

EMC DATA DOMAIN DD600 SERIES

Deduplication storage for mid-sized data centers

ESSENTIALS

Scalable Deduplication Storage

- Fast, inline deduplication with up to 1.2 TB/hour of single stream throughput
- Up to 5.4 TB/hour of aggregate throughput
- Extended retention providing up to 2.7 PB of logical storage
- 10-30x average data reduction

Easy Integration

- Supports leading backup and archive applications
- Supports leading enterprise applications for database, email, content management, and virtual environments
- Simultaneous use of VTL, NAS, NDMP, and EMC Data Domain Boost

Multisite Disaster Recovery

- 99 percent bandwidth efficiency for network based replication
- Flexible replication topologies for tape free DR or tape consolidation
- Replication from up to 90 remote sites
- Encrypted replication

Ultra-Safe Storage for Reliable Recovery

- Continuous recovery verification, fault detection, and healing
- Dual disk parity RAID 6

Operational Simplicity

- Power, cooling, and space efficiencies for green operation
- Supports any combination of backup and archive applications in a single system

NEXT-GENERATION DATA PROTECTION

EMC® Data Domain® deduplication storage systems have revolutionized disk backup and remote office data protection with high-speed, inline deduplication. Backup data can be reduced in size by an average of 10 to 30x, so disk backup storage is now cost-effective for onsite retention, and highly efficient for network-based replication to disaster recovery sites.

SCALABLE DEDUPLICATION STORAGE

All Data Domain systems derive their performance advantages from the EMC Data Domain Stream-Informed Segment Layout (SISL™) scaling architecture. This CPU-centric approach minimizes the number of disk spindles required to achieve the throughput performance needed for critical single-stream operations. Data Domain systems save significant physical storage capacity by substituting small references for each identical redundant sequence, enabling cost-efficient retention on disk for fast, reliable recoveries.

EASY INTEGRATION

The Data Domain DD600 Appliance series is qualified with all leading enterprise backup software and archiving applications and easily integrates into the existing storage infrastructure without change for either data center or distributed office data protection. These systems support simultaneous data access methods through NFS and CIFS file service protocols over Ethernet, or as a disk-based target using application-specific interfaces such as EMC Data Domain Boost. DD Boost enables advanced integration for use with EMC Avamar, EMC NetWorker and Symantec OpenStorage. Users can leverage the same DD600 series system for both backup and archive workloads. This improves the efficiency across backup and archive applications and data types, as well as reduces management overhead by combining multiple applications' storage on a single system.

MULTISITE DISASTER RECOVERY

EMC Data Domain Replicator software enables network-efficient and encrypted replication to a remote site for disaster recovery, remote office data protection, or multisite tape consolidation. The DD670 supports replication fan-in from Data Domain systems installed at up to 90 remote offices. Cross-site deduplication minimizes the required bandwidth between all sites, since only the first instance of data is transferred across any of the WAN segments. Datasets are effectively shrunk by 99 percent, to a size where network-efficient replication is fast and reliable. If confidentiality is required, deduplicated and compressed data can be encrypted in-flight when being replicated between Data Domain systems, independent of the replication topology used.

ULTRA-SAFE STORAGE FOR RELIABLE RECOVERY

The EMC Data Domain Data Invulnerability Architecture provides continuous recovery verification and continuously detects and protects against data integrity issues during the initial backup and throughout the data lifecycle.

OPERATIONAL SIMPLICITY

EMC Data Domain systems are simple to install and manage. Connect an appliance to your backup server as either a file server via Ethernet or as a virtual tape library (VTL) via Fibre Channel. EMC Data Domain Boost (for use with EMC Avamar, EMC NetWorker and Symantec OpenStorage) is also supported; all three interfaces can be used simultaneously.



SPECIFICATIONS

DD600 Series Specifications	DD620	DD640	DD670
Logical Capacity, Standard ^{1,3}	83 TB	0.32 PB ⁴	0.6 PB ⁴
Logical Capacity, Redundant ^{2,3}	415 TB	1.6 PB ⁴	2.7 PB ⁴
Maximum Throughput (Other)	1.1 TB/hr ⁸	2.3 TB/hr ⁹	3.6 TB/hr ⁵
Maximum Throughput (DD Boost)	2.4 TB/hr	3.4 TB/hr ⁶	5.4 TB/hr ⁶
Power Dissipation ⁷	339 W	500 W	688 W
Cooling Requirements ⁷	1,157 BTU/hr	1,705 BTU/hr	2,347 BTU/hr

1. Mix of typical enterprise backup data (filesystems, databases, e-mail, developer files), full backup weekly, incremental backup daily, to system capacity.
2. Mix of typical enterprise data (filesystems, databases, email, developer files), full backup daily, to system capacity.
3. All capacity values are calculated using Base 10 (i.e., 1 TB = 1,000,000,000,000 bytes).
4. Includes support for add-on shelves.
5. Maximum throughput achieved using Symantec OpenStorage and 10 Gb Ethernet.
6. Maximum throughput achieved using DD Boost and 10 Gb Ethernet.
7. Controller only.
8. Maximum throughput achieved using VTL interface and 4 Gbps Fibre Channel.
9. Maximum throughput achieved using NFS and 10 Gb Ethernet.

