BEYOND REAL

Z CAM™ K1 Pro

User Manual (Draft)

v1.0

1. INTRODUCTION

Camera Introduction

01. Lens A & B

02. Status Indicator A & B

(Front & Side)

04. Status Indicator A & B
05. Function button
06. Record button
07. Power on/off button

03. Status display

(Rear)

08. WIFI antenna port
11. Ethernet port
10. 1/4" Tripod mount hole (top)

09. SD card slot A & B

(Top)

Z CAM™ K1 Pro

12. 1/4" Tripod mount hole (bottom)
13. Mic socket
14. Power socket (for LEMO plug)

(Bottom)

17. D-TAP end
16. D-TAP plug
15. LEMO plug
18. DC end

D-TAP Connector

Power Cable

19. DC plug

AC/DC Power Adapter

US plug

EU plug

UK plug

AC Power Cable

Display Information

Time remaining
WiFi on
Recording time
ISO
Shutter speed

LED Indicator Status

- **Green**: When the camera is turned on with SD card in the slot.
- **Red**:   When the camera is turned on but no SD card in the slot or the SD.
- **Flashing Green**: When the camera is recording, LED indicator will flash every second.
- **Flashing Red (normal)**: When the SD card memory is full, LED indicator will flash every 500ms.
- **Flashing Red (fast)**: When the camera is overheated, LED indicator will flash every 200ms.

2. CAMERA SETUP

2.1. Install / Take Out Memory Cards

1) Insert 2 SD cards into the slots with correct direction (indicated by the icon beside the slot)
2) To take out the SD card, press down the SD card and it will eject from the slot.
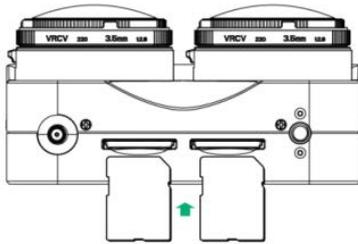
* It is highly recommended to use SanDisk Extreme PRO® SDXC UHS-I memory cards. (Note that the camera supports SDXC memory cards up to 128GB capacity.)

2.2. Power On / Off The Camera

1) Connect the LEMO power cable to the camera.
2) Connect the D-TAP connector to the LEMO power cable. *
3) Connect the D-TAP connector to the AC/DC power adapter, and select the proper AC power cable to plug to a power socket, the camera will be powered on automatically when the power is connected for the 1st time.

D-TAP Connector

AC Power Cable

AC/DC Power Adapter
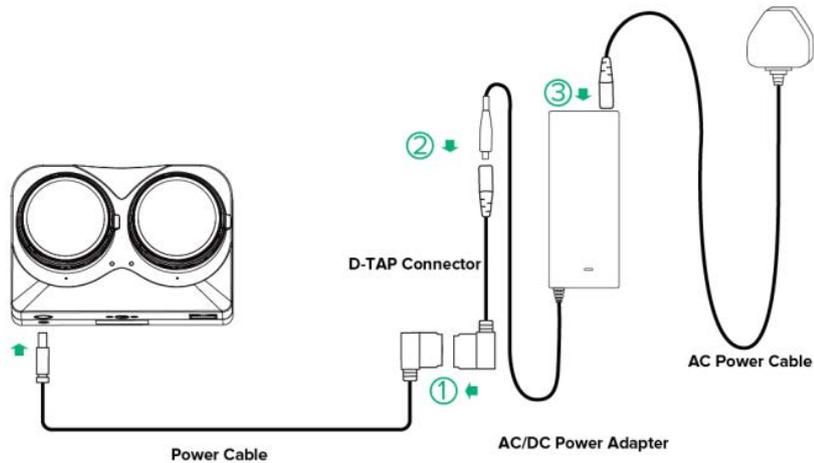
Power Cable

* Please note that with LEMO power cable you can also connect to a battery or external power supply with D-TAP socket, and hot swap is supported.

4) To power off the camera, long-press the **Power** button until the LED indicators are off.
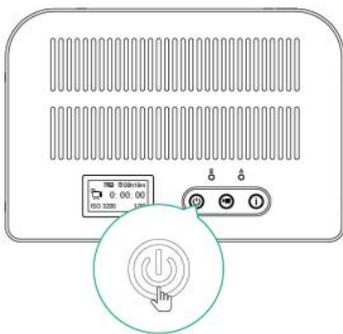
2.3. Camera with PoE (Power over Ethernet)

To use PoE as power supply for the camera, you would need a router or switch* with PoE function, with output power not less than **15.4W** for each port, and the output voltage should be **48V** for each port.

