D-Link®

Version 1.01 | 28/04/2023

User Manual

5 km Long Range 802.11ac Wireless Bridge

DAP-3711

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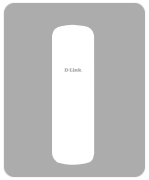
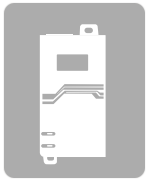
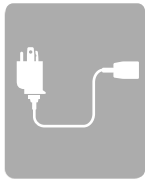


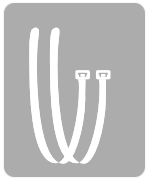
DAP-3711 5 km Long Range 802.11ac Wireless Bridge



24V PoE Injector



Power cord



Mounting ties

Quick Start Guide

Note: Using a PoE Injector with a different voltage rating or PoE injector than the one included with the DAP-3711 will cause damage and void the warranty for this product.

System Requirements

Web-based Configuration Requirements	**Computer with the following:** • Microsoft Windows®, Apple Mac OS, or a Linux-based operating system **Browser Requirements:** • Microsoft Edge, Firefox 60.0, Safari ,or Chrome 68.0.3440.106

Introduction

DAP-3711 is a powerful WIFI Bridge/AP device, which allows WIFI access and video/audio/data transmission device, enables long-range, fast speed and robust wireless connections. DAP-3711 has the advantages of long-distance, high-throughput, and between point-to-multi-point performances.

DAP-3711 also support TDMA. TDMA technology solves the problems of hidden-node problem in the 802.11 network. ACK Time-Out Auto Adjust can automatically detect the distances of the DAP-3711 devices, and thus adjust the wireless parameters to achieve the best wireless link quality.

The best transmission range and max speed of DAP-3711 is up to 867Mbps[1], making it suitable for many applications of WIFI Bridge, especially point-to-multi-point communication.

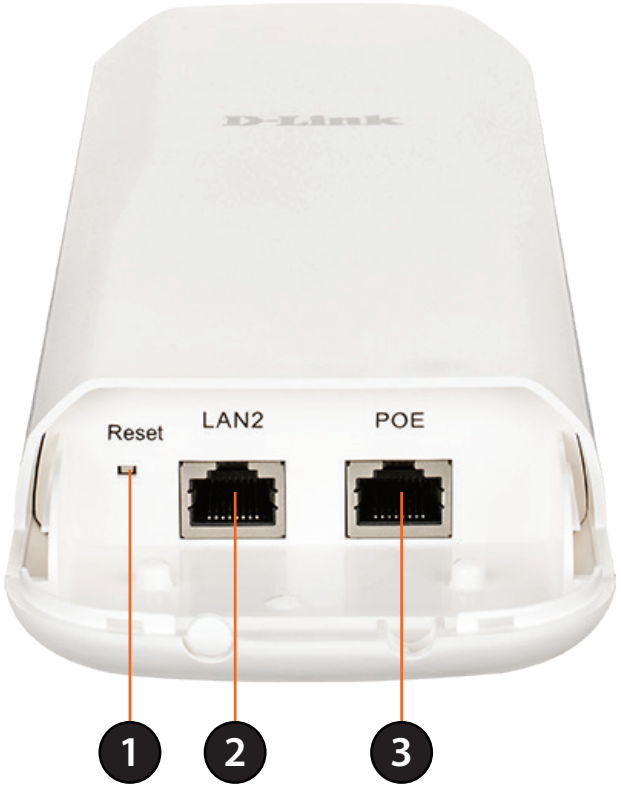
[1] Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate.

Features

- High-performance 802.11ac 2×2 chip
- Max. transmission range: 5 km
- Max. transmission throughput: up to 867 Mbps
- Integrated TDMA, intelligent rate control, and Auto ACK timeout
- TDMA solves the problems of hidden-node problem in the 802.11 network, thus having better long-distance and PTMP performance
- Supports 4 operation modes: Access Point, Client, WDS Access Point, WDS Client
- Supports point-to-point and point-to-multipoint connections
- Unique RF and antenna design enable long-range transmission
- Wireless multimedia optimization technology guarantees video/audio transmission QoS
- User-friendly web-based UI makes the installation and setup processes much easier
- Reliable PoE power supply
- Waterproof housing and protection from weather
- Web-based configuration, easy to use
- Support dual backup firmware, maintenance operation will be safer and more reliable
- Web based working scenario selection makes the installation and setting much easier

Hardware Overview

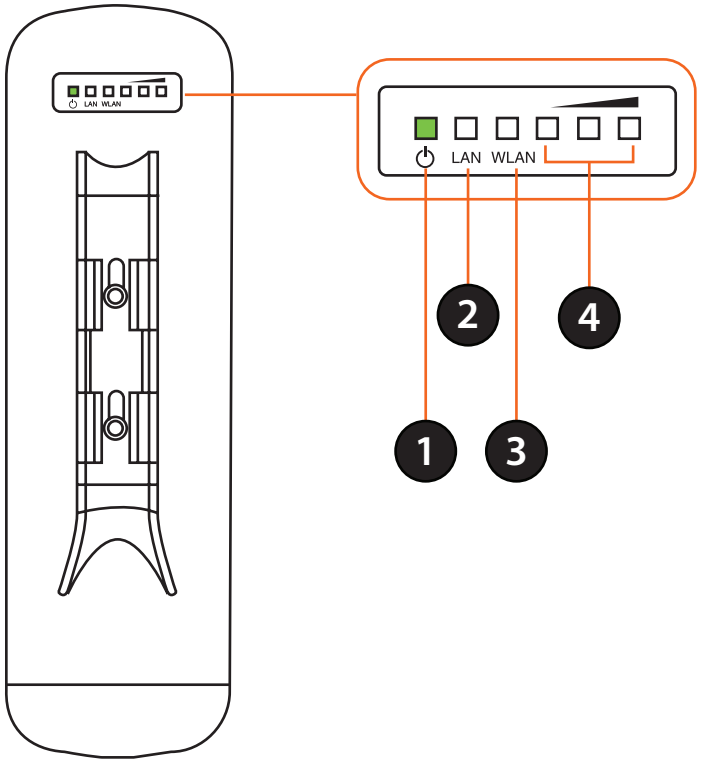
Connection



1	**Reset Button**	Resets the device to its factory settings.
2	**LAN 2 Port**	Uses a standard Ethernet cable to connect to devices such as computers and switches.
3	**PoE LAN Port**	Uses a standard Ethernet cable to connect the device to a PoE power source such as a PoE switch or PoE injector.

Note: The DAP-3711 uses a proprietary PoE injector which is needed to function correctly. Only use the included PoE injector as other power sources such as 3rd party PoE injector es or hubs may damage the DAP-3711 or cause it to operate unreliably and will also void the warranty.

Hardware Overview
LED Indicators



1	**Power**	Power indicator. Green light indicates the power is on.
2	**LAN**	Network connection light. A steady green light indicates the LAN port of the PoE power supply is connected to a network device. A flashing green light indicates data is being transmitted.
3	**WLAN**	Wireless indicator. Lights up to indicate wireless activation. Flashes when data is being transmitted.
4	**Signal Strength**	Signal strength indicator. A red light indicates a weak signal. Red and yellow together indicates a medium signal. Yellow, red and green together indicates a strong signal.

Installation

Preparation before Installation

Before installing the DAP-3711, check the distance between the two sides and ensure that they are within wireless signal range of each other. It may be helpful to use a Graphic Information System (GIS) program such as Google Earth to check for obstructions between the two sites. If there is an obstruction, it may help to install the DAP-3711 as high as possible to prevent the signal from being blocked.

Note: Ensure that both devices have the same model number and are running the same firmware version. The radiation pattern and wireless protocol of the DAP-3711 is designed for high-performance bridge connectivity. Using different models or models with mismatched firmware versions may cause problems, such as performance degradation or a reduction in coverage area.

Powering the Access Point

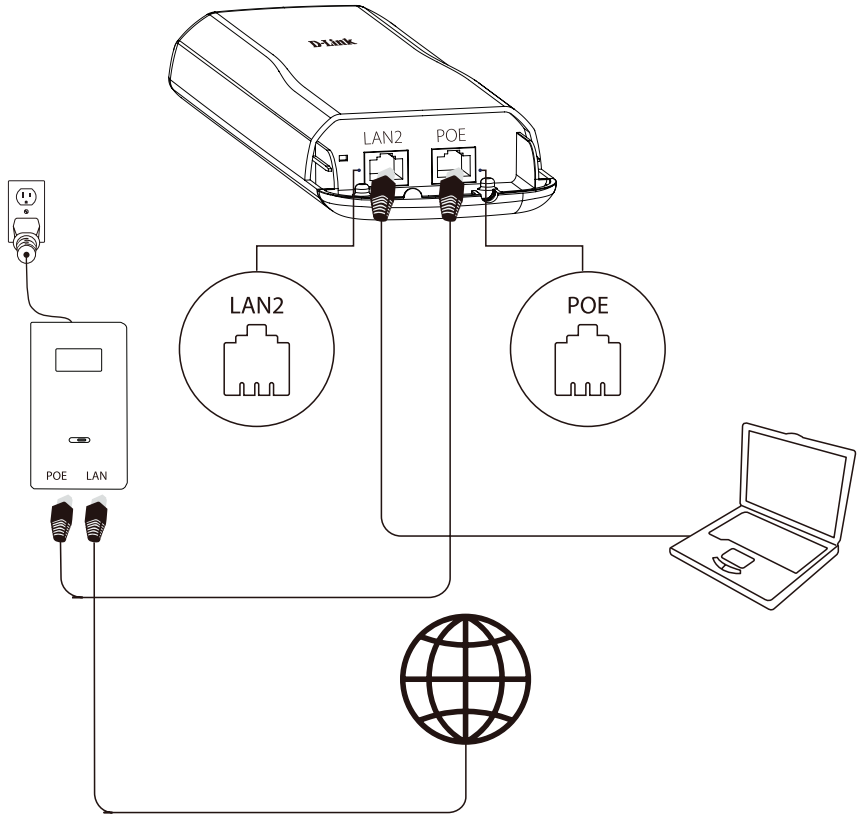
To power the DAP-3711, use a standard Ethernet cable to connect the PoE port on the DAP-3711 to a 24V PoE injector.

Cable Requirements

Use a CAT 5 cable with an even sheath. The Ethernet ports on the DAP-3711 access point cannot accept a CAT 5 cable that has an uneven sheath; the RJ-45 connector on the cable will not fit properly into the receptacle on the access point.

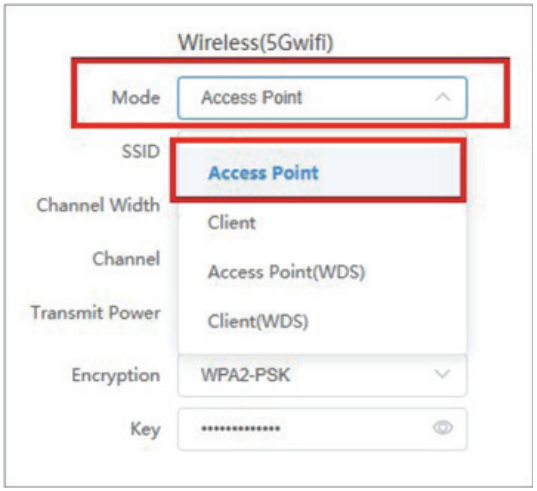
Configuring the First DAP-3711 in Access Point Mode

1. Use an Ethernet cable to connect the LAN 2 port on the DAP-3711 to the management computer.



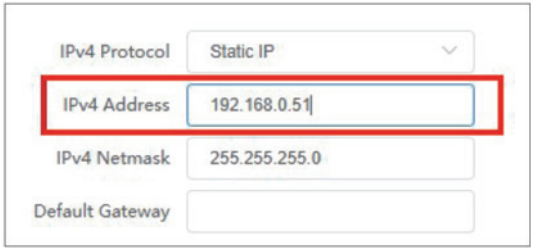
2. Ensure the computer is configured with the static IP address 192.168.0.2 and a subnet mask of 255.255.255.0.
3. Launch a web browser. Enter 192.168.0.50 in the address field of your browser.

4. Log in to the administration user interface.
   The default login information is:
   Username: **admin**
   Password: **admin**
5. Follow the Setup Wizard's instructions to configure the device in Access Point Mode.



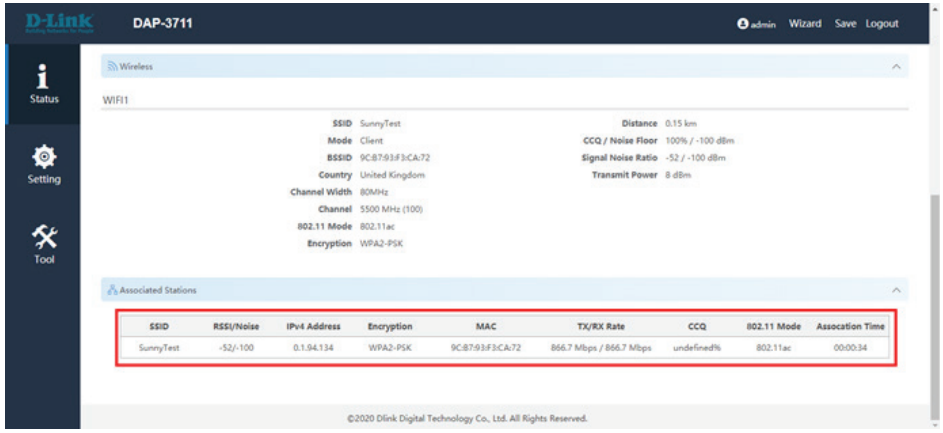
Configuring the Second DAP-3711 in Client Mode

1. Follow steps 1-4 of the instructions above to power on the device. Launch the Setup Wizard to configure the device in Client Mode.
2. To a void an IP address conflict, change the IPv4 address so that it is different from the first DAP-3711's IP address (for instance, by changing it to 192.168.0.51, as in the following screenshot).

