

D-Link[®]

Unmanaged, Smart or Fully Managed switches

What is the best solution for your business?





G L O S S A R Y

Which switch is right for you?

What is a Switch?

Switches are a key component of business networks, as they connect multiple PCs, printers, access points, phones, lights, servers, and other hardware. Switches allow you to send and receive information (such as email) and access shared resources.

Network switches are available with varying amounts of ports and features to meet the needs and demands of your working project.

When do I need a switch?

As you connect more devices, the complexity of your network grows.

To address these growing needs, it might be necessary to deploy a switch or consider upgrading to a better more functional model, to manage your business network better.

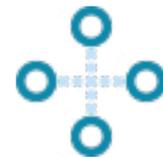
Of the three major categories of switches unmanaged, smart, and managed - which is best for your needs?



SNMP
Simple Network Management Protocol (SNMP) is a networking protocol used for the management and monitoring of network-connected devices in Internet Protocol networks.



RSTP/STP
Rapid Spanning Tree Protocol and Spanning Tree Protocol are used for redundancy in the network and to prevent looping. RTSP recovers the network from a failed link and locates a new network path in significantly less time than STP.



VLAN
Virtual LAN configurations group devices together to isolate traffic, improve network performance, add an extra layer of security, and reduce unnecessary network traffic.



PoE
Power over Ethernet, allows a switch to connect and power a device with a single cable. Power devices such as access points or a cameras when no power socket is available.



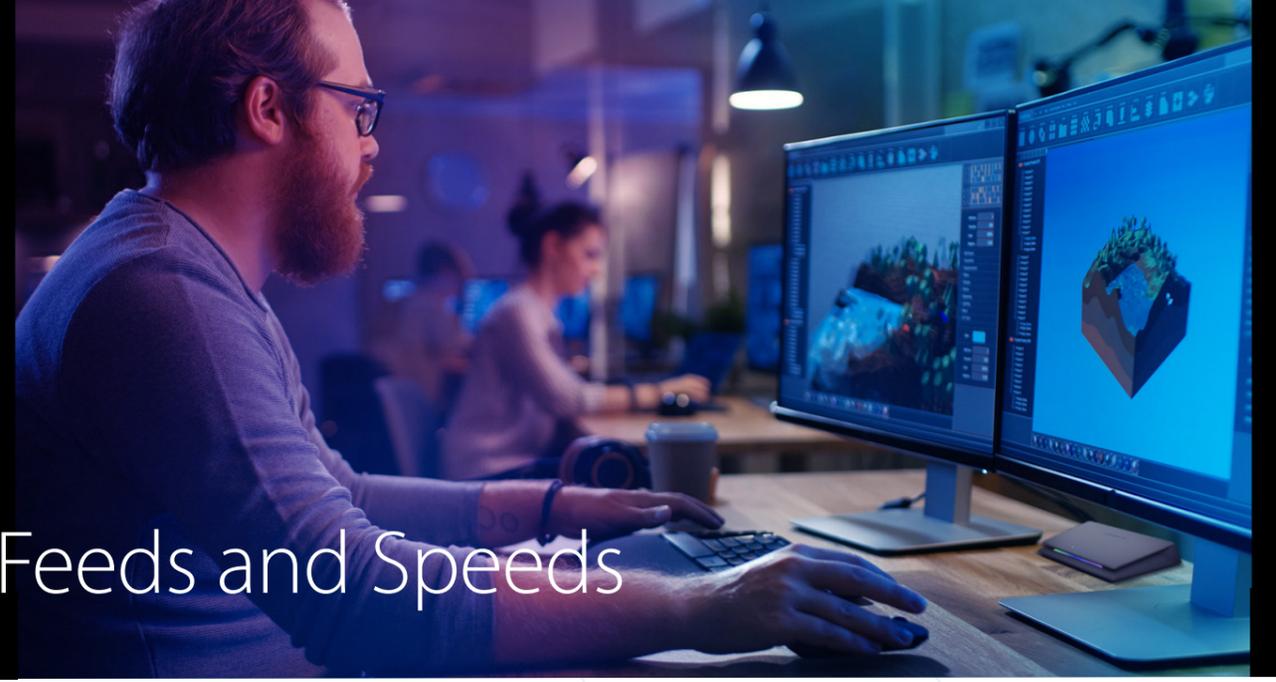
QoS
Quality of Service allows you to prioritize your network traffic and improve performance (commonly used in VoIP and video applications).



