



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 (P+D), TMBOC, P1, P2, L2C (L+M), L5 (I+Q)	
	GLONASS	L1 C/A, P1, P2, L2C, L3 (I+Q)	
	Galileo	E1 (B+C), CBOC, E5A (I+Q), E5B (I+Q), AltBoc, E6 (B+C)	
	BeiDou	B1, B1C (P+D), TMBOC, B2B(I+Q) B2, B2A(I+Q), AltBoc, B3	
	QZSS	L1C C/A, L1C (P+D), TMBOC, L2C (L+M), L5 (I+Q), L6 (L61, L62), L1S, L1Sb, L5S	
	SBAS	L1, L5 (P+D)	
	NavIC	L1, L5, S-Band	
	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
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	
	Removable SD Slot	Up to 128 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	
	Ingress Protection	IP68	

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.