ThinkServer

ThinkServer RD330 Photography - 3.5" disk bays

ThinkServer

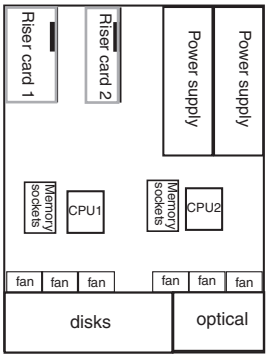
ThinkServer RD330 Photography - 2.5" disk bays

ThinkServer RD330 with 3.5" Disk Bay (4304) - TopSeller

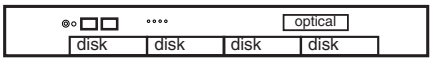
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
4304-E1U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300		4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
4304-E2U	1xE5-2403	1333MHz RDIMM	1x4GB	No	300		4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
4304-E3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500		4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
4304-E4U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500	4x1TB 3.5" SATA	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
4304-E5U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade		4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2
4304-E6U	2xE5-2420	1333MHz RDIMM	2x8GB	No	500+Upgrade		4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	1
4304-E7U	1xE5-2420	1333MHz RDIMM	1x16GB	No	500		4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2
4304-E8U	1xE5-2403	1333MHz RDIMM	1x4GB	No	500+Upgrade		4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	1

Limited warranty	**3-year** parts and labor; more services information see S-RAL sheet
Processor	Up to two Intel® Xeon® E5-2400 series processors, **Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) **Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)
Implementation	Two LGA1356 sockets
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)
Additional memory disclaimers	• *Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs* • *Over six DIMMs requires dual processors* • *Mixing of UDIMM, RDIMM, or LV RDIMM is not supported*
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz
Disk bays	Four 3.5" hot-swap SATA/SAS disk bays (see right)
Disk controller	*RAID 300*: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support *Upgrade for 300:* Additional upgrade key for RAID 300, add RAID 5 support *RAID 500*: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support *Upgrade for 500:* Additional upgrade key for RAID 500 adapter, add RAID 5 support *RAID 700:* ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support *Battery for 700:* Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support	Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter
Disk(s)	*3.5" SATA:* SATA 6.0Gb/s, 7200 rpm *3.5" SAS:* SAS 6.0Gb/s, 15000 rpm
Tape drive	None
Optical	DVD±RW or DVD ROM, slim
Diskette	None (use USB port)
Chipset	**Intel C606 Chipset**
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management
Riser card	(See Right) Riser card 1 for slot 1, riser card 2 for slot 2
Front ports	Two USB 2.0
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; *Basic:* IDM LED lights indicate failing component category
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); *iKVM:* add-on ThinkServer Management Module Premium for iKVM functions
Security chip	No onboard TPM chip; *TPM:* additional add-on card for TPM function, TCG 1.2-compliant
Prerequisites	SATA/SAS disk, OS
Keyboard/mouse	None (use USB port)
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies
Rack kit	Includes rack kit
Cable management	Optional cable management arm on selected models
Cooling	Six fans, non-hot swap

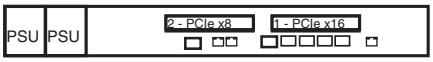
1U Rack top



Front



Rear



Mechanical

- 1U rack
- 19"W x 28.9"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1	5.25",	0.5" high,	external,	for optical
Bay 2-5	3.5",	1" high,	external,	for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8*
* *x4 elec for single processor model, x8 elec for dual processors model*

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Lenovo® SmartGrid Manager

ENERGY STAR Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RAL sheet

See footnotes for important warranty information
US model(s) announced August 14, 2012

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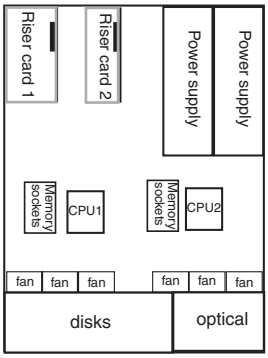
ThinkServer RD330 with 3.5" Disk Bay (4304) - TopSeller (June 2013)

