

# 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 Rejection

The 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



<b>Number of Channels</b>	874	
<b>GNSS Constellations</b>	GPS	L1 C/A, L1C (P+D), P1, P2, L2C (L+M), L5 (I+Q)
	GLONASS	L1 C/A, P1, P2, L2C, L3 (I+Q)
	GALILEO	E1 (B+C), E5A (I+Q), E5B (I+Q), AltBoc, E6 (B+C)
	BeiDou	B1, B1-2, B1C (P+D), B5A (I+Q), B2, B5B (I+Q), B3
	QZSS	L1 C/A, L1C(P+D), TMSBOC, L2C(L+M), L5(I+Q), L6, L1S, L1Sb, L5S
	SBAS	L1, L5
	IRNSS	L5, S-Band
	L-Band	1525-1560 MHz
<b>Position Accuracy (rms)</b>	Autonomous (Stand alone)	< 2 m
	SBAS	< 1 m
	DGPS	< 0.5 m
	PPP	Horizontal: 0.025 m Vertical: 0.050 m
	RTK	Horizontal: 0.008 m + 1 ppm Vertical: 0.015 m + 1 ppm
	Static/Fast Static	Horizontal: 0.003 m + 0.1 ppm Vertical: 0.004 m + 0.4 ppm
	Roll / Pitch / Heading <sup>1</sup>	Roll / Pitch: 0.10 deg, Heading: 0.09 deg (2 m baseline)
<b>Time To First Fix</b>	Cold Start	< 35 s
	Warm Start	< 5 s
	Reacquisition	< 1 s
<b>Output Rate</b>	Position, Heading Measurements	up to 100 Hz, Heading up to 50 Hz up to 100 Hz
<b>Network</b>	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
<b>Memory</b>	Non-removable	Up to 64 GB
<b>Status/Interface</b>	LEDs / Keys	'Power ON/OFF, External Command inputs (Function) 4 x External LED Drivers
<b>Connectors</b>	I/O	64-pin DIN41612 type B, Right Angle
	GNSS Antenna	2 x MMCX, +5 VDC Ports (0.2A max)
<b>Communication</b>	Ethernet	Full-duplex 10BASE-T/100Base-TX
	USB	2 x High-speed USB 2.0 (480 Mbps) Dual-Role Port
	Serial	2 x RS232 up to 460.8 kbps, 2 x RS232/RS422 up to 460.8 kbps
	CAN	2 x CAN 2.0
	Time	1 x IRIG
	1PPS	2 x 1PPS
	Event Marker	2 x Event Marker
<b>Power</b>	External Input	1 x Power Input
	Input Voltage	+4.5 to +40 VDC
	Power Consumption	4 W typical
<b>Physical &amp; Environmental</b>	Operating Temperature	-40°C to +80° C
	Storage Temperature	-40°C to +85°C
	Humidity	MIL-STD- 810D (method 507.2)
	Shock	MIL-STD- 810H (method 514.8)
	Vibration	MIL-STD- 810H (method 516.8)
	Dimensions	100 X 80 X 13 mm
	Weight	0.070 kg



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.