

DAP-3520 Release 1.00

## AirPremier N Dual Band Exterior PoE Access Point

## User Manual

**Business Class Networking** 

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### **Package Contents**



- D-Link DAP-3520 AirPremier N Dual Band Exterior PoE Access Point
- Ethernet Cable
- Manual on CD
- DC 48V, 0.4A Power Adapter
- Installation Guide

If any of the above items are missing, please contact your reseller.

### **Minimum System Requirements**

- Computers with Windows<sup>®</sup>, Macintosh<sup>®</sup>, or Linux-based operating systems with an installed Ethernet adapter
- Internet Explorer version 7.0 and above or Firefox version 3.0 and above.

## Introduction

The DAP-3520 802.11a/n or b/g/n switchable AP increases productivity by allowing you to work faster and more efficiently. With the DAP-3520, bandwidth-intensive applications like graphics or multimedia will benefit significantly because large files are now able to move across the network quickly.

The DAP-3520 is capable of operating in one of five different wireless networking modes; access point, WDS (Wireless Distribution System) with AP, WDS, Wireless Client, or WISP Client Router mode.

Use less wiring, enjoy increased flexibility, save time and money with PoE (Power over Ethernet). With PoE, the DAP-3520 shares power and data over the CAT5 cable, making the setup of your network less expensive and more convenient.

An ideal solution for quickly creating and extending a wireless local area network (WLAN) in offices or other workplaces, trade shows, and special events, the DAP-3520 providing data transfers rates up to 300Mbps. (The 802.11n standard is backwards compatible with 802.11a, 802.11g, and 802.11b devices.)

WPA/WPA2 is offered in two flavors: Enterprise (used for corporations) and Personal (used for home users).

WPA-Personal and WPA2-Personal are directed towards home users who do not have the server-based equipment required for user authentication. The method of authentication is similar to WEP because you define a "Pre-Shared Key" on the wireless router/AP. Once the pre-shared key is confirmed and satisfied at both the client and access point, access is then granted. The encryption method used is referred to as the Temporal Key Integrity Protocol (TKIP), which offers per-packet dynamic hashing. It also includes an integrity checking feature which ensures that the packets were not tampered with during wireless transmission.

WPA-Enterprise and WPA2-Enterprise are ideal for businesses that already have existing security infrastructures established. Management and security implementation can now be centralized on a server participating on the network. Utilizing 802.1x with a RADIUS (Remote Authentication Dial-in User Service) server, a network administrator can define a list of authorized users who can access the wireless LAN. When attempting to access a wireless LAN with WPA-Enterprisee configured, the new client will be requested to enter a username with a password.. If the new client is authorized by the administration, and enters the correct username and password, then access is then granted. In the case where an employee leaves the company, the network administrator is able to remove the previous employee from the authorized list to avoid compromising the

EAP (Extensible Authentication Protocol) is available through the Windows<sup>®</sup> XP operating system. You will need to use the same type of EAP protocol on all devices in your network when using the 802.1x feature.

<sup>\*</sup>Maximum wireless signal rate derived from IEEE Standard 802.11 specifications. Actual data throughput may vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead can lower actual data throughout rate.

### **Features and Benefits**

- Five different operation modes Capable of operating in one of five different operation modes to meet your wireless networking needs: Access Point, WDS with AP, WDS, Wireless Client, or WISP Client Router.
- Faster wireless networking with the 802.11n (draft) standard to provide a maximum wireless signal rate of up to 300 Mbps\*.
- Compatible with the 802.11b standard to provide a wireless data rate of up to 11 Mbps, allowing you to migrate your system to the 802.11n (draft) and 802.11g standards on your own schedule without sacrificing connectivity.
- Compatible with the 802.11g standard to provide a wireless data rate of up to 54 Mbps in the 2.4 GHz frequency range.
- Compatible with the 802.11a standard to provide a wireless data rate of up to 54 Mbps in the 5 GHz frequency range.
- Better security with WPA The DAP-3520 can securely connect wireless clients on the network using WPA (Wi-Fi Protected Access) to provide a much higher level of security for your data and communications than its previous versions.
- AP Manager II management software The real-time display of the network's topology and AP's information makes network configuration and management quick and simple.
- SNMP for management The DAP-3520 is not just fast, but also supports SNMP v.3 for better network management. Superior wireless AP manager software is bundled with the DAP-3520 for network configuration and firmware upgrade. Systems administrators can also set up the DAP-3520 easily with the Web-based configuration. A D-Link D-View 6.0 module will be downloadable for network administration and real-time network traffic monitoring with D-Link D-View 6.0 software.
- Utilizes OFDM technology (Orthogonal Frequency Division Multiplexing).
- Supports 802.3af Power over Ethernet.
- Supports one 10/100/1000M Ethernet port.
- Operates in the 2.4~2.5 GHz and 5.15~5.85 GHz\*\* frequency ranges.
- Supports PPPoE on WAN interface (WISP Client Router mode).
- Supports NAT mode and simple firewall (WISP Client Router mode).
- Built-in heater.
- Web-based interface for managing and configuring.

\*Maximum wireless signal rate derived from IEEE Standard 802.11 specifications. Actual data throughput may vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead can lower actual data throughout rate.

\*\*Please note that operating frequency ranges vary depending on the regulations of individual countries and jurisdictions. The DAP-3520 isn't supported in the 5.25~5.35 GHz and 5.47 ~ 5.725 GHz frequency ranges in some regions.

## **Wireless Basics**

D-Link wireless products are based on industry standards to provide high-speed wireless connectivity that is easy to use within your home, business or public access wireless networks. D-Link wireless products provides you with access to the data you want, whenever and wherever you want it. Enjoy the freedom that wireless networking can bring to you.

WLAN use is not only increasing in both home and office environments, but in public areas as well, such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are allowing people to work and communicate more efficiently. Increased mobility and the absence of cabling and other types of fixed infrastructure have proven to be beneficial to many users.

Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards, allowing wireless users to use the same applications as those used on a wired network.

#### People use WLAN technology for many different purposes:

**Mobility** - productivity increases when people can have access to data in any location within the operating range of their WLAN. Management decisions based on real-time information can significantly improve the efficiency of a worker.

Low implementation costs - WLANs are easy to set up, manage, change and relocate. Networks that frequently change can benefit from WLAN's ease of implementation. WLANs can operate in locations where installation of wiring may be impractical.

**Installation and network expansion** - by avoiding the complications of troublesome cables, a WLAN system can be fast and easy during installation, especially since it can eliminate the need to pull cable through walls and ceilings. Wireless technology provides more versatility by extending the network beyond the home or office.

**Inexpensive solution** - wireless network devices are as competitively priced as conventional Ethernet network devices. The DAP-3520 saves money by providing users with multi-functionality configurable in four different modes.

**Scalability** - Configurations can be easily changed and range from Peer-to-Peer networks, suitable for a small number of users to larger Infrastructure networks to accommodate hundreds or thousands of users, depending on the number of wireless devices deployed.

#### **Standards-Based Technology**

The DAP-3520 Wireless Access Point utilizes the 802.11a, 802.11b, 802.11g, and 802.11n (draft) standards.

