NUCLIAS CONNECT
DAP-X2810 User Guide

V 1.00

nuclias connect

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Nuclias Connect
Introduction

Nuclias Connect is D-Link's centralized management solution for Small-to-Medium-Sized Business (SMB) networks. Nuclias Connect makes it easier to analyze, automate, configure, optimize, scale, and secure your network — delivering the convenience of an Enterprise-wide management solution, at an SMB price. Nuclias Connect gives you the financial and technical flexibility to expand from a small network to a larger one of up to 1,000 Access Points (APs), while retaining a robust and centralized management system. With its intuitive Graphical User Interface (GUI), a wealth of enhanced AP features, and a setup wizard that supports 11 languages, Nuclias Connect minimizes the hassle of deployment, configuration, and administration tasks.

Deployable on a Windows server (or Linux via Docker), PC, or Smartphone (via lite management app) the Nuclias Connect free-to-download software is capable of managing up to 1,000 APs without licensing charges, coupled with an inexpensive optional hardware controller (DNH-100 Nuclias Connect Hub) suitable for remote locations. Through software-based monitoring and remote management of all wireless Access Points (APs) on your network, Nuclias Connect offers tremendous flexibility compared to traditional hardware-based unified management systems. Configuration can be done remotely. Network traffic analytics are available at a glance (in whole or in part). Load Balancing, Airtime Fairness, and Localized Throttling are enabled.

Nuclias Connect supports multi-tenancy, so network administrators can grant localized management authority for local networks. In addition, because APs can support 8 SSIDs per radio (16 SSIDs per dual band APs), administrators have the option of using one SSID to create a guest network for visitors.

Nuclias Connect provides direct AP discovery and provisioning when it shares the same Layer-2/Layer-3 network with a given AP, allowing users to find APs and import profiles with minimum effort, which can be applied as needed to groups or individual APs for even more effective configuration.

Since Nuclias Connect's software operates transparently on the network, an AP can be deployed anywhere in an NAT environment. Admins can provide and manage a variety of distributed deployments, including settings and admin account configuration for each deployment.

Nuclias Connect allows for multiple user authentications while enabling specific access control configurations for each SSID, giving admins the option of configuring separate internal networks for different subnets, while enabling more advanced Value-Added Services, such as Captive Portal or Wi-Fi Hotspot.

Nuclias Connect Key Features

- Free-to-Download Management Software
- Searchable Event Log and Change Log
- License-Free Access Points
- Traffic Reporting & Analytics
- Authentication via Customizable Captive Portal, 802.1x and RADIUS Server, POP3, LDAP
- Remote Config. & Batch Config.
- Multilingual Support
- Intuitive Interface
- Multi-Tenant & Role-Based Administration
- Payment Gateway (PayPal) Integration and Front-Desk Ticket Management

For more information on how to use Nuclias Connect with the DAP-X2810, please refer to the Nuclias Connect User Guide.

Package Contents

- DAP-X2810 802.11ax Power over Ethernet (PoE) Access Point
- Mounting Brackets
- Ceiling Brackets
- Quick Install Guide

Note: *No PSU supplied. To power the units use a D-Link 802.3at PoE switch or the D-Link DPE-301GI PoE injector.*

System Requirements

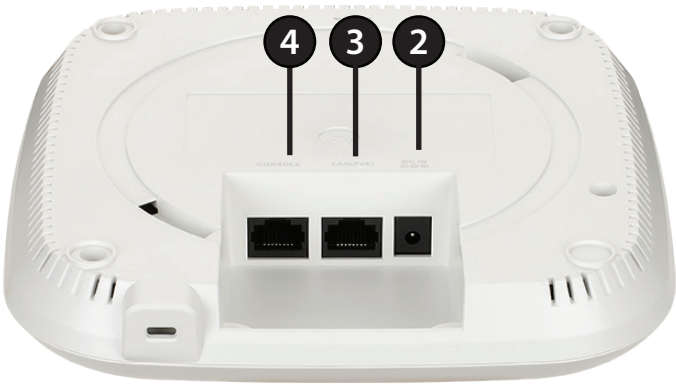
- Computers with Windows®, Macintosh®, or Linux-based operating systems with an installed Ethernet Adapter
- Internet Explorer 11, Safari 7, Firefox 28, or Google Chrome 33 and above (for configuration)

Hardware Overview

LEDs

1	Power/Status	Solid Red	Indicates the access point has malfunctioned.
		Blinking Red	This LED will blink during boot-up.
		Solid Green	Indicates that the DAP-X2810 is working properly.

Connections

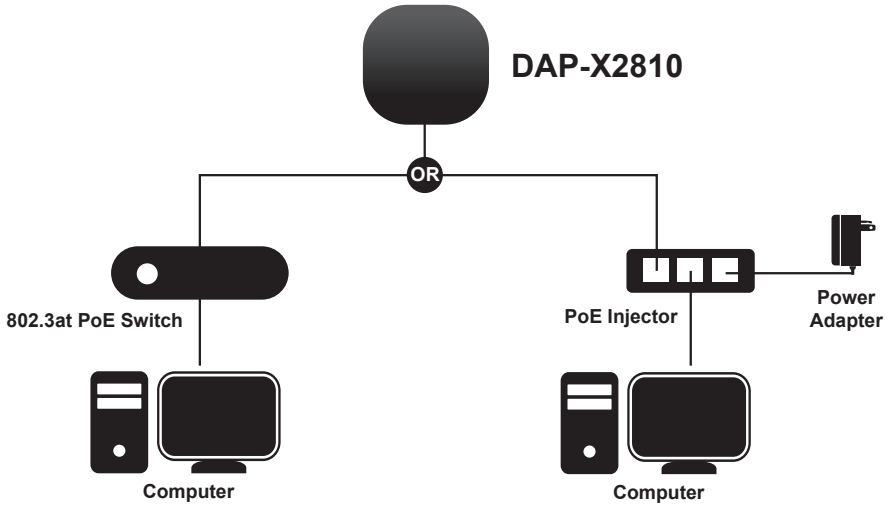


2	Power Receptor	Connect the supplied power adapter. (*Note: no longer used, replaced by PoE)
3	LAN (PoE) Port	Connect to a Power over Ethernet (PoE) switch or router via an Ethernet cable.
4	Console Port	RJ45 console port for debug

Basic Installation
Hardware Setup

To power on the DAP-X2810, you can use ONE of the following methods:
1. Plug one end of your Ethernet cable into theLAN(PoE) port of the DAP-X2810, and the other end into a port on a 802.3at PoE switch.
2. Purchase a DPE-301GI PoE injector separately if you need to connect the access point without a 802.3at PoE Switch.

Configure the access point



To set up and manage the DAP-X2810, use one of the following methods:
1. Connect the access point and your computer to the same PoE switch. Manage the access point from the computer.
   Enter ***dapx2810.local*** in the address field of your browser.
   Log in to the Administration Web pages. The default login information is:
   Username: **admin**
   Password: **admin**
2. Connect the access point and your computer via DPE-301GI PoE injector. Manage the access point from the computer.
   Enter ***dapx2810.local*** in the address field of your browser.
   Log in to the Administration Web pages. The default login information is:
   Username: **admin**
   Password: **admin**

Setup Wizard

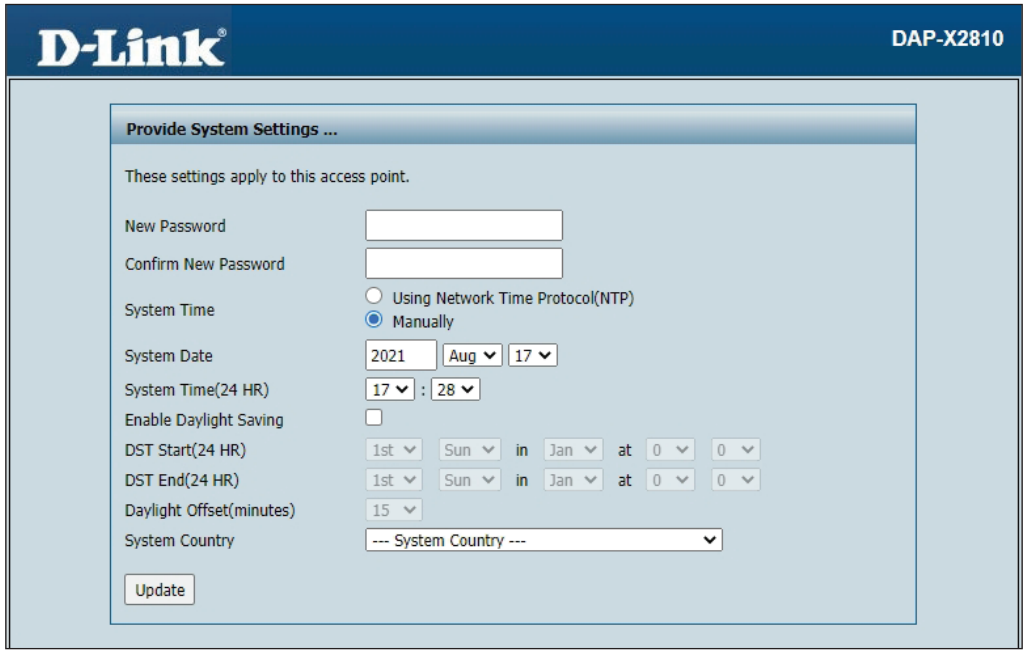
The first login instance displays the System Settings window which requires a change in password. Additional settings include the System Time and System Country functions.

After logging in to the user interface, fill in the New Password and Confirm New Password fields.

In the System Time function, select **Using Network Time Protocol (NTP)** or **Manually** to define the system time. If required, click the Daylight Saving Offset drop-down menu and select the value (minutes).

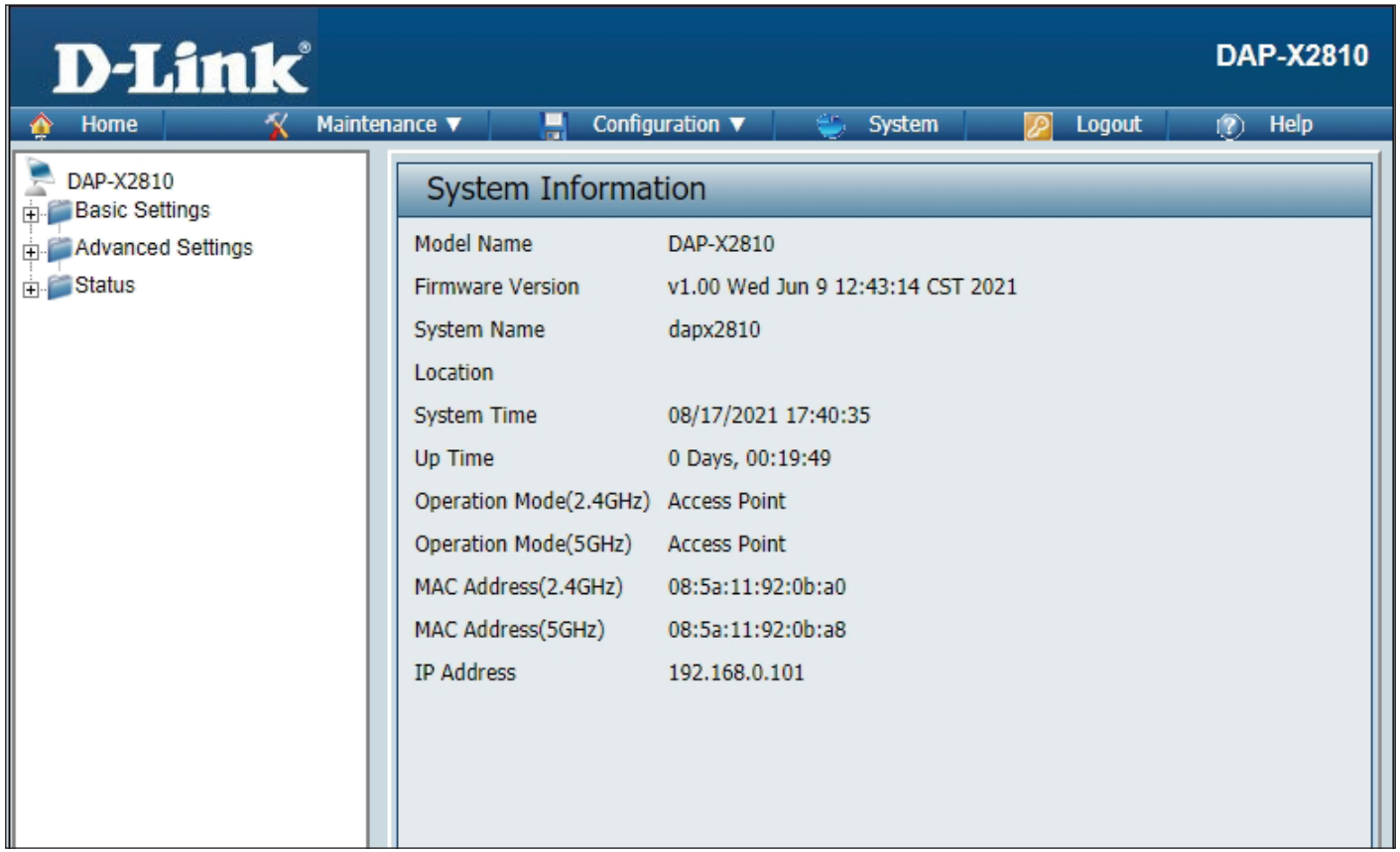
- Setting NTP System Time: Before trying to configure NTP check, perform a ping test with the NTP server. In the NTP Server field, enter the NTP server to use. Then click the Time Zone drop-down menu and select the appropriate time zone.
- Setting System Time Manually: From the System Date drop-down menu, select the Year, Month, and Day along with the Hour and Minutes appropriate for the AP.
- Enable Daylight Saving: Click the radio button to enable the daylight savings time (DST) function. Set the DST start (24 hours) and end (24 hours) time by clicking on the drop-down menus and setting the Month, Week, Day, Hour, and Minute of the DST starting days.

Once the settings are configured, click **Update** button to accept the configuration and proceed to the main interface menu page.



Web User Interface

The DAP-X2810 supports an elaborate web user interface where the user can configure and monitor the device. Launch a web browser, type ***dapx2810.local*** in the address field and then press Enter to login. Most of the configurable settings are located in the left menu of the web GUI which contains sections called **Basic Settings**, **Advanced Settings** and **Status**.



Wireless

On the wireless settings page, you can set up the basic wireless configuration for the access point. The user can choose from 4 different wireless modes:

Access Point - Used to create a wireless LAN

WDS with AP - Used to connect multiple wireless networks while still functioning as a wireless access point

WDS - Used to connect multiple wireless networks

Access Point Mode

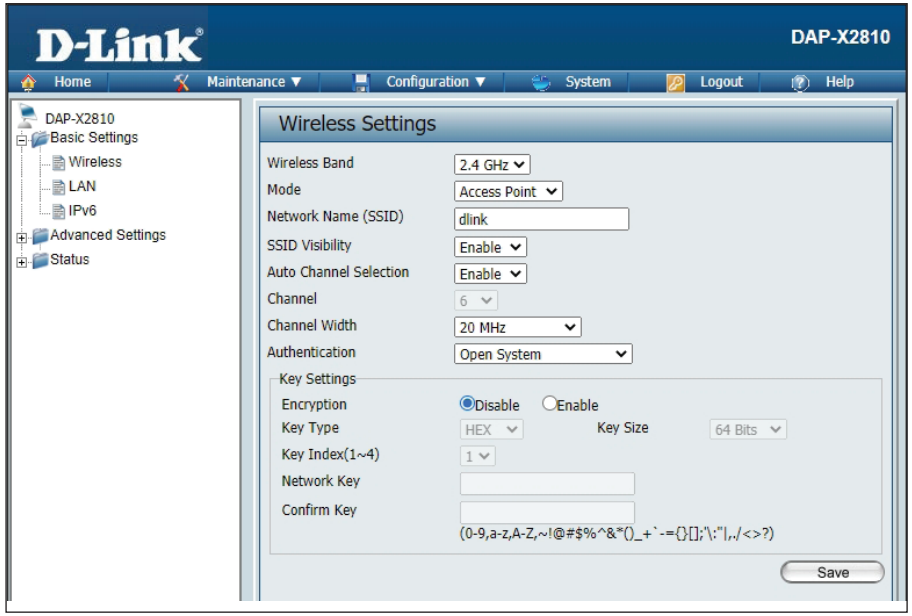
Wireless Band: Select either **2.4 GHz** or **5 GHz** from the drop-down menu.

Mode: Select **Access Point** from the drop-down menu.

Network Name (SSID): Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is **dlink**. The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network. The SSID can be up to 32 characters and is case-sensitive.

SSID Visibility: Select **Enable** to broadcast the SSID across the network, thus making it visible to all network users. Select **Disable** to hide the SSID from the network.

Auto Channel Selection: This feature when enabled automatically selects the channel that provides the best wireless performance. The channel selection process only occurs when the AP is booting up. To manually select a channel, set this option to **Disable** and select a channel from the drop-down menu.



Channel: To change the channel, first toggle the *Auto Channel Selection* setting to **Disable**, and then use the drop-down menu to make the desired selection.

Note: *The wireless adapters will automatically scan and match the wireless settings.*

Channel Width: Allows you to select the channel width you would like to operate in 2.4GHz and 5GHz. Use the drop-down menu to choose **20 MHz** or **Auto 20/40 MHz** or **Auto 20/40/80 MHz**.

Authentication: Use the drop-down menu to choose **Open System**, **Enhanced Open**, **Enhanced Open + Open**, **WPA-Personal**, **WPA-Enterprise**, or **802.1x**.

- Select **Open System, Enhanced Open**, **Enhanced Open or Open**, to communicate the key across the network (WEP).
- Select **WPA-Personal** to secure your network using a password and dynamic key changes. No RADIUS server is required.
- Select **WPA-Enterprise** to secure your network with the inclusion of a RADIUS server.
- Select **802.1X** if your network is using port-based Network Access Control.

WDS with AP Mode

Wireless Band: Select either **2.4GHz** or **5GHz** from the drop-down menu.

Mode: WDS with AP mode is selected from the drop-down menu.

Network Name (SSID): Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is **dlink**. The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.

Auto Channel Selection: Enabling this feature automatically selects the channel that will provide the best wireless performance. This feature is not supported in WDS with AP mode. The channel selection process only occurs when the AP is booting up.

Channel: All devices on the network must share the same channel. To change the channel, use the drop-down menu to make the desired selection. (Note: The wireless adapters will automatically scan and match the wireless settings.)

Channel Width: Allows you to select the channel width you would like to operate in 2.4GHz and 5GHz. Use the drop-down menu to choose 20 MHz or Auto 20/40 MHz or Auto 20/40/80 MHz.

AP MAC Address: Enter the MAC addresses of the APs on your network that will serve as bridges to wirelessly connect multiple networks.

Site Survey: Click on the **Scan** button to search for available wireless networks, then click on the available network that you want to connect with.

Authentication: Use the drop-down menu to choose **Open System** or **WPA-Personal**.

- Select Open System to communicate the key across the network.
- Select WPA-Personal to secure your network using a password and dynamic key changes. No RADIUS server is required.

WDS Mode

Wireless Band: Select either 2.4GHz or 5GHz from the drop-down menu.

Mode: WDS is selected from the drop-down menu.

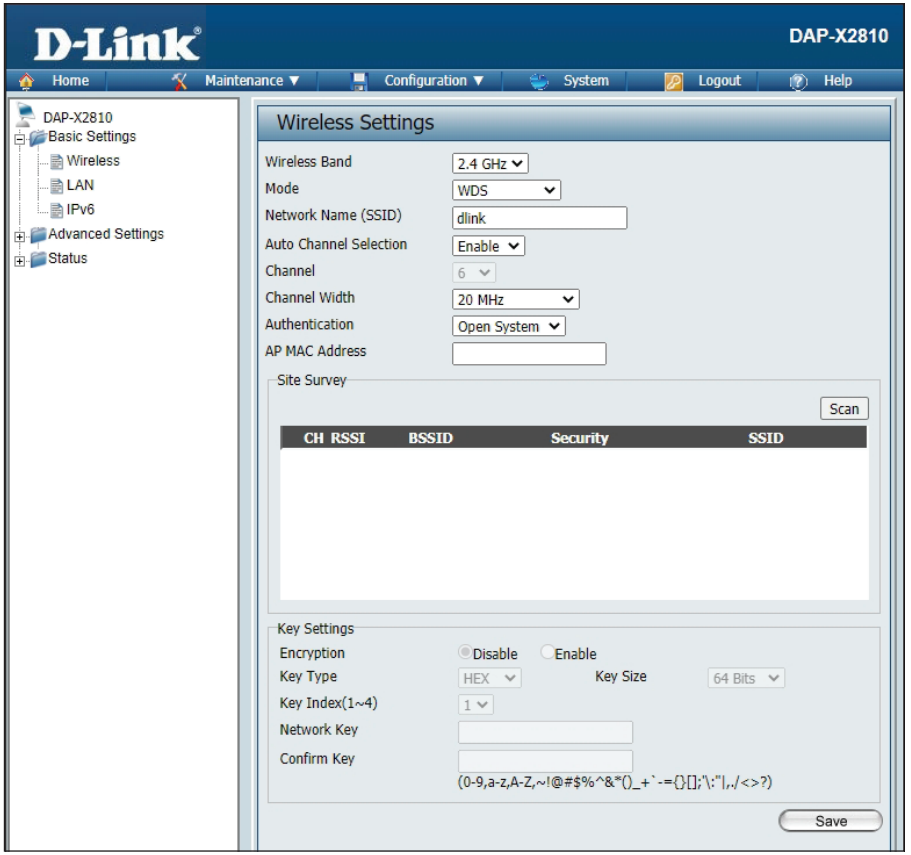
Network Name (SSID): Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is **dlink**. The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.

Auto Channel Selection: Enabling this feature automatically selects the channel that will provide the best wireless performance. This feature is not supported in WDS mode.

Channel: All devices on the network must share the same channel. To change the channel, use the drop-down menu to make the desired selection.

Channel Width: Allows you to select the channel width you would like to operate in 2.4GHz and 5GHz. Use the drop-down menu to choose 20 MHz or Auto 20/40 MHz or Auto 20/40/80 MHz.

AP MAC Address: Enter the MAC addresses of the APs on your network that will serve as bridges to wirelessly connect multiple networks.



Site Survey: Click on the **Scan** button to search for available wireless networks, then click on the available network that you want to connect with.

Authentication: Use the drop-down menu to choose **Open System** or **WPA-Personal**.

- Select Open System to communicate the key across the network.
- Select WPA-Personal to secure your network using a password and dynamic key changes. No RADIUS server is required.

Wireless Security

Wireless security is a key concern for any wireless network. Unlike any other networking methods, wireless networks broadcast it's presence for anyone to connect to it. Today, wireless security has advanced to a level where it is virtually impenetrable.
There are mainly two forms of wireless encryption and they are called Wired Equivalent Privacy (WEP) and Wi-Fi Protected Access (WPA). WEP was the first security method developed. It is a low level encryption but better than now encryption. WPA is the newest encryption standard and with the advanced WPA3 standard, wireless networks have finally reach a point where the security is strong enough to give users peace of mind when installing wireless networks.

