

ThinkServer RD650 Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification	Components	Specification
Dimensions	2U rack. Height: 87 mm (3.4 in), width: 482 mm (19 in), depth: 764 mm (30 in)	Operating systems supported	Microsoft Windows Server 2016/2012 R2/2012/2008 R2. Windows Small Business Server 2011. Red Hat Enterprise Linux 6.5/6.6/7. SUSE Linux Enterprise Server 11. VMware vSphere (ESXi) 5.1 P5/5.5 U2/6.0
Weight	Minimum configuration: 16 kg (35.3 lb), maximum: 32 kg (70.5 lb)	Base warranty	3-year limited onsite service with 9x5/NBD.
Processor	Up to two 145W Intel Xeon E5-2600 v3 family (code name: Haswell) processors with 18 cores up to 2.3GHz, 16 cores up to 2.3GHz, 14 cores up to 2.6GHz, 12 cores up to 2.6GHz, 10 cores up to 2.6GHz, 8 cores up to 3.2GHz, 6 cores up to 3.4GHz, 4 cores up to 3.5GHz. Two QPI link up to 9.6 GT/s. Up to 2133MHz memory speed. Up to 45MB cache		Up to two redundant hot-swap 550W/750W/1100W/1600W power supplies. 550W, 1100W, and 1600W are 80 PLUS Platinum qualified. 750W is 80 PLUS Platinum or Titanium qualified.
Chipset	Intel C612 Platform Controller Hub (PCH)	Disk bay configuration	PSU requirements
Memory DIMMs	24 DIMM sockets (12 DIMMs per processor), 8-channel capable (4-channel per processor). RDIMM and LRDIMM (cannot be intermixed), DDR4, 2133MHz	6x3.5"	550W 750W 1100W 1600W
Memory capacity	384GB (RDIMM, 16GB x 24)/768GB (LRDIMM, 32GB x 24)	12x3.5"	• (up to 135W CPU)
Memory protection	ECC, memory mirroring, lockstep, and memory sparing	8x2.5"	•
AnyRAID support	RAID 0, 1, 10 with AnyRAID 110i, 6Gb/s SATA, optional key for RAID 5. RAID 0, 1, 10 with AnyRAID 510i, 6Gb/s SAS/SATA, optional key for RAID 5/50. RAID 0, 1, 10, 5, 50, 6, 60 with AnyRAID 720i/720ix. 12Gb/s SAS/SATA. 720i needs cache for RAID 6/60 support. 720ix must have cache. Optional cache for 720i/720ix: 1GB read-only memory. 1GB/2GB/4GB flash with super capacitor. Flash options include CacheVault, CacheCade Pro, and FastPath	16x2.5"	• (up to 105W CPU+24 DIMMs or 135W+16 DIMMs)
Disk drive bays	Up to 12 3.5", 24 2.5", or 6 2.5" plus 9 3.5" hot-swap disk bays on front. Up to 4 2.5" bays on 24 2.5" or 2.5" + 3.5" models can support easy-swap PCIe SSD via optional Anybay kit (consumes two PCIe slots). Up to 2 2.5" rear mounted hot-swap disk bays, optional. Up to 2 M.2 SSD drives via optional M.2 module. Up to one internal LTO-6 SAS tape drive on 8 x 2.5" and 720ix model, or external RDX tape drive via USB.	24x2.5"	•
	Disk bay configuration	2.5"+3.5"	•
	AnyRAID requirements and optional drives supported		
	RAID110i RAID510i RAID720i RAID720ix		
	6x3.5" • • •		• (optional rear bay/M.2)
	12x3.5" • • •		• (optional tape/rear bay/M.2)
	8x2.5" • • •		• (optional rear bay/M.2)
	16x2.5" • • •		• (optional Anybay/rear bay/M.2)
	24x2.5" • • •		• (optional Anybay/rear bay/M.2)
	6x2.5"+9x3.5" • • •		• (optional Anybay/rear bay/M.2)
Internal disk drive	3.5" HDD up to 8TB (SATA/SAS). 2.5" HDD up to 1.8TB (SAS)/2TB (SATA). 2.5" SSD up to 1.6TB (SATA/SAS). Easy-swap PCIe SSD up to 1.6TB. PCIe SSD adapter up to 3.2TB. M.2 SSD up to 120GB. 2.5" SSD and HDD are compatible with 3.5" bay	Slot 1 (riser card 1)	PCIe 3.0 x 16, half length, full height
SD module	Up to 2 SDHC flash cards via optional SD module, 8GB or 32GB each	Slot 2 (riser card 1)	PCIe 3.0 x 16, half length, full height
Optical drive	Optional one 9.5mm optical drive on 8 or 16 x 2.5" model, DVD-ROM or DVD±RW	Slot 3 (riser card 1)	PCIe 3.0 x 16, half length, full height
Network interfaces	One dedicated management port, one AnyFabric slot for customized LOM. Discrete network options is also available via PCIe slots	Slot 4 (onboard)	PCIe 3.0 x 16, low-profile, half length, requires 2nd CPU
Security features	Power-on and administrator password. Optional TPM (TCG 1.2-compliant)	Slot 5 (riser card 2)	PCIe 3.0 x 16, half length, full height, requires 2nd riser card and 2nd CPU
Systems management	Supports ThinkServer System Manager (TSM), optional TSM Premium. UEFI. Onboard Aspeed AST2400 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC). Control Panel LEDs shows the status of power, ID, network, system. Supports ThinkServer management software: Diagnostics, Deployment Manager, Energy Manager, System Manager, Partner Pack for VMware vCenter and Microsoft System Center Operations Manager, Power Planner	Slot 6 (riser card 2)	PCIe 3.0 x 16, half length, full height, requires 2nd riser card and 2nd CPU
		Slot 7 (onboard)	PCIe 3.0 x 16, low-profile, half length, requires 2nd CPU
		Slot 8 (onboard)	PCIe 3.0 x 16, low-profile, half length, requires 2nd CPU

