



# DELTA-G<sub>3</sub>TAJ(T)

for TRE-G3TAJ, TRE-G3TAJT

The DELTA receiver is based on our TRIUMPH Technology implemented in our TRIUMPH Chip. For the first time in the GNSS history, we offer up to 100 Hz RTK, 216 channels of multi-frequency GPS, Galileo, and GLONASS in a small nice-looking durable watertight box with the TRE-G3TAJ or TRE-G3TAJT boards inside. The main advantage of Delta-G3TAJ(T) is the In Band Interference Rejection (IBIR) availability. Delta is a powerful and reliable receiver for high-precision navigation systems, including high dynamics systems, for machine and traffic control, as well as for high-precision surveying and geodynamics and aerogeophysics applications.

Delta-G3TAJT supports IEEE 1588 Standard for a Precision Clock Synchronization Protocol for Networked Measurement and Control Systems. and operates as a GPS-synchronized master clock, which allows synchronization of real time industrial distributed systems over Ethernet network with sub-microsecond accuracy. Delta can operate as a receiver for post-processing, as a Continuously Operating Reference Station (CORS) or portable base station for Real-time Kinematic (RTK) applications, and as a scientific station collecting information for special studies, such as ionosphere monitoring and the like.

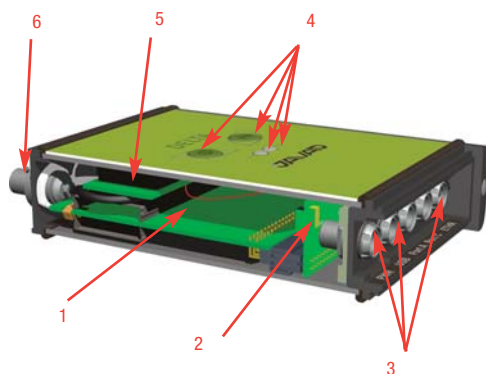
# DELTA-G3TAJ(T)

## Standard Configuration

- GPS L1/L2/L2C/L5
- GLONASS L1/L2
- Update rate 1 Hz
- RAIM
- In-Band Interference Rejection
- TriPad interface
- RS232 serial port (460.8 kbps)
- External GNSS Antenna TNC Female connector

## Optional Features

- Galileo E1/E5A
- QSZZ
- Compass B1\*
- Update rate 5Hz, 10Hz, 20Hz, 50Hz & 100Hz
- RTK rate 1 Hz, 5Hz, 10Hz, 20Hz, 50Hz & 100Hz
- Data recording up to 2048MB
- Multi-Base Code Differential Rover
- Code Differential Base
- Advanced Multipath Reduction
- IEEE1588 Master Clock (G3TAJT only)
- Two event markers
- Two 1 PPS timing strobes
- 1 PPS level converter
- CAN port
- External Reference Frequency Input/Output
- External Reference Output Frequency converter
- Up to 3 high-speed RS232 serial ports
- High-speed RS232/RS422 serial port
- USB port
- Ethernet
- WAAS/EGNOS/MSAS (SBAS)



1. GNSS Receiver with on-board Memory
2. GNSS Interconnect Board
3. Communication and Power Ports
4. On/Off and Function Buttons and LEDs
5. Reference Converter Board (optional)
6. External GNSS Antenna Connector

\*Board TRE\_G3TH\_4 or newer

## Description

Total 216 channels: all-in-view (GPS L1/L2/L5, Galileo E1/E5A/E5B, GLONASS L1/L2/L3, QZSS L1/L2/L5, Compass B1/B2, SBAS L1/L5) integrated receiver, rugged aluminum housing with TriPad interface

## Tracking Specification

Signals Tracked	GPS C/A, P1, P2, L2C (L+M), L5 (I+Q) Galileo E1 (B+C), E5A (I+Q) GLONASS C/A, L2C, P1, P2 QZSS C/A, L1C(I+Q), L2C (L+M), L5 (I+Q), SAIF Compass B1 SBAS L1, L5
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## Performance Specifications

Autonomous	<2 m
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 + 1.5 ppm * base_line_length
RTK (OTF) accuracy	Horizontal: 1 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1.5 ppm * base_line_length
DGPS accuracy	< 0.25 m (post-processing) < 0.5 m (real-time)
Real-time heading accuracy	~ 0.004/L [rad] RMS, where L is the antenna separation in [m]
Cold Start	<35 seconds
Warm Start	<5 seconds
Reacquisition	<1 second

## Power Specification

Battery	External
External Input Voltage	+4.5 to +35 volts (1 external power port)
Power Consumption	4.2 W

## I/O

GNSS Antenna Connector	50 Ohm TNC, +5 VDC (100 mA) to power LNA. 3 serial RS232 port (up to 460.8 kbps) High-speed RS232/RS422 serial port (up to 460.8 Kbps)
Communication Ports	High-speed USB 2.0 device port (480 Mbps) Full-duplex 10BASE-T/100BASE-TX Ethernet port CAN 2.0 2x 1 PPS synchronized 1 PPS level converter (0 to 4V on 500hm load) 2x Event Marker
Other I/O Signals	IRIG External Reference Frequency Input/Output External Reference Output Frequency Converter (5/10/20MHz, -2dBm to +13dBm, step 1dB) Two LEDs, two function keys (TriPad)
Status Indicator	

## Memory & Recording

Internal Memory	Up to 2048MB 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 extrusion, waterproof IP66
Operating Temperature	-40° C to +80° C
Storage Temperature	-45° C to +85° C
Humidity	95%
Dimensions	W: 109 mm x H: 35 mm x D: 141 mm/ max 160 mm with connectors
Weight	401 g

\*\* For good observation conditions and proper length of observation session

Specifications are subject to change without notice



**JAVAD GNSS**  
[www.javad.com](http://www.javad.com)

Rev.2.2 February 26, 2013