



Storage Product Guide

A place for everything

Flexible network storage for all your data needs

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Introduction – it's all about storage

Although hard disks capable of storing terabytes of data are now commonplace in desktop PCs and servers, consumers and businesses alike are choosing to use dedicated network storage appliances rather than rely solely on local hard drives.

A network storage appliance simplifies document and file sharing, making collaborating with others a great deal easier - even across different platforms, making life a lot simpler when sharing data between Windows, Mac OS and Linux users. Added to which a shared appliance is always on, always accessible and can be made available remotely over the Internet to support users working from home or on the move.

Network storage appliances provide a more secure solution, with data access restricted to authorised users with the necessary credentials. They can also be used to take backups of data held on desktop and notebook hard drives, providing centralised management and easy user-driven recovery when the worst happens. Add in RAID protection as standard and a network storage appliance can even provide access to your business critical data when a

hard disk crashes, making for a highly-available as well as secure solution.

As a leading vendor of high-performance network storage appliances, D-Link manufactures products capable of meeting the needs of a wide range of organisations, from small companies, looking for easy to manage unified storage solutions, to large enterprise customers looking for a secure storage platform for business critical data.

Robust construction and ease of use are common features across the entire D-Link range, with support for both network file sharing and block-level iSCSI access on an IP Storage Area Network (SAN).

Industry-standard SATA and SAS disks can be fitted inside the appliances, with support for the latest Solid State Disks (SSDs) on enterprise products for the

ultimate performance. Similarly, D-Link storage appliances can be connected to the network using fast Gigabit Ethernet and, on high end products, the latest high-bandwidth 10 Gigabit interfaces with multiple ports, load-balancing and failover capabilities.

Remote setup and management are the order of the day across the D-Link product range. More than that, D-Link appliances can be used to build a private cloud, to provide secure anytime, anywhere access to stored data from any internet-connected device.

With a D-Link storage appliance to suit every business, deciding what to buy can be a little daunting. This guide, however, will tell you everything you need to know and maybe a little more along the way.

Storage – the D-Link jargon buster



Can't tell your SATA from your SAS? Not sure what RAID is all about? This short section will help you get to grips with D-Link storage products and services discussed in this guide.

FTP

Short for File Transfer Protocol, FTP is a platform-independent technology used to upload and download files over a LAN or Internet connection.

Hot-plug/hot-swap

The ability to install and replace hard disks and other components without powering down the system or affecting its availability.

Hot-spare

A spare disk in a storage array which is automatically brought online if one of the data disks fails.

iSCSI

An implementation of the block-level SCSI disk protocol for use on IP networks, iSCSI enables a Storage Area Network (SAN) to be implemented using ordinary Ethernet cabling and switches rather than more complex and expensive Fibre Channel hardware. An iSCSI target is a volume on a storage array. An iSCSI initiator is the hardware/software that connects an iSCSI target to a host server.

JBOD

Short for "Just a bunch of disks", where each disk is accessible separately rather than through a collective RAID interface. It offers no redundancy or performance advantages.

Mirroring

A RAID technology where data written to one set of disks is automatically copied to another identical set. Provides 100% redundancy because, if one set of disks fails the data is still available on the other.

snapshot

A point in time copy of data, typically held on a virtual volume. snapshots can be taken in seconds, used to quickly recover lost or damaged data and allow backups to be taken while production systems continue to operate.

Thin provisioning

Maximises the use of disk capacity by enabling virtual disk volumes to be created that may be larger than the actual physical space available. As a virtual volume grows, additional capacity is assigned from a pool of disks in a supporting array.

RAID

A Redundant Array of Independent Disks (RAID) is where data is spread across multiple hard disks, optionally together with error correction data to enable the array to continue working in the event of one or, in some cases, two disk failures. RAID protection can be implemented in software or, for better performance, hardware using a RAID disk controller. Different levels of RAID are available, popular options being simple mirroring of disks, RAID 1, and RAID 5 where data and error correction information is striped across all the disks in an array.

SAS

Serial Attached SCSI (SAS) disks are more reliable and tend to support higher spin speeds and faster transfer rates than SATA alternatives. However they are more expensive and mostly used in high-end datacentre environments. For maximum availability SAS disks should be attached to a RAID controller.

SATA

The most affordable of modern disk technologies, Serial ATA (SATA) disks are deployed in desktop PCs and entry-level servers/storage appliances, offering a good mix of capacity and performance. For maximum availability, enterprise-quality SATA disks should be specified and configured as an array using software or hardware based RAID.

SMB/CIFS

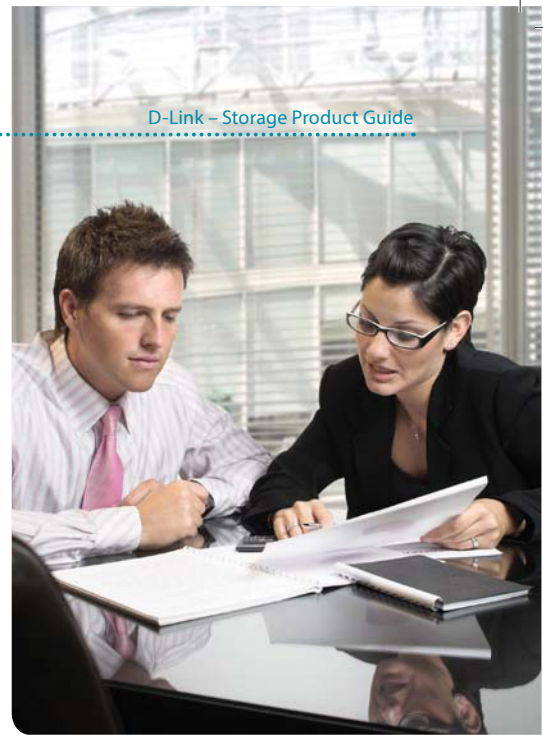
The network file sharing protocol used by Windows, also supported on other platforms such as Mac OS and Linux to allow for data sharing.

SSD

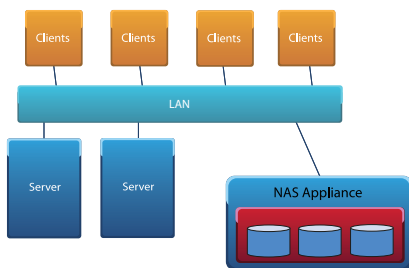
A Solid State Drive (SSD) is a data storage device that uses integrated circuit assemblies as memory to store data, so it provides much higher performance than traditional SAS and SATA drives. SSDs also run cooler and quieter and consume less power. However, cost per Gigabyte is much higher compared with ordinary magnetic technology.

Choosing the right product

One of the big decisions when buying and deploying a network storage appliance is whether to go for a NAS (Network Attached Storage) appliance, an iSCSI SAN (Storage Area Network) appliance, or one that supports both technologies.



NAS



With a NAS appliance, files and folders are saved on the storage appliance before being managed and advertised on the network as file shares. Client desktops and servers can then browse the network to find the shared files and folders, typically using Windows Explorer or Mac OS finder folders can be mapped locally for ease of access.

Typical uses

- Shared storage on a home or small business network
- Repository for IP surveillance recordings (see page 22)

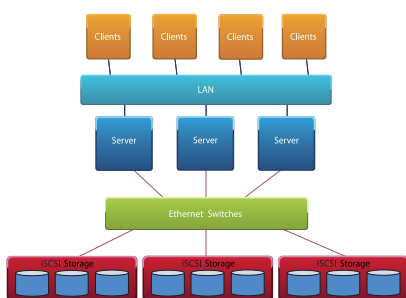
Pros

- Easy to understand and configure
- Most appliances support cross-platform access using common file sharing protocols such as SMB/CIFS, AFP, NFS and FTP
- Easy remote access over the Internet

Cons

- Performance can be limited by the capabilities of storage appliance and file sharing software
- Storage accessed directly by end users requiring additional security and authentication technology

iSCSI



On an iSCSI Storage Area Network (SAN) volumes in a storage appliance are logically connected to a remote host (usually a server) and accessed using the block-level iSCSI protocol as though they were locally attached hard disks.

Typical uses

- Storage for Web, email and database servers in medium to large organisations
- High-availability clustering

Pros

- Block-level access delivers high levels of performance
- More secure with storage connected direct to servers not individual users
- Uses standard Ethernet infrastructure to connect storage to servers
- Good fit to virtualisation platforms

Cons

- Can be more complex to understand and configure than NAS

The D-Link range includes NAS appliances (DNS-325 and DNS-345); unified appliances that support simultaneous NAS and iSCSI connectivity (DNS-1100-04, DNS-1200-05 and DNS-1550-04); and pure iSCSI SAN appliances (DSN-6000 Series) with additional high-availability features for larger enterprise customers. D-Link also provides a range of Network Video Recorders: a storage appliance designed expressly for use with network IP cameras to create a complete IP Surveillance solution.



D-Link Network Attached Storage (NAS) appliances

As an alternative to an industry-standard Windows file server, a NAS appliance is hard to beat, offering the same file and print sharing capabilities as a server but in a format that's more affordable, quicker to deploy and easier to manage.

Forget about client licences, they're not needed here. Neither are complex management utilities, everything is done from a browser so no technical knowledge is required. Take it out of the box, plug it in and you can be up and sharing files in minutes. D-Link's NAS appliances are designed to work with standard SATA hard disks and provide cross-platform file sharing on mixed Windows, Mac OS and Linux networks. RAID protection comes as standard along with Gigabit Ethernet for LAN connectivity plus USB ports that can be used to attach printers or external backup drives.



**ShareCenter™
DNS-320L**



**ShareCenter™
DNS-320LW**



Surveillance center



USB 3.0

1.2GHz RAM

**ShareCenter™
DNS-327L**

2-Bay Cloud Network Storage Enclosures

- Access your files from anywhere with mylink™ Cloud Services
- 2 x 3.5" internal SATA I/II hard disk drive bays, support up to 8TB
- Easy installation and setup of the of hard disk drives
- Disks can be configured for separate access, JBOD or RAID 0/1 depending on redundancy or performance requirements
- Standalone device that connects directly to your router, no need to connect to separate computer
- Network file sharing on Windows, Mac OS and Linux networks
- USB port for printer sharing and external backup disk attachment plus UPS monitoring
- HTTP and FTP with DDNS for simplified remote access

- Feature-rich backup software with support for local, remote, USB and cloud backup
- Supports Apple Time Machine™
- Download movies, music and photos to you iOS or Android devices to view later
- Stream digital content to compatible DLNA media players such as Boxee Box by D-Link, PlayStationR 3, Microsoft Xbox 360™ or directly to a smart TV
- D-Link Green eco-friendly design incorporating hard disk drive power management and smart fan speed control
- reddot design award winner
- Available in black (DNS-320L) and white(DNS-320LW colour for you to choose from



mylink™ Access-NAS app



View photos and stream music and videos from your iPhone®, iPad® and Android®. Download files from your storage device from wherever you are to view later. Upload music, movies and photos to your ShareCenter™ and back them up, so you never lose any previous files or run out of space on your Smartphone or tablet!



