Dell EMC PowerEdge T150

Technical Specifications

Part Number: E80S
Regulatory Type: E80S001
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Notes, cautions, and warnings

NOTE: A NOTE indicates important information that helps you make better use of your product.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Contents

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Technical specifications

The technical and environmental specifications of your system are outlined in this section.

Topics:

Chassis dimensions

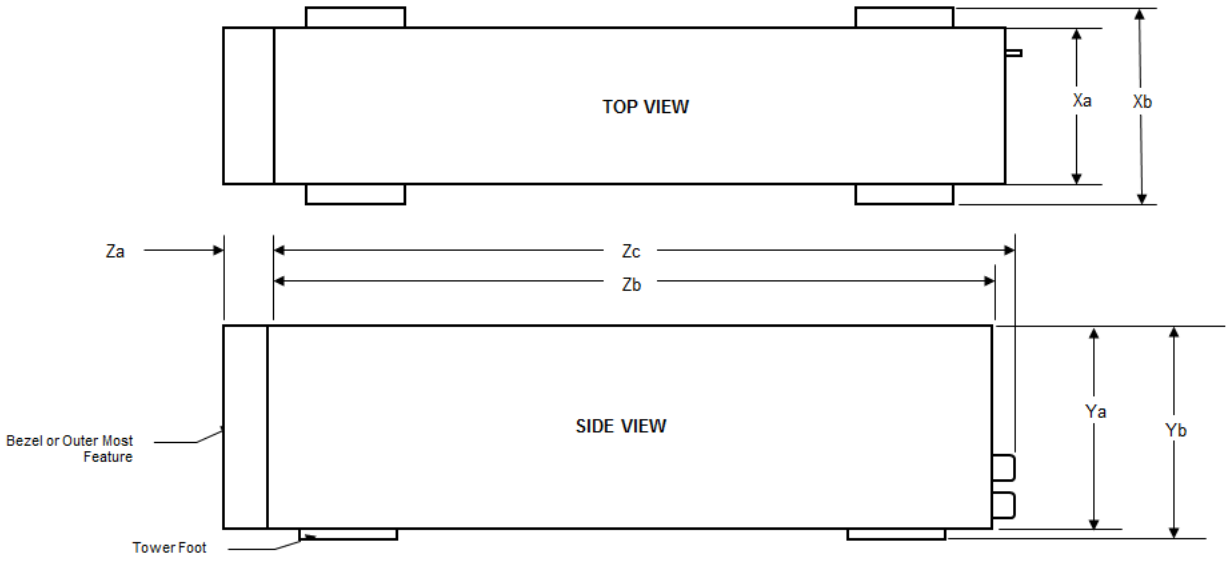

Figure 1. PowerEdge T150 chassis dimensions

Table 1. Chassis dimension for the PowerEdge T150 system

Drives	Xa	Xb	Ya	Yb	Yc	Za	Zb	Zc
4 x 3.5-inch	175 mm (6.88 inches)	NA	360 mm (14.17 inches)	362.9 mm (14.28 inches)	NA	With bezel : 35 mm (17 inches) Without bezel : NA	400 mm (15.74 inches)	418.75 mm (16.48 inches)

NOTE: Zb is the nominal rear wall external surface where the system board I/O connectors reside.

System weight

Table 2. PowerEdge T150 system weight

System configuration	Maximum weight (with all drives/SSDs)
4 x 3.5-inch system	11.68 kg (25.74 lbs.)

Processor specifications

Table 3. PowerEdge T150 processor specifications

Supported processor	Number of processors supported
Intel Xeon E-2300 series processor with up to 8 cores or Intel Pentium processor with up to 2 cores per processor	One

NOTE: Note: For Pentium processor, maximum memory speed supported is 2666 MT/s.

PSU specifications

The PowerEdge T150 system supports one AC cabled power supply unit (PSU).

Table 4. PowerEdge T150 PSU specifications

PSU	Class	Heat dissipation (maximum)	Frequency	Voltage	AC		DC	Current
					High line 200–240 V	Low line 100–120 V		
300 W AC	Bronze	1024 BTU/hr	50/60 Hz	100–240 V AC, autoranging	300 W	300 W	NA	4.6 A
400 W AC	Platinum	1365 BTU/hr	50/60 Hz	100–240 V AC, autoranging	400 W	400 W	NA	5.4 A

NOTE: Heat dissipation is calculated using the PSU wattage rating.

NOTE: When selecting or upgrading the system configuration, to ensure optimum power utilization, verify the system power consumption with the Enterprise Infrastructure Planning Tool available at Dell.com/calc.

