Unified Access Wired/Wireless Switching

D-Link's Unified Access Wired/Wireless Switching solution provides an innovative evolution in wireless LAN. Prior to this evolution, complex installations, intricate management utilities and limited scalability options were the main reasons why network administrators were hesitant to deploy facility-wide wireless LAN. With D-Link's new breed of WLAN architecture, businesses, government organizations, schools, hospitals, public hot spots and others can now simplify installation and enhance the effectiveness of their Wi-Fi networks.

Premium Wireless Connectivity

D-Link's Unified Access Wired/Wireless Switching offers premium wireless connectivity options and flexibility in an easy-to-deploy, centrally managed system. Designed for medium-sized to large wireless networks, this solution highlights core functionalities such as consistent wireless connectivity, comprehensive network control and secure user authentication. It provides businesses and organizations with the flexibility and investment protection through: scalable expansion, handling of wired or wireless traffic from any port, unified LAN/WLAN deployment, and easy upgrade to future technologies through Gigabit connectivity and 10-Gigabit/fiber support.

Enhanced Performance & Security

D-Link's Unified Access Wired/Wireless Switching provides not only roaming among the across to the access points, but also roaming among the peer wireless switches. In addition to intra-switch roaming, it also supports roaming across different subnets for secure wireless connection across multiple departments in a large enterprise. As roaming is through the Ethernet cable at the fast Gigabit speed, traffic bottlenecks are minimized and overall network performance is enhanced.

Combining with the access points' 108Mbps (Turbo mode)[1] throughput, this makes for a fast network performance. AP, no matter where installed, are automatically discovered and centrally managed. As users move around the wireless network, all data information, translation, authentication paths and user tracking are executed on the switch end to provide network administrators with a consolidated and secure wireless system. The switch provides a means to define and detect rouge AP to prevent illegal intrusion into the internal network. Security can be pre-set and RF channels auto-adjusted for each AP, so when an AP is removed or added, the entire network does not have to be reconfigured: the switch will automatically configure each new AP with the same configuration as the replaced units.

Core & Outlying Units

D-Link's Unified Access Wired/Wireless Switching solution consists of two components: the DWS-3024/3026 wireless switches that function as the core units, and the DWL-3500AP/8500AP wireless access points that serve as the outlying units. The wireless switches remain at the core of the wireless system infrastructure, while multiple AP units can be dispersed throughout a site and connected to the wireless switches. AP can be directly attached to the wireless switch, or indirectly connected through any network switch. The wireless switches have standard rack-mount design and can be hidden in a wiring closet, while the AP support 802.3af Power over Ethernet and can be installed on high walls or ceilings far away from AC power outlets.

Flexible Deployment

In a unified LAN/WLAN deployment, D-Link's Unified Access Wired/Wireless Switching architecture allows the switches to be placed deep inside an existing wired network, say in a data center, to protect current investments in infrastructure. Wireless traffic is tunneled to the switches for centralized data forwarding decision. An alternative would be to put the switches at the network edge for minimized distance from the AP, flexible scalability and distributed peer-to-peer WLAN switching. Converged LAN/WLAN deployment means all restrictions on port usage are removed: any port on the wireless switch can be used for wired or wireless purposes.

Single or Dual Band Wireless Connection

Two access points are available for selection: the DWL-3500AP operating at the 2.4GHz frequency band, and the DWL-8500AP operating at dual 2.4GHz and 5GHz frequency bands. Depending on the network requirements, either type of AP or a combination of both can be installed. The system provides automatic adjustment of 802.11b/g and 802.11a/b/g RF channels, multiple SSID for each frequency band, and optimal transmit power to provide mobile users with the best and secure wireless signals..

DWL-3500AP

DWL-8500AP

DWS-3024

DWS-3026

Wireless Switching Solution

+ High-Speed Reliable Wireless Deployment Solution
+ Increases Installation Flexibility
+ Wireless Switch and Wireless Access Points Work Together

Centralized Management of Wireless Network

+ Tracks & Maintains User Authentication As Users Roam Throughout the Network
+ Intelligently Designates Users to Virtual Groups Based on User's Authenticated Identity
+ Provides Scaled, Resilient, Integrated Management Infrastructure
+ Centrally Manages User Authentication/Security Policies
+ Provides Key Management for Each Security Protocol
+ Configures and Controls All Connected Access Points

Simplified & Resilient Network Deployment

+ 802.3af Power Over Ethernet Simplifies AP Installation
+ Gigabit Connection Ready for Future Wireless Speed Upgrade
+ Redundant Power Supply Support Maximizes Network Uptime

