

KartaCam 2 User Manual

(v0.1)

Manufactured by Grabtaxi Holdings Pte. Ltd,
Address: 3 Media CI, Singapore 138498



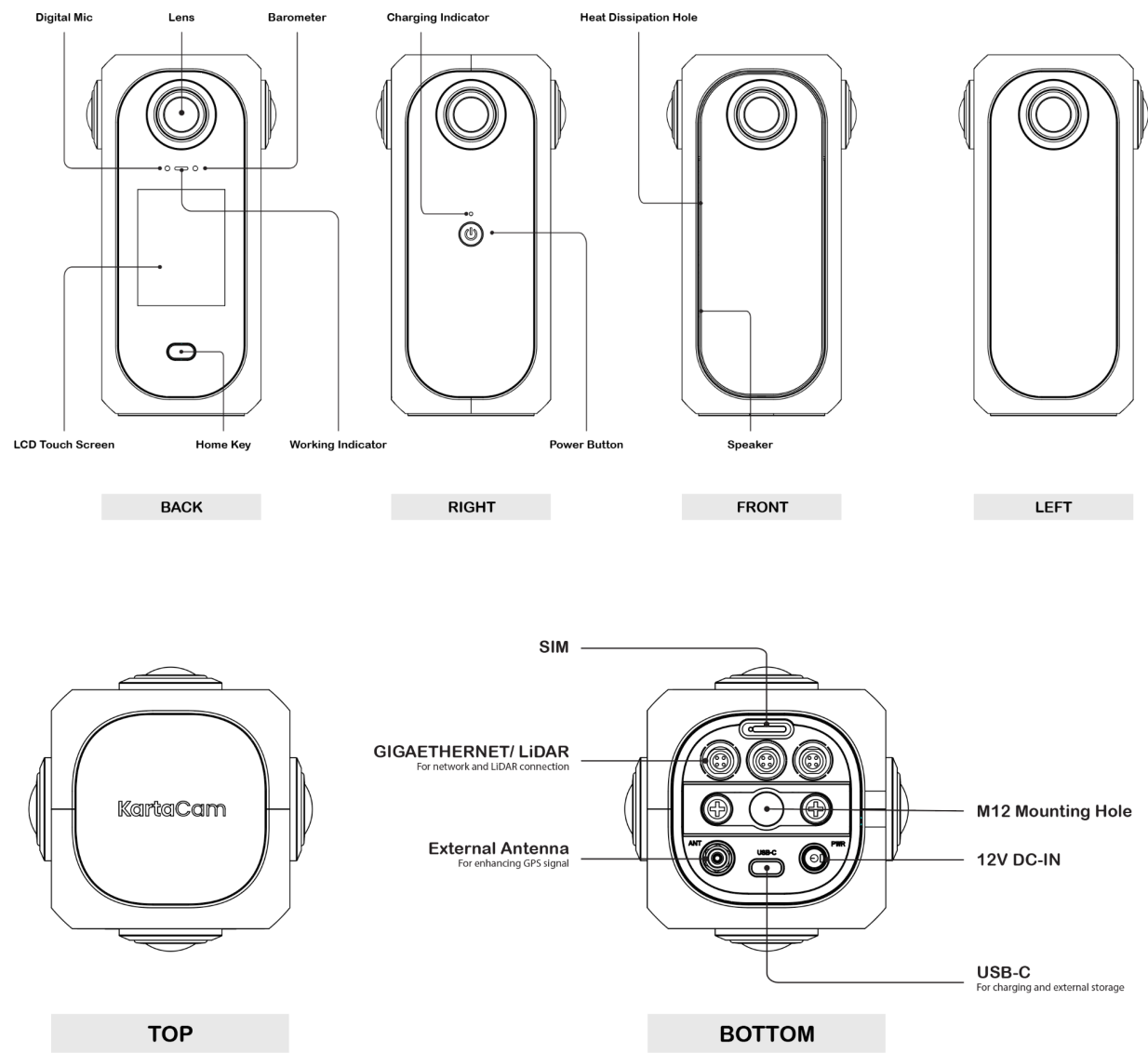
Introduction



KartaCam 2 revolutionizes map-making with its exceptional image quality, GPS accuracy, versatile connectivity, edge AI capability, and user-friendly design. It features four 48MP sensors and f/2.0 lenses for high-resolution full 360-degree images, along with advanced HDR technology for balanced photos. The dual-band high-precision GPS module ensures accurate geotagging, while built-in 4G, Wi-Fi, and Bluetooth enable seamless