Wired Equivalent Privacy (WEP)

WEP Open System will send a request to the access point and if the key used matches the one configured on the access point, the access point will return a success message back to the wireless client. If the key does not match the one configured on the access point, the access point will deny the connection request from the wireless client.

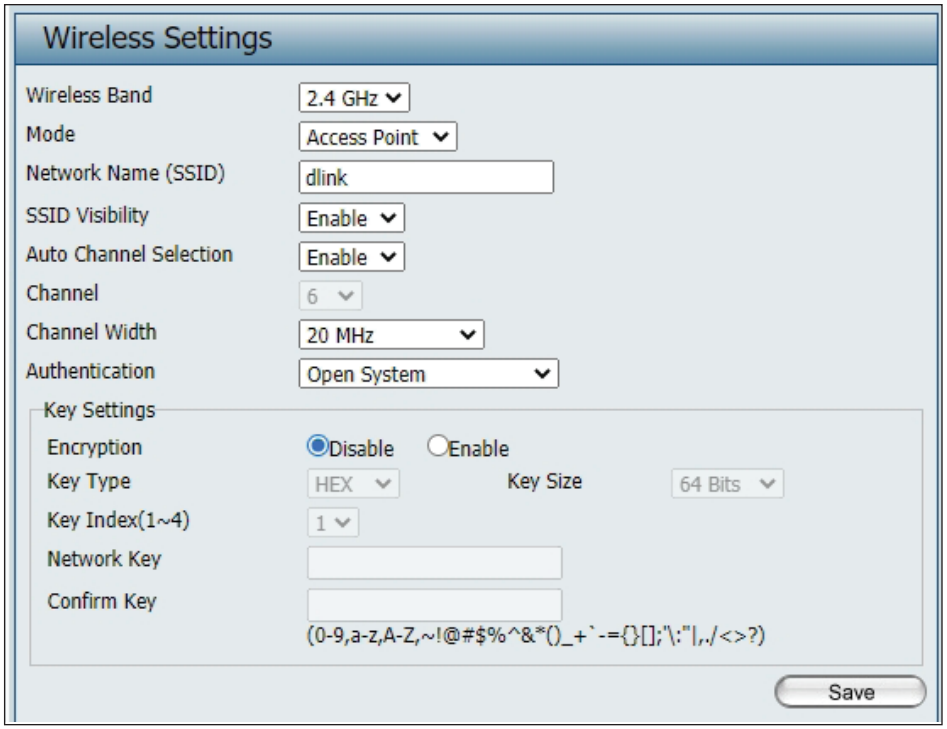
Encryption: Use the radio button to disable or enable encryption.

Key Type: Select HEX** or ASCII*.

Key Size: Select 64 Bits or 128 Bits.

Key Index (1-4): Select the 1st through the 4th key to be the active key.

Key: Input up to four keys for encryption. You will select one of these keys in the Key Index drop-down menu.



**Hexadecimal (HEX) digits consist of the numbers 0-9 and the letters A-F.
*ASCII (American Standard Code for Information Interchange) is a code that represents English letters using numbers ranging from 0-127.

Wi-Fi Protected Access (WPA / WPA2 / WPA3)

WPA was created by the Wi-Fi Alliance to address the limitations and weaknesses found in WEP. This protocol is mainly based on the 802.11i standard. There are also two variations found in WPA called WPA-Personal (PSK) and WPA-Enterprise (EAP).

WPA-EAP requires the user to install a RADIUS Server on the network for authentication.
WPA-Personal does not require the user to install a RADIUS Server on the network.

Comparing WPA-PSK with WPA-EAP, WPA-PSK is seen as a weaker authentication but comparing WPA-PSK to WEP, WPA-PSK is far more secure than WEP. WPA-EAP is the highest level of wireless security a user can use for wireless today.

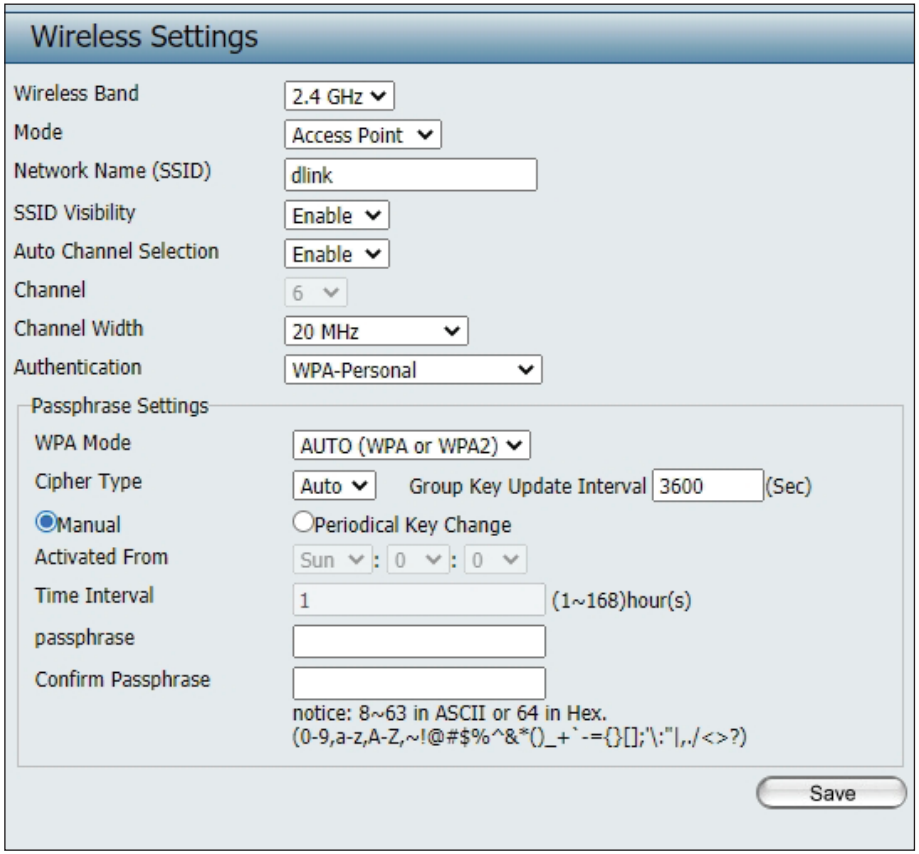
WPA2/WPA3 are upgrades of WPA. WPA2/WPA3 yet again solves some possible security issues found in WPA. WPA2/WPA3 have two variations called WPA2/WPA3-Personal (PSK) and WPA2/WPA3-Enterprise (EAP) which are the same as found with WPA.

WPA Mode: When WPA-Personal is selected for Authentication type, you must also select a WPA mode from the drop-down menu: AUTO (WPA or WPA2), WPA2 or WPA3,WPA2 Only or WPA3 Only.

Cipher Type: When you select WPA-Personal, you must also select AUTO, AES, or TKIP from the drop-down menu.

Group Key Update: Select the interval during which the group key will be valid. The default value of 3600 is recommended.

Pass Phrase: When you select WPA-Personal, enter a Pass Phrase in the corresponding field.



WPA Mode: When WPA-Enterprise is selected, you must also select a WPA mode from the drop-down menu: AUTO (WPA or WPA2) or WPA2 Only or WPA3 only.

Cipher Type: When WPA-Enterprise is selected, you must also select a cipher type from the drop-down menu: Auto, AES, or TKIP.

Group Key Update Interval: Select the interval during which the group key will be valid. 3600 is the recommended value as a lower interval may reduce data transfer rates.

RADIUS Server: Enter the IP address of the RADIUS server to be used in authenticate.

RADIUS Port: Enter the RADIUS port.

RADIUS Secret: Enter the shared secret to be used between the radius server and the DAP to authenticate.

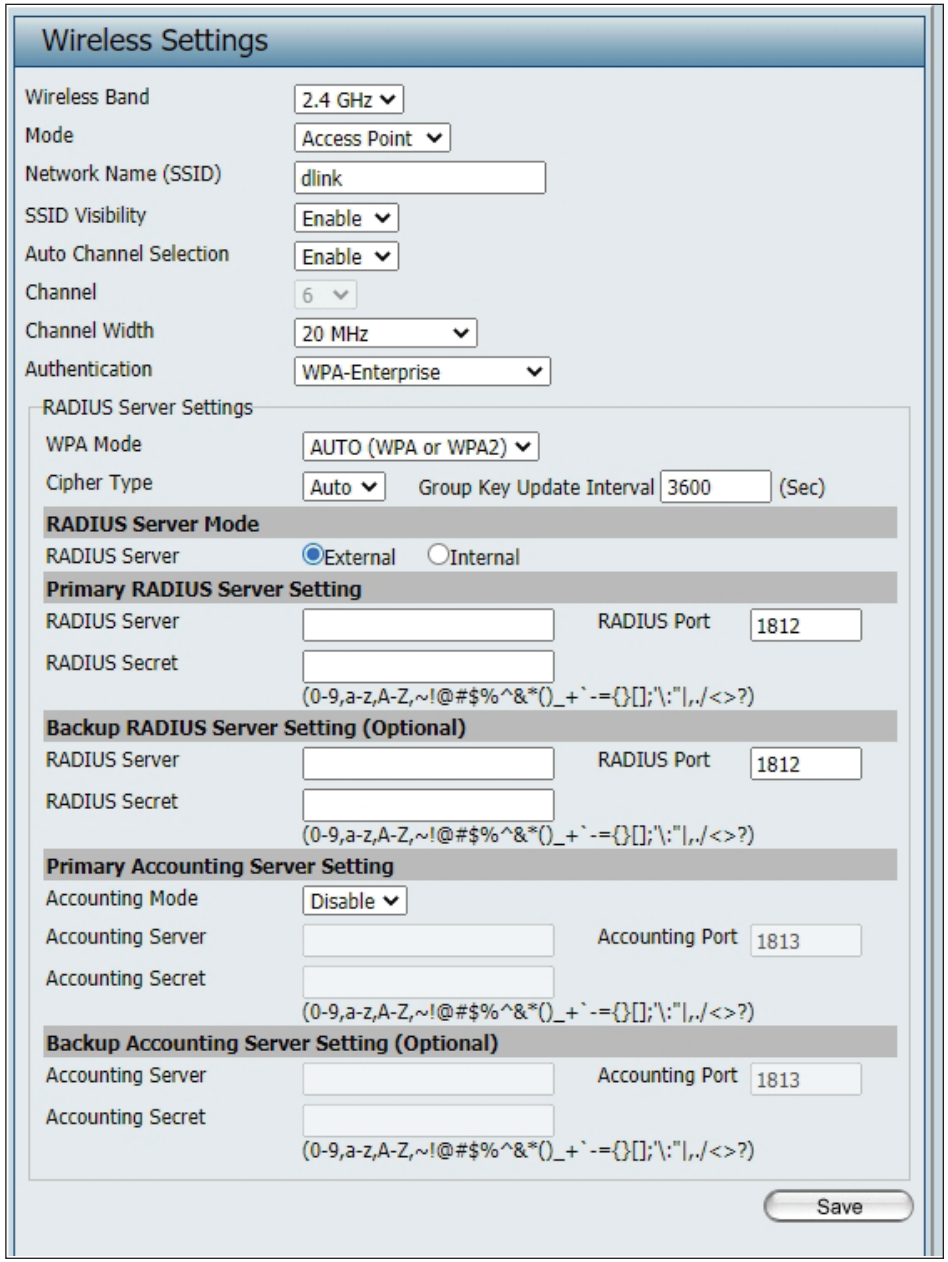
Accounting Mode: Click the drop-down menu to enable or disable the accounting mode.

Accounting Server: Enter the IP address of the accounting server.

Accounting Port: Enter the accounting port.

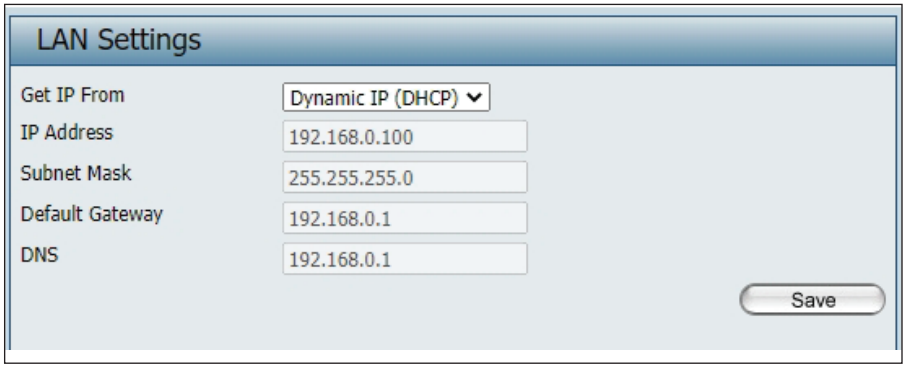
Accounting Secret: Enter the accounting secret.

Save: Save the updated configuration. Click **Configuration** > **Save and Activate** to make changes permanent.



LAN

LAN is short for Local Area Network. This is considered your internal network. These are the IP settings of the LAN interface for the DAP-X2810. These settings may be referred to as private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.



Get IP From: **Dynamic IP (DHCP)** is chosen here. Choose this option if you have a DHCP server in your network, or if you wish to assign a static IP address to the DAP-X2810. When **Dynamic IP (DHCP)** is selected, the other fields here will be grayed out. Please allow about 2 minutes for the DHCP client to be functional once this selection is made.

IP Address: Assign a static IP address that is within the IP address range of your network.

Subnet Mask: Enter the subnet mask. All devices in the network must share the same subnet mask.

Default Gateway: Enter the IP address of the gateway/router in your network.

DNS: Enter a DNS server IP address. This is usually the local IP address of your gateway/router.

IPv6

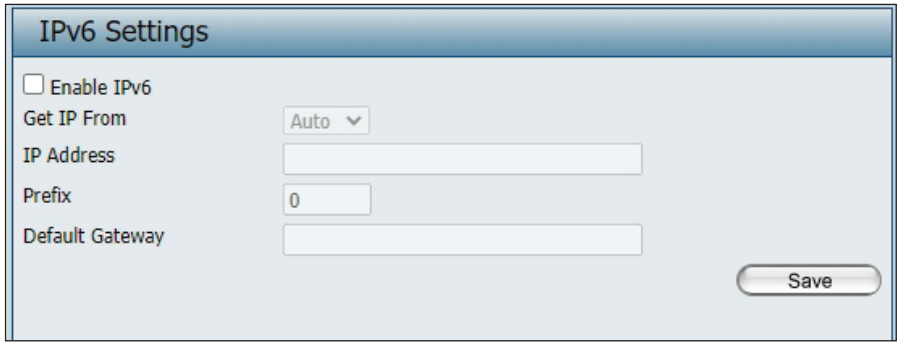
Enable IPv6: Check to enable IPv6

Get IP From: Dynamic IP is chosen here. Choose this option the DAP-X2810 can get IPv6 address automatically or use Static to set IPv6 address manually.
When **Auto** is selected, the other fields here will be grayed out.

IPv6 Address: Enter the LAN IPv6 address used here.

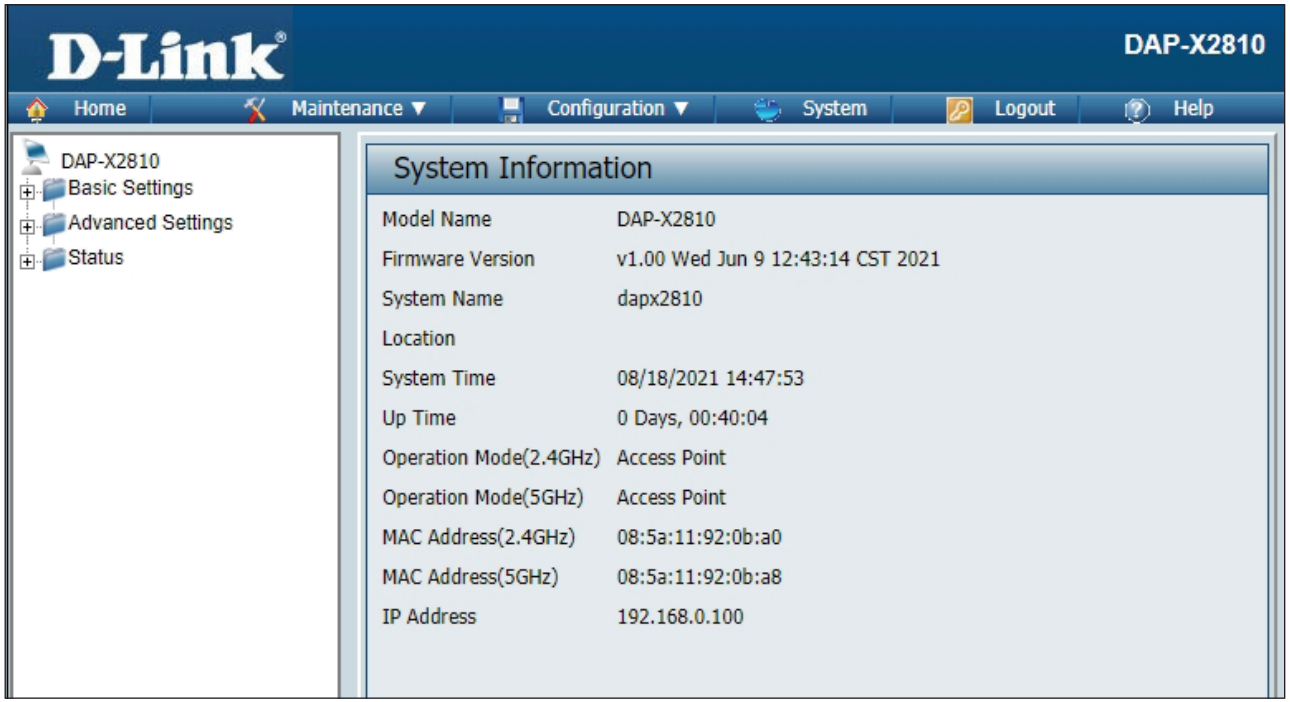
Prefix: Enter the LAN subnet prefix length value used here.

Default Gateway: Enter the LAN default gateway IPv6 address used here.



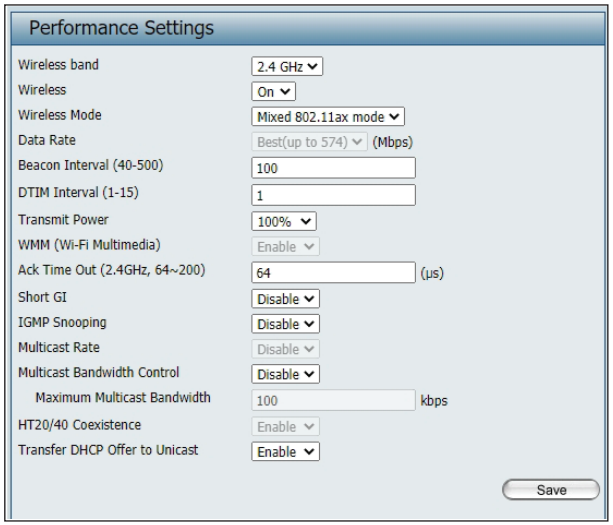
Advanced Settings

In the Advanced Settings Section the user can configure advanced settings concerning Performance, Wireless Resource, Multi-SSID, VLAN, Intrusion, Schedule, Internal RADIUS Server, ARP Spoofing Prevention, Bandwidth Optimization, Captive Portal, DHCP Server, Filters and Traffic Control . The following pages will explain settings found in the Advanced Settings section in more detail.



Performance

On the Performance Settings page the users can configure more advanced settings concerning the wireless signal and hosting.



Wireless Band: Select either 2.4GHz or 5GHz.

Wireless: Use the drop-down menu to turn the wireless function On or Off.

Wireless Mode: The different combination of clients that can be supported include Mixed 802.11b/g/n mode, Mixed 802.11b/g mode, 802.11n Only mode, and Mixed 802.11ax mode in the 2.4 GHz band and Mixed 802.11a/n, 802.11a Only mode, 802.11n Only mode, Mixed 802.11ac mode and Mixed 802.11ax mode in the 5 GHz band. Please note that when backwards compatibility is enabled for legacy (802.11a/g/b) clients.

Data Rate*: Indicate the base transfer rate of wireless adapters on the wireless LAN. The AP will adjust the base transfer rate depending on the base rate of the connected device. If there are obstacles or interference, the AP will step down the rate. This option is enabled in Mixed 802.11b/g mode (for 2.4 GHz) and 802.11a only mode (for 5 GHz). The choices available are Best (Up to 54), 54, 48, 36, 24, 18, 12, 9, 6 for 5 GHz and Best (Up to 54), 54, 48, 36, 24, 18, 12, 9, 6, 11, 5.5, 2 or 1 for 2.4 GHz.

Beacon Interval (40-500): Beacons are packets sent by an access point to synchronize a wireless network. Specify a value in milliseconds. The default (100) is recommended. Setting a higher beacon interval can help to save the power of wireless clients, while setting a lower one can help a wireless client connect to an access point faster.

DTM Interval (1-15): Select a Delivery Traffic Indication Message setting between 1 and 15. 1 is the default setting. DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

Transmit Power: This setting determines the power level of the wireless transmission. Transmitting power can be adjusted to eliminate overlapping of wireless area coverage between two access points where interference is a major concern. For example, if wireless coverage is intended for half of the area, then select 50% as the option. Use the drop-down menu to select 100%, 50%, 25%, or 12.5%.

WMM (Wi-Fi Multimedia): WMM stands for Wi-Fi Multimedia. Enabling this feature will improve the user experience for audio and video applications over a Wi-Fi network.

Ack Time Out: To effectively optimize throughput over long distance links enter a value for Acknowledgement Time Out between 64 and 200 microseconds for 5 GHz and 2.4 GHz in the field provided.

Short GI: Select Enable or Disable. Enabling a short guard interval can increase throughput. However, be aware that it can also increase the error rate in some installations due to increased sensitivity to radio-frequency installations.

IGMP Snooping: Select Enable or Disable. Internet Group Management Protocol allows the AP to recognize IGMP queries and reports sent between routers and an IGMP host (wireless STA). When IGMP snooping is enabled, the AP will forward multicast packets to an IGMP host based on IGMP messages passing through the AP.

Multicast Rate: Select the multicast rate to adjust multicast packet data rates.

Multicast BandwidthControl: Adjust the multicast packet data rate here. The multicast rate is supported in AP mode, (2.4 GHZ and 5 GHZ) and WDS with AP mode, including Multi-SSIDs.

