

# ***Fasmedo***<sup>®</sup> **Medical Originality**

FM-308: 4K MediCam



## Quick Start Guide

V1.8

See more information on [www.fasmedo.com](http://www.fasmedo.com) or scan



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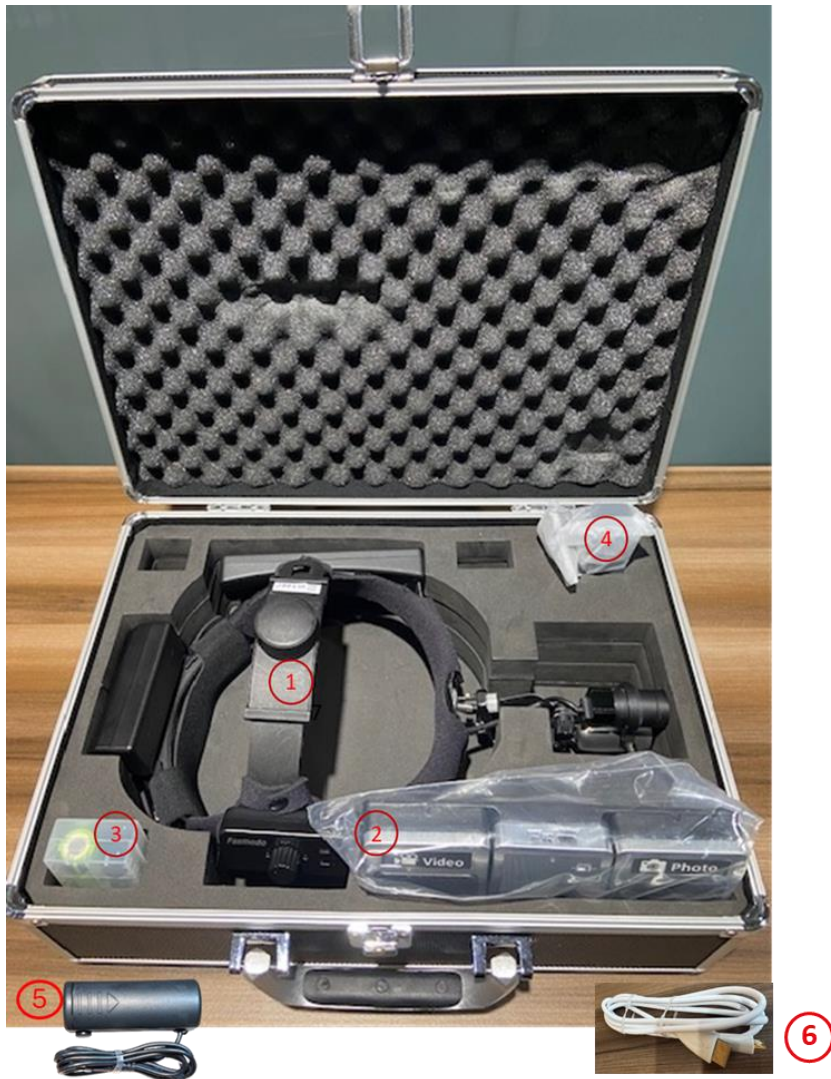
## **Intended Use**

*To provide real-time 4K ultra-wide field, non-contact imaging during surgical procedures with high-brightness LED illumination (up to 50,000 Lux).*

## **Target User**

- 1. Surgeons*
- 2. Surgical nurses*
- 3. Dentist*
- 4. Operating room technicians experienced in surgical microscopy or ENT procedures.*

# 1.Package contents



1. FM-308 x 1 ( with 21700 battery x 1)
2. Bluetooth pedal with cable x 1
3. 21700 battery x 1
4. Battery charger x 1 & Type C cable x 1
5. Waist hanging battery box(without battery)
6. HDMI cable

## 2. Appearance introduction

### Front



- 1. LED
- 2. Camera
- 3. Multi-direction Hinge
- 4. LED Power button

### Back



- 5. USB-Type C Charger Port
- 6. HDMI Output port
- 7. Battery cover
- 8. Tuner (for head height)
- 9. Tuner (for head circumference)

### Control Box



- 10. Power button
- 11. FoV switching button
- 12. Photo button
- 13. Video recording button

### 3. Before using your FM-308

A. When using the FM-308 first time, please pull out the battery room sticker.



B. Before using your FM-308, please use included Type C cable to charge the battery(either through LED box or Control Box Type C charge port) fully at least 4 hours for the first time.

C. Do not use cables from other products is suggested.

D. Do not use the computer to charge battery is suggested.

## 4. Replace the battery box(Optional)

If you like to reduce the weight of head-wearing, you can remove the battery box which is attached on the back side of headband, and replace with waist hanging battery box.

