BrosTrend 1 km Outdoor Wireless Bridge Kit

BrosTrend 5GHz 867Mbps Outdoor WiFi Bridge (1KM Wireless Internet Network Bridge) Instruction Manual

Model: 1 km Outdoor Wireless Bridge Kit

1. INTRODUCTION

This manual provides detailed instructions for setting up and operating your BrosTrend 5GHz 867Mbps Outdoor WiFi Bridge. This kit is designed to extend your network wirelessly over long distances, up to 1 kilometer with a clear line of sight, enabling stable internet connectivity between buildings such as houses, shops, barns, garages, sheds, farms, or RVs.

The kit includes two units: one configured as an Access Point (AP) or Transmitter, and the other as a Station (Receiver). It supports high-speed data transmission up to 867Mbps on the 5GHz band, adhering to the 802.11ac WiFi standard.

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Video: Introducing 1 km Outdoor Wireless Bridge Kit. This video provides a visual overview of the product's capabilities and features.

2. PACKAGE CONTENTS

Please verify that all items are present in your package:

- 2 x Outdoor CPEs (Customer Premises Equipment)
- 2 x Power Adapters
- 2 x Passive PoE Injectors
- 2 x Ethernet Cables
- 4 x Screws
- 4 x Expansion Bolts
- 2 x Plastic Straps
- 1 x Quick Installation Guide

3. SETUP GUIDE

3.1 Powering the CPEs

The CPEs can be powered using one of two methods:

1. **Via PoE Injector (Recommended):** Connect the PoE/LAN port of the CPE to the PoE port of the included PoE injector using an Ethernet cable. Then, connect the DC power adapter to the PoE injector and plug it into an electrical socket.
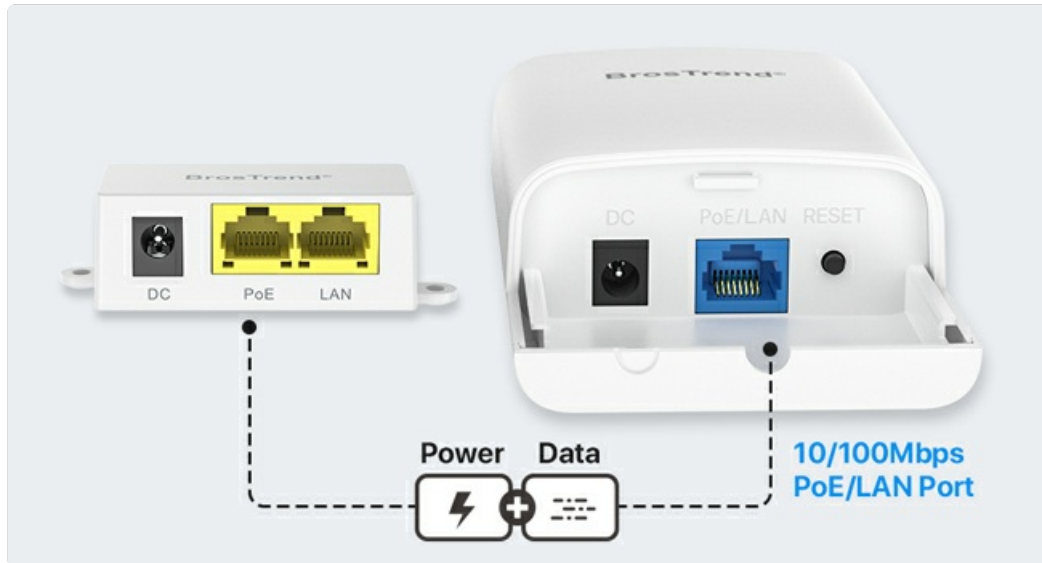

Image: Connection diagram for powering the CPE via PoE injector. The Ethernet cable carries both power and data.

2. **Via DC Power Adapter (Direct):** Connect the DC power adapter directly to the DC port of the CPE.

Note: The PoE injectors are designed for indoor use only.

