

NETGEAR®

User Manual

Insight Instant AirBridge WBC502

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Revision History

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202-12051-03	April 2020	Throughout the manual, we added information that you cannot use NETGEAR Insight to configure and manage the AirBridge if the operation mode is access point or client bridge. We revised Change the management mode to NETGEAR Insight Mode or Standalone Mode on page 111 and added two subsections: Change the management mode to NETGEAR Insight Mode on page 112 and Change the management mode to Standalone Mode on page 113.
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1

Access the AirBridge and Use the Easy Setup Method

This user manual is for the NETGEAR Insight Instant Wireless AirBridge WBC502, in this manual, referred to as the AirBridge.

The AirBridge can provide an outdoor, long-distance, WiFi connection in a master-satellite configuration that lets you extend your main network to a detached site. You can also use the AirBridge as a long-range, point-to-point access point or client bridge.

This user manual complements the installation guide that came with your AirBridge and the hardware installation guide, which you can download by visiting netgear.com/support/download/. This chapter describes how you can access the AirBridge and configure the operation mode for your selected setup. The chapter includes the following sections:

- [Related documentation](#)
- [Overview](#)
- [About NETGEAR Insight](#)
- [AirBridge label](#)
- [Operation mode: AirBridge Master, AirBridge Satellite, Access Point, or Client Bridge](#)
- [AirBridge mode](#)
- [Access the AirBridge for initial configuration](#)
- [Operation mode and default settings after the Day Zero Easy Setup configuration](#)
- [Log in to the AirBridge after initial setup](#)
- [Change the language of the local browser UI](#)

Note: For more information about the topics that are covered in this manual, visit the support website at netgear.com/support/.

Note: Firmware updates with new features and bug fixes are made available from time to time at netgear.com/support/download/. You can check for and download new firmware manually. If the features or behavior of your product does not match what is described in this manual, you might need to update the firmware.

Related documentation

The following related AirBridge documentation is available at netgear.com/support/download/:

- Installation guide
- Hardware installation guide
- Data sheet

For information about the NETGEAR Insight app and the Insight Cloud portal, visit insight.netgear.com and see the NETGEAR knowledge base at netgear.com/support/product/insight.aspx.

Overview

The AirBridge is intended for environments where you need to extend your network to another building or across a large outdoor campus or yard while no *wired* network infrastructure is available.

The AirBridge can provide a long-distance, high performance, IEEE 802.11ac WiFi connection in the following setups:

- **Single master to single satellite.** Point-to-point setup between two AirBridges in a configuration with a single master and single satellite with a long-distance reach of 1.8 miles (3 km) or more. This setup requires a line of sight between the main and detached sites.
- **Single master to multiple satellites.** Point-to-multipoint setup between multiple AirBridges in a configuration with a single master and up to four satellites with a long-distance reach of 1.8 miles (3 km) or more. This setup requires a line of sight between the main and detached sites.
- **Outdoor access point.** A setup that allows for a long-range WiFi reach in which an AirBridge functions as an access point that provides connections to WiFi clients, client bridges, or both.
- **Outdoor client bridge.** A setup in which an AirBridge functions as a client bridge, providing a network connection to a wired device, such as an IP surveillance camera. The client bridge connects to the main network through a backhaul WiFi connection to a WiFi access point.

For information about application examples, see the hardware installation guide, which you can download from netgear.com/support/download/.

You can mount the AirBridge outside to a wall or pole and provide power to the AirBridge through an Ethernet cable that is connected to the provided power adapter, which must be installed indoors. The AirBridge integrates a high-gain directional antenna for a line of sight connection to other AirBridges or WiFi clients.

The AirBridge provides two 10/100/1000BASE-T RJ-45 LAN ports for network connections. One LAN port must be connected to the provided power adapter. Use Category 5e (Cat 5e) or higher-rated Ethernet cables terminated with RJ-45 connectors to make Gigabit connections.

For more information about the hardware, see the hardware installation guide.

The AirBridge provides administrative management options that let you configure, monitor, and control the AirBridge and the WiFi network:

- Using the local browser user interface (UI) you can configure the AirBridge and set up a WiFi connection between two or more units in any of the supported operation modes. This manual (the user manual) describes the options that are available to you when you use the local browser UI.
- Using NETGEAR Insight, you can set up a pair or a group of AirBridges, with one AirBridge functioning as the master and one or more other AirBridges functioning as satellites.

For more information about NETGEAR Insight, visit netgear.com/insight and see the NETGEAR knowledge base articles at netgear.com/support.

About NETGEAR Insight

To configure and manage the AirBridge as a master or satellite in a point-to-point or point-to-multipoint setup, you can use NETGEAR Insight app on your iOS or Android mobile device and connect to the Insight cloud-based management platform. For Insight Premium and Insight Pro subscribers, the AirBridge also supports the Insight Cloud portal, which is the website that provides access to the Insight cloud-based management platform.

Note: At this time, NETGEAR Insight does not support the access point and client bridge operation modes. To configure and manage the AirBridge as an access point or client bridge, you first must change the management mode to Standalone Mode, and then use the local browser UI. For more information, see [Change the management mode to NETGEAR Insight Mode or Standalone Mode](#) on page 111.

This user manual describes the local browser UI. For more information about NETGEAR Insight, visit insight.netgear.com and see the NETGEAR knowledge base at netgear.com/support/product/insight.aspx.

If you install the AirBridge as a NETGEAR Insight managed device, the settings for features that you can manage through the Insight app and Insight Cloud portal are masked out in the local browser UI. However, using the local browser UI, you can still manage the settings for certain features that are not yet supported in Insight. For more information, visit the NETGEAR knowledge base at netgear.com/support/product/insight.aspx and search for *What is Hybrid Management Mode*.

AirBridge label

The label on the back panel of the AirBridge shows the serial number, MAC address, default *management* WiFi network name (SSID), network key (password), and default login information of the AirBridge.

Operation mode: AirBridge Master, AirBridge Satellite, Access Point, or Client Bridge

The AirBridge can function in one of the following operation modes: AirBridge Master, AirBridge Satellite, Access Point, or Client Bridge.

With a WiFi link partner such as another AirBridge, you can provide network and Internet connectivity to a detached site where no wired infrastructure is available.

Note: Closely related to the AirBridge operation mode is the AirBridge mode (that is, *without* the term *operation*). If the operation mode for the AirBridge is AirBridge Master or AirBridge Satellite, you can enable or disable the AirBridge mode. For more information, see [AirBridge mode](#) on page 12.

The AirBridge can function in one of the following operation modes:

- **AirBridge Master.** The AirBridge functions as a master in a point-to-point setup or point-to-multipoint setup. You install the master at a main site to provide *long-distance* network and Internet connectivity to a satellite at one or more detached sites. This setup requires a line of sight between the main site and each detached site. By default, the AirBridge mode is enabled, which is the setting that we recommend for a master-to-satellite setup. Depending on your network situation, your WiFi requirements, and your understanding of the consequences, you can disable the AirBridge mode.

Note: We do not recommend that you use a master and several satellites to create a multi-building campus network backbone.

- **AirBridge Satellite.** The AirBridge functions as a satellite in a master-to-satellite setup. You install the satellite at a detached site. The master provides *long-distance* network and Internet connectivity to the satellite. This setup requires a line of sight between the detached site and main site. By default, the AirBridge mode is enabled, which is the setting that we recommend for a master-to-satellite setup. However, the AirBridge mode must be the same as on the master with which the satellite associates. If the AirBridge mode is disabled on the master, you must also disable it on the satellite.
- **Access Point.** The AirBridge functions as a regular WiFi access point to provide network and Internet connectivity to any of the following types of WiFi link partners:
 - An AirBridge that functions as a client bridge
 - WiFi clients at an extended range
 - Another type of access point

Note: To configure and manage the AirBridge as an access point, you first must change the management mode to Standalone Mode, and then use the local browser UI. For more information, see [Change the management mode to NETGEAR Insight Mode or Standalone Mode](#) on page 111. At this time, NETGEAR Insight does not support the access point operation mode.

- **Client Bridge.** The AirBridge functions as a client bridge at a detached site to provide network and Internet connectivity to a wired device such as an IP surveillance camera. The client bridge connects to a WiFi access point at the main site. This access point can be an AirBridge or another type of access point.

Note: To configure and manage the AirBridge as a client bridge, you first must change the management mode to Standalone Mode, and then use the local browser UI. For more information, see [Change the management mode to NETGEAR Insight Mode or Standalone Mode](#) on page 111. At this time, NETGEAR Insight does not support the operation mode.

For information about configuring the operation mode, see [Access the AirBridge for initial configuration](#) on page 14 and [Manually Configure or Change the Operation Mode](#) on page 37.

The following table shows the features that are determined by the operation mode that you select. For the AirBridge Master and AirBridge Satellite operation modes, the table

also shows the features that are determined by whether the AirBridge mode is enabled or disabled.

Table 1. Features determined by the operation mode and the AirBridge mode

Feature	AirBridge Master		AirBridge Satellite		Access Point	Client Bridge
	AirBridge mode enabled	AirBridge mode disabled	AirBridge mode enabled ¹	AirBridge mode disabled ¹	AirBridge mode N/A	AirBridge mode N/A
WiFi range	Long distance ²	Extended range ³	Long distance ²	Extended range ³	Extended range ³	Extended range ³
Line of sight	Required	N/A	Required	N/A	N/A	N/A
WiFi link partners	AirBridge satellite only	AirBridge, any WiFi AP, and WiFi clients	AirBridge master only	AirBridge master only	WiFi clients, AirBridge AP, and any WiFi AP	AirBridge AP or any WiFi AP
Number of 5 GHz SSIDs	1	4	1	1	8	1
Management option	Standalone Mode ⁴ or NETGEAR Insight	Standalone Mode ⁴ or NETGEAR Insight	Standalone Mode ⁴ or NETGEAR Insight	Standalone Mode ⁴ or NETGEAR Insight	Standalone Mode ⁴ only	Standalone Mode ⁴ only

1. The AirBridge mode setting on the satellite must be the same as the one on the master.
2. Reliable long-distance WiFi connection of 1.8 miles (3 km) or more for a limited number of satellites.
3. Powerful antenna for a reliable extended-range WiFi connection for multiple individual WiFi clients.
4. Standalone Mode lets you use all options of the local browser UI.

AirBridge mode

The *AirBridge mode* specifies the type of multiple access method that the AirBridge uses.

Note: Closely related to the AirBridge mode is the AirBridge operation mode (that is, *with the term operation*). For more information, see [Operation mode: AirBridge Master, AirBridge Satellite, Access Point, or Client Bridge](#) on page 10.

You can select the AirBridge mode only if the operation mode of the AirBridge is AirBridge Master or AirBridge Satellite. In a master-to-satellite setup, you must either enable or disable the AirBridge mode on both the master and the satellite. (Do not enable it on one and disable it on the other.)

The AirBridge mode determines the following characteristics on the AirBridge:

AirBridge mode enabled:

- **Highly reliable connections for a limited number of WiFi devices.** Provides reliable point-to-point connections between a master and a satellite and point-to-multipoint connections between a master and a limited number of satellites.
- **Best suited for long distance for a limited number of WiFi devices.** A master can connect over a long distance of 1.8 miles (3 km) or more to a satellite at a detached site.
- **Single 5 GHz SSID.** A single 5 GHz SSID provides the backhaul WiFi connection between the master and the satellites.
- **No individual WiFi clients supported.** Other than the satellites, individual WiFi clients cannot connect to the 5 GHz SSID. However, by connecting a switch and a WiFi access point to the satellite, you can support multiple WiFi clients at the detached site.
- **Another AirBridge as a link partner only.** An AirBridge and one or more other AirBridges can establish WiFi connections. You cannot use any other types of access points as link partners.

AirBridge mode disabled:

- **Reliable connections for multiple WiFi devices.** Provides reliable point-to-multipoint connections between an access point and multiple individual WiFi clients.
- **Best suited for extended range for multiple WiFi devices.** The powerful antenna of the AirBridge supports a WiFi range that extends beyond the range of most access points.
- **Multiple 5 GHz SSIDs.** Multiple 5 GHz SSIDs can support satellites, client bridges, and individual WiFi clients.
- **Individual WiFi clients supported.** Individual WiFi clients can connect to the AirBridge.
- **Any access point as a link partner.** Any access point, including third-party access points, can establish a WiFi connection with an AirBridge.

Note: For information about configuring the AirBridge mode, see [Manually Configure or Change the Operation Mode](#) on page 37, and [Change the AirBridge mode](#) on page 59.

Access the AirBridge for initial configuration

Depending on your network situation, setup, and preference, you can use different management options to connect to the AirBridge for initial configuration.

Table 2. Operation mode and management mode options

Operation Mode	Management Mode Standalone Mode ¹	Management Mode NETGEAR Insight Mode ²
AirBridge Master, point-to-point or point-to-multipoint setup	Supported	Supported
AirBridge Satellite, point-to-point or point-to-multipoint	Supported	Supported
Access Point	Supported	Not supported
Satellite	Supported	Not supported

1. Standalone Mode lets you use all options of the local browser UI.

2. NETGEAR Insight Mode lets you use the Insight app or Cloud Portal.

Depending on the operation mode (see [Change the management mode to NETGEAR Insight Mode or Standalone Mode](#) on page 111), you can access and configure the AirBridge by using the NETGEAR Insight app on an iOS or Android mobile device, by using the Insight Cloud portal, or by using the local browser UI. You cannot combine Insight management with management over the local browser UI. These types of management are mutually exclusive. However, even if you use Insight management, you can still access the local browser UI for a *limited* number of options.

The Insight app and the Insight Cloud portal provide ease of access and let you configure most features that are available on the AirBridge, except for the access point and client bridge operation modes. However, the local browser UI lets you configure all features that are available on the AirBridge, including the access point and client bridge operation modes.

CAUTION: This device must be professionally installed. It is the installer's responsibility to follow local country regulations, including operations within legal frequency channels, output power, and DFS requirements. The vendor, reseller, or distributor is not responsible for illegal wireless operations. For more details, see the device's terms and conditions.

Determine your access and configuration method and then see the information in the relevant section in this manual:

- **Insight app or the Insight Cloud portal.** If you use the Insight app or the Insight Cloud portal to access and configure the AirBridge as a master or satellite, see one of the following sections:
 - [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15
 - [Connect over the Internet using the NETGEAR Insight Cloud portal](#) on page 17
- **Local browser UI.** If you use the local browser UI to access and configure the AirBridge in any operation mode, see one of the following sections:
 - [Connect over WiFi using a WiFi-enabled computer or mobile device](#) on page 18
 - [Connect over Ethernet using a computer connected to the same network](#) on page 23
 - [Connect over Ethernet using a directly connected computer](#) on page 28

Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device

You can install the NETGEAR Insight app on an iOS or Android mobile device to configure and manage the AirBridge as a master or satellite.

Note: At this time, the NETGEAR Insight app does not support the access point and client bridge operation modes. To configure and manage the AirBridge as an access point or client bridge, you first must change the management mode to Standalone Mode, and then use the local browser UI. For more information, see [Change the management mode to NETGEAR Insight Mode or Standalone Mode](#) on page 111.

IMPORTANT: If you add the AirBridge to a NETGEAR Insight network location and manage the AirBridge through the Insight app or Insight Cloud portal, the local device password for the AirBridge changes. That is, the Insight network password for that location replaces the local device password. To access the local browser UI, you must then enter the Insight network password and not the local device password. If you later decide to remove the AirBridge from the Insight network location or change the management mode to Standalone Mode (see [Change the management mode to Standalone Mode](#) on page 113), you must continue to use the Insight network password to access the local browser UI until you manually change the local device password on the AirBridge.

For more information about the Insight app, visit insight.netgear.com and see the NETGEAR knowledge base at netgear.com/support/product/insight.aspx.

To connect to the AirBridge over WiFi using an iOS or Android mobile device:

1. On your iOS or Android mobile device, go to the app store, search for NETGEAR Insight, and download the latest version of the Insight app.



2. For initial discovery and configuration, connect your mobile device to the WiFi network that is connected to the same network to which the AirBridge is connected.

Note: For initial discovery and configuration, do *not* connect your smartphone to the default management SSID of the AirBridge.

3. Open the Insight app.
4. If you did not set up a NETGEAR account, tap **Create NETGEAR Account** and follow the onscreen instructions.
5. Enter the email address and password for your account and tap **LOG IN**.
After you log in to your account, the IP address of the AirBridge displays in the device list.
6. Write down the AirBridge IP address.
You can use the IP address to connect to the local browser UI of the AirBridge using an Ethernet connection when your computer is connected to the same network as the AirBridge. For more information, see [Connect over Ethernet using a computer connected to the same network](#) on page 23.
7. To use the Insight app (instead of the local browser UI) to configure and manage the AirBridge, tap the AirBridge, and follow the prompts to register the AirBridge and add it to an Insight network location.

Connect over the Internet using the NETGEAR Insight Cloud portal

The Insight Cloud portal is available for Insight Premium or Insight Pro subscribers. To use the NETGEAR Insight Cloud portal to configure and manage the AirBridge as a master or satellite, the AirBridge must already be connected to the Internet.

Note: At this time, the NETGEAR Insight Cloud portal does not support the access point and client bridge operation modes. To configure and manage the AirBridge as an access point or client bridge, you first must change the management mode to Standalone Mode, and then use the local browser UI. For more information, see [Change the management mode to NETGEAR Insight Mode or Standalone Mode](#) on page 111.

IMPORTANT: If you add the AirBridge to a NETGEAR Insight network location and manage the AirBridge through the Insight app or Insight Cloud portal, the local device password for the AirBridge changes. That is, after you add the AirBridge to an Insight network location, the Insight network password for that location replaces the local device password. To access the local browser UI, you must then enter the Insight network password and not the local device password. If you later decide to remove the AirBridge from the Insight network location or change the management mode to Web-browser mode (see [Change the management mode to Standalone Mode](#) on page 113), you must continue to use the Insight network password to access the local browser UI until you manually change the local device password on the AirBridge.

For more information about the Insight Cloud portal and the configuration and management options that are available through the Insight Cloud portal, visit insight.netgear.com and see the NETGEAR knowledge base at netgear.com/support/product/insight.aspx.

To connect to the AirBridge over the Internet through the Insight Cloud portal:

1. Visit insight.netgear.com.
The NETGEAR Account Login page displays.
2. Enter your Insight email address and password.
If you do not own an Insight account, you can create one.
3. Click the **Login** button.
After you log in, you can do the following:
 - Add the AirBridge to the Cloud portal by entering its serial number.
 - Add the AirBridge to an Insight network location.
 - Configure and manage the AirBridge.

Connect over WiFi using a WiFi-enabled computer or mobile device

This section describes how to connect to the AirBridge for the first time over WiFi using a WiFi-enabled computer or mobile device (without using the NETGEAR Insight app).

For this procedure, do not connect the AirBridge to a network with a DHCP server, otherwise you cannot access the AirBridge at its default IP address of 192.168.0.100.

To connect to the AirBridge over WiFi using a WiFi-enabled computer or mobile device:

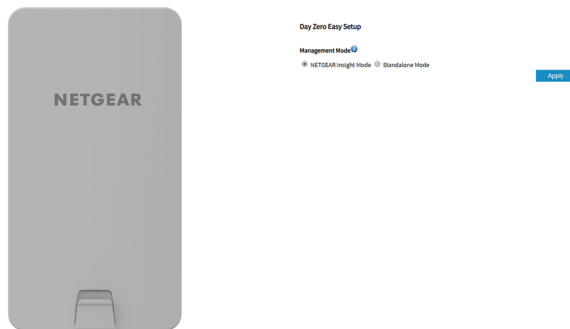
1. From your computer or mobile device, connect over WiFi to the AirBridge's management WiFi network.

The management SSID is on the AirBridge label on the bottom of the AirBridge and is shown in the format NETGEARxxxxxx-SETUP, where xxxxxx is the last six hexadecimal digits of the AirBridge's MAC address. The default password is **sharedsecret**.

2. On the computer or mobile device, open a web browser and, in the address bar, enter **https://192.168.0.100**.

When the AirBridge is not connected to a network with a DHCP server, the default IP address of the AirBridge is 192.168.0.100.

The Day Zero Easy Setup page displays.




3. If your browser does not open the Day Zero Easy Setup page but displays a security message and does not let you proceed, do one of the following:
 - **Google Chrome.** If Google Chrome displays a *Your connection is not private* message, click the **ADVANCED** link. Then, click the **Proceed to 192.168.0.100 (unsafe)** link.
 - **Apple Safari.** If Apple Safari displays a *This connection is not private* message, click the **Show Details** button. Then, click the **visit this website** link. If a warning pop-up window opens, click the **Visit Website** button. If another pop-up window


opens to let you confirm changes to your certificate trust settings, enter your Mac user name and password and click the **Update Setting** button.

- **Mozilla Firefox.** If Mozilla Firefox displays a *Your connection is not secure* message, click the **ADVANCED** button. Then, click the **Add Exception** button. In the pop-up window that opens, click the **Confirm Security Exception** button.
- **Microsoft Internet Explore.** If Microsoft Internet Explorer displays a *There is a problem with this website's security certificate* message, click the **Continue to this website (not recommended)** link.
- **Microsoft Edge.** If Microsoft Edge displays a *There is a problem with this website's security certificate* message or a similar warning, select **Details > Go on to the webpage**.

4. Select the **Standalone Mode** radio button.



Day Zero Easy Setup

Management Mode 

NETGEAR Insight Mode Standalone Mode

Country/Region


Germany

Time Zone


UTC+01:00 France, Germany, Italy

DHCP Client

Enable Disable

AP Name 

WBC502

AP Login New Password* 


AP Login New Password

Confirm New Password*

Confirm New Password

Operation mode

AirBridge Satellite


SSID* 

Enter SSID Name

Authentication

WPA2-AES

Passphrase*


Enter Passphrase 

(* 8-63 chars)

Management SSID

NETGEAR7ECPA6-SETUP

Management WPA2 Passphrase*

Enter Passphrase 

(* 8-63 chars)

Note: After you save the basic settings that are shown on the page, the Day Zero Easy Setup page no longer displays when you log in. Instead, a login window opens. After you log in, the Dashboard page displays.

