



## User Manual

# Wireless AC750 Dual Band Range Extender

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# Preface

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

## Manual Revisions

Revision	Date	Description
1.0	January 13, 2014	• Initial release

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The purpose of this product is to create a constant network connection for your devices. As such, it does not have a standby mode or use a power management mode. If you wish to power down this product, please simply unplug it from the power outlet.

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# Package Contents



DAP-1520  
Wireless AC750 Dual Band Range Extender



Wi-Fi Configuration Card

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

# System Requirements

<b>Network Requirements</b>	<ul style="list-style-type: none"><li>• A wireless router with an active Internet connection.</li><li>• IEEE 802.11ac draft, 802.11n, 802.11g, 802.11b or 802.11a wireless clients/devices</li></ul>
<b>Web-based Configuration Utility Requirements</b>	<p><b>Computer or Mobile Device with the following:</b></p> <ul style="list-style-type: none"><li>• A Windows®, Macintosh®, Android™, or Linux-based operating system</li><li>• Wireless adapter or Wi-Fi functionality</li></ul> <p><b>Browser Requirements:</b></p> <ul style="list-style-type: none"><li>• Internet Explorer® 7 or later</li><li>• Firefox® 12.0 or later</li><li>• Safari® 4 or later</li><li>• Google Chrome™ 20.0 or later</li></ul>

# Introduction

## Features

### **Easily Extend Your Existing Network**

The DAP-1520 Wireless AC750 Dual Band Range Extender lets you easily extend a secure wireless network with a press of a button. Connect the DAP-1520 to a router and share your high-speed Internet access in more places throughout your home or small office.

### **High-speed Wireless Performance With Wireless 802.11ac Technology**

Thanks to the latest Wireless N technology, the DAP-1520 provides a wireless connection at up to 750 Mbps\* with other 802.11ac wireless devices. This feature lets you participate in real-time activities online, such as video streaming, online gaming, and real-time audio with smooth performance.

### **Simple Setup**

All it takes is a press of a button to connect compatible WPS devices to the DAP-1520. Its easy-to-use Web UI lets you quickly and easily connect the DAP-1520 to an uplink router, configure the extended wireless network, and manage the administrative settings. The setup wizard will even guide you through the setup process, getting your extended wireless network up and running in no time.

### **Compatibility**

The DAP-1520 is fully compatible with the IEEE 802.11n/g/b/a and IEEE draft 802.11ac standards, so you can still use your devices with it.

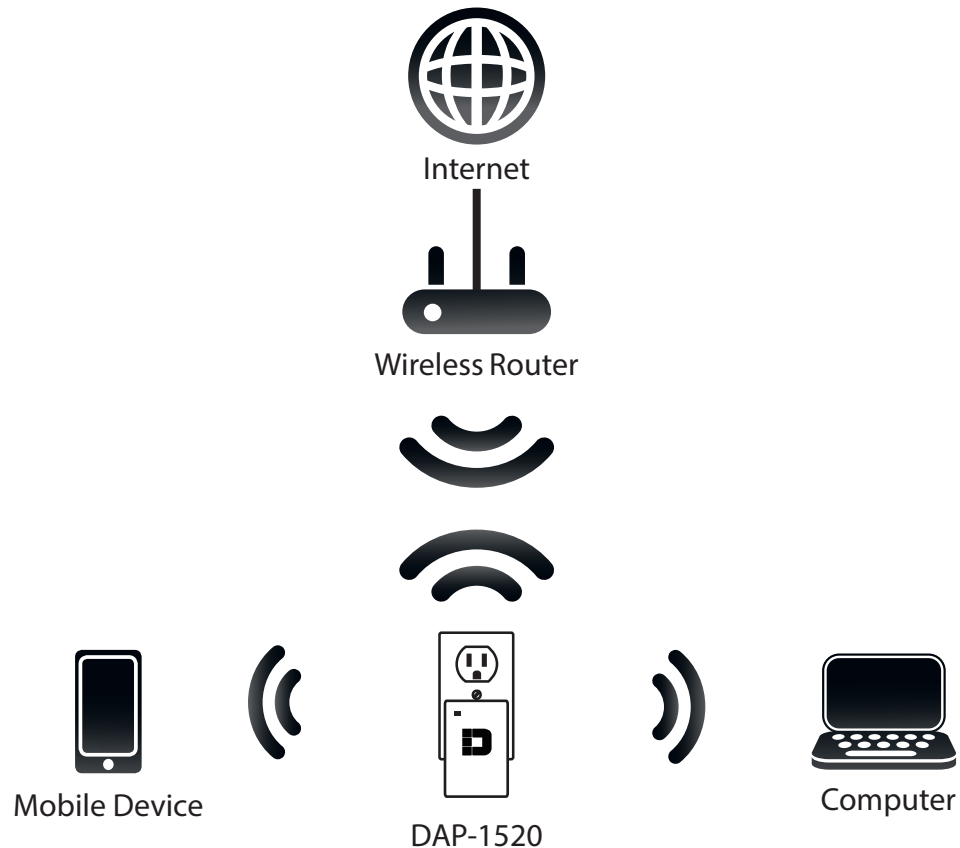
### **Latest Wireless Network Security and Encryption**

The DAP-1520 supports wireless security features to prevent unauthorized access, be it from over the wireless network or from the Internet. Support for WPA/WPA2 standards ensure that you'll be able to use the best possible encryption methods with your compatible wireless devices.

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

## What is a Wireless Extender?

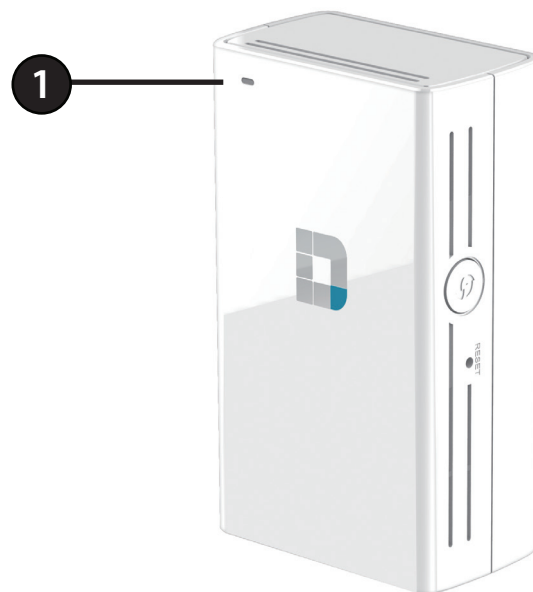
The DAP-1520 acts as a repeater to extend the range of an existing wireless network to provide a better signal for parts of your home or office that may have poor or no reception. Your existing wireless signal will be re-broadcast by the DAP-1520, allowing you to reach the farthest corners of your home or office. The extended network can simply use the same network credentials as the existing network, or you can specify a different network name and password, giving you the flexibility to control network access.





# Hardware Overview

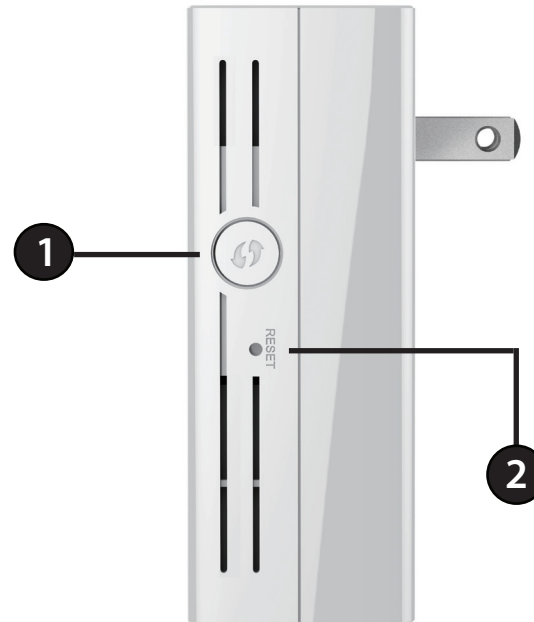
## Front/Top



<b>1</b>	Power/Status LED	Solid Green	The device is powered ON and operating normally.
		Blinking Green	The device is processing WPS.
		Solid Red	Device is powering ON or system is defective.
		Blinking Red	The device is in recovery mode or the device has malfunctioned.
		Blinking Orange	Cannot connect or provision an IP address from the uplink router.
		Off	Device is not receiving power. Check the power outlet.

# Hardware Overview

## Side



<b>1</b>	WPS Button	Pressing the WPS button for 1 second allows you to connect with Wi-Fi clients using Wi-Fi Protected Setup.
<b>2</b>	Reset Button	Pressing the reset button will reset the DAP-1520 to the factory default settings.

# Installation

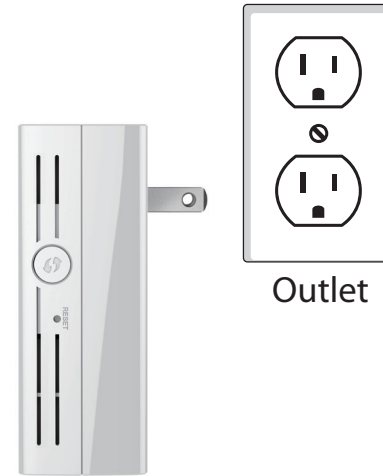
## Wireless Installation Considerations

The Wireless AC750 Dual Band Range Extender lets you extend the reach of your existing wireless network, allowing you to work wirelessly from more places in your home or office. 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 extender and other network devices to a minimum - each wall or ceiling can reduce your adapter's range by up to 98 feet (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. At a 45-degree angle, a wall that is 0.5 meters thick (1.5 feet) appears to be almost 1 meter (3 feet) thick. At a 2-degree angle it can appear over 14 meters (45 feet) 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 routers, 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 can 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 2.4 GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4 GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.

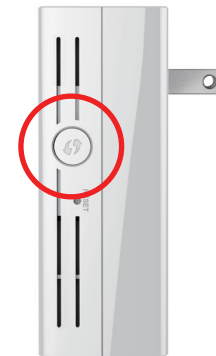
# Setting Up Your DAP-1520

Plug in the DAP-1520 to a power outlet. Verify that the power LED is blinking orange before continuing.



## Connecting to Your DAP-1520

You can use the WPS method to connect to the DAP-1520. Press the WPS button on the DAP-1520 and its green LED will flash. Then activate WPS on your client device and it should connect automatically. Once you are connected to the DAP-1520, you can then configure your DAP-1520 using the web-based configuration in a web browser.



Locate the Wi-Fi name (SSID) and password for your DAP-1520 device. This information is printed on the specification sticker on the underside of the device. Using your computer or mobile device's Wi-Fi connection utility, connect to the SSID of your DAP-1520 and enter the password. If you are unsure of how to connect to a wireless network, please refer to "Connecting a Wireless Client" on page 37, or consult your device's user manual. Once connected, you can begin the configuration process.



## Configuring Your DAP-1520

There are two ways to configure your DAP-1520; using the QRS Mobile app on your smartphone or tablet device, or using the web GUI on your computer.

