

# TOTAL BUSINESS NETWORKING SOLUTIONS

## PRODUCT GUIDE

Next-Gen Connectivity for Next-Gen Business

 **nuclias**  
cloud



 **nuclias**  
connect



**Unified**



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

For over three decades, 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?

# WI-FI 6

## This is The End of Slow Business

Next-gen connectivity for next-gen businesses



MU-MIMO



OFDMA



2.4 GHz BAND  
COMPATIBILITY



1024-QAM



TARGET  
WAKE TIME



BSS COLORING

We are now entering a whole new high speed internet era, the demand for high speed and density wireless access from users has changed from a good to have to a necessity. Due to this, network performance has become a business-critical requirement. Both staffs and consumers have come to expect a secure, reliable & fast Wi-Fi connection – the absence of which can influence their decision to enter an establishment or to leave.

In order to attract and retain customers and employees, companies need to offer secure, reliable Wi-Fi and an amazing experience, or risk losing business. And, to accommodate the growing number of mobile and IoT devices, improvements to the efficiency of a wireless network – and how it handles congestion and ever-increasing capacity demands has become a key factor of success.

WIFI 6 provide new technological enhancements that allow for all businesses and users to optimize their performance, especially in high density network environments such as supermarkets, schools, busy offices, and factories where multiple users use multiple devices simultaneously. Designed for operation in both the 2.4 GHz and 5 GHz spectrums, these access points provide more reliable, consistent connections over a longer range. MU-MIMO, OFDMA, and 1024-QAM dramatically reduce latency as well as increase data rate throughput and network capacity. In addition to enhanced security with support for WPA3 Enterprise wireless encryption, the new access points also provide PoE support, Airtime Fairness to efficiently share coverage among clients, and Band Steering for efficient traffic management.

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# WI-FI 6

## What is Wi-Fi 6?

Wi-Fi 6, also referred to as the 802.11ax protocol, promises to bring blazing wireless connectivity for enhanced user experiences like never before. But aside from the obvious consumer benefits, Wi-Fi 6 is also generating a lot of excitement for IoT environments in many vertical industrial applications. In this paper, we will take a look at 5 key features that enable Wi-Fi 6 to achieve high data rate and low-latency performance in challenging high-density scenarios.

### OFDMA

Wi-Fi 6

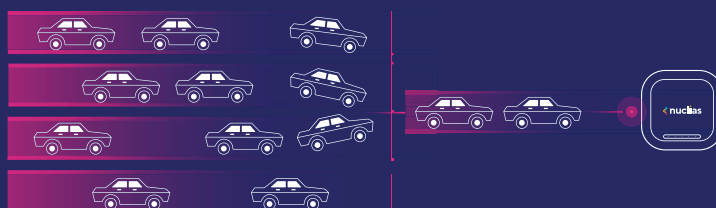


Wi-Fi 6 uses OFDMA, an extension of the OFDM architecture, to improve data-rate efficiency and reduce latency for densely-connected wireless networks, such as IoT environments for Smart industrial applications. OFDMA can significantly boost data throughput and reduce wireless latency by achieving highly-efficient spectral usage across the wireless signal.

MU-MIMO, to further reduce network latency and significantly increase wireless network bandwidth. Earlier versions of Wi-Fi 5 used SU-MIMO\* (Single User Multiple Input Multiple Output), which only allowed communication with multiple devices in consecutive order, or one at a time. Wi-Fi 6 with MU-MIMO uses multiple spatial streams for simultaneous communication with multiple devices which greatly improve both upload and download performance.

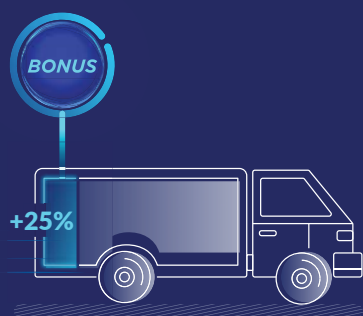
### MU-MIMO

Multi-User Multiple Input  
Multiple Output





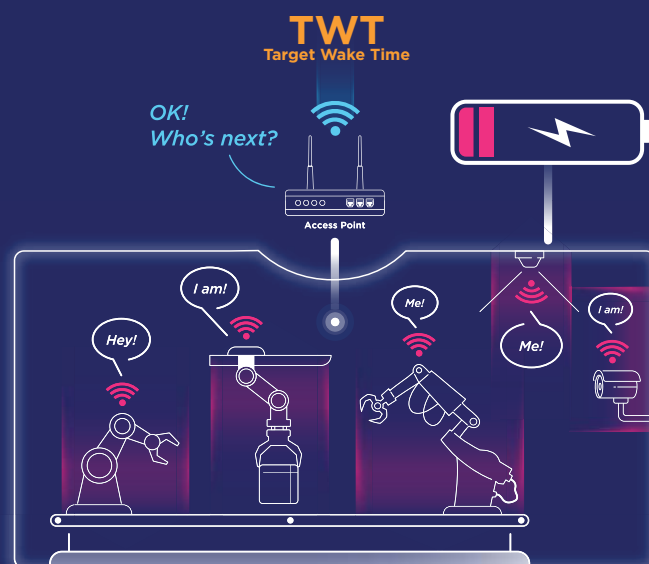
## 1024 QAM



**1024 QAM**  
Higher capacity up to 25%

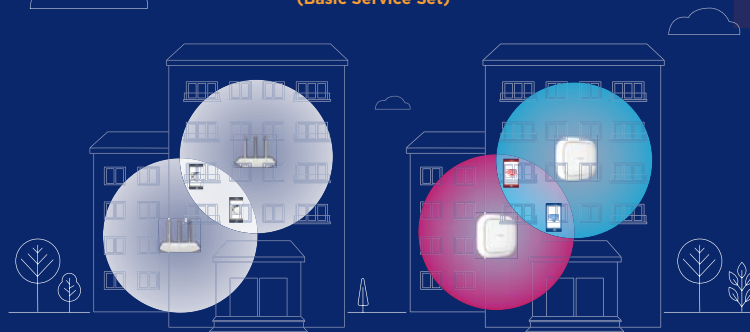
To further facilitate massive amounts of data transfer on the wireless network, Wi-Fi 6 uses 1024 quadrature amplitude modulation (1024 QAM), an improvement from the previous Wi-Fi 5 modulation scheme (256 QAM), to add another 2 bits of data per symbol transmitted (total of 10 bits), enabling Wi-Fi 6 to ensure high quality of service (QoS) for high-traffic venues such as sport arenas, train stations, and convention centers. That's an impressive 25% increase in data rate throughput.

To reduce network congestion and optimize spectral efficiency, TWT enables the access point to schedule communication timeslots for every device on the network, placing all devices in sleep mode except the one device being served during the scheduled time period, significantly reducing network congestion and effectively conserving device battery life. For densely-connected IoT environments, such as wireless sensor networks (WSN) in factory automation, battery conservation is a huge benefit.



**Contention-Based Access**

## BSS Coloring (Basic Service Set)



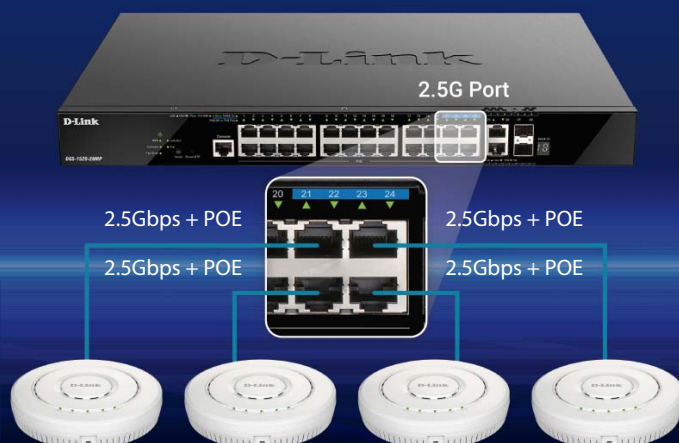
More Wi-Fi congestion



Reduced Wi-Fi congestion

To minimise wireless interference, the Wi-Fi 6 protocol enables access points to inject 'coloring' information into the data packet when coverage overlap with another BSS is detected, enabling devices to effectively identify and ignore signals from another wireless network. The access point can also change its color if a neighboring BSS access point is using the same color (known as color collision). The access point embeds a blue color element into the data packet, allowing the device to ignore all signals from the overlapping network, effectively eliminating interference.

Aside from fantastic features to enhance your business wifi, D-Link also offer a series of cost effective multigig (2.5Gbps) PoE switch that Simplify your wifi 6 deployment, with the multigig



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# D-Link Wi-Fi 6 for Your Business



Managing wireless networks for high-traffic locations such as corporate offices, schools, hotels, and shopping centers can be very challenging, even for experienced IT managers and MSPs (Managed Service Providers). In this section, we'll briefly discuss network management concerns for these key business sectors.

## 1. Enterprise



In fast-paced corporate offices where agile working environments have been adopted, access to high-bandwidth services such as high-definition video streaming and cloud-based applications can happen anytime, anywhere. While Wi-Fi 6 can alleviate many traffic-related network bottlenecks, an agile working environment will still need an agile form of network management to effectively minimize network congestion. Most enterprise networks will also require ample network security measures to protect sensitive company data from unauthorized access.

## 2. Education



Wi-Fi connectivity is a must-have for classrooms, and so are access permissions for the various types of users, curriculum, and locations across the campus. In addition to blocking access to unauthorized websites, network administrators should also have the ability to control every aspect of the network, such as activating specific network segments for targeted class sessions and disabling network access for empty classrooms to preserve network bandwidth and prevent unauthorized access.

In addition to smart phones, laptops, and tablets, Wi-Fi 6 will connect more devices in the classroom, including smart watches, gaming consoles, Kindle, Echo, scan markers, and even bandwidth-intensive interactive learning experiences such as AR/VR headsets.

## 3. Hospitality



When arriving at a hotel, one of the first things a guest is likely to ask for is the Wi-Fi password. With so many guest devices accessing the wireless network relentlessly looking for the best local attractions, user account management is just as important as bandwidth allocation to keep them reliably connected with seamless handoffs when moving from their room to the downstairs bar, or even to the outdoor pool. For temporary restricted network access, front desk attendants can print vouchers for non-resident guests, granting network access only within a limited time and usage speed to preserve bandwidth, ensuring high quality of service for paying resident guests.

## 3. Retail/SMBs



Retail businesses often have multiple locations and individual network maintenance across remote sites will be very time consuming and costly. Businesses should have an efficient centralized platform for remote network management to ensure services such as POS (Point of Sale) terminals, customer service kiosks, and captive portals remain operational to enhance shopper experience. Network downtime can incur significant losses as well as have a negative impact on customer loyalty.

With the arrival of Wi-Fi 6, user experience will be considerably improved across most business scenarios and each will have varying network infrastructures with different application needs. But one common requirement for business networks of any size is the need for an effective management solution to achieve optimized network performance and reliability, which can only be accomplished through real-time monitoring and efficient maintenance with a centralized management platform. And D-Link has a range of network management solutions to help you do just that.

NUCLIAS



Cloud managed networking presents the opportunity for businesses to decrease the complexity of deploying and managing the networks they now need. What are the challenges that businesses are faced with traditional network infrastructure, the rise of complexity, and why cloud network management could be the right choice for a range of businesses?

Many organizations aiming to handle additional network strains and cut cost and complexity are looking towards cloud-based network management. Put simply, cloud network management allows a business to centralize its network management for multiple locations through a web interface to a tool they run in a third-party hosted environment, or via a Software-as-a-Service (SaaS) application.



Once core systems are in place, for instance a gateway switch at a branch office or store, the best cloud network management systems enable new devices, such as a wireless access point (AP), to be provisioned, managed, secured and maintained remotely without any IT personnel needing to visit the site.



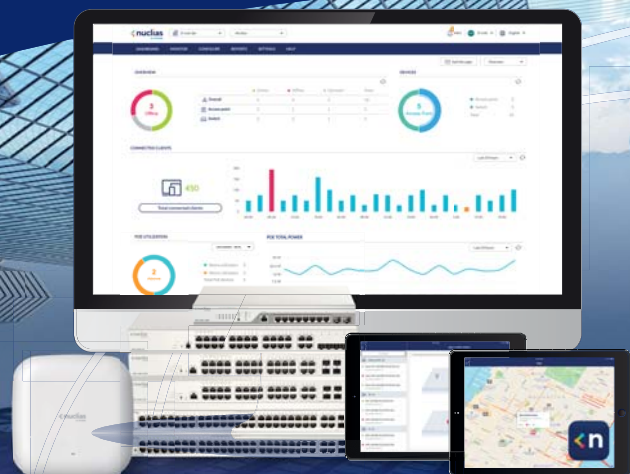
Find Out More



D-Link



# Simple, Feature-rich Cloud Networking, As It Should Be.



✓ Zero-touch Deployment

✓ Hassle-free Management

✓ Unlimited Scalability

These benefits are particularly useful for businesses with several small locations, such as retailers, food and drink destinations, petrol stations and hotel chains. The ability for a wireless network device to be posted out, clipped into position by an onsite manager, then configured centrally through the cloud-based interface provides huge efficiency benefits for businesses with multiple locations, though limited IT headcount.



Reporting  
and analytics



Pay-as-you grow  
Subscription



Zero-touch  
provisioning

At D-Link, we believe that cloud managed networking is the answer to many of the challenges that MSPs face when servicing multiple local businesses, and the IT teams of mid-sized companies. With our new solution, Nuclias, we're delivering into that sweet spot between the excess feature laden high-end and high effort, low value "budget" solutions currently available. We're delivering the visibility, ease of deployment, automation and security that smaller IT teams and MSPs need on tap to be able to do more with less, while future proofing their networks - all at a price point that delivers demonstrable ongoing value.

Nuclias offers truly zero touch provisioning. Access points can be shipped from stock without the IT team needing to pre-configure them – a significant time saving on initial deployment and a boost to service level performance when damaged equipment needs rapid replacement.

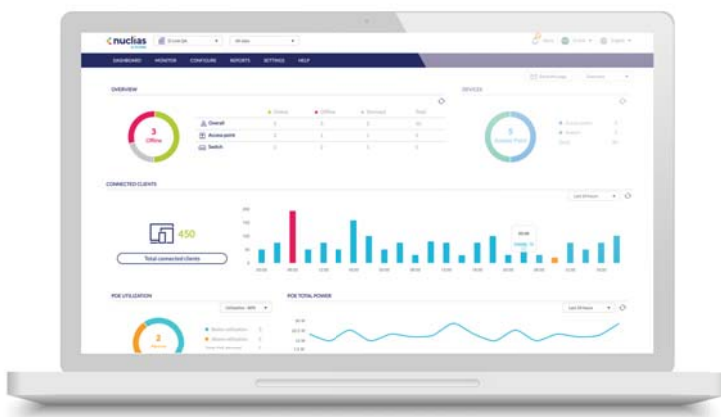
Being 100% a cloud based SaaS, Nuclias is highly accessible and offers transparent pricing – no hidden costs or separate bills for cloud hosting and configuration. The service is built on a platform that already supports more than five million devices, backed by a 24/7 multi time zone customer support service.

Designed from the outset for multi-tenant support, Nuclias ensures compliance with the latest data protection and privacy regulations – user traffic is not sent via the cloud service, and security is assured with out-of-band, SSL-encrypted management plane backed with 99.99% uptime service level agreement.



## D-Link Network Management Solutions

Digital Transformation is essential to how business is done, and how business is won, and your business needs a stable wireless connectivity foundation on which to build capabilities and competencies in the Internet of Things (IoT), Cloud Operations, and Data-Driven Decision-making. D-Link has been setting the standard in business network infrastructure for over 30 years, partnering with companies at every stage of the growth journey, from home office to multinational, listening to their needs and delivering solutions tailored to every IT budget, and level of IT networking expertise – from novice to expert.



### Nuclias Cloud

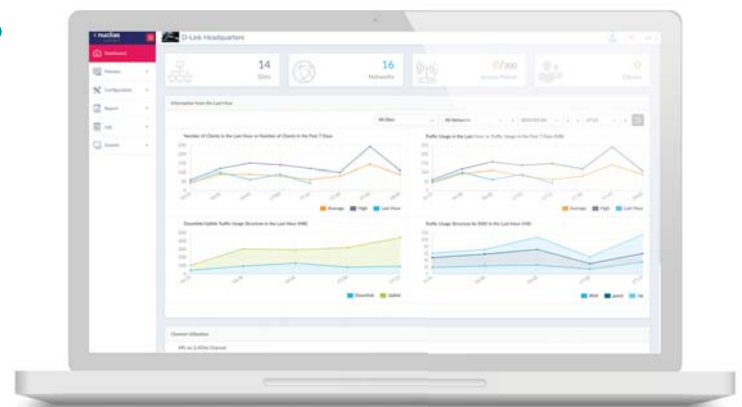


Nuclias Cloud is a complete solution for Small-to-Medium Businesses (SMBs) that don't need or understand, and can't afford a complex IT solution; who want something that stays largely out of the way, and just works. With the Nuclias Cloud Platform, all admin tasks are handled through the Cloud (via Web Browser or App), enabling easy management of remote sites anywhere in the world, while enabling plug-&-play (Zero-Touch) network device deployment, with unlimited scalability. With the technical barriers to expansion removed, and with our 99.9% Service-Level Agreement (SLA) with service continuity backup, Nuclias Cloud removes the hassle & distraction from IT network ownership, so that you can focus on your business.

### Nuclias Connect



Nuclias Connect is a network management solution for people that prefer a hands-on approach to IT administration and data ownership. It is a software-based solution that enables enterprise-wide network management, at an SMB price. It is comprised of free-to-download management software, license-free Access Points (up to 1,000), and an inexpensive optional hardware controller complete the offering. The user interface is simple & intuitive, enabling at-a-glance insights across your entire network, and easy automation and reporting, while delivering backwards compatibility with D-Link Access Points already on the market.\*





### Unified Wireless

D-Link Unified Network Management is our gold standard for enterprise wireless infrastructure. It is the ideal D-Link solution for large and small organizations that have robust traffic and security demands, and demand precise control over who has access and who doesn't, what they can access, and when. D-Link's Unified range is designed for superb user experience. It utilizes dedicated wireless hardware controllers, and implements centralized control policies, enabling your IT experts to have precise and far-reaching control over the coverage, traffic, automation, security, and content of your network – so that capacity, efficiency, and stability are optimal.



## Different Solutions for Your Business Needs

### Nuclias Cloud vs Nuclias Connect vs Unified Wireless

			Unified Wireless
Controller Type	Cloud-Based	Software-Based/Hardware-Based	Hardware-Based
Scalability (Standard)	Unlimited	Up to 1,000 APs (100 for Nuclias Hub)	Up to 66 APs (256 in a cluster w/DWC-1000) Up to 256 APs (1024 in a cluster w/DWC-2000)
Solution Scope	Complete Solution including, APs, Switches, SD-WAN Gateway	Customizable SW Controller w/APs Switches, IP Cameras and Hub	Hardware Controller w/APs
Legacy Device Compatibility	No	Yes (Selected Devices)	N/A
Ease of Deployment	Zero-Touch & Tablet App ● ● ● ● ●	App & Desktop-based Configuration ● ● ● ● ● ○	Setup Wizard ● ● ● ● ● ○
User-Friendly Interface	Yes	Yes	Yes
Technical Expertise Req'd	Low	Low-Moderate	High
Performance	● ● ● ● ●	● ● ● ● ●	● ● ● ● ●
Target Audience	Small-Large Enterprises	Small-Medium Enterprises	Medium-Large Enterprises
Pricing	Pay-as-you-Go (Yearly Licensing Fee)	Free Software Controller (Optional Cloud Licensing w/Hub Optional Controller Hub)	Optional License Upgrades (DWC-1000/DWC-2000)

## Network management, refreshed.

Automate, monitor, manage and scale your network without the complexity or cost.





## D-Link Nuclias: Built for the Future

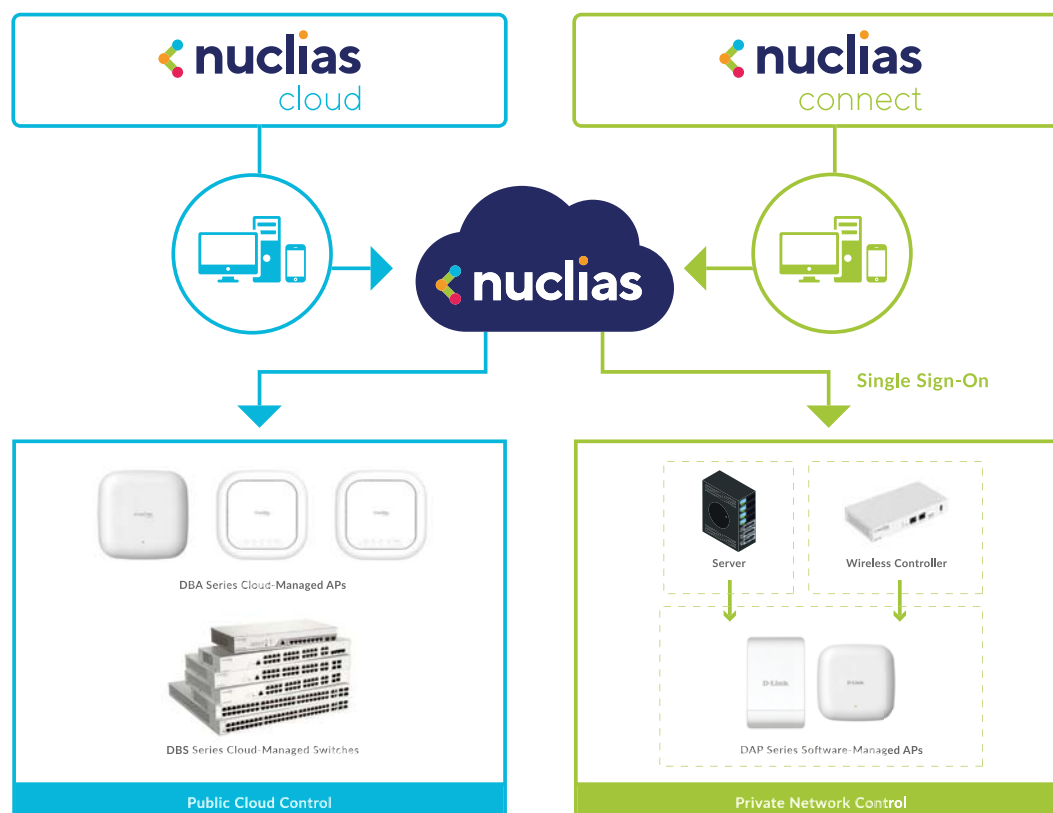
Moving toward the next manageable wireless network era, every company needs a robust Wi-Fi Network Management Solution that can comfortably support the Internet of Things (IoT), data-driven operations, and an increasingly Cloud-based workload. Large enterprises, with their complex IT demands and dedicated technical staff, are well positioned to do this using standard Wireless Controller-based infrastructure. But Small-to-Medium Businesses (SMBs) can find such solutions geeky and impractical, especially if they have multiple sites to cover. They need something simpler, more user-friendly, and more centralized. Enter Nuclias centralized SMB network management solutions, by D-Link, which minimize the time, money, effort, and resources consumed by professional-grade wireless infrastructure. They're built for your present, with an eye on your future.

### Nuclias Cloud: Power & Simplicity

Our Nuclias Cloud solution reduces the frustrations and resources of network management by moving it to the Cloud, which greatly expands the power and reach of any organization. Administration can be done for any site or device (Switch or Access Point), from anywhere in the world. By eliminating the technical barriers to expanding your network, adding a device in any remote location is no more technically burdensome than adding a device centrally. Administration can be done via Web Browser or dedicated App, anywhere with an online connection. Nuclias Cloud provides a tremendous degree of control, while eliminating additional workload for in-house IT personnel (via Zero-Touch Deployment), delivering an easy, low-fuss path to business transformation and centralized management.

### Nuclias Connect: Value & Privacy

Nuclias Connect is designed for any organization looking to configure and manage their wireless infrastructure on-premises using existing resources such as (servers/PC) or dedicated onsite appliance (the Hub), for cost or privacy reasons. Nuclias Connect facilitates a greater degree of user-friendly centralized control than traditional Wireless Controllers permit while balancing the functionality needs of many businesses for privacy. By eliminating the need for additional software licensing, an SMB or MSP can build a single virtual network (composed of up to 1,000 devices) across different sites and geographies. Nuclias Connect also allows network deployment decisions to be driven more by need, and less by cost, while its intuitive dashboard makes it easier to understand the challenges facing your network and its users.



## Hybrid Management: The Best of Both Worlds

For multi-site organisations or MSPs wanting to keep the management of their locations completely separate for segmentation or data privacy reasons, Nuclias Connect coupled with the Nuclias Cloud portal is the answer. By registering your Nuclias Connect installation, and enabling the Cloud Connectivity, you enable simplified multi-site/organization management, where an admin can remotely connect to any “enabled” Nuclias Connect instance without the need for a Virtual Private Network (VPN) connection. Multiple sites are listed to make remote access and management simple through a single interface. Single Sign-On via D-Link’s Nuclias portal provides the simplified convenience of the Cloud, but without the usual Cloud concerns regarding user data, since no data is exchanged. Cloud and non-Cloud sites can be managed through the Nuclias framework, with any number of private network deployments, or one multi-site network, controlled from one console.

### Nuclias Solution Comparison

		
<b>Solution Scope</b>	Complete Network Management	Total Network Management
<b>Solution Components</b>	Cloud Platform, APs, Switches, SD-WAN Gateway	New and Legacy APs*, Switches, IP Cameras w/optional Hub Controller
<b>Control &amp; Configuration</b>	Full Cloud-Hosted Platform w/Zero-Touch Provisioning	Management w/optional Lite Mobile App
<b>Scalability</b>	Unlimited	Up to 1,000 Devices (100 for Hub Appliance)
<b>IT Expertise Required</b>	Low	Moderate
<b>Multi-Site Management</b>	Yes (Integrated)	Yes
<b>Social Login</b>	Yes	No
<b>Solution Profile</b>	Turnkey Solution Enabling Centralized Remote Network Management	Value Solution for SMB Network Management w/Private Hosting

\*Contact your local D-Link representative for details.

NUCLIAS CLOUD

WI-FI 6



Complete cloud-managed networking solution for small to large-sized organisations with one or more sites.

## Cloud Manageable Access Points Now with WiFi 6

**With next-generation Wi-Fi 6 dual-band concurrent 2.4 GHz and 5 GHz radios, the DBA Business Cloud Access Points are best-in-class indoor and outdoor access points designed specifically for enterprise environments.**

Offering high combined data rates to wireless clients and designed as a zero-configuration, pre-managed access point for the Nuclias cloud, DBA Business Cloud Wi-Fi 6 access points allow for High density lightning-fast access to bandwidth-intensive applications such as data, voice, and video streaming concurrently.

### DBA Business Cloud Wi-Fi 6 Access Point Highlights:

#### D-Link Wi-Fi 6 AC Access Point

- Up to 3600 Mbps with 4 x 4 MU-MIMO with four spatial streams
- Supports MU-MIMO (download & upload), beam forming and load balancing
- Supports OFDMA • 1024 QAM • TWT - Target Wake Time • BSS Colouring

#### Simplified deployment, enabling installation into an existing network infrastructure

- Integrates Multi-gig 2.5Gbps PoE Ethernet LAN port
- Zero-touch provisioning, AP can be provisioned before deployment

#### Revolutionary Energy Efficiency











- Innovative D-Link Green features helps conserve energy without affecting performance





# Nuclias Cloud: Cloud Managed Accesspoint

## — Cloud-Managed Access Points

	Model	DBA-1210P	DBA-1520P	DBA-2520P	DBA-2620P	DBA-2720P	DBA-2820P	DBA-X1230P	DBA-X2830P	DBA-3620P	DBA-3621P
	Product Image										
General	Environment	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Outdoor	Outdoor
	IEEE Standard	IEEE 802.11a/b/g/n/ac Wave 2	IEEE 802.11a/b/g/n/ac Wave 2	IEEE 802.11a/b/g/n/ac Wave 2	IEEE 802.11a/b/g/n/ac Wave 2	IEEE 802.11a/b/g/n/ac Wave 2	IEEE 802.11a/b/g/n/ac Wave 2	IEEE 802.11a/b/g/n/ac/ax	IEEE 802.11a/b/g/n/ac/ax	IEEE 802.11a/b/g/n/ac Wave 2	IEEE 802.11a/b/g/n/ac
	WiFi Speed	AC 1300	AC 1750	AC 1900	AC 1300	AC 2100	AC 2500	AX1800	AX3600	AC 1300	AC1300
	2.4 GHz Speed	400Mbps	450Mbps	600Mbps	400Mbps	400Mbps	800Mbps	575Mbps	1147Mbps	400Mbps	400Mbps
	5 GHz Speed	867Mbps	1300Mbps	1299Mbps	867Mbps	867Mbps+867Mbps	1733Mbps	1200Mbps	2402Mbps	867Mbps	867Mbps
Functionality	Number of SSIDs	16 per device 8 per band	16 per device 8 per band	16 per device 8 per band	16 per device 8 per band	24 per device 8 per band	16 per device 8 per band	16 per device 8 per band	16 per device 8 per band	16 per device 8 per band	16 per device 8 per band
	PoE Budget	802.3af	802.3at	802.3at	802.3at	802.3at	802.3at	802.3at	802.3at	802.3at	802.3at
Physical	Ethernet Interface	1 x 10/100/1000 Ethernet Port with PoE	1 x 10/100/1000 Ethernet Port with PoE	2 x 10/100/1000 Ethernet Ports with PoE (1 only)	2 x 10/100/1000 Ethernet Ports with PoE (1 only)	2 x 10/100/1000 Ethernet Ports with PoE (1 only)	2 x 10/100/1000 Ethernet Ports with PoE (1 only)	1 x 10/100/1000 Mbps Ethernet Ports with PoE	1 x 10/100/1000/2500Mbps Ethernet port with PoE; 1 x 10/100/1000 Mbps Ethernet port	2 x 10/100/1000 Ethernet Ports with PoE	1 x 10/100/1000 Mbps Ethernet Ports with PoE
	Max Output Power	2.4GHz: 20dBm 5GHz: 20dBm	2.4GHz: 22dBm 5GHz: 26dBm	2.4GHz: 25dBm 5GHz: 25dBm	2.4GHz: 26dBm 5GHz: 26dBm	2.4GHz: 26dBm 5GHz: 26dBm	2.4GHz: 26dBm 5GHz: 26dBm	2.4GHz: 23dBm 5GHz: 22dBm	2.4GHz: 29 dBm 5GHz: 28 dBm	2.4GHz: 26dBm 5GHz: 26dBm	2.4GHz: 26dBm 5GHz: 26dBm
Technical Specification	Antenna	Internal Omnidirectional	Internal Omnidirectional	Internal Omnidirectional	Internal Omnidirectional	Internal Omnidirectional	Internal Omnidirectional	Internal Omnidirectional	Internal Omnidirectional	Internal Omnidirectional (Optional External Antenna)	External Omnidirectional
	Mounting Type	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Wall/Pole
	Security Lock	Yes		Yes	Yes	Yes	Yes	Yes			
	IEC60601-1-2			Yes	Yes	Yes	Yes		Yes	Yes	

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\*Please contact your local D-Link office for availability.

# Nuclias Cloud Switches

The Nuclias Cloud-Managed Switches offer a robust set of Layer 2 and Layer 2+ features designed to support the most demanding applications.

Extensive range to meet the networking needs of businesses of all sizes with a range of port configurations from 10-52 ports. L2/L2+ features help to optimise and improve network efficiency. Optional PoE models that support PoE/PoE+ with high PoE power budgets. Combo fibre ports provide additional flexibility on choice and distance the switches can be connected.

## D-Link Switch Highlights:

- Simultaneous/scheduled firmware upgrade and configuration push
- Customisable network reports
- Alert when a switch or port goes offline
- Switches can be configured through the Nuclias cloud-platform for:
  - IPv4 ACL for network resource management and control
  - Access policies for port/MAC-based network security
  - Port scheduling allows you to enable/disable port based on time schedule
  - Switch port configuration including VLAN, role, PoE, mirroring

## Cloud-managed Gigabit Switches



	MODEL	DBS-2000-10MP	DBS-2000-28	DBS-2000-28P	DBS-2000-28MP	DBS-2000-52	DBS-2000-52MP
HARDWARE	Number of Gigabit ports	8	24	24	24	48	48
	Number of Combo 1000BASE-T/SFP ports		4	4	4	4	4
	Number of SFP ports	2					
	Switching capacity	20 Gbps	56 Gbps	56 Gbps	56 Gbps	104 Gbps	104 Gbps
	PoE standards	802.3af, 802.3at		802.3af, 802.3at	802.3af, 802.3at		802.3af, 802.3at
	PoE power budget	130 W		193 W	370 W		370 W
	PoE capable ports	Ports 1-8, up to 30 W		Ports 1-24, up to 30 W	Ports 1-24, up to 30 W		Ports 1-48, up to 30 W
	Time-based PoE	•	•	•	•	•	•
	Fanless	•	•	•	•	•	•
	802.3az EEE	•	•	•	•	•	•
L2	Power supply type	Internal	Internal	Internal	Internal	Internal	Internal
	MAC address	8K	8K	8K	8K	16K	16K
	802.1D STP, 802.1w RSTP	•	•	•	•	•	•
	802.3ad link aggregation	•	•	•	•	•	•
VLAN	VLAN group (max static)	256	256	256	256	256	256
	Port-based VLAN, Voice VLAN	•	•	•	•	•	•
SECURITY	SSL	•	•	•	•	•	•
	ACL	•	•	•	•	•	•
	Port security	•	•	•	•	•	•

\* Coming soon

# Nuclias Cloud SD-WAN Gateway

## SD-WAN Gateway for a complete Nuclias solution

Centralized control functionality to securely and intelligently direct traffic across the WAN & Support intuitive Site-to-Site VPN, Application identification and control, and Web Content Filtering for secure connections.

Software-defined solutions are evolving network operations in this era of digital transformation, D-Link Nuclias Cloud **SD-WAN** solution helps IT administrators to simplify branch network deployment. With the variety of optimization design for internet connectivity and allows enterprises to leverage any combination of transport services – including MPLS, LTE and broadband internet services – to securely connect users to applications.



### DBG-2000 SD-WAN Gateway

- x86 Quad-cores CPU
- DDR3 2GB memory
- 4\*10/100/1000Mbps ports, 2\* USB ports, 1 RJ-45 console port
- Firewall/NAT throughput: 1.8Gbps
- IPsec VPN throughput: 450Mbps, IPsec VPN tunnel: 100
- SSL VPN throughput: 200Mbps
- Current session: 200,000
- Multiple WAN/Configurable interfaces
- DPI Firewall
- VPN Server/Client for secure communications
- PPPoE/PPTP/L2TP/DHCP
- Bandwidth Management
- Static/Policy-based routing
- VLAN for network segmentation
- Application identification/Control
- Web Content Filtering
- IDP (Intrusion Detection & Prevention)

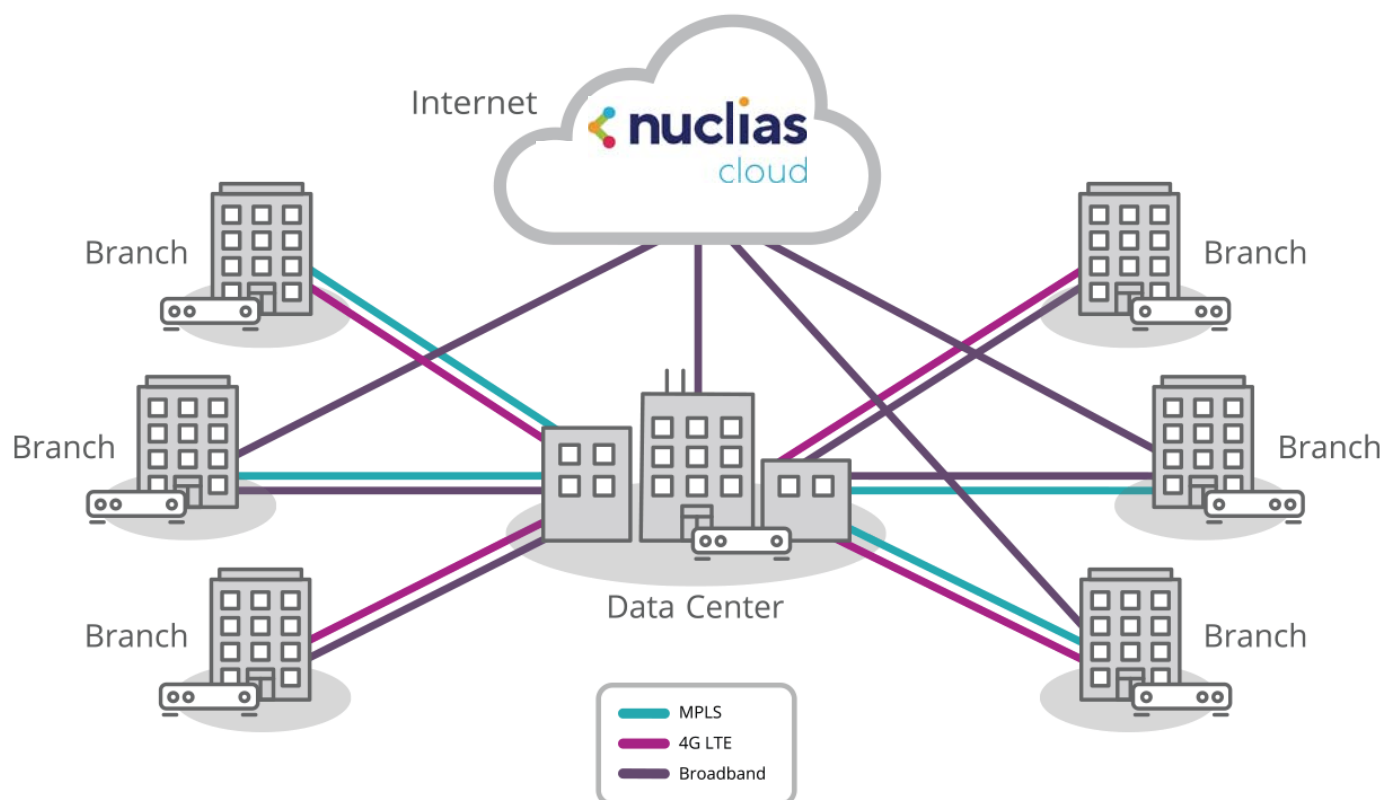


### DBG-X1000 SD-WAN Gateway

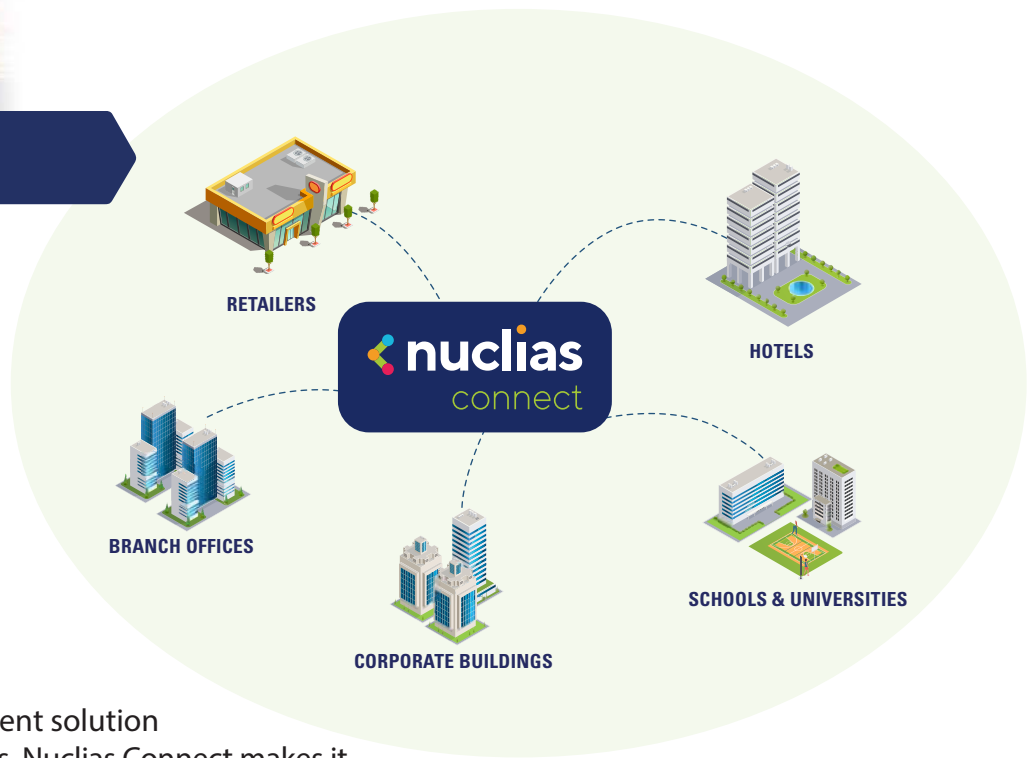
- x86 Quad-cores CPU
- 802.11ax 2\*2 dual band
- 1\*WAN GbE port, 3\*LAN GbE port, 1\* LAN/WAN configurable GbE port, 1\* USB port, 1\*RJ45 console port
- Firewall/NAT throughput: 900Mbps
- IPsec VPN throughput: 150Mbps, IPsec VPN tunnel: 50
- SSL VPN throughput: 80Mbps
- Current session: 100,000
- Multiple WAN/Configurable interfaces
- DPI Firewall
- VPN Server/Client for secure communications
- PPPoE/PPTP/L2TP/DHCP
- Bandwidth Management
- Static/Policy-based routing
- VLAN for network segmentation
- Application identification/Control
- Web Content Filtering
- IDP (Intrusion Detection & Prevention)



## SD-WAN Architecture



## NUCLIAS CONNECT



Nuclias Connect is the ideal centralised network management solution for SME and corporate networks. Nuclias Connect makes it easier to analyse, automate, configure, optimise, scale, and secure a network – delivering the convenience of an Enterprise-grade management solution, at an SMB price.

### Customisable

**nuclias**  
connect

#### Free Software Download

Free to download software for Windows and Linux providing centralised management for a wide range of D-Link access points, switches and IP cameras.

#### Self-Optimising Network

Nuclias Connect automatically adjust access point transmission power to optimise coverage as well as self-healing in the even of device failure.

#### Local Management

Nuclias Connect can be installed on a local as well as privately hosted cloud server, meaning all the data is kept privately. Alternatively, Nuclias Connect Hub\* is a dedicated controller preloaded with the Nuclias Connect management software



Nuclias Connect Hub DNH-100

## Main features

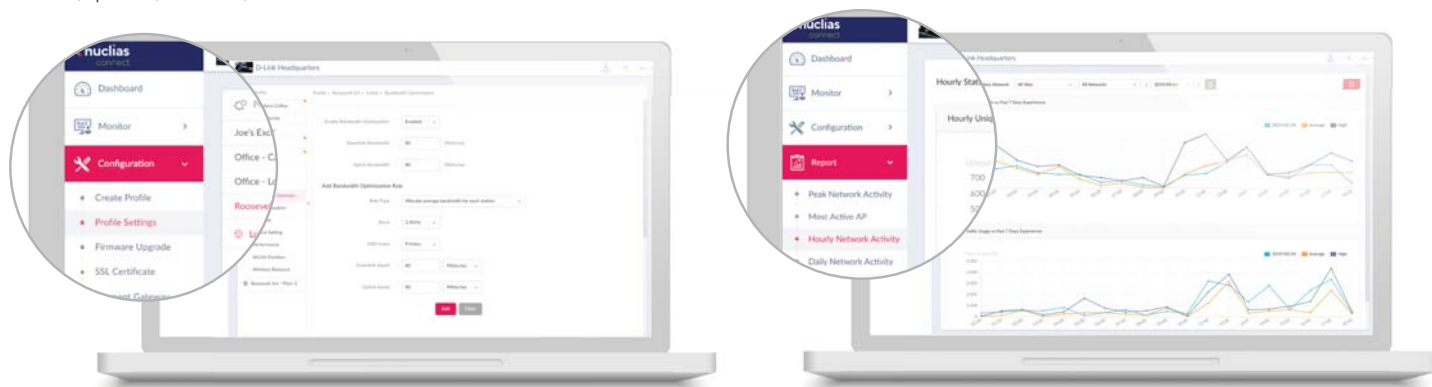
- Free-to-Download Nuclias Connect Management Software
- License-Free Access Points, switches, IP cameras
- Backwards-Compatibility
- Intuitive Interface
- All-in-One Standalone Hardware Controller (Nuclias Connect Hub\*)
- Traffic Reporting & Analytics
- Remote Config & Batch Config
- Multi-Tenant & Role-based Administration
- Searchable & Auditable Event & Change Logs
- 802.1x and RADIUS Server, POP3, LDAP
- Multilingual Support
- Front-Desk Ticket Management
- Authentication and Payment Gateway (Paypal)
- Integration via Customisable Captive Portal

## Flexibility to Meet Your Needs

- Free software download or dedicated Nuclias Connect Hub\*
- Monitoring and remote management of wireless APs, switches and IP cameras on your network
- Control & analytics of a broad or fine granularity, presentable in a variety of formats.
- Manage a variety of distributed deployments, including the option to configure settings and admin accounts in a specific manner for each deployment.
- Expand from a small network to a larger one (up to 1,000 APs)

## Insights at a Glance

- Gain an extensive understanding of your network through usage analytics and status reports which can be viewed at a glance.
- Insights derived from traffic data can create business value.
- Traffic can be viewed across the entire network, to the level of a single AP.



