



# MIKROTIK GATEWAY

## KNOT LR8/LR9 IoT Gateway for LoRa

An out-of-the-box 902-928 MHz IoT Gateway solution for LoRa® technology. For ultimate versatility and cost-effectiveness. It uses Narrow Band and CAT-M technology. Because of the low cost, low bandwidth cellular connection, it is supported by countless mobile operators around the globe. This kit contains a pre-installed UDP packet forwarder to any public or private LoRa® servers. With the support of 8 different channels, Listen Before Talk (LBT) and spectral scan features this product will astound you with its enticing price point. KNOT features so many protocol support and connectivity options: 2.4 GHz wireless, Bluetooth, LoRa®, 2x 100 Mbps Ethernet ports with PoE-in and PoE-out, Micro-USB.

### FEATURES

- ✓ All-in-one: LoRa, CAT-M/NB, 2.4 GHz wireless, Bluetooth
- ✓ Available in 868Mhz or 915Mhz version
- ✓ 2x 100 Mbps Ethernet Ports
- ✓ PoE-in & PoE Out
- ✓ 5V MicroUSB In
- ✓ GNSS & GPIO
- ✓ RS485

### SYSTEM ADVANTAGES

- ✓ First gateway with a CAT-M interface for LoRa; uses Narrow Band and CAT-M technology
- ✓ Supports 8 different channels, Listen Before Talk (LBT), and spectral scan features
- ✓ DIN rail mount for easy integration 64MB
- ✓ RAM and 128MB flash SPI NAND



# MIKROTIK GATEWAY

## TECHNICAL SPECIFICATIONS

### SPECIFICATIONS

Product Code	RB924i-2nD-BT5&BG77&R11e-LR8/LR9
Interface	Mini-PCIe
CPU	QCA9531 650 MHz
Supported Class	A and C
RF Output Power	901-927MHZ 27dBm
Dimensions	122mm x 87mm x 26mm
RouterOS License	Level 4
Operating System	RouterOS
PoE in	12-57 V
Size of RAM	64 MB
Storage Size	128 MB
Storage Type	Flash SPI NAND
Max Power Consumption	2W
Tested Ambient Temp	-40C to +70C
Suggested Price	\$269

### POWERING

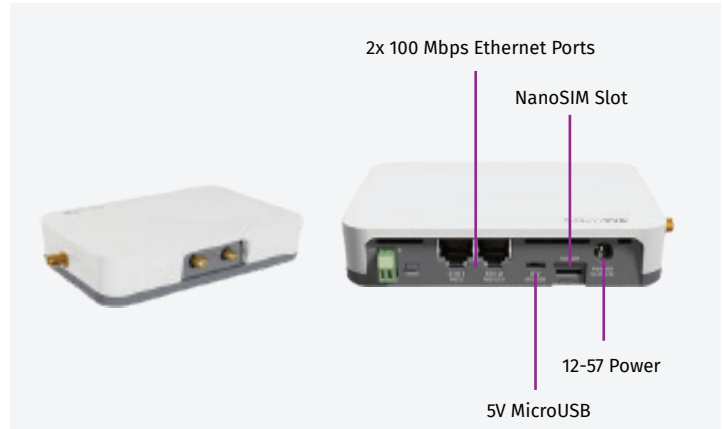
Number of DC Inputs	3 (poE-in, DC jack, MicroUSB)
IDC Jack Input Voltage	12-57V
PoE-out	802.3af/at
Max Power Consumption	18W (5W without attachments)
PoE-out Ports	1 (Ether2)
PoE-in	Yes
PoE-in Input Voltage	12-57V

### SUPPORTED BANDS

Cat-M1: LTE FDD	B1, B2, B3, B4, B5, B8, B12, B13, B18, B20, B25, B26, B27, B28, B66, B85
Cat-NB2: LTE FDD	B1, B2, B3, B4, B5, B8, B12, B18, B19, B20, B25, B28, B66, B71 B85

### ETHERNET

10/100/1000 Ethernet Ports	2x100Mbps
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### PERIPHERALS

SIM Slots	1x NanoSIM
Number of USB Ports	1x 100 MicroUSB
Built-in GPS	Yes
USB Slot Type	MicroUSB Port Type AB
Bluetooth	Version 5.2

