

D-Link[®]

WIRELESS

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Package Contents

- D-Link DAP-1555 Wireless N Dualband MediaBridge
- 2 Detachable Antennas
- Power Adapter
- CAT5 Ethernet Cable
- Mounting Kit
- Rubber Feet
- CD-ROM with Installation Wizard, User Manual, and Special Offers

Note: Using a power supply with a different voltage rating than the one included with the DAP-1555 will cause damage and void the warranty for this product.



System Requirements

- Computers with Windows[®], Macintosh[®], or Linux-based operating systems with an installed Ethernet adapter
- Internet Explorer Version 6.0, Mozilla 1.7.12 (5.0), or Firefox 1.5 and above (for configuration)

Introduction

TOTAL PERFORMANCE

Combines award winning access point features and Draft 802.11n wireless technology to provide the best wireless performance

TOTAL SECURITY

The most complete set of security features including WPA2 and MAC Address Control to protect your network against outside intruders

TOTAL COVERAGE

Provides greater wireless signal rates even at farther distances for best-in-class Whole Home Coverage.

ULTIMATE PERFORMANCE

The D-Link Xtreme N[™] MediaBridge (DAP-1555) is a draft 802.11n compliant device that delivers real world performance of up to 650% faster than an 802.11g wireless connection (also faster than a 100Mbps wired Ethernet connection). Create a secure wireless network to share photos, files, music, video, printers, and network storage throughout your home. Connect the Xtreme N[™] MediaBridge to router and share your high-speed Internet access with everyone on the network. In addition, this MediaBridge includes a Quality of Service (QoS) engine that keeps digital phone calls (VoIP) and online gaming smooth and responsive, providing a better Internet experience.

EXTENDED WHOLE HOME COVERAGE

Powered by Xtreme N[™] technology, this high performance MediaBridge provides superior Whole Home Coverage while reducing dead spots. The Xtreme N[™] MediaBridge is designed for use in bigger homes and for users who demand higher performance networking. Add a Xtreme N[™] notebook or desktop adapter and stay connected to your network from virtually anywhere in your home.

TOTAL NETWORK SECURITY

The Xtreme N[™] MediaBridge supports all of the latest wireless security features to prevent unauthorized access, be it from over the wireless network or from the Internet. Support for WPA and WEP standards ensure that you'll be able to use the best possible encryption method, regardless of your client devices.

* Maximum wireless signal rate derived from IEEE Standard 802.11g, 802.11a and Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

Features

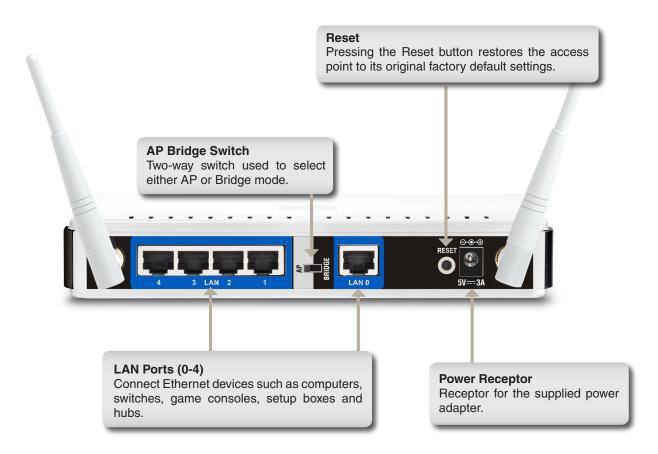
- Faster Wireless Networking The DAP-1555 provides up to 300Mbps* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio. The performance of this 802.11n wireless access point gives you the freedom of wireless networking at speeds 650% faster than 802.11g.
- Compatible with 802.11a, 802.11b and 802.11g Devices The DAP-1555 is still fully compatible with the IEEE 802.11a/b/g standard, so it can connect with existing 802.11a/b/g PCI, USB and Cardbus adapters.
- Advanced Firewall Features The Web-based user interface displays advanced network management features including:

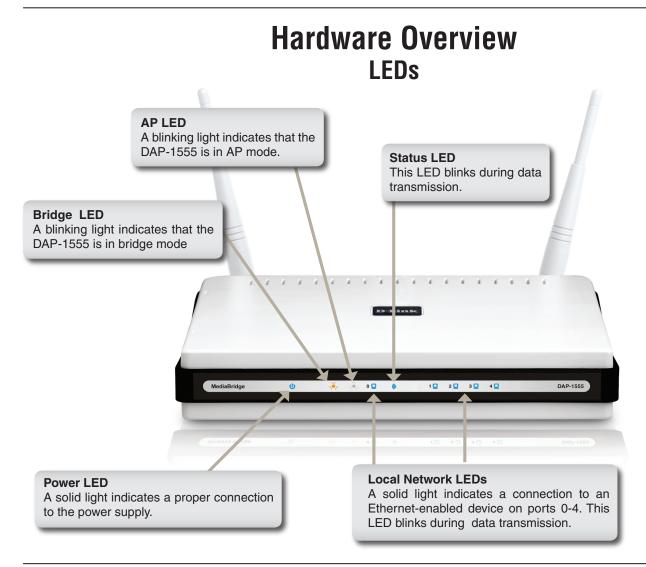
Content Filtering - Easily applied content filtering based on MAC Address.

• User-friendly Setup Wizard - Through its easy-to-use Web-based user interface, the DAP-1555 lets you control what information is accessible to those on the wireless network, whether from the Internet or from your company's server. Configure your access point to your specific settings within minutes.

^{*} Maximum wireless signal rate derived from IEEE Standard 802.11g, 802.11a and Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

Hardware Overview Connections





Installation

This section will walk you through the installation process. Placement of the DAP-1555 is very important. Do not place the DAP-1555 in an enclosed area such as a closet, cabinet, or in the attic or garage.

Before you Begin

Please configure the MediaBridge with the computer that was last connected directly to your modem. Also, you can only use the Ethernet port on your modem. If you were using the USB connection before using the MediaBridge, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the Internet port on the MediaBridge, and then turn the modem back on. In some cases, you may need to call your ISP to change connection types (USB to Ethernet).

If you have DSL and are connecting via PPPoE, make sure you disable or uninstall any PPPoE software such as WinPoet, Broadjump, or Enternet 300 from your computer or you will not be able to connect to the Internet.

Wireless Installation Considerations

The D-Link wireless access point lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. 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 D-Link access point and other network devices to a minimum each wall or ceiling can reduce your adapter's range from 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 (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
- **3**. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless access points, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
- **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 2.4GHz 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 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone in not in use.

Section 2 - Installation

AP/BRIDGE Mode

Depending on how you want to use your DAP-1555 will determine which mode you use on the DAP-1555. This section will help you figure out which setting works with your setup.

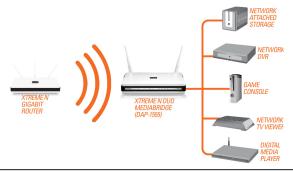
AP Mode

If you already have a wired or wireless router, and want to add a MediaBand (5GHz wireless), to your network, you will need to move the switch on the back panel of the DAP-1555 to "AP".



Bridge Mode

If you want to wirelessly connect multiple Ethernet enabled devices such as game consoles, media players, or network attached storage devices you will need to move the switch on the back panel of the DAP-1555 to "BRIDGE".



Section 2 - Installation

Create a Full MediaBand (5GHz wireless) Network

If you have two DAP-1555 devices and want to create a wireless network with full MediaBand technology you will need to connect one MediaBridge to your router and move the switch on the back panel to "AP". The second MediaBridge will need to be placed next to your Ethernet-enabled devices and you will need to move the switch on the back panel to "BRIDGE".



Configuration for AP Mode

This section will show you how to configure your new D-Link wireless access point using the web-based configuration utility.

Web-based Configuration Utility

To access the configuration utility, open a web-browser such as Internet Explorer and enter the friendly address for AP mode (dlinkap).



Select **Admin** from the drop-down menu and then enter your password. Leave the password blank by default.

If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.

Link				
				_
LOGIN				
Log in to	the access point: User Name :	(ALCON)		
	Password :		Log In	

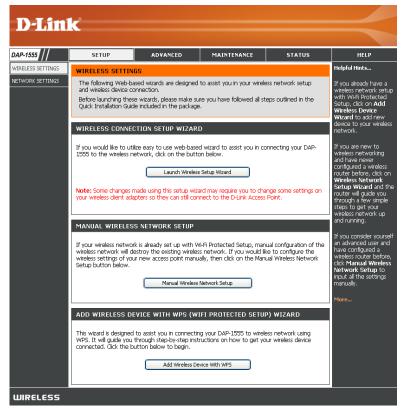
13

Setup Wizard

Click Launch Wireless Setup Wizard to quickly configure your access point.

To setup your wireless network click **Add Wireless Device With WPS** and skip to page 22.

If you want to enter your settings without running the wizard, click **Manual Wireless Network Setup** and skip to page 24.



Wireless Setup Wizard

This Wizard is designed to assist you in connecting you wireless device to your access point. It will guide you through step-by-step instructions on how to get your wireless device connected.

Product Page: DAP-1555

Enter the Device Name of the AP and click **Next** to continue. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.

lf	you	1	want	to	change	the	admin	account	password,
er	nter	а	new	ра	ssword a	and	click Ne	ext.	

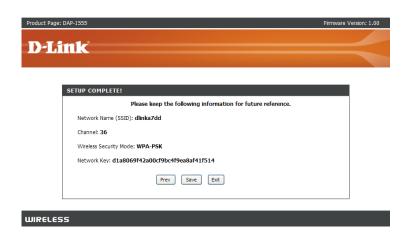


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Firmware Version: 1.00

Select Auto as the configuration method only if your wireless device supports Wi-Fi Protected Setup.	Product Page: DAP-1555 Firmware Version: 1.00 D-Link	
Skip to page 17 for Manual configuration.		
Click Next to continue.	SELECT CONFIGURATION METHOD Please select one of the following configuration methods and click next to continue. Auto - Select this option if your wireless device supports WPS (Wi-Fi Protected Setup) Manual Select this option if you want to setup your network manually Prev Next Exit 	
	WIRELESS	

Click **Save** to save your network settings.

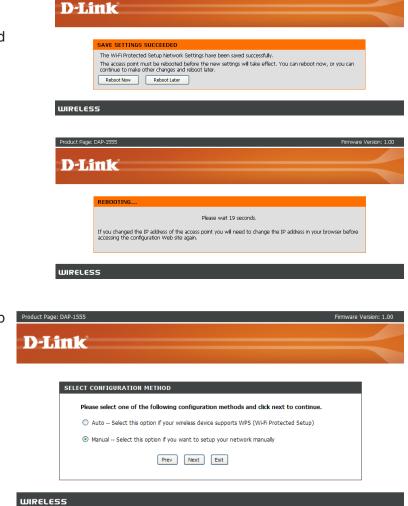


In order for your network settings to take effect you must reboot the access point by clicking **Reboot Now**.