Expansion slots

PSU1	8	7	5	6	4	1
PSU2	Optional rear bay					2
						3
						AnyFabric slot

Slot 1 (riser card 1)	PCIe 3.0 x 16, half length, full height
Slot 2 (riser card 1)	PCIe 3.0 x 16, half length, full height
Slot 3 (riser card 1)	PCIe 3.0 x 16, half length, full height
Slot 4 (onboard)	PCIe 3.0 x 16, low-profile, half length, requires 2nd CPU
Slot 5 (riser card 2)	PCIe 3.0 x 16, half length, full height, requires 2nd riser card and 2nd CPU
Slot 6 (riser card 2)	PCIe 3.0 x 16, half length, full height, requires 2nd riser card and 2nd CPU
Slot 7 (onboard)	PCIe 3.0 x 16, low-profile, half length, requires 2nd CPU
Slot 8 (onboard)	PCIe 3.0 x 16, low-profile, half length, requires 2nd CPU

Notes:

On 2.5" disk bay models, slots 1 and 2 can be replaced with one PCIe 3.0 x16 slot, double wide, full length, full height. Slots 5 and 6 can be replaced with one PCIe 3.0 x16 slot, double wide, full length, full height.

Model		70DR0030EA
Product		ThinkServer RD650
Region		EMEA
Machine Type		70DR
TopSeller		TopSeller
Processor		1xE5-2630 v3 8C/2.4GHz/20MB/85W/DDR4-1866
2nd CPU		4XG0F28818
Memory		1x16GB RDIMM DDR4-2133 ECC
RAID Controller		AnyRAID 720i+2GB Flash
Disk Bays		8x2.5" HS
Storage		2x300GB HDD 10K 2.5" SAS6Gbs
Slots		3xFH HL
Optical		9.5mm DVD±RW
Add-on NIC		GbEx4 RJ-45 AnyFabric
TPM		None
System Management		TSM
Operating System		None
Warranty		3-year
Power Supply		750Wx1 Platinum
Ann Date (mm/yy)		07/15





