

# BOSMA

BOSMA G1 Pro

# DC0201



## User' s Instruction Manual

Please read this instruction carefully before using.

Please keep this instruction safe for future reference.

Please ensure to understand the content of this manual in order to properly use this device.

For complete instructions, please refer the advanced user' s guide.

This guide is available on PC and on smartphones.

# Introduction

## Before use:

Thank you for purchasing Bosma G1 Camera.

To ensure proper use of the Bosma G1 Camera, please refer to this manual.

Please follow “safety guide” on page 3 and “Important Operating Items” on page 6 in order to prevent malfunctions and damages of the device.

## Disclaimer before use and testing:

Bosma can not be responsible for lost data and is not able to recover it due to the malfunction of the camera or memory cards.

## Copyright disclaimer:

Laws and regulations on might apply on recording, transmitting and producing any video/audio footages, please refer to them before using. Video recording might be prohibited in some events and locations, please use accordingly.

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# Safety Precautions (Please Follow)

Please read the following to ensure a safe use experience of this device. Please follow these precautions to prevent any damages to users, others and the device itself.

 **WARNING:** Indicates a hazard of serious injury or death.

- Please only use the power supply specified in this manual with the device.
- Please do not disassemble or modify the device.
- Please do not expose the device to shocks and vibrations.
- Please do not touch any exposed internal parts. Please immediately stop using the device if any abnormality is detected (such as smoke or odor).
- Please do not use organic solvents such as gasoline or paint thinner to clean the device.
- Please do not expose the product to humidity. Please Do not insert foreign objects or pour liquids into the device.
- Please do not use the device in flammable environments where gas may exist. Failure to do so may result in electric shock, explosion or fire.
- Please do not place a lens or a camera with a lens attached without the lens cap attached. Lenses may gather light and cause a fire., please do not touch the product connected to power outlet during thunderstorms, to prevent any potential electric shock.

Please follow the precautions below when using batteries

- Please only use the batteries compatible with this device.
- Please do not expose batteries to fire or high heat.
- Please only charge the batteries with compatible chargers.
- Do not expose the connectors to dust or allow them to come into contact with metal objects.
- Do not use leaking batteries.
- Please isolate the terminals with tape or other materials when disposing batteries. Failure to do so may.
- Result in electric shock, explosion or fire.
- If the battery leaks and the leaked material comes into contact with skin or clothing, please rinse immediately and thoroughly with running water.
- In case of contact with eyes, please rinse thoroughly with clean running water and seek medical attention immediately.

**Please follow the precautions below when using the power adaptor**

- Use a dry cloth to regularly clean up any dust accumulated on the power plug and socket.
- Do not plug or unplug the power plug with wet hands.
- Do not use the product when the power plug is not fully inserted into the power outlet.
- Do not expose the power plug and terminals to dust or other metal objects.
- Do not touch the battery charger or power adapter connected to the power outlet during thunderstorms.
- Do not place heavy objects on the power cord. Do not damage, break or modify the power cord.
- Do not use a cloth or other material while the product is in use or just after use and still warm.
- Material to wrap the product.
- Do not unplug the power plug by pulling the power cord.
- Do not connect the product to the power supply for an extended period of time.
- Do not charge the battery at temperatures outside the range of 5-40°C. Failure to do so may result in electric shock, explosion or fire.
- Do not let the product touch the same spot on the skin for an extended period of time. It can cause low temperature contact burns with symptoms including skin redness and blistering. Even if the product does not feel hot.
- When using the product in high temperature environments and for those with circulation problems or less sensitive skin, using a tripod or similar device is recommended.
- In places where the use of the device is prohibited, please follow the signs to close the product. Device may malfunction due to the influence of electromagnetic waves and accidents may occur.



Attention: Please read below to prevent personal injuries or property damages

- Do not place the device in a high or low temperature environment. The temperature of the product may become high or low, which may cause burns or injury when touched.
- Do not shake the device violently or subject it to strong impact.
- Do not squeeze the lens hard or collide it with objects. Failure to do so may result in injury or product damage.
- Please mount the product on a stable tripod.
- Do not move the product after mounting it on a tripod. Failure to do so may cause injury or may result in an accident.
- Do not touch any parts inside the device.
- If abnormal reaction or inflammation of the skin is detected during or after using the device, please stop using it and immediately seek for medical attention.
- Please mount the product on suitable and fixed device. Placed unstably may cause injury or may result in an accident.