5. Enter the settings that are described in the following table.

Insight Instant AirBridge WBC502 User Manual

Setting	Description
Country/Region	<p>From the menu, select the country and region in which the AirBridge is operating.</p> <p>Note: Make sure that the country is set to the location where the device is operating. You are responsible for complying with the local, regional, and national regulations that are set for channels, power levels, and frequency ranges.</p> <p>Note: It might not be legal to operate the AirBridge in a region other than the regions listed in the menu. If your country or region is not listed, check with your local government agency.</p>
Time Zone	<p>From the menu, select the time zone for the country and region in which the AirBridge is operating.</p>
DHCP Client	<p>By default, the DHCP client of the AirBridge allows the AirBridge to receive an IP address from a DHCP server (or router that functions as a DHCP server) in your network. To set up the AirBridge with a static (fixed) IP address, do the following:</p> <ol style="list-style-type: none">Select the Disable radio button. Additional fields display.Specify the IP address, IP subnet mask, IP address of the default gateway, and IP address of the DNS server.
AP Name	<p>As an option, enter a new device name for the AirBridge. The name must contain alphanumeric characters, cannot be longer than 15 characters, and cannot contain spaces. The name <i>can</i> contain hyphens, but cannot start or end with a hyphen.</p> <p>By default, the device name is WBC502, which is the AirBridge's model number.</p>
AP Login New Password	<p>Enter a new local device password. This is the password that you must use to log in to the AirBridge's local browser UI. (It is <i>not</i> the password that you use for WiFi access.)</p> <p>The password must be 8 to 32 characters in length and must contain at least one uppercase letter, one lowercase letter, and one number. The following special characters are allowed: ! @ # \$ % ^ & * ()</p> <p>Write down and save the password for future use.</p>
Confirm New Password	<p>Enter exactly the same password that you entered in the AP Login New Password field.</p>

(Continued)

Setting	Description
Operation Mode	<p>From the menu, select the operation mode that the AirBridge must function in:</p> <ul style="list-style-type: none"> • AirBridge Master • AirBridge Satellite • Access Point • Client Bridge <p>For information about the operation modes, see Operation mode: AirBridge Master, AirBridge Satellite, Access Point, or Client Bridge on page 10 and Operation mode and default settings after the Day Zero Easy Setup configuration on page 33.</p>
SSID	<p>Enter a name for the 5 GHz SSID. You can use a maximum of 32 characters with a combination of alphanumeric and special characters, except for quotation marks (") and a backslash (\).</p> <p>The function of the 5 GHz SSID depends on the operation mode:</p> <ul style="list-style-type: none"> • AirBridge master and satellite. The 5 GHz SSID is the backhaul WiFi connection between the master and the satellite. • Access point. The 5 GHz SSID is the WiFi network that the access point broadcasts. • Client bridge. The 5 GHz SSID is the WiFi extension between the client bridge and the base station.
Authentication	<p>From the menu, select one of the following authentication types for the 5 GHz SSID:</p> <ul style="list-style-type: none"> • Open. Authentication is not required and data encryption is not supported. This setting does not provide any security and is not appropriate for most situations. • WPA2-AES. This option allows the 5 GHz SSID to be secured with a WPA2 passphrase. This option uses AES encryption. All devices that use the 5 GHz SSID must be capable of supporting WPA2-AES. <p>After you complete the setup process, you can set up WPA2 Enterprise security with RADIUS servers. For more information, see Set up WPA2-Enterprise security on a master or access point on page 81 or Set up WPA2-Enterprise security on a satellite or client bridge on page 84.</p>
Passphrase	<p>Unless you selected Open from the Authentication Type menu, enter a new passphrase (network key or WiFi password) for the 5 GHz SSID.</p> <p>The length of the passphrase must be from 8 to 63 characters.</p>

(Continued)

Setting	Description
Management SSID	The management SSID lets you connect from your WiFi-enabled computer or mobile device to the AirBridge to configure and manage the it. This management SSID is not used for backhaul or regular WiFi client connections. For more information, see Manage the settings for the 2.4 GHz management SSID on page 86.
Management WPA2 Passphrase	Enter a new passphrase (network key or WiFi password) for the management SSID. This passphrase replaces the default passphrase (sharedsecret). The length of the passphrase must be from 8 to 63 characters.

6. Click the **Apply** button.
Your settings are saved.
After about one minute the AirBridge is back online.
This process takes about one minute.
7. Reconnect over WiFi to the AirBridge’s management SSID using the new passphrase that you just defined on the Day Zero Easy Setup page.
8. In the web browser, enter **https://192.168.0.100**.
If you assigned a static IP address to the AirBridge, enter that IP address.
The login page displays.
9. If your browser does not display the login page but displays a security message and does not let you proceed, see the information in [Step 3](#).
10. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you just defined on the Day Zero Easy Setup page. The user name and password are case-sensitive.
11. In the TERMS OF USE section, click the **NETGEAR’s Terms and Conditions** link, and read the terms of use.
12. If you agree, select the check box to acknowledge that you read and agree with the terms of use.
You need to select this check box only once. Subsequent times that you log in, the check box is preselected.
13. Click the **Login** button.
The Device Status page displays the Device Information section and other sections. You can now customize the AirBridge settings for your network environment.

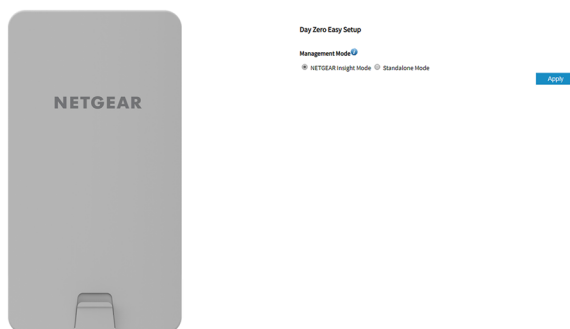
Connect over Ethernet using a computer connected to the same network

The following procedure assumes that your network includes a DHCP server (or router that functions as a DHCP server) and that the AirBridge and the computer are on the same network. By default, the AirBridge functions as a DHCP client. If you want to set up the AirBridge with a static (fixed) IP address, see [Connect over Ethernet using a directly connected computer](#) on page 28.

To connect to the AirBridge using a computer that is connected to the same network as the AirBridge:

1. To determine the IP address that the DHCP server assigned to the AirBridge, use one of the following methods:
 - **Windows-based computer.** If you use a Windows-based computer, open Windows Explorer, and click the **Network** link. If prompted, enable the Network Discovery feature. Under Network Infrastructure, locate the WBC502 (assuming that you did not change the device name), and double-click **WBC502**.
 - **DHCP server.** Access the DHCP server in your network and open the page that shows the network connections.
 - **IP network scanner.** Use an IP network scanner to scan for the IP address that is assigned to the AirBridge.
 - **NETGEAR Insight app.** Use the NETGEAR Insight app to discover the IP address that is assigned to the AirBridge. For more information, see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15.
2. On the computer, open a web browser and, in the address bar, enter the IP address that is assigned to the AirBridge.

The Day Zero Easy Setup page displays.



- If your browser does not open the Day Zero Easy Setup page but displays a security message and does not let you proceed, do one of the following:
 - Google Chrome.** If Google Chrome displays a *Your connection is not private* message, click the **ADVANCED** link. Then, click the **Proceed to x.x.x.x (unsafe)** link, in which x.x.x.x represents the IP address of the AirBridge.
 - Apple Safari.** If Apple Safari displays a *This connection is not private* message, click the **Show Details** button. Then, click the **visit this website** link. If a warning pop-up window opens, click the **Visit Website** button. If another pop-up window opens to let you confirm changes to your certificate trust settings, enter your Mac user name and password and click the **Update Setting** button.
 - Mozilla Firefox.** If Mozilla Firefox displays a *Your connection is not secure* message, click the **ADVANCED** button. Then, click the **Add Exception** button. In the pop-up window that opens, click the **Confirm Security Exception** button.
 - Microsoft Internet Explore.** If Microsoft Internet Explorer displays a *There is a problem with this website's security certificate* message, click the **Continue to this website (not recommended)** link.
 - Microsoft Edge.** If Microsoft Edge displays a *There is a problem with this website's security certificate* message or a similar warning, select **Details > Go on to the webpage**.
- Select the **Standalone Mode** radio button.



Day Zero Easy Setup

Management Mode

NETGEAR Insight Mode Standalone Mode

Country/Region

Germany

Time Zone

UTC+01:00 France, Germany, Italy

DHCP Client

Enable Disable

AP Name

WBC502

AP Login New Password

AP Login New Password

Confirm New Password*

Confirm New Password

Operation mode

AirBridge Satellite

SSID

Enter SSID Name

Authentication

WPA2-AES

Passphrase*

Enter Passphrase

(* 8-63 chars)

Management SSID

NETGEARZEECPIS-SETUP

Management WPA2 Passphrase*

Enter Passphrase

(* 8-63 chars)

Apply

Note: After you save the basic settings that are shown on the page, the Day Zero Easy Setup page no longer displays when you log in. Instead, a login window opens. After you log in, the Dashboard page displays.

5. Enter the settings that are described in the following table.

Setting	Description
Country/Region	<p>From the menu, select the country and region in which the AirBridge is operating.</p> <p>Note: Make sure that the country is set to the location where the device is operating. You are responsible for complying with the local, regional, and national regulations that are set for channels, power levels, and frequency ranges.</p> <p>Note: It might not be legal to operate the AirBridge in a region other than the regions listed in the menu. If your country or region is not listed, check with your local government agency.</p>
Time Zone	<p>From the menu, select the time zone for the country and region in which the AirBridge is operating.</p>
DHCP Client	<p>By default, the DHCP client of the AirBridge allows the AirBridge to receive an IP address from a DHCP server (or router that functions as a DHCP server) in your network. To set up the AirBridge with a static (fixed) IP address, do the following:</p> <ol style="list-style-type: none"> Select the Disable radio button. Additional fields display. Specify the IP address, IP subnet mask, IP address of the default gateway, and IP address of the DNS server.
AP Name	<p>As an option, enter a new device name for the AirBridge. The name must contain alphanumeric characters, cannot be longer than 15 characters, and cannot contain spaces. The name <i>can</i> contain hyphens, but cannot start or end with a hyphen.</p> <p>By default, the device name is WBC502, which is the AirBridge's model number.</p>
AP Login New Password	<p>Enter a new local device password. This is the password that you must use to log in to the AirBridge's local browser UI. (It is <i>not</i> the password that you use for WiFi access.)</p> <p>The password must be 8 to 32 characters in length and must contain at least one uppercase letter, one lowercase letter, and one number. The following special characters are allowed: ! @ # \$ % ^ & * ()</p> <p>Write down and save the password for future use.</p>
Confirm New Password	<p>Enter exactly the same password that you entered in the AP Login New Password field.</p>

(Continued)

Setting	Description
Operation Mode	<p>From the menu, select the operation mode that the AirBridge must function in:</p> <ul style="list-style-type: none"> • AirBridge Master • AirBridge Satellite • Access Point • Client Bridge <p>For information about the operation modes, see Operation mode: AirBridge Master, AirBridge Satellite, Access Point, or Client Bridge on page 10 and Operation mode and default settings after the Day Zero Easy Setup configuration on page 33.</p>
SSID	<p>Enter a name for the 5 GHz SSID. You can use a maximum of 32 characters with a combination of alphanumeric and special characters, except for quotation marks (") and a backslash (\).</p> <p>The function of the 5 GHz SSID depends on the operation mode:</p> <ul style="list-style-type: none"> • AirBridge master and satellite. The 5 GHz SSID is the backhaul WiFi connection between the master and the satellite. • Access point. The 5 GHz SSID is the WiFi network that the access point broadcasts. • Client bridge. The 5 GHz SSID is the WiFi extension between the client bridge and the base station.
Authentication	<p>From the menu, select one of the following authentication types for the 5 GHz SSID:</p> <ul style="list-style-type: none"> • Open. Authentication is not required and data encryption is not supported. This setting does not provide any security and is not appropriate for most situations. • WPA2-AES. This option allows the 5 GHz SSID to be secured with a WPA2 passphrase. This option uses AES encryption. All devices that use the 5 GHz SSID must be capable of supporting WPA2-AES. <p>After you complete the setup process, you can set up WPA2 Enterprise security with RADIUS servers. For more information, see Set up WPA2-Enterprise security on a master or access point on page 81 or Set up WPA2-Enterprise security on a satellite or client bridge on page 84.</p>
Passphrase	<p>Unless you selected Open from the Authentication Type menu, enter a new passphrase (network key or WiFi password) for the 5 GHz SSID.</p> <p>The length of the passphrase must be from 8 to 63 characters.</p>

(Continued)

Setting	Description
Management SSID	The management SSID lets you connect from your WiFi-enabled computer or mobile device to the AirBridge to configure and manage the it. This management SSID is not used for backhaul or regular WiFi client connections. For more information, see Manage the settings for the 2.4 GHz management SSID on page 86.
Management WPA2 Passphrase	Enter a new passphrase (network key or WiFi password) for the management SSID. This passphrase replaces the default passphrase (sharedsecret). The length of the passphrase must be from 8 to 63 characters.

6. Click the **Apply** button.
Your settings are saved.
After about one minute the AirBridge is back online.
The login page displays.
7. If the login page does not display automatically, take one of the following actions:
 - If you assigned a static IP address to the AirBridge, enter that IP address in the address bar of the web browser.
 - If you did not assign a static IP address, reenter the IP address that is displayed in the address bar of the web browser. If that does not work, write down the IP address, close the web browser, reopen the web browser, and then reenter the IP address in the address bar of the web browser.
 - If you did not assign a static IP address and you closed the page so that you cannot see the IP address of the AirBridge, use an IP scanner tool, use a network discovery tool, or access the DHCP server to discover the IP address of the AirBridge in your network. Then, open a browser and enter the IP address in the address bar of the web browser.
 - If your browser does not open the login page but displays a security message and does not let you proceed, see the information in [Step 3](#).
8. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you just defined on the Day Zero Easy Setup page. The user name and password are case-sensitive.
9. In the TERMS OF USE section, click the **NETGEAR's Terms and Conditions** link, and read the terms of use.

10. If you agree, select the check box to acknowledge that you read and agree with the terms of use.

You need to select this check box only once. Subsequent times that you log in, the check box is preselected.

11. Click the **Login** button.

The Device Status page displays the Device Information section and other sections. You can now customize the AirBridge settings for your network environment.

Connect over Ethernet using a directly connected computer

If your network does not include a DHCP server (or router that functions as a DHCP server), you can use a computer that is connected through an Ethernet cable to the LAN port of the AirBridge.

To connect to the AirBridge using a computer that is connected to a LAN port of the AirBridge:

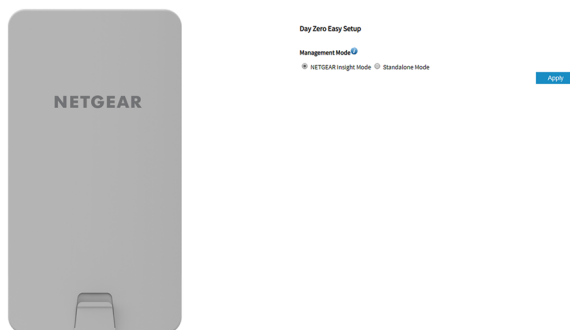
1. Record the IP address and subnet mask of your computer so that you can reinstate these IP address settings later.
2. Temporarily change the IP address on your computer to 192.168.0.210 with 255.255.255.0 as the subnet mask.

(You can actually use any IP address in the 192.168.0.2–192.168.0.254 range, with the exception of IP address 192.168.0.100, which is the default IP address of the AirBridge.)

For more information about changing the IP address on your computer, see the help or documentation for your computer.

3. Use an Ethernet cable to connect your computer to the LAN2 port on the AirBridge.
4. On the computer, open a web browser and enter **192.168.0.100** in the address bar.

The Day Zero Easy Setup page displays.



- If your browser does not open the Day Zero Easy Setup page but displays a security message and does not let you proceed, do one of the following:
 - Google Chrome.** If Google Chrome displays a *Your connection is not private* message, click the **ADVANCED** link. Then, click the **Proceed to 192.168.0.100 (unsafe)** link.
 - Apple Safari.** If Apple Safari displays a *This connection is not private* message, click the **Show Details** button. Then, click the **visit this website** link. If a warning pop-up window opens, click the **Visit Website** button. If another pop-up window opens to let you confirm changes to your certificate trust settings, enter your Mac user name and password and click the **Update Setting** button.
 - Mozilla Firefox.** If Mozilla Firefox displays a *Your connection is not secure* message, click the **ADVANCED** button. Then, click the **Add Exception** button. In the pop-up window that opens, click the **Confirm Security Exception** button.
 - Microsoft Internet Explore.** If Microsoft Internet Explorer displays a *There is a problem with this website's security certificate* message, click the **Continue to this website (not recommended)** link.
 - Microsoft Edge.** If Microsoft Edge displays a *There is a problem with this website's security certificate* message or a similar warning, select **Details > Go on to the webpage**.
- Select the **Standalone Mode** radio button.



Day Zero Easy Setup

Management Mode

NETGEAR Insight Mode Standalone Mode

Country/Region

Time Zone

DHCP Client

Enable Disable

AP Name

WBC502

AP Login New Password

AP Login New Password

Confirm New Password*

Confirm New Password

Operation mode

SSID

Enter SSID Name

Authentication

Passphrase*

Enter Passphrase

(* 8-63 chars)

Management SSID

NETGEARFCP9-SETUP

Management WPA2 Passphrase*

Enter Passphrase

(* 8-63 chars)

Note: After you save the basic settings that are shown on the page, the Day Zero Easy Setup page no longer displays when you log in. Instead, a login window opens. After you log in, the Dashboard page displays.

7. Enter the settings that are described in the following table.

Setting	Description
Country/Region	<p>From the menu, select the country and region in which the AirBridge is operating.</p> <p>Note: Make sure that the country is set to the location where the device is operating. You are responsible for complying with the local, regional, and national regulations that are set for channels, power levels, and frequency ranges.</p> <p>Note: It might not be legal to operate the AirBridge in a region other than the regions listed in the menu. If your country or region is not listed, check with your local government agency.</p>
Time Zone	<p>From the menu, select the time zone for the country and region in which the AirBridge is operating.</p>
DHCP Client	<p>By default, the DHCP client of the AirBridge allows the AirBridge to receive an IP address from a DHCP server (or router that functions as a DHCP server) in your network. To set up the AirBridge with a static (fixed) IP address, do the following:</p> <ol style="list-style-type: none"> a. Select the Disable radio button. <ul style="list-style-type: none"> Additional fields display. b. Specify the IP address, IP subnet mask, IP address of the default gateway, and IP address of the DNS server.
AP Name	<p>As an option, enter a new device name for the AirBridge. The name must contain alphanumeric characters, cannot be longer than 15 characters, and cannot contain spaces. The name <i>can</i> contain hyphens, but cannot start or end with a hyphen.</p> <p>By default, the device name is WBC502, which is the AirBridge's model number.</p>
AP Login New Password	<p>Enter a new local device password. This is the password that you must use to log in to the AirBridge's local browser UI. (It is <i>not</i> the password that you use for WiFi access.)</p> <p>The password must be 8 to 32 characters in length and must contain at least one uppercase letter, one lowercase letter, and one number. The following special characters are allowed: ! @ # \$ % ^ & * ()</p> <p>Write down and save the password for future use.</p>
Confirm New Password	<p>Enter exactly the same password that you entered in the AP Login New Password field.</p>

(Continued)

Setting	Description
Operation Mode	<p>From the menu, select the operation mode that the AirBridge must function in:</p> <ul style="list-style-type: none"> • AirBridge Master • AirBridge Satellite • Access Point • Client Bridge <p>For information about the operation modes, see Operation mode: AirBridge Master, AirBridge Satellite, Access Point, or Client Bridge on page 10 and Operation mode and default settings after the Day Zero Easy Setup configuration on page 33.</p>
SSID	<p>Enter a name for the 5 GHz SSID. You can use a maximum of 32 characters with a combination of alphanumeric and special characters, except for quotation marks (") and a backslash (\).</p> <p>The function of the 5 GHz SSID depends on the operation mode:</p> <ul style="list-style-type: none"> • AirBridge master and satellite. The 5 GHz SSID is the backhaul WiFi connection between the master and the satellite. • Access point. The 5 GHz SSID is the WiFi network that the access point broadcasts. • Client bridge. The 5 GHz SSID is the WiFi extension between the client bridge and the base station.
Authentication	<p>From the menu, select one of the following authentication types for the 5 GHz SSID:</p> <ul style="list-style-type: none"> • Open. Authentication is not required and data encryption is not supported. This setting does not provide any security and is not appropriate for most situations. • WPA2-AES. This option allows the 5 GHz SSID to be secured with a WPA2 passphrase. This option uses AES encryption. All devices that use the 5 GHz SSID must be capable of supporting WPA2-AES. <p>After you complete the setup process, you can set up WPA2 Enterprise security with RADIUS servers. For more information, see Set up WPA2-Enterprise security on a master or access point on page 81 or Set up WPA2-Enterprise security on a satellite or client bridge on page 84.</p>
Passphrase	<p>Unless you selected Open from the Authentication Type menu, enter a new passphrase (network key or WiFi password) for the 5 GHz SSID.</p> <p>The length of the passphrase must be from 8 to 63 characters.</p>

(Continued)

Setting	Description
Management SSID	The management SSID lets you connect from your WiFi-enabled computer or mobile device to the AirBridge to configure and manage the it. This management SSID is not used for backhaul or regular WiFi client connections. For more information, see Manage the settings for the 2.4 GHz management SSID on page 86.
Management WPA2 Passphrase	Enter a new passphrase (network key or WiFi password) for the management SSID. This passphrase replaces the default passphrase (sharedsecret). The length of the passphrase must be from 8 to 63 characters.

8. Click the **Apply** button.
Your settings are saved.
After about one minute the AirBridge is back online.
The login page displays.
9. If the login page does not open automatically, enter **192.168.0.100** in the address bar of your browser.
If you changed the IP address (that is, you specified a static IP address), enter the new IP address.
10. If your browser does not display the login page but displays a security message and does not let you proceed, see the information in [Step 5](#).
11. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you just defined on the Day Zero Easy Setup page. The user name and password are case-sensitive.
12. In the TERMS OF USE section, click the **NETGEAR's Terms and Conditions** link, and read the terms of use.
13. If you agree, select the check box to acknowledge that you read and agree with the terms of use.
You need to select this check box only once. Subsequent times that you log in, the check box is preselected.
14. Click the **Login** button.
The Device Status page displays the Device Information section and other sections. You can now customize the AirBridge settings for your network environment.

15. After you complete the setup process, or both the setup process and your configurations, you can change the computer back to its original IP address settings.

Operation mode and default settings after the Day Zero Easy Setup configuration

After you complete the Day Zero Easy Setup configuration and specify the AirBridge to function in one of four operation modes, the default settings are as stated in the following table.

Note: In some countries and regions, the default settings might differ from the settings that are stated in the following table.

Table 3. Operation mode default settings after the Day Zero Easy Setup configuration

Default Setting	AirBridge Master	AirBridge Satellite	Access Point	Client Bridge
AirBridge mode	Enabled	Enabled	N/A	N/A
Auto RF	Enabled	Enabled	Enabled	Enabled
Channel HT mode	40 MHz	N/A	40 MHz	N/A
Client Limit	N/A	N/A	32	N/A
Distance	1 km (0.6 miles)	1 km (0.6 miles)	1 km (0.6 miles)	1 km (0.6 miles)
Master Time Slot	Auto	N/A	N/A	N/A
Satellite Priority	N/A	High	N/A	N/A

Note: For information about manually configuring the operation mode, see [Manually Configure or Change the Operation Mode](#) on page 37.

