



GNSS RECEIVER

TRIUMPH-OMEGA



OMEGA is the most advanced GNSS receiver. It does not include integrated antenna and controller. It is suited for applications like machine control and in marine and avionics applications. Adding GrAnt and any controller with JAVAD MOBILE TOOLS makes a complete RTK systems.

OMEGA

GNSS RECEIVER

Total 864 channels: all-in-view (integrated receiver, rugged magnesium housing)	
Signals Tracked	GPS C/A, L1C(P+D), P1, P2, L2C(L+M), L5(I+Q) GLONASS C/A, P1, P2, L2C, L3(I+Q) Gallileo E1(B+C), E5A(I+Q), E5B(I+Q), AltBoc, E6(B+C) QZSS C/A, L1C(P+D), L2C(L+M), L5(I+Q), SAIF, LEX(P+D) BeiDou B1, B1-2, B1C(P+D), B5A(I+Q), B2, B5B(I+Q), B3 SBAS L1, L5 IRNSS L5
Autonomous Accuracy (rms)	<2 m
Static, Fast Static Accuracy (rms)	Horizontal: 0.3 cm + 0.1 ppm * base_line_length** Vertical: 0.35 cm + 0.4 ppm * base_line_length
Kinematic Accuracy (rms)	Horizontal: 1 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1 ppm * base_line_length
RTK (OTF) Accuracy (rms)	Horizontal: 1 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1 ppm * base_line_length
DGPS Accuracy (rms)	< 0.25 m (post-processing) < 0.5 m (real-time)
Cold Start	<35 seconds
Warm Start	<5 seconds
Reacquisition	<1 second

ENVIRONMENTAL

Enclosure	Molded magnesium alloy, IP67
Color	Gray
Operating Temperature***	-40° C to +60° C
Storage Temperature***	-20° C to +45° C
Humidity	100% condensing
Dimensions	4.91 x 6.69 x 1.77 inches (125 x 170 x 45 mm) without radio 4.91 x 6.69 x 2.56 inches (125 x 170 x 65 mm) with radio
Weight	2.2 lbs (1 kg) without radio 2.87 lbs (1.3 kg) with radio
Shock	Survives a 2 m drop onto hard surface

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

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

***Li-Ion batteries are the temperature limiting factor

RADIO

4G LTE Mini Card	LTE, HSPA+, HSDPA, HSUPA, WCDMA, GSM, GPRS, EDGE (up to 100 Mbps) LTE, EV-DO, 1xRTT CDMA (up to 100 Mbps)
MicroSIM card slot	One; user accessible, fully sealed
Radio Modem	Internal 406-470MHz UHF radio Internal 902-928/ 868-870 MHz ISM radio (optional)
Base Power Output	1 Watt

I/O

Communication Ports	Wi-Fi 5 GHz and 2.4GHz (802.11 a, b, g, n, d, e, i) Bluetooth 4.1 Compliance and CSA2 Support Dual-mode Bluetooth and Bluetooth LE Full-duplex 10BASE-T/100Base-TX Ethernet port High Speed USB 2.0 Host (480 Mbps) High Speed USB 2.0 Device (480 Mbps) One high speed RS-422 serial port (up to 460.8 Kbps) Two high speed configurable RS-232/RS-422 serial ports (up to 460.8 Kbps) One CAN 2.0 A/B port
Other I/O Signals	1PPS Output Event Marker Input External Reference Frequency Input/Output External Calibrator External GNSS antenna External cellular antenna External radio antenna

USER INTERFACE

SD card slot	High Capacity microSD Card (microSDHC) up to 128GB Class 10; user accessible, fully sealed
LED Indication	On/OFF, Battery status, External power, Cellular, Bluetooth, Wi-Fi, Radio, Ethernet, Satellites, Position, Recording statuses
Buttons	On/Off button; Bluetooth On/Off; Wi-Fi On/Off; Recording On/Off

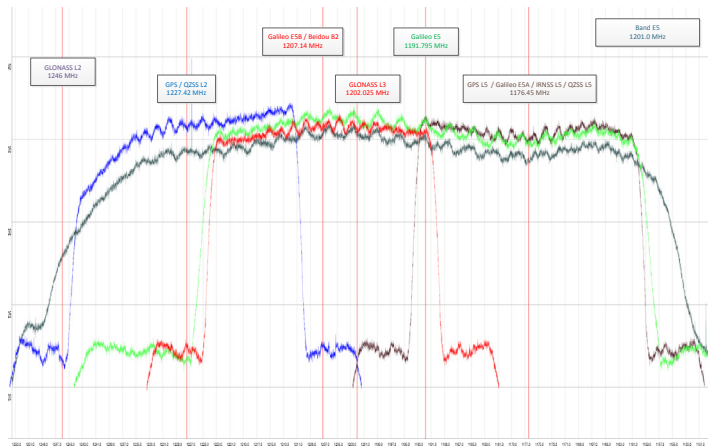
POWER MANAGEMENT

Battery	Rechargeable, Lightweight Li-Ion battery 42.5 Wh (nom.)
Operation Time	12 hours on one charge
External Power Input	10-30 V DC
Charging	Power management notifies user when battery needs charging and protects battery from overcharging

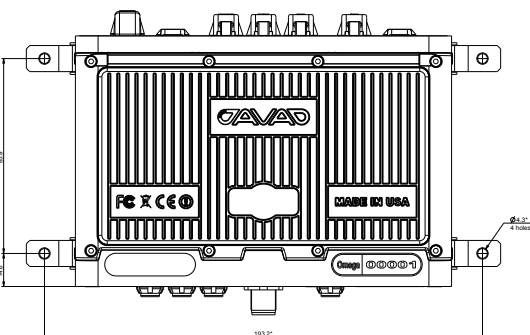
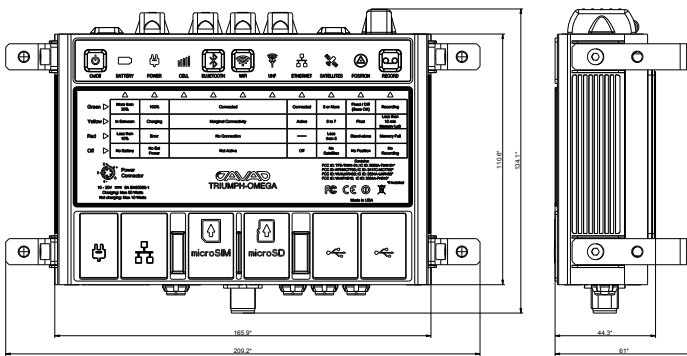
OMEGA

INTERFERENCE MONITORING AND REPORTING

The OMEGA has the best available interference protection. It is the only receiver that monitors and reports interference graphically and numerically. Over 100 channels are dedicated to continuous interference monitoring.



E5 wide band spectrum and individual signal spectrums after digital filtering.



Top view



Bottom view. Connectors



900 Rock Avenue
San Jose
CA 95131, USA

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

Illustrations, descriptions and technical specifications are not binding and may change.