



Inertial One-Step solutions

FOG, AHRS, GNSS-INS

for

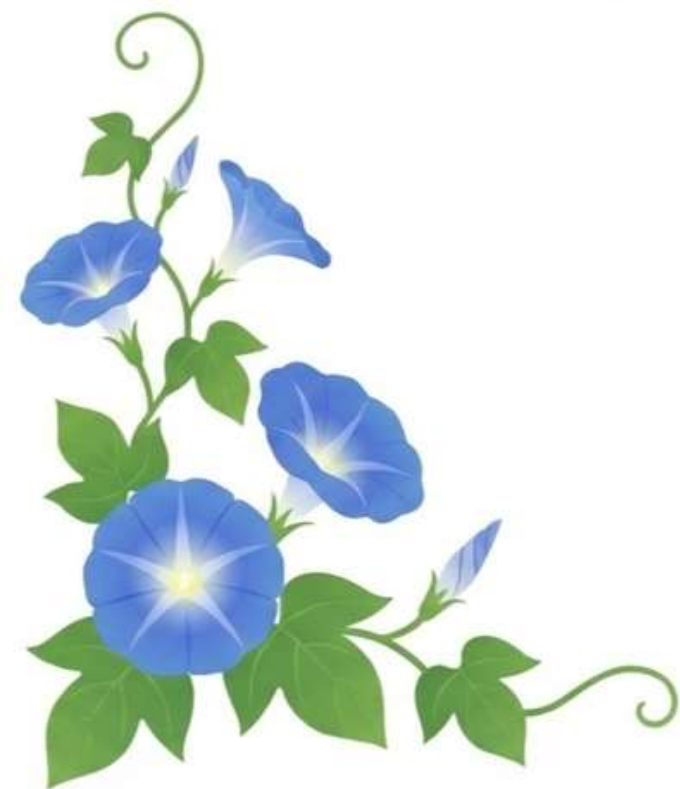
LEO, UAV, USV & UGV

AEGIVERSE

Simplified Navigation

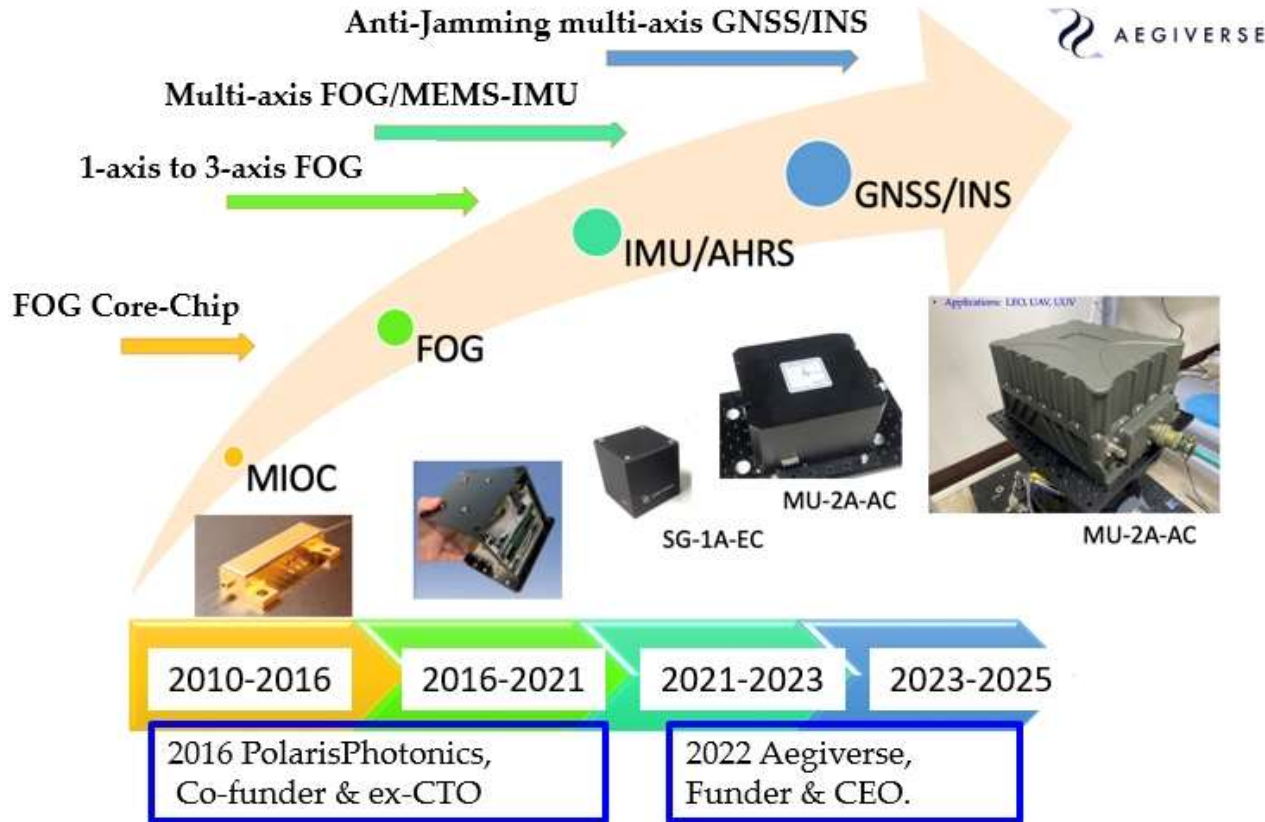
Guardian of Your Every Trajectory

One Step to Deployment



16 Years: From Lab to Deploy, Made Simple

- Holds **33 invention and design patent applications**
- Has design/manufacturing ability from chip to FOG, IMU, INS.
- Localized supply chain, **Pure Design-By-Taiwan and Made-In-Taiwan**

