



TW5310 GPS Smart Antenna/Receiver

The TW5310 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.

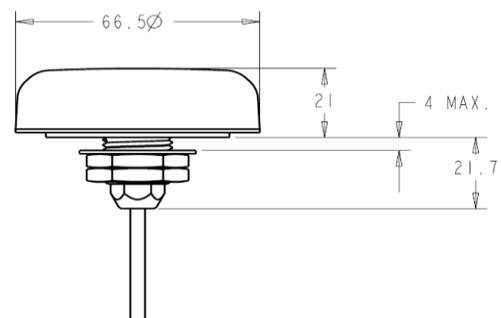
The TW5310 is housed in an industrial grade weatherproof IP67 enclosure for 19mm diameter ($\frac{3}{4}$ ") thru-hole mount or mast mount installations and comes with NMEA 0183 standard output via a RS232 interface.



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

Mechanical Dimensions (mm)



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)
- 1 pulse per second source
- UTC synchronized precise time-base
- GPS output: NMEA 0183
- RS232 interface on flying lead
- Industrial grade waterproof IP67 enclosure
- RoHS Compliant



TW5310 GPS Smart Antenna/Receiver

Specification

Electrical	
Voltage	12 V nominal (9 to 16 V oper.)
Current	85 mA typ.
Output	NMEA 0183 standard
Interface / Termination	RS232 / Flying leads (custom termination available)
Cable length / Type	5 metres / CAT5E, AWG24
Mechanical	
Dimensions	66.5 dia. x 21 H mm (Radome)
Weight	60 g
Attachment Method	19 mm dia. (3/4") thru-hole or mast-mount
Antenna Response	
Frequency	1575.42 MHz \pm 10 MHz
Gain (element)	3 dBic @ 90°
Polarization	Right Hand Circular
Axial Ratio	\leq 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
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: 100 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
Wiring	
Brown/White	Gnd
Brown	Power (+12 V)
Green/White	GPS Status
Green	N/C
Orange/White	Power (+12 V)
Blue/White	RX (RS232 in)
Orange	TX (RS2323 out)
Blue	1PPS (3.3 V)

Ordering Information

TW5310 with 5 metre cable, NMEA output, RS232 interface/flying leads

32-5310-0

Please contact Tallysman Wireless for additional information

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