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Hazards, Safety and Warnings

FCC Warning Statement

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

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Misuse of the camera and accessories may damage the camera and possibly cause an accident.

Please read carefully and refer to the instruction manual, please keep this instruction manual.

This chapter contains important contents, violation of which may cause accidents such as fire, or cause personal injury.

Do not allow children to use the camera and accessories alone.

fire and electric shock

◇ If the camera is damaged, flooded or short-circuited, please turn off the camera immediately and take out the battery.

◇ Use the external power supply correctly, keep it dry and ventilated, and do not cover it.

◇ Do not use an external power supply during thunder or lightning, otherwise it may damage the camera and cause electric shock or fire.

About the battery

Batteries are chemicals and misuse may cause fire or accident.

◇ Use a qualified battery, and put it into the camera correctly according to the mark.

◇ Do not use swollen or leaking batteries.

◇ Do not short-circuit, impact, squeeze, puncture, disassemble or incinerate the battery.

◇ Do not store or use at high temperature.

About the LCD screen

- ◇The LCD screen is fragile, and it is forbidden to beat, squeeze or knock it.
- ◇If the screen is broken, do not touch it. In case of accidental contact, rinse with clean water immediately. If swallowed, rinse mouth immediately and drink plenty of water, seek medical attention immediately.

Precautions for use and storage

- ◇Do not drop, hit or puncture the camera.
- ◇Do not let the LED lights shine directly on the human eyes, strong light may damage eyesight.
- ◇Do not use corrosive solvents to clean the camera and accessories.
- ◇When not in use for a long time, please take out the battery and put it in a dry place.
- ◇The camera has no parts that users can repair by themselves, and it is forbidden to disassemble or repair by themselves. In case of failure, please find a professional or dealer for repair. Self-disassembly will void the warranty.

Environmental requirements

- ◇Using environment: temperature -10°C~40°C.
- ◇Storage environment: temperature -20°C~60°C, humidity≤50%.
- ◇It is forbidden to use or store in the environment with strong vibration and dust.

Waste disposal

- ◇It is forbidden to throw away the camera and accessories at will. Please dispose of waste according to local laws.

Other warnings

- ◇If the camera has wireless functions such as 4G, WiFi or Bluetooth, please use it in a place with good signal. This camera may interfere with aircraft, medical equipment, etc. Do not use it in prohibited places.
- ◇Please abide by the local laws and regulations on the use of wireless devices.
- ◇Please abide by local laws and regulations on personal privacy protection.

Check before use

- ◇To ensure your interests, before using the camera, please install the battery and memory card for trial shooting inspection.
- ◇We are not responsible for additional losses caused by improper use or camera failure.

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Microsoft/windows is a registered trademark of Microsoft Corporation.

Pentium is a registered trademark of Intel Corporation.

Macintosh/Mac OS/iOS are registered trademarks of Apple Inc.

Android is a registered trademark of Google Inc.

Referenced product names, proper nouns or trademarks are registered trademarks of their respective owners.

About the manual

- ◇The pictures are for reference only. We try our best to keep the content correct. If the product is updated, please

refer to the actual product.

◇In order to improve the user experience, the APP may be upgraded, please use it according to the actual situation without prior notice.

◇We reserve all rights to this manual. Any unit or individual shall not reproduce or disseminate without our consent.

Thanks for choosing this product!

This is a 4K UHD digital video camera that supports WiFi, with the following features:

- ◇Dual lens simultaneous video recording ◇4K UHD video ◇3.0-inch IPS high-definition touch screen
- ◇Time-lapse video ◇Loop recording ◇Slow motion recording ◇WiFi, mobile APP operation
- ◇IR remote control ◇IR night vision ◇Support external microphone ◇Support up to 128GB SD card

1.1 Computer System Requirements

When using the camera with a computer, the computer must not fall below the following specifications:

CORE i3/3.0G or above processor/Windows XP or above operating system

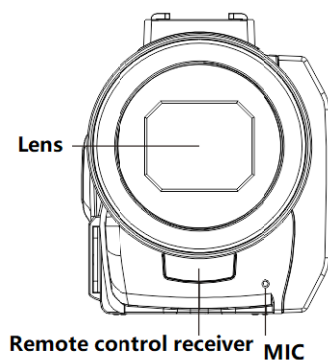
8GB or more memory/2GB or more graphics card/500GB or more available disk space

Standard USB2.0 or higher interface/1920x1080 pixel or higher screen resolution.

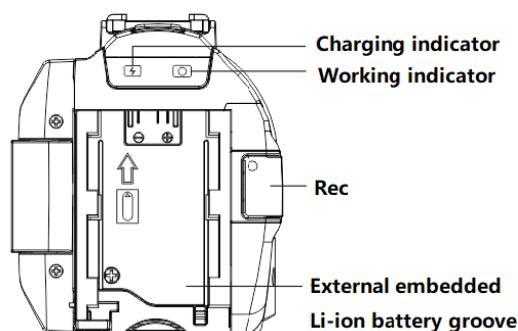
If the computer specification is low, it may not work properly when connected to the camera.

