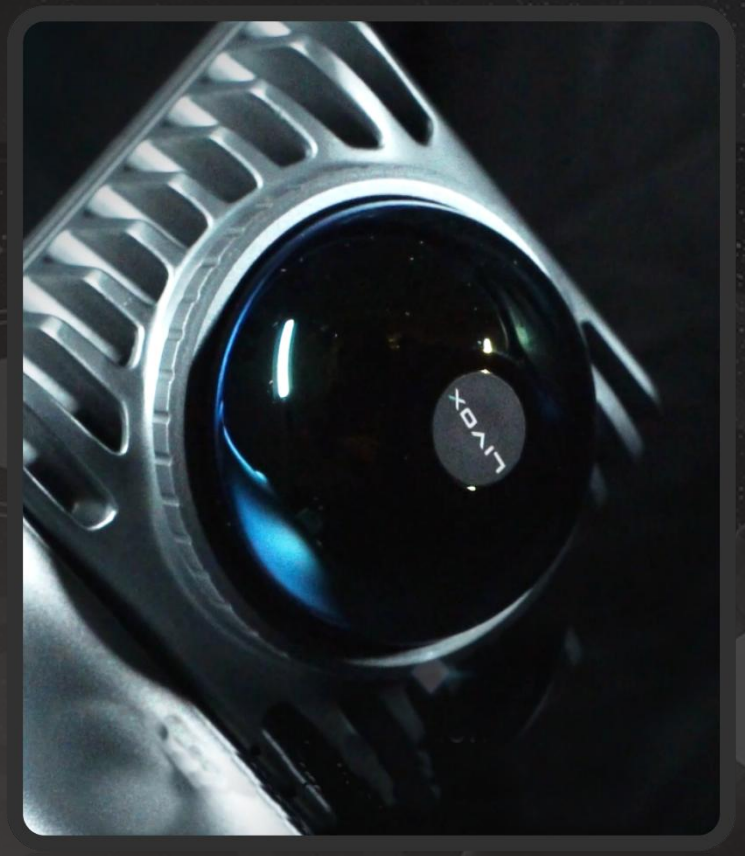
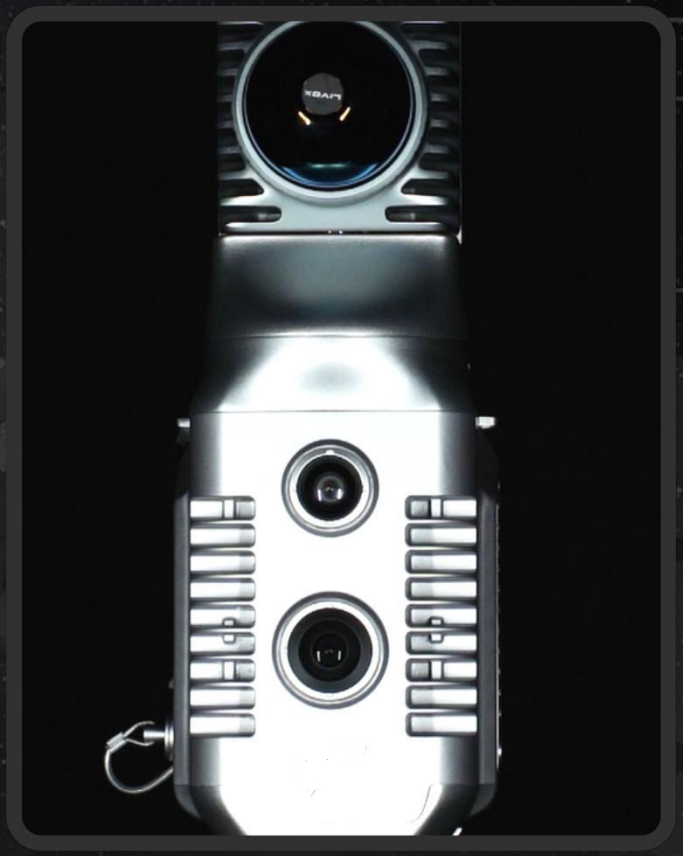
FOXTECH ROBOT



SLAM2000

New power for 3D mobile mapping



CORPORATE CULTURE

Value
Innovation
Integrity

SLAM2000 Parameter

Main body

Weight	925 g (Host), 1450 g (With handle and base)
Dimensions	94.5 mm x 84.6 mm x 219 mm (Host) 170 mm X 173.8 mm X 364.5 mm (With handle and base)
Power consumption	20W (Typical)
Input voltage	20V
Internal storage	512GB SSD
Working temperature	-20°C ~ 50°C (Operation), -40°C ~ 70°C (Storage)
Humidity	<95%
Protection class	IP54
Scanning FOV	Panoramic 360°

Accuracy

Point cloud thickness	< 1 cm (Post-processing), < 2 cm (Real-time)
Relative accuracy	< 1 cm (Post-processing), < 2 cm (Real-time)
Absolute accuracy	< 5 cm (Post-processing)

Laser scanner

Wavelength	905nm
Laser class	Class 1
Range	0.1 m ~ 70 m@ 80%
FOV	360°(H), -7°~ 52° (V)
Laser pulse repetition rate	200 kHz
Echo	Single (Strongest)
Frame rate	10 Hz (Typical)