# Operating Items

## Camera maintenance

### Please handle with care

- This camera is not waterproof and cannot be used underwater. To keep the camera as dust and drip-proof as possible, keep the terminal cover, battery compartment cover, memory card slot cover and all other covers closed.
- In order to prevent sand, dust, dirt or water accidentally enter into the camera. Please do not expose the device to these elements. This device has dust and drip-proof design, but it cannot completely prevent dirt, dust, water or salt from entering.
- If water falls on the camera, please wipe it off with a clean dry cloth. If dirt, dust or salt falls on the camcorder, please wipe off with a clean and well-wrung damp cloth.
- Using the camera in dusty or dirty locations may cause damage to the camcorder.
- It is recommended to clean the camera after using it. Leaving dirt, dust, water, or salt on the camera may cause device failure.
- If the camera accidentally falls into water or is concerned that moisture (water), dirt, dust, or salt may have entered the camera, please immediately contact your nearest after-sales service center.
- Do not place the camera near objects with strong magnetic fields, such as magnets or motors. Please avoid using the camera near objects with radio waves or place the camera close to these objects, such as large antennas. Strong magnetic field may cause camera to malfunction or to corrupt recorded data.
- Do not place the camera in a place where the temperature is too high, such as in a car in direct sunlight. High temperature may cause camera to malfunction.
- There are precise electronic circuits in the camera. Do not disassemble the camera.
- Use only commercially available special lens cleaning tools to blow dust off the lens or other parts with an air blower.
- Do not use cleaners containing organic solvents to clean the body and lens.
- Do not touch the electrical contacts of the camera with your fingers. so as not to corrode the contacts. Corroded contacts can cause camera to malfunction.

- If the camera suddenly enters a warm room from a low temperature, it may cause condensation on the surface of the camera and its internal parts. To prevent condensation, put the camera in a sealed plastic bag first, and then wait for its temperature to gradually increase before removing it from the bag.
- If condensation occurs on the camera, do not use the camera to prevent any damage. Please remove the lens, or remove the memory card or battery. Please turn off the camera and wait for all the moisture to evaporate before continuing to use it. After the camera is completely dry, the internals may remain cold. Do not remove the lens or remove the memory card or battery during this time.
- Do not use the camera to the sun directly, or it may result in image sensor damage.
- Do not let a high-energy light source such as laser into camera, or it may result in image sensor damage.
- When removing the lens, please install the mount cover in time to avoid contamination of dust or sand.
- If the camera will not be used for a long time, please remove the battery and place the camera in a dry and cool place with good ventilation. During playback, please press several times to shoot or record to confirm whether the camera works normally.
- Avoid storing the camera in places with chemicals that cause rust and corrosion, such as chemical laboratories.
- If the camera has not been used for a long time, please test all functions before using again.
- The camera may become hot after repeated continuous shooting or still image/movie shooting for a long time. This is not a malfunction.
- If there is a bright light source inside or outside the image area, ghosting may occur.



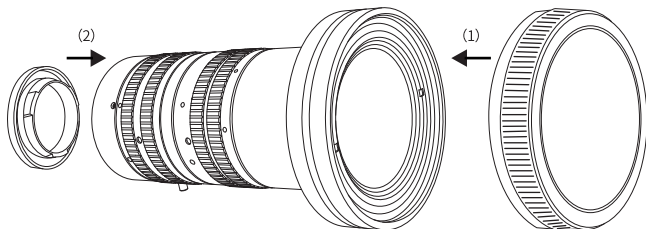
## Storage Device

To protect the memory card and recorded data from damage, please note the following:

- Do not drop, bend or get the memory card. Do not apply excessive force, or subject it to physical shock or vibration when handling memory cards.
- Do not touch the electrical contacts of the memory card with your fingers or any metal objects.
- Do not stick any stickers etc. on the memory card.
- Do not store or use memory cards near any objects with strong magnetic fields (such as TVs, speakers or magnets). Please avoid places that are prone to static electricity.
- Do not expose the memory card to sunlight or near heat sources.
- Please store the memory card in the case if possible.
- Do not store memory cards in high heat, dusty or humid environments.

