Starpheye
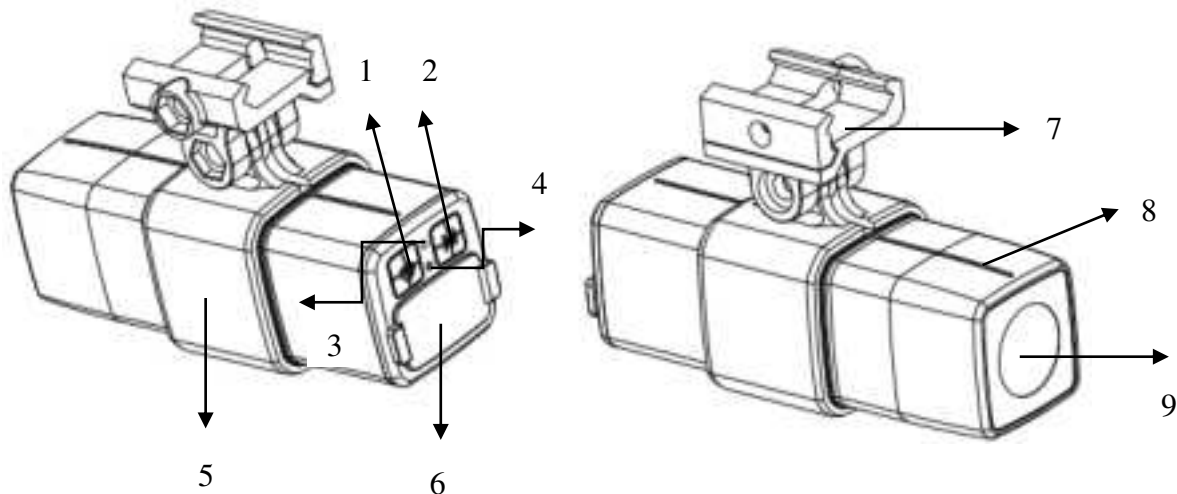
FIREFLY Q8

- IP67 protection level

- 4K recording up to 3.5 hours

- Supports 5G WIFI+Bluetooth remote control

- Wide angle or telephoto lens versions are optional

- 4x slow motion, able to see bullet trajectories clearly

- Laser etched texture technology, anti slip and beautiful!

- Support posture triggered recording and mouse tail cable triggered recording

- Equipped with gun rail bracket and barrel clamp bracket, there are more gameplay options!

- Gyro V4.1 algorithm, anti shake image does not tail in dark environments

- A cross symbol or red dot can be added in the middle of the image, which is more suitable for shooting scenes!

Catalogue

Characteristics：

1. Power button
2. Mode button
3. Status LED
4. Microphone pickup hole
5. Camera stand
6. Waterproof rubber plug (including TF card slot/USB-C socket and reset hole)

7. Gun rail bracket base (also supports other universal bracket bases)
8. Camera forward marking slot
9. Camera lens position

Button description：

Name	Function	Describe
1. Power button	Power on/off/video recording	Short press once to turn on, long press for 2 seconds to turn off；Short press once to record/stop recording.
2. Mode button	Mode switching	Short press to switch between recording/slow motion/photo modes. Press and hold for 3 seconds 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 function	The red LED stays on during charging and goes out after being fully charged
Green LED	The recording mode is constantly on	The green LED flashes when recording, and flashes briefly when taking photos.
Blue LED	The photo mode is constantly on	When turning on WIFI, it flashes
G/B LED	When in slow motion mode, both green and blue LED are constantly on	Green and blue LED flash simultaneously during slow motion recording
Special G LED	Low battery warning	When the battery level is lower than the startup voltage, the camera cannot be turned on and the green LED flashes for 3 seconds 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 2 seconds of vibration
Low Battery	Low power automatic shutdown	When low power is detected, vibrate 30 seconds in advance and give a 5-second prompt. Automatically shut down after 30 seconds
key operation		Vibration once during key operation for feedback

Specification list:

Specification	Photo resolution	8M
	Video resolution	4K30FPS/2.5K60FPS/1080P120FPS...
	TF card requirements	U3
	Maximum support for TF cards	512GB
	Size	100×32×32 MM
	Weight	100g
	Battery capacity	2200mAh
	working hours	3.5h@4K
	charging time	3h
	compressed format	H.264/H.265
	Video/photo file format	*.MP4 / *.JPG
	Protection level	IP67
	Operation tips	Vibration /LED
Optical - Wide Angle Version	Aperture	F/1.8 , 7G
	Angle of view	H=125° V=150°
Optics -12.5mm long focal length version	Aperture	F/2.35 ,6G
	Angle of view	H=28.5° V=35.7°
Electrical parameters	working voltage	5V
	Working current	400mA@4K30FPS
	Charging current	1000mA

	Standby leakage current	45uA
Working mode	Video recording	
	Slow motion recording	
	Photo	

<u>Posture-triggered recording function:</u>

When the camera is turned on, you only need to put the camera up more than 30 degrees, and then down more than 30 degrees. Finally returning to 0 degrees. These actions need to be completed within 2 seconds. It triggers the automatic recording.

<u>External Mouse tail cable trigger recording function:</u>

The USB port of the camera is Designed for two IO trigger functions, which can be used to control recording and taking photos with a Mouse tail cable (an adapter cable is required).

<u>Bluetooth remote control triggers recording function:</u>

After the camera is turned on, it will automatically search for the Bluetooth remote control. At this time, you can press the button on the Bluetooth remote control to pair with the camera. After pairing successfully, you can control the camera to record and take photos through the Bluetooth remote control. (Separate Firefly Bluetooth remote control is required)

<u>USB connection instructions:</u>

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.

<u>APP usage instructions:</u>

After the camera is turned on, long press the mode button for 2 seconds to turn on the WIFI function. Then you can find Firefly_Q8_5G_xxxxxxxxxxxx(x indicates a random number or letter, which varies from camera to camera) in the WIFI

hotspot on your phone/tablet and connect to the hotspot. The default password is 12345678. Once the connection is successful, you can open the APP. Screenshot below:

APP homepage   APP Preview Interface   APP playback interface   APP settings interface

After opening the APP, you will first enter the APP home page, 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.) 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 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.

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.

Video Encoding Format
H264/H265.

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

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.

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.

Mirroring

The image is flipped 180 degrees after opening.

Auto Power Off

When the camera has not been operated and recorded for 5 minutes, it will automatically shut down to save power.

FOV

A total of 8 different sizes of view can be switched. Note 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.

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 on by default. When turned off, WIFI will run on 2.4G frequency. Can be compatible with old devices.

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.hawkeyefpv.com.cn .

FCC Warning

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 inte rference 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 interferenceto 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.

Absorption Rate (SAR) information: This device meets the government's requirements This device meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health.

FCC RF Exposure Information and Statement.

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. This device was tested for typical body-worn operations with the back of the device kept 0mm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a appropriate separation distance between the user's body and the back of the device. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that donot satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided. Use only the supplied or an approved antenna.