Outputs













RobotSLAM basic, RobotSLAM standard, RobotSLAM professional,

RobotSLAM Plus standard, RobotSLAM Plus professional

Laser Scanner Measurement Rate

Max. 320,000 points/sec① Class 1(IEC 60825-1:2014) eye-safe

Laser Safety Class 905 nm Laser Wavelength

Echo Mode 8-bit, dual return 0.05-120 m Measuring Range 10 Hz

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

Range Noise ±2mm to ±4mm for measuring distance below 25m and target reflection above 78%

Relative Accuracy GPS+Glonass+Beidou+Galileo multi-constellation tracking GNSS Differential 2

Signal Tracking^②

555 channels RMS 1 cm+1 ppm nano SIM card slot built in CORS Access 2

Positioning Data Refresh Rate 2 max. 100 Hz

best up to 3-5 cm

laser sensor 360° mechanical rotation Scanning Principle

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

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

1.5 kg (handheld only)

System Consumption

dual external Li-ion battery, hot swappable DC 14.4V, 6875mAh, 99 Wh (old model); DC 14.4V, 6900mAh, 99 Wh (new model) single battery 2≥hours, dual batteries 4≥hours Battery Unit

Endurance **IP Protection**

Device Connection

-20-65°C (operating), -40~85°C (storage) Wi-Fi or Ethernet cable built-in SSD, 512GB (extendable upon request); SD card (removable), 128GB Data Storage Data Download

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) Panoramic Camera

Software Package Processing Method

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 ecommended to activate GNSS RTK for positioning, which may help much to eliminate control points record and measurement.

Options

Model Handheld	RobotSLAM basic	RobotSLAM standard	RobotSLAM professional
Components Control Point	\checkmark	\checkmark	\checkmark
Record Button Built-in GNSS	\checkmark	\checkmark	\checkmark
Module GNSS Antenna LED	-	\checkmark	\checkmark
Screen Smartphone Holder		\checkmark	\checkmark
Smartphone APP Pano	\checkmark	\checkmark	
Camera Fill-in Light ①	\checkmark	\checkmark	\checkmark
Backpack Kit Al Robot Dog	\checkmark	\checkmark	\checkmark
Mount Kit ③ USV-based	option	option	option
Mount Kit ③ SUV-based	option	option	option
Mount Kit ③ UAV-based			√
Mount Kit③	-	option	option
		option	option
	-	option	option
		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 AI Robot Dog Mount kit, USV-based Mount kit, SUV-based Mount kit and UAV-based Mount kit are all optional accessories, available upon request.

No.39, Sicheng Road, Guangzhou 510663, China

https://www.sandinginstrument.com/ export@sandinginstrument.com

dealer info



ROBOT SLAM

ASURVEY-GRADESLAM HANDHELD

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

(V. 202305)

Illustration

GCP record butto

helps to record control point directly when not connected to APP

nain control butte to start/stop scans

and initialize status identified by LED colors

fill-in light (option

supplements lighting when working in the dark or recording

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

collaborates with onboard GNSS to provide centimeter level positioning

SIM card slot

GNSS antenna

LED screen device status and commands to

Nano SIM card to fit, supports CORS network access display, interactive and practical

extendable to 512GB max., ready for direct copy

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

range 120m and point rate 640,000

points/sec max.

laser sensor

enables one hand free when another is occupied in peration

andheld 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

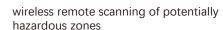
easy to carry and well fits long-time working indoors and outdoors



automobile mapping



Al Robot Dog





SUV-based

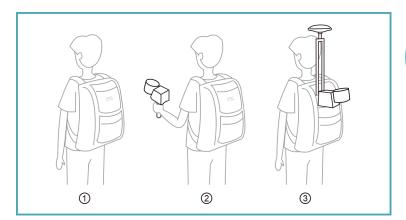
mounted onto a car for entry-level



UAV-based

aerial perspective to scan building top which handheld mode cannot

Backpack 3-in-1





no pulling on the ground →

when 3 becomes 1

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

APP&Software



KO30T

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



- Anandheld (handle, base plate)1
- martphone holder1
- Emain cable1 Grechargeable battery2
- Ethernet cable1
- Cmicro SD card1 Mcleaning cloth1
- Opano camera (option)1
- BGNSS antenna & cable **D**shoulder strap **B**attery compartment Battery charger & cable **1** USB flash drive SD card reader Nhand-carry case

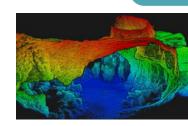
Pfill-in light & charging cable 1

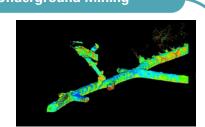
Note: the above is applicable for RobotSLAM standard only. Please refer to the configuration list for more details of different models.

Applications

Underground Mining



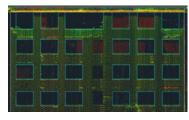




Building Elevational Surveying

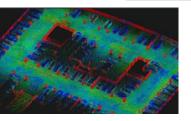






Basement Parking Digitization







Forestry Investigation



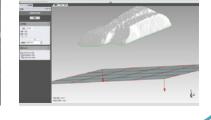




Stockpile Volume Calculation







Shoreside Survey + USV Bathymetry



