



## WASPcam™ 9907 4K Action-Sports Camera

# User Manual

Please read through this user manual before using the product and keep the manual for future reference. Product appearance and/or specifications are subject to change without notice. Before using this camera, please insert a micro SD card (class 10 card, no larger than 64GB) into the WASPcam™ 9907 4K camera. Camera functions will not work without a micro SD card inserted into the camera. Please note the camera **does not include** a micro SD card inside the package, the micro SD card must be **purchased separately**.

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## Table of Contents

Manual Disclaimer .....	3
Safety Precautions .....	3
System Requirements.....	4
Features.....	5
Accessories.....	6
Camera Function Quick Guide Diagram.....	7
Button Functions .....	8
Basic Camera Functions .....	9
Installing the Micro SD Card.....	9
Using the Wi-Fi Button .....	9
Charging the Battery .....	9
Turning the Camera On/Off .....	9
Screen Icons .....	10
Zoom In/Out.....	10
Menu Interface Introduction .....	10
Recording Functions .....	10
Photos .....	12
Deleting / Protecting Files / Slide Show .....	13
Video Menu Settings .....	13
System Settings .....	14
Photo Menu Settings.....	15
Enabling the Camera's Wi-Fi.....	15
Installing the WASPcam App .....	15
Using the Camera's Wi-Fi.....	16
App Interface Description .....	17
Updating Wi-Fi Name & Password.....	<a href="#">17</a> <del>18</del>
Connecting to External Devices .....	<a href="#">18</a> <del>19</del>
Technical Specifications.....	20

## Manual Disclaimer

Every effort has been made to ensure that the contents of this manual are correct and up to date. However, no guarantee is made regarding the accuracy of the contents. The manufacturer reserves the right to change the manual contents and product specifications without notice.

## Safety Precautions

- Do not store the product in dusty, dirty, or sandy areas, as its components may be damaged.
- Do not leave the camera in places exposed to extremely high temperatures, such as direct sunlight for extended periods of time. High temperatures can shorten the life of electronic devices, damage batteries and warp or melt certain plastics.
- Do not store the product in cold areas. When the product warms up to its normal temperature, moisture can form inside, which may damage the electronic circuits.
- Cobra Electronics is not responsible for any legal repercussions from the use of the WASPcam™ 9907 4K or from the sharing of footage.
- Do not attempt to open the casing or attempt your own repairs. High-voltage internal components create the risk of electric shock when exposed.
- Do not drop or knock the product. Rough handling may damage the internal components.
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the product. Wipe the product with a slightly damp soft cloth.
- Do not open the battery cover while an image is being recorded. Doing so will not only make storage of the current image impossible, it can also corrupt other image data already stored on the micro SD card.
- It is recommended to use the camera in temperatures between 0°C to 40°C (32°F to 104°F).
- It is normal for the camera to be warm after long periods of use.
- Please use a lens cleaning cloth or camera air blower to clean fingerprints or dust from the lens.
- Always test for proper operation before using the camera.
- Cobra Electronics is not responsible for any damage or personal injuries resulting from the use of the WASPcam™ 9907 4K or for replacing it if lost or stolen.

## System Requirements

The camera requires a computer with the following minimum specifications for 4K video playback:

- Windows® 7/ MAC OS X 10.8
- 4th Generation Intel® Processor / AMD Quad-Core CPU
- 8GB of RAM
- Graphics solution that supports 4K displays
- A monitor that supports 4K video
- Available hard disk space

The camera requires a computer with the following minimum specifications for full HD 1440p/30fps video playback:

- Windows® 7 / MAC OS X 10.8
- Intel® Core Duo™ / AMD Dual-Core CPU
- 4 GB of RAM
- Graphics solution that supports 1440p displays
- A display that supports 1440p video playback
- Available hard disk space

The camera requires a computer with the following minimum specifications for full HD 1080p/30fps and 720p/60fps video playback:

