Western Digital.

OpenFlex™ D3000 Series Fabric Device

DATA SHEET

Benefits

- Composable, shareable high-performance storage
- Access data from anywhere in the data center
- Lower capex and opex by reducing resource over provisioning
- Manageable through existing data center orchestration frameworks
- Reduce stranded or underutilized resources
- Dynamic provisioning—scale down resources just as easily as you scale up
- Common hardware for any use case
- Scale at the enclosure or blade level
- Deploy uniform components at a time, provision as needed
- Reduce complexity

Specifications

OpenFlex D3000 Series Fabric Device*

Protocol	Ethernet
Media	Disk
Ports	Dual SFP28 (2×25Gb)
Bandwidth	3GB/s
Power	400 W
Formatted Capacity	168TB[1]
Weight	· 21 kg (46 lbs)
Physical Dimensions	Height: 43.69mm (1.72") (1U) Width: 449.6mm (17.7") (Fits in a standard rack) Depth: 813mm (32")

* Projected specifications subject to change without notice

[1] One GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to storage capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drives, the operating system and other factors.

The Realization of Open, Scalable, Composable IT Infrastructure

With the exponential growth in data, along with the increasing diversity of workflows and demands on IT infrastructure, businesses need to increase speed, agility and time-to-value for their customers. Emerging as a solution for this, composable infrastructure is a new architectural approach that—using NVMe™-over-Fabric—will vastly improve compute and storage utilization, performance, and agility in the data center.

Freeing Data From the Server

NVMe-over-Fabric, or NVMf, is a networked storage protocol that allows storage to be disaggregated from the 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 regardless of location.

Exploiting NVMe device-level performance, NVMf promises to deliver the lowest end-to-end latency from application to shared storage. NVMf enables composable infrastructures to deliver the data locality benefits of NVMe DAS (the low latency, high performance) while providing the agility and flexibility of sharing storage and compute.

Multiple Storage Tiers Over the Same Wire—Disk and Flash Accessed via NVMf

In addition to enabling NAND flash media access over NVMf, Western Digital has enabled disks to be accessed via NVMf so that all data center storage can be addressed in the same way. The Western Digital NVMf architecture is a huge step towards the software-defined data center—allowing storage to be assigned to applications without regard for where it is physically located. This is the essence of "composable infrastructure" where physical resources (compute, networking, storage) can be logically and dynamically configured and treated as a service for a specific application without the need for physical configuration.

The OpenFlex D3000 can be considered as a network addressable drive, behaving like a single large HDD. It presents NVMf namespaces, configurable by the user. Emerging Quality of Service features in the NVMe specification will allow NVMf connected disk to support QoS policies not present or possible on standalone SAS disks. Also, as a network device, the D3000 can be hot plugged from the network with no data loss just as individual storage drives can be hot swapped without data loss.

In addition to supporting standard block access magnetic media, the D3000 can transparently support internal SMR (Shingled Magnetic Recording) media. The SMR complexities will be abstracted and not visible to any client applications which can read and write in a random fashion and not be burdened with Zone Block Command (ZBC) syntax.

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