The IEEE 802.11n (draft) standard is an extension of the 802.11a, 802.11b, and 802.1g standards that came before it. It increases the maximum wireless signal rate up to 300 Mbps\* within both the 2.4 GHz and the 5 GHz bands, utilizing OFDM technology.

This means that in most environments - within the specified range of this device - you will be able to transfer large files quickly, or even watch a movie in MPEG format over your network without noticeable delays. This technology works by transmitting high-speed digital data over a radio wave utilizing OFDM (Orthogonal Frequency Division Multiplexing) technology. OFDM works by splitting the radio signal into multiple smaller sub-signals that are then simultaneously transmitted at different frequencies to the receiver. OFDM reduces the amount of crosstalk (interference) in signal transmissions.

The D-Link DAP-3520 will automatically sense the best possible connection speed to ensure the greatest possible speed and range.

802.11n offers the most advanced network security features available today, including WPA.

#### **Important Information**

This product should ONLY be installed by an experienced installer who is familiar with local building and safety codes and where ever applicable, is licensed by the appropriate authorities. Failure to do so may void the D-Link product warranty and may expose the end user or the service provider to legal and financial liabilities. D-Link and its resellers or distributors are not liable for injury, damage, or violation of regulations associated with the installation of outdoor units or antennas.

A safety grounding system is necessary to protect your outdoor installation from lightning strikes and the build-up of static electricity. The grounding system must comply with the National Electrical Code and safety standards that apply in your country. Always check with a qualified electrician if you are in doubt as to whether your outdoor installation is properly grounded.

<sup>\*</sup>Maximum wireless signal rate derived from IEEE Standard 802.11 specifications. Actual data throughput may vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead can lower actual data throughout rate.

#### **Installation Considerations**

The D-Link DAP-3520 lets you access your network, using a wireless connection, from virtually anywhere within its operating range. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

- 1 Keep the number of walls and ceilings between the DAP-3520 and other network devices to a minimum each wall or ceiling can reduce your DAP-3520's range by 3-90 feet (1-30 meters). Position your devices so that the number of walls or ceilings is minimized.
- 2 Be aware of the direct line between network devices. A wall that is 1.5 feet thick (0.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle, the wall appears to be over 42 feet (14 meters) thick! Position your devices so that the signal will travel straight through a wall or ceiling instead of at an angle for better reception.
- 3 Building materials can impede the wireless signal a solid metal door or aluminum studs can have a negative effect on range. Try to position wireless devices and computers with wireless adapters so that the signal passes through drywall or open doorways, and not through other materials.
- 4 Keep your product away at least 3-6 feet or 1-2 meters from electrical devices or appliances that generate RF noise.
- 5 If you are using 2.4 GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4 GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even when the phone is not in use.

## **Five Operational Modes**

<b>Operation Mode</b> (Only supports 1 mode at a time)	Function
Access Point (AP)	Create a wireless LAN
WDS with AP	Wirelessly connect multiple networks while still functioning as a wireless AP
WDS	Wirelessly connect multiple networks
Wireless Client	AP acts as a wireless network adapter for your Ethernet- enabled device
WISP Client Router	Transforms your wireless AP into a WISP Client router

### **Getting Started**



- 1 You will need broadband Internet access.
- 2 Consult with your cable or DSL provider for proper installation of the modem.
- 3 Connect the cable or DSL modem to a router. See the printed Install Guide included with your router.
- 4 See the printed Install Guide included with the DAP-3520.
- 5 If you are connecting a desktop computer to your network, install a wireless PCI adapter into an available PCI slot on your desktop computer.
- 6 Install the drivers for your wireless CardBus adapter into a laptop computer.

#### **Connecting PoE (Power over Ethernet)**



Connect one end of an Ethernet cable (included with your package) to the LAN port on the DAP-3520 and the other end of the Ethernet cable to either your computer or to your PoE switch. The AP can be powered on by a PoE switch or by the power adapter shipped with the AP.

#### **Reading the LEDs**



LED	Color	Status	Description
Power	Green	Solid Green	The device is ready.
		Light Off	The device is powering off.
	Red	Blinking Red	The device is booting up.
LAN	Green	Solid Green	The link is up.
		Blinking Green	Data is being transmitted.
		Light Off	The link is down.
WLAN	Green	Solid Green	Wireless is ready.
		Blinking Green	Data is being transmitted.
		Light Off	Wireless is off.

## **Using the Configuration Menu**

To configure the DAP-3520, use a computer that is connected to the DAP-3520 with an Ethernet cable (see the *Network Layout diagram*).

First, disable the *Access the Internet using a proxy server* function. To disable this function, go to **Control Panel > Internet Options > Connections > LAN Settings** and uncheck the enable box.

Start your web browser program (Internet Explorer, Mozilla Firefox).

Type the IP address and http port of the DAP-3520 in the address field (http://192.168.0.50) and press Enter. Make sure that the IP addresses of the DAP-3520 and your computer are in the same subnet.

🕘 D/	AP-35	20 - M	icrosoft l	nternet	Exp	lorer
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	F <u>a</u> vorites	<u>T</u> ools	Hel	P
6	Back	• 🖯	) - 🔀	2		$\rho$
Addre	ss 🧔	http://:	192.168.0.5	0/logout.	.php	

After the connection is established, you will see the user identification window as shown.

Note: If you have changed the default IP address assigned to the DAP-3520, make sure to enter the correct IP address.

- Type "admin" in the User Name field.
- Leave the **Password** field blank.
- Click the **Login** button.

D-l	link		DAP-3520
	LOGIN Login to the Access Point:		
	L F	Jser Name admin Password Login	

Note: If you have changed the password, make sure to enter the correct password.

After successfully logging into the DAP-3520 the following screen will appear:

D-Link			DAP-3520
🔶 Home 🥳 🕺 Maintenai	nce 🔻 🛛 💝 System	💋 Logout	🕐 Help
DAP-3520	System Informati	ion	
Advanced Settings	Model Name	DAP-3520	
	Firmware Version	1.00beta0922 14:18:36 09/22/2008	
	Location	D-LINK ACCESS FOUND	
	System Time	01/01/2000 00:25:46	
	Up Time	0 Days, 00:25:47	
	Operation Mode	Wireless client	
	IP Address	192.168.0.50	

When making changes on most of the configuration screens in this section, use the **Apply** button at the bottom of each screen to save your configuration changes.



Click the **Apply** button to configure changes.