Choose **Reboot Later** to make other changes and reboot later.

Select Man	ual	as	the	configuration	method	to	setup
your networ	'k m	anı	ually				

Click Next to continue.



Product Page: DAP-1555

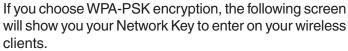
D-Link DAP-1555 User Manual

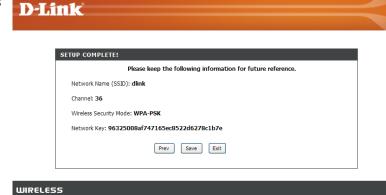
Firmware Version: 1.00

Enter a network name and choose Automatically assign Product Page: DAP-1555 a network key.

To Manually assign a network key, skip to page 19.

Click Next to continue.





To prevent outsiders from accessing your network, the AP will automatically assign a security key (also called WEP or WPA key) to your network.

Use WPA encryption instead of WEP (WPA is stronger than WEP and all D-Link wireless client adapters support WPA). Prev Next Exit

D-Link

WIRELESS

Product Page: DAP-1555

WELCOME TO THE D-LINK WIRELESS SETUP WIZARD

Use this option if your prefer to create your own key.

Give your network a name, using up to 32 characters. Network Name (SSID) : dlink Automatically assign a network key (Recommended)

Manually assign a network key

Firmware Version: 1.00

Firmware Version: 1.00

18

Click Save to finish the Setup Wizard.

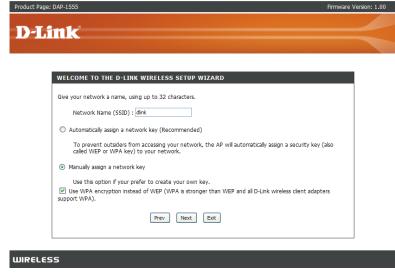
If you choose WEP encryption, the following screen will show you your Network Key to enter on your wireless clients.

Click **Save** to finish the Setup Wizard.

IP COMPLETE!
Please keep the following information for future reference.
etwork Name (SSID): dlink
hannel: 36
Vireless Security Mode: WEP
letwork Key: 6a1f78a8a508c586328b9e0550
Prev Save Exit

Choose Manually assign a network key to create you own key.

Click Next to continue.



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Click Next to continue.

For **WPA** encryption, enter a Network Key between 8 and 63 characters long or enter exactly 64 characters using 0-9 and A-F.



If you select **WPA** encryption, the following screen will show you your network key to enter on your wireless clients.

Click **Save** to finish the Setup Wizard.



For **WEP** encryption, enter a Network Key exactly 5 or 13 characters long or exactly 10 or 26 characters using 0-9 and A-F.

Click **Next** to continue.

uct Page: DAP-1555	Firmware Versio
-Link	
WELCOME TO THE D-LINK WIRELESS SETUP WIZARD	
The WEP (Wired Equivalent Privacy) key must meet one of the following guidelines :	
- Exactly 5 or 13 characters - Exactly 10 or 26 characters using 0-9 and A-F	
A longer WEP key is more secure than a short one	
Network Key : dink	
Prev Next Exit	

If you select **WEP** encryption, the following screen will show you your network key to enter on your wireless clients.

Click **Save** to finish the Setup Wizard.

uct Page: DAP-1555	Firmware Version: 1.0
)-Link	
SETUP COMPLETE!	
Please keep the following information for future reference.	
Network Name (SSID): dlink	
Channel: 36	
Wireless Security Mode: WEP	
Network Key: dlink	
Prev Save Exit	

Add Wireless Device With WPS

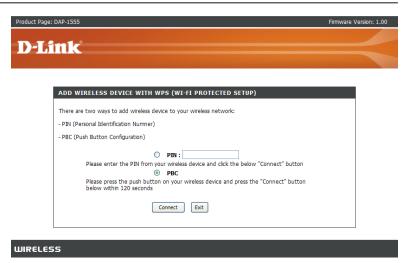
This Wizard is designed to assist you in your wireless network setup. It will guide you through step-by-step instructions on how to set up your wireless network and how to make it secure.

Select PIN to use your PIN number from your wireless	Product Page: DAP-1555	Firmware Version: 1.00
device to connect to your network.	D-Link	
For PBC configuration, skip to page 23.		
Click Connect to continue.	ADD WIRELESS DEVICE WITH WPS (WI-FI PROTECTED SETUP) There are two ways to add wireless device to your wireless network: - PIN (Personal Identification Nummer) - PBC (Push Button Configuration) © PIN : [24681353 Please enter the PIN from your wireless device and click the below "Connect" button © PBC Please press the push button on your wireless device and press the "Connect" button below within 120 seconds Connect Exit	
	WIRELESS	
Start WPS on the wireless device you are adding to you wireless network to complete the setup.	Product Page: DAP-1555	Firmware Version: 1.00
	USING PIN NUMBER Please start WPS on the wireless device you are adding to your network within 118 seconds	
	WIRELESS	

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Click **Connect** to continue.

Select **PBC** to use the Push Button Configuration to connect to your network.



Press down the Push Button on the wireless device you are adding to your network to complete the setup.



Manual Configuration Wireless Settings

- Wireless Mode: The current wireless mode is set to Access Point, it will create a wireless infrastructure network.
- Enable Wireless: Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions.
- Wireless Network When you are browsing for available wireless Name: networks, this is the name that will appear in the list (unless Visibility Status is set to Invisible, see below). This name is also referred to as the SSID. For security purposes, it is highly recommended to change from the pre-configured network name.
 - **802.11 Band:** Operating frequency band. Choose 2.4GHz for visibility to legacy devices and for longer range. Choose 5GHz for least interference.
 - 802.11 Mode: If you choose 2.4GHz band, than select one of the following:

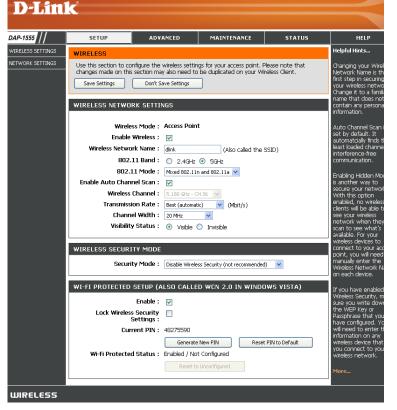
802.11b Only - Select if all of your wireless clients are 802.11b.

802.11g Only - Select if all of your wireless clients are 802.11g.

802.11n Only - Select only if all of your wireless clients are 802.11n.

Mixed 802.11g and 802.11b - Select if you are using both 802.11b and 802.11g wireless clients.

Mixed 802.11n and 802.11g - Select if you are using both 802.11n and 802.11g wireless clients.



Mixed 802.11n, 802.11b, and 802.11g - Select if you are using a mix of 802.11n, 11g, and 11b wireless clients. If you choose 5GHz band, then select either **802.11a only**, **802.11n only**, or **Mixed 802.11n and 802.11a**.

Enable Auto The Auto Channel Scan setting can be selected to allow the DAP-1555 to choose the channel with the least amount of Channel Scan: interference.

- Wireless Channel: Indicates the channel setting for the DAP-1555. By default the channel is set to 6 for 2.4GHz band. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you enable Auto Channel Scan, this option will be greyed out.
- Transmission Rate: Select the transmit rate. It is strongly suggested to select Best (Auto) for best performance.

Channel Width: Select the Channel Width:
 Auto 20/40 - Select if you are using both 802.11n and non-802.11n wireless devices.
 20MHz - Select if you are not using any 802.11n wireless clients.

- Visibility Status: Select Invisible if you do not want the SSID of your wireless network to be broadcasted by the DAP-1555. If Invisible is selected, the SSID of the DAP-1555 will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DAP-1555 in order to connect to it.
- Security Mode: Refer to page 65 for more information regarding the wireless security.

Enable: Enable the Wi-Fi Protected Setup feature.

Lock Wireless Locking the wireless security settings prevents the settings from being changed by any new external registar using its PIN. Security Settings: Devices can still be added to the wireless network using Wi-Fi Protected Setup. It is still possible to change wireless network settings with Manual Wireless Network Setup, Wireless Network Setup Wizard, or an existing external WLAN Manager Registar.

Current PIN: Shows the current value of the access point's PIN.

Generate New PIN: Create a random number that is a valid PIN. This becomes the access point's PIN. You can then copy this PIN to the user interface of the registrar.

Reset PIN to Restore the default PIN of the access point. Default:

Reset to Resets Wi-Fi Protected Status to Not Configured. Vista WPS icon will only be displayed when the Wi-Fi Protected Status is **Unconfigured**: Not Configured.

Network Settings DHCP

This section will allow you to change the local network settings of the access point and to configure the DHCP settings.

Device Name: Enter the Device Name of the AP. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.



Static IP

Select Static IP Address if all the Internet port's 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 Access point will not accept the IP address if it is not in this format.

- Access Point IP Enter the IP address of the access point. The default IP address is Address: 192.168.0.50. If you change the IP address, once you click Apply, you will need to enter the new IP address in your browser to get back into the configuration utility.
- Subnet Mask: Enter the Subnet Mask assigned by your ISP.
- Default Gateway: Enter the Gateway assigned by your ISP.
 - **Device Name:** Enter the Device Name of the AP. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.



Advanced MAC Address Filter

The MAC address filter section can be used to filter network access by machines based on the unique MAC addresses of their network adapter(s). It is most useful to prevent unauthorized wireless devices from connecting to your network. A MAC address is a unique ID assigned by the manufacturer of the network adapter.

Configure MAC When "OFF" is selected, MAC addresses are not **Filtering:** used to control network access. When "ALLOW" is selected, only computers with MAC addresses listed in the MAC Address List are granted network access. When "DENY" is selected, any computer with a MAC address listed in the MAC Address List is refused access to the network.

D-Link					
DAP-1555 //	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
MAC ADDRESS FILTER ADVANCED WIRELESS WISH	based on the MAC Ac	ass Controller) Address filt Idress of the network ada the network adapter. This Don't Save Settings	er option is used to contro toter. A MAC address is a u feature can be configurer	inique ID assigned by	Helpful Hints Create a list of M addresses that y would either like allow or deny acc your network. Computers that I obtained an IP ac from the access obtained an IP ac from the access bHCP server will the DHCP client i the the Clean bit select a device the address to the lis click the clean bit click the clean bit click the clean bit address from the Filtering list.
WIRELESS					

Advanced Wireless

Transmit Power: Set the transmit power of the antennas.

