



Obsidian

Model **S** / Model **R**

User Guide

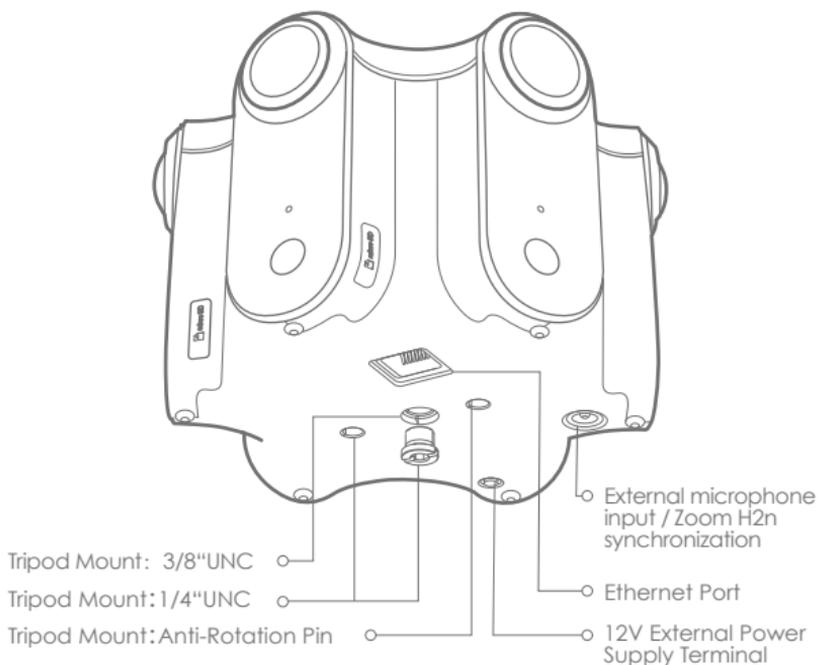
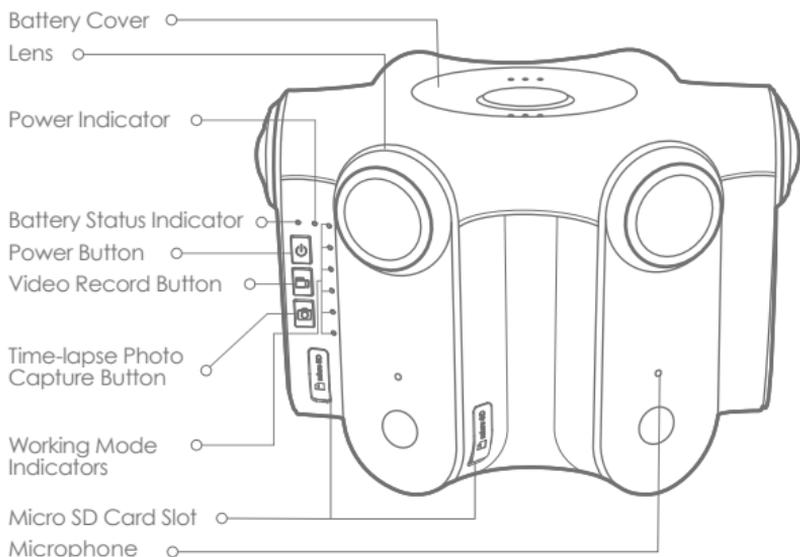
使用说明书

# Contents

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## Name of Parts





## Specification Parameters

<b>Model</b>	Obsidian R / S
<b>Video Format</b>	MOV
<b>Photo Format</b>	JPG / DNG
<b>Weight (Camera + Battery)</b>	1.1kg
<b>Recording Media</b>	Micro SD / SDHC / SDXC cards, U3 (USH - I) cards are recommended
<b>Video Coding Format</b>	H.264 / H.265
<b>Input Voltage</b>	12V
<b>Working Temperature</b>	0 ~ 30 °C
<b>Working Humidity</b>	10~90% RH
<b>Storage Temperature</b>	- 40 ~ 80 °C
<b>Storage Humidity</b>	5 ~ 90% RH
<b>ISO Range</b>	100 - 3200



### Video

<b>Model</b>	<b>Video Resolution</b>	<b>Frame rate (fps)</b>	<b>Single-lens Resolution</b>
Obsidian R	8k x 8k	30	3800 x 3000
	4k x 4k	60	1900 x 1500
Obsidian S	6k x 6k	50 *	3000 x 2160
	6k x 6k	30	3000 x 3000
	4k x 4k	120	1500 x 1080
	4k x 4k	80	1500 x 1500



### Photo

<b>Model</b>	<b>Photo Resolution</b>	<b>Single-lens Resolution</b>
Obsidian R	8k x 8k	3800 x 3000
Obsidian S	6k x 6k	3000 x 3000

\* It can be conforms to 60fps in Kandao Studio for better VR HMD playback.



