

Fixposition Nav-RTK Dual

Reliable High-Precision Positioning and Heading

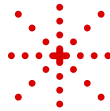


DUAL ANTENNA POSITIONING AND HEADING

Nav-RTK Dual supports all constellation and multi-frequency global navigation satellite system (GNSS) signals. The use of dual antennas improves positioning precision and robustness by independently receiving and processing GNSS signals, while also offering reliable heading without electromagnetic interference.

PROPRIETARY FUSION ENGINE

Nav-RTK Dual uses Fixposition's proprietary fusion engine with cutting edge dead reckoning to combine data from multiple sources, including two independent GNSS signals, inertial measurement units (IMUs), magnetometer and barometer to achieve reliable high-precision navigation in any environment.



Our algorithms allow us to achieve superior robustness even in difficult situations



Robust to electromagnetic interference



Accurate and robust state estimation with up to 200 Hz update rate



Plug and Play integration in PX4 and other autopilot control systems for drones and robots



Compact form factor and only 34g for size-sensitive applications



Standard interfaces and connectors for hassle-free communication

Technical Specifications

Sensor Fusion Engine

Solution Latency	10 ms
Position Accuracy (in RTK fix status)	
Horizontal	1.0 cm + 1 ppm
Vertical	1.5 cm + 1 ppm
Velocity Accuracy	±0.03 m/s
Max. Velocity	20 m/s
Acquisition (time to first position)	
Cold start	25 s
Hot start/reacquisition	2 s
Aided start	2 s

RTK

GNSS Constellations & Band	
GPS/QZSS	L1C/A, L2C
Galileo	E1B/C, E5b
Beidou	B1I, B2I
GLONASS	L1OF, L2OF
Max. GNSS Velocity	500 m/s
Output Rate	up to 20 Hz

IMU

Degrees of Freedom	9
Output Rate	up to 200 Hz

Communication

Output Format	UBX, NMEA
Reference Data Format	RTCM 3.x
Network RTK Support	NTRIP, TCP/IP
Connectivity	JST GH 6-pin (Vcc/UART/TimePulse/TimeTrigger), 2x SMA, microUSB, Wi-Fi (802.11a/b/g/n)

Electrical and Mechanical

Power Supply (V_{cc})	5 V to 20 V
Power Consumption	3 W
Dimensions (L x W x H)	5.4 x 2.5 x 3.2 cm
Weight (without case and antenna)	34 g
Operating Temperature	-40 °C to 85 °C