3.2 Automatic Pairing (Plug-and-Play)

The BrosTrend WiFi Bridge kit comes pre-paired from the factory for easy setup. To initiate automatic pairing:

1. Place both CPE units (one AP/Transmitter, one Station/Receiver) in the same room.
2. Power on both CPEs using one of the methods described above.
3. The units will automatically pair within approximately 1 minute.

You can identify the AP (Transmitter) and Station (Receiver) units by checking the labels on their backs. The AP unit's PoE/LAN indicator will light solid green, while the Station unit's PoE/LAN indicator will also light solid green upon successful power-on.
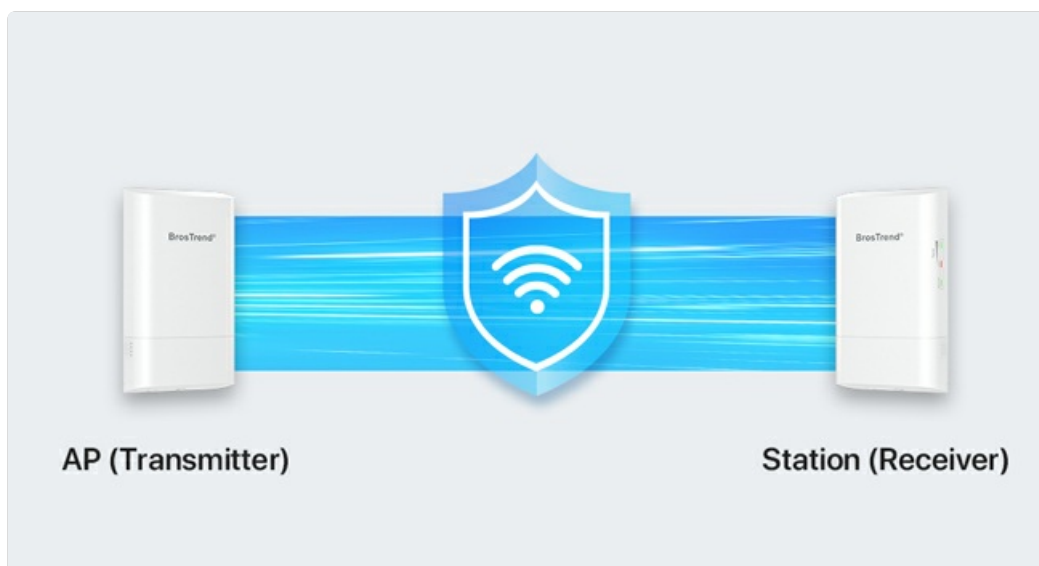

Image: Two CPE units successfully paired, indicated by a green checkmark and blue signal lines.

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Video: Outdoor WiFi Bridge Setup Guide, Auto-Pairing Method. This video demonstrates the step-by-step process for automatic pairing and

3.3 Installation and Placement

Once paired, the CPEs are ready for outdoor installation. Proper placement is crucial for optimal performance.

- **Clear Line of Sight:** A clear, unobstructed line of sight between the AP (Transmitter) and the Station (Receiver) is essential. Obstacles such as trees, buildings, or large steel structures can significantly block the wireless signal and reduce performance.
- **Alignment:** Aim the front of the AP (Transmitter) directly towards the front of the Station (Receiver). For optimal signal transmission, they should be 100% face-to-face. In some cases, vertical or horizontal alignment within a 60° angle range may be necessary.
- **Mounting Options:** The units support both wall-mounted and pole-mounted installations.

1 km Outdoor Wireless Bridge Kit

Extends network connectivity to various buildings and structures, such as shops, barns, garages, sheds, farms, and RVs, enabling stable WiFi connection for different purposes such as workshops, home offices, and guest houses.

Image: Visual representation of a 1 km outdoor wireless link between an AP and a Station, emphasizing clear line of sight over a rural area.

Point-to-Point Connection

Extend Your Network to Another Building

Working Mode:
AP (Transmitter)

Working Mode:
Station (Receiver)

Modem /
Main Router

LAN

PoE Injector
(Included)

DC   PoE   LAN

Data

Power

Power

Power
Socket

The bridging
AP (Transmitter)
and the
Station (Receiver)
should have
a clear line of sight.