For detailed information on either of the methods for configuring your DAP-1520, refer to the following sections of the manual:

- "QRS Mobile App Setup" on page 10
- "Web-based Configuration" on page 15

# QRS Mobile App Setup

The DAP-1520 can be set up from your iOS or Android smartphone or tablet device using the QRS Mobile app.

Search for “QRS Mobile” in the App Store or Google Play, or use your mobile device to scan the QR codes on the right to download the QRS Mobile app from the App Store (left) for your iOS device, or from Google Play (right) for your Android device.



For iOS

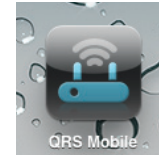


For Android

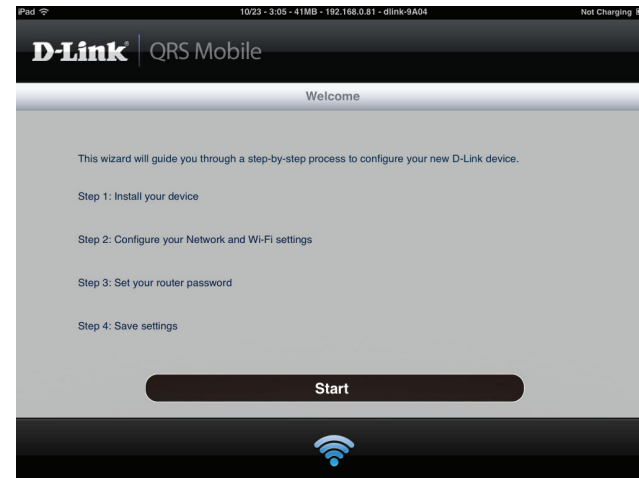
Connect to the Wi-Fi network that is displayed on the Wi-Fi Configuration Card included in your package (ex: **dlink-a8fa**). Then, enter the Wi-Fi password also printed on the Wi-Fi Configuration Card (ex: **akbdj19346**).



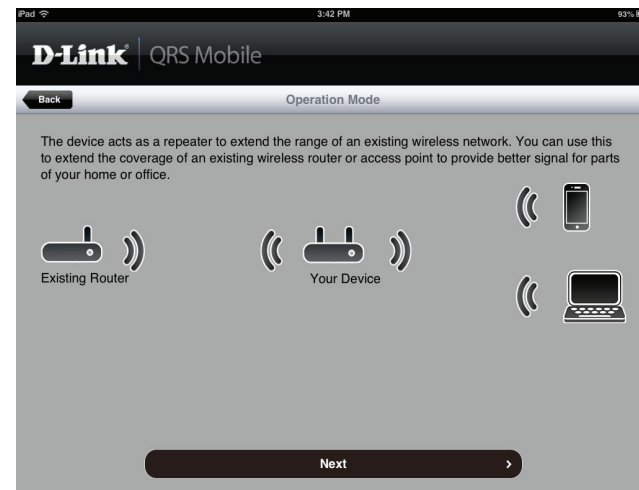
Once your mobile device is connected, tap on the **QRS Mobile** icon.



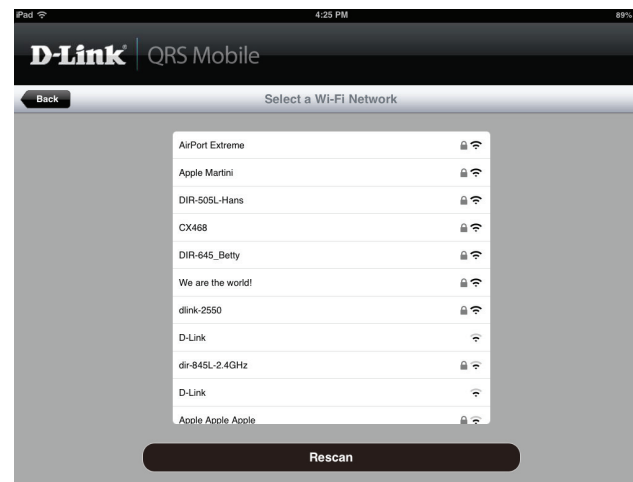
Click **Start** to continue.



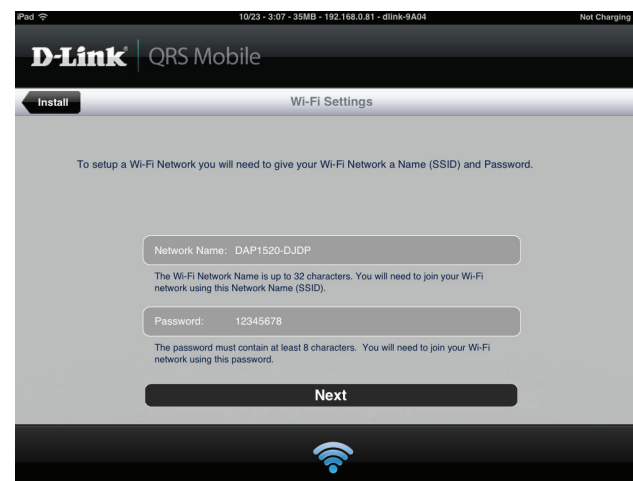
Click **Next** to continue.



QRS Mobile will first detect your DAP-1520, then scan for available Wi-Fi networks. Select the network you wish to extend. Enter the password if required.

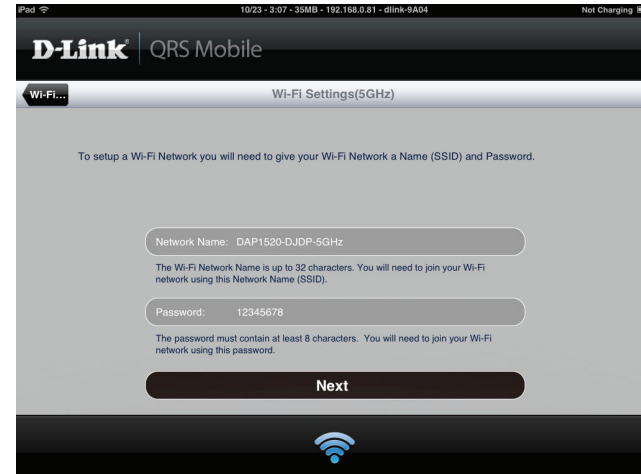


Enter a network name (SSID) and password for the extended 2.4 GHz Wi-Fi network. You may keep the existing SSID and password if you wish. Click **Next** to continue.

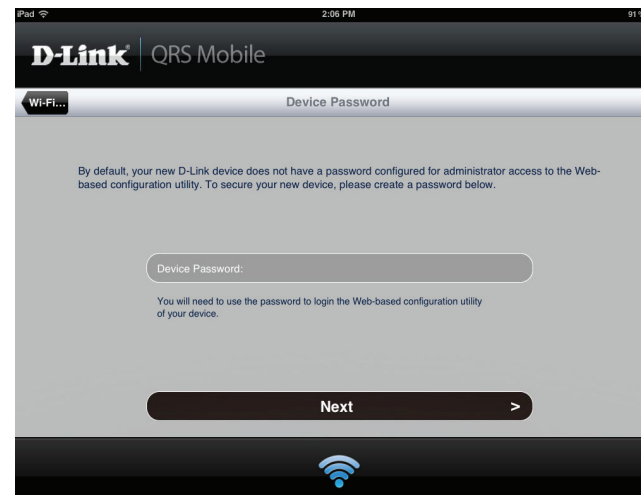




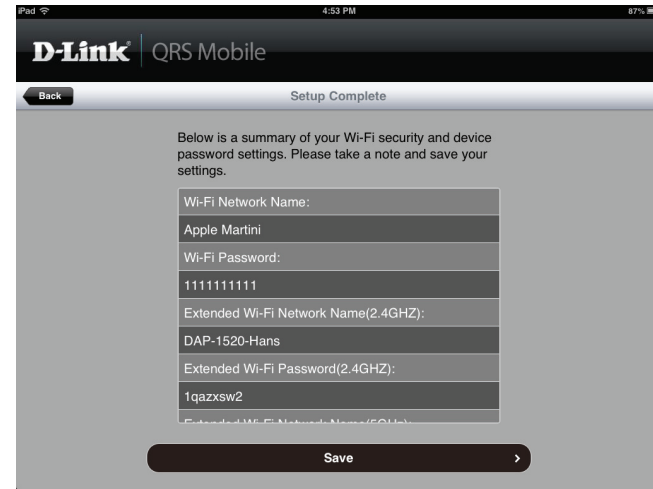
Enter a network name (SSID) and password for the extended 5 GHz Wi-Fi network. Click **Next** to continue.



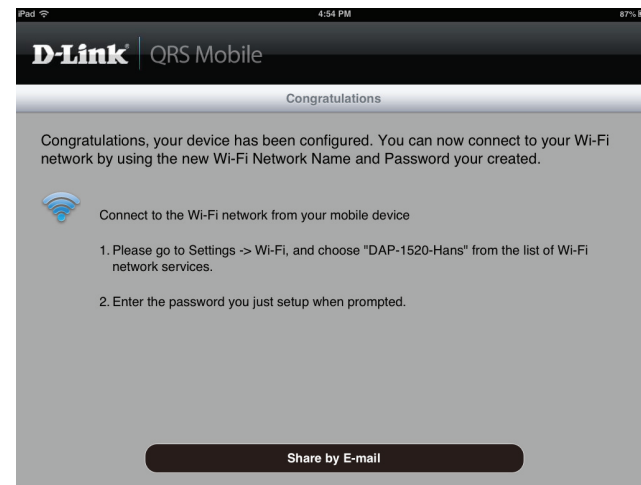
Create an admin password for the DAP-1520's web-based configuration utility. Click **Next** to continue.



A summary of your settings will be displayed. Click **Save** to reboot the device and to complete the setup.



After the setup wizard is complete, the following screen will appear. To connect to the extended network, you can now change your mobile device and laptop Wi-Fi settings to the wireless network name and password you just created. You can also share your Wi-Fi information by clicking **Share by E-mail**.



# Web-based Configuration

To access the configuration utility for the DAP-1520 on your PC, first connect to the DAP-1520 wirelessly using the Wi-Fi name (SSID) and password located on your Wi-Fi Configuration Card. Then open a web browser and enter **http://dlinkap.local/** in your browser's URL field. You may also enter the IP address\* of the DAP-1520. Windows XP users can enter **http://dlinkap**.

