



NJ-gw-L01

Lora gateway

I. Product Overview

The NJ-gw-L01 series Lora Industrial IoT Gateway is an edge gateway designed for smart city, smart lighting, smart energy, and smart water management applications, featuring multi-network compatibility, industrial-grade stability, and global regional adaptability. It supports multiple uplink connectivity options including 4G, Ethernet, WiFi, and Bluetooth, incorporates built-in dual-mode GPS/Beidou positioning, offers extensive hardware interfaces and high-level industrial protection, and enables massive device connectivity, data acquisition, protocol conversion, remote management, and edge computing—fully meeting the demands for 24/7 stable operation in complex outdoor environments.



II. Key Features and Highlights

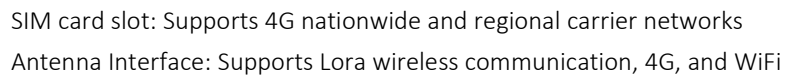
1. Native support for the Lora standard protocol, enabling concurrent access by high-capacity nodes
2. Uplink connectivity: 4G Cat.1, Ethernet, WiFi, Bluetooth
3. Positioning: Dual-mode GPS/Beidou standard configuration for faster and more accurate positioning
4. Extensive interfaces: test port, RJ45 network port, and SIM card slot (from top to bottom)
5. Industrial-grade equipment with wide temperature and pressure ranges, lightning protection, surge protection, and IP65 protection rating
6. Supports local web configuration, remote OTA updates, and integration with MQTT/HTTP cloud platforms

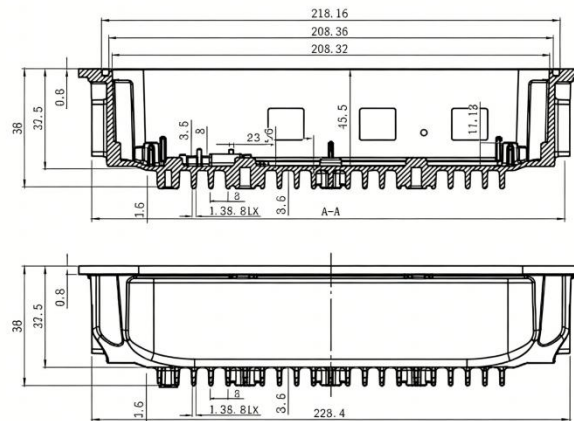
III. Hardware Description

3.1 Hardware Interface Description (Top-down)

Test Port: Debug USB Interface

Network port: RJ45 10/100M Adaptive Ethernet





Gateway View

3.3 Physical Rendering Images



Front

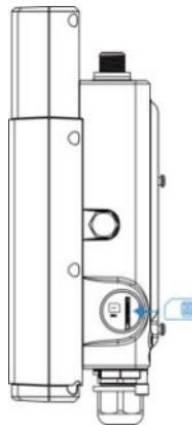


Back

IV. Hardware Installation

4.1 SIM Card Installation

1. Insert the SIM card into the slot in the indicated direction; to remove it, press the card inward to eject it.
2. Insert the SIM card slot into the SIM card slot and tighten it with a wrench.



4.2 Gateway Installation

The NJ-gw-L01 gateway supports wall-mounted or bracket-mounted installation. Before installation, ensure all accessories (SIM card, network cable, antenna) are assembled and the software is configured.

Note: Do not power on the device or connect it to other devices during installation

4.3 Precautions for Outdoor Installation:

1. The gateway must be installed at an angle of at least 20 degrees from the building's edge and maintained at a minimum distance of 50 cm from the wall surface.
2. The Lora antenna shall be positioned below the highest point of the building;
3. During equipment installation, position the antenna perpendicular to the ground to ensure optimal performance;
4. Gateway equipment, power supply devices, and antennas must be equipped with lightning protection measures (surge arresters/lightning protectors); antennas and feed lines must be grounded.
5. The connection feed connector on the antenna must be waterproofed; if water enters the connector, prolonged exposure will increase contact resistance, elevate signal line losses, and degrade antenna performance.
7. When using a cellular network, choose a location with strong signal coverage.

V. Technical Parameters

5.1 Basic Information

parameter	specifications
product name	Lora Industrial IoT Gateway
model	NJ-gw-L01AM / NJ-gw-L01EU
protocol standard	Lora、 4G
Applicable Regions	NJ-gw-L01AM: North America, South America; NJ-gw-L01EU: Europe, Asia, Africa
transmitting power	19–22 dBm (adjustable)
receiving sensitivity	≤ -110 dBm@50kbps
Node Connection Capability	Up to 200+Lora terminals
Product Weight	Approximately 1.5 kg

5.2 Uplink Network

Network Method	specifications
4G	LTE Cat.1, available across multiple frequency bands worldwide
Ethernet	10/100 Mbps RJ45, auto-reverse
WiFi	802.11b/g/n 2.4G
PDA	BLE 5.0 for local debugging and network configuration

5.3 Localization Module

parameter	specifications
Location Type	GPS + Beidou Dual Mode (Standard)
positioning accuracy	Horizontal positioning <5 m (open environment)
Cold startup time	≤ 30 s
Hot Start Time	≤ 3 s

VI. Typical Application Scenarios



- Smart Lighting: The smart streetlight gateway integrates with individual lamp controllers, centralized controllers, and solar-powered streetlight IoT controllers. It enables remote centralized management of streetlight status, brightness adjustment, and fault alerts, helping operators reduce maintenance costs and enhance the intelligence level of urban lighting management—a hallmark of smart lighting IoT systems.
- Smart Water Management: Capable of real-time collection and transmission of data such as river water levels, rainfall amounts, and operational status of water control facilities, enabling management authorities to promptly monitor hydrological dynamics, issue early warnings for flood and drought risks, and enhance the digital monitoring and emergency response capabilities of water infrastructure.
- Smart Agriculture: Solar-powered IoT-based insecticide lamp controllers and systems, pest monitoring and forecasting control systems, high-altitude monitoring systems, meteorological station controllers and systems, as well as solar-powered surveillance systems. These solutions enable farmers to accurately monitor agricultural environmental conditions, promoting precision farming and the intelligent transformation of agricultural IoT technologies.
- Smart Photovoltaics: IoT-enabled solar MPPT controllers, solar-powered IoT streetlights, and off-grid solar power systems.