YABBY3 LoRaWAN®

All 868, 902-928MHz LoRaWAN® regions supported

Ultra-rugged and compact battery-powered GPS asset tracking device for LoRaWAN® networks featuring 7 years battery life (4x battery life of previous generation).

84 x 63 x 24 mm (3.31x 2.48 x 0.94 in)

‘Deploy Once’ Battery Life

Over 7+ years battery life on user-replaceable 3 x AAA Lithium batteries

Adaptive Tracking

Tracks assets when they’re on the move and enters sleep mode when stationary to conserve power

Battery Life Monitoring

Periodic battery status uplinks give a breakdown of power use

Ultra-Rugged

Ultra-rugged and weatherproof IP68, IK06 Housing

Integration-Ready

Easy integration with comprehensive documentation and a flexible and open payload format

Connectivity

LoRaWAN	Highly sensitive radio transceiver is available in a single multiband device. Both 868 and 902 - 928 MHz supported
LoRaWAN Regions	AU915 AS923-1 AS923-2 AS923-3 AS923-4 EU868 IN865 KR920 RU864 US915

Location

GNSS Module	Sony CXD5612
Constellation	Concurrent GPS, GLONASS, Galileo, BeiDou QZSS
Tracking Sensitivity	-149 dBm cold start / -163 dBm hot start
*Location Accuracy	~1m 2D RMS, GPS, -130dBm
Low Noise Amplifier	GPSsignals are filtered and boosted by a SAW filter and low-noise amplifier (LNA) allowing operation where other units fail
LoRaWAN Gateway Geolocation	LoRaWAN gateway geolocation fallback when there is no GNSS(Network Specific)

* Positioning accuracy specifications are provided by the GNSSsupplier and reflect ideal conditions. Device configuration, installation, environmental conditions, augmentation services, and many other factors may lead to variations in positioning accuracy.

Power

Input Voltage	4-5.5 VDC
Sleep Current	<1.5uA* *Average current in lowest power configuration

Batteries

User-Replaceable Batteries	3 x AAA. Batteries not included.
Supported Battery Types	Lithium (LiFeS2) *Please dispose of Lithium batteries in a safe and responsible manner.
*Battery Life Estimates	Once Daily location updates – 7 years **Movement-Based location updates – 7 months Hourly location updates – 7 months

* Battery life estimates are influenced by several factors including temperature, installation and orientation of the device, the frequency of location updates, network coverage, sensor integrations, peripherals, accelerometer settings, and more. Battery life calculators are available at support.digitalmatter.com.

** Movement-based estimates are based on 2 hours of movement, occurring 5 days a week, with default tracking parameters (location updates every 3 minutes and uploads every 30 minutes). Devices can be configured to provide more frequent location updates when the asset is in motion.

Mechanics / Design

Dimensions	Standard - 84 x 63 x 24 mm (3.31x 2.48 x 0.94”) Livestock Collar - 109 x 60 x 30 mm (4.29 x 2.36 x 1.18”)
Housing	Non-branded housing for optional white-labeling
IP/IK Rating	Ultra-rugged and waterproof IP68 and IK06-rated housing ensures the Yabby3 LoRaWAN can withstand impact, fine dust, and brief submersion
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.
Operating Temperature	-30°C to +60°C
GPS Antenna	Internal
RF Antenna	Internal
3-Axis Accelerometer	3-Axis Accelerometer to detect movement
Diagnostic LED	Diagnostic LED indicates operation status
Onboard Speed & Heading	Current speed and heading is reported with each position update

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
Theft Recovery	Reduce or minimize asset loss and theft

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 DMLink provisioning tool. Some parameters can be changed via downlink.

Integration

Third-Party Integration	Easy integration with comprehensive documentation and a flexible and open payload format

Security

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

Warranty

Manufacturer's Warranty	Two-year manufacturer's warranty. Exclusions apply.

Certifications

Please check our knowledge base for regulatory and network certifications