Dell PowerVault ME484 JBOD Storage Enclosure

Support Matrix

March 2023
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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.

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Introduction

This Support Matrix provides the latest compatibility/interoperability information and the supported software, firmware, and hardware for an ME484 JBOD storage enclosure that is attached directly to a host server. This document supersedes all other ME484 JBOD documentation information.

NOTE: For information about using the ME484 as an expansion enclosure connected to a storage system, refer to the applicable support matrix, either the *Dell PowerVault ME4 Series Storage System Support Matrix* or the *Dell PowerVault ME5 Series Storage System Support Matrix*.

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ME484 JBOD storage enclosure rules

This following table lists some of the rules for ME484 JBOD storage enclosures:

Table 1. ME484 JBOD storage enclosure rules

Rule	ME484 JBOD
Maximum number of servers	1 (Windows or Linux)
Maximum SAS cable length	4 m
Maximum number of ME484 JBOD storage enclosures per host bus adapter (HBA)	2
Recommended Windows failover policy. (On Windows systems, MPIO is required with multipath configurations).	Failover only
Recommended Linux Multipath Policy. (On Linux systems, Device Mapper Multipath is required with multipath configurations).	Failover

NOTE: Clustering is not supported in ME484 JBOD storage enclosure configurations.

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ME484 JBOD server support

This section lists the adapters and controllers that have been tested for use with ME484 JBOD storage enclosures.

The ME484 JBOD storage enclosure supports the following adapters and controllers:

- Dell HBA355e
- Dell 12 Gbps SAS

You can download the supported drivers and firmware for the adapters and controllers from https://www.dell.com/support/. To determine if a PowerEdge server supports an adapter, see the support matrix for that server.

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Management Tools

The ME484 JBOD storage enclosure is managed using the PowerTools Server Hardware Manager software. For more information, see the *PowerTools Server Hardware Manager Administrator's Guide* or the *PowerTools Server Hardware Manager Support Matrix* on https://www.dell.com/support/.

The ME484 JBOD storage enclosure is not integrated with Dell OpenManage or the Dell Remote Access Controller (iDRAC).

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Supported ME484 JBOD storage enclosure firmware

ME484 JBOD storage enclosures contain two IOMs and both IOMs must be at the same firmware version.

NOTE: This document refers to I/O modules as IOMs. Other Dell documentation might refer to the I/O modules as Enclosure Management Modules (EMMs). For ME484 JBOD storage enclosures, these two terms are interchangeable.

The firmware version on each IOM must be updated individually because the IOMs do not automatically synchronize firmware versions.

Table 2. ME484 JBOD storage enclosure firmware

Version	Release date
521A	September 12, 2018
523B	December 20, 2018
5258	September 26, 2019
525F	December 19, 2019
526E	August 5, 2020
5280	July 2, 2021
52A0	July 14, 2022
52B2	January 12, 2023

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Supported operating systems

The ME484 JBOD storage enclosure supports the following operating systems:

Table 3. Operating system support

Operating system	SAS host server	Notes and required hotfixes
Microsoft Windows		
Windows Server 2022 Standard and Datacenter (Server Core and Desktop Experience)	✓	Ensure you apply the latest operating system updates.
Windows Server 2019 Standard and Datacenter (Server Core and Desktop Experience)	✓	Ensure you apply the latest operating system updates.
Windows Server 2016 Standard and Datacenter (Server Core and Desktop Experience)	✓	Ensure you apply the latest operating system updates.
Windows Server 2012 R2 Standard and Datacenter (Server Core mode supported)	✓	Ensure you apply the latest operating system updates.
Linux		
Red Hat Enterprise Linux 8.x	✓	Ensure you apply the latest operating system updates.
Red Hat Enterprise Linux 7.x	✓	Ensure you apply the latest operating system updates.
Red Hat Enterprise Linux 6.9	✓	Ensure you apply the latest operating system updates.
SUSE Linux Enterprise Server 15.x	✓	Ensure you apply the latest operating system updates.
SUSE Linux Enterprise Server 12.x	✓	Ensure you apply the latest operating system updates.

