



GAJT-710MS™

GPS Anti-Jam Technology (GAJT®) for Marine Applications

JAMMING AND INTERFERENCE

Jamming and interference, whether intentional or unintentional, can seriously degrade GPS position, navigation and time availability—even to the point of total solution denial. Jammers create excessive noise, overpowering the low power GPS signals and saturating the electronics in a GPS receiver front end. Methods are needed to suppress this interference so your GPS receiver continues to operate and provide reliable positioning.

LOW COST, SMALL FORM FACTOR

Until now, the high cost and large size of Controlled Reception Pattern Antennas (CRPAs) has had limited use in the marine market. The GAJT-710MS CRPA from VERIPOS combines an antenna array and null forming electronics into a marine hardened enclosure that is suitable for installation on a wide range of marine vessels, including DP drill rigs, construction, survey and seismic vessels.

LEADING EDGE TECHNOLOGY

The system uses NovAtel's Pinwheel® antenna array to receive GNSS signals in the L1 and L2 bands. Interference mitigation is achieved by applying proprietary digital beamforming algorithms to the signals, creating dynamic nulls to give protection against narrowband and broadband interference sources. Integration to your VERIPOS receiver is seamless.

HOW IT WORKS

GAJT mitigates interference by creating nulls in the antenna gain pattern in the direction of jammers, providing significant anti-jam protection even in dynamic multi-jammer scenarios. The output of the GAJT-710MS is a standard Radio Frequency (RF) feed.

BUILT FOR THE FUTURE

GAJT protects L1 and L2 GPS signals. The wide bandwidth of the GAJT-710MS ensures future compatibility with M-Code GPS.

BENEFITS

- Low cost anti-jam protection for ships and boats
- Easy to integrate, ideal for retrofitting
- Anti-jam protection in dynamic multi-jammer scenarios
- Compatible with VERIPOS receivers

FEATURES

- Affordable protection for GPS position, velocity and time
- Up to 40 dB of additional anti-jamming protection
- Single enclosure system
- Simultaneous GPS L1 and L2 protection
- Adaptive digital nulling

TECHNICAL SPECIFICATIONS

Performance

GNSS (GPS) Signals

Center frequency	
L1	1575.42 MHz
L2	1227.6 MHz

Controlled Reception Pattern Antenna (CRPA)

Number of elements	7
Bandwidth	±11 MHz (centered on L1 and L2)
Noise figure	3 dB
LNA gain	30 dB
VSWR	≤2.0:1
RF output	50 Ω TNC

Interference Rejection

Simultaneous L1 and L2

Interference suppression	40 dB (typical)
Number of simultaneous nulling directions	6

Physical and Electrical

Dimensions	290 x 290 x 120 mm
Weight	7.5 kg
Power	
Power consumption	25 W
Input voltage	+10 to +28 VDC

Environmental

MIL-STD-810G

Temperature

MIL-STD-810G 505.5

Operating	-40°C to +71°C
Storage	-55°C to +85°C

Humidity

MIL-STD-810G 507.5, Proc. II

Altitude

MIL-STD-810G 500.5	
Operating	3,600 m/12,000'
Storage	12,000m/40,000'

Solar Radiation

MIL-STD-810G 505.5

Corrosion

MIL-STD-810G, 509.5	
MIL-STD-810G	

Water

MIL-STD-810G, 512.5	
IEC 60529 IPX6	

Sand and Dust

MIL-STD-810G, 510.5	
---------------------	--

Salt Fog

MIL-STD-810G, 509.6	
---------------------	--

Submersion

IP67	
------	--

Vibration

MIL-STD-810G, 514.6	
---------------------	--

Shock

MIL-STD-810G, 516.6	
---------------------	--

Compliance

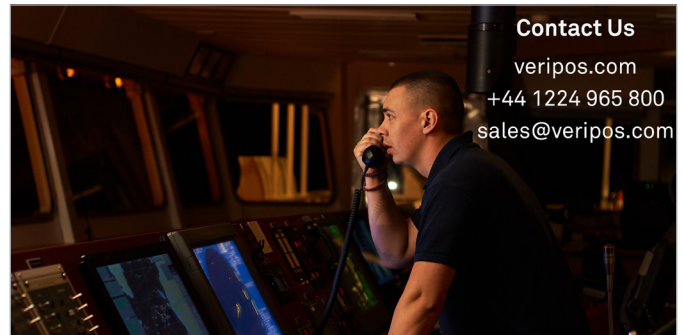
CE, FCC, WEEE	
---------------	--

Connectors

Power	MIL-C-26482, Series 2
RF	TNC (Female)
Service	MIL-DTL-38999, Series 3

Export Approvals

Canadian Controlled Goods



Contact Us

veripos.com
+44 1224 965 800
sales@veripos.com

ABOUT VERIPOS

VERIPOS is a global technology leader, pioneering end-to-end solutions for assured positioning for the offshore marine oil and gas industry. VERIPOS is part of Hexagon's Positioning Intelligence division. Learn more at veripos.com

© 2018 Hexagon AB and/or its subsidiaries and affiliates. All rights reserved. Hexagon and the Hexagon logo are registered trademarks of Hexagon AB or its subsidiaries. All other trademarks or servicemarks used herein are property of their respective owners. Hexagon believes the information in this publication is accurate as of its publication date. Such information is subject to change without notice.

REV 1