## Mounting/Unmounting the lens

- After unmounting the lens, place the back of the lens facing upwards and install the protective lens cap immediately.



\* Lens sold separately.

## Smudge on the image sensor

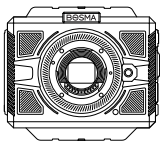
- If you found dust entering the camera from the outside or smudges appear on the image, please contact the after-sales service of the product for the image sensor cleaning.

# What's in the box

## Contents In The Package

Please contact your local post-sale service if any items below are missing from the box.

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● camera body



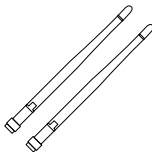
● sensor cap



● dry cloth



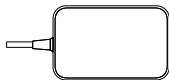
● power adaptor cable



● 3D cable



● power supply cable



● power adaptor



● instruction manual

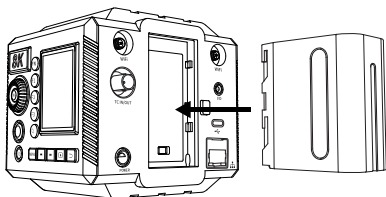
- This product does not include any accessories, except CF Express 2.0 memory card and power adaptor.
- Camera lens is sold separately.
- Battery is sold separately.
- Please store all items in a safe location.
- This device does not come with CD-ROM.

# Before Shooting (battery and storage device)

## Power Supply

### Install The Battery

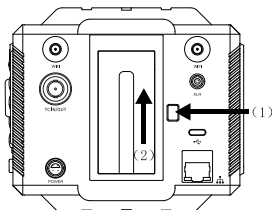
- Please prepare NP-F 970 battery (sold separately). Please check the battery level before installing the battery. If the battery level is low, please charge or replace before using.
- As shown in the picture below, align the battery contacts to insert the battery and push it down, as indicated by the arrow, you will hear a clicking sound when the battery is locked in successfully.



**!** This device is only compatible with NP-F970 batteries. Please refer to the instructions of the battery manufacturer.

### Removing The Battery

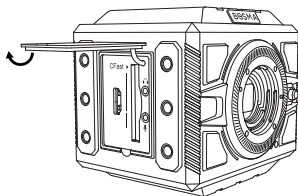
- Turn off the power switch.
- Press the button indicated by the arrow (1), then push the battery up as indicated by the arrow (2) to remove the battery.



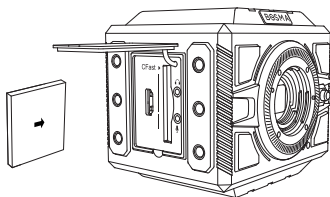
## Data Storage

### Inserting the memory card

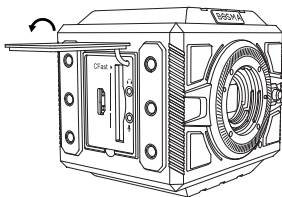
- Open the cover as shown below.



- Insert the memory card as indicated by the arrow and check the markings on the memory card are in the same direction as the terminals. Insert the memory card after confirming. If you have any trouble inserting, please recheck the memory card is oriented correct and try again.



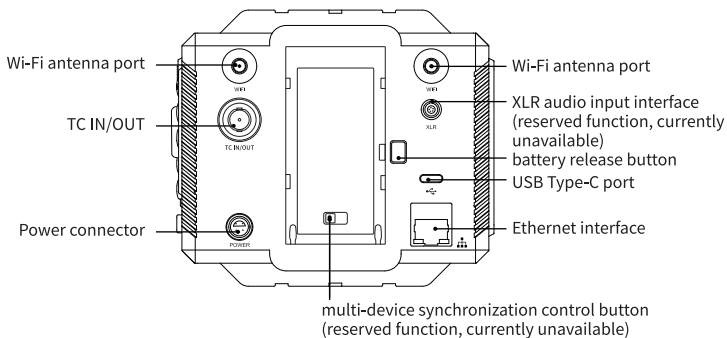
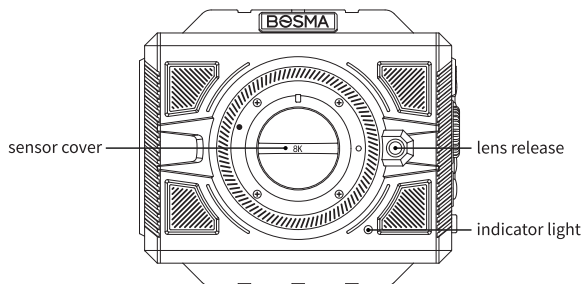
- Close the cover as shown.

