FIREFLY Q8L

- IP67 protection level
- 4K video recording up to 3+hours, standby for 10 hours in deep sleep modeSupports 5G WIFI+Bluetooth remote control
- telephoto 4K lens, farther and clearer
- 4x slow motion, able to see bullet trajectories clearly
- Self developed shooting trigger function. Can record videos of 5 seconds before shooting and 10 seconds after shooting
- Mount bracket compatible with shotgun sizes .410, 28, 20, and 12 gauge(12-26mm)
- Gyro V4.1 algorithm, anti shake image does not tail in dark environments
- A cross or red dot symbol can be added in the middle of the image, and its position can be moved.

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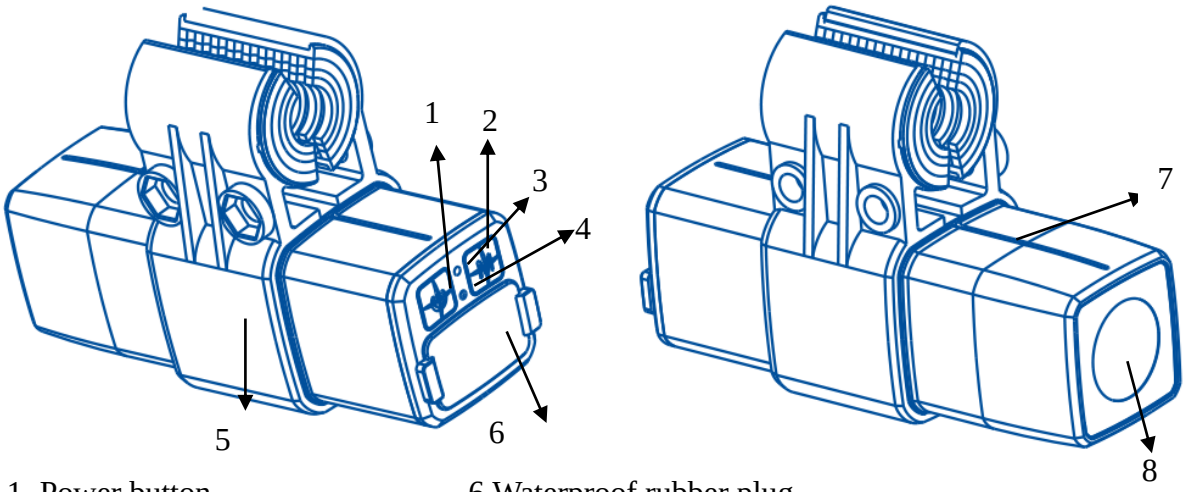
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Characteristics:



1. Power button
2. Mode button
3. Status LED
4. Microphone pickup hole
5. Camera stand（Compatible with barrel diameters of 12-26mm）
6. Waterproof rubber plug (including TF card slot/USB-C socket and reset hole)
7. Camera forward marking slot
8. Camera lens position

Button description:

Name	Function	Describe
Power button	Power on/off video recording	Short to turn on, long press 2S to turn off; Short to record/stop recording
Mode button	Mode	Short to between recording/slow motion. Press and hold for 2S to turn on/off WIFI.
Reset key		When the camera malfunctions, it can be powered off to repair the problem

LED description:

Name	Function	Describe
Red LED	Indicating charging	The red LED up while charging， turns off when fully charged...
Green LED	The recording mode is constantly on	The green LED flashes when recording.
Blue LED	The slow motion mode is constantly on	When turning on WIFI, it flashes
G/B LED	Power Saving Mode	Green and blue lights alternate and flash slowly

Special G LED	Low battery warning	When the battery is lower than the startup voltage, the camera can't be turned on and the G LED flashes for 3s as a prompt

Vibration description:

Name	Function	Describe
Vibration after startup	Indicate battery level	When the battery level is above 75% -100%, vibrate 4 times Vibration for 3 times at 50% -75% Vibration 2 times at 25% -50%; Vibration once at 1% -25%.
Shutdown	Normal shutdown	Shutdown after 2s of vibration
Low Battery	Low power automatic shutdown	Vibration lasts for 5 seconds when low power is detected, and then automatically shuts down after 30 seconds
key operation		Vibration once during key operation for feedback

