MAGNA-F (NavGuard® 502) is the latest federated, affordable GPS Anti-Jam solution from Mayflower Communications - the technology leader in GPS Anti-Jam for over 30 years. The GPS Anti-Jam system is critical for military operations in GPS contested NAVWAR environments.

MAGNA-F is developed by Mayflower Communications and BAE Systems under sponsorship by the US Navy SPAWAR PEO C4I PMW/A-170 under ONR Rapid Innovation Funding (RIF) program to support GPS protection requirements of SWaP-constrained sea, air and ground platforms e.g., ships, fixed-wing and rotary aircraft, and UAVs as well as tactical vehicles. In addition, MAGNA-F supports transmission/reception of Iridium communications signals, which can be used for Beyond Line of Sight (BLoS) UAV C2 operations and alternate/contingency platform communications.

MAGNA-F leverages proven Small Antenna System (SAS) Anti-Jam solution from Mayflower which has been extensively tested by the Government on multiple ground and air platforms. MAGNA-F is the highest performance and smallest GPS anti-jam federated solution on the market in its class utilizing a 3.5” diameter FRPA footprint compatible antenna outperforming many larger solutions. MAGNA-F has been performance qualification tested and meets Government MAGNA Technical Requirement Document (TRD) performance specification requirements.

MAGNA-F AJ solution offers an affordable SWaP-C alternative over larger and more expensive existing anti-jam systems. It is C/A, SAASM and M-Code compatible.

MAGNA-F is available now to support platform integration and qualification. Please contact us for additional information and pricing.
Multi-Platform Anti-Jam GPS Navigation Antenna (MAGNA-F)
Affordable Low SWaP GPS Anti-Jam and Iridium Solution

High level Features and Benefits
- 5-channel AJ design mitigates large number of spatially located WB/NB jammers (*expandable to 8 channels with software upgrade*)
- Supports transmission/reception of Iridium communications signals
- Robust RF front-end handles high-power co-site signals
- Simultaneous (L1 and L2) GPS protection
- Compatible with any GPS receiver
- Ultra compact, low power, low cost
- Provides greater than 90 dB J/S anti-jam protection

Performance Metrics
- Dynamics: Suitable for very high dynamics applications
- Designed specifically to counter Rotor Blade modulation
- Simultaneous dual frequency (L1 and L2)
- Mitigates multiple CW, partial band, broadband and pulsed jammers even under high dynamics
- Uses multiple element spatial temporal adaptive filtering (STAP)
- Greater than 40 dB of jamming suppression against multiple jammers

Antenna Electronics External Interface:
- DC Power: Amphenol 2M805 Series 3-pin connector
- RS-422 Data I/O: Amphenol 51-Pin micro-DSUB EMI filtered connector
- Dual GPS RF Output Connectors: SMA (Female)

Antenna External Interface:
- Antenna Output Connectors: SMA (Male)
- Iridium Tx/Rx Connector: SMA (Female)
- Built-in-Test (BIT) auto fault detection and logging
- Operating Temperature: -40° C to +85° C
- GPS RF Gain: Adjustable
- Noise Figure: <3.5dB

SWAP Metrics
- Size: AE: 5.73" x 3.0" x 1.264"
- s-CRPA: 3.5" Diameter x 2.0" Height
- Weight: <1.5 lbs (AE)
- <0.5 lbs (s-CRPA)
- Power: 28VDC, <17 Watts

NavGuard® is a registered trademark of Mayflower Communications Company, Inc.
The material in this MAGNA-F Data Sheet has been approved for public release by SPAWAR (SR-2016-237)

www.mayflowercom.com
11 Oak Park Drive Bedford, MA 01730
Email: thomas@mayflowercom.com Tel: (781) 359-9500 x2226