ALPHA-3N

GPS L1/L2/L2C/L5, Galileo E1/E5A/E5B/AltBoc
GLONASS L1/L2/L3, BeiDou B1/B2,
QZSS L1/L2/L5, IRNSS L5, SBAS L1/L5

864 GNSS channels of this receiver allow tracking all current and future satellite signals. The on-board power supply on ALPHA-3N receiver accepts any voltage from +7 to +40 volts and delivers clean filtered voltage where needed. This eliminates the risk of power contamination (ripples) that can be created when clean power is generated elsewhere and delivered to the board via cables. ALPHA-3N receiver also includes user interface TriPad, GSM module, Bluetooth® wireless technology.

In addition to timing strobe and event marker, the ALPHA-3N receiver includes the option of complete IRIG timing system

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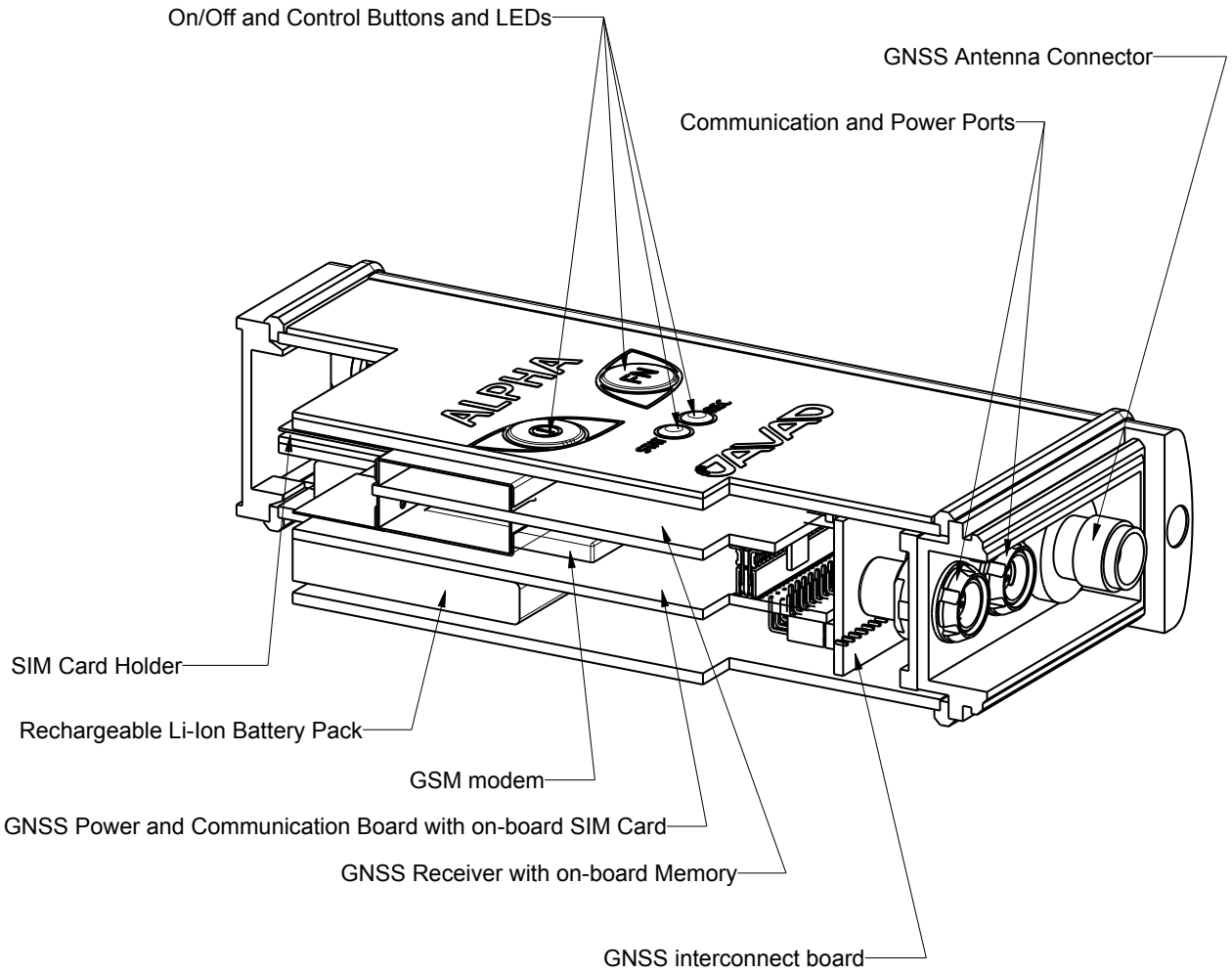
On/Off and Control Buttons and LEDs
GNSS Antenna Connector
Communication and Power Ports
SIM Card Holder
Rechargeable Li-Ion Battery Pack
GSM modem
GNSS Power and Communication Board with on-board SIM Card
GNSS Receiver with on-board Memory
GNSS interconnect board