- Windows® 7 / MAC OS X 10.8
- Intel® Core Duo™ / AMD Dual-Core CPU
- 2 GB of RAM
- DirectX 9 compatible graphics solution
- Available hard disk space

The camera requires a computer with the following minimum specifications for full WVGA/VGA video playback:

- Windows® Vista / MAC OS X 10.5
- Intel® / AMD Dual-Core CPU and later
- 1 GB of RAM
- DirectX 9 compatible graphics solution
- Available hard disk space

Minimum requirements for connecting the camera to a PC or Mac:

- Standard USB 2.0 port

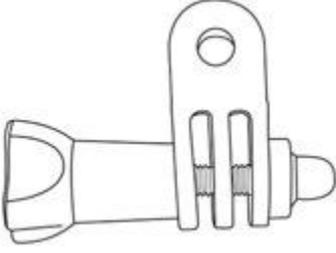
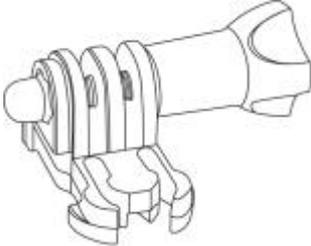
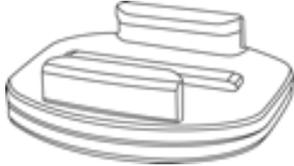
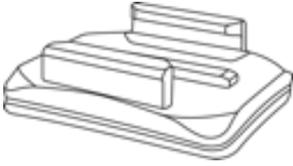
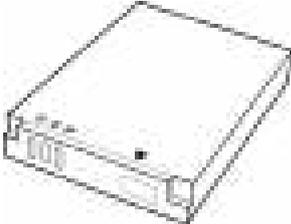
## **Features**

The camera offers a variety of features and functions including:

- Captures 4K/24fps and 1440p/30fps Video
- Full HD 1080p/60fps
- Time-lapse recording
- Supports motion detection, image rotation, image stabilization , WDR, diving mode, G-sensor, GPS and remove fisheye
- Wi-Fi: 802.11b/g/n
- H.264 Video Compression
- 170° Wide Angle Lens
- 20 Megapixel Photos
- Li-ion Rechargeable Battery
- Smartphone App Supported – WASPcam App

