



GNSS RECEIVER

DELTA-3L



874 GNSS channels of this receiver allow tracking all current and future satellite signals. The DELTA-3L receiver is the only all-in-view receiver in the market that can track and decode the QZSS L6 (both L61 and L62) signal messages. We offer highly stable digital filters (band characteristics do not change with age, input voltages, or temperature), improved GLONASS inter-channel bias performance (due to our flat digital filter shape), excellent new multipath rejection technique, the best ever. The embedded calibrator measures phase and code delays of each signal of each band. External calibration is not required.

DELTA-3L 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-3L 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-3L

TRACKING FEATURES

GPS C/A, L1C(P+D) including TMBOC(6,1,4/33) , P1, P2, L2C(L+M), L5(I+Q)

GLONASS C/A, P1, P2, L2C, L3(I+Q)

Gallileo E1(B+C) including CBOC(6,1,1/11), E5A(I+Q), E5B(I+Q), AltBoc, E6(B+C)

QZSS C/A, L1C(P+D) including TMBOC(6,1,4/33) , L2C(L+M), L5(I+Q), L6(L61/L62), L1S, L1Sb, L5S

BeiDou B1, B1C(P+D) including TMBOC(6,1,4/33) , B2B(I+Q), B2, B2A(I+Q), AltBoc, B3

L-band: 1525-1560 MHz

SBAS* L1, L5(P+D)

IRNSS L5

In-Band Interference Rejection

Spoofing detection

Advanced Multipath Reduction

Fast acquisition channels

High accuracy velocity measurement

PERFORMANCE SPECIFICATIONS

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

Real-time heading accuracy:

$0.004/L$ [rad] RMS, where L is the antenna separation in [m]

Cold/Warm Start/ Reacquisition

< 35 seconds / < 5 seconds / < 1 second

* 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

DATA STORAGE

Up to 12 GB of onboard non-removable memory for data storage

INPUT/OUTPUT

Two high speed RS232 serial ports (up to 460.8 Kbps) 7 pin ODU

High speed configurable RS232/RS422 serial port (up to 460.8 Kbps) 7 pin ODU

High speed configurable RS232/RS422 serial port (up to 460.8 Kbps) M12, 8 pin

High speed USB 2.0 dual-role port (device or host), 5 pin ODU

Full-duplex 10BASE-T/100BASE-TX Ethernet port, 7 pin ODU

CAN 2.0 M12, 8 pin

IRIG timecode output A134, A137, B124, B137

Two 1 PPS outputs, BNC

Synchronized to UTC or any selected satellite system time.

Voltage level: $V_{oh} > 1.8V$ at 50 Ohm load

Output Impedance: 25 to 30 Ohm (typ)

Two Event Marker inputs, BNC

External Reference Frequency Input/Output, BNC

The central pin of the RF antenna connector outputs +5 VDC to power LNA. The sourced current is 0.12A max.

Serial port (M12) bus power, +12 V DC, 250 mA max

Two LEDs, two function keys (TriPad)

POWER SPECIFICATION

External power input, 5 pin ODU

Power consumption: 6.5 Watt

Input voltage: +4.5 to +40 Volts

PHYSICAL & ENVIRONMENTAL

RF antenna connector: TNC or SMA (optional)

Operating Temperature: $-40^{\circ}C$ to $+75^{\circ}C$ ($-40^{\circ}F$ to $167^{\circ}F$)

Storage Temperature: $-40^{\circ}C$ to $+85^{\circ}C$ ($-40^{\circ}F$ to $185^{\circ}F$)

Enclosure: aluminum extrusion, waterproof IP 66

Humidity: 95%

Shock complies with MIL-STD- 810H (method 514.8)

Vibration complies with MIL-STD- 810H (method 516.8)

Dimensions: 4.3x1.4x5.6/max 6.3 inches (109x35x141/ max 160 mm) with connectors

Weight: 0.92 lbs (0.42 kg)

WARRANTY

Extended 3-year warranty

DELTA-3L

DATA FEATURES

Up to 100 Hz update rate for real time position and raw data (code and carrier)

10 cm code phase and 1 mm carrier phase precision

IEEE 1588 protocol support

Hardware Viterbi decoder

Hardware Reed-Solomon and LDPC decoders

RTCM SC104 versions 2.x and 3.x Input/Output

NMEA 0183 versions 2.x and 3.0 Output

Spectrum data output

In-built netBrowser

RINEX / BINEX data output

Code Differential Rover/Base

Geoid and Magnetic Variation models

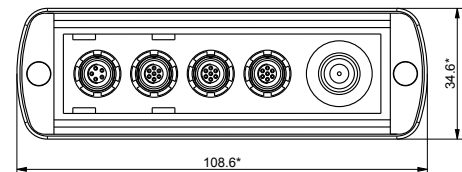
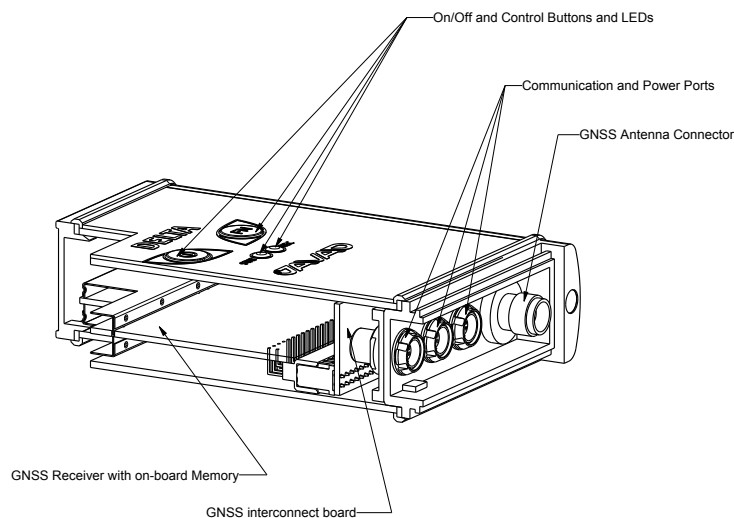
RAIM

Different DATUMs support

Output of grid coordinates

EASY MANAGEMENT WITH NETVIEW&MODEM

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



*all dimensions are in mm



900 Rock Avenue
San Jose
CA 95131, USA

+1(408)770-1770
sales@javad.com
www.javad.com