- A. Unplug the battery box cable from the connector, and then follow the direction to pull up the battery box hardly.



- B. Take out the battery from battery box and then insert the battery into the waist hanging battery box.

- C. Connecting the waist hanging battery box cable to connector socket.



## 5. Turn on FM-308 LED (Mid-Light suggested)

- A. LED ON:** Press the power button to turn ON the FM-308 LED. Once on, the LED should show a solid blue light.



- B. LED:** Turning the knob clockwise to increase intensity (beep twice when reached maximum), turning the knob counter-clockwise to decrease the intensity (beep once when reached minimum).



- C. LED OFF:** Press the power button to turn OFF the FM-308 LED.

## 6. Power on the FM-308 Camera



A. Working Modes: Working mode will be selected when power-ON. FM-308 can work in 2 different modes:

**A-1. HDMI output mode:** Please first turn ON the monitor (or video recording box) and make sure HDMI cable is connected between FM-308 and the monitor (or video recording box).

**A-2. Wi-Fi mode:** It can preview and control the FM-308.

B. Turn ON/OFF the camera: Press and hold the Power button for 3 seconds to turn ON/OFF your FM-308 camera. Once on, the Power button LED should show a solid green light for Wi-Fi mode, or solid violet light for HDMI mode.

## 7. Connect your FM-308 with App

(Go to Step 7 if you have App paired with FM-308 MediCam already.)

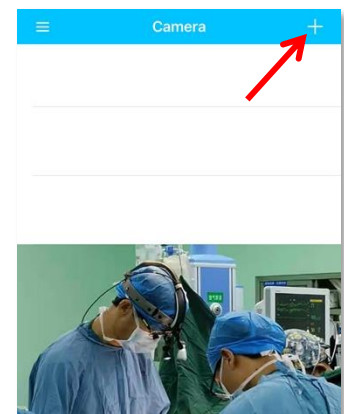
### 7.1 Download the App

- A. iOS: Search for “MediCam App” in the App Store to download the App to your smart device.
- B. Android: Search for “MediCam Lite” in the App Store to download the App to your smart device.
- C. Microsoft Windows and MAC OS: Download Windows App from <https://www.fasmedo.com/apps/>.

### 7.2 Add Your FM-308 to the App

The start screen should show a blank list.

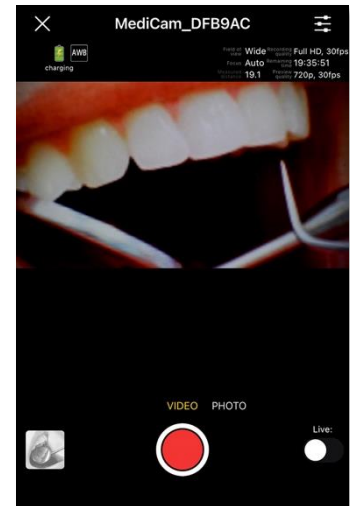
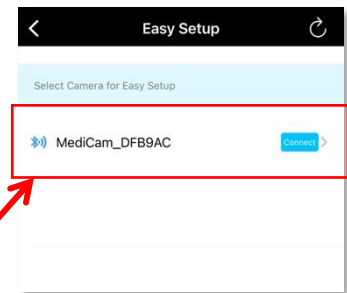
Tap the  icon on the top right corner to add a MediCam.



## 7.3 Search & Connect

Make sure Wi-Fi and Bluetooth are enabled on your smart device or PC.

- A. New MediCam is found. Tap on it to continue.
- B. Confirm to “Join MediCam’s network”.
- C. Now you see a preview on your smart device or PC for the area being filmed.