1.2 Diagrams of the camera

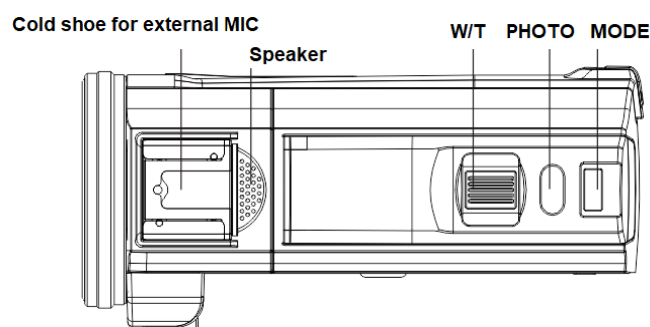
Front view



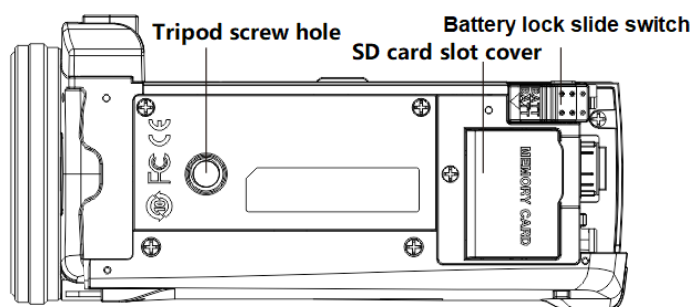
Rear view



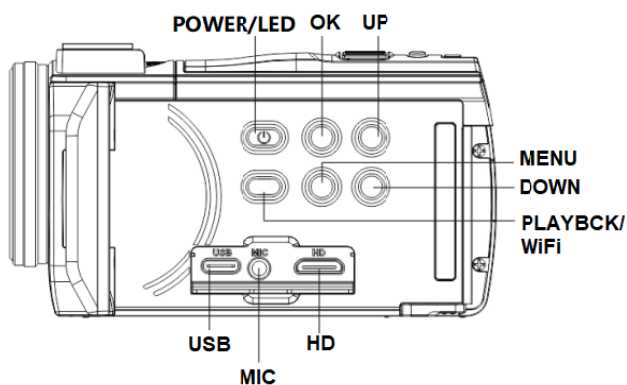
Top view



Bottom view



Left side view



1.3 Description of button functions

Icon	Button name	Function Description
	POWER/LED	Short press to power on, and long press for 3 seconds to power off. After powering on, short press to Turn On/Off the IR night vision and switch the Fill light.
	MENU	Enter the control Menu / Return (without saving)
	OK	Confirm operation
	UP	Move Forward (Up) Video playback mode: Fast Rewind
	DOWN	Move Down Video playback mode: Fast Forward
	MODE	Switch working mode: Video mode/Photo mode ( stands for Video mode,  stands for Photo mode)

	PHOTO	Photo mode: press Lightly to Focus, press Firmly to Take pictures
	Rec	Video mode: Record video/Stop recording video Video playback mode: Play/Stop
	W/T	Photo/video mode: Zoom, zoom in/zoom out Video playback mode: adjust the volume when playing video

Note: The place with $\diamond$ means a button or switch of the camera.

2 Start using

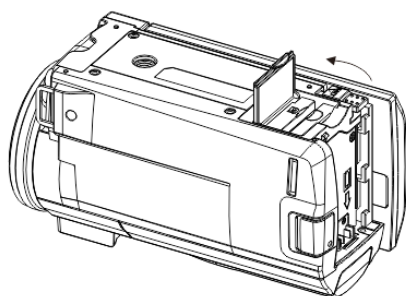
2.1 Insert a memory card

It needs to insert a memory card into the camera, please follow the steps to insert the memory card, as shown in the figure.

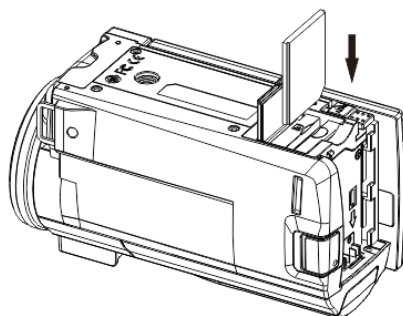
2.1.1. Open the memory card cover. Insert the memory card in the direction shown in the picture, and push until you hear a "click".

2.1.2. Close the memory card cover.

Open the memory card cover in the direction of the arrow



Insert the memory card in the direction of the arrow



Notice:

Use a qualified memory card with a card speed no lower than Class 10.

When using a new memory card, please format it with the camera.

Do not insert or remove the memory card during work, as this will damage the memory card or lose data.

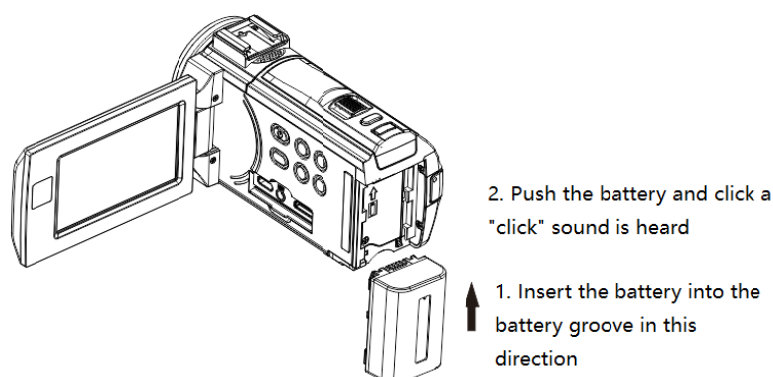
Some memory cards may cause the camera to freeze or work abnormally, please pay attention to whether it is compatible.

2.2 Insert a battery

The camera uses an external embedded lithium-ion battery, please assemble it correctly before use, as shown in the figure below.

2.2.1. Check the direction of the metal contacts of the battery, and put the contacts in the upward direction, and put the battery in.

2.2.2. Push the battery from bottom to top in the direction of the arrow indicated by the battery groove until a "click" sound is heard, and the assembly is complete.



Notice:

Please assemble the battery correctly, otherwise the camera will not be able to turn on or be damaged if installed incorrectly.

Unqualified lithium batteries and power adapters are prohibited.

2.3 Charge the battery

2.3.1 Insert the battery, connect the camera and the power adapter with a USB cable, and connect the power adapter to the mains. The camera charging indicator "CHG" is on, indicating that it is charging, and the indicator light will go out after charging is completed.

2.3.2 It can also be connected to a computer to charge the camera. Insert the battery, and connect the camera to the USB interface of the computer with a USB cable. The camera charging indicator "CHG" is on, indicating that it is charging, and the indicator light will go out after charging is completed. When using the computer to charge the camera, please turn off the camera first, which can save charging time.

2.3.3 Specifications of power adapter: input AC 100~240V/50~60HZ, output DC 5V/2A. Please confirm the local power supply specification before use.

2.3.4 Shoot while charging. In order to adapt to long-term shooting, the camera supports recording while charging. When using this function, please use the power adapter to power the camera. After connecting according to the steps in 2.3.1, turn on the camera to shoot. When using this function, it is forbidden to use computer power supply, otherwise the computer may be damaged!

Notice:

Before using the mains to charge, you must confirm that the local power supply specifications meet the requirements! Please ensure ventilation during the charging process, and it is forbidden to cover the machine with any objects. After charging is complete, remove the power source as soon as possible!

