

miro Edge Core

Modular family of LPWAN indoor gateways, combining multi-connectivity and multi-frequency capabilities.



Description

miro Edge Core is a high-performance OEM and white-label gateway platform, fully compatible with LoRaWAN® and mioty®, engineered for secure, scalable, high-volume deployments.

The **miro Edge Core** family is built around a processing module based on the NXP i.MX6UL CPU, enabling user space applications directly on the device. Its modular design and small form factor combine integrated interfaces including Ethernet, Power over Ethernet (PoE) or DC supply, an integrated LTE modem, Wi-Fi, Bluetooth, and two Mini PCIe connectors.

Running a Yocto-based Linux OS, the gateways integrates seamlessly into diverse infrastructures. The built-in web frontend supports easy configuration across various technologies and frequency bands. A remote management system (RMS) rounds off the feature set with firmware-over-the-air (FOTA) updates, remote access, and real-time device health monitoring, all designed to integrate with customers' existing IT infrastructures.

Features

- ▶ Support for 868/915 MHz and 2.4 GHz LoRaWAN® and ETSI Listen Before Talk (LBT)
- ▶ Support for 868 MHz mioty®
- ▶ Based on i.MX6UL processor module with 1x Cortex® A7 (792 MHz)
- ▶ Modular design: 2x Mini PCIe
- ▶ Ethernet, LTE (3G/4G), WiFi, Bluetooth
- ▶ Dual SIM support with optional eSIM support
- ▶ PoE and 9 - 36 VDC supply
- ▶ 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 Core	Datasheet	2026/04/14	1.0

Revision history

Date	Release	Changes
2026/02/18	1.0	Initial version

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Connectors and Interfaces

#	Name	#	Name
1	External LoRa® 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	LoRa® LED	10	External LTE antenna

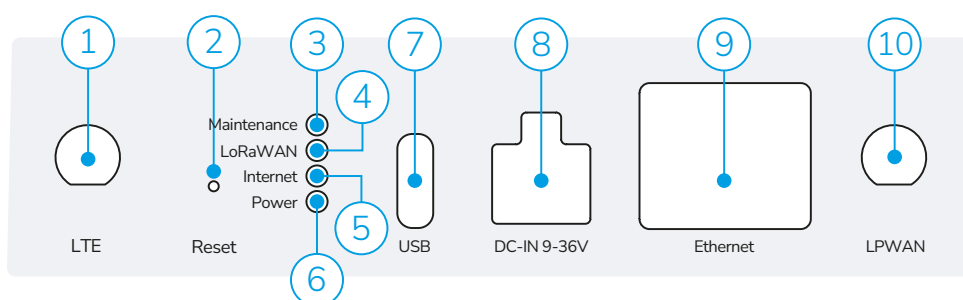


Figure 1: Interfaces

Technical Specifications

Mechanical specifications	
Weight	200g
Dimensions (without antennas)	110 × 129 × 33 mm
Enclosure	Plastic, ABS, IP40
Processor	
Processor	NXP i.MX 6UL
Core	Arm® Cortex®-A7 single core
Memory	512 MB DDR, 8GB eMMC
Operating System	Yocto-based Linux
Operating conditions	
Temperature range	0 – 55 °C
Humidity	0 – 95 % RH, non-condensing
Device power supply	
Standard	9 – 36 VDC with microFit connector, PoE 802.3af (12 W)
LoRa® Radio / Wireless	
Chip set	RX: SX1302 ² / SX1250, TX: SX1261
Rx sensitivity ¹	-141 dBm (SF12)
RF transmission power ¹	up to 27 dBm
Data rates ¹	0.6 – 300 kbps (FSK) SF7-SF12, 125/250/500 kHz
mioty® Radio / Wireless	
Chip set	CC1260
Rx sensitivity ¹	-136 dBm
RF transmission power ¹	Up to 24 dBm
Antenna options	
LoRa® / mioty®	External antenna
LTE	Single external antenna

