Yabby Edge Cellular

Cellular LTE-M / NB-IoT

Low cost, Indoor/Outdoor asset tracker with industry-leading battery life and cloud-based location solving in a small rugged IP67 housing

Indoor/Outdoor

GNSS, Wi-Fi AP MAC Address Scanning, and Cell Tower location with cloud-based location solving

10 Years Battery Life

Deploy-once battery life with up to 10 years on only 3 x AAA user-replaceable batteries

Movement-Based Tracking

Tracks assets when they're on the move and enters sleep mode when stationary to save power

Ultra-Rugged

Weatherproof and ultra-rugged IP67 Housing

Low Cost

Low cost to support large-scale deployments

Connectivity

LTE-M / NB-IoT	Nordic nRF9160 Modem operates on all major global LTE-M and NB-IoT bands. Supported LTE-M (Cat-M1) bands: Cat-M1: B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B66 Cat-NB1/NB2: B1, B2, B3, B4, B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B66
SIM Size & Access	Internal Nano 4FF SIM

Batteries

User-Replaceable Batteries	3 x AAA
Battery Life	Up to 10 years of battery life at once-daily position updates, 2 years battery life at once-hourly position updates. Enable intelligent movement-based tracking for longer battery life.
Supported Battery Types	Alkaline Lithium (LiFeS2) - recommended *Please dispose of Lithium batteries in a safe and responsible manner

Location

Chipset	Semtech LR1110
Constellation	GPS and BeiDou
Cloud-Based Solver	Asset location is calculated in Location Engine
Tracking Sensitivity	-134 dBm autonomous / -141 dBm aided
GNSS Assistance	GNSS almanac data for greater sensitivity and position accuracy
Low Noise Amplifier	GPS signals are boosted by a unique low-noise amplifier (LNA) allowing operation where other units fail
WiFi Positioning	Indoor asset location using WiFi access point scanning
Cell Tower Location	Cell tower fallback for positioning when there is no GNSS or WiFi signal

Power

Input Voltage	3-5.5V DC
Sleep Current	<10uA* *Average current in lowest power configuration

Mechanics / Design

Dimensions	Standard - 85 x 63 x 24 mm (3.35 x 2.48 x .94”) Livestock Collar - 109 x 60 x 30 (4.29 x 2.36 x 1.18”) Snap Housing (Smallest Size, not IP67 rated) - 75 x 45 x 25 mm (2.95 x 1.77 x 0.98”)
Weight	Standard - 82 g (2.9 oz)
Housing	Ultra-Rugged IP67 Housing

Mechanics / Design *(continued)*

IP Rating	IP67 rated housing ensures device can withstand fine dust, high-pressure spray, submersion for 30 mins in 1m of water, and extreme temperatures
Installation	Compact and concealable. Multiple installation options for covertly and easily securing the device to assets with screws, bolts, cable ties, rivets, and more. Collar housing available for securing device to livestock.
Operating Temperature	-20°C to +60°C
GPS Antenna	Internal
Cellular Antenna	Internal
WiFi Antenna	Internal
3-Axis Accelerometer	3-Axis Accelerometer to detect movement, high G-force events, and more
Diagnostic LED	Diagnostic LED signifies operation status
Flash Memory	Store weeks of records if device is out of cellular coverage. Storage capacity for over 5 days of continuous 30-second logging.
On-Board Speed and Heading	Scanning technology used on the Yabby Edge does not return speed and heading
On-Board Temperature	The device reports internal temperature which provides an indication of ambient temperature but may not always be precise.

Smarts

Auto-APN	Auto-APN allows the device to analyze the SIM card and select the correct APN details from a list that is pre-loaded in the device's firmware
Battery Life Monitoring	"Battery Low" and "Battery Critical" alert levels
Geofence Alerts	The server can use device location to create geofences and alerts if an asset enters or leaves designated locations
Impact Detection	Configure impact-detection alerts when G-forces are exceeded by a user-defined threshold
Periodic or Movement-Based Tracking	Configure parameters to send updates based on set time intervals or when movement occurs. Adaptive tracking technology detects when the device is on the move and increases the update rate, providing detail when you need it while conserving battery when stationary.
Preventative Maintenance	Set reminders based on distance traveled and run hours to reduce maintenance and repair costs
Run Hour Monitoring	Capture run hours based on movement to understand and optimize asset utilization
Sleep Mode	Stationary devices enter sleep mode until movement occurs to conserve battery life and optimize data usage
Theft Recovery	Switch to Recovery Mode in the case of theft or loss to activate real-time tracking for asset retreival

Device Management

Flexible Configuration	Configure device parameters such as position update rate, movement and accelerometer settings, and more to fit any tracking application
OEM Server	Manage, monitor, configure, debug, update, and restart devices remotely from our cloud-based device management system

Integration

Third-Party Integration	TCP Direct or HTTPS Webhook
Cloud-Based Solver	Location Engine makes it easy to perform cloud-based position solving and integrate data into any system

Security

Data Security	Military-level AES-256 Encryption from device to OEM Server to protect the integrity and confidentiality of telematics data. Data forwarded to third-party systems is sent via HTTPS for end-to-end security.

Warranty

Manufacturer's Warranty	One year manufacturer's warranty