

Total Storage Solution

Complete solution includes Writeable Snapshots, Volume Cloning and Replication at no additional cost

High Availability

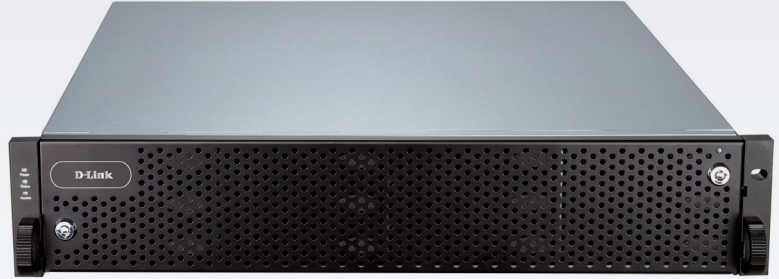
Active controller operation in HA configuration for redundancy and maximum performance

Continuous Operation

Online firmware upgrades in HA configuration for superior uptime

Scalability to Grow with Your Business

Expand the Storage capacity easily by adding the DSN-6020 Expansion Closure



Product image for illustration purposes only and may differ depending on hardware revision

DSN-6000 Series

iSCSI SAN Storage Arrays

Features

Redundant architecture

- RAID controllers
- Power supplies
- Fan modules
- Battery backup modules
- JBOD expansion

Advanced data protection

- RAID Level 0,1,0+1,3,5,6,10,30,50,60
- Writeable Snapshot
- Windows VSS support

Scheduled remote replication

- Asynchronous replications for up to 8 logical volumes
- Full replication and incremental replication support
- Manual & schedule tasks support
- Dedicated port reservation for replication usage
- Windows and Linux host utilities support

High connection availability

- Load Balancing and Failover

Expandable capacity up to 60 Drives (180 TB)

Hardware iSCSI offloaded engine

Four 1GbE / two 10GbE iSCSI ports per controller

D-Link's DSN-6000 Series are a range of high performance, fully redundant storage solutions that are simple to deploy and manage.

All DSN-6000 storage solutions are supplied complete with snapshot capabilities and remote replication as standard so there is no need for additional licenses. Also each RAID controller is equipped with 4GB cache to ensure maximum performance straight out of the box.

As with all D-Link storage solutions, the DSN-6000 Series uses an integrated and intuitive management GUI to ensure the system can be up and running in no time, even with limited IT knowledge. D-Link also provides optional comprehensive on-site service and support ensuring that your storage solution will be repaired quickly should the worst happen.

The DSN-6000 Series currently supports 36TB of raw capacity per shelf using 3TB drives (and even greater capacity as larger disk drives become available), and overall scalability to 180TB using DSN-6020 Expansion Enclosure. D-Link's DSN-6000 Series provides 1GbE or 10 GbE host interface connectivity which can handle over 200,000 I/O per second. The DSN-6000 Series supports applications demanding high throughput, scalability and flexible storage planning.

The DSN-6000 Series can be easily implemented as primary storage, as secondary storage to supplement an existing infrastructure, or as a nearline storage device to improve backup and recovery times. Using the intuitive and integrated management GUI, the DSN-6000 Series Arrays can be seamlessly incorporated in both Physical and Virtual Server environments.

High Availability

The DSN-6000 Series can provide the failover and redundancy capabilities required for mission critical scenarios such as Virtual Machine (VM) shares, database hosting, Online Transactional Processing (OLTP), email applications, storage consolidation and other primary storage needs. It is equipped with fully redundant components for all major functions, such as RAID controllers, power supplies, fan modules, battery backup modules, and SAS JBOD expansion ports. The Hot-pluggable design is capable of providing uninterrupted services. In addition, the DSN-6000

Series incorporates advanced high availability features such as RAID 6 and RAID 60 support, writable snapshot, Microsoft Windows™ VSS support, and volume configuration restoration. These advanced features help to reduce or eliminate any system downtime. Unlike other vendors, D-Link's DSN-6000 Series is able to upgrade to firmware without the system going offline. Both firmware image and volume handling are well protected by the redundant RAID controllers; when one RAID controller is down or has lost connection, the other RAID controller takes over its tasks immediately. This feature ensures that volumes and services are transferred seamlessly and simultaneously.

Applications

The optimised Input/output Operations per second and unparalleled throughput are capable of providing run-time critical online services, such as Cloud storage, SQL, Exchange, and high-end surveillance storage. Furthermore, with its iSCSI interface, D-Link's DSN-6000 Series is ideal for virtualisation environments - VMWare, Hyper-V, and Citrix. System administrators can install up to 32 Operating Systems onto the iSCSI system through the Boot-from-SAN functionality. With this feature, the multiple Operating Systems/Servers can be easily managed and protected by D-Link advanced data protection features, avoiding system downtime caused by single points of failure.