ShareCenter™ + DNS-325

2-Bay NAS appliance with mylink™ Cloud

- Remote access via the D-Link cloud App
- Two 3.5 inch drive bays for SATA hard disks - up to 3TB
- Disks can be configured for separate access, as a JBOD array or with RAID 0/1 protection
- Network file sharing on mixed Windows, Mac OS and Linux networks
- HTTP and FTP with DDNS for simplified remote access
- Up to 256 user accounts can be configured with support for 128 shares and 64 concurrent SMB and 10 FTP connections
- Network attachment via an auto-sensing Gigabit Ethernet interface
- USB port for printer sharing, flash drive and external backup disk attachment plus UPS monitoring
- Integrated backup support, bundled Windows desktop backup software, Apple Time Machine support for Mac backup
- Support for up to 4 x D-Link IP cameras



ShareCenter™ + DNS-345

4-bay NAS appliance with mylink™ Cloud

- Remote access via the D-Link cloud App
- Four 3.5in drive bays for SATA hard disks - up to 3TB
- Disks can be configured for separate access, as a JBOD array or with 0/1/10/5/5 + hot spare protection
- Network file sharing on mixed Windows, Mac OS and Linux networks
- HTTP and FTP with DDNS for simplified remote access.
- Active Directory integration for user authentication
- Up to 512 user accounts can be configured (800 with Active Directory) with support for 128 shares and 64 concurrent SMB and 10 FTP connections
- Two auto-sensing Gigabit Ethernet ports with link aggregation
- USB port for printer sharing, flash drive and external backup disk attachment plus UPS monitoring
- Integrated backup support including backup to the cloud (Amazon S3), bundled Windows desktop backup software, Apple Time Machine support for Mac backup
- Remotely Access, Stream and Sync your digital data via the mylink™ Cloud Portal
- Scheduled power on/off, disk hibernation, smart fans and D-Link Green Ethernet
- Support for up to 4 x D-Link IP cameras

Do more with add-ons

A D-Link NAS appliance can do a lot more than just share files and printers. You can also stream digital content to players like the D-Link Boxee Box, PlayStation 3 or Xbox 360. An iTunes server is also built in and a variety of easy to configure add-ons available including Photo Center to help organise your photos; a tool to create your own WordPress blog and an enhanced Torrent download engine to schedule and manage unattended file downloads.

Benefits – Do more with your NAS appliance than simply share files. Write your own blog, stream music and movies, manage downloads – all using simple to deploy ShareCenter™ add-ons.



SqueezeCenter Audio Streamer



Gallery 2 Photo Center



Blog



WEB DAV



Ajaxplorer



aMule Download Manager



Audio Streamer



mylink™ Cloud



ShareCenter™ DNS-320

2-Bay Network Storage Enclosure

- 2 x 3.5" Internal SATA I/II Hard Drive bays - up to 8TB
- Easy installation and setup of the of hard disk drives
- Disks can be configured for separate access, JBOD or RAID 0/1 depending on redundancy or performance requirements
- USB Port for printer sharing and external backup disk attachment plus UPS monitoring
- Download movies, music and photos to you iOS or Android devices to view later
- Stream digital content to compatible DLNA media players such as Play Station R 3, Microsoft Xbox 360TM or directly to a smart TV
- D-Link Green eco-friendly design incorporating hard disk drive power management and smart fan speed control



ShareCenter™ DNS-315

1-Bay Network Storage Enclosure

- 1 x 3.5" Internal SATA I/II hard disk drive bay - up to 4TB
- With the backup software you can schedule automatic backup from your PC or USB device to NAS
- USB port for printer sharing and external backup disk attachment
- Stream digital content to compatible DLNA media players such as Play Station® 3, Microsoft Xbox 360TM, D-Link Boxee Box or directly to a smart TV
- Using the integrated iTunes server, stream your iTunes media files to Apple devices such as the iPhone, iPod, and iPad
- D-Link Green eco-friendly design incorporating hard disk drive power management and smart fan speed control

mydlink™ Cloud Services



We have all heard of the Cloud and how it's changing the way we use our computers, smartphones and tablets to access data.

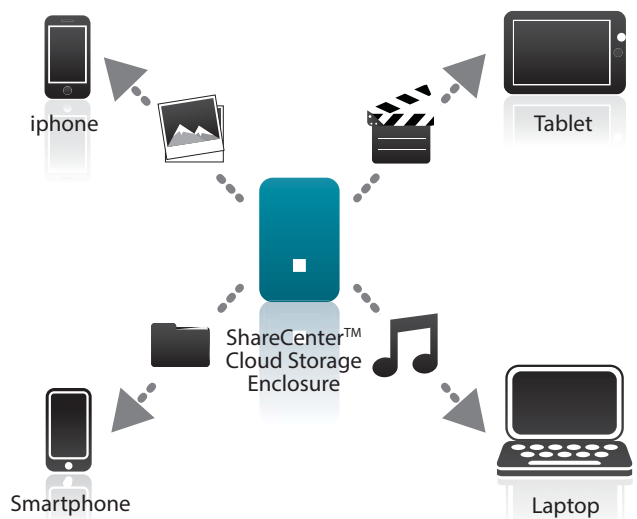
In fact, if you use Facebook/LinkedIn to keep in touch, Slideshare to share presentations or You Tube to share videos, you use the Cloud already. Simply, the Cloud is what lets you access your digital data – from any connected device, anywhere in the world. You can seamlessly store, sync, stream and share using multiple connected devices such as smartphones, media tablets, smart televisions and PCs.

Just like the Internet, the cloud is our digital 'hub' for storing and accessing content. No matter where you are, by connecting your devices and uploading content to the cloud, you can access, manage and share files, view camera video and/or control devices.

If you are travelling abroad for business and need to access your presentation from the office or need important office data to be both secure and accessible at the same time – D-link has the solution. D-Link has taken the flexibility of the Cloud and added the security of their web portal to create the best of both worlds for people who are always on the go; with less time at the office. You can enjoy anywhere, anytime access to your data without having to upload everything to a public server first. Just attach your Cloud Storage Device to your network to take your data with you - wherever you go.

Cloud Storage devices offer a centralised solution with remote sharing, streaming, and management capabilities. With D-Link Cloud Storage users have the ability to access files remotely and locally, download and upload files, and delete files, on their ShareCenter™ from any computer using the mydlink.com portal. It also comes with an app for the iPad, iPhone, and Android, enabling users to access data, view photos, and stream music and videos from their ShareCenter™ directly to their mobile devices from around the globe.

Easy access from anywhere



It also allows 2-way syncing so that you'll always have the latest data on your storage device and your computers and you can set up guest user accounts for the convenience of sharing files from your device via a web link.





Benefits

Build – build your own personal cloud and access your data anywhere, anytime from any device with a Web browser.

By setting up a mydlink™ account, users can download and upload files, delete files/folders from their storage device and check the status of their ShareCenter™ + remotely. With the mydlink™ Cloud app available for iPhone®, iPad® and Android™ devices users can access files, view photos, and stream music and videos from their Smartphones and tablets. Files can be downloaded from a storage device to a mobile device to send on or view later.

With the mydlink™ Cloud Services you can...

- Access files stored on your ShareCenter™ Cloud NAS through the Internet
- Stream music and movie files to your iOS device
- Browse through your photos, or view a slideshow of all your images
- Open documents such as Microsoft Office files and PDFs
- Save files to your mobile device for offline playback
- Back up photos and images from your Camera Roll to your ShareCenter™ Cloud NAS
- Search for specific files on your ShareCenter™ Cloud NAS or on your iOS device
- Rename and delete your files
- Supports “Open in” option to open your files with different apps
- Supports AirPlay for playback of your media on other devices
- Supports AirPrint to print out your documents
- Monitor disk usage and status

Back up – Software to backup client PCs is also included and, as well as file and print sharing, D-Link ShareCenter™ appliances come with media servers and other add-ons of value to home and small business users alike.

Security

In addition to protecting your valuable data the ShareCenter™ Network Storage devices can also be used to protect your valuable possessions; with support for up to four D-Link IP Surveillance cameras users can create a comprehensive home security solution. Just install your cameras and use your ShareCenter™ + to store, manage and replay the video footage.

mydlink™ iOS apps for ShareCenter™ Cloud Storage Enclosure

- for iPod Touch and iPhones



- for iPads



Get the
mydlink™
iOS app



Storage Consolidation

Storage consolidation makes good business sense. It can help companies dramatically reduce the high maintenance cost of proliferated storage, more fully utilise storage assets, and improve the quality of storage services that IT offers to the enterprise.

This good news arrives at a time when many IT organisations are striving to satisfy both the demand from their customers for more storage and the demand from CFOs to reduce cost. Migration to consolidated storage architecture will allow IT to provision more storage for less cost.

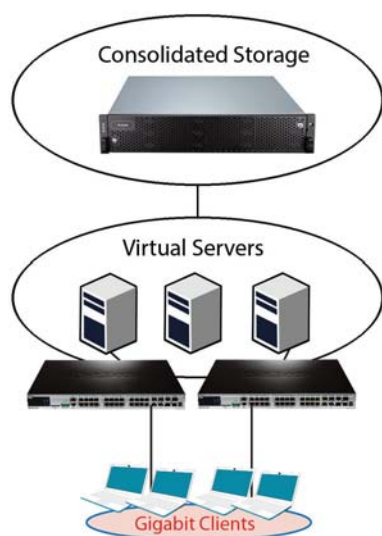
Storage consolidation, also called storage convergence is a method of centralising data storage among multiple servers. The objective is to facilitate data backup and archiving for all subscribers in an enterprise, while minimising the time required to access and store data. Other desirable features include simplification of the storage infrastructure, centralised and efficient management, optimised resource utilisation, and low operating cost.

