



# GEO-PULSE

## RTK Receiver and Signal booster

The GEO-PULSE is a cost-effective GNSS antenna and RTK receiver offering precise vehicle location for applications like ride-share, fleet monitoring, and navigation apps. It features a high-quality triple-frequency patch antenna that can be roof-mounted or dashboard-installed, matching the performance of much more expensive antennas. With a dual-band GNSS receiver that connects via Bluetooth and Wi-Fi and is powered by USB-A, the GEO-PULSE provides 10cm accuracy within GEODNET RTK coverage when used with the GEODNET app on iOS or Android. Its built-in sensor fusion and IMU ensure reliable tracking in challenging environments such as under canopies, bridges, and tunnels.

### Repeater Function:

The HYFIX GEO-PULSE has a secondary RF re-radiation port that can be used to improve GPS/GNSS signal performance internal to the cabin of the vehicle. Third party devices such as dashcams will more consistent GPS / GNSS performance without any modification or data connection to GEO-PULSE. Unlike cheap GPS repeaters, the GEO-PULSE re-radiates all constellations and has a programmable gain element to optimize the in-vehicle signal performance.

### 3rd Party Mobile App Integration:

The versatile GEO-PULSE provides high-accuracy RTK-based location to 3rd party mobile applications in a wide range of ways. These include:

- Mock Location (Android)
- Made For Apple Certification (iOS, expected in Q1 2025)
- Full Custom Integration

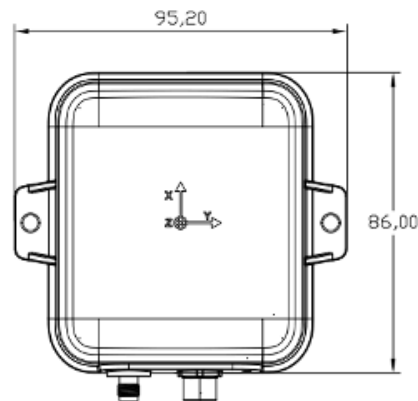
### Specs

Default GNSS Constellation	GPS + GLONASS + Galileo + BDS + QZSS
Number of concurrent GNSS	4 + QZSS
SBAS	WAAS*, EGNOS*, MSAS* and GAGAN*
Function(s)	RTK + DR (integrated IMU)
Horizontal Position Accuracy	Autonomous : 1m RTK : <0.1m + 1ppm
DR Position Error (with speed)	<2 % of distance traveled without GNSS
DR Position Error (without speed)	<4 % of distance traveled without GNSS
Velocity Accuracy	0.03 m/s
Accuracy of 1PPS signal	20 ns
Convergence time	RTK : < 10s
TTFF (with AGNSS)	Full Cold Start: 5 s
TTFF (without AGNSS)	Full Cold Start: 26 s Warm Start: 16 s Hot Start: 1 s
Sensitivity	Acquisition: -145 dBm Tracking: -165 dBm Reacquisition: -157 dBm
Dynamic Performance	Maximum Altitude: 10000 m Maximum Velocity: 500 m/s Maximum Acceleration: 4g
Nav. Update Rate	1 Hz/ 10 Hz
Raw Data Update Rate	GNSS: 1Hz IMU: 100 Hz (max)



### Supported Bands

GPS/QZSS	L1 C/A, L5
GLONASS	L1
Galileo	E1, E5a
BDS	B1I, B2a
	L5 (1176.45 MHz)



### Physical & Electrical

Weight	220g
Power	<0.9W
Power Supply	

