



ALPHA

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

ALPHA receiver is based on our TRIUMPH Technology implemented in our TRIUMPH Chip. For the first time in the GNSS history we offer up to 100 Hz RTK.

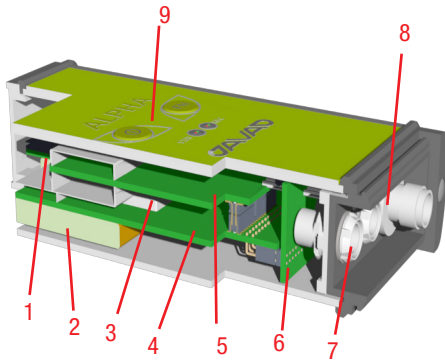
216 channels of single or dual frequency GPS, Galileo and GLONASS in a small attractive, sturdy, and watertight box, which contains either TR-G3, TR-G2T or TR-G3T board.

The on-board power supply on ALPHA 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 receiver also includes TriPad (two LEDs, ON/OFF and function button), GSM module, Bluetooth® wireless technology and battery. In addition, the receiver comes with large amount of flash for data storage. Simply stated, additional functions are not needed to incorporate any of our ALPHA in most applications.

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

Main Features*

- GPS L1/L2/L2C/L5
- GLONASS L1/L2 (G3 and G3T only)
- Galileo E1/E5A
- BeiDou B1
- QZSS L1/L2/L5
- Update Rate 1 Hz, 5Hz, 10Hz, 20Hz, 50Hz, 100Hz
- RTK Rate 1 Hz, 5Hz, 10Hz, 20Hz, 50Hz, 100Hz
- Data Recording up to 256MB
- RAIM
- TriPad Interface
- Multi-Base Code Differential Rover
- Code Differential Base
- Advanced Multipath Reduction
- Event Marker
- 1 PPS timing strobe
- RS232 Serial Port (460.8 kbps)
- 1 high Speed (460.8 kbps) RS232 Serial Port
- USB port (12Mbps)
- Internal GSM/GPRS Module
- Bluetooth® Interface
- KFK WAAS/EGNOS (SBAS)
- Rechargeable Li-Ion Battery
- External GNSS Antenna TNC Female connector



1. SIM Card Holder
2. Rechargeable Li-Ion Battery Pack
3. GSM Modem
4. GNSS Power and Communication Board with on-board SIM-card
5. GNSS Receiver with on-board Memory
6. GNSS Interconnect Board
7. Communication and Power Ports
8. External GNSS Antenna Connector
9. On/Off and Functional Buttons and LEDs

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

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

Description	Total 216 channels: all-in-view (GPS L1/L2/L5, Galileo E1/E5A, GLONASS L1/L2, BeiDou B1, QZSS L1/L2/L5 SBAS)
Tracking Specification	
ALPHA-G3	GPS C/A, P1; GLONASS L1; Galileo E1 (B+C); BeiDou B1; QZSS C/A, L1C(I+Q), SAIF; SBAS
ALPHA-G2T	GPS C/A, P1, P2, L2C (L+M), L5 (I+Q); Galileo E1 (B+C), E5A (I+Q), BeiDou B1, QZSS C/A, L1C(I+Q), L2C (L+M), L5 (I+Q), SAIF; SBAS
ALPHA-G3T	GPS C/A, P1, P2, L2C (L+M), L5 (I+Q), Galileo E1 (B+C), E5A (I+Q); GLONASS L1/L2; BeiDou B1; QZSS C/A, L1C(I+Q), L2C (L+M), L5 (I+Q), SAIF; SBAS
Performance Specifications	
Autonomous	<2 m
Static, Fast Static Accuracy	Horizontal: 0.3 cm + 0.5 ppm * base_line_length** Vertical: 0.5 cm + 0.5 ppm * base_line_length
Kinematic Accuracy	Horizontal: 1 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1.5 ppm * base_line_length
RTK (OTF) Accuracy	Horizontal: 1 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1.5 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
Power Specification	
Battery	One internal Li-Ion battery (7.2 V, 1.37 Ah) with internal charger
Operation Time	up to 8 hours
External Power Input	+7 to +40 Volts
I/O	
GNSS Antenna Connector	50 Ohm TNC, +5 VDC (100 mA) to power LNA.
Communication Ports	1x serial (RS232) 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
Other I/O Signals	1 PPS synchronized; Event Marker; IRIG
Status Indicator	Two LEDs, two function keys (TriPad)
Memory & Recording	
Internal Memory	Up to 256 MB of on-board non-removable memory for data storage
Raw Data Recording	Up to 100 times per second (100Hz)
Real Time Data	
Input/Output	JPS, RTCM SC104 v. 2.x and 3.x, CMR
Output	NMEA 0183 v. 2.x and 3.0, BINEX
Environmental Specifications	
Enclosure	Aluminum extrusion, waterproof IP66
Operating /Storage Temperature	-40° C to +80° C / -45° C to +85° C
Humidity	95% non-condensing
Dimensions	5.83 x 3.35 x 1.38 in (148 x 85 x 35 mm)
Weight	
Alpha-G3	0.95 lbs (0.430 kg)
Alpha-G2T	0.96 lbs (0.435 kg)
Alpha-G3T	0.99 lbs (0.448 kg)

Specifications are subject to change without notice

