

# EMC DATA DOMAIN DD160

## Deduplication storage for small enterprise data centers and remote offices

### ESSENTIALS

#### Scalable Deduplication Storage

- Extended disk-based retention
- Eliminate tape at remote sites
- 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, NDMP, NAS, 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 to larger Data Domain systems at central site
- 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 DD160 is qualified with all leading enterprise backup software and archiving applications and easily integrates into existing infrastructures in small enterprise data centers and remote offices. All Data Domain systems support simultaneous data access methods. Connect the DD160 to your backup server through NFS and CIFS file service protocols over Ethernet, or by using virtual tape library (VTL) emulation over Fibre Channel. These systems are also supported as a disk-based target using application-specific interfaces such as EMC Data Domain Boost. DD Boost enables advanced integration for environments with EMC Avamar®, EMC NetWorker®, and Symantec OpenStorage. Users can leverage the same DD160 system for both backup and archive workloads, improving storage efficiency and reducing management overhead.

### DATA PROTECTION FOR REMOTE OFFICES

IT resources for data protection are typically centralized in the data center. As a result, data protection strategies and execution are often neglected at remote sites even though information at these sites may be as important as information found in the primary data center. The DD160 provides a simple data protection solution for remote offices, providing cost-efficient retention on disk for fast, reliable recoveries. Network-efficient replication of remote office data to a primary data center is simplified with the inclusion of EMC Data Domain Replicator software. Tape backups at remote offices can be eliminated, reducing costs and management while accelerating the return on investment.

## 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.

## MULTISITE DISASTER RECOVERY

Replication capabilities are included as part of the core feature set of the DD160. With DD Replicator software, you can send remote office data offsite over existing networks, for centralized management or for disaster recovery. Multiple, geographically distributed offices can simultaneously send selected backup and archive data to a central location enabling a flexible, enterprise-wide site recovery and retention model. Cross-site deduplication further improves network efficiency by eliminating the need to transfer common data already received. 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.

## OPERATIONAL SIMPLICITY

Data Domain systems are simple to install and manage, resulting in lower administrative and operational costs. All Data Domain systems have an automatic call-home system reporting capability, called autosupport, which provides email notification on complete system status. This non-intrusive alerting and data collection capability enables proactive support and service without administrator intervention, further simplifying ongoing management.

## SPECIFICATIONS

Data Domain DD160 Appliance	
Logical Capacity, Standard <sup>1,2</sup>	40 TB
Logical Capacity, Redundant <sup>1,3</sup>	195 TB
Max. Throughput (DD Boost) <sup>4</sup>	1.1 TB/hr
Max. Throughput <sup>5</sup>	667 GB/hr
Power Dissipation	339 W
Cooling Requirement	1157 BTU/hr

1. All capacity values are calculated using Base 10 (i.e., 1 TB = 1,000,000,000,000 bytes).

2. Mix of typical enterprise backup data (filesystems, databases, email, developer files). The low end of capacity range represents a full backup weekly or monthly, incremental backup daily or weekly, to system capacity. The top end of the range represents full backup daily, to system capacity.

3. Mix of typical enterprise data (filesystems, databases, email, developer files), full backup daily, to system capacity.

4. Maximum throughput achieved using DD Boost and 1 Gb Ethernet.

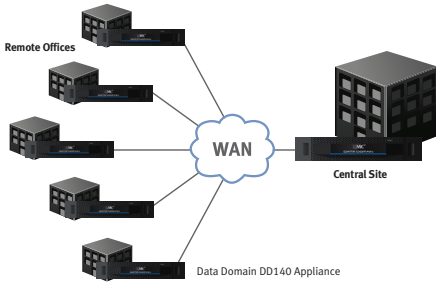
5. Maximum throughput achieved using NFS and 1 Gb Ethernet.

## 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 RAID 6, snapshots, telnet, FTP, SSH, email alerts, scheduled capacity reclamation, Ethernet failover and aggregation, Link Aggregation Control Protocol (LACP), VLAN tagging, IP aliasing, and EMC Data Domain Replicator included; EMC Data Domain Boost, EMC Data Domain Virtual Tape Library (for open systems and IBM i operating environments), EMC Data Domain Encryption, and EMC Data Domain Retention Lock optional software



The DD160 comes equipped with EMC Data Domain Replicator software, which provides network-efficient replication so remote office data can be sent offsite over existing networks for centralized management or for disaster recovery. Tape backups can be eliminated at remote offices, reducing costs and simplifying data protection.



## Management

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

## Data Access

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

## 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, and 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 4 Gb Fibre Channel HBA

## System Weight

7 drives 49 lbs (22.1 kg); 12 drives: 57 lbs (25.8 kg)

## System Dimensions (W x D x H)

19" x 22" x 3.5" (48.3 cm x 55.9 cm x 8.9 cm)

2 EIA units

## Minimum Clearance

Front, with bezel closed: 1.56" (4.0 cm)

Rear: 5" (12.7 cm)

## Power

(VA) 100-120/200-240 V~, 50/60 Hz; 7 drives: 330 VA; 12 drives: 373 VA

## System Thermal Rating

7 drives: 1061 BTU/hr; 12 drives: 1157 BTU/hr

## Operating Temperature

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

Max 7.9 BA sound power at 25° C when all drives seek simultaneously

## CONTACT US

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, contact your local representative or authorized reseller—or visit us at [www.EMC.com](http://www.EMC.com).

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EMC Corporation  
Hopkinton, Massachusetts 01748-9103  
1-508-435-1000  
In North America 1-866-464-7381  
[www.EMC.com](http://www.EMC.com)

EMC Backup Recovery Systems  
Santa Clara, California 95054  
1-408-980-4800  
In North America 1-866-933-3873

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