



When precision matters...™

TW5310/TW5330 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.

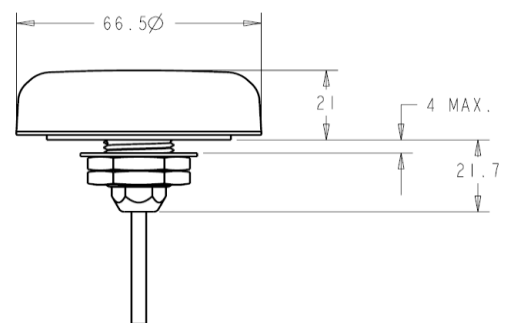
The TW5310 is housed in an industrial grade weatherproof IP67 enclosure for 19mm diameter (¾") thru-hole mount or mast mount installations and comes with NMEA 0183 standard output via a RS232 interface. A TW5330 version is available with a conical radome.



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/N0)
- Differential 1 pulse per second (RS422)
- UTC synchronized precise time-base
- GPS output: NMEA 0183
- 5 metre cable, RS232 interface
- Industrial grade waterproof IP67 enclosure
- RoHS Compliant



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Specification

Electrical	
Voltage	12 V nominal (9 to 16 V oper.)
Current	85 mA typ.
Output	NMEA 0183 standard
Interface / Termination	RS232 / RJ45 (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 ±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
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	Differential RS422 / 100 ns Accuracy
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 (Options 12V, 5V)
Green/White	N/C
Green	1PPS Qualification
Orange/White	1PPS - B
Blue/White	RX into TW5310 (RS232)
Orange	TX out of TW531 (RS2323)
Blue	1PPS - A

Ordering Information

Legacy Part Numbers:

TW5310, 5 metre cable, RS232 interface, RJ45 termination (12V operation) 32-5310-0

TW5310, 5 metre cable, RS232 interface, RJ45 termination (5V operation) 32-5310-2

TW5330 are same products with conical radome

* 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.

TW5310, 5 metre cable, RS232 interface, RJ45 termination (12V operation) 33-5310-0

TW5310, 5 metre cable, RS232 interface, RJ45 termination (5V operation) 33-5310-2

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