Zenty | Professional A/V Solution Provider

User Manual [V1.0]



4K e-PTZ Camera w/ 5x Zoom & Speaker

ZT-330 | ZT-CA50

ZENTY ®
9807 EMILY LANE
STAFFORD, TX 77477
(844) 200-1945
SUPPORT@ZENTY.COM

Safety Precautions:

- During the installation and operation, all electrical safety regulations of the country and region of use must be strictly observed.
- Please use the power adapter that comes standard with this product.
- Do not connect multiple devices to the same power adapter (exceeding capacity of the adapter may generate excessive heat or cause fire).
- Do not rotate the camera by hand, otherwise it may cause mechanical failure.
- When installing this product on a wall or ceiling, make sure the device securely and there are no obstacles within the rotation range; Do not power on until all installations are completed.
- To avoid heat build-up, please keep smooth ventilation around the device.
- If the device smokes, smells, or makes noises, please turn off the power and unplug the power cord immediately, then contact the dealer in time.
- This device is not waterproof, please keep the device dry.
- This product has no user serviceable parts, damage caused by disassembly by the user is not covered by the warranty.



Operating this equipment in a residential environment may cause radio interference.

 Copyright © Zenty AV

Table of Contents

1. Introduction 4
2. Packing List 4
3. Appearance and Interface 4
4. Product Features 5
5. Product Specifications 7
6. Product Dimensions 8
7. Installation and Connection 9
    7.1 Installation 9
    7.2 Connection 9
8. Remote Control 10
9. Pairing 11
10. GUI Settings 12
    10.1 Menu 12
    10.2 Setting 12
11. Maintenance & Troubleshooting 13
12. FCC & IC Statement 14

 Copyright © Zenty AV

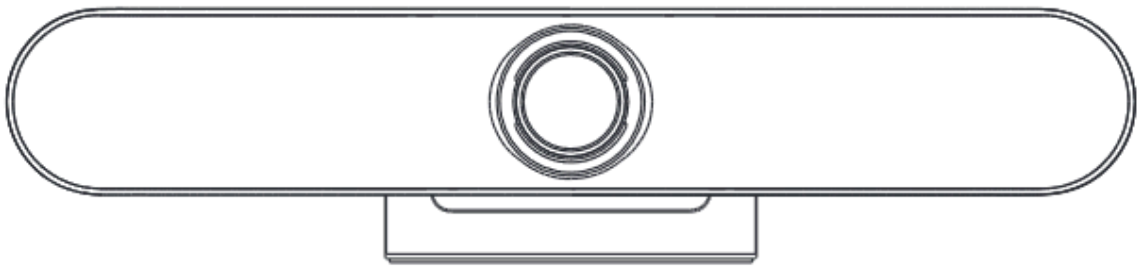
1. Introduction

The ZT-CA50 provides an all-in-one design seamlessly integrates a 4K UHD camera, beam forming microphone, and full-frequency loudspeaker, streamlining wiring and simplifying video communication. With a 4K UHD CMOS sensor, a wide 121° field of view, and a microphone with a 6-meter pickup range, the product guarantees clear, real, and accurate communication experiences. Its intelligent analysis capabilities automatically frame participants, track speakers, and switch screens, ensuring a consistently clear visual representation. The product's multiple interfaces, including HDMI and USB 3.0 audio video outputs, facilitate versatile connectivity. With easy plug-and-play installation options such as desktop, wall, and TV/display screen, this solution offers a hassle-free experience in crowded meeting rooms, marking a significant leap forward in modern video conferencing technology.

