DELTA-G3T for TRE-G3T

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-G3T board inside.

Delta-G3T 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 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.
**Standard Configuration**
- GPS L1/L2/L2C/L5
- GLONASS L1/L2
- Update rate 1 Hz
- RAIM
- TriPad interface
- RS232 serial port (460.8 kbps)
- External GNSS Antenna TNC Female connector

**Optional Features**
- Galileo E1/E5A
- Galileo E5B
- GLONASS L3
- QZSS
- Compass B1
- Compass B2
- 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
- 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)

**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), E5B (I+Q), AltBoc
  - GLONASS C/A, L2C, P1, P2, L3 (I+Q)
  - QZSS C/A, L1(L+Q), L2C (L+M), L5 (I+Q), SAIF
  - Compass B1, B2
  - SBAS L1, L5

**Performance Specifications**
- **Autonomous**
  - Horizontal: 0.3 cm + 0.1 ppm * base_length****
  - Vertical: 0.35 cm + 0.4 ppm * base_length****
- **Static, Fast Static accuracy**
  - Horizontal: 1 cm + 1 ppm * base_length
  - Vertical: 1.5 cm + 1.5 ppm * base_length
- **Kinematic accuracy**
  - Horizontal: 1 cm + 1 ppm * base_length
  - Vertical: 1.5 cm + 1.5 ppm * base_length
- **RTK (OTF) accuracy**
  - Horizontal: 1 cm + 1 ppm * base_length
  - Vertical: 1.5 cm + 1.5 ppm * base_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**
  - 3.4 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 50Ohm load)
  - 2x Event Marker
  - IRIG
- **Other I/O Signals**
  - External Reference Frequency Input/Output
  - External Reference Output Frequency Converter (5/10/20MHz, -2dBm to +13dBm, step 1dB)
  - 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)

**Memory & Recording**
- **Internal Memory**
  - Up to 2048MB of on-board non-removable memory
- **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

*Board TRE_G3TH_4 or newer
** Board TRE_G3TH_8 or newer
*** Up to 4096MB on request

Specifications are subject to change without notice