Features

- 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

Modular Building Block for Open, 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.

Enabling Fast Data to Live Outside the Server

NVMe-over-Fabric, or NVMf, 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 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 (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 also 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.

Western Digital will initially offer two composable storage options—flash for high-performance, mission-critical apps, and data as well as disk for high-capacity tiering, data protection, and disaster recovery.

OpenFlex™ **F3000** Series Fabric Device

Specifications

OpenFlex F3000 Fabric Device[1]

Protocol	Ethernet				
Media	NAND Flash				
Ports	Dual QSFP28 (2×50Gb)				
Bandwidth	12GB/s				
Power	140 W				
Endurance	1 DWPD			3 DWPD	
Formatted Capacity (TB)[3]	15.3	30.7	61.4	12.8	25.6

Rear View

Front View

OpenFlex E3000 Fabric Enclosure housing up to 10 OpenFlex F3000 Fabric Devices

OpenFlex E3000 Fabric Enclosure with up to 10 OpenFlex F3000 Series Fabric Devices

Max. # of Devices	• 10 Dual-port fabric device bays
Weight	• Product fully populated: 77.11kg (170 lbs)
Fabric/Network Interface	• Dual QSFP28 per Device
Management	• RJ45 1Gbps connector • Redfish® and • Open Composability API (out of band via RJ45)[2]
LED Indicators	• Power/Activity, Locate and Fault
Physical Dimensions	• Height 130mm (5.12") • Width 447mm (17.61") • Depth 824mm (32.44")
Power	• 220V, 110V • Dual 1600W Power Supplies with fans
Cooling	• 4 Fans (N+1 Supported)
Environmental	• Operating Temperature: 5°- 40°C • Non-op Temperature: -30°- 60°C • Humidity: 8% to 90% RH operating & non-op
Serviceability	• Hot-swappable power supplies, fans, and fabric devices

[1] Projected specifications subject to change without notice

[2] For more information on the OpenFlex Architecture and Open Composability, visit: http://www.wdc.com/nvmf

[3] One MB is equal to one million bytes, 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 drives, the operating system and other factors.

Western Digital