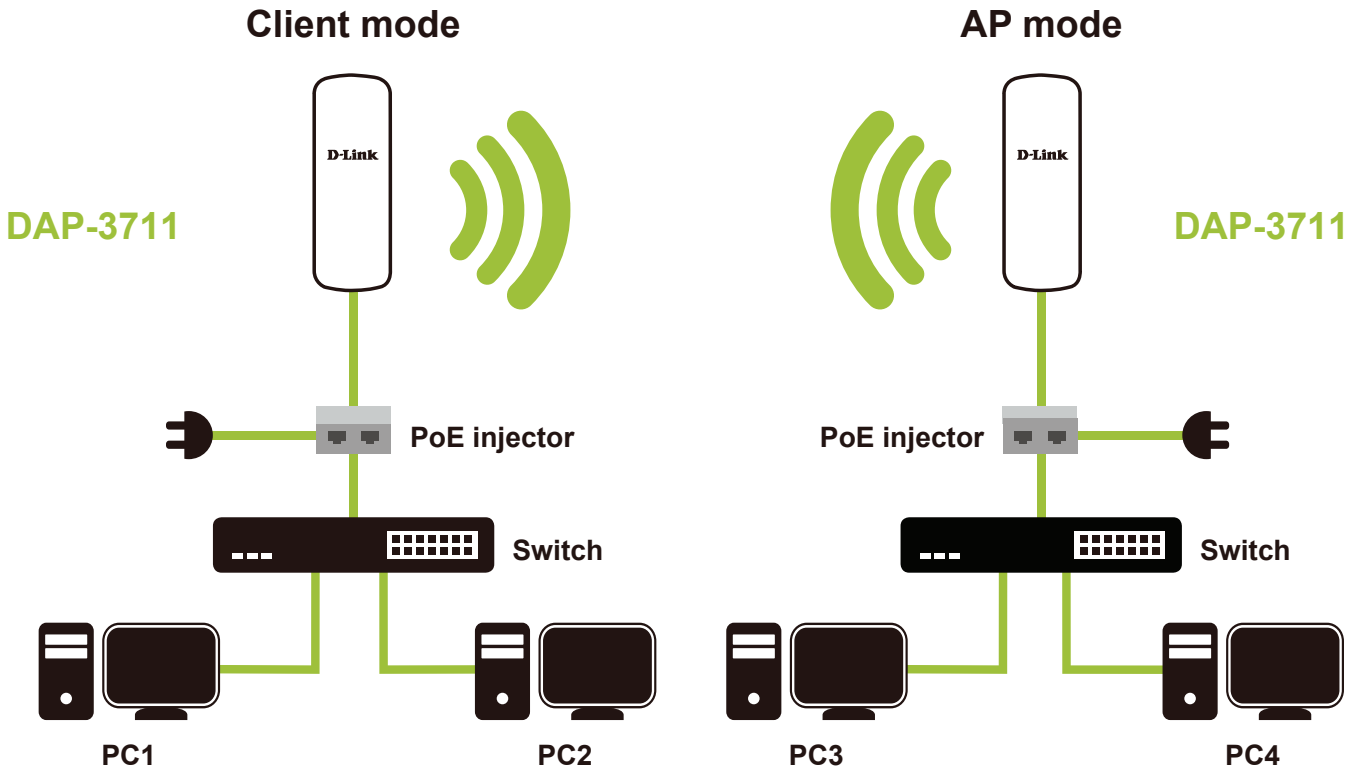


3. On step four of the Setup Wizard (Wireless), select Client from the dropdown list. Enter the same SSID and key that you entered when configuring the first device.

4. To confirm that wireless connectivity between the two devices is configured correctly, navigate to the Status page and check the information under Associated Stations (shown below).



Once completed, your network will resemble the following diagram.



Wireless Installation Considerations

The D-Link Long Range 802.11ac Wireless Bridge 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 dra-matically or drop completely. Make sure your 2.4 Hz 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.

Mounting the Device

If you plan to install the DAP-3711 on a pole, orient the front of the access point (the side without the LEDs) toward the intended coverage area. The radio antennas transmit through the front of the access point but not through the reverse side (where the bracket is).

Be sure to install the device at a height that ensures that the alignment between the devices is visible and there is no obstruction in the middle.

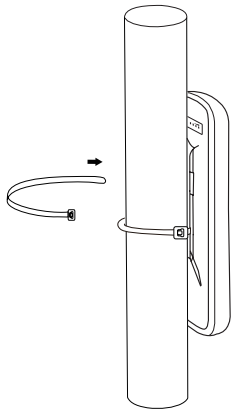
Checking the Signal Strength

Before fixing the device in place, slowly pan the DAP-3711 from side to side and check the LED indicator to find the position where the signal is strongest.

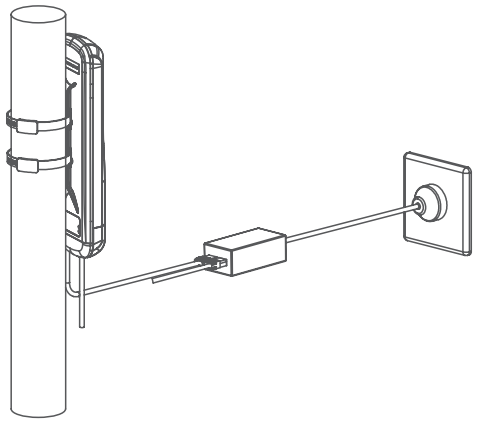
Mounting on a Pole

1.Connect an Ethernet cable to the LAN port on the DAP-3711.

2.Place the DAP-3711 against the pole where you want it to be positioned.



3. Wrap the metal mounting ties around the pole and thread them through the holes on the DAP-37



Configuration

This section will show you how to configure your new D-Link Long Range 802.11ac Wireless Bridge using the web-based configuration utility.

Factory Default Setting

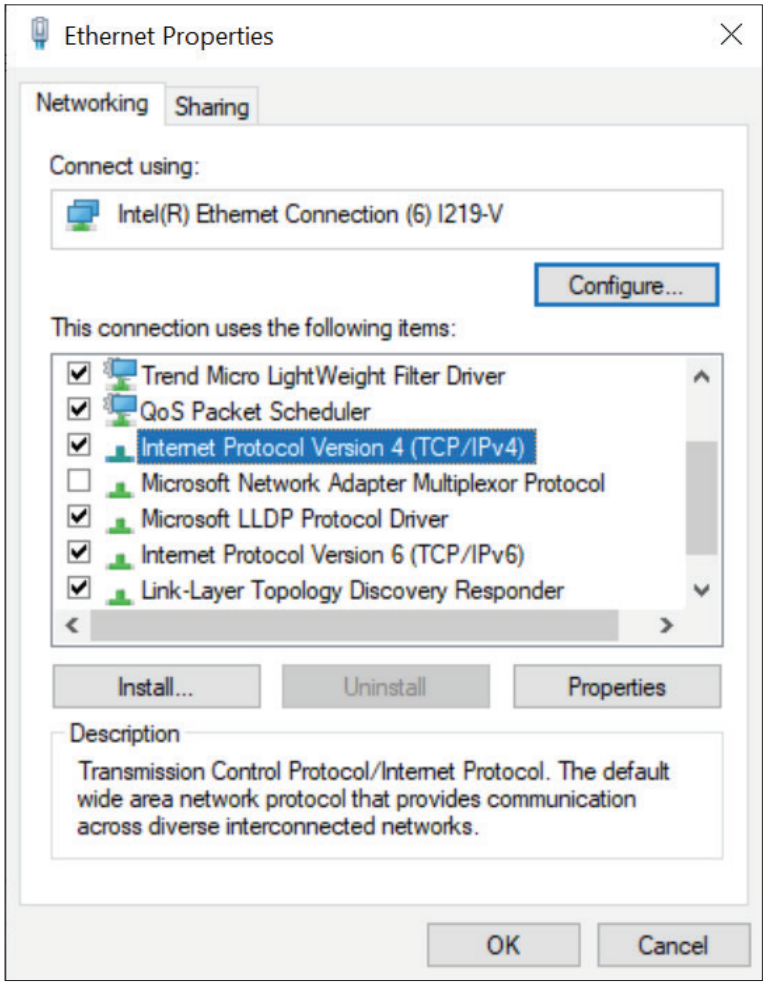
The following table shows the DAP-3711's default settings.

Features	Factory Default Setting
Username	admin
Password	admin
Operation Mode	Bridge
Wi-Fi Mode	Access Point
SSID	dlink
Encryption	WPA2-PSK
Key	1234567890abc
LAN	IP: 192.168.0.50 Subnet: 255.255.255.0 Gateway: 192.168.0.1
DHCP Server	disable
802.11 mode	802.11 ac
Channel	auto
Bandwidth	80 MHz
TDMA	disable

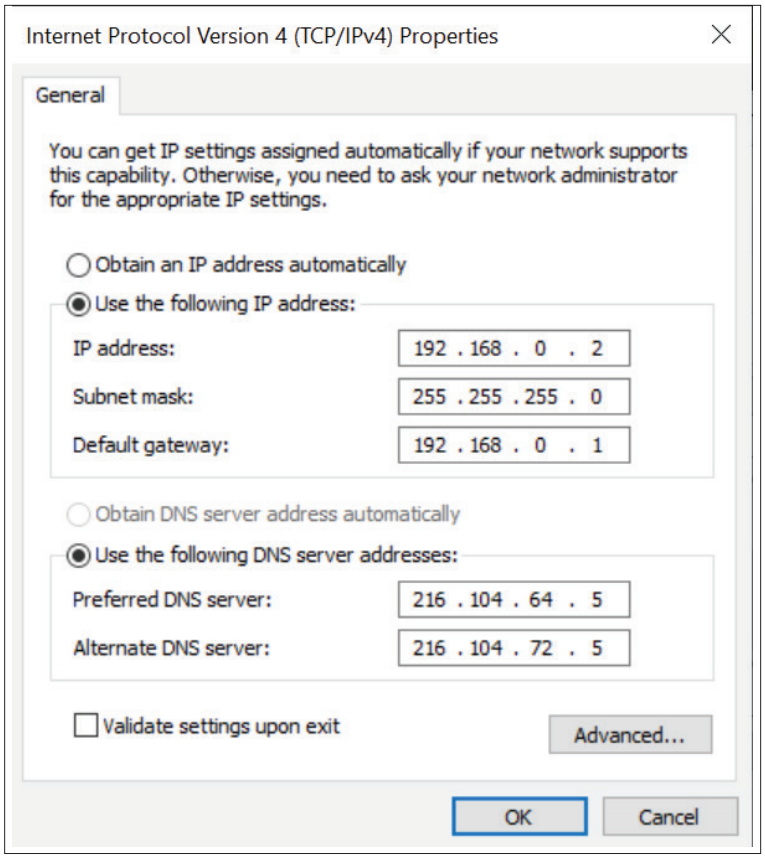
Web-based Configuration

To log in the DAP-3711 web interface, you will need to configure your computer's TCP/IP settings:

1. Right-click the **Local Area Connection** icon on your computer and click **Properties**, then click **Continue**. The **Local Area Connection Properties** dialog box will appear, as seen below.



2. Select **Internet Protocol (TCP/IP)** and click the **Properties** button, and the following dialog box will appear:

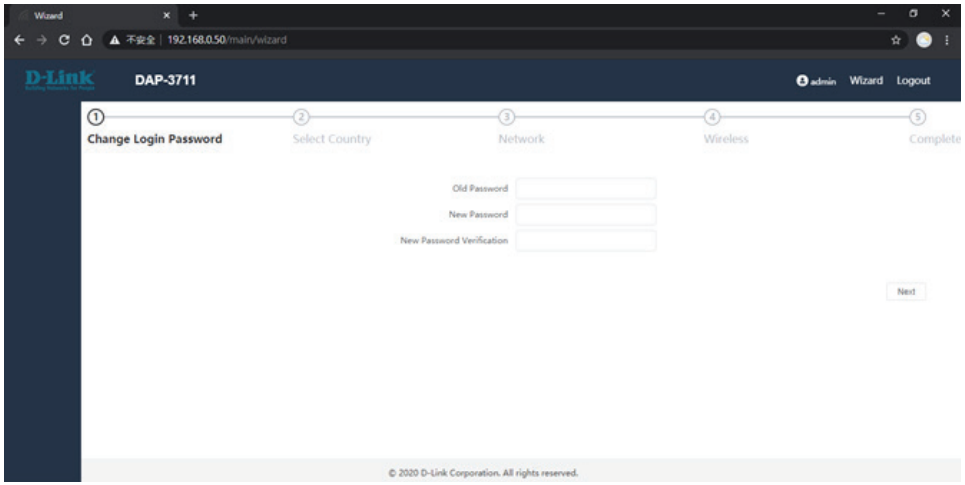


3. In the above figure, the **IP address** should be set to **192.168.0.***. Here, * can be any number between 1-255 (but not 50, since the DAP-3711's default IP address is **192.168.0.50**).

4. When you are done configuring the IP settings above, enter the default IP address (**192.168.0.50**) into the address bar of your web browser, and the following login interface will appear.