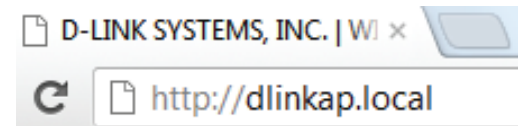
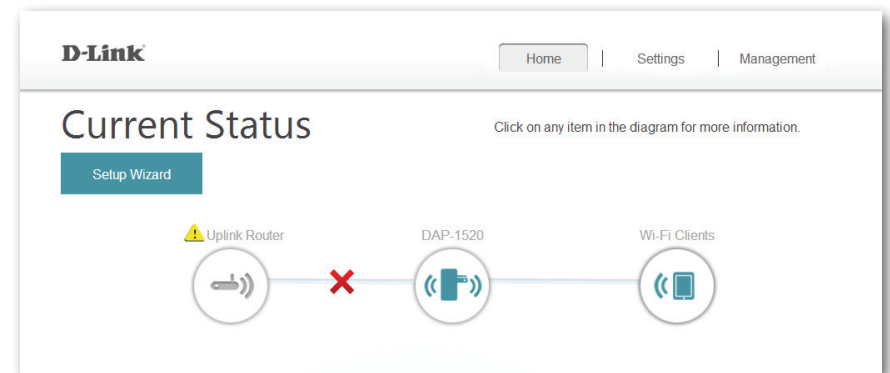
\* The default IP address is 192.168.0.50. Once your DAP-1520 connects to your router, it will be assigned a new IP address based on your network's DHCP settings. You will need to log in to your router to see what IP address was assigned to your DAP-1520.

For multiple DAP-1520s, go to **http://dlinkapxxxx.local**, as shown on the included Wi-Fi Configuration Card, with "xxxx" being the last four digits of the DAP-1520's MAC address.

Enter your password. By default, Admin is selected as the username and cannot be changed, and by default, the password is blank.

The configuration interface will open, and you can configure the various settings for the DAP-1520. If you have not yet configured an uplink network, the home screen will show that there is no connection between the DAP-1520 and the uplink router.

For detailed information on manually setting up your DAP-1520 to extend an existing wireless network, refer to "Using the Manual Method" on page 21.

A screenshot of the login form. It features a label "Admin Password:" above a text input field. Below the input field is a teal "Log In" button.

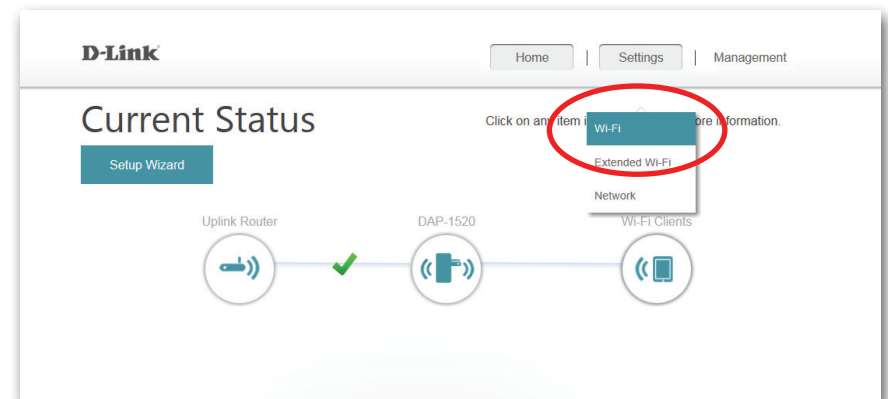
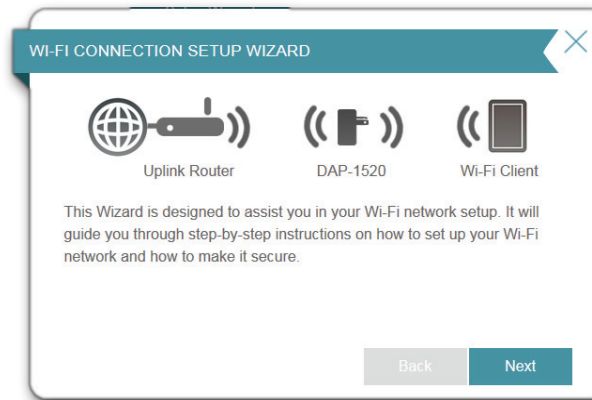
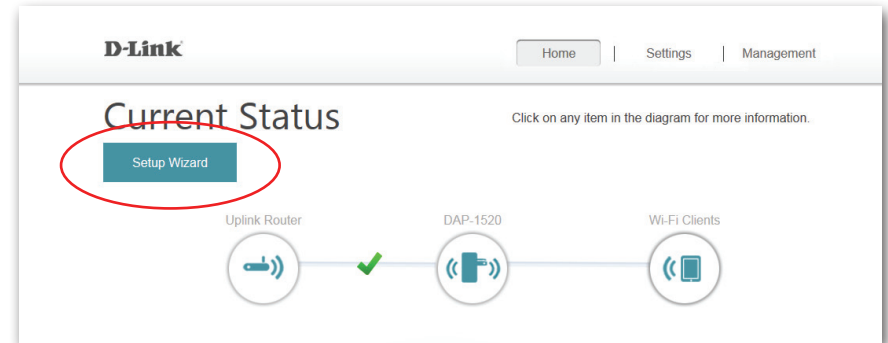
# Setup Wizard

If you wish to configure your extender to connect to the Internet using the setup wizard, click the **Setup Wizard** button.

This wizard is designed to guide you through a step-by-step process to configure your new Wireless AC750 Dual Band Range Extender to extend your wireless network and connect to the Internet.

Click **Next** to continue.

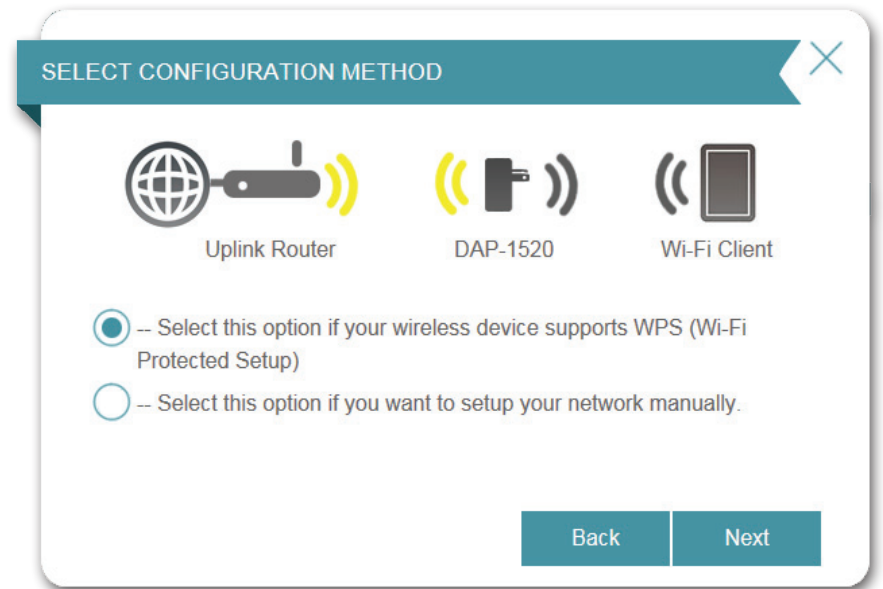
If you already have a Wi-Fi network set up and you want to configure your Wi-Fi network settings manually, go to **Settings** at the top of your browser window and select **Wi-Fi** from the drop-down menu (refer to “Wi-Fi Settings” on page 27) to set up the connection between your DAP-1520 and the uplink router. To set up the extended Wi-Fi network, select **Extended Wi-Fi** (refer to “Extended Wi-Fi Settings” on page 28).



Select whether you want to use the WPS (Wireless Protected Setup) method or the manual method to set up an extended wireless network using your DAP-1520 and click **Next**.

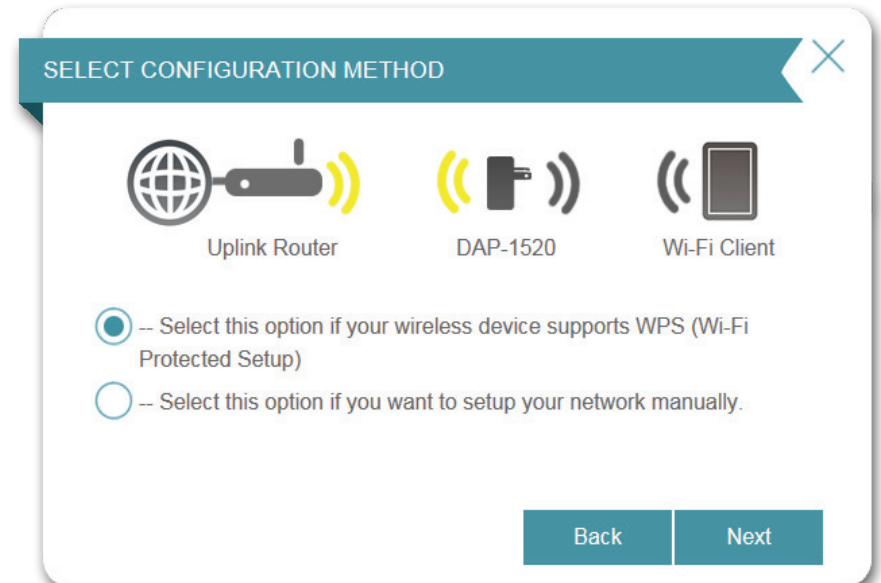
If you wish to use the WPS method, please refer to “Using the WPS Method” on page 18.

If you wish to use the manual setup method, please refer to “Using the Manual Method” on page 21.



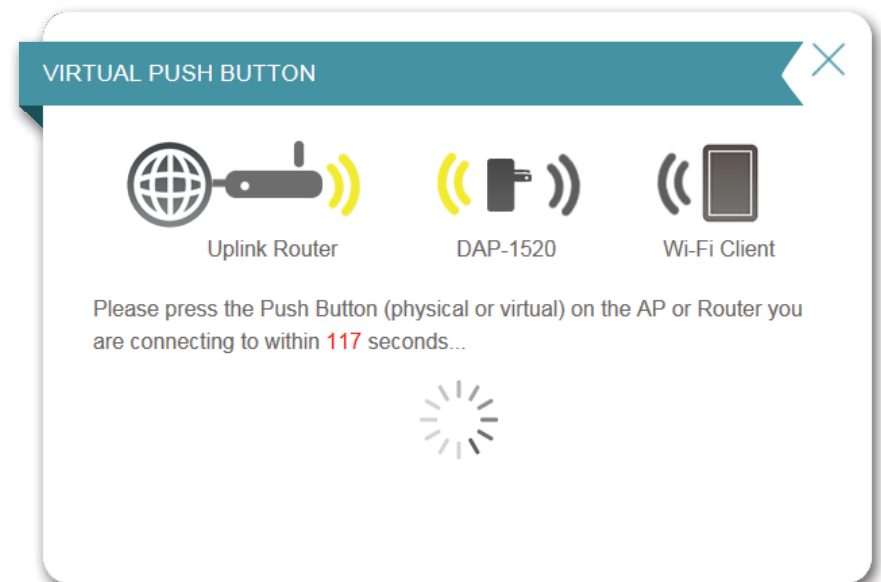
## Using the WPS Method

To set up using the WPS method, select the first option from the setup wizard menu. Click **Next** to continue.

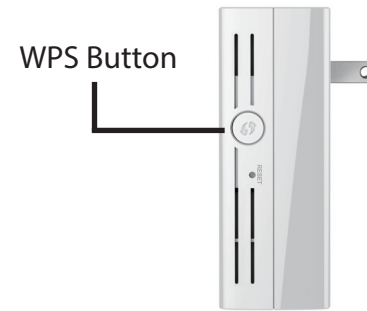


The DAP-1520 uses the push button method for WPS. After selecting WPS, the DAP-1520 will ask you to press the WPS push button on the access point or router you want to connect the DAP-1520 to. You have 120 seconds to press the button on your access point or router. Click **Next** to continue.

