exceeding media challenges

BrightVR

User Manual

LiveStream Model

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1. Introduction

1.1 Overview

Congratulations on the acquisition of your new BrightVR 360 camera and welcome to MOG Technologies world!

With **BrightVR Stream 360 Camera** you can easily **capture your 360 contents** with a **4K output resolution** taking advantage of its instant **automatic capture, stitch and broadcast** feature set.

With **BrightVR** you can live stream your 360 content without the need of any other media encoding hardware.

This manual will show you how to handle and operate your camera, enabling you to get amazing and professional 360 videos and panoramic photos.

1.2 Information

Please read this manual carefully before using the camera for proper and safe operation. The content and images present on this manual are subject to change without prior notice. After reading this manual, keep it close and accessible for future reference.

To prevent damage to your camera or injury to yourself or to others, read the following chapters referring to **0 Camera Safety and Handling Instructions.**

1.3 Camera Safety and Handling Instructions

- Please check if you have all the camera components available and if they are operating normally before using it;
- Only use power sources and accessories approved to use with this product;
- Be careful when carrying the camera. It is precision equipment, so it contains precision circuits;
- Do not drop the camera, expose it to a strong physical impact, or move it around while it is attached to a tripod;
- Do not modify or disassemble the camera. Touching the product internal parts can result in malfunction or even injury. In the event of a malfunction, the camera should be repaired by a qualified technician;
- Do not block any ventilation openings to maintain sufficient ventilation;
- Do not insert any conducting materials into the electrical contacts, or in any other components of the camera;
- Keep the camera dry since it is not waterproof nor water resistant;
- Do not use or store the camera close to equipment that generates strong magnetic fields (e.g., electric motors) or areas where strong electromagnetic signals are generated (e.g., electrical transmission towers). Note that exposing the camera to strong electromagnetic signals can cause in malfunction damages or even destruction of the data stored on camera/memory card;
- Do not expose the camera and accessories to flame, hot sun or any other heat source;
- Do not use it in the presence of flammable gas to prevent an explosion or fire;
- Recommended operation temperature for Camera:
- Operating Temperature Range: **0ºC~40ºC;**
- Avoid using, placing or storing the camera in places with temperatures above 40 ºC (104 ºF);
- Turn the camera OFF before removing or disconnecting the power source;
- Disconnect the power cable and remove the battery module before storing the camera or accessories;
- Do not store your camera in dusty, humid places or in locations where potentially corrosive chemicals are used;
- If the camera has been stored for an extended period, please check if all material is according before using it;
- Do not touch the lens surface with your fingers;
- If dust or dirt is accumulated on the camera or its lens, please disconnect all power sources and use a soft, clean and dry cloth to wipe away gently;
- Do not use soaps, detergents, ammonia, alkaline cleaners, bleach and/or abrasive cleaning compounds or solvents as these substances may damage electronic circuits;
- Do not allow children to use the camera and accessories.

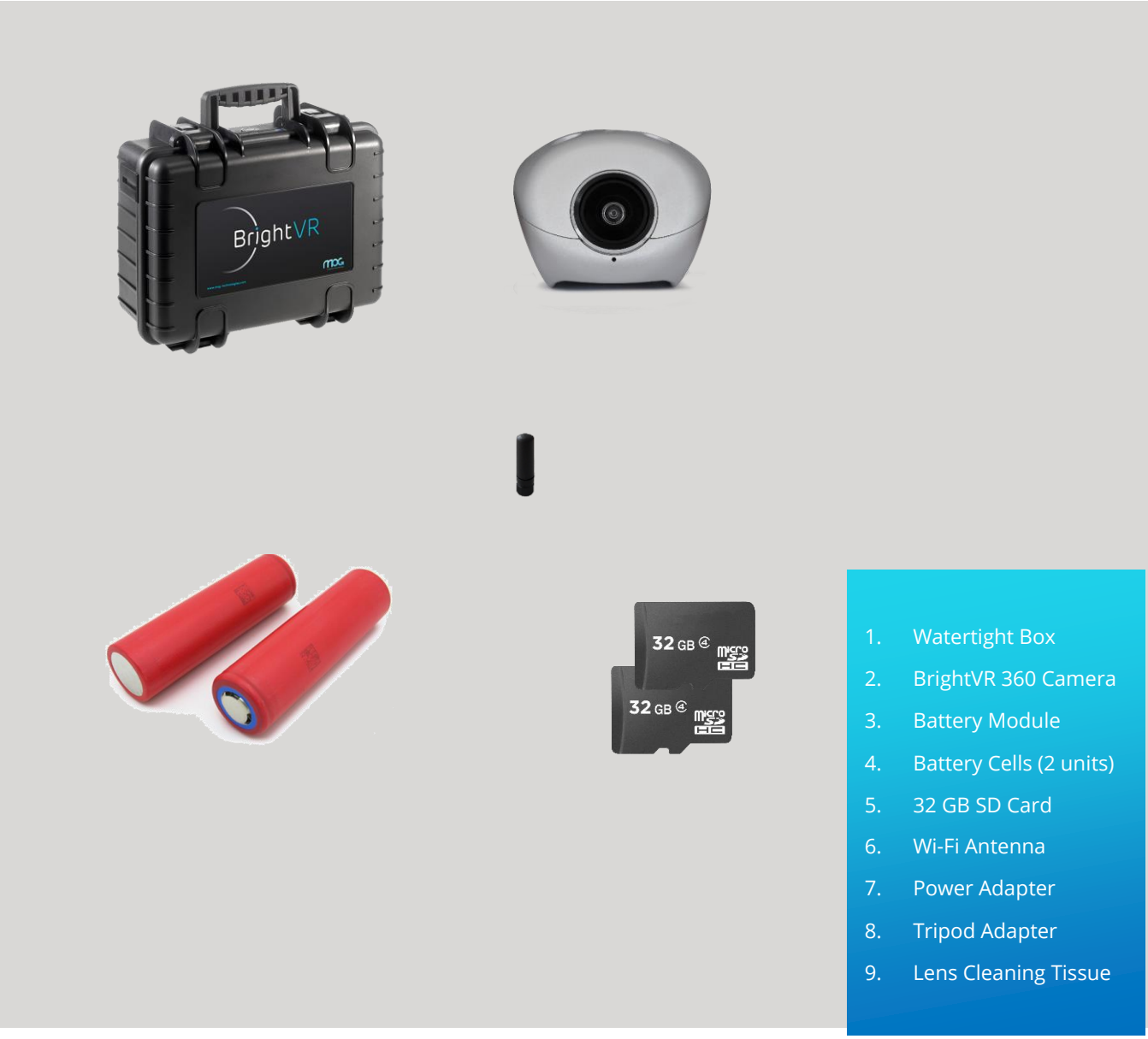
1.4 Battery Safety and Handling Instructions