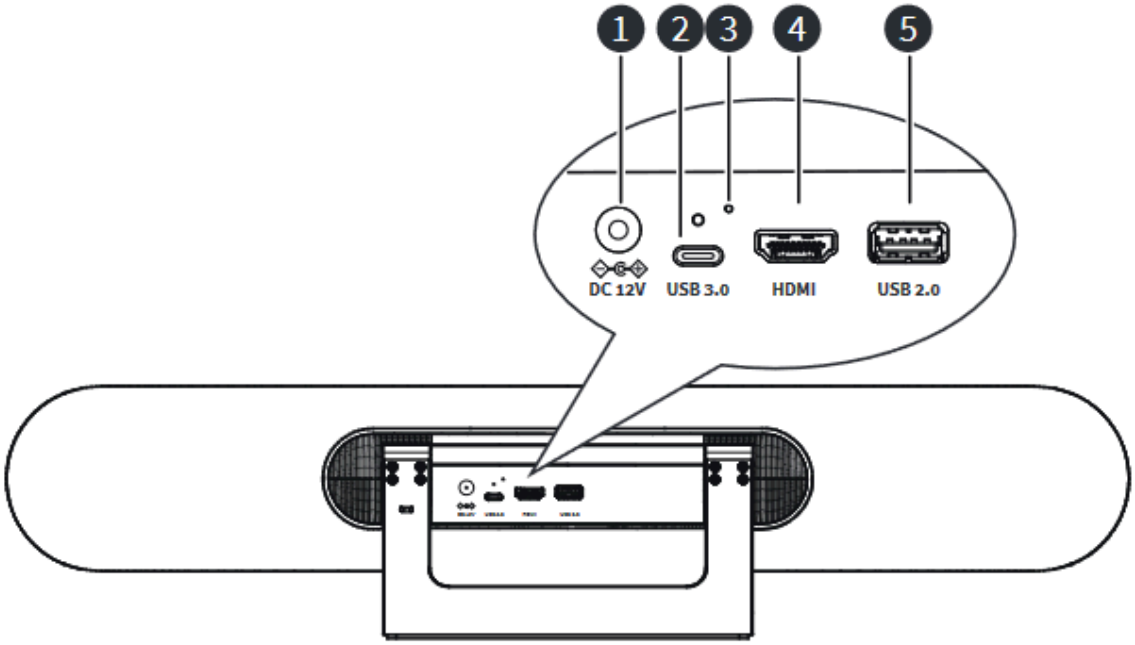
2. Packing List

- (1) x Camera
- (1) x Power Adapter
- (1) x Power Cable
- (1) x Remote Control
- (1) x USB Cable
- (1) x Wall Bracket (with screw)
- (1) x User Manual

3. Appearance and Interface



 Copyright © Zenty AV



No.	Name	No.	Name
1	DC 12V Interface	4	HDMI Interface
2	USB 3.0 Interface	5	USB 2.0 Interface
3	Reset Button	-	-

4. Product Features

- **Applicable Scene:** It is specifically crafted for small and medium-sized meeting rooms, particularly designed for Huddle Rooms accommodating 4 to 6 people. Its purpose is to assist enterprises in maximizing the utilization of smaller meeting spaces. Not only does it enhance the efficiency of meetings, but it also contributes to cost savings on rentals.

- **Product Value :** Small and medium-sized enterprises find it convenient to engage in daily business negotiations and team collaborations flexibly across various locations. This approach aims to establish a relaxed, unrestrictive, and seamless conversational environment, facilitating quick decision-making and enhancing overall efficiency.

 Copyright © Zenty AV

- **All-in-One Design :** The integrated design of a 4K ultra HD camera, beamforming microphone, and full-frequency loudspeaker minimizes wiring requirements and simplifies video communication.
- **Bluetooth 5.0:** Utilizing Bluetooth 5.0 technology offers notable improvements. In comparison to the previous generation, it boasts a doubled transmission rate and a quadrupled transmission distance. This enhancement enables more efficient transmission of high-quality audio between mobile phones and tablet devices, facilitating seamless wireless Bluetooth streaming.
- **4K 30Hz UHD:** Utilizing a high-quality UHD CMOS sensor with a resolution of 8.51 million pixels and a 1/2.5-inch size, the camera produces a clear, ultra-high-resolution 4K image (3840x2160). Additionally, it is backward compatible with 1080P, 720P, and other resolutions, catering to users' diverse video experience requirements. This capability ensures communication that is clearer, more genuine, smoother, and more accurate.
- **Wide Field View:** The camera features a wide field of view at 121° (with a 110° horizontal field of view), a 5x zoom capability, and an optical lens specifically tailored for conference settings. With a built-in electric head offering a motion range of ±15° horizontally and in pitch, users need not concern themselves with camera positioning. This ensures participants can effortlessly and clearly enter the scene.
- **Beam forming Microphone:** The device is equipped with a built-in Beam Forming (BF) microphone that boasts a pickup range of 6 meters. Utilizing a low-distortion transverse beamforming algorithm, the microphone precisely directs towards the speaker, resulting in improved sound quality, clearer communication, and a richer, more authentic audio experience.
- **Audio 3A Algorithm:** The built-in audio 3A algorithm (AEC/AGC/ANS) ensures full-duplex dialogue, catering to the communication requirements of various room structures. Whether participants are seated at a conference table, against a wall, or standing, a comfortable calling experience is guaranteed.
- **Full Frequency Speaker:** The full-frequency Hi-Fi loudspeaker, designed with professional acoustics, minimizes noise interference and delivers an exceptional sound effect.
- **Plug and Play Type:** Easily connect to a computer or business display screen through the plug-and-play USB interface, making it very user-friendly. With minimal wiring, this facilitates convenient video communication and reduces the learning cost for users.
- **Speaker Phone:** It can function as both a Bluetooth microphone and speaker when connected to a mobile phone or other devices via Bluetooth. Moreover, calls can seamlessly integrate into audio and video conferences.