Wireless Switch

+ Provides Centralized Security/ Management for WLAN Infrastructure
+ Provides 802.3af PoE, Auto-Adjustment of RF Channels & Remote Boots for AP
+ Automatically Configures All Attached AP
+ Detects Rogue AP to Increase Wireless Security

Wireless Switch Access Point

+ 802.11g or Concurrent 802.11a/g Wireless Connectivity
+ Up to 108Mbps (Turbo Mode) in Both Frequency Bands [1]
+ High Gain Detachable Dipole Antennas Ensure Maximum Coverage
+ Provides 802.3af PoE Support
+ Sensitive Information Not Locally Stored
+ Security: WEP, WPA/WPA2, Multiple SSID per Frequency Band

Unified Access Wired/Wireless Switching

FEATURES & BENEFITS

Wireless Switch-to-Access Point Architecture	The wireless switching centralized architecture is composed of the DWS-3024/3026 switches, which are the core units that manage the network, and the DWL-3500AP/8500AP access points, which deliver wireless connectivity to mobile clients and can be dispersed throughout the network. The switch provides each AP with network information and individually customized security profiles to intelligently manage all data traversing the wireless waves.
Centralized WLAN Management & Easy Deployment	Through a centralized management platform, network maintenance and configuration become a more efficient process. If any access point were to fail, administrators can instantly identify the location of the failed AP and immediately swap it out with another AP. The switch will automatically configure the new AP with the same configuration as the previous unit.
Multimode Wireless Access & More Mobile Freedom Flexibility	Each DWL-8500AP access point has 802.11a/g dual band functionality, which provides all clients with flexible connecting options. For users requiring low network traffic and running high-bandwidth applications, the 802.11a band is ideal. Other users using the 802.11b/g band could roam throughout the building and perform their daily job responsibilities wirelessly with sufficient network bandwidth.
Maximum Network Protection	Each client connecting to the wireless network goes through a strict authentication process to ensure maximum security. Whether the client is an assigned user, a visiting guest, or just has department access, the switch protects the entire network infrastructure with its vast array of security protocols. These protocols include WPA/WPA2, 802.1x user authentication, and 802.11i standard security.
Gigabit & 10-Gigabit Support for Future Upgrade	By incorporating Gigabit into the wireless switch, D-Link offers enterprises an easy upgrade path to future wireless LAN technologies, such as the next generation 802.11n standard. In addition, the switch's optional 10-Gigabit allows the network to integrate with high-speed servers and the network backbone, further protecting users' investments in network hardware.
Seamless Roaming for Continuous Connection	Implementing Unified Access Wired/Wireless Switching solution within a business or organization would only mean a high return on investment. With D-Link's wireless switch infrastructure, all deployed AP within a designated area retain the same security and network configuration through the user-based authentication mechanism, meaning seamless roaming is set in place. With fast roaming provided by the switch, employees can maintain connection integrity while moving around the building conducting Voice over Wi-Fi calls or other bandwidth-sensitive applications.
802.3af Standard PoE Support for Easy Deployment	For installation sites such as large offices, factories, hospitals, schools and public Wi-Fi hot spots, access points typically need to be placed at out-of-the-way locations such as on the ceilings or rooftops for maximum coverage. It is at these locations where wall AC outlets are inaccessible, and extending power lines to these places is difficult and expensive. By transmitting remote power through the standard network cabling inside the walls and ceilings, a centralized power source is provided, eliminating the need for individual power sources for these devices.
Scalable Expansion	Each switch can manage up to 48 access points. A network site can begin with one wireless switch to manage a few AP or to use for mixed wired/wireless LAN purposes. When the number of AP is augmented, up to four switches in a peer-to-peer configuration can be added to form a large, centralized management system capable of handling up to 192 access points.

[1] Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead may lower actual data throughput rate. 108Mbps Turbo mode operation in 5GHz frequency band not allowed in EU countries.

