



*Personal Systems Reference
Lenovo® ThinkServer™ Servers
2008 to present - withdrawn*

August 2011 - Version 404



Lenovo ThinkServer 200 Series Family

lenovo.com

ThinkServer™



Lenovo ThinkServer TS100
with 400W non-redundant power supply



Lenovo ThinkServer TS100
with simple-swap disks



Lenovo ThinkServer TS100
with 430W redundant power supply



Lenovo ThinkServer TS100



Lenovo ThinkServer TS100



Lenovo ThinkServer TS100

| Name | Type-model | Slot x bay | Processor | GHz | Cores | Memory | Disk(s) | Disk size | Disk connection | Disk type | RAID controller | SATA optical | Power supply | Limited warranty ¹ | Workhorse Global | Avail date |
|-------|------------|------------|-----------|------|-------|---------|---------|-----------|-----------------|-----------|-----------------|--------------|--------------|-------------------------------|------------------|------------|
| TS100 | 6432-17U | 4x7 | E7400 | 2.80 | 2 | 1 x 1GB | None | 3.5" | 4 x Simple-swap | SATA | 1064E | DVD | 400W | 1-year | No | Sep 08 |

- **T = Tower, S = Single processor**
- **High performance server with rock solid technology and proven hardware design**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

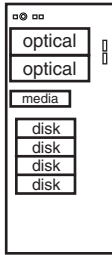
| | | | | | | | | | | | | | | |
|---|--|--|---|-----------------------------|---------|-----------------------------|---------|---|---------|---|---------|---|---------|---|
| Processor | One Intel® Core™ 2 Duo Processor E7400 with dual-core, one maximum, 1066MHz system bus, and 3MB L2 cache | | <div><div>Tower</div><div><ul style="list-style-type: none">• Business black color; metal case• 8.5"W x 21.25"D x 17.25"H• 216mm W x 540mm D x 438mm H• 56 lb (25.2kg) max configuration• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support</div><div><div>Bay ① 5.25", 1.6" high, external, standard optical</div><div>Bay ② 5.25", 1.6" high, external, optional optical</div><div>Bay ③ 3.5", 1" high, external, open</div><div>Bay ④ 3.5", 1" high, internal, optional SATA disk</div><div>Bay ⑤ 3.5", 1" high, internal, optional SATA disk</div><div>Bay ⑥ 3.5", 1" high, internal, optional SATA disk</div><div>Bay ⑦ 3.5", 1" high, internal, optional SATA disk</div></div><div><div>Slot 1: full-length, full-height, PCIe x8</div><div>Slot 2: full-length, full-height, PCIe x1 (x4 mechanical)</div><div>Slot 3: full-length, full-height, 64-bit PCI-X (not enabled)</div><div>Slot 4: full-length, full-height, 32-bit PCI 2.2</div><div>Slot 5: half-length, full-height, 32-bit PCI 2.2</div></div><div><div>Security</div><div><ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)</div><div><div>Software management tools</div><div><ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage</div></div><div><div>ThinkPlus Priority Support, 90-day Trial</div><div>RoHS-compliant</div><div><div>Limited Warranty¹</div><div><div><div>⇒ 1-year parts and labor</div><div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</div><div>⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services</div><div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div></div></div></div></div></div> | | | | | | | | | | | |
| Implementation | Processor uses FC-LGA8 package, one LGA775 socket | | | | | | | | | | | | | |
| Memory | 1GB std, 8GB max, PC2-6400 800MHz DDR2, ECC , dual-channel capable, four 184-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; three sockets available | | | | | | | | | | | | | |
| Graphics | ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.2, 16MB, external monitor port (VGA DB-15); <i>Maximum resolution</i> : 1024x768@85Hz | | | | | | | | | | | | | |
| Diskette | None (use USB port) | | | | | | | | | | | | | |
| SATA DVD | DVD-ROM, SATA 1.5Gb/s, uses ICH9R | | | | | | | | | | | | | |
| SATA disk(s) | None | | | | | | | | | | | | | |
| SATA controller | Serial ATA, SATA 3.0Gb/s, integrated in ICH9R, not used by disks | | | | | | | | | | | | | |
| SATA connectors | Six SATA connectors on planar, four simple-swap connectors on 3.5" disk backplate | | | | | | | | | | | | | |
| SATA RAID cont | LSI™ 1064E, SATA 3.0 Gb/s, RAID® 0, 1 support, Mini PCI Express® adapter | | | | | | | | | | | | | |
| SAS disk | Not supported | | | | | | | | | | | | | |
| SAS connectors | Not supported | | | | | | | | | | | | | |
| SAS controller | Not supported | | | | | | | | | | | | | |
| Chipset | Intel 3210 Chipset , Intel I/O Controller Hub 9 RAID (ICH9R) for RAID 0, 1, 10 support, SMSC® SCH5027D Super I/O | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, two serial (9-pin), parallel, ethernet (RJ-45), monitor (VGA DB-15) | | | | | | | | | | | | | |
| Diagnostics | Diagnostic LEDs (system-error LED on front cover; error LEDs for fans, disks, memory, processor, PCI slots, power supply) | | | | | | | | | | | | | |
| Systems mgmt | System management utility, baseboard management controller, IPMI 2.0-compliant | | | | | | | | | | | | | |
| Audio | None | | | | | | | | | | | | | |
| Speaker | Internal speaker | | | | | | | | | | | | | |
| Ethernet | Gigabit ethernet on planar, Broadcom® BCM5722, PCIe x1 | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | |
| Power supply | One 400 watts, one maximum, non-redundant, variable speed fan, non-hot-swap, universal | | | | | | | | | | | | | |
| Cooling | Three fans (processor, rear, disks) | | | | | | | | | | | | | |
| <div><div>Accessories</div><div><table><tr><td>1GB PC2-6400 DDR2 ECC UDIMM</td><td>45J6188</td></tr><tr><td>2GB PC2-6400 DDR2 ECC UDIMM</td><td>45J6189</td></tr><tr><td>160GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6195</td></tr><tr><td>250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6196</td></tr><tr><td>500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6197</td></tr><tr><td>750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6198</td></tr></table></div><div>Other accessories at lenovo.com/accessories</div></div> | | | | 1GB PC2-6400 DDR2 ECC UDIMM | 45J6188 | 2GB PC2-6400 DDR2 ECC UDIMM | 45J6189 | 160GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6195 | 250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6196 | 500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6197 | 750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) |
| 1GB PC2-6400 DDR2 ECC UDIMM | 45J6188 | | | | | | | | | | | | | |
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See footnotes for important warranty information
US model announced September 30, 2008
US model withdrawn effective April 2010

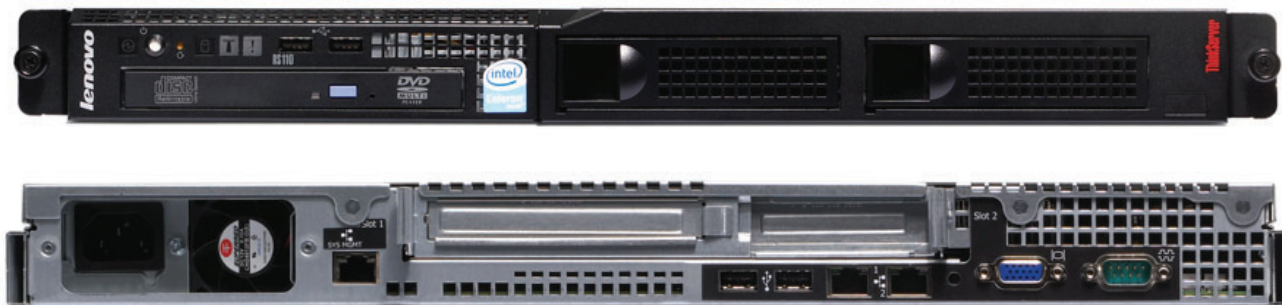
© Lenovo
(TS100-1) April 2010

| Name | Type-model | Slot x bay | Processor | GHz | Cores | Memory | Disk(s) | Disk size | Disk connection | Disk type | RAID controller | SATA optical | Power supply(s) | Limited Warranty ¹ | Global | Avail date |
|-------|------------|------------|-----------|------|-------|---------|---------|-----------|-----------------|-----------------------|-----------------|--------------|-----------------|-------------------------------|--------|------------|
| TS100 | 6434-13U | 4x7 | E3110 | 3.00 | 2 | 2 x 1GB | None | 3.5" | 4 x Simple-swap | SATA | 1064E | DVD | 400W | 3-year | No | Sep 08 |
| TS100 | 6434-15U | 4x7 | X3360 | 2.83 | 4 | 2 x 2GB | None | 3.5" | 4 x Hot-swap | SATA/SAS ⁴ | MR10i | DVD | 2 x 430W | 3-year | No | Sep 08 |

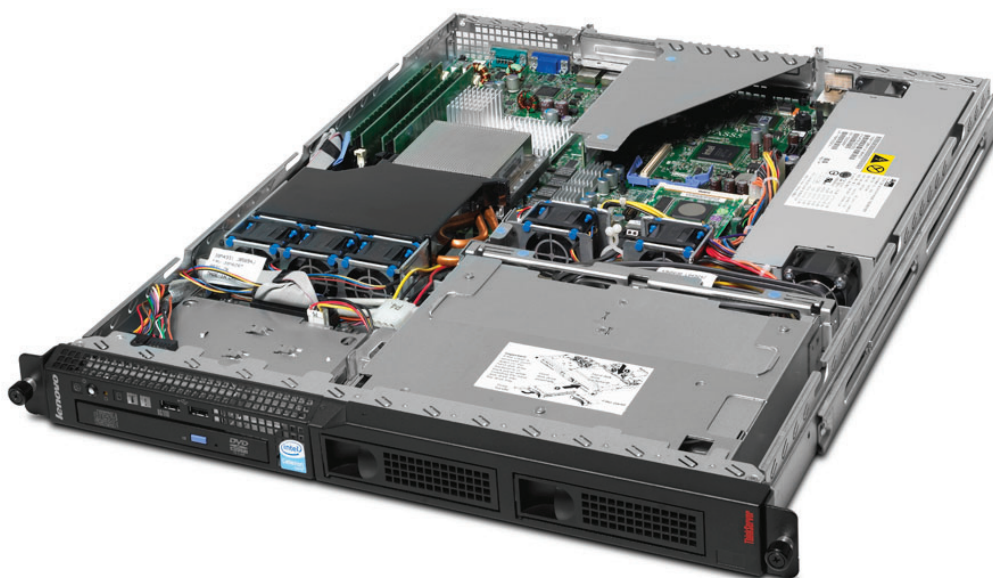
- **T = Tower, S = Single processor**
- **High performance server with rock solid technology and proven hardware design**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|---|-----------------------------|---------|-----------------------------|---------|---|---------|---|---------|---|---------|---|---------|--|---------|--|---------|--|---------|--|---------|--|
| Processor | One Intel® Xeon® Processor E3110 with dual-core , one maximum, 1333MHz system bus, and 6MB L2 cache or One Intel Xeon Processor X3360 with quad-core , one maximum, 1333MHz system bus, and 12MB L2 cache Processor uses FC-LGA8 package, one LGA775 socket | | | Tower <ul style="list-style-type: none">• Business black color; metal case• 8.5"W x 21.25"D x 17.25"H• 216mm W x 540mm D x 438mm H• 56 lb (25.2kg) max configuration• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support  | | | | | | | | | | | | | | | | | | | | | |
| Implementation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Memory | 2GB or 4GB std, 8GB max, PC2-6400 800MHz DDR2, ECC , dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in two sockets; two sockets available | | | | | | | | | | | | | | | | | | | | | | | | |
| Graphics | ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.2, 16MB, external monitor port (VGA DB-15); <i>Maximum resolution:</i> 1024x768@85Hz | | | | | | | | | | | | | | | | | | | | | | | | |
| Diskette | None (use USB port) | | | Bay ① 5.25", 1.6" high, external, standard optical Bay ② 5.25", 1.6" high, external, optional optical Bay ③ 3.5", 1" high, external, open Bay ④ 3.5", 1" high, internal, optional disk Bay ⑤ 3.5", 1" high, internal, optional disk Bay ⑥ 3.5", 1" high, internal, optional disk Bay ⑦ 3.5", 1" high, internal, optional disk Slot 1: full-length, full-height, PCIe x8 Slot 2: full-length, full-height, PCIe x1 (x4 mechanical) Slot 3: full-length, full-height, 64-bit PCI-X (not enabled) Slot 4: full-length, full-height, 32-bit PCI 2.2 Slot 5: half-length, full-height, 32-bit PCI 2.2 | | | | | | | | | | | | | | | | | | | | | |
| SATA DVD | DVD-ROM, SATA 1.5Gb/s, uses ICH9R | | | | | | | | | | | | | | | | | | | | | | | | |
| SATA disk(s) | None | | | | | | | | | | | | | | | | | | | | | | | | |
| SATA controller | Serial ATA, SATA 3.0Gb/s, integrated in ICH9R, not used by disks | | | | | | | | | | | | | | | | | | | | | | | | |
| SATA connectors | Six SATA connectors on planar, <i>13U SATA:</i> 4 simple-swap connectors on 3.5" disk backplate <i>15U SATA/SAS:</i> 4 hot-swap connectors on 3.5" disk backplane | | | | | | | | | | | | | | | | | | | | | | | | |
| SATA RAID cont | LSI™ 1064E, SATA 3.0 Gb/s, RAID® 0, 1 support, Mini PCI Express® adapter | | | | | | | | | | | | | | | | | | | | | | | | |
| SAS disk(s) | None | | | | | | | | | | | | | | | | | | | | | | | | |
| SAS connectors | <i>15U SATA/SAS:</i> 4 hot-swap connectors on 3.5" disk backplane | | | | | | | | | | | | | | | | | | | | | | | | |
| SAS RAID cont | <i>15U:</i> LSI MR10i, SATA 3.0 Gb/s, SAS 3.0 Gb/s, RAID® 0, 1, 5, 6, 10, 50, 60 support, Mini PCI Express adapter | | | | | | | | | | | | | | | | | | | | | | | | |
| Chipset | Intel 3210 Chipset , Intel I/O Controller Hub 9 RAID (ICH9R) for RAID 0, 1, 10 support, SMSC® SCH5027D Super I/O | | | | | | | | | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | Security <ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | | | | | | | | | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, two serial (9-pin), parallel, ethernet (RJ-45), monitor (VGA DB-15) | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic LEDs (system-error LED on front cover; error LEDs for fans, disks, memory, processor, PCI slots, power supply) | | | | | | | | | | | | | | | | | | | | | | | | |
| Systems mgmt | System management utility, baseboard management controller, IPMI 2.0-compliant | | | | | | | | | | | | | | | | | | | | | | | | |
| Audio | None | | | Software management tools <ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage | | | | | | | | | | | | | | | | | | | | | |
| Speaker | Internal speaker | | | | | | | | | | | | | | | | | | | | | | | | |
| Ethernet | Gigabit ethernet on planar, Broadcom® BCM5722, PCIe x1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | ThinkPlus Priority Support, 90-day Trial | | | | | | | | | | | | | | | | | | | | | |
| Power supply | <i>Some:</i> One 400 watts, one maximum, non-redundant, variable speed fan, non-hot-swap, universal <i>Some:</i> Two 430 watts, two maximum, redundant with two, variable speed fan, hot-swap, universal | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | Three fans (processor, rear, disks) | | | RoHS-compliant | | | | | | | | | | | | | | | | | | | | | |
| Accessories <table><tr><td>1GB PC2-6400 DDR2 ECC UDIMM</td><td>45J6188</td></tr><tr><td>2GB PC2-6400 DDR2 ECC UDIMM</td><td>45J6189</td></tr><tr><td>160GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6195</td></tr><tr><td>250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6196</td></tr><tr><td>500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6197</td></tr><tr><td>750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6198</td></tr><tr><td>250GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6201</td></tr><tr><td>500GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6202</td></tr><tr><td>750GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6203</td></tr><tr><td>1TB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6204</td></tr><tr><td>146GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm)</td><td>45J6211</td></tr></table> | | | | | 1GB PC2-6400 DDR2 ECC UDIMM | 45J6188 | 2GB PC2-6400 DDR2 ECC UDIMM | 45J6189 | 160GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6195 | 250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6196 | 500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6197 | 750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6198 | 250GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6201 | 500GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6202 | 750GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6203 | 1TB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6204 | 146GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) |
| 1GB PC2-6400 DDR2 ECC UDIMM | 45J6188 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2GB PC2-6400 DDR2 ECC UDIMM | 45J6189 | | | | | | | | | | | | | | | | | | | | | | | | |
| 160GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6195 | | | | | | | | | | | | | | | | | | | | | | | | |
| 250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6196 | | | | | | | | | | | | | | | | | | | | | | | | |
| 500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6197 | | | | | | | | | | | | | | | | | | | | | | | | |
| 750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6198 | | | | | | | | | | | | | | | | | | | | | | | | |
| 250GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6201 | | | | | | | | | | | | | | | | | | | | | | | | |
| 500GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6202 | | | | | | | | | | | | | | | | | | | | | | | | |
| 750GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6203 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1TB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6204 | | | | | | | | | | | | | | | | | | | | | | | | |
| 146GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) | 45J6211 | | | | | | | | | | | | | | | | | | | | | | | | |
| Other accessories at lenovo.com/accessories | | | | Limited Warranty¹ <ul style="list-style-type: none">↪ 3-year parts and labor↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)↪ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services↪ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | | | | | | |

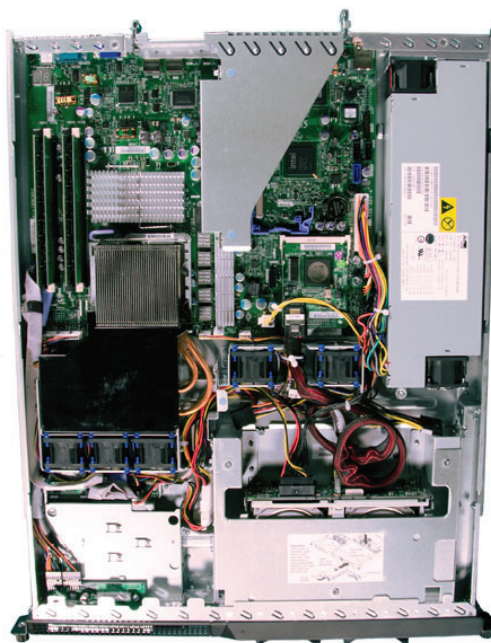
ThinkServer™



Lenovo ThinkServer RS110



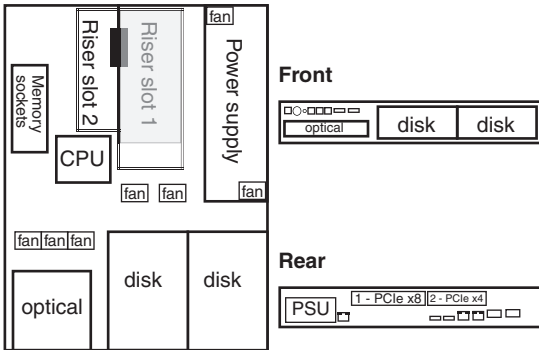
Lenovo ThinkServer RS110



Lenovo ThinkServer RS110

| Name | Type-model | Slot x bay | Processor | GHz | Cores | Memory | Disk(s) | size | Disk connection | Disk type | RAID controller | EIDE optical | Power supply | Fans | Limited warranty ¹ | Workhorse Global | Avail date |
|-------|------------|------------|-----------|------|-------|---------|---------|------|-----------------|-----------|-----------------|--------------|--------------|------|-------------------------------|------------------|------------|
| RS110 | 6436-15U | 2x3 | E7400 | 2.80 | 2 | 1 x 1GB | None | 3.5" | 2 x Simple-swap | SATA | 1064E | Combo | 350W | 5 | 1-year | No | Sep 08 |

- **R = Rack, S = Single processor**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

| | | |
|---|--|--|
| Processor | One Intel® Core™ 2 Duo Processor E7400 with dual-core, one maximum, 1066MHz system bus, and 3MB L2 cache | <div>1U Rack top</div> <div></div> <div>Front</div> <div><div>optical</div><div>disk</div><div>disk</div></div> <div>Rear</div> <div><div>PSU</div><div>1 - PCIe x8</div><div>2 - PCIe x4</div></div> <div><ul style="list-style-type: none">• Black color front; metal case• 17.3" W x 22" D x 1.75" H• 440mm W x 559mm D x 43mm H• 28 lb (12.7kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons with system error LED<div>Bay ① 5.25", 0.5" high, external, std optical</div><div>Bay ② 3.5", 1" high, external, optional disk</div><div>Bay ③ 3.5", 1" high, external, optional disk</div><div>PCI Express riser card:</div><div>Slot 1: 3/4-length, full-height, PCIe x8</div><div>Slot 2: half-length, low-profile, PCIe x4 (x8 mechanical)</div><div>Security</div><div><ul style="list-style-type: none">• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all)</div><div>ThinkPlus Priority Support, 90-day Trial</div><div>RoHS-compliant</div><div>Limited Warranty¹</div><div><div>↺ 1-year parts and labor</div><div>↺ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</div><div>↺ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services</div><div>↺ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div></div> |
| Implementation | Processor uses FC-LGA8 package, one LGA775 socket | |
| Memory | 1GB std, 8GB max, PC2-6400 800MHz DDR2, ECC , dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; three sockets available | |
| Graphics | ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.3, 16MB, external monitor port (VGA DB-15 rear); <i>Maximum resolution</i> : 800x600@85Hz | |
| EIDE controller | Enhanced IDE controller in Enterprise South Bridge, one connector on planar, single 1-drop IDE cable (for Combo) | |
| EIDE Combo | DVD-ROM/CD-RW, Ultrabay Enhanced, 12.7mm high | |
| SATA disk(s) | None | |
| SATA controller | Serial ATA, SATA 3.0Gb/s, integrated in ICH9R, not used by disks | |
| SATA connectors | Two SATA connectors on planar, two simple-swap connectors on 3.5" disk backplate | |
| SATA RAID cont | LSI™ 1064E, SATA 3.0Gb/s, RAID® 0, 1 support, Mini PCI Express® adapter | |
| SAS disk | Not supported | |
| SAS connectors | Not supported | |
| SAS RAID cont | Not supported | |
| Chipset | Intel 3210 Chipset , Intel I/O Controller Hub 9 RAID (ICH9R) for RAID 0, 1, 10 support, SMSC® SCH5027 Super I/O | |
| Riser card | Contains one PCI Express x4 slot and one PCI Express x8 slot | |
| Front ports | Two USB 2.0 | |
| Rear ports | Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | |
| Diagnostics | Diagnostic LEDs (system-error LED on front cover; error LEDs for fans, disk controller, memory, PCI slots, power) | |
| Systems mgmt | System management utility, baseboard management controller, IPMI 2.0-compliant | |
| Audio | None | |
| Speaker | Internal speaker | |
| Ethernet | Dual gigabit on planar, Broadcom® 5722 (PCIe x1), Broadcom 5703 (PCI 2.2), full duplex, Wake on LAN® | |
| Keyboard | None (use USB port) | |
| Mouse | None (use USB port) | |
| Power supply | One 350 watts, one maximum, non-redundant, two variable speed fans, non-hot-swap, universal | |
| Cooling | Five fans, five maximum, variable speed | |
| Software management tools | | |
| • ThinkServer EasyStartup • ThinkServer EasyManage | | |
| Accessories | | |
| 1GB PC2-6400 DDR2 ECC UDIMM 45J6188 | | |
| 2GB PC2-6400 DDR2 ECC UDIMM 45J6189 | | |
| 160GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6195 | | |
| 250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6196 | | |
| 500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6197 | | |
| 750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6198 | | |
| Other accessories at lenovo.com/accessories | | |

See footnotes for important warranty information
US model announced September 30, 2008
US model withdrawn effective April 2010

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- **R = Rack, S = Single processor**
- **High performance server with rock solid technology and proven hardware design**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

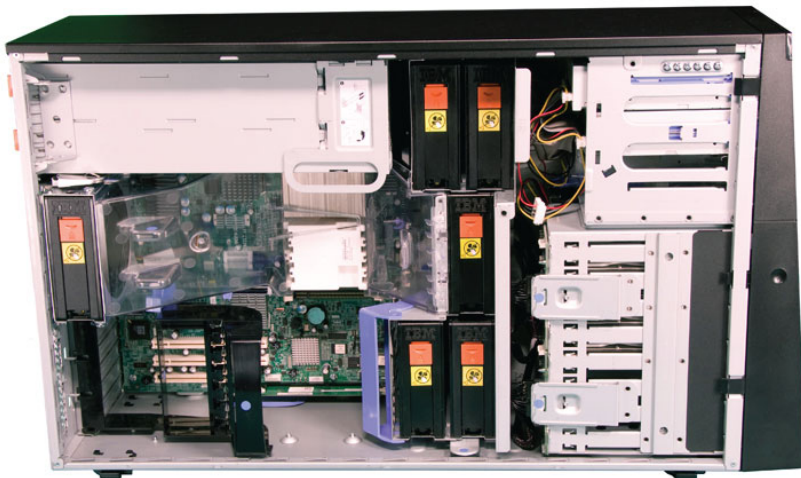
See footnotes for important warranty information
US models announced September 30, 2008
US models withdrawn effective April 2010



Lenovo ThinkServer TD100



Lenovo ThinkServer TD100x



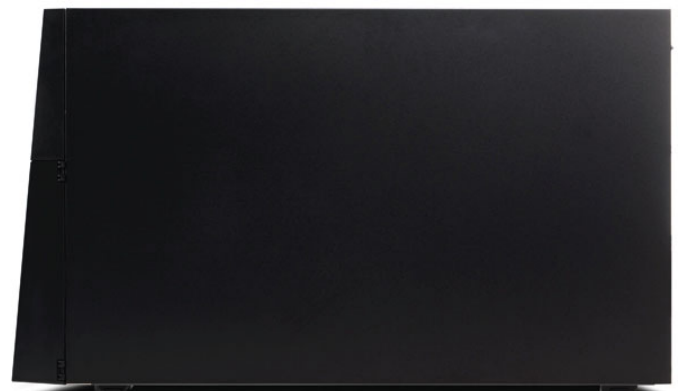
Lenovo ThinkServer TD100
or TD100x



Lenovo ThinkServer TD100
or TD100x



Lenovo ThinkServer TD100x
with Easy LED Diagnostic panel



Lenovo ThinkServer TD100
or TD100x

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory | Disk(s) size | Disk connection | Disk type | RAID controller | EIDE optical | Power supply(s) | Fans | Limited warranty ¹ | Global | Avail date |
|-------|------------|------------|--------------|------|-------|---------|--------------|-----------------|-----------|-----------------|--------------|-----------------|------|-------------------------------|--------|------------|
| TD100 | 6399-14U | 6x7 | 1 x E5405 | 2.00 | 4 | 2 x 1GB | None 3.5" | 4 x Simple-swap | SATA | RAID-8k | DVD | 670W | 3 | 1-year | No | Sep 08 |
| TD100 | 6399-15U | 6x7 | 1 x E5405 | 2.00 | 4 | 2 x 1GB | None 3.5" | 4 x Simple-swap | SATA | 9580W | DVD | 670W | 3 | 1-year | No | Jan 09 |

- **T = Tower, D = Dual processor support**
- **High performance server with rock solid technology and proven hardware design**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

| | | | | | | | | | | | | | | | | | | |
|---|--|--|--------------------------------------|---------|-------------------------------|---------|-------------------------------|---------|-------------------------------|---------|---|---------|---|---------|---|---------|---|---------|
| Processor(s) | One Intel® Xeon® Processor E5405 with quad-core , two maximum, 1333MHz system bus, and 12MB L2 cache | <div><div><div>optical</div><div>optical</div><div>tape</div></div><div><div>disk</div><div>disk</div><div>disk</div><div>disk</div></div></div> <div>Tower<ul style="list-style-type: none">• Business black color; metal case• 8.6"W x 29.4"D x 17.3"H• 218mm W x 747mm D x 440mm H• 75 lb (34kg) max configuration• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support<div>Bay ① 5.25", 1.6" high, external, std optical</div><div>Bay ② 5.25", 1.6" high, external, optional tape or optical</div><div>Bay ③ 5.25", 1.6" high, external, optional tape or optical</div><div>Bay ④ 3.5", 1" high, external, optional disk</div><div>Bay ⑤ 3.5", 1" high, external, optional disk</div><div>Bay ⑥ 3.5", 1" high, external, optional disk</div><div>Bay ⑦ 3.5", 1" high, external, optional disk</div><div>Slot 1: half-length, full-height, PCIe® x4 (x8 mechanical)</div><div>Slot 2: full-length, full-height, PCIe x8</div><div>Slot 3: full-length, full-height, PCIe x8</div><div>Slot 4: full-length, full-height, 64-bit PCI-X</div><div>Slot 5: full-length, full-height, 64-bit PCI-X</div><div>Slot 6: half-length, full-height, PCI</div></div> | | | | | | | | | | | | | | | | |
| Implementation | Processor uses FC-LGA6 package, two LGA771 sockets | | | | | | | | | | | | | | | | | |
| Memory | 2GB std, 32GB max, PC2-5300 667MHz DDR2, Advanced ECC , fully buffered, eight 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in two sockets; six sockets available | | | | | | | | | | | | | | | | | |
| Graphics | ATI® RN50 (ES1000), on planar; 32-bit/33MHz PCI 2.3, 16MB, external monitor port (VGA DB-15 rear); <i>Maximum resolution:</i> 800x600@85Hz | | | | | | | | | | | | | | | | | |
| EIDE controller | Enhanced IDE/ATA 100 controller in Enterprise South Bridge, one connector on planar, single 2-drop IDE cable (for DVD) | | | | | | | | | | | | | | | | | |
| EIDE DVD | DVD-ROM, 1.6" high | | | | | | | | | | | | | | | | | |
| SATA disk(s) | None | | | | | | | | | | | | | | | | | |
| SATA connectors | Four simple-swap connectors on 3.5" disk backplane | | | | | | | | | | | | | | | | | |
| SAS disk(s) | None | | | | | | | | | | | | | | | | | |
| SATA/SAS cont | <i>15U</i> SATA: Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar | | | | | | | | | | | | | | | | | |
| SAS connectors | None | | | | | | | | | | | | | | | | | |
| SATA/SAS RAID controller | <i>14U</i> SATA: RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane | | | | | | | | | | | | | | | | | |
| Chipset | Intel 5000P chipset , Intel 6321ESB-2E I/O Controller Hub, NS PC8374L Super I/O | | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | | | |
| Rear ports | Two USB 2.0, two serial (9-pin), parallel, keyboard (PS/2), mouse (PS/2), external monitor (VGA DB-15), ethernet (RJ-45), system management (RJ-45) | | | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, PCI slots, voltage regulator module, power supply) | | | | | | | | | | | | | | | | | |
| Systems mgmt | System management utility, baseboard management controller, IPMI 2.0-compliant | | | | | | | | | | | | | | | | | |
| Audio | None | | | | | | | | | | | | | | | | | |
| Speaker | Internal speaker | | | | | | | | | | | | | | | | | |
| Ethernet | Gigabit ethernet on planar, Broadcom® BCM5721, PCIe x1, full duplex, Wake on LAN® | | | | | | | | | | | | | | | | | |
| Keyboard | None (use PS/2 or USB port) | | | | | | | | | | | | | | | | | |
| Mouse | None (use PS/2 or USB port) | | | | | | | | | | | | | | | | | |
| Power supply | One 670 watts, one maximum, non-redundant, variable speed fan, non-hot-swap, universal | | | | | | | | | | | | | | | | | |
| Cooling | Three or six fans, six maximum, variable speed, hardware failure protection, hot-swap, six fans required with second redundant power supply | | | | | | | | | | | | | | | | | |
| Software management tools <ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage | | | | | | | | | | | | | | | | | | |
| Accessories <table><tr><td>Intel Xeon Quad-Core Processor E5405</td><td>45J6221</td></tr><tr><td>1GB PC2-5300 DDR2 ECC FB-DIMM</td><td>45J6191</td></tr><tr><td>2GB PC2-5300 DDR2 ECC FB-DIMM</td><td>45J6192</td></tr><tr><td>4GB PC2-5300 DDR2 ECC FB-DIMM</td><td>45J6193</td></tr><tr><td>160GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6195</td></tr><tr><td>250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6196</td></tr><tr><td>500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6197</td></tr><tr><td>750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6198</td></tr></table> Other accessories at lenovo.com/accessories | | | Intel Xeon Quad-Core Processor E5405 | 45J6221 | 1GB PC2-5300 DDR2 ECC FB-DIMM | 45J6191 | 2GB PC2-5300 DDR2 ECC FB-DIMM | 45J6192 | 4GB PC2-5300 DDR2 ECC FB-DIMM | 45J6193 | 160GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6195 | 250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6196 | 500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6197 | 750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6198 |
| Intel Xeon Quad-Core Processor E5405 | 45J6221 | | | | | | | | | | | | | | | | | |
| 1GB PC2-5300 DDR2 ECC FB-DIMM | 45J6191 | | | | | | | | | | | | | | | | | |
| 2GB PC2-5300 DDR2 ECC FB-DIMM | 45J6192 | | | | | | | | | | | | | | | | | |
| 4GB PC2-5300 DDR2 ECC FB-DIMM | 45J6193 | | | | | | | | | | | | | | | | | |
| 160GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6195 | | | | | | | | | | | | | | | | | |
| 250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6196 | | | | | | | | | | | | | | | | | |
| 500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6197 | | | | | | | | | | | | | | | | | |
| 750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6198 | | | | | | | | | | | | | | | | | |
| Security <ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | | | | | | | | | | | | | | | | | | |
| ThinkPlus Priority Support, 90-day Trial | | | | | | | | | | | | | | | | | | |
| RoHS-compliant | | | | | | | | | | | | | | | | | | |
| Limited Warranty¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | | | |

