

Product Highlights

Unified Network Architecture

- Manages up to 48 D-Link Unified Access Points¹ (192 Access Points in a cluster)

Robust Wired/Wireless Security

- With Access Control Lists, Captive Portal, Rogue AP detection and mitigation

Seamless Mobility

- Fast roaming for continuous connectivity

Advanced switching and routing

- Support for RIP v1/v2 routing protocol

Simplified Management

- Web GUI for easy configuration



DWS-3160 Series

Gigabit Layer 2+ Unified Switches

Key Features

Scalable Unified Wired/Wireless Network Architecture

- Manages up to 48 D-Link Unified Access Points¹
- Up to 192 Unified Access Points can be managed by a cluster of four DWS-3160 switches

Robust Wired/Wireless Security

- Built-in captive portal
- Rogue AP detection and mitigation
- 802.1X authentication
- Access control list

Seamless Mobility

- Fast roaming
- L3 roaming support, ensuring continuous connectivity

Advanced Switching and Routing

- VLAN routing
- Spanning tree
- IGMP/MLD snooping
- IPv6 ready
- 802.3at PoE support²

Simplified Management

- Up to four switches may form a cluster, enabling single-IP management
- WebGUI or command line interface
- SNMP v1/2c/3
- Flow support
- Dual image

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

Simplified Management

The DWS-3160 is able to centralise all critical WLAN management, thereby eliminating the need to manage access points individually. The administrator simply assigns a profile to an individual D-Link Unified Access Point, and the configuration corresponding to that profile would be applied onto that access point automatically. In addition, the DWS-3160 can apply new firmware to all D-Link Unified Access Points on the network, thus greatly simplifying the upgrade process.

Besides its wireless capabilities, the DWS-3160 also excels as an advanced L2+ switch. Complete with ACL security, multi-layer QoS, comprehensive VLAN support, as well as Multicast Snooping capabilities, the DWS-3160 enables easy and flexible deployment. Furthermore, multiple DWS-3160s can form a Switch Cluster, which enables the administrator to configure all switches from one single Cluster Master. As the size of the cluster grows, so can the number of D-Link Unified Access Points being managed. Up to 192 D-Link Unified Access Points may be managed by the Switch Cluster. This helps to significantly simplify management and reduce maintenance efforts when a network is scaled up.

Trusted Security

The DWS-3160 offers a state-of-the-art Wireless Intrusion Detection System (WIDS), which empowers administrators to detect Rogue Access Points and Rogue Clients, effectively preventing them from causing damage to the network. The administrator can also activate various threat detections and use Radio Frequency Scan to sweep the entire wireless network to identify any possible security breach in advance.

When working in conjunction with D-Link Unified Access Points, Virtual Access Points may be easily configured and managed, allowing the administrator to assign different access privileges to different classes of users. In addition to WPA and WPA2, an added measure of protection is added with an advanced captive portal, thus enabling only authorised users to utilise the wireless network.

On the wired side, the DWS-3160 utilises Access Control Lists to tightly control what goes in and out of the network by setting up a number of simple rules. Along with other advanced security features, such as 802.1X Network Access Control and advanced Denial-of-Service Protection, the DWS-3160 provides robust and centralised security, ensuring maximum network reliability.

Network Resiliency

When a number of access points are deployed close to each other, interference may result if proper RF management is not implemented. The DWS-3160 is aware of how the radio spectrum is being utilised in the network and will automatically assign the most optimised channel to each access point under its management. This greatly reduces RF interference and will allow the administrator to deploy APs more densely.

To further minimise interference, when a number of access points are operating on the same channel within close proximity of each other, the DWS-3160 will reduce the transmission power of these access points. When, for whatever reason, there is no longer so many access points present, transmission power will be increased to expand network coverage.

To ensure that no access point is overburdened while others sit idle, the DWS-3160 will prevent certain D-Link Unified Access Points from accepting new association requests if its resources are fully utilised. A neighboring D-Link Unified Access Point will instead pick up the load. This ensures that proper load balancing is in place, and the network will function in the most optimal state.

Seamless Mobility

Wireless clients can enjoy seamless and uninterrupted roaming from AP to AP if they are managed by the same DWS-3160 switch, even if they are not in the same subnet. Because the DWS-3160 employs various mechanisms such as pre-authentication and key-caching, wireless users can freely roam the entire network without needing to re-authenticate. This allows tablet and smart phone and netbook computer users to travel freely within any area covered by the DWS-3160's managed APs without having to worry about network connectivity, thus enabling a truly mobile workplace.