## DNC-100 Nuclias Connect Management Software Key Features:



Free-to-Download Management Software



License-Free Access Points



Backwards Compatibility



Intuitive Interface



Traffic monitoring



Minimum 6,000 passcode access



Inexpensive Hardware Controller



Traffic Reporting & Analytics



Remote Config. & Batch Config.



Multi-Tenant & Role-Based Administration



Up to 1,000 captive portal account



Searchable Event Log and Change Log



Authentication via Customizable Captive Portal, 802.1x and RADIUS Server, POP3, LDAP, AD



Multilingual Support



Payment Gateway (Paypal) Integration and Front-Desk Ticket Management



Account usage duration limit





# nuclias

## connect

A free network management software with robust functionality, highly scalable, and end-to-end control.



	MODEL	DAP-2230	DAP-2610	DAP-2660	DAP-2662	DAP-2680	DAP-2695
HARDWARE	Hopspot 2.0 compatible				•		
	Wireless standards	b/g/n	Simultaneous a/n/ac (Wave 2) and b/g/n	Simultaneous a/n/ac and b/g/n	Simultaneous a/n/ac and b/g/n	Simultaneous a/n/ac (Wave 2) and b/g/n	Simultaneous a/n/ac and b/g/n
	Wireless frequency range	2.4 to 2.4835 GHz	2.4 to 2.4835GHz 5.15 to 5.875GHz	2.4 to 2.4835 GHz 5.15 to 5.875 GHz	2.4 to 2.4835 GHz 5.15 to 5.875 GHz	2.4 to 2.4835 GHz 5.15 to 5.875 GHz	2.4 to 2.4835 GHz 5.15 to 5.875 GHz
	Maximum wireless speed	300 Mbps - 2.4 GHz	867 Mbps - 5 GHz 400 Mbps - 2.4 GHz	867 Mbps - 5 GHz 300 Mbps - 2.4 GHz	867 Mbps - 5 GHz 300 Mbps - 2.4 GHz	1300 Mbps - 5 GHz 450 Mbps - 2.4 GHz	1300 Mbps - 5 GHz 450 Mbps - 2.4 GHz
	MIMO	•	• (MU-MIMO)	•	•	• (MU-MIMO)	•
	Antenna type	Embedded omni-directional	2 embedded omni-directional	4 embedded omni-directional	4 embedded omni-directional	3 embedded omni-directional	6 detachable omni-directional
	Antenna gain	3 dBi	3 dBi for 2.4GHz 3 dBi for 5GHz	3 dBi for 2.4GHz 4 dBi for 5GHz	3 dBi for 2.4GHz 4 dBi for 5GHz	3.6 dBi for 2.4GHz 4.2 dBi for 5GHz	4 dBi for 2.4GHz 6 dBi for 5GHz
	Power-over-Ethernet (PoE)	• (802.3af)	• (802.3af)	• (802.3af)	• (802.3af)	• (802.3at)	• (802.3at)
	Wired interface	1 x Fast Ethernet	1 x Gigabit	1 x Gigabit (PoE in), 1 x Gigabit + 1 x RJ11	1 x Gigabit	1 x Gigabit	2 x Gigabit
	Console port						•
	Type of housing	Plastic	Plastic	Plastic	Plastic	Plastic	Metal (UL-2043)
	Outdoor housing (IP rating)						
WIRELESS	Maximum number of SSIDs	8	16	16	16	16	16
	Multiple modes (AP, WDS with AP, WDS / bridge, client)	•	•	•	•	•	•
	WMM-PS/802.11e (U-APSD)	•	•	•	•	•	•
	Wi-Fi scheduler	•	•	•	•	•	•
	AP traffic load balance	•	•	•	•	•	•
	L2 roaming		•	•	•	•	•
SECURITY	WEP/WPA/WPA2-Per./Ent.	•	•	•	•	•	•
	TKIP/AES encryption	•	•	•	•	•	•
	WLAN partition, Station Isolation	•	•	•	•	•	•
	SSID broadcast disable	•	•	•	•	•	•
	MAC address filtering	•	•	•	•	•	•
	802.1X authentication	•	•	•	•	•	•
NETWORK	DHCP server	•	•	•	•	•	•
	802.1D STP, IGMP snooping, ARP spoofing, SNTP	•	•	•	•	•	•
	IPv6	•	•	•	•	•	•
MANAGEMENT	WEB	•	•	•	•	•	•
	SNMP (v1, v2c, v3)	•	•	•	•	•	•
	CLI, Telnet, SSH	•	•	•	•	•	•
	Syslog	•	•	•	•	•	•
	Central management through Nuclias Connect*	•	•	•	•	•	•



\* Compatibility with Nuclias Connect through firmware update.



# D-Link Unified Wireless Solution

At D-Link, we recognise that wireless has to be reliable and secure for business. Our latest generation of Unified Wireless Solution offer seamless connectivity, self-healing mechanisms, traffic segmentation and centralized management to achieve a wireless environment as productive and secure as a wired network. 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.

## D-Link Managed Wireless



## Unified Wireless



		Nuclias Cloud	Nuclias Connect	Nuclias Connect Hub (DNH-100)	DWC-1000 (H/W vers. C1)	DWC-2000
H/W	Number of Gigabit ports				4 x LAN, 2 x WAN	
	Number of Combo 1000Base-T/SFP ports					4
WLAN MANAGEMENT	Type of controller	Cloud-based	Software-based ( <b>Free</b> )	Hardware-based	Hardware-based	Hardware-based
	Standard number of APs	N/A, Subscription per AP	1000	100	12 (48 with cluster of 4 x DWC-1000)	64 (256 with cluster of 4 x DWC-2000)
	Maximum number of APs through optional license upgrade	Unlimited number of APs supported through subscription	1000	100	66 (264 with cluster of 4 x DWC-1000)	256 (1024 with cluster of 4 x DWC-2000)
	Supported AP	DBA Series APs	DAP Series APs*	DAP Series APs*	DWL-Series APs	DWL-Series APs
	Zero touch provisioning for AP deployment	•				
	AP geolocation	• (with Google Maps)				
	Controller redundancy				•	•
	Advanced traffic report and data analysis	•				
	Visualised topology	•	•	•	•	•
	NAT pass through (AP)	•	•	•		
	Multi-tenancy	•	•	•		
	WIDS				•	•
	IPv6				•	•
	Captive portal	•	•	•	•	•
USER AUTHENTICATION	Authentication method	802.1x, RADIUS, Facebook/Google login	Local DB, external RADIUS, LDAP, POP3, Wi-Fi passcode, AD	Local DB, external RADIUS, LDAP, POP3, Wi-Fi passcode, AD	Local DB, external RADIUS, NAP, Wi-Fi passcode	Local DB, external RADIUS, NAP, Wi-Fi passcode
	Payment gateway (Paypal, WorldPay, SecureNet, Authorise.Net)				•	•
	Web redirect		•	•	•	•
RF	Auto transmit power control		•	•	•	•
	Self-healing around failed APs		•	•	•	•
WIRELESS FEATURE	Multiple SSID per Radio (AP)	8	8	8	16	16
	Band steering		•	•	•	•
	Seamless roaming				•	•
	L2 roaming		•	•	•	•
	Bandwidth optimisation		•	•	• (QoS)	• (QoS)
	Load balancing				•	•
SYSTEM MANAGEMENT	Web-based user interface	HTTPS	HTTPS	HTTPS	HTTP	HTTP
	Firmware/module online check	•	•	•		
	Remote management	•	•	•	•	•
	Cloud hosting	Native	Amazon Web Services / Microsoft Azure	Amazon Web Services / Microsoft Azure		
	Firmware/configuration upgrade by scheduling	•	•	•		
NETWORKING	WAN fail-over				•	
	Link aggregation					• (LACP)
	Layer 3 routing (table size)				• (100)	• (2048)
	Firewall				•	
	VLAN				•	•
	Support VPN gateway				• (VPN license upgrade)	
	Build in DHCP server				•	•
OTHERS	Optional license upgrades				DWC-1000-AP18-LIC DWC-1000-AP6-LIC DWC-1000-VPN-LIC DWC-1000-WCF-12	DWC-2000-AP32-LIC DWC-2000-AP64-LIC DWC-2000-VPN-LIC DWC-2000-AP128-LIC

➤ Saves time and resources by configuring and managing multiple access points from a cloud, software or hardware-based wireless controller. This avoids repeated configurations and improves control of the wireless network.

\* Nuclias Connect Supported APs

# Unified 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 twelve wireless access points (upgradable to 66) and a maximum of 264 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 66 access points per device
- Upgrade to maximum 264 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 256 access points per device
- Upgrade to maximum 1024 access points per cluster
- Hard disk drive extension slot

## Optional Accessories

### Upgrade licenses:

DWC-1000-VPN-LIC	DWC-1000 VPN Security License
DWC-1000-6AP-LIC	DWC-1000 Additional 6 Access Points Support License
DWC-1000-AP18-LIC	DWC-1000 Additional 18 Access Points Support License
DWC-1000-WCF-12-LIC	DWC-1000 WCF License for one Year
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
DV-800	D-View 8 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





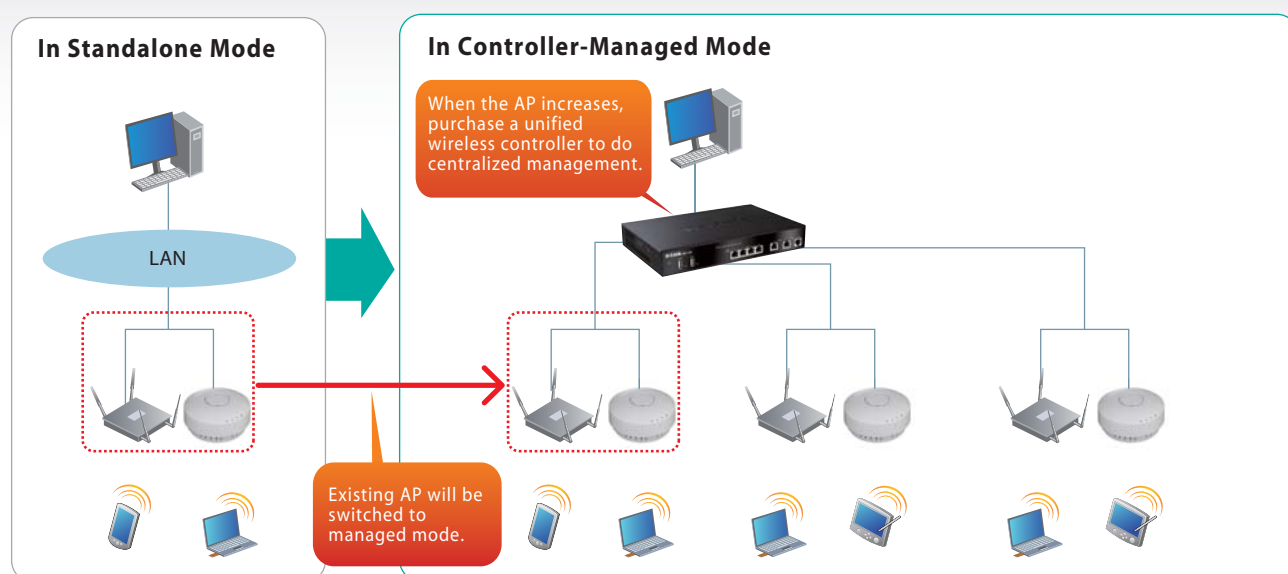
MODEL			DWC-1000	DWC-2000
Interfaces	Ethernet	10/100/1000BASE-T Option (WAN) Ports	2 <sup>1</sup>	—
		10/100/1000BASE-T LAN Ports	4	—
		Combo 10/100/1000BASE-T/SFP Ports	—	4
	USB 2.0 Ports		2	2
	RJ45 Console Port		✓	✓
Capacity and Performance	Maximum Access Points per Unit (Default/Upgrade)		12 / 66 <sup>2</sup>	64 / 256 <sup>2</sup>
	Maximum Access Points per Cluster (Default/Upgrade)		48 / 264 <sup>2</sup>	256 / 1024 <sup>2</sup>
	Concurrent Captive Portal Authentication Users (Wired/ Wireless)		1024	3072
	Dedicated IPSec VPN Tunnels <sup>3</sup>		70	—
	Dedicated PPTP/ L2TP VPN Tunnels <sup>3</sup>		25	—
	Dedicated SSL VPN Tunnels <sup>3</sup>		20	—
Access Point Management	Compatible Managed APs		DWL Series APs	
	AP Discovery & Control		Layer-2 and Layer-3	Layer-2 and Layer-3
	AP Monitoring	Managed AP	Managed AP	Managed AP
		Rogue AP	Rogue AP	Rogue AP
	Client Monitoring	Authentication Fail AP	Authentication Fail AP	Authentication Fail AP
		Standalone AP	Standalone AP	Standalone AP
Roaming	Fast Roaming		✓	✓
	Intra-Controller / Inter-Controller Roaming		✓	✓
	Intra-Subnet / Inter-Subnet Roaming		✓	✓
	Wireless Security		WEP	WEP
Security	Wireless Instruction Detection & Prevention System (WIDS)		Dynamic WEP	Dynamic WEP
	LAN Security		WPA Personal/ Enterprise	WPA Personal/ Enterprise
	Authentication		WPA2 Personal/ Enterprise	WPA2 Personal/ Enterprise
	VLAN		Rogue and Valid AP Classification	Rogue and Valid AP Classification
VLAN	VLAN Group		802.1x Port-Based Access Control and Guest VLAN	802.1x Port-Based Access Control and Guest VLAN
	802.1q VLAN Tagging		802.1x Port-Based Access Control and Guest VLAN	802.1x Port-Based Access Control and Guest VLAN
	Subnet-Based VLAN		802.1x Port-Based Access Control and Guest VLAN	802.1x Port-Based Access Control and Guest VLAN
	Port-Based VLAN		802.1x Port-Based Access Control and Guest VLAN	802.1x Port-Based Access Control and Guest VLAN
Firewall System <sup>3</sup>	Policy		Captive Portal	Captive Portal
	Dynamic Route		MAC Authentication	MAC Authentication
	Dynamic DNS		255 Static	255 Static
	NAT, PAT		✓	✓
Networking <sup>3</sup>	Route Failover		—	—
	Outbound Load Balancing		—	—
Virtual Private Network (VPN) <sup>3</sup>	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		—	✓
SSL Virtual Private Network (SSL VPN) <sup>3</sup>	Hub and Spoke		—	✓
	SSL Encryption Methods		—	DES, 3DES, AES
System Management	SSL Message Integrity		—	MDS, SHA1
	Web-Based User Interface		HTTP, HTTPS	HTTP
	Command Line Interface		✓	✓
Physical & Environment	SNMP		v1, v2c, v3	v1, v2c, v3
	Power Supply		100-240 V AC, 50-60 Hz Internal	100-240 V AC, 50-60 Hz Internal
	Maximum Power Consumption		26.95 W	12.6 W
	Dimension		440 x 310 x 44 mm	180 x 280 x 44 mm
	Operating Temperature		0°C to 40°C	-20°C to 70°C
	Operating Humidity		5% to 95% RH Non-Condensing	5% to 95% RH Non-Condensing
	EMI		FCC Class A, CE Class A, C-Tick, IC	FCC Class B, CE Class B, VCCI, C-Tick, IC
	Safety		cUL, LVD (EN60950-1)	cUL, LVD (EN60950-1)

<sup>1</sup> The first port is enabled by default. The second port is enabled by purchasing the DWC-1000-VPN-LIC license<sup>2</sup> The number of managed APs can be increased through purchase of license upgrades.<sup>3</sup> Features enabled through purchase of the VPN/Router/Firewall license upgrade

## Flexible Deployment

The Unified Wireless Access Point Series can act as a managed access point controlled by the Unified Switch or Wireless Controller. It may also be used as standalone access point when there is no controller in the network.

Unified Access Point can work as standalone Access Point or changed to managed mode during the presence of unified switch or controller.

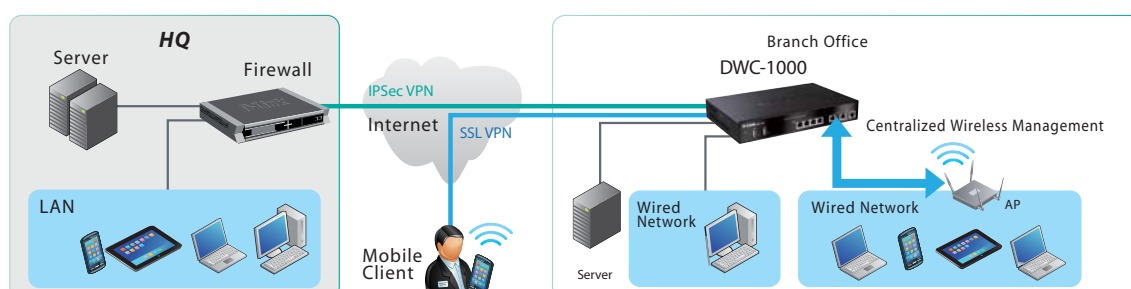


## DWC-1000 as an all-in-one Gateway \*

To address the constantly growing scale and needs of business networks, the DWC-1000 offers a flexible selection of expansion features: administrators can purchase an add-on license to upgrade the capabilities of the DWC-1000. The VPN license upgrade enables the DWC-1000 to provide VPN, Router and Firewall functionality. The firewall function allows administrator to control network access by setting classification policies. The dual option ports provide link failover and internet connection redundancy to ensure uninterrupted internet connectivity. The Virtual Private Network (VPN) features provide secure remote control to manage access points in branch offices as well as site-to-site VPN tunnel to facilitate HQ to branch office connectivity through encrypted virtual links. In addition, mobile users can also connect back to their office via SSL VPN tunnel on-the-go.

### All-in-One Gateway - DWC 1000

DWC-1000 can act as an all-in-one gateway to provide firewall, VPN as well as centralized wireless management capability for SMB network.



\* Require to purchase DWC-1000-VPN-LIC to activate the functions.

# D-Link Unified Wireless Solutions for Education

Today, education is about mobile learning and Bring Your Own Device (BYOD). Students and faculty expect immediate access with a seamless connection to the campus network anytime and everywhere, often with 2 or 3 wireless devices at once. In virtually every academic classroom, nearly all educators have online components to their curriculum.

In a high-density learning environment, hundreds of people are trying to connect to the network at the same time. And everyone is eating up more bandwidth than ever before, exceeding the capacity of your existing network.

You know that it's critical for everyone to have a fast, reliable, and secure connection to the campus network. One failure to connect wirelessly is one too many. With your IT budget stretched thin, the expectation to provide unified coverage for everyone, everywhere may seem insurmountable.



## Unified Wireless Solution

DWC-2000 & DWL-8620AP

Working together as a unified solution the DWC-2000 Unified Wireless Controller and DWL-8620AP Access Point consolidate the security, manage the bandwidth and maintain the intelligence of your entire wireless network.

Complete with an array of advanced features and 802.11ac support, each DWC-2000 Unified Wireless Controller can manage up to 64 DWL-8620AP access points by itself and up to 256 in a switch cluster. And the DWC-2000 greatly reduces network administration by enabling centralised configuration of all DWL-8620AP access points.

**D-Link Unified Wireless provides a range of solutions that enable your network to become a highly mobile, productive learning environment at a low total cost of ownership.**

**D-Link Unified Wireless networks are scalable;** you start in one building and you can add as you go. They're easy to deploy, featuring one-time configuration and dispatch to multiple access points (APs) at one time.

**Each Switch/Controller can automatically detect and configure new channels** as new APs are added to the network, eliminating the need to manually assign a new radio frequency (RF) channel for each AP.

**Each D-Link Access Point offers high quality, reliable, and secure connectivity**, with high data transmission speeds and AP load balancing, allowing students to stay connected as they move from one end of the campus to another.

**D-Link is helping schools build a mobile and connected campus** that advances education by providing Wireless Everywhere.



# 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.

### Managed Mode

- Centralised management/firmware dispatch
- Auto-power adjustment
- Layer 2/3 Fast roaming
- Captive portal

### Standalone Mode

- Rogue AP detection, Station isolation
- MAC address filtering, Auto-channel selection
- AP load balancing set-up, AP Clustering
- Wi-Fi Multimedia (WMM)

#### DWL-2600AP

Unified Wireless N300 PoE Access Point



- Self-configuring cluster allows easier provisioning (up to 8 units)
- Load balancing to optimise high network traffic volume and redundancy

#### DWL-6610AP (B1)

Unified Wireless AC1200 Simultaneous Dual-Band PoE Access Point



- Flexible Quality of Service (QoS) with WMM
- 802.3af PoE enables installation in hard-to-reach locations

#### DWL-6620APS

Unified Wireless AC1300 Wave 2 Dual-Band PoE Access Point



- 802.11ac Wave 2 AC1300
- Supports MU-MIMO
- Smart Antennas technology allows dynamically changing the direction of the antennas in which the energy is radiated, that delivers great WiFi performance in high density environment, mitigate RF interference.

#### DWL-6720AP

Unified 802.11ac Dual-band PoE Outdoor Access Point



- Auto Channel selection
- 802.1p Quality of Service (QoS)
- Wireless Multimedia (WMM)
- Wireless Distribution System (WDS)

#### DWL-7620AP

Unified Wireless AC2200 Wave 2 Tri-Band PoE Access Point



- 802.11ac Wave 2 AC2200
- Tri-band (2.4GHz + 5GHz + 5GHz)
- MU-MIMO can serve multiple wireless clients simultaneously and utilizes the spectrum more efficiently

#### DWL-8620AP

Unified Wireless AC2600 Wave 2 Dual-Band PoE Access Point



- 802.11ac Wave 2 AC2600
- Dual-band (2.4 GHz and 5 GHz)
- Supports MU-MIMO
- 802.11K Fast Roaming
- Supports Link Aggregation

#### DWL-8720AP

Unified Wireless AC1300 Dual-Band Outdoor PoE Access Point



- 802.11ac AC1300
- Concurrent dual-band (2.4 GHz and 5 GHz)
- Supports 802.11K
- Supports WPA3
- IP67-compliant housing for harsh weather

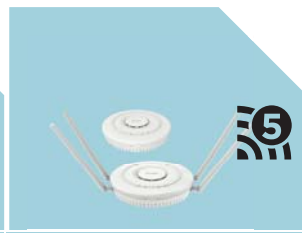
#### DWL-X8630AP

Unified Wireless AX3600 Simultaneous Dual-Band PoE Access Point



- 802.11 AX 3600
- Dual-band (2.4 GHz and 5 GHz)
- Supports 2.5Gbps LAN PoE Port + 1 Gigabit LAN Port
- 1024 QAM
- Supports MU-MIMO (Download & Upload)





MODEL	DWL-2600AP	DWL-6610AP (B1)	DWL-6620APS	DWL-6720AP
<b>WIRELESS STANDARDS</b>				
IEEE 802.11a		•	•	•
IEEE 802.11b/g/n	•	•	•	•
IEEE 802.11ac		•	•	•
IEEE 802.41AX				
Simultaneous Dual-Band		•	•	•
<b>WIRED STANDARDS</b>				
10/100BASE-TX	1			
10/100/1000BASE-T		1	2	2
2.5G BASE-T				
<b>OPERATION MODES</b>				
AP Mode	•	•	•	•
Bridge (WDS) Mode	•	•	•	•
<b>ANTENNA FEATURES</b>				
Antenna Type	Internal	Internal (DWL-6610AP) External (DWL-6610APE)	Internal	Internal
Gain	3 dBi for 2.4 GHz	3.5 dBi for 2.4 GHz 5 dBi for 5 GHz (DWL-6610AP) 3 dBi for 2.4 GHz 4 dBi for 5 GHz (DWL-6610APE)	4 dBi for 2.4 GHz 6 dBi for 5 GHz	4 dBi for 2.4 GHz 6 dBi for 5 GHz
<b>AUTHENTICATION FEATURES</b>				
64/128-Bit WEP	•	•	•	•
WPA/WPA2-PSK	•	•	•	•
WPA/WPA2-EAP	•	•	•	•
TKIP/AES	•	•	•	•
802.1X User Authentication	•	•	•	•
<b>SECURITY FEATURES</b>				
MAC Address Filtering	•	•	•	•
SSID Broadcast Disable	•	•	•	•
Rogue AP Detection	•	•	•	•
802.1Q VLAN	•	•	•	•
Multiple SSIDs for Network Segmentation	•	•	•	•
<b>GROUPING FEATURES</b>				
Load Balancing	•	•	•	•
Link Integrity Monitoring	•	•	•	•
<b>QoS FEATURES</b>				
WMM (WiFi Multimedia)	•	•	•	•
<b>NETWORK FEATURES</b>				
Auto-Channel Scan	•	•	•	•
Auto-Power Adjustment	•	•	•	•
<b>MANAGEMENT FEATURES</b>				
SNMP	•	•	•	•
D-View 7	•			
AP Clustering	•	•		
Telnet	•	•	•	•
SSH	•	•	•	•
Management via Wireless Controller	•	•	•	•
<b>INSTALLATION FEATURES</b>				
Indoor/Outdoor	Indoor	Indoor	Indoor	Indoor
Plenum rated (UL-2043)			•	•
Power over Ethernet (PoE)	802.3af	802.3af	802.3at	802.3at
PoE Injector Included				
1EC60601-1-2				

**DWL-7620AP****DWL-8620AP****DWL-8720AP****DWL-X8630AP**

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Internal

Internal

External

Internal

4 dBi for 2.4 GHz  
5 dBi for 5 GHz3 dBi for 2.4 GHz  
4 dBi for 5 GHz3.5 dBi for 2.4 GHz  
5 dBi for 5 GHz3 dBi for 2.4 GHz  
4 dBi for 5 GHz

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Indoor

Indoor

Outdoor (IP-67 rated)

Indoor

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802.3at

802.3at

802.3at

802.3at

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# Powerful Network Backbone with D-Link Structured Cabling Solutions



The structured cabling infrastructure is important when building up a network for data centres, office buildings, apartments, and campuses. At D-Link, we provide high quality UTP cables, optical fiber cables as well as the accessories that comply to industry TIA/EIA standard.



COPPER



FIBER



ACCESSORIES



DATA CENTER



ENTERPRISE



EDUCATIONAL



HEALTHCARE

\* Project must be validated by DCCE Engineer. Must be full D-Link Structural Cabling Implementation.



# High-Speed 10 Gigabit Network Solutions



## Layer 2/3 10G Switches (DXS-1100 Series, DXS-1210 Series, DXS-3400 Series, DXS-3610 Series)

From entry level Layer 2 smart switches with intuitive and easy-to-use GUI to Layer 3 fully managed 10G switches that support physical stacking and expansion module, whether you are managing a small network with a few 10G links, or a large Enterprise network with 10G links throughout, D-Link has the right switch for you.

### DXS-3610 Series

Fully managed Layer 3 Managed Switches, designed for Top-of-the-rack deployment with expansion module for additional 1G, 10G or 40G ports.

### DXS-3400 Series

Layer 3 Lite Managed Switches support physical stacking up to 4 units, hot-swappable power module and fan modules.

### DXS-1210 Series

Layer 2 Web Smart Switches for businesses of all sizes requiring essential L2 switching functionality and advanced security features.

### DXS-1100 Series

Layer 2 Lite Entry level Smart Switches with intuitive and easy-to-use Graphical User Interface.



## 10G SFP+ Optical Transceivers (DEM-43X Series)

D-Link's 10G SFP+ Transceiver series are hot-swappable SFP+ transceivers that plug into SFP+ slots on switches and support 10G Ethernet. They offer customers a wide variety of 10G Ethernet connectivity options (10GBASE-SR/LR/LRM/ER/ZR) for data centers, enterprise wiring closets, and service provider transport applications.

## 10G Network Cables (Cat 7 F/FTP, Cat 6A FTP/UTP Cables)

High quality cables, comply to International standard to ensure reliable infrastructure for your building, data centres, offices and campus data communication.

**Cat 6a** – support 10GBase-T up to 100 meters

**Cat 7** – support 10GBase-T up to 100 meters with strict specifications for crosstalk and system noise





## 32 KEY SOLUTIONS

## 32 KEY SOLUTIONS



# 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 802.3bt PoE++ standard, to provide extra power up to 90W 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.

# 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.

dlinkgreen





### 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.





# 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 and Top-Of-Rack, all as detailed below.



DXS-5000-54S

## Top-Of-Rack

- Award-winning Enterprise-class performance, security and control
- Modular architecture with redundant control planes option
- High performance 10 Gigabit stacking options with Layer 2 and Layer 3 features
- 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

## 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
- 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

## 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



## 10 GbE Top-Of-Rack Switches

10 GIGABIT ETHERNET

DXS-5000 Series



DXS-3610 Series



DXS-3400 Series



## Layer 2/3 Gigabit Manage Switches

10 GIGABIT ETHERNET / GIGABIT ETHERNET

DGS-3630 Series



DGS-3130 Series



DGS-3000 Series



DGS-2000 Series



## Standalone Switches

10 GIGABIT ETHERNET

2.5 GIGABIT ETHERNET

GIGABIT ETHERNET

FAST ETHERNET

### UNMANAGED

### SMART

### LAYER 2 MANAGED

### LAYER 2 METRO ETHERNET



DXS-1100 Series



DXS-1210 Series



DMS-1100 Series



DGS-1510 Series



DGS-2000 Series



DGS-1000 Series



DGS-105/108 Series



DGS-1100 V2 Series



DGS-1210 Series



DGS-1520 Series



DIS-200G Series



DIS-100G Series



DGS-3000 Series



DGS-1100 / ME Series



DGS-1210 / ME Series



DES-1000 Series



DGS-1250 Series



DIS-300G Series



DIS-700G Series



DES-1210 Series

## PoE Switches

2.5 GIGABIT ETHERNET

GIGABIT ETHERNET

FAST ETHERNET

### UNMANAGED

### SMART

### LAYER 2/2+

### METRO ETHERNET

DMS-1100-10TP (PoE+)

DGS-1008P (PoE+)  
DGS-1008MP (PoE+)  
DGS-1010MPDGS-1100-08P V2 (PoE+)  
DGS-1100-24P V2 (PoE+)  
DGS-1100-10MP V2 (PoE+)  
DGS-1100-10MPP V2 (UPoE)  
DGS-1100-26MP V2 (PoE+)  
DGS-1100-26MPP V2 (UPoE)DES-1008PA (PoE)  
DES-1018MP (PoE)DES-1210-08P (PoE)  
DES-1210-28P (PoE+)DGS-1210-10P (PoE+)  
DGS-1210-10MP (PoE+)  
DGS-1210-28P (PoE+)  
DGS-1210-28MP (PoE+)  
DGS-1210-52MP (PoE+)  
DGS-1210-52MPP (PoE+)  
DGS-1250-28XMP  
DGS-1250-52XMP  
DGS-1510-28P (PoE+)  
DGS-1510-28XMP (PoE+)  
DGS-1510-52XMP (PoE+)  
DGS-1520-28MP (PoE+)  
DGS-1520-52MP (PoE+)  
DGS-100G-5PSW (PoE+)  
DGS-200G-12PSW (PoE+)  
DGS-200G-12PSW (PoE+)  
DGS-300G-8PSW (PoE+)  
DGS-300G-14PSW (PoE+)DGS-2000-10P (PoE+)  
DGS-2000-10MP (PoE+)  
DGS-2000-28P (PoE+)  
DGS-2000-28MP (PoE+)  
DGS-2000-52MP (PoE+)DGS-3000-28LP (PoE+)  
DGS-3000-28XMP (PoE+)  
DGS-3130-30NPS (PoE+)  
DGS-3130-30PS (PoE+)  
DGS-3130-54PS (PoE+)  
DGS-3420-28PC (PoE+)  
DGS-3420-52P (PoE+)  
DGS-3630-28PC (PoE+)  
DGS-3630-52PC (PoE+)DGS-1100-24P/ME (PoE+)  
DGS-1210-10P/ME (PoE+)  
DGS-1210-28P/ME (PoE+)  
DGS-1210-28MP/ME (PoE+)  
DGS-1210-52P/ME (PoE+)  
DGS-1210-52MP/ME (PoE+)  
DGS-1210-52MPP/ME (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 & 3at PoE / PoE + standard provide up to 15.4A and 30W respectively to each PoE enabled device. The latest standard 802.3bt 90W expands the use of PoE in new applications.

802bt 90W PoE++ technology drives high-power infrastructure for smart building systems, safe cities, thin clients, Point-of-Sales, digital signages, high-performance Wi-Fi access points, smart lighting system and a lot more. Building owners can adopt the standard to future-proof their PoE networks.

## How can PoE be Green?

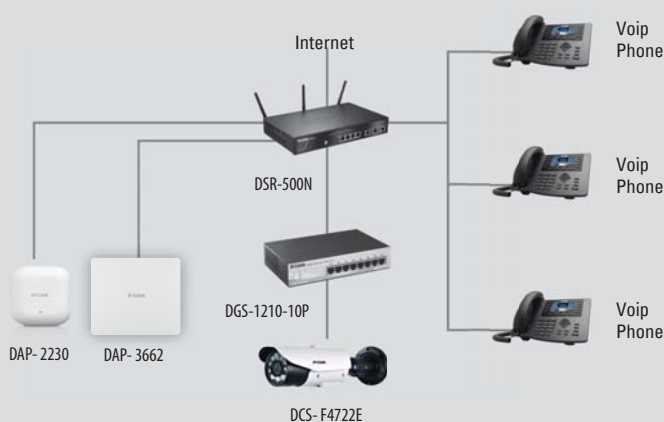
Using D-Link's integrated time-based PoE functionality, it is possible to automatically shut down ports which also shut down the devices on a predefined schedule, saving power and money, and increasing security.

## What is the PoE Power Budget?

The PoE Power Budget is the maximum amount of power that a switch can provide to all the PoE 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+ (MP series). 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 30 W 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 2600 Mbps on the 5 GHz band with enhanced coverage so can benefit from PoE+'s additional power.



# Data Center Switches

## DXS and DQS-5000 Series

These series of Data Center Switches are high-performance switches that feature high port density, routing, and ultra-low latency, designed to be deployed as Top-of-Rack (ToR) or leaf-spine switches in data center applications. Combined with ONIE support and increased cost-efficiency, the 5000 Series form a flexible long-term solution for managing and expanding data center infrastructures in a Software-defined Networking (SDN) environment. The 5000 Series switches support open networking, providing IT professionals with innovative third-party operating systems and software options. This lowers costs by separating software from hardware and increases network agility and flexibility.

The 5000 Series switches are available in a variety of high-capacity interface combinations, including SFP+, QSFP+, SFP28, and QSFP28 ports to accommodate the scale and requirements of data centers. Open Network Install Environment (ONIE) support means the switches can be easily integrated in existing network ecosystems using a variety of supported third-party Network Operating Systems (NOSs) for optimal compatibility. Furthermore, the ability to pick and choose software based on practical requirements eliminates the restrictions imposed by vendor-locked software environments.



### Series include the below models

#### DXS-5000-54S

- 48 10G SFP+ ports
- 6 x 40 QSFP+ ports
- Up to 1.44Tbps switching capacity
- Up to 1,071 Mpps
- Up to 288K Mac addresses
- 12MB Packet Buffer Memory

#### DQS-5000-32S

- 32 40G QSFP+ ports
- Up to 2.56Tbps switching capacity
- Up to 1,428 Mpps
- Up to 288K Mac addresses
- 12MB Packet Buffer Memory

#### DQS-5000-32Q28

- 32 100G QSDP28 ports
- Up to 6.4Tbps switching capacity
- Up to 2,980 Mpps
- Up to 40K Mac addresses
- 16MB Packet Buffer Memory

#### DQS-5000-54S28

- 48 25G SFP28 ports
- 6 100G QSFP 28 ports
- Up to 3.6Tbps switching capacity
- Up to 2,380 Mpps
- Up to 40K Mac addresses
- 16MB Packet Buffer Memory

### Available Modules

#### Optional 10G SFP+ Transceivers

DEM-431XT - 10GBASE-SR, multi-mode, OM1: 33 m / OM2: 82 m / OM3: 300 m (without DDM)  
 DEM-432XT - 10GBASE-LR, single-mode, 10 km (without DDM)  
 DEM-433XT - 10GBASE-LR, single-mode, 40 km (without DDM)  
 DEM-434XT - 10GBASE-ZR, single-mode, 80 km (without DDM)  
 DEM-435XT - 10GBASE-LRM, multi-mode, 200 m (without DDM)

#### Optional WDM (Bidi) SFP+ Transceivers

DEM-436XT-BXD - 10GBASE-LR, single-mode, 20 km (TX: 1330 nm, RX: 1270 nm) (without DDM)  
 DEM-436XT-BXU - 10GBASE-LR, single-mode, 20 km (TX: 1270 nm, RX: 1330 nm) (without DDM)

#### Optional 40G QSFP+ Transceivers

DEM-QX01Q-SR4 - 40GBASE-SR4, multi-mode, OM3: 100 m / OM4: 150 m  
 DEM-QX10Q-SR4 - 40GBASE-LR4, single-mode, 10 km

#### Optional 10G SFP+ Direct Attach Cables

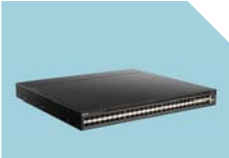



DEM-CB100S - 10G SFP+ to SFP+ 1 m Direct Attach Cable  
 DEM-CB300S - 10G SFP+ to SFP+ 3 m Direct Attach Cable  
 DEM-CB700S - 10G SFP+ to SFP+ 7 m Direct Attach Cable  
 DEM-CB100QS-4XS - 40G QSFP+ to 4 10G SFP+ 1 m Direct Attach Cable

### Key Series Features

- Variety of high-speed interface combinations to meet different network requirements
- Two AC/DC hot-swappable power modules for 1+1 redundancy and load sharing
- Modular, N+1 hot-swappable fan design
- Wire-speed, ultra-low latency switching
- Variety of 10G, 25G, 40G, and 100G interfaces for high-density availability and uplink options
- Supports OpenFlow v1.0/1.3
- Supports Virtual eXtensible LAN (VXLAN) network virtualization
- 802.1Qau, 802.1Qbb, 802.1Qaz Data Center
- Preloaded with Open Network Install
- Open Network Linux (ONL)-ready
- RJ-45/mini-USB console port
- Dedicated management port
- Industry-standard CLI

dlinkgreen



					
MODEL		DXS-5000-54S	DQS-5000-32S	DQS-5000-32Q28	DQS-5000-54SQ28
Interfaces	10G	—	—	—	—
	25G	48 x 10G SFP+ Ports	32 x 40G QSFP+ ports	32 x 100G QSFP28 ports	48 x 25G SFP28 ports
	40G	6 x 40G QSFP+ Ports	1 x USD 2.0 port	1 x USD 2.0 port	6 x 10G QSFP28 ports
	100G	1 x USD 2.0 port	—	—	1 x USD2.0 port
Performance	Switching Capacity	1.44 Tbps	2.56 Tbps	6.4 Tbps	3.6 Tbps
	Max. Forwarding Rate	1,071 Mpps	1,428 Mpps	2,980 Mpps	2,380 Mpps
	Packet Buffer Memory	12MB	12MB	16MB	16MB
	MAC Address Table	288K	288K	40K	40K
Layer 2 Features	802.3ad Link Aggregation	Max. 64 groups per device, Max 32 ports per group			
	Spanning Tree Protocol (STP)	802.1D, 802.1W RSTP, 802.1s MSTP, Loop Guard, TCN Guard			
	802.3x Flow Control	✓			
	Jumbo Frame	Up to 9KB			
	Port Mirroring	Support One to One, Many to one. Support up to 4 mirroring groups			
	VLAN Mirroring	✓			
	RSPAN	✓			
	Loopback Detection (LBD)	✓			
Layer 3 Multicast Features	IGMP v1/v2/v3	✓			
	MLD v1/v2	✓			
	DVMRP v3	✓			
	PIM-SSM	PIM-SSM, PIM-SM IPv4/IPv6, PIM-DM IPv4/IPv6			
	IGMP/MLD Proxy	✓			
Security	Broadcast/Unicast/Multicast Control	✓			
	SSH	✓			
	Port Security	✓			
	DoS attack prevention	✓			
	IP Source Guard	✓			
	DHCP Server Screening	✓			
	Dynamic ARP Inspection (DAI)	✓			
	Duplicate Address Detection	✓			
Authentication, Authorization and Accounting (AAA)	802.1X Authentication	Support port-based, host-based and Identity-driven policy assignment			
	Guest VLAN	✓			
	Radius Authentication	✓			
	TACACS+ authentication	✓			
	Authentication for management access	✓			
	MAC-based Access Control	✓			
Quality of Service (QoS)	Queue handling	Strict Priority, Weighted Deficit Round Robin (WDRR)			
	Congestion Control	Weighted Random Early Detection			
	Bandwidth Control	✓			
	Three Color Marker	✓			
	Class of Service	✓			
	Policy Map	Remark 802.1p priority, Remark ToS/DSCP, Rate limiting			
Data Center Features	Open Network Install Environment	✓			
	FCoE Initialization Protocol (FIP)	✓			
	Snooping	✓			
	OpenFlow v1.3	✓			
	Management Tool	Support Puppet and Chef			
	Data Center Bridging Exchange (DCBX)	✓			
	Virtual Extensible Local Area Network (VxLAN)	✓			
Access Control List	MAC Access List	✓			
	IP Access List	IPv4/IPv6			
	CPU Interface Filtering	✓			
	Time-based ACL	✓			
Management	Industry-Standard CLI	Support port-based, host-based and Identity-driven policy assignment			
	Telnet Server for IPv4/IPv6	✓			
	Secure FTP client for IPv4/IPv6	✓			
	SNMP	✓			
	SMTP	✓			
	RMONv1	✓			
	Link Detection	LLDP/LLDP-MED, UDLD, CDP			
	DHCP	DHCP Relay, DHCP auto-configuration, DHCP auto-image			

# Layer 3 Stackable 10G Managed Switches

## DXS-3610 Series

The D-Link DXS-3610 Series Layer 3 Stackable 10G Managed Switches are a set of new, compact, high-performance switches that feature ultra low latency, with 10G Ethernet switching and routing. The 1U height and front-to-back airflow make the DXS-3610 Series suitable for Enterprise and campus aggregation network environments. The DXS-3610 Series is available in two configurations; 48 fixed 10G SFP+ with 6 fixed 100G QSFP28 and 48 fixed 10G Base-T with 6 fixed 100G QSFP28. 100G ports allow for either uplink or stacking configurations, depending on your system's needs.



