

TEKTELIC PELICAN Ex

A LoRaWAN® & BLE Asset Tracker for Hazardous Locations

TEKTELIC's PELICAN Ex is a rugged, long-life LoRaWAN® and Bluetooth® Low Energy (BLE) asset tracker designed for reliable asset visibility in hazardous and industrial environments where explosive atmospheres may be present. ATEX-certified for Zone 1/21 locations, it combines the long-range, low-power performance of LoRaWAN® with the flexibility and ubiquity of BLE, and can operate as either a tracker or a BLE beacon to support a wide range of outdoor and industrial asset-tracking applications. Featuring an intelligent built-in state machine that increases reporting frequency when assets are in motion and reduces updates when stationary, PELICAN Ex optimizes battery life and operational efficiency while enabling safe, scalable deployments in demanding environments such as oil and gas sites, mining operations, and processing plants.



Sensing Functions



BLE
TRANSCIVER



TRACKER MODE



BEACON MODE
(100MS ADVERTISING
INTERVAL)



ACCELEROMETER



AMBIENT MCU
TEMPERATURE



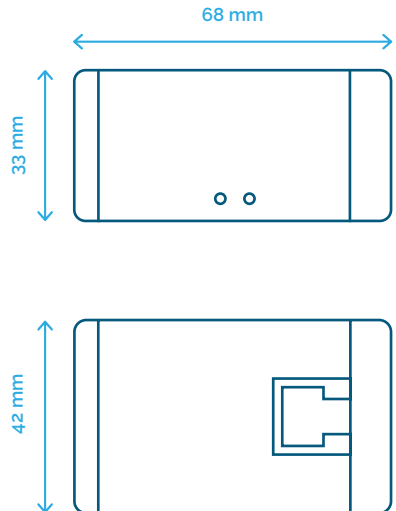
MAGNETIC
HALL-EFFECT
SENSOR



BATTERY LEVEL
INDICATOR

Features

- ✓ **ATEX Zone 1 certified** for safe operation in hazardous and explosive environments
- ✓ **Exceptional** battery life, supporting up to **10+ years*** in Tracker mode and 3 years in Beacon mode
- ✓ **Dual-mode operation** supporting both LoRaWAN® **asset tracking** and **BLE beacon** functionality
- ✓ **Rugged IP67-rated** enclosure designed for reliable operation in harsh indoor and outdoor environments
- ✓ **Compatible with standard LoRaWAN® gateways and network servers** for broad interoperability
- ✓ **Quick and easy device onboarding & data viewing** using TEKTELIC LeapX™ mobile application
- ✓ TEKTELIC Kona Atlas™ **support** for payload encoding and decoding
- ✓ TEKTELIC Locus™ **integration** for centralized device, data, and fleet management
- ✓ **Compact form factor** enabling discreet installation across diverse asset types
- ✓ **Rapid deployment** for scalable commercial and enterprise installations



* Actual battery life varies based on configuration, data rate, and operating temperature.

Technical and Functional System Specifications

General System Parameters		
Operational Temperature	-20°C to 50°C	
Operational Relative Humidity	10% - 100% Non-Condensing	
Ingress Protection	IP67	
Size	68 x 42x 33 mm (excluding mounting features)	
Weight (without bracket)	107.8 g (51.3 g enclosure + 56.5 g battery)	
Battery	1 x C-Cell LTC	
Battery Life		
Reporting Period - 60 min @SF10 (Tracker)	10 Years	
Reporting Period - 24 hrs @ SF10 (Beacon)	3 Years	
Wireless Parameters (LoRa)	LoRa	BLE
RF Power (Max)	15 dBm	0 dBm
RF Sensitivity	-137 dBm (SF12, 125 kHz)	125 kbps: -103 dBm 500 kbps: -98 dBm 2 Mbps: -91 dBm
Channel Plans	EU868, US915, AU915, AS923-1-2-3-4, IN865, KR920	2.4GHz ISM
Antenna	Internal	Internal
LoRa Device Class	Class A	N/A
Specification Version	1.0.2	5.0
Sensor Specifications		
Accelerometer Sensitivity	Sample rate: 1, 10, 25, 50, 100, 200, 400 Hz Measurement range: +/-2, +/-4, +/-8, +/-16 g Precision: 16, 32, 64, 192 mg	
BLE Protocols	iBeacon, Eddystone UID, Eddystone TLM	
Default BLE Advertising Interval	100 ms	
Certifications & Compliance		
Regulatory	FCC, ISED, CE (RED)	
Radio	ETSI EN 300 220	
	ETSI EN 301-489-1/-3	
ATEX	EN IEC 60079-0	
	EN 60079-11	
	<Ex> II 2G Ex Ia IIC T4 Gb	
	<Ex> II 2D Ex Ia IIIC T135°C Db	

TEKTELIC Communications is a premier supplier of complete LoRaWAN® IoT solutions. Our end-to-end systems combine network infrastructure, devices, and applications to enable easy, fast, and cost-effective deployment for the most demanding IoT challenges.