2.4 Turn the camera on and off

2.4.1. Insert the battery, short press <power button> to turn on the camera

2.4.2. In the power-on state, press and hold the <power button> to turn off the power of the camera.

2.4.3. The camera supports turning on the screen and shutting down when the screen is closed. Open the screen to automatically power on, close the screen to automatically power off.

2.4.4. Automatic shutdown. When not in use for a long time, the camera will automatically shut down to save power. When the power is low, the screen will display "Battery Low" and it will shut down automatically.

2.5 Change working mode

2.5.1 The camera supports three working modes and one setting mode:

Video recording mode: The icon "" is displayed on the upper left corner of the screen, and you can record video and set related parameters at this time.

Photo mode: The icon "" is displayed on the upper left corner of the screen, and you can take photos and set related parameters at this time.

Playback mode: Play back photos/video files and perform related operations.

Setting mode: touch the screen, there is a "" icon at the bottom right of the screen--to change pictures, this mode can set the system parameters of the camera.

2.5.2 Change working mode

Press the <MODE> key to switch the working mode: video recording mode/photographing mode, and the icons of each mode will be displayed in the upper left corner of the screen.

2.6 Use the Remote control

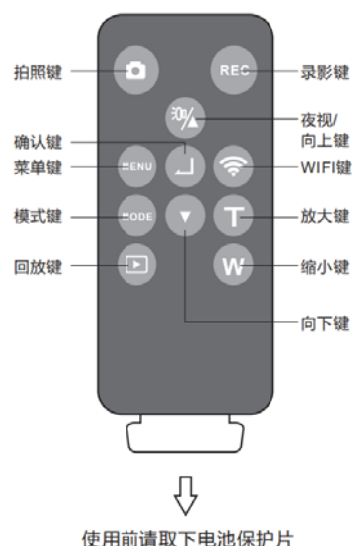
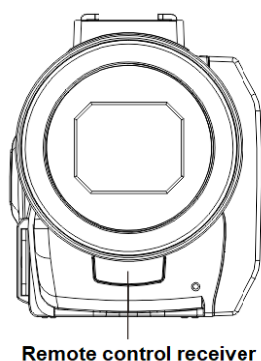
The camera can be operated by the remote control, and the functions of the remote control buttons are as follows:

Icon	Button name	Function Description
	PHOTO	Take pictures in photo mode
	VIDEO	Record a video/Stop Video recording in Video Mode
	MENU	Enter the menu in each mode
	MODE	Change Video mode/ Photo mode/ Playback mode
	PLAYBACK	Enter Playback mode
	UP/LED light	In the Menu: Up Playback mode: Page Forward Video/Photo mode: Turn On/Off IR night vision light/Rill light
	PLAY/STOP	Playback mode : Play/Stop playing while playing back a video In the Menu: Confirm
	DOWN	In the Menu: Down Playback mode: Page Backward
	WiFi	Video/Photo mode: Turn On/Off WiFi
	ZOOM IN	Video mode/Photo mode: Zoom In Playback mode: Fast Forward while playing recorded video
	ZOOM OUT	Video mode/Photo mode: Zoom Out Playback mode: Fast Rewind when playing recorded video

Notice:

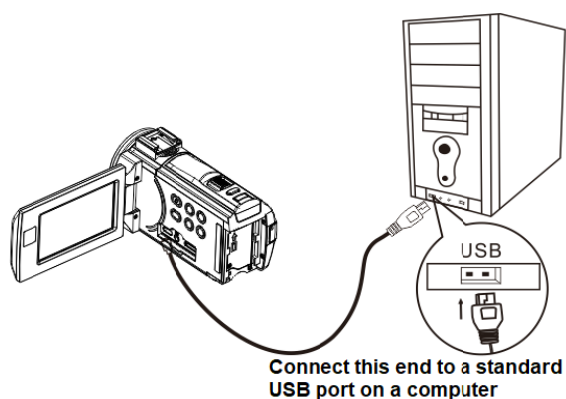
Before using the remote control, please remove the battery protection sheet of the remote control.

When using the remote control, aim the remote control at the remote control receiver and prevent objects from blocking it.



2.7 Connect to a computer

The camera can be connected to a computer to transfer files, view and edit videos and photos.



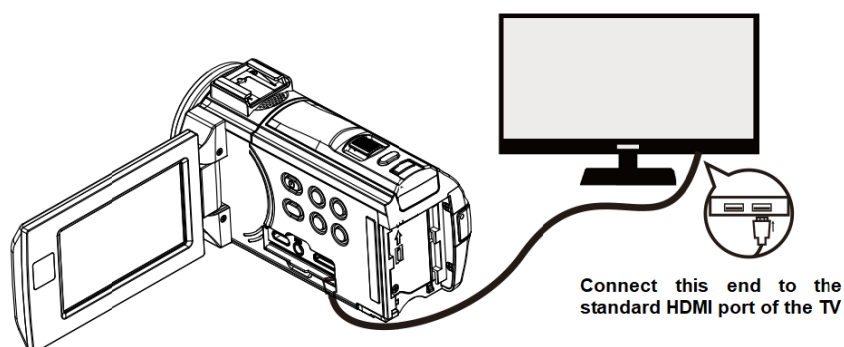
2.8 Connect to a TV

The camera can be connected to a TV for use.

2.8.1. Connect the HD port of the camera to the HD port of the TV with a HD cable.

2.8.2. Switch the HD interface of the TV to the current interface.

2.8.3. Turn on and operate the camera, and all the content will be displayed on the TV, as shown in the figure.



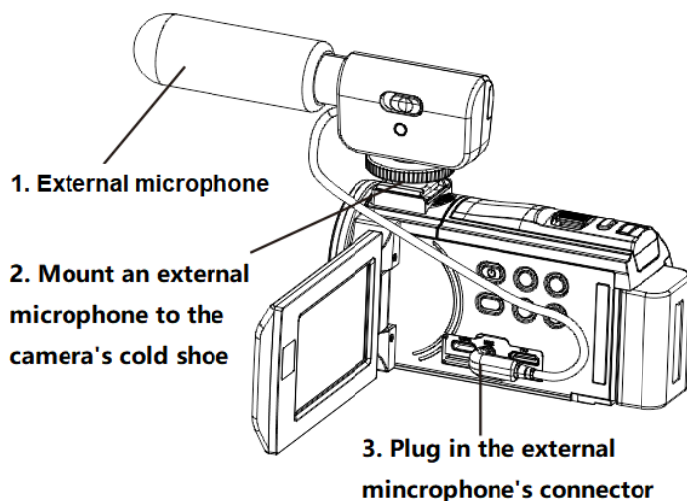
.9 Use an external microphone (optional accessory, non-standard configuration)

The camera supports using an external microphone. Using an external microphone can effectively reduce ambient noise and improve sound quality.

