miro
Edge Indoor mioty®

Modular cost-effective family of mioty® indoor base stations for 868 MHz ISM frequency band

Description

miro Edge Indoor mioty® is an OEM/white-label product family of affordable, fully mioty®-compatible base stations. 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 base stations into any infrastructure.

Utilizing the built-in web-frontend, the gateway can be configured to communicate with any mioty® compatible service center.

The gateway also offers a remote management system, which can be integrated into the customers IT infrastructure. The RMS supports firmware-over-the-air update (FUOTA), remote access and versatile real-time device healt information.

Features

- ▶ Support for 868 MHz
- ▶ Modular design: 2 × Mini PCIe slots
- ▶ Ethernet, PoE, USB, Mini PCIe
- ▶ Optional cellular connectivity (3G/4G card)
- ▶ Cellular SIM/eSIM support
- ▶ Remote Management System
- ▶ Preconfigured or web-based configuration
- ▶ Customer specific branding and configuration

Applications

- ▶ Smart Metering / Smart Buildings
- ▶ Industry 4.0
- ▶ Home Automation
- ▶ Healthcare
- ▶ Smart Retail
- ▶ Supply Chain & Logistics
- ▶ Facility Management

Document Information

About

File name	Document type	Date	Revision
DS miro Edge Indoor mioty®	Datasheet	2024/05/02	1.0

Revision history

Date	Release	Changes
2024/05/02	1.0	First revision

Table of content

Connectors and Interfaces

Connectors and Interfaces

1	External mioty® antenna	**6**	Power Indicator
2	Reset button	**7**	Power input, USB micro
3	WWAN LED	**8**	USB device connector
4	WLAN LED	**9**	Ethernet / PoE
5	mioty® LED	**10**	External LTE antenna
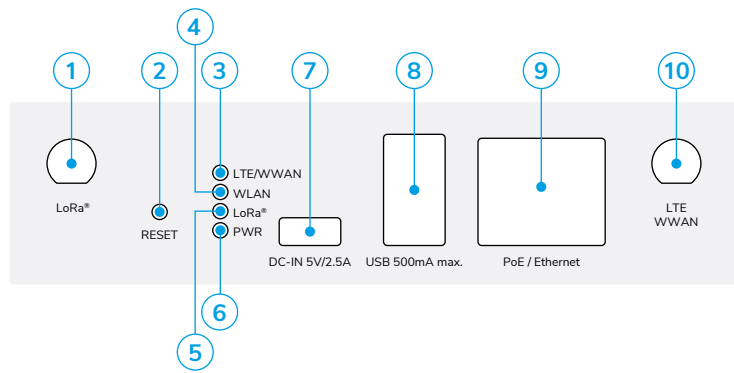
Figure 1: Interfaces

LED status information

LED	Description	solid	flashing	off
LTE/WWAN	mobile network available	connected	error	not available
WLAN	WiFi activity	-	transmission activity	WiFi off
mioty®	mioty® connectivity	connected	-	no connection
PWR	Power supply	device is powered	-	device not powered

Technical Specifications

Mechanical specifications	
Weight	~175 g
Dimensions (internal antennas)	110 × 129 × 33 mm
Enclosure	Plastic, ABS
Ingress protection	IP41

Operating conditions	
Temperature range	0 – 55 °C
Humidity	0 – 95 % RH, non-condensing

Device power supply	
Standard	MicroUSB (5 VDC, 12 W)
Optional	PoE 802.3af (12 W)

mioty® radio / wireless	
Rx sensitivity[1]	-136 dBm
RF transmission power[1]	up to 27 dBm
RX frame capabilities[1]	Up to 3.5M telegrams per day (PER <= 1%)

[1] See gateway card datasheet for detailed specifications

Antenna options	
LTE	Dual, multi-band-MIMO (internal + external)

