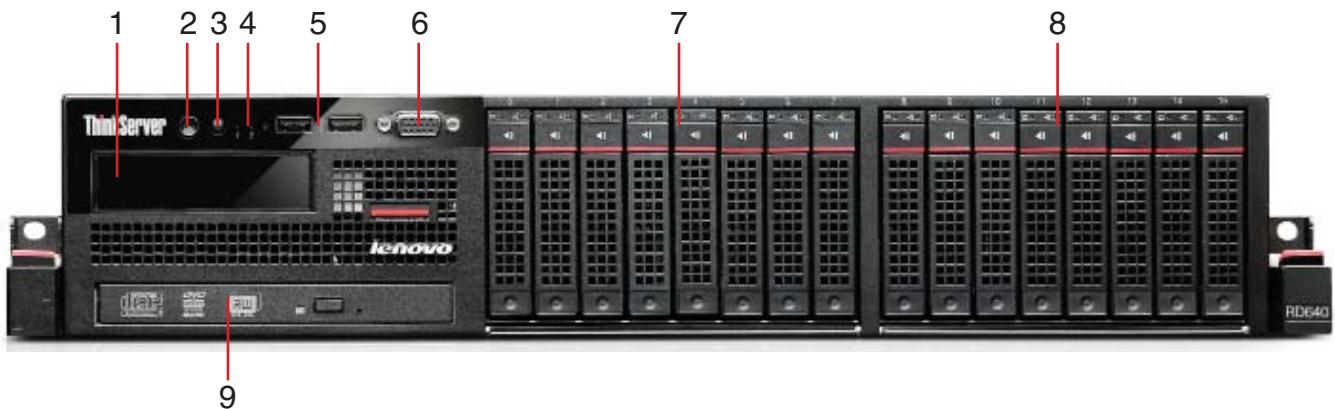
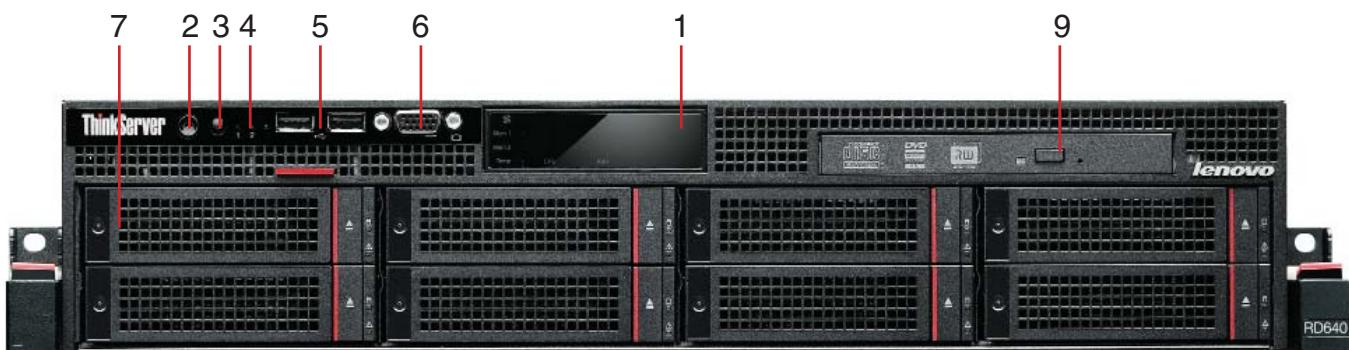


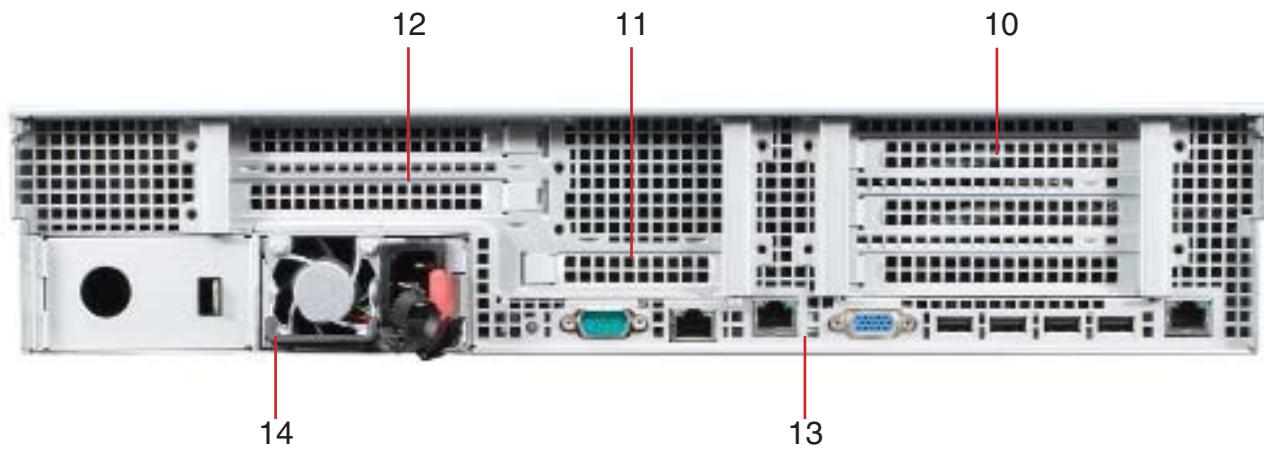
ThinkServer RD640 Overview - Front and Rear