Power
Socket

PoE Injector
(Included)

DC   PoE   LAN

Power   Data

Data

WAN

Another AP
/ Router

Smartphone

Laptop

Camera

Main House
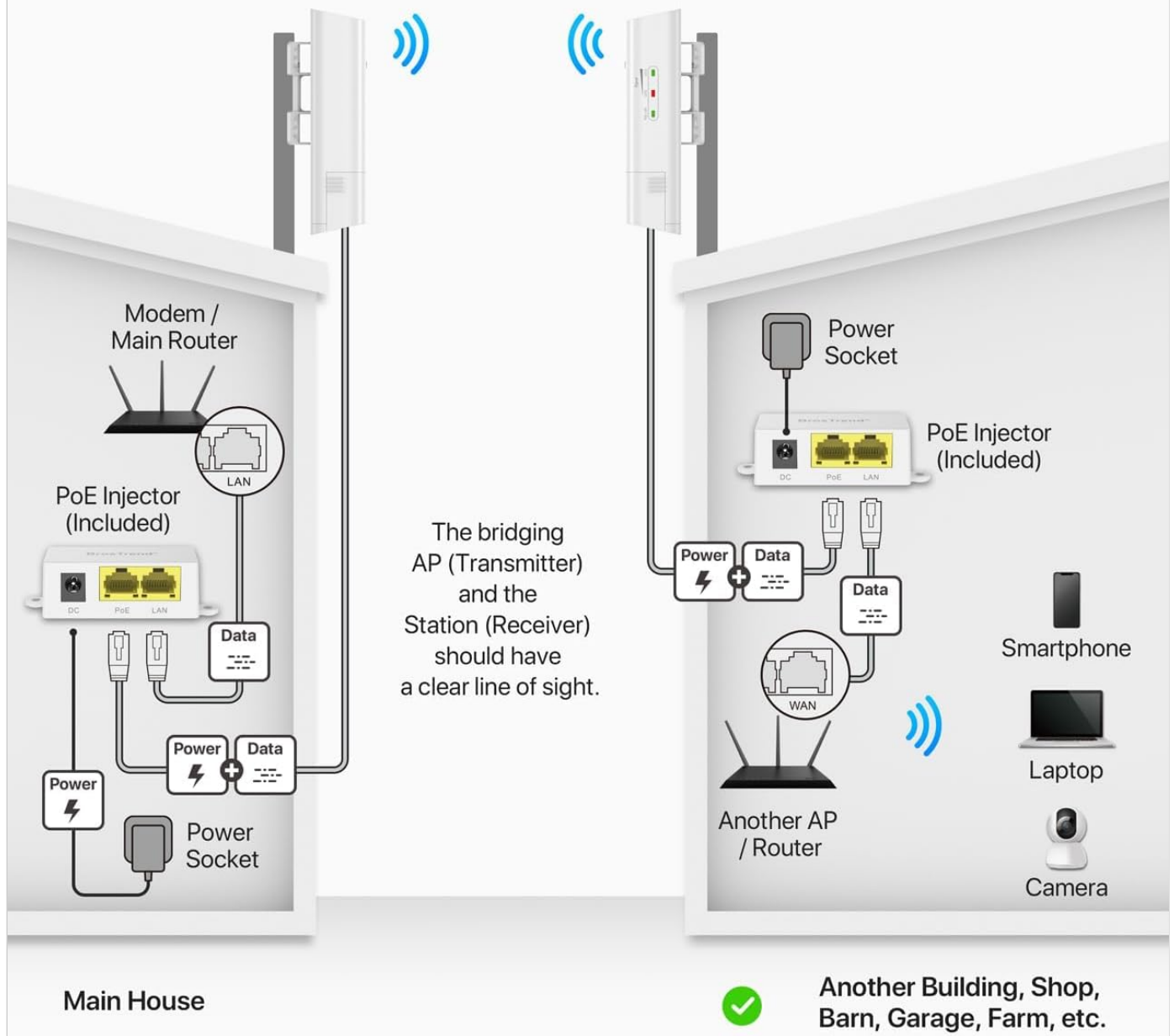
**Another Building, Shop,
Barn, Garage, Farm, etc.**

Image: Detailed diagram of a Point-to-Point connection, showing how the AP connects to the main router and the Station connects to devices in a remote building.

