



# DELL POWERPROTECT DATA DOMAIN

PowerProtect Data Domain target storage appliances are designed and optimized for cyber resilience—resulting in performance, efficiency and security advantages that simplify operations, reduce risk and lower costs. Data Domain delivers a fast, secure and efficient solution that is optimized for multi-cloud cyber resilience and future demands.

The Data Domain appliance family includes the DD9910F, DD9910, DD9410, DD6410, and All-Flash Ready Node, plus the [Data Domain Virtual Edition](#) software-defined appliance for in-cloud and on-premises.

	All-Flash Ready Node	DD6410	DD9410	DD9910	DD9910F
<b>Logical Capacity<sup>1</sup></b>	Up to 11 PB	Up to 16.6 PB	Up to 49.9 PB	Up to 97.5 PB	Up to 34.5 PB
<b>Logical Capacity with Cloud Tier</b>	N/A	Up to 49.9 PB	Up to 149.8 PB	Up to 293 PB	N/A
<b>Usable Capacity<sup>2</sup></b>	220 TB 200 TiB	12 TB – 256 TB 10.9 TiB – 232.8 TiB	192 TB – 768 TB 170 TiB – 681 TiB	576 TB – 1.5 PB 511 TiB – 1.33 PiB	272 TB – 544 TB 241.3 TiB – 482.6 TiB
<b>Usable Capacity with Cloud Tier<sup>2</sup></b>	N/A	Up to 768TB Up to 698.5 TiB	Up to 2.3 PB Up to 2.0 PiB	Up to 4.5 PB Up to 4PiB	N/A
<b>ES120 Shelf</b>	N/A	8 TB 7.2K SAS	N/A	N/A	N/A
<b>DS600 Shelf</b>	N/A	N/A	8 TB 7.2K SAS	8 TB 7.2K SAS	N/A
<b>FS240 Shelf</b>	N/A	N/A	3.8 TB SSD <sup>3</sup>	3.8 TB SSD <sup>3</sup>	15.36 TB SSD

<sup>1</sup>Logical capacity based on up to 50x deduplication (Data Domain All-Flash Ready Node, Data Domain Virtual Edition); and up to 65x deduplication on the DD6410, DD9410, DD9910 and DD9910F, which includes additional hardware assisted data compression of typically 30%. Actual capacity & throughput depends on application workload, deduplication and other settings.

<sup>2</sup>TiBu/PiBu values adjusted for estimated DDOS overhead. DDOS overhead can vary depending on metadata required for customer workloads.

<sup>3</sup>High Availability configuration only, in a standard configuration SSDs are in the controller. High availability active/standby configuration is supported with DD9910 and DD9410.

	All-Flash Ready Node	DD6410	DD9410	DD9910	DD9910F
<b>Built-In Networking</b>	1x Mgm't port 2x LOM	1x Mgm't port 2x LOM	1x Mgm't port 2x LOM	1x Mgm't port 2x LOM	1x Mgm't port 2x LOM
<b>Required Networking (rNDC or OCP)</b>	2x dual port 25G SFP+	4x 10G BASE-T or 4x 10/25G SFP+	4x 10G BASE-T or 4x 10/25G SFP+	4x 10G BASE-T or 4x 10/25G SFP+	4x 10G BASE-T or 4x 10/25G SFP+
<b>Optional Networking with I/O Cards</b>	N/A	Up to two quad port 10G Base-T or two quad port 25G SFP+  One quad port 10G Base-T or dual port 10/25G SFP+  Up to two quad port 32Gb FC HBA	Up to four quad port 10G Base-T, which can auto- negotiate down to support 1GbE  Up to four quad port 10/25G SFP28  Up to four dual port 100G QSFP  Up to four quad port 32Gb FC HBA	Up to four quad port 10G Base-T which can auto- negotiate down to support 1GbE  Up to four quad port 10/25G SFP28  Up to four dual port 100G QSFP  Up to four quad port 32Gb FC HBA	Up to four quad port 10G Base-T which can auto- negotiate down to support 1GbE  Up to four quad port 10/25G SFP28  Up to four dual port 100G QSFP  Up to four quad port 32Gb FC HBA