¹ See gateway card datasheet for detailed specifications

Technical Specifications

Certifications

CE	Pending
FCC	Pending

Mechanical Dimensions

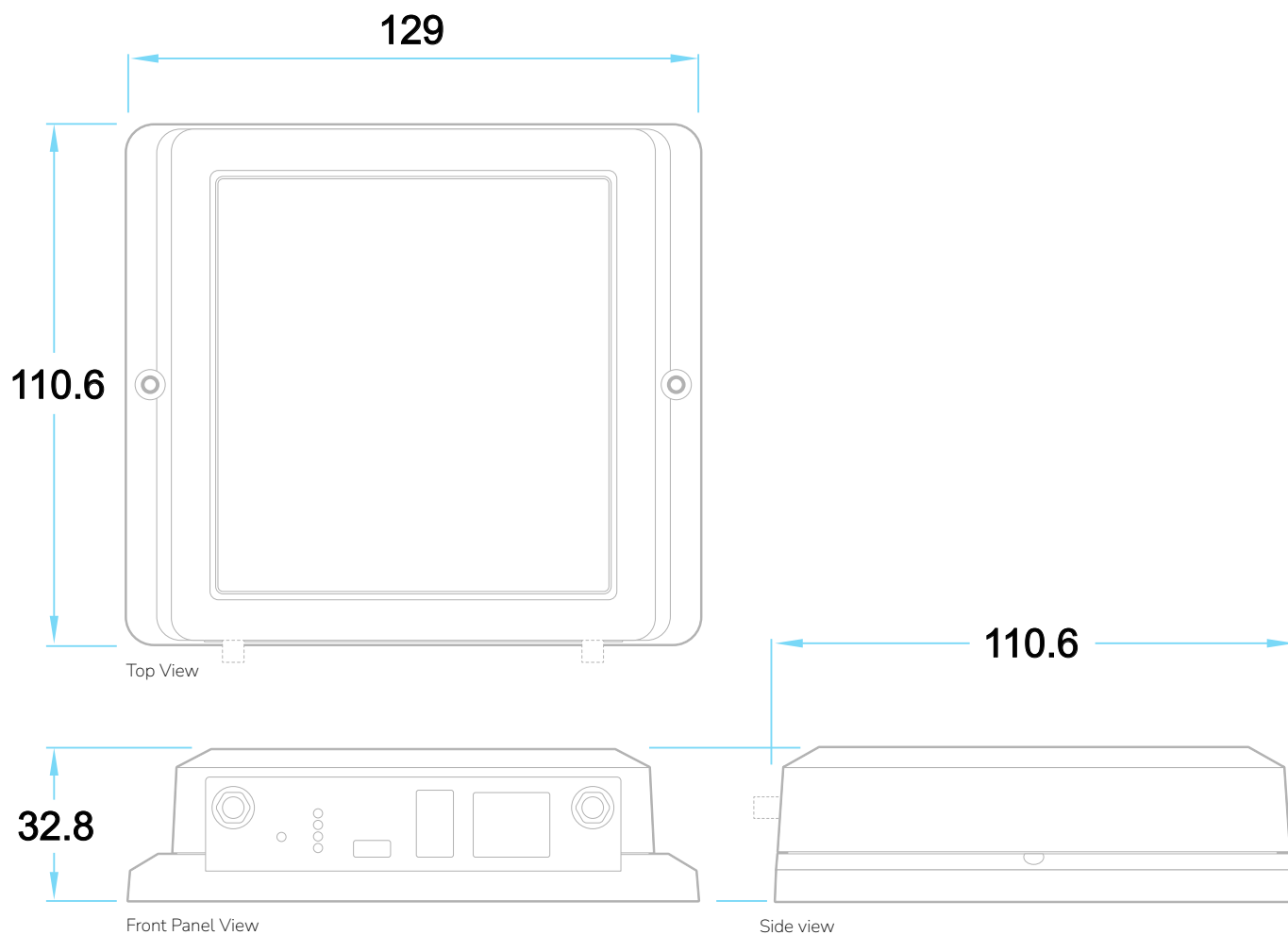


Figure 2: Mechanical Dimensions in mm

Additional Documentation

Additional Ressources

Product information page	miromico.ch/en/products/details/miro-Edge-Core
Technical documentation	docs.miromico.ch/gateways-cards/miro-edge/core/