There are two storage consolidation architectures in common use: network-attached storage (NAS), and storage area network (SAN), both utilise redundant array of independent

disks (RAID) technology, in NAS, the hard drive that stores the data has its own network address. Files can be stored and retrieved rapidly because they do not compete with other computers for processor resources. SAN is a more sophisticated architecture, initially using Fibre Channel technology, however, the majority of SANs used in Small to Medium Business Applications today utilise iSCSI connectivity. SANs are noted for high throughput and ability to provide centralised storage for numerous subscribers over a large geographic area. SANs support data sharing and data migration among servers.

In RAID architecture, the data is located on multiple disks. The array appears as a single logical hard drive. This facilitates balanced overlapping of input/output (I/O) operations and provides fault tolerance, minimising downtime and the risk of catastrophic data loss.

IT Managers ideal Environment



Benefits

Consolidating storage makes good business sense. The logic is straightforward. IT systems have an increasingly direct impact on basic business indicators, such as top-line revenue and customer satisfaction, and depend on reliable and flexible storage systems.

For most enterprises, the business case for consolidating storage is compelling. It allows companies to:

- Improve top-line revenue
- Provide a better return on IT investment
- Reduce indirect and overall costs
- Reduce infrastructure costs
- Improve productivity
- Simplify Data Centre Management



Virtualisation

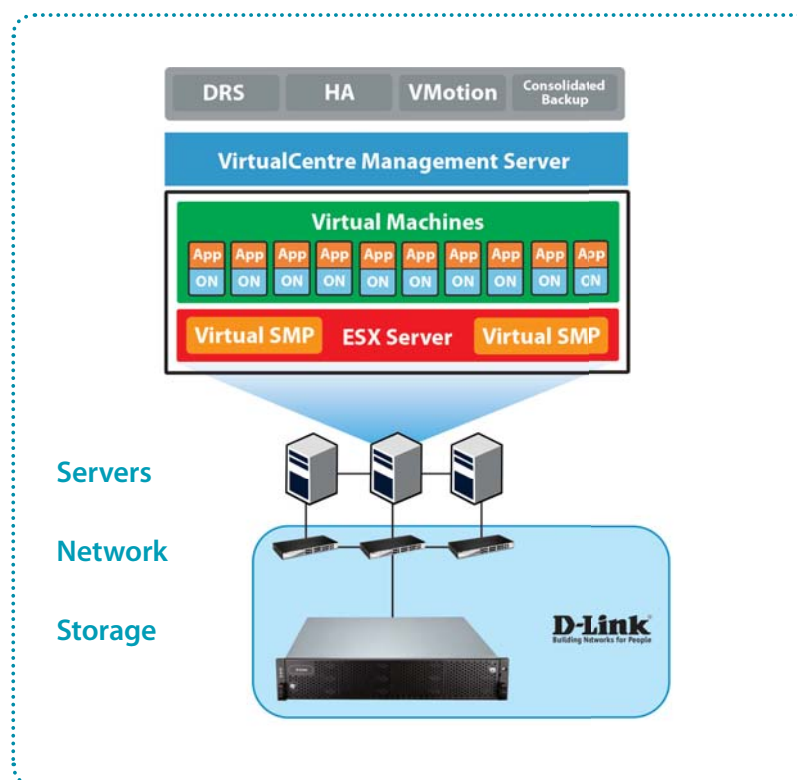
Server virtualisation technologies have been available for many years; indeed, VMware delivered its first products as early as 1999 and entered the server market in 2001.

Initially only of benefit to large enterprises, server virtualisation is now common place in smaller organisations with only a handful of servers. The benefits of server virtualisation are well documented – simplifying management, increasing data availability and reducing operational costs through better hardware utilisation and lower energy costs.

But where does D-Link fit?

With a D-Link SAN, D-Link switch and virtualised servers, it is also possible to unlock advanced virtualisation features, like VMware's VMotion, XenServer's XenMotion or Microsoft Hyper-V's Live Migration. These technologies enable movement of a running virtual machine (VM) from one server to another, a function not possible without centralized storage and a reliable, high performance network. This offers companies zero-downtime for server maintenance since VMs can be moved from server to server without service interruption. It is also possible to move running application workloads to take advantage of available computing power. That's unprecedented flexibility; delivered by the leading virtualisation providers but enabled by the technology provided by D-Link.

All D-Link Business Solutions storage products are certified for use with the main virtualisation technology providers: VMware, Citrix, and Microsoft Hyper-V, ensuring fast integration and simple management.



NAS for backup – data protection made easy

Put a NAS appliance on your network and you have the makings of a robust, reliable and easy to use backup solution, and one which can be exploited in several ways.



Option 1. Desktop backup

Forget about copying files to CD/DVD or USB memory stick, a NAS appliance can take backups of desktop computers over the network, to protect local files not already stored on the appliance itself.

A must-have on any network, D-Link NAS appliances ship with Windows backup software (ShareCenter™ Sync) to enable copies of important documents, music, photos and videos to be automatically saved to the NAS appliance. Built-in scheduling tools mean that users don't have to remember when to do this, plus backups can be scheduled to run unattended so as not to interfere with normal work.

It's all done automatically so you're always protected and, should a file be accidentally deleted or corrupted, recovery is just as easy. Simple tools enable users to do this themselves rather than rely on support staff.

As well as the bundled Windows backup tools, D-Link NAS appliances support Apple Time Machine, so that Mac users can be protected too. Added to which third party backup products can use the NAS appliance to store backups, even recover the entire contents of a crashed PC or server in some cases.

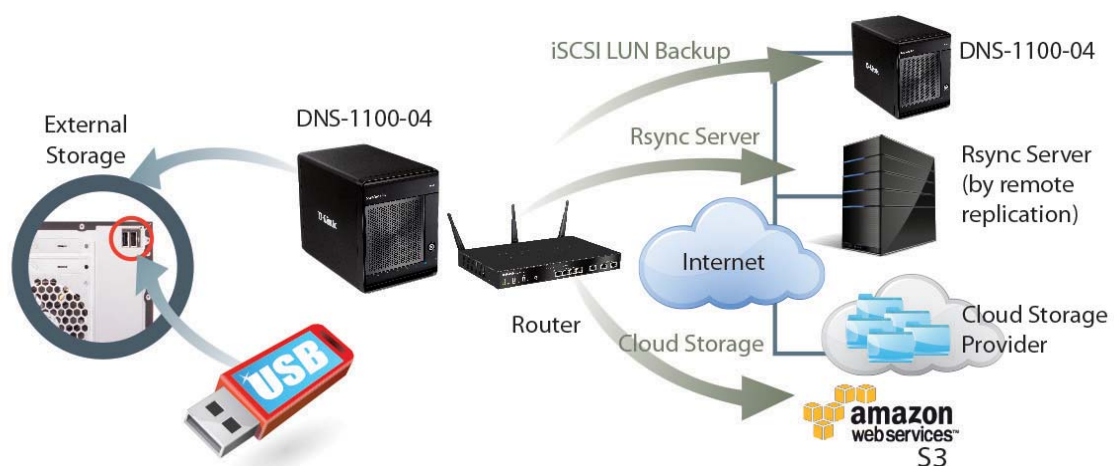
Option 2. Secure your backup

Using a NAS appliance for sharing files and storing desktop backups is all very well, but you are putting all your eggs into one basket. RAID technology built into the appliance hardware helps protect against disk failure, but the data also need to be backed up to handle accidental file deletion; to be able to revert to earlier versions and to archive data for compliance.

D-Link NAS products include built-in tools that can take scheduled backups of volumes, folders and files held on the appliance. Those backups can be stored on external USB hard disks or directed to other network storage, such as another NAS appliance. More than that, some models provide support for continual replication using industry-standard RSYNC technology to make sure that backup copies are always up to date, with backup and replication to a remote site yet another option, for belt and braces protection against disaster.

Option 3. Backup to the cloud

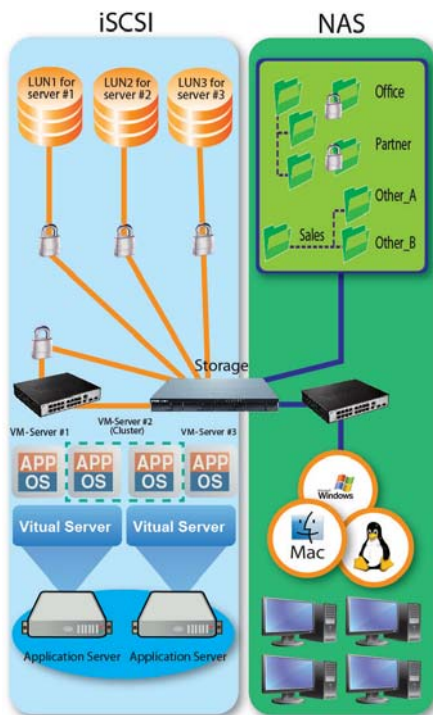
As well as backup to USB attached devices and replication to another appliance, most D-Link products also support backup to the cloud. With this you don't need any extra disks or appliances, instead backups are stored on servers out on the Internet. Backups can be taken directly to the secure Amazon S3 cloud storage network, for the ultimate in off-site protection.





D-Link Unified Storage appliances with NAS and iSCSI

Unified appliances offer all the benefits of NAS in terms of server-like network file sharing with management via an easy to use browser interface. In addition, however, they can also be used to provide block-level access to storage in the appliance using the iSCSI protocol.



Typically used to connect servers to storage over an IP network, iSCSI creates a direct connection between a server and virtual disks on a remote storage appliance. Those disks can then be formatted and managed using tools on the server, just like direct-attached drives. Unlike direct-attached disks, however, extra capacity can be added without powering down the server, added to which D-Link unified appliances also support thin provisioning to maximise capacity by only allocating real disk capacity to virtual volumes as and when required.

Other advantages of a D-Link unified storage appliance include the ability to take point in time volume snapshots. These can be used to quickly restore systems after changes have been made and to allow backups to be taken of open files without shutting down associated applications.