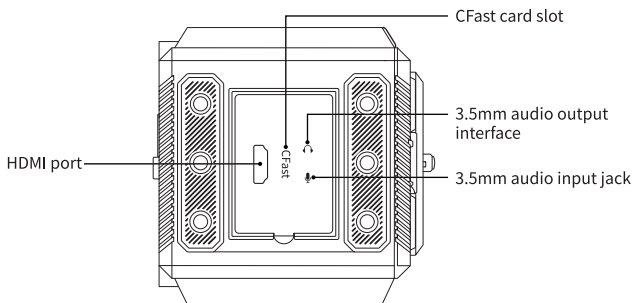
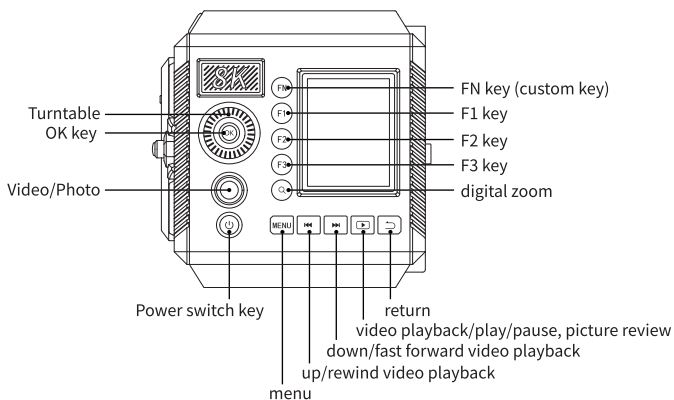


## introductions

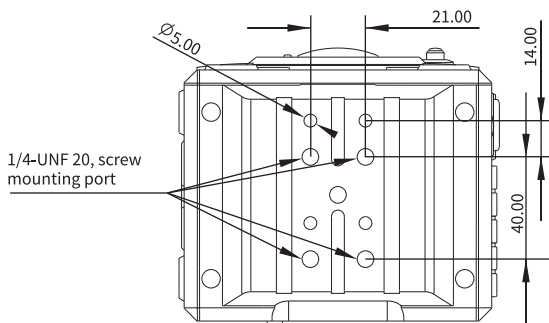
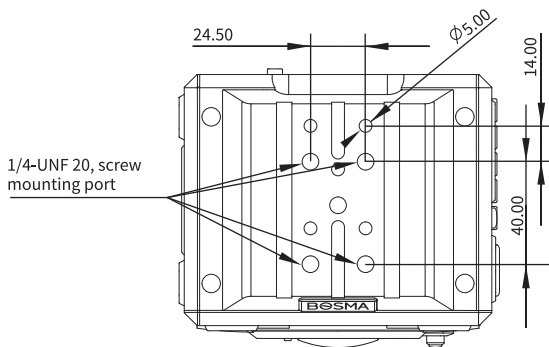
- Please turn on the power switch before operating according to this instruction manual.
- All menu settings and custom functions are default.
- In the photo examples in this instruction manual, a device equipped with a BOSMA lens is shown as a display example.
- The sample photos used in this owner's manual are for illustration purposes only.
- It is assumed that the user has prepared a lens adapter when using other lens.

