# Networking and Video Surveillance for Business

Switching options for all businesses, from small to enterprise level

IP cameras and video surveillance solutions to suit all budgets

The very fastest wireless connections for business users at home or office

D-Link®
Building Networks for People

# Choose D-Link for more performance, more reliability, more functionality

For 29 years, D-Link has been creating complete, end-to-end networking solutions that deliver just that, and more. With a track record of product innovation and industry-beating growth, D-Link is today a billion dollar company with the scale, the resources, the experience and the expertise that the world's most demanding businesses look for.

How has this been achieved? We make sure we stay really close to our customers' businesses and then, because our R&D resources are geared to fast-track product development, we provide them with early access to the most advanced solutions possible.

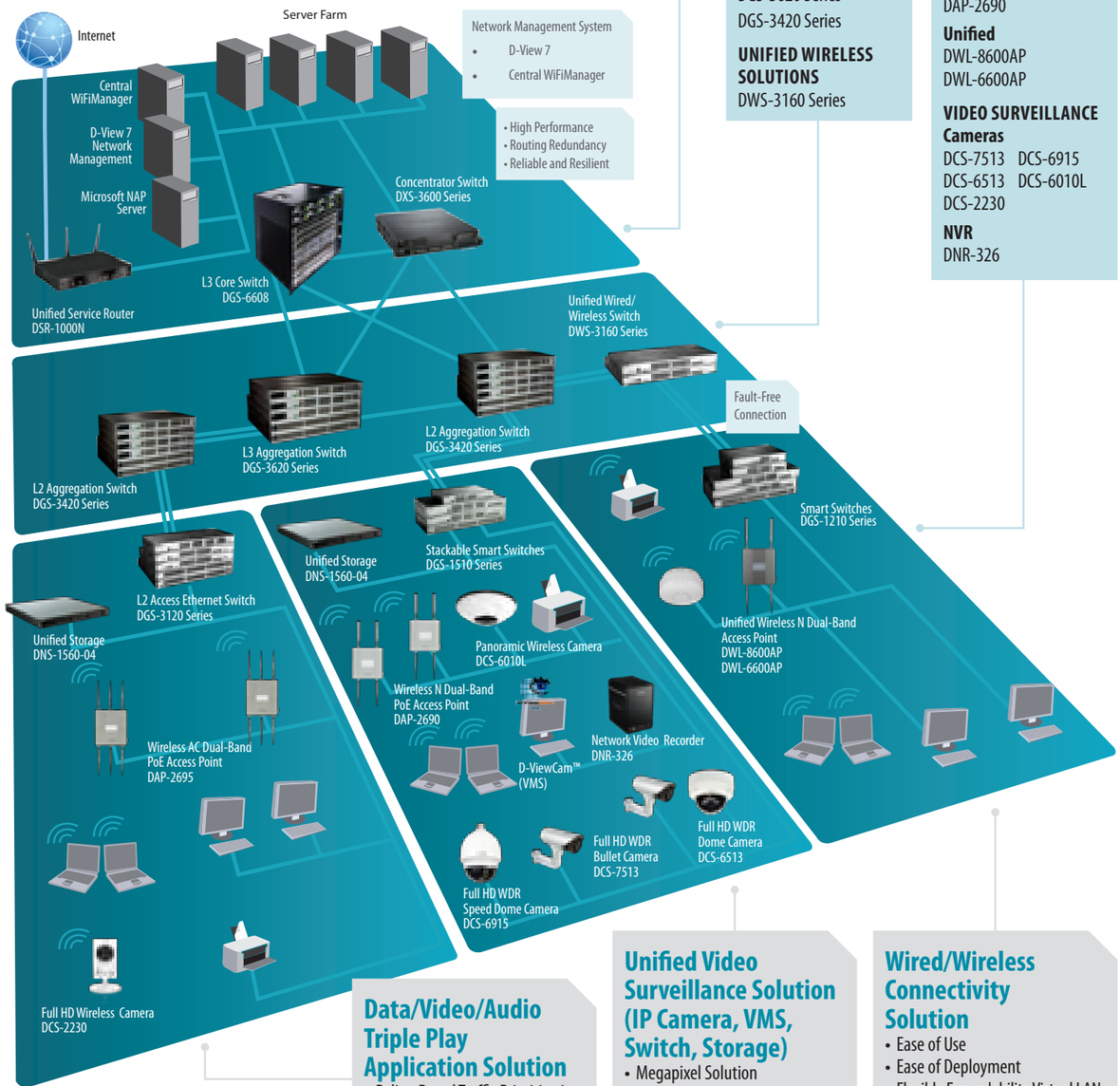
It all adds up to state-of-the-art solutions that will really work for your business – D-Link's switching, wireless, security, surveillance, storage and management solutions deliver best-in-class performance. We offer standardised technology with industry leading functionality integrated into highly flexible, highly reliable and highly secure solutions that are easy to implement, at a price you can afford. Who could ask for more?

## Contents



# Key Solutions

D-Link is a global leader in providing network connectivity solutions for a range of businesses. From the beginning, D-Link engineers have researched, designed and manufactured innovative, standards-based networking solutions that provide our customers with secure, reliable, easy to manage high-performance networks. We sell our state-of-the-art hardware at the best prices, and even though price may be the deciding factor for many new customers, D-Link's innovation, reliability and service keeps them loyal year after year.




## Core Network

**LAYER 3 CORE ETHERNET SWITCHES**
DGS-6608
DXS-3600 Series

## Aggregation Network

**LAYER 2 / LAYER 3 AGGREGATED ETHERNET SWITCHES**
DGS-3620 Series
DGS-3420 Series

**UNIFIED WIRELESS SOLUTIONS**
DWS-3160 Series

## Access Network

**LAYER 2 ACCESS ETHERNET SWITCHES**
DGS-3120 Series

**SMART SWITCHES**
DGS-1510 Series
DGS-1210 Series

**STORAGE**
DNS-1560-04

**WIRELESS ACCESS**
**Standalone**
DAP-2695
DAP-2690
**Unified**
DWL-8600AP
DWL-6600AP

**VIDEO SURVEILLANCE**
**Cameras**
DCS-7513 DCS-6915
DCS-6513 DCS-6010L
DCS-2230

**NVR**
DNR-326

## Data/Video/Audio Triple Play Application Solution

- Policy-Based Traffic Prioritisation
- Optimise the Quality of Multi-Services

## Unified Video Surveillance Solution (IP Camera, VMS, Switch, Storage)

- Megapixel Solution
- Standalone NVR/VMS
- PoE Switch
- iSCSI SAN

## Wired/Wireless Connectivity Solution

- Ease of Use
- Ease of Deployment
- Flexible Expandability Virtual LAN
- Endpoint Security
- Single IP Management



# Access Network

Over the past few years, enterprise access networks have seen one of the fastest areas of growth. As technology has evolved and user demand has increased, enterprise access networks have turned from a 'traditional' data network to a more complex network with integrated data, voice and multimedia services. D-Link, in meeting the needs of businesses to have more productive processes, is providing the following solutions for their access network:

## Wireless Connectivity

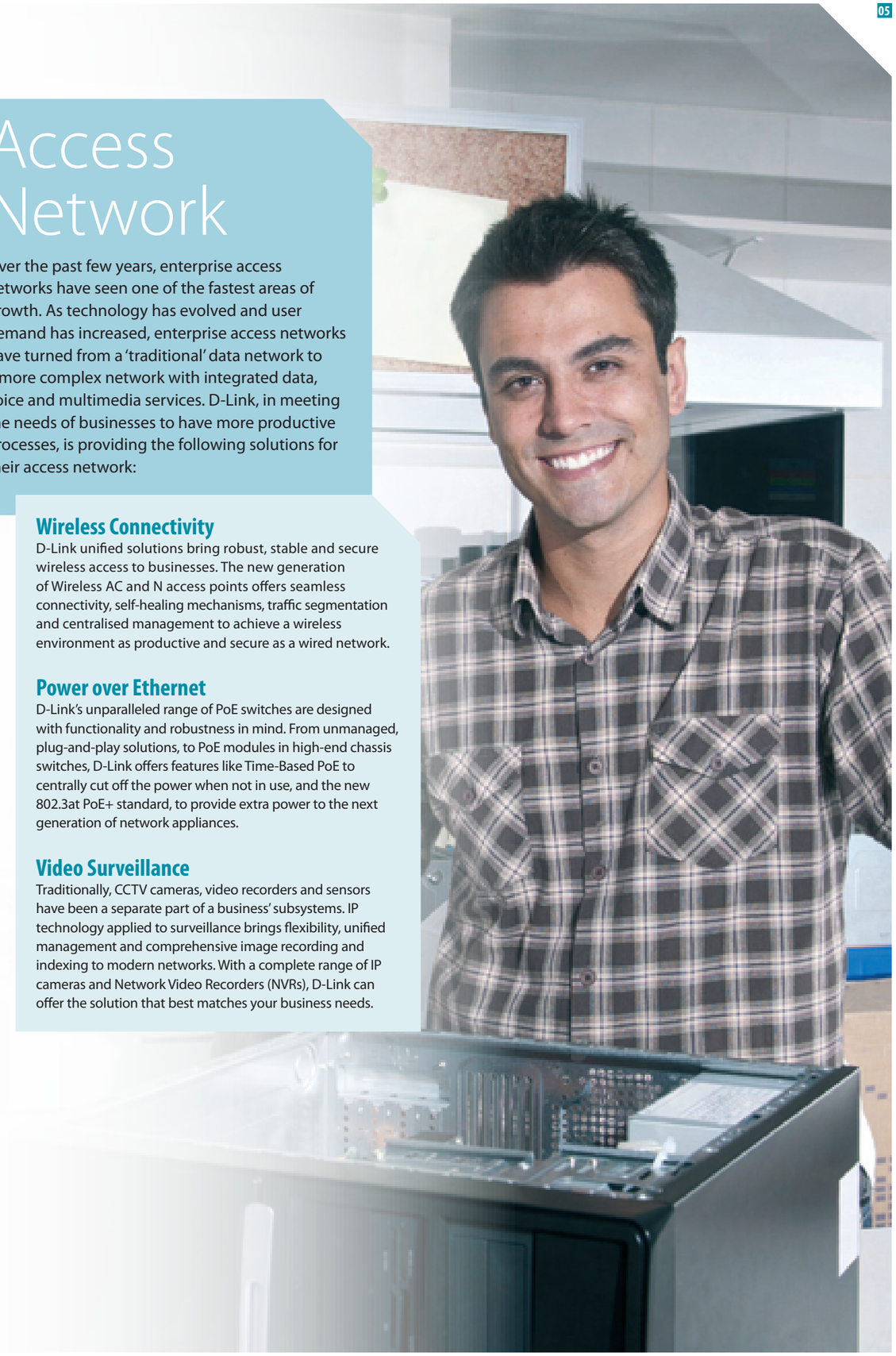
D-Link unified solutions bring robust, stable and secure wireless access to businesses. The new generation of Wireless AC and N access points offers seamless connectivity, self-healing mechanisms, traffic segmentation and centralised management to achieve a wireless environment as productive and secure as a wired network.

## Power over Ethernet

D-Link's unparalleled range of PoE switches are designed with functionality and robustness in mind. From unmanaged, plug-and-play solutions, to PoE modules in high-end chassis switches, D-Link offers features like Time-Based PoE to centrally cut off the power when not in use, and the new 802.3at PoE+ standard, to provide extra power to the next generation of network appliances.

## Video Surveillance

Traditionally, CCTV cameras, video recorders and sensors have been a separate part of a business' subsystems. IP technology applied to surveillance brings flexibility, unified management and comprehensive image recording and indexing to modern networks. With a complete range of IP cameras and Network Video Recorders (NVRs), D-Link can offer the solution that best matches your business needs.



# Aggregation Network

Aggregation Networks distribute traffic from an Access Network across the business. Routing, filtering and WAN access processes, and access to resources like network storage, all therefore take place at this level. D-Link offers flexible and robust solutions with Layer 2+ and Layer 3 managed switches, ready for the next generation of IP networks:

## IPv6-Ready

As the range of IPv4 addresses has been depleted, IPv6 is being deployed in an increasing number of organisations such as Internet Service Providers (ISP) and international data carriers. Therefore businesses need to build the migration from IPv4 to IPv6 into their Network strategies to ensure that they are able to benefit from the advanced services that only IPv6 can offer. Most D-Link aggregation switches are certified 'IPv6 Ready' and are capable of being integrated into current and future networks, protecting both your investment and IT budget.

## Bandwidth Management & Traffic Filtering and Analysis

With the surge of traffic and additional services, the business network is under increasing pressure, so IT administrators need to ensure that traffic is at a reasonable level and network resources are utilised properly. D-Link offers the tools to run a network smoothly and avoid disruptions and bottlenecks, such as bandwidth management to a high level of granularity. D-Link has SafeGuard Engine technology, too, which protects the switch from unexpected traffic peaks or virus outbreaks, and sFlow compatibility to analyse network sessions in great detail.

## Network Storage

As business data grows and new technologies like virtualisation become more widely implemented, effective reliable storage is of primary concern. D-Link's range of Network Attached Storage (NAS) devices ensure that all your important data is easily accessible yet protected from unauthorised access. RAID technology protects your content from disk failures and additional services such as FTP and File Server provide secure access to your data from the Internet. For businesses with more complex storage needs, D-Link's Unified Storage Appliances provide advanced features like consolidation, volume snapshots and virtualisation, with a range of devices that are certified 'VMware Ready'.

# Core Network

The Core is the backbone of any big business network, and is therefore the most critical 'component'. High availability, resilience and fault isolation are important factors if you are to avoid critical disruptions. D-Link has the technology to ensure that the core processes run smoothly and meet your business needs:

## 10 Gigabit

With an increase in network traffic, Gigabit technology has become a bottleneck at the core portion of the network, which is where 10 Gigabit switches come in. To ensure that the core can provide the services and features needed at the lower levels of the network, 10 Gigabit uplinks can also be deployed on Gigabit switches. D-Link offers 10 Gigabit technology in both switches and copper/fibre modules in a wide variety of Layer 2+ and Layer 3 devices.

## xStacking Technology

D-Link's stacking technology provides resilience and high availability in the form of high-speed, dual-ring stacking solutions that can work around a hardware fault in milliseconds. Faulty hardware can be hot-swapped and replaced without impacting the rest of the network, minimising downtime and ensuring that critical processes are not interrupted.

## 30-Second Layer Guide

***Network switch technology operates on a 'layer' basis to ensure total interoperability. Here's our quick guide to what the layers mean...***

### Layer 1

The Physical Layer, which governs how the network hardware fits together and its assorted electrical/optical specifications. Responsible for the transmission and reception of raw data streams via physical means.

### Layer 2

The Data Link Layer, specifies how network traffic is shared and data moved around. It's here that Ethernet switches mostly operate, forwarding traffic based on the universally implemented MAC address of attached devices. In other words, the formation of the data connection between two or more devices.

### Layer 3

The Network Layer, at which the IP networking protocol works. It's here that routing is done, based on the Internet Protocol address information. A Layer 3 switch can, therefore, route traffic between networks.

### Layers 4-7

As you move up the layers more and more information about the data inside the packets and ultimately the applications involved becomes available. Advanced switches can filter traffic using this information to make more informed decisions on how to process and direct it. It's at this level that FTP servers and the Internet operate, but that's beyond this guide.

## What's a MAC Address?

In networking terms, MAC has nothing to do with the eponymous Apple computers; it stands for Media Access Control and is a unique identifier assigned to network interfaces for communications on the physical network segment. Every device (computer, printer, IP Camera etc) has a MAC address so that a switch knows where to direct traffic.

# Switches

If a switch fails, your business can experience any number of issues, from loss of connectivity for a group of users, to major disruption and downtime for the entire network. D-Link has the knowledge and expertise to help you find the right solution for your business. From the core of your network to its edge, D-Link's comprehensive selection of switches includes 10 Gigabit, Gigabit, Fast Ethernet and PoE that range from entry level to fully managed, more sophisticated solutions. Products under this category include Unmanaged, Smart, Managed, xStack, Chassis and Unified Wireless, all as detailed below.

## Unmanaged

- The simplest way to build a network and let it pretty much run itself
- Plug-and-play connectivity, which makes these perfect for small businesses without a dedicated IT department
- Ideal for small networks that need to share resources
- Several of our unmanaged switches fall into our D-Link Green™ range, specifically designed to reduce energy consumption and utilise recycled packaging, which helps reduce the impact on the environment
- PoE-compliant, eliminating the need for external power supplies and thus allowing you to utilise current cables for a tidier system

## Smart

- Many of the benefits of Managed, as outlined below, but without the complexity or cost
- Ease of configuration through web-management
- Ideal for users wishing to build small- to medium-size networks but who don't need the advanced features necessary for large-scale corporate deployments
- PoE-compliant, eliminating the need for external power supplies, thus allowing you to utilise existing cables for a tidier system

## Smart Managed

- Centralised management and virtual stacking via D-Link's intuitive single IP management
- Layer 3 static routing allows for scalable network design for future business growth
- Supports unique Auto Voice and Auto Surveillance VLANs to prioritise traffic from VoIP phones and IP cameras in the network

## Managed

- Allows administrators to monitor traffic across the network, introduce redundancy and control access
- Found in networks with numerous users and applications, where performance and reliability must be maximised and security enforced
- Ideal for large sites where server farms are deployed, with hundreds of users sharing multiple printers and applications and routinely using wireless access and video-conferencing, such as in corporate headquarters
- Includes D-Link's industry-leading selection of xStack switches
- PoE-compliant, eliminating the need for external power supplies, thus allowing you to utilise existing cables for a tidier system

## xStack

- Award-winning range
- High performance and 10 Gigabit stacking options
- 10 Gigabit, Gigabit and Fast Ethernet versions, with Layer 2 and Layer 3 features
- PoE-compliant, eliminating the need for external power supplies, thus allowing you to utilise existing cables for a tidier system

## Chassis

- Enterprise-class performance, security and control
- Modular architecture with redundant control planes option
- High port density with 10 Gigabit line cards available
- High reliability with fault-tolerant topologies ensures rock-solid connectivity, and D-Link Green™ technology provides eco-friendly power saving
- Redundant loadsharing power supplies and a hot-swappable fan module for mission-critical network applications

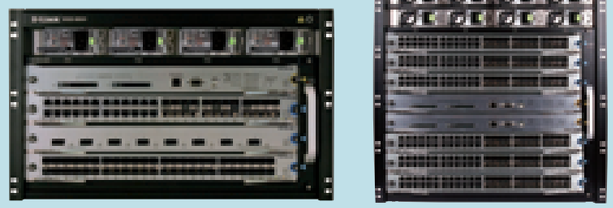
## Unified Wireless

- Managed switches which offer flexible deployment, one single device can manage both wired and wireless access traffic – unified switch = wireless controller + LAN switch
- Feature-rich centralised management for wireless Access Points (AP) and clients, including security policy and RF parameters
- Enables seamless wireless roaming without the need for cursor re-authentication: necessary in particular for Voice-over-WLAN (VoWLAN) applications
- Resiliency of the entire wireless network through self-healing and AP load balancing. The unified switch can effectively manage the wireless bandwidth, optimise WLAN traffic and ensure maximum RF coverage

## Chassis Switches

SINGLE CONTROLLER / DUAL CONTROLLER

DGS-6600 Series



## Concentrator Switches

10 GIGABIT ETHERNET

DXS-3600 Series

## Standalone Switches

| | UNMANAGED | SMART | SMART MANAGED | LAYER 2 | LAYER 2+ | LAYER 3 |
|---|---|---|---|---|---|---|
| GIGABIT ETHERNET | DGS-1000 Series<br>DGS-105/108 Series | DGS-1100 Series<br>DGS-1210 Series | DGS-1510 Series | DGS-3000 Series<br>DGS-3120 Series<br>DES-3200 Series | DGS-3420 Series | DGS-3620 Series |
| FAST ETHERNET | DES-1000 Series<br>DES-105/108 Series | DES-1100 Series<br>DES-1210 Series | | | | |

## PoE Switches

| | UNMANAGED | SMART | SMART MANAGED | LAYER 2/2+ | LAYER 3 |
|---|---|---|---|---|---|
| GIGABIT ETHERNET | DGS-1008P | DGS-100-08P<br>DGS-1210-08P (POE+)<br>DGS-1210-10P (POE+)<br>DGS-1210-24P (POE+)<br>DGS-1210-28P (POE+) | DGS-1500-28P (POE+)<br>DGS-1510-28P (POE+) | DGS-3120-24PC (POE+)<br>DGS-3120-48PC (POE+)<br>DGS-3420-28PC (POE+)<br>DGS-3420-52P (POE+) | DGS-3620-28PC (POE+)<br>DGS-3620-52P (POE+) |
| FAST ETHERNET | DES-1005P<br>DES-1008PA<br>DES-1018P<br>DES-1018MP | DES-1210-08P<br>DES-1210-28P (POE+) | | DES-3200-28P (POE+)<br>DES-3200-52P (POE+) | |

# Power over Ethernet (PoE)

## What is Power over Ethernet (PoE)?

Power over Ethernet allows a single cable (usually referred to as a CAT5 cable) to provide both data connection and electrical power to any PoE-enabled devices such as wireless access points, network cameras or IP phones. PoE essentially passes electrical power along with data on Ethernet (LAN) cabling to compatible network devices, thereby negating the need for power outlets in proximity to the devices being powered.

With PoE you only need one cable for both power and data so wireless access points and Video Surveillance cameras, for example, can be installed without having to run power to inaccessible places such as ceilings or roof spaces. You can also protect such devices from outages, by adding a central Uninterruptible Power Supply (UPS), and both monitor and manage energy consumption centrally – perhaps even switching devices off when they're not needed. Support for PoE can be added to existing networks but, if you're serious about it, PoE-enabled switches don't need additional wiring and are easier to manage. Either way, check for support for industry standards, both on the switches and networking devices you want to power.

## What is PoE +

The original IEEE 802.3af-2003 PoE standard provides up to 15.4 W of DC power (minimum 44 V DC and 350 mA) to each device. Only 12.95 W is assured to be available at the powered device as some power is dissipated in the cable. The updated IEEE 802.3at PoE standard, also known as PoE+ or PoE plus, provides up to 25.5 W of power. PoE+ is beneficial for devices that require more power, such as Pan-Tilt-Zoom cameras, thin clients and video phones. It also expands PoE functionality to a wider range, making it possible to power a larger number of edge devices from a single PoE port.

## How can PoE be Green?

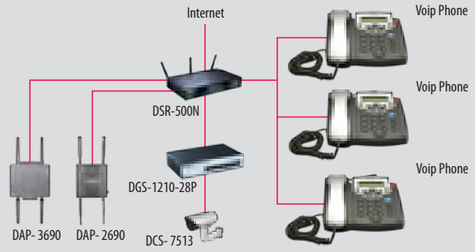
Using D-Link's integrated time-based PoE functionality, it is possible to automatically shut down ports which also shut down the devices on a predefined schedule, saving power and money, and increasing security.

## What is the PoE Power Budget?

The PoE Power Budget is the maximum amount of power that a switch can provide to **all** the devices connected to it. If this is exceeded, then devices will not function correctly as they are not receiving adequate power. In order to choose the right switch, the overall power consumption for the network must be calculated. This can be done by adding up the maximum power demand of every device you intend to connect to the switch.

It is essential to consider the current and possible future power requirements of your network; over-specifying the power budget of a switch in the first instance will result in higher initial costs but could save time and money in the long run.

D-Link has two 'Smart Switch' families to address different requirements – Smart and Smart+. Switches in the Smart+ range have higher power budgets and are capable of providing more power per port than the Smart range which is more economical.




PoE devices can transmit a Discovery Protocol that informs the PoE Switch of the actual power required by the device. If the power is less than the default (15.4W for PoE or 25.5W for PoE+), the PoE switch acknowledges the request with its available power and modifies the power budget accordingly. If the requesting powered device exceeds the power budget for the switch, the port is either powered down, or the port remains in low-power mode.

## Benefits of PoE

### Reduced Costs

With PoE, only one cable – a simple CAT5 Ethernet cable – is required to be routed to each device instead of two (data *and* power), so fewer power adapters or outlets are needed. In large organisations this can bring a major cost reduction.

### Flexibility

A PoE-enabled appliance can be installed virtually anywhere, without the need for AC outlets. This provides flexibility and scalability in placing all the network equipment (switches, wireless access points, and IP cameras) in the most optimal locations instead of locations only where power is available. This also enables better network designs.

### Reliability

PoE infrastructure enables centralised power management that provides back-up with an Uninterruptable Power Supply (UPS) to the devices and all the distributed PD networking devices; even during power failures this ensures the reliability and availability of powered devices.

### Network Control

Network administrators can control and monitor devices using SNMP (Simple Network Management Protocol). Devices can be powered down when not in use or if there is unauthorised access, which allows for increased security.

### Add to, Move or Change the network

PoE-enabled switches enable network additions, moves and changes to be accomplished faster. They allow the network to be more flexible and accommodating to changing business and network requirements.

### Centralised Power Management

Managing a PoE-enabled switch via a web browser or by SNMP, enables remote networking devices to be easily reset or shut down, saving the time and expense of dispatching a technician.

### Security

Shutting down unnecessary PoE network devices when no one is at the office ensures better business security.

### Eco-Friendly

As with security, shutting down unnecessary PoE network devices can also save power and money for a business.

# Typical PoE Applications

## IP Cameras

There are several types of IP cameras – from a basic box camera to an outdoor pan, tilt and zoom (PTZ) to a heated dome camera, and each one has a different power requirement. Basic outdoor IP cameras have a power consumption of about 7 watts; however, additional features require additional power, so an outdoor PTZ device with IR night vision will require significantly more power than an indoor static device.

## IP Phones

IP phones are commonly connected and powered by PoE. A standard IP phone will consume around 4-7 watts of power whereas one with a backlit, colour screen or even video conferencing capability will use substantially more.

## Wireless Access Points

Due to their placements, wireless access points are typically powered using PoE, but different types of Wireless APs have different power requirements. For example, dual-band concurrent APs require more power as they broadcast on both the 2.4 and 5 GHz frequencies. The latest Wireless AC technology delivers wireless speeds of up to 1300 Mbps on the 5 GHz band with enhanced coverage so can benefit from PoE+'s additional power.

# xStack Chassis Switches

## DGS-6600 Series

For a customisable solution based on your business needs, D-Link's DGS-6600 modular chassis series allows you to implement a solution-specific switch with multiple modules. The DGS-6600 is a Layer 3 backbone chassis-based Gigabit switch that provides everything a business needs for a reliable network. This 4-Slot chassis offers a 576 Gbps switch fabric capacity, supporting wire speed L2/L3 packet switching in dynamic or static environments. Some of the features include a high port density, with L2/L3/L4 Class of Service (CoS) and Access Control Lists (ACL), QoS, Link Aggregation, hot-swappable line cards with redundant power supply, and traffic monitoring. Designed for performance and flexibility, this chassis switch offers you the price/performance ratio necessary to deploy a cost-effective enterprise backbone network.

## Principle Product Features

**DGS-6604-SK**
- 4-slot chassis starter kit
- I/O module slots x 3
- CPU module slot x 1
- Switching capacity of up to 576 Gbps
- Up to 144 x Gigabit ports
- Up to 48 x 10 Gigabit ports
- Built-in replaceable fan module
- Built-in dust filter
- Optional Redundant Power Supply includes:
  DGS-6604 4-Slot Chassis
  DGS-6600-CM Control Module
  DGS-6600-PWR 850W AC Power Supply

**DGS-6608-SK**
- 8-slot chassis starter kit
- I/O module slots x 6
- CPU module slots x 2
- Loadsharing/redundant switching capacity of up to 1.152 Tbps
- Up to 288 x Gigabit ports
- Up to 96 x 10 Gigabit ports
- Built-in replaceable fan module
- Built-in dust filter
- Optional redundant power supply includes:
  DGS-6608 8-Slot Chassis
  DGS-6600-CM-II Control Module
  DGS-6600-PWR 850W AC Power Supply

## Available Modules

**10 GIGABIT MODULES**
**DGS-6600-8XG**
8-Port 10 Gigabit XFP Module (DGS-6604)

**DGS-6600-16XS-D**
16-Port 10 Gigabit SFP+ Module with MPLS function DGS-6600 Series

**GIGABIT MODULES**
**DGS-6600-48T**
48-Port 10/100/1000BASE-T Module
**DGS-6600-48TS**
24-Port 10/100/1000BASE-T and 24-Port SFP Module
**DGS-6600-48S**
48-Port SFP Module

**PoE MODULES**
**DGS-6600-48P**
48-Port 10/100/1000BASE-T PoE Module

**CPU MODULES**
**DGS-6600-CM-II**
Control Module for DGS-6604 and DGS-6608

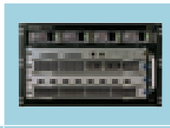
**OPTIONAL REDUNDANT/ REPLACEMENT POWER SUPPLY MODULES**
**DGS-6600-PWR**
850 W AC Power Supply for DGS-6604 and DGS-6608

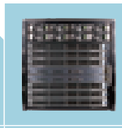
**REPLACEMENT FAN TRAY**
**DGS-6600-FAN**
Smart Fan Module for DGS-6604

## Key Series Features

- 4-/8*-slot modular chassis
- Hot-swappable line cards
- Optional redundant power supply
- 4000 IP interfaces
- 32,000 MAC addresses per module
- 4096 static VLANs
- 8 priority queues
- 128-trunk group, 8 ports per group
- Telnet/console CLI
- SNMP v1,v2c,v3/RMON
- CPU utilisation monitoring
- TFTP client
- Web GUI
- Traffic monitoring
- SYSLOG







| MODEL | | DGS-6604-SK | DGS-6608-SK |
|---|---|---|---|
| Interfaces | Fast Ethernet | | |
| | Gigabit Ethernet | 3 Slots available for any combination of Ports 1 Slot for CPU Module | 6 Slots available for any combination of Ports 2 Slots for CPU Module |
| | SFP Slots | | |
| | Combo Gigabit/SFP Slots | | |
| | 10 Gigabit Slots | | |
| General Features | Stackability | | |
| | Stacking Speed (per Port) | | |
| | Switching Capacity | 576 Gbps | 1.152 Tbps |
| | Forwarding Mode | Store-and-Forward | |
| | Packet Buffer Memory | 2 MB | |
| | MAC Address Table | 32,000 per Module | |
| | Flow Control | 802.3x, HOL Blocking Prevention | |
| | MDI/MDIX | Configurable | |
| Layer 2 Features | Loop Protection | 802.1Q, 802.1w, 802.1s | |
| | 803.2ad Link Aggregation | 128 Groups, 8 Ports per Group | |
| | Port Mirroring | One-to-One, Many-to-One, RX/TX/Both, Flow-Based, RSPAN | |
| | Loopback Detection | • | |
| | Cable Diagnostics | | |
| Layer 3 Features | IP Interfaces | 4000 | |
| | Routing Protocols | Static, RIP v1/v2, RIPng, OSPF v2/v3, BGP v4, BGP+* | |
| | Policy-Based Routing | • | |
| | Route Balancing | ECMP/WCMP* | |
| | IPv6 Tunneling | Static, ISATAP, 6to4 | |
| | VRRP | • | |
| Virtual LAN (VLAN) | VLANs | 4096 Static; 256 Dynamic | |
| | GVRP | • | |
| | Protocol VLAN (802.1v) | • | |
| | Double VLAN (Q-in-Q) | Port-Based / Selective | |
| Multicasting | Groups | 2000 | |
| | Protocols | IGMP v1 / v2 / v3, PIM-SM, PIM-DM, PIM Spare-Dense | |
| Quality of Service (QoS) | Standard | 802.1p, DSCP | |
| | Number of Queues | 8 | |
| | Mode | Strict / WRR / Strict+WRR / DRR / WDRR | |
| | CoS Handling | 802.1p | |
| | Bandwidth Control | Port-Based, Flow-Based | |
| Security | STP Security | BPDU Filtering, Root Restriction | |
| | Per-Port MAC Limitation | • | |
| | Static MAC | 16 | |
| | Storm Control | Broadcast / Multicast / Unicast | |
| | IP-MAC-Port Binding | • | |
| | DHCP Server Screening | • | |
| | ARP Spoofing Prevention | •* | |
| | Traffic Segmentation | | |
| | D-Link SafeGuard Engine | | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Port-Based, Host-Based, Dynamic VLAN Assignment | |
| | Web-Based Access Control (WAC) | | |
| | MAC-Based Access Control (MAC) | | |
| | Network Access Protection (NAP) | •* | |
| | Guest VLAN | • | |
| | Switch Access | RADIUS / TACACS+, 3-Level User Account | |
| Access Control Lists (ACL) | Rules | (number of entries depending on installed Modules) | |
| | ACL Handling | VLAN ID, 802.1p, MAC, IP, IPv6, DSCP, Port, Protocol | |
| | Time-Based ACL | • | |
| Power over Ethernet | Standard | 802.3af (PoE) | |
| | PoE Ports | 48-Port PoE Module (DGS-6600-48P) | |
| | PoE Power Budget | 586-2217 W (dependent on number of DGS-6600-PWRs installed) | |
| | Time-Based PoE | • | |
| Management | Switch Access | Web GUI, Telnet, Console | |
| | sFlow | • | |
| | SNMP | v1 / v2c / v3 | |
| | DHCP | Server, Client, Relay (IPv4, IPv6) | |
| | RMON | • | |
| | TFTP Client | • | |
| | Syslog | • | |
| Physical and Environment | Power Supply | Internal, Redundant | |
| | Maximum Power Consumption | Dependent on Installed Modules | |
| | Power-Saving Technology | | |
| | Operating Temperature | 0°C to 50°C | |
| | Operating Humidity | 10% to 90% RH Non-Condensing | |
| | Dimensions (W x D x H) | 484 x 470 x 280 mm | 445 x 470 x 500 mm |
| | Mean Time Between Failures (MTBF) | Dependent on installed Modules | |
| Modules / Transceivers | 10 Gigabit SFP+ Modules | DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD | |
| | 10 Gigabit XFP Transceivers | DEM-421XT, DEM-423XT | |
| | SFP Transceivers | DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | |

* Implemented in future firmware upgrade

# Layer 3 10 Gigabit Stackable* Managed Switches

## DXS-3600 Series

The D-Link DXS-3600 Series offers two compact, high-performance switches that feature wire-speed 10 Gigabit Ethernet switching, routing, and very low latency. The 1U height and selectable front-to-back or back-to-front air flow make the DXS-3600 Series suitable for enterprise and campus aggregation network environments, while the 8 or 24 fixed 10 Gigabit SFP+ ports and can accommodate more ports with the addition of an expansion module. The expansion modules not only provide extra 10G SFP+ ports, but also increase the flexibility of 120G stacking, or low-cost 10GBASE-T connections for different applications.

## Principle Product Features

**DXS-3600-16S**

- 10 Gigabit SFP+ ports x 8
- Open expansion slot x 1
- Switching capacity of up to 480 Gbps
- Hot-swappable power modules for power redundancy and load sharing
- Hot-swappable fan trays with airflow control provide cooling redundancy

**DXS-3600-32S**

- 10 Gigabit SFP+ ports x 24
- Open expansion slot x 1
- Switching capacity of up to 960 Gbps
- Up to 480 Gigabit stacking bandwidth with four devices functioning together as one
- Hot-swappable power modules for power redundancy and load sharing
- Hot-swappable fan trays with airflow control provide cooling redundancy

## Optional Products

**Optional Software Image Upgrade Licenses**

| | |
|---|---|
| DXS-3600-32S-SE | DXS-3600-32S standard to enhanced image upgrade license |

**Optional Expansion Modules**

| | |
|---|---|
| DXS-3600-EM-4XT | 4-Port 10 GBASE-T Module |
| DXS-3600-EM-8T | 8-Port 10/100/1000BASE-T Module |
| DXS-3600-EM-Stack | 2-Port 120G CXP Stacking Module (for DXS-3600-32S only) |

**Optional Redundant/Replacement Power Supplies**

| | |
|---|---|
| DXS-3600-PWR-FB | 300W AC Power Supply with front-to-back airflow |

**Optional Redundant/Replacement Fan Tray**

| | |
|---|---|
| DXS-3600-FAN-FB | Fan Module with front-to-back airflow |

**Optional 120G Stacking Cable**

| | |
|---|---|
| DEM-CB50CXP | DXS-3600-32S Stacking Cable for use with DXS-3600-EM-Stack |

**Optional 10 Gbps SFP+ Direct Attach Stacking Cables**

| | |
|---|---|
| DEM-CB100S | 10 Gigabit SFP+ 1 m Direct Attach Stacking Cable |
| DEM-CB300S | 10 Gigabit SFP+ 3 m Direct Attach Stacking Cable |

**Optional Management Software**

| | |
|---|---|
| DV-700 | D-View 7 Network Management System |

*Physical stacking only available on DXS-3600-32S

## Key Series Features

- 1x 10/100/1000BASE-T Ethernet port for out-of-band remote management
- Fast performance with up to 960 Gbps switching capacity
- 24 fixed SFP+ 10G ports
- IEEE 802.1Qbb Priority-based Flow Control (PFC)
- IEEE 802.1Qaz Enhanced Transmission Selection (ETS)
- IEEE 802.1Qau Congestion Notification (QCN)
- NLB
- MPLS (Enhanced Image)
- OSPF/BGP
- ERPS
- Three Color Marker (trTCM/srTCM)
- Congestion Control
- Access Control List (ACL)
- Port security
- Traffic segmentation
- Broadcast/multicast/unicast storm control
- DoS attack prevention
- Web-based GUI
- SSH
- SNMP & RMON
- LLDP/LLDP-MED
- L2/L3/L4 multi-layer access control lists
- 802.1x user authentication via TACACS+ and RADIUS servers

## What does SFP mean?

SFP stands for Small Form-Factor Pluggable, and refers to the transceivers used to connect networking devices such as switches or routers to fibre-optic or copper cable in order to expand a data communications network, often over several kilometres. Generally speaking they are hot-pluggable, meaning that you do not need to power-off the device when plugging or unplugging the cable, and operate at up to Gigabit Ethernet speeds. For faster connections, Enhanced SFP, known as SFP+, offers rates of up to 16 Gbps.



| MODEL | | DXS-3600-16S | DXS-3600 -32S |
|---|---|---|---|
| Interfaces | 10 Gigabit Ethernet SFP+ | 8 | 24 |
| | Expansion Slot | 1 | |
| General Features | Stackability | Virtual Stacking of up to 32 Units | Virtual Stacking of up to 32 Units; Physical Stacking of up to 4 Units |
| | Stacking Speed (per Port) | 240 Gbps (Full Duplex) | |
| | Switching Capacity | 480 Gbps | 960 Gbps |
| | Forwarding Mode | 357.14 Mpps | 714.28 Mpps |
| | Packet Buffer Memory | 9 MB | |
| | MAC Address Table | 128,000 | |
| | Flow Control | 802.3x, HOL Blocking Prevention | |
| Layer 2 Features | 803.2ad Link Aggregation | Max 16 Groups per Device , 12 Ports per Group | |
| | Port Mirroring | One-to-One, Many-to-One, Mirrioring for Tx/Rx/Both, 4 Mirroring Groups | |
| | Flow Mirroring | One-to-One, Many-to-One, Mirroring for Rx, 4 Mirroring Groups | |
| | Jumbo Frame | Up to 12,000 Bytes | |
| Layer 3 Features | ARP | 512 Static ARP | |
| | IP Interface | Supports 256 interfaces | |
| | Default Routing | • | |
| | Static Routing | Max. 1K IPv4 entries, Supports Route Distribution, Supports Secondary Route, Supports Equal Cost/Weighted Cost, Multi-Path Route | |
| Virtual LAN (VLAN) | VLANs | Up to 4096 Static | |
| | GVRP | Up to 4096 Dynamic | |
| | Subnet-based VLAN | • | |
| | Double VLAN (Q-in-Q) | Port-Based, Selective | |
| | Port-based VLAN | • | |
| | MAC-based VLAN | • | |
| | VLAN Group | Max 4K Static VLAN Groups, Max 4094 VIDs | |
| Multicasting | Groups | 2000 | |
| | Protocols | IGMP v1 / v2 / v3, PIM-SM, PIM-DM, PIM Spare-Dense, PIM-SSM, DVMRP v3, MLD v1 | |
| Quality of Service (QoS) | Standard | 802.1p | |
| | No. of Queues | 8 per port | |
| | Mode | Strict + WRR | |
| | CoS Handling | 802.1p Priority Queues ,DSCP, VLAN, MAC address, IP address, IPv6 Traffic class, IPv6 flow label, TCP/UDP port | |
| | Bandwidth Control | Port-Based (Ingress/Egress, min. granularity 8 Kb/s)<br>Flow-Based (Ingress/Egress, min. granularity 8 Kb/s)<br>Per Queue Bandwidth Control (min. granularity 8 Kb/s) | |
| Security | STP Security | BPDU filtering | |
| | Per-Port MAC Limitation | Up to 12K Addresses per Port/System | |
| | Static MAC | | |
| | Storm Control | Broadcast / Multicast / Unicast | |
| | IP-MAC-Port Binding | ARP Inspection, IP Inspection, DHCP Snooping | |
| | DHCP Server Screening | • | |
| | ARP Spoofing Prevention | Max 64 Entries | |
| | Traffic Segmentation | • | |
| | D-Link SafeGuard Engine | • | |
| Data Centre Features | DCB Standards Supported | IEEE 802.1Qbb Priority-based Flow Control (PFC), IEEE 802.1Qaz Enhanced Transmission Selection (ETS),<br>IEEE 802.1Qau Congestion Notification (QCN), NLB | |
| Enhanced Image (EI) Additional Features | L3 Multicasting | Multicast Table Size: 2K, IGMP v1, v2c, v3, PIM-SM, PIM-DM, PIM-Sparse-Dense Mode, PIM-SSM, DVMRP v3, MLD v1/v2 | |
| | MPLS | LDP, MPLS LSP trigger filtering, • MPLS label-forwarding, MPLS QoS, MPLS ping and traceroute, L2 protocol tunneling through PW, VPWS, VPLS, PW Redundancy | |
| | L3 Features | IPv6 Tunneling (Static, ISATAP, GRE, 6to4), VRRP | |
| | L3 VPN | MPLS/BGP L3 VPN, VRF-Lite, MP-BGP, VRF aware application | |
| | L3 Routing | Supports 16K hardware routing entries shared by IPv4/IPv6 (max. 16K IPv4 entries, max. 8K IPv6 entries), Supports 8K hardware L3 forwarding entries shared by IPv4/IPv6 (max. 8K IPv4 entries, max. 4K IPv6 entries), RIP (RIP v1/v2, RIPng), OSPF (OSPF v2, OSPF v3, OSPF Passive Interface, Stub/NSSA Area, OSPF Equal Cost Route), BGPv4, Route Redistribution, IP Directed Broadcast, Policy Based Route | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Supports Port-based access control, supports Host-based access control, Dynamic VLAN Assignment,<br>Identity-driven Policy (VLAN/ACL/QoS) Assignment | |
| | Access Control | Web-based Access Control (WAC), MAC-based Access Control (MAC) | |
| | Guest VLAN | • | |
| Access Control Lists (ACL) | Max ACL entries | 1792 Ingress ACL Rule, 1k Egress ACL Rule, 1K VLAN ACL Rules | |
| | Time-Based ACL | 802.1p Priority, VLAN, MAC Address, Ether Type, IP Address, DSCP, Protocol Type, TCP/UDP Port Number, IPv6 Traffic Class and flow Lable | |
| Management | Web-based GUI | • | |
| | Command Line Interface (CLI) | • | |
| | Telnet, TFTP Client | • | |
| | SNMP | • | |
| | SSH | • | |
| | RMON | • | |
| | RADIUS/TACACS+ | • | |
| | LLDP/LLDP-MED | • | |
| Physical and Environment | Power Supply | Internal | |
| | Maximum Power Consumption | 74.3 W | 116.8 W |
| | Number of Fans | 3 | |
| | Operating Temperature | 0°C to 45°C | |
| | Operating Humidity | 0% to 95% RH Non-Condensing | |
| | Dimensions (W x D x H) | 440 x 506 x 44 mm | |
| | Mean Time Between Failures (MTBF) | 134,330 Hours | |
| Modules / Transceivers | 10 Gigabit SFP+ Modules | DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD | |
| | SFP Transceivers | DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | |

# xStack Layer 3 Gigabit Stackable Managed

## DGS-3620 Series

The xStack DGS-3620 Series of next-generation Gigabit Layer 3 Stackable Managed Switches deliver businesses with performance, flexibility, security, multi-layer QoS and access control, along with redundant power solutions. With high Gigabit port densities, Gigabit SFP and 10 Gigabit SFP+ support, and advanced software solutions, these switches can act as either departmental access layer devices or core switches to form a multi-level network structure with backbone and centralised high-speed servers. Service providers can take advantage of the high SFP density switches to structure the cores of Fibre to the Building (FTTB) networks that they extend to the subscriber's sites. Each of the five switch models in this series is embedded with two different software images – Standard Image (SI) and the optional Enhanced Image (EI). The Standard Image provides sophisticated features such as advanced Quality of Service (QoS), traffic shaping, L2 multicasting and robust security features. The Enhanced Image supports ERPS, Double VLAN (Q-in-Q), Ethernet OAM, Static Route, IMPB, sFlow, and IPv6 features which are suitable for the next generation of IPv6 networks or triple-play applications.