Pre-Paired, Plug-and-Play

Image: A user installing one of the CPE units on an exterior wall, demonstrating the physical installation process.

4. OPERATING THE WIFI BRIDGE

4.1 Signal Strength Indicators

The CPE units feature LED indicators to help you assess the signal strength and ensure proper alignment:

- **Good Signal:** Both LED1 and LED2 indicators on the AP (Transmitter) stay solid on. On the Station (Receiver), both LED1 and LED2 blink slowly.
- **Decent Signal:** The LED1 indicator on the AP (Transmitter) stays solid on, while LED2 turns off. On the Station (Receiver), LED1 blinks slowly, and LED2 turns off.
- **Fair or No Signal:** Both LED1 and LED2 indicators on both the AP (Transmitter) and Station (Receiver) turn off.

Image: Close-up of the signal strength indicators on a CPE unit, showing green and red LEDs.

4.2 Point-to-Point (PtP) Connection

The primary function of this kit is to establish a Point-to-Point wireless link. The AP (Transmitter) connects to your main network (e.g., router/modem) and transmits the signal. The Station (Receiver) receives this signal and can then connect to another router, switch, or individual devices (like cameras, laptops) in the remote building, extending your network.

4.3 Point-to-Multipoint (PtMP) Application

For Point-to-Multipoint applications, you can connect up to 15 Station (Receiver) units to one AP (Transmitter). This is ideal for scenarios requiring multiple remote network extensions, such as surveillance camera systems across a large property. For PtMP setup, manual configuration of the AP (Transmitter) and Station (Receiver) via the user interface pages is required. This process requires a good understanding of network configuration knowledge.

Image: Illustration of a Point-to-Multipoint topology, demonstrating how one AP can connect to multiple Station units for extended coverage, particularly for surveillance.

5. MAINTENANCE

The BrosTrend Outdoor WiFi Bridge is designed for durability in various weather conditions:

- **Weatherproof Enclosure:** Rated IP65 for protection against dust and water ingress.
- **Lightning Protection:** Features 6KV lightning protection.
- **Optimal Protection:** While designed for outdoor use, placing the units under eaves or other sheltered locations can further extend their lifespan and maintain performance.
- **Cable Care:** Use qualified Cat5e or higher outdoor PoE-compatible Ethernet cables that are waterproof, shielded, UV-resistant, and capable of withstanding high and low temperatures for outdoor installations.

Image: Visual representation of the CPE's durability, highlighting its IP65 weatherproof and 6KV lightning protection features against diverse environmental conditions.

6. TROUBLESHOOTING

- **No Signal / Poor Connection:**

  - Ensure a clear line of sight between the AP (Transmitter) and Station (Receiver). Obstacles like trees or buildings can severely degrade signal quality.

- Verify that both units are correctly aligned and facing each other. Use the signal strength LEDs to assist with alignment.
- Check all cable connections to ensure they are secure and properly seated.

- **Power Issues:**

  - Confirm that the power adapters are plugged into working electrical outlets.
  - If using PoE, ensure the Ethernet cable is correctly connected to the PoE port on the injector and the PoE/LAN port on the CPE.

- **Intermittent Connection:**

  - Environmental factors (heavy rain, snow, strong winds) can temporarily affect signal stability.
  - Ensure outdoor-rated Ethernet cables are used to prevent degradation from weather exposure.
  - Check for new obstructions that may have appeared in the line of sight.

- **Network Speed is 100Mbps ONLY:**

  - The 10/100 Mbps RJ45 Ethernet port of the WiFi bridge provides wired speeds up to 100Mbps ONLY. The 867Mbps speed refers to the wireless data transmission between the two CPEs.