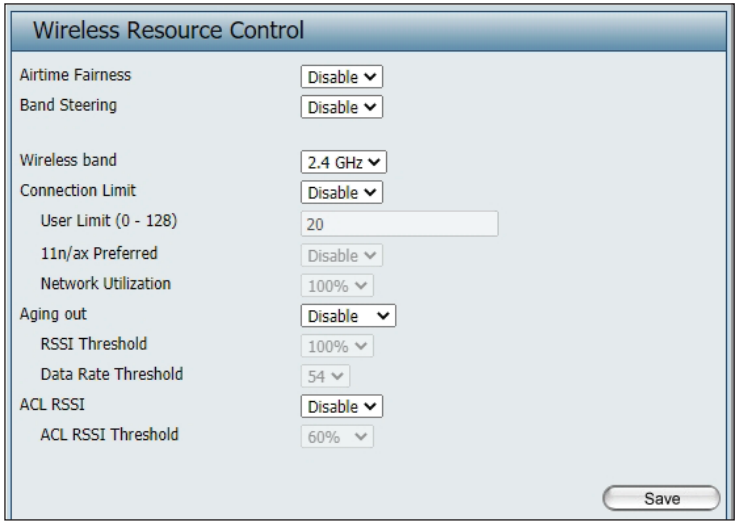
Maximum Multicast Bandwidth: Set the multicast packets' maximum bandwidth pass through rate from the Ethernet interface to the Access Point.

HT20/40 Coexistence: Enable this option to reduce interference from other wireless networks in your area. If the channel width is operating at 40 MHz and there is another wireless network's channel overlapping and causing interference, the Access Point will automatically change to 20 MHz.

Transfer DHCP Offer to Unicast: Enable to transfer the DHCP Offer to Unicast from LAN to WLAN. It is suggested to enable this function if stations number is larger than 30.

Wireless Resource

The Wireless Resource Control window is used to configure the wireless connection settings so that the device can detect the better wireless connection in your environment.



Airtime Fairness: Click the drop-down menu to enable or disable the airtime fairness function.

Band Steering: Click the drop-down menu to enable the band steering function. When the wireless clients support both 2.4GHz and 5GHz and the 2.4GHz signal is not strong enough, the device will use 5GHz as higher priority.

Wireless Band: Click the drop-down menu to select the wireless band, 2.4GHz or 5GHz.

Connection Limit: Click the drop-down menu to enable or disable the connection limit function. The option is for load balancing. This determines whether to limit the number of users accessing this device. The exact number is entered in the User Limit field below. This feature allows the user to share the wireless network traffic and the client using multiple APs. If this function is enabled and when the number of users exceeds this value, or the network utilization of this AP exceeds the percentage that has been specified, the DAP-X2810 will not allow clients to associate with the AP.

User Limit (0 - 128): This function is only available when Connection Limit is enabled. Set the maximum amount of users that are allowed access (0 - 128 users) to the device using the specified wireless band.

11n Preferred: This function is only available when Connection Limit is enabled. Use the drop-down menu to enable the 11n Preferred function. The wireless clients with 802.11n protocol will have higher priority to connect to the device.

Network Utilization: Click the drop-down menu to set the maximum utilization of this access point for service. The DAP-X2810 will not allow any new clients to associate with the AP if the utilization exceeds the value the user specifies. When this network utilization threshold is reached, the device will pause for one minute to allow network congestion to dissipate.

Aging out: Use the drop-down menu to select the criteria for disconnecting the wireless clients.

RSSI Threshold: When **Aging out** is **RSSI**, click the drop-down menu to select the percentage of RSSI. When the RSSI of wireless clients is lower than the specified percentage, the device disconnects the wireless clients. The function is only available when **Aging out** is **RSSI**.

Data Rate Threshold: When **Aging out** is **Data Rate**, click the drop-down menu to select the threshold of data rate. When the data rate of wireless clients is lower than the specified number, the device disconnects the wireless clients. The function is only available when **Aging out** is **Data Rate**.

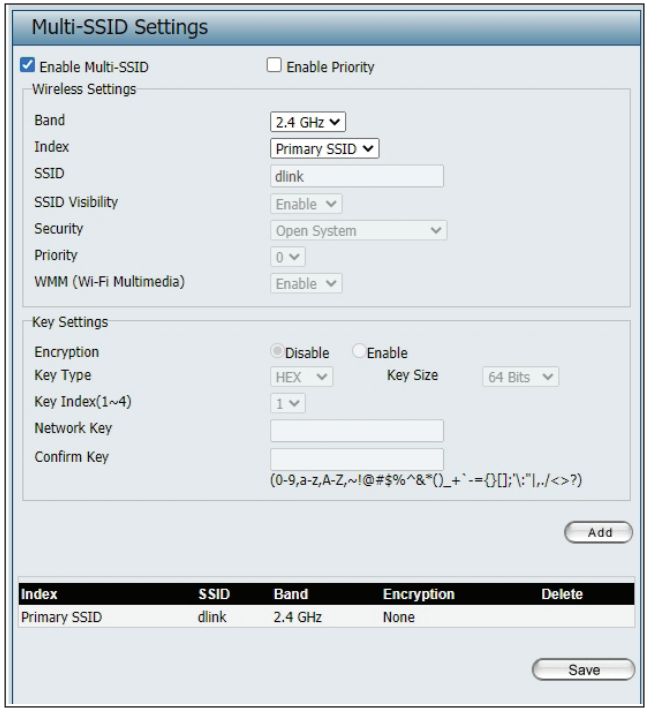
ACL RSSI: Click the drop-down menu to enable the ACL RSSI function. When enabled, the device denies the connection request from the wireless clients with the RSSI lower than the specified threshold below.

ACL RSSI Threshold: Click the drop-down menu to set the ACL RSSI Threshold.

Save: Click to save the updated configuration. To make the updates permanent, click **Configuration > Save and Activate**.

Multi-SSID

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



Enable Multi-SSID: Check to enable support for multiple SSIDs.

Enable Priority: Check to enable the Priority function.

Band: Select **2.4GHz** or **5GHz**.

Index: You can select up to three multi-SSIDs. With the Primary SSID, you have a total of four multi-SSIDs.

SSID: Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is **dlink**. The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.

SSID Visibility: Enable or Disable SSID visibility. Enabling this feature broadcasts the SSID across the network, thus making it visible to all network users.

Security: The Multi-SSID security can be Open System, WPA-Personal, or WPA-Enterprise. For a detailed description of the Open System parameters please go to pages 17. For a detailed description of the WPA-Personal parameters please go to page 18. For a detailed description of the WPA-Enterprise parameters please go to page 19.

Priority: Select the priority level of the SSID selected.

WMM (Wi-Fi Multimedia): WMM stands for Wi-Fi Multimedia. Enabling this feature will improve the user experience for audio and video applications over a Wi-Fi network.

Encryption: When you select Open System, toggle between Enable and Disable. If Enable is selected, the Key Type, Key Size, Key Index (1~4), Key, and Confirm Keys must also be configured.

Key Type: Select HEX or ASCII.

Key Size: Select 64-bit or 128-bit.

Key Index (1-4): Select from the 1st to 4th key to be set as the active key.

Key: Input up to four keys for encryption. You will select one of these keys in the Key Index drop-down menu.

WPA Mode: When you select either WPA-Personal or WPA-Enterprise, you must also choose a WPA mode from the drop-down menu.

Cipher Type: Select Auto, AES, or TKIP from the drop-down menu.

Group Key Update Interval: Select the interval during which the group key will be valid. The default value of 3600 seconds is recommended.

Pass Phrase: When you select WPA-Personal, please enter a Pass Phrase in the corresponding field.

Confirm Pass Phrase: When you select WPA-Personal, please re-enter the Pass Phrase entered in the previous item in the corresponding field.

RADIUS Server: When you select WPA-Enterprise, enter the IP address of the RADIUS server. In addition, you must configure RADIUS Port and RADIUS Secret.

RADIUS Port: Enter the RADIUS port.

RADIUS Secret: Enter the RADIUS secret.

Accounting Mode: Click the drop-down menu to enable or disable the accounting mode.

Accounting Server: Enter the IP address of the accounting server.

VLAN

VLAN List

The DAP-X2810 supports VLANs. VLANs can be created with a Name and VID. Mgmt (TCP stack), LAN, Primary/Multiple SSID, and WDS connection can be assigned to VLANs as they are physical ports. Any packet which enters the DAP-X2810 without a VLAN tag will have a VLAN tag inserted with a PVID. The VLAN List tab displays the current VLANs.

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

VLAN Mode: The current VLAN mode is displayed.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate**.

VID: Displays the VID of the VLAN.

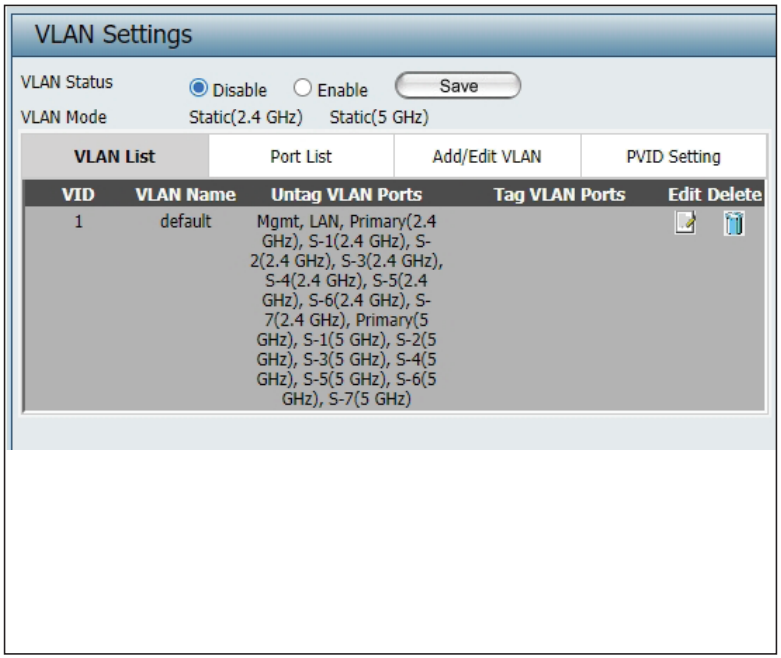
VLAN Name: Displays the name of the VLAN.

Untag VLAN Ports Displays the untagged ports.

Tag VLAN Ports: Displays the tagged ports.

Edit: Clink the icon to edit the current VLAN.

Delete: Click the icon to delete the current VLAN.



Port List

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

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

VLAN Mode: Displays the current VLAN mode.

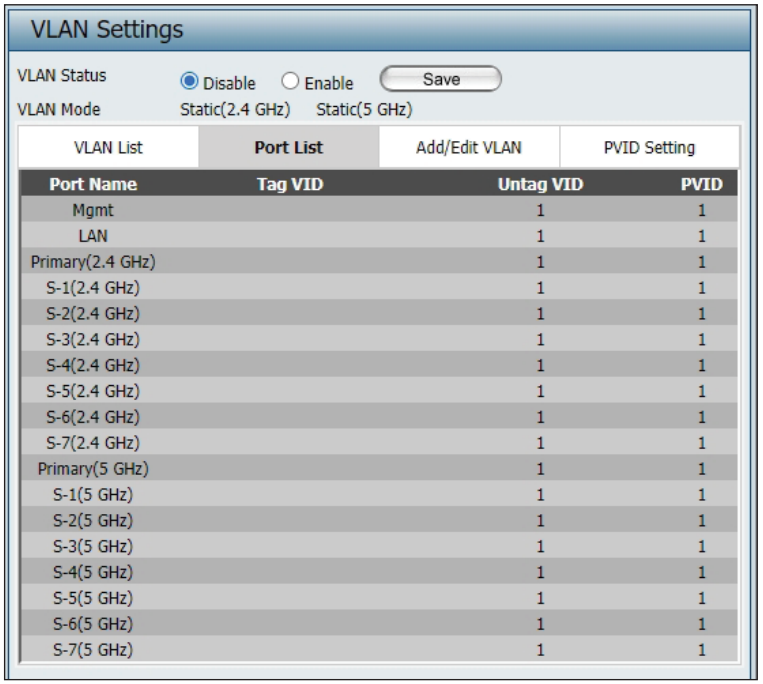
Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Port Name: The name of the port is displayed in this column.

Tag VID: The Tagged VID is displayed in this column.

Untag VID: The Untagged VID is displayed in this column.

PVID: The Port VLAN Identifier is displayed in this column.



Add/Edit VLAN

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

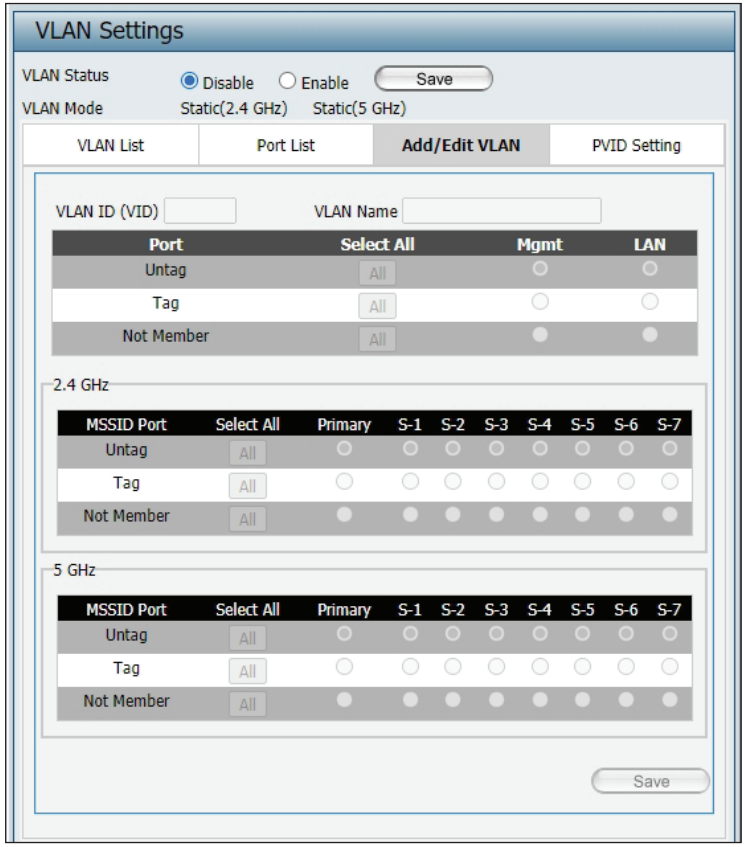
VLAN Status: Use the radio button to toggle to Enable.

VLAN Mode: Displays the current VLAN mode.

VLAN ID: Provide a number between 1 and 4094 for the Internal VLAN.

VLAN Name: Enter the VLAN to add or modify.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate**.



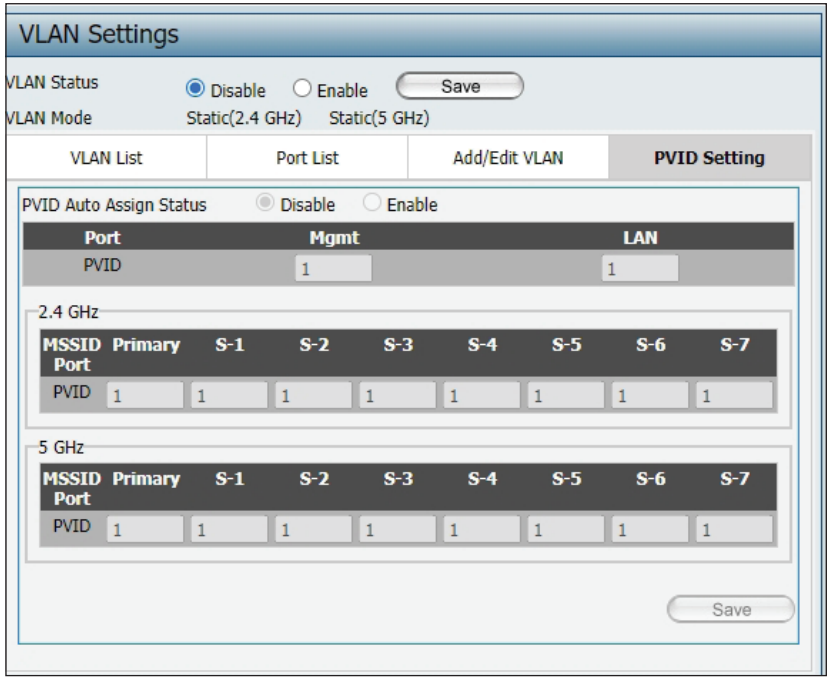
PVID Settings

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

VLAN Status: Use the radio button to toggle between Enable and Disable.

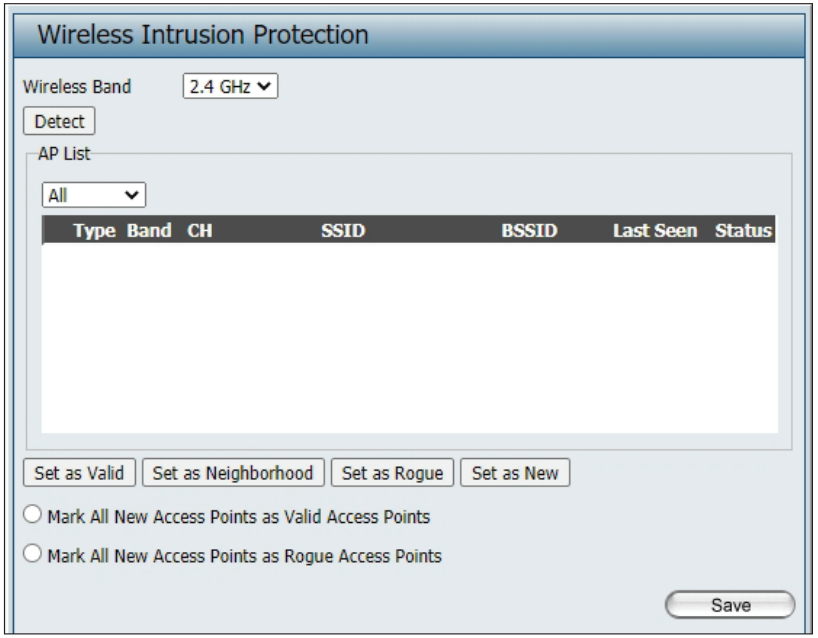
VLAN Mode: Displays the current VLAN mode.

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



Intrusion

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



Wireless Band: Select 2.4GHz or 5GHz.

AP List: Click the drop-down menu to select **All**, **Valid**, **Neighbor**, **Rogue**, and **New**.

The following is a definition of the listed AP categories:

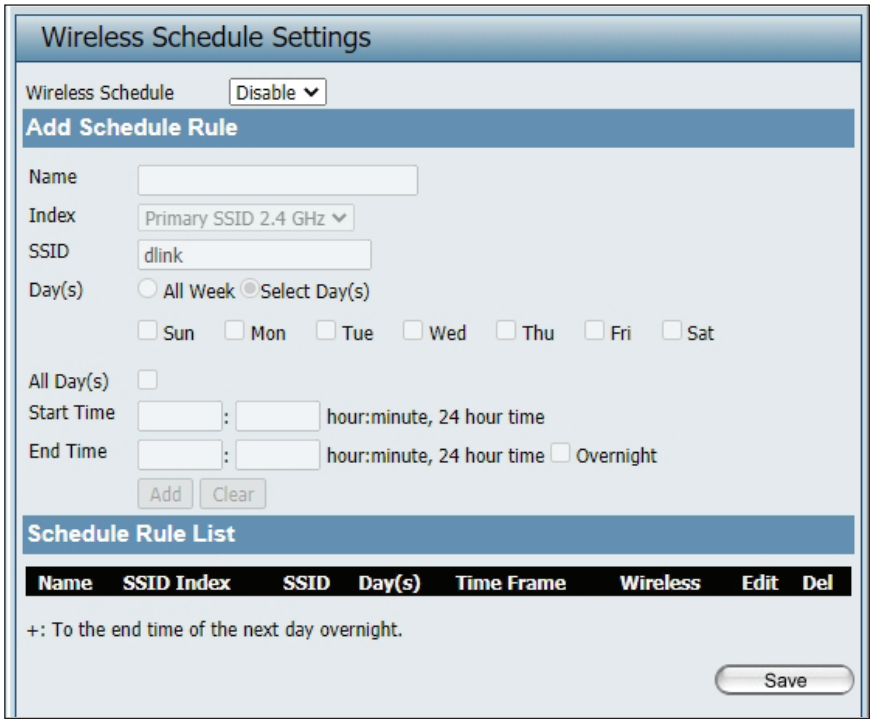
- Valid: An AP which is authenticated to the network with encryption is classified as valid.
- Neighbor: A detected AP with a weak signal strength is classified as a suspect neighbor.
- Rogue: An AP that has been installed on the secure network without explicit authorization.
- New: An alternative category.

From the AP List select a detected AP and click **Set as Valid**, **Set as Neighborhood**, **Set as Rogue**, or **Set as New** to manually define the category type for the AP. Alternatively, click the radio button to mark all new access points as valid or rogue.

Save: Click to save the updated configuration.
To make the updates permanent, click Configuration > **Save and Activate.**

Schedule

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



Wireless Schedule: Use the drop-down menu to enable the device's scheduling feature.

Name: Enter a name for the new scheduling rule in the field provided.

Index: Use the drop-down menu to select the desired SSID.

SSID: This read-only field indicates the current SSID in use. To create a new SSID, go to the Wireless Settings window (Basic Settings > **Wireless**).

Day(s): Toggle the radio button between All Week and Select Day(s). If the second option is selected, check the specific days you want the rule to be effective on.

All Day(s): Check this box to have your settings apply 24 hours a day.

Start Time: Enter the beginning hour and minute, using a 24-hour clock.

End Time: Enter the ending hour and minute, using a 24-hour clock.

Internal RADIUS Server

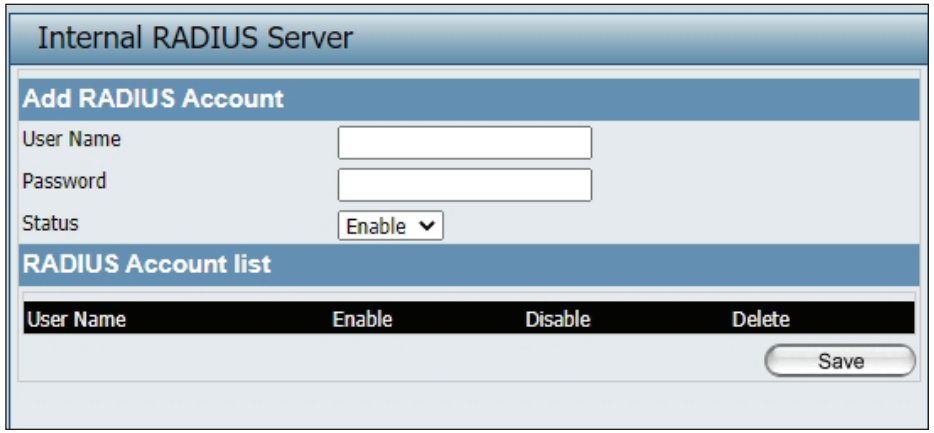
The DAP-X2810 features a built-in RADIUS server. Once you have finished adding a RADIUS account, click the Save button to let your changes take effect. The newly-created account will appear in this RADIUS Account List. The radio buttons allow the user to enable or disable the RADIUS account. Click the icon in the delete column to remove the RADIUS account. We suggest you limit the number of accounts below 30.

