

GL.iNet GL-XE300

GL.iNet GL-XE300 (Puli) 4G LTE Industrial IoT Gateway User Manual

Model: GL-XE300 (EC25-AF) | Brand: GL.iNet

1. INTRODUCTION

The GL.iNet GL-XE300 (Puli) is a versatile 4G LTE Industrial IoT Gateway designed to provide robust and secure network connectivity. It functions as a router, access point, extender, and WDS bridge, making it suitable for various applications from personal use to industrial IoT deployments. Featuring OpenWrt pre-installed, it offers extensive customization and programmability for DIY projects. This device ensures constant data transmission by seamlessly switching to a 4G LTE wireless network if the Ethernet internet connection fails.



Figure 1: GL.iNet GL-XE300 (Puli) 4G LTE Industrial IoT Gateway.



Figure 2: The GL-XE300 (Puli) can be used in various IoT applications such as security cameras, point-of-sale systems,

2. PACKAGE CONTENTS

Please verify that all items are present in your package:

- GL-XE300-AF 4G LTE Portable IoT Gateway (with Quectel EC25-AF 4G module pre-installed) x1
- Ethernet cable x1
- 5V/2A power adapter x1
- User manual x1

3. SETUP

3.1 Initial Setup

1. **Power Connection:** Connect the provided 5V/2A power adapter to the GL-XE300 device and plug it into a power outlet.
2. **SIM Card Installation:** Insert a standard nano-SIM card into the designated SIM card slot on the device. Ensure it is properly seated.
3. **Ethernet Connection (Optional):** For wired internet access or to connect to a local network, plug an Ethernet cable into the WAN or LAN ports as needed.
4. **First-Time Access to Web UI:**
 - Connect your computer or mobile device to the GL-XE300's Wi-Fi network (SSID and password are typically found on a sticker on the device).
 - Open a web browser and navigate to the default IP address (e.g., 192.168.8.1).
 - Follow the on-screen instructions to complete the initial setup, including setting a new administrator password.

3.2 Connecting to Public/Hotel Wi-Fi (Repeater Mode)

The GL-XE300 can extend an existing Wi-Fi network, such as those found in hotels or public spaces. This is particularly useful for sharing a single internet connection across multiple devices securely.

Your browser does not support the video tag.

Video 1: This video demonstrates how to connect the GL.iNet router to public or hotel Wi-Fi networks using repeater mode. It covers scanning for networks, joining a selected network, and troubleshooting captive portal issues by adjusting DNS settings.

For detailed steps on connecting to public Wi-Fi via repeater mode, please refer to the video above. Key steps include:

1. Access the GL.iNet Admin Panel.
2. Navigate to the "Repeater" section under "INTERNET".
3. Click "Scan" to find available wireless hotspots.
4. Select the desired Wi-Fi network and click "Join".
5. If a captive portal does not appear automatically, go to "MORE SETTINGS" > "Custom DNS Server" and temporarily switch off "DNS Rebinding Attack Protection". Remember to re-enable it after successful connection.