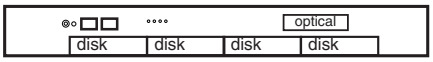
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
4304-F5U	1xE5-2407	1600MHz RDIMM	1x8GB	No	300	2x1TB 3.5" SATA	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1

Limited warranty	**3-year** parts and labor; more services information see S-RAL sheet
Processor	Up to two Intel® Xeon® E5-2400 series processors, **Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz)
Implementation	Two LGA1356 sockets
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)
Additional memory disclaimers	• *Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs* • *Over six DIMMs requires dual processors* • *Mixing of UDIMM, RDIMM, or LV RDIMM is not supported*
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz
Disk bays	Four 3.5" hot-swap SATA/SAS disk bays (see right)
Disk controller	*RAID 300*: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support *Upgrade for 300:* Additional upgrade key for RAID 300, add RAID 5 support *RAID 500*: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support *Upgrade for 500:* Additional upgrade key for RAID 500 adapter, add RAID 5 support *RAID 700:* ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support *Battery for 700:* Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support	Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter
Disk(s)	*3.5" SATA:* SATA 6.0Gb/s, 7200 rpm *3.5" SAS:* SAS 6.0Gb/s, 15000 rpm
Tape drive	None
Optical	DVD±RW or DVD ROM, slim
Diskette	None (use USB port)
Chipset	**Intel C606 Chipset**
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management
Riser card	(See Right) Riser card 1 for slot 1, riser card 2 for slot 2
Front ports	Two USB 2.0
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; *Basic:* IDM LED lights indicate failing component category
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); *iKVM:* add-on ThinkServer Management Module Premium for iKVM functions
Security chip	No onboard TPM chip; *TPM:* additional add-on card for TPM function, TCG 1.2-compliant
Prerequisites	SATA/SAS disk, OS
Keyboard/mouse	None (use USB port)
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies
Rack kit	Includes rack kit
Cable management	Optional cable management arm on selected models
Cooling	Six fans, non-hot swap

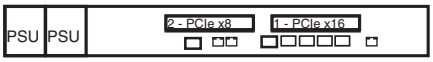
1U Rack top



Front



Rear



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Disk Bays

Bay 1	5.25",	0.5" high,	external,	for optical
Bay 2-5	3.5",	1" high,	external,	for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8*
* *x4 elec for single processor model, x8 elec for dual processors model*

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

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RoHS-compliant

For more accessories, see O-RAL sheet

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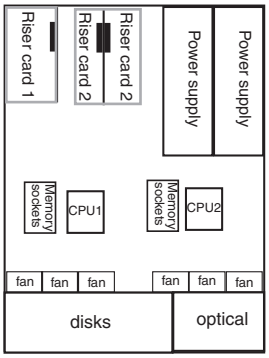
ThinkServer RD330 with 3.5" Disk Bay (4305)

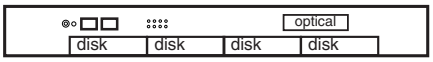
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
4305-B1U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300	No	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
4305-B2U	1xE5-2403	1333MHz RDIMM	1x8GB	No	300	No	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
4305-B3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	300	No	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
4305-B4U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade	No	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	1
4305-B5U	1xE5-2450	1333MHz RDIMM	1x16GB	No	500+Upgrade	No	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2

