



DELTAQM

FOR TRE-QUATTRO



DeltaQM 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.

864 channels of single or dual frequency GPS, GLONASS, Galileo, QZSS, and BeiDou in a small attractive, sturdy, and watertight box, which contains TRE-QUATTRO board.

Tracking Features*

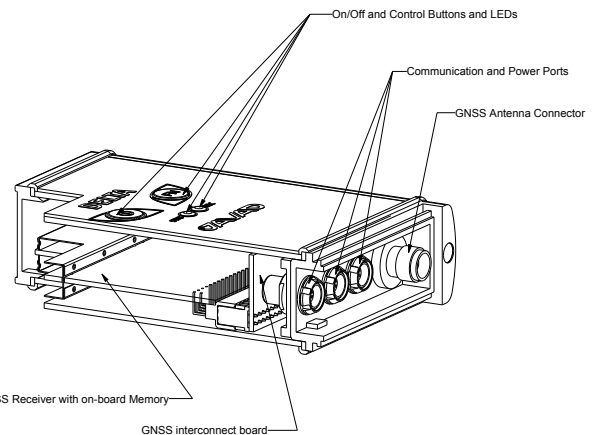
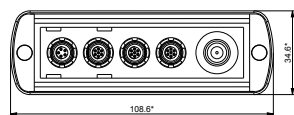
- Total 864 channels: all-in-view
- GPS C/A, P1, P2, L2C (L+M), L1C(I+Q)
- Galileo E1(B+C)
- GLONASS C/A, P1, P2, L2C
- QZSS C/A, L2C (L+M), L1C(I+Q), SAIF
- BeiDou B1, B1R, L1C(I+Q)
- SBAS L1
- Advanced Multipath Reduction
- Fast acquisition channels
- High accuracy velocity measurement
- Almost unlimited altitude and velocity (for authorized users)

Performance Specifications

- Attitude accuracy:
 - Real time heading - $0.004/L$ [rad] RMS**
 - Roll/Pitch - $0.0065/L$ [rad] RMS**
 - Angular velocity determination - $0.05/L$ [rad/s]**
- Determination of antennas relative position - 10 mm RMS
- Autonomous: <2 m
- Static, Fast Static Accuracy:
 - Horizontal: $0.3 \text{ cm} + 0.1 \text{ ppm} * \text{base_line_length}^{***}$
 - Vertical: $0.35 \text{ cm} + 0.4 \text{ ppm} * \text{base_line_length}$
- Kinematic Accuracy:
 - Horizontal: $1 \text{ cm} + 1 \text{ ppm} * \text{base_line_length}$
 - Vertical: $1.5 \text{ cm} + 1 \text{ ppm} * \text{base_line_length}$
- RTK (OTF) Accuracy:
 - Horizontal: $1 \text{ cm} + 1 \text{ ppm} * \text{base_line_length}$
 - Vertical: $1.5 \text{ cm} + 1 \text{ ppm} * \text{base_line_length}$
- DGPS Accuracy:
 - < 0.25 m post processing; < 0.5 m real-time
- Cold/Warm Start/ Reacquisition:
 - <35 seconds / <5 seconds / <1 second

Data Features

- Up to 20 Hz update rate for real time position and 100 Hz raw data (code and carrier)
- 10 cm code phase and 1 mm carrier phase precision
- IEEE 1588 protocol support
- Hardware Viterbi decoder
- RTCM SC104 versions 2.x and 3.x Input/Output



* For the full list of standard and optional features see www.javad.com

** Where L is the antenna separation in [m]

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

- NMEA 0183 versions 2.x and 3.0 Output
- BINEX Output
- Code Differential Rover
- Code Differential Base
- Geoid and Magnetic Variation models
- RAIM
- Different DATUMs support
- Output of grid coordinates

Data Storage

- Up to 16 GB of onboard non-removable memory for data storage

Input/Output

- Four GNSS antenna connectors: 50 Ohm TNC, +5 VDC (120 mA) to power LNA
- Two high speed RS232 serial ports (up to 460.8 Kbps)
- Two high speed RS232/422 serial port (up to 460.8 Kbps)
- High speed USB 2.0 device port (480 Mbps)
- Full-duplex 10BASE-T/100BASE-TX Ethernet port
- Two CAN 2.0 A/B ports
- IRIG timecode output
- Two 1 PPS outputs synchronized to GPS, GLONASS or UTC
- Two Event Marker inputs
- Two LEDs, two function keys (TriPad)

Power Specification

- External power input
- Power consumption: 7.2 Watt
- Input voltage: +6 to +35 Volts

Environmental

- Operating Temperature: -40°C to +70°C
- Storage Temperature: -45°C to +85°C
- Humidity: 95%
- High shock and vibration resistance

Physical

- Dimensions: 4.3x1.4x5.6/max 6.3 inches (109x35x141/ max 160 mm) with connectors
- Weight: 0.92 lbs (0.42 kg)

Specifications are subject to change without notice