## 8. Operating your FM-308 Medicam

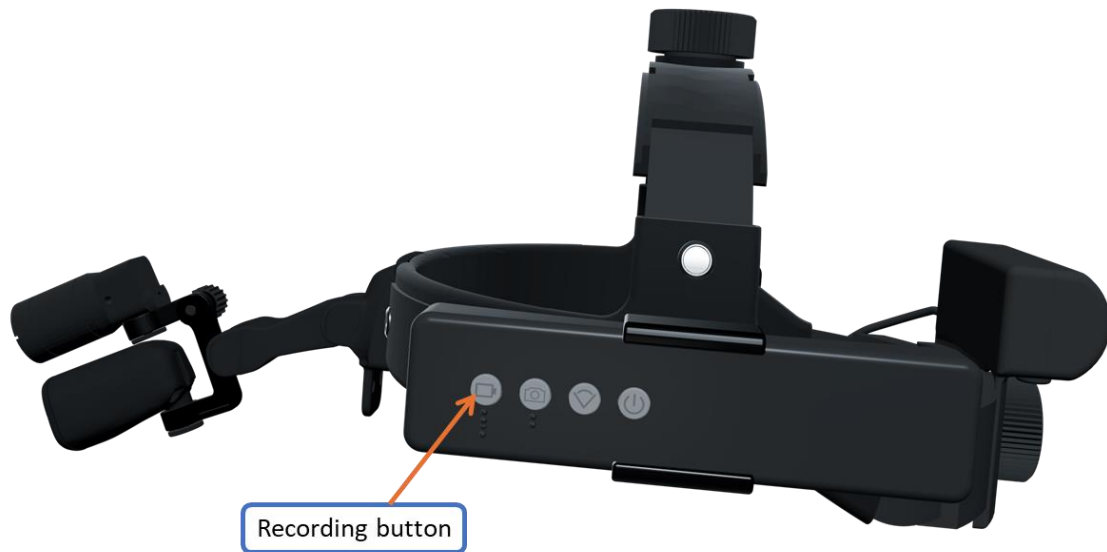
### 8.1 Eye Sight Alignment

Before start recording, adjust the LED to the target, also align the camera to the target. Please have a preview on APP screen to assure the recording area is what you want.



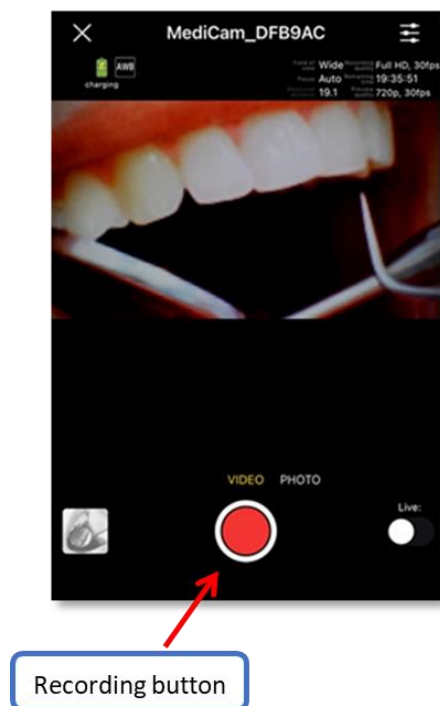
### 8.2 By clicking the Record button

Press the Record button to start recording, press it again to stop recording. (A high-pitched tone will sound to signal the start of recording; A low-pitched tone will sound to signal the stop of recording.)



### 8.3 By tapping the screen on the app

When in the preview mode, videos can be taken by tapping the red record button and photos can be taken by the camera button.

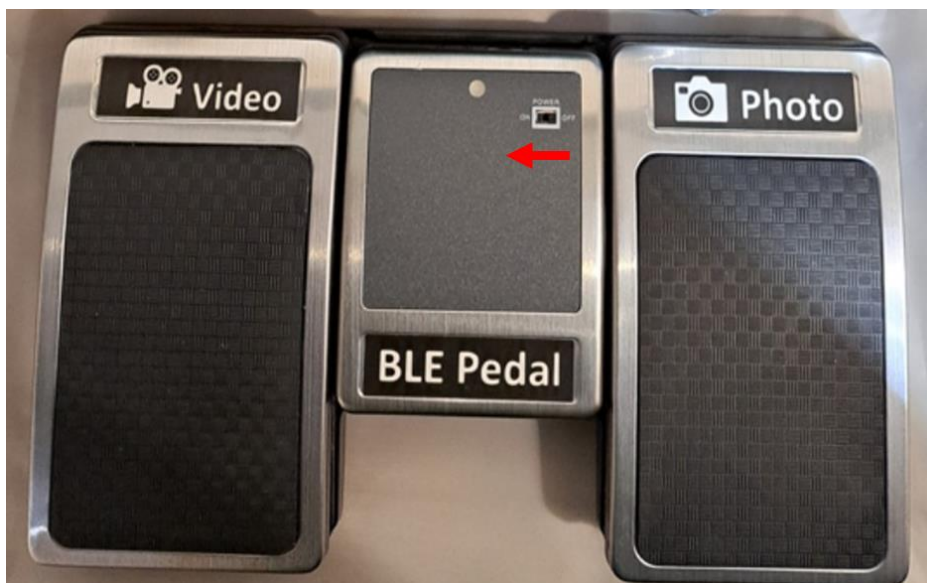


## 8.4 By using the Pedal

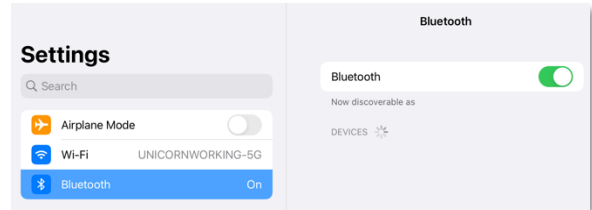
Before using the Pedal, connect the USB cable and have it charged at least 3 hours.



