



ALPHA2

FOR TR-G2, TR-G3, TR-G2T, TR-G3T



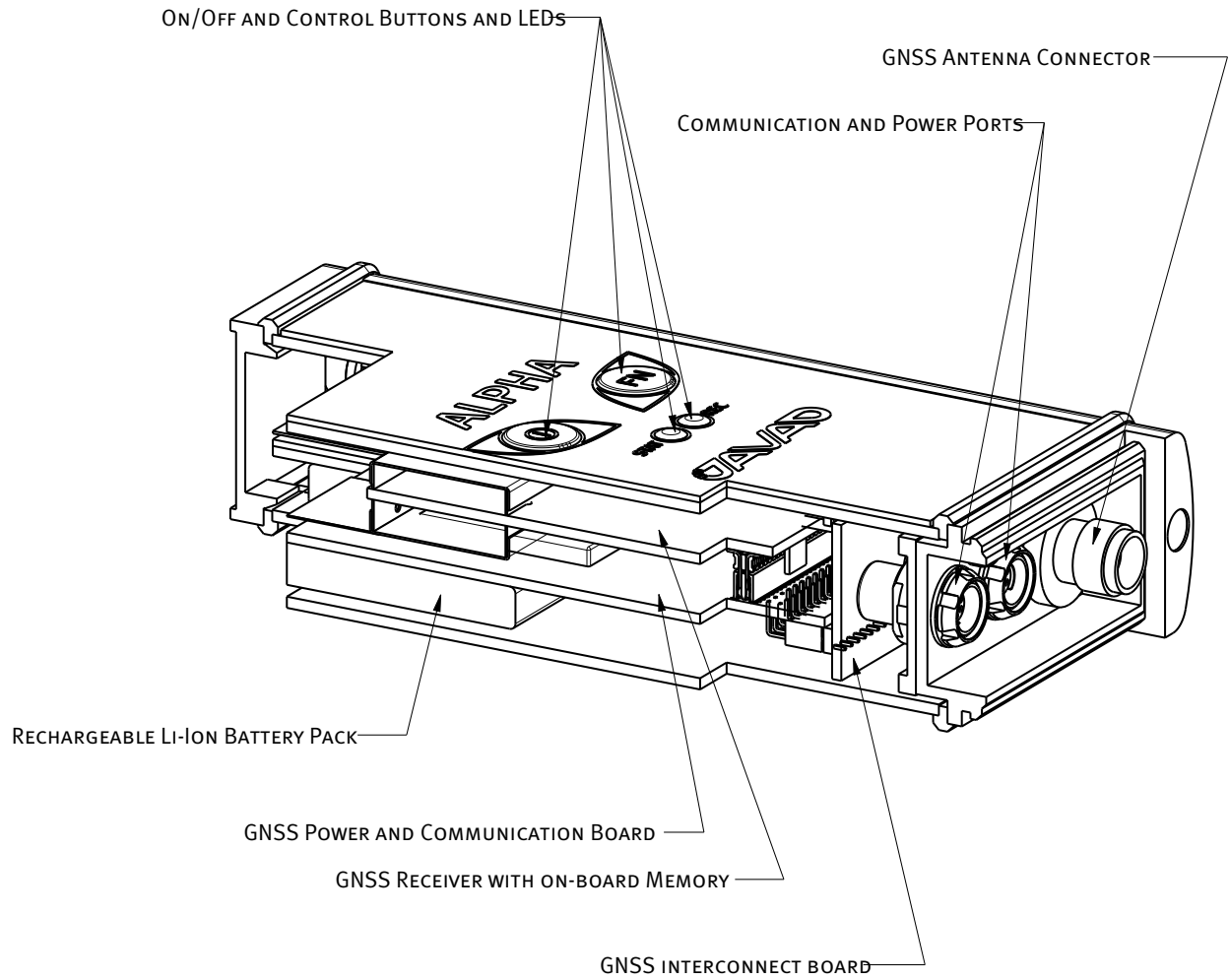
ALPHA2 receiver is based on our TRIUMPH Technology implemented in our TRIUMPH Chip.

216 channels of single or dual frequency GPS, Galileo and GLONASS in a small attractive, sturdy, and watertight box, which contains either TR-G2, TR-G3, TR-G2T or TR-G3T board.