Easy Configuration

for better management and debugging of applications

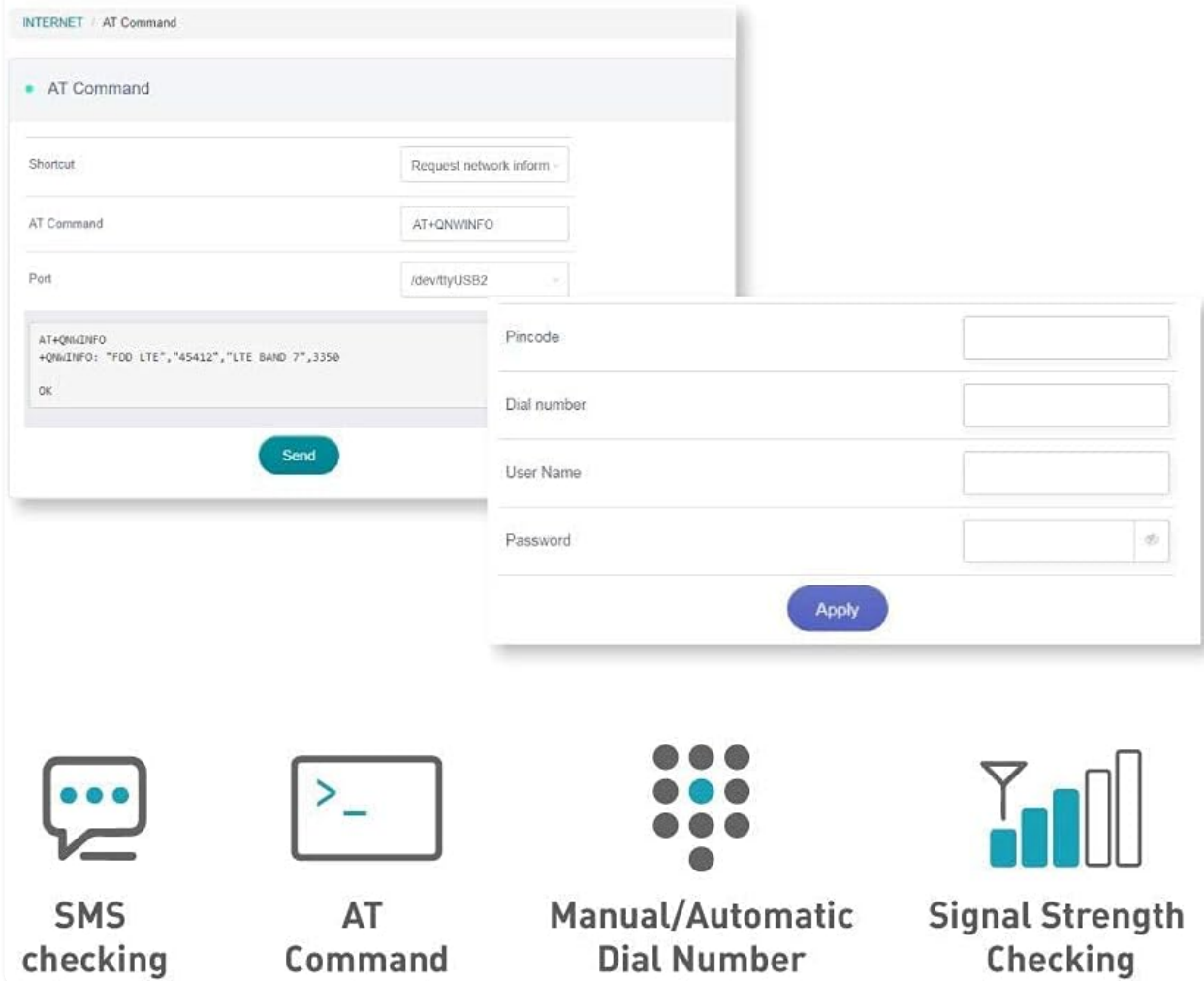


Figure 3: The Web UI 3.0 provides easy configuration options for managing the device, including advanced settings like AT commands for the 4G modem.

4. OPERATING INSTRUCTIONS

4.1 4G LTE Connectivity

The GL-XE300 converts 4G LTE signals into a Wi-Fi network, providing speeds up to 300Mbps (2.4GHz only). It features a failover mechanism, automatically switching to 4G LTE if your primary Ethernet internet connection becomes unavailable, ensuring continuous data transmission.

4.2 Network Features

- **Dual Ethernet Ports:** Equipped with both WAN and LAN Ethernet ports for flexible network configurations.
- **USB 2.0 Port:** Allows for further extension and sharing of files across devices.
- **Antenna SMA Mount Holes:** Reserved for connecting external antennas to enhance signal reception.