Texture camera

Resolution	12MP
FOV	210° (Diagonal)
Frame rate	30 Hz

Visual camera

Resolution	12MP
FOV	100° (Diagonal)

Interface

USB Type-C 1	SSD data copy
USB Type-C 2	Charge by PD power bank, OTG (5 V)
Circular connector	External power supply (20 V), External S-RTK
WiFi	Supported

Lithium battery

Model	SP30
Input voltage	5V -20V
Output voltage	10.8 V
Battery Capacity	3000mAh
Weight	400 g
Dimensions	85 mm x 60 mm x 144.5 mm
Endurance	95 mins (SLAM2000 only)

Design & Material

Design

- Modern industrial design
- Streamline shape design
- Ergonomics handle
- More portable
- Eternal classic

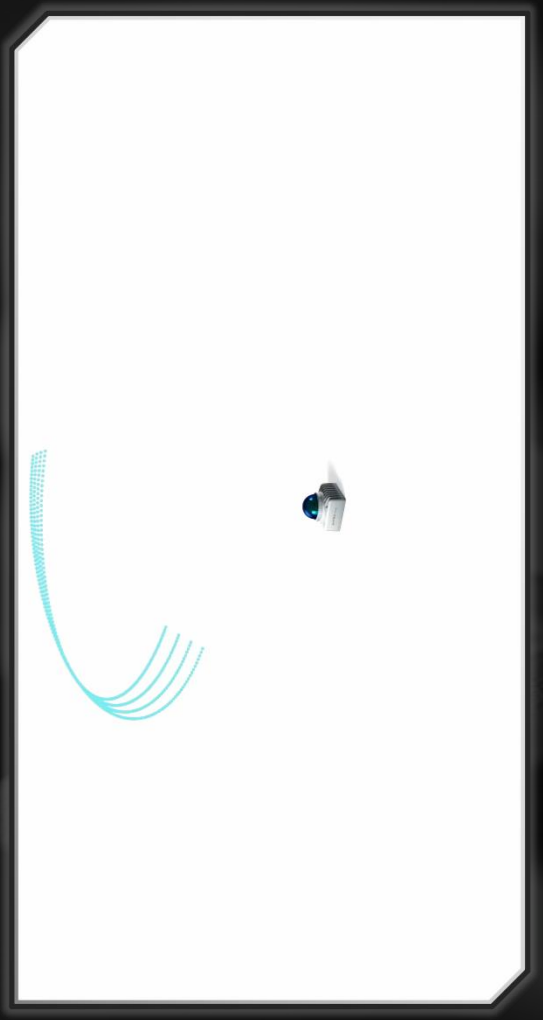
Material

Aviation aluminum

- High-tech material
- Metal appearance
- Super eye-catching
- Lighter weight

Create the future
Lead the world

Laser Sensor



Minimum scanning range: 10cm

Active anti-jamming

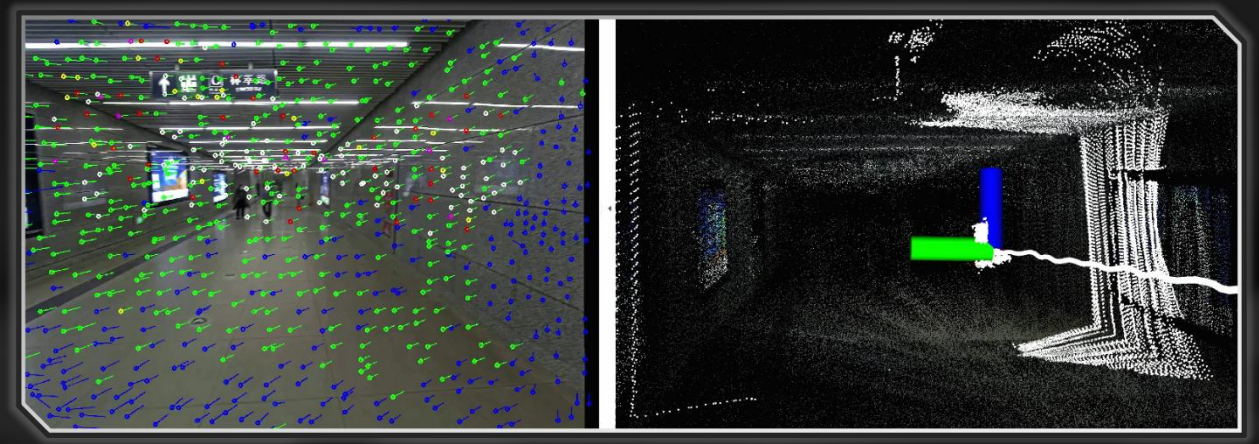
Resistance to outdoor bright light

360° rotation

Dynamic panoramic laser FOV

You can see when you walk,
and you can get what you see.