ShareCenter™ Pro 1100 DNS-1100-04

Unified Storage appliance

- 12TB and above in four hot-swap 3.5in drive bays
- Standard JBOD array or 0/1/5/6 RAID protection
- Network file sharing on mixed Windows, Mac OS and Linux networks
- HTTP/S and FTP support plus DDNS for simplified remote access
- Up to 4,096 user accounts can be configured (10,000 with Active Directory integration) with support for 1000 shares and 64 concurrent SMB and 10 FTP connections
- Block level iSCSI data transfers with support for up to 64 iSCSI targets
- Virtual disks with thin provisioning and volume snapshot facilities
- Two auto-sensing Gigabit Ethernet ports with link aggregation
- Two USB ports for printer, flash drive and external disk attachment plus UPS monitoring
- Integrated backup tools, client software for backup of network PCs



ShareCenter™ Pro 1200 DNS-1200-05

Storage appliance with RAID 6 availability

- 15TB and above in five hot-swap 3.5in drive bays
- RAID 5 with hot-spare plus RAID 6 to protect against two drive failures at once
- Network file sharing on mixed Windows, Mac OS and Linux networks
- HTTP/S and FTP support plus DDNS for simplified remote access
- Up to 4,096 NAS user accounts (10,000 with Active Directory integration), 1000 shares and 64 concurrent SMB and 10 FTP connections
- Block level iSCSI data transfers with up to 64 iSCSI targets
- Virtual disks with thin provisioning and volume snapshots
- Two auto-sensing Gigabit Ethernet ports with link aggregation
- Two USB ports for printer, flash drive and external disk attachment plus UPS monitoring
- Integrated backup tools plus client software for backup of network PCs
- Power management features including scheduled power on/off, disk hibernation and SMART health scan.



ShareCenter™ Pro 1550 DNS-1550-04

Rack-mount unified appliance

- 4vU rack-mount format
- Hot-swap 3.5in drive bays
- Redundant hot-swap power supplies
- Dual-core processor plus 2GB RAM
- RAID 6 to protect against two drive failures at once
- Network file sharing on mixed Windows, Mac OS and Linux networks
- HTTP/S and FTP support plus DDNS for simplified remote access
- Up to 4,096 NAS user accounts (10,000 with Active Directory integration), 1024 shares and 256 concurrent connections
- Block level iSCSI data transfers with up to 64 iSCSI targets
- Virtual disks with thin provisioning and up to 32 volume snapshots
- Two auto-sensing Gigabit Ethernet ports with link aggregation and automatic failover/failback
- Five USB ports for printer, flash drive and external disk attachment plus UPS monitoring
- Integrated backup support including backup to the Cloud
- Bundled client software for backup of Windows PCs plus Apple Time Machine support
- VMware ready





Typical uses

Small Business – An affordable and flexible solution, unified appliances support NAS for simple file sharing and flexible iSCSI SAN connectivity to servers, and can do so simultaneously from the same box.

High availability – iSCSI storage can be quickly switched between servers in a cluster to deliver continuity of service in the event of a hardware or software failure.

Feature	RAID 0	RAID 1	RAID 5	RAID 6
Minimum No of Drives	2	2	3	4
Data Protection	No Protection	Single Drive Failure	Single Drive Failure	2 Drive Failure
Read Performance	High	High	High	High
Write Performance	High	Medium	Low	Low
Capacity Utilisation	100%	50%	67% - 94%	50% - 88%
Typical Applications	High end workstations, Video production and editing	Operating system, transaction databases file server, web server	Data warehousing web server, database server, NVR, DVR	Data Archive back-up to disk, large capacity, high availability solutions

RAID is for availability

Should a disk fail inside a D-Link network storage appliance, the data redundancy provided by the built-in RAID technology may allow the appliance to keep on working. Different levels of protection are available, here's how the most popular options stack up:-

RAID 0 – data striped across multiple disks

- +ve No loss of capacity
- ve No redundancy – if one disk fails the whole array crashes

RAID 1 – disk mirroring with data on one set of disks mirrored to another

+ve 100% redundancy - if one disk fails the other set is still available

-ve Lose 50% of capacity

RAID 5 – data and parity (recovery) information striped across disks

+ve Array can survive single disk failure with minimal loss of capacity

-ve Only protects against single drive failures

RAID 6 – data and double parity (recovery) information striped across disks

+ve Array can survive two simultaneous disk failures

-ve Requires more capacity than RAID 5

Virtual Disk Expansion

A unique feature on D-Link ShareCenter™ Pro unified storage appliances (DNS-1100-4, DNS-1200-5 and DNS-1550-04), virtual disk expansion lets you add capacity beyond that available on the disks inside. This is done by connecting to other iSCSI targets on the network and presenting them as virtual disks which can then be shared on the network using the built-in NAS technology.



Benefits of virtual disk expansion include simple integration of a D-Link unified storage appliance into an existing iSCSI SAN plus the ability to expand storage without having to upgrade existing disks.

Dual Gigabit Ethernet Benefits

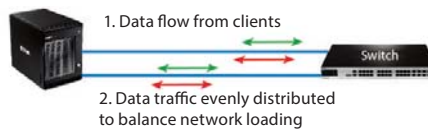
Link Aggregation

Link Aggregation combines both LAN ports into a single group to increase the link speed beyond that of a single cable or port



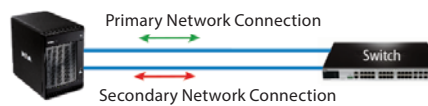
Load Balancing

Load balancing is a way to spread data traffic (workload) between each port, in order to achieve optimal resources utilisation, minimise response time.



Failover

Failover automatically switches the data traffic from a failed port to a working port. Should the port come back then the information will be retransmitted



Multiple IP Support

Connect multiple IPs from different LAN areas



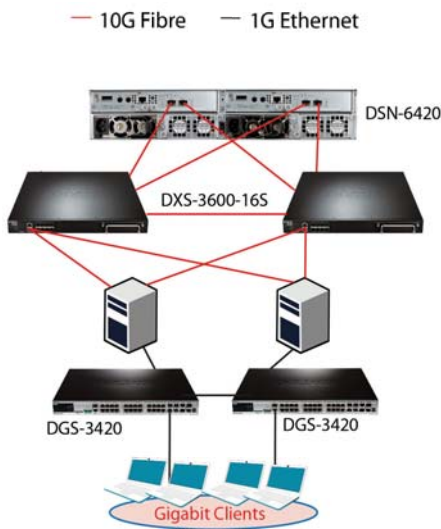
D-Link scalable iSCSI SAN Network Storage Arrays

Medium to large enterprises wanting to centralise storage in the datacentre, will use SAN (Storage Area Network) technology to connect servers to scalable storage arrays.



In the past this would have required specialised Fibre Channel hardware but nowadays is just as likely to be implemented using iSCSI carried over standard Ethernet switches and cables.

Crucial requirements here are high-performance and highly available iSCSI storage systems, to support servers running messaging, database and line of business applications. Increasingly these will be hosted on virtual servers running on a mix of hypervisors, often servicing private and hybrid cloud implementations.

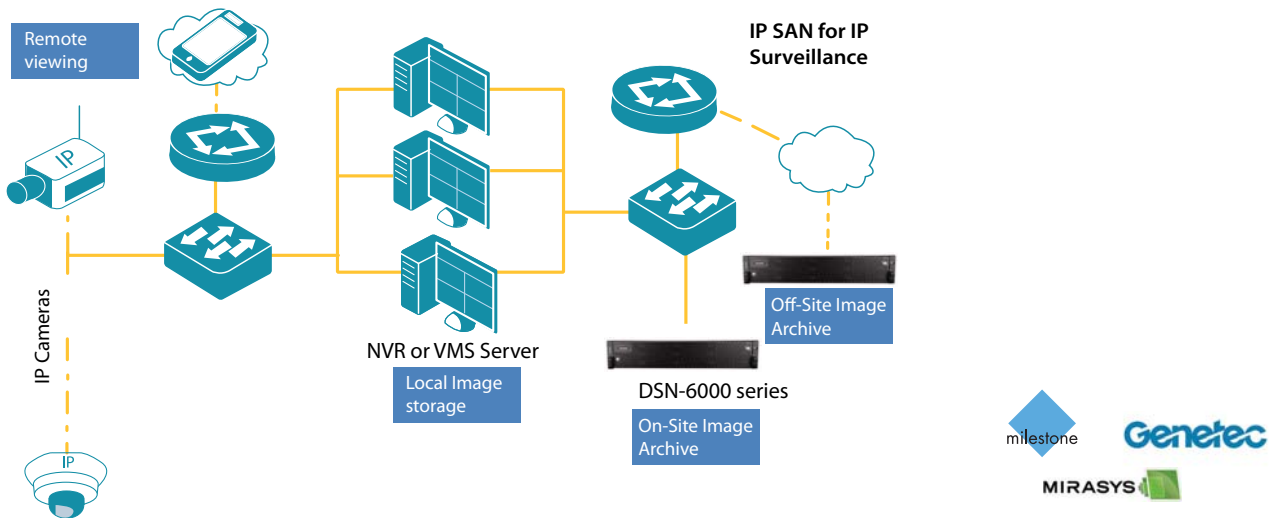


Switch and Controller Redundancy

D-Link has a complete range of high-performance and highly redundant network storage arrays that are simple to deploy and manage. As well as iSCSI, all support industry-standard SATA and SAS disk technologies, have built-in RAID and thin provisioning as standard. Volume snapshot and remote replication facilities are also included, with no need for additional licenses, plus a variety of high-availability options including redundant controllers, power supplies and fans.

Typical uses

Storage for IP Surveillance



Line of business applications – iSCSI storage is presented to host servers and applications just like direct attached storage, offering high-performance with the added advantage of central management and data protection.

Virtualisation – support for the leading virtualisation platforms, such as VMware, Hyper-V and Citrix XenServer, allows D-Link iSCSI storage to be provisioned and expanded on demand to meet rapidly changing business needs.

Storage consolidation – instead of multiple arrays directly attached to individual servers, storage can be provisioned and managed centrally.



