LINOVISION RUTM50

LINOVISION Industrial Teltonika 5G Cellular Router RUTM50 and 5G LTE MIMO Combo 7-in-1 Antenna User Manual

Model: RUTM50

1. Introduction

This manual provides instructions for the installation, operation, and maintenance of the LINOVISION Industrial Teltonika 5G Cellular Router RUTM50 and its accompanying 5G LTE MIMO Combo 7-in-1 Antenna. This system is designed for robust and reliable high-speed internet connectivity in various industrial and outdoor environments.

2. Product Overview

2.1. Router Components (RUTM50)

The RUTM50 is an industrial-grade 5G cellular router. It features multiple ports and indicators for comprehensive network management.

Image 2.1.1: LINOVISION Industrial Teltonika 5G Cellular Router RUTM50 with connected antennas. This image shows the router unit with its various external antennas for 5G, GPS, and Wi-Fi.

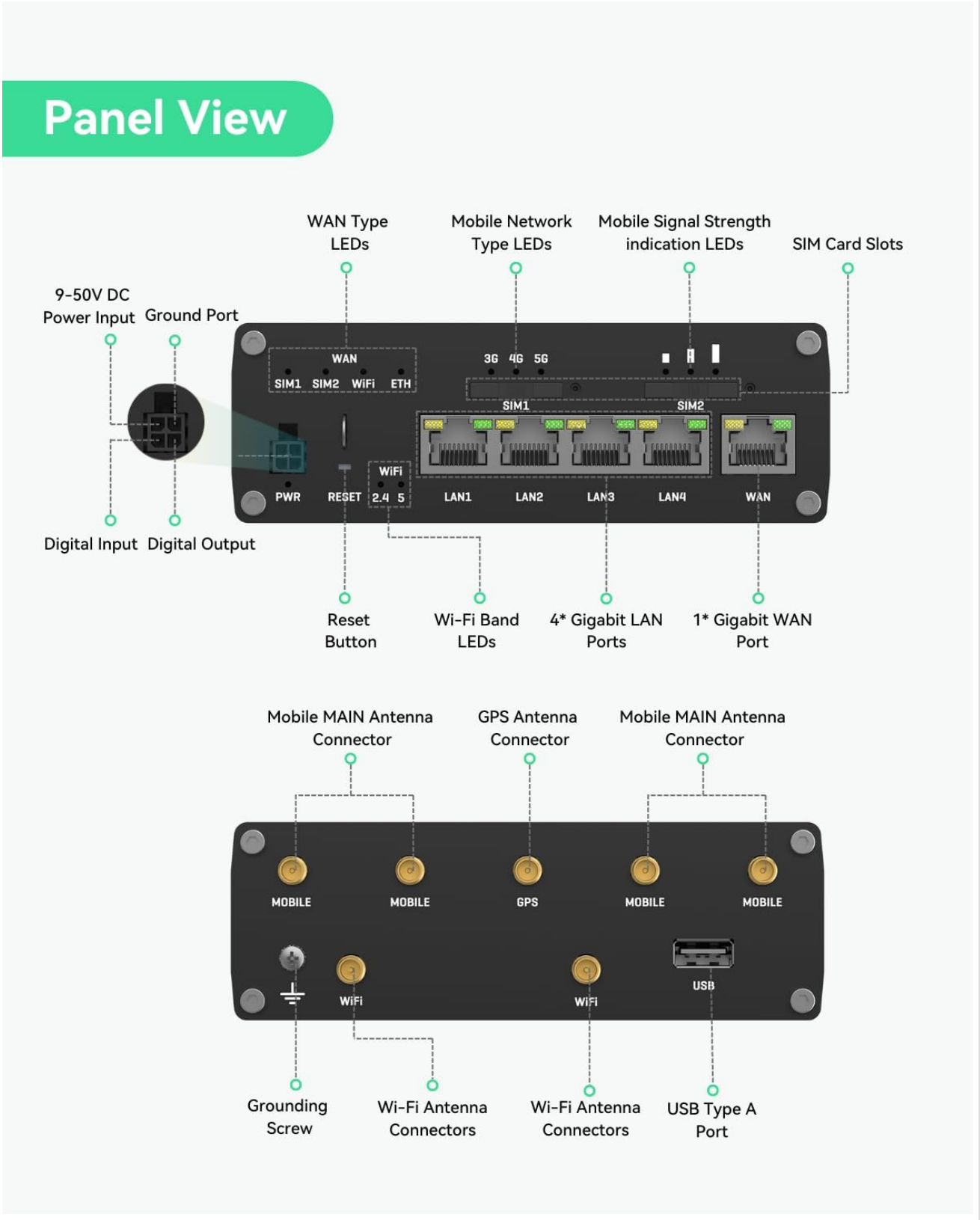

Image 2.1.2: Detailed panel view of the RUTM50 router, highlighting power input, SIM card slots, Ethernet ports, and antenna connectors. This image provides a clear layout of all ports and indicators on the router.

2.2. 7-in-1 Combo Antenna

The included 7-in-1 antenna provides comprehensive connectivity for 5G LTE MIMO, Wi-Fi, and GNSS. It is designed for outdoor, roof-type mounting and is IP67 waterproof.

Image 2.2.1: The LINOVISION 7-in-1 Combo Antenna with its multiple cables and connectors. This image shows the robust design of the antenna and its various connection points.