SOFTWARE

EMC Data Domain Operating System (DD OS) 5.1 or later

Software Features

Global Compression™, Data Invulnerability Architecture including end-to-end verification (ongoing) 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, EMC Data Domain Boost, EMC Data Domain Virtual Tape Library (for open systems and IBM i operating environments), EMC Data Domain Encryption, EMC Data Domain Replicator, and EMC Data Domain Retention Lock optional software

Management

EMC Data Domain Enterprise Manager, SNMP, and command line interface

Data Access

NFS v3 over TCP, CIFS, DD Boost (for use with Symantec OpenStorage and EMC NetWorker), tape library emulation (VTL) over Fibre Channel, and NDMP Tape Server

SYSTEM EXPANSION

DD670

- Twelve 1 TB internal drives
- Up to two expansion shelves with 2 TB drives
- Up to four expansion shelves with 1 TB shelves
- Support for a mix of expansion shelves with 2 TB drives or 1 TB drives up to maximum external storage capacity
- Support for a mix of ES30 and ES20 shelves up to maximum external storage capacity

DD640

- Seven or twelve 1 TB internal drives
- One ES30 expansion shelf with 2 TB drives
- Up to two ES30 expansion shelves with 1 TB drives

DD620

- Seven or twelve 1 TB internal drives
- No external expansion

REGULATORY APPROVALS

Safety: UL 60950-1, CSA 60950-1, EN 60950-1, IEC 60950-1, GS, SABS, GOST, IRAM

Emissions: FCC Class A, EN 55022, CISPR 22, VCCI, BSMI, MIC, ICES-003

Immunity: EN 55024, CISPR 24

Power Line Harmonics: EN 61000-3-2

HARDWARE PLATFORM

2U 19-inch, rack mountable, use in 4-post rack, hotplug disks, redundant fans, redundant power supplies, serial port, 2 copper 10/100/1000. Ethernet ports, optional dual-port copper or optical 1 Gb Ethernet and quad-port copper 1 Gb Ethernet. Optional dual-port copper or dual-port optical 10 Gb Ethernet on DD640 and DD670 models only.

System Weight

DD670, 12 drives: 66 lbs (30 kg)
DD640, 7 drives: 51 lbs (23.2 kg)
DD640, 12 drives: 58 lbs (26.4 kg)
DD620, 7 drives: 49 lbs (22.1 kg)
DD620, 12 drives: 57 lbs (25.8 kg)

System Dimensions (W x D x H)

DD640/DD670: 19" x 29.5" x 3.5"
(48.3 cm x 74.9 cm x 8.9 cm)
2 EIA units

DD620: 19" x 22" x 3.5"
(48.3 cm x 55.9 cm x 8.9 cm)
2 EIA units

Minimum Clearances

Front, with bezel: 1.56" (4.0 cm) Rear: 5" (12.7 cm)

Power (VA)

100-120/200-240 V~, 50/60 Hz
DD670: 12 drives, 724 VA
DD640: 7 drives, 451 VA; 12 drives, 526 VA
DD620: 7 drives, 330 VA; 12 drives, 373 VA

System Thermal Rating

DD670, 12 drives: 2,347 BTU/hr, 688 Watts
DD640, 7 drives: 1,462 BTU/hr, 428 Watts
DD640, 12 drives: 1,705 BTU/hr, 500 Watts
DD620, 7 drives: 1,061 BTU/hr, 311 Watts
DD620, 12 drives: 1,157 BTU/hr, 339 Watts

Operating Temperature/Altitude

DD640/DD670: 5°C to 35°C (41°F to 95°F), 35°C at 7500 feet, derate 1.1°C/1000 feet above 7500 feet to 10,000 feet

DD620: 10°C to 35°C (50°F to 95°F), 35°C at 7500 feet, derate 1.1°C/1000 feet above 7500 feet to 10,000 feet

Operating Humidity

20% to 80% non-condensing

Non-Operating (Transportation) Temperature

-40°C to +65°C (-40°F to +149°F)

Operating Acoustic Noise

DD640/DD670: declared noise emission values per ISO 9296:

DD670 Sound power, LWAd: 7.4 bels
Sound pressure, LpAm: 58 db

DD640 Sound power, LWAd: 7.52 bels
Sound pressure, LpAm: 56.4 db

DD620: Max 7.9 BA, sound power at 25°C

CONTACT US

To learn more about how EMC products, services, and solutions help solve your business and IT challenges, contact your local representative or authorized reseller—or visit us at www.EMC.com.

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