

Dell EMC PowerEdge MX750c

Technical Specifications

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.

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Technical specifications

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

Topics:

- Sled dimensions
- Sled weight
- Processor specifications
- Supported operating systems
- System battery specifications
- Memory specifications
- PERC, Mezzanine and Mini Mezzanine slots specifications
- Drive specifications
- Storage controller specifications
- Ports and connectors specifications
- Video specifications
- Environmental specifications

Sled dimensions

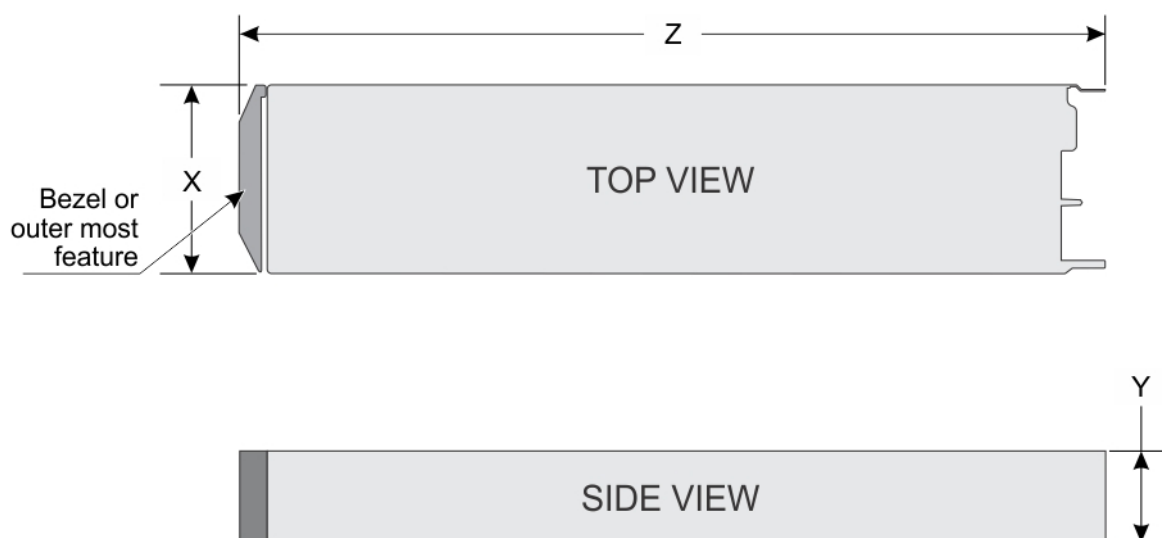


Figure 1. PowerEdge MX750c sled dimensions

Table 1. Sled dimensions of the PowerEdge MX750c system

X	Y	Z (handle closed).
250.2 mm (9.85 inches)	42.15 mm (1.65 inches)	594.99 mm (23.42 inches)

Sled weight

Table 2. PowerEdge MX750c sled weight

System configuration	Maximum weight
6 x 2.5-inch	8.3 kg (18.29 pound)
4 x 2.5-inch	8.1 kg (17.85 pound)

Processor specifications

Table 3. PowerEdge MX750c processor specifications

Supported processor	Number of processors supported
3 rd Generation Intel Xeon Scalable processors with up to 40 cores	Up to two

Supported operating systems

The PowerEdge MX750c system supports the following operating systems:

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

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

System battery specifications

The PowerEdge MX750c system supports CR 2032 3.0-V lithium coin cell system battery.

Memory specifications

The PowerEdge MX750c system supports the following memory specifications for optimized operation.

Table 4. PowerEdge MX750c memory specifications

DIMM type	DIMM rank	DIMM capacity	Single processor		Dual processors	
			Minimum system capacity	Maximum system capacity	Minimum system capacity	Maximum system capacity
RDIMM	Single rank	8 GB	8 GB	128 GB	16 GB	256 GB
	Dual rank	16 GB	16 GB	256 GB	32 GB	512 GB
		32 GB	32 GB	512 GB	64 GB	1 TB
		64 GB	64 GB	1 TB	128 GB	2 TB
LRDIMM	Quad rank	128 GB	128 GB	2 TB	256 GB	4 TB
	Octa rank	256 GB	256 GB	4 TB	512 GB	8 TB