## Principle Product Features

**DGS-3620-28TC**
- 10/100/1000BASE-T ports x 20
- Combo 10/100/1000BASE-T/SFP ports x 4
- 10 Gigabit SFP+ ports x 4

**DGS-3620-28SC**
- SFP ports x 20
- Combo 10/100/1000BASE-T/SFP ports x 4
- 10 Gigabit SFP+ ports x 4

**DGS-3620-28PC**
- 10/100/1000BASE-T ports x 20
- Combo 10/100/1000BASE-T PoE/SFP ports x 4
- 10 Gigabit SFP+ ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget (760 W with DPS-700 RPS)

**DGS-3620-52T**
- 10/100/1000BASE-T ports x 48
- 10 Gigabit SFP+ ports x 4

**DGS-3620-52P**
- 10/100/1000BASE-T PoE ports x 48
- 10 Gigabit SFP+ ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget (760 W with DPS-700 RPS)

## Optional Accessories

**Optional Software Image Upgrade Licenses**

| | |
|---|---|
| DGS-3620-28TC-SE-LIC | DGS-3620-28TC Standard to Enhanced Image Upgrade License |
| DGS-3620-28SC-SE-LIC | DGS-3620-28SC Standard to Enhanced Image Upgrade License |
| DGS-3620-28PC-SE-LIC | DGS-3620-28PC Standard to Enhanced Image Upgrade License |
| DGS-3620-52T-SE-LIC | DGS-3620-52T Standard to Enhanced Image Upgrade License |
| DGS-3620-52P-SE-LIC | DGS-3620-52P Standard to Enhanced Image Upgrade License |

**Optional 10 Gbps SFP+ Direct Attach Stacking Cables**

| | |
|---|---|
| DEM-CB100S | 10 Gigabit SFP+ 1m Direct Attach Stacking Cable |
| DEM-CB300S | 10 Gigabit SFP+ 3m Direct Attach Stacking Cable |

**Optional Redundant Power Supplies**

| | |
|---|---|
| DPS-500 | 140 W Redundant Power Supply for DGS-3620-28TC, DGS-3620-28SC and DGS-3620-52T |
| DPS-700 | 589 W Redundant Power Supply for DGS-3620-28PC and DGS-3620-52P |

**Optional Management Software**

| | |
|---|---|
| DV-700 | D-View 7 Network Management System |

## Key Series Features

- Physical stack of up to 12 units, totalling up to 576 Gigabit ports
- Up to 80 Gbps full-duplex stacking bandwidth
- Optional external redundant power supply
- 802.1p priority queues/ multi-layer CoS
- Loopback Detection (LBD)
- L2/L3/L4 multi-layer access control
- Virtual stack of up to 32 units using Single IP Management (SIM)
- 802.1X Guest VLAN
- IP multicast support for bandwidth-intensive applications
- SSH/SSL support
- Flexible software options with Standard Image (SI) and Enhanced Image (EI) for advanced features
- PoE/PoE+ versions available
- Telnet
- Command line interface (CLI)
- Web-based GUI
- RMON support
- Traffic segmentation
- Supports Microsoft NAP
- D-Link SafeGuard Engine

xSTACK

dlinkgreen



| MODEL | | DGS-3620-28TC | DGS-3620-28SC | DGS-3620-28PC | DGS-3620-52T | DGS-3620-52P |
|---|---|---|---|---|---|---|
| Interfaces | Fast Ethernet | | | | | |
| | Gigabit Ethernet | 20 | | 20 | 48 | 48 |
| | Gigabit SFP Slots | | 20 | | | |
| | Combo 10/100/1000BASE-T/SFP Slots | 4 | 4 | 4 | | |
| | 10 Gigabit SFP+ Slots | 4 | 4 | 4 | 4 | 4 |
| General Features | Stackability | Virtual Stacking of up to 32 Units; Physical Stacking of up to 12 Units | | | | |
| | Stacking Speed | Up to 40 Gbps (80 Gbps full duplex) | | | | |
| | Switching Capacity | 128 Gbps | 128 Gbps | 128 Gbps | 176 Gbps | 176 Gbps |
| | Forwarding Mode | Store-and-Forward | | | | |
| | Packet Buffer Memory | 2 MB | | | | |
| | MAC Address Table | 32,000 | | | | |
| | Flow Control | 802.3x, HOL Blocking Prevention | | | | |
| | MDI/MDIX | Configurable | | | | |
| Layer 2 Features | Loop Protection | 802.1Q, 802.1w, 802.1s, ERPS | | | | |
| | 803.2ad Link Aggregation | Maximum 32 Groups per Device. 8 Gigabit Ports or 2 10 Gigabit Ports per Group | | | | |
| | Port Mirroring | One-to-One, Many-to-One, Flow-Based, RSPAN | | | | |
| | Loopback Detection | • | | | | |
| | Cable Diagnostics | • | | | | |
| Layer 3 Features | IP Interfaces | 256 | | | | |
| | Routing Protocols | Static, RIP v1/v2, RIPng*, OSPF v2, OSPF v3*, BGP v4*, BGP+ v4* | | | | |
| | Policy-Based Routing | • | | | | |
| | Route Balancing | ECMP/WCMP | | | | |
| | IPv6 Tunneling | Static*, ISATAP*, GRE*, 6to4* | | | | |
| | VRRP | • | | | | |
| Virtual LAN (VLAN) | VLANs | 4096 Static; 4096 Dynamic | | | | |
| | GVRP | • | | | | |
| | Protocol VLAN (802.1v) | • | | | | |
| | Double VLAN (Q-in-Q) | Port-Based / Selective | | | | |
| Multicasting | Groups | 2000 | | | | |
| | Protocols | IGMP V1 / V2 / V3, PIM-SM, PIM-SM v6*, PIM-DM, PIM Spare-Dense, DVMRP v3* | | | | |
| Quality of Service (QoS) | Standard | 802.1p | | | | |
| | Number of Queues | 8 | | | | |
| | Mode | Strict / WRR / Strict+WRR / WRED | | | | |
| | CoS Handling | Switch Port, VLAN ID, 802.1p, MAC, IPv4, IPv6, DSCP, Port, Protocol, IPv6 Traffic Class, IPv6 Flow Label, Payload (User-Defined) | | | | |
| | Bandwidth Control | Port-Based, Flow-Based | | | | |
| Security | STP Security | BPDU Filtering, Root Restriction | | | | |
| | Per-Port MAC Limitation | • | | | | |
| | Static MAC | 16 | | | | |
| | Storm Control | Broadcast / Multicast / Unicast | | | | |
| | IP-MAC-Port Binding | 500 Entries | | | | |
| | DHCP Spoofing Prevention | • | | | | |
| | ARP Spoofing Prevention | • | | | | |
| | Traffic Segmentation | • | | | | |
| | D-Link SafeGuard Engine | • | | | | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Port-Based, Host-Based, Dynamic VLAN Assignment | | | | |
| | Web-Based Access Control (WAC) | Port-Based, Host-Based, Dynamic VLAN Assignment | | | | |
| | MAC-Based Access Control (MAC) | Port-Based, Host-Based, Dynamic VLAN Assignment | | | | |
| | Network Access Protection (NAP) | 802.1x NAP, DHCP NAP | | | | |
| | Guest VLAN | • | | | | |
| | Switch Access | RADIUS / TACACS+, 4-Level User Account | | | | |
| Access Control Lists (ACL) | Rules | Ingress: 6 Profiles, 256 Rules per Profile; Egress: 4 Profiles, 128 Rules per Profile | | | | |
| | ACL Handling | Switch Port, VLAN ID, 802.1p, MAC, IPv4, IPv6, DSCP, Port, Protocol, IPv6 Traffic Class, IPv6 Flow Label, Payload (User-Defined) | | | | |
| | Time-Based ACL | • | | | | |
| Power over Ethernet | Standard | | | 802.3af (PoE), 802.3at (PoE+) | | 802.3af (PoE), 802.3at (PoE+) |
| | PoE Ports | | | 24 | | 48 |
| | PoE Power Budget | | | 370 W (760 W with DPS-700 RPS) | | 370 W (760 W with DPS-700 RPS) |
| | Time-Based PoE | | | • | | • |
| Management | Switch Access | Web GUI, Telnet | | | | |
| | sFlow | • | | | | |
| | SNMP | V1 / V2c / V3 | | | | |
| | DHCP | Server, Client, Relay (IPv4, IPv6) | | | | |
| | RMON | • | | | | |
| | TFTP Client | • | | | | |
| | Syslog | • | | | | |
| Physical and Environment | Power Supply | Internal | | | | |
| | Maximum Power Consumption | 45.1 W | 43.4 W | 502.2 W | 76 W | 517.1 W |
| | Power-Saving Technology | Green Ethernet | | | | |
| | Operating Temperature | 0°C to 50°C | | | | |
| | Operating Humidity | 10% to 90% RH Non-Condensing | | | | |
| | Dimensions (W x D x H) | 441 x 310 x 44 mm | 441 x 310 x 44 mm | 441 x 310 x 44 mm | 441 x 310 x 44 mm | 441 x 310 x 44 mm |
| | Mean Time Between Failures (MTBF) | 292,976 Hours | 298,263 Hours | 236,811 Hours | 247,929 Hours | 235,645 Hours |
| Modules / Transceivers | 10 Gigabit SFP+ Transceivers | DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD | | | | |
| | SFP Transceivers | DEM-210, DEM-211, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | | | | |

* Enhanced Image (EI) only

# xStack Layer 2+ Gigabit Stackable Managed Switches

## DGS-3420 Series

The xStack DGS-3420 Series of next-generation Layer 2+ Gigabit switches delivers performance, flexibility, security, multi-layer QoS, and accessibility, along with redundant power solutions for SMBs and enterprises. With high Gigabit port densities, Gigabit SFP, 10 Gigabit SFP+ support, and advanced software solutions, these switches can act as either departmental access layer devices or aggregation switches to form a multi-level network structure with backbone and centralised high-speed servers. Service providers can take advantage of the high-SFP-density DGS-3420-28SC to structure the aggregation of Fibre to the Building (FTTB) networks that are extended to the subscribers' sites.

### Principle Product Features

**DGS-3420-28TC**
- 10/100/1000BASE-T ports x 20
- Combo 1000BASE-T/SFP ports x 4
- 10 Gigabit SFP+ ports x 4

**DGS-3420-28SC**
- SFP ports x 20
- Combo 1000BASE-T/SFP ports x 4
- 10 Gigabit SFP+ ports x 4

**DGS-3420-28PC**
- 10/100/1000BASE-T PoE ports x 20
- Combo 10/100/1000BASE-T PoE/SFP ports x 4
- 10 Gigabit SFP+ ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget (760 W with DPS-700 RPS)

**DGS-3420-52T**
- 10/100/1000BASE-T ports x 48
- 10 Gigabit SFP+ ports x 4

**DGS-3420-52P**
- 10/100/1000BASE-T PoE ports x 48
- 10 Gigabit SFP+ ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget (760 W with DPS-700 RPS)

### Optional Accessories

**Optional 10 Gbps SFP+ Direct Attach Stacking Cables**

| | |
|---|---|
| DEM-CB100S | 10 Gigabit SFP+ 1 m Direct Attach Stacking Cable |
| DEM-CB300S | 10 Gigabit SFP+ 3 m Direct Attach Stacking Cable |

**Optional Redundant Power Supplies**

| | |
|---|---|
| DPS-500 | 140 W Redundant Power Supply for DGS-3420-28TC, DGS-3420-28SC and DGS-3420-52T |
| DPS-700 | 589 W Redundant Power Supply For DGS-3420-28PC and DGS-3420-52P |

**Optional Management Software**

| | |
|---|---|
| DV-700 | D-View 7 Network Management System |

### Key Series Features

- Physical stack of up to 12 Units, totalling up to 576 Gigabit ports
- Up to 40 Gbps full-duplex stacking bandwidth
- Optional external redundant power supply
- Comprehensive security features, including Microsoft NAP
- Comprehensive IPv6 support
- Multiple functions in a single device: switching, static routing and PoE, thus eliminating the need to purchase multiple routers and switches
- Web-based GUI for easy management
- SD Card slot to store and restore configuration files
- Green Technology – power-saving mode, time-based PoE, smart fans



| MODEL | | DGS-3420-28TC | DGS-3420-28SC | DGS-3420-28PC | DGS-3420-52T | DGS-3420-52P |
|---|---|---|---|---|---|---|
| Interfaces | Fast Ethernet | | | | | |
| | Gigabit Ethernet | 20 | | 20 | 48 | 48 |
| | SFP Slots | | 20 | | | |
| | Combo 10/100/1000BASE-T/SFP Slots | 4 | 4 | 4 | | |
| | 10 Gigabit SFP+ Slots | 4 | 4 | 4 | 4 | 4 |
| General Features | Stackability | Virtual Stacking of up to 32 Units; Physical Stacking of up to 12 Units | | | | |
| | Stacking Speed | Up to 20 Gbps (40 Gbps full duplex) | | | | |
| | Switching Capacity | 128 Gbps | 128 Gbps | 128 Gbps | 176 Gbps | 176 Gbps |
| | Forwarding Mode | Store-and-Forward | | | | |
| | Packet Buffer Memory | 2 MB | | | | |
| | MAC Address Table | 16,000 | | | | |
| | Flow Control | 802.3x, HOL Blocking Prevention | | | | |
| | MDI/MDIX | Configurable | | | | |
| Layer 2 Features | Loop Protection | 802.1Q, 802.1w, 802.1s, ERPS | | | | |
| | 803.2ad Link Aggregation | 32 Groups, 8 Gb Ports per Group / 2 10 Gigabit Ports per Group | | | | |
| | Port Mirroring | One-to-One, Many-to-One, RX/TX/Both, Flow-Based, RSPAN | | | | |
| | Loopback Detection | • | | | | |
| | Cable Diagnostics | • | | | | |
| Layer 3 Features | IP Interfaces | 256 | | | | |
| | Routing Protocols | Static, Rip v1/v2, RIPng | | | | |
| | Policy-Based Routing | Based on ACL | | | | |
| | Route Balancing | | | | | |
| | IPv6 Tunneling | Static, ISATAP, 6to4 | | | | |
| | VRRP | • | | | | |
| Virtual LAN (VLAN) | VLANs | 4096 Static; 256 Dynamic | | | | |
| | GVRP | • | | | | |
| | Protocol VLAN (802.1v) | • | | | | |
| | Double VLAN (Q-in-Q) | Port-Based / Selective | | | | |
| Multicasting | Groups | 960 (IGMP), 480 (MLD) | | | | |
| | Protocols | IGMP v1/v2/v3, MLD v1, v2 Snooping | | | | |
| Quality of Service (QoS) | Standard | 802.1p, DSCP | | | | |
| | Number of Queues | 8 | | | | |
| | Mode | Strict / WRR / Strict+WRR | | | | |
| | CoS Handling | Switch Port, VLAN ID, 802.1p, MAC, IP, IPv6, DSCP, Port, Protocol, IPv6 Traffic Class, IPv6 Flow Label, Payload (User-Defined) | | | | |
| | Bandwidth Control | Port-Based, Flow-Based | | | | |
| Security | STP Security | BPDU Filtering, Root Restriction, UDLD | | | | |
| | Per-Port MAC Limitation | • | | | | |
| | Static MAC | 16 | | | | |
| | Storm Control | Broadcast / Multicast / Unicast | | | | |
| | IP-MAC-Port Binding | 500 Entries | | | | |
| | DHCP Spoofing Prevention | • | | | | |
| | ARP Spoofing Prevention | • | | | | |
| | Traffic Segmentation | • | | | | |
| | D-Link SafeGuard Engine | • | | | | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Port-Based, Host-Based, Dynamic VLAN Assignment | | | | |
| | Web-Based Access Control (WAC) | Port-Based, Host-Based, Dynamic VLAN Assignment | | | | |
| | MAC-Based Access Control (MAC) | Port-Based, Host-Based, Dynamic VLAN Assignment | | | | |
| | Network Access Protection (NAP) | 802.1x, NAP, DHCP NAP | | | | |
| | Guest VLAN | • | | | | |
| | Switch Access | RADIUS / TACACS+, 3-Level User Account | | | | |
| Access Control Lists (ACL) | Rules | Ingress ACL: 6 Profiles, 256 Rules per Profile; Egress ACL: 4 Profiles, 128 Rules per Profile | | | | |
| | ACL Handling | Ether Type, VLAN ID, 802.1p, MAC, IP, IPv6, DSCP, Port, Protocol, IPv6 Traffic Class, IPv6 Flow Label, Payload (User-Defined) | | | | |
| | Time-Based ACL | • | | | | |
| Power over Ethernet | Standard | | | 802.3af (PoE), 802.3at (PoE+) | | 802.3af (PoE), 802.3at (PoE+) |
| | PoE Ports | | | 24 | | 48 |
| | PoE Power Budget | | | 370 W (760 W with DPS-700 RPS) | | 370 W (760 W with DPS-700 RPS) |
| | Time-Based PoE | | | • | | • |
| Management | Switch Access | Web GUI, Telnet, Console | | | | |
| | sFlow | • | | | | |
| | SNMP | v1 / v2c / v3 | | | | |
| | DHCP | Server, Client, Relay (IPv4, IPv6) | | | | |
| | RMON | • | | | | |
| | TFTP Client | • | | | | |
| | Syslog | • | | | | |
| Physical and Environment | Power Supply | Internal | | | | |
| | Maximum Power Consumption | 58.8 W | 60.2 W | 478.0 W | 81.0 W | 505.4 W |
| | Power-Saving Technology | Green Ethernet | | | | |
| | Operating Temperature | 0°C to 50°C | | | | |
| | Operating Humidity | 10% to 90% RH Non-Condensing | | | | |
| | Dimensions (W x D x H) | 441 x 310 x 44 mm | 441 x 310 x 44 mm | 441 x 310 x 44 mm | 441 x 310 x 44 mm | 441 x 310 x 44 mm |
| | Mean Time Between Failures (MTBF) | 287,763 Hours | 300,371 Hours | 206,190 Hours | 255,608 Hours | 202,462 Hours |
| Modules / Transceivers | 10 Gigabit SFP+ Transceivers | DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD | | | | |
| | SFP Transceivers | DEM-210, DEM-211, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | | | | |

# xStack Layer 2 Gigabit Stackable Managed

## DGS-3120 Series

The DGS-3120 Series is an enhanced Layer 2 stackable managed solution designed to connect end-users in a secure SMB or enterprise network, so is perfect for businesses that require a high level of network security and maximum uptime. Its comprehensive security features and PoE support make it suitable for any business environment where manageability, reliability and high port densities are necessary at an affordable price. Each of the five switch models in this series is embedded with two different software images – Standard Image (SI) and the optional Enhanced Image (EI). The Standard Image provides sophisticated features such as advanced Quality of Service (QoS), traffic shaping, L2 multicasting and robust security features. The Enhanced Image supports ERPS, Double VLAN (Q-in-Q), Ethernet OAM, Static Route, IMPB, sFlow, and IPv6 features which are suitable for the next generation of IPv6 networks or triple-play applications. With enhanced network reliability and comprehensive security, as well as proactive and effective network management and future-proof IPv6 support, the DGS-3120 Series is designed to scale as your network requirement grows.

### Key Series Features

- Built-in 10 Gigabit CX4 stacking/ uplink ports
- 40 Gigabit stacking bandwidth
- Stackable up to six physical units
- Up to 288 Gigabit ports in a single stack
- PoE/PoE+ versions available
- Optional redundant power supply
- Smart fans
- 19in, 1U rack-mountable
- Comprehensive security
- IPv6 ready
- Supports Microsoft NAP
- sFlow
- SD Card slot for configuration and system images
- Easy to configure through web interface
- Power-saving technology

## Principle Product Features

**DGS-3120-24TC**
- 10/100/1000BASE-T ports x 20
- Combo 1000BASE-T/SFP ports x 4
- 10 Gigabit CX4 ports x 2

**DGS-3120-24PC**
- SFP ports x 16
- Combo 10/100/1000BASE-T/SFP ports x 8
- 10 Gigabit CX4 ports x 2

**DGS-3120-24SC**
- 10/100/1000BASE-T PoE ports x 20
- Combo 1000BASE-T/SFP ports x 4
- 10 Gigabit CX4 ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget (760 W with DPS-700 RPS)

**DGS-3120-48TC**
- 10/100/1000BASE-T ports x 44
- Combo 10/100/1000BASE-T/SFP ports x 4
- 10 Gigabit CX4 ports x 2

**DGS-3120-48PC**
- 10/100/1000BASE-T PoE ports x 44
- Combo 1000BASE-T/SFP ports x 4
- 10 Gigabit CX4 ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget (760 W with DPS-700 RPS)

## Optional Accessories

**Optional Software Image Upgrade Licenses**

| | |
|---|---|
| DGS-3120-24TC-SE-LIC | DGS-3120-24TC Standard to Enhanced Image Upgrade License |
| DGS-3120-24SC-SE-LIC | DGS-3120-24SC Standard to Enhanced Image Upgrade License |
| DGS-3120-24PC-SE-LIC | DGS-3120-24PC Standard to Enhanced Image Upgrade License |
| DGS-3120-48TC-SE-LIC | DGS-3120-48TC Standard to Enhanced Image Upgrade License |
| DGS-3120-48TP-SE-LIC | DGS-3120-48TP Standard to Enhanced Image Upgrade License |

**Optional 10Gbps Stacking and Interconnect Cables**

| | |
|---|---|
| DEM-CB50 | 50 cm Stacking Cable |
| DEM-CB100 | 100 cm Stacking Cable |
| DEM-CB300 | 300 cm Stacking Cable |
| DEM-CB50ICX | 50 cm Interconnect Cable |

**Optional Redundant Power Supplies**

| | |
|---|---|
| DPS-200 | 60 W Redundant Power Supply for DGS-3120-24TC and DGS-3120-24SC |
| DPS-500 | 140 W Redundant Power Supply for DGS-3120-48TC |
| DPS-700 | 589 W Redundant Power Supply For DGS-3120-24PC and DGS-3120-48PC |

**Optional Management Software**

| | |
|---|---|
| DV-700 | D-View 7 Network Management System |



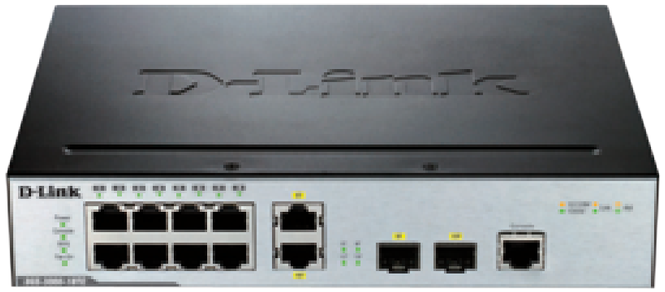
| MODEL | | DGS-3120-24TC | DGS-3120-24PC | DGS-3120-24SC | DGS-3120-48TC | DGS-3120-48PC |
|---|---|---|---|---|---|---|
| Interfaces | Fast Ethernet | | | | | |
| | Gigabit Ethernet | 20 | 20 | | 44 | 44 |
| | SFP Slots | | | 16 | | |
| | Combo Gigabit/SFP Slots | 4 | 4 | 8 | 4 | 4 |
| | 10 Gigabit Slots | | | | | |
| General Features | Stackability | Virtual Stacking of up to 32 Units; Physical Stacking of up to 6 Units | | | | |
| | Stacking Speed | Up to 20 Gbps (40 Gbps full duplex) | | | | |
| | Switching Capacity | 88 Gbps | 88 Gbps | 88 Gbps | 136 Gbps | 136 Gbps |
| | Forwarding Mode | Store-and-Forward | | | | |
| | Packet Buffer Memory | 2 MB | | | | |
| | MAC Address Table | 16,000 | | | | |
| | Flow Control | 802.3x, HOL Blocking Prevention | | | | |
| | MDI/MDIX | Configurable | | | | |
| Layer 2 Features | Loop Protection | 802.1Q, 802.1w, 802.1s, ERPS* | | | | |
| | 803.2ad Link Aggregation | 32 Groups<br>8 Gb Ports per Group | | | | |
| | Port Mirroring | One-to-One, Many-to-One, RX/TX/Both, RSPAN, Flow-Based | | | | |
| | Loopback Detection | • | | | | |
| | Cable Diagnostics | • | | | | |
| Layer 3 Features | IP Interfaces | 16* | | | | |
| | Routing Protocols | Static* | | | | |
| | Policy-Based Routing | | | | | |
| | Route Balancing | | | | | |
| | IPv6 Tunneling | | | | | |
| | VRRP | | | | | |
| Virtual LAN (VLAN) | VLANs | 4096 Static | | | | |
| | GVRP | • | | | | |
| | Protocol VLAN (802.1v) | • | | | | |
| | Double VLAN (Q-in-Q) | •* | | | | |
| Multicasting | Groups | 1000 | | | | |
| | Protocols | IGMP v1 / v2 / v3, MLD v1, v2 Snooping | | | | |
| Quality of Service (QoS) | Standard | 802.1p, DSCP | | | | |
| | Number of Queues | 4 | | | | |
| | Mode | Strict / WRR | | | | |
| | CoS Handling | Switch Port, VLAN ID, 802.1p, MAC, IP, IPv6, DSCP, Port, Protocol, Payload (User-Defined) | | | | |
| | Bandwidth Control | Port-Based, Flow-Based | | | | |
| Security | STP Security | BPDU Filtering, Root Restriction | | | | |
| | Per-Port MAC Limitation | • | | | | |
| | Static MAC | 64 | | | | |
| | Storm Control | Broadcast / Multicast / Unicast | | | | |
| | IP-MAC-Port Binding | 510 Entries* | | | | |
| | DHCP Spoofing Prevention | •* | | | | |
| | ARP Spoofing Prevention | • | | | | |
| | Traffic Segmentation | • | | | | |
| | D-Link SafeGuard Engine | • | | | | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Port-Based, Host Based, Dynamic VLAN/ACL/QoS Assignment | | | | |
| | Web-Based Access Control (WAC) | Port-Based, Host Based, Dynamic VLAN/ACL/QoS Assignment | | | | |
| | MAC-Based Access Control (MAC) | Port-Based, Host Based, Dynamic VLAN/ACL/QoS Assignment | | | | |
| | Network Access Protection (NAP) | 801.1X NAP, DHCP NAP | | | | |
| | Guest VLAN | • | | | | |
| | Switch Access | RADIUS / TACACS+, 4-Level User Account | | | | |
| Access Control Lists (ACL) | Rules | 1500 | | | | |
| | ACL Handling | Ether Type, VLAN ID, 802.1p, MAC, IP, IPv6, DSCP, Port, Protocol, Payload (User-Defined) | | | | |
| | Time-Based ACL | • | | | | |
| Power over Ethernet | Standard | | 802.3af (PoE), 802.3at (PoE+) | | | 802.3af (PoE), 802.3at (PoE+) |
| | PoE Ports | | 20 | | | 44 |
| | PoE Power Budget | | 370 W<br>(760 W with DPS-700 RPS) | | | 370 W<br>(760 W with DPS-700 RPS) |
| | Time-Based PoE | | • | | | • |
| Management | Switch Access | Web GUI, Telnet, Console | | | | |
| | sFlow | •* | | | | |
| | SNMP | v1 / v2c / v3 | | | | |
| | DHCP | Client, Relay | | | | |
| | RMON | • | | | | |
| | TFTP Client | • (IPv4, IPv6*) | | | | |
| | Syslog | • | | | | |
| Physical and Environment | Power Supply | Internal | | | | |
| | Maximum Power Consumption | 40.5 W | 482.7 W | 34.1 W | 67.1 W | 516.5 W |
| | Power-Saving Technology | Green Ethernet | | | | |
| | Operating Temperature | 0°C to 50°C | | | | |
| | Operating Humidity | 10% to 90% RH Non-Condensing | | | | |
| | Dimensions (W x D x H) | 440 x 210 x 44 mm | 440 x 310 x 44 mm | 440 x 210 x 44 mm | 440 x 310 x 44 mm | 440 x 380 x 44 mm |
| | Mean Time Between Failures (MTBF) | 561,830 Hours | 282,541 Hours | 516,317 Hours | 292,201 Hours | 223,006 Hours |
| Modules / Transceivers | 10 Gigabit Modules | DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD | | | | |
| | SFP Transceivers | DEM-210, DEM-211, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | | | | |

* Enhanced Image (EI) only

# Layer 2 Gigabit Managed Switch

## DGS-3000 Series

The DGS-3000-10TC is a Layer 2 managed switch that provides wired Gigabit speed access – perfect for metro and campus networks – and since it's designed as a 1U rack-mount case and comes with IPV6 support, it's suitable for enterprise access or service provider telecom cabinets. The DGS-3000-10TC maximises network performance without compromising on reliability and security, and Green Technology decreases energy costs by reducing power consumption, again without compromising on performance.



## Principle Product Features

**DGS-3000-10TC**

- 10/100/1000BASE-T ports x 8
- Combo 10/100/1000BASE-T/SFP ports x 2
- Desktop, or 1U rack-mountable
- Smart fan

## Optional Accessories

**Optional Management Software**

DV-700 D-View 7 Network Management System

## What does 1U Rack-Mountable mean?

Many D-Link switches and other supporting hardware such as RPSs (Redundant Power Supplies) are designed to fit in standard 19in-wide communications enclosure frames. 1U Rack-Mountable means this device is one standard unit high (which is 44mm) and that it can thus be mounted into a standard comms rack. Many of D-Link's switches that are narrower than 19in are supplied with brackets so they can still be rack-mounted if desired.

## Key Series Features

- Virtual stacking; up to 32 units per virtual stack managed through a single IP address
- 16,000 MAC address tables
- IEEE 802.3x flow control, HOL blocking prevention flow control
- Jumbo frames up to 12 KB
- BPDU filtering
- Root restriction
- Loopback Detection (LBD)
- Link aggregation
- Port mirroring
- 8 queues per port
- DSCP
- 802.1p
- Bandwidth control
- Queue handling
- Time-based QoS

| MODEL | | DGS-3000-10TC |
|---|---|---|
| Interfaces | Fast Ethernet | |
| | Gigabit Ethernet | 8 |
| | SFP Slots | |
| | Combo Gigabit/SFP Slots | 2 |
| | 10 Gigabit Slots | |
| General Features | Stackability | Virtual Stacking of up to 32 Units |
| | Stacking Speed (per Port) | |
| | Switching Capacity | 20 Gbps |
| | Forwarding Mode | Store-and-Forward |
| | Packet Buffer Memory | 1.5 MB |
| | MAC Address Table | 16,000 |
| | Flow Control | IEEE 802.3x Flow Control, HOL Blocking Prevention |
| | MDI/MDIX | Configurable |
| Layer 2 Features | Loop Protection | 802.1Q, 802.1w, 802.1s, ERPS |
| | 803.2ad Link Aggregation | 802.3ad 802.1AX |
| | Port Mirroring | One-to-One, Many-to-One, Flow-based (ACL) Mirroring |
| | Loopback Detection | • |
| | Cable Diagnostics | • |
| Virtual LAN (VLAN) | VLANs | 4096 Static |
| | GVRP | • |
| | Protocol VLAN (802.1v) | • |
| | Double VLAN (Q-in-Q) | • |
| Multicasting | Groups | 1000 |
| | Protocols | IGMP v1/v2 snopping, v3 awareness, MLD v1, v2 awareness |
| Quality of Service (QoS) | Standard | DSCP, 802.1p |
| | No. of Queues | 8 |
| | Mode | Strict Priority Queue (SPQ), Weighted Round Robin (WRR), Deficit Round Robin (DRR), SPQ + WRR |
| | CoS Handling | 802.1p Priority Queues, VLAN ID, MAC Address, Ether Type, IPv4/v6 Address, IPv6 Traffic Class, IPv6 Flow Label, DSCP, Protocol Type, TCP/UDP Port, User-Defined Packet Content |
| | Bandwidth Control | Port-Based, Host-Based |
| Security | STP Security | BPDU Filtering, Root Restriction |
| | Per-Port MAC Limitation | |
| | Static MAC | |
| | Storm Control | • |
| | IP-MAC-Port Binding | • |
| | DHCP Server Screening | • |
| | ARP Spoofing Prevention | • |
| | Traffic Segmentation | • |
| | D-Link SafeGuard Engine | • |
| Management | Switch Access | • |
| | sFlow | Web GUI, Telnet, Console |
| | SNMP | • |
| | DHCP | • |
| | RMON | • |
| | TFTP Client | • |
| | Syslog | • |
| Physical and Environment | Power Supply | 230V AC internal with 12V DC RPS option |
| | Maximum Power Consumption | 16.5 W |
| | Power-Saving Technology | • |
| | No of Fans | 1 |
| | Operating Temperature | 0°C to 50°C |
| | Operating Humidity | 10% to 90% RH Non-Condensing |
| | Dimensions (W x D x H) | 228.5 x 195 x 44 mm |
| | Mean Time Between Failures (MTBF) | 711,565 Hours |
| Modules/Transceivers | SFP Transceivers | DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-210, DEM-211 |

# xStack Layer 2 Fast Ethernet Managed Switches

## DES-3200 Series

A member of D-Link's Layer 2 managed switch family, the DES-3200 Series is designed for the ETTX, FTTX and enterprise markets. These switches provide 8, 16, 24 or 48 10/100 Mbps Fast Ethernet connections and various SFP or combo Gigabit/SFP port uplink options. The compact DES-3200-10 and DES-3200-18 incorporate a fanless design so are suitable for desktop, telecom cabinet or distribution box deployment, while the DES-3200-28 and DES-3200-52 models (and their PoE counterparts) are standard 1U rack-mount size and provide 24 or 48 copper connections on Fast Ethernet; beneficially, their design also includes 2 or 4 Gigabit/SFP Combo ports which provide up to 4 Gbps uplink bandwidth or dual Ethernet ring topology support. The DES-3200-28P/52P are Power over Ethernet (PoE) compliant and provide 15.4 W per port and up to 30 W in the first four or eight ports (according to model), so are perfect for powering and networking devices such as video IP phones, wireless access points and IP cameras.