Log in to the AirBridge after initial setup

After initial setup, the AirBridge is ready for use and you can change the settings and monitor traffic.

When you access the local browser UI of the AirBridge, your browser might display a security message. You can either ignore this message or install the AirBridge's security certificate. Consider the following examples:

- **Google Chrome.** If Google Chrome displays a *Your connection is not private* message, click the **ADVANCED** link. Then, click the **Proceed to x.x.x.x (unsafe)** link, in which x.x.x.x represents the IP address of the AirBridge.
- **Apple Safari.** If Apple Safari displays a *This connection is not private* message, click the **Show Details** button. Then, click the **visit this website** link. If a warning pop-up window opens, click the **Visit Website** button. If another pop-up window opens to let you confirm changes to your certificate trust settings, enter your Mac user name and password and click the **Update Setting** button.
- **Mozilla Firefox.** If Mozilla Firefox displays a *Your connection is not secure* message, click the **ADVANCED** button. Then, click the **Add Exception** button. In the pop-up window that opens, click the **Confirm Security Exception** button.
- **Microsoft Internet Explore.** If Microsoft Internet Explorer displays a *There is a problem with this website's security certificate* message, click the **Continue to this website (not recommended)** link.
- **Microsoft Edge.** If Microsoft Edge displays a *There is a problem with this website's security certificate* message or a similar warning, select **Details > Go on to the webpage**.

To log in to the AirBridge's local browser UI:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see the information in the introduction of this task.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for that location (see [Connect over](#)

WiFi using the NETGEAR Insight app on an iOS or Android mobile device on page 15).

The Device Status page displays the Device Information section and other sections. The following figure shows the Device Status page and the Device Information section.

The screenshot shows the NETGEAR Insight Instant AirBridge WBC502 web interface. The top navigation bar includes the NETGEAR logo, the device name 'WBC502 - Instant AirBridge', and a language dropdown menu set to 'English'. Below the navigation bar are buttons for 'Changes: 0', 'Reset', and 'Logout'. The main content area is divided into a left sidebar and a main panel. The sidebar contains a navigation menu with categories: Overview (Device Status, Connections, Realtime), Network (Basic, Wireless), Management (Advanced, Time Zone, WiFi Scheduler, Tools), and System Manager (Account, Firmware, Log). The main panel displays the 'Device Information' section, which includes a table with the following data:

Device Information	
AP Name	WBC502
Serial Number	6621902K00000
MAC Address	
- LAN	BC:A5:11:7E:EC:F8
- Wireless LAN - 5GHz	BC:A5:11:7E:EC:FA
Country	Germany
Current Local Time	Wed Dec 25 00:34:31 2019
Uptime	3h 47m 6s
Firmware Version	19.49.42.1
Device Version	1.0
Management VLAN ID	Untagged

Below the Device Information section is the 'Memory Information' section, which is currently empty.

For more information about the sections on the Device Status page, see [View the device status and other information](#) on page 133.

Change the language of the local browser UI

You can change the language of the local browser UI.

To change the language of the local browser UI:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. From the menu at the top right of the page, select another language. After a few seconds, the language changes.

2

Manually Configure or Change the Operation Mode

When you access the AirBridge for the first time, you must select an operation mode on the Day Zero Easy Setup page. After you do so, you can also manually change the operation mode and settings.

This chapter describes how you can manually configure the operation mode of the AirBridge and the settings that are associated with the selected operation mode. For an overview of the operation modes, see [Operation mode: AirBridge Master, AirBridge Satellite, Access Point, or Client Bridge](#) on page 10.

The chapter includes the following sections:

- [Recommendations for configuration](#)
- [Configure the AirBridge as a master in a point-to-point or point-to-multipoint setup](#)
- [Configure the AirBridge as a satellite in a point-to-point setup](#)
- [Configure the AirBridge as an access point](#)
- [Configure the AirBridge as a client bridge](#)

CAUTION: This device must be professionally installed. It is the installer's responsibility to follow local country regulations, including operations within legal frequency channels, output power, and DFS requirements. The vendor, reseller, or distributor is not responsible for illegal wireless operations. For more details, see the device's terms and conditions.

Recommendations for configuration

For a master-to-satellite, site-to-site setup, we recommend that you complete the initial pairing of the AirBridges at a staging area with easy access to the network that is to supply connectivity to the master and access point. For information about the hardware setup, see the hardware installation manual, which you can download by visiting netgear.com/support/download/.

We recommend the following configuration order:

- If you manually configure AirBridges in a master-to-satellite setup (or change such an existing configuration), we recommend that you first configure the satellite and then configure the master. After you complete the configurations, the WiFi backhaul connection between the master and satellite is automatically established.

Note: If you first configure the master and then configure the satellite, the WiFi backhaul connection between the master and satellite is not (or no longer) operational, and you might not be able to access the satellite.

- Similarly, if you manually configure an AirBridge as a client bridge in an access point-to-client bridge setup (or change such an existing configuration), we recommend that you first configure the client bridge and then configure the access point. (The access point can be an AirBridge or another type of access point.) After you complete the configurations, the WiFi backhaul connection between the access point and client bridge is automatically established.

Note: If you first configure the access point and then configure the client bridge, the WiFi backhaul connection between the access point and client bridge is not (or no longer) operational, and you might not be able to access the client bridge.

Configure the AirBridge as a master in a point-to-point or point-to-multipoint setup

You can configure the AirBridge as a master in a point-to-point or point-to-multipoint setup. You install the master at a main site to provide network and Internet connectivity to one or more satellites at detached sites where no wired infrastructure is available. This setup requires a line of sight between the main site and each detached site.

Note: We do not recommend that you use a master and several satellites to create a multi-building campus network backbone.

To configure the AirBridge as a master in a point-to-point or point-to-multipoint setup:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. From the **Operation Mode** menu, select **AirBridge Master**.

6. Select the AirBridge **Enable** radio button.

By default, the AirBridge mode is enabled, which is the setting that we recommend for a master-to-satellite setup. Depending on your network situation, your WiFi requirements, and your understanding of the consequences, you can disable the AirBridge mode.

Note: For information about optional advanced settings that display on the page, such as changing the Auto RF mode (so that you can set a specific transmission power), channel HT mode, channel, bit rate, and master time slot, see [Manage Advanced WiFi and Radio Features](#) on page 90. We recommend that you do not change these advanced settings while you perform the current task.

7. In the **Distance** field, enter the approximate distance at which the satellite or satellites are located.

Enter the distance in km. (1 km is 0.6 miles.) For example, if the distance is 2 km (1.2 miles), enter 2.

Note: For information about changing the name or security settings of the 5 GHz backhaul SSID to which the satellite or satellites must connect, see [Manage the 5 GHz SSIDs and WiFi security](#) on page 65.

8. Click the **Save** button.
Your settings are saved but not yet applied.
A pop-up window opens. The window shows the number of changes to be applied.
9. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Configure the AirBridge as a satellite in a point-to-point setup

You can configure the AirBridge as a satellite in a point-to-point setup with an AirBridge master that is located at a main site. You install the satellite at a detached site, where no wired infrastructure is available. This setup requires a line of sight between the detached site and the main site.

To configure the AirBridge as a satellite:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Network, select **Wireless**.
The Wireless Settings page displays.

5. From the **Operation Mode** menu, select **AirBridge Satellite**.

6. Select the AirBridge **Enable** radio button.

By default, the AirBridge mode is enabled, which is the setting that we recommend for a master-to-satellite setup. Depending on your network situation, your WiFi requirements, and your understanding of the consequences, you can disable the AirBridge mode.

Note: For information about optional advanced settings that display on the page, such as changing the Auto RF mode (so that you can set a specific transmission power), bit rate, and satellite priority, see [Manage Advanced WiFi and Radio Features](#) on page 90. We recommend that you do not change these advanced settings while you perform the current task.

7. In the **Distance** field, enter the approximate distance at which the master is located. Enter the distance in km. (1 km is 0.6 miles.) For example, if the distance is 2 km (1.2 miles), enter 2.

8. In the Wireless Settings - 5GHZ section, click the **Edit** button.

A new page opens.

IMPORTANT: The first time that you set up a satellite to connect to a master, the master must be offline to prevent a network loop. Therefore, you must enter the 5 GHZ SSID backhaul settings manually (see the next step). For more information about the master-to-satellite hardware setup that we recommend, see the hardware installation guide.

Tip: If you are *changing* an existing 5 GHZ SSID backhaul setting for a satellite, the master might already be online, allowing you to use the AP detection scanning function to scan for a master (see [Scan for neighboring access points](#) on page 62).

9. To manually configure the 5 GHZ SSID backhaul settings, specify the following settings:

a. To enter the basic service set ID (BSSID) of one particular master, select the **Preferred SSID** check box, and enter the MAC addresses of the 5 GHZ radio of the AirBridge master.

This option is useful if your network includes more than one master. If your network includes a single master, you can skip this option.

b. In the **SSID** field, enter the name of the 5 GHZ SSID of the master with which you want the satellite to connect.

c. From the **Security Mode** menu, select the type of security, if any, for the connection to the selected SSID.

- d. If the type of security is WPA2-PSK, in the **Passphrase** field, enter the WiFi passphrase (also referred to as WiFi password or network key).
If the type of security is WPA2-Enterprise, see [Set up WPA2-Enterprise security on a satellite or client bridge](#) on page 84.
- e. Click the **Save** button.
Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

10. Click the **Apply** button.

Your settings are saved and applied. The WiFi connection is reestablished. The page displays the number of seconds before the AirBridge is back online.

Configure the AirBridge as an access point

You can configure the AirBridge as an access point that can support multiple 5 GHz SSIDs. You install the access point at a main site to provide network and Internet connectivity to individual WiFi clients, client bridges, other access point that extend the WiFi network, or a combination of these. This setup does not require a line of sight between the access point and the WiFi clients, client bridge, or other access point. The powerful antenna of the AirBridge allows for an extended WiFi range.

To configure the AirBridge as an access point:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

- From the **Operation Mode** menu, select **Access Point**.

Note: For information about optional advanced settings that display on the page, such as changing the Auto RF mode (so that you can set a specific transmission power), channel HT mode, channel, and bit rate, see [Manage Advanced WiFi and Radio Features](#) on page 90. We recommend that you do not change these advanced settings while you perform the current task.

- To limit the number of clients that can connect to the AirBridge, keep the Clients Limits **Enable** radio button selected and enter a number in the **Client Limits** field. By default, the limit is 32 clients. You can specify a lower or higher number of maximum WiFi clients. The range is from 1 to 32. The maximum number applies to all clients connected to all 5 GHZ SSIDs on the AirBridge. You can disable client limits entirely by selecting the Clients Limits **Disable** check box.
- To scan for neighboring access points, click the AP Detection **Scan** button. A new page opens. For more information, see [Scan for neighboring access points](#) on page 62.
- In the **Distance** field, enter the approximate distance at which most WiFi devices or client bridges are located. Enter the distance in km. (1 km is 0.6 miles.) For example, if the distance is 2 km (1.2 miles), enter 2.
- In the Wireless Settings - Access Point section, do one of the following:
 - To change the default 5 GHZ SSID or another previously enabled 5 GHZ SSID, click the **Edit** button for the 5 GHZ SSID.
 - To enable and configure a new 5 GHZ SSID, select the **Enabled** check box for a disabled 5 GHZ SSID, and then click the **Edit** button for the 5 GHZ SSID.

A new page opens.

- To configure the 5 GHZ SSID settings, specify the settings that are described in the following table:

Setting	Description
Wireless Setting - Access Point 5GHz	
Enable	This check box is selected, otherwise you cannot configure the SSID settings.

(Continued)

Setting	Description
SSID	The service set ID (SSID), which is the name for the WiFi network with which WiFi clients can connect.
Hidden SSID	To hide the WiFi network name and prevent it from displaying in the scanning list of a WiFi client, select the Enable radio button. To connect to the WiFi network, a user must know the WiFi network name. By default, the Disable radio button is selected.
Client Isolation	To prevent WiFi clients that are associated with the same or different WiFi networks on the access point from communicating with each other, select the Enable radio button. If you enable client isolation, WiFi clients can still communicate with each other over the Internet. When the AirBridge mode is disabled, by default, the Disable radio button is selected.
VLAN Isolation	To prevent clients on different VLANs from communicating with each other, select the Enable radio button, and enter the VLAN ID in the ID field. This VLAN ID must already be defined in your network. The default VLAN ID is 1. The range is from 1 to 4094. If you enable VLAN isolation, clients can still communicate with each other over the Internet. By default, the Disable radio button is selected.
L2 Isolation	To prevent WiFi and LAN clients on the same access point from communicating with each other, select the Enable radio button. If you enable L2 isolation, clients can still communicate with each other over the Internet. By default, the Disable radio button is selected.
Wireless Security	
Security Mode	From the Security Mode menu, select WPA2-PSK or WPA2-Enterprise for the connection to the selected SSID. For information about WPA2-Enterprise, see Set up WPA2-Enterprise security on a master or access point on page 81. Note: We recommend that you set up security, although in certain situations, and if you are aware of the risks, you can select None .
Encryption	This field is fixed at AES. You cannot select another option.
Passphrase	If you select WPA2-PSK from the Security Mode menu, enter a passphrase (network key or WiFi password) that WiFi clients must enter to connect to the SSID. The length of the passphrase must be from 8 to 63 characters.

(Continued)

Setting	Description
Group Key Update Interval	The period in seconds that the group key changes. The period can be from 30 to 3600 seconds. The default period is 3600 seconds (1 hour). If you enter 0, the update interval is disabled and the group key is not changed. For greater security, we recommend that you do not disable the update interval so that the group key can be changed automatically.

Fast Roaming

Status	To enable fast roaming, select the Enable radio button. By default, the Disable radio button is selected. If your network includes WiFi clients that must be able to roam from one access point to another, enable fast roaming so that certain client applications can quickly reassociate with a new access point. Fast roaming is not available if you select None from the Security Mode menu.
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For information about other WiFi features such as setting up a MAC filter and traffic shaping, see [Manage Advanced WiFi and Radio Features](#) on page 90.

- Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

- To enable the guest network on an SSID, in the Wireless Settings - Access Point section, select the **Guest Network** check box for the SSID.

- Click the **Save** button.

Your settings are saved but not yet applied.

- Click the **Apply** button.

Your settings are saved and applied. The WiFi connection is reestablished. The page displays the number of seconds before the AirBridge is back online.

Configure the AirBridge as a client bridge

You can configure the AirBridge as a client bridge. You install the client bridge at a detached site to provide network and Internet connectivity to a single wired device that is not WiFi-capable on its own. For example, you could connect a pan-tilt-zoom (PTZ) camera to a client bridge.

This setup does not require a line of sight between the access point at the main site and the client bridge. The access point with which the client bridge associates can be either another AirBridge or a different model access point.

To configure the AirBridge as a client bridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.

2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. From the **Operation Mode** menu, select **Client Bridge**.

Note: For information about optional advanced settings that display on the page, such as changing the Auto RF mode (so that you can set a specific transmission power) and bit rate, see [Manage Advanced WiFi and Radio Features](#) on page 90. We recommend that you do not change these advanced settings while you perform the current task.

6. Click the AP Detection **Scan** button.

A new page opens. After the AirBridge completes its scan for neighboring access points, the page displays (for each detected access point) the information that is described in the following table.

Setting	Description
BSSID	The basic service set ID (BSSID) in the format of a MAC address. This is usually the MAC address of the radio on the AirBridge master or access point that broadcasts the SSID.
SSID	The service set ID (SSID), which is the name for the WiFi network with which the AirBridge satellite, client bridge, or access point can connect.
Channel	The radio channel on which the SSID is being broadcast.
Signal Level	The strength of the WiFi signal that is being broadcast, expressed in -dBm. A lower value means a stronger signal. For example, -40 dBm indicates a stronger signal than -60 dBm.
Security	The type of security that is configured for the SSID.
Mode	The operation mode of the detected access point.

7. Select the access point with which you want the client bridge to associate by clicking the row for the access point.
The page changes.
8. To select the BSSID of the selected access point as the preferred BSSID, select the check box.
After you select the BSSID, in most situations, you do not need to change the detected SSID, security mode, and encryption.
9. If the security mode is WPA2-PSK, in the **Passphrase** field, enter the passphrase that is required to connect to the SSID.
If the type of security is WPA2-Enterprise, see [Set up WPA2-Enterprise security on a satellite or client bridge](#) on page 84.
10. Click the **Save** button.
Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.
A pop-up window opens. The window shows the number of changes to be applied.
11. In the **Distance** field, enter the approximate distance at which the access point is located.
Enter the distance in km. (1 km is 0.6 miles.) For example, if the distance is 2 km (1.2 miles), enter 2.
12. Click the **Save** button.

Your settings are saved but not yet applied. The pop-up window shows the number of changes to be applied.

13. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

3

Manage the Wired Network Settings

This chapter describes how you can manage the wired network settings of the AirBridge.

The chapter includes the following sections:

- [Specify a static IPv4 address for the AirBridge](#)
- [Specify a link-local IPv6 address for the AirBridge](#)
- [Reenable the DHCP client of the AirBridge](#)
- [Manage the STP settings](#)

Specify a static IPv4 address for the AirBridge

By default, the DHCP client of the AirBridge is enabled, allowing a DHCP server (usually, a router) in your network to assign an IPv4 address to the AirBridge. You can disable the DHCP client and specify static (fixed) IP address settings for the AirBridge.

To specify static IPv4 address settings for the AirBridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Network, select **Basic**.
The page that displays shows the IPv4 Settings, IPv6 Settings, and Spanning Tree Protocol (STP) Settings sections.
5. In the IPv4 Settings section, select the **Static IP** radio button.
The IPv4 address fields display.
6. Specify the static IPv4 address, subnet mask, gateway IPv4 address, and primary and secondary DNS addresses.
7. Click the **Save** button.
Your settings are saved but not yet applied.
A pop-up window opens. The window shows the number of changes to be applied.
8. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Note: To log back in to the AirBridge, you now must use the static IP address that you assigned.

Specify a link-local IPv6 address for the AirBridge

By default, the DHCP client of the AirBridge is enabled, allowing a DHCPv6 server (usually, a router) in your network to assign an IPv6 address to the AirBridge. You can disable the DHCP client and specify link-local IPv6 address settings for the AirBridge.

To specify link-local IPv6 address settings for the AirBridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Basic**.

The page that displays shows the IPv4 Settings, IPv6 Settings, and Spanning Tree Protocol (STP) Settings sections.

5. In the IPv4 Settings section, select the **Static IP** radio button.

The IPv4 address fields display.

6. In the IPv6 Settings section, clear the **Link-local Address** check box.

The IPv6 address fields display.

7. Specify the static IPv6 address, subnet prefix length, IPv6 gateway address, and primary and secondary DNS addresses.

8. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

9. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Note: To log back in to the AirBridge, you now must use the IPv6 address that you assigned.

Reenable the DHCP client of the AirBridge

If you disabled the DHCP client of the AirBridge, you can reenable it.

To reenable the DHCP client of the AirBridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Basic**.

The page that displays shows the IPv4 Settings, IPv6 Settings, and Spanning Tree Protocol (STP) Settings sections.

5. In the IPv4 Settings section, select the **DHCP** radio button.

The IPv4 address fields no longer display.

6. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

7. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Note: To log back in to the AirBridge, you now must use the IP address that is assigned by the DHCP (or DHCPv6) server in your network.

To determine the IP address that the DHCP server assigned to the AirBridge, use one of the following methods:

- **Windows-based computer.** If you use a Windows-based computer, open Windows Explorer, and click the **Network** link. If prompted, enable the Network Discovery feature. Under Network Infrastructure, locate the WBC502 (assuming that you did not change the device name), and double-click **WBC502**.
- **DHCP server.** Access the DHCP server in your network and open the page that shows the network connections.
- **IP network scanner.** Use an IP network scanner to scan for the IP address that is assigned to the AirBridge.
- **NETGEAR Insight app.** Use the NETGEAR Insight app to discover the IP address that is assigned to the AirBridge. For more information, see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15.

Manage the STP settings

By default, Spanning Tree Protocol (STP) is enabled on the AirBridge.

You can change the settings for STP, or disabled it entirely. However, we recommend that you keep STP enabled because it helps to prevent network loops.

To manage the STP settings:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Basic**.

The page that displays shows the IPv4 Settings, IPv6 Settings, and Spanning Tree Protocol (STP) Settings sections.

5. In the Spanning Tree Protocol (STP) Settings section, specify the settings that are described in the following table:

Setting	Description
Status	<p>Select one of the following radio buttons:</p> <ul style="list-style-type: none"> • Enable. STP is enabled. This is the default setting. • Disable. STP is disabled.
Hello Time	<p>The interval in seconds between handshake packets the AirBridge sends to communicate information about the topology throughout the entire bridged LAN. The range is 1-10 seconds. The default is 2 seconds.</p>
Max Age	<p>The period in seconds within which the AirBridge must receive a hello packet from another device in the spanning tree before the AirBridge assumes that the device is inactive. The range is 6-40 seconds. The default is 20 seconds.</p>
Forward Delay	<p>The period in seconds that a device spends in each of the listening and learning states before entering the forwarding state. This delay is provided so that when a new device enters a busy network, the device analyzes data traffic before participating in the network. The range is 4-30 seconds. The default is 15 seconds.</p>
Priority	<p>The priority of the AirBridge in the spanning tree. A smaller number means a higher priority. The range is 0-65535. The default is 32768.</p>

6. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

7. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

4

Manage the WiFi and Radio Features

This chapter describes how you can manage the WiFi and radio settings of the AirBridge. For information about advanced WiFi and radio settings, see [Manage Advanced WiFi and Radio Features](#) on page 90.

The chapter includes the following sections:

- [Recommended configuration order](#)
- [Change the device name of the AirBridge](#)
- [Change the country and region of operation](#)
- [Change the AirBridge mode](#)
- [Scan for neighboring access points](#)
- [Specify the approximate distance for the WiFi connection](#)
- [Manage the 5 GHz SSIDs and WiFi security](#)
- [Manage the settings for the 2.4 GHz management SSID](#)

CAUTION: This device must be professionally installed. It is the installer's responsibility to follow local country regulations, including operations within legal frequency channels, output power, and DFS requirements. The vendor, reseller, or distributor is not responsible for illegal wireless operations. For more details, see the device's terms and conditions.

Recommended configuration order

We recommend the following configuration order:

- If you change an existing configuration for AirBridges in a master-to-satellite setup, we recommend that you first change the satellite and then change the master. After you complete the configurations, the WiFi backhaul connection between the master and satellite is automatically reestablished.

Note: If you first change the master and then change the satellite, the WiFi backhaul connection between the master and satellite is no longer operational, and you might not be able to access the satellite.