User Name: Enter a name to authenticate user access to the internal RADIUS server.

Password: Enter a password to authenticate user access to the internal RADIUS server. The length of your password should be 8~64.

Status: Toggle the drop-down menu between Enable and Disable.

RADIUS Account List: Displays the list of users.



ARP Spoofing Prevention

The ARP Spoofing Prevention feature allows users to add IP/MAC address mapping to prevent ARP spoofing attacks.

ARP Spoofing Prevention: This drop-down allows you to enable the ARP spoofing prevention function.

Add: Click to create a defined rule.

Clear: Click to clear a defined rule.

Gateway IP Address: Enter a gateway IP address.

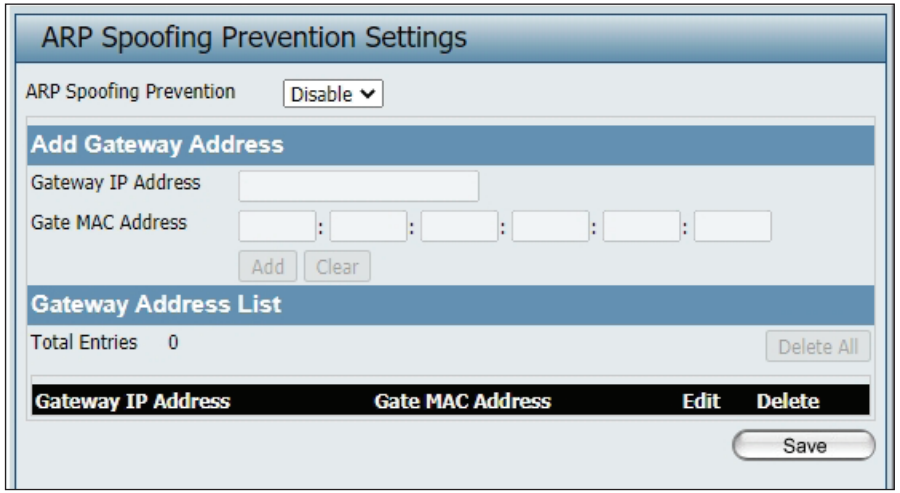
Gateway MAC Address: Enter a gateway MAC address.

Delete All: Click to delete all gateway entries.

Edit: Click to edit the selected gateway entry.

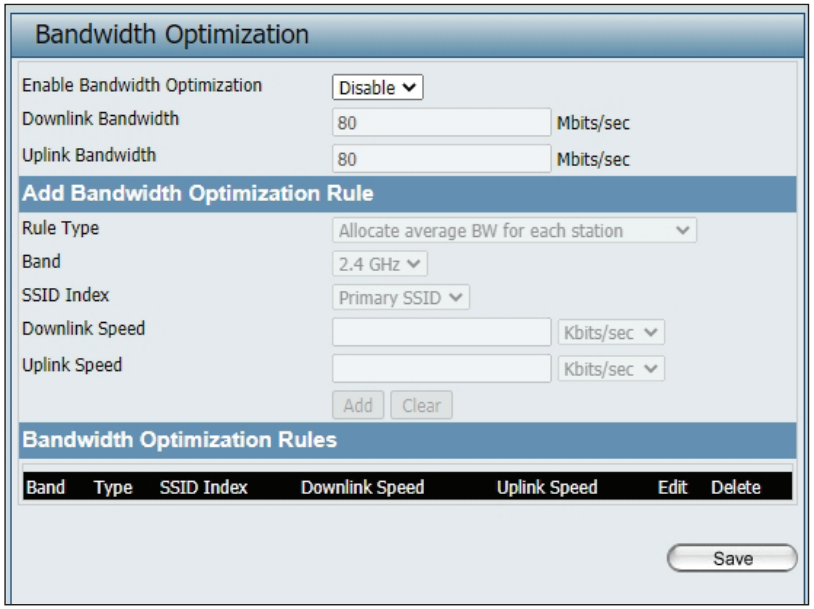
Delete: Click to delete the gateway entry.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate**.



Bandwidth Optimization

The Bandwidth Optimization window allows the user to manage the bandwidth of the device and arrange the bandwidth for various wireless clients. When the Bandwidth Optimization rule is finished, click the **Add** button. To discard the Add Bandwidth Optimization Rule settings, click the **Clear** button. Click the **Save** button to let your changes take effect.



Enable Bandwidth Optimization: Use the drop-down menu to Enable the Bandwidth Optimization function.

Downlink Bandwidth: Enter the downlink bandwidth of the device in Mbits per second.

Uplink Bandwidth: Enter the uplink bandwidth of the device in Mbits per second.

Allocate average BW for each station: AP will distribute average bandwidth for each client.

Allocate maximum BW for each station: Specify the maximum bandwidth for each connected client. Reserve certain bandwidth for future clients.

Allocate different BW for a/b/g/n stations: The weight of 11b/g/n and 11a/n client are 10%/20%/70% and 20%/80%. AP will distribute different bandwidth for 11a/b/g/n clients.

Allocate specific BW for SSID: All clients share the total bandwidth.

Rule Type: Use the drop-down menu to select the type that is applied to the rule. Available options are: **Allocate average BW for each station, Allocate maximum BW for each station, Allocate different BW for 1a/b/g/n stations,** and **Allocte specific BW for SSID**.

Band: Use the drop-down menu to toggle the wireless band between 2.4GHz and 5GHz.

SSID Index: Use the drop-down menu to select the SSID for the specified wireless band.

Downlink Speed: Enter the limitation of the downloading speed in either Kbits/sec or Mbits/sec for the rule.

Uplink Speed: Enter the limitation of the uploading speed in either Kbits/sec or Mbits/sec for the rule.

Add: Click to create a defined rule.

Clear: Click to remove the settings from the menu interface.

Edit: Click to edit the selected gateway entry.

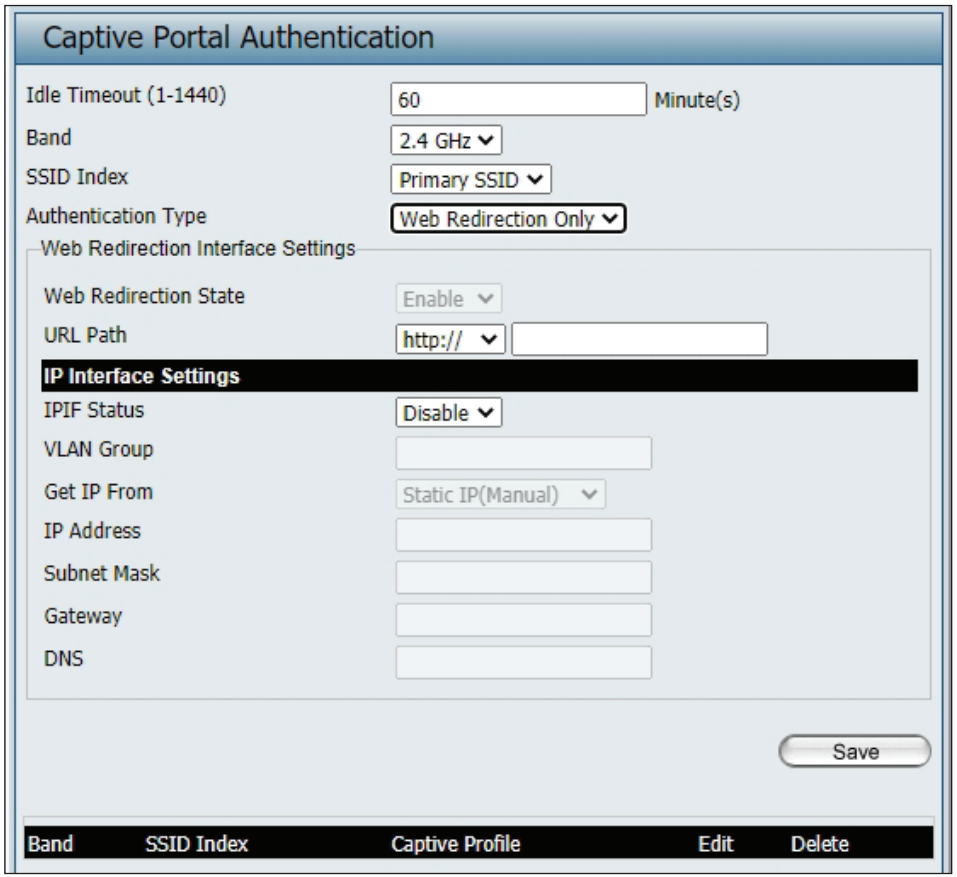
Delete: Click to delete the gateway entry.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Captive Portal

Authentication Settings-Web Redirection Only

The Captive Portal is a built-in web authentication server. When a station connects to an AP, the web browser will be redirected to a web authentication page. In this window, users can view and configure the Captive Portal settings. After selecting Web Redirection Only as the Authentication Type, we can configure the redirection website URL that will be applied to each wireless client in this network.



Idle Timeout(1-1440): Enter the session timeout value here. This value can be from 1 to 1440 minutes. By default, this value is 60 minutes.

Band:

Select 2.4GHz or 5GHz.

SSID Index:

Select the SSID for this Authentication.

Authentication Type:

Select the captive portal encryption type here. Options to choose from are Web Redirection, Username/Password, Passcode, Remote RADIUS, LDAP and POP3. In this section we'll discuss the Web Redirection option.

Web Redirection State:

The default setting is Enable when you select **Web Redirection Only**.

URL Path:

Select whether to use either HTTP or HTTPS here. After selecting either http:// or https://, enter the URL of the website that will be used in the space provided.

IPIF Status:

Select to **Enable** or **Disable** the Captive Portal with its IP interface feature here.

VLAN Group:

Enter the VLAN Group ID here.

Get IP From:

Static IP (Manual) is chosen here. Choose this option if you do not have a DHCP server in your network, or if you wish to assign a static IP address to the DAP-X2810. When Dynamic IP (DHCP) is selected, the other fields here will be grayed out. Please allow about 2 minutes for the DHCP client to be functional once this selection is made.

IP Address: Assign a static IP address that is within the IP address range of your network.

Subnet Mask: Enter the subnet mask. All devices in the network must share the same subnet mask.

Gateway: Enter the IP address of the gateway/router in your network.

DNS: Enter a DNS server IP address. This is usually the local IP address of your gateway/router.

Edit: Click to edit the selected entry.

Delete: Click to delete the entry.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Authentication Settings- Username/Password

The Captive Portal is a built-in web authentication server. When a station connects to an AP, the web browser will be redirected to a web authentication page. In this window, users can view and configure the Captive Portal settings. After selecting Username/Password as the Authentication Type, we can configure the Username/Password authentication that will be applied to each wireless client in this network.

Session timeout(1-1440): Enter the session timeout value here. This value can be from 1 to 1440 minutes. By default, this value is 60 minutes.

Band: Select 2.4GHz or 5GHz.

SSID Index: Select the SSID for this Authentication.

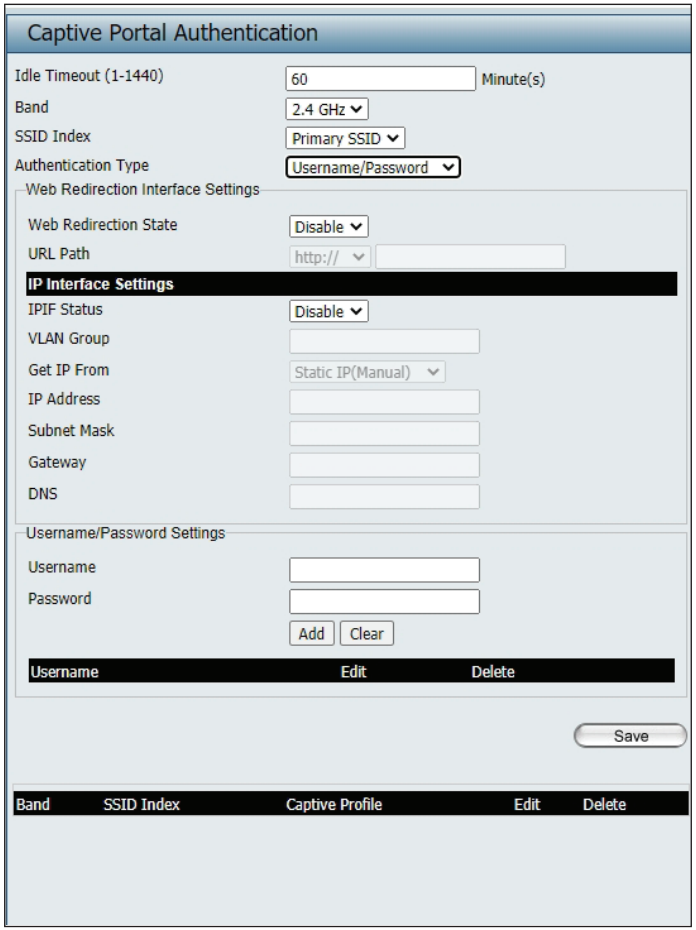
Authentication Type: Select the captive portal encryption type here. Options to choose from are Web Redirection, Username/Password, Passcode, Remote RADIUS, LDAP and POP3. In this section we'll discuss the Username/Password option.

Web Redirection State: Disable is default setting. Select Enable to enable the website redirection feature.

URL Path: Select whether to use HTTP or HTTPS. After selecting either http:// or https://, enter the URL of the website that will be used in the space provided.

IPIF Status: Select to Enable or Disable the Captive Portal with its IP interface feature here.

VLAN Group: Enter the VLAN Group ID here.



Get IP From: Static IP (Manual) is chosen here. Choose this option if you do not have a DHCP server in your network, or if you wish to assign a static IP address to the DAP-X2810. When Dynamic IP (DHCP) is selected, the other fields here will be grayed out. Please allow about 2 minutes for the DHCP client to be functional once this selection is made.

IP Address: Assign a static IP address that is within the IP address range of your network.

Subnet Mask: Enter the subnet mask. All devices in the network must share the same subnet mask.

Gateway: Enter the IP address of the gateway/router in your network.

DNS: Enter a DNS server IP address. This is usually the local IP address of your gateway/router.

Username: Enter the username for the new account here.

Password: Enter the password for the new account here.

Add: Click to create a defined rule.

Clear: Click to remove the settings from the menu interface.

Edit: Click to edit the selected gateway entry.

Delete: Click to delete the gateway entry.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Authentication Settings- Passcode

The Captive Portal is a built-in web authentication server. When a station connects to an AP, the web browser will be redirected to a web authentication page. In this window, users can view and configure the Captive Portal settings. After selecting Passcode as the Authentication Type, you can configure the Passcode authentication that will be applied to each wireless client in this network.

Session timeout(1-1440): Enter the session timeout value here. This value can be from 1 to 1440 minutes. By default, this value is 60 minutes.

Band: Select 2.4GHz or 5GHz.

SSID Index: Select the SSID for this Authentication.

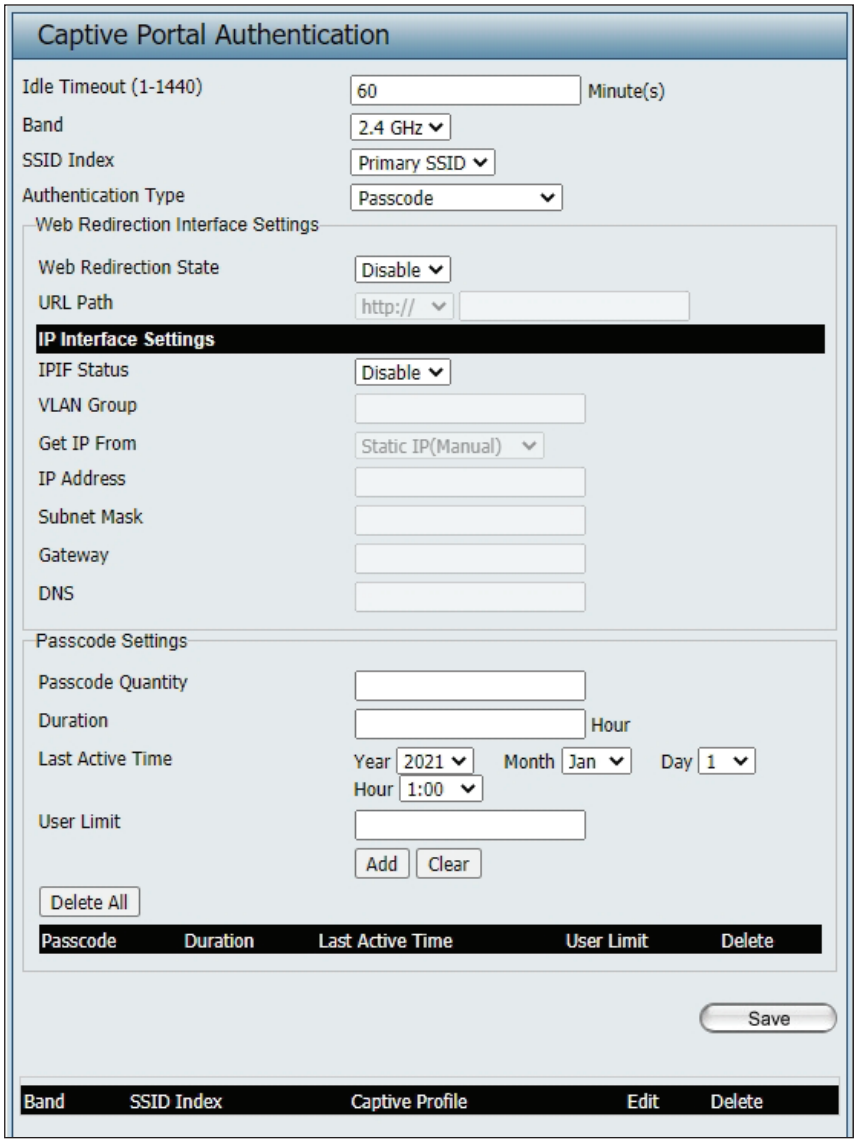
Authentication Type: Select the captive portal encryption type here. Options to choose from are Web Redirection, Username/Password, Passcode, Remote RADIUS, LDAP and POP3. In this section we'll discuss the Passcode option.

Web Redirection State: The default setting is Disable. Select Enable to enable the website redirection feature.

URL Path: Select whether to use HTTP or HTTPS here. After selecting either http:// or https://, enter the URL of the website that will be used in the space provided.

IPIF Status: Select to Enable or Disable the Captive Portal with its IP interface feature here.

VLAN Group: Enter the VLAN Group ID here.



Get IP From: Static IP (Manual) is chosen here. Choose this option if you do not have a DHCP server in your network, or if you wish to assign a static IP address to the DAP-X2810. When Dynamic IP (DHCP) is selected, the other fields here will be grayed out. Please allow about 2 minutes for the DHCP client to be functional once this selection is made.

IP Address: Assign a static IP address that is within the IP address range of your network.

Subnet Mask: Enter the subnet mask. All devices in the network must share the same subnet mask.

Gateway: Enter the IP address of the gateway/router in your network.

DNS: Enter a DNS server IP address. This is usually the local IP address of your gateway/router.

Passcode Quantity: Enter the number of ticket that will be used here.

Duration: Enter the duration value, in hours, for this passcode.

Last Active Day: Select the last active date for this passcode here. Year, Month and Day selections can be made.

User Limit: Enter the maximum amount of users that can use this passcode at the same time

Add: Click to create a defined rule.

Clear: Click to remove the settings from the menu interface.

Delete All: Click to delete all passcode setting entries

Edit: Click to edit the selected entry.

Delete: Click to delete the entry.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Authentication Settings- Remote RADIUS

The Captive Portal is a built-in web authentication server. When a station connects to an AP, the web browser will be redirected to a web authentication page. In this window, users can view and configure the Captive Portal settings. After selecting Remote RADIUS as the Authentication Type, you can configure the Remote RADIUS authentication that will be applied to each wireless client in this network.

Session timeout(1-1440): Enter the session timeout value here. This value can be from 1 to 1440 minutes. By default, this value is 60 minutes.

Band: Select 2.4GHz or 5GHz.

SSID Index: Select the SSID for this Authentication.

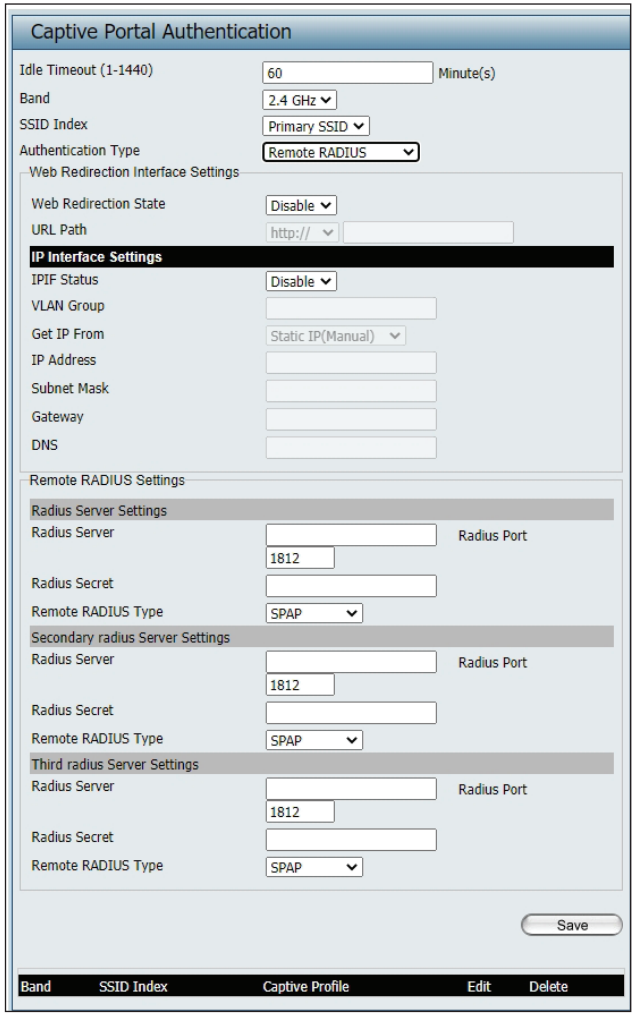
Authentication Type: Select the captive portal encryption type here. Options to choose from are Web Redirection, Username/Password, Passcode, Remote RADIUS, LDAP and POP3. In this section we'll discuss the Remote RADIUS option.

Web Redirection State: The default setting is Disable. Select Enable to enable the website redirection feature.

URL Path: Select whether to use either HTTP or HTTPS here. After selecting either http:// or https://, enter the URL of the website that will be used in the space provided.

IPIF Status: Select to Enable or Disable the Captive Portal with its IP interface feature here.

VLAN Group: Enter the VLAN Group ID here.