* Please note that a switch with PoE can only used for power supply, and you would need a router with PoE if need control and live viewing with the camera.

2.4. Ethernet Connection (to Computer)

With Ethernet connection to a computer (PC/Mac), you can control the camera and download files with Z CAM™ Controller (**4. CAMERA CONTROL**), and do live streaming with Z CAM™ WonderLive (**8. LIVE STEAMING,** PC only).

There are 2 ways of connection: **Direct Mode** & **Router Mode**.

Direct Mode (default)
Connect the camera to the computer directly with an Ethernet cable. It's default setting of the camera.
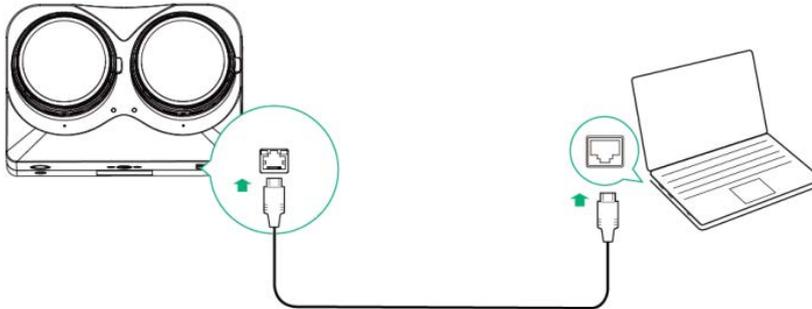
Router Mode
1) Change the "Network" setting to "Router" in **Z CAM Controller** (PC / Mac) or **Z CAM VR** app (mobile device).
2) Connect the camera to a router with an Ethernet cable, and then connect the router to the computer via Ethernet network or WiFi.
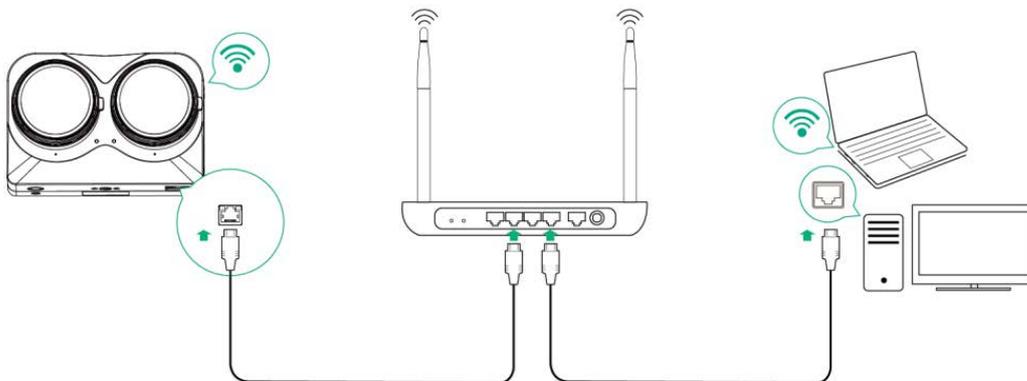
2.5. WiFi Connection (to Mobile Device)

With WiFi connection to a mobile device (iPhone/iPad/Android device), you can control the camera with **Z CAM VR** app installed on the mobile device (**7. REMOTE CONTROL**). Here are the steps to set up WiFi connection.

1) Make sure the WiFi is activated (a WiFi icon on the display). If not, long press the **Info Button** for 5 seconds, then there will be a WiFi icon on the display, which means WiFi of the camera is activated.
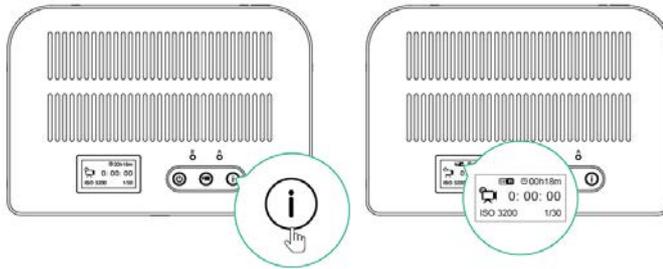
2) Connect the mobile device to the camera with correct WiFi ID (start with ZCAM-K1P), and default password is <u>12345678</u>. You can change the password in the **Z CAM VR** app.

* Please note that the camera has built-in antenna, and would suggest to have external antenna installed as to get better WiFi coverage and signal.