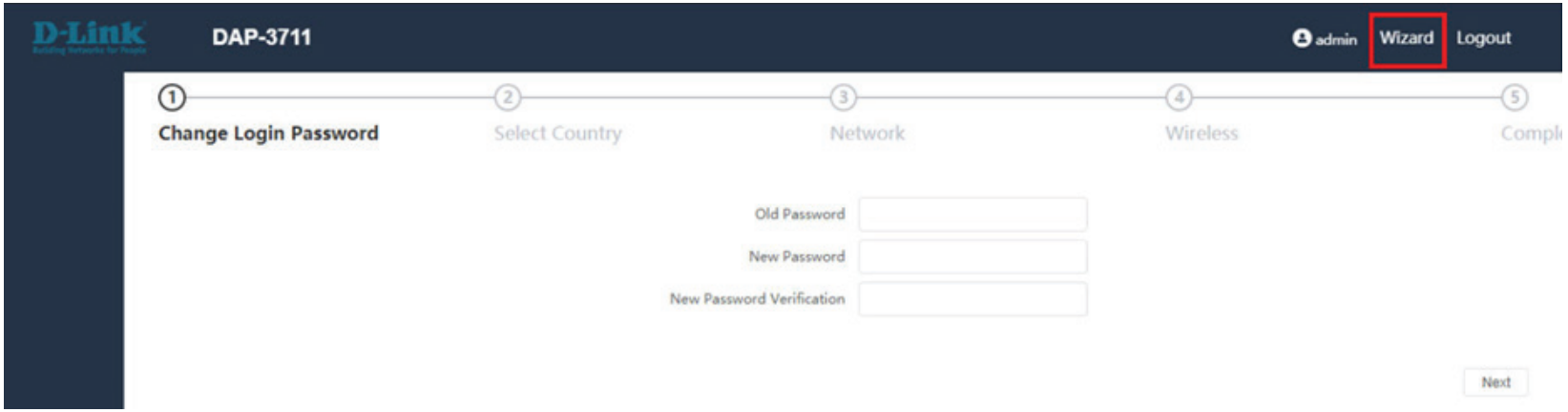
5. Enter the username (Default: **admin**) and password (Default: admin) respectively and click"**Login**"to login the main page of DAP-3711. As you can see, this management interface will enter the wizard mode to take you through the initial settings.

Note: The password supports 4~31 digits of upper and lower case letters, numbers, and special symbols `~!@#$%^&*()-_=+



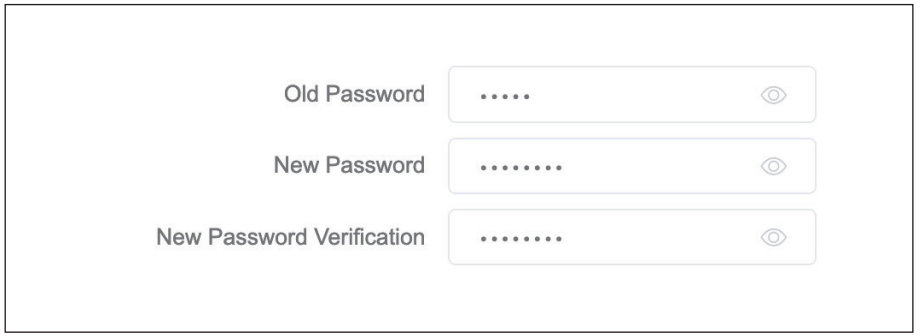
Wizard

When you log into the DAP-3711 for the first time, the Wizard page will automatic pop-up. You can also click **Wizard** in the top right corner.



Change Login Password

If you log in to DAP-3711 for the first time, you need to change the password. The default password is admin. The device login password supports 4~31 digits of upper and lower case letters, numbers, and special symbols `~!@#$%^&*()-_=+

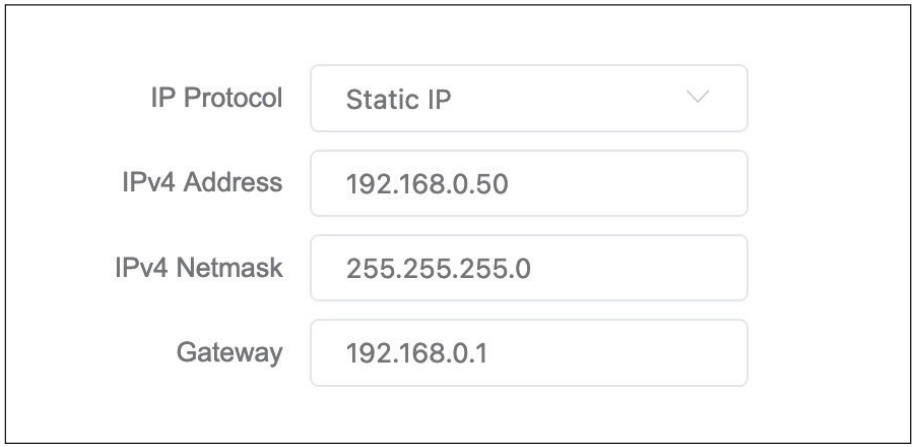


Select Country

Select the country where the device is located. Only allow the device to work on channels allowed in a specific country.

Network

This helps to set the network parameters. The default mode is Bridge mode and the default LAN IP address is 192.168.0.50. Please change 192.168.0.50 to other IP.



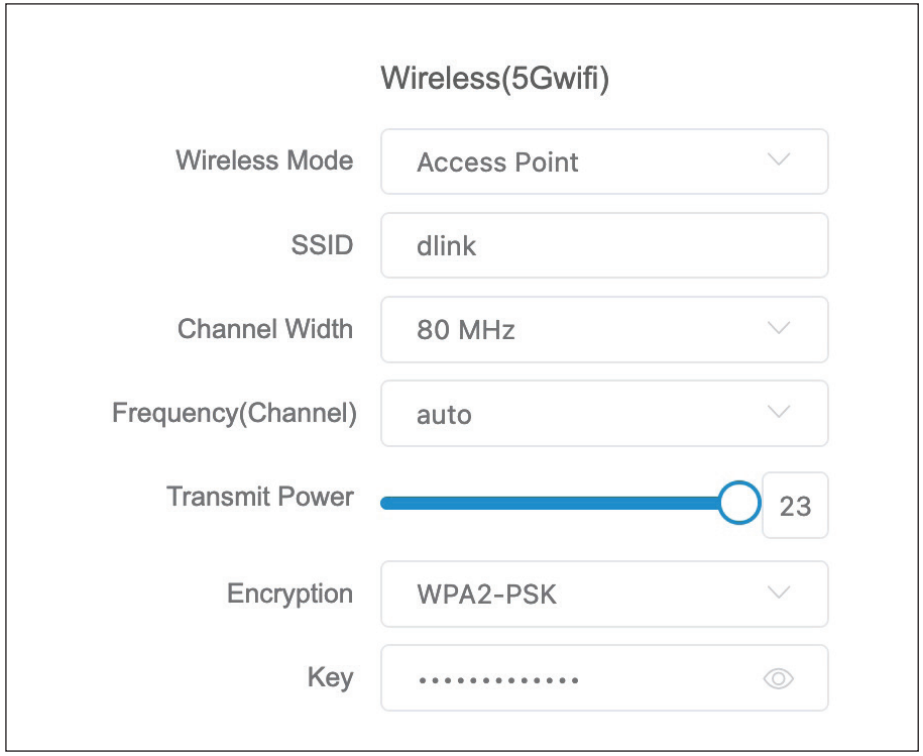
IP Protocol: If you select "Static IP", you have to specify a static IP address, subnet mask, default gateway and DNS server for your local area network which connects to the LAN port of DAP-3711. Make sure the specified IP address is unique on your network in order to prevent IP conflict.

DHCPv4 Client: Select "DHCPv4 Client" to allow the DHCP server within your local area network to assign an IP address automatically.

DHCPv6 Client: Select "DHCPv6 Client" to allow the DHCP server within your local area network to assign an IP address automatically.

Wireless

This is for Access Point wireless related settings. Select the operating mode corresponding to the desired mode, and then click "Next" to complete the wizard. After confirming that the operating mode will be changed, the AP will reboot and be ready for use when it is completed.



Wireless Mode: DAP-3711 has four different operating modes, making it adaptable to any situation. Before setting, please determine which Wireless Model (**Access Point, Client, Access Point (WDS), Client (WDS)**) you want to set the DAP-3711 to, and then follow the wizard's instructions to set it up step by step.

Access Point: The DAP-3711 connects directly to the main Ethernet LAN and receives connectivity from other wireless devices. In access point (AP) mode, 802.11a/n/ac compliant devise can connect to the wireless network.

Client: DAP-3711 is connected to the remote AP in it. When there are more than two APs with identical SSID and encryption in the environment, it will automatically connect to them. You can also check the connected AP information in the "**Station List**" on the "**Status**" page.

Access Point (WDS): Use WDS feature to link multiple APs in a network, all associated stations from any AP can communicate with each other like in ad-hoc mode. Access Point (WDS) mode expands current wireless coverage and allows device to connect to the network. It means this device is a AP in WDS mode.

Client (WDS): Use WDS feature to link multiple APs in a network, all associated stations from any AP can communicate with each other like in ad-hoc mode. Client (WDS) means this device is a client in WDS mode.

SSID: User Enter a name for your wireless network. For security purposes, it is highly recommended to change from the default network name.

Channel Width: Channel width basically controls how broad the signal is for transferring data. Select what you need according to your environment. Default 80 MHz in Access Point mode. DAP-3711 supports 10MHz/20MHz/40MHz/80MHz bandwidth.

Frequency (Channel): Indicates the channel setting for the DAP-3711. In Access Point or Access Point (WDS) mode, the channel can be changed to fit the channel settings of the existing wireless network or to customize the wireless network.

Transmit Power: This setting determines the power level of the wireless transmission. Transmitting power can be adjusted to eliminate overlapping of wireless area coverage between two access points where interference is a major concern.

Encryption: The key is required and only sharing the same key with other wireless devices can the communication be established.

OPEN: It allows any device to join the network without performing any security check.

WPA-PSK: It is a simplified WPA mode with no need for specific authentication server. In this so-called WPA Pre-Shared Key, all you have to do is just pre-enter a key in each WLAN node and this is the common way to be adopted in large and middle enterprise as well as residential network.

WPA2-PSK: As a new version of WPA, only all the clients support WPA2, can it be available. If it is selected, the data encryption can only be AES and the passphrase is required.

WPA/WPA2 Hybrid-PSK: It provides options of WPA (TKIP) or WPA2 (AES) encryption for the client. If it is selected, the data encryption can only be TKIP + AES and the passphrase is required.

Key: Only 8 to 63 bits of upper and lower case English letters, numbers and special symbols are supported `~!@#$%^&*()-_=+

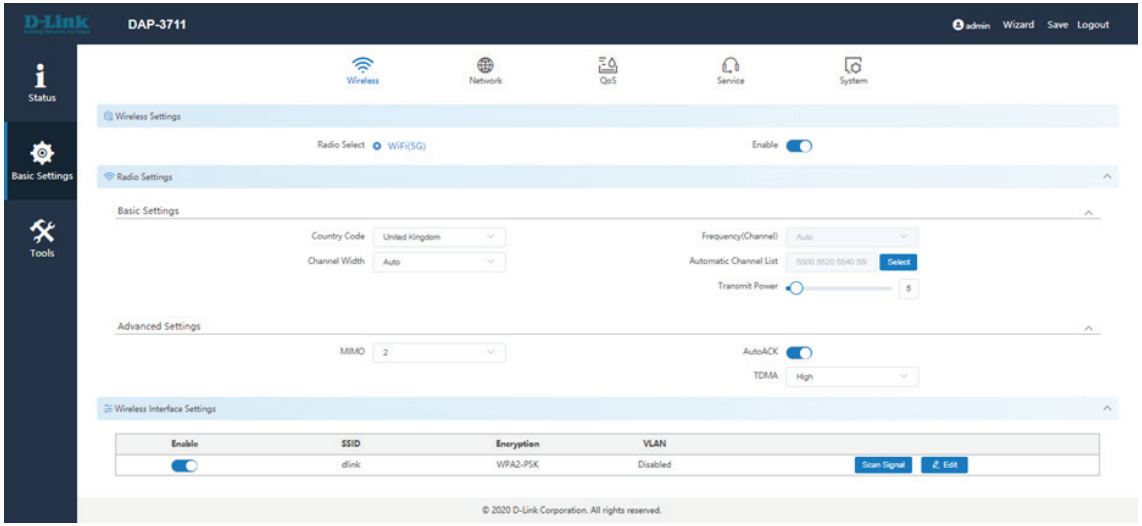
Complete

After the data input is completed, press Next to complete the above setting procedure, and the device will automatically reboot.

Basic Settings

The DAP-3711 provides three main options in the black bar on the left, which are **Status**, **Basic Settings** and **Tools**. This section will introduce how to navigate the **Basic Settings** page. In Basic settings page, there are five tabs: **Wireless, Network, QoS, Service**, and **System.**

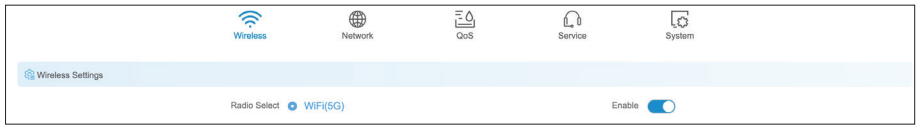
After making changes, click **Save** to apply them.



Wireless

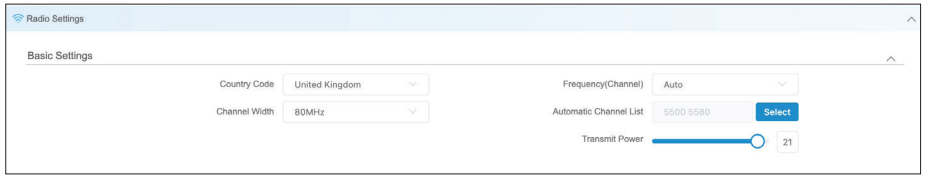
In the **Wireless** tab, you can configure the DAP-3711's Wi-Fi and radio settings.

Wireless Settings: Toggle the button to enable or disable Wi-Fi.



Radio Setting: In this section, users can set up basic and advanced Wi-Fi and radio settings.

Basic Settings



Country Code: Use this to select the country where the DAP-3711 is installed.

Channel Width: Use this to change the AP's channel width. The default is 80 MHz. (in Access Point model or Access Point (WDS) mode)

Frequency: Use this to specify the Wi-Fi channel to use, or select Auto to determine this automatically. Default is Auto.

