EnGenius EAP600

EnGenius EAP600 Dual-Band Wireless Access Point User Manual

Model: EAP600 | Brand: EnGenius

1. Introduction

The EnGenius EAP600 is a high-powered, dual-band 802.11a/b/g/n wireless indoor access point designed to extend network coverage and enhance connectivity in various environments. It supports data rates up to 300Mbps in each frequency band and features a Gigabit Ethernet port for high-speed data transfers. The EAP600 is suitable for large or multi-story buildings and client-intensive facilities, offering robust wireless performance and PoE (Power-over-Ethernet) capability for flexible deployment.

2. Package Contents

Verify that your package contains the following items:

- EAP600 Dual Band N600 Indoor Access Point
- 12V/2A Power Adapter
- T-Rail Mounting Kit
- Ceiling Mount and Wall Screw Kit

3. Product Overview and Features

The EnGenius EAP600 is designed to appear as a low-profile smoke detector, allowing it to blend unobtrusively into various indoor environments. Its robust design supports a wide range of applications.

Key Features:

- Concurrent Dual-Band 802.11a/b/g/n with up to 300Mbps data rate in each frequency band
- Up to 29 dBm high RF power for longer range and enhanced wireless coverage
- Offers greater bandwidth capacity with a Gigabit Ethernet Port
- Designed for indoor deployments with ceiling mountable smoke detector design

- Ideal for extending networks within large or multi-story buildings
- Suitable for client-intensive facilities like hotels, resorts, hospitals, office buildings, and universities
- Industry Standard Security protocols
- SSID-to-VLAN Tagging support
- 802.3at/af PoE Compatible for flexible power options

Figure 1: EnGenius EAP600 Dual-Band Wireless Access Point. This image shows the EnGenius EAP600 Dual-Band Wireless Access Point, a white, circular device designed for ceiling mounting, resembling a smoke detector.

4. Setup Guide

This section provides detailed instructions for configuring your EnGenius EAP600 Access Point. A basic understanding of network concepts like IP addresses, subnet masks, and gateways is beneficial.

4.1 Network Fundamentals for AP Configuration

To configure an Access Point (AP), it is important to understand how devices communicate on a network:

- **IP Address:** A unique identifier for each device on a network (e.g., 192.168.1.1).

- **Subnet Mask:** Typically 255.255.255.0, it defines the network portion of an IP address. For this mask, the first three numbers define the network domain (e.g., 192.168.1.x). All devices on the same network must share the same domain.
- **Gateway:** The IP address of the router, which acts as the entry and exit point for network traffic.
- **DHCP Server:** A service, usually on your router, that automatically assigns IP addresses to devices. A network should only have one active DHCP server to avoid conflicts.

4.2 Configuration Steps

Follow these steps to set up your EAP600 Access Point:

1. **Prepare Router Settings:**
    - Before powering on the AP, access your router's configuration interface.
    - Decide on a fixed IP address for the AP. This IP address must be within your network's domain (e.g., 192.168.1.x) but outside the range of IP addresses assigned by your router's DHCP server (e.g., if DHCP assigns 192.168.1.2-127, choose an IP like 192.168.1.128 or higher).
    - Note your router's fixed IP address (this will be the AP's gateway).
    - Optionally, you can reserve this fixed IP address for the AP in your router's settings using the AP's MAC address (found on the device label).
2. **Initial AP Connection:**
    - Power on the EAP600. The default IP address is often 192.168.1.1, which may conflict with your router.
    - Connect the AP directly to your computer using an Ethernet cable. Temporarily disconnect your computer from your main network or turn off your router if necessary to avoid IP conflicts.
    - Access the AP's web interface by opening a web browser and entering its default IP address (e.g., 192.168.1.1).
3. **Configure Basic AP Settings:**
    - Navigate to the 'Operation Mode' section and ensure both 2.4 GHz and 5 GHz bands are set to 'Access Point' mode. Select your region (e.g., 'United States').
    - Go to 'IP Settings' and change the AP's IP address to the fixed IP address you selected in Step 1.
    - Set the AP's Gateway to your router's fixed IP address.
    - After making changes, look for a 'Save/Reload' or 'Apply' option. It is crucial to save and apply pending changes, which often requires a device reboot. Wait for the reboot process to complete.
4. **Connect AP to Router:**
    - If your router was off, power it back on.
    - Connect the EAP600 to your router using an Ethernet cable.
    - Access the AP's web interface again, this time using its newly assigned fixed IP address.
5. **Configure Wireless Network (SSID and Security):**
    - For each wireless band (2.4 GHz and 5 GHz), go to the 'Wireless Network' settings.
    - Configure the SSID (network name) and security settings (e.g., WPA2-PSK with a strong password).
    - For seamless roaming between your router's Wi-Fi and the AP's Wi-Fi, it is recommended to use the **same SSID and security password** for both the router and the AP. This allows devices to automatically switch to the strongest signal. Do not use the same SSID with different security types, as this can cause connectivity issues.
    - Save and apply changes, and allow the AP to reboot.

6. **Verify Operation:**
    - Connect a wireless device (e.g., smartphone, laptop) to one of the AP's Wi-Fi bands.
    - Check if the device has internet access.
    - You can verify which device your client is connected to by checking the client lists in both your router's and the AP's configuration interfaces.