connections. The 10 TOPS on-device AI checks image quality, blurs PII information, and recognizes objects for automatic tagging. KartaCam 2 supports LiDAR integration for SLAM applications and offers an intuitive interface for easy operation.

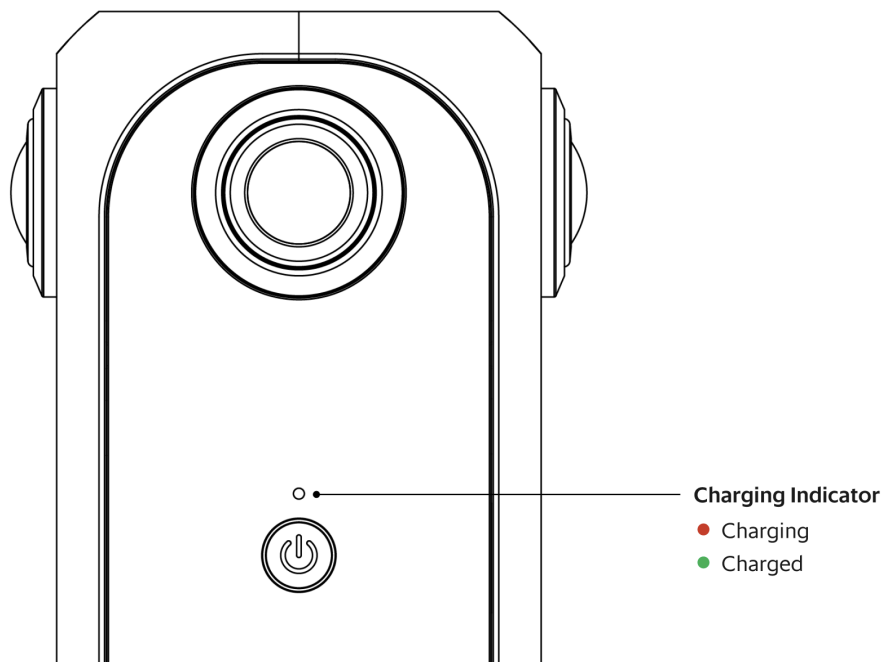
The various components and buttons on the camera body are as follows:



Basic Operation

Before You Start

1. On the bottom of the camera, you can find the charging port. It can be the USB-C or the DC-IN port. A charging indicator above the Power Button will light up to indicate that charging is in progress. Once the battery is fully charged (approx. 3 hrs), the charging indicator turns from red to green.



2. Use a screwdriver to unscrew the waterproof screw head on bottom of KartaCam 2, press with a SIM pin to pop out the SIM card slot. Open the cover and insert the SIM card (Type: Nano) as shown. Tighten the screw.



Note:

- Please read the user manual carefully before using KartaCam 2.
- Please keep it carefully for future reference or parts replacement.
- KartaCam 2 body and lens will attach protective films on surface to prevent the damage. You can remove the protective cover depends on the requirement. Please wipe the lens before start shooting.
- Surface heating of the camera is normal after a long time usage.
- Be careful to carry and store KartaCam 2. Avoid lying KartaCam 2 lenses on any surface which will lead to lens damage and imaging problems. <Illustration TBA>

