SurphSLAM powered by GeoSLAM

Mobile scanning for the real world - continuous realtime registration and rendering for indoor and outdoor environments

SurphSLAM 10

- Based on Surphaser 3D laser scanner model 10 and GeoSLAM RealTime Software
- Works anywhere - seamlessly transition between indoors and outdoors, on uneven and sloping terrain
- Realtime feedback - see the map being built as you walk, see your path and plan where you need to go
- Instant results - review and download the fully registered point cloud after every scan

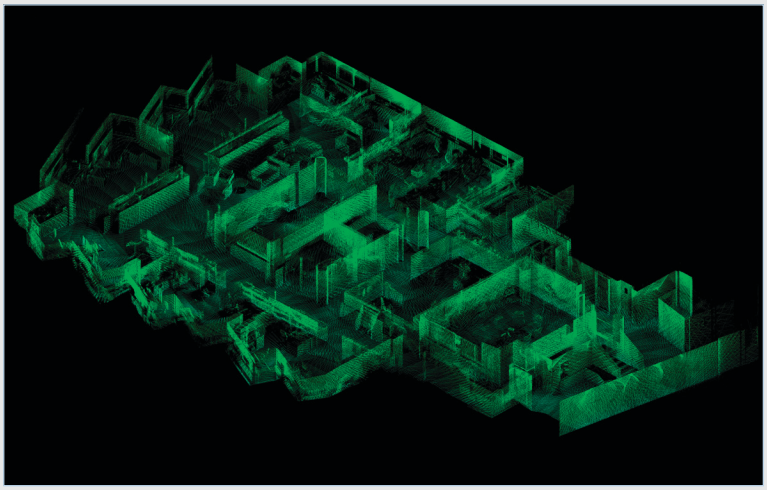


Street scene: distance 521.99 m, scanning and registration time 9.1 mins



Points: 24,437,438
Bounding box:
length: 187.30m, xmin: -91.65m, xmax: 95.65m
width: 45.73m, ymin: -16.31m, ymax: 29.41m
height: 3.21m, zmin: -3.15m, zmax: 0.06m
Average speed 0.96m/s

Office: distance 283.70m, scanning and registration time 7.7 mins



Points: 21,130,810
Bounding box:
length: 27.22m, xmin: -1.35m, xmax: 25.87m
width:19.69m, ymin: -1.18m, ymax: 18.51m
height: 0.06m, zmin: 0.02m, zmax: 0.08m
Average speed 0.61m/s

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System Specification

Laser Sensor

Surphaser Model 10

Range measurement	Phase shift
Laser Wavelength	1550nm
Laser Type	CW
Laser Class	Class 1
Maximum Range	130m
Angular FOV	270° x 360°
Data Acquisition Rate	208,000 points/sec

Operating Parameters

Scanner Mirror Speed	90Hz
Scanner Lateral Density	2° azimuth @0.5Hz azimuth 6 points/deg vertical
Recommended maximum speed	1m/s
Azimuth Rotation Speed	0.1-0.5Hz
Operating Temperature	5°C to +40°C

Physical Parameters

Weight	17.5kg Scanner 5.0kg Trolley 8.0kg Battery pack 4.5kg
Dimensions L x W x H	80cm x 50cm x 120cm

User Interface

Interface screen	Any device with WiFi and WebGL-enabled web browser

Power consumption

Scanner	30W 14-19VDC
Processing Unit	55W

Power supply

Battery Type	Lithium Ion
Battery Capacity	90Wh each
No. batteries	4
Hot swappable	Yes
Battery Life	4 hours (continuous use)
Charge Time	2 hours (using provided 250W DC supply)

Data

Data Storage Capacity	350GB
Raw data file size	~100MB for every 1 min scanning
Processed data file size	~10MB-20MB for every 1 min scanning
Default output file format	.LAZ (compressed .LAS)

Accuracy

Local Accuracy, better than	1cm
Absolute Position Accuracy*	1 – 5cm (10 mins scanning, 1 loop)

** Expected accuracy range in feature rich environment.*

Preliminary