



When precision matters...™

TW5210 GPS Smart Antenna/Receiver

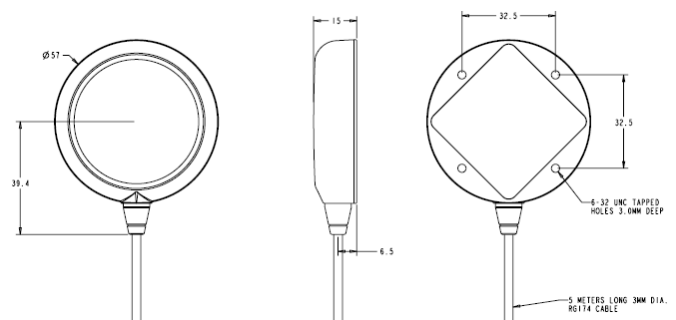
The TW5210 by Tallysman Wireless is a professional grade integrated GPS smart antenna/receiver.

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)



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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

Legacy Part Numbers:

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

* As a result of a growing product portfolio, Tallysman has rationalized its part number system. No changes have been made to the mechanical or electrical properties of these products. Where administratively possible, please use the following Part Numbers.

TW5210 with 3 metre cable, 12V, NMEA output, RS232 interface / flying leads	33-5210-0
TW5210 with 3 metre cable, NMEA output, USB Connection	33-5210-1
TW5210 with 3 metre cable, 5V, NMEA output, RS232 interface / flying leads	33-5210-2
TW5210 with 3 metre cable, 12V, NMEA output, CMOS interface / flying leads	33-5210-3

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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