



AEROFOX

Septentrio mosaic-H Anti-Jamming GNSS Module

(No Reviews) Write A Review

Price Available Upon Inquiry

SKU: A2504021

Weight: 1.00 KGS

Add to Wish Lists

SEND INQUIRY NOW

Description

The **Mosaic-H** is a cutting-edge **RTK GPS module** that harnesses the powerful capabilities of **Septentrio's elite mosaic-H GNSS receiver**. It is equipped with an **IST8310 magnetometer**, **two high-performance antennas**, and a **CNC aluminum housing**. The module offers a wide range of functionalities, including **easy configuration, spectrum analysis, data logging, and post-processing**, making it suitable for various applications.

With its **dual-antenna input**, the **mosaic-H** provides **compass-free yaw information** to the autopilot, commonly referred to as **GPS heading or moving baseline yaw**. By using **GPS as the yaw reference** instead of a traditional magnetometer, it eliminates inaccuracies caused by **magnetic interference** from **vehicle motors, electrical systems, and environmental sources** such as **metal structures or power lines**. This ensures **precise yaw reporting** to the autopilot and enhances **overall navigation reliability and performance**, especially in challenging environments.

The **Septentrio mosaic-H GNSS receiver module** incorporates a suite of proprietary technologies that set it apart from the competition:

AIM+ (Advanced Interference Mitigation) Technology: Effectively suppresses **both intentional and unintentional interference sources**, ensuring consistent and reliable performance even in **demanding RF environments**.

LOCK+ Technology: Maintains optimal tracking even under **high vibrations or shocks**, ensuring **high precision and stable operation in dynamic conditions**, such as **fast-moving aerial and robotic applications**.

RAIM+ (Receiver Autonomous Integrity Monitoring) Algorithm: Provides **unmatched integrity and reliability**, serving as a safeguard for **mission-critical applications**.

Key Features

Advanced anti-jamming and anti-spoofing solutions with **AIM+ Technology & OSNMA**

Dual-antenna support for **GPS-based yaw determination (GPS for YAW) using a single GNSS module**

Full-band satellite compatibility: Multi-constellation, multi-frequency support (**L1/L2/E5**)

Stable RTK performance for high-precision applications

Septentrio mosaic-H Anti-Jamming GNSS Module

Ardupilot & PX4 | NMEA / SBF

FOXTECH.COM

Key Features

FOXTECH.COM

Advanced anti-jamming and anti-spoofing solutions with **AIM+ Technology & OSNMA**

Dual-antenna support for GPS-based yaw determination (GPS for YAW) using a single GNSS module

Full-band satellite compatibility: Multi-constellation, multi-frequency support (L1/L2/E5)

Stable RTK performance for high-precision applications

Advanced Anti-Jamming and Anti-Spoofing

The Septentrio receiver (orange trajectory) remains unaffected even under severe interference, while the two competing receivers (red and blue) produce erroneous positioning results.

FOXTECH.COM

Under extreme interference conditions, where the jamming signal strength is 10 million times higher than the GNSS signal, multiple receivers were tested. The red and blue lines represent the positioning results of two competing receivers, which were significantly affected by interference, leading to position deviations of several hundred meters. In contrast, the Septentrio receiver (orange trajectory) demonstrated exceptional anti-jamming performance, maintaining accurate GNSS positioning throughout the test. Additionally, it can actively detect and output interference signal indicators, providing real-time situational awareness.

In GNSS spoofing attacks, attackers typically first use jamming signals to disrupt the receiver's GNSS signal lock, increasing the likelihood of the receiver accepting the spoofed signal upon reacquisition.

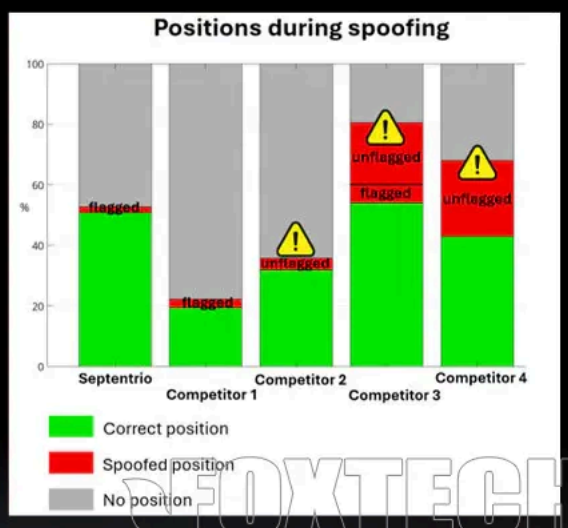
Road Test Results – Septentrio Receiver Resists Meaconing GNSS Spoofing

FOXTECH.COM

In the Meaconing test, the Septentrio receiver (orange trajectory) demonstrated strong resistance to meaconing-type GNSS spoofing, while competing receivers were misled to the location of the retransmission antenna on the mountain.

