REUMAR AH Halow Pro

REUMAR WiFiHaLow Wireless Bridge 802.11ah Pro User Manual

Model: AH Halow Pro

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your REUMAR WiFiHaLow Wireless Bridge 802.11ah Pro. This device is designed to establish long-distance point-to-point or point-to-multipoint wireless network connections, extending network coverage and facilitating remote surveillance.

2. Product Features

- **Point-to-Point Wireless Bridge:** Utilizes WiFi HaLow technology for long-distance network data transmission, extending network reach to other buildings or for monitoring applications. Can also function as a signal booster.
- **Simplified Installation:** Features automatic networking for transmitter and receiver units, eliminating complex configuration. Supports flexible switching between transmission and reception modes.
- **Extended Range Transmission:** Operates in the 902MHz-928MHz frequency band, offering strong penetration and diffraction capabilities. Achieves indoor signal transmission through up to 4 walls (up to 492 feet) and outdoor transmission up to 2600 feet in open areas.
- **Robust Signal Transmission:** Enables long-distance monitoring by connecting one bridge to an IP camera and the other to a computer, without extensive wiring or additional routers. Suitable for various environments including buildings, factories, farms, and construction sites.
- **IP65 Weatherproof Design:** Features waterproof, dust-proof, and lightning protection. Designed to operate in temperatures ranging from -4°F to 158°F, suitable for outdoor deployment in diverse weather conditions.

3. Package Contents

Verify that all items are present in your package:

- 1 x REUMAR WiFiHaLow Wireless Bridge Transmitter Unit
- 1 x REUMAR WiFiHaLow Wireless Bridge Receiver Unit
- 2 x Power Adapters (specific to region)
- 1 x Ethernet Cable
- 1 x User Manual (this document)

4. Setup Guide

The REUMAR WiFiHaLow Wireless Bridge is designed for easy, plug-and-play installation with automatic pairing between units.

4.1 Basic Point-to-Point Setup

1. **Identify Units:** The package contains two identical units. One will function as the transmitter (connected to your network source) and the other as the receiver (connected to your target device). The units are pre-configured for automatic pairing.
2. **Transmitter Placement:** Position the transmitter unit near your internet source (e.g., router, computer). Connect the transmitter to your network using an Ethernet cable.
3. **Receiver Placement:** Position the receiver unit near the device you wish to connect to the network (e.g., IP camera, computer, smart TV).
4. **Power Connection:** Connect the power adapters to both the transmitter and receiver units and plug them into electrical outlets.
5. **Automatic Pairing:** The units will automatically detect and pair with each other. Allow a few minutes for the connection to establish. Status indicator lights on the devices will confirm successful pairing.
6. **Connect Target Device:** Connect your target device (e.g., IP camera) to the receiver unit using an Ethernet cable.

Figure 4.1: Setup diagram illustrating point-to-point network extension to a second building and for IP camera surveillance.

4.2 Through-Wall Penetration

The WiFi HaLow technology allows for significant signal penetration through obstacles. For indoor use, the signal can pass through up to 4 walls, providing coverage up to 492 feet. For optimal performance, minimize the number of dense obstacles between the units.

Figure 4.2: Visual representation of the wireless bridge's ability to penetrate walls and floors, extending network coverage within a multi-story building.

5. Operating Instructions

Once the units are powered on and paired, they will automatically create a wireless bridge. No further configuration is typically required for basic operation.

5.1 Network Extension

The primary function of the wireless bridge is to extend your existing network. Any device connected via Ethernet to the receiver unit will have network access as if it were directly connected to your main router.

Figure 5.1: Example of wireless connection for outdoor surveillance, demonstrating how the bridge eliminates the need for extensive cabling.

5.2 Surveillance System Integration

For IP camera surveillance, connect the IP camera to the receiver unit. The camera will then be accessible over your network, allowing for remote monitoring.