Visual Camera



Result of vision matching

Result of regular corridor

Resolution: 12 MP

Frame frequency: 30Hz

FOV：100°

Visual slam algorithm

- improve the adaptability of 3D reconstruction in scenes with ***weak structural features***
- Avoid the failure or error cause by repetitive structure

Texture Camera

Original data

Color point cloud data

Resolution: 12 MP

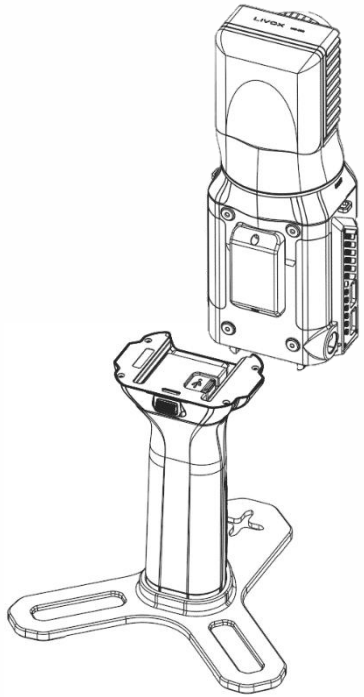
Frame frequency: 30Hz

FOV：210°

- Ultra-wide FOV
- Higher definition texture information
- Higher precision and higher definition color point
- More realistic and clearer

SP30 battery handle

SP30 diagram

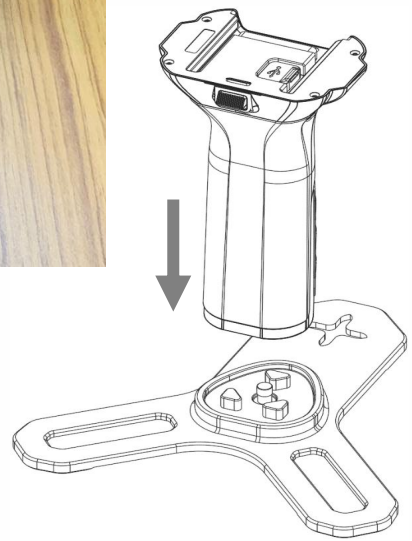


Installation and removal

Model：	SP30
Capacity：	3000mAh
Input voltage：	5-12V
Output voltage:	10.8V
Weight:	400g
Endurance:	95 mins

- Quick installation and removal
- Type-C charging interface
- Capacity indicator light
- Reduce the failure rate
- More comfortable
- CCC, CE, FCC

Base and control point



Installation and removal

Control point accuracy

SN of control points	Easting	Northing	Up	D X	D Y	D X Y	D Z
2	797901.763	2496711.178	0.647	0.005	0.009	0.010	-0.014
4	797869.027	2496748.783	0.255	0.015	0.008	0.017	-0.023
8	797822.294	2496854.722	1.227	0.018	-0.034	0.038	-0.013
12	797796.890	2496694.453	0.818	-0.012	0.005	0.013	-0.017
16	797829.012	2496678.097	0.668	-0.021	-0.015	0.026	-0.016
20	797867.316	2496636.012	0.493	0.018	-0.008	0.019	-0.023
MEAN				0.004	-0.006	0.021	-0.018
Mean square error				0.016	0.016	0.023	0.018

- Metal base
- Thinner and more stable
- Quick installation and removal
- Trigger mode instead of putting for 10s on control point
- Buzzer alerts the success or failure of control point collection and extraction
- Avoid leakage, overcollection, unclear collection of control point

High precision IMU

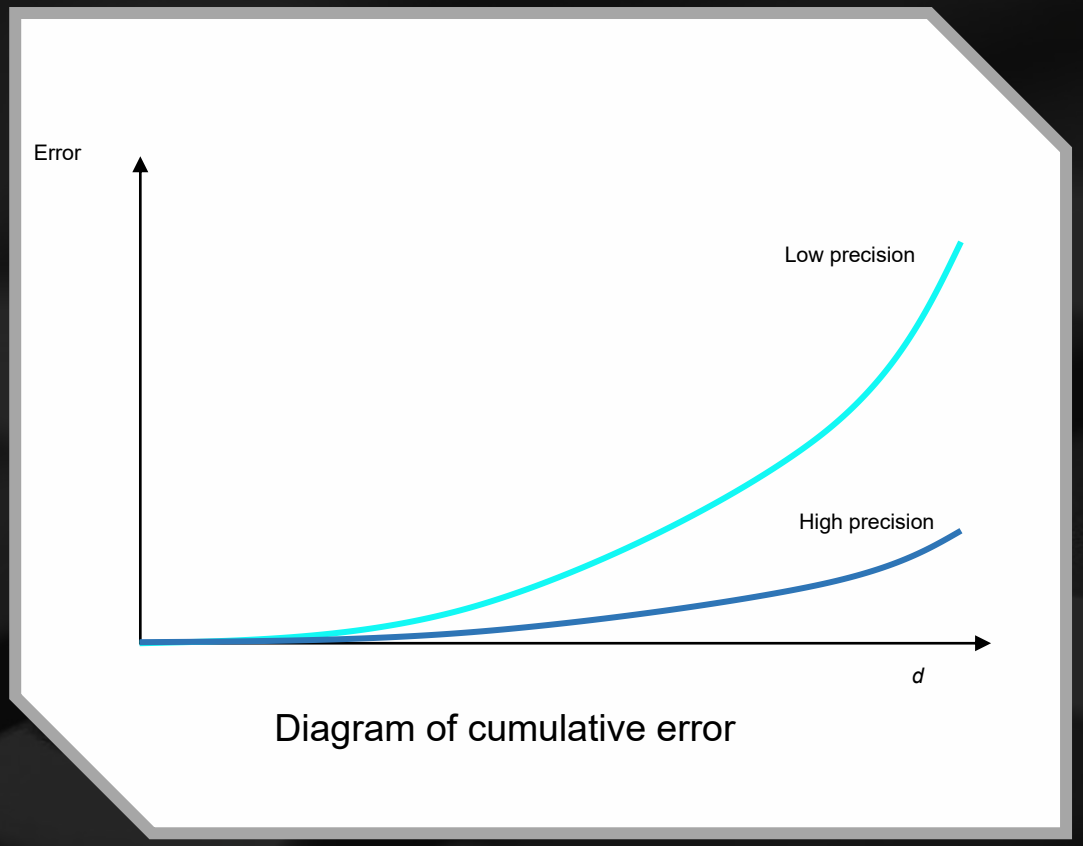
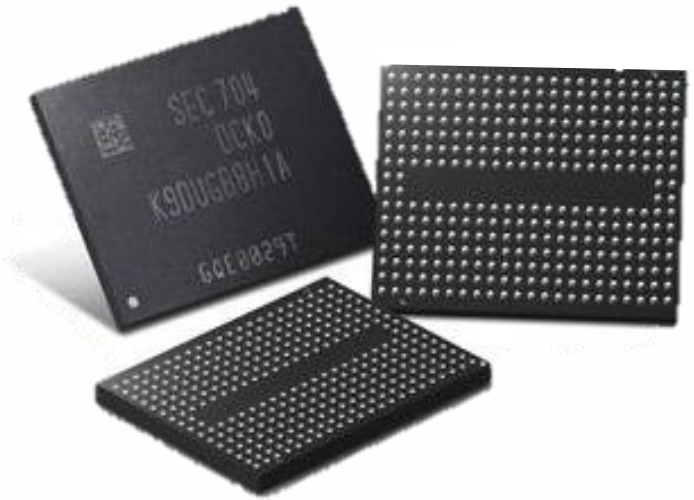