Limited warranty	**3-year** parts and labor; more warranty information see S-RAL sheet
Processor	Up to two Intel® Xeon® E5-2400 series processors, **Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) **Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)
Implementation	Two LGA1356 sockets
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)
Additional memory disclaimers	• *Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs* • *Over six DIMMs requires dual processors* • *Mixing of UDIMM, RDIMM, or LV RDIMM is not supported*
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz
Disk bays	Four 3.5" hot-swap SATA/SAS disk bays (see right)
Disk controller	*RAID 300*: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support *Upgrade for 300:* Additional upgrade key for RAID 300, add RAID 5 support *RAID 500*: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support *Upgrade for 500:* Additional upgrade key for RAID 500 adapter, add RAID 5 support *RAID 700:* ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support *Battery for 700:* Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support	Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter
Disk(s)	*3.5" SATA:* SATA 6.0Gb/s, 7200 rpm *3.5" SAS:* SAS 6.0Gb/s, 15000 rpm
Tape drive	None
Optical	DVD±RW or DVD ROM, slim
Diskette	None (use USB port)
Chipset	**Intel C606 Chipset**
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management
Riser card	(See Right) Riser card 1 for slot 1, riser card 2 for slot 2
Front ports	Two USB 2.0
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector
Intelligent Diagnostics Module (IDM)	Supports IDM on selected model; *Basic:* IDM LED lights indicate failing component category
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); *iKVM:* add-on ThinkServer Management Module Premium for iKVM functions
Security chip	No onboard TPM chip; *TPM:* additional add-on card for TPM function, TCG 1.2-compliant
Prerequisites	SATA/SAS disk, OS
Keyboard/mouse	None (use USB port)
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies
Rack kit	Includes rack kit
Cable management	*Cable:* contains cable management arm
Cooling	Six fans, non-hot swap

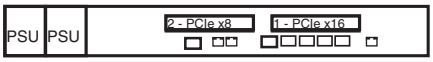
1U Rack top



Front



Rear



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ENERGY STAR Server 1.1-compliant
RoHS-compliant

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ThinkServer RD330 with 3.5" Disk Bay (4305) - September 2012

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4305-F3U	1xE5-2407	1600MHz RDIMM	4x8GB	No	700+Battery	3x500GB 3.5" SATA	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
4305-F4U	1xE5-2420	1600MHz RDIMM	6x8GB	No	700+Battery	3x300GB 3.5" SAS	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2

Limited warranty	**3-year** parts and labor; more services information see S-RAL sheet
Processor	Up to two Intel® Xeon® E5-2400 series processors, **Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz)
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RAID Support	Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter
Disk(s)	*3.5" SATA:* SATA 6.0Gb/s, 7200 rpm *3.5" SAS:* SAS 6.0Gb/s, 15000 rpm
Tape drive	None
Optical	DVD±RW or DVD ROM, slim
Diskette	None (use USB port)
Chipset	**Intel C606 Chipset**
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management
Riser card	(See Right) Riser card 1 for slot 1, riser card 2 for slot 2
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Keyboard/mouse	None (use USB port)
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies
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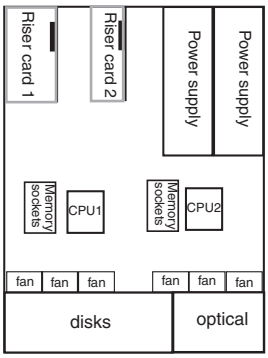
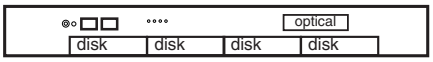
Cooling	Six fans, non-hot swap

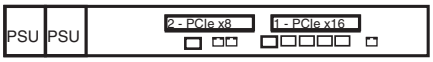
1U Rack top



Front



Rear



Mechanical

- 1U rack
- 19"W x 28.9"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1	5.25",	0.5" high,	external,	for optical
Bay 2-5	3.5",	1" high,	external,	for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8*
* *x4 elec for single processor model, x8 elec for dual processors model*

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Lenovo® SmartGrid Manager

ENERGY STAR® Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RAL sheet

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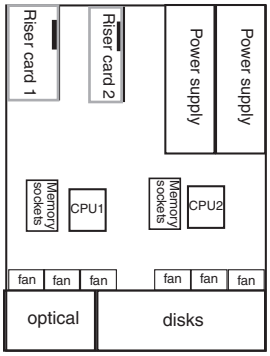
ThinkServer RD330 with 2.5" Disk Bay (3073) - TopSeller

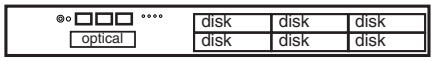
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3073-C1U	1xE5-2403	1333MHz RDIMM	1x4GB	No	300		6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
3073-C2U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300		6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
3073-C3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500		6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
3073-C4U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade		6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2
3073-C5U	2xE5-2420	1333MHz RDIMM	2x8GB	No	500+Upgrade		6xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	1
3073-C6U	2xE5-2420	1333MHz RDIMM	2x8GB	No	500+Upgrade	2x200G SSD	6xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
3073-C7U	1xE5-2420	1333MHz RDIMM	1x16GB	No	500		6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2
3073-C8U	1xE5-2450	1333MHz RDIMM	1x8GB	No	300		6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1

