GNSS RECEIVER

DeltaQM

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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.

Main Characteristics*

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

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 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

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
- 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

* For the full list of standard and optional features see www.javad.com
** US WAAS, European EGNOS, Russian SDCM, Indian GAGAN, Japanese MSAS, and similar future satellite systems
*** For good observation conditions and proper length of observation session

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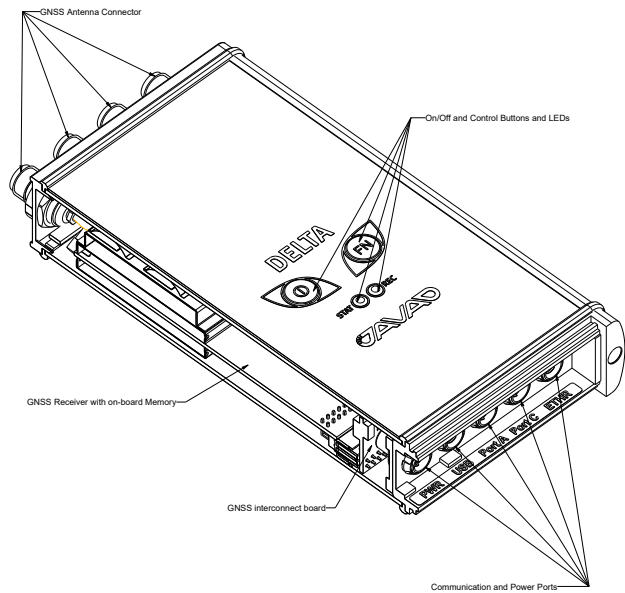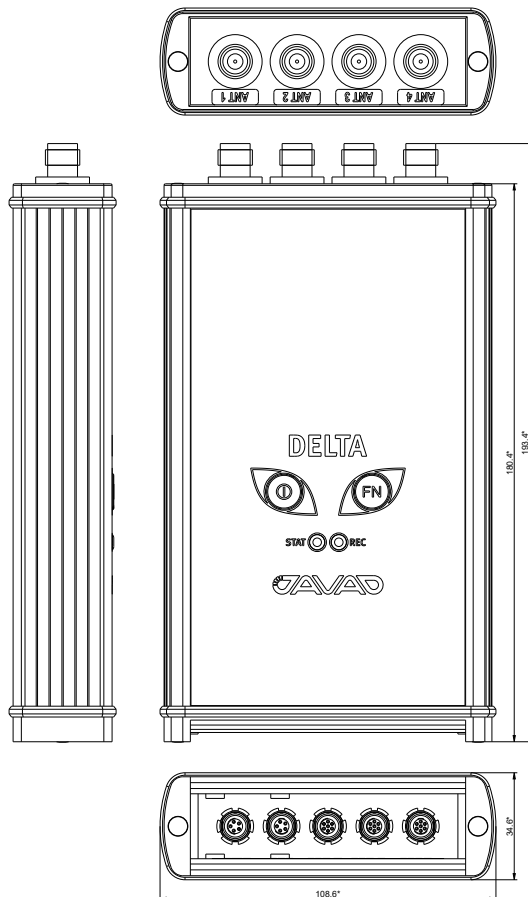- Power consumption: 7.2 Watt
- Input voltage: +6 to +35 Volts

ENVIRONMENTAL

- Temperature:
    Operating: -40 °F to +158 °F (-40 °C to +70 °C)
    Storage: -49 °F to +185 °F(-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)

Dimensions

GNSS Antenna Connector

On/Off and Control Buttons and LEDs

GNSS Receiver with on-board Memory

GNSS interconnect board

Communication and Power Ports

193.4*
180.4*
34.6*
108.6*

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. THIRD ANGLE PROJECTION
3. * REFERENCES DIMENSION.
4. SCALE 1.000

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EASY MANAGEMENT WITH NETVIEW&MODEM

NetView&Modem is a free application allowing the user to easily control JAVAD GNSS TRIUMPH-3 receivers, i.e. allowing efficiently managing receiver parameters and commands via a user friendly graphical interface.