Stacking
A stackable network switch can be set up to operate together in a 'stack' with other compatible network switches, this group of switches will then show the characteristics of a single switch but having the port capacity of the sum of the combined switches.



Unmanaged Switches



Feeds and Speeds

D-Link's wide portfolio of switches offer a solution for all your networking needs

Unmanaged switches are plug-and-play and therefore the easiest to set up, offering simple connectivity with no need for management—perfect for a home or small office. Most often, unmanaged switches are added to an existing network to expand the network's capacity for additional Ethernet-capable devices.

How do I choose the right switch?

As you can imagine, there's a few bits to consider:

Size - aka number of ports

Switches provide a number of options here - the most popular sizes of 5 and 8 will be sufficient for most homes or small offices, but if you have more devices to wire up, 16- and 24- port versions are also common. The simple rule to follow when deciding what size switch to buy is, count the number of devices you want to connect and add on a couple of spares for future expansion, and remember that one port is used up connecting the switch to the router.

Need Power?

PoE (Power over Ethernet) allows connection to Access Points, Cameras or VoIP phones. This proves to be useful, as it will enable one cable to provide both internet and power, particularly if a standard plug socket is not available.

If you have a switch already, PoE can be added to a non-PoE switch, if you just have 1 or 2 devices that need power, via a PoE injector.

Why the need for Speed?

Networks need to be faster and more powerful to connect more devices for tasks like surveillance, working from home and streaming at the same time. There are 2 common switch speeds in the home, with faster speeds normally reserved for business, but becoming more common in homes, especially with prosumers.

Fast Ethernet provides speeds of up to 100Mbps and **Gigabit** offers speeds up to 1000Mbps.

2.5Gb or other multi gigabit switches for homes/small offices are becoming more popular, D-Link has the exceptionally well designed DMS-106XT now and new DMS-10x series available soon. D-Link offers a variety of 10 Gigabit switches mainly for SMB customers, requiring a superior speed from their network.

When choosing what switch to add to your network, firstly find out what speed the Ethernet ports on your router are, if you have Fast Ethernet ports, you should go for a Fast Ethernet switch, Gigabit ports on your router will allow you to choose, I would suggest in most cases, Gigabit is worth the extra investment.

Unmanaged Switch Features

- Plug-and-play connectivity
- Ideal for sharing resources
- Energy Efficient
- Fast Ethernet/Gigabit and (new) multigigabit Variations
- Max Power – PoE+ options
- Fibre Uplink options



Smart Managed Switches



Intro to D-Link Smart Switches

Why is a smart switch better than unmanaged?

Unmanaged switches are great for expanding a small network that is controlled by a gateway such as the router provided by your ISP, however larger networks require more granular management to enhance both performance and security.

Data flows across switches in the same way regardless of the layer they operate at, however a smart switch can utilise layer 3 functionality to create better routing paths for packets, segregate network traffic using VLANs, create access control lists to deny and allow certain kinds of traffic and perform many other functions, making them the perfect choice for entry level switches at the edge and distribution level of business grade/demanding networks.

With D-Link smart switches, implement network changes with an easy-to-use GUI and minimise your time configuring your network or benefit from software/hardware controllers for easy set-up and monitoring either locally or in the cloud. (Certain models only)

DGS-1210 Smart Switch

The DGS-1210 Series introduces advanced Layer 2 management & security features and SFP Ports at 1Gb Speeds for fibre cabling.(Small Form Factor Pluggable Transceivers)



DGS-1250 Series

Introduces 10G Fibre speeds called 'SFP+' Perfect for those with heavy user demands and want a faster backbone.



DGS-1510 Series

Stacking technology – 10G SFP+ fibre ports for physical stacking or uplinks, combine many switches into one for easier management using 10G Fibre.



DGS-1520 Series

Multi-Gigabit 2.5G ports on the DGS-1520 Series PoE switches eliminate potential bottlenecks when connecting to Wi-Fi 6 access points capable of Gigabit+ wireless speeds.