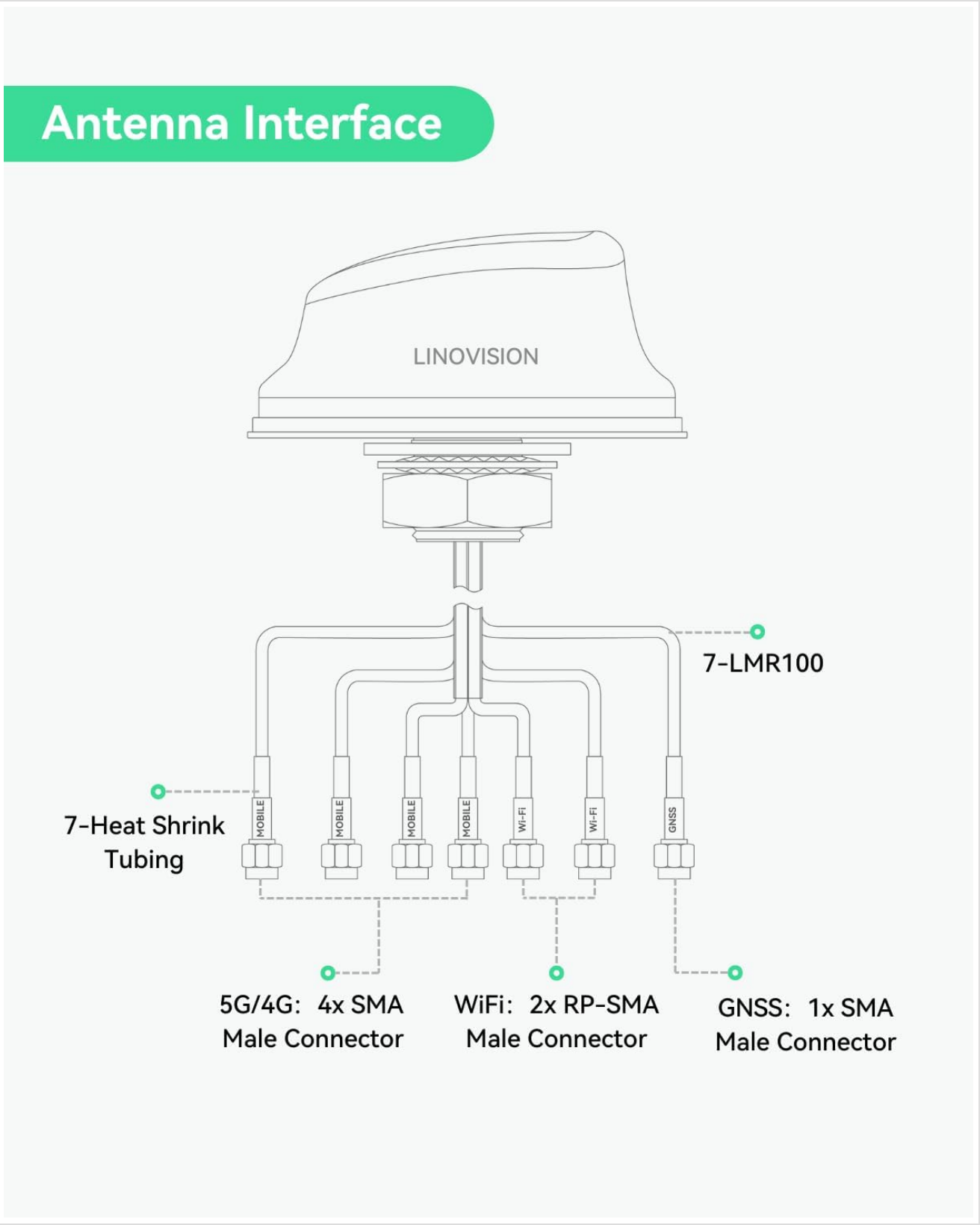

Image 2.2.2: Diagram illustrating the antenna interface, showing 5G/4G, Wi-Fi, and GNSS connectors. This diagram helps identify the different cable types and their corresponding connectors.

3. Setup

3.1. SIM Card Installation

1. Ensure the router is powered off.
2. Locate the SIM card slots (SIM1, SIM2) on the router panel (refer to Image 2.1.2).
3. Insert your activated 5G/4G SIM card(s) into the designated slots until they click into place.

4. Ensure the SIM cards are correctly oriented according to the diagram near the slots.

3.2. Antenna Installation

1. **Mounting the 7-in-1 Antenna:** Choose an outdoor location, preferably on a roof, that provides a clear line of sight to cellular towers and GPS satellites. Securely mount the antenna using the screw mount mechanism. The antenna is IP67 waterproof for outdoor reliability.
2. **Connecting Antenna Cables to Router:** Connect the 4x 5G LTE MIMO cables, 2x Wi-Fi cables, and 1x GNSS cable from the 7-in-1 antenna to the corresponding SMA Male connectors on the RUTM50 router. Refer to Image 2.1.2 and Image 2.2.2 for connector identification.
3. Ensure all connections are finger-tight to prevent signal loss.