The on-board power supply on ALPHA2 receiver accepts any voltage from +5.5 to +40 volts and delivers cleanly 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. ALPHA2 receiver also includes TriPad (two LEDs, ON/OFF and function button) except G2 version, Bluetooth® wireless technology. Also, the receiver comes with a large amount of flash for data storage. Simply stated, additional functions are not needed to incorporate any of our ALPHA2 in most applications.

In addition to timing strobe and event marker, the ALPHA2 receiver includes the option of complete IRIG timing system.

ALPHA2



Tracking Features*

- Total 216 channels: all-in-view
- ALPHA2-G2
GPS L1, Galileo E1, SBAS
- ALPHA2-G3
GPS L1, GLONASS L1, Galileo E1, BeiDou B1, SBAS
- ALPHA2-G2T
GPS L1/L2/L5, Galileo E1/E5A, BeiDou B1, SBAS
- ALPHA2-G3T
GPS L1/L2/L5, Galileo E1/E5A, GLONASS L1/L2, BeiDou B1, SBAS 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: $0.5 \text{ cm} + 0.5 \text{ ppm} * \text{base_line_length}$
- Kinematic Accuracy:
Horizontal: $1 \text{ cm} + 1 \text{ ppm} * \text{base_line_length}$
Vertical: $1.5 \text{ cm} + 1.5 \text{ ppm} * \text{base_line_length}$
- RTK (OTF) Accuracy:
Horizontal: $1 \text{ cm} + 1 \text{ ppm} * \text{base_line_length}$
Vertical: $1.5 \text{ cm} + 1.5 \text{ ppm} * \text{base_line_length}$
- 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 100 Hz update rate for real time position and raw data (code and carrier)
- Up to 100 Hz update rate for RTK
- 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 256 MB of on-board 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 V1.1 Class 2 supporting SPP Slave Profile
- 1 PPS synchronized. 1PPS signal amplitude:
 - at Low Level and 50 Ohm load: 3.3V typ
 - at Low Level and no load: 4V max
 - at High Level and 50 Ohm load: 5V typ
 - at High Level and no load: 5.7V max
- Event Marker
- IRIG
- Two LEDs, two function keys (TriPad)

Power Specification

- External power input +5.5 to +40 volts

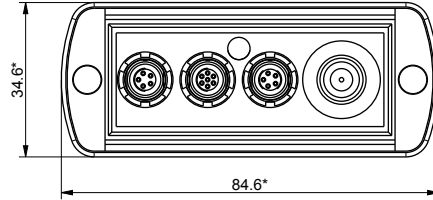
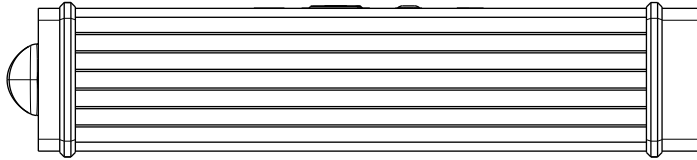
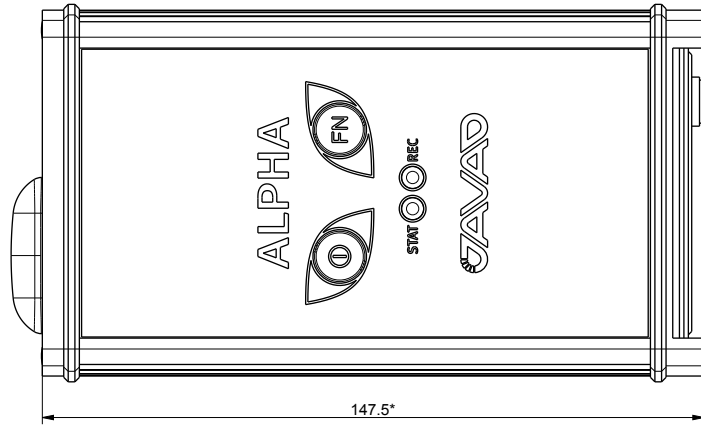
Environmental and Physical

- 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 in (148 x 85 x 35 mm)
- Weight:
 - Alpha2-G2: 0.78 lbs (0.340 kg)
 - Alpha2-G3: 0.75 lbs (0.355 kg)
 - Alpha2-G2T: 0.75 lbs (0.355 kg)
 - Alpha2-G3T: 0.82 lbs (0.370 kg)

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

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

ALPHA2



All dimensions are in mm

Specifications are subject to change without notice



JAVAD GNSS
www.javad.com
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