### Series include the below models

#### DXS-3610-54S

- 48 x 1/10GbE SFP/SFP+ ports
- 6 x 40/100GbE QSFP+/QSFP28 ports
- 19-inch, 1U rack-mount

#### DXS-3610-54T

- 48 x 1/10GbE Base-T ports
- 6 x 40/100 GbE QSFP+/QSFP28 ports
- 19-inch, 1U rack-mount

### Optional Products

DXS-3610-54S/54T 48-port 10G SFP+, 6-port 100G QSFP28 interfaces switch with Standard Image with 2 full load front-to-back AC PSUs and 5 front-to-back fan modules  
DXS-3610-54S/54T 48-port 10G SFP+, 6-port 100G QSFP28 interfaces switch with Enhanced Image with 2 full load front-to-back AC PSUs and 5 front-to-back fan modules  
DXS-3610-54T/54T 48-port 10GBase-T, 6-port 100G QSFP28 interfaces switch with Standard Image with 2 front-to-back AC PSUs and 5 front-to-back fan modules  
DXS-3610-54T/54T 48-port 10GBase-T, 6-port 100G QSFP28 interfaces switch with Enhanced Image with 2 front-to-back AC PSUs and 5 front-to-back fan modules

#### Optional Management Software

DV-700 - D-View 7 Network Management Software  
DV-800 - D-View 8 Network Management Software

#### Optional 100G QSFP28 Transceivers<sup>4</sup>

DEM-Q2801Q-SR4 • 100GBASE-SR4 QSFP28, Multi-Mode 100 m SR4 transceiver  
DEM-Q2810Q-LR4 • 100GBASE-LR4 QSFP28, Single-Mode 10 km LR4 transceiver

#### Optional 40G QSFP+ Transceivers<sup>4</sup>

DEM-QX01Q-SR4 • 40GBASE-SR4 Multi-mode, OM3:100M/OM4:150 m  
DEM-QX10Q-LR4 • 40GBASE-LR4 Single-mode, 10 km

#### Optional 10G SFP+ Transceivers<sup>4</sup>

DEM-431XT • 10GBASE-SR SFP+ transceiver (w/o DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF  
DEM-432XT • 10GBASE-LR SFP+ transceiver (w/o DDM), 10 km  
DEM-433XT • 10GBASE-ER SFP+ transceiver (w/o DDM), 40 km  
DEM-434XT • 10GBASE-ZR SFP+ transceiver (w/o DDM), 80 km  
DEM-436XT-BXU • 10GBASE-LR BiDi SFP+ transceiver (w/o DDM) 20 km, Tx: 1270 nm, Rx: 1330 nm  
DEM-436XT-BXD • 10GBASE-LR BiDi SFP+ transceiver (w/o DDM) 20 km, Tx: 1330 nm, Rx: 1270 nm

#### Optional 1G SFP Transceivers<sup>4</sup>

DEM-310GT • 1000BASE-LX SFP transceiver, single-mode fiber, 10 km, 3.3 V operating voltage  
DEM-311GT • 1000BASE-SX SFP transceiver, multi-mode fiber, 550 m, 3.3 V operating voltage  
DEM-312GT2 • 1000BASE-SX SFP transceiver multi-mode fiber, 2 km, 3.3 V operating voltage  
DEM-314GT • 1000BASE-LH SFP transceiver, single-mode fiber, 50 km, 3.3 V operating voltage  
DEM-315GT • 1000BASE-ZX SFP transceiver, single-mode fiber, 80 km, 3.3 V operating voltage  
DEM-330T • 1000BASE-BX WDM SFP transceiver, single-mode fiber, 10 km, 3.3 V operating voltage, Tx: 1550 nm, Rx: 1310 nm

Image with 2 front-to-back AC PSUs and 5 front-to-back fan modules  
DXS-3610-54S-SE-LIC DXS-3610-54S Standard Image to Enhanced Image License  
DXS-3610-54T-SE-LIC DXS-3610-54T Standard Image to Enhanced Image License  
DXS-PWR700AC 770 W AC modular power supply with front-to-back airflow  
DXS-PWR1000DC 1100 W DC modular power supply with front-to-back airflow  
DXS-FAN200 Fan tray with front-to-back airflow

DEM-330R • 1000BASE-BX WDM SFP transceiver, single-mode fiber, 10 km, 3.3 V operating voltage, Tx: 1310 nm, Rx: 1550 nm  
DEM-331T • 1000BASE-BX WDM SFP transceiver, single-mode fiber, 40 km, 3.3 V operating voltage, Tx: 1550 nm, Rx: 1310 nm  
DEM-331R • 1000BASE-BX WDM SFP transceiver single-mode fiber, 40 km, 3.3 V operating voltage, Tx: 1310 nm, Rx: 1550 nm  
DGS-712 • 1000BASE-TX SFP transceiver

#### Optional 100G QSFP28 Direct Attach Cables

DEM-CB100Q28 • 100G QSFP28 to QSFP28 1 m Direct Attach Cable

#### Optional 40G QSFP+ Direct Attach Cables

DEM-CB100QXS • 40G QSFP+ to QSFP+ 1 m Direct Attach Cable  
DEM-CB300QXS • 40G QSFP+ to QSFP+ 3 m Direct Attach Cable

#### Optional 10G SFP+ Direct Attach Cables

DEM-CB100S • 10G SFP+ to SFP+ 1 m Direct Attach Cable  
DEM-CB300S • 10G SFP+ to SFP+ 3 m Direct Attach Cable  
DEM-CB700S • 10G SFP+ to SFP+ 7 m Direct Attach Cable

<sup>1</sup> Will be supported in future releases.

<sup>2</sup> Based on maximum value of Switch Resource Management (SRM)

<sup>3</sup> Table is shared between all multicast functions

<sup>4</sup> Only supports full duplex mode

### Key Series Features

- 48 x 1/10GbE SFP/SFP+ ports 6 x 40/100GbE QSFP+/QSFP28 ports
- 48 x 1/10GbE Base-T ports 6 x 40/100 GbE QSFP+/QSFP28 ports
- Two AC/DC hot-swappable power modules for
- 1+1 power redundancy and load sharing
- Hot-swappable fan trays with front-to-back airflow and N+1 cooling redundancy
- Up to 1200G stacking bandwidth with twelve devices functioning together as a single unit
- IEEE 802.1Qbb Priority-based Flow Control (PFC)
- MPLS
- ERPS (G.8032 v1/v2)
- MACSec1 (DXS-3610-54T 10G BASE-T port only)
- OpenFlow v1.3
- IEEE 802.3ah Ethernet link OAM
- IEEE 802.1ag
- ITU-T Y.1731
- Web-based GUI, Command Line Interface (CLI)

### Upgradable to Enhanced Image

- L3 Multicasting
- MPLS
- L3 VPN
- L3 Routing

MODEL		DXS-3610-54S	DXS-3610-54T
Interfaces	Ports	• 48 x 1/10GbE SFP/SFP+ ports • 6 x 40/100GbE QSFP+/QSFP28 ports	• 48 x 1/10GbE Base-T ports • 6 x 40/100 GbE QSFP+/QSFP28 ports
	Console Port	RJ-45 console port for out-of-band management	
General Features	Stackability	Physical Stack up to 12 units, Virtual Stacking/Clustering up to 32 units	Physical Stack up to 12 units, Virtual Stacking/Clustering up to 32 units
	Switching Capacity	2.16 Tbps	2.16 Tbps
	Forwarding Mode	1607.04 Mpps	1607.04 Mpps
	Packet Buffer Memory	32 MB	
	MAC Address Table	Up to 288K	
	Flow Control	802.3x, HOL Blocking Prevention	
Layer 2 Features	803.2AX Link Aggregation	Max. 32 groups per device, 12 ports per group	
	Port Mirroring	Supports One-to-One, Many-to-One, Mirroring for Tx/Rx/Both, 4 mirroring groups	
	Flow Mirroring	Supports One-to-One, Many-to-One, Mirroring for Rx, 4 mirroring groups	
	Jumbo Frame	Up to 9416 bytes	
Layer 3 Features	ARP	512 Static ARP	
	IP Interface	Supports 256 interfaces	
	Default Routing	✓	
	Static Routing	Max. 1K IPv4 entries, Max. 512 IPv6 entries, secondary route, 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	
L3 Multicasting* (/EI)	Table Size	Up to 16K	
	Protocols	IGMP v1, v2c, v3, PIM-SM IPv4/IPv6, PIM-DM, Multicast Source Discovery Protocol (MSDP), PIM-Sparse-Dense Mode, PIM-SSM, DVMRP v3, MLD v1/v2	
Quality of Service (QoS)	Standard	802.1p	
	No. of Queues	8 queues per port	
	Queue handling	Strict, Weighted Round Robin (WRR), Strict + WRR, Round Robin (RR), Weighted Deficit Round Robin (WDRR)	
	QoS based on	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)	
		Flow-Based (Ingress/Egress, min. granularity 8 Kb/s)	
		Per Queue Bandwidth Control (min. granularity 8 Kb/s)	
Security	Port Security	Up to 12K MAC addresses per port/system	
	Broadcast/Multicast/Unicast Storm Control	✓	
	IPv6 Route Advertisement (RA) Guard	✓	
	DHCP Server Screening	✓	
	IP-MAC-Port Binding	ARP Inspection, IP Source Guard, DHCP Snooping	
	DHCP Server Screening	✓	
	ARP Spoofing Prevention	Max 64 Entries	
	Traffic Segmentation	✓	
	D-Link SafeGuard Engine	✓	
Enhanced Image (EI) Additional Features	L3 Multicasting	Multicast Table Size: up to 16K, IGMP v1, v2c, v3, PIM-SM IPv4/IPv6, PIM-DM, MSDP, PIM-Sparse-Dense Mode, PIM-SSM, DVMRP v3, MLD v1/v2	
	MPLS	Label Distribution Protocol (LDP), Penultimate Hop Popping (PHP), Virtual Private Wire Service (VPWS), Virtual Private LAN Service (VPLS), BGP/MPLS VPN, Multiprotocol extensions for BGP4, Virtual Routing Forwarding (VRF), LSP MPLS Ping/Traceroute	
	L3 VPN	MPLS/BGP L3 VPN, MP-BGP, VRF aware application	
	L3 Routing	BGP v4/v4+, IS-IS, IS-ISv6, VRF Lite, BGPv4, OSPFv2, IPv4 Static Route, RIPv1/2, IP Directed Broadcast, Bidirectional Forwarding Detection (BFD), BGP	
Authentication, Authorisation and Accounting (AAA)	802.1x Authentication	Supports Port-based access control, supports Host-based access control, Dynamic VLAN Assignment, Identity-driven Policy (VLAN/ACL/QoS) Assignment	
	Access Control	802.1p priority, VLAN, MAC address, EtherType, IP address, DSCP, Protocol type, TCP/UDP port number, IPv6 Traffic Class, IPv6 Flow Label	
	Guest VLAN	✓	
Access Control Lists (ACL)	Max ACL entries	2304 ingress ACL rules, 2K egress ACL rules, 3K VLAN Access Maps	
	Time-Based ACL	✓	
Management	Web-based GUI	✓	
	Command Line Interface (CLI)	✓	
	Telnet, TFTP Client	✓	
	SNMP v1/v2c/v3	✓	
	sFlow	✓	
	RMONv1 / v2	✓	
	OpenFlow v1.3	✓	
	LLDP/LLDP-MED	✓	
Physical and Environment	Power Input	1 + 1 redundant power supply design, Input: 100 to 240 V AC, 50/60 Hz	
	Maximum Power Consumption	320.8 W	330.2 W
	Number of Fans	5	
	Operating Temperature	0°C to 45°C	
	Operating Humidity	0% to 95% RH Non-Condensing	
	Dimensions (W x D x H)	441.0 x 487.44 x 43.5 mm (17.36 x 19.19 x 1.71 in)	
	Mean Time Between Failures (MTBF)	94,262 hours	
Modules / Transceivers	100G QSFP28 Direct Attach Cables	DEM-CB100Q28	
	40G QSFP+ Direct Attach Cables	DEM-CB100QXS, DEM-CB300QXS	
	10G SFP+ Direct Attach Cables	DEM-CB100S, DEM-CB300S, DEM-CB700S	
	100G QSFP28 Transceivers	DEM-Q2801Q-SR4, DEM-Q2810Q-LR4	
	40G QSFP+ Transceivers	DEM-QX01Q-SR4, DEM-QX10Q-LR4	
	10 Gigabit SFP+ Modules	DEM-431XT, DEM-432XT, DEM-433XT, DEM-434XT, DEM-436XT-BXD, DEM-436XT-BXD	
	SFP Transceivers	DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT, DEM-330T, DEM-330R, DEM-331T, DEM-331R, DGS-712	
	Modular Power Supply and Fan	DXS-PWR700AC • 770 W AC modular power supply with front-to-back airflow	
		DXS-PWR1000DC • 1100 W DC modular power supply with front-to-back airflow DXS-FAN200 • Fan tray with front-to-back airflow	



# Layer 3 Stackable 10 G Managed Switches

## DXS-3400 Series

D-Link's DXS-3400 Series Layer 3 Stackable 10 GbE Managed Switches are new, compact, high-performance switches that feature wire-speed 10-Gigabit Ethernet switching, routing, and ultra-low latency. The 1U height and high port density make the DXS-3400 Series suitable for enterprise and campus environments where space is at a premium. The DXS-3400 Series switches also include 20 10GBASE-T or 10G SFP+ ports and 4 10GBASE-T/SFP+ combo ports, making them suitable for datacenter, core, and distribution applications. The DXS-3400 Series switches feature a modular fan and power supply design for a high availability architecture. The hot-swappable design means that fans and power supplies can be replaced

without affecting switch operation. The DXS-3400 Series switches come with 3 modes: IP Mode, LAN Mode, and L2 VPN Mode, which modify the size of the Layer 2 and 3 tables for optimum efficiency.



### Series include the below models

#### DXS-3400-24TC

- 10 Gigabit Base-T x 20
- 10 Gigabit Base-T / SFP+ Combo x 4
- Switching capacity of up to 480 Gbps
- Up to 80G stacking bandwidth
- Up to 4 switches in a stack
- Ring/chain topology support
- Hot-swappable power modules for power redundancy and load sharing
- Hot-swappable fan trays with airflow control provide cooling redundancy

#### DXS-3400-24SC

- 10 Gigabit SFP+ x 20
- 10 Gigabit Base-T / SFP+ Combo x 4
- Switching capacity of up to 480 Gbps
- Up to 80G stacking bandwidth
- Up to 4 switches in a stack
- Ring/chain topology support
- Hot-swappable power modules for power redundancy and load sharing
- Hot-swappable fan trays with airflow control provide cooling redundancy

### Key Series Features

- Two AC/DC hot-swappable power modules for
- 1+1 redundancy and load sharing
- Three hot-swappable fan trays provide N+1 cooling redundancy
- Physical stacking via four 10G ports, can stack up to 4 devices
- Ethernet Ring Protection Switching (ERPS)
- Switch Resource Management (SRM) for flexible management of system resources
- IEEE 802.1Qbb Priority-based Flow Control (PFC)
- IEEE 802.1Qaz Enhanced Transmission Selection (ETS)
- IEEE 802.1Qau Congestion Notification (CN)
- Port mirroring/Bandwidth Control
- Broadcast/Multicast/Unicast storm control
- Single Rate Three Color Marker (srTCM)
- Two Rate Three Color Marker (trTCM)
- RJ-45/Mini-USB console port
- Management and alarm ports
- USB port for firmware and configuration files
- Easy-to-use Web GUI
- Industry-standard CLI

### Upgradable to Enhanced Image

- L3 IPv6 Tunneling
- L3 OSPF Routing
- L3 Multicasting

### Optional Products

#### Optional Software Image Upgrade Licenses

DXS-3400-24SC-SE-LIC DXS-3400-24SC Standard Image to Enhanced Image license  
DXS-3400-24TC-SE-LIC DXS-3400-24TC Standard Image to Enhanced Image license

#### Optional Redundant/Replacement Power Supplies

DXS-PWR300AC 300 W AC modular power supply with front-to-back airflow  
DXS-PWR300DC 300 W DC modular power supply with front-to-back airflow

#### Optional Redundant/Replacement Fan Tray



DXS-FAN100 Fan module with front-to-back airflow

#### 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  
DEM-CB500S 10-GbE SFP+ 5m Direct Attach Stacking Cable  
DEM-CB700S 10-GbE SFP+ 7m Direct Attach Stacking Cable

#### Optional Management Software

DV-700 D-View 7 Network Management System  
DV-800 D-View 8 Network Management System

			
MODEL		DXS-3400-24TC	DXS-3400-24SC
Interfaces	10 Gigabit Ethernet SFP+	—	20
	10 Gigabit Base-T	20	—
	10 Gigabit Base-T/SFP+ Combo	4	4
General Features	Stackability	Virtual Stacking of up to 32 Units; Physical Stacking of up to 4 Units	
	Stacking Speed (per Port)	up to 80 Gbps	
	Switching Capacity	480 Gbps	
	Forwarding Mode	357.12 Mpps	
	Packet Buffer Memory	4 MB	
	MAC Address Table	48 K	
	Flow Control	802.3x, HOL Blocking Prevention	
Layer 2 Features	803.2ad Link Aggregation	Max 32 Groups per Device, 8 Ports per Group	
	Port Mirroring	One-to-One, Many-to-One, Mirroring 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. 256 IPv4 entries, 128 IPv6 Entries, Supports Route Distribution, Supports Secondary Route, Supports Equal Cost/Weighted Cost, Multi-Path Route	
Virtual LAN (VLAN)	VLANs	Up to 4094 Static	
	GVRP	Up to 4094 Dynamic	
	Subnet-based VLAN	✓	
	Double VLAN (Q-in-Q)	Port-Based, Selective	
	Port-based VLAN	✓	
	MAC-based VLAN	✓	
Multicasting	VLAN Group	Max 4K Static VLAN Groups, Max 4094 VIDs	
	Groups	256	
Quality of Service (QoS)	Protocols	IGMP v1 / v2 / v3, PIM-SM, PIM-DM, PIM Sparse-Dense, PIM-SSM, DVMRP v3, MLD v1/v2	
	Standard	802.1p	
	No. of Queues	8 per port	
	Mode	Strict/WRR/Strict + WRR/DRR/WDRR	
	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 64 Kb/s) Flow-Based (Ingress/Egress, min. granularity 64 Kb/s) Per Queue Bandwidth Control (min. granularity 64 Kb/s)	
Security	STP Security	BPDU filtering	
	Per-Port MAC Limitation	✓	
	Static MAC	Up to 12K Addresses per Port/System	
	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	✓	
Data Centre Features	D-Link SafeGuard Engine	✓	
	DCB Standards Supported	IEEE 802.1Qbb Priority-based Flow Control (PFC), IEEE 802.1Qaz Enhanced Transmission Selection (ETS), IEEE 802.1Qau Congestion Notification (QCN), NLB	
Enhanced Image (EI) Additional Features	L3 Multicasting	Multicast Table Size: 2K, IGMP v1, v2, v3, PIM-SM, PIM-DM, PIM-Sparse-Dense Mode, PIM-SSM, DVMRP v3, MLD v1/v2	
	L3 Features	IPv6 Tunneling (Static, ISATAP, GRE, 6to4), VRRP	
	L3 Routing	Supports 4096K hardware routing entries shared by IPv4/IPv6 (max. 4096K IPv4 entries, max. 1024K IPv6 entries), Supports 32K hardware L3 forwarding entries shared by IPv4/IPv6 (max. 32K IPv4 entries, max. 16K 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, 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, 512K Egress ACL Rule, 3K 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 Label	
Management	Web-based GUI	✓	
	Command Line Interface (CLI)	✓	
	Telnet, TFTP Client	✓	
	SNMP	✓	
	SSH	✓	
	RMON	✓	
	RADIUS/TACACS+	✓	
Physical and Environment	LLDP/LLDP-MED	✓	
	Power Supply	Internal	
	Maximum Power Consumption	159.8 W	118.6 W
	Number of Fans	3	
	Operating Temperature	-5°C to 50°C	
	Operating Humidity	0% to 95% RH Non-Condensing	
Modules / Transceivers	Dimensions (W x D x H)	441 x 44 x 380 mm	
	10 Gigabit SFP+ Modules	DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD, DEM-433XT, DEM-433XT-DD, DEM-434XT, DEM-435XT, DEM-435XT-DD, DEM-436XT-BXD, DEM-436XT-BXU	
	SFP Transceivers	DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT	

# Layer 3 Stackable Gigabit Managed Switches

## DGS-3630 Series (with 10G Uplinks)

The DGS-3630 Series Layer 3 Stackable Managed Switches are designed for medium to larger sized businesses, large Enterprises, and ISPs. They deliver high performance, flexibility, fault tolerance, and advanced software features for maximum return on investment. With Gigabit Ethernet RJ45 and SFP ports, 10 GbE SFP+ ports, advanced security features, and advanced Quality of Service (QoS), the DGS-3630 Series can act as core, distribution or access layer switches. High port densities, switch stacking, and easy management make the DGS-3630 Series suitable for a variety of applications. The DGS-3630 Series switches include the Standard Image (SI) software, and for additional functionality, they may be upgraded to Enhanced Image (EI) via a separately ordered license upgrade. The Standard Image provides core SMB and SME functionality, such as L2 switching, entry-level routing, L2 multicast, advanced QoS, Operations, Administration, and Maintenance (OAM), and robust security features. The Enhanced Image includes all the features from the Standard Image, and also supports full L3 routing for Enterprise integration, including OSPF, BGP, VRF-Lite and L3 multicast. This approach allows I.T. managers to deploy a lower cost L2/L2+ solution today, and upgrade

to a L3 solution in the future if networking needs change and a full dynamic routing solution is required.



### Series include the below models

#### DGS-3630-28TC

- 10/100/1000BASE-T ports x 20
- Combo 10/100/1000BASE-T/SFP ports x 4
- 10 Gigabit SFP+ ports x 4

#### DGS-3630-28SC

- SFP ports x 20
- Combo 10/100/1000BASE-T/SFP ports x 4
- 10 Gigabit SFP+ ports x 4

#### DGS-3630-28PC

- 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 (740 W with DPS-700 RPS)\*

#### DGS-3630-52TC

- 10/100/1000BASE-T ports x 44
- Combo 10/100/1000BASE-T/SFP ports x 4
- 10 Gigabit SFP+ ports x 4

#### DGS-3630-52PC

- 10/100/1000BASE-T ports x 44
- 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 (740 W with DPS-700 RPS)\*

### Key Series Features

- Physical stacking up to 9 units, 432 GbE ports
- Supports long-distance stacking over fiber
- 80 Gbps per device physical stacking bandwidth
- 20/44 10/100/1000BASE-T ports or 20 SFP ports
- 4 Combo 10/100/1000BASE-T/SFP ports
- 4 10-Gigabit SFP+ uplink ports
- Switch Resource Management (SRM) for flexible management of system resources
- 6 kV surge protection on all RJ45 access ports
- Redundant Power Supply (RPS) support
- IEEE 802.1D/802.1w/802.1s
- Spanning Tree
- Loopback Detection (LBD)
- Ethernet Ring Protection
- Switching (ERPS)
- RJ45/mini-USB console port
- Management and alarm ports
- USB port for firmware and configuration files
- Easy-to-use web GUI
- Industry standard CLI
- IEEE 802.3ah Ethernet First Mile (EFM)
- IEEE 802.1ag/ITU-T Y.1731 OAM

### Upgradable to Enhanced Image

- Super VLAN
- L3 Routing: BGP, VRF-Lite, OSPF
- L3 Multicasting

### Upgradable to MPLS Image

- L3 Routing: IS-IS
- MPLS

### 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
- DEM-CB700S 10-GbE SFP+ 7m Direct Attach Stacking Cable

#### Optional Redundant Power Supplies

- DPS-500A Redundant power supply unit for DGS-3630-28TC, DGS-3630-28SC, DGS-3630-52TC
- DPS-500DC DC Redundant power supply unit for DGS-3630-28TC, DGS-3630-28SC, DGS-3630-52TC
- DPS-700 Redundant power supply unit for DGS-3630-28PC, DGS-3630-52PC

\*Revision A2 comply with UL 62368 / EN 62368-1.



		NON POE			POE	
MODEL		DGS-3630-28TC	DGS-3630-28SC	DGS-3630-52TC	DGS-3630-28PC	DGS-3630-52PC
Interfaces	Gigabit Ethernet	20	—	44	20 (PoE)	44 (PoE)
	Gigabit SFP Slots	—	20	—	—	—
	Combo 10/100/1000BASE-T/SFP Slots	4	4	4	4 (PoE)	4 (PoE)
	10 Gigabit SFP+ Slots	4	4	4	4	4
General Features	Stackability	Virtual Stacking of up to 32 Units; Physical Stacking of up to 9 Units				
	Stacking Speed	up to 80 Gbps				
	Switching Capacity	128 Gbps	128 Gbps	176 Gbps	128 Gbps	176 Gbps
	Forwarding Mode	Store-and-Forward				
	Packet Buffer Memory	4 MB				
	MAC Address Table	68,000				
	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, RIPvng*, OSPF v2, OSPF v3*, BGP v4*, BGP+ v4*, IS-ISv4/v6**				
	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	8,000				
	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/WDRR				
	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	Port Security for up to 3328 MAC Addresses for Port/System/VLAN				
	Storm Control	Broadcast / Multicast / Unicast				
	IP-MAC-Port Binding	12,000 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)	Max. ACL Entries	Ingress: 4K Egress: 1K, VLAN Access Map Numbers: 3K				
	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 (740 W with DPS-700 RPS)	370 W (740 W with DPS-700 RPS)
	Time-Based PoE	—	—	—	✓	✓
	Switch Access	Web GUI, Telnet, Console				
Management	sFlow	✓				
	SNMP	V1 / V2c / V3				
	DHCP	Server, Client, Relay (IPv4, IPv6)				
	RMON	✓				
	TFTP Client	✓				
	Syslog	✓				
Physical and Environment	Power Supply	Internal				
	Maximum Power Consumption	42.4 W	63.58 W	62 W	469.3 W	485 W
	Power-Saving Technology	Green Ethernet				
	Operating Temperature	-5°C to 50°C				
	Operating Humidity	10% to 95% RH Non-Condensing				
	Dimensions (W x D x H)	441 x 259.8 x 44 mm	441 x 259.8 x 44 mm	441 x 259.8 x 44 mm	441 x 380 x 44 mm	441 x 380 x 44 mm
	Mean Time Between Failures (MTBF)	300,190 Hours	280,612 Hours	263,936 Hours	259,222 Hours	199,929 Hours
Modules / Transceivers	10 Gigabit SFP+ Transceivers	DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD, DEM-433XT, DEM-433XT-DD, DEM-434XT, DEM-435XT, DEM-435XT-DD, DEM-436XT-BXD, DEM-436XT-BXU				
	SFP Transceivers	DEM-210, DEM-211, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT				

\* Enhanced Image (E) only  
\*\* MPLS Image (MI) only



# Layer 3 Lite Stackable Gigabite Managed Switches

## DGS-3130 Series (with 10G Uplinks)

The DGS-3130 Series is an enhanced Layer 3 Lite Stackable Managed Solution designed to connect end-users in a secure SMB or enterprise network, which is perfect for businesses that require a high level of network security and maximum uptime. Its comprehensive security features and PoE support makes it suitable for any business environment where manageability, reliability and high port densities are necessary at an affordable price. It includes advanced Quality of Service (QoS), traffic shapping, L2 Multicasting, Robust Security features and IPv6 features which are suitable for next-generation IPv6 networks or triple play applications over Metro Ethernet.



### Series include the below models

#### DGS-3130-30TS

- 10/100/1000BASE-T ports x 24
- 10GBASE-T ports x 2
- 10 Gigabit SFP+ ports x 4

#### DGS-3130-30S

- SFP ports x 24
- 10GBASE-T ports x 2
- 10 Gigabit SFP+ ports x 4

#### DGS-3130-30PS

- 10/100/1000BASE-T PoE ports x 24
- 10GBASE-T ports x 2
- 10 Gigabit SFP+ ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370W PoE Power Budget  
(740W with DPS-700 RPS)\*

#### DGS-3130-54TS

- 10/100/1000BASE-T ports x 48
- 10GBASE-T ports x 2
- 10 Gigabit SFP+ ports x 4

#### DGS-3130-54S

- SFP ports x 48
- 10GBASE-T ports x 2
- 10 Gigabit SFP+ ports x 4

#### DGS-3130-54PS

- 10/100/1000BASE-T PoE ports x 48
- 10GBASE-T ports x 2
- 10 Gigabit SFP+ ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370W PoE Power Budget  
(740W with DPS-700 RPS)\*

### Key Series Features

- 80G Physical Stacking Bandwidth, up to 9 units
- Optional Redundant Power Supply
- IEEE 802.3x flow control, HOL blocking prevention flow control
- Comprehensive Security
- Supports Microsoft NAP
- sFlow
- Loopback Detection (LBD)
- Link aggregation
- Port mirroring
- 8 queues per port
- DSCP
- 802.1p
- Bandwidth control
- Queue handling
- Time-based QoS
- ERPS multi ring / sub-ring\*
- Policy based route\*
- IGMP / OSPF\*
- Carrier grade OAM 802.1ag / Y.1731 CFM\*
- PD Alive\*
- ACL expert access group\*
- Support in Firmware R1.10

### Optional Accessories

#### Optional Redundant Power Supply

DPS-500A	140 W AC Redundant Power Supply for DGS-3130-30S/TS, DGS-3130-54S/TS
DPS-700	589W Redundant Power Supply for DGS-3130-30PS/54PS

#### Optional 10 Gbps SFP+ Direct Attach Cables

DEM-CB100S	10 Gigabit SFP+ 1 m Direct Attach Cable
DEM-CB300S	10 Gigabit SFP+ 3 m Direct Attach Cable
DEM-CB700S	10 Gigabit SFP+ 7 m Direct Attach Cable



		NON POE				POE	
MODEL		DGS-3130-30TS	DGS-3130-30S	DGS-3130-54TS	DGS-3130-54S	DGS-3130-30PS	DGS-3130-54PS
Interfaces	Gigabit Ethernet	24		48		24 (PoE)	48 (PoE)
	SFP Slots		24		48		
	10GBASE-T	2	2	2	2	2	2
	10 Gigabit SFP+ Slots	4	4	4	4	4	4
General Features	Stackability	Virtual Stacking of up to 32 Units; Physical Stacking of up to 9 Units					
	Stacking Speed	Up to 80 Gbps full duplex					
	Switching Capacity	168 Gbps	168 Gbps	216 Gbps	216 Gbps	168 Gbps	216 Gbps
	Max Packet Forwarding Rate	125 Mpps	125 Mpps	161 Mpps	161 Mpps	125 Mpps	161 Mpps
	Packet Buffer Memory	2 MB	2 MB	4 MB	4 MB	2 MB	4 MB
	MAC Address Table	16,000					
	Flow Control	IEEE 802.3x Flow Control, HOL Blocking Prevention					
	Jumbo Frame	9216 Bytes					
Layer 2 Features	Loop Protection	802.1D, 802.1w, 802.1s, ERPS					
	802.3ad Link Aggregation	32 Groups, 8 Gigabit Ports per Group					
	Port Mirroring	One-to-One, Many-to-One, Mirroring for Tx/Rx/Both, Flow-Based (ACL) Mirroring, RSPAN					
	Loopback Detection	✓					
	Cable Diagnostics	✓					
Layer 3 Features	IP Interfaces	16					
	Routing Protocols	Static, RIP v1/v2, RIPv6					
	Policy-Based Routing	✓					
	VRRP	✓					
Virtual LAN (VLAN)	VLANs	4096 Static					
	GVRP	4000 Dynamic					
	Protocol VLAN (802.1v)	✓					
	Double VLAN (Q-in-Q)	Port-Based / Selective					
Layer 2 Multicasting	Groups	1024					
	Protocols	IGMP Snooping v1/v2/v3, MLD Snooping v1 / v2					
Quality of Service (QoS)	Standard	802.1p, DSCP					
	Number of Queues	8					
	Mode	Strict / WRR / Strict+WRR / DRR					
	CoS Handling	VLAN ID, 802.1p Priority Queue, MAC, IPv4/v6 Address, Ether Type, DSCP, TCP/UDP Port, Protocol Type, IPv6 Traffic Class, IPv6 Flow Label, User-Defined Packet Content					
Security	Bandwidth Control	Flow-Based (Ingress, min. granularity 8 kbps), Port-Based (Ingress / Egress min. granularity 8 kbps)					
	STP Security	BPDU Filtering, Root Restriction					
	Port Security	✓					
	DoS Attack Prevention	✓					
	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/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)	802.1x, NAP, DHCP NAP					
	Guest VLAN	✓					
	Switch Access	RADIUS / TACACS+, 4-Level User Account					
Access Control Lists (ACL)	Rules	Ingress ACL: 8 Profiles, 2048 Rules per Profile; Egress ACL: 4 Profiles, 512 Rules per Profile					
	ACL Handling	Ether Type, VLAN ID, 802.1p Priority, MAC, IPv4/v6 Address, DSCP, TCP/UDP Port, Protocol Type, IPv6 Traffic Class, IPv6 Flow Label, User-Defined Packet Content					
	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 (740 W with DPS-700 RPS)	370 W (740 W with DPS-700 RPS)
	Time-Based PoE					✓	✓
Management	Switch Access	Web GUI, CLI, Telnet, Console					
	sFlow, TFTP Client, Syslog	✓					
	SNMP	v1 / v2c / v3					
	DHCP	Server, Client, Relay					
	RMON	v1 / v2					
Physical and Environment	Power Supply	Internal with RPS Option					
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet					
	Operating Temperature	0°C to 50°C					
	Operating Humidity	10% to 90% RH Non-Condensing					
	Dimensions (W x D x H)	440 x 250 x 44 mm	441 x 250 x 44 mm	441 x 290 x 44 mm	441 x 350 x 44 mm	441 x 350 x 44 mm	441 x 350 x 44 mm
Modules / Transceivers	10 Gigabit SFP+ Transceivers	DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD, DEM-433XT, DEM-433XT-DD, DEM-434XT, DEM-435XT, DEM-435XT-DD, DEM-436XT-BXU, DEM-436XT-BXD					
	SFP Transceivers	DEM-210, DEM-211, DEM-220T, DEM-220R, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT, DEM-330T, DEM-330R, DEM-331T, DEM-331R, DGS-712					

# Metro Ethernet Gigabit Layer 2 Managed Switches

## DGS-3000 Series (with 10G Uplinks\*)

The DGS-3000 Series Managed Gigabit Switches are part of the Layer 2+ family of D-Link's managed switch product line that provides wired Gigabit speeds for Metro Ethernet and campus networks. They feature a variety of ports, including 10/100/1000BASE-T RJ-45 ports, 1G SFP ports, and 10G SFP+ ports for increased network bandwidth. DGS-3000 Series supports up to 6 kV surge protection on all Ethernet ports, advanced Layer 2+ functions, and a suite of security and management tools make the DGS-3000 Series Managed Gigabit Switches ideal for Metro Ethernet and campus applications. The DGS-3000 Series Managed Gigabit Switches come with a variety of port types, including 1 G RJ-45 ports, 1 G SFP ports, and 10G SFP+ ports, with all models offering a minimum of at least 2 1 G SFP ports. The DGS-3000-28X, DGS-3000-28XS, and DGS-3000-52X offer 4 10G SFP+ ports for improved bandwidth and fault tolerance. The DGS-3000-28LP and DGS-3000-28XMP switches feature Power over Ethernet (PoE), allowing compatible devices to be installed in remote locations without immediate access to power outlets.



## Series include the below models

### DGS-3000-10L

- 10/100/1000BASE-T port X 8
- SFP port x 2
- 11 inch, 1U rack mount
- Fanless

### DGS-3000-20L

- 10/100/1000BASE-T port X 16
- SFP port x 4
- 11 inch, 1U rack mount
- Fanless

### DGS-3000-28L

- 10/100/1000BASE-T port X 24
- SFP port x 4
- 19 inch, 1U rack mount
- Fanless

### DGS-3000-28LP

- 10/100/1000BASE-T PoE port X 24
- SFP port x 4 IEEE 802.3af/802.3at
- 193W PoE Power Budget
- 19 inch, 1U rack mount
- 2 x Smart Fan

### DGS-3000-28X

- 10/100/1000BASE-T port X 24
- 10G SFP+ port x 4
- 19 inch, 1U rack mount
- Smart Fan

### DGS-3000-28XMP

- 10/100/1000BASE-T PoE port X 24
- 10G SFP+ port x 4
- IEEE 802.3af/802.3at
- 370W PoE Power Budget
- 19 inch, 1U rack mount
- 2 x Smart Fan

### DGS-3000-28XS

- SFP port x 24
- 10G SFP+ port x 4
- 19 inch, 1U rack mount
- 2 x Smart Fan

### DGS-3000-52L

- 10/100/1000BASE-T port X 48
- SFP port x 4
- 19 inch, 1U rack mount
- 2 x Smart Fan

### DGS-3000-52X

- 10/100/1000BASE-T port X 48
- 10G SFP+ port x 4
- 19 inch, 1U rack mount
- 2 x Smart Fan

## Optional Accessories

### Optional 10 Gigabit Ethernet SFP+ Direct Attach Cables (DGS-3000-28X, 28XMP, 28XS, and 52X only)

- DEM-CB100S 10G SFP+ 1 m Direct Attach Cable
- DEM-CB300S 10G SFP+ 3 m Direct Attach Cable
- DEM-CB700S 10G SFP+ 7 m Direct Attach Cable

### Optional Redundant Power Supplies

- DPS-500A 140 W Redundant Power Supply (Alternating Current)
- DPS-500DC 140 W Redundant Power Supply (Direct Current)
- DPS-CB150-2PS v.B1 150 cm RPS cable for connecting the DGS-3000 Series with the DPS-500A and DPS-500DC

### Optional Management Software

- DV-700 D-View 7 Network Management System
- DV-800 D-View 8 Network Management System

## Key Series Features

- 6 kV surge protection for Ethernet ports
- Real Time Clock (RTC)
- Dying Gasp
- Ethernet Ring Protection Switching (ERPS)
- Redundant Power Supply (RPS) support
- VLAN trunking
- VLAN mirroring
- ISM VLAN (Multicast VLAN)
- RSPAN
- Access Control Lists (ACLs)
- D-Link Safeguard Engine
- BPDU attack protection
- ARP spoofing prevention
- IP-MAC-Port Binding
- DoS attack prevention
- IEEE 802.1X port-based Access Control
- WAC/MAC-based Access Control
- Guest VLAN
- 802.1ag CFM
- 802.3ah Ethernet Link OAM
- SNMP v1/v2c/v3
- RMON v1/v2
- LLDP/LLDP-MED












## NON POE

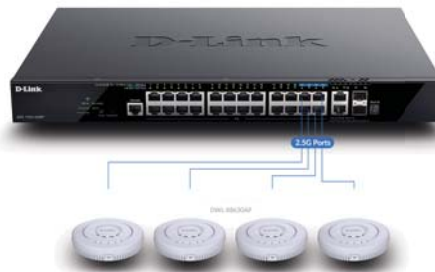
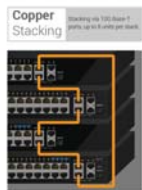
MODEL		DGS-3000-10L	DGS-3000-20L	DGS-3000-28L	DGS-3000-28X
Interface	Gigabit Ethernet	8	16	24	24
	SFP Slots	2	4	4	—
	10 Gigabit Slots SFP+	—	—	—	4
General Features	Stackability				
	Stacking Speed (per Port)				
	Switching Capacity	20 Gbps	40Gbps	56Gbps	128Gbps
	Forwarding Mode				
	Packet Buffer Memory				
	MAC Address Table				
	Flow Control				
	MDI/MDIX				
Layer 2 Features	Loop Protection				
	803.2ad Link Aggregation				
	Port Mirroring				
	Loopback Detection				
	Cable Diagnostics				
Virtual LAN (VLAN)	VLANs				
	GVRP				
	Protocol VLAN (802.1v)				
	Double VLAN (Q-in-Q)				
Multicasting	Groups				
	Protocols	IGMP			
Quality of Service (QoS)	Standard				
	No. of Queues				
	Mode	Strict			
	CoS Handling	802.1p Priority Queues, VLAN ID, MAC Address, Ether Type,			
	Bandwidth Control				
Security	STP Security				
	Per-Port MAC Limitation				
	Static MAC				
	Storm Control				
	IP-MAC-Port Binding				
	DHCP Server Screening				
	ARP Spoofing Prevention				
	Traffic Segmentation				
Power over Ethernet	D-Link SafeGuard Engine				
	Standard	—	—	—	—
	PoE Ports	—	—	—	—
	PoE Power Budget	—	—	—	—
Management	Switch Access				
	sFlow				
	SNMP				
	DHCP				
	RMON				
	TFTP Client				
	Syslog				
Physical and Environment	Power Supply				
	Maximum Power Consumption	13.6 W	15.6W	17.6W	220.1W
	No of Fans	Fanless	Fanless	Fanless	1
	Operating Temperature				
	Operating Humidity				
	Dimensions (W x D x H)	280 x 140 x 44 mm	280 x 140 x 44 mm	440 x 210 x 44 mm	440 x 210 x 44 mm
	Mean Time Between Failures (MTBF)	841,608 Hours	762,952 Hours	635,099 Hours	652,062 Hours
Modules/ Transceivers	SFP Transceivers				
	10GbE SFP+ Transceivers	DEM-431XT, DEM-431XT-DD, DEM-432XT,			
	WDM SFP Transceivers				

    				
POE				
DGS-3000-28XS	DGS-3000-52L	DGS-3000-52X	DGS-3000-28LP	DGS-3000-28XMP
—	48	48	24 (PoE)	24 (PoE)
24	4	—	4	—
4	—	4	—	4
Virtual Stacking of up to 32 Units				
—	—	—	—	—
128Gbps	104Gbps	176Gbps	56Gbps	128Gbps
Store-and-Forward				
1.5 MB				
16,000				
IEEE 802.3x Flow Control, HOL Blocking Prevention				
Configurable				
802.1D, 802.1w, 802.1s, ERPS				
802.3ad 802.1AX				
One-to-One, Many-to-One, Flow-based (ACL) Mirroring				
✓				
✓				
4K				
✓				
✓				
✓				
1024				
v1/v2 snooping, v3 awareness, MLD v1, v2 awareness				
DSCP, 802.1p				
8				
Priority Queue (SPQ), Weighted Round Robin (WRR), SPQ + WRR				
IPv4/v6 Address, IPv6 Traffic Class, IPv6 Flow Label, DSCP, Protocol Type, TCP/UDP Port, User-Defined Packet Content				
Port-Based, Host-Based, Dynamic VLAN assignment				
BPDU Filtering, Root Restriction				
✓				
512				
✓				
✓				
✓				
✓				
✓				
✓				
—	—	—	802.3af (PoE) 802.3at (PoE+)	802.3af (PoE) 802.3at (PoE+)
—	—	—	24	24
—	—	—	193W	370W
Web GUI, Telnet, SSH, Console				
✓				
✓				
✓				
✓				
✓				
✓				
Internal				
53.4W	39.0W	40.7W	246.5W	445.2W
2	2	2	2	2
-5°C to 50°C				
10% to 95% RH Non-Condensing				
440 x 210 x 44 mm	440 x 210 x 44 mm	440 x 210 x 44 mm	440 x 210 x 44 mm	440 x 308 x 44 mm
574,974 Hours	501,290 Hours	465,240 Hours	304,565 Hours	268,693 Hours
DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT				
DEM-432XT-DD, DEM-433XT, DEM-433XT-DD, DEM-435XT, DEM-436XT-BXU, DEM-436XT-BXD				
DEM-330T, DEM-330R, DEM-331T, DEM-331R				

# Layer 3 Stackable Gigabit Smart Managed Switches

## DGS-1520 Series (with 2.5G PoE + 10G Uplinks)

The DGS-1520 Series, a new generation Layer 3 Stackable Smart Managed Switches, includes four 10 GB ports for uplink or stacking up to a total of eight switches with a total of 80 Gigabit stacking bandwidth. Designed for effortless multi-site network deployments with Zero Touch Provisioning, the DGS-1520 Series is also powerful enough for server and storage applications. For unrestricted Wi-Fi 6 edge device capabilities, PoE models offer four 2.5 GB Base-T ports for Multi-Gigabit connectivity. For SMBs with expanding networks and significant bandwidth growth, the DGS-1520 effortlessly adds highly cost-effective 10 GB connectivity to ensure seamless aggregation between access and core layers.



