



Western Digital

Product Brief



OpenFlex™ Data24 NVMe-oF™

Storage Platform

The Performance of NVMe™ Flash in Shared Storage Western Digital's OpenFlex™ Data24 NVMe-oFTM storage platform extends the high performance of NVMe™ flash to shared storage. It provides low-latency sharing of NVMe SSDs over a high-performance Ethernet fabric to deliver similar performance to locally attached NVMe SSDs. Unsurpassed connectivity in its class using Western Digital RapidFlex™ NVMe-oF controllers, allows up to six hosts to be attached without a switch, like a traditional JBOF.

NVMe-over-Fabrics, or NVMe-oF, is a networked storage protocol that allows storage to be disaggregated from compute to make that storage widely available to multiple applications and servers. By enabling applications to share a common pool of storage capacity, data can be easily shared between applications or needed capacity can be allocated to an application to respond to application needs.

OpenFlex Data24 NVMe-oF storage platform can also be used as a disaggregated storage resource in an open composable infrastructure environment using the Open Composable API. The platform can also be specified with just two RapidFlex adapters for simpler environments and as a direct replacement for SAS external storage.

OpenFlex Data24 is built to deliver high availability and enterprise-class reliability. The entire platform, including SSDs, is backed with a 5-year limited warranty.

Features

- Up to 368TB¹ of low latency Dual Port SSDs in 2U 24-bay platform
- Bandwidth match between SSDs (Storage) and I/O (Network) – No oversubscription
- RESTful API support for simplified management
- Vertically integrated Western Digital design: NVMe SSDs, fabric adapters and platform
- Optional dual adapter configuration for direct SAS replacement
- Industry-leading 5-year limited warranty

Benefits

- Enables multiple servers to share NVMe flash storage as if it were local
- Leverages low latency fabric to fully utilize IOPS and capacity
- Provides more efficient use of large capacity SSDs at low latency
- Balances access to eliminate over-subscription and maintain NVMe performance
- Provides open composability thru mature NVMe-oF standard
- Ideal SAS replacement option (dual adapter configuration)

OpenFlex™ Data24 NVMe-oF™ Storage Platform

Specifications

Hardware	Specifications	OpenFlex Data24
24 Dual port high-performance SSDs	Form Factor	2U
Wide range of NVMe SSD capacity and endurance options	Front Drive Bays	Up to 24 x U.2 NVMe SSDs
—Ultrastar® DC SN840: 1DWPD: Up to 15360 GB	Power Supply	2x 2000W Platinum 200-240VAC, CRPS, Hot Plug
—Ultrastar DC SN840: 3DWPD: Up to 6400 GB	Fabric Adapter Slots	6x PCIe x16
High availability with dual IOM	Fabric Adapter(s)	Western Digital RapidFlex NVMe-oF Fabric Adapter
3 PCIe® x 16 slots/IOM	Cabling	Passive (1 - 5m) and Active Optical (5 - 50m)
Western Digital RapidFlex NVMe-oF fabric adapters	Platform Management	ARM Based BMC
—Six 100GbE ports with dual IOM for maximum performance	Rear I/O	1G-BASE-T Management Port (RJ-45)
—Two 100GbE ports for direct replacement of SAS external storage	HA Redundancy	Dual IOMs, Dual Port SSDs, Dual PSUs, Dual Rotor Hot Plug Fans
Two 100GbE ports for direct replacement of SAS external storage	Environmental	10oC - 35oC
Western Digital RapidFlex NVMe-oF fabric adapters	Chassis Dimensions	87.63mm x 448mm x 711.2mm
OpenFlex inspired composability in a mainstream 2U24	(Height x Width x Depth)	3.45in x 17.64in x 28in
28in (711mm) chassis depth - fits most commonly used short depth racks (800 - 1000mm)	Weight	Maximum 31.75kg / 70lbs
	Warranty ²	5 Years Limited Warranty

Performance

		128K Bandwidth	4K IOPS	4K QD1 Latency
6 x 100GbE	Read	71.3 GB/s	15.2M	168 µs
	Write	39.8 GB/s	6.2M	44 µs
2 x 100GbE	Read	23.83 GB/s	5.09M	175.45 µs
	Write	15.09 GB/s	3.72M	41.73 µs

¹ One terabyte (TB) is equal to one trillion byte. Actual user capacity may be less due to operating environment.

² Please see product warranty terms and conditions for details at: https://documents.westerndigital.com/content/dam/doc-library/en_us/assets/public/western-digital/collateral/warranty/warranty-western-digital-platform-products.pdf.