See footnotes for important warranty information
 US models announced September 30, 2008 or January 20, 2009
 US models withdrawn effective February 2010

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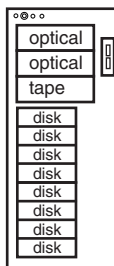
| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory | Disk(s) | Disk size | Disk connection | Disk type | RAID controller | EIDE optical | Power supply(s) | Fans | Limited warranty ¹ | Workhorse Global | Avail date |
|-------|------------|------------|--------------|------|-------|---------|---------|-----------|-----------------|-----------------------|-----------------|--------------|-----------------|--------|-------------------------------|------------------|------------|
| TD100 | 6429-17U | 6x11 | 1 x E5410 | 2.33 | 4 | 2 x 1GB | None | 3.5" | 8 x Hot-swap | SATA/SAS ⁴ | RAID-8k DVD | 2 x 835W | 6 | 3-year | No | Sep 08 | |
| TD100 | 6429-18U | 6x11 | 1 x E5430 | 2.66 | 4 | 2 x 2GB | None | 3.5" | 8 x Hot-swap | SATA/SAS ⁴ | RAID-8k DVD | 2 x 835W | 6 | 3-year | No | Sep 08 | |

- **T = Tower, D = Dual processor support**
- **High performance server with rock solid technology and proven hardware design**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

| | | | |
|--|--|--|---|
| Processor(s) | One Intel® Xeon® Processor E5410 or E5430 with quad-core , two maximum, 1333MHz system bus, and 12MB L2 cache | <div><div><div>optical</div><div>optical</div><div>tape</div></div><div><div>disk</div><div>disk</div><div>disk</div><div>disk</div><div>disk</div><div>disk</div><div>disk</div><div>disk</div></div></div> | Tower |
| Implementation | Processor uses FC-LGA6 package, two LGA771 sockets | | <ul style="list-style-type: none">• Business black color; metal case• 8.6"W x 29.4"D x 17.3"H• 218mm W x 747mm D x 440mm H• 75 lb (34kg) max configuration• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support |
| Memory | 2GB or 4GB std, 32GB max, PC2-5300 667MHz DDR2, Advanced ECC , fully buffered, eight 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in two sockets; six sockets available | | Bay ① 5.25", 1.6" high, external, std optical |
| Graphics | ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.3, 16MB, external monitor port (VGA DB-15 rear); <i>Maximum resolution</i> : 800x600@85Hz | | Bay ② 5.25", 1.6" high, external, optional tape or optical |
| EIDE controller | Enhanced IDE/ATA 100 controller in Enterprise South Bridge, one connector on planar, single 2-drop IDE cable (for DVD) | | Bay ③ 5.25", 1.6" high, external, optional tape or optical |
| EIDE DVD | DVD-ROM, 1.6" high | | Bay ④ 3.5", 1" high, external, optional disk |
| SATA disk(s) | None | | Bay ⑤ 3.5", 1" high, external, optional disk |
| SATA connectors | Eight hot-swap connectors on 3.5" disk backplane | | Bay ⑥ 3.5", 1" high, external, optional disk |
| SAS disk(s) | None | | Bay ⑦ 3.5", 1" high, external, optional disk |
| SATA/SAS cont | Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used | | Bay ⑧ 3.5", 1" high, external, optional disk |
| SAS connectors | Eight hot-swap connectors on 3.5" disk backplane | | Bay ⑨ 3.5", 1" high, external, optional disk |
| SATA/SAS RAID controller | RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane | | Bay ⑩ 3.5", 1" high, external, optional disk |
| Chipset | Intel 5000P chipset , Intel 6321ESB-2E I/O Controller Hub, NS PC8374L Super I/O | | Bay ⑪ 3.5", 1" high, external, optional disk |
| Front ports | Two USB 2.0 | | Slot 1: half-length, full-height, PCIe® x4 (x8 mechanical) |
| Rear ports | Two USB 2.0, two serial (9-pin), parallel, keyboard (PS/2), mouse (PS/2), external monitor (VGA DB-15), ethernet (RJ-45), system management (RJ-45) | | Slot 2: full-length, full-height, PCIe x8 |
| Diagnostics | Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, PCI slots, voltage regulator module, power supply) | | Slot 3: full-length, full-height, PCIe x8 |
| Systems mgmt | System management utility, baseboard management controller, IPMI 2.0-compliant | Slot 4: full-length, full-height, 64-bit PCI-X | |
| Audio | None | Slot 5: full-length, full-height, 64-bit PCI-X | |
| Speaker | Internal speaker | Slot 6: half-length, full-height, PCI | |
| Ethernet | Gigabit ethernet on planar, Broadcom® BCM5721, PCIe x1, full duplex, Wake on LAN® | | |
| Keyboard | None (use PS/2 or USB port) | | |
| Mouse | None (use PS/2 or USB port) | | |
| Power supply | Two 835 watts, two maximum, redundant with two, variable speed fan, hot-swap, universal, two redundant power supplies require six fans | | |
| Cooling | Six fans, six maximum, variable speed, hardware failure protection, hot-swap, six fans required with second redundant power supply | | |
| Software management tools | | | |
| • ThinkServer EasyStartup • ThinkServer EasyManage | | | |
| Accessories | | | |
| Intel Xeon Quad-Core Processor E5410 45J6185 | | | |
| Intel Xeon Quad-Core Processor E5430 45J6186 | | | |
| 1GB PC2-5300 DDR2 ECC FB-DIMM 45J6191 | | | |
| 2GB PC2-5300 DDR2 ECC FB-DIMM 45J6192 | | | |
| 4GB PC2-5300 DDR2 ECC FB-DIMM 45J6193 | | | |
| 250GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6201 | | | |
| 500GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6202 | | | |
| 750GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6203 | | | |
| 1TB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6204 | | | |
| 146GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 45J6211 | | | |
| 300GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 45J6212 | | | |
| 450GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 67Y0119 | | | |
| Other accessories at lenovo.com/accessories | | | |
| Security | | | |
| <ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | | | |
| ThinkPlus Priority Support, 90-day Trial | | | |
| RoHS-compliant | | | |
| Limited Warranty¹ | | | |
| ⇒ 3-year parts and labor | | | |
| ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) | | | |
| ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty | | | |
| <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services | | | |
| ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | |

See footnotes for important warranty information
 US models announced September 30, 2008
 US models withdrawn effective February 2010

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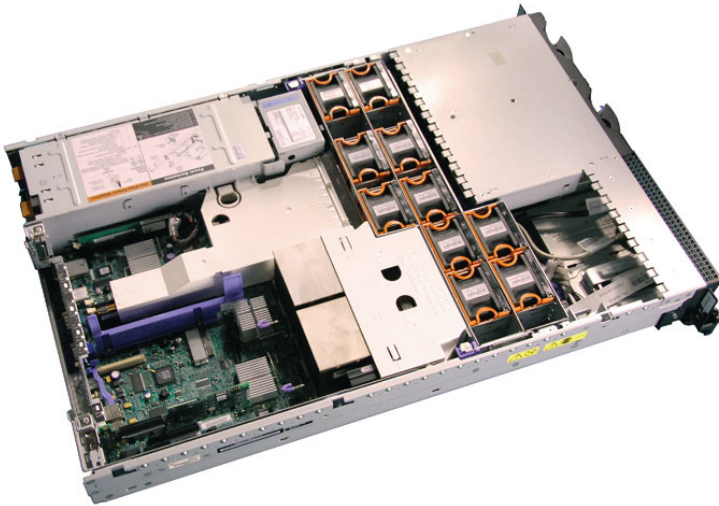
| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory | Disk(s) | size | Disk connection | Disk type | RAID controller | EIDE optical | Power supply(s) | Fans | warranty ¹ | Global | Avail date | |
|--|---|------------|--------------|------|-------|---------|---------|------|-----------------|-----------|--|--------------|-----------------|----------|-----------------------|--------|------------|--------|
| TD100x | 4206-14U | 6x11 | 1 x X5450 | 3.00 | 4 | 2 x 2GB | None | 3.5" | 8 x | Hot-swap | SATA/SAS ⁴ | RAID-8k | DVD | 2 x 835W | 6 | 3-year | No | Sep 08 |
| <ul style="list-style-type: none">• T = Tower, D = Dual processor support• This small and medium business (SMB) model is part of the US TopSeller™ Program• The TD100x differs from the TD100 because of the following standard features: Easy LED Diagnostic panel, support for up to eight 3.5" hot-swap SAS disks, two redundant 835 watt power supplies, six redundant fans | | | | | | | | | | | | | | | | | | |
| Processor(s) | One Intel® Xeon® Processor X5450 with quad-core, two maximum, 1333MHz system bus, and 12MB L2 cache | | | | | | | | | | Tower <ul style="list-style-type: none">• Business black color; metal case• 8.6"W x 29.4"D x 17.3"H• 218mm W x 747mm D x 440mm H• 75 lb (34kg) max configuration• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support  | | | | | | | |
| Implementation | Processor uses FC-LGA6 package, two LGA771 sockets | | | | | | | | | | | | | | | | | |
| Memory | 4GB std, 48GB max, PC2-5300 667MHz DDR2, Advanced ECC, fully buffered, twelve 240-pin DIMM sockets; Non-italics: standard memory in two sockets; ten sockets available | | | | | | | | | | Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, optional tape or optical Bay ③ 5.25", 1.6" high, external, optional tape or optical Bay ④ 3.5", 1" high, external, optional disk Bay ⑤ 3.5", 1" high, external, optional disk Bay ⑥ 3.5", 1" high, external, optional disk Bay ⑦ 3.5", 1" high, external, optional disk Bay ⑧ 3.5", 1" high, external, optional disk Bay ⑨ 3.5", 1" high, external, optional disk Bay ⑩ 3.5", 1" high, external, optional disk Bay ⑪ 3.5", 1" high, external, optional disk | | | | | | | |
| Graphics | ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.3, 16MB, external monitor port (VGA DB-15 rear); Maximum resolution: 800x600@85Hz | | | | | | | | | | | | | | | | | |
| EIDE controller | Enhanced IDE/ATA 100 controller in Enterprise South Bridge, one connector on planar, single 2-drop IDE cable (DVD) | | | | | | | | | | Slot 1: half-length, full-height, PCIe® x4 (x8 mechanical) Slot 2: full-length, full-height, PCIe x8 Slot 3: full-length, full-height, PCIe x8 Slot 4: full-length, full-height, 64-bit PCI-X Slot 5: full-length, full-height, 64-bit PCI-X Slot 6: half-length, full-height, PCI | | | | | | | |
| EIDE DVD | DVD-ROM, 1.6" high | | | | | | | | | | | | | | | | | |
| SATA disk(s) | None | | | | | | | | | | Security <ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | | | | | | | |
| SATA connectors | Eight hot-swap connectors on 3.5" disk backplane | | | | | | | | | | | | | | | | | |
| SAS disk(s) | None | | | | | | | | | | ThinkPlus Priority Support, 90-day Trial | | | | | | | |
| SATA/SAS cont | Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used | | | | | | | | | | | | | | | | | |
| SAS connectors | Eight hot-swap connectors on 3.5" disk backplane | | | | | | | | | | RoHS-compliant | | | | | | | |
| SATA/SAS RAID controller | RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane | | | | | | | | | | | | | | | | | |
| Chipset | Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8374L Super I/O | | | | | | | | | | Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | | | |
| Rear ports | Two USB 2.0, two serial (9-pin), parallel, keyboard (PS/2), mouse (PS/2), external monitor (VGA DB-15), ethernet (RJ-45), system management (RJ-45) | | | | | | | | | | Other accessories at lenovo.com/accessories | | | | | | | |
| Diagnostics | Easy LED Diagnostics (operator information panel on left side with error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, PCI slots, power supplies) | | | | | | | | | | | | | | | | | |
| Systems mgmt | System management utility, baseboard management controller, IPMI 2.0-compliant | | | | | | | | | | | | | | | | | |
| Audio | None | | | | | | | | | | | | | | | | | |
| Speaker | Internal speaker | | | | | | | | | | | | | | | | | |
| Ethernet | Gigabit ethernet on planar, Broadcom® BCM5721, PCIe x1, full duplex, Wake on LAN® | | | | | | | | | | | | | | | | | |
| Keyboard | None (use PS/2 or USB port) | | | | | | | | | | | | | | | | | |
| Mouse | None (use PS/2 or USB port) | | | | | | | | | | | | | | | | | |
| Power supply | Two 835 watts, two maximum, redundant with 2, variable speed fan, hot-swap, universal, two redundant power supplies require six fans | | | | | | | | | | | | | | | | | |
| Cooling | Six fans, six maximum, variable speed, hardware failure protection, hot-swap, six fans required with second redundant power supply | | | | | | | | | | | | | | | | | |
| Software management tools | | | | | | | | | | | | | | | | | | |
| • ThinkServer EasyStartup • ThinkServer EasyManage | | | | | | | | | | | | | | | | | | |
| Accessories | | | | | | | | | | | | | | | | | | |
| Intel® Xeon® Quad-Core Processor X5450 45K1608 | | | | | | | | | | | | | | | | | | |
| 1GB PC2-5300 DDR2 ECC FB-DIMM 45J6191 | | | | | | | | | | | | | | | | | | |
| 2GB PC2-5300 DDR2 ECC FB-DIMM 45J6192 | | | | | | | | | | | | | | | | | | |
| 4GB PC2-5300 DDR2 ECC FB-DIMM 45J6193 | | | | | | | | | | | | | | | | | | |
| 250GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6201 | | | | | | | | | | | | | | | | | | |
| 500GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6202 | | | | | | | | | | | | | | | | | | |
| 750GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6203 | | | | | | | | | | | | | | | | | | |
| 1TB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6204 | | | | | | | | | | | | | | | | | | |
| 146GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 45J6211 | | | | | | | | | | | | | | | | | | |
| 300GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 45J6212 | | | | | | | | | | | | | | | | | | |
| 450GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 67Y0119 | | | | | | | | | | | | | | | | | | |
| Other accessories at lenovo.com/accessories | | | | | | | | | | | | | | | | | | |

See footnotes for important warranty information
 US model announced September 30, 2008
 US model withdrawn effective February 2010

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 (TD100X-1) February 2010



Lenovo ThinkServer RD120



Lenovo ThinkServer RD120



Lenovo ThinkServer RD120



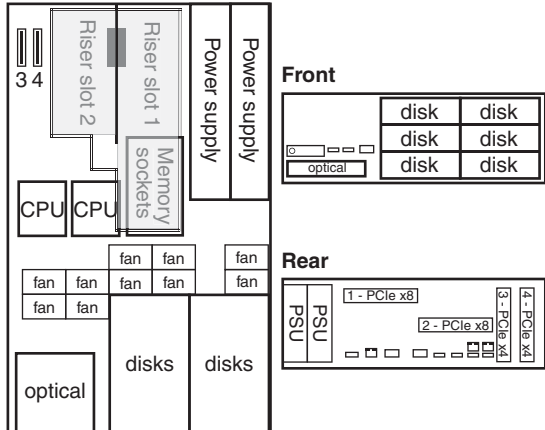
Lenovo ThinkServer RD120



Lenovo ThinkServer RD120

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory | Disk(s) size | Disk connection | Disk type | RAID controller | EIDE optical | Power supply(s) | Fans | Limited warranty ¹ | Workhorse Global | Avail date |
|-------|------------|------------|--------------|------|-------|---------|--------------|-----------------|-----------|--------------------------------|--------------|-----------------|------|-------------------------------|------------------|------------|
| RD120 | 6445-12U | 4x7 | 1 x E5205 | 1.86 | 2 | 2 x 1GB | None | 3.5" | 6 x | Hot-swap SATA/SAS ⁴ | RAID-8k | Combo 2 x 835W | 10 | 1-year | No | Sep 08 |
| RD120 | 6445-14U | 4x7 | 1 x E5205 | 1.86 | 2 | 2 x 1GB | None | 3.5" | 6 x | Hot-swap SATA/SAS ⁴ | 9580W | Combo 2 x 835W | 10 | 1-year | No | Jan 09 |

- **R = Rack, D = Dual processor support**
- **High performance server with rock solid technology and proven hardware design**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

| | | |
|---|---|--|
| Processor | One Intel® Xeon® Processor E5205 with dual-core, two maximum, 1066MHz system bus, and 6MB L2 cache | <div>2U Rack top</div> <div></div> |
| Implementation | Processor uses FC-LGA6 package, two LGA771 sockets | |
| Memory | 2GB std, 48GB max, PC2-5300 667MHz DDR2, Advanced ECC , fully buffered, 4-channel capable, twelve 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in two sockets; ten sockets available | |
| Graphics | ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.3, 16MB, external monitor port (two VGA DB-15 front and rear); <i>Maximum resolution</i> : 800x600@85Hz | |
| EIDE controller | Enhanced IDE controller in Enterprise South Bridge, one connector on planar, single 1-drop IDE cable (for Combo) | |
| EIDE Combo | DVD-ROM/CD-RW, Ultrabay Enhanced, 12.7mm high | |
| SATA disk(s) | None | |
| SATA connectors | Six hot-swap connectors on 3.5" disk backplane | |
| SAS disk(s) | None | |
| SATA/SAS ⁴ cont | 14U SATA/SAS : Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID [®] 0, 1, 10 support, 8-port, on planar | |
| SAS connectors | Six hot-swap connectors on 3.5" disk backplane | |
| SATA/SAS RAID controller | 12U SATA/SAS : RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID [®] 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane | |
| Chipset | Intel 5000P chipset , Intel 6321ESB-2E I/O Controller Hub, NS PC8742XVUL Super I/O | |
| Riser card | Contains two PCI Express® x8 slots | |
| Front ports | Two USB 2.0, external monitor (VGA DB-15) | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45), external SAS | |
| Diagnostics | Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED; error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, riser card, PCI slots, power supplies) | |
| Systems mgmt | System management utility, baseboard management controller, IPMI 2.0-compliant | |
| Audio | None | |
| Speaker | Internal speaker | |
| Ethernet | Dual gigabit on planar, two Broadcom® 5708, PCIe x1, full duplex, Wake on LAN®, TCP/IP Offload Engine (TOE), Alert Standard Format 2.0 | |
| Keyboard | None (use USB port) | |
| Mouse | None (use USB port) | |
| Power supply | Two 835 watts, two maximum, redundant with 2, variable speed fan, hot-swap, universal, two redundant power supplies require ten fans | |
| Cooling | Ten fans, ten maximum, variable speed, hardware failure protection, hot-swap, ten fans required with second redundant power supply | |
| Accessories Intel Xeon Quad-Core Processor E5205 45J6180 1GB PC2-5300 DDR2 ECC FB-DIMM 45J6191 2GB PC2-5300 DDR2 ECC FB-DIMM 45J6192 4GB PC2-5300 DDR2 ECC FB-DIMM 45J6193 500GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6202 750GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6203 1TB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6204 300GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 45J6212 450GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 67Y0119 Other accessories at lenovo.com/accessories | | |
| Limited Warranty¹ ⇨ 1-year parts and labor ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations) ⁷ • Post warranty maintenance services ⇨ 24 hour x 7 day ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378 | | |
| Security • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (front or all) | | |
| Software management tools • ThinkServer EasyStartup • ThinkServer EasyManage | | |
| ThinkPlus Priority Support, 90-day Trial | | |
| RoHS-compliant | | |

See footnotes for important warranty information
 US models announced September 30, 2008 or January 20, 2009
 US models withdrawn effective February 2010

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory | Disk(s) | Disk size | Disk connection | Disk type | RAID controller | EIDE optical | Power supply(s) | Fans | Workhorse warranty ¹ | Global | Avail date |
|-------|------------|------------|--------------|------|-------|---------|---------|-----------|-----------------|-----------------------|-----------------|--------------|-----------------|------|---------------------------------|--------|------------|
| RD120 | 6447-18U | 4x7 | 1 x E5410 | 2.33 | 4 | 2 x 1GB | None | 3.5" | 6 x Hot-swap | SATA/SAS ⁴ | RAID-8k | Combo | 2 x 835W | 10 | 3-year | No | Sep 08 |
| RD120 | 6447-21U | 4x7 | 1 x E5430 | 2.66 | 4 | 2 x 2GB | None | 3.5" | 6 x Hot-swap | SATA/SAS | RAID-8k | Combo | 2 x 835W | 10 | 3-year | No | Sep 08 |
| RD120 | 6447-23U | 4x10 | 2 x E5450 | 3.00 | 8 | 2 x 2GB | None | 2.5" | 8 x Hot-swap | SAS | RAID-8k | Combo | 2 x 835W | 10 | 3-year | No | Sep 08 |
| RD120 | 6447-24U | 4x7 | 2 x E5450 | 3.00 | 8 | 2 x 2GB | None | 3.5" | 6 x Hot-swap | SATA/SAS | RAID-8k | Combo | 2 x 835W | 10 | 3-year | No | May 09 |

- **R = Rack, D = Dual processor support**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

| | | | | | |
|--|---|--|--|--|--|
| Processor | One or two Intel® Xeon® Processor E5410, E5430, or E5450 with quad-core , two maximum, 1333MHz bus, and 12MB L2 cache Processor uses FC-LGA6 package, two LGA771 sockets | | | | |
| Implementation | Processor uses FC-LGA6 package, two LGA771 sockets | | | | |
| Memory | 2GB or 4GB std, 48GB max, PC2-5300 667MHz DDR2, Advanced ECC , fully buffered, 4-channel capable, twelve 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in two sockets; ten sockets available | | | | |
| Graphics | ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.3, 16MB, external monitor port (two VGA DB-15 front and rear); <i>Maximum resolution</i> : 800x600@85Hz | | | | |
| EIDE controller | Enhanced IDE controller in Enterprise South Bridge, one connector on planar, single 1-drop IDE cable (for DVD) | | | | |
| EIDE Combo | DVD-ROM/CD-RW, Ultrabay Enhanced, 12.7mm high | | | | |
| SATA disk(s) | None | | | | |
| SATA connectors | 18U/21U/24U : six hot-swap connectors on 3.5" disk backplane | | | | |
| SAS disk(s) | None | | | | |
| SATA/SAS cont | Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used | | | | |
| SAS connectors | 18U/21U/24U : six hot-swap connectors on 3.5" disk backplane | | | | |
| SATA/SAS RAID controller | 23U : eight hot-swap connectors on 2.5" disk backplane RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane | | | | |
| Chipset | Intel 5000P chipset , Intel 6321ESB-2E I/O Controller Hub, NS PC8742XVUL Super I/O | | | | |
| Riser card | Contains two PCI Express® x8 slots | | | | |
| Front ports | Two USB 2.0, external monitor (VGA DB-15) | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45), external SAS | | | | |
| Diagnostics | Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED; error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, riser card, PCI slots, power supplies) | | | | |
| Systems mgmt | System management utility, baseboard management controller, IPMI 2.0-compliant | | | | |
| Audio | None | | | | |
| Speaker | Internal speaker | | | | |
| Ethernet | Dual gigabit on planar, two Broadcom® 5708, PCIe x1, full duplex, Wake on LAN®, TCP/IP Offload Engine (TOE), Alert Standard Format 2.0 | | | | |
| Keyboard | None (use USB port) | | | | |
| Mouse | None (use USB port) | | | | |
| Power supply | Two 835 watts, two maximum, redundant with 2, variable speed fan, hot-swap, universal, two redundant power supplies require ten fans | | | | |
| Cooling | Ten fans, ten maximum, variable speed, hardware failure protection, hot-swap, ten fans required with second redundant power supply | | | | |
| Accessories Intel Xeon Quad-Core Processor E5410 45J6185 Intel Xeon Quad-Core Processor E5430 45J6186 1GB PC2-5300 DDR2 ECC FB-DIMM 45J6191 2GB PC2-5300 DDR2 ECC FB-DIMM 45J6192 4GB PC2-5300 DDR2 ECC FB-DIMM 45J6193 750GB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6203 1TB 3.5" Hot-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6204 146GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 45J6211 300GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 45J6212 450GB 3.5" Hot-swap SAS 3.0Gb/s Disk (15000 rpm) 67Y0119 Other accessories at lenovo.com/accessories | | | | | |
| Software management tools • ThinkServer EasyStartup • ThinkServer EasyManage | | | | | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts², 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations)⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | |
| Security • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (front or all) | | | | | |
| ThinkPlus Priority Support, 90-day Trial | | | | | |
| RoHS-compliant | | | | | |

See footnotes for important warranty information
 US models announced September 30, 2008 or May 19, 2009
 US models withdrawn effective February 2010

Partial list of accessories supported on Lenovo® ThinkServer RS110, RD120, TS100, TD100, TD100x

ThinkServer Ready accessories are available through Lenovo Business Partners. Locate a Business Partner near you at: bplocator.lenovo.com

Processors⁵⁵**TD100, RD120:**

| | | | |
|------------------------------|---------|-----|----------|
| Intel® Xeon® Processor E5405 | 45J6221 | ann | 09/30/08 |
| Intel Xeon Processor E5410 | 45J6185 | ann | 09/30/08 |
| Intel Xeon Processor E5420 | 45K1605 | ann | 09/30/08 |
| Intel Xeon Processor E5430 | 45J6186 | ann | 09/30/08 |

TD100x:

| | | | |
|----------------------------|---------|-----|----------|
| Intel Xeon Processor X5450 | 45K1608 | ann | 09/30/08 |
|----------------------------|---------|-----|----------|

RD120:

| | | | |
|----------------------------|---------|-----|----------|
| Intel Xeon Processor E5205 | 45J6180 | ann | 09/30/08 |
|----------------------------|---------|-----|----------|

⁵⁵ Additional Processor must match the existing processor

Memory**TS100, RS110:**

| | | | |
|-----------------------------|---------|-----|----------|
| 1GB PC2-6400 DDR2 ECC SDRAM | 45J6188 | ann | 09/30/08 |
| 2GB PC2-6400 DDR2 ECC SDRAM | 45J6189 | ann | 09/30/08 |

TD100, RD120:

| | | | |
|------------------------------|---------|-----|----------|
| 1GB PC2-5300 DDR2 ECC FBDIMM | 45J6191 | ann | 09/30/08 |
| 2GB PC2-5300 DDR2 ECC FBDIMM | 45J6192 | ann | 09/30/08 |

Backup**All:**

| | | | |
|-----------------------------------|---------|-----|----------|
| IBM® RDX 160GB Cartridge | 67Y0169 | ann | 11/10/09 |
| IBM RDX 320GB Cartridge | 67Y0170 | ann | 11/10/09 |
| IBM RDX 500GB Cartridge | 67Y0171 | ann | 11/10/09 |
| IBM DDS Generation 6 5-Pack Media | 67Y1377 | ann | 11/10/09 |

TS100, TD100, RD120:

| | | | |
|-----------------------------------|---------|-----|----------|
| IBM LTO Generation 3 5-Pack Media | 67Y1379 | ann | 11/10/09 |
|-----------------------------------|---------|-----|----------|

Connectivity

| | | | |
|--|---------|-----|----------|
| IBM 8Gb FC Single-port HBA by QLogic® | 67Y0172 | ann | 11/10/09 |
| IBM 8Gb FC Dual-port HBA by QLogic | 67Y0173 | ann | 11/10/09 |
| IBM 8Gb FC Single-port HBA by Emulex® | 67Y0174 | ann | 11/10/09 |
| IBM 8Gb FC Dual-port HBA by Emulex | 67Y0175 | ann | 11/10/09 |
| IBM 8Gb FC Single-port HBA by Brocade® | 67Y0176 | ann | 11/10/09 |
| IBM 8Gb FC Dual-port HBA by Brocade | 67Y0177 | ann | 11/10/09 |

Keyboard

| | | | |
|----------------------------|---------|-----|----------|
| Preferred Pro USB Keyboard | 73P5220 | ann | 06/21/05 |
|----------------------------|---------|-----|----------|

Mouse

| | | | |
|----------------------------|---------|-----|----------|
| Lenovo Optical Mouse (USB) | 06P4069 | ann | 05/21/03 |
|----------------------------|---------|-----|----------|

Storage**RS100, RD120:****2.5" SAS Hot-swap (HS):**

| | | | |
|--|---------|-----|----------|
| 73GB 2.5" SAS SFF HS (15000 rpm) | 45J6208 | ann | 09/30/08 |
| 146GB ² 2.5" SAS SFF HS (10000 rpm) | 45J6207 | ann | 09/30/08 |

All:**3.5" SATA Hot-swap (HS):**

| | | | |
|-------------------------------|---------|-----|----------|
| 160GB 3.5" SATA HS (7200 rpm) | 45J6200 | ann | 09/30/08 |
| 250GB 3.5" SATA HS (7200 rpm) | 45J6201 | ann | 09/30/08 |
| 500GB 3.5" SATA HS (7200 rpm) | 45J6202 | ann | 09/30/08 |
| 750GB 3.5" SATA HS (7200 rpm) | 45J6203 | ann | 09/30/08 |
| 1TB 3.5" SATA HS (7200 rpm) | 45J6204 | ann | 09/30/08 |

3.5" SATA Simple-swap:

| | | | |
|--|---------|-----|----------|
| 160GB 3.5" SATA Simple-swap (7200 rpm) | 45J6195 | ann | 09/30/08 |
| 250GB 3.5" SATA Simple-swap (7200 rpm) | 45J6196 | ann | 09/30/08 |
| 500GB 3.5" SATA Simple-swap (7200 rpm) | 45J6197 | ann | 09/30/08 |
| 750GB 3.5" SATA Simple-swap (7200 rpm) | 45J6198 | ann | 09/30/08 |

For more information on server accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/thinkserveraccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

Partial list of Lenovo® ThinkPlus Services for ThinkServer™

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html**Training classes**

- The basics on components, diagnostics, troubleshooting, and managing Lenovo servers, delivered in interactive online format

| | |
|---|---------|
| Online Training, Understanding Lenovo Servers | 45K4080 |
| Online Training, Understanding Systems Management | 45K4081 |
| Installation, ThinkServer Hardware Only | 45K4082 |

ThinkPlus service upgrade options⁷*LOR = Lenovo Onsite Repair***TS100 with 1-year warranty**

