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Wi-Sys Communications Inc.

WS5012 Magnet Mount High Sensitivity Tracking & Timing GPS Receiver+Antenna

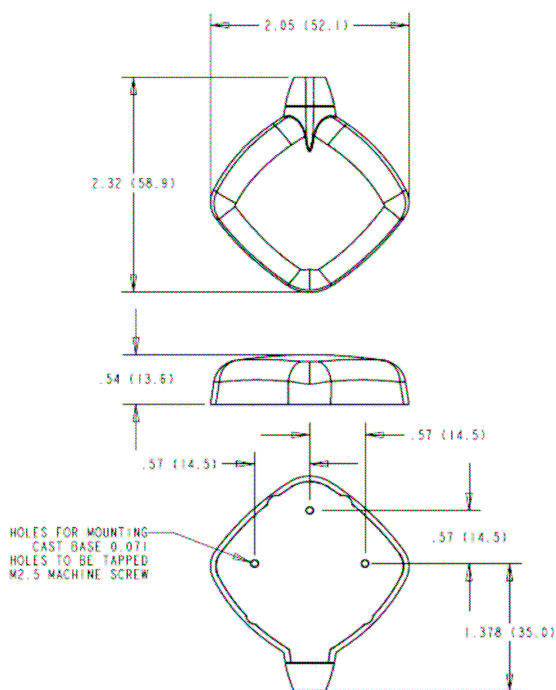
Applications:

- ◆ High Performance GPS Tracking
- ◆ Automotive Navigation
- ◆ Fleet Management
- ◆ Military, Security & Public Safety
- ◆ WiMAX & Wireless Timing/Synchronization



The WS5012 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 the STMicroelectronics STA8058 Teseo™ high performance GPS Engine with embedded flash memory, a Low Noise Amplifier, a SAW filter, as well as a perfectly tuned ceramic patch element for maximum GPS signal reception. The WS5012 High Sensitivity GPS Receiver + Antenna is housed in a compact, rugged weatherproof magnet or screw mount enclosure, and is available with USB, CMOS and RS232 interfaces.

Mechanical Dimensions



Features:

- ◆ Integrated GPS receiver, antenna, LNA & SAW filter
- ◆ Very High Sensitivity: -159dBm tracking
- ◆ Quick Time to Fix: 39 sec cold start
- ◆ 16 channel ST Teseo™ GPS Engine
- ◆ Flash memory: upload embedded GPS firmware, settings & history
- ◆ Standard NMEA 0183 GPS output
- ◆ 1PPS output 50ns accuracy - CMOS version
- ◆ WAAS and EGNOS supported
- ◆ Low power & standby modes
- ◆ Low current: 80 mA typ., 3.3V operation
- ◆ USB and CMOS interfaces
- ◆ Weatherproof industrial grade enclosure
- ◆ RoHS compliant



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Specifications:

Mechanical	
Dimensions	52.1 mm x 58.9 mm x 13.6 mm
Weight	120 g
Interface	CMOS or USB type A (RS232 custom option)
Attachment method	Magnetic (5 lb lift-off) or Screw mount (M2.5 pre-threaded)
Shock	Vertical axis 50G, other axis 30G
Vibration	3 axis sweep = 15 min 10-200 Hz log sweep: 3G
Environmental	
Operating Temperature	-40 to +85 C
Storage	-45 to +85 C
Weatherproof	IP67
Electrical	
Voltage	3.3V +/- 10% (CMOS version)
Current	85 mA max (CMOS version)
Antenna Response	
Frequency	1575.42 MHz
Gain	@ 90° 3 dBic @ 20° -2 dBic
Polarization	Right Hand Circular
Axial Ratio	@ 90° 4 dB @ 20° 6 dB
Out-of-band rejection	+15 MHz: 10 dB/- 15 MHz: 30dB +20 MHz: 20 dB/- 20 MHz: 30dB +40 MHz: 40 dB/- 40 MHz: 40dB

GPS Performance	
Frequency	L1, 1575.42 MHz
Channels	16 channels parallel
Sensitivity	Acquisition: -146dBm Tracking: -159dBm
Accuracy	2m (autonomous) <1 metre (SBAS)
Time to First Fix	Cold start: 39 sec Warm start: 34 sec Hot start: 2.5 sec Reacquisition: <1 sec
1PPS Output	(WS5012-T-3m-CMOS only) Resolution: +/- 31nS Accuracy: 50nS
Serial Protocol:	Output: NMEA 0183 Baud Rate: 4800 bps (default), user configurable up to 115kbps Update Rate: 1Hz NMEA Message: GGA, VTG, GSA, GSV, RMC

Specifications subject to change without notice.
Please visit our website or contact us for additional information.

Ordering Information:

WS5012-3m-USB: 3 metre cable, USB connectivity

WS5012-3m-CMOS: 3 metre cable, CMOS interface, flying leads

WS5012-T-3m-CMOS: 3 metre cable, CMOS interface (with 1PPS output), flying leads

Wi-Sys Communications Inc.

31B Richardson Side Road
Ottawa, ON K2K 0A1 Canada
Tel 613.254.7386 Fax 613.254.7388
sales@wi-sys.com www.wi-sys.com

