SWAN™
Low Consumption GNSS Receiver

Energy Saving with GNSS Accuracy

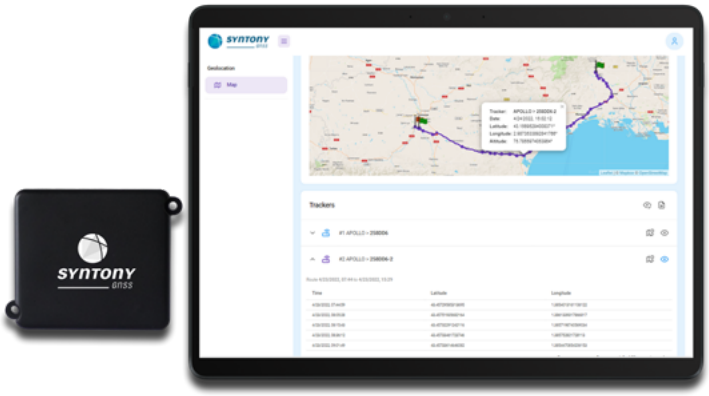
SWAN is designed to be easily integrated into any IoT device, and allows our clients to offer the lowest power consumption GNSS-based positioning solution.

Using low-power telecom networks to connect to our GALAXIE server, SWAN is a precise, cheap, autonomous, durable, and robust solution.

SWAN low battery consumption allows:

- Increase of the lifetime
- Fewer or no recharges at all
- Battery-size reduction
- Fewer number of battery used, guaranteeing an economic and sustainable solution

SWAN and its online tracking app



SIMPLICITY

The SWAN solution consists of just two components: a lightweight embedded library and a location service accessible via a REST API. That's it.

ENERGY EFFICIENCY

SWAN revolutionizes energy consumption, using 15 to 50 times less power compared to traditional GNSS receivers, depending on the use case.

COST REDUCTION

With SWAN, there's no need for a full GNSS chip—an off-the-shelf RF front-end is all you need.

HIGH ACCURACY

SWAN delivers location accuracy ranging from 10 to 25 meters, with ongoing cloud-based enhancements.

RELIABILITY

Enjoy consistent, high-quality service over time, without any performance degradation even after continuous use.

SPEED

The GALAXIE server calculates positions in mere seconds, providing nearly instantaneous results.

SECURITY

All transactions processed by the GALAXIE server are fully encrypted and secured for maximum protection.

The Internet of Things (IoT) continues to unlock vast opportunities for enhancing operations and reducing costs, particularly in asset location and tracking.

However, traditional GNSS-based receivers have struggled to gain traction among major logistics players due to concerns about high energy consumption, bulky designs, and total cost of ownership (TCO).

Syntony's SWAN solution changes this paradigm by introducing a true GNSS cloud-based location service.

Powered by Syntony's secure GALAXIE server and patented algorithms, SWAN calculates precise locations in the cloud, overcoming the limitations of traditional systems.

What sets SWAN apart is its future-proof design. Because all computations are performed server-side, the device remains fully upgradeable without any hardware modifications.

Algorithmic improvements can be implemented instantly, ensuring immediate performance enhancements without replacing devices in the field.

Specifications

RF Specification

GNSS Bands	L1/E1 (GPS/GALILEO)
Antenna	Patch antenna

Battery Life

Energy spent for 1 pos	0.007 mAh
1 GNSS position/hour	12 months *(with 3 000 mAh battery)*
1 GNSS position/day	96 months *(with 3 000 mAh battery)*
Duration of battery charge	2 h

Data Connectivity

Network Compatibility	LoRa & Wi-Fi
LoRaWAN © Modem	Seeed
Frequency Band	EU 868 MHz US 915 MHz AS 923 MHz
WIFI Frequency Band	2412-2472 MHz

Standard & Certification

LORA Alliance	EU 868 US 915
Radio Frequency Regulation	Part 15 of FCC rule for LORA CE EN62479 EN300440 EN 55032 EN 301 489 EN 62311

Environment & Housing

Housing	Plastic, easily fixed on any type of support
Power supply	3 000 mAh battery – Rechargeable via USB
Connector	Micro-USB
Dimensions (LxWxH)	71 x 64 x 13 mm
Operating temp.	20°C to 80°C
Weight	43 gr

For more information

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SYNTONY GNSS

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