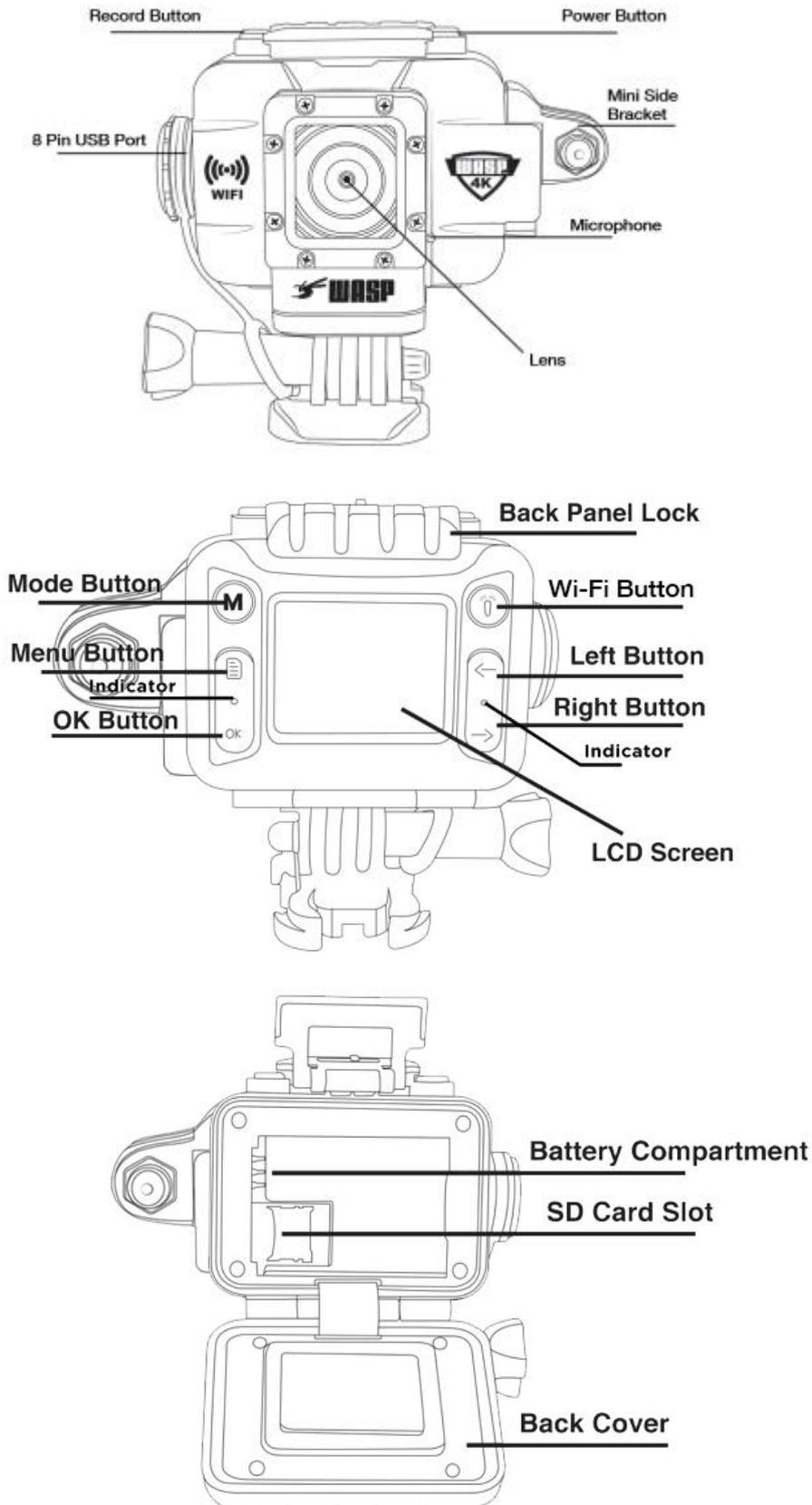
## Accessories

The following items should be included in the camera package. If any items are missing or damaged, contact your dealer immediately.

 <p>Micro USB Cable</p>	 <p>Straight Joint Mount</p>	 <p>J-Hook Buckle</p>
 <p>Mini Side Bracket</p>	 <p>Flat Adhesive Mount</p>	 <p>Curved Adhesive Mount</p>
	 <p>User Manual</p>	 <p>Rechargeable Li-ion Battery</p>

## Camera Function Quick Guide Diagram

Refer to the following illustrations to familiarize yourself with the buttons and controls of this camera.



## Button Functions

Button	Function
Power Button (Top Left) 	Turn the camera on & off. Clear the screen. Delete files under playback mode. Press once in video mode to take a photo while recording video.
Mode Button <b>M</b>	Switch to picture mode, video mode and playback mode.
Record Button (Top Right) 	Start and stop taking photos/videos. Returns to the photo/video mode when you are in the menu.
Menu Button 	Enter / exit menu settings.
OK Button <b>OK</b>	Browse photos and videos, to enter and confirm settings under setting mode.
Left Button 	Choose the last menu or file, zoom in on photos and videos. Reduce volume during playback. Press and hold to rewind playback video.
Right Button 	Choose the next menu or file, to zoom out on photos and videos. Increase volume during playback. Press and hold to fast forward playback video.
Wi-Fi Button 	Press to enter / exit the Wi-Fi menu.