### Series include the below models

#### DGS-1520-28

- 10/100/1000 Base-T ports x 24
- 10G Base-T ports x 2
- 10G SFP+ ports x 2

#### DGS-1520-28MP

- 10/100/1000 Base-T PoE ports x 20
- 2.5G Base-T PoE ports x 4
- 10G Base-T ports x 2
- 10G SFP+ ports x 2
- 370W, 740W (with RPS)

#### DGS-1520-52

- 110/100/1000 Base-T ports x 48
- 10G Base-T ports x 2
- 10G SFP+ ports x 2

#### DGS-1520-52MP

- 10/100/1000 Base-T PoE Ports x 44
- 2.5G Base-T PoE Ports x 4
- 10G Base-T Ports x 2
- 10G SFP+ Ports x 2
- 370W, 740W (with RPS)

### Optional Products

#### DEM-Optional SFP Transceivers

310GT 1000BASE-LX, single-mode, 10 km  
DEM-311GT 1000BASE-SX, multi-mode, 550 m  
DEM-312GT2 1000BASE-SX, multi-mode, 2 km  
DEM-314GT 1000BASE-LHX, single-mode, 50 km  
DEM-315GT 1000BASE-ZX, single-mode, 80 km  
DGS-712 1000BASE-T to SFP transceiver

#### Optional WDM SFP Transceivers

DEM-330T 1000BASE-LX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 10 km  
DEM-330R 1000BASE-LX, Wavelength Tx:1310 nm Rx:1550 nm, Single-mode, 10 km  
DEM-331T 1000BASE-LX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 40 km  
DEM-331R 1000BASE-LX, Wavelength Tx:1310nm Rx:1550 nm, Single-mode, 40 km

#### Optional SFP+ Transceivers

DEM-431XT 10GBASE-SR Multi-mode, OM1:33M/OM2:82M/OM3:300M (w/o DDM)  
DEM-432XT 10GBASE-LR Single-mode, 10 km (w/o DDM)  
DEM-433XT 10GBASE-ER Single-mode, 40 km (w/o DDM)  
DEM-434XT 10GBASE-ZR Single-mode, 80 km (w/o DDM)  
DEM-436XT-BXD 10GBASE-LR Single-mode, 20 km (TX-1330/RX-1270 nm) (w/o DDM)  
DEM-436XT-BXU 10GBASE-LR Single-mode, 20 km (TX-1270/RX-1310 nm) (w/o DDM)

#### Optional SFP+ Direct Attach Stacking Cables

DEM-CB100S 1 m 10G SFP+ Direct Attach Cable (DAC)  
DEM-CB300S 3 m 10G SFP+ Direct Attach Cable (DAC)  
DEM-CB700S 7 m 10G SFP+ Direct Attach Cable (DAC)

#### Optional Redundant Power Supplies

DPS-520 PoE Redundant Power Supply for Non-PoE Models only  
DPS-700 AC Redundant Power Supply for PoE Models only

### Key Series Features

- 24 or 48 x 10/100/1000Base-T ports
- 20 or 44 x 10/100/1000Base-T PoE and 4 x 2.5GBase-T PoE
- 2 x 10GBase-T and 2 x SFP+ uplink ports
- Physical Stacking of up to 8 units
- 2 x 10GBase-T and/or 2 x SFP+
- 80 Gbps physical stacking bandwidth
- Hybrid Stacking
- RSPAN
- Selective Q-in-Q
- IGMP v1/v2/v3
- MLD v1/v2
- PIM-SM/DM/SSM
- Static Route
- RIP/RIPng
- OSPF
- Ethernet Ring Protection Switching (ERPS)
- Virtual Router Redundancy Protocol (VRRP)
- Redundant Power Supply (RPS) support
- D-View 7
- D-Link Network Assistant (DNA)
- Zero Touch Provisioning (ZTP)

# D-Link DGS-1520 Series Multi-Gigabit Smart Managed Switch

## 01. Stackable Scalability

The DGS-1520 Series feature four 10-Gigabit ports (two 10GBASE-T & two SFP+) for high-speed uplink or stacking up to eight DGS-1520 switches with a total of 80G stacking bandwidth using hybrid mode (copper and fiber). SMBs can quickly add cost-effective 10 Gigabit aggregation to the network infrastructure with flexible stacking scalability.



## 02. Multi-Gigabit & PoE

PoE models of the DGS-1520 Series provide power (up to a total of 370W per switch, or 740W with the DPS-700 redundant power supply) to PoE-enabled devices and offer the convenience of 4 multi-Gigabit ports to accommodate Wi-Fi 6 (802.11ax) access points or network services that require more than Gigabit bandwidth, such as video surveillance systems.



## 03. Zero Touch Provisioning

The DGS-1520 Series with Zero Touch Provisioning are designed for automated and effortless multi-site network expansions, saving time and configuration costs to lower your budget significantly. Simply upload switch configurations from a central location and install the DGS-1520 Series onto the network for swift deployment and sound network auditing.



## 04. Simplified Central Management

Remotely manage multiple wired/wireless networks with the D-View 7 management platform from one central location to reduce maintenance costs. D-Link Network Assistant (DNA) is also available to easily set up and manage smaller networks.



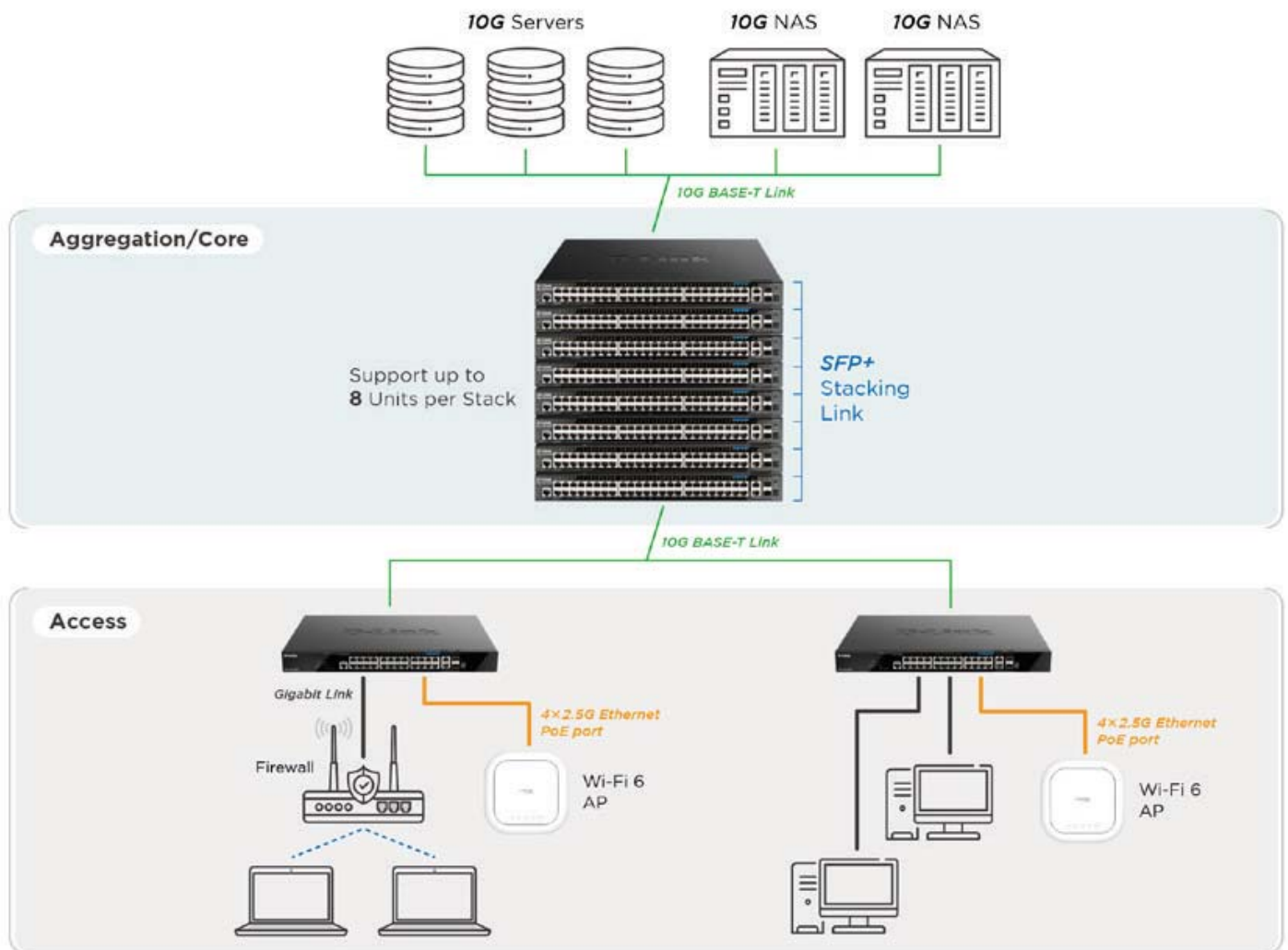
## 05. Power Redundancy





Connect a DPS-520 redundant power supply via management port to enhance network reliability (non-PoE models only). In the event of an internal PSU failure, the redundant power supply is immediately triggered to maintain uninterrupted operation of the LAN switch and its connected devices for a more resilient network infrastructure.





# D-Link DGS-1520 Series Multi-Gigabit Smart Managed Switch (Cont'd)



					
MODEL		NON POE DGS-1520-28	POE DGS-1520-28MP	NON POE DGS-1520-52	POE DGS-1520-52MP
Interfaces	Gigabit Ethernet	24	24 (PoE)	48	48 (PoE)
	10GBase-T Port	2	2	2	2
	1000Base-T PoE Port	-	20	-	44
	2.5Base-T PoE Port	-	4	-	4
	10G SFP+ Slot	2	2	2	2
	Console Port				
General Features	RJ-45 Management Port	Yes (DPS-520 only)	-	Yes (DPS-520 only)	-
	Stackability	Physical Stacking of up to 8 units			
	Physical Stacking Bandwidth	80G			
	Hybrid Stacking	10GBase-T and SFP+			
	Switching Capacity	128Gbps	140Gbps	176Gbps	188Gbps
	Max. Packet Forwarding Rate	95.24 Mpps	104.16 Mpps	130.95 Mpps	139.88 Mpps
Layer 2 Features	Forwarding Mode	Store-and-forward			
	MAC Address Table	16,000			
	Jumbo Frame	12288 Byte			
	Flow Control	802.3x/HOL Blocking Prevention			
	MDI/MDIX	Configurable			
	Loopback Detection (LBD)	✓			
L2 Multicast	802.3ad Link Aggregation	✓			
	Port Mirroring	✓			
	L2 Protocol Tunneling	✓			
	IGMP Snooping	✓			
	Cable Diagnostics	✓			
	IGMP Snooping	IGMP v1/v2/v3 Snooping, Supports 512 IGMP groups, Host-based IGMP Snooping Fast Leave, Supports 128 static IGMP groups, Per VLAN IGMP Snooping, Data Driven Learning, IGMP Snooping Querier, Report Suppression			
Layer 3 Features	MLD Snooping	MLD v1/v2 Snooping, Support 256 MLD Groups, Host-based MLD Snooping Fast Leave, Supports 64 static MLD groups, MLD Snooping Querier, Per VLAN MLD Snooping, MLD Proxy Reporting			
	IP Interface	16			
	IPv4 Entries / Static ARP	8192/256			
	Gratuitous ARP	✓			
	Loopback interface	✓			
	VRRP v2/v3	✓			
Layer 3 Routing	Hardware routing	1024			
	IPv4/IPv6 Static route	512/256			
	IPv4/IPv6 Default route	✓			
	Equal-Cost Multi-Path Route (ECMP)	✓			
	Weighted-Cost Multi-Path Route (WCMP)	✓			
	Policy-based Route (PBR)	✓			
L3 Multicasting	Route Preference	✓			
	Route Redistribution	✓			
	RIPv1/v2/ing	✓			
	OSPF	OSPF v2/v3, OSPF passive interface, Stub/NotSA area, Supports Equal-Cost Multi-Path Route (ECMP), Text/MDS authentication			
	L3 Multicasting	IGMP v1/v2/v3, IGMP Proxy, MLD v1/v2, MLD proxy, DVMRP v3, PIM Sparse-Dense Mode (PIM-SDM), PIM-SM/DM/SSM for IPv4/IPv6			
	VLAN Group	4K			
Virtual LAN (VLAN)	VID	1~4094			
	Double VLAN (Q-in-Q)	Port-based Q-in-Q			
	Selective Q-in-Q	✓			
	802.1Q	✓			
	Auto Surveillance VLAN	✓			
	Port-based VLAN	✓			
Quality of Service (QoS)	802.1p Protocol-based VLAN	✓			
	Voice VLAN	✓			
	MAC-based VLAN	✓			
	Subnet-based VLAN	✓			
	VLAN translation	✓			
	Multicast VLAN (SM VLAN for IPv4/IPv6)	✓			
Security	Asymmetric VLAN	✓			
	Private VLAN	✓			
	VLAN Trunking	✓			
	Super VLAN	✓			
	802.1p	✓			
	Queue Handling	Strict Priority, Weighted Round Robin (WRR), Strict+ WRR, Weighted Deficit Round Robin (WDRR)			
Authentication, Authorisation and Accounting (AAA)	CoS based on	Switch port, Inner/Outer VID, Inner/Outer 802.1p Priority, MAC address, Ether type, IP address, DSCP ToS/IP preference, Protocol type, TCP/UDP port, IPv6 traffic class, IPv6 flow label			
	Bandwidth Control	*Port-based (ingress/egress), min. granularity 8 Kbps; Flow-based (ingress/egress, min. granularity 8 Kbps); Per queue bandwidth control (min. granularity 8 Kb/s)			
	Three Color Marker	CIR/PIR minimum granularity: 8 kbps, trTCM, sTCM			
	Port Security	Supports up to 64 MAC addresses per port			
	D-Link Safeguard Engine	✓			
	DHCP Server Screening	✓			
Access Control Lists (ACL)	IP Source Guard	✓			
	DHCP Snooping	✓			
	IPv6 Snooping	✓			
	Dynamic ARP Inspection (DAI)	✓			
	DHCPv6 Guard	✓			
	IPv6 Route Advertisement (RA) Guard	✓			
Management	IPv6 ND Inspection	✓			
	Duplicate Address Detection (DAD)	✓			
	ARP Spoofing Prevention	Max. 64 entries			
	L3 Control Packet Filtering	✓			
	Unicast Reverse Path Forwarding (URPF)	✓			
	Traffic Segmentation	✓			
Physical and Environment	SSL	*TLS 1.0/1.1/1.2, IPv4/IPv6 access			
	SSH	SSH v2, Supports IPv4/IPv6 access			
	BPDUI Attack Protection	Yes			
	DOS Attack Prevention	Yes			
	Guest VLAN	Yes			
	802.1X Authentication	Port/host-based access control, Identity-driven Policy Assignment, Dynamic VLAN Assignment			
Modules/ Transceivers	Web-based Access Control (WAC)	Port/host-based access control, Identity-driven Policy Assignment, Dynamic VLAN Assignment			
	MAC-based Access Control (MAC)	Port/host-based access control, Identity-driven Policy Assignment, Dynamic VLAN Assignment			
	RADIUS and TACACS+ Authentication	Port/host-based access control, Identity-driven Policy Assignment, Dynamic VLAN Assignment			
	Authentication Database Failover	✓			
	Compound Authentication	✓			
	Privilege Level for Management Access	✓			
Access Control Lists (ACL)	Trusted Host	✓			
	RADIUS/TACACS+ Accounting	✓			
	ACL based on	802.1p priority, VID, MAC address, Ether Type, LLC, VLAN, IP address, IP preference/ToS, DSCP mask, Protocol type, TCP/UDP port number, IPv6 Traffic Class, IPv6 Flow Label			
	Time-based ACL	✓			
	CPU Interface Filtering	✓			
	Max. ACL entries	Ingress (hardware entries): 1536 Egress (hardware entries): 512 VLAN Access Map Numbers: 2048 IPv4/IPv6 access, SSL (HTTPS)			
Management	Web-Based GUI	✓			
	CLI	✓			
	sFlow	✓			
	SNMP	✓			
	DHCP	✓			
	RMON	✓			
Physical and Environment	TFTP	✓			
	D-Link Discover Protocol (DDP)	✓			
	SMTP	✓			
	Zero Touch Provisioning (ZTP)	✓			
	Dimension	441 x 207.4 x 44 mm	441 x 308.5 x 44 mm	441 x 207.4 x 44 mm	441 x 308.5 x 44 mm
	Weight	2.33 Kg	4.29 Kg	2.78 Kg	4.80 Kg
Modules/ Transceivers	Operation Temperature	-5 ~ 50°C	-5 ~ 50°C	-5 ~ 50°C	-5 ~ 50°C
	Storage Temperature	-40 ~ 70°C	-40 ~ 70°C	-40 ~ 70°C	-40 ~ 70°C
	Operation Humidity	10% ~ 95% RH	10% ~ 95% RH	10% ~ 95% RH	10% ~ 95% RH
	Storage Humidity	5% ~ 95% RH	5% ~ 95% RH	5% ~ 95% RH	5% ~ 95% RH
	Operating Altitude	Up to 2000 m	Up to 2000 m	Up to 2000 m	Up to 2000 m
	Maximum Power Consumption	30.4W	453.3W (PoE On); 45.2W (PoE Off)	51.2W	459.5W (PoE On); 66.3W (PoE Off)
Modules/ Transceivers	Standby Power Consumption	20.9W/100V; 21.5W/240V	37.2W/100V; 37.3W/240V	25.5W/100V; 26.8W/240V	39.8W/100V; 40.7W/240V
	Power Input	100 ~ 240 VAC	100 ~ 240 VAC	100 ~ 240 VAC	100 ~ 240 VAC
	Redundant Power Supply	DPS-520	DPS-700	DPS-520	DPS-700
	Maximum PoE Budget	-	370W (w/o RPS); 740W (w/ RPS)	-	370W (w/o RPS); 740W (w/ RPS)
	SFP transceivers	DEM-310GT, DEM-311GT, DEM-312GT, DEM-314GT, DEM-315GT, DGS-712			
	WDM SFP Transceivers	DEM-330T, DEM-330R, DEM-331T, DEM-331R			
Modules/ Transceivers	SFP+ Transceivers	DEM-431XT, DEM-432XT, DEM-433XT, DEM-434XT, DEM-436XT-BXU, DEM-436XT-BXU			
	Direct Attach Stacking Cables	DEM-CB100S, DEM-CB300S, DEM-CB700S			
	Redundant Power Supplies	DPS-520 PoE Redundant Power Supply for Non-PoE Models only, DPS-700			

# Layer 2+ Stackable Gigabit Smart Managed Switches

## DGS-1510 Series (with 10G Uplinks)

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.



### Series include the below models

#### 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
- 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-1510-52

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

#### DGS-1510-28XMP

- 10/100/1000BASE-T PoE port x 24
- 10GbE SFP+ ports x 4
- 802.3af and 802.3at PoE/PoE+ support
- 370W PoE power budget Smart fans

#### DGS-1510-28X

- 10/100/1000BASE-T port x 24
- 10G SFP+ Ports x 4
- Smart fan

#### DGS-1510-28XS

- SFP ports x 24
- 10G SFP+ ports x 4
- Smart Fan

### 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

### 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
DEM-CB700S	10-GbE SFP+ 7m Direct Attach Stacking Cable

#### Optional Management Software

DV-700	D-View 7 Network Management System
DV-800	D-View 8 Network Management System

		NON POE				POE		
MODEL		DGS-1510-20	DGS-1510-28X	DGS-1510-28XS	DGS-1510-52X	DGS-1510-28P	DGS-1510-28XMP	DGS-1510-52XMP
Interfaces	Gigabit Ethernet	16	24	—	48	24 (PoE)	24 (PoE)	48 (PoE)
	SFP Slots	2	—	24	—	2	—	—
	10 Gigabit SFP+ Slots	2	4	4	4	2	4	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	128 Gbps	128 Gbps	176 Gbps	92 Gbps	128 Gbps	176 Gbps
	Forwarding Mode	Store-and-Forward						
	Packet Buffer Memory	1.5MB	1.5MB	1.5MB	3MB	1.5MB	1.5MB	3MB
	MAC Address Table	16,000						
	Flow Control	802.3x, HOL Blocking Prevention						
Layer 2 Features	MDI/MDIX	Configurable						
	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	✓						
Layer 3 Features	Cable Diagnostics	✓						
	IP Interfaces	8						
	Routing Protocols	Static						
	Policy-Based Routing	—						
	Route Balancing	—						
Virtual LAN (VLAN)	IPv6 Tunneling	—						
	VRRP	—						
	VLANs	4096 Static						
	GVRP	✓						
Multicasting	Protocol VLAN (802.1v)	—						
	Double VLAN (Q-in-Q)	—						
Quality of Service (QoS)	Groups	512						
	Protocols	IGMP v1/v2						
	Standard	802.1p, DSCP						
	Number of Queues	4						
	Mode	Strict Priority Queue (SPQ), Weighted Round Robin (WRR), Deficit Round Robin (DRR)						
Security	CoS Handling	802.1p, DSCP						
	Bandwidth Control	Port-Based						
	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	✓						
Authentication, Authorisation and Accounting (AAA)	D-Link SafeGuard Engine	✓						
	802.1x Authentication	Port-Based						
	Web-Based Access Control (WAC)	✓						
	MAC-Based Access Control (MAC)	✓						
	Network Access Protection (NAP)	✓						
Access Control Lists (ACL)	Guest VLAN	✓						
	Switch Access	User Account						
	Rules	768						
Power over Ethernet	ACL Handling	MAC, IP, 802.1p, DSCP/IPV6 Address						
	Time-Based ACL	—						
	Standard	—	—	—	—	802.3af (PoE), 802.3at (PoE+)	802.3af, 802.3at	802.3af, 802.3at
	PoE Ports	—	—	—	—	24	1-24	1-48
Management	PoE Power Budget	—	—	—	—	193 W	370 W	370 W (740W w/ DPS-700)
	Time-Based PoE	—	—	—	—	✓	✓	✓
	Switch Access	Web GUI, Telnet, Console						
	sFlow	—						
	SNMP	v1 / v2c / v3						
	DHCP	DHCP Client						
	RMON	✓						
Physical and Environment	TFTP Client	✓						
	Syslog	✓						
	Power Supply	Internal						
	Maximum Power Consumption	20.3 W	22.3W	22.3W	48 W	238.7 W (PoE on) 29 W (PoE off)	436.3 W (PoE on) 38.4 W (PoE off)	486.9 W (PoE on) 58.8 W (PoE off)
	Power-Saving Technology	IEEE 802.3az EEE, Green Ethernet						
Modules/ Transceivers	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 44mm	440 x 210 x 44mm	440 x 210 x 44 mm	440 x 250 x 44 mm	440mm x 308.50mm x 44mm	440mm x 308mm x 44mm
Modules/ Transceivers	10 Gigabit SFP+ Transceivers	DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD, DEM-433XT, DEM-433XT-DD, DEM-434XT, DEM-435XT, DEM-435XT-DD, DEM-436XT-BXU, DEM-436XT-BXD						
	SFP Transceivers	DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT, DGS-712						
	WDM SFP Transceivers	DEM-330T, DEM-330R, DEM-331T, DEM-331R						



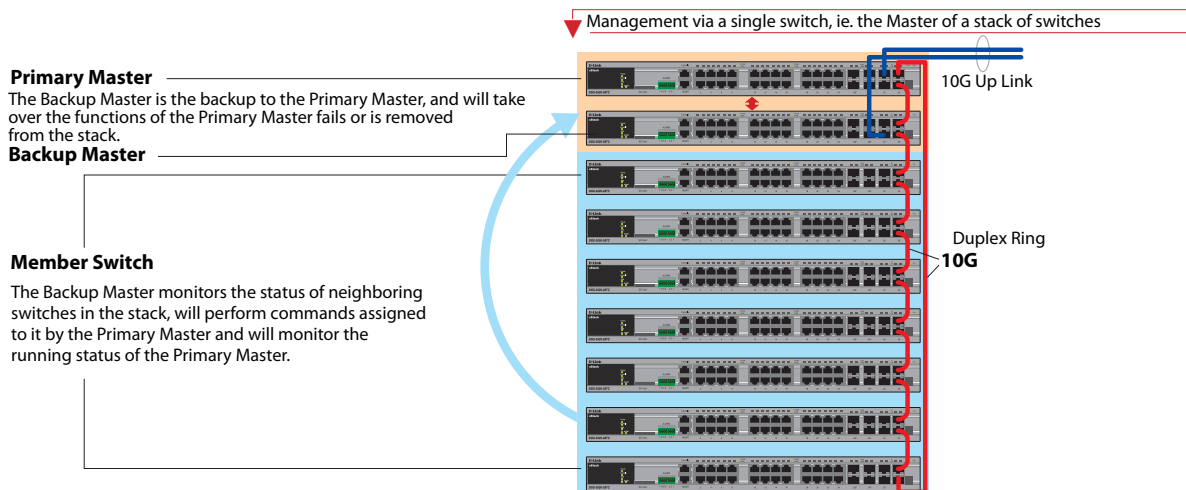
# Physical Stacking Among Switches

A stackable switch is a network switch that is able to operate as a standalone switch, while they can also be set up to operate together with one or more switches of the same models, which is called Physical Stacking. Physical Stacking allows the switches to work as a single switch, making it easier to manage and configure via a single management interface. Switches supporting physical stacking can operate together or can operate independently. When the switches are stacked together, should one unit in a stack be removed or fail, data will continue to flow through other units that remain functional. With physical stacking, it is easy to increase the total port count and grow the network by adding additional switches as and when needed, while maintaining minimum management complexity.

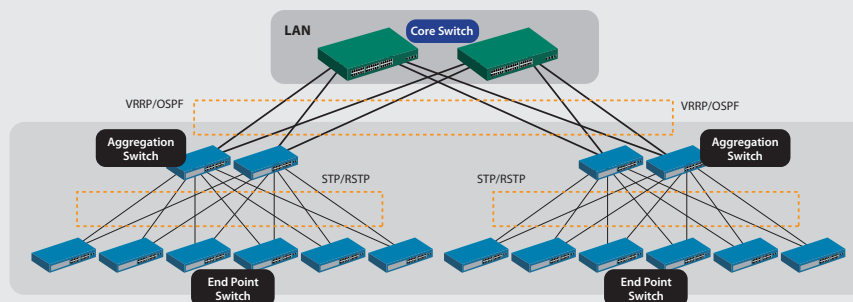
## Models that support physical stacking:

DXS-3610 Series	DGS-3130 Series
DXS-3400 Series	DGS-1520 Series
DGS-3630 Series	DGS-1510 Series

\* All models above support physical stacking on the 10G SFP+ Slots via 10G Direct Attach Cable (DEM-CB100S/DEM-CB300S/DEM-CB700S), except DGS-3120 Series where special stacking cables are needed. Please refer to page 59 for details.

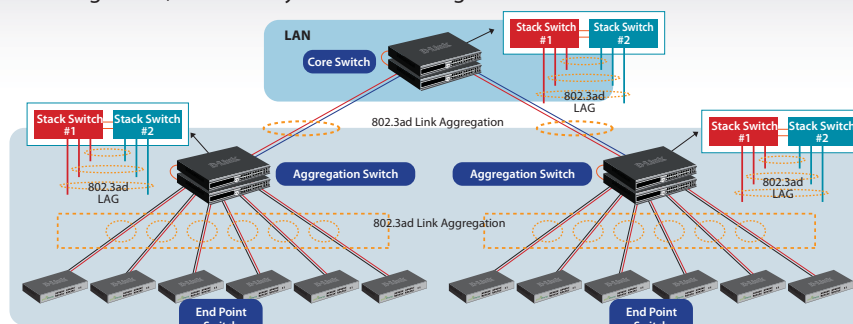


## Typical Network with Complex Setup



- Complex Network Topology
- Long recovery time during failure

## Network Designed with Physical Stacking and Link Aggregation for simplified management, redundancy and load sharing.

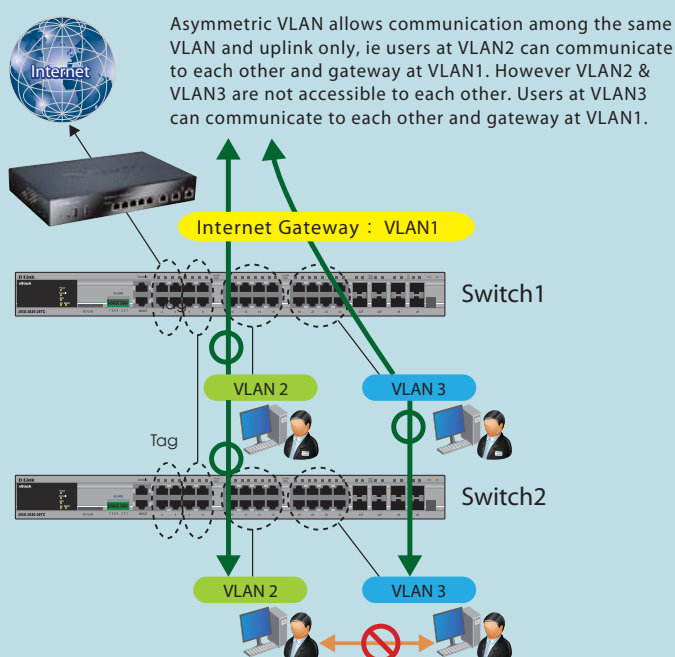


- Simplified Network Topology
- Easily Expandable by adding more switches in the stack
- Reduce System Recovery Time during failure

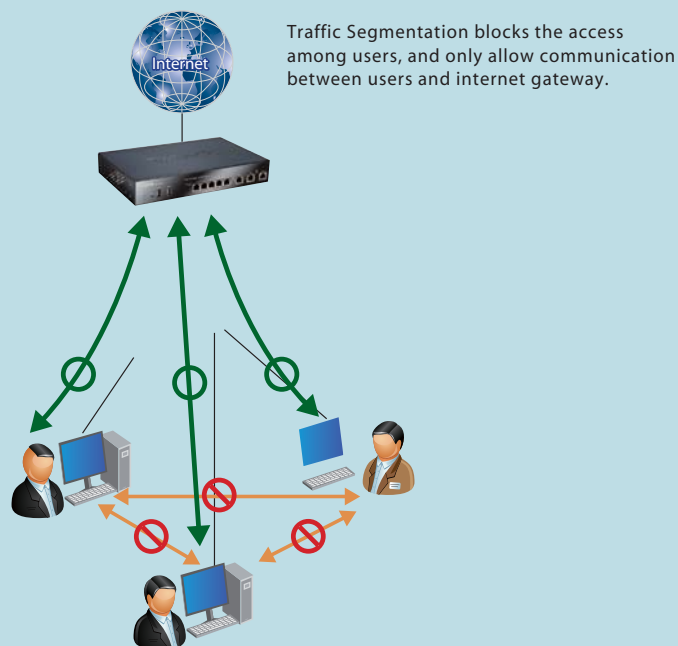
# D-Link Ethernet Switching Solution for Hotels and Service Apartments

It is important to maintain privacy to hotel or service apartment's guests when they access to internet via the provided network. To ensure the communication between each hotel guest room as well as the units in the apartments are blocked, the network administrator may configure port security function to restrict the access of individual port to uplink only. There are 3 ways to achieve it, namely Asymmetric VLAN, Traffic Segmentation and Private VLAN.

## Asymmetric VLAN



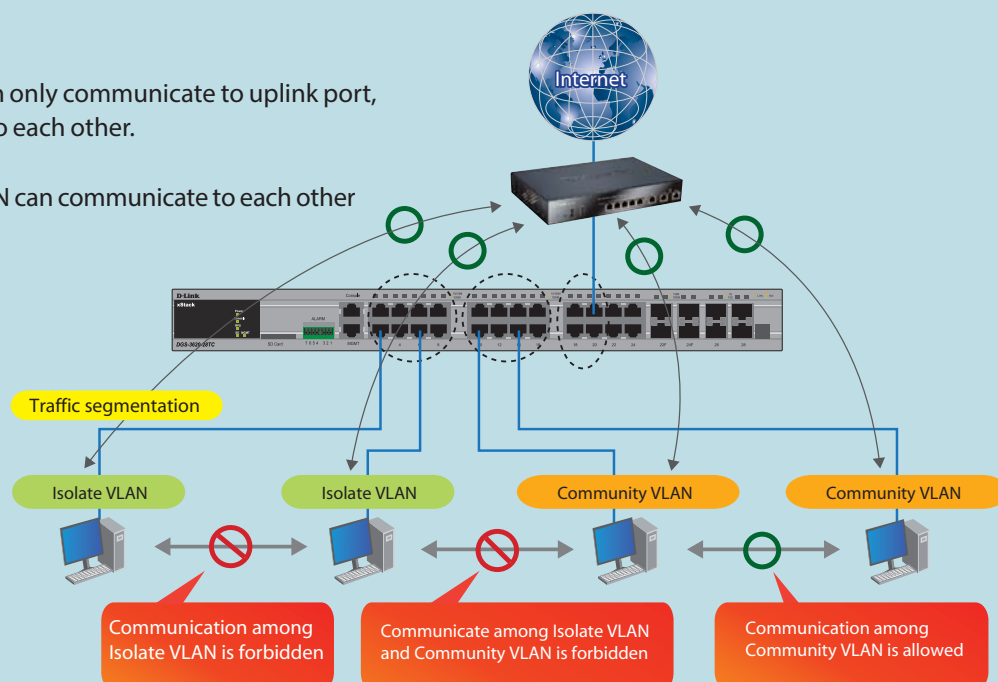
## Traffic Segmentation



## Private VLAN

Users at Isolate VLAN can only communicate to uplink port, they are not accessible to each other.

Users at community VLAN can communicate to each other and also uplink port



# Layer 2+ 10G Smart Managed Switches

## DXS-1210 Series

D-Link's DXS-1210 Series 10 Gigabit Ethernet Smart Switches are a cost effective 10 GbE switch series capable of servicing a range of network needs in any business. Supporting 10GBASE-T/ SFP+ combo ports, they provide connection flexibility across a network allowing easier network integration. With high performance and low latency the DXS-1210-12TC/12SC can fulfill the needs for virtualization, cloud services and server-to-server applications making it perfect for SMB customers.



### Series include the below models

#### DXS-1210-10TS

- 10GBASE-T ports x 8
- SFP+ ports x 2
- Smart fans

#### DXS-1210-12TC

- 10GBASE-T ports x 8
- 10G SFP+ x 2
- 10GBASE-T/SFP+ combo port x 2
- Smart fans

#### DXS-1210-12SC

- 10-port 10G SFP+ x 10
- 10GBASE-T/SFP+ combo port x 2
- Smart fans

#### DXS-1210-16TC

- 10GBASE-T ports x 12
- 10G SFP+ x 2
- 10GBASE-T/SFP+ combo port x 2
- Smart fans

#### DXS-1210-28T

- 10GBASE-T ports x 24
- 25G SFP28 x 4
- Smart fans

#### DXS-1210-28S

- 10G SFP+ x 24
- 10GBASE-T ports x 4
- Smart fans

### Optional Accessories

#### Optional 10 Gbps SFP+ Direct Attach Interconnect Cables







DEM-CB100S	10 Gigabit SFP+ 1 m Direct Attach Stacking Cable
DEM-CB300S	10 Gigabit SFP+ 3 m Direct Attach Stacking Cable
DEM-CB700S	10-GbE SFP+ 7m Direct Attach Stacking Cable

#### Optional Management Software

DV-700	D-View 7 Network Management System
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### 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)

							
MODEL		DXS-1210-10TS	DXS-1210-12TC	DXS-1210-12SC	DXS-1210-16TC	DXS-1210-28T	DXS-1210-28S
Interfaces	10GBASE-T	8	8	—	12	24	4
	SFP+ Slots	2	2	10	2	4 (25G SFP28)	24
	Combo 10GBASE-T/ SFP+ Slots	—	2	2	2	-	-
General Features	Stackability	—					
	Stacking Speed (per Port)	—					
	Switching Capacity	200 Gbps	240 Gbps		320 Gbps	680 Gbps	560 Gbps
	Forwarding Mode	Store-and-Forward					
	Packet Buffer Memory	2 MB				4 MB	4 MB
	MAC Address Table	16,000				32,000	32,000
	Flow Control	802.3x, HOL Blocking Prevention					
Layer 2 Features	MDI/MDIX	Configurable					
	Loop Protection	802.1D, 802.1w, 802.1s					
	803.2ad Link Aggregation	Max. 8 groups per device/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 IPv4/v6				4 IPv4/v6	
	Routing Protocols	Static: Max. 64 IPv4 entries, Max. 64 IPv6 entries				Static Max. 128 IPv4, 64 IPv6 entries	
Virtual LAN (VLAN)	VLANs	4000					
	GVRP	✓					
	Protocol VLAN (802.1v)	—					
	Double VLAN (Q-in-Q)	—					
	Auto Voice VLAN	✓					
	Auto Surveillance VLAN	✓					
Multicasting	Groups	1000				512	
	Protocols	IGMP v1/v2/v3 Snooping, MLD v1/v2 Snooping					
Quality of Service (QoS)	Standard	802.1p, DSCP					
	Number of Queues	8					
	Mode	Strict Priority Queue (SPQ), Weighted Round Robin (WRR), Deficit Round Robin (DRR)					
	CoS Handling	802.1p, DSCP, TOS, IPv6 Traffic Class, Port, VLAN ID, MAC, IPv4, IPv6, Protocol, IPv6 Flow Label					
	Bandwidth Control	Port-Based					
Security	STP Security	Root Restriction					
	Per-Port MAC Limitation	✓					
	Static MAC	1K				256	
	Storm Control	Broadcast / Multicast / Unicast					
	IP-MAC-Port Binding	✓					
	DHCP Spoofing Prevention	✓					
	ARP Spoofing Prevention	✓					
	Traffic Segmentation	✓					
	D-Link SafeGuard Engine	✓					
Authentication, Authorisation and Accounting (AAA)	802.1x Authentication	Port-Based, Host-Based, Identity Driven				Port-Base, Host Based	
	Web-Based Access Control (WAC)	Port-Based, Host-Based, Identity Driven				—	
	MAC-Based Access Control (MAC)	Port-Based, Host-Based, Identity Driven				—	
	Network Access Protection (NAP)	—				—	
	Guest VLAN	—				✓	
	Switch Access	RADIUS / TACACS+					
Access Control Lists (ACL)	Rules	256				1024	
	ACL Handling	802.1p, DSCP, IPv6 Traffic Class, Port, VLAN ID, MAC, IPv4, IPv6, Protocol, IPv6 Flow Label					
	Time-Based ACL	—					
Management	Switch Access	Web GUI, Telnet, D-Link Network Assistant Utility					
	sFlow	—					
	SNMP	v1 / v2c / v3					
	DHCP	Client					
	RMON	✓					
	TFTP Client	✓					
	Syslog	✓					
Physical and Environment	Power Supply	Internal					
	Maximum Power Consumption	68.67 W	90.81 W	43.81 W	90.81 W	87.3W	85.7W
	Power-Saving Technology	Green Ethernet					
	Operating Temperature	-5°C to 50°C					
	Operating Humidity	0% to 95% RH Non-Condensing					
	Dimensions (W x D x H)	440 x 210 x 44 mm					
Modules/ Transceivers	10 Gigabit SFP+ Transceivers	DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD, DEM-433XT, DEM-433XT-DD, DEM-434XT, DEM-436XT-BXU, DEM-436XT-BXD					
	SFP Transceivers	DEM-302S-LX, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT, DGS-712					
	WDM SFP Transceivers	DEM-302S-BXD, DEM-302S-BXU, DEM-330T, DEM-330R, DEM-331T, DEM-331R					



# D-Link Metro Ethernet Switches

D-Link's Metro Ethernet Switches are purpose-built for deployment in Metropolitan Area Networks and designed based on field proven experience learnt from multiple Ethernet deployments in Telecoms/Carriers. With support for a wide variety of technologies, which includes Ethernet OAM (Operations, Administration and Maintenance), Double VLAN (Q-in-Q), QoS and Triple-Play services demanded by Carrier Ethernet, they are optimized for Ethernet-to-the-Home (ETTH) and Ethernet-to-the-Business (ETTB) services. They also come ready with Service Provider- friendly hardware, robust software and security features, which serve as an ideal access level switches in a Metropolitan network. D-Link Metro Ethernet Switches can be positioned as high-end residential switch or access layer switch in a Metro Ethernet. Targeted at IPTV applications, it provides complete multicast functions and reliable hardware design.

## 802.3ah OAM

The 802.3ah OAM, a data link layer protocol, provides network administrator the ability to monitor the health of the network and quickly determine the location of failing links or fault conditions on point-to-point and emulated point-to-point Ethernet links.

## Multicast Capability

Ideal for the growing demands of IPTV usage, the D-Link Metro Ethernet Switches provides comprehensive multicast functions which enable various channel program designs for IPTV providers. This includes IGMP Snooping, Limited IP Multicast, ISM VLAN as well as MLD Snooping for an IPv6 environment.

## Security

Through static MAC, network administrator can filter packets sent by non-registered devices. Port Security can limit the number of MAC addresses learnt per port and to prevent MAC address flooding attacks.

## 802.1x Authentication

The support of port-based and host-based 802.1x access control with local server or RADIUS server allows network administrator to put unauthorized users into Guest VLAN and restrict them with limited access rights.

## Fully IPv6 Compatible

IPv6 Compatibility ensures continued reliable usage by Internet Service Providers (ISPs) when migrating to next-generation IP networks.

## Easy Management

D-Link Metro Ethernet Switches feature a variety of management tools and supports several communication standards. Configuration can be done through Telnet, SNMP and HTTP. The Graphical User Interface (GUI) provides network administrator a straightforward and convenient way to manage their networks. The Link Layer Discovery Protocol (LLDP) allows the switch to advertise its identity and capabilities on the local network and to detect neighboring devices, so that the devices can provide topology information to management software applications.

## Key Features

- ISM VLAN (Layer 2 Multicast)
- Guest VLAN
- IGMP Snooping
- MLD Snooping
- IGMP Authentication
- Access Control List (ACL)
- Port / Host-based 802.1x Access Control
- RADIUS / Local Authentication Database
- D-Link SafeGuard Engine
- Port-based Q-in-Q
- VLAN Trunking
- Port Security
- SSH / SSL
- IP-MAC-Port Binding (IMPB)
- IEEE 802.3ah OAM
- Cable Diagnostics
- SNMP v1/v2c/v3
- RMON v1
- Link Layer Discovery Protocol (LLDP)
- DHCP Auto Configuration
- Neighbor Discovering
- Command Line Interface
- 6kV Surge Protection on all Ethernet Ports
- Dying Gasp

\* Features supported are model dependent. Please refer to technical specification of each model.

# Layer 2+ Gigabit Metro Ethernet Switches

## DGS-1210/ME Series (B1)

The DGS-1210/ME Series Metro Ethernet Switches are a range of switches ideally suited for Metro Ethernet applications. They feature a variety of port configurations, including 10/100/1000BASE-T RJ-45 ports, 1G SFP slots and some models also support 10G SFP+ slots for increased network bandwidth. Surge protection, advanced Layer 2 functions, extensive suite of security and management tools make the DGS-1210/ME Series Metro Ethernet Switches ideal for Metro Ethernet applications. There are some models feature with Power over Ethernet (PoE), allowing compatible devices to be installed and powered in remote locations without immediate access to power outlets.