Expansion Options

The capacity of the DSN-6000 Series storage arrays can be easily expanded with the addition of the DSN-6020 Expansion Enclosure, which supports up to 12 SAS and SATA hard drives. Up to 4 DSN-6020 enclosures can be mounted in a storage array to expand the overall capacity to 180TB, and even higher capacity as larger hard drives are introduced.

Green Energy Savings

The DSN-6000 Series is equipped with D-Link Green features for saving power. A hard drive can be a very power-hungry component in a SAN. When properly configured, the power consumption of hard drives can be reduced to a minimum using the auto disk spin down feature. The DSN- 6000 Series systems monitor environmental temperatures to optimise the cooling mechanism. The fan modules respond only when needed. The power supply modules are all 80 PLUS power efficient, providing a more favourable power conversion rate. When combined, these power saving features help to greatly reduce energy consumption and increase the product's lifespan.



D-Link Assist

Rapid Response Support

If the worst should happen to your network you need the very best support and fast. Downtime costs your business money. D-Link Assist maximises your uptime by solving technical problems quickly and effectively. Our highly trained technicians are on standby around the clock, ensuring that award-winning support is only a phone call away.

With a choice of three affordable service offerings covering all D-Link business products, you can select the package that suits you best:

D-Link Assist Gold - for comprehensive 24-hour support

D-Link Assist Gold is perfect for mission-critical environments where maximum uptime is a high priority. It guarantees four hour around-the-clock response. Cover applies 24/7 for every day of the year including holidays.

D-Link Assist Silver - for prompt same-day assistance

D-Link Assist Silver is designed for 'high availability' businesses that require rapid response within regular working hours. It provides a four hour response service Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist Bronze - for guaranteed response on the next business day

D-Link Assist Bronze is a highly cost-effective support solution for less critical environments. Response is guaranteed within eight business hours Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist can be purchased together with any D-Link business product. So whether you're buying switching, wireless, storage, security or IP Surveillance equipment from D-Link, your peace of mind is guaranteed. D-Link Assist also offers installation and configuration services to get your new hardware working quickly and correctly.

Remote Replication, Cloning and Snapshots

Remote replication provides continuous data protection ensuring your valuable data is safe in the event of a catastrophic system failure in your primary site or data centre. One source target can be set up with multiple destination targets, allowing administrators to replicate data to different locations. These replication jobs can be set up for manual or automated scheduling allowing hourly or daily configuration.

Volume cloning can be used to backup data from a source volume to a target volume, set up a backup schedule, and deploy rules for creating these backups.

Snapshot technology ensures data can be restored quickly and easily from a point-in-time copy and easily without the need for lengthy restore from a backup. Up to a total of 512 writable or read-only snapshots are supported and compliant to Microsoft Windows Volume Shadow Copy Services (VSS). These snapshots can be implemented manually or through automated scheduling which allows hourly or daily configuration. In addition, the snapshot technology follows the block-level copy-on-write technology which provides fast recovery of data in case of a disk failure, file corruption or program malfunction.

Remote replication, cloning and snapshot technology are supplied as standard features in all DSN-6000 Series storage solutions, at no additional cost.