License Upgrade

The DWS-3160 can manage 12 Unified Access Points by default, but is capable of managing up to 48 APs. If administrators need to deploy more APs in the network, they can purchase upgrade licenses on an as-needed basis. Two types of license models are offered, a 12 AP upgrade or a 24 AP upgrade.

Choosing the right upgrade license is a straightforward process. You simply choose the license model that corresponds to your DWS-3160 switch (whether it's a base or POE-type models), and then the number of managed APs you need to upgrade the switch to handle. To further simplify the process, users from certain regions have the option of purchasing upgrade licenses online. However, if online purchase isn't available in your area, you can always purchase the physical license pack.



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

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

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

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

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

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

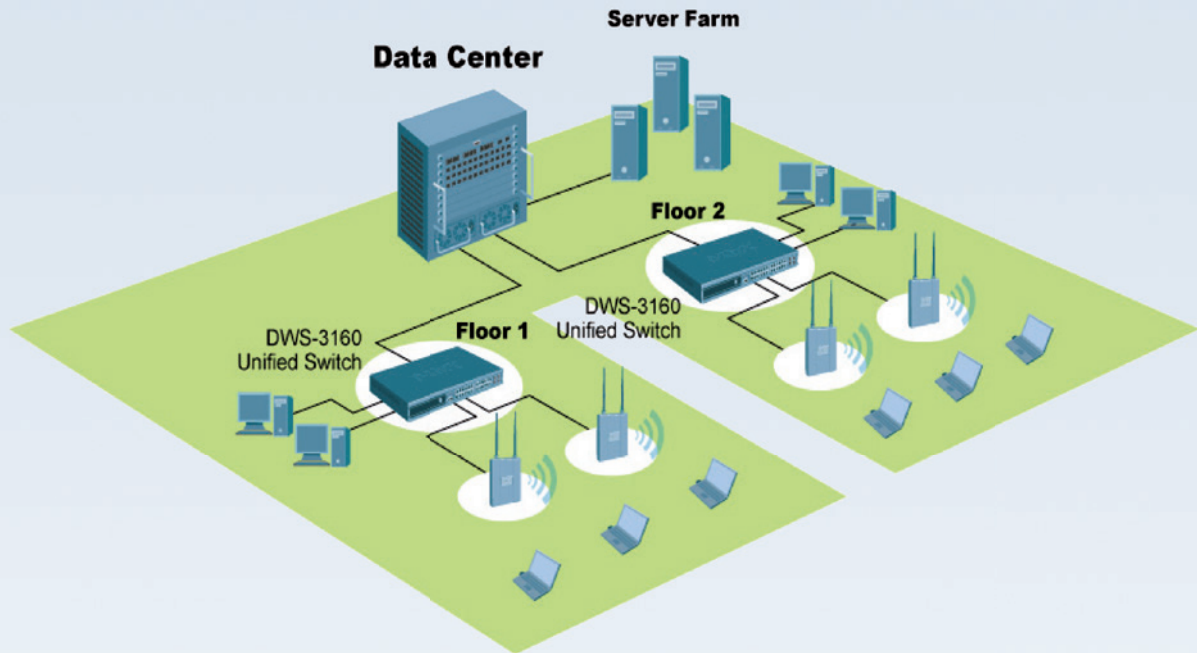
D-Link Assist Bronze - for guaranteed response on the next business day