### Key Series Features

- Port-based Q-in-Q
- VLAN Trunking
- IP-MAC-Port Binding (IMPB)
- Access Control List (ACL)
- IEEE 802.1X Access Control
- Guest VLAN
- Quality of Service (QoS)
- Port security
- ITU-T G.8032 ERPS sub-50ms protection & recovery
- D-Link Safeguard Engine
- Layer 2 Multicast
- 802.3ah Ethernet Link OAM
- Dying Gasp for quick troubleshooting during power failures or system shut down
- 6kV Surge Protection on all Gigabit Ethernet Ports
- Command Line Interface (CLI)
- RJ-45 Console Port

### Series include the below models

#### DGS-1210-10/ME (B1)

- 10/100/1000BASE-T ports x 8
- SFP ports x 2

#### DGS-1210-10P/ME (B1)

- 10/100/1000BASE-T PoE ports x 8
- SFP ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 78 W PoE power budget

#### DGS-1210-12TS/ME (B1)

- 10/100/1000BASE-T ports x 2
- SFP ports x 10

#### DGS-1210-20/ME (B1)

- 10/100/1000BASE-T ports x 16
- SFP ports x 4

#### DGS-1210-28/ME (B2)

- 10/100/1000BASE-T ports x 24
- SFP ports x 4

#### DGS-1210-28P/ME (B2)

- 10/100/1000BASE-T PoE ports x 24
- SFP ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 193 W PoE power budget

#### DGS-1210-28MP/ME (B2)

- 10/100/1000BASE-T PoE ports x 24
- SFP ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget

#### DGS-1210-52/ME (B2)

- 10/100/1000BASE-T ports x 48
- SFP ports x 4

#### DGS-1210-52P/ME (B2)

- 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
- Port 1 - 8: Up to 30W
- Port 9 - 24: Up to 15.4W

#### DGS-1210-52MP/ME (B2)

- 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
- Port 1 - 8: Up to 30W
- Port 9 - 48: Up to 15.4W

#### DGS-1210-52MPP/ME (B1)

- 10/100/1000BASE-T PoE ports x 48
- SFP ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 740 W PoE power budget

### Optional Accessories

#### Optional 10 Gbps SFP+ Direct Attach Cables (For DGS-1210-28X/28XS ME B1)

DEM-CB100S	10 Gigabit SFP+ 1 m Direct Attach Cable
DEM-CB300S	10 Gigabit SFP+ 3 m Direct Attach Cable
DEM-CB700S	10 Gigabit SFP+ 7 m Direct Attach Cable

#### Optional DC Primary Power Supply (For Non-PoE Models)

SF24-2120200-1C	Input voltage: 72 VDC to 36 VDC, Output voltage: 12V/2A (For DGS-1210-10/ME, 20/ME, 28/ME B1)
SE40-1120333-3C	Input voltage: 72 VDC to 36 VDC, Output voltage: 12V/3.33A (For DGS-1210-52/ME B1)

#### Optional Redundant Power Supplies (For Non-PoE Models)

DPS-200A	60 W Redundant Power Supply
DPS-500A	140 W AC Redundant Power Supply
DPS-500DC	140 W DC Redundant Power Supply
DPS-CB150-2PS v.B1	The RPS cable for DGS-1210/ME & DPS-200A/500A/500DC
SUS4-21124-000S	Optional 54W AC to DC Power Supply Unit (PSU) with external lead-acid battery



		NON POE				
MODEL		DGS-1210-10/ME	DGS-1210-12TS/ME	DGS-1210-20/ME	DGS-1210-28/ME	DGS-1210-52/ME
Interfaces	Gigabit Ethernet	8	2	16	24	48
	SFP Slots	2	10	4	4	4
	10 Gigabit SFP+ Slots					
General Features	Switching Capacity	20 Gbps	24 Gbps	40 Gbps	56 Gbps	104 Gbps
	Max Packet Forwarding Rate	14.88 Mpps	17.86 Mpps	29.8 Mpps	41.7 Mpps	77.4 Mpps
	Packet Buffer Memory		1.5 MB			3 MB
	MAC Address Table	16,000				
	Flow Control	IEEE 802.3x Flow Control, HOL Blocking Prevention				
	Jumbo Frame	9216 Bytes				
Layer 2 Features	Loop Protection	802.1D, 802.1w, 802.1S, ERPS				
	802.3ad Link Aggregation	8 Groups, 8 Ports per Group				
	Port Mirroring	One-to-One, Many-to-One, Mirroring for Tx/Rx/Both, Flow-Based (ACL) Mirroring for Ingress Traffic				
	Loopback Detection		•			
	Cable Diagnostics		•			
Layer 3 Features	ARP	256 Static ARP				
	IP Interfaces	4				
	Default Routing		•			
	Static Routing	Max 64 IPv4 Entries, Max 32 IPv6 Entries				
Virtual LAN (VLAN)	VLANs	4094 Static				
	GVRP	256 Dynamic				
	Protocol VLAN (802.1v)		•			
	Double VLAN (Q-in-Q)	Port-Based				
	MAC-Based VLAN		•			
	ISM VLAN (Multicast VLAN)		•			
	Private VLAN		•			
Layer 2 Multicasting	VLAN Trunking		•			
	Groups	256				
	Protocols	IGMP Snooping v1/ v2 / v3 awareness, MLD Snooping v1 / v2 awareness				
Quality of Service (QoS)	Standard	802.1p				
	Number of Queues	8				
	Mode	Strict / WRR				
	CoS Handling	Switch Port, 802.1p Priority Queue, VLAN ID, MAC Address, IP Address, DSCP, ToS, Protocol Type, IPv6 Traffic Class, TCP/UDP Port				
Security	Bandwidth Control	Port-Based (Ingress/Egress, min. granularity 64 kbps), Flow-Based (Ingress, min. granularity 64 kbps), Egress Queue Bandwidth Control (min. granularity 64 kbps)				
	STP Security	BPDU Filtering, Root Restriction				
	Port Security		•			
	DoS Attack Prevention		•			
	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				
	MAC-Based Access Control (MAC)	Host-Based				
	Network Access Protection (NAP)	802.1x NAP, DHCP NAP				
	Guest VLAN		•			
Access Control Lists (ACL)	Switch Access	RADIUS / TACACS+, 4-Level User Account				
	Rules	256 Ingress Access Rules				
	ACL Handling	Switch Port, 802.1p Priority, VLAN ID, MAC, IP Address, Ether Type, ToS, ICMP, IPv6 Traffic Class, DSCP, Protocol Type, TCP/UDP Port				
Power over Ethernet	Time-Based ACL		•			
	Standard					
	PoE Ports					
	PoE Power Budget					
Management	Time-Based PoE					
	Switch Access	Web GUI, CLI, Telnet, Console				
	SNMP	v1 / v2c / v3				
	DHCP	Client, Relay				
	RMON	v1 / v2				
	TFTP Client		•			
Physical and Environment	Syslog		•			
	Power Supply	Internal with RPS Option on Non-PoE Models				
	Maximum Power Consumption	13.59 W	13.85 W	13.97 W	19.14 W	38.35 W
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet				
	Mean Time Between Failures (MTBF)	412,956 Hours	405,083 Hours	349,836 Hours	497,918 Hours	381,999 Hours
	Operating Temperature	-5°C to 50°C				
	Operating Humidity	10% to 90% RH Non-Condensing				
Modules/ Transceivers	Dimensions (W x D x H)	280 x 126 x 44 mm	280 x 180 x 44 mm	280 x 180 x 44 mm	440 x 140 x 44 mm	440 x 210 x 44 mm
	10 Gigabit SFP+ Transceivers (For 28X, 28XS/ME B1)	DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD, DEM-433XT, DEM-433XT-DD, DEM-434XT, DEM-436XT-BXU, DEM-436XT-BXD				
	SFP Transceivers	DEM-210, DEM-211, DEM-220T, DEM-220R, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT, DEM-330T, DEM-330R, DEM-331T, DEM-331R, DGS-712				



MODEL		DGS-1210-10P/ME	DGS-1210-28P/ME	DGS-1210-28MP/ME	DGS-1210-52P/ME	DGS-1210-52MP/ME	DGS-1210-52MPP/ME
Interfaces	Gigabit Ethernet	8 (PoE)	24 (PoE)	24 (PoE)	24 (PoE) + 24	48 (PoE)	48 (PoE)
	SFP Slots	2	4	4	4	4	4
	10 Gigabit SFP+ Slots						
General Features	Switching Capacity	20 Gbps	56 Gbps	56 Gbps	104 Gbps	104 Gbps	104 Gbps
	Max Packet Forwarding Rate	14.88 Mpps	41.7 Mpps	41.7 Mpps	77.4Mpps	77.4 Mpps	77.4 Mpps
	Packet Buffer Memory	1.5 MB					
	MAC Address Table	16,000					
	Flow Control	IEEE 802.3x Flow Control, HOL Blocking Prevention					
	Jumbo Frame	9216 Bytes					
Layer 2 Features	Loop Protection	802.1D, 802.1w, 802.1S, ERPS					
	802.3ad Link Aggregation	8 Groups, 8 Ports per Group					
	Port Mirroring	One-to-One, Many-to-One, Mirroring for Tx/Rx/Both, Flow-Based (ACL) Mirroring for Ingress Traffic					
	Loopback Detection					•	
	Cable Diagnostics					•	
Layer 3 Features	ARP	256 Static ARP					
	IP Interfaces	4					
	Default Routing					•	
	Static Routing	Max 64 IPv4 Entries, Max 32 IPv6 Entries					
Virtual LAN (VLAN)	VLANs	4094 Static					
	GVRP	256 Dynamic					
	Protocol VLAN (802.1v)					•	
	Double VLAN (Q-in-Q)	Port-Based					
	MAC-Based VLAN					•	
	ISM VLAN (Multicast VLAN)					•	
	Private VLAN					•	
Layer 2 Multicasting	VLAN Trunking					•	
	Groups	256					
	Protocols	IGMP Snooping v1/ v2 / v3 awareness, MLD Snooping v1 / v2 awareness					
Quality of Service (QoS)	Standard	802.1p					
	Number of Queues	8					
	Mode	Strict / WRR					
	CoS Handling	Switch Port, 802.1p Priority Queue, VLAN ID, MAC Address, IP Address, DSCP, ToS, Protocol Type, IPv6 Traffic Class, TCP/UDP Port					
Security	Bandwidth Control	Port-Based (Ingress/Egress, min. granularity 64 kbps), Flow-Based (Ingress, min. granularity 64 kbps), Egress Queue Bandwidth Control (min. granularity 64 kbps)					
	STP Security	BPDU Filtering, Root Restriction					
	Port Security					•	
	DoS Attack Prevention					•	
	Storm Control	Broadcast / Multicast / Unicast					
	IP-MAC-Port Binding					•	
	DHCP Server Screening					•	
	ARP Spoofing Prevention					•	
	Traffic Segmentation					•	
	D-Link SafeGuard Engine					•	
	802.1x Authentication	Port-Based, Host-Based					
Authentication, Authorisation and Accounting (AAA)	MAC-Based Access Control (MAC)	Host-Based					
	Network Access Protection (NAP)	802.1x NAP, DHCP NAP					
	Guest VLAN					•	
	Switch Access	RADIUS / TACACS+, 4-Level User Account					
Access Control Lists (ACL)	Rules	256 Ingress Access Rules					
	ACL Handling	Switch Port, 802.1p Priority, VLAN ID, MAC, IP Address, Ether Type, ToS, ICMP, IPv6 Traffic Class, DSCP, Protocol Type, TCP/UDP 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+)	802.3af (PoE) 802.3at (PoE+)	802.3af (PoE) 802.3at (PoE+)
	PoE Ports	8	24	24	802.3af (PoE): 16 802.3at (PoE+): 8	802.3af (PoE): 40 802.3at (PoE+): 8	48
	PoE Power Budget	78 W	193 W	370 W	193 W	370 W	740 W
	Time-Based PoE	•	•	•	•	•	•
Management	Switch Access	Web GUI, CLI, Telnet, Console					
	SNMP	v1 / v2c / v3					
	DHCP	Client, Relay					
	RMON	v1 / v2					
	TFTP Client					•	
	Syslog					•	
Physical and Environment	Power Supply	Internal with RPS Option on Non-PoE Models					
	Maximum Power Consumption	101.7 W	251.5 W	445 W	273.2 W	479.5 W	957.9 W
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet					
	Mean Time Between Failures (MTBF)	310,336 Hours	331,699 Hours	267,960 Hours	289,151 Hours	272,910 Hours	265,457 Hours
	Operating Temperature	-5°C to 50°C					
	Operating Humidity	10% to 90% 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 430 x 44 mm	440 x 430 x 44 mm	440 x 431 x 44 mm
Modules/ Transceivers	10 Gigabit SFP+ Transceivers (For 28X, 28XS/ME B1)	DEM-431XT, DEM-431XT-DD, DEM-432XT, DEM-432XT-DD, DEM-433XT, DEM-433XT-DD, DEM-434XT, DEM-436XT-BXU, DEM-436XT-BXD					
	SFP Transceivers	DEM-210, DEM-211, DEM-220T, DEM-220R, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT, DEM-330T, DEM-330R, DEM-331T, DEM-331R, DGS-712					



# Advanced Layer 2+ Gigabit Smart Managed Switches

## DGS-1250 Series (with 10G Uplinks)

The D-Link DGS-1250 Series Smart Managed Switches are the latest generation of switches to provide increased Power over Ethernet (PoE) output, high port density, multiple management interfaces, and advanced Layer 2 features. With all of these features combined, the DGS-1250 Series provides a cost-efficient and flexible solution for expanding any business network. DGS-1250 Series includes a wide range of port and media types. All models in the DGS-1250 Series feature four 10G SFP+ ports, allowing you to choose the most suitable media type for your requirements. All DGS-1250 Series PoE switches include support for IEEE 802.3af/at and higher power budgets, allowing more PoE devices to be powered by the switch and for devices to be installed in remote locations without immediate access to power outlets. Furthermore, the DGS-1250-28XMP and DGS-1250-52XMP can supply PoE power up to 370W providing even more power for connected devices.



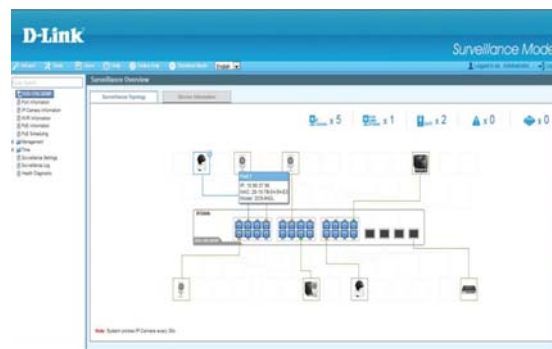
### Key Series Features

- Access Control Lists (ACLs)
- D-Link Safeguard Engine helps the CPU resist broadcast/multicast/unicast flooding
- Port Security supports up to 64 MAC addresses per port
- ARP Spoofing Prevention
- IMPB Support
- D-Link Network Assistant (DNA) utility or multilingual Web UI
- Built-in SNMP MIB for remote NMS (D-View 7.0)
- Full command line support via console port1
- Static routing
- Surveillance Mode
- Auto Voice VLAN
- Dual software images
- Dual configuration files
- Link status detection
- Port and LED shut-off
- System hibernation
- Time-based PoE (PoE models only)



### Surveillance Mode

The DGS-1250 Series supports Auto Voice VLAN and Surveillance Mode, which allows voice and video traffic to be automatically identified and handled differently than regular network traffic. Auto Voice VLAN detects Voice over IP (VoIP) traffic and automatically segments it from the rest of the network, adding a layer of isolation and allowing Quality of Service (QoS) to be applied. Surveillance Mode detects compatible ONVIF cameras and places them in a surveillance VLAN, allowing a single switch to be used for voice, video, and data, removing the need for dedicated hardware and reducing maintenance costs. Surveillance Mode also includes its own Web UI, making surveillance features easily accessible and simplifying management of your surveillance network.



### Series include the below models

#### DGS-1250-28X

- 24 x 10/100/1000BASE-T
- 4 x 10G SFP+ ports

#### DGS-1250-28XMP

- 24 x 10/100/1000BASE-T PoE
- 4 x 10G SFP+ ports
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budgets

#### DGS-1250-52X

- 48 x 10/100/1000BASE-T
- 4 x 10G SFP+ ports

#### DGS-1250-52XMP

- 48 x 10/100/1000BASE-T PoE
- 4 x 10G SFP+ ports
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget

### Optional Accessories

DGS-712  
DEM-302S-LX  
DEM-302S-BXD/BXU  
DEM-310GT  
DEM-311GT  
DEM-312GT2  
DEM-314GT  
DEM-315GT  
DEM-330T/R  
DEM-331T/R  
DEM-210  
DEM-211

1000BASE-T copper  
1000BASE-LX, single-mode, 2 km  
Gigabit WDM transceiver, single-mode, 2 km  
1000BASE-LX, single-mode, 10 km  
1000BASE-SX, multi-mode, 550 m  
1000BASE-SX, multi-mode, 2 km  
1000BASE-LHX, single-mode, 50 km  
100BASE-ZX, single-mode, 80 km  
Gigabit WDM transceiver, single-mode 10 km  
Gigabit WDM transceiver, single-mode 40 km  
100BASE-FX, single-mode, 15 km  
100BASE-FX, multi-mode, 2 km

DEM-220T/R  
DEM-410T  
DEM-431XT  
DEM-431XT-DD  
DEM-432XT  
DEM-432XT-DD  
DEM-433XT  
DEM-433XT-DD  
DEM-434XT  
DEM-436XT-BXD  
DEM-436XT-BXU

Fast Ethernet WDM transceiver, single-mode, 20 km  
10GBASE-T SFP+ transceiver, 100 m  
10GBASE-SR SFP+ transceiver (without DDM), 33 m: OM1 MMF, 82 m: OM2 MMF, 300 m: OM3 MMF  
10GBASE-SR SFP+ transceiver (with DDM), 33 m: OM1 MMF, 82 m: OM2 MMF, 300 m: OM3 MMF  
10GBASE-LR SFP+ transceiver (without DDM), 10 km  
10GBASE-LR SFP+ transceiver (with DDM), 10 km  
10GBASE-ER SFP+ transceiver (without DDM), 40 km  
10GBASE-ER SFP+ transceiver (with DDM), 40 km  
10GBASE-ZR SFP+ transceiver (without DDM), 80 km  
10GBASE-LR BiDi SFP+ transceiver (without DDM), wavelength Tx: 1330 nm, Rx: 1270 nm, 20 km  
10GBASE-LR BiDi SFP+ transceiver (without DDM), wavelength Tx: 1270 nm, Rx: 1330 nm, 20 km

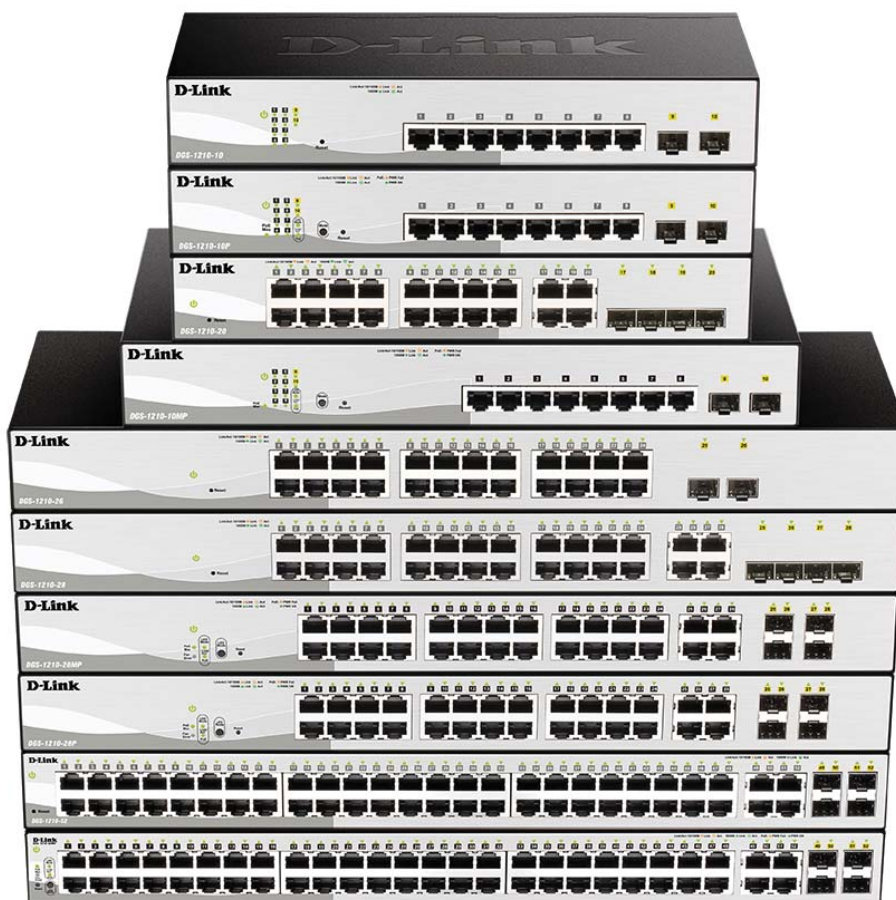
		NON POE		POE	
MODEL		DGS-1250-28X	DGS-1250-52X	DGS-1250-28XMP	DGS-1250-52XMP
Interfaces	1000Base-T Interface	24	48		
	1000Base-T PoE Interface	-	-		
	1000Base-T PoE Interface			24	48
	1000Base-T PoE Interface			-	-
	1000Base-T PoE Interface			-	-
	10G SFP+ Interface	4	4	4	4
	10G SFP+ Interface			-	-
	10G SFP+ Interface			-	-
	Auto MDI/MDIX			-	-
General Features	Console Port	RJ-45	RJ-45	RJ-45	RJ-45
	Switching Capacity	128Gbps	176Gbps	128Gbps	176Gbps
	Max. Packet Forwarding Rate	95.24Mpps	130.95Mpps	95.24Mpps	130.95Mpps
	Store & Forwarding Forwarding			-	-
	MAC Address Table Size	16K	32K	16K	32K
	Dual Images			-	-
Power Over Ethernet (PoE)	Standard			802.3a	
	Maximum PoE Budget			370W	370W
	PD Alive	Yes (R1.1)	Yes (R1.1)	Yes (R1.1)	Yes (R1.1)
Layer 2 Features	802.3x Flow Control			-	-
	Head-of-line (HOL) Blocking Prevention			-	-
	802.1D Spanning Tree (STP)			-	-
	802.1w Rapid Spanning Tree (RSTP)			-	-
	802.1s Multiple Spanning Tree (MSTP)			-	-
	Root Restriction			-	-
	Root Guard			-	-
	802.3ad Link Aggregation			-	-
	Link Aggregation Group Per Device	8	8	8	8
	Max Port Per Link Aggregation Group	8	8	8	8
	Port Mirroring			-	-
	Jumbo Frame	12,000 Bytes	12,000 Bytes	12,000 Bytes	12,000 Bytes
	Loopback Detection (LBD)			-	-
	IGMP Snooping			-	-
Layer 3 Features	Max IGMP Snooping Groups	256	256	256	256
	MLD Snooping			-	-
	MLD Snooping Groups			-	-
	IP Interface			-	-
	Max Number of IP Interface	4	4	4	4
	ARP			-	-
Virtual LAN (VLAN)	IPv6 Neighbor Discovery (ND)			-	-
	Default Route			-	-
	Static Route			-	-
	802.1Q VLAN			-	-
Quality of Service (QoS)	VLAN Groups	4094	4094	4094	4094
	Port-based VLAN			-	-
	Voice VLAN			-	-
	Auto Surveillance VLAN			-	-
Security	Asymmetric VLAN			-	-
	Class of Service (CoS)			-	-
	Strict Priority Queue (SPQ)			-	-
	Weighted Round Robin (WRR)			-	-
	Port-based Bandwidth Control			-	-
	MAC Access List			-	-
	SSH			-	-
	SSL	Yes (only support TLS 1.0)	Yes (only support TLS 1.0)	Yes (only support TLS 1.0)	Yes (only support TLS 1.0)
	Port Security			-	-
	Broadcast/Multicast/Unicast Storm Control			-	-
	Traffic Segmentation			-	-
	IP-MAC-Port Binding (IMPB)			-	-
	IP Source Guard			-	-
	DHCP Snooping			-	-
	IPv6 Snooping			-	-
	Dynamic ARP Inspection (DAI)			-	-
	DHCPv6 Guard			-	-
	IPv6 Route Advertisement (RA) Guard			-	-
	IPv6 ND Inspection			-	-
	Duplicate Address Detection (DAD)			-	-
	D-Link Safeguard Engine			-	-
	DHCP Server Screening			-	-
	ARP Spoofing Prevention			-	-
	BPDU Attack Protection			-	-
	DoS Attack Prevention			-	-
	802.1X			-	-
	Port based 802.1X Authentication			-	-
	Identity Driven 802.1X Policy Assignment			-	-
	Guest VLAN			-	-
	Authentication for Management Access			-	-
	RADIUS			-	-
Management	Simple Network Time Protocol (SNTP)			-	-
	Web-based GUI	Yes (only support IE8, IE9, IE10)	Yes (only support IE8, IE9, IE10)	Yes (only support IE8, IE9, IE10)	Yes (only support IE8, IE9, IE10)
	Command Line Interface (CLI)	Yes (Limited CLI via telnet) R2 (Full CLI)	Yes (Limited CLI via telnet) R2 (Full CLI)	Yes (Limited CLI via telnet) R2 (Full CLI)	Yes (Limited CLI via telnet) R2 (Full CLI)
	Telnet Server			-	-
	SNMP			-	-
	TFTP Client			-	-
	System Log			-	-
	RMON			-	-
	D-Link Discover Protocol (DDP)	Yes (v0.27)	Yes (v0.27)	Yes (v0.27)	Yes (v0.27)
	Dual Configurations			-	-
	DNS Client			-	-
Power Consumption	D-Link Network Assistant			-	-
	Smart Wizard			-	-
	Maximum Power Consumption	30.6W(100V/60Hz), 29.6W(240V/50Hz) (Power measurement from AC side)	51W(100V/60Hz), 51.2W(240V/50Hz) (Power measurement from AC side)	PoE ON: 455.1W(100V/60Hz), 431.5W(240V/50Hz) PoE OFF: 38.6W(100V/60Hz), 39.1W(240V/60Hz) (Power measurement from AC side)	PoE ON: 467.3W(100V/60Hz), 443.6W(240V/50Hz) PoE OFF: 56.4W(100V/60Hz), 57.2W(240V/50Hz) (Power measurement from AC side)
Power Saving	Standby Power Consumption	8.7W(100V), 9.3W(240V)	23W(100V), 23.5 W(240V)	18.5 W(100V), 19W(240V)	27.8W(100V), 28.4W(240V)
	Power Input	100-240 VAC	100-240 VAC	100-240 VAC	100-240 VAC
	Energy Efficiency Ethernet (EEE)			-	-
	Power Saving By Link Status			-	-
	Power Saving By Cable Length			-	-
	Power Saving By LED Shut-Off			-	-
	Power Saving By Port Shut-Off			-	-
Physical and Environment	Power Saving By System Hibernation			-	-
	Time-based PoE			-	-
	Dimension	440mm x 140 mm x 44mm	440mm x 210 mm x 44mm	440mm x 250 mm x 44mm	440mm x 430 mm x 44mm
	Weight	1.75KG	3.01KG	3.46KG	3.85KG
	Operation Temperature	-5 - 50°C	-5 - 50°C	-5 - 50°C	-5 - 50°C
	Storage Temperature	-20-70°C	-20-70°C	-20-70°C	-20-70°C
	Operation Humidity	0% - 95% RH	0% - 95% RH	0% - 95% RH	0% - 95% RH
	Storage Humidity	0% - 95% RH	0% - 95% RH	0% - 95% RH	0% - 95% RH
	Operating Altitude	1500 meters	1500 meters	1500 meters	1500 meters
	Comply with RoHS 6	Yes	Yes	Yes	Yes

# Layer 2+ Gigabit Smart Managed Switches

## DGS-1210 Series

The DGS-1210 Layer 2+ Gigabit Smart Managed Switches are the latest generation to feature D-Link's Green 3.0 Technology and IEEE 802.3az Energy Efficient Ethernet standard, which offers a high level of energy saving and efficiency. By offering multiple management options, the Smart Managed 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 from IPv4 to IPv6. Built for small- and medium-sized businesses, the DGS-1210 Series Layer 2+ Gigabit Smart Managed Switches provide functionality, security, and manageability for a fraction of the standard cost of ownership.

Six switches in the DGS-1210 range offer power-budget PoE for businesses looking to power VoIP phones, wireless access points or network cameras. The various model design with different power budget allows plenty of flexibility in power allocation for a variety of powered devices but still offers affordable installation costs.



## Series include the below models

### DGS-1210-10 (F1)

- 10/100/1000BASE-T ports x 8
- SFP ports x 2

### DGS-1210-10MP (F1)

- 10/100/1000BASE-T PoE ports x 8
- SFP ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 130 W PoE power budget

### DGS-1210-10P (F1)

- 10/100/1000BASE-T PoE ports x 8
- SFP ports x 2
- 802.3af (PoE) and 802.3at (PoE+) support
- 65 W PoE power budget

### DGS-1210-20 (F1)

- 10/100/1000BASE-T ports x 16
- 10/100/1000BASE-T/SFP Combo ports x 4

### DGS-1210-26 (F2)

- 10/100/1000BASE-T ports x 24
- SFP ports x 2

### DGS-1210-28 (F2)

- 10/100/1000BASE-T ports x 24
- 10/100/1000BASE-T/SFP Combo ports x 4

### DGS-1210-28P (F2)

- 10/100/1000BASE-T PoE ports x 24
- 10/100/1000BASE-T/SFP Combo ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 193 W PoE power budget

### DGS-1210-28MP (F2)

- 10/100/1000BASE-T PoE ports x 24
- 10/100/1000BASE-T/SFP Combo ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget

### DGS-1210-52 (F2)

- 10/100/1000BASE-T ports x 48
- 10/100/1000BASE-T/SFP Combo ports x 4

### DGS-1210-52MP (F2)

- 10/100/1000BASE-T PoE ports x 48
- 10/100/1000BASE-T/SFP Combo ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 370 W PoE power budget

### DGS-1210-52MPP (E1)

- 10/100/1000BASE-T PoE ports x 48
- SFP ports x 4
- 802.3af (PoE) and 802.3at (PoE+) support
- 740 W PoE power budget

## Key Series Features






- Layer 3 Static Routing
- Internet Group Management Protocol (IGMP) snooping
- Loopback Detection (LBD)
- Cable diagnostics
- 802.1Q Virtual LAN (VLAN)
- Auto Surveillance VLAN (ASV)
- 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)

## Optional Accessories







### Optional Management Software

DV-700	D-View 7 Network Management System
DV-800	D-View 8 Network Management System



						
		NON POE				
MODEL		DGS-1210-10 (F1)	DGS-1210-20 (F1)	DGS-1210-26 (F2)	DGS-1210-28 (F2)	DGS-1210-52 (F2)
Interfaces	Gigabit Ethernet	8	16	24	24	48
	10/100/1000BASE-T/SFP Combo Slots		4		4	4
	SFP Slots	2		2		
General Features	Switching Capacity	20 Gbps	40 Gbps	52 Gbps	56 Gbps	104 Gbps
	Max Packet Forwarding Rate	14.88 Mpps	29.8 Mpps	38.7 Mpps	41.7 Mpps	77.4 Mpps
	Packet Buffer Memory	4.1 Mbits	4.1 Mbits	4.1 Mbits	4.1 Mbits	12 Mbits
	MAC Address Table					
	Flow Control					
	Jumbo Frame					
	Loop Protection					
Layer 2 Features	802.3ad Link Aggregation	8 Groups 8 Ports per Group	8 Groups 8 Ports per Group	4 Groups 8 Ports per Group	8 Groups 8 Ports per Group	4 Groups 8 Ports per Group
	Port Mirroring					
	Loopback Detection					
	Cable Diagnostics					
Layer 3 Features	ARP	•	•	•	•	•
	IP Interfaces	4	4	4	4	4
	Default Routing	•	•	•	•	•
	Static Routing					
Virtual LAN (VLAN)	VLANs					
	Auto Voice VLAN					
	Auto Surveillance VLAN					
Layer 2 Multicasting	Groups					
	Protocols					
Quality of Service (QoS)	Standard					
	Number of Queues					
	Mode					
	CoS Handling					
	Bandwidth Control					
Security	STP Security					
	Port Security					
	DoS Attack Prevention					
	Storm Control					
	IP-MAC-Port Binding					
	DHCP Server Screening					
	ARP Spoofing Prevention					
	Traffic Segmentation					
Authentication, Authorisation and Accounting (AAA)	802.1x Authentication					
	Switch Access					
Access Control Lists (ACL)	Rules					
	ACL Handling					
Power over Ethernet	Standard					
	PoE Ports					
	PoE Power Budget					
	Time-Based PoE					
Management	Switch Access					
	SNMP					
	DHCP					
	RMON					
	TFTP Client					
	Syslog					
Physical and Environment	Power Supply	Internal	Internal	Internal	Internal	Internal
	Maximum Power Consumption	6.33 W	13.02 W	15.11 W	16.94 W	34.2 W
	Power-Saving Technology					
	Mean Time Between Failures (MTBF)	1,380,058 Hours	1,087,100 Hours	1,082,534 Hours	992,594 Hours	400,667 Hours
	Operating Temperature					
	Operating Humidity					
Modules/ Transceivers	Dimensions (W x D x H)	280 x 126 x 44 mm	280 x 180 x 44 mm	440 x 140 x 44 mm	440 x 140 x 44 mm	440 x 210 x 44 mm
	SFP Transceivers					

\*Revision F2 comply with UL 62368 / EN 62368-1.

     					
POE					
DGS-1210-10MP (F1)	DGS-1210-10P (F1)	DGS-1210-28P (F2)	DGS-1210-28MP (F2)	DGS-1210-52MP (F2)	DGS-1210-52MPP (E1)
8 (PoE)	8 (PoE)	24 (PoE)	24 (PoE)	48 (PoE)	48 (PoE)
		4	4	4	
2	2				4
20 Gbps	20 Gbps	56 Gbps	56 Gbps	104 Gbps	104 Gbps
14.88 Mpps	14.88 Mpps	41.7 Mpps	41.7 Mpps	77.4 Mpps	77.4 Mpps
4.1 Mbits	4.1 Mbits	4.1 Mbits	4.1 Mbits	12 Mbits	3 MB
8000					16,000
IEEE 802.3x Flow Control, HOL Blocking Prevention					
10,000 Bytes					9216 Bytes
802.1D, 802.1w, 802.1s					802.1D, 802.1w, 802.1s, ERPS
8 Groups 8 Ports per Group	8 Groups 8 Ports per Group	4 Groups 8 Ports per Group	4 Groups 8 Ports per Group	4 Groups 8 Ports per Group	26 Groups 8 Ports per Group
One-to-One, Many-to-One, Mirroring for Tx/Rx/Both					
•					
•					
•					
4	4	4	4	4	1
•					•
Entries, Max 50 IPv6 Entries					Max 64 IPv4 Entries, Max 32 IPv6 Entries
256 Static					
•					
•					
256					
awareness, MLD Snooping v1 / v2 awareness					IGMP Snooping v1 / v2 / v3 awareness, MLD Snooping v1 / v2
802.1p, DSCP					
8					
Strict / WRR					
Protocol Type, DSCP, ToS, IP Preference, IPv6 Traffic Class, TCP/UDP Port					802.1p Priority Queue, DSCP, ToS, IPv6 Traffic Class, TCP/UDP Port
Egress, min. granularity 16 kbps)					Port-Based (Ingress/Egress, min. granularity 64 kbps)
Root Restriction					
•					
•					
Broadcast / Multicast / Unicast					
Smart IP-MAC-Port Binding					
•					
•					
•					
•					
Port-Based					
RADIUS					
Ingress ACL: 50 Profiles, 768 Rules					
MAC, IP Address, Ether Type, IPv6 Traffic Class, DSCP, Protocol Type, TCP/UDP Port					
802.3af (PoE) 802.3at (PoE+)	802.3af (PoE) 802.3at (PoE+)	802.3af (PoE) 802.3at (PoE+)	802.3af (PoE) 802.3at (PoE+)	802.3af (PoE) 802.3at (PoE+)	802.3af (PoE) 802.3at (PoE+)
8	8	24	24	48	48
130 W	65 W	193 W	370 W	370 W	740 W
•	•	•	•	•	•
Web GUI, Compact CLI, Telnet					
v1 / v2c / v3					
Client					
v1					
•					
•					
Internal	External	Internal	Internal	Internal	Internal
148.7 W	80.6 W	247.4 W	424.8 W	454.1 W	967.5 W
Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet					
1,274,005 Hours	729,258 Hours	469,262 Hours	277,967 Hours	236,406 Hours	350,728 Hours
-5°C to 50°C					
0% to 95% RH Non-Condensing					
330 x 180 x 44 mm	280 x 180 x 44 mm	440 x 250 x 44 mm	440 x 250 x 44 mm	440 x 430 x 44 mm	440 x 430 x 44 mm
DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT, DEM-330T, DEM-330R, DEM-331T, DEM-331R, DGS-712					

# Layer 2 Fast Ethernet Smart Managed 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.



### Series include the below models

#### 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

### Optional Accessories

#### Optional Management Software




- |        |                                    |
|--------|------------------------------------|
| DV-700 | D-View 7 Network Management System |
| DV-800 | D-View 8 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)

### 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...

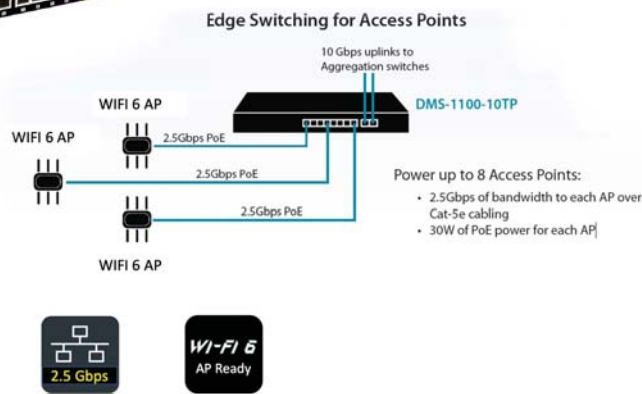
				
		NON POE	POE	
MODEL		DES-1210-28	DES-1210-08P	DES-1210-28P
Interfaces	Fast Ethernet	24	8 (PoE)	24 (PoE)
	Gigabit Ethernet	2	—	2
	Combo Gigabit/SFP Slots	2	—	2
General Features	Stackability	—	—	—
	Stacking Speed (per Port)	—	—	—
	Switching Capacity	12.8 Gbps	1.6 Gbps	12.8 Gbps
	Forwarding Mode	Store-and-Forward		
	Packet Buffer Memory	512 KB	384 KB	512 KB
	MAC Address Table	8K Entries	8K Entries	8K Entries
	Flow Control	802.3x, HOL Blocking Prevention		
	MDI/MDIX	Configurable		
	Loop Protection	802.1Q, 802.1w		
L2 Features	803.2ad Link Aggregation	14 Groups 8 Ports per Group	4 Groups 8 Ports per Group	14 Groups 8 Ports per Group
	Port Mirroring	One-to-One, Many-to-One, RX/TX/Both		
	Loopback Detection	✓		
	Cable Diagnostics	—		
	VLANs	256 Static		
Virtual LAN (VLAN)	GVRP	—		
	Protocol VLAN (802.1v)	—		
	Double VLAN (Q-in-Q)	—		
	Auto Voice VLAN	✓		
	Auto Surveillance VLAN	✓		
	Groups	256		
Multicasting	Protocols	IGMP v1, v2		
	Standard	802.1p, DSCP		
Quality of Service (QoS)	Number of Queues	4		
	Mode	Strict / WRR		
	CoS Handling	802.1p, DSCP		
	Bandwidth Control	✓		
	STP Security	—		
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	✓		
	802.1x Authentication	Port-Based		
Authentication, Authorisation and Accounting (AAA)	Web-based Access Control (WAC)	—		
	MAC-based Access Control (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)		
	PoE Ports	—	8	802.3af (PoE): 24 802.3at (PoE+): 4
	PoE Power Budget	—	72 W	193 W
Management	Switch Access	Web GUI, Telnet		
	sFlow	—		
	SNMP	v1 / v2c / v3		
	DHCP	Client		
	RMON	✓		
	TFTP Client	✓		
	Syslog	✓		
Physical and Environment	Power Supply	Internal	External	Internal
	Maximum Power Consumption	9.46 W	84.9 W (PoE on) 3.5 W (PoE off)	254 W (PoE on) 26.4 W (PoE off)
	Power Saving Technology	—	—	Smart Fans
	Number of Fans	0	0	3
	Operating Temperature	0°C to 40°C		
	Operating Humidity	5% to 95% RH Non-Condensing		
	Dimensions (W x D x H)	330 x 180 x 44 mm	190 x 120 x 38 mm	440 x 210 x 44 mm
	Mean Time Between Failures (MTBF)	330,182 Hours	656,745 Hours	244,140 Hours
Modules/ Transceivers	SFP Transceivers	DEM-210, DEM-211, DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT		



# Layer 2 2.5 Gigabit Smart Managed Switches

## DMS-1100 Series

The DMS-1100 Series is the latest in D-Link Layer 2 Smart Managed Switches Family. This series supports 2.5 Gigabit Ethernet and 10G SFP+ Slots for uplink. It blends plug-and-play simplicity with exceptional value and reliability for small and medium-sized business (SMB) networking. The whole series are housed in a new style rack-mount metal case with easy-to-view front panel diagnostic LEDs, and provide advanced features including network security, traffic segmentation, QoS and versatile management.



### Series include the below models

#### DMS-1100-10TS

- 2.5GBASE-T ports x 8
- 10 Gigabit SFP+ ports x 2

#### DMS-1100-10TP\*

- 2.5GBASE-T PoE ports x 8
- 10 Gigabit SFP+ ports x 2

### Optional Accessories

#### Optional 10 Gbps SFP+ Direct Attach Cables

DEM-CB100S	10 Gigabit SFP+ 1 m Direct Attach Cable
DEM-CB300S	10 Gigabit SFP+ 3 m Direct Attach Cable
DEM-CB700S	10 Gigabit SFP+ 7 m Direct Attach Cable

### Key Series Features

- Port Security
- 2.5G Base-T PoE\*
- D-Link Safeguard Engine
- Auto Surveillance VLAN
- Voice VLAN
- Port Mirroring
- Bandwidth Control
- Traffic Segmentation
- 802.1p Priority Queue Mapping
- Web-based GUI or D-Link Network Assistant utility



### 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 (44mm) and that it can be mounted into a standard comms rack. Some D-Link switches that are narrower than 19in are supplied with brackets so they can still be rack-mounted if desired.



NON POE

POE

MODEL		DMS-1100-10TS	DMS-1100-10TP
Interfaces	2.5GBASE-T	8	8 (PoE)
	10 Gigabit SFP+ Slots	2	2
General Features	Stackability		
	Stacking Speed		
	Switching Capacity	80 Gbps	80 Gbps
	Max Packet Forwarding Rate	59.52 Mpps	59.52 Mpps
	Packet Buffer Memory	12 Mbits	
	MAC Address Table	16000	
	Flow Control	IEEE 802.3x Flow Control, HOL Blocking Prevention	
	Jumbo Frame	9216 Bytes	
L2 Features	Loop Protection	802.1D, 802.1w, ERPS	
	802.3ad Link Aggregation	•	
	Port Mirroring	One-to-One, Many-to-One, Mirroring for Tx/Rx/Both	
	Loopback Detection	•	
	Cable Diagnostics	•	
Virtual LAN (VLAN)	VLANs	128 Static	
	GVRP		
	Protocol VLAN (802.1v)		
	Double VLAN (Q-in-Q)		
	Auto Voice VLAN	•	
	Auto Surveillance VLAN	•	
Layer 2 Multicasting	Groups	TBA	
	Protocols	IGMP Snooping v1 / v2 / v3, MLD Snooping v1 / v2	
Quality of Service (QoS)	Standard	802.1p	
	Number of Queues	8	
	Mode	Strict / WRR / DRR	
	CoS Handling	Switch Port	
	Bandwidth Control	Port-Based (Ingress/Egress)	
Security	STP Security		
	Port Security		
	DoS Attack Prevention	•	
	Storm Control	Broadcast / Multicast / Unicast	
	IP-MAC-Port Binding		
	DHCP Server Screening		
	ARP Spoofing Prevention		
	D-Link SafeGuard Engine	•	
Authentication, Authorisation and Accounting (AAA)	802.1x Authentication		
Power Over Ethernet	Standard	802.3af (PoE) 802.3at (PoE+)	
	PoE Ports	8	
	PoE Power Budget	240 W	
	Time-based PoE	•	
Access Control Lists (ACL)	ACL Handling		
Management	Switch Access	Web GUI	
	sFlow		
	SNMP	v1 / v2c	
	DHCP	Client	
	RMON		
	TFTP Client	•	
	Syslog	•	
	Power Supply	Internal	
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet	
	Operating Temperature	-5°C to 50°C	
	Operating Humidity	0% to 95% RH Non-Condensing	
	Dimensions (W x D x H)	440 x 209 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, DEM-433XT, DEM-433XT-DD, DEM-434XT, DEM-436XT-BXD, DEM-436XT-BXU	
	SFP Transceivers	DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT, DEM-330T, DEM-330R, DEM-331T, DEM-331R, DGS-712	

# Layer 2 Gigabit Metro Ethernet Switches

## DGS-1100/ME Series

The DGS-1100/ME Gigabit Metro Ethernet Switches are ideal solution for Metro Ethernet applications which require upgrade from Fast Ethernet to Gigabit entry level switches. This series also offer resilience against electrical spikes with in-built surge protection, giving customer a reliable solution that they can count on.

Compliant with IEEE802.3az Energy Efficient Ethernet, the DGS-1100/ME switches consume less energy by cutting down on power consumption when port utilization 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/ME Series also features D-Link Green Technology that helps automatically save energy. The switches monitor the link status of every port and will drastically reduce power consumption when a port link is down.

The DGS-1100/ME Series also feature Loopback Detection and Cable Diagnostics to help network administrators find and solve network problems quickly and easily. Loopback Detection is used to detect loops created by a specific port and automatically shut down the affected port. The Cable Diagnostics feature is designed for network administrators to quickly examine the quality of the copper cables, recognize the cable type, and detect cable errors.