Automatic Channel List: If the auto channel is selected in Frequency, user can decide channels which DAP-3711 can run. After clicking the **Select**, user can select the channels which DAP-3711 can run in their country.

Transmit Power: The device's output power. When the output power is increased, the signal distance and signal strength will be improved.

Advanced Settings

802.11 Mode: You can select the 802.11 mode which the DAP-3711 should use. It is suggested to keep this setting at 802.11ac to provide an optimal transmission rate.

MIMO: The DAP-3711 supports 2T2R Multi-Input-Multi-Output. In high-interference environments, you can set this to 1T1R to reduce the noise.

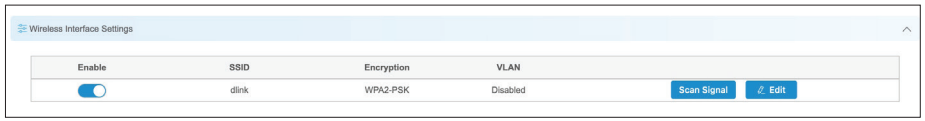
Auto ACK: Enabling this function will automatically detect the distance between the two DAP-3711 units and optimize the link quality. Enabling this is recommended. If you disable this function, you will need to manually enter the distance between the two units.

TDMA: To use TDMA, you will need to enable TDMA mode in both DAP-3711 units. TDMA can prevent 802.11 hidden node issues. When setting up PTMP, enabling TDMA is recommended. The TDMA function can only work between two DAP-3711 units.

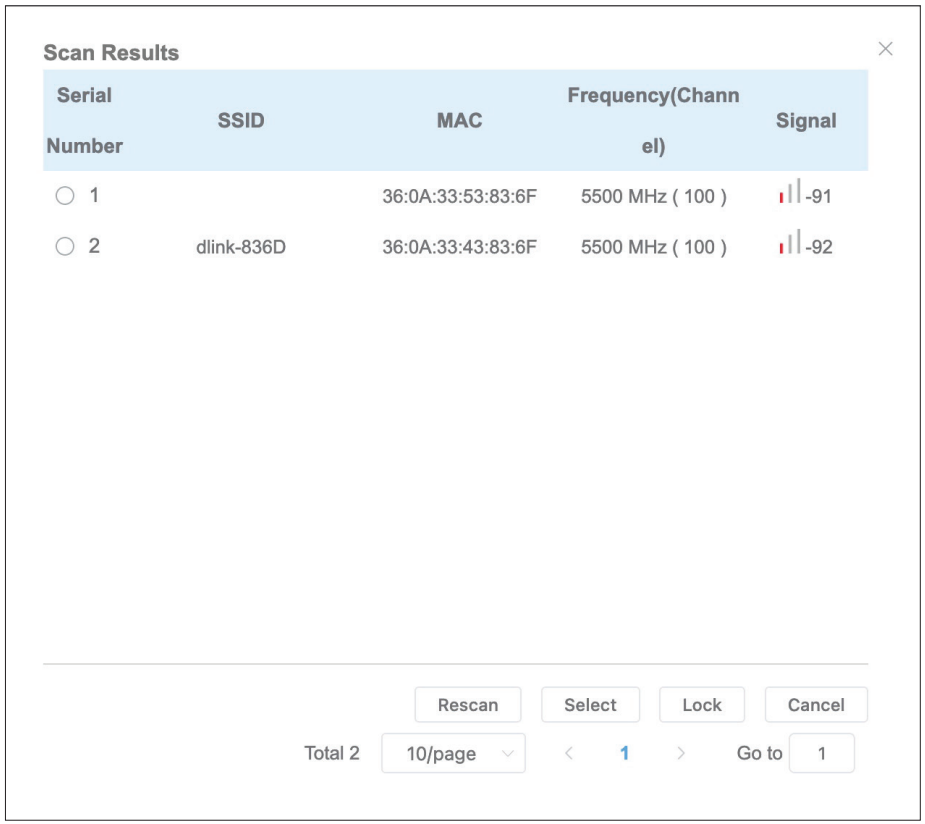
When TDMA is enabled, you can also decide whether you want to enable JTrans. JTrans can help prevent an internal wireless attack. The client and access point must be turned on at the same time when JTrans is enabled.

Wireless Interface Settings

In this section, you can change the settings for the DAP-3711's Wi-Fi operation mode, SSID, encryption, and site survey.



Scan Signal: When you click **Scan Signal**, the device will conduct a site survey to find the SSIDs that the DAP-3711 can detect. If you select an SSID, the DAP-3711 will switch to client mode and connect to the SSID you selected. Click the **Edit** button to set up encryption (if required).



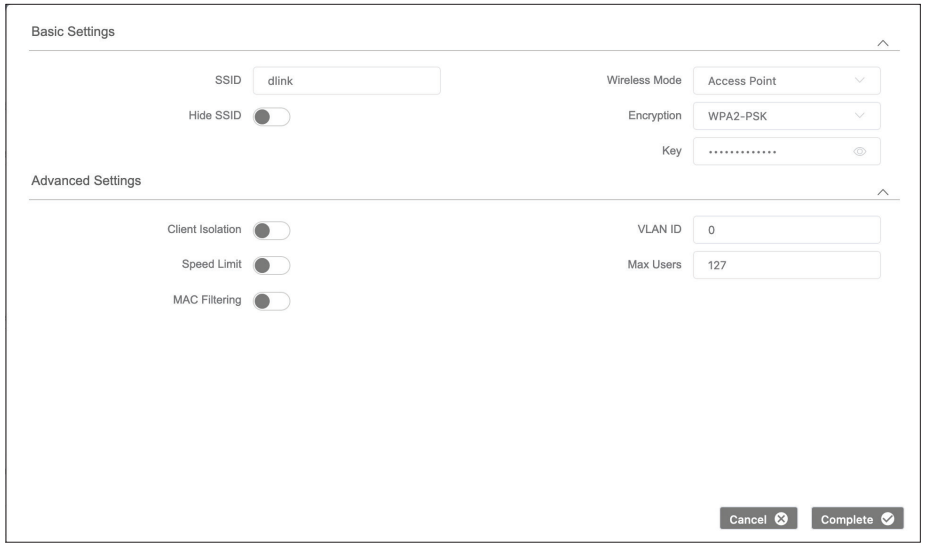
Rescan: Click this to perform a site survey again.

Select: Click this to select which SSID the DAP-3711 should connect to.

Lock: Use this to select which SSID and MAC address the DAP-3711 should connect to. If you enable this, the DAP-3711 will only connect to the AP you specify.

Cancel: Click this to cancel the scan.

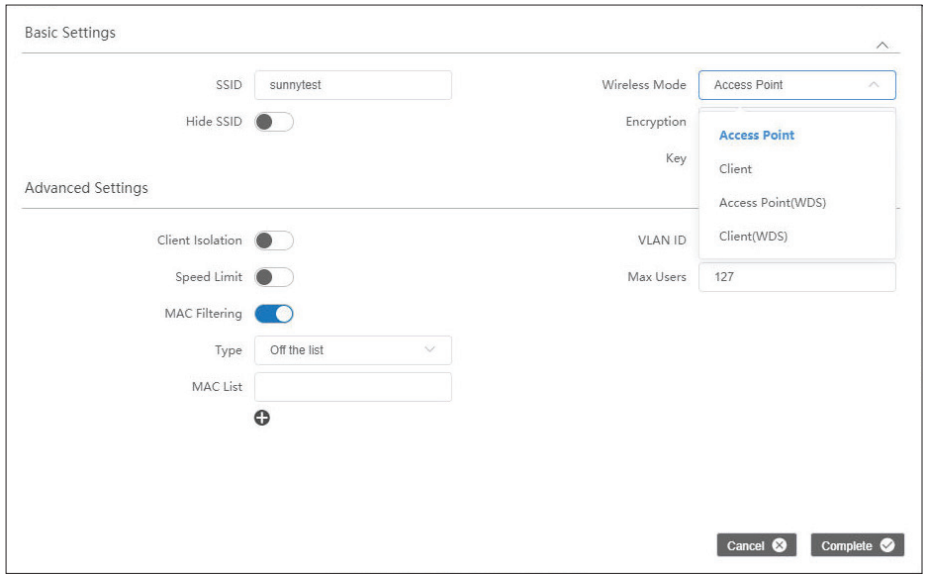
Edit: Click this to change the DAP-3711's operation mode, encryption and key. The following page will pop up:



SSID: To set the SSID which the DAP-3711 will broadcast when it operates in **Access Point** or **Access Point (WDS)** or **SSID** mode, or the SSID that the DAP-3711 will attempt to connect to when it operates in **Client** or **Client (WDS)** mode.

Hidden SSID: When the DAP-3711 is in **Access Point** or **Access Point (WDS)** mode, this function will be displayed. Use this to hide the broadcast name of the wireless network to avoid being connected to others. Check this function; others will not be able to search the SSID

Wireless Mode: DAP-3711 has four different operating modes, making it adaptable to any situation. Before setting, please determine which Wireless Model **(Access Point, Client, Access Point (WDS), Client (WDS))** you want to set the DAP-3711 to



Access Point: The DAP-3711 connects directly to the main Ethernet LAN and receives connectivity from other wireless devices. In access point (AP) mode, 802.11a/n/ac compliant devise can connect to the wireless network.

Client: DAP-3711 is connected to the remote AP in it. When there are more than two APs with identical SSID and encryption in the environment, it will automatically connect to them. You can also check the connected AP information in the "**Station List**" on the "**Status**" page.

Access Point (WDS): Use WDS feature to link multiple APs in a network, all associated stations from any AP can communicate with each other like in ad-hoc mode. Access Point (WDS) mode expands current wireless coverage and allows device to connect to the network. It means this device is an AP in WDS mode.

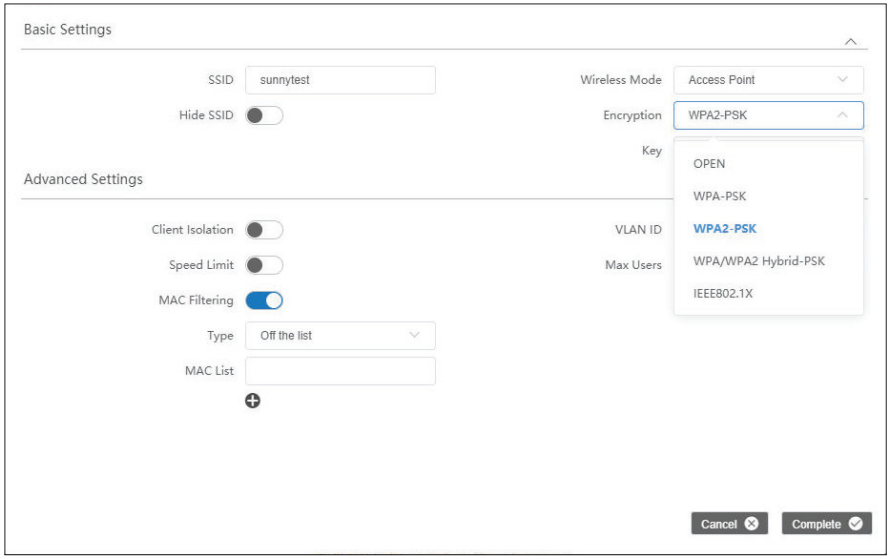
Client (WDS): Use WDS feature to link multiple APs in a network, all associated stations from any AP can communicate with each other like in ad-hoc mode. Client (WDS)means this device is a client in WDS mode.

Encryption: The key is required and only sharing the same key with other wireless devices can the communication be established.

OPEN: It allows any device to join the network without performing any security check.

WPA-PSK: It is a simplified WPA mode with no need for specific authentication server. In this so-called WPA Pre-Shared Key, all you have to do is just pre-enter a key in each WLAN node and this is the common way to be adopted in large and middle enterprise as well as residential network.

WPA2-PSK: As a new version of WPA, only all the clients support WPA2, can it be available. If it is selected, the data encryption can only be AES and the passphrase is required.



WPA/WPA2 Hybrid-PSK: You can select the 802.11 mode which the DAP-3711 should use. It is suggested to keep this setting at 802.11ac to provide an optimal transmission rate.

Key: Only 8 to 63 bits of upper and lower case English letters, numbers and special symbols are supported `~!@#$%^&*()-_=+

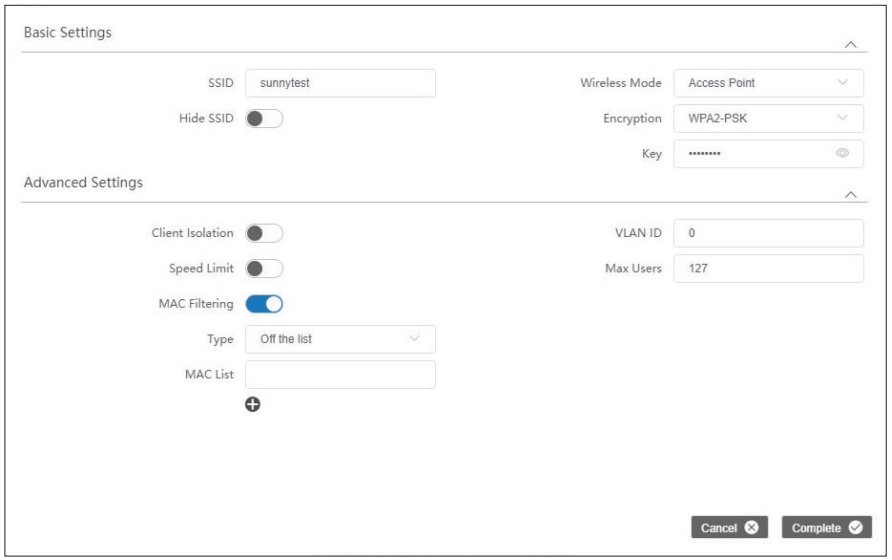
Client Isolation: When you enable this function, the clients which are connected to the DAP-3711 will not be able to communicate with each other.