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 Next Business Day | 45K4055 |
| 3-year LOR 9x5 4 hour response | 45K4056 |
| 4-year LOR 9x5 Next Business Day | 51J0723 |
| 4-year LOR 9x5 4 hour response | 51J0724 |
| 5-year LOR 9x5 Next Business Day | 51J0725 |
| 5-year LOR 9x5 4 hour response | 51J0726 |

TS100 with 3-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 4 hour response | 45K4059 |
| 4-year LOR 9x5 Next Business Day | 51J0727 |
| 4-year LOR 9x5 4 hour response | 51J0728 |
| 5-year LOR 9x5 Next Business Day | 51J0729 |
| 5-year LOR 9x5 4 hour response | 51J0730 |

TD100 with 1-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 Next Business Day | 45K4062 |
| 3-year LOR 9x5 4 hour response | 45K4063 |
| 4-year LOR 9x5 Next Business Day | 51J0731 |
| 4-year LOR 9x5 4 hour response | 51J0732 |
| 5-year LOR 9x5 Next Business Day | 51J0733 |
| 5-year LOR 9x5 4 hour response | 51J0734 |

TD100 with 3-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 4 hour response | 45K4066 |
| 4-year LOR 9x5 Next Business Day | 51J0735 |
| 4-year LOR 9x5 4 hour response | 51J0736 |
| 5-year LOR 9x5 Next Business Day | 51J0737 |
| 5-year LOR 9x5 4 hour response | 51J0738 |

RS110 with 1-year warranty

| | |
|-----------------------------------|---------|
| 3-year LOR, 9x5 Next Business Day | 45K4069 |
| 3-year LOR, 4 hour response | 45K4070 |
| 4-year LOR 9x5 Next Business Day | 51J0739 |
| 4-year LOR 9x5 4 hour response | 51J0740 |
| 5-year LOR 9x5 Next Business Day | 51J0741 |
| 5-year LOR 9x5 4 hour response | 51J0742 |

RS110 with 3-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR, 4 hour response | 45K4073 |
| 4-year LOR 9x5 Next Business Day | 51J0743 |
| 4-year LOR 9x5 4 hour response | 51J0744 |
| 5-year LOR 9x5 Next Business Day | 51J0745 |
| 5-year LOR 9x5 4 hour response | 51J0746 |

RD120 with 1-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 Next Business Day | 45K5305 |
| 3-year LOR 9x5 4 hour response | 45K5306 |
| 4-year LOR 9x5 Next Business Day | 51J0747 |
| 4-year LOR 9x5 4 hour response | 51J0748 |
| 5-year LOR 9x5 Next Business Day | 51J0749 |
| 5-year LOR 9x5 4 hour response | 51J0750 |

RD120 with 3-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 4 hour response | 45K4076 |
| 4-year LOR 9x5 Next Business Day | 51J0751 |
| 4-year LOR 9x5 4 hour response | 51J0752 |
| 5-year LOR 9x5 Next Business Day | 51J0753 |
| 5-year LOR 9x5 4 hour response | 51J0754 |

Lenovo Online Data Backup

- Secure offsite data storage
- 256-bit Advanced Encryption System
- Data recovery or access in case of an unforeseen event
- Automatic, remote management
- Choose which business critical data to back up

| | |
|--|---------|
| 1-year 25GB Server Lenovo Online Data Backup (US) | 45K2115 |
| 1-year 50GB Server Lenovo Online Data Backup (US) | 45K2116 |
| 1-year 100GB Server Lenovo Online Data Backup (US) | 45K2117 |

ThinkPlus Priority Support

- 9x5 Next Business Day response Lenovo Onsite Repair
- 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
- 24x7 support with priority routing and advanced level technicians

TS100 with 1-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4057 |
| 3-year Priority 4 Support | 45K4058 |

TS100 with 3-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4060 |
| 3-year Priority 4 Support | 45K4061 |

TD100 with 1-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4064 |
| 3-year Priority 4 Support | 45K4065 |

TD100 with 3-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4067 |
| 3-year Priority 4 Support | 45K4068 |

RS110 with 1-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4071 |
| 3-year Priority 4 Support | 45K4072 |

RS110 with 3-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4074 |
| 3-year Priority 4 Support | 45K4075 |

RD120 with 1-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K5307 |
| 3-year Priority 4 Support | 45K5308 |

RD120 with 3-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4077 |
| 3-year Priority 4 Support | 45K4078 |

ThinkPlus Priority Support with Hard Disk Drive Retention

- 9x5 Next Business Day response Lenovo Onsite Repair
- 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
- 24x7 support with priority routing and advanced level technicians
- Hard Disk Drive Retention (HDDR) means customer keeps disk

*HDDR = Hard Disk Drive Retention***TS100 with 1-year warranty**

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5441 |
| 3-year Priority 4 Support with HDDR | 45K5442 |

TS100 with 3-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5443 |
| 3-year Priority 4 Support with HDDR | 45K5444 |

TD100 with 1-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5445 |
| 3-year Priority 4 Support with HDDR | 45K5446 |

TD100 with 3-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5447 |
| 3-year Priority 4 Support with HDDR | 45K5448 |

RS110 with 1-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5449 |
| 3-year Priority 4 Support with HDDR | 45K5450 |

RS110 with 3-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5451 |
| 3-year Priority 4 Support with HDDR | 45K5452 |

RD120 with 1-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5453 |
| 3-year Priority 4 Support with HDDR | 45K5454 |

RD120 with 3-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5455 |
| 3-year Priority 4 Support with HDDR | 45K5456 |

ThinkPlus Productivity

- Priority Support
- Online Training, Understanding Lenovo Servers
- One-time hardware installation

| | |
|---|---------|
| 3-year ThinkPlus Productivity, TS100 (1-year) | 45K4084 |
| 3-year ThinkPlus Productivity, TS100 (3-year) | 45K4086 |
| 3-year ThinkPlus Productivity, TD100 (1-year) | 45K4088 |
| 3-year ThinkPlus Productivity, TD100 (3-year) | 45K4090 |
| 3-year ThinkPlus Productivity, RS110 (1-year) | 45K4092 |
| 3-year ThinkPlus Productivity, RS110 (3-year) | 45K4094 |
| 3-year ThinkPlus Productivity, RD120 (1-year) | 45K5309 |
| 3-year ThinkPlus Productivity, RD120 (3-year) | 45K4096 |

| Type-model | Slot x bay | Processor | GHz | Cores | Memory DIMMs | Memory speed | Disk(s) | Disk size | Pre-conf RAID | Disk bays | SATA optical | Graphics adapter(s) | Windows Server preload | Power supply(s) | Avail date |
|------------|------------|-----------|------|-------|--------------|--------------|----------------------|-----------|---------------|----------------|--------------|---------------------|------------------------|-----------------|------------|
| 0992-19U | 4x4 | X3450 | 2.66 | 4 | 1x4GB | 1333MHz | 1x500GB ² | 3.5" | No | 2xDirect Cable | DVD±RW | FX380 | No | 280W | Nov 10 |

- **Real server class dependability at desktop price point**
- **Ideal entry single-socket tower server for growing enterprises, corporate branch offices and Managed Service Providers**
- **This model has a 3-year limited warranty¹**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

| | | | | |
|--|---|---------|---|--|
| Processor | Intel® Xeon® Processor X3450 with quad-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, TXT, Turbo Boost Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache | | <div><div><div>Tower</div><div><div><div><div>optical</div><div>optical</div><div>disk</div><div></div><div></div></div><div>disk</div></div></div><div><div><div>PSU</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div>1 - PCIe x16</div><div>2 - PCIe x1</div><div>3 - PCI</div><div>4 - PCI</div></div></div></div></div></div></div> | |
| Implementation | Processor in LGA1156 socket, up to one processor | | | |
| Memory | 4GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets | | | |
| Graphics | NVIDIA® Quadro® FX 380 , PCIe x16 adapter, 256MB, two dual-link DVI-I, includes DVI to VGA converter, 35W | | | |
| Disk bays | Two 3.5" SATA disk bays, no hot-swap, direct cable | | | |
| SATA disk(s) | 500GB , SATA 3.0Gb/s, 7200 rpm, 3.5" | | | |
| SATA DVD±RW | Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive | | | |
| SATA controller | Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA connectors for disks, two SATA connectors for opticals | | | |
| Chipset | Intel 3450 Chipset , Platform Controller Hub (PCH) for PCI, ethernet, and USB | | | |
| Front ports | Two USB 2.0 | | | |
| Rear ports | Six USB 2.0, serial (9-pin), ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) <i>Intel HD model(s):</i> one analog VGA DB-15 , one DisplayPort | | | |
| Ethernet | One gigabit ethernet on planar, Intel 82578DM | | | |
| Security chip | STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant | | | |
| Diagnostics | Two system status LEDs on front panel (disk drive activity, power/sleep) | | | |
| Keyboard | None (use USB port) | | | |
| Mouse | None (use USB port) | | | |
| Power supply | One 280 watts standard, one maximum, autosensing, no hot-swap, no redundancy, 85% PSU, 80 PLUS® Bronze qualified | | | |
| Cooling | 4 fans (power supply, CPU, rear, front) | | | |
| Rack mount | Rack shelf support | | | |
| Accessories | | | | |
| 1GB PC3-10600 DDR3 ECC UDIMM | | 67Y1387 | | |
| 2GB PC3-10600 DDR3 ECC UDIMM | | 67Y1388 | | |
| 4GB PC3-10600 DDR3 ECC UDIMM | | 67Y1389 | | |
| 500GB 3.5" SATA Cabled (7200 rpm) | | 67Y1401 | | |
| 1TB 3.5" SATA Cabled (7200 rpm) | | 67Y1402 | | |
| More accessories on O-RED sheet | | | | |
| Other accessories at lenovo.com/accessories | | | | |
| Limited Warranty¹ | | | | |
| ⇒ 3-year parts and labor | | | | |
| ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) | | | | |
| ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty | | | | |
| • Onsite service upgrade options (in eligible locations)⁷ | | | | |
| • Post warranty maintenance services | | | | |
| ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | |

| | |
|--|--|
| <ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 16.0"D x 14.9"H• 175mm W x 407mm D x 377mm H• 24.7 lb (11.2kg) max configuration• 25-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons | |
| Disk Bays | |
| Bay 1 | 5.25", 1.6" high, external, std optical |
| Bay 2 | 5.25", 1.6" high, external, optional optical |
| Bay 3 | 3.5", 1" high, external, std disk |
| Bay 4 | 3.5", 1" high, external, opt disk |
| Expansion Slots | |
| Slot 1: half-length, full-height, PCI Express 2.0 x16 | |
| Slot 2: half-length, full-height, PCI Express 2.0 x1 | |
| Slot 3: half-length, full-height, 32-bit PCI | |
| Slot 4: half-length, full-height, 32-bit PCI | |
| Software Management Tools | |
| • ThinkServer EasyStartup | |
| Power-On Hotkey | |
| • Setup Utility: F1 at startup | |
| • Diagnostic: F2 at startup | |
| • Network Boot: F12 at startup | |
| • RAID Configuration Utility: Ctrl+I at startup | |
| Security | |
| • Security chip (see information on left) | |
| • Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) | |
| • Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) | |
| • Power-on password | |
| • Boot sequence control | |
| • Boot without keyboard, mouse, diskette | |
| • Serial port I/O control | |
| • USB port disablement (front or all) | |
| ENERGY STAR® Server 1.0-compliant | |
| RoHS-compliant | |

| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Disk(s) | Disk size | Disk bays | Disk Controller | Disk type | SATA optical | RAID Int | System mgmt | Ethernet | Avail date |
|-------|------------|------------|---------------|------|-------|--------------|----------------------|-----------|----------------|-----------------|-----------|--------------|----------|-------------|----------|------------|
| TD230 | 1027-12U | 5x7 | 1xE5506 | 2.13 | 4 | 1x2GB | 1x250GB ² | 3.5" | 5xDirect Cable | ICH10R | SATA | DVD±RW | 0/1/10 | IPMI | 2xGb | Jul 10 |

- **This model has a 1-year limited warranty¹**
- **Flexible and green tower computing at value price point**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

| | | |
|---|--|--|
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5506 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache | <div> <div>Front</div> </div> <div> <div>Rear</div> </div> |
| Implementation | Two LGA1366 sockets | |
| Memory | 2GB std, 32GB max (16GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Over four DIMMs requires dual processors | |
| Graphics | Onboard ServerEngines™ Pilot II graphics/management controller, one VGA DB-15 on rear, 32MB; <i>Maximum resolution: 1600x1200@52Hz</i> | |
| SATA disk(s) | 250GB , SATA 3.0Gb/s, 7200 rpm | |
| Disk bays | Five 3.5" SATA disk bays, no hot-swap, direct cable (DC) | |
| Disk controller | Six SATA connectors for opticals and disks, Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 10 support | <ul style="list-style-type: none"> • Tower mechanical • Business black color; metal case • 8.3"W x 20.1"D x 18.5"H • 210mm W x 510mm D x 470mm H • 57.6 lb (26.2kg) max configuration • Toolless side cover removal • Toolless disk and optical drive removal |
| Optical | Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive | |
| Diskette | None (use USB port) | |
| Ethernet | Two Gigabit Ethernet ports, Intel 82574L and 82567 | |
| Chipset | Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right) and links to 82574L, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, slots 4-5, onboard SATA controller, and links to 82567 | <ul style="list-style-type: none"> Bay 1 5.25", 1.6" high, external, std optical Bay 2 5.25", 1.6" high, external, optional optical Bay 3 3.5", 1" high, external, std disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk |
| Extender card | None | |
| Front ports | Two USB 2.0 | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) | |
| Internal ports | One USB 2.0 connector for optional tape drive | |
| Diagnostics | System status LEDs on front, Diagnostic LEDs on rear | |
| Systems mgmt | Onboard ServerEngines Pilot II graphics/management controller, IPMI 2.0-compliant baseboard management controller (BMC) | <ul style="list-style-type: none"> Slot 1: half-length, full-height, PCI Express 2.0 x8 Slot 2: half-length, full-height, PCI Express 2.0 x8 Slot 3: half-length, full-height, PCI Express 2.0 x8*** Slot 4: half-length, full-height, 32-bit PCI 2.3 Slot 5: half-length, full-height, PCI Express x4 |
| Prerequisites | Monitor, SATA/SAS disk, OS | *** x4 electrical |
| Keyboard | None (use USB port) | |
| Mouse | None (use USB port) | |
| Power supply(s) | One fixed 625 watts standard, universal, 80 PLUS® Bronze qualified | |
| Cooling | Five fans std (power supply, two front, one rear, first processor), one optional processor fan for second processor | |
| Accessories Intel Xeon E5506 Processor Option Kit 67Y1449 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y1432 ThinkServer TD230 SATA RAID 5 Upgrade 67Y1459 250GB 3.5" SATA (7200 rpm) 67Y1400 More accessories on O-ARTsheet Other accessories at lenovo.com/accessories | | |
| Max memory capacity 32GB with eight 4GB PC3-10600 DDR3 RDIMMs (using 67Y1433) | | Power-On Hotkey <ul style="list-style-type: none"> • Setup Utility: F2 at startup • Network Boot: F12 at startup • ICH10R RAID: Ctrl+E at startup |
| Max internal capacity 10.0TB with five 2TB 3.5" SATA disks (using 67Y2642) | | Software Management Tools <ul style="list-style-type: none"> • ThinkServer EasyStartup |
| Limited Warranty¹ ⇒ 1-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none"> • Onsite service upgrade options (in eligible locations)⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | Security <ul style="list-style-type: none"> • Administrator password • User password • Front panel lock out • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all) |
| | | RoHS-compliant |

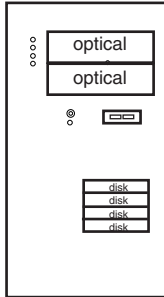
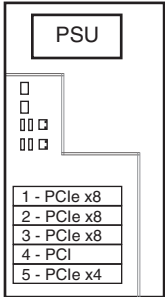
See footnotes for important warranty information

US model announced July 27, 2010

US model withdrawn effective April 2011

| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | Disk bays | Disk Controller | Disk type | RAID Int | System mgmt | Ethernet | Avail date |
|--------------|------------|------------|---------------|------|-------|--------------|--------------|-----------|-----------------|-----------------|-----------------------|----------|-------------|----------|------------|
| TD230 | 1040-11U | 5x7 | 1xE5503 | 2.00 | 2 | 1x2GB | 1333MHz | 3.5" | 5x Direct Cable | ICH10R | SATA | 0/1/10 | IPMI | 2x Gb | Jul 10 |
| TD230 | 1040-12U | 5x6 | 1xE5503 | 2.00 | 2 | 1x2GB | 1333MHz | 3.5" | 4 x Hot-swap | ICH10R | SATA | 0/1/10 | IPMI | 2x Gb | Jul 10 |
| TD230 | 1040-13U | 5x6 | 1xE5506 | 2.13 | 4 | 1x4GB | 1333MHz | 3.5" | 4 x Hot-swap | 9240-8i | SATA/SAS ⁴ | 0/1/5/10 | IPMI | 2x Gb | Jul 10 |

- *These models have a 3-year limited warranty¹*
- *Flexible and green tower computing at value price point*

| | | |
|--|---|--|
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache Intel Xeon Processor E5506 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache | <div> <div>Front - (Hot-swap)</div>  </div> <div> <div>Rear</div>  </div> |
| Implementation | Two LGA1366 sockets | |
| Memory | 2GB or 4GB std, 32GB max (16GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Over four DIMMs requires dual processors | |
| Graphics | Onboard ServerEngines™ Pilot II graphics/management controller, one VGA DB-15 on rear, 32MB; <i>Maximum resolution: 1600x1200@52Hz</i> | |
| Disk bays | <i>Some:</i> Five 3.5" SATA disk bays, no hot-swap, direct cable (DC) <i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays <i>Some:</i> Four 3.5" HS SATA/SAS disk bays | |
| Disk controller | <i>Some:</i> Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, RAID ⁸ 0, 1, 10 support <i>Some:</i> ThinkServer SAS 9240-8i, PCI Express® bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support <i>DC Model(s):</i> Six SATA connectors for opticals and disks | <ul style="list-style-type: none"> • Tower mechanical • Business black color; metal case • 8.3"W x 20.1"D x 18.5"H • 210mm W x 510mm D x 470mm H • 57.6 lb (26.2kg) max configuration • Toolless side cover removal • Toolless optical drive removal |
| Optical | Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s | <i>Hot-swap model(s):</i> Bay 1 5.25", 1.6" high, external, std optical Bay 2 5.25", 1.6" high, external, optional optical Bay 3 3.5", 1" high, external, optional disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk |
| Diskette | None (use USB port) | |
| Ethernet | Two Gigabit Ethernet ports, Intel 82574L and 82567 | <i>Direct cable model(s):</i> Bay 1 5.25", 1.6" high, external, std optical Bay 2 5.25", 1.6" high, external, optional optical Bay 3 3.5", 1" high, external, optional disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk |
| Chipset | Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right) and links to 82574L, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, slots 4-5, onboard SATA controller, and links to 82567 | |
| Extender card | None | Slot 1: half-length, full-height, PCI Express 2.0 x8 Slot 2: half-length, full-height, PCI Express 2.0 x8 Slot 3: half-length, full-height, PCI Express 2.0 x8*** Slot 4: half-length, full-height, 32-bit PCI 2.3 Slot 5: half-length, full-height, PCI Express x4 *** x4 electrical |
| Front ports | Two USB 2.0 | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) | Power-On Hotkey <ul style="list-style-type: none"> • Setup Utility: F2 at startup • Network Boot: F12 at startup • ICH10R RAID: Ctrl+E at startup • LSI 9420-8i RAID: Ctrl+H at startup |
| Internal ports | One USB 2.0 connector for optional tape drive | |
| Diagnostics | System status LEDs on front, Diagnostic LEDs on rear | Software Management Tools <ul style="list-style-type: none"> • ThinkServer EasyStartup |
| Systems mgmt | Onboard ServerEngines Pilot II graphics/management controller, IPMI 2.0-compliant baseboard management controller (BMC) | |
| Prerequisites | Monitor, SATA/SAS disk, OS | Security <ul style="list-style-type: none"> • Administrator password • User password • Front panel lock out • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all) |
| Keyboard | None (use USB port) | |
| Mouse | None (use USB port) | RoHS-compliant |
| Power supply(s) | One fixed 625 watts standard, universal, 80 PLUS® Bronze qualified | |
| Cooling | Five fans std (power supply, two front, one rear, first processor), one optional processor fan for second processor | |
| Max memory capacity 32GB with eight 4GB PC3-10600 DDR3 RDIMMs (using 67Y1433) | | |
| Max internal capacity 3.5" SATA HS: 8.0TB with four 2TB 3.5" SATA disks (using 67Y2642) 3.5" SATA DC: 10.0TB with five 2TB 3.5" SATA disks (using 67Y2642) 3.5" SAS HS: 2.4TB with four 600GB 3.5" SAS disks (using 67Y2644) | | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none"> • Onsite service upgrade options (in eligible locations)⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | |

See footnotes for important warranty information
 US models announced July 27, 2010
 US models withdrawn effective April 2011

- *This model has a 1-year limited warranty¹*
- *Flexible and green tower computing at value price point*

See footnotes for important warranty information
US models announced July 27, 2010
US models withdrawn effective April 2011

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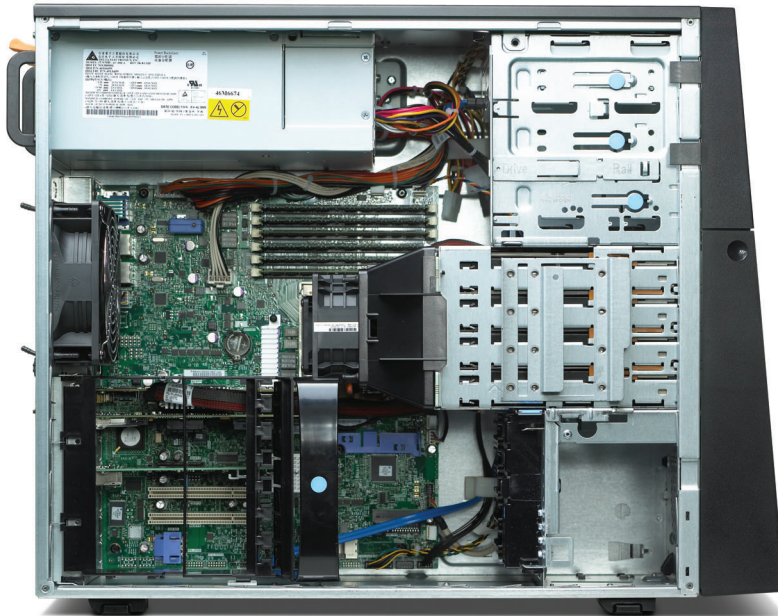
ThinkServer™



Lenovo ThinkServer TS200



Lenovo ThinkServer TS200
with Redundant Power Supply



Lenovo ThinkServer TS200
with Redundant Power Supply



Lenovo ThinkServer TS200

| Type-model | Slot x bay | Processor(s) | Base GHz | Max GHz | Cores | Memory DIMMs | Memory type | Memory speed | Disk size | RAID battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Avail date |
|------------|------------|--------------|----------|---------|-------|--------------|-------------|--------------|-----------|--------------|---------------|-----------------------|----------|-------------|-----------------|------------|
| 6525-11U | 5x7 | X3430 | 2.40 | 2.80 | 4 | 1x2GB | UDIMM | 1333MHz | 3.5" | None | 4xSimple-swap | SATA | 0/1 | | 401W | Nov 09 |
| 6525-12U | 5x7 | X3450 | 2.66 | 3.20 | 4 | 1x4GB | RDIMM | 1333MHz | 3.5" | None | 4xHot-swap | SATA/SAS ⁴ | 0/1 | IMM | 401W | Nov 09 |
| 6525-16U | 5x7 | X3450 | 2.66 | 3.20 | 4 | 1x4GB | RDIMM | 1333MHz | 3.5" | None | 4xHot-swap | SATA/SAS | 0/1/10 | IMM | 401W | Jan 10 |

- These models have a 3-year limited warranty¹
- These small and medium business (SMB) models are part of the US TopSeller™ Program

| | | | | | | | |
|--|---|--|--|--|--|--|--|
| Processor(s) | Up to one processor, one processor standard, Intel Xeon® Processor X3430 and X3450 with quad-core , 2.5GT/s (giga-transfers/second) DMI (Direct Media Interface), Turbo Boost Technology, Hyper-Threading Technology (X3450 only), Intel 64, 1333MHz DDR3 memory controller, 8MB cache | | | <div>Front</div> <div><div><div>optical</div><div>optical</div><div>diskette</div><div>disk</div><div>disk</div><div>disk</div><div>disk</div></div><div></div></div> | | <div>Rear</div> <div><div><div>PSU</div><div><div><div>1 - PCIe x8</div><div>2 - PCIe x8</div><div>3 - PCIe x4</div><div>4 - PCI</div><div>5 - PCI</div></div></div></div></div> | |
| Implementation | One LGA1156 socket | | | | | | |
| Memory | 2GB or 4GB std, UDIMM or RDIMM* , PC3-10600 1333MHz DDR3, Advanced ECC** , Memory Mirroring 11U: Four 240-pin DIMM sockets, 16GB max (Pending availability of 4GB UDIMM), std memory in 1 socket, 3 sockets available 12U/16U: Six 240-pin DIMM sockets, supports up to 6 single- or dual-rank RDIMMs, or up to 4 quad-rank RDIMMs * Cannot intermix RDIMM and UDIMM memory ** Advanced ECC-enable DIMMs required | | | | | <ul style="list-style-type: none">• Tower mechanical• Business black color; metal case• 8.6"W x 21.3"D x 17.3"H• 218mm W x 540mm D x 440mm H• 56 lb (25.2kg) max configuration• Toolless side cover removal | |
| Graphics | Matrox® G200eV, integrated in Integrated Management Module (IMM), one VGA DB-15 in rear; 128MB, shared with IMM; <i>Maximum resolution: 1024x768@85Hz</i> | | | | | | |
| Disk bays | 11U: four 3.5" simple-swap (SS) SATA disk bays 12U/16U: four 3.5" hot-swap (HS) SATA/SAS disk bays | | | | | | |
| Disk Controller | 11U/12U: ServeRAID®-BR10iL, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID ^o 0, 1 support 16U: ServeRAID M1015, PCI Express bus, SATA 6Gb/s, SAS 6Gb/s, RAID 0, 1, 10 support | | | | | | |
| Optical | Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s | | | | | | |
| Diskette | None (use USB port) | | | | | | |
| Ethernet | Two gigabit ethernet ports***, Intel 82574L *** One port shared with system management | | | | | | |
| Chipset | Intel 3420 Chipset , Platform Controller Hub (PCH) for PCI, ethernet and USB | | | | | | |
| Extender card | None | | | | | | |
| Front ports | Two USB 2.0 | | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), one ethernet (RJ-45), one ethernet/system management (RJ-45), serial (9-pin) | | | | | | |
| Internal ports | One USB 2.0 for tape drive or embedded hypervisor | | | | | | |
| Diagnostics | Diagnostic LEDs (error LEDs for fans and memory) | | | | | | |
| Systems mgmt | Trusted Platform Module (TPM) 1.2 support, IPMI 2.0-compliant 11U: IMM Standard, upgradeable to IMM Premium 12U/16U: IMM Premium | | | | | | |
| Prerequisites | Monitor, SATA/SAS disk, OS | | | | | | |
| Keyboard | None (use USB port) | | | | | | |
| Mouse | None (use USB port) | | | | | | |
| Power supply(s) | One 401 watts standard, one maximum, universal, auto switch, no hot-swap, no redundancy | | | | | | |
| Cooling | Three fans std (power supply, system, hard drive cage), three maximum, no hot-swap, no redundancy | | | | | | |
| <div>Virtualization</div> <div>Virtualization ready, hypervisor connector embedded</div> | | | | | | | |
| <div>Max memory capacity (RDIMM models)</div> <div><i>Single-rank RDIMM:</i> 6GB with six 1GB PC3-10600 DDR3 RDIMMs (using 67Y0014) <i>Dual-rank RDIMM:</i> 12GB with six 2GB PC3-10600 DDR3 RDIMMs (using 67Y0124) <i>Quad-rank RDIMM:</i> 16GB with four 4GB PC3-8500 DDR3 RDIMMs (using 67Y0125) 32GB with four 8GB RDIMMs (Pending availability)</div> | | | | | | | |
| <div>Max internal capacity</div> <div>11U: 4.0TB with four 1TB SS SATA disks (using 67Y1380) 12U/16U: 3.5" SATA HS: 4.0TB with four 1TB HS SATA disks (using 45J6204) 3.5" SAS HS: 2.4TB with four 600GB HS SAS disks (using 67Y1386)</div> | | | | | | | |
| <div>Limited Warranty¹</div> <div><div>⇒ 3-year parts and labor</div><div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services</div><div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div> | | | | | | | |
| | | | | <div>Disk Bays</div> <div><div>Bay 1</div><div>5.25", 1.6" high,</div><div>external,</div><div>std optical</div></div> <div><div>Bay 2</div><div>5.25", 1.6" high,</div><div>external,</div><div>optional optical</div></div> <div><div>Bay 3</div><div>3.5", 1" high,</div><div>external,</div><div>optional diskette</div></div> <div><div>Bay 4</div><div>3.5", 1" high,</div><div>external,</div><div>optional disk</div></div> <div><div>Bay 5</div><div>3.5", 1" high,</div><div>external,</div><div>optional disk</div></div> <div><div>Bay 6</div><div>3.5", 1" high,</div><div>external,</div><div>optional disk</div></div> <div><div>Bay 7</div><div>3.5", 1" high,</div><div>external,</div><div>optional disk</div></div> | | | |
| | | | | <div>Expansion Slots</div> <div>Slot 1: full-length, full-height, PCI Express x8 Slot 2: full-length, full-height, PCI Express x8 Slot 3: full, PCI Express x4 (x1 electrical) Slot 4: full, 32-bit PCI Slot 5: full, 32-bit PCI</div> | | | |
| | | | | <div>Power-On Hotkey</div> <div><ul style="list-style-type: none">• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup• RAID Configuration Utility: Ctrl+C at startup</div> | | | |
| | | | | <div>Security</div> <div><ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)</div> | | | |
| | | | | <div>Software Management Tools</div> <div><ul style="list-style-type: none">• ThinkServer EasyStartup</div> | | | |
| | | | | ThinkPlus Priority Support, 90-day Trial | | | |
| | | | | RoHS-compliant | | | |
| | | | | <div>Accessories</div> <div><div>450GB 3.5" 6Gb/s SAS Disk HS (15000 rpm)</div><div>67Y1385</div></div> <div><div>1TB 3.5" SATA Disk SS</div><div>67Y1380</div></div> <div><div>600GB 3.5" 6Gb/s SAS Disk HS</div><div>67Y1386</div></div> <div>Other accessories at lenovo.com/accessories</div> | | | |

See footnotes for important warranty information
 US models announced November 24, 2009 or January 8, 2010
 US models withdrawn effective February 2011

| Type-model | Slot x bay | Processor(s) | Base GHz | Max GHz | Cores | Memory DIMMs | Memory type | Memory speed | Disk size | RAID battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Avail date |
|------------|------------|--------------|----------|---------|-------|--------------|-------------|--------------|-----------|--------------|------------|-----------------------|----------|-------------|-----------------|------------|
| 6530-13U | 5x7 | X3450 | 2.66 | 3.20 | 4 | 1x4GB | RDIMM | 1333MHz | 3.5" | None | 4xHot-swap | SATA/SAS ⁴ | Multi* | IMM | 2x430W | Nov 09 |