## Basic Camera Functions

### Installing the Micro SD Card

To insert the SD card

- With the camera off open the back cover
- Slide the silver card lock down and gently pull up
- Place the SD card in the slot
- Close and push the card lock up to secure the card in place

**\*\*Note – Please use a minimum speed Class 10 card, maximum 64GB storage capacity**

Follow these steps in reverse order to remove the SD card

\*\*Note - Please ensure that the SD Card is inserted in the correct direction or you may damage the SD card and/or SD card reader.

### Using the Wi-Fi Button

Press the Wi-Fi button  to turn on the camera's Wi-Fi. Press the button again to turn off the camera's Wi-Fi.

### Charging the Battery

Connect camera and power supply using the included USB cable. The red indicator on the left side on the back of the camera will remain on while the camera is charging. Once it is fully charged the red indicator light will turn off. When plugged into a power source, the camera will turn on and off, and then begin charging. The camera can be turned back on to record while charging.

\*\*Note - To improve the charging efficiency of the camera, please turn the camera off while it is charging

### Turning the Camera On/Off

To turn on the camera, press the power button for 3 seconds. A chime will sound, the WASPcam™ 9907 4K LCD screen will turn on and the red indicator light at the front of the camera will also turn on. To turn off the camera, press the power button again for 3 seconds until the chime sounds and the screen goes black.

## Screen Icons

At the left of the LCD screen it displays the video icon, loop recording icon, white balance icon and the audio record icon.

At the right of LCD screen it displays the remaining recording time, resolution, SD card icon, and the battery icon. On the bottom of the LCD screen it displays the date and time.

## Zoom In/Out

While in record or photo mode, use the left and right arrow buttons to zoom in/out.

## Menu Interface Introduction

When in standby mode, press the menu button to enter settings, press the left/right arrow buttons to choose the options, then press the OK button to confirm. Press the menu button again to quit.

## Recording Functions

### Normal Recording

In video mode press the record button to start a video. The green LED light between the arrows will flash and the recorded time and recording icon will be displayed on the top of the LCD screen.

Press the record button again to stop recording and save the file – the estimated remaining recording time is displayed at the top of the LCD screen.

### Loop recording

In video mode press the menu button and use the right arrow to turn on Looping (for more details refer to Video Settings). Exit the menu and press the record button to start a video. The LED light between the 2 arrows will flash green and the red flashing recording icon and the recording time will be displayed at the top of the LCD screen.

After the looping duration, the camera will stop recording automatically and save the video, and then continue recording a new video file without missing a second of footage.

When the SD card is full, camera will delete the oldest video footage automatically and continue recording.

At any time while recording, you can press the record button to stop and save the video. The remaining time is displayed at the top of the LCD screen.

### Time-lapse Recording

In video mode press the menu button and use the right arrow to turn on Time-lapse Record (for more options refer to Video Settings). Exit the menu and press the record button to begin the time-lapse.

After 5 seconds (for example), the camera will take a picture automatically and begin counting down from 5 seconds again. The camera will take photos every 5 seconds until the user presses the record button to stop the time-lapse, the camera's battery dies, or the micro SD card is full.

The camera automatically saves all the photos it took during the time-lapse into a video file. Each photo is one frame of video.

### Automatic Recording

Users can turn Automatic Recording "On" if they want the camera to begin recording automatically when it is powered on. If Automatic Recording is set to "Off", users will have to manually begin recording.

### Motion Detection

1) In video mode press the menu button and use the right arrow to turn on Motion Detection and choose 30 SEC for example (for more options refer to Video Settings). Press REC to enter Motion Detection mode. The screen will say Motion Detecting.

2) If there is movement, the camera will auto record for 30sec (or the configured time) and stop. If there is no movement, the camera will stop recording automatically. If there is constant movement, the camera will detect this and the camera will keep recording in 30sec intervals (or the configured time).

\*\* Note – If you need to pause recording, press the record button once to pause. If you need to cancel motion detection – please turn off this setting in the menu.