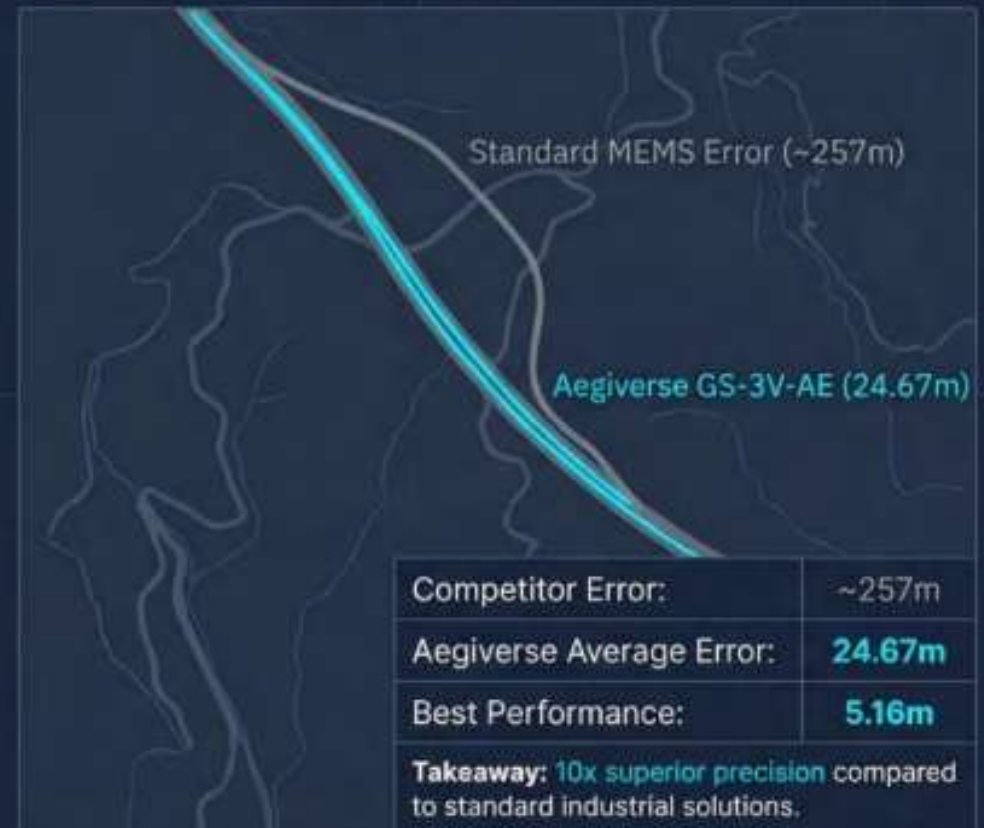


Verified Resilience: The Guanyinshan Tunnel Test

Context



Data Visualization



Maritime Stability: Conquering Salt, Spray, and Depth



The Challenge Block

Unforgiving marine environments demand absolute protection against continuous salt fog corrosion and aggressive water ingress for USV, ROV, and UUV autonomous platforms.

The Solution Block

Hermetically sealed FOG IMUs providing flawless stabilization for remote weapon stations and autonomous surface navigation.

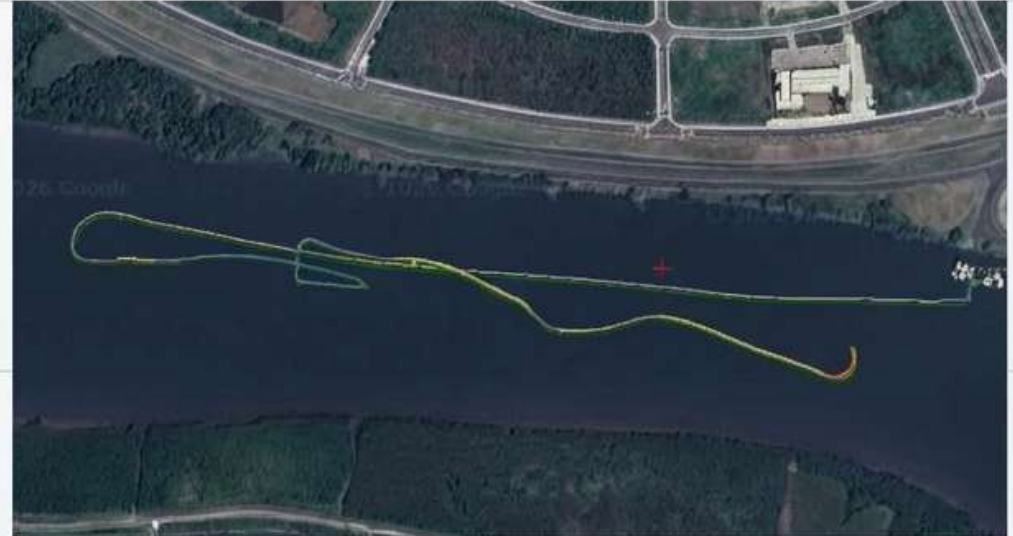
- ✓ **Environmental Rating:** IP67 Immersion & MIL-STD-810F/G (Salt Fog).
- ✓ **Housing:** Military-grade sealed enclosure.

Field Validation: Autonomous USV Navigation

Joint on-site validation of the Aegiverse GNSS-INS in real-world urban river conditions.



Location: Shuangxi Yacht Marina. Co-developed and validated with industry partners to accelerate deployment and integration.



- **Dark Blue Path:** On-board Vessel GNSS.
- **Green Path:** Aegiverse GNSS-INS.
- **Yellow Path:** Fused Position (The ultimate stable trajectory).

Key Achievements:

- Established high-precision, long-term stability in complex water conditions.
- Demonstrated reliable autonomous navigation with stable operation.
- Laid a proven foundation for commercial fleet deployment and future autonomous maritime programs.

Choosing Your Precision: A Comparison of AEdiverse Navigation Systems

Both the GS-1V-AC and GS-3V-AC are powerful, compact dual-antenna GNSS/MEMS-INS solutions designed for demanding applications, sharing the same physical footprint but catering to different performance tiers, with the GS-3V-AC providing enhanced stability and precision.



Head-to-Head Performance Comparison

Purpose: This table directly compares key performance metrics related to inertial navigation. For all metrics listed, a lower value indicates higher precision and greater stability, which is crucial for navigating without a GNSS signal.