### Key Series Features

- Various selection of port counts, with or without PoE and fiber support
- Port-based Q-in-Q\*
- Silent, fanless design (Non-PoE models)
- IGMP Snooping
- IEEE 802.1X Access Control\*
- Guest VLAN\*
- Quality of Service (QoS)
- Port security\*
- D-Link Safeguard Engine
- Layer 2 Multicast
- 802.3ah Ethernet Link OAM\*
- 6kV Surge Protection on all Gigabit Ethernet Ports
- Command Line Interface (CLI)

\* Supported on DGS-1100-06/10ME



### Series include the below models

#### DGS-1100-06/ME

- 10/100/1000BASE-T ports x 5
- SFP port x 1

#### DGS-1100-16/ME

- 10/100/1000BASE-T ports x 16

#### DGS-1100-24P/ME

- 10/100/1000BASE-T PoE ports x 12
- 10/100/1000BASE-T ports x 12
- 802.3af (PoE) and 802.3at (PoE+) support
- 100 W PoE power budget

#### DGS-1100-10/ME

- 10/100/1000BASE-T ports x 8
- 10/100/1000BASE-T/SFP Combo ports x 2

#### DGS-1100-24/ME

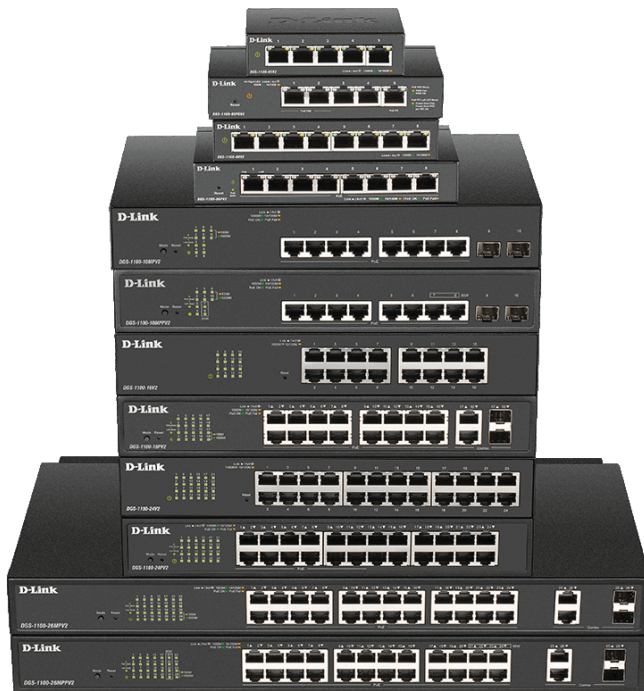
- 10/100/1000BASE-T ports x 24

		NON POE				POE
MODEL		DGS-1100-06/ME	DGS-1100-10/ME	DGS-1100-16/ME	DGS-1100-24/ME	DGS-1100-24P/ME
Interfaces	Gigabit Ethernet	5	8	16	24	12 (PoE) + 12
	10/100/1000BASE-T/SFP Combo Slots		2			
	SFP Slots	1				
General Features	Switching Capacity	12 Gbps	20 Gbps	32 Gbps	48 Gbps	48 Gbps
	Max Packet Forwarding Rate	8.9 Mpps	14.88 Mpps	23.81 Mpps	35.71 Mpps	35.71 Mpps
	Packet Buffer Memory	128KB	4.1 Mbits	512 KB	512 KB	512 KB
	MAC Address Table	4,000	8,000	8,000	8,000	8,000
	Flow Control	IEEE 802.3x Flow Control, HOL Blocking Prevention				
	Jumbo Frame	9216 Bytes	10 Kbytes	9216 Bytes	9216 Bytes	9216 Bytes
Layer 2 Features	Loop Protection	802.1D, 802.1w		802.1D, 802.1w	802.1D, 802.1w	802.1D, 802.1w
	802.3ad Link Aggregation	8 Groups, 8 Ports per Group		8 Groups, 8 Ports per Group	12 Groups, 8 Ports per Group	12 Groups, 8 Ports per Group
	Port Mirroring	One-to-One, Many-to-One, Mirroring for Tx/Rx/Both				
	Loopback Detection			•		
	Cable Diagnostics			•		
Layer 3 Features	ARP	128 Static ARP				
	IP Interfaces		1			
	Default Routing		•			
	Static Routing					
Virtual LAN (VLAN)	VLANs	32	32	128	128	128
	GVRP					
	Auto Surveillance VLAN			•	•	•
	Double VLAN (Q-in-Q)	Port-Based	Port-Based			
	Voice VLAN			•	•	•
	ISM VLAN (Multicast VLAN)			•		
Layer 2 Multicasting	Groups	32	256	64	64	64
	Protocols	IGMP Snooping v1/ v2 / v3 awareness, MLD Snooping v1 / v2		IGMP Snooping v1/ v2 / v3 awareness, MLD Snooping v1 / v2 awareness		
Quality of Service (QoS)	Standard	802.1p, DSCP	802.1p, DSCP	802.1p	802.1p	802.1p
	Number of Queues	4	8	4	4	4
	Mode			Strict / WRR		
	CoS Handling	802.1p, DSCP, IPv6 Traffic Class	802.1p, DSCP	Switch Port	Switch Port	Switch Port
	Bandwidth Control	Port-Based (Ingress/Egress, min. granularity 64 kbps)	Port-Based (Ingress/Egress, min. granularity 16 kbps)	Port-Based (Ingress, min. granularity 8 kbps, Egress, min. granularity 64 kbps)		
Security	STP Security					
	Port Security	•	•			
	DoS Attack Prevention	•		•	•	•
	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/QoS Assignment	Port-Based, Host-Based, Dynamic VLAN/QoS Assignment			
	Guest VLAN	•	•			
Power over Ethernet	Standard					802.3af (PoE)
	PoE Ports					12
	PoE Power Budget					100 W
	Time-Based PoE					•
Management	Switch Access	Web GUI, CLI, Telnet				
	SNMP	v1 / v2c / v3	v1 / v2c / v3	v1 / v2c	v1 / v2c	v1 / v2c
	DHCP	Client, Relay	Client, Relay	Client	Client	Client
	RMON	v1	v1			
	TFTP Client			•		
	Syslog			•		
Physical and Environment	Power Supply	External	External	Internal	Internal	Internal
	Maximum Power Consumption	7.08W	7.9 W	9.31 W	13.94 W	128.32 W
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet (All supported except DGS-1100-06/ME)				
	Mean Time Between Failures (MTBF)	459,420 Hours	706,061 Hours	2,827,541 Hours	2,406,109 Hours	563,292 Hours
	Operating Temperature	0°C to 40°C	-5°C to 50°C	-5°C to 50°C	-5°C to 50°C	-5°C to 50°C
	Operating Humidity	10% to 90% RH Non-Condensing				
Modules / Transceivers	Dimensions (W x D x H)	280 x 126 x 44 mm	190 x 120 x 38 mm	280 x 180 x 44 mm	280 x 180 x 44 mm	280 x 230 x 44 mm
	SFP Transceivers	DEM-210, DEM-211, DEM-220T, DEM-220R (Supported by DGS-1100-06, 10/ME) DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT, DEM-315GT, DEM-330T, DEM-330R, DEM-331T, DEM-331R, DGS-712 (Supported by DGS-1100-06, 10, 18/ME)				

# Layer 2 Gigabit Smart Managed Switches

## DGS-1100 V2 Series

The DGS-1100 Series is a range of switches designed to meet the requirements of small, medium, and enterprise businesses. Support for multiple PoE standards (802.3af/at/bt) make the DGS-1100 Series ideal for IP surveillance deployments. Advanced management features, a range of diagnostic and troubleshooting tools, and energy efficient technologies provide a flexible solution to meet your networking requirements.



\*Model dependent

### Green Features That Help the Environment and Your Budget

D-Link Green technology enables the DGS-1100 Smart Managed Switches to save power without sacrificing performance. Most of the models in the series utilize a fanless design, ensuring a longer product life, as well offering silent and energy-efficient operation. All are IEEE 802.3az-compliant and feature Link Status detection and Time-Based PoE



### Key Series Features

- Available in multiple configurations, with or without PoE and fiber support
- Fanless design for silent operation<sup>1</sup>
- Link status detection
- IEEE 802.3az Energy-Efficient Ethernet compliant
- Time-based PoE\*
- PoE++ 802.3bt (Up to 90W)\*
- IGMP Snooping
- Bandwidth Control
- IEEE 802.1Q VLAN traffic segregation
- Port-based VLAN
- IEEE 802.1p Quality of Service
- Surveillance VLAN\*
- Voice VLAN

### Management Features

- Client-based utility or web-based GUI
- Built-in SNMP MIB2
- D-Link Network Assist

Safeguard  
Engine

Energy  
Efficient  
Ethernet

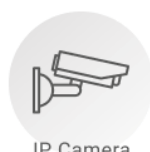
dlinkgreen



# Types of Power-over-Ethernet Standards

## IEEE 802.3af (PoE)

Power Sourced **15.4W**  
Power Requested **13W**



IP Camera



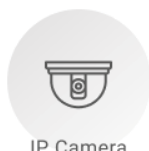
IP Phone

## IEEE 802.3at (PoE+)

Power Sourced **30W**  
Power Requested **25.5W**



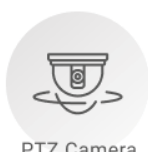
Wireless AP



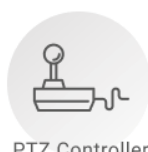
IP Camera

## IEEE 802.3bt (PoE++)

Power Sourced **90W**  
Power Requested **71.3W**



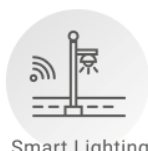
PTZ Camera



PTZ Controller



Digital Signage



Smart Lighting



POS System

## Series include the below models

### DGS-1100-05V2

- 5x 10/100/1000BASE-T Port

### DGS-1100-05PDV2

- 5x 10/100/1000BASE-T
- Port 1 & 2 PoE passthrough

### DGS-1100-08V2

- 8x 10/100/1000BASE-T Port

### DGS-1100-16V2

- 16x 10/100/1000BASE-T Port

### DGS-1100-24V2

- 24x 10/100/1000BASE-T Port

### DGS-1100-08PV2

- 8x 10/100/1000BASE-T PoE
- 64 W PoE power budget

### DGS-1100-08PLV2

- 4x 10/100/1000BASE-T PoE + 4x 10/100/1000BASE-T Port
- 80 W PoE power budget

### DGS-1100-18PV2

- 16x 10/100/1000BASE-T PoE
- 2x 100/1000 GE/SFP Combo Ports
- 130 W PoE power budget

### DGS-1100-24PV2

- 12x 10/100/1000BASE-T PoE
- 12x 10/100/1000BASE-T Port
- 100 W PoE power budget

### DGS-1100-10MPV2

- 8x 10/100/1000BASE-T PoE
- 2x SFP Ports
- 130 W PoE power budget

### DGS-1100-26MPV2

- 24x 10/100/1000BASE-T PoE
- 2x GE/SFP Combo Ports
- 370W PoE power bud

### DGS-1100-10MPPV2

- 8x 10/100/1000BASE-T PoE
- 2x SFP Ports
- 802.3bt (PoE++) support (up to 90W)
- 242 W PoE power budget

### DGS-1100-26MPPV2

- 24x 10/100/1000BASE-T PoE
- 2x GE/SFP Combo Ports
- 802.3bt (PoE++) support (up to 90W)
- 525 W PoE power budget

## Optional Accessories

### Optional SFP Transceivers

DEM-210 100BASE-FX, single-mode, 15 km  
DEM-211 100BASE-FX, multi-mode, 2 km  
DEM-220T 100BASE-BX-D, single-mode, 20 km  
DEM-220R 100BASE-BX-U, single-mode, 20 km  
DGS-712 1000BASE-T copper, 100 m  
DEM-310GT 1000BASE-LX, single-mode, 10 km  
DEM-311GT 1000BASE-SX, multi-mode, 550 m

DEM-312GT2 1000BASE-SX, multi-mode, 2 km  
DEM-314GT 1000BASE-LHX, single-mode, 50 km  
DEM-315GT 1000BASE-ZX, single-mode, 80 km  
DEM-330T 1000BASE-BX-D, single-mode, 10 km  
DEM-330R 1000BASE-BX-U, single-mode, 10 km  
DEM-331T 1000BASE-BX-D, single-mode, 40 km  
DEM-331R 1000BASE-BX-U, single-mode, 40 km



		NON POE			
MODEL		DGS-1100-05V2	DGS-1100-08V2	DGS-1100-16V2	DGS-1100-24V2
Interfaces	Gigabit Ethernet	5	8	16	24
	Auto MDI/MDIX	Yes			
General Features	Switching Capacity	10 Gbps	16 Gbps	32Gbps	48Gbps
	Max. Packet Forwarding Rate	7.4Mpps	11.9Mpps	23.81Mpps	35.71Mpps
	Store & Forwarding Forwarding			✓	
	MAC Address Table Size	2K	4K	8K	8K
	802.3x Flow Control			✓	
	Head-of-line (HOL) Blocking Prevention			✓	
L2 Features	802.1D Spanning Tree (STP)			✓	
	802.1w Rapid Spanning Tree (RSTP)			✓	
	802.1AX Link Aggregation			✓	✓
	Port Mirroring			✓	
	Jumbo Frame	9K bytes	9K bytes	10K bytes	10K bytes
	Loopback Detection (LBD)			✓	
	Cable Diagnostics			✓	
Virtual LAN (VLAN)	IGMP Snooping			✓	
	802.1Q VLAN			1 ~ 4094	
	VLAN Groups	32	32	128	128
	Port-based VLAN			✓	
	Voice VLAN	Static Voice VLAN only	Static Voice VLAN only	✓	✓
	Auto Surveillance VLAN			✓	✓
	Asymmetric VLAN	✓			
Security	Number of Queue	4	4	8	8
	Class of Service (CoS)			✓	
	Rate Limiting			✓	
	Strict Priority Queue (SPQ)			✓	
	Weighted Round Robin (WRR)			✓	
	Port-based Bandwidth Control			✓	
	SSL			✓	✓
	Broadcast/Multicast/Unicast Storm Control			✓	
	Traffic Segmentation			✓	
	D-Link Safeguard Engine			✓	✓
Management	DoS Attack Prevention			✓	✓
	Web-based GUI			✓	
	SNMP			✓	
	TFTP Client			✓	✓
	System Log			✓	✓
	LLDP			✓	✓
	D-Link Discover Protocol (DDP)			✓	
	DHCP/BootP Client			✓	
Physical and Environment	D-Link Network Assistant			✓	
	Smart Wizard			✓	✓
	Dimension	100.5 × 82 × 28 mm	145 × 82 × 28 mm	280 x 180 x 44mm	280 x 180 x 44mm
	Weight	0.23 kg	0.34 kg	1.21 Kg	1.32 Kg
	Operation Temperature	0 ~ 40 °C	0 ~ 40 °C	-5-50°C	-5-50°C
	Storage Temperature	-40 ~ 70 °C	-40 ~ 70 °C	-40-70°C	-40-70°C
	Operation Humidity	0% ~ 90% RH	0% ~ 90% RH	0%-95% RH	0%-95% RH
	Storage Humidity	0% ~ 95% RH	0% ~ 95% RH	0% ~ 95% RH	0% ~ 95% RH
	Maximum Power Consumption	3.42 W	4.94 W	10.1Watts	15.9Watts
	Standby Power Consumption	1.39 W	1.93 W	3.4Watts	4.5Watts
	FAN	Fanless	Fanless	Fanless	Fanless
	Power Input	AC: 100 ~ 240 V (5V/1A power adapter)	AC: 100 ~ 240 V (5V/1A power adapter)	AC: 100-240V	AC: 100-240V
	Energy Efficiency Ethernet (EEE)	✓			
	Comply with RoHS 6	✓			

		POE				PoE++ ( 802.3bt)	
MODEL		DGS-1100-08PV2	DGS-1100-10MPV2	DGS-1100-18PV2	DGS-1100-24PV2	DGS-1100-10MPPV2	DGS-1100-26MPPV2
Interfaces	Gigabit Ethernet	8 (PoE)	8 (PoE)	16 (PoE)	12 (PoE) + 12	8 (PoE)	24 (PoE)
	Gigabit PoE++ Ethernet Port No.					PoE++ (Port 7 ~ 8)	PoE++ (Port 20 ~ 24)
	SFP Slot		2			2	
	Combo 1000Base-T/SFP			2			2
General Features	Auto MDI/MDIX	✓	✓	✓	✓	✓	✓
	Switching Capacity	16 Gbps	20Gbps	36Gbps	48Gbps	20Gbps	52Gbps
	Max. Packet Forwarding Rate	11.9Mpps	14.88Mpps	26.78Mpps	35.71Mpps	14.88Mpps	38.69Mpps
	Store & Forwarding Forwarding	✓	✓	✓	✓	✓	✓
Power Over Ethernet	Jumbo Frame	9K bytes	10K bytes	10K bytes	10K bytes	10K bytes	10K bytes
	MAC Address Table Size	4K	8K	8K	8K	8K	8K
	Standard	802.3af (PoE)	802.3af (PoE)	802.3af (PoE)	802.3af (PoE)	802.3af (PoE)	802.3af (PoE)
		802.3at (PoE+)	802.3at (PoE+)	802.3at (PoE+)	802.3at (PoE+)	802.3at (PoE+)	802.3at (PoE+)
L2 Features	PoE Ports	8	8	16	12 (PoE)	8 (PoE)	24 (PoE)
	PoE Power Budget	64W	130W	130W	100 Watts	242W	525W
	Time-based PoE		Yes				
	802.3x Flow Control				✓		
Virtual LAN (VLAN)	Head-of-line (HOL) Blocking Prevention				✓		
	802.1D Spanning Tree (STP)				✓		
	802.1w Rapid Spanning Tree (RSTP)				✓		
	802.1AX Link Aggregation		✓				
Quality of Service (QoS)	802.3ad Link Aggregation		✓				
	Link Aggregation Group Per Device	2 (static port trunk)	8	8	8	8	8
	Port Mirroring				✓		
	Loopback Detection (LBD)				✓		
Security	IGMP Snooping				✓		
	802.1Q VLAN	1 ~ 4094	1 ~ 4094	1 ~ 4094	1 ~ 4094	1 ~ 4094	1 ~ 4094
	VLAN Groups	32	128	128	128	128	128
	Port-based VLAN				✓		
Management	Auto Surveillance VLAN		✓		✓		
	Class of Service (CoS)				✓		
	Rate Limiting				✓		
	Strict Priority Queue (SPQ)				✓		
Physical and Environment	Weighted Round Robin (WRR)				✓		
	Port-based Bandwidth Control				✓		
	SSL		✓		✓		
	Broadcast/Multicast/Unicast Storm Control				✓		
Security	Traffic Segmentation				✓		
	D-Link Safeguard Engine		✓		✓		
	DoS Attack Prevention		✓		✓		
	Web-based GUI				✓		
Management	SNMP				✓		
	SNMP Trap				✓		
	TFTP Client		✓		✓		
	System Log		✓		✓		
Physical and Environment	LLDP		✓		✓		
	D-Link Discover Protocol (DDP)				✓		
	DHCP/BootP Client				✓		
	Cable Diagnostics				✓		
Physical and Environment	D-Link Network Assistant				✓		
	Dimension	171 × 97.8 × 28.6 mm	280x 180x 44mm	280x 230x 44mm	280x 230x 44mm	280x 230x 44mm	440x 330x 44mm
	Weight	0.433 kg	1.50 Kg	2.10 Kg	2.00 Kg	2.00 Kg	4.4 Kg
	Operation Temperature	0 ~ 40 °C	-5-50°C	-5-50°C	-5-50°C	-5-50°C	-5-50°C
Physical and Environment	Storage Temperature	-40 ~ 70 °C	-40-70°C	-40-70°C	-40-70°C	-40-70°C	-40-70°C
	Operation Humidity	0% ~ 90% RH	0%-95% RH	0%-95% RH	0%-95% RH	0%-95% RH	0%-95% RH
	Storage Humidity	0% ~ 95% RH	0% ~ 95% RH	0% ~ 95% RH	0% ~ 95% RH	0% ~ 95% RH	0% ~ 95% RH
	Maximum Power Consumption	4.6 W (PoE off) 77.9W (PoE on)	PoE on : 164.6Watts PoE off: 11.7Watts	PoE on : 166.7Watts PoE off: 18.3Watts	PoE on : 131.5Watts PoE off: 19.5Watts	PoE on : 291.8Watts PoE off: 12.8Watts	PoE on : 619.5Watts PoE off: 38.4Watts
Physical and Environment	Standby Power Consumption	2.0 W	5.6 Watts	10.0 Watts	8.8Watts	8.1 Watts	15.2 Watts
	Power Input	AC: 100 ~ 240 V (54V/1.574A power adapter)	AC: 100-240V	AC: 100-240V	AC: 100-240V	AC: 100-240V	AC: 100-240V
	Energy Efficiency Ethernet (EEE)	✓					
	Comply with RoHS 6	✓					

# Gigabit Ethernet 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

\*Functions Listed above are Model Dependent.

## DGS-1000 Series

### DGS-1005A



- 10/100/1000BASE-T ports x 5
- External power supply
- Desktop
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DGS-1008A



- 10/100/1000BASE-T ports x 8
- External power supply
- Desktop
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DGS-1005C



- 10/100/1000BASE-T ports x 5
- External power supply
- Desktop
- Fanless
- Energy-Efficient Ethernet (EEE)

### DGS-1008C



- 10/100/1000BASE-T ports x 8
- External power supply
- Desktop
- Fanless
- Energy-Efficient Ethernet (EEE)

### DGS-1005P



- 10/100/1000BASE-T ports x 5
- 4 Ports PoE
- External Power Supply
- Desktop
- 60 W PoE Power Budget

### DGS-1008P



- 10/100/1000BASE-T ports x 8
- Supports 802.3af PoE & 802.3at PoE+ (Port 1-4)
- 68 W PoE Power Budget
- External Power Supply
- Desktop, Fanless, D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DGS-1008MP



- 10/100/1000BASE-T PoE ports x 8
- Supports 802.3af PoE & 802.3at PoE+
- 125 W PoE Power Budget
- Internal Power Supply, Fanless
- Desktop with rack-mountable kit
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DGS-1016A



- 10/100/1000BASE-T ports x 16
- External power supply
- Desktop
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DGS-1024A



- 10/100/1000BASE-T ports x 24
- External power supply
- Desktop
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DGS-1016C



- 10/100/1000BASE-T ports x 16
- Internal Power Supply
- 11in, 1U desktop with rack-mountable kit
- Fanless
- Energy-Efficient Ethernet (EEE)

### DGS-1016S



- 10/100/1000BASE-T ports x 16
- External power supply
- Desktop
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DGS-1024C



- 10/100/1000BASE-T ports x 24
- Internal Power Supply
- 11in, 1U desktop with rack-mountable kit
- Fanless
- Energy-Efficient Ethernet (EEE)

### DGS-1016D



- 10/100/1000BASE-T ports x 16
- Internal Power Supply
- 11in, 1U desktop with rack-mountable kit
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DGS-1024D



- 10/100/1000BASE-T ports x 24
- Internal Power Supply
- 11in, 1U desktop with rack-mountable kit
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DGS-1026MP



- 10/100/1000BASE-T PoE ports x 24
- 2 Gigabit Combo Uplink ports (Ethernet/SFP)
- Internal Power Supply
- Supports 802.3af PoE and 802.3at PoE+
- 370 W PoE Power Budget
- 19in, 1U rack-mount
- 2 x Smart Fans
- Energy-Efficient Ethernet (EEE)

dlinkgreen

Energy Efficient Ethernet

## DGS-105/108 Series

### DGS-105















- 10/100/1000BASE-T ports x 5
- Robust metal product housing
- Cable diagnostics function
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)



### DGS-108



- 10/100/1000BASE-T ports x 8
- Robust metal product housing
- Cable diagnostics function
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

								
MODEL		DGS-1005A	DGS-1008A	DGS-1005C	DGS-1008C	DGS-1008P	DGS-1008MP	
Interfaces	1000BASE-T (Gigabit)	5	8	5	8	8	8	
General Features	Switching Capacity	10 Gbps	16 Gbps	10 Gbps	16 Gbps	16 Gbps	16 Gbps	
	Max Packet Forwarding Rate	7.44 Mpps	11.9 Mpps	7.44 Mpps	11.9 Mpps	11.9 Mpps	11.9 Mpps	
	Packet Buffer Memory	128 KB	128 KB	256 KB	256 KB	256 KB	192 KB	
	MAC Address Table	2000	8000	2000	8000	8000	4000	
	Flow Control	IEEE 802.3x Flow Control						
	Jumbo Frame	9216 Bytes	9216 Bytes	9216 Bytes	9216 Bytes	9216 Bytes	9216 Bytes	
Quality of Service (QoS)	Standard	802.1p	802.1p	802.1p	802.1p	802.1p, DSCP		
	Number of Queues	4	4	4	4	4		
	Mode	Strict	Strict	Strict	Strict	Strict		
Power over Ethernet	Standard					802.3af (PoE) 802.3at (PoE+)	802.3af (PoE) 802.3at (PoE+)	
	PoE Ports					4	8	
	PoE Power Budget					68 W	140 W	
Physical and Environment	Power Supply	External					Internal	
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet (EEE)		IEEE 802.3az Energy-Efficient Ethernet (EEE)		Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet (EEE)		
	Number of Fans	0						
	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	
	Operating Humidity	10% to 90% RH Non-Condensing					0% to 95% RH Non-Condensing	5% to 90% RH Non-Condensing
	Dimensions (W x D x H)	91 x 73 x 22 mm	131 x 82 x 22 mm	106 x 87 x 21.45mm	151.2 x 96 x 22 mm	190 x 120 x 38 mm	280 x 180 x 44 mm	

							
MODEL		DGS-1016A	DGS-1024A	DGS-1016C	DGS-1024C	DGS-1016D	DGS-1024D
Interfaces	1000BASE-T (Gigabit)	16	24	16	24	16	24
General Features	Switching Capacity	32 Gbps	48 Gbps	32 Gbps	48 Gbps	32 Gbps	48 Gbps
	Max Packet Forwarding Rate	23.81 Mpps	35.71 Mpps	23.81 Mpps	35.71 Mpps	23.81 Mpps	35.71 Mpps
	Packet Buffer Memory	2 Mbits	3.5 Mbits	256 KB	512 KB	512 KB	512 KB
	MAC Address Table	8000	16000	8000	16000	8000	8000
	Flow Control	IEEE 802.3x Flow Control					
	Jumbo Frame	9600 Bytes	9600 Bytes	9216 Bytes	9216 Bytes	9216 Bytes	9600 Bytes
Quality of Service (QoS)	Standard			802.1p	802.1p	802.1p	802.1p
	Number of Queues			8	8	4	4
	Mode			Strict	Strict	Strict	Strict
Power over Ethernet	Standard						
	PoE Ports						
	PoE Power Budget						
Physical and Environment	Power Supply	External		Internal			
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet (EEE)		IEEE 802.3az Energy-Efficient Ethernet (EEE)		Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet (EEE)	
	Number of Fans	0					
	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
	Operating Humidity	5% to 90% RH Non-Condensing		10% to 90% RH Non-Condensing		5% to 90% RH Non-Condensing	
	Dimensions (W x D x H)	231 x 158 x 46 mm	257 x 178 x 46 mm	282.2 x 178 x 44.5 mm	282.2 x 178 x 44.5 mm	280 x 180 x 44 mm	280 x 180 x 44 mm

			
MODEL		DGS-105	DGS-108
Interfaces	1000BASE-T (Gigabit)	5	8
General Features	Switching Capacity	10 Gbps	16 Gbps
	Max Packet Forwarding Rate	7.44 Mpps	11.9 Mpps
	Packet Buffer Memory	128 KB	
	MAC Address Table	2000	8000
	Flow Control	IEEE 802.3x Flow Control	
	Jumbo Frame	9216 Bytes	
Quality of Service (QoS)	Standard	IEEE 802.1p	
	Number of Queues	4 Queues	
	Mode	Strict	
Physical and Environment	Power Supply	External	
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet (EEE)	
	Number of Fans	0	
	Operating Temperature	0°C to 40°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



# 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
- Quality of Service (QoS)

\*Functions Listed above are Model Dependent.



## DES-1000 Series

### DES-1005A / DES-1008A



- 10/100BASE-TX ports x 5 or 8
- External power supply
- Desktop
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DES-1005C / DES-1008C



- 10/100BASE-TX ports x 5 or 8
- External power supply
- Desktop
- Fanless
- Energy-Efficient Ethernet (EEE)

### DES-1016A / DES-1024A



- 10/100BASE-TX ports x 16 or 24
- External power supply
- Desktop
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DES-1016C / DES-1024C



- 10/100BASE-TX ports x 16 or 24
- Internal power supply
- 11in, 1U desktop with rack-mountable kit
- Fanless
- Energy-Efficient Ethernet (EEE)

### DES-1016D / DES-1024D



- 10/100BASE-TX ports x 16 or 24
- Internal power supply
- 11in, 1U desktop with rack-mountable kit
- Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DES-1008PA



- 10/100BASE-TX ports x 8
- Supports 802.3af PoE (Port 1 - 4)
- 58 W PoE Power Budget
- External power supply
- Desktop, Fanless
- D-Link Green™ & Energy-Efficient Ethernet (EEE)

### DES-1018MP



- 10/100BASE-TX ports x 16
- 10/100/1000BASE-T/SFP Combo ports x 2
- Supports 802.3af PoE (Port 1 - 16)
- 246.4 W PoE Power Budget
- 19in rack-mountable, EEE
- 1 Smart Fan, Internal power supply



MODEL		DES-1005A	DES-1008A	DES-1005C	DES-1008C	DES-1008PA
Interfaces	100BASE-TX (Fast Ethernet)	5	8	5	8	8
	Switching Capacity	1 Gbps	1.6 Gbps	1 Gbps	1.6 Gbps	1.6 Gbps
General Features	Max Packet Forwarding Rate	0.74 Mpps	1.19 Mpps	0.74 Mpps	1.19 Mpps	1.19 Mpps
	Packet Buffer Memory	48 KB	96 KB	96 KB	96 KB	96 KB
	MAC Address Table	2000	2000	2000	2000	2000
	Flow Control	IEEE 802.3x Flow Control				
	Jumbo Frame	2048 Bytes			2048 Bytes	
Quality of Service (QoS)	Standard	802.1p				
	Number of Queues					
	Mode					
Power over Ethernet	Standard					802.3af (PoE)
	PoE Ports					4
	PoE Power Budget					58 W
Physical and Environment	Power Supply	External				
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet (EEE)			Energy-Efficient Ethernet (EEE)	
	Number of Fans	0				
	Operating Temperature	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
	Dimensions (W x D x H)	87 x 47.85 x 21.7 mm		141.5 x 78.5 x 23.8 mm		88 x 48 x 21.45 mm



MODEL		DES-1016A	DES-1024A	DES-1016C	DES-1024C	DES-1016D	DES-1024D
Interfaces	100BASE-TX (Fast Ethernet)	16	24	16	24	16	24
	Switching Capacity	3.2 Gbps	4.8 Gbps	3.2 Gbps	4.8 Gbps	3.2 Gbps	4.8 Gbps
General Features	Max Packet Forwarding Rate	2.38 Mpps	3.57 Mpps	2.38 Mpps	3.57 Mpps	2.38 Mpps	3.57 Mpps
	Packet Buffer Memory	2 Mbits	2.5 Mbits	256 KB	256 KB	2 Mbits	2 Mbits
	MAC Address Table	8000	8000	8000	8000	8000	8000
	Flow Control	IEEE 802.3x Flow Control					
	Jumbo Frame			9216 Bytes	9216 Bytes		
Quality of Service (QoS)	Standard	802.1p	802.1p	802.1p	802.1p	802.1p	802.1p
	Number of Queues	2	2	4	4	4	4
	Mode	Strict	Strict	Strict	Strict	Strict	Strict
Physical and Environment	Power Supply	External	External	Internal	Internal	Internal	Internal
	Power-Saving Technology	Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet (EEE)		IEEE 802.3az Energy-Efficient Ethernet (EEE)		Green Ethernet, IEEE 802.3az Energy-Efficient Ethernet (EEE)	
	Number of Fans	0					
	Operating Temperature	0°C to 40°C					
	Operating Humidity	10% to 90% RH Non-Condensing					
	Dimensions (W x D x H)	155.7 x 122 x 41 mm	231 x 158 x 46 mm	282.2 x 151 x 44.5 mm	282.2 x 151 x 44.5 mm	280 x 125.8 x 44 mm	280 x 125.8 x 44 mm








MODEL		DES-1018MP
Interfaces	100BASE-TX (Fast Ethernet)	16
	10/100/1000BASE-T/SFP Combo Slots	2
General Features	Switching Capacity	7.2 Gbps
	Max Packet Forwarding Rate	5.36 Mpps
	Packet Buffer Memory	384 KB
	MAC Address Table	8000
	Flow Control	IEEE 802.3x Flow Control
Power Over Ethernet (PoE)	Standard	802.3af (PoE)
	PoE Ports	16
	PoE Power Budget	246.4 W
Physical and Environment	Power Supply	Internal
	Power-Saving Technology	IEEE 802.3az Energy-Efficient Ethernet (EEE)
	Number of Fans	1
	Operating Temperature	0°C to 40°C
	Operating Humidity	0% to 95% RH Non-Condensing
	Dimensions (W x D x H)	280 x 210 x 44 mm

# Industrial Ethernet Switches

## Rugged and reliable

D-Link's Industrial Ethernet Switches are designed specifically to withstand wide temperature range, vibrations and shock. These rugged, yet easy to deploy, switches have superior environmental specification compared to those of commercial network switches. With its hardened design combined with high availability network features, these switches form vital parts of any network infrastructure facilitating the increasing demand for smart cities, city-wide surveillance and wireless connectivity.

				
<b>DIS-M100G-SW Series</b> Industrial 10/100/1000Base-T to SFP Media Converter for long distance connection	<b>DIS-100E/100G Series</b> Industrial Fast Ethernet / Gigabit Unmanaged Switches for edge deployment	<b>DIS-200G Series</b> Industrial Gigabit Smart Managed Switches for aggregation deployment	<b>DIS-300G Series</b> Industrial Gigabit Managed Switches for aggregation deployment	<b>DIS-700G Series</b> Industrial Layer 2+ Gigabit Managed Switch for core deployment
Plug and play; compact size	Plug and play; compact size	Cost-effective; compact size	High performance; compact size	High performance, dual redundant DC input
-40 to 75° operating temperature	-40 to 75° operating temperature	-40 to 65° operating temperature	-40 to 75° operating temperature	-40 to 75°C operating temperature
DIN-Rail mounting	DIN-Rail mounting	DIN-Rail mounting	DIN-Rail mounting	Rack mounting
1-Port	5-port	12-port	8/12/14-port	24-port SFP + 4-port SFP+
Redundant power inputs	Redundant power inputs	Optional PoE 802.3af/at support	Optional PoE 802.3af/at support	Supports intelligent Quality of Service (QoS)
IEC Shock / Freefall / Vibration certified	Optional PoE 802.3af/at support (DIS-100G)	VLAN support for added security	VLAN support for added security	Optimisation of network traffic

Designed for a more connected future

### 1 Rugged, Hardened Design

*Design to operate in wide temperature ranges, vibration, shock, allowing the switches to be deployed in enclosures or cabinets in outdoor locations*

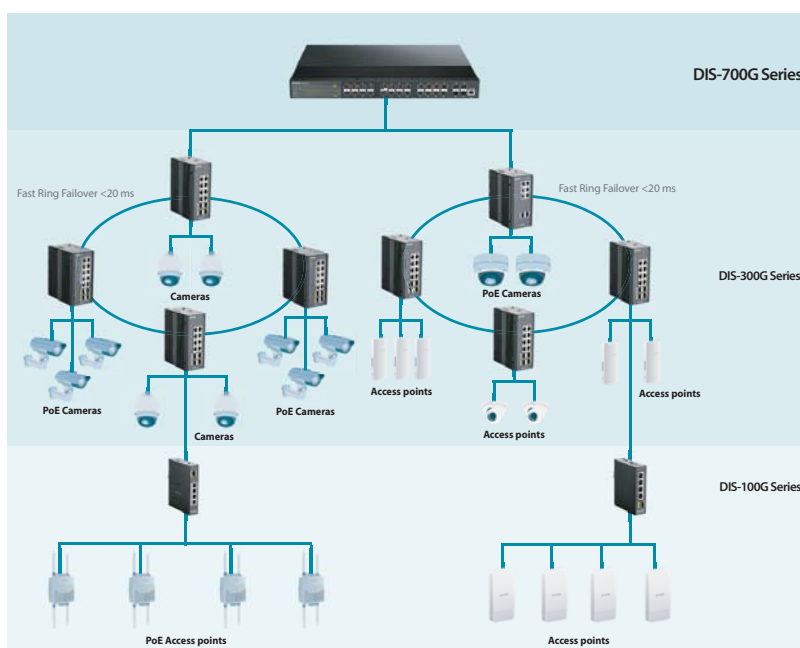
### 2 High Availability

*Comprehensive network redundancy features with fast fault recovery, together with advanced security features provides industrial-grade reliability and protection*

### 3 Flexible Options

*Wide selection of port density, media and PoE provides customer with the flexibility to choose the right switch that best fits their requirement*

Deployment Scenario



	MODEL	ACCESSORIES
SFP TRANSCEIVERS	DIS-S301SX	1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver • up to 550 m • -40~85°C operating temperature
	DIS-S302SX	1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver • up to 2 km • -40~85°C operating temperature
	DIS-S310LX	1-port Mini-GBIC SFP to 1000BaseLX Single-Mode Fibre Transceiver • up to 10 km • -40~85°C operating temperature
	DIS-S330EX	1-port Mini-GBIC SFP to 1000BaseEX Single-Mode Fibre Transceiver • up to 30 km • -40~85°C operating temperature
	DIS-S350LHX	1-port Mini-GBIC SFP to 1000BaseLHX Single-Mode Fibre Transceiver • up to 50 km • -40~85°C operating temperature
	DIS-S380ZX	1-port Mini-GBIC SFP to 1000BaseZX Single-Mode Fibre Transceiver • up to 80 km • -40~85°C operating temperature
POWER SUPPLIES	DIS-H30-24	30W 24VDC Ultra Slim DIN Rail PSU • Input: 85 ~ 264VAC • Output: 21.6 ~ 29V DC • Din rail TS-35/7.5 or 15 mountable • -30~70°C operating temperature
	DIS-H60-24	60W 24VDC Ultra Slim DIN Rail PSU • Input: 85 ~ 264VAC • Output: 21.6 ~ 29V DC • Din rail TS-35/7.5 or 15 mountable • -30~70°C operating temperature
	DIS-N240-48	240W 48VDC DIN Rail PSU • Input: 90 ~ 264VAC • Output: 48 ~ 55V DC • Din rail TS-35/7.5 or 15 mountable • -20~70°C operating temperature
	DIS-N480-48	480W 48VDC DIN Rail PSU • Input: 90 ~ 264VAC • Output: 48 ~ 55V DC • Din rail TS-35/7.5 or 15 mountable • -20~70°C operating temperature

# Industrial Layer 2+ Gigabit Managed Switch

## DIS-700G Series

The DIS-700G Series Industrial Layer 2+ Gigabit Managed Switch are designed specifically to withstand temperature range, vibrations and shock. These rugged, yet easy to deploy, switches have superior environmental specification compared to those of commercial network switches. With its hardened design combined with high availability network features, these switches form vital parts of any network infrastructure facilitating the increasing demand for smart cities, city-wide surveillance and wireless connectivity.

The DIS-700G-28XS L2+ Gigabit Managed Switch with 10 Gigabit uplinks is a 28-port aggregation switch. It provides high overall throughput and reduces the response time for time-sensitive video, voice and data applications. It offers advanced intelligent Quality of Service (QoS) features such as SPQ, WRR, SPQ+ WRR scheduling schemes with hierarchical per port, per queue shaping & scheduling with bandwidth management.



### Series include the below models

#### DIS-700G-28XS

- 24 x SFP ports
- 4 x 10G SFP+
- 1 U Rack Mount
- Highly resistant IP30-rated metal case
- Easy-to-control management interfaces and security
- Operating Temperature: -40° to 75°C
- Certified for vibration, shock, free-fall, EMC

	MODEL	ACCESSORIES
POWER SUPPLIES	DIS-H30-24	30W 24VDC Ultra Slim DIN Rail PSU • Input: 85 ~ 264VAC • Output: 21.6 ~ 29V DC • Din rail TS-35/7.5 or 15 mountable • -30~70°C operating temperature
	DIS-H60-24	60W 24VDC Ultra Slim DIN Rail PSU • Input: 85 ~ 264VAC • Output: 21.6 ~ 29V DC • Din rail TS-35/7.5 or 15 mountable • -30~70°C operating temperature
	DIS-N240-48	240W 48VDC DIN Rail PSU • Input: 90 ~ 264VAC • Output: 48 ~ 55V DC • Din rail TS-35/7.5 or 15 mountable • -20~70°C operating temperature
	DIS-N480-48	480W 48VDC DIN Rail PSU • Input: 90 ~ 264VAC • Output: 48 ~ 55V DC • Din rail TS-35/7.5 or 15 mountable • -20~70°C operating temperature
SFP TRANSCEIVERS	DIS-S301SX	1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver • up to 550 m • -40~85°C operating temperature
	DIS-S302SX	1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver • up to 2 km • -40~85°C operating temperature
	DIS-S310LX	1-port Mini-GBIC SFP to 1000BaseLX Single-Mode Fibre Transceiver • up to 10 km • -40~85°C operating temperature

	MODEL	DIS-700G-28XS
HARDWARE	Number of Fast Ethernet ports	
	Number of Gigabit ports	
	Number of SFP ports	24
	Number of 10G SFP+ ports	4
	PoE standards	
	PoE power budget	
	PoE capable ports	
	Input voltage range	Dual 20-58 VDC
	Compatible power supplies	Built-in
	Redundant power input option	
	Mounting option	19" rack mount
	Operating temperature range	-40 to +75°C
	Vibration, shock and freefall certification	
	NEMA-TS2, EN50121-4 (compliant)	
L2	EMC certification	
	Ingress protection	
	MAC address	8K
	802.1D STP, 802.1w RSTP, 802.1s MSTP	•
	Fast Failover Protection Rings	• (<20ms)
	802.3ad, 802.1AX link aggregation	•
	VLAN group (max static)	2048
	Port/MAC/protocol-based VLAN, GVRP	•
	Port-based double VLAN	•
	Auto-Servillance, Voice VLAN	
VLAN	Multicast protocols	IGMP v1/v2/v3, IGMP snooping
	802.1p	
	Policy-based access control engine	Multi-layer ACL
	Number of queues per port	8
QoS	Traffic shaper	Port/queue-based shaping & scheduling
	Traffic policer	TrTCM
	Multicast/Broadcast/Flooding Storm Control	•
SECURITY	Access control	IP/MAC/policy-based
	802.1X access control	•
AAA	RADIUS/TACACS+ authentication	RADIUS only
	SNMP (v1/v2c/v3), RMON v1	•
MANAGEMENT	Web-based management	•
	Command line interface (CLI)	•
	HTTPs, SSH	•
	Syslog	•

### Key Series Features

#### FLEXIBILITY AVAILABILITY

- SFP & SFP+ port for high bandwidth connection
- Plug-and-Play installation

#### ROBUST AND HIGH-REDUNDANCY DESIGN

- Wide operating temperature (-40° to 75°C)
- High EMC endurance
- Durable IP-30-rated housing
- 19" rack mounting

#### FULLY CERTIFIED

- Shock - IEC 60068-2-27
- Freefall - IEC 60068-2-32
- Vibration - IEC 60068-2-6
- Ce, UL, FCC,
- RoHS
- WEEE compliant

#### ADVANCED FEATURES

- Intelligent QoS
- Comprehensive Security Features
- Multi-Layer ACL
- Multicast/Broadcast/Storm Control
- 9KB Jumbo Frame
- Single & Multiple rings supported with < 20ms
- IEEE 802.1p QoS
- IEEE 802.1Q tag-based VLANs
- IEEE 802.1ad Double Tagging (Q in Q)
- Static trunk or Dynamic via LACP
- IEEE 802.1X authentication Network Access Control



# Layer 2 Gigabit Industrial Managed Switches

## DIS-300G Series

The DIS-300G Series Industrial Gigabit Managed Switches are designed specifically to withstand wide temperature range, vibrations and shock. These rugged, yet easy to deploy, switches have superior environmental specification compared to those of commercial network switches. With its hardened design combined with high availability network features, these switches form vital parts of any network infrastructure facilitating the increasing demand for smart cities, city-wide surveillance and wireless connectivity. With its comprehensive feature set, DIS-300G managed switches are easy to configure, partition and organise user's network and provide reliable and quality of service. The DIS-300G-8PSW and DIS300G-14SPW switches are PoE switches which are compliant with both IEEE 802.3af and IEEE 802.3at PoE standards and delivering up to 30 watts power per port along with data on standard Ethernet cabling. These switches can be used to power any IEEE 802.3af/at compliant PoE PD devices, which eliminates the need for additional wiring. They also provide additional PoE power management features which can greatly reduce the deployment effort of planning PoE power budget.



