

# Navigation Resiliency for Fixed-Wing UAVs

The Critical Need for Resilient PNT Modern fixed-wing UAVs require continuous, precise GNSS for long endurance missions. In contested environments, jamming causes operational blindness, navigation errors, and compromised control loops. Persistent GNSS availability is essential for flight safety and mission success.



- 01 Sustained GNSS Availability**  
Fixed-wing UAVs require continuous GNSS throughout long-endurance missions.
- 02 Error Growth Over Time**  
Navigation errors accumulate progressively when GNSS quality is degraded or unavailable.
- 03 Limited Recovery Opportunities**  
Unlike VTOL platforms, fixed-wing UAVs cannot pause or re-initialize navigation in flight.
- 04 Tight Autopilot Coupling**  
GNSS performance directly impacts guidance, control loops, and mission execution.

## GPSdome-SunStone

The **GPSdome-SunStone** provides essential GNSS resiliency for fixed wing platforms where flight endurance and weight are critical factors. By implementing 2 element with null steering technology, the SunStone mitigating interference from a single jamming source, ensuring the UAV's autopilot maintains a consistent and accurate navigation lock. It offers flexible protection for one or two GNSS bands (selecting from L1/E1, L2, L5, or GLONASS G1) and integrates seamlessly into constrained airframes with its 180g enclosed weight (or <80g OEM board). Operating at a mere 2.7W, it enables long range missions without compromising the platform's power budget.



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## Aura

Operating in dense electronic warfare environments, Aura delivers a superior level of navigational security. This high-end system utilizes a 4-element antenna array to mitigate complex, multi-source threats by neutralizing jamming from up to three directions simultaneously per band.

Available in robust dual-band configurations including L1/E1+L2, L1/E1+L5, or GLONASS G1. Aura ensures the high speed precision needed for autonomous navigation and safe return-to-base maneuvers. Despite its advanced capabilities, it remains optimized for flight, weighing 500g in its enclosed format (375g for OEM) and featuring a near-zero latency of <100ns to keep flight control loops tight and responsive. Like the SunStone, Aura provides real-time interference intelligence via UART, enabling the UAV to report threat zones during the mission.



\*Available also in OEM format

	Weight	# of Jamming Directions Protected	
SunStone	180g	1	Dual Band*
Aura	500g	3	Dual Band*

\*GPS L1/E1 + L2  
OR  
GPS L1/E1 + L5  
OR  
GPS L1/GLONASS G1

**For other configurations please contact our sales team**