



Luxun-I is an Multi-source Fusion Autonomous Unmanned Vehicle launched by OMNIGEO. It is an intelligent mobile platform integrated with multi-sensors including GNSS, inertial navigation, LiDAR and industrial camera. Equipped with self-developed multi-source fusion navigation and positioning algorithm, it delivers high-precision, all-scene and all-weather positioning & autonomous navigation. Compatible with various GNSS location services and fusion of LiDAR/inertial navigation/vision, applicable to surveying, inspection, security, logistics and other industries.



Category	Item	Details & Specifications
Product Features	Multi-source Fusion Positioning	Fuses data from GNSS, inertial navigation, LiDAR and vision to realize high-precision, continuous and robust pose calculation
	Multiple GNSS Service Support	Supports SPP, PPP, RTK and other GNSS location services to meet positioning demands of diverse scenarios
	Multi-mode Fusion Compatibility	Supports LIO/GLIO/LIVO/GLIVO; enables fusion and coupling of GNSS/LiDAR/inertial navigation/vision sensors
	Autonomous Navigation & Obstacle Avoidance	Implements autonomous navigation, path planning and dynamic obstacle avoidance based on Navigation2
	Self-developed Algorithm	Independently developed multi-source fusion navigation & positioning algorithm; supports secondary development and customization as required
Technical Indicators	High Expandability	Modular design for easy expansion and integration, suitable for diverse industrial scenarios
	Positioning Accuracy	GNSS RTK: 1cm+1ppm (horizontal plane)
	Supported GNSS Systems	LiDAR-Inertial Fusion: better than 5cm (typical value)
	Overall Dimension	GPS, BDS, GLONASS, Galileo, QZSS; supports SPP / PPP / RTK data processing
	LiDAR Model	430×365×170mm (Length × Width × Height)
	Industrial Camera	Livox Mid-360 (360° × 59.7° FOV)
	Computing Platform	Hikvision color industrial camera
	Operating System	Intel NUC 12
	Autonomous Navigation Framework	Ubuntu 22.04 + ROS2 Humble
	Communication Interfaces	Navigation2-based autonomous navigation and obstacle avoidance
	Power Supply Voltage	Thunderbolt 4, HDMI 2.0b, 2.5G Ethernet, USB 3.2, CAN
	Endurance	24V DC (battery powered)
	Rated Payload	Approximately 2~3 hours (varies with load and working conditions)
	Operating Temperature	10 kg
		-25 ~ 60 °C