GS-1V-AC (Industrial)

GS-3V-AC (Tactical)

5 deg/hr



Gyro In-Run Bias Stability



1 deg/hr

5x More Stable

≤ 40 μg



Accelerometer In-Run Bias Stability



≤ 10 μg

4x More Stable

3.0 cm/sec²



Free Inertial Position Drift



0.5 cm/sec²

6x Less Drift

0.2 deg



INS Heading Accuracy (1σ)



0.05 deg

4x More Precise

0.5 deg



Static Pitch/Roll Accuracy (RMS)



0.05 deg

10x More Precise

≤ 0.05 m/sec



Velocity Accuracy



≤ 0.02 m/sec

2.5x More Precise

GS-1V-AC: High-End Industrial Grade

Built for Demanding Industrial Applications Systems

Delivers robust and reliable navigation for complex industrial automation and unmanned systems.

GS-3V-AC: Tactical Grade

Engineered for Mission-Critical Precision

Offers elite stability for operations requiring uncompromised navigation, even during signal loss.

Reaching New Heights: Aerospace and Space Applications

- Aegiverse is a key partner in Taiwan's space industry, with 40% of our business focused on aerospace applications.
- Our high-reliability, low-drift FOG IMUs are ideally suited for ADCS in CubeSats and LEO satellites.
- In 2023, we began a strategic project with the **Taiwan Space Agency (TASA)** to advance our MIOC and FOG technology for space applications.

TASA



Anti-Jamming: Battlefield Ready



THE THREAT

In modern warfare and contested spaces, GPS is the first point of failure. RF jamming severs satellite connections.

THE SOLUTION

Aegiverse pure physics-based inertial systems maintain true Dead-Reckoning accuracy. Low bias instability ($< 0.01 \text{ }^\circ/\text{hr}$) ensures mission completion under severe electronic warfare conditions.

THE TACTICAL EDGE

Survive the Jamming:
Precise Inertial Navigation for Drones, UAVs, and USVs.

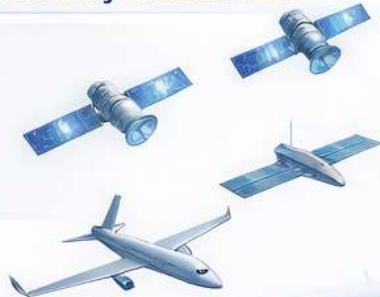
Taiwan-Made Strength:
In-house RSD and manufacturing from prototype to mass production.

Beyond the Lab:
Battle-ready navigation that turns autonomous vision into reality.

Space Dominance: Three-Layer Global Unmanned Systems Navigation Architecture

Strategic Orbital & High-Accuracy Guidance

VIORA : LEO/UAV
3D FOG
Inertial Sensing
Precision Reference



**Non-Red
Self-reliant
Inertial solutions**



Certification
ISO27001
ISO9001, AS9100

Comprehensive Surface & Terrestrial Navigation (Middle & Lower Layer)

GS : Drone & USV
GNSS-INS
Inertial Navigation



HARS : UGV & UUV
Hybrid FOG IMU/AHRS
Inertial Attitude and Heading



Inertial One-Step Solutions
FOG, AHRS, GNSS-INS
for LEO, UAV, USV, UGV

Series - Vehicles - Core Function		
Series	Vehicles	Core Function
VIORA	LEO / High-end UAVs	Inertial Sensing
GS	Tactical Drones	Tactical GNSS-INS
HARS	UGV, UUV, ROV	IMU AHRS

Step Into the Unknown. We'll Guide You Home.

Aegiverse specializes in LEO satellite inertial attitude determination and high-precision navigation for Drones, UAVs, and USVs. With our in-house design and manufacturing facility in Taiwan, we ensure superior quality control for our inertial products from prototyping to mass production. We combine firm engineering expertise with a collaborative spirit to deliver reliable, Taiwan-made positioning solutions for the future of autonomy.



Your Inertial Partner

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