Parameters

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

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	\checkmark		
Control point measurement key	\checkmark	\checkmark	
Built-in GNSS module	\checkmark	\checkmark	
Rod-shaped GNSS Antenna	\checkmark	\checkmark	
Screen Display	\checkmark	\checkmark	
Mobile phone Holder	\checkmark	\checkmark	
Mobile APP	\checkmark	\checkmark	
360° Panoramic camera	Optional	Optional	
Fill Light ①	Optional	Optional	
Backpack Kit		$\sqrt{2}$	
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.

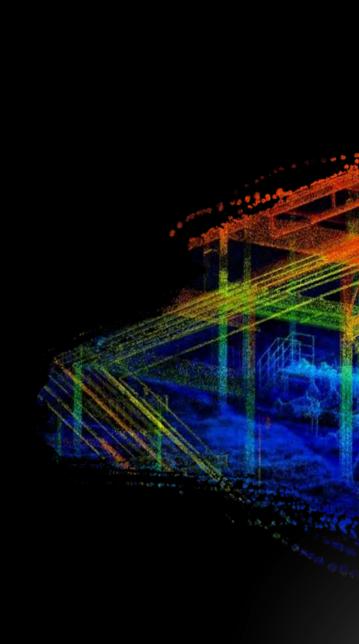
② The backpack kit contains a dish antenna and a radio-frequency cable. This backpack is a multi-functional combination, that is, one backpack provides two operation methods (Handheld + Backpack) and also has a storage function. Say goodbye to the traditional trolley case or suitcase, free your hands, and make it easier for one-man operations.

③ Al robot dog kit, USV kit, car kit and drone kit can be ordered separately as optional accessories.



GUANGDONG KOLIDA INSTRUMENT CO., LTD.

Add: 7/F, South Geo-information Industrial Park, No.39 Si Cheng Road, Tian He IBD, Guangzhou 510663, China Tel: +86-20-22139033 Fax: +86-20-22139032 Email: export@kolidainstrument.com market@kolidainstrument.com http://www.kolidainstrument.com



K120

Capture the reality effortlessly





Handheld Scanner Unit

Carrying Platforms

Handheld

collect point cloud where you are.

Al Robot Dog

remote control and visible.

Car

collect point cloud where you are.

Wirelessly scanning potential dangerous areas,

Indoor and outdoor and underground space operation,

Indoor and outdoor and underground space operation,

Control Point Recording Key Panoramic Camera Antenna Scanner For control point collecting Optional accessory, 18 Collect satellite signal Measuring range 120m, MP, left and right facing to perform centimeterlevel point frequency 320k/640k, without running APP field of view 360°x 285° 360°, panoramic, antishake GNSS positioning SIM Card Slot Cell phone Bracket Main Control Kev Screen Display For initialization, start and To show information Compatible with Nano Suitable for both right or SIM card, for access to left handed stop scanning, identify such as working status CORS network device status by indicator and task timing light color change. Fill Light SD Card Slot Target Base Handle Optional accessory, fivelevel 128GB memory card To measure control Quick assembly and adjustment for brightening point; able to install a (default), up to 512GB disassembly photos or dark scene. Fill Light. expansible

App & Software





COLIDA SLAM OFFI



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



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



Outdoor data collection for top of buildings.

Application Scenario









Ĥ

Pipeline Survey

Mine Tunnel Modeling

Underground Ancient Garage Survey Buildings Survey

Packing List



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

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

RobotSLAM Palm

- · 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









Surveying



Police Forensics



Subway-platform Measurement

(D) Firefighting Application