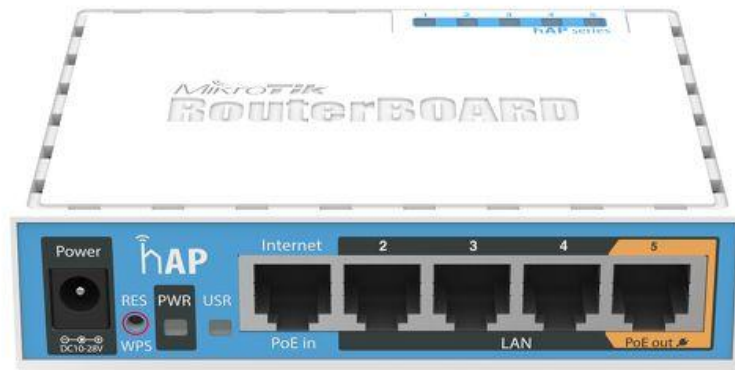# GSG WAN LITE User Guide and Datasheet

1. User Guide

1.1 Introduction

The GSG WAN LITE is a simple home wireless access point, configured out of the box. You can plug in your internet cable and start using wireless internet immediately without any additional setup steps.

1.2 Safety Warnings

Before working on any equipment, be aware of electrical hazards and follow standard safety practices. Ultimate disposal must comply with national laws and regulations, and installation must adhere to local and national electrical codes. This product is intended for indoor use only; keep it away from water, fire, humidity, and hot environments. Use only the approved power supply and accessories provided in the original packaging. In case of device failure, disconnect power immediately by unplugging the unit. It is the customer's responsibility to operate within legal frequency channels, output power limits, cabling requirements, and Dynamic Frequency Selection (DFS) regulations. All MikroTik radio devices must be professionally installed. Maintain a minimum of 20 cm between antennas and any part of your body to comply with RF exposure limits.

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1.3 Connecting

1. Connect your Internet cable to **Ethernet1**.
2. Plug local network devices (PCs, switches) into **Ethernet2–5**.
3. Set your computer's IP configuration to automatic (DHCP).
4. Join the wireless network named with the "MikroTik" prefix.
5. Open **https://192.168.88.1** in your web browser.
   - Default login: **admin** with no password (or check the device sticker).
6. Click **Check for updates** and upgrade to the latest RouterOS version.
7. In the QuickSet menu:
   - Change **Network Name (SSID)**.
   - Select your **Country** to apply regulatory settings.
   - Enter a **WiFi Password** (minimum eight characters).
   - Set a **Router Password**, confirm it, and click **Apply Configuration**.

1.4 Powering

- **Power Jack**: Barrel connector (5.5 mm outer, 2 mm inner, positive tip) accepts 10–28 V DC.
- **Passive PoE Input**: **Ethernet1** port accepts 10–28 V DC.
- **Power Consumption**: Up to 5 W under maximum load.
- **PoE Output**: **Ethernet5** provides passive PoE (input voltage minus ~2 V, up to 0.58 A).

1.5 Mobile App Setup

1. Scan the QR code on the device to install the MikroTik mobile app.
2. Launch the app; the IP address and username are pre-filled.
3. Tap **Connect** to link to your device over Wi-Fi.
4. Choose **Quick setup** for a guided configuration or **Advanced** for full control.

1.6 Configuration

RouterOS offers extensive options beyond QuickSet. If IP connectivity is unavailable, use Winbox to connect via the device's MAC address on the LAN side. For recovery, the reset button provides network boot and Netinstall options (see section 1.8).

1.7 Mounting

Place the GSG WAN LITE on a flat, stable indoor surface with adequate ventilation. For PoE deployments, use Cat5 shielded Ethernet cables. Maintain a minimum 20 cm clearance around the antennas for MPE compliance. Wall-mount anchoring holes are provided in the enclosure.

1.8 Extension Slots and Ports

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- **Ethernet1–5**: 10/100 Mbps Auto MDI/X (supports straight or crossover cables).
- **Wireless**: Integrated 2.4 GHz 802.11b/g/n, 2×2 MIMO with two onboard PIF antennas (max gain 1.5 dBi).
- **USB**: One USB 2.0 Type-A port for storage or 3G/4G modems (max 1 A).
- **Reset Button**:
    1. Hold ~5 s at boot until LED flashes to reset RouterOS config.
    2. Hold ~10 s (LED solid) to enable CAP mode (searches for CAPsMAN).
    3. Hold ~15 s (LED off) for Netinstall recovery.
    4. Hold before power-on to load backup RouterBOOT loader.
- **LEDs**: Show power, Ethernet activity, wireless activity, and boot state.