Table 5. Memory module sockets

Memory module sockets	Speed
32, 288-pin	3200 MT/s, 2933 MT/s, 2666 MT/s

- NOTE:** 8 GB RDIMM is not supported with Intel Optane PMem 200 Series configurations.
- NOTE:** 256 GB LRDIMM is only supported on X4 universal backplane configuration. It cannot be mixed with Intel Optane PMem 200 Series configurations.
- NOTE:** PMem can be mixed with RDIMMs and LRDIMMs.
- NOTE:** PMem cannot be mixed with 256GB LRDIMM.
- NOTE:** Mix of Intel Data center persistent memory module operating modes (App Direct, Memory Mode) is not supported within socket or across sockets.
- NOTE:** Memory DIMM slots are not hot pluggable.
- NOTE:** For more information about Intel Optane PMem 200 Series installation guidelines, see the system *Installation and Service Manual* at www.dell.com/poweredgemanuals.

PERC, Mezzanine and Mini Mezzanine slots specifications

The PowerEdge MX750c system supports:

- One x16 PCIe Gen4 slot for PERC – connected to processor 1
- One x16 PCIe Gen4 slot for Mezz A – connected to processor 1
- One x16 PCIe Gen4 slot for Mezz B – connected to processor 2
- One x16 PCIe Gen4 slot for mini-Mezz card – connected to processor 2

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

Drive specifications

Drives

The Dell EMC PowerEdge MX750c system supports:

- 6 x 2.5-inch hot-swappable SAS, SATA drives supported on X6 SAS/SATA BP configuration.
- 6 x 2.5-inch hot-swappable NVMe, SATA supported on X6 universal BP configuration.
- 4 x 2.5-inch hot-swappable NVMe, SAS, SATA drives supported on X4 universal BP configuration.

NOTE: For more information about how to hot swap NVMe PCIe SSD U.2 device, see the *Dell Express Flash NVMe PCIe SSD User's Guide* at <https://www.dell.com/support> > **Browse all products** > **Data Center Infrastructure** > **Storage Adapters & Controllers** > **Dell PowerEdge Express Flash NVMe PCIe SSD** > **Documentation** > **Manuals and Documents**.

Storage controller specifications

The system supports the following controller cards:

Table 6. Storage controller cards of the PowerEdge MX750c system

Internal controllers	External controllers
<ul style="list-style-type: none"> PERC H745P MX PERC H755 MX HBA350i MX Boot Optimized Storage Subsystem (BOSS-S1): HWRAID 2 x M.2 SSDs 240 GB or 480 GB 	<ul style="list-style-type: none"> PERC H745P MX HBA330 MMZ

Ports and connectors specifications

USB ports specifications

Table 7. PowerEdge MX750c USB specifications

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

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

IDSDM

The PowerEdge MX750c system supports Internal Dual SD module (IDSDM).

The IDSDM supports two microSD cards and is available in the following configurations:

Table 8. PowerEdge MX750c supported microSD card storage capacity

IDSDM card
<ul style="list-style-type: none"> 16 GB 32 GB 64 GB

NOTE: One IDSDM card slot is dedicated for redundancy.

NOTE: Use Dell EMC branded microSD cards that are associated with the IDSDM configured systems.

Video specifications

The PowerEdge MX750c System supports Matrox G200 W3 graphics controller integrated with iDRAC with 16 MB of video frame buffer.

Table 9. Supported video resolution options

Resolution	Refresh rate (Hz)	Color depth (bits)
1024 x 768	60	8, 16, 32
1280 x 800	60	8, 16, 32
1280 x 1024	60	8, 16, 32

Table 9. Supported video resolution options (continued)

Resolution	Refresh rate (Hz)	Color depth (bits)
1360 x 768	60	8, 16, 32
1440 x 900	60	8, 16, 32
1600 x 900	60	8, 16, 32
1600 x 1200	60	8, 16, 32
1680 x 1050	60	8, 16, 32
1920 x 1080	60	8, 16, 32
1920 x 1200	60	8, 16, 32

Environmental specifications

NOTE: For additional information about environmental certifications, refer to the *Product Environmental Datasheet* located with the manuals & documents on www.dell.com/support/home.