#### Home > Basic Settings > Wireless > Access Point mode

D-Link <sup>®</sup>					DA	P-3520
🔶 Home 🏾 🌠 Maintenance	🔹 😜 System			Logout	۲	Help
Home Maintenance     DAP-3520     Basic Settings     Wireless     LAN     Internet Connection     Advanced Settings     Status	Vireless Settings Wireless Band Mode Network Name (SSID) SSID Visibility Auto Channel Selection Channel Channel Width Authentication Key Settings Encryption Key Type Key Index(1~4) Network Key Confirm Key	2.4GHz Access Point 3520 Enable Disable Auto 20/40 MHz Open System Disable HEX I I I I I I I I I I I I I	Key Size	Logout 64 B	Note: Section 1. Se	Ply

- Mode: Select Access Point from the pull-down menu. The other four choices are WDS with AP, WDS, Wireless Client, and WISP Client Router.
- Network Name (SSID): Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is **dlink**. The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network. The SSID can be up to 32 characters and is case-sensitive.
  - **SSID Visibility:** Enable or Disable SSID visibility. Enabling this feature broadcasts the SSID across the network, thus making it visible to all network users.
- Auto Channel Selection: Enabling this feature automatically selects the channel that provides the best wireless performance. Enable is set by default. The channel selection process only occurs when the AP is booting up.

	the channel, first toggle the Auto Channel Selection setting to <b>Dis-</b> <b>able</b> , and then use the pull-down menu to make the desired selec- tion. (Note: The wireless adapters will automatically scan and match the wireless settings.)
Channel Width:	Allows you to select the channel width you would like to operate in. Select <b>20 MHz</b> if you are not using any 802.11n wireless clients. <b>Auto 20/40 MHz</b> allows you to both 802.11n and non-802.11n wire- less devices on your network.
Authentication:	Use the pull-down menu to choose <b>Open System</b> , <b>Shared Key</b> , <b>WPA-Personal</b> , or <b>WPA-Enterprise</b> . Select <b>Open System</b> to communicate the key across the network. Select <b>Shared Key</b> to limit communication to only those devices that share the same WEP settings. If multi-SSID is enabled, this option is not available. Select <b>WPA-Personal</b> to secure your network using a password and dynamic key changes. No RADIUS server is required. Select <b>WPA-Enterprise</b> to secure your network with the inclusion
	of a RADIUS server.

#### Home > Basic Settings > Wireless > WDS with AP mode

D-Link			DAP-3520
🔶 Home 🤺 Maintenanc	e 🔻 🛛 😜 System	💋 Logout	🕖 Help
DAP-3520	Wireless Settings		
Advanced Settings	Wireless Band       2.4GHz         Mode       WDS with AP         Network Name (SSID)       3520         SSID Visibility       Enable         Auto Channel Selection       Disable         Channel       3         WDS       Remote AP MAC Address         1. 00:21:91:5a:86:ef       2.         Site Survey       CH         CH       Signal	<ul> <li>3 4</li> <li>7 8</li> <li>Security SSID</li> </ul>	Scan
	Authentication Open System   Key Settings Encryption Key Type HEX Key Index(1~4) Network Key Confirm Key	Enable Key Size <u>64 Bi</u>	bs V Apply

In WDS with AP mode, the DAP-3520 wirelessly connects multiple networks while still functioning as a wireless AP.

Wireless Band:	Select either 2.4 GHz or 5 GHz from the pull-down menu.
Mode:	WDS with AP mode is selected from the pull-down menu.
Network Name (SSID):	Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is <b>dlink</b> . The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.
SSID Visibility:	<b>Enable</b> or <b>Disable</b> SSID visibility. Enabling this feature broadcasts the SSID across the network, thus making it visible to all network users.

Auto Channel Selection:	Enabling this feature automatically selects the channel that will pro- vide the best wireless performance. This feature is not supported in WDS with AP mode. The channel selection process only occurs when the AP is booting up.		
Channel:	All devices on the network must share the same channel. To change the channel, use the pull-down menu to make the desired selection. (Note: The wireless adapters will automatically scan and match the wireless settings.)		
Channel Width:	Allows you to select the channel width you would like to operate in. Select <b>20 MHz</b> if you are not using any 802.11n wireless clients. <b>Auto 20/40 MHz</b> allows you to both 802.11n and non-802.11n wire- less devices on your network.		
Remote AP MAC Address:	Enter the MAC addresses of the APs on your network that will serve as bridges to wirelessly connect multiple networks.		
Site Survey:	Click on the <b>Scan</b> button to search for available wireless networks, then click on the available network that you want to connect with		
Authentication:	Use the pull-down menu to choose <b>Open System</b> , <b>Shared Key</b> , or <b>WPA-Personal</b> .		
	Select <b>Open System</b> to communicate the key across the network.		
	Select <b>Shared Key</b> to limit communication to only those devices that share the same WEP settings. If multi-SSID is enabled, this option is not available.		
	Select <b>WPA-Personal</b> to secure your network using a password and dynamic key changes. No RADIUS server is required.		

#### Home > Basic Settings > Wireless > WDS mode

D-Link				DAP-3520	
🔶 Home 🤺 Maintenance	e 👻 😌 System		💋 Logout	🕐 Help	
DAP-3520	Wireless Settings				
Basic Settings Wireless LAN Advanced Settings Status	Wireless Band Mode Network Name (SSID) SSID Visibility Auto Channel Selection Channel Channel Width WDS Remote AP MAC Address 1, 00:21:91:5a:86:ef 2, 5, 6, Site Survey CH Signal E	2.4GHz ▼         WDS         3520         Enable ▼         Disable ▼         11 ▼         Auto 20/40 MHz ▼         3.         7.         SSID         Security	4 8 SSID	Scan	
	Authentication Key Settings Encryption Key Type Key Index(1~4) Network Key Confirm Key	Open System	Key Size 64 E	Bits M	
				Apply	

In WDS mode, the DAP-3520 wirelessly connects multiple networks, without functioning as a wireless AP.

Wireless Band:	Select either 2.4 GHz or 5 GHz from the pull-down menu.
Mode:	<b>WDS</b> is selected from the pull-down menu.
Network Name (SSID):	Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is <b>dlink</b> . The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.
SSID Visibility:	<b>Enable</b> or <b>Disable</b> SSID visibility. Enabling this feature broadcasts the SSID across the network, thus making it visible to all network users.

Auto Channel Selection:	Enabling this feature automatically selects the channel that will provide the best wireless performance. This feature is not supported in WDS mode.		
Channel:	All devices on the network must share the same channel. To change the channel, use the pull-down menu to make the desired selec- tion.		
Channel Width:	Use the pull-down menu to choose 20 MHz or Auto 20/40 MHz.		
Remote AP MAC Address:	Enter the MAC addresses of the APs on your network that will serve as bridges to wirelessly connect multiple networks.		
Site Survey:	Click on the <b>Scan</b> button to search for available wireless networks, then click on the available network that you want to connect with.		
Authentication:	Use the pull-down menu to choose <b>Open System</b> , <b>Shared Key</b> , or <b>WPA-Personal</b> .		
	Select <b>Open System</b> to communicate the key across the network.		
	Select <b>Shared Key</b> to limit communication to only those devices that share the same WEP settings.		
	Select <b>WPA-Personal</b> to secure your network using a password and dynamic key changes. No RADIUS server is required.		

#### Home > Basic Settings > Wireless > Wireless Client mode

🔉 System 🛛 😰 Help
ss Settings
nd 2.4GHz Wireless Client me (SSID) 3520 ty Enable el Selection Disable 11 Sth Auto 20/40 MHz Scan Signal BSSID Security SSID
on Open System

Wireless Band:	Select either <b>2.4 GHz</b> or <b>5 GHz</b> from the pull-down menu.
Mode:	Wireless Client is selected from the pull-down menu.
Network Name (SSID):	Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is <b>dlink</b> . The SSID can be easily changed to connect to an existing wireless network.
SSID Visibility:	This option is unavailable in wireless client mode.
Auto Channel Selection:	Enabling this feature automatically selects the channel that will pro- vide the best wireless performance. This feature is not supported in Wireless Client mode.