- Similarly, if you change an existing configuration for an AirBridge that functions as a client bridge in an access point-to-client bridge setup, we recommend that you first change the client bridge and then change the access point. (The access point can be an AirBridge or another type of access point.) After you complete the configurations, the WiFi backhaul connection between the access point and client bridge is automatically reestablished.

Note: If you first change the access point and then change the client bridge, the WiFi backhaul connection between the access point and client bridge is no longer operational, and you might not be able to access the client bridge.

Change the device name of the AirBridge

The device name is also referred to as the AP name or system name. It is the AirBridge name that displays in the network. By default, the device name is WBC502, which is the AirBridge's model number. You can change this name.

To change the name of the AirBridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. In the **AP Name** field, enter a new name.

The name must contain alphanumeric characters, cannot be longer than 15 characters, and cannot contain spaces. The name *can* contain hyphens, but cannot start or end with a hyphen.

6. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

7. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Change the country and region of operation

After initial configuration, you can change the country and region of operation of the AirBridge.

WARNING: Make sure that the country is set to the location where the device is operating. You are responsible for complying with the local, regional, and national regulations that are set for channels, power levels, and frequency ranges.

WARNING: It might not be legal to operate the AirBridge in a region other than the regions listed in the menu. If your country or region is not listed, check with your local government agency.

To change the country and region of operation of the AirBridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Network, select **Wireless**.
The Wireless Settings page displays.
5. From the **Country / Region** menu, select the country and region in which the AirBridge is operating.
6. Click the **Save** button.
Your settings are saved but not yet applied.
A pop-up window opens. The window shows the number of changes to be applied.
7. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Change the AirBridge mode

You can select the AirBridge mode only if the operation mode of the AirBridge is AirBridge Master or AirBridge Satellite. In a master-to-satellite setup, you must either enable the AirBridge mode on both the master and the satellite or disable it on both the master and the satellite. That is, do not enable it on the master and disable it on the satellite, or the other way around.

The AirBridge mode specifies the type of multiple access method that the AirBridge uses.

- **AirBridge mode enabled.** The characteristics of the AirBridge are as follows:
 - **Highly reliable connections for a limited number of WiFi devices.** Provides reliable point-to-point connections between a master and a satellite and point-to-multipoint connections between a master and a limited number of satellites.
 - **Best suited for long distance for a limited number of WiFi devices.** A master can connect over a long distance of 1.8 miles (3 km) or more to a satellite at a detached site.
 - **Single 5 GHz SSID.** A single 5 GHz SSID provides the backhaul WiFi connection between the master and the satellites.
 - **No individual WiFi clients supported.** Other than the satellites, individual WiFi clients cannot connect to the 5 GHz SSID. However, by connecting a switch and a WiFi access point to the satellite, you can support multiple WiFi clients at the detached site.
 - **Another AirBridge as a link partner only.** An AirBridge and one or more other AirBridges can establish WiFi connections. You cannot use any other types of access points as link partners.
- **AirBridge mode disabled.** The characteristics of the AirBridge are as follows:
 - **Reliable connections for multiple WiFi devices.** Provides reliable point-to-multipoint connections between an access point and multiple individual WiFi clients.
 - **Best suited for extended range for multiple WiFi devices.** The powerful antenna of the AirBridge supports a WiFi range that extends beyond the range of most access points.
 - **Multiple 5 GHz SSIDs.** Multiple 5 GHz SSIDs can support satellites, client bridges, and individual WiFi clients.
 - **Individual WiFi clients supported.** Individual WiFi clients can connect to the AirBridge.
 - **Any access point as a link partner.** Any access point, including third-party access points, can establish a WiFi connection with an AirBridge.

By default, the AirBridge mode is enabled, which is the setting that we recommend for a master-to-satellite setup. Depending on your network situation, your WiFi requirements, and your understanding of the consequences, you can disable the AirBridge mode.

CAUTION: The behavior of the AirBridge changes when you disable the AirBridge mode. Change the AirBridge mode only if you understand the consequences.

To change the AirBridge mode:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Network, select **Wireless**.
The Wireless Settings page displays.
5. Select one of the following AirBridge radio buttons:
 - **Enable**. The AirBridge is enabled.
This is the default setting.
 - **Disable**. The AirBridge mode is disabled.
6. Click the **Save** button.
Your settings are saved but not yet applied.
A pop-up window opens. The window shows the number of changes to be applied.
7. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Scan for neighboring access points

Scanning for neighboring access points is useful if you want to connect to another device. Scan if you want to connect a satellite to a master or a client bridge to an access point.

Note: In this task, a neighboring access point can function either as a master or as an access point.

To scan for neighboring access points:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.

2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. Click the AP Detection **Scan** button.

A new page opens. After the AirBridge completes its scan for neighboring access points, the page displays (for each detected access point) the information that is described in the following table.

Setting	Description
BSSID	The basic service set ID (BSSID) in the format of a MAC address. This is usually the MAC address of the radio on the AirBridge master or access point that broadcasts the SSID.
SSID	The service set ID (SSID), which is the name for the WiFi network with which the AirBridge satellite, client bridge, or access point can connect.
Channel	The radio channel on which the SSID is being broadcast.
Signal Level	The strength of the WiFi signal that is being broadcast, expressed in -dBm. A lower value means a stronger signal. For example, -40 dBm indicates a stronger signal than -60 dBm.
Security	The type of security that is configured for the SSID.
Mode	The operation mode of the detected access point.

6. Either select the master with which you want the satellite to associate or the access point with which you want the client bridge to associate by clicking the row for the master or access point.
The page changes.
7. To select the BSSID of the selected master or access point as the preferred BSSID, select the check box.
After you select the BSSID, in most situations, you do not need to change the detected SSID, security mode, and encryption.
8. If the security mode is WPA-PSK or WPA2-PSK, in the **Passphrase** field, enter the passphrase that is required to connect to the SSID.
If the type of security is WPA2-Enterprise, see [Set up WPA2-Enterprise security on a satellite or client bridge](#) on page 84.
9. Click the **Save** button.
Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.
A pop-up window opens. The window shows the number of changes to be applied.
10. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Specify the approximate distance for the WiFi connection

You can specify the approximate distance at which a master, satellite, client bridge, or access point is located. Depending on your site, network setup, and network configuration, an AirBridge can support a long distance WiFi connection of 3 km (1.8 miles) or more to another AirBridge. The powerful antenna of the AirBridge also supports WiFi connections over an extended (longer) range than most access points.

Setting the approximate distance configures the signal sensitivity of the AirBridge, specifically the Layer 2 acknowledgement time-out period.

Round to the nearest km. For example, if the distance between a master and a satellite is 600 meters (1,968 ft), round to 1 km (0.6 mile). However, if the distance is less than 500 meters (1,640 ft), enter 0.

In a point-to-multipoint setup with one master and multiple satellite, enter the distance between the master and the satellite that is located the furthest away.

To specify the approximate distance for the WiFi connection between two AirBridges:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. In the **Distance** field, enter the approximate distance which a master, satellite, client bridge, or access point is located or at which most WiFi clients are located

Enter the distance in km. (1 km is 0.6 miles.) For example, if the distance is 2 km (1.2 miles), enter 2.

6. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

7. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Manage the 5 GHz SSIDs and WiFi security

The following table lists the number of 5 GHz SSIDs that the AirBridge can support, depending on the operation mode and the AirBridge mode. In addition, the table lists the possible link partners with which you can establish a WiFi connection on the SSIDs.

Table 4. 5 GHz SSIDs on the AirBridge

Operation Mode	AirBridge Mode	Number of 5 GHz SSIDs	WiFi Link Partners
Master	Enabled	1	AirBridge only
	Disabled	4	AirBridge, any WiFi AP, and WiFi clients
Satellite	Enabled or disabled (must follow the mode on the master)	1	AirBridge master only
Access Point	N/A	8	WiFi clients, AirBridge, and any WiFi AP
Client Bridge	N/A	1	AirBridge or any WiFi AP

The number of 5 GHz SSIDs that you can configure depends on the following settings:

- Operation mode (see [Operation mode: AirBridge Master, AirBridge Satellite, Access Point, or Client Bridge](#) on page 10)
- AirBridge mode (see [Change the AirBridge mode](#) on page 59)

The AirBridge supports the following WiFi security:

- For an individual 5 GHz SSID, you can configure WPA2-PSK or WPA2-Enterprise security. For more information on configuring WPA2-PSK security, see one of the following sections:
 - [Change the 5 GHz SSID or WiFi security mode for a satellite on page 67](#)
 - [Change or configure a new 5 GHz SSID for a master with the AirBridge mode enabled on page 68](#)
 - [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled on page 71](#)
 - [Change the 5 GHz SSID or WiFi security mode for a client bridge on page 75](#)
 - [Change or configure a 5 GHz SSID for an access point on page 76](#)

For more information on configuring WPA2-Enterprise security with a RADIUS authentication server, see [Set up WPA2-Enterprise security on a satellite or client bridge on page 84](#) or [Set up WPA2-Enterprise security on a master or access point on page 81](#).

Note: In addition to WPA2-Enterprise security with a RADIUS *authentication* server, you can set up a RADIUS *accounting* server, which you also can use with WPA2-PSK. That is, the WiFi security can be WPA-PSK *and* you can use a RADIUS accounting server.

- Depending on the operation mode and AirBridge mode, you can configure security settings such as a hidden SSID, client isolation, VLAN isolation, an L2 isolation, and you can entirely disable a 5 GHz SSID that is not the default 5 GHz SSID. For more information, see one of the following sections:
 - [Change or configure a new 5 GHz SSID for a master with the AirBridge mode enabled on page 68](#)
 - [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled on page 71](#)
 - [Change or configure a 5 GHz SSID for an access point on page 76](#)
- Depending on the operation mode, you can enable and configure a guest network. For more information, see [Configure a guest network on an access point on page 80](#).
- Depending on the operation mode and AirBridge mode, you can set up a WiFi MAC filter. For more information, see [Set up a MAC filter for a 5 GHz SSID on page 102](#).

Change the 5 GHz SSID or WiFi security mode for a satellite

Use this task if the operation mode of the AirBridge is AirBridge Satellite.

When you performed the initial configuration on the Day Zero Easy Setup page, you were required to change the name of the default 5 GHz SSID. If you kept WPA2-PSK as the WiFi security mode, you were also required to change the passphrase.

You can manually change the default 5 GHz SSID or WiFi security mode again.

Note: For information about scanning for neighboring access points and selecting a preferred BSSID and SSID, which is a method to automatically change the SSID, see [Scan for neighboring access points](#) on page 62.

To manually change the default 5 GHz SSID or WiFi security mode for a satellite:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Network, select **Wireless**.
The Wireless Settings page displays.
5. In the Wireless Settings - 5GHz section, click the **Edit** button for the 5 GHz SSID.
A new page opens.
6. To configure the 5 GHz SSID settings, specify the settings that are described in the following table:

Setting	Description
BSSID	If you want the satellite to connect to a particular master, select the Preferred BSSID check box and enter the basic service set ID (BSSID) of the master in the format of a MAC address. The BSSID is usually the MAC address of the radio on the AirBridge master that broadcasts the SSID.
SSID	In the SSID field, enter the service set ID (SSID), that is, the name of the WiFi network on the AirBridge master with which the satellite must connect.
Security Mode	From the Security Mode menu, select the same security mode that is defined on the AirBridge master. You can select WPA2-PSK or WPA2-Enterprise for the connection to the selected SSID. For information about WPA2-Enterprise, see Set up WPA2-Enterprise security on a satellite or client bridge on page 84.
Encryption	If you select WPA2-PSK from the Security Mode menu, this field is fixed at AES. You cannot select another option.
Passphrase	If you select WPA2-PSK from the Security Mode menu, enter the passphrase (network key or WiFi password). The length of the passphrase must be from 8 to 63 characters. You must enter the same passphrase that is defined on the AirBridge master so that the satellite can connect to the master.

7. Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

8. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Change or configure a new 5 GHz SSID for a master with the AirBridge mode enabled

Use this task if the operation mode of the AirBridge is AirBridge Master and the AirBridge mode is enabled.

When you performed the initial configuration on the Day Zero Easy Setup page, you were required to change the name of the default 5 GHz SSID. If you kept WPA2-PSK as the WiFi security, you were also required to change the passphrase.

If the AirBridge mode is enabled, the master supports a single 5 GHz SSID. You can change this default 5 GHz SSID again.

CAUTION: If you change the 5 GHz SSID to which satellite connects, we recommend that you first change the satellite and then change the master so that the WiFi backhaul connection between the master and satellite can be automatically reestablished. If you first change the master and then change the satellite, the WiFi backhaul connection between the master and satellite is no longer operational, and you might not be able to access the satellite.

To change a 5 GHz SSID or enable and configure a new 5 GHz SSID for a master with the AirBridge mode enabled:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.

2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. Go to the Wireless Settings - Access Point section.

The following information displays:

- A single 5 GHz SSID only is supported.
- The **Enabled** check box is selected. You cannot clear the check box, which means that you cannot disable the SSID.
- The SSID field shows the name for the WiFi network to which satellites can connect. You can change the SSID name.

6. Click the **Edit** button for the default 5 GHz SSID.

A new page opens.

7. To configure the 5 GHz SSID settings, specify the settings that are described in the following table:

Setting	Description
Wireless Setting - AirBridge Access Point 5GHz	
Hidden SSID	To hide the WiFi network name and prevent it from displaying in the scanning list of a WiFi client, select the Enable radio button. To connect to the WiFi network, a user must know the WiFi network name. By default, the Disable radio button is selected.
Client Isolation	To prevent WiFi clients that are associated with the same or different WiFi networks on the master from communicating with each other, select the Enable radio button. If you enable client isolation, WiFi clients can still communicate with each other over the Internet. By default, the Disable radio button is selected. If L2 isolation is enabled, the Client Isolation radio buttons are disabled.
VLAN Isolation	To prevent clients on different VLANs from communicating with each other, select the Enable radio button, and enter the VLAN ID in the ID field. For the first 5 GHz SSID, the default VLAN ID is 1, for the second 5 GHz SSID, the default VLAN ID 2, for the third 5 GHz SSID, the VLAN ID is 3, and so on. The range is from 1 to 4094. If you enable VLAN isolation, clients can still communicate with each other over the Internet. By default, the Disable radio button is selected.
L2 Isolation	To prevent WiFi and LAN clients on the same AirBridge from communicating with each other, select the Enable radio button. If you enable L2 isolation, clients can still communicate with each other over the Internet. By default, the Disable radio button is selected.
Wireless Security	
Security Mode	From the Security Mode menu, select WPA2-PSK or WPA2-Enterprise for the connection to the selected SSID. For information about WPA2-Enterprise, see Set up WPA2-Enterprise security on a master or access point on page 81. Note: We recommend that you set up security, although in certain situations, and if you are aware of the risks, you can select None .
Encryption	If you select WPA2-PSK from the Security Mode menu, this field is fixed at AES. You cannot select another option.

(Continued)

Setting	Description
Passphrase	If you select WPA2-PSK from the Security Mode menu, enter a passphrase (network key or WiFi password). The length of the passphrase must be from 8 to 63 characters. You must enter the same passphrase on a satellite that must connect to the master.
Group Key Update Interval	The period in seconds that the group key changes. The period can be from 30 to 3600 seconds. The default period is 3600 seconds (1 hour). If you enter 0, the update interval is disabled and the group key is not changed. For greater security, we recommend that you do not disable the update interval so that the group key can be changed automatically.

For information about other WiFi features such as setting up a RADIUS accounting and a MAC filter, see [Manage Advanced WiFi and Radio Features](#) on page 90.

8. Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

9. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled

Use this task if the operation mode of the AirBridge is AirBridge Master and the AirBridge mode is disabled.

When you performed the initial configuration on the Day Zero Easy Setup page, you were required to change the name of the default 5 GHz SSID. If you kept WPA2-PSK as the WiFi security, you were also required to change the passphrase.

If the AirBridge mode is disabled, the master can support up to four 5 GHz SSIDs. In that situation, you can enable and configure a new 5 GHz SSID, or change such a 5 GHz SSID if you previously enabled it.

CAUTION: If you change the 5 GHz SSID to which satellite connects, we recommend that you first change the satellite and then change the master so that the WiFi backhaul connection between the master and satellite can be automatically reestablished. If you first change the master and then change the satellite, the WiFi backhaul connection between the master and satellite is no longer operational, and you might not be able to access the satellite.

To change a 5 GHz SSID or enable and configure a new 5 GHz SSID for a master with the AirBridge mode disabled:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Network, select **Wireless**.
The Wireless Settings page displays.
5. Go to the Wireless Settings - 5G section.
The following information displays:
 - Up to four 5 GHz SSIDs are available.
 - The **Enabled** check box is selected for the enabled SSIDs and cleared for the disabled SSIDs. You can either enable or disable SSIDs.
 - The SSID fields shows the names for the WiFi networks to which satellites and WiFi clients can connect. You can change the SSID names.

6. Do one of the following:

- To change the default or another previously enabled 5 GHz SSID, click the **Edit** button for the 5 GHz SSID.
- To enable and configure a new 5 GHz SSID, select the **Enabled** check box for a disabled 5 GHz SSID, and then click the **Edit** button for the 5 GHz SSID.

A new page opens.

7. To configure the 5 GHz SSID settings, specify the settings that are described in the following table:

Setting	Description
Wireless Setting - AirBridge Access Point 5GHz	
Hidden SSID	To hide the WiFi network name and prevent it from displaying in the scanning list of a WiFi client, select the Enable radio button. To connect to the WiFi network, a user must know the WiFi network name. By default, the Disable radio button is selected.
Client Isolation	To prevent WiFi clients that are associated with the same or different WiFi networks on the master from communicating with each other, select the Enable radio button. If you enable client isolation, WiFi clients can still communicate with each other over the Internet. By default, the Disable radio button is selected. If L2 isolation is enabled, the Client Isolation radio buttons are disabled.
VLAN Isolation	To prevent clients on different VLANs from communicating with each other, select the Enable radio button, and enter the VLAN ID in the ID field. For the first 5 GHz SSID, the default VLAN ID is 1, for the second 5 GHz SSID, the default VLAN ID 2, for the third 5 GHz SSID, the VLAN ID is 3, and so on. The range is from 1 to 4094. If you enable VLAN isolation, clients can still communicate with each other over the Internet. By default, the Disable radio button is selected.
L2 Isolation	To prevent WiFi and LAN clients on the same AirBridge from communicating with each other, select the Enable radio button. If you enable L2 isolation, clients can still communicate with each other over the Internet. By default, the Disable radio button is selected.
Wireless Security	
Security Mode	From the Security Mode menu, select WPA2-PSK or WPA2-Enterprise for the connection to the selected SSID. For information about WPA2-Enterprise, see Set up WPA2-Enterprise security on a master or access point on page 81. Note: We recommend that you set up security, although in certain situations, and if you are aware of the risks, you can select None .

(Continued)

Setting	Description
Encryption	If you select WPA2-PSK from the Security Mode menu, this field is fixed at AES. You cannot select another option.
Passphrase	If you select WPA2-PSK from the Security Mode menu, enter a passphrase (network key or WiFi password). The length of the passphrase must be from 8 to 63 characters. You must enter the same passphrase on a satellite that must connect to the master.
Group Key Update Interval	The period in seconds that the group key changes. The period can be from 30 to 3600 seconds. The default period is 3600 seconds (1 hour). If you enter 0, the update interval is disabled and the group key is not changed. For greater security, we recommend that you do not disable the update interval so that the group key can be changed automatically.

Fast Roaming

Status	To enable fast roaming, select the Enable radio button. By default, the Disable radio button is selected. If your network includes WiFi clients that must be able to roam from one AirBridge to another AirBridge or access point, enable fast roaming so that certain client applications can quickly reassociate with a new AirBridge or access point. Fast roaming is not available if you select None from the Security Mode menu.
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For information about other WiFi features such as setting up a RADIUS accounting, a MAC filter, and traffic shaping, see [Manage Advanced WiFi and Radio Features](#) on page 90.

- Click the **Save** button.
Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.
A pop-up window opens. The window shows the number of changes to be applied.
- In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Change the 5 GHz SSID or WiFi security mode for a client bridge

Use this task if the operation mode of the AirBridge is Client Bridge.

When you performed the initial configuration on the Day Zero Easy Setup page, you were required to change the name of the default 5 GHz SSID. If you kept WPA2-PSK as the WiFi security mode, you were also required to change the passphrase.

You can manually change the default 5 GHz SSID or WiFi security mode again.

Note: For information about scanning for neighboring access points and selecting a preferred BSSID and SSID, which is a method to automatically change the SSID, see [Scan for neighboring access points](#) on page 62.

To manually change the default 5 GHz SSID or WiFi security mode for a client bridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. In the Wireless Settings - 5GHz section, click the **Edit** button for the 5 GHz SSID.
A new page opens.

6. To configure the 5 GHz SSID settings, specify the settings that are described in the following table:

Setting	Description
BSSID	If you want the client bridge to connect to a particular access point, select the Preferred BSSID check box and enter the basic service set ID (BSSID) of the access point in the format of a MAC address. (The access point can be an AirBridge or another type of access point.) The BSSID is usually the MAC address of the radio on the access point that broadcasts the SSID.
SSID	In the SSID field, enter the service set ID (SSID), that is, the name of the WiFi network with which the client bridge must connect.
Security Mode	From the Security Mode menu, select the same security mode that is defined on the access point. You can select WPA2-PSK or WPA2-Enterprise for the connection to the selected SSID. For information about WPA2-Enterprise, see Set up WPA2-Enterprise security on a satellite or client bridge on page 84.
Encryption	If you select WPA2-PSK from the Security Mode menu, this field is fixed at AES. You cannot select another option.
Passphrase	If you select WPA2-PSK from the Security Mode menu, enter the passphrase (network key or WiFi password). The length of the passphrase must be from 8 to 63 characters. You must enter the same passphrase that is defined on the access point so that the client bridge can connect to the access point.

7. Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

8. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Change or configure a 5 GHz SSID for an access point

Use this task if the operation mode of the AirBridge is Access Point.

When you performed the initial configuration on the Day Zero Easy Setup page, you were required to change the name of the default 5 GHz SSID. If you kept WPA2-PSK as the WiFi security, you were also required to change the passphrase.

The access point can support up to eight 5 GHz SSIDs. You can enable and configure a new 5 GHz SSID, or change such a 5 GHz SSID if you previously enabled it.

CAUTION: If you change the 5 GHz SSID to which a client bridge connects, we recommend that you first change the client bridge and then change the access point so that the WiFi backhaul connection between the access point and client bridge can be automatically reestablished. If you first change the access point and then change the client, the WiFi backhaul connection between the access point and client bridge is no longer operational, and you might not be able to access the client bridge.

CAUTION: If you change the 5 GHz SSID or associated security settings, existing WiFi connections to clients are terminated. For a WiFi client to reconnect, the client must be configured with the new SSID, security settings, or both.

To change a 5 GHz SSID or enable and configure a new 5 GHz SSID for an access point:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. Go to the Wireless Settings - Access Point section.