Get IP From: Static IP (Manual) is chosen here. Choose this option if you do not have a DHCP server in your network, or if you wish to assign a static IP address to the DAP-X2810. When Dynamic IP (DHCP) is selected, the other fields here will be grayed out. Please allow about 2 minutes for the DHCP client to be functional once this selection is made.

IP Address: Assign a static IP address that is within the IP address range of your network.

Subnet Mask: Enter the subnet mask. All devices in the network must share the same subnet mask.

Gateway: Enter the IP address of the gateway/router in your network.

DNS: Enter a DNS server IP address. This is usually the local IP address of your gateway/router.

Radius Server: Enter the RADIUS server's IP address here

Radius Port: Enter the RADIUS server's port number here

Radius Port: Enter the RADIUS server's shared secret here

Remote Radius Type: Select the remote RADIUS server type here. Currently, only SPAP will be used.

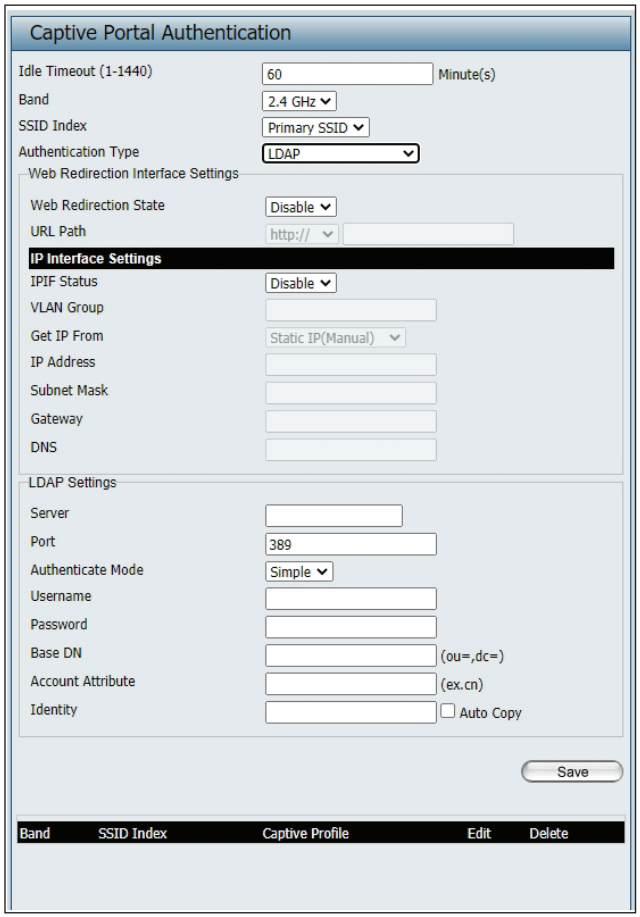
Edit: Click to edit the selected entry.

Delete: Click to delete the entry.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Authentication Settings- LDAP

The Captive Portal is a built-in web authentication server. When a station connects to an AP, the web browser will be redirected to a web authentication page. In this window, users can view and configure the Captive Portal settings. After selecting LDAP as the Authentication Type, you can configure the LDAP authentication that will be applied to each wireless client in this network.



Session timeout(1-1440): Enter the session timeout value here. This value can be from 1 to 1440 minutes. By default, this value is 60 minutes.

Band: Select 2.4GHz or 5GHz.

SSID Index: Select the SSID for this Authentication.

Authentication Type: Select the captive portal encryption type here. Options to choose from are Web Redirection, Username/Password, Passcode, Remote RADIUS, LDAP and POP3. In this section we'll discuss the LDAP option.

Web Redirection State: The default setting is Disable. Select Enable to enable the website redirection feature.

URL Path: Select whether to use either HTTP or HTTPS here. After selecting either http:// or https://, enter the URL of the website that will be used in the space provided.

IPIF Status: Select to Enable or Disable the Captive Portal with its IP interface feature here.

VLAN Group: Enter the VLAN Group ID here.

Get IP From: Static IP (Manual) is chosen here. Choose this option if you do not have a DHCP server in your network, or if you wish to assign a static IP address to the DAP-X2810. When Dynamic IP (DHCP) is selected, the other fields here will be grayed out. Please allow about 2 minutes for the DHCP client to be functional once this selection is made.

IP Address: Assign a static IP address that is within the IP address range of your network.

Subnet Mask: Enter the subnet mask. All devices in the network must share the same subnet mask.

Gateway: Enter the IP address of the gateway/router in your network.

DNS: Enter a DNS server IP address. This is usually the local IP address of your gateway/router.

Server: Enter the LDAP server's IP address or domain name here.

Port: Enter the LDAP server's port number here.

Authenticate Mode: Select the authentication mode here. Options to choose from are Simple and TLS.

Username: Enter the LDAP server account's username here.

Password: Enter the LDAP server account's password here.

Base DN: Enter the administrator's domain name here

Account Attribute: Enter the LDAP account attribute string here. This string will be used to search for clients.

Identity: Enter the identity's full path string here. Alternatively, select the Auto Copy checkbox to automatically add the generic full path of the web page in the identity field.

Edit: Click to edit the selected entry.

Delete: Click to delete the entry.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Authentication Settings- POP3

The Captive Portal is a built-in web authentication server. When a station connects to an AP, the web browser will be redirected to a web authentication page. In this window, users can view and configure the Captive Portal settings. After selecting POP3 as the Authentication Type, you can configure the POP3 authentication that will be applied to each wireless client in this network.

Session timeout(1-1440): Enter the session timeout value here. This value can be from 1 to 1440 minutes. By default, this value is 60 minutes.

Band: Select 2.4GHz or 5GHz.

SSID Index: Select the SSID for this Authentication.

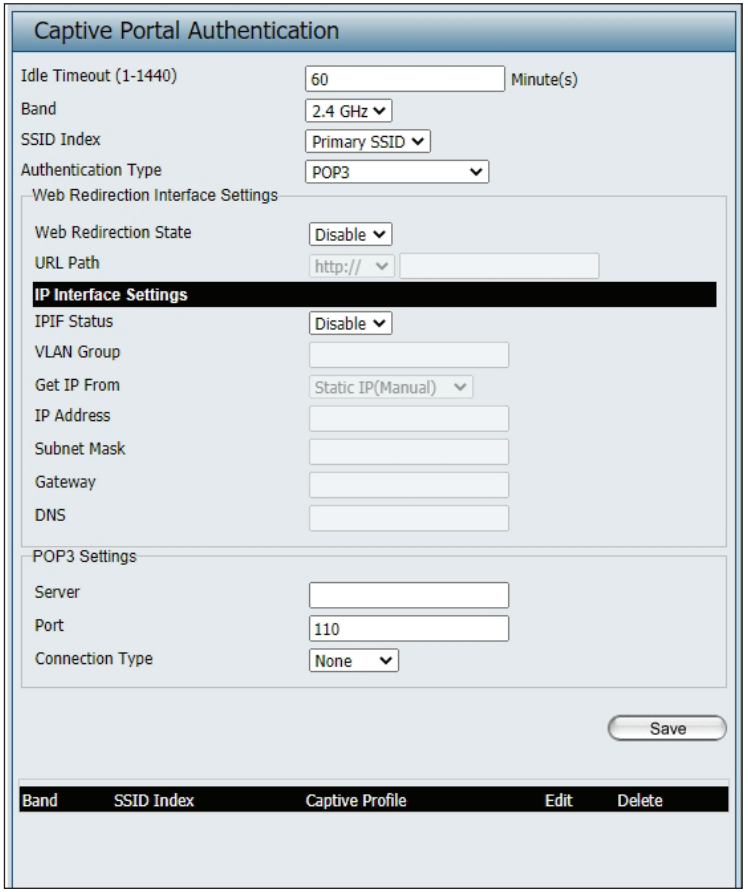
Authentication Type: Select the captive portal encryption type here. Options to choose from are Web Redirection, Username/Password, Passcode, Remote RADIUS, LDAP and POP3. In this section we'll discuss the POP3 option.

Web Redirection State: The default setting is Disable. Select Enable to enable the website redirection feature.

URL Path: Select whether to use either HTTP or HTTPS here. After selecting either http:// or https://, enter the URL of the website that will be used in the space provided.

IPIF Status: Select to Enable or Disable the Captive Portal with its IP interface feature here.

VLAN Group: Enter the VLAN Group ID here.



Get IP From: Static IP (Manual) is chosen here. Choose this option if you do not have a DHCP server in your network, or if you wish to assign a static IP address to the DAP-X2810. When Dynamic IP (DHCP) is selected, the other fields here will be grayed out. Please allow about 2 minutes for the DHCP client to be functional once this selection is made.

IP Address: Assign a static IP address that is within the IP address range of your network.

Subnet Mask: Enter the subnet mask. All devices in the network must share the same subnet mask.

Gateway: Enter the IP address of the gateway/router in your network.

DNS: Enter a DNS server IP address. This is usually the local IP address of your gateway/router.

Server: Enter the POP3 server's IP address or domain name here.

Port: Port: Enter the POP server's port number here.

Connection Type: Select the connection type here. Options to choose from are None and SSL/TLS.

Edit: Click to edit the selected entry.

Delete: Click to delete the entry.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

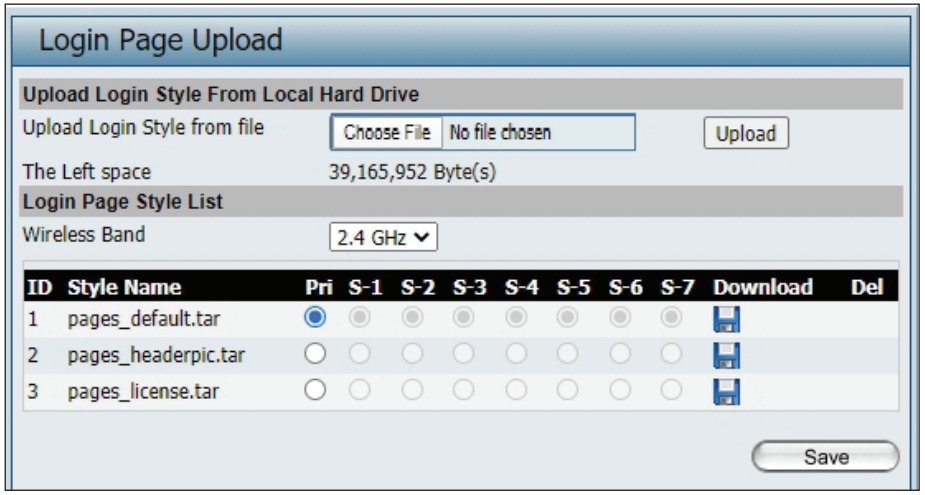
Login Page Upload

In this window, users can upload a custom login web page that will be used by the captive portal feature. Click the **Browse** button to navigate to the login style located on the managing computer and then click the **Upload** button to initiate the upload.

Upload Login Style From Local Hard Drive: In this field the path to the login style file that will be uploaded is be displayed. Alternatively, the path can be manually entered here.

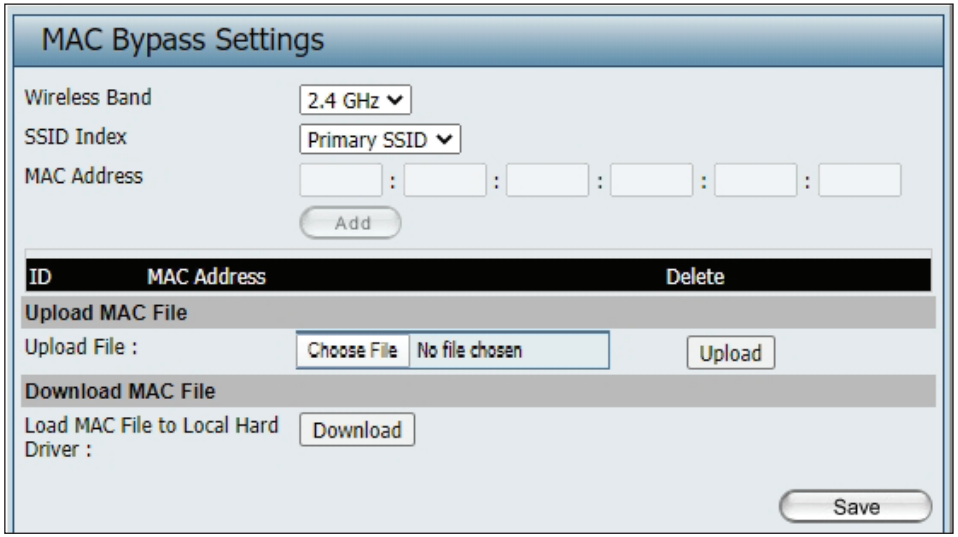
Login Page Style List: Select the wireless band and login style that will be used in each SSID here. Click the download button to download the template file for the login page and click the delete button to delete the template file.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**



MAC Bypass

The DAP-X2810 features a wireless MAC Bypass. Once finished editing these settings, click the **Save** button to let the changes take effect.



Wireless Band: Select the wireless band for MAC Bypass.

SSID Index: Select the SSID for MAC Bypass.

MAC Address: Enter each MAC address that you wish to include in your bypass list, and click Add.

MAC Address List: When a MAC address is entered, it appears in this list.
Highlight a MAC address and click the Delete icon to remove it from this list.

Upload File: To upload a MAC bypass list file, click Browse and navigate to the MAC bypass list file saved on the computer, and then click Upload.

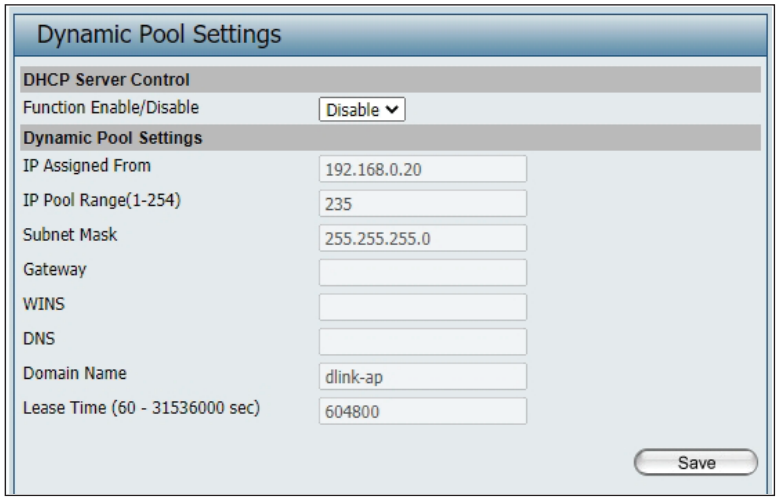
Load MAC File to Local Hard Driver: To download MAC bypass list file, click Download and save the MAC bypass list.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

DHCP Server

Dynamic Pool Settings

The DHCP address pool defines the range of the IP address that can be assigned to stations in the network. A Dynamic Pool allows wireless stations to receive an available IP with lease time control. If needed or required in the network, the DAP-X2810 is capable of acting as a DHCP server.



Function Enable/Disable: Dynamic Host Configuration Protocol (DHCP) assigns dynamic IP addresses to devices on the network. This protocol simplifies network management and allows new wireless devices to receive IP addresses automatically without the need to manually assign new IP addresses. Select Enable to allow the DAP-X2810 to function as a DHCP server.

IP Assigned From: Input the first IP address available for assignment on your network.

IP Pool Range(1-254): Enter the number of IP addresses available for assignment. IP addresses are increments of the IP address specified in the "IP Assigned From" field.

Subnet Mask: All devices in the network must have the same subnet mask to communicate. Enter the subnet mask for the network here.

Gateway: Enter the IP address of the gateway on the network.

WINS: Specify the Windows Internet Naming Service (WINS) server address for the wireless network. WINS is a system that determines the IP address of a network computer that has a dynamically assigned IP address.

DNS: Enter the IP address of the Domain Name System (DNS) server. The DNS server translates domain names such as www.dlink.com into IP addresses.

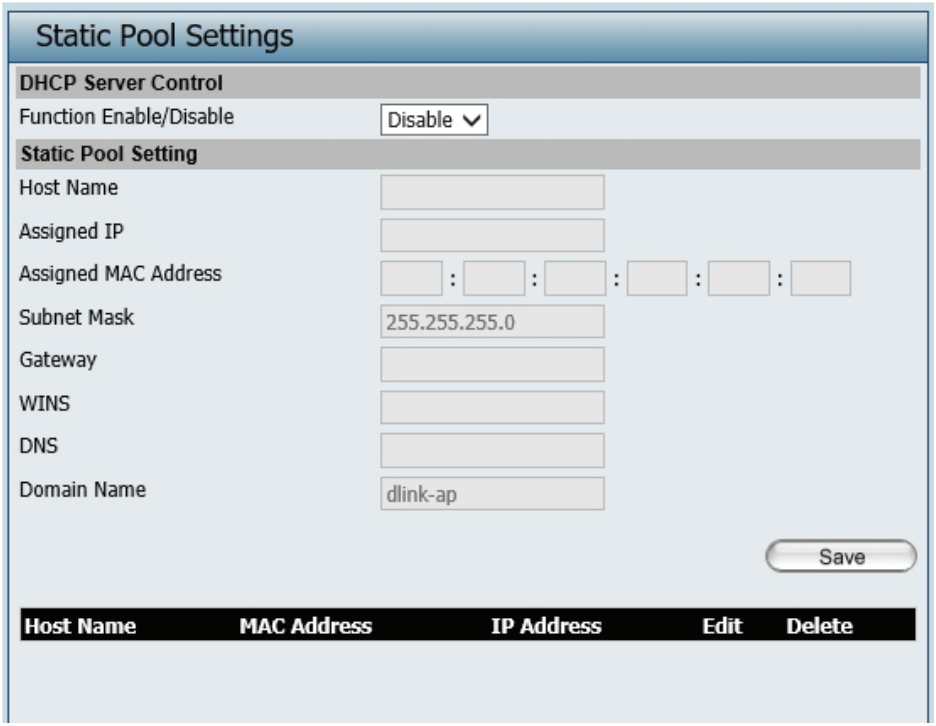
Domain Name: Enter the domain name of the network, if applicable. (An example of a domain name is: www.dlink.com.)

Lease Time: The lease time is the period of time before the DHCP server will assign new IP addresses.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Static Pool Setting

The DHCP address pool defines the range of IP addresses that can be assigned to stations on the network. A static pool allows specific wireless stations to receive a fixed IP without time control.



Function Enable/Disable: Dynamic Host Configuration Protocol (DHCP) assigns IP addresses to wireless devices on the network. This protocol simplifies network management and allows new wireless devices to receive IP addresses automatically without the need to manually assign IP addresses. Select Enable to allow the DAP-X2810 to function as a DHCP server.

Assigned IP: Use the Static Pool Settings to assign the same IP address to a device every time you start up. The IP addresses assigned in the Static Pool list must NOT be in the same IP range as the Dynamic Pool. After you have assigned a static IP address to a device via its MAC address, click Apply; the device will appear in the Assigned Static Pool at the bottom of the screen. You can edit or delete the device in this list.

Assigned MAC Address: Enter the MAC address of the device requesting association here.

Subnet Mask: Define the subnet mask of the IP address specified in the "IP Assigned From" field.

Gateway: Specify the Gateway address for the wireless network.

WINS: Specify the Windows Internet Naming Service (WINS) server address for the wireless network. WINS is a system that determines the IP address of a network computer with a dynamically assigned IP address, if applicable.

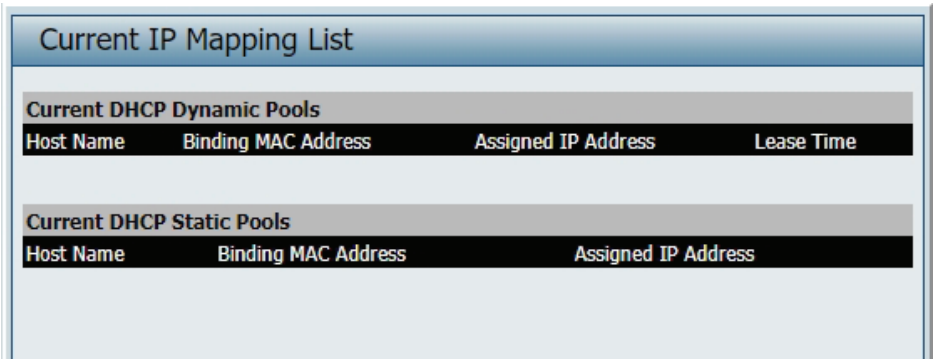
DNS: Enter the DNS server address for your wireless network.

Domain Name: Specify the domain name for the network.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Current IP Mapping List

This window displays information about the current assigned DHCP dynamic and static IP address pools. This information is available when you enable the DHCP server on the AP and assign dynamic and static IP address pools.



Current DHCP Dynamic Profile: These are IP address pools the DHCP server has assigned using the dynamic pool setting.

Binding MAC Address: The MAC address of a device on the network that is assigned an IP address from the DHCP dynamic pool.

Assigned IP Address: The current corresponding DHCP-assigned IP address of the device.

Lease Time: The length of time that the dynamic IP address will be valid.

Current DHCP Static Pools: These are the IP address pools of the DHCP server assigned through the static pool settings.

Binding MAC Address: The MAC address of a device on the network that is within the DHCP static IP address pool.

Assigned IP Address: The current corresponding DHCP-assigned static IP address of the device.

Binding MAC Address: The MAC address of a device on the network that is assigned an IP address from the DHCP dynamic pool.

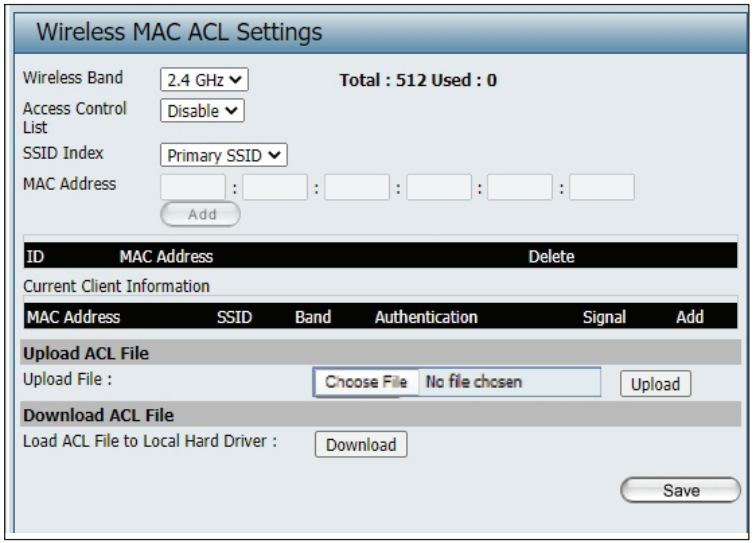
Assigned IP Address: The current corresponding DHCP-assigned static IP address of the device.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Filters

Wireless MAC ACL

This page allows the user to configure Wireless MAC ACL settings for access control.



Wireless Band: Displays the current wireless band rate.

Access Control List: Select **Disable** to disable the filters function.