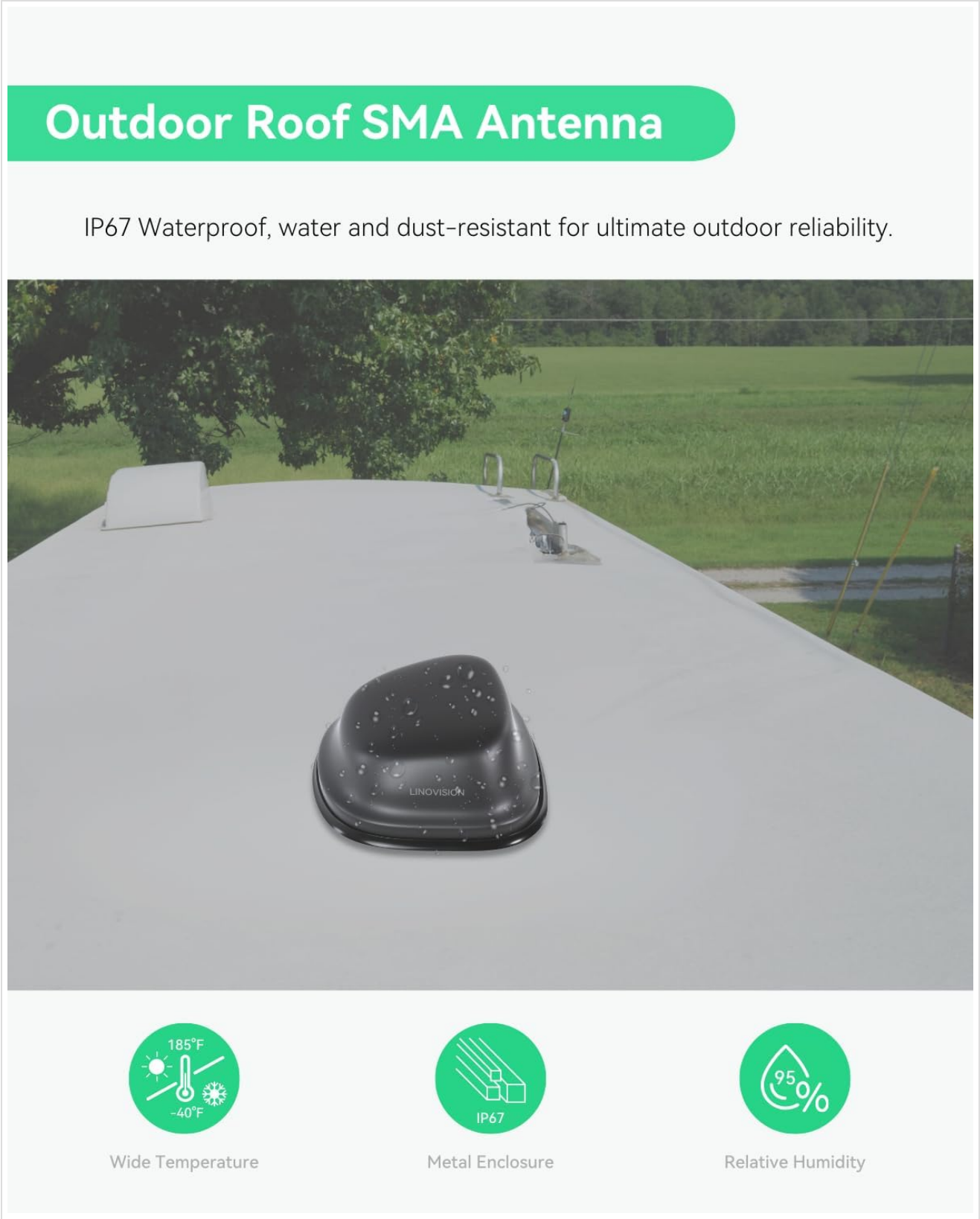

Image 3.2.1: Example of the 7-in-1 antenna mounted on a roof, demonstrating its outdoor application. This image shows the antenna's physical appearance when installed outdoors.

3.3. Power Connection

1. Connect the power adapter to the 9-50V DC Power Input Ground Port on the router (refer to Image 2.1.2).
2. Plug the power adapter into a suitable power outlet. The PWR LED on the router should illuminate, indicating power is supplied.

3.4. Ethernet Connection

For wired network access, connect your devices (e.g., computers, switches) to the LAN ports (LAN1-LAN4) on the

router using standard Ethernet cables. The WAN port can also be configured as a LAN port if needed.

4. Operating Instructions

4.1. Initial Configuration

Upon powering on, the router will boot up. Access the router's web interface via a connected computer using a web browser. The default IP address and login credentials can typically be found on a label on the router or in the quick start guide. Follow the on-screen prompts to configure your network settings, including cellular (APN settings), Wi-Fi, and security protocols (WPA2, WPA3). The router operates on LINOVISION Proprietary OS.

