

# TW5252



## 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 corrections messages.

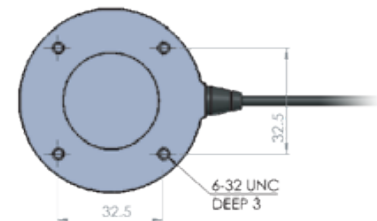
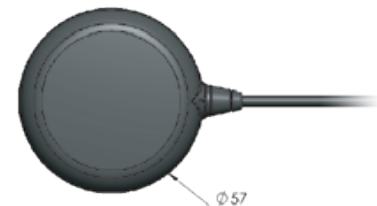
The TW5252 employs Tallysman's Accutenna™ dual feed antenna patch technology which greatly improves rejection of multi-path signal interference, across the whole GNSS band. The addition of pre- and post-filtering within the RF signal chain greatly improves immunity to jamming carriers typical within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

### 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.



Mechanical Dimensions (mm)

### 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

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## Specifications

### 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 °C to +85 °C  
Storage Temperature ..... -45 °C to +85 °C  
Weatherproof ..... IP67  
Shock ..... Vertical axis 50G, other axis 30G  
3 axis sweep - 15 min  
Vibration ..... 10-200 Hz log sweep 3G

### Sensitivity

Tracking & Nav ..... -164 dBm  
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 ..... 4g  
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:

32-5252-7-10-05-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.

**About Calian GNSS Ltd.:** With global headquarters and manufacturing in Ottawa, Canada, Calian GNSS is a leading manufacturer of high-precision antennas and components for Global Navigation Satellite System (GNSS) applications. Calian GNSS' mission is to support the needs of a new generation of positioning systems by delivering unprecedented antenna precision at competitive prices. Learn more at [www.calian.com/GNSS](http://www.calian.com/GNSS)

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