



TRE-DUO-IMU

OEM GNSS Receiver



Key Features

- All GNSS Constellations
- NTRIP Caster / Server
- GNSS Heading & IMU Roll / Pitch
- Spoofing & Jamming Detection
- Ethernet, USB, Serial
- CAN & Event
- 1PPS & IRIG
- Advanced Multipath Mitigation

TRE-DUO-IMU is an all-constellation OEM GNSS receiver with dual-antenna GNSS Heading and an integrated MEMS IMU for roll and pitch.

This GNSS + IMU combination provides RTK performance with 3D attitude for multiple applications. A 64-pin connector allows easy access to all ports and data for integrators to quickly provide time, position, and attitude.

TRE-DUO-IMU 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, S	
	L-Band	1525-1560 Mhz	
Performance		Horizontal (m)	Vertical (m)
	Standalone	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
	Heading	< 0.09 deg (2m baseline)	
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, Heading up to 50 Hz	
	Measurements	Up to 100 Hz	
Network	NTRIP Caster	Up to 256 NTRIP Clients	
	TCP / TCPO / UDP Server	5 / 256 / Unlimited Clients	
	NTRIP / TCP Client	2 / 2 Connections	
	NTRIP Server	2 NTRIP Caster Connections	
	HTTP(S) Server	1 Client	
	FTP Server / Push / SFTP	1 Client / 1 / 1 Connection	
Wired I/O	Main Connector	64-pin DIN41612 type B, Right Angle	
	GNSS Antenna	2 x MMCX, +5 VDC Ports (0.2A max)	
	Serial	2 x RS232 up to 460.8 kbps 2 x RS232/RS422 up to 460.8 kbps	
	USB	2 x USB 2.0 (480 Mbps) Dual-Role Port	
	CAN	2 x CAN 2.0	
	Event Marker	2 x Event Marker	
	1PPS	2 x 1PPS	
Storage	Internal Memory	Up to 64 GB	
Status/Interface	Keys	Power ON/OFF, External Command Inputs (Function)	
	LEDs	4 x External LED Drivers	

1. Using dual-antenna GNSS & IMU. Inertial roll & pitch measurements are dependent on GNSS RTK performance.

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.

TRE-DUO-IMU Specifications



Power	Input	+4.5 to +40 VDC
	Power Consumption	4 W typical
Physical	Dimensions	100 x 120 x 13 mm
	Weight	70 g
Environmental	Operating Temperature	-40°C to +80° C
	Storage Temperature	-40°C to +85°C
	Humidity	MIL-STD- 810D (method 507.2)
	Shock & Vibration	MIL-STD-810H (methods 514.8 & 516.8)

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