2.6. Camera Reset

If you want to reset the camera, long press the **Record** button for 5 seconds, then the camera will restart with all the settings back to factory setting.
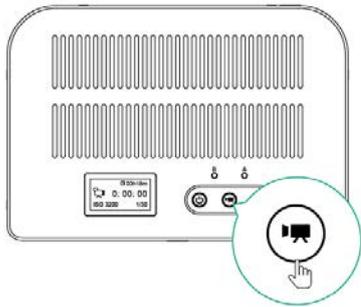
3. RECORDING

3.1. Before Recording

Please do the following check before recording:

1) Check the **Aperture** of both lens and make sure they are aligned. You can turn the **Aperture Ring** to adjust it and make sure it's in the right position (with the white line on the Aperture Ring pointing to the number).
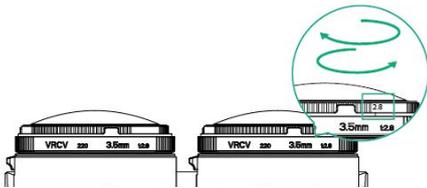
2) Format both SD cards with **Z CAM™ Controller** on a PC (**4. CAMERA CONTROL**) or with **Z CAM VR** app on a mobile device (**5. REMOTE CONTROL**).
3) Make sure the camera is in a horizontal position.

3.2. Start / Stop Recording

1) Press the **Record** button to start recording. Time of recording will be indicated on the displays.
2) While it's recording, press the **Record** button again to stop recording.

4. REMOTE CONTROL (with Z CAM VR app)

Z CAM VR is a mobile app (iOS only for now) to control the camera through WiFi connection. You can download it from Apple's App Store.

4.1. Connect to The Camera

1) Make sure the mobile device is connected to the camera through WiFi, please refer to **2.5 WiFi Connection**.
2) Open the **Z CAM VR** app, and there will be a list of the camera connected. Select the

camera and it will come into the main screen. You can select one of the camera (lens) or All Cameras (both lenses) from the top menu.
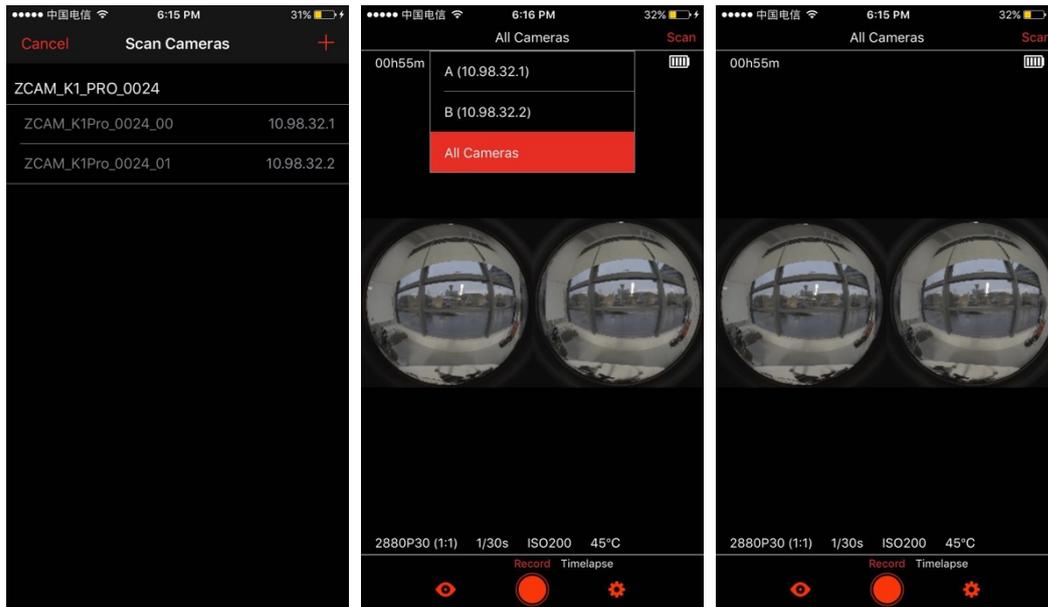
4.2. SD Cards Format

