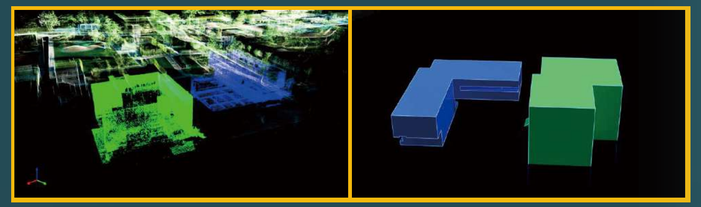
Parametric Reconstruction

An intelligent point cloud registration algorithm based on feature extraction and matching generates the vectorized, lightweight, and editable parametric 3D model automatically.



One-stop Workflow

Various types of functions include multi-map registration, volume calculation, distance measurement, mileage statistics, track editing, and offline generation of mesh.

Application

Topographic Mapping

Agriculture & Forestry Survey

Engineering Survey

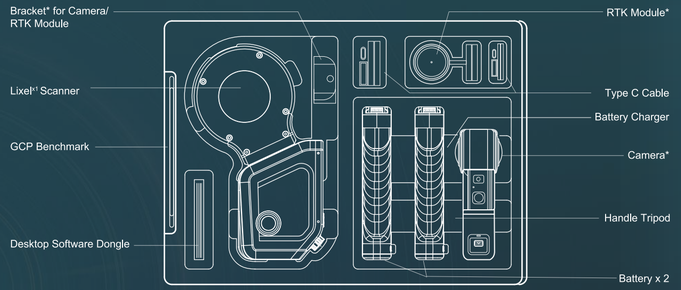
Emergency Mapping

Volume Calculation

Underground Space Mapping

Technical Specifications

Operation Range	0.05 - 120 m
Laser	Class 1 / 905 nm
Channels of Resolution	16
Accuracy	＜2 cm
FOV	360 x 270°
Points/s	320,000
Processing	Real-time processing
Display	Live streaming point cloud
Carrier	Handheld / Backpack / UAV
Scanner Weight & Size	＜1.9 kg (with battery), 138×90×381 mm
Camera	Wide field×1, positioning×3
Operation Temperature	-20°C - 50°C
Battery Life	1.5 h
Single Scanning Time	60 min
Ingress Protection	IP54
Storage Capacity	1T SSD
Point Cloud Format	.las, .laz
Power Supply	V-mount 46.8 Wh, 14.4 V battery
Power Consumption	＜30 w



*Optional

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SATLAB GEOSOLUTIONS

Lixel^x1

Handheld SLAM Scanner

Made by Sweden

Lixel^{X1} Handheld SLAM Scanner

Lixel X1 real scene 3D reconstruction scanner – a compact, powerful, and precise LiDAR scanner for capturing real-world scenes and generating detailed 3D models instantly without post-processing.

Powered by advanced SLAM technology, this lightweight and integrated device offers real-time data capture and immediate data preview.

Fast Capturing and Real Time Modelling

Utilizing real-time data decoding and modeling technology, point cloud data is immediately generated within a mere 5 seconds inside the scanner right after scanning. This allows for the immediate monitoring of reconstruction effects in the LixelGo software, ensuring high-quality data.

United Design and Minimal Operation

Lixel^{X1}'s integrated design of LiDAR, visible-light camera, motion camera, high-precision inertial navigation technology, and high performance computing eliminates the tedious operation steps and makes your scan easier and simple. And the complex structure is of excellent heat-sinking capability.

Long-term Continuous Operation Breakpoint Scanning

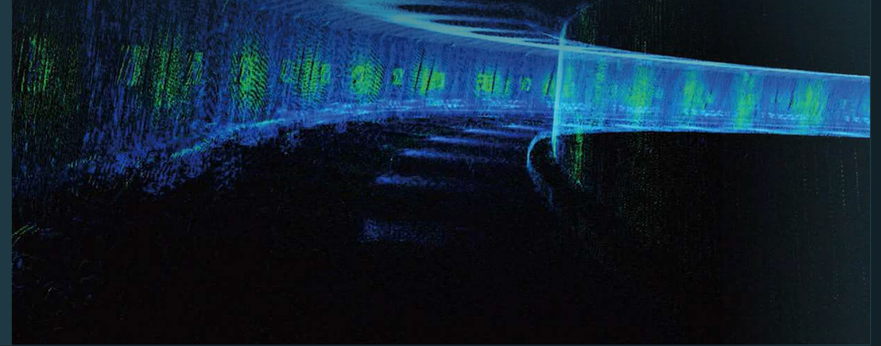
60 minutes of ultra-long continuous operation time and high capability in resuming the scanning from the break-point.
No need for segmented scanning in large scenes and greatly improves the efficiency of measurement and data analysis.

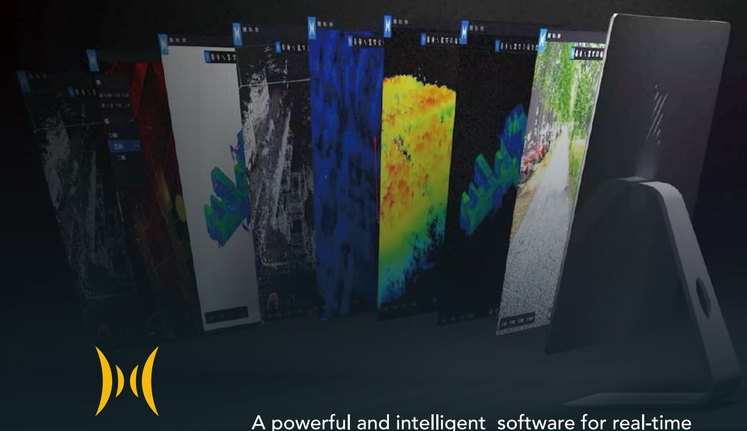
Real-time Color Rendering

High-precision vision and laser fusion technology generate true color point clouds in real-time to twin the real world.

Robust and Reliable

With the industry-level of SLAM algorithm, the Lixel^{X1} is used to generate high-precision point clouds for complicated areas like long corridors, tunnels, etc., and largely improves the stability of mapping for weak texture scenes.
Moreover, the cumulative error of multi-source data can be reduced significantly by combining the software solution.





LixelStudio

A powerful and intelligent software for real-time 3D modeling, viewing, and post-processing.

Everything is Monomer

Point cloud segmentation, semantic recognition, and editing of scenes and objects based on the deep learning of neural networks algorithm to perform sophisticated extraction of monomer.