### OTHER

Concentrator Card for LoRa	R11e-LR8/R11e-LR9
Antenna Gain	1.5dBi/2dBi Bluetooth

### CERTIFICATIONS & APPROVALS

Certification	Bluetooth CE
IP	FCC, IC

### WIRELESS

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

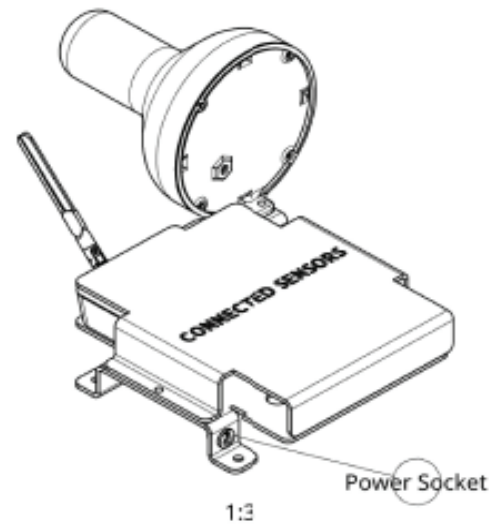
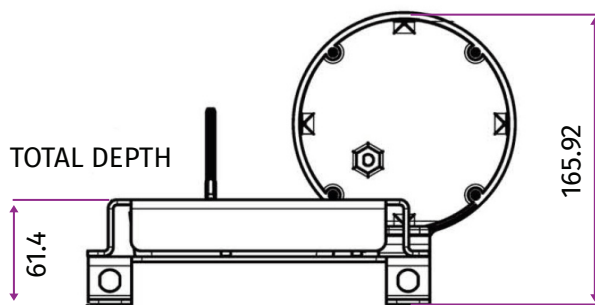
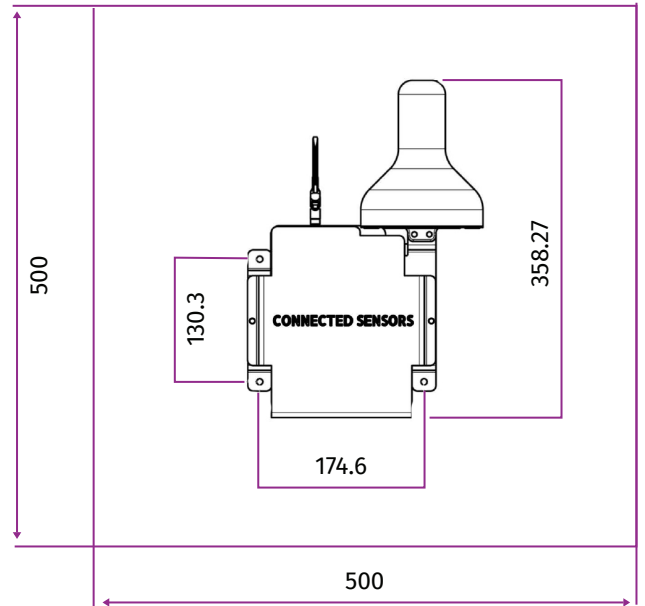
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## TECHNICAL SPECIFICATIONS

### INSTALLATION INSTRUCTIONS

For optimal performance, gateway assembly is to be installed in areas with:

- ✓ Either drywall or plywood with clear area of at least 500mm x 500mm
- ✓ 1 meter away from structural, or decorative metal to ensure best possible signal propagation
- ✓ Within 1.5 meters 120v 15 amp power source IEC 60906-2 NEMA Standard and can operate between 110 to 240VAC at standard current of no more than 1-AMP of continuous draw
- ✓ LTE signal availability and/or wired Ethernet with Internet connectivity



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS ANGULAR = ±° SURFACE FINISH ✓		NAME	SIGNATURE	DATE	TITLE:		
	DRAWN						
	CHECKED						
DO NOT SCALE DRAWING	APPROVED				SIZE	DWG NO	REV
BREAK ALL SHARP EDGES & REMOVE BURRS					SCALE	WEIGHT	SHEET
FIRST ANGLE PROJECTION 	MATERIAL	FINISH					