OpenFlex™ Data24 Series NVMe-oF™ Storage Platform

The Performance of NVMe™ Flash in Shared Storage

Western Digital’s OpenFlex™ Data24 NVMe-oF™ 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. 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.

Designed for Government

The ability to process data quickly, to be nimble and make timely decisions requires high-performance resources. OpenFlex Data24 offers a pool of NVMe-oF storage that can be shared and leveraged across applications that optimizes utilization of resources when they are needed and delivers extreme performance to support timely decisions.

TAA compliance allows this product to be sold via specific government channels and FIPS 140-2 validated drives (forthcoming) offer increased assurances for secure environments.
# OpenFlex Data24 Series NVMe-oF Storage Platform

## Specifications

### Hardware
- 24 Dual port high-performance SSDs
- Wide range of NVMe SSD capacity and endurance options
  - Ultrastar DC SN840: 1DWPD: Up to 15360 GB
  - Ultrastar DC SN840: 3DWPD: Up to 6400 GB
- High availability with dual IOM
- 3 PCIe x 16 slots/IOM
- Western Digital RapidFlex NVMe-oF fabric adapters
  - Six 100GbE ports with dual IOM for maximum performance
  - Four ports for a balance of performance and price
- Two 100GbE ports for direct replacement of SAS external storage
- Western Digital RapidFlex C2000 NVMe-oF Fabric Bridge Adapters
- OpenFlex inspired composability in a mainstream 2U24
- 28in (711mm) chassis depth - fits most commonly used short depth racks (800 - 1000mm)

### Form Factor
- 2U

### Front Drive Bays
- Up to 24 x U.2 NVMe SSDs

### Power Supply
- 2x 2000W Platinum 200-240VAC, CRPS, Hot Plug

### Fabric Adapter Slots
- 6x PCIe x16

### Fabric Adapter(s)
- Western Digital RapidFlex C2000 NVMe-oF Fabric Adapter

### Cabling
- Passive (1 - 5m) and Active Optical (5m)

### Rear I/O
- 1G-BASE-T Management Port (RJ-45)

### HA Redundancy
- Dual IOMs, Dual Port SSDs, Dual PSUs, Dual Rotor Hot Plug Fans

### Chassis Dimensions
- 87.63mm x 448mm x 711.2mm
- 3.45in x 17.64in x 28in

### Weight
- Maximum 31.75kg / 70lbs

### Limited Warranty
- 5 Years Standard

### Performance for Data24

<table>
<thead>
<tr>
<th>RoCE</th>
<th>128K Bandwidth</th>
<th>4K IOPS</th>
<th>4K QD1 Latency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read</td>
<td>Write 66.52 GB/s</td>
<td>6.16 M</td>
<td>27.8 μs</td>
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<tr>
<td>4 x 100GbE</td>
<td>Read 47.65 GB/s</td>
<td>11.17 M</td>
<td>83.6 μs</td>
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<tr>
<td>Write</td>
<td>Write 48.01 GB/s</td>
<td>6.13 M</td>
<td>27.9 μs</td>
</tr>
<tr>
<td>2 x 100GbE</td>
<td>Read 21.87 GB/s</td>
<td>4.01 M</td>
<td>83.9 μs</td>
</tr>
<tr>
<td>Write</td>
<td>Write 24.00 GB/s</td>
<td>5.65 M</td>
<td>28.3 μs</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>TCP</th>
<th>128K Bandwidth</th>
<th>4K IOPS</th>
<th>4K QD1 Latency</th>
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</thead>
<tbody>
<tr>
<td>Read</td>
<td>Write 63.87 GB/s</td>
<td>10.68 M</td>
<td>92.2 μs</td>
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<tr>
<td>6 x 100GbE</td>
<td>Read 44.08 GB/s</td>
<td>8.00 M</td>
<td>92.5 μs</td>
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<tr>
<td>Write</td>
<td>Write 44.83 GB/s</td>
<td>4.13 M</td>
<td>92.5 μs</td>
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<tr>
<td>4 x 100GbE</td>
<td>Read 21.41 GB/s</td>
<td>2.94 M</td>
<td>93.2 μs</td>
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<tr>
<td>Write</td>
<td>Write 23.69 GB/s</td>
<td>1.92 M</td>
<td>65.9 μs</td>
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</tbody>
</table>

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

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