Channel:	The channel used will be displayed, and follow the root AP.
Channel Width:	Use the pull-down menu to choose 20 MHz or Auto 20/40 MHz.
Site Survey:	Click on the <b>Scan</b> button to search for available wireless networks, then click on the available network that you want to connect with.
Authentication:	Use the pull-down menu to choose <b>Open System</b> or <b>WPA-Per-sonal</b> .
	Select <b>Open System</b> to communicate the key across the network.
	Select <b>WPA-Personal</b> to secure your network using a password and dynamic key changes. No RADIUS server is required.

#### Home > Basic Settings > Wireless > WISP Client Router mode

D-Link				DAP-3520	
🔶 Home 🏾 🎸 Maintenand	e 👻 😂 System		💋 Logout	🕐 Help	
DAP-3520	Wireless Settings				
Basic Settings ↓ Basic Settings ↓ LAN ↓ Advanced Settings ⊕ Status	Wireless Band     a       Mode     M       Network Name (SSID)     3       SSID Visibility     a       Auto Channel Selection     a       Channel     a       Site Survey     CH       CH     Signal	2.4GHz   MISP Client Router   S20  Enable   Disable   Auto 20/40 MHz   SID Security	SSID	Scan	
	Authentication C Key Settings Encryption Key Type Key Index(1~4) Network Key Confirm Key	Dpen System  Disable Denable HEX	Key Size 64 Bi		

Wireless Band:	Select either 2.4 GHz or 5 GHz from the pull-down menu.
Mode:	WISP Client Router is selected from the pull-down menu.
Network Name (SSID):	Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is <b>dlink</b> . The SSID can be easily changed to connect to an existing wireless network.
SSID Visibility:	This option is unavailable in wireless client mode.
Auto Channel Selection:	Enabling this feature automatically selects the channel that will pro- vide the best wireless performance. This feature is not supported in Wireless Client mode.

Channel:	The channel used will be displayed, and follow the root AP.
Channel Width:	Use the pull-down menu to choose 20 MHz or Auto 20/40 MHz.
Site Survey:	Click on the <b>Scan</b> button to search for available wireless networks, then click on the available network that you want to connect with.
Authentication:	Use the pull-down menu to choose <b>Open System</b> or <b>WPA-Per-sonal</b> .
	Select <b>Open System</b> to communicate the key across the network.
	Select <b>WPA-Personal</b> to secure your network using a password and dynamic key changes. No RADIUS server is required.

## Home > Basic Settings > Wireless > Open System or Shared Key authentication

D-Link					DAF	P-3520
🔌 Home 🦷 🔏 Maintenanci	e 👻 💝 System			Logout	0	Help
DAP-3520	Wireless Settings					
Wireless     LAN     Internet Connection     Advanced Settings     Status	Wireless Band Mode Network Name (SSID) SSID Visibility Auto Channel Selection Channel	2.4GHz v Access Point v 3520 Enable v Disable v 11 v Auto 20/40 MHz v				
	Authentication Key Settings Encryption Key Type Key Index(1~4) Network Key Confirm Key	Open System	Key Size	64 Bi	ts 💙	
				(	Apı	oly

**Encryption:** Use the radio button to disable or enable encryption.

- Key Type\*: Select HEX or ASCII.
  - Key Size: Select 64 Bits or 128 Bits.
- **Key Index (1~4):** Select the 1st through the 4th key to be the active key.
  - **Key:** Input up to four keys for encryption. You will select one of these keys in the Key Index pull-down menu.
  - **Network Key:** Enter a network key, otherwise known as a password.
  - **Confirm Key:** Retype the network key.

\*\*Hexadecimal (HEX) digits consist of the numbers 0-9 and the letters A-F.

\*ASCII (American Standard Code for Information Interchange) is a code that represents English letters using numbers ranging from 0-127.

# Home > Basic Settings > Wireless > WPA-Personal authentication

D-Link		DAP-3520
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DAP-3520 Basic Settings Wireless LAN Advanced Settings Status	Wireless Settings	
	Wireless Band Mode Network Name (SSID) SSID Visibility Auto Channel Selection Channel Channel Width	2.4GHz v Access Point v 3520 Enable v Disable v 7 v Auto 20/40 MHz v
	Authentication PassPhrase Settings WPA Mode Cipher Type PassPhrase Confirm PassPhrase	WPA-Personal  AUTO (WPA or WPA2)  Auto  Group Key Update Interval 1800 (Seconds)
		Apply

WPA Mode:	When <b>WPA-Personal</b> is selected for Authentication type, you must also select a WPA mode from the pull-down menu: <b>AUTO (WPA or</b> <b>WPA2)</b> , <b>WPA2 Only</b> , or <b>WPA Only</b> . WPA and WPA2 use different algorithms. <b>AUTO (WPA or WPA2)</b> allows you to use both WPA and WPA2.
Cipher Type:	When you select <b>WPA-Personal</b> , you must also select <b>AUTO, AES</b> , or <b>TKIP</b> from the pull down menu.
Group Key Update Interval:	Select the interval during which the group key will be valid. The default value of <b>1800</b> is recommended.
PassPhrase:	When you select <b>WPA-Personal</b> , please enter a PassPhrase in the corresponding field.
Confirm PassPhrase:	Retype the PassPhrase in the corresponding field.

# Home > Basic Settings > Wireless > WPA-Enterprise authentication

Mome       Maintenance       System       Logout       Help         DAP-3520       ■       Basic Settings       Wireless Settings       Wireless Band       2.4GHz ▼         Wireless       ■       ■       Access Point       ■         LAN       ■       Access Point       ■         Mode       Access Point       ■       ■         Network Name (SSID)       3520       ■       ■         SSID Visibility       Enable ▼       ■       ■         Auto Channel Selection       Disable ▼       ■       ■         Channel Width       Auto 20/40 MHz ▼       ■       ■         Authentication       ■       ■       ■       ■         RADIUS Server Settings       ■       ■       ■       ■	D-Link	DAP-3520
DAP-3520   Basic Settings   Wireless   LAN   Mode   Advanced Settings   Status     Status     Wireless Band   2.4GHz    Mode   Access Point      Network Name (SSID)   3520   SSID Visibility   Enable    Auto Channel Selection   Disable    Channel   7    Channel Width   Auto 20/40 MHz    RADIUS Server Settings	🏠 Home 🏾 🐔 Maintenance	e 👻 🤤 System 🛛 👘 🖓 Help
Wireless   Wireless   LAN   Mode   Advanced Settings   Status   Status Wireless Band 2.4GHz  Mode Access Point  Network Name (SSID) 3520 SSID Visibility Enable  Auto Channel Selection Channel Selection Channel Width Auto 20/40 MHz  Channel Width Auto 20/40 MHz  RADIUS Server Settings	DAP-3520	Wireless Settings
WPA Mode AUTO (WPA or WPA2)   Cipher Type Auto   Group Key Update Interval 1800 (Seconds)   Network Access Protection   Network Access   Protection   Network Access   Primary RADIUS Server Setting   RADIUS Server   RADIUS Server   RADIUS Server Setting (Optional)   RADIUS Server   RADIUS Servere	Basic Settings Vireless LAN Advanced Settings Connection Advanced Settings Connection Status	Wireless Settings         Wireless Band       2.4GHz          Mode       Access Point          Network Name (SSID)       3520         SSID Visibility       Enable          Auto Channel Selection       Disable          Channel       7          Channel Width       Auto 20/40 MHz          Authentication       WPA-Enterprise          RADIUS Server Settings       WPA Mode         WPA Mode       AUTO (WPA or WPA2)          Cipher Type       Auto © Group Key Update Interval 1800 (Seconds)         Network Access Protection       Network Access Protection         Network Access Point       RADIUS Server Setting         RADIUS Server       RADIUS Port 1812         RADIUS Server       Accounting Port 1813         Accounting Mode       Disable Accounting Port 1813         Accounting Server       Accounting Port 1813      <