ThinkServer RD640 with 8x2.5"/16x2.5" Disk Drive Bays



ThinkServer RD640 with 8x3.5" Disk Drive Bays



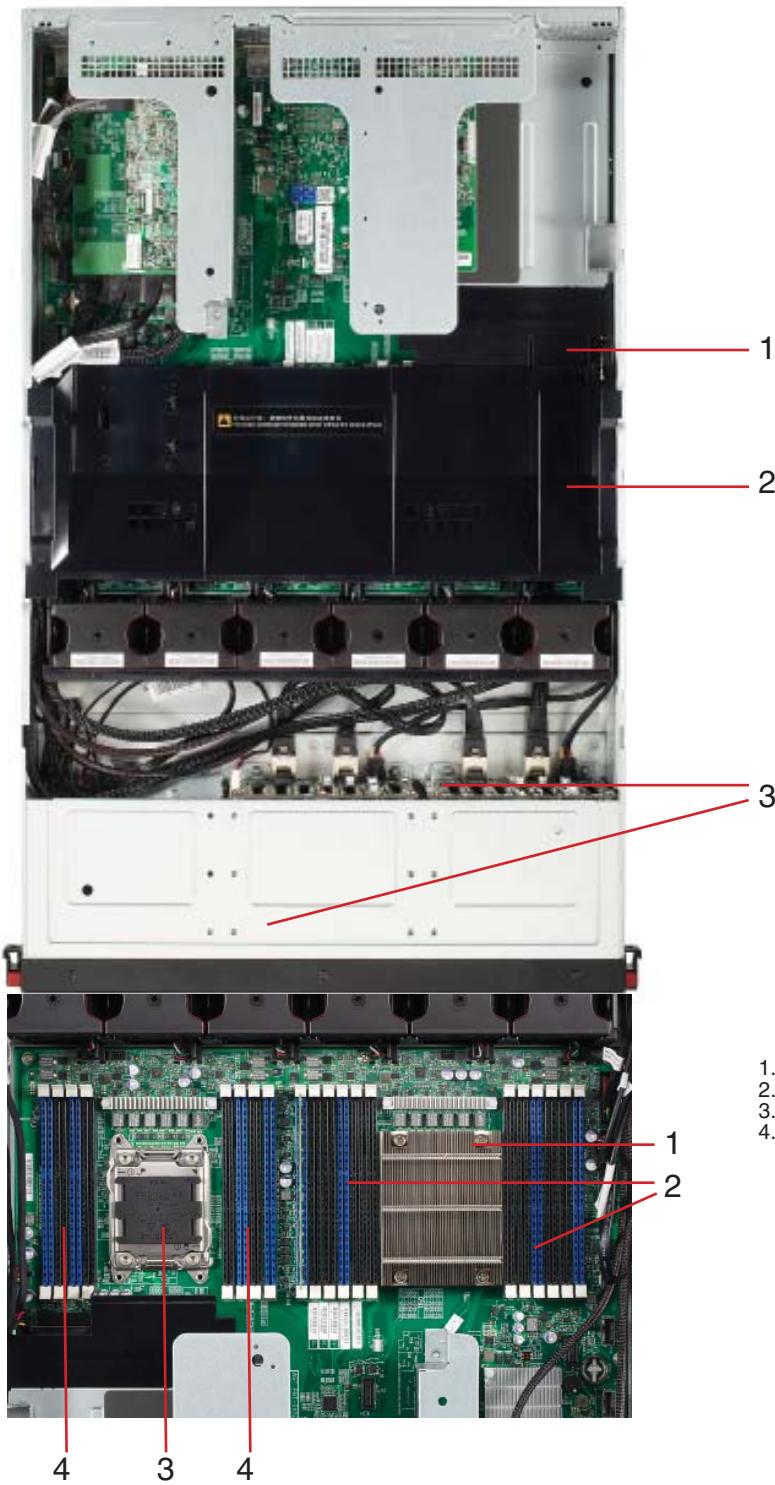
Front View

1. Intelligent Diagnostics Premium Module (optional)
2. Power Button with LED
3. ID button with LED
4. 2 Network interface status LEDs
5. 2 USB 2.0
6. 1 VGA
7. Hot-swap disk drive bays
8. Hot-swap disk drive bays for 16x2.5" hard drive bays model
9. Optical (optional)

Rear View

10. PCI Express slots 1-3
11. PCI Express slots 4
12. PCI Express slots 5-6 (for dual processors model)
13. Rear ports:
 - 4 USB 2.0
 - 1 serial
 - 2 ethernet
 - 1 RJ-45 (dedicate/share mgmt)
 - 1 VGA
14. Hot-swap power supplies

