PinPoint v3
Economic solution for 2cm accuracy

Introduction

Optimised for use with AB Dynamics ADAS targets and driving robots, the Pinpoint v3 offers a compact and economic solution for 2 cm positional accuracy.

The Pinpoint v3 uses survey-grade Quad GNSS receivers and high-performance inertial sensors to give a single-box navigation solution that fits in the palm of your hand. Using industry-standard OxTS technology, the Pinpoint v3 has a plug-and-play Ethernet interface for use with AB Dynamics ADAS targets and driving robots. The precision of its low-latency outputs makes it ideal for path-following and general use on the proving ground.

Key advantages

- Robust positioning in challenging environments with GPS, GLONASS, BeiDou and Galileo constellations available as standard (with compatible base-station)
- High-accuracy, low-latency outputs thanks to state-of-the-art calibration and advanced algorithms.
- Single-box solution – no need to connect multiple units together, meaning faster and simpler installation.
- Fully-integrated GNSS and IMU using highly-sophisticated Kalman filters – copes with GNSS outages without sudden positional jumps.
- Reliable plug-and-play Ethernet output to AB Dynamics ADAS targets and driving robots.
- Dual GNSS receivers to give accurate heading angle even at low speeds or when stationary.
- Small size and low weight (0.435kg), easy to mount in the vehicle.
- Rugged and waterproof (IP65).
- Low cost.
- Includes cables, antennae and software.
- Perfect for use with AB Dynamics driving robots (including for path-following).
- Free of export restrictions – can be shipped worldwide without an export licence.
- CAN output available (optional).

Specification

Performance			Hardware	
Position accuracy (RTK)[1]	0.02 m		Dimensions	142 x 77 x 41 mm
Velocity Accuracy (RMS)	0.1 km/h		Weight	0.435 kg
Roll/pitch angle accuracy (1σ)	0.05°		Input voltage	10-31 V dc
Heading (yaw) angle accuracy (1σ with 2 m antenna separation)	0.1°		Power consumption	9 W
Yaw rate (10Hz cut-off filter)	0.1°/s		Operating temperature	-40°C to +70°C
Slip angle accuracy (1σ at 50 km/h)[2]	0.25°		Environmental protection	IP65
			Output rate	100Hz
GNSS	GPS L1, L2C GLONASS L1, L2 BeiDou B1, B2 Galileo E1, E5		Vibration	10 - 500Hz @ 1.42 g RMS
	Accelerometers	Gyroscopes		
Technology	MEMS	MEMS	Ethernet	10/100 Base-T with AB Dynamics interface
Range	8g	480°/s	CAN (optional)	Up to 1Mbit/s
Bias stability	0.08mg	5°/hr	Internal storage	32GB
Scale factor	0.08%	0.3%		

[1] Horizontal position accuracy. Requires RTK fixed base station transmitting in RTCMv3 format
[2] Slip angle error is dependent on velocity, velocity accuracy and heading accuracy