

Lixel K2

User Manual(V1.0)

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1 Product Overview

The **Lixel K2** is a fixed type lightweight real-time 3D reconstruction device developed by Qiyu Innovation. It is designed for precision spatial data acquisition and scanning applications.

2 Basic Device Operations

2.1 Battery Installation

1. Press the battery latch.
2. Insert the battery into the bottom of the device and ensure it is fully seated.
3. Release the latch and confirm that the battery is securely locked in place.

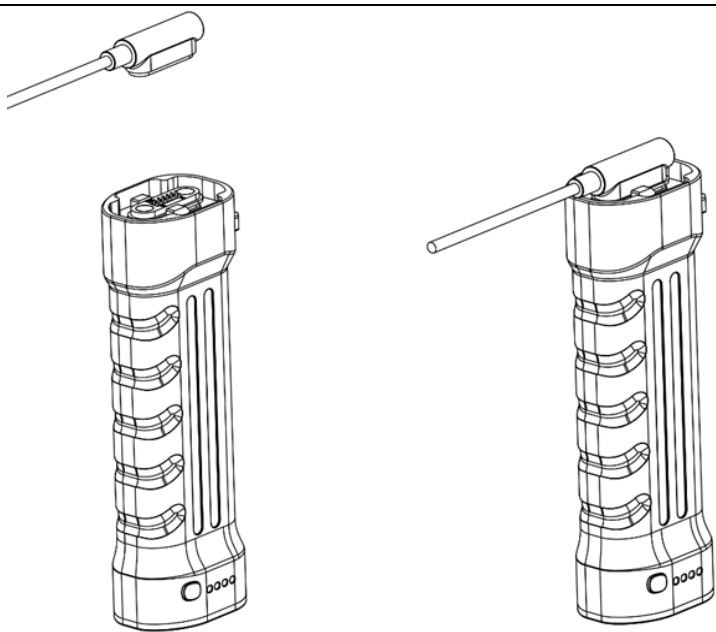
Caution: Failure to properly lock the battery may cause the device to fall.

2.2 Base Installation

A threaded mounting hole is located at the bottom of the battery handle. Attach the device to the base, tighten the bottom screw securely, and place the device on a flat surface.

2.3 Battery charging

Use the provided charging cable, connect the charging adapter to the battery, once the indicator light starts flashing, the battery is charging.



Battery full charge time: about 2 hours. During the charging process, the indicator light indicates the current battery level. Please refer to the table below for details.

Flashing Pattern	Battery Level
	0-24%
	25%-49%
	50%-74%
	75%-99%

2.4 Function key operation

Function	Button Operation	Device Status
Power On	Press and hold for 4 seconds	The indicator light will change from slow flashing blue to solid green, indicating the device has entered standby mode.
Power Off	Press and hold for 4 seconds	While in standby mode, long press for 4 seconds. The indicator light will change from solid green to flashing white, indicating the system is saving data. The device powers off once the indicator turns off.

Start Scanning	In standby mode, double-click the button.	The indicator light will switch from solid green to fast-flashing green, then slow-flashing green. The LiDAR will begin to rotate, indicating that scanning has successfully started, and the device has entered scanning mode.
Stop Scanning	In scanning mode, double-click the button.	The indicator light will change from slow-flashing green to fast-flashing green, then solid green. The LiDAR will stop rotating, indicating that scanning has successfully stopped, and the device has returned to standby mode.
Control Point Collection	In scanning mode, single-click the button.	The indicator light will stay on for about 1 second, then return to slow-flashing green. This indicates successful control point recording.
Switch to USB Mode	In standby mode, single-click + indicator light turns white + single-click	After a single click, the indicator light will turn white and remain for up to 3 seconds. During this white light period, single-click the button again to switch to USB mode. If no further action is taken within 3 seconds, the device will remain in its original mode.

2.5 Indicator light description

Indicator Light Status	Meaning
No light	Device not started
Slow-flashing green light	Scanning mode
Solid green light	Standby mode
Solid blue light	USB mode
Solid yellow light	Device not activated
Solid red light	System error
Slow-flashing blue light (~30s)	Powering on
Solid white light	Switching between standby and USB mode
Fast-flashing green light	Scan starting/stopping

Light alternates between red and green	Upgrading
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2.6 Data Transfer Instructions

To transfer data, connect the device to a computer using the provided USB 3.1 cable while the device is in standby mode. Use the app or the power button to switch to USB mode. Once the device is recognized, you can proceed with data copying.

Notes:

The USB mode will automatically disable after a device restart.

If you want to continue scanning after enabling USB mode without powering off or disconnecting the device, you must manually exit USB mode.

Using other USB cables may result in slower transfer speeds or other issues.

A common problem could be that the USB cable could only be recognized in one direction. When rotating the Type C port 180 degrees, with the other side pointing up, it cannot be recognized by the device.

2.7 Basic usage specifications

1. The LixelKity K1 scanner is a kind of precision surveying and mapping equipment. Falling or being hit by external forces may damage the equipment, leading to abnormal work or bad accuracy, or even complete damage to the equipment.
2. When using a tripod, make sure to tighten the tripod and the device cartridge battery to prevent the device from falling.
3. The protection level of the LixelKity K1 scanner is IP54 . Please pay attention to the environment when using it and do not use it in an environment exceeding this protection level. It is recommended to use a soft dry cloth or a self-cleaning cloth to clean the equipment. Please keep the LiDAR module and lens parts clean and do not touch them directly with your hands.
4. Do not cover or touch the heat dissipation part of the equipment during use. When the device temperature is too high during use, it may automatically shut down.

2.8 Specifications

Category	Parameter	Lixel K2
General Performance	Power Input	14.4V
	Power Consumption	<20W
	Weight	1KG
	Dimensions	130mm×90mm×77mm
	Data Interface	USB 3.1 Gen2
	Internal Storage	EMMC 512G
	RTK Module	Support
	RTK Module	2.4GWifi 2412-2472MHz 5G2 Wifi 5180-5240MHz 5G8 Wifi 5745-5825MHz
	Bluetooth	2402-2480MHz
	Operating Temperature	-20℃~50℃
	Enclosure Material	Navigational Aluminum
	Power Supply	Fast-lock battery
	Total Operating Time	1.5h
	Battery Capacity	28.8wh
	Charging Time (25℃)	0%~100%@98 min
	Charging Temperature	5~30°

	Cameras	3 (Panorama*2, front*1)
	App Wi-Fi Range	20m
LiDAR Module	Laser Safety Class	Class 1 / 905nm
	Scanning Range	0.1m~40m@10%, 70m@80%
	Field of View	360 x -7~+52°
	Scanning Method	Mobile Scanning
	Point Rate	200,000 points /s
Vision Module	Panoramic Camera FOV	200° x 200°
	Forward Camera FOV	100° x 85°
	Camera Resolution	4000*3000
	CMOS Size	1/2"
	Shutter Type	Rolling shutter
Charger	Input	100-240V~50/60Hz
	Output	16.8V 1.2A
	Rated Power	20.2W
Accessories	Backpack + Inner Case	Support
	Phone Mount	Support
	Extension Pole	Support

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.