

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.

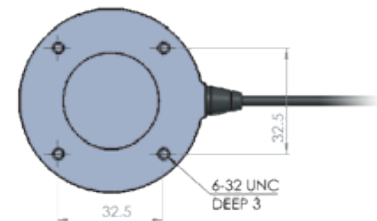
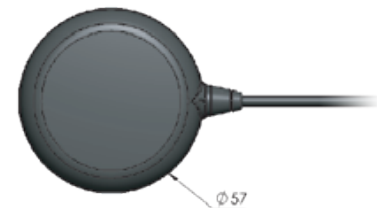
The TW5252 employs Tallysman's Accutenna™ dual feed antenna patch technology which greatly improves rejection of multi-path signal interference, across the whole GNSS band. The addition of pre- and post-filtering within the RF signal chain greatly improves immunity to jamming carriers typical within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

TW5252 Smart GNSS Antenna

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 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:

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

© 2024 Calian GNSS Ltd. All rights reserved. Calian, the "Confidence. Engineered." tag line and the Calian logo are trademarks or registered trademarks of Calian GNSS Ltd. and/or its affiliates in Canada and certain other countries. All other trademarks mentioned in this document are the property of their respective owners. This document contains Calian proprietary information. Use, disclosure, copying or distribution of information requires the written permission of Calian GNSS Ltd. The information presented is subject to change without notice. Calian assumes no responsibility for any errors or omissions in this document. Calian GNSS Ltd. hereby disclaims any and all warranties and liabilities of any kind.

Contact us:

info.gnss@calian.com
T: +1 613 591-3131

Calian GNSS Ltd.
36 Steacie Drive,
Ottawa ON
K2K 2A9 Canada

www.calian.com/GNSS