DSN-6000 Series storage arrays

Highly available storage for business-critical applications

- 12 hot-swap SATA/SAS disk bays, expandable to 60 bays using DSN-6020 JBOD expansion arrays
- Up to 180TB (using 3TB disks)
- Multiple RAID levels including RAID 6/60 for dual-disk failure protection
- Redundant controller card option for active/active failover
- High-performance iSCSI interface with hardware offload engine and either 4 Gigabit (DSN-6110) or two 10GbE ports (DSN-6410) per controller
- Redundant hot-swap power supplies and fans
- Battery-backed cache option for high availability
- Remote replication, cloning and snapshots
- Windows VSS support
- Up to 1024 iSCSI targets and 512 writeable snapshots
- VMware, Hyper-V and Citrix virtualisation ready







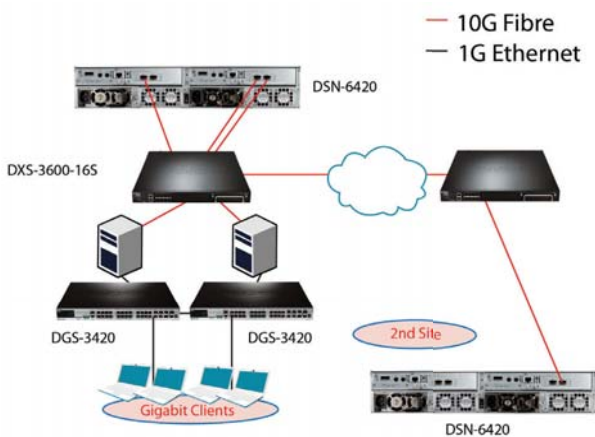
DSN-3200-10 15-Bay iSCSI SAN Array

Scalable iSCSI SAN array for small to medium business

- 15 hot-swap SATA disk bays
- Up to 30TB (using 2TB disks)
- Powerful System-on-a-Chip design capable of over 80,000 IOPS
- Support for RAID levels 0/1/1+0/5
- Battery-backed cache (512MB, upgradeable to 4GB)
- 8 Gigabit network ports with 802.3ad Link Aggregation
- Embedded IP-SAN Device Manager (IDM) for storage management
- Volume virtualisation with online capacity expansion

DSN-6000 Series product feature matrix:

				
	DSN-6110	DSN-6120	DSN-6410	DSN-6420
Raid controller	Single	Dual - active/active	Single	Dual - active/active
iSCSI ports	4 x Gigabit Ethernet	8 x Gigabit Ethernet (4 per controller)	2 x 10GbE	4 x 10GbE (2 per controller)
Number of disk bays	12 (SATA/SAS) 3.5in, hot-swap			
Expansion enclosure	DSN-6020 (12 bays, 4 enclosures per stack)			
Cache memory	4GB per controller			
Power supplies	2 x 500W (hot-swap)			
iSCSI	Hardware offload engine • CHAP authentication • 128 sessions per controller			
High availability	Dual active/active controllers • Battery-backed cache module Online firmware upgrade without re-booting • Microsoft MPIO, MC/S, Trunking and LACP Flexible RAID group ownership			
Advanced data protection	Writeable snapshots (up to 512) • Windows VSS support Configurable N-way mirror • Online disk roaming Instant volume configuration restore			
Data security	Volume replication tool with multipath support VLAN 802.1Q/802.1p			



Controller Redundancy and Replication

Some DSN-6000 features explained:

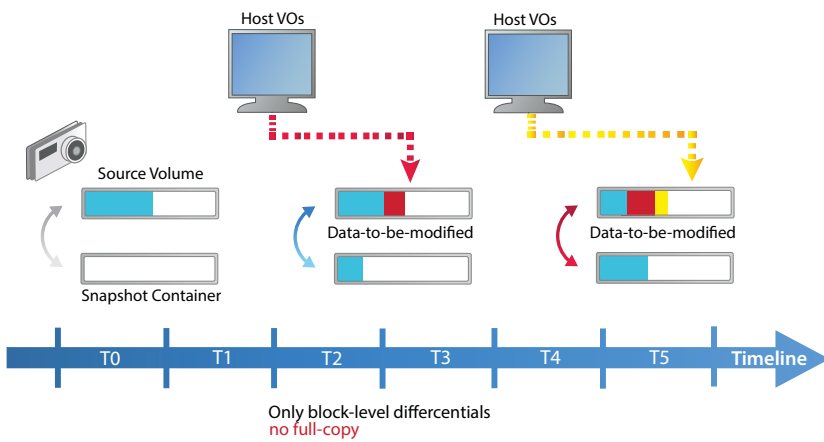
Remote Replication

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

All DSN-6000 storage solutions are supplied complete with snapshot capabilities and remote replication as standard.

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 setup with multiple destination targets, allowing administrators to replicate data to different locations. snapshot technology ensures data can be restored quickly and easily without the need for lengthy restore from a back-up. Remote replication and snapshot technology are supplied as standard with all DSN-6000 Series storage solutions.

Volume snapshots



A valuable option of D-Link unified storage appliances and the DSN-6000 Series, a snapshot is a complete record of the data held on an iSCSI volume at a particular point in time. snapshots can be taken in seconds and, unlike a conventional backup, require minimal amounts of storage. That's because, instead of copying every block of data, snapshots only store changes made to the original over time.

Benefits include the ability to quickly undo changes and restore a volume to the way it was at an earlier date without the need to copy data from a backup. snapshots can also be used to take backups of open files and to test new applications using real data without affecting production systems. D-Link DNS-6000 Series also supports the Microsoft snapshot technology available in Windows Server – VSS (Volume Shadow Copy Service).

High availability



A single D-Link DSN-6000 Series array may provide storage to multiple host servers. It therefore needs to be highly reliable and able to continue working even when one of its components fails. High-availability options include:

- Redundant hot-swappable 500 Watt power supplies
- Redundant fans
- Redundant second controller with active/active failover
- Battery backup module to provide cache protection in the event of a power failure for up to 72 hours
- RAID support 1,1,0+1,3,5,6,10,30,50,60
- Expansion arrays have redundant SAS controllers
- Online firmware upgrade with no re-boot required
- Multiple network ports with automatic failover
- Remote replication built-in

Benefits include being able to provide the failover and redundancy demanded by companies looking to support business critical applications, as well as virtualisation and consolidation needs.





Storage for Surveillance

Modern IP Surveillance systems are an affordable and effective way of keeping a vigilant eye on buildings, equipment and other valuables. D-Link is a leading vendor of such systems with, in its range of network storage appliances, models specifically geared towards simplifying the deployment of a complete IP Surveillance solution.

Recording space

Cameras operating 24 hours a day can generate a huge amount of data. Data that keeps on growing, fuelled by the introduction of high resolution camera technology, the need to keep recordings for longer periods and an increasing awareness of what IP Surveillance has to offer.

A network storage appliance can help here by providing a flexible,

easily extendable and secure store for your surveillance recordings, without the need for custom recording hardware. Out go messy tapes and limited capacity DVDs, instead video recordings are stored on hard disk for quick and easy playback while built-in RAID protection, together with integrated backup and remote replication tools, ensures the security and ready availability of recordings, whatever happens.

video from your cameras, enabling a complete IP Surveillance solution to be deployed without the need for additional hardware or specialised monitoring and management tools.

For small business users, the ShareCenter™ DNS-325 and DNS-345 can be configured to run a local Surveillance Center app, to collect and store recordings from up to four IP cameras.

Did you know...

Fitted with just two 3TB hard drives, a D-Link storage appliance can store high-quality video and audio for up to four cameras for 8 weeks or more*.

* Actual capacity dependent on recording format and schedule

Network cameras can be configured to record direct to any D-Link NAS appliance, regardless of the camera vendor involved. Likewise, NAS can be used to support larger deployments involving multiple camera feeds and centralised recording and monitoring consoles.

For the ultimate in performance and capacity, the iSCSI support provided by D-Link unified and enterprise storage appliances is hard to beat.

Surveillance tools, too

D-Link network storage appliances can be used with virtually any IP Surveillance product to provide secure and extensible storage for recordings. However, that isn't all they have to offer. Some also include built-in Network Video Recorder (NVR) software, to capture, monitor and manage

Customers looking for something more capable, meanwhile, can opt for a standalone Network Video Recorder – effectively a NAS appliance delivered ready-configured to accept video from multiple network cameras without turning on a computer.

D-Link® Bandwidth and Storage Calculator	
Compression:	<input type="radio"/> MJPEG <input type="radio"/> MPEG4 <input checked="" type="radio"/> H.264
Resolution:	<input type="radio"/> VGA/D1 <input type="radio"/> 1.3 Megapixel <input type="radio"/> 1MP/720P <input type="radio"/> 3 Megapixel <input checked="" type="radio"/> 2MP/1080P
Video Quality:	<input type="radio"/> Low <input checked="" type="radio"/> Medium <input type="radio"/> High
Average Frame Size:	34 KB
Number of Cameras:	60
Frame Rate per Camera:	5 FPS
Hours of Motion:	14 Hours a Day
Storage in Days (per camera):	30
Total Bandwidth:	81.6 Mbps
Average Bandwidth per Camera:	1.4 Mbps
Estimated Storage:	15.4 TB



Stand Alone Network Video Recorder DNR-326

2-Bay Professional Network Video Recorder

- Support for all D-Link cameras plus other brands (Axis, Cisco, Mobotix, Panasonic, Sony etc.)
- 2 disk bays for SATA disks up to 3TB with optional RAID1 protection
- Full HD (1080p) recording
- Gigabit Ethernet connectivity
- Patrol, focus and PTZ, functions
- snapshot, full screen and digital zoom
- Smart Search technology to simplify event investigation
- Digital watermark to prevent tampering with recordings



mylink™ Network Video Recorder DNR-322L

Easy to configure Network Video Recorder with remote access

- Easy setup via the mylink™ portal
- Real-time monitoring and playback of recordings via a browser, from mylink™ website or built-in NVR website
- Support for D-Link cameras up to 3 Megapixel resolution
- 2 disk bays for SATA disks, up to 3TB with optional RAID1 protection
- HD recording
- Gigabit Ethernet connectivity
- Automated backup



JustConnect DNR-2060-08P

Multi-Functional Network Video Recorder

- 6 disk bays for SATA disks up to 3TB (18TB total capacity)
- 8 Gigabit network ports with 802.3at Power over Ethernet for ease of camera installation
- High speed Full HD (1080p) recording from up to eight cameras
- Remote management plus self-contained local controls and display option
- Patrol, focus and PTZ functions
- snapshot, full screen and digital zoom
- Smart Search technology to simplify event investigation
- Digital watermark to prevent tampering with recordings

D-ViewCam™ NVR

D-Link Network Video recorders feature bundled D-ViewCam™ NVR monitoring and recording software with an integrated console to manage up to two NVR appliances, giving 16 concurrent live view channels, easily organised by dragging and dropping camera feeds onto the display window.