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Supported hard drives

The ME484 JBOD storage enclosure supports the following hard drives:

Table 4. Supported hard drives

Dell P/N	Form Factor	Model	Capacity	Speed	Capacity	Vendor	Firmware	SED
R1ND2	2.5"	MZILT800HAHQ0D3	960GB	SSD	12GB	Samsung	DSF8	No
F0VFY	2.5"	MZILT1T6HAJQ0D3	1.92TB	SSD	12GB	Samsung	DSF8	No
K74WN	2.5"	MZILT960HBHQ0D3	960GB	SSD	12GB	Samsung	DSA4	No
TMTW9	2.5"	MZILT1T9HBJR0D3	1.92TB	SSD	12GB	Samsung	DSA4	No
CRNPH	2.5"	MZILT3T8HBLS0D3	3.84TB	SSD	12GB	Samsung	DSA4	No
84C40	2.5"	MZILT7T6HALA0D3	7.68TB	SSD	12GB	Samsung	DSA4	No
GW8T1	2.5"	MZILT800HBHQ0D3	800GB	SSD	12GB	Samsung	DWA4	No
3TCV6	2.5"	MZILT1T6HBJR0D3	1.6TB	SSD	12GB	Samsung	DSA4	No
H8DG4	2.5"	MZILG960HCHQAD3	960GB	SSD	24GB	Samsung	DSG5	No
NRR34	2.5"	MZILG1T9HCJRAD3	1.92TB	SSD	24GB	Samsung	DSG5	No
9N32F	2.5"	MZILG3T8HCLSAD3	3.84TB	SSD	24GB	Samsung	DSG5	No
3CHC8	2.5"	MZILG800HCHQAD3	800GB	SSD	24GB	Samsung	DWG5	No
5RJND	2.5"	MZILG1T6HCJRAD3	1.6TB	SSD	24GB	Samsung	DWG5	No
88YMD	2.5"	XS960SE70114	960GB	SSD	12GB	Seagate	3D03	No
D4VFW	2.5"	XS1920SE70114	1.92TB	SSD	12GB	Seagate	3D03	No
KXDCD	2.5"	XS3840SE70114	3.84TB	SSD	12GB	Seagate	3D03	No
0MK61	2.5"	XS7680SE70114	7.68tb	SSD	12GB	Seagate	3D03	No
43PCJ	2.5"	PX05SVB048Y	480GB	SSD	12GB	Toshiba	AS10	No
N5PK6	2.5"	PX05SVB048Y	480GB	SSD	12GB	Toshiba	AS10	No
MWGK7	2.5"	PX05SRB096Y	960GB	SSD	12GB	Toshiba	AS10	No
24YF3	2.5"	PX05SRB096Y	960GB	SSD	12GB	Toshiba	AS10	No
0FYFW	2.5"	PX05SRB192Y	1.92TB	SSD	12GB	Toshiba	AS10	No
HDGG4	2.5"	PX05SRB192Y	1.92TB	SSD	12GB	Toshiba	AS10	No
1N61H	2.5"	PX05SVQ192B	1.92TB	SSD	12GB	Toshiba	AX0B	Yes
6K9P2	2.5"	PX05SVQ192B	1.92TB	SSD	12GB	Toshiba	AX0B	Yes
3PR5C	2.5"	KPM5XVUG480G	480GB	SSD	12GB	Toshiba	B026	No
H8X3X	2.5"	KPM5XRUG960G	960GB	SSD	12GB	Toshiba	B026	No
TDNP7	2.5"	KPM5XRUG1T92	1.92TB	SSD	12GB	Toshiba	B026	No
N85XX	2.5"	KPM5XRUG3T84	3.84TB	SSD	12GB	Toshiba	B026	No
DJY51	2.5"	KPM5WVUG1T92	1.92TB	SSD	12GB	Toshiba	B322	Yes

Table 4. Supported hard drives (continued)

