

Vision-RTK 2

Built for precise positioning in GNSS degraded and denied areas

OUR UNIQUE SOLUTION

With our proprietary deep sensor fusion technology, reliable and precise real-time global positioning is no longer limited to an exclusive few. Fixposition's Vision-RTK 2 is an accessible high-precision positioning sensor that enables autonomous navigation systems to operate in a multitude of challenging environments, be it urban canyons, underpasses, under tree canopies or anywhere else where traditional GNSS positioning systems fail. The Vision-RTK 2 will allow you to expand into new and exciting territories.



An off-the-shelf solution that eliminates long and expensive internal development and lets you focus on your core business.



Real-time precise global positioning that is available everywhere: from urban canyons and underpasses to forests and barns.

KEY FEATURES



A compact and lightweight solution suitable for use on all types of platforms: from small drones and robots to tractors and excavators.

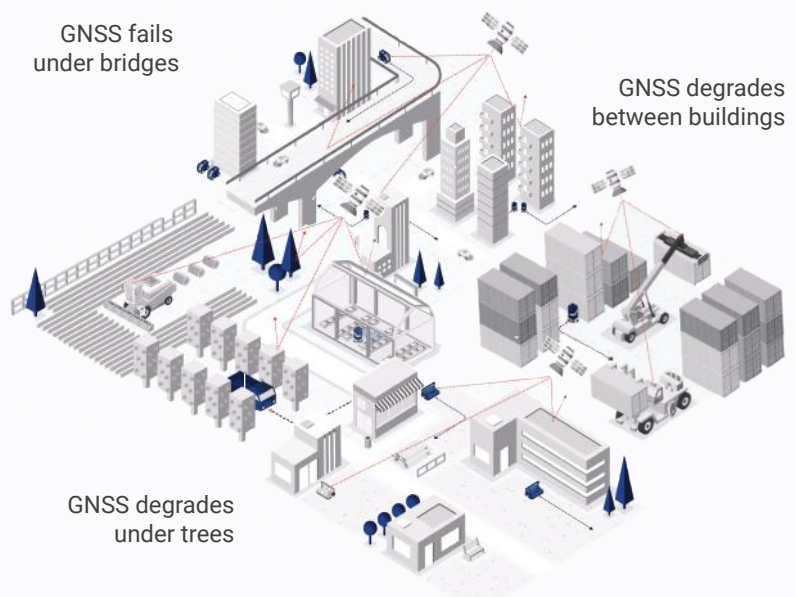


Industry standard connectors and protocols to easily integrate into any project.

INDUSTRY CHALLENGES

GNSS fails under bridges

GNSS degrades between buildings



GNSS degrades under trees

Technical Specifications

SOFTWARE

Sensor fusion engine performance

Max. output rate	200 Hz
Horizontal and vertical position accuracy (RTK fix only)	1.0 cm + 1 ppm
Accuracy of heading angle	0.4° (1 m baseline)
Velocity accuracy	0.05 m/s
Max. velocity	22 m/s for sensor fusion (500 m/s for GNSS only)
Position error as a percentage of travelled distance in GNSS outages*	0.75%
Acquisition time	Cold start 25 s

Communications and configuration

Data formats	NMEA, ROS, Fixposition custom message and others
Operating modes	Automotive, handheld, lawnmower, ground robot
RTK correction data inputs	RTCM 3.3 over UART or NTRIP
Wheel odometry data inputs	CAN, UART

*Automotive mode with wheel odometry input

HARDWARE

Built-in features

Dual RTK receivers	Supported GNSS constellations: GPS/QZSS (L1C/A, L2C) Galileo (E1B/C, E5b) Beidou (B1I, B2I) GLONASS (L1OF, L2OF)
Camera	CMOS with global shutter, 120° DFOV
IMU	Accelerometer, gyroscope, barometer
Internal storage	16 GB flash memory

Interfaces

Wired inputs/outputs	2 × UART, CAN, Ethernet, USB-C
Wireless	Wi-Fi 802.11 ac/a/b/g/n
GNSS antenna connector	2 × SMA
Camera inputs	2 × MIPI CSI-2

Electrical specifications

Supply voltage range	5 – 36 VDC
Typical power consumption	7.5 W

Mechanical specifications

	Dimensions OEM board + camera	Dimensions weatherproof housing
Length × width × height	65 × 72 × 17 mm	113 × 130 × 30 mm
Weight	49 g	420 g

Environmental specifications

Operating and storage temperature	-40 °C to +85 °C
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