



## TW5340/TW5341 Multi-Constellation Smart Antenna

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



# TW5340/TW5341 Multi-Constellation Smart Antenna

## Mechanical:

The TW5340/TW5341 is housed in an industrial grade weatherproof IP67 enclosure for 19mm diameter ( $\frac{3}{4}$ "") thru-hole mount or mast mount installations. It is available with low profile radome or with a conical radome. L-brackets and pipe mount brackets are available as installation options.

## Specifications

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

## Ordering Information

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

27-0045-1 DB9 Test adaptor (For CMOS versions a CMOS/RS232 converter will also be required)

Where x= interface/voltage (1 = RS232 5V; 2 = CMOS 5V, 3 = CMOS, 3.3V, 5 = RS232 3.3V, 6 RS232 = 12V to 36V),  
yy= Radome (00= grey conical, 10=grey low profile, 01=white conical, 11=white low profile)  
zz= cable length in metres. Standard is 5m, (15 M and 25m special order only)

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