**A.** Slide the POWER switch to turn on the Pedal for set up.

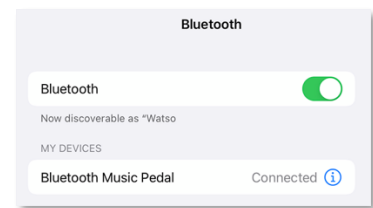
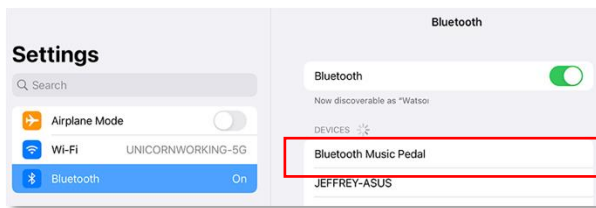


## B. Bluetooth Pedal Pairing Process



Open the Settings App

Turn ON bluetooth



Select device: **Bluetooth Music Pedal**

Connected

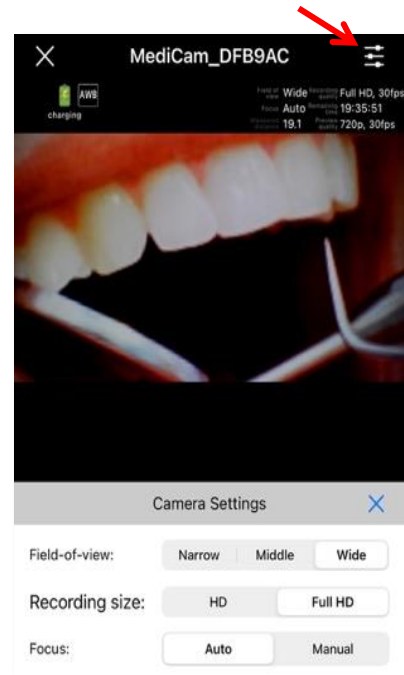
If you want to connect to another device, you need to remove the connected device from the list, and press “reset” button of the original pedal for 3 seconds.

**C.** Stepping on the left pedal to start recording, and stepping again on the left pedal again to stop recording; stepping on the right pedal to take photos.

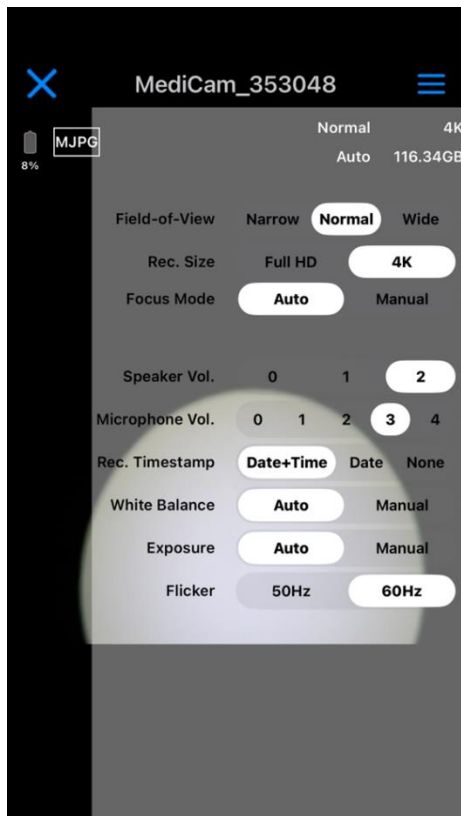
## 9. Device Settings

### 9.1 Setting by App

A. On the preview screen, tap the Tools icon(  ) on the top right corner to control and configure the display of Videos/ Photos.



B. Select the features that you want to change

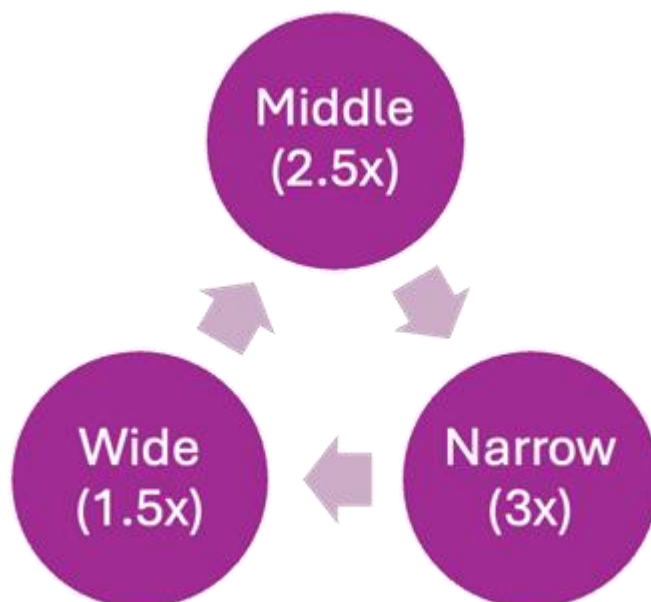


## 9.2 Setting by Buttons

**A. Field of View(FoV):** The default FoV is in Normal(middle) view.



Tapping the FoV switching button, the FoV will be changed in the following order.