\*\* Note – This setting will not work if the Loop Record is turned on

### Image Rotation

If your WASPcam™ 9907 4K camera is mounted upside down, enter the menu and select Image Rotation. This will rotate the video/images being recorded 180°, and the screen will show rotated images. Footage can also be rotated in most video editing software if required.

## Photos

### Snap Shots

While you are recording video you can press the power button to take a snap shot.

\*\*Note - when you are taking a snap shot, video is still being recorded continuously. You can only view the snap shots in playback mode.

### Normal photo

Press the Mode button until the camera is in photo mode, indicated by a camera icon in the top left corner. Additional icons are shown in this mode for the white balance, exposure, ISO icons, SD Card & battery icons.

The LCD screen will also display the remaining amount of photos and resolution. Press the record button to take a photo.

\*\*Note - when taking pictures – please hold the camera steady or it may affect the picture quality.

#### 1) Self-timer Mode (Single/3s/10s/30s Timer)

When the Self-timer is turned on, press the record button and the camera will count down the configured time and then take a photo. Press the record button again to stop the count down.

#### 2) Burst (Off / Burst 3 / Burst 10)

When Burst is turned on, press the record button and the camera will take and save 3 or 10 consecutive photos.

#### 3) Auto Photo (Off/3/5/10 seconds)

When Auto Photo is turned on, press the record button and the camera will take a photo at the configured interval continuously. The screen will show the countdown and when the time is up the camera will take a photo automatically, save the photo, and then continue photographing according to the configured time.

#### 4) Quick Review (Off/2seconds/5seconds)

When Quick Review is turned on and a photo is taken, the camera will display the photo on the screen for 2 or 5 seconds (according to the menu setting) and then return to photo standby mode.

### Playback mode

Press the mode button until the camera is in playback mode, indicated by the playback (▶) icon in the top left corner. Press the arrow buttons to choose the file you want to review and press the OK button to confirm. During video playback press OK to pause the video and

resume playback. During Video playback press the right/left arrows to adjust the volume and press and hold the right or left arrow buttons to fast forward or reverse playback.

## Deleting / Protecting Files / Slide Show

### Deleting Files

In playback mode press the menu button to enter settings and press the left/right arrows to select Delete and the OK button to confirm. Press the left/right arrows to Delete all or Delete Current, then press the OK button to confirm. Press the left/right arrow buttons to choose Cancel to keep the file or OK to delete the file.

### Protecting Files

In playback mode press the menu button to enter settings and press the left/right arrow buttons to select the protect setting. Press OK to confirm, and then press the left/right arrow buttons to select Lock Current, Unlock Current, Lock All, Unlock All, then press OK to confirm. Press the Menu button to exit

### Slide Show (Off/2/5/8 seconds)

In playback mode press the menu button to enter settings and turn on Slide Show. Press the menu button to return to video playback and the camera will scroll through the files in playback mode at the specified rate.

## Video Menu Settings

From Video mode, press the menu button to enter video settings. Navigate with the left/right arrow buttons to choose the options and the OK button to confirm. Press the menu button again to exit the settings menu.

MENU OPTION	SETTINGS
Resolution	2160p/24fps 1440p/30fps 1080p/60fps 1080p/30fps 720p/120fps 720p/60fps
Looping	2 Minutes / 5 Minutes / 10 Minutes
Time-lapse Record	Off / 1 Second / 3 Seconds / 5 Seconds / 10 Seconds / 30 Seconds / 60 Seconds
Automatic Recording	Off / On
Audio	Off / On
WDR	Off/ On
Diving Mode	Off / On
Remove FishEye	Off / On
Motion Detection	Off / 30 Seconds / 1 Minute / 5 Minutes
Date Stamp	Off / Date / Date/Time

## System Settings

From standby mode and playback mode, press the menu button twice to enter the system settings. Navigate with the left/right arrow buttons to choose the options and the OK button to confirm. Press the menu button again to exit the settings menu.