Tap the **Setting** button and select Format card, there will be a pop-up window to confirm the formatting. Tap **Format** if you want to format the cards.
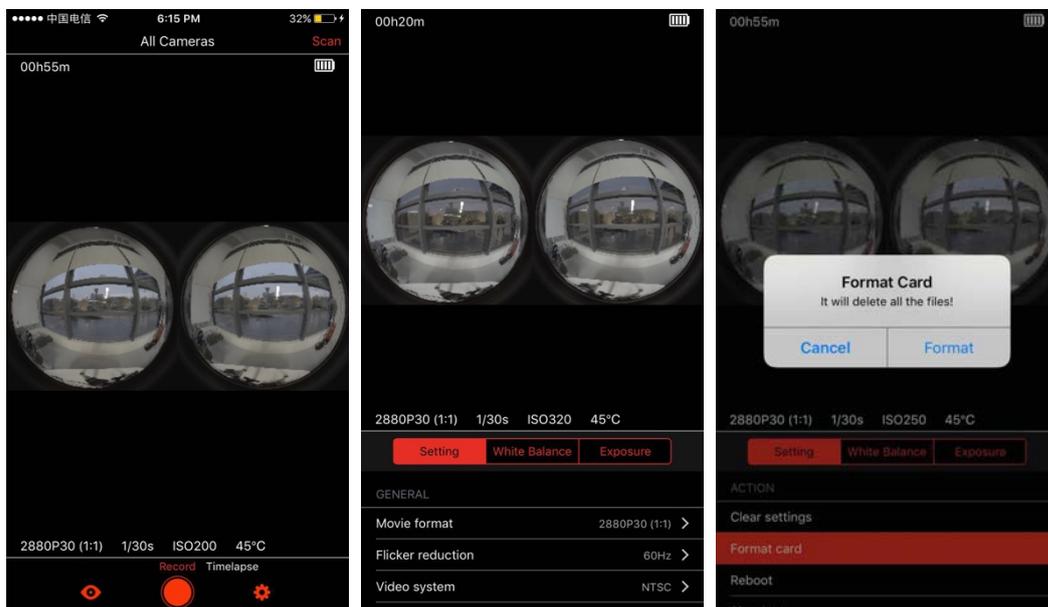
Please note that all the data will be erased from the cards after formatting!

4.3. Recording

Tap the **Record** button to start recording, and Tap **Stop** button to stop it.

4.4. Timelapse (Video)

1) Swap to select Timelapse mode and tap Record button to start recording.

2) **Timelapse interval** can be modified in the **Settings**.
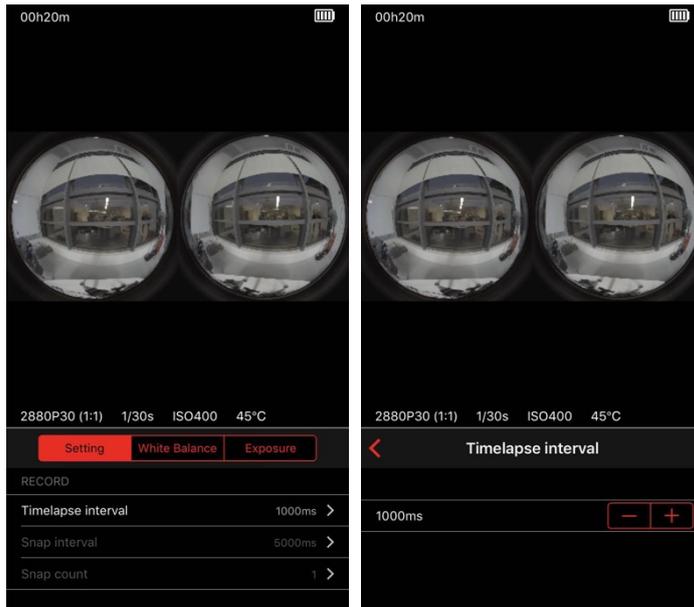
4.5. Camera Settings

There are 3 tabs at the bottom of the main screen including: **Settings**, **White Balance**, **Exposure**, which you can change the settings of the camera*. Please check the **User Manual** of **Z CAM VR** for more details.

* We would suggest to keep **Coordination** of **White Balance** & **Exposure** as **Enable** as to get a good result of video footage.

5. CAMERA CONTROL (with Z CAM™ Controller)

Z CAM™ Controller (PC & Mac) is a software that provides basic control features of all Z CAM™ VR cameras. Ethernet or WiFi connection is required for camera control.

It's available for free on Z CAM's website: http://www.z-cam.com/controller/ .

Here are some basic features of camera control, for more details you can download the full **User Manual** from the website: http://www.z-cam.com/controller/.