**B. Switch Auto-Focus(AF) and Manual Focus(MF):** The default is Auto-Focus mode



If you like to fix the focus distance, you can toggle AF/MF function by clicking the power button to switch between Auto Focus(AF) and Manual Focus(MF) mode. **(Please note that long-pressing the power button will turn on/off the power of FM-308)**

- If the indicator light on the Power button is blinking green or purple(HDMI mode), it means MF is on(AF is off).
- If the indicator light on the Power button is steady green or purple(HDMI mode), it means AF is on.

**C. If you want to change the focus distance when the AF is off, you can adjust the distance number on the App only.**

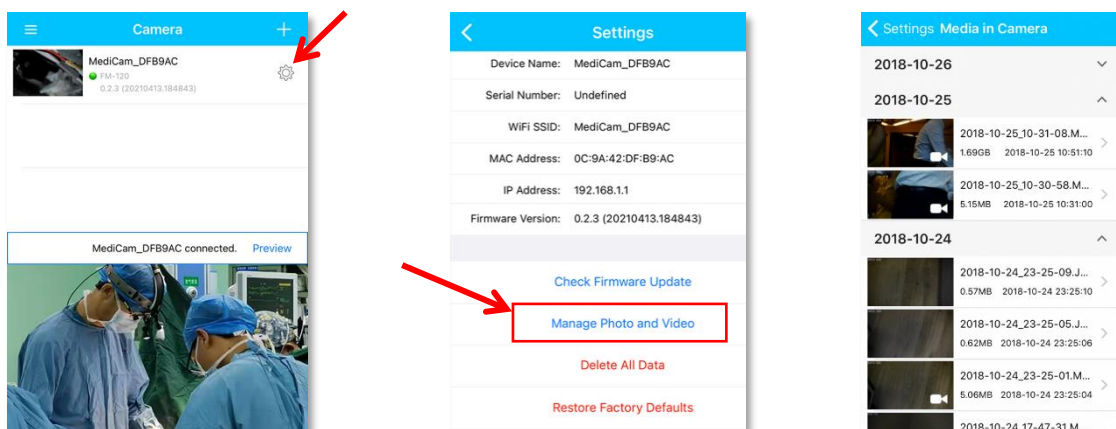
## 10. Manage MediCam Videos/ Photos

### 10.1 Save media files from MediCam to PC

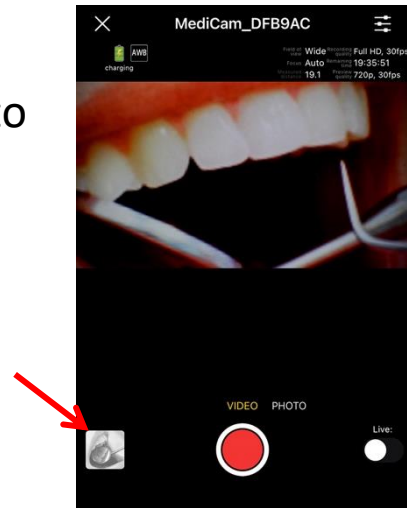
- A. Connect your MediCam to PC by USB cable.
- B. Turn ON the MediCam to access the media files stored in internal memory card.
- C. View the videos (VIDEOS folder) and photos (PHOTOS folder) on PC, select to view/save the files you need.

### 10.2 Save media files from app to your smart device

- A. On the Start screen, click on the Gear icon ⚙️ of your camera, tap “Manage Photo and Video” to select and save files to your smart device.