Meaconing is a form of GNSS spoofing, where legitimate GNSS signals are recorded and retransmitted with a delay, causing affected receivers to incorrectly compute their position based on the spoofed signal's antenna location.

During testing, as the vehicle traveled along a coastal road, the Septentrio receiver (orange line) consistently maintained accurate positioning. In contrast, competing RTK modules (red line) were deceived, reporting their location as the mountain peak where the interference transmission antenna was placed in the JammerTest scenario.



Robust GNSS Anti-Spoofing Algorithm and Spoofing Detection Capability

FOXTECH.COM

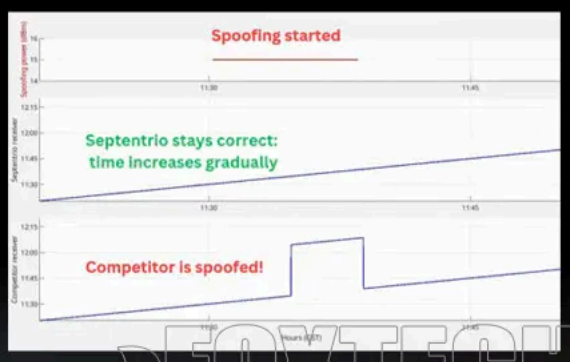
The combination of powerful GNSS anti-spoofing algorithms (green) and spoofing signal detection features (red, flagged markers) demonstrates that the Septentrio receiver delivers reliable performance under various spoofing attacks.

Green: Percentage of time the receiver was not deceived, either outputting the correct position or successfully mitigating spoofed signals.

Gray: Percentage of time the receiver did not provide positioning while being spoofed.

Red: Percentage of time the receiver was successfully spoofed and output incorrect positions.

- Flagged (marked): The receiver detected and flagged the spoofing event.
- Unflagged (unmarked): The receiver failed to detect and mark the spoofing event.



Reliable GNSS Timekeeping Under Spoofing Attacks

FOXTECH.COM

When GNSS time signals were spoofed, the Septentrio receiver continued to provide accurate time information, while competing receivers output incorrect timestamps.

The Septentrio receiver consistently maintains precise timing, which is critical for applications in telecommunications, power grids, and financial institutions. These sectors rely heavily on accurate GNSS timing, and malicious spoofing attacks can disrupt services, potentially causing financial losses in the tens of millions.

Investing in resilient GNSS technology is essential to protect mission-critical applications and ensure the reliability of user services.

Why Choose Us_

Related Products

CubePilot

Here 3 GNSS(M8N) GPS Unit

$379.00

CubePilot

Cube Orange Standard Set with Here 3 GNSS

$999.00

CubePilot

RFD900x Data Transmission Module

$529.00

ADD TO CART

Foxtech

AEROFOX CAN F9P Positioning Module

$529.00

ADD TO CART

LEAVE A MESSAGE

If you have any questions about our products or services, feel free to reach out to customer service team.

Name

E-mail

Country

Phone/WhatsApp/Skype

Company Name

Content

I'm not a robot

reCAPTCHA
Privacy - Terms

SEND INQUIRY NOW

SHOP

ROBOT

Inspection/Mapping

Control System

Battery

UAV Equipment

BRANDS

Foxtech

T-motor

Tarot

Supreme

Tattu

SYK

CubePilot

SEEKER

CUAV

DAMIAO

View All

INFO

About Us

Dealership

Disclaimer

CUSTOMER SERVICE

Payment Methods

Shipping & Delivery Time

Contact Us

Custom battery packs

LEGALS

Privacy Policy

Return Policy

Sitemap

SIGN UP FOR OUR NEWSLETTER

Get the latest updates on new products and upcoming sales

enter your email address

SUBSCRIBE

Need help? No problem! Our customer service team will respond to your message promptly. **LiveChat** or **Email Us**

© 2025 Foxtech All Rights Reserved.