Fully Managed Switches

Fully Managed Options

Managed switches are the most powerful and often designed to be the core of the network.

As your business grows, you have to consider the demand for improved internet experience, security, data protection, governance & compliance to name a few. You may have existing switches, but in order to properly configure the network for maximum efficiency, it would be a good idea to employ the use of network managed switches.

For network administrators, operation managers, business owners, the underlying network infrastructure must become more agile, flexible, consistent across all environments, which very simply cannot be achieved using basic networking devices.

Fully Managed switches offer all the features of Smart Managed Plus switches with additional Layer 2 (switching) and Layer 3 (routing) functionality.

Key Features

- Advanced Network Security and Redundancy
- ACL List, Authentication control with 802.1x, Radius, AAA, A...
- DHCP server & dynamic routing
- Hardware redundancy, optional module slots.
- Stackable options
- Dedicated Full Fibre Switch [1 Gig SFP and 10 Gig SFP+]
- PoE options
- Layer 3 Routing functions
- Dedicated Stacking ports



DGS-3130 Series

Gigabit L3 Stackable Managed



Layer 3 managed switch
10-Gigabit sfp+ ports
24 port SFP available
Physical stacking





Why upgrade to managed?

Why upgrade to managed switches?

The main difference with managed switches is having more granular control to configure your traffic, connected devices and security on your network

Go Green With Your Network

You now have the choice to go green when upgrading to managed switches. This new generation switches features the latest innovative energy-efficient technologies that can automatically adjust power consumption according to the link status. Reduce the power consumption of ports that are idle, resulting in up to an 80% reduction in power use.

Performance

Unmanaged switches have limited or no tools for monitoring network activity or performance. Managed switches allow you to monitor and alert on the health of the network or particular device. Quickly detect and repair network problems – remotely if needed.

Security

Managed switches have some major security benefits, such as the ability to monitor and control the network, port security to disable ports and prevent unauthorised access, shut down active threats, protection for data, control.

You need advanced security built into your network devices to combat today's complex attacks.

Redundancy

This can ultimately prevent expensive downtime, which you will appreciate. This feature allows you to create alternative data paths in case a connection/cable fails. This helps in safeguarding your network traffic and keep it running smoothly.

Versatile traffic management.

A rich set of multi-layer QoS/CoS features ensure that critical network services such as VoIP, video conferences, IPTV, and IP surveillance are always given high priority, and 10-Gigabit ports deliver the speed you need. Traffic Shaping features guarantee bandwidth for these services even when the network is busy. L2 Multicast support enables the DGS-3130 Series to handle growing IPTV applications



Transceivers

Transceivers allow for the expansion of Ethernet networks by providing high-speed connections over a fibre-optic cabling. The fibre-optic transceivers have standard duplex LC connectors to provide maximum compatibility. They are hot pluggable and Small Form Factor Pluggable (SFP) compliant with the Multi-Source Agreement (MSA) specification.

Small Form Pluggable (SFP) Package

Transceivers use the Small Form-factor Pluggable (SFP) design. They provide the necessary signal amplification for data to be transmitted to the network cable from the port, and vice versa. The SFP form factor is advantageous because it is smaller than other form factors, ensuring lower costs, lower power disruption, and higher port density.

Multiple Applications

Applications of fibre transceivers include distributed multi-processing, Gigabit switch cascading, high-speed I/O file transfer, bus extension application, and channel extender/data storage. This versatility is invaluable for an expanding network, and helps the infrastructure grow with the business.

Hot Pluggable

All D-Link transceivers are hot pluggable. You can connect a transceiver while the system is powered on without causing any issues, and easily swap one for another without having to reboot the switch each time. This permits modules to be added or removed without interrupting the network, facilitating maintenance and greatly reducing downtime.

DEM-3 series

SFP 1000Base-SX Multi-mode Fibre



The DEM-311GT is a high performance 850nm multimode SFP/mini-GBIC transceiver. Supporting full duplex, Gigabit speeds on multimode fiber

DEM-4 seriesSeries

SFP+ 10GBASE-SR Multi-Mode Fibre



DEM-431XT is a high performance 850nm Multi-Mode SFP+ transceiver. Supporting Full-duplex, 10 Gigabit speeds on Multi-Mode fibre cables.

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