# List Of Items





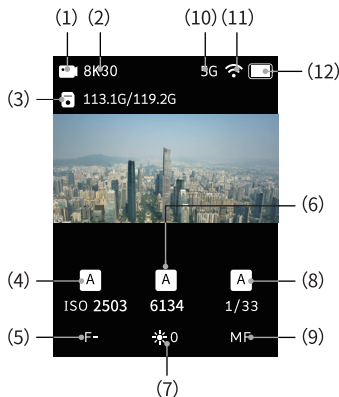




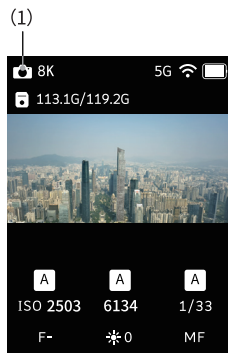
Unit:mm

# Internal Display Items

## Video Mode



## Photo Mode



(1) Video/Photo mode

(2) Video resolution frame rate/photography resolution

(3) Storage capacity

(4) ISO mode and ISO value

(5) Aperture value

(6) White balance mode and color temperature value

(7) Exposure value

(8) Shutter mode and shutter value

(9) Focus mode

(10) 5G signal (external 5G transceiver signal, no 5G module inside the camera)

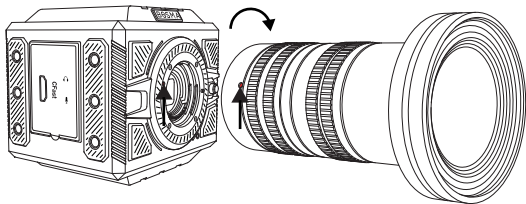
(11) Wi-Fi signal

(12) Battery level

# Mounting/Unmounting Lens

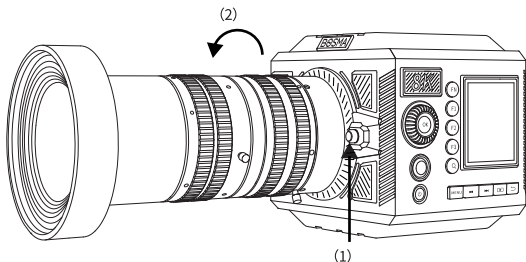
## Mounting the lens


- Remove the body cover first.
- Align the red dot on the lens with the red dot on the camera, then turn the lens in the direction shown by the arrow until it stops, this means the lens has been installed properly.



## Removing the lens

- While pressing the lens release button shown in figure (1), turn the lens in the direction shown in figure (2).
- Turn the lens until it stops to remove the lens.
- Attach the lens cap to the removed lens.
- Attach the body cap to the camera body.



 \* When a heavy lens is mounted, please use an additional support system to avoid damage to lens mount.

## Compatible Storage Devices

The following memory cards can be used with the device (no capacity limitation). Please format the card using this device before using.

- CFast 2.0 memory card

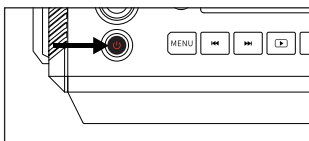


\* CFast 2.0 memory cards in this manual will be referred as “memory card” for short.

# Control instruction

## Turn on the power

- As shown by the arrow in the figure, press and hold the power button for 3 seconds to power on the camera. To the operation menu, you can use the keys or dial to operate the menu.



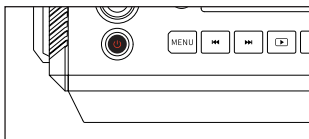
You can use the AC adapter (supplied) or batteries (sold separately) to power the camcorder.

Example: Using the power adapter to supply power.

- ❗ Do not use any other power adapter, use only the power adapter. Otherwise, it may lead to cause failure.
- ❗ Do not use any other power cord, only use the supplied power cord. Failure to do so may cause malfunction.

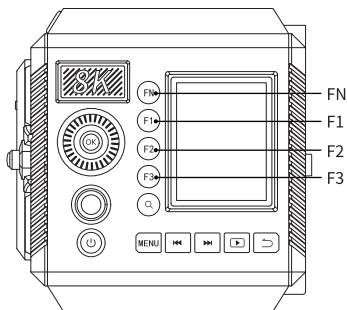
## Power Off the Power

- When the camera is on, as shown by the arrow in the figure, press and hold the power button for three seconds to turn off the camera.



- ❗ It is recommended to remove the battery and unplug the power supply after powering off.

