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## LINOVISION IOT-R51W-5G365D

# LINOVISION IOT-R51W-5G365D Industrial 4G LTE Cellular Router Instruction Manual

Model: IOT-R51W-5G365D

Brand: LINOVISION

## 1. OVERVIEW

The LINOVISION IOT-R51W-5G365D is an industrial-grade 4G LTE cellular router designed for reliable and flexible internet connectivity in various applications. It features a pre-loaded 5GB data plan valid for 365 days, offering immediate plug-n-play functionality. This router supports RS232/RS485 and MQTT for IoT integration, ensuring high reliability with automatic network switching and global coverage. It operates on a pay-as-you-go model without monthly contracts, making it suitable for massive IoT deployments and remote monitoring.

## 2. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- LINOVISION IOT-R51W-5G365D Router
- 4G Full-Band Antenna
- 2.4G Wi-Fi Antenna
- DIN Rail Mounting Kit
- Screws
- Power Adapter
- Terminals
- Pre-loaded 5GB 365 Days Data Plan (integrated)
- User Manual

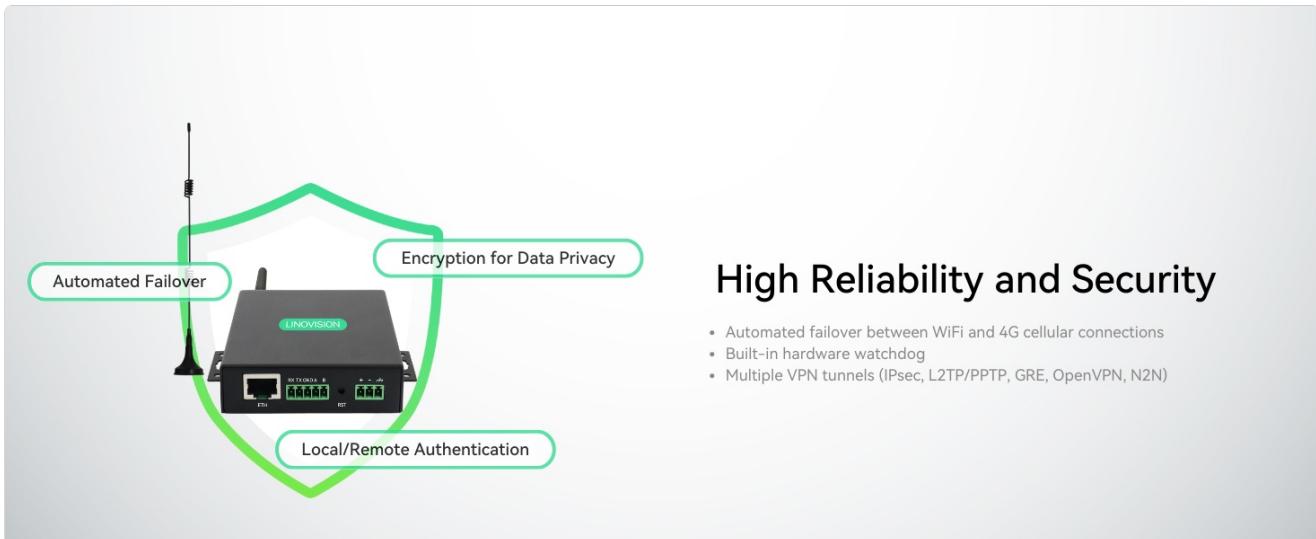


Figure 2.1: LINOVISION IOT-R51W-5G365D Package Contents

### 3. PRODUCT FEATURES

- **Plug-n-Play:** The device includes a digital SIM with a pre-loaded data plan, enabling immediate connectivity upon power-on.
- **4G LTE Cat4 Router:** Offers a maximum bandwidth of 150Mbps, suitable for applications such as security cameras, RVs, and computers.
- **RS485 & MQTT Integration:** Facilitates integration with IoT sensors, solar charge controllers, and other IoT devices.
- **High Reliability:** Ensures stable connectivity by automatically switching to the most optimal network available.
- **Global Coverage:** Operates in most countries, allowing flexible selection of local data plans without roaming charges.
- **Pay-as-You-Go:** No monthly contract is required for data usage.
- **Application Dashboard:** Designed for large-scale IoT deployments, providing a dashboard for device status and data usage monitoring.
- **Pre-loaded Data Plan:** Includes 5GB of data valid for 365 days, automatically activated upon power-on. Ideal for IoT sensor connectivity.
- **Network Coverage:** Default coverage is the United States (AT&T / T-Mobile network). Optional coverage is available for Canada, Mexico, Japan, Europe, or Australia. Data plans can be renewed or topped up at a cost of \$29 per 5GB for 365 days.