 Copyright © Zenty AV

- **Intelligent Analysis:** Incorporated with an intelligent analysis algorithm, the system identifies the speaker's position, automatically frames participants, tracks speakers, and switches the speaker screen. This ensures that the speaker is consistently clear in the picture.
- **Multiple Interfaces:** Capable of simultaneously supporting HDMI and USB 3.0 audio-video output.
- **Easy Installation:** Various flexible installation options, including desktop, wall, and TV/display screen, are available for quick and easy deployment in a crowded meeting room.

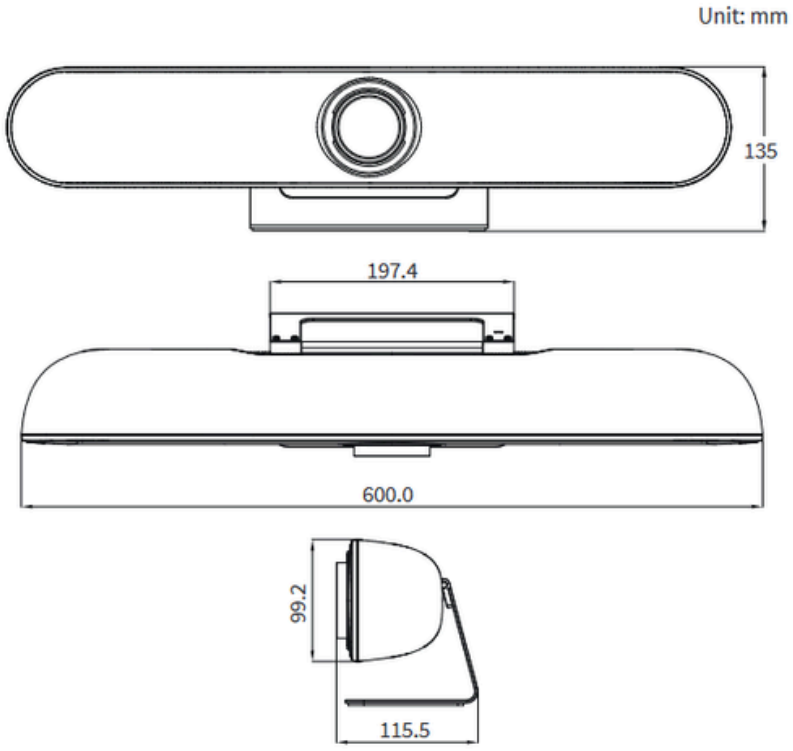
5. Product Specifications

Camera	
Video System	4K30, 1080P30, 720P30, etc
Sensor	1/2.5-inch, CMOS, 8.51M pixel
Lens	121° (DFOV), 110° (HFOV), 5x Digital Zoom, Pan/Tilt ± 15°
PTZ	MPT+EPTZ
Digital Noise Reduction	2D&3D Digital Noise Reduction
Video S/N	≥ 55dB
Backlight Compensation	Support
Audio	
Full Frequency Speaker	96dB SPL in the case of 0.5 meter
Microphone Array	Beamforming microphone, pick up distance up to 6m
Extended MIC	Support
USB Features	
Connection Type	USB 3.0, downward compatible with USB 2.0
Video Compression	MJPEG/YUY2
USB Audio	32K sampling rate, support UAC 1.0
USB Protocol	UVC 1.1
UVC PTZ Control	Support

 Copyright © Zenty AV

Interfaces	
Video Interface	1 x HDMI, 1.4b
USB Interface	1 x USB 3.0, Type-C
	1 x USB 2.0, Type-A
Power Interface	DC 12V, 2A (max.)
General Specifications	
Control	2.4G Remote Controller
Installation	Desktop, Wall, TV and others
Operating Temperature	0°C~40°C
Storage Temperature	-40°C~60°C
Dimension	600mm x 115.5mm x 135mm (with bracket)
Net Weight	About 2.5Kg