Dell P/N	Form Factor	Model	Capacity	Speed	Capacity	Vendor	Firmware	SED
6N7KY	2.5"	KPM6XRUG960G	960GB	SSD	12GB	Kioxia	BA0D	No
4CN85	2.5"	KPM6XRUG1T92	1.92TB	SSD	12GB	Kioxia	BA0D	No
H9TT5	2.5"	KPM6XRUG3T84	3.84TB	SSD	12GB	Kioxia	BA0D	No
PD02Y	2.5"	KPM6XRUG7T68	7.68TB	SSD	12GB	Kioxia	BA0D	No
DHWH5	2.5"	KPM6WVUG1T92	1.92TB	SSD	12GB	Kioxia	BD0D	Yes
81H9C	2.5"	KPM6WVUG3T84	3.84TB	SSD	12GB	Kioxia	BD0D	Yes
JTKH5	2.5"	KPM6XVUG800G	800GB	SSD	12GB	Kioxia	BA0D	No
GD3N0	2.5"	KPM6XVUG1T60	1.6TB	SSD	12GB	Kioxia	BA0D	No
C9R60	2.5"	KPM6XRUG960G	960GB	SSD	24GB	Kioxia	BA48	No
VRTN9	2.5"	KPM6XRUG1T92	1.92TB	SSD	24GB	Kioxia	BA48	No
2XVX2	2.5"	KPM6XRUG3T84	3.84TB	SSD	24GB	Kioxia	BA48	No
YM0T1	2.5"	KPM6XRUG7T68	7.68TB	SSD	24GB	Kioxia	BA48	No
NNGV4	2.5"	KPM6XVUG800G	800GB	SSD	24GB	Kioxia	BA48	No
1081V	2.5"	KPM6WVUG1T92	1.92TB	SSD	24GB	Kioxia	BD48	Yes
MD4YN	2.5"	KPM6WVUG3Y84	3.84TB	SSD	24GB	Kioxia	BD48	Yes
KRVY1	2.5"	KPM7XRUG960G	960GB	SSD	24GB	Kioxia	C10A	No
6K35K	2.5"	KPM7XRUG1T92	1.92TB	SSD	24GB	Kioxia	C10A	No
MT0R5	2.5"	KPM7XRUG3T84	3.84TB	SSD	24GB	Kioxia	C10A	No
7N1WT	2.5"	KPM7XRUG7T68	7.68TB	SSD	24GB	Kioxia	C10A	No
X96H8	2.5"	KPM7XVUG800G	800GB	SSD	24GB	Kioxia	C10A	No
4TRHM	2.5"	KPM7XVUG1T60	1.6TB	SSD	24GB	Kioxia	C10A	No
XTH17	2.5"	ST900MP0026	900GB	15K	12GB	Seagate	KT3A	No
N9WXC	2.5"	ST900MP0126	900GB	15K	12GB	Seagate	KSC9	Yes
G2G54	2.5"	ST1200MM0099	1.2TB	10K	12GB	Seagate	ST36	No
JY57X	2.5"	DL1800MM0159	1.8TB	10K	12GB	Seagate	ST5C	No
RWR8F	2.5"	DL2400MM0159	2.4TB	10K	12GB	Seagate	ST5C	No
8YWH3	2.5"	ST2400MM0149	2.4TB	10K	12GB	Seagate	SSEA	Yes
1D0F5	2.5"	BL2400MM0159	2.4TB	10K	12GB	Seagate	SBS4	No
TMVN7	2.5"	ST2000NX0463	2TB	7.2K	12GB	Seagate	NT32	No
Y6W8N	2.5"	ST2000NX0453	2TB	7.2K	12GB	Seagate	NSF2	Yes
YKT0W	2.5"	AL14SXB90ENY	900GB	15K	12GB	Toshiba	EE0A	No
01M0D	2.5"	AL15SEB120NY	1.2GB	10K	12GB	Toshiba	EF06	No
0WRRF	2.5"	AL15SEB18EQY	1.8TB	10K	12GB	Toshiba	EF06	No
F9NWJ	2.5"	AL15SEB24EQY	2.4TB	10K	12GB	Toshiba	EF06	No
07FPR	3.5"	HUH721010AL5200	10TB	7.2K	12GB	HGST	LS21	No
9HXK6	3.5"	HUH721212AL5200	12TB	7.2K	12GB	HGST	NS10	No
0JHTD	3.5"	HUH721212AL5205	12TB	7.2K	12GB	HGST	NM10	Yes

Table 4. Supported hard drives (continued)

