Cudy LT500 Outdoor

Cudy LT500 Outdoor 4G LTE Router User Manual

Model: LT500 Outdoor | Brand: Cudy

1. Introduction

The Cudy LT500 Outdoor 4G LTE Router is a robust and versatile networking device designed to provide high-speed internet access in outdoor environments. It converts a 4G LTE cellular signal into a reliable AC1200 dual-band Wi-Fi network and fast Ethernet connectivity. Featuring an IP65-rated waterproof housing, 4KV lightning protection, and detachable antennas, it is ideal for locations where traditional wired internet is unavailable, such as holiday cabins, remote cameras, farms, or RVs. This manual provides detailed instructions for setting up, operating, maintaining, and troubleshooting your LT500 Outdoor router.





Figure 1.1: Cudy LT500 Outdoor 4G LTE Router with antennas.

2. Package Contents

Verify that all items are present in your package:

- Cudy LT500 Outdoor 4G LTE Router
- 2 x Detachable 4G Cellular Antennas
- Passive PoE Adapter (Power over Ethernet Injector)

- Ethernet Cable
- Mounting Kit (Pole/Wall mounting straps and screws)
- Quick Installation Guide

3. Product Overview

The LT500 Outdoor router is designed for durability and performance in various outdoor conditions. It features a robust, weatherproof casing and multiple ports for connectivity.

3.1 Device Layout

The device includes ports for SIM card insertion, Ethernet connectivity (PoE In), and SMA connectors for the detachable cellular antennas.



Figure 3.1: Cudy LT500 Outdoor Router showing antenna ports and general layout.

3.2 LED Indicators

The router features several LED indicators to show its status:

- **Power LED:** Indicates power status.
- **4G/LTE LED:** Shows 4G LTE connection status and signal strength.
- **Wi-Fi LED:** Indicates Wi-Fi network activity.
- **LAN/WAN LED:** Shows Ethernet port activity.

4. Setup

4.1 SIM Card Installation

1. Ensure the router is powered off.
2. Locate the SIM card slot cover on the device.
3. Open the cover and insert your nano SIM card into the slot until it clicks into place. Ensure the SIM card is from a compatible 4G provider.
4. Close the SIM card slot cover securely to maintain the IP65 rating.



Figure 4.1: Inserting the SIM card into the router.

4.2 Antenna Installation

Attach the two detachable 4G cellular antennas to the SMA connectors on the top of the router. Hand-tighten them until secure. These antennas are crucial for optimal 4G LTE signal reception.



Figure 4.2: Detail of SMA connector for antenna attachment.

4.3 Mounting the Router

The LT500 Outdoor router supports both pole and wall mounting. Choose a location with good cellular signal reception and clear line of sight to the area where Wi-Fi coverage is desired.

- **Pole Mounting:** Use the provided mounting straps to secure the router to a pole.
- **Wall Mounting:** Use the provided screws and anchors to mount the router directly to a wall.



Figure 4.3: Mounting options: Wall mount (left) and Pole mount (right).

4.4 Powering On (Passive PoE)

The LT500 Outdoor router is powered via Passive Power over Ethernet (PoE). This allows power and data to be transmitted over a single Ethernet cable, simplifying outdoor installation.

1. Connect one end of an Ethernet cable to the LAN/WAN PoE In port on the LT500 Outdoor router.
2. Connect the other end of the Ethernet cable to the 'PoE' port on the Passive PoE Adapter.
3. Connect another Ethernet cable from the 'LAN' port on the Passive PoE Adapter to your computer or an indoor router/switch.
4. Plug the power adapter into a power outlet. The router will power on automatically.



Figure 4.4: Passive PoE connection diagram.

4.5 Initial Connection

Once powered on, the router will attempt to connect to the 4G LTE network. You can connect to the router via Wi-Fi or a wired Ethernet connection.

- **Wi-Fi Connection:** Search for the default Wi-Fi network (SSID) broadcast by the router. The default Wi-Fi password is often found on a label inside the router's SIM card compartment or on the device itself. A common default password is "password".
- **Wired Connection:** Connect your computer directly to the LAN port of the PoE adapter using an Ethernet cable.

5. Operating Instructions

5.1 Accessing the Web Management Interface

To configure the router settings, access its web-based management interface:

1. Ensure your device is connected to the router's Wi-Fi network or via Ethernet.
2. Open a web browser (e.g., Chrome, Firefox, Edge).
3. In the address bar, type the default IP address of the router (commonly192.168.10.1 or 192.168.1.1) and press Enter. Refer to the Quick Installation Guide for the exact default IP.
4. Enter the default username and password when prompted. These are usuallyadmin for both, or found on the device label.

5.2 Basic Network Configuration

From the web interface, you can configure various settings:

- **Wi-Fi Settings:** Change the Wi-Fi network name (SSID) and password for both 2.4 GHz and 5 GHz bands.
- **WAN Settings:** Verify the 4G LTE connection status. You may need to configure APN settings depending on your SIM card provider.
- **LAN Settings:** Adjust the router's IP address and DHCP server settings if necessary.