WPA Mode:	When <b>WPA-Enterprise</b> is selected, you must also select a WPA mode from the pull-down menu: <b>AUTO (WPA or WPA2)</b> , <b>WPA2 Only</b> , or <b>WPA Only</b> . WPA and WPA2 use different algorithms. <b>AUTO (WPA or WPA2)</b> allows you to use both WPA and WPA2.
Cipher Type:	When WPA-Enterprise is selected, you must also select a cipher type from the pull-down menu: <b>Auto</b> , <b>AES</b> , or <b>TKIP</b> .
Group Key Update Interval:	Select the interval during which the group key will be valid. <b>1800</b> is the recommended value as a lower interval may reduce data transfer rates.

Network Access Protection:	Enable or disable Microsoft Network Access Protection.	
RADIUS Server:	Enter the IP address of the primary RADIUS server. You must also configure RADIUS port and RADIUS secret. In addition to a primary RADIUS server, the AP allows you to set up an optional backup RADIUS server.	
RADIUS Port:	Enter the RADIUS port.	
RADIUS Secret:	Enter the RADIUS secret.	
Accounting Mode:	Use the drop-down menu to <b>Enable</b> the accounting mode feature.	
Accounting Server:	Enter the IP address of the primary accounting server. You must also configure the accounting port and the accounting secret. In addition, to a primary accounting server, the AP allows you to setup an optional backup accounting server.	
Accounting Port:	Enter the accounting port.	
Accounting Secret:	Enter the accounting secret.	

#### Home > Basic Settings > LAN

D-Link <sup>®</sup>				DAP-3520
🔶 Home 🤺 Maintenanc	e 🔻 💛 System		💋 Logout	🕐 Help
DAP-3520	LAN Settings			
Wireless	Get IP From	Static IP (Manual) 🛛 💌		
Internet Connection	IP Address	192.168.0.50		
	Subnet Mask	255.255.255.0		
	Default Gateway			
				Apply

LAN is short for Local Area Network. This is considered your internal network. These are the IP settings of the LAN interface for the DAP-3520. These settings may be referred to as private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.

Get IP From:	<b>Static IP (Manual)</b> is chosen here. Choose this option if you do not have a DHCP server in your network, or if you wish to assign a static IP address to the DAP-3520. When <b>Dynamic IP (DHCP)</b> is selected, the other fields here will be grayed out. Please allow about 2 minutes for the DHCP client to be functional once this selection is made.
IP Address:	The default IP address is <b>192.168.0.50</b> . Assign a static IP address that is within the IP address range of your network.
Subnet Mask:	Enter the subnet mask. All devices in the network must share the same subnet mask.
Default Gateway:	Enter the IP address of the gateway in your network. If there is a gateway in your network, please enter an IP address within the range of your network.

#### Home > Basic Settings > Internet Connection > Static IP

D-Link <sup>®</sup>			DAP-3520
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DAP-3520	Internet Connectio	n	
Basic Settings     Wireless     LAN     Internet Connection     Advanced Settings     Status	Internet Connection Type Static IP IP Address Subnet Mask ISP Gateway Primary DNS Address Secordary DNS Address MTU Clone MAC Address Enable MAC Source MAC Address	Static IP         192.168.0.50         255.255.255.0         1500         1500         Scan         MAC Address	
			Apply

Select **Static IP** if all WAN IP information is provided to you by your ISP. You will need to enter in the IP address, subnet mask, gateway address, and DNS address(es) provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The DAP-3520 will not accept the IP address if it is not in this format.

Internet	Use the drop-down menu to choose Static IP. The other three
<b>Connection Type:</b>	choices are Dynamic IP (DHCP), PPPoE, and PPTP.
IP Address:	The default IP address is <b>192.168.0.50</b> . Assign a static IP address that is within the IP address range of your network.
Subnet Mask:	Enter the subnet mask. All devices in the network must share the same subnet mask.

ISP Gateway:	Enter the IP address of the gateway in your network. If there is a gateway in your network, please enter an IP address within the range of your network.
Primary DNS Address:	Enter the Primary DNS server IP address assigned by your ISP.
Secondary DNS Address:	Enter the Secondary DNS server IP address. This is optional.
MTU:	You may need to change the Maximum Transmission Unit for optimal performance with your specific ISP. The default MTU is <b>1500</b> .
Enable:	The default MAC address is set to the WAN's physical interface MAC address on the DAP-3520. You can tick this Clone MAC Address Enable check box to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with the MAC address of the DAP-3520. It is not recommended that you change the default MAC address unless required by your ISP.
MAC Source:	Use the drop-down menu to select Auto or Manual.
MAC Address:	Manually enter an appropriate MAC address or click the <b>Scan</b> button to search for a specific MAC address.

# Home > Basic Settings > Internet Connection > Dynamic IP (DHCP)

<b>D-Link</b>				DAP-3520
🏠 Home 🦷 🐔 Maintenance	e 👻 💝 System		💋 Logout	🕐 Help
DAP-3520	Internet Connectio	n		
Wireless	Internet Connection Type	Dynamic IP (DHCP) 💌		
Internet Connection Internet Connection Internet Connection Internet Connection Internet Connection Internet Connection	Host Name Primary DNS Address	DAP-3520		
	Secordary DNS Address			
		1500		
	Enable			
	MAC Source MAC Address	Auto 💌 Scan		
	MAC Address	MA	C Address	
			(	Apply

Select **Dynamic IP (DHCP)** to obtain IP address information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for Cable modem services.

Internet Connection Type:	Use the drop-down menu to choose <b>Dynamic IP (DHCP)</b> . The other three choices are <b>Static IP</b> , <b>PPPoE</b> , and <b>PPTP</b> .
Host Name:	The host name is optional but may be required by some ISPs. The default host name is the model name of the device and may be changed.
Primary DNS Address:	Enter the primary DNS (Domain Name Server) server IP address assigned by your ISP.
Secondary DNS Address:	Enter the secondary DNS (Domain Name Server) server IP address assigned by your ISP, if applicable.

MTU: You may need to change the Maximum Transmission Unit for optimal performance with your specific ISP. The default MTU is 1500.
 Enable: The default MAC address is set to the WAN's physical interface MAC address on the DAP-3520. You can tick this Clone MAC Address Enable check box to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with the MAC address of the DAP-3520. It is not recommended that you change the default MAC address unless required by your ISP.
 MAC Source: Use the drop-down menu to select Auto or Manual.
 MAC Address: Manually enter an appropriate MAC address or click the Scan button to search for a specific MAC address.