Dell P/N	Form Factor	Model	Capacity	Speed	Capacity	Vendor	Firmware	SED
NT1X2	3.5"	HUS726T4TALS200	4TB	7.2K	12GB	HGST	PU07	No
44YFV	3.5"	HUS728T8TAL5200	8TB	7.2K	12GB	HGST	RS07	No
5JH5X	3.5"	ST4000NM0295	4TB	7.2K	12GB	Seagate	DT34	No
W5M2R	3.5"	ST4000NM0295	4TB	7.2K	12GB	Seagate	DT34	No
M40TH	3.5"	ST8000NM0185	8TB	7.2K	12GB	Seagate	PT55	No
VFP4M	3.5"	ST8000NM0185	8TB	7.2K	12GB	Seagate	PT55	No
YF87J	3.5"	ST10000NM0256	10TB	7.2K	12GB	Seagate	TT56	No
HV5CH	3.5"	ST10000NM0598	10TB	7.2K	12GB	Seagate	RSL5	No
YMN53	3.5"	ST12000NM0158	12TB	7.2K	12GB	Seagate	RSL5	No
KRM6X	3.5"	ST4000NM017A	4TB	7.2K	12GB	Seagate	CSJA	No
0N660	3.5"	ST8000NM014A	8TB	7.2K	12GB	Seagate	CSLD	No
10N7R	3.5"	ST4000NM019B	4TB	7.2K	12GB	Seagate	LW0A	No
F7DTR	3.5"	DL4000NM019B	4TB	7.2K	12GB	Seagate	LBW3	No
C5HD0	3.5"	ST8000NM024B	8TB	7.2K	12GB	Seagate	LS0C	No
RJT6H	3.5"	ST10000NM011G	10TB	7.2K	12GB	Seagate	ESL7	No
7KT9W	3.5"	ST12000NM009G	12TB	7.2K	12GB	Seagate	ESL7	No
CNXPV	3.5"	ST16000NM010G	16TB	7.2K	12GB	Seagate	ESL7	No
M1C0T	3.5"	ST12000NM006J	12TB	7.2K	12GB	Seagate	PSLB	No
41DXR	3.5"	ST16000NM006J	16TB	7.2K	12GB	Seagate	PSLB	No
5HYG2	3.5"	ST18000NM006J	18TB	7.2K	12GB	Seagate	PSLB	No
0J4R9	3.5"	ST18000NM007D	18TB	7.2K	12GB	Seagate	GS07	No
R3G03	3.5"	ST20000NM004D	20TB	7.2K	12GB	Seagate	GS07	No
1MVTT	3.5"	MG04SCA40ENY	4TB	7.2K	12GB	Toshiba	EG03	No
FV725	3.5"	MG06SCA800EY	8TB	7.2K	12GB	Toshiba	EH0D	No
24HF9	3.5"	MG08SCA16TEY	16TB	7.2K	12GB	Toshiba	EJ09	No
4N7V0	3.5"	MG08SCA16TEY	16TB	7.2K	12GB	Toshiba	EJ09	No
VF206	3.5"	WUH721816AL5200	16TB	7.2K	12GB	WD	US06	No
R20GG	3.5"	WUH721818AL5200	18TB	7.2K	12GB	WD	US06	No
HNHWC	3.5"	WUH721816AL5205	16TB	7.2K	12GB	WD	UM06	Yes
1D4CR	3.5"	WUH722020AL5200	20TB	7.2K	12GB	WD	VS15	No
DC2GD	3.5"	WUH722222AL5200	22TB	7.2K	12GB	WD	WS02	No

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Dell EMC Storage Support Policy

Level 1: Full Contractual Support

For tested devices listed in this Support Matrix, (and for the specific version listed), Dell EMC will provide solution support, under an active support contract assuming that all other components in the storage solution are also under contracted support with their respective manufacturers and that documented recommended design best practices are followed.

Level 2: Conditional Support

In addition to the product versions tested by Dell EMC and listed in this Support Matrix, the compatibility of comparable hardware models and newer firmware versions can be projected based upon the results for the systems actually tested and will be designated as "conditionally supported".

Dell EMC will provide full contractual support for the storage solution under an active support contract, assuming that all components in the storage solution are also under contracted support with their respective manufacturers and that documented recommended design best practices are followed.

Resolution of functional and/or performance issues may be out of Dell EMC's control. In such cases, these issues will need to be addressed by the applicable device or software/firmware vendor. Dell EMC may require, in its sole discretion, as a condition of continuing support, that the customer replace the component with one that was tested and/or upgrade/downgrade to a supported software version.

Examples of Conditional Support situations include, but are not limited to:

- If a switch or server adapter shares the same underlying ASIC or chipset and is from the same vendor as a tested configuration, then it may produce similar results.
- If a component is an identical model of a component listed, but differs in firmware version, then it may produce similar results for any firmware and/or drivers that are newer than those listed. For example, if version X of firmware has been tested and is listed as compatible, then versions newer than version X are expected to continue to work.

Failure of a "conditionally supported" component to provide the same service level as the similar device listed, unless Dell EMC has communicated end of support or a specific incompatibility for a particular product, firmware or software version, would be treated as a bug that needs to be fixed by the device or software/firmware vendor.

Level 3: Commercially Reasonable Effort

For components not listed within this Support Matrix, OR where customer has not, or is not willing to apply accepted Dell EMC recommended best practices for the specific storage family's SAN design and implementation, as long as the customer has an active support contract with the appropriate vendor(s), and an active support contract, Dell EMC will provide storage solution support for any untested component of the configuration, until such time as it is determined, in Dell EMC's sole discretion, that a problem lies within the untested component(s) or the way they interoperate with Dell EMC.

Once an untested component has been determined to be the source of the issue, Dell EMC will only provide support for the storage solution on a Commercially Reasonable Effort (CRE) basis. CRE support may be limited to certain days of the week and during normal business hours only.

Dell EMC does not guarantee that issues undertaken on a CRE basis will be resolved in a timely fashion, or at all. There is a possibility that the customer would need to replace an untested component or take the affected system out of production to resolve the issues.