2.9.1. Before use, please read the instructions and precautions of the external microphone carefully to avoid damage to the camera.

2.9.2. Mount the external microphone as shown in the figure, and tighten the fixing nut.

2.9.3. Plug the 3.5mm connector of the external microphone into the MIC port and turn on the microphone switch.



Notice:

Output impedance of external microphone: $0.2K\Omega \sim 2.2K\Omega$, due to the difference in the parameters of external microphones, please select according to the actual adaptation.

2.10 Use Zoom Function

The camera has a zoom function. In Video/Photo mode, slide the <W/T> to T to zoom in on the object (enlarge the scene), and slide the <W/T> to W to zoom out the object (zoom out the scene).

2.11 Use IR night vision or Turn on Fill light

2.11.1 The camera supports infrared night vision, which can take photos or record videos in dark environments.

2.11.2 In Video or Photo mode, short press <POWER/LED> to enter the night vision mode, and the night vision icon will be displayed on the upper left of the screen. In night vision mode, The screen is displayed in black and white, and only black and white photos or videos can be taken or recorded.

2.11.3 Short press <POWER/LED> again to turn on the Fill light, and the screen is displayed in color.

2.11.4 Press <POWER/LED> for the third time to return to normal mode.

Notice:

The IR night vision mode can be used in Photo/Video mode, and the infrared light can be turned on or off during video recording.

In setup mode or playback mode, the operation of fill light/infrared light is invalid.

3 Use the camera

This chapter helps you understand and use various advanced functions of the camera.

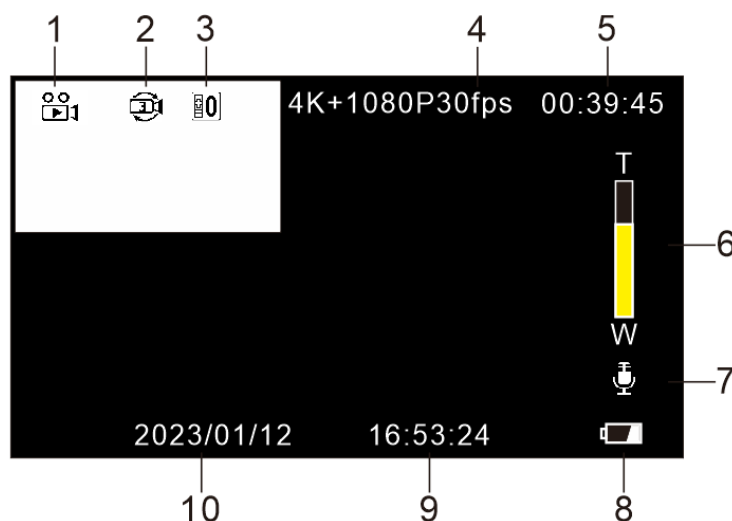
3.1 Video Mode

The camera automatically enters the video mode after it is turned on, and all operations in this chapter are

performed in the video mode.

In video mode, the screen displays as follows:

1 Video mode	2 Loop recording	3 ISO	4 Video resolution
5 Recordable time of video	6 W/T	7 Audio recording	8 Battery level
9 Time	10 Date		



3.1.1 Record video

In video mode, users can record video. You can also set the menu items to help record better videos, the operation is as follows.

3.1.1.1. Correctly insert the memory card, install the battery, and short press <POWER/LED> to start the camera; the camera has an automatic power-on function when the screen is turned on.

3.1.1.2. After the camera is turned on, it will automatically enter Video mode, or press <MODE> to switch to Video mode from other modes, and the icon "1" will appear on the upper left corner of the display screen.

3.1.1.3. Refer to the image displayed on the screen to select and adjust the target to be photographed, hold the camera steady, and press <Rec> to start shooting.

3.1.1.4. During the recording process, a red icon flashes on the upper left of the screen.

3.1.1.5. If the memory card is full, the screen will display "MEMORY FULL "and the recording will end automatically. In this case, you need to replace a new memory card, or delete the files in this memory card to continue recording.

3.1.2 Dual Record

Set the display style of the front and rear cameras on the screen, the default is "Picture-in-Picture1": the picture of the rear camera is displayed in the upper left corner of the preview screen of the front camera. Select "Picture-in-Picture2": the picture of the front camera is displayed in the upper left corner of the preview picture of the rear camera. Select "Front": the front camera is displayed in full screen.

3.1.2.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select the "Dual Record";

3.1.2.2. Press <OK> to enter the "Dual Record" submenu;

3.1.2.3. Press <UP/DOWN> to select the required video resolution:

Front/Picture-in-Picture1/Picture-in-Picture2;

3.1.2.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

You can also touch the screen to complete the operation:

A In Video mode, click the middle of the screen, four icons appear at the bottom of the screen, click the " " icon at the bottom right to enter the menu;

B Click the "Dual Record" icon to pop up the resolution options;

C Click to select the desired style and return to the previous menu;

D Click the " " icon to return to Video mode.

Other functions in this section support touch operation, and the usage method is the same as 3.1.2.

3.1.3 Resolution

This function is to set the resolution of the recorded video file. The higher the resolution, the larger the video file, and the more storage space it occupies. On the contrary, the lower the resolution, the smaller the video file, and the smaller the storage space occupied.

3.1.3.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select the "Resolution" ;

3.1.3.2. Press <OK> to enter the "Resolution" submenu;

3.1.3.3. Press <UP/DOWN> to select the required video resolution: 4K+1080P30fps/2K+1080P30fps/1080P+1080P30fps; if Dual Record is "Front", the resolution options change to: 4K30fps/2.7K60fps/2.7K30fps/1080P60fps/1080P30fps/720P60fps/720P30fps.