5.1. Connect to The Camera

1) There will be a pop-up window to scan the camera when the software is open, with list of the camera which is connected to the computer.
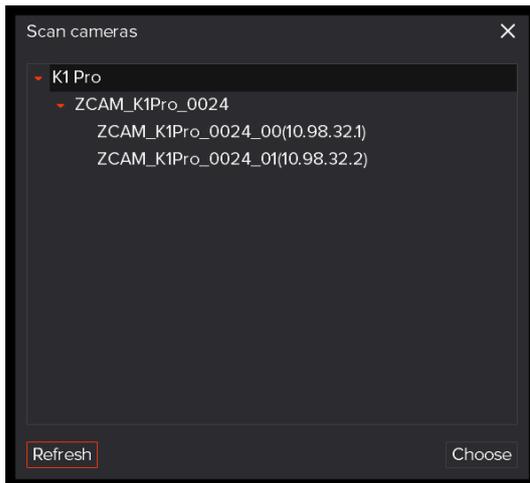
2) Select the camera you want to control, then double click the name of the camera or click "Choose" button, and you will come into the main window of Z CAM Controller.
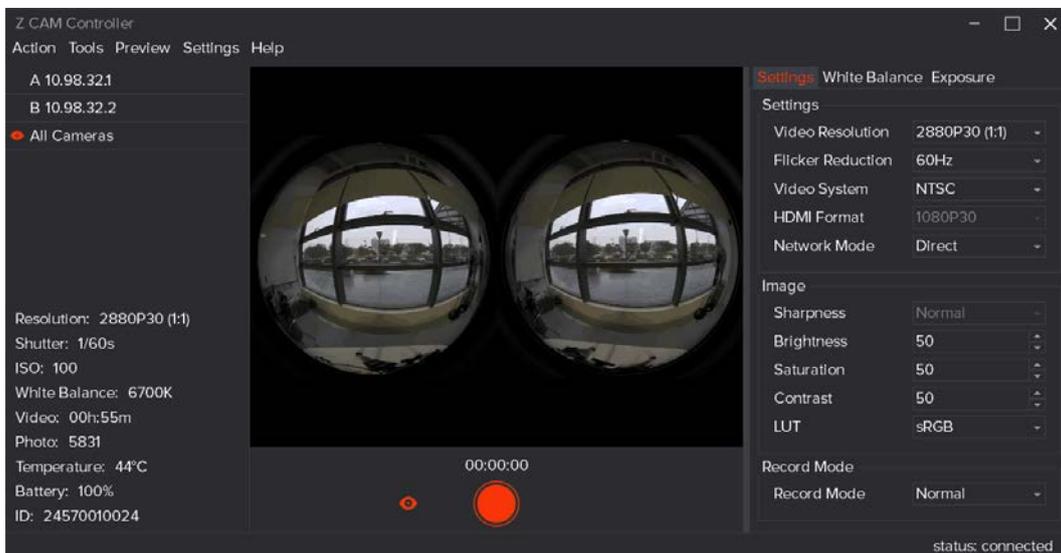
5.2. SD Cards Format

1) Select **Action –> Format SD cards** from the top menu
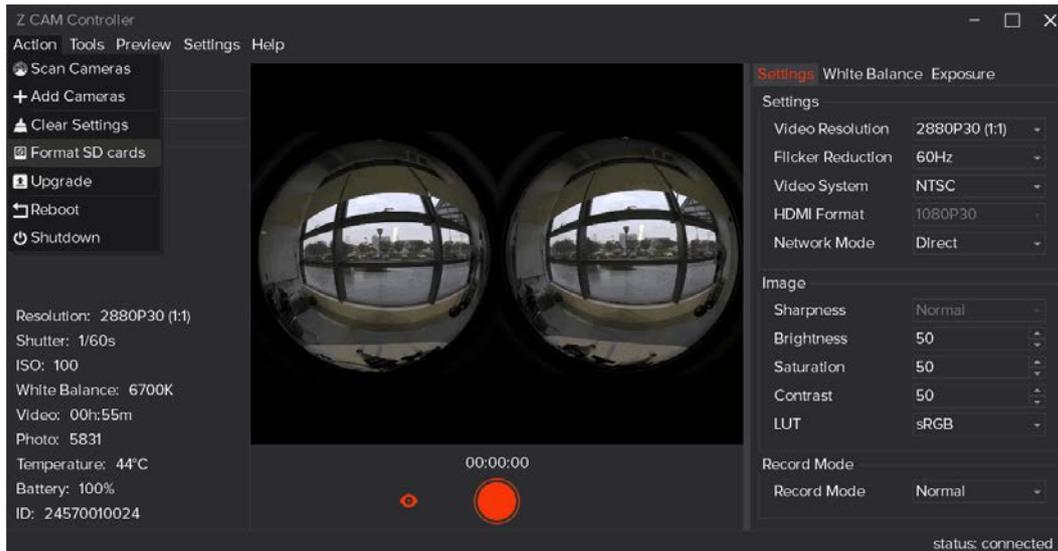
2) There will be a pop up window to confirm the formatting. Select **OK** if you want to format.
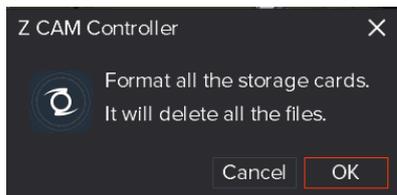
Please note that all the data will be erased from the cards after formatting!