* Multi = RAID-0/1/5/6/10 support

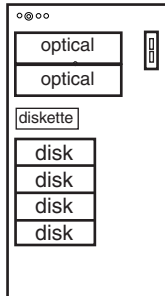
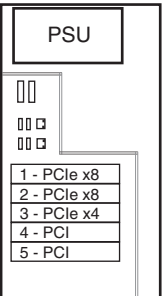
- **This model has a 3-year limited warranty¹**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

| | | |
|---|--|---|
| Processor(s) | Up to one processor, one processor standard, Intel® Xeon® Processor X3450 with quad-core , 2.5GT/s DMI, Turbo Boost Technology, Hyper-Threading Technology and Intel 64, 1333MHz DDR3 memory controller, 8MB cache | <div>Front</div> <div><div><div>optical</div><div>optical</div><div>diskette</div><div>disk</div><div>disk</div><div>disk</div><div>disk</div></div></div> <div>Rear</div> <div><div><div>PSU</div><div>PSU</div><div><div><div></div><div></div></div><div><div></div><div></div></div><div><div>1 - PCIe x8</div><div>2 - PCIe x8</div><div>3 - PCIe x4</div><div>4 - PCI</div><div>5 - PCI</div></div></div></div></div> <div><ul style="list-style-type: none">• Tower mechanical, rack-mountable to 5U rack• Business black color; metal case• 8.6"W x 21.3"D x 17.3"H• 218mm W x 540mm D x 440mm H• 56 lb (25.2kg) max configuration• Toolless side cover removal• Rack shelf support</div> |
| Implementation | One LGA1156 socket | |
| Memory | 4GB std, RDIMM , PC3-10600 1333MHz DDR3 , Advanced ECC** , Memory Mirroring Six 240-pin DIMM sockets, supports up to 6 single- or dual-rank RDIMMs, or up to 4 quad-rank RDIMMs ** Advanced ECC-enable DIMMs required | |
| Graphics | Matrox® G200eV, integrated in Integrated Management Module (IMM), one VGA DB-15 in rear; 128MB, shared with IMM; <i>Maximum resolution: 1024x768@85Hz</i> | |
| Disk bays | Four 3.5" hot-swap (HS) SATA/SAS disk bays | |
| Disk Controller | ServeRAID-MR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1, 5, 6, 10 support | |
| Optical | Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s | |
| Diskette | None (use USB port) | |
| Ethernet | Two gigabit ethernet ports***, Intel 82574L *** One port shared with system management | |
| Chipset | Intel 3420 Chipset , Platform Controller Hub (PCH) for PCI, ethernet and USB | |
| Extender card | None | |
| Front ports | Two USB 2.0 | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), one ethernet (RJ-45), one ethernet/system management (RJ-45), serial (9-pin) | |
| Internal ports | One USB 2.0 for tape drive or embedded hypervisor | |
| Diagnostics | Diagnostic LEDs (error LEDs for fans and memory) | |
| Systems mgmt | IMM Premium, Trusted Platform Module (TPM) 1.2 support, IPMI 2.0-compliant | |
| Prerequisites | Monitor, SATA/SAS disk, OS | |
| Keyboard | None (use USB port) | |
| Mouse | None (use USB port) | |
| Power supply(s) | Two 430 watts standard, two maximum, rear access, hot-swap, redundant with two power supplies | |
| Cooling | Four fans std (two power supply fans, system fan, hard drive cage), four maximum, no hot-swap, no redundancy | |
| <div><div><div><div><div>Max memory capacity</div></div><div><div><i>Single-rank RDIMM:</i> 6GB with six 1GB PC3-10600 DDR3 RDIMMs (using 67Y0014)</div><div><i>Dual-rank RDIMM:</i> 12GB with six 2GB PC3-10600 DDR3 RDIMMs (using 67Y0124)</div><div><i>Quad-rank RDIMM:</i> 16GB with four 4GB PC3-8500 DDR3 RDIMMs (using 67Y0125)</div><div>32GB with four 8GB RDIMMs (Pending availability)</div></div></div></div><div><div><div><div>Max internal capacity</div></div><div><div><i>3.5" SATA HS:</i> 4.0TB with four 1TB HS SATA disks (using 45J6204)</div><div><i>3.5" SAS HS:</i> 2.4TB with four 600GB HS SAS disks (using 67Y1386)</div></div></div></div></div> | | |
| <div><div><div><div><div>Virtualization</div></div><div>Virtualization ready, hypervisor connector embedded</div></div></div></div> | | |
| <div><div><div><div><div>Accessories</div></div><div><div>4GB PC3-8500 DDR3 ECC RDIMM (4Rx8)</div><div>146GB² 3.5" SAS HS (15000 rpm)</div><div>450GB 3.5" 6Gb/s SAS Disk HS (15000 rpm)</div><div>1TB 3.5" SATA Disk HS</div><div>600GB 3.5" 6Gb/s SAS Disk HS</div><div>Other accessories at lenovo.com/accessories</div></div></div><div><div>67Y0125</div><div>45J6211</div><div>67Y1385</div><div>45J6204</div><div>67Y1386</div></div></div></div> | | |
| <div><div><div><div><div>Limited Warranty¹</div></div><div><div>⇒ 3-year parts and labor</div><div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty</div><div>• Onsite service upgrade options (in eligible locations)⁷</div><div>• Post warranty maintenance services</div><div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div></div></div></div> | | |
| <div><div><div><div><div>Software Management Tools</div></div><div>• ThinkServer EasyStartup</div></div></div></div> | | |
| <div><div><div><div><div>Power-On Hotkey</div></div><div><div>• Setup Utility: F1 at startup</div><div>• Diagnostic: F2 at startup</div><div>• Network Boot: F12 at startup</div><div>• RAID Configuration Utility: Ctrl+C at startup</div></div></div></div></div> | | |
| <div><div><div><div><div>Security</div></div><div><div>• Side cover lock (ships with two identical keys) - prohibits removal of front panel and disks</div><div>• Power-on password</div><div>• Administrator password</div><div>• Boot sequence control</div><div>• Boot without keyboard, mouse, diskette</div><div>• Serial port I/O control</div><div>• USB port disablement (all)</div></div></div></div></div> | | |
| <div>ThinkPlus Priority Support, 90-day Trial</div> | | |
| <div>RoHS-compliant</div> | | |

See footnotes for important warranty information
US model announced November 24, 2009
US model withdrawn effective February 2011

| Type-model | Slot x bay | Processor | GHz | Cores | Memory DIMMs | Memory type | Memory speed | Disk size | RAID battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Avail date |
|------------|------------|---------------|------|-------|--------------|-------------|--------------|-----------|--------------|---------------|-----------|----------|-------------|-----------------|------------|
| 6524-11U | 5x7 | Pentium G6950 | 2.80 | 2 | 1x1GB | UDIMM | 1333MHz | 3.5" | None | 4xSimple-swap | SATA | 0/1 | None | 401W | Jan 10 |

- **This model has a 1-year limited warranty¹**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

| | | | | |
|--|--|---|--|--|
| Processor(s) | Up to one processor, one processor standard, Intel® Pentium® Processor G6950 with dual-core , Intel 64, 1066MHz DDR3 memory controller, 3MB cache | Front  | Rear  | |
| Implementation | One LGA1156 socket | | | |
| Memory | 1GB std, UDIMM, PC3-10600 1333MHz DDR3*, Advanced ECC**, Memory Mirroring Four 240-pin DIMM sockets, 16GB max (Pending availability of 4GB UDIMM), std memory in 1 socket, 3 sockets available * System automatically clocks down for processor with 1066MHz DDR3 memory controller ** Advanced ECC-enable DIMMs required | <ul style="list-style-type: none">• Tower mechanical• Business black color; metal case• 8.6"W x 21.3"D x 17.3"H• 218mm W x 540mm D x 440mm H• 56 lb (25.2kg) max configuration• Toolless side cover removal | | |
| Graphics | Matrox® G200eV, integrated in Integrated Management Module (IMM), one VGA DB-15 in rear; 128MB, shared with IMM; <i>Maximum resolution: 1024x768@85Hz</i> | | | |
| Disk bays | Four 3.5" simple-swap (SS) SATA disk bays | | | |
| Disk Controller | ServeRAID®-BR10iL, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1 support | | | |
| Optical | DVD-ROM DL SATA 1.5Gb/s 16-48X Max Drive | | | |
| Diskette | None (use USB port) | | | |
| Ethernet | Two gigabit ethernet ports***, Intel 82574L *** One port shared with system management | | | |
| Chipset | Intel 3420 Chipset , Platform Controller Hub (PCH) for PCI, ethernet and USB | | | |
| Extender card | None | | | |
| Front ports | Two USB 2.0 | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), one ethernet (RJ-45), one ethernet/system management (RJ-45), serial (9-pin) | | | |
| Internal ports | One USB 2.0 for tape drive or embedded hypervisor | | | |
| Diagnostics | Diagnostic LEDs (error LEDs for fans and memory) | | | |
| Systems mgmt | IMM standard, Trusted Platform Module (TPM) 1.2 support, IPMI 2.0-compliant | | | |
| Prerequisites | Monitor, SATA disk, OS | | | |
| Keyboard | None (use USB port) | | | |
| Mouse | None (use USB port) | | | |
| Power supply(s) | One 401 watts standard, one maximum, universal, auto switch, no hot-swap, no redundancy | | | |
| Cooling | Three fans std (power supply, system, hard drive cage), three maximum, no hot-swap, no redundancy | | | |
| Accessories 1GB PC3-10600 DDR3 1333MHz UDIMM 67Y0122 160GB² 3.5" SATA Simple-swap 45J6195 250GB 3.5" SATA Simple-swap 45J6196 500GB 3.5" SATA Simple-swap 45J6197 750GB 3.5" SATA Simple-swap 45J6198 1TB 3.5" SATA Simple-swap 67Y1380 Other accessories at lenovo.com/accessories | | Disk Bays Bay 1 5.25", 1.6" high, external, std optical Bay 2 5.25", 1.6" high, external, optional optical Bay 3 3.5", 1" high, external, optional diskette Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk | | |
| Software Management Tools • ThinkServer EasyStartup | | Expansion Slots Slot 1: full-length, full-height, PCI Express x8 Slot 2: full-length, full-height, PCI Express x8 Slot 3: full, PCI Express x4 (x1 electrical) Slot 4: full, 32-bit PCI Slot 5: full, 32-bit PCI | | |
| Virtualization Virtualization ready, hypervisor connector embedded | | Power-On Hotkey • Setup Utility: F1 at startup • Diagnostic: F2 at startup • Network Boot: F12 at startup • RAID Configuration Utility: Ctrl+C at startup | | |
| Max internal capacity 4.0TB with four 1TB SS SATA disks (using 67Y1380) | | Security • Side cover lock (ships with two identical keys) - prohibits removal of front panel and disks • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all) | | |
| Limited Warranty¹ ⇒ 1-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations)⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | ThinkPlus Priority Support, 90-day Trial RoHS-compliant | | |

See footnotes for important warranty information
US model announced January 8, 2010
US model withdrawn effective February 2011



Lenovo ThinkServer RS210
(Four 2.5" Disk Bays)



Lenovo ThinkServer RS210
(Two 3.5" Disk Bays)



Lenovo ThinkServer RS210



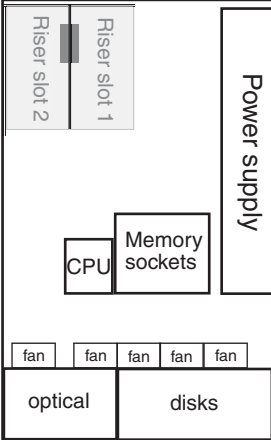

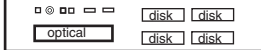

Lenovo ThinkServer RS210



Lenovo ThinkServer RS210
(Two 3.5" Disk Bays)

| Type-model | Slot x bay | Processor(s) | Base GHz | Max GHz | Cores | Memory DIMMs | Memory type | Memory speed | Disk size | RAID battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Avail date |
|------------|------------|--------------|----------|---------|-------|--------------|-------------|--------------|-----------|--------------|---------------|-----------------------|----------|-------------|-----------------|------------|
| 6534-11U | 2x3 | X3430 | 2.40 | 2.80 | 4 | 1x2GB | UDIMM | 1333MHz | 3.5" | None | 2xHot-swap | SATA/SAS ⁴ | 0/1 | | 1x351W | Nov 09 |
| 6534-14U | 2x5 | X3450 | 2.66 | 3.20 | 4 | 1x4GB | RDIMM | 1333MHz | 2.5" | None | 4xHot-swap | SATA/SAS | Multi* | IMM | 1x351W | Nov 09 |
| 6534-16U | 2x3 | i3-530 | 2.93 | | 2 | 1x1GB | UDIMM | 1333MHz | 3.5" | None | 2xSimple-swap | SATA | 0/1 | | 1x351W | Jan 10 |
| 6534-17U | 2x3 | X3450 | 2.66 | 3.20 | 4 | 1x4GB | RDIMM | 1333MHz | 3.5" | None | 2xHot-swap | SATA/SAS | 0/1/5/10 | IMM | 1x351W | Jan 10 |

* Multi = RAID-0/1/5/6/10 support

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|---------------|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|-------------------|-----------|-------------|-------|----------------|-----------|---------------|-------|----------------|-----------|---------------|-------|-------------------|-----------|-------------|-------|------------------|-----------|---------------|-------|------------------|-----------|---------------|-------|------------------|-----------|---------------|-------|------------------|-----------|---------------|
| Processor(s) | Up to one processor, one processor standard, Intel® Core™ i3 Processor i3-530 with dual-core , Hyper-Threading Technology and 64, 1333MHz DDR3 memory controller, 4MB cache or Intel Xeon® Processor X3430 and X3450 with quad-core , 2.5GT/s (giga-transfers/second) DMI (Direct Media Interface), Turbo Boost Technology, Hyper-Threading Technology (X3450 only), Intel 64, 1333MHz DDR3 memory controller, 8MB cache | <div><div>1U Rack top</div><div>Front (Model 11U/16/17U)</div><div>Front (Model 14U)</div><div>Rear</div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Implementation | One LGA1156 socket | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Memory | 1GB, 2GB, or 4GB std, UDIMM or RDIMM* , PC3-10600 1333MHz DDR3, Advanced ECC** , Memory Mirroring <i>11U/16U:</i> Four 240-pin DIMM sockets, 16GB max (Pending availability of 4GB UDIMM), std memory in 1 socket, 3 sockets available <i>14U/17U:</i> Six 240-pin DIMM sockets, supports up to 6 single- or dual-rank RDIMMs, or up to 4 quad-rank RDIMMs * Cannot intermix RDIMM and UDIMM memory ** Advanced ECC-enable DIMMs required | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200eV, integrated in Integrated Management Module (IMM), one VGA DB-15 in rear; 128MB, shared with IMM; <i>Maximum resolution: 1024x768@85Hz</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disk bays | <i>11U/17U:</i> two 3.5" hot-swap (HS) SATA/SAS disk bays <i>16U:</i> two 3.5" simple-swap (SS) SATA disk bays <i>14U:</i> four HS SATA/SAS disk bays on 2.5" Slim-Form-Factor (SFF) | <div>Mechanical Specifications</div> <ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.3"W x 22"D x 1.75"H• 440mm W x 560mm D x 43mm H• 28 lb (12.7kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disk Controller | <i>11U/16U:</i> ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1 support <i>14U:</i> ServeRAID-MR10i, PCI Express bus, SATA 3Gb/s, SAS 3Gb/s, RAID 0, 1, 5, 6, 10 support <i>17U:</i> ServeRAID M1015, PCI Express bus, SATA 6Gb/s, SAS 6Gb/s, RAID 0, 1, 5***, 10 support *** RAID 5 is supported by add-in Advanced Feature Key | <div>Disk Bays</div> <p><i>11U/16U/17U:</i></p> <table><tr><td>Bay 1</td><td>5.25", 0.5" high,</td><td>external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 3</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr></table> <p><i>14U:</i></p> <table><tr><td>Bay 1</td><td>5.25", 0.5" high,</td><td>external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>2.5", 0.6" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 3</td><td>2.5", 0.6" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 4</td><td>2.5", 0.6" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 5</td><td>2.5", 0.6" high,</td><td>external,</td><td>optional disk</td></tr></table> | | | | | | | | | | | | | | | Bay 1 | 5.25", 0.5" high, | external, | std optical | Bay 2 | 3.5", 1" high, | external, | optional disk | Bay 3 | 3.5", 1" high, | external, | optional disk | Bay 1 | 5.25", 0.5" high, | external, | std optical | Bay 2 | 2.5", 0.6" high, | external, | optional disk | Bay 3 | 2.5", 0.6" high, | external, | optional disk | Bay 4 | 2.5", 0.6" high, | external, | optional disk | Bay 5 | 2.5", 0.6" high, | external, | optional disk |
| Bay 1 | 5.25", 0.5" high, | external, | std optical | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 2 | 3.5", 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 3 | 3.5", 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 1 | 5.25", 0.5" high, | external, | std optical | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 2 | 2.5", 0.6" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 3 | 2.5", 0.6" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 4 | 2.5", 0.6" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 5 | 2.5", 0.6" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Optical Diskette Ethernet | UltraSlim Enhanced DVD±RW None (use USB port) Two gigabit ethernet ports***, Intel 82574L *** One port shared with system management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chipset | Intel 3420 Chipset , Platform Controller Hub (PCH) for PCI, ethernet and USB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), one ethernet (RJ-45), one ethernet/system management (RJ-45), serial (9-pin) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Internal ports | One USB 2.0 for embedded hypervisor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic LEDs (error LEDs for fans and memory) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Systems mgmt | Trusted Platform Module (TPM) 1.2 support, IPMI 2.0-compliant <i>11U/16U:</i> IMM Standard, upgradeable to IMM Premium <i>14U/17U:</i> IMM Premium | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, SATA/SAS disk, OS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power supply(s) | <i>11U/16U/17U:</i> One 351 watts, universal, auto switch, no hot-swap, no redundancy <i>14U:</i> One 351 watts, high efficiency, universal, auto switch, no hot-swap, no redundancy | <div>Power-On Hotkey</div> <ul style="list-style-type: none">• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup• RAID Configuration Utility: Ctrl+C at startup | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | Six fans std (five system, one power supply), six maximum, variable speed, no hot-swap, no redundancy | <div>Security</div> <ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Max memory capacity (RDIMM models)</div> <p><i>Single-rank RDIMM:</i> 6GB with six 1GB PC3-10600 DDR3 RDIMMs (using 67Y0014) <i>Dual-rank RDIMM:</i> 12GB with six 2GB PC3-10600 DDR3 RDIMMs (using 67Y0124) <i>Quad-rank RDIMM:</i> 16GB with four 4GB PC3-8500 DDR3 RDIMMs (using 67Y0125) 32GB with four 8GB RDIMMs (Pending availability)</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Limited Warranty¹</div> <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Software Management Tools</div> <ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ThinkPlus Priority Support, 90-day Trial | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RoHS-compliant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

See footnotes for important warranty information
US models announced November 24, 2009 or January 8, 2010
US models withdrawn effective September 2010

| Type-model | Slot x bay | Processor | Base GHz | Cores | Memory DIMMs | Memory type | Memory speed | Disk size | RAID battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Avail date | | | | | | | | | | | | |
|--|---|---------------|----------|-------|--------------|-------------|--------------|-----------|--------------|--|-----------|----------|-------------|-----------------|------------|----------------------------------|---------|--|---------|-----------------------------|---------|-----------------------------|---------|-----------------------------|---------|---------------------------|---------|
| 6533-12U | 2x3 | Pentium G6950 | 2.80 | 2 | 1x1GB | UDIMM | 1333MHz | 3.5" | None | 2xSimple-swap | SATA | 0/1 | None | 1x351W | Jan 10 | | | | | | | | | | | | |
| <ul style="list-style-type: none">• This model has a 1-year limited warranty¹• This small and medium business (SMB) model is part of the US TopSeller™ Program | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Processor(s) | Up to one processor, one processor standard, Intel® Pentium® Processor G6950 with dual-core , Intel 64, 1066MHz DDR3 memory controller, 3MB cache | | | | | | | | | <div><div><div>1U Rack top</div><div><div><div><div>Riser slot 2</div><div>Riser slot 1</div></div><div><div>Power supply</div></div><div><div>CPU</div><div>Memory sockets</div></div><div><div>fanfanfanfanfan</div><div>opticaldisks</div></div></div></div><div><div>Front</div><div><div><div>optical</div><div>diskdisk</div></div></div><div>Rear</div><div><div>PSU</div><div><div><div><div></div><div></div><div></div><div></div></div><div>1 - PCIe x8</div><div>2 - PCIe x8</div></div></div></div></div></div></div> | | | | | | | | | | | | | | | | | |
| Implementation | One LGA1156 socket | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Memory | 1GB std, UDIMM, PC3-10600 1333MHz DDR3*, Advanced ECC**, Memory Mirroring Four 240-pin DIMM sockets, 16GB max (Pending availability of 4GB UDIMM), std memory in 1 socket, 3 sockets available * System automatically clocks down for processor with 1066MHz DDR3 memory controller ** Advanced ECC-enable DIMMs required | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200eV, integrated in Integrated Management Module (IMM), one VGA DB-15 in rear; 128MB, shared with IMM; <i>Maximum resolution: 1024x768@85Hz</i> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disk bays | Two 3.5" simple-swap (SS) SATA disk bays | | | | | | | | | <div><div><div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Mechanical Specifications</div><div><ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.3"W x 22"D x 1.75"H• 440mm W x 560mm D x 43mm H• 28 lb (12.7kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention</div></div></div></div></div></div> | | | | | | | | | | | | | | | | | |
| Disk Controller | ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1 support | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Optical | UltraSlim Enhanced DVD±RW | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diskette | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ethernet | Two gigabit ethernet ports***, Intel 82574L *** One port shared with system management | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chipset | Intel 3420 Chipset , Platform Controller Hub (PCH) for PCI, ethernet and USB | | | | | | | | | <div><div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Disk Bays</div><div><div><div>Bay 1</div><div>5.25", 0.5" high,</div><div>external,</div><div>std optical</div></div><div><div>Bay 2</div><div>3.5", 1" high,</div><div>external,</div><div>optional disk</div></div><div><div>Bay 3</div><div>3.5", 1" high,</div><div>external,</div><div>optional disk</div></div></div></div></div></div><div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Expansion Slots</div><div>Slot 1: low-profile, PCI Express x8 Slot 2: half-length, full-height, PCI Express x8</div></div></div><div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Power-On Hotkey</div><div><ul style="list-style-type: none">• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup• RAID Configuration Utility: Ctrl+C at startup</div></div></div><div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Security</div><div><ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)</div></div></div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>ThinkPlus Priority Support, 90-day Trial</div></div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>RoHS-compliant</div></div></div></div></div></div></div></div> | | | | | | | | | | | | | | | | | |
| Extender card | None | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), one ethernet (RJ-45), one ethernet/system management (RJ-45), serial (9-pin) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Internal ports | One USB 2.0 for embedded hypervisor | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic LEDs (error LEDs for fans and memory) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Systems mgmt | IMM standard, Trusted Platform Module (TPM) 1.2 support, IPMI 2.0-compliant | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, SATA disk, OS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power supply(s) | One 351 watts, universal, auto switch, no hot-swap, no redundancy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | Six fans std (five system, one power supply), six maximum, variable speed, no hot-swap, no redundancy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Accessories</div><div><table><tr><td>1GB PC3-10600 DDR3 1333MHz UDIMM</td><td>67Y0122</td></tr><tr><td>160GB² 3.5" SATA Simple-swap</td><td>45J6195</td></tr><tr><td>250GB 3.5" SATA Simple-swap</td><td>45J6196</td></tr><tr><td>500GB 3.5" SATA Simple-swap</td><td>45J6197</td></tr><tr><td>750GB 3.5" SATA Simple-swap</td><td>45J6198</td></tr><tr><td>1TB 3.5" SATA Simple-swap</td><td>67Y1380</td></tr></table></div><div>Other accessories at lenovo.com/accessories</div></div></div></div> | | | | | | | | | | | | | | | | 1GB PC3-10600 DDR3 1333MHz UDIMM | 67Y0122 | 160GB ² 3.5" SATA Simple-swap | 45J6195 | 250GB 3.5" SATA Simple-swap | 45J6196 | 500GB 3.5" SATA Simple-swap | 45J6197 | 750GB 3.5" SATA Simple-swap | 45J6198 | 1TB 3.5" SATA Simple-swap | 67Y1380 |
| 1GB PC3-10600 DDR3 1333MHz UDIMM | 67Y0122 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 160GB ² 3.5" SATA Simple-swap | 45J6195 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 250GB 3.5" SATA Simple-swap | 45J6196 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 500GB 3.5" SATA Simple-swap | 45J6197 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 750GB 3.5" SATA Simple-swap | 45J6198 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1TB 3.5" SATA Simple-swap | 67Y1380 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Software Management Tools</div><div><ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage</div></div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Max internal capacity</div><div>2.0TB with two 1TB SS SATA disks (using 67Y1380)</div></div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Limited Warranty¹</div><div><ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>Security</div><div><ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)</div></div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>ThinkPlus Priority Support, 90-day Trial</div></div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>RoHS-compliant</div></div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | |

See footnotes for important warranty information
 US model announced January 8, 2010
 US model withdrawn effective September 2010

Partial list of accessories supported on Lenovo® ThinkServer TS200, RS210.

ThinkServer Ready accessories are available through Lenovo Business Partners. Locate a Business Partner near you at: bplocator.lenovo.com

Memory⁵³

| | | | |
|-----------------------------------|---------|-----|----------|
| 1GB PC3-10600 DDR3 1333MHz UDIMM | 67Y0122 | ann | 11/24/09 |
| 2GB PC3-10600 DDR3 1333MHz UDIMM | 67Y0123 | ann | 11/24/09 |
| 1GB PC3-10600 DDR3 RDIMM (1R x 8) | 67Y0014 | ann | 05/05/09 |
| 2GB PC3-10600 DDR3 RDIMM (2R x 8) | 67Y0124 | ann | 11/24/09 |
| 4GB PC3-8500 DDR3 RDIMM (4R x 8) | 67Y0125 | ann | 11/24/09 |

⁵³Mixing of UDIMM and RDIMM is not support

Backup

| | | | |
|-----------------------------------|---------|-----|----------|
| IBM® RDX 160GB Cartridge | 67Y0169 | ann | 11/10/09 |
| IBM RDX 320GB Cartridge | 67Y0170 | ann | 11/10/09 |
| IBM RDX 500GB Cartridge | 67Y0171 | ann | 11/10/09 |
| IBM DDS Generation 6 5-Pack Media | 67Y1377 | ann | 11/10/09 |
| IBM LTO Generation 3 5-Pack Media | 67Y1379 | ann | 11/10/09 |

Connectivity

| | | | |
|--|---------|-----|----------|
| IBM 8Gb FC Single-port HBA by QLogic® | 67Y0172 | ann | 11/10/09 |
| IBM 8Gb FC Dual-port HBA by QLogic | 67Y0173 | ann | 11/10/09 |
| IBM 8Gb FC Single-port HBA by Emulex® | 67Y0174 | ann | 11/10/09 |
| IBM 8Gb FC Dual-port HBA by Emulex | 67Y0175 | ann | 11/10/09 |
| IBM 8Gb FC Single-port HBA by Brocade® | 67Y0176 | ann | 11/10/09 |
| IBM 8Gb FC Dual-port HBA by Brocade | 67Y0177 | ann | 11/10/09 |

ThinkServer IBM RAID controller

| | | | |
|--|---------|-----|----------|
| SAS 3Gb HBA Controller V2 | 67Y0183 | ann | 11/10/09 |
| ServeRAID® M1015 | 67Y1368 | ann | 12/08/09 |
| ServeRAID M5015 | 67Y0184 | ann | 11/10/09 |
| ServeRAID M5014 | 67Y0185 | ann | 11/10/09 |
| ServeRAID M1000 Series Adv Feature Key | 67Y1369 | ann | 12/08/09 |
| ServeRAID M5000 Series Battery Kit | 67Y0186 | ann | 11/10/09 |
| ServeRAID M5000 Series Adv Feature Key | 67Y0188 | ann | 12/08/09 |

Keyboard

| | | | |
|----------------------------|---------|-----|----------|
| Preferred Pro USB Keyboard | 73P5220 | ann | 06/21/05 |
|----------------------------|---------|-----|----------|

Mouse

| | | | |
|----------------------------|---------|-----|----------|
| Lenovo Optical Mouse (USB) | 06P4069 | ann | 05/21/03 |
|----------------------------|---------|-----|----------|

Disk Drive**2.5" SAS Hot-swap (HS):**

| | | | |
|---|---------|-----|----------|
| 73GB ² 2.5" SAS SFF HS (15000 rpm) | 67Y0115 | ann | 05/05/09 |
| 146GB 2.5" SAS SFF HS (10000 rpm) | 67Y0116 | ann | 05/05/09 |
| 146GB 2.5" SAS SFF HS (15000 rpm) | 67Y0117 | ann | 05/05/09 |
| 300GB 2.5" SAS SFF HS (10000 rpm) | 67Y0118 | ann | 05/05/09 |

2.5" SATA Hot-swap (HS):

| | | | |
|------------------------------------|---------|-----|----------|
| 300GB 2.5" SATA SFF HS (10000 rpm) | 67Y0002 | ann | 05/05/09 |
| 160GB 2.5" SATA SFF HS (7200 rpm) | 67Y0120 | ann | 09/08/09 |
| 500GB 2.5" SATA SFF HS (7200 rpm) | 67Y0121 | ann | 09/08/09 |

3.5" SAS Hot-swap (HS):

| | | | |
|-------------------------------|---------|-----|----------|
| 146GB 3.5" SAS HS (15000 rpm) | 45J6211 | ann | 09/30/08 |
|-------------------------------|---------|-----|----------|

3.5" 6Gb/s SAS HS:

| | | | |
|-------------------------------|---------|-----|----------|
| 300GB 3.5" SAS HS (15000 rpm) | 67Y1384 | ann | 01/26/10 |
| 450GB 3.5" SAS HS (15000 rpm) | 67Y1385 | ann | 01/26/10 |
| 600GB 3.5" SAS HS (15000 rpm) | 67Y1386 | ann | 01/26/10 |

3.5" SATA Hot-swap (HS):

| | | | |
|-------------------------------|---------|-----|----------|
| 160GB 3.5" SATA HS (7200 rpm) | 45J6200 | ann | 09/30/08 |
| 250GB 3.5" SATA HS (7200 rpm) | 45J6201 | ann | 09/30/08 |
| 500GB 3.5" SATA HS (7200 rpm) | 45J6202 | ann | 09/30/08 |
| 750GB 3.5" SATA HS (7200 rpm) | 45J6203 | ann | 09/30/08 |
| 1TB 3.5" SATA HS (7200 rpm) | 45J6204 | ann | 09/30/08 |

3.5" SATA Simple-swap:

| | | | |
|--|---------|-----|----------|
| 160GB 3.5" SATA Simple-swap (7200 rpm) | 45J6195 | ann | 09/30/08 |
| 250GB 3.5" SATA Simple-swap (7200 rpm) | 45J6196 | ann | 09/30/08 |
| 500GB 3.5" SATA Simple-swap (7200 rpm) | 45J6197 | ann | 09/30/08 |
| 750GB 3.5" SATA Simple-swap (7200 rpm) | 45J6198 | ann | 09/30/08 |
| 1TB 3.5" SATA Simple-swap (7200 rpm) | 67Y1380 | ann | 11/24/09 |

For more information on server accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/thinkserveraccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

Partial list of Lenovo® ThinkPlus Services for ThinkServer

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html**Training classes**

- The basics on components, diagnostics, troubleshooting, and managing Lenovo servers, delivered in interactive online format

| | |
|---|---------|
| Online Training, Understanding Lenovo Servers | 45K4080 |
| Online Training, Understanding Systems Management | 45K4081 |
| Installation, ThinkServer Hardware Only | 45K4082 |

ThinkPlus service upgrade options⁷*LOR = Lenovo Onsite Repair***TS200 with 1-year warranty**