Diagram of cumulative error

- Independently developed
- Reduce the cumulative error

Built-in SSD



Capacity：512GB

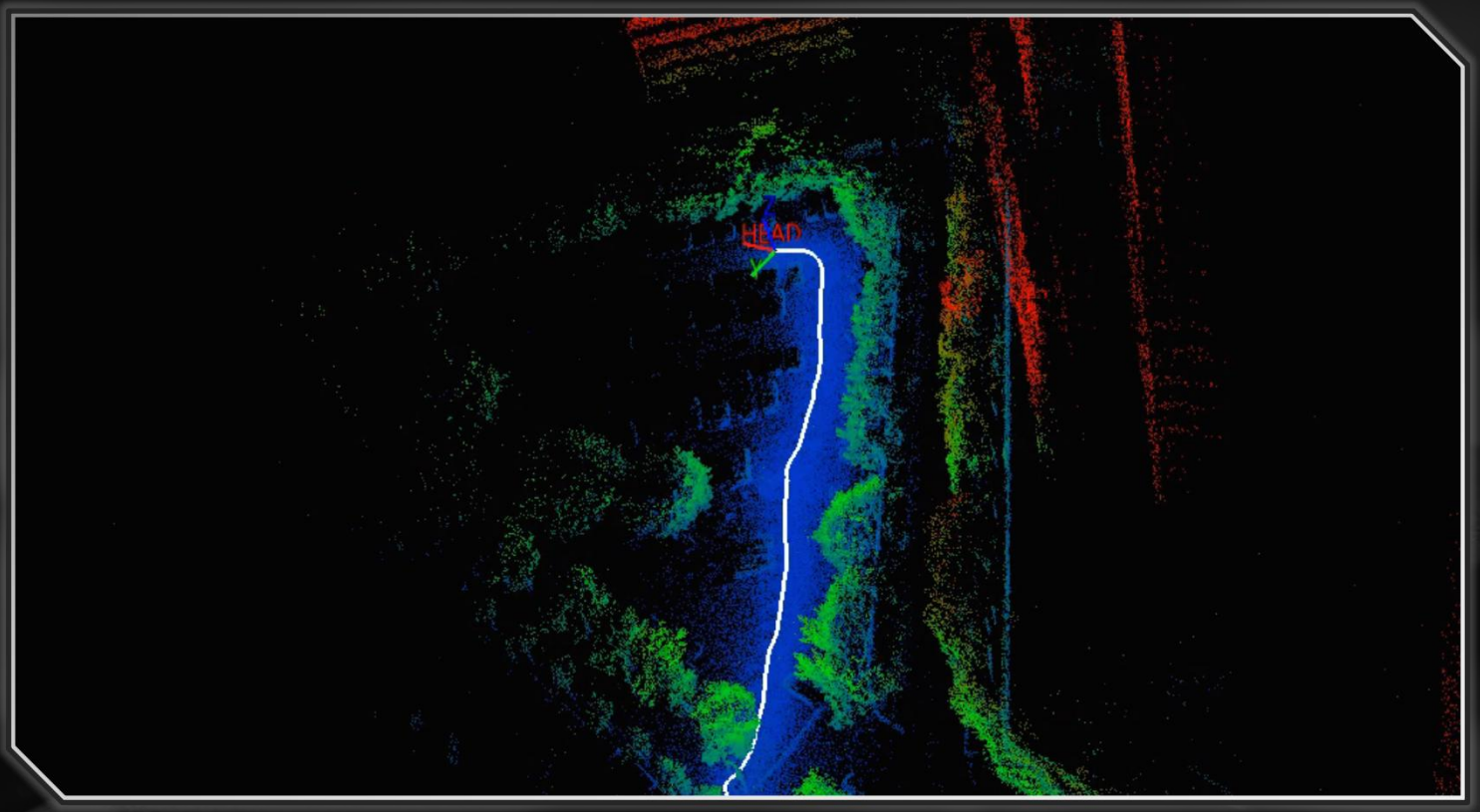
Write speed：250~280MB/s

Read speed：300~350MB/s

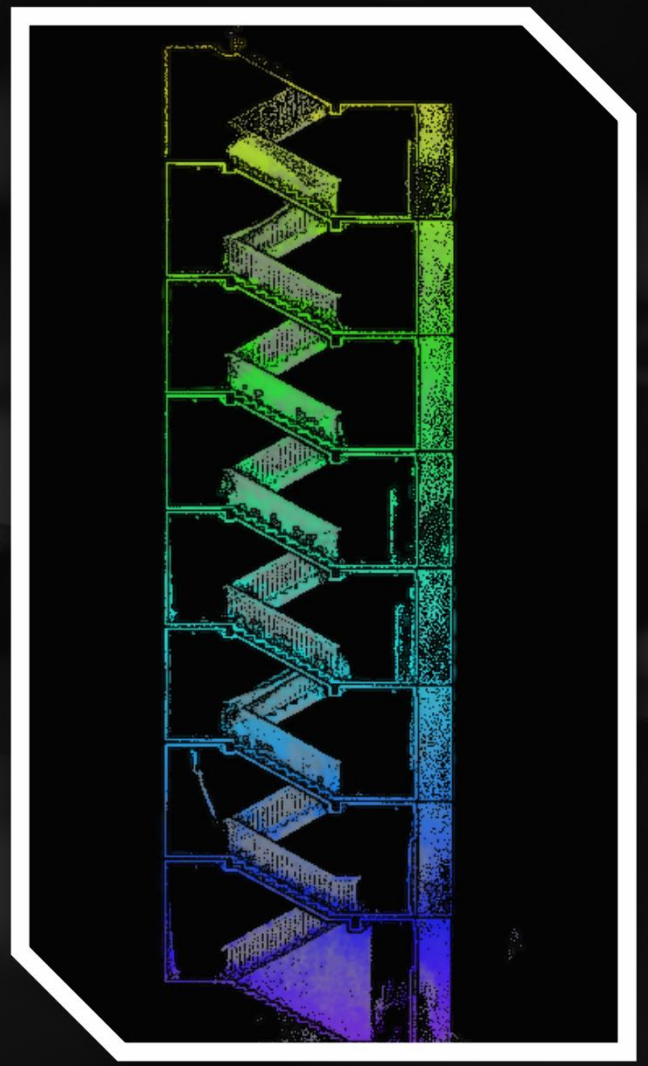
Endurance ： 2000 +

- Data storage is more secure, stable, and the data transmission speed is higher
- Support direct high-speed data copy when SLAM2000 is shut down

Real-time mapping



Based on the integrated high-performance computing unit, SLAM2000 can be real-time mapping. That is, map construction is in the process of data collection, and directly output the result data after data collection. More suitable for emergency rescue and other application scenes requiring the timely results.