CE FC ACN 052 202 838

D-Link Worldwide Offices

U.S.A.	*TEL: 1-800-326-1688*	*FAX: 1-866-743-4905*	*Spain*	*TEL: 34-93-4090770*	*FAX: 34-93-4910795*	*Turkey*	*TEL: 90-312-473-40-55*	*FAX: 90-312-473-40-06*
Canada	*TEL: 1-905-8295033*	*FAX: 1-905-8295223*	*Portugal*	*TEL: 351-21-8688493*		*Egypt*	*TEL: 202-291-9035*	*FAX: 202-291-9051*
Europe (U. K.)	*TEL: 44-20-8731-5555*	*FAX: 44-20-8731-5511*	*Czech Republic*	*TEL: 420-(603)-276-589*		*Israel*	*TEL: 972-9-9715700*	*FAX: 972-9-9715601*
Germany	*TEL: 49-6196-77990*	*FAX: 49-6196-7799300*	*Switzerland*	*TEL: 41-(0)-1-832-11-00*	*FAX: 41(0)-1-832-11-01*	*LatinAmerica*	*TEL: 56-2-232-3185*	*FAX: 56-2-232-0923*
France	*TEL: 33-1-30238688*	*FAX: 33-1-30238689*	*Greece*	*TEL: 30-210-9914 512*	*FAX: 30-210-9916902*	*Brazil*	*TEL: 55-11-218-59300*	*FAX: 55-11-218-59322*
Netherlands	*TEL: 31-10-282-1445*	*FAX: 31-10-282-1331*	*Luxemburg*	*TEL: 32-(0)2-517-7111*	*FAX: 32-(0)2-517-6500*	*South Africa*	*TEL: 27-12-665-2165*	*FAX: 27-12-665-2186*
Belgium	*TEL: 32(0)2-517-7111*	*FAX: 32(0)2-517-6500*	*Poland*	*TEL: 48-(0)-22-583-92-75*	*FAX: 48-(0)-22-583-92-76*	*Russia*	*TEL: 7-495-744-0099*	*FAX: 7-495-744-0099 #350*
Italy	*TEL: 39-02-2900-0676*	*FAX: 39-02-2900-1723*	*Hungary*	*TEL: 36-(0)-1-461-30-00*	*FAX: 36-(0)-1-461-30-09*	*Japan*	*TEL: 81-3-5781-0963*	*FAX: 81-3-5781-0965*
Sweden	*TEL: 46-(0)8564-61900*	*FAX: 46-(0)8564-61901*	*Singapore*	*TEL: 65-6774-6233*	*FAX: 65-6774-6322*	*China*	*TEL: 86-10-58635800*	*FAX: 86-10-58635799*
Denmark	*TEL: 45-43-969040*	*FAX: 45-43-424347*	*Australia*	*TEL: 61-2-8899-1800*	*FAX: 61-2-8899-1868*	*Taiwan*	*TEL: 886-2-6600-0123*	*FAX: 886-2-6600-8168*
Norway	*TEL: 47-99-300-100*	*FAX: 47-22-309580*	*India*	*TEL: 91-022-26526696*	*FAX: 91-022-26528914*	*Headquarters*	*TEL: 886-2-6600-0123*	*FAX: 886-2-6600-9898*
Finland	*TEL: 358-9-2707 5080*	*FAX: 358-9-2707-5081*	*Middle East (Dubai)*	*TEL: 971-4-3916480*	*FAX: 971-4-3908881*			