5.3. Recording

1) Click the Record button on the main window to start recording, there will be red dot flashing at the left-top of the live view window. Time of recording will be showed on the top of record button.
2) Click the Stop button to stop recording.
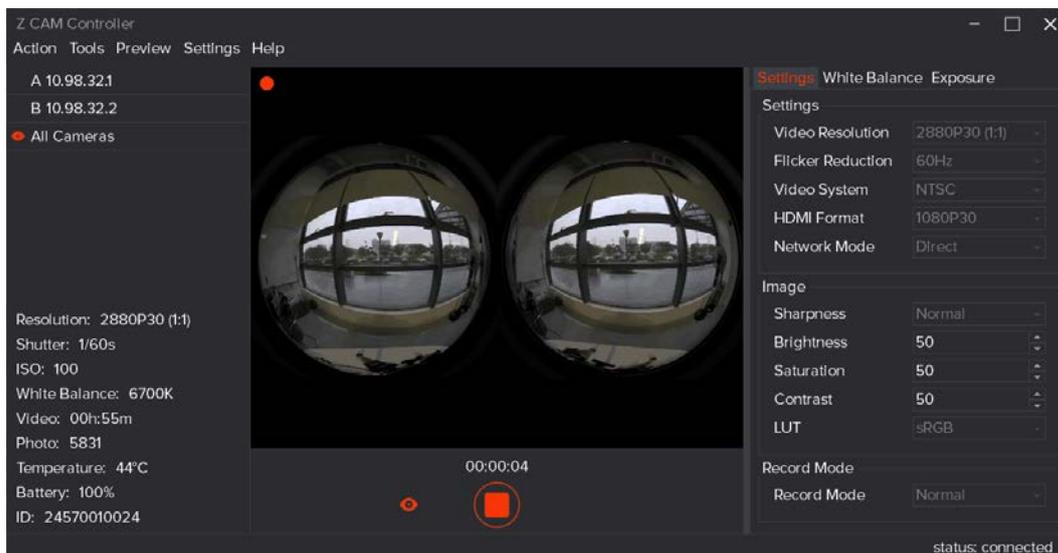
5.4. File Managers

