DeltaQ is a powerful GNSS receiver designed for high accuracy applications with requirements of the three-dimensional position and attitude, linear and angular velocity determination of the four-antenna system using the dual frequency code and carrier data from four antennas.

216 channels of single or dual frequency GPS, Galileo and GLONASS in a small attractive, sturdy, and watertight box, which contains Quattro-G3D board.
DELTAQ

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

Specifications are subject to change without notice

** Up to 50 Hz with attitude engine turned off
** The simultaneous signals tracking is limited by the number of the available channels. By the attitude determination GPS L1,L2,L2C and GLONASS L1,L2 tracking should be active only

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### Standard Configuration
- GPS L1/L2/L2C (all antennas)
- GLONASS L1/L2 (main antenna only)
- Update rate 1 Hz
- RAIM
- TriPad interface
- RS232 serial port (460.8 kbps)
- 4 External GNSS Antenna TNC Female connectors

### Optional Feature
- Galileo E1
- QZSS
- Compass B1
- Update rate 5Hz, 10Hz, 20Hz*
- Attitude/RTK rate 1 Hz, 5Hz, 10Hz, 20Hz
- Data recording up to 2048MB
- Multi-Base 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)

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### Description
Total 216 channels: all-in-view (GPS L1/L2, Galileo E1, GLONASS L1/L2, QZSS, Compass B1, SBAS L1) integrated receiver, rugged aluminum housing with TriPad interface.

### Tracking Specification
- Signals Tracked**
  - GPS C/A, P1, P2, L2C (L+M)
  - Galileo E1 (B+C)
  - GLONASS C/A, L2C, P1, P2 (main antenna only)
  - QZSS C/A, L1C (I+Q), L2C (L+M), SAIF
  - Compass B1
  - SBAS L1
- Real time heading - 0.004/L [rad] RMS***
- Roll/Pitch - 0.0065/L [rad/s]***
- Angular velocity determination - 0.05/L [rad/s]***
- Determination of antennas relative position - 10 mm RMS
- Horizontal: 0.3 cm + 0.1 ppm * base_line_length****
- Vertical: 0.35 cm + 0.4 ppm * base_line_length****
- 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
  - 0.1 m/s
- Cold start; warm start
  - <35 seconds; <5 seconds

### Power Specification
- Battery: External
- External Input Voltage: +6 to +35 volts (1 external power port)
- Power Consumption: 5.2 W

### I/O
- GNSS Antenna Connector: Four 50 Ohm TNC, +5 VDC (100 mA) to power LNA
- Communication Ports:
  - Three serial RS232 ports (up to 460.8 kbps)
  - High-speed RS232/RS422 serial port (up to 460.8 Mbps)
  - Full-duplex 10BASE-T/100BASE-TX Ethernet port
  - Bluetooth V1.2 Class 2 supporting SPP Slave Profile
  - CAN 2.0
- Other I/O Signals:
  - Two 1 PPS synchronized
  - PPS level converter (0 to 4V on 500hm load)
  - Two Event Markers
  - IRIG
- Status Indicator:
  - Two LEDs, two function keys (TriPad)

### Memory & Recording
- Internal Memory: Up to 2048MB of on-board non-removable memory for data storage
- Raw Data Recording: Up to 20 times per second (20Hz)*

### 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 IP67
- Operating Temperature: -40° C to +75° C
- Storage Temperature: -45° C to +85° C
- Humidity: 95%
- Dimensions: 109 x 35 x 141/max 160 with connectors
- Weight: 595 g

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** Where L is the antenna separation in [m]
*** For good observation conditions and proper length of observation session
**** For good observation conditions and proper length of observation session