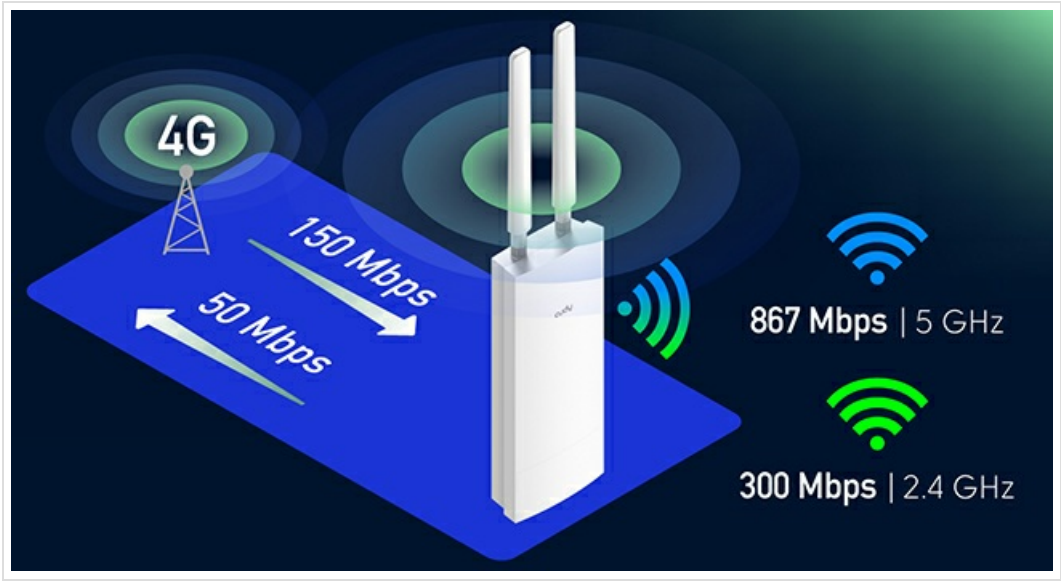


Figure 5.1: The LT500 converts 4G LTE into AC1200 dual-band Wi-Fi.

5.3 Advanced Features

The LT500 Outdoor router supports several advanced features:

- **DDNS (Dynamic DNS):** Allows you to access your network resources remotely using a domain name, even if your public IP address changes.
- **VPN (Virtual Private Network):** Supports various VPN protocols (e.g., PPTP, L2TP, OpenVPN, WireGuard) for secure remote access or encrypted browsing.
- **Access Point Mode:** Can be configured to function as an access point to extend an existing wired network.



Figure 5.2: Supported VPN protocols.

6. Maintenance

Proper maintenance ensures the longevity and optimal performance of your LT500 Outdoor router.

6.1 Firmware Updates

Regularly check the Cudy official website for firmware updates. Updating the firmware can improve performance, add new features, and fix security vulnerabilities.

6.2 Cleaning

Wipe the exterior of the router with a soft, damp cloth. Do not use harsh chemicals or abrasive cleaners. Ensure all port covers are securely closed to maintain the IP65 rating.

6.3 Environmental Considerations

The LT500 Outdoor is designed for outdoor use with an IP65 rating, providing protection against dust and water jets. It also features 4KV lightning protection and operates within a wide temperature range of -4°F to 140°F (-20°C to 60°C).



Figure 6.1: Weather-Proof Design highlights: IP65 Waterproof, 4KV Protection, and wide temperature range.

7. Troubleshooting

This section addresses common issues you might encounter with your Cudy LT500 Outdoor router.

7.1 No Internet Connection

- **Check SIM Card:** Ensure the SIM card is correctly inserted and active with your mobile carrier.
- **APN Settings:** Verify that the APN settings in the router's web interface match those required by your mobile carrier.
- **Signal Strength:** Check the 4G/LTE LED indicator. If the signal is weak, try repositioning the router or adjusting the antennas.
- **Carrier Compatibility:** Some carriers may require specific IMEI settings for routers. Consult your carrier or Cudy support if issues persist.

7.2 Weak Wi-Fi Signal or Limited Range

- **Placement:** Ensure the router is mounted in a central location with minimal obstructions between it and your Wi-Fi devices.
- **Antennas:** Ensure antennas are securely attached and oriented for optimal signal.
- **Interference:** Avoid placing the router near other electronic devices that might cause interference.



Figure 7.1: Wi-Fi coverage varies by environment.

7.3 Cannot Access Web Management Interface

- **IP Address:** Double-check the router's IP address.
- **Connection:** Ensure your device is properly connected to the router via Wi-Fi or Ethernet.
- **Firewall/Antivirus:** Temporarily disable any firewall or antivirus software on your computer that might be blocking access.
- **Reset:** If all else fails, perform a factory reset by pressing and holding the reset button on the router for about 5-10 seconds. Note that this will erase all custom settings.

8. Specifications

Feature	Specification
Model Name	LT500 Outdoor
Product Dimensions	3.94 x 2.13 x 9.49 inches
Item Weight	1.08 pounds
Wireless Communication Standard	802.11ac (AC1200)
Frequency Band Class	Dual-Band (2.4 GHz & 5 GHz)
4G LTE Category	Cat 4 (Up to 150Mbps download)
Antennas	2 x Detachable 5dBi Cellular Antennas (SMA interface)
Weather Protection	IP65 Rated Waterproof, 4KV Lightning Protection
Power Supply	24V Passive PoE (Adapter Included)
Special Features	Access Point Mode, Weatherproof, DDNS, VPN
Operating Temperature	-4°F to 140°F (-20°C to 60°C)

9. Warranty and Support

Cudy products are designed for reliability and performance. For warranty information, please refer to the warranty card included with your product or visit the official Cudy website.

9.1 Technical Support

If you encounter any issues or have questions not covered in this manual, please contact Cudy technical support through their official website or the contact information provided in your product packaging. You can also find additional resources, including the full installation manual, at the following link: Cudy LT500 Installation Manual (PDF).

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