



Abeeway
Improve your position

COMPACT TRACKER



Long battery life – Indoor & Outdoor IK08/IP68 robust casing

The Abeeway Compact Tracker is a highly versatile multi-technology tracker with embedded sensors combining multi-constellation GNSS, Wi-Fi Sniffer and BLE, supporting **accurate outdoor & indoor geolocation**. A patented ultra-low-power GPS mode (LP-GPS) with server assistance is also available for extra battery life.

The Compact tracker also has a very sensitive accelerometer with enables multiple use cases such as angle detection, motion & activity sensing, and start-stop position tracking.

The **compact and robust form factor**, designed to resist **harsh surroundings** enables you to perform seamless asset tracking, monitoring, workforce safety and management in any industrial environment - whether it's for **heavy-duty assets** or **workforce security**, taking advantage of its **long battery autonomy**.



Applications:

- Real-time tracking, status monitoring of heavy and light assets, vehicles, machines and equipment, outdoors or in indoor industrial facilities
- Activity monitoring based on motion for usage optimization, industrial control, and management
- Optimization of supply chain and production, delivery, and inventory tracking
- Workforce security in ATEX Zone 0 area
- Geofencing applications: receiving zone alerts when leaving/entering specific areas
- Antitheft applications, notification, and location trigger when an asset is moving, with periodic updates or on demand

Product Highlights

Mobile App for iOS and Android

- **Tracking:** Locate asset, share its position, define geozone alerts.
- **Configuration & FOTA:** Easy upgrades via BLE and access to wireless CLI.

Multiple operating modes:

- **Motion Tracking:** Real-time position at a given cycle when motion is detected.
- **Permanent tracking:** Regular interval real time position.
- **Start/End motion tracking:** Receive position messages during motion start and end events.
- **Fix on demand:** Obtain tracker position when needed (very low power operating mode)

- **Activity tracking:** Monitor activity rate with embedded sensors.

- **Geozone detection:** capability to detect specific zones that matter for your processes.

Geolocation technologies

- **GPS:** Precise outdoor position
- **Low power GPS:** Fast Time To First Fix in outdoor and daylight indoor conditions
- **Wi-Fi :** Positioning for urban area and indoor fingerprinting
- **BLE:** Indoor positioning and geozoning, supports iBeacon, EddyStone, Atll-Beacon
- **BLE AoA:** Supports Quuppa compatible high-precision AoA positioning.

Other features:

- Geofencing zone detection
- Proximity detection
- Temperature monitoring
- LoRaWAN® Class A radio
- Waterproof enclosure (IP68); IK08
- Firmware upgrade
- Replaceable AA batteries
- Very modular fixation
- Magnetic switch (optional)
- Pressure sensor (Optional)
- Speaker (optional)
- ATEX/IECEEx certification⁽⁶⁾⁽⁷⁾⁽⁸⁾
- BLE scan function for inventory of tools and accessories
- Indoor BLE/WiFi fingerprinting with HERE Tracking (requires subscription)
- Indoor BLE based geolocation with Quuppa Intelligent Location (requires Quuppa infrastructure)
- BLE based safe/hazard zone detection

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.)
1 GPS fix per hour ⁽²⁾	1 year
1 LPGPS fix per hour ⁽²⁾	4 years
1 WiFi scan per hour	7 years
1 BLE scan every 3 min	> 5 years
Standby	> 5 years

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 sensitivity	-88 dBm
GNSS band	1575 – 1610MHz

Standards and Certifications

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

Position accuracy

GPS⁽³⁾	Position accuracy (Standard deviation)	3 meters	
	Time To First Fix	Cold start	30-45 seconds
		Hot start	<5 seconds
Acquisition sensitivity	-140 dBm		
Low power GPS⁽³⁾	Position Accuracy (50%-90%)	15 - 30 meters	
	Time To First Fix	< 10 seconds	
	Acquisition sensitivity	-145 dBm	
Wi-Fi⁽⁴⁾	Indoor Position Accuracy	20 - 50 meters	
	Time to get a position	3 seconds	
BLE for positioning⁽⁴⁾	Indoor Position Accuracy	5 - 15 m	
	Time to get a position	1 second	
BLE for proximity	Proximity Detection accuracy	< 1m	

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	DEABE5XX-XXXEU	DEABE5XX-XXXEU-Ex0 ^{(6),(8)}	DEABE5XX-XXXEU-Ex2 ⁽⁷⁾
ABE COMPACT TRACKER IN865	DEABE5XX-XXXIN	DEABE5XX-XXXIN-Ex0 ^{(6),(8)}	DEABE5XX-XXXIN-Ex2 ⁽⁷⁾
ABE COMPACT TRACKER US915	DDEABE5XX-XXXUS	DEABE5XX-XXXUS-Ex0 ^{(6),(8)}	DEABE5XX-XXXUS-Ex2 ⁽⁷⁾
ABE COMPACT TRACKER AS923	DEABE5XX-XXXAS	DEABE5XX-XXXAS-Ex0 ^{(6),(8)}	DEABE5XX-XXXAS-Ex2 ⁽⁷⁾
ABE COMPACT TRACKER AU915	DEABE5XX-XXXAU	DEABE5XX-XXXAU-Ex0 ^{(6),(8)}	DEABE5XX-XXXAU-Ex2 ⁽⁷⁾

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

(2) Assuming 5 satellites at -130dBm input power

(3) Assuming 5 satellites at -130 dBm input power


(4) Accuracy depends on the BLE beacon or WiFi AP density and physical layout of the premises

(5) Assuming the tracker has acquired Almanac by placing the tracker in open sky in good conditions. The Almanac acquisition can take 15 mins - 1 hour depending on the conditions

(6) 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

(7) ATEX Zone 2:  II 3G Ex ic nA IIC T4 Gc Ta -20 °C ... +40 °C

 II 3D Ex ic tc IIIB T135°C Dc Ta -20 °C ... +40 °C

(8) 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.