- **Beacon Period:** Beacons are packets sent by an Access Point to synchronize a wireless network. Specify a value. 100 is the default setting and is recommended.
- **RTS Threshold:** This value should remain at its default setting of 2346. If inconsistent data flow is a problem, only a minor modification should be made.
- Fragmentation The fragmentation threshold, which is specified Threshold: in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte setting will be fragmented before transmission. 2346 is the default setting.
- **DTIM Interval:** (Delivery Traffic Indication Message) 1 is the default setting. A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

DAP-1555	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
AC ADDRESS FILTER	ADVANCED WIRELESS If you are not familiar with these Advanced Wireless settings, please read the help section before attempting to modify these settings. Save Settings Don't Save Settings				Helpful Hints
ADVANCED WIRELESS					It is recommended the you leave these parameters at their default values. Adjusting them could limit the performance of your wireless network.
	ADVANCED WIRELESS SETTINGS				
	Transmit	t Power : 🛛 High 🛛 🔽			
	Beacon	Period: 100	(201000)		Use 802.11d only fi countries where it is
	RTS Th	reshold: 2346	(02347)		required.
	Fragmentation Th	reshold: 2346	(2562346)		Enabling WMM can help control latency
		interval : 1	(1255)		and jitter when
		Enable : 📃			transmitting multime content over a wirel
		olation : 📃			connection.
					More
	WMM	iolation : 📃 Enable : 🔽 Kort GI : 🔽			

- 802.11d Enable*: This enables 802.11d operation. 802.11d is a wireless specification developed to allow implementation of wireless networks in countries that cannot use the 802.11 standard. This feature should only be enabled if you are in a country that requires it.
 - L2 Isolation: Enabling L2 (Layer 2) Isolation prevents associated wireless clients from communicating with each other.
 - WMM Enable: WMM is QoS for your wireless network. This will improve the quality of video and voice applications for your wireless clients.
 - Short GI: Check this box to reduce the guard interval time therefore increasing the data capacity. However, it's less reliable and may create higher data loss.

*Note: Transmit power is regulated by international standards and users are forbidden to change its maximum limit. Regarding the frequency of 802.11d, every country limits the frequency range used within its territory. Consumers are only allowed to purchase products that operates with the country regulated frequency.

D-Link DAP-1555 User Manual

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WISH

WISH is short for Wireless Intelligent Stream Handling, a technology developed to enhance your experience of using a wireless network by prioritizing the traffic of different applications.

- Enable WISH: Enable this option if you want to allow WISH to prioritize your traffic.
 - **HTTP:** Allows the access point to recognize HTTP transfers for many common audio and video streams and prioritize them above other traffic. Such streams are frequently used by digital media players.
- Windows Media Enables the access point to recognize certain Center: audio and video streams generated by a Windows Media Center PC and to prioritize these above other traffic. Such streams are used by systems known as Windows Media Extenders, such as the Xbox 360.
 - Automatic: When enabled, this option allows the access point to automatically attempt to prioritize traffic streams that it doesn't otherwise recognize, based on the behavior that the streams exhibit. This acts to de-prioritize streams that exhibit bulk transfer characteristics, such as file transfers, while leaving interactive traffic, such as gaming or VoIP, running at a normal priority.
 - WISH Rule: A WISH Rule identifies a specific message flow and assigns a priority to that flow. For most applications, the priority classifiers ensure the right priorities and specific WISH Rules are not required. WISH supports overlaps between rules. If more than

one rule matches for a specific message flow, the rule with the highest priority will be used.

D-Lin	K				
DAP-1555	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
MAC ADDRESS FILTER ADVANCED WIRELESS WISH	applications. Save Settings WISH Enab PRIORITY CLASSII Windows Media	Don't Save Settings	oritizes the traffic of variou		Helpful Hints Enable this option if you want to allow WIBH to prioritize wireless traffic. For most applications, the priority classifiers ensure the right priorities, and specific WISH Rules are not required. More
	Host 1 Po	IP Range	Host 2 IP	Protocol / Ports	

Enable: Enable this option if you want to allow WISH to prioritize your traffic.
Name: Create a name for the rule that is meaningful to you.
Priority: The priority of the message flow is entered here. The four priorities are defined as:
BK: Background (least urgent)
BE: Best Effort
VI: Video
VO: Voice (most urgent)
Protocol: The protocol used by the messages.
Host 1 IP Range: The rule applies to a flow of messages for which one computer's IP address falls within the range set here.

Host 1 Port Range: The rule applies to a flow of messages for which host 1's port number is within the range set here.

Host 2 IP Range: The rule applies to a flow of messages for which the other computer's IP address falls within the range set here.

Host 2 Port Range: The rule applies to a flow of messages for which host 2's port number is within the range set here.

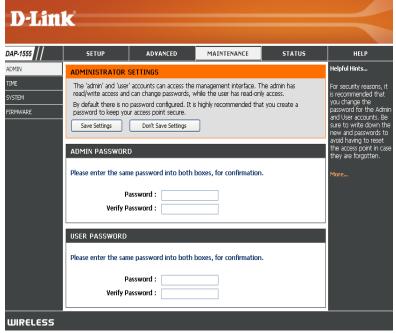
WISH Rules: This section is where you define WISH Rules. Enable or disable defined rules with the check boxes at the left.

Tools Admin

This page will allow you to change the Administrator and User passwords. You can also enable Remote Management. There are two accounts that can access the management interface through the web browser. The accounts are admin and user. Admin has read/write access while user has read-only access. User can only view the settings but cannot make any changes. Only the admin account has the ability to change both admin and user account passwords.

Admin Password: Enter a new password for the Administrator Login Name. The administrator can make changes to the settings.

User Password: Enter the new password for the User login. If you login as the User, you can only see the settings, but cannot change them.

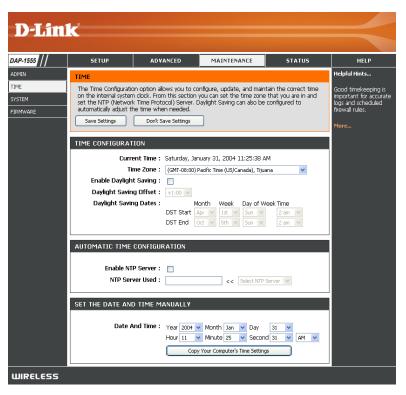


Time

The Time Configuration option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in and set the Time Server. Daylight Saving can also be configured to automatically adjust the time when needed.

Time Zone: Select the Time Zone from the drop-down menu.

- **Daylight Saving:** To select Daylight Saving time manually, select enabled or disabled, and enter a start date and an end date for daylight saving time.
- Enable NTP Server: NTP is short for Network Time Protocol. NTP synchronizes computer clock times in a network of computers. Check this box to use a NTP server. This will only connect to a server on the Internet, not a local server.
- NTP Server Used: Enter the NTP server or select one from the drop-down menu.
 - Manual: To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second and then click **Save Settings**. You can also click **Copy Your Computer's Time Settings**.

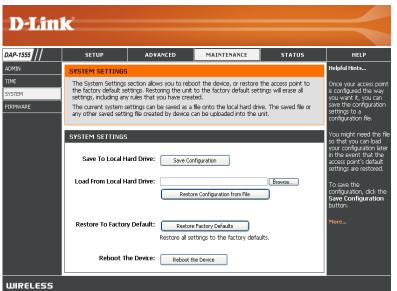


System

- Save Settings to Use this option to save the current access point Local Hard Drive: configuration settings to a file on the hard disk of the computer you are using. First, click the Save button. You will then see a file dialog, where you can select a location and file name for the settings.
- Load Settings from Use this option to load previously saved access Local Hard Drive: point configuration settings. First, use the Browse control to find a previously save file of configuration settings. Then, click the Load button to transfer those settings to the access point.
- Restore to Factory This option will restore all configuration settings Default Settings: back to the settings that were in effect at the time the access point was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created. If you want to save the current access point configuration settings, use the Save button above.

Note: Restoring the factory default settings will not reset the Wi-Fi Protected Status to Not Configured.

Reboot Device: Click to reboot the access point.



Firmware

You can upgrade the firmware of the access point here. Make sure the firmware you want to use is on the local hard drive of the computer. Click on Browse to locate the firmware file to be used for the update. Please check the D-Link support website for firmware updates at http://support.dlink.com. You can download firmware upgrades to your hard drive from this site.

- Browse: After you have downloaded the new firmware, click Browse to locate the firmware update on your hard drive. Click Upload to complete the firmware upgrade.
- **Upload:** Once you have a firmware update on your computer, use this option to browse for the file and then upload the information into the access point.



Status Device Info

This page displays the current information for the DAP-1555. It will display the LAN and Wireless information.

- General: Displays the access point's time and firmware version.
 - LAN: Displays the MAC address and the private (local) IP settings for the access point.
- Wireless LAN: Displays the wireless MAC address and your wireless settings such as SSID and Channel.

DAP-1555	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
DEVICE INFO	DEVICE INFORMATION				Helpful Hints
WIRELESS	All of your network connection details are displayed on this page. The firmware version is also displayed here.				All of your WAN and LAN connection details are displayed here.
STATISTICS	GENERAL				More
	Firmware	Time : Saturday, Jar /ersion : 1.0, 16 Au	nuary 31, 2004 11:22:55 A g 2007	М	
	LAN	n Tuna - DUCD Clinck			
	Connection Type : DHCP Client MAC Address : 00:18:11:68:74:81				
		IP Address : 192.168.0.155			
	Subnet Mask : 255.255.2				
	Default Gateway: 192.168.0.1				
	Primary DNS Server: 192.168.0.1				
	Secondary DNS	Server: 0.0.0.0			
	WIRELESS LAN				
	Wireless	Radio: Enabled			
		WISH: Active			
		ddress: 00:18:11:68:	74:81		
	Network Name	. ,			
		hannel: 10			
		Mode: Disabled Setup: Enabled/Con	figured		
WIRELESS					

36

Wireless

The wireless section allows you to view the wireless clients that are connected to your wireless access point.

- MAC Address: The Ethernet ID (MAC address) of the wireless client.
 - IP Address: The LAN-side IP address of the client.
 - Mode: The transmission standard being used by the client. Values are 11a, 11b, 11g, 11ng or 11na for 802.11a, 802.11b, 802.11g or 802.11n respectively.
 - **Rate:** Displays the actual transmission rate of the client in megabits per second.

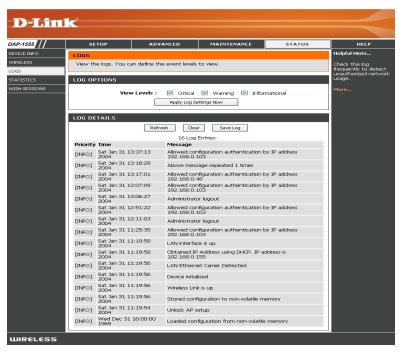
D-Lin	k				\prec	
DAP-1555	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP	
DEVICE INFO	WIRELESS				Helpful Hints	
WIRELESS	View the wireless clie	nts that are connected to	your access point.		This is a list of all wireless clients that are	
LOGS	NUMBER OF WIR	NUMBER OF WIRELESS CLIENTS : 0				
STATISTICS WISH SESSIONS	MAC Address	IP Address	Mode Rate	Signal (%)	your access point. More	
WIRELESS						

Signal: This is a relative measure of signal quality. The value is expressed as a percentage of theoretical best quality. Signal quality can be reduced by distance, by interference from other radio-frequency sources (such as cordless telephones or neighboring wireless networks), and by obstacles between the access point and the wireless device.