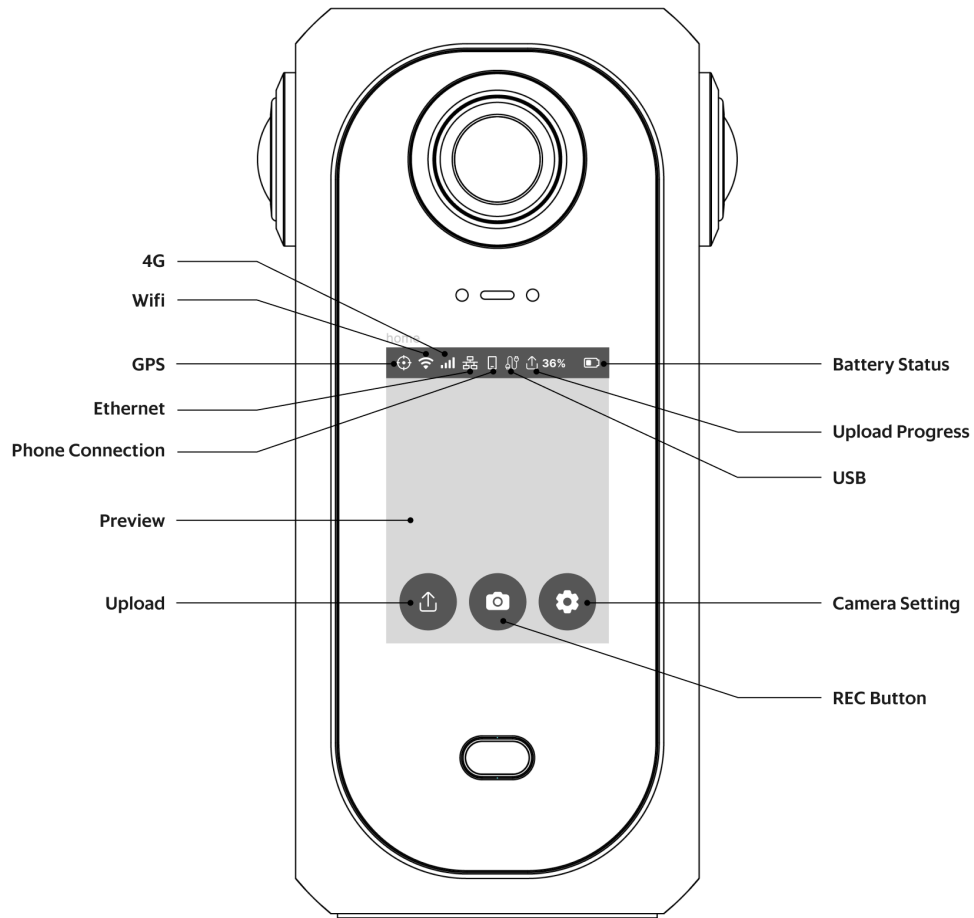


Button Instructions

- **Power on:** When the camera is turned off, press the Power Button to power it on.
- **Power off:** In standby mode, press the Power Button for 3 seconds to open the power option, select “Shut down” to turn off the camera. Press the Power Button for **8** seconds for force shut down.
- **Turn the touch screen on/off:** If the touch screen is not touched for 30 seconds, it will be turned off automatically, or long press the home key to close the touch screen. Touch the screen or home key again to wake it up.
- **Start recording:** In standby mode, tap the REC button on the touch screen to start a recording, and then again to stop.

Using the Touch Screen

The touch screen's main display shows the current shooting mode and the information shown below.



By tapping the screen, the following can be achieved:

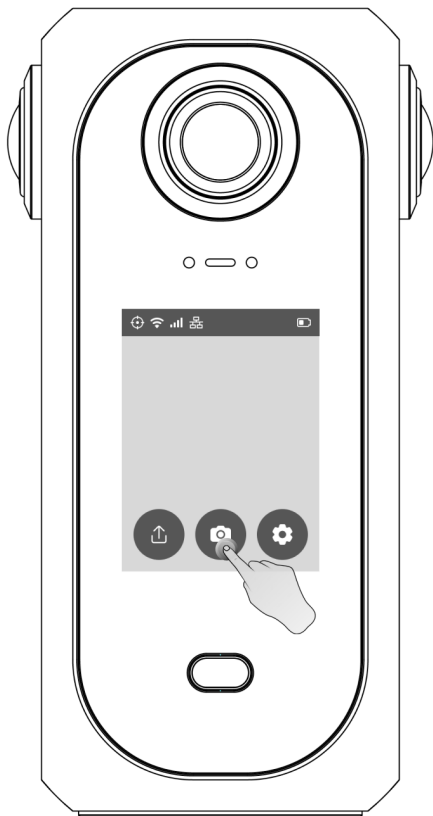
- Tap the Camera icon  on the lower middle to start the imagery collection.
- Tap the Upload icon  on the lower left corner to view the recorded trips and upload.
- Tap the Settings icon  on the lower right corner to set the camera brightness and volume, check alert, update firmware, and get help.
- Tap the preview area to hide the function buttons and status bar.