	All-Flash Ready Node	DD6410	DD9410	DD9910	DD9910F
<b>Weight (Lbs)</b>	Up to 79.6 lbs	Up to 96.5 lbs	9 SSDs: 75 lbs	14 SSDs: 77 lbs	14 SSDs: 77 lbs
<b>Dimensions</b>	17.1" x 28.5" x 3.5" 2U EIA rack units	17.6" x 32.9" x 3.4" 2U EIA rack units	17.1" x 28.5" x 3.4" 2U EIA rack units	17.1" x 28.5" x 3.4" 2U EIA rack units	17.1" x 28.5" x 3.4" 2U EIA rack units
<b>Power<sup>4</sup> 100-120/200-240v~, 50/60 Hz</b>	24 + BOSS SSDs; 1326 VA	4 SSDs 20 HDDs; 800 VA	9 SSDs: 735 VA	14 SSDs: 1356 VA	14 SSDs: 1356 VA
<b>Thermal Rating<sup>4</sup> (Watts)</b>	24 + BOSS SSDs; 1260 Watts	4 SSDs 20 HDDs; 760 Watts	9 SSDs: 694 Watts	14 SSDs: 1281 Watts	14 SSDs: 1281 Watts
<b>Thermal Rating<sup>4</sup> (BTU/Hr)</b>	24 + BOSS SSDs; 4297 btu/h	4 SSDs 20 HDDs; 2592 btu/h	9 SSDs: 2367 btu/h	14 SSDs: 4368 btu/h	14 SSDs: 4368 btu/h
<b>Operating Temperature/ Altitude (No Direct Sunlight)</b>	10°C to 35°C, 35°C at 2,953 ft	10°C to 35°C, 35°C at 3,117 ft	10°C to 35°C, 35°C at 2,953 ft	10°C to 35°C, 35°C at 2,953 ft	10°C to 35°C, 35°C at 2,953 ft
<b>Non-Operating (Transportation) Temperature</b>	-40°C to +65°C (-40°F to +149°F)	-40°C to +65°C (-40°F to +149°F)	-40°C to +65°C (-40°F to +149°F)	-40°C to +65°C (-40°F to +149°F)	-40°C to +65°C (-40°F to +149°F)
<b>Operating Humidity</b>	10% to 80% with 29°C (84.2°F) max. dew point.	8% at -12C min. dew point to 80% at 21°C (69.8°F) max. dew point.	10% to 80% with 29°C (84.2°F max. dew point.	10% to 80% with 29°C (84.2°F max. dew point.	10% to 80% with 29°C (84.2°F) max. dew point.
<b>Operation Acoustic Noise (Sound Power)</b>	8.7 bels	7.8 bels	8.7 bels	8.7 bels	8.7 bels
<b>Operation Acoustic Noise (Sound Pressure)</b>	76 db	67 db	76 db	76 db	76 db

## Statement of Compliance

Dell Information Technology Equipment is compliant with all currently applicable regulatory requirements for Electromagnetic Compatibility, Product Safety, and Environmental Regulations where placed on market.

Detailed regulatory information and verification of compliance is available at the [Dell Regulatory Compliance website](#).

## Software

### Software features

Global Compression™, Data Invulnerability Architecture, including inline verification and integrated dual disk parity RAID 6, snapshots, telnet, FTP, SSH, email alerts, scheduled capacity reclamation, Ethernet failover and aggregation, Link Aggregation Control Protocol (LACP), VLAN tagging, IP aliasing, DD Boost, DD Encryption, DD Extended Retention, DD Retention Lock, DD Virtual Tape Library (VTL) (for open systems and IBMi operating environments). Available add-ons include: DD Boost, Cloud Tier for long-term retention, Cloud Disaster Recovery, and DD Replicator.

### System management

PowerProtect DD Management Center, DD System Manager, SNMP, and command line management interface.

### Data management

NFS v3 over TCP, CIFS and DD Boost over 1GbE or 10GbE or Fibre Channel, tape library emulation (VTL) over Fibre Channel, and NDMP Tape Server.

## DS600 Expansion shelf

### External interface (host/expansion)

Four ports with four lanes per port (16 lanes) of 24Gb/s serial attached SCSI generation 4 (SAS-4) per Link Control Card (LCC). Allows the use of standard SAS-4 compatible Mini-SAS-HD cables.

### Connector type

Supports SAS-4 Mini SAS HD SFF-8674 connector

### SAS cable length

Up to 5 meters

### Disk drives

60-drive bays per DS600 expansion shelf, support low profile, one inch high, 3.5-inch form factor drives

Drive Choices: SAS (12 Gb/s), 4 TB<sup>5</sup> or 8 TB

### Dimensions

Height: 8.75 in (22.23 cm) 5U (4U plus 1U cable management tray)

Width including rails: 17.50 in (44.45 cm)

Depth (chassis only): 34.5 in (87.5 cm)

Weight: 205.0 lbs (93 kg) (fully loaded)

### Operational<sup>4</sup>

Power: (VA) 640 VA or 602W (200-240V, 50 to 60 Hz)

Thermal Rating: 2053 BTU/hr

### Environmental

ASHRAE A3 w/ ESD-50 excursion

Ambient temperature: 41° F to 104° F (5° C to 40° C)

