BAE SYSTEMS

DIGAR™

Advanced anti-jamming GPS for airborne and maritime platforms

M-Code is here, providing superior jamming immunity in the most severe GPS-challenged environments

BAE Systems is excited to announce our newest member to the anti-jam portfolio, DIGAR with M-Code GPS. The U.S. military and close allies have used GPS on the battlefield for decades. Virtually all military electronic equipment – aircraft, vehicles, radios, computers and guided bombs – relies on GPS for accurate positioning, navigation, and timing (PNT).

Threats are increasing and evolving as our adversaries improve their ability to jam and spoof GPS signals. To defend against increasingly available counter-GPS capabilities, the military is requiring GPS protection, augmentation, and alternatives that are more resilient and less vulnerable.

High-performance GPS anti-jamming protection is available today and should be the foundation of any high-assurance PNT strategy in this evolving anti-access/area denial (A2/AD) environment.

Leveraging over 50 years of military GPS experience and advanced technical expertise in anti-jamming technology, BAE Systems now provides digital beamforming GPS anti-jamming in form factors that suit your military needs.

DIGAR comprises the best airborne GPS anti-jamming antenna electronics available. It supports 24 simultaneous steered beams to provide superior jamming immunity in the most severe GPS-challenged environments.

The antenna electronics are built upon field-proven GPS anti-jamming weapons technology and state-of-the-art signal processing techniques. As the premier military GPS and anti-jamming provider for weapons such as the Joint Direct Attack Munition (JDAM), Massive Ordnance Penetrator (MOP), Excalibur and others, BAE Systems now offers this superior digital beamforming anti-jamming capability to airborne and maritime users including F-15, F-16, and SOCOM.

Name	Description	Availability
DIGAR-300M/400M	– Superior Anti-Jam – Security approved M-Code GPS receiver inside – Power: 28vdc (DIGAR-300M) 115V/400Hz (DIGAR-400M)	2027
DIGAR-GUARDIAN™	– All Weather Enclosure – Superior Anti-Jam – Power: 28vdc – Optional GPS Receiver	2026
DIGAR-300/400	– Superior Anti-Jam – Power: 28vdc (DIGAR-300) 115V/400Hz (DIGAR-400)	DIGAR-300 available now

baesystems.com/gps

Key features and benefits

- Superior Y-Code and M-Code beamforming
- Up to 24 simultaneous beams for jamming immunity
- 120+ dB J/S performance*
- Four- to seven-element CRPA compatible
- Simultaneous L1/L2 protection
- Supports Y-Code and M-Code anti-jamming
- Supports STAP/SFAP beamforming
- Small form factor (75 cubic inches)
- Supports retrofit AE-1/GAS- 1/ADAP platforms
- Situational awareness (direction finding)
- Embedded Y-Code or M-Code receiver option

Superior anti-jamming performance

DIGAR's advanced, anti-jamming capabilities were specifically designed to meet the mission needs of airborne and maritime platforms, including fixed wing, unmanned and rotary wing. It's been tested head-to-head with the industry's leading solutions and has outperformed them all. With technology proven at government test ranges and now fielded on multiple platforms, DIGAR provides superior protection against all known jamming threats.

Growth

- Enhanced situational awareness (e.g. jammer characterization and geo-location)
- RelNav (JPALS, AAR)
- GNSS multi-constellation compatibility as part of future upgrade to MGUE Increment 2

Superior protection against all known jamming threats

DIGAR-300/300M
DIGAR-400/400M

System characteristics

Anti-jamming performance	(24 MHz broadband jammer)
State 5 tracking	>105 dB J/S*
State 3 tracking	>120dB J/S*
Other	Compatible with any GPS receiver using RF Output. Beamforming available with ASR™-M, GEM™ VII, and ASR 3.7 receivers
Size	DIGAR-400 offers a package suitable for UAS and rotary wing DIGAR-200 supports retrofit AE-1/GAS-1/ADAP platforms and forward-fit fixed wing
CRPA compatibility	Can be configured for beamsteering with any array
Platform versatility	Tested on fixed wing, rotorcraft, UAS, and naval vessels
GPS flexibility	Programmable for optimized Y- and M-Code anti-jamming
Situational awareness	Direction finding

Physical characteristics

Power	DIGAR-300: 28 volts DC DIGAR-400: 115V/400 Hz
Power consumption	50W nominal, 75W max
Weight	DIGAR-300/400: <5 lbs
Size/volume	DIGAR 300/400: 7 D x 5.6 W x 1.9 H in. (17.78 D x 14.22 W x 4.83 H cm)
Temperature range	-54°C to 71°C (continuous)
Cooling	Conduction/convection
Shock operating	20 g
Shock crash	40 g
Random vibration	20-1000 Hz, 0.32 g2/Hz 1000-2000 Hz, -6 dB per octave decrease

Interfaces

- Protected RF output (L1/L2)
- Digital multi-beam output
- RS-422 control/status interface
- RS-422 instrumentation

*Actual performance for specific threat environments varies and is classified.

For more information contact:
BAE Systems

P. O. Box 868
Nashua, New Hampshire 03061-0868
W: baesystems.com/gps

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