1.9 Operating System Support

The GSG WAN LITE ships with RouterOS version 6 pre-installed. The exact factory version is shown under **/system resource**. Other operating systems have not been tested or supported. For upgrades and licensing details, refer to MikroTik's website.
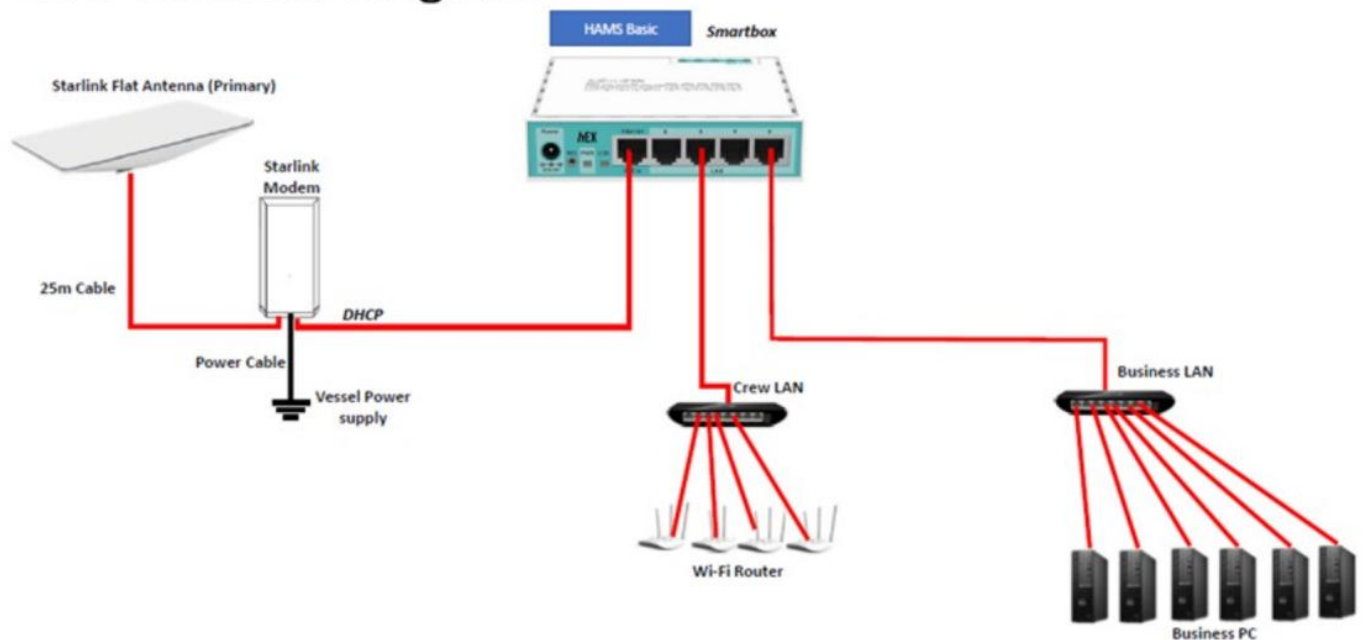
1.10 Regulatory Notices

- **FCC ID**: TV7RB951Ui-2ND (complies with FCC Part 15, Class B).
- **Certifications**: CE, RoHS, IC, EAC.
- Devices with "-EG" in the serial number have restricted frequency ranges and TX power per country regulations.
- Dispose of the device separately from household waste and follow local e-waste guidelines.
- Unauthorized modifications may void the user's authority to operate the equipment.
- End users must comply with all local regulatory requirements for frequency, power, cabling, and DFS.
- Professional installation is required for all MikroTik radio products.

Starlink VSAT Network Diagram

The diagram below illustrates a typical Starlink-based VSAT (Very Small Aperture Terminal) communication system designed for maritime or remote deployments. It shows the interconnection of hardware components for efficient network distribution onboard:

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- **Starlink Flat Antenna** (Primary): Receives and transmits satellite signals.
- **25m Cable**: Connects the antenna to the modem.
- **Starlink Modem**: Powers the antenna and provides internet access; uses DHCP to assign IP addresses automatically.
- **Smartbox (HAMS Basic)**: Acts as a router or gateway to segment and manage the onboard network.
- **Crew LAN**: Connects to a Wi-Fi router that distributes wireless internet to crew devices.
- **Business LAN**: Supports business-critical operations via direct connections to business PCs.

VSAT Network Diagram

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2. Technical Datasheet

2.1 Hardware Specifications

Parameter	Specification
Product Code	RB951Ui-2nD
Architecture	MIPSBE
CPU	Qualcomm Atheros QCA9531 @ 650 MHz
CPU Cores	1
RAM	64 MB DDR2
Storage	16 MB NOR flash
Ethernet Ports	5× 10/100 Mbps Auto MDI/X
Wireless	2.4 GHz 802.11b/g/n, 2×2 MIMO, 1.5 dBi antennas
USB	1× USB 2.0 Type-A
PoE Input	Port 1 passive PoE (10–28 V DC)
PoE Output	Port 5 passive PoE (input – ~2 V, up to 0.58 A)
Power Input	10–28 V DC via barrel jack or PoE
Max Power Consumption	≤ 5 W
Operating Temperature	–30 °C to +60 °C
Operating Humidity	10 %–90 % non-condensing
Storage Temperature	–40 °C to +70 °C
Dimensions (W×D×H)	113 × 89 × 28 mm
Weight	200 g
Regulatory Certifications	CE, FCC Class B, IC, EAC, RoHS
FCC ID	TV7RB951Ui-2ND

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2.2 Environmental & Compliance

- **MTBF**: ~100,000 hours at 25 °C.
- **Tested Ambient Temperature**: –30 °C to +70 °C.
- **IP Rating**: IP20 (indoor use only).
- **RF Exposure**: Maintain 20 cm separation for MPE compliance.
- **End-of-Life Disposal**: Follow local e-waste regulations; do not discard with household waste.

2.3 Ordering Information

Model	Description
RB951Ui-2nD GSG WAN LITE: 5× Ethernet, USB, 2.4 GHz wireless, PoE in/out	

For full product variants, accessories, and pricing, visit the official product page.

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