If a connection has been successfully made, you will see a notice on the screen and the LED on the device will turn solid green.

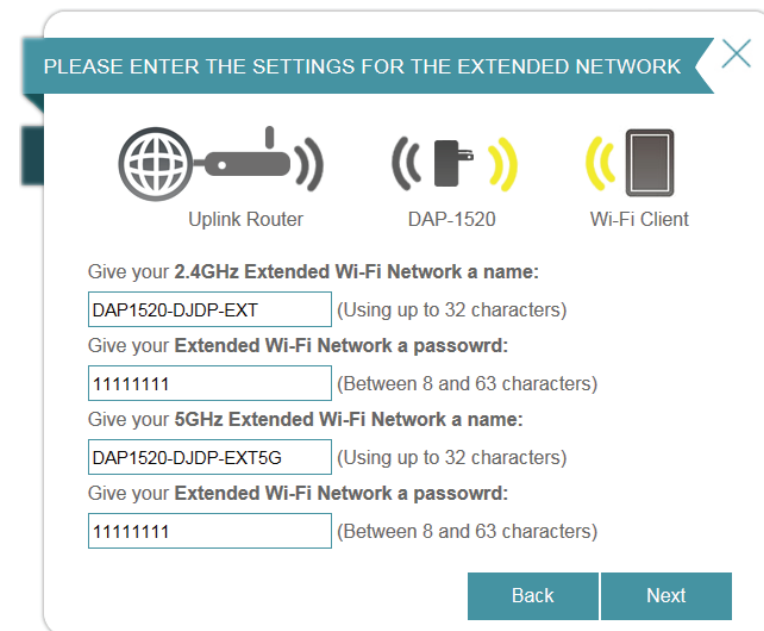


You can also use the WPS button on the side of the DAP-1520 to initiate a WPS connection with the uplink router. After pressing the WPS button on the DAP-1520, you will have 120 seconds to press the WPS button on your access point or router. The LED on the DAP-1520 will turn solid green when a connection has been successfully established with the uplink router.



Once your connection has been established, you can then enter your desired extended network settings for both 2.4 GHz and 5 GHz networks. Click **Next** to continue.

Once you have completed the first time setup, you do not need to create another SSID. Each time you run the setup wizard you can choose to either keep or change the current SSID. If the setup wizard is abandoned on the first time setup then the SSID defaults to the DAP-1520 factory setting. The next time you enter the setup wizard the SSID displayed will be that of the DAP-1520 factory setting. You can still rename this SSID.




Once you have completed the first time setup, you do not need to create another SSID. Each time you run the setup wizard you can choose to either keep or change the current SSID.


The next screen will show your network name and password settings you entered in the previous step. Click **Save** to complete the setup.

Your changes will be saved and the device will reboot.


SETUP COMPLETE



Uplink Router



DAP-1520



Wi-Fi Client

Please take a note of the following summary of your Wi-Fi Security settings for future reference.

Wi-Fi Network Name: DIR626L-dan  
Wi-Fi Password: 11111111

Extended Wi-Fi Network Name(2.4GHz): DAP1520-DJDP-EXT  
Extended Wi-Fi Password: 11111111

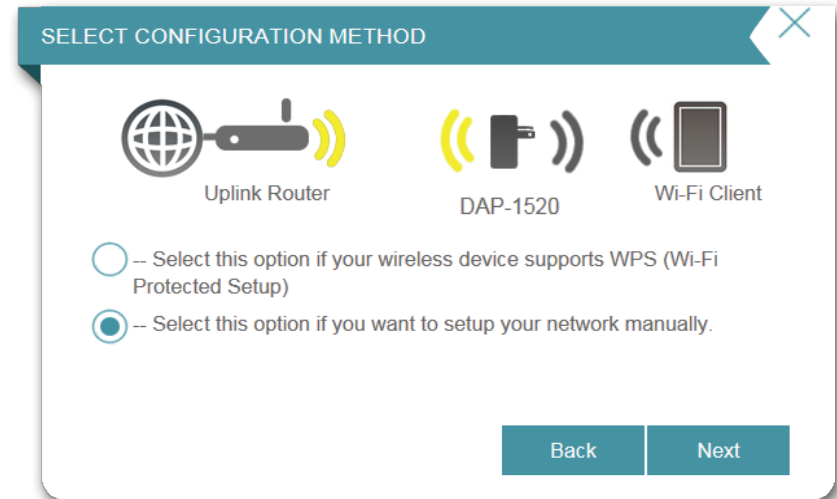
Extended Wi-Fi Network Name(5GHz): DAP1520-DJDP-EXT5G  
Extended Wi-Fi Password: 11111111

Back Save



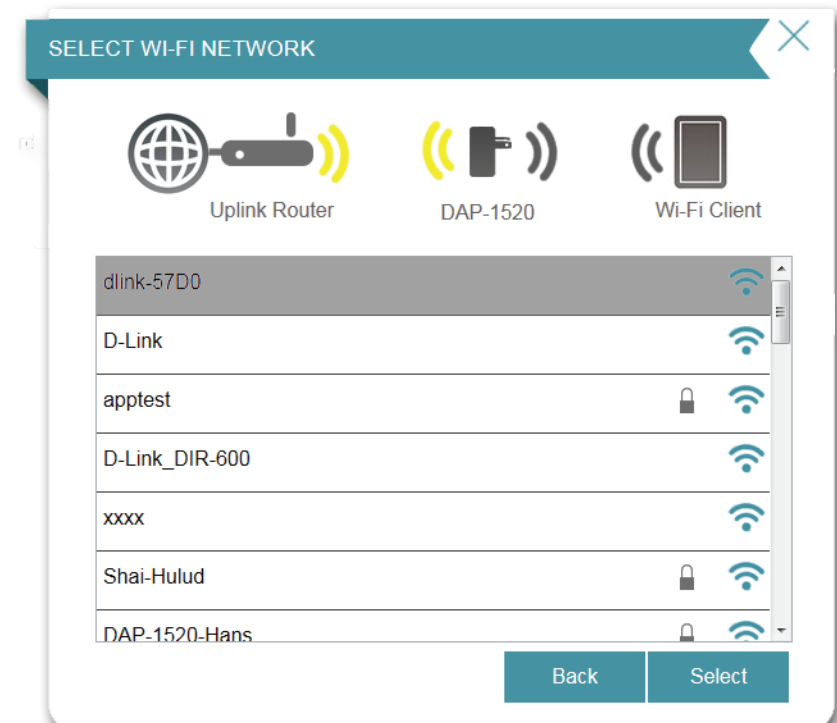
## Using the Manual Method

To set up your network manually, select the second option from the setup wizard menu. Click **Next** to continue.



The DAP-1520 will first scan for available Wi-Fi networks and list the networks it has found. If the network you would like to connect to isn't listed, click **Back** and select the manual option again to perform another scan.


Click to highlight the uplink network you wish to use, then click the **Select** button.




Enter the password for your uplink network.

Click **Next** to continue, or click **Back** to return to the previous step.


ENTER WI-FI PASSWORD
✕



Uplink Router



DAP-1520



Wi-Fi Client

Please enter Wi-Fi Password to establish wireless connection

Wi-Fi Password:

(Between 8 and 63 characters)


Back
Next

The DAP-1520 will re-broadcast the Wi-Fi connection from the uplink router as extended 2.4 GHz and 5 GHz Wi-Fi networks. When configuring the DAP-1520 for the first time, the wizard will create a new Wi-Fi network name (SSID) based on the SSID of your existing network. This is so that the extended Wi-Fi network can be distinguished from your existing network. If you wish, you can rename the SSID using the wizard.


Once you have completed the first time setup, you do not need to create another SSID. Each time you run the setup wizard you can choose to either keep or change the current SSID. If the setup wizard is abandoned on the first time setup then the SSID defaults to the DAP-1520 factory setting. The next time you enter the setup wizard the SSID displayed will be that of the DAP-1520 factory setting. You can still rename this SSID.

Click **Next** to continue, or click **Back** to return to the previous step.


PLEASE ENTER THE SETTINGS FOR THE EXTENDED NETWORK
✕



Uplink Router



DAP-1520



Wi-Fi Client

Give your **2.4GHz Extended Wi-Fi Network** a name:

(Using up to 32 characters)

Give your **Extended Wi-Fi Network** a password:

(Between 8 and 63 characters)

Give your **5GHz Extended Wi-Fi Network** a name:

(Using up to 32 characters)

Give your **Extended Wi-Fi Network** a password:

(Between 8 and 63 characters)




Back
Next

The setup process is now complete. A summary page will appear showing the settings for both the connection to the uplink router and the extended Wi-Fi network. It is recommended that you record this information for future reference.

Click **Save** to exit the wizard and return to the home screen.

Or, click **Back** to return to the previous step.

SETUP COMPLETE ✕

 Uplink Router       DAP-1520       Wi-Fi Client

Please take a note of the following summary of your Wi-Fi Security settings for future reference.

Wi-Fi Network Name: DIR626L-dan  
Wi-Fi Password: 11111111

Extended Wi-Fi Network Name(2.4GHz): DAP1520-DJDP-EXT  
Extended Wi-Fi Password: 11111111

Extended Wi-Fi Network Name(5GHz): DAP1520-DJDP-EXT5G  
Extended Wi-Fi Password: 11111111

[Back](#)      [Save](#)

## Home Screen

The home screen gives a summary of the current status of devices connected to the DAP-1520. A green check between the device and the uplink router indicates that there is an active connection. A red cross indicates that there is no connection present, or there is a connection error.

To alter the present configuration step-by-step using the setup wizard, click **Setup Wizard**.

---

### Current Status

Click on any item in the diagram for more information.

Setup Wizard

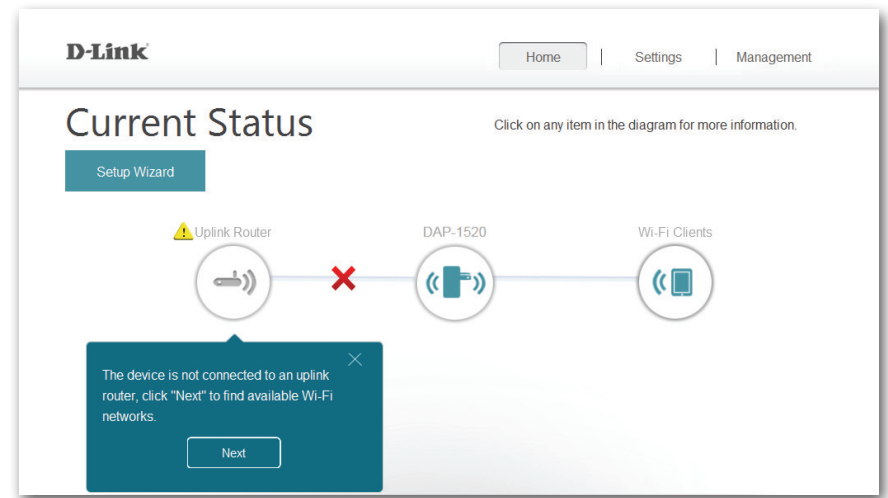


**Uplink Router:** This icon shows the status of the Internet connection to the uplink router. It is grey if the DAP-1520 is not connected to an uplink router. Once connected, click on it to see its connection details.