ThinkServer RD640 Overview - Internal



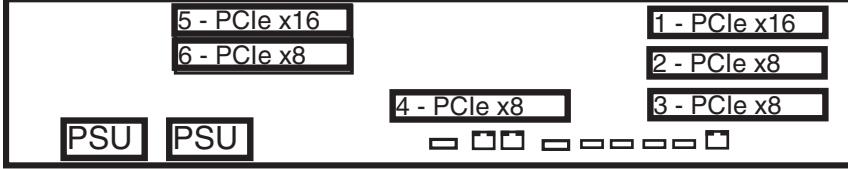
Internal View

1. Hot-swap cooling fans
2. Processors and memory DIMM sockets (under cooling shroud, see below)
3. PCI Express slots

Processors and Memory DIMM Sockets (under cooling shroud)

1. CPU 1
2. 12 Memory DIMM sockets for CPU 1
3. CPU 2 (optional)
4. 8 Memory DIMM sockets for CPU 2 (for dual processors model)

ThinkServer RD640 Platform Specifications

Components	Specifications																											
Chipset	Intel C602J Chipset																											
Mechanical	<ul style="list-style-type: none"> • 2U rack with rail kit • 19"W x 28.9"D x 3.45"H (with rack handles) • 482.4mm W x 734mm D x 87.6mm H (with rack handles) • 26.5 kg (58.42 lb) when fully configured 																											
Front ports	Two USB 2.0, one analog VGA DB-15 connector																											
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector																											
Expansion Slots	 <p>Up to six PCI-Express slots via two riser cards, riser card 1 for slot 1-3, riser card 2 for slot 4-6 Slot 1: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCI Express 3.0 x8 Slot 3: half-length, full-height, PCI Express 3.0 x8 Slot 4: Low Profile, PCI Express 3.0 x8 <i>Slot 5-6 are available on dual processors models:</i> Slot 5: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCI Express 3.0 x8</p>																											
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; <i>Maximum resolution: 1920x1200@60Hz</i>																											
Hot-swap parts	Disk drives, power supplies, and cooling fans																											
Safety, environment, and certifications	Environmental certifications <ul style="list-style-type: none"> • Energy Star Server 1.1 qualified • RoHS-compliant 																											
	EMC <ul style="list-style-type: none"> FCC Class A, CSA CE 																											
	240VA <ul style="list-style-type: none"> Supports 																											
	Temperature - operating <ul style="list-style-type: none"> 50 °F to 95 °F (10 °C to 35 °C) 																											
	Temperature - non operating (no package) <ul style="list-style-type: none"> -10 °C to 60 °C 																											
	Temperature - non operating (with package) <ul style="list-style-type: none"> -40 °C to 70 °C 																											
	Altitude - operating <ul style="list-style-type: none"> Supported Altitude (unpressurized): 0-10000ft (0-3048m) 																											
	Humidity - operating <ul style="list-style-type: none"> 8%~80%, non-condensing 																											
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Acoustic noise (idle/working mode)	Category <table border="1"> <thead> <tr> <th>Category</th> <th>Normal Configuration</th> <th>Best Configuration</th> </tr> </thead> <tbody> <tr> <td>CPU</td> <td>1</td> <td>2</td> </tr> <tr> <td>HDD</td> <td>2x 900GB 2.5" SAS 6Gb/s</td> <td>16x 900GB 2.5" SAS 6Gb/s</td> </tr> <tr> <td>Memory</td> <td>1x 8GB 1600MHz LVRDIMM</td> <td>20x 8GB 1600MHz LVRDIMM</td> </tr> <tr> <td>PCIe adapters</td> <td>I350 X520-DA2 Emulex LPe16002</td> <td>I350 X520-DA2 Emulex LPe16002</td> </tr> <tr> <td>PSU</td> <td>1x 800W</td> <td>2x 800W</td> </tr> <tr> <td>RAID</td> <td>RAID 700 adapter</td> <td>RAID 700 adapter</td> </tr> <tr> <td>Sound Pressure (operating)</td> <td>44.1 dB(A)</td> <td>42.91 dB(A)</td> </tr> <tr> <td>Sound Pressure (idle)</td> <td>44.4 dB(A)</td> <td>43.8 dB(A)</td> </tr> </tbody> </table>	Category	Normal Configuration	Best Configuration	CPU	1	2	HDD	2x 900GB 2.5" SAS 6Gb/s	16x 900GB 2.5" SAS 6Gb/s	Memory	1x 8GB 1600MHz LVRDIMM	20x 8GB 1600MHz LVRDIMM	PCIe adapters	I350 X520-DA2 Emulex LPe16002	I350 X520-DA2 Emulex LPe16002	PSU	1x 800W	2x 800W	RAID	RAID 700 adapter	RAID 700 adapter	Sound Pressure (operating)	44.1 dB(A)	42.91 dB(A)	Sound Pressure (idle)	44.4 dB(A)	43.8 dB(A)
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