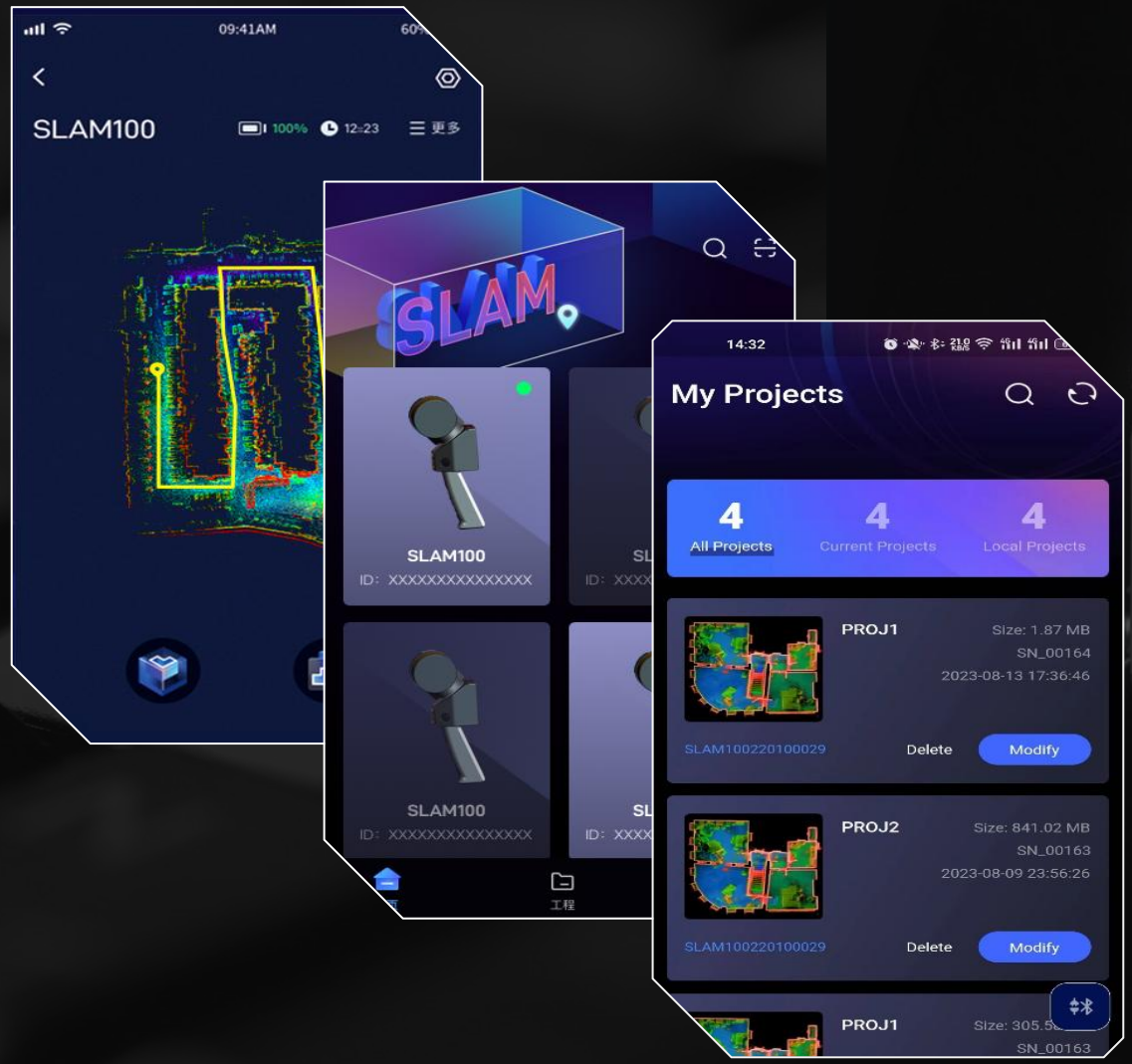


Real-time data of muti-story building

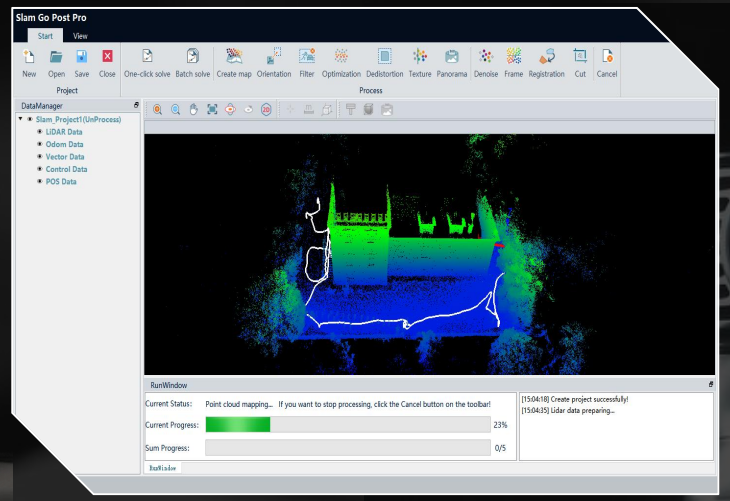
Software

SLAM GO

- Mobile APP
- Project management
- Parameter setting
- Real-time data display
- Firmware upgrading
- Maintenance