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 Next Business Day | 45K4055 |
| 3-year LOR 9x5 4 hour response | 45K4056 |
| 4-year LOR 9x5 Next Business Day | 51J0723 |
| 4-year LOR 9x5 4 hour response | 51J0724 |
| 5-year LOR 9x5 Next Business Day | 51J0725 |
| 5-year LOR 9x5 4 hour response | 51J0726 |

TS200 with 3-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 4 hour response | 45K4059 |
| 4-year LOR 9x5 Next Business Day | 51J0727 |
| 4-year LOR 9x5 4 hour response | 51J0728 |
| 5-year LOR 9x5 Next Business Day | 51J0729 |
| 5-year LOR 9x5 4 hour response | 51J0730 |

RS210 with 1-year warranty

| | |
|-----------------------------------|---------|
| 3-year LOR, 9x5 Next Business Day | 45K4069 |
| 3-year LOR, 4 hour response | 45K4070 |
| 4-year LOR 9x5 Next Business Day | 51J0739 |
| 4-year LOR 9x5 4 hour response | 51J0740 |
| 5-year LOR 9x5 Next Business Day | 51J0741 |
| 5-year LOR 9x5 4 hour response | 51J0742 |

RS210 with 3-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR, 4 hour response | 45K4073 |
| 4-year LOR 9x5 Next Business Day | 51J0743 |
| 4-year LOR 9x5 4 hour response | 51J0744 |
| 5-year LOR 9x5 Next Business Day | 51J0745 |
| 5-year LOR 9x5 4 hour response | 51J0746 |

Lenovo Online Data Backup

- Secure offsite data storage
- 256-bit Advanced Encryption System
- Data recovery or access in case of an unforeseen event
- Automatic, remote management
- Choose which business critical data to back up

| | |
|--|---------|
| 1-year 25GB Server Lenovo Online Data Backup (US) | 45K2115 |
| 1-year 50GB Server Lenovo Online Data Backup (US) | 45K2116 |
| 1-year 100GB Server Lenovo Online Data Backup (US) | 45K2117 |

ThinkPlus Priority Support

- 9x5 Next Business Day response Lenovo Onsite Repair
- 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
- 24x7 support with priority routing and advanced level technicians

TS200 with 1-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4057 |
| 3-year Priority 4 Support | 45K4058 |

TS200 with 3-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4060 |
| 3-year Priority 4 Support | 45K4061 |

RS210 with 1-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4071 |
| 3-year Priority 4 Support | 45K4072 |

RS210 with 3-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4074 |
| 3-year Priority 4 Support | 45K4075 |

ThinkPlus Priority Support with Hard Disk Drive Retention

- 9x5 Next Business Day response Lenovo Onsite Repair
- 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
- 24x7 support with priority routing and advanced level technicians
- Hard Disk Drive Retention (HDDR) means customer keeps disk

*HDDR = Hard Disk Drive Retention***TS200 with 1-year warranty**

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5441 |
| 3-year Priority 4 Support with HDDR | 45K5442 |

TS200 with 3-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5443 |
| 3-year Priority 4 Support with HDDR | 45K5444 |

RS210 with 1-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5449 |
| 3-year Priority 4 Support with HDDR | 45K5450 |

RS210 with 3-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5451 |
| 3-year Priority 4 Support with HDDR | 45K5452 |

ThinkPlus Productivity

- Priority Support
- Online Training, Understanding Lenovo Servers
- One-time hardware installation

| | |
|---|---------|
| 3-year ThinkPlus Productivity, TS200 (1-year) | 45K4084 |
| 3-year ThinkPlus Productivity, TS200 (3-year) | 45K4086 |
| 3-year ThinkPlus Productivity, RS210 (1-year) | 45K4092 |
| 3-year ThinkPlus Productivity, RS210 (3-year) | 45K4094 |



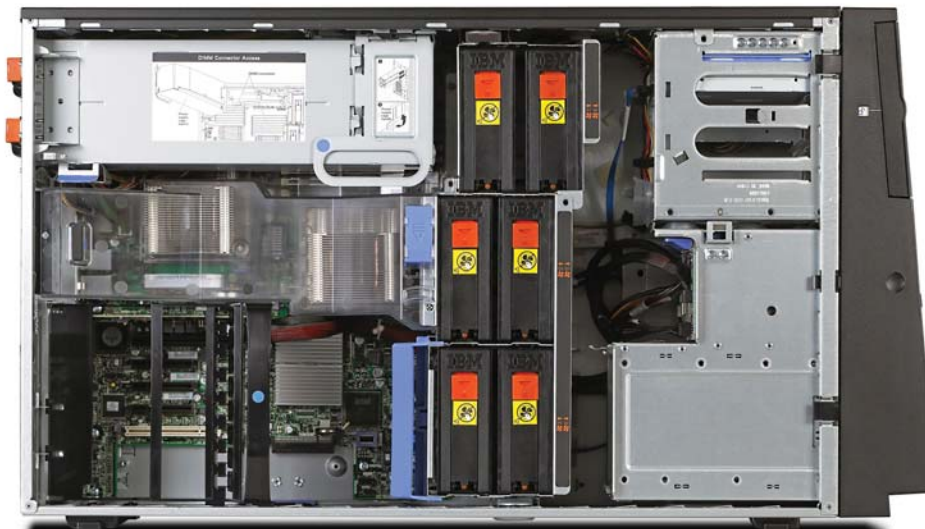
Lenovo ThinkServer TD200



Lenovo ThinkServer TD200x



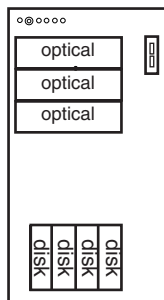
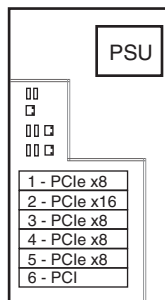
Lenovo ThinkServer TD200



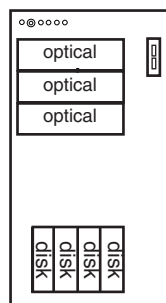
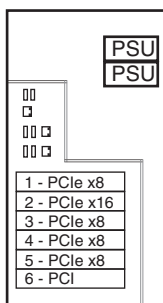
Lenovo ThinkServer TD200x

| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date |
|-------|------------|------------|---------------|------|-------|--------------|--------------|-----------|--------------|---------------|-----------------------|----------|-------------|-----------------|----------|------------|
| TD200 | 3809-3AU | 6x7 | 1xE5502 | 1.86 | 2 | 1x2GB | 1333MHz | 3.5" | None | 4xSimple-swap | SATA | 0/1 | None | 670W | 2xGb | Sep 09 |
| TD200 | 3809-3BU | 6x7 | 1xE5504 | 2.00 | 4 | 1x2GB | 1333MHz | 3.5" | None | 4xHot-swap | SATA/SAS ⁴ | 0/1 | None | 670W | 2xGb | Sep 09 |

- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **These models have a 3-year limited warranty¹**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

| | | | |
|--|---|---|--|
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5502 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5504 with quad-core , 4.8GT/s QPI, 800MHz DDR3 memory controller, and 4MB cache | Front  | Rear  |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | |
| Memory | 2GB std, 96GB max (48GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, Advanced ECC** , Memory Mirroring , twelve 240-pin DIMM sockets***, * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Advanced ECC-enable DIMMs required *** Over six DIMMs requires dual processors | <ul style="list-style-type: none">• Tower mechanical, rack-mountable to 5U• Business black color; metal case• 8.6"W x 29.4"D x 17.3"H• 218mm W x 747mm D x 440mm H• 77 lb (35kg) max configuration• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support Bay 1 5.25", 1.6" high, external, std optical Bay 2 5.25", 1.6" high, external, optional optical Bay 3 5.25", 1.6" high, external, optional optical Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Slot 1: half-length, full-height, PCI Express x8 Slot 2: full, PCI Express x16 (x8 electrical) Slot 3: full, PCI Express x8 (x4 electrical) Slot 4: full, PCI Express x8 (x4 electrical) Slot 5: full, PCI Express x8 Slot 6: half-length, 32-bit PCI 2.3 | |
| Graphics | Matrox® G200e integrated, one VGA DB-15 in rear, 16MB; <i>Maximum resolution: 1600x1200@85Hz</i> | | |
| Disk bays | 3AU: four 3.5" simple-swap (SS) SATA disk bays 3BU: four 3.5" hot-swap (HS) SATA/SAS disk bays | | |
| Disk Controller | ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1 support | | |
| Optical Diskette Ethernet | Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s None (use USB port) Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | |
| Extender card | None | | |
| Front ports | Two USB 2.0 | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | |
| Internal ports | Two USB 2.0, one connector for tape drive, one connector for embedded hypervisor | | |
| Diagnostics | Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, voltage regulator module, power supply) | | |
| Systems mgmt | Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium | | |
| Prerequisites | Monitor, SATA/SAS disk, OS | | |
| Keyboard | None (use USB port) | | |
| Mouse | None (use USB port) | | |
| Power supply(s) | One 670 watts standard, one maximum, rear access, universal | | |
| Cooling | Three fans std, three maximum, variable speed, hot-swap | | |
| Accessories Intel Xeon Dual-Core Processor E5502 67Y0008 Intel Xeon Quad-Core Processor E5504 67Y0009 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0015 4GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0016 750GB 3.5" SATA Disk SS (7200 rpm) 45J6198 1TB 3.5" SATA Disk HS (7200 rpm) 45J6204 Other accessories at lenovo.com/accessories | | | |
| Max internal capacity 3AU: 3.0TB with four 750GB SS SATA disks 3BU: 4.0TB with four 1TB HS SATA disks | | | |
| Virtualization Virtualization ready, hypervisor connector embedded | | | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | |
| Software Management Tools <ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage | | | |
| Power-On Hotkey <ul style="list-style-type: none">• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup• RAID configuration utility: Ctrl+A at startup | | | |
| Security <ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | | | |
| ThinkPlus Priority Support, 90-day Trial | | | |
| RoHS-compliant | | | |

See footnotes for important warranty information
 US models announced September 8, 2009
 US models withdrawn effective September 2010

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date | |
|--|---|------------|--------------|------|-------|--------------|--------------|-----------|--------------|------------|--|----------|--|-----------------|----------|------------|--|
| TD200 | 3817-3GU | 6x7 | 1xE5506 | 2.13 | 4 | 2x2GB | 1333MHz | 3.5" | None | 4xHot-swap | SATA/SAS ⁴ | Multi* | None | 2x920W | 2xGb | Oct 09 | |
| * Multi = RAID-0/1/5/6/10 support | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none">• Easy to use with ThinkServer EasyStartup and EasyManage software• These models have a 3-year limited warranty¹• This small and medium business (SMB) model is part of the EMEA TopSeller™ Program | | | | | | | | | | | | | | | | | |
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5506 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache | | | | | | | | | | Front  | | Rear  | | | | |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | | | | | | | | | | | | | | | |
| Memory | 4GB std, 96GB max (48GB per processor), RDIMM, PC3-10600 1333MHz DDR3* , Advanced ECC** , Memory Mirroring , twelve 240-pin DIMM sockets***, * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Advanced ECC-enable DIMMs required *** Over six DIMMs requires dual processors | | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200e integrated, one VGA DB-15 in rear, 16MB; <i>Maximum resolution: 1600x1200@85Hz</i> | | | | | | | | | | | | | | | | |
| Disk bays | Four 3.5" hot-swap (HS) SATA/SAS disk bays | | | | | | | | | | <ul style="list-style-type: none">• Tower mechanical, rack-mountable to 5U• Business black color; metal case• 8.6"W x 29.4"D x 17.3"H• 218mm W x 747mm D x 440mm H• 77 lb (35kg) max configuration• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support | | | | | | |
| Disk Controller | ServeRAID-MR10i, PCIe bus, SATA 3Gb/s, SAS 3Gb/s, RAID 0, 1, 5, 6, 10, 50 support | | | | | | | | | | | | | | | | |
| Optical | Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s | | | | | | | | | | <ul style="list-style-type: none">Bay 1 5.25", 1.6" high, external, std opticalBay 2 5.25", 1.6" high, external, optional opticalBay 3 5.25", 1.6" high, external, optional opticalBay 4 3.5", 1" high, external, optional diskBay 5 3.5", 1" high, external, optional diskBay 6 3.5", 1" high, external, optional diskBay 7 3.5", 1" high, external, optional disk | | | | | | |
| Diskette | None (use USB port) | | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing | | | | | | | | | | <ul style="list-style-type: none">Slot 1: half-length, full-height, PCI Express x8Slot 2: full, PCI Express x16 (x8 electrical)Slot 3: full, PCI Express x8 (x4 electrical)Slot 4: full, PCI Express x8 (x4 electrical)Slot 5: full, PCI Express x8Slot 6: half-length, 32-bit PCI 2.3 | | | | | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | | | | | | | | | | | | | | | |
| Extender card | None | | | | | | | | | | <ul style="list-style-type: none">• Virtualization ready, hypervisor connector embedded | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | | | | | | | | | <ul style="list-style-type: none">• Software Management Tools• ThinkServer EasyStartup• ThinkServer EasyManage | | | | | | |
| Internal ports | Two USB 2.0, one connector for tape drive, one connector for embedded hypervisor | | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, voltage regulator module, power supply) | | | | | | | | | | <ul style="list-style-type: none">• Power-On Hotkey• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup• RAID configuration utility: Ctrl+A at startup | | | | | | |
| Systems mgmt | Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium | | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, SATA/SAS disk, OS | | | | | | | | | | <ul style="list-style-type: none">• Security• Side cover lock (ships with two identical keys) - prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | <ul style="list-style-type: none">• ThinkPlus Priority Support, 90-day Trial | | | | | | |
| Power supply(s) | Two 920 watts standard, two maximum, rear access, hot-swap, redundant with two power supplies | | | | | | | | | | | | | | | | |
| Cooling | Three fans std, three maximum, variable speed, hot-swap | | | | | | | | | | <ul style="list-style-type: none">• RoHS-compliant | | | | | | |
| Accessories Intel Xeon Dual-Core Processor E5506 67Y0010 2GB PC3-10600 DDR3 ECC RDIMM 67Y0015 4GB PC3-10600 DDR3 ECC RDIMM 67Y0016 146GB ² 3.5" SAS HS (15000 rpm) 45J6211 160GB 3.5" SATA HS (7200 rpm) 45J6200 250GB 3.5" SATA HS (7200 rpm) 45J6201 500GB 3.5" SATA HS (7200 rpm) 45J6202 750GB 3.5" SATA HS (7200 rpm) 45J6203 1TB 3.5" SATA HS (7200 rpm) 45J6204 Other accessories at lenovo.com/accessories | | | | | | | | | | | | | | | | | |
| Max internal capacity 4.0TB with four 1TB HS SATA disks | | | | | | | | | | | | | | | | | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | | |

See footnotes for important warranty information
US model announced September 29, 2009
US model withdrawn effective September 2010

| Name | Type-model | Slot x bay | Proc-essor(s) | GHz Cores | Memory DIMMs | Memory speed | Disk size | Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date | |
|--------|------------|------------|---------------|-----------|--------------|--------------|-----------|---------|------------|-----------------------|----------|-------------|-----------------|----------|------------|--------|
| TD200x | 3822-41U | 6x11 | 1xE5520 | 2.26 | 4 | 2x2GB | 1333MHz | 2.5" | 8xHot-swap | SATA/SAS ⁴ | Multi* | Premium | 2x920W | 2xGb | Jul 09 | |
| TD200x | 3822-42U | 6x11 | 1xE5530 | 2.40 | 4 | 3x2GB | 1333MHz | 2.5" | 8xHot-swap | SATA/SAS | Multi | Premium | 2x920W | 2xGb | Jul 09 | |
| TD200x | 3822-43U | 6x11 | 2xE5530 | 2.40 | 8 | 6x2GB | 1333MHz | 2.5" | Battery | 8xHot-swap | SATA/SAS | Multi | Premium | 2x920W | 2xGb | Jul 09 |

* Multi = RAID-0/1/5/6/10/50/60 support

- **These models have a 3-year limited warranty¹**
- **Fully loaded, high performance tower computing and virtualization ready**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

| | | |
|--|---|---|
| Processor(s) | Up to two processors, one or two processors standard, Intel® Xeon® Processor E5520 or E5530 with quad-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 1066MHz DDR3 memory controller, and 8MB cache | <div>Front<div><div>optical</div><div>optical</div><div>optical</div><div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div></div></div></div> <div>Rear<div><div>PSU</div><div>PSU</div><div><div>1 - PCIe x8</div><div>2 - PCIe x16</div><div>3 - PCIe x8</div><div>4 - PCIe x8</div><div>5 - PCIe x8</div><div>6 - PCI</div></div></div></div> |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | |
| Memory | 4GB, 6GB, or 12GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, Advanced ECC** , Memory Mirroring , sixteen 240-pin DIMM sockets, std memory in 2, 3, or 6 sockets, 14, 13, or 10 sockets available***, eight sockets distributed into 3-channel per processor (3-3-2) * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Advanced ECC-enable DIMMs required *** Over eight DIMMs requires dual processors | |
| Graphics | Matrox® G200e, integrated, one VGA DB-15 in rear, 16MB; <i>Maximum resolution: 1600x1200@85Hz</i> | |
| Disk bays | 8 hot-swap (HS) SATA/SAS disk bays, 2.5" Slim-Form-Factor (SFF) std | |
| Disk Controller | ServeRAID®-MR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID [®] 0, 1, 5, 6, 10, 50, 60 support <i>43U: Battery backed cache integrated</i> | |
| Optical Diskette Ethernet | Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s None (use USB port) Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-5 (see right) and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | |
| Extender card | None | |
| Front ports | Two USB 2.0 | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | |
| Internal ports | Two USB 2.0, one connector for tape drive, one connector for embedded hypervisor | |
| Diagnostics | Easy LED Diagnostics (operator information panel on front cover with error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, PCI slots, power supplies) | |
| Systems mgmt | Integrated Management Module (IMM) Premium, Trusted Platform Module (TPM) 1.2 support, IPMI 2.0-compliant, | |
| Prerequisites | Monitor, SATA/SAS disk, OS | |
| Keyboard | None (use USB port) | |
| Mouse | None (use USB port) | |
| Power supply(s) | Two 920 watts standard, two maximum, rear access, hot-swap, auto-sensing, redundant with two power supplies | |
| Cooling | Six fans std, six maximum, variable speed, hot-swap | |
| Accessories Intel Xeon Quad-Core Processor E5520 67Y0011 Intel Xeon Quad-Core Processor E5530 67Y0102 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0015 300GB ² 2.5" SAS SFF HS (10000 rpm) 67Y0118 500GB 2.5" SATA SFF HS (7200 rpm) 67Y0121 Other accessories at lenovo.com/accessories | | |
| Max internal capacity 4.0TB with eight 500GB SATA SFF disks | | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | |

• Tower mechanical, rack-mountable to 5U

• Business black color; metal case

• 8.6"W x 29.4"D x 17.3"H

• 218mm W x 747mm D x 440mm H

• 84 lb (38kg) max configuration

• Toolless side cover removal

• Toolless disk and optical drive removal

• Toolless adapter retention

• Illuminated front icons

• Rack shelf support

Bay 1 5.25", 1.6" high, external, std optical

Bay 2 5.25", 1.6" high, external, optional optical

Bay 3 5.25", 1.6" high, external, optional optical

Bay 4 2.5", 0.6" high, external, optional disk

Bay 5 2.5", 0.6" high, external, optional disk

Bay 6 2.5", 0.6" high, external, optional disk

Bay 7 2.5", 0.6" high, external, optional disk

Bay 8 2.5", 0.6" high, external, optional disk

Bay 9 2.5", 0.6" high, external, optional disk

Bay 10 2.5", 0.6" high, external, optional disk

Bay 11 2.5", 0.6" high, external, optional disk

Slot 1: half-length, full-height, PCI Express x8

Slot 2: full, PCI Express x16 (x8 electrical)

Slot 3: full, PCI Express x8 (x4 electrical)

Slot 4: full, PCI Express x8 (x4 electrical)

Slot 5: full, PCI Express x8

Slot 6: half-length, full-height, 32-bit PCI 2.3

Virtualization

Virtualization ready, hypervisor connector embedded

Power-On Hotkey

• Setup Utility: F1 at startup

• Diagnostic: F2 at startup

• Network Boot: F12 at startup

• RAID configuration utility: Ctrl+A at startup

Software Management Tools

• ThinkServer EasyStartup

• ThinkServer EasyManage

Security

• Side cover lock (ships with two identical keys)

- prohibits removal of front panel and disks

• Power-on password

• Administrator password

• Boot sequence control

• Boot without keyboard, mouse, diskette

• Serial port I/O control

• USB port disablement (all)

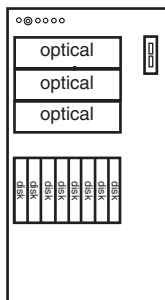
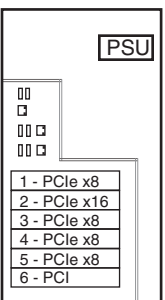
ThinkPlus Priority Support, 90-day Trial

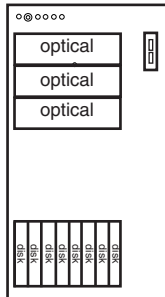
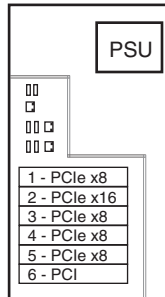
RoHS-compliant

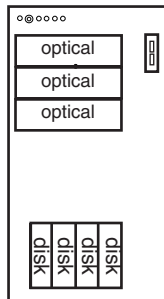
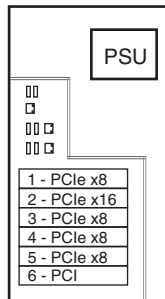
See footnotes for important warranty information
 US models announced June 30, 2009
 US models withdrawn effective September 2010

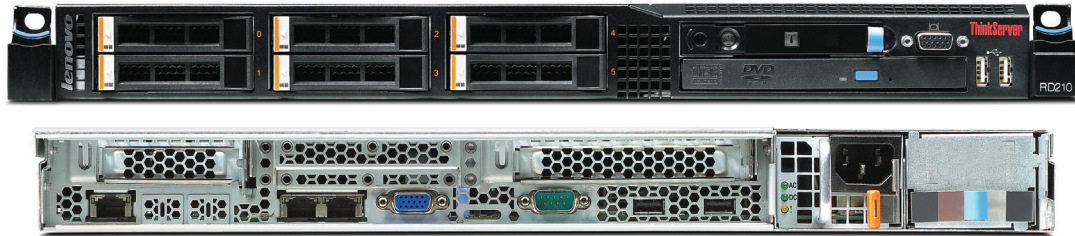
| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date |
|--------|------------|------------|---------------|------|-------|--------------|--------------|-----------|--------------|------------|-----------------------|----------|-------------|-----------------|----------|------------|
| TD200x | 3822-47U | 6x7 | 1xE5504 | 2.00 | 4 | 1x2GB | 1333MHz | 3.5" | No | 4xHot-swap | SATA/SAS ⁴ | 0/1/10 | Premium | 1x920W | 2xGb | Jan 10 |
| TD200x | 3822-48U | 6x11 | 1xE5520 | 2.26 | 4 | 1x4GB | 1333MHz | 2.5" | No | 8xHot-swap | SATA/SAS | 0/1/10 | Premium | 1x920W | 2xGb | Jan 10 |

- **These models have a 3-year limited warranty¹**
- **Fully loaded, high performance tower computing, and virtualization ready**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

| | | | | | | |
|--|---|---------|--|--|---|--|
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5504 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5520 with quad-core , 5.86GT/s QPI, 1066MHz DDR3 memory controller, and 8MB cache | | Front (48U only) | | Rear | |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | |  | |  | |
| Memory | 2GB or 4GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, Advanced ECC** , Memory Mirroring , sixteen 240-pin DIMM sockets, std memory in 1 socket, 15 sockets available***, eight sockets distributed into 3-channel per processor (3-3-2) * System automatically clocks down for processors with 800MHz or 1066 MHz DDR3 memory controller ** Advanced ECC-enable DIMMs required *** Over eight DIMMs requires dual processors | | | | | |
| Graphics | Matrox® G200e, integrated, one VGA DB-15 in rear, 16MB; <i>Maximum resolution: 1600x1200@85Hz</i> | | | | | |
| Disk bays | 47U: four 3.5" hot-swap (HS) SATA/SAS disk bays 48U: eight HS SATA/SAS disk bays, 2.5" Slim-Form-Factor (SFF) std | | | | | |
| Disk Controller | ServeRAID® M1015, PCI Express bus, SATA 6Gb/s, SAS 6Gb/s, RAID 0, 1, 10 support | | | | | |
| Optical | Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s | | | | | |
| Diskette | None (use USB port) | | | | | |
| Ethernet | Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing | | | | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-5 (see right) and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | | | | |
| Extender card | None | | | | | |
| Front ports | Two USB 2.0 | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | | | | |
| Internal ports | Two USB 2.0, one connector for tape drive, one connector for embedded hypervisor | | | | | |
| Diagnostics | Easy LED Diagnostics (operator information panel on front cover with error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, PCI slots, power supplies) | | | | | |
| Systems mgmt | Integrated Management Module (IMM) Premium, Trusted Platform Module (TPM) 1.2 support, IPMI 2.0-compliant, | | | | | |
| Prerequisites | Monitor, SATA/SAS disk, OS | | | | | |
| Keyboard | None (use USB port) | | | | | |
| Mouse | None (use USB port) | | | | | |
| Power supply(s) | One 920 watts standard, two maximum, rear access, hot-swap, auto-sensing, redundant with two power supplies | | | | | |
| Cooling | Six fans std, six maximum, variable speed, hot-swap | | | | | |
| Accessories | | | | | | |
| 2GB PC3-10600 DDR3 1333 MHz RDIMM | | 67Y0015 | | | | |
| 4GB PC3-10600 DDR3 1333 MHz RDIMM | | 67Y0016 | | | | |
| Other accessories at lenovo.com/accessories | | | | | | |
| Virtualization | | | | | | |
| Virtualization ready, hypervisor connector embedded | | | | | | |
| Software Management Tools | | | | | | |
| • ThinkServer EasyStartup • ThinkServer EasyManage | | | | | | |
| Limited Warranty¹ | | | | | | |
| ⇒ 3-year parts and labor | | | | | | |
| ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) | | | | | | |
| ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty | | | | | | |
| • Onsite service upgrade options (in eligible locations) ⁷ | | | | | | |
| • Post warranty maintenance services | | | | | | |
| ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | |
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| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | Disk(s) | Disk bays | Disk type | RAID Int | Optical | Power supply(s) | Ethernet | Avail date |
|--|--|------------|--------------|------|-------|--------------|--------------|-----------|---------|---|--|----------|---|-----------------|----------|------------|
| TD200 | 3724-38U | 6x7 | 1xE5502 | 1.86 | 2 | 1x2GB | 1333MHz | 3.5" | None | 4xHot-swap | SATA/SAS ⁴ | 0/1 | DVDRW | 670W | 2xGb | Jul 09 |
| TD200 | 3724-39U | 6x11 | 1xE5502 | 1.86 | 2 | 1x2GB | 1333MHz | 2.5" | None | 8xHot-swap | SATA/SAS | 0/1 | DVDRW | 670W | 2xGb | Jul 09 |
| • These models have a 3-year limited warranty¹ | | | | | | | | | | | | | | | | |
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5502 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache | | | | | | | | | | Front* | | Rear | | | |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | | | | | | | | |  | |  | | | |
| Memory | 2GB std, 96GB max (48GB per processor), RDIMM, PC3-10600 1333MHz DDR3^{**}, Advanced ECC^{***}, Memory Mirroring , twelve 240-pin DIMM sockets, std memory in 1 socket, 11 sockets available****, ** System automatically clocks down for processors with 800MHz DDR3 memory controller *** Advanced ECC-enable DIMMs required **** Over six DIMMs requires dual processors | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200e integrated, one VGA DB-15 rear <i>Maximum resolution: 1024x768@85Hz</i> | | | | | | | | | | | | | | | |
| Disk bays | 38U: four 3.5" hot-swap (HS) SATA/SAS disk bays 39U: eight hot-swap (HS) SATA/SAS disk bays, 2.5" Slim-Form-Factor (SFF) | | | | | | | | | | | | | | | |
| Disk Controller | ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID ⁸ 0, 1 support | | | | | | | | | | | | | | | |
| Optical | Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s | | | | | | | | | | | | | | | |
| Diskette | None (use optional USB diskette) | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing | | | | | | | | | | | | | | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | | | | | | | | | | | | | | |
| Extender card | None | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, voltage regulator module, power supply) | | | | | | | | | | | | | | | |
| Systems mgmt | Integrated Management Module (IMM) std, IPMI 2.0-compliant, upgradeable to IMM Premium | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, SATA/SAS disk, OS | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | |
| Power supply(s) | one 670 watts standard, one maximum, rear access, universal | | | | | | | | | | | | | | | |
| Cooling | Three fans std, three maximum, variable speed, hot-swap | | | | | | | | | | | | | | | |
| Accessories 1GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0014 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0015 4GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0016 300GB ² 2.5" SAS SFF HS (10000 rpm) 67Y0118 450GB 3.5" SAS Disk HS (15000 rpm) 67Y0119 1TB 3.5" Hot-swap SATA Disk (7200 rpm) 45J6204 USB Portable Diskette Drive 05K9276 Other accessories at lenovo.com/accessories | | | | | | | | | | | | | | | | |
| Software Management Tools • ThinkServer EasyStartup • ThinkServer EasyManage | | | | | | | | | | | | | | | | |
| Max internal capacity 38U: 4.0TB with four 1TB SATA disks 39U: 2.4TB with eight 300GB SATA/SAS SFF disks | | | | | | | | | | | | | | | | |
| Virtualization Virtualization ready, hypervisor connector embedded, one internal USB port for virtualization hypervisor | | | | | | | | | | | | | | | | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations)⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | Power-On Hotkey • Setup Utility: F1 at startup • Diagnostic: F2 at startup • Network Boot: F12 at startup • RAID configuration utility: Ctrl+A at startup | | | | | | |
| | | | | | | | | | | Security • Side cover lock (ships with two identical keys) - prohibits removal of front panel and disks • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all) | | | | | | |
| | | | | | | | | | | ThinkPlus Priority Support, 90-day Trial | | | | | | |
| | | | | | | | | | | RoHS-compliant | | | | | | |