Device Options

Product ID	ISM BAND			Options		LPWAN	
	868 MHz	915 MHz	2.4 GHz	LTE	Ext. Antenna	LoRa	mioty
EDGE-LW-868-LTE	✓			✓	✓	✓	
EDGE-LW-2G4-LTE			✓	✓	✓	✓	
EDGE-MY-868-LTE	✓			✓	✓		✓

Keep in touch

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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®/LoRaWAN® 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 seamless integration of these gateways into any infrastructure. The Gateway can be configured to communicate with any LoRaWAN® compatible cloud service.

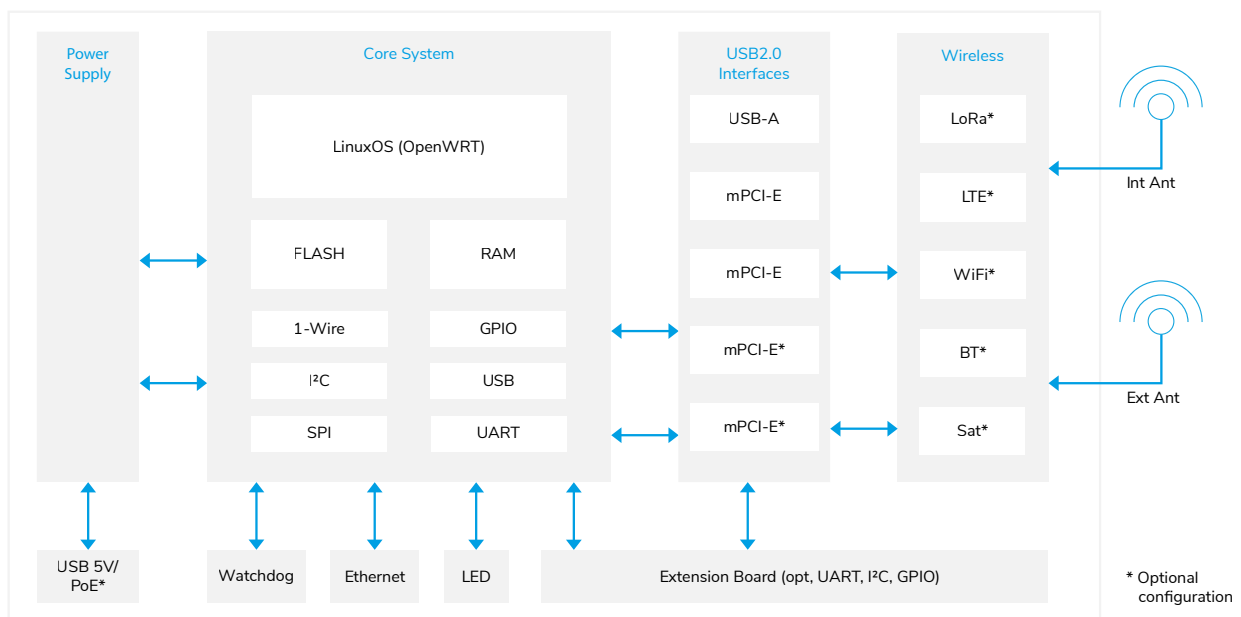


Figure 3: Block diagram miro Edge Indoor

LED status information

LED	Description	solid	flashing	off
LTE/WWAN	mobile network available	connected	error	not available (?)
WLAN	WiFi activity	-	transmission activity	WiFi off
LoRa ^{® 1}	LoRa [®] connectivity	connected	-	no connection
PWR	Power supply	device is powered	-	device not powered