

# Septentrio Unveils New GNSS/INS Receiver for Unmanned Aerial Systems



Septentrio, a leading global supplier of high-accuracy positioning technology for demanding applications has announced today a new addition to their GNSS/INS portfolio. AsteRx-i S UAS combines GNSS technology with industrial-grade inertial sensor to provide high-accuracy, reliable positioning and 3D orientation (heading, roll, pitch) to aerial drones and other compact robotic systems.

Septentrio's introduction of AsteRx-i S UAS builds on top of their existing UAV products, AsteRx m2 and m2a UAS. Its optimized SWaP (Size, Weight and Power) increases UAV battery life, resulting in longer flight times and improved productivity. This credit card sized receiver is designed for easy integration into any UAS (Unmanned Aerial System) and is compatible with popular autopilots such as Pixhawk and ArduPilot. It is a single-package

GNSS/INS product, with an on-board IMU (Inertial Measurement Unit) and standard connectors allowing flexibility of sensor choice. "Quick receiver integration makes the lives of our customers easier. It also speeds up their system's time-to-market," said Danilo Sabbatini, product manager at Septentrio. "Our goal was to combine a high-performance product with a simple and flexible plug-and-play integration design, suitable for any aerial system."

[Septentrio](#) centimeter-level positioning is based on multi-frequency, multi-constellation GNSS technology (GPS, Glonass, Galileo, Beidou, QZSS). AsteRx-i S UAS combines a GNSS receiver with a high-quality IMU to deliver reliable positioning together with 3D orientation. Septentrio's innovative GNSS – IMU integration algorithm provides continuous positioning during short GNSS outages (coasting) which can happen in flight near high structures, under bridges or during banking turns.

AsteRx-i S UAS comes with built-in industry leading [Advanced Interference Mitigation](#) (AIM+) technology. In aerial drones, where lots of electronics are crammed into a small space, neighbouring devices can emit electromagnetic radiation which interferes with GPS and GNSS signals. AIM+ offers protection against such interference resulting in faster set-up times and robust continuous operation. A built-in power spectrum plot allows users to analyse interference, helping locate its source and mitigating it.