Dutputs











Robot SLAM RobotSLAM basic, RobotSLAM standard, RobotSLAM professional

16-channel^① Laser Scanner

Measurement Rate Max. 320,000 points/sec^① Class 1(IEC 60825-1:2014) eye-safe Laser Safety Class

Laser Wavelength

Echo Mode Measuring Range

10 Hz

Scanning Rate Scanning FOV 360°x 285° Horizontal Angle Resolution 0.18° (10 Hz)

Vertical Angle Resolution

Relative Accuracy GNSS Differential^② best up to 1 cm GPS+Glonass+Beidou+Galileo multi-constellation tracking

Signal Tracking@ RTK Positioning Accuracy[®] CORS Access[®]

RMS 1 cm+1 ppm

nano SIM card slot built in

Positioning Data Refresh Rate² max. 100 Hz best up to 3-5 cm

Absolute Accuracy²

Scanning Principle
Accumulated Mileage Error

Housing Material

Weight

Dimension

System Consumption Power Supply

Battery Unit

Endurance

IP Protection

Temperature

Device Connection

Data Storage Data Download

Panoramic Camera Software Package

Processing Method Process Time

dual external Li-ion battery, hot swappable DC 14.4V, 6875mAh, 99Wh single battery ≥2 hours, dual batteries ≥4 hours

1.9 kg (handheld only)

262x230x146 mm

555 channels

-20~65°C (operating), -40~85°C (storage)

laser sensor 360°mechanical rotation

0.1%-0.2% (under the condition without loop closure)

Wi-Fi or Ethernet cable

built-in SSD, 512GB (extendable upon request); SD card (removable), 128GB via Ethernet cable, WiFi or SD card 2-lens, fisheye, 360°, image pixels 18 MP, video pixels 5.7k RobotSLAM Palm (smartphone APP), RobotSLAM Engine (PC)

aviation-grade aluminum, with high protection level and anti-inference capability

post-processing on PC approx. 1-2 times of data acquisition

① to expect higher point rate like 640,000 points/sec max., 32-channel laser sensor is also available upon request, and that's RobotSLAM Plus series.

② GNSS differential performance is only applicable to the standard and professional versions. In outdoor scenes with moderate satellite signals coverage, it is recommended to activate GNSS RTK for positioning, which may help much to eliminate control points record and measurement.

Options

Model	RobotSLAM basic	RobotSLAM standard	RobotSLAM professional
Handheld Components	√	√	√
Control Point Record Button	√	√	√
Built-in GNSS Module		√	\checkmark
GNSS Antenna		√	√
LED Screen	\checkmark	√	√
Smartphone Holder	√	√	√
Smartphone APP	\checkmark	√	√
Pano Camera	option	option	option
Fill-in Light ^①	option	option	option
Backpack Kit			√2
Al Robot Dog Mount Kit ^③		option	option
USV-based Mount Kit ^③		option	option
SUV-based Mount Kit ^③		option	option
UAV-based Mount Kit ^③		option	option

① fill-in light and 360°pano camera are bundled as a visual module.

② the backpack kit includes a white plate antenna and a longer GNSS antenna cable; the backpack 3-in-1 magic tactically provides two working modes in one

package: handheld and backpack, plus the storage function. No carrying case or trolley suitcase needec

3 Al Robot Dog Mount kit, USV-based Mount kit, SUV-based Mount kit and UAV-based Mount kit are all optional accessories, available upon request.



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dealer info



RO30T SLAM

A Survey-grade SLAM **Handheld**

direct geo-referencing amazing cm-level accuracy backpack 3-in-1 magic abundant software functions



Illustration

GCP record buttor

helps to record control point directly when not connected to APP

nain control butt to start/stop scans

and initialize, status identified by LED

fill-in light (option

supplements lighting when working in the dark or recording pano

ano camera (opt

2-lens fisheye and 18MP, captures left&right for less

collaborates with onboard GNSS to provide centimeter level positioning

LED screen

device status and commands to display, interactive and practical

SD card slot

extendable to 512GB

max., ready for direct

128GB default,

Nano SIM card to fit, supports CORS network access

SIM card slot

GNSS antenna

target base plate

helps to record GCPs and ready for fitting fill-in light kit

range 120m and point rate 640,000 points/sec max.

enables one hand free when another is occupied in peration

handheld grip

left and right to fit smartphone holder for checking at ease

Platforms



Handheld

ready to work in indoor, outdoor and underground environments



USV-based

to scan shoreside and integrate with underwater topography



Backpack

easy to carry and well fits long-time working indoors and outdoors



SUV-based

mounted onto a car for entry-level automobile mapping



Al Robot Dog

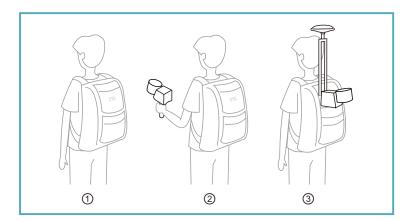
wireless remote scanning of potentially hazardous zones



UAV-based

aerial perspective to scan building top which handheld mode cannot

Backpack 3-in-1







when 3 becomes 1

- ① storage packing
- ② handheld mode
- 3 backpack mode

APP&Software



Smartphone APP-RobotSLAM Palm

- CORS settings
- status display
- fieldwork control

- task timer
- storage info
- device registration

Post Processing Software-RobotSLAM Engine

- coordinate system transformation
- auto/manual optimization
- instant loading of mass data
- H.&V. accuracy verification
- loop closure review
- enable RTK for adjustment
- point cloud classification
- processing replay

- point rendering
- 3D measurement
- pano overlay display
- global registration
- auto denoising
- sectional view
- X-ray rendering

Computer Configuration

Requirement	Minimum	Recommended	
OS	Windows10/Windows11 64-bit		
Graphics Card	GTX-3060/RX6600M or above (NVIDIA series recommended)		
CPU	Intel i7-11800H/AMD R7-5800H or above	Intel i7-12700H/AMD R7-6800H or above	
Internal Memory	16GB or above	32GB or above	
SSD	1TB or above	2TB or above	

Note: for faster data loading, it's recommended to process the data directly with SSD instead of HDD.

Unboxing



- B GNSS antenna & cable A handheld (handle, base plate)
- smartphone holder
- nain cable
- **G** rechargeable battery
- Ethernet cable
- R micro SD card
- M cleaning cloth pano camera (option)
- **battery** compartment 🕕 battery charger & cable USB flash drive SD card reader

shoulder strap

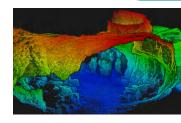
N hand-carry case 1 P fill-in light & charging cable 1

Note: the above is applicable for RobotSLAM standard only. Please refer to the configuration list for more details of different models.

Applications

Underground Mining



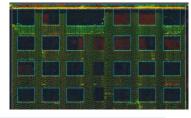




Building Elevational Surveying

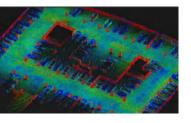






Basement Parking Digitization



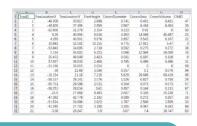




Forestry Investigation



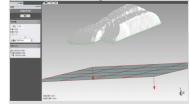




Stockpile Volume Calculation







Shoreside Survey + USV Bathymetry



