

Appliance Series

DD140: Deduplication Storage for Remote Office Data Protection

Key Benefits

Remote Office Data Protection

- > High-speed, inline deduplication storage
- > 10-30x average data reduction
- > Reliable backup and rapid recovery
- > Extended disk-based retention
- > Eliminate tape at remote sites
- > Includes Data Domain Replicator software

Easy Integration

- > Supports leading backup and archive applications from:

EMC	Symantec
HP	IBM
Microsoft	CommVault
BakBone	CA
Atempo	
- > Supports leading enterprise applications including:
 - > Database: Oracle, SAP, DB2, SQL
 - > Email: Microsoft Exchange
 - > Virtual environments: VMware
 - > Content management: Microsoft SharePoint
- > Simultaneous use of NAS and Symantec OpenStorage (OST)

Multi-site Disaster Recovery

- > 99% bandwidth reduction
- > Consolidate remote office backups
- > Flexible replication topologies
- > Replicate to larger Data Domain systems at central site
- > Multi-site tape consolidation
- > Cost-efficient disaster recovery

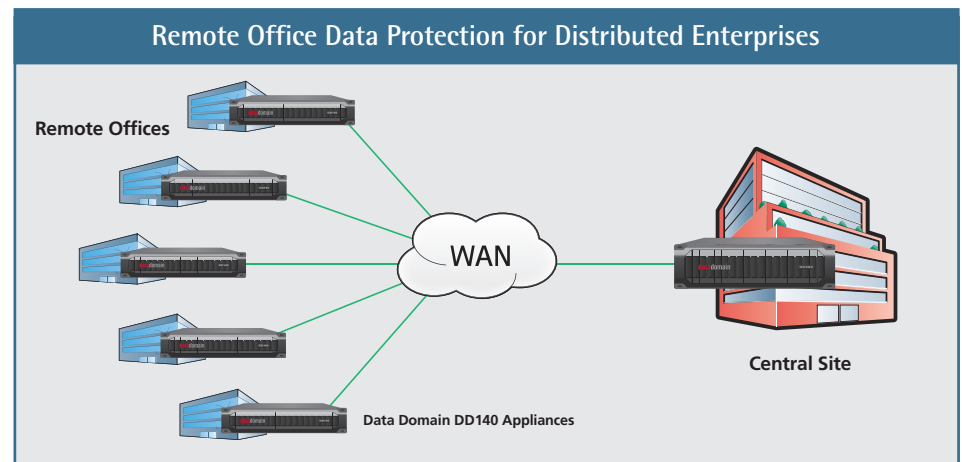
Ultra-safe Storage for Reliable Recovery

- > Data Invulnerability Architecture
- > Continuous recovery verification, fault detection and healing

Operational Simplicity

- > Lower administrative costs
- > Power, cooling and space efficiencies for green operation
- > Reduced hardware footprint
- > Supports many combinations of backup and archive applications in a single system

Backup and recovery of company data at its primary sites typically places high demands on the resources of a company's IT department. The result is that data protection strategies and execution are neglected at the smaller, remote sites even though information at these regional offices or branch offices may be as important as that found at the primary data center. A lack of technical resources at remote sites further complicates the problem and recent advances in disk-based backup technologies have done little to provide relief. Though some of these products allow faster backup or slightly longer retention at the remote site, it still creates an 'island of backup data' that is too voluminous to replicate to a primary facility for centralized management and disaster recovery purposes.



Data Domain has revolutionized disk backup and remote office data protection with patented, high-speed, inline deduplication. Backup data can be reduced in size by an average of 10-30x, so disk backup storage is



DD140 Appliance

now cost-effective for long-term onsite retention, and becomes a critical tool for consolidation of backup data across distributed enterprises.

Remote Office Data Protection

Data Domain inline deduplication systems store each unique data sequence only once and save significant physical storage capacity by substituting small references for each identical redundant sequence. Backup data, for example, is ideal for this technology, and Data Domain is the only vendor to offer the benefits of data reduction, the throughput to meet backup windows and the right capacity and price points to meet the data protection and replication needs of remote sites.