Indicator Lights

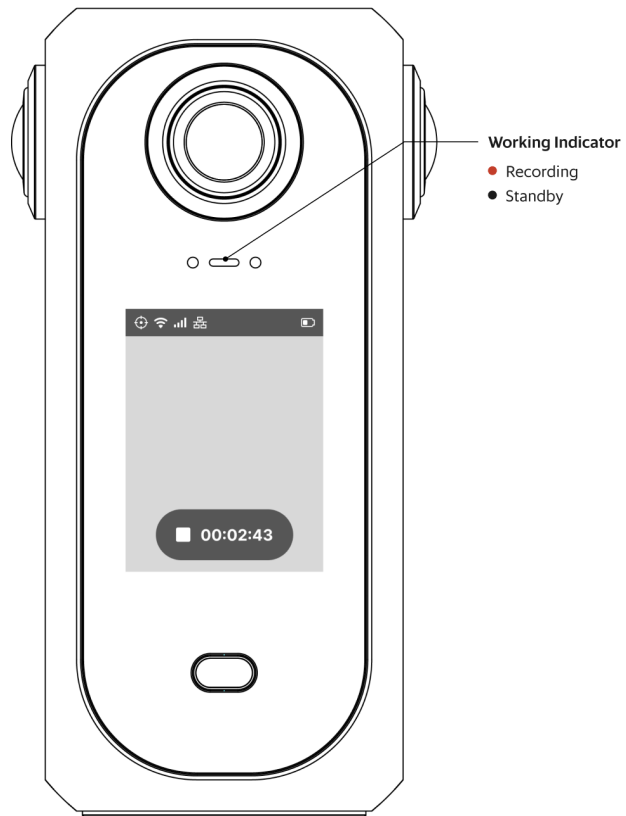
Light Types	Camera Status	Indicator Light Status
Power button LED	Power off	Off
	Powering on/ Sleep mode	Solid white
	Upgrading firmware	Flashing white
Working indicator LED	Imagery collecting	Breathing red
	Standby	Off
Charging indicator LED	Charging	Solid red
	Full charged	Solid green
	No charge	Off

Recording

Tap REC button  in the home screen to start recording. The working indicator will flash in red while recording. Or trigger the recording via KartaView app if connected. See <Section> for more information.