Table 10. 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
Operational altitude de-rating	Maximum temperature is reduced by 1°C/300 m (33.8°F/984 Ft) above 900 m (2953 Ft)

Table 11. Operational climatic range category A3

Temperature	Specifications
Allowable continuous operations	
Temperature ranges for altitudes <= 900 m (<= 2953 ft)	5–40°C (41–104°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 85% RH with 24°C (75.2°F) maximum dew point
Operational altitude de-rating	Maximum temperature is reduced by 1°C/175 m (33.8°F/574 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 (41°F in 15 minutes), 5°C in an hour* (41°F in an hour) for tape <i>i</i> NOTE: * - Per ASHRAE thermal guidelines for tape hardware, these are not instantaneous rates of temperature change.
Non-operational temperature limits	-40 to 65°C (-104 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	0.26 G _{rms} at 5 Hz to 350 Hz (all operation orientations)
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.
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.

Thermal restriction matrix

Table 16. PowerEdge MX750c thermal restriction - processor configuration

ASHRAE		A2	A3/A4
Ambient Support	30 ° C	35 ° C	40 ° C (ASHRAE A3) / 45 ° C (ASHRAE A4)
Processor	270 W processor in 4 drives backplane configuration with 4 NVMeS	Processor with 220 W and above has to be limited in 4 drives backplane configuration.	Not supported for processor TDP >140 W in A3 Not supported for processor TDP >135 W in A4

Table 17. Thermal restriction matrix

Configuration		6 x 2.5-inch BP w/6 drives and 32 DIMMs		4 x 2.5-inch BP w/4 drives and 32 DIMMs	
Test storage		SAS drive	NVMe drive	SAS drive	NVMe drive
Ambient temperature					
Processor TDP	105 W	45°C	35°C	45°C	35°C
	120 W	45°C	35°C	45°C	35°C
	125 W	45°C	35°C	45°C	35°C
	135 W	45°C	35°C	45°C	35°C
	150 W	35°C	35°C	35°C	35°C

Table 17. Thermal restriction matrix (continued)

Configuration		6 x 2.5-inch BP w/6 drives and 32 DIMMs		4 x 2.5-inch BP w/4 drives and 32 DIMMs	
Test storage		SAS drive	NVMe drive	SAS drive	NVMe drive
Ambient temperature					
	165 W	35°C	35°C	35°C	35°C
	185 W	35°C	35°C	35°C	35°C
	205 W	35°C	35°C	35°C	35°C
	220 W	Not supported	Not supported	35°C	35°C
	250 W	Not supported	Not supported	35°C	35°C
	270 W	Not supported	Not supported	35°C	30°C
Memory	128 GB LRDIMM 3200, 9.4 W, 2 DPC	45°C	35°C	45°C	35°C
	Intel Optane PMem 200 Series, 15-18 W	30°C	30°C	35°C	35°C
PCIe card	Mezzanine card, Tier2, ≤ 30 W	45°C	35°C	45°C	35°C
	Mini Mezzanine card	45°C	35°C	45°C	35°C

Thermal air restrictions

Thermal

PowerEdge servers have an extensive collection of sensors that automatically track thermal activity, which helps regulate temperature thereby reducing server noise and power consumption. The sensors in the MX750c interact with the chassis management services module which regulates fan speed. All fans which cool the MX750c are contained in the MX7000 chassis.

Thermal management of PowerEdge MX750c delivers high performance for the right amount of cooling to components at the lowest fan speeds across a wide range of ambient temperatures from 10°C to 35°C (50°F to 95°F) and to extended ambient temperature ranges (see Environmental Specifications section). The benefits to you are lower fan power consumption (lower server system power and data center power consumption) and greater acoustical versatility.

For detailed information about thermal please consult the MX7000 Technical Guide.

ASHRAE A3 environment

- Do not perform a cold startup below 5°C.
- The operating temperature specified is for a maximum altitude of 3050 m (10,000 ft).
- Higher wattage processors, Thermal Design Power(TDP)>140 W are not supported.
- Non-Dell qualified peripheral cards or peripheral cards greater than 30 W are not supported.
- PCIe SSD is not supported.
- Intel Optane PMem 200 Series is not supported.
- 128 GB LRDIMM is not supported.

ASHRAE A4 environment

- Do not perform a cold startup below 5°C.
- The operating temperature specified is for a maximum altitude of 3050 m (10,000 ft).

- Higher wattage processors, Thermal Design Power(TDP)>135 W are not supported.
- Non-Dell qualified peripheral cards or peripheral cards greater than 30 W are not supported.
- PCIe SSD is not supported.
- Intel Optane PMem 200 Series is not supported.
- 128 GB LRDIMM is not supported.