## Principle Product Features

**DES-3200-10**
- 10/100BASE-TX ports x 8
- Combo 1000BASE-T/SFP port x 1
- SFP port x 1
- Fanless
- 9in, 1U desktop

**DES-3200-18**
- 10/100BASE-TX ports x 16
- Combo 1000BASE-T/SFP port x 1
- SFP port x 1
- Fanless
- 11in, 1U desktop

**DES-3200-28**
- 10/100BASE-TX ports x 24
- Combo 1000BASE-T/SFP ports x 2
- 10/100/1000 BASE-T ports x2
- Fanless
- 19in, 1U rack-mountable

**DES-3200-28P**
- 10/100BASE-TX PoE ports x 24
- Combo 1000BASE-T/SFP ports x 2
- 10/100/1000 BASE-T ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 188 W PoE power budget
- Smart fan
- 19in, 1U rack-mountable

**DES-3200-52**
- 10/100BASE-TX ports x 48
- Combo 1000BASE-T/SFP ports x 2
- 10/100/1000BASE-T ports x 2
- Smart fan
- 19in, 1U rack-mountable

**DES-3200-52P**
- 10/100BASE-TX PoE ports x 48
- Combo 1000BASE-T/SFP ports x 2
- SFP ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget
- Smart fan
- 19in, 1U rack-mountable

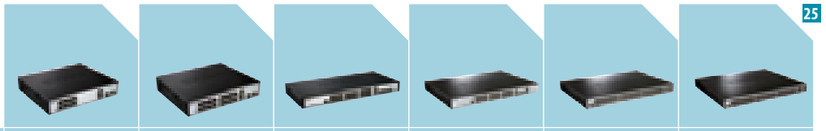
## Optional Accessories

**Optional Management Software**
DV-700 D-View 7 Network Management System

## Key Series Features

- D-Link single IP management (virtual stacking)
- Internet Group Management Protocol (IGMP) snooping
- Multicast Listener Discovery (MLD) snooping
- Ethernet Ring Protection Switching (ERPS)
- Gratuitous Address Resolution Protocol (ARP)
- 802.3ah Ethernet link OAM
- 802.1v protocol VLAN
- VLAN trunking
- Asymmetric VLAN
- Double VLAN (Q-in-Q)
- Selective Q-in-Q
- IGMP snooping multicast (ISM) VLAN
- Quality of Service (QoS)
- Access Control List (ACL)
- CPU interface filtering
- 802.1ag Connectivity Fault Management (CFM)
- Broadcast/multicast/unicast storm control
- Traffic segmentation
- D-Link SafeGuard Engine
- IP-MAC-Port Binding (IMPB)
- ARP spoofing prevention
- BPDU attack protection
- DHCP server screening
- 802.1X port-based access control
- 802.1X host-based access control
- Per-queue bandwidth control





| MODEL | | DES-3200-10 | DES-3200-18 | DES-3200-28 | DES-3200-28P | DES-3200-52 | DES-3200-52P |
|---|---|---|---|---|---|---|---|
| Interfaces | Fast Ethernet | 8 | 16 | 24 | | 48 | |
| | Gigabit Ethernet | | | | | | |
| | SFP Slots | 1 | 1 | 2 | 2 | 2 | 2 |
| | Combo Gigabit/SFP Slots | 1 | 1 | 2 | 2 | 2 | 2 |
| | 10 Gigabit Slots | | | | | | |
| General Features | Stackability | Virtual stacking of up to 32 units | | | | | |
| | Stacking Speed (per Port) | | | | | | |
| | Switching Capacity | 5.6 Gbps | 7.2 Gbps | 12.8 Gbps | | 17.6 Gbps | |
| | Forwarding Mode | Store-and-Forward | | | | | |
| | Packet Buffer Memory | 1.5 MB | | | | | |
| | MAC Address Table | 16,000 | | | | | |
| | Flow Control | 802.3x, HOL Blocking Prevention | | | | | |
| | MDI/MDIX | Configurable | | | | | |
| Layer 2 Features | Loop Protection | 802.1Q, 802.1w, 802.1s, ERPS | | | | | |
| | 803.2ad Link Aggregation | 5 Groups 8 Ports per Group | 9 Groups 8 Ports per Group | 14 Groups 8 Ports per Group | | 26 Groups 8 Ports per Group | |
| | Port Mirroring | One-to-One, Many-to-One, RX/TX/Both, Flow-Based | | | | | |
| | Loopback Detection | • | | | | | |
| | Cable Diagnostics | • | | | | | |
| Virtual LAN (VLAN) | VLANs | 4096 Static; 256 Dynamic | | | | | |
| | GVRP | • | | | | | |
| | Protocol VLAN (802.1v) | • | | | | | |
| | Double VLAN (Q-in-Q) | • | | | | | |
| Multicasting | Groups | 1000 | | | | | |
| | Protocols | IGMP v1 / v2 / v3, MLD v1, v2 Snooping | | | | | |
| Quality of Service (QoS) | Standard | 802.1p, DSCP | | | | | |
| | Number of Queues | 8 | | | | | |
| | Mode | Strict / WRR | | | | | |
| | CoS Handling | Switch Port, VLAN ID, 802.1p, MAC, IP, IPv6, DSCP, Port, Protocol, Payload (User-Defined) | | | | | |
| | Bandwidth Control | Port-Based, Flow-Based | | | | | |
| Security | STP Security | BPDU Filtering, Root Restriction, UDLD | | | | | |
| | Per-Port MAC Limitation | • | | | | | |
| | Static MAC | 64 | | | | | |
| | Storm Control | Broadcast / Multicast / Unicast | | | | | |
| | IP-MAC-Port Binding | 500 Entries | | | | | |
| | DHCP Spoofing Prevention | • | | | | | |
| | ARP Spoofing Prevention | • | | | | | |
| | Traffic Segmentation | • | | | | | |
| | D-Link SafeGuard Engine | • | | | | | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Port-Based, Host-Based, Dynamic VLAN Assignment | | | | | |
| | Web-Based Access Control (WAC) | Port-Based, Host-Based | | | | | |
| | MAC-Based Access Control (MAC) | Port-Based, Host-Based, Dynamic VLAN Assignment | | | | | |
| | Network Access Protection (NAP) | 802.1x NAP, DHCP NAP | | | | | |
| | Guest VLAN | • | | | | | |
| | Switch Access | RADIUS / TACACS+, 3-Level User Account | | | | | |
| Access Control Lists (ACL) | Rules | 512 | | | | | |
| | ACL Handling | Ether Type, VLAN ID, 802.1p, MAC, IP, IPv6, DSCP, Port, Protocol, Payload (User-Defined) | | | | | |
| | Time-Based ACL | • | | | | | |
| Management | Switch Access | Web GUI, Telnet, Console | | | | | |
| | sFlow | | | | | | |
| | SNMP | v1 / v2c / v3 | | | | | |
| | DHCP | Client, Relay (IPv4, IPv6) | | | | | |
| | RMON | • | | | | | |
| | TFTP Client | • | | | | | |
| | Syslog | • | | | | | |
| Physical and Environment | Power Supply | Internal | | | | | |
| | Maximum Power Consumption | 13.54 W | 15.44 W | 20.83 W | 250.78 W | 33.38 W | 417.6 W |
| | Power-Saving Technology | | | | | | |
| | Operating Temperature | -5°C to 50°C | | | | | |
| | Operating Humidity | 10%-90% RH Non-Condensing | | | | | |
| | Dimensions (W x D x H) | 228.5 x 195 x 44 mm | 280.5 x 180 x 44 mm | 441 x 210 x 44 mm | 441 x 308 x 44 mm | | |
| | Mean Time Between Failures (MTBF) | 873,750 Hours | 743,115 Hours | 668,867 Hours | 216,780 Hours | 440,704 Hours | 189,396 Hours |
| Modules/ Transceivers | SFP Transceivers | DEM-210, DEM-211, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | | | | | |

# Gigabit Stackable Smart Managed Switches

## DGS-1510 Series

With up to 48 1000BASE-T ports, two Gigabit SFP ports and two 10 Gigabit SFP+ ports, along with PoE support, the DGS-1510 Series is ideal for deployment in an SME/SMB core. Add to that the 10 Gigabit uplinks to connect with servers equipped with 10G port connectivity, and the DGS-1510 serves as a good interconnection between the core switch and edge switch for medium- to large-scale enterprise deployment.

If you're looking for PoE capability, the DGS-1510-28P is your perfect partner for powering VoIP phones, wireless access points or network cameras, thanks to 24 Power over Ethernet-enabled ports that can support up to 193 W of power output following the enhanced IEEE 802.3at PoE+ standard. This switch therefore offers the ideal balance between flexibility in power allocation for a variety of powered devices and affordable installation costs.

## Principle Product Features

**DGS-1510-20**
- 10/100/1000BASE-T ports x 16
- SFP ports x 2
- 10 Gigabit SFP+ ports x 2
- Smart fan

**DGS-1510-28**
- 10/100/1000BASE-T ports x 24
- SFP ports x 2
- 10 Gigabit SFP+ ports x 2
- SFP ports x 4
- Smart fans

**DGS-1510-28P**
- 10/100/1000BASE-T PoE ports x 24
- SFP ports x 2
- 10 Gigabit SFP+ ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 193 W PoE power budget
- Smart fans

**DGS-1510-28X**
- 10/100/1000BASE-T PoE ports x 24
- 10 Gigabit SFP+ ports x 4
- Smart fan

**DGS-1510-52**
- 10/100/1000BASE-T ports x 48
- SFP ports x 2
- 10 Gigabit SFP+ ports x 2
- Smart fans
-

**DGS-1510-52X**
- 10/100/1000BASE-T ports x 48
- 10 Gigabit SFP+ ports x 4
- Smart fans

## Optional Accessories

**Optional 10 Gbps SFP+ Direct Attach Stacking Cables**

| | |
|---|---|
| DEM-CB100S | 10 Gigabit SFP+ 1 m Direct Attach Stacking Cable |
| DEM-CB300S | 10 Gigabit SFP+ 3 m Direct Attach Stacking Cable |

**Optional Management Software**

| | |
|---|---|
| DV-600S | D-View 6.0 Network Management Software Standard Edition |
| DV-600P | D-View 6.0 Network Management Software Professional Edition |

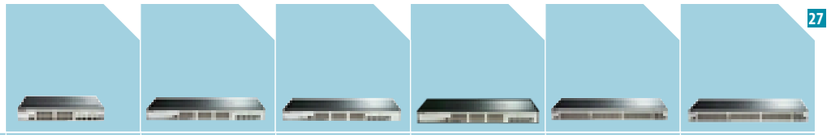
## Key Series Features

- 10 Gigabit connectivity
- Physical stacking via two 10 Gigabit ports, with stacking for up to six devices
- Single IP management (virtual stacking of up to 32 units)
- Static routing
- IPv6 management support
- Auto surveillance VLAN
- Auto voice VLAN
- Loopback Detection (LBD)
- Configurable MDI/MDIX
- LLDP/LLDP-MED
- Access Control List (ACL)
- D-Link SafeGuard Engine
- Port security
- ARP spoofing prevention
- IP-MAC-port binding
- DoS attack prevention
- D-Link Network Assistant Utility or multi-language web-based GUI
- Built-in SNMP MIB for remote NMS (D-View 7)
- Full CLI via console port
- IPv4/IPv6 stack
- Dual image
- IEEE 802.3az Energy Efficient Ethernet
- D-Link Green™ 3.0 power-saving features

Energy Efficient Ethernet

dlinkgreen





| MODEL | | DGS-1510-20 | DGS-1510-28 | DGS-1510-28P | DGS-1510-28X | DGS-1510-52 | DGS-1510-52X |
|---|---|---|---|---|---|---|---|
| Interfaces | Fast Ethernet | | | | | | |
| | Gigabit Ethernet | 16 | 24 | 24 | 24 | 48 | 48 |
| | SFP Slots | 2 | 2 | 2 | | 2 | |
| | Combo Gigabit/SFP Slots | | | | | | |
| | 10 Gigabit SFP+ Slots | 2 | 2 | 2 | 4 | 2 | 4 |
| General Features | Stackability | Virtual Stacking of up to 32 units; Physical Stacking of up to 6 units | | | | | |
| | Stacking Speed (per Port) | 20 Gbps (Full Duplex) | | | | | |
| | Switching Capacity | 76 Gbps | 92 Gbps | 92 Gbps | 128 Gbps | 140 Gbps | 176 Gbps |
| | Forwarding Mode | Store-and-Forward | | | | | |
| | Packet Buffer Memory | 1.5 MB | | | | 3 MB | |
| | MAC Address Table | 16,000 | | | | | |
| | Flow Control | 802.3x, HOL Blocking Prevention | | | | | |
| | MDI/MDIX | Configurable | | | | | |
| Layer 2 Features | Loop Protection | 802.1D, 802.1w, 802.1s | | | | | |
| | 803.2ad Link Aggregation | 32 Groups, 8 Ports per Group | | | | | |
| | Port Mirroring | One-to-One, Many-to-One, RX/TX/Both | | | | | |
| | Loopback Detection | • | | | | | |
| | Cable Diagnostics | • | | | | | |
| Layer 3 Features | IP Interfaces | 8 | | | | | |
| | Routing Protocols | Static | | | | | |
| | Policy-Based Routing | | | | | | |
| | Route Balancing | | | | | | |
| | IPv6 Tunneling | | | | | | |
| | VRRP | | | | | | |
| Virtual LAN (VLAN) | VLANs | 4096 Static | | | | | |
| | GVRP | • | | | | | |
| | Protocol VLAN (802.1v) | | | | | | |
| | Double VLAN (Q-in-Q) | | | | | | |
| Multicasting | Groups | 512 | | | | | |
| | Protocols | IGMP v1/v2 | | | | | |
| Quality of Service (QoS) | Standard | 802.1p, DSCP | | | | | |
| | Number of Queues | 4 | | | | | |
| | Mode | Strict Priority Queue (SPQ), Weighted Round Robin (WRR), Deficit Round Robin (DRR) | | | | | |
| | CoS Handling | 802.1p, DSCP | | | | | |
| | Bandwidth Control | Port-Based | | | | | |
| Security | STP Security | | | | | | |
| | Per-Port MAC Limitation | • | | | | | |
| | Static MAC | 128 | | | | | |
| | Storm Control | Broadcast / Multicast / Unicast | | | | | |
| | IP-MAC-Port Binding | 512 Entries | | | | | |
| | DHCP Spoofing Prevention | • | | | | | |
| | ARP Spoofing Prevention | • | | | | | |
| | Traffic Segmentation | • | | | | | |
| | D-Link SafeGuard Engine | • | | | | | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Port-Based | | | | | |
| | Web-Based Access Control (WAC) | | | | | | |
| | MAC-Based Access Control (MAC) | | | | | | |
| | Network Access Protection (NAP) | | | | | | |
| | Guest VLAN | | | | | | |
| | Switch Access | User Account | | | | | |
| Access Control Lists (ACL) | Rules | 768 | | | | | |
| | ACL Handling | MAC, IP, 802.1p, DSCP/IPV6 Address | | | | | |
| | Time-Based ACL | | | | | | |
| Power over Ethernet | Standard | | | 802.3af (PoE), 802.3at (PoE+) | | | |
| | PoE Ports | | | 24 | | | |
| | PoE Power Budget | | | 193 W | | | |
| | Time-Based PoE | | | • | | | |
| Management | Switch Access | Web GUI, Telnet, Console | | | | | |
| | sFlow | | | | | | |
| | SNMP | v1 / v2c / v3 | | | | | |
| | DHCP | | | | | | |
| | RMON | • | | | | | |
| | TFTP Client | • | | | | | |
| | Syslog | | | | | | |
| Physical and Environment | Power Supply | Internal | | | | | |
| | Maximum Power Consumption | 20.3 W | 24 W | 238.7 W (PoE on) 29 W (PoE off) | 22.3 W | 38.4 W | 44.2 W |
| | Power-Saving Technology | IEEE 802.3az EEE, Green Ethernet | | | | | |
| | Operating Temperature | -5°C to 50°C | | | | | |
| | Operating Humidity | 0% to 95% RH Non-Condensing | | | | | |
| | Dimensions (W x D x H) | 280 x 180 x 44 mm | 440 x 210 x 44 mm | 440 x 250 x 44 mm | 440 x 210 x 44 mm | 440 x 210 x 44 mm | 440 x 250 x 44 mm |
| Modules/ Transceivers | 10 Gigabit SFP+ Transceivers | DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD | | | | | |
| | SFP Transceivers | DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | | | | | |

# Gigabit Smart+ Switches with Fibre Uplinks

## DGS-1210 Series

The DGS-1210 Smart+ Switches are the latest generation to feature D-Link's Green 3.0 Technology, which offers a high level of energy saving and efficiency as they also comply with the IEEE 802.3az Energy Efficient Ethernet standard. By offering multiple management options, the Smart+ Switches allow quick deployment, infrastructure expansion and seamless function upgrades, and with full support for IPv6 management and configurations, this latest range will ensure your network remains protected after the upgrade from IPv4 to IPv6. Built for small- and medium-sized businesses, the DGS-1210 Series Gigabit Smart+ Switches provide functionality, security, and manageability for a fraction of the standard cost of ownership.

Three switches in the DGS-1210 range offer high-power-budget PoE for businesses looking to power VoIP phones, wireless access points or network cameras. The 8-port DGS-1210-10P offers up to 30 W on any of its eight ports, whereas the Smart PoE+ DGS-1210-28P and DGS-1210-52P provide 24 or 48 PoE-enabled ports, a power budget of 193 W, and four or eight ports supporting up to 30 W each at the PoE+ standard. The design allows plenty of flexibility in power allocation for a variety of powered devices but still offers affordable installation costs.

### Key Series Features

- Internet Group Management Protocol (IGMP) snooping
- Loopback Detection (LBD)
- Cable diagnostics
- 802.1Q Virtual LAN (VLAN)
- Management VLAN
- Asymmetric VLAN
- Auto Voice VLAN
- Quality of Service (QoS)
- Access Control List (ACL)
- 802.1X Access Control
- Port security
- Broadcast/multicast/unicast storm control
- D-Link Safeguard Engine
- DHCP server screening
- ARP spoofing prevention
- Web-based GUI
- Simple Network Management Protocol (SNMP)

Energy Efficient Ethernet

dlinkgreen

## Principle Product Features

**DGS-1210-10**
- 10/100/1000BASE-T ports x 8
- SFP ports x 2
- Fanless
- 11in, 1U desktop

**DGS-1210-10P**
- 10/100/1000BASE-T PoE ports x 8
- Combo 10/100/1000BASE-T/SFP ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 78 W PoE power budget
- Fanless
- 13in, 1U Desktop

**DGS-1210-20**
- 10/100/1000BASE-T ports x 16
- SFP ports x 4
- Fanless
- 19in, 1U rack-mountable

**DGS-1210-28**
- 10/100/1000BASE-T ports x 24
- SFP ports x 4
- Fanless
- 19in, 1U rack-mountable

**DGS-1210-28P**
- 10/100/1000BASE-T PoE ports x 24
- SFP ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 185 W PoE power budget
- Smart fans
- 19in, 1U rack-mountable

**DGS-1210-52**
- 10/100/1000BASE-T ports x 48
- SFP ports x 4
- Smart fans
- 19in, 1U rack-mountable

**DGS-1210-52P**
- 10/100/1000BASE-T PoE ports x 24
- 10/100/1000BASE-T ports x 24
- SFP ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 193 W PoE power budget
- Smart fans
- 19in, 1U rack-mountable

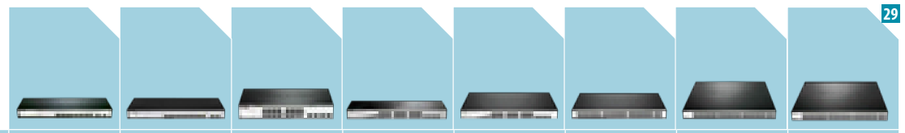
**DGS-1210-52MP**
- 10/100/1000BASE-T PoE ports x 48
- SFP ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget
- Smart fans
- 19in, 1U rack-mountable

### Optional Accessories

**Optional Management Software**

DV-700 D-View 7 Network Management System





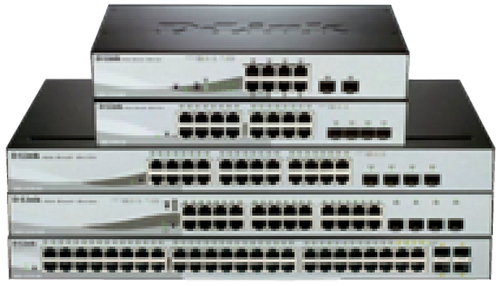
| MODEL | | DGS-1210-10 | DGS-1210-10P | DGS-1210-20 | DGS-1210-28 | DGS-1210-28P | DGS-1210-52 | DGS-1210-52P | DGS-1210-52MP |
|---|---|---|---|---|---|---|---|---|---|
| Interfaces | Fast Ethernet | | | | | | | | |
| | Gigabit Ethernet | 8 | 8 | 16 | 24 | 24 | 48 | 48 | 48 |
| | Combo Gigabit/SFP Slots | | 2 | | | | | | |
| | SFP Slots | 2 | | 4 | 4 | 4 | 4 | 4 | 4 |
| General Features | Stackability | | | | | | | | |
| | Stacking Speed (per Port) | | | | | | | | |
| | Switching Capacity | 20 Gbps | 20 Gbps | 40 Gbps | 56 Gbps | 56 Gbps | 104 Gbps | 104 Gbps | 104 Gbps |
| | Forwarding Mode | Store-and-Forward | | | | | | | |
| | Packet Buffer Memory | 1 MB per Device | | | 1.5 MB per Device | | 3 MB per Device | | |
| | MAC Address Table | 16,000 | | | | | | | |
| | Flow Control | 802.3x, HOL Blocking Prevention | | | | | | | |
| | MDI/MDIX | Configurable | | | | | | | |
| Layer 2 Features | Loop Protection | 802.1Q, 802.1w | | | | | | | |
| | 803.2ad Link Aggregation | Max. 5 Groups 8 Ports per Group | | Max. 10 Groups per Device/ 8 Ports per Group | Max. 14 Groups per Device/ 8 Ports per Group | | Max. 26 Groups per Device/ 8 Ports per Group | | |
| | Port Mirroring | One-to-One, Many-to-One, RX/TX/Both | | | | | | | |
| | Loopback Detection | • | | | | | | | |
| | Cable Diagnostics | • | | | | | | | |
| Virtual LAN (VLAN) | VLANs | 4096 Static | | | | | | | |
| | GVRP | | | | | | | | |
| | Protocol VLAN (802.1v) | | | | | | | | |
| | Double VLAN (Q-in-Q) | | | | | | | | |
| | Auto Voice VLAN | • | | | | | | | |
| | Auto Surveillance VLAN | • | | | | | | | |
| Multicasting | Groups | 256 | | | | | | | |
| | Protocols | IGMP v1, v2 | | | | | | | |
| Quality of Service (QoS) | Standard | 802.1p, DSCP | | | | | | | |
| | Number of Queues | 4 | | | | | | | |
| | Mode | Strict / WRR | | | | | | | |
| | CoS Handling | 802.1p, DSCP | | | | | | | |
| | Bandwidth Control | Port-Based | | | | | | | |
| Security | STP Security | | | | | | | | |
| | Per-Port MAC Limitation | • | | | | | | | |
| | Static MAC | 64 | | | | | | | |
| | Storm Control | Broadcast / Multicast / Unicast | | | | | | | |
| | IP-MAC-Port Binding | | | | | | | | |
| | DHCP Server Screening | • | | | | | | | |
| | ARP Spoofing Prevention | • | | | | | | | |
| | Traffic Segmentation | • | | | | | | | |
| | D-Link SafeGuard Engine | • | | | | | | | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Port-Based | | | | | | | |
| | Web-Based Access Contol (WAC) | | | | | | | | |
| | MAC-Based Access Contol (MAC) | | | | | | | | |
| | Network Access Protection (NAP) | | | | | | | | |
| | Guest VLAN | | | | | | | | |
| | Switch Access | | | | | | | | |
| Access Control Lists (ACL) | Rules | 768 | | | | | | | |
| | Mac-Based ACL | VLAN ID, 802.1p, MAC, IP, DSCP, Port | | | | | | | |
| | Time-Based ACL | | | | | | | | |
| Power over Ethernet | Standard | | 802.3af (PoE) 802.3at (PoE+) | | | 802.3af (PoE) 802.3at (PoE+) | | 802.3af (PoE) 802.3at (PoE+) | 802.3af (PoE) 802.3at (PoE+) |
| | PoE Ports | | 8 | | | 24 | | 24 | 48 |
| | PoE Power Budget | | 78 W | | | 193 W | | 193 W | 370 W |
| | Time-Based PoE | | • | | | • | | • | • |
| Management | Switch Access | Web GUI, Telnet | | | | | | | |
| | sFlow | | | | | | | | |
| | SNMP | v1 / v2c / v3 | | | | | | | |
| | DHCP | Client | | | | | | | |
| | RMON | | | | | | | | |
| | TFTP Client | • | | | | | | | |
| | Syslog | • | | | | | | | |
| Physical and Environment | Power Supply | Internal | | | | | | | |
| | Maximum Power Consumption | 13.59 W | 103.4 W (PoE on) 17.9 W (PoE off) | 16.09 W | 22.45 W | 251.3 W (PoE on) 26.3 W (PoE off) | 38.27 W | 270.2 W (PoE on) 46.5 W (PoE off) | 483.1 W (PoE on) 48.9 W (PoE off) |
| | Power-Saving Technology | Link Status, Cable Length Detection, LED or Port Shutoff, Port Standby Mod, System Hibernation Mod | | | | | | | |
| | Number of Fans | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 3 |
| | Operating Temperature | 0°C to 40°C | | | | | | | |
| | Operating Humidity | 0% to 95% RH Non-Condensing | | | | | | | |
| | Dimensions (W x D x H) | 280.5 x 180 x 44 mm | 330 x 180 x 44 mm | 440 x 140 x 44 mm | 440 x140 x 44 mm | 440 x 210 x 44 mm | 440 x 210 x 44 mm | 440 x 430 x 44 mm | 440 x 430 x 44 mm |
| Modules/ Transceivers | SFP Transceivers | DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | | | | | | | |

# Gigabit Smart Switches with Fibre Uplinks

## DGS-1210 Series

The DGS-1210 Series complies with the IEEE 802.3az Energy Efficient Ethernet standard, so offers a high level of energy saving and efficiency. Support for IPv6 management and configurations also ensures your network remains protected after the upgrade from IPv4 to IPv6. By providing good functionality, security, and manageability for a fraction of the standard cost of ownership, and offering multiple management options, these smart switches allow quick deployment, infrastructure expansion and seamless function upgrades so are perfect for small- and medium-sized businesses.

The DGS-1210 Series includes a range of cost-effective switches, two of which are PoE-enabled for businesses looking to power VoIP phones, wireless access points or network cameras, but with a slightly lower overall power budget than the DGS-1210 Smart+ range on the previous page. The DGS-1210-08P is an 8-port Smart PoE Switch that provides eight PoE-enabled ports supplying power of up to 15.4 W each, whereas the DGS-1210-24P has 24 ports, of which 12 are enabled with PoE+ support, delivering up to 30 W of power in keeping with the IEEE 802.3at standard.



### Key Series Features

- Internet Group Management Protocol (IGMP) Snooping
- Loopback Detection (LBD)
- Cable diagnostics
- 802.1Q Virtual LAN (VLAN)
- Management VLAN
- Asymmetric VLAN
- Auto Voice VLAN
- Quality of Service (QoS)
- Access Control List (ACL)
- 802.1X Access Control
- Port security
- Broadcast/multicast/unicast storm control
- D-Link SafeGuard Engine
- DHCP server screening
- ARP spoofing prevention
- Web-based GUI
- Simple Network Management Protocol (SNMP)

Energy Efficient Ethernet

dlinkgreen

### Principle Product Features

**DGS-1210-08P**
- 10/100/1000BASE-T PoE ports x 8
- 802.3af PoE support
- 45 W PoE power budget
- Fanless
- 11in, 1U desktop

**DGS-1210-16**
- 10/100/1000BASE-T ports x 16
- SFP ports x 4
- Fanless
- 11in, 1U desktop

**DGS-1210-24**
- 10/100/1000BASE-T ports x 24
- SFP ports x 4
- Fanless
- 19in, 1U rack-mountable

**DGS-1210-24P**
- 10/100/1000BASE-T PoE ports x 12
- 10/100/1000BASE-T ports x 12
- SFP ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 85 W PoE power budget
- 19in, 1U rack-mountable

**DGS-1210-48**
- 10/100/1000BASE-T ports x 44
- Combo 10/100/1000BASE-T/SFP ports x 4
- 19in, 1U rack-mountable

### Optional Accessories

**Optional Management Software**

DV-700 D-View 7 Network Management System

| MODEL | | DGS-1210-08P | DGS-1210-16 | DGS-1210-24 | DGS-1210-24P | DGS-1210-48 |
|---|---|---|---|---|---|---|
| Interfaces | Fast Ethernet | | | | | |
| | Gigabit Ethernet | 8 | 16 | 24 | 24 | 44 |
| | Combo Gigabit/SFP Slots | | | | | 4 |
| | SFP Slots | 2 | 4 | 4 | 4 | |
| General Features | Stackability | | | | | |
| | Stacking Speed (per Port) | | | | | |
| | Switching Capacity | 20 Gbps | 40 Gbps | 56 Gbps | 56 Gbps | 96 Gbps |
| | Forwarding Mode | Store-and-Forward | | | | |
| | Packet Buffer Memory | 6 MB per Device | | | | |
| | MAC Address Table | 16,000 | | | | |
| | Flow Control | 802.3x, HOL Blocking Prevention | | | | |
| | MDI/MDIX | Configurable | | | | |
| Layer 2 Features | Loop Protection | 802.1Q, 802.1w | | | | |
| | 803.2ad Link Aggregation | 8 Groups; 8 Ports per Group | | | | |
| | Port Mirroring | One-to-One, Many-to-One, RX/TX/Both, Flow-Based | | | | |
| | Loopback Detection | • | | | | |
| | Cable Diagnostics | • | | | | |
| Virtual LAN (VLAN) | VLANs | 256 Static | | | | |
| | GVRP | | | | | |
| | Protocol VLAN (802.1v) | | | | | |
| | Double VLAN (Q-in-Q) | | | | | |
| | Auto Voice VLAN | • | | | | |
| | Auto Surveillance VLAN | • | | | | |
| Multicasting | Groups | 256 | | | | |
| | Protocols | IGMP v1, v2 | | | | |
| Quality of Service (QoS) | Standard | 802.1p, DSCP | | | | |
| | Number of Queues | 8 | 4 | 4 | 8 | 4 |
| | Mode | Strict / WRR | | | | |
| | CoS Handling | 802.1p, DSCP | | | | |
| | Bandwidth Control | Port-Based | • | • | Port-Based | • |
| Security | STP Security | | | | | |
| | Per-Port MAC Limitation | • | | | | |
| | Static MAC | 64 | | | | |
| | Storm Control | Broadcast / Multicast / Unicast | | | | |
| | IP-MAC-Port Binding | • | | | | |
| | DHCP Server Screening | • | | | | |
| | ARP Spoofing Prevention | • | | | | |
| | Traffic Segmentation | • | | | | |
| | D-Link SafeGuard Engine | • | | | | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Port-Based | | | | |
| | Web-Based Access Contol (WAC) | | | | | |
| | MAC-Based Access Contol (MAC) | | | | | |
| | Network Access Protection (NAP) | | | | | |
| | Guest VLAN | | | | | |
| | Switch Access | | | | | |
| Access Control Lists (ACL) | Rules | 200 | | | | |
| | Mac-Based ACL | VLAN ID, 802.1p, MAC, IP, DSCP, Port | | | | |
| | Time-Based ACL | | | | | |
| Power over Ethernet | Standard | 802.3af (PoE) | | | 802.3af (PoE), 802.3at (PoE+) | |
| | PoE Ports | 8 | | | 12 | |
| | PoE Power Budget | 45 W | | | 85 W | |
| | Time-Based PoE | • | | | • | |
| Management | Switch Access | Web GUI, Telnet | | | | |
| | sFlow | | | | | |
| | SNMP | v1 / v2c / v3 | | | | |
| | DHCP | Client | | | | |
| | RMON | | | | | |
| | TFTP Client | • | | | | |
| | Syslog | • | | | | |
| Physical and Environment | Power Supply | Internal | | | | |
| | Maximum Power Consumption | 60 W (PoE on)<br>5.6 W (PoE off) | 17.4 W | 24.1 W | 120 W (PoE on)<br>9.7 W (PoE off) | 59.1 W |
| | Power-Saving Technology | Link Status, Cable Length Detection , LED or Port Shutoff , Port Standby mod, System Hibernation mod | | | | |
| | Number of Fans | 0 | 0 | 0 | 2 | 2 |
| | Operating Temperature | 0°C to 50°C | 0°C to 40°C | 0°C to 40°C | 0°C to 50°C | 0°C to 40°C |
| | Operating Humidity | 10% to 95% RH Non-Condensing | | | | |
| | Dimensions (W x D x H) | 280 x 180 x 44 mm | 440 x 210 x 44 mm | 440 x 210 x 44 mm | 441 x 209.9 x 44 mm | 440 x 250 x 44 mm |
| | Mean Time Between Failures (MTBF) | 348,795 Hours | 799,491 Hours | 410,948 Hours | 205,768 Hours | 322,402 Hours |
| Modules/ Transceivers | SFP Transceivers | DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | | | | |

# Fast Ethernet Smart Switches

## DES-1210 Series

The DES-1210 Series provides 8, 24 or 48 Fast Ethernet ports, with optional Gigabit and combo Gigabit/SFP ports, so has all the features needed in a small- or medium-sized business, without the complexity or cost. The built-in web interface and PC-based SmartConsole Utility make these switches easy to deploy, configure and troubleshoot and the complete set of features allows for seamless integration in any business environment.

The PoE option is available on the 8- and 24-port members of the family and includes power-saving technologies such as time-based PoE, which allows the power to be shut off at a predetermined time, saving power on VoIP phones, wireless access points or any other PoE equipment. Furthermore, the DES-1210-28P incorporates a Smart Fan feature, automatically turning on the system fans only when necessary. This not only saves energy and cost but also extends the lifespan of the switch. The DES-1210-28P is also compliant with the PoE+ standard, enabling it to feed up to 30 Watts to connected PoE devices.

### Principle Product Features

**DES-1210-08P**
- 10/100BASE-TX PoE ports x 8
- 802.3af PoE support
- 72 W PoE power budget
- Fanless

**DES-1210-28**
- 10/100BASE-TX ports x 24
- 10/100/1000BASE-T ports x 2
- Combo 1000BASE-T/SFP ports x 2
- Fanless
- 19in, 1U rack-mountable

**DES-1210-28P**
- 10/100BASE-TX PoE ports x 24
- 10/100/1000BASE-T ports x 2
- Combo 1000BASE-T/SFP ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 193 W PoE power budget
- Smart fans x 3
- 19in, 1U rack-mountable

**DES-1210-52**
- 10/100BASE-TX ports x 48
- 10/100/1000BASE-T ports x 2
- Combo 1000BASE-T/SFP ports x 2
- Fanless
- 19in, 1U rack-mountable

### Optional Accessories

**Optional Management Software**

DV-700 D-View 7 Network Management System

### Key Series Features

- Internet Group Management Protocol (IGMP) snooping
- Multicast filtering
- 802.1Q tagged Virtual LAN (VLAN)
- Management VLAN
- Asymmetric VLAN
- Auto Voice VLAN
- Quality of Service (QoS)
- Access Control List (ACL)
- 802.1X Access Control
- Broadcast/multicast/unicast storm control
- D-Link SafeGuard Engine
- DHCP server screening
- ARP spoofing prevention
- Web-based GUI
- Simple Network Management Protocol (SNMP)

dlinkgreen

### What speed does Ethernet run at ?

Ethernet interfaces are referred to as 10BASE-T (Ethernet), 100BASE-TX (Fast Ethernet), 1000BASE-T (Gigabit Ethernet) and 10GBASE-T (10 Gigabit Ethernet.) Each standard represents a 10-fold increase in data transfer speed, from 10BASE-T (10 million bits per second) up to 10GBASE-T (10 thousand million bits per second). Don't forget that eight bits equals one byte...



| MODEL | | DES-1210-08P | DES-1210-28 | DES-1210-28P | DES-1210-52 |
|---|---|---|---|---|---|
| Interfaces | Fast Ethernet | 8 | 24 | 24 | 48 |
| | Gigabit Ethernet | | 2 | 2 | 2 |
| | Combo Gigabit/SFP Slots | | 2 | 2 | 2 |
| General Features | Stackability | | | | |
| | Stacking Speed (per Port) | | | | |
| | Switching Capacity | 1.6 Gbps | 12.8 Gbps | 12.8 Gbps | 17.6 Gbps |
| | Forwarding Mode | Store-and-Forward | | | |
| | Packet Buffer Memory | 384 KB | 512 KB | 512 KB | 1 MB |
| | MAC Address Table | 8000 | | | |
| | Flow Control | 802.3x, HOL Blocking Prevention | | | |
| | MDI/MDIX | Configurable | | | |
| L2 Features | Loop Protection | 802.1Q, 802.1w | | | |
| | 803.2ad Link Aggregation | 4 Groups<br>8 Ports per Group | 14 Groups<br>8 Ports per Group | 14 Groups<br>8 Ports per Group | 26 Groups<br>8 Ports per Group |
| | Port Mirroring | One-to-One, Many-to-One, RX/TX/Both | | | |
| | Loopback Detection | • | | | |
| | Cable Diagnostics | | | | |
| Virtual LAN (VLAN) | VLANs | 256 Static | | | |
| | GVRP | | | | |
| | Protocol VLAN (802.1v) | | | | |
| | Double VLAN (Q-in-Q) | | | | |
| | Auto Voice VLAN | • | | | |
| | Auto Surveillance VLAN | • | | | |
| Multicasting | Groups | 256 | | | |
| | Protocols | IGMP v1, v2 | | | |
| Quality of Service (QoS) | Standard | 802.1p, DSCP | | | |
| | Number of Queues | 4 | | | |
| | Mode | Strict / WRR | | | |
| | CoS Handling | 802.1p, DSCP | | | |
| | Bandwidth Control | • | | | |
| Security | STP Security | | | | |
| | Per-Port MAC Limitation | • | | | |
| | Static MAC | 64 | | | |
| | Storm Control | Broadcast / Multicast / Unicast | | | |
| | IP-MAC-Port Binding | | | | |
| | DHCP Server Prevention | • | | | |
| | ARP Spoofing Prevention | • | | | |
| | Traffic Segmentation | • | | | |
| | D-Link SafeGuard Engine | • | | | |
| Authentication, Authorisation and Accounting (AAA) | 802.1x Authentication | Port-Based | | | |
| | Web-based Access Contol (WAC) | | | | |
| | MAC-based Access Contol (MAC) | | | | |
| | Network Access Protection (NAP) | | | | |
| | Guest VLAN | | | | |
| | Switch Access | | | | |
| Access Control Lists (ACL) | Rules | 240 | | | |
| | Mac-Based ACL | VLAN ID, 802.1p, MAC, IP, DSCP, Port | | | |
| | Time-Based ACL | | | | |
| Power over Ethernet | Standard | 802.3af (PoE) | | 802.3af (PoE), 802.3at (PoE+) | |
| | PoE Ports | 8 | | 802.3af (PoE): 24<br>802.3at (PoE+): 4 | |
| | PoE Power Budget | 72 W | | 193 W | |
| | Time-Based PoE | • | | • | |
| Management | Switch Access | Web GUI, Telnet | | | |
| | sFlow | | | | |
| | SNMP | v1 / v2c / v3 | | | |
| | DHCP | Client | | | |
| | RMON | | | | |
| | TFTP Client | • | | | |
| | Syslog | • | | | |
| Physical and Environment | Power Supply | External | Internal | Internal | Internal |
| | Maximum Power Consumption | 89.4 W (PoE on)<br>9.6 W (PoE off) | 13.4 W | 254 W (PoE on)<br>26.4 W (PoE off) | 28.9 W |
| | Power Saving Technology | | | Smart Fans | |
| | Number of Fans | 0 | 0 | 3 | 0 |
| | Operating Temperature | 0°C to 40°C | | | |
| | Operating Humidity | 5% to 95% RH Non-Condensing | | | |
| | Dimensions (W x D x H) | 190 x 120 x 38 mm | 440 x 140 x 44 mm | 440 x 250 x 44 mm | 440 x 250 x 44 mm |
| | Mean Time Between Failures (MTBF) | 274,382 Hours | 356,242 Hours | 205,416 Hours | 592,770 Hours |
| Modules/ Transceivers | SFP Transceivers | | DEM-210, DEM-211, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT | | |

# Gigabit Smart Switches

## DGS-1100 Series

D-Link's DGS-1100 Series provides an affordable solution for small offices, home offices and small and medium businesses as well as enterprise deployment, anywhere in fact that requires simple installation and easy network management. Each model comes in a compact desktop-sized metal case and features either 8, 16, 16+2 SFP, 24, 24+2 SFP, or 8 PoE and 24 with 12 PoE-enabled Gigabit ports. Compliant with IEEE802.3az Energy Efficient Ethernet, these switches consume less energy by cutting down on power consumption when port utilisation is low. By deploying EEE devices, users can cut operating costs and even cut down on necessary cooling equipment, helping small and medium-sized businesses stay within their budgets. The DGS-1100 Series also features D-Link Green™ Technology to help save energy automatically by monitoring the link status of every port and drastically reducing power consumption when a port link is down.