**B.** Or in the Preview mode, tap on the “folder” icon to select and save files to your smart device.



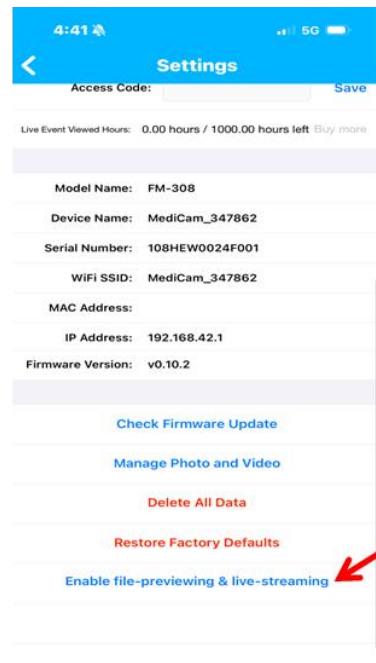
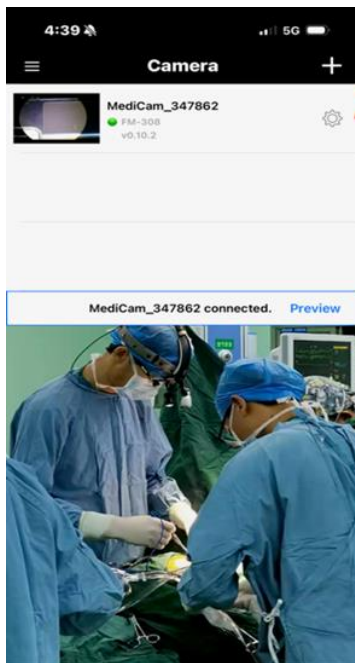
### **10.3 Delete the file from MediCam**

When the file is saved to a PC or smart device, remove the file from MediCam to preserve space for new recordings.

## 11. Live Broadcasting

Before using Live Broadcasting, you must possess a cellular-4G/5G-enabled smart device and your smart device must be connected to a cellular 4G/5G network. (cellular plan NOT included)

On the Start screen, click on the Gear icon ⚙️ of your camera, tap “Enable file-previewing & Live Streaming”. Then, the camera will restart.



## 11.1 Host Live Event

(Default viewing time for every MediCam is 1,000 hours, each viewer would consume broadcaster's viewing time)

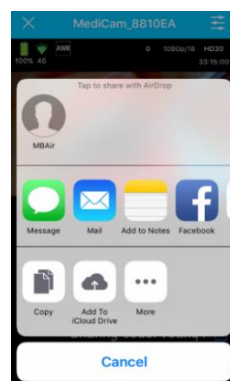
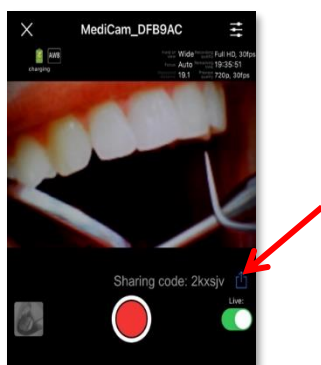
**A.** When viewing video preview on the App, tap on the “Live” switch to start live broadcasting.



**B.** The App will show “Prepare live streaming....” then “Started live streaming...”



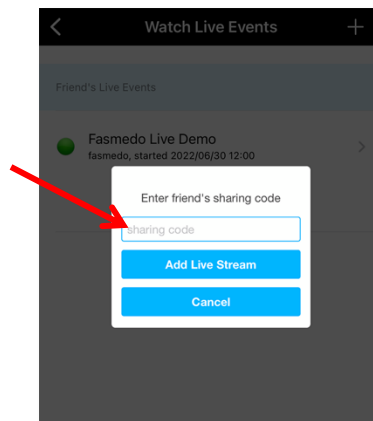
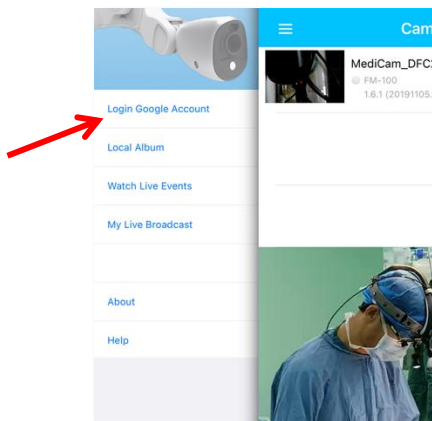
**C.** You will receive a Sharing code when live broadcasting starts. Tap on the “share” icon to share it with friends.



## 11.2 Watch Live Events

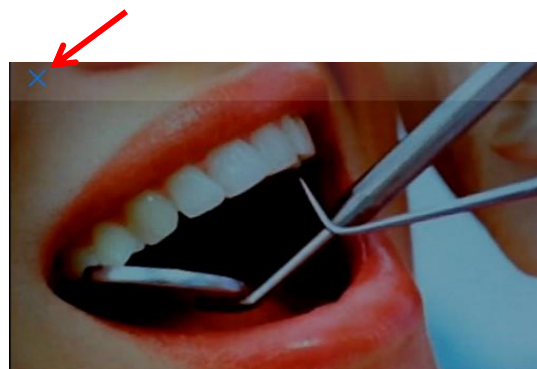
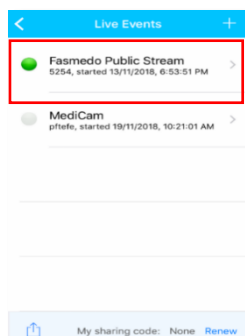
**A.** All invited parties must download the MediCam App to watch live events.