4.2. 5G/4G Cellular Connectivity

The RUTM50 supports SA and NSA 5G modules, offering ultra-high speeds up to 3.4Gbps (DL) and 550Mbps (UL). It is backward compatible with 4G networks (up to 1.6Gbps DL/200Mbps UL). Once SIM cards are installed and configured, the router will automatically connect to the available cellular network. Monitor the Mobile Network Type LEDs and Mobile Signal Strength indication LEDs on the router for status (refer to Image 2.1.2).

Image 4.2.1: Diagram illustrating the 5G ultra-high speed capabilities of the router, showing speeds up to 3.4 Gbps. This image visually represents the high data transfer rates achievable with the 5G module.

4.3. Wi-Fi Network Setup

The router supports dual-band Wi-Fi. Configure your Wi-Fi network (SSID, password, security type) through the web interface. Ensure your Wi-Fi antennas are properly connected for optimal wireless performance.

4.4. Automated Failover

The RUTM50 supports automated failover, ensuring an uninterrupted connection by switching between available internet sources (5G SIM 1, 5G SIM 2, Wi-Fi, Wired WAN) if one connection fails. This feature enhances network

reliability.

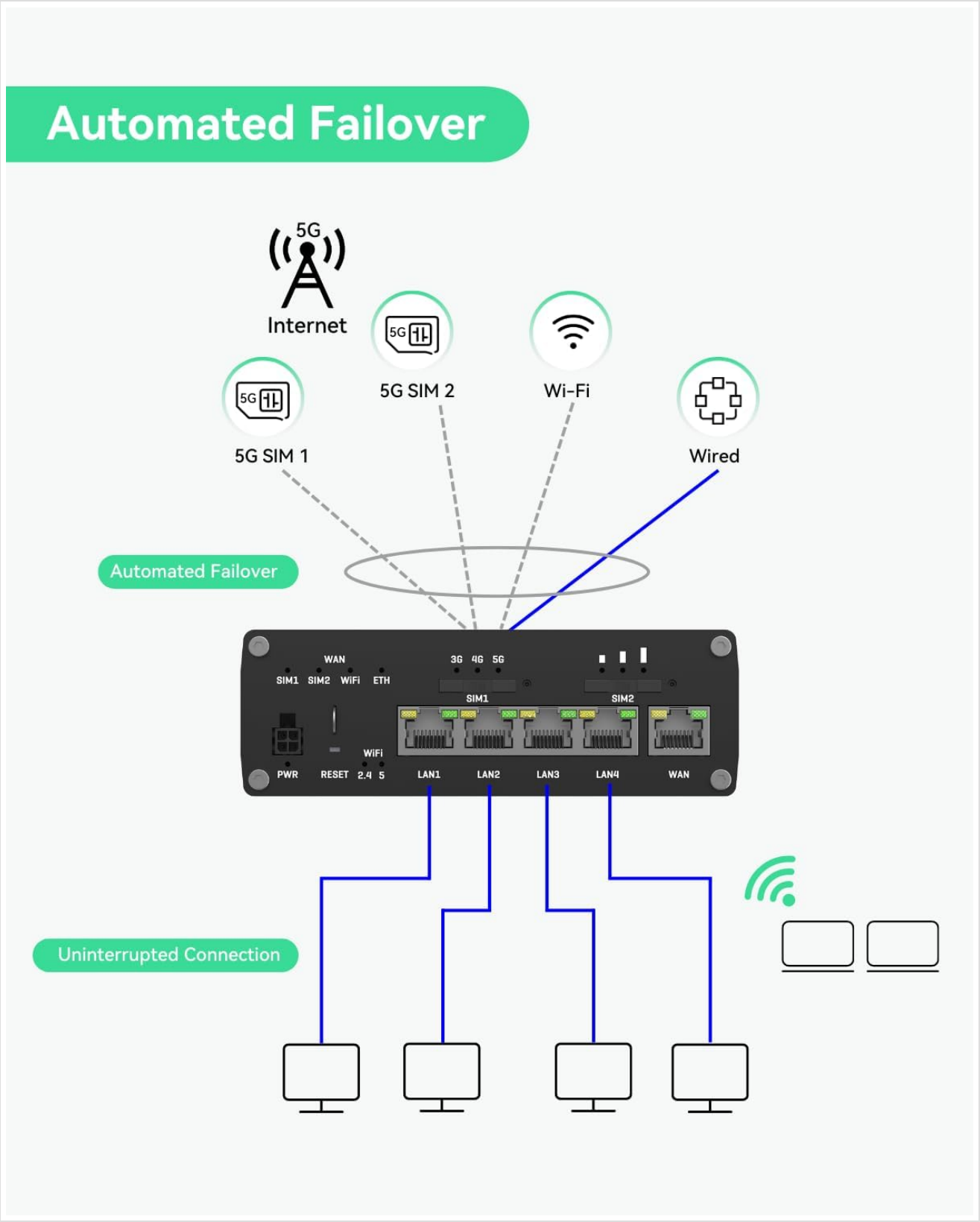

Image 4.4.1: Diagram illustrating the automated failover functionality, showing how the router switches between different internet sources for continuous connectivity. This diagram explains the router's ability to maintain an internet connection even if one source fails.

5. Maintenance

- **Regular Cleaning:** Keep the router and antenna free from dust and debris. For the outdoor antenna, periodically check for any obstructions or damage.
- **Firmware Updates:** Regularly check the LINOVISION website or the router's web interface for available

firmware updates. Keeping the firmware updated ensures optimal performance, security, and access to new features.

