

AScan**X1**

Turn Motion into Reality



70 m

Scanning Range

200 K pts/s

Measurement Rate

1 cm

Relative Accuracy

5 cm

Absolute Accuracy

AScan X1

Professional Handheld SLAM Scanner

APEKS AScan X1 is a professional handheld SLAM scanner designed for fast, accurate and efficient 3D reality capture.

Equipped with a 40-line high-density LiDAR, high-precision IMU, GNSS positioning and multi-camera imaging, it delivers key-specifications:

- Up to 70 m scanning range
- 200,000 points per second
- 1 cm relative accuracy

With a $360^{\circ} \times 59^{\circ}$ field of view, AScan X1 captures dense, detailed and colorized point clouds while moving, providing reliable 3D mapping for complex indoor and outdoor environments.



GNSS-Enhanced 3D Mapping

Combining SLAM with 1408-channel GNSS for reliable 3D positioning. RTK provides accurate absolute positioning and georeferencing for outdoor mapping.



Integrated Field Design

AScan X1 integrates LiDAR, IMU and cameras into one compact handheld scanner, delivering a streamlined solution for efficient 3D data capture.



Long-Lasting Battery

With a 47.52Wh battery and up to 2.5 hours of scanning time, AScan X1 keeps your fieldwork moving with fewer interruptions.



Smart Storage & Data Transfer

With a built-in 256 GB SSD and USB 3.0 connectivity, AScan X1 offers ample storage and fast, convenient data transfer for efficient field workflows.





APEKS-LIVE

Real-Time SLAM Field Software

Capture & Control in the Field



01 | Live 3D View

Visualize point clouds in real time while scanning.

02 | Smart Field Control

Monitor scanner status and manage scan settings from your phone.

03 | Measure on the Go

Measure points, distances and areas directly from the captured scene.

04 | RTK & Control Points

Add positioning and control points for georeferenced SLAM projects.

05 | Review & Export

Review projects and export DXF data directly in the field.

APEKS-CORE

Professional SLAM Point Cloud
Post Processing Software

Process & Deliver on Your PC



01 | Multi-Scan Registration

Combine multiple scans into one complete 3D scene.

02 | Point Cloud Optimization

Clean noise, refine structures and preserve 3D details.

03 | RTK & GCP Georeferencing

Bring SLAM data into real-world coordinates.

04 | Measure, Model & Export

Measure, generate meshes and export professional CAD & point cloud data.

Laser Scanner

Laser class	Class 1 Eye Safe
Max. Measure Range	40m @ 10% reflectivity 70m @ 80% reflectivity
Field of view	360°x 59°
Wavelength	905nm
Point Measure Rate	200,000 points per second
Channel	40 lines
Relative Accuracy	1cm
Absolute Accuracy	5cm

Camera

Number of cameras	3
Camera type	Global shutter
Resolution	2MP
Field of view	300°(H) × 101°(V)

POSITIONING SYSTEM

GNSS channels	1408
Satellite tracking	• GPS: L1C/A, L1C, L2C, L2P(Y), L5 • BDS: B1I, B2I, B3I, B1C, B2a, B2b • GLONASS: L1,L2,L3* • Galileo: E1, E5a, E5b, E6 • QZSS: L1C/A, L1C, L2C, L5, L6 • SBAS: L1C/A
RTK accuracy	• H: 8 mm + 1 ppm RMS • V: 15 mm+ 1 ppm RMS
IMU	High-Precision IMU

General System Performance

Charging	Charges via a Type-C port with 30W charging power supports simultaneous charging and operation.
Battery capacity	47.52Wh,3300mAh/14.4V
Working time from a single battery	about 2.5H
Data storage	Built-in SSD, 256 GB
Data Transfer	USE3.0
Size	115mm(L)x94mm(W)x194mm(H)
Weight(with Battery Handle)	1.5kg
Operating temperature	-10~40°C
Ingress protection	IP64 (according to IEC 60529)

DATA OUTPUT

Point Cloud (colorized)	.las, .laz, .e57, .pcd
Mesh (colorized)	.ply, .obj

Software

APEKS-LIVE	Data acquisition control, Real-time point cloud display,etc.
APEKS-CORE	POS Processing, Adjustment & Refine ment, Point Cloud Generation,3D Modeling. Supports Colorized Point Clouds, 3D Mesh Models, and 3D Gaussian Splatting (3DGS) Outputs.



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