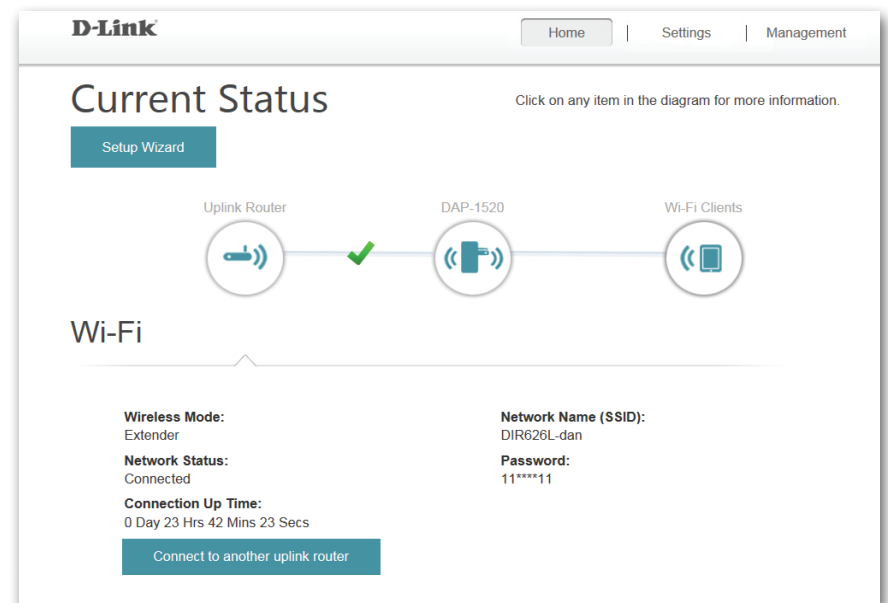
**DAP-1520:** Click on this icon to see details of the uplink network the DAP-1520 is connected to or connect to another uplink router..

**Wi-Fi Clients:** Click on the Wi-Fi Clients icon to see client details.

If there is no connection between the DAP-1520 and the uplink router, you can click on the uplink router icon to search for an available uplink router.



At any time, you can click on the device images on the home screen to view the current status of each device.



You can view the details of both the uplink network and the extended Wi-Fi network by clicking on the DAP-1520 icon.

The screenshot displays the D-Link web interface for the DAP-1520. At the top, there are navigation tabs for 'Home', 'Settings', and 'Management'. The main heading is 'Current Status' with a sub-note: 'Click on any item in the diagram for more information.' Below this is a 'Setup Wizard' button and a network diagram showing 'Uplink Router', 'DAP-1520', and 'Wi-Fi Clients' connected in a line. A green checkmark is positioned between the Uplink Router and DAP-1520. Below the diagram, the 'DAP-1520' section provides hardware and firmware versions. Two expandable sections, 'Network' and 'Extended Wi-Fi', are shown with their respective configuration details.

**D-Link** Home | Settings | Management

## Current Status

Click on any item in the diagram for more information.

[Setup Wizard](#)

Uplink Router — — DAP-1520 — Wi-Fi Clients

### DAP-1520

Hardware Version: a1 Firmware Version: 1.00

[Network](#) [Extended Wi-Fi](#) [IPv4 / IPv6](#)

**Network**

- MAC Address: 00:18:e7:95:9a:04
- Device IP Address: 192.168.0.128
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.0.1
- DNS Server: 192.168.0.1

**Extended Wi-Fi**

- Wi-Fi Network Name (2.4GHz): DAP-1520-Claire
- Password: 1qaz!sw2
- Wi-Fi Network Name (5GHz): DAP-1520-Claire2
- Password: 1qaz!sw2

# Wi-Fi Settings

This page lets connect your DAP-1520 to a wireless network. This is the uplink network which the DAP-1520 will then be able to extend. To access this page, point to the **Settings** drop-down menu at the top of the page, and select Wi-Fi. Click **Save** to save the settings and return to the home page.

**Wireless Mode:** This is set to Repeater mode and cannot be changed.

**Wi-Fi Network Name (SSID):** Click **Scan** to scan for available wireless networks and select the one you want to use the DAP-1520 to extend. You can also type in the name (SSID) of the wireless network.

**Security:** Select the security method that is being used by the wireless network that you have selected: **WEP**, **WPA/WPA2**, or **None**.

**Password:** If you selected WEP or WPA/WPA2, you will be required to enter the password or security key for the network you are attempting to join.

You can also use WPS to connect your wireless devices to the DAP-1520's extended network. For further information on how to do this, please refer to "Connecting a Wireless Client" on page 37.

The screenshot shows the D-Link web interface for Wi-Fi Settings. At the top, there is a navigation bar with 'D-Link' on the left and 'Home', 'Settings', and 'Management' on the right. The main content area has a heading 'Wi-Fi Settings' and a sub-heading 'Settings >> Wi-Fi'. Below the heading is a 'Save' button. The form contains the following fields:

- Wireless Mode: Extender
- Wi-Fi Network Name (SSID): DIR626L-dan (with a 'Scan' button next to it)
- Security: WPA/WPA2-Personal (with a dropdown arrow)
- Password: 11\*\*\*\*11

## Extended Wi-Fi Settings

This page lets you configure the settings for the DAP-1520's extended wireless network. To access this page, point to the **Settings** drop-down menu at the top of the page, and select Extended Wi-Fi. Click **Save** to save the settings and return to the home page.

### 2.4 GHz

**Wi-Fi Name (SSID):** This is the name of the DAP-1520's extended network. The DAP-1520 will rebroadcast the uplink router's Internet connection under this SSID. You can also choose to make the SSID for the extended network the same as the SSID for the uplink network.

**Security:** Select the type of wireless security you wish to use for the extended network. Choose **None**, **WEP**, or **WPA/WPA2 Personal**.

**Password:** Enter the password or network key that you wish to use for the extended network.

### 5 GHz

**Wi-Fi Name (SSID):** Enter the SSID for the extended 5 GHz network here.

**Security:** Select the type of wireless security you wish to use for the extended 5 GHz network. Choose **None**, **WEP**, or **WPA/WPA2 Personal**.

**Password:** Enter the password or network key that you wish to use for the extended 5 GHz network.

The screenshot displays the 'Extended Wi-Fi Settings' page on a D-Link device. At the top, there are navigation links for 'Home', 'Settings', and 'Management'. The main heading is 'Extended Wi-Fi Settings' with a sub-note: 'Use this section to configure the wireless settings for your D-Link Extender. Please note that changes made on this section may also need to be duplicated on your Wireless Client.' Below this, there is a breadcrumb trail 'Settings >> Extended Wi-Fi' and a 'Save' button. The settings are organized into two sections: '2.4GHz' and '5GHz'. Each section contains three input fields: 'Wi-Fi Name(SSID)', 'Security', and 'Password'. For the 2.4GHz section, the SSID is 'DAP1520-DJDP-EXT', Security is 'WPA/WPA2-Personal', and Password is '11111111'. For the 5GHz section, the SSID is 'DAP1520-DJDP-EXT5G', Security is 'WPA/WPA2-Personal', and Password is '11111111'.



# Network Settings

This page lets you configure the network settings for the DAP-1520. To access this page, point to the **Settings** drop-down menu at the top of the page, then select **Network**. Click **Save** at any time to save the changes you have made on this page.

**Management Link:** You can change the URL name of the device by editing the text in the text box. If you change the name of the device, you will need to enter "http://xxxx.local." (where "xxxx" corresponds to the name of the device) in the address bar of your web browser in order to access the configuration utility.

Settings >> Network Save

**Network Settings**

Device Name: http://  .local. Advanced Settings...

## Advanced Settings

The Advanced Settings section of the Network Settings page allows you to configure both IPv4 and IPv6 settings that will be used by the DAP-1520's extended network.

### IPv4 Device Management Interface

**My LAN Connection is:** Here you can select whether you want the IP to have a **Dynamic IP** or **Static IP** address. If you select Dynamic IP, the options below will not be available.

**IP Address:** Enter the Static IP address that you want to assign to the extended network AP. This address should be outside of the uplink router's DHCP address pool.

**Subnet Mask:** Enter the subnet mask.

**Gateway Address:** Enter the gateway address. This is usually the IP address of the uplink router.

**Primary DNS Server:** Enter the address of the primary DNS server.

**Secondary DNS Server:** Enter the address of the secondary DNS server. This is optional but will provide backup if the primary server fails.

**IPv4 Device Management Interface**

Choose a IPv4 provisioning mechanism to be used by the AP.

My LAN Connection is:  ▼

IP Address:

Subnet Mask:

Gateway Address:

Primary DNS Server:

Secondary DNS Server:

## Autoconfiguration (SLAAC/DHCPv6)

### IPv6 Device Management Interface

**My IPv6 Connection is:** Select **Autoconfiguration (SLAAC/DHCPv6)** to have the DAP-1520 automatically receive an IPv6 address from the uplink router.

**Obtain DNS Server Address:** You can select to obtain IPv6 DNS server information automatically, or you can select to configure DNS servers manually by clicking on the radio dial next to the option.

**Primary DNS Server:** For manual settings, enter the primary IPv6 DNS server address.

**Secondary DNS Server:** For manual settings, enter the secondary IPv6 DNS server address. This is optional but will provide backup if the primary server fails.

The screenshot shows the 'IPv6 Device Management Interface' configuration page. At the top, it says 'Choose a IPv6 provisioning mechanism to be used by the AP.' Below this, there is a dropdown menu labeled 'My IPv6 Connection is:' with 'Autoconfiguration (SLAAC/DHCPv6)' selected. Underneath, it says 'Obtain a DNS server address automatically or enter a specific DNS server address.' There are two radio button options: 'Obtain IPV6 DNS Servers automatically' (which is unselected) and 'Use the following IPV6 DNS Servers' (which is selected). At the bottom, there are two text input fields labeled 'Primary DNS Server:' and 'Secondary DNS Server:'.

## Static IPv6

### IPv6 Device Management Interface

**My IPv6 Connection is:** Select **Static IPv6** to manually assign an IP address to the DAP-1520.

**IPv6 Address:** Enter the IPv6 address that you want to assign to the extended network AP. This address should be outside of the uplink router's DHCP address pool.

**Subnet Prefix Length:** Enter the length of the IPv6 subnet prefix.

**Default Gateway:** Enter the default gateway.

**Primary DNS Server:** Enter the primary IPv6 DNS server address.

**Secondary DNS Server:** Enter the secondary IPv6 DNS server address. This is optional but will provide backup if the primary server fails.