3.1.3.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.4 Color

This function can set various special effects when recording video files according to personal preferences.

3.1.4.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "Color";

3.1.4.2. Press <OK> to enter the "Color" submenu;

3.1.4.3. Press <UP/DOWN> to select the desired special effect: Color/Black & White/Sepia;

3.1.4.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.5 Loop Recording

Loop recording means that when storing MEMORY FULL, the camera will automatically start recording from the first file on the memory card and overwrite the old video file.

This function is to set the time length of each video file in loop recording.

3.1.5.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "Loop Recording";

3.1.5.2. Press <OK> to enter the "Loop Recording" submenu;

3.1.5.3. Press <UP/DOWN> to select the required loop recording time length: Off/1Minutes/3Minutes/5Minutes;

3.1.5.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.6 Slow Motion

Slow-motion recording refers to shooting scenes at a high frame rate and then playing them back at normal speed.

This function can help you take clear shots of rapidly changing scenes, such as a fast-running rabbit.

3.1.6.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "Slow Motion";

3.1.6.2. Press <OK> to enter the "Slow Motion" submenu;

3.1.6.3. Press <UP/DOWN> to select slow motion resolution: Off/2.7K 60fps/1080P 60fps/ 720P 60fps;

3.1.6.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.7 Time-lapse Record

Time-lapse video is a shooting technology that can compress time. It can compress the video recording process of several minutes or hours into a short time and save it as a video file. This function is mainly used to shoot some slow-changing Scenery, such as the process of flowers blooming.

3.1.7.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "Time-lapse Record";

3.1.7.2. Press <OK> to enter the "Time-lapse Record" submenu;

3.1.7.3. Press <UP/DOWN> to select the time-lapse video option: Off/1Second/5Seconds/10Seconds/30Seconds;

3.1.7.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.8 White Balance

This function is to adjust the color deviation of the recorded video screen according to different light source environments. It is recommended to use the automatic mode.

3.1.8.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "White Balance";

3.1.8.2. Press <OK> to enter the "White Balance" submenu;

3.1.8.3. Press <UP/DOWN> to select the desired white balance option: Auto/Daylight/Cloudy/Tungsten;

3.1.8.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.9 Sharpness

This feature allows users to adjust the Sharpness of the video to make the edges of the video clearer or softer

3.1.9.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "Sharpness";

3.1.9.2. Press <OK> to enter the "Sharpness" submenu;

3.1.9.3. Press <UP/DOWN> to select the desired sharpness: Sharp/Normal/Soft;

3.1.9.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.10 Exposure

This function can adjust the brightness of the captured video according to the ambient brightness. The larger the EV value, the higher the brightness of the captured video file, and the smaller the EV value, the darker the captured video. When the ambient brightness is low, adjusting this function is invalid.

3.1.10.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "Exposure";

3.1.10.2. Press <OK> to enter the "Exposure" submenu;

3.1.10.3. Press <UP/DOWN> to select the desired exposure value: from -3.0 to +3.0;

3.1.10.4. Press <OK> to save and return, press <MENU> twice to return to Video mode.

Notice:

When the ambient brightness is low, adjusting this function is invalid.

3.1.11 WDR

Enable this function to shoot clear video files in places with strong contrast between light and dark.

3.1.11.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "WDR";

3.1.11.2. Press <OK> to enter the "WDR" submenu;

3.1.11.3. Press <UP/DOWN> to select whether to enable WDR: Off/On;

3.1.11.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.12 Record Audio

This function can enable or disable the sound during video recording.

3.1.12.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select “Record Audio”;

3.1.12.2. Press <OK> to enter the "Record Audio" submenu;

3.1.12.3. Press <UP/DOWN> to select whether to turn on the sound when recording: Off/On;

3.1.12.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.13 Date Stamp

This function is to set whether to display the time and date on the captured video.

3.1.13.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "Date Stamp";

3.1.13.2. Press <OK> to enter the "Date Stamp" submenu;

3.1.13.3. Press <UP/DOWN> to choose whether to display the date and time on the video file: Off/On;

3.1.13.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.1.14 Metering

This function is to set the Metering mode required for shooting.

3.1.14.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "Metering";

3.1.14.2. Press <OK> to enter the "Metering" submenu;

3.1.14.3. Press <UP/DOWN> to select the desired Metering mode: Average/Center-Weighted/Spot;

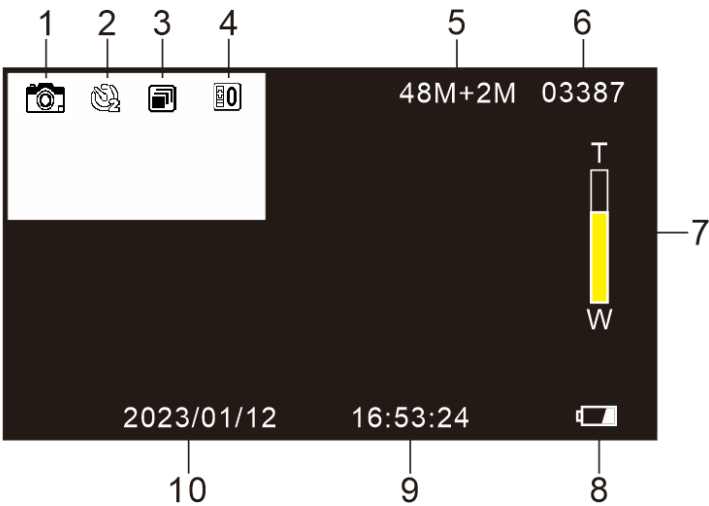
3.1.14.4. Press <OK> to save and return, press <MENU> twice to return to Video mode;

3.2Photo mode

The camera has a powerful camera function. In Photo mode, you can help to take very beautiful photos by setting various menus. The specific operations are as follows.