Temperature gradient: 68° F/hr (20° C/hr)

Relative humidity extremes: 8% to 85% noncondensing

Elevation: 900m at 45C, 3050m at 33C

Non-Operating (Transportation) Temperature:

Ambient temperature: -40° F to 149° F (-40° C to 65° F)

Relative humidity: 10% to 95% noncondensing

Elevation: Maximum 12,000 m (39,370 ft)

## FS240 SSD shelf

### External interface (host/expansion)

Dual 4 lane 24Gb/s serial attached SCSI 4 (SAS) ports per Link Control Card (LCC)—one for host and one for expansion

### Connector type

SFF-8088 connectors (mini-SAS)

### SAS cable length

Up to 5 meters

### Disk drives

24-drive bays, supports, 2.5-inch form factor 15.36 and 3.84 TB SSD drives

### Dimensions

Height: 3.40 in (8.46 cm)

Width: 17.5 in (44.45 cm)

Depth: 19.6 in (33.02 cm)

Weight: 46 lbs (21 kg)

### Operational<sup>4</sup>

Power (VA): 343A or 336W, (100-240V ~, 47 to 63 Hz)

Thermal Rating: 1147 BTU/hr

### Environmental

Ambient temperature: 50° F to 95° F (10° C to 35° C)

Temperature gradient: 36° F/hr (20° C/hr)

Relative humidity extremes: 20% to 80% noncondensing

Elevation: -50 to 10000 ft (-16 to 3050 m)

Non-Operating (Transportation)

Temperature:

Ambient temperature: -40° F to 149° F (-40° C to 65° F)

Temperature gradient: 36° F/hr (20° C/hr)

Relative humidity: 10% to 90% noncondensing

Elevation: -50 to 35,000 ft (-16 to 10,600 m)

## ES120 Expansion shelf

### External interface (host/expansion)

Two ports with four lanes per port (8 lanes) of 24Gb/s serial attached SCSI generation (SAS-4) per Link Control Card (LCC). Allows the use of standard SAS-4 compatible Mini-SAS-HD cables.

### Connector type

Supports SAS-4 Mini SAS HD SFF-8674 connector

### SAS cable length

Up to 5 meters

### Disk drives

12-drive bays, supports, 3.5-inch form factor 8 TB 7.2K SAS drives

### Dimensions

Height: 3.4 in (8.68 cm)

Width: 17.5 in (44.45 cm)

Depth: 21.5 in (54.5 cm)

Weight: 56.39 lbs (25.58 kg)

### Operational<sup>4</sup>

Power (VA): Up to 195VA or 193W, (100-240V ~, 47 to 63 Hz)

Thermal Rating: Up to 659 BTU/hr

### Environmental

Ambient temperature: 41° F to 95° F (5° C to 35° C)

Temperature gradient: 36° F/hr (20° C/hr)

Relative humidity extremes: 8% to 85% noncondensing

Elevation: Up to 10000 ft (-16 to 3050 m)

Non-Operating (Transportation):

Ambient temperature: -40° F to 149° F (-40° C to 65° F)

Temperature gradient: 36° F/hr (20° C/hr)

Relative humidity: 5% to 95% with 27° C (80.6° F) max dewpoint

Elevation: Up to 39,370 ft (12,000 m)

## Data Domain rack<sup>5</sup>

### Power configuration

Single phase is standard, optional 3-phase.

Two power domains (base and extended),  
each redundant.

### Power inlet count

Either two or four (Single Phase DD9900 HA  
with 4x DS60 or DD9900/DD9900 HA with 5x  
DS60)

### Plug types

L6-30P, 56PA322, 332P6W, 3750DP, L7-30,  
60309, CS-8365C, 9P54U2T, 3P-Wye, or 3P-  
Wye Flying Leads

### PDU Power capacity

single-phase, 24A, 200-240 V~, 50/60 Hz

three-phase 3W+G, 40A, 200-240 V~, 50/60  
Hz (3P-Delta)

three-phase 3W+N+PE, 24A, 200-240 V~,  
50/60 Hz (3P-Wye)

### Dimensions

40U available rack capacity

Height: 75 in (190.8 cm)

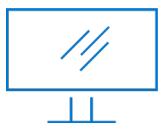
Width: 24.0 in (61.1 cm)

Depth: 39.0 in (99.2 cm)

Weight: 380 lbs (173 kg) when empty

<sup>4</sup>Actual results may vary depending on system configuration and operating conditions.

<sup>5</sup>A 60.0 cm x 120.0 cm 42 U deep rack is also available.



Learn more about  
[PowerProtect Data  
Domain](#)



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