Figure 3.1: Global IoT Cellular Router Capabilities

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Figure 3.2: Virtual SIM and Flexible Data Plans



Figure 3.3: Unlocked Worldwide Coverage

## 4. SETUP

### 4.1 Device Panel View

Familiarize yourself with the ports and indicators on the router:



Figure 4.1: Router Panel View

### 4.2 SIM Card Installation

The router comes with a pre-loaded digital SIM. If you need to install an additional physical SIM card or a Micro SD card, follow these steps:

1. Locate the SIM card slot cover on the side of the router.
2. Use a small screwdriver to unscrew the cover.
3. Carefully insert your Nano-SIM card into the designated SIM1 or SIM2 slot, ensuring the correct orientation as indicated on the device.
4. If applicable, insert a Micro SD card into its slot.
5. Replace the SIM card slot cover and secure it with the screw.

Video 4.1: SIM Card Setup for LINOVISION 4G LTE Router. This video demonstrates the process of installing a SIM card into the LINOVISION 4G LTE Router.

### 4.3 Power Connection

Connect the provided power adapter to the router's power input terminals and then plug it into a suitable power source. The PWR LED will illuminate when the device is powered on.

### 4.4 Antenna Connection

Attach the 4G Full-Band Antenna to the 'Main' port and the 2.4G Wi-Fi Antenna to the 'WiFi/AUX' port on the router. Ensure they are securely fastened.

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## 5. OPERATING INSTRUCTIONS

### 5.1 Initial Power-On

Once powered on, the router will automatically detect the cellular network and activate the pre-loaded data plan. The NET LED will indicate network activity.

### 5.2 Connecting Devices

- **Wi-Fi:** Search for the router's Wi-Fi network (SSID) on your device and connect using the default password provided in the user manual or on the device label.
- **Ethernet:** Connect an Ethernet cable from your device to the LAN port on the router.

### 5.3 Accessing the Web Interface

To configure advanced settings, access the router's web interface by typing its default IP address (e.g., 192.168.1.1) into a web browser. Log in using the default credentials (usually admin/admin or found in the manual).

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## 6. CONNECTIVITY MODES

The IOT-R51W-5G365D offers flexible connectivity options:

- **Cellular (4G LTE):** Primary mode for internet access using the integrated or physical SIM card.
- **Wi-Fi:** Provides wireless internet access to connected devices.
- **Ethernet (LAN/WAN):** Allows for wired connections to devices or integration into an existing network.

## Unlocked Worldwide Coverage

Flexible data plans with hundreds of mobile operators in the world, and without roaming fee  
Supported LTE Bands:  
B1/B2/B3/B4/B5/B7/B8/B9/B12/B13/B17/B18/B19/B20/B25/B26/B28/B66



Figure 6.1: Connectivity as a Service



## Connectivity as a Service

- Plug-n-Play, get it connected once it is powered on
- No Physical SIM card is needed
- Easy to switch between mobile carriers
- No contract is required
- Pay as you go

Figure 6.2: Outage Proof Design

## 7. RS485 & MQTT INTEGRATION

The router supports RS485 and MQTT protocols, enabling seamless integration with various IoT devices and sensors. This allows for data collection and control in industrial and remote environments.

Figure 7.1: RS485 + MQTT for IoT

## 8. INDUSTRIAL DESIGN & RELIABILITY

The IOT-R51W-5G365D is built for demanding industrial environments, featuring a robust design that ensures stable operation across a wide range of conditions.

- **Wide Operating Temperature Range:** Functions reliably from -22°F to 167°F (-30°C to 75°C).
- **Humidity Tolerance:** Operates effectively in relative humidity levels from 5% to 95%.
- **Wide Voltage Input:** Supports a DC input range of 6-35V.
- **Automated Failover:** Seamlessly switches between Wi-Fi and 4G cellular connections to maintain uptime.
- **Built-in Hardware Watchdog:** Enhances system stability and recovery.
- **Multiple VPN Tunnels:** Supports IPsec, L2TP/PPTP, GRE, OpenVPN, and N2N for secure data transmission.

- **Local/Remote Authentication:** Provides flexible authentication options for network access.

