



Abeeway
Improve your position

INDUSTRIAL MANAGEABLE ATEX BEACON



LoRaWAN Manageable – Hardened IP68/IK08 casing – ATEX BLE Beacon



Rugged, manageable, long lifetime beacon with Bluetooth and LoRaWAN capabilities, designed for use in harsh and hazardous environments. A versatile tool for various tracking and asset monitoring applications that can be used in areas requiring compliance with ATEX/IECEx safety standards.

This innovative industrial beacon can be configured through BLE using the Abeeway mobile app and managed over the air using any LoRaWAN network, so supervision (e.g. battery level) and configuration can be centralized. The intrinsically safe design supports the stringent requirements of IECEx/ATEX zone 0, including both Gas and Dust risks. Support for the Bluetooth® 5.0 standard makes the beacons compatible with all popular smartphones and tablets.



Applications:

- Scalable Real-time Location Tracking (RTLS). Long battery life and centralized status monitoring of beacon battery and other parameters over LoRaWAN reduces OPEX.
- Ideal manageable BLE anchor for indoor geolocation use cases for person or equipment tracking. Ideal for use in hazardous and explosive environments which require IECEx/ATEX Zone 0/ Zone 2 certification.

Product Highlights

Main features:

- Support for Eddystone / iBeacon / Altbeacon / Quuppa beaconing
- Temperature and battery level monitoring
- LoRaWAN® Class A radio
- Waterproof enclosure (IP68); shock resistant (IK08)
- Firmware upgradable
- Replaceable AA batteries
- Modular fixation
- Abeeway mobile app for beacon configuration
- ATEX/IECEx certification⁽²⁾⁽³⁾⁽⁴⁾



INDUSTRIAL MANAGEABLE ATEX BEACON SPECIFICATIONS

Physical configuration

Size	112mm x 66mm x 33mm (L x l x h)
Weight	190g
Waterproof capability and resistance	IP68, IK08
Operating temperatures	-20°C to +65°C
Storage temperature	10°C to 30°C (recommended)
Time storage max	12 months
Humidity	< 95% non-condensing

Estimated lifetime

Use Case	Battery Life (Approx.)
BLE Advertisement Period = 0,333 sec	5 years (ATEX 0)
BLE TX power = 0 dBm	8 years (ATEX Zone 2/non-ATEX)
LoRaWAN periodic reporting = 60 mins	

Data communication support

LoRaWAN™ Modem	Semtech transceiver SX1262
Protocol	LoRaWAN Class A
LoRaWAN™ Frequency bands ⁽¹⁾	EU868MHz / US915MHz / AS923MHz / AU915 MHz
Configuration supported	OTA or ABP
RF output power ⁽¹⁾	14 dBm / 19 dBm (max)
LoRaWAN™ receiver sensitivity	-130 dBm in SF10
Wi-Fi sniffer sensitivity	-86 dBm
Wi-Fi frequency band	2412 - 2472MHz
BLE RF output power	3 dBm max
BLE beacon range (approx.)	100m (without any obstacles)

Standards and Certifications

LoRa Alliance EU868, US915, AS923, IN865, AU915
Radio regulatory certification : EC, FCC, IC, TELEC, IMDA

Power management


Primary battery	3x AA/3.6V (Li-SOCl2) -Nominal capacity 8Ah
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Product references

Product	SKU			
ABE COMPACT TRACKER EU868	DEABE51X-XXXEU	DEABE51X-XXXEU-Ex0 ⁽²⁾⁽⁴⁾	DEABE51X-XXXEU-Ex2 ⁽³⁾	
ABE COMPACT TRACKER IN865	DEABE51X-XXXIN	DEABE51X-XXXIN-Ex0 ⁽²⁾⁽⁴⁾	DEABE51X-XXXIN-Ex2 ⁽³⁾	
ABE COMPACT TRACKER US915	DEABE51X-XXXUS	DEABE51X-XXXUS-Ex0 ⁽²⁾⁽⁴⁾	DEABE51X-XXXUS-Ex2 ⁽³⁾	
ABE COMPACT TRACKER AS923	DEABE51X-XXXAS	DEABE51X-XXXAS-Ex0 ⁽²⁾⁽⁴⁾	DEABE51X-XXXAS-Ex2 ⁽³⁾	
ABE COMPACT TRACKER AU915	DEABE51X-XXXAU	DEABE51X-XXXAU-Ex0 ⁽²⁾⁽⁴⁾	DEABE51X-XXXAU-Ex2 ⁽³⁾	

(1) Channel frequencies and Transmit output power level are country specific and controlled by the operator

(2) ATEX Zone 0:  II 1G Ex ia IIC T4 Ga Ta -20 °C ... +40 °C
 II 1D Ex ia IIIC T135°C Da Ta -20 °C ... +40 °C

(3) ATEX Zone 2:  II 3G Ex ic nA IIC T4 Gc Ta -20 °C ... +65 °C
 II 3D Ex ic tc IIIB T135°C Dc Ta -20 °C ... +65 °C

(4) IECEx: Ex ia IIC T4 Ga
 Ex ia IIIC T135°C Da

Abeeway is the market leader in low-power geolocation and a provider of disruptive IoT tracking solutions worldwide. Abeeway offers the most energy-efficient, reliable and flexible geolocation solutions using unique tracking devices and a smart multitechnology location system optimized for long-range and low-power-consumption LoRaWAN® connectivity. Offering the fastest time-to-market, Abeeway delivers a complete end-to-end solution for mass-market IoT sectors for asset tracking and management, process and decision optimization and personal safety. Abeeway is a member of the LoRa Alliance® and part of the Actility Group. Actility Group is a leading provider of LPWA IoT connectivity solutions, tools, business services and applications.