The following information displays:

- Up to eight 5 GHz SSIDs are available.
- The **Enabled** check box is selected for the enabled SSIDs and cleared for the disabled SSIDs. You can either enable or disable SSIDs.
- The SSID fields shows the names for the WiFi networks to which client bridges and WiFi clients can connect. You can change the SSID names.

Note: For information about guest networks, see [Configure a guest network on an access point](#) on page 80.

6. Do one of the following:

- To change the default 5 GHz SSID or another previously enabled 5 GHz SSID, click the **Edit** button for the 5 GHz SSID.
- To enable and configure a new 5 GHz SSID, select the **Enabled** check box for a disabled 5 GHz SSID, and then click the **Edit** button for the 5 GHz SSID.

A new page opens.

7. To configure the 5 GHz SSID settings, specify the settings that are described in the following table:

Setting	Description
Wireless Setting - Access Point 5GHz	
5G	The 5G check box is selected for an enabled SSID and cleared for an disabled SSID. You can either enable or disable the SSID. Note: The 5G check box serves the same purpose as the Enabled check box (see Step 5).
SSID	The SSID field shows the name for the WiFi network to which client bridges and WiFi clients can connect. You can change the name. Note: The 5G check box serves the same purpose as the Enabled check box (see Step 5).
Hidden SSID	To hide the WiFi network name and prevent it from displaying in the scanning list of a WiFi client, select the Enable radio button. To connect to the WiFi network, a user must know the WiFi network name. By default, the Disable radio button is selected.
Client Isolation	To prevent WiFi clients that are associated with the same or different WiFi networks on the access point from communicating with each other, select the Enable radio button. If you enable client isolation, WiFi clients can still communicate with each other over the Internet. By default, the Disable radio button is selected. If L2 isolation is enabled, the Client Isolation radio buttons are disabled.
VLAN Isolation	To prevent clients on different VLANs from communicating with each other, select the Enable radio button, and enter the VLAN ID in the ID field. For the first 5 GHz SSID, the default VLAN ID is 1, for the second 5 GHz SSID, the default VLAN ID 2, for the third 5 GHz SSID, the VLAN ID is 3, and so on. The range is from 1 to 4094. If you enable VLAN isolation, clients can still communicate with each other over the Internet. By default, the Disable radio button is selected.

(Continued)

Setting	Description
L2 Isolation	<p>To prevent WiFi and LAN clients on the same AirBridge from communicating with each other, select the Enable radio button. If you enable L2 isolation, clients can still communicate with each other over the Internet.</p> <p>By default, the Disable radio button is selected.</p> <p>If you enable L2 isolation, to exclude a device from L2 isolation, enter the MAC address of the device in a Whitelist field.</p>

Wireless Security

Security Mode	<p>From the Security Mode menu, select WPA2-PSK or WPA2-Enterprise for the connection to the selected SSID.</p> <p>For information about WPA2-Enterprise, see Set up WPA2-Enterprise security on a master or access point on page 81.</p> <p>Note: We recommend that you set up security, although in certain situations, and if you are aware of the risks, you can select None.</p>
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Encryption	<p>If you select WPA2-PSK from the Security Mode menu, this field is fixed at AES. You cannot select another option.</p>
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Passphrase	<p>If you select WPA2-PSK from the Security Mode menu, enter a passphrase (network key or WiFi password). The length of the passphrase must be from 8 to 63 characters.</p> <p>You must enter the same passphrase on a client bridge that must connect to the access point. WiFi clients must enter the same passphrase enter to connect to the SSID.</p>
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Group Key Update Interval	<p>The period in seconds that the group key changes. The period can be from 30 to 3600 seconds. The default period is 3600 seconds (1 hour).</p> <p>If you enter 0, the update interval is disabled and the group key is not changed. For greater security, we recommend that you do not disable the update interval so that the group key can be changed automatically.</p>
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Fast Roaming

Status	<p>To enable fast roaming, select the Enable radio button. By default, the Disable radio button is selected.</p> <p>If your network includes WiFi clients that must be able to roam from one AirBridge to another AirBridge or access point, enable fast roaming so that certain client applications can quickly reassociate with a new AirBridge or access point.</p> <p>Fast roaming is not available if you select None from the Security Mode menu.</p>
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For information about other WiFi features such as setting up a RADIUS accounting server, a MAC filter, and traffic shaping, see [Manage Advanced WiFi and Radio Features](#) on page 90.

8. Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

9. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Configure a guest network on an access point

If the operation mode of the AirBridge is Access Point, you can configure one or more 5 GHz SSIDs as guest networks.

For information about changing the DHCP server settings for the guest networks, see [Change the DHCP server settings for a guest WiFi network](#) on page 108.

To configure a guest network when the AirBridge functions as an access point:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

If the AirBridge mode is disabled, eight 5 GHz SSIDs are available for an access point.

5. In the Wireless Settings - Access Point section, do one of the following:

- To change an existing 5 GHz SSID (one that is already enabled and configured) into a guest network, select the **Guest Network** check box for the 5 GHz SSID.

- To enable and configure a new 5 GHz SSID as a guest network, do the following:
 - a. Select the **Enabled** check box for the 5 GHz SSID.
 - b. Select the **Guest Network** check box for the 5 GHz SSID.
 - c. Click the **Edit** button for the 5 GHz SSID.
A new page opens.
 - d. Configure the settings for the 5 GHz SSID.
For more information, see [Change or configure a 5 GHz SSID for an access point](#) on page 76.
 - e. Click the **Save** button.
Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

6. Click the **Apply** button.

Your settings are saved and applied. The WiFi connection is reestablished. The page displays the number of seconds before the AirBridge is back online.

Set up WPA2-Enterprise security on a master or access point

Use this task if the operation mode of the AirBridge is AirBridge Master or Access Point.

When you set up WPA2-Enterprise security on a master or access point, you must specify the RADIUS authentication server settings. As an option, you can also specify a RADIUS accounting server, or you can set up a RADIUS accounting server separate from WPA2-Enterprise security (see [Set up a RADIUS accounting server on a master or access point](#) on page 104).

The link partner or partners of the master or access point must use the same RADIUS authentication server settings.

To set up WPA2-Enterprise security on a master or access point:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. In either the Wireless Settings - Access Point section or, if the AirBridge mode is disabled on a master, the Wireless Settings - 5GHz section, do one of the following:
 - To configure WPA2-Enterprise security for the default 5 GHz SSID or another previously enabled 5 GHz SSID, click the **Edit** button for the 5 GHz SSID.
 - To enable and configure WPA2-Enterprise security for a new 5 GHz SSID, select the **Enabled** check box for a disabled 5 GHz SSID, and then click the **Edit** button for the 5 GHz SSID.

A new page opens.

6. Wireless Security section, from the **Security Mode** menu, select **WPA2-Enterprise**. Additional fields display.
7. In the Wireless Security section, configure the WPA2-Enterprise and RADIUS authentication server settings as described in the following table.

Setting	Description
Encryption	This field is fixed at AES. You cannot select another option.
Group Key Update Interval	The period in seconds that the group key changes. The period can be from 30 to 3600 seconds. The default period is 3600 seconds (1 hour). If you enter 0, the update interval is disabled and the group key is not changed. For greater security, we recommend that you do not disable the update interval so that the group key can be changed automatically.
Radius Server	Enter the IPv4 address of the RADIUS authentication server. The AirBridge must be able to reach this IP address.

(Continued)

Setting	Description
Radius Port	Enter the number of the UDP port on the AirBridge that is used to access the RADIUS authentication server. The default port number is 1812.
Radius Secret	Enter the password (shared key) that is used between the AirBridge and the RADIUS authentication server during the authentication process.

- To specify a RADIUS accounting server, in the Radius Accounting section, configure the settings as described in the following table.

Setting	Description
Radius Accounting	To enable RADIUS accounting, select the Enable radio button. By default, the Disable radio button is selected.
Radius Accounting Server	Enter the IPv4 address of the RADIUS accounting server. The AirBridge must be able to reach this IP address.
Radius Accounting Port	Enter the number of the UDP port on the AirBridge that is used to access the RADIUS accounting server. The default port number is 1813.
Radius Accounting Secret	Enter the password (shared key) that is used between the AirBridge and the RADIUS accounting server during the authentication process.
Interim Accounting Interval	Enter the period in seconds between each accounting update message that the AirBridge sends to the RADIUS accounting server. The default period is 600 seconds.

- Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

- In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Set up WPA2-Enterprise security on a satellite or client bridge

Use this task if the operation mode of the AirBridge is AirBridge Satellite or Client Bridge.

When you set up WPA2-Enterprise security on a satellite or client bridge, you must specify the same RADIUS server authentication settings that you specify on the master or access point.

Note: For a client bridge, you can also set up WPA-Enterprise if the link partner is not an AirBridge functioning as an access point but another type of access point that supports WPA-Enterprise.

To set up WPA2-Enterprise security on a satellite or client bridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. In the Wireless Settings - 5GHz section, click the **Edit** button for the 5 GHz SSID.

A new page opens.

6. From the **Security Mode** menu, select **WPA2-Enterprise**.

Additional fields display.

Note: For a client bridge, you can also select **WPA-Enterprise**. Use that option only if the link partner is not an AirBridge functioning as an access point but another type of access point that supports WPA-Enterprise.

7. Configure the WPA2-Enterprise settings as described in the following table. The settings that you must enter depend on the configuration of the master or access point and the RADIUS server.

Setting	Description
EAP Method	From the EAP Method menu, select one of the following Extensible Authentication Protocol (EAP) methods: <ul style="list-style-type: none"> • TTLS. Tunneled Transport Layer Security. • PEAP. Protected Extensible Authentication Protocol.
EAP Authentication	From the EAP Authentication menu, select one of the following EAP authentication methods: <ul style="list-style-type: none"> • MSCHAP. Microsoft Challenge-Handshake Authentication Protocol version 1 (MS-CHAPv1). • MSCAPV2. Microsoft Challenge-Handshake Authentication Protocol version 2 (MS-CHAPv2).
Authentication Identity	Enter the user name that is required for the AirBridge to access the authentication RADIUS server during the authentication process.
Authentication Password	Enter the password (shared key) that is required for the AirBridge to access the authentication RADIUS server during the authentication process. This password must be the same as the one that is configured on the master or satellite.

8. Click the **Save** button. Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again. A pop-up window opens. The window shows the number of changes to be applied.
9. In the pop-up window, click the **Apply** button. Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Manage the settings for the 2.4 GHz management SSID

You can use the 2.4 GHz management SSID *only* to access the local browser UI of the AirBridge from a WiFi device for management purposes.

The 2.4 GHz SSID cannot be used for backhaul WiFi connections or for regular WiFi clients connections to the AirBridge. For these types of connections, use a 5 GHz SSID.

Note: The SSID (the name of the management WiFi network) is NETGEARXXXXXX-SETUP, in which XXXXXX represents the last six digits of the MAC address of the LAN interface of the AirBridge. You cannot change this name.

Change the passphrase for the 2.4 GHz management SSID

Other than the passphrase (WiFi password or network key), you cannot change the settings for the 2.4 GHz management SSID.

When you performed the initial configuration on the Day Zero Easy Setup page, you were required to change the passphrase for the 2.4 GHz management SSID. You can change the passphrase again.

To change the passphrase for the 2.4 GHz management SSID:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. In the Management Interface - 2.4G section, click the **Edit** button.
A new page opens.
6. In the **Passphrase** field, enter a new passphrase (network key or WiFi password) that you must enter to connect to local browser UI of the AirBridge.
The length of the passphrase must be from 8 to 63 characters.
7. Click the **Save** button.
Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.
A pop-up window opens. The window shows the number of changes to be applied.
8. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Disable the idle time-out for the 2.4 GHz management SSID

By default, the idle time-out for the 2.4 GHz management SSID is 15 minutes. That is, if no WiFi client is connected to the 2.4 GHz management SSID for 15 minutes, the 2.4 GHz management SSID is turned off.

Only after you reboot the AirBridge can you reconnect to the 2.4 GHz management SSID. However, you can disable the idle time-out so that the 2.4 GHz management SSID stays always on.

To disable the idle time-out for the 2.4 GHz management SSID:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.
The Wireless Settings page displays.
5. In the Management Interface - 2.4G section, select the **Always on** radio button.
By default, the **Turn off if idle in 15 minutes** radio button is selected.
6. Click the **Save** button.
Your settings are saved but not yet applied.
A pop-up window opens. The window shows the number of changes to be applied.
7. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Disable the 2.4 GHz management SSID

As a security measure, you can entirely disable the 2.4 GHz management SSID. If you do so, access to the AirBridge local browser UI is possible only over a wired connection.

To disable the 2.4 management SSID:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Network, select **Wireless**.
The Wireless Settings page displays.

5. In the Management Interface - 2.4G section, clear the **Enabled** check box.
6. Click the **Save** button.
Your settings are saved but not yet applied.
A pop-up window opens. The window shows the number of changes to be applied.
7. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

5

Manage Advanced WiFi and Radio Features

This chapter describes how you can manage advanced WiFi and radio settings. For other WiFi and radio settings, see [Manage the WiFi and Radio Features](#) on page 56.

The settings that are described in this chapter apply to the 5 GHz radio and 5 GHz SSIDs, because you can use the 2.4 GHz radio and 2.4 GHz SSID only for management of the AirBridge.

The chapter includes the following sections:

- [Recommended configuration order](#)
- [Manage the channel high throughput mode](#)
- [Manage the channel or channels](#)
- [Manage the radio transmit power](#)
- [Change the bit rate](#)
- [Manage client limits](#)
- [Manage time slot assignments to satellites](#)
- [Manage the satellite priority](#)
- [Set up a WiFi on/off schedule for a 5 GHz SSID](#)
- [Set up a MAC filter for a 5 GHz SSID](#)
- [Set up a RADIUS accounting server on a master or access point](#)
- [Manually block a WiFi client or connection from a 5 GHz SSID](#)
- [Configure traffic shaping for a 5 GHz SSID](#)
- [Change the DHCP server settings for a guest WiFi network](#)

CAUTION: This device must be professionally installed. It is the installer's responsibility to follow local country regulations, including operations within legal frequency channels, output power, and DFS requirements. The vendor, reseller, or distributor is not responsible for illegal wireless operations. For more details, see the device's terms and conditions.

Recommended configuration order

We recommend the following configuration order:

- If you change an existing configuration for AirBridges in a master-to-satellite setup, we recommend that you first change the satellite and then change the master. After you complete the configurations, the WiFi backhaul connection between the master and satellite is automatically reestablished.

Note: If you first change the master and then change the satellite, the WiFi backhaul connection between the master and satellite is no longer operational, and you might not be able to access the satellite.

- Similarly, if you change an existing configuration for an AirBridge that functions as a client bridge in an access point-to-client bridge setup, we recommend that you first change the client bridge and then change the access point. (The access point can be an AirBridge or another type of access point.) After you complete the configurations, the WiFi backhaul connection between the access point and client bridge is automatically reestablished.

Note: If you first change the access point and then change the client bridge, the WiFi backhaul connection between the access point and client bridge is no longer operational, and you might not be able to access the client bridge.

Manage the channel high throughput mode

The channel high throughput (HT) mode is also referred to as the channel width.

By default, the channel width is 40 MHz for the 5 GHz radio on the AirBridge. The other options are 20 MHz and 80 MHz.

The wider the channel, the better the performance (that is, the greater the transmission quality and speed), but the fewer channels are available for use. Before you change the channel width, consider your network conditions and the applications that must be supported.

To manage the channel HT mode:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. From the **Channel HT Mode** menu, select **20MHz**, **40MHz** (the default setting), or **80MHz**.

6. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

7. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Manage the channel or channels

By default, a WiFi channel is automatically assigned for the 5 GHz radio on the AirBridge. The channels that are available depend on the country and region that you selected for the AirBridge.

You do not need to change the channel unless you experience interference (which is indicated by lost connections).

If you use multiple access points, you can reduce interference by selecting different channels for adjacent access points. We recommend a channel spacing of four channels between adjacent access points (for example, use channels 44 and 60, or 112 and 128).

WARNING: Make sure that the country is set to the location where the device is operating (see [Change the country and region of operation](#) on page 58). You are responsible for complying with the local, regional, and national regulations that are set for channels, power levels, and frequency ranges.

To manage the channels:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. Click the Channel **Configuration** button.

A new page opens,

6. Do one of the following:

- To select a specific channel, click the button for the channel and frequency.
- To enable automatic channel allocation, click the **All** button.

Note: The **None** button lets you reset all channels before you select one or more specific channels. The **U-NNI** buttons lets you select specific groups of channels.

7. Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

8. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Manage the radio transmit power

By default, the transmit power for the 5 GHz radio on the AirBridge is automatically assigned.

You can disable automatic assignment and set a specific transmit power. However, note the following:

- If you set the transmit power too high, the AirBridge might not be able to connect to another WiFi device such as a master or access point.
- If you set the transmit power too low, WiFi clients might not be able to connect to the AirBridge.

Make sure that you comply with the regulatory requirements for total radio frequency (RF) output power in your country.

WARNING: Make sure that the country is set to the location where the device is operating (see [Change the country and region of operation](#) on page 58). You are responsible for complying with the local, regional, and national regulations that are set for channels, power levels, and frequency ranges.

To manage the radio transmit power:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. Do one of the following:
 - Clear the **Auto RF** check box.
Automatic transmit power is disabled. You can now specify a specific transmit power (see the next step).
 - Select the **Auto RF** check box.
Automatic transmit power is enabled. This is the default setting.
6. If you cleared the Auto RF check box, from the **Transmit Power** menu, select the transmit power.
The transmit power is expressed in dBm.
7. Click the **Save** button.
Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.
A pop-up window opens. The window shows the number of changes to be applied.
8. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Change the bit rate

If the AirBridge functions as a master or access point, by default, data is automatically sent at the lowest effective bit rate. We recommend that you do not manually change the bit rate.

If you understand the consequences, you can manually select a higher bit rate. Client devices must either use the selected bit rate or a higher bit rate. You cannot manually set the bit rate for an AirBridge that functions as a satellite or client bridge.

WARNING: Be careful changing the bit rate. If you set the bit rate too high, some WiFi devices might no longer be able to connect to the AirBridge.

To change the bit rate:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. Click the Bit Rate **Configuration** button.

A new page opens.

6. Write down the current bit rate.

After you change the bit rate, if WiFi devices can no longer connect to the AirBridge, you can reset the bit rate to the old value.

7. On the blue bar, select a new bit rate by clicking the white dot that represents the bit rate.

The bit rate is expressed in Mbps.

8. Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

9. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Manage client limits

If the AirBridge functions as a master with the AirBridge mode disabled or as an access point, by default, a maximum of 32 WiFi client can associate with the AirBridge.

You can specify a lower or higher number of maximum WiFi clients. The range is from 1 to 32. The maximum number applies to all clients connected to all 5 GHz SSIDs on the AirBridge. You cannot set client limits for individual 5 GHz SSIDs.

You can also disable client limits entirely, allowing an unlimited number of clients to associate with the AirBridge.

To manage client limits:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. Do one of the following:

- **Set client limits.** Set client limits by doing the following:
 - a. Select the Clients Limits **Enable** check box.
By default, client limits are enabled.
 - b. In the **Client Limits** field, enter a number from 1 to 32.
The default is 32.
- **Disable client limits.** Disable client limits by selecting the Clients Limits **Disable** check box.
By default, client limits are enabled.

6. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

7. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Manage time slot assignments to satellites

If the AirBridge functions as a master with the AirBridge mode enabled, by default, the AirBridge automatically assigns time slots to each satellite so that each satellite receives equal opportunity. We recommend that you keep automatic time slot assignments. If you understand the consequences, you can manually set the time slot to a value from 2 to 7. For example if you divide 1 second into 10 time slots, each time slot is 100 ms. If you set the time slot to 3, each satellite receives 300 ms on a rotating basis.

Note: By default, each satellite receives the same number of time slots. However, the higher the satellite priority that you set for a for a satellite (see [Manage the satellite priority](#) on page 99), the more time slots the AirBridge assigns to the satellite.

To manage time slots on a master:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.

2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. From the **Master Time Slot** menu, select **Auto**, or a value from **2** to **7**.

By default, the selection is Auto. We recommend that you keep the selection at Auto.

6. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

7. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Manage the satellite priority

If the AirBridge functions as a master with the AirBridge mode enabled, by default, the AirBridge assigns time slots for the traffic to each satellite (see [Manage time slot assignments to satellites](#) on page 98). By default, each satellite receives the same number of time slots, that is, the same amount of time to transmit and receive. By default, the priority for each satellite is set to High, but you can prioritize one satellite over another and assign a lower priority to another satellite, causing the satellite to be assigned a smaller number of time slots by the master.

You can assign a high, middle, or low satellite priority. The high priority receives 10 times as much time as the low priority. The middle priority receives 5 times as much time as the low priority. (The relationship is 10:5:1.)

As a general guideline, give a higher priority to a satellite with a good WiFi connection to the master (that is, a high-quality signal between the devices) and a lower priority to a satellite with a poor WiFi connection to the master. A higher satellite priority means that the satellite can perform better than a satellite with a lower satellite priority.

To manage the satellite priority:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. From the **Satellite Priority** menu, select **High**, **Middle**, or **Low**.
The default selection is High.
6. Click the **Save** button.
Your settings are saved but not yet applied.
A pop-up window opens. The window shows the number of changes to be applied.
7. In the pop-up window, click the **Apply** button.
Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Set up a WiFi on/off schedule for a 5 GHz SSID

If the operation mode of the AirBridge is AirBridge Master or Access Point, you can set up a WiFi on/off schedule. Scheduling a 5 GHz SSID to be turned off is a green feature that allows you to turn off WiFi during scheduled vacations, office shutdowns, on evenings, or on weekends. If more than one 5 GHz SSID is available, you can set up and manage a WiFi on/off schedule for each 5 GHz SSID.

Before you enable and set up a WiFi on/off schedule, make sure that the time zone settings are synchronized with your local time. For more information, see [Manage the date and time settings](#) on page 120.

To set up a WiFi on/off schedule for a 5 GHz SSID:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Management, select **WiFi Schedules**.

A page displays the Auto Reboot Settings section and the Wi-Fi Scheduler section.

5. In the Wi-Fi Scheduler section, select the following:

- **Status.** Select the **Enable** radio button.
By default, the **Disable** button is selected, and the settings are masked out.
- **SSID Selection.** From the **SSID Selection** menu, select the 5 GHz SSID to which the WiFi on/off schedule must apply.
If the configured AirBridge operation mode supports a single 5 GHz SSID only, the SSID is already selected from the menu.
- **Schedule Templates.** From the **Schedule Templates** menu, select one of the following templates:
 - **Always available.**
 - **Available 8-17 daily.**
 - **Available 8-17 daily except weekends.**
 - **Custom schedule.**

Based on your selection, the Schedule Table is preconfigured. You can refine the settings.

