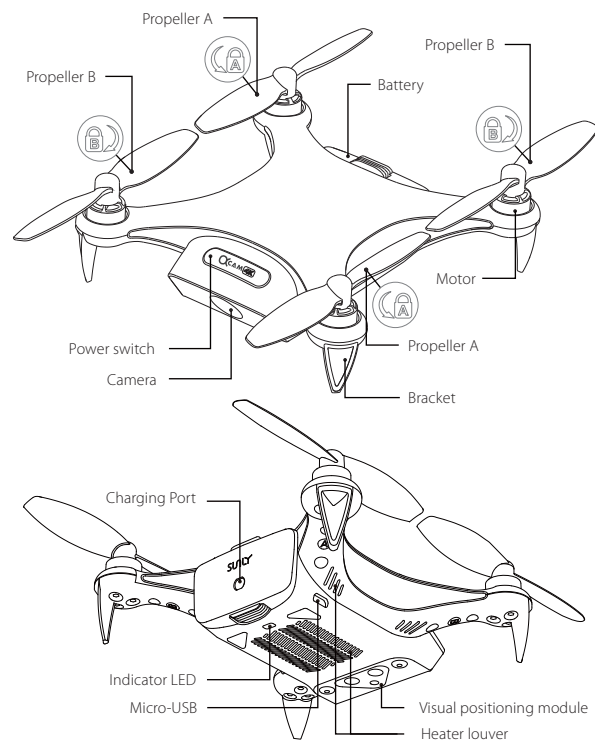# Alpha CAM

User Manual

V1.0

SUNLY TECH

Learn about your Alpha CAM

The Alpha CAMam is SUNLYTECH's portable smart mini drone that has been specially designed for selfie-lovers. It is equipped with a high-definition camera for 4K/@30fps and 1080P/@30fps video recording and 13 million pixels photo shooting. Download SUNLY FLY App(Android/iOS) to control Alpha Cam CAM with your smart phone.
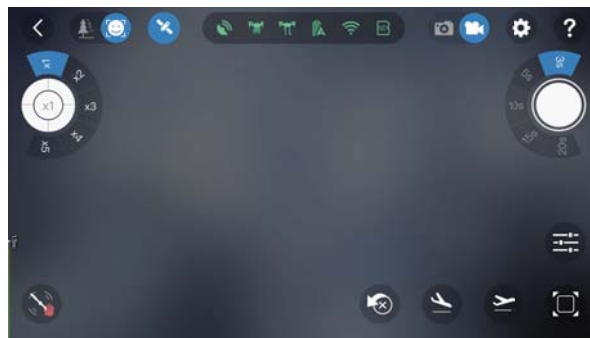
The following is the body structure of Alpha CAM:

Propeller A

Propeller B

Propeller B

Battery

Motor

Power switch

Camera

Propeller A

Bracket

Charging Port

Indicator LED

Micro-USB

Visual positioning module

Heater louver

Learn about your App

SUNLY FLY is a smartphone application developed for Alpha CAM. Users can use the SUNLY FLY App to control the flight and shooting instead of remote controller, and share the pictures directly to the social network.

SUNLY FLY App Control Interface

‹	Quit	🌲😊	Shooting mode	✂	GPS switch
📡	GPS		Optical flow sensor	📶	Height sensor
🔋	Battery power	📶	WiFi	💾	SD card capacity
📷📹	Camera mode	⚙	Settings	?	Help
⊕	Focal length	◯	Shooting/delay	🔴	Video recording
⚙	Camera settings		Propellers forced to stop		Cancel
	Return		Landing		Take off
⬜	Full screen	│	Height status bar		

💡 For the specific use and meaning of the icons in SUNLY FLY App, please refer to the "HELP" button on the flight interface of APP .

—2—

Use your Alpha CAM

1、 Download SUNLY FLY App

Before using this product, please go to APP store to download and install SUNLY FLY App.

2、 Watch the introduction and tutor video.

Please scan the two-dimensional code to visit the official website of SUNLY TECH: www.sunlytech.com and click the Video Center to view.

