

miro Edge Outdoor

High-performance family of LoRa® and LoRaWAN® gateways for 868 MHz, 915 MHz and 2.4 GHz frequency bands

Description

miro Edge Outdoor is an OEM/white-label product family of affordable, fully LoRaWAN®-compatible gateways. Encased in an IP65 waterproof housing, this device is designed for outdoor installations. The small form-factor, integrated interfaces such as Ethernet, Power over Ethernet (PoE), Mini PCIe, and its underlying OpenWRT based Linux OS enable seamless integration of these gateways into any infrastructure.

Utilizing the built-in web-frontend, the gateway can be configured to communicate with any LoRaWAN® compatible network server.



Features

- ▶ Support for 868/915 MHz and 2.4 GHz
- ▶ IP68 / IP67 waterproof housing
- ▶ ETSI Listen Before Talk (LBT)
- ▶ Modular design: up to 4 × Mini PCIe slots
- ▶ Ethernet, PoE, USB, Mini PCIe
- ▶ Optional cellular connectivity (3G/4G card)
- ▶ Cellular SIM/eSIM support
- ▶ Preconfigured or web-based configuration
- ▶ Customer specific branding and configuration

Applications

- ▶ Smart Metering / Smart Buildings
- ▶ Smart Agriculture
- ▶ Large scale network deployments
- ▶ Industry 4.0
- ▶ Healthcare
- ▶ Supply Chain & Logistics
- ▶ Facility Management

Document Information

About

File name	Document type	Date	Revision
DS miro Edge Outdoor	Datasheet	2024/01/24	1

Revision history

Date	Release	Changes
2024/01/24	1	Separate indoor and outdoor version

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Connectors and Interfaces

Connectors and Interfaces

1 Air pressure compensation

2 Power Indicator

3 Power Connector (optional)

4 Ethernet/PoE (optional)

5 LTE antenna (optional)

6 LoRa® antenna

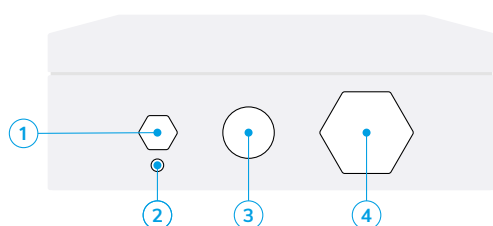


Figure 1: Interfaces Bottom

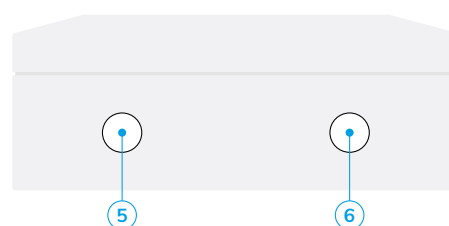


Figure 2: Interfaces Top

Technical Specifications

Mechanical specifications	Outdoor
Weight	~220 g
Dimensions (internal antennas)	150 × 150 × 55 mm
Enclosure	Plastic, ASA, UV resistant
Ingress protection	IP65

Operating conditions	Outdoor
Temperature range	-20 – 60 °C
Humidity	0 – 95 % RH, non-condensing

Device power supply	Outdoor
Standard	PoE 802.3af (12 W)
Optional	5...24VDC (12 W)
	Super-Cap power fail

LoRa® Radio / Wireless	868 MHz / 915 MHz	2.4 GHz
Chip set	RX: SX1308 ² / SX1257, TX: SX1272	SX1280 (3x RX, 1x TX)
Rx sensitivity ¹	-141 dBm (SF12)	-130 dBm (SF12)
RF transmission power ¹	up to 27 dBm	up to 24 dBm
Data rates ¹	0.6 – 300 kbps (FSK) SF7-SF12, 125/250/500 kHz	0.6 – 253 kbps (LoRa) Up to 1.3 Mbps (FLRC) Up to 2 Mbps (FSK)

¹ See gateway card datasheet for detailed specifications

² SX1302 based gateways available on request

Antenna options	
IoT/LoRa®	Internal and external antenna option, software selectable antenna diversity
LTE	Dual, multi-band-MIMO (internal + external)

Technical Specifications

Certifications

CE

FCC

US915: FCC ID: 2AUQE30REJ
2G4-PRO: FCC ID: 2AUQEBQN90
LTE: FCC ID: 2AJYU-8PYA007
LTE: FCC ID: XMR201708EC21E

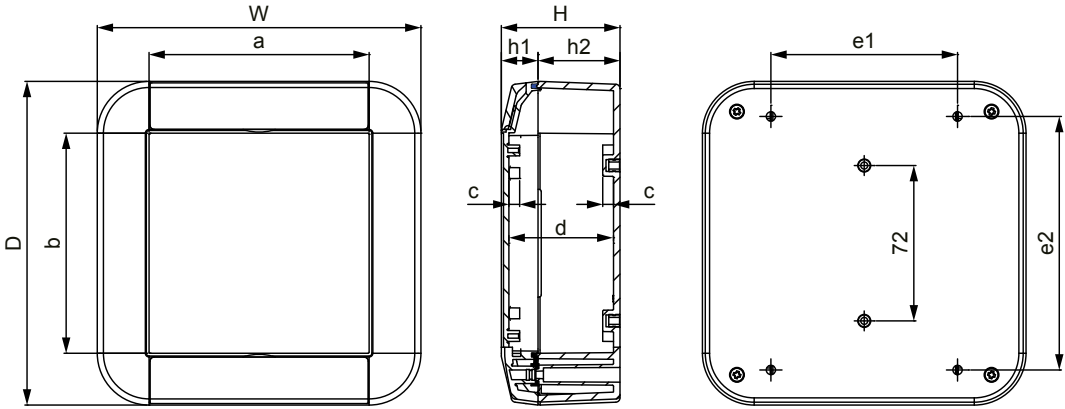
⚠ FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Mechanical Dimensions



W	D	H	h1	h2	a	b	c	d	e1	e2
150	150	55	17	38	102	102	5	48.5	86.5	117.5

Figure 3: Mechanical Dimensions in mm

Additional Documentation

Additional Ressources

Product information page	miromico.ch/miro-edge-outdoor
Technical documentation	docs.miromico.ch/gateways-cards

Device Options

Product ID	ISM BAND			Options		
	EU868	US915	2.4 GHz ¹	LTE	Ext. Antenna	BICS SIM ²
EDGE-OD-LW-868	✓				✓	
EDGE-OD-LW-868-LTE	✓			✓	✓	✓
EDGE-OD-LW-868-BIC	✓			✓	✓	
EDGE-OD-LW-915		✓			✓	
EDGE-OD-LW-915-LTE		✓		✓	✓	✓
EDGE-OD-LW-915-BIC		✓		✓	✓	
EDGE-OD-LW-2G4			✓		✓	
EDGE-OD-LW-2G4-LTE			✓	✓	✓	✓
EDGE-OD-LW-2G4-BIC			✓	✓	✓	

¹ with power amplifier and hardware ranging support

² other SIM provider on request

Keep in touch

Miromico AG
Gallusstrasse 4
CH-8006 Zürich
Switzerland

info@miromico.ch
www.miromico.ch

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