## Principle Product Features

**DGS-1100-08**
- 10/100/1000BASE-T ports x 8
- Fanless
- 7in, desktop

**DGS-1100-08P**
- 10/100/1000BASE-T PoE ports x 8
- 802.3af PoE Support
- 64 W PoE Power Budget
- Fanless
- 7in, desktop

**DGS-1100-16**
- 10/100/1000BASE-T ports x 16
- Fanless
- 11in, 1U rack-mountable

**DGS-1100-18**
- 10/100/1000BASE-T ports x 16
- SFP ports x 2
- Fanless
- 11in, 1U rack-mountable

**DGS-1100-24**
- 10/100/1000BASE-T ports x 24
- Fanless
- 11in, 1U rack-mountable

**DGS-1100-24P**
- 10/100/1000BASE-T ports x 24
- 802.3af (PoE) and 802.3at (PoE+) support
- 100 W PoE power budget
- 11in, 1U rack-mountable

**DGS-1100-26**
- 10/100/1000BASE-T ports x 16
- SFP ports x 2
- Fanless
- 11in, 1U rack-mountable

## Optional Accessories

**Optional Management Software**
DV-700 D-View 7 Network Management System

## Key Series Features

- Basic configurable options
- 11in metal case. Comes with adapters to install in 19in racks (except DGS-1100-08/08P)
- Improved resilience, longer MTBF (Mean Time Between Failures)
- VLAN support for traffic segmentation
- Auto surveillance VLAN for easy integration with IP-based surveillance systems
- Loopback Detection (LBD) and Broadcast Storm Control to avoid network downtime
- Quality of Service (QoS) and Bandwidth Control to ensure smooth operation
- Cable diagnostics function to help troubleshoot wiring problems
- Web-based GUI or SmartConsole utility
- 802.3az Energy Efficient Ethernet (EEE) compliant

Energy Efficient Ethernet

dlinkgreen



| MODEL | | DGS-1100-08 | DGS-1100-08P | DGS-1100-16 | DGS-1100-18 | DGS-1100-24 | DGS-1100-24P | DGS-1100-26 |
|---|---|---|---|---|---|---|---|---|
| Interfaces | Fast Ethernet | | | | | | | |
| | Gigabit Ethernet | 8 | 8 | 16 | 16 | 24 | 24 | 24 |
| | Combo Gigabit/SFP Slots | | | | 2 | | | 2 |
| General Features | Stackability | | | | | | | |
| | Stacking Speed (per Port) | | | | | | | |
| | Switching Capacity | 16 Gbps | 16 Gbps | 32 Gbps | 36 Gbps | 48 Gbps | 48 Gbps | 52 Gbps |
| | Forwarding Mode | Store-and-Forward | | | | | | |
| | Packet Buffer Memory | 2 Mb | 2 Mb | 512 Kb | 1.5 Mb | 512 Kb | 512 Kb | 1.5 Mb |
| | MAC Address Table | 8000 | | | | | | |
| | Flow Control | 802.3x, HOL Blocking Prevention | | | | | | |
| | MDI/MDIX | Auto | | | | | | |
| L2 Features | Loop Protection | • | | | | | | |
| | 803.2ad Link Aggregation | 2 Groups; 2-4 Ports per Group | | 8 Groups 8 Ports per Group | 9 Groups 8 Ports per Group | 12 Groups; 8 Ports per Group | | 13 Groups 8 Ports per Group |
| | Port Mirroring | One-to-One, Many-to-One | | | | | | |
| | Loopback Detection | • | | | | | | |
| | Cable Diagnostics | • | | | | | | |
| Virtual LAN (VLAN) | VLANs | 32 Static | | | | | | |
| | GVRP | | | | | | | |
| | Protocol VLAN (802.1v) | | | | | | | |
| | Double VLAN (Q-in-Q) | | | | | | | |
| | Auto Voice VLAN | • | | | | | | |
| | Auto Surveillance VLAN | • | | | | | | |
| Multicasting | Groups | 32 | | | | | | |
| | Protocols | IGMP v1/v2 | | | | | | |
| Quality of Service (QoS) | Standard | 802.1p | | | | | | |
| | Number of Queues | 4 | | | | | | |
| | Mode | Strict / WRR | | | | | | |
| | CoS Handling | | | | | | | |
| | Bandwidth Control | Port-Based | | | | | | |
| Security | STP Security | | | | | | | |
| | Per-Port MAC Limitation | • | | | | | | |
| | Static MAC | 128 | | | | | | |
| | Storm Control | Broadcast / Multicast / Unicast | | | | | | |
| | IP-MAC-Port Binding | | | | | | | |
| | DHCP Server Prevention | | | | | | | |
| | ARP Spoofing Prevention | | | | | | | |
| | Traffic Segmentation | | | | | | | |
| | D-Link SafeGuard Engine | | | | | | | |
| Power over Ethernet | Standard | | 802.3af (PoE) | | | | 802.3at (PoE+) | |
| | PoE Ports | | 8 | | | | 12 | |
| | PoE Power Budget | | 64 W | | | | 100 W | |
| | Time-Based PoE | | | | | | | |
| Management | Switch Access | Web GUI | | | | | | |
| | sFlow | | | | | | | |
| | SNMP | | | | | | | |
| | DHCP | | | | | | | |
| | RMON | | | | | | | |
| | TFTP Client | | | | | | | |
| | Syslog | | | | | | | |
| Physical and Environment | Power Supply | Internal | | | | | | |
| | Maximum Power Consumption | 4.89W | 78.8 W (PoE on) 5.2 W (PoE off) | 9.31 W | 14.88 W | 13.94 W | 128.32 W (PoE on) 19.04 W (PoE off) | 19.04 W |
| | Power-Saving Technology | IEEE 802.3az Energy Efficient Ethernet | | | | | | |
| | Number of Fans | 0 | | | | | 1 | 0 |
| | Operating Temperature | 0°C to 50°C | 0°C to 40°C | 0°C to 50°C | | 0°C to 50°C | -5°C to 50°C | |
| | Operating Humidity | 10% to 95% RH Non-Condensing | | 0% to 95% RH Non-Condensing | | | | |
| | Dimensions (W x D x H) | 171 x 98 x 28 mm | 190 x 120 x 38 mm | 280 x 180 x 44 mm | 280 x 180 x 44 mm | 280 x 180 x 44 mm | 280 x 230 x 44 mm | 280 x 180 x 44 mm |
| | Mean Time Between Failures (MTBF) | 503,585 Hours | 708,219 Hours | 2,827,541 Hours | 2,671,256 Hours | 2,406,109 Hours | 563,292 Hours | 2,277,645 Hours |

# Fast Ethernet Smart Switches

## DES-1100 Series

The DES-1100 Series provides businesses with the benefits of a managed device but without the associated complexity and cost. Equipped with 16 or 24 Fast Ethernet ports, these switches integrate basic configurable functions that provide performance and scalability with an easy-to-use web interface to help users deploy their network quickly and easily.

### Principle Product Features

**DES-1100-16**
- 10/100BASE-TX ports x 16
- 802.3ad link aggregation
- Static VLAN
- 802.1p QoS
- Fanless

**DES-1100-24**
- 10/100BASE-TX ports x 24
- 802.3ad link aggregation
- Static VLAN
- 802.1p QoS
- Fanless

### Optional Accessories

**Optional Management Software**

DV-700 D-View 7 Network Management System

### Key Series Features

- Basic configurable options
- 11in metal case. Comes with adapters to install in 19in racks
- Fanless, for silent operation
- Improved resilience, longer MTBF (Mean Time Between Failures)
- VLAN support for traffic segmentation
- Loopback Detection (LBD) and Broadcast Storm Control to avoid network downtime
- Quality of Service (QoS) and Bandwidth Control to ensure smooth operation
- Web-based GUI or SmartConsole utility

### What does Link Aggregation mean?

Link aggregation combines (aggregates) multiple network connections in parallel in order to increase throughput beyond what a single connection could sustain, and provides redundancy should one of the links fail. Combining can occur such that multiple interfaces share one logical address (IP) or one physical address (MAC address), or it allows each interface to have its own address. A logical connection requires that both ends of a link use the same aggregation method, but has performance advantages over the physical connection method.



| MODEL | | DES-1100-16 | DES-1100-24 |
|---|---|---|---|
| Interfaces | Fast Ethernet | 16 | 24 |
| | Gigabit Ethernet | | |
| | Combo Gigabit/SFP Slots | | |
| General Features | Stackability | | |
| | Stacking Speed (per Port) | | |
| | Switching Capacity | 3.2 Gbps | 4.8 Gbps |
| | Forwarding Mode | Store-and-Forward | |
| | Packet Buffer Memory | 1.75 Mb | |
| | MAC Address Table | 8000 | |
| | Flow Control | 802.3x | |
| | MDI/MDIX | Auto | |
| L2 Features | Loop Protection | | |
| | 803.2ad Link Aggregation | 2 Groups, 4 Ports per Group | |
| | Port Mirroring | One-to-One, Many-to-One | |
| | Loopback Detection | • | |
| | Cable Diagnostics | | |
| Virtual LAN (VLAN) | VLANs | 32 Static | |
| | GVRP | | |
| | Protocol VLAN (802.1v) | | |
| | Double VLAN (Q-in-Q) | | |
| | Auto Voice VLAN | | |
| | Auto Surveillance VLAN | | |
| Multicasting | Groups | 32 | |
| | Protocols | IGMP v1/v2 | |
| Quality of Service (QoS) | Standard | 802.1p | |
| | Number of Queues | 2 | |
| | Mode | Strict / WRR | |
| | CoS Handling | | |
| | Bandwidth Control | Port-Based | |
| Security | STP Security | | |
| | Per-Port MAC Limitation | | |
| | Static MAC | 128 | |
| | Storm Control | Broadcast / Multicast / Unicast | |
| | IP-MAC-Port Binding | | |
| | DHCP Server Prevention | | |
| | ARP Spoofing Prevention | | |
| | D-Link SafeGuard Engine | | |
| Management | Switch Access | Web GUI | |
| | sFlow | | |
| | SNMP | | |
| | DHCP | | |
| | RMON | | |
| | TFTP Client | | |
| | Syslog | | |
| Physical and Environment | Power Supply | Internal | |
| | Maximum Power Consumption | 5.96 W | 7.68 W |
| | Power-Saving Technology | | |
| | Number of Fans | 0 | |
| | Operating Temperature | 0°C to 40°C | |
| | Operating Humidity | 10% to 95% RH Non-Condensing | |
| | Dimensions (W x D x H) | 280 x 125 x 44 mm | |
| | Mean Time Between Failures (MTBF) | 597,779 Hours | 562,006 Hours |

# Gigabit Unmanaged Switches

The DGS-1000 Series consists of Unmanaged Gigabit Switches designed for cost-effective Small Office Home Office (SOHO) and workgroup connection. They support full duplex operation, provide IEEE 802.3x flow control for reliable data transfer, and auto MDI/MDIX to eliminate the need for cross-over cables, thus simplifying installation. They make use of D-Link Green™ technology, too, which reduces power consumption and provides a longer product life without sacrificing operational performance or functionality. Recyclable packaging and minimised use of harmful substances (RoHS compliant) make this switch series truly environmentally friendly since it also complies with the Energy-Efficient Ethernet standard.

## Key Series Features

- Power savings by link status
- Power savings by cable length detection
- Jumbo frame
- IEEE 802.3x Flow Control
- Auto MDI/MDIX
- Quality of Service (QoS)
- Cable diagnostics

## DGS-1000 Series

### DGS-1005D

- 10/100/1000BASE-T ports x 5
- External power supply
- Desktop
- Fanless
- D-Link Green™

### DGS-1008D

- 10/100/1000BASE-T ports x 8
- External power supply
- Desktop
- Fanless
- D-Link Green™

### DGS-1008P

- 10/100/1000BASE-T ports x 8
- Includes 802.3af PoE ports x 4
- External power supply
- Desktop
- Fanless

### DGS-1016D

- 10/100/1000BASE-T ports x 16
- Internal power supply
- 11in, 1U desktop with rack-mountable kit
- Fanless
- D-Link Green™

### DGS-1024D

- 10/100/1000BASE-T ports x 24
- Internal power supply
- 11in, 1U desktop with rack-mountable kit
- Fanless
- D-Link Green™

## DGS-105/108 Series

### DGS-105

- 10/100/1000BASE-T ports x 5
- Robust metal product housing
- 802.3az Energy Efficient Ethernet (EEE)
- Cable diagnostics function
- Slot for Kensington security lock

### DGS-108

- 10/100/1000BASE-T ports x 8
- Robust metal product housing
- 802.3az Energy Efficient Ethernet (EEE)
- Cable diagnostics function
- Slot for Kensington security lock



| MODEL | | DGS-1005D | DGS-1008D | DGS-1008P | DGS-1016D | DGS-1024D |
|---|---|---|---|---|---|---|
| Interfaces | 100BASE-TX (Fast Ethernet) | | | | | |
| | 1000BASE-T (Gigabit) | 5 | 8 | 8 | 16 | 24 |
| | 100BASE-FX (Fibre) | | | | | |
| General Features | Switching Capacity | 10 Gbps | 16 Gbps | 16 Gbps | 48 Gbps | 32 Gbps |
| | Forwarding Mode | | Store-and-Forward | | | |
| | Packet Buffer Memory | 192 KB | 192 KB | 192 KB | 512 KB | 512 KB |
| | MAC Address Table | 8000 | 4000 | 4000 | 8000 | 8000 |
| | Flow Control | 802.3x | | | | |
| | MDI/MDIX | Auto | | | | |
| Quality of Service (QoS) | Standard | 802.1p | 802.1p | 802.1p, DSCP | 802.1p | 802.1p |
| | Number of Queues | | | 4 | | |
| | Mode | | | Strict | | |
| Power over Ethernet | Standard | | | 802.3af (PoE) | | |
| | PoE Ports | | | 4 | | |
| | PoE Power Budget | | | 52 W | | |
| Physical and Environment | Power Supply | External | | | Internal | |
| | Power-Saving Technology | Green Ethernet and Energy-Efficient Ethernet(EEE) | | | Green Ethernet | |
| | Number of Fans | 0 | | | | |
| | Operating Temperature | 0°C to 40°C | 0°C to 40°C | 0°C to 50°C | 0°C to 40°C | 0°C to 40°C |
| | Operating Humidity | 10% to 90% RH Non-Condensing | 10% to 90% RH Non-Condensing | 0% to 95% RH Non-Condensing | 5% to 90% RH Non-Condensing | |
| | Dimensions (W x D x H) | 44.2 x 100.2 x 32.6 mm | 164.5 x 112.4 x 35.0 mm | 190 x 120 x 38 mm | 280 x 180 x 44 mm | 280 x 180 x 44 mm |

| MODEL | | DGS-105 | DGS-108 |
|---|---|---|---|
| Interfaces | 100BASE-TX (Fast Ethernet) | | |
| | 1000BASE-T (Gigabit) | 5 | 8 |
| | 100BASE-FX (Fibre) | | |
| General Features | Switching Capacity | 10 Gbps | 16 Gbps |
| | Forwarding Mode | Store-and-Forward | |
| | Packet Buffer Memory | 128 KB | 128 KB |
| | MAC Address Table | 2000 | 8000 |
| | Flow Control | IEEE 802.3x | IEEE 802.3x |
| | MDI/MDIX | Auto MDI/MDIX Adjustment for all Ports | |
| Quality of Service (QoS) | Standard | IEEE 802.1p | IEEE 802.1p |
| | Number of Queues | 4 Queues | 4 Queues |
| | Mode | Strict | Strict |
| Physical and Environment | Power Supply | External 5 V/1 A Level 'V' Power Adapter | |
| | Power-Saving Technology | Green Ethernet and IEEE 802.3az Energy-Efficient Ethernet (EEE) | |
| | Number of Fans | 0 | |
| | Operating Temperature | 0°C to 50°C | |
| | Operating Humidity | 5% to 90% RH Non-Condensing | |
| | Dimensions (W x D x H) | 100 x 98 x 28 mm | 162 x 102 x 28 mm |

# Fast Ethernet Unmanaged Switches

The DES-1000 Series of Fast Ethernet Unmanaged Switches is designed for cost effective Small Office Home Office (SOHO) and workgroup connection. They use standard CAT5 copper twisted-pair wires as the network cable, and support full/half duplex operation for 10/100 Mbps speeds. These switches provide IEEE 802.3x flow control for reliable data transfer, and auto MDI/MDI-X to eliminate the need for cross-over cables, thus simplifying installation.

## Key Series Features

- Fanless
- IEEE 802.3x Flow Control
- Auto MDI/MDIX
- Plug-and-Play installation filtering
- Quality of Service (QoS) (DES-1016D and DES-1024D)

## DES-1000 Series

### DES-1005D

- 10/100BASE-TX ports x 5
- External power supply
- Desktop
- Fanless

### DES-1008D

- 10/100BASE-TX ports x 8
- External power supply
- Desktop
- Fanless

### DES-1005P

- 10/100BASE-TX ports x 4
- 10/100BASE-TX PoE ports x 1
- QoS support for traffic prioritisation
- Green Ethernet technology
- Fanless

### DES-1008PA

- 10/100BASE-TX ports x 8
- External power supply
- Desktop
- Fanless

### DES-1008F

- 10/100BASE-TX ports x 7
- 100BASE-FX port x 1
- External power supply
- Desktop
- Fanless

### DES-1016D

- 10/100BASE-TX ports x 16
- Internal power supply
- 11in, 1U desktop with rack-mountable kit
- Fanless

### DES-1018P

- 10/100BASE-TX ports x 8
- 10/100BASE-TX PoE ports x 8
- Combo ports x 2
- Internal power supply
- 11in, 1U desktop with rack-mountable kit

### DES-1018MP

- 10/100BASE-TX PoE ports x 16
- Combo ports x 2
- Internal power supply
- 11in, 1U desktop with rack-mountable kit

### DES-1024D

- 10/100BASE-TX ports x 24
- Internal power supply
- 11in, 1U desktop with rack-mountable kit
- Fanless

## DES-105/108 Series

### DES-105

- 10/100BASE-TX ports x 5
- Plug-and-play operation
- QoS functionality
- Robust metal housing
- Low energy consumption

### DES-108

- 10/100BASE-TX ports x 8
- Plug-and-play operation
- QoS functionality
- Robust metal housing
- Low energy consumption



| MODEL | | DES-1005D | DES-1008D | DES-1005P | DES-1008PA | DES-1008F |
|---|---|---|---|---|---|---|
| Interfaces | 100BASE-TX (Fast Ethernet) | 5 | 8 | 5 | 8 | 7 |
| | 1000BASE-T (Gigabit) | | | | | |
| | 100BASE-FX (Ethernet Fibre Link) | | | | | 1 |
| General Features | Switching Capacity | 1 Gbps | 1.6 Gbps | 1 Gbps | 1.6 Gbps | 1.6 Gbps |
| | Forwarding Mode | Store-and-Forward | | | | |
| | Packet Buffer Memory | 57 KB | 57 KB | 64 KB | 96 KB | 96 KB |
| | MAC Address Table | 2000 | 1000 | 2000 | 1000 | 1000 |
| | Flow Control | 802.3x | | | | |
| | MDI/MDIX | Auto | | | | |
| Quality of Service (QoS) | Standard | 802.1p | | | | |
| | Number of Queues | | | 4 | | |
| | Mode | | | Strict | | |
| Power over Ethernet | Standard | | | 802.3af (PoE) | 802.3af (PoE) | 802.3af (PoE) |
| | PoE Ports | | | 1 | 4 | 4 |
| | PoE Power Budget | | | 52 W | 52 W | 52 W |
| Physical and Environment | Power Supply | External | | | | |
| | Power-Saving Technology | Green Ethernet and Energy-Efficient Ethernet (EEE) | | | | |
| | Number of Fans | 0 | | | | |
| | Operating Temperature | 0°C to 50°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C |
| | Operating Humidity | 10% to 90% RH Non-Condensing | | | 5% to 90% RH Non-Condensing | 10% to 90% RH Non-Condensing |
| | Dimensions (W x D x H) | 125.3 x 83.4 x 29.1 mm | 164.5 x 111.5 x 36.0 mm | 140 x 85 x 28 mm | 172 x 98 x 27.9 mm | 192 x 117 x 32 mm |

| MODEL | | DES-1016D | DES-1018P | DES-1018MP | DES-1024D |
|---|---|---|---|---|---|
| Interfaces | 100BASE-TX (Fast Ethernet) | 16 | 16 | 16 | 24 |
| | 1000BASE-T (Gigabit) | | | | |
| | 10000BASE-T/SFP (Combo) | | 2 | 2 | |
| General Features | Switching Capacity | 3.2 Gbps | 7.2 Gbps | 7.2 Gbps | 4.8 Gbps |
| | Forwarding Mode | Store-and-Forward | | | |
| | Packet Buffer Memory | 2 MB | 384KB | 384KB | 2 MB |
| | MAC Address Table | 8000 | 8000 | 8000 | 8000 |
| | Flow Control | 802.3x | | | |
| | MDI/MDIX | Auto | | | |
| Quality of Service (QoS) | Standard | 802.1p | | | |
| | Number of Queues | 2 | | | 2 |
| | Mode | Strict | | | Strict |
| Power over Ethernet | Standard | | 802.3af (PoE) | 802.3af (PoE) | |
| | PoE Ports | | 8 | 16 | |
| | PoE Power Budget | | 80 W | 246.4 W | |
| Physical and Environment | Power Supply | Internal | | | |
| | Power-Saving Technology | Green Ethernet and Energy-Efficient Ethernet | | | Green Ethernet and Energy-Efficient Ethernet |
| | Number of Fans | 0 | 1 | 1 | 0 |
| | Operating Temperature | 0°C to 40°C | | | |
| | Operating Humidity | 10% to 90% RH Non-Condensing | | | |
| | Dimensions (W x D x H) | 280 x 125.8 x 44 mm | 280 x 210 x 44 mm | 280 x 210 x 44 mm | 280 x 125.8 x 44 mm |

| MODEL | | DES-105 | DES-108 |
|---|---|---|---|
| Interfaces | 100BASE-TX (Fast Ethernet) | 5 | 8 |
| | 1000BASE-T (Gigabit) | | |
| | 100BASE-FX (Ethernet Fibre Link) | | |
| General Features | Switching Capacity | 1.0 Gbps | 1.6 Gbps |
| | Forwarding Mode | Store-and-Forward | |
| | Packet Buffer Memory | 384 KB | 768 KB |
| | MAC Address Table | 2000 | 1000 |
| | Flow Control | IEEE 802.3x | |
| | MDI/MDIX | Auto MDI/MDIX Adjustment for all Ports | |
| Quality of Service (QoS) | Standard | IEEE 802.1p | IEEE 802.1p |
| | Number of Queues | 2 Queues | 2 Queues |
| | Mode | Strict | WRR Mode |
| Physical and Environment | Power Supply | External 5 V/1 A Level "V" Power Adapter | |
| | Power-Saving Technology | Green Ethernet and IEEE 802.3az Energy Efficient Ethernet (EEE) | |
| | Number of Fans | | |
| | Operating Temperature | 0°C to 50°C | |
| | Operating Humidity | 10% to 90% RH Non-Condensing | |
| | Dimensions (W x D x H) | 100 x 98 x 28 mm | 162 x 102 x 28 mm |

# D-View 7 Network Management System

The D-View 7 Network Management System (DV-700) is a comprehensive standards-based management tool designed to centrally manage, in a consistent manner, critical network characteristics such as availability, reliability, resilience and security. Flexible and versatile, D-View 7 uses cutting-edge web technology to provide a comprehensive software toolbox that can be accessed without the need to install separate software.

## Flexible Architecture

D-View 7 is organised into a server-probe architecture, which simplifies data collection across complex networks. Monitoring and configuring multiple devices at remote locations, across the Internet, or using Network Address Translation (NAT) methodology is no longer an issue. With D-View 7, remotely deployed probes will automatically tunnel home, allowing for the management of devices that cannot be directly accessed using standard Simple Network Management Protocol (SNMP). When a device is selected for management, D-View 7 probes will relay the command to the devices and then report back its data to the D-View 7 server.

## Simplify Network Management

D-View 7 supports various predefined configuration templates which help users easily manage multiple devices. For complex configurations, D-View 7 also has the ability to deploy Command Line Interface (CLI) scripts across multiple devices simultaneously. This allows D-View 7 to support a wide range of configuration features and virtually any device as long as it supports CLI settings. With a highly customisable scheduling system, D-View 7 allows users to assign tasks to be issued in off-peak hours or any other planned-maintenance time frame. Users thus have peace of mind, knowing that routine maintenance tasks and configurations will be automatically managed and monitored by D-View 7's event notification system. D-View 7 also supports periodic tasks which can be run daily, weekly, monthly or to some other set schedule.

## Key Series Features

- Simplify management tasks
- Supports SNMP v1, v2c, and v3
- Supports device auto-discovery
- Supports scheduled and periodic task management
- Supports event notification and event escalation
- Supports SNMP trap and syslog collection
- Supports batch configuration and is capable of configuring multiple devices at a time
- Flexible architecture
- Designed with a server-and-probe architecture
- Supports management of devices behind a firewall, NAT, or in remote sites without a VPN
- Visualisation
- Easy-to-understand and easy-to-configure dashboard
- Customisable chart system for displaying data
- Supports auto-generate network topology
- Supports real-time device status on topology
- Supports real-time device rack and panel simulation
- Supports smart and managed switches, unified switches, unified access points, wireless controllers, wireless access points, etc
- Supports third-party devices
- Supports third-party device management by MIB compiler and browser

## Product Highlights

### Comprehensive Network Management

Manage your network effectively with useful tools and features such as Batch Configuration, SNMP, and Flexible Command Line Dispatch.

### Hassle-Free Network Management

Graphical and detailed dashboard provides a centralised and convenient way to manage and monitor your network.

### Extensive Device Support

Supports a large number of devices including smart and managed switches, unified access points, and wireless controllers, as well as non-D-Link devices.

## Manage Third-Party Devices

Network administrators can customise the SOID and related information of virtually any third-party device to let D-View 7 identify and manage them. D-View 7 can then check the health status of those devices, issue CLI commands, and undertake the standard management and monitoring. Combined with the new D-View 7 graphical dashboard, network administrators can get near-real-time feedback on the status of their network.

## Enhanced Trap and Syslog Analysis

D-View 7 also functions as a trap and syslog server which can collect all of the trap or syslog data from multiple devices across a network. This gives network administrators a centralised place to collect important data, which can then be searched easily from within D-View 7. The advanced search system lets network administrators set keyword combinations, and generate alarms based on events that are reported in the trap or syslog feature.

## TECHNICAL SPECIFICATIONS

| | | |
|---|---|---|
| **GENERAL** | | |
| **Architecture** | Supports standard server client web architecture<br>Supports multi-tenant architecture | Supports probe design to collect data from remote site without VPN or behind NAT |
| **User Management** | Supports read-write and read-only privileges by modules | |
| **Internationalization** | Supported languages:<br>English, Simplified Chinese, Traditional Chinese | |
| **DISCOVERY** | | |
| **Device Discovery** | Supports SNMP v1, v2c, v3 scan<br>Supports IPv4 address range scan | Supports smart scan by neighborhood<br>Supports discover across LAN by probe |
| **Link Discovery** | Supports LLDP, FDB based link discovery | |
| **Auto Discovery** | Supports periodically discovery with specific time period | |
| **INVENTORY** | | |
| **Inventory Management** | Supports inventory and devices export | Supports device grouping by labels;<br>a device can belong to multiple labels |
| **MONITORING** | | |
| **Dashboard** | Supports overall system and product summary for wired or wireless devices | Supports customized dashboard |
| **Sensor** | Supports following methods to data collection<br>SNMP, PING | |
| **Topology View** | Supports auto-topology generation<br>Supports customised topology generation<br>Supports devices status display<br>Supports link status display<br>Supports different structure of topology (tree type, start type) | Supports multi-layer topology for following views<br>Supports customized background image overlay for following views |
| **Panel View** | Supports panel and LED status of switches | Supports panel view with stacking switches |
| **Status Polling** | Supports multiple polling methods<br>Ping, SNMP | Supports customized polling time for each devices or by group |
| **Event & Notification** | Supports customized criteria or threshold to trigger the event based on following rules:<br>Value Match<br>Keyword Match<br>Keyword Combination Match | Supports customized escalation rules<br>Supports email notification to defined users |

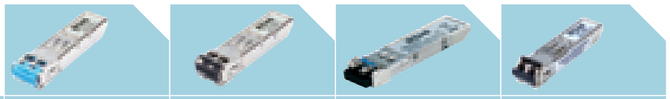
# SFP/SFP+/XFP Transceivers

## Fast Ethernet SFP Transceivers

| MODEL | | DEM-210 | DEM-211 |
|---|---|---|---|
| Standard | | IEEE 802.3u 100 BASE-FX | IEEE 802.3u 100 BASE-FX |
| Connector | | Duplex LC | Duplex LC |
| Fibre Type | Single-Mode | 9/125 µm | |
| | Multi-Mode | | 62.5/125 µm |
| Wavelength | | 1310 nm | 1310 nm |
| Maximum Distance | | 15 km | 2 km |
| Power | | 3.3 V | 3.3 V |
| Hot-Pluggable | | • | • |

D-Link's Small Form-Factor Pluggable (SFP) and 10 Gigabit Small Form-Factor Pluggable (XFP) Transceivers help to achieve long-distance data transmission and high-speed communication with single-mode fibre, multi-mode fibre and copper cables. These modules can be easily installed into compatible switches and media converters; please see the switch and media converter comparison tables for relevant compatibility.

## Gigabit Ethernet SFP Transceivers



| MODEL | | DEM-310GT | DEM-311GT | DEM-312GT2 | DEM-314GT |
|---|---|---|---|---|---|
| Standard | | IEEE 802.3z 1000BASE-LX | IEEE 802.3z 1000BASE-SX | IEEE 802.3z 1000BASE-SX | IEEE 802.3z 1000BASE-LX |
| Connector | | Duplex LC | Duplex LC | Duplex LC | Duplex LC |
| Fibre Type | Single-Mode | 9/125 µm | | | 9/125 µm |
| | Multi-Mode | 50/125 µm<br>62.5/125 µm | 50/125 µm<br>62.5/125 µm | 50/125 µm<br>62.5/125 µm | |
| Wavelength | | 1310 nm | 850 nm | 850 nm | 1310 nm |
| Maximum Distance | | 10 km | 550 m | 550 m | 50 km |
| Power | | 3.3 V | 3.3 V | 3.3 V | 3.3 V |
| Hot-Pluggable | | • | • | • | • |

## 10 Gigabit Ethernet SFP+/XFP Transceivers

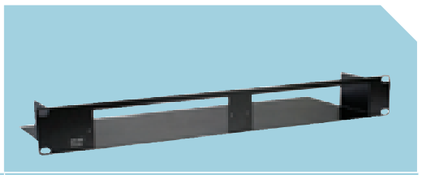
| MODEL | | DEM-431XT | DEM-431XT-DD | DEM-432XT | DEM-432XT-DD | DEM-421XT |
|---|---|---|---|---|---|---|
| Standard | | IEEE 802.3ae 10GBASE-SR | IEEE 802.3ae 10GBASE-SR | IEEE 802.3ae 10GBASE-LR | IEEE 802.3ae 10GBASE-LR | IEEE 802.3ae 10GBASE-SR |
| Form Factor | | SFP+ | SFP+ | SFP+ | SFP+ | XFP |
| Connector | | Duplex LC | Duplex LC | Duplex LC | Duplex LC | Duplex LC |
| Fibre Type | Single-Mode | | | 9/125 µm | 9/125 µm | |
| | Multi-Mode | 50/125 µm (Cable)<br>62.5/125 µm (Fibre) | 50/125 µm (Cable)<br>62.5/125 µm (Fibre) | | | 50/125 µm (Cable)<br>62.5/125 µm (Fibre) |
| Wavelength | | 850 nm | 850 nm | 1310 nm | 1310 nm | 850 nm |
| Maximum Distance | | 300 m | 300 m | 10 km | 10 km | 300 m |
| Power | | 3.3 V | 3.3 V | 3.3 V | 3.3 V | 3.3/5 V |
| Hot-Pluggable | | • | • | • | • | • |
| Digital Diagnostics Monitoring | | | • | | • | |

# Redundant Power Supplies

Redundancy, in networking terms, is essentially the provision of a back-up system at component level such that an individual failure will not prove critical. Redundant power supplies provide battery back-up power so that, should the mains supply fail, they kick in automatically to keep your switch(es) running and the network fully functional. The RPS you choose will need to be based upon the power draw you might need to call on, dependent on the switch, and any PoE (Power over Ethernet) devices, to which you are looking to provide back-up power. One of the advantages of the DPS-700 is that it is designed to improve flexibility in supporting PoE equipment, and it also supports one-plus-one power capabilities, so when cascading the DPS-700 with a device's internal power supply, the power system can provide an additional power budget to the device.

| MODEL | DPS-200 | DPS-500 | DPS-700 |
|---|---|---|---|
| Output Power | 60 W | 140 W | 589 W |
| Input Power | 90 to 264 V AC | 90 to 264 V AC | 90 to 264 V AC |
| Dimensions | 196 x 195 x 50 mm | 196 x 195 x 50 mm | 441 x 139 x 44 mm |
| Mounting Options (see table below) | DPS-800 | DPS-800 | 19in Rack, 1U |

| COMPATIBLE SWITCHES | DPS-200 | DPS-500 | DPS-700 |
|---|---|---|---|
| DGS-3120-24TC | • | | |
| DGS-3120-48TC | | • | |
| DGS-3120-24PC | | | • |
| DGS-3120-48PC | | | • |
| DGS-3120-24SC | • | | |
| DGS-3420-28TC | | • | |
| DGS-3420-28SC | | • | |
| DGS-3420-28PC | | | • |
| DGS-3420-52T | | • | |
| DGS-3420-52P | | | • |
| DGS-3620-28TC | | • | |
| DGS-3620-28SC | | • | |
| DGS-3620-28PC | | | • |
| DGS-3620-52T | | • | |
| DGS-3620-52P | | | • |
| DWS-3160 | | | • |
| DWS-4026 | | | • |



| MOUNTING OPTIONS | DPS-800 |
|---|---|
| Number of Redundant Power Supply Slots | 2 |
| Form Factor | 19in Rack, 1.5U |
| Compatible with Redundant Power Supplies | DPS-200, DPS-500 |

# Switch Cables

## InfiniBand Cable Series

These10G InfiniBand Twinaxial Cables are designed to support high-speed connections on 10 Gbps Ethernet devices when used with compatible D-Link products. With five models in the range, they are an ideal solution for cost-effective, high-speed networking  connectivity between D-Link switches, and other devices within a rack or in adjacent racks.

### Key Series Features

- Full range of features, including high throughput, low latency, quality of service, failover and fully scalable design
- 10 Gigabit Ethernet connectivity
- Connects with InfiniBand (CX4) latch or screw ports for use as a stacking cable or uplink cable at speeds up to 10 Gbps

| MODEL | DEM-CB50 | DEM-CB50CXP | DEM-CB50ICX | DEM-CB100 |
|---|---|---|---|---|
| Cable Series Type | InfiniBand | CXP Direct Attach | InfiniBand | InfiniBand |
| Standard | IEEE802.3ak 10GBASE-CX4 | SFP MSA | IEEE802.3ak 10GBASE-CX4 | IEEE802.3ak 10GBASE-CX4 |
| Device Rate | 10 Gbps | 120 Gbps | 10 Gbps | 10 Gbps |
| Connector Type | Screw-Type at Both Ends | CXP Cable Assembly | 1 x Screw-Type / 1 x Latch | Screw-Type at Both Ends |
| Wire AWG | 28 | 30 | 28 | 28 |
| MinimumCable Bend Radius | | 49 mm | | |
| Cable Length | 50 cm | 50 cm | 50 cm | 100 cm |
| Voltage | 30 V AC | 30 V AC | 30 V AC | 30 V AC |
| Current | 0.5 A | 0.5 A | 0.5 A | 0.5 A |
| Operating Temperature | -40°C to 85°C | -40°C to 85°C | -40°C to 85°C | -40°C to 85°C |
| Connectivity | Physical Stacking Cable or Uplink Cable for DGS-3120 Series | Physical Stacking Cable for DXS-3600-32S Switch's DXS-3600-EM-Stack Module | Connecting Cable Between DGS-3120 Series and DMC-805X | Physical Stacking Cable or Uplink Cable for DGS-3120 Series |

## SFP+ Direct Attach Cable Series

The 10G Passive SFP+ Twinaxial Direct Attach Cable is designed to support 10 Gigabit Ethernet or Gigabit Ethernet connections between switches with 10 Gbps Gigabit Ethernet uplink; this is much faster than SFP, which only supports 2.5 Gbps Gigabit Ethernet. This series is suitable for very short distances up to seven metres (c. 23 feet), and is ideal for highly cost-effective networking connectivity between switches and servers within a rack or in adjacent racks.

### Key Series Features

- High speeds and low latency result in faster transmissions than other types of cables
- SFP+ connectors on cable mean no need for expensive SFP+ transceivers and fibre cables
- Lower power consumption than other cables like 10BASE-T or 10GBASE-CX4 means savings on energy usage and costs

| MODEL | DEM-CB100S | DEM-CB300 | DEM-CB300S | DEM-CB300CX |
|---|---|---|---|---|
| Cable Series Type | SFP+ Direct Attach | InfiniBand | SFP+ Direct Attach | InfiniBand |
| Standard | SFP MSA | IEEE802.3ak 10GBASE-CX4 | SFP MSA | IEEE802.3ak 10GBASE-CX4 |
| Device Rate | 10 Gbps | 10 Gbps | 10 Gbps | 10 Gbps |
| Connector Type | SFP+ Cable Assembly | Screw-Type at Both Ends | SFP+ Cable Assembly | Latch-Type at Both Ends |
| Wire AWG | 30 | 28 | 30 | 28 |
| MinimumCable Bend Radius | 23.5 mm | | 23.5 mm | |
| Cable Length | 100 cm | 300 cm | 300 cm | 300 cm |
| Voltage | 30 V AC | 30 V AC | 30 V AC | 30 V AC |
| Current | 0.5 A | 0.5 A | 0.5 A | 0.5 A |
| Operating Temperature | -40°C to 85°C | -40°C to 85°C | -40°C to 85°C | -40°C to 85°C |
| Connectivity | Recommended for use only with D-Link Switching Products | Physical Stacking Cable or Uplink Cable for DGS-3120 Series | Recommended for use only with D-Link Switching Products | Physical Stacking Cable for Linking DGS-3400 Series with DEM-410CX |

## 120G Passive CXP Direct Attach Cable

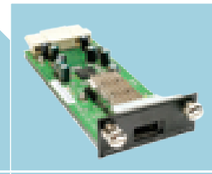
The DEM-CB50CXP 120G Passive CXP Twinaxial Direct Attach Cable carries 12 duplex channels of 10 Gbps data, for up to 120 Gbps in total, making it one of the fastest and highest-density interconnection solutions on the market. This cable is designed to support connections for the latest 100 Gbps Gigabit Ethernet and is intended to be used for physical stacking with the D-Link DXS-3600-32S switch's DXS-3600-EMStack module to provide the best possible performance and network reliability.

### Key Series Features

- Supports up to 120 Gbps of bandwidth over 12 channels of 10G Ethernet
- Perfect for handling heavy network traffic and demand
- Meets the 100 Gigabit Ethernet and InfiniBand 12X QDR specifications for superior high-efficiency networking
- Hot-pluggable
- Special latch design enables easy disengagement

# Modules and Media Converters

A D-Link module provides enterprises with highly affordable, low-latency 10 Gigabit network connections using twin-axial copper cable. Significantly lower in cost than the fibre equivalent, this supports distances ranging up to five metres, depending on wire gauge. Media converters act as the link point to join copper and fibre connections together, in other words to connect 10/100/1000BASE-T copper to fibre (or vice versa) in order to enable exceedingly rapid network data traffic at enterprise level. They act as a useful conduit when expanding a network, as existing copper-cable-based switches do not have to be replaced but can be expanded upon into a fibre network through the use of a D-Link Media Converter.



| MODULES | DEM-410CX | DEM-410X |
|---|---|---|
| Standard | IEEE 802.3ak<br>10 Gigabit Ethernet | IEEE 802.3ae<br>10 Gigabit Ethernet |
| No. of Ports | 1 | 1 |
| Connector | CX4 (Copper) | XFP (Fibre) |
| Accessories | DEM-CB100 Cable | DEM-421XT Transceiver |
| Compatibility | DGS-3426P<br>DGS-3427<br>DGS-3450<br>DGS-3627<br>DGS-3627G<br>DGS-3650<br>DWS-4026 | DGS-3426P<br>DGS-3427<br>DGS-3450<br>DGS-3627<br>DGS-3627G<br>DGS-3650<br>DWS-4026 |

| MEDIA CONVERTERS | DMC-300SC | DMC-515SC | DMC-530SC | DMC-700SC | DMC-810SC | DMC-805X |
|---|---|---|---|---|---|---|
| Standards | 10/100BASE-TX<br>100BASE-TX | 10/100BASE-TX<br>100BASE-TX | 10/100BASE-TX<br>100BASE-TX | 1000BASE-T<br>1000BASE-SX | 100BASE-TX<br>1000BASE-LX | IEEE 802.3ak<br>IEEE-802.3ae<br>IEEE-802.3aq |
| Connectors | SC / RJ45 | SC / RJ45 | SC / RJ45 | SC / RJ45 | SC / RJ45 | CX4 / SFP+ |
| Data Rate | 100 Mbps | 100 Mbps | 100 Mbps | 1 Gbps | 1 Gbps | 20 Gbps |
| Fibre Type | Multi-Mode | Single-Mode | Single-Mode | Multi-Mode | Single-Mode | Multi-Mode |
| Maximum Distance | 2 km | 15 km | 30 km | 550 m | 10 km | 80 km |

| CHASSIS AND ACCESSORIES | DMC-1000 | DMC-1001 |
|---|---|---|
| Description | 16-Slot Media Converter Chassis<br>with Internal Power Supply | Redundant Power Supply<br>for DMC-1000 |

# Power over Ethernet (PoE) Adapters

D-Link's Power over Ethernet (PoE) adapters are designed to help simplify network maintenance and deployment at offices, factories and Wi-Fi hot spots. These adapters allow surveillance cameras and wireless access points to be installed on building rooftops, ceilings or high walls where normal AC outlets may be inaccessible, but where the device itself does not have PoE capability.