BUSINESS

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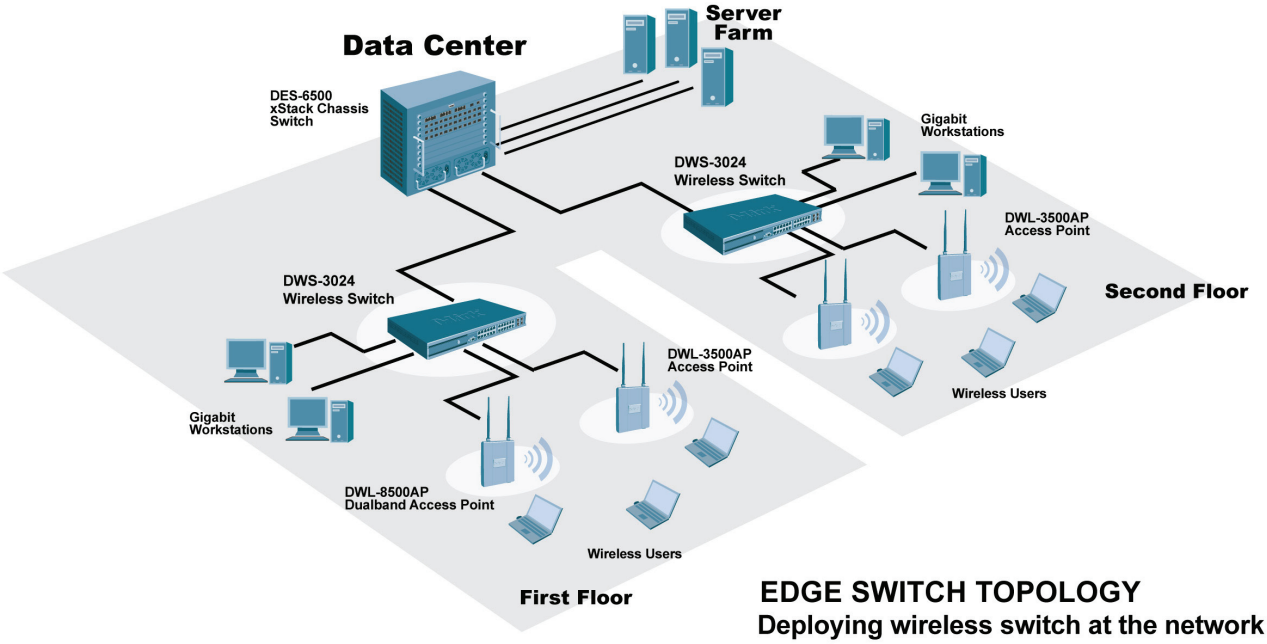
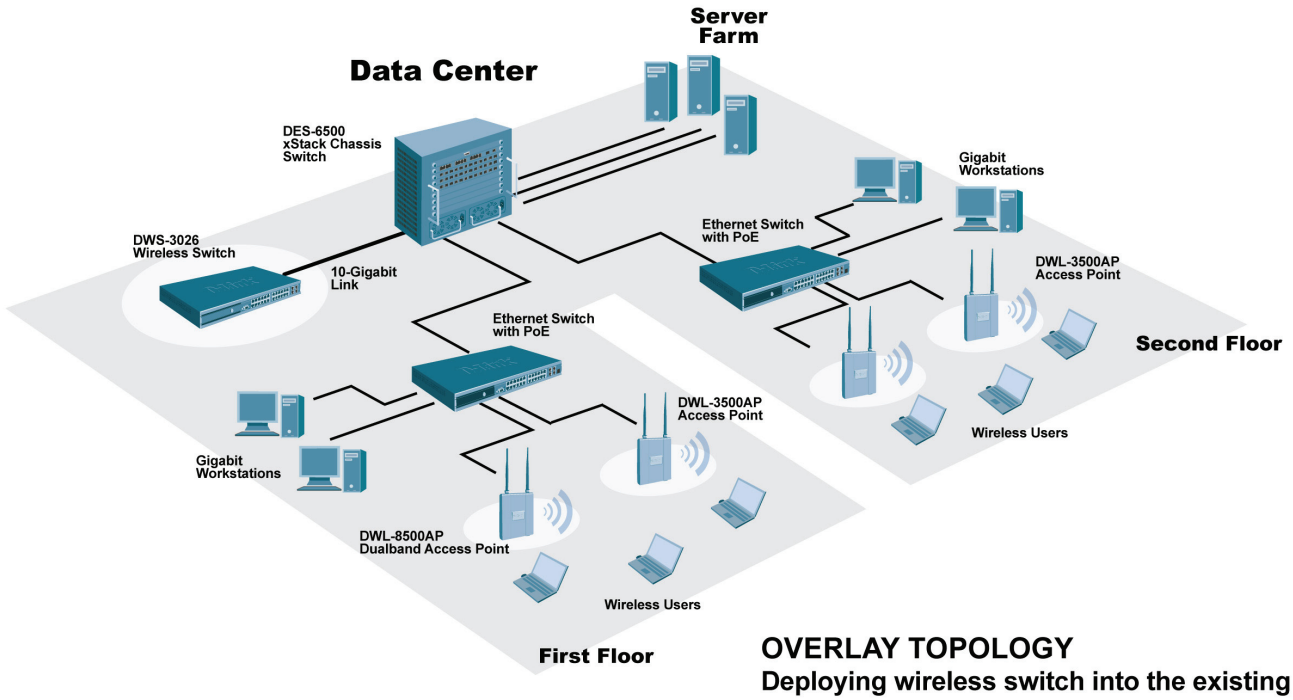


EDGE SWITCH TOPOLOGY

Deploying wireless switch at the network edge for maximum scalability. AP can be directly connected to and powered by the wireless switch.



OVERLAY TOPOLOGY

Deploying wireless switch into the existing infrastructure without affecting the wired network. AP can be indirectly connected to and powered by the PoE switch.