

GPS Protection for Fixed-Wing UAVs



GPS Jamming #1 Threat to Fixed-Wing UAV Operations

Fixed-wing UAVs heavily rely on GPS for navigation and autonomous operations, making them vulnerable to GPS jamming attacks. These attacks can disrupt navigation capabilities and pose a significant risk to the UAV operation. Jamming is a growing threat in military operations and poses a significant risk to surveillance and tracking capabilities. EW (electronic warfare) techniques, particularly jamming, is a very common method to disrupt all ISR capabilities for UAVs and in all recent battlefields had been extensively used to cripple UAV operations in critical missions.

GPSdomeM

Is the **only** GPS anti-jamming solution for class 1-2 fixed-wing UAVs

It is a small-sized, retrofit module that uses null steering technology to protect against jamming, ensuring continuity of autonomous navigation and operation during jamming conditions. It has a tiny form factor of 74x47x25mm, weighs 150g, and has a power consumption of < 1W. Available also in an OEM board-level form factor weighing less than 35g, it is the minimal required protection for any unprotected GNSS-based system today.



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Since GPS is critical for any kind of SIGINT (signals intelligence) integrating anti-jamming solutions like GPSdomeM and GPSdome2M is mandatory in GPS challenged environments making any UAV 20x to 100x more resilient to jamming attacks. Even when equipped with an INS and/or other alternative sensors, adding anti-jamming greatly reduces the platforms overall navigation error and enables missions where high accuracy is crucial.

GPSdome2M

Is the **only** proportional anti-jamming solution that provides high-performance protection optimized for C-SWaP (Cost, Size, Weight, and Power).

Still small (99x95x56mm) and lightweight (500g), it is a solution that wields null steering technology and proprietary self-learning algorithms to defend against GPS jamming in two frequencies from up to 3 directions simultaneously in each band. Coming in two variations (L1+L2 or L1+Glonass G1 protection), GPSdome2 also provides real time information on any jamming attacks it detects, including the power of the attacks and the frequency attacked.

Both GPSdome and GPSdome2 installation is fully retrofit, compatible with almost any GNSS receiver and most commercially available GNSS antennas.



	Weight	# of Jamming Directions Protected	Frequencies Protected
GPSdomeM	150g	1	GPS L1 (C/A Code)
GPSdome2M	500g	3	L1+L2 or L1+Glonass G1 protection