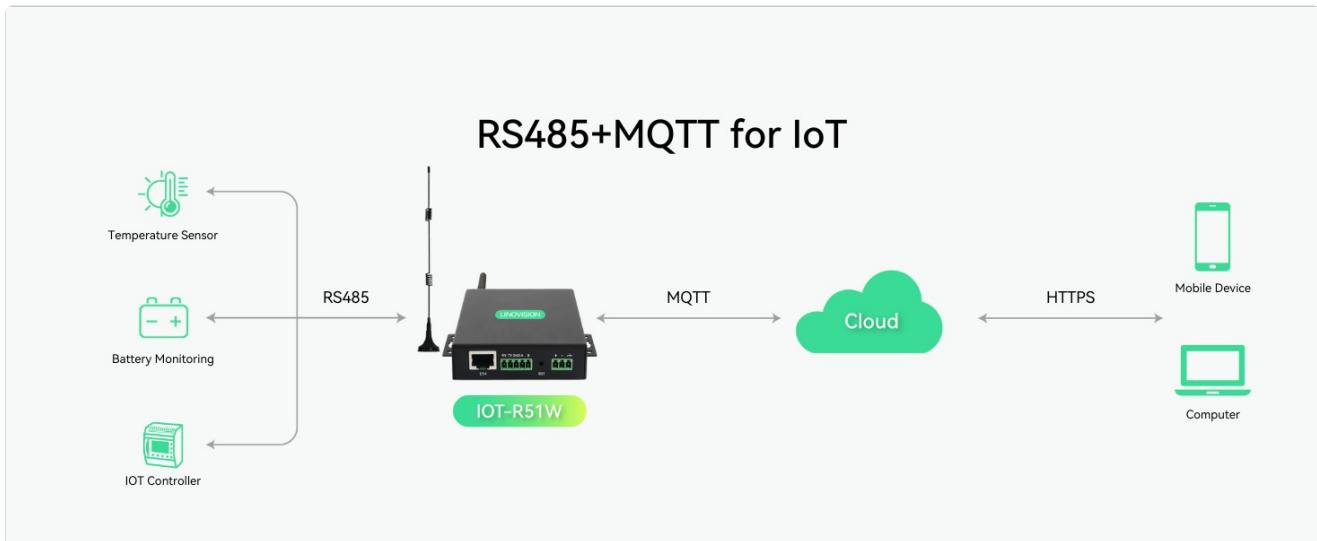


Figure 8.1: Industrial Design Features

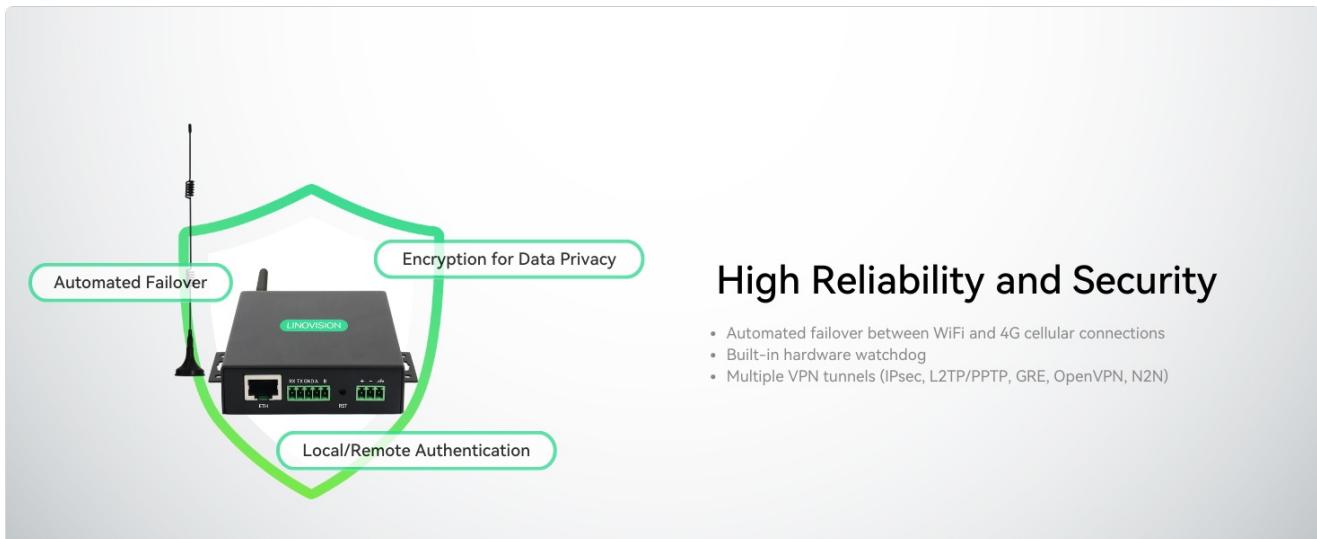


Figure 8.2: High Reliability and Security

## 9. INSTALLATION

The router supports both DIN-Rail and Wall Mounting options for flexible installation in various industrial settings.

### 9.1 DIN-Rail Mounting

Attach the provided DIN-Rail clip to the router using the screws. Snap the router onto a standard DIN rail.

### 9.2 Wall Mounting

Use the wall mounting bracket and screws to secure the router to a flat surface.



