

Precise Positioning for Marine Applications



- High Performance Antenna for Marine Applications
- Resistant to INMARSAT Jamming and Other Sources
- Compact Dual-Frequency Antenna that Supports RTK, DGPS, and Post-Processed Applications
- Capable of Supporting L-Band DGPS Corrections

MG-A8 Antenna

The new MG-A8 marine antenna provides exemplary GNSS signal tracking while not being susceptible to signal jamming from other sources, such as INMARSAT communications.

The MG-A8 offers GPS L1 and L2 signal reception as well as L-Band corrections and INMARSAT rejection. It gives users an opportunity to use dual-constellation double-frequency features and L-Band DGPS corrections for high accuracy in everyday work. The MG-A8 antenna is a compact and lightweight solution for marine and navigation applications.

The MG-A8 antenna can be used in DGPS mode for meter level navigation purposes but can also be used for RTK centimeter level positioning in areas where there is a network of reference stations available to support this level of precision.

This antenna is extremely useful in supporting various levels of accuracy for marine usage. There are accuracy requirements in marine applications and this antenna provides a simple and scalable solution to users.

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SPECIFICATIONS

Performance

Operation Frequency Range	Upper band – 1520...1590 MHz Lower band – 1215...1260 MHz
Out-of-Band Rejection	GPS L1 ± 100 MHz -40 dBc (typical) GPS L2 ± 200 MHz -50 dBc (typical) 1625 -1660 MHz -30 dBc (typical)
Gain at Zenith (90°)	GPS L1 5 dBic GPS L2 5 dBic Omnistar 4 dBic
Gain Roll-Off (from Zenith to Horizon)	GPS L1 -7.5 dB GPS L2 -10 dB Omnistar -7.5 dB
LNA Gain	35 dB (typical)
Noise Figure	1.5 dB (typical)
VSWR	≤ 2.0 : 1
Differential Propagation Delay L1, L2	7 ns (maximum)
Nominal Impedance	50 Ohm

Physical and Electrical

Diameter	89mm
Radius	50mm to measuring nozzle (SHMM)
Height	102.5mm (without adapter) 205mm (with universal aluminum or plastic adapter) 180mm (with marine plastic adapter)
Weight	250g antenna without adapter 80g universal aluminum adapter 60g universal plastic adapter 100g marine (flange) plastic adapter 330g antenna with aluminum adapter
Power	Input Voltage +3 to +18 VDC Current Consumption 60 ± 5 mA (typical)
Mount	M24x1.5 external thread (without adapter) 5/8"-11 internal thread (with Aluminum or Plastic Universal Adapter) Flange with 3 hole of 6.5mm diameter (with Marine Adapter)
Connector	TNC female

Environmental

Temperature	Operating Range -40°C to +70°C Storage Range -40°C to +70°C
Water Protection	IPx7 IEC 60529
Dust Protection	IP6x IEC 60529
Vibration	1) MIL-STD-810G, Method 514.6, Category 4 – Common carrier, Table 514.6C-II, 1 hours per axis 2) MIL-STD-810G, Method 514.6, Category 21 – Watercraft-marine vehicles, Figure 514.6D-9, 2 hours per axis
Mechanical Shock	Multiple shocks, IEC 60068-2-29, Test Eb, 25g / 6µs, 1000 bumps per axis
Humidity	MIL-STD-810G, Method 507.5, Procedure II, item 2.4.2, Table 507.5-IX, Aggravated cycle.
Salt Fog	MIL-STD-810G, Method 509.5, 5% salt solution concentration, 96 hours
RoHS Compliant	Yes

For more specification information: oem.topconpositioning.com/marine

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