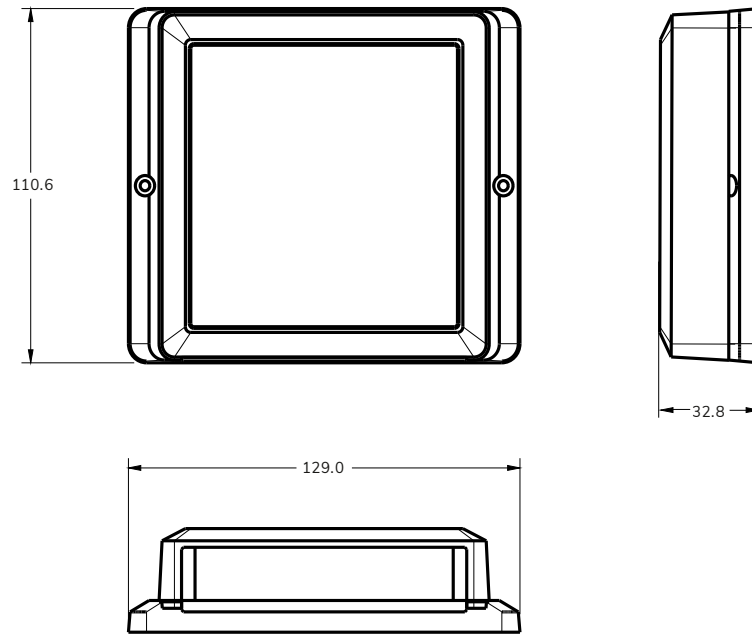| Certifications	
CE	pending

Mechanical Dimensions

Figure 2: Mechanical Dimensions in mm

Additional Documentation

Additional Ressources

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

Device Options

Product ID	ISM BAND		Options		
	868 MHz	915 MHz	LTE	Ext. Antenna	SIM[1]
EDGE-MY-868	✓			✓	
EDGE-MY-868-LTE	✓		✓	✓	CH/EU

[1] Gateway is equipped with Swisscom SIM card and 200 MB/month data volume for 3 months. Other SIM cards on request.

Keep in touch

Miromico AG
Gallusstrasse 4
CH-8006 Zürich
Switzerland

info@miromico.ch
www.miromico.ch

Functional Description

miro Edge Indoor is a product family of extremely flexible and cost-effective edge gateways for indoor applications. The modular design supports LoRa®/Mioty® for all frequency regions (868/915 MHz/2.4 GHz) or allows for customer specific interfaces such as Bluetooth or proprietary radios. The small form-factor, integrated interfaces like USB2.0, Ethernet, mPCIe, WiFi (optional) and its underlying LinuxOS allows for seamleass integration of these gateways into any infrastructure. The Gateway can be configured to communicate with any Mioty® compatible cloud service.
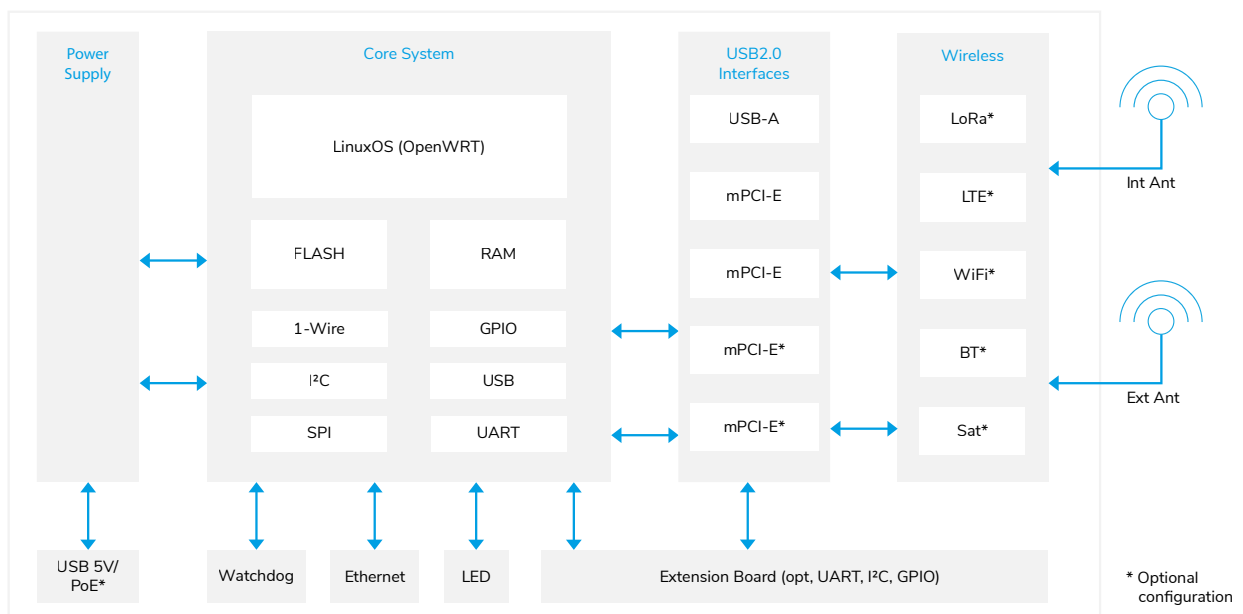

Figure 3: Block diagram miro Edge Indoor