



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 certification<sup>(5)(6)</sup>
- 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 <sup>(2)</sup>	1 year
1 LPGPS fix per hour <sup>(2)</sup>	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 <sup>(1)</sup>	EU868MHz / US915MHz / AS923MHz / AU915 MHz
Configuration supported	OTA or ABP
RF output power <sup>(1)</sup>	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

<b>GPS<sup>(3)</sup></b>	Position Accuracy (50%-90%)	10 to 18 meters	
	Time To First Fix	Cold start	30-45 seconds
		Hot start	<5 seconds
	Acquisition sensitivity	-140 dBm	
<b>Low power GPS<sup>(3)</sup></b>	Position Accuracy (50%-90%)	15 - 30 meters	
	Time To First Fix	< 10 seconds	
	Acquisition sensitivity	-145 dBm	
<b>Wi-Fi<sup>(4)</sup></b>	Indoor Position Accuracy	20 - 50 meters	
	Time to get a position	3 seconds	
<b>BLE for positioning<sup>(4)</sup></b>	Indoor Position Accuracy	5 - 15 m	
	Time to get a position	1 second	
<b>BLE for proximity</b>	Proximity Detection accuracy	< 1m	

## Power management

Primary battery	3x AA/3.6V ( Li-SOCI2) -Nominal capacity 8Ah
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## Product references

Product	SKU			
ABE COMPACT TRACKER EU868	DEABE5XX-XXXEU	DEABE5XX-XXXEU-Ex0 <sup>(5),(7)</sup>	DEABE5XX-XXXEU-Ex2 <sup>(6)</sup>	
ABE COMPACT TRACKER IN865	DEABE5XX-XXXIN	DEABE5XX-XXXIN-Ex0 <sup>(5),(7)</sup>	DEABE5XX-XXXIN-Ex2 <sup>(6)</sup>	
ABE COMPACT TRACKER US915	DDEABE5XX-XXXUS	DEABE5XX-XXXUS-Ex0 <sup>(5),(7)</sup>	DEABE5XX-XXXUS-Ex2 <sup>(6)</sup>	
ABE COMPACT TRACKER AS923	DEABE5XX-XXXAS	DEABE5XX-XXXAS-Ex0 <sup>(5),(7)</sup>	DEABE5XX-XXXAS-Ex2 <sup>(6)</sup>	
ABE COMPACT TRACKER AU915	DEABE5XX-XXXAU	DEABE5XX-XXXAU-Ex0 <sup>(5),(7)</sup>	DEABE5XX-XXXAU-Ex2 <sup>(6)</sup>	

(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) 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

(6) 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

(7) 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.