The SLAM200E is a high-precision, high-performance, and high-efficiency handheld laser scanner meticulously developed by Feima Robotics. It combines the defining strengths of its predecessors the SLAM100 and SLAM200 into a single, powerful platform.Equipped with a high-frequency LiDAR sensor, dual 12MP panoramic cameras, a built-in high-precision GNSS module, and a high-performance onboard computing unit, the SLAM200E delivers a groundbreaking experience in spatial data acquisition.

Main body

Weight	1.6 kg (Scanner) 2.1 kg (With battery and base)
Dimensions	404 mm × 170 mm × 118 mm (With battery and base)
Power consumption	26 W
Storage	512 G SSD
Lithium battery	SP30
Lithium battery endurance	70 min（only SLAM200E）
Operating temperature	-20°C ~ 50°C
Humidity	< 95%
Protection class	IP54

Camera

Resolution	12 M pixel × 2
FOV	210°（Per camera）

Interface

Type-C1	Charge \ OTG \ 20V external power
Type-C2	SSD
Wi-Fi	Supported
Bluetooth	Supported

High-precision IMU

Bias Instability	0.5°/ h (Allan Variance @ 25°C)
Angle Random Walk (ARW)	0.025°/ √ hr

Real-time result accuracy

Absolutely accuracy (RMSE)	3 cm
Relative accuracy (RMSE)	2 cm @ 100 m
Point cloud thickness (noise)	2 cm

GNSS module

Satellite system	GPS \ GLONASS \ GALILEO \ BDS \ QZSS
Positioning Accuracy (RTK)	Horizontal：0.8 cm + 1 ppm Vertical：1.5 cm + 1 ppm

Laser

Wavelength	905 nm
Laser class	Class 1
Range	0.05 m ~ 120 m
FOV	360°H, 270°V
Point frequency	320 kpts/s (16 laser lines version) 640 kpts/s (32 laser lines version)

Post-processing result accuracy

Absolutely accuracy (RMSE)	2 cm（Typical）
Relative accuracy (RMSE)	Handheld Mode, Control Point-Assisted Mode[1] 1 cm @ 100 m　5 mm @ 60 m
Repeat accuracy (RMSE)	2 cm（Two uninterrupted RTK scans）
Point cloud thickness (noise)	0.5 cm (Point cloud planar thickness within 50 m of the odometry center)

[1] Relative accuracy: Typical test environment within 100m × 100m.
In RTK mode, the relative accuracy depends on the quality of RTK data and the field environment.

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Features

Ultra-High Precision Measurements within Millimeter Range

As a professional-grade high-precision mobile mapping tool, the SLAM200E supports relative accuracy of 5 mm within a 60-meter range and 1 cm within a 100-meter range. When connected to an RTK module or integrated with GCP, it can achieve absolute accuracy of up to 3 cm.

Real-Time Mapping with Absolute Reference Coordinates

The SLAM200E delivers instant, high-precision, and colored point clouds, providing intuitive and detailed mapping results.When connected to RTK, the device outputs point clouds with absolute coordinates in real time, significantly enhancing operational efficiency.

High-Precision 3D Scene Reconstruction

The SLAM200E combines high-precision point cloud capture with high-resolution texture data acquisition, enabling accurate 3D scene reconstruction through both geometry and imagery.

Instant Measurement

Released alongside the SLAM200E, SLAM Instant APP provides instant measurement solutions across multiple environments. Once real-time point cloud results are captured in the field, industry-ready reports can be generated on site within minutes.

Gaussian Splatting(3DGS)

Leveraging panoramic imagery, the SLAM200E supports large-scale Gaussian Splatting generation, visualization, and application. Both the outputs and intermediate process data adopt open, general formats for easy interoperability with third-party platforms.

Multi-platform Mounting

The SLAM200E supports a modular, cross-platform, multi-mission workflow, seamlessly adapting to UAV, backpack, vehicle-mount, chest mount, and tripod configurations.

Software

SLAM GO App

SLAM GO is the data collection app for Feima Robotics' handheld laser scanners, compatible with both Android and iOS systems.This APP establishes a stable connection with SLAM200E through WiFi,SLAM200E can share mobile network, the APP provides convenient data collection and control, as well as powerful results management functions.

SLAM GO POST Pro

SLAM GO POST Pro is a PC software that comes with the handheld laser scanners from Feima Robotics, embedded in the UAVmanager. The software supports post-processing of SLAM200E collected data, enabling the generation of high-precision, high-resolution colored point clouds and localized panoramic images. It also allows for point cloud visualization and optimization.

SLAM Instant App

SLAM Instant App is a specialized tool developed by Feima Robotics for real-time measurement in the field. It can be installed on Android tablets to enable quick measurement and industry-specific measurement report generation after completing field data collection.

Applications