Specifications

Beacon Mini-TX

SKU: 4745010309533

General specifications

- **Name:** Beacon Mini-TX
- **Size:** 47x42x15mm
- **Weight:** ~ 25g (housing + battery)
- **Weight:** ~ 6.4g (board only)
- **Power:** 5V, supplied via Micro-USB cable
- **Radio frequency band:** 868/915MHz
- **Radio output power**: <10 mW (<10 dBm)
- **Battery:** Li-Ion 250mAh (soldered to the board)
- **Ports:** Micro-USB port



Tracking performance

	IA	NIA	MF NIA
Stationary beacon	✓*	×	×
Automatic map building	×	×	×
Mobile beacon	×	✓	✓

- **TX frequency:** 31kHz*
- **RX frequency:** None
- **Distance measurement:** Up to 30m 1D
- **Precision:** Differential: ±2cm, Absolute: 1–3% of the distance to the beacons
- **Additional sensors:** IMU - Accelerometer + gyroscope

Interfaces

- UART
- SPI
- Virtual UART via USB
- NMEA
- I2C (for compass simulation)

More information

- Products - https://marvelmind.com/product/mini-tx/
- Instagram - https://t.ly/4nmqw

Overview

The Beacon Mini-TX is a beacon for Marvelmind precise Indoor positioning and navigation system. It has no microphone, so it cannot receive ultrasound. Beacon Mini-TX was mainly designed as a mobile beacon for NIA and MF NIA. Beacon Mini-TX has an IMU on board, allowing users to get information from the gyroscope and accelerometer.

The system is used for autonomous robots, vehicles, drones, and people, as well as for industrial applications requiring precise positioning and indoor localization.

Applications

- Industrial (Forklift/people tracking, factory automation)
- Healthcare (locate assets, patients & staff)
- Retail (security, navigation, customer analytics)
- Consumer (connected home, sports analytics)
- Distance measurement indoors
- Medium/small drones

*Beacon Mini-TX is designed to work mainly in NIA and MF NIA and has only 31kHz metal sensors. Different sensors can be installed for batches of >100 units.

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