Logs

The access point automatically logs (records) events of possible interest in it's internal memory. If there isn't enough internal memory for all events, logs of older events are deleted but logs of the latest events are retained. The Logs option allows you to view the access point logs. You can define what types of events you want to view and the level of the events to view. This access point also has external Syslog Server support so you can send the log files to a computer on your network that is running a Syslog utility

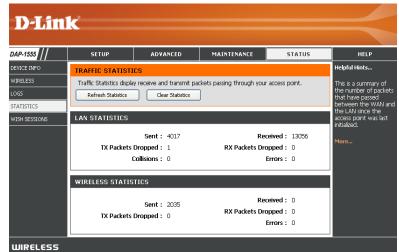
- View Levels: There are three levels of message importance: Informational, Warning, and Critical. Select the levels that you want displayed in the log.
- Apply Log Settings: Will filter the log results so that only the selected options appear.
 - **Refresh:** Updates the log details on the screen so it displays any recent activity.
 - **Clear:** Clears all of the log contents.
 - Save Log: This option will save the access point to a log file on your computer.



Statistics

The Statistics page displays all of the LAN, WAN, and Wireless packets transmit and receive statistics.

- Sent: The number of packets sent from the access point.
- **Received:** The number of packets received by the access point.
- **TX Packets** Displays the number of packets that were dropped **Dropped:** while sending, due to errors, collisions, or access point resource limitations.
- **RX Packets** Displays the number of packets that were dropped **Dropped:** while receiving, due to errors, collisions, or access point resource limitations.
- **Collisions:** Displays the number of packets that were dropped due to Ethernet collisions (two or more devices attempting to use an Ethernet circuit at the same time).
 - **Errors:** The number of transmission failures that cause loss of a packet. A noisy radio-frequency environment can cause a high error rate on the wireless LAN.



Wish Sessions

The WISH Sessions page displays full details of active local wireless sessions through your access point when WISH has been enabled. A WISH session is a conversation between a program or application on a wirelessly connected LAN-side computer and another computer, however connected.

- **Originator:** The IP address and, where appropriate, port number of the computer that originated a network connection.
 - Target: The IP address and, where appropriate, port number of the computer to which a network connection has been made.
- Protocol: The communications protocol used for the conversation.
 - State: State for sessions that use the TCP protocol.



- NO: None -- This entry is used as a placeholder for a future connection that may occur.
- SS: SYN Sent -- One of the systems is attempting to start a connection.
- EST: Established -- the connection is passing data.
- FW: FIN Wait -- The client system has requested that the connection be stopped.
- CW: Close Wait -- the server system has requested that the connection be stopped.
- TW: Time Wait -- Waiting for a short time while a connection that was in FIN Wait is fully closed.
- LA: Last ACK -- Waiting for a short time while a connection that was in Close Wait is fully closed.
- CL: Closed -- The connection is no longer active but the session is being tracked in case there are any retransmitted packets still pending.

Priority: The priority given to packets sent wirelessly over this conversation by the WISH logic. The priorities are:

- BK: Background (least urgent)
- BE: Best Effort
- VI: Video
- VO: Voice (most urgent)

Time out: The number of seconds of idle time until the access point considers the session terminated. The initial value of Time Out depends on the type and state of the connection.

300 seconds

UDP connections.

240 seconds

Reset or closed TCP connections. The connection does not close instantly so that lingering packets can pass or the connection can be re-established.

7800 seconds

Established or closing TCP connections.

Help

D T See					
D-Lin	<u> </u>				
DAP-1555 //	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
MENU	SUPPORT MENU				
SETUP					
ADVANCED	 <u>Setup</u> <u>Advanced</u> 				
MAINTENANCE	 Maintenance Status 				
STATUS	<u>Glossary</u>				
GLOSSARY					
	SETUP HELP				
	<u>Wizard</u> <u>Network Setting</u> <u>Wireless</u>	15			
	ADVANCED HELP				
	<u>Advanced Wirel</u>	255			
	MAINTENANCE HEL	р			
	• <u>Admin</u> • <u>System</u> • <u>Firmware</u>				
	STATUS HELP				
	 <u>Device Info</u> <u>Logs</u> 				
WIRELESS					

Configuration for Bridge Mode

This section will show you how to configure your new D-Link wireless MediaBridge using the web-based configuration utility.

Web-based Configuration Utility

To access the configuration utility, open a web-browser such as Internet Explorer and enter the friendly address for Bridge mode (dlinkap).

D-Link - Microsoft Internet Explorer					
Eile Edit View Favorites Tools Help					
🛛 🌀 Back 👻 🕥 - 💌 😰 🏠 🔎 Search	I				
🛛 A <u>d</u> dress 🙆 dinkap 💽 🗲 Go					

Select **Admin** from the drop-down menu and then enter your password. Leave the password blank by default.

If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.

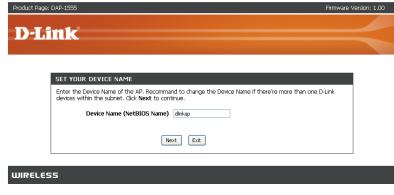
Product Page: DAP-1555	Hardware version:	Firmware Version: 1.00
D-Link		
LOGIN		
Log in to the bridge: User Name : Admin 🗸		
Password : Log In		
WIRELESS		

Setup Wizard

This wizard is designed to assist you in configuring the wireless settings for your bridge. It will guide you through step-by-step instructions on how to setup your wireless network.



Enter the Device Name of the AP and click **Next** to continue. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.



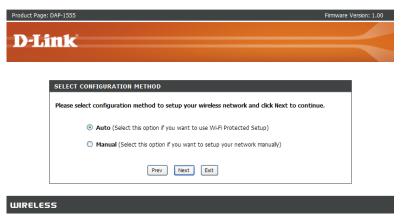
If you want to change the admin account password, enter a new password and click **Next**.

Product Page: DAP-1555	Firmware Version: 1.00
D-Link	
SET YOUR NEW PASSWORD	
You may change the admin account password by entering in a new password. Click Next to continue.	
Password Verify Password	
Next Exit	
WIRELESS	

Select Auto configuration if you want to use Wi-Fi Protected Setup.

If you want to setup your network manually, skip to page 50.

Click **Next** to continue.



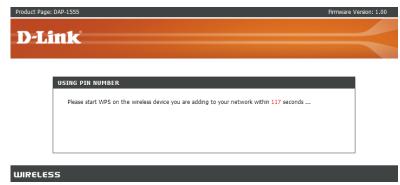
Select **PIN** to connect your wireless device with WPS.

For **PBC** configuration, skip to page 49.

Enter the PIN number used into you access point and click **Connect**.

Product Page: DAP-1555 Firmware Version: 1.00 DELINE CONNECT TO WIRELESS DEVICE WITH WPS There are two ways to connected to wreless device with WPS : • PIN (Personal Identification Number) • PBC (Push Button Configuration) @ PIN : 24681353 Generate New PIN Reset PIN to default Plase Enter the above PIN Information into your Acces Point and click the below "Connect" button. @ PEC Plases press the push button on your wireless device and press the "Connect" button below 120 seconds. Prev Connect

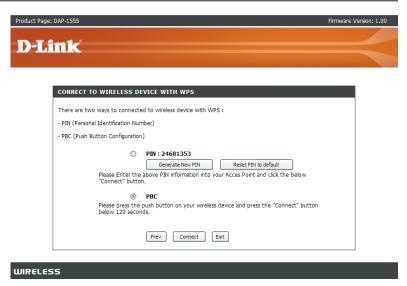
Start WPS on the wireless device you are adding to you wireless network to complete the setup.



WIRELESS

Click **Connect** to continue.

Select **PBC** to use the Push Button Configuration to connect to your network.

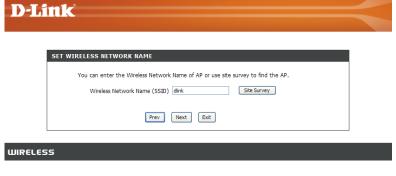


Press down the Push Button on the wireless device you are adding to your network to complete the setup.



Select Manual configuration to setup your network	Product Page: DAP-1555	Firmware Version: 1.00
manually.	D-Link	
Click Next to continue.		
	SELECT CONFIGURATION METHOD	
	Please select configuration method to setup your wire	less network and click Next to continue.
	Auto (Select this option if you want to use to a set of the set	NI-FI Protected Setup)
	Manual (Select this option if you want to se	tup your network manually)
	Prev Next Ex	t
	WIRELESS	
Enter the Wireless Network Name of the AP or use site	Product Page: DAP-1555	Firmware Version: 1.00
survey to find the AP.	D-Link	

Click **Next** to continue on to page 52.



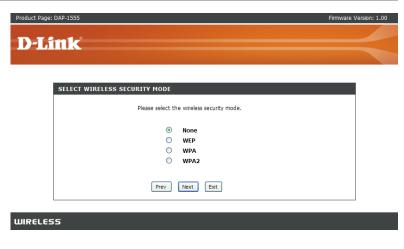
If you clicked on **Site Survey** to following screen will be displayed.

Find your access point from the list and click **Connect** to complete the Setup Wizard.

ık					
ITE SURVEY PAGE					
SSID	BSSID	Channel	Encrypt	Signal	Select
Candy	00195b2902b0	1 (G)	yes	60	0
КАК	001346c91c2a	6 (G)	yes	22	0
AV_Room_2	00195b0b6772	11 (G)	yes	36	0
projector-0	0013d37889c6	11 (G)	no	12	0
openrg	3472ed57dab4	11 (G)	no	4	0
m-Lounge	001b11547863	3 (N+G)	yes	58	0
KR1	0015e9746bbb	4 (G)	yes	10	0
cdouble	001485e3d636	2 (G)	yes	10	0
dwl8220_mktg_lab	001195e0fd60	48 (A)	yes	6	0
dlink	00179a293762	1 (G)	no	0	0
bigbear	000d88aca8d4	6 (G)	yes	0	0
	·	~			

WIRELESS

Choose which Security Mode you want to use and click **Product Page: DAP-1555 Next** to continue.



If you choose **WEP**, enter the wireless security password and click **Next** to complete the Setup Wizard.



If you choose **WPA**, enter the WPA Personal Passphrase and clic **Next** to complete the Setup Wizard.