Speed Limit: When you enable this function, you will be able to set up a maximum upload/download speed for each client.

VLAN ID: Use this to set up the VLAN ID for the SSID.

Max. Users: Use this to set up the maximum number of clients that can connect to the DAP-3711.

MAC Filtering: Use this to set up a list of MAC addresses that you want to allow or disallow to connect to DAP-3711.



Network

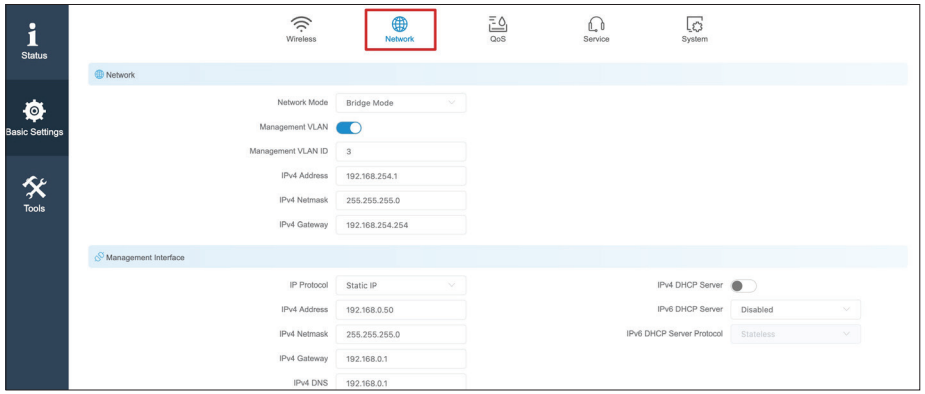
In the **Network** tab, you can set up the DAP-3711's network mode and IP address.

Network Mode: Select either Bridge Mode or Router Mode.

Bridge Mode: In this mode, the DAP-3711's LAN Port and Wi-Fi will bridge together.

Router Mode: In this mode, the DAP-3711 will act as a router.

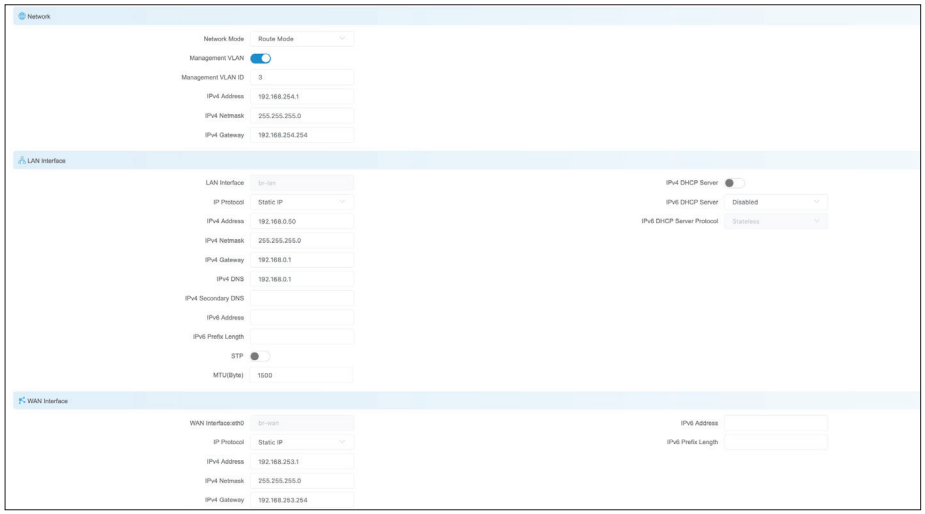
Management VLAN: Use this to set up a management VLAN ID tag and IP address. When the VLAN is enabled, the DAP-3711 can only be accessed with this VLAN tag and IP address.



In Bridge Mode, users can configure the DAP-3711's LAN interface.

IP Protocol: Use this setting to select either Static IP or DHCP IP.

IPv4/IPv6 DHCP Server: Enabling this function in bridge mode is not recommended. When you enable this function, you need to make sure there are no DHCP servers in the DAP-3711's network.

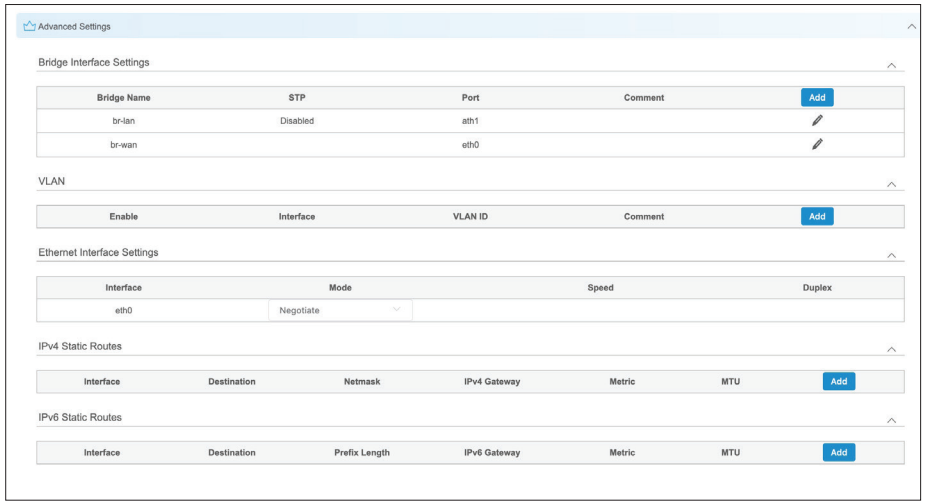


In **Router Mode**, you need to configure the LAN and WAN interface of the DAP-3711.

LAN interface: You can set the IP addresses of the devices which can be accessed via Wi-Fi using this setting. DAP-3711 supports two LAN ports, in Route Mode, the LAN Interface here represents the LAN2 port.

WAN Interface: In router mode, the physical LAN port becomes the WAN port. You need to enter the IP address or configure DHCP clients to get the IP address as well as PPPoE.

Advanced Settings: In this section, you can configure settings such as static routes. In general, users will not need to configure anything in this section.



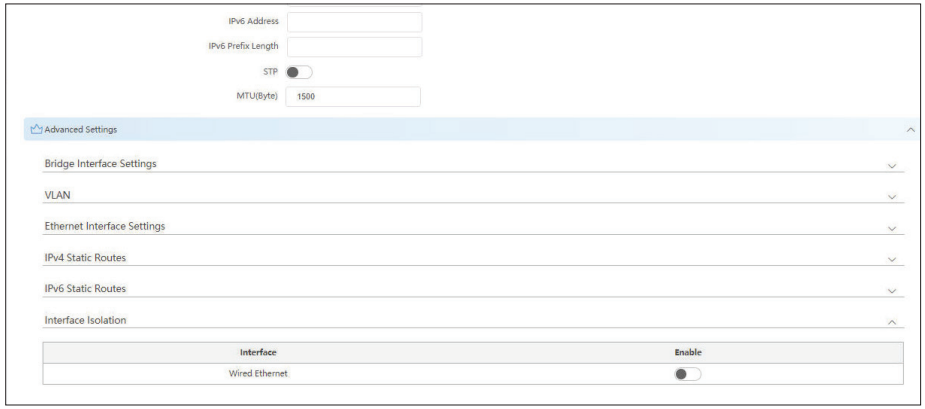
Bridge Interface Setting: This displays and controls the DAP-3711's bridge policy.

VLAN: This displays the DAP-3711 VLAN ID tag.

Ethernet Interface Setting: Use this to select the LAN port's speed negotiation mode.

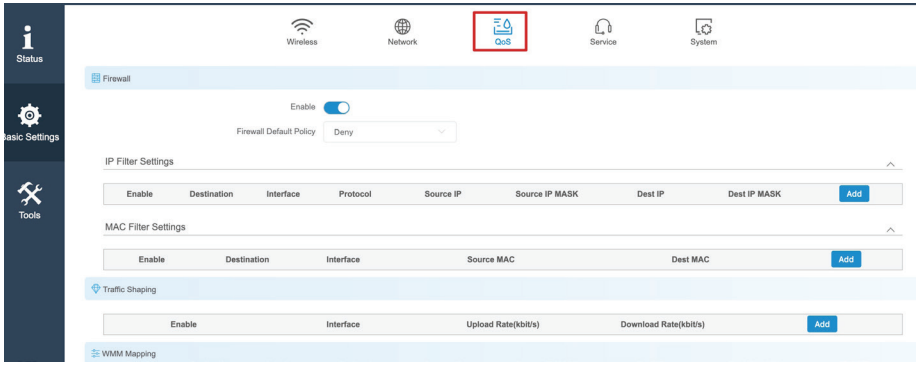
IPv4/IPv6 Static Route: Use this to add the Static Route rule for the DAP-3711.

Interface Isolation: After enabling this function, the two wired interfaces of the device cannot ping each other



QoS

In the QoS tab, there are four sections on this page: **Firewall**, **Traffic Shaping**, **WMM**, and **QoS Priority**.



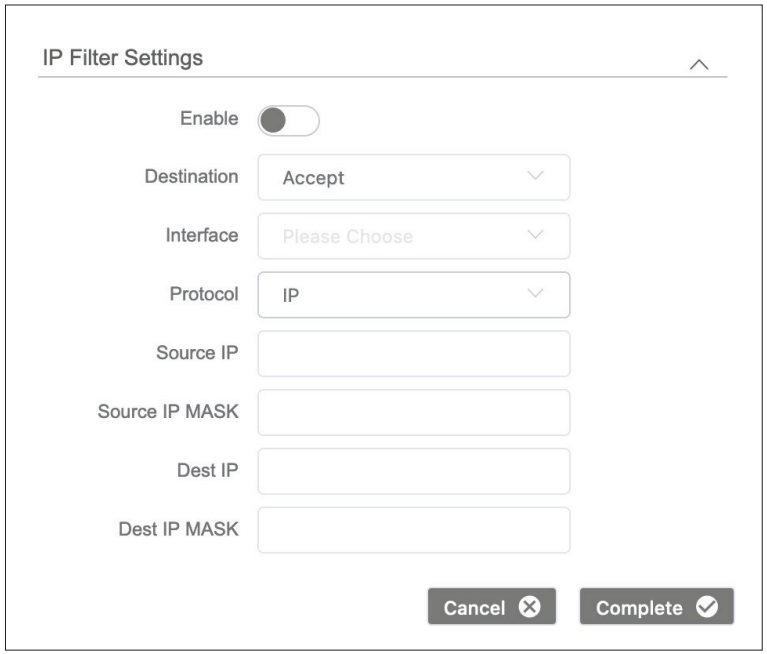
Firewall: When the firewall is enabled, the device will only allow certain devices to connect to it.

Firewall Default Policy:

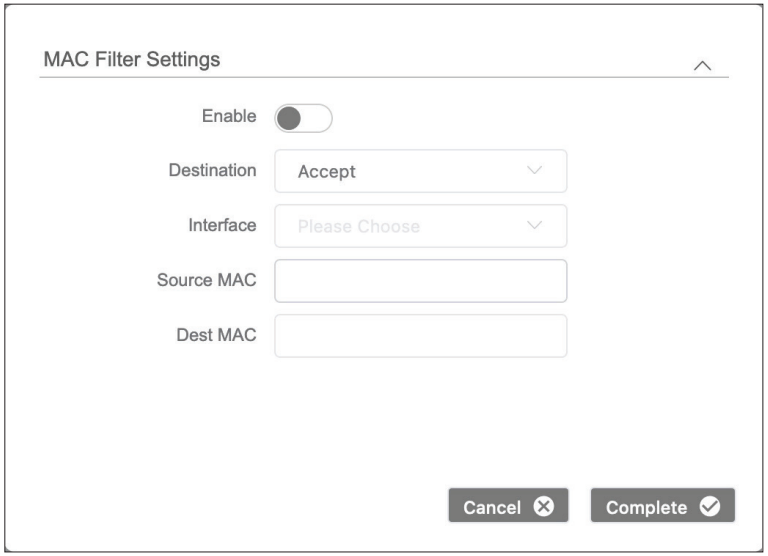
Accept: Only accept the devices listed in **IP Filter Settings** and **MAC Filter Settings**.

Deny: Deny the devices listed in **IP Filter Settings** and **MAC Filter Settings**.

IP Filter Settings: Click **Add** to add a new IP address to allow or deny.



MAC Filter Settings: Click **Add** to add a new MAC address to accept or deny.

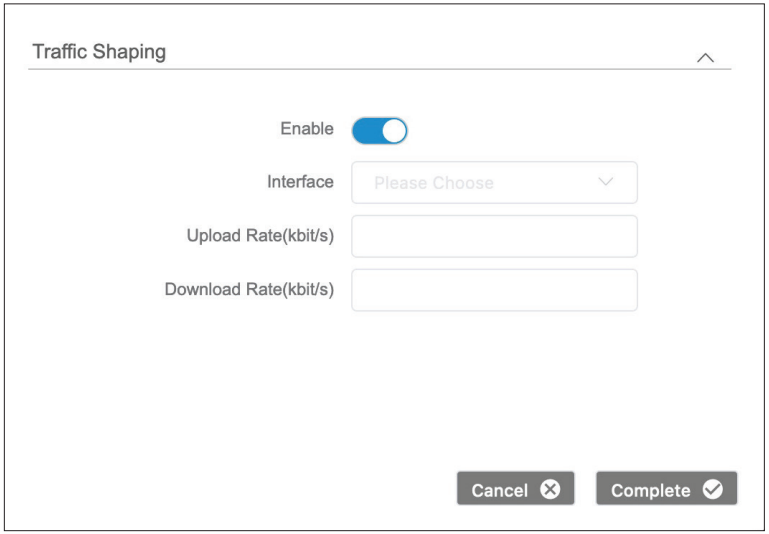


Traffic Shaping: Traffic shaping is used to control the upload/download traffic on each network port.

