MIKROTIK

KNOT LR8G kit

An industrial-grade IoT gateway for smart asset tracking, remote monitoring, and efficient automation – now with enhanced LoRa® reception, concurrent GPS + LTE CAT-M, and a lower price.



- LoRa ® 868MHz
- CAT-M/NB technology
- 2.4 GHz wireless
- RS485/Modbus
- 2x 100 Mbps Ethernet ports
- PoE-in & PoE-out
- GNSS
- GPIO
- Bluetooth

Smart IoT Connectivity That Just Works

The KNOT LR8G is a compact, out-of-the-box gateway for LoRa®-based networks, designed to bring affordable, reliable connectivity to even the most remote or infrastructure-light environments. It supports **LTE CAT-M1 and NB2, Bluetooth 5.2, 2.4 GHz Wi-Fi, GPS**, and **Ethernet with PoE**, making it a flexible centrepiece for any IoT deployment.

CAT-M1 and NB2 mobile internet connectivity allows you to save tons of money and remotely monitor and manage equipment without needing high-cost data plans or full LTE coverage.

Whether you're tracking high-value assets across a hospital, managing a vending machine in a shopping mall, or monitoring sensors in an agricultural field – the KNOT LR8G ties everything together and keeps everything connected.

Key Features & Upgrades

- **Concurrent GPS and LTE CAT-M**

  Track assets in motion with precise GPS while maintaining a live LTE CAT-M1 connection. Ideal for mobile units like service vehicles, containers, or roaming field equipment.

- **Versatile Powering**

  Choose from PoE-in, DC jack, or MicroUSB – including PoE-out on Ether2 for powering other devices.

- **SMA Female Connectors for All Main Interfaces**

  Easy antenna setup for LTE, GPS, and LoRa®.

- **Improved 868 MHz LoRa® Reception**

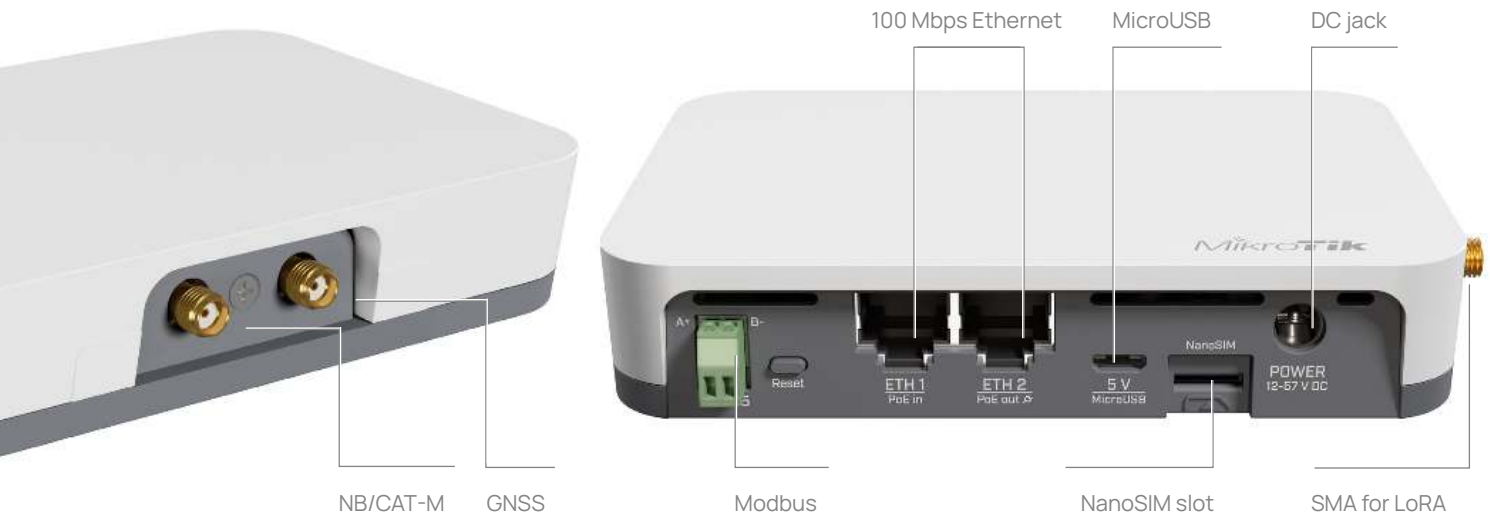
  Enhanced sensitivity for stronger signal and longer range, even in interference-heavy environments.

- **Lower Price, Same Reliability**

  Cost-effective for large-scale deployments without sacrificing performance.

- **Powered by RouterOS v7**

  – for full control, custom scripting, and advanced routing features.



Practical Use Cases

Hospital Asset Tracking

Attach Bluetooth beacons to critical medical equipment. Install a KNOT LR8G in each storage area. As gear moves, KNOT detects nearby tags, tracks location via GPS, and sends updates over LTE CAT-M – keeping inventory up-to-date and reducing manual audits.

Cold Chain Monitoring

Use wired Modbus sensors to monitor temperature and humidity inside refrigerated containers. KNOT converts Modbus to TCP and forwards data securely via MQTT or HTTPS, using low-bandwidth LTE or NB-IoT.

Agriculture & Remote Sites

Deploy KNOT to gather soil or weather sensor data in rural fields. Its wide band support, LoRa® reception, GPS compatibility make it ideal for long-range, low-power data collection.

Industrial Automation

Bridge legacy wired sensors and actuators to the cloud. With DIN rail support and GPIO monitoring, KNOT easily integrates into industrial cabinets or manufacturing environments.

Lightweight, Powerful, Cost-Effective

At just 6W consumption and small footprint (122 × 87 × 26 mm), the KNOT LR8G is perfect for deployments where space, power, and budget are limited – but performance can't be.

KNOT: track, monitor, automate – smarter and cheaper than ever before.



Specifications

Product code	RB924iR-2nD-BT5&BG770A&R11e-LR8G
CPU	QCA9531 650 MHz
CPU architecture	MIPSBE
Size of RAM	64 MB
RAM type	DDR2
Storage	128 MB, NAND
Number of 100M Ethernet ports	2
USB port	1 microUSB type AB
Wireless	2.4 GHz 802.11b/g/n
Wireless interface model	QCA9531
Antenna gain	1.5 dBi
Antenna beam width	360°
GNSS interface model	MT3337V
GNSS standard	GPS
Antenna connector	SMA female
LoRa band	868MHz
Bluetooth version	5.2
IoT modem	BG770A
Cat NB type	Cat NB2
Cat NB band	B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B28/B66
Cat M type	Cat M1
Cat M band	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66
Operating system	RouterOS v7, License level 4
Operating temparature	-40°C to +70°C

Powering

Number of DC inputs	3 (PoE-In, MicroUSB, DC jack)
PoE-In input voltage	18-57 V
MicroUSB input voltage	5 V
DC jack input voltage	12-57 V
Power adapter nominal voltage	24 V
Power adapter nominal current	1.2 A
PoE-in	802.3af/at
PoE-out	802.3af (Ether2)
Smart PoE	Injector
Max out per port output (input < 30 V)	650 mA
Max out per port output (input > 30 V)	450 mA
Max power consumption (without attachments)	6 W
Max power consumption	23 W

Wireless specifications

Rate (2.4 GHz)	Tx (dBm)	Receive Sensitivity
1MBit/s	22	-96
11MBit/s	22	-89
6MBit/s	20	-93
54MBit/s	18	-74
MCS0	20	-93
MCS7	16	-71

Included parts



24 V 1.2 A
power adapter



Wall mount
set



DIN rail
mount set



USB OTG cable