for ThinkServer RD540/RD640  
 0C19549 – Intel® Xeon® E5-2680 v2 processor option for ThinkServer RD540/RD640  
 0C19550 – Intel® Xeon® E5-2670 v2 processor option for ThinkServer RD540/RD640  
 0C19551 – Intel® Xeon® E5-2660 v2 processor option for ThinkServer RD540/RD640  
 0C19552 – Intel® Xeon® E5-2650L v2 processor option for ThinkServer RD540/RD640  
 0C19553 – Intel® Xeon® E5-2667 v2 processor option for ThinkServer RD540/RD640  
 0C19554 – Intel® Xeon® E5-2650 v2 processor option for ThinkServer RD540/RD640  
 0C19555 – Intel® Xeon® E5-2640 v2 processor option for ThinkServer RD540/RD640  
 0C19556 – Intel® Xeon® E5-2630 v2 processor option for ThinkServer RD540/RD640  
 0C19557 – Intel® Xeon® E5-2620 v2 processor option for ThinkServer RD540/RD640  
 0C19558 – Intel® Xeon® E5-2630L v2 processor option for ThinkServer RD540/RD640  
 0C19559 – Intel® Xeon® E5-2609 v2 processor option for ThinkServer RD540/RD640  
 0C19560 – Intel® Xeon® E5-2603 v2 processor option for ThinkServer RD540/RD640

### RAID AND HBA

0A89464 – ThinkServer RAID 500 Adapter II  
 0A89407 – ThinkServer RAID 500 Upgrade Key for Advanced RAID  
 0A89463 – ThinkServer RAID 700 Adapter II  
 67Y2647 – ThinkServer RAID 700 Battery  
 0C19489 – ThinkServer RAID 710 Adapter  
 0C19490 – ThinkServer RAID Super Capacitor Module  
 0C19491 – ThinkServer RAID FastPath Software Key  
 0C19492 – ThinkServer RAID CacheCade Pro 2.0 Software Key  
 0C19476 – ThinkServer LPe1250 Single Port 8GB Fiber Channel HBA by Emulex  
 0C19478 – ThinkServer LPe12002 Dual Port 8GB Fiber Channel HBA by Emulex

### MANAGEMENT

67Y2624 – ThinkServer Management Module Premium

### ETHERNET

#### 1Gbps Ethernet

0C19506 – ThinkServer 1Gbps Ethernet I350-T2 Server Adapter by Intel®  
 0C19507 – ThinkServer 1Gbps Ethernet I350-T4 Server Adapter by Intel®

#### 10Gbps Ethernet

0C19487 – Lenovo® 10Gbps Ethernet X520-SR2 Server Adapter by Intel®  
 0C19486 – Lenovo® 10Gbps Ethernet X520-DA2 Server Adapter by Intel®  
 0C19497 – Lenovo® 10Gbps Ethernet X540-T2 Server Adapter by Intel®  
 0C19488 – Lenovo® 10Gbps Ethernet Fiber Module by Intel®

### MEMORY AND HARD DRIVES

0C19533 – ThinkServer 4GB DDR3L-1600 MHz (1R x 8) RDIMM  
 0C19534 – ThinkServer 8GB DDR3L-1600 MHz (2R x 8) RDIMM  
 0C19535 – ThinkServer 16GB DDR3L-1600 MHz (2R x 4) RDIMM

**3.5" 7.2K Enterprise Hot Swap SATA 6Gbps**  
 0A89473 – ThinkServer 500GB 7.2K 3.5" Enterprise SATA 6Gbps Hot Swap Hard Drive  
 0A89474 – ThinkServer 1TB 7.2K 3.5" Enterprise SATA 6Gbps Hot Swap Hard Drive  
 0A89475 – ThinkServer 2TB 7.2K 3.5" Enterprise SATA 6Gbps Hot Swap Hard Drive  
 0A89477 – ThinkServer 3TB 7.2K 3.5" Enterprise SATA 6Gbps Hot Swap Hard Drive  
 0C19520 – ThinkServer 3.5" 4TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive

**3.5" 7.2K Enterprise Hot Swap SAS 6Gbps**  
 0C19530 – ThinkServer 3.5" 1TB 7.2K SAS 6Gbps Hot Swap Hard Drive  
 0C19531 – ThinkServer 3.5" 2TB 7.2K SAS 6Gbps Hot Swap Hard Drive  
 0C19532 – ThinkServer 3.5" 3TB 7.2K SAS 6Gbps Hot Swap Hard Drive

**2.5" 7.2K Enterprise Hot Swap SATA 6Gbps**  
 0C19495 – ThinkServer 500GB 7.2K 2.5" Enterprise SATA 6Gbps Hot Swap Hard Drive  
 0C19496 – ThinkServer 1TB 7.2K 2.5" Enterprise SATA 6Gbps Hot Swap Hard Drive