**B.** Tap “Live Events” from the menu bar, and then tap the  icon to add a live event, then enter the sharing code you have received.



**C.** The Live event will be added to the list. The green round circle indicates that the event is live now.

**D.** Tap on the name of the live event will lead audiences to the live streaming view. When you are done, just tap on the “X” icon to exit.



## 12. Buttons / LED Indicators

### A. Control Box Buttons:

| MODE                     | Power Button Indicator Behavior                                                        |
|--------------------------|----------------------------------------------------------------------------------------|
| Power ON<br>(HDMI mode)  | Boot up: ●<br>Ready: ●                                                                 |
| Power ON<br>(Wi-Fi mode) | Boot up: Fast flash ●<br>Ready: ● or ● (battery<20%)                                   |
| Recording                | Battery>20 %: Slow flash ●<br>Battery<20 %: Fast flash ●                               |
| AF & MF                  | Auto Focus(AF): ● or ● (in HDMI mode)<br>Manual Focus(MF): flash ● or ● (in HDMI mode) |
| Device OFF               | Not charging: ●<br>Charging, battery <100 %: Slow flash ●<br>Charging, battery full: ● |
| Memory Full              | Slow flash ●                                                                           |

### B. LED Box Buttons:

| Battery Capacity    | Back LED Behavior (Discharging)<br>(●: ON, ○: OFF, ◎: Blinking) |
|---------------------|-----------------------------------------------------------------|
| Battery<br>75%~100% | ● ● ●                                                           |
| Battery<br>40%~74%  | ● ● ○                                                           |
| Battery<br>20%~39%  | ● ○ ○                                                           |
| Battery<br>0%~19%   | ◎ ○ ○                                                           |

| Battery Capacity   | Back LED Behavior (charging)<br>(●: ON, ○: OFF, ◎: Blinking) |
|--------------------|--------------------------------------------------------------|
| Battery<br>100%    | ● ● ●                                                        |
| Battery<br>75%~99% | ● ● ◎                                                        |
| Battery<br>40%~74% | ● ◎ ○                                                        |
| Battery<br>0%~39%  | ◎ ○ ○                                                        |

## 13. Bluetooth Pedal LED Indicator

| Device Status        | LED Indicator Behavior                                           |
|----------------------|------------------------------------------------------------------|
| Pairing / Searchable | R-G-B flash sequentially at 200ms interval                       |
| Connected            | Current battery color flash at 2000ms interval (25% ON, 75% OFF) |
| Reconnecting         | Current battery color flash at 1200ms interval (50% ON, 50% OFF) |
| Not connected        | Current battery color flash at 400ms interval (50% ON, 50% OFF)  |

## 14. Maintenance & Cleaning

- Use alcohol wipes to erase the stain on the device.
- Don't use corrosive fluid to clean the device. It may damage the device.
- How to maintain the camera lens:
  - Use a blowing dust ball to clean dust on the camera lens.
  - Spray Lens cleaner onto the lens
  - Wipe dry with microfiber lens tissue
- Avoid running out the battery while in use, charge or replace the battery as soon as you can when the low-power warning appears.
- Use the proper adapter(5V3A) to charge the battery on the device.
- Avoid exposing FM-308 to fire and other direct heat sources, including hair dryers, microwave ovens, and other appliances.
- Do not force insertion connectors into the sockets on the rear panel.  
If you find it difficult to insert connectors, they may not match.