On the DWL-P50, the power comes from a PoE port on the switch, down the Ethernet cable, and then this adapter takes that power and provides it to a standard 5 V DC / 12 V DC outlet, into which the device which needs power is plugged. The DWL-P200 does exactly the same thing, but is designed for use where the switch does not have any PoE ports. So you plug in an Ethernet cable, and input power at the switch-end of the cable on the Base Unit, then run an Ethernet cable (now carrying PoE power) from the Base Unit to the Terminal Unit, where the power is then 'converted' back for use by the device.

The DPE-101GI acts in a similar way again, but is designed to be used for PoE-equipped end-point devices but where the switch does not have PoE capability.

## DWL-P50
### 5/12 V DC PoE Splitter

**Main Features**
- Use with a PoE switch or midspan
- Supply power to PoE devices

**Physical Features**
- IEEE 802.3af Power over Ethernet
- Terminal unit x 1
- 5 V DC and 12 V DC output
- Output selection via DIP switch

## DWL-P200
### 5/12 V DC PoE Kit

**Main Features**
- Use without a PoE switch
- Supply power to PoE devices

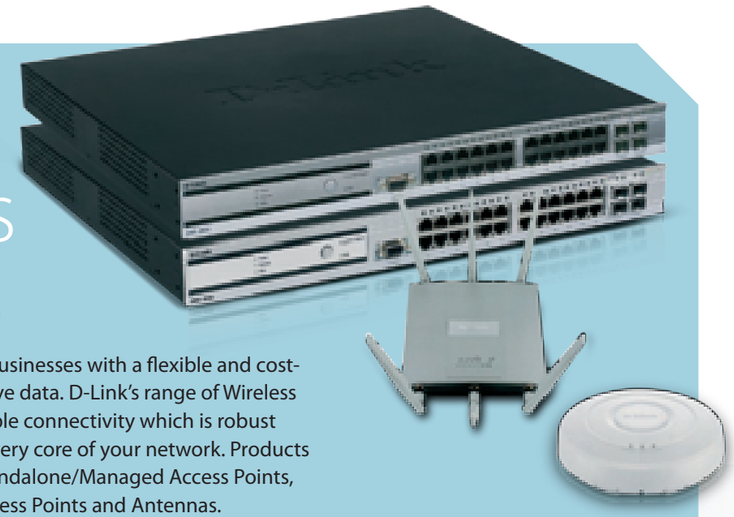
**Physical Features**
- Base unit x 1
- Terminal unit x 1
- 5 V DC and 12 V DC output
- Output selection via DIP switch

## DPE-101GI
### 1-Port Gigabit PoE Injector

**Main Features**
- Use without a PoE switch
- Supply power to PoE devices

**Physical Features**
- Terminal unit x 1
- Maximum power input 48 V
- Gigabit speed
- Use only with D-Link's access points

# Business Wireless



Wireless technology provides businesses with a flexible and cost-effective way to send and receive data. D-Link's range of Wireless AC and N products provide stable connectivity which is robust enough to be deployed at the very core of your network. Products under this category include Standalone/Managed Access Points, Single Band and Dual-Band Access Points and Antennas.

# Wireless AC

## The World's Fastest Wi-Fi Technology is Here!

Wireless AC is the next generation of Wi-Fi. Designed for much higher speeds, wider coverage and better sustained performance with a larger number of devices so that you get whole coverage, seamless performance on all devices and speeds that are up to four times faster!

### Next generation Wi-Fi for businesses

Dubbed 'Wireless AC', '5G' or even 'Gigabit Wi-Fi', 802.11ac delivers up to four* times the bandwidth of current Wireless N products, with yet more to come. With the ability to handle high-demand business applications, Wireless AC is revolutionising the way businesses utilise their wireless connection around the office.

Everything from sharing larger files, high-definition video conferencing to real-time or scheduled data backups has been made possible with 802.11ac, thanks primarily to the move to the 5 GHz radio spectrum where there is less noise and interference from competing technologies. Moreover, there's just a lot more space available in this band, allowing for up to 19 non-overlapping wireless channels compared to just three with 802.11n. Plus, those channels can be made wider to carry a lot more data, with 80 MHz and ultimately 160 MHz channels available in 802.11ac, compared to 20/40 MHz with 802.11n.

The way in which radio signals are transmitted is also changing. Out go omni-directional antennas, broadcasting every which way they can, in favour of so-called 'beamforming' technology, where the signal is directed at the device it is meant for, further enhancing that four-times boost in Wi-Fi bandwidth.

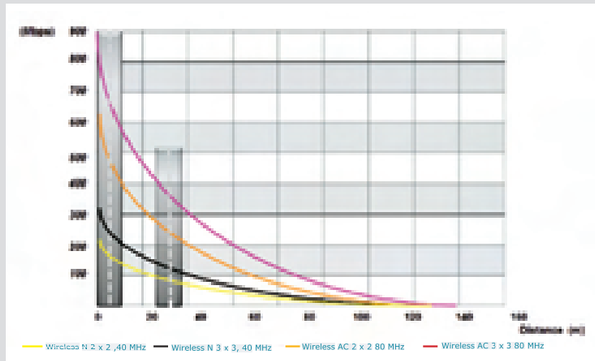
Beamforming also helps to improve range and reliability. The maximum distance supported by Wi-Fi is unchanged at 200-300m, but by concentrating and directing signals, 802.11ac eliminates dead spots, and at the same time, improve signal strength and reliability at all distances.

802.11ac makes it possible to support more devices on the network at the same time, automatically adjusting the wireless signals to provide an optimised connection for each one. Plus, by delivering more data in less time, 802.11ac helps extend battery life on mobile devices, enabling you to get more done between charges.

* When compared with Wireless N300.

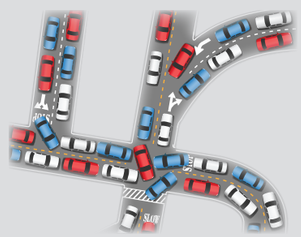
Wireless AC

### Why it's time to move from Wireless N to Wireless AC




### Interference

Most mobile devices and wireless routers currently use the 2.4 GHz frequency which slows down the data transfer rate/overall packet flow.



### Congestion

Congestion occurs when too many devices are accessing the network at the same time which slows the speed of the data transfer for everyone.

# Why Wireless AC?

## Exclusive Use of the 5 GHz Frequency

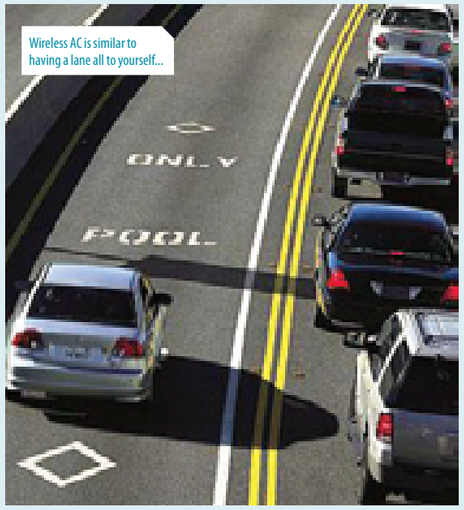
- With so many devices connected to the 2.4 GHz frequency band, interference has reached a point where it can cripple your data flow and speed.
- The 5 GHz frequency band is less common and Wireless AC uses the 5 GHz band exclusively for its transmission. With fewer devices connected, you get less interference and faster speeds.

## Extensibility

- Latest Wireless AC improvements have included standardised 'Beamforming' that synchronises antenna signals to/from the wireless access point for better Wi-Fi performance and range.

## Wider Channel Bandwidth

- Previous wireless standards had bands ranging from 20 MHz to 40 MHz. But with Wireless AC, the band has increased to 80 MHz, meaning a wider band for your data to pass through at faster speeds.
- It also offers non-overlapping and higher bandwidth for higher performance and increased signal reliability.

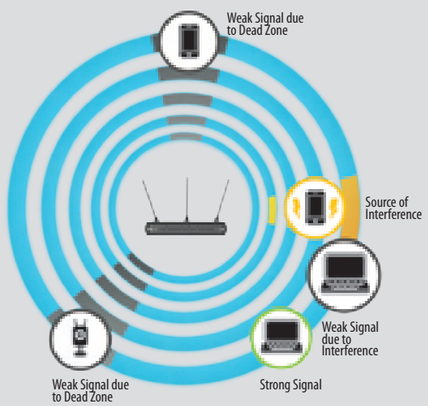




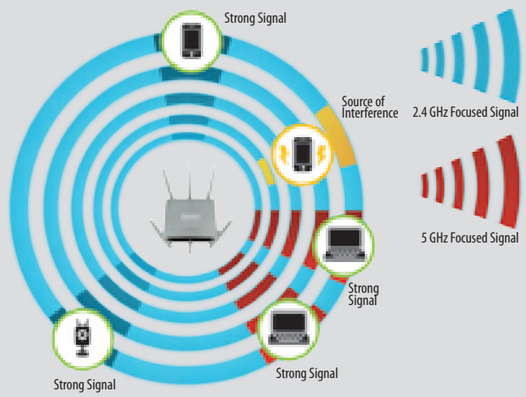

# AC SmartBeam™

- AC SmartBeam™ is D-Link's optimised beamforming technology, which targets devices with weak reception by sending a focused signal to the device. This ensures that all the devices within the network get optimised wireless connectivity, no matter where they are.

### With a Standard Access Point...




### With a D-Link AC SmartBeam™ Router



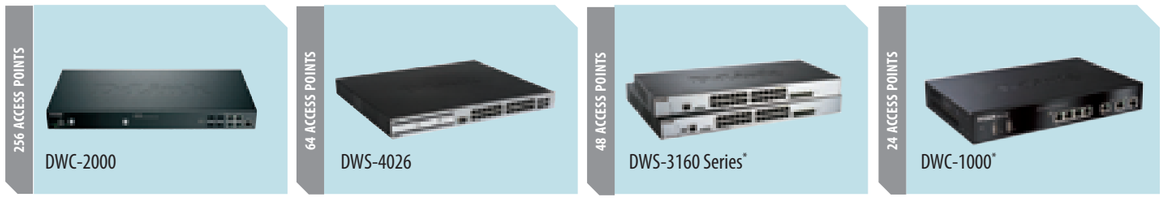



# Range Overview

## Standalone Wireless Access Points


## Unified Wireless Access Points


## Unified Solutions: Wireless Switches and Wireless Controller




*DWS-3160 Series supports 12 Access Points as standard and can be upgraded to 48 Access Points through a license upgrade
DWC-1000 supports 6 Access Points as standard and can be upgraded to 24 Access Points through a license upgrade
DWC-2000 supports 64 Access Points as standard and can be upgraded to 256 Access Points through a license upgrade

## Network Adapters

# Standalone Wireless Access Points

## DAP Series

Wireless technology offers businesses flexible and inexpensive ways to send and receive data, cut costs and improve productivity, and D-Link has a range of robust wireless access points that are able to work in both the 2.4 GHz and 5 GHz frequencies. Backwards compatible with all Wi-Fi technologies, our wireless range includes the latest dual-band Wireless AC devices, plenum-rated for mounting on walls and ceilings. Robust enough to be deployed at the very core of your network, they give greatly enhanced reliability and coverage, and include advanced security features to keep you completely safe from intrusion.

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Energy Efficient Ethernet

### DAP-1665
**Wireless AC1200 Dual-Band Access Point**

Wireless AC

- The latest dual-band 802.11ac technology delivers combined speeds of up to 1200 Mbps, with increased range to reach more places in your office
- Can operate as an access point, bridge, bridge with access point, repeater or wireless client, giving the flexibility to tailor it to your network needs
- Complete set of security encryption standards including WEP, WPA/WPA2, and WPS to safeguard your network against outside intruders
- Gigabit Ethernet port for the fastest wired speeds

### DAP-2310
**Wireless N Access Point**

Central WiFiManager
Compatible

- 802.11n connectivity for increased network capacity
- Up to 300 Mbps wireless speeds
- Four products in one: access point, wireless client, WDS (Wireless Distribution System), WDS with AP
- Gigabit Ethernet port for the fastest wired speeds
- Multiple SSID for wireless network segmentation
- VLAN support
- WMM (Wireless Multi Media) to prioritise audio, video and voice applications
- Enhanced security with RADIUS support
- High-power radio design

### DAP-2360
**Wireless N PoE Access Point**

Central WiFiManager
Compatible

- High-power single radio design of the antennas reduces dead spots and increases capacity
- Detachable antennas provide optimal wireless coverage in the 2.4 GHz (802.11g and 802.11n) band
- Up to 300 Mbps wireless speeds
- PoE support for convenient installation
- Allows network administrators to deploy a highly manageable and extremely robust 802.11n wireless network

### DAP-2553
**Wireless N300 Dual-Band PoE Access Point**

- Selectable dual-band connectivity for increased network capacity
- Ideal for indoor deployments
- Periodical key change in WPA/WPA2-Personal
- Four products in one: access point, wireless client, WDS (Wireless Distribution System), WDS with AP

### DAP-2590
**Wireless N Dual-Band PoE Access Point**

- Selectable dual-band connectivity for increased network capacity
- Wireless speeds of up to 300 Mbps in both 2.4 GHz and 5 GHz wireless bands
- Four products in one: access point, wireless client, WDS (Wireless Distribution System), WDS with AP
- Rugged metal, plenum-rated housing
- Enhanced network security features with NAP (Network Access Protection) support
- PoE support for one-cable installation

### DAP-2690
**Wireless N Simultaneous Dual-Band PoE Outdoor Access Point**

Central WiFiManager
Compatible

- Simultaneous dual-band operation for high-performance wireless connections
- Wireless speeds of up to 300 Mbps in both 2.4 GHz and 5 GHz wireless bands.
- Load balancing with band steering to provide more stable and faster wireless connections
- Four products in one: access point, wireless client, WDS (Wireless Distribution System), WDS with AP
- Rugged metal, plenum-rated housing
- Enhanced network security features with NAP (Network Access Protection) support
- PoE support for one-cable installation



| MODEL | DAP-1665 | DAP-2310 | DAP-2360 | DAP-2553 | DAP-2590 | DAP-2690 |
|---|---|---|---|---|---|---|
| **WIRED STANDARDS** | | | | | | |
| IEEE 802.3 10BASE-T | • | • | • | • | • | • |
| IEEE 802.3u 100BASE-TX | • | • | • | • | • | • |
| IEEE 802.3ab 1000BASE-T | • | • | • | • | • | • |
| **WIRELESS STANDARDS** | | | | | | |
| IEEE 802.11a | | | | • | • | • |
| IEEE 802.11g | • | • | • | • | • | • |
| IEEE 802.11n | • | • | • | • | • | • |
| IEEE 802.11ac | • | | | | | |
| Bandsteering Support | | | | | | • |
| Simultaneous Dual-Band | • | | | | | • |
| **OPERATION MODES** | | | | | | |
| Access Point Client Mode | • | • | • | • | • | • |
| Bridge (WDS) Mode | • | • | • | • | • | • |
| Bridge with Access Point Mode | • | • | • | • | • | • |
| **ANTENNA FEATURES** | | | | | | |
| Number of Antennas | 2 | 2 | 2 | 3 | 3 | 4 |
| Gain | 2 dBi for 2.4 GHz; 2 dBi for 5 GHz | 2 dBi for 2.4 GHz | 5 dBi for 2.4 GHz | 3 dBi for 2.4 Ghz; 5 dBi for 5 Ghz | 4 dBi for 2.4 GHz; 6 dBi for 5 GHz | 4 dBi for 2.4 GHz; 6 dBi for 5 GHz |
| Detachable | • | • | • | • | • | • |
| Dipole Antenna | • | • | • | • | • | • |
| **AUTHENTICATION FEATURES** | | | | | | |
| 64/128-Bit WEP | • | • | • | • | • | • |
| WPA/WPA2-PSK | • | • | • | • | • | • |
| WPA/WPA2-EAP | • | • | • | • | • | • |
| TKIP/AES | • | • | • | • | • | • |
| 802.1X User Authentication | | • | • | • | • | • |
| **SECURITY FEATURES** | | | | | | |
| MAC Address Filtering | • | • | • | • | • | • |
| SSID Broadcast Disable | • | • | • | • | • | • |
| Rogue AP Detection | | • | • | • | • | • |
| WLAN Partition | • | • | • | • | • | • |
| 802.1Q VLAN | | • | • | • | • | • |
| Multiple SSIDs for Network Segmentation | | • | • | • | • | • |
| **GROUPING FEATURES** | | | | | | |
| Load Balancing | | • | • | • | • | • |
| Link Integrity | | • | • | • | • | • |
| User Limit | • | • | • | • | • | • |
| **QoS FEATURES** | | | | | | |
| WMM (Wi-Fi Multimedia) | • | • | • | • | • | • |
| **NETWORKING FEATURES** | | | | | | |
| Auto-Channel Scan | • | • | • | • | • | • |
| Auto-Power Adjustment | | | | | | |
| **MANAGEMENT FEATURES** | | | | | | |
| SNMP | | • | • | • | • | • |
| D-View | | • | • | • | • | • |
| AP Manager Utility | | • | • | • | • | • |
| Configuration through Array | | • | • | • | • | • |
| Telnet | | • | • | • | • | • |
| SSH | | • | • | • | • | • |
| Central WiFiManager | | • | • | | | • |
| **INSTALLATION FEATURES** | | | | | | |
| For Outdoor Usage | | | | | | |
| 802.3af Power over Ethernet (PoE) | | | • | • | • | • |
| PoE Injector Included | | | | | | • |

# Standalone Wireless Access Points

## DAP Series

Wireless technology offers businesses flexible and inexpensive ways to send and receive data, cut costs and improve productivity, and D-Link has a range of robust wireless access points that are able to work in both the 2.4 GHz and 5 GHz frequencies. Backwards compatible with all Wi-Fi technologies, our wireless range includes the latest dual-band Wireless AC devices, plenum-rated for mounting on walls and ceilings. Robust enough to be deployed at the very core of your network, they give greatly enhanced reliability and coverage, and include advanced security features to keep you completely safe from intrusion.

dlink green

Energy Efficient Ethernet

### DAP-2660
**Wireless AC1200 Simultaneous Dual-Band PoE Access Point**

Central WiFiManager Compatible

Wireless AC

- Harness the power of Wireless AC, enjoying combined wireless speeds of up to 1200 Mbps, perfect for high-demand business applications
- Enhanced dual-band performance with band steering to provide a faster and more stable wireless connection
- Maintain a secure network with a range of features including WPA/WPA2, Wireless LAN segmentation and VLAN support
- Configure to use as an access point, a wireless distribution system (WDS) with access point, a WDS/bridge, or a wireless client

### DAP-2695
**Wireless AC1750 Simultaneous Dual-Band PoE Access Point**

Central WiFiManager Compatible

Wireless AC

- Super-fast Wireless AC Performance
- Latest Wireless AC technology, fully backwards compatible with existing Wi-Fi standards
- Flexible simultaneous dual-band technology with band steering that automatically makes use of the less-crowded 5 GHz frequency
- Enhanced network security and access control features, as well as wireless segmentation

### DAP-3310
**Wireless N PoE Outdoor Access Point with PoE Pass-Through**

- Built to withstand harsh environments with weatherproof IPX6 standard
- Allows for flexible installation and supplies additional power to another PoE-powered device such as a video surveillance camera
- Multiple operation modes including access point, WDS, WDS with AP, wireless client, wireless repeater, WISP client router or WISP repeater
- Long-distance wireless networking with WDS and WISP
- Secure wireless connectivity with WAP/WPA2

### DAP-3410
**Wireless N 5 GHz PoE Outdoor Access Point with PoE Pass-Through**

- Increase network capacity by adding 5 GHz wireless connectivity for smartphones, notebooks or other portable devices
- Multiple operation modes, including access point, wireless distribution system (WDS), WDS with AP, repeater, wireless client, WISP client router and repeater
- Waterproof to IPX6 standard
- PoE pass-through capability
- Up to 300 Mbps wireless speed
- Industry standard security and encryption

### DAP-3690
**Wireless N Simultaneous Dual-Band PoE Outdoor Access Point**

- Concurrent dual-band 802.11n connectivity
- IP67-rated housing with built-in heater and sensor
- Supports up to 16 SSIDs (8 per radio)
- Enterprise security and management
- Internal and external RADIUS support
- 802.3at Power over Ethernet (PoE) support
- Multiple operation modes, including access point, WDS, WDS with AP, wireless client

### DAP-3662
**Wireless AC1200 Concurrent Dual-Band Outdoor PoE Access Point**



Central WiFiManager Compatible

Wireless AC

- Wireless AC for super-fast performance
- Flexible simultaneous dual-band technology with band steering that automatically makes use of the less-crowded 5 GHz frequency
- IP68-rated housing provides weatherproofing for the most demanding environments
- Multiple operation modes, including access point, wireless distribution system (WDS), WDS with AP, repeater, wireless client and WDS/Bridge
- Wall- and pole-mounting hardware included
- 802.3af Power over Ethernet (PoE) support



| MODEL | DAP-2660 | DAP-2695 | DAP-3310 | DAP-3410 | DAP-3690 | DAP-3662 |
|---|---|---|---|---|---|---|
| **WIRED STANDARDS** | | | | | | |
| IEEE 802.3 10BASE-T | • | • | • | • | • | • |
| IEEE 802.3u 100BASE-TX | • | • | • | • | • | • |
| IEEE 802.3ab 1000BASE-T | • | • | | | • | • |
| **WIRELESS STANDARDS** | | | | | | |
| IEEE 802.11a | • | • | | • | • | • |
| IEEE 802.11g | • | • | • | • | • | • |
| IEEE 802.11n | • | • | • | • | • | • |
| IEEE 802.11ac | • | • | | | | • |
| Simultaneous Dual-Band | • | • | | | • | • |
| **OPERATION MODES** | | | | | | |
| Access Point Client Mode | • | • | • | • | • | • |
| Bridge (WDS) Mode | • | • | • | • | • | • |
| Bridge with AP Mode | • | • | • | • | • | • |
| **ANTENNA FEATURES** | | | | | | |
| Number of Antennas | 4 | 6 | 1 | 1 | 4 | 4 |
| Gain | Two x 3 dBi for 2.4 GHz<br>Two x 4 dBi for 5 GHz | Three x 4 dBi for 2.4 GHz<br>Three x 6 dBi for 5 GHz | 10 dBi for 2.4 GHz | 15 dBi for 5 Ghz | 5 dBi for 2.4 Ghz<br>7 dBi for 5 Ghz | Two x 6 dBi for 2.4 GHz<br>Two x 6 dBi for 5 GHz |
| Detachable | | • | | | • | |
| Dipole Antenna | • | • | | | • | |
| Embedded Antenna | • | | • | • | | • |
| **AUTHENTICATION FEATURES** | | | | | | |
| 64/128-Bit WEP | • | • | • | • | • | • |
| WPA/WPA2-PSK | • | • | • | • | • | • |
| WPA/WPA2-EAP | • | • | • | • | • | • |
| TKIP/AES | • | • | • | • | • | • |
| 802.1X User Authentication | • | • | • | • | • | • |
| **SECURITY FEATURES** | | | | | | |
| MAC Address Filtering | • | • | • | • | • | • |
| SSID Broadcast Disable | • | • | • | • | • | • |
| Rogue AP Detection | • | • | • | • | • | • |
| WLAN Partition | • | • | • | • | • | • |
| 802.1Q VLAN | • | • | • | • | • | • |
| Multiple SSIDs for Network Segmentation | • | • | • | • | • | • |
| **GROUPING FEATURES** | | | | | | |
| Load Balancing | • | • | | • | • | • |
| Link Integrity | • | • | | • | • | • |
| User Limit | • | • | | • | • | • |
| **QoS FEATURES** | | | | | | |
| WMM (WiFi Multimedia) | • | • | • | • | • | • |
| **NETWORKING FEATURES** | | | | | | |
| Auto-Channel Scan | • | • | • | • | • | • |
| Auto-Power Adjustment | | | | | • | • |
| **MANAGEMENT FEATURES** | | | | | | |
| SNMP | • | • | • | • | • | • |
| D-View | • | • | | • | • | • |
| AP Manager Utility | • | • | | • | • | • |
| Configuration through Array | • | • | | | • | • |
| Telnet | • | • | • | • | • | • |
| SSH | • | • | | • | • | • |
| Central WiFiManager | • | • | | | | • |
| **INSTALLATION FEATURES** | | | | | | |
| For Outdoor Usage | | | • | • | • | • |
| 802.3af Power over Ethernet (PoE) | • | | | v | | • |
| 802.3at Power over Ethernet (PoE+) | | • | | | • | |
| PoE Injector Included | • | • | • | | • | |
| PoE Pass-Through | | | • | • | | |

# Central WiFiManager

## CWM-100

Central WiFiManager is D-Link's latest free tool to help network administrators streamline their wireless access point management workflow. Central WiFiManager is an innovative approach to the more traditional hardware-based multiple access point management system and uses a centralised server to both remotely manage and monitor wireless access points on a network. Whether deployed on a local computer or hosted on a public cloud service, Central WiFiManager can be easily integrated into existing networks in conjunction with supporting D-Link wireless access points, to help eliminate existing bottlenecks for wireless traffic.

### Extendable, Affordable Business Wireless Solution

Designed from the ground up as a standalone software controller, D-Link's free Central WiFiManager is flexible, robust, and feature-rich. It comes ready to run with many enhanced enterprise wireless access point features to provide a solid wireless network system for customers who need a centralised management controller. Central WiFiManager can be deployed onto a server running Microsoft Windows[1] and can manage up to 500 APs[2] without any license charges. Central WiFiManager supports a range of D-Link Access Points, as shown on the right.

### Robust Security and Management Tools

Central WiFiManager supports multi-site deployment management as well as multi-tenancy management. This allows network administrators to provide different authorities between head and regional offices, and allows service providers to offer a managed wireless network for their customers. Sites can be logically separated with their own configuration, access security, network map, and statistics. For example, a network operations manager could pre-configure APs before dispatching them to regional offices. He can then manage all of the APs on an enterprise intranet, while allowing local administrators to manage only theirs.

## Key Features

### Web-Based Management

- Software controller that can be installed on a Microsoft Windows computer[1] and accessed through any device with a web browser such as a smartphone, tablet or computer

### Multi-Site Management

- Multiple distributed sites can be managed from a central location
- The multi-tenant architecture provides multi-layer management authority

### NAT Pass-Through

- Controllers can manage wireless access points in remote locations even if they are behind a NAT device (router or firewall)

### Captive Portal and Access Control

- Supports local DB, external RADIUS, LDAP, POP3 and Wi-Fi passcode authentication
- Supports user access control

### Auto Radio Frequency (RF) Management

- Supports automatic channel and output power optimisation

### Bandwidth Optimisation

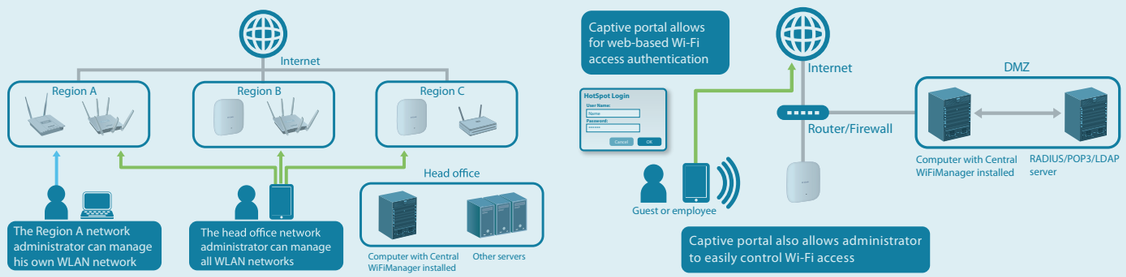
- Optimises wireless bandwidth

INDOOR WIRELESS ACCESS POINTS COMPATIBLE WITH CENTRAL WIFIMANAGER

| | 11AC DUAL BAND | | | 11N DUAL BAND | 11N SINGLE BAND | |
|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |
| **MODEL** | **DAP-2695** | **DAP-2660** | **DAP-3662** | **DAP-2690** | **DAP-2360** | **DAP-2310** |
| **Indoor/Outdoor** | Indoor | Indoor | Outdoor | Indoor | Indoor | Indoor |
| **H/W Version** | A1 | A1 | A1 | B1 | B1 | B1 |
| **IEEE Standard** | 802.11a/b/g/n/ac | 802.11a/b/g/n/ac | 802.11a/b/g/n/ac | 802.11a/b/g/n | 802.11b/g/n | 802.11b/g/n |
| **2.4 GHz Speed** | 450 Mbps | 300 Mbps | 300 Mbps | 300 Mbps | 300 Mbps | 300 Mbps |
| **5 GHz Speed** | 1300 Mbps | 900 Mbps | 900 Mbps | 300 Mbps | | |
| **Number of SSIDs** | 16 (8 per radio) | 16 (8 per radio) | 16 (8 per radio) | 16 (8 per radio) | 8 | 8 |
| **Ethernet Interface** | 2 x Gigabit Ethernet | 1 x Gigabit Ethernet | 2 x Gigabit Ethernet | 1 x Gigabit Ethernet | 1 x Gigabit Ethernet | 1 x Gigabit Ethernet |
| **PoE Standard** | 802.3at (PoE +) | 802.3af (PoE) | 802.3af (PoE) | 802.3af (PoE) | 802.3af (PoE) | |
| **Max Tx Power** | 27.5 dBm | 2.4 GHz: 28 dBm<br>5 GHz: 26 dBm | 26 dBm | 23 dBm | 26 dBm | 26 dBm |
| **Antenna Type** | External | Internal | Internal | External | External | External |
| **Antenna Gain** | 2.4 GHz: 4 dBi<br>5 GHz: 6 dBi | 2.4 GHz: 3 dBi<br>5 GHz: 4 dBi | 2.4 GHz: 6 dBi<br>5 GHz: 6 dBi | 2.4 GHz: 4 dBi<br>5 GHz: 6 dBi | 2.4 GHz: 5 dBi | 2.4 GHz: 2 dBi |
| **Mounting Type** | Wall/Desktop | Ceiling/Wall/Desktop | Wall/Pole | Wall/Desktop | Wall/Desktop | Wall/Desktop |
| **Security Lock** | • | • | • | • | • | • |
| **Power Adapter** | 48 V / 0.5 A | 12 V / 1A | 48 V / 0.5 A | 48 V / 0.5 A | 12 V / 1 A | 12 V / 1 A |
| **Maximum Power Consumption** | 18.2 W | 11 W | 12.5 W | 10.67 W | 7.9 W | 6.5 W |
| **PoE Kit in Package** | • | | • | • | | |

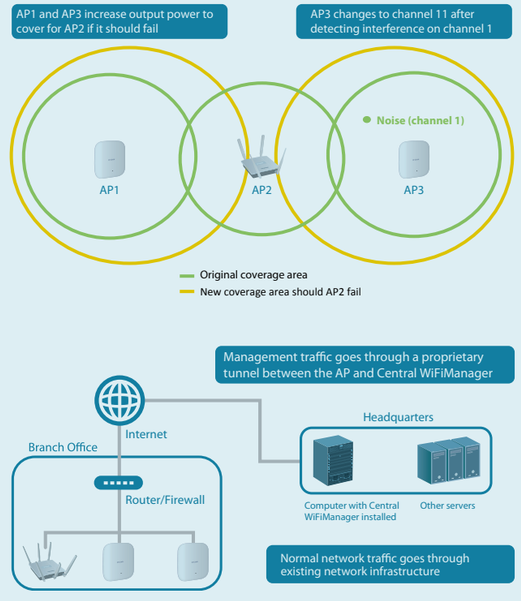
TECHNICAL SPECIFICATIONS

| | |
|---|---|
| **WLAN MANAGEMENT** | |
| Maximum APs per Device (Controller) | 500[2] |
| WLAN Management Features | AP Grouping, Multi-Tenancy, Visualised Topology, NAT Pass-Through |
| AP-Controller Connection Mode | Bridge Mode |
| **USER AUTHENTICATION** | |
| Guest Portal | Captive Portal |
| Authentication Method | Local, POP3, RADIUS, LDAP, Voucher |
| Hotspot Features | Built-in Support for Voucher-Based Authentication<br>Built-in Hotspot Manager for Voucher Creation and Guest Management<br>Rate limiting and bandwidth control for guest and hotspot portal |
| **WIRELESS FEATURES** | |
| RF Management and Control | Auto Output Power Control, Auto Channel, Self-Healing Around Failed APs |
| Multiple SSIDs per Radio(AP) | 8 |
| Advanced Wireless Features | Band steering, L2 roaming, Bandwidth Optimisation |
| WIDS System | Rogue AP Detection |
| **SYSTEM MANAGEMENT** | |
| Management Interface | Web-Based User Interface |
| Minimum System Requirements | Computer running Microsoft Windows 7 or Windows Server 2008/2012 |
| Online Check | Firmware, Module |
| Scheduling | Firmware Update, Configuration Update |




For wireless access, D-Link SMB APs can support 8 SSIDs per radio, which means administrators can use one SSID to create a guest network for visitors. Central WiFiManager expands on that built-in feature and allows for multiple user authentications. Access controls can be configured per SSID as well, allowing network administrators to configure separate internal networks for different subnets. This means that more advanced value-added services such as a captive portal or Wi-Fi hotspot can be used to help manage traffic. Unlike traditional hardware controller solutions for managing wireless APs, Central WiFiManager has a much lower initial investment cost as it comes bundled with six of D-Link's APs and there are no per-AP license charges. With the simple-to-use installation tool, it is easy to expand the wireless network in the future. Adding devices to Central WiFiManager is done automatically when new access points are discovered on the network, allowing new devices to be quickly managed and deployed.

Central WiFiManager also automatically manages RF output for multiple access points, optimising the number of available wireless channels and coverage. This results in reduced channel interference and provides faster total bandwidth throughput and connection reliability. By optimising the coverage area and connection quality, Central WiFiManager enables network administrators to provide a better wireless service at a lower deployment cost, resulting in a higher return on investment.




Deploying Central WiFiManager is also much simpler compared to traditional hardware controller solutions as it can be installed on any server running a recent version of Microsoft Windows[1]. Central WiFiManager software operates transparently on the network, meaning the access point can be deployed anywhere in a customer's Layer-2/3 environment. Management traffic to and from the target access points will go through an authorised tunnel to Central WiFiManager while normal network traffic will go through the existing networking infrastructure unimpeded. The Central WiFiManager management interface is also remotely accessible via its built-in web server, so administrators can use a web browser to connect to computers with Central WiFiManager installed to manage their WLAN network and wireless access points from anywhere.

FREE with selected D-Link Access Points

[1] Supported Operating Systems: Microsoft Windows 7 or Windows Server 2008/2012.
[2] Number of wireless access points supported depends on the specification of the computer on which Central WiFiManager is installed. To support 500 APs, a computer with at least an Intel Core i5 3.2 GHz with 4 GB RAM and 2 TB hard drive is recommended.

# Unified Wireless Access Points

## DWL Series

D-Link's Unified Wireless Access Points are highly manageable and scalable with high data transmission speeds, optional support for Power over Ethernet and advanced security features.

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Energy Efficient Ethernet

### Managed Mode

- Centralised management
- Centralised firmware dispatch
- Auto-power adjustment
- Dynamic auto-channel selection
- Layer 2 Fast roaming
- Layer 3 Fast roaming
- Captive portal

### Standalone Mode

- Local storage of configuration

### Managed and Standalone Mode

- WEP/WPA/WPA2 security
- Rogue AP detection
- Station isolation
- MAC address filtering
- AP load balancing set-up
- Wi-Fi Multimedia (WMM)
- SpectraLink voice priority
- Local storage of configuration

### DWL-2600AP

**Unified Wireless N PoE Access Point**

- Wireless performance of up to 300 Mbps network throughput
- Self-configuring cluster enables easier provisioning
- Up to 16 virtual access points (VAP) may be created from a single unit
- Load balancing to optimise high network traffic volume and redundancy
- Supports the latest standards in Wi-Fi security

### DWL-3600AP

**Unified Wireless N PoE Access Point**

- Expand a Wi-Fi network to cover a larger area
- Load balancing to optimise high network traffic volume and redundancy
- 802.11n connectivity for increased network capacity
- Supports the latest standards in Wi-Fi security to identify and track assets equipped with an Aeroscout Radio Frequency ID (RFID) tag.

### DWL-6600AP

**Unified Wireless N Simultaneous Dual-Band PoE Access Point**

- Concurrent dual-band – works in 2.4 GHz and 5 GHz simultaneously
- Flexible deployment – stand-alone or centrally managed by a wireless controller
- Wireless performance of up to 300 Mbps network throughput in each band
- Self-configuring cluster enables easier provisioning
- Up to 32 virtual access points (VAP) can be created from a single unit
- Automatic load-balancing among neighbouring access points
- Flexible Quality of Service (QoS) with Wi-Fi MultiMedia (WMM)

### DWL-8600AP

**Unified Wireless N Simultaneous Dual-Band PoE Access Point**

- Green technology for advanced power saving
- Supports advanced wireless functions
- Flexible dual-band wireless connectivity
- Optimal wireless performance
- Total security and Quality of Service(QoS)

### DWL-8610AP

**Unified Wireless AC1750 Dual-Band Access Point**

Wireless AC

- Harness the power of Wireless AC, enjoying combined wireless speeds of up to 1750 Mbps, perfect for high-demand business applications
- Enhanced dual-band performance with band steering to provide a faster and more stable wireless connection
- AC SmartBeam™ technology greatly improves wireless performance by focusing wireless signals, providing wider wireless coverage without the need for additional access points.







| MODEL | DWL-2600AP | DWL-3600AP | DWL-6600AP | DWL-8600AP | DWL-8610AP |
|---|---|---|---|---|---|
| **WIRED STANDARDS** | | | | | |
| IEEE 802.3 10BASE-T | • | • | • | • | • |
| IEEE 802.3u 100BASE-TX | • | • | • | • | • |
| IEEE 802.3ab 1000BASE-T | | • | • | • | • |
| **WIRELESS STANDARDS** | | | | | |
| IEEE 802.11a | | • | • | • | • |
| IEEE 802.11g | • | • | • | • | • |
| IEEE 802.11n | • | • | • | • | • |
| IEEE 802.11ac | | | | | • |
| Simultaneous Dual-Band | | | • | • | • |
| **OPERATION MODES** | | | | | |
| AP Client Mode | | | | | |
| Bridge (WDS) Mode | • | • | • | • | • |
| Bridge with AP Mode | • | • | • | • | • |
| **ANTENNA FEATURES** | | | | | |
| No. of Antennas | Internal | Internal | Internal | 4 | Internal |
| Gain | 3 dBi for 2.4 GHz | 4.7 dBi for 2.4 GHz | 5 dBi for 2.4 Ghz; 6 dBi for 5 Ghz | 4 dBi for 2.4 Ghz ; 6 dBi for 5 Ghz | 5 dBi for 2.4 Ghz; 6.5 dBi for 5 Ghz |
| Detachable | | | Connectors for External Antennas | • | |
| Dipole Antenna | • | • | • | • | • |
| Embedded Antenna | • | • | • | | • |
| **AUTHENTICATION FEATURES** | | | | | |
| 64/128-Bit WEP | • | • | • | • | • |
| WPA/WPA2-PSK | • | • | • | • | • |
| WPA/WPA2-EAP | • | • | • | • | • |
| TKIP/AES | • | • | • | • | • |
| 802.1X User Authentication | • | • | • | • | • |
| **SECURITY FEATURES** | | | | | |
| MAC Address Filtering | • | • | • | • | • |
| SSID Broadcast Disable | • | • | • | • | • |
| Rogue AP Detection | • | • | • | • | • |
| WLAN Partition | • | • | • | • | • |
| 802.1Q VLAN | • | • | • | • | • |
| Multiple SSIDs for Network Segmentation | • | • | • | • | • |
| **GROUPING FEATURES** | | | | | |
| Load Balancing | • | • | • | • | • |
| Link Integrity | • | • | • | • | • |
| User Limit | • | • | • | • | • |
| **QoS FEATURES** | | | | | |
| WMM (WiFi Multimedia) | • | • | • | • | • |
| **NETWORK FEATURES** | | | | | |
| Auto-Channel Scan | • | • | • | • | • |
| Auto-Power Adjustment | | • | • | • | • |
| **MANAGEMENT FEATURES** | | | | | |
| SNMP | • | • | • | • | • |
| D-View | | • | • | • | • |
| AP Manager Utility | • | • | • | • | • |
| Configuration through Array | • | • | • | • | • |
| Telnet | • | • | • | • | • |
| SSH | • | • | • | • | • |
| Management via Wireless Controller/ Unified Switch | • | • | • | • | • |
| Supported D-Link Wireless Controller/ Unified Switch models | DWC-1000<br>DWS-3160<br>DWS-4026 | DWC-1000<br>DWS-3160<br>DWS-4026 | DWC-1000<br>DWS-3160<br>DWS-4026 | DWC-1000,<br>DWL-3024/3024L<br>DWS-3160, DWS-4026 | DWC-1000<br>DWS-3160<br>DWS-4026 |
| **INSTALLATION FEATURES** | | | | | |
| For Outdoor Usage | | | | | |
| 802.3af Power over Ethernet (PoE) | • | • | • | • | • |
| PoE Injector Included | | | | • | |

# Unified Wired/Wireless Access System

## DWS-3160 Series

The DWS-3160 Unified Layer 2+ Gigabit Wired/Wireless Switch is the ideal mobility solution for businesses, since it empowers administrators to exercise total control over their entire wireless network(s) by centralising all aspects of provisioning and management. Able to manage up to 48 D-Link unified access points by itself and up to 192 in a switch cluster, the DWS-3160 models can be configured to act either as a wireless controller in the core network, or as a Layer 2+ Gigabit Switch at the edge, enabling it to be seamlessly integrated into any existing network infrastructure.