- Only use batteries approved to use in this product and don't use modified or homemade batteries
- Do not disassemble, modify or short-circuit the batteries. Do not use different types of batteries and do not mix new and old batteries;
- Do not use near, or expose the batteries to, fire, excessive heat, water or to any chemicals materials;
- Keep the batteries dry and do not subject them to strong physical impact;
- Attention to the batteries polarity. Reverse polarity installation of the batteries in the end product must be avoided. Reverse insertion of batteries can cause charging, and that may result in leakage or explosion;
- Store and keep batteries away from children to prevent any danger events;
- Do not handle the battery if it is damaged or leaking. Prevent any battery leakage from contacting with any part of your body or clothing. Battery disposal must follow local environmental regulations;
- Handle the batteries carefully. Overcharging, short-circuiting, reverse charging, or incineration of batteries must be avoided to prevent one or more of the following occurrences: the release of toxic materials, the release of hydrogen and/or oxygen, gas, and the rise in surface temperature;
- If an accident occurs, keep calm and seek medical attention at once.

2. The Basics

2.1 Package Contents

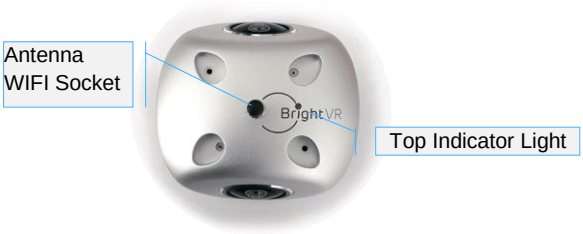
Please check that all items described below were delivered with your order:

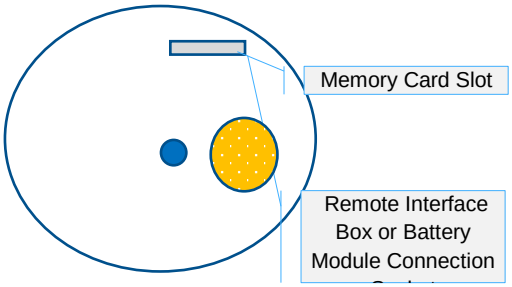


1. Watertight Box
2. BrightVR 360 Camera
3. Battery Module
4. Battery Cells (2 units)
5. 32 GB SD Card
6. Wi-Fi Antenna
7. Power Adapter
8. Tripod Adapter
9. Lens Cleaning Tissue

