Abeeway
Improve your position

MICRO TRACKER

Small - Versatile - Precise

The Abeeway Micro Tracker is a multi-mode tracker combining GPS, low power GPS, Wi-Fi, LoRa™ and BLE radios with embedded sensors to support accurate outdoor and indoor geolocation. This low-power location device tracks and locates anything, anyone, anytime at a low cost of ownership. Due to its small size and long battery lifetime, the Abeeway Micro tracker is the ideal product for numerous tracking applications. Simple to use, a single button gives access to numerous functionalities you will personalize for your needs.

Keep track of your assets, valuables, improve safety and security, gather data to improve process and efficiencies. The Abeeway Micro Tracker opens a whole new world of possibilities.

Applications

- Asset tracking at fixed frequency updates or on demand
- Personal tracking with help button
- Safety monitoring for lone workers inside facilities or in outdoor
- Anti-theft; notify and locate when device is moving
- Geofencing applications

Product Highlights

Multiple operating modes:
- Motion Tracking: Real-time position 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

Geolocation technologies:
- GPS: Precise outdoor position
- Low power GPS: Fast Time To First Fix in outdoor and daylight indoor conditions
- Wi-Fi: Position in indoor and urban area

Other features
- User interface: Buzzer, LEDs, multi-modes button
- Temperature monitoring
- Embedded antennas
- LoRa Class A radio
- Water-spray resistant enclosure (IP64)
- Resistance to explosive athmosphere (ATEX Zone 2 and 22 certified)

Physical configuration

Size	59mm x 34 mm x 13 mm (L x l x h)
Weight	21g
Waterproof capability	IP64
Operating temperatures	-10°C to 55°C
Charging temperatures	0°C to 45°C
Storage temperature	10°C to 30°C (recommended)
Time storage max	6 months
Humidity	5% to 95% non-condensing

Estimated lifetime

Use Case	Battery Life (Approx.)
Movement detection (120 positions per day)	>10 days
Standby mode	10 months at 20°C

Standards and Certifications

LoRa Alliance EU868, US915, AS923
Radio regulatory certification : EC, FCC, IC, TELEC
ATEX Group II Zone 2 and 22 compliant with ATEX Directive 2014/34/EU (ATEX II 3G Ex ec nC IIB T4 Gc; ATEX 3D Ex ec IIIC T 135°C Dc)\\

Data communication support

LoRaWAN™ Modem	Semtech transceiver SX1272
Protocol	LoRaWAN v1.0.2 Class A
LoRaWAN™ Frequencies bands [1]	EU 868MHz / US 915MHz / AS 923MHz
Configuration supported	OTA or ABP
RF output power [1]	14 dBm (EU) 16.5 dBm (max)
Min sensitivity of LoRaWAN™ receiver	-130 dBm in SF10
Wi-Fi Frequency band	2412 – 2472MHz
WI-FI sniffer sensitivity	-86 dBm
BLE sensitivity	-88 dBm
BLE RF output power	4 dBm max
BLE frequency band	2402 – 2480MHz
GNSS band	1575 – 1610MHz

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

Position accuracy

GPS[2]	Position Accuracy (50%-90%)	10 to 20 meters	
	Time To First Fix	Cold start	40-60 seconds
		Hot start	<5 seconds
	Acquisition sensitivity	-140 dBm	
Low power GPS[2]	Position Accuracy (50%-90%)	15 - 30 meters	
	Time To First Fix	<5 seconds	
	Acquisition sensitivity	-144 dBm	
Wi-Fi	Indoor and Deep Urban Position Accuracy	20 - 50 meters	
	Time to get a position	3 seconds	

(2) Assuming 6 satellites at -130 dBm input power

Power management

Rechargeable Battery	3.7V	0.45 Ah
Battery type	Lithium Polymer	
Charger supply	5V from a standard micro USB charger	
Power consumption	Stand-by: <0,01mA/h	
	GPS tracking in cold start [3]: 0,7mAh (per position)	
	Low power GPS tracking [3]: 0,06mAh (per position)	
	WiFi tracking: 0,05mAh (per position)	

(3) 6 satellites or more at -130 dBm

Product references

Product	SKU
MICRO TRACKER WHITE EU868 (option small packing box) APY logo	DEABE003
MICRO TRACKER WHITE US915 (option retail packing box) APY logo	DEABE004
MICRO TRACKER WHITE AS923 (option small packing box) APY logo	DEABE005

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 multi-technology 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.