If you choose WPA , enter the WPA Personal Passphrase and click Next to complete the Setup Wizard.	Product Page: DAP-1555 Firmware Version: D-Link		
	SET YOUR WPA PERSONAL PASSPHRASE Please enter the WPA personal passphrase to establish wireless connection. WPA Personal Passphrase : (8-63 characters) (8-63 characters) (Berev) Next Ext		
If you choose WPA2 , enter the WPA2 Personal Passphrase and click Next to complete the Setup Wizard.	Product Page: DAP-1555 Firmware Version: 1.00 D-Link		
	SET YOUR WPA2 PERSONAL PASSPHRASE Please enter the WPA2 personal passphrase to establish wireless connection. WPA2 Personal Passphrase : (6-63 characters) Prev Itest Exit WIRELESS		
The Wireless Setup Wizard is complete. Click Finish to reboot the device.	Product Page: DAP-1555 Firmware Version: 1.00 D-Link		
	CONNECT TO WIRELESS DEVICE The wireless setup wizard has completed.		
	WIRELESS		

Wireless

- Wireless Mode: Select Infrastructure to connect to a wireless (AP) Access Point, select Ad-hoc to connect to another bridge or wireless station.
 - Site Survey: A function that looks for available wireless networks.
- Enable Wireless: Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions.
- Wireless Network Service Set Identifier (SSID) is the name of your wireless Name: network. Create a name using up to 32 characters. The SSID is case-sensitive.
 - Enable Auto The Auto Channel Scan setting can be selected to allow Channel Scan: the DAP-1555 to choose the channel with the least amount of interference.
- Wireless Channel: Indicates the channel setting for the DAP-1555. By default the channel is set to 6. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. If you enable Auto Channel Scan, this option will be greved out.

D-Lin	k				\prec
DAP-1555	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
WIZARD WIRLESS NETWORK SETTINGS	WIRELESS Wireless Network See Use this section to co changes made on this Save Settings WIRELESS NETWO Wireless Netwo Enable Wireless Netwo Enable Auto Cham Wireless 802.1 Transmissi	ttings hfgure the wireless settin bork Save Settings KK SETTINOS St Mode : AP Client Wireless : K k Name : dirk. tel Scan : 2.437 GHz - C 1 Mode : Mixed 802.111	gs for your wireless bridge be duplicated on your Wi Site Survey (Also called the s H 6 No. 802.11a, 802.11a, 802.11a, 802.11 X) V (Mbit/s)	. Please note that reless Clent.	Helpful Hints Changing your Wreless Network Name (SSID) is the first tap to connect to the wireless network, You must know the SSID to join wreless network. The channel number is elsected automatically to match the channel selected automatically to match the channel selected automatically to match the channel wreless network. If you have enabled Wireless Security, make sure you write down the WEP Key or Pasphrase that you whomation on any writes down that you connect to your wreless network.
		ty Mode : Disable Wirele	ss Security (👻 D WCN 2.0 IN WINDO	JWS VISTA)	If you have enabled "WPA-Enterprise" for the Wrields Socurity, you will need a RADUS server behind the wrields device (such as AP) for the authentication. The RADUS must be configured to support your Wrields Security configuration.
WIRELESS					

802.11 Mode: If all of the wireless devices in your wireless network can connect in the same transmission mode, you can improve performance slightly by choosing the appropriate "Only" mode. If you have some devices that use a different transmission mode, choose the appropriate "Mixed" mode.

Mixed 802.11a and 802.11g - Select this so the bridge can site survey to 802.11a and 802.11g networks. Mixed 802.11a, 802.11g and 802.11b - Select this so the bridge can site survey to 802.11a, 802.11g and 802.11b networks. Mixed 802.11a, 802.11g and 802.11ng - Select this so the bridge can site survey to 802.11a, 802.11g and 802.11ng networks.

802.11ng means it's 802.11n operated in 2.4GHz band. Mixed 802.11a, 802.11g, 802.11ng and 802.11b - Select this so the bridge can site survey to 802.11a, 802.11g, 802.11ng

and 802.11b networks.

Mixed 802.11na, 802.11a, 802.11g - Select this so the bridge can site survey to 802.11na, 802.11a and 802.11g networks. 802.11na means it's 802.11n operated in 5GHz band.

 Mixed 802.11na, 802.11a, 802.11g and 802.11b - Select this so the bridge can site survey to 802.11na, 802.11a, 802.11g, and 802.11b networks.

 Mixed 802.11na, 802.11a, 802.11ng and 802.11g - Select this so the bridge can site survey to 802.11na, 802.11a, 802.11g, and 802.11g networks.

 Mixed 802.11na, 802.11a, 802.11ng, 802.11g and 802.11b - Select this so the bridge can site survey to 802.11na, 802.11a, 802.11ng, 802.11ng, 802.11g, 802.11g, 802.11b, 802.11a, 802.11a, 802.11a, 802.11a, 802.11a, 802.11a, 802.11a, 802.11a, 802.11b, 802.11a, 802.11a,

Transmission Rate: Select the transmit rate. It is strongly suggested to select Best (Auto) for best performance.

Channel Width: Select the Channel Width:

Auto 20/40 - Select if you are using both 802.11n and non-802.11n wireless devices. **20MHz** - Select if you are not using any 802.11n wireless clients.

Security Mode: Refer to page 65 for more information regarding wireless security.

Enable: Enable the Wi-Fi Protected Setup feature.

Network Settings Static

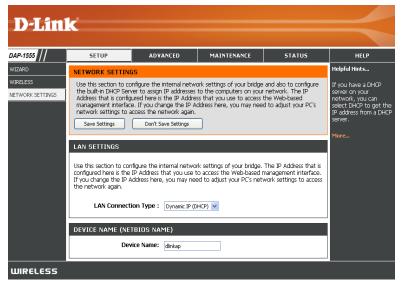
This section will allow you to change the local network settings of the bridge and to configure the Static settings.

- IP Address Mode: Select Static if your ISP assigned you the IP address, subnet mask, gateway, and DNS server addresses. Select DHCP to automatically assign an IP address to the computers on the LAN/private network.
 - **IP Address:** Enter the IP address assigned by your ISP.
 - Subnet Mask: Enter the Subnet Mask assigned by your ISP.
- Default Gateway: Enter the Gateway assigned by your ISP.
 - **Device Name:** Enter the Device Name of the AP and click **Next** to continue. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.



DHCP

- LAN Connection Select DHCP to automatically obtain an IP address Type: on the LAN/private network.
 - **Device Name:** Enter the Device Name of the AP and click **Next** to continue. It is recommended to change the Device Name if there is more than one D-Link device within the subnet.



Advanced Advanced Wireless

MAC Cloning Mode: This feature controls the MAC Address of the Bridge as seen by other devices (wired or wireless).

- WLAN Card: If set to Ethernet Client, the MAC Address from the first Ethernet client that transmits data through the Bridge will be used. This setting is useful when connected to an Xbox or if there is only one Ethernet device connected to the Bridge. When multiple Ethernet devices are connected to the Bridge, it may not be obvious which MAC Address is being used.
- Ethernet Client: If set to WLAN Card, the MAC Address of the WLAN Card (typically written on the back of the card) will be used. When multiple Ethernet devices are connected to the Bridge, the MAC Address of the Bridge will not change.

D-Link DAP-1555 SETUP ADVANCED MAINTENANCE STATUS HELP ADVANCED WIRELESS leinful Hinte ADVANCED WIRELESS If you are not familiar with these Advanced Wireless settings, please read the help section before attempting to modify these settings. Save Settings Don't Save Settings WIRELESS MAC CLONING Cloning Mode: 💿 WLAN Card 🔘 Ethernet Clien ADVANCED WIRELESS SETTINGS Transmit Power : 🛛 High 🛛 💌 RTS Threshold : 2346 (0..2347) Fragmentation Threshold : 2346 (256.,2346) Short GI : 🔽 WIRELESS

- Transmit Power: Set the transmit power of the antennas.
- RTS Threshold: This value should remain at its default setting of 2436. If inconsistent data flow is a problem, only a minor modification should be made.
- Fragmentation The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented. Packets exceeding Threshold: the 2346 byte setting will be fragmented before transmission. 2346 is the default setting.
 - Short GI: Check this box to reduce the guard interval time therefore increasing the data capacity. However, it's less reliable and may create higher data loss.

Tools Admin

This page will allow you to change the Administrator and User passwords. You can also enable Remote Management. There are two accounts that can access the management interface through the web browser. The accounts are admin and user. Admin has read/write access while user has read-only access. User can only view the settings but cannot make any changes. Only the admin account has the ability to change both admin and user account passwords.

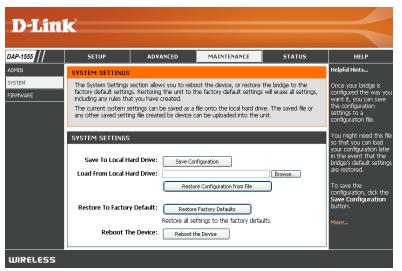
Admin Password: Enter a new password for the Administrator Login Name. The administrator can make changes to the settings.

- User Password: Enter the new password for the User login. If you login as the User, you can only see the settings, but cannot change them.
- Web Idle Timeout: Enter a maximum idle time in which the internet connection is maintained during inactivity.

D -Lin	1 _ ²				
DAP-1555	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
ADMIN		SETTINGS			Helpful Hints
SYSTEM FIRMWARE	The 'admin' and 'user' read/write access and by default there is no password to keep you. Save Settings ADMIN PASSWORD Please enter the sam P, Verify P.	For security reasons, it is recommended that you change the Admin and User accounts. Be sure to write down the password's to vandd having to reset the bridge in case they are forgotten.			
	P. Verify P. ADMINISTRATION	ie password into both assword : assword : Timeout :	boxes, for confirmation	L	
WIRELESS					

System

- Save To Local Hard Use this option to save the current access point Drive: configuration settings to a file on the hard disk of the computer you are using. First, click the Save button. You will then see a file dialog, where you can select a location and file name for the settings.
 - Load From Local Use this option to load previously saved access Hard Drive: point configuration settings. First, use the Browse control to find a previously save file of configuration settings. Then, click the Load button to transfer those settings to the access point.
- Restore To Factory This option will restore all configuration settings Default: back to the settings that were in effect at the time the access point was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created. If you want to save the current access point configuration settings, use the Save button above.

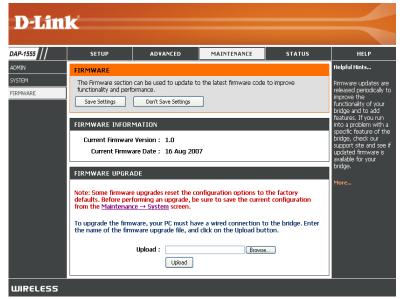


Reboot The Device: Click to reboot the bridge.

Firmware

You can upgrade the firmware of the Access point here. Make sure the firmware you want to use is on the local hard drive of the computer. Click on Browse to locate the firmware file to be used for the update. Please check the D-Link support site for firmware updates at http://support.dlink.com. You can download firmware upgrades to your hard drive from the D-Link support site.