### Key Series Features

#### FLEXIBILITY AVAILABILITY

- Available in PoE and non-PoE Models
- SFP port for long distance connections
- Plug-and-Play installation

#### ROBUST AND HIGH-REDUNDANCY DESIGN

- Fanless, passive cooling design
- Wide operating temperature (-40° to 75°C)
- High EMC endurance
- Durable IP-30-rated housing
- Dual Power input for redundant power supplies
- Din-Rail and Wall mounting options

#### FULLY CERTIFIED

- Shock - IEC 60068-2-27
- Freefall - IEC 60068-2-32
- Vibration - IEC 60068-2-6
- Ce, UL, FCC,
- NEMA-TS2
- RoHS
- WEEE compliant

#### ADVANCED FEATURES

- Multicast/Broadcast/Storm Control
- 9KB Jumbo Frame
- Ring Protection with < 20ms
- IEEE 802.1p QoS
- IEEE 802.1Q tag-based VLANs
- IEEE 802.1ad Double Tagging (Q in Q)
- Static trunk or Dynamic via LACP
- IEEE 802.1X authentication Network Access Control)

### Series include the below models

#### DIS-300G-12SW

- 100/1000BASET ports x 8
- SFP slots x 4
- Fanless
- DIN Rail
- Highly resistant IP30-rated metal case
- Easy-to-control management interfaces and security
- Operating Temperature: -40° to 75°C
- Certified for vibration, shock, free-fall, EMCs

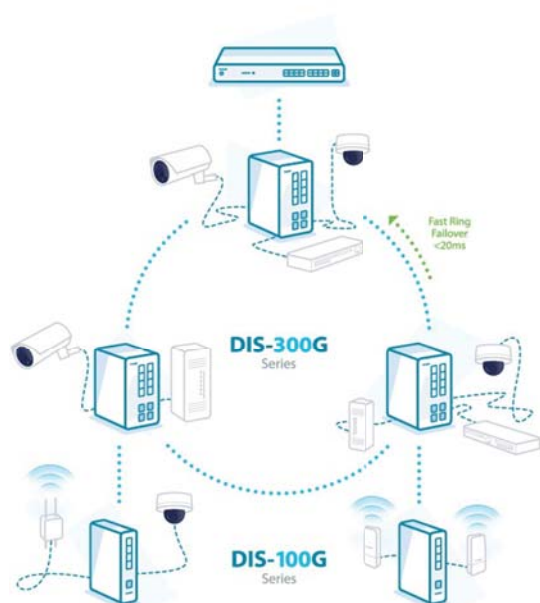
#### DIS-300G-8PSW

- 100/1000BASET ports x 6 ( 1-4 PoE Port)
- SFP slots x 2
- IEEE 802.3 af/at
- Fanless
- DIN Rail
- Highly resistant IP30-rated metal case
- Easy-to-control management interfaces and security
- Operating Temperature: -40° to 75°C
- Certified for vibration, shock, free-fall, EMC

#### DIS-300G-14PSW

- 100/1000BASET ports x 10 ( 1-8 PoE Port )
- SFP slots x 4
- IEEE 802.3 af/at
- Fanless
- DIN Rail
- Highly resistant IP30-rated metal case
- Easy-to-control management interfaces and security
- Operating Temperature: -40° to 75°C
- Certified for vibration, shock, free-fall, EMC





	MODEL	ACCESSORIES
POWER SUPPLIES	DIS-H30-24	30W 24VDC Ultra Slim DIN Rail PSU • Input: 85 ~ 264VAC • Output: 21.6 ~ 29V DC • Din rail TS-35/7.5 or 15 mountable • -30~70°C operating temperature
	DIS-H60-24	60W 24VDC Ultra Slim DIN Rail PSU • Input: 85 ~ 264VAC • Output: 21.6 ~ 29V DC • Din rail TS-35/7.5 or 15 mountable • -30~70°C operating temperature
	DIS-N240-48	240W 48VDC DIN Rail PSU • Input: 90 ~ 264VAC • Output: 48 ~ 55V DC • Din rail TS-35/7.5 or 15 mountable • -20~70°C operating temperature
	DIS-N480-48	480W 48VDC DIN Rail PSU • Input: 90 ~ 264VAC • Output: 48 ~ 55V DC • Din rail TS-35/7.5 or 15 mountable • -20~70°C operating temperature
SFP TRANSCEIVERS	DIS-S301SX	1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver • up to 550 m • -40~85°C operating temperature
	DIS-S302SX	1-port Mini-GBIC SFP to 1000BaseSX Multi-Mode Fibre Transceiver • up to 2 km • -40~85°C operating temperature
	DIS-S310LX	1-port Mini-GBIC SFP to 1000BaseLX Single-Mode Fibre Transceiver • up to 10 km • -40~85°C operating temperature

	MODEL	DIS-300G-12SW	DIS-300G-8PSW	DIS-300G-14PSW
HARDWARE	Number of Fast Ethernet ports			
	Number of Gigabit ports	8	6	10
	Number of SFP ports	4	2	4
	Number of 10G SFP+ ports			
	PoE standards		802.3af, 802.3at	802.3af, 802.3at, 60W (port 1 and 2 only)
	PoE power budget		120 W	240 W
	PoE capable ports		Ports 1-4, up to 30 W	Ports 1-2, up to 60 W Ports 3-8, up to 30 W
	Input voltage range	12-58 VDC	48-58 VDC (54~58V VDC for PoE+)	48-58 VDC (54~58V VDC for PoE+)
	Compatible power supplies	DIS-H30-24, DIS-H60-24, DIS-N240-48, DIS-N480-48	DIS-N240-48, DIS-N480-48	DIS-N240-48, DIS-N480-48
	Redundant power input option	•	•	•
	Mounting option	Din-rail and wall	Din-rail and wall	Din-rail and wall
	Operating temperature range	-40 to +75°C	-40 to +75°C	-40 to +75°C
	Vibration, shock and freefall certification			
	NEMA-TS2, EN50121-4 (compliant)	•	•	•
	EMC certification			
	Ingress protection			
L2	MAC address	8K	8K	8K
	802.1D STP, 802.1w RSTP, 802.1s MSTP	•	•	•
	Fast Failover Protection Rings	• (<20ms)	• (<20ms)	• (<20ms)
VLAN	802.3ad, 802.1AX link aggregation	•	•	•
	VLAN group (max static)	256	1024	1024
	Port / MAC / protocol-based VLAN, GVRP	•	•	•
	Port-based double VLAN	•	•	•
QoS	Auto-Servillance, Voice VLAN			
	Multicast protocols	IGMP v1/v2, IGMP snooping	IGMP v1/v2, IGMP snooping	IGMP v1/v2, IGMP snooping
	802.1p	•	•	•
	Policy-based access control engine			
SECURITY	Number of queues per port	8	8	8
	Traffic shaper	Port-based	Port-based	Port-based
AAA	Traffic policer			
	Multicast/Broadcast/Flooding Storm Control	•	•	•
	Access control	IP/MAC/policy-based	IP/MAC/policy-based	IP/MAC/policy-based
MANAGEMENT	802.1X access control	•	•	•
	RADIUS/TACACS+ authentication	•	•	•
	SNMP (v1/v2c/v3), RMON v1	•	•	•
	Web-based management	•	•	•
	Command line interface (CLI)	•	•	•
	HTTPs, SSH	•	•	•
	Syslog	•	•	•
	Command Line Interface (CLI)	Full	Full	Full
	Console port	RJ45	RJ45	RJ45

# Layer 2 Gigabit Industrial Smart Managed Switches

## DIS-200G Series

The DIS-200G Series Layer 2 Gigabit Outdoor Smart Managed Switches are equipped with 8 PoE-capable 10/100/1000BASE-T ports (PoE models), 2 10/100/1000BASE-T ports, and 2 SFP ports. These switches feature a robust design making them ideal for deployment in outdoor environments, capable of withstanding the harshest environments. The DIS-200G Series furthermore integrates advanced management and security functions to provide a complete solution. The DIS-200G Series switches are housed in a highly resistant IP30-rated metal casing to protect the switches from harsh environmental conditions. The high electromagnetic compatibility (EMC) protects the DIS-200G Series from unwanted effects when operating in environments with strong electromagnetic interference. Meanwhile, the fanless design extends the life of DIS-200G Series while also being able to operate in a wider temperature range of up to 75 °C. For increased flexibility, the DIS-200G Series can also be mounted on a DIN rail, wall mounted, or be installed in an equipment rack. Additionally, the DIS-200G Series features 6 kV surge protection on all copper ports to help prevent damage to the switch and connected devices caused by sudden power surges and lightning strikes. The in-built surge protection of up to 6 kV can mitigate the damage to the switch from both indoor and outdoor devices and network connections by absorbing the excess energy while still letting the amount of power through required for the switch to operate normally. This increases network reliability, reduces repair costs, and removes the need for replacement hardware in the event of an electrical surge or lightning strike.



### Series include the below models

#### DIS-200G-12S

- 10/100/1000BASE-T ports x 10
- SFP ports x 2
- Fanless
- DIN rail/wall/rack mountable installation
- 6 kV surge protection on copper ports
- IP30 housing to withstand harsh operating environments
- Operating Temperature: -40 to 65 °C

#### DIS-200G-12SW

- 10/100/1000BASE-T ports x 10
- SFP ports x 2
- Fanless
- DIN rail/wall/rack mountable installation
- 6 kV surge protection on copper ports
- IP30 housing to withstand harsh operating environments
- Operating Temperature: -40 to 75 °C

#### DIS-200G-12PS

- 10/100/1000BASE-T PoE ports x 8
- 10/100/1000BASE-T ports x 2
- SFP ports x 2
- 802.3af(PoE) and 802.3at(PoE+) support
- 240W PoE power budget
- Fanless
- DIN rail/wall/rack mountable installation
- 6 kV surge protection on copper ports
- IP30 housing to withstand harsh operating environments
- Operating Temperature: -40 to 65 °C

#### DIS-200G-12PSW

- 10/100/1000BASE-T PoE ports x 8
- 10/100/1000BASE-T ports x 2
- SFP ports x 2
- 802.3af(PoE) and 802.3at(PoE+) support
- 240W PoE power budget
- Fanless
- DIN rail/wall/rack mountable installation
- 6 kV surge protection on copper ports
- IP30 housing to withstand harsh operating environments
- Operating Temperature: -40 to 75 °C

### Key Series Features

#### FLEXIBLE AVAILABILITY

- Available in PoE and non-PoE models
- Outdoor model variations with wider operating temperature ranges

#### ROBUST AND HIGH-REDUNDANCY DESIGN

- Fanless, passive cooling design
- High EMC endurance
- 6 kV surge protection on copper ports
- Ethernet Ring Protection Switching (ERPS)
- Dual power input for redundant power supplies

#### LAYER 2 FEATURES

- IEEE 802.1Q and port-based VLAN
- IEEE 802.1p Quality of Service (QoS)
- STP/RSTP/MSTP
- Port mirroring
- Link aggregation
- Bandwidth control
- Broadcast storm control
- IGMP/MLD Snooping





#### ADVANCED FEATURES

- Auto Surveillance VLAN 2.0 (ASV 2.0)

### Optional Accessories

#### Optional Accessories

- |                |   |
|----------------|---|
| • DIS-PWR40AC  | 40 W, 100 ~ 240 V AC input, 12 V DC output power adapter with 60 °C operating temperature for DIS-200G-12S and DIS-200G-12SW    |
| • DIS-PWR180AC | 180 W, 100 ~ 240 V AC input, 54 V DC output power adapter with 60 °C operating temperature for DIS-200G-12PS and DIS-200G-12PSW |
| • DIS-RK200G   | Rack mount kit Standard 19" rack mounting kit   |

		 		 	
		NON POE		POE	
MODEL		DIS-200G-12S	DG5-200G-12SW	DIS-200G-12PS	DIS-200G-12PSW
Interfaces	Gigabit Ethernet	10			
	SFP Slots	2			
General Features	Switching Capacity	24 Gbps			
	Forwarding Mode	Store-and-Forward			
	Packet Buffer Memory	4 MB			
	MAC Address Table	up to 8K Entries			
	Flow Control	802.3x, HOL Blocking Prevention			
	MDI/MDIX	Configurable			
Layer 2 Features	Loop Protection	802.ID, 802.1W, 802.1S			
	803.2ad Link Aggregation	Max. 6 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	✓*			
	Auto Voice VLAN	✓			
	Auto Surveillance VLAN	✓			
Multicasting	Groups	64			
	Protocols	IGMP v1, v2, v3*			
Quality of Service (QoS)	Standard	802.1p			
	Number of Queues	4			
	Mode	Strict / WRR			
	CoS Handling	802.1p, TOS/IP Preference			
	Bandwidth Control	Port-Based			
Security	Per-Port MAC Limitation	✓			
	Static MAC	64			
	Storm Control	Broadcast / Multicast / Unicast			
	Traffic Segmentation	✓			
	D-Link SafeGuard Engine	✓			
Authentication, Authorisation and Accounting (AAA)	802.1x Authentication	Port-Based			
	Web-Based Access Control (WAC)	✓*			
	Web-Based Access Control (MAC)	✓*			
	Web-Based Access Control (NAP)	—			
	Guest VLAN	—			
Power over Ethernet	Standard	—	—	802.3af (PoE) 802.3at (PoE+)	802.3af (PoE) 802.3at (PoE+)
	PoE Ports	—	—	8	8
	PoE Power Budget	—	—	130W	130W
Management	Switch Access	Web GUI/D-Link Network Assistant			
	SNMP	v1 / v2c / v3*			
	DHCP	Client			
	RMON	—			
	TFTP Client	✓			
	Syslog	✓			
Physical and Environment	Power Supply	12-48 VDC, redundant dual inputs through terminal block/ 12 VDC through 4-pin power din			
	Power-Saving Technology	Link Status, Cable Length Detection, LED or Port Shutoff, Port Standby Mod, System Hibernation			
	Number of Fans	Fanless			
	Operating Temperature	-40°C to 65°C	-40°C to 75°C	-40°C to 65°C	-40°C to 75°C
	Operating Humidity	0% to 95% RH Non-Condensing			
Modules/ Transceivers	Dimensions (W x D x H)	210 x 171.2 x 48 mm			
	SFP Transceivers	DEM-310GT, DEM-311GT, DEM-312GT2, DEM-314GT			

\* This feature will be supported in future firmware release

# Unmanaged Gigabit Industrial Switches

## DIS-100G Series

The DIS-100G Series Gigabit Industrial Unmanaged Switches are equipped with a variety of port combinations including 10/100/1000BASE-T non-PoE or PoE ports, and SFP ports. These switches feature a robust design making them ideal for deployment in industrial and outdoor cabinet surveillance settings, capable of withstanding the harshest environments. The DIS-100G Series switches are housed in a highly resistant IP30-rated metal casing to help protect them from harsh environmental conditions. The high electromagnetic compatibility (EMC) helps protect the DIS-100G Series from unwanted effects when operating in environments with strong electromagnetic interference. The fanless design extends the life of the DIS-100G Series while also being able to operate in a wide temperature range from -40 °C up to 75 °C. For increased flexibility, the DIS-100G Series can also be mounted on a DIN rail or conveniently mounted on a solid surface wall. In addition, the DIS-100G Series supports dual power input which allows for a redundant power supply configuration to make sure the switches continue to operate in the event of a primary power supply failure.



### Series include the below models

#### DIS-100G-5PSW

- 10/100/1000BASE-T PoE ports x 4
- SFP ports x 1
- Fanless
- DIN Rail
- Highly resistant IP30-rated metal casing
- 802.3af/at (Up to 120W)
- Operating Temperature: -40 to 75°C

#### DIS-100G-5SW

- 10/100/1000BASE-T ports x 4
- SFP ports x 1
- Fanless
- DIN Rail
- Highly resistant IP30-rated metal casing
- Operating Temperature: -40 to 75°C

#### DIS-100G-5W

- 10/100/1000BASE-T ports x 5
- Fanless
- DIN Rail
- Highly resistant IP30-rated metal casing
- Operating Temperature: -40 to 75°C

\*Take note that all the switches does not come equip with PSU (Power Supply Unit)

### Key Series Features

#### FLEXIBLE AVAILABILITY

- Available in PoE and non-PoE models
- SFP port for long distance connections
- Plug-and-Play installation

#### ROBUST AND HIGH-REDUNDANCY

##### DESIGN

- Fanless, passive cooling design
- Wide operating temperature (-40 ~ 75 °C)
- High EMC endurance
- Durable IP30-rated housing
- Dual power input for redundant power supplies

#### FULLY CERTIFIED

- Shock - IEC 60068-2-27
- Freefall - IEC 60068-2-32
- Vibration - IEC 60068-2-6
- UL/CE/FCC
- NEMA-TS2
- EN50121-4 compliant
- UL C1D2 compliant (DIS-100G-5PSW)

#### ADVANCED FEATURES

- Multicast/Unicast/Storm Control
- 9 KB Jumbo Frame
- IEEE 802.3x Flow Control
- IEEE 802.1q Quality of Service (QoS) with 4 hardware queues per port

## Optional Accessories

### Optional SFP Transceivers

- DIS-S310LX 1000BASE-LX, single-mode, 10 km, -40 to 85 °C operating temperature
- DIS-S301SX 1000BASE-SX, multi-mode, 550 m, -40 to 85 °C operating temperature

### Optional Accessories

- DPE-SP110 Outdoor PoE Ethernet Surge Protector
- DPE-SP110I Ethernet Surge Protector



		NON POE		POE
MODEL		DGS-100G-5SW	DGS-100G-5W	DIS-100G-5PSW
General	Hardware Version	A1	A1	A1
	Number of Ports	4 x 10/100/1000BASE-T ports 1 x SFP port	5 x 10/100/1000BASE-T ports	4 x 10/100/1000BASE-T PoE ports 1 x SFP ports
	Port Functions	IEEE 802.3 for Ethernet IEEE 802.3u for Fast Ethernet IEEE 802.3ab for Gigabit Ethernet IEEE 802.3z for Gigabit fiber IEEE 802.3x Flow Control IEEE 802.3af/at Power over Ethernet (DIS-100G-5PSW) IEEE 802.3az Energy-Efficient Ethernet (EEE)		
	Media Interface Exchange	Auto-MDI/MDIX adjustment for all twisted pair ports		
	Switching Capacity	10 Gbps		
Performance	Maximum Forwarding Rate	7.44 Mpps		
	MAC Address Table Size	Up to 2K entries		
	Transmission Method	Store-and-forward		
	Jumbo Frame	9 KB		
	Advanced Features	Broadcast/Multicast/Unicast Storm Control IEEE 802.1p Quality of Service (QoS) - 4 hardware queues per port		
PoE	PoE Standards	N/A	N/A	IEEE 802.3af/at
	PoE Capable Ports	N/A	N/A	Ports 1 to 4
	PoE Power Budget	N/A	N/A	Max. 120 W1
Physical	Diagnostic LEDs	ALM P1/P2 Link/Activity/Speed	ALM P1/P2 Link/Activity/Speed	ALM P1/P2 Link/Activity/Speed PoE status
	Power Input	12 to 58 V DC terminal block dual input	12 to 58 V DC terminal block dual input	48 to 58 V DC terminal block dual input
	Power Consumptions	Maximum: 3.82 W	Maximum: 3.18 W	Maximum: 131.57 W (PoE on) 4.46 W (PoE off)
	Alarm Relay			
	Heat Dissipation	13.03 BTU/hr	10.85 BTU/hr	448.94 BTU/hr (PoE on) 15.22 BTU/hr (PoE off)
	Weight	0.32 kg (0.71 lbs)	0.32 kg (0.71 lbs)	0.50 kg (1.10 lbs)
	Dimensions	112.2 x 29.1 x 89.4 mm (4.42 x 1.15 x 3.52 inches)	112.2 x 29.1 x 89.4 mm (4.42 x 1.15 x 3.52 inches)	139 x 29 x 107 mm (5.47 x 1.14 x 4.21 inches)
	Ventilation	Fanless, passive cooling		
	Operating Temperature	-40 to 75 °C (-40 to 167 °F)		
	Storage Temperature	-40 to 85 °C (-40 to 185 °F)		
	Operating Humidity	5% to 95% RH, non-condensing		
	Storage Humidity	5% to 95% RH, non-condensing		
	Material	IP30-rated metal casing		
	Installation	DIN rail/wall-mountable		
	MTBF	>25 years		
	Certifications	UL/CE/FCC NEMA-TS2 EN50121-4 compliant UL C1D2 compliant (DIS-100G-5PSW) UL60950-1 (DIS-100G-5W/5SW)		
	Safety	UL61010-1, UL61010-2-201, UL C1D2 (DIS-100G-5PSW)		
	EMI	47 CFR FCC Part 15 Subpart B (Class A) ICES-003 Issue 6 (Class A)		
	EMC	EN61000-6-2 EN61000-6-4		
	EMS	EN 61000-4-2 ESD Level 3 EN 61000-4-3 RS Level 3 EN 61000-4-4 EFT Level 3 EN 61000-4-5 Surge Level 3 EN 61000-4-6 CS Level 3 EN 61000-4-8		
	Environmental Tests	IEC 60068-2-27 Shock IEC 60068-2-32 Freefall IEC 60068-2-6 Vibration		
Warranty	Warranty	Limited lifetime warranty2		
Order Information	Part Number	Description		
	DIS-100G-5W	5 x 10/100/1000 Mbps ports switch with -40 to 75 °C operating range		
	DIS-100G-5SW	4 x 10/100/1000 Mbps ports + 1 x SFP port switch with -40 to 75 °C operating range		
	DIS-100G-5PSW	4 x 10/100/1000 Mbps PoE ports + 1 x SFP port switch with -40 to 75 °C operating range		
Optional SFP Transceivers	DIS-S310LX	1000BASE-LX, single-mode, 10 km, -40 to 85 °C operating temperature		
	DIS-S301SX	1000BASE-SX, multi-mode, 550 m, -40 to 85 °C operating temperature		
Optional Accessories	DPE-SP110	Outdoor PoE Ethernet Surge Protector		
	DPE-SP110I	Ethernet Surge Protector		

1 The actual available PoE budget depends on the power supply connected to the switch.

2 Limited lifetime warranty is available in the USA only. The warranty is void when not purchased from an authorized US D-Link reseller. Please visit [us.dlink.com](http://us.dlink.com) for a list of authorized US resellers.



# 250M Long Range PoE Switch

D-Link offer wide variety of PoE switches ranging from standard to Long range PoE and PoE with high power budget to suit each home/SOHO and SMB need.

Long Range PoE provide a breakthrough in technology to supply PoE power up to 250m which provide the best cost-effective powered solution



## Key Series Features

- 250 m Long Range PoE
- Supports 802.3af/at
- 6KV Lighting Protection
- Quality of Service (QoS) on Video Streaming
- Intelligent PD - Automatic detection power status / Recover
- Supports VLAN

## Built for your Need

Robust and cost-effective PoE solution to provide power for your PoE powered devices such as IP cameras, CCTV, VoIP, AP etc



**6KV**  
Lighting Protection



**250M**  
Transmission Distance



**QoS**  
Switch Video Streaming



**INTELLIGENT PD**  
Switch Automatic Detection  
Power Status/Recover



**VLAN**  
Switch



**IEEE802.3af/at**  
STANDARDS

## Up to 250m PoE and Data Transmission

Equipped with PoE extend technology, these PoE Switches have the capability to supply 802.3af/at PoE up to 250m with data transmission. Cost saving for long distance solution.

### Standard PoE



### 250m PoE



\* Extend mode enabled, supported data rate up to 10Mbps with Cat 5E cable and above

Can support up to 250m\* to save cost and more flexibility

## 6KV Surge Protection

D-Link 250M is enhanced with 6KV surge protection. Effectively guard equipment from lightning damage especially if use on AP/IP camera install outdoor or at higher position



## Enhanced with VLAN Function

With a flick of button, Isolate the downlink port to each other can effectively suppress network storms and improve network performance



## Enhanced with Video QoS

Improve the Video Packet Priority and create high priority for video streaming, perfect solution for IP camera/CCTV





MODEL	DES-F1006P-E	DES-F1010P-E	DSS-100E-18P	DES-F1025P-E
Description	250m 6-Ports Fast Ethernet with 4 PoE Ports and 2 Uplink Ports	250m 10-Ports Fast Ethernet with 8 PoE Ports and 2 Uplink Ports	250m 16-Ports Fast Ethernet with 16 PoE Ports and 1 Gigabit Combo Uplink Port	250m 24-Ports Fast Ethernet with 24 PoE Ports and 1 Gigabit Combo Uplink Ports
Ethernet Speed	Fast Ethernet	Fast Ethernet	Fast Ethernet	Fast Ethernet
Downlink	4	8	16	24
Uplink	2	2	1 Combo Gigabit (Ethernet/SFP)	1 Combo Gigabit (Ethernet/SFP)
Housing	Metal	Metal	Metal	Metal
IEEE 802.3af (15.4W)	✓	✓	✓	✓
IEEE 802.3at (30W)	✓	✓	✓	✓
PoE Budget	60W	96W	230W	250W
Port support PoE powered up to 250m	1-4	1-8	9-16	1-8
VLAN Isolation	✓	✓	✓	✓
QoS (Video)	✓	✓	-	✓
PoE PD recovery	✓	✓	-	✓
Rackmountable	-	-	✓	✓
Lighting Protecting	6KV	6KV	6KV	6KV



MODEL	DGS-F1006P-E	DGS-F1010P-E	DGS-F1018P-E	DGS-F1026P-E
Description	250m 6-Ports Gigabit with 4 PoE Ports and 2 Uplink Ports	250m 10-Ports Gigabit with 8 PoE Ports and 2 Uplink Ports	250m 16-Ports Gigabit with 16 PoE Ports and 2 SFP Uplink Ports	250m 24-Ports Gigabit with 24 PoE Ports and 2 SFP Uplink Ports
Ethernet Speed	Gigabit	Gigabit	Gigabit	Gigabit
Downlink	4	8	16	24
Uplink	2	2	2 SFP	2 SFP
Housing	Metal	Metal	Metal	Metal
IEEE 802.3af (15.4W)	✓	✓	✓	✓
IEEE 802.3at (30W)	✓	✓	✓	✓
PoE Budget	60W	96W	150W	250W
Port support PoE powered up to 250m	1-4	1-8	1-8	1-8
VLAN Isolation	✓	✓	✓	✓
QoS (Video)	✓	✓	✓	✓
PoE PD recovery	✓	✓	✓	✓
Rackmountable	-	-	✓	✓
Lighting Protecting	6KV	6KV	6KV	6KV

# M2M Business Solutions

## DWM Series - M2M LTE Modem Router

Machine to Machine technology is an integral part of the Internet of Things. Collect data from remote sensors, keep assets connected without deploying new infrastructure, take payments from anywhere, or deploy networks in remote areas. Organisations can work smarter with D-Link's M2M products. Blazing fast 4G LTE speeds, such as those delivered by D-Link's 4G LTE M2M Router Series, give you the reliable, always-on connectivity you need for business in the digital age.

LTE router is great for exhibitions, trade shows, or for demonstrations requiring an internet connection outside of the office. In office it helps to lower down your cost on installing hardwire Ethernet cables. 4G is ideal for users unable to get conventional ADSL or cable broadband, for example in rural and/or remote areas. The connection could be shared to different clients such as Wi-Fi devices or printer.

LTE VPN router is easiest way to deploy a LTE gateway for machine connecting with Internet. The connection could be plug and play without geographic limit. LTE VPN router is the most cost-effective product with robust design, secure internet access, variable voltage range and wide temperature range.

### Key Series Features

- Blazing fast 5G/LTE Speeds
- Easy to use web interface
- Powerful VPN tools
- Advanced remote management
- SNMP management
- Supports IPSec, PPTP, L2TP
- Built-in SIM Card slot
- Support D-Link EDS for Remote Management



## Key Benefits 5G/4G LTE M2M VPN Routers

**Multi-SIM Design\***  
Zero downtime with multi-SIM failover design

**Secure VPN Connection**  
Integrated VPN Client and Server support for secure connectivity

**Industrial Grade Design**  
Zinc-plated steel casing for extra protection

**Remote Management**  
Network management platform for massive IoT implementation

**GPS Tracking**  
Central location tracking management

**WiFi Connectivity\***  
WiFi connection for multiple wireless clients

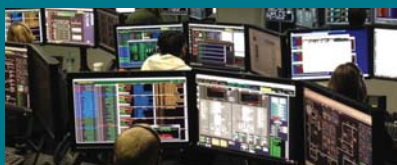
**Outdoor WAN Connectivity**  
Providing Internet connection for outdoor deployment

**High Reliability of Network**  
Stable WAN access with WAN backup using M2M mobile routers

\*model dependent

## M2M Solves Your Internet Connectivity Problems

### Un-stable Internet Connections



Cloud-based applications require businesses to maintain reliable WAN connections. Install D-Link M2M dual-SIM routers together with firewall, businesses can use cost-effective mobile network as (a) WAN Backup to increase the redundancy for mission critical applications and (b) load balance to enhance of data transmission efficiency over multiple WAN connections.

### In-accessible to Fixed Broadband



Without accessing to fiber/Cable/ADSL WAN at remote locations and in the public transportation, high-speed mobile network with well-coverage is the best WAN infrastructure. D-Link M2M dual-SIM routers, supporting multiple frequency bands of 5G /4G (Cat 4/6) /3G, are able to work with any mobile operators.

### Costly Fixed Broadband Charges



Remote IoT devices consume low-medium WAN bandwidth. Installation and monthly flat-rate subscription of fixed broadband for a network of IoT devices is expensive. D-Link M2M VPN routers connect IoT devices with low-cost, usage-based and INSTANT-ON mobile network. Built-in VPN client and server establish secure WAN transmission paths for data protection.



SIM Slots	One	Two	Two	Two	Two	Two	Two
Four with Two (2) LTE built-in modems (HW: D1)   Two (HW: A1)							
<b>Connectivity</b>	1 x Gigabit Ethernet LAN port	1 x 10/100Mbps Ethernet LAN port	1 x 10/100Mbps Ethernet LAN port	1 x 10/100Mbps Ethernet LAN port	1 x 10/100Mbps Ethernet LAN port	1 x Gigabit Ethernet LAN port	2 x Gigabit Ethernet LAN port
<b>4G LTE Speed</b>	LTE Cat.4 Downlink 150Mbps	LTE Cat.4 Downlink 150Mbps	LTE Cat.4 Downlink 150Mbps	LTE Cat.4 Downlink 150Mbps	LTE Cat.4 Downlink 150Mbps	LTE Cat. 6 Downlink 300 Mbps	LTE Cat. 6 Downlink 300 Mbps
<b>Antennas</b>	2 x detachable 3G/4G antennas	2 x detachable 3G/4G antennas	2 x detachable 3G/4G antennas;	2 x detachable 3G/4G antennas;	2 x detachable 3G/4G antennas;	2 x detachable 3G/4G antennas (HW: D1)	2 x detachable 3G/4G antennas
<b>GPS (Global Navigation Satellite System GNSS)</b>	N.A.	N.A.	N.A.	N.A.	N.A.	Yes	Yes
<b>VPN Features</b>	OpenVPN	L2TP/IPsec/ GRE VPN	L2TP/OpenVPN/ PPTP/IPsec/ GRE VPN	L2TP/OpenVPN/ PPTP/IPsec/ GRE VPN	L2TP/OpenVPN/ PPTP/IPsec/ GRE VPN	L2TP/OpenVPN/ PPTP/IPsec/ GRE VPN	L2TP/OpenVPN/ PPTP/IPsec/ GRE VPN
						2 x detachable WiFi antennas	2 x detachable WiFi antennas
						1 x Gigabit Ethernet WAN/LAN port (Configurable)	1 x Gigabit Ethernet WAN/LAN port (Configurable)
						1 x 10/100Mbps Ethernet WAN/LAN port (Configurable)	1 x 10/100Mbps Ethernet WAN/LAN port (Configurable)
						1 x Gigabit Ethernet WAN/LAN port (Configurable)	1 x Gigabit Ethernet WAN/LAN port (Configurable)
						5G Speeds upto 1Gbps*	5G Speeds upto 1Gbps*
						4 x 5G NR/LTE detachable antennas	4 x 5G NR/LTE detachable antennas
						2 x detachable WiFi antennas	2 x detachable WiFi antennas

\* DWM-312W is not managed by D-Link Edge Cloud Solution (DECS)  
5G speed varies

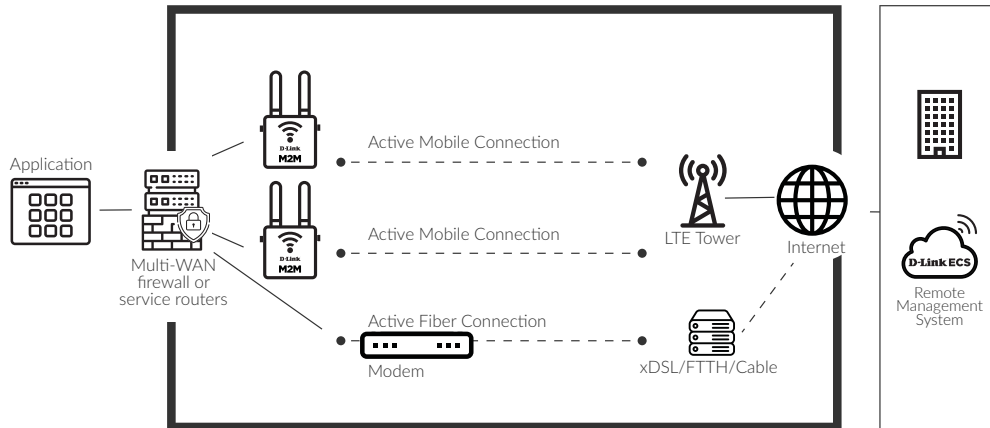
# Applications of M2M VPN Routers for Businesses

## Scenario 1

### WAN Backup & Load Balance over Fiber and Mobile Connectivity

To provide uninterruptible WAN connectivity, connect firewall/service router to D-Link M2M VPN routers and establish load-balance multi-WAN broadband infrastructure with auto-failover redundancy.

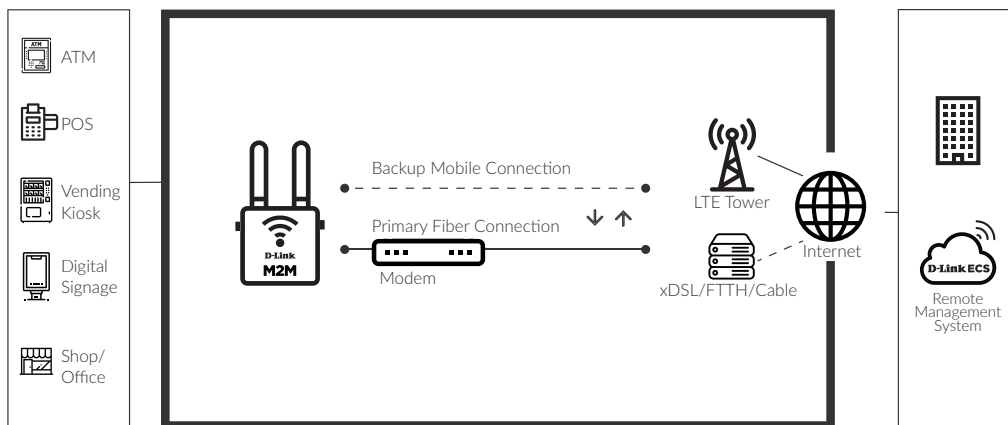
Comparing with using 2nd fiber as WAN Backup link, D-Link M2M routers with mobile network can cut down the monthly broadband cost drastically when setting up WAN redundancy for general office networks.



## Scenario 2

### Automatic Fiber-to-Mobile Failover

With D-Link M2M VPN router, failure of primary fiber broadband connection will automatically trigger the failover to backup mobile broadband network. For the mission critical businesses such as banking ATM, D-Link M2M VPN router adds extra redundancy with built-in dual SIM support.

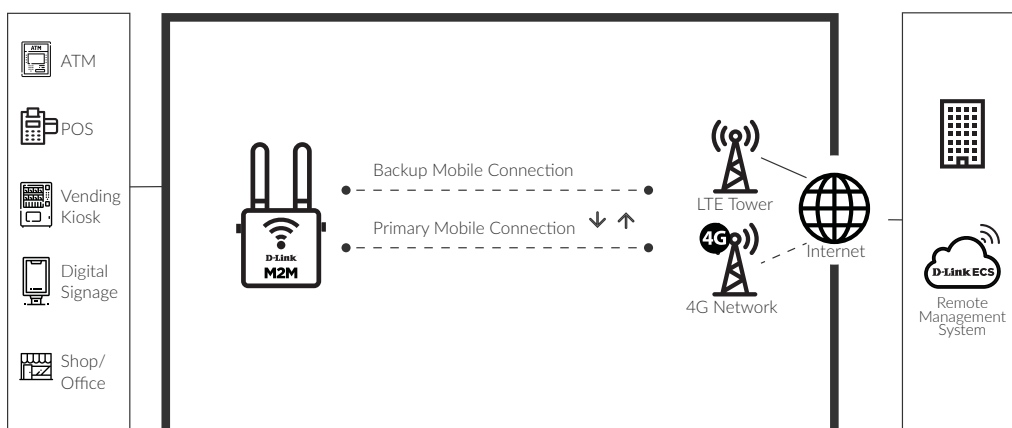


## Scenario 3

### Automatic Mobile-to-Mobile Failover

With D-Link M2M VPN router, failure of primary mobile broadband (SIM 01) will automatically trigger the failover to secondary backup mobile broadband network (SIM 02).

This is the most cost effective, reliable and secure WAN connection to bring back the valuable and sensitive data from the remote IoT devices.





# 5G/4G LTE M2M Solutions

**5G/4G LTE M2M Solutions include the following two (2) components**

- **High-speed Mobile VPN Industrial Routers and**
- **Device Management platform, D-ECS (D-Link Edge Cloud Solution)**

D-Link M2M VPN industrial routers use the high-speed mobile 5G/4G mobile networks to establish bi-direction secure and redundant data transmission paths between the business control centers and the remote IoT (Industrial of Things) devices. D-Link D-DEC is an easy-to-use tool for the MIS to effectively manage remote D-Link M2M routers.

Designed for remote machine-to-machine and secure VPN deployments, D-Link 5G/4G LTE M2M VPN routers unlock the business capabilities anytime, anywhere with high-performance 5G/4G/3G connectivity easily.

With the adoption of both Artificial intelligence (AI) and machine learning (ML), businesses are able to make good decisions with vast amount of data including video, sound, measurements, etc collected from a network of industrial sensors.



# 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 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: English, Simplified Chinese, Traditional Chinese	

### DISCOVERY

Device Discovery	Supports SNMP v1, v2c, v3 scan Supports IPv4 address range scan	Supports smart scan by neighborhood 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; a device can belong to multiple labels
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### MONITORING

Dashboard	Supports overall system and product summary for wired or wireless devices	Supports customized dashboard
Sensor	Supports following methods to data collection SNMP, PING	
Topology View	Supports auto-topology generation Supports customised topology generation Supports devices status display Supports link status display Supports different structure of topology (tree type, start type)	Supports multi-layer topology for following views 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 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: Value Match Keyword Match Keyword Combination Match	Supports customized escalation rules Supports email notification to defined users

# SFP/SFP+ Transceivers

## Fast Ethernet SFP Transceivers

MODEL	DEM-210	DEM-211	DEM-220T	DEM-220R
Standard	IEEE 802.3u 100 BASE-FX	IEEE 802.3u 100 BASE-FX	IEEE 802.3ah 100 BASE-BX-D	IEEE 802.3ah 100 BASE-BX-U
Connector	Duplex LC	Duplex LC	Simplex LC	Simplex LC
Fiber Type	Single-Mode	9/125 µm	9/125 µm	9/125 µm
	Multi-Mode	50/125 µm 62.5/125 µm		
Wavelength	1310 nm	1310 nm	TX: 1550 nm RX: 1310 nm	TX: 1310 nm RX: 1550 nm
Maximum Distance	15 km	2 km	20 km	20 km
Power	3.3 V	3.3 V	3.3 V	3.3 V
Hot-Pluggable	•	•	•	•

D-Link's Small Form-Factor Pluggable (SFP) and 10 Gigabit Small Form-Factor Pluggable (SFP+) Transceivers help to achieve long-distance data transmission and high-speed communication with single-mode fiber, multi-mode fiber 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	DEM-315GT	DEM-330T	DEM-330R	DEM-331T	DEM-331R	DGS-712
Standard	IEEE 802.3z 1000BASE-LX	IEEE 802.3z 1000BASE-SX	IEEE 802.3z 1000BASE-SX	IEEE 802.3z 1000BASE-LHX	IEEE 802.3z 1000BASE-ZX	IEEE 802.3ah 1000 BASE-BX-D	IEEE 802.3ah 1000 BASE-BX-U	IEEE 802.3ah 1000 BASE-BX-D	IEEE 802.3ah 1000 BASE-BX-U	IEEE 802.3ab 1000BASE-T
Connector	Duplex LC	Duplex LC	Duplex LC	Duplex LC	Duplex LC	Simplex LC	Simplex LC	Simplex LC	Simplex LC	RJ-45
Fiber Type	Single-Mode	9/125 µm: 10km	9/125 µm	9/125 µm	9/125 µm	9/125 µm	9/125 µm	9/125 µm	9/125 µm	
	Multi-Mode	50/125 µm: 550m 62.5/125 µm: 550m	50/125 µm: 550m 62.5/125 µm: 300m	50/125 µm: 2km 62.5/125 µm: 1km						
Wavelength	1310 nm	850 nm	1310 nm	1550 nm	1550 nm	TX: 1550 nm RX: 1310 nm	TX: 1310 nm RX: 1550 nm	TX: 1550 nm RX: 1310 nm	TX: 1310 nm RX: 1550 nm	
Maximum Distance	10 km / 550m	550 m / 300m	2km / 1km	50 km	80 km	10 km	10 km	40 km	40 km	100m
Power	3.3 V	3.3 V	3.3 V	3.3 V	3.3 V	3.3 V	3.3 V	3.3 V	3.3 V	3.3 V
Hot-Pluggable	•	•	•	•	•	•	•	•	•	•

## 10 Gigabit Ethernet SFP+ Transceivers

MODEL	DEM-431XT / DEM-431XT-DD	DEM-432XT / DEM-432XT-DD	DEM-433XT / DEM-433XT-DD	DEM-434XT	DEM-435XT / DEM-435XT-DD	DEM-436XT-BXD	DEM-436XT-BXU
Standard	IEEE 802.3ae 10GBASE-SR	IEEE 802.3ae 10GBASE-LR	IEEE 802.3ae 10GBASE-ER	IEEE 802.3ae 10GBASE-ZR	IEEE 802.3ae IEEE 802.3aq 10GBASE-LRM	IEEE 802.3ae 10GBASE-LR	IEEE 802.3ae 10GBASE-LR
Connector	Duplex LC	Duplex LC	Duplex LC	Duplex LC	Duplex LC	Simplex LC	Simplex LC
Fiber Type	Single-Mode	9/125 µm	9/125 µm	9/125 µm	9/125 µm	9/125 µm	9/125 µm
	Multi-Mode	50/125 µm: 300m 62.5/125 µm: 33m			50µm, 400MHz-km: 100m 50µm, OM2, 500MHz-km: 220m 50µm, OM3, 2000MHz-km: 220m 62.5/125 µm: 220m		
Wavelength	850 nm	1310 nm	1550 nm	1550 nm	1310 nm	TX: 1330 nm RX: 1270 nm	TX: 1270 nm RX: 1330 nm
Maximum Distance	300 m / 33m	10 km	40 km	80 km	220 m	20 km	20 km
Power	3.3 V	3.3 V	3.3 V	3.3 V	3.3 V	3.3 V	3.3 V
Hot-Pluggable	•	•	•	•	•	•	•
Digital Diagnostics Monitoring	• (DEM-431XT-DD)	• (DEM-432XT-DD)	• (DEM-433XT-DD)		• (DEM-435XT-DD)		

## 40 Gigabit Ethernet QSFP+ Transceivers

MODEL	DEM-QX01Q-SR4	DEM-QX10Q-LR4
Standard	40GBASE-SR4	40GBASE-LR4
Connector	MPO	Duplex LC
Fiber Type	Single-Mode	9/125 µm
	Multi-Mode	OM3: 100m OM4: 150m
Wavelength	850 nm	L0: 1271 nm, L1: 1291 nm, L2: 1311 nm, L3: 1331 nm
Maximum Distance	150 m	10 km
Power	3.3 V	3.3 V
Hot-Pluggable	•	•
Digital Diagnostics Monitoring		•

## Industrial Grade Gigabit Ethernet SFP Transceivers\*

MODEL	DIS-S310LX	DIS-S301SX	DIS-S302SX	DIS-S350LHX
Standard	IEEE 802.3z 1000BASE-LX	IEEE 802.3z 1000BASE-SX	IEEE 802.3z 1000BASE-SX	IEEE 802.3z 1000BASE-LHX
Connector	Duplex LC	Duplex LC	Duplex LC	Duplex LC
Fiber Type	Single-Mode	9/125 µm	50/125 µm	50/125 µm
	Multi-Mode			
Wavelength	1310 nm	850 nm	1310 nm	1550 nm
Maximum Distance	10 km	550 m	2 km	50 km
Power	3.3 V	3.3 V	3.3 V	3.3 V
Hot-Pluggable	•	•	•	•
Operating Temperature	-40 to 85°C	-40 to 85°C	-40 to 85°C	-40 to 85°C

\* For Use With DIS-200G Series

# 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.

## Redundant Power Supplies

MODEL	DPS-200A	DPS-300	DPS-500A	DPS-500DC	DPS-700
Output Power	60 -Watt	90-Watt	140-Watt	140-Watt	589-Watt
Input Power	90 to 264VAC	90 to 264VAC	90 to 264VAC	36 to ~72VDC	90 to 264VAC
Input Frequency	47 to 63Hz	47 to 63Hz	47 to 63Hz	47 to 63Hz	47 to 63Hz
Form Factor	Solid Metal Case	Solid Metal Case	Solid Metal Case	Solid Metal Case	Solid Metal Case, 19-inch Rack-mount, 1U Height
Over Current Protection	✓	✓	✓	✓	✓

## LAN Switch Compatibility

COMPATIBLE SWITCHES	DPS-200A	DPS-500A	DPS-500DC	DPS-700
DGS-3120-24TC	✓	—	—	—
DGS-3120-48TC	—	✓	✓	—
DGS-3120-24PC	—	—	—	✓
DGS-3120-48PC	—	—	—	✓
DGS-3120-24SC	✓	—	—	—
DGS-3130-30TS	—	✓	✓	—
DGS-3130-30S	—	✓	✓	—
DGS-3130-30PS	—	—	—	✓
DGS-3130-30NPS	—	—	—	✓
DGS-3130-54PS	—	—	—	✓
DGS-3130-54TS	—	✓	✓	—
DGS-3130-54S	—	✓	✓	—
DGS-3630-28TC	—	✓	✓	—
DGS-3630-28SC	—	✓	✓	—
DGS-3630-28PC	—	—	—	✓
DGS-3630-52TC	—	✓	✓	—
DGS-3630-52PC	—	—	—	✓

## Redundant Power Supply Chassis



MODEL	NO. OF RPS SLOTS	FORM FACTOR	SUPPORTED RPS
DPS-800	2	19-inch Rack-mount, 1U Height	DPS-200A, DPS-300, DPS-500A, DPS-500DC



# Switch Cables & 10GbE Network Interface Cards (NIC)

## InfiniBand Cable Series

These 10G InfiniBand Twinaxial Cables are designed to support high-speed connections on 10 Gbps Ethernet devices when used with compatible D-Link products. 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

## 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 (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 fiber cables
- Lower power consumption than other cables like 10BASE-T or 10GBASE-CX4 means savings on energy usage and costs

## QSFP+ Direct Attach Cable Series

The 40G Passive QSFP+ Twinaxial Direct Attach Cable is a high performance, high bandwidth and cost effective connection solution that supports 40 Gigabit Ethernet, while having lower crosstalk and power consumption than other cables. This makes it an optimal solution for handling high bandwidth transmission within short distances such as within a rack or between racks inside energy-efficient data centers.



