







Qianxing Robot Automatic Navigation Driving System

Product Description




A comprehensive intelligent navigation product integrating BDS navigation, autonomous driving, obstacle avoidance, and the Internet of Things, primarily composed of a navigation computer, obstacle avoidance radar, IoT modules, and dual antennas. Highly integrated to reduce traditional navigation intelligent tablet modules, it fundamentally integrates with equipment to improve product reliability. The autonomous coupling navigation algorithm enhances stability in harsh environments such as cities and fields. Focusing on intelligent device navigation, it aids customers in applying the product in agriculture, industry, and military sectors. When combined with the Shangyida BDS Intelligent Monitoring Comprehensive Management Platform, it enables multi-machine formation, real-time data monitoring, and big data analysis, helping customers quickly gain a market advantage.

Performance Characteristics

-  APP intelligent operation
-  One-click automatic U-turn
-  View job progress in real time
-  U-turn autonomous driving
-  Cloud RTK high-precision navigation
-  Supports unmanned spraying, mowing, inspection and transportation machines



Product Features

-  1 The error of BDS RTK navigation operations is within $\pm 2.5\text{cm}$, ensuring more accurate trajectory maintenance.
-  2 The system can permanently store, memorize, and automatically summarize job information for later retrieval and use.
-  3 It can be applied to different terrains, various operation modes, different agricultural machinery, and diverse working environments.

- ④ Fully automatic control, precise navigation, unaffected by weather conditions, enabling uninterrupted 24-hour operation around the clock.
- ⑤ Convenient installation, plug and play, simple operation, intuitive and clear.
- ⑥ Supports remote parameter adjustment and remote control, enabling rapid response and decision-making in frontline situations.
- ⑦ Supports multi-vehicle formation, remote control, and big data analysis (requires installation of BDS Intelligent Monitoring Integrated Management Platform).
- ⑧ Upgradable online, saving manpower/effort/time/tools, allowing users to easily and quickly enjoy the latest software features and optimal services.

Product parameters

Project name		Unit	Details
Physical dimensions and electrical characteristics	Size	mm	200*150*80
	Weight	g	1300
	Input voltage	V	12
	Power consumption	W	<5
IMU performance indicators	Gyroscope type	/	MEMS
	Gyroscope input range	°/s	±500
	Gyroscope bias stability	°/h	2.5
	Accelerometer range	g	±8
	Accelerometer bias stability	mg	1
Environmental indicators	Operating temperature	°C	-10 - + 60
	Storage temperature	°C	-50 - + 80
	Humidity	%	95% non-condensing
	Vibration	/	MIL-STD-810G (40g)
	Protection level	/	IP65
GNSS indicators	Satellite system	/	BDS: B1、 B2
	GNSS data update rate	Hz	5、 10
	Heading accuracy	°/m	0.2
	Combined navigation data update rate	Hz	100
Communication interface	4G, Bluetooth Low Energy (BLE), Ethernet, CAN, RS-485		

Application Scenarios



spraying operation



mowing operation



inspection operation