## Principle Product Features

### DWS-3160-24TC

- 10/100/1000BASE-T ports x 20
- Combo 10/100/1000BASE-T/SFP ports x 4
- Console (RJ45) port x 1
- Management of up to 12 access points per switch
- Upgrade licenses for up to 48 access points per switch
- Up to 192 access points per switch cluster
- Automatic access point transmit output power adjustment

### DWS-3160-24PC

- 10/100/1000BASE-T PoE ports x 20
- Combo 10/100/1000BASE-T/SFP ports x 4
- Console (RJ45) port x 1
- 802.3af (PoE) and 802.3at (PoE)+ support
- 370 W PoE power budget (760 W with DPS-700 RPS)
- Management of up to 12 access points per switch
- Upgrade licenses for up to 48 access points per switch
- Up to 192 access points per switch cluster
- Automatic access point transmit output power adjustment

## Optional Accessories

**Optional Software Image Upgrade Licenses**

| | |
|---|---|
| DWS-316024TCAP12-LIC | DWS-3160-24TC Additional 12 Access Points Support License |
| DWS-316024TCAP24-LIC | DWS-3160-24TC Additional 24 Access Points Support License |
| DWS-316024PCAP12-LIC | DWS-3160-24PC Additional 12 Access Points Support License |
| DWS-316024TCAP24-LIC | DWS-3160-24PC Additional 24 Access Points Support License |

**Optional Redundant Power Supplies**

| | |
|---|---|
| DPS-200 | 60 W Redundant Power Supply for DWS-3160-24TC |
| DPS-700 | 589 W Redundant Power Supply For DWS-3160-24PC |

**SFP Transceivers**

| | |
|---|---|
| DEM-210 | 100BASE-FX, Single-Mode, 15 km |
| DEM-211 | 100BASE-FX, Multi-Mode, 2 km |
| DEM-310GT | 1000BASE-LX, Single-Mode,10 km |
| DEM-311GT | 1000BASE-LX, Multi-Mode, 550 m |
| DEM-312GT2 | 1000BASE-LX, Multi-Mode, 2 km |
| DEM-314GT | 1000BASE-LX, Single-Mode, 50 km |

**Optional Management Software**

| | |
|---|---|
| DV-700 | D-View 7 Network Management System |

## Key Series Features

- Management of up to 12 access points per switch
- Upgrade licenses for up to 48 access points per switch
- Up to 192 access points per switch cluster
- Automatic access point RF channel adjustment
- Automatic access point transmit output power adjustment
- Centralised access point firmware upgrade



| MODEL | | DWS-3160-24TC | DWS-3160-24PC |
|---|---|---|---|
| Interfaces | 10/100/1000BASE-T (RJ45) | 20 | |
| | Combo 1000BASE-T/SFP | 4 | |
| General Features | Switching Capacity | 48 Gbps | |
| | Maximum Forwarding Rate | 35.71 Mpps | |
| | Forwarding Mode | Store-and-Forward | |
| | Packet Buffer Memory | 2 MB | |
| | MTBF | 561,829 Hours | 282,541 Hours |
| | Console Port | RJ45 | |
| WLAN Management Capability | | Centralised | |
| Roaming | | Fast Roaming; Intra-Switch/Inter-Switch Roaming; Intra-Subnet/Inter-Subnet Roaming | |
| Access Control and Bandwidth Management | | Up to 32 SSID per AP (16 SSID per Frequency Band)<br>AP Load Balancing based on the number of users or AP utilisation<br>Flexible Mapping Schemes | |
| Managed Access Point | | DWL-2600AP, DWL-3600AP, DWL-6600AP, DWL-8600AP, DWL-8610AP | |
| Access Point Management | | AP Auto-Discovery<br>Remote AP Reboot<br>AP Monitoring: List Managed AP, Rogue AP, Authentication Failed AP<br>Client Monitoring: List Clients Associated with each Managed AP<br>Ad-Hoc Client Monitoring<br>AP Authentication Supporting Local Database and External RADIUS Server<br>Centralised RF/Security Policy Management<br>Automatic AP RF Channel Adjustment<br>Automatic AP Transmit Output Power Adjustment<br>Centralised Firmware Upgrade | |
| WLAN Security | | WPA Personal/Enterprise<br>WPA2 Personal/Enterprise<br>64/128/152-Bit WEP Data Encryption<br>MAC Authentication<br>Station Isolation<br>Wireless Station and AP Monitoring based on RF Channel, MAC Address, SSID, Time<br>Rogue AP and Client Detection and Mitigation<br>Captive Portal<br>Security Profile<br>802.1X Support<br>Guest VLAN | |
| Layer 2 Features | | MAC Address Table: 16,000<br>IGMP Snooping; MLD Snooping<br>802.1D/w/s SpanningTree; 802.3ad Link Aggregation; 802.1ab LLDP<br>Port Mirroring (One-to-One and Many-to-One)<br>Jumbo Frame Size: up to 13 KB | |
| Virtual LAN (VLAN) | | Static VLAN Groups: 3,965<br>802.1q VLAN Tagging; 802.1v<br>Subnet-basedVLAN; MAC-basedVLAN<br>GVRP; Double VLAN; VoiceVLAN | |
| Layer 3 Features | | IPv4/v6 Static Route<br>RoutingTable Size: 512 Static Routes<br>VRRP; ARP Proxy | |
| Quality of Service (QoS) | | Voice VLAN<br>Wireless Multimedia (WMM)<br>802.1p Priority Queues<br>CoS-based QoS<br>Per-Flow Bandwidth Control<br>Per-Port Traffic Shaping<br>Minimum Bandwidth Guarantee | |
| Access Control List (ACL) | | ACL Based on: Switch Port, MAC Address, 802.1p Queues, VLAN, Ether Type, DSCP, IP Address, Protocol Type, TCP/UDP Port | |
| LAN Security | | RADIUS Authentication Management Access<br>TACACS+ Authentication for Management Access<br>SSH & SSL Support<br>MAC Filtering; 802.1x Port-Based Access Control & Guest VLAN<br>Denial of Service Protection<br>Dynamic ARP Inspection<br>Protected Port<br>Broadcast Storm Control<br>Access Control List | |
| Management Methods | | Management of up to 12 Access Points per Switch<br>Upgrade Licenses for up to 48 Access Points per Switch<br>Up to 192 APs per Switch Cluster<br>Single IP Management (SIM)<br>SSH; SSL; SNMP v1, 2c, 3; sFlow; Dual Image Support<br>Web GUI; Command Line Interface | |
| Physical and Environment | Dimension | 440 x 210 x 44 mm | 440 x 310 x 44 mm |
| | Weight | 2.55 kg | 5.24 kg |
| | Maximum Power Consumption | 37.7 W | 467 W (Full PoE Load) |
| | PoE | | 802.3af PoE |
| | PoE Power Budget | | 30 W per Port; 370 W Total (740 W with DPS-700) |
| | Redundant Power Supply | DPS-200 | DPS-700 |
| | Operating Temperature | 0°C to 50°C | |
| | Operating Humidity | 10% to 90% RH Non-Condensing | |
| Certification | EMI-EMC | FCC Class A, CE; ICES-003, C-Tick, VCCI | |
| | Safety | UL/cUL; CB | |

# Unified Wired/Wireless Access System

## DWS-4026

The DWS-4026 is D-Link's next-generation Unified Wired/Wireless Gigabit Switch with an array of advanced features and 802.11n support. With the ability to manage up to 64 unified wireless access points by itself and up to 256 unified wireless access points in a switch cluster, the DWS-4026 is a full-featured and cost-effective mobility solution for mid-to-large enterprises and service providers. Extremely versatile and flexible, the DWS-4026 can be deployed as a wireless controller in the core network or as a Layer 2+ PoE Gigabit switch at the edge, depending on the requirement. By centralising WLAN configuration and management functions, the DWS-4026 enables network administrators to have the control, security, redundancy, and reliability needed to scale and manage their wireless networks easily and efficiently.

## Principle Product Features

**DWS-4026**

- 10/100/1000BASE-T PoE ports x 20
- Combo 10/100/1000BASE-T/SFP ports x 4
- 802.3af (PoE) support (24 Ports)
- 10 Gigabit expansion slots x 2
- Redundant power supply support
- Up to 256 APs per cluster/peer group

## Optional Accessories

**Modules**

| | |
|---|---|
| DEM-410X | 1-Port 10 Gigabit XFP Module |
| DEM-410CX | 1-Port 10 Gigabit CX4 Module |

**10 Gigabit Ethernet XFP Transceivers**

| | |
|---|---|
| DEM-421XT | 10GBASE-SR, MMF; 300m |

**Gigabit Ethernet SFP Transceivers**

| | |
|---|---|
| DEM-310GT | 1000BASE-LX, SMF/MMF; 10km/2km |
| DEM-311GT | 1000BASE-SX, MMF; 550m |
| DEM-312GT2 | 1000BASE-SX, MMF; 2km |
| DEM-314GT | 1000BASE-LH, SMF; 50km |

**Optional Management Software**

| | |
|---|---|
| DV-700 | D-View 7 Network Management System |

## Wireless Management

- L2/L3 fast roaming
- Intra-switch/inter-switch roaming
- Centralised security policy/AP/client
- Management and monitoring
- Adaptive wireless
- Automatic RF channel adjustment
- Automatic AP transmit output power adjustment
- AP-AP Tunnel
- AP load balancing
- AP auto-discovery and firmware dispatch
- AP authentication
- RF self-healing
- Auto-VoIP
- Wi-Fi multimedia (WMM)
- SpectraLink Voice Priority (SVP)
- Remote AP reboot
- Visualised AP management tool
- Wireless Intrusion Detection and Prevention System (WIDS/WIPS)
- Rogue AP/client detection and mitigation
- WPA/WPA2 Personal/Enterprise
- Captive portal
- Station isolation

## Wired Management

- Internet Group Management Protocol (IGMP) snooping
- Link Layer Discovery Protocol (LLDP)
- LLDP-Media Endpoint Discovery (LLDP-MED)
- Double VLAN (Q-in-Q)
- Selective Q-in-Q
- Subnet-based VLAN
- IPv4 static route
- Routing Information Protocol (RIP)
- Virtual Router Redundancy Protocol (VRRP)
- Quality of Service (QoS)
- Traffic shaping
- Bandwidth control
- Access Control List (ACL)
- 802.1X Port-based Access Control
- Guest VLAN
- Broadcast Storm Control



| MODEL | | DWS-4026 |
|---|---|---|
| IEEE LAN Standard | | 802.3; 802.3u; 802.3z; 802.3ab; 802.3ae; 802.3af |
| Interfaces | 10/100/1000BASE-T (RJ45) | 20 (PoE) |
| | Combo 1000BASE-T/SFP | 4 |
| | 10 Gigabit Slot | 2 |
| | XFP Module | DEM-410X |
| | CX4 Module | DEM-410CX |
| Stackability | Physical Stack | Via CX4/XFP Module; Duplex Chain/Ring Topology; Bi-Directional Redundant Stacking Topology;<br>Up to 40 Gbps (Full Duplex); Up to 12 Units per Stack |
| General Features | Switch Capacity | 88 Gbps |
| | Forwarding Rate | 65.47 Mpps (Maximum) |
| | Forwarding Mode | Store-and-Forward |
| | Buffer Memory | 750 KB |
| | MTBF | 185,540 Hours |
| | Console Port | Female RS-232 DB-9 Console for Out-of-Band Configuration |
| WLAN Management Capability | | Max. 64 APs per Switch; Max. 256 APs per Cluster; Max. 2048 Wireless Users (1024 Tunneled, 2048 Non-Tunneled) |
| Roaming | | Fast Roaming (Wireless Adapter needs to support too); Intra-Switch / Inter-Switch Roaming; Intra-Subnet / Inter-Subnet Roaming; AP-AP-Tunnel |
| Access Control and Bandwidth Management | | Max. 32 SSID per AP (16 SSID per RF Frequency Band); AP Load Balancing Based on the number of users or utilisation per AP |
| Managed Access Point | | DWL-2600AP, DWL-3600AP, DWL-6600AP, DWL-8600AP, DWL-8610AP |
| Access Point Management | | AP Auto-Discovery<br>Remote AP Reboot<br>AP Monitoring: List Managed AP, Authentication Failed AP, Rogue AP<br>Ad-Hoc Clients Monitoring<br>Client Monitoring: List Clients Associated with Each Managed AP<br>AP Authentication Supporting Local Database and External RADIUS Server<br>Centralised RF/Security Policy Management<br>Visualised AP Management Tool (Support up to 16 JPG Files)<br>Unified AP Support (DWL-8600AP): Managed/Standalone Mode |
| WLAN Security | | Wireless Intrusion Detection and Prevention System (WIDS)<br>Rogue AP Mitigation<br>64/128-Bit WEP Data Encryption<br>Rogue and Valid AP Classification Based on MAC Address<br>WPA Personal/Enterprise<br>WPA2 Personal/Enterprise<br>Wireless Station and AP Monitoring on RF Channel, MAC Address, SSID, Time<br>Captive Portal<br>Station Isolation<br>Encryption Type Support: WEP, WPA, Dynamic WEP, TKIP, AES-CCMP, EAP-FAST, EAP-TLS, EAP-TTLS, EAP-MD5, PEAP-GTC, PEAP-MS-CHAPv2, PEAP-TLS<br>MAC Authentication |
| Layer 2 Features | | MAC Address Table: 8000<br>IGMP Snooping: 1000 Multicast Groups<br>MLD Snooping<br>802.1D STP, 802.1s Rapid STP, 802.1w Multiple STP<br>802.3ad Link Aggregation: Max. 32 Groups, Max. 8 Ports per Group<br>Jumbo Frame: Max. 9 KBytes; 802.1ab Link Layer Discovery Protocol (LLDP); LLDP-MED<br>Port Mirroring: One-to-One, Many-to-One<br>Flow Control: 802.3x in Full Duplex, Back Pressure in Half Duplex, Head-of-Line Blocking Prevention |
| Virtual LAN (VLAN) | | 802.1Q Tagged VLAN<br>802.1v Protocol VLAN<br>Static VLAN Groups: 3,965<br>Subnet-Based VLAN<br>GARP VLAN Registration Protocol (GVRP)<br>MAC-Based VLAN; Double VLAN; Voice VLAN |
| Layer 3 Features | | IPv4 Static Route; Routing Table Size: Max. 128 Static Routes<br>Floating Static Route; Proxy Address Resolution Protocol (ARP)<br>Virtual Router Redundancy Protocol (VRRP); Routing Information Protocol (RIP) v1/v2 |
| Quality of Service (QoS) | | 802.1p Priority Queues (Max. 8 Queues per Port)<br>Auto-VoIP; Minimum Bandwidth Guarantee per Queue<br>Traffic Shaping per Port; Per-Flow Bandwidth Control<br>CoS Based on: Switch Port, VLAN, DSCP, TCP/UDP Port, TOS, Dest/Source MAC Address, Dest/Source IP Address |
| Access Control List (ACL) | | ACL Based on: Switch Port, MAC Address, 802.1p Queues, VLAN, Ether Type, DSCP, IP Address, Protocol Type, TCP/UDP Port |
| LAN Security | | RADIUS and TACACS+ Authentication for Management Access<br>Secure Shell (SSH) v1/v2; Secure Sockets Layer (SSL) v3<br>Transport Layer Security (TLS) v1; MAC Filtering; Denial of Service Protection; Dynamic ARP Inspection (DAI)<br>Port Security: 20 MAC per Port, Port Violation Notification; 802.1X Port-Based Access Control and Guest VLAN<br>Broadcast Storm Control in Granularity of 1% of Link Speed; DHCP Snooping; Protected Port; DHCP Filtering |
| Management Methods | | Web-Based GUI; Switch Clustering; RADIUS Accounting; Command Line Interface (CLI); Telnet Client<br>TFTP Client; Telnet Server: Max. 5 Sessions; sFlow<br>BootP/DHCP Client; DHCP Server; DHCP Relay; Dual Images<br>Port Description; Multiple Configuration Files; Dual Image Services<br>Simple Network Management Protocol (SNMP) v1/v2c/v3; Remote Monitoring (RMON) v1; Simple Network Time Protocol (SNTP); System Log |
| Physical and Environment | Dimension | 19in; 1U Rack-Mountable; 440 x 389 x 44 mm (W x D x H) |
| | Weight | 6 Kg |
| | Power Input | Input: 100-240 V AC, 50/60Hz; Internal Universal Power Supply |
| | Maximum Power Consumption | 525 W (With All PoE Ports in Operation) |
| | PoE | 802.3af (PoE) |
| | PoE Power Budget | 15.4 W per Port; 370 W Total |
| | RPS | DPS-700 |
| | Operating Temperature | 0°C to 40°C |
| | Operating Humidity | 10% to 90% RH Non-Condensing |
| Certification | EMI-EMC | FCC Class A; CE; VCCI; C-Tick; ICES-003; EN 60601 1-2 |
| | Safety | UL/cUL; CB |

# Wireless Controllers

## DWC Series

The DWC Series of wireless controllers is designed for centralised wireless LAN management, developed specifically for businesses, education and medium-to-large enterprises that are looking for an easy-to-use, scalable solution to manage and configure their wireless network(s).

With the ability to manage up to six wireless access points (upgradable to 24) and a maximum of 96 wireless access points in a controller cluster, the DWC-1000 is a cost-effective mobility solution for businesses. Its auto-managed AP discovery and single-point management allows you to establish an enterprise-class system without the burden of executing massive 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, especially for wireless environments.

Its bigger brother, the DWC-2000, has the ability to manage up to 64 (upgradable to 256) wireless access points and up to a maximum of 1,024 wireless access points in a controller cluster, so is suitable for medium- to large-scale deployments. It also features auto-managed AP discovery and single-point management, and the guest account generation function manages guest users' bandwidth and accessibility to network resources. Again, the robust and comprehensive security detection system manages associated APs by blocking potential attacks from unauthorised users and appliances, which is particularly crucial in wireless environments.

## Principle Product Features

**DWC-1000**

- 10/100/1000BASE-T LAN ports x 4
- 10/100/1000BASE-T option (WAN) ports x 2
- USB 2.0 ports x 2
- Manage up to 24 access points per cluster
- Upgrade to 96 access points per cluster

**DWC-2000**

- 10/100/1000BASE-T LAN ports x 4
- Combo 10/100/1000BASE-T/SFP ports x 4
- USB 2.0 ports x 2
- Manage up to 64 access points per cluster
- Upgrade to 256 access points per cluster
- Hard disk driver extension slot

## Optional Accessories

**Upgrade licenses:**

| | |
|---|---|
| DWC-1000-VPN-LIC | DWC-1000 Additional Six Access Points Support License |
| DWC-1000-6AP-LIC | DWC-1000 VPN Security License |
| DWC-2000-AP32-LIC | DWC-2000 Additional 32 Access Points Support License |
| DWC-2000-AP64-LIC | DWC-2000 Additional 64 Access Points Support License |
| DWC-2000-AP128-LIC | DWC-2000 Additional 128 Access Points Support License |

**Optional Management Software**

| | |
|---|---|
| DV-700 | D-View 7 Network Management System |

## Key Series Features

- Integrated appliance for centralised wireless network management
- Integrates seamlessly in any network infrastructure – no modifications required
- An ideal solution to move to Wireless N or Wireless AC from legacy technologies
- Upgrade licenses – pay only for the functionality that you need
- Support for up to 64 access points; upgradeable to up to 256 access points
- Dynamic wireless network adjustment to ensure top performance at all times
- 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 ports for file and printer sharing
- Enhanced security with captive portal and RADIUS support



| MODEL | | | DWC-1000 | DWC-2000 |
|---|---|---|---|---|
| Interfaces | Ethernet | 10/100/1000BASE-T Option (WAN) Ports | 2[1] | |
| | | 10/100/1000BASE-T LAN Ports | 4 | |
| | | Combo 10/100/1000BASE-T/SFP Ports | | 4 |
| | USB 2.0 Ports | | 2 | 2 |
| | RJ45 Console Port | | • | • |
| Capacity and Performance | Maximum Access Points per Unit (Default/Upgrade) | | 6 / 24[2] | 64 / 256[2] |
| | Maximum Access Points per Cluster (Default/Upgrade) | | 24 / 96[2] | 256 / 1024[2] |
| | Concurrent Captive Portal Authentication Users (Wired/ Wireless) | | 124 / 400 | 3072 |
| | Dedicated IPSec VPN Tunnels[3] | | 70 | |
| | Dedicated PPTP/ L2TP VPN Tunnels[3] | | 25 | |
| | Dedicated SSL VPN Tunnels[3] | | 20 | |
| Access Point Management | Compatible Managed APs | | DWL-2600AP, DWL-3600AP, DWL-6600AP, DWL-8600AP, DWL-8610AP | DWL-2600AP, DWL-3600AP, DWL-6600AP, DWL-8600AP, DWL-8610AP |
| | AP Discovery & Control | | Layer-2 and Layer-3 | Layer-2 and Layer-3 |
| | AP Monitoring | | Managed AP<br>Rogue AP<br>Authentication Fail AP<br>Standalone AP | Managed AP<br>Rogue AP<br>Authentication Fail AP<br>Standalone AP |
| | Client Monitoring | | Authenticated Client<br>Rogue Client<br>Authentication Fail Client<br>Ad-Hoc Client | Authenticated Client<br>Rogue Client<br>Authentication Fail Client<br>Ad-Hoc Client |
| | Centralised RF/Security Policy Management | | • | • |
| Roaming | Fast Roaming | | • | • |
| | Intra-Controller / Inter-Controller Roaming | | • | • |
| | Intra-Subnet / Inter-Subnet Roaming | | • | • |
| Security | Wireless Security | | WEP<br>Dynamic WEP<br>WPA Personal/ Enterprise<br>WPA2 Personal/ Enterprise | WEP<br>Dynamic WEP<br>WPA Personal/ Enterprise<br>WPA2 Personal/ Enterprise |
| | Wireless Instruction Detection & Prevention System (WIDS) | | Rogue and Valid AP Classification<br>Rogue AP Mitigation | Rogue and Valid AP Classification<br>Rogue AP Mitigation |
| | LAN Security | | 802.1x Port-Based Access Control and Guest VLAN | 802.1x Port-Based Access Control and Guest VLAN |
| | Authentication | | Captive Portal<br>MAC Authentication | Captive Portal<br>MAC Authentication |
| VLAN | VLAN Group | | 255 Static | 255 Static |
| | 802.1q VLAN Tagging | | • | • |
| | Subnet-Based VLAN | | • | • |
| | Port-Based VLAN | | • | • |
| Firewall System[3] | Policy | | Each Feature Supports 100 Rules<br>Supports up to 600 Firewall Rules | |
| | Dynamic Route | | RIPv1, RIPv2 | |
| | Dynamic DNS | | • | |
| | NAT, PAT | | • | |
| | Web Content Filtering | | Static URL<br>Keywords | |
| Networking[3] | Route Failover | | • | |
| | Outbound Load Balancing | | • | |
| Virtual Private Network (VPN)[3] | Encryption Methods | | DES, 3DES, AES, Twofish, Blowfish, CAST-128, NULL | |
| | IPSec NAT Traversal | | • | |
| | Dead Peer Detection | | • | |
| | IP Encapsulating Security Payload (ESP) | | • | |
| | IP Authentication Header (AH) | | • | |
| | VPN Tunnel Keep Alive | | • | |
| | Hub and Spoke | | • | |
| SSL Virtual Private Network (SSL VPN)[3] | SSL Encryption Methods | | DES, 3DES, AES | |
| | SSL Message Integrity | | MD5, SHA1 | |
| System Management | Web-Based User Interface | | HTTP | HTTP, HTTPS |
| | Command Line Interface | | • | • |
| | SNMP | | v1, v2c, v3 | v1, v2c, v3 |
| Physical & Environment | Power Supply | | 100-240 V AC, 50-60 Hz Internal | 100-240 V AC, 50-60 Hz Internal |
| | Maximum Power Consumption | | 19.3 W | 26.95 W |
| | Dimension | | 180 x 280 x 44 mm | 440 x 310 x 44 mm |
| | Operating Temperature | | 0°C to 40°C | 0°C to 40°C |
| | Operating Humidity | | 5% to 95% RH Non-Condensing | 5% to 95% RH Non-Condensing |
| | EMI | | FCC Class B, CE Class B, VCCI, C-Tick, IC | FCC Class A, CE Class A, C-Tick, IC |
| | Safety | | cUL, LVD (EN60950-1) | cUL, LVD (EN60950-1) |

[1] The first port is enabled by default. The second port is enabled by purchasing the DWC-1000-VPN-LIC license
[2] The number of managed APs can be increased through purchase of license upgrades. Only available in groups of six licenses per upgrade
[3] Features enabled through purchase of the VPN/Router/Firewall license upgrade

# Antennas – Single/Dual-Band (2.4/5 GHz)/Cables

## ANT Series

| SINGLE/DUAL-BAND ANTENNAS (2.4 / 5 GHz) | | ANT50-2000N |
|---|---|---|
| **Electrical** | Connector Type | N Jack x 2 |
| | Gain | 20 dBi |
| | Horizontal/Vertical Angle | 10° |
| | Front-to-Back Ratio | -30 dB (Max) |
| | Polarisation | Dual Linear 45° |
| | Impedance | 50 Ohms |
| **Physical and Environmental** | Survival Wind Speed | 216 Km/h (Max) |
| | Operating Temperature | -40°C to 80°C |
| | Weight | 1.32 Kg |
| | Dimensions | 320 x 320 x 20 mm |
| | Material | PC, UV-resistant |
| | Mounting Type | Wall and Pole |

| ACCESSORIES | ANT24-CB03N | ANT24-CB06N | ANT24-CB09N |
|---|---|---|---|
| **Cable Type** | HDF-400 | HDF-400 | HDF-400 |
| **Length** | 3 m | 6 m | 9 m |
| **Cable Loss (dB)** | 1 dB | 2 dB | 3 dB |
| **Connection Type** | N-Male; N-Female | N-Male; N-Female | N-Male; N-Female |
| **Use With** | Outdoor Antennas | Outdoor Antennas | Outdoor Antennas |



# Wireless Network Adapters

## DWA Series

D-Link's DWA range of wireless adapters provides the perfect solution to add super-fast Wireless AC to any computer, whether desk-bound or on the go. With three USB plug-and-play 'dongles', and a PCI hard-wired adapter for PCs, you can enjoy a transformed wireless Internet connection using the fastest wireless technology available today.

### DWA-182
**Wireless AC Dual-Band USB Adapter**

The DWA-182 provides ultra-fast Wireless AC speeds, and with dual-band performance up to 300 Mbps (2.4 GHz) or a whopping 867 Mbps on the 5 GHz band. Perfect for smooth HD video streaming or Skype™ calls (either in the office or on the move), this wireless adapter is easy to set-up, easy to use and offers extended Wi-Fi coverage with fewer wireless deadspots.

### DWA-171
**Wireless AC Dual-Band Nano USB Adapter**

With its integrated dual-band technology, this pocket-sized marvel provides up to 150 Mbps over the 2.4 GHz band or up to 433 Mbps over the less-congested 5 GHz band, so you'll have reduced Wi-Fi interference to maximised throughput for faster video streaming, VoIP calls or general data transfer, whether that's moving files or accessing the Internet. WPS one-button set-up makes this a gift.

### DWA-172
**Wireless AC600 Dual-Band High-Gain USB Adapterr**

Whether you're at home using a desktop computer or out and about with a notebook, the DWA-172 Wireless AC600 Dual-Band High-Gain USB Adapter's sleek design is perfect for mobility and convenience, so that you can take advantage of Wireless AC's super-fast speed wherever you are. Up to 300 Mbps (2.4 GHz) or a whopping 867 Mbps on the 5 GHz band makes this a stand-out mobile wireless companion.

### DWA-582
**Wireless AC1200 Dual-Band PCI Express Adapter**

The DWA-582 Wireless AC1200 Dual-Band PCI Express Adapter connects your desktop computer to a high-speed network and provides a blazing-fast Wireless AC connection with superior reception. Once connected, you can access your network's high-speed Internet connection while also getting secure access to shared photos, files, music, video, printers and storage.




| MODEL | DWA-182 | DWA-171 | DWA-172 | DWA-582 |
|---|---|---|---|---|
| **Wireless Standards** | IEEE 802.11ac/n/g/b/a | IEEE 802.11ac/n/g/b/a | IEEE 802.11ac/n/g/b/a | IEEE 802.11ac/n/g/b |
| **Wireless Speed** | 300 Mbps 2.4 GHz<br>867 Mbps 5 GHz | 433 Mbps 5 GHz<br>300 Mbps 2.4 GHz | 150 Mbps 2.4 GHz<br>433 Mbps 5 GHz | 300 Mbps 2.4 GHz<br>867 Mbps 5 GHz |
| **WPS One-Button Connection** | • | • | • | |
| **USB Type / PCI Card** | USB 3.0 | USB 2.0 | USB 2.0 | PCI Card |
| **Security** | WPA & WPA2 | WPA & WPA2 | WPA & WPA2 | WPA & WPA2; WEP 64/128 Bit |
| **Antenna Type** | Integrated Antenna | Integrated Antenna | External | External |
| **Dimensions** | 97.3 x 29.1 x 13.5 mm | 31.7 x 18.8 x 8 mm | 193 x 15.7 x 15 mm | 121 x 79 x 25 mm |
| **Weight** | 20.5 g | 3.9 g | 23.2 g | 48.8 g |

# Unified Service Routers

## DSR Series

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 data-security needs of businesses. These routers are packed with advanced security and management features that are easily integrated into your existing infrastructure and which provide remote workers with secure access through the powerful VPN engine.

D-Link's Unified Services Routers are, essentially, all-in-one gateway devices providing outstanding performance and rich functionalities, including IEE 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.

## Principle Product Features

### DSR-150N

- 10/100BASE-TX (WAN) port x 1
- 10/100BASE-TX (LAN) ports x 8
- IEEE 802.11b/g/n wireless LAN (2.4 GHz)
- USB 2.0 port x 1
- 2dBi antennas x 2 (internal)
- D-Link Green™ technology

### DSR-250N

- 10/100/1000BASE-T (WAN) port x 1
- 10/100/1000BASE-T (LAN) ports x 8
- IEEE 802.11b/g/n wireless LAN (2.4 GHz)
- USB 2.0 port x 1
- 2dBi dipole antennas x 2 (detachable)
- D-Link Green™ technology

### DSR-500N

- 10/100/1000BASE-T (WAN) ports x 2
- 10/100/1000BASE-T (LAN) ports x 4
- IEEE 802.11b/g/n wireless LAN (2.4 GHz)
- USB 2.0 port x 1
- 2dBi dipole antennas x 3 (detachable)
- 3G support
- D-Link Green™ technology

### DSR-1000N

- 10/100/1000BASE-T (WAN) ports x 2
- 10/100/1000BASE-T (LAN) ports x 4
- IEEE 802.11a/b/g/n wireless LAN (2.4 GHz or 5 GHz)
- USB 2.0 ports x 2
- 2dBi dipole antennas x 3 (detachable)
- 3G support
- D-Link Green™ technology

## Key Series Features

- 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 via optional 3G USB modem
- 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™ Technology

dlinkgreen

VPNC CERTIFIED Basic Interop

VPNC CERTIFIED AES Interop






| MODEL | | DSR-150N | DSR-250N | DSR-500N | DSR-1000N |
|---|---|---|---|---|---|
| Interfaces | Gigabit Ports (WAN) | | 1 | 2 | 2 |
| | Fast Ethernet Ports (WAN) | 1 | | | |
| | Gigabit Ports (LAN) | 8 | 8 | 4 | 4 |
| | USB | 1 x USB 2.0 | 1 x USB 2.0 | 1 x USB 2.0 | 2 x USB 2.0 |
| | Console | 1 x RJ45 | | | |
| Performance | Firewall Throughput | 95 Mbps | 750 Mbps | 950 Mbps | 950 Mbps |
| | VPN Throughput | 40 Mbps | 50 Mbps | 70 Mbps | 100 Mbps |
| | Concurrent Sessions | 20,000 | 20,000 | 30,000 | 60,000 |
| | New Sessions (Per Second) | 200 | 200 | 300 | 600 |
| | Firewall Policies | 200 | 200 | 300 | 600 |
| Internet Connection Type | | DHCP, Static IP, PPPoE, L2TP, PPTP | | | As left plus Multiple PPPoE |
| Firewall System | Static Route | • | | | |
| | Dynamic DNS | | | RIPv1, RIP v2, OSPF | |
| | Inter-VLAN Route | • | | | |
| | NAT, PAT | • | | | |
| | Web Content Filtering | Static URL, Keywords | | | |
| | Intrusion Prevention System (IPS) | | Signature Package Included in Firmware | | |
| Networking | DHCP Server/Client | • | | | |
| | DHCP Relay | • | | | |
| | IEEE802.1q VLAN | • | | | |
| | VLAN (Port-Based) | • | | | |
| | IP Multicast | IGMP Proxy | | | |
| | IPv6 | • | | | |
| | Route Failover | | | • | |
| | Outbound Load Balancing | | | • | |
| | 3G Redundancy | • | | | |
| Wireless | Multiple Service Set Identifier (SSID) | • | | | |
| | Service Set Identifier (SSID) to VLAN Mapping | • | | | |
| | Standards | 802.11b/g/n | | | 802.11a/b/g/n |
| | Wireless Security | WEP/WPS/WPA-PSK/WPA-EAP/WPA2-PSK/WPA2-EAP | | | |
| VPN | VPN Tunnels | | 65 | 85 | 135 |
| | IPSec Tunnels | 10 | 25 | 35 | 70 |
| | SSL VPN Tunnels | 1 | 5 | 10 | 20 |
| | PPTP/L2TP Clients | 10 | 25 | | |
| | GRE | | 10 | 15 | 20 |
| | Encryption Methods | DES, 3DES, AES, Twofish, Blowfish, CAST-128, NULL | | | |
| | SSL Encryption Methods | RC4-128, 3DES, AES | | | |
| | IPSec/PPTP/L2TP Server | • | | | |
| | IPSec NAT Traversal | • | | | |
| | Dead Peer Detection | • | | | |
| | IP Encapsulating Security Payload (ESP) | • | | | |
| | IP Authentication Header (AH) | • | | | |
| | VPN Tunnel Keep Alive | • | | | |
| | Hub and Spoke | • | | | |
| Bandwidth Management | Maximum Bandwidth Control | • | | | |
| | Priority Bandwidth Control | Port-Based QoS, 3 Classes | | | |
| System Management | Web-Based User Interface | HTTP, HTTPS | | | |
| | Command Line | • | | | |
| | SNMP | v1, v2c, v3 | | | |
| Physical and Envirnmental | Power Supply | External Power Supply Unit Input: 100-240 V AC, 50/60 Hz; Output 12 V DC /1.5 A | | Internal Power Supply Unit Input: 100-240 V AC, 50/60 Hz; Output 12 V DC /1.5 A | |
| | Maximum Power Consumption | 10.5 W | 12.6 W | 16.8 W | 19.3 W |
| | Dimensions (L x W x H) | 208 x 118 x 35 mm | 140 x 203 x 35 mm | 180 x 280 x 44 mm | |
| | Operating Temperature | 0°C to 40°C | | | |
| | Operating Humidity | 5% to 95% RH Non-Condensing | | | |
| | EMI/EMC | FCC Class B, CE Class B, C-Tick, IC | | | FCC Class B, CE Class B, C-Tick, IC, VCCI |
| | Safety | cUL, LVD (EN60950-1) | | | |
| | 3rd Party Certification | IPv6 Ready, Wi-Fi, ICSA-Certified Firewall, VPNC AES Interop, VPNC Basic Interop | | | |
| | Mean Time Between Failures (MTBF) | 240,000 Hours | 250,000 Hours | 260,000 Hours | |

# Video Surveillance

The security of your business is at risk if there is no surveillance or monitoring system in place to protect your assets. Choosing to implement video surveillance brings many advantages, not least of which is that in most cases you can utilise your existing data network infrastructure to maximise investment. Digital video surveillance not only provides all of the superior functionality of an effective analogue CCTV offering, but adds several key benefits, such as increased accessibility, real-time alerts, unlimited video storage, secure image distribution and superior cost benefits, not to mention, of course, the peace of mind that comes with knowing your business premises are being monitored 24/7. Products under this category include IP cameras, network video recorders and video encoders. Many of D-Link's IP cameras are PoE-equipped, making installation simpler and more cost-effective when used in conjunction with PoE-capable switches, and there are plenty in the range that are wireless, again simplifying location positioning.

## Key to icons used

In the following pages you're going to come across these icons. Here's what they mean...

**mydlink™**
Uses D-Link's cloud to store and access saved content and monitor remotely in real time

**Onvif**
Conforms to standards established by the Open Network Video Interface Forum

**Wireless** (Wireless N & G)
Wireless-equipped to work with Wi-Fi networks. Look for Wireless AC for speed

**Ethernet** (100Mbps LAN x1)
Equipped with hard-wired connection. Look for speed/number at bottom

**Power of Ethernet** (Power over Ethernet)
Device draws its power from the switch, eliminating separate supply

**Optical Zoom** (20x Optical Zoom)
Camera is equipped with physical zoom. Figure gives the zoom level

**JustConnect™** (just connect)
Plug and play simplicity on video recorder with auto configuration

**USB Ports** (USB 2.0 x 3)
Device equipped with USB. Text gives speed and number of ports

**Bay Capacity** (2-Bay)
Indicates that a Network Video Recorder has two bays for SATA drives



# Range Overview

## Fixed Cameras (Indoor)

WIRED/WIRELESS: DCS-930L | DCS-930L | DCS-933L | DCS-942L | DCS-2132L | DCS-2136L | DCS-2230 | DCS-7000L

WIRED: DCS-2210 | DCS-3010 | DCS-3112 | DCS-3710 | DCS-3716

## Fixed Cameras (Outdoor)

WIRED: DCS-2310L | DCS-7010L | DCS-7110 | DCS-7413 | DCS-7513

WIRED / WIRELESS: DCS-2330L | DCS-2332L

## Panoramic and Mini Dome Cloud Cameras (Indoor)

INDOOR: DCS-6010L | DCS-6004L

## Dome Cameras (Indoor/Outdoor)

INDOOR: DCS-6113

OUTDOOR: DCS-6210 | DCS-6314 | DCS-6315 | DCS-6511 | DCS-6513

## PTZ Cameras (Indoor/Outdoor)

INDOOR: DCS-5020L | DCS-5222L | DCS-5615 | DCS-6616

OUTDOOR: DCS-6815 | DCS-6915

# Fixed Network Cameras (Wired / Wireless)

D-Link's range of fixed network cameras are designed to meet the needs of businesses looking to implement a cost-effective monitoring system indoors, and who might also be looking for night-vision capabilities with either a hard-wired or wireless camera. All cameras offer motion detection with notification, so peace of mind comes already built in...

## DCS-930L
### Wireless Cloud Camera

- 1/5" VGA progressive scan CMOS sensor
- 640 x 480 resolution
- Built-in microphone
- Motion detection and e-mail notification with snapshots

## DCS-932L
### Wireless Day/Night Cloud Camera

- 1/5" VGA progressive scan CMOS sensor
- 640 x 480 resolution
- Up to 5 m night vision with integrated IR illuminator
- Built-in microphone
- Motion detection and e-mail notification with snapshots

## DCS-933L
### Wireslss Day/Night Cloud Camera

- 1/5" VGA progressive scan CMOS sensor
- 640 x 480 resolution
- Up to 5 m night vision with integrated IR illuminator
- Built-in microphone
- Motion detection and e-mail notification with snapshots
- Built-in wireless extender (maximum five clients)

## DCS-942L
### Wireless Enhanced Day/Night Cloud Camera

- 1/5" VGA progressive scan CMOS sensor
- 640 x 480 resolution
- Up to 5 m night vision with integrated IR illuminator
- Two-way audio with built-in microphone and external speaker output
- Recording to local microSD card slot (16 Gb included) or to a NAS device
- Integrated PIR motion sensor
- Motion detection and E-Mail Notification with Snapshots.

