



JANAK
Inside Technology of JAVAD

TRIUMPH-1M Plus

GNSS Smart Antenna



Key Features

- GNSS & MEMS IMU
- 4G Cellular Modem
- UHF Radio
- Pole-secured UHF/Cellular Antenna
- Bluetooth & Wi-Fi
- 18 Hour Battery Life

TRIUMPH-1M Plus is a precision GNSS Smart Antenna featuring integrated wireless communications and a MEMS IMU to deliver Tilt Compensated RTK. With a full-band UHF radio and a 4G cell modem, users have Base/Rover or network RTK on demand. The JAVAD patented in-pole UHF & cellular antenna ensures exceptional reliability.

TRIUMPH-1M Plus Specifications



Tracking	Total Channels	874	
	GPS	L1 C/A, L1C, P1, P2, L2C, L5	
	GLONASS	L1 C/A, P1, P2, L2 C/A, L3	
	Galileo	E1, E5, E5A, E5B, E6	
	BeiDou	B1, B1C, B2B, B2, B2A, B3	
	QZSS	L1C C/A, L1C, L2C, L5, L6, L1S, L1Sb, L5S	
	SBAS	L1, L5	
	NavIC	L1, L5	
	L-Band	1525-1560 MHz	
Performance		Horizontal (m)	Vertical (m)
	Autonomous (Stand alone)	1.000	1.500
	SBAS	0.500	0.850
	DGPS	0.250	0.500
	JStar (PPP)	0.025	0.050
	RTK	0.008 + 1 ppm	0.015 + 1 ppm
	Network RTK	0.008 + 0.5 ppm	0.015 + 0.5 ppm
	Static / Fast Static	0.003 + 0.1 ppm	0.004 + 0.4 ppm
	Tilt-Compensated RTK	RTK + 5 mm + 0.5 mm / ° tilt, up to 30°	
Time to First Fix	Cold Start	< 35 s	
	Warm Start	< 5 s	
	Reacquisition	< 1 s	
	RTK Initialization	2 - 6 s	
Output Rate	Position / Heading	up to 100 Hz	
	Measurements	up to 100 Hz	
Wireless I/O	Bluetooth	v5.1 Class 2	
	Wi-Fi	802.11 ac/a/b/g/n, 2.4 & 5 GHz	
	UHF	406 - 470 MHz; up to 2W power	
	Cellular	LTE / DC-HSPA+ / HSPA+ / HSPA / UMTS (WCDMA); Class 10 microSIM	
Wired I/O	USB	USB 2.0 High Speed, Type C	
Storage	Internal Memory	64 GB	
Status/Interface	LEDs	Battery Status / External power, Bluetooth/Wi-Fi, Cellular / Radio, Satellites, Position Mode, Recording Status	
	Buttons	Power, Function	
Power	Connector	5-pin ODU	
	Input Voltage	+10 to +30 VDC	
	Battery	2 x Li-Ion batteries (7.2 V, 5.9 Ah)	
	Operation Time	Up to 18 hours	
Physical	Dimensions	178 x 96 x 178 mm (7 x 3.78 x 7 in)	
	Weight	1.7 kg (3.75 lbs) / 1.82 kg (4.02 lbs)	
Environmental	Operating Temperature	-40°C to +65° C	
	Storage Temperature	-45°C to +85°C	
	Humidity	100% Condensing	
	Shock & Vibration	MIL-STD-810H; Survives 2m drop	
	Ingress Protection	IP68	

*Refer to the user manual for full specifications.

GNSS performance is dependent on signal quality, satellite geometry, ionospheric and tropospheric conditions, baseline length, multipath effects and RF interference. Specifications may be changed without notice.