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | Disk(s) | Disk bays | Disk type | RAID Int | Optical | Power supply(s) | Ethernet | Avail date | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|------------|------------------|------|-------|--------------|--------------|-----------|---------|---------------|--|----------|--|-----------------|----------|------------|-----------------------------------|---------|-----------------------------------|-----------|-----------------------------------|---------|--|-----------|---|---------|---|-----------|---|---------|-----------------------------|-----------|--|---------|----------------|-----------|---------------|-------|----------------|-----------|---------------|-------|----------------|-----------|---------------|
| TD200 | 3824-37U | 6x7 | 1xE5502 | 1.86 | 2 | 1x2GB | 1333MHz | 3.5" | None | 4xSimple-swap | SATA | | DVDRW | 670W | 2xGb | Jul 09 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none">• High performance server with rock solid technology and proven hardware design• Easy to use with ThinkServer EasyStartup and EasyManage software• This model has a 1-year limited warranty¹ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5502 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache | | | | | | | | | | Front  | | Rear  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Memory | 2GB std, 96GB max (48GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, Advanced ECC** , Memory Mirroring , twelve 240-pin DIMM sockets, std memory in 1 socket, 11 sockets available****, * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Advanced ECC-enable DIMMs required *** Over six DIMMs requires dual processors | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200e integrated, one VGA DB-15 rear <i>Maximum resolution: 1024x768@85Hz</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disk bays | Four 3.5" simple-swap SATA disk bays | | | | | | | | | | <ul style="list-style-type: none">• Tower mechanical, rack-mountable to 5U• Business black color; metal case• 8.6"W x 29.4"D x 17.3"H• 218mm W x 747mm D x 440mm H• 77 lb (35kg) max configuration• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support <table><tr><td>Bay 1</td><td>5.25", 1.6" high,</td><td>external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>5.25", 1.6" high,</td><td>external,</td><td>optional optical</td></tr><tr><td>Bay 3</td><td>5.25", 1.6" high,</td><td>external,</td><td>optional optical</td></tr><tr><td>Bay 4</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 5</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 6</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 7</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr></table> <p>Slot 1: half-length, full-height, PCI Express x8 Slot 2: full, PCI Express x16 (x8 electrical) Slot 3: full, PCI Express x8 (x4 electrical) Slot 4: full, PCI Express x8 (x4 electrical) Slot 5: full, PCI Express x8 Slot 6: half-length, 32-bit PCI 2.3</p> | | | | | | | Bay 1 | 5.25", 1.6" high, | external, | std optical | Bay 2 | 5.25", 1.6" high, | external, | optional optical | Bay 3 | 5.25", 1.6" high, | external, | optional optical | Bay 4 | 3.5", 1" high, | external, | optional disk | Bay 5 | 3.5", 1" high, | external, | optional disk | Bay 6 | 3.5", 1" high, | external, | optional disk | Bay 7 | 3.5", 1" high, | external, | optional disk |
| Bay 1 | 5.25", 1.6" high, | external, | std optical | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 2 | 5.25", 1.6" high, | external, | optional optical | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 3 | 5.25", 1.6" high, | external, | optional optical | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 4 | 3.5", 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 5 | 3.5", 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 6 | 3.5", 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 7 | 3.5", 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disk Controller | Serial ATA, SATA 3Gb/s, integrated in ICH10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Optical | Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diskette | None (use optional USB diskette) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), Load balancing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, LPC bus to VSC452 for limited Super I/O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Extender card | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, voltage regulator module, power supply) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Systems mgmt | Integrated Management Module (IMM) std, IPMI 2.0-compliant, upgradeable to IMM Premium | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, SATA disk, OS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power supply(s) | One 670 watts standard, one maximum, rear access, universal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | Three fans std, three maximum, variable speed, hot-swap | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accessories <table><tr><td>1GB PC3-10600 DDR3 1333 MHz RDIMM</td><td>67Y0014</td></tr><tr><td>2GB PC3-10600 DDR3 1333 MHz RDIMM</td><td>67Y0015</td></tr><tr><td>4GB PC3-10600 DDR3 1333 MHz RDIMM</td><td>67Y0016</td></tr><tr><td>160GB² 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6195</td></tr><tr><td>250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6196</td></tr><tr><td>500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6197</td></tr><tr><td>750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J6198</td></tr><tr><td>USB Portable Diskette Drive</td><td>05K9276</td></tr><tr><td>Lenovo® TV L151 15-inch Analog TFT Monitor</td><td>9165AC6</td></tr></table> Other accessories at lenovo.com/accessories | | | | | | | | | | | | | | | | | 1GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y0014 | 2GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y0015 | 4GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y0016 | 160GB ² 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6195 | 250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6196 | 500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6197 | 750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6198 | USB Portable Diskette Drive | 05K9276 | Lenovo® TV L151 15-inch Analog TFT Monitor | 9165AC6 | | | | | | | | | | | |
| 1GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y0014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y0015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y0016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 160GB ² 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6195 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 250GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6196 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 500GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6197 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 750GB 3.5" Simple-swap SATA 3.0Gb/s Disk (7200 rpm) | 45J6198 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| USB Portable Diskette Drive | 05K9276 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lenovo® TV L151 15-inch Analog TFT Monitor | 9165AC6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Software Management Tools <ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max internal capacity 3.0TB with four 750GB SATA disks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Virtualization Virtualization ready, hypervisor connector embedded, one internal USB port for virtualization hypervisor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Limited Warranty¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power-On Hotkey <ul style="list-style-type: none">• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup• RAID configuration utility: Ctrl+A at startup | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Security <ul style="list-style-type: none">• Side cover lock (ships with two identical keys)<ul style="list-style-type: none">- prohibits removal of front panel and disks• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ThinkPlus Priority Support, 90-day Trial | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RoHS-compliant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



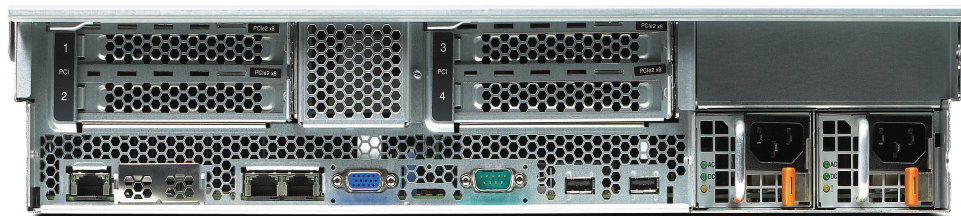
Lenovo® ThinkServer RD210



Lenovo ThinkServer RD220
(8 Disk Bays plus Tape Drive)



Lenovo ThinkServer RD220
(12 Disk Bays)



Lenovo ThinkServer RD220

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date |
|--|---|------------|--------------|-----|-------|--------------|--------------|-----------|--------------|-----------|---|----------|-------------|-----------------|----------|------------|
| RD210 3795-21U 2x7 1xE5502 1.86 2 1x1GB 1333MHz 2.5" None 6xHot-swap SATA/SAS ⁴ 0/1 None 1x675W 2xGb May 09 | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none">• This model has a 1-year limited warranty¹• This small and medium business (SMB) model is part of the US TopSeller™ Program | | | | | | | | | | | | | | | | |
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5502 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache | | | | | | | | | | <div>1U Rack top</div> <div>Front</div> <div>Rear</div> <div>Bay 1 5.25", 0.5" high, external, std optical</div> <div>Bay 2 2.5", 0.6" high, external, optional disk</div> <div>Bay 3 2.5", 0.6" high, external, optional disk</div> <div>Bay 4 2.5", 0.6" high, external, optional disk</div> <div>Bay 5 2.5", 0.6" high, external, optional disk</div> <div>Bay 6 2.5", 0.6" high, external, optional disk</div> <div>Bay 7 2.5", 0.6" high, external, optional disk</div> <div>Slot 1: low-profile, PCI Express 2.0 x16</div> <div>Slot 2: half-length, full-height, PCI Express 2.0 x16</div> <div>Power-On Hotkey</div> <div>• Setup Utility: F1 at startup</div> <div>• Diagnostic: F2 at startup</div> <div>• Network Boot: F12 at startup</div> <div>Software Management Tools</div> <div>• ThinkServer EasyStartup</div> <div>• ThinkServer EasyManage</div> <div>Security</div> <div>• Power-on password</div> <div>• Administrator password</div> <div>• Boot sequence control</div> <div>• Boot without keyboard, mouse, diskette</div> <div>• Serial port I/O control</div> <div>• USB port disablement (front or all)</div> <div>ThinkPlus Priority Support, 90-day Trial</div> <div>RoHS-compliant</div> | | | | | |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | | | | | | | | | | | | | | |
| Memory | 1GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3** , Advanced ECC*** , Memory Mirroring , sixteen 240-pin DIMM sockets, standard memory in 1 socket, 15 sockets available****, eight sockets distributed into 3-channel per processor (3-3-2) ** System automatically clocks down for processor with 800MHz DDR3 memory controller *** Advanced ECC-enable DIMMs required **** Over eight DIMMs requires dual processors | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200e, integrated, two VGA DB-15 (front and rear), 8MB; <i>Maximum resolution: 1280x1024@60Hz</i> | | | | | | | | | | | | | | | |
| Disk bays | 6 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std | | | | | | | | | | | | | | | |
| Disk Controller | ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID ⁰ , 1 support | | | | | | | | | | | | | | | |
| Optical | UltraSlim Enhanced DVD±RW | | | | | | | | | | | | | | | |
| Diskette | None (use USB port) | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, TCP/IP Offload Engine(TOE), Broadcom® 5709C operated over PCIe bus, load balancing, upgradeable to 4 int ethernet ports via optional daughter card | | | | | | | | | | | | | | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | | | | | | | | | | | | | | |
| Riser card | (See Right) Two PCI Express 2.0 x16 slots std, convertible via optional riser card(s) to 64-bit 133MHz PCI-X | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0, external monitor (VGA DB-15) | | | | | | | | | | | | | | | |
| Rear ports | Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | | | | | | | | | | | | | | |
| Internal port | One USB connector for embedded hypervisor | | | | | | | | | | | | | | | |
| Diagnostics | Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED) | | | | | | | | | | | | | | | |
| Systems mgmt | Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | |
| Power supply(s) | One 675 watts standard, two maximum, hot-swap, auto-sensing, redundant with two power supplies | | | | | | | | | | | | | | | |
| Cooling | Six fans std, six maximum, variable speed, hot-swap | | | | | | | | | | | | | | | |
| Accessories | | | | | | | | | | | | | | | | |
| Intel Xeon Dual-Core Processor E5502 67Y0004 | | | | | | | | | | | | | | | | |
| 1GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0014 | | | | | | | | | | | | | | | | |
| 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0015 | | | | | | | | | | | | | | | | |
| 4GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0016 | | | | | | | | | | | | | | | | |
| 73GB ² 2.5" SAS SFF HS (15000 rpm) 67Y0115 | | | | | | | | | | | | | | | | |
| 146GB 2.5" SAS SFF HS (10000 rpm) 67Y0116 | | | | | | | | | | | | | | | | |
| 300GB 2.5" SAS SFF HS (10000 rpm) 67Y0118 | | | | | | | | | | | | | | | | |
| 500GB 2.5" SATA SFF HS (7200 rpm) 67Y0121 | | | | | | | | | | | | | | | | |
| Other accessories at lenovo.com/accessories | | | | | | | | | | | | | | | | |
| Max internal capacity | | | | | | | | | | | | | | | | |
| 3.0TB with six 500GB SATA SFF disks | | | | | | | | | | | | | | | | |
| Virtualization | | | | | | | | | | | | | | | | |
| Virtualization ready, hypervisor connector embedded | | | | | | | | | | | | | | | | |
| Limited Warranty¹ | | | | | | | | | | | | | | | | |
| ⇒ 1-year parts and labor | | | | | | | | | | | | | | | | |
| ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) | | | | | | | | | | | | | | | | |
| ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty | | | | | | | | | | | | | | | | |
| • Onsite service upgrade options (in eligible locations)⁷ | | | | | | | | | | | | | | | | |
| • Post warranty maintenance services | | | | | | | | | | | | | | | | |
| ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | |

Personal Systems Reference (PSREF)

* Multi = RAID-0/1/5/6/10/50/60 support

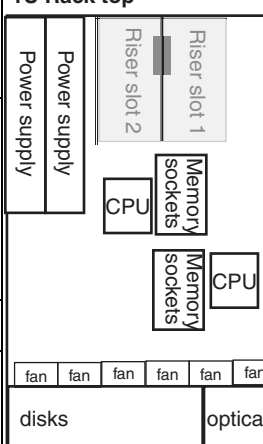
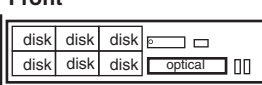
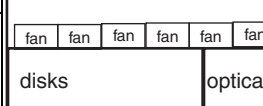
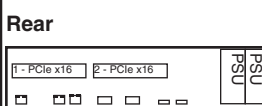
- **These models have a 3-year limited warranty¹**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

See footnotes for important warranty information
US models announced May 5, 2009
US models withdrawn effective February 2011

| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date |
|---|------------|------------|---------------|------|-------|--------------|--------------|-----------|--------------|------------|-----------------------|----------|-------------|-----------------|----------|------------|
| RD210 | 3796-2CU | 2x7 | 1xE5540 | 2.53 | 4 | 2x2GB | 1333MHz | 2.5" | Battery | 6xHot-swap | SATA/SAS ⁴ | Multi* | Premium | 2x675W | 2xGb | May 09 |
| * Multi = RAID-0/1/5/6/10/50/60 support | | | | | | | | | | | | | | | | |

* Multi = RAID-0/1/5/6/10/50/60 support

- **This model has a 3-year limited warranty¹**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

| | | | |
|--|---|---|---|
| Processor(s) | Up to two processors, one processors standard, Intel® Xeon® Processor E5540 with quad-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 1066MHz DDR3 memory controller, and 8MB cache | <div>1U Rack top</div> <div></div> | <div>Front</div> <div></div> |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | |
| Memory | 4GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3**, Advanced ECC***, Memory Mirroring , sixteen 240-pin DIMM sockets, std memory in 1 socket, 15 sockets available****, eight sockets distributed into 3-channel per processor (3-3-2) ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller ***Advanced ECC-enable DIMMs required **** Over eight DIMMs requires dual processors | | |
| Graphics | Matrox® G200e, integrated, two VGA DB-15 (front and rear), 8MB; <i>Maximum resolution: 1280x1024@60Hz</i> | | |
| Disk bays | 6 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std | | |
| Disk Controller | ServeRAID®-MR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1, 5, 6, 10, 50 support, Battery backed cache integrated | | |
| Optical | UltraSlim Enhanced DVD±RW | | |
| Diskette | None (use USB port) | | |
| Ethernet | Two Gigabit Ethernet ports, TCP/IP Offload Engine(TOE), Broadcom® 5709C operated over PCIe bus, load balancing, upgradeable to 4 int ethernet ports via optional daughter card | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | |
| Riser card | (See Right) Two PCI Express 2.0 x16 slots std, convertible via optional riser card(s) to 64-bit 133MHz PCI-X | <div>Power supply</div> <div></div> | <div>Rear</div> <div></div> |
| Front ports | Two USB 2.0, external monitor (VGA DB-15) | | |
| Rear ports | Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | |
| Internal port | One USB connector for embedded hypervisor | | |
| Diagnostics | Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED) | | |
| Systems mgmt | Integrated Management Module (IMM) Premium, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | |
| Keyboard | None (use USB port) | | |
| Mouse | None (use USB port) | | |
| Power supply(s) | Two 675 watts standard, two maximum, variable speed fan, hot-swap, auto-sensing, redundant with two power supplies | | |
| Cooling | Six fans std, six maximum, variable speed, hot-swap | | |
| Accessories Intel Xeon Quad-Core Processor E5540 67Y0096 73GB ² 2.5" SAS SFF HS (15000 rpm) 67Y0115 146GB 2.5" SAS SFF HS (10000 rpm) 67Y0116 300GB 2.5" SAS SFF HS (10000 rpm) 67Y0118 500GB 2.5" SATA SFF HS (7200 rpm) 67Y0121 Other accessories at lenovo.com/accessories | | <div>• 1U Mechanical; rack-mount only</div> <div>• Black color front; metal case</div> <div>• 17.3"W x 27.5"D x 1.75"H</div> <div>• 440mm W x 711.4mm D x 43mm H</div> <div>• 34.5 lb (15.6kg) max configuration</div> <div>• Toolless top cover removal</div> <div>• Toolless disk and optical drive removal</div> <div>• Toolless adapter retention</div> <div>• Illuminated front icons with pull-out Easy LED Diagnostics panel</div> <div>Bay 1 5.25", 0.5" high, external, std optical</div> <div>Bay 2 2.5", 0.6" high, external, optional disk</div> <div>Bay 3 2.5", 0.6" high, external, optional disk</div> <div>Bay 4 2.5", 0.6" high, external, optional disk</div> <div>Bay 5 2.5", 0.6" high, external, optional disk</div> <div>Bay 6 2.5", 0.6" high, external, optional disk</div> <div>Bay 7 2.5", 0.6" high, external, optional disk</div> <div>Slot 1: low-profile, PCI Express 2.0 x16</div> <div>Slot 2: half-length, full-height, PCI Express 2.0 x16</div> | |
| Max internal capacity 3.0TB with six 500GB SATA SFF disks | | <div>Power-On Hotkey</div> <div>• Setup Utility: F1 at startup</div> <div>• Diagnostic: F2 at startup</div> <div>• Network Boot: F12 at startup</div> | |
| Virtualization Virtualization ready, hypervisor connector embedded | | <div>Software Management Tools</div> <div>• ThinkServer EasyStartup</div> <div>• ThinkServer EasyManage</div> | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations) ⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | <div>Security</div> <div>• Power-on password</div> <div>• Administrator password</div> <div>• Boot sequence control</div> <div>• Boot without keyboard, mouse, diskette</div> <div>• Serial port I/O control</div> <div>• USB port disablement (front or all)</div> <div>ThinkPlus Priority Support, 90-day Trial</div> <div>RoHS-compliant</div> | |

See footnotes for important warranty information
US model announced May 5, 2009
US model withdrawn effective February 2011

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| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date | |
|--|---|------------|--------------|-----|-------|--------------|--------------|-----------|---------|-----------|---|----------|-------------|-----------------|----------|------------|--|
| RD210 3818-25U 2x7 1xE5502 1.86 2 1x1GB 1333MHz 2.5" None 6xHot-swap SATA/SAS [†] 0/1 None 1x675W 2xGb May 09 | | | | | | | | | | | | | | | | | |
| • This model has a 1-year limited warranty¹ | | | | | | | | | | | | | | | | | |
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5502 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache | | | | | | | | | | <div><div>1U Rack top</div><div><div><div>Opt PSU</div><div>Power supply</div><div>Riser slot 2</div><div>Riser slot 1</div><div>CPU</div><div>Memory sockets</div><div>Memory sockets</div><div>CPU</div><div>fan</div><div>fan</div><div>fan</div><div>fan</div><div>fan</div><div>fan</div><div>disks</div><div>optical</div></div><div><ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.3"W x 27.5"D x 1.75"H• 440mm W x 711.4mm D x 43mm H• 34.5 lb (15.6kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons with pull-out Easy LED Diagnostics panel</div><div>Bay 1 5.25", 0.5" high, external, optional optical</div><div>Bay 2 2.5", 0.6" high, external, optional disk</div><div>Bay 3 2.5", 0.6" high, external, optional disk</div><div>Bay 4 2.5", 0.6" high, external, optional disk</div><div>Bay 5 2.5", 0.6" high, external, optional disk</div><div>Bay 6 2.5", 0.6" high, external, optional disk</div><div>Bay 7 2.5", 0.6" high, external, optional disk</div><div>Slot 1: low-profile, PCI Express 2.0 x16</div><div>Slot 2: half-length, full-height, PCI Express 2.0 x16</div></div></div> | | | | | | |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | | | | | | | | | | | | | | | |
| Memory | 1GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3^{**}, Advanced ECC^{***}, Memory Mirroring , sixteen 240-pin DIMM sockets, standard memory in 1 socket, 15 sockets available ^{****} , eight sockets distributed into 3-channel per processor (3-3-2) ^{**} System automatically clocks down for processor with 800MHz DDR3 memory controller ^{***} Advanced ECC-enable DIMMs required ^{****} Over eight DIMMs requires dual processors | | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200e, integrated, two VGA DB-15 (front and rear), 8MB; <i>Maximum resolution: 1280x1024@60Hz</i> | | | | | | | | | | | | | | | | |
| Disk bays | 6 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std | | | | | | | | | | | | | | | | |
| Disk Controller | ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID [®] 0, 1 support | | | | | | | | | | | | | | | | |
| Optical | None | | | | | | | | | | | | | | | | |
| Diskette | None (use optional USB diskette) | | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing, upgradeable to 4 int ethernet ports via optional daughter card | | | | | | | | | | | | | | | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | | | | | | | | | | | | | | | |
| Riser card | (See Right) Two PCI Express 2.0 x16 slots std, convertible via optional riser card(s) to 64-bit 133MHz PCI-X | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0, external monitor (VGA DB-15) | | | | | | | | | | | | | | | | |
| Rear ports | Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | | | | | | | | | | | | | | | |
| Internal port | One USB connector for embedded hypervisor | | | | | | | | | | | | | | | | |
| Diagnostics | Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED) | | | | | | | | | | | | | | | | |
| Systems mgmt | Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium | | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | | |
| Power supply(s) | One 675 watts standard, two maximum, hot-swap, auto-sensing, redundant with two power supplies | | | | | | | | | | | | | | | | |
| Cooling | Six fans std, six maximum, variable speed, hot-swap | | | | | | | | | | | | | | | | |
| Accessories | | | | | | | | | | | | | | | | | |
| Intel Xeon Dual-Core Processor E5502 | | | | | | | 67Y0004 | | | | | | | | | | |
| 1GB PC3-10600 DDR3 1333 MHz RDIMM | | | | | | | 67Y0014 | | | | | | | | | | |
| 2GB PC3-10600 DDR3 1333 MHz RDIMM | | | | | | | 67Y0015 | | | | | | | | | | |
| 4GB PC3-10600 DDR3 1333 MHz RDIMM | | | | | | | 67Y0016 | | | | | | | | | | |
| 73GB ² 2.5" SAS SFF HS (15000 rpm) | | | | | | | 67Y0115 | | | | | | | | | | |
| 146GB 2.5" SAS SFF HS (10000 rpm) | | | | | | | 67Y0116 | | | | | | | | | | |
| 300GB 2.5" SAS SFF HS (10000 rpm) | | | | | | | 67Y0118 | | | | | | | | | | |
| USB Portable Diskette Drive | | | | | | | 05K9276 | | | | | | | | | | |
| Lenovo® TV L151 15-inch Analog TFT Monitor | | | | | | | 9165AC6 | | | | | | | | | | |
| Other accessories at lenovo.com/accessories | | | | | | | | | | | | | | | | | |
| Max internal capacity | | | | | | | | | | | | | | | | | |
| 1.8TB with six 300GB SATA/SAS SFF disks | | | | | | | | | | | | | | | | | |
| Virtualization | | | | | | | | | | | | | | | | | |
| Virtualization ready, hypervisor connector embedded | | | | | | | | | | | | | | | | | |
| Limited Warranty¹ | | | | | | | | | | | | | | | | | |
| ⇒ 1-year parts and labor | | | | | | | | | | | | | | | | | |
| ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) | | | | | | | | | | | | | | | | | |
| ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty | | | | | | | | | | | | | | | | | |
| • Onsite service upgrade options (in eligible locations) ⁷ | | | | | | | | | | | | | | | | | |
| • Post warranty maintenance services | | | | | | | | | | | | | | | | | |
| ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | | |
| Power-On Hotkey | | | | | | | | | | | | | | | | | |
| • Setup Utility: F1 at startup | | | | | | | | | | | | | | | | | |
| • Diagnostic: F2 at startup | | | | | | | | | | | | | | | | | |
| • Network Boot: F12 at startup | | | | | | | | | | | | | | | | | |
| Software Management Tools | | | | | | | | | | | | | | | | | |
| • ThinkServer EasyStartup | | | | | | | | | | | | | | | | | |
| • ThinkServer EasyManage | | | | | | | | | | | | | | | | | |
| Security | | | | | | | | | | | | | | | | | |
| • Power-on password | | | | | | | | | | | | | | | | | |
| • Administrator password | | | | | | | | | | | | | | | | | |
| • Boot sequence control | | | | | | | | | | | | | | | | | |
| • Boot without keyboard, mouse, diskette | | | | | | | | | | | | | | | | | |
| • Serial port I/O control | | | | | | | | | | | | | | | | | |
| • USB port disablement (front or all) | | | | | | | | | | | | | | | | | |
| ThinkPlus Priority Support, 90-day Trial | | | | | | | | | | | | | | | | | |
| RoHS-compliant | | | | | | | | | | | | | | | | | |

See footnotes for important warranty information
 US model listed are special bid models for technical reference only
 US models withdrawn effective December 2009

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date |
|---|---|------------|--------------|------|-------|--------------|--------------|-----------|--------------|------------|---|----------|-------------|-----------------|----------|------------|
| RD210 | 3819-26U | 2x7 | 1xE5502 | 1.86 | 2 | 1x1GB | 1333MHz | 2.5" | None | 6xHot-swap | SATA/SAS ⁴ | 0/1 | None | 1x675W | 2xGb | May 09 |
| • This model has a 3-year limited warranty¹ | | | | | | | | | | | | | | | | |
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5502 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache | | | | | | | | | | <div><div><div>1U Rack top</div><div><div><div>Opt PSU</div><div>Power supply</div><div>Riser slot 2</div><div>Riser slot 1</div><div>CPU</div><div>Memory sockets</div><div>Memory sockets</div><div>CPU</div><div>fan</div><div>fan</div><div>fan</div><div>fan</div><div>fan</div><div>fan</div><div>disks</div><div>optical</div></div></div><div><div>Front</div><div><div>disk</div><div>disk</div><div>disk</div><div>disk</div><div>disk</div><div>optical</div></div></div><div><div>Rear</div><div><div>1- PCIe x16</div><div>2- PCIe x16</div><div>PSU</div></div></div></div></div> | | | | | |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | | | | | | | | | | | | | | |
| Memory | 1GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3^{**} , Advanced ECC^{***} , Memory Mirroring , sixteen 240-pin DIMM sockets, standard memory in 1 socket, 15 sockets available ^{****} , eight sockets distributed into 3-channel per processor (3-3-2) ^{**} System automatically clocks down for processor with 800MHz DDR3 memory controller ^{***} Advanced ECC-enable DIMMs required ^{****} Over eight DIMMs requires dual processors | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200e, integrated, two VGA DB-15 (front and rear), 8MB; <i>Maximum resolution: 1280x1024@60Hz</i> | | | | | | | | | | | | | | | |
| Disk bays | 6 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std | | | | | | | | | | | | | | | |
| Disk Controller | ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID [®] 0, 1 support | | | | | | | | | | | | | | | |
| Optical | None | | | | | | | | | | | | | | | |
| Diskette | None (use optional USB diskette) | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine (TOE), load balancing, upgradeable to 4 int ethernet ports via optional daughter card | | | | | | | | | | | | | | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | | | | | | | | | | | | | | |
| Riser card | (See Right) Two PCI Express 2.0 x16 slots std, convertible via optional riser card(s) to 64-bit 133MHz PCI-X | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0, external monitor (VGA DB-15) | | | | | | | | | | | | | | | |
| Rear ports | Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | | | | | | | | | | | | | | |
| Internal port | One USB connector for embedded hypervisor | | | | | | | | | | | | | | | |
| Diagnostics | Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED) | | | | | | | | | | | | | | | |
| Systems mgmt | Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | |
| Power supply(s) | One 675 watts standard, two maximum, hot-swap, auto-sensing, redundant with two power supplies | | | | | | | | | | | | | | | |
| Cooling | Six fans std, six maximum, variable speed, hot-swap | | | | | | | | | | | | | | | |
| Accessories <div><div>Intel Xeon Dual-Core Processor E550267Y0004</div><div>1GB PC3-10600 DDR3 1333 MHz RDIMM67Y0014</div><div>2GB PC3-10600 DDR3 1333 MHz RDIMM67Y0015</div><div>4GB PC3-10600 DDR3 1333 MHz RDIMM67Y0016</div><div>73GB² 2.5" SAS SFF HS (15000 rpm)67Y0115</div><div>146GB 2.5" SAS SFF HS (10000 rpm)67Y0116</div><div>300GB 2.5" SAS SFF HS (10000 rpm)67Y0118</div><div>500GB 2.5" SATA SFF HS (7200 rpm)67Y0121</div><div>USB Portable Diskette Drive05K9276</div><div>Lenovo® TV L151 15-inch Analog TFT Monitor9165AC6</div><div>Other accessories at lenovo.com/accessories</div></div> | | | | | | | | | | | | | | | | |
| Max internal capacity 3.0TB with six 500GB SATA SFF disks | | | | | | | | | | | | | | | | |
| Virtualization Virtualization ready, hypervisor connector embedded | | | | | | | | | | | | | | | | |
| Limited Warranty¹ <div><div>3-year parts and labor</div><div>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<div><div>Onsite service upgrade options (in eligible locations)⁷</div><div>Post warranty maintenance services</div></div></div><div>24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div> | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | Power-On Hotkey <div><div>Setup Utility: F1 at startup</div><div>Diagnostic: F2 at startup</div><div>Network Boot: F12 at startup</div></div> | | | | | |
| | | | | | | | | | | | Software Management Tools <div><div>ThinkServer EasyStartup</div><div>ThinkServer EasyManage</div></div> | | | | | |
| | | | | | | | | | | | Security <div><div>Power-on password</div><div>Administrator password</div><div>Boot sequence control</div><div>Boot without keyboard, mouse, diskette</div><div>Serial port I/O control</div><div>USB port disablement (front or all)</div></div> | | | | | |
| | | | | | | | | | | | ThinkPlus Priority Support, 90-day Trial | | | | | |
| | | | | | | | | | | | RoHS-compliant | | | | | |

See footnotes for important warranty information
US model listed are special bid models for technical reference only
US models withdrawn effective December 2009

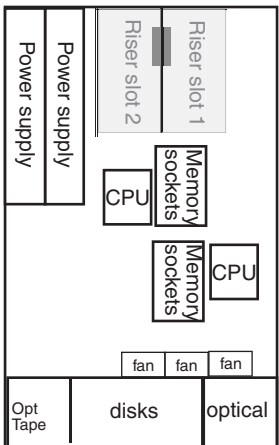

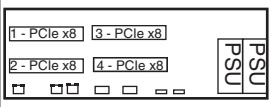
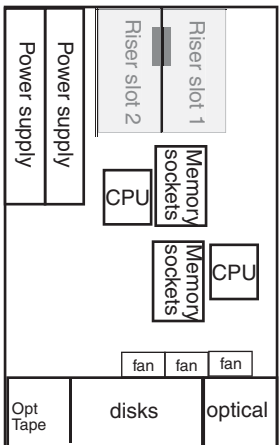
| Name | Type-model | Slot x bay | Proc-essor(s) | GHz Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date |
|-------|------------|------------|---------------|-----------|--------------|--------------|-----------|--------------|------------|-----------------------|----------|-------------|-----------------|----------|------------|
| RD220 | 3798-16U | 4x9 | 1xE5502 | 1.86 2 | 1x2GB | 1333MHz | 2.5" | None | 8xHot-swap | SATA/SAS ⁴ | 0/1 | | 2x675W | 2xGb | May 09 |
| RD220 | 3798-1FU | 4x9 | 1xE5520 | 2.26 4 | 1x2GB | 1333MHz | 2.5" | None | 8xHot-swap | SATA/SAS | Multi* | Premium | 2x675W | 2xGb | May 09 |
| RD220 | 3798-1LU | 4x9 | 2xE5540 | 2.53 8 | 2x2GB | 1333MHz | 2.5" | None | 8xHot-swap | SATA/SAS | Multi | Premium | 2x675W | 2xGb | May 09 |

