



TW5340 Multi-Constellation GNSS 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 messages 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 (12V to 36V option available).

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 IP67 enclosure
- RoHS and REACH Compliant



TW5340 Multi-Constellation GNSS Receiver/Antenna

Mechanical:

The TW5340/TW5341 is housed in an industrial grade weatherproof IP67 enclosure for 19mm diameter (¾") 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

Frequencies	GPS / GLONASS / QZSS	1 PPS Output	Single ended & Differential RS422. +/-50 ns Accuracy 16Kv protection RS422 lines
SBAS	WAAS, EGNOS, MSAS	Channels	32 simultaneous plus 2 fast acquisition
Antenna / Axial Ratio	Dual Feed / < 1 dB typical.	Sensitivity	Acquisition: -146 dBm Tracking: -162 dBm
Cable Length	5m (15m & 25m special order)	Time to First Fix	Cold start: 35 sec Warm start: 30 sec
Output	RS232, CMOS	Serial Protocol	Hot start: <2 sec Reacquisition: <1 sec Output: NMEA 0183 Baud Rate: 300 to 921,600 bps, 115200 (default) Update Rate: configurable up to 10Hz NMEA Message Configurable
Voltages	3.3V, 5V, and 12 V 12 V to 36V VDC Option	Navigation accuracy	Power, Gnd, Rx Tx, 1 PPS Qualification, Differential 1 PPS-A, Differential 1 PPS-B
Current	120 mA during acquisition 80 mA operating Standby mode < 1mA	GPS+GLO	1.5m (50% CEP)
Dimensions	66.5 mm (dia) x 21 mm (h)	Environmental:	
Weight	135 g	Operating Temp. -	-40C to +85C
Mounting Method	19 mm dia. (¾") thru-hole or mast-mount	Storage Temp.	-45C to +85C
Navigation accuracy	1.5m (50% CEP)	Weatherproof	IP67
Environmental:		Shock	Vertical axis 50G, other axis 30G 3 axis sweep - 15 min
Operating Temp. -	-40C to +85C	Vibration	10-200 Hz log sweep 3G
Storage Temp.	-45C to +85C	Emissions	EN 55022
Weatherproof	IP67	Immunity	EN 61000-4-3, EN 61000-4-4, EN 61000-4-6
Shock	Vertical axis 50G, other axis 30G 3 axis sweep - 15 min	Wires	
Vibration	10-200 Hz log sweep 3G		
Emissions	EN 55022		
Immunity	EN 61000-4-3, EN 61000-4-4, EN 61000-4-6		

Ordering Information

33-5340-x-yy GPS/GLONASS /QZSS Smart Antenna

33-5341-x-yy 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 (0= RS232 12V; 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)

* Contact Tallysman for pre-configuration in Pass-To-Pass Mode

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