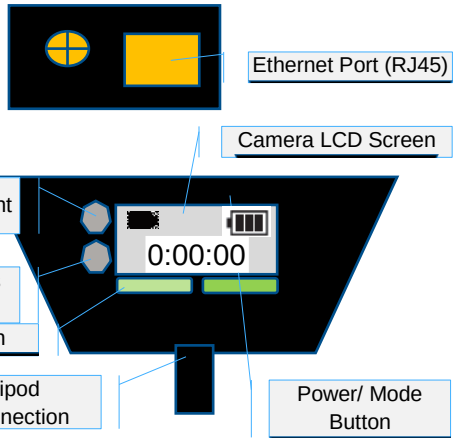
2.2 Getting to know your Camera

2.2.1 Indicators and accessories

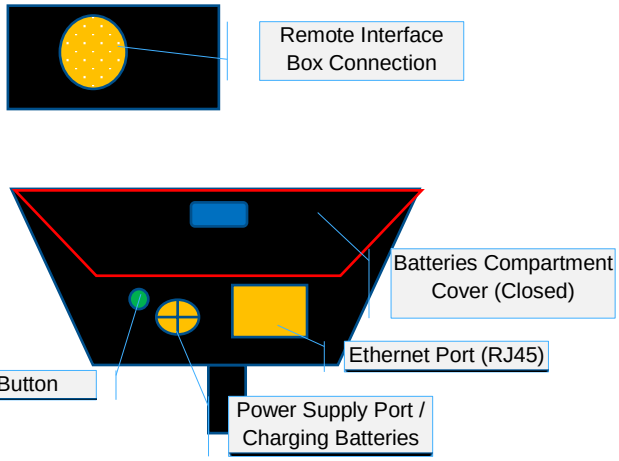


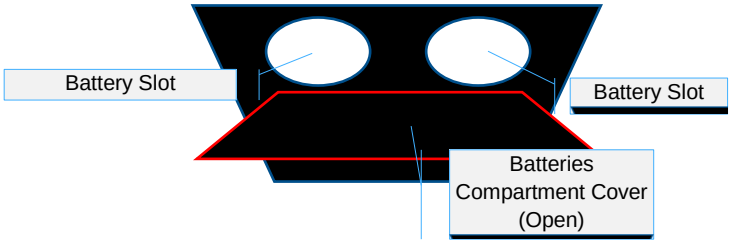


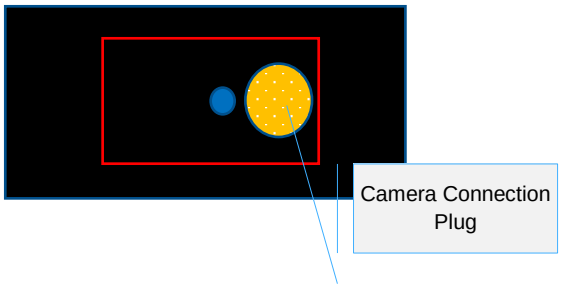
"Front View"



"Rear View"







2.2.2 Top Indicator Light on Camera

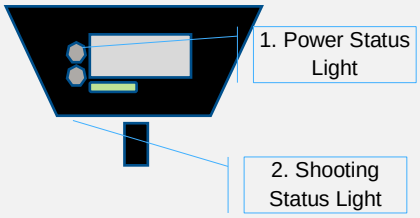
The top indicator light on camera shows the camera power states and battery status.

LED Indicator/Colour	Status Description
Fixed White	The camera is ON
Blinking White	The camera battery is Low

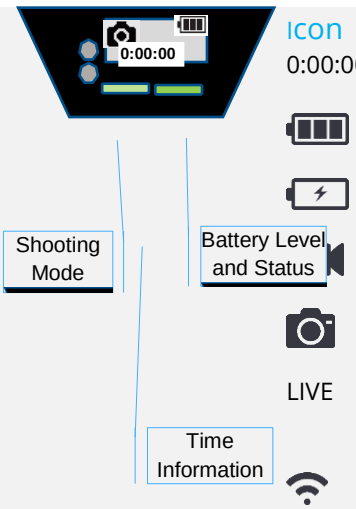
2.2.3 Indicator Lights and Display on battery module

The LCD and light indicators of the battery module provide information about the camera operating mode and status.

The following table displays the different status possible and the corresponding operating mode.



LED Indicator/Colour	Status Description
(1.) OFF	The camera is OFF
(1.) Fixed White	The camera is ON
(1.) Blinking White	The camera is charging. The camera is ON or OFF and the power adapter is connected.
(2.) OFF	Recording, Live Streaming or Photo Shooting are stopped
(2.) Blinking White	Recording or Live Streaming Shooting is in progress.
(2.) 1 x Blinking White	Photo Shooting is in progress



Icon	LED Indicator/Colour	Status Description
0:00:00	Time	Recording or transmission (Live Streaming) time
	Battery Level	Displays battery power level
	Battery Status	Battery is charging
	Recording Mode	Recording mode is selected. See LED indicator to check the shooting status.
	Photo Mode	Photo mode is selected.
LIVE	Live Streaming Mode	Live streaming mode is selected. See LED indicator to check the shooting status.
	Wi-Fi Enabled	This LED is always activated and it means that the camera is Wi-Fi enabled.

2.3 Initial SETUP

2.3.1 Connecting the WIFI Antenna

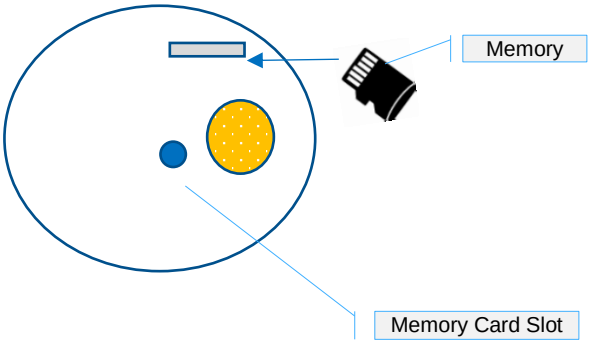
	1. Turn OFF the Camera 1. Insert the Wi-Fi antenna into the socket and screw it until it is securely attached to the camera (no tools are required for this procedure).

2.3.2 Inserting and removing a Memory Card

BrightVR camera comes with a 32 GB capacity memory card. A memory card must be inserted in the camera slot to record videos or save your photos. Please note that some memory cards may not be compatible with the device.

The following memory cards can be used, regardless of its capacity:

- SDHC memory cards* – Class 10 – speed grade U3 , to answer the demand for high resolution and high-quality 4K video recording that the camera requires.
  ** Cards conforming SD standards.*
  Please note that not all memory cards have been verified to work with BrightVR camera.