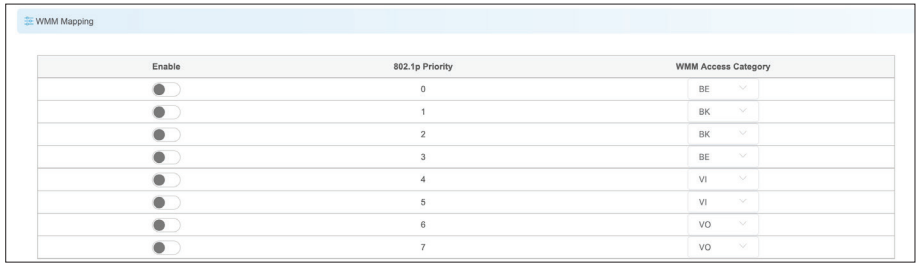
Interface: Select the Interface: eth0 (LAN), eth1(LAN2), ath1(wireless)

Upload Rate: Enter the maximum upload speed.

Download Rate: Enter the maximum download speed.



WMM Mapping: WMM (Wi-Fi Multimedia) allows wireless communication to define a priority limit on the basis of data type. Time-sensitive data (like video/audio data) can be assigned a higher priority than other data. For WMM to be enabled, the wireless client must support it as well.



QoS Priority: Use this setting to set the QoS settings on the LAN port.

Service

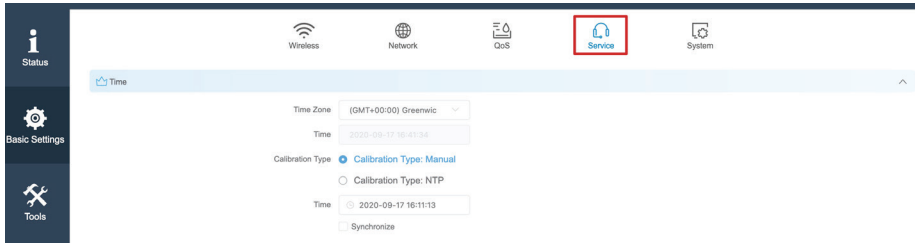
In the service tab, you can configure the following settings: **Time**, **Automatic Restart**, **External System Log Server**, **Ping Watchdog** and **LED Settings**.

Time: Here you can configure the DAP-3711's time settings.

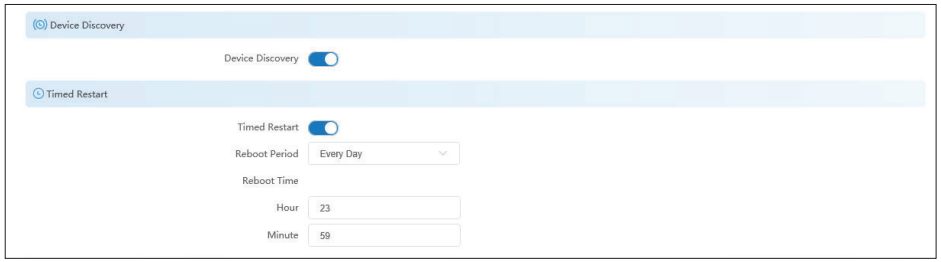
Time Zone: Use this to select the Time Zone in your location.

Calibration Type: If **Manual** is selected, you can change the time, or click **Synchronize** to sync the DAP-3711's time with user's PC.

If **NTP** is selected, the DAP-3711 will sync with a dedicated NTP server. Internet access is required if this setting is enabled.



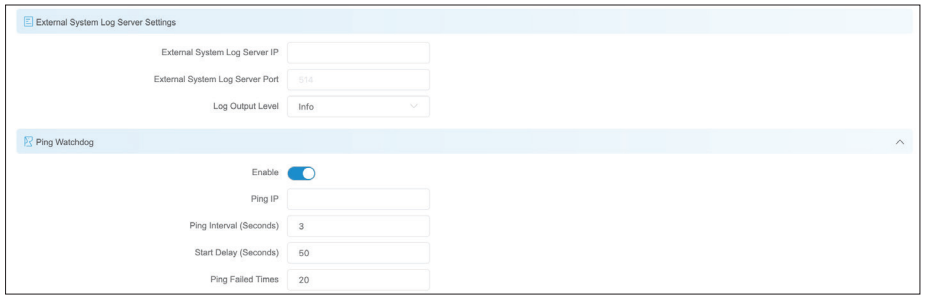
Device Discovery: The process in which the device will search within its range to find other active devices that have registered themselves as visible to other devices.



Time Restart: When this function is enabled, the DAP-3711 will automatically restart according to a schedule that you set.

Reboot Period: There are three items can be selected: **Every Day**, **Every Week**, and **Once**.

External System Log Server Settings: When this is enabled and a server IP is also set here, the log information will be saved to the Syslog server automatically.



Ping Watchdog: The Ping Watchdog sets the DAP-3711 to continuously ping a user-defined IP address (for example, the IP address of the AP that the client is connecting to). If it is unable to ping using the settings that you entered, the DAP-3711 will automatically reboot. It is highly recommended that you enable this feature when using Access Point / Access Point (WDS) Mode.

Ping IP: Specify the IP address of the target which will be monitored using ping. If this feature is enabled in Client/Client (WDS) mode, the IP address should be the IP address of the AP that the client is connecting to.

Ping Interval: Specify the time interval (in seconds) that the Ping Watchdog should wait between ping requests.

Startup Delay: Specify the initial time delay (in seconds) before the first ping request should be sent by the Ping Watchdog.

Ping Failure: Specify the number of ping replies to wait for. If the designated number of ping replies is not received, the Ping Watchdog will reboot the device.

Note: If you want to modify the parameters of the Ping Watchdog, please disable it first and then apply the desired settings. When the web page shows that Ping Watchdog is disabled, users will be able to re-enable it with modified parameters.

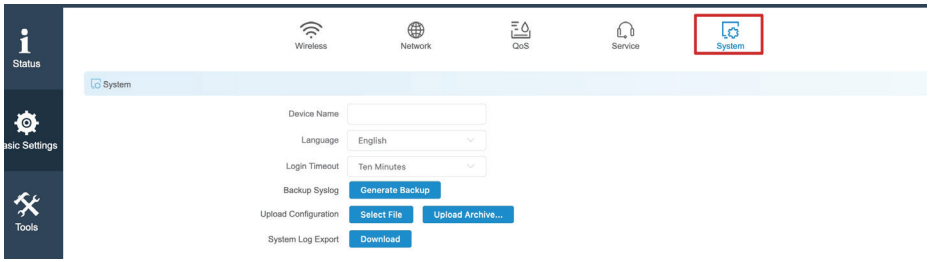
LED Configuration: LED1, LED2, and LED3 light up to indicate the DAP-3711's signal strength. The default ranges are:

LED1: -95 dBm to -1 dBm
LED2: -71 dBm to -1 dBm
LED3: -56 dBm to -1 dBm

When the signal strength is higher than -95dB and below -71dBm, LED1 light; when the signal strength is higher than -71dB and below -56dBm, both LED1 and LED2 light; when the signal strength is higher than -56dBm, all the 3 LEDs light.

System

There are three subsections in the **System** section: **System**, **Firmware Management**, and **Account Management**.



Device Name: Enter the device name here.

Login Timeout: Enter the time (in minutes) before users should be automatically logged out of the web UI.

Backup Syslog: Click to back up the current system configuration settings and download them as a file.

Upload Configuration: Click **Browse** to choose the backup configuration file and then click Upload to apply the settings.

System Log Export: Click to download a backup of the current system log.

Restore Factory Settings: Click the **Reset** button to restore the device to the factory default settings.

Reboot: Click the button to reboot the DAP-3711.

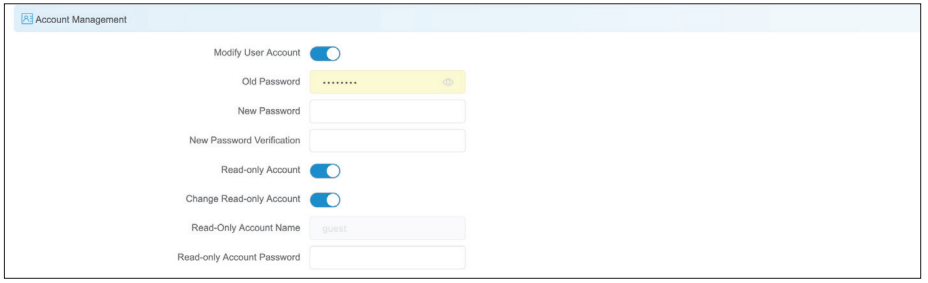
Firmware Update: Click the **Browse** button and choose a firmware file, then click the **Update** button to upgrade the firmware to the latest version.

Account Management: In this section you can change the admin password or set up a Read Only account.

Modify User Account: Use this to change the admin account's password

Read-Only Account: Use this to enable a Read Only guest account

Change Read-Only Account: Use this to change the guest account's password

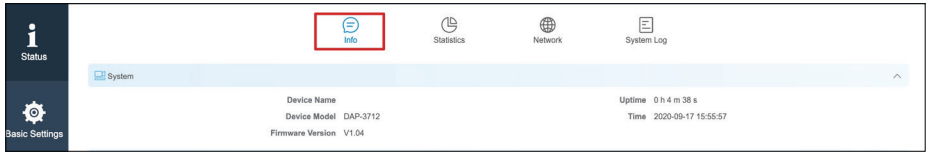


Status

There are four tabs in the **Status** section. This page displays the **System, Network**, **Wireless** and **Station List** for the DAP-3711.

Info

In the **Info** tab, information about the device is displayed.



Device Name: Device Name: The name of the device

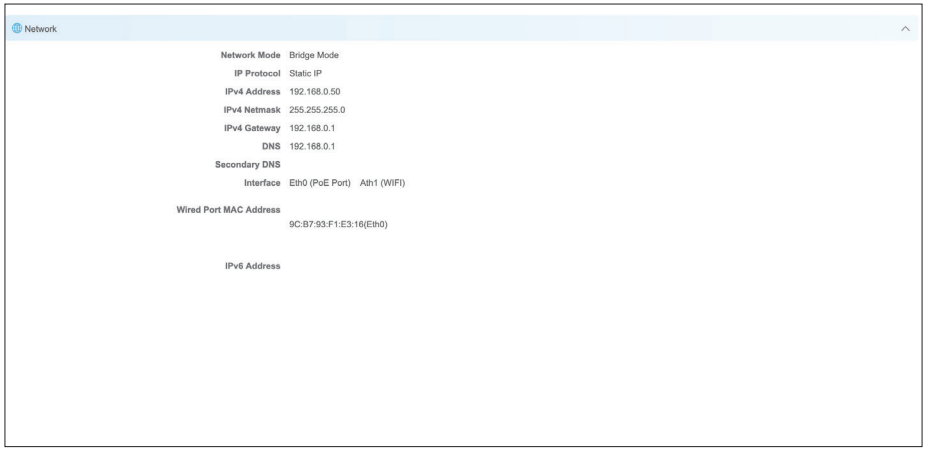
Device Model: Device Model: The model (DAP-3711)

Firmware Version: The software version number

Uptime: The length of time that the device has been powered on

Time: The current time

Network: This displays the DAP-3711's network status



Network Mode: This indicates whether the device is in Router Mode or Bridge Mode

IP Protocol: This indicates whether the device is configured with a Static IP or DHCP

Wired Port MAC Address: This displays the device's LAN MAC Address

SSID: SSID: Displays the device's SSID

Wireless Mode: This displays the device's mode: Access Point, Client, Access Point (WDS), or Client (WDS)

BSSID: This displays the device's Wi-Fi MAC address

Country Code: This displays the device's country code

Channel Width: This displays the device's current operating channel width (10/20/40/80 MHz)

Frequency (Channel): Displays the device's current operating channel

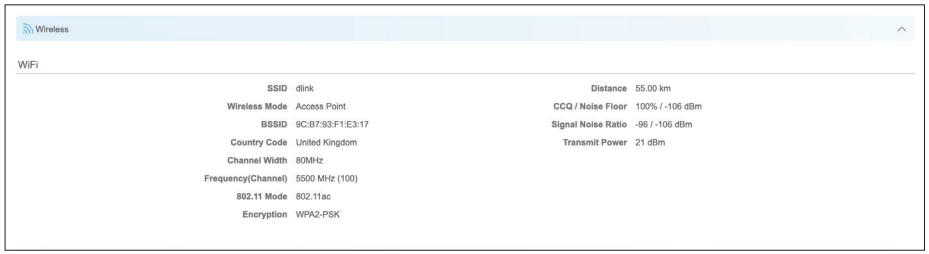
802.11 Mode: This displays the device's current 802.11 mode: 802.11ac or 802.11 a/n

Encryption: Displays the current Wi-Fi encryption

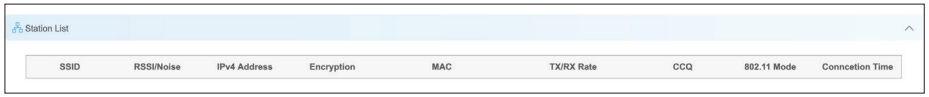
Distance: Shows distance between the two associated devices

Noise Floor: Displays the current noise floor value. In order to achieve the best results, a value of less than -95dBm is recommended

Transmit Power: Displays the DAP-3711's current Wi-Fi power output



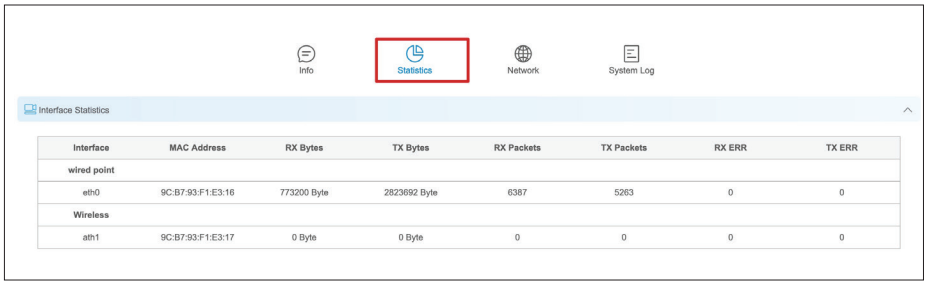
Station List Info: This will list all of the client devices which are connected to the DAP-3711.