The DD140 offers an average of 10-30x data reduction for enterprise recovery images,

enabling cost-efficient retention on disk for fast, reliable recoveries as well as highly efficient replication of remote office data to a primary data center. Snapshot technology further enables extended local and offsite retention on disk. This makes the elimination of tape at remote branch offices operationally and economically feasible, and further adds to the return on investment of the solution.

Easy Integration

The DD140 is qualified with all leading enterprise backup software and archiving applications and easily integrates into the existing storage infrastructure without change for remote site data protection. Data Domain deduplication storage works with the backup packages already in use at remote and branch offices and primary data centers. This means that the lengthy and costly planning periods for implementing new software, server resources and disk targets required by competing solutions is entirely avoided when choosing the DD140 to satisfy the data protection needs of the remote sites.

Installation is as easy as connecting to Ethernet. Connect the DD140 to your

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backup server as a NAS file server or use the Symantec OpenStorage option for Veritas NetBackup. It takes just minutes to start backing up and recovering data.

Data Domain systems can be used to efficiently store backup and archive data. 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.

Multi-site Disaster Recovery

Replication capabilities are included as part of the core feature set of the DD140. Using Data Domain Replicator software, distributed enterprises can move their remote or branch 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 this central location enabling a flexible, enterprise-wide site recovery and retention model.

Network-efficient replication is operationally feasible because Data Domain deduplication technology effectively shrinks backup data sets by 99%. Cross-site deduplication further improves network efficiency by eliminating the need to transfer common data already received.

Remote office backup and recovery can now be achieved orders of magnitude faster, cheaper, more securely and reliably than with tape technologies, enabling multi-site tape consolidation.

Ultra-safe Storage for Reliable Recovery

The Data Domain Data Invulnerability Architecture provides the industry's best defense against data integrity issues.

Continuous recovery verification along with extra levels of data protection continuously protect against data integrity issues during the initial backup and throughout the data

life cycle. Unlike any other storage array, deduplication system, or file system, each DD140 ensures that recoverability is verified and then continuously re-verified.

Operational Simplicity

Data Domain systems are very 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.

Because of the massive data reduction, less physical equipment is required. This makes the physical footprint significantly smaller and consequently the systems are energy efficient because they require less power and cooling.

SPECIFICATIONS	DD140
Capacity: Raw ³	1.5 TB
Logical Capacity: Standard ^{1,3}	17 TB
Logical Capacity: Redundant ^{2,3}	43 TB
Maximum Throughput	450 GB/hr
Power Dissipation	215 W
Cooling Requirement	778 BTU/hr

- Mix of typical enterprise backup data (file systems, databases, mail, developer files), full backup weekly, incremental backup daily, to system capacity.
- Mix of typical enterprise data (file systems, databases, mail, developer files), full backup daily, to system capacity.
- All capacity values are calculated using Base10 (i.e., 1TB = 1,000,000,000,000 bytes).

SOFTWARE

Data Domain Operating System (DD OS) 4.7 or later

Software Features

Global Compression, Data Invulnerability Architecture including end-to-end verification (ongoing), snapshots, telnet, FTP, SSH, email alerts, scheduled capacity reclamation, Ethernet failover and aggregation, Data Domain OpenStorage (optional), Replicator (included) and Retention Lock (optional)

Management

Data Domain Enterprise Manager, GUI, SNMP, and command line management interface

Protocols

NFS v3 over TCP, CIFS, Symantec OpenStorage

HARDWARE PLATFORM

2U 19-inch rack-mountable, use in 4-post rack, hot plug disks, redundant fans, redundant power supplies, serial port, 2 copper 10/100/1000 Ethernet ports and optional dual port copper or optical 1 Gb Ethernet

System Weight

42 lbs (19.1 kg)

System Dimensions (WxDxH)

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 closed: 1.56" (4.0 cm)
Rear: 5" (12.7 cm)

Power (VA)

100-120 / 200-240 V~, 50/60 Hz
228 VA

System Thermal Rating

778 BTU/hr

Operating Temperature

10°C to 35°C (50°F to 95°F)

Operating Humidity

20% to 80%, non-condensing

Non-operating (Transportation) Temperature

-40°C to +65°C (-40°F to +149°F)

Operating Acoustic Noise

6.7 BA sound power at 25°C

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