1. Tap REC button



2. Start recording

Connect to Wi-Fi

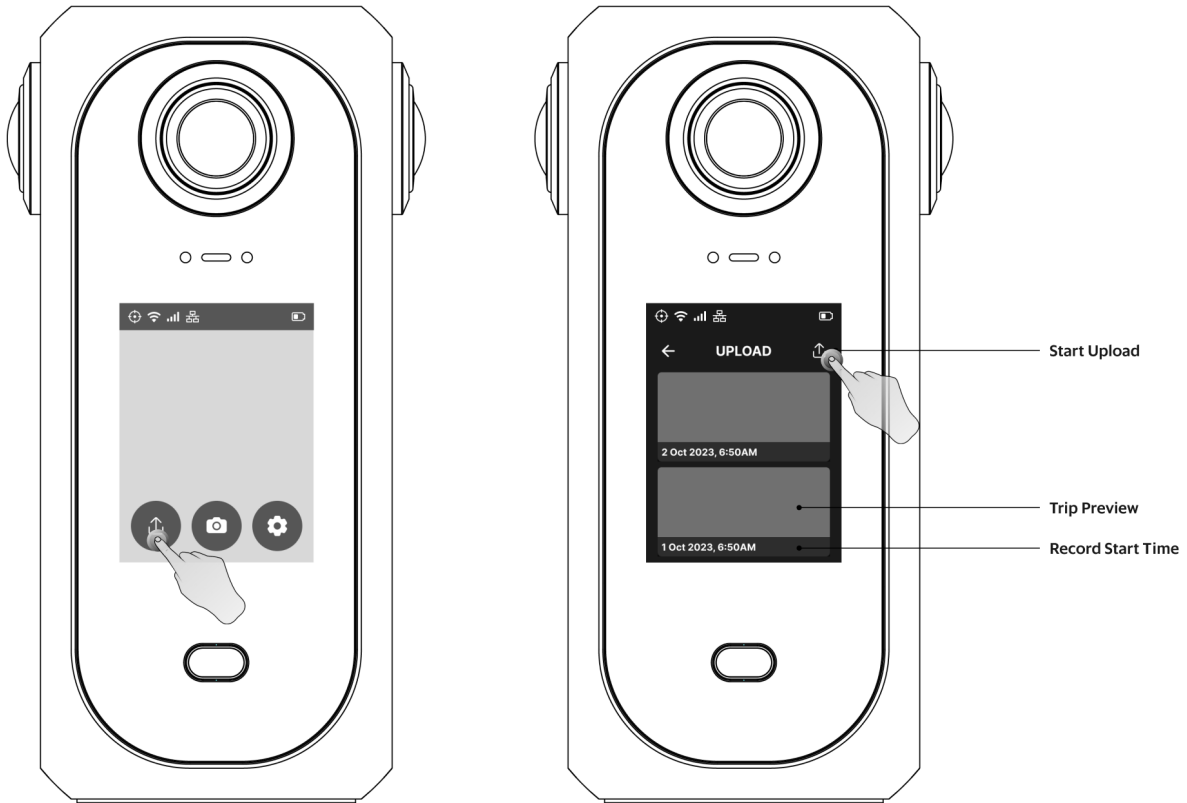
Can insert the 4G SIM card into the KartaCam 2, or can connect KartaCam 2 to Wi-Fi (set via KartaView App). For the 1st step, KartaCam 2 can directly connect to the default Wi-Fi without any setting.

Default Wi-Fi SSID: kartacam

Password: 12345678

Upload Imagery

Tap Upload icon  in the home screen to go to the Upload page. You can overview the recorded trips and tap the Upload icon at the top-right corner to start uploading all images.