1) Select **Tools –> File Manager** from the top menu.
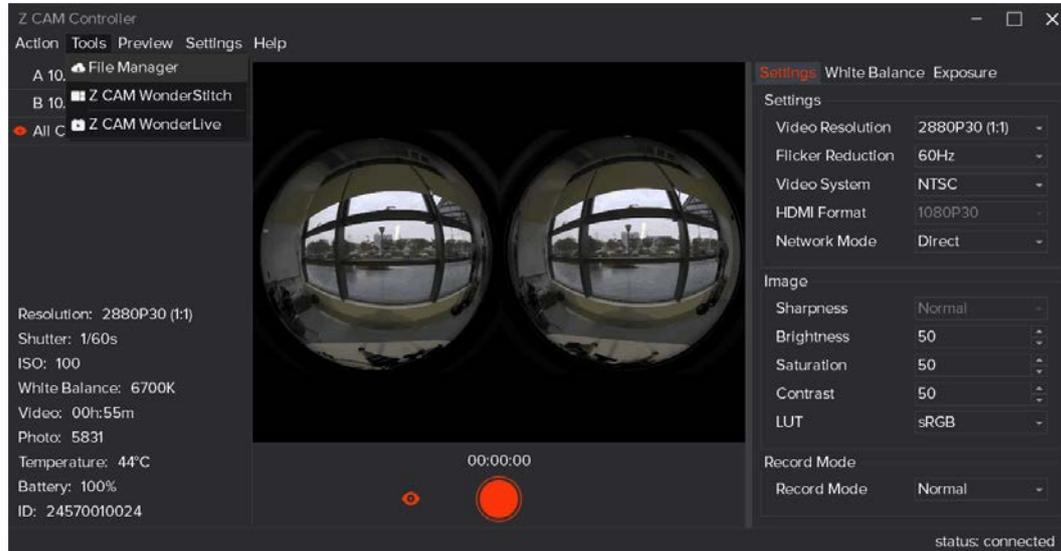
2) Click the files you want to download from the File list, and click **Download** button.
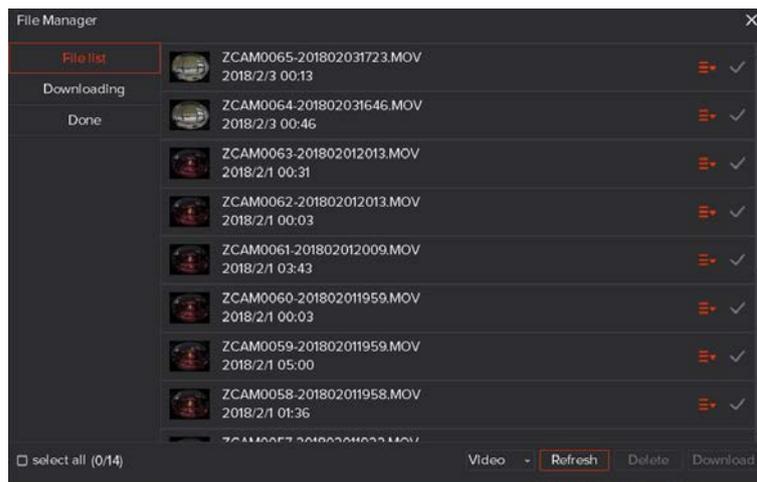
3) Click **Browse** button to select the folder you want to save the files, then click **Download** button to download the files from the camera. It will jump to **Downloading** window to show the progress of download.
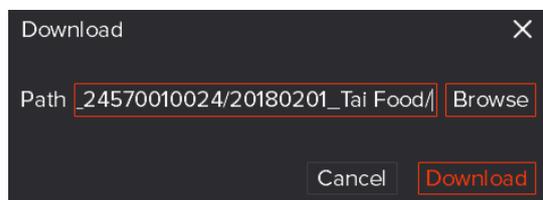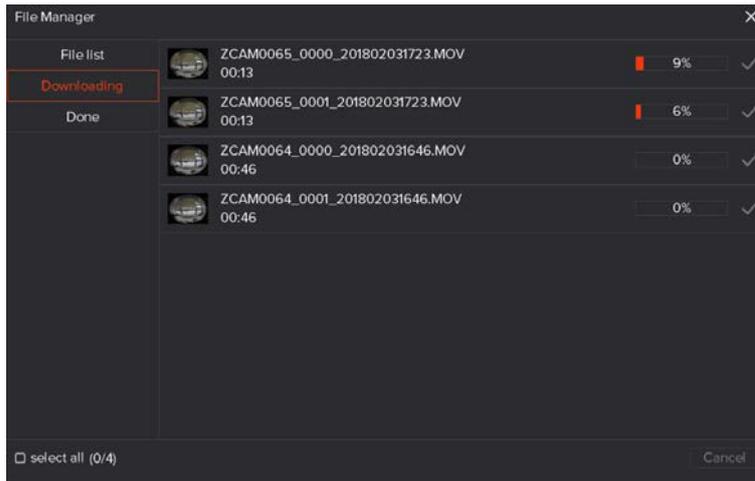
5.5. Camera Settings