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

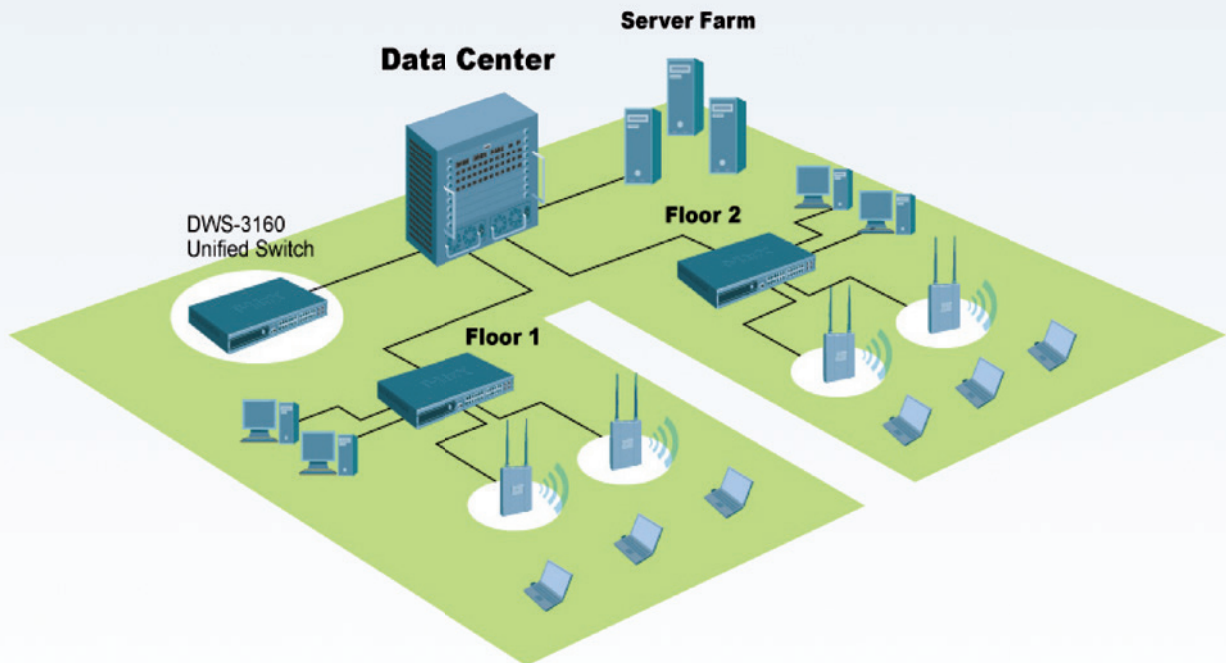
D-Link Assist can be purchased together with any D-Link business product. So whether you're buying switching, wireless, storage, security or IP Surveillance equipment from D-Link, your peace of mind is guaranteed. D-Link Assist also offers installation and configuration services to get your new hardware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



DWS-3160 Series Gigabit Layer 2+ Unified Switches

Converged Edge Deployment



Overlay Deployment



Technical Specifications		DWS-3160-24TC	DWS-3160-24PC
			
System			
Network Interfaces	20 10/100/1000Base-T 4 Combo 10/100/1000Base-T/SFP		
Console Port	RJ45		
MAC Address Table	16K		
Performance			
Switching Capacity	48 Gbps		
Max. Forwarding Rate	35.71 Mpps		
Forwarding Method	Store-and-forward		
Packet Buffer Memory	2 MB		
802.3at Power over Ethernet ²	30 W Per Port 370 W Total Power Budget 740 W Total Power Budget With RPS		
Number of VLANs per Device	3,965		
Static Routes	512		
Jumbo Frames	13K		
Physical			
Size	19-inch Standard Rack-Mount Width, 1U Height		
Max. Power Consumption	37.7 W	467 W (full PoE load)	
MTBF	561,829 hours	282,541 hours	
Acoustic	Below 30°C:<46.3dB Over 30°C:<33.0dB	Below 30°C:<39.8dB Over 30°C:<51.8dB	
Heat Dissipation	128.6 BTU/hr	With 370 W PoE load: 1593.5 BTU/hr	
Dimensions	440 x 210 x 44 mm (17.32 x 8.27 x 1.73 inches)	440 x 310 x 44 mm (17.32 x 12.20 x 1.73 inches)	
Weight	2.55 kg (5.63 pounds)	5.24 kg (11.55 pounds)	
Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)		
Storage Temperature	-40 °C to 70 °C (-40 °F to 158 °F)		
Operating Humidity	10% to 90% RH		
Storage Humidity	5% to 90% RH		
EMI Certifications	FCC Class A, CE, ICES-003, C-Tick, VCCI		
Safety	UL/cUL, CB		

DWS-3160 Series Gigabit Layer 2+ Unified Switches

Functions & Features

Management

- Management of up to 12 Access Points per switch
- Upgrade licenses for up to 48 Access Points per switch
- Up to 192 APs per Switch Cluster
- Single IP Management (SIM)
- SSH
- SSL
- SNMP v1, 2c, 3
- sFlow
- Dual Image Support
- Web GUI
- Command Line Interface

