



PinPoint 2G

Economic solution for 2cm accuracy

Introduction

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



The Pinpoint 2G uses dual survey-grade GPS and GLONASS 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 2G 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 and GLONASS constellations used as standard (with base-station with GLONASS receive capability)
- 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 GPS and IMU using highly-sophisticated Kalman filters – copes with GPS outages without sudden positional jumps
- Reliable plug-and-play Ethernet output to AB Dynamics' ADAS targets and driving robots
- Dual GPS 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 (60g shock survival) 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	143 x 77 x 41 mm
Velocity accuracy (RMS)	0.1 km/h		Weight	0.435 kg
Roll/pitch angle accuracy (1 σ)	0.05°		Input voltage	10-31 V dc
Roll/pitch range	-180° to +180°		Power consumption	12 W
Heading (yaw) angle accuracy (1 σ with 2 m antenna separation)	0.1°		Operating temperature	-40°C to +70°C
Heading (yaw) range	0° to 360°		Environmental protection	IP65
Slip angle accuracy (1 σ at 50 km/h) ²	0.25°		Output rate	100Hz
			Shock survival	60g
GNSS	GPS & GLONASS L1, L2 for use with RTK base-station corrections		Vibration	10 - 2000Hz @ 4.12 g RMS
	Accelerometers	Gyroscopes	Internal storage	32GB
Technology	MEMS	MEMS	Ethernet	10/100 Base-T with AB Dynamics' interface
Range	10g	300°/s	CAN (optional)	Up to 1Mbit/s
Bias stability	0.08mg	3°/hr		
Linearity	0.05%	0.05%		
Scale factor	0.05%	0.05%		

¹ Horizontal position accuracy. Vertical accuracy approximately 0.03 m. Requires RTK fixed base station transmitting in RTCMv3 format

² Slip angle error is dependent on velocity, velocity accuracy and heading accuracy