The Playback Manager has a similarly clean and simple web interface allowing users to play, search or export video, with the ability to continue recording live while viewing or searching footage.

An integrated Backup and File Manager also simplifies the process of backing up video data from the NVR to external storage with digital watermarking to prevent tampering.

mylink™ Cloud Services for D-Link Cloud NVR - DNR-322L

- mylink™ Cloud Services for D-Link Cloud Network Video Recorder offer a simple and easy solution to access your camera live views and recordings from anywhere around the world via the Internet. You can remotely monitor your home or business using a standard web browser

- Access the D-Link Cloud Network Video Recorder through a browser on a computer, notebook or tablet

- You can access live view, playback recorded videos, check on the status and configure the device from anywhere in the world via the Internet





Storage accessories

As well as an extensive range of Storage devices, D-Link has a wide range of accessories and useful extras to help put the finishing touches to your network solution.



Power Over Ethernet (PoE) adapters



Unified Wireless Access System



Hard Disk Drive



Wireless Access Point



IP Surveillance Cameras



DPS Power Supplies



Wireless Controller

Accessories and other networking products such as power supplies, hard disk drives, cameras and Wireless Access Points all connect to the network and provide additional functionality.

Power Over Ethernet (PoE) adapters are designed to help simplify network deployments. PoE adapters bring flexibility to the network by providing PoE functionality to network devices that do not have this function built in already. The adapters can connect devices like Access Points, IP Cameras and VoIP phones to your network switches without a nearby power outlet.

A Wireless Controller allows businesses to control, configure and manage Access Points centrally. The Wireless Controller is a scalable solution that can further manage more Access Points as a business grows with in-built security functionalities to protect the network from intrusion and attack.

And it doesn't just stop there, D-Link Wireless Access Points can be used to provide businesses with flexible and inexpensive ways to send and receive data which also provides robust and stable connectivity. Unified Switches and Wireless Controllers can be used to manage, control and deploy wireless networks more easily and efficiently.

If you need it, D-Link and its partners can supply it.

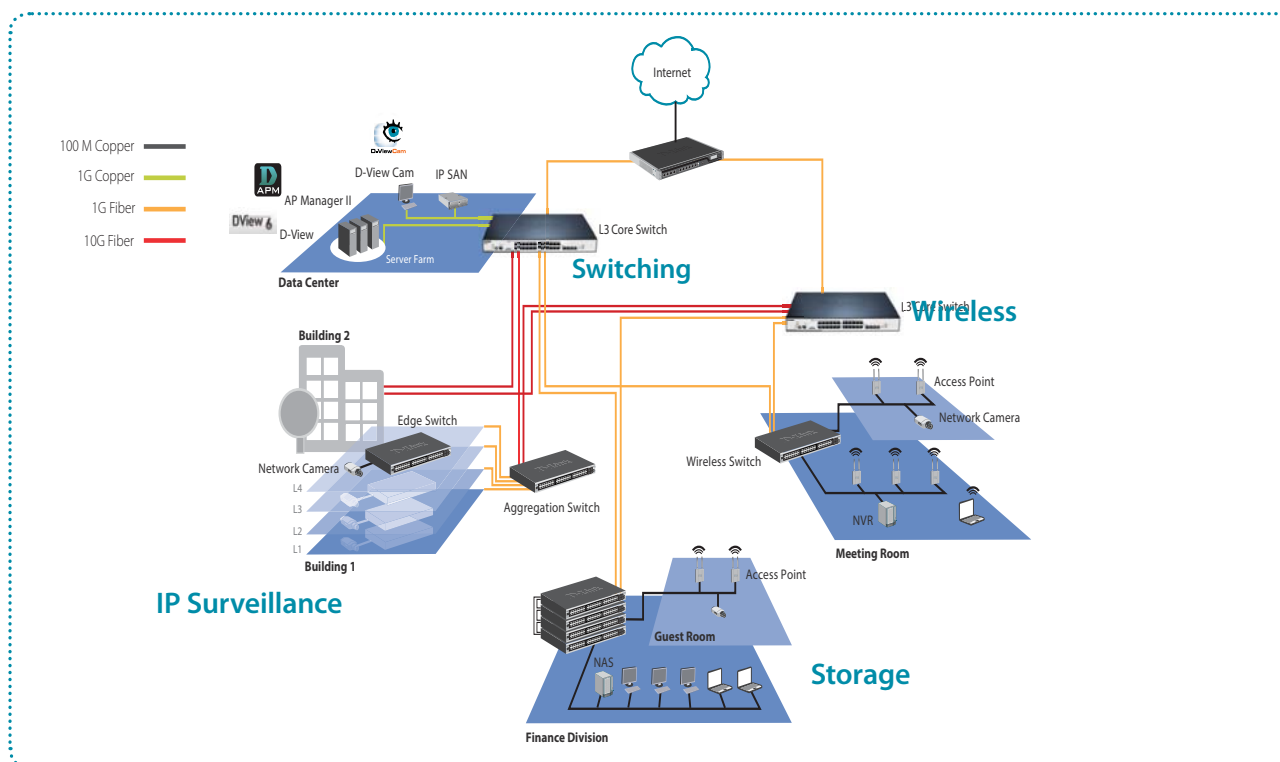
Not just Storage - the D-Link difference

As a leader in the field of Storage Products, D-Link has all the hardware and software products needed to put together an effective network for a wide range of needs. However, that's not the end of the story, D-Link has a lot more to offer beyond the specialist storage products outlined in this guide.

With over 25 years' of networking experience, we are uniquely positioned to offer a comprehensive selection of business solutions from Ethernet Switches, Wireless Access Points, Storage, Security to IP Surveillance cameras.

As technologies continue to develop and converge, any combination or all of these may be integrated and tailored to provide you with end-to-end networking solutions.

Our products are non-proprietary and standards-based, which means they are designed to integrate seamlessly with any network infrastructure that is already in place.



D-Link is the complete network solution.

No other vendor of Storage products can match the depth or products and expertise that D-Link is able to provide.

IP Surveillance

As one of the leaders in both IP Surveillance and general networking products, D-Link can supply everything required to build an affordable and easy to deploy system to ensure the security and safety of people, possessions and places. As well as an extensive range of network cameras, D-Link has digital video encoders to enable existing analogue cameras to be incorporated alongside newer IP cameras. D-Link also provides a comprehensive range of accessories to help with camera installation and setup, plus Network Video Recorders, storage appliances and all the software needed for monitoring and recording.

To see our complete range, please visit www.dlink.com or refer to our Business Solutions Product Guide.

DCS-7010L

HD Mini Bullet Outdoor Cloud Camera

The DCS-7010L HD Mini Bullet Outdoor Cloud Camera is a mydlink™-enabled IP surveillance outdoor camera that lets you monitor an area 24 hours a day. The DCS-7010L is built with a megapixel image sensor with resolutions up to 720p HD that gives a sharp, high-resolution snapshots and videos with rich detail.

- 1/4" Megapixel CMOS sensor
- Built-in ICR
- IR LED for nightmode
- 2-way audio support
- Motion detection
- Privacy mask
- Multicast video/audio stream
- Mobile phone remote surveillance
- Built-in Samba client for saving to a NAS
- ePTZ viewing
- Unified D-Link SDK
- IP-66 weatherproof



DCS-7513

Full HD WDR Day & Night Outdoor Camera

The Full HD WDR Day & Night Outdoor Camera, DCS-7513 is a high definition camera that uses 2 megapixel progressive scan CMOS sensor with a motorised P-iris lens and onboard WDR image enhancement to deliver superior quality images and videos in all lighting and weather conditions.

- 1/2.8" 2 megapixel progressive CMOS sensor
- 2 Megapixels for Full HD Resolution of 1920 x1080, At 30 fpsUp
- SD/SDHC Card slot for onboard storage
- Wide Dynamic Range image enhancement for critical light source
- Remote Zoom and Focus
- Built-in IR LED illuminator with a 30 meter range for use in dark areas
- Real-time H.264/ MPEG-4/ MJPEG
- P-Iris and Motorised varifocal lens with motorised focus control
- Simultaneous streams
- ePTZ for virtual PTZ operation
- 2-way audio support (half-duplex)
- SD/SDHC card slot for camera side storage
- IPv6, QoS, CoS equipped for advanced transmission
- Privacy mask
- Advanced event management
- Multicast video/audio stream
- Samba client for NAS
- ONVIF compliant
- IP-66 weather proof
- Built-in heater and fan for -40°C ~ 50°C operation temperature



DCS-6113

Full HD Fixed Dome IP Camera

Full High-Definition IP cameras with H.264 compression and audio support in a compact housing, they also deliver high resolution Megapixel images.



- 1/2.7" 2 Megapixel CMOS sensor for exceptional 1080p Full HD quality video under varied lighting conditions
- Fixed length lens (4mm, F1.5) with 16x digital zoom
- Removable IR-cut filter for day/night operation
- Integrated infrared LED illumination for 24hr low light and night time operation
- Tamper detection
- Simultaneous Motion JPEG, MPEG-4 and H.264 streaming
- 10/100Mbps Ethernet interface with 803.3af PoE for easy installation
- 2-way audio support
- MicroSD card slot for local video recording (card not included)
- 1 digital input / 1 digital output for sensors and alarms
- Analogue output (NSTC/PAL) for use with existing CCTV systems
- ONVIF compliant

DCS-6616

Speed Dome 12x PTZ IP Camera

A professional IP surveillance solution featuring precise high-speed pan/tilt/zoom functionality which allows for extensive monitoring and object tracking.



- Sony 1/4" Super HAD-II CCD sensor for recording at resolutions up to 720 x 576
- Fixed length lens (3.8 – 45.6mm, F1.6 – 2.7)
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme contrast environments
- Removable IR-cut filter for day and night operation
- Concealed motorised PTZ with 12x optical zoom and 12x digital zoom
- 10 - 400°/sec Pan/Tilt with up to with 360° endless pan and -10° to 170° tilt travel
- Proportional pan/tilt – when camera zooms the tracking speed slows for more accurate control
- PTZ pre-sets to monitor specific locations along a pre-determined path
- Simultaneous Motion JPEG, MPEG-4 and H.264 streaming with multicast support
- 8 alarm inputs / 1 alarm output
- ONVIF compliant

DCS-3716

PoE HD day and night Wide Dynamic Range IP camera

A Full High-Definition Network Camera in a compact housing that delivers Megapixel images under any lighting condition, day or night, and can be used in conjunction with IR illuminators for night time surveillance.