After the camera is turned on, it automatically enters the Video mode, and the user needs to press <MODE> to switch to the Photo mode. After entering Photo mode, some icons will be displayed on the screen, and their meanings are shown in the figure below:

1 Photo mode	2 Selfie	3 Sequence	4 EV
5 Image Resolution	6 Number of available photos remaining	7 W/T	8 Battery level
9 Time	10 Date		



3.2.1 Take photos

3.2.1.1. Correctly insert the memory card, install the battery, short press <POWER/LED> to turn on the camera, and the camera has the function of automatically turning on the screen;

3.2.1.2. Press <MODE> to switch to Photo mode; at this time, the " " icon appears on the upper left corner of the display screen.

3.2.1.3. Point the camera lens at the scene to be photographed, adjust the angle and direction, hold the camera firmly and keep it steady;

3.2.1.4. Lightly press the first segment of the <photograph button>, a white focus frame will appear on the screen, and then the focus frame will turn green, then press the <photograph button> again to the second segment, and the sound of "click" means that the photo is taken ;

3.2.1.5. If the memory card is full and the screen displays “MEMORY FULL”, you need to replace a new memory card or delete the files in this card to continue taking pictures.

In Photo mode, the user can set various parameters in the Photo mode menu first, and then take a photo. The specific operations of the various menus under the Photo menu are as follows. If you are not familiar with this camera, you can also use the camera's default settings.

3.2.2 Dual Record

Set the display style of the front and rear cameras on the screen, the default is "Picture-in-Picture1": the picture of the rear camera is displayed in the upper left corner of the preview screen of the front camera. Select "Picture-in-Picture2": the picture of the front camera is displayed in the upper left corner of the preview picture of the rear camera. Select "Front": the front camera is displayed in full screen.

3.2.2.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select “Dual Record”;

3.2.2.2. Press <OK> to enter the "Dual Record" submenu;

3.2.2.3. Press <UP/DOWN> to select the required video resolution:

Front/Picture-in-Picture1/Picture-in-Picture2;

3.2.2.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.3 Resolution

This function is to set the resolution of the photo. The higher the resolution, the larger the photo file and the more storage space it takes up. On the contrary, the lower the resolution, the smaller the photo file and the smaller the storage space it takes up.

3.2.3.1. In Photo mode, press <MENU> to enter the menu, press <DOWN> to select "Resolution";

3.2.3.2. Press <OK> to enter the "Resolution" submenu;

3.2.3.3. Press <UP/DOWN> to select the desired photo resolution:

48M+2M/36M+2M/24M+2M/20M+2M/16M+2M/12M+2M/8M+2M/5M+2M; if Dual Record selects "Front", the resolution menu becomes: 48M/36M /24M/20M/16M/12M/8M/5M

3.2.3.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.4 White Balance

This function is to adjust the color deviation of the recorded video screen according to different light source environments. It is recommended to use the automatic mode.

3.2.4.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "White Balance";

3.2.4.2. Press <OK> to enter the "White Balance" submenu;

3.2.4.3. Press <UP/DOWN> to select the desired white balance option: Auto/Daylight/Cloudy/Tungsten;

3.2.4.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.5 Quality

This function is to set the quality of the photo, the higher the quality of the photo, the clearer the photo, and the larger the storage space occupied

3.2.5.1. In Photo mode, press <MENU> to enter the menu, press <DOWN> to select Quality";

3.2.5.2. Press <OK> to enter the "Quality" submenu;

3.2.5.3. Press <UP/DOWN> to select the required photo quality: Fine/Normal/Economy;

3.2.5.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.6 Sharpness

This function is to set the sharpness of the photo to make the edges of the photo clearer or softer.

3.2.6.1. In Photo mode, press <MENU> to enter the menu, press <DOWN> to select "Sharpness";

3.2.6.2. Press <OK> to enter the "Sharpness" submenu;

3.2.6.3. Press <UP/DOWN> to select the desired sharpness: Sharp/Normal/Soft;

3.2.6.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.7 Selftimer

This function is to set the waiting time when taking a selfie.

3.2.7.1. In Photo mode, press <MENU> to enter the menu, press <DOWN> to select "Selftimer";

3.2.7.2. Press <OK> to enter the "Selftimer" submenu;

3.2.7.3. Press <UP/DOWN> to select the Selfie time: Off/2S Timer/5S Timer/10S Timer;

3.2.7.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.8 Color

This function is to set various special effects when taking pictures according to personal preference.

3.2.8.1. In Photo mode, press <MENU> to enter the menu, press <DOWN> to select "Color";

3.2.8.2. Press <OK> to enter the "Color" submenu;

3.2.8.3. Press <UP/DOWN> to select the special effect required for taking pictures: Color/Black & White/Sepia;

3.2.8.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.9 ISO

This function is to set the sensitivity of taking photos, and it is recommended to use the automatic mode;

3.2.9.1. In Photo mode, press <MENU> to enter the menu, press <DOWN> to select "ISO";

3.2.9.2. Press <OK> to enter the "ISO" submenu;

3.2.9.3. Press <UP/DOWN> to select the desired ISO option: Auto/100/200/400/800/1600/3200/6400;

3.2.9.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.1.10 Exposure

This function can adjust the brightness of the captured video according to the ambient brightness. The larger the EV value, the higher the brightness of the captured video file, and the smaller the EV value, the darker the captured video. When the ambient brightness is low, adjusting this function is invalid.

3.1.10.1. In Video mode, press <MENU> to enter the menu, press <DOWN> to select "Exposure";

3.1.10.2. Press <OK> to enter the "Exposure" submenu;

3.1.10.3. Press <UP/DOWN> to select the desired exposure value: from -3.0 to +3.0;

3.1.10.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode.

Notice:

When the ambient brightness is low, adjusting this function is invalid.

3.2.11 Sequence

This function is to set the camera to take five continuous shots, that is, after turning on this function, five photos will be taken continuously each time;

3.2.11.1. In Photo mode, press <MENU> to enter the menu, press <DOWN> to select "Sequence";

3.2.11.2. Press <OK> to enter the "Sequence" submenu;

3.2.11.3. Press <UP/DOWN> to select whether to enable continuous shooting: Single/3 Sequence;

3.2.11.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.12 WDR

Turn on this function to take clear photos in places with strong contrast between light and dark.

3.2.12.1. In Photo mode, press <MENU> to enter the menu, press <DOWN> to select "WDR";

3.2.12.2. Press <OK> to enter the "WDR" submenu;

3.2.12.3. Press <UP/DOWN> to select whether to enable WDR: Off/On;

3.2.12.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.13 Metering

This function is to set the Metering mode required for taking pictures.

