



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, DD3410, and All-Flash Ready Node, plus the [Data Domain Virtual Edition](#) software-defined appliance for in-cloud and on-premises.

	All-Flash Ready Node	DD3410	DD6410	DD9410	DD9910	DD9910F
Max Throughput (DD Boost)	Up to 56.4 TB/hr	Up to 20.7 TB/hr	Up to 67 TB/hr	Up to 83.1 TB/hr	Up to 130 TB/hr	Up to 130 TB/hr
Logical Capacity¹	Up to 11 PB	Up to 2 PB	Up to 19.2 PB	Up to 57.6 PB	Up to 112.5 PB	Up to 40.8 PB
Logical Capacity with Cloud Tier	N/A	N/A	Up to 57.6 PB	Up to 172.5 PB	Up to 337.5 PB	N/A
Usable Capacity²	220 TB 200 TiB	8 – 40 TB 7.27 TiB – 36.37 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
Usable Capacity with Cloud Tier²	N/A	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 4 PiB	N/A
ES120 Shelf	N/A	N/A	8 TB 7.2K SAS	N/A	N/A	N/A
DS600 Shelf	N/A	N/A	N/A	8 TB 7.2K SAS	8 TB 7.2K SAS	N/A
FS240 Shelf	N/A	N/A	N/A	3.8 TB SSD ³	3.8 TB SSD ³	15.36 TB SSD

¹Logical capacity based on typically 50:1 data reduction (Data Domain All-Flash Ready Node, Data Domain Virtual Edition, DD3410); and typically 75:1 data reduction 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.

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

³High 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	DD3410	DD6410	DD9410	DD9910	DD9910F
Built-In Networking	1x Mgm't port 2x LOM	1x dual port 1G BASE-T (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
Required Networking (rNDC or OCP)	2x dual port 25G SFP+	1x quad port 10G BASE-T (Default) OR 1x quad port 10/25 GbE-SFP28	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+
Optional Networking with I/O Cards	N/A	One quad port 10/25 GbE - SFP28 One quad port 10G Base-T One quad port 32G FC	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 dual port 100G QSFP Up to four quad port 32Gb FC HBA 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	DD3410	DD6410	DD9410	DD9910	DD9910F
Weight (Lbs)	Up to 79.6 lbs	Up to 81 lbs	Up to 96.5 lbs	9 SSDs: 75 lbs	14 SSDs: 77 lbs	14 SSDs: 77 lbs
Dimensions	17.1" x 28.5" x 3.5" 2U EIA rack units	17.6" x 32.9" x 3.4" 2U EIA rack units	17.6" 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
Power⁴ 100-120/200-240v~, 50/60 Hz	24 + BOSS SSDs; 1326 VA	3 SSDs 10 HDDs; 560 VA	4 SSDs 20 HDDs; 800 VA	9 SSDs: 735 VA	14 SSDs: 1356 VA	14 SSDs: 1356 VA
Thermal Rating⁴ (Watts)	24 + BOSS SSDs; 1260 Watts	3 SSDs 10 HDDs; 527 Watts	4 SSDs 20 HDDs; 760 Watts	9 SSDs: 694 Watts	14 SSDs: 1281 Watts	14 SSDs: 1281 Watts
Thermal Rating⁴ (BTU/Hr)	24 + BOSS SSDs; 4297 btu/h	3 SSDs 10 HDDs; 1798 btu/h	4 SSDs 20 HDDs; 2592 btu/h	9 SSDs: 2367 btu/h	14 SSDs: 4368 btu/h	14 SSDs: 4368 btu/h
Operating Temperature/ Altitude (No Direct Sunlight)	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 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
Non-Operating (Transportation) Temperature	-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)	-40°C to +65°C (-40°F to +149°F)
Operating Humidity	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.	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.
Operation Acoustic Noise (Sound Power)	8.7 bels	7.8 bels	7.8 bels	8.7 bels	8.7 bels	8.7 bels
Operation Acoustic Noise (Sound Pressure)	76 db	67 db	67 db	76 db	76 db	76 db

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 TB⁵ 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)

Operational⁴

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)

Operational⁴

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)

Operational⁴

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 rack⁵

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

⁴Actual results may vary depending on system configuration and operating conditions.

⁵A 60.0 cm x 120.0 cm 42 U deep rack is also available.

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](#).



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