Datasheet

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TW5252 Smart GNSS Antenna

Overview

The TW5252 is a multi-constellation GNSS Receiver which provides simultaneous GPS/GLONASS + SBAS reception. It is designed for use in professional grade digital tracking/ positioning applications.

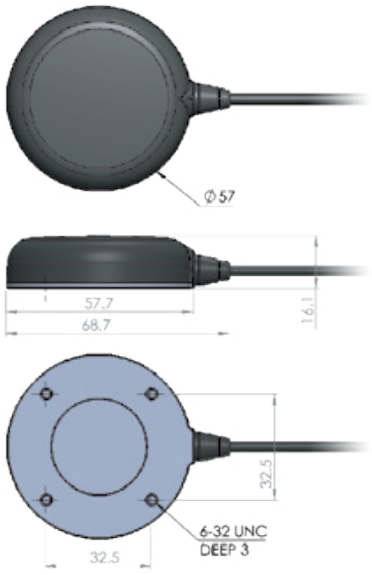
The TW5252 GNSS Smart Antenna uses a state of the art multiconstellation GNSS receiver which provides 72 high sensitivity tracking channels which can be configured to acquire and track 3 concurrent GNSS constellations (GPS, Galileo, GLONASS and Beidou) plus SBAS (WAAS, EGNOS, MSAS and GAGAN) and QZSS augmentation signals simultaneously. Differential GPS corrections may also be supplied via RTCM formatted corrrections messages.

The TW5252 employs Tallysman's Accutenna™ dual feed antenna patch technology which greatly improves rejection of multi-path signal interference, across the whole GNSS band. The addition of pre- and post- filtering within the RF signal chain greatly improves immunity to jamming carriers typical within urban environments.

The TW5252 can be configured to output a variety of NMEA 0183 message lists with navigation update rates up to 5Hz. An RS232 interface is provided for data communication with input voltage range from 5V to 36V suitable for Automotive applications.

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





Mechanical Dimensions (mm)

Interface

The TW5252 has a 5 meter cable terminated in RJ12 connector. Adaptor cables are available to interface to for a variety of Two-Way radios, PC, etc contact Tallysman for details.

Features

- Multi-Constellation Receiver/Antenna
- Concurrent tracking of 3 constellations
- 72 Channel simultaneous operation
- High performance tracking (-164 dBm)
- WAAS, EGNOS,MSAS & GAGAN + QZSS
- DGPS corrections using RTCM input
- Navigation rates 1 to 5 Hz
- Conditioned ignition input for Tait Radios
- 5V to 36V automotive operation
- Accutenna™ Technology
- Pre- and Post- LNA filtering
- Superior multi-path signal rejection
- Industrial grade IP67 enclosure
- RoHS, Reach, RED compliant, CE Marking

Specifications in brief

Antenna	
Architecture	Dual Feed
Axial Ratio	< 1 dB typical
Frequencies	GPS/QZSS L1 C/A, GLONASS L10F BeiDou B1I, Galileo E1B/C
SBAS	WAAS, EGNOS, MSAS, GAGAN
Channels	72–Channel u-blox M8 engine

Interface	
Pwr, Gnd Tx, RX	RS232

Mechanical	
Dimensions	57 mm dia. x 15 mm H
Weight	130 g
Mounting Method	Magnetic Mount
Cable Length	5 m with RJ12 termination
Enclosure	Industrial grade magnetic mount weatherproof IP67

Electrical	
Voltages	5 V to 36 VDC
Current	<500 mW nominal Operating

Environmental	
Operating Temperature	-40℃ to +85℃
Storage Temperature	-45℃ to +85℃
Weatherproof	IP67K
Shock	Vertical axis 50G,other axis 30G 3 axis sweep – 15 min
Vibration	10–200 Hz log sweep 3G

Sensitivity	
Tracking & Nav	-164 dBm 1
Cold starts	-148 dBm
Hot starts	-157 dBm

Acquisition	
Cold start	26 sec Aided 3 sec
Reacquisition	1 sec

Accuracy	
Position Accuracy	2.5m CEP (Horizontal)
Velocity Accuracy	0.05 m/s
Heading Accuracy	0.3 deg

Operational Limits	
Dynamics	4 g
Altitude	50,000 m
Velocity	500 m/s

Serial Protocol	
Output	NMEA 0183
Input	RTCM
Baud Rate	Configurable up to 230400 bps
Update Rate	Configurable up to 5Hz

Ordering Information:

33–5252–7–10–05–ccc

ccc= Custom Configuration (Contact Tallysman for “Custom” details e.g. configuration, radio cable type.

e.g. PC0= NMEA out, no adaptor cable TC4 = Tait NMEA, 27–0118–1 radio cable

TW5252 Configuration Cable

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

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