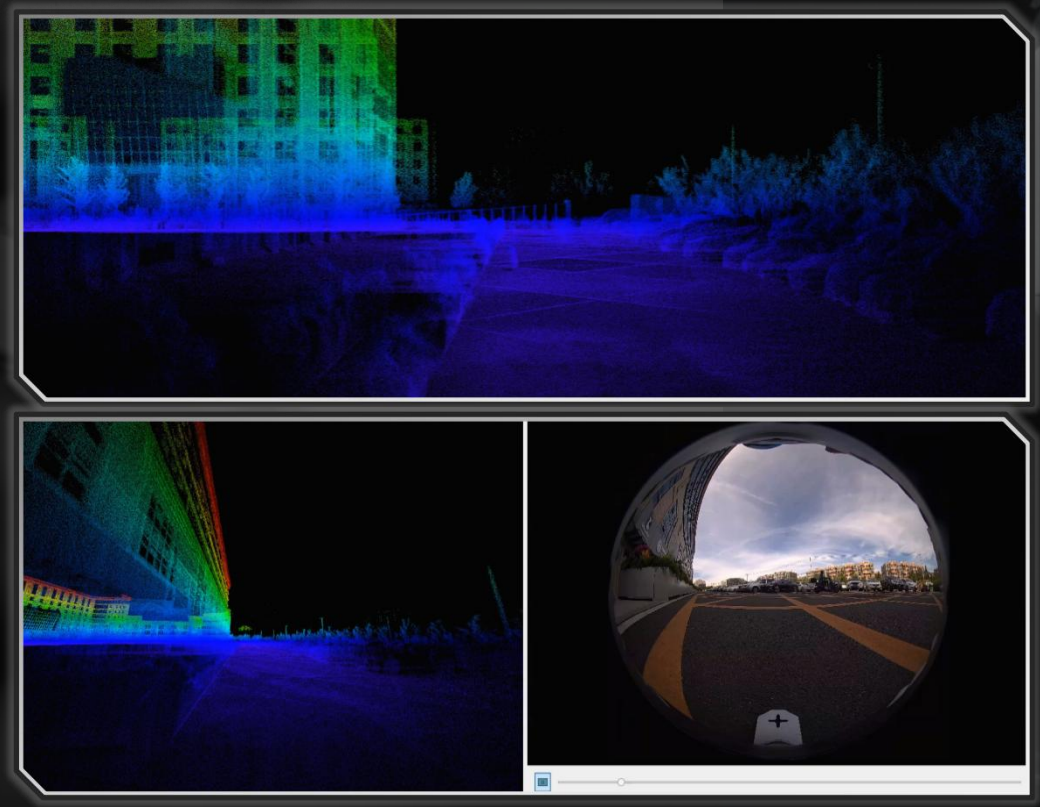


Software



SLAM GO POST

- PC software module
- Data post processing
- One-button slam mapping
- Point cloud coloring
- Point cloud browsing
- Data editing
- Data optimization
- Panoramic image generation



Methods for use

handheld

RTK

backpack

Static station

High precision coloring

Handheld mode

Handheld mode

Handheld mode

Static station mode

COMPARISON BETWEEN SLAM100 AND SLAM2000

	Range	Point frequency	Spot size	Camera	Battery	Weight
SLAM100	120m	320kHz	Smaller	5Mp x 3	18650 lithium battery x 4	1928g
SLAM2000	70m	200kHz	Small	12Mp	Intelligent battery handle	1450g

	Handheld	Airborne	Vehicle mounted	Extended pole	Static station	RTK	Backpack	Real-time mapping
SLAM100	√	√	√	√	x	√	√	x
SLAM2000	√	x	x	√	√	√	√	√

SLAM100

- Long range scanning（120m）
- High-precision data acquisition for both indoor and outdoor large scenes;
- Supporting airborne and vehicle-mounted data acquisition;
- Suitable for indoor and outdoor modeling, power line inspection, earthwork survey, topographic survey, landscape, forestry and other scenes

SLAM2000

- Short range scanning (70m);
- Focus on indoor high-precision data acquisition;
- Small outdoor scene data acquisition;
- Small cumulative error, more evenly distributed point cloud and better coloring effect;
- Suitable for indoor and outdoor modeling, earthwork survey, reverse engineering of large structures, landscape, forestry, etc.
- Real-time mapping, more suitable for emergency rescue;
- Not suitable for power line inspection and high building data acquisition;