- Browse: After you have downloaded the new firmware, click Browse to locate the firmware update on your hard drive. Click Upload to complete the firmware upgrade.
- **Upload:** Once you have a firmware update on your computer, use this option to browse for the file and then upload the information into the bridge.



Status Device Info

This page displays the current information for the DAP-1555. It will display the LAN and Wireless information.

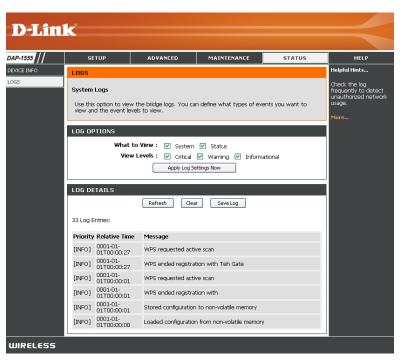
D-Lin	K				\prec
DAP-1555	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
DEVICE INFO	DEVICE INFORMAT	ION			Helpful Hints
LOGS	All of your Internet an version is also displayed	d network connection of here.	letails are displayed on this	page. The firmware	All of your LAN connection details are displayed here.
	GENERAL				More
	Firmware				
	LAN				
		Address : 00:18:11:68			
		Address: 192.168.0.3			
		et Mask : 255.255.25 Bateway : 192.168.0.3			
		Saleway : 192.166.0	L		
	WIRELESS LAN				
	Wireles	ss Radio: Enabled			
		Status: Doing WPS	registration		
		Address : 00:18:11:68	3:74:81		
		e (SSID) : dlink			
		Channel : 120			
		d Setup : Enabled/No	t Configured		
	Securit	t y Mode: Disabled			
WIRELESS					

Logs

The bridge automatically logs (records) events of possible interest in its internal memory. If there is not enough internal memory for all events, logs of older events are deleted, but logs of the latest events are retained. The Logs option allows you to view the bridge logs. You can define what types of events you want to view and the level of events to view. This bridge also has external Syslog Server support so you can send the log files to a computer on your network that is running a Syslog utility.

What to View:	You can select the types of messages that you want
	to display from the log.

- View Levels: There are three levels of message importance: Informational, Warning, and Critical. Select the levels that you want displayed in the log.
- Apply Log Settings Will filter the log results so that only the selected Now: options appear.
 - **Refresh:** Clicking this button refreshes the display of log entries. There may be new events since the last time you accessed the log.
 - Clear: Clicking this button erases all log entries.
 - Save Log: Select this option to save the bridge log to a file on your computer.



Help



Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DAP-1555 offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA (Wi-Fi Protected Access)
- WEP (Wired Equivalent Privacy)
- WPA2-PSK (Pre-Shared Key)
- WPA-PSK (Pre-Shared Key)

What is WEP?

WEP stands for Wired Equivalent Privacy. It is based on the IEEE 802.11 standard and uses the RC4 encryption algorithm. WEP provides security by encrypting data over your wireless network so that it is protected as it is transmitted from one wireless device to another.

To gain access to a WEP network, you must know the key. The key is a string of characters that you create. When using WEP, you must determine the level of encryption. The type of encryption determines the key length. 128-bit encryption requires a longer key than 64-bit encryption. Keys are defined by entering in a string in HEX (hexadecimal - using characters 0-9, A-F) or ASCII (American Standard Code for Information Interchange – alphanumeric characters) format. ASCII format is provided so you can enter a string that is easier to remember. The ASCII string is converted to HEX for use over the network. Four keys can be defined so that you can change keys easily.

What is WPA?

WPA, or Wi-Fi Protected Access, is a Wi-Fi standard that was designed to improve the security features of WEP (Wired Equivalent Privacy).

The 2 major improvements over WEP:

- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead of TKIP.
- User authentication, which is generally missing in WEP, through the extensible authentication protocol (EAP). WEP regulates access to a wireless network based on a computer's hardware-specific MAC address, which is relatively simple to be sniffed out and stolen. EAP is built on a more secure public-key encryption system to ensure that only authorized network users can access the network.

WPA-PSK/WPA2-PSK uses a passphrase or key to authenticate your wireless connection. The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?*&_) and spaces. This key must be the exact same key entered on your wireless bridge or access point.

WPA/WPA2 incorporates user authentication through the Extensible Authentication Protocol (EAP). EAP is built on a more secure public key encryption system to ensure that only authorized network users can access the network.

Configure WEP In AP Mode

It is recommended to enable encryption on your wireless access point before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

- 1. Log into the web-based configuration by opening a web browser and entering the IP address of the access point (192.168.0.50). Click on **Setup** and then click **Wireless Settings** on the left side.
- 2. Next to Security Mode, select WEP.

3. Next to WEP Key Length,	select the level of encryption (64
or 128-bit).	

Hex - (recommended) Letters A-F and numbers 0-9 are valid.

- 4. Next to *WEP Key 1*, enter a WEP key that you create. Make sure you enter this key exactly on all your wireless devices. You may enter up to 4 different keys.
- 5. Next to Authentication, select **Open or Shared Key**.
- 6. Click Save Settings to save your settings. If you are configuring the access point with a wireless adapter, you will lose connectivity until you enable WEP on your adapter and enter the same WEP key as you did on the access point.

WIRELESS SECURITY MODE To protect your privacy you can configure wireless security features. This device supports two wireless security modes including: WPA-Personal, and WPA-Enterprise. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.	
Security Mode :	WEP
WEP	
access point and the wiréless statik key box. For 128 bit keys you mus number from 0 to 9 or a letter fror authentication type to "Shared Ke You may also enter any text string hexadecimal key using the ASCII v. be entered for 64 bit keys, and a r If you choose the WEP security op	, into a WEP key box, in which case it will be converted into a alues of the characters. A maximum of 5 text characters can naximum of 13 characters for 128 bit keys. tion this device will ONLY operate in Legacy Wireless mode NOT get 11N performance due to the fact that WEP is not
WEP Key Length :	64 bit (10 hex digits) V (length applies to all kevs)
WEP Key 1 :	
WEP Key 2 :	••••••
WEP Key 3 :	•••••
WEP Key 4 :	•••••
Default WEP Key :	WEP Key 1 💌

Configure WPA-Personal (PSK) In AP Mode

It is recommended to enable encryption on your wireless access point before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

WIRELESS SECURITY MODE

- Log into the web-based configuration by opening a web browser and entering the IP address of the access point (192.168.0.50). Click on Setup and then click Wireless Settings on the left side.
- 2. Next to Security Mode, select WPA-Personal.
- 3. Next to *WPA Mode*, select **Auto**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
- 4. Next to Cipher Type, select TKIP, AES, or TKIP and AES.
- 5. Next to *Group Key Update Interval*, enter the amount of time before the group key used for broadcast and multicast data is changed (3600 is default).
- To protect your privacy you can configure wireless security features. This device supports two wireless security modes including: WPA-Personal, and WPA-Enterprise. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server. Security Mode : WPA-Personal V WPA WPA requires stations to use high grade encryption and authentication. For legacy compatibility, use WPA or WPA2 mode. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. The strongest cipher that the client supports will be used. For best security. use WPA2 capable. The strongest cipher that the client supports will be used. For best security. The AES cipher will be used across the wireless network to ensure best security. WPA Mode : WPA only Cipher Type : TKIP Group Key Update Interval : 3600 (seconds) PRE-SHARED KEY
- 6. Next to *Pre-Shared Key*, enter a key (passphrase). The key is entered as a pass-phrase in ASCII format at both ends of the wireless connection. The pass-phrase must be between 8-63 characters.
- Click Save Settings to save your settings. If you are configuring the access point with a wireless adapter, you will lose connectivity until you enable WPA-PSK on your adapter and enter the same passphrase as you did on the access point.

Configure WPA-Enterprise (RADIUS) In AP Mode

It is recommended to enable encryption on your wireless access point before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

- Log into the web-based configuration by opening a web browser and entering the IP address of the access point (192.168.0.50). Click on Setup and then click Wireless Settings on the left side.
- 2. Next to Security Mode, select WPA-Enterprise.
- 3. Next to *WPA Mode*, select **Auto WPA or WPA2**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
- 4. Next to Cipher Type, select TKIP, AES or TKIP and AES
- 5. Next to *Group Key Update Interval*, enter the amount of time before the group key used for broadcast and multicast data is changed (3600 is default).
- 6. Next to *Authentication Timeout*, enter the amount of time before a client is required to re-authenticate (60 minutes is default).
- 7. Next to *RADIUS Server IP Address* enter the IP Address of your RADIUS server.
- 8. Next to RADIUS Server Port, enter the port you are using with

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WIRELESS SECURITY MODE	
wireless security modes including: 1	onfigure wireless security features. This device supports two WPA-Personal, and WPA-Enterprise. WPA provides a higher as not require an authentication server. The WPA-Enterprise 5 server.
Security Mode :	WPA-Enterprise 💌
WPA	
use WPA or WPA2 mode. This m security with stations that are WPA be used. For best security, use WP A	grade encryption and authentication. For legacy compatibility, ode uses WPA for legacy clients while maintaining higher 42 capable. The strongest cipher that the client supports will 742 Only mode. In this mode, legacy stations are not allowed S cipher will be used across the wireless network to ensure
WPA Mode :	WPA Only
Cipher Type :	TKIP
Group Key Update Interval :	3600 (seconds)
EAP (802.1X)	
When WPA enterprise is enabled, the access point uses EAP (802.1x) to authenticate clients via a remote RADIUS server.	
Authentication Timeout :	60 (minutes)
RADIUS server IP Address :	0.0.0.0
RADIUS server Port :	1812
RADIUS server Shared Secret :	•••••
MAC Address Authentication : Advanced >>	

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Section 4 - Security

your RADIUS server. 1812 is the default port.

- 8. Next to *RADIUS Server Shared Secret*, enter the security key.
- 9. If the *MAC Address Authentication* box is selected then the user will need to connect from the same computer whenever logging into the wireless network.
- 10. Click **Advanced** to enter settings for a secondary RADIUS Server.
- 11. Click **Apply Settings** to save your settings.

EAP (802.1X)	
When WPA enterprise is enabled, the server.	e router uses EAP (802. 1x) to authenticate clients via a remote RADIUS $% \left({{\left[{{\left[{{\left[{\left[{\left[{\left[{\left[{\left[{\left[$
Authentication Timeout :	60 (minutes)
RADIUS server IP Address :	0.0.0.0
RADIUS server Port :	1812
RADIUS server Shared Secret :	radius_shared
MAC Address Authentication :	
<< Advanced	
Optional backup RADIUS server	r.
Second RADIUS server IP Address :	0.0.0
Second RADIUS server Port :	1812
Second RADIUS server Shared Secret :	radius_shared
Second MAC Address Authentication :	

Configure WEP In Bridge Mode

It is recommended to enable encryption on your wireless access point before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

- **1.** Log into the web-based configuration by opening a web browser and entering the IP address of the bridge (192.168.0.35). Click on **Setup** and then click **Wireless Settings** on the left side.
- 2. Next to Security Mode, select WEP.