## Quick Settings:



### Shooting/recording mode settings

- Choose photo or record mode.  
After pressing the [FN] key, select the photo or record mode.

### ISO settings

- After pressing the [F1] key, quickly set the ISO value.

### Shutter setting

- After pressing the [F2] key, quickly set the shutter parameters.

### Exposure value setting

- After pressing the [F3] key, set the exposure parameters quickly.

## Menu instruction

With this device, you can set various functions from the menu.

- Press [MENU] to display the main menu/return to the main menu.
- Use the dial to select menu options.
- Press [OK] to confirm that the setting is valid.
- Press [↶] to return to the previous menu.

## Supported protocol and operational status

Protocol		RTSP	RTMP	RTP	
Video	H.264	Setting	○	○	○
		8K Output	○	○	○
	H.265	Setting	○	○	○
		8K Output	○	○	○
Audio	AAC		○	○	○
	PCM (16bit/44.1KHz)		○	○	○
	PCM (16bit/48KHz)		○	×	○
	PCM (24bit/44.1KHz)		×	×	×
	PCM (24bit/48KHz)		×	×	×

○:OK , ×:NG

## Operational Status

Protocol		HLS	DASH	SRT	NDI*
Video	H.264	Setting	○	○	○
		8K Output	○	○	○
	H.265	Setting	○	×	○
		8K Output	○	×	○
Audio	AAC		○	○	○
	PCM (16bit/44.1KHz)		×	×	×
	PCM (16bit/48KHz)		×	×	×
	PCM (24bit/44.1KHz)		×	×	×
	PCM (24bit/48KHz)		×	×	×

○:OK , ×:NG



# Push Streaming Settings

## Configurations

### Web Settings:

- Login to Web Control, locate connect (1)>> Push Streaming (2)>>Switch, please switch it on as shown (3).
- In the address box (4), please input the local streaming server address.
- Click on Save (5) and complete the configuration.

The screenshot displays the 'Web Settings' interface for 'Push Streaming'. The left sidebar contains a menu with 'Connect' highlighted. The main area shows the 'Push Streaming' configuration page. At the top, there are tabs for 'Network', 'WIFI', 'HDMI', '5G', 'Push Streaming', 'Pull Streaming', and 'NDI'. Below the tabs, there is a 'Switch' toggle set to 'On', with an arrow (3) pointing to it. An arrow (2) points to the 'Push Streaming' tab. The configuration is split into 'Main Stream' and 'Sub Stream' sections. The 'Main Stream' section has a 'Status' dropdown set to 'Success', a 'Rate' input field with '0.20M/S', and an 'Address' input field containing 'rtmp://192.168.1.66:1935/dash/hello', with an arrow (4) pointing to it. The 'Sub Stream' section has a 'Status' dropdown set to 'Failed', a 'Rate' input field with '0.00KB/S', and an empty 'Address' input field. At the bottom left of the configuration area, there is a 'Save' button with an arrow (5) pointing to it. An arrow (1) points to the 'Connect' option in the sidebar menu.

### Memory Card Configuration Steps

- Create RtmpUrl.ini file in the root directory of the memory card.
- Open the RtmpUrl.ini file, write the file according to the actual application environment in the following text format, and fill in the push stream server address. The underlined black field is the push stream address.

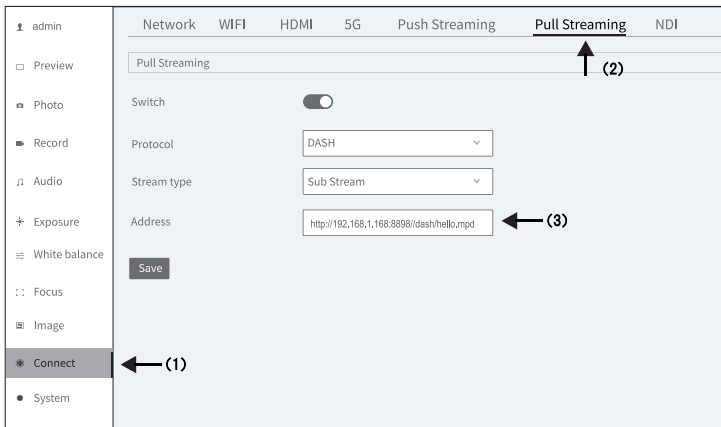
```
[RTMP_SERVER]
URL=rtmp://192.168.1.30:1935/hls/hello ←
[RTMP_SERVER]
2kURL=rtmp://192.168.1.30:1935/hls/hello ←
```