7. SPECIFICATIONS

Feature	Detail
Product Dimensions	2.8 x 1.7 x 5.2 inches
Item Weight	3.5 ounces
Model Name	1 km Outdoor Wireless Bridge Kit
Brand	BrosTrend
Manufacturer	BrosTrend Technology LLC
WiFi Standards	IEEE 802.11a/n/ac
Frequency	5GHz
WiFi Speed	Up to 867Mbps
Channel Bandwidth	20/40/80MHz
Wireless Security	WPA-PSK, WPA2-PSK, Mixed WPA/WPA2-PSK
Interfaces	1 x 10/100Mbps PoE/LAN Port; 1 x DC Power Jack; 1 x Reset Button
Antenna	2 x 9dBi Polarization Directional Antennas
Antenna Beamwidth	60° (Horizontal), 60° (Vertical)
Power Consumption	4.7W per Piece
Power Supply Method	12V 1A Passive PoE; 12V 1A DC
Maximum Passive PoE Cable Length	Passive Power over Ethernet via PoE/LAN up to 60 Meters (196 Feet)

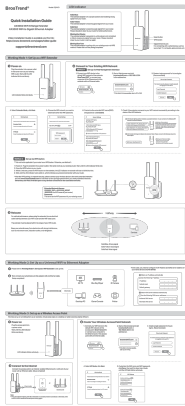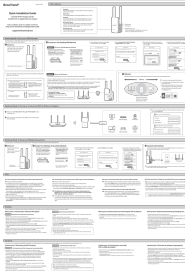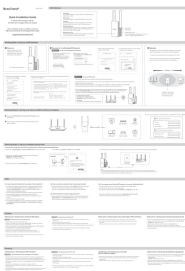| Feature	Detail
Operating Temperature	-22°F - 131°F (-30°C - 55°C)
Waterproof Level	IP65
Lightning Protection	6 KV
Deployment	Pole/Wall Mounting

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official BrosTrend website or contact their customer service directly. Contact details are typically found on the product packaging or the manufacturer's website. BrosTrend Technology LLC is the manufacturer of this product.

Related Documents - 1 km Outdoor Wireless Bridge Kit

	[BrosTrend WiFi Bridge Quick Installation Guide](#) Comprehensive quick installation guide for the BrosTrend Outdoor CPE WiFi Bridge. Learn how to set up point-to-point wireless connections, configure network settings, and ensure optimal performance for long-range connectivity.
	[BrosTrend AX1500 WiFi 6 Range Extender & Ethernet Adapter Quick Installation Guide](#) Get step-by-step instructions for setting up your BrosTrend AX1500 WiFi 6 Range Extender and Gigabit Ethernet Adapter. Learn to configure it as an extender, a WiFi-to-Ethernet adapter, or a wireless access point. Includes LED indicators, FAQs, and compliance information.
	[BrosTrend AX3000 WiFi 6 Extender Setup Guide](#) A comprehensive setup guide for the BrosTrend AX3000 WiFi 6 Extender, covering installation, configuration, and operation as a WiFi extender, Ethernet adapter, and access point.

[BrosTrend AX3000 WiFi 6 Range Extender & Ethernet Adapter: Quick Installation Guide](#)

Step-by-step instructions for setting up your BrosTrend AX3000 WiFi 6 Range Extender and Gigabit Ethernet Adapter. Learn how to configure it as a WiFi extender, Ethernet adapter, or access point.

[AX3000 WiFi 6 Range Extender & Gigabit Ethernet Adapter Quick Installation Guide](#)

Quick installation guide for the BrosTrend AX3000 WiFi 6 Range Extender and Gigabit Ethernet Adapter (Model: E3/AX3). Learn how to set up the device as a WiFi extender, WiFi to Ethernet adapter, or Access Point using web interface or WPS.

[BrosTrend AX1500 WiFi 6 Range Extender & Ethernet Adapter Quick Installation Guide](#)

A comprehensive guide for setting up and using the BrosTrend AX1500 WiFi 6 range extender and universal WiFi to Ethernet adapter. Learn about different operating modes, setup methods (Web UI and WPS), LED indicator meanings, relocation tips, and troubleshooting FAQs.