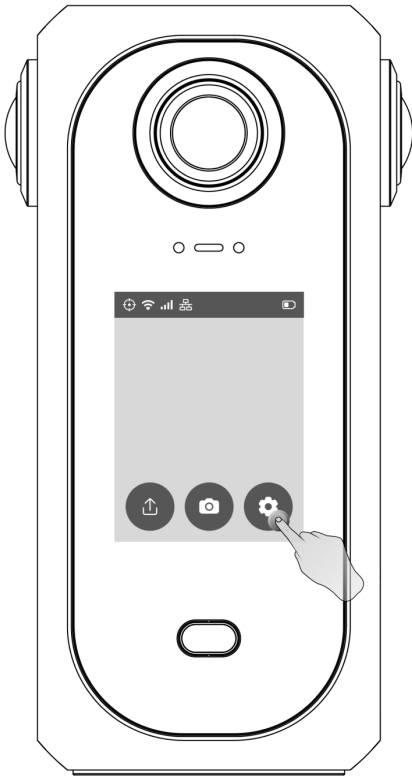


1. Tap Upload icon in the home screen

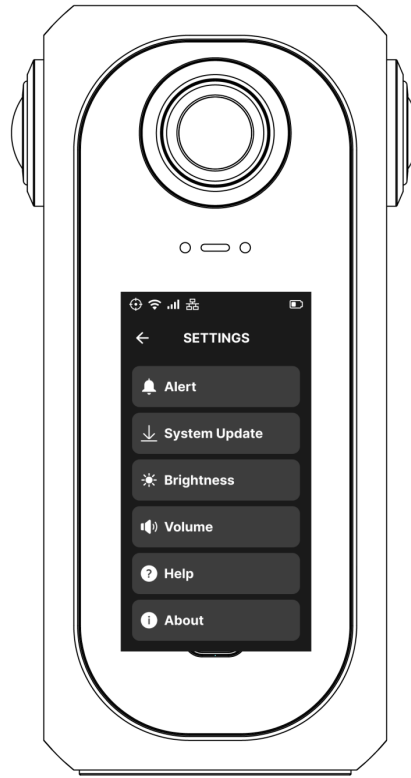
2. Tap the top-right icon to start uploading

Camera Settings

Tap Setting icon  in the home screen to go to the Setting page.



1. Tap Setting icon in the home screen



2. Set camera, check update, or get help

System Update

The KartaCam 2 firmware ensures that the camera runs efficiently. Please update to the latest version for optimal results.

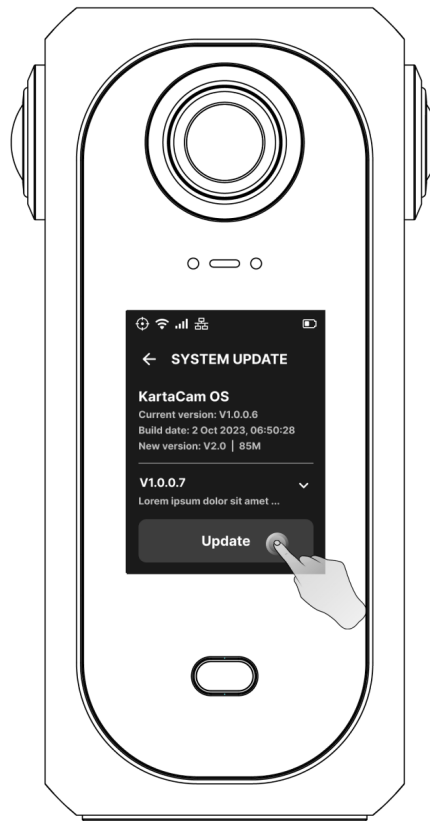
In the Settings page, tap "System Update", and tap "Update" button to start the firmware update process if there is a new firmware available.

During the firmware update process, the power button light blinks and the camera automatically restarts after the update is complete.

Note: Please make sure the camera's power is **above 40%** and the camera is linked to WiFi or 4G before updating the firmware.



1. Tap "System Update"



2. Tap "Update" button

Connect to a Phone

Connect KartaCam2 to your phone via the KartaView App to assign tasks, collect imagery, upload imagery, submit tasks and more.

Steps:

1. Turn on Bluetooth on your phone.
2. Turn on KartaCam2.
3. Launch the KartaView App and tap on partner login and log in using your registered

Google account.

4. At the map home screen, tap on the  to connect your camera.
5. Scan the QR code on the KartaCam2 LCD screen to connect.

After connection, you will be able to see the KartaCam2 status bar on the App screen.
And you can check the camera status, and see the live preview before starting collecting.

Note:

1. KartaView App is Android only, there is no iOS version available right now.
2. Download the latest KartaView App from Google Play Store and install it.
3. Once connected with KartaView app, you can only start and stop the recording via app.
4. Before proceeding, ensure that your KartaView user account is whitelisted.