6. To refine the settings in the Schedule Table, do the following as needed:

- For each day, from the **Available** menu, select **available** or **unavailable**:
 - **available.** WiFi is turned on during the hours that you must specify in the **Duration** fields for the selected day.
 - **unavailable.** WiFi is turned off during the hours that you must specify in the **Duration** fields for the selected day.
- For each day, in the **Duration** fields, specify the start hour and minutes and the end hours and minutes.
If you selected **available** from the **Available** menu, WiFi is turned on during the hours that you specify in the **Duration** fields for the selected day.
If you selected **unavailable** from the **Available** menu, WiFi is turned off during the hours that you specify in the **Duration** fields for the selected day.

7. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

8. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Set up a MAC filter for a 5 GHz SSID

By default, the AirBridge does not restrict access to a 5 G SSID based on a MAC address.

For each 5 GHz SSID, you can set up a MAC address filter, which is an access control list (ACL) that is based on MAC addresses. An ACL provides added security to ensure that only authorized WiFi devices connect to the SSID:

- **MAC address allows access.** An ACL with a policy that allows access functions as follows:
 - A WiFi device for which you place the MAC address in the ACL is allowed to connect to the SSID.
 - All other WiFi devices are denied a connection to the SSID.
- **MAC address denies access.** An ACL with a policy that denies access functions as follows:
 - A WiFi device for which you place the MAC address in the ACL is denied a connection to the SSID.
 - All other WiFi devices are allowed to connect to the SSID.

Note: If you manually block a WiFi client (that is, *kick* a client, see [Manually block a WiFi client or connection from a 5 GHz SSID](#) on page 105), an ACL that denies the MAC address of the client is automatically added to the 5 GHz SSID from which you blocked the client. That ACL denies access to the client but allows access all other clients. You can manually delete the client from the ACL, after which the client is no longer denied access to the SSID.

To set up a MAC filter for a 5 GHz SSID:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. In either the Wireless Settings - Access Point section or, if the AirBridge mode is disabled on a master, the Wireless Settings - 5GHz section, click the **Edit** button for the 5 GHz SSID.

A new page opens.

6. Scroll down to the Wireless MAC Filter section.

7. From the **ACL Mode** menu, select one of the following:

- **Deny MAC in the List.** The MAC addresses that you add to the list are denied access but all other MAC address are allowed access.
- **Allow MAC in the List.** The MAC addresses that you add to the list are allowed access but all other MAC address are denied access.

By default, the selection is Disabled and all MAC addresses are allowed.

8. To add MAC addresses to the list, do the following:

- a. Enter the MAC address of a WiFi device in the fields.

- b. Click the **Add** button.

The MAC address is added to the list. The address displays, together with an entry number, and a Delete button, allowing you to remove the MAC address from the list.

- c. To add another MAC address, repeat steps a and b.

9. Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

10. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Set up a RADIUS accounting server on a master or access point

Use this task if the operation mode of the AirBridge is AirBridge Master or Access Point.

You can set up a RADIUS accounting server without using WPA2-Enterprise security, which requires setting up a RADIUS authentication server (see [Set up WPA2-Enterprise security on a master or access point](#) on page 81).

To set up a RADIUS accounting server on a master or access point:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. In either the Wireless Settings - Access Point section or, if the AirBridge mode is disabled on a master, the Wireless Settings - 5GHz section, do one of the following:
 - To configure a RADIUS accounting server for the default 5 GHz SSID or another previously enabled 5 GHz SSID, click the **Edit** button for the 5 GHz SSID.
 - To enable and configure a RADIUS accounting server for a new 5 GHz SSID, select the **Enabled** check box for a disabled 5 GHz SSID, and then click the **Edit** button for the 5 GHz SSID.

A new page opens.

- In the Radius Accounting section, configure the settings as described in the following table.

Setting	Description
Radius Accounting	To enable RADIUS accounting, select the Enable radio button. By default, the Disable radio button is selected.
Radius Accounting Server	Enter the IPv4 address of the RADIUS accounting server. The AirBridge must be able to reach this IP address.
Radius Accounting Port	Enter the number of the UDP port on the AirBridge that is used to access the RADIUS accounting server. The default port number is 1813.
Radius Accounting Secret	Enter the password (shared key) that is used between the AirBridge and the accounting RADIUS server during the authentication process.
Interim Accounting Interval	Enter the period in seconds between each accounting update message that the AirBridge sends to the RADIUS accounting server. The default period is 600 seconds.

- Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

- In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Manually block a WiFi client or connection from a 5 GHz SSID

You can manually block a WiFi client (that is, *kick* a client) or connection from a 5 GHz SSID.

If you do so, an ACL that denies the MAC address of the client is automatically added to the 5 GHz SSID from which you blocked the client. That ACL denies access to the client but allows access all other clients. You can manually delete the client from the ACL, after which the client is no longer denied access to the SSID. For more information, see [Set up a MAC filter for a 5 GHz SSID](#) on page 102.

To manually block a WiFi client or connection from a 5 GHz SSID:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Overview, select **Connections**.
The page that displays shows the Connection List - 5GHz table.
For more information, see [View the 5 GHz WiFi connections](#) on page 137.
5. To block a client or device, click the associated **Kick** button in the Block column on the right.
A pop-up window opens.
6. Click the **OK** button.
The client no longer displays on the page, but the automatically created ACL is not yet saved.
A pop-up window opens. The window shows the number of changes to be applied.
7. Click the **Apply** button.
Your settings are saved and applied. The WiFi connection is reestablished. The page displays the number of seconds before the AirBridge is back online.

Configure traffic shaping for a 5 GHz SSID

In a configuration with multiple 5 GHz SSIDs, the WiFi clients on all 5 GHz SSID are allocated the same amount of bandwidth for downloading and uploading traffic. By shaping the traffic for each 5 GHz SSID, you can control the total bandwidth usage on the AirBridge, or you can control the way the bandwidth is allocated between the

5 GHz SSIDs. For each 5 GHz SSID, you can shape the traffic by limiting the bandwidth for downloading traffic and the bandwidth for uploading traffic.

You can configure traffic shaping for an AirBridge that functions as an access point. You can do the same for a master with the AirBridge mode disabled. In a configuration in which a single 5 GHz SSID is available, you cannot configure traffic shaping.

To configure traffic shaping for a 5 GHz SSID:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.

2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. In either the Wireless Settings - Access Point section or, if the AirBridge mode is disabled on a master, the Wireless Settings - 5GHz section, click the **Edit** button for the 5 GHz SSID.

A new page opens.

6. Scroll down to the Wireless Traffic Shaping section.

7. Select the Status **Enable** radio button.

By default, the Status **Disable** radio button is selected and traffic shaping is disabled.

8. In the **Download Limit** field, enter the limit in Mbps.

You can enter a limit from 1 to 999 Mbps. If you enable traffic shaping, do not enter 0. Otherwise downloading traffic is disabled entirely.

9. In the **Upload Limit** field, enter the limit in Mbps.

You can enter a limit from 1 to 999 Mbps. If you enable traffic shaping, do not enter 0. Otherwise uploading traffic is disabled entirely.

10. To limit the configured limits to each individual user of the SSID, select the **Per User** check box.

If you use the SSID to provide a WiFi connection to multiple individual users (as opposed to, for example, a client bridge), this option is useful to the control the bandwidth usage of individual users.

11. Click the **Save** button.

Your settings are saved but not yet applied. The page closes. The Wireless Settings page displays again.

A pop-up window opens. The window shows the number of changes to be applied.

12. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Change the DHCP server settings for a guest WiFi network

By default, a WiFi client that connects to a guest network (see [Configure a guest network on an access point](#) on page 80) is assigned an IP address in the range from 192.168.200.100 to 192.168.200.200. You can change this address range, which applies to all WiFi guest networks on the AirBridge.

This setting applies only if the AirBridge functions as an access point. You can change the DHCP server settings for a guest network only if you enabled at least one guest network on a 5 GHz SSID.

To change the DHCP server settings for a guest WiFi network:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to

which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. Scroll down to the Guest Network DHCP Server Settings section.

You can change the DHCP server settings for a guest network only if you enabled at least one guest network on a 5 GHz SSID. Otherwise, the fields are masked out.

6. Configure the settings that are described in the following table, keeping in mind that the IP address, starting IP address, and ending IP address must be in the same range.

Setting	Description
IP Address	The IP address for the guest network. The default IP address is 192.168.200.1.
Subnet Mask	The subnet mask associated with the IP address. The default subnet mask is 255.255.255.0.
Starting IP Address	The starting IP address in the address range from which a WiFi client on a guest network can be assigned an IP address. The default starting IP address is 192.168.200.100.
Ending IP Address	The ending IP address in the address range from which a WiFi client on a guest network can be assigned an IP address. The default ending IP address is 192.168.200.200.
WINS Server IP	The IP address of an optional Windows Internet Name Service.

7. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

8. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

6

Maintain the AirBridge

This chapter describes how you can maintain the AirBridge.

The chapter includes the following sections:

- [Change the management mode to NETGEAR Insight Mode or Standalone Mode](#)
- [Upgrade the firmware on the AirBridge](#)
- [Reboot the AirBridge from the local browser UI](#)
- [Schedule the AirBridge to reboot](#)
- [Manage the configuration file of the AirBridge](#)
- [Reset the AirBridge to factory default settings](#)
- [Manage the date and time settings](#)
- [Configure and view the logs](#)
- [Set up email alerts](#)
- [Manage access security settings](#)
- [Specify a management VLAN](#)

Change the management mode to NETGEAR Insight Mode or Standalone Mode

The AirBridge can function in one of the following management modes:

- **NETGEAR Insight Mode.** You can manage the AirBridge remotely from a mobile device on which the NETGEAR Insight app is installed or, if you are an Insight Premium or Insight Pro subscriber, through the Insight Cloud portal. The NETGEAR Insight Mode is the default management mode. In this mode, you *can* connect to the AirBridge over the local browser UI (which you normally use in the Standalone Mode), but most fields, menus, and buttons are masked out. For information about the Insight app and Insight Cloud portal, visit insight.netgear.com and see the NETGEAR knowledge base at netgear.com/support/product/insight.aspx.

Note: At this time, NETGEAR Insight does not support the access point and client bridge operation modes. To configure and manage the AirBridge as an access point or client bridge, you first must change the management mode to Standalone Mode, and then use the local browser UI.

IMPORTANT: When you change the management mode from Standalone Mode to NETGEAR Insight Mode, the Insight cloud-based management platform pushes the latest Insight configuration to the AirBridge.

- **Standalone Mode.** You can manage the AirBridge locally from a WiFi or wired device through the local browser UI. (In this context, Standalone Mode and local browser UI are the same management mode.) In this mode, the AirBridge functions as a standalone device and is not connected to the Insight cloud-based management platform. If the AirBridge functions in the access point or client bridge operation mode, you must use the local browser UI.

Note: If you are already using the NETGEAR Insight Mode to manage the AirBridge but want to change the management mode to Standalone Mode, you do *not* need to manually remove the AirBridge from your Insight account, you do *not* need to reset the AirBridge to factory default setting, and you do *not* need to entirely reconfigure the AirBridge. Rather, you can use the local browser UI to change the management mode. Even if the management mode is NETGEAR Insight Mode, you *can* log in to the local browser UI using your Insight network password for the Insight network location to which the AirBridge is assigned.

IMPORTANT: If you first add the AirBridge to a NETGEAR Insight network location and manage the AirBridge through the Insight app or Insight Cloud portal and then you change the management mode to Standalone Mode, you might need to continue to use the Insight network password for the Insight network location to access the local browser UI until you manually change the local device password on the AirBridge.

Change the management mode to NETGEAR Insight Mode

To change the management mode from Standalone Mode to NETGEAR Insight Mode:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Management, select **Advanced**.

The page displays the advanced settings with the Management Mode section at the top.

5. In the Management Mode section, select the **NETGEAR Insight Mode** radio button.

IMPORTANT: When you change the management mode from Standalone Mode to NETGEAR Insight Mode, the Insight cloud-based management platform pushes the latest Insight configuration to the AirBridge.

6. Click the **Apply** button.

Your settings are saved and applied.

Change the management mode to Standalone Mode

To change the management mode from NETGEAR Insight Mode to Standalone Mode:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Management, select **Advanced**.
The page displays the advanced settings with the Management Mode section at the top.
5. In the Management Mode section, select the **Standalone Mode** radio button.
6. Click the **Apply** button.
Your settings are saved and applied.

Upgrade the firmware on the AirBridge

You can visit the NETGEAR support website to determine if new firmware is available for the AirBridge.

If new firmware is available, download the firmware file to your computer. If needed, unzip the firmware file. Then, update the AirBridge to the new firmware.

Note: Before you upgrade the firmware, we recommend that you read the firmware release notes, if available. Although it is highly unlikely, a situation might occur that requires you to reconfigure the AirBridge after a firmware upgrade.

To upgrade the firmware on the AirBridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under System Manager, select **Firmware**.

The page displays the Firmware Upgrade section and the Backup/Restore Settings section.

The current firmware version and the device version display.

5. Locate and select the firmware file on your computer by doing the following:
 - a. In the Firmware Upgrade section, click the **Choose File** button.
 - b. Navigate to the firmware file.
The filename ends in `.bin`.
 - c. Select the firmware file.

6. Click the **Upload** button.

The page displays the upgrade progress.

WARNING: To avoid the risk of corrupting the firmware, do not interrupt the upgrade. For example, do not close the browser, click a link, or load a new page. Do not turn off the AirBridge. Wait until the AirBridge finishes.

When the upgrade is finished, the login page displays. The firmware version displays on the login page.

Reboot the AirBridge from the local browser UI

You can use the local browser UI to reboot the AirBridge. This is very useful after you installed the AirBridge at its permanent location, and the power adapter might not easily be reachable.

To reboot the AirBridge from the local browser UI:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. At the top right of the page, select the **Reset** tab.

The page displays the Reboot the device section and the Restore the device to default settings section.

5. Click the **Reboot the device** button.

The page displays the reboot progress.

WARNING: To avoid the risk of corrupting the firmware, do not interrupt the reboot. For example, do not close the browser, click a link, or load a new page. Do not turn off the AirBridge. Wait until the AirBridge finishes.

When the reboot is finished, the login page displays.

Schedule the AirBridge to reboot

You can schedule the AirBridge to automatically reboot at a time that is convenient for the network, for example, when you do not expect any WiFi traffic to be processed.

To schedule the AirBridge to automatically reboot:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.

2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Management, select **WiFi Schedules**.

A page displays the Auto Reboot Settings section and the Wi-Fi Scheduler section.

5. In the Auto Reboot Settings section, select the Status **Enable** radio button.

6. Select one or more check boxes for the days on which you want the AirBridge to automatically reboot.

7. In the fields under the days, enter the hour in the left field (for example, enter **23** for 11 p.m.) and the minutes in the right field (for example, enter **30** for 11:30 p.m.).

8. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

9. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

Manage the configuration file of the AirBridge

The configuration settings of the AirBridge are stored within the AirBridge in a configuration file. You can back up (save) this file to your computer. After you do so, you can restore the configuration from the file.

Back up the AirBridge configuration settings

You can save a copy of the current configuration settings. If necessary, you can restore the configuration settings later.

To back up the AirBridge's configuration settings:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under System Manager, select **Firmware**.

The page displays the Firmware Upgrade section and the Backup/Restore Settings section.

5. In the Backup/Restore Settings section, click the Backup Settings **Export** button. A pop-up window opens.

6. Choose a location to store the file on your computer.

The name of the backup file is `backup-WBC502-yyyy-mm-dd.tar.gz`, in which yyyy is the year, mm is the month, and dd is the date.

An example of a name of a backup file is `backup-WBC502-2020-01-18.tar.gz`.

7. Follow the directions of your browser to save the file.

Restore the AirBridge configuration settings

If you backed up the configuration settings (see [Back up the AirBridge configuration settings](#) on page 117), you can restore the configuration settings from the backup file.

To restore the AirBridge's configuration settings from the backup file:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under System Manager, select **Firmware**.

The page displays the Firmware Upgrade section and the Backup/Restore Settings section.

5. In the Backup/Restore Settings section, click the Restore New Setting **Choose File** button and navigate to and select the saved configuration file (that is, the backup file).

The name of the backup file is `backup-WBC502-yyyy-mm-dd.tar.gz`, in which yyyy is the year, mm is the month, and dd is the date.

An example of a name of a backup file is `backup-WBC502-2020-01-18.tar.gz`.

6. Click the **Import** button.

The page displays the restoration progress.

WARNING: To avoid the risk of corrupting the firmware, do not interrupt the restoration. For example, do not close the browser, click a link, or load a new page. Do not turn off the AirBridge. Wait until the AirBridge finishes.

When the restoration is finished, the login page displays.

Reset the AirBridge to factory default settings

Under some circumstances (for example, if you lost track of the changes that you made to the configuration of the AirBridge or you move the AirBridge to a different network), you might want to erase the configuration and reset the AirBridge to factory default settings (see [Factory default settings](#) on page 159).

If you do not know the current IP address of the AirBridge, first try to use the NETGEAR Insight app or an IP scanner application to detect the IP address before you reset the AirBridge to factory default settings.

You can use either the physical **Reset** button on the back panel of the AirBridge or the software **Reset** button in the local browser UI.

After you reset the AirBridge to factory default settings, the user name is admin, the local login password is **password**, the LAN IP address is 192.168.0.100, the AirBridge's DHCP client is enabled, the default management SSID is shown in the format NETGEARxxxxxx-SETUP, and the default password for WiFi access is **sharedsecret**. For a list of factory default settings, see [Factory default settings](#) on page 159.

To reset the AirBridge to factory default settings using the local browser UI:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under System Manager, select **Firmware**.
The page displays the Firmware Upgrade section and the Backup/Restore Settings section.
5. In the Backup/Restore Settings section, click the Reset to Default **Reset** button.
The page displays the reset progress.

WARNING: To avoid the risk of corrupting the firmware, do not interrupt the reset. For example, do not close the browser, click a link, or load a new page. Do not turn off the AirBridge. Wait until the AirBridge finishes.

When the reset is finished, your address bar of your web browser might show 192.168.0.100, which is the default IP address of the AirBridge.

6. In the address bar, enter the IP address that was assigned to the AirBridge before you reset the AirBridge to factory default settings.
The Day Zero Easy Setup page displays.
If you do not know the IP address, see [Access the AirBridge for initial configuration](#) on page 14.

Manage the date and time settings

By default, the AirBridge is configured to automatically get the date and time from an Network Time Protocol (NTP) server that is preconfigured.

You can also manually set the date and time, configure a different time zone from the one that you specified on the Day One Easy Setup page, and specify daylight saving time settings.

To manage the date and time settings:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Management, select **Time Zone**.

The page that displays shows the Date and Time Settings section and the Time Zone section.

5. To configure the date and time, in the Date and Time Settings section, select one of the following radio buttons:

- **Manually Set Date and Time.** Specify the date and time settings by doing one of the following:
 - Enter the setting manually by doing the following:
 - a. In the **Date** fields, specify the year, month, and date.
 - b. In the **Time** fields, specify the hour and minutes.
Use 24-hour format.
 - Synchronize the date and time setting with the computer from which you log in to the local browser UI of the AirBridge by clicking the **Synchronize with PC** button.
- **Automatically Get Date and Time.** The AirBridge automatically gets the date and time from the Network Time Protocol (NTP) server that is specified in the **NTP Server** field.
This is the default setting. You can specify a different NTP server from the one that is preconfigured.

6. To configure a different time zone from the one that you specified on the Day One Easy Setup page, in the Time Zone section, do one of the following:

- Select the **Auto Detect** check box.
The AirBridge detects the time zone automatically.
- Clear the **Auto Detect** check box and select a time zone from the **Time Zone** menu.
If you manually select a time zone, you can also manually configure daylight saving time settings (see the next step).

7. To manually enable and configure daylight saving time settings, in the Time Zone section, do the following:
 - a. Select the **Enable Daylight Saving** check box.
 - b. From the **Start** menus, select the month, day, and time that daylight saving time must start.
 - c. From the **End** menus, select the month, day, and time that daylight saving time must end.
8. Click the **Apply** button.

Your settings are saved and applied.

Configure and view the logs

The AirBridge generates messages in response to events, faults, errors, changes in configuration, and other occurrences. The messages are stored locally. In addition, you can configure the AirBridge to forward the messages to a remote server for monitoring purposes or long-term archival storage. Local and remote configuration of the logging capability includes filtering of messages logged or forwarded based on their severity.

View and manage the system log

The system log stores messages in memory based on the severity of an event. You can view these messages and specify the event severity that the AirBridge logs. You can also download the messages and clear the message log.

To view and manage the system log:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to

which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under System Manager, select **Log**.
The System Log page displays.
5. To manage the log capability, select one of the following Status radio buttons:
 - **Enable**. The AirBridge log messages.
This is the default settings.
 - **Disable**. The AirBridge does not log messages.
6. From the **Log type** menu, select the event severity that the AirBridge logs:
 - **ALL**. All events are logged. This is the default setting. A large number of events might be logged.
 - **Debug**. Events that provide very detailed device information, down to the debugging level, are logged.
 - **Information**. Events that provide device information are logged.
 - **Notice**. Normal but significant device events are logged.
 - **Warning**. The lowest level of device warnings are logged.
 - **Error**. Device errors are logged. An example is a failure to request a device token.
 - **Critical**. The third-highest device warning level. An critical event is logged if a critical device malfunction occurs.
 - **Alert**. The second-highest warning level. An alert event is logged if a serious device malfunction occurs, such as all device features being down. Action must be taken immediately.
 - **Emergency**. The highest warning level. If the device is down, or not functioning properly, an emergency event is logged.

Note: Events with the selected severity level and all events of greater severity are logged. For example, if you select Error, the logged events include Error, Critical, Alert, and Emergency.
7. Click the **Apply** button.
Your settings are saved and applied.
8. To refresh the information on the page, click the **Refresh** button.
The page refreshes and displays the most recent log messages.

9. To download the log file to your computer, click the **Download** button, and save the log file to a location on your computer.
10. To clear the log, click the **Clear** button.
The pages refreshes and all log messages are cleared.

Set up a remote log server

You can let the AirBridge send log messages to a remote log server, which is also referred to as a remote syslog host.

You can also let the AirBridge send the traffic log to the remote log server. (The traffic log is too large to be stored locally on the AirBridge.)

To set up a remote log server:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under System Manager, select **Log**.
The System Log page displays.
5. To manage the remote log server capability, select one of the following Remote Log radio buttons:
 - **Enable**. The AirBridge sends log messages to a remote log server. You must specify the IP address of the remote log server (see [Step 7](#)).
 - **Disable**. The AirBridge does not send log messages to a remote log server. This is the default settings.

6. If the remote log server capability is enabled, to manage whether the traffic log is sent to the remote log server, select one of the following Traffic Log radio buttons:
 - **Enable.** The AirBridge sends its traffic log to the remote log server.
 - **Disable.** The AirBridge does not send its traffic log to the remote log server. This is the default settings.
7. In the **Log Server IP Address** field, enter the IP address of the remote log server.
8. In the **Log Server Port** field, enter the port number that the AirBridge uses to contact the remote log server.
By default, the port number is 514.
9. Click the **Apply** button.
Your settings are saved and applied.