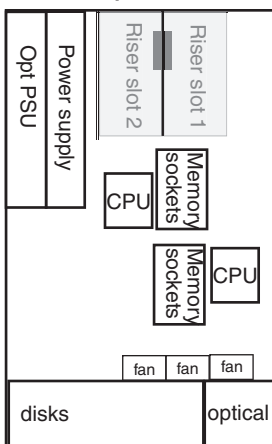

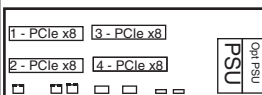
* Multi = RAID-0/1/5/6/10/50/60 support

- **These models have a 3-year limited warranty¹**
- **Easy to use with ThinkServer EasyStartup and EasyManage software**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

| | | |
|--|--|---|
| Processor(s) | Up to two processors, one or two processors standard, Intel® Xeon® Processor E5502 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5520 or E5540 with quad-core , 5.86GT/s QPI, 1066MHz DDR3 memory controller, and 8MB cache Processor uses FC-LGA package, two LGA1366 sockets | <div>2U Rack top</div> <div>Front</div> <div>Rear</div> <div>Power-On Hotkey</div> <div>Software Management Tools</div> <div>Security</div> <div>ThinkPlus Priority Support, 90-day Trial</div> <div>RoHS-compliant</div> |
| Implementation | | |
| Memory | 2GB or 4GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3** , Advanced ECC*** , Memory Mirroring , sixteen 240-pin DIMM sockets, std memory in 1 or 2 sockets, 15 or 14 sockets available****, eight sockets distributed into 3-channel per processor (3-3-2) ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller ***Advanced ECC-enable DIMMs required **** Over eight DIMMs requires dual processors | |
| Graphics | Matrox® G200e, integrated, two VGA DB-15 (front and rear), 16MB; <i>Maximum resolution: 1280x1024@60Hz</i> | |
| Disk bays | 8 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std | |
| Disk Controller | 16U: ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1 support 1FU/1LU: ServeRAID-MR10i, PCIe bus, SATA 3Gb/s, SAS 3Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support | |
| Optical | UltraSlim Enhanced DVD±RW | |
| Diskette | None (use USB port) | |
| Ethernet | Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing, upgradeable to 4 int ethernet ports via optional daughter card | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | |
| Riser card | (See Right) Four PCI Express 2.0 x8 slots std, convertible via optional riser card(s) to 64-bit 133MHz PCI-X | |
| Front ports | Two USB 2.0, external monitor (VGA DB-15) | |
| Rear ports | Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | |
| Internal port | One USB connector for embedded hypervisor | |
| Diagnostics | Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED) | |
| Systems mgmt | Trusted Platform Module (TPM) 1.2 support 16U: Integrated Management Module (IMM) std, IPMI 2.0-compliant, upgradeable to IMM Premium 1FU/1LU: IMM Premium, IPMI 2.0-compliant | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | |
| Keyboard | None (use USB port) | |
| Mouse | None (use USB port) | |
| Power supply(s) | Two 675 watts standard, two maximum, variable speed fan, hot-swap, auto-sensing, redundant with two power supplies | |
| Cooling | Three fans std, three maximum, variable speed, hot-swap | |
| Max internal capacity 4.0TB ² with eight 500GB SATA SFF disks | | |
| Virtualization Virtualization ready, hypervisor connector embedded | | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations) ⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | |

See footnotes for important warranty information
US models announced May 5, 2009
US models withdrawn effective February 2011

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date | |
|--|---|------------|--------------|-----|-------|--------------|--------------|-----------|--------------|---|--|----------|-------------|-----------------|----------|------------|--|
| RD220 3798-13U 4x10 1xE5506 2.13 4 1x2GB 1333MHz 2.5" None 8xHot-swap SATA/SAS ⁴ Multi* None 2x675W 2xGb May 09 | | | | | | | | | | | | | | | | | |
| * Multi = RAID-0/1/5/6/10/50/60 support | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none">• This model has a 3-year limited warranty¹• Easy to use with ThinkServer EasyStartup and EasyManage software• This small and medium business (SMB) model is part of the US TopSeller™ Program | | | | | | | | | | | | | | | | | |
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5506 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache | | | | | | | | | |  | | | | | | |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | | | | | | | | | | | | | | | |
| Memory | 2GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3^{**}, Advanced ECC^{***}, Memory Mirroring , sixteen 240-pin DIMM sockets, std memory in 1 socket, 15 sockets available****, eight sockets distributed into 3-channel per processor (3-3-2) ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller *** Advanced ECC-enable DIMMs required **** Over eight DIMMs requires dual processors | | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200e, integrated, two VGA DB-15 (front and rear), 16MB; <i>Maximum resolution: 1280x1024@60Hz</i> | | | | | | | | | | | | | | | | |
| Disk bays | 8 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std | | | | | | | | | | | | | | | | |
| Disk Controller | ServeRAID®-MR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID ⁵ 0, 1, 5, 6, 10, 50, 60 support | | | | | | | | | |  | | | | | | |
| Tape backup | Optional, internal/external, 3.5", USB or SATA via disk controller | | | | | | | | | | | | | | | | |
| Optical | UltraSlim Enhanced DVD±RW | | | | | | | | | | | | | | | | |
| Diskette | None (use USB port) | | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing, upgradeable to 4 int ethernet ports via optional daughter card | | | | | | | | | | | | | | | | |
| Chipset | Intel 5520 Chipset , Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | | | | | | | | |  | | | | | | |
| Riser card | (See Right) Four PCI Express 2.0 x8 slots std, convertible via optional riser card(s) to 64-bit 133MHz PCI-X | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0, external monitor (VGA DB-15) | | | | | | | | | | | | | | | | |
| Rear ports | Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45), | | | | | | | | | | | | | | | | |
| Internal port | One USB connector for embedded hypervisor | | | | | | | | | | | | | | | | |
| Diagnostics | Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED) | | | | | | | | | | <ul style="list-style-type: none">• 2U Mechanical; rack-mount only• Black color front; metal case• 17.5"W x 27.5"D x 3.36"H• 443.6mm W x 698mm D x 85.4mm H• 65 lb (29.5kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons with pull-out Easy LED Diagnostics panel | | | | | | |
| Systems mgmt | Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium | | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | | |
| Power supply(s) | Two 675 watts standard, two maximum, variable speed fan, hot-swap, auto-sensing, redundant with two power supplies | | | | | | | | | | <ul style="list-style-type: none">• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup | | | | | | |
| Cooling | Three fans std, three maximum, variable speed, hot-swap | | | | | | | | | | | | | | | | |
| Accessories Intel Xeon Quad-Core Processor E5506 67Y0005 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0015 300GB ² 2.5" SAS SFF HS (10000 rpm) 67Y0118 500GB 2.5" SATA SFF HS (7200 rpm) 67Y0121 Other accessories at lenovo.com/accessories | | | | | | | | | | | | | | | | | |
| Max internal capacity 4.0TB with eight 500GB SATA SFF disks | | | | | | | | | | | | | | | | | |
| Virtualization Virtualization ready, hypervisor connector embedded | | | | | | | | | | | | | | | | | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | |  | | | | | | | |
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| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | Power-On Hotkey <ul style="list-style-type: none">• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup | | | | | | | |
| | | | | | | | | | | Software Management Tools <ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage | | | | | | | |
| | | | | | | | | | | Security <ul style="list-style-type: none">• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all) | | | | | | | |
| | | | | | | | | | | ThinkPlus Priority Support, 90-day Trial | | | | | | | |
| | | | | | | | | | | RoHS-compliant | | | | | | | |

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | RAID Int | IMM Premium | Power supply(s) | Ethernet | Avail date |
|---|--|------------|--------------|-----|-------|--------------|--------------|-----------|--------------|--|-----------|----------|-------------|-----------------|----------|------------|
| RD220 3779-1AU 4x13 1xE5502 1.86 2 1x1GB 1333MHz 2.5" None 12xHot-swap SATA/SAS ⁴ 0/1 None 1x675W 2xGb May 09 | | | | | | | | | | | | | | | | |
| • This model has a 3-year limited warranty ¹ | | | | | | | | | | | | | | | | |
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5502 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache | | | | | | | | | | | | | | | |
| Implementation | Processor uses FC-LGA package, two LGA1366 sockets | | | | | | | | | | | | | | | |
| Memory | 1GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3 ^{**} , Advanced ECC ^{***} , Memory Mirroring, sixteen 240-pin DIMM sockets, standard memory in 1 socket, 15 sockets available ^{****} , eight sockets distributed into 3-channel per processor (3-3-2) ** System automatically clocks down for processors with 800MHz DDR3 memory controller *** Advanced ECC-enable DIMMs required **** Over eight DIMMs requires dual processors | | | | | | | | | | | | | | | |
| Graphics | Matrox® G200e, integrated, two VGA DB-15 (front and rear), 16MB; Maximum resolution: 1280x1024@60Hz | | | | | | | | | | | | | | | |
| Disk bays | 12 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std | | | | | | | | | | | | | | | |
| Disk Controller | ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID ⁸ 0, 1 support | | | | | | | | | | | | | | | |
| Optical | None | | | | | | | | | | | | | | | |
| Diskette | None (use optional USB diskette) | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine (TOE), load balancing, upgradeable to 4 int ethernet ports via optional daughter card | | | | | | | | | | | | | | | |
| Chipset | Intel 5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O | | | | | | | | | | | | | | | |
| Riser card | (See Right) Four PCI Express 2.0 x8 slots std, convertible via optional riser card(s) to 64-bit 133MHz PCI-X | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0, external monitor (VGA DB-15) | | | | | | | | | | | | | | | |
| Rear ports | Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) | | | | | | | | | | | | | | | |
| Internal port | One USB connector for embedded hypervisor | | | | | | | | | | | | | | | |
| Diagnostics | Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED) | | | | | | | | | | | | | | | |
| Systems mgmt | Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | |
| Power supply(s) | One 675 watts standard, two maximum, variable speed fan, hot-swap, auto-sensing, redundant with two power supplies | | | | | | | | | | | | | | | |
| Cooling | Three fans std, three maximum, variable speed, hot-swap | | | | | | | | | | | | | | | |
| Accessories | | | | | | | | | | | | | | | | |
| Intel Xeon Dual-Core Processor E5502 | | | | | | | 67Y0004 | | | | | | | | | |
| 1GB PC3-10600 DDR3 1333 MHz RDIMM | | | | | | | 67Y0014 | | | | | | | | | |
| 2GB PC3-10600 DDR3 1333 MHz RDIMM | | | | | | | 67Y0015 | | | | | | | | | |
| 4GB PC3-10600 DDR3 1333 MHz RDIMM | | | | | | | 67Y0016 | | | | | | | | | |
| 73GB ² 2.5" SAS SFF HS (15000 rpm) | | | | | | | 67Y0115 | | | | | | | | | |
| 146GB 2.5" SAS SFF HS (10000 rpm) | | | | | | | 67Y0116 | | | | | | | | | |
| 300GB 2.5" SAS SFF HS (10000 rpm) | | | | | | | 67Y0118 | | | | | | | | | |
| 500GB 2.5" SATA SFF HS (7200 rpm) | | | | | | | 67Y0121 | | | | | | | | | |
| USB Portable Diskette Drive | | | | | | | 05K9276 | | | | | | | | | |
| Lenovo® TV L151 15-inch Analog TFT Monitor | | | | | | | 9165AC6 | | | | | | | | | |
| Other accessories at lenovo.com/accessories | | | | | | | | | | | | | | | | |
| Max internal capacity | | | | | | | | | | | | | | | | |
| 6.0TB with twelve 500GB SATA SFF disks | | | | | | | | | | | | | | | | |
| Virtualization | | | | | | | | | | | | | | | | |
| Virtualization ready, hypervisor connector embedded | | | | | | | | | | | | | | | | |
| Limited Warranty¹ | | | | | | | | | | | | | | | | |
| ⇒ 3-year parts and labor | | | | | | | | | | | | | | | | |
| ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays) | | | | | | | | | | | | | | | | |
| ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty | | | | | | | | | | | | | | | | |
| • Onsite service upgrade options (in eligible locations) ⁷ | | | | | | | | | | | | | | | | |
| • Post warranty maintenance services | | | | | | | | | | | | | | | | |
| ⇒ 24 hour x 7 day ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 2U Rack top | | | | | | |
| | | | | | | | | | |  | | | | | | |
| | | | | | | | | | | Front | | | | | | |
| | | | | | | | | | |  | | | | | | |
| | | | | | | | | | | Rear | | | | | | |
| | | | | | | | | | |  | | | | | | |
| | | | | | | | | | | <ul style="list-style-type: none">• 2U Mechanical; rack-mount only• Black color front; metal case• 17.5"W x 27.5"D x 3.36"H• 443.6mm W x 698mm D x 85.4mm H• 65 lb (29.5kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons with pull-out Easy LED Diagnostics panel | | | | | | |
| | | | | | | | | | | Bay 1 5.25", 0.5" high, external, optional optical | | | | | | |
| | | | | | | | | | | Bay 2 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 3 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 4 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 5 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 6 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 7 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 8 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 9 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 10 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 11 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 12 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Bay 13 2.5", 0.6" high, external, optional disk | | | | | | |
| | | | | | | | | | | Slot 1: full-length, full-height, PCI Express 2.0 x8 | | | | | | |
| | | | | | | | | | | Slot 2: low-profile, PCI Express 2.0 x8 | | | | | | |
| | | | | | | | | | | Slot 3: full-length, full-height, PCI Express 2.0 x8 | | | | | | |
| | | | | | | | | | | Slot 4: half-length, full-height, PCI Express 2.0 x8 | | | | | | |
| | | | | | | | | | | Power-On Hotkey | | | | | | |
| | | | | | | | | | | <ul style="list-style-type: none">• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup | | | | | | |
| | | | | | | | | | | Software Management Tools | | | | | | |
| | | | | | | | | | | <ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage | | | | | | |
| | | | | | | | | | | Security | | | | | | |
| | | | | | | | | | | <ul style="list-style-type: none">• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all) | | | | | | |
| | | | | | | | | | | ThinkPlus Priority Support, 90-day Trial | | | | | | |
| | | | | | | | | | | RoHS-compliant | | | | | | |

See footnotes for important warranty information

US models listed are special bid models for technical reference only

US models withdrawn effective December 2009

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(TIT1-6) December 2009

Partial list of accessories supported on Lenovo® ThinkServer TD200, TD200x, RD210, RD220

ThinkServer Ready accessories are available through Lenovo Business Partners. Locate a Business Partner near you at: bplocator.lenovo.com

Processors⁵⁵**TD200:**

| | | | |
|--|---------|-----|----------|
| Intel® Xeon® Dual-Core Processor E5502 | 67Y0008 | ann | 10/06/09 |
| Intel Xeon Quad-Core Processor E5504 | 67Y0009 | ann | 10/06/09 |
| Intel Xeon Quad-Core Processor E5506 | 67Y0010 | ann | 10/06/09 |

TD200x:

| | | | |
|--------------------------------------|---------|-----|----------|
| Intel Xeon Quad-Core Processor E5520 | 67Y0011 | ann | 06/30/09 |
| Intel Xeon Quad-Core Processor E5530 | 67Y0102 | ann | 06/30/09 |
| Intel Xeon Quad-Core Processor E5540 | 67Y0103 | ann | 03/02/10 |

RD210, RD220:

| | | | |
|--------------------------------------|---------|-----|----------|
| Intel Xeon Dual-Core Processor E5502 | 67Y0004 | ann | 05/05/09 |
| Intel Xeon Quad-Core Processor E5504 | 67Y0007 | ann | 05/05/09 |
| Intel Xeon Quad-Core Processor E5506 | 67Y0005 | ann | 05/05/09 |
| Intel Xeon Quad-Core Processor E5520 | 67Y0006 | ann | 05/05/09 |
| Intel Xeon Quad-Core Processor E5540 | 67Y0096 | ann | 05/05/09 |

⁵⁵ Additional Processor must match the existing processor

Memory

| | | | |
|------------------------------|---------|-----|----------|
| 1GB PC3-10600 DDR3 ECC RDIMM | 67Y0014 | ann | 05/05/09 |
| 2GB PC3-10600 DDR3 ECC RDIMM | 67Y0015 | ann | 05/05/09 |
| 4GB PC3-10600 DDR3 ECC RDIMM | 67Y0016 | ann | 05/05/09 |

Backup**All:**

| | | | |
|--------------------------|---------|-----|----------|
| IBM® RDX 160GB Cartridge | 67Y0169 | ann | 11/10/09 |
| IBM RDX 320GB Cartridge | 67Y0170 | ann | 11/10/09 |
| IBM RDX 500GB Cartridge | 67Y0171 | ann | 11/10/09 |

RD210, RD220:

| | | | |
|-----------------------------------|---------|-----|----------|
| IBM LTO Generation 3 5-Pack Media | 67Y1379 | ann | 11/10/09 |
|-----------------------------------|---------|-----|----------|

ThinkServer IBM RAID controller

| | | | |
|--|---------|-----|----------|
| SAS 3Gb HBA Controller V2 | 67Y0183 | ann | 11/10/09 |
| ServeRAID® M1015 | 67Y1368 | ann | 12/08/09 |
| ServeRAID M5015 | 67Y0184 | ann | 11/10/09 |
| ServeRAID M5014 | 67Y0185 | ann | 11/10/09 |
| ServeRAID M1000 Series Adv Feature Key | 67Y1369 | ann | 12/08/09 |
| ServeRAID M5000 Series Battery Kit | 67Y0186 | ann | 11/10/09 |
| ServeRAID M5000 Series Adv Feature Key | 67Y0188 | ann | 12/08/09 |

Connectivity

| | | | |
|--|---------|-----|----------|
| IBM 8Gb FC Single-port HBA by QLogic® | 67Y0172 | ann | 11/10/09 |
| IBM 8Gb FC Dual-port HBA by QLogic | 67Y0173 | ann | 11/10/09 |
| IBM 8Gb FC Single-port HBA by Emulex® | 67Y0174 | ann | 11/10/09 |
| IBM 8Gb FC Dual-port HBA by Emulex | 67Y0175 | ann | 11/10/09 |
| IBM 8Gb FC Single-port HBA by Brocade® | 67Y0176 | ann | 11/10/09 |
| IBM 8Gb FC Dual-port HBA by Brocade | 67Y0177 | ann | 11/10/09 |

Keyboard

| | | | |
|----------------------------|---------|-----|----------|
| Preferred Pro USB Keyboard | 73P5220 | ann | 06/21/05 |
|----------------------------|---------|-----|----------|

Mouse

| | | | |
|----------------------------|---------|-----|----------|
| Lenovo Optical Mouse (USB) | 06P4069 | ann | 05/21/03 |
|----------------------------|---------|-----|----------|

Disk Drive**All:****2.5" SAS Hot-swap (HS):**

| | | | |
|-----------------------------------|---------|-----|----------|
| 73GB 2.5" SAS SFF HS (15000 rpm) | 67Y0115 | ann | 05/05/09 |
| 146GB 2.5" SAS SFF HS (10000 rpm) | 67Y0116 | ann | 05/05/09 |
| 146GB 2.5" SAS SFF HS (15000 rpm) | 67Y0117 | ann | 05/05/09 |
| 300GB 2.5" SAS SFF HS (10000 rpm) | 67Y0118 | ann | 05/05/09 |

2.5" SATA HS:

| | | | |
|------------------------------------|---------|-----|----------|
| 300GB 2.5" SATA SFF HS (10000 rpm) | 67Y0002 | ann | 05/05/09 |
| 160GB 2.5" SATA SFF HS (7200 rpm) | 67Y0120 | ann | 09/08/09 |
| 500GB 2.5" SATA SFF HS (7200 rpm) | 67Y0121 | ann | 09/08/09 |

3.5" SAS HS:

| | | | |
|-------------------------------|---------|-----|----------|
| 146GB 3.5" SAS HS (15000 rpm) | 45J6211 | ann | 09/30/08 |
|-------------------------------|---------|-----|----------|

3.5" SATA HS:

| | | | |
|-------------------------------|---------|-----|----------|
| 160GB 3.5" SATA HS (7200 rpm) | 45J6200 | ann | 09/30/08 |
| 250GB 3.5" SATA HS (7200 rpm) | 45J6201 | ann | 09/30/08 |
| 500GB 3.5" SATA HS (7200 rpm) | 45J6202 | ann | 09/30/08 |
| 750GB 3.5" SATA HS (7200 rpm) | 45J6203 | ann | 09/30/08 |
| 1TB 3.5" SATA HS (7200 rpm) | 45J6204 | ann | 09/30/08 |

3.5" SATA Simple-swap:

| | | | |
|--|---------|-----|----------|
| 160GB 3.5" SATA Simple-swap (7200 rpm) | 45J6195 | ann | 09/30/08 |
| 250GB 3.5" SATA Simple-swap (7200 rpm) | 45J6196 | ann | 09/30/08 |
| 500GB 3.5" SATA Simple-swap (7200 rpm) | 45J6197 | ann | 09/30/08 |
| 750GB 3.5" SATA Simple-swap (7200 rpm) | 45J6198 | ann | 09/30/08 |

TD200:**3.5" 6Gb/s SAS HS:**

| | | | |
|-------------------------------|---------|-----|----------|
| 300GB 3.5" SAS HS (15000 rpm) | 67Y1384 | ann | 01/26/10 |
| 450GB 3.5" SAS HS (15000 rpm) | 67Y1385 | ann | 01/26/10 |
| 600GB 3.5" SAS HS (15000 rpm) | 67Y1386 | ann | 01/26/10 |

For more information on server accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/thinkserveraccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

Partial list of Lenovo® ThinkPlus Services for ThinkServer™ TD200x, RD210, RD220

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html**Training classes**

- The basics on components, diagnostics, troubleshooting, and managing Lenovo servers, delivered in interactive online format

| | |
|---|---------|
| Online Training, Understanding Lenovo Servers | 45K4080 |
| Online Training, Understanding Systems Management | 45K4081 |
| Installation, ThinkServer Hardware Only | 45K4082 |

ThinkPlus service upgrade options⁷LOR = *Lenovo Onsite Repair***TD200x with 1-year warranty**

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 Next Business Day | 45K4062 |
| 3-year LOR 9x5 4 hour response | 45K4063 |
| 4-year LOR 9x5 Next Business Day | 51J0731 |
| 4-year LOR 9x5 4 hour response | 51J0732 |
| 5-year LOR 9x5 Next Business Day | 51J0733 |
| 5-year LOR 9x5 4 hour response | 51J0734 |

TD200x with 3-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 4 hour response | 45K4066 |
| 4-year LOR 9x5 Next Business Day | 51J0735 |
| 4-year LOR 9x5 4 hour response | 51J0736 |
| 5-year LOR 9x5 Next Business Day | 51J0737 |
| 5-year LOR 9x5 4 hour response | 51J0738 |

RD210, RD220 with 1-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 Next Business Day | 45K5305 |
| 3-year LOR 9x5 4 hour response | 45K5306 |
| 4-year LOR 9x5 Next Business Day | 51J0747 |
| 4-year LOR 9x5 4 hour response | 51J0748 |
| 5-year LOR 9x5 Next Business Day | 51J0749 |
| 5-year LOR 9x5 4 hour response | 51J0750 |

RD210, RD220 with 3-year warranty

| | |
|----------------------------------|---------|
| 3-year LOR 9x5 4 hour response | 45K4076 |
| 4-year LOR 9x5 Next Business Day | 51J0751 |
| 4-year LOR 9x5 4 hour response | 51J0752 |
| 5-year LOR 9x5 Next Business Day | 51J0753 |
| 5-year LOR 9x5 4 hour response | 51J0754 |

ThinkPlus Priority Support

- 9x5 Next Business Day response Lenovo Onsite Repair
- 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
- 24x7 support with priority routing and advanced level technicians

TD200x with 1-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4064 |
| 3-year Priority 4 Support | 45K4065 |

TD200x with 3-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4067 |
| 3-year Priority 4 Support | 45K4068 |

RD210, RD220 with 1-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K5307 |
| 3-year Priority 4 Support | 45K5308 |

RD210, RD220 with 3-year warranty

| | |
|---------------------------|---------|
| 3-year Priority Support | 45K4077 |
| 3-year Priority 4 Support | 45K4078 |

ThinkPlus Priority Support with Hard Disk Drive Retention

- 9x5 Next Business Day response Lenovo Onsite Repair
- 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
- 24x7 support with priority routing and advanced level technicians
- Hard Disk Drive Retention (HDDR) means customer keeps disk

HDDR = *Hard Disk Drive Retention***TD200x with 1-year warranty**

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5445 |
| 3-year Priority 4 Support with HDDR | 45K5446 |

TD200x with 3-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5447 |
| 3-year Priority 4 Support with HDDR | 45K5448 |

RD210, RD220 with 1-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5453 |
| 3-year Priority 4 Support with HDDR | 45K5454 |

RD210, RD220 with 3-year warranty

| | |
|-------------------------------------|---------|
| 3-year Priority Support with HDDR | 45K5455 |
| 3-year Priority 4 Support with HDDR | 45K5456 |

ThinkPlus Productivity

- Priority Support
- Online Training, Understanding Lenovo Servers
- One-time hardware installation

| | |
|--|---------|
| 3-year ThinkPlus Productivity, TD200x (1-year) | 45K4088 |
| 3-year ThinkPlus Productivity, TD200x (3-year) | 45K4090 |
| 3-year ThinkPlus Productivity, RD210, RD220 (1-year) | 45K5309 |
| 3-year ThinkPlus Productivity, RD210, RD220 (3-year) | 45K4096 |

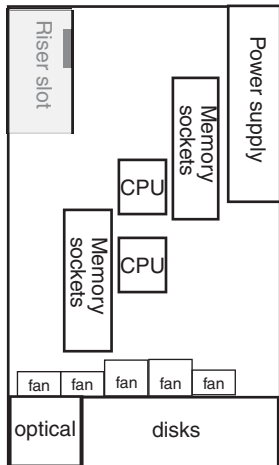
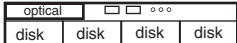

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | SATA optical | RAID Int | System mgmt | Ethernet | Avail date |
|-------|------------|------------|--------------|------|-------|--------------|--------------|-----------|--------------|-------------|-----------|--------------|----------|-------------|----------|------------|
| RD230 | 4010-11U | 1x5 | 1x E5503 | 2.00 | 2 | 1x 2GB | 1333MHz | 3.5" | None | 4x Hot-swap | SATA | DVD±RW | 0/1/5/10 | IPMI | 2x Gb | Dec 10 |

- **This model has a 1-year limited warranty¹**
- **High performance, advanced RAID, and remote management supported at value price point**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

| | | |
|--|---|---|
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache | <div>Front</div> <div>optical disk disk disk disk</div> <div>Rear</div> <div>PSU I-PCIe x16</div> |
| Implementation | Two LGA1366 sockets | |
| Memory | 2GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets** * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Over four DIMMs requires dual processors | |
| Graphics | Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i> | |
| Disk bays | Four 3.5" hot-swap (HS) SATA disk bays | |
| Disk controller | Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 5, 10 support | |
| Optical | UltraSlim Enhanced DVD±RW | |
| Diskette | None (use USB port) | |
| Ethernet | Two Gigabit Ethernet ports, dual Intel 82574L controllers | |
| Chipset | Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller | |
| Riser card | (See Right) One PCI Express 2.0 x16 slot standard | <ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.2"W x 22.4"D x 1.72"H• 436mm W x 568mm D x 43.6mm H• 37.7 lb (17kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention <div>Bay 1 5.25", 0.5" high, external, std optical</div> <div>Bay 2 3.5", 1" high, external, optional disk</div> <div>Bay 3 3.5", 1" high, external, optional disk</div> <div>Bay 4 3.5", 1" high, external, optional disk</div> <div>Bay 5 3.5", 1" high, external, optional disk</div> <div>Slot 1: half-length, full-height, PCI Express 2.0 x16</div> |
| Front ports | Two USB 2.0 | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) | |
| Internal port | One USB 2.0 connector | |
| Diagnostics | Diagnostic and system status LEDs on front panel | |
| Systems mgmt | Onboard Aspeed AST2050 graphics/management processor IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | |
| Keyboard | None (use USB port) | |
| Mouse | None (use USB port) | |
| Power supply(s) | One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy | |
| Cooling | Five fans standard, five maximum, variable speed | |
| <div>Accessories</div> <div>Intel Xeon E5503 Processor Option Kit 67Y1483</div> <div>2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y1432</div> <div>8GB PC3-10600 DDR3 1333 MHz RDIMM 67Y1464</div> <div>500GB² 3.5" SATA HS (7200 rpm) 67Y1401</div> <div>1TB 3.5" SATA HS (7200 rpm) 67Y1402</div> <div>More accessories on O-ARTsheet</div> <div>Other accessories at lenovo.com/accessories</div> | | |
| <div>Max memory capacity</div> <div>64GB with eight 8GB RDIMMs</div> | | |
| <div>Max internal capacity</div> <div>8.0TB with four 2TB 3.5" SATA disks</div> | | |
| <div>Limited Warranty¹</div> <div>⇒ 1-year parts and labor</div> <div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div> <div>⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty</div> <div>• Onsite service upgrade options (in eligible locations)⁷</div> <div>• Post warranty maintenance services</div> <div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div> | | |
| <div>Virtualization</div> <div>Virtualization ready, VMWare Ready™ certified</div> | | |
| <div>Power-On Hotkey</div> <div>• Setup Utility: DEL at startup</div> <div>• Network Boot: F12 at startup</div> <div>• Onboard SATA RAID: Ctrl+I at startup</div> | | |
| <div>Software Management Tools</div> <div>• ThinkServer EasyStartup</div> | | |
| <div>Security</div> <div>• Administrator password</div> <div>• User password</div> <div>• Boot sequence control</div> <div>• Boot without keyboard, mouse, diskette</div> <div>• Serial port I/O control</div> <div>• USB port disablement (all)</div> | | |
| RoHS-compliant | | |

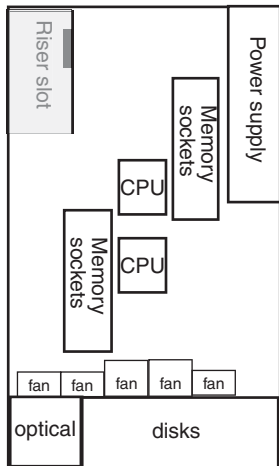

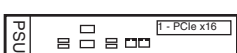
| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | SATA optical | RAID Int | System mgmt | Ethernet | Avail date |
|-------|------------|------------|---------------|------|-------|--------------|--------------|-----------|--------------|-------------|-----------------------|--------------|------------|-------------|----------|------------|
| RD230 | 4011-12U | 1x5 | 1x E5506 | 2.13 | 4 | 1x2GB | 1333MHz | 3.5" | | 4x Hot-swap | SATA | DVD±RW | 0/1/5/10 | IPMI | 2x Gb | Dec 10 |
| RD230 | 4011-13U | 1x5 | 1x E5507 | 2.26 | 4 | 1x4GB | 1333MHz | 3.5" | | 4x Hot-swap | SATA | DVD±RW | 0/1/5/10 | KVM | 2x Gb | Dec 10 |
| RD230 | 4011-14U | 1x5 | 1x E5620 | 2.40 | 4 | 1x4GB | 1333MHz | 3.5" | Battery | 4x Hot-swap | SATA/SAS ⁴ | DVD±RW | 0/1/5/6/10 | KVM | 2x Gb | Dec 10 |

