Flash Storage Platform for Software-Defined Storage

The 2U24 Flash Storage Platform is a key element of next generation software-defined storage (SDS) systems. The Platform balances performance with capacity, delivering high IOPS, low latency at up to 184TB capacity. It also offers flexibility to improve compute-to-capacity ratio by decoupling available storage from CPU resources.

Designed for Enterprise and the Cloud

2U24 Flash Storage Platform addresses the demanding storage needs of large enterprises and cloud service providers who require dense, shared flash storage. The Platform offers distinct features designed for today’s data centers, such as:

- Enterprise-class high availability: hot swappable components including SSDs, I/O Modules, PSUs (integrated fans)
- Fully upgradeable: upgradeable firmware enables drive technology and capacity updates without impacting applications
- Support enterprise workloads including database, virtualization and scale-out configurations

Features

- Flash storage platform with up to 24 Ultrastar® 2.5” SAS SSD modules or 24 Ultrastar DC SA620 SATA SSD modules
- Available SSD capacities include 7.68TB, 3.84TB, 1.92TB, and 960GB
- Start with as little as 12 SSDs; upgrade one additional module at a time
- 2 rack units
- Up to six 12Gb/s SAS3 connections to host
- Up to 4.7M IOPS, 23 GB/s; <1ms latency
- Easy maintenance of SSD modules. Front accessible and hot swappable.
- 5-year limited warranty

Figure 1: Platform Layout
2U24 Flash Storage Platform

Platform Models, Capacity and Performance

<table>
<thead>
<tr>
<th>Model Number</th>
<th>1E50243</th>
<th>1E50241</th>
<th>1E50242</th>
<th>1E50240</th>
<th>1E50107</th>
<th>1E50110</th>
<th>1E50108</th>
<th>1E50111</th>
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</thead>
<tbody>
<tr>
<td>SSD Type</td>
<td>SATA, 960GB</td>
<td>SATA, 1.92TB</td>
<td>SAS, 3.84TB</td>
<td>SAS, 7.68TB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endurance</td>
<td>Read-Intensive, 0.6DW/D</td>
<td>Read-Intensive, 1DW/D</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td># of Drives</td>
<td>12</td>
<td>24</td>
<td>12</td>
<td>24</td>
<td>12</td>
<td>24</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Capacity (TB)</td>
<td>11.52</td>
<td>23.04</td>
<td>23.04</td>
<td>46.08</td>
<td>46.08</td>
<td>92.16</td>
<td>92.16</td>
<td>183.32</td>
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<tr>
<td>4KB Random Read IOPS</td>
<td>735,000</td>
<td>3,000,000</td>
<td>4,700,000</td>
<td>3,000,000</td>
<td>4,700,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4KB Random Write IOPS</td>
<td>312,000</td>
<td>336,000</td>
<td>672,000</td>
<td>244,000</td>
<td>528,000</td>
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<tr>
<td>Seq Read BW (MB/s)</td>
<td>5,700</td>
<td>21,350</td>
<td>23,000</td>
<td>17,800</td>
<td>23,000</td>
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<tr>
<td>Seq Write BW (MB/s)</td>
<td>4,600</td>
<td>12,350</td>
<td>23,000</td>
<td>12,100</td>
<td>23,000</td>
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</tbody>
</table>

Based on internal testing results or projections. Results and performance may vary according to system adoption, configuration and broader system architecture.

Specifications

Max. Drives • 24 x 2.5” SSDs

Drive Interface • 12Gb/s SAS or 6Gb/s SATA

Available SSD Capacities • SAS (1DW/D): 3.84TB, 7.68TB
• SATA (0.6DW/D): 960GB, 1.92TB

Host Interface • 1+1 I/O Modules (IOM) (SAS: 2 IOM, SATA: 1 IOM), 3 Mini-SAS HD ports per IOM

Management • SCSI Enclosure Services

LED Indicators • Front/Rear: Power, ID, Fault

Physical Dimensions

Height: • 87.4mm (3.44”)
Width: • 444mm (17.56”)
Depth: • 536mm (21.1”)

Weight

• Product without SSDs: 18.3kg (40.3lbs)
• Product with 24 SSDs: 23.7kg (52.3lbs)

Power • 1+1 600W, 80+ Gold
• 90-264V AC input, auto ranging, 47-63Hz

Cooling • 3 fan modules per power supply, front-to-rear system cooling
• Fan speed turning via system management interface

Environmental

Operating Temperature: • 5 to 40°C
Non-op Temperature: • -50 to 60°C
Humidity: • 5 to 85% relative humidity
Operating Altitude: • 40°C @ 3,000ft
Sound Power: • < 7.2Bels @ 23s²C

Serviceability • Hot-swappable IOM, power supply and SSDs

Western Digital

5601 Great Oaks Parkway
San Jose, CA 95119, USA
US (Toll-Free): 800.831.4618
International: 408.717.6000
www.westerndigital.com

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