Limited warranty	**3-year** parts and labor; more services information see S-RAL sheet
Processor	Up to two Intel® Xeon® E5-2400 series processors, **Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) **Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)
Implementation	Two LGA1356 sockets
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)
Additional memory disclaimers	• *Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs* • *Over six DIMMs requires dual processors* • *Mixing of UDIMM, RDIMM, or LV RDIMM is not supported*
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz
Disk bays	Six 2.5" hot-swap SATA/SAS disk bays (see right)
Disk controller	*RAID 300*: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support *Upgrade for 300:* Additional upgrade key for RAID 300, add RAID 5 support *RAID 500*: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support *Upgrade for 500:* Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support *RAID 700:* ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50 support *Battery for 700:* Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50 via ThinkServer RAID 700 adapter
Disk(s)	*2.5" SAS:* SAS 6.0Gb/s, 10000 rpm *SSD:* Solid State Drive, 2.5"
Tape drive	None
Optical	DVD±RW or DVD ROM, slim
Diskette	None (use USB port)
Chipset	**Intel C606 Chipset**
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management
Riser card	(See Right) Riser card 1 for slot 1, riser card 2 for slot 2
Front ports	One analog VGA DB-15 connector, two USB 2.0
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; *Basic:* IDM LED lights indicate failing component category
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); *iKVM:* add-on ThinkServer Management Module Premium for iKVM functions
Security chip	No onboard TPM chip; *TPM:* additional add-on card for TPM function, TCG 1.2-compliant
Prerequisites	SATA/SAS disk, OS
Keyboard/mouse	None (use USB port)
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies
Rack kit	Includes rack kit
Cable management	Optional cable management arm on selected models
Cooling	Six fans, non-hot swap

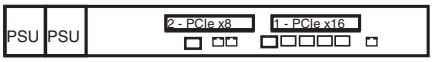
1U Rack top



Front



Rear



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Bay 2-7	2.5",	0.6" high, external,	for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8*
* *x4 elec for single processor model, x8 elec for dual processors model*

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Lenovo® SmartGrid Manager

ENERGY STAR Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RAL sheet

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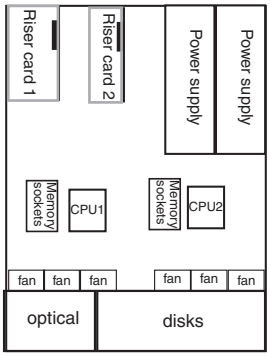
ThinkServer RD330 with 2.5" Disk Bay (3074)

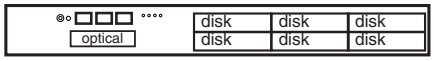
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3074-D1U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300	None	6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
3074-D2U	1xE5-2403	1333MHz RDIMM	1x8GB	No	300	None	6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
3074-D3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	300	None	6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2
3074-D4U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade	None	6xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	1
3074-D5U	1xE5-2450	1333MHz RDIMM	1x16GB	No	500+Upgrade	None	6xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2

Limited warranty	**3-year** parts and labor; more services information see S-RAL sheet
Processor	Up to two Intel® Xeon® E5-2400 series processors, **Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) **Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)
Implementation	Two LGA1356 sockets
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)
Additional memory disclaimers	• *Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs* • *Over six DIMMs requires dual processors* • *Mixing of UDIMM, RDIMM, or LV RDIMM is not supported*
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz
Disk bays	Six 2.5" hot-swap SATA/SAS disk bays (see right)
Disk controller	*RAID 300*: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support *Upgrade for 300:* Additional upgrade key for RAID 300, add RAID 5 support *RAID 500*: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support *Upgrade for 500:* Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support *RAID 700:* ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50 support *Battery for 700:* Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50 via ThinkServer RAID 700 adapter
Disk(s)	*2.5" SAS:* SAS 6.0Gb/s, 10000 rpm *SSD:* Solid State Drive, 2.5"
Tape drive	None
Optical	DVD±RW or DVD ROM, slim
Diskette	None (use USB port)
Chipset	**Intel C606 Chipset**
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management
Riser card	(See Right) Riser card 1 for slot 1, riser card 2 for slot 2
Front ports	One analog VGA DB-15 connector, two USB 2.0
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; *Basic:* IDM LED lights indicate failing component category
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); *iKVM:* add-on ThinkServer Management Module Premium for iKVM functions
Security chip	No onboard TPM chip; *TPM:* additional add-on card for TPM function, TCG 1.2-compliant
Prerequisites	SATA/SAS disk, OS
Keyboard/mouse	None (use USB port)
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies
Rack kit	Includes rack kit
Cable management	Optional cable management arm on selected models
Cooling	Six fans, non-hot swap