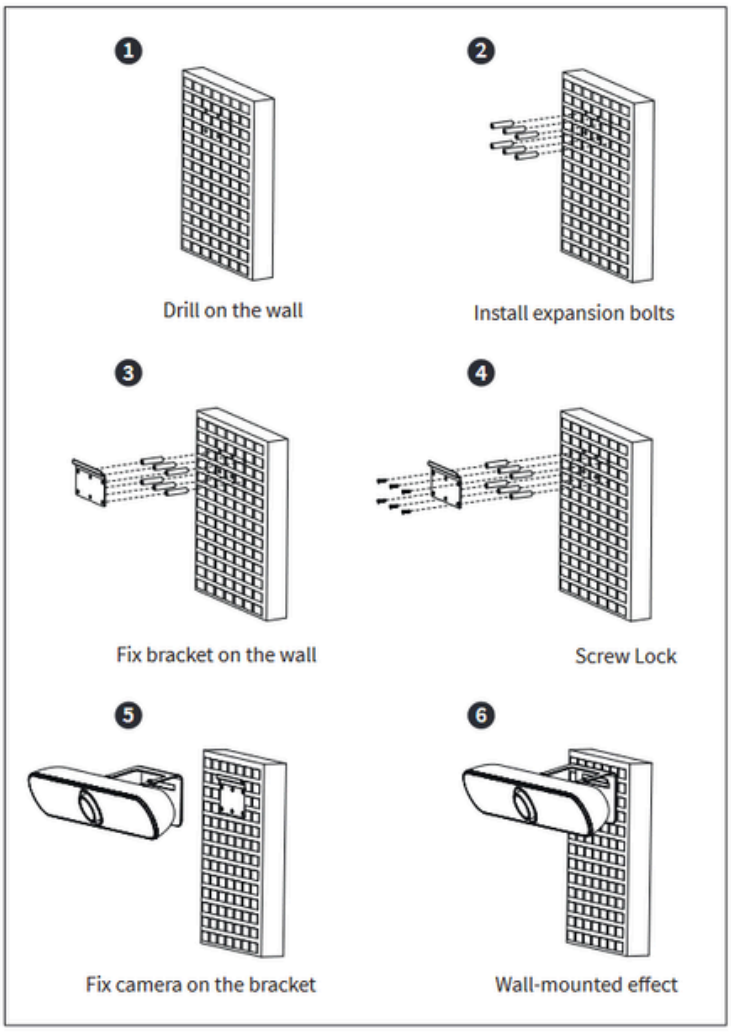
6. Product Dimensions



 Copyright © Zenty AV

7. Installation and Connection

7.1 Installation

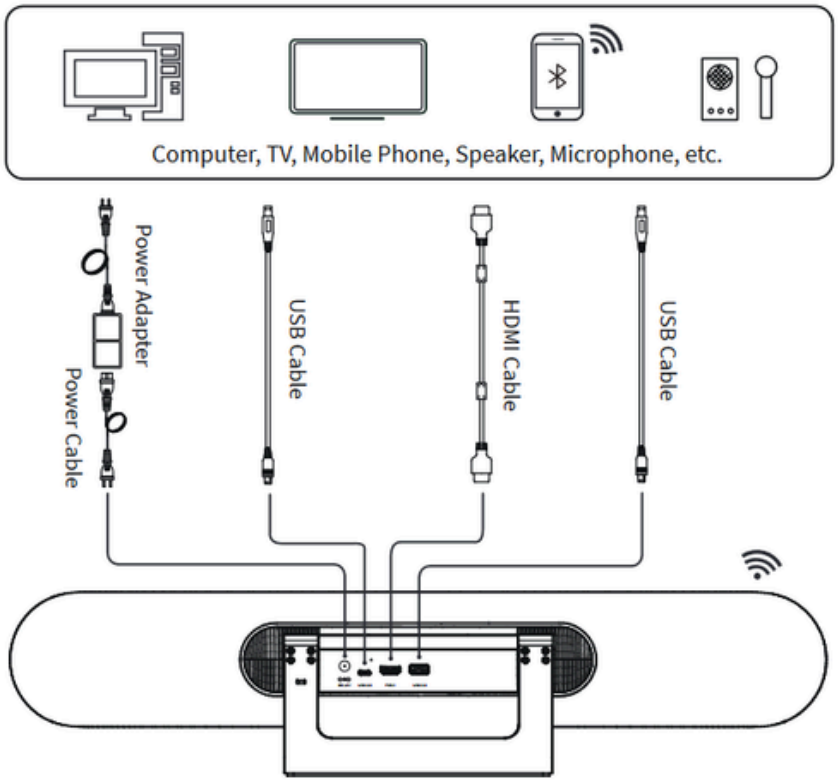


Note: The installation diagram is for reference only, please refer to actual product for the installation accessories.