- These models have a 3-year limited warranty¹
- These small and medium business (SMB) models are part of the US TopSeller™ Program

| | | | | | | | | | | | | | | | | | | |
|---|--|--|---------------|-----------------------------|-------------|-------|--------------------------|---------------|-------|--------------------------|---------------|-------|--------------------------|---------------|-------|--------------------------|---------------|--|
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5506 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5507 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5620 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache | <div>1U Rack top</div> <div></div> <div><ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.2"W x 22.4"D x 1.72"H• 436mm W x 568mm D x 43.6mm H• 37.7 lb (17kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention</div> <div><table><tr><td>Bay 1</td><td>5.25", 0.5" high, external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>3.5", 1" high, external,</td><td>optional disk</td></tr><tr><td>Bay 3</td><td>3.5", 1" high, external,</td><td>optional disk</td></tr><tr><td>Bay 4</td><td>3.5", 1" high, external,</td><td>optional disk</td></tr><tr><td>Bay 5</td><td>3.5", 1" high, external,</td><td>optional disk</td></tr></table></div> <div>Slot 1: half-length, full-height, PCI Express 2.0 x16</div> | Bay 1 | 5.25", 0.5" high, external, | std optical | Bay 2 | 3.5", 1" high, external, | optional disk | Bay 3 | 3.5", 1" high, external, | optional disk | Bay 4 | 3.5", 1" high, external, | optional disk | Bay 5 | 3.5", 1" high, external, | optional disk | <div>Front</div> <div></div> <div>Rear</div> <div></div> |
| Bay 1 | 5.25", 0.5" high, external, | | std optical | | | | | | | | | | | | | | | |
| Bay 2 | 3.5", 1" high, external, | | optional disk | | | | | | | | | | | | | | | |
| Bay 3 | 3.5", 1" high, external, | | optional disk | | | | | | | | | | | | | | | |
| Bay 4 | 3.5", 1" high, external, | | optional disk | | | | | | | | | | | | | | | |
| Bay 5 | 3.5", 1" high, external, | optional disk | | | | | | | | | | | | | | | | |
| Implementation | Two LGA1366 sockets | | | | | | | | | | | | | | | | | |
| Memory | 2GB or 4GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets** * System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors | | | | | | | | | | | | | | | | | |
| Graphics | Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i> | | | | | | | | | | | | | | | | | |
| Disk bays | 12U/13U: Four 3.5" hot-swap (HS) SATA disk bays 14U: Four 3.5" hot-swap (HS) SATA/SAS disk bays | | | | | | | | | | | | | | | | | |
| Disk controller | 12U/13U: Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 5, 10 support 14U: ThinkServer 8708ELP SAS RAID Controller, PCI Express [®] bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10 support 14U: Battery backed cache integrated | | | | | | | | | | | | | | | | | |
| Optical | UltraSlim Enhanced DVD±RW | | | | | | | | | | | | | | | | | |
| Diskette | None (use USB port) | | | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, dual Intel 82574L controllers | | | | | | | | | | | | | | | | | |
| Chipset | Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller | | | | | | | | | | | | | | | | | |
| Riser card | (See Right) One PCI Express 2.0 x16 slot standard | | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) | | | | | | | | | | | | | | | | | |
| Internal port | One USB 2.0 connector | | | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic and system status LEDs on front panel | | | | | | | | | | | | | | | | | |
| Systems mgmt | Onboard Aspeed AST2050 graphics/management processor IPMI model(s): IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub KVM model(s): IPMI functions PLUS KVM supported, 24bit high quality video compression | | | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | | | |
| Power supply(s) | One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy | | | | | | | | | | | | | | | | | |
| Cooling | Five fans standard, five maximum, variable speed | | | | | | | | | | | | | | | | | |
| Max memory capacity | | | | | | | | | | | | | | | | | | |
| 64GB with eight 8GB RDIMMs | | | | | | | | | | | | | | | | | | |
| Max internal capacity | | | | | | | | | | | | | | | | | | |
| 3.5" SATA HS: 8.0TB with four 2TB 3.5" SATA disks 3.5" SAS HS: 2.4TB with four 600GB 3.5" SAS disks | | | | | | | | | | | | | | | | | | |
| Limited Warranty¹ | | | | | | | | | | | | | | | | | | |
| ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Software Management Tools | | | | | | | | | | | | | | | | | | |
| • ThinkServer EasyStartup | | | | | | | | | | | | | | | | | | |
| Security | | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none">• Administrator password• User password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | | | | | | | | | | | | | | | | | | |
| RoHS-compliant | | | | | | | | | | | | | | | | | | |

| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | SATA optical | RAID Int | System mgmt | Ethernet | Avail date |
|--------------|------------|------------|---------------|------|-------|--------------|--------------|-----------|--------------|-------------|-----------|--------------|----------|-------------|----------|------------|
| RD230 | 1043-11U | 1x5 | 1x E5503 | 2.00 | 2 | 1x 2GB | 1333MHz | 3.5" | None | 4x Hot-swap | SATA | DVD±RW | 0/1/5/10 | IPMI | 2x Gb | Dec 10 |

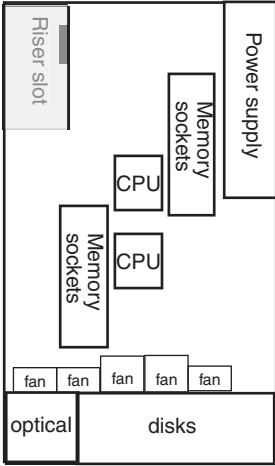


- **This model has a 1-year limited warranty¹**
- **High performance, advanced RAID, and remote management supported at value price point**

| | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|-----------|-----------------------------------|-----------|-----------------------------------|---------|--|-----------|-----------------------------|---------|----------------|-----------|---------------|-------|----------------|-----------|---------------|-------|----------------|-----------|---------------|
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache | <div>1U Rack top</div> <div></div> <div><div>Front</div><div></div><div><div>Rear</div><div></div></div><div><ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.2"W x 22.4"D x 1.72"H• 436mm W x 568mm D x 43.6mm H• 37.7 lb (17kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention<table><tr><td>Bay 1</td><td>5.25", 0.5" high,</td><td>external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 3</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 4</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 5</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr></table><div>Slot 1: half-length, full-height, PCI Express 2.0 x16</div></div></div> | Bay 1 | 5.25", 0.5" high, | external, | std optical | Bay 2 | 3.5", 1" high, | external, | optional disk | Bay 3 | 3.5", 1" high, | external, | optional disk | Bay 4 | 3.5", 1" high, | external, | optional disk | Bay 5 | 3.5", 1" high, | external, | optional disk |
| Bay 1 | 5.25", 0.5" high, | | external, | std optical | | | | | | | | | | | | | | | | | | |
| Bay 2 | 3.5", 1" high, | | external, | optional disk | | | | | | | | | | | | | | | | | | |
| Bay 3 | 3.5", 1" high, | | external, | optional disk | | | | | | | | | | | | | | | | | | |
| Bay 4 | 3.5", 1" high, | | external, | optional disk | | | | | | | | | | | | | | | | | | |
| Bay 5 | 3.5", 1" high, | | external, | optional disk | | | | | | | | | | | | | | | | | | |
| Implementation | Two LGA1366 sockets | | | | | | | | | | | | | | | | | | | | | |
| Memory | 2GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets** * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Over four DIMMs requires dual processors | | | | | | | | | | | | | | | | | | | | | |
| Graphics | Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i> | | | | | | | | | | | | | | | | | | | | | |
| Disk bays | Four 3.5" hot-swap (HS) SATA disk bays | | | | | | | | | | | | | | | | | | | | | |
| Disk controller | Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 5, 10 support | | | | | | | | | | | | | | | | | | | | | |
| Optical | UltraSlim Enhanced DVD±RW | | | | | | | | | | | | | | | | | | | | | |
| Diskette | None (use USB port) | | | | | | | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, dual Intel 82574L controllers | | | | | | | | | | | | | | | | | | | | | |
| Chipset | Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller | | | | | | | | | | | | | | | | | | | | | |
| Riser card | (See Right) One PCI Express 2.0 x16 slot standard | | | | | | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) | | | | | | | | | | | | | | | | | | | | | |
| Internal port | One USB 2.0 connector | | | | | | | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic and system status LEDs on front panel | | | | | | | | | | | | | | | | | | | | | |
| Systems mgmt | Onboard Aspeed AST2050 graphics/management processor IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub | | | | | | | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | | | | | | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | | | | | | | |
| Power supply(s) | One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy | | | | | | | | | | | | | | | | | | | | | |
| Cooling | Five fans standard, five maximum, variable speed | | | | | | | | | | | | | | | | | | | | | |
| <div><div>Accessories</div><table><tr><td>Intel Xeon E5503 Processor Option Kit</td><td>67Y1483</td></tr><tr><td>2GB PC3-10600 DDR3 1333 MHz RDIMM</td><td>67Y1432</td></tr><tr><td>8GB PC3-10600 DDR3 1333 MHz RDIMM</td><td>67Y1464</td></tr><tr><td>500GB² 3.5" SATA HS (7200 rpm)</td><td>67Y1401</td></tr><tr><td>1TB 3.5" SATA HS (7200 rpm)</td><td>67Y1402</td></tr></table><div>More accessories on O-ARTsheet</div></div> <div>Other accessories at lenovo.com/accessories</div> | | Intel Xeon E5503 Processor Option Kit | 67Y1483 | 2GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y1432 | 8GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y1464 | 500GB ² 3.5" SATA HS (7200 rpm) | 67Y1401 | 1TB 3.5" SATA HS (7200 rpm) | 67Y1402 | | | | | | | | | | | |
| Intel Xeon E5503 Processor Option Kit | 67Y1483 | | | | | | | | | | | | | | | | | | | | | |
| 2GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y1432 | | | | | | | | | | | | | | | | | | | | | |
| 8GB PC3-10600 DDR3 1333 MHz RDIMM | 67Y1464 | | | | | | | | | | | | | | | | | | | | | |
| 500GB ² 3.5" SATA HS (7200 rpm) | 67Y1401 | | | | | | | | | | | | | | | | | | | | | |
| 1TB 3.5" SATA HS (7200 rpm) | 67Y1402 | | | | | | | | | | | | | | | | | | | | | |
| <div><div>Max memory capacity</div><div>64GB with eight 8GB RDIMMs</div></div> | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>Max internal capacity</div><div>8.0TB with four 2TB 3.5" SATA disks</div></div> | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>Limited Warranty¹</div><div><div><div>⇒ 1-year parts and labor</div><div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty</div><div>• Onsite service upgrade options (in eligible locations)⁷</div><div>• Post warranty maintenance services</div><div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div></div></div> | | | | | | | | | | | | | | | | | | | | | | |

| Name | Type-model | Slot x bay | Processor(s) | GHz | Cores | Memory DIMMs | Memory speed | Disk size | RAID Battery | Disk bays | Disk type | SATA optical | RAID Int | System mgmt | Ethernet | Avail date |
|-------|------------|------------|--------------|------|-------|--------------|--------------|-----------|--------------|--------------|-----------|--------------|------------|-------------|----------|------------|
| RD230 | 1044-11U | 1 x 5 | 1 x E5503 | 2.00 | 2 | 1 x 2GB | 1333MHz | 3.5" | None | 4 x Hot-swap | SATA | DVD±RW | 0/1/5/10 | IPMI | 2 x Gb | Dec 10 |
| RD230 | 1044-15U | 1 x 5 | 1 x E5506 | 2.13 | 4 | 1 x 4GB | 1333MHz | 3.5" | None | 4 x Hot-swap | SATA/SAS* | DVD±RW | 0/1/5/6/10 | KVM | 2 x Gb | Dec 10 |

• **These models have a 3-year limited warranty¹**

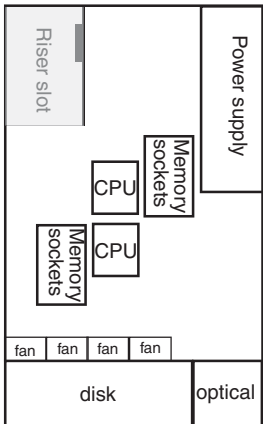
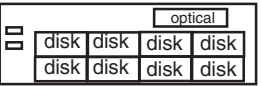

• **High performance, advanced RAID, and remote management supported at value price point**

| | | | | | | |
|--|---|--|--|--|--|--|
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache Intel Xeon Processor E5506 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache | | | <div>1U Rack top</div> <div></div> <div><div>Front</div><div></div><div>Rear</div><div></div></div> <div><ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.2"W x 22.4"D x 1.72"H• 436mm W x 568mm D x 43.6mm H• 37.7 lb (17kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention<div>Bay 1 5.25", 0.5" high, external, std optical</div><div>Bay 2 3.5", 1" high, external, optional disk</div><div>Bay 3 3.5", 1" high, external, optional disk</div><div>Bay 4 3.5", 1" high, external, optional disk</div><div>Bay 5 3.5", 1" high, external, optional disk</div><div>Slot 1: half-length, full-height, PCI Express 2.0 x16</div></div> | | |
| Implementation | Two LGA1366 sockets | | | | | |
| Memory | 2GB or 4GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets** * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Over four DIMMs requires dual processors | | | | | |
| Graphics | Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i> | | | | | |
| Disk bays | 11U: Four 3.5" hot-swap (HS) SATA disk bays 15U: Four 3.5" hot-swap (HS) SATA/SAS disk bays | | | | | |
| Disk controller | 11U: Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 5, 10 support 15U: ThinkServer 8708ELP SAS RAID Controller, PCI Express [®] bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10 support | | | | | |
| Optical | UltraSlim Enhanced DVD±RW | | | | | |
| Diskette | None (use USB port) | | | | | |
| Ethernet | Two Gigabit Ethernet ports, dual Intel 82574L controllers | | | | | |
| Chipset | Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller | | | | | |
| Riser card | (See Right) One PCI Express 2.0 x16 slot standard | | | | | |
| Front ports | Two USB 2.0 | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) | | | | | |
| Internal port | One USB 2.0 connector | | | | | |
| Diagnostics | Diagnostic and system status LEDs on front panel | | | | | |
| Systems mgmt | Onboard Aspeed AST2050 graphics/management processor IPMI model(s): IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub KVM model(s): IPMI functions PLUS KVM supported, 24bit high quality video compression | | | | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | | | | |
| Keyboard | None (use USB port) | | | | | |
| Mouse | None (use USB port) | | | | | |
| Power supply(s) | One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy | | | | | |
| Cooling | Five fans standard, five maximum, variable speed | | | | | |
| <div><div>Accessories</div><div>Intel Xeon E5503 Processor Option Kit 67Y1483</div><div>2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y1432</div><div>More accessories on O-ARTsheet</div><div>Other accessories at lenovo.com/accessories</div></div> | | | | | | |
| <div><div>Max memory capacity</div><div>64GB with eight 8GB RDIMMs</div></div> | | | | | | |
| <div><div>Max internal capacity</div><div>3.5" SATA HS: 8.0TB with four 2TB 3.5" SATA disks</div><div>3.5" SAS HS: 2.4TB with four 600GB 3.5" SAS disks</div></div> | | | | | | |
| <div><div>Limited Warranty¹</div><div>⇒ 3-year parts and labor</div><div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty</div><div>• Onsite service upgrade options (in eligible locations)⁷</div><div>• Post warranty maintenance services</div><div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div> | | | | | | |
| <div><div>Virtualization</div><div>Virtualization ready, VMWare Ready™ certified</div></div> | | | | | | |
| <div><div>Power-On Hotkey</div><div>• Setup Utility: DEL at startup</div><div>• Network Boot: F12 at startup</div><div>• Onboard SATA RAID: Ctrl+I at startup</div><div>• Add-on SATA/SAS RAID: Ctrl+H at startup</div></div> | | | | | | |
| <div><div>Software Management Tools</div><div>• ThinkServer EasyStartup</div></div> | | | | | | |
| <div><div>Security</div><div>• Administrator password</div><div>• User password</div><div>• Boot sequence control</div><div>• Boot without keyboard, mouse, diskette</div><div>• Serial port I/O control</div><div>• USB port disablement (all)</div></div> | | | | | | |
| RoHS-compliant | | | | | | |

See footnotes for important warranty information
 US models announced December 14, 2010
 US models withdrawn effective August 2011

| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Disk size | RAID Battery | Disk bays | Disk Controller | Disk type | RAID Int | System mgmt | Power supply(s) | Ethernet | Avail date |
|--------------|------------|------------|---------------|------|-------|--------------|-----------|--------------|------------|-----------------|-----------------------|----------|-------------|-----------------|----------|------------|
| RD240 | 1047-11U | 3x9 | 1xE5503 | 2.00 | 2 | 1x2GB | 3.5" | None | 8xHot-swap | 1068E | SATA/SAS ⁴ | 0/1/1E | IPMI | 1x750W | 2xGb | Jul 10 |

- **This model has a 1-year limited warranty¹**
- **High performance, scalability, and remote management supported at value price point**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--|------------|-----------|---------------|-----------|-------------|-------|------|----------|-----------|---------------|-------|------|----------|-----------|---------------|-------|------|----------|-----------|---------------|-------|------|----------|-----------|---------------|-------|------|----------|-----------|---------------|-------|------|----------|-----------|---------------|-------|------|----------|-----------|---------------|-------|------|----------|-----------|---------------|
| Processor(s) | Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache |  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Implementation | Two LGA1366 sockets | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Memory | 2GB , 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Over four DIMMs requires dual processors | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Graphics | Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disk bays | Eight 3.5" hot-swap (HS) SATA/SAS disk bays | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disk controller | LSI™ LSI SAS1068E, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1E support | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Optical | UltraSlim Enhanced DVD±RW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diskette | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ethernet | Two Gigabit Ethernet ports, dual Intel 82574L controllers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chipset | Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right), links to LSI SAS1068E, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Riser card | (See Right) One PCI Express 2.0 x8, two PCI Express 2.0 x8 (x4 electrical) slots standard |  | <ul style="list-style-type: none">• 2U Mechanical• Designed for EIA-310 standard 19-inch rack only• Black color front; metal case• 19"W x 27.6"D x 3.44"H• 483mm W x 700mm D x 87.5mm H• 66.6 lb (30kg) max configuration• Toolless top cover removal• Toolless disk removal• Toolless adapter retention <table><tr><td>Bay 1</td><td>5.25"</td><td>0.5" high,</td><td>external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>3.5"</td><td>1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 3</td><td>3.5"</td><td>1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 4</td><td>3.5"</td><td>1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 5</td><td>3.5"</td><td>1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 6</td><td>3.5"</td><td>1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 7</td><td>3.5"</td><td>1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 8</td><td>3.5"</td><td>1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 9</td><td>3.5"</td><td>1" high,</td><td>external,</td><td>optional disk</td></tr></table> <p>Slot 1: full-length, full-height, PCI Express 2.0 x8 Slot 2: full-length, full-height, PCI Express 2.0 x8*** Slot 3: half-length, full-height, PCI Express 2.0 x8*** *** x4 electrical</p> | Bay 1 | 5.25" | 0.5" high, | external, | std optical | Bay 2 | 3.5" | 1" high, | external, | optional disk | Bay 3 | 3.5" | 1" high, | external, | optional disk | Bay 4 | 3.5" | 1" high, | external, | optional disk | Bay 5 | 3.5" | 1" high, | external, | optional disk | Bay 6 | 3.5" | 1" high, | external, | optional disk | Bay 7 | 3.5" | 1" high, | external, | optional disk | Bay 8 | 3.5" | 1" high, | external, | optional disk | Bay 9 | 3.5" | 1" high, | external, | optional disk |
| Bay 1 | 5.25" | | | 0.5" high, | external, | std optical | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 2 | 3.5" | | | 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 3 | 3.5" | | | 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 4 | 3.5" | | | 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 5 | 3.5" | | | 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 6 | 3.5" | | | 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 7 | 3.5" | | | 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 8 | 3.5" | | | 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bay 9 | 3.5" | | | 1" high, | external, | optional disk | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Front ports | Two USB 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Internal port | One USB 2.0 connector | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagnostics | Diagnostic and system status LEDs on front panel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Systems mgmt | Onboard Aspeed AST2050 graphics/management processor IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Keyboard | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mouse | None (use USB port) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power supply(s) | One 750 watts standard, two maximum, variable speed fan, auto-sensing, redundant with two power supplies | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | Four fans standard, four maximum, variable speed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accessories | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intel Xeon E5503 Processor Option Kit | | 67Y1466 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2GB PC3-10600 DDR3 1333 MHz RDIMM | | 67Y1432 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8GB PC3-10600 DDR3 1333 MHz RDIMM | | 67Y1464 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1TB 3.5" SATA HS (7200 rpm) | | 67Y1480 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 450GB ² 3.5" SAS HS (15000 rpm) | | 67Y1482 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| More accessories on O-ARTsheet | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other accessories at lenovo.com/accessories | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max memory capacity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 64GB with eight 8GB PC3-10600 DDR3 RDIMMs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max internal capacity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.5" SATA HS: 16.0TB with eight 2TB HS SATA disks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.5" SAS HS: 4.8TB with eight 600GB HS SAS disks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Limited Warranty¹ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ⇒ 1-year parts and labor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • Onsite service upgrade options (in eligible locations) ⁷ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • Post warranty maintenance services | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Virtualization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Virtualization ready, VMWare Ready™ certified | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power-On Hotkey | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • Setup Utility: DEL at startup | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • Network Boot: F12 at startup | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • LSI 1068E RAID: Ctrl+C at startup | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Software Management Tools | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • ThinkServer EasyStartup | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Security | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • Administrator password | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • User password | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • Boot sequence control | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • Boot without keyboard, mouse, diskette | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • Serial port I/O control | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| • USB port disablement (all) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RoHS-compliant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

See footnotes for important warranty information
 US model announced July 27, 2010
 US model withdrawn effective August 2011

| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Disk size | RAID Battery | Disk bays | Disk Controller | Disk type | RAID Int | System mgmt | Power supply(s) | Ethernet | Avail date |
|-------|------------|------------|---------------|------|-------|--------------|-----------|--------------|------------|-----------------|-----------------------|----------|-------------|-----------------|----------|------------|
| RD240 | 1048-11U | 3x9 | 1xE5503 | 2.00 | 2 | 1x2GB | 3.5" | | 8xHot-swap | 1068E | SATA/SAS ⁴ | 0/1/1E | IPMI | 1x750W | 2xGb | Jul 10 |
| RD240 | 1048-12U | 3x9 | 1xE5640 | 2.66 | 4 | 1x4GB | 3.5" | Battery | 8xHot-swap | 8708E | SATA/SAS | Multi* | KVM | 1x750W | 2xGb | Jul 10 |
| RD240 | 1048-13U | 3x9 | 2xE5650 | 2.66 | 12 | 2x4GB | 3.5" | Battery | 8xHot-swap | 8708E | SATA/SAS | Multi | KVM | 2x750W | 2xGb | Jul 10 |

*Multi = RAID 0/1/5/6/10/50/60

*Multi = RAID 0/1/5/6/10/50/60

| | | |
|--|---|--|
| Processor(s) | Up to two processors, one or two processors standard, Intel® Xeon® Processor E5503 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5640 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5650 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache | <div><div><div>2U Rack top</div><div><div>2U Mechanical</div><div>Designed for EIA-310 standard 19-inch rack only</div><div>Black color front; metal case</div><div>19"W x 27.6"D x 3.44"H</div><div>483mm W x 700mm D x 87.5mm H</div><div>66.6 lb (30kg) max configuration</div><div>Toolless top cover removal</div><div>Toolless disk removal</div><div>Toolless adapter retention</div></div></div><div><div>Front</div><div><div>Bay 1 5.25", 0.5" high, external, std optical</div><div>Bay 2 3.5", 1" high, external, optional disk</div><div>Bay 3 3.5", 1" high, external, optional disk</div><div>Bay 4 3.5", 1" high, external, optional disk</div><div>Bay 5 3.5", 1" high, external, optional disk</div><div>Bay 6 3.5", 1" high, external, optional disk</div><div>Bay 7 3.5", 1" high, external, optional disk</div><div>Bay 8 3.5", 1" high, external, optional disk</div><div>Bay 9 3.5", 1" high, external, optional disk</div></div><div><div>Rear</div><div><div>Slot 1: full-length, full-height, PCI Express 2.0 x8</div><div>Slot 2: full-length, full-height, PCI Express 2.0 x8***</div><div>Slot 3: half-length, full-height, PCI Express 2.0 x8***</div><div>*** x4 electrical</div></div></div></div></div> |
| Implementation | Two LGA1366 sockets | |
| Memory | 2GB, 4GB, or 8GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors | |
| Graphics | Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i> | |
| Disk bays | Eight 3.5" hot-swap (HS) SATA/SAS disk bays | |
| Disk controller | <i>Some:</i> LSI™ LSISAS1068E, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1E support <i>Some:</i> ThinkServer 8708ELP SAS RAID Controller, PCI Express bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support <i>Some:</i> Battery backed cache integrated | |
| Optical | UltraSlim Enhanced DVD±RW | |
| Diskette | None (use USB port) | |
| Ethernet | Two Gigabit Ethernet ports, dual Intel 82574L controllers | |
| Chipset | Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right), links to LSISAS1068E, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB | |
| Riser card | (See Right) One PCI Express 2.0 x8, two PCI Express 2.0 x8 (x4 electrical) slots standard | |
| Front ports | Two USB 2.0 | |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) | |
| Internal port | One USB 2.0 connector | |
| Diagnostics | Diagnostic and system status LEDs on front panel | |
| Systems mgmt | Onboard Aspeed AST2050 graphics/management processor <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub <i>KVM model(s):</i> IPMI functions PLUS KVM supported, 24bit high quality video compression | |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS | |
| Keyboard | None (use USB port) | |
| Mouse | None (use USB port) | |
| Power supply(s) | One or two 750 watts standard, two maximum, variable speed fan, auto-sensing, redundant with two power supplies | |
| Cooling | Four fans standard, four maximum, variable speed | |
| Max memory capacity 64GB with eight 8GB PC3-10600 DDR3 RDIMMs | | |
| Max internal capacity 3.5" SATA HS: 16.0TB with eight 2TB HS SATA disks 3.5" SAS HS: 4.8TB with eight 600GB HS SAS disks | | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations) ⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | | |
| | | Virtualization Virtualization ready, VMWare Ready™ certified |
| | | Power-On Hotkey • Setup Utility: DEL at startup • Network Boot: F12 at startup • 1068E RAID: Ctrl+C at startup • 8708ELP RAID: Ctrl+H at startup |
| | | Software Management Tools • ThinkServer EasyStartup |
| | | Security • Administrator password • User password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all) |
| | | RoHS-compliant |

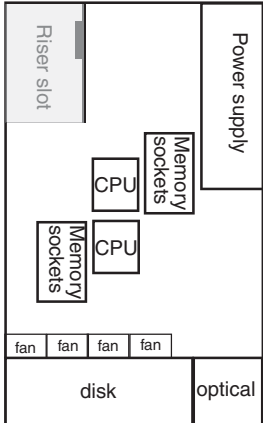
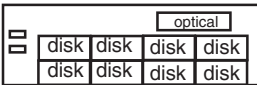

See footnotes for important warranty information

US models announced July 27, 2010

US models withdrawn effective August 2011

| Name | Type-model | Slot x bay | Proc-essor(s) | GHz | Cores | Memory DIMMs | Disk size | RAID Battery | Disk bays | Disk Controller | Disk type | RAID Int | System mgmt | Power supply(s) | Ethernet | Avail date |
|--------------|------------|------------|---------------|------|-------|--------------|-----------|--------------|-------------|-----------------|-----------------------|----------|-------------|-----------------|----------|------------|
| RD240 | 1046-11U | 3x9 | 1xE5506 | 2.13 | 4 | 1x2GB | 3.5" | | 8x Hot-swap | 1068E | SATA/SAS ⁴ | 0/1/1E | IPMI | 1x750W | 2xGb | Jul 10 |
| RD240 | 1046-12U | 3x9 | 1xE5507 | 2.26 | 4 | 1x4GB | 3.5" | | 8x Hot-swap | 8708E | SATA/SAS | Multi* | KVM | 1x750W | 2xGb | Jul 10 |
| RD240 | 1046-13U | 3x9 | 1xE5620 | 2.40 | 4 | 1x4GB | 3.5" | Battery | 8x Hot-swap | 8708E | SATA/SAS | Multi | KVM | 2x750W | 2xGb | Jul 10 |
| RD240 | 1046-14U | 3x9 | 2xE5640 | 2.66 | 8 | 2x4GB | 3.5" | Battery | 8x Hot-swap | 8708E | SATA/SAS | Multi | KVM | 2x750W | 2xGb | Jul 10 |

*Multi = RAID 0/1/5/6/10/50/60

| | |
|--|--|
| Processor(s) | Up to two processors, one or two processors standard, Intel® Xeon® Processor E5506 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5507 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5620 or E5640 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache |
| Implementation | Two LGA1366 sockets |
| Memory | 2GB, 4GB, or 8GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3**, ECC, Memory Mirroring , eight 240-pin DIMM sockets***, ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller *** Over four DIMMs requires dual processors |
| Graphics | Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i> |
| Disk bays | Eight 3.5" hot-swap (HS) SATA/SAS disk bays |
| Disk controller | <i>Some:</i> LSI™ LSISAS1068E, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1E support <i>Some:</i> ThinkServer 8708ELP SAS RAID Controller, PCI Express bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support <i>Some:</i> Battery backed cache integrated |
| Optical | UltraSlim Enhanced DVD±RW |
| Diskette | None (use USB port) |
| Ethernet | Two Gigabit Ethernet ports, dual Intel 82574L controllers |
| Chipset | Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right), links to LSISAS1068E, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB |
| Riser card | (See Right) One PCI Express 2.0 x8, two PCI Express 2.0 x8 (x4 electrical) slots standard |
| Front ports | Two USB 2.0 |
| Rear ports | Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) |
| Internal port | One USB 2.0 connector |
| Diagnostics | Diagnostic and system status LEDs on front panel |
| Systems mgmt | Onboard Aspeed AST2050 graphics/management processor <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub <i>KVM model(s):</i> IPMI functions PLUS KVM supported, 24bit high quality video compression |
| Prerequisites | Monitor, keyboard, mouse, SATA/SAS disk, rack, OS |
| Keyboard | None (use USB port) |
| Mouse | None (use USB port) |
| Power supply(s) | One or two 750 watts standard, two maximum, variable speed fan, auto-sensing, redundant with two power supplies |
| Cooling | Four fans standard, four maximum, variable speed |
| Max memory capacity 64GB with eight 8GB PC3-10600 DDR3 RDIMMs | |
| Max internal capacity 3.5" SATA HS: 16.0TB with eight 2TB HS SATA disks 3.5" SAS HS: 4.8TB with eight 600GB HS SAS disks | |
| Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations) ⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 | |
| 2U Rack top  | |
| Front  | |
| Rear  | |
| <ul style="list-style-type: none">• 2U Mechanical• Designed for EIA-310 standard 19-inch rack only• Black color front; metal case• 19"W x 27.6"D x 3.44"H• 483mm W x 700mm D x 87.5mm H• 66.6 lb (30kg) max configuration• Toolless top cover removal• Toolless disk and removal• Toolless adapter retention | |
| Bay 1 5.25", 0.5" high, external, std optical Bay 2 3.5", 1" high, external, optional disk Bay 3 3.5", 1" high, external, optional disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Bay 8 3.5", 1" high, external, optional disk Bay 9 3.5", 1" high, external, optional disk | |
| Slot 1: full-length, full-height, PCI Express 2.0 x8 Slot 2: full-length, full-height, PCI Express 2.0 x8**** Slot 3: half-length, full-height, PCI Express 2.0 x8**** **** x4 electrical | |
| Virtualization Virtualization ready, VMWare Ready™ certified | |
| Power-On Hotkey <ul style="list-style-type: none">• Setup Utility: DEL at startup• Network Boot: F12 at startup• 1068E RAID: Ctrl+C at startup• 8708ELP RAID: Ctrl+H at startup | |
| Software Management Tools <ul style="list-style-type: none">• ThinkServer EasyStartup | |
| Security <ul style="list-style-type: none">• Administrator password• User password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all) | |
| RoHS-compliant | |

See footnotes for important warranty information

US models announced July 27, 2010

US models withdrawn effective August 2011

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product 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.

¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less.

³ **Systems with limited onsite service** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges.

⁴ **SATA/SAS:** The system configuration supports the installation of either SATA or SAS disks. A configuration including both SATA and SAS disks is not supported.

⁷ **ThinkPlus Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.

⁸ **RAID:** Supported RAID levels for a system will vary from the stated capabilities of the RAID controller due to dependencies on the number and capacity of physical disks in the system and on customer requirements for performance, fault tolerance, or data redundancy.

RAID levels and requirements:

- **RAID 0 (striping)** provides increased performance by writing data across multiple drives.
- **RAID 1 (mirroring)** provides fault tolerance by writing the data on two drives.
- **RAID 5 (striping with parity)** uses distributed parity data to provide fault tolerance more efficiently than RAID 1. Requires three or more drives.
- **RAID 6 (striped set with dual distributed parity)** provides fault tolerance from two drive failures; array continues to operate with up to two failed drives. Requires four drives.
- **RAID 10 (or RAID 1+0)** combines RAID 1 and RAID 0 to create a stripe of mirrors that is fault tolerant while offering increased performance. Requires four drives.
- **RAID 50 (or RAID 5+0)** combines RAID 5 and RAID 0 to create block-level striping with distributed parity improving performance over RAID 5. Requires six drives.
- **RAID 60 (or RAID 6+0)** combines RAID 6 and RAID 0 to create block-level striping with distributed double parity improving performance over RAID 6. Requires eight drives.

¹⁰ **Modem speeds:** Public network download speeds are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.

¹¹ **For combination drives,** maximum speeds only are given in the following order: CD read, CD write, CD re-write, DVD read.

¹⁴ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.

¹⁵ **Update Connector** is available at no charge to registered customers during the limited warranty period. Line charges may apply.

¹⁶ **Embedded Security Subsystem** works with optional VPN software.