## Package Contents



Obsidian Camera



Carrying Case



Shoulder Strap



Manual



Lens Cleaning  
Cloths



Ethernet Cable  
for PoE & Camera



\* Sync control cable  
for Zoom H2n Handy  
Recorder(spatial sound)



\* PoE Power Supply  
for DC54V 60W



\* PoE Power Cord



\* Batteries LP-E6



\* Lens Cleaning Pen



\* Card Reader USB 3.0



\* Battery Cover with  
Hot/Cold-Shoe Socket



\* Hot/Cold-Shoe Mount  
for Zoom H2n Handy  
Recorder(spatial sound)



\* Bubble Level

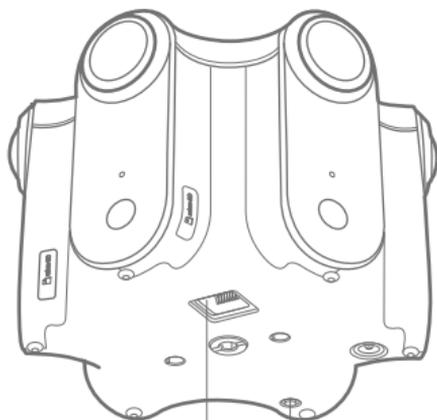
( \* Optional )



## Using the Camera



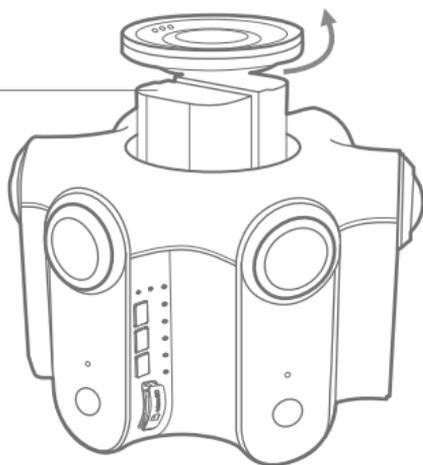
Power the Camera using one of the following ways



❶ PoE (Power over Ethernet)

❷ 12V external power supply

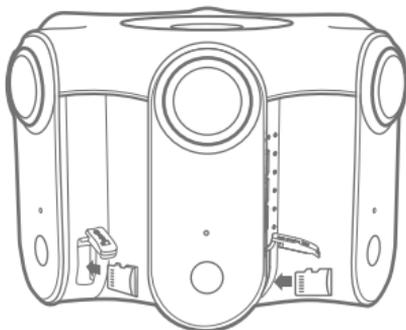
❸ 2 X Canon LP-E6 or compatible batteries



If more than one power source is connected to the camera at the same time, the camera will choose its supply in the order of preference as listed above.

## Insert Micro SD cards

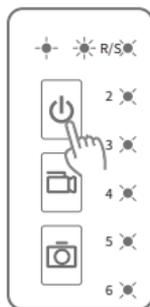
Insert all six Micro SD cards into the slots. **U3 (USH-I)** cards are highly recommended for maximum speed and stability.



## Power on / off

**Power on:** Long press the [power button] for 3 seconds, if the camera is turned on normally, the power lamp will stay red and the six working mode lamps will blink, then stay blue.

**Power off:** Long press the [power button] for 3 seconds, all [working mode lamps] will turn off after fast blink.



## Video Shooting & Time Lapse

### Video shooting

Short press the [Video Capture button] to start recording video and short press the button again to stop recording. All working mode lamps will be in quick flashes before the recording starts normally. During the recording process, all working mode lamps will flash slowly.





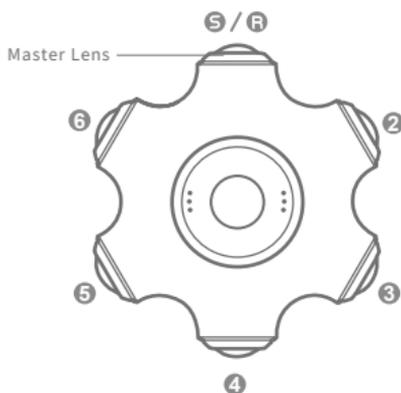
## Time lapse shooting

Short press the [Time-lapse Photo Capture button] to start the capture. The default time interval is 10 seconds. Short press the [Time-lapse Photo Capture button] again to end the capture. Every time it captures, the blue working mode lamps will twinkle once. Time interval can be changed in the Obsidian Remote App.



