



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.

# TRIUMPH-1M

## GNSS RECEIVER

Total 864 channels: all-in-view	
Signals Tracked	GPS C/A, P1, P2, L1C (P+D), L2C (L+M), L5 (I+Q); Galileo E1 (B+C), E5A (I+Q), E5B (I+Q), AltBoc; GLONASS C/A, L2C, P1, P2, L3 (I+Q); QZSS C/A, L1C(I+Q), L2C (L+M), L5 (I+Q), SAIF; Beidou B1, B2; 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
Shock	Survives a 2 m drop onto hard surface
Vibration	In process of obtaining MIL STD 810G & 810F Certification

\* For the full list of standard and optional features see [www.javad.com](http://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	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

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)

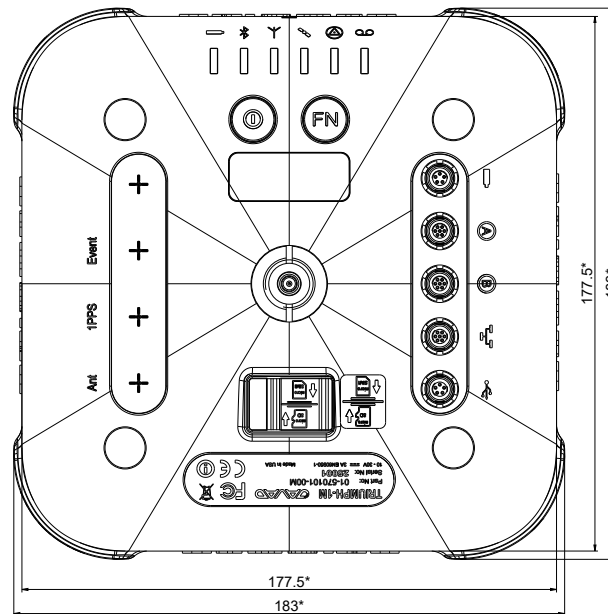
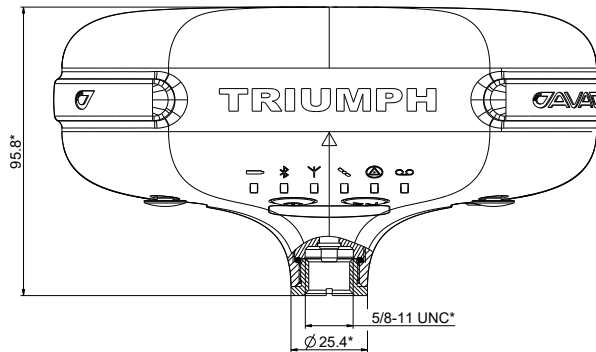
## USER INTERFACE

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	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

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All dimensions are in mm



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