Insert the Memory Card:

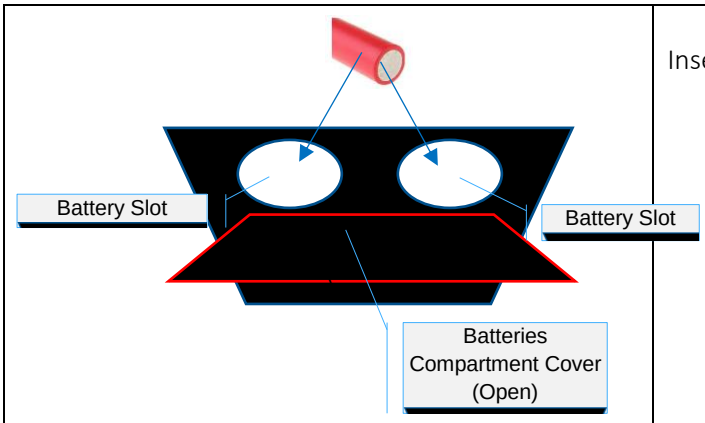
1. Turn the camera OFF;
2. Insert the memory card into the slot on the bottom of the camera with the card contacts adequately aligned with the ones from the camera;
3. Push the memory card into the slot until it locks in place.

Remove the Memory Card:

1. Turn the camera OFF;
2. Press into the slot with your fingernail,
3. The card will pop out.

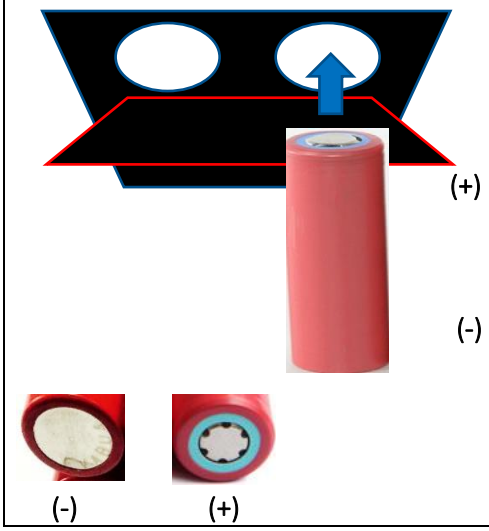
2.3.3 Inserting, removing and Charging the Batteries

BrightVR camera comes with two rechargeable batteries that will provide power to the camera when unplugged from the wall power outlet.



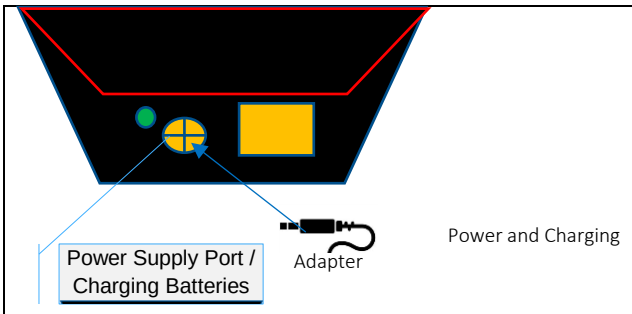
Inserting Batteries

1. Turn the camera OFF;
2. Open the battery compartment cover;
3. Insert the batteries into the slots (Ensure the batteries are inserted in the correct orientation. Please check image for info).
1. Once both batteries are inserted, close the battery compartment cover.



Removing batteries

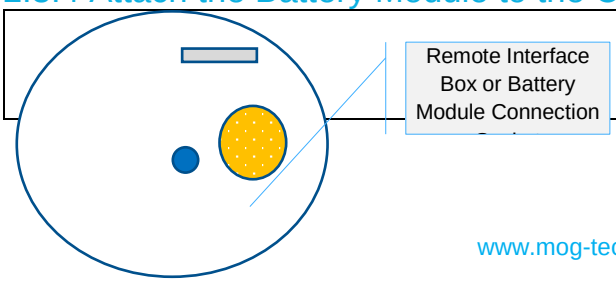
1. Turn the camera OFF;
2. Open the battery compartment cover;
3. Gently shake the battery compartment to slide the batteries out;
4. Always remove both batteries.



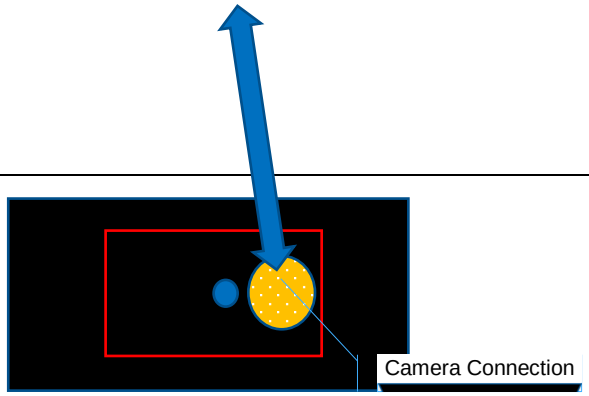
Charge the batteries using only the included power adapter.

1. Plug the power adapter on the battery module and to an AC electrical outlet.
2. The LCD screen will show the charging status/progress.