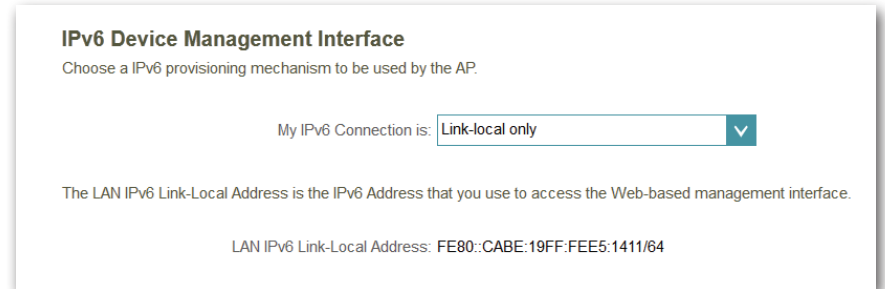
The screenshot shows the 'IPv6 Device Management Interface' configuration page. At the top, it says 'Choose a IPv6 provisioning mechanism to be used by the AP.' Below this, there is a dropdown menu labeled 'My IPv6 Connection is:' with 'Static IPv6' selected. Underneath, it says 'Enter the IPv6 address information that you would like to use to access the Web-based management interface.' There are five input fields: 'IPv6 Address:', 'Subnet Prefix Length:', 'Default Gateway:', 'Primary DNS Server:', and 'Secondary DNS Server:'.

## Link-local Only

### IPv6 Device Management Interface

**My IPv6 Connection is:** Select **Link-local only** to only set an IPv6 address for the local network.

**LAN IPv6 Link-Local Address:** The link-local address of the DAP-1520.



The screenshot shows a configuration window titled "IPv6 Device Management Interface". Below the title, it says "Choose a IPv6 provisioning mechanism to be used by the AP." There is a dropdown menu labeled "My IPv6 Connection is:" with "Link-local only" selected. Below this, a note states: "The LAN IPv6 Link-Local Address is the IPv6 Address that you use to access the Web-based management interface." At the bottom, the "LAN IPv6 Link-Local Address" is displayed as "FE80::CABE:19FF:FEE5:1411/64".

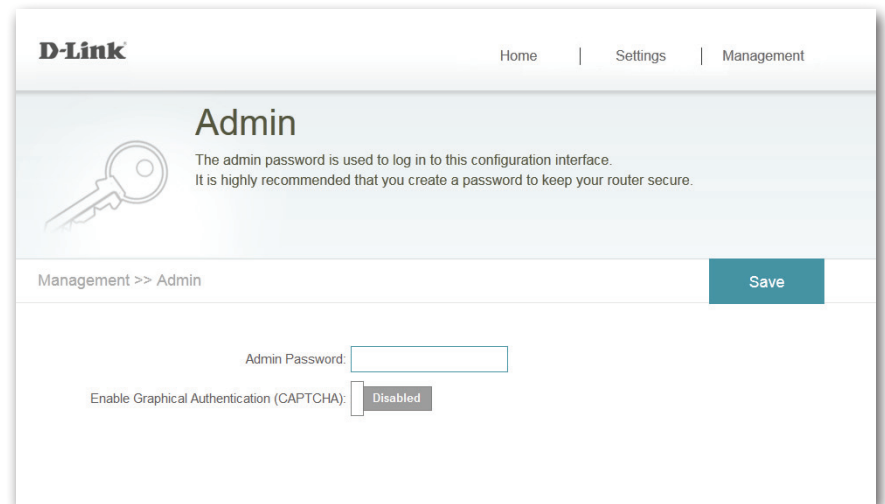
# Maintenance Admin

This page will allow you to set a new password for the administrator account used to configure the DAP-1520. You can also enable graphical authentication (CAPTCHA) on this page. To access this page, point to the **Management** drop down menu at the top of the page, and select **Admin**. Click **Save** at any time to save the changes you have made on this page.

**Admin Password:** Enter the Admin password.

**Enable Graphical Authentication:** Click on the slider to enable graphical authentication, or CAPTCHA. This provides an extra layer of security by requiring you to enter a code that is displayed on-screen. This can help prevent unauthorized users from gaining access to your wireless network using automated methods.

**Note:** The device will reboot after saving the changes for the password to take effect.



The screenshot shows the D-Link Admin configuration page. At the top, there is a navigation bar with the D-Link logo and links for Home, Settings, and Management. The main heading is "Admin" with a key icon. Below the heading, there is a message: "The admin password is used to log in to this configuration interface. It is highly recommended that you create a password to keep your router secure." The page includes a breadcrumb "Management >> Admin" and a "Save" button. The form contains an "Admin Password:" input field and an "Enable Graphical Authentication (CAPTCHA):" slider set to "Disabled".

# System

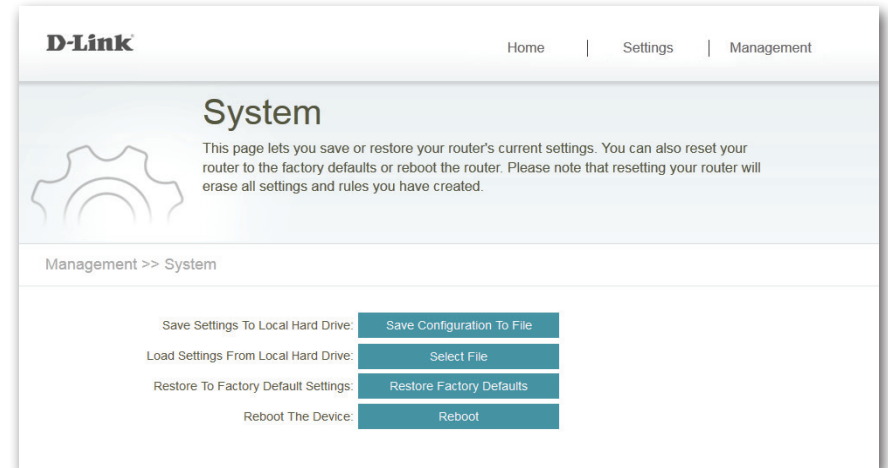
This page allows you to save or restore your system configuration, reset, or reboot the DAP-1520. To access this page, point to the **Management** drop down menu at the top of the page, and select **System**. Click **Save** at any time to save the changes you have made on this page.

**Save Settings To Local Hard Drive:** Save the system settings onto a file to the local hard drive. You will then see a file dialog where you can select a location and enter a file name for the configuration file.

**Load Settings From Local Hard Drive:** Load the system settings from a previously saved file on the local hard drive.

**Restore to Factory Default Settings:** Restore the system settings to factory default settings. This will erase all currently stored settings.

**Reboot the Device:** Click **Reboot** to reboot the DAP-1520.



# Upgrade

Firmware and language upgrades may be provided for the DAP-1520 in future. You can check and upgrade your firmware and language pack on this page. To access this page, point to the **Management** drop down menu at the top of the page, and select **Upgrade**. Click **Save** at any time to save the changes you have made on this page.

## Firmware Information

**Firmware Information:** This section displays the currently installed firmware version, as well as the date on which the current firmware version was released.

Click **Check For New Firmware** to find out if there is new or updated firmware. If there is, you can download it to your computer.

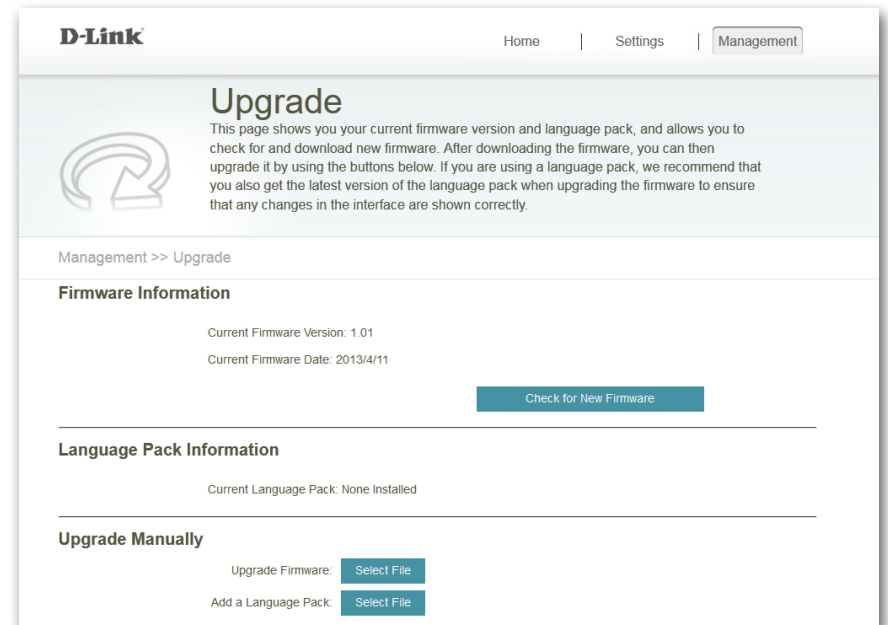
## Language Pack Information

This section will show the details of any language packs currently installed.

## Upgrade Manually

**Upgrade Firmware:** Click **Select File** to locate the firmware file on your computer and perform a manual firmware upgrade.

**Add a Language Pack:** Click **Select File** to locate a language pack file on your computer and add the language pack to the user interface.



# Statistics

This page displays details about your wireless and network connections. To access this page, point to the **Management** drop-down menu at the top of the page, and select **Statistics**. Click **Clear** to reset the statistics.

## Wi-Fi

Click on the **Wi-Fi** tab to display the statistics for the connection between the DAP-1520 and the uplink router.

The Blue line indicates the upload speeds and the red line indicates the download speeds.

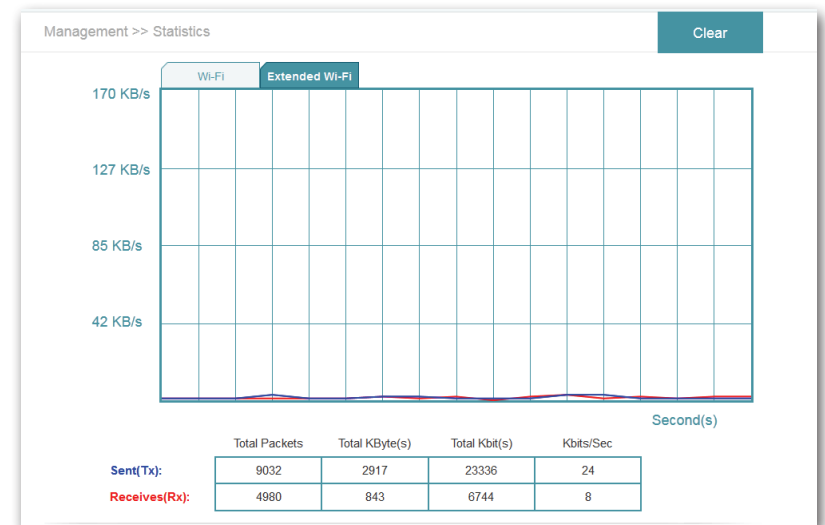
The table displays the following in real-time:

- Total Packets
- Total Byte(s)
- Total Kbit(s)
- Kbits/sec



## Extended Wi-Fi

Click on the **Extended Wi-Fi** tab to display the statistics for the connection between the DAP-1520 and any connected clients.