Product Dimension

Dimension / Weight: 120 x 74 x 28mm, 223.5g

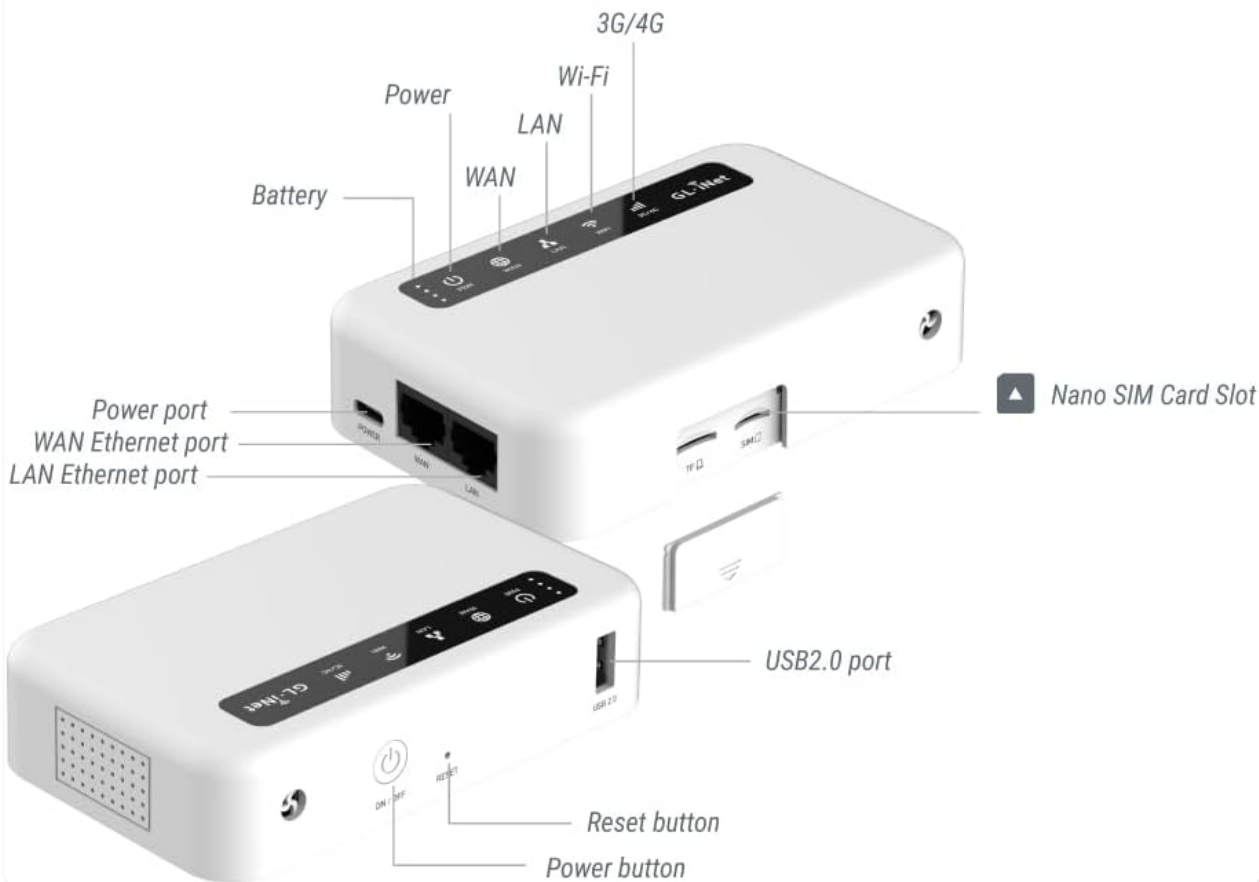


Figure 4: Detailed view of the GL-XE300 showing power port, WAN Ethernet port, LAN Ethernet port, Nano SIM Card Slot, USB 2.0 port, Reset button, and Power button.

4.3 Security and Privacy

The device comes with advanced security features to protect your online activities:

- **VPN Support:** OpenVPN and WireGuard are pre-installed, compatible with over 30 VPN service providers. The Web UI 3.0 simplifies setting up VPN servers and clients.
- **Advanced Protocols:** Supports IPv6, WPA3 encryption, and Cloudflare DNS for enhanced security and privacy.

Secure Your Business Data

from anywhere, anytime



WireGuard®

Max. 38Mbps

OpenVPN

Max. 10Mbps

* Test result in local network. Real speed depends on your network settings and may be lower than this.

* Working as OpenVPN server will slower than OpenVPN client.

Figure 5: The GL-XE300 supports various VPN services including WireGuard and OpenVPN, offering secure data transmission.

Level Up Your Online Security

with top-notch security features



Figure 6: Enhance your online security with features like WireGuard, OpenVPN, IPv6, WPA3, and NextDNS/Cloudflare support.

