GNSS ANTENNA FOR TR-G3 AND TR-G2T

TyrAnt

TyrAnt receiver (smart antenna) is based on our TRIUMPH Technology implemented in our TRIUMPH Chip. The high performance GNSS antenna is integrated together with the receiver in the compact and robust housing. TyrAnt can be mounted on flat surfaces with four screws or mounted on standard poles (5/8-11 or 1-14 inches thread).
Communication is provided via CAN 2.0 and RS-232/RS-422 interface.

DATA SHEET

VERSION 2.3 MAY 26, 2021

TyrAnt

Specifications

STANDARD CONFIGURATION
- Total 216 All-In-View Channels
- GPS L1 for G3 version and
- GPS L1/L2/L2C/L5 for G2T
- GLONASS L1 for G3 version
- Update Rate 1 Hz
- RAIM
- Memory 0 MB
- CAN 2.0 (1Mbps)
- Internal GNSS Antenna

OPTIONAL FEATURES
- Galileo E1/E5A
- BeoDou B1
- QZSS
- SBAS
- Update Rate 5 Hz, 10 Hz, 20 Hz, 50 Hz, 100 Hz
- RTK Rate 1 Hz, 5 Hz, 10 Hz, 20 Hz, 50 Hz,100 Hz
- Data Recording up to 256 MB
- Multi-Base Code Differential Rover
- Code Differential Base
- Advanced Multipath Reduction
- Heading Determination
- Spectrum Data Ouput
- CAN Open Interface
- RS-232/RS-422 Serial Port (460.8 kbps)

TRACKING SPECIFICATION	
TyrAnt-G3	GPS C/A, P1; Galileo E1 (B+C); GLONASS C/A, P1; QZSS C/A, L1C(I+Q), SAIF; Beidou B1; SBAS L1
TyrAnt-G2T	GPS C/A, P1, P2, L2C (L+M), L5 (I+Q); Galileo E1 (B+C), E5A (I+Q); QZSS C/A, L1C(I+Q), L2C (L+M), L5 (I+Q), SAIF; Beidou B1; SBAS L1, L5
PERFORMANCE SPECIFICATIONS	
Autonomous	< 2m
Static, Fast Static Accuracy	Horizontal: 0.3 cm + 0.1 ppm * base_line_length* Vertical: 0.35 cm + 0.4 ppm * base_line_length
Kinematic Accuracy	Horizontal: 1 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1 ppm * base_line_length
RTK (OTF) Accuracy	Horizontal: 1 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1 ppm * base_line_length
DGPS Accuracy	< 0.25 m post processing; < 0.5 m real-time
Cold / Warm start/ Reacquisition	< 35 seconds / < 5 seconds / < 1 second
POWER SPECIFICATION	
External power input	+ 10 to +35 V DC
GNSS ANTENNA SPECIFICATIONS	
GNSS Antenna Type	Integrated Microstrip (Zero Centered)
Ground Plane	Antenna on a flat ground plane
I/O	
Communication Ports	CAN 2.0 (1Mbps) 1x serial (RS232/RS422) up to 460.8 kbps;
External Power port	1 port (combined with communication port)

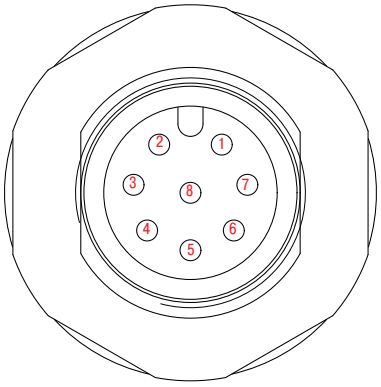
* For good observation conditions and proper length of observation session