MENU OPTION	SETTINGS
Wi-Fi	On/Off
Wi-Fi SSID	Username setting, the default is WASPcam
Wi-Fi Password	Password setting, the default is 12345678
White Balance	Auto / Daylight / Cloudy / Tungsten / Fluorescent / Underwater
ISO	Auto / 100 / 200 / 400 / 800 / 1600
Image Rotation	On/Off
Color	Color / Black & White / Sepia
Sharpness	Strong / Normal / Soft
Exposure	+2.0 / +1.5 / +1.0 / +0.5 / +0.0 / -0.5 / -1.0 / -1.5 / -2.0
Anti-shaking	On/Off
TV Mode	NTSC/PAL
TV Out	Off / On
Auto Power Off	Off / 1 min / 5 mins (Length of time with no activity before the camera shuts off)
Screen Saver	Off / 30secs / 1 Minute / 5 Minutes (Length of time with no activity before the screen shuts off)
Date / Time	YYYY / MM / DD / HH / MM / SS
Date Stamp	Off / Date / Date & Time
Beep Sound	Off / 30% / 60% / 100%
Indicator Lights	Off / On
Language	English, French, Spanish, Portuguese, German, Italian, 简体中文, 繁體中文, РУССКИЙ, 日本語, 한국어, Polski
Frequency	60 HZ / 50HZ
G-Sensor	Off / High / Medium / Low
GPS	Off / On
Format SD Card	Cancel / Ok
Default	Cancel / Ok
Version	FWVer: X.X /XXXX XX XX

## Photo Menu Settings

From Photo mode, press the menu button to enter photo settings. Navigate with the left/right arrow buttons to choose the options and the OK button to confirm. Press the menu button again to exit the settings menu.

MENU OPTION	SETTINGS
Photo Resolution	20MP / 12MP
Self-timer	Single / 3s / 10s / 30s Timer
Burst	Off / Burst 3 / Burst 10
Auto Photo	Off / 3 / 5 / 10 seconds
Quality	Fine / Normal / Economy
Quick Review	Off / 2 / 5 seconds
Date Stamp	Off / Date / Date/Time

## Enabling the Camera's Wi-Fi

- 1) Before using this function, download and install the WASPCam App to your Apple iPhone® or Android™ smartphone.
- 2) Before using this function, please insert a micro SD card (class 10 card, no larger than 64GB) into the WASPCam™ 9907 4K camera. The Wi-Fi function will not work without a micro SD card inserted into the camera.

## Installing the WASPCam App

### Apple iPhone® (iOS system)

There are two ways to download the WASPCam App to your iPhone:

1. Download from iTunes Store through your computer
2. Download from the App store through your iPhone

Note: Before you do the following steps, please confirm that your computer has the iTunes program installed and you have set up an Apple account. It needs to be Apple iOS 6.0 system or above.

### Download from iTunes

	Click iTunes icon to open iTunes
	Click iTunes Store Icon to open the iTunes Store
	Enter "WASPCam App" into the search bar Click download under the WASPCam App Icon
	Once it's finished the WASPCam App icon will show on your home screen

## WASPcam™ 9907 4K User Manual

### Download from iPhone

	Click the App Store icon
	Click the search field and enter WASPcam App, click the blue search button
	Click the icon and click download
	Once it's finished the WASPcam App icon will show on your home screen

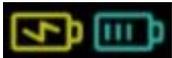
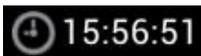
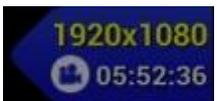
### Android Smartphone

	Open the Google Play store on your phone
	Enter "WASPcam App" into the search bar and hit search
	Click on the WASPcam App icon to view the app page
	Click the install button to install the WASPcam App to your phone
	Once download is complete, the WASPcam App will appear in your application menu.