- Sony 1/2.8" 3 Megapixel progressive CMOS sensor
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme contrast environments
- CS mount DC auto iris lens (3.1 - 8mm, F1.2)
- 10x digital zoom
- Full HD recording up to 2048 x 1536 at 15 fps
- Removable IR-cut filter for day and night operation
- 10/100Mbps fast Ethernet interface with 802.3af PoE support for ease of installation
- Simultaneous Motion JPEG, MPEG-4 and H.264 streaming with multicast support
- RS-485 interface for external pan/tilt accessories
- Digital I/O (2 alarm input, 1 alarm output)
- Analogue BNC output
- ONVIF compliant

DCS-6511

Vandal-proof HD resolution and Wide Dynamic Range day and night IP camera



Indoor/outdoor Fixed Dome Camera in a robust weatherproof, vandal-proof IP66 housing, it delivers Megapixel images under any lighting condition, including complete darkness

- 1/3" Megapixel CMOS sensor (1280 x 1024) for exceptional picture quality under varied lighting conditions
- Motorised varifocal lens (3.3 - 12mm, F1.4 - 360) for remote focusing
- Removable IR-cut filter for day and night operation
- Integrated infrared LED illumination for 24hr low light and night time operation
- IK-10 Vandal-proof dome, certified to IP-66 for outside use with built-in heater and fan for use in extreme weather conditions
- Simultaneous Motion JPEG, MPEG-4 and H.264 streaming
- 10/100Mbps Ethernet interface with 802.3af PoE support for ease of installation
- SD card slot for local video recording (card not included)
- JPEG still image capture
- 2 alarm inputs / 1 alarm output

DCS-6818

High speed PTZ Dome IP camera

The DCS-6818 is a professional indoor/outdoor IP surveillance solution featuring precise high-speed pan/tilt/zoom functionality.



- Sony 1/4" Super-HAD II CCD technology plus Wide Dynamic Range (WDR) support for exceptional picture quality in extreme contrast environments
- Removable IR-cut filter for day and night operation
- Concealed motorised PTZ with choice of 18x (DCS-6815) or 36x (DCS-6818) optical zoom, plus 12x digital zoom
- Fast (up to 400°/sec) Pan/Tilt with up to with 360° endless pan and -10° to 190° tilt travel
- Proportional pan/tilt - when camera zooms the tracking speed slows for more accurate control
- PTZ pre-sets to monitor specific locations along a pre-determined path
- IP66 certified casing with built-in heater and fan for operation in temperatures from -40° to 50° Celsius
- Simultaneous Motion JPEG, MPEG-4 and H.264 streaming plus JPEG still image capture
- 8 alarm inputs / 1 alarm output
- Wide range of mounting accessories

DCS-2130

Wireless N HD Cube IP Camera

The DCS-2130 is a unique and versatile surveillance solution. Unlike a traditional webcam, this is a complete system with a built-in CPU and web server that transmits high quality video images for security and surveillance. Simple installation and an intuitive web-based interface offer easy integration with your Ethernet or 802.11n wireless network.



- 1/4" 1 Megapixel progressive CMOS sensor for -HD resolution up to 1280 x 800 pixels
- Quality fixed length lens (3.45mm, F2.0) with 10x digital zoom
- Wireless N Wi-Fi and wired Ethernet interfaces
- Micro SD card slot for local video recording (card not included)
- Built-in microphone and external speaker input for 2-way audio
- Motion JPEG, MPEG-4 and H.264 compression
- e-PTZ to zoom in on areas of interest without the need for robotics
- ONVIF compliant

Wireless

Wireless technology offers businesses more flexible and inexpensive ways to send and receive data. D-Link has a range of robust Wireless Access Points able to work in both 2.4GHz and 5GHz frequencies. Backwards compatible with all Wi-Fi technologies, our wireless range includes single and dual band Wireless N devices that are plenum-rated for mounting on walls and ceilings.

Whether you are a small company looking to add wireless to your LAN or a larger organisation wanting to build scalable wireless networks, our solutions provide stable connectivity which is robust enough to be deployed at the very core of your network, giving you greatly enhanced reliability and coverage. What's more, our wireless devices include advanced security features to keep your business completely safe from unwanted intrusion. Listed below are a select few of our Wireless products. To see our complete range, please visit www.dlink.com or refer to our Business Solutions Product Guide.

DWL - 6600AP

Wireless N Dualband Unified Access Point



The DWL-6600AP provides businesses with a scalable and flexible solution for their wireless network, with concurrent Dualband in both 2.4 GHz and the less crowded 5.0 GHz bands. The AP can work in standalone mode for initial deployment, then self-configuring cluster of up to 8 access points, and ultimately augmented by adding D-Link's Unified Switch solutions to provide centralised wireless LAN management.

Key features

- Concurrent Dualband, works in both 2.4 GHz and 5 GHz simultaneously
- Unified Wireless Solution - standalone/clustered AP, or in conjunction with D-Link's Wireless Controllers and Unified Switches
- 802.11n with wireless speeds to up to 300 Mbps
- Gigabit with 802.3af Power over Ethernet support
- Loading balancing to optimise high network traffic volume
- Enhanced security with the latest Wi-Fi standards as well as RADIUS support
- Multiple SSID and VLAN support for wireless network segmentation
- WMM™ to prioritise audio, video and voice applications
- Integrated RFID recognition for Aeroscout™ devices to track wireless clients
- AirMagnet™ support for accurate planning, designing and troubleshooting of wireless networks

DWL-2600AP

Wireless N Unified Access Point



The DWL-2600AP is an entry level indoor Access Point designed to meet the business needs of companies of all sizes. The AP can work in standalone mode for initial deployment, then self-configuring cluster of up to 8 access points, and ultimately augmented by adding D-Link's Unified Switch solutions to provide centralised wireless LAN management.

Key features

- Unified Wireless Solution - standalone/clustered AP, or in conjunction with D-Link's Wireless Controllers and Unified Switches
- 802.11n with wireless speeds to up to 300 Mbps
- Fast Ethernet with 802.3af Power over Ethernet support
- Loading balancing to optimise high network traffic volume
- Enhanced security with the latest Wi-Fi standards as well as RADIUS support
- Multiple SSID and VLAN support for wireless network segmentation
- WMM™ to prioritise audio, video and voice applications
- Integrated RFID recognition for Aeroscout™ devices to track wireless clients

DAP-2690

Wireless N Dualband PoE Access Point



The D-Link DAP-2690 provides businesses with the perfection solution for deploying Wireless N, delivering reliable performance with no dead spots and speeds of up to 300 Mbps simultaneously in both the 2.4 GHz and 5 GHz bands. Designed for indoor installation, this Access Point enables network administrators to deploy a highly manageable, robust and secure wireless network.

Key features

- Concurrent Dualband, works in both 2.4GHz and 5GHz simultaneously
- 802.11n with wireless speeds to up to 300 Mbps
- Gigabit with 802.3af Power over Ethernet support
- Plenum-rated metal chassis
- 5 operational modes
- Loading balancing to optimise high network traffic volume
- Enhanced security with the latest Wi-Fi standards as well as internal RADIUS server
- Multiple SSID and VLAN support for wireless network segmentation
- WMM™ to prioritise audio, video and voice applications
- Microsoft NAP support

Unified Wired/ Wireless Access Systems

Unified Wired/Wireless Access Switching solution that will be able to fully integrate and control the wireless elements at the edge of the network, creating a Unified Wired and Wireless Access System. It offers centralised management that greatly simplifies wireless deployment and significantly enhances access security, wireless throughput and network convergence.



DWC-1000

Wireless controller



Centralised wireless LAN manager developed specifically for campuses, branch offices, and SMBs looking for an easy to use, scalable solution to manage and configure their wireless network. Its auto-managed Access Point discovery and single point management allow customers to acquire an enterprise class system without the burden of executing large and complex configurations. With a robust and comprehensive security detection system, the DWC-1000 also enables managed APs to block potential attacks from unauthorised users and devices.

Key features

- Support for 96 Access Points through license upgrade and clustering
- Wide range of compatible Access Points available
- Gigabit connectivity
- Dynamic wireless network adjustment to optimise performance
- Can be connected directly to the Internet – ideal for branch offices
- Upgrade licenses available for extra VPN and Firewall functionality
- Easy to use Web interface and straightforward configuration
- USB port for file and printer sharing
- Enhanced security with Captive Portal and RADIUS support

DWS-3160

24-Port Gigabit Unified Wireless Switch



Designed to be the ideal mobility solution for medium-sized and large enterprises and service providers, the DWS-3160 empowers administrators to exercise total control over their wireless networks by centralising all aspects of provisioning and management. Able to manage up to 48 D-Link Unified Access Points per switch and up to 192 in a switch cluster and with optional Power over Ethernet support, the DWS-3160 can be configured to act either as a Wireless Controller in the core network, or as an L2+ Gigabit Switch at the edge, enabling it to be seamlessly integrated into any existing network infrastructure

Key features

- Support for 192 Access Points through license upgrade and clustering
- Wide range of compatible Access Points available
- Optional 802.3af Power over Ethernet support
- Robust wired and wireless security with Access Control Lists, Captive Portal, Rogue AP detection and mitigation
- Fast roaming for seamless mobility and connectivity
- Advance switching and routing support
- Simplified web GUI management and configuration

Did you know...

“D-Link are the market leaders in wireless technology.”*



* Source: Gartner, Market Share: Enterprise Wireless LAN Equipment, Worldwide, 2010

Switches

Switches are fundamental to any business network. With today's networks being challenged with the demand for broader capacity and higher traffic speeds, switches are pushed to work even harder. D-Link's comprehensive portfolio of switches, which includes Gigabit, Fast Ethernet and PoE, have been designed to meet these challenges - whatever the size, nature and complexity of our customers' business operation.

The quality and diversity of our Switch offerings provide the foundation for a full range of network solutions that are guaranteed interoperable, reliable and secure. The breadth and depth of our switches, as well as their seamless interconnectivity with other D-Link products, means there is always a solution available – from the core of your network to its edge, D-Link can make your network more productive.



D-Link Wireless Access Points and Routers are also available, together with security and management products. Moreover, as a billion dollar company, D-Link has the global resources and expertise to develop, deliver and support those products to the same high level, across the board. It can also fast track product development and provide customers with early access to the latest technology.