Scan to download the
KartaView Android App

Specifications

Imaging	FOV coverage	360° full coverage (H+V)
	Fno.	F2.0
	Image sensor	48MP*4
	Edge AI	10 TOPS
Positioning	GPS	L1 band:GPS/GLONASS/Galileo/BeiDou/QZSS/SBAS

		L5 band:GPS/Galileo/ BeiDou/IRNSS With interior and exterior antenna Acquisition time 30s Position accuracy 1-3m, Max. 135 satellites tracking
	GPS frequency	Up to 10Hz
	RTK	Supported
Connection	2G/3G/4G	LTE FDD:B2/4/5/7/12/13/25/26 LTE TDD:B38/41 WCDMA:B2/4/5 GSM:B2/5
	Bluetooth	Bluetooth V5.0 of 1, 2 and 3 Mbps Supports Bluetooth V5.0+EDR and Low Energy (BLE) Frequency:2.402GHz ~ 2.480 GHz
	Wi-Fi	802.11 a/b/g/n/ac/ax, support Wi-Fi 6 Operation Frequency: 2412MHz~2472MHz 5150MHz~5850MHz EIRP 2.4 GHz: <33 dBm(FCC), <20 dBm(CE) EIRP 5.8 GHz: <33 dBm(FCC), <14 dBm(CE)
	Lora	LoRaWAN, LinkWAN Support spread spectrum factor: SF5/SF6/SF7/SF8/SF9/SF10/SF11/SF12 Support LoRa/(G)FSK/BPSK/(G)MSK modulation Frequency: AS923
LIDAR	LIDAR connection	Yes
Power Supply	Battery	9600mAh
	Power	- DC-IN 12VDC/3A - USB-C PD 5VDC/3A,9VDC/3A,12VDC/3A,15VDC/3A
Size	Size	80mm*80mm*185mm
Weight	Weight	1.5Kg
Environmental	IP	IP65

	Operating temperature	-10°C ~ +45°C
	Storage temperature	-10°C ~ +70°C
	Relative humidity	5% to 95% non condensing

Safety and Privacy

1. Avoid exposure to extreme temperatures: Prolonged exposure to extreme temperatures can damage the camera's components, reduce battery life, and affect overall performance. Always store and use the camera within the recommended temperature range.
2. Keep the camera dry: Do not use the camera in wet or damp environments for long time Water or moisture can damage the electronics and void the warranty.
3. Protect against impact: Handle the camera with care and use a protective case when not in use to avoid damage from accidental drops or impacts.
4. Use proper maintenance procedures: To clean the camera, use a soft, lint-free cloth to gently wipe the surface, lens, and LCD screen. Do not use abrasive or solvent cleaners, as they may damage the camera's surfaces and components.
5. Be cautious with the battery: Do not attempt to disassemble or modify the battery. Use the provided charger or a manufacturer-recommended charger to prevent overcharging or overheating.
6. Use compatible accessories: Only use accessories specifically designed for your camera model. Using incompatible or third-party accessories may impact image quality and overall performance and can damage the camera or void the warranty.
7. Follow local regulations: When using the camera in public places, adhere to local laws and customs regarding photography. Some locations may have restrictions on taking photos or require permission before use.
8. Protect your privacy: Be mindful of privacy concerns while taking pictures or recording videos. Avoid capturing sensitive or personal information without permission from the involved individuals.

FCC Statement (Federal Communications Commission)

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 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.

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

FCC Radiation Exposure Statement

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.

We declares that this device is in compliance with the essential repuirements and other relevant provisions of Directive 2014/53/EU.

Our product do not contains the AC/DC adapter. You need purchase the DC 12V/3A compliance the directive 2014/30/EU.

The adapter shall be installed near the equipment and shall be easily accessible.

CAUTION:

1. Replacement of a battery with an incorrect type that can defeat a safeguard (for example.in the case of some lithium battery types);
2. Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion;
3. Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas;
4. And a battery subiected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

FCC ID E-label

Here are general steps to view the FCC ID E-label on the device:

Step 1: Power on the Device

First, you need to power on the device in order to access its user interface. Electronic labels can usually be found in the device's system settings section.

Step 2: Navigate to the FCC Electronic Label Area

Within the device's user interface, you'll need to locate a "Settings" area. Within this, you'll likely see an option titled "Regulatory Information". This typically leads to a submenu that lists detailed information about the device's hardware and software specifications, including its FCC ID.

Step 3: View the FCC Electronic Label

In the "Regulatory Information" area, you should see an entry labeled "FCC ID". The string following this is the device's FCC ID.

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