Set up email alerts

You can specify an email address to which the AirBridge automatically can send an alerts when the configuration of the AirBridge is changed.

To set up email alerts:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Management, select **Advanced**.
The page displays the advanced settings with the Management Mode section at the top.

5. In the Email Alert section, configure the following settings:
 - a. Select the Status **Enable** check box.
The field and menus become available.
 - b. In the **From** field, enter the originating email address.
 - c. In the **To** field, enter the email address of the recipient.
 - d. In the **Subject** field, enter the subject information of the email or leave the default subject information.
The subject information is *[Email-Alert][WBC502][BC:A5:11:7E:EC:F8] Configuration Changed*.
 - e. In the **Username** field, enter the user name to access the originating email account.
 - f. In the **Password** field, enter the password to access the originating email account.
 - g. In the **SMTP Server** field, enter the name of the outgoing email server name.
 - h. In the **Port** field, enter the port number that the AirBridge uses to contact the SMTP server.
By default, the port number is 514.
 - i. From the **Security Mode** menu, select one of the following options, depending on the security that the SMPT server uses:
 - **None**. The SMPT server does not use security. This is the default setting.
 - **SSL/TLS**. The SMPT server uses the SSL or TLS security protocol
 - **STARTLS**. The SMPT server uses the STARTLS security protocol.
6. To send a test email, click the **Send Test Mail** button.
7. Verify that the recipient receives the email.
8. Click the **Apply** button.
Your settings are saved and applied.

Manage access security settings

You can change the local device password for access to the local browser UI of the AirBridge. You can also manage the SSH and HTTPS settings.

Change the local login password

The local login password is the password that lets you log in to the local browser UI.

When you performed the initial configuration on the Day Zero Easy Setup page, you were required to change the local login password. You can change it again.

The password must be 8 to 32 characters in length and must contain at least one uppercase letter, one lowercase letter, and one number. The following special characters are allowed:

! @ # \$ % ^ & * ()

To change the local login password:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under System Manager, select **Account**.

The Account Settings page displays.

5. In the **Current Password** field, enter your current local login password.
6. In the **New Password** and **Verify Password** fields, enter the new local login password.
7. Click the **Apply** button.

Your settings are saved and applied.

You are logged out from the local browser UI. If you log in again, use your new local login password.

Manage the HTTPS settings

By default, secure HTTP (HTTPS) access is enabled on the AirBridge so that a connection to the local browser UI is secure. Any attempt to log in over an HTTP connection is automatically changed to an HTTPS connection, that is, HTTP access is automatically forwarded to HTTPS access. Although you can disable HTTPS access so that you can access the AirBridge over an HTTP connection, we recommend that you keep HTTPS access enabled.

To manage the HTTPS settings:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Management, select **Advanced**.

The page displays the advanced settings with the Management Mode section at the top.

5. In the HTTPS Setting section, select one of the following Status radio buttons:

- **Enable**. HTTPS access is enabled.
This is the default setting. We recommend that you keep HTTPS access enabled.
- **Disable**. HTTPS access is disabled.

6. If HTTPS is enabled, in the HTTPS Setting section, select one of the following HTTPS Forward radio buttons:
 - **Enable.** An attempt to log in over an HTTP connection is automatically changed to an HTTPS connection, that is, HTTP access is automatically forwarded to HTTPS access.
This is the default setting. We recommend that you keep HTTPS forwarding enabled.
 - **Disable.** An attempt to log in over an HTTP connection is not automatically changed to an HTTPS connection.
7. Click the **Apply** button.
Your settings are saved and applied.

Manage the SSH settings

By default secure shell (SSH) access is disabled on the AirBridge. You can enable it.

To manage the SSH settings:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Management, select **Advanced**.
The page displays the advanced settings with the Management Mode section at the top.
5. In the SSH Setting section, select one of the following Status radio buttons:
 - **Enable.** SSH access is enabled.

- **Disable.** SSH access is disabled.
This is the default setting. If you do not intend to use SSH, we recommend that you keep SSH access disabled.

6. Click the **Apply** button.
Your settings are saved and applied.

Specify a management VLAN

By default, you can access the local browser UI from any VLAN and management traffic such as traffic from a DHCP server can reach the AirBridge from any VLAN. That is, management traffic is untagged.

For additional security, you can specify a management VLAN ID so that you can access the local browser UI from this VLAN only and management traffic can reach the AirBridge over this VLAN only. That is, the management traffic is tagged with the VLAN ID.

CAUTION: The VLAN must be defined on your network, and the DHCP server, switch, and router to which the AirBridge is connected must be able to reach the AirBridge over this VLAN. Otherwise, when you change the VLAN, connectivity problems might occur, and you might be locked out from the local browser UI.

To specify a management VLAN for the AirBridge:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Network, select **Wireless**.

The Wireless Settings page displays.

5. Scroll to the Management VLAN Setting section at the bottom of the page.
6. Click the Status **Enable** radio button.
7. In the field that becomes available, enter the ID of the management VLAN.
8. Click the **Save** button.

Your settings are saved but not yet applied.

A pop-up window opens. The window shows the number of changes to be applied.

9. In the pop-up window, click the **Apply** button.

Your changes are applied. If the WiFi link must be reestablished, the page displays the number of seconds before the AirBridge is back online.

7

Monitor the AirBridge and its Network Connections

This chapter describes how you can monitor the AirBridge and its network connections.

The chapter includes the following sections:

- [View the device status and other information](#)
- [View the 5 GHz WiFi connections](#)
- [View the CPU load on the AirBridge](#)
- [View the 5 GHz WiFi and LAN traffic load](#)

View the device status and other information

You can view AirBridge device information, memory information, Ethernet LAN information for IPv4 and IPv6, WiFi LAN information for the 5 GHz band, and statistics.

To view the device status and other information:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see the information in the introduction of this task.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for that location (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections. You cannot change any settings on this page.

The following tables describe the information on the page.

Table 5. Device Information section

Setting	Description
AirBridge Name	The device name (system name). For more information, see Change the device name of the AirBridge on page 57.
Serial Number	The fixed serial number of the AirBridge.
MAC Address LAN	The fixed MAC address of the LAN2 port.
MAC Address Wireless LAN - 5GHz	The fixed MAC address of the 5 GHz radio interface.
Country	The country and region that you set for the AirBridge operation. For more information, see Change the country and region of operation on page 58.

Table 5. Device Information section (Continued)

Setting	Description
Current Local Time	The time that the AirBridge detected. For more information, see Manage the date and time settings on page 120.
Uptime	The period since that last time the AirBridge started or rebooted.
Firmware Version	The firmware version. For more information, see Upgrade the firmware on the AirBridge on page 113.
Device Version	The device version.
Management VLAN ID	Shows whether management traffic is tagged or untagged. For more information, see Specify a management VLAN on page 130.

Table 6. Memory Information section

Setting	Description
Total Available	The total memory in kB and the available memory in kB.
Free	The total memory in kB and the free memory in kB.
Cached	The total memory in kB and the cached memory in kB.
Buffered	The total memory in kB and the buffered memory in kB.

Table 7. LAN Information - IPv4 section

Setting	Description
IP Address	The IPv4 address that is assigned to the LAN port of the AirBridge. This is the IPv4 address over which you can reach the local browser UI. For more information, see Specify a static IPv4 address for the AirBridge on page 50.
Subnet Mask	The subnet mask that is associated with the IPv4 address.
Gateway	The IPv4 address of the gateway.
Primary DNS	The IPv4 address of the primary DNS server.
Secondary DNS	The IPv4 address of the secondary DNS server, if any.

Table 7. LAN Information - IPv4 section (Continued)

Setting	Description
DHCP Client	Shows whether the DHCP client of the AirBridge is enabled. For more information, see Reenable the DHCP client of the AirBridge on page 52.
Spanning Tree Protocol (STP)	Shows whether STP is enabled. For more information, see Manage the STP settings on page 53.

Table 8. LAN Information - IPv6 section

Setting	Description
IP Address	The IPv6 address that is assigned to the LAN port of the AirBridge. This is the IPv6 address over which you can reach the local browser UI.
Link-Local Address	The link-local IPv6 address of the AirBridge. For more information, see Specify a link-local IPv6 address for the AirBridge on page 51.
Gateway	The IPv6 address of the gateway.
Primary DNS	The IPv6 address of the primary DNS server.
Secondary DNS	The IPv6 address of the secondary DNS server, if any.

Table 9. Wireless LAN Information - 5GHz section

Setting	Description
Operation Mode	The operation mode of the AirBridge. For more information, see Manually Configure or Change the Operation Mode on page 37.
Wireless Mode	The WiFi mode, which is fixed at 802.11 ac/n/a.
Channel Bandwidth	The WiFi channel bandwidth. For for information, see Manage the channel high throughput mode on page 91.

Table 9. Wireless LAN Information - 5GHz section (Continued)

Setting	Description
Channel	The WiFi channel. For for information, see Manage the channel or channels on page 92.
Distance	The distance is specified for the link partner or partners of the AirBridge. For for information, see Specify the approximate distance for the WiFi connection on page 64.

The information that is described in the following table displays only if the operation mode is AirBridge Master or Access Point.

For more information about these settings, see [Change or configure a new 5 GHz SSID for a master with the AirBridge mode enabled](#) on page 68, [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled](#) on page 71, or [Change or configure a 5 GHz SSID for an access point](#) on page 76.

Table 10. Statistics

Setting	Description
Profile	The profile number, which depends on the number of SSIDs that are supported and enabled on the AirBridge.
SSID	The WiFi network name.
Security	The type of WiFi security on the SSID.
VID	The VLAN ID, if any, that is configured for the SSID.
802.1Q	Shows whether VLAN isolation is enabled.
RX (Packets)	The amount of packets in Bytes and the number of packets that is received on the SSID.
TX (Packets)	The amount of packets in Bytes and the number of packets that is transmitted on the SSID.

- To refresh the information on the page, click the **Refresh** button.

View the 5 GHz WiFi connections

You can view all WiFi connections on the 5 GHz radio.

To view the 5 GHz WiFi connections:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Overview, select **Connections**.

The page that displays shows the Connection List - 5GHz table.

The information depends on the operation mode of the AirBridge and the type of connected WiFi device or devices.

- If the operation mode of the AirBridge is AirBridge Master or Access Point, for each connected WiFi device, the page displays the information that is described in the following table.

Table 11. Operation mode is AirBridge Master or Access Point: WiFi device information

Setting	Description
SSID	The 5 GHz SSID to which the WiFi device is connected.
MAC Address	The MAC address of the connected WiFi device.
TX (KB)	The total amount of traffic in kilobytes that the WiFi device transmitted.
RX (KB)	The total amount of traffic in kilobytes that the WiFi device received.

Table 11. Operation mode is AirBridge Master or Access Point: WiFi device information (Continued)

Setting	Description
RSSI (dBm)	The received signal strength indicator (RSSI) for the WiFi device. The RSSI is expressed in decibel-milliwatts (dBm).
Block	For more information, see Step 6 .

- If the operation mode of the AirBridge is AirBridge Satellite or Client Bridge, the page displays the 5 GHz backhaul SSID information that is described in the following table.

Table 12. Operation mode is AirBridge Satellite or Client Bridge: 5 GHz backhaul SSID information

Setting	Description
SSID	The 5 GHz backhaul SSID to which the WiFi device is connected.
BSSID	The MAC address of the radio on the master or access point.
Connection Status	Shows whether the satellite is associated with the master or the client bridge is associated with an access point.
Wireless Mode	The WiFi mode. For example, 802.11 ac/n/a.
Current Channel	The WiFi channel. For example, 5.500 GHz (Channel 100).
Security	The WiFi security. For example, WPA2/PSK AES.
Tx Data Rates (Mbps)	The WiFi transmit data rate in Mbps. For example, 400 Mb/s.
Current noise level	The noise level in dBm, For example, -95 dBm.
Signal Strength	The signal strength in dBm., For example, -52 dBm.

- To refresh the information on the page, click the **Refresh** button.
- If the operation mode of the AirBridge is AirBridge Master or Access Point, to block (*kick*) a WiFi device, do the following:
 - Click the associated **Kick** button in the Block column on the right. A pop-up window opens.
 - Click the **OK** button. The WiFi device no longer displays on the page. An ACL that denies the MAC address of the WiFi device is automatically added to the 5 GHz SSID from which

you blocked the WiFi device. This ACL denies access to the WiFi device but allows access all other WiFi devices. (For more information, see [Set up a MAC filter for a 5 GHz SSID](#) on page 102.)

A pop-up window opens. The window shows the number of changes to be applied. (The automatically-created ACL is not saved until you click the **Apply** button.)

- c. Click the **Apply** button.

Your settings are saved and applied. The WiFi connection is reestablished. The page displays the number of seconds before the AirBridge is back online.

View the CPU load on the AirBridge

You can view the CPU load on the AirBridge.

To view the CPU load:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.

2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Overview, select **Realtime**.

The page that displays shows the CPU load. By default, the Load tab is selected.

The CPU load is displayed as a graph, which is updated every three seconds and covers a maximum period of three minutes.

The page also displays the current load, average load, and peak load, each of which is expressed as a percentage and is measured during the previous three minutes.

View the 5 GHz WiFi and LAN traffic load

You can view the 5 GHz WiFi and LAN traffic load on the AirBridge.

To view the 5 GHz WiFi and LAN traffic load:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Overview, select **Realtime**.

The page that displays shows the CPU load. By default, the Load tab is selected.

5. Select the **Traffic** tab.

The page displays traffic information for the default 5 GHz SSID.

The traffic load is displayed as a graph, which is updated every three seconds and covers a maximum period of three minutes.

The page also displays the current inbound and outbound traffic loads, the average inbound and outbound traffic loads, and the peak inbound and outbound traffic loads, each of which is expressed in kilobytes per second (KB/s), and is measured during the previous three minutes.

6. If you configured one or more other 5 GHz SSIDs on the AirBridge, to view the traffic information for another 5 GHz SSID, select the tab for the SSID.

The page displays traffic information for the selected 5 GHz SSID.

7. To view the traffic information for the wired connection, select the **LAN** tab.

The page displays traffic information for the Ethernet ports.

8

Perform Diagnostics and Troubleshooting

This chapter describes how you can perform diagnostics and troubleshoot AirBridge and its network connections.

The chapter includes the following sections:

- [Send a ping](#)
- [Send a traceroute request](#)
- [Send a name server lookup request](#)
- [Perform a speed test](#)
- [Quick tips for troubleshooting](#)
- [Troubleshoot with the LEDs](#)
- [Troubleshoot the WiFi connectivity](#)
- [You cannot log in to the AirBridge over a LAN connection](#)
- [Changes are not saved](#)
- [Troubleshoot your network using your computer ping utility](#)

Send a ping

You can ping the IPv4 address of a device or network location from the AirBridge and view the results of the ping test. You can use this option to check whether the AirBridge can communicate with a particular IPv4 device or network location.

To send a ping:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.

2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Management, select **Tools**.

By default, the Ping tab is selected and the Ping Test Parameters page displays.

5. In the **Target IP / Domain Name** field, enter the IP address that the AirBridge must ping.

6. In the **Ping Packet Size** field, enter the size in bytes of the each ping packet.

The default size is 64 bytes.

7. In the **Number of Pings** field, enter the number of ping packets that the AirBridge must send.

The default number is 4.

8. Click the **Start** button.

The AirBridge sends the ping. The results display on the page.

Send a traceroute request

You can configure the AirBridge to send a traceroute request to an IPv4 address or host name and view the results of the traceroute request. You can use this option to discover the paths that packets take to a remote destination.

To send a traceroute request:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.

2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Management, select **Tools**.

By default, the Ping tab is selected and the Ping Test Parameters page displays.

5. Select the **Traceroute** tab.

The Traceroute Test Parameters page displays.

6. In the **Target IP / Domain Name** field, enter the IP address or domain name for which you want to send a traceroute request.

7. Click the **Start** button.

The AirBridge sends the traceroute request. By default, the traceroute request consists of a 38-byte packet and can detect a maximum of 30 hops. The results display on the page.

Send a name server lookup request

You can configure the AirBridge to send a domain name server lookup (nslookup) request to an IPv4 address or host name and view the results of the nslookup request. You can use this option to discover the domain name of an IPv4 address or, the other way around, the IPv4 address of a domain name.

To send a name server lookup request:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.
The login page displays.
If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.
3. Enter the AirBridge user name and local device password.
The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.
If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).
The Device Status page displays the Device Information section and other sections.
4. Under Management, select **Tools**.
By default, the Ping tab is selected and the Ping Test Parameters page displays.
5. Select the **Nslookup** tab.
The Nslookup Test Parameters page displays.
6. In the **Target IP / Domain Name** field, enter the IP address or domain name for which you want to send a name server lookup request.
7. Click the **Start** button.
The AirBridge sends the name server lookup request. The results display on the page.

Perform a speed test

You can perform a speed test between the AirBridge and an IPv4 address or host name and view the results of the speed test. You can also use this option to determine the general network performance. The maximum speed that the AirBridge can measure is 100 Mbps.

Use the speed test to determine the point-to-point link speed between a master and a satellite or between an access point and a client bridge. For example, after the point-to-point link between a master and a satellite is established, you can do the following:

- On the master, enter the IP address of the satellite, and perform the speed test to determine the speed of the downlink, which is the link from the master to the satellite.
- On the satellite, enter the IP address of the master, and perform the speed test to determine the speed of the uplink, which is the link from the satellite to the master.

To perform a speed test:

1. Open a web browser from a computer that is connected to the same network as the AirBridge or directly to the AirBridge through an Ethernet cable or WiFi connection.
2. Enter the IP address that is assigned to the AirBridge.

The login page displays.

If your browser does not display the login page but displays a security message and does not let you proceed, see [Log in to the AirBridge after initial setup](#) on page 34.

3. Enter the AirBridge user name and local device password.

The user name is **admin**. The local device password is the one that you specified the first time that you logged in. The user name and password are case-sensitive.

If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

The Device Status page displays the Device Information section and other sections.

4. Under Management, select **Tools**.

By default, the Ping tab is selected and the Ping Test Parameters page displays.

5. Select the **Speed Test** tab.

The Speed Test Parameters page displays.

6. In the **Target IP / Domain Name** field, enter the IP address or domain name for which you want to perform a speed test.

7. In the **Time Period** field, enter the duration in seconds of the entire speed test.
The default is 20 seconds.
8. In the **Check Interval** field, enter the interval in seconds between the intermediate throughput results.
The default is 5 seconds.

The **IPv4 Port** field is fixed at port number 5201. The **IPv6 Port** field is fixed at port number 60001.
9. Click the **Start** button.
The AirBridge performs the speed test. The results display on the page.

Quick tips for troubleshooting

*** The AirBridge is unresponsive or does not function normally.**

If the AirBridge is unresponsive or does not function normally, restart both the power adapter and the AirBridge:

1. Unplug the power cable of the power adapter to which the AirBridge is connected.
Both the power adapter and the AirBridge power off.
2. Wait 30 seconds.
3. Plug in the power cable of the power adapter.

WARNING: Power the AirBridge only with an Ethernet cable that is connected from the LAN1 (PoE-24V) port on the AirBridge to the PoE port on the supplied power adapter. Do not use any other power source such as a PoE switch. The LAN1 (PoE-24V) port is not a standard PoE port. Using any other power source could damage the device.

Both the power adapter and the AirBridge power on.

4. Wait two minutes.

*** You cannot connect over WiFi to the local browser UI.**

If you cannot connect over WiFi to the local browser UI of AirBridge, try the following:

- Make sure that the AirBridge is broadcasting a WiFi signal and is not disabled or turned off.
- Make sure that the 2.4 GHz management interface was not automatically turned off or disabled. For more information, see [Disable the 2.4 GHz management SSID](#) on

page 88 and [Disable the idle time-out for the 2.4 GHz management SSID](#) on page 87.

- Make sure that the WiFi network name (SSID) and WiFi security settings of the 2.4 GHz management interface on the AirBridge and the WiFi settings on your WiFi-enabled computer or WiFi device match exactly. For more information, see [Change the passphrase for the 2.4 GHz management SSID](#) on page 86.

*** You cannot connect a satellite to a master or a client bridge to an access point.**

If you cannot connect a satellite to an AirBridge that functions as a master or a client bridge to an AirBridge that functions as a access point, try the following:

- Make sure that the AirBridge that functions as a master or access point is broadcasting a WiFi signal and is not disabled or turned off.
- Make sure that the WLAN LED on the AirBridge is not off.
 - **Master or access point.** If the WLAN LED is off on a master or access point, none of the 5 GHz SSIDs might be enabled. For more information, see [Change or configure a new 5 GHz SSID for a master with the AirBridge mode enabled](#) on page 68, [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled](#) on page 71, or [Change or configure a 5 GHz SSID for an access point](#) on page 76.
 - **Satellite or client bridge.** If the WLAN LED is off on a satellite or client bridge, the satellite did not connect to the master or the client bridge did not connect to the access point.
Make sure that you configured the satellite or client bridge correctly. For more information, see [Configure the AirBridge as a satellite in a point-to-point setup](#) on page 40 or [Configure the AirBridge as a client bridge](#) on page 45.

For hardware setup troubleshooting information and information about the signal strength indicator (SSI) LEDs, see the hardware installation guide, which you can download by visiting netgear.com/support/download/.

- Make sure that the satellite or client bridge is not inadvertently blocked on the 5 GHz SSID of the master or access point. For more information, see [Set up a MAC filter for a 5 GHz SSID](#) on page 102.
- Make sure that a WiFi on/off schedule is not active on the 5 GHz SSID of the master or access point. For more information, see [Set up a WiFi on/off schedule for a 5 GHz SSID](#) on page 100.
- Wait to see if the 5 GHz radio on the AirBridge is in the process of changing to a different channel. If the 5 GHz radio is functioning on a DFS channel that is also being used as a weather channel or by a radar, the 5 GHz radio must halt operation for a period from 1 to 10 minutes, and move to another channel. This delay causes a satellite or client bridge to lose its WiFi connection while the AirBridge waits to reestablish radio operation on a different channel.