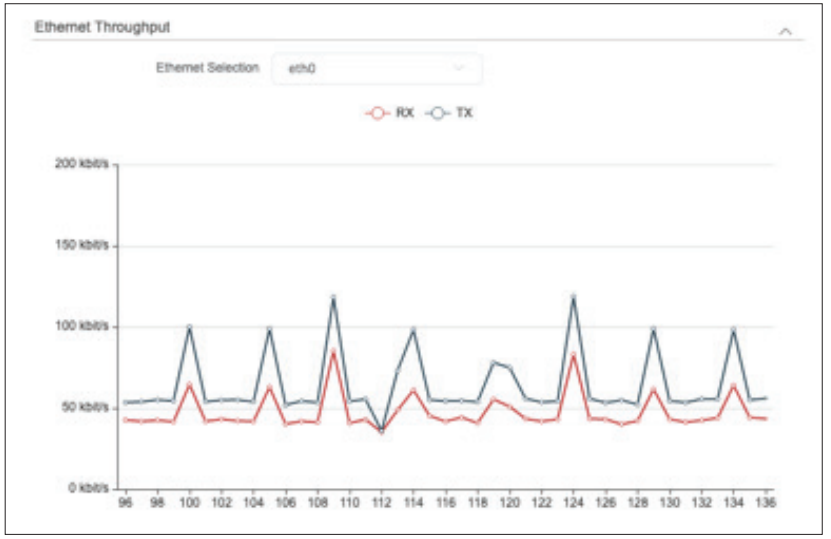
Statistics

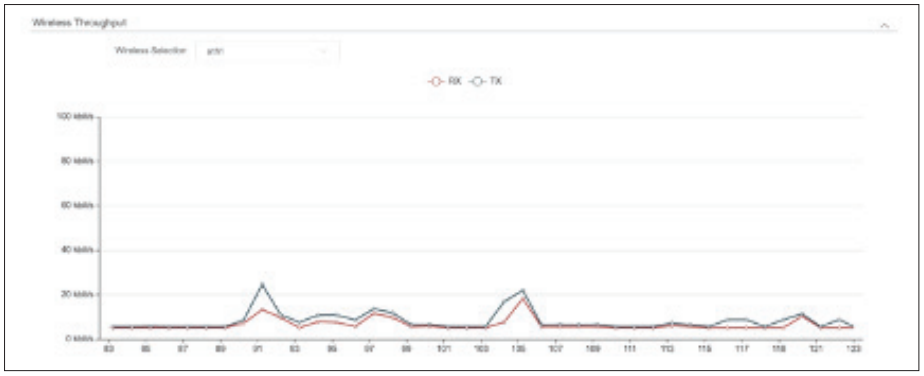
There are two subsections: **Interface Statics** and **Throughput**.

Interface Statics: Displays the DAP-3711's traffic



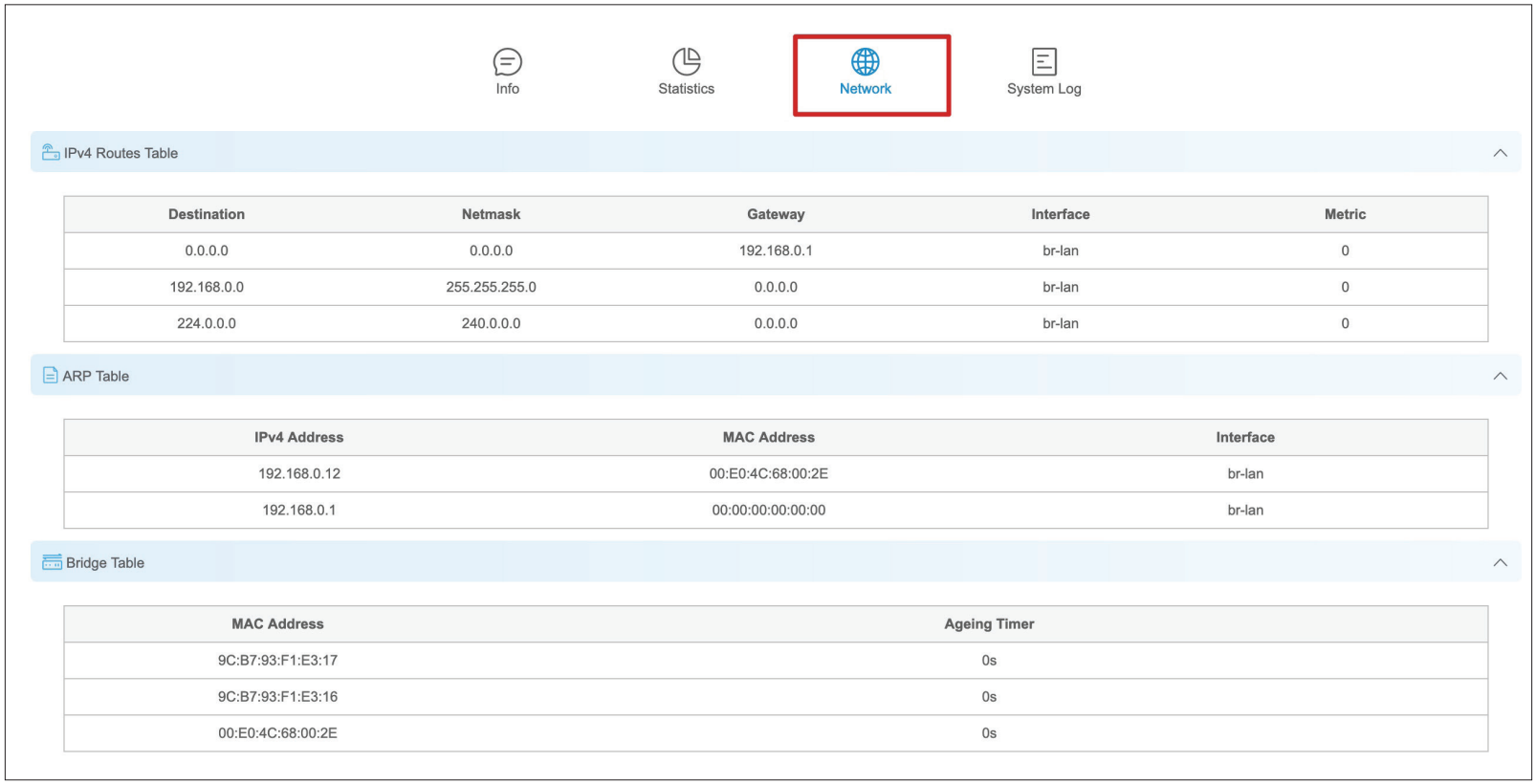
Throughput: Displays the current Ethernet and wireless traffic





Network

In this tab, you can see the current IPv4 route table, APR table and bridge table.



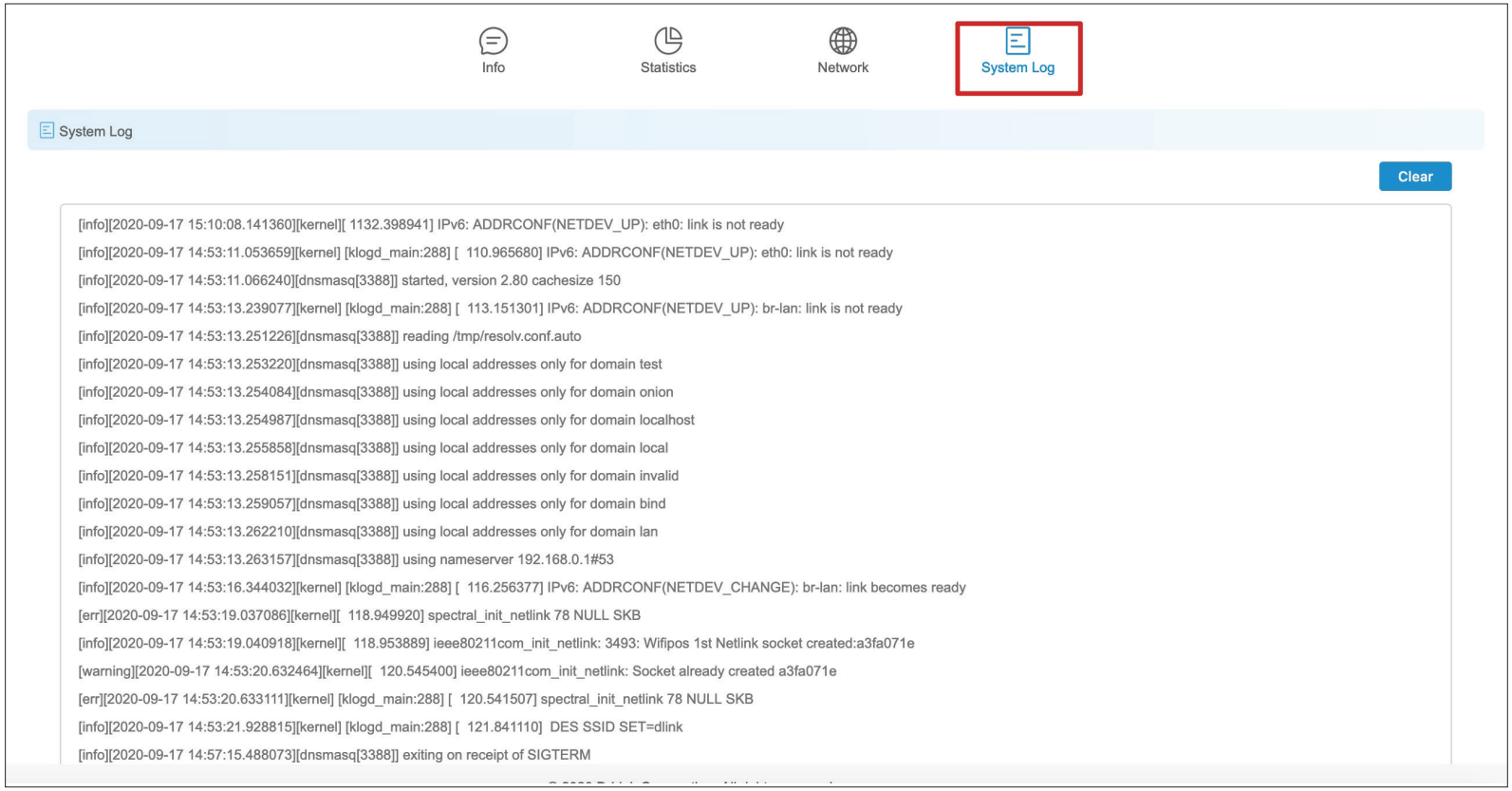
Destination	Netmask	Gateway	Interface	Metric
0.0.0.0	0.0.0.0	192.168.0.1	br-lan	0
192.168.0.0	255.255.255.0	0.0.0.0	br-lan	0
224.0.0.0	240.0.0.0	0.0.0.0	br-lan	0

IPv4 Address	MAC Address	Interface
192.168.0.12	00:E0:4C:68:00:2E	br-lan
192.168.0.1	00:00:00:00:00:00	br-lan

MAC Address	Ageing Timer
9C:B7:93:F1:E3:17	0s
9C:B7:93:F1:E3:16	0s
00:E0:4C:68:00:2E	0s

Syslog Info

This tab shows the current syslog. Click the Clear button to **Clear** the log.



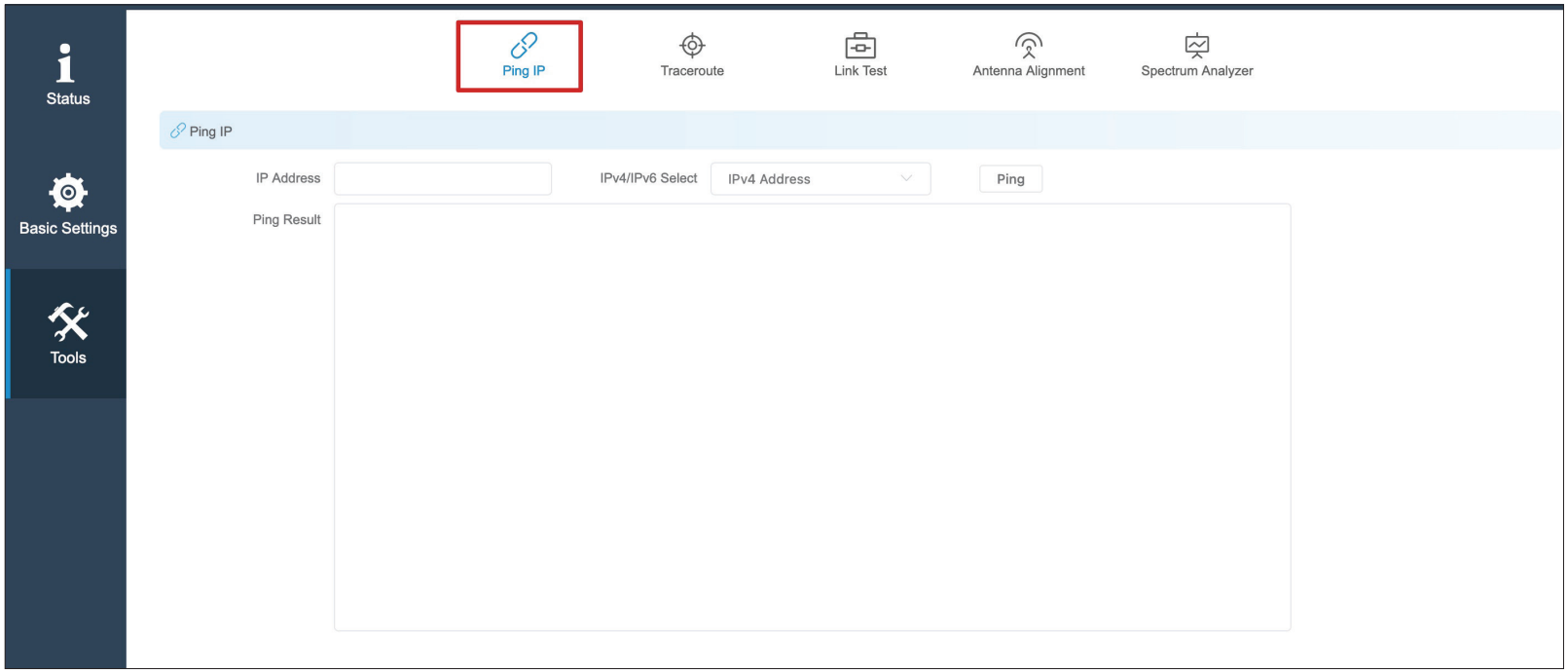
Tools

The DAP-3711 has many useful tools built in to help you manage the device and your network. These tools include **Ping IP, Traceroute, Link Test, Antenna Alignment and Spectrum Analyzer.**

Ping IP

You can type in an IP address and check the ping result.