Applications

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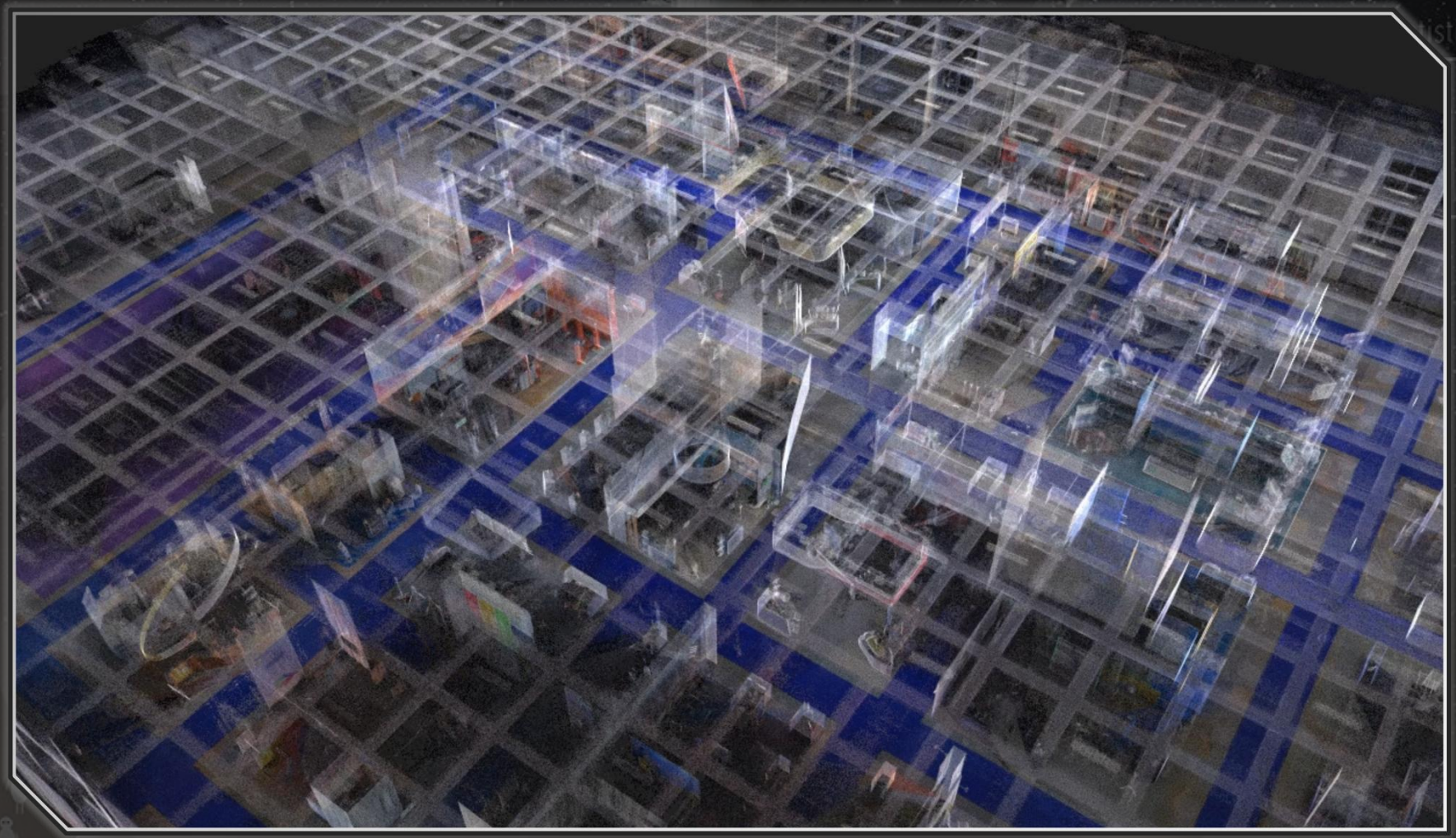