Specification list:

Specification	Video resolution	4K30FPS/2.5K60FPS/1080P120FPS...
	TF card requirements	U3
	Max support for TF	512GB
	Size	100×32×32 MM
	Weight	108g
	Battery capacity	2190mAh
	working hours	4 hours@1080P@30 (laboratory data)
	charging time	3h
	compressed format	H.264/H.265
	file format	*.MP4 / *.JPG
	Protection level	IP67
	Operation tips	Vibration /LED
12.5mm long focal length version	Aperture	F/2.35 ， 6G
	Angle of view	H=28.5 ° V=35.7 °

8mm long focal length version	Aperture	F/2.0 ， 5G
	Angle of view	H=41 ° V=47 °
Electrical parameters	working voltage	5V
	Working current	400mA@4K30FPS
	Charging current	1000mA
	leakage current	45uA
Working mode	Video recording	
	Slow motion recording	

Shooting-triggered recording function:

When the camera is turned on, as long as it detects shooting vibrations, the camera will automatically trigger and save videos 5 seconds before and 10 seconds after shooting (note: pre shooting videos cannot be saved when connecting to the app)

Power Saving Mode:

When the camera is turned on and no shooting vibration is detected within 20 seconds, the camera will automatically enter power-saving mode. At this moment, the green and blue lights alternate and flash slowly. When lifting the gun barrel 30 degrees or flipping the camera left or right for more than 30 degrees for 1 second, the camera will automatically exit power-saving mode and enter pre recording mode, waiting for shooting to trigger.

External remote pressure switch trigger recording function:

Two contacts are reserved on the USB port of the camera, and the remote pressure switch can be used to control video recording. If pairing is unsuccessful, you can restart the camera and pair again. (Need to purchase additional Firefly remote pressure switch).

Bluetooth remote control triggers recording function:

After the camera is on, it will search for the BT remote. At then, you can press the button on the BT remote control to pair. After pairing successfully, you can control the camera to record through the BT remote.
(Need to purchase additional Firefly Bluetooth remote control).

USB connection instructions:

1. When the camera is off and connected to the USB port of the camera with the computer, the camera will automatically turn on and enter the U disk mode. At this point, you can copy the video/photos from the camera to the computer.
2. When the camera is on with the computer connected to the USB port of the camera, the camera will enter the PC CAM mode. The camera can then be used as a 4K camera for your computer.

APP usage instructions:

