

Parameters

Series	K120	Scanning Principle	360°mechanical rotation of laser sensor during operation
Model Version	K120, K120s	Shell Material	Aviation-grade aluminum, high protection, high anti-interference capability
Laser Sensor	16-lines (K120), 32-lines (K120s)	Weight	1.9kg (Handheld unit only)
Effective Scanning Rate	Maximum 320,000 or 640,000 points/sec ①	Size	262x230x146mm (Handheld unit only)
Laser Safety Level	CLASS 1 (IEC 60825-1:2014), Safe and Visible	System Power Consumption	20w
Laser Wavelength	905nm	Mode of Power Supply	External lithium battery, dual battery redundant power supply, hot swappable
Mode of Echoing	8-bit, Dual Echo	Battery Performance	DC 14.4V, 6875Ah, 99Wh
Scanning Distance	0.05 ~ 120m,	Endurance Time	Single battery ≥2 hours, Dual batteries ≥4 hours
Scanning Frequency	10Hz	Protection Level	IP54
Field of View	360°x285° (Horizontal x Vertical)	Environment	-20~65°C (working), -40~85°C (storage)
Horizontal Angular Resolution	0.18°(10 Hz)	Device Connection	Wi-Fi and/ or Ethernet cable
Vertical Angular Resolution	2°	Data Storage	Built-in SSD 512GB (can be customized and expanded); removable SD card 128GB
Relative Accuracy	The highest accuracy can be 1cm	Data Download	By Ethernet cable or SD card or wifi
GNSS Differential	GPS, Glonass,BDS, Galileo, IRNSS, SBAS, QZSS	Panoramic Camera	Two cameras, 360°, photo pixels 18 MP, video pixels 5.7k
Signal Tracking	555 Channels	Software Configuration	Mobile: K-SLAM PC: KOLIDA SLAM OFFICE
RTK Assisted Positioning	Horizontal positioning accuracy RMS 1cm+1ppm	Processing Method	Post-processing by PC
CORS Access	Built-in Nano SIM card slot, able to access to CORS network	Processing Time	Same or twice as much as the data collecting time
Positioning Data Refreshing Rate	Maximum 100Hz		
Absolute Accuracy	≤ 5cm		
Mileage Accumulation Error	0.1%~0.2% (Without closed loop)		

Note:

- ① If you need to increase the point frequency, you can customize and upgrade to 32-line laser sensor, which can reach up to 640,000 points/second. The corresponding series name is K-120s.
- ② The parameters such as GNSS differential and absolute accuracy are only applicable to the standard and professional version. In outdoor scenes with good GPS satellite signals coverage, it is recommended to use GNSS RTK for positioning, which can allow you to skip control-point recording and coordinate system conversion.

Version & Optional

Version	K120	K120 Pro
Handheld Scanner	√	√
Control point measurement key	√	√
Built-in GNSS module	√	√
Rod-shaped GNSS Antenna	√	√
Screen Display	√	√
Mobile phone Holder	√	√
Mobile APP	√	√
360° Panoramic camera	Optional	Optional
Fill Light ①	Optional	Optional
Backpack Kit	—	√②
AI Robot Dog kit ③	Optional	Optional
Unmanned Boat Kit ③	Optional	Optional
Car Kit ③	Optional	Optional
UAV kit ③	Optional	Optional

Note:

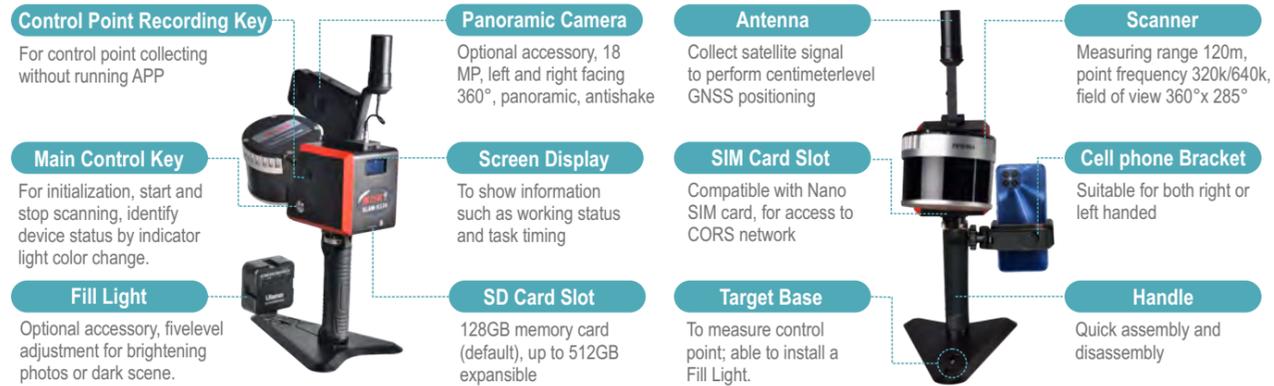
- ① The Fill Light and the 360° panoramic camera are bundled as a visual module kit. The Fill Light can provide supplementary lighting for photos or illumination in low-light scenarios.
- ② The backpack kit contains a dish antenna and a radio-frequency cable. This backpack is a multi-functional combination, that is, one backpack provides two operation methods (Handheld + Backpack) and also has a storage function. Say goodbye to the traditional trolley case or suitcase, free your hands, and make it easier for one-man operations.
- ③ AI robot dog kit, USV kit, car kit and drone kit can be ordered separately as optional accessories.



K120

Capture the reality effortlessly

Handheld Scanner Unit



Carrying Platforms



Indoor and outdoor and underground space operation, collect point cloud where you are.



Lightweight and easy-to-carry, suitable for indoor and outdoor combining collection.



Wirelessly scanning potential dangerous areas, remote control and visible.



Measure water depth and supplement information of both sides of the river shore, enrich the results.



Indoor and outdoor and underground space operation, collect point cloud where you are.



Outdoor data collection for top of buildings.

Packing List



A Scanner (Handle, Target Base)	1	B GNSS Antenna (with a short Radio-Frequency Cable)	1
C Mobile Phone Bracket Main	1	D Shoulder Strap	1
E Cable	1	F Battery Compartment Cover	1
G Lithium Battery	2	H Charger & Cable	1
I Ethernet Cable	1	J USB Flash Drive	1
K Micro SD Card	1	L Card Reader	1
M Cleaning Cloth	1	N Carrying Box	1
O Panoramic Camera(Optional)	1	P Fill Light & Charging Cable (Optional)	1

Note: This list is only for the standard version, without accessories of backpack kit and other kits.

App & Software



RobotSLAM Palm

- CORS Settings
- Task Timing
- Status Display
- Memory View
- Acquisition Control
- Device Registration

RobotSLAM Engine

- Seven-parameter Coordinate Transformation
- Manual or Fully Automatic Optimization Matching
- Billion-level Point Cloud Opens in Seconds
- RTK data used in processing and Loop Closure Detection
- Replay & Adjustment of Processing Procedures
- Time/elevation/intensity/X-Ray and other modes of rendering
- Panoramic Image Overlay Point Cloud Browsing
- Plane & Elevation Accuracy Check
- Point Cloud Denoising
- Multi-view Display
- Point Cloud Classification
- Point Cloud Stitching
- Point Cloud Coloring
- 3D Measurement
- Mining Application Module



Application Scenario

