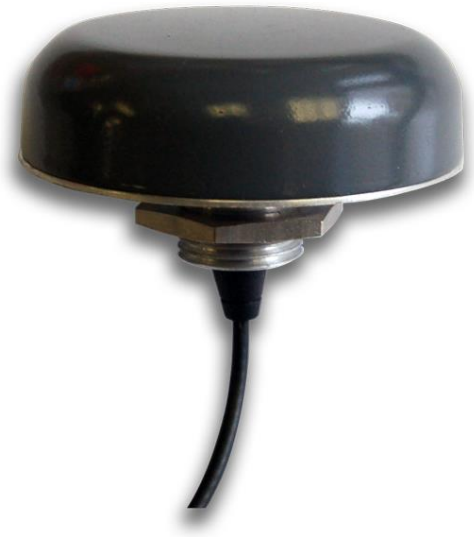
TW5340 Multi-Constellation GNSS Smart Antenna

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 supports ST Microelectronics Autonomous A-GPS which accelerates GPS positioning by predicting satellite ephemeris data based on previous observations. This results 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.

The TW5340 Standby mode feature provides for very low current consumption (<200uA) and is particularly useful in battery operated applications such as trailer tracking.

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.

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
- Low current Standby mode
- 1 PPS single ended & differential (RS422) output
- *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 / 100 ns Accuracy
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		
Output	RS232, CMOS	**Time to First Fix**	Cold start: 35 sec Warm start: 30 sec Hot start: <2 sec Reacquisition: <1 sec
Voltages	3.3, 5, and 12 VDC		
Current	120 mA during acquisition 80 mA operating Standby mode < 200uA	**Serial Protocol**	Output: NMEA 0183 Baud Rate: 300 to 921,600 bps, 115200 (default) Update Rate: configurable up to 10Hz NMEA Message: GGA, VTG, GSA, GSV, RMC
Dimensions	66.5 mm (dia) x 21 mm (h)		
Weight	135 g		
Mounting Method	19 mm dia. (¾") thru-hole or mast-mount		
Navigation accuracy GPS+GLO	1.55m (50% CEP)	**Wires**	Inputs: Pwr, Gnd, Rx Outputs: Tx, 1 PPS Qualification, Differential 1 PPS-A, Differential 1 PPS-B
Environmental: Operating Temp. - Storage Temp. Weatherproof Shock Vibration Emissions Immunity	 -40°C to +85°C -45°C to +85°C IP67 Vertical axis 50G,other axis 30G 3 axis sweep – 15 min 10-200 Hz log sweep 3G EN 55022 EN 61000-4-3, EN 61000-4-4, EN 61000-4-6		

Ordering Information

Part Numbering:

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),
yy= Radome (00= grey conical, 10=grey low profile, 01=white conical, 11=white low profile)

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