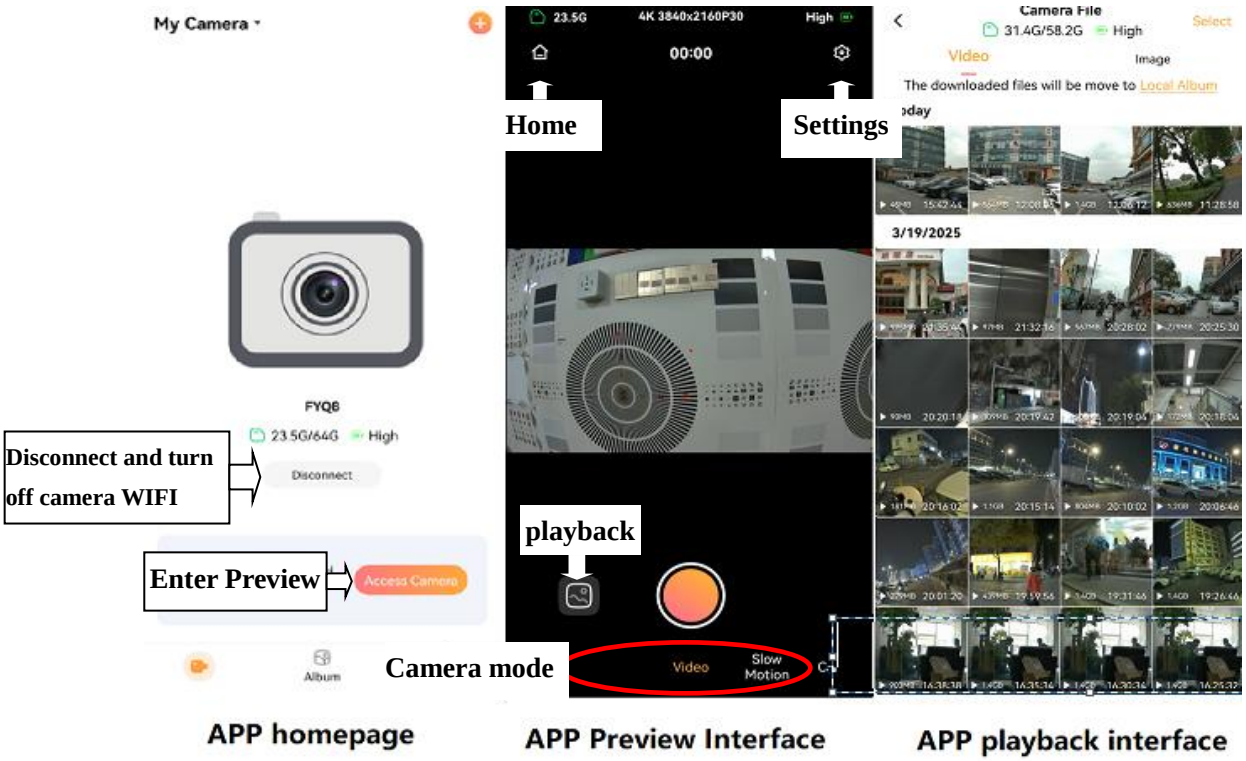
1. APP download:

Google Play Search : **Viipulse**

APP Store Search : **Viipulse**

2.APP connection:

After the camera is on, long press the mode button for 2S to turn on the WIFI. Then you can find Firefly_Q8_5G_xxxxxxxxxxx(x indicates a random number or letter, which varies from camera to camera) in the WIFI hotspot on your phone/ tablet and connect. The default password is 12345678. Once the connection is successful, you can open the APP. Screenshot below:



After opening the APP, you will enter the APP home page, Click "Enter Camera" to enter the APP preview interface. In the preview interface, you can see the camera's image in real time. It is convenient to adjust the best shooting Angle of the camera.
In the home page, there is a "disconnect" button. Tapping it will exit the APP and turn off the camera's WIFI. (When the Settings are complete, you can tap the Disconnect button to turn off the camera WIFI to save power.)
In this interface, we can click the icon in the upper left corner to return to the main page, or click the icon in the upper right corner to enter the menu setting. Click the icon in the lower left corner to enter the playback screen to view the video or photo recorded before. There are three camera modes at the bottom, and you can swipe to select the one you want.

APP menu options Introduction:

Note: Android APP and IOS APP menu options will be different order, the following options are the order of Android:

Recording sound

Recording sound can be **turned on**/off quickly.

Video resolution

4k30fps/**2.5k60fps**/2.5k30fps/1080p60fps/1080p30fps/1080p120fps

Loop Recoding Duration

Camera segmented video, can choose 1 min /3 min /**5 min** /10 min.

Light Source Frequency

Light frequency setting, which can be used to avoid light flickering when used indoors.

Video Encoding Format

H264/H265.

WDR

When the WDR function is enabled, the video tolerance will be improved. It is recommended to use on cloudy days, sunny days may cause excessive exposure.

LOGO Watermark

Optional close/**Red dot**/cross /LOGO. When recording a shooting game, you can turn on the red dot or cross symbol reference.

LOGO coordinates X

LOGO coordinates Y

Used to adjust the position coordinates of red dots or crosshairs. The adjustable

range is 90% of the camera image.

Mirroring

The image is flipped 180 degrees after opening.

Auto Power Off: Default On.