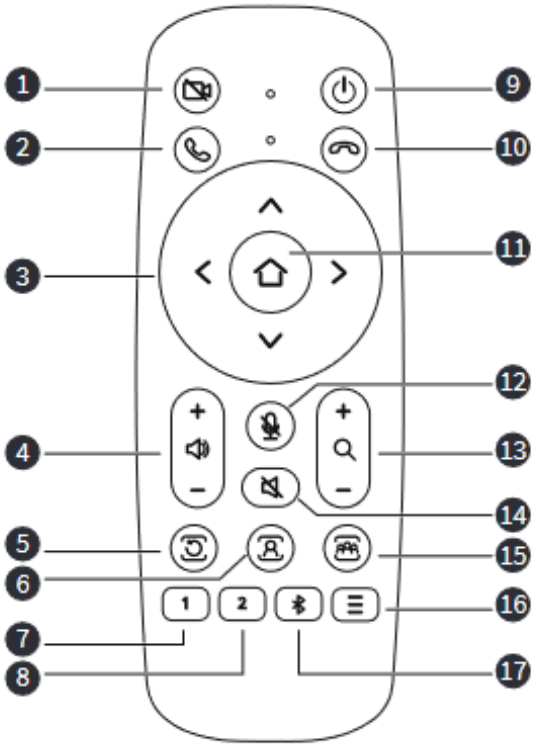
7.2 Connection

The cable connections shown in the following figure contains optional configurations and for reference only. Please connect the cables according to actual needs.

 Copyright © Zenty AV



8. Remote Control



 Copyright © Zenty AV

No.	Name	Function Description
1	Camera Close Key	Press to turn off the camera, press again to resume
2	Call Key	Answer the call
3	Direction Keys	Press to move the camera to up, down, left and right directions; press the [OK] key to turn the camera back to the middle position
4	Volume +/- Keys	Press to increase or decrease the volume
5	Exit Tracking Key	Press to exit the tracking mode
6	Speaker Tracking Key	Press to enable the speaker tracking function
7	Preset 1 Key	Long press to set preset 1; short press to call preset 1
8	Preset 2 Key	Long press to set preset 2; short press to call preset 2
9	Standby Key	Long press camera enter to standby mode; short press to resume
10	Hang Up Key	Hang up the call
11	OK Key	Confirm selection
12	Mute Key	Turn on/off the microphone
13	Zoom Keys	Zoom in [+]; Zoom out [-]
14	Speaker Mute Key	Turn on/off the speaker
15	Participants Tracking Key	Press to enable the participants tracking function
16	Menu Key	Press to enter or exit the OSD menu
17	Bluetooth Key	Enable/Disable the Bluetooth function

9. Pairing

The remote control has been paired before delivery. If you need to pair it again, please refer to the following steps:

Step 1: Connect the camera to the power supply, wait for the initialization to complete, and the camera can output pictures normally.

Step 2: Clear the paired status: Press and hold the [MENU] + [OK] key at the same time until the indicator of remote control lights with steady red.

 Copyright © Zenty AV

Step 3: Enter the pairing mode:

Use a pin to poke the [Reset] button of the camera, the camera's LED light will switch to blue running effect when it enters the pairing mode.

(Note: There are only 15s operation time while entering the pairing mode, after timeout, it will exit the pairing mode automatically, and the LED is not the blue running effect).

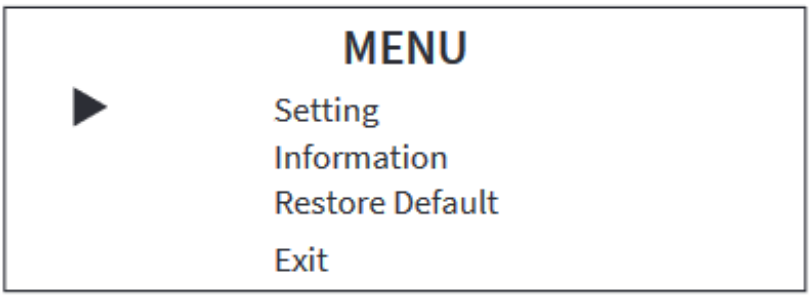
Step 4: Start pairing:

Press and hold the [MENU] key until the indicator of remote control light with steady red. When successful paired, the LED of camera flashes with blue light. If the pairing fails, please repeat steps 2, 3 and 4 to repair.

10. GUI Settings