Select **Accept** to accept only those devices with MAC addresses in the Access Control List. All other devices not on the list will be rejected.

Select **Reject** to reject the devices with MAC addresses on the Access Control List. All other devices not on the list will be accepted.

SSID Index: Click the drop-down menu to select the SSID for the specified wireless band.

MAC Address: Enter each MAC address that you wish to include in your filter list, and click **Apply**.

MAC Address List: When you enter a MAC address, it appears in this list. Highlight a MAC address and click Delete to remove it from this list.

Current Client Information: This table displays information about all the current connected stations.

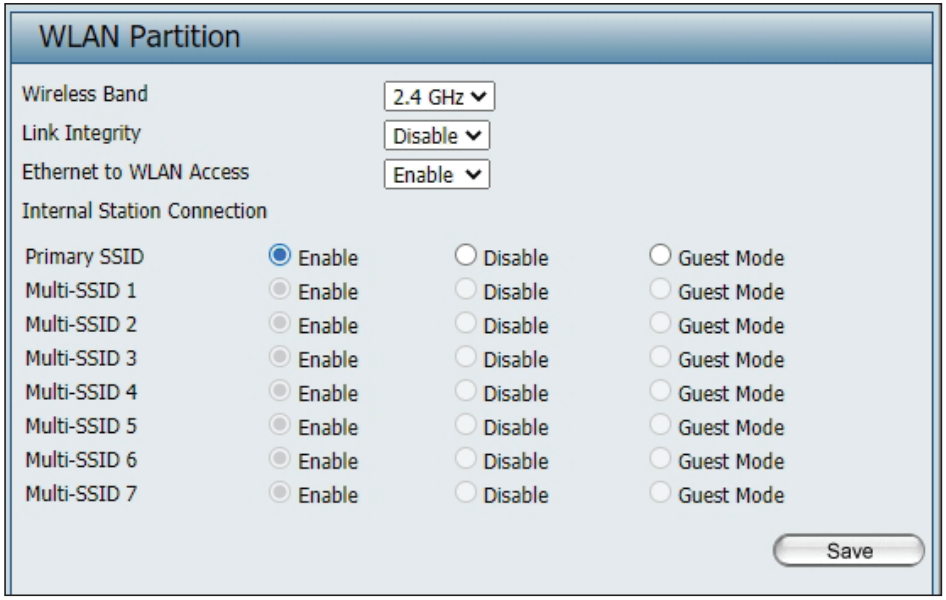
Upload File: To upload an ACL list fle, click Browse and navigate to the ACL list file saved on the computer, and then click Upload.

Load MAC File to Local Hard Driver: To download the ACL list, click Download and to save the ACL list.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

WLAN Partition

This page allows the user to configure a WLAN Partition.



Wireless Band: Displays the current wireless band.

Link Integrity: Select **Enable** or **Disable**. If the Ethernet connection between the LAN and the AP is disconnected, enabling this feature will cause the wireless segment associated with the AP to be disassociated from the AP.

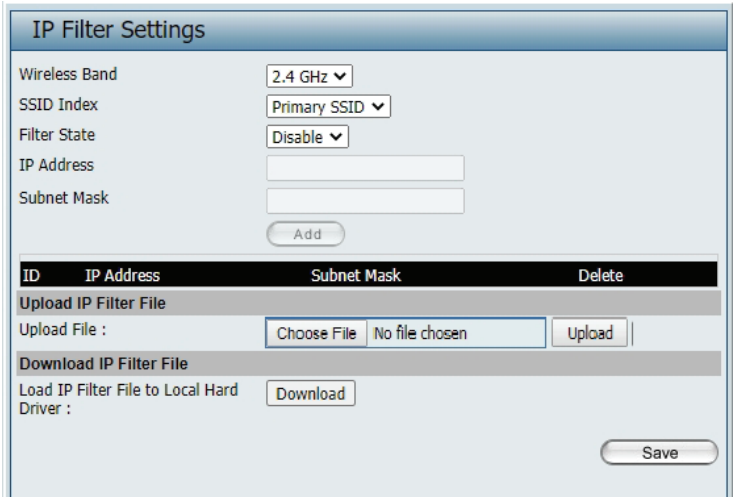
Ethernet WLAN Access: The default is Enable. When disabled, all data from the Ethernet to associated wireless devices will be blocked. Wireless devices can still send data to the Ethernet.

Internal Station Connection: The default value is Enable, which allows stations to intercommunicate by connecting to a target AP. When disabled, wireless stations cannot exchange data on the same Multi-SSID. In Guest mode, wireless stations cannot exchange data with any station on your network.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

IP Filter Settings

Enter the IP address or network address that will be used in the IP filter rule (e.g. an IP address like 192.168.70.66 or a network address like 192.168.70.0). This IP address or network will be inaccessible to wireless clients in this network.



Wireless Band: Click the drop-down menu to select the wireless band, 2.4GHz or 5GHz.

SSID Index: Click the drop-down menu to select the SSID for the IP filter.

Filter State: Click the drop-down menu to enable or disable the filter state. By default this feature is disabled.

IP Address: Enter the IP address or network address.

Subnet Mask: Enter the subnet mask of the IP address or networks address.

IP Address List: When an IP address is entered, it appears in the list. Highlight an IP address and click **Delete** icon to remove it from the list.

Upload IP Filter File: To upload the IP filter list file, click **Choose File** and navigate to the IP filter list file saved on the computer, and then click **Upload**.

Download IP Filter File: To download the IP Filter list file, click **Download** and to save the IP filter list.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate**.

Traffic Control

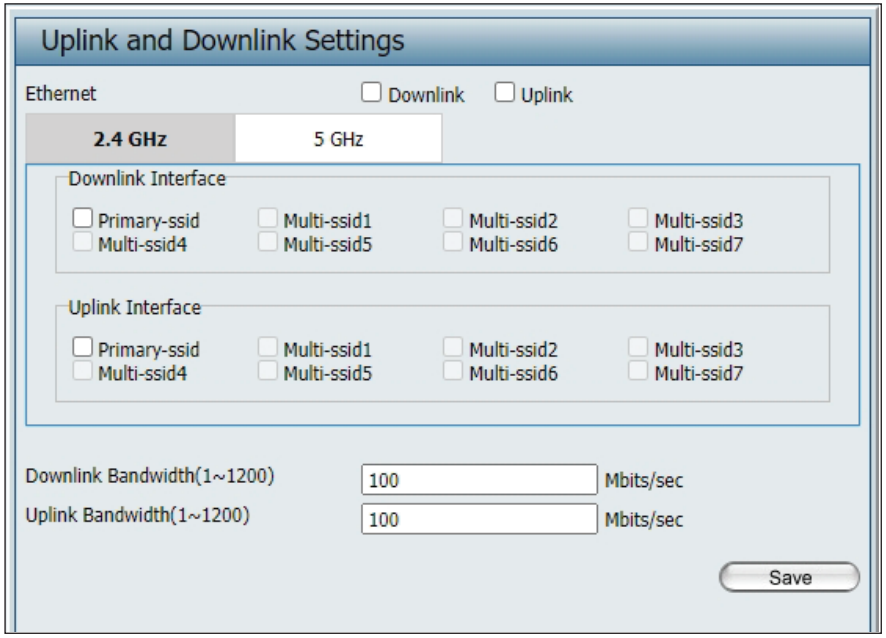
Uplink/Downlink Setting

The uplink/downlink setting allows users to customize the downlink and uplink interfaces including specifying downlink/uplink bandwidth rates in Mbits per second. These values are also used in the QoS and Traffic Manager windows. Once the desired uplink and downlink settings are finished, click the **Save** button to let your changes take effect.

Downlink Bandwidth: The downlink bandwidth in Mbits per second.

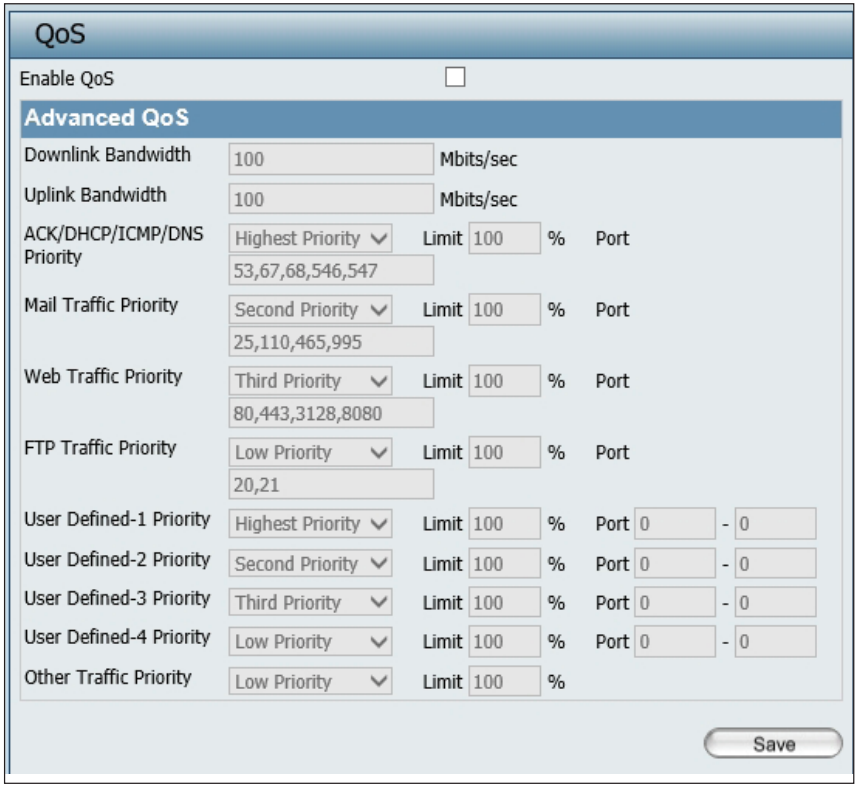
Uplink Bandwidth: The uplink bandwidth in Mbits per second.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**



QoS

Quality of Service (QoS) enhances the experience of using a network by prioritizing the traffic of different applications. The DAP-X2810 supports four priority levels. Once the desired QoS settings are finished, click the **Save** button to let your changes take effect.



Enable QoS: Check this box to allow QoS to prioritize traffic. Use the drop-down menus to select the four levels of priority. Click the Save button when you are finished.

Downlink Bandwidth: The downlink bandwidth in Mbits per second. This value is entered in the Uplink/Downlink Setting window.

Uplink Bandwidth: The uplink bandwidth in Mbits per second. This value is entered in the Uplink/Downlink Setting window.

ACK/DHCP/ICMP/DNS Priority: Click the drop-down menu to select the level of priority for the selected rule.

Web Traffic Priority: Click the drop-down menu to select the level of priority for the selected rule.

FTP Traffic Priority: Click the drop-down menu to select the level of priority for the selected rule.

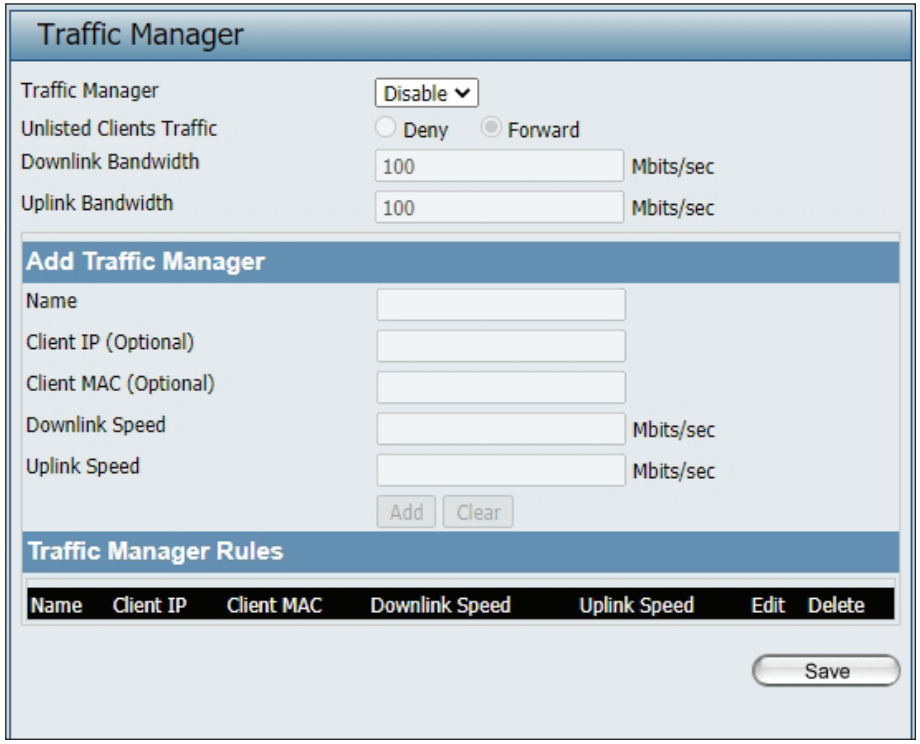
User Defined-1/2/3/4 Priority: Click the drop-down menu to select the level of priority for the selected rule.

Other Traffic Priority: Click the drop-down menu to select the level of priority for the selected rule.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Traffic Manager

The traffic manager feature allows users to create traffic management rules that specify how to deal with listed client traffic and specify downlink/ uplink speeds for new traffic manager rules. Click the **Save** button to let your changes take effect.



Traffic Manager: Use the drop-down menu to **Enable** the traffic manager feature.

Unlisted Client Traffic: Select **Deny** or **Forward** to determine how to deal with unlisted client traffic.

Downlink Bandwidth: The downlink bandwidth in Mbits per second. This value is entered in the Uplink/Downlink Setting window.

Uplink Bandwidth: The uplink bandwidth in Mbits per second. This value is entered in the Uplink/Downlink Setting window.

Name: Enter the name of the traffic manager rule.

Client IP (optional): Enter the client IP address of the traffic manager rule.

Client MAC (optional): Enter the client MAC address of the traffic manager rule.

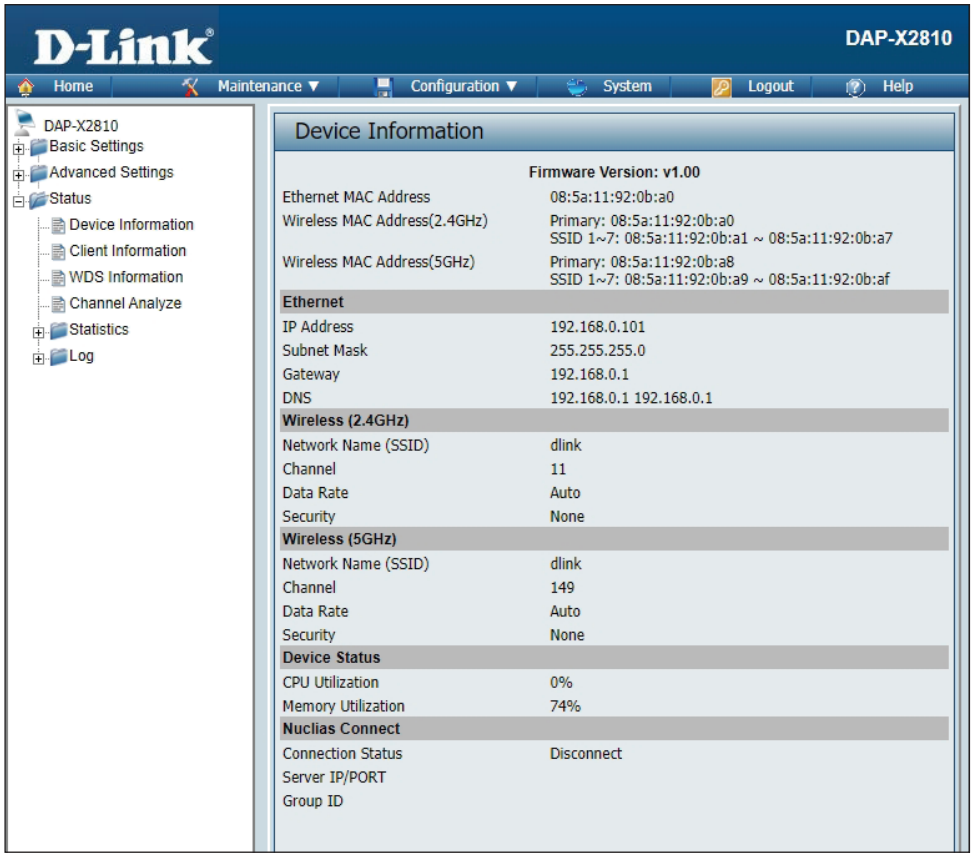
Downlink Speed: Enter the downlink speed in Mbits per second.

Uplink Speed: Enter the uplink speed in Mbits per second.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Status

In the Status Section the user can monitor and view the configuration settings of the access point. Here the user can also view statistics about client information, WDS information and more. The following pages will explain settings found in the Status section in more detail.



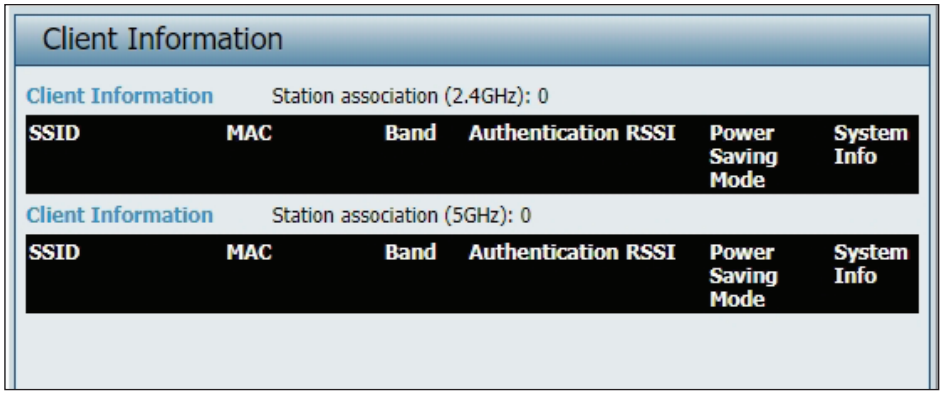
Device Information

This page displays information like firmware version, Ethernet and wireless parameters, as well as the information regarding CPU and memory utilization.

Device Information: This read-only window displays the configuration settings of the DAP-X2810, including the firmware version and the device's MAC address.

Client Information

This page displays the associated client's SSID, MAC, band, authentication method, signal strength, and power saving mode for the DAP-X2810 network.



Client Information: This window displays the wireless client information for clients currently connected to the DAP-X2810.

SSID: Displays the SSID of the client.

MAC: Displays the MAC address of the client.

Band: Displays the wireless band that the client is connected to.

Authentication: Displays the type of authentication being used.

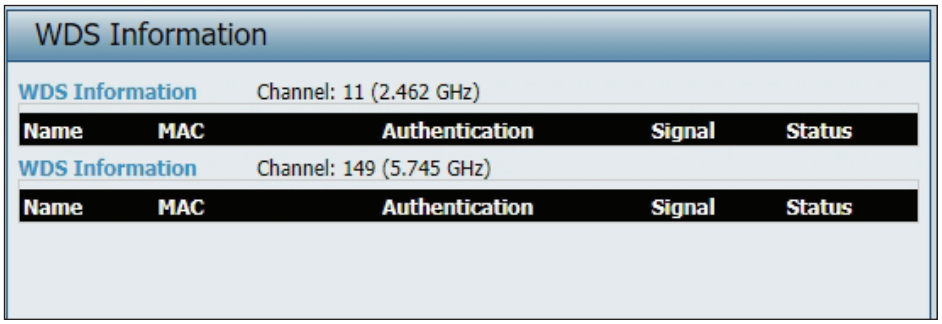
RSSI: Displays the client's signal strength.

Power Saving Mode: Displays the status of the power-saving feature.

System Info: Displays the associated clients' OS information for the network.

WDS Information Page

This page displays the access point's SSID, MAC, band, authentication method, signal strength, and status for the DAP-X2810's Wireless Distribution System network.



WDS Information: This window displays the Wireless Distribution System information for clients currently connected to the DAP-X2810.

Name: Displays the SSID of the client.

MAC: Displays the MAC address of the client.

Authentication: Displays the type of authentication being used.

Signal: Displays the client's signal strength.

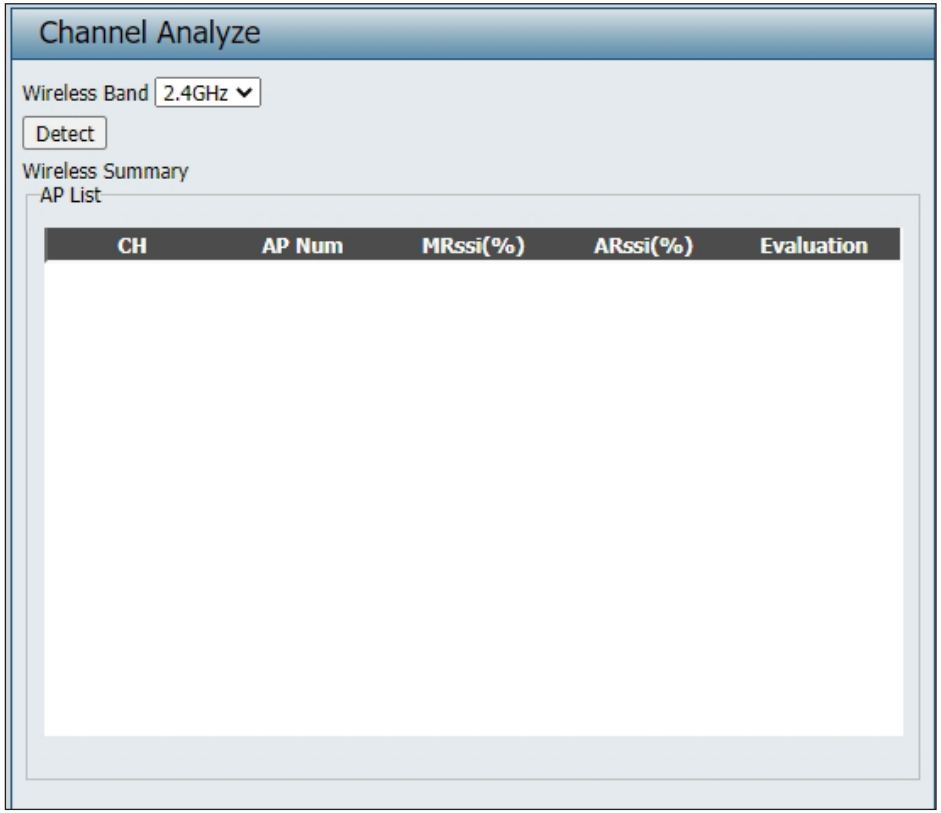
Status: Displays the status of the power saving feature.

Channel Analyze

Wireless Band: Select either 2.4Ghz or 5GHz.

Detect: Click the Detect button to scan.

AP List: This will list the transmitting channels and quality.