#### Home > Basic Settings > Internet Connection > PPPoE

D-Link <sup>®</sup>		DAP-3520
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DAP-3520	Internet Connectio	n
Basic Settings Wireless LAN Advanced Settings Be Status	Internet Connection Type PPPoE PPPoE PPPoE Mode User Name Password Retype Password Service Name IP Address Get DNS from Primary DNS Address Secordary DNS Address Connect Mode Select MTU Clone MAC Address Enable MAC Source MAC Address MAC Address	PPPoE     Dynamic PPPoE     Dynamic PPPoE     Dynamic PPPoE     Enter DNS Manually     Enter DNS Manually     Connect On Demand     1492     Always On     MAC Address     Apply

Choose PPPoE (Point to Point Protocol over Ethernet) if your ISP uses a PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services. Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.

Internet Connection Type:	Use the drop-down menu to choose <b>PPPoE</b> . The other three choices are <b>Static IP</b> , <b>Dynamic IP (DHCP)</b> , and <b>PPTP</b> .
PPPoE Mode:	Select <b>Dynamic PPPoE</b> (most common) or <b>Static PPPoE</b> . Use <b>Static PPPoE</b> if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses.

User Name:	Enter your PPPoE user name.			
Password:	Enter your PPPoE password.			
<b>Retype Password:</b>	Retype your PPPoE password.			
Service Name:	Enter the ISP Service Name (optional).			
IP Address:	Enter the IP address (Static PPPoE only).			
Get DNS from:	Toggle between <b>Receive DNS from ISP</b> and <b>Enter DNS Manually</b> depending on how you will obtain your Domain Name Server information.			
Primary DNS Address:	Enter the primary DNS (Domain Name Server) server IP address assigned by your ISP.			
Secondary DNS Address:	Enter the secondary DNS (Domain Name Server) server IP address assigned by your ISP, if applicable.			
Connect Mode Select:	Select either Always On, Manual, or Connect On Demand.			
MTU:	You may need to change the Maximum Transmission Unit for optimal performance with your specific ISP. The default MTU is <b>1492</b> .			
Enable:	The default MAC address is set to the WAN's physical interface MAC address on the DAP-3520. You can tick this Clone MAC Address Enable check box to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with the MAC address of the DAP-3520. It is not recommended that you change the default MAC address unless required by your ISP.			
MAC Source:	Use the drop-down menu to select Auto or Manual.			
MAC Address:	Manually enter an appropriate MAC address or click the <b>Scan</b> button to search for a specific MAC address			

#### Home > Basic Settings > Internet Connection > PPTP

D-Link		DAP-3520
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DAP-3520	Internet Connectio	on
Desk: SetUrings Wreless LAN Advanced Settings Status	Internet Connection Type PPTP PPTP Mode IP Address Subnet Mask Gateway DNS Address Server IP / Name PPTP Account PPTP Password PPTP Retype Password MTU Clone MAC Address Enable MAC Source MAC Address MAC Address	PPTP     Dynamic IP (DHCP)     Dynamic IP (DHCP)     Image: Comparison of the second

Choose PPTP (Point-to-Point-Tunneling Protocol) if your ISP uses a PPTP connection. Your ISP will provide you with a username and password. This option is typically used for DSL services.

Internet Connection Type:	Use the drop-down menu to choose <b>PPTP</b> . The other three choices are <b>Static IP</b> , <b>Dynamic IP (DHCP)</b> , and <b>PPPoE</b> .
PPTP Mode:	Select <b>Dynamic IP (DHCP)</b> (most common) or <b>Static IP</b> . Use <b>Static IP</b> if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses.

IP Address:	Enter the IP address (Static IP only).			
Subnet Mask:	Enter the subnet mask (Static IP only).			
Gateway:	Enter the gateway IP address provided by your ISP.			
DNS Address:	The DNS server information will be supplied by your ISP (Internet Service Provider).			
Server IP/Name:	Enter the server IP provided by your ISP (optional).			
PPTP Acount:	Enter your PPTP account name.			
<b>PPTP Password:</b>	Enter your PPTP password.			
PPTP Retype Password:	Retype your PPTP password.			
MTU:	You may need to change the Maximum Transmission Unit for optimal performance with your specific ISP. The default MTU is <b>1400</b> .			
Enable:	The default MAC address is set to the WAN's physical interface MAC address on the DAP-3520. You can tick this Clone MAC Address Enable check box to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with the MAC address of the DAP-3520. It is not recommended that you change the default MAC address unless required by your ISP.			
MAC Source:	Use the drop-down menu to select Auto or Manual.			
MAC Address:	Manually enter an appropriate MAC address or click the <b>Scan</b> button to search for a specific MAC address.			

#### Home > Advanced Settings > Performance

<b>D-Link</b>		DAP-3520	
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DAP-3520	Performance Settings	\$	
Basic Sectings     Advanced Settings     Berformance     Muth.SSID	Wireless	On 👻	
	Wireless Mode	Mixed 802.11n, 802.11g and 802.11b 💌	
	Data Rate	Best(Up to 300) 💽 (Mbps)	
	Beacon Interval (25-500)		
	DTIM Interval (1-15)		
Enters	Transmit Power	100% 💌	
⊡∽jj Router Settings ⊡⊂istatus	WMM (Wi-Fi Multimedia)	Enable 💌	
	Ack Time Out (2.4GHz, 64~200)	150 (µs)	
	Short GI	Enable 💌	
	IGMP Snooping	Disable 💌	
	Link Integrity	Disable 💌	
	Connection Limit	Disable 💌	
	User Limit (0 - 64)	20	
	Network Utilization		
		Annhy	
		Арргу	
Wireless	Use the pull-down me	enu to turn the wireless function <b>On</b> or <b>Off</b> .	
Wireless Mode:	The different combir	nation of clients that can be supported inc	
	Mixed 802.11n, 802.	11g and 802.11b, Mixed 802.11g and 802.	
	and 802.11n Only in	the 2.4 GHz band and <b>Mixed 802.11n, 802.</b>	
	802.11a only, and 8	<b>302.11n Only</b> in the 5 GHz band. Please	
that when backwards compatibility is enabled for legacy (80			
	g/b) clients, degrada	tion of 802.11n (draft) wireless performant	
	expected.		
Data Rate*:	Indicate the base tra	unsfer rate of wireless adapters on the wire	
	LAN. The AP will ac	djust the base transfer rate depending on	
	base rate of the conr	nected device. If there are obstacles or inte	
	ence, the AP will step	o down the rate. This option is enabled in <b>M</b>	
	802.11g and 802.11	b mode (for 2.4 GHz) and 802.11a only m	
	(for 5 GHz). The cho	vices available are Best (Up to 54), 54, 48	
	24, 18, 12, 9, 6 for 5	GHz and Best (Up to 54), 54, 48, 36, 24	
	<b>12, 9, 6, 11, 5.5, 2</b> o	r <b>1</b> for 2.4 GHz.	
*Maximum wireless sign	al rate derived from IEEE Standa	ard 802.11 specifications. Actual data throughout may yany N	

\*Maximum wireless signal rate derived from IEEE Standard 802.11 specifications. Actual data throughput may vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead can lower actual data throughout rate.