💡 SUNLY FLY App requires Android 4.3 or higher versions；iOS 8.0 or higher versions.

3、 Charging

Insert the original charging cable into the charging port of the battery. The indicator LED keeps on red when charging. It will turn to green when charging is completed. Unplug the cable when the LED turns to green.

Indicator LED
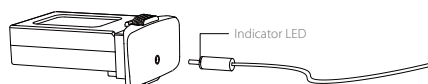
4、 Install battery

Please note the front and back side of the battery to ensure that the battery is correctly inserted into the fuselage.

💡 Battery tail LOGO font up shows battery installed correctly.

⚠️ About the battery safe use method, see "Alpha CAM disclaimer and safety guidelines".

5、 Preparing to take off

To avoid any danger, please fit on the propeller before.
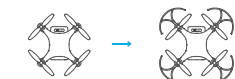
⚠️ The working propellers may cause serious damage to the approaching objects, please keep more then 2 meters distance from the drone to ensure safety.

Before flying place the drone horizontally on the ground and turn the tail of drone to yourself.

✕   ✓

⚠️ Default is scenery mode: camera direction is the head of drone; you can adjust the flight interface "Shooting mode" 🔘🔘 button to the selfie mode: camera direction is the tail of the drone.

Reading tips:　💡 Instruction　⚠️ Warning

—3—

- Long press the power button until the power indicated light flashes to blue . After a few seconds the "beep" sound comes out, indicates successfully switched on.
- Long press the power button of the drone longer than 3 seconds until the power indicator light goes out. The drone turns off.

B、Ready to fly

Launch the App, click [Enter flight] button, follow the instructions into settings and connect the device with drone's WIFI, then back to the interface of App and enter flight interface.

Default SSID: AlphaCAM-XXX, password: sunlytech, it can be changed in Settings.

C、Compass calibration

The drone already calibrated in factory, before the first flight, suggest calibrate the compass; otherwise the drone may not work properly and affect flight safety. Frequent calibration of the compass can improve the reliability of drone.

How to operate: Select "Calibration - compass calibration" in Settings of the upper right corner of the flight interface you can start to calibration referring to the prompts.

6、Fly

Take off
click on the "take off" button at the buttom of the screen, slide to the right end, the drone will take off and rise to 1m altitude and hover.

Landing
during the flight, click on the "landing" button and slide to the right end. The drone will land in the place.

Return
during the flight in GPS mode，click the "return" button, slide to the right end, the drone will return to the point of departure.

Propellers forced to stop
during the flight, such as in an emergency, you can click on the "Propellers forced to stop" button, the drone will force the propeller to stop working. With a certain risk and destructive, please use caution.

The returning drone will rise to the return altitude of SUNLY FLY App setting (default return altitude is 5 meters), please ensure no obstacle in returning route.A

In the implementation of take-off or landing or return operation, if the button does not slide to the end, the slider is automatically hidden, the corresponding operation is not executed.

7、Control mode

Touch mode

Control the drone by click on the operating button on the screen.

- The up/down button of the left side to control the drone rising/falling. The left/right button to control left/right rotation of the drone to adjust the flight course.

- The up/down button of the right side to control the drone forwards/backwards, and the left/right button to control left/right movement of the drone.
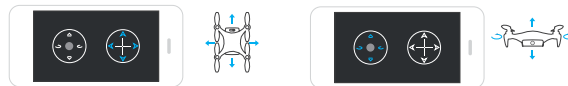
💡 Touch mode is default operating mode, user can adjust the control mode in settings.

Motion mode

Use the gravity sensing system of mobile device to control the drone flying.

- Keep pressing on any point on the right side of the screen while tilting the mobile device forwards and backwards/rightwards and leftwards, to control the drone flying to the corresponding direction.

- Click the up/down button of operating lever on the left, to control the drone rising/falling, and the left/right button to control the left/right rotation of the drone to adjust the flight course.
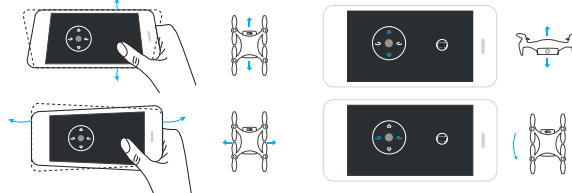
💡 Sensitivity of operation is not same in different mobile devices when motion mode is used.

