



TW5210 GPS Smart Antenna/Receiver

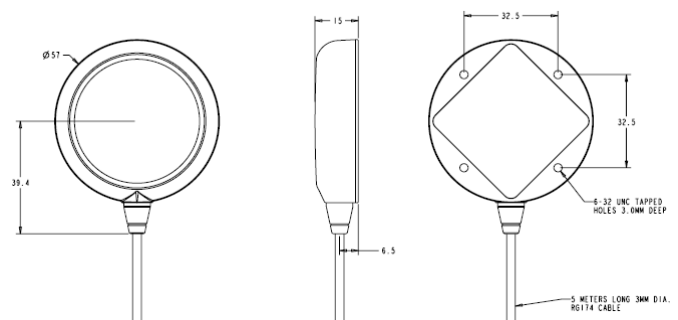
The TW5210 by Tallysman Wireless is a professional grade integrated GPS smart antenna/receiver.

It features the STMicroelectronics STA8058 Teseo™ WAAS, EGNOS and MSAS enabled GPS L1 receiver IC, a high performance low noise amplifier stage, a tight out-of-band SAW filter to reject interference, and a perfectly tuned antenna element for maximum GPS signal reception, even in dense urban-canyon environments where multipath interference is prevalent.

The TW5210 is housed in a compact, industrial-grade weather-proof, magnet mount enclosure, with a NMEA 0183 standard output via a RS232 or CMOS interface on flying leads, or a USB connector.



Dimensions (mm)



Applications

- Professional & Mission Critical GPS
- Fleet Management & Asset Tracking
- Agriculture, Mining & Construction
- Military & Security
- Law Enforcement & Public Safety
- Industrial & Wireless Timing
- Network Stratum 1 Time Source

Features

- Integrated GPS receiver, GPS antenna, LNA & SAW filter in one
- STMicroelectronics STA8058 Teseo™ GPS L1 Receiver IC
- SBAS: WAAS, EGNOS & MSAS enabled
- Very high Carrier to Noise Ratio (C/No)
- UTC synchronized precise time-base
- GPS output: NMEA 0183
- RS232, USB and CMOS interface options
- Industrial grade waterproof IP67 enclosure
- RoHS Compliant
- Optional: 1 pulse per second source (RS232 version)



TW5210 GPS Smart Antenna/Receiver

Specification

Electrical	
Voltage	32-5210-0: 12V (RS232) 32-5210-1: 5V (USB) 32-5210-2: 5 V (RS232) 32-5210-3: 12V (CMOS)
Current	85 mA typ.
Output	NMEA 0183 standard
Interface / Termination	32-5210-0: RS232 / Flying lead 32-5210-1: USB Connector 32-5210-2 CMOS / Flying lead 32-5210-3 CMOS / Flying lead
1 PPS Output	32-5210-2 & 32-5210-3 only
Cable	3mm OD / 5 metre
Mechanical	
Dimensions	57 dia. x 15 H mm
Weight	150 g
Attachment Method	Magnet or screw mount
Environmental	
Operating Temp.	-40 to +85 °C
Storage Temp.	-45 to +85 °C
Weatherproof	IP67
Shock	Vertical axis 50 G, other axis 30 G
Vibration	3 axis sweep = 15 min 10-200 Hz log sweep:3 G

GPS Performance	
Frequency	GPS L1 / 1575.42 MHz
SBAS	WAAS, EGNOS, MSAS
Channels	16 channels
Sensitivity	Acquisition: -146 dBm Tracking: -159 dBm
Accuracy	2 metre (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 accuracy	50 ns
Serial Protocol	Output: NMEA 0183 Baud Rate: 4800 bps (default), user configurable up to 115 kbps Update Rate: 1Hz NMEA Message: GGA, VTG, GSA, GSV, RMC
Antenna Response	
Frequency	1575.42 MHz ±10 MHz
Gain (element)	3 dBic @ 90°
Polarization	Right Hand Circular
Axial Ratio	≤4 dB typ.
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

Ordering Information

TW5210 with 3 metre cable, 12V, NMEA output, RS232 interface / flying leads	32-5210-0
TW5210 with 3 metre cable, NMEA output, USB Connection	32-5210-1
TW5210 with 3 metre cable, 5V, NMEA output, RS232 interface / flying leads	32-5210-2
TW5210 with 3 metre cable, 12V, NMEA output, CMOS interface / flying leads	32-5210-3

Please contact Tallysman Wireless for additional information

Tallysman Wireless Inc

106 Schneider Road, Unit 3
Ottawa ON K2K 1Y2 Canada
Tel 613 591 3131
Fax 613 591 3121

sales@tallysman.com

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