- **Environmental Conditions:** Ensure the router is operated within its specified temperature and humidity ranges. The outdoor antenna is designed for harsh conditions (IP67 waterproof, wide temperature range).

6. Troubleshooting

- **No Power:** Check the power adapter connection and the power outlet. Ensure the PWR LED is illuminated.
- **No Cellular Signal:** Verify SIM card installation and activation. Check antenna connections. Ensure the antenna has a clear line of sight. Check Mobile Signal Strength LEDs.
- **No Internet Access:** Confirm cellular connectivity. Check APN settings in the router's web interface. Verify Ethernet cable connections for wired devices. For Wi-Fi, check SSID and password.
- **Slow Speeds:** Check signal strength. Ensure the antenna is optimally positioned. Consider network congestion in your area.
- **Cannot Access Web Interface:** Ensure your device is connected to the router (via Ethernet or Wi-Fi). Verify the router's IP address and your device's network settings. Try restarting the router.

7. Specifications

Feature	Description
Brand	LINOVISION
Model Name	RUTM50
Wireless Communication Standard	802.11.be
Compatible Devices	Laptop, Personal Computer, Smartphone, Tablet
Connectivity Technology	5G, Ethernet, LTE, Wi-Fi
Operating System	LINOVISION Proprietary OS
Security Protocol	WPA2, WPA3
Data Transfer Rate	3400 Megabits Per Second (5G DL)
LAN Port Bandwidth	1000 Mbps
Maximum Upstream Data Transfer Rate	550 Megabits Per Second (5G UL)
Frequency	698~960MHz/ 1710~2690MHz/ 2900~3800MHz (Antenna)
Antenna Type	7-in-1 Combo (4x 5G LTE MIMO, 2x Wi-Fi, 1x GNSS)
Antenna Ingress Protection	IP67 Waterproof

8. Applications

The LINOVISION Industrial Teltonika 5G Cellular Router RUTM50 and 7-in-1 Antenna are suitable for a wide range of applications requiring robust and reliable internet connectivity.