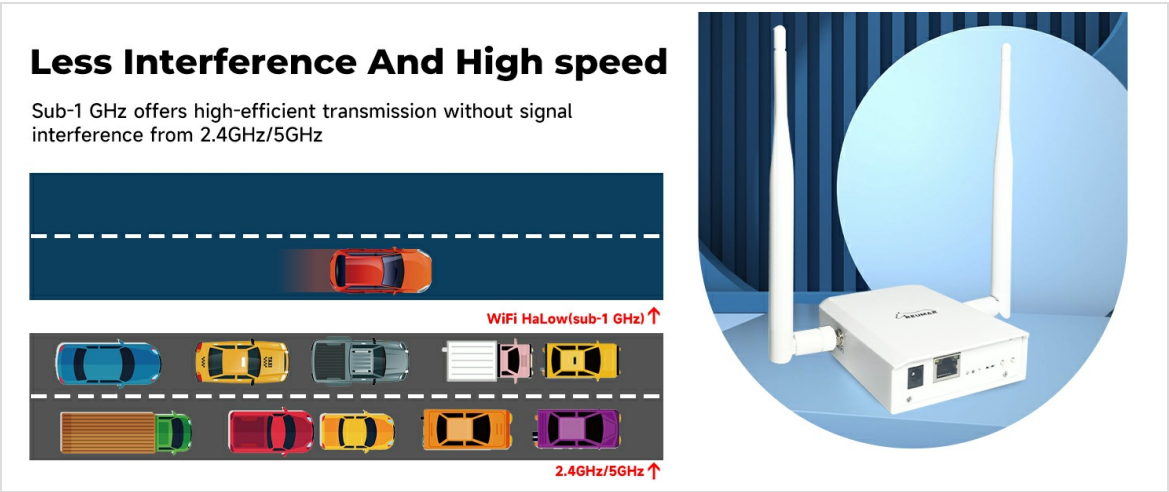

Figure 5.2: Connecting the wireless bridge to an IP camera for extended surveillance capabilities.

5.3 Multi-Device Connectivity

The system can transmit WiFi to multiple devices. The receiver unit can connect to devices that have an RJ45 Ethernet port or support 2.4GHz Wi-Fi.

Figure 5.3: The wireless bridge supports connectivity for a range of devices via Ethernet or 2.4GHz Wi-Fi.

6. Maintenance

Proper maintenance ensures the longevity and optimal performance of your REUMAR Wireless Bridge.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the units. Do not use liquid cleaners or aerosols.
- **Environmental Conditions:** While the units are weatherproof (IP65), avoid prolonged exposure to extreme conditions beyond the specified operating temperature range (-4°F to 158°F). Ensure proper ventilation if used indoors.
- **Firmware Updates:** Periodically check the REUMAR official website for any available firmware updates. Follow the instructions provided with the update carefully.
- **Cable Management:** Ensure all cables are securely connected and not under strain. Avoid bending cables sharply.

7. Troubleshooting

If you encounter issues with your REUMAR Wireless Bridge, refer to the following troubleshooting steps:

7.1 No Connection / Signal Loss

- **Power Check:** Ensure both transmitter and receiver units are powered on and their power indicator lights are active.
- **Line of Sight:** While the device has good penetration, obstructions can degrade signal. Try to minimize physical barriers between the units, especially for long-distance outdoor use.
- **Distance:** Verify that the distance between the units does not exceed the maximum specified range (492 feet indoors, 2600 feet outdoors).
- **Reset:** If the units fail to connect, try power cycling both devices (unplug and replug after 10 seconds). If issues persist, a factory reset might be necessary (refer to the device's physical reset button or specific instructions if available).
- **Interference:** Although operating in the sub-1 GHz band reduces interference, other devices operating in similar frequencies could potentially cause issues. Try repositioning the units slightly.

7.2 Slow Connection Speed

- **Obstructions:** Even if a connection is established, heavy obstructions (e.g., multiple thick walls, dense foliage) can significantly reduce throughput.
- **Distance:** Performance can decrease with increasing distance. Ensure the units are within optimal range for your desired speed.
- **Source Network Speed:** Verify that your primary internet connection speed is adequate. The wireless bridge cannot exceed the speed of the source network.
- **Device Limitations:** Ensure the connected devices (e.g., IP camera, computer) are not the bottleneck.

7.3 Configuration Issues (e.g., Cannot Change Name/Password)

The REUMAR WiFiHaLow Wireless Bridge is designed for automatic, plug-and-play operation and typically does not require user configuration of network names or passwords. If you are attempting to access advanced settings and are experiencing difficulties, ensure you are following any specific instructions provided for advanced setup or management. If no such instructions are available, the device may not support user-configurable network names or passwords for the bridge connection itself.

8. Specifications

Feature	Specification
Model Number	AH Halow Pro
Product Dimensions	3.3 x 5 x 10.6 inches
Item Weight	15.8 ounces
Wireless Communication Standard	802.11ah (WiFi HaLow)
Frequency Band	902MHz-928MHz (Sub-1 GHz)
Outdoor Transmission Range	Up to 2600 feet (open areas)
Indoor Transmission Range	Up to 492 feet (through 4 walls)
Operating Temperature	-4°F to 158°F (-20°C to 70°C)
Weatherproof Rating	IP65 (Waterproof, Dust-proof, Lightning Protection)
Special Feature	Access Point Mode (Point-to-Point, Point-to-Multi Point)
Color	White

9. Warranty and Support

REUMAR products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the contact information provided with your purchase or visit the official REUMAR website. Keep your purchase receipt for warranty claims.