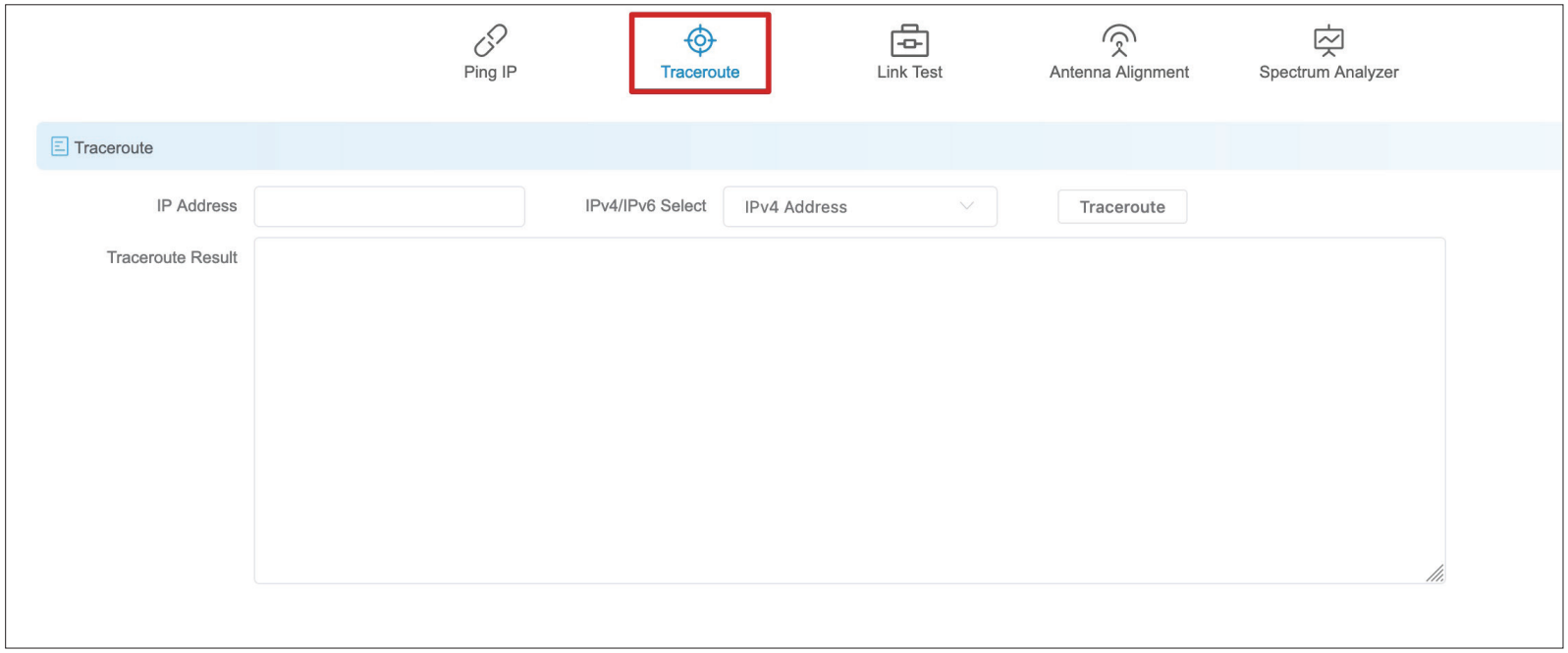
IP Address: Enter the IP address that you would like to ping.



Traceroute

This allows the user to traceroute an IP address.

IP Address: Enter the IP address to traceroute



Link Test

The DAP-3711 has a built-in Iperf function. Users can configure the DAP-3711 in **Iperf Server Mode**. Then the Iperf client can connect to the Iperf server to verify the speed between the two links. In client mode, you can assign an Iperf server IP address to check the speed between the two links.

Iperf Type: Select Client or Server

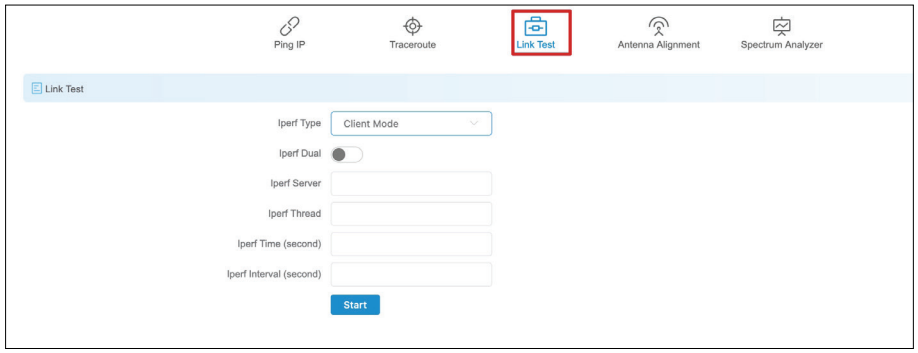
Iperf Dual: If you select Iperf Dual, the DAP-3711 will conduct a bi-directional speed test. Otherwise, it only test the speed of transmission from the Iperf client to the Iperf server.

Iperf Server: Enter the Iperf server's IP address.

Iperf Thread: Enter the number of threads during the test.

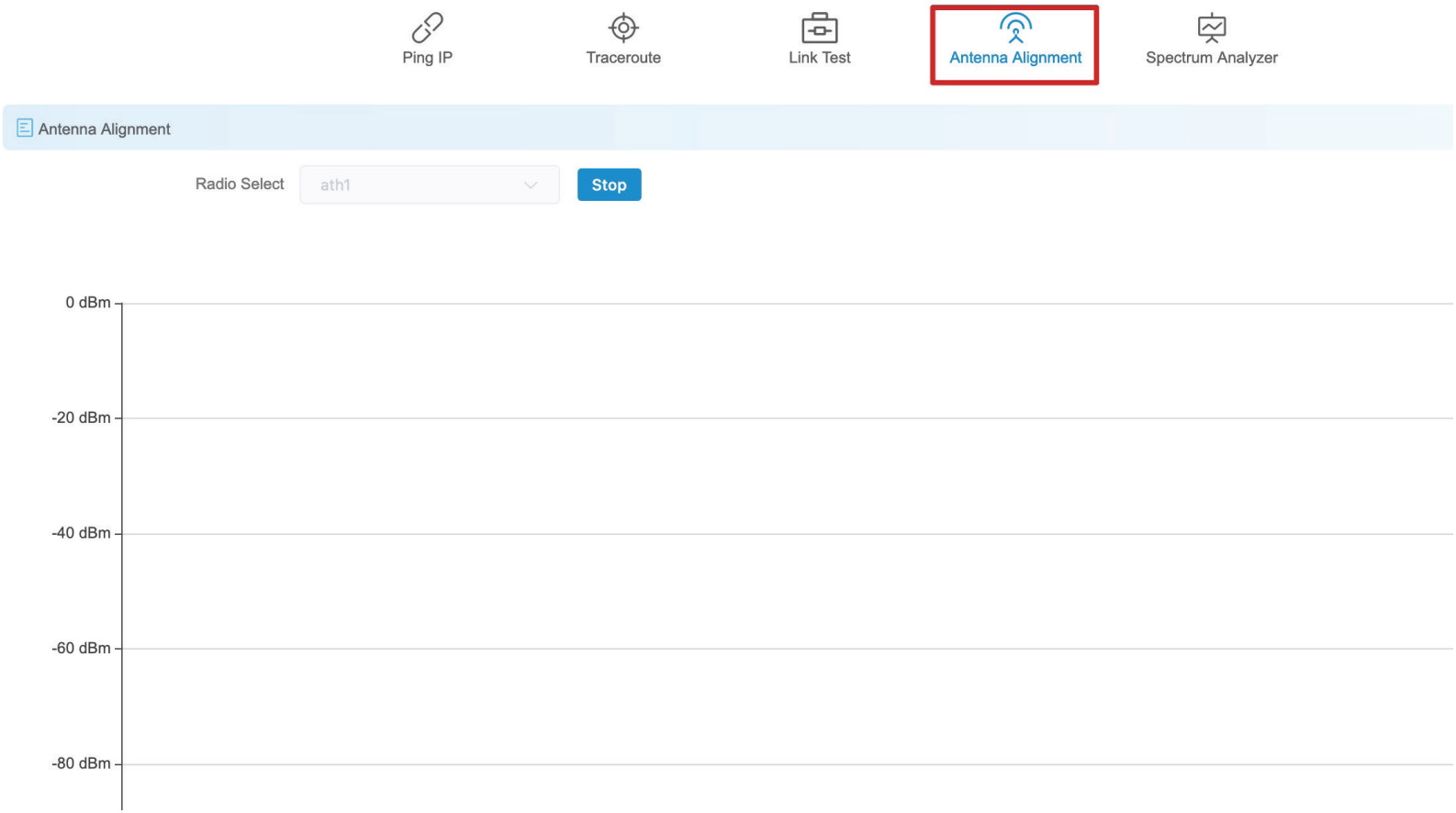
Iperf Time: Enter how long the speed test should last.

Iperf Interval: Enter the interval to wait between the tests.



Antenna Alignment

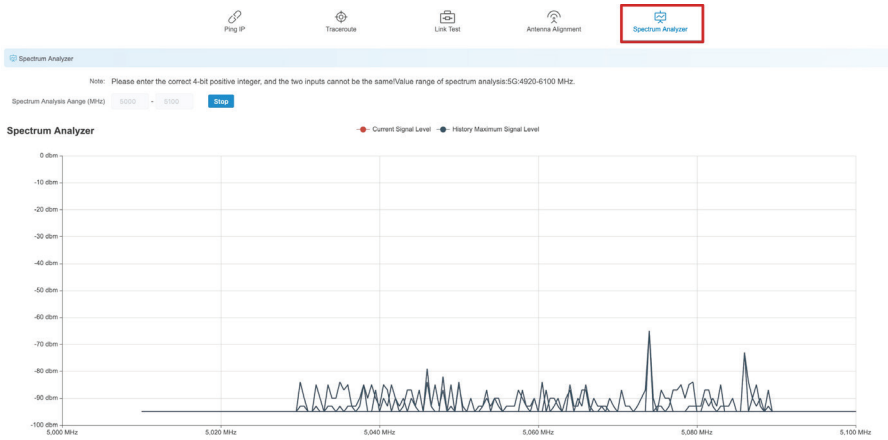
When you select this, the DAP-3711 will recalibrate its signal strength. You can check which angle has the best antenna alignment when you install the DAP-3711.



Spectrum Analyzer

You can use the Spectrum Analyzer to scan for the best channels. When performing the scan, the DAP-3711 Wi-Fi may disconnect.

Spectrum Analysis Range: Enter the frequency range to conduct spectrum analysis on. It will take a few seconds to finish the scan.



Technical Specifications

Standards
802.11a/n/ac

Device Interfaces
2 x 100/1000 Mbps Ethernet port, reset button

LEDs
Power, WLAN, LAN, Signal strength

Antenna Type
Directional

Antenna Gain
15 dBi

Beamwidth
H: 40°, V: 15°

Standards
802.11a/n/ac

Protection
8 kV ESD Protection

Enclosure
ABS, IP66 compliant

Operation Modes
AP, Station, WDS AP, WDS Station

Operating Frequency
5180~5320 MHz, 5745~5825 MHz

Max. Transmit Power[1]
27 dBm

Wireless Speed
Up to 867 Mbps

Bandwidth Support
20/40/80 MHz

Wireless Configuration
Auto channel support, transmit power selection,
SSID broadcast enabling/disabling

Security
802.11i 128-bit AES Personal / Enterprise

System Tools
Ping, traceroute, NTP, ping watchdog, syslog,
spectrum analyzer, throughput testing (Iperf)

Smart Wireless Technology
TDMA, Auto ACK, intelligent rate control,
co-channel interference avoidance

Advanced Features
Max. station limit

[1] Range will vary depending on country's maximum transmit power output regulation. Maximum wireless signal rate derived from IEEE Standard 802.11g and 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.

LAN Type
Static, DHCP

VLAN Support
Yes

Firewall
IP / MAC filter

Monitors
Throughput, interfaces, routes table, bridge table, ARP table, AP information, syslog

Firmware Upgrade
Web-based upgrade

Power Input
24V Passive PoE

Power Consumption
≤ 15 W

Operating Temperature
-40°C to 65°C

Storage Temperature
-40°C to 85°C

Operating Humidity
0% to 90%

Storage Humidity
0% to 90%

Weight
600g (1.3 lbs)

Dimensions
288 x 88 x 45 mm (11.3 x 3.4 x 1.8 in)

Certifications
CE
FCC

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FCC Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation statement.

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.

Caution!

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