# SRS2



## Share reality with unmatched speed and flexibility.

The Sokkia SRS2 combines MLF-SLAM (multiple localization fusion–SLAM), VSLAM (visual SLAM), and RTK-SLAM technologies. This integrated approach delivers stable, centimeter-level accuracy - even in areas where GNSS signals are weak or unavailable - by leveraging LiDAR, visual, IMU, and RTK data. High-fidelity point clouds and real-time colorized imaging ensure actionable results in a single workflow, minimizing return visits and rework.

- Capture data on the move with a truly portable solution.
- Simplify your workflow from field capture to final processing.
- Achieve survey-grade accuracy without the need for extensive setup.
- Scan diverse environments, from dense forests to urban canyons.
- Integrate seamlessly with Magnet software for a complete solution.

## Specifications

| System Parameters | |
|---|---|
| Absolute Accuracy | <3 cm (1.18 in.) [1] |
| Relative Accuracy | <2 cm (0.79 in.) [2] |
| Repeat Accuracy | <2 cm (0.79 in.) [3] |
| Horizontality/Verticality | <0.025° [4] |
| Power Supply Method | Lithium Battery Powered |
| Battery Capacity | 3450 mAh |
| Single Battery Life | 2 h [5] |
| Weight | 1.3 kg (2.87 lbs) (with base, battery, and RTK module) |
| Dimensions | 345×187×120 mm (13.58x7.36x4.72 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:<br>22°C to 30°C (71.6°F to 86°F) [6] |
| **LiDAR Sensor Parameters** | |
| Laser | Mid360 |
| Scan Rate | 200,000 pts/s |
| LiDAR Accuracy | 2 cm (0.79 in.) |
| Safety Level | Class 1 (Eye-safe) |
| Laser Wavelength | 905 nm |
| Detection Range | 40 m (131.23 ft) @ 10% reflectivity;<br>70 m (229.66 ft) @ 80% reflectivity |
| Field of view | Horizontal 360 ° , Vertical -7° to 52° |
| **Camera Parameters** | |
| Number of Cameras | 4 |
| Visual SLAM camera | 1.3 MP × 2 |
| Panoramic Camera | 12 MP × 2 |
| Frame Rate | Adjustable |

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| RTK Parameters | |
|---|---|
| Satellite Systems | BDS B1I, B2I, B3I, B1C, B2b<br>GPS L1C/A, L2C, L2P(Y), L5<br>GLONASS G1, G2<br>Galileo E1, E5a, E5b, E6<br>QZSS L1C/A, L2C, L5<br>SBAS L1C/A |
| Channels | 1408 |
| RTK Differential Protocol | NTRIP |
| RTK Accuracy | Horizontal: 0.8 cm (0.31 in.) + 1 ppm<br>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: 0.005°,<br>Heading: 0.01° |
| Post-Processing Position Accuracy | Horizontal: 0.01 m (3.94 in.),<br>Vertical: 0.02 m (7.87 in.) |
| **MAPPING METHOD** | |
| Mapping Principles | MLF-SLAM, PPK-SLAM,<br>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 (22.05x13.39x6.30 in.) |
| **Backpack Kit Parameters** | |
| Weight | 3.9 kg (8.60 lbs) |
| Dual battery power display | Supported |
| Dimensions | 580×303×145 mm (22.83x12.99x5.71 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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