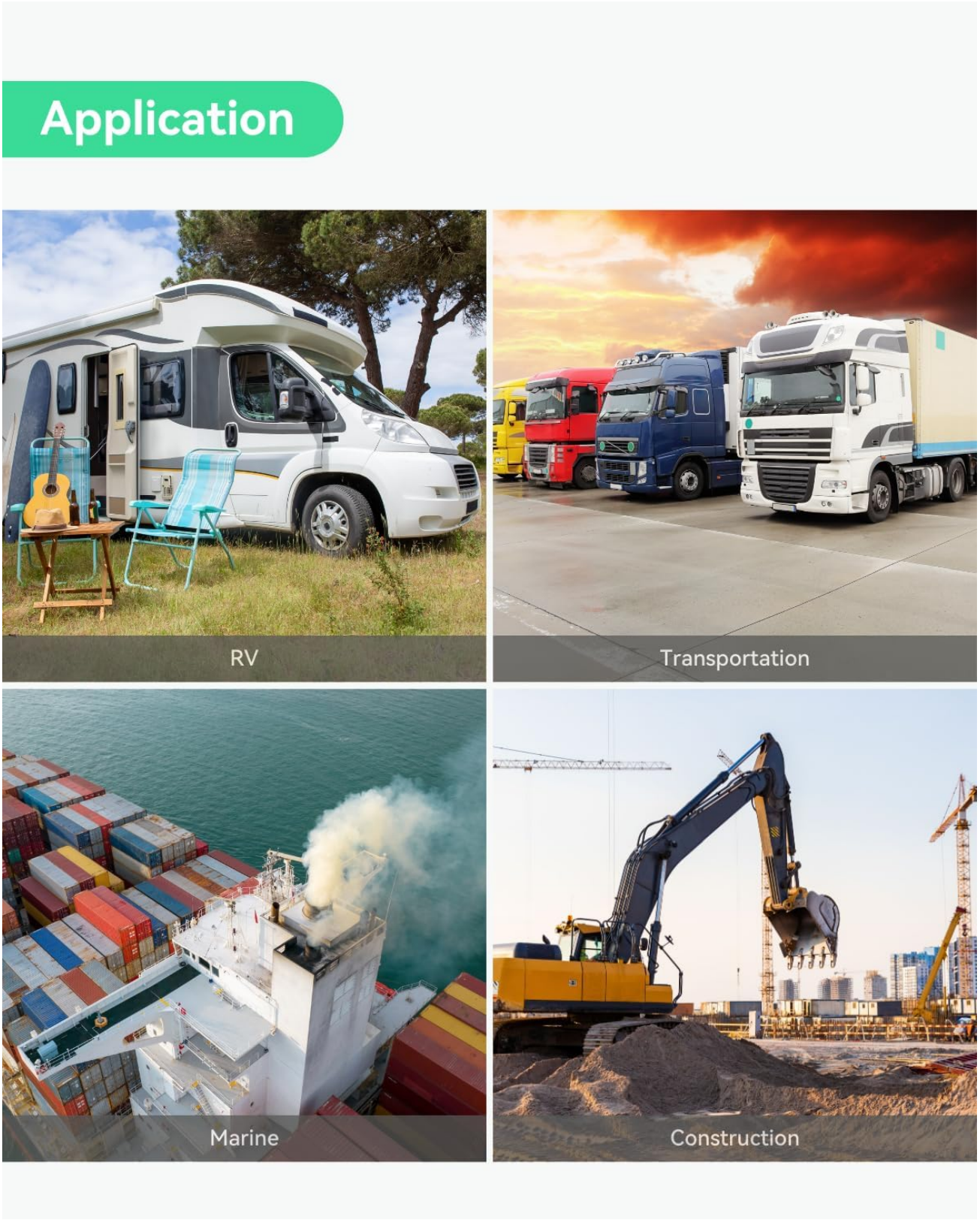

Image 8.1.1: Visual representation of various application scenarios including RVs, transportation, marine environments, and construction sites. This image demonstrates the versatility and intended use cases for the router and antenna system.

9. Warranty and Support

For warranty information and technical support, please refer to the official LINOVISION website or contact their customer service. Keep your purchase receipt for warranty claims.