RADIO SPECIFICATIONS	
UHF/VHF Radio	External (JLink 3G type)
Internal Memory	Up to 256 MB of on-board non-removable memory for data storage
Raw Data Recording	Up to 100 times per second (100Hz)
REAL TIME DATA	
Input/Output	JPS, RTCM SC104 v. 2.x and 3.x, CMR
Output	NMEA 0183 v. 2.x and 3.0, BINEX
ENVIRONMENTAL SPECIFICATIONS	
Enclosure	Aluminum and plastic, waterproof IP67
Mounting	5/8-11 or 1-14 inches mount, or 4 holes M5
Operating /Storage Temperature	-40° C to +80° / -45° C to +85° C
Humidity	100% condensing
Shock	Survives a 2 m drop onto hard surface
Dimensions	5.51 x 5.51 x 2.44 in (140 x 140 x 62 mm)
Weight	1.10 lbs (0.5 kg)

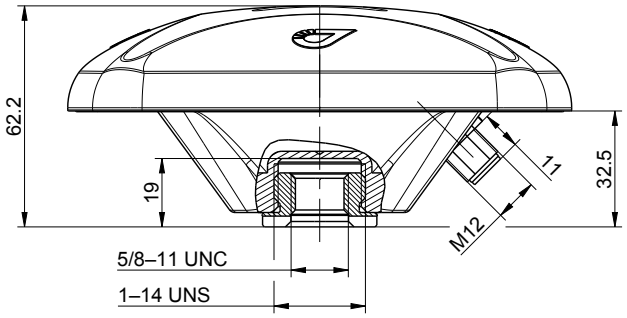
RS422/RS232/CAN Connector

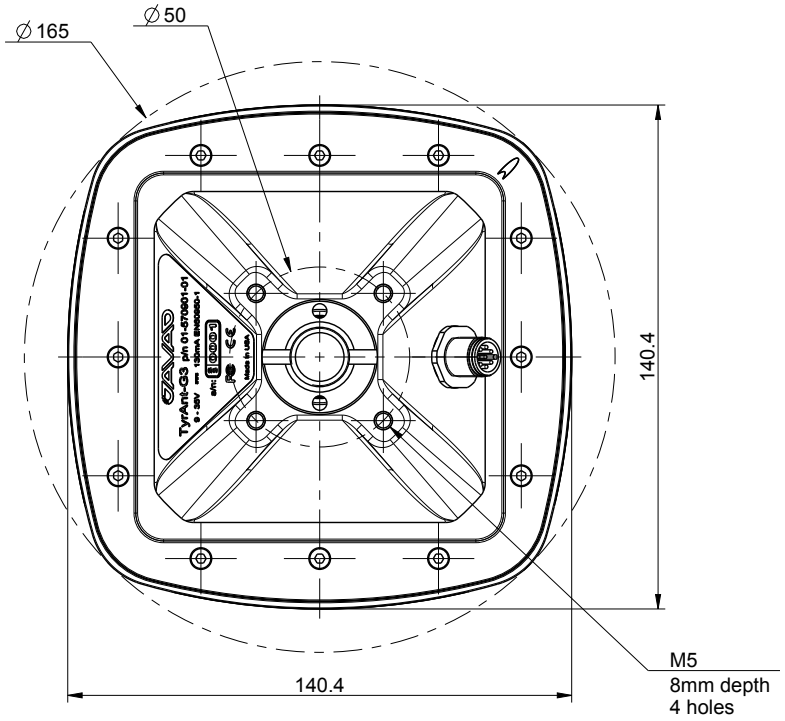
The connector is a sealed M12, 8 pin Male receptacle, FM, M16x1.5, flying lead connector Binder-USA p/n 09-3481-700-08.

#	SIGNAL NAME	DIR	DETAILS
1	PWR IN	P	Bus power, + 10 to +35 V DC, 250 mA
2	GND	-	Ground
3	422_TX+/RTS	O	Port TX+ line/RTS
4	422_TX-/TX	O	Port TX- line/TX
5	422_RX+/CTS	I	Port RX+ line/CTS
6	422_RX-/RX	I	Port RX- line/RX
7	CAN_H	I/O	CAN_H bus line (dominant high)
8	CAN_L	I/O	I/O CAN_H bus line (dominant low)



Dimensions





Illustrations, descriptions and technical specifications are not binding and may change.

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