4.4 Remote Management with GoodCloud

GoodCloud is a remote device management platform that allows you to manage and monitor your GL-XE300 anytime, anywhere. Features include:

- Viewing real-time statistics.
- Setting up VPN servers and clients.
- Managing client connection lists.
- Remote SSH access to your IoT devices.



Figure 7: GoodCloud provides a comprehensive platform for accessing, managing, and configuring your Puli (GL-XE300) remotely, integrating with various IoT devices and data platforms.

Remote SSH Supported

access IoT devices using GoodCloud

Figure 8: Remote SSH access is supported via GoodCloud, allowing secure management of connected IoT devices.

4.5 Open Source & Programmability

With OpenWrt pre-installed, the GL-XE300 is highly extendable and ideal for DIY projects. It features 128MB RAM, 16MB NOR + 128MB NAND Flash, and supports up to 512MB MicroSD cards for storage. The built-in

4G modem supports AT commands, manual/automatic dial numbers, SMS checking, and signal strength checking via Web UI 3.0.

Interchangeable Module

Customize Your Internet User Case



	Band	Region
GL-XE300C4-AF w/ EC25-AF 4G LTE Module	FDD-LTE: B2/B4/B5/B12/B13/B14/B66/B71 WCDMA: B2/B4/B5	North America FirstNet
GL-XE300C6-A w/ EP06-A 4G LTE Module	LTE-FDD: B2/B4/B5/B7/B12/B13/B25/B26/ B29 ^① /B30/B66 WCDMA: B2/B4/B5	North America

^① LTE-FDD B29 and B32 support receiving only, and are only for secondary component carrier in 2xCA.

Figure 9: The GL-XE300 features an interchangeable Mini PCIe Module, allowing for customization of your internet user case.

5. MAINTENANCE

- **Software Updates:** Regularly check for firmware updates via the OpenWrt interface to ensure optimal performance, security, and access to new features.
- **Battery Care:** The device includes a 5000mAh Lithium Polymer battery. To prolong battery life, avoid extreme temperatures and store the device with a partial charge if not used for extended periods.
- **Cleaning:** Use a soft, dry cloth to clean the device. Avoid liquid cleaners or abrasive materials.

6. TROUBLESHOOTING

- **No Internet Connection:**
 - Verify that the SIM card is correctly inserted and active with your carrier.
 - Check the 4G signal strength in the Web UI.
 - Ensure Ethernet cables are securely connected if using a wired WAN.

- If connecting to public Wi-Fi, ensure you have completed any captive portal login. If the portal doesn't appear, temporarily disable "DNS Rebinding Attack Protection" in "MORE SETTINGS" > "Custom DNS Server" as shown in Video 1.

- **Slow Speeds:**

- Check your 4G signal strength.
- Ensure no background applications are consuming excessive bandwidth.
- If using VPN, note that VPN encryption can reduce speeds.

- **Device Not Responding:**

- Press and hold the power button to restart the device.
- If unresponsive, use the reset button (refer to Figure 4 for location) to restore factory settings (this will erase all configurations).

For further assistance, please refer to the official GL.iNet online documentation or contact customer support.

7. SPECIFICATIONS

Feature	Detail
Product Dimensions	4.72 x 2.91 x 1.1 inches
Item Weight	8.1 ounces
Model Name	GL-XE300
Item Model Number	2dd77b47-0c6e-45b4-bae7-24693ad81a69
Brand	GL.iNet
Batteries	1 Lithium Polymer battery required (included)
Special Feature	Guest Mode
Frequency Band Class	Single-Band (2.4GHz)
Wireless Communication Standard	802.11n
Frequency	2.45 GHz
Recommended Uses	Business
Connectivity Technology	Wi-Fi, USB, Ethernet
RAM	128MB
Flash Memory	16MB NOR + 128MB NAND
MicroSD Support	Max. 512MB

8. WARRANTY AND SUPPORT

The GL.iNet GL-XE300 (Puli) comes with a **2-year Warranty**.

For technical support, troubleshooting guides, and detailed documentation, please visit the official GL.iNet

website or their online documentation portal. You can also utilize the GoodCloud platform for remote management and monitoring of your device.

GL.iNet Official Documentation: docs.gl-inet.com

GoodCloud Platform: goodcloud.xyz