3. Next to WEP Key Length,	select the level of encryption (64
or 128-bit).	

Hex - (recommended) Letters A-F and numbers 0-9 are valid.

- 4. Next to *WEP Key*, enter a WEP key that you create. Make sure you enter this key exactly on all your wireless devices.
- 5. Next to Authentication, select **Open or Shared Key**.
- 6.Click **Save Settings** to save your settings. If you are configuring the access point with a wireless adapter, you will lose connectivity until you enable WEP on your adapter and enter the same WEP key as you did on the access point.

WIRELESS	SECURITY MODE	
To protect your privacy you can configure wireless security features. This device supports two wireless security modes including: WPA-Personal, and WPA-Enterprise. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.		
	Security Mode :	WEP
WEP		
wireless bridg	e and the wireless AF	ndard. To use it you must enter the same key(s) into the 9. For 64 bit keys you must enter 10 hex digits into each key
number from	0 to 9 or a letter from	ter 26 hex digits into each key box. A hex digit is either a n A to F. For the most secure use of WEP set the " when WEP is enabled.
number from authentication You may also hexadecimal k	0 to 9 or a letter fror n type to "Shared Ke" enter any text string key using the ASCII va	n A to F. For the most secure use of WEP set the
number from authentication You may also hexadecimal k be entered for If you choose (802.118/G	0 to 9 or a letter fror n type to "Shared Ke" enter any text string (ey using the ASCII v) or 64 bit keys, and a r) the WEP security op	m A to F. For the most secure use of WEP set the y" when WEP is enabled. into a WEP key box, in which case it will be converted into a alues of the characters. A maximum of 5 text characters can naximum of 13 characters for 128 bit keys. vition this device will ONLY operate in Legacy Wireless mode NOT get 11N performance due to the fact that WEP is not
number from authentication hexadecimal k be entered for If you choose (802.118/6) supported by	0 to 9 or a letter from n type to "Shared Ke enter any text string key using the ASCII v. or 64 bit keys, and a r the WEP security op). This means you will	m A to F. For the most secure use of WEP set the y" when WEP is enabled. into a WEP key box, in which case it will be converted into a alues of the characters. A maximum of 5 text characters can naximum of 13 characters for 128 bit keys. vition this device will ONLY operate in Legacy Wireless mode NOT get 11N performance due to the fact that WEP is not
number from authentication hexadecimal k be entered for If you choose (802.118/6) supported by	0 to 9 or a letter from n type to "Shared Ke enter any text string rey using the ASCII vi or 64 bit keys, and a r the WEP security op). This means you will Draft 11N specificatio	m A to F. For the most secure use of WEP set the y" when WEP is enabled. into a WEP key box, in which case it will be converted into a alues of the characters. A maximum of 5 text characters can naximum of 13 characters for 128 bit keys. thin this device will ONLY operate in Legacy Wireless mode NOT get 11N performance due to the fact that WEP is not on.
number from authentication You may also hexadecimal k be entered for If you choose (802.118/6) supported by	0 to 9 or a letter from n type to "Shared Ke enter any text string rey using the ASCII v. or 64 bit keys, and a r e the WEP security op). This means you will Draft 11N specification WEP Key Length :	 n A to F. For the most secure use of WEP set the y" when WEP is enabled. into a WEP key box, in which case it will be converted into a alues of the characters. A maximum of 5 text characters can naximum of 13 characters for 128 bit keys. ition this device will ONLY operate in Legacy Wireless mode NOT get 11N performance due to the fact that WEP is not on. 64 bit (10 hex digits) (length applies to all keys)

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Configure WPA-Personal (PSK) In Bridge Mode

It is recommended to enable encryption on your wireless access point before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

- Log into the web-based configuration by opening a web browser and entering the IP address of the bridge (192.168.0.35). Click on Setup and then click Wireless Settings on the left side.
- 2. Next to Security Mode, select WPA-Personal.
- 3. Next to *WPA Mode*, select **Auto WPA or WPA2, WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
- 4. Next to Cipher Type, select TKIP, AES, or TKIP and AES.
- 5. Next to *Pre-Shared Key*, enter a key (passphrase). The key is entered as a pass-phrase in ASCII format at both ends of the wireless connection. The pass-phrase must be between 8-63 characters.

WIRELESS SECURITY MODE	
To protect your privacy you can configure wireless security features. This device supports two wireless security modes including: WPA-Personal, and WPA-Enterprise. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.	
Security Mode : WPA-Personal 💌	
WPA	
WPA requires stations to use high grade encryption and authentication. For legacy compatibility, use WPA or WPA2 mode. This mode uses WPA for legacy cleants while maintaining higher security with stations that are WPA2 capable. The strongest cipher that the client supports will be used. For best security, use WPA2 Only mode. In this mode, legacy APs are not allowed access with WPA security. The AES cipher will be used across the wireless network to ensure best security.	
WPA Mode : Auto (WPA or WPA2) 💌	
Cipher Type : TKIP and AES 💌	
PRE-SHARED KEY	
Pre-Shared Key: ••••••	

6. Click Save Settings to save your settings. If you are configuring the access point with a wireless adapter, you will lose connectivity until you enable WPA-PSK on your adapter and enter the same passphrase as you did on the access point.

Configure WPA-Enterprise (RADIUS) In Bridge Mode

It is recommended to enable encryption on your wireless access point before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

- 1. Log into the web-based configuration by opening a web browser and entering the IP address of the bridge (192.168.0.35). Click on **Setup** and then click **Wireless Settings** on the left side.
- 2. Next to Security Mode, select WPA-Enterprise.
- 3. Next to *WPA Mode*, select **Auto WPA or WPA2**, **WPA2 Only**, or **WPA Only**. Use **Auto** if you have wireless clients using both WPA and WPA2.
- 4. Next to Cipher Type, select **TKIP**, **AES** or **TKIP** and **AES**.
- 5. Next to EAP type, select **EAP-TLS**, **EAP-TTLS**, or **PEAP** that will be used for authentication.
- 6. Next to EAP Username, enter the username of the wireless client for the tunnel establishment and the inner authentication method.
- Next to EAP Password, enter the password of the wireless client for EAP-MD5 or the inner authentication methods of PEAP and EAP-TTLS.
- 8. Next to EAP Certificate Password, enter the password of the user certificate.

	WIRELESS SECURITY MODE
))	To protect your privacy you can configure wireless security features. This device supports two wireless security modes including: WPA-Personal, and WPA-Enterprise. WPA provides a higher level of security. WPA-Personal does not require an authentication server. The WPA-Enterprise option requires an external RADIUS server.
	Security Mode : WPA-Enterprise 💌
	WPA
	WPA requires stations to use high grade encryption and authentication. For legacy compatibility, use WPA or WPA2 mode. This mode uses WPA for legacy clents while maintaining higher security with stations that are WPA2 canable. The strongest clipher that the clent supports will be used. For best security, use WPA2 Driv mode. In this mode, legacy APs are not allowed access with WPA security. The AES cipher will be used across the wireless network to ensure best security.
	WPA Mode : Auto (WPA or WPA2) V
	Cipher Type : TKIP and AES V
	EAP (802.1X)
1	TLS based authentication methods (TLS, TTLS, PEAP) require certificates to be provided.
	EAP Type: TLS 💌
	EAP Username :
	EAP CERTIFICATES
;	EAF GERTIFICATES
	EAP Authentication requires certificate(s) to be provided. Please upload the appropriate certificates. The User Certificate should be in PKCS #12 format and the Root Certificate should be in DER/x509 format.
	EAP Certificate Password :
	EAP User Certificate : Browse
	The User Certificate (PKCS #12 format) is required.
r	Upload
	EAP Root Certificate : Browse
	The Root Certificate (DER/x509 format) is required.
	Upload
	L

Section 4 - Security

- 9. Next to EAP User Certificate, click Browse to locate the user certificate file. It is optional for **EAP-TLS**, but mandatory for **PEAP** and **EAP-TTLS**.
- 10. Next to EAP Root Certificate, click Browse to locate the Root Certificate file. It is mandatory to upload a root certificate to be able to authenticate the server certificate.

Section 5 - Connecting to a Wireless Network

Connect to a Wireless Network Using Windows® XP

Windows[®] XP users may use the built-in wireless utility (Zero Configuration Utility). The following instructions are for Service Pack 2 users. If you are using another company's utility or Windows[®] 2000, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows[®] XP utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

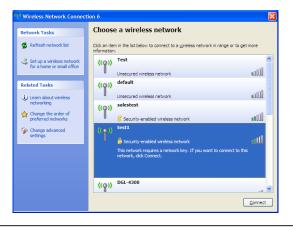
or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **View Available Wireless Networks**.

The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.





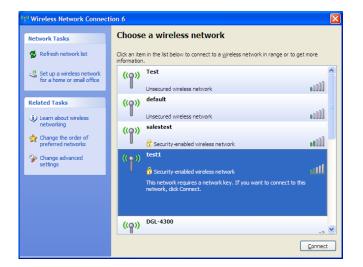
Section 5 - Connecting to a Wireless Network

Configure WEP

It is recommended to enable WEP on your wireless bridge or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WEP key being used.

1. Open the Windows[®] XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.





2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.

3. The Wireless Network Connection box will appear. Enter the same WEP key that is on your access point and click Connect.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WEP settings are correct. The WEP key must be exactly the same as on the wireless access point.

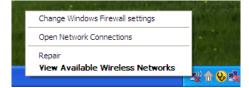
Wireless Network Conr	nection
	a network key (also called a WEP key or WPA key). A network intruders from connecting to this network.
Type the key, and then click	< Connect.
Network <u>k</u> ey:	
Confirm network key:	
	<u>C</u> onnect Cancel

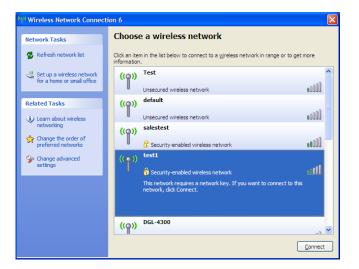
Section 5 - Connecting to a Wireless Network

Configure WPA-PSK

It is recommended to enable WEP on your wireless bridge or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WEP key being used.

1. Open the Windows[®] XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.





2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.

Section 5 - Connecting to a Wireless Network

3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK passphrase and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The WPA-PSK passphrase must be exactly the same as on the wireless access point.

Wireless Network C	onnection X
	uires a network key (also called a WEP key or WPA key). A network own intruders from connecting to this network.
Type the key, and then	click Connect.
Network <u>k</u> ey:	
Confirm network key:	
	Connect Cancel

Section 6 - Troubleshooting

Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DAP-1555. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows[®] XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.)

1. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link access point (192.168.0.50 for example), you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

• Make sure you have an updated Java-enabled web browser. We recommend the following:

- Internet Explorer 6.0 or higher
- Netscape 8 or higher
- Mozilla 1.7.12 (5.0) or higher
- Opera 8.5 or higher
- Safari 1.2 or higher (with Java 1.3.1 or higher)
- Camino 0.8.4 or higher
- Firefox 1.5 or higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.
- Disable any internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows[®] XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

• Configure your Internet settings:

- Go to Start > Settings > Control Panel. Double-click the Internet Options Icon. From the Security tab, click the button to restore the settings to their defaults.
- Click the **Connection** tab and set the dial-up option to Never Dial a Connection. Click the LAN Settings button. Make sure nothing is checked. Click **OK**.
- Go to the **Advanced** tab and click the button to restore these settings to their defaults. Click **OK** three times.
- Close your web browser (if open) and open it.
- Access the web management. Open your web browser and enter the IP address of your D-Link access point in the address bar. This should open the login page for your the web management.
- If you still cannot access the configuration, unplug the power to the access point for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

2. What can I do if I forgot my password?

If you forgot your password, you must reset your access point. Unfortunately this process will change all your settings back to the factory defaults.

To reset the access point, locate the reset button (hole) on the rear panel of the unit. With the access point powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the access point will go through its reboot process. Wait about 30 seconds to access the access point. The default IP address is 192.168.0.1. When logging in, the username is **admin** and leave the password box empty.

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D-Link DAP-1555 User Manual
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Section 6 - Troubleshooting

3. Why can't I connect to certain sites or send and receive emails when connecting through my access point?

If you are having a problem sending or receiving email, or connecting to secure sites such as eBay, banking sites, and Hotmail, we suggest lowering the MTU in increments of ten (Ex. 1492, 1482, 1472, etc).

Note: AOL DSL+ users must use MTU of 1400.

To find the proper MTU Size, you'll have to do a special ping of the destination you're trying to go to. A destination could be another computer, or a URL.

- Click on Start and then click Run.
- Windows[®] 95, 98, and Me users type in **command** (Windows[®] NT, 2000, and XP users type in **cmd**) and press **Enter** (or click **OK**).
- Once the window opens, you'll need to do a special ping. Use the following syntax:

	C:\>ping yahoo.com -f -1 1482
ping [url] [-f] [-l] [MTU value]	Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:
	Packet needs to be fragmented but DF set. Packet needs to be fragmented but DF set. Packet needs to be fragmented but DF set. Packet needs to be fragmented but DF set.
Example: ping yahoo.com -f -l 1472	Ping statistics for 66.94.234.13: Packets: Sent = 4, Received = 0, Lost = 4 (100%, loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms
	C:\>ping yahoo.com -f -l 1472
	Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:
	Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52 Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52 Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52 Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52
	Ping statistics for 66.94.234.13: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 93ms, Maximum = 203ms, Average = 132ms
	C:\>

80

You should start at 1472 and work your way down by 10 each time. Once you get a reply, go up by 2 until you get a fragmented packet. Take that value and add 28 to the value to account for the various TCP/IP headers. For example, lets say that 1452 was the proper value, the actual MTU size would be 1480, which is the optimum for the network we're working with (1452+28=1480).

Once you find your MTU, you can now configure your access point with the proper MTU size.

To change the MTU rate on your access point follow the steps below:

- Open your browser, enter the IP address of your access point (192.168.0.50) and click **OK**.
- Enter your username (admin) and password (blank by default). Click **OK** to enter the web configuration page for the device.
- Click on Setup and then click Manual Configure.
- To change the MTU enter the number in the MTU field and click **Save Settings** to save your settings.
- Test your email. If changing the MTU does not resolve the problem, continue changing the MTU in increments of ten.

Wireless Basics

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Access point is a device used to provide this link.

What is Wireless?

Wireless or Wi-Fi technology is another way of connecting your computer to the network without using wires. Wi-Fi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office network.

Why D-Link Wireless?

D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

How does wireless work?

Wireless works similar to how cordless phone work, through radio signals to transmit data from one point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

Wireless Local Area Network (WLAN)

In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point as seen in the picture, the signal can travel up to 300 feet. With an outdoor access point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.

Wireless Personal Area Network (WPAN)

Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away.

Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power which makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

Who uses wireless?

Wireless technology as become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

Home

- Gives everyone at home broadband access
- Surf the web, check email, instant message, and etc
- Gets rid of the cables around the house
- Simple and easy to use

Small Office and Home Office

- Stay on top of everything at home as you would at office
- Remotely access your office network from home
- Share Internet connection and printer with multiple computers
- No need to dedicate office space

Where is wireless used?

Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link Cardbus Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like: Airports, Hotels, Coffee Shops, Libraries, Restaurants, and Convention Centers.

Wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

Tips

Here are a few things to keep in mind, when you install a wireless network.

Centralize your access point or Access Point

Make sure you place the bridge/access point in a centralized location within your network for the best performance. Try to place the bridge/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.

Eliminate Interference

Place home appliances such as cordless telephones, microwaves, and televisions as far away as possible from the bridge/access point. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

Security

Don't let you next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WEP security feature on the access point. Refer to product manual for detail information on how to set it up.

Wireless Modes

There are basically two modes of networking:

- Infrastructure All wireless clients will connect to an access point or wireless bridge.
- Ad-Hoc Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more DAP-1555 wireless network Cardbus adapters.

An Infrastructure network contains an Access Point or wireless bridge. All the wireless devices, or clients, will connect to the wireless bridge or access point.

An Ad-Hoc network contains only clients, such as laptops with wireless cardbus adapters. All the adapters must be in Ad-Hoc mode to communicate.

Appendix B - Networking Basics

Networking Basics

Check your IP address

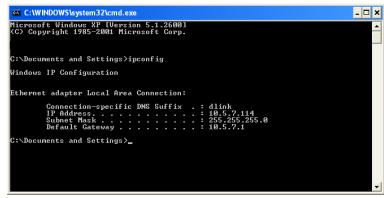
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

Click on Start > Run. In the run box type *cmd* and click OK.

At the prompt, type *ipconfig* and press Enter.

This will display the IP address, subnet mask, and the default gateway of your adapter.

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your access point. Some firewall software programs may block a DHCP request on newly installed adapters.



If you are connecting to a wireless network at a hotspot (e.g. hotel, coffee shop, airport), please contact an employee or administrator to verify their wireless network settings.

Appendix B - Networking Basics

Statically Assign an IP address

If you are not using a DHCP capable gateway/access point, or you need to assign a static IP address, please follow the steps below:

Step 1

Windows[®] XP - Click on Start > Control Panel > Network Connections. Windows[®] 2000 - From the desktop, right-click My Network Places > Properties.

Step 2

Right-click on the Local Area Connection which represents your D-Link network adapter and select Properties.

Step 3

Highlight Internet Protocol (TCP/IP) and click Properties.

Step 4

Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your access point.

Example: If the access point's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set Default Gateway the same as the LAN IP address of your access point (192.168.0.1).

Set Primary DNS the same as the LAN IP address of your access point (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

Step 5

Click **OK** twice to save your settings.

eneral	
	automatically if your network supports ed to ask your network administrator for
Obtain an IP address autom	atically
Use the following IP addres	\$.
IP address:	192.168.0.52
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192.168.0.1
Obtain DNS server address	automatically
O Use the following DNS serv	er addresses:
Preferred DNS server:	192.168.0.1
Alternate DNS server:	
	Advanced

Appendix C - Technical Specifications

Technical Specifications

Standards

- IEEE 802.11n (draft)
- IEEE 802.11a
- IEEE 802.11g
- IEEE 802.11b
- IEEE 802.3
- IEEE 802.3u

Security

- WPA-Personal
- WPA2-Personal
- WPA-Enterprise
- WPA2-Enterprise
- 64/128-bit WEP

Wireless Signal Rates¹

- 300Mbps 108Mbps
- 54Mbps 48Mbps
- 36Mbps 24Mbps
- 18Mbps 12Mbps
- 11Mbps 9Mbps
- 6Mbps 5.5Mbps
- 2Mbps 1Mbps

Maximum Operating Voltage 3.3V

Maximum Power Consumption

1435 mA

Modulation

- 11b: DQPSK, DBPSK and CCK
- 11a/g: BPSK, QPSK, 16QAM, 64QAM, OFDM
- 11n: BPSK, QPSK, 16QAM, 64QAM, OFDM, MCS

Frequency Range²

• 2.4GHz to 2.483GHz • 5.15GHz~5.825GHz³

• AP

External Antenna Type

Two (2) detachable reverse SMA Antennas

• Bridge

LEDs

Power

• WLAN • LAN (10/100)

Operating Temperature

32°F to 104°F (0°C to 40°C)

Humidity

90% maximum (non-condensing)

Safety & Emissions

• FCC • CE

• IC • C-Tick

Dimensions

- L = 7.75 inches
- W = 4.75 inches
- H = 1.25 inches

Warranty

1 Year

¹Maximum wireless signal rate derived from IEEE Standard 802.11g, 802.11a and Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range. ²Range varies depending on country's regulation.

³The DAP-1555 doesn't include 5.25-5.35GHz & 5.47~5.725GHz.

Appendix D - Contacting Technical Support

Contacting Technical Support

U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- Model number of the product (e.g. DAP-1555)
- Hardware Revision (located on the label on the bottom of the access point (e.g. rev A1))
- Serial Number (s/n number located on the label on the bottom of the access point).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

For customers within the United States:

Phone Support: (877) 453-5465

Internet Support: http://support.dlink.com For customers within Canada:

Phone Support: (800) 361-5265

Internet Support: http://support.dlink.com

Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

Limited Warranty:

D-Link warrants that the hardware portion of the D-Link product described below ("Hardware") will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below ("Warranty Period"), except as otherwise stated herein.

- Hardware (excluding power supplies and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: Ninety (90) days

The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware. All Hardware or part thereof that is replaced by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Limited Software Warranty:

D-Link warrants that the software portion of the product ("Software") will substantially conform to D-Link's then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days ("Software Warranty Period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link's functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by DLink in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software (and all copies the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty:

The Limited Warranty provided hereunder for Hardware and Software portions of D-Link's products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim:

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow DLink to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at https://rma.dlink.com/.

Appendix E - Warranty

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping
 package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside
 of the package. Do not include any manuals or accessories in the shipping package. DLink will only replace the defective
 portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered:

The Limited Warranty provided herein by D-Link does not cover:

Products that, in D-Link's judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product.

While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited Warranty.

Disclaimer of Other Warranties:

EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.

Appendix E - Warranty

IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

Limitation of Liability:

TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NONCONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

Governing Law:

This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

Trademarks:

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Copyright Statement:

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CE Mark Warning:

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

If this device is going to be operated in 5.15 ~ 5.25GHz frequency range, then it is restricted in indoor environment only.

IMPORTANT NOTICE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.

Industry Canada Notice:

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This device has been designed to operate with an antenna having a maximum gain of 2 dB. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

Registration



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

Version 1.0 July 26, 2007