5012D-U Smart GPS Antenna with Integrated Receiver

The 5012D-U GPS Receiver + Antenna incorporates a highly sensitive 16-channel, very quick time-to-fix GPS Receiver, and a high performance active/filtered GPS antenna. It features high performance GPS Engine with embedded flash memory, a Low Noise Amplifier, SAW filter, as well as a precision tuned ceramic patch element for maximum GPS signal reception. The 5012D-U High Sensitivity GPS Receiver + Antenna is housed in a compact, rugged weatherproof magnet or screw mount enclosure.

Features

- Highly Sensitive: -159dBm tracking
- Quick Time to Fix: 39 sec cold start
- 16 channel GPS Engine
- Standard NMEA 0183 GPS output
- WAAS and EGNOS supported
- Low power & standby modes
- Weatherproof industrial grade enclosure

Antenna Response Specifications

Center Frequency	Nominal Gain	Polarization	Out-of-Band Rejection
1575.42 MHz ± 10 MHz	3 dBic @ 90° -2.0 dBic @ 20°	Right Hand Circular	+15 MHz: 10 dB/- 15 MHz:30dB +20 MHz: 20 dB/- 20 MHz:30dB +40 MHz: 40 dB/- 40 MHz:40dB

Antenna Electrical Specifications

Voltage	Current Draw
5 volts USB comm interface	85 mA max

Mechanical Specifications

Antenna Dimensions	Weight	Mounting
2.05" x 2.32" x .53" (52.1 x 58.9 x 13.6 mm)	.26 lbs (120 g)	Magnetic (5 lb lift-off) or Screw mount (M2.5 pre-threaded)

Shock	Vibration	Cable Length	Interface
Vertical axis 50G, other axes 30G	3 axis, sweep tt= 15 min; 10 – 200 Hz log sweep: 3G	9.8'(3 meters) highly flexible USB cable	USB

Environmental Specifications

Temperature Range	Weather Proof
-40°C to +85°C operating	IP67

GPS Performance

Frequency: L1: 1575.42 MHz
Channels: 16 channels parallel
Sensitivity: Acquisition: -146dBm Tracking: -159dBm
Accuracy: 2 m (autonomous) <1 metre (SBAS)
Time to First Fix: Cold start: 39 sec Warm start: 34sec Hot start: 2.5 sec Reacquisition <1 sec
Serial Protocol: Output: NMEA 0183 Baud Rate: 4800 bps (default), user configuration up to 115kbps Update Rate: 1Hz NMEA Message: GGA, VTG, GSA, GSV, RMC