



GNSS RECEIVER

TRIUMPH-1M



The new TRIUMPH-1M receiver inherits the best features of our famous TRIUMPH-1. Based on our new 864 channel chip, equipped with the internal 4G/LTE/3G card, easy accessible microSD and microSIM cards, includes “Lift & Tilt” technology.

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GNSS RECEIVER

Total 864 channels: all-in-view	
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) Galileo E1(B+C), E5A(I+Q), E5B(I+Q), AltBoc QZSS C/A, L1C(P+D), L1S, L2C(L+M), L5(I+Q) BeiDou B1, B1C(P+D), B5A(I+Q), B2, B5B(I+Q) SBAS L1, L5 IRNSS L5
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: 0.8 cm + 1 ppm * base_line_length Vertical: 1.5 cm + 1 ppm * base_line_length
RTK V6+ Accuracy (rms)	Horizontal: 0.4 cm + 1 ppm * base_line_length Vertical: 0.7 cm + 1.5 ppm * base_line_length
DGPS Accuracy	< 0.25 m post processing; < 0.5 m real-time
Cold start	<35 seconds
Warm start	<5 seconds
Reacquisition	<1 second

INTERNAL GNSS ANTENNA

GNSS Antenna Type	Integrated Microstrip (Zero Centered)
Ground Plane	Antenna on a flat ground plane

ENVIRONMENTAL

Enclosure	Molded magnesium alloy and plastic, waterproof IP67
Color	JAVAD GNSS Green
Operating /Storage Temperature***	-40° C to +65° / -45° C to +85° C ***
Humidity	100% condensing
Dimensions	7 x 3.78 x 7 in (178 x 96 x 178 mm)
Weight	3.75 lbs (1.7 kg)/4.02 lbs (1.82 kg) with modem antenna
Accidental fall	Survives a 2 m drop onto a hard surface
Shock	Complies with MIL-STD- 810H (Method 514.8)
Vibration	Complies with MIL-STD- 810H (Method 516.8)

* 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

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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	Up to 2(optionally) 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

Data storage	16 GB
Input/Output	JPS, RTCM SC104 v. 2.x and 3.x, CMR
Output	NMEA 0183 v. 2.x and 3.0, BINEX
Status Indicator	Six LEDs, two function keys (MinPad)

USER INTERFACE

Card Slots	High Capacity microSD Card (microSDHC) up to 128GB Class 10; Up to 2 microSIM; 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

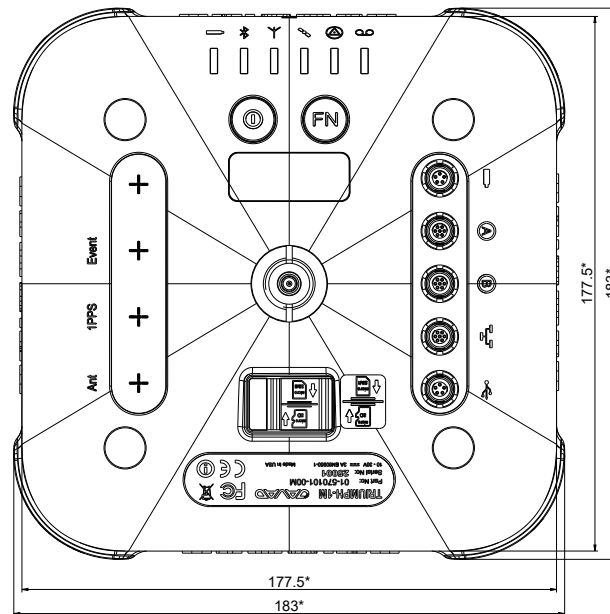
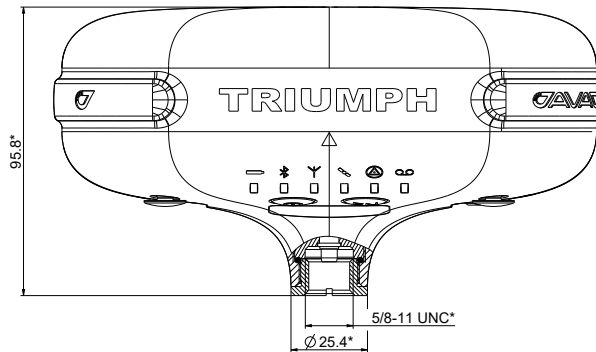
POWER MANAGEMENT

Battery	Two internal Li-Ion batteries (7.2 V, 5.9 Ah each) with internal charger
Operation Time	Up to 18 hours
Input Voltage	+10 to +30 volts

TECHNOLOGIES

In-Band Interference Rejection
Spoofing Detection
GLONASS .2mm Dynamic Calibration
Heading Determination
Javad Mobile Tools authorization
Spectrum Data Output
J-Shield
J-Shield+

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All dimensions are in mm



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