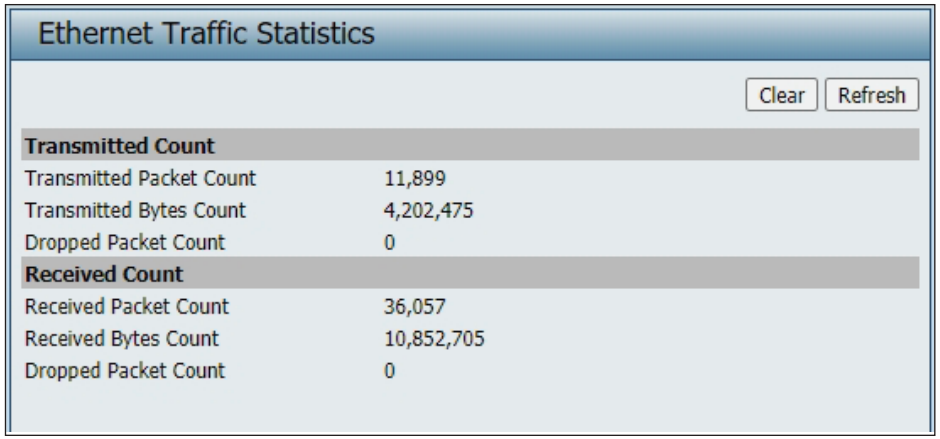


Statistics

Ethernet Traffic Statistics

Displays wired interface network traffic information.

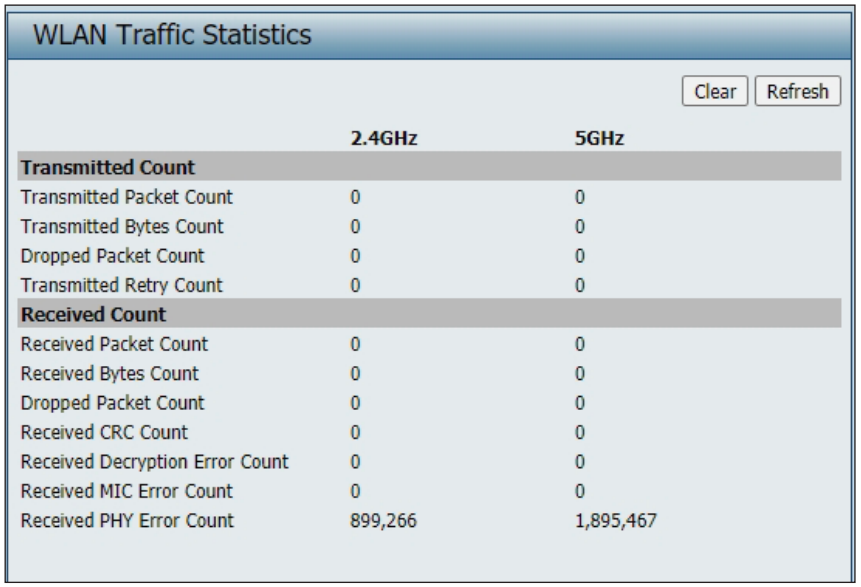
Ethernet Traffic Statistics: This page displays transmitted and received count statistics for packets and bytes.



WLAN Traffic Statistics

Displays throughput, transmitted frame, received frame, and error information for the AP network.

WLAN Traffic Statistics: This page displays wireless network statistics for data throughput, transmitted and received frames, and frame errors.

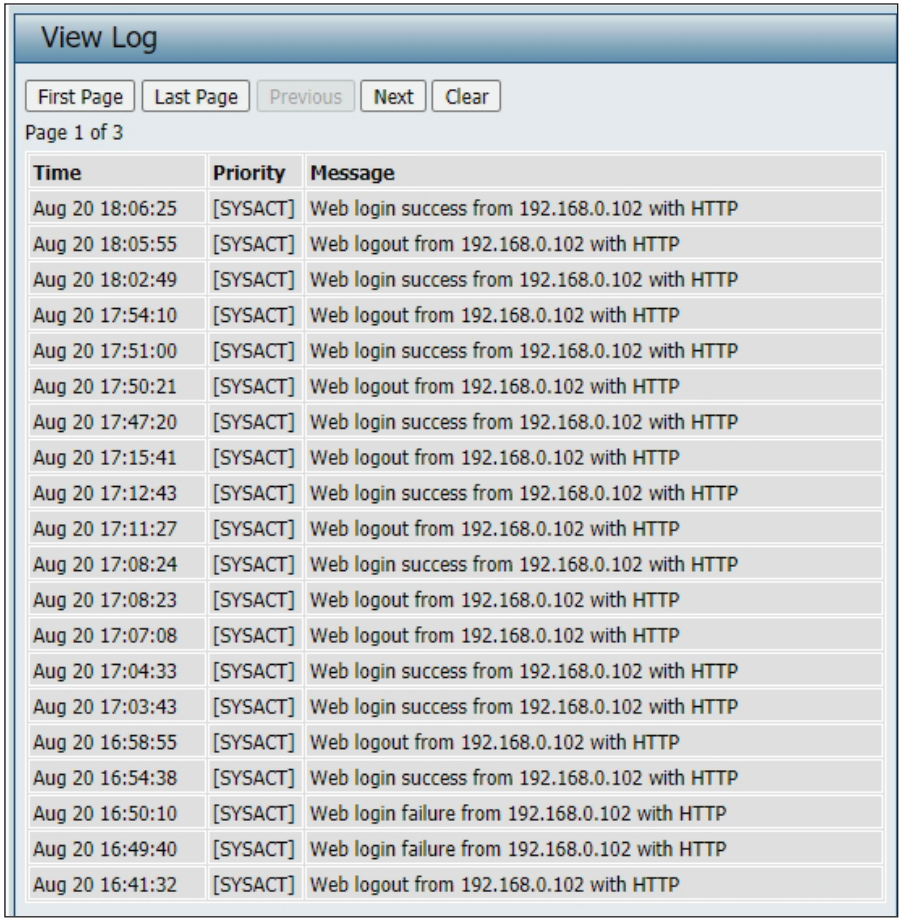


Log

View Log

The AP's embedded memory holds logs here. The log information includes but is not limited to the following items: cold start AP, upgrading firmware, client association with APs, and web login. The web page holds up to 500 logs.

View Log: The AP's embedded memory displays system and network messages including a time stamp and message type. The log information includes but is not limited to the following items: cold start AP, upgrading firmware, client association with APs, and web login. The web page holds up to 500 logs.



Time	Priority	Message
Aug 20 18:06:25	[SYSACT]	Web login success from 192.168.0.102 with HTTP
Aug 20 18:05:55	[SYSACT]	Web logout from 192.168.0.102 with HTTP
Aug 20 18:02:49	[SYSACT]	Web login success from 192.168.0.102 with HTTP
Aug 20 17:54:10	[SYSACT]	Web logout from 192.168.0.102 with HTTP
Aug 20 17:51:00	[SYSACT]	Web login success from 192.168.0.102 with HTTP
Aug 20 17:50:21	[SYSACT]	Web logout from 192.168.0.102 with HTTP
Aug 20 17:47:20	[SYSACT]	Web login success from 192.168.0.102 with HTTP
Aug 20 17:15:41	[SYSACT]	Web logout from 192.168.0.102 with HTTP
Aug 20 17:12:43	[SYSACT]	Web login success from 192.168.0.102 with HTTP
Aug 20 17:11:27	[SYSACT]	Web logout from 192.168.0.102 with HTTP
Aug 20 17:08:24	[SYSACT]	Web login success from 192.168.0.102 with HTTP
Aug 20 17:08:23	[SYSACT]	Web logout from 192.168.0.102 with HTTP
Aug 20 17:07:08	[SYSACT]	Web logout from 192.168.0.102 with HTTP
Aug 20 17:04:33	[SYSACT]	Web login success from 192.168.0.102 with HTTP
Aug 20 17:03:43	[SYSACT]	Web login success from 192.168.0.102 with HTTP
Aug 20 16:58:55	[SYSACT]	Web logout from 192.168.0.102 with HTTP
Aug 20 16:54:38	[SYSACT]	Web login success from 192.168.0.102 with HTTP
Aug 20 16:50:10	[SYSACT]	Web login failure from 192.168.0.102 with HTTP
Aug 20 16:49:40	[SYSACT]	Web login failure from 192.168.0.102 with HTTP
Aug 20 16:41:32	[SYSACT]	Web logout from 192.168.0.102 with HTTP

Log Settings

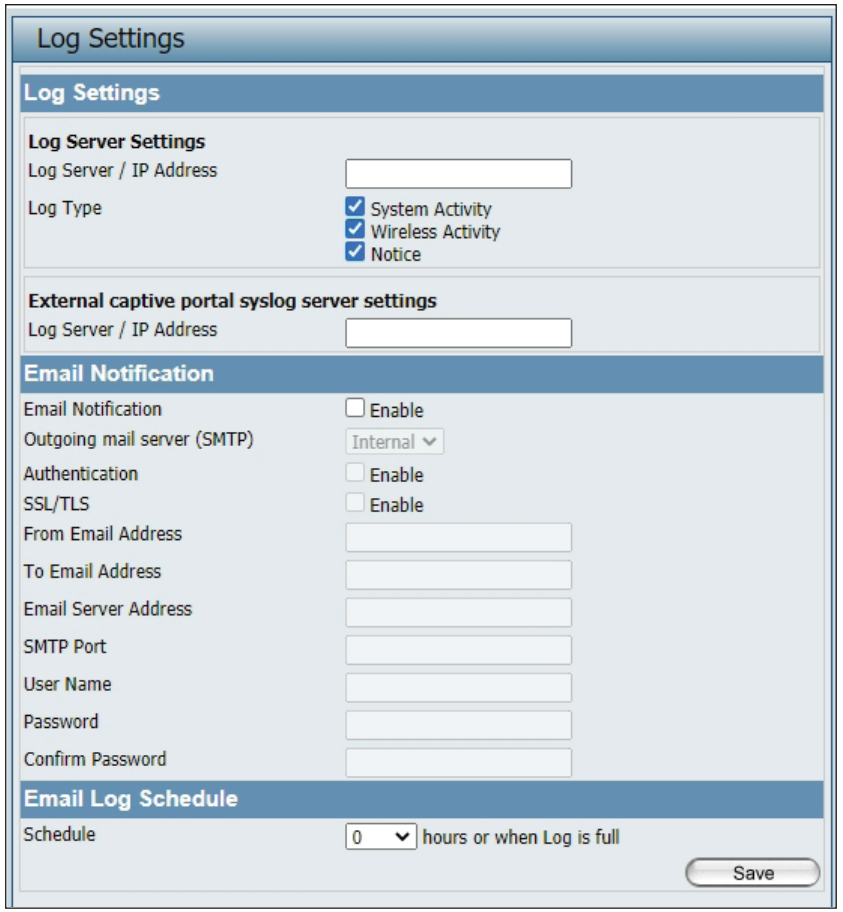
Enter the log server's IP address to send the log to that server. Check or uncheck System Activity, Wireless Activity, or Notice to specify what kind of log type you want it to log.

Log Server/IP Address: Enter the IP address of the server you would like to send the DAP-X2810 log to.

Log Type: Check the box for the type of activity you want to log. There are three types: System Activity, Wireless Activity, and Notice.

EU directive Syslog Server Settings: Enter the IP address of the syslog server you would like to send the DAP-X2810 log to.

E-mail Notification: Support Simple Mail Transfer Protocol for log schedule and periodical change key. It can not support Gmail SMTP port 465. Please set to Gmail SMTP port 25 or 587.



Outgoing Mail Server (SMTP): Click the drop-down menu to select the SMTP server type; options include: Internal, Gmail,Hotmail.

Authentication: Check the box to enable the authentication of the email notification.

SSL/TLS: Check the box to enable the SSL/TLS function.

From Email Address: Enter the email address.

To Email Address: Enter the email address.

Email Server Address: Enter the email server address.

SMTP Port: Enter the SMTP port.

User Name: Enter the name of the new user entry.

Password: Enter the password set for the email notification.

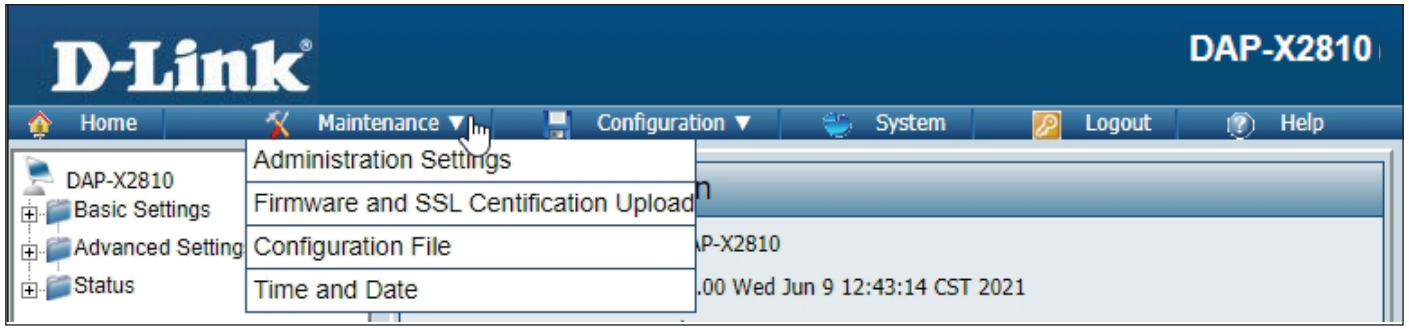
Confirm Password: Retype the password entry to confirm the password.

E-mail Log Schedule: Use the drop-down menu to set the email log schedule.

Save: Click to save the updated configuration. To make the updates permanent, click Configuration > **Save and Activate.**

Maintenance Section

In the Status Section the user can monitor and view configuration settings of the access point. Here the user can also view statistics about client information, WDS information and more. The following pages will explain settings found in the maintenance section in more detail.



Administration

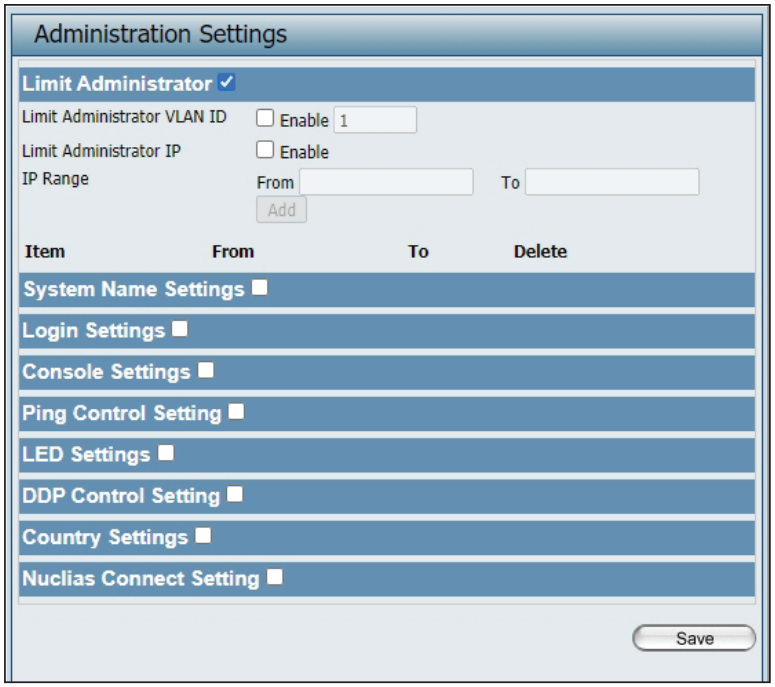
Limit Administrator

Check one or more of the eight main categories to display the various hidden administrator parameters and settings displayed on the next five pages. Each of the eight main categories display various hidden administrator parameters and settings.

Limit Administrator VLAN ID: Check the box provided and the enter the specific VLAN ID that the administrator will be allowed to log in from.

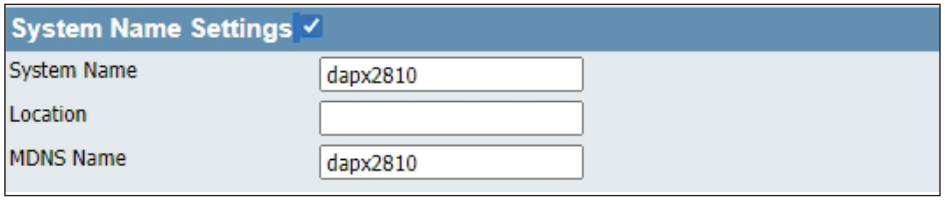
Limit Administrator IP: Check to enable the Limit Administrator IP address.

IP Range: Enter the IP address range that the administrator will be allowed to log in from and then click the Add button.



System Name Settings

Each of the eight main categories display various hidden administrator parameters and settings.



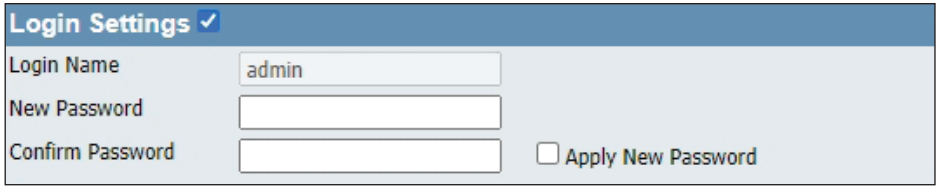
System Name: The name of the device. The default name is dapx2810.

Location: The physical location of the device, e.g. 72nd Floor, D-Link HQ.

MDNS Name : The MDNS name of the device. The default MDNS name is D-Link DAP-X2810.

Login Settings

Each of the eight main categories display various hidden administrator parameters and settings.



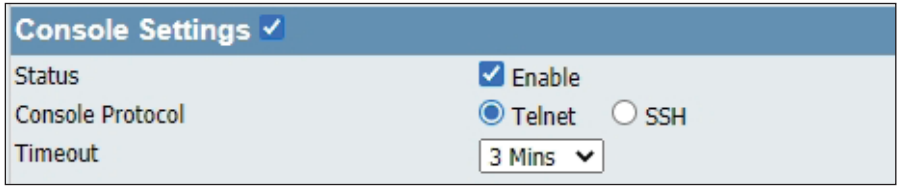
Login Name: Enter a user name. The default is **admin**.

New Password: When changing your password, enter the new password here. The password is case-sensitive. "A" is a different character than "a." The length should be between 0 and 12 characters.

Confirm Password: Enter the new password a second time for confirmation purposes.

Console Settings

Each of the eight main categories display various hidden administrator parameters and settings.



Status: Status is enabled by default. Uncheck the box to disable the console.

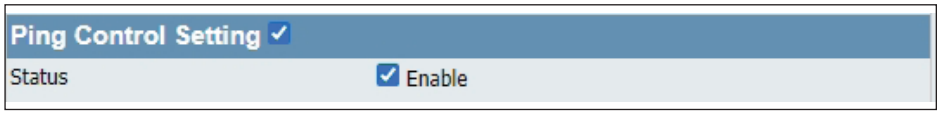
Console Protocol: Select the type of protocol you would like to use, Telnet or SSH.

Time-out: Set to 1 Min, 3 Mins, 5 Mins, 10 Mins, 15 Mins or Never.

Ping Control Setting

Each of the eight main categories display various hidden administrator parameters and settings.

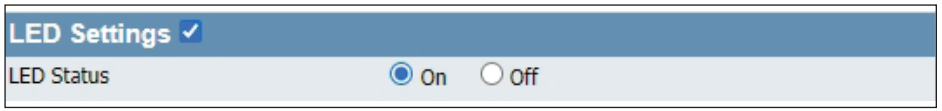
Status: Status is enabled by default. Uncheck the box to disable ping control.



LED Settings

Each of the eight main categories display various hidden administrator parameters and settings

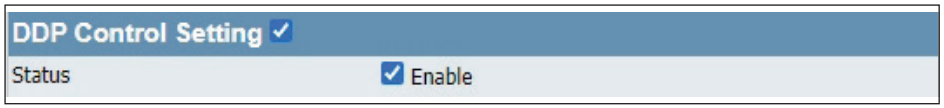
LED Status: Select the LED on/off you would like to use.



DDP Setting

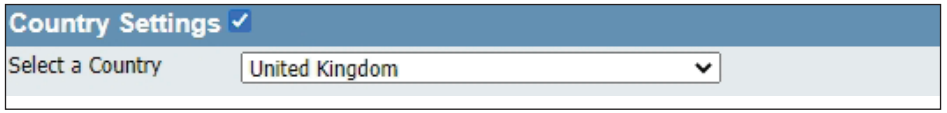
Each of the eight main categories display various hidden administrator parameters and settings.

Status is enabled by default. Uncheck the box to disable DDP control.



Country Setting

Select a Country: Choose from drop down list country where device is located.



Nuclias Connect Settings

The Nuclias Connect section is used to create a set of APs on the Internet to be organized into a single group in order to increase ease of management.

Enable Nuclias Connect: Click the drop-down menu to enable or disable Nuclias Connect.

Note: *To save the new configuration settings to the firmware, click* ***Configuration*** > ***Save and Activate****, otherwise click* ***Discard Changes*** *to delete any setting change.*

Firmware and SSL Upload

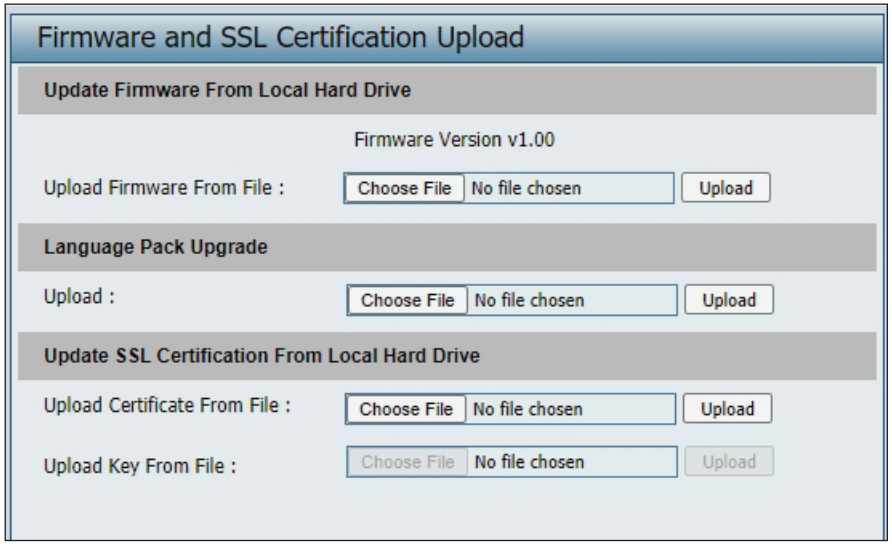
This page allows the user to perform a firmware upgrade. This upgrades the software running on the hardware used by the access point. This is a useful feature that prevents future bugs and allows for new features to be added to this product. Please go to your local D-Link website to see if there is a newer version firmware available.

Firmware and SSL Certification Upload: You can upload files to the access point.