## DCS-2132L
### HD Wireless Cloud Camera

- 1/4" 1 megapixel progressive scan CMOS sensor
- HD 720p or 1280 x 800 resolution
- Up to 5 m night vision with integrated IR illuminator
- Two-way audio with built-in microphone and speaker
- Integrated PIR motion sensor
- Motion detection, event recording and e-mail notification with snapshots

## DCS-2136L
### HD Wireless AC Day/Night Cloud Camera with Colour Night Vision

- Sony Exmor 1/3" 1 megapixel progressive scan CMOS sensor supporting Wide Dynamic Range (WDR) and LowLight+ technology
- HD 720p resolution
- Up to 5 m colour night vision with integrated white light illuminator
- Two-way audio with built-in microphone and speaker
- Recording to local microSD card slot (16 Gb included) or to a NAS device
- Integrated PIR motion sensor

## DCS-2230
### Full HD Wireless Day/Night Cloud Camera

- 1/2.7" 2 megapixel progressive scan CMOS sensor
- Full HD 1080p resolution
- Up to 5 m night vision with integrated IR illuminator
- Two-way audio with built-in microphone and speaker
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Integrated PIR sensor for enhanced motion detection

## DCS-7000L
### Wireless AC Day/Night HD Mini Bullet Cloud Camera

- 1/4" megapixel progressive scan CMOS sensor
- Full HD 1280p resolution
- Up to 8 m night vision with integrated IR illuminator
- Two-way audio with built-in microphone and external speaker output
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-Mail notification with snapshots
- Electronic pan/tilt/zoom for large-area coverage

## What is mydlink™?

mydlink™ is a cloud-based platform that maintains a live link between your router via the Internet and your mydlink™ smartphone/tablet app, so that you can always be in control, wherever you are and whenever you want. Whether you want to access, control, monitor or automate, there is a mydlink™ product, and supporting smartphone or tablet app, to help you. Just look for the mydlink™ logo...



| MODEL | DCS-930L | DCS-932L | DCS-933L | DCS-942L | DCS-2132L | DCS-2136L | DCS-2230 | DCS-7000L |
|---|---|---|---|---|---|---|---|---|
| **IMAGE SENSOR** | | | | | | | | |
| Type | 1/5" VGA Progressive Scan CMOS | 1/5" VGA Progressive Scan CMOS | 1/5" VGA Progressive Scan CMOS | 1/5" VGA Progressive Scan CMOS | 1/4" 1 Megapixel Progressive Scan CMOS | 1/3" 1 Megapixel Progressive Scan CMOS | 1/2.7" 2 Megapixel Progressive Scan CMOS | 1/4" 1 Megapixel Progressive Scan CMOS |
| Megapixel | | | | | • | • | • | • |
| Wide Dynamic Range (WDR) | | | | | | • | | |
| LowLight+ | | | | | | • | | |
| Maximum Video Resolution | 640 x 480 | 640 x 480 | 640 x 480 | 640 x 480 | 1280 x 720 | 1280 x 720 | 1920 x 1080 | 1280 x 720 |
| **LENS** | | | | | | | | |
| Type | Fixed | Fixed | Fixed | Fixed | Fixed | Fixed | Fixed | Fixed |
| Focal Length | 5.01 mm | 5.01 mm | 3.15 mm | 3.15 mm | 3.45 mm | 3.6 mm | 4.37 mm | 2.4 mm |
| F-Number | F2.8 | F2.8 | F2.8 | F2.8 | F2.0 | F1.4 | F2.0 | F2.0 |
| Minimum Illumination (Lux) | 1 Lux | 1 Lux (Colour) 0 Lux (B&W, IR-LED on) | 1 Lux (Colour) 0 Lux (B&W, IR-LED on) | 1 Lux (Colour) 0 Lux (B&W, IR-LED on) | 1 Lux (Colour) 0 Lux (B&W, IR-LED on) | 1 Lux (Colour) 0 Lux (Colour, White Light LED on) | 1 Lux (Colour) 0 Lux (B&W, IR-LED on) | 0.1 Lux (Colour) 0 Lux (B&W, IR-LED on) |
| Angle of View (Horizontal/Vertical) | 45.3° / 34.5° | 45.3° / 34.5° | 45.3° / 34.5° | 45.3° / 34.5° | 57.8° / 37.8° | 64° / 46.5° | 67.4° / 40.8° | 98° / 52° |
| Motorised Pan/Tilt | | | | | | | | |
| Optical Zoom | | | | | | | | |
| Privacy Masks | | | | | 3 Zones | 3 Zones | 3 Zones | 3 Zones |
| **DAY AND NIGHT** | | | | | | | | |
| ICR Filter | | • | • | • | • | | • | • |
| Built-in PIR | | | | • | • | | • | • |
| Built-in IR | | 5 m | 5 m | 5 m | 5 m | 5 m (White Light) | 5 m | 8 m |
| **AUDIO** | | | | | | | | |
| Two-Way Audio | | | | • | • | • | • | • |
| Built-in Microphone | • | • | • | • | • | • | • | • |
| External Microphone Input | | | | | | | | • |
| Built-in Speaker | | | | | • | • | • | |
| External Speaker Output | | | | • | | | | • |
| **CONNECTIVITY** | | | | | | | | |
| Wired LAN | • | • | • | • | • | • | • | • |
| Wireless LAN | 802.11 b/g/n | 802.11 b/g/n | 802.11 b/g/n | 802.11 b/g/n | 802.11 b/g/n | 802.11 b/g/n/ac | 802.11 b/g/n | 802.11 b/g/n/ac |
| 802.3af PoE | | | | | | | | |
| Digital Input/Output | | | | | DI x 1, DO x 1 | DI x 1, DO x 1 | DI x 1, DO x 1 | |
| Monitor Output | | | | | | | | |
| Memory Card Slot | | | | • (16 GB included) | • | • (16 GB included) | • | • |
| **SOFTWARE FEATURES** | | | | | | | | |
| Video Format | MJPEG | MJPEG | H.264, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MJPEG |
| Multi-Stream | | | • | • | • | • | • | • |
| Multi-Profile | | | • | • | | | | |
| Digital Zoom | 4 x | 4 x | 4 x | 4 x | 10 x | 10 x | 10 x | 10 x |
| Electronic Pan/Tilt | | | | | | | | • |
| HTTP Secure (HTTPS) | | | | • | • | • | • | |
| Java Support | • | • | • | • | | | | |
| Motion Detection | • | • | • | • | • | • | • | • |
| E-Mail Notification | • | • | • | • | • | • | • | • |
| Schedule Recording to Hard Drive | | | • | • | • | • | • | • |
| Recording to NAS | | | | | • | • | • | • |
| Audio Recording | • | • | • | • | • | • | • | • |
| Mobile Stream | • | • | • | • | • | • | • | • |
| UPnP Installation | • | • | • | • | • | • | • | • |
| DDNS Support | • | • | • | • | • | • | • | • |
| Enable/Disable LED Indicators | | • | • | • | • | • | | |
| D-ViewCam™ Compatible | • | • | • | • | • | • | • | • |
| **PHYSICAL AND ENVIRONMENT** | | | | | | | | |
| Dimensions | 27.2 x 60 x 96 mm | 27.2 x 60 x 96 mm | 80 x 115 x 80 mm | 27.2 x 60 x 96 mm | 58 x 89 x 127.9 mm | 58 x 43.1 x 128.8 mm | 95 x 58 x 38.7 mm | 93 x 56 x 49 mm |
| Weight | 76.9 g | 76.9 g | 96.2 g | 76.9 g | 116 g | 109 g | 70 g | 115 g (160 g with Stand) |
| Maximum Power Consumption | 5.5 W | 2 W | 4 W | 5.5 W | 3.65 W | 4.5 W | 2.5 W | 3.5 W |
| Operating Temperature | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C |
| Operating Humidity | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing |

# Fixed Network Cameras (Wired – Indoor)

This range of wired indoor network cameras are perfect for larger offices or campus locations where 24/7 security is paramount, since the built-in Power over Ethernet capability enables them to be powered from just the one data cable direct to the switch. A full range of features makes it easy to find the perfect fit for your surveillance needs.

## DCS-2210
### Full HD PoE Day/Night Network Camera

- 1/2.7" 2 megapixel progressive scan CMOS sensor
- Fixed lens (4.37 mm, F2.0)
- Full HD 1080p resolution
- Up to 5 m night vision with integrated IR illuminator
- 10 x digital zoom
- Two-way audio with built-in microphone and speaker
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots. Integrated PIR sensor for enhanced motion detection
- e-PTZ for virtual pan/tilt/zoom operation

## DCS-3010
### HD PoE Fixed Network Camera

- 1/4" 1 megapixel progressive scan CMOS sensor
- Fixed lens (4.0 mm, F 1.5)
- 720p HD or 1280 x 800 resolution
- 4 x digital zoom
- Two-way audio with built-in microphone, external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Tamper detection
- e-PTZ for virtual pan/tilt/zoom operation

## DCS-3112
### HD PoE Day/Night Fixed Network Camera

- Sony 1/4" 1.3 megapixel progressive scan CMOS sensor
- CS mount DC iris varifocal Lens (3.5mm~8 mm, F1.4) with 2.3 x optical zoom
- HD 720p or 1280 x 1024 resolution
- 10 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local SD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots.
- Infrared cutfilter removal for recording in low-light conditions
- Analogue output

## DCS-3710
### HD WDR PoE Day/Night Fixed Network Camera

- Sony 1/3" 1.3 megapixel progressive scan CMOS sensor
- CS mount DC iris varifocal lens (2.9mm~8.2 mm, F1.0) with 2.8 x optical zoom
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- HD 720p or 1280 x 1024 resolution
- 10 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local SD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Infrared cutfilter removal for recording in low-light conditions
- Analogue output

## DCS-3716
### Full HD WDR PoE Day/Night Fixed Network Camera

- Sony 1/2.8" 3 megapixel progressive scan CMOS sensor
- CS mount DC iris varifocal Lens (3.1mm~8mm, F1.2) with 2.6 x optical zoom
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- Full HD 1080p or 2048 x 1536 resolution
- 10 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local SD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Infrared cutfilter removal for recording in low-light conditions
- Analogue output







| MODEL | DCS-2210 | DCS-3010 | DCS-3112 | DCS-3710 | DCS-3716 |
|---|---|---|---|---|---|
| **IMAGE SENSOR** | | | | | |
| Type | 1/2.7" 2 Megapixel Progressive Scan CMOS | 1/4" 1 Megapixel Progressive Scan CMOS | Sony Exmor 1/4" 1.3 Megapixel Progressive Scan CMOS | Sony Exmor 1/3" 1.3 Megapixel WDR Progressive Scan CMOS | Sony Exmor 1/2.8" 3 Megapixel WDR Progressive Scan CMOS |
| Megapixel | • | • | • | • | • |
| Wide Dynamic Range (WDR) | | | | • | • |
| Maximum Video Resolution | 1920 x 1080 | 1280 x 720 | 1280 x 1024 | 1280 x 1024 | 2048 x 1536 |
| **LENS** | | | | | |
| Type | Fixed | Fixed | Varifocal, DC Iris, | Varifocal, DC Iris | Varifocal, DC Iris |
| Focal Length | 4.37 mm | 4 mm | 3.5 mm~8 mm | 2.9mm~8.2 mm | 3.1mm~8.0 mm |
| F-Number | F2.0 | F1.5 | F1.4 | F1.0 | F1.2 |
| Minimum Illumination (Lux) | 1 Lux (Colour)<br>0 Lux (B&W, IR-LED on) | 1 Lux | 0.4 Lux (Colour)<br>0.04 Lux (B/W) | 0.2 Lux (Colour)<br>0.02 Lux (B/W) | 10.5 Lux (Colour);<br>0.05 Lux (B/W) |
| Angle of View (Horizontal/Vertical) | 67.4° / 40.8° | 56.9° / 35.9 ° | 35.4°~77.6° / 26.6°~57.6° | 35.6°~95° / 26.7°~69° | 38.7°~95.9° / 29.1°~71.0° |
| Motorised Pan/Tilt | | | | | |
| Optical Zoom | | | 2.3 x | 2.8 x | 2.6 x |
| Privacy Masks | 3 Zones | 3 Zones | 3 Zones | 3 Zones | 3 Zones |
| **DAY AND NIGHT** | | | | | |
| Infrared Cutfilter Removal | • | | • | • | • |
| Built-in IR | 5 m | | | | |
| **AUDIO** | | | | | |
| Two-Way Audio | • | • | • | • | • |
| Built-in Microphone | • | • | | | |
| External Microphone Input | | • | • | • | • |
| Built-in Speaker | • | | | | |
| External Speaker Output | | • | • | • | • |
| **CONNECTIVITY** | | | | | |
| Wired LAN | • | • | • | • | • |
| Wireless LAN | | | | | |
| 802.3af PoE | • | • | • | • | • |
| Digital Input/Output | DI x 1, DO x 1 | | DI x 2, DO x 1 | DI x 2, DO x 1 | DI x 2, DO x 1 |
| Monitor Output | | | BNC Output | BNC Output | BNC Output |
| Memory Card Slot | • | • | • | • | • |
| **SOFTWARE FEATURES** | | | | | |
| Video Format | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MJPEG, MPEG-4 | H.264, MPEG-4, MJPEG |
| Multi-Stream | • | • | • | • | • |
| Multi-Profile | • | • | • | • | • |
| Digital Zoom | 10 x | 4 x | 10 x | 10 x | 10 x |
| HTTP Secure (HTTPS) | • | • | • | • | • |
| Java Support | | | | | |
| Motion Detection | • | • | • | • | • |
| E-Mail Notification | • | • | • | • | • |
| Recording to Local Storage | • | • | • | • | • |
| Recording to NAS | • | • | • | • | • |
| Audio Recording | • | • | • | • | • |
| Video Output to 3GPP | • | • | • | • | • |
| UPnP Installation | • | • | • | • | • |
| DDNS Support | • | • | • | • | • |
| Enable/Disable LED Indicators | | • | • | • | • |
| D-ViewCam™ Compatible | • | • | • | • | • |
| **PHYSICAL AND ENVIRONMENT** | | | | | |
| Dimensions | 95 x 58 x 38.7 mm | 147 x 61.9 x 39.2 mm | 180.4 x 80 x 52.9 mm | 140 x 80 x 53 mm | 140 x 80 x 53 mm |
| Weight | 69 g | 165 g | 560 g | 576 g | 580 g |
| Maximum Power Consumption | 2 W | 4.6 W | 3.6 W | 2 W | 4 W |
| Operating Temperature | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C |
| Operating Humidity | 20% to 80% RH<br>Non-Condensing | 20% to 80% RH<br>Non-Condensing | 20% to 80% RH<br>Non-Condensing | 20% to 80% RH<br>Non-Condensing | 20% to 80% RH<br>Non-Condensing |

# Fixed Network Cameras (Wired – Outdoor)

This selection of fixed, wired cameras are all built to IP65/66/67/68 standard, so they're weather-proof and designed specifically for use outside. Additional features such as long-distance night vision, digital zoom and motion detection/alert make them perfect for the perimeter areas of buildings, alleyways or other dimly lit areas.

## DCS-2310L
### Outdoor HD PoE Day/Night Cloud Camera

- 1/4" 1 megapixel progressive scan CMOS sensor
- Fixed lens (3.45 mm, F 2.0)
- HD 720p or 1280 x 800 resolution
- Up to 5 m night vision with integrated IR illuminator
- 10 x digital zoom
- Two-way audio with built-in microphone and speaker
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Integrated PIR sensor for enhanced motion detection
- ePTZ for virtual pan/tilt/zoom operation

## DCS-7010L
### Outdoor HD PoE Day/Night Fixed Mini Bullet Cloud Camera

- 1/4" 1 megapixel progressive scan CMOS sensor
- Fixed lens (4.3 mm, F2.0)
- HD 720p or 1280 x 800 resolution
- Up to 10 m night vision with integrated IR illuminator
- 4 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 Video Formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- IP67 weatherproof housing

## DCS-7110
### Outdoor HD PoE Day/Night Fixed Bullet Camera

- Sony 1/2.7" 2 megapixel progressive scan CMOS sensor
- Fixed lens (4 mm, F1.5)
- HD 1080p or 1920 x 1080 resolution
- Up to 15 m night vision with integrated IR illuminator
- 4 x digital zoom
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Tamper detection
- Analogue output
- IP66 weatherproof housing

## DCS-7413
### Outdoor Full HD PoE Day/Night Fixed Bullet Network Camera

- 1/2.7" 2 megapixel progressive scan CMOS sensor
- Fixed lens (4.3 mm, F2.0)
- Full HD 1080p resolution
- Up to 30 m night vision with integrated IR illuminator
- 10 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local SD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Analogue output
- IP68 weatherproof housing

## DCS-7513
### Outdoor Full HD WDR PoE Day/Night Fixed Bullet Network Camera

- 1/2.8" 2 megapixel progressive scan CMOS sensor
- Motorised P-iris varifocal lens (3~9 mm) with 3 x optical zoom
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- Full HD 1080p resolution
- Up to 30 m night vision with integrated IR illuminator
- 10 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local SD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Analogue output
- IP68 weatherproof housing

## How is Weatherproofing rated?

The industry standard for weatherproof housings, as used by D-Link, have the following meanings:

IP65: Dust-tight; Water projected by a nozzle (6.3 mm nozzle at 12.5 litres/min) against enclosure from any direction shall have no harmful effects.

IP66: Dust-tight; Water projected in powerful jets (12.5 mm nozzle 100 litres/min) against the enclosure from any direction shall have no harmful effects.

IP67: Dust-tight; Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water up to 1m deep for 30 minutes.

IP68: Dust-tight; Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water up to 3m deep indefinitely.







| MODEL | DCS-2310L | DCS-7010L | DCS-7110 | DCS-7413 | DCS-7513 |
|---|---|---|---|---|---|
| **IMAGE SENSOR** | | | | | |
| Type | 1/4" 1 Megapixel Progressive Scan CMOS | 1/4" 1 Megapixel Progressive Scan CMOS | 1/2.7" 2 Megapixel Progressive Scan CMOS | 1/2.7" 2 Megapixel Progressive Scan CMOS | 1/2.8" 2 Megapixel Progressive Scan CMOS |
| Megapixel | • | • | • | • | • |
| Wide Dynamic Range (WDR) | | | | | • |
| Maximum Video Resolution (Pixels) | 1280 x 800 | 1280 x 800 | 1920 x 1080 | 1920 x 1080 | 1920 x 1080 |
| **LENS** | | | | | |
| Type | Fixed | Fixed | Fixed | Fixed | Motorised P-Iris Varifocal Lens |
| Focal Length | 3.45 mm | 4.3 mm | 4 mm | 4.3 mm | 3~9 mm |
| F-Number | F2.0 | F2.0 | F1.5 | F2.0 | F1.2~2.3 |
| Minimum Illumination (Lux) | 1 Lux (Colour), 0.5 Lux (B&W) 0 Lux (B&W, IR-Led on ) | 1.5 Lux (Colour) 0 Lux (B&W, IR-LED on) | 0.26 Lux (Colour) 0 Lux (B&W, IR-LED on) | 1.5 Lux (Colour) 0 Lux (B&W, IR-LED on ) | 0.2 Lux (Colour) 0 Lux (B&W, IR-LED on ) |
| Angle of View (Horizontal/Vertical) | 57.8° / 37.8° | 73.5° / 42.5° | 77.4° / 45.1° | 79° / 43° | 121.2°~38.1° / 62.1°~21.3° |
| Motorised Pan/Tilt | | | | | |
| Optical Zoom | | | | | 3X |
| Privacy Masks | 3 Zones | 3 Zones | 3 Zones | 3 Zones | 3 Zones |
| **DAY AND NIGHT** | | | | | |
| ICR Filter | • | • | • | • | • |
| Built-in IR | 5 m | 10 m | 15 m | 30 m | 30 m |
| Audio | | | | | |
| Two-Way Audio | • | • | | • | • |
| Built-in Microphone | • | | | | |
| External Microphone Input | | • | | • | • |
| Built-in Speaker | • | | | | |
| External Speaker Input | | • | | • | • |
| **CONNECTIVITY** | | | | | |
| Wired LAN | • | • | • | • | • |
| Wireless LAN | | | | | |
| 802.3af PoE | • | • | • | • | • |
| Digital Input/Output | | DI x 1, DO x 1 | DI x 1, DO x 1 | DI x 1, DO x 1 | DI x 1, DO x 1 |
| Monitor Output | | | BNC | BNC | BNC |
| Memory Card Slot | • | • | | • | • |
| **SOFTWARE FEATURES** | | | | | |
| Video Format | H.264, MJPEG, MPEG-4 | H.264, MJPEG, MPEG-4 | H.264, MJPEG, MPEG-4 | H.264, MJPEG, MPEG-4 | H.264, MJPEG, MPEG-4 |
| Multi-Stream | • | • | • | • | • |
| Multi-Profile | | | • | | |
| Digital Zoom | 10 x | 4 x | 4 x | 10 x | 10 x |
| HTTP Secure (HTTPS) | • | • | • | • | • |
| Java Support | • | | | | |
| Motion Detection | • | • | • | • | • |
| E-Mail Notification | • | • | • | • | • |
| Recording to Local Storage | • | • | • | • | • |
| Recording to NAS | • | • | • | • | • |
| Audio Recording | • | • | | • | • |
| Video Output to 3GPP | • | • | • | • | • |
| UPnP Installation | • | • | • | • | • |
| DDNS Support | • | • | • | • | • |
| Enable/Disable LED Indicators | | | | | |
| D-ViewCam™ Compatible | • | • | • | • | • |
| **PHYSICAL AND ENVIRONMENT** | | | | | |
| IP Rating | IP65 | IP67 | IP66 | IP68 | IP68 |
| Dimensions | 138.9 x 93 x 66 mm | 176.5 x 80.5 x 65 mm | 197 x 73 x 71 mm | 316.5 x 249.1 x 97.5 mm | 97.5 x 223.5 x 97.5 mm |
| Weight | 235 g | 510 g | 783 g | 1.92 Kg (with Bracket and Sun Shield) | 2.05 Kg (with Bracket and Sunshield) |
| Maximum Power Consumption | 5.3 W | 5.4 W | 6 W | 11.2 W | 11.02 W |
| Operating Temperature | -25°C to 50°C | -25°C to 50°C | -20°C to 50°C | -40°C to 50°C | -40°C to 50°C |
| Operating Humidity | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing |

## What is mydlink™?

mydlink™ is a cloud-based platform that maintains a live link between your router via the Internet and your mydlink™ smartphone/tablet app, so that you can always be in control, wherever you are and whenever you want. Whether you want to access, control, monitor or automate, there is a mydlink™ product, and supporting smartphone or tablet app, to help you. Just look for the mydlink™ logo... mydlink

# Panoramic & Mini Dome Cloud Cameras (Indoor)

## DCS-6004L
### Indoor HD PoE Mini Dome Cloud Camera

- 1/4" 1 megapixel progressive scan CMOS sensor
- Fixed lens (2.8 mm, F1.8)
- HD 720p or 1280 x 800 resolution
- Up to 5 m night vision with integrated IR illuminator
- 10 x digital zoom
- Two-way audio with built-in microphone and external speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots

## DCS-6010L
### 2-Megapixel Panoramic Wireless Cloud Camera

- 1/3.2" 2 megapixel progressive scan CMOS sensor
- Fixed fisheye lens (1.25 mm, F2.0)
- Ceiling-mount 360° surveillance with fisheye distortion correction
- 1620 x 1200 resolution
- 10 x digital zoom
- Two-way audio with built-in microphone and speaker
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- ePTZ for virtual pan/tilt/zoom operation

## What is mydlink™?

Please see the previous page for an explanation on how the mydlink™ cloud-based platform can help you to access, control, monitor and automate.

| MODEL | DCS-6004L | DCS-6010L |
|---|---|---|
| **IMAGE SENSOR** | | |
| Type | 1/4" 1 Megapixel Progressive Scan CMOS | 1/3.2" 2 Megapixel Progressive Scan CMOS |
| Megapixel | • | • |
| Wide Dynamic Range (WDR) | | |
| Maximum Video Resolution (Pixels) | 1280 x 800 | 1600 x 1200 |
| **LENS** | | |
| Type | Fixed | Fisheye |
| Focal Length | 2.8 mm | 1.25 mm |
| F-Number | F1.8 | F2.0 |
| Minimum Illumination (Lux) | 1 Lux (Colour) 0 Lux (B&W, IR-LED on) | 1 Lux |
| Angle of View (Horizontal/Vertical) | 75.2° / 48.2° | 180° / 180° |
| Motorised Pan/Tilt | | |
| Optical Zoom | | |
| Privacy Masks | 3 Zones | 3 Zones |
| **DAY AND NIGHT** | | |
| ICR Filter | • | |
| Built-in IR | 5 m | |
| **AUDIO** | | |
| Two-Way Audio | • | • |
| Built-in Microphone | • | • |
| External Microphone Input | | • |
| Built-in Speaker | | • |
| External Speaker Output | • | |
| **CONNECTIVITY** | | |
| Wired LAN | • | • |
| Wireless LAN | | 802.11g/b/n |
| 802.3af PoE | • | |
| Digital Input/Output | | |
| Monitor Output | | |
| Memory Card Slot | • | • |
| **SOFTWARE FEATURES** | | |
| Video Format | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG |
| Multi-Stream | • | • |
| Multi-Profile | | • |
| Digital Zoom | 10X | 10X |
| HTTP Secure (HTTPS) | • | • |
| Java Support | | |
| Motion Detection | • | • |
| E-Mail Notification | • | • |
| Recording to Local Storage | • | • |
| Recording to NAS | • | • |
| Audio Recording | • | • |
| Video Output to 3GPP | • | • |
| UPnP Installation | • | • |
| DDNS Support | • | • |
| Enable/Disable LED Indicators | | |
| D-ViewCam™ Compatible | • | • |
| **PHYSICAL AND ENVIRONMENT** | | |
| Dimensions | 90 x 50.5 mm (Ø x H) | 134.2 x 49.8 mm (Ø x H) |
| Weight | 130 g | 1.92 Kg (with Bracket and Sun Shield) |
| Maximum Power Consumption | 3.5 W | 3.9 W |
| Operating Temperature | 0°C to 40°C | 0°C to 40°C |
| Operating Humidity | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing |

# Fixed Network Cameras (Wireless – Outdoor)

## DCS-2330L
### Outdoor HD Wireless Day/Night Cloud Camera

- 1/4" 1 megapixel progressive scan CMOS sensor
- HD 720p resolution
- Up to 5 m night vision with integrated IR illuminator
- Built-in microphone
- Supports MJPEG and H.264 video formats
- Recording to local microSD card slot (16 Gb included) or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots and video
- Integrated PIR sensor for enhanced motion detection
- ePTZ for virtual pan/tilt/zoom operation
- IP65 weatherproof housing

## DCS-2332L
### Outdoor HD Wireless Day/Night Cloud Camera

- 1/4" 1 megapixel progressive scan CMOS sensor
- HD 720p resolution
- Up to 5 m night vision with integrated IR illuminator
- Two-way audio with built-in microphone and speaker
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Integrated PIR sensor for enhanced motion detection
- IP65 weatherproof housing

| MODEL | DCS-2330L | DCS-2332L |
|---|---|---|
| **IMAGE SENSOR** | | |
| Type | 1/4" 1 Megapixel Progressive Scan CMOS | 1/4" 1 Megapixel Progressive Scan CMOS |
| Megapixel | • | • |
| Wide Dynamic Range (WDR) | | |
| Maximum Video Resolution (Pixels) | 1280 x 720 | 1280 x 720 |
| **LENS** | | |
| Type | Fixed | Fixed |
| Focal Length | 3.45 mm | 3.45 mm |
| F-Number | F2.0 | F2.0 |
| Minimum Illumination (Lux) | 1 Lux (colour), 0.5 Lux (B&W), 0 Lux (B&W, IR-Led on ) | 1 Lux (colour), 0.5 Lux (B&W), 0 Lux (B&W, IR-Led on ) |
| Angle of View (Horizontal/Vertical) | 57.8° / 37.8° | 57.8° / 37.8° |
| Motorised Pan/Tilt | | |
| Optical Zoom | | |
| Privacy Masks | 3 zones | 3 zones |
| **DAY AND NIGHT** | | |
| ICR Filter | • | • |
| Built-in PIR | • | • |
| Built-in IR | 5m | 5m |
| **AUDIO** | | |
| Two-Way Audio | | • |
| Built-in Microphone | • | • |
| External Microphone Input | | |
| Built-in Speaker | | • |
| **CONNECTIVITY** | | |
| Wired LAN | • | • |
| Wireless LAN | 802.11b/g/n | 802.11b/g/n |
| 802.3af PoE | | |
| Digital Input/Output | | |
| Monitor Output | | |
| Memory Card Slot | • (16 GB included) | • |
| **SOFTWARE FEATURES** | | |
| Video Format | H.264, MJPEG | H.264, MJPEG, MPEG-4 |
| Multi-Stream | • | • |
| Multi-Profile | | |
| Digital Zoom | 10 x | 10 x |
| HTTP Secure (HTTPS) | • | • |
| Java Support | • | • |
| Motion Detection | • | • |
| E-Mail Notification | • | • |
| Recording to Local Storage | • | • |
| Recording to NAS | • | • |
| Audio Recording | • | • |
| UPnP Installation | • | • |
| DDNS Support | • | • |
| Enable/Disable LED Indicators | | |
| D-ViewCam™ Compatible | • | • |
| **PHYSICAL AND ENVIRONMENT** | | |
| IP Rating | IP65 | IP65 |
| Dimensions | 66 x 45.7 x 146.8 mm | 66 x 45.7 x 146.8 mm |
| Weight | 134 g | 235 g |
| Maximum Power Consumption | 5 W | 5.3 W |
| Operating Temperature | -25°C to 50°C | -25°C to 50°C |
| Operating Humidity | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing |

# Fixed Dome Network Cameras (Wired)

D-Link's high-performance Fixed Dome Network Cameras provide the perfect video surveillance solution for a whole host of business environments. They are equipped with progressive CMOS technology to deliver exceptional picture quality, and all are PoE-enabled for simplified low-cost installation.

## DCS-6113
### Indoor Full HD PoE Day/Night Fixed Dome Network Camera

- 1/2.7" 2 megapixel progressive scan CMOS sensor
- Fixed lens (4 mm, F1.5)
- Full HD 1080p resolution
- Up to 10 m night vision with integrated IR illuminator
- 16 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Tamper detection
- Analogue output

## DCS-6210
### Outdoor Full HD Vandal-Resistant Mini Fixed Dome Network Camera

- 1/2.7" 2 megapixel progressive scan CMOS sensor
- Fixed lens (4.3 mm, F2.0)
- Full HD 1080p resolution
- 10 x digital zoom
- Built-in microphone
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- ePTZ for virtual pan/tilt/zoom operation
- IP66 weatherproof and IK10 vandal-proof housing

## DCS-6314
### Outdoor Full HD WDR Varifocal Day & Night Dome Network Camera

- 1/2.8" 2 megapixel WDR progressive scan CMOS sensor
- Varifocal lens (2.8~12 mm, F1.4) with 4 x optical zoom
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- Full HD 1080p resolution
- Up to 15 m night vision with integrated IR illuminator
- 10 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- IP68 weatherproof and IK10 vandal-proof housing

## DCS-6315
### Outdoor HD WDR Varifocal Day & Night Dome Network Camera with Colour Night Vision

- 1/3" 1 megapixel WDR progressive scan CMOS sensor
- Varifocal lens (2.8~12 mm, F1.4) with 4 x optical zoom
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- LowLight+ technology
- HD 720p resolution
- Up to 15 m night vision with integrated IR illuminator
- 10 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- IP68 weatherproof and IK10 vandal-proof housing

## DCS-6511
### Outdoor PoE Vandal-Resistant HD Fixed Dome Network Camera

- 1/3" 1.3 megapixel WDR progressive scan CMOS sensor
- Motorised varifocal lens (3.3~12 mm, F1.4~360) with 3.6 x optical zoom
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- HD 720p or 1280 x 1024 resolution
- Up to 20 m night vision with integrated IR illuminator
- 10 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Analogue output
- IP66 weatherproof and IK10 vandal-proof housing

## DCS-6513
### Outdoor Full HD WDR Day & Night Dome Network Camera

- 1/2.8" 3 megapixel WDR progressive scan CMOS sensor
- Motorised P-iris varifocal lens (3~9 mm, F1.2~2.3) with 3 x optical zoom
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- Full HD 1080p or 2048 x 1536 resolution
- Up to 20 m night vision with integrated IR illuminator
- 10 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- IP67 weatherproof and IK10 vandal-proof housing



| MODEL | DCS-6113 | DCS-6210 | DCS-6314 | DCS-6315 | DCS-6511 | DCS-6513 |
|---|---|---|---|---|---|---|
| **IMAGE SENSOR** | | | | | | |
| Type | 1/2.7" 2 Megapixel Progressive Scan CMOS | 1/2.7" 2 Megapixel Progressive Scan CMOS | 1/2.8" 2 Megapixel WDR Progressive Scan CMOS | 1/3" 1 Megapixel WDR Progressive Scan CMOS | 1/3" 1.3 Megapixel WDR Progressive Scan CMOS | 1/2.8" 3 Megapixel WDR Progressive Scan CMOS |
| Megapixel | • | • | • | • | • | • |
| Wide Dynamic Range (WDR) | | | • | • | • | • |
| LowLight+ | | | | • | | |
| Maximum Video Resolution (Pixels) | 1920 x 1080 | 1920 x 1080 (16:9)<br>1440 x 1080 (Other) | 1920 x 1080 (16:9)<br>1440 x 1080 (Other) | 1280 x 720 (16:9)<br>1024 x 768 (Other) | 1280 x 720 (16:9)<br>1280 x 1024 (Other) | 1920 x 1080 (16:9)<br>2048 x 1536 (Other) |
| **LENS** | | | | | | |
| Type | Fixed | Fixed | Varifocal | Varifocal | Motorised Varifocal | Motorised P-Iris Varifocal |
| Focal Length | 4.0 mm | 4.3 mm | 2.8~12 mm | 2.8~12 mm | 3.3~12 mm | 3~9 mm |
| F-Number | F1.5 | F2.0 | F1.4 | F1.4 | F1.4~360 | F1.2~2.3 |
| Minimum Illumination (Lux) | 0.12 Lux (Colour)<br>0 Lux (B&W, IR-LED on) | 1 Lux | 0.2 Lux (Colour)<br>0 Lux (B&W, IR-LED on) | 0.1 Lux (Colour)<br>0 Lux (B&W, IR-LED on) | 0.1 Lux (Colour)<br>0 Lux (B&W, IR-LED on) | 0.5 Lux (Colour)<br>0 Lux (B&W, IR-LED on) |
| Angle of View (Horizontal/Vertical) | 77.4° / 45.1° | 79° / 43° | 96.5°~31.2° / 64.5°~17.8° | 90°~28° / 58.8°~16° | 23.9°~89.8° / 63.6°~17.9° | 96.4°~31.6° / 51.2°~17.7° |
| Optical Zoom | | | 4 x | 4 x | 3.6 x | 3 x |
| Privacy Masks | 5 Zones | 3 Zones | 3 Zones | 3 Zones | 3 Zones | 3 Zones |
| **DAY AND NIGHT** | | | | | | |
| ICR Filter | • | | • | • | • | • |
| Built-in IR | 15 m | | 15 m | 15 m | 20 m | 20 m |
| **AUDIO** | | | | | | |
| Two-Way Audio | • | | • | • | • | • |
| Built-in Microphone | | • | | | | |
| External Microphone Input | • | | • | • | • | • |
| Built-in Speaker | | | | | | |
| External Speaker Output | • | | • | • | • | • |
| **CONNECTIVITY** | | | | | | |
| Wired LAN | • | • | • | • | • | • |
| Wireless LAN | | | | | | |
| 802.3af PoE | • | • | • | • | • | • |
| Digital Input/Output | DI x 1, DO x 1 | | DI x 1, DO x 1 | DI x 1, DO x 1 | DI x 1, DO x 1 | DI x 1, DO x 1 |
| Monitor Output | BNC | | | | BNC | BNC |
| Memory Card Slot | • | • (Max 32 GB) | • (Max 32 GB) | • (Max 64 GB) | • (Max 32 GB) | • (Max 32 GB) |
| **SOFTWARE FEATURES** | | | | | | |
| Video Format | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG |
| Multi-Stream | • | • | • | • | • | • |
| Multi-Profile | | • | • | • | • | • |
| Digital Zoom | 16 x | 10 x | 10 x | 10 x | 10 x | 10 x |
| HTTP Secure (HTTPS) | • | • | • | • | • | • |
| Java Support | | | • | • | | • |
| Motion Detection | • | • | • | • | • | • |
| E-Mail Notification | • | • | • | • | • | • |
| Recording to Local Storage | • | • | • | • | • | • |
| Recording to NAS | • | • | • | • | • | • |
| Audio Recording | • | • | • | • | • | • |
| Video Output to 3GPP | • | • | • | • | • | • |
| UPnP Installation | • | • | • | • | • | • |
| DDNS Support | • | • | • | • | • | • |
| Enable/Disable LED Indicators | | | • | • | • | • |
| D-ViewCam™ Compatible | • | • | • | • | • | • |
| **PHYSICAL AND ENVIRONMENT** | | | | | | |
| IP Rating | | IP68 | IP68 | IP68 | IP66 | IP67 |
| Vandal Proof | | IK10 | IK10 | IK10 | IK10 | IK10 |
| Dimensions | 130 x 97.8 mm (Ø x H) | 115.52 x 106.75 x 51.59 mm | 123 x 113.7 x 128 mm | 123 x 113.7 x 128 mm | 127 x 151.79 x 191.8 mm | 151.79 x 191.3 x 127 mm |
| Weight | 472 g | 412.2 g | 1.112 Kg | 1.112 Kg | 1.030 Kg | 1.53 Kg |
| Maximum Power Consumption | 5.3 W | 7.8 W | 10.5 W | 10.5 W | 9 W | 10.5 W |
| Operating Temperature | 0°C to 40°C | -25°C to 50°C | -30°C to 50°C | -30°C to 50°C | -40°C to 50°C | -40°C to 50°C |
| Operating Humidity | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing |
| **ACCESSORIES** | | | | | | |
| Mounting Options | | | DCS-34-2<br>DCS-34-3 | DCS-34-2<br>DCS-34-3 | DCS-34-2<br>DCS-34-3<br>DCS-34-4 | DCS-34-2<br>DCS-34-3<br>DCS-34-4 |

# Pan, Tilt, Zoom (PTZ) Network Cameras (Indoor / Outdoor)

These high-speed PTZ and dome cameras feature full 360° panning for all-round super-wide-range surveillance. Available in both indoor and outdoor enclosures, and with ultra-low-lux sensors and ICR support, these cameras can be automated with preset focal points and an 'auto patrol cruise' to provide a continual scan inside or outside a building.