Supported operating systems

The PowerEdge T150 system supports the following operating systems:

- Canonical Ubuntu Server LTS
- VMware ESXi
- Microsoft Windows Server with Hyper-V
- Red Hat Enterprise Linux
- SUSE Linux Enterprise Server

For more information, go to www.dell.com/ossupport.

Cooling fans specifications

The PowerEdge T150 system supports the following:

- One system cooling fan located at the back of the system.
- One processor cooling fan located on the heat sink.

NOTE: For more information about the fan support configuration or matrix, see Thermal restriction matrix.

System battery specifications

The PowerEdge T150 system supports CR 2032 3.0-V lithium coin cell system battery.

Expansion card specifications

The PowerEdge T150 system supports up to two PCI express (PCIe) Gen 4 and two PCIe Gen 3 expansion cards.

Table 5. Expansion card slots supported on the system board

PCIe slot	Processor Connection	PCIe slot height	PCIe slot length	Slot width
Slot 1 (Gen4 from processor)	Processor	Full Height	Half Length	x4 link in x8 slot
Slot 2 (Gen4 from processor)	Processor	Full Height	Half Length	x16 link in x16 slot
Slot 3 (Gen3)	Platform Controller Hub	Full Height	Half Length	x1
Slot 4 (Gen3)	Platform Controller Hub	Full Height	Half Length	x4 link in x8 slot

NOTE: Slot 1 does not function when Pentium processor is installed.

NOTE: For information on the expansion card installation guidelines, see the system specific *Installation and Service Manual* available at https://www.dell.com/poweredgemanuals.

Memory specifications

The PowerEdge T150 system supports the following memory specifications for optimized operation.

Table 6. Memory specifications

DIMM type	DIMM rank	DIMM capacity	Single processor	
			Minimum DIMM capacity	Maximum DIMM capacity
UDIMM	Single rank	8 GB	8 GB	32 GB
		16 GB	16 GB	64 GB
	Dual rank	32 GB	32 GB	128 GB

Table 7. Memory module sockets

Memory module sockets	Speed
4, 288-pin	3200 MT/s, 2933 MT/s, 2666 MT/s

NOTE: 32 GB x 4 supports 2933 MT/s.

NOTE: For Pentium processor, maximum memory speed supported is 2666 MT/s.

Storage controller specifications

The PowerEdge T150 system supports the following controller cards:

Table 8. PowerEdge T150 storage controller cards

Internal controllers	External controllers
• PERC H345 • PERC H355 • PERC H755 • HBA355i • S150	• HBA355e

Drives

The PowerEdge T150 system supports 4 x 3.5-inch cabled SAS/SATA (HDD/SSD) drives.

NOTE: PERC card is required when drive capacity is greater than or equal to 8 TB.

Ports and connectors specifications

USB ports specifications

Table 9. PowerEdge T150 USB ports specifications

Front		Rear		Internal	
USB port type	No. of ports	USB port type	No. of ports	USB port type	No. of ports
USB 3.0-compliant port	One	USB 2.0-compliant port	Five	Internal USB 3.0-compliant port	One
iDRAC Direct port (Micro-AB USB 2.0-compliant port)	One	USB 3.0-compliant port	One		

NOTE: The micro-AB USB 2.0-compliant port can only be used as an iDRAC Direct or a management port.

NIC port specifications

The PowerEdge T150 system supports up to two Onboard LOM 1GbE.

Serial connector specifications

The PowerEdge T150 system supports one serial connector on rear of the system, which is a 9-pin connector, Data Terminal Equipment (DTE), 16550-compliant .

VGA ports specifications

The PowerEdge T150 system supports one DB-15 VGA port on the rear panel of the system.

Video specifications

The PowerEdge T150 system supports integrated Matrox G200 graphics controller with 16 MB of video frame buffer.

Table 10. Supported video resolution options for the system

Resolution	Refresh rate (Hz)	Color depth (bits)
1024 x 768	60, 72, 75, 85	8, 16, 32
1280 x 800	60, 75	8, 16, 32
1280 x 1024	60, 75, 85	8, 16, 32
1360 x 768	60	8, 16, 32
1440 x 900	60, 75, 85	8, 16, 32
1600 x 900	60	8, 16, 32
1600 x 1200	60, 65, 70, 75, 85	8, 16, 32
1680 x 1050	60, 75, 85	8, 16, 32
1920 x 1080	60	8, 16, 32
1920 x 1200	60, 75, 85	8, 16, 32

Environmental specifications

NOTE: For additional information about environmental certifications, refer to the *Product Environmental Datasheet* located with the Documentation > Regulatory Information on www.dell.com/support/home.

