

# TW5340/ TW5341



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## TW5340/TW5341 Multi-Constellation Smart Antenna

### Overview

The TW5340 is a multi-constellation GNSS Smart Antenna which provides simultaneous GPS/GLONASS/SBAS reception. It is designed for use in professional grade applications such as precision timing, network synchronization, low current applications, and tracking/positioning applications.

The TW5340 GNSS Smart Antenna uses the state-of-the-art ST STA8088 receiver which provides 32 high sensitivity tracking channels plus 2 fast acquisition channels which can be assigned to acquire and track GPS, GLONASS, QZSS, and SBAS (WAAS, EGNOS, MSAS) signals simultaneously.

The TW5340 employs Tallysman's Accutenna™ dual feed antenna patch technology which greatly improves rejection of multi-path signal interference, across the whole GNSS band, making the TW5340 the most precise smart antenna in its size across all operating environments.

The TW5340 accelerates GPS positioning by predicting satellite ephemeris data based on previous observations, resulting in extremely fast Time-To-First-Fix.

The TW5340 can be configured to outputs up to three NMEA 0183 message lists with navigation update rates up to 10Hz. RS232, and CMOS interfaces are available with input voltage options of 3,3V, 5.0V and 12V to 36V with over voltage protection.

A standard one pulse-per-second 1PPS synchronized to UTC time is available as a single ended output or as a differential output at RS422 levels. NMEA data can also be configured to output at RS422 levels, however the 1PPS output is disabled in this mode.



Tallysman's Windows™ based Configurator enables simple configuration of parameters such as baud rates, output message rates, constellation, tracking parameters, 1PPS configuration and Standby mode parameters.

A non-magnetic version is available with Part Number TW5341.

### Features

- Multi-Constellation Receiver/Antenna
- 32 Channel simultaneous operation
- High performance tracking (-162 dBm)
- WAAS, EGNOS, & MSAS enabled
- 3 NMEA 0183 output Lists
- Navigation rates 1 to 10 Hz
- 1 PPS & NMEA configurable RS422 outputs
- Low Current Standby Mode
- Accutenna™ Technology
- Excellent multi-path signal rejection
- Industrial grade IP69K enclosure
- RoHS, REACH and RED Compliant. CE Marking

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## Specifications

Antenna	Environmental
Architecture .....Dual Feed	Operating Temperature. ....-40°C to +85°C
Axial Ratio .....< 1 dB typical.	Storage Temperature.....-45°C to +85°C
Frequencies.....GPS / GLONASS / QZSS	Weatherproof .....IP69K
SBAS .....WAAS, EGNOS, MSAS	Shock. ....Vertical axis 50G, other axis 30G 3 axis sweep – 15 min 10-200 Hz log sweep 3G
Channels.....32 simultaneous plus 2 fast acquisition	Vibration.....EN 55022
Navigation Accuracy	Emissions.....EN 61000-4-3, EN 61000-4-4, EN
GPS+GLONASS .....1.5m (50% CEP)	Immunity .....61000-4-6
Interface	Sensitivity
Outputs.....RS232, CMOS	Acquisition.....-146 dBm
1 PPS Output.....Single ended & Differential RS422. +/-50 ns Accuracy 16Kv protection RS422 lines	Tracking .....-162 dBm
Mechanical	Time to First Fix
Dimensions .....66.5 mm dia x 21 mm H	Cold start .....35 sec
Weight.....135 g	Warm start .....30 sec
Mounting Method .....19 mm dia. (3/4") thru-hole or mast-mount	Hot start .....<2 sec
Cable Length......5m (15m & 25m special order)	Reacquisition .....<1 sec
Connector .....RJ45	Serial Protocol
Enclosure .....Industrial grade magnetic mount weatherproof IP69K	Output.....NMEA 0183
Electrical	Baud Rate.....300 to 921,600 bps, 115200 (default)
Voltages .....3.3V, 5V (+/- 0.5V) and 12 V to 36V (9V min)	Update Rate.....Configurable up to 10Hz
Current .....120 mA during acquisition 80 mA operating Standby mode < 1mA	NMEA Message Configurable
	Wires
	Power, Gnd, Rx Tx, 1 PPS Qualification, Differential 1 PPS-A, Differential 1 PPS-B

## Ordering Information:

33-5340-x-yy-zz GPS/GLONASS /QZSS Smart Antenna, 33-5341-x-yy-zz Non-magnetic, GPS/GLONASS/ Smart Antenna

**DB9 Test adaptor (For CMOS versions a CMOS/RS232 converter will also be required)**

**27-0045-1**

Please refer to the Ordering Guide for the current and complete list of available products.



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**Contact us:**  
[info@tallymatics.com](mailto:info@tallymatics.com)  
**T: +1 613 591-3131**

Tallymatics Inc.  
36 Steacie Drive,  
Ottawa ON  
K2K 2A9 Canada

[www.tallymatics.com](http://www.tallymatics.com)