Upload Firmware from Local Hard Drive: The current firmware version is displayed above the file location field. After the latest firmware is downloaded, click on the "Choose File" button to locate the new firmware. Once the file is selected, click on the "Open" and "Upload" buttons to begin updating the firmware. Please don't turn the power off while upgrading.

Language Pack Upgrade : After you have downloaded a language pack to your local drive, click "Choose File." Select the language pack and click "Open" and "Upload" to complete the upgrade.

Upload SSL Certification from Local Hard Drive: After you have downloaded a SSL certification to your local drive, click "Choose File." Select the certification and click "Open" and "Upload" to complete the upgrade.



Configuration File Upload

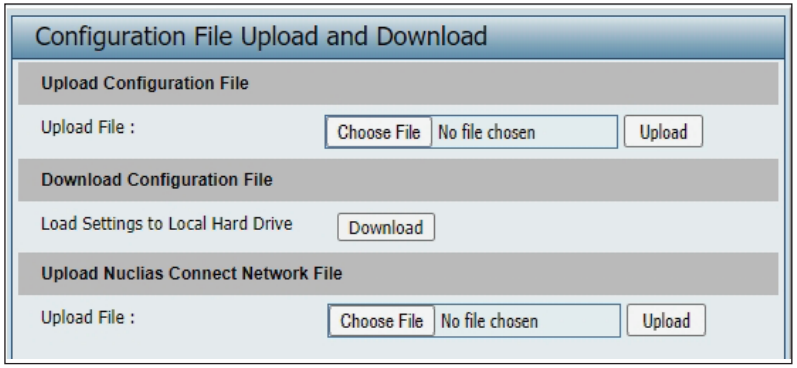
This page allows the user to back up and recover the current configuration of the access point in case of a unit failure.

Configuration File Upload and Download: You can upload and download configuration files of the access point.

Upload Configuration File: Browse to the saved configuration file you have in your local drive and click "Open" and "Upload" to update the configuration.

Download Configuration File: Click "Download" to save the current configuration file to your local disk. Note that if you save one configuration file with the administrator's password now, after resetting your DAP-X2810 and then updating to this saved configuration file, the password will be gone.

Upload Nuclias Connect Network File : Browse to the saved Nuclias Connect Network file you have in your local drive and click "Open" and "Upload" to upload the Nuclias Connect Network file .



Time and Date Settings

Enter the NTP server IP, choose the time zone, and enable or disable daylight saving time.

Current Time: Displays the current time and date settings.

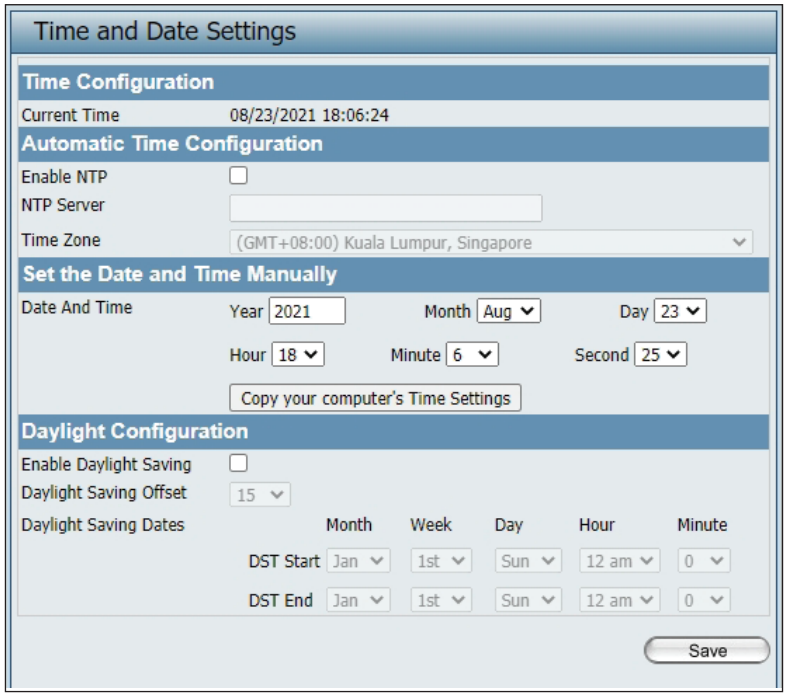
Enable NTP Server: Check to enable the AP to get system time from an NTP server from the Internet.

NTP Server: Enter the NTP server IP address.

Time Zone: Use the drop-down menu to select your correct Time Zone.

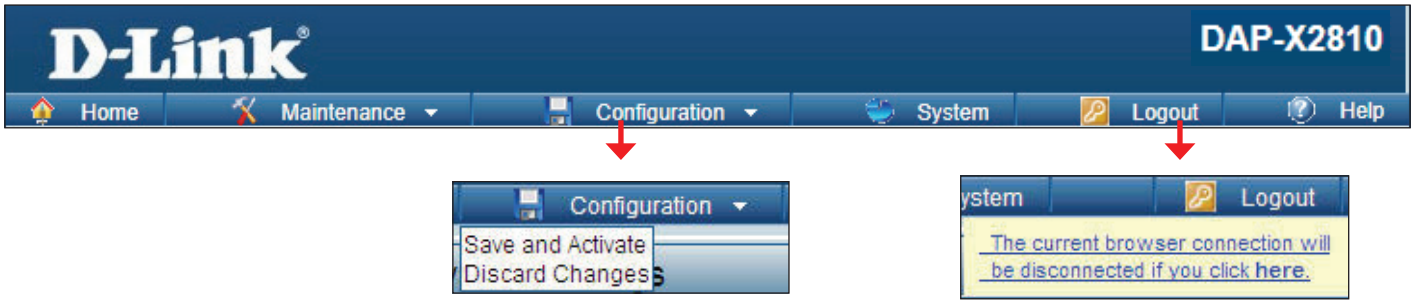
Enable Daylight Saving: Check the box to enable Daylight Saving Time.

Set the Date and Time Manually: A user can either manually set the time for the AP here, or click the Copy Your Computer's Time Settings button to copy the time from the computer in use (Make sure that the computer's time is set correctly).



Configuration and System

These are the remaining options to choose from in the top menu. **Configuration** allows the user to save and activate or discard the configurations. **System** allows the user to restart the unit, perform a factory reset or clear the language pack settings. **Logout** allows the user to safely log out from the access point's web configuration. **Help** allows the user to read more about the given options to configure without the need to consult the manual. The following pages will explain settings found in the configuration and system section in more detail.



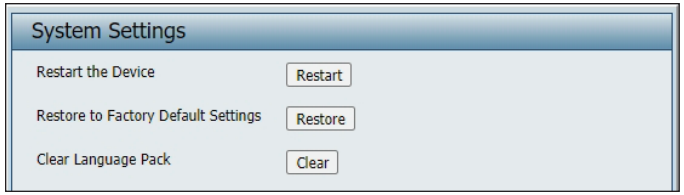
System Settings

On this page the user can restart the unit, perform a factory reset of the access point or clear the added language pack.

Restart the Device: Click Restart to restart the DAP-X2810.

Restore to Factory Default Settings: Click Restore to restore the DAP-X2810 back to factory default settings.

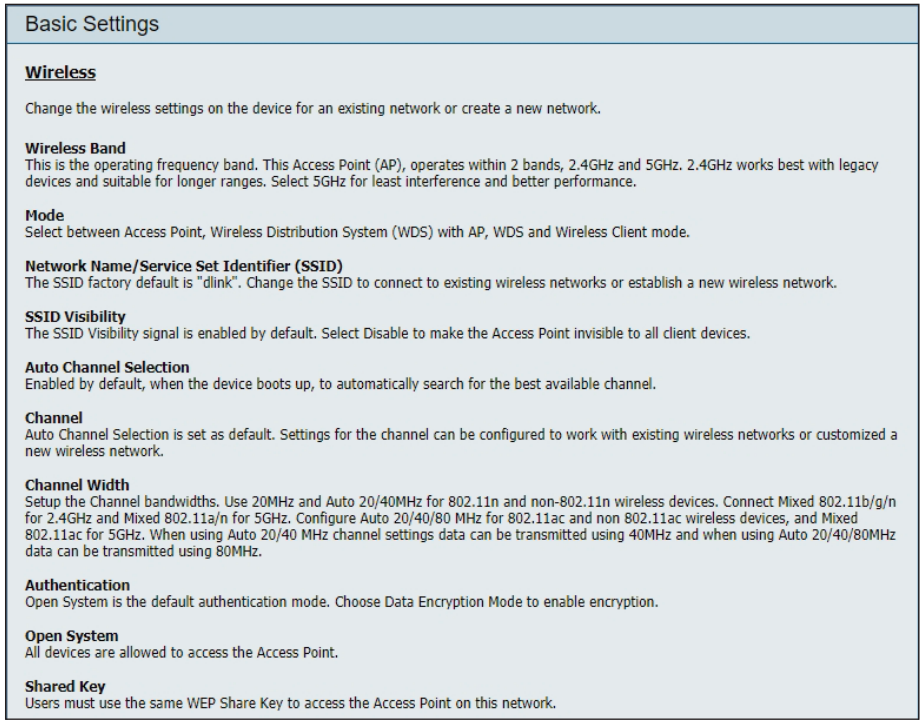
Clear Language Pack: Click to clear the current language pack.



Help

The help page is useful to view a brief description of a function available on the access point in case the manual is not present.

Help: Scroll down the Help page for topics and explanations.



Basic Settings

Wireless

Change the wireless settings on the device for an existing network or create a new network.

Wireless Band
This is the operating frequency band. This Access Point (AP), operates within 2 bands, 2.4GHz and 5GHz. 2.4GHz works best with legacy devices and suitable for longer ranges. Select 5GHz for least interference and better performance.

Mode
Select between Access Point, Wireless Distribution System (WDS) with AP, WDS and Wireless Client mode.

Network Name/Service Set Identifier (SSID)
The SSID factory default is "dlink". Change the SSID to connect to existing wireless networks or establish a new wireless network.

SSID Visibility
The SSID Visibility signal is enabled by default. Select Disable to make the Access Point invisible to all client devices.

Auto Channel Selection
Enabled by default, when the device boots up, to automatically search for the best available channel.

Channel
Auto Channel Selection is set as default. Settings for the channel can be configured to work with existing wireless networks or customized a new wireless network.

Channel Width
Setup the Channel bandwidths. Use 20MHz and Auto 20/40MHz for 802.11n and non-802.11n wireless devices. Connect Mixed 802.11b/g/n for 2.4GHz and Mixed 802.11a/n for 5GHz. Configure Auto 20/40/80 MHz for 802.11ac and non 802.11ac wireless devices, and Mixed 802.11ac for 5GHz. When using Auto 20/40 MHz channel settings data can be transmitted using 40MHz and when using Auto 20/40/80MHz data can be transmitted using 80MHz.

Authentication
Open System is the default authentication mode. Choose Data Encryption Mode to enable encryption.

Open System
All devices are allowed to access the Access Point.

Shared Key
Users must use the same WEP Share Key to access the Access Point on this network.

Technical Specifications

Standards
- IEEE 802.11ax
- IEEE 802.11ac
- IEEE 802.11n
- IEEE 802.11g
- IEEE 802.11a
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3ab
- IEEE 802.3at
- IEEE 802.3x

Network Management
- Web Browser interface (HTTP, Secure HTTP (HTTPS))
- Nuclias Connect

Security
- WPA™ Personal/Enterprise
- WPA2™ Personal/Enterprise
- WPA3™ Personal/Enterprise
- WEP™ 64-/128-bit

Wireless Frequency Range
- 2.4 to 2.4835 GHz and 5.15 to 5.85 GHz

Operating Voltage
- 12V/2.5A or 802.3at PoE

Antenna Type
- Two Dual Band Internal Antennas (2.4Ghz 3.2dBi & 5Ghz 4.3dBi)

LEDs
- Power/Status

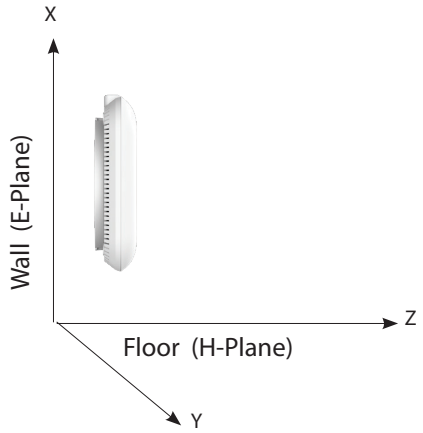
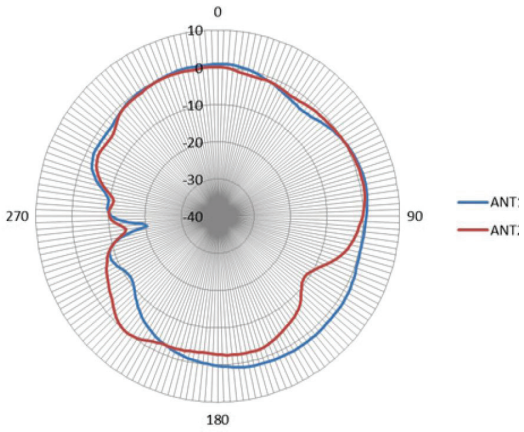
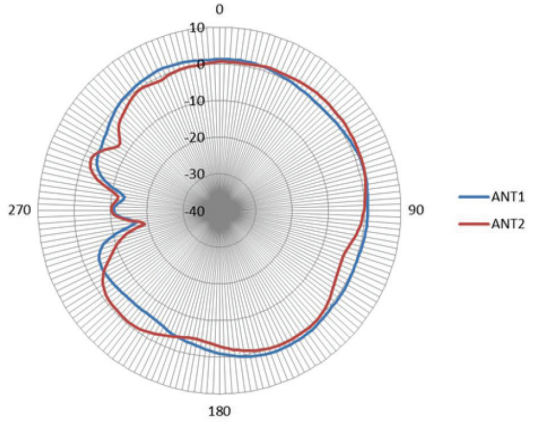
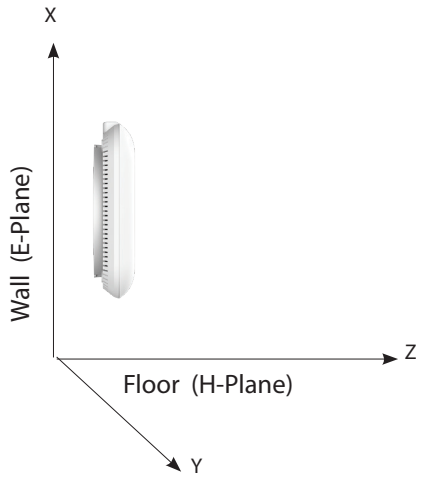
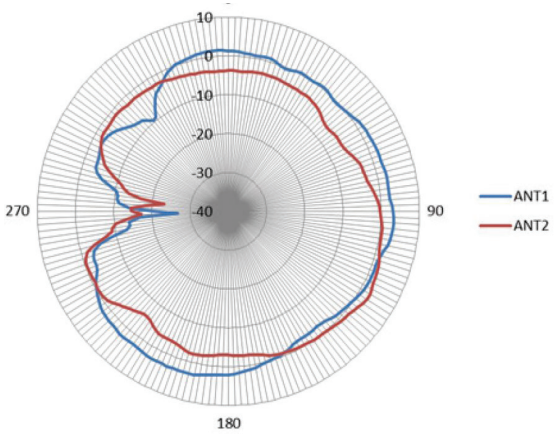
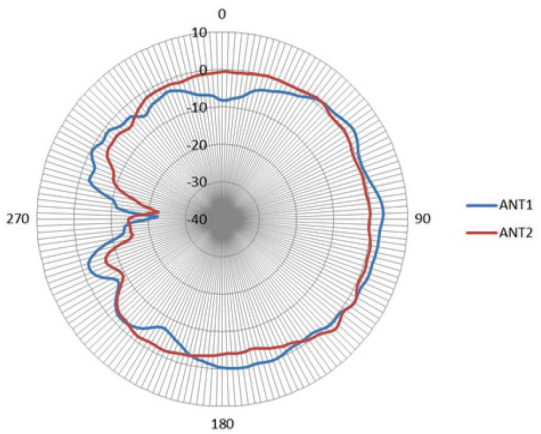
Temperature
- Operating: 0˚C to 40˚C
- Storing: -20˚C to 65˚C

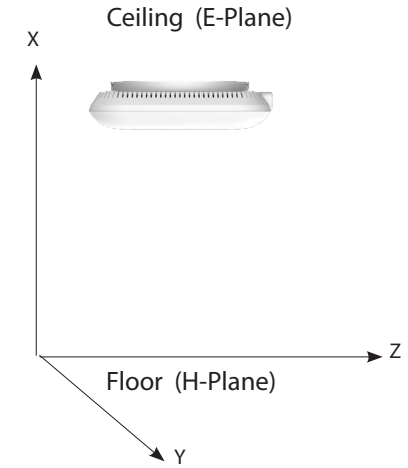
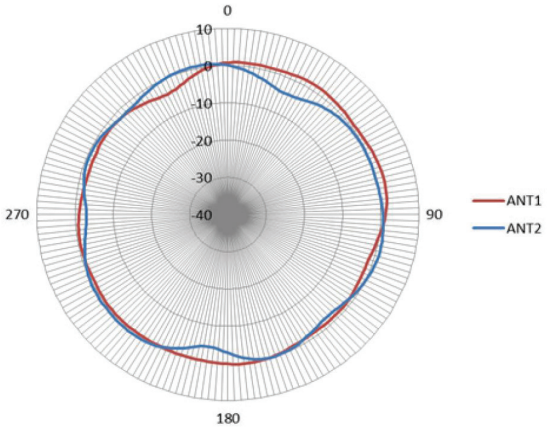
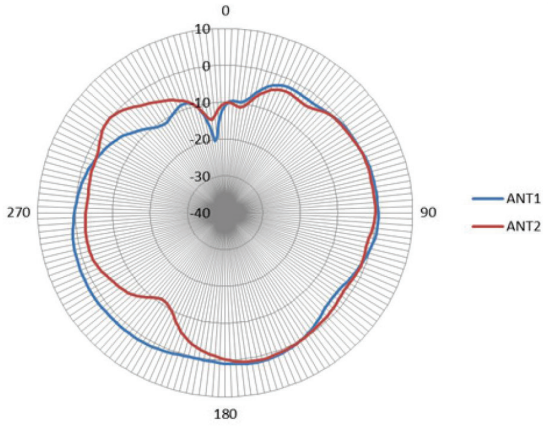
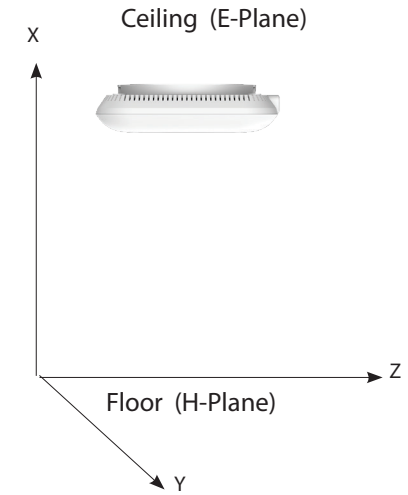
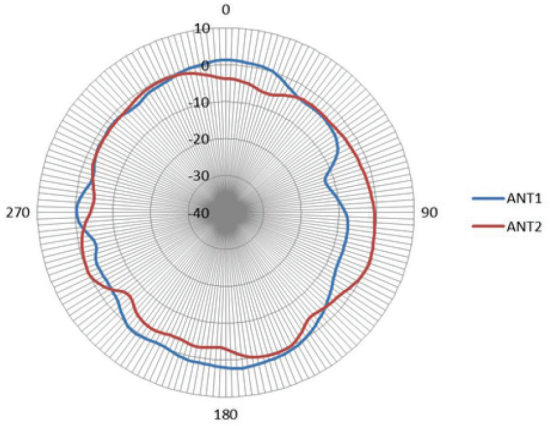
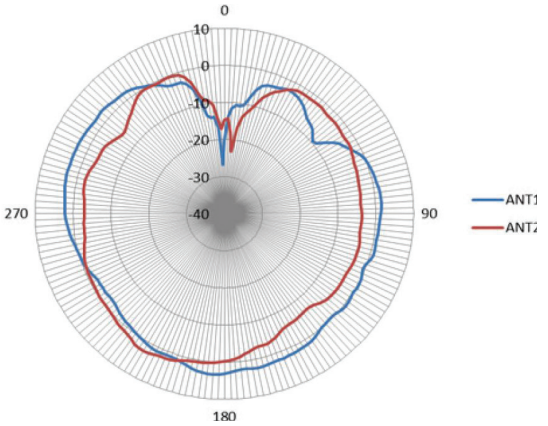
Humidity
- Operating: 10%~90% (non-condensing)
- Storing: 5%~95% (non-condensing)

Certifications
- FCC
- CE
- IC
- RCM
- LVD

Dimensions
- L = 170 mm
- W = 170mm
- H = 28 mm

Antenna Pattern

Antenna Pattern		
Orientation	H-Plane	E-Plane
2.4 GHz Wall Mounted 		
5 GHz Wall Mounted 		

Antenna Pattern		
Orientation	H-Plane	E-Plane
2.4 GHz Ceiling Mounted 		
5 GHz Ceiling Mounted 		

Warranty

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

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

Limited Warranty:

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

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

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

Limited Software Warranty:

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

Non-Applicability of Warranty:

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

Submitting A Claim:

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

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support (USA 1-877-453-5465 or Canada 1-800-361-5265), who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form. Enter the assigned Case ID Number at https://rma.dlink.com/ (USA only) or https://rma.dlink.ca (Canada only).

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc.
- **USA residents** send to 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.
- **Canadian residents** send to D-Link Networks, Inc., 2525 Meadowvale Boulevard Mississauga, Ontario, L5N 5S2 Canada. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via Purolator Canada or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in Canada, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming. RMA phone number: 1-800-361-5265 Hours of Operation: Monday-Friday, 9:00AM – 9:00PM EST

What Is Not Covered:

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

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

Disclaimer of Other Warranties:

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

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

Limitation of Liability:

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

Governing Law:

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

Trademarks:

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Federal Communication Commission Interference 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.

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.

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.

For product available in the USA market, only channel 1~11 can be operated. Selection of other channels is not possible.

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

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

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 41 cm between the radiator & your body.

MPORTANT NOTE:

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 32cm between the radiator & your body.

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

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

This device and it's antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

IC statement:

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

IMPORTANT NOTE:

Radiation Exposure Statement:
This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
This device has been designed to operate with an antenna having a maximum gain of 5.1dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage

radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.
For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.
Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.
This device and it's antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.
Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionnement en association avec une autre antenne ou transmetteur.

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.
les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une
utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

Power Usage

This device is an Energy Related Product (ErP) with High Network Availability (HiNA), and automatically switches to a power-saving Network Standby mode within 1 minute of no packets being transmitted.

Network Standby: 4.838 watts

Registration

Register your product online at www.onlineregister.com/dlink

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