SRS1



Share reality with unmatched speed and flexibility.

By leveraging LiDAR, visual, IMU, and RTK data, the Sokkia SRS1 professional SLAM scanner delivers stable, centimeter-level accuracy, even in areas where GNSS signals are weak or unavailable. High-fidelity point clouds and real-time colorized imaging ensure actionable results in a single workflow, minimizing return visits and rework.

- One person, one scanner. Walk the site and capture it all.
- Go from raw field data to final deliverables without the complexity.
- Get centimeter-level accuracy whether you're indoors, outdoors or underground.
- Adapt to the job with handheld, vehicle and drone mounting options.
- Process, share and deliver results through a complete MAGNET-connected workflow.

Specifications

System Parameters	
Absolute Accuracy	<3 cm (1.18 in.) [1]
Relative Accuracy	<1 cm (0.39 in.) [2]
Repeat Accuracy	<2 cm (0.79 in.) [3]
Horizontality/Verticality	<0.015° [4]
Power Supply Method	Lithium Battery Powered
Battery Capacity	3450 mAh
Single Battery Life	2 h [5]
Weight	2.2 kg (4.85 lbs) (with base, battery, and RTK module)
Dimensions	345 × 187 × 120 mm (13.58 x 7.36 x 4.72 in.)
Protection Level	IP64
Storage Capacity	512 GB SSD
Port	USB-C
Control Method	APP, Button
Firmware Upgrade Method	OTA, Offline
Operating Temperature	-20°C to 40°C (-4°F to 104°F)
Device Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Battery Storage Temperature	Recommended Storage Temperature: 22°C to 30°C (71.6°F to 86°F) [6]
LiDAR Sensor Parameters	
Laser	XT32
Scan Rate	640.000 pts/s
LiDAR Accuracy	0.5 cm (0.20 in.)
Safety Level	Class 1 (Eye-safe)
Laser Wavelength	905 nm
Detection Range	120 m (393.70 ft)
Field of view	Horizontal 280° , Vertical 360°
Camera Parameters	
Number of Cameras	5
Visual SLAM camera	1.3 MP × 2
Panoramic Camera	12 MP × 3
Frame Rate	Adjustable

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RTK Parameters	
Satellite Systems	BDS B1I, B2I, B3I, B1C, B2b GPS L1C/A, L2C, L2P(Y), L5 GLONASS G1, G2 Galileo E1, E5a, E5b, E6 QZSS L1C/A, L2C, L5 SBAS L1C/A
Channels	1408
RTK Differential Protocol	NTRIP
RTK Accuracy	Horizontal: 0.8 cm (0.31 in.) + 1 ppm Vertical: 1.5 cm (0.59 in.) + 1 ppm
Differential Data	RTCM V3.X
RTK Data Format	.rtk
IMU Parameters	
Output Frequency	200 Hz
Post-Processing Attitude Accuracy	Roll/Pitch: 0.003°, Heading: 0.01°
Post-Processing Position Accuracy	Horizontal: 0.005 m (1.97 in.), Vertical: 0.01 m (3.94 in.)
MAPPING METHOD	
Mapping Principles	MLF-SLAM, PPK-SLAM, RTK-SLAM, SLAM
Real-Time Colorization	Supported
Real-Time Processing	Supported

OUTPUT SPECIFICATIONS	
Colored Point Cloud	LAS
MESH	LOD-OSGB
Panoramic Image	JPG
Telescopic Pole Adapter	
Weight	300 g (0.66 lbs)
Supported Telescopic Pole Diameter	25-25.5 mm (0.98-1.00 in.) [7]
Frontpack Kit Parameters	
Weight	2.1 kg (4.63 lbs)
Outer Packaging Dimensions	560 × 340 × 160 mm (22.05 x 13.39 x 6.30 in.)
Backpack Kit Parameters	
Weight	3.9 kg (8.60 lbs)
Dual battery power display	Supported
Dimensions	580 × 303 × 145 mm (22.83 x 12.99 x 5.71 in.)
Hot Swap	Supported

[1, 2] *Deviations may occur in some scenarios.*
[3] *Two scans with GNSS, with GNSS disconnection not exceeding 100 meters.*
[4] *Requires measurement of absolutely horizontal and vertical objects such as building walls and interiors.*
[5] *Battery life tested at 20 °C without camera recording or RTK connection.*
[6] *20 °C to 45 °C for <1 month; -20 °C to 35 °C for >1 month.*
[7] *Only supports the outer diameter of the telescopic part in the range of 25-25.5 mm for RTK telescopic poles; The locking device does not support RTK telescopic poles with a protruding circular ring on the top contact surface.*

Specifications subject to change without notice.
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