**2.5" 10K Enterprise Hot Swap SAS 6Gbps**  
 67Y2619 – ThinkServer 2.5" 300GB 10K SAS 6Gbps Hot Swap Hard Drive  
 67Y2621 – ThinkServer 2.5" 600GB 10K SAS 6Gbps Hot Swap Hard Drive  
 0A89409 – ThinkServer 2.5" 900GB 10K SAS 6Gbps Hot Swap Hard Drive

**2.5" 15K Enterprise Hot Swap SAS 6Gbps**  
 0C19494 – ThinkServer 2.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive

**2.5" Enterprise MLC SATA**  
 0A89418 – ThinkServer 2.5" 200GB MLC SATA Solid State Drive  
 0A89419 – ThinkServer 2.5" 400GB MLC SATA Solid State Drive  
 0A89420 – ThinkServer 2.5" 100GB MLC SATA Solid State Drive

**2.5" to 3.5" Enterprise MLC SATA**  
 0C19571 – ThinkServer 2.5" 100GB MLC SATA Solid State Drive to 3.5" Kit  
 0C19572 – ThinkServer 2.5" 200GB MLC SATA Solid State Drive to 3.5" Kit  
 0C19573 – ThinkServer 2.5" 400GB MLC SATA Solid State Drive to 3.5" Kit

### RACK AND POWER

4X20E54690 – ThinkServer 800W Gold Hot Swap Redundant Power Supply for Racks  
 0A89476 – ThinkServer Cable Management Arm

## SERVICES OFFERINGS

Lenovo® Services lets you get the most out of your ThinkServer® – no matter how you use it. Whether you have a thousand client seats or just one, Lenovo delivers the quality, reliability and peace of mind to keep you up and running, no matter where you are, no matter when you need it.

Lenovo ThinkServer Services are offered in a variety of service levels to meet the needs of your business as well as your budget. You can extend your base warranty for up to five years and choose the service level you value most: onsite next day, same day or around the clock within four hour service windows up to 365 days a year. We also offer an optional Keep Your Drive service so that your data never needs to leave your premises, as well as a Priority Support call center upgrade offering.

#### RD Series ThinkServer with 3-year base warranty

4-year Onsite Next Business Day Response ----- 5WS0F15415  
 5-year Onsite Next Business Day Response ----- 5WS0F15419  
 3-year Onsite 9x5 4 Hour Response (RD Series) ----- 5WS0F15355  
 3-year Onsite 24x7 4 Hour Response (RD Series) ----- 5WS0F15458

#### Lenovo ThinkServer Priority Support

Want to jump to the head of the queue? Talk to a specialized agent and get advanced call center support? Then our Priority Support offering is perfect for you. Choose an offering which matches the term of the ThinkServer base warranty or select from the convenient service bundle offerings designed to make it easy to purchase the combination of Lenovo services that are just right for your organization.

#### Lenovo ThinkServer Keep Your Drive

Data security is more important than ever and Lenovo offers our popular Keep Your Drive Service so that your data never needs to leave your hands. In the unlikely event of a hard drive failure requiring a hard drive replacement, you can keep your original drive, ensuring that your data stays in your control. Add this service to your base warranty or choose a services bundle which meets your business needs.

#### Lenovo ThinkServer Keep Your Drive

3-year Keep Your Drive (RD Series)----- 5PS0F15436

#### Bundled ThinkServer Services Offerings

Lenovo offers convenient services bundles to allow you to choose the combination of services that's right for you with a single part number and price. Here are a few of our most popular offerings:

#### RD Series ThinkServer with 3-year base warranty

3-year Onsite 9x5 4 Hour Response + Priority (RD Series) -----  
 ----- 5WS0F15468  
 3-year Onsite 24x7 4 Hour Response + Priority (RD Series) -----  
 ----- 5WS0F15399  
 3-year Onsite 24x7 4 Hour Response + Priority + Keep Your  
 Drive (RD Series)----- 5PS0F15352  
 4-year Onsite 9x5 4 Hour Response + Priority + Keep Your  
 Drive (RD Series)----- 5PS0F15400

NOTE: All service levels offered vary by country. Please consult your Lenovo Business Partner or Lenovo Sales Representative for more information on the services offered in your location.

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**Availability:** Offers, prices, specifications and availability may change without notice. Lenovo is not responsible for photographic or typographic errors. **Warranty:** For a copy of applicable warranties, write to: Warranty Information, 500 Park Offices Drive, RTP, NC, 27709, Attn: Dept. ZPYA/B600. Lenovo makes no representation or warranty regarding third-party products or services. **Trademarks:** Lenovo, the Lenovo logo, Rescue and Recovery, ThinkPad, ThinkCentre, ThinkServer, ThinkStation, ThinkVantage and ThinkVision are trademarks or registered trademarks of Lenovo. Microsoft, Windows and Vista are registered trademarks of Microsoft Corporation. Intel, the Intel logo, Intel Core, Core Inside, Xeon and Xeon Inside are registered trademarks of Intel Corporation in the U.S. and other countries. Other company, product and service names may be trademarks or service marks of others.

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