

ThinkServer RD330 Photography - 3.5" Disk Bays

ThinkServer™



ThinkServer RD330 Photography - 2.5" Disk Bays

ThinkServer™



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

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Memory 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-E1G	1xE5-2407	1333MHz RDIMM	1x4GB	No	300	None	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
4304-E3G	1xE5-2420	1333MHz RDIMM	1x8GB	No	500	None	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
4304-E5G	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade	None	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2
4304-E8G	1xE5-2403	1333MHz RDIMM	1x4GB	No	500+Upgrade	None	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	1

Limited warranty	3-year parts and labor	
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	<ul style="list-style-type: none"> 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 (See Right) Riser card 1 for slot 1, riser card 2 for slot 2	
Riser card	Two USB 2.0	
Front 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	
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)

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

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

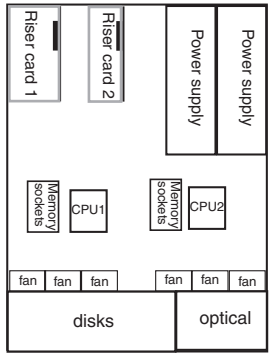
ThinkServer RD330 with 3.5" Disk Bay (4304) - TopSeller (Sep 2012)

Product Specifications Reference (PSREF)

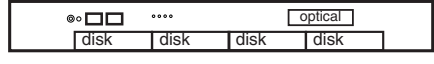
Type-model	Processor(s)	Memory (MHz/type)	Memory Pre-conf DIMMs	RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	System TPM mgmt	Cable mgmt	Preload OS	PSU qty	
4304-F1G	1xE5-2450	1600MHz RDIMM	1x8GB	No	500+Upgrade	No	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2

Limited warranty	3-year parts and labor
Processor	Up to two Intel® Xeon® E5-2400 series processors, 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) Two LGA1356 sockets
Implementation	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)
Memory	<ul style="list-style-type: none"> 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
Additional memory disclaimers	
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 (See Right) Riser card 1 for slot 1, riser card 2 for slot 2
Riser card	Two USB 2.0
Front 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
Rear ports	
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

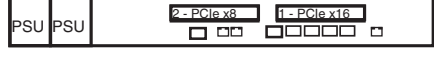
1U Rack top



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)

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

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

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
3073-C3G	1xE5-2420	1333MHz RDIMM	1x8GB	No	500	None	6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
3073-C4G	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade	None	6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2
3073-C5G	2xE5-2420	1333MHz RDIMM	2x8GB	No	500+Upgrade	None	6xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	1

Limited warranty	3-year parts and labor	
Processor	Up to two Intel® Xeon® E5-2400 series processors, 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	<ul style="list-style-type: none"> 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 (See Right) Riser card 1 for slot 1, riser card 2 for slot 2	
Riser card	One analog VGA DB-15 connector, two USB 2.0	
Front 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	
Rear ports		
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 2-7	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)

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

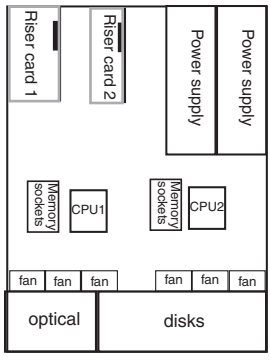
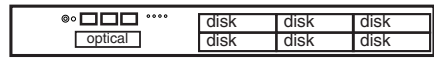
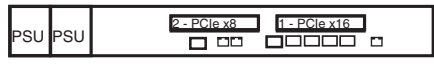
- Lenovo® SmartGrid Manager

ENERGY STAR® Server 1.1-compliant
RoHS-compliant

ThinkServer RD330 with 2.5" Disk Bay (3073) - TopSeller (Sep 2012)

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory Pre-conf DIMMs RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics TPM	System mgmt mgmt	Cable mgmt	Preload OS	PSU qty
3073-C9G	1xE5-2450	1600MHz RDIMM	1x8GB No	500+Upgrade	No	6xHS	SATA/SAS	DVD±RW	No	TPM IPMI	No	No	2

Limited warranty	3-year parts and labor		1U Rack top										
Processor	Up to two Intel® Xeon® E5-2400 series processors, 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) Two LGA1356 sockets												
Implementation	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)		Front										
Memory	<ul style="list-style-type: none"> 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 												
Additional memory disclaimers	<ul style="list-style-type: none"> 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 		Rear										
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)		Mechanical										
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		<ul style="list-style-type: none"> 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 										
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50 via ThinkServer RAID 700 adapter		Disk Bays										
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"		Bay 1 5.25", 0.5" high, external, for optical Bay 2-7 2.5", 0.6" high, external, for disk										
Tape drive	None		Expansion Slots										
Optical	DVD±RW or DVD ROM, slim		Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8 (x4 elec)										
Diskette	None (use USB port)		Security										
Chipset	Intel C606 Chipset		<ul style="list-style-type: none"> 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) 										
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2		Software Management Tools										
Riser card	One analog VGA DB-15 connector, two USB 2.0		<ul style="list-style-type: none"> ThinkServer EasyStartup ThinkServer EasyManage 										
Front 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		Energy Management Technology										
Rear ports	Supports IDM on selected models; Basic: IDM LED lights indicate failing component category		<ul style="list-style-type: none"> Lenovo® SmartGrid Manager 										
Intelligent Diagnostics Module (IDM)	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions		ENERGY STAR® Server 1.1-compliant										
Systems mgmt	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant		RoHS-compliant										
Security chip	SATA/SAS disk, OS												
Prerequisites	None (use USB port)												
Keyboard/mouse	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies												
Power supply	Includes rack kit												
Rack kit	Optional cable management arm on selected models												
Cable management	Six fans, non-hot swap												
Cooling													