3.2.13.1. In video recording Photo mode, press <MENU> to enter the menu, press <DOWN> to select "Metering";

3.2.13.2. Press <OK> to enter the "Metering" submenu;

3.2.13.3. Press <UP/DOWN> to select the desired Metering mode: Average/Center-Weighted/Spot;

3.2.13.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode;

3.2.14 Date Stamp

This function is to set the time and date displayed on the photos taken.

3.2.14.1. In Photo mode, press <MENU> to enter the menu, press <DOWN> to select "Date Stamp";

3.2.14.2. Press <OK> to enter the "Date Stamp" submenu;

3.2.14.3. Press <UP/DOWN> to choose whether to display the date and time on the photo file:

Off/Date/Date&Time;

3.2.14.4. Press <OK> to save and return, press <MENU> twice to return to Photo mode ;

3.3 Playback Mode

The photos and videos taken by the camera can be viewed in Playback Mode, and can be protected and deleted.

3.3.1 Play back video

3.3.1.1. Press <PLAYBACK/WiFi> to switch to Playback Mode, press <UP/DOWN> to select video or photo, press OK to enter the corresponding submenu; view the corresponding file.

3.3.1.2 Select the video, press <OK> to enter the video, press <Rec> to play the video, during the playback of the video, the operation functions of each button are as follows:

Press <Rec or OK>: pause/resume playback,

Press <MENU>: stop playing,

Press <UP>: rewind,

Press <DOWN>: fast forward,

Move <W/T> to the right: turn up the volume,

Toggle <W/T> to the left: turn down the sound

3.3.2 Delete

This function is to delete the shooting files.

3.3.2.1. In Playback Mode, press <DOWN> to select the file, press <OK> to enter the file, press <MENU> to enter the menu, and select "Delete";

3.3.2.2. Press <OK> to enter the "Delete" submenu;

3.3.2.3. Press <UP/DOWN> to select the desired operation mode: Delete Current/Delete All;

3.3.2.4. Press <OK> to enter the submenu, press <UP/DOWN> to confirm whether to delete again: Cancel/OK;

3.3.2.5. Press <OK> to execute and return, press <MENU> to return to Playback Mode;

Notice:

1. The delete operation cannot delete locked files.
2. Files cannot be restored after deletion, please use with caution.

3.3.3 protect

This function is to lock and unlock video/photo files.

3.3.3.1. In Playback Mode, press <DOWN> to select the file, press <OK> to enter the file, press <MENU> to enter the menu, press <DOWN> to select "Protect";

3.3.3.2. Press <OK> to enter the "Protection" submenu;

3.3.3.3. Press <UP/DOWN> to select the desired operation: Lock Current/Unlock Current/Lock All /Unlock All;

3.3.3.4. Press <OK> to execute and return, press <MENU> to return to Playback Mode;

Notice:

1. Lock Current: It means to lock the video/photo file currently being browsed.
2. Unlock Current: It refers to unlocking the video/photo file currently being browsed.
3. LockAll : refers to lock all video/photo files of the camera.
4. Unlock All: refers to unlock all video/photo files of the camera.

3.4 Setup

This function is to set the system parameters of the camera. In this mode, you can set the Language, Beep Sound, Frequency, etc. of the camera. The specific operations are as follows.

Enter the setting mode method:

In Video mode/Photo mode, press <MENU> twice to enter the menu;

In this menu, the user can make corresponding settings according to the selection. The specific operation is as follows:

3.4.1 Date&Time

This function is to set the system date and time of the camera

3.4.1.1. In the setting mode, press <DOWN> to select "Date&Time";

3.4.1.2. Press <OK> to enter the "Date&Time" submenu;

3.4.1.3. Press <UP/DOWN> to set the year/month/day/hour/minute, press <OK>: switch between year/month/day/hour/minute/second confirmation;

3.4.1.4. After the setting is completed, press <OK> to confirm and return.

3.4.2 Auto power off

This function is to set the camera to automatically shut down to save power if it is not used for a certain period of time.

3.4.2.1. In the setting mode, press <DOWN> to select "Auto power off";

3.4.2.2. Press <OK> to enter the "Auto power off" submenu;

3.4.2.3. Press <UP/DOWN> to select the waiting time for automatic shutdown:
Off/1Minute/2Minutes/3Minutes/5Minutes/10Minutes

3.4.2.4. Press <OK> to save and return;

3.4.3 Beep Sound

This function is to set the camera button operation sound on and off.

3.4.3.1. In the setting mode, press <DOWN> to select "Beep Sound";

3.4.3.2. Press <OK> to enter the "Beep Sound" submenu;

3.4.3.3. Press <UP/DOWN> to select Beep Sound operation: Off/On;

3.4.3.4. Press <OK> to save and return.

3.4.4 Language

This function is to set the required operating language according to user needs

3.4.4.1. In Setup, press <DOWN> to select "Language";

3.4.4.2. <OK> Enter the "Language" submenu;

3.4.4.3. Press <UP/DOWN> to select the desired language:

English/French/Spanish/Portuguese/German/Italian/Simplified Chinese/Traditional Chinese/Russian/Japanese;

3.4.4.4. Press <OK> to save and return.

3.4.5 Frequency

This function is set to be synchronized with the user's Frequency to avoid screen flickering under lighting conditions. For details, please refer to the local power supply standard.

3.4.5.1. In the setting mode, press <DOWN> to select "Frequency";

3.4.5.2. <OK> Enter the "Frequency" submenu;

3.4.5.3. Press <UP/DOWN> to select the appropriate Frequency item: 50HZ/60HZ

3.4.5.4. Press <OK> to save and return.

3.4.6 WiFi Auto Off

This function is used to automatically turn off the time when the WiFi is turned on but the phone is not connected to the WiFi.

3.4.6.1. In the setting mode, press <DOWN> to select "WiFi Auto Off";

3.4.6.2. <OK> Enter the "WiFi Auto Off" submenu;

3.4.6.3. Press <UP/DOWN> to select the required automatic closing time: Off/3Minutes/5Minutes;

3.4.6.4. Press <OK> to save and return.

3.4.7 Format

This function is to format the memory card of the camera. After formatting, all files on the memory card will be deleted and cannot be recovered. Please use this function with caution.