### Using the Camera's Wi-Fi

From video standby mode or playback mode press the menu button twice to enter system settings. Press the left/right arrow buttons to choose Wi-Fi and select open. The Wi-Fi icon will show on the screen. Search the WLAN using your mobile phone and find the network name "WASPcam", connect and enter the password 12345678 (shown on the camera screen) and confirm. Connection is successful when the LCD screen shows "Wi-Fi connected". Open the WASPcam App to preview the camera's view, take video and photos, and change menu settings directly from the connected smartphone.

## App Interface Description

	Connect to Wi-Fi, and click the WASPcam App icon to run the App
	This image will be displayed when the app is starting up
	<p>After connecting, your smartphone will enter standby mode and a live viewing screen will be displayed on your phone</p> <p>In video mode press the  symbol to begin recording</p> <p>In photo mode press the  symbol to take a photo.</p>
	Wi-Fi connected
	Battery charging or displays current battery power level
	Micro SD card inserted
	Displays what the date stamp will look like on footage
	Displays what the time stamp will look like on footage
	Displays the video or photo resolution (depending on the app mode). Also displays estimated recording time remaining on the micro SD card.
	Sound recording on, sound recording off
	Take a snap shot while recording video
	Video Mode
	Photo Mode
	Change camera / app settings
	View video and photo files you've taken while using the app

## Updating Wi-Fi Name & Password

### Updating the Wi-Fi Network Name

Turn the camera on and press the menu button twice to enter system settings, press the left/right arrow buttons to choose WIFI SSID. Press the OK button to select then press the menu button to select Del then press the Ok button to delete the WIFI name. Then you can enter new a new WIFI name. Press the menu button to select uppercase/lowercase letters or numbers, press the left/right arrow buttons to choose the letters to spell the word you want then press the Ok button to confirm. Press the menu button to select and Ok to confirm the setting.

### Updating the Wi-Fi Password

Turn the camera on and press the menu button twice to enter system settings, press the left/right arrow buttons to choose WIFI password. Press the OK button to select then press the menu button to select Del then press the Ok button to delete the WIFI password. Then you can enter a new WIFI password. Press the left/right arrow buttons to choose the letters to spell the word you want then press the Ok button to confirm. Press the menu button to select and Ok to confirm the setting.

**Note: The WIFI name and passwords need to be at least 8 characters comprised of upper/lower case letters and numbers**

## Connecting to External Devices

### Playback on TV

Turn the camera on; connect the camera to the TV with the Video cable. Select USB mode on the TV then go into the camera menu settings and make sure the TV Out is set to "On". The LCD screen on the camera will turn off automatically and now all operations and functions can be seen on the TV.

**\*\*Note:** TV Video cable is not included and when connected it will only transmit images/videos but no sound.

### View Files on PC / MAC

Connect the camera to the computer using the included USB cable. The LCD Screen displays Mass Storage and Camera. Press the left/right buttons to select Mass Storage and the record button to confirm. Click on the CARDV folder on the computer. There are two sub folders MOVIE and PHOTO. Open and view the corresponding files.

### Web cam – PC Only

Connect the camera to the computer using the included USB cable. The LCD Screen displays Mass Storage and Camera. Press the left/right buttons to select Camera and the record button to confirm. Go to My Computer and you can now use the camera as a web cam.

## Technical Specifications

Sensor	12 Mega CMOS Sensor
Video Resolution	2160p/24fps 1440p/30fps 1080p/60fps 1080p/30fps 720p/120fps 720p/60fps
Image Size	20MP / 12MP
Memory	Micro SD card up to 64GB – Class 10
Lens	170° Wide View Angle
Video Format	.MP4
Image Format	JPG
Wi-Fi	802.11b/g/n
Audio	Built-in Mic, Speaker
Port	USB 8 Pin, TV OUT
Battery	Lithium-ion Rechargeable Battery 1050mAh
Screen	1.5 inch LCD
Waterproof	Down to 98 feet (30 meters) without an external housing

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