*** You cannot connect a WiFi client to a 5 GHz SSID on a master or access point.**

If you cannot connect a WiFi client to a 5 GHz SSID on an AirBridge that functions as a master with the AirBridge mode disabled or as an access point:

- Make sure that the AirBridge that functions as the master or access point is broadcasting a WiFi signal and is not disabled or turned off.
- Make sure that the WiFi network name (SSID) and WiFi security settings of the 5 GHz SSID on the AirBridge and the WiFi settings on the WiFi client match exactly. For more information, see [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled](#) on page 71 or [Change or configure a 5 GHz SSID for an access point](#) on page 76.
- Make sure that the WiFi client supports the type of security that you are using for the AirBridge 5 GHz SSID (WPA2-PSK or WPA2-Enterprise). For more information, see [Manage the 5 GHz SSIDs and WiFi security](#) on page 65.
- Make sure that the WiFi signal is not blocked by objects between the AirBridge and the WiFi client.
- Make sure that the AirBridge's SSID broadcast is not disabled. If the AirBridge's SSID broadcast is disabled, the WiFi network name is hidden and does not display in the WiFi client's scanning list. To connect to a hidden network, you must enter the network name and the WiFi password. For more information about the SSID broadcast, see [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled](#) on page 71 or [Change or configure a 5 GHz SSID for an access point](#) on page 76.
- Make sure that the WiFi client does not use a static IP address but is configured to receive an IP address automatically with DHCP. (For most devices, DHCP is the default setting.)
- Make sure that the WiFi client is not inadvertently blocked on the 5 GHz SSID of the master or access point. For more information, see [Set up a MAC filter for a 5 GHz SSID](#) on page 102.
- Make sure that a WiFi on/off schedule is not active on the 5 GHz SSID of the master or access point. For more information, see [Set up a WiFi on/off schedule for a 5 GHz SSID](#) on page 100.

*** You cannot connect over Ethernet to the local browser UI.**

If you cannot access the local browser UI by connecting an Ethernet cable to the LAN2 port on the AirBridge, try the following:

- Make sure that the Ethernet cables are securely plugged in.
- Make sure that you use the correct IP address and subnet of the AirBridge.

By default, the IP address of the AirBridge is 192.168.0.100 (see [Connect over Ethernet using a directly connected computer](#) on page 28).

If the AirBridge is connected to a network with a DHCP server and you do not know the IP address, determine the IP address that the DHCP server assigned to the AirBridge by using one of the following methods:

- **Windows-based computer.** If you use a Windows-based computer, open Windows Explorer, and click the **Network** link. If prompted, enable the Network Discovery feature. Under Network Infrastructure, locate the WBC502 (assuming that you did not change the device name), and double-click **WBC502**.
- **DHCP server.** Access the DHCP server in your network and open the page the shows the network connections.
- **IP network scanner.** Use an IP network scanner to scan for the IP address that is assigned to the AirBridge.
- **NETGEAR Insight app.** Use the NETGEAR Insight app to discover the IP address that is assigned to the AirBridge. For more information, see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15.

Troubleshoot with the LEDs

When you connect the LAN1 (PoE-24V) port on the AirBridge to the supplied power adapter and plug in the power adapter to an outlet, the AirBridge LEDs light as described here:

1. The Power LED lights solid amber.
2. After about two minutes, the following occurs:
 - The LAN1 LED lights solid amber if the LAN port on the power adapter is connected to an Ethernet device.
The LAN1 (PoE-24V) port on the AirBridge must always be connected to the supplied power adapter, but if the LAN port on the power adapter is not connected to an Ethernet device, the LAN1 port on the AirBridge remains off.
 - If the AirBridge is already set up and configured, the WLAN LED lights solid amber.
 - If a LAN device is connected to the LAN2 port on the AirBridge, the LAN2 LED lights solid amber.

You can use the LEDs for troubleshooting. For more information, see the following sections:

- [Power LED remains off](#) on page 150
- [WLAN LED is off](#) on page 150
- [A LAN LED is off while a device is connected](#) on page 151

Note: For information about the signal strength indicator (SSI) LEDs, which indicate the strength of the signal for the WiFi connection either between the satellite and the master or between the client bridge and the access point, see the hardware installation guide, which you can download by visiting netgear.com/support/download/.

Power LED remains off

When you connect the LAN1 (PoE-24V) port on the AirBridge to the supplied power adapter, plug in the power adapter to an outlet, but the Power LED remains off, do the following:

- Make sure that the Ethernet cable between the AirBridge and the power adapter is correctly connected at both ends and that you use the correct ports:
 - On the AirBridge, use the LAN1 (PoE-24V) port.
 - On the power adapter, use the PoE port.

WARNING: Power the AirBridge only with an Ethernet cable that is connected from the LAN1 (PoE-24V) port to the PoE port on the supplied power adapter. Do not use any other power source such as a PoE switch. The LAN1 (PoE-24V) port is not a standard PoE port. Using any other power source could damage the device.

- Make sure that the power cable of the power adapter is plugged into a functioning electrical outlet. If it is plugged into a power strip, make sure that the power strip is turned on. If it is plugged directly into the wall, verify that the outlet is not switched off.

If the error persists, a hardware problem might exist. For recovery instructions or help with a hardware problem, contact technical support at netgear.com/support.

WLAN LED is off

If the WLAN LED is off, check these items, depending on the operation mode of the AirBridge:

- **Master or access point.** If the WLAN LED is off on a master or access point, none of the 5 GHz SSIDs might be enabled. Make sure that at least one 5 GHz SSID is

enabled. For more information, see [Change or configure a new 5 GHz SSID for a master with the AirBridge mode enabled](#) on page 68, [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled](#) on page 71, or [Change or configure a 5 GHz SSID for an access point](#) on page 76.

- **Satellite or client bridge.** If the WLAN LED is off on a satellite or client bridge, the satellite did not connect to the master or the client bridge did not connect to the access point.

Make sure that you configure the satellite or client bridge correctly so that it can connect to its link partner. For more information, see [Configure the AirBridge as a satellite in a point-to-point setup](#) on page 40 or [Configure the AirBridge as a client bridge](#) on page 45.

For hardware setup troubleshooting information and information about the signal strength indicator (SSI) LEDs, see the hardware installation guide, which you can download by visiting netgear.com/support/download/.

If the error persists, a hardware problem might exist. For recovery instructions or help with a hardware problem, contact technical support at netgear.com/support.

A LAN LED is off while a device is connected

The LAN1 LED and LAN2 LED on the AirBridge function as follows:

- **LAN1 LED.** The LAN1 (PoE-24V) port on the AirBridge must always be connected to the supplied power adapter. If the LAN port on the power adapter is not connected to an Ethernet device, the LAN1 LED on the AirBridge remains off. This is normal behavior. When you connect a powered-on network device such as a switch to the LAN port on the power adapter, the LAN1 LED on the AirBridge lights amber.
- **LAN2 LED.** When a powered-on device such as a PTZ camera is directly connected to the LAN2 port on the AirBridge, the LAN2 LED on the AirBridge lights amber.

If the LAN1 LED or LAN2 LED remains off while a powered-on device is connected as described above, a hardware connection problem might be occurring. Check these items:

- Make sure that the Ethernet cable connectors are securely plugged in at the AirBridge, the power adapter, and the network device.
- Make sure that the connected network device is actually turned on.
- Make sure that you are using the correct Ethernet cable. Use a standard Category 5 Ethernet patch cable. If the network device incorporates Auto Uplink™ (MDI/MDIX) ports, you can use either a crossover cable or a normal patch cable.

Troubleshoot the WiFi connectivity

Tip: If you want to change the WiFi settings of the AirBridge's network, use a wired connection to avoid being disconnected when the new WiFi settings take effect.

Troubleshoot the WiFi connectivity between a satellite and a master

If you cannot connect a satellite to an AirBridge that functions as a master, check these items:

- Make sure that the AirBridge that functions as a master is broadcasting a WiFi signal and is not disabled or turned off.
- On the satellite, make sure that the right signal strength indicator (SSI) LED is solid green or the middle SSI LED is solid amber.
For more information about hardware setup troubleshooting and about the SSI LEDs, which indicate the strength of the signal for the WiFi connection either between the satellite and the master, see the hardware installation guide, which you can download by visiting netgear.com/support/download/.
- Make sure that the WLAN LED on the AirBridge is not off.
 - **Master.** If the WLAN LED is off on a master, none of the 5 GHz SSIDs might be enabled. For more information, see [Change or configure a new 5 GHz SSID for a master with the AirBridge mode enabled](#) on page 68 or [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled](#) on page 71.
 - **Satellite.** If the WLAN LED is off on a satellite, the satellite did not connect to the master.
Make sure that you configured the satellite correctly. For more information, see [Configure the AirBridge as a satellite in a point-to-point setup](#) on page 40.
- Make sure that the satellite is not inadvertently blocked on the 5 GHz SSID of the master. For more information, see [Set up a MAC filter for a 5 GHz SSID](#) on page 102.
- Make sure that a WiFi on/off schedule is not active on the 5 GHz SSID of the master. For more information, see [Set up a WiFi on/off schedule for a 5 GHz SSID](#) on page 100.
- Wait to see if the 5 GHz radio on the AirBridge is in the process of changing to a different channel. If the 5 GHz radio is functioning on a DFS channel that is also being used as a weather channel or by a radar, the 5 GHz radio must halt operation for a period from 1 to 10 minutes, and move to another channel. This delay causes a satellite to lose its WiFi connection while the AirBridge waits to reestablish radio operation on a different channel.

Troubleshoot the WiFi connectivity between a client bridge and an access point

If you cannot connect a client bridge to an AirBridge that functions as an access point, check these items:

- Make sure that the AirBridge that functions as an access point is broadcasting a WiFi signal and is not disabled or turned off.
- On client bridge, make sure that the right signal strength indicator (SSI) LED is solid green or the middle SSI LED is solid amber.
For more information about hardware setup troubleshooting and about the SSI LEDs, which indicate the strength of the signal for the WiFi connection between the client bridge and the access point, see the hardware installation guide, which you can download by visiting netgear.com/support/download/.
- Make sure that the WLAN LED on the AirBridge is not off.
 - **Access point.** If the WLAN LED is off on an access point, none of the 5 GHz SSIDs might be enabled. For more information, see [Change or configure a 5 GHz SSID for an access point](#) on page 76.
 - **Client bridge.** If the WLAN LED is off on a client bridge, the client bridge did not connect to the access point. Make sure that you configured the client bridge correctly. For more information, see [Configure the AirBridge as a client bridge](#) on page 45.
- Make sure that the client bridge is not inadvertently blocked on the 5 GHz SSID of the access point. For more information, see [Set up a MAC filter for a 5 GHz SSID](#) on page 102.
- Make sure that a WiFi on/off schedule is not active on the 5 GHz SSID of the access point. For more information, see [Set up a WiFi on/off schedule for a 5 GHz SSID](#) on page 100.
- Wait to see if the 5 GHz radio on the AirBridge is in the process of changing to a different channel. If the 5 GHz radio is functioning on a DFS channel that is also being used as a weather channel or by a radar, the 5 GHz radio must halt operation for a period from 1 to 10 minutes, and move to another channel. This delay causes a client bridge to lose its WiFi connection while the AirBridge waits to reestablish radio operation on a different channel.

Troubleshoot the WiFi connectivity between a WiFi client and a master or access point

If you cannot connect a WiFi client such as a smartphone to an AirBridge that functions as a master with the AirBridge mode disabled or as an access point, check these items:

- Make sure that the master or access point is broadcasting a WiFi signal and is not disabled or turned off.
- Make sure that the WiFi network name (SSID) and WiFi security settings of the 5 GHz SSID on the master or access point and the WiFi settings on the WiFi client match exactly. For more information, see [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled](#) on page 71 or [Change or configure a 5 GHz SSID for an access point](#) on page 76.
- Make sure that the WiFi client supports the security that you are using for the AirBridge 5 GHz SSID (WPA2-PSK or WPA2-Enterprise). For more information, see [Manage the 5 GHz SSIDs and WiFi security](#) on page 65.
- Make sure that the WiFi signal is not blocked by objects between the AirBridge and the WiFi client.
- Make sure that the AirBridge's SSID broadcast is not disabled.
If the AirBridge's SSID broadcast is disabled, the WiFi network name is hidden and does not display in the WiFi client's scanning list. To connect to a hidden network, you must enter the network name and the WiFi password. For more information about the SSID broadcast, see [Change or configure a new 5 GHz SSID for a master with the AirBridge mode disabled](#) on page 71 or [Change or configure a 5 GHz SSID for an access point](#) on page 76.
- Make sure that the WiFi client does not use a static IP address but is configured to receive an IP address automatically with DHCP. (For most devices, DHCP is the default setting.)
- Make sure that the WiFi client is not inadvertently blocked on the 5 GHz SSID of the master or access point. For more information, see [Set up a MAC filter for a 5 GHz SSID](#) on page 102.
- Make sure that a WiFi on/off schedule is not active on the 5 GHz SSID of the master or access point. For more information, see [Set up a WiFi on/off schedule for a 5 GHz SSID](#) on page 100.

You cannot log in to the AirBridge over a LAN connection

If you are unable to log in to the AirBridge from a computer on your local network and use the AirBridge's local browser UI, check the following:

- If you are using an Ethernet-connected computer, check the Ethernet cable between the computer and the AirBridge.
- Make sure that the IP address of your computer is in the same subnet as the AirBridge. If you disabled the AirBridge's DHCP client and configured a fixed (static) IP address when you connected the AirBridge to your network (see [Specify a static IPv4 address for the AirBridge](#) on page 50), change the IP address and subnet mask on your computer to so that the IP addresses of your computer and the AirBridge are in the same IP subnet.
- If the AirBridge is connected to a network with a DHCP server and you do not know the IP address, determine the IP address that the DHCP server assigned to the AirBridge by using one of the following methods:
 - **Windows-based computer.** If you use a Windows-based computer, open Windows Explorer, and click the **Network** link. If prompted, enable the Network Discovery feature. Under Network Infrastructure, locate the WBC502 (assuming that you did not change the device name), and double-click **WBC502**.
 - **DHCP server.** Access the DHCP server in your network and open the page the shows the network connections.
 - **IP network scanner.** Use an IP network scanner to scan for the IP address that is assigned to the AirBridge.
 - **NETGEAR Insight app.** Use the NETGEAR Insight app to discover the IP address that is assigned to the AirBridge. For more information, see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15.
- Try quitting the browser and launching it again.
- Make sure that you are using the correct login information. The user name is **admin** and the password is the one that you specified the first time that you logged in. Make sure that Caps Lock is off when you enter this information. If you previously managed the AirBridge through the NETGEAR Insight app or Insight Cloud portal, enter the Insight network password for the Insight network location to which the AirBridge was assigned (see [Connect over WiFi using the NETGEAR Insight app on an iOS or Android mobile device](#) on page 15).

Changes are not saved

If you are logged in to the AirBridge's local browser UI and the AirBridge does not save the changes that you make on a page, do the following:

- When entering configuration settings, always click the **Save** or **Apply** button before moving to another page or tab. If you clicked the **Save** button, when you are ready with entering configuration settings, click the **Apply** button to apply the configuration settings. Otherwise, your changes are lost.
- Click the **Refresh** or **Reload** button in the web browser. It is possible that the changes occurred but that the old settings remain in the web browser's cache.

Troubleshoot your network using your computer ping utility

Most computers contain a ping utility that can send an echo request packet to a designated device. The device then responds with an echo reply. You can easily troubleshoot a network using the ping utility in your computer.

Test the LAN path from your computer to the AirBridge

You can ping the AirBridge from your computer to verify that the LAN path to your AirBridge is set up correctly.

To ping the AirBridge from a Windows-based computer:

1. From the Windows taskbar, click the **Start** button and select **Run**.
2. In the field provided, enter **ping** followed by the IP address of the AirBridge, as in this example:

ping 192.168.0.100

3. Click the **OK** button.

A message such as the following one displays:

```
Pinging <IP address> with 32 bytes of data
```

If the path is working, you see this message:

```
Reply from < IP address >: bytes=32 time=NN ms TTL=xxx
```

If the path is not working, you see this message:

```
Request timed out
```

If the path is not functioning correctly, one of the following problems might be occurring:

- Wrong physical connections
For a wired connection, make sure that the numbered LAN LED is lit for the port to which you are connected.
Check that the appropriate LEDs are on for your network devices. If your AirBridge and computer are connected to a separate Ethernet switch, make sure that the link LEDs are lit for the switch ports that are connected to your computer and AirBridge.
- Wrong network configuration
Verify that the Ethernet card driver software and TCP/IP software are both installed and configured on your computer.
Verify that the IP address for your AirBridge and your computer are correct and that the addresses are in the same subnet.

Test the path from your computer to a remote device

After you verify that the LAN path works correctly, test the path from your computer to a remote device.

To test the path from your computer to a remote device:

1. From the Windows toolbar, click the **Start** button and select **Run**.
2. In the field provided, enter **ping -n 10 IP address**.
IP address is the IP address of a remote device such as a remote DNS server.

If the path is functioning correctly, replies as described in [Test the LAN path from your computer to the AirBridge](#) on page 156 display. If you do not receive replies, do the following:

- Check to see that your computer lists the IP address of the router to which the AirBridge is connected as the default router. If the IP configuration of your computer is assigned by DHCP, this information is not visible in your computer's Network Control Panel.
- Check to see that the network address of your computer (the portion of the IP address specified by the netmask) is different from the network address of the remote device.

A

Factory Default Settings and Technical Specifications

This appendix includes the following sections:

- [Factory default settings](#)
- [Technical specifications](#)

Factory default settings

You can reset the AirBridge to the factory default settings, which are shown in the following table. However, many settings depend on the operation mode that you configure on the Day Zero Easy Setup configuration page (see [Operation mode and default settings after the Day Zero Easy Setup configuration](#) on page 33).

For information about resetting the AirBridge to its factory settings, see [Reset the AirBridge to factory default settings](#) on page 119.

Table 13. AirBridge factory default settings

Feature	Default Setting
Access	
Default IP address	192.168.0.100
DHCP client	Enabled
Local login user name	admin (case-sensitive, nonconfigurable)
Local login password	password (case-sensitive, configurable) The first time that you log in to the local browser UI, you must define a new local login password.
HTTPS	Enabled
HTTP forwarded to HTTPS	Enabled
SSH access	Disabled
Operation modes and operation mode-dependent features	
Operation mode	The default mode is AirBridge Satellite. However, you can select one of the following operation modes the first time that you log in to the local browser UI: AirBridge Master AirBridge Satellite Access Point Client Bridge
AirBridge mode	Enabled when the operation mode is AirBridge Master or AirBridge Satellite Not applicable when the operation mode is Access Point or Client Bridge
Channel HT mode	40 MHz when the operation mode is AirBridge Master or Access Point Not applicable when the operation mode is AirBridge Satellite or Client Bridge
Master time slot	Auto when the operation mode is AirBridge Master Not applicable in any other operation mode
Satellite priority	High when the operation mode is AirBridge Satellite Not applicable in any other operation mode

Table 13. AirBridge factory default settings (Continued)

Feature	Default Setting
Client limits	32 when the operation mode is Access Point Not applicable in any other operation mode
Guest network DHCP server	Enabled when the operation mode is Access Point and you enable a guest network. Not applicable in any other operation mode or when no guest network is enabled.
Default radio features (not operation mode-dependent features)	
Radio transmission power	Automatic (Auto RF)
Channel	The available channels and the default channel depend on the configured region and country and on the operation mode.
Bit rate	Automatic
Distance	1 km (0.6 mil)
WiFi networks (SSIDs)	
2.4 GHz management SSID	NETGEARXXXXXX-SETUP XXXXXX represents the last six digits of the MAC address of the LAN interface of the AirBridge. The WiFi security is WPA2-PSK The default WiFi passphrase is sharedsecret.
5 GHz SSIDs	The number of 5 GHz SSID that are supported depends on the operation mode and the AirBridge mode: NETGEARXXXXXX_1 NETGEARXXXXXX_2 NETGEARXXXXXX_3 NETGEARXXXXXX_4 NETGEARXXXXXX_5 NETGEARXXXXXX_6 NETGEARXXXXXX_7 NETGEARXXXXXX_8 XXXXXX represents the last six digits of the MAC address of the LAN interface of the AirBridge. For any 5 GHz SSID, the WiFi security is WPA2-PSK For any 5 GHz SSID, the default WiFi passphrase is sharedsecret.
Hidden SSID	Disabled
Client isolation	Disabled
VLAN isolation	Disabled
L2 isolation	Disabled
Fast roaming	Disabled
WiFi MAC filter	Disabled
WiFi traffic shaping	Disabled

Table 13. AirBridge factory default settings (Continued)

Feature	Default Setting
Other	
Date and time settings	Obtained automatically from the default NTP server
STP	Disabled
2.4 GHz management SSID time-out	Automatically turned off after 15 minutes of being idle
Management VLAN	Disabled (untagged)

Technical specifications

The following table shows the technical specifications of the AirBridge. For more information, see the product data sheet, which you can download by visiting netgear.com/support/download/.

Table 14. AirBridge technical specifications

Feature	Description
Power adapter	Proprietary 24V PoE (Power: 4, 5; Return: 7, 8) active Ethernet The plug is localized to the country of sale. Power consumption 8.93W maximum
Dimensions (L x W x H)	7.54 x 4.49 x 1.88 in. (186 x 100 x 29 mm)
Weight	1.11 lb (504 g)
Operating temperature	AirBridge: -4° to 140°F (-20° to 60°C) Power adapter: 32° to 104°F (0° to 40°C)
Operating humidity	0 to 90% maximum relative humidity, noncondensing
Storage temperature	-22° to 176°F (-40° to 80°C)
Storage humidity	0 to 90% maximum relative humidity, noncondensing
LAN interfaces	LAN1 (PoE-24V) . 10/100/1000 BASE-T RJ-45 Ethernet port used to connect to the power adapter and network LAN2 . 10/100/1000 BASE-T RJ-45 Ethernet port used to connect an optional single device
WiFi interfaces	2.4 GHz radio for management access only 5 GHz radio for WiFi devices and WiFi clients, depending on the configuration

Table 14. AirBridge technical specifications (Continued)

Feature	Description
Operating frequency range 5 GHz band	5150~5250 MHz 5250~5350 MHz 5470~5725 MHz 5725~5850 MHz The supported channels depend on the configured regulatory domain.
Supported radio technologies	802.11n/ac: 2x2 MIMO with 2 streams 802.11ac supports very high throughput (VHT), 20/40/80 MHz 802.11n supports high throughput (HT), 20/40 MHz 802.11n/ac packet aggregation: AMPDU, ASPDU Orthogonal frequency-division multiplexing (OFDM) under 802.11ac/a/n AirBridge technology with Time Division Multiple Access (TDMA) under 802.11ac/n
Supported data rates in Mbps	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 802.11n: 6.5 to 300 (MCS0 to MCS15) 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS=1 to 2)
Maximum number of supported clients	32 The supported number of clients depend on the operation mode and network conditions.
802.11 security	WPA2-PSK WPA2 Enterprise Note: We recommend that you set up security. In certain situations, and if you are aware of the risks, you can select and open network without security.
Regulatory compliance	FCC/ ISED Subpart 15 B Subpart E 15.407 Subpart C/J RSS-102/247 CE EN 301 893 EN 301 489-1/-17 EN 50385 EN 55032 EN 55024/EN 55034 EN 60950-1/-22 IEC 60529 EN 62368-1 EC 1275 Electromagnetic compatibility (2014/30/EU)