Joystick mode

Control the drone by dragging the two joysticks on the screen.

- Drag the left joystick up/down, to control the drone rising/falling, and drag the joystick leftwards/rightwards, to , control the left and right rotation of the drone to adjust the flight course.

- Drag the right joystick up/down, to control the drone forwards /backwards, and drag the joystick leftwards/ rightwards, to control the left/right movement of drone .
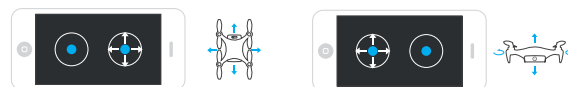
💡 In joystick mode, user can adjust the joystick function button in "Settings-Custom joystick" interface according to the user's needs.

8、Shooting / Video recording

Click the "Camera mode" 📷 button at the flight interface, to switch shooting or video recording.

Change Focus: Click the "focus" ⊕ button in the upper left corner of the flight interface to adjust the focus.

Delayed Shooting: Press the "Shutter" ◯ button in the upper right corner of the flight interface to select the delay time.

Shooting：Click the "shutter" ◯ button at the flight interface. Each time you click will take one photo for default. User can modify the photo amount of continuous shooting in "camera settings" ⌨ .

Video recording：Click the "Video recording" 🔴 button to enter in the recording interface. Click the "Stop video recording" ⏺ button to stop recording.

9、Appendix Specifications

Drone

Size:	128x128x43mm (excluding the propeller)
Weight:	220g
Max. Battery Time:	20 minutes
Max. Using Altitude:	3000m
Max. Control Distance:	100m (In the open area without interference)
Wind Resistance Level:	28km/h
Positioning System:	GPS: GPS&GLONASS dual-mode satellite positioning
	visual : optical flow + Infrared (illumination >15lux)
Hover Accuracy:	Vertical: +/-0.1m (visual positioning) ; +/-0.5m (GPS)
	Horizontal: +/-0.3m (visual positioning); +/-1.0m (GPS)
Wi-Fi Frequency:	2.4GHz; 5GHz(default frequency)
Operating temperature:	5-40℃

Camera

Image sensor:	SONY1/3.06 inch CMOS
Effective pixels:	13 Mega Pixels
Camera lens:	FOV90°; F2.2; f/2.95mm
Photo Size:	4208x3120
Video recording:	1080p@30fps after EIS on 4K@30fps
ISO range:	100-3200
EV range:	-12; -8; -4; 0; 4; 8; 12
Storage format:	JPG/MP4
Storage capacity:	16GB (including system file)
USB interface type:	Micro-USB

Battery

Rated capacity:	2000mAh
Rated energy:	15.2Wh
Nominal voltage:	7.6V
Battery type:	LiPo 2S
Operating temperature (charge):	5-40℃
Operating temperature (discharge):	5-40℃
Max. charge voltage:	8.7V

App

App name:	SUNLY FLY
Image Transmission Resolution:	VGA; QVGA (Default Resolution)
Delay:	160ms (depends on actual environment and mobile device)
Supported mobile device OS:	Android 4.3 or higher versions; iOS 8.0 or higher versions

Declaration of Conformity

CE 0980

Hereby Shanghai Sunly Technology Co.,Ltd., Inc declares that this Alpha CAM Drone (Model No.: SUNLY17A) is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Input Power: 80W

Rating Current: 10A

Ambient Temperature ranges 0~40 ℃
This device must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

Manufacture
Shanghai Sunly Technology Co.,Ltd.
Address:
D1106.D-1108.Minggu Science&Technology Park,No.7001 Zhongchun Rd.,Shanghai,China

FCC Statement

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.

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.

FCC Radiation Exposure Statement

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co‑located or operating in conjunction with any other antenna or transmitter. This device must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

The instruction would be aperiodically updated.
The most recent information please see official website.

OCCAM 4K
www.sunlytech.com