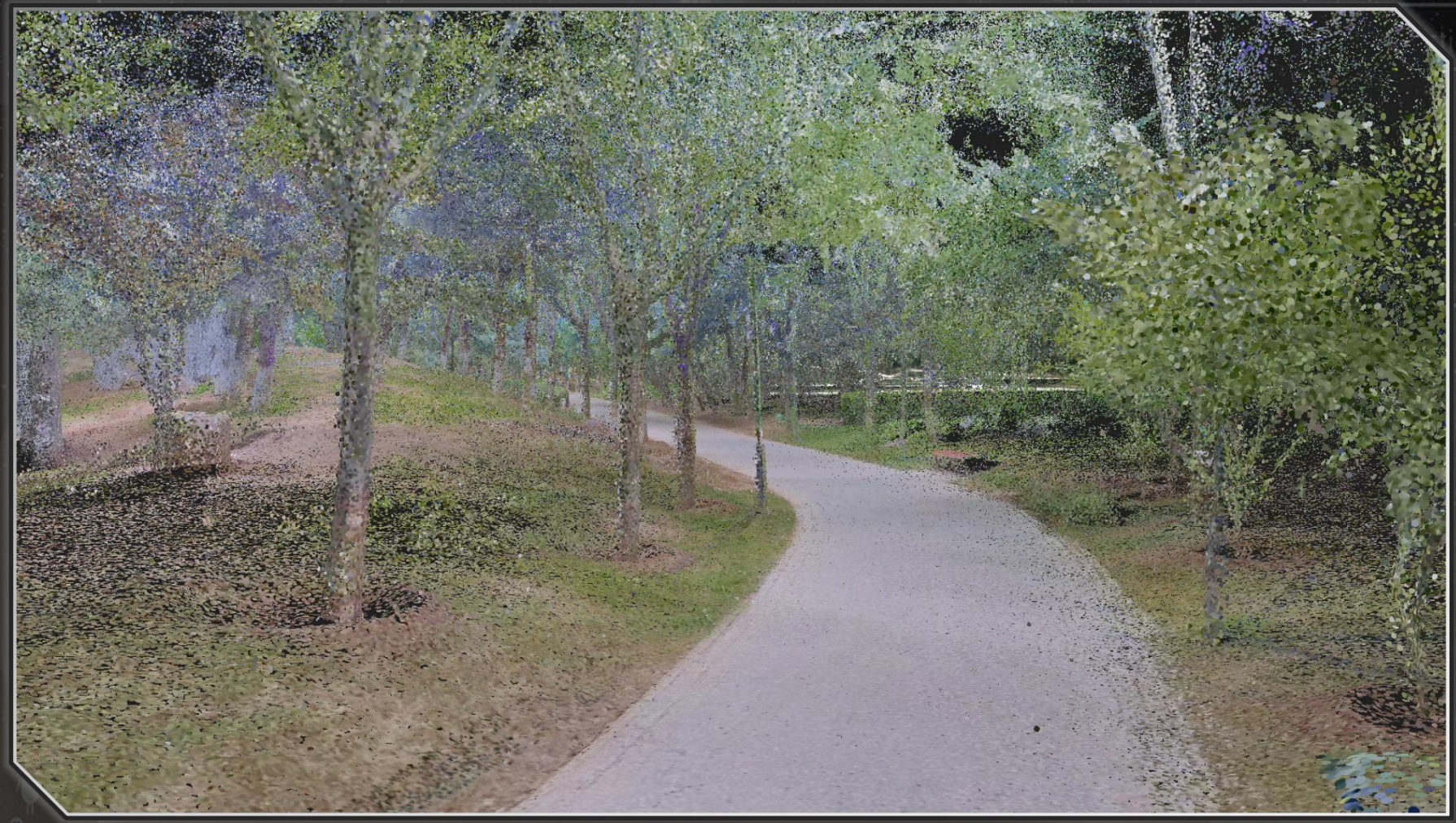


GARAGE

GARDEN



PARK

STREET & BUILDING

Thank you