## DCS-5020L (Indoor)
### Wireless N Day & Night Pan/Tilt Cloud Camera

- 1/5" 1 megapixel progressive scan CMOS sensor
- Fixed lens (2.2 mm, F2.0)
- Motorised pan/tilt with +170° to -170° pan range and +95° to -25° tilt range
- 640 x 480 resolution
- Up to 8 m night vision with integrated IR illuminator
- 4 x digital zoom
- Built-in microphone
- Built-in wireless extender (maximum five clients)
- Supports MJPEG and H.264 video formats
- Motion and sound detection, event recording and e-mail notification with snapshots and video

## DCS-5222L (Indoor)
### Pan/Tilt/Zoom Cloud Camera

- 1/4" 1 megapixel progressive scan CMOS sensor
- Fixed lens (4.57 mm, F1.9)
- Motorised pan/tilt with +170° to -170° pan range and +90° to -25° tilt range
- HD 720p resolution
- Up to 5 m night vision with integrated IR illuminator
- 4 x digital zoom
- Two-way audio with built-in microphone and external speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Integrated PIR sensor for enhanced motion detection

## DCS-5615 (Indoor)
### Full HD Mini Pan & Tilt Dome Network Camera

- 1/2.7" 2 megapixel progressive scan CMOS sensor
- Fixed Lens (4.0 mm, F1.5)
- Motorised pan/tilt with +180° to -180° pan range and +90° to -10° tilt range
- Full HD 1080p resolution
- 16 x digital zoom
- Built-in microphone
- Supports MJPEG, MPEG-4 and H.264 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- Tamper detection

## DCS-6616 (Indoor)
### 12x WDR Speed Dome Network Camera

- 1/4" Sony Super HAD-II CCD sensor
- Motorised varifocal lens (3.8~45.6 mm, F1.6~2.7)
- Motorised pan/tilt with fast 10°~400°/Sec 360° endless pan and +170° to -10° tilt range
- Proportional pan/tilt; when camera zooms the tracking speed slows for more accurate control
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- 720 x 576 (NTSC) or 720 x 480 (PAL) resolution
- Day and night vision with Infrared Cutfilter Removal (ICR)
- 12 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Motion detection, event recording and e-mail notification with snapshots

## DCS-6815 (Outdoor)
### 18x WDR Speed Dome Network Camera

- 1/4" Sony Super HAD-II CCD sensor
- Motorised varifocal lens (3.4~61.2 mm, F1.4~3.0)
- Motorised pan/tilt with fast 10°~ 400°/Sec 360° endless pan and +190° to -10° tilt range
- Proportional pan/tilt; when camera zooms the tracking speed slows for more accurate control
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- 720 x 576 (NTSC) or 720 x 480 (PAL) resolution
- Day and night vision with Infrared Cutfilter Removal (ICR)
- 12 x digital zoom
- Two-way audio with external microphone input and speaker output
- Supports MJPEG, MPEG-4 and H.264 video formats
- Motion detection, event recording and e-mail notification with snapshots
- IP66 weatherproof and IK10 vandal-proof housing

## DCS-6915 (Outdoor)
### 20X Full HD WDR Speed Dome Network Camera

- Sony Exmor 1/2.8" 3 megapixel progressive scan CMOS sensor
- Motorised varifocal lens (4.7~94 mm, F1.6~3.5)
- Motorised pan/tilt with fast 5°~ 400°/Sec 360° endless pan and +190° to -10° tilt range
- Proportional pan/tilt; when camera zooms the tracking speed slows for more accurate control
- Wide Dynamic Range (WDR) technology for exceptional picture quality in extreme-contrast environments
- Full HD 1080p resolution
- Day and night vision with Infrared Cutfilter Removal (ICR)
- Two-way audio with external microphone input and speaker output
- Supports MJPEG and MPEG-4 video formats
- Recording to local microSD card slot or to a NAS device
- Motion detection, event recording and e-mail notification with snapshots
- IP66 weatherproof and IK10 vandal-proof housing








| MODEL | DCS-5020L | DCS-5222L | DCS-5615 | DCS-6616 | DCS-6815 | DCS-6915 |
|---|---|---|---|---|---|---|
| **IMAGE SENSOR** | | | | | | |
| Type | 1/5" VGA Progressive Scan CMOS | 1/4" 1 Megapixel Progressive Scan CMOS | 1/2.7" 2 Megapixel Progressive Scan CMOS | 1/4" Sony Super HAD II CCD | 1/4" Sony Super HAD II CCD | 1/2.8" Sony Exmor 2 Megapixel CMOS |
| Megapixel | | • | • | | | • |
| Wide Dynamic Range (WDR) | | | | • | • | • |
| Maximum Video Resolution | 640 x 480 | 1280 x 720 | 1920 x 1080 | NTSC: 720 x 480 PAL: 720 x 576 | NTSC: 720 x 480 PAL: 720 x 576 | 1920 x 1080 |
| **LENS** | | | | | | |
| Type | Fixed | Fixed | Fixed | Varifocal | Motorised Varifocal | Motorised Varifocal |
| Focal Length | 2.2 mm | 4.57 mm | 4 mm | 3.8~45.6 mm | 3.4~61.2 mm | 4.7~94 mm |
| F-Number | F 2.0 | F1.9 | F1.5 | F1.6~F2.7 | F1.4~F3.0 | F1.6~3.5 |
| Minimum Illumination (Lux) | 1 Lux (Colour) 0 Lux (B&W, IR-LED on) | 1 Lux (Colour) 0 Lux (B&W, IR-LED on) | 1 Lux (Colour) | 0.1 Lux (Colour) 0.01 Lux (B/W) | 0.01 Lux (Colour) 0.01 Lux (B/W) | 0.1 Lux (Colour) 0.01 Lux (B/W) |
| Angle of View (Horizontal/Vertical) | 66.22° / 43 ° | 98° / 52° | 77.4° / 45.1° | 4.49°~52.8° 3.40°~39.7° | 60.8°~3.6° | 52.27°~4.07° 33.4°~2.33° |
| Motorised Pan/Tilt | • | • | • | • | • | • |
| Optical Zoom | | | | 12 x | 18 x | 20 x |
| Privacy Masks | | 3 Zones | 5 Zones | 16 Zones | 16 Zones | 16 Zone |
| **DAY AND NIGHT** | | | | | | |
| Infrared Cutfilter Removal | • | • | | • | • | • |
| Built-in IR | 8 m | 5 m | | | | |
| **AUDIO** | | | | | | |
| 2-Way Audio | | • | | • | • | • |
| Built-in Microphone | • | • | • | | | |
| External Microphone Input | | | | • | • | • |
| Built-in Speaker | | • | | | | |
| External Speaker Output | | | | • | • | • |
| **CONNECTIVITY** | | | | | | |
| Wired LAN | • | • | • | • | • | • |
| Wireless LAN | 802.11b/g/n | 802.11b/g/n | | | | |
| 802.3af PoE | | | • | | | |
| Digital Input/Output | | DI x 1, DO x 1 | DI x 1 | DI x 8, DO x 1 | DI x 8, DO x 1 | DI x 4, DO x 1 |
| Monitor Output | | | | BNC | BNC | |
| Memory Card Slot | | • | • | | | • |
| **SOFTWARE FEATURES** | | | | | | |
| Video Format | H.264, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | H.264, MPEG-4, MJPEG | MJPEG, MPEG-4 | H.264, MJPEG |
| Multi-Stream | • | • | • | • | • | • |
| Multi-Profile | • | • | • | • | | • |
| Digital Zoom | 4 x | 10 x | 16 x | 12 x | 12 x | 10 x |
| HTTP Secure (HTTPS) | | • | • | | | |
| Java Support | • | | | | | |
| Motion Detection | • | • | • | • | • | • |
| E-Mail Notification | • | • | • | • | • | • |
| Schedule Recording to Hard Drive | | • | • | • | | • |
| Recording to NAS | | • | • | • | • | |
| Audio Recording | • | • | • | • | • | |
| Video Output to 3GPP | • | • | • | | | |
| UPnP Installation | • | • | • | • | • | • |
| DDNS Support | • | • | • | • | • | • |
| Enable/Disable LED Indicators | • | • | • | | | |
| D-ViewCam™ Compatible | • | • | • | • | • | • |
| **PHYSICAL AND ENVIRONMENT** | | | | | | |
| IP Rating | | | | | IP66 | IP66 |
| Vandal Proof | | | | | IK10 | IK10 |
| Dimensions | 102.35 x 101.27 x 133.6 mm | 114 x 125 mm (Ø x H) | 116.34 x 56.7 mm (Ø x H) | 131 x 205 mm (Ø x H) | 190 x 302.5 mm (Ø x H) | 191.97 x 282.11 mm (Ø x H) |
| Weight | 292.4g | 540g | 210g | 1.2 Kg | 2.6 Kg | 2.32 Kg |
| Maximum Power Consumption | 8.64 W | 9 W | 5.8 W | 14 W | 65 W (with Heater) | 65 W (with Heater) |
| Operating Temperature | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C | -40°C to 50°C | -45°C to 50°C |
| Operating Humidity | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing | 20% to 80% RH Non-Condensing |
| **ACCESSORIES** | | | | | | |
| Mounting Options | | | | | DCS-32-1, DCS-32-2, DCS-32-4 | |
| Other | | | | | DCS-80-6 (Outdoor PSU) | |

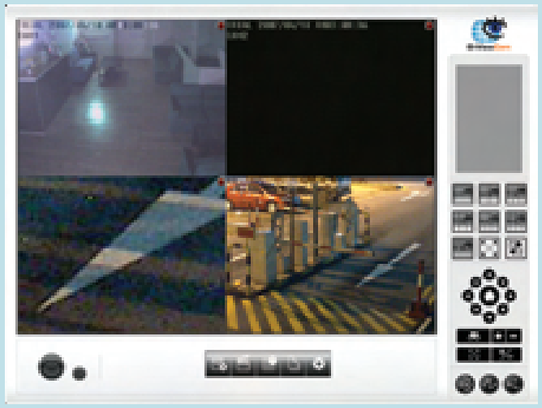
# Video Management Software (VMS)

D-ViewCam™ Standard (DCS-100) Video Management Software (VMS) comes bundled with D-Link's network cameras and provides video recording, live view and playback management for up to 32 network cameras and video servers.

A comprehensive surveillance system designed to centrally manage multiple IP cameras for Home, Small Office Home Office (SOHO), or Small and Medium Business (SMB) users, it is compatible with all current D-Link IP cameras and video servers. It offers digital monitoring and recording capabilities of video, audio and events for various security applications, and the software provides users with a wide array of features including an 'e-map mode' which allows users to arrange a map with camera locations and orientation. Additional features such as auto-patrol, rotate, zoom, and focus provide users with optimal control over their video surveillance.

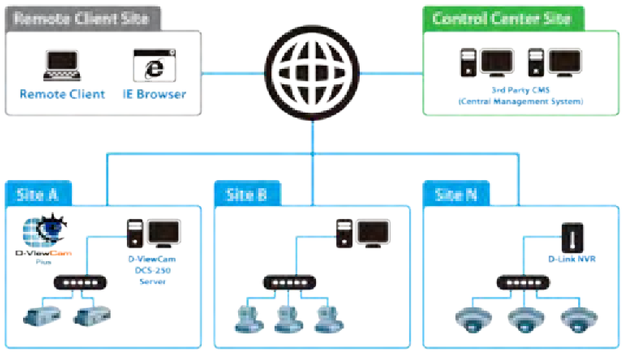
For larger organisations with more cameras in their network, there is D-ViewCam™ Plus (DCS-250), a comprehensive network camera surveillance software system designed for medium-to-large business as well as enterprise users. It centrally manages up to 64 network cameras and is compatible with current D-Link network cameras, video servers and an extensive range of third-party network cameras from more than 40 other companies. This software offers digital monitoring and recording of video, audio, and events for use in various security applications. Furthermore, this easy-to-use surveillance software provides users with a wide array of features, including multiple-channel playback, high-resolution monitoring and live view.

Video Display



Video Playback

## D-ViewCam™ / D-ViewCam™ Plus Typical Network Set-up




## Network Camera Accessories: Brackets, PSU

| MODEL | | DCS-32-2 | DCS-34-3 | DCS-34-4 |
|---|---|---|---|---|
| Mounting Options | Type | Straight Tube (Short) | Bent Mount | Flush Mount |
| | Compatible With | DCS-6815 | DCS-6314, DCS-6315, DCS-6511 | DCS-6511 DCS-6513 |

| MODEL | | DCS-80-6 |
|---|---|---|
| Power Supplies | Input Power | 220~230 V AC |
| | Output | 24 V DC |
| | Protection | IP66 |
| | Compatible With | DCS-6815 |

# Video Encoder

D-Link's high-performance, single-channel video encoder integrates existing analogue CCTV (closed circuit television) into an IP-based video surveillance system.

This video encoder is the ideal choice for businesses where surveillance equipment is already installed and functioning. The alarm handling features provide alerts in the event of loss of video or loss of network connection, and motion alarms with configurable detection areas allow for effective surveillance and help to mitigate the need for constant human supervision. A buffer system allows the server to capture images to the built-in SD card slot both before and after an event occurs.

### What is a Video Encoder?

Video encoders, also known as video servers, enable an existing analogue CCTV video surveillance system to be integrated with an IP-based network video system. Video encoders play an important role in installations where many analogue cameras already exist and are to be retained since they are still in good, functioning order.

### How Does it Work?

A video encoder connects to an analogue video camera via a coaxial cable and converts analogue video signals into digital video streams that are then sent over a wired or wireless IP-based network (e.g. LAN, WLAN or Internet). To view and/or record the digital video signal, a computer can be used instead of DVRs, VCRs or analogue monitors.

By using video encoders, analogue video cameras of all types, such as fixed, indoor/outdoor, dome, pan/tilt/zoom, and other specialist cameras can be remotely accessed and controlled over an IP network.

### What are the Benefits of a Video Encoder?

A video encoder also offers other benefits such as event management and advanced video and security functionalities. In addition, it provides scalability and ease of integration with other security systems.

## DVS-310-1
### H.264 PoE Video Encoder

- H.264/MPEG-4/MJPEG triple codec
- Two-way audio
- Motion detection
- One-channel BNC input
- SD card slot (SD card not included)
- PoE support
- Digital input x 2
- Digital output x 1
- RS485 interface
- Audio line in/out

| MODEL | | DVS-310-1 |
|---|---|---|
| Network Specifications | Interface | 1 x 10/100BASE-TX |
| | 802.3af PoE Compatible | • |
| | Network Protocols | IPv4, DHCP, ARP, DNS, TCP/IP, DDNS (D-Link), HTTP, HTTPS, UPnP™, Port Forwarding, Samba, SMTP, PPPoE, NTP (D-Link), FTP, RTP, RTSP, UDP, RTCP, ICMP, 3GPP |
| Video Specifications | Video Format | MJPEG, MPEG-4, H.264 |
| | Bit Rate | 64 Kbps to 4 Mbps |
| | Supported Resolutions | PAL: D1 (720 x 576), CIF (352 x 288), QCIF (176 x 144) NTSC: D1 (720 x 480), CIF (352 x 240), QCIF (176 x 120) |
| | Video Input | 1CH, NTSC/PAL, BNC Connector, 1.0 Vp-p with 75 Ω Loading |
| | Video Recording | Instant Local Video Recording |
| | Video Buffer | Pre/Post Buffer for Image/Video Capture |
| Audio | Bidirectional Audio | • |
| | Audio Connector | 3.5 mm Stereo Input/Output |
| | Audio Input | 8 KHz Sample Rate, ADPCM |
| | Audio Output | 8 KHz Sample Rate, ADPCM |
| | Audio Codec | G.726 |
| Pan/Tilt/Zoom | PTZ Connection | RS485 |
| | PTZ Protocols | PelcoP, PelcoD, Merit Lilin, Visca, DynaColour, Transparent |
| | Baud Rate | 1200, 1800, 2400, 4800, 9600, 19200 |
| Digital I/O | Number of Inputs | 2 |
| | Number of Outputs | 1 |
| Alarm Handling | Loss Detection | Video and Network Loss Detection |
| | Motion Detection | Hardware Based, Multiple Detection Areas |
| | Event Handler | Alerts by FTP and Email |
| Storage | Local Storage | SD Card |
| Video Management Software | D-ViewCam™ | Compatible |
| Physical and Environment | Dimension (L x W x H) | 90 x 78 x 36 mm |
| | Weight | 232 g |
| | Operating Temperature | 0°C to 40°C |
| | Operating Humidity | 20% to 80% RH Non-Condensing |

# Network Video Recorders

D-Link's standalone, wired Network Video Recorders (NVRs) support up to nine network cameras with MJPEG, MPEG-4 or H.264 recording onto high-speed 3.5-inch SATA hard drives for long-term recording and video playback. These NVRs support real-time monitoring and playback via a web browser from cameras located in local or remote sites, and all without turning on a computer.

## DNR-312L
### mydlink™ Network Video Recorder with HDMI

- Accessible from the Internet with mydlink™
- One bay for SATA hard drive (not included)
- HDMI display output
- 2 x USB ports for keyboard/mouse control, storage backup, UPS status update
- Monitor and record up to nine cameras simultaneously using MJPEG, MPEG-4 or H.264 video formats
- HD recording (720p)
- Supports all D-Link cameras

## DNR-322L
### Cloud Network Video Recorder

- Accessible from the Internet with mydlink™
- USB port for UPS status update
- Two bays for SATA hard drives (not included)
- Slot for Kensington security lock
- Nine-channel IP camera recording
- Single-channel playback
- RAID 0/1 and JBOD
- HD recording (720p)
- Configurable recording schedules
- Supports all D-Link cameras

## DNR-326
### 2-Bay Professional Network Video Recorder

- Two bays for SATA hard drives (not included) with optional RAID 1 protection
- USB port for UPS status update
- Support for all D-Link cameras as well as many third-party cameras (Axis, Panasonic, Sony, Mobotix, Cisco, etc)
- Monitor and record up to nine cameras simultaneously using MJPEG, MPEG-4 or H.264 video formats
- SmartSearch technology to simplify event investigation
- Full HD recording (1080p)
- Digital watermark to prevent tampering on recorded files

## DNR-2060-08P
### JustConnect™ Multifunctional Network Video Recorder

- Six bays for SATA hard drives
- HDMI and VGA dual display outputs
- Front panel controls
- Auto discovery and auto configuration
- Monitor, record and play back up to eight cameras simultaneously using MJPEG, MPEG-4 or H.264 video formats
- Built-in PoE+ switch
- Supports all D-Link IP cameras

## What does JBOD mean?

JBOD stands for 'Just a Bunch of Disks' – essentially a collection of independent hard drives – where each disk is accessible separately or as a combined (spanned) single logical volume rather than through a collective RAID interface. It offers no redundancy or performance advantages, so if the 'bunch' of disks is operating as a spanned volume and one drive fails, the whole lot fail.

## What is mydlink™?

mydlink™ is a cloud-based platform that maintains a live link between your mydlink™-enabled product via the Internet and your mydlink™ smartphone/tablet app, so that you can always be in control, wherever you are and whenever you want. Whether you want to access, control, monitor or store, there is a mydlink™ product, and supporting smartphone or tablet app, to help you. Just look for the mydlink™ logo...






| MODEL | | DNR-312L | DNR-322L | DNR-326 | DNR-2060-08P |
|---|---|---|---|---|---|
| General | Number of Channels | 9 | 9 | 9 | 8 |
| | Compression Format | H.264/MPEG-4/MJPEG | H.264/MPEG-4/MJPEG | H.264/MPEG-4/MJPEG | H.264/MJPEG |
| | Maximum Recording Performance | H.264 at 720p at 270 fps | H.264 1080P: 90 Mbps<br>H.264 720P: 90 Mbps<br>MJPEG 1080P: 90 fps<br>MJPEG 720P: 192 fps | H.264 1080P: 90 Mbps<br>H.264 720P: 90 Mbps<br>MJPEG 1080P: 90 fps<br>MJPEG 720P: 192 fps | H.264 at 1080p at 240 fps |
| Video Management – Live View | Video Output | HDMI | | | HDMI, VGA |
| | Display Mode | 1, 4, 9 Split Screen | 1, 4, 6, 9, 16, 25, 36, 64 Split Screen | 1, 4, 6, 9, 16, 25, 36, 64 Split Screen | 1, 4, 8 Split Screen |
| | Auto Scan | • | • | • | • |
| | PTZ Control | • | • | • | • |
| | Auto Pan/Patrol | • | | | • |
| | One-/Two-Way Audio | Two-Way Audio | One-Way Audio | One-Way Audio | One-Way Audio |
| Video Management – Recording | Recording Type | Schedule/ Manual/ Event (Motion) | Schedule/ Manual/ Event (Motion) | Schedule/ Manual/ Event (DI/ Motion) | Schedule/ Manual/ Event (DI/ Motion) |
| | Edge Motion Detection (by Camera) | • | • | • | • |
| | Pre-Recording/ Post-Recording Period | Pre-Rec: 60 seconds<br>Post-Rec: 300 seconds | Pre-Rec: 180 seconds<br>Post-Rec: 180 seconds | Pre-Rec: 180 seconds<br>Post-Rec: 180 seconds | Pre-Rec: 70 seconds<br>Post-Rec: 70 seconds |
| | Audio Recording | • | • | • | • |
| | Auto Recycling (Disk Capacity)/ Scheduled Recycling (Days) | • | • | • | • |
| Video Management – Playback | Simultaneously Playback Channels | 9 | 1 | 4 | 8 |
| | Playback Mode | Video Control (Play, Stop, Pause, Forward, Backward, Next, Previous) | Video Control (Play, Stop, Pause, Forward, Backward, Next, Previous) | Video Control (Play, Stop, Pause, Forward, Backward, Next, Previous) | Video Control (Play, Stop, Pause, Forward, Backward, Next, Previous) |
| | Digital Zoom Ratio | 16 x | 4 x | 4 x | 2 x |
| | Audio Control | • | • | • | • |
| | Video Search (Factor) | • (Time, Event, Camera) | • (Time, Event, Camera) | • (Time, Event, Camera) | • (Text, Time, Event, Camera) |
| | Smart/ Intelligent Search (Factor) | | | • (Motion Detection<br>Missing/ Abandoned Object<br>Lost Focus/ Camera Occlusion) | |
| | Video Enhancement | | • | • | |
| | Video Export File Format | AVI | AVI/ASF (Time Stamp) | AVI/ASF (Time Stamp) | DRV/AVI/RAW |
| | Image Export File Format | BMP/JPG | BMP/JPG | BMP/JPG | JPG |
| | Tamper-Proof (Digital Watermark) | • | • | • | • |
| Event Management | I/O Control | | | • | • |
| | Event to Email | • | • | • | • |
| | Event to Alarm | • | | | • |
| | Event by Signal Lost | • | | • | • |
| | Event by Disk Full | • | • | • | • |
| Remote Access | Client Viewer | Browser/mydlink™ View NVR APP | Browser/mydlink™ Mobile App | Browser/Multi-NVR Viewer | Browser/JustConnect™+ Mobile App |
| | Remote View | • | • | • | • |
| | Concurrent Channels per Client (Max) | 9 | 9 | 9 | 8 |
| | Playback Viewer | Browser/ Playback Manager | Browser/ Playback Manager | Browser/ Playback Manager | Browser/ Playback Manager |
| E-Map | E-Map Layers | 3 | 1 | 1 | 1 |
| | E-Map Image Format | BMP/ JPG | BMP/ JPG | BMP/ JPG | JPG |
| Compatibility | Supported Cameras | D-Link | D-Link | D-Link and Third Party | D-Link |
| | Auto Surveillance VLAN Support | • | • | • | |
| Hardware | Hard Disk Bays | 1 x 3.5" SATA HDD, Max. 4TB | 2 x 3.5" SATA HDD, Max. 8TB | 2 x 3.5" SATA HDD, Max. 8TB | 6 x 3.5" SATA HDD, Max. 18TB |
| | Hard Disk Configuration | Single | Single, RAID 0 / 1, JBOD | Single, RAID 0 / 1, JBOD | Single |
| | NAS (File Server) | | Standard HDD Mode | Standard HDD Mode | |
| | Network Interface | 1 x Gigabit Port | 1 x Gigabit Port | 1 x Gigabit Port | 1 x Gigabit Port<br>8 x 802.3at Fast Ethernet Ports |
| | PoE Support | | | | 802.3at (PoE+) |
| | Backup Options | USB | | | USB, eSATA |
| | Front Panel Controls | | | | • |
| | Auto Boot-Up (Power Recovered) | • | • | • | • |
| | Dimensions | 49.8 x 141.6 x 173 mm | 115 x 146.4 x 178.5 mm | 115 x 146.4 x 178.5 mm | 90.4 x 440.4 x 450.9 mm |
| | Weight | 425 g | 875 g | 875 g | 9.02 Kg |
| | Power Consumption | 30 W (Max)<br>0.337 W (Standby) | 25.20 W (Max)<br>0.234 W (Standby) | 25.20 W (Max)<br>0.234 W (Standby) | 200 W (with PoE on) |
| | Operation Temperature | 0°C to 40°C | 0°C to 55°C | 0°C to 55°C | 0°C to 40°C |
| | mydlink™ Functions | Live View, Playback, Disk/Camera Status | | | |

# Network Storage

Every business requires a reliable way of storing and backing up their data. D-Link provides a range of simple and cost-effective network storage products to meet any data management challenges. Products in this category include Network Attached Storage (NAS) devices such as the Cloud-enabled ShareCenter™ 2-Bay and 4-Bay Storage Network Enclosures and rack-mountable unified storage appliances for larger businesses or enterprise-class levels of storage. With the former you can share, download, delete or upload documents, files and media content such as photos, presentations and videos on a network or remotely over the Internet via the secure mydlink™ portal or using the mydlink™ Access-NAS app available for iPhone, iPad and Android devices, whilst the latter come with massive capacity capability and support for lightning-fast data throughput via Gigabit Ethernet connections.

# Range Overview

## Network Attached Storage (NAS)

4-BAY (UP TO 24 TB)

DNS-340L

2-BAY (UP TO 12 TB)

DNS-320L

DNS-327L

## Unified Storage Appliances

4-BAY (UP TO 24 TB)

DNS-1550-04

DNS-1560-04

## What is Network Attached Storage?

Network Attached Storage, or NAS for short, is essentially one or more hard drives, usually stored within a dedicated enclosure, that acts as a repository for files that all users on the network can access (provided they have the required software permissions). NAS devices are particularly important in businesses where multiple users want to share the same information and have quick and easy access to it. All D-Link's NAS devices come as standard with mydlink™, our multi-level cloud access platform.

## What is mydlink™?

mydlink™ is a cloud-based platform that maintains a live link between your router via the Internet and your mydlink™ smartphone/tablet app, so that you can always be in control, wherever you are and whenever you want. Whether you want to access, control, monitor or automate, there is a mydlink™ product, and supporting smartphone or tablet app, to help you. Just look for the mydlink™ logo... mydlink

## Key

In the following pages you're going to see these icons. Here's what they mean...

1 Gbps LAN x 4

**Ethernet**
Equipped with hard-wired Gigabit port(s). Look for number of ports at the bottom

vmware READY

**VMware-Ready**
Complies with VMware Inc's standards for cloud and virtualisation software and services

Windows Server 2008

**Windows Server 2008**
Confirms that products are guaranteed to work with Windows Server 2008

dlna

**Icon Title**
Conforms to the Digital Living Network Alliance's standards for network device interoperability

CITRIX ready

**Citrix-Ready**
Complies with Citrix System Inc's standards for cloud and virtualisation software and services

UPnP

**Universal Plug and Play**
Devices will seamlessly discover each other's presence and establish functional services

mydlink

**mydlink™**
Uses D-Link's cloud to store and access saved content and monitor remotely in real time

# Network Attached Storage (NAS)

D-Link's Network Attached Storage solutions are designed to provide simple, reliable network storage for businesses of all sizes. These NAS devices can be easily deployed to provide centralised file sharing and set to protect data on any network. What's more, with the mydlink™ Cloud, data stored on these devices can be accessed from any Internet-connected device, whether in the office or on the move.

dlink green

## DNS-320L
### ShareCenter™ 2-Bay Cloud Network Storage Enclosure

UPnP dlna mydlink

- Two 3.5" internal SATA hard drive bays with capacity for up to 12 TB of storage (6 TB per bay)[1]
- Disks can be RAID-configured for maximum capacity or maximum data security, depending on requirements
- USB 2.0 port for printer sharing or external backup disk
- Access your files from anywhere with mydlink™ cloud services
- Gigabit Ethernet for high-speed data transfer
- Multiple management options for control and notification
- Supports up to 256 users
- Media streaming including peer-to-peer download engine

## DNS-327L
### ShareCenter™+ 2-Bay Cloud Network Storage Enclosure

UPnP dlna mydlink

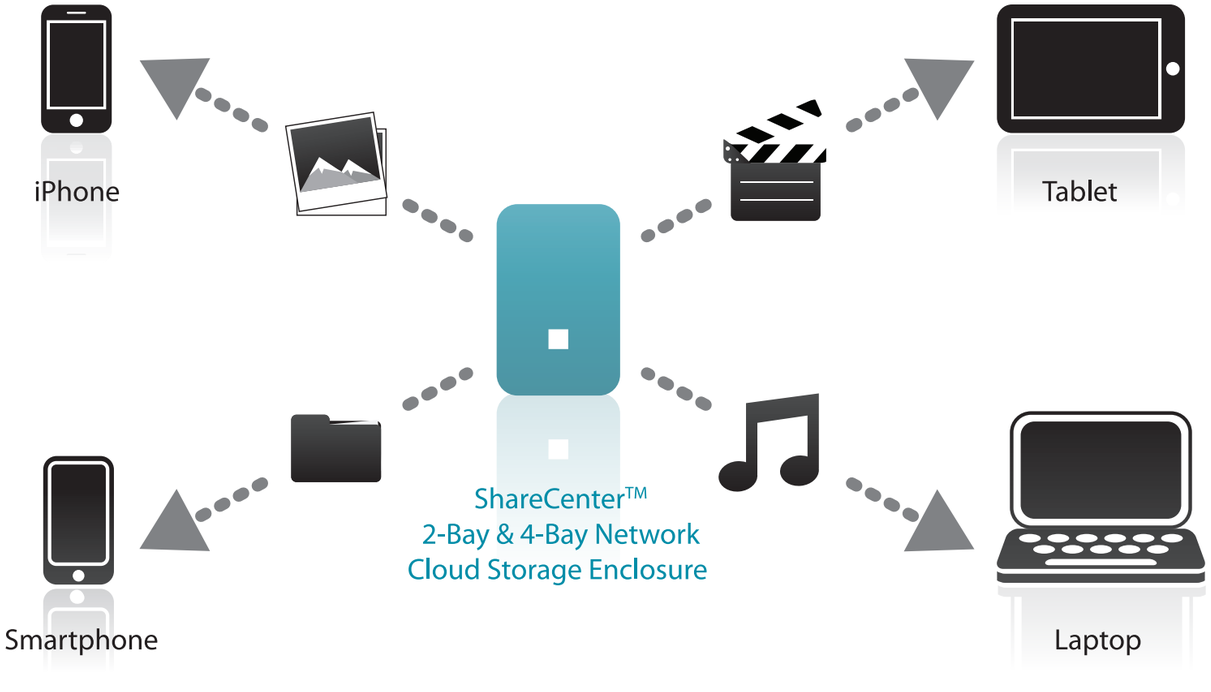
- Two 3.5" internal SATA hard drive bays with capacity for up to 12 TB of storage (6 TB per bay)[1]
- Disks can be RAID-configured for maximum capacity or maximum data security, depending on requirements
- Stream digital content to compatible DLNA media players
- USB 3.0 port for printer sharing or external backup disk
- Includes smart library applications
- Remotely access/manage data or built-in applications from anywhere using the mydlink™ mobile device app or on a computer through the mydlink™ portal

## DNS-340L
### ShareCenter™+ 4-Bay Cloud Network Storage Enclosure

UPnP dlna mydlink

- Four 3.5" internal SATA hard drive bays with capacity for up to 24 TB of storage (6 TB per bay)[1]
- Access files from anywhere on any computer or on iOS and Android smartphones and tablets with the free mydlink™ Access-NAS app
- Zero-configuration technology for easy set-up
- Multiple RAID types for a wide array of storage options
- Dual-Gigabit Ethernet for high-speed data transfer
- Multiple back-up options including Apple Time Machine
- Multiple USB 2.0 and 3.0 ports for sharing additional storage or adding a network printer

[1] Hard drives not included








| MODEL | | | DNS-320L | DNS-327L | DNS-340L |
|---|---|---|---|---|---|
| Storage Features | Number of Bays | | 2 | 2 | 4 |
| | Max Capacity[1] | | 12 TB | 12 TB | 24 TB |
| | Supported Drive Type | | 3.5" Internal SATA I/II with Capacity of up to 6 TB per Bay | | |
| Hardware and Performance | CPU Speed | | 1 GHz | 1.2 GHz | 1.2 GHz |
| | SDRAM | | 256 MB | 512 MB | 512 MB |
| | Maximum Throughput (Read) | | 66 MB/s | 81.8 MB/s | 82 MB/s |
| Network | Interfaces | Ethernet | 1 x Gigabit | 1 x Gigabit | 2 x Gigabit |
| | | USB | 1 x USB 2.0 | 1 x USB 3.0 | 1 x USB 3.0, 2 x USB 2.0 |
| | 802.3ad Link Aggregation | | | | • |
| | iSCSI | | | | • |
| | File System | | CIFS, NFS, Web File Manager AFP, WebDAV | CIFS, NFS, Web File Manager AFP, WebDAV | CIFS, NFS, Web File Manager AFP, WebDAV |
| | Active Directory | | | | • |
| | VLAN Support | | | | • |
| | Media Server | | • | • | • |
| | FTP Server | | • | • | • |
| | User/Group Quotas | | • | • | • |
| | Dynamic DNS | | • | • | • |
| | USB Drive Support | | • | • | • |
| | USB Print Server Support | | • | • | • |
| | USB UPS Monitoring | | • | • | • |
| Volume and RAID | RAID Controller | | Single | Single | Single |
| | RAID Support | | RAID 0/1 JBOD Standard | RAID 0/1 JBOD Standard | RAID 0, 1, 5, 10, 5+Hot Spare, JBOD, Standard |
| | Target Nodes | | | | |
| | Hot-Swappable Drives | | • | • | • |
| | Free-Space Defragmentation | | | | |
| | S.M.A.R.T. | | • | • | • |
| | Thin Provisioning | | | | |
| | Volume Snapshots | | | | |
| | Virtual Disks | | | | |
| Applications and Third-Party Add-On Support | My Photos | | • | • | • |
| | My Files | | • | • | • |
| | My Music | | • | • | • |
| | My Surveillance/Surveillance Center | | • | • | • |
| | P2P Download | | • | • | • |
| | FTP/HTTP Download | | • | • | • |
| | Remote Backup | | • | • | • |
| | Local Backup | | • | • | • |
| | Amazon S3 Backup | | • | • | • |
| | D-Link Vault | | | • | • |
| | Third Party Add-On Support | | | • | • |
| Storage Management | Web-Based GUI | | HTTP, HTTPS | HTTP, HTTPS | HTTP, HTTPS |
| | Easy Search Utility | | • | • | • |
| | Firmware Upgradable | | • | • | • |
| | Email Alerts | | • | • | • |
| | SNMP | | | | • |
| Physical and Environment | Display | | | • | • |
| | Power Supply Type | | External | External | External |
| | Dimensions | | 90 x 144.3 x 193.3 mm | 90 x 144.3 x 195.3 mm | 185 x 146 x 217.4 mm |
| | Operating Temperature | | 0°C to 40°C | 0°C to 40°C | 0°C to 40°C |
| | Operating Humidity | | 5% to 90% RH Non-Condensing | 5% to 90% RH Non-Condensing | 0% to 90% RH Non-Condensing |

[1] Maximum capacity may be increased with future firmware upgrades

## What is mydlink™?

mydlink™ is a cloud-based platform that maintains a live link between your router via the Internet and your mydlink™ smartphone/tablet app, so that you can always be in control, wherever you are and whenever you want. Whether you want to access, control, monitor or automate, there is a mydlink™ product, and supporting smartphone or tablet app, to help you. Just look for the mydlink™ logo... mydlink

## What does RAID mean?

A Redundant Array of Independent Disks (RAID) (sometimes referred to as a Redundant Array of Inexpensive Disks) 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, at hardware level 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 the array.

# 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.

dlink green

## DNS-1550-04
### ShareCenter™ Pro 1550 Rack-Mount Unified Appliance

- 1U rack-mount format
- Hot-swappable 3.5" drive bays
- Redundant hot-swappable power supplies
- Dual-core processor plus 2 GB RAM
- RAID 6 to protect against two drive failures at once
- Network file sharing on mixed Windows, Mac OS and Linux networks
- Up to 32 volume snapshots
- HTTPS and FTP support plus DDNS for simplified remote access
- Block-level iSCSI data transfers with up to 64 iSCSI targets
- 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

## DNS-1560-04
### ShareCenter™ Pro 1560 Rack-Mount Unified Appliance

Windows Server 2008

- 1U rack-mount format
- Hot-swappable 3.5" drive bays
- Redundant hot-swappable power supplies
- Dual-core processor plus 4 GB RAM
- Network file sharing on mixed Windows, Mac OS and Linux networks
- Virtual disks with thin provisioning
- De-duplication support
- Up to 32 volume snapshots
- HTTPS and FTP support plus DDNS for simplified remote access
- Block-level iSCSI data transfers with up to 64 iSCSI targets
- Two auto-sensing Gigabit Ethernet ports with link aggregation and automatic failover/failback
- Two 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

| MODEL | | | DNS-1550-04 | DNS-1560-04 |
|---|---|---|---|---|
| Storage Features | Number of Bays | | 4 | 4 |
| | Maximum Capacity | | 24 TB | 24 TB |
| | Drive Type | | | |
| Hardware and Performance | CPU Speed | | Dual Core 1.8 GHz | Dual Core1.86 GHz |
| | SDRAM | | 2 GB | 4 GB |
| | Maximum Throughput (Read) | | 89 MB/s | 120 MB/s |
| Network | Interfaces | Ethernet | 2 x Gigabit | 2 x Gigabit |
| | | USB | 5 x USB 2.0 | 2 x USB 2.0 |
| | 802.3ad Link Aggregation | | • | • |
| | iSCSI | | • | • |
| | File System | | CIFS/SMB, NFS, DFS, AFP | SMB/CIFS, NFS, AFP, FTP, WebDAV |
| | Active Directory | | • | • |
| | VLAN Support | | • | • |
| | Media Server | | • | • |
| | FTP Server | | | |
| | User/Group Quotas | | • | • |
| | Dynamic DNS | | | |
| | USB Drive Support | | • | • |
| | USB Print Server Support | | • | • |
| | USB UPS Monitoring | | • | • |
| Volume and RAID | RAID Controller | | Single (Module) | Single (Module) |
| | RAID Support | | 0, 1, 5, 6, 10 and JBOD | 0, 1, 5, 10 and JBOD |
| | Target Nodes | | 64 | 64 |
| | Hot-Swappable Drives | | • | • |
| | Free Space Defragmentation | | • | • |
| | S.M.A.R.T. | | • | • |
| | Thin Provisioning | | | • |
| | De-Duplication | | | • |
| | Volume Snapshots | | • | • |
| | Virtual Disks | | • | • |
| Storage Management | Web-Based GUI | | HTTP, HTTPS | HTTP, HTTPS |
| | Easy Search Utility | | • | • |
| | Firmware Upgradable | | • | • |
| | Email Alerts | | • | • |
| | SNMP | | • | • |
| Physical and Environment | Display | | | |
| | Power Supply Supply Type | | Internal, 226 W (Redundant, 80 PLUS Certified) | Internal, 226 Ws (Redundant, 80 PLUS Certified) |
| | Dimensions | | 429 x 442 x 44 mm | 533.4 x 442 x 44 mm |
| | Operating Temperature | | 5°C to 35°C | 5°C to 35°C |
| | Operating Humidity | | 10% to 85% RH Non-Condensing | 10% to 85% RH Non-Condensing |

## What does Link Aggregation mean?

Link aggregation combines (aggregates) multiple network connections in parallel in order to increase throughput beyond what a single connection could sustain, and provides redundancy should one of the links fail. Combining can occur such that multiple interfaces share one logical address (IP) or one physical address (MAC address), or it allows each interface to have its own address. A logical connection requires that both ends of a link use the same aggregation method, but has performance advantages over the physical connection method.

## What does iSCSI mean?

An implementation of the block-level SCSI (Small Computer System Interface) 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.

## What is Failover?

Failover is the automatic switching to a redundant or standby server, system, hardware component or network upon the failure or unexpected termination of the previously active server, system, hardware component or network. Failover and switchover are essentially the same thing, except that failover is automatic and usually operates without warning, while switchover requires human intervention.

## What does RAID mean?

A Redundant Array of Independent Disks (RAID) (sometimes referred to as a Redundant Array of Inexpensive Disks) 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, at hardware level 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 the array.

# D-Link Assist

D-Link Assist
Rapid Response Support

## Expect instant help if the unexpected happens

**If the unexpected happens to your network, you need the very best support, and you need it fast, because downtime costs your business money. D-Link Assist maximises your uptime by solving technical problems quickly and effectively thanks to our highly trained technicians who 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 video 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]

### 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 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, video surveillance, wireless and data security, ensuring interoperability from one vendor, with award-winning support.

For nearly 30 years, D-Link has designed, developed and manufactured award-winning networking and communications products. We pride ourself 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. It 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.

[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.



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 and 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.

### Longer warranty for longer life.

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

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.

# Index

# D-Link (Europe) Ltd

With our innovative approach to computer networking, D-Link helps you connect to more of everything. From relatively modest beginnings, the company has grown over the last 29 years into an exciting global brand which is at the forefront of the very latest networking and IP surveillance technologies. With European offices in more than 30 countries, D-Link is well placed to serve your business needs.

**Albania**
**Austria**
**Belgium**
**Bosnia and Herzegovina**
**Bulgaria**
**Croatia**
**Czech Republic**
**Denmark**
**Finland**
**France**
**Germany**
**Greece**
**Hungary**
**Italy**
**Kosovo**
**Luxembourg**
**FYR Macedonia**
**Malta**
**Montenegro**
**Netherlands**
**Norway**
**Poland**
**Portugal**
**Romania**
**Serbia**
**Slovakia**
**Slovenia**
**Spain**
**Sweden**
**Switzerland**
**UK and Ireland**



**Exclusions of Liability**
We have used all reasonable endeavours to ensure that the data within this Business Solutions Guide is accurate at the time of going to press and to correct any errors or omissions as soon as practicable after being notified of them. Guide specifics are subject to change without notice.

For further information
visit www.dlink.com

D-Link®
Building Networks for People