There are 3 tabs on the right of the main window including: **Settings**, **White Balance**, **Exposure**, which you can change the settings of the camera*. Please check the **User Manual** of Z CAM Controller for more details.
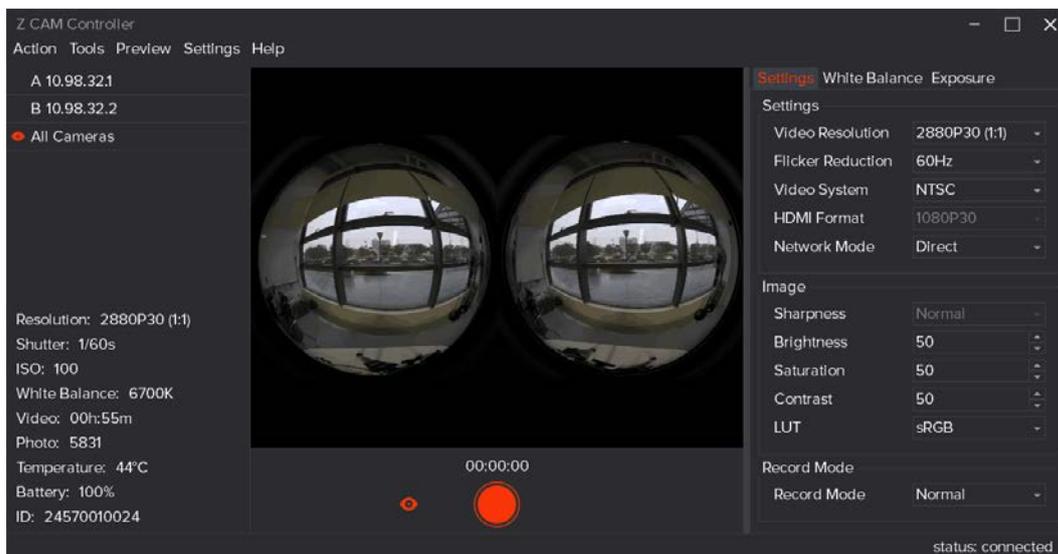
* We would suggest to keep **Coordination** of **White Balance** & **Exposure** as **Enable** as to get a good result of video footage.
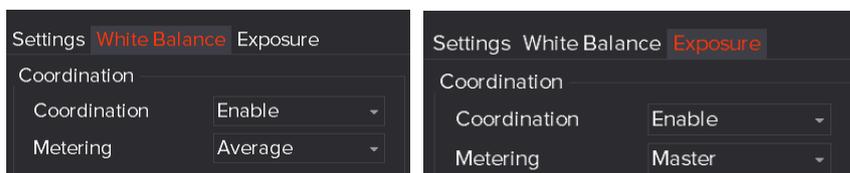
6. LIVE STREAMING (with Z CAM™ WonderLive)

Please check **User Manual** of **Z CAM™ WonderLive** for the detail of live streaming with the

camera, which you can download from the website: http://www.z-cam.com/wonderlive/

7. VIDEO STITCHING (with Z CAM™ WonderStitch)

Please check **User Manual** of **Z CAM™ WonderStitch** for the detail of video stitching, which you can download from the website: http://www.z-cam.com/wonderstitch/

8. FIRMWARE UPGRADE (with Z CAM™ Controller)

Please follow the steps as below to upgrade the firmware of the camera:

1. Download the latest firmware from the website: http://www.z-cam.com/firmware-update/
2. Open Z CAM™ Controller, select **Action -> Upgrade** from the top menu.

3. **Browse** and select the firmware file from the computer, and click **Upgrade** button.
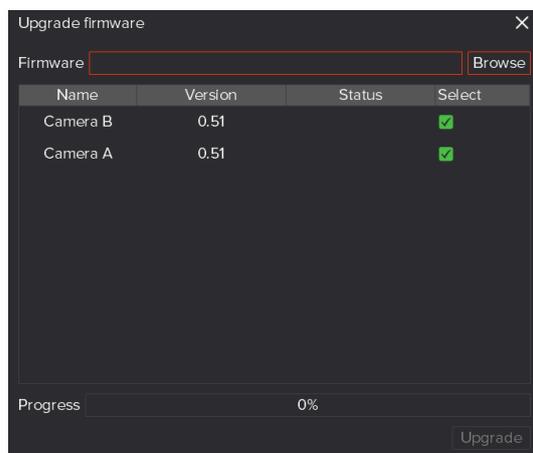
4. The camera will reboot after the firmware upgrade is finished.

9. CAMERA MAINTENANCE

- As the camera is a precise instrument, please do not flop it or let it suffer physical strike.
- As the camera is a non-waterproof of camera, please do not use it in water or a humid environment.
- If water accidently invades the camera, please shut it down, take out the battery and the memory card, and make the camera dry within 24 hours.
- As the camera's heating range is 0-40°C, please do not place or use the camera in an environment where the temperature is lower than 0°C or higher than 40°C.
- Please do not let the camera and the already installed lens face the sun.
- Please do not touch the image sensor while removing the lens.
- Please do not blow off any dust on the sensor with a dust blower.
- Please do not use any detergent containing organic solvent to clean the camera body and the lens.
- Please use soft lens cloth to clean the camera body and the lens regularly.
- Please do not disassemble the camera by yourself.
- Please take out the battery and place the camera in a well-ventilated, dry and cool place if the camera will not be used for a long time.
- Please press the shutter for several times during the storage period to verify whether the camera can function properly or not.
- Please do not place the camera in a darkroom, a lab or other places where corrosive chemicals are stored.

* Please note this document will be updated irregularly and make sure you have downloaded the latest version from the website: http://www.z-cam.com/180-vr-camera-k1-pro/

Disclaimer: All product features and technical specifications stated above are subjected to Z CAM™ 's sole interpretation and explanation.