5. Operating Instructions

Once configured, the EnGenius EAP600 operates as an extension of your existing network, providing enhanced wireless coverage.

5.1 Dual-Band Operation

The EAP600 supports both 2.4 GHz and 5 GHz wireless bands. The 2.4 GHz band offers wider coverage and better penetration through obstacles, while the 5 GHz band provides higher speeds and less interference, ideal for bandwidth-intensive tasks like streaming HD video.

5.2 Client Roaming

If you configured the AP with the same SSID and security as your main router, wireless clients will automatically roam between the AP and the router, connecting to the signal with the best strength. This ensures continuous connectivity as you move throughout the coverage area.

5.3 Transmit Power Settings

The EAP600 allows adjustment of transmit power. While increasing transmit power can extend range, it is important to note that the Wi-Fi link requires communication in both directions. Client devices (laptops, phones) have limited transmit power. If the AP's signal is strong but the client's signal back to the AP is weak, bandwidth will be reduced, or the connection may drop. Increasing transmit power also increases the heat generated by the RF transistors, which can potentially shorten the unit's lifespan. Adjust transmit power cautiously and only if necessary.

6. Maintenance

Regular maintenance helps ensure optimal performance and longevity of your EnGenius EAP600.

6.1 Cleaning

Periodically clean the exterior of the device with a soft, dry cloth. Avoid using liquid cleaners or aerosols, as they may damage the unit.

6.2 Firmware Updates

Check the official EnGenius website for available firmware updates. Firmware updates can improve performance, add new features, and address security vulnerabilities. Follow the instructions provided by EnGenius carefully when performing firmware updates.

6.3 Environmental Considerations

Ensure the device is installed in a well-ventilated area, away from direct sunlight, heat sources, and excessive moisture. Maintain operating temperatures within the recommended range specified in the product's technical specifications.

7. Troubleshooting

This section addresses common issues you might encounter with your EAP600 Access Point.

7.1 Configuration Issues

- **Changes not applied:** Always ensure you click 'Save/Reload' or 'Apply' and allow the device to reboot after making configuration changes.
- **Cannot access web interface:** Verify that your computer's IP address is on the same subnet as the AP's IP address. If connecting directly, ensure no other DHCP server is active.

7.2 Connectivity Problems

- **No internet access:** Check the physical Ethernet cable connection between the AP and your router. Verify that the AP's gateway IP address is correctly set to your router's IP.
- **Client devices not connecting:** Ensure the correct SSID and Wi-Fi password are being used. Check the AP's wireless settings for any disabled bands or incorrect security configurations.

7.3 Slow Speeds or Dropped Connections

- **Weak signal:** Consider the placement of the AP. Obstacles like thick walls can degrade signal strength.
- **Interference:** In congested areas, other wireless networks or devices can cause interference. Try changing the wireless channel in the AP's configuration settings.
- **Client device limitations:** Ensure your client devices support dual-band Wi-Fi to utilize the 5 GHz band for higher speeds.

7.4 Power Issues

- **AP not powering on:** Verify the power adapter is correctly connected and functioning, or if using PoE, ensure the PoE injector or switch is providing power.

8. Specifications

The following table outlines the technical specifications for the EnGenius EAP600 Dual-Band Wireless Access Point:

Feature	Specification
Brand	EnGenius
Model Name	EAP600
Item Model Number	N600
Wireless Type	802.11a/b/g/n
Frequency Band Class	Dual-Band (2.4 GHz & 5 GHz)
Connectivity Technology	Wireless
RAM	64 MB
Flash Memory Size	8 MB
Hardware Platform	PC

Feature	Specification
Operating System Compatibility	Mac, PC, Windows 7, etc
Power Source	90 - 240 VDC ± 10%, 50/60 Hz; 48 VDC/0.375A (PoE)
Voltage	12 Volts (via adapter)
Item Weight	10.4 ounces
Product Dimensions (LxWxH)	6.36 x 1.64 x 6.36 inches
Color	White
Special Feature	DC in Jack
Compatible Devices	Personal Computer
Recommended Uses	Large Offices, Public Spaces, Multi-floor Buildings, Client-intensive Facilities

9. Official Product Videos

The following videos provide additional information and visual guidance for the EnGenius EAP600.

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Video 1: EnGenius EAP600 Overview (Duration: 2:25). This video provides a general overview of the EnGenius EAP600 Dual-Band Wireless Access Point, highlighting its features and benefits.

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Video 2: EnGenius EAP600 Feature Spotlight (Duration: 0:54). This video focuses on specific features of the EAP600, demonstrating its capabilities.

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Video 3: EnGenius EAP600 Installation Guide (Duration: 2:40). This video provides visual instructions for the physical installation of the EnGenius EAP600 Access Point.

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Video 4: EnGenius EAP600 Advanced Configuration (Duration: 1:17). This video demonstrates advanced configuration options for the EnGenius EAP600.

10. Warranty and Support

For detailed warranty information, technical support, and customer service, please refer to the official EnGenius website or contact EnGenius customer support directly. Keep your purchase receipt for warranty claims.