### Key Series Features

- QSFP+ (Quad Enhanced Small Form-Factor Pluggable)
- Replace four standard SFP+ cable assemblies, resulting in higher port density, cost efficiency and reduction in power savings compared to standard SFP+

## 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



MODEL	DEM-CB50CXP	DEM-CB50	DEM-CB100	DEM-CB300
Cable Series Type	CXP Direct Attach	InfiniBand	InfiniBand	InfiniBand
Standard	SFP MSA	IEEE802.3ak 10GBASE-CX4	IEEE802.3ak 10GBASE-CX4	IEEE802.3ak 10GBASE-CX4
Device Rate	120 Gbps	10 Gbps	10 Gbps	10 Gbps
Connector Type	CXP Cable Assembly	Screw-Type at Both Ends	Screw-Type at Both Ends	Screw-Type at Both Ends
Wire AWG	30	28	28	28
Minimum Cable Bend Radius	49 mm			
Cable Length	50 cm	50 cm	100 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	Physical Stacking Cable for DXS-3600-32S Switch's DXS-3600-EM-Stack Module	Physical Stacking Cable or Uplink Cable for DGS-3120 Series	Physical Stacking Cable or Uplink Cable for DGS-3120 Series	Physical Stacking Cable or Uplink Cable for DGS-3120 Series



MODEL	DEM-CB100S	DEM-CB300S	DEM-CB700S	DEM-CB100QXS	DEM-CB300QXS	DEM-CB100QXS-4XS
Cable Series Type	SFP+ Direct Attach	SFP+ Direct Attach	SFP+ Direct Attach	QSFP+ Direct Attach	QSFP+ Direct Attach	QSFP+ Direct Attach to 4 x 10G SFP+ Direct Attach
Standard	SFP MSA	SFP MSA	SFP MSA	SFP MSA	SFP MSA	SFP MSA
Device Rate	10 Gbps	10 Gbps	10 Gbps	40 Gbps	40 Gbps	40 Gbps
Connector Type	SFP+ Cable Assembly	SFP+ Cable Assembly	SFP+ Cable Assembly	QSFP+ Cable Assembly	QSFP+ Cable Assembly	QSFP+ Cable Assembly
Wire AWG	30	30	24	30	30	30
Minimum Cable Bend Radius	23.5 mm	23.5 mm	23.5 mm	32 mm	32 mm	23.5 mm
Cable Length	100 cm	300 cm	700 cm	100 cm	300 cm	100 cm
Voltage	30 V AC	30 V AC	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	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	-40°C to 85°C	-40°C to 85°C

## 10GbE Network Interface Cards (NIC)











MODEL	DXE-820T
Descriptions	2-Ports 10GBASE-T RJ-45 PCIe Adapter
PCIe Interface	PCI Express x8 2.0, 5 GT/s compliant
Features	802.3x Flow Control 802.1Q VLAN Tagging TCP/UDP/IP Checksum Offloading 802.3ad Teaming
Jumbo Frame	Up to 9KB

# Media Converters


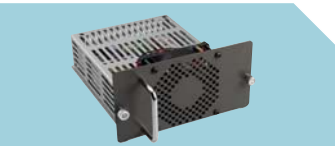

Media converters act as the link point to join copper and fiber connections together, in other words to connect 10/100/1000BASE-T copper to fiber (or vice versa) in order to enable exceedingly rapid network data traffic at enterprise level. They act as a useful conduit when expanding a network, as existing copper-cable-based switches do not have to be replaced but can be expanded upon into a fiber network through the use of a D-Link Media Converter.

There are 2 series of media converters: Chassis-based and Standalone. The Chassis-based Series can be slot into a 16-slot chassis equipped with its own housing and AC power supply. The chassis can be mounted into the rack. This series of media converters can also be used as standalone unit. The Chassis-based Series can be managed with Management Functions. The DMC-1002 Management Module is available with mix management SNMP and Web Management capabilities.








## Chassis-based/Standalone Media Converter Series

								
MEDIA CONVERTERS	DMC-300SC	DMC-515SC	DMC-530SC	DMC-700SC	DMC-805G	DMC-810SC	DMC-920	DMC-1910
Standards	10/100BASE-TX 100BASE-FX	10/100BASE-TX 100BASE-FX	10/100BASE-TX 100BASE-FX	1000BASE-T 1000BASE-SX	IEEE 802.3ab IEEE-802.3z	1000BASE-T 1000BASE-LX	10/100BASE-TX 100BASE-FX	1000BASE-T 1000BASE-LX
Connectors	SC / RJ45	SC / RJ45	SC / RJ45	SC / RJ45	RJ45 / SFP	SC / RJ45	SC / RJ45	SC / RJ45
Data Rate	100 Mbps	100 Mbps	100 Mbps	1 Gbps	1 Gbps	1 Gbps	100 Mbps	1 Gbps
Fiber Type	Multi-Mode	Single-Mode	Single-Mode	Multi-Mode	Single-Mode / Multi-Mode	Single-Mode	Single-Mode	Single-Mode
Fiber Wavelength	1310 nm	1310 nm	1310 nm	850 nm	Depends on SFP Transceivers	1310 nm	DMC-920T: TX: 1550nm, RX: 1310nm DMC-920R: TX: 1310nm, RX: 1550 nm	DMC-1910T: TX: 1550nm, RX: 1310nm DMC-1910R: TX: 1310nm, RX: 1550 nm
Maximum Distance	2 km	15 km	30 km	550 m	Depends on SFP Transceivers	10 km	20 km	15 km

## 16-Slot Chassis

			
CHASSIS AND ACCESSORIES	DMC-1000	DMC-1001	DMC-1002
Description	16-Slot Media Converter Chassis with Internal Power Supply	Redundant Power Supply for DMC-1000	Management Module with SNMP

## Standalone Media Converter Series

							
MEDIA CONVERTERS	DMC-G01LC	DMC-F02SC	DMC-F15SC	DMC-F20SC-BXD	DMC-F20SC-BXU	DMC-F30SC	DMC-F60SC
Standards	IEEE 802.3ab IEEE-802.3z	10/100BASE-TX 100BASE-FX	10/100BASE-TX 100BASE-FX	10/100BASE-TX 100BASE-FX	10/100BASE-TX 100BASE-FX	10/100BASE-TX 100BASE-FX	10/100BASE-TX 100BASE-FX
Connectors	RJ45 / SFP	SC / RJ45	SC / RJ45	SC / RJ45	SC / RJ45	SC / RJ45	SC / RJ45
Data Rate	1 Gbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps	100 Mbps
Fiber Type	Single-Mode / Multi-Mode	Multi-Mode	Single-Mode	Single-Mode	Single-Mode	Single-Mode	Single-Mode
Fiber Wavelength	Depends on SFP Transceivers	1310 nm	1310 nm	TX: 1550nm, RX: 1310nm	TX: 1310nm, RX: 1550 nm	1310 nm	1310 nm
Maximum Distance	Depends on SFP Transceivers	2 km	15 km	20 km	20 km	30 km	60 km

# 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 DPE-301GS, 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 DPE-301GI acts in a similar way, but is designed to be used for PoE-equipped end-point devices where the switch does not have PoE capability. The DPE-301GI + DPE-301GS 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 DPE-301GI, then run an Ethernet cable (now carrying PoE power) from the DPE-301GI to the DPE-301GS, where the power is then 'converted' back for use by the device.

## DPE-301GS

### 5/9/12 V DC PoE Splitter



#### Main Features

- Use with a PoE switch
- Supply power to non-PoE devices

#### Physical Features

- Supports 802.3af (PoE) and 802.3at (PoE+)
- 10/100/1000BASE-T port
- 5 V DC, 9 V DC and 12 V DC output
- Output selection via DIP switch
- DC Jack Dimension: 5.5 x 5.5 mm or 3.8 x 5.5 mm

## DPE-301GI + DPE-301GS

### 5/9/12 V DC PoE Kit



#### Main Features

- Use without a PoE switch
- Supply power to non-PoE devices

#### Physical Features

- DPE-301GI x 1
- DPE-301GS x 1

## DPE-301GI

### 1-Port Gigabit PoE Injector



#### Main Features

- Use without a PoE switch
- Supply power to PoE devices

#### Physical Features

- Supports 802.3af (PoE) and 802.3at (PoE+)
- Output: 0.6A at 54 V
- 10/100/1000BASE-T port

## DPE-302GE

### 2-Port Gigabit PoE Extender



#### Main Features

- Deliver PoE power over 10/100/1000Mbps connections up to 500 meters
- One PoE input port to dual PoE output ports

#### Physical Features

- 802.3af (PoE) and 802.3at (PoE+) Compliant
- PoE+ Data Port (IN): 1 x 10/100/1000BASE-T
- PoE+ Data Port (OUT): 2 x 10/100/1000BASE-T

## DPE-SP110

### Outdoor PoE Lightning Protector



#### Main Features

- Protect your outdoor network equipment from damage caused by lightning or other static charge buildup.

#### Physical Features

- Suitable for all PoE equipment and Ethernet devices
- Higher surge capability and lower clamping voltage with 10 kA Impulse Discharge Current
- Compliance with IEC 64633-21 / IEC 61000-4-5 / ITU-T K- Series
- 10/100/1000 Mbps connection up to 100 m
- Supports 802.3af (PoE) and 802.3at (PoE+)
- IP66-rated housing and additional port protection
- Use in harsh environments with a wide temperature operation range of (-40 to 75 °C)

## DPE-SP110i

### Indoor PoE Lightning Protector



#### Main Features

- Protect your outdoor network equipment from damage caused by lightning or other static charge buildup.

#### Physical Features

- Suitable for all PoE equipment and Ethernet devices
- Compliance with IEC 64633-21 / IEC 61000-4-5 / ITU-T K- Series
- 10/100/1000 Mbps connection up to 100 m
- Supports 802.3af (PoE) and 802.3at (PoE+)
- Use in harsh environments with a wide temperature operation range of (-40 to 75 °C)



























The DPE-302GE allows a Gigabit Power over Ethernet (PoE) connection to be extended up to 500 meters, by daisy-chaining up to 4 units. It is designed to transmit data and supply up to 30W of power to PoE-capable devices such as PTZ IP cameras, using PoE power source equipment (PSE). It allows PoE devices to be deployed virtually anywhere over longer distances, eliminating the need for a nearby power outlet and attached power supply.

The DPE-302GE can also be used in combination with the DPE-301GS PoE Splitter to power up non-PoE devices over long distances. It is capable of operating in temperatures of up to 60 °C, offering up additional installation options.

The DPE-302GE intelligently communicates the maximum available current with a Powered Device (PD). This protection feature keeps the device safe from damage by preventing it from powering on in case there is not enough current. This safety feature can also automatically disable the port in the event of an electrical short circuit.

\*By just plug and play without additional power supply, a single DPE-302GE can increase the PoE range to 200 meters.

## D-Link Wireless Access Points at a Glance

	MODEL NUMBER	IMAGE	WIFI SPEED	FREQUENCY	DATA SIGNAL RATE	MAXIMUM OUTPUT POWER*	ANTENNA GAIN	ANTENNA	MU-MIMO	MULTI SSID	MULTI OPERATION MODE	TYPE	LAN PORT
NUCLIAS CLOUD DBA-SERIES	DBA-2820P		AC2600	2.4 GHz	Up to 800 Mbps	26 dBm (398 mW)	3 dBi	4 x 4	Yes	Up to 16 SSID	AP	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 1733 Mbps	26 dBm (398 mW)	4 dBi						1 x 10/100/1000 Ethernet Port
	DBA-2620P		AC1300	2.4 GHz	Up to 400 Mbps	26 dBm (398 mW)	4.9 dBi (variable)	2 x 2	Yes	Up to 16 SSID	AP	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 867 Mbps	26 dBm (398 mW)	6.1 dBi(variable)						1 x 10/100/1000 Ethernet Port
	DBA-2520P		AC1900	2.4 GHz	Up to 600 Mbps	25 dBm (316 mW)	3 dBi	3 x 3	Yes	Up to 16 SSID	AP	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 1299 Mbps	25 dBm (316 mW)	4 dBi						1 x 10/100/1000 Ethernet Port
	DBA-1510P		AC1750	2.4 GHz	Up to 450 Mbps	15 dBm (32 mW)	3 dBi	3 x 3	Yes	Up to 16 SSID	AP	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 1300 Mbps	15 dBm (32 mW)	5 dBi						---
	DBA-1210P		AC1300	2.4 GHz	Up to 400 Mbps	20 dBm (100 mW)	3 dBi	2 x 2	Yes	Up to 16 SSID	AP	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 867 Mbps	20 dBm (100 mW)	3 dBi						---
NUCLIAS CONNECT DAP SERIES	DAP-X1230P		AX1800	2.4 GHz	Up to 547 Mbps	20 dBm (100 mW)	3 dBi	2 x 2	Yes	Up to 16 SSID	AP	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 1200 Mbps	23 dBm (200 mW)	4 dBi						---
	DAP-X2830P		AX3600	2.4 GHz	Up to 1147 Mbps	29 dBm (794 mW)	3 dBi	4 x 4	Yes	Up to 16 SSID	AP	Indoor	1 x 2.5Gbps Ethernet PoE port
				5 GHz	Up to 2401 Mbps	28 dBm (630 mW)	4 dBi						1 x 10/100/1000 Ethernet Port
	DAP-X2810		AX1800	2.4 GHz	Up to 547 Mbps	20 dBm (100 mW)	3 dBi	2 x 2	Yes	Up to 16 SSID	AP, WDS, WDS + AP	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 1402 Mbps	23 dBm (200 mW)	4 dBi						---
	DAP-X2850		AX3600	2.4 GHz	Up to 1147 Mbps	28 dBm (630 mW)	3.5 dBi	4 x 4	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 2.5Gbps Ethernet PoE port
				5 GHz	Up to 2401 Mbps	25.5 dBm (794 mW)	5.5 dBi						1 x 10/100/1000 Ethernet Port
	DAP-3666		AC1200	2.4 GHz	Up to 300 Mbps	26 dBm (398 mW)	6 dBi	2 x 2	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Outdoor IP68	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 866 Mbps	26 dBm (398 mW)	7 dBi						1 x 10/100/1000 Ethernet Port
	DAP-2695		AC1750	2.4 GHz	Up to 450 Mbps	26.5 dBm (446 mW)	4 dBi	3 x 3	-	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 1300 Mbps	26.5 dBm (446 mW)	6 dBi						1 x 10/100/1000 Ethernet Port
	DAP-2720		AC2200	2.4 GHz	Up to 400 Mbps	26 dBm (398 mW)	3 dBi	2 x 2	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 866 Mbps	24 dBm (250 mW)	3 dBi						---
	DAP-2682		AC2300	2.4 GHz	Up to 600 Mbps	28 dBm (630 mW)	3.7 dBi	4 x 4	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 1700 Mbps	28 dBm (630 mW)	4.8 dBi						1 x 10/100/1000 Ethernet Port
	DAP-2680		AC1750	2.4 GHz	Up to 450 Mbps	26.5 dBm (398 mW)	3.6 dBi	3 x 3	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 1300 Mbps	26.5 dBm (398 mW)	4.2 dBi						---
	DAP-2660		AC1200	2.4 GHz	Up to 300 Mbps	26 dBm (398 mW)	3 dBi	2 x 2	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 866 Mbps	26 dBm (398 mW)	4 dBi						---
	DAP-2610		AC1300	2.4 GHz	Up to 400 Mbps	23 dBm (200 mW)	3 dBi	2 x 2	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 867 Mbps	23 dBm (200 mW)	3 dBi						---
	DAP-2662		AC1200	2.4 GHz	Up to 300 Mbps	26 dBm (398 mW)	3.8 dBi	2 x 2	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 867 Mbps	26 dBm (398 mW)	3.8 dBi						---
	DAP-2620		AC1200	2.4 GHz	Up to 300 Mbps	20 dBm (100 mW)	2.8 dBi	2 x 2	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100/1000 PoE In Ethernet port
				5 GHz	Up to 867 Mbps	20 dBm (100 mW)	4.1 dBi						1 x 10/100/1000 Ethernet port
	DAP-2622		AC1200	2.4 GHz	Up to 300 Mbps	20 dBm (100 mW)	2.8 dBi	2 x 2	Yes	Up to 16 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100/1000 Ethernet PoE In port
				5 GHz	Up to 867 Mbps	20 dBm (100 mW)	4.1 dBi						1 x 10/100/1000 Ethernet PoE Out port
	DAP-2230		N300	2.4 GHz	Up to 300 Mbps	29.84 dBm (963 mW)	3 dBi	2 x 2	-	Up to 8 SSID	AP, WDS, WDS + AP, Wireless client	Indoor	1 x 10/100 Ethernet PoE port
				5 GHz	---	---	---						---
UNIFIED WIRELESS DWL SERIES	DWL-X8630AP		AX3600	2.4 GHz	Up to 1147 Mbps	29.9 dBm (979 mW)	3 dBi	4 x 4	Yes	Up to 32 SSID	AP, WDS, WDS + AP	Indoor	1 x 2.5G Ethernet PoE port
				5 GHz	Up to 2401 Mbps	28.6 dBm (719 mW)	4 dBi						1 x 10/100/1000 Ethernet
	DWL-8620AP		AC2600	2.4 GHz	Up to 800 Mbps	29.5 dBm (898 mW)	3 dBi	4 x 4	Yes	Up to 32 SSID	AP, WDS, WDS + AP	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 1733 Mbps	29.7 dBm (924 mW)	4 dBi						1 x 10/100/1000 Ethernet
	DWL-7620AP		AC2200	2.4 GHz	Up to 300 Mbps	28 dBm (636 mW)	3 dBi	2 x 2	Yes	Up to 32 SSID	AP, WDS, WDS + AP	Indoor	1 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 867 Mbps	29.8 dBm (956 mW)	4 dBi						1 x 10/100/1000 Ethernet
	DWL-6620AP		AC1300	2.4 GHz	Up to 400 Mbps	27.7 dBm (589 mW)	4 dBi	2 x 2	-	Up to 32 SSID	AP, WDS, WDS + AP	Indoor	2 x 10/100/1000 Ethernet PoE port
				5 GHz	Up to 867 Mbps	28.9 dBm (772 mW)	6 dBi						---
	DWL-2600AP		N300	2.4 GHz	Up to 300 Mbps	18 dBm (63 mW)	3 dBi	2 x 2	-	Up to 16 SSID	AP, WDS, WDS + AP	Indoor	1 x 10/100 Ethernet PoE port
				5 GHz	---	---	---						---
SERIES	DAP-3320-F		N300	2.4 GHz	Up to 300 Mbps	27 dBm (501 mW)	3 dBi	2 x 2	-	-	AP, WDS, WDS + AP, Wireless client	Indoor/Outdoor IP65	1 x 10/100/1000 Ethernet port
				5 GHz	---	---	---						---

\* Maximum Output Power inclusive of Antenna Gain



# Security

In today's inter-connected, web-based business environment, a company's network security is key to their stability, productivity and success.

Increasingly businesses with mobile or remote workers, or that who employ social media as a tool have a greater likelihood of experiencing crippling data network security breaches. D-Link's Network Security Solutions will help you maintain a healthy network free from virus attacks, unauthorized intrusion and harmful content.

With a full array of components, including Unified Threat Management appliances, firewalls and network switches, D-Link security solutions work together to prevent network disruption from internal and external threats and are easy to install, manage and update



# 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 IEEE 802.11ac, secure wireless access, 3G/4G 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.



### Series includes the below models

#### DSR-250N

- 10/100/1000BASE-T (WAN) port x 2 (1 Combo WAN/LAN)
- 10/100/1000BASE-T (LAN) ports x 8
- IEEE 802.11b/g/n wireless LAN
- USB 2.0 port x 1 for USB storage or 3G/4G dongle
- 2dBi antennas x 2

#### DSR-500

- 10/100/1000BASE-T (WAN) port x 2
- 10/100/1000BASE-T (LAN) ports x 4
- USB 2.0 port x 1 for USB storage or 3G/4G dongle

#### DSR-500AC

- 10/100/1000BASE-T (WAN) port x 2
- 10/100/1000BASE-T (LAN) ports x 4
- IEEE 802.11b/g/n/ac wireless LAN
- USB 2.0 port x 1 for USB storage or 3G/4G dongle
- 2dBi antennas x 2

#### DSR-1000

- 10/100/1000BASE-T (WAN) port x 2
- 10/100/1000BASE-T (LAN) ports x 4
- USB 2.0 port x 2 for USB storage or 3G/4G dongle

#### DSR-1000AC

- 10/100/1000BASE-T (WAN) port x 2
- 10/100/1000BASE-T (LAN) ports x 4
- IEEE 802.11b/g/n/ac wireless LAN
- USB 2.0 port x 2 for USB storage or 3G/4G dongle
- 2dBi antennas x 3

### Key Series Features

- Static/dynamic IP WAN type
- Point-to-Point over Ethernet (PPoE)
- SSL/IPSec/PPTP/L2TP VPN/OpenVPN
- VPN hub and spoke
- IPSec/PPTP/L2TP VPN pass-through
- 3G/4G WAN redundancy via optional 3G USB modem
- Network Address Translation (NAT) transparent mode
- WAN traffic failover
- Outbound load balancing
- 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





MODEL		DSR-250N	DSR-500	DSR-500AC	DSR-1000	DSR-1000AC
Interfaces	Gigabit Ports (WAN)	1	2	2	2	2
	Gigabit Ports (LAN)	8	4	4	4	4
	USB	1 x USB 2.0	1 x USB 2.0	1 x USB 2.0	2 x USB 2.0	2 x USB 2.0
	Console	1 x RJ45				
Performance	Firewall Throughput	750 Mbps	950 Mbps	950 Mbps	950 Mbps	950 Mbps
	VPN Throughput	50 Mbps	70 Mbps	200 Mbps	100 Mbps	250 Mbps
	Concurrent Sessions	20,000	30,000	50,000	60,000	100,000
	New Sessions (Per Second)	200	300	500	600	1000
	Firewall Policies	200	300	600	600	600
Internet Connection Type		DHCP, Static IP, PPPoE, L2TP, PPTP				
Firewall System	Static Route	•				
	Dynamic Route	RIPv1, RIP v2, OSPF		RIPv1, RIP v2, OSPF	RIPv1, RIP v2, OSPF	RIPv1, RIP v2, OSPF
	Dynamic DNS	•				
	Inter-VLAN Route	•				
	NAT, PAT	•				
	Web Content Filtering	Static URL, Keywords				
Networking	Intrusion Prevention System (IPS)	Signature Package Included in Firmware				
	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/ac		802.11a/b/g/n/ac
	Wireless Security	WEP/WPS/WPA-PSK/WPA-EAP/ WPA2-PSK/WPA2-EAP		WEP/WPS/WPA-PSK/WPA-EAP/ WPA2-PSK/WPA2-EAP		WEP/WPS/WPA-PSK/WPA-EAP/ WPA2-PSK/WPA2-EAP
VPN	VPN Tunnels	65	85	85	135	135
	IPSec Tunnels	25	35	35	70	70
	SSL VPN Tunnels	5	10	10	20	20
	PPTP/L2TP Tunnels	25	25	25	25	25
	GRE	10	15	15	20	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 Environmental	Power Supply	External	Internal	Internal	Internal	Internal
	Maximum Power Consumption	12.6 W	15.6 W	16.8 W	17.2 W	19.3 W
	Dimensions (L x W x H)	140 x 203 x 35 mm	180 x 280 x 44 mm	180 x 280 x 44 mm	180 x 280 x 44 mm	180 x 280 x 44 mm
	Operating Temperature	0°C to 40°C				
	Operating Humidity	5% to 95% RH Non-Condensing				

\* Applicable to Wireless Model only.

# DFL-870

## NetDefend UTM Firewall

The D-Link DFL-870 NetDefend UTM Firewall is a next generation Unified Threat Management (UTM) firewall which provides a powerful security solution to protect business networks from a wide range of threats. The DFL-870 offers a comprehensive defense against virus attacks, unauthorized intrusions, and flooding of harmful traffic, for successfully managing, monitoring, and maintaining a healthy network.

The DFL-870 provides a complete set of advanced security features to secure, manage, and monitor your network. These features include remote management, bandwidth control policies, URL blacklists and whitelists, access policies, and SNMP support. The DFL-870 furthermore supports email alerts, system logging, consistency checking, and real-time statistics gathering that keeps you up-to-date on the status of the network. Additionally, multiple WAN ports support traffic load balancing and failover, thus guaranteeing Internet availability and bandwidth. The D-Link DFL-870 integrates an intrusion detection and prevention system, gateway antivirus, content filtering, and application control for superior Layer 7 content inspection. An acceleration engine increases throughput, while the real-time update service keeps the IDPS information, anti-virus signature, URL and application databases current. Combined, these enhancements help to protect office networks from application exploits, network worms, malicious code attacks, and provide everything a business needs to safely manage employee Internet access. D-Link offers optional, cost-efficient, per-device NetDefend Firewall UTM Service subscriptions that ensure that each of the firewall's service databases remain up-to-date.

### Key Series Features

#### INTEGRATED FIREWALL

- Multiple WAN ports for WAN failover and outbound load balancing
- Link aggregation on LAN ports
- IEEE 802.1Q VLAN
- Granular bandwidth management
- D-Link pro-active ZoneDefense™ End-to-End Security (E2ES) solution

#### UNIFIED THREAT MANAGEMENT (UTM)

- Intrusion Detection & Prevention System (IDPS)
- Anti-virus protection
- Web Content Filtering (WCF) in HTTP/HTTPS
- Application control
- Email security

#### VIRTUAL PRIVATE NETWORK (VPN)

- Supports IPSec, PPTP, L2TP, SSL, GRE protocols
- Redundant VPN gateway
- Hub-and-spoke VPN support

#### ADVANCED FUNCTIONS

- User authentication through:
- Captive portal
- User Identity Awareness
- Active/passive High Availability (HA)

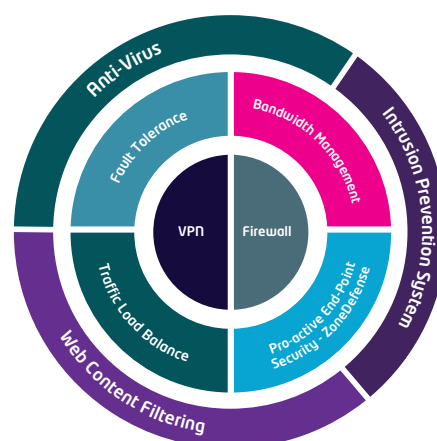


MODEL		DFL-870
Interfaces	Ports	6 Configurable Ports
	USB Port	2 x USB 2.0 Ports
	Serial Port	Mini USB Console Port
System Performance	Firewall Throughput	4 Gbps
	VPN Throughput	1 Gbps
	IPS Throughput	450 Mbps
	AV Throughput	600 Mbps
	AC Throughput	700 Mbps
	Concurrent Sessions	500,000
	New Sessions per second	45,000
	Policies	2,000
Firewall System	Transparent Mode	✓
	NAT, PAT	✓
	OSPF Dynamic Routing Protocol	✓
	H.323 NAT Traversal	✓
	Time Scheduled Policies	✓
	Application Layer Gateway	✓
	Zone Defense	✓
	ICSA Certified	✓
Networking	DHCP Server/Client	✓
	DHCP Relay	✓
	Policy-Based Routing	✓
	802.1q VLAN	✓
	IGMP v3	✓



MODEL		DFL-870
Traffic Load Balancing	Outbound Traffic Load Balancing	✓
	Server Load Balancing	✓
Algorithms for Outbound Load Balancing	Round Robin	✓
	Destination-Based	✓
	Spillover	✓
Bandwidth Management	Policy-Based Traffic Shaping	✓
	Guaranteed Bandwidth	✓
	Maximum Bandwidth Protocol	✓
	Priority Bandwidth	✓
	Dynamic Bandwidth Balancing	✓
	Bandwidth Management in VPN Tunnel	✓
High Availability	WAN Failover	✓
	Traffic Re-Direct at Failover	✓
	Active-Passive Mode	✓
	Device Failure Detection	✓
	Link Failure Detection	✓
	FW/VPN Session SYN	✓
Intrusion Detection & Prevention System (IDP/IPS)	Automatic Pattern Update	✓
	DOS, DDOS Protection	✓
	Attack Alarm via Email	✓
	Advanced IDP/IPS	✓
	IP Blacklist	✓
Content Filtering	HTTP	✓
	HTTPS	✓
	Script Types	✓
	Safe Search Enforcement	✓
Antivirus	Real-time AV Scanning	✓
	Stream-based Scanning	✓
	Scans, VPN Tunnels	✓
	ZIP/GZIP Compression File	✓
	Signature Licenser (Kaspersky)	✓
	Automatic Pattern Update	✓
Email Security	IMAP, SMTP and POP3 Protocols Support	✓
	Sender/Recipient Email Address Black List/Exempt	✓
	List Filtering	✓
	MIME Header Check	✓
	File Type Whitelisting/Blacklisting	✓
	File Extension	✓
IM/P2P Blocking	Anti Spam	✓
	12 Months Service Subscription	✓
	Application B/W Management, Policy Control & Prioritization	✓
	Supports 1000+ recognized application	✓
	Schedule & Rule-Based Control	✓

DFL-870-AV-12-LIC	DFL-870 NetDefend AV Subscription for 12 Months
DFL-870-IPS-12-LIC	DFL-870 NetDefend IPS Subscription for 12 Months
DFL-870-WCF-12-LIC	DFL-870 NetDefend WCF Subscription for 12 Months
DFL-870-AC-12-LIC	DFL-870 NetDefend Application Control Subscription for 12 Months



## Optional Licenses

### Upgrade licenses:

DFL-870-AC-12-LIC	DFL-870 1 Year Application Control License
DFL-870-AC-24-LIC	DFL-870 2 Years Application Control License
DFL-870-AC-36-LIC	DFL-870 3 Years Application Control License
DFL-870-IPS-12-LIC	DFL-870 1 Year Intrusion Prevention System License
DFL-870-IPS-24-LIC	DFL-870 2 Years Intrusion Prevention System License
DFL-870-IPS-36-LIC	DFL-870 3 Years Intrusion Prevention System License
DFL-870-WCF-12-LIC	DFL-870 1 Year Web Content Filtering License
DFL-870-WCF-24-LIC	DFL-870 2 Years Web Content Filtering License
DFL-870-WCF-36-LIC	DFL-870 3 Years Web Content Filtering License
DFL-870-AV-12-LIC	DFL-870 1 Year Anti-Virus License
DFL-870-AV-24-LIC	DFL-870 2 Years Anti-Virus License
DFL-870-AV-36-LIC	DFL-870 3 Years Anti-Virus License



# COPPER

## Cables

### Cat 7 SFTP

- Comply with Cat 7 specifications
- 4-pair unshielded twisted pair (UTP) cable
- 23 AWG solid copper conductor for superior conductivity
- PE insulation
- PVC Jacket
- Verified compliant with EIA/TIA standards by ETL



### Cat 6 UTP

- Comply with Cat 6 specifications
- 4-pair unshielded twisted pair (UTP) cable
- 23 AWG solid copper conductor for superior conductivity
- PE insulation
- PE central cross
- PVC/LSZH Jacket
- Verified compliant with EIA/TIA standards by ETL



### Cat 5e UTP

- Comply with Cat 5e specifications
- 4-pair unshielded twisted pair (UTP) cable
- 24AWG solid copper conductor for superior conductivity
- PE insulation
- PVC Jacket
- Verified compliant with EIA/TIA standards by ETL



### Cat 6A UTP

- Comply with Cat 6A specifications
- 4-pair unshielded twisted pair (UTP) cable
- 23 AWG solid copper conductor for superior conductivity
- HD-PE insulation, PE central cross
- PVC/LSZH Jacket
- Verified compliant with EIA/TIA standards by ETL



### Cat 6 SFTP

- Comply with Cat 6 specifications
- 4-pair unshielded twisted pair (UTP) cable
- 23 AWG solid copper conductor for superior conductivity
- PE insulation
- PE central cross
- PVC/LSZH Jacket
- Verified compliant with EIA/TIA standards by ETL



### Cat 5e SFTP

- Comply with Cat 5e specifications
- 4-pair screened twisted pair Cable
- 24AWG solid copper conductor
- Pairs are wrapped in polyester tape and aluminum foil with drain
- PE insulation
- PVC Jacket
- Verified compliant with EIA/TIA standards by ETL



## Patch Cord

### Cat 6A UTP

- Conductor: 24 AWG, Multi-cores
- Insulation Material: HD-PE
- 10 Gbit/s Networks.
- Low Cross Talk and Alien Cross Talk.
- 8P8C (RJ-45) modular connectors with straight-through T568A or T568B wiring.



### Cat 6 UTP

- Conductor: 24 AWG, Multi-strands
- Insulation Material: HD-PE
- Gigabit network
- 8P8C (RJ-45) modular connectors with straight-through T568A or T568B wiring.



### Cat 6 STP

- Conductor: 24 AWG, Multi-cores
- Insulation Material: HD-PE
- Outside Tape metal: MYLAR
- Drain Wire: 26 AWG
- Gigabit network
- Low Cross Talk.
- 8P8C (RJ-45) modular connectors with straight-through T568A or T568B wiring.



### Cat 5e UTP

- Insulation Material: High Density Polyethylene
- 100 Mbit/s or a gigabit networks.
- Low Cross Talk.
- 8P8C (RJ-45) modular connectors with straight-through T568A or T568B wiring.



## Key Stone Jack & Box

### Cat 6A UTP

- RJ45 8P 8C 50u Jack
- Terminating 4 pairs, suitable for 23-26 AWG stranded & solid wire compatible with both 110 & Krone punch down tools
- Universal labels color coded for T568A and T568B wiring schemes
- Fitting in density keystone patch panel



### Cat 6 UTP

- RMS BP 8C 50u Jack
- Terminating 4 pairs, 23-26 AWG cable
- Universal labels color coded for T568A and T568B wiring schemes
- Fit in High-Density Keystone Panel
- 3P/ETL verified unshielded EIA/TIA connecting hardware



### Cat 5e UTP

- RJ45 8P 8C 50u Jack
- laminating 4 pairs, 23-24 AWG cable
- Universal labels color coded for T568A and T568B wiring schemes
- Fit in High-Density Keystone Panel



## Patch Panels & Face Plate

### Cat 6 UTP

- Six-port RJ45 modules applied
- ID stripes for identifying port allocations
- Terminating 4 pairs, 22-26 AWG, unshielded cable
- Improved cable management with an optional cable management bar
- Simple type, or "T" slot type)
- Universal labels color-coded for T568A and T568B wiring schemes



### Cat 6 STP

- Hand screw, easy to open cover
- Eight port RJ45 modules applied
- Jack shutter to keep dust away
- Friendly installation, tight angle between IDCs and RMS Jacks
- ID stripes for identifying port allocations
- IOC: suitable for 22-26 AWG stranded and solid wire



### Cat 5e UTP Loaded

- Six-port RJ45 modules applied
- ID stripes for identifying port allocations
- Terminating 4 pairs, 22-26 AWG, unshielded cable
- Improved cable management with an optional cable management bar
- (Simple type, or "T" slot type)
- Universal labels color-coded for T568A and T568B wiring schemes



### Cat 5e STP Unloaded

- Hand screw, easy to open cover
- Eight port RJ45 modules applied
- Jack shutter to keep dust away
- Friendly installation, right angle between IDCs & RJ45 jacks
- ID stripes for identifying port allocations



### Face Plate

- Faceplates are inbuilt with shutters
- Compatible with standard colored keystone jacks
- Faceplates are available in one, two and four ports variant



### RJ-45 Connectors

- Cat 5e / Cat 6 UTP / STP 8P8C plug

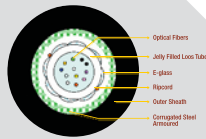


## FIBER

### Cables

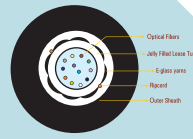
#### Fiber Optic Cable Armoured

- Suitable for Indoor/Outdoor Local Area Network System
- Excellent Water Proof Layer & Good Moisture Resistance
- Excellent Crush Resistance performance, Light weight. Compact structure



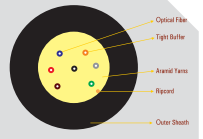
#### Fiber Optic Cable Unarmoured

- Suitable for Indoor/Outdoor (duct) aerial, pipeline
- Excellent Water Proofing performance
- Light weight. small and compact size cable



#### Fiber Optic Cable Tight Buffered

- Suitable for aerial, pipeline, bracket lying
- Suitable for Indoor & outdoor cable
- Light weight, all dielectric self supporting



### LIU

#### Fiber Optic LIU Fixed 1U

- Aluminum base material for light mounting
- Can manage both splices and terminations
- Preamsembled shelves in multiple configurations
- Can include adapter panels for maximum 48 LC, 24 SC, 24 ST or 24 FC terminations
- Snap-in locker design, easy to change adapter panels for various connector patching
- Removable front and rear covers for better access to interior of LIU



#### Fiber Optic Sliding LIU

- 1.5mm steel sheet for strong housing
- Ball bearing slid rails with positive stop
- Easy to work for patching the connectors
- Can manage both splices and terminations
- Preamsembled shelves in multiple configurations
- Clear plastic cover to protect the fibers



#### Fiber Optic Wall Mount LIU

- Front door design is easy for operation & fibers expansion
- Can manage both splices and terminations
- Easy installation Top & bottom cable entry is easy with rubber plug



### Patch Cord + Pigtail

#### Fiber Optic Patch cord-Simplex

- Adopts high precision ceramic ferrule with good concentricity
- Good geometrical characteristics of apex offset & radius of curvature & fiber height
- Compact & strong crimping offers exceptional tensile strength in cable assemblies
- 100% inspected for optical characteristics & fiber endface finish
- Low insertion loss & return loss, clean and scratch-free end faces
- Good performance endurance under changing circumstances



#### Fiber Optic Patch cord-Duplex

- Adopts high precision ceramic ferrule with good concentricity
- Good geometrical characteristics of apex offset & radius of curvature & fiber height
- Compact & strong crimping offers exceptional tensile strength in cable assemblies
- 100% inspected for optical characteristics & fiber endface finish
- Low insertion loss & return loss, clean and scratch-free end faces
- Good performance endurance under changing circumstances



#### Fiber Optic Pigtails

- Adopts high precision ceramic ferrule with good concentricity
- Advanced termination facilities & process, deliver good geometrical characteristics of apex offset & radius of curvature & fiber height
- 100% inspected for optical characteristics & fiber end face finish
- Low insertion loss & return loss, clean & scratch-free end faces



### Adapter Panel

#### Fiber Optic -SC Adapter

- Compact design
- Telcordia, TIA/EIA/IEC compliance
- High precision alignment
- Low insertion and return loss



#### Fiber Optic - FC Adapter

- Cold tolled steel materials
- Available in 4-24 holes (according to the type of adapters)
- Offer type of 175,109 size module panels
- Suitable for FCLC, SC, ST adapters
- Panel fastener to hold adapter panels securely in place
- Ideal for simple moves, adds and changes



#### Fiber Optic - LC Adapter

- Compact design
- Telcordia, TIA/EIA/IEC compliance
- High precision alignment
- Low insertion and return loss
- Self adjusting metal panel clips
- Duplex adapter SC footprint



### Connectors

#### Fiber Optic - FC Connector

- High Precision Ceramic Ferrule
- High Precision Nickel plated brass housing
- 900um and 3mm strain relief boot



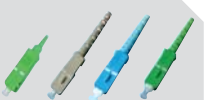
#### Fiber Optic - LC Connector

- High Precision Ceramic Ferrule
- High Precision Polymer housing
- Simplex or Duplex at your choice
- APC Green Polymer housing with 900um and 3mm strain relief boot



#### Fiber Optic - SC Connector

- High Precision Ceramic Ferrule
- High Precision Polymer housing
- Quick Conversion to duplex with a joint clip
- APC Green Polymer housing with 900um and 3mm strain relief boot



# Plan Your Network with D-Link

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