Outputs











Scanning Principle
Accumulated Mileage Error

Housing Material

Weight Dimension

IP Protection

Device Connection Data Storage Data Download

Panoramic Camera Software Package Processing Method Process Time

Series Model RobotSLAM basic, RobotSLAM standard, RobotSLAM professional 16-channel① Laser Scanner Max. 320,000 points/sec^① Class 1(IEC 60825-1:2014) eye-safe Measurement Rate Laser Safety Class Laser Wavelength Echo Mode 8-bit, dual return 0.05-120 m Measuring Range

Scanning Rate Scanning FOV 10 Hz 360°x 285° Horizontal Angle Resolution 0.18° (10 Hz) Vertical Angle Resolution Relative Accuracy GNSS Differential[®] GPS+Glonass+Beidou+Galileo multi-constellation tracking Signal Tracking@ RTK Positioning Accuracy[®] CORS Access[®] 555 channels

RMS 1 cm+1 ppm nano SIM card slot built in Positioning Data Refresh Rate^②
Absolute Accuracy^② max. 100 Hz best up to 3-5 cm laser sensor 360° mechanical rotation

0.1%-0.2% (under the condition without loop closure) aviation-grade aluminum, with high protection level and anti-inference capability

1.9 kg (handheld only) 262x230x146 mm

System Consumption dual external Li-ion battery, hot swappable DC 14.4V,6875mAh,99Wh **Power Supply** Battery Unit single battery ≥2 hours, dual batteries ≥4 hours Endurance

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

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 9

Model		RobotSLAM basic	RobotSLAM standard	RobotSLAM professional
Handheld Components		√	√	√
Control Point Record Button	า	√	√	√
Built-in GNSS Module			\checkmark	√
GNSS Antenna			√	√
LED Screen		\checkmark	√	√
Smartphone Holder		\checkmark	√	√
Smartphone APP	and A	\checkmark	√	√
Pano Camera		option	option	option
Fill-in Light ^①	10	option	option	option
Backpack Kit				√@
Al Robot Dog Mount Kit ^③			option	option
USV-based Mount Kit [®]			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 needed.
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.



SOUTH SURVEYING & MAPPING TECHNOLOGY CO., LTD.

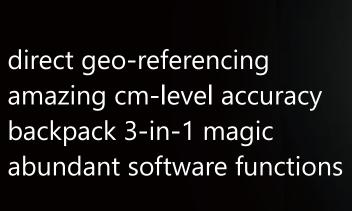
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dealer info



ROBOT SLAM

A Survey-grade SLAM Handheld



(V. 202305)

Illustration

GCP record buttor

helps to record control point directly when not connected to APP

main control but

to start/stop scans and initialize, status identified by LED

fill-in light (optio

supplements lighting when working in the dark or recording pano

2-lens fisheye and

collaborates with 18MP, captures onboard GNSS to left&right for less provide centimeter level positioning

LED screen

device status and commands to display, interactive and practical

Nano SIM card to fit, supports CORS network access

GNSS antenna

SIM card slot

helps to record GCPs

and ready for fitting

fill-in light kit

SD card slot target base plate

128GB default, extendable to 512GB max., ready for direct

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



Al Robot Dog

wireless remote scanning of potentially hazardous zones



SUV-based

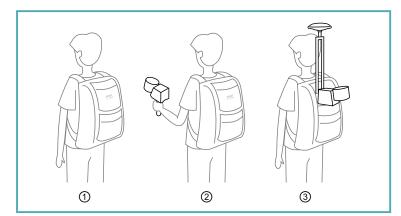
mounted onto a car for entry-level automobile mapping



UAV-based

aerial perspective to scan building top which handheld mode cannot

Backpack 3-in-1







no pulling on the ground \rightarrow

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

APP&Software



TOEOS

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		
Graphics Card	Windows10/Windows11 64-bit			
CPU	GTX-3060/RX6600M or above (NVIDIA series recommended)			
Internal Memory	Intel i7-11800H/AMD R7-5800H or above	Intel i7-12700H/AMD R7-6800H or above		
RAM	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

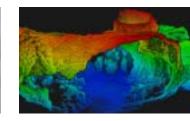


- B GNSS antenna & cable A handheld (handle, base plate) c smartphone holder shoulder strap nain cable **battery** compartment G rechargeable battery 🕕 battery charger & cable Ethernet cable USB flash drive Micro SD card SD card reader
- N hand-carry case M cleaning cloth 1 P fill-in light & charging cable 1 opano camera (option) Note: the above is applicable for RobotSLAM standard only. Please refer to the

Applications

Underground Mining



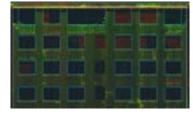




Building Elevational Surveying

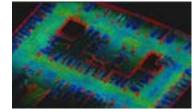






Basement Parking Digitization

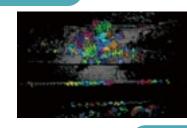


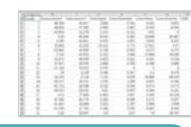




Forestry Investigation







Stockpile Volume Calculation







Shoreside Survey + USV Bathymetry