## 15. Product Specification

| Camera Subsystem           |                                                                                                                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image Sensor               | • 8.29M pixel, 4K, 1/2.8" sensor                                                                                                                     |
| Focus                      | • 10-70cm, Autofocus / Manual focus                                                                                                                  |
| Magnification Ranges       | • 3x, 2.5x, 1.5x                                                                                                                                     |
| Internal Storage           | • 256GB                                                                                                                                              |
| Recording Video Resolution | • 4K 3840x2160<br>• Full HD 1080P                                                                                                                    |
| File formats recorded      | • *.mp4                                                                                                                                              |
| Video formats recorded     | • Video: H.264, Audio: AAC                                                                                                                           |
| Buttons                    | • Power button<br>• Field-of-view switch button<br>• Recording button<br>• Snapshot button                                                           |
| Status Display             | • 3-colors LED (Red, Blue, Green)                                                                                                                    |
| Headlight Subsystem        |                                                                                                                                                      |
| Light Intensity            | • 4,800 – 50,000 Lux, continuous knob control                                                                                                        |
| Button                     | • On / Off push button                                                                                                                               |
| Status Display             | • Blue color LED (battery capacity & charging status)                                                                                                |
| Wireless Interfaces        |                                                                                                                                                      |
| Wi-Fi                      | • 802.11 ac                                                                                                                                          |
| Frequency Range            | • 5.15GHz to 5.85GHz                                                                                                                                 |
| Antenna type               | • Internal antenna, 1Tx1R MIMO                                                                                                                       |
| Bluetooth                  | • BT 4.0 (LE)                                                                                                                                        |
| System                     |                                                                                                                                                      |
| I/O                        | • HDMI Type-C (Mini-HDMI) connector for video output<br>• USB Type-C connector for charging and data transfer                                        |
| Battery                    | • 3.7V, 4900mAh Li-ion 21700 x 1                                                                                                                     |
| Working Hours:             | • 4 hours (Headlight OFF, 4K recording, with video preview from App)<br>• 1 hour (Headlight Max, 4K recording, with video preview from App)          |
| Environmental Condition    | • Operating condition: 0°C ~ 40°C, 80kPa~101.3 kPa, < 85% humidity<br>• Storage (Transport) condition: -10°C ~ 60°C, 80kPa~101.3 kPa, < 85% humidity |
| Dimension                  | • Length: 350mm, Wide: 240mm, Height: 180mm                                                                                                          |
| Weight                     | • ~430g                                                                                                                                              |

## 16. Troubleshooting

### ***a. The camera cannot turn on:***

Check the battery's power

### ***b. The camera cannot turn off:***

Contact the manufacturer

### ***c. The camera cannot be discovered in the App/***

***The camera cannot connect to the App/***

***Camera video preview of FM-308 freezes on the App***

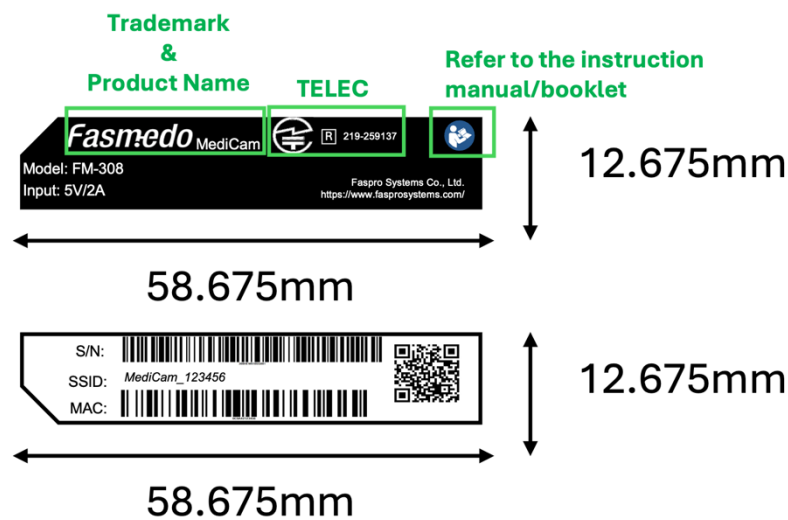
- 1 Check that the camera is on
- 2 Let the PC/Tablet/Phone to close to the camera
- 3 Restart the App
- 4 Reset the Wi-Fi settings of PC/Tablet/Phone

### ***d. The LED is blinky/The LED cannot turn on***

Check the battery's power

1. If you face a problem that is not mentioned in this guide, please contact the manufacturer.
2. If you have already followed this guide, but it doesn't work, please contact the manufacturer.

## 18. Safety Symbols



## 19. Safety Instruction

1. The wireless signal generated by the device may cause interference or malfunction of the other medical devices (such as a pacemaker or hearing aids). Please use FM-308 carefully.
2. The FM-308 device has been verified to meet the specific absorption rate (SAR) limitations of body worn devices. The EU's maximum allowable level is 2.0 W/kg, and D5 is lower than that value.
3. Not to look at LED directly at all times to avoid damaging your eyes.
4. Avoid exposing FM-308 to fire and other direct heat sources, including hair dryers, microwave ovens and other appliances.
5. It is recommended that you do NOT disassemble the unit for any reason.
6. Do not force inserting connectors to the sockets on the rear panel. If you find it difficult to insert connectors, they may not match.
7. The LED device of the FM-308 complies with the requirements of Laser Class 1.
8. Do not dispose this product in the household waste, please follow the respective national law for proper disposal.
9. **WARNING:** Do not modify this equipment without authorization of the manufacturer
10. Potential sources of electromagnetic interference include mobile phones, radio transmitters, and other electronic devices; maintain adequate distance from such equipment and follow the EMC guidelines specified in this manual to ensure proper device performance

P/N: 500FMWFAD07v1.7

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