# Connecting a Wireless Client

## WPS Button

WPS (Wi-Fi Protected Setup) is a simple and secure way to connect your wireless devices with the DAP-1520. Most wireless devices such as wireless routers, media players, printers, and cameras will have a WPS button (or a software utility with WPS) that you can press to connect to the DAP-1520. Please refer to the user manual for the wireless device you want to connect to make sure you understand how to enable WPS. Once you know, follow the steps below:

**Step 1** - Press the WPS button on the DAP-1520 for about 1 second. The LED on the device will start to blink. You can also use the WPS option in the setup wizard section of the web interface.

**Step 2** - Within 120 seconds, press the WPS button on your wireless device.

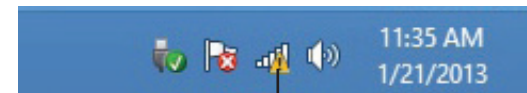
**Step 3** - Allow up to 1 minute to configure. Once the LED light stops blinking and turns solid green, you will be connected and your wireless connection will be secured with WPA2.

# Windows® 8

## WPA/WPA2

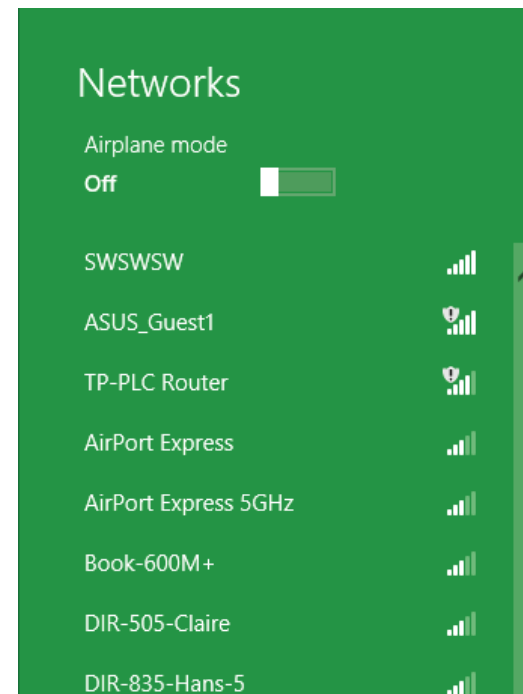
It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key (Wi-Fi password) being used.

To join an existing network, locate the wireless network icon in the taskbar, next to the time display.



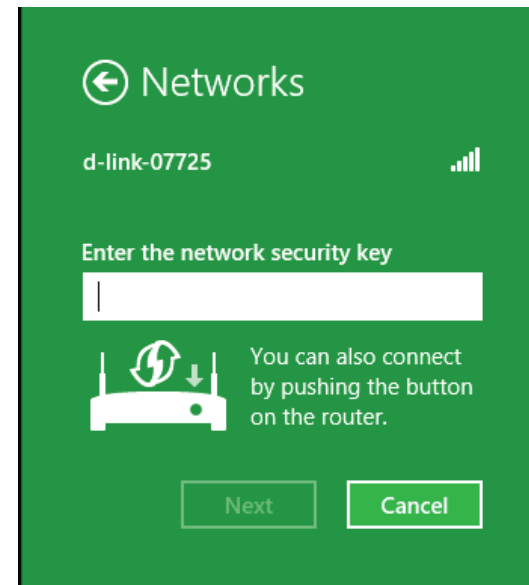
Wireless Icon

Clicking on this icon will display a list of wireless networks which are within connecting proximity of your computer. Select the desired network by clicking on the network name.

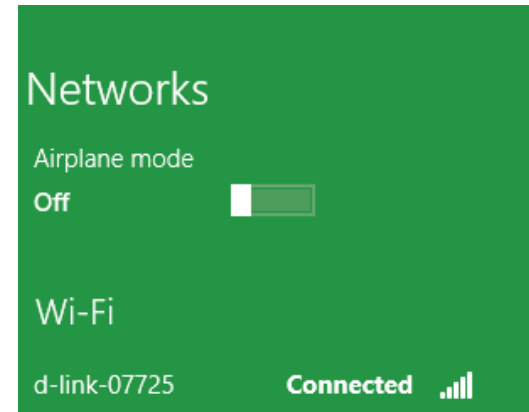


You will then be prompted to enter the network security key (Wi-Fi password) for the wireless network. Enter the password into the box and click **Next**.

If you wish to use Wi-Fi Protected Setup (WPS) to connect to the router, you can also press the WPS button on your router at this point to enable the WPS function.



When you have established a successful connection with a wireless network, the word **Connected** will appear next to the name of the network to which you are connected.

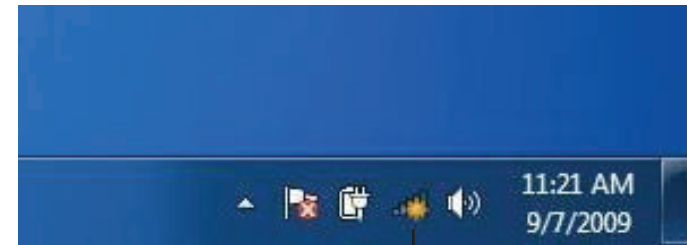


# Windows® 7

## WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Click on the wireless icon in your system tray (lower-right corner).



Wireless Icon

2. The utility will display any available wireless networks in your area.

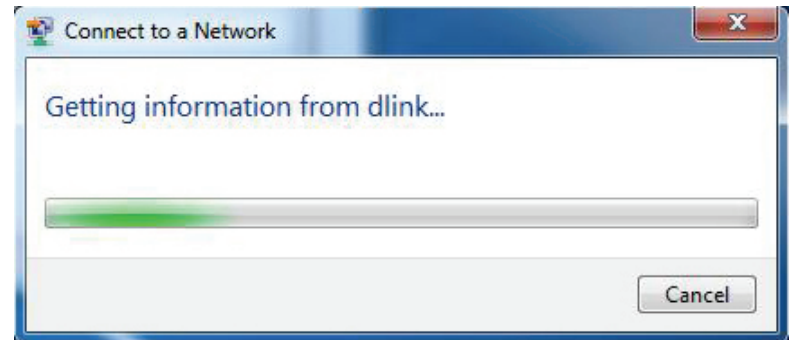


3. Highlight the wireless network (SSID) you would like to connect to and click the **Connect** button.

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

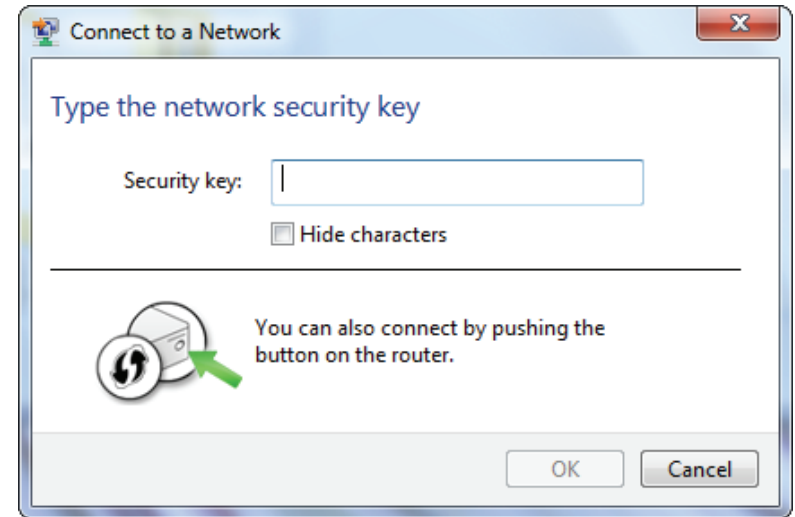


4. The following window appears while your computer tries to connect to the router.



5. Enter the same security key or passphrase that is on your router and click **Connect**.

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



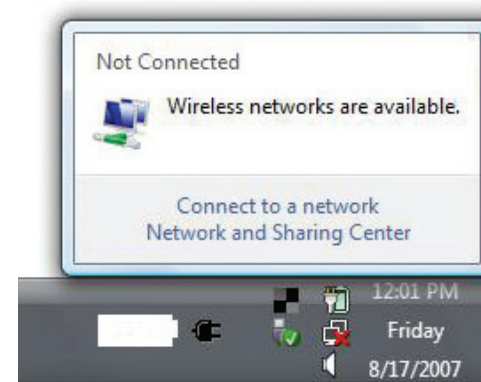
# Windows Vista®

Windows Vista® users may use the built-in wireless utility. 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 Vista® utility as seen below.

If you receive the "Wireless Networks Are Available" bubble, click on the center of the bubble to access the utility.

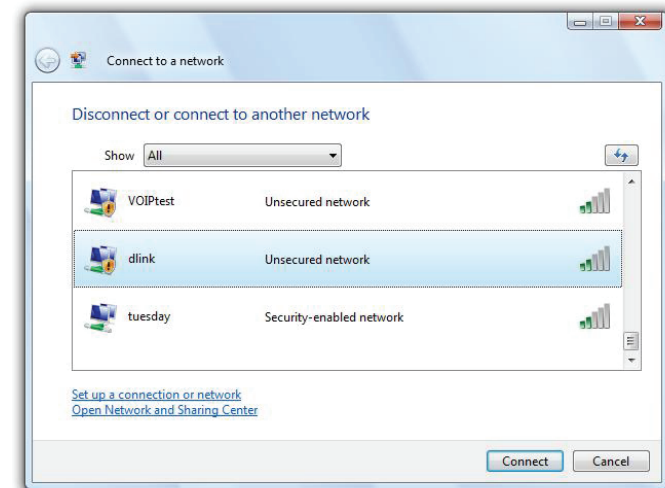
or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **Connect to a network**.



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

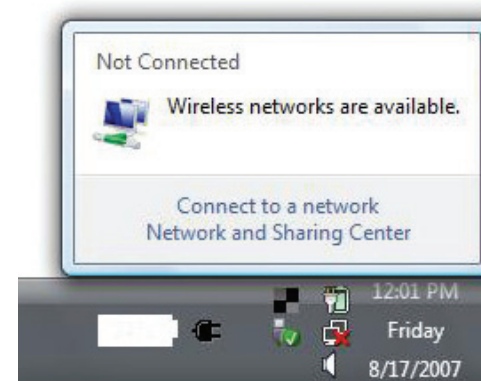
If you get a good signal but cannot access the Internet, check the TCP/IP settings for your wireless adapter. Refer to "Troubleshooting" on page 49 for more information.