When the camera has not been operated and recorded for 15 minutes, it will automatically shut down to save power.

Preliminary Record

The camera automatically starts recording and saves it in memory after booting up. (When connected to the app or in slow motion mode, this function is invalid.)

FOV

A total of 8 different sizes of view can be switched. (It takes effect only when in video mode and the anti-shake function is turned off.)

Recording volume

The recording size can be selected from 0% to 100% recording volume.

ISO

Auto/100/200/400/800/1600/3200.

White Balance

Auto/sunny/cloudy/incandescent/fluorescent/underwater mode.

Video quality

High/**medium**/low. High bitrates can preserve more detail in the picture, but take up more storage space. Low bit rates occupy less memory space. The maximum bit rate of the camera is about 40Mbps.

Time Stamp

When turned on, the time and date can be displayed in the video.

Exposure compensation

exposure value adjustment range +-2.0, low exposure value can avoid overexposure, preserve details, but the picture will be darker; With a high exposure value, the overall picture will be brighter, but some details may be lost.

Anti-Shaking

Anti-shake is turned on by default. The anti-shake algorithm has been optimized, and the screen in dark environments will not drag. If it is a fixed shooting scene, it is recommended to turn off anti-shake to improve the picture quality.

Metering Method

Average metering, center-weighted metering, spot metering. Different metering methods are applied to different parts of the image. Average metering calculates the brightness of the entire image, center-weighted metering calculates the brightness of an important area in the middle part of the image, and spot metering calculates the brightness of the central point of the image. The metering method can be adjusted according to different shooting requirements.

Status lights

Turned on by default. the LED will no longer light after it is turned off.

Shock

Turned on by default. the motor will no longer vibrate after closing.

5G WI-FI

Turned off by default. (Can be compatible with old devices.) **When turned on, WIFI will run on 5G frequency. Download speed can be faster.**

Gyro Data

When turned on, it will generate gyro data that can be used by Gyroflow for algorithm stabilization.

Trigger sensitivity

There are 5 options available and can be turned off. The higher the sensitivity, the easier it is to trigger, but it is also more prone to false triggering. When turned off, the camera will not be able to trigger firing. The default is mid-range. **When shooting with a rifle at a fixed point, it is recommended to set it to the high or highest option to reduce missed triggers; When using a large caliber shotgun, it is recommended to adjust it to the medium and low options to reduce false triggering.**

Wake up sensitivity

There are 5 options to choose from. The higher it is, the easier it is to wake up, but it also consumes more power.

Sleep mode

Light sleep/deep sleep/**off**. The wake-up time for light sleep is around 0.4 seconds, which is generally energy-saving; The wake-up time for deep sleep is around 2 seconds, but it is the most energy-efficient. When turned off, the camera will not enter sleep mode.

WIFI name

You can change the WIFI name manually.

WIFI password

You can change the WIFI password manually.

Firmware version

Displays the camera's firmware version number.

Format SD card

You can format TF card.Suggestion: Format the new TF card once on the machine.

Factory Reset - you can restore the parameters of the machine to factory Settings.

Suggestion: If the machine has any problems, restore the factory Settings first, and then restart once.

Charging instructions:

Use a USB cable to connect to your phone charger, or your computer. Use a charger above 2A to speed up charging time. When fully charged, the charging light will go off. It is recommended to charge after turning off the machine.

Solutions to common problems:

1. Feel that shooting video is not good: Restore default Settings in the menu.
2. Feel the video is not smooth:

a. Set the frame rate to 2.5K60FPS; b. Anti-shake open.

3. Feel that the screen is too exposed: a. Turn off WDR; b. Manually turn down the EV.
4. Charging time is too long: When charging, long press the power button to shut down and charge.
5. The image and audio are not synchronized when playing: a. Copy the video to the computer; b. Replace the player.
6. Can not record: a. Ensure that the TF card speed reaches U3; b. Format the TF card on the menu once.

7. For more information please visit www.hawkeyecameras.com Or contact E-mail: vikin@hawkeyefpv.com.cn