AP Management

- AP Auto-Discovery
- Remote AP Reboot
- AP Monitoring: List Managed AP, Rogue AP, Authentication Failed AP
- Client Monitoring: List clients associated with each Managed AP
- Ad-hoc Client Monitoring
- AP Authentication Supporting Local Database and External RADIUS Server
- Centralised RF/Security Policy Management
- Automatic AP RF Channel Adjustment
- Automatic AP Transmit Output Power Adjustment
- Centralised Firmware Upgrade

Supported Unified Access Points

- DWL-2600AP
- DWL-3600AP
- DWL-6600AP
- DWL-8600AP

Roaming

- Fast Roaming
- Intra-Switch/Inter-Switch Roaming
- Intra-Subnet/Inter-Subnet Roaming

Access Control & Bandwidth Management

- Up to 32 SSID per AP (16 SSID per frequency band)
- AP Load Balancing based on the number of users or AP utilisation
- Flexible Mapping Schemes

L2 Features

- MAC address table: 16K
- IGMP Snooping
- MLD Snooping
- 802.1D/w/s Spanning Tree
- 802.3ad Link Aggregation
- 802.1ab LLDP
- Port Mirroring (One-to-One and Many-to-One)
- Jumbo Frame Size: Up to 13 KB

L3 Features

- IPv4/v6 Static Route
- Routing Table Size: 512 Static Routes
- VRRP
- ARP Proxy

LAN Security

- RADIUS Authentication Management Access
- TACACS+ Authentication for Management Access
- SSH & SSL Support
- MAC Filtering
- 802.1x Port-based Access Control & Guest VLAN
- Denial of Service Protection
- Dynamic ARP Inspection
- Protected Port
- Broadcast Storm Control
- Access Control List

LAN Flow Control

- 802.3x Standard in Full Duplex Mode
- Back Pressure in Half Duplex Mode
- Head-of-Line Blocking Prevention

QoS (Quality of Service)

- Voice VLAN
- Wireless Multimedia (WMM)
- 802.1p Priority Queues
- CoS-based QoS
- Per-Flow Bandwidth Control
- Per-Port Traffic Shaping
- Minimum Bandwidth Guarantee

VLAN

- Static VLAN groups: 3,965
- 802.1q VLAN Tagging
- 802.1v

- Subnet-based VLAN
- MAC-based VLAN
- GVRP
- Double VLAN
- Voice VLAN

WLAN Security

- WPA Personal/Enterprise
- WPA2 Personal/Enterprise
- 64/128/152-bit WEP Data Encryption
- MAC Authentication
- Station Isolation
- Wireless Station and AP Monitoring based on RF Channel, MAC Address, SSID, Time
- Rogue AP and Client Detection & Mitigation
- Captive Portal
- Security Profile
- 802.1X Support
- Guest VLAN

¹ Purchase of license upgrade is required

² DWS-3160-24PC only

DWS-3160 Series Gigabit Layer 2+ Unified Switches

Upgrade Licences	DWS-3160-24TC	DWS-3160-24PC
12 additional AP	• DWS-316024TCAP12-LIC	• DWS-316024PCAP12-LIC
24 additional AP	• DWS-316024TCAP24-LIC	• DWS-316024PCAP24-LIC

Optional Products		
Management Software	<ul style="list-style-type: none"> • DV-600S D-View 6.0 Network Management Software Standard Edition • DV-600P D-View 6.0 Network Management Software Professional Edition 	

SFP transceivers	Standard	Mode	Max Distance
DEM-310GT	• 1000Base-LX	• Single-mode	• 10 Km
DEM-311GT	• 1000Base-LX	• Multi-mode	• 550 m
DEM-312GT2	• 1000Base-LX	• Multi-mode	• 2 Km
DEM-314GT	• 1000Base-LX	• Single-mode	• 50 Km
DEM-315GT	• 1000Base-LX	• Single-mode	• 80 Km

WDM SFP transceivers	Standard	Tx Wavelength	Rx Wavelength	Max Distance
DEM-331T	• 1000Base-LX	• 1550 nm	• 1310 nm	• 40 Km
DEM-331R	• 1000Base-LX	• 1310 nm	• 1550 nm	• 40 Km



For more information: www.dlink.com

D-Link European Headquarters. D-Link (Europe) Ltd., D-Link House, Abbey Road, Park Royal, London, NW10 7BX.
 Specifications are subject to change without notice. D-Link is a registered trademark of D-Link Corporation and its overseas subsidiaries.
 All other trademarks belong to their respective owners. ©2013 D-Link Corporation. All rights reserved. E&OE.

Updated June 2013

D-Link[®]
 Building Networks for People