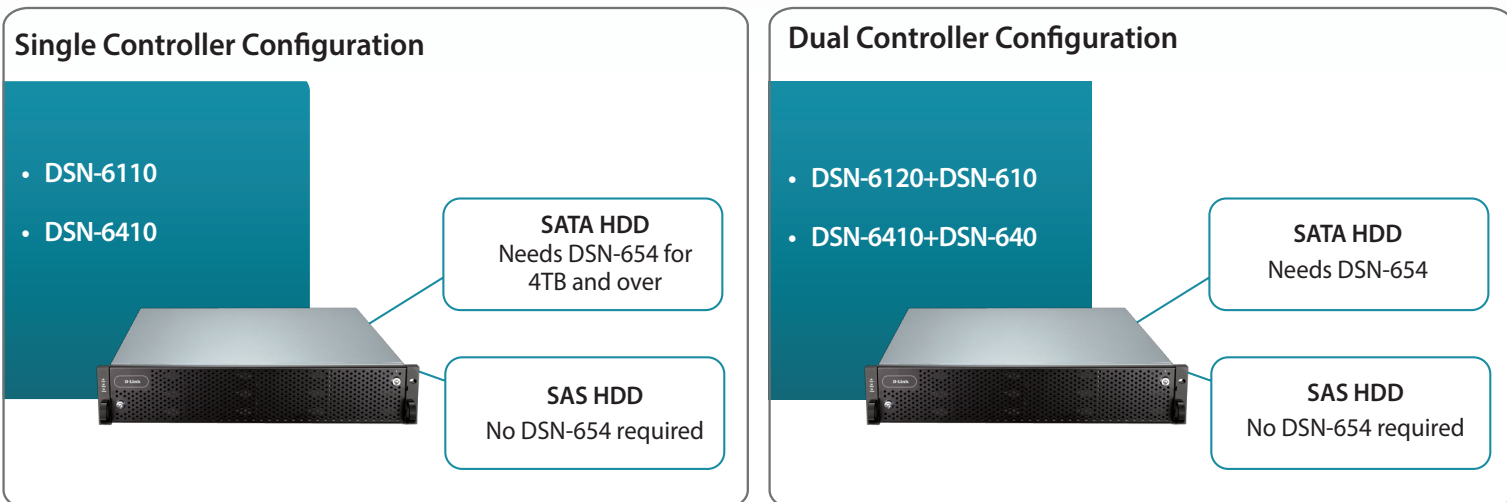
RAID support





The DSN-6000 Series iSCSI SAN arrays support RAID levels 0, 1 (N-way mirror), 0+1, 3, 5, 6, 10, 30, 50, 60 and JBOD for data protection and performance.

Additional Features

The DSN-6000 Series incorporates advanced high availability features such as RAID 6 and RAID 60, writable snapshots, Microsoft Windows VSS support, and volume configuration restoration. These advanced features help to reduce or eliminate any system downtime. Unlike other vendors, D-Link's DSN-6000 Series (with a secondary controller installed) is able to upgrade its onboard firmware without the need for a system reboot or any system downtime. Firmware images and volume handling are protected by the redundant controllers, when one RAID controller is down or has lost its connection, the other RAID controller takes over the tasks immediately. This ensures that volumes and services are transferred seamlessly and simultaneously.

SATA drives in the following configurations need a SATA bridge board:



Technical Specifications				
	DSN-6110	DSN-6120	DSN-6410	DSN-6420
				
RAID Controller	Single controller	Dual controllers	Single controller	Dual controllers
No. of Host Channels Per Controller Ports	4 x 1 GbE iSCSI Ports	8 x 1 GbE iSCSI Ports	2 x 10 GbE iSCSI Ports	4 x 10 GbE iSCSI Ports
Expansion Enclosure	DSN-6020			
Cache Memory Per Controller	4GB			
No. of Hard Drives (SAS & SATA II)	12			
Maximum Number of Hard Drives Supported	60			
Storage Capacity	48TB with 4TB Hard Drives			
iSCSI Network Interface				
Hardware iSCSI off-load engine	•			
iSCSI jumbo frame	•			
Header/Data digest	•			
CHAP authentication	•			
Target nodes support	Up to 32			
Sessions per controller	Up to 128			
VLAN Support	VLAN 802.1 Q, 802.1P			
Volume & RAID Support				
RAID Support	RAID level 0,1,0+1,3,5,6,10,30,50, 60, JBOD, N-way mirror			
Logical Volumes	Up to 1024			
Hard Drives per Volume Group	Up to 32			
Volume Sharing	One logic volume can be shared by as many as 16 hosts			
Hot Spares	Global and dedicated			
Online Volume Expansion	•			
Cache Policy	Write-through or write-back			
Instant Volume Access	•			
Auto Volume Rebuilding	•			
RAID Level Migration	Online volume migration without system downtime			

D-Link Green	
Auto disk spin down	•
Advanced cooling mechanism	•
Power Supplies	80 PLUS energy-efficient
High Availability	
Dual-active RAID controller	Redundant dual controllers installed
Flexible RAID group ownership	Dual controllers installed Each flexible RAID group can be assigned to one of the two controllers
Management Port Take-over	Seamless with dual controllers installed
Online Firmware Upgrade	No system reboot or down-time required with dual controllers installed
Multi-path & Load-Balancing	Supports Microsoft MPIO, MC/S, Trunking and LACP
Advanced Data Protection	
Writable snapshot	•
Microsoft VSS Services	Windows Volume Shadow Copy Services (VSS)
Configurable N-way mirror	•
Online disk roaming	•
Volume configuration restoration	Instant volume configuration restoration
Hot pluggable battery module (BBM)	•
Volume Replication Tool	Multipath Support included
Management	
Serial Console	•
SSH Telenet	•
HTTP Web User Interface	•
Secured Web (HTTPS)	•
iSNS	•
S.E.S	•

DSN-6000 Series iSCSI SAN Storage Arrays

Other Specifications	
Data Security	Volume replication tool with multipath support VLAN 802.1Q, 802.1p support
Notification	Email; SNMP trap; Browser pop-up windows; Syslog; Windows Messenger
OS Support	Windows; Linux; Solaris; Mac
Virtualisation	VMWare; Hyper-V; Citrix
Supply Type	2 x 500 W (Redundant)
Dimensions	2U 19" Rackmount 442.8mm x 500.6mm x 88.0mm (W x D x H)
Operating Temperature	0 to 40 C (32 to 104)
Operating Humidity	5% to 95% (Non- Condensing)



For more information: www.dlink.com

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Updated April 2014

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