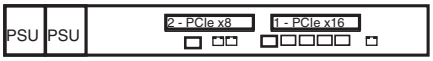
1U Rack top



Front



Rear



Mechanical

- 1U rack
- 19"W x 28.9"D x 1.72"H (with rack handles)
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- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1	5.25",	0.5" high, external,	for optical
Bay 2-7	2.5",	0.6" high, external,	for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8*

* *x4 elec for single processor model, x8 elec for dual processors model*

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Lenovo® SmartGrid Manager

ENERGY STAR Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RAL sheet

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ThinkServer RD330 with 2.5" Disk Bay (3074) - September 2012

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3074-D6U	1xE5-2407	1600MHz RDIMM	1x4GB	No	300		6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
3074-D7U	1xE5-2407	1600MHz RDIMM	4x8GB	No	700+Battery	3x300GB 2.5" SAS	6xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
3074-D8U	1xE5-2420	1600MHz RDIMM	6x8GB	No	700+Battery	3x300GB 2.5" SAS	6xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2

Limited warranty	**3-year** parts and labor; more services information see S-RAL sheet
Processor	Up to two Intel® Xeon® E5-2400 series processors, **Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1)**, 3-channel DDR3 memory controller (up to 1066MHz) **Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1)**, Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz)
Implementation	Two LGA1356 sockets
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)
Additional memory disclaimers	• *Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs* • *Over six DIMMs requires dual processors* • *Mixing of UDIMM, RDIMM, or LV RDIMM is not supported*
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz
Disk bays	Six 2.5" hot-swap SATA/SAS disk bays (see right)
Disk controller	*RAID 300*: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support *Upgrade for 300:* Additional upgrade key for RAID 300, add RAID 5 support *RAID 500*: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support *Upgrade for 500:* Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support *RAID 700:* ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50 support *Battery for 700:* Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50 via ThinkServer RAID 700 adapter
Disk(s)	*2.5" SAS:* SAS 6.0Gb/s, 10000 rpm *SSD:* Solid State Drive, 2.5"
Tape drive	None
Optical	DVD±RW or DVD ROM, slim
Diskette	None (use USB port)
Chipset	**Intel C606 Chipset**
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management
Riser card	(See Right) Riser card 1 for slot 1, riser card 2 for slot 2
Front ports	One analog VGA DB-15 connector, two USB 2.0
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; *Basic:* IDM LED lights indicate failing component category
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); *iKVM:* add-on ThinkServer Management Module Premium for iKVM functions
Security chip	No onboard TPM chip; *TPM:* additional add-on card for TPM function, TCG 1.2-compliant
Prerequisites	SATA/SAS disk, OS
Keyboard/mouse	None (use USB port)
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies
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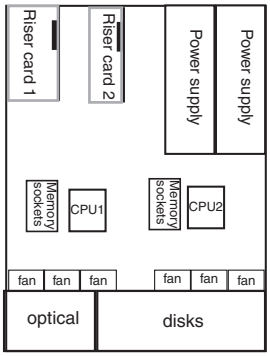

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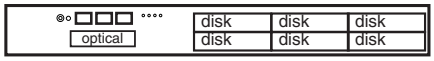
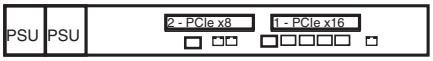


Rear



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