Figure 9.1: Installation Options

## 10. SPECIFICATIONS

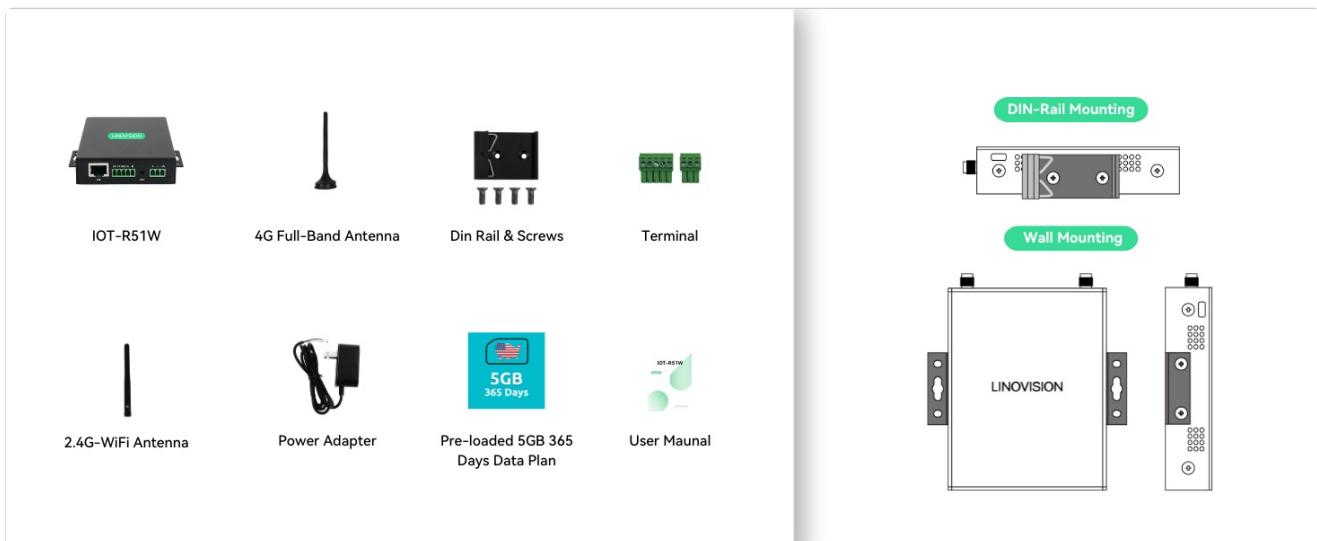


Figure 10.1: Router Dimensions

Feature	Detail
Model Name	IOT-R51W-5G365D
Connectivity Technology	4G LTE Cat4
Max Bandwidth	150Mbps
Wireless Communication Standard	802.11n
Frequency Band Class	Single-Band
Special Feature	Remote Access, Virtual SIM, RS232/RS485, MQTT
Operating Temperature	-22°F to 167°F (-30°C to 75°C)
Relative Humidity	5% to 95%

Feature	Detail
Voltage Input	6-35V DC
Dimensions (L x W x H)	3.93 x 3.07 x 0.86 inches (100 x 78 x 22 mm)
Item Weight	1.34 pounds (0.61 kg)
Color	Black

## 11. TROUBLESHOOTING

If you encounter issues with your LINOVISION IOT-R51W-5G365D router, consider the following common solutions:

- **No Internet Connection:**

- Check if the PWR and NET LEDs are illuminated. If not, verify the power connection.
- Ensure the cellular antenna is securely connected.
- Confirm that the pre-loaded data plan is active and has remaining data.
- If using a physical SIM, ensure it is correctly inserted and activated with your carrier.
- Try restarting the router by disconnecting and reconnecting the power.

- **Slow Connection Speed:**

- Relocate the router to an area with better cellular signal strength.
- Ensure the cellular antenna is positioned optimally.
- Check for network congestion in your area.

- **Cannot Access Web Interface:**

- Verify that your device is connected to the router via Wi-Fi or Ethernet.
- Ensure you are using the correct IP address and login credentials.
- Clear your browser's cache or try a different browser.

- **Device Reset:** If the router is unresponsive or you need to restore factory settings, use the 'RST' button on the rear panel. Consult the full user manual for specific reset procedures.

## 12. WARRANTY AND SUPPORT

LINOVISION provides local technical support (phone + email) from Plano, TX. For warranty information, technical assistance, or further inquiries, please contact LINOVISION customer service.



## Virtual SIM and More Flexible Data Plans

- No Physical SIM card is needed
- Easy to switch between carriers
- No contract is required
- More affordable data plans
- Worldwide data plans without roaming fee
- Comes with free 5GB data for 365 Days

Figure 12.1: LINOVISION US Local Support