DGS-1210

10/16/20/24/28/48/52-Port Gigabit Smart Switch

The Smart series offer tremendous flexibility with wide choice of Gigabit ports with additional fibre connectivity. Optional Power over Ethernet enables users to utilise their existing network infrastructure to eliminate the need for additional power outlets.

DGS-1210 Smart switches integrates advanced management and security functions that provide performance and scalability. Featuring D-Link Green technology and compliant with IEEE802.3az Energy Efficient Ethernet as well as intelligent traffic prioritisation in the form of Auto Surveillance and Voice VLANs.



DGS-1500

20/28/52-Port Gigabit SmartPro Switch

The SmartPro series has all the performance, security and management as the Smart series but offers even greater scalability, including the ability to virtually stack switches and manage them together. Up to 32 D-Link switches from one place without the need of stacking cables and the ability to have switches operating together but in different locations. Static routing is also available on SmartPro switches together with other more advanced networking and management features, incorporating Green Ethernet technology for reliable and eco-friendly operation.



DGS-3120

24/48-Port Layer 2 Gigabit Stackable Managed Switch

DGS-3120 series enhanced L2 switches designed to connect end-users in a secure SMB or enterprise network. These switches support physical stacking, multicast and enhanced security, making them an ideal Gigabit access layer solution. The series consists of 24 or 48 Gigabit ports switches with additional fibre uplinks and high bandwidth 10 Gigabit stacking ports, as well as different software images, to provide the ultimate flexibility and scalability. Optional Power over Ethernet enables users to utilise their existing network infrastructure to eliminate the need for additional power outlets.



DGS-3420

28/52-Port Layer 2+ Gigabit Stackable Managed Switch

DGS-3420 series Layer 2+ Gigabit switches delivers performance, flexibility, security, multi-layer QoS and access control, along with redundant power solutions for SMBs and enterprises. With high Gigabit port densities, Gigabit SFP and 10-Gigabit SFP+ uplink and stacking support, and advanced software solutions, these switches can act as either departmental access layer devices or aggregation switches to form a multilevel network structured with backbone and centralised high-speed servers. Optional Power over Ethernet enables users to utilise their existing network infrastructure to eliminate the need for additional power outlets.



DGS-3620

28/52-Port Layer 3 Gigabit Stackable Managed Switch

DGS-3620 series Layer 3 Gigabit switches deliver performance, flexibility, security, multi-layer QoS and access control, along with support for full set of routing protocols. With high Gigabit port densities, Gigabit SFP and 10-Gigabit SFP+ uplink and stacking support, and separate software image options, these switches can act as either departmental access layer devices or core switches to form a multilevel network structured with backbone and centralised high-speed servers. Optional Power over Ethernet enables users to utilise their existing network infrastructure to eliminate the need for additional power outlets.



DXS-3600

8/24-Port Top-of-Rack 10 Gigabit Managed Switch

D-Link's DXS-3600 Series Top-of-Rack 10 Gigabit Managed Switch consists of compact, high-performance switches that feature 10 Gigabit Ethernet switching, routing, and very low latency. The 1U height and front-to-back air flow make the DXS-3600 Series suitable for Top-of-Rack data centre, enterprise and campus aggregation network environments. The DXS-3600 Series consists of 8-port and 24-port 10 Gigabit SFP+ ports switches with an expansion module slot. The optional expansion modules not only provide additional 10 Gigabit SFP+ ports but also 120G stacking, or 10GBASE-T connectivity for different applications.



Did you know...

"D-Link are the market leaders in Ethernet Switching."*

*Source:Gartner,Market Share: Enterprise Ethernet Switches,Worldwide,2010

Security

Every day businesses face potential security breaches from every direction to their network: virus attacks, file sharing, messaging abuse, spyware and many others. Remote workers can unintentionally provide hostile threats with back door access to your business. With such a diversity of threat, gone are the days when a simple protective firewall was enough. And managing a host of different remedies is inefficient and difficult.

D-Link's Unified Services Routers offer secure, high-performance networking solutions to address the growing needs of businesses. The routers are packed with advanced security and management features that can also be integrated easily into your existing infrastructure. These routers provide your remote workers with secure access through the powerful VPN engine.



To see our complete range, please visit www.dlink.com or refer to our Business Solutions Product Guide.

Unified Services Routers

D-Link's Unified Services Routers include rich functionalities, such as IEEE 802.11n, secure wireless access, 3G WAN redundancy, IPv6 and comprehensive VPN features. The DSR Series provide a signature package to enhance the security of your network by identifying intrusion patterns and blocking external threats.

DSR-250N



- 10/100/1000BASE-T x1 (WAN)
- 10/100/1000BASE-T x8 (LAN)
- IEEE 802.11b/g/n Wireless LAN (2.4 GHz)
- USB 2.0 port x 1
- 2dBi dipole antennas x 2 (Detachable)
- External power supply
- D-Link Green technology

DSR-500N



- 10/100/1000BASE-T x2 (WAN)
- 10/100/1000BASE-T x4 (LAN)
- IEEE 802.11b/g/n Wireless LAN (2.4GHz)
- USB 2.0 port x 1
- 2dBi dipole antenna x 3 (Detachable)
- Internal power supply
- D-Link Green technology

DSR-1000N



- 10/100/1000BASE-T x2 (WAN)
- 10/100/1000BASE-T x 4 (LAN)
- IEEE 802.11 a/b/g/n (2.4GHz + 5GHz)
- USB 2.0 port x 2
- 2dBi dipole antenna x 3 (Detachable)
- 3G support
- Internal power supply
- D-Link Green technology

All of the below features apply to all of the range:

- Static/Dynamic IP WAN Type
- Point-to-Point over Ethernet (PPoE)
- SSL/IPSec/PPTP/L2TP VPN
- VPN Hub and Spoke
- IPSec/PPTP/L2TP VPN Pass-Through
- 3G WAN Redundancy (DSR-1000N only)
- Network Address Translation (NAT)
- Transparent Mode
- WAN Traffic Failover
- Outbound Load Balancing (DSR-500N/1000N only)
- Remote Management (Web, SNMP, SSH, Telnet)
- Internet Group Management Protocol (IGMP) Proxy/Snooping
- Stateful Packet Inspection (SPI)
- L2 to L7 Access Control
- IP/MAC Binding
- Virtual LAN (VLAN)
- Intrusion Prevention System (IPS)
- Wireless Security (WEP, WPA, WPA2, WPS)
- Multiple SSIDs
- SSID-to-VLAN Mapping
- IPv6 Phase 2 Certified

D-Link Green – for environmentally friendly storage

D-Link storage appliances are configured with a variety of features to conserve and manage energy without affecting performance.

For example, the power consumption of hard drives in a D-Link array can be reduced to a minimum using the auto disk spin down feature, saving power when disks are not in use.

Some appliances can also be configured to shut themselves down overnight or at other times of inactivity and, similarly, be scheduled to power up ready for duty when needed.

Power supplies are all 80 PLUS certified, a certification granted to products that have more than 80% energy efficiency at given levels of load. This enables D-Link appliances to run more efficiently by using less electricity, allowing them to run at a cooler temperatures increasing product lifespan and reducing operating costs.

Temperature controlled cooling fans are another key feature along with D-Link Green Ethernet technology to switch off network ports when not in use and fine tune signal strength to meet cable length requirements.

Green technologies found on D-Link network storage appliances:

- **Hard Drive Hibernation:** Reduces power consumption and noise, and also extends the life of the hard drives.
- **Low Power Consumption:** D-Link NAS devices are powered by low power CPUs to save on energy and cooling bills.
- **Smart Fan Design:** Automatically adjusts the fan speed based on temperature to efficiently dissipate heat and conserve the power.
- **D-Link Green Ethernet:** Allows the device to optimise power usage based on dynamic detection of cable length and port activity.
- **Schedule Power On/Off:** Turns the appliance off when not needed.



D-Link Assist



Expect instant help if the unexpected happens

If the unexpected happens 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.



Comprehensive cover available across all D-Link business products

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.

As standard, when you purchase a D-Link product we will exchange it should something go wrong.¹

Convenient choice of three service levels to suit your needs

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

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

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

Peace of mind from our award-winning support services

Plug into our network of highly trained specialists who will act quickly to diagnose your problem and take instant corrective action.

Choose the enhanced service level that is right for you

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

Get expert help with your installation and configuration

Available on selected products, D-Link Assist can help you get your new hardware up and running with the minimum of fuss.

Installation services include unpacking, quality inspection, interconnection with host server, and installation and integration of software.²

¹ Only for the duration of the hardware warranty for as long as the original buyer owns the product. Original proof of purchase may be required.

² D-Link products only.

Benefit from D-Link's global reach and local support

Established in 1986 D-Link has evolved to become a billion dollar global enterprise with 160 offices across 71 countries.

With highly trained D-Link Assist technicians on standby across Europe you can be sure of the very best in local support, wherever you are.

Dare to compare

D-Link Assist offers remarkable value, service of the highest quality at a very reasonable price. We challenge you to find a more competitive technical support solution.

Why D-Link?

D-Link is one of the world's leading network infrastructure companies, providing a complete end-to-end solution including Switching, Storage, IP Surveillance, Wireless and Security ensuring interoperability, from one vendor, with award winning support.

For over 27 years, D-Link has designed, developed and manufactured award-winning products. D-Link prides itself on consistently delivering innovative, high-performing and intuitive products for businesses. With D-Link technology you can increase network performance and cut operational costs.

D-Link delivers its extensive range of networking products to organisations and consumers through its global network of channel partners and service providers. D-Link understands the significance of accessing, managing, securing and sharing data and digital content, and has pioneered many IP technologies to deliver a fully integrated Digital Home and business network experience.



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 and cover applies 24/7 for every day of the year including holidays.



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.



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.

Longer warranty for longer life. For extra reassurance, D-Link Assist gives you the option of extending warranties on any D-Link business products that you purchase by three years.

D-Link assist is currently available in the following countries: Austria, Belgium, Czech Republic, Denmark, Finland*, France, Germany, Hungary, Republic of Ireland, Italy*, Luxembourg, Monaco, The Netherlands, Norway*, Poland, Portugal*, San Marino*, Spain*, Sweden*, Switzerland*, United Kingdom and Vatican.

* Partial coverage available.

For further information: www.dlink.com



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