Beacon Interval (25-500):	Beacons are packets sent by an access point to synchronize a wireless network. Specify a value in milliseconds. The default ( <b>100</b> ) is recommended. Setting a higher beacon interval can help to save the power of wireless clients, while setting a lower one can help a wireless client connect to an access point faster.
DTIM Interval (1-15):	Select a Delivery Traffic Indication Message setting between 1 and 15. 1 is the default setting. DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.
Transmit Power:	This setting determines the power level of the wireless transmission. Transmitting power can be adjusted to eliminate overlapping of wireless area coverage between two access points where interference is a major concern. For example, if wireless coverage is intended for half of the area, then select <b>50%</b> as the option. Use the pull-down menu to select <b>100%</b> , <b>50%</b> , <b>25%</b> , or <b>12.5%</b> .
WMM (Wi-Fi Multimedia):	WMM stands for Wi-Fi Multimedia. Enabling this feature will improve the user experience for audio and video applications over a Wi-Fi network.
Ack Time Out (2.4 GHZ, 48~200) or Ack Time Out (5 GHZ, 25~200):	To effectively optimize throughput over long distance links enter a value for Acknowledgement Time Out between <b>25</b> and <b>200</b> microseconds for 5 GHz or from <b>48</b> to <b>200</b> microseconds in the 2.4 GHz in the field provided.
Short GI:	Select <b>Enable</b> or <b>Disable</b> . Enabling a short guard interval can increase throughput. However, be aware that it can also increase the error rate in some installations due to increased sensitivity to radio-frequency installations.
IGMP Snooping:	Select <b>Enable</b> or <b>Disable</b> . Internet Group Management Protocol allows the AP to recognize IGMP queries and reports sent between routers and an IGMP host (wireless STA). When IGMP snooping is enabled, the AP will forward multicast packets to an IGMP host based on IGMP messages passing through the AP.
Link Integrity:	Select <b>Enable</b> or <b>Disable</b> . If the Ethernet connection between the LAN and the AP is disconnected, enabling this feature will cause the wireless segment associated with the AP to be disassociated from the AP.

Connection Limit:	Select <b>Enable</b> or <b>Disable</b> . This is an option for load balancing. This determines whether to limit the number of users accessing this device. The exact number is entered in the User Limit field below. This feature allows the user to share the wireless network traffic and the client using multiple APs. If this function is enabled, when the number of users exceeds this value, the DAP-3520 will not allow clients to associate with the AP.
User Limit (0 - 64):	Set the maximum amount of users that are allowed access (0-64 users).To use this feature, the Connection Limit above must be enabled. For most users, a limit of 10 is recommended. The default setting is 20.
Nework Utilization:	Select a utilization percentage between <b>180</b> , <b>60</b> , <b>40</b> , <b>20</b> , or <b>0</b> . When this network utilization threshold is reached, the device will pause one minute to allow for network congestion to dissipate.

#### Home > Advanced Settings > Multi-SSID

D-Link	DAP-3520
🔶 Home 🏾 🅉 Maintenance	🝷 🗢 System 🛛 🖉 Logout 🕡 Help
DAP-3520 Advanced Settings Advanced Settings Advanced Settings Multi-SSID VLAN VLAN Comparison Schedule Cos DHCP Server Filters Router Settings Status	Multi-SSID Settings
	Enable Multi-SSID          Wireless Settings         Band       2.4 GH2 ♥         Index       Primary SSID ♥         SSID       3520         SSID       3520         SSID Visibility       Enable ♥         Security       Open System ♥         Priority       O♥         WMM (Wi-Fi Multimedia)       Enable ♥         Key Settings       Enable ●         Encryption       Disable ● Enable         Key Type       HEX ♥       Key Size 64 Bits ♥         Key Index(1~4)       1 ♥         Network Key
	Index SSID Band Encryption Delete Primary SSID 3520 2.4 GHz None
	Apply

The device supports up to eight multiple Service Set Identifiers. You can set the Primary SSID in the **Basic** > **Wireless** section. The SSID's factory default setting is **dlink**. The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.

Enable Multi-SSID:Check to enable support for multiple SSIDs.Band:This read-only value is the current band setting.Index:You can select up to seven multi-SSIDs. With the Primary SSID, you have a total of eight multi-SSIDs.

SSID:	Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is <b>dlink</b> . The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.
SSID Visibility:	<b>Enable</b> or <b>Disable</b> SSID visibility. Enabling this feature broadcasts the SSID across the network, thus making it visible to all network users.
Security:	The Multi-SSID security can be <b>Open System</b> , <b>WPA-Persona</b> l, or <b>WPA-Enterprise</b> . For a detailed description of the Open System parameters please go to page 26. For a detailed description of the WPA-Personal parameters please go to page 27. For a detailed description of the WPA-Enterprise parameters please go to pages 28-29.
Priority:	Select the desired priority from the drop-down menu.
WMM (Wi-Fi Multimedia):	Select Enable or Disable.
Encryption:	When you select <b>Open System</b> , toggle between <b>Enable</b> and <b>Disable</b> . If <b>Enable</b> is selected, the Key Type, Key Size, Key Index (1~4), Network Key, and Confirm Keys must also be configured.
Кеу Туре:	Select HEX or ASCII.
Key Size:	Select 64 Bits or 128 Bits.
Key Index (1~4):	Select from the 1st to the 4th key to be set as the active key.
Network Key:	Enter a network key, otherwise known as a password.
Confirm Key:	Retype the network key.
WPA Mode:	When you select either <b>WPA-Personal</b> or <b>WPA-Enterprise</b> , you must also choose a WPA mode from the pull-down menu: <b>AUTO</b> ( <b>WPA or WPA2</b> ), <b>WPA2 Only</b> , or <b>WPA Only</b> . WPA and WPA2 use different algorithms. <b>AUTO</b> ( <b>WPA or WPA2</b> ) allows you to use both WPA and WPA2. In addition, you must configure Cipher Type, and Group Key Update Interval.
Cipher Type:	Select Auto, AES, or TKIP from the pull-down menu.
Group Key Update Interval:	Select the interval during which the group key will be valid. The default value of <b>1800</b> seconds is recommended.
PassPhrase:	When you select <b>WPA-Personal</b> , please enter a PassPhrase in the corresponding field.

Confirm PassPhrase:	When you select <b>WPA-Personal</b> , please re-enter the PassPhrase entered in the previous item in the corresponding field.
RADIUS Server:	When you select <b>WPA-Enterprise</b> , enter the IP address of the primary RADIUS server. You must also configure RADIUS port and RADIUS secret. In addition to a primary RADIUS server, the AP allows you to set up an optional backup RADIUS server.
RADIUS Port:	Enter the RADIUS port.
RADIUS Secret:	Enter the RADIUS secret.
Accounting Mode:	Use the drop-down menu to <b>Enable</b> the accounting mode feature.
Accounting Server:	When you select <b>WPA-Enterprise</b> , enter the IP address of the primary accounting server. You must also configure the accounting port and the accounting secret. In addition, to a primary accounting server, the AP allows you to setup an optional backup accounting server.
Accounting Port:	Enter the accounting port.
Accounting Secret:	Enter the accounting secret.