## Master Lens

The lens labeled "S" or "R" is the master lens of the camera. In default mode, each lens calculates its own exposure parameters (ISO & Shutter Speed) automatically and individually, and all of them follow the Automatic White Balance setting of the master lens. This setting can be changed in the Obsidian Remote App.





## Operate With Obsidian Remote APP

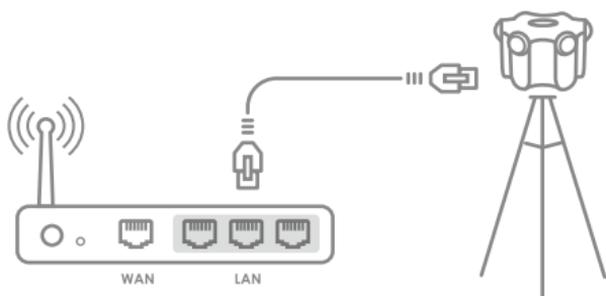
### Download the Obsidian remote APP to the mobile phone

APP	Obsidian Remote Controller		
Download	iOS	Android	
	APP Store	Google Play Store	<a href="http://www.kandaovr.com">http://www.kandaovr.com</a>

### WiFi connection

The camera must connect to a wireless router by an Ethernet cable and the mobile phone must connect to the same router. Please note:

- 1 The camera should be connected to the router's LAN port, not the WAN port.



- 2 Connect your smartphone to the router's WIFI. For example, if you connect the camera to the router with WIFI name "Love Virtual Reality", your phone should also connect to the WIFI named "Love Virtual Reality". You can verify this by checking the WIFI connection in your phone's settings.



Click the Obsidian Remote APP icon to start





## Studio

Kandao Studio provides a effortless solution for stitching high quality 3D 360 VR videos and photos.



Effortless  
One-Click  
Processing



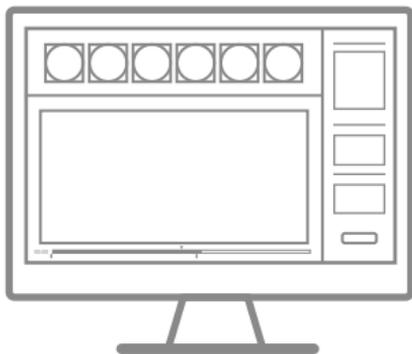
Immersive 3D  
depth



Ambisonic  
surround  
sound support



GPU acceleration  
to speed up  
creative workflow



Download

<http://www.kandaovr.com/studio.html>

## Safe Handling Precautions

1. Avoid condensation and freeze -- When moving the camera from one extreme temperature to another, keep your camera in sealed plastic bags to prevent condensation. Allow time for equipment to adjust to temperature change before removing from the plastic bag.
2. Avoid snow -- Be careful that snowflakes can easily scratch the lens. To prevent camera circuits from being damaged by melting snow, please turn off the camera and pull out the battery immediately.
3. Avoid dust -- Please use and store the camera in a clean environment. When using the camera outdoors, be careful not to allow dust or sand scratch the camera. Please use blower brush, or lens tissue to remove dust from the lens. Never use alcohol or any volatile liquid to clean the camera.
4. Avoid moisture -- Avoid using the camera in high humidity conditions. Remove and store the battery in a dry box when not using the camera.
5. Avoid shake -- Do not bang or subject the camera to strong impacts. Do not put the extra objects attached with the camera into the package (for example, forget to remove the quick release plate), which will increase the possibility of lens damage when shaking and vibration.
6. Never place the camera close to magnets, motors or other devices that generate strong electromagnetic fields. Exposure to strong magnetic fields may cause malfunctions or corrupt image data.
7. Memory cards are small, thin and easy to break, so keep them in a special box when not using and make sure the metal contacts are clean and shiny. Avoid storing the cards with data in areas exposed to strong magnetic fields or electromagnetic radiation or high temperature.
8. Don't charge the battery inside the camera for a long time, unplug the external power cable when not using the camera.
9. Do not bump or rub the lens.
10. Do not use camera beyond the normal power supply range.
11. Do not take the camera apart or try to repair any of the electronics yourself.
12. Avoid foreign objects or liquids inside the camera.

K A N D A O

[www.kandaovr.com](http://www.kandaovr.com)

Kandao is a high tech company committed to virtual reality with a strong mixed of mission and passion to build the best VR camera for the mass. The co-founders and core team members of Kandao graduated from top universities and have either/both technical and/or commercial backgrounds in leading technology organization such as Tencent, Huawei, Philips, Sharp and other well-known enterprises. With strong research, development, and operational capabilities, Kandao builds the world's first portable high quality 3D 360 camera and are creating more fascinating VR technologies.

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