digital matter

Yabby EDGE LoRaWAN®

All 868, 902-928MHz LoRaWAN regions supported

Ultra-rugged and compact Indoor/Outdoor asset tracker. Features cloud-based location solving for 10+ years of battery life.

2021 IoT Evolution Product of The Year

Indoor/Outdoor

GNSS, Wi-Fi AP MAC Address Scanning, and LoRaWAN® geolocation fallback for seamless indoor/outdoor asset management

'Deploy Once' Battery Life

Over 10+ years battery life on only 2 x AAA user-replaceable batteries

Cloud-Based Location

Position calculations are handled in the cloud (versus on-device) for substantial power savings

Adaptive Tracking

Periodic or optional movement-based tracking - tracks assets throughout the day and/or when movement occurs, entering sleep mode when inactive to conserve power and data usage

Battery Life Monitoring

Periodic battery status uplinks give breakdown of power use

Ultra-Rugged

IP67 rated housing ensures the device can withstand fine dust, high-pressure spray, submersion for 30 minutes in 1m of water

Connectivity

LoRaWAN	Highly sensitive radio transceiver is available in 868 or 902 - 928 MHz versions
LoRaWAN Regions	AU915 AS923-1 AS923-2 AS923-3 AS923-4 EU868 IN865 KR920 RU864 US915

Batteries

User-Replaceable Batteries	2 x AAA
Supported Battery Types	Lithium (LiFeS2) *Please dispose of Lithium batteries in a safe and responsible manner
Battery Life	Once Daily location updates – 10+ years Movement-Based location updates – 6 years Hourly location updates – 3 years

Location

Chipset	Semtech LR1110
Constellation	Concurrent GPS and BeiDou
Cloud-Based Solver	Asset location is calculated in Digital Matter's 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
LoRaWAN Gateway Geolocation Fallback	LoRaWAN gateway geolocation fallback when there is no GNSS or Wi-Fi signal
Wi-Fi Positioning	Indoor asset location using Wi-Fi access point scanning (device does not connect to Wi-Fi)

Power

Input Voltage	2-3.6V DC
Sleep Current	<10uA* *Average current in lowest power configuration

Mechanics / Design

Dimensions	Standard - 84 x 63 x 24 mm (3.31 x 2.48 x 0.94") 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")

Mechanics / Design *(continued)*

Weight	Standard - 82 g (2.9 oz)
Housing	Ultra-Rugged IP67 Housing. Non-branded housing for optional white-labeling.
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. Stainless steel screws supplied. Collar housing available for securing device to livestock.
Operating Temperature	-30°C to +60°C
GPS Antenna	Internal
RF Antenna	Internal
Wi-Fi Antenna	Internal
3-Axis Accelerometer	3-Axis Accelerometer to detect movement
Diagnostic LED	Diagnostic LED indicates operation status
Speed and Heading	Scanning technology used on the Yabby Edge does not return speed and heading

Smarts

Battery Life Monitoring	Periodic battery status uplinks give a breakdown of power use
Geofence Alerts	The server can use device location to create geofences and alerts if an asset enters or leaves designated locations
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.
Sleep Mode	Stationary devices enter sleep mode until movement occurs to conserve battery life and optimize data usage

Device Management

Flexible Configuration	Configure device parameters such as position update rate, movement and accelerometer settings, and more to fit any tracking application
Configuration App	Manage device firmware updates and parameters via a USB configuration cable and app. Some parameters can be changed via downlink.

Integration

Third-Party Integration	Easy integration with comprehensive documentation and a flexible and open payload format
Cloud-Based Solver	Digital Matter's Location Engine makes it easy to perform cloud-based position solving and integrate data into any system

Security

Data Security	LoRaWAN networks use AES-128 Encryption so your data is protected

Warranty

Manufacturer's Warranty	Two-year manufacturer's warranty

Certifications

Please visit support.digitalmatter.com for a full list of compliance specifications and documentation for your region	**868** - CE, UKCA (in progess), ICASA **915** - ACMA