- The URL= field is followed by the 8K/4K streaming address, which is empty when no configuration is required.
- The 2kURL= field is followed by the 2K streaming URL, and it is empty when no configuration is required.
- Save the file, insert the memory card into the camera, and the camera will automatically configure the streaming address when it recognizes the memory card.
- Enter the URL option of the camera streaming web page to view the configured streaming address.

## Pull Streaming Settings

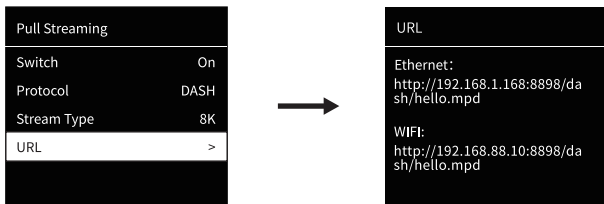
### Obtain address from Web

- Login to Web Control, locate connect (1) >> Pull Streaming (2) >> Address (3).



### Obtain address from the camera

- Connect >> Pull Streaming >> URL  
This will display the address detail.



# Specifications:

Model	G1 Pro
Camera	
Sensor	4/3 Inch CMOS
Effective Megapixels	33 megapixels
Sensor Size	18.84mmx10.60mm
Lens Mount	MFT Mount (Supports EF & PL lens via lens adaptos)
Dynamic Range	11 Stops
Microphone	Internal Stereo Microphone
Recording	
Record Resolution	7680 x 4320 (8K UHD)
	3840 x 2160 (4K UHD)
	1920 x 1080 (2K FHD)
Frame Rate	60 / 50 / 30 / 25 / 24 fps
Maximum Recording Frame Rate	3840x2160@60fps (H.265/H.264)
	7680x4320@30fps (H.265/H.264)
Maximum Recording Bitrates	3840x2160@200M (H.265/H.264)
	7680x4320@600M (H.265/H.264)
Color Depth	12Bit
Video Recording Format	H.264, 8-bit 4:2:0
	H.265, 10-bit 4:2:0
Video Encoding Format	MOV/MP4
Recording Mode	Regular/Timelapse
Bitrate Control	VBR
	CBR

Encoding Level	H.264 high profile
	H.265 main 10 profile
Audio Sampling Rate	48KHz/24bit (Max)
Audio Format	AAC (48KHz/16bit)
	PCM (48KHz/24bit)
<b>Settings</b>	
ISO	Auto, Manual (250-25600)
Shutter	Shutter Speed: auto, manual (1/30 - 1/156250秒)
	Shutter Angle: auto ,manual (1°-360°)
White Balance	Auto, Pre-set, manual (2,500K-10,000K)
Focus Mode	Manual Focus/Auto Focus/Continuous Auto Focus
Image	Brightness/Contrast/Saturation/Sharpness
HDR	SDR10/SDR8/HDR10
Color gamut	BT.709/BT.2020
<b>Connectivity</b>	
HDMI	HDMI 2.1 Type A x 1 (Max 8K@30fps,10-bit 4:2:2)
USB	USB 3.0 Type C x 1
Audio in	3.5mm stereo in / 5-pin LEMO
Audio out	3.5mm stereo out
Ethernet	RJ45 x 1
WIFI	2.4GHz:802.11 b/g/n
	5GHz: 802.11a/n/ac
<b>Power</b>	
Battery	Sony NP-F (sold separately)
Power-in	DC 12V, LEMO interface

Storage	
Memory card	CFast 2.0 and External SSD via USB C
File Format	exFAT
Body	
Material	Metal alloy
Dimension	126.2x108x108.7mm
Weight	1250g
Environment	
Storage environment	-20 °C ~ 60 °C
Operating temperature	0 °C ~ 40 °C

# FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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 is encouraged to try to correct the interference by one or more of the following measures:

• orient 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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

## RF Exposure Information

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.