3.4.7.1. In the setting mode, press <DOWN> to select "Format";

3.4.7.2. <OK> Enter the "Format" submenu;

3.4.7.3. Press <UP/DOWN> to select whether to format the memory card: cancel/confirm;

When "Cancel" is selected, the formatting function will not be executed;

When "Confirm" is selected, press <OK> to execute the function. After the execution is completed, it will automatically return to the setting mode.

3.4.8 Default Setting

When the camera cannot take normal photos/videos due to wrong menu settings, the user can use this function to restore the factory default settings.

3.4.8.1. In the setting mode, press <DOWN> to select "Default Setting";

3.4.8.2. <OK> Enter the "Default Setting" submenu;

3.4.8.3. Press <UP/DOWN> to select whether to restore factory settings: cancel/confirm;

When "Cancel" is selected, the default settings will not be restored;

When "Confirm" is selected, press <OK> to execute the function. After the execution is completed, it will automatically return to the setting mode.

3.4.9 Version

This function allows you to check the software version of the camera's operating system.

3.4.9.1 In the setting mode, press <DOWN> to select "Version", and the current version information of the camera will be displayed on the right side of the screen.

3.5 WiFi Connection

The camera can be operated remotely with a mobile phone in WiFi mode. The functions and related applications

after connecting to WiFi will be introduced in detail below.

3.5.1. In Video mode or Photo mode, press and hold <PLAYBACK/WiFi> for 3 seconds to turn on the WiFi function. At this time, the upper left corner of the camera screen displays "AP mode", and the middle of the screen displays "SSID: X60S_XXXX", "PWA2:12345678 ", the bottom of the screen displays "WiFi_OFF" characters.

3.5.2. Press and hold <PALYBACK/WiFi> for 3 seconds to turn off the WiFi function and return to the main preview interface.

3.5.3. For Android phones and tablets, enter the Google Play app store and search for the APP "Lercenker" file to download and install.

3.5.4. IOS system mobile phones and tablets, enter the APP Store and search for the APP "Lercenker" file to download and install.

3.5.5. Press and hold <PALYBACK/WiFi> for 3 seconds to turn on the WiFi function, use the mobile phone to search the camera device WiFi name: "X60S_XXXX" and click to connect to the device, enter the device connection password "12345678" as prompted and click to confirm the connection.

3.5.6. Open the APP installed on the mobile phone and enter to perform remote photo taking, video recording, playback and other related operations on the camera.

Notice:

Android system and Apple system may have some differences in operation methods due to different device systems, but the installation method is the same, and users can operate according to the software characteristics of different mobile phones.

4Appendices

4.1 Technical Specifications

Image sensor	Front: 20MP CMOS sensor , Max 48.0MP (Interpolated) ; Rear: 2MP CMOS sensor
Memory	Built-in 128MB, expandable SD card up to 128GB
ISO	Auto , ISO100 , ISO200 , ISO400 , ISO800 , ISO1600 , ISO3200 , ISO6400 ,
Lens	Front : F/2.0 f=2.9mm ; Rear : F/2.4 f=2.9mm
Focus range	Front : 0.4m ~ infinity ; Rear : 0.5m ~ infinity
Photo	JPG; Front lens: 5M/8M/12M/16M/20M/24M/36M/48M(Interpolated) Rear lens: 2M
Video	MP4 , H.264; Front lens:4K30fps/2.7K60fps/2.7K30fps/1080P60fps/1080P30fps/720P60fps /720P30fps ;

	Rear lens:1080P30fps
Zoom	16X digital zoom
Anti-shake	Support , EIS
IR Night vision/Fill light	Support , <2.5m (Only the front lens)
White balance	Auto/ Daylight/ Cloudy/ Flourescent/ Tungsten
EV	-3.0EV ~ +3.0EV
Selfie	Off/ 2sec./ 5sec./ 10sec.
PC port	USB2.0 (High speed)
LCD screen	3.0 inch IPS HD touch screen
Microphone	Built-in
External Microphone	Support , 3.5mm coaxial, Output impedance : 0.2K Ω ~2.2K Ω
Speaker	Built-in
HD output	Support
WiFi	Support, the mobile phone and the camera are interconnected
IR remote control	Support , 6 meter
Battery	Li-ion batteryNP-180
Power adapter	Output DC 5V/1.5A
Language	English/French/Spanish/Portuguese/German/Italian/Simplified Chinese/Traditional Chinese/Russian/Japanese
Dimensions	120(L) $\times$ 57(W) $\times$ 61(H)mm
Weight	297 $\pm$ 5g(battery excluded)

4.2Common faults and solutions

Problem	Possible cause	Solution
Can not turn on the camera	Battery is not inserted correctly/Battery low	Inserting the battery correctly/Charging the battery
Suddenly black screen	Power saving enabled/Battery low	Restart/Charge battery
Can't record video or take pictures	Memory card not formatted	Format the memory card
	Memory card speed is too slow	Replace the memory card with a speed of Class 10 or higher
	Memory card write protected	Remove write protection
Take photos normally, but the photos are not clear.	The lens is dirty or has foreign matter.	Clean the lens with a special soft cloth and keep it clean
Prompt memory card error	Memory card protection	Release memory card protection

Freeze at work	The memory card format is wrong/The memory card is damaged	Format the memory card or replace it with a qualified memory card
	The memory card is not qualified	Replace with a qualified memory card
Photos/videos are out of color	Camera white balance/special effects/exposure and other parameter settings are wrong	Set parameters correctly. If you don't know the settings, please restore the factory settings.
The remote control does not work	Camera remote receiver is blocked.	Remove the blocking object
	Remote control battery is dead	Replace the battery
	The distance is too far	Close to the camera when using
External microphone works abnormally.	External microphone is not equipped with battery or the battery is dead	Insert a battery with sufficient power.
	External microphone is not connected properly	Connect it correctly
	The parameters of external microphone are incorrect.	Select a microphone with the correct parameters.
Connection to the computer is abnormal	Wrong connection or damaged USB cable	Reconnect or replace the USB cable
Video stutters/freezes when playing on computer	Computer configuration is too low	Use a computer that meets the requirements