#### Home > Advanced Settings > VLAN > VLAN List

D-Link				DAP-3520
🔶 Home 🤺 Maintenance	e 👻 💝 System		🛛 🖉 Logout	🕐 Help
DAP-3520	VLAN Settings			
Advanced Settings	VLAN Status :	O Enable		
VLAN	VLAN List Port List	Add/Edit VLAN	PVID Setting	
Schedule	VID VLAN Name	Untag VLAN Ports Momt, LAN, Primary, S-	Tag VLAN Ports 1.	Edit Delete
Gos ⊡∭ Gos DHCP Server ⊕∭ Filters	1 default	S-2, S-3, S-4, S-5, S-6, S-7, W-1, W-2, W-3, W 4, W-5, W-6, W-7, W-8	-, /- 3	2 11
⊕- <b>Status</b>				

The DAP-3520 supports VLANs. VLANs can be created with a Name and VID. Mgmt (TCP stack), LAN, Primary/Multiple SSID, and WDS connection can be assigned to VLANs as they are physical ports. Any packet which enters the DAP-3520 without a VLAN tag will have a VLAN tag inserted with a PVID.

The VLAN List tab displays the current VLANs.

VLAN Status: Use the radio button to toggle to Enable. Next, go to the Add/Edit VLAN tab to add or modify an item on the VLAN List tab.

#### Home > Advanced Settings > VLAN > Port List

D-Link			DAP-3520
🔶 Home 🤺 Maintenanc	e 👻 😌 System	💋 Logout	🕐 Help
DAP-3520 DAP-3520 Advanced Settings Advanced Settings Performance Multi-SSID	VLAN Settings		
	VLAN Status : ⊙ Disable O Enable VLAN Mode : Static		
VLAN	VLAN List Port List Add/Edit VLAN	PVID Setting	
Schedule	Port Name Tag VID	Untag VID	PVID
	Ngmt	1	1
E Filters	3520	1	1
🗄 🍯 Router Settings	dlink	1	1
⊞~ 📁 Status	dlink	1	1
	W-1	1	1
	W-2	1	1
	W-3	1	1
	W-4	1	1
	W-5	1	1
	W-6	1	1
	W-7	1	1
	W-8	1	1
	L		

The Port List tab displays the current ports. If you want to configure the guest and internal networks on a Virtual LAN (VLAN), the switch and DHCP server you are using must also support VLANs. As a prerequisite step, configure a port on the switch for handling VLAN tagged packets as described in the IEEE 802.1Q standard.

VLAN Status:	Use the radio button to toggle to Enable. Next, go to the Add/Edit VLAN tab to add or modify an item on the VLAN List tab.
Port Name:	The name of the port is displayed in this column.
Tag VID:	The Tagged VID is displayed in this column.
Untag VID:	The Untagged VID is displayed in this column.
PVID:	The Port VLAN Identifier is displayed in this column.

#### Home > Advanced Settings > VLAN > Add/Edit VLAN

D-Link <sup>®</sup>		DAP-3520
🔶 Home 🦷 🛠 Maintenance	👻 👙 System 🛛 🖉 Logout	🕐 Help
DAP-3520	VLAN Settings	
Multi-SSID	VLAN Mode: Static VLAN List Port List Add/Edit VLAN PVID Setting	
	VLAN ID (VID) Add	
<ul> <li>P → P DHCP Server</li> <li>P → P → P → P → P → P → P → P → P → P →</li></ul>	Port Select All Mgmt LAN Untag All Tag All	
	Not Member All MSSID Port Select All Primary S-1 S-2 S-3 S-4 S-5	S-6 S-7
	Tag     All     O     O       Not Member     All     O     O	
	WDS Port         Select All         W-1         W-2         W-3         W-4         W-5         W-6           Untag         All         Image         Image <td>W-7 W-8</td>	W-7 W-8
	Not Member All OOOOO	Apply

The Add/Edit VLAN tab is used to configure VLANs. Once you have made the desired changes, click the **Apply** button to let your changes take effect.

VLAN Status:	Use the radio button to toggle to Enable.
VLAN ID (VID):	Provide a number between 1 and 4094 for the Internal VLAN.
VLAN Name:	Enter the VLAN to add or modify.

#### Home > Advanced Settings > VLAN > PVID Setting

D-Link		DAP-3520
🔶 Home 🦷 🌠 Maintenance	e 👻 🤤 System 🛛 🖉 Logout	🕐 Help
DAP-3520 Basic Settings Advanced Settings Muti-SSID VLAN Schedule GoS DHCP Server Filters Status Status	VLAN Settings         VLAN Status : ① Disable ② Enable         VLAN Mode : Static         VLAN List       Port List         Add/Edit VLAN       PVID Setting         PVID Auto Assign Status ③ Disable ③ Enable         Port       Mgmt         LAN         PVID       1         1       1         MSSID Port       Primary         S-1       S-2       S-3         S-4       S-5       S-6         PVID       1       1         WDS Port       Primary       S-1       S-2       S-3         WDS Port       Primary       S-1       S-2       S-3       S-4       S-5       S-6         PVID       1       1       1       1       1       1       1	S-7 1 W-8 1 Apply

The PVID Setting tab is used to enable/disable the Port VLAN Identifier Auto Assign Status as well as to configure various types of PVID settings. Click the **Apply** button to let your changes take effect.

**VLAN Status:** Use the radio button to toggle to Enable.

PVID Auto Assign Status: Use the radio button to toggle PVID auto assign status to Enable.

#### Home > Advanced Settings > Intrusion

<b>D-Link</b>			DAP-3520
🔶 Home 🤺 Maintenand	e 👻 😂 System	💋 Logout	🕐 Help
DAP-3520	Wireless Intrusion Protection	BSSID     Last See       Set as Rogue     Set as New       Access Points     Access Points	n Status

The Wireless Intrusion Protection window is used to set APs as **All**, **Valid**, **Neighborhood**, **Rogue**, and **New**. Click the **Apply** button to let your changes take effect.

AP List: The choices include All, Valid, Neighbor, Rogue, and New.

**Detect** Click this button to initiate a scan of the network.

#### Home > Advanced Settings > Schedule

<b>D-Link</b>		DAP-3520
💠 Home 🤺 Maintenanc	e 👻 👙 System	💋 Logout 🛛 🛞 Help
DAP-3520	Wireless Sche	dule Settings
E ∭ Basic Settings	Wireless Schedule	Disable 💌
Performance Multi-SSID	Add Schedule Ru	e
	Name	
Schedule	Day(s)	◯ All Week
DHCP Server		Sun Mon Tue Wed Thu Fri Sat
⊕	All Day(s)	(hourminute 24 hour time)
⊡ · j Status	End Time	(hour minute, 24 hour time)
	Wireless	
		Add Clear
	Schedule Rule Lis	st
	Name	Day(s) Time Frame Wireless Edit Delete
r		Apply

The Wireless Schedule Settings window is used to add and modify scheduling rules on the device. Click the **Apply** button to let your changes take effect.

Wireless Schedule:	Use the pull-down menu to enable the device's scheduling fea- ture.
Name:	Enter a name for the new scheduling rule in the field provided.
Day(s):	Toggle the radio button between All Week and Select Days(s). If the second option is selected, check the specific days you want the rule to be effective on.
All Days(s):	Check this box to have your settings apply 24 hours a day.
Wireless:	Toggle the pull-down menu between <b>Off</b> and <b>On</b> .