Tracking Features*

- Total 864 channels: all-in-view
- GPS: C/A, L1C (P+D), P1, P2, L2C (L+M), L5(I+Q)
- GLONASS: C/A, L2C, P1, P2, L3 (I+Q)
- Galileo: E1 (B+C), E5A (I+Q), E5B (I+Q), AltBoc
- BeiDou: B1, B1-2, B1C(P+D), B5A (I+Q), B2, B5B (I+Q)
- QZSS: C/A, L1C (P+D), L2C (L+M), L5 (I+Q), SAIF
- SBAS:** L1, L5
- IRNSS L5
- Advanced Multipath Reduction
- Fast acquisition channels
- High accuracy velocity measurement

Performance Specifications

- 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
- 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

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
- Hardware Viterbi decoder
- RTCM SC104 versions 2.x and 3.x Input/Output
- NMEA 0183 versions 2.x and 3.0 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

- Serial port RS232 up to 460.8 kbps
- Serial port RS-232/RS-422 up to 460.8 kbps
- Built-in USB to RS232 FTDI converter. 12Mbps USB 2.0 Full-Speed. Up to 1.5Mbps RS232 speed
- Bluetooth V2.0+EDR Class 2 supporting SPP Slave Profile
- 1 PPS synchronized
- IRIG
- Two LEDs, two function keys (TriPad)

Radio Specifications

- GSM/GPRS Module Internal GSM/GPRS quad-band module, GPRS Class 10
- GSM/GPRS Antenna External

Power

- One internal Li-Ion battery (7.4 V, 1.48 Ah) with internal charger
- Operation Time up to 6 hours
- External power input +7 to +40 volts

Environmental and Physical

- Enclosure: Aluminum extrusion, waterproof IP 66
- Operating Temperature: -40°C to +80°C****
- Storage Temperature: -45°C to +85°C*****
- Humidity 95% non-condensing
- High shock and vibration resistance
- Dimensions: 5.83 x 3.35 x 1.38 inches (148 x 85 x 35 mm)
- Weight: 0.99 lbs (448 g)

* 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
*** The operating temperature range of Li-Ion batteries is -30 ° C to +55° ° C
****The storage temperature of Li-Ion batteries is -20 ° C to +45° C

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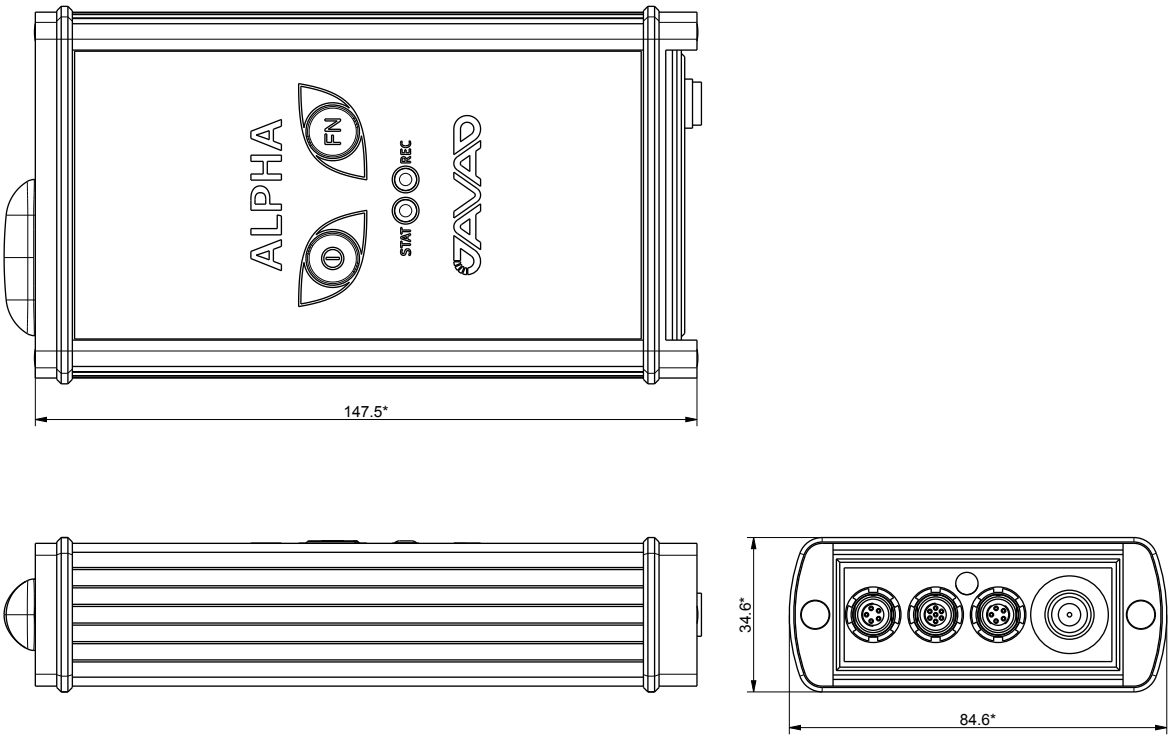

All dimensions are in mm

Specifications are subject to change without notice