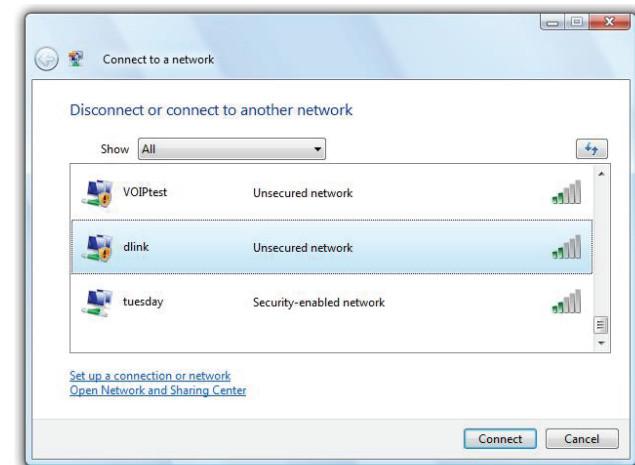
## WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Open the Windows Vista® Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower right corner of screen). Select **Connect to a network**.



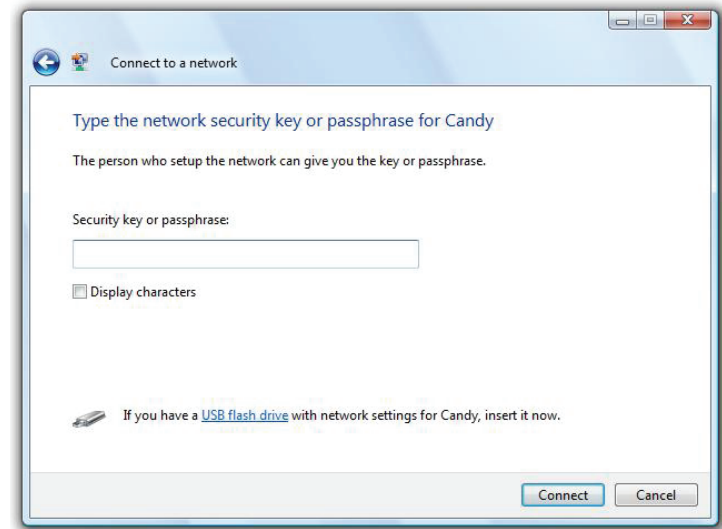
2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.





3. Enter the same security key or passphrase that is on your router and click **Connect**.

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



# 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, 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.

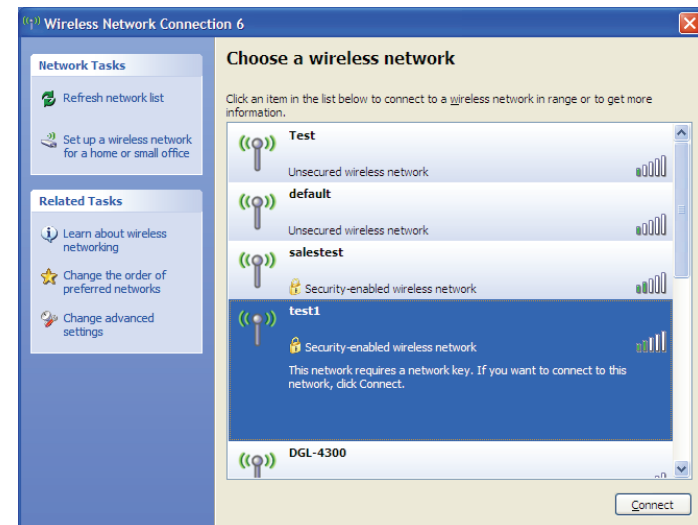
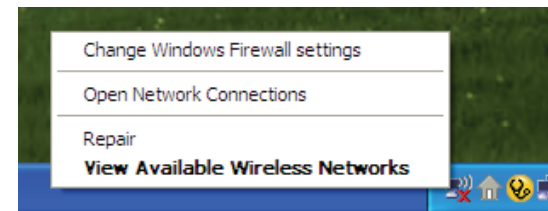
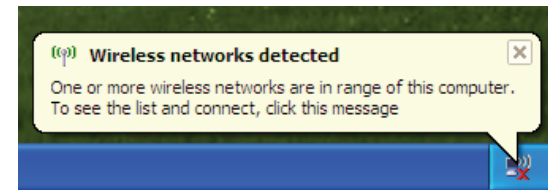
If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

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.

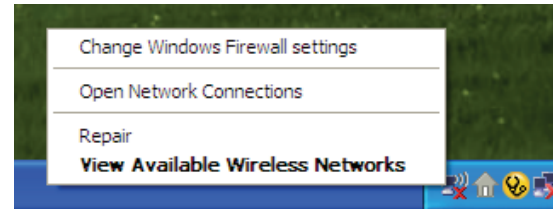
If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the **Wireless Basics** section in this manual for more information.



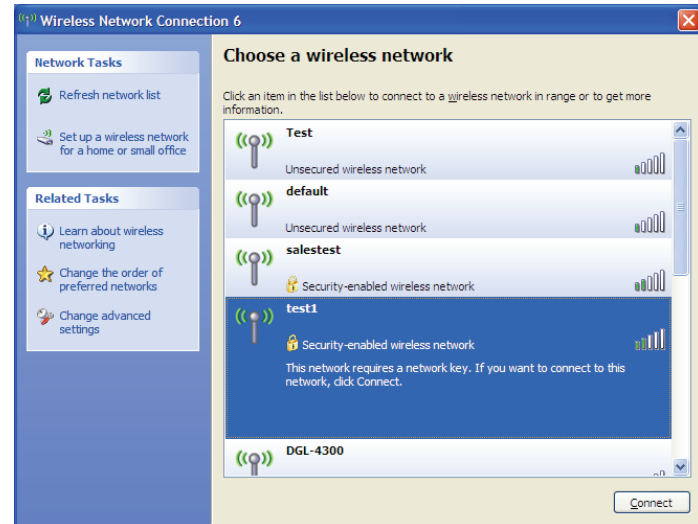
## WPA/WPA2

It is recommended to enable WPA on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WPA 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**.

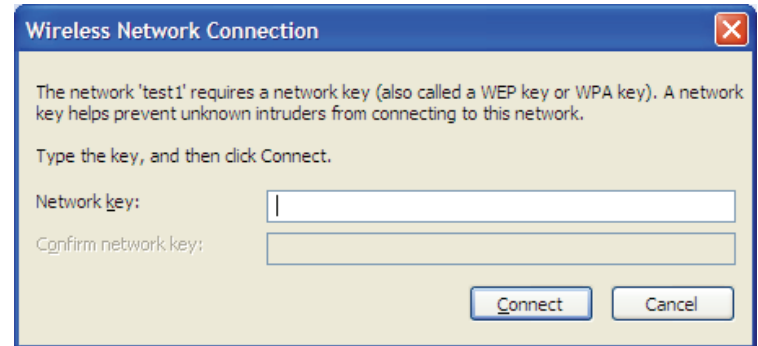


2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. The **Wireless Network Connection** box will appear. Enter the 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 router.



# Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DAP-1520. 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 Wireless AC750 Dual Band Range Extender (dlinkap.local for example), you are not connecting to a website nor do you 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 7 or later
  - Firefox 12.0 or later
  - Safari 4 or later
  - Google Chrome 20.0 or later
- Make sure that you are connected to the same wireless network which is listed on the base of the DAP-1520. If you have an active wired LAN Ethernet connection, try temporarily unplugging the Ethernet cable from the computer you are using, as this may eliminate possible conflicts from having two simultaneous connections on the same computer.
- Disable any Internet security software running on the computer. Software firewalls such as ZoneAlarm, BlackICE, 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 interface. Open your web browser and enter the address of your extender (**http://dlinkap.local**) in the address bar. This should open the login page for your web management. If the DAP-1520 is not connected to an uplink router, you can try accessing the web interface using the default IP address **http://192.168.0.50**.
  - If you still cannot access the configuration, unplug the extender from the power outlet for at least 10 seconds and plug it 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 extender. Unfortunately this process will change all your settings back to the factory defaults.

To reset the extender, locate the reset button (hole) on the underside panel of the unit. With the extender powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the extender will go through its reboot process (indicated by the LED turning red). Wait about 30 seconds to access the extender. The default IP address is **http://dlinkap.local**. When logging in, the username is **admin** and leave the password box empty.

# 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 and conveniently access your network. 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 adapters 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 router is a device used to provide this link.

## Tips

Here are a few things to keep in mind when you are installing your Wireless AC750 Dual Band Range Extender.

### **Centralize the extender's location**

For best performance, make sure you place the extender in a centralized location within your desired usage area. Try to place the extender so that there are minimal obstructions between it and the uplink router. If possible, use an elevated power outlet, so the signal can be dispersed more easily. If you have a large home or usage area, you may need several extenders in order to achieve optimal coverage.

### **Eliminate Interference**

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

### **Security**

Don't let your neighbors or intruders connect to your wireless network. Secure your wireless network by utilizing the WPA or WEP security feature on the extender and uplink router. Refer to the relevant sections of this manual for further details.



# Technical Specifications

## Standards

- IEEE 802.11ac draft
- IEEE 802.11a
- IEEE 802.11n
- IEEE 802.11g
- IEEE 802.11b

## Wireless Frequency Range <sup>1</sup>

- 2.4 GHz to 2.4835 GHz
- 5.18MHz to 5.85MHz

## Antenna

- Internal Antenna

## Security

- Wi-Fi Protected Access (WPA/WPA2)
- Wi-Fi Protected Setup (WPS)
- Wired Equivalent Privacy (WEP) 64/128-bit

## Advanced Features

- QRS Mobile setup app for iOS and Android devices

## Device Management

- Web UI

## Diagnostic LEDs

- Status/WPS

## Operating Temperature

- 0 to 40 °C (32 to 104 °F)

## Operating Humidity

- 0% to 90% non-condensing

## Power Input

- AC 110-240 V

## Maximum Power Consumption

- 5.5 W

## Certifications

- EMI/EMC
- FCC
- CE
- IC
- C-Tick
- UL
- Wi-Fi Certified

## Dimensions

- 92 x 58 x 34.2 mm (3.62 x 2.28 x 1.35 inches)

## Weight

- 104 grams (3.67 ounces)

<sup>1</sup> Frequency range varies depending on local regulations

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# Safety Statements

## **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 communications. 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 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.

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.

## **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.

Operations in the 5.15-5.25 GHz / 5.470 ~ 5.725 GHz band are restricted to indoor usage 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 20 cm between the radiator & your body. To maintain compliance with FCC RF exposure compliance requirements, please avoid direct contact to the transmitting antenna during transmitting.

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

**ICC Notice:**

Operation is subject to the following two conditions:

- 1) This device may not cause interference and
- 2) This device must accept any interference, including interference that may cause undesired operation of the device.

**IMPORTANT NOTE:**

**IC Radiation Exposure Statement:**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

- (i) The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems;
- (ii) The maximum antenna gain (2dBi) permitted (for devices in the band 5725-5825 MHz) to comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate, as stated in section A9.2(3).

In addition, users should also be cautioned to take note that high-power radars are allocated as primary users (meaning they have priority) of the bands 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

**Règlement d'Industry Canada**

Les conditions de fonctionnement sont sujettes à deux conditions:

- (1) Ce périphérique ne doit pas causer d'interférence et.
- (2) Ce périphérique doit accepter toute interférence, y compris les interférences pouvant perturber le bon fonctionnement de ce périphérique.