Table 11. Operational climatic range category A2

Temperature	Specifications
Allowable continuous operations	
Temperature ranges for altitudes <= 900 m (<= 2953 ft)	10–35°C (50–95°F) with no direct sunlight on the equipment
Humidity percent ranges (non-condensing at all times)	8% RH with -12°C minimum dew point to 80% RH with 21°C (69.8°F) maximum dew point

Table 11. Operational climatic range category A2 (continued)

Temperature	Specifications
Operational altitude de-rating	Maximum temperature is reduced by 1°C/300 m (1.8°F/984 Ft) above 900 m (2953 Ft)

Table 12. Operational climatic range category A4

Temperature	Specifications
Allowable continuous operations	
Temperature ranges for altitudes <= 900 m (<= 2953 ft)	5–45°C (41–113°F) with no direct sunlight on the equipment
Humidity percent ranges (non-condensing at all times)	8% RH with -12°C minimum dew point to 90% RH with 24°C (75.2°F) maximum dew point
Operational altitude de-rating	Maximum temperature is reduced by 1°C/125 m (33.8°F/410 Ft) above 900 m (2953 Ft)

Table 13. Shared requirements across all categories

Temperature	Specifications
Allowable continuous operations	
Maximum temperature gradient (applies to both operation and non-operation)	20°C in an hour* (36°F in an hour) and 5°C in 15 minutes (9°F in 15 minutes), 5°C in an hour* (9°F in an hour) for tape **NOTE:** * - Per ASHRAE thermal guidelines for tape hardware, these are not instantaneous rates of temperature change.
Non-operational temperature limits	-40 to 65°C (-40 to 149°F)
Non-operational humidity limits	5% to 95% RH with 27°C (80.6°F) maximum dew point
Maximum non-operational altitude	12,000 meters (39,370 feet)
Maximum operational altitude	3,048 meters (10,000 feet)

Table 14. Maximum vibration specifications

Maximum vibration	Specifications
Operating	0.21 G_{rms} at 5 Hz to 500 Hz for 10 minutes (all x, y, and z axes)
Storage	1.88 G_{rms} at 10 Hz to 500 Hz for 15 minutes (all six sides tested)

Table 15. Maximum shock pulse specifications

Maximum shock pulse	Specifications
Operating	Six consecutively executed shock pulses in the positive and negative x, y, and z axis of 6 G for up to 11 ms. Six consecutively executed shock pulses in the positive and negative x, y, and z axis of 6G for up to 11ms.
Storage	Six consecutively executed shock pulses in the positive and negative x, y, and z axis (one pulse on each side of the system) of 71 G for up to 2 ms

Particulate and gaseous contamination specifications

The following table defines the limitations that prevent the damage to the IT equipment and/or, or both failure from particulate and gaseous contamination. If the levels of particulate or gaseous pollution exceed the specified limitations and results in equipment damage or failure, you must rectify the environmental conditions. Remediation of environmental conditions is the responsibility of the customer.

Table 16. Particulate contamination specifications

Particulate contamination	Specifications
Air filtration	Data center air filtration as defined by ISO Class 8 per ISO 14644-1 with a 95% upper confidence limit. **NOTE:** This condition applies to data center environments only. Air filtration requirements do not apply to IT equipment designed to be used outside a data center, in environments such as an office or factory floor. **NOTE:** Air entering the data center must have MERV11 or MERV13 filtration.
Conductive dust	Air must be free of conductive dust, zinc whiskers, or other conductive particles. **NOTE:** This condition applies to data center and non-data center environments.
Corrosive dust	• Air must be free of corrosive dust. • Residual dust present in the air must have a deliquescent point less than 60% relative humidity. **NOTE:** This condition applies to data center and non-data center environments.

Table 17. Gaseous contamination specifications

Gaseous contamination	Specifications
Copper Coupon Corrosion rate	<300 Å/month per Class G1 as defined by ANSI/ ISA71.04-2013
Silver Coupon Corrosion rate	<200 Å/month as defined by ANSI/ISA71.04-2013

NOTE: Maximum corrosive contaminant levels measured at ≤50% relative humidity.

Thermal restrictions

Supported 3.5-inch drive count is restricted to 2 x drives per chassis for ASHRAE A4 requirement.

NOTE: DIMM blank is not required.