2.3.4 Attach the Battery Module to the Camera



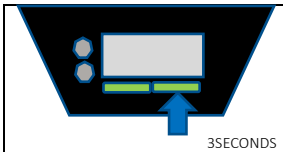
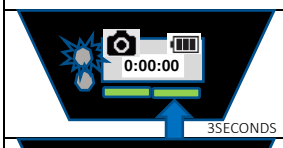
1. Insert the battery module properly aligned into the Bright VR camera connection socket.

	2. Push the battery module until it is closely coupled to the camera. 3. Tighten the screw to lock the battery module to the camera.

2.4 Starting UP

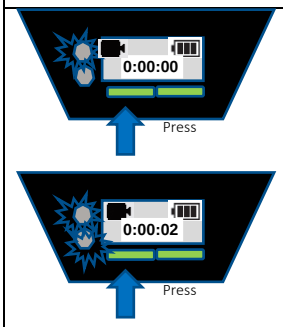
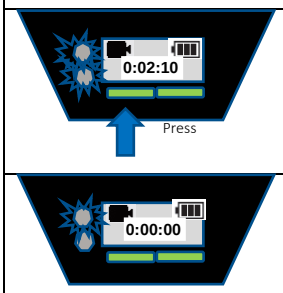
2.4.1 Powering ON / OFF

BrightVR Camera will operate from batteries and when plugged to the AC adapter or plugged to remote box/cable.

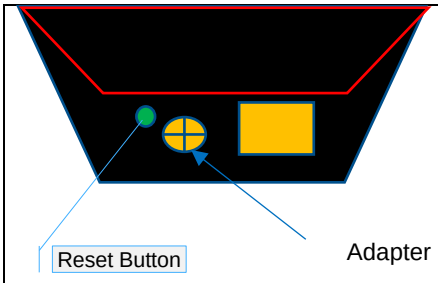
	Powering On
 	Press and hold down the Power/Mode button for about 3 seconds to turn ON the camera. The LCD will show MOG logo, and the power status light turns ON.
	Powering OFF
 	Press and hold down the Power/Mode button for about 3 seconds to turn OFF the camera. During the shut-down the LCD will show the MOG logo. When the camera turns OFF, the power status light and the display screen turns OFF.

2.4.2 Basic Camera Operation

	Basic Camera Operation By default, de camera starts in the recording mode.

	You can change the shooting mode pressing the Power/Mode button. - Recording Mode - Photo Mode LIVE - Live Streaming Mode
	Press “Setting button” (depending on the shooting mode selected) to start recording a video, to starting a live streaming or to take a photo. After your confirmation, the shooting status light will start blinking.
	Press “Setting button” (depending on the shooting mode selected) to stop recording video, to stop a live streaming. After your confirmation, the shooting status light will stop blinking.

2.5 Resetting to Factory Defaults

	To Reset the camera and restore factory default settings, insert an object such as a thin paper clip into the opening of the reset button for approximately 10 seconds until the LED turns off.

3. Network Connection

BrightVR camera provide three networks connection ways: ethernet (Cable), WIFI Hotspot and as a client of an available WIFI network. In chapters 4. BrightVR App and 5. Working Modes will be described when and how to use the different network connections supported by the camera.

After the camera access to the network, you can configure and control the camera remotely using the BrightVR App installed in your smartphone/tablet (see chapter 4. BrightVR App). If the network has internet access you will be able to perform Live Streaming to outside of you network (e.g. Youtube, OTT platform, etc.).

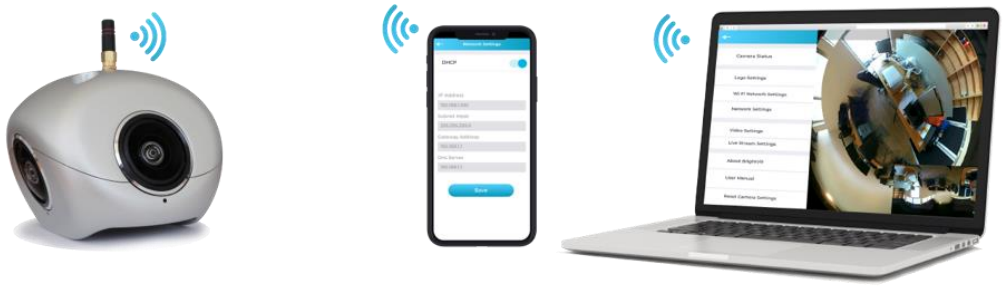
3.1 Ethernet (Cable)

Use an Ethernet cable to connect your camera to a local area network (LAN). You can connect the network cable on the camera ethernet port of battery module or the remote box. By default, the Ethernet port is set up for DHCP addressing (Camera working as a DHCP Client). Note: You can define a static IP through BrightVR App.

3.2 WIFI – Camera as a WIFI Hotspot

Using this mode, the camera acts as a wireless access point and you will be able to connect your device (Smartphone/Tablet/Computer) to the camera.

The camera default SSID name is “BrightVR_[serialnumber]” and the password is 1234567890.
To have access to the camera, the IP by DEFAULT is 192.168.42.1



3.3 WIFI - Camera as a client of a Wi-Fi Network

Your camera can be connected to a wireless local area network (WLAN). By default, the Ethernet port is set up for DHCP addressing (Camera working as a DHCP Client).

4. BrightVR App

4.1 For iOS or Android System

The camera can be controlled through battery module buttons (Basic Camera Operation) or remotely using the BrightVR APP provided there is a network connection between the camera and the smartphone/tablet.

The BrightVR APP enables you to control all operations available on the camera and set further configurations such as bitrates, live streaming, network settings, etc…

To download and install BrightVR App on your compatible smartphone or tablet (IOS or Android System), please scan this QR Code to get access to Apple Store or Google Play:

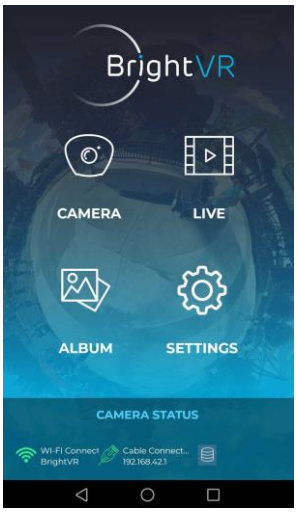
QR CODE APPLE STORE	QR CODE GOOGLE PLAY

You can also find the App in the Apple Store by searching for: BrightVR. Make sure you have downloaded and installed the APP firstly then see below.

The BrightVR APP interface is as shown in the picture.

4.2 Connecting to the Camera

1. Turn on the camera
2. Open the BrightVR APP and tap on “Connect to the camera”. You will see a list of nearby WIFI networks.
3. You will be prompted to connect to your camera WIFI network. Select and connect to your camera WIFI network (see Camera as a WIFI hotspot / Access Point).
4. Once connected you can start controlling and configure your camera.

1.	2. 3.	4. 

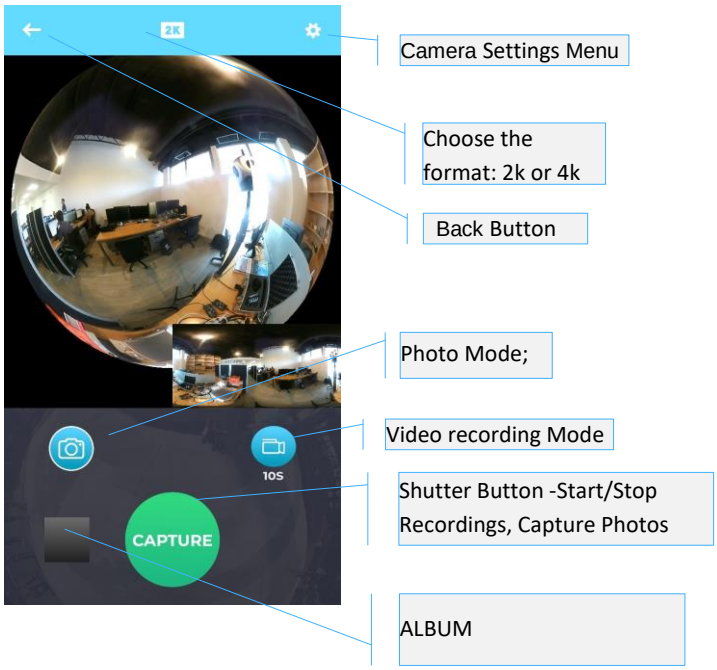
Note: A camera can only be connected with one device (Smartphone/Tablet/Computer) at the same time.

4.3 Home Page Menu

	Prepare your camera to start recording video or take photos. Recording Camera Modes - Photo Mode - Video recording Mode
	Prepare your camera to perform a live streaming video and if required to record the transmission. - RTMP - YOUTUBE -
	Preview your videos and photos. There is four views for preview: Fisheye, Little Planet, VR and Panoramic/Normal.
	Configure and verify your camera settings. Camera Status, Logo Settings, Reset camera WIFI, Video Settings, Live Stream Settings, About Bright VR, User Manual, Reset Camera Settings
	The camera status screen offers information about the network connection - Check you WIFI connection (SSID is showed) - Check you Ethernet/Cable Connection (IP address is showed) -

4.3.1 Camera

Click to enter the Camera, the APP will automatically load the preview stream.

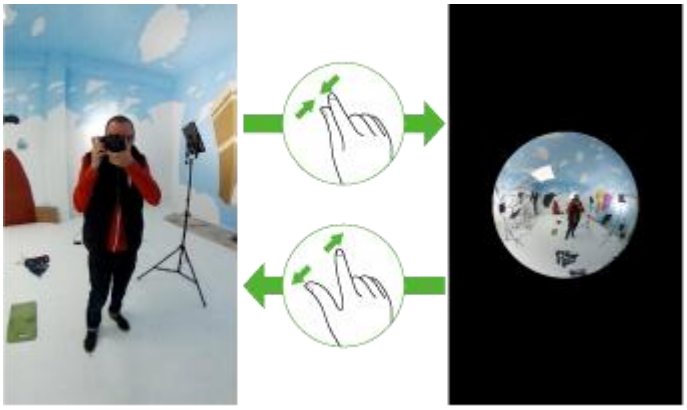


Viewer

You can display a desired area of a spherical image taken with the camera and zoom in or out to check details in the image.

The screens below are used as examples in the following descriptions.

Zooming in or out: Pinch out, pinch in



Changing the displayed area: Swipe or flick

4.3.1.1 Photo Mode

Assuming you are already connected to your camera using de BrightVR App (Connecting to the Camera):

1. With BrightVR App open tap on the “CAMERA”;
2. Select the pretended resolution to take photos, 2K or 4K (on top of the application);
3. To select photo mode, tap on <photo camera icon>;
4. Tap on “CAPTURE” Button to take a photo

4.3.1.2“Standalone” Recording to SD Card

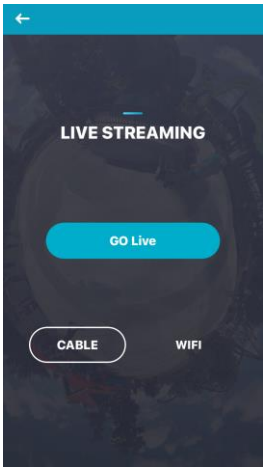
Assuming you are already connected to your camera using de BrightVR App (Connecting to the Camera):

1. With BrightVR App open tap on the “CAMERA”;
2. Select the pretended resolution to record, 2K or 4K on top of the application;
3. To select recording mode, simply tap the green button to star capturing
4. The center of the capture button will turn red and your camera will simultaneously vibrate.
5. To stop recording, tap the red record button.

4.3.1.3 Live Streaming – CABLE and Wi-Fi connection

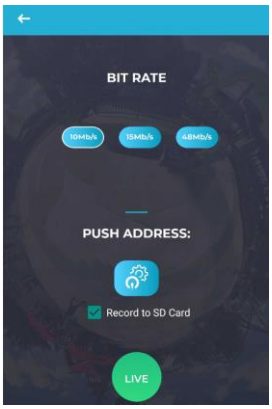
The camera can live stream through different video distribution platforms (e.g. YouTube, using RTMP). Assuming you are already connected to your camera using de BrightVR App (Connecting to the Camera):

1. Select the network connection that you will use to perform the Live Streaming "CABLE or



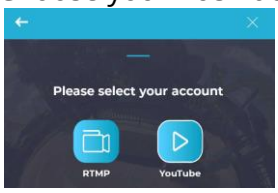
Wi-Fi".
1.1. If the option was "CABLE", tap "**GO Live**" to proceed
1.2. If your option was "Wi-Fi" Introduce Wi-Fi network credentials and confirm;

2. Select the desired BIT RATE (10, 15 or 48 Mb/s) and click on PUSH ADDRESS.



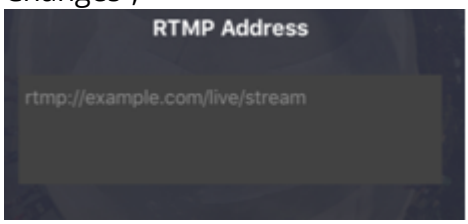
Note: If you want to record the live transmission, select the option “Record to SD Card”;

3. Choose your Push address option:



3.1. “RTMP” option:

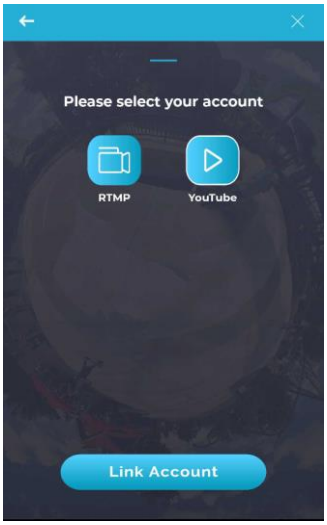
i. Introduces the RTMP address (RTMP://address), and tap on “Confirm Changes”;



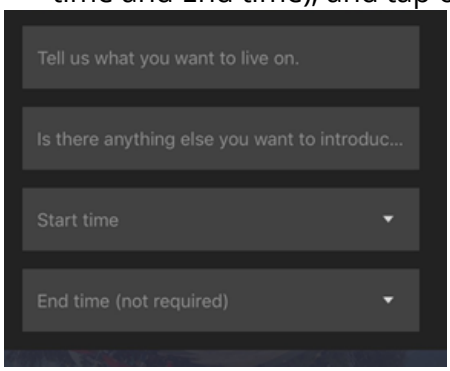
ii. And finally, to start the Live Streaming tap on “LIVE”.

3.2. “YouTube” option:

i. Link your YouTube account;
Note that you previously must configure a live event on your YouTube Channel and don´t forget to able the video 360º option;



ii. Introduces your YouTube live channel settings (Title, Introduction, Start time and End time), and tap on “Confirm Changes”;

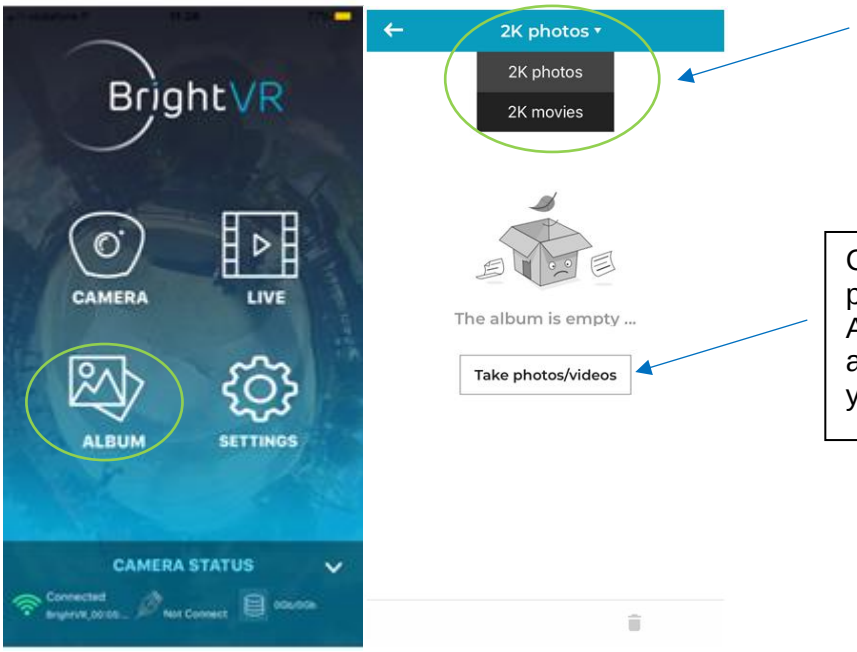


iii. And finally, to start the Live Streaming tap on “LIVE”.

4.3.2 Album

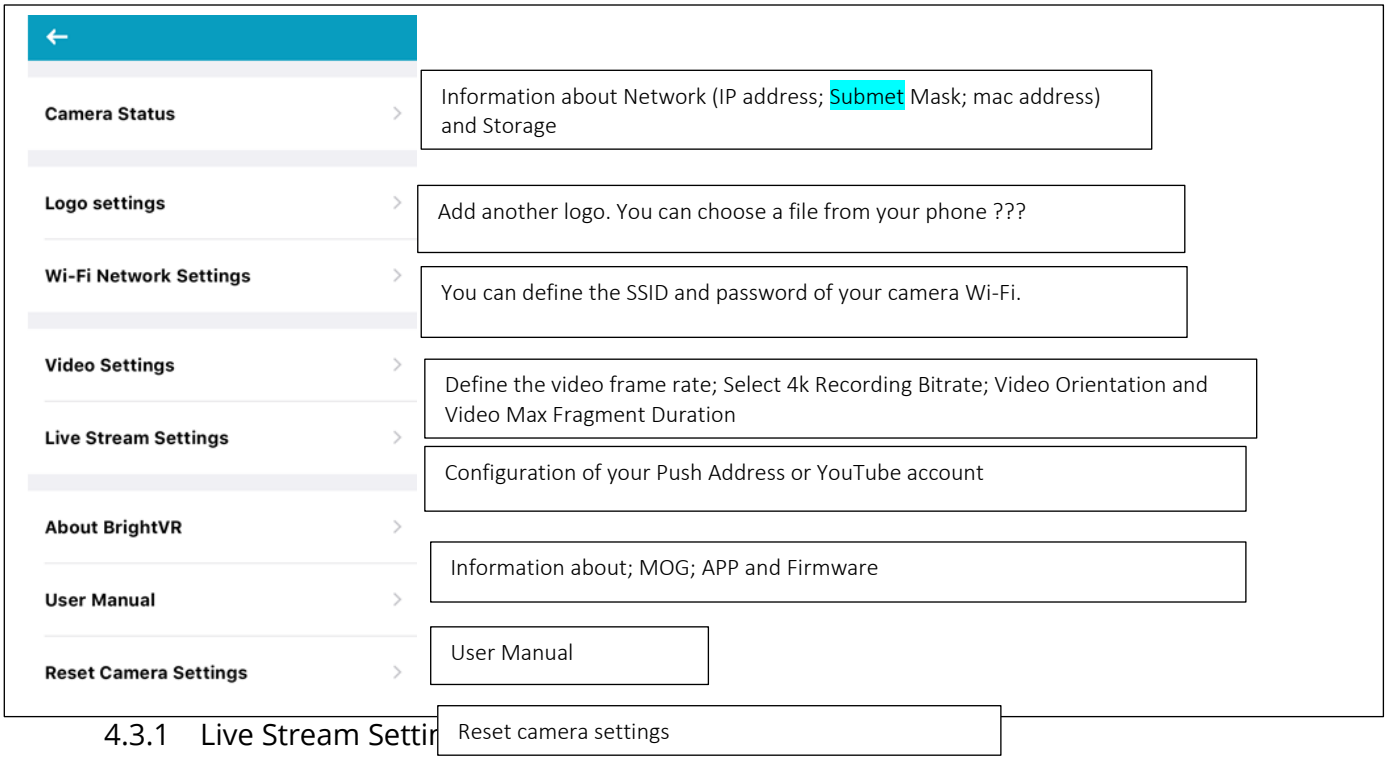
Select the Album button to access all your videos and photos capture in 2k mode.

Selecting the arrow, you can choose between photos or videos



Clicking on the photos/videos the App will automatically redirect you to Camera

4.3.3 Settings



4.3.1 Live Stream Settin

Contacts

For further information or any technical doubt about BRIGHTVR Stream 360 Camera, please contact:
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http://www.mog-technologies.com

FCC ID:2ARZN-BRIGHTVR

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference (1) this device may not cause harmful interference, and (2) this device must accept any interference 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 aClass B digital device, pursuant to Part 15 of the FCC Rules. These limits aredesigned to provide reasonable protection against harmful interference in aresidential installation. This equipment generates, uses and can radiate radiofrequency energy and, if not installed and used in accordance with theinstructions, 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 interference to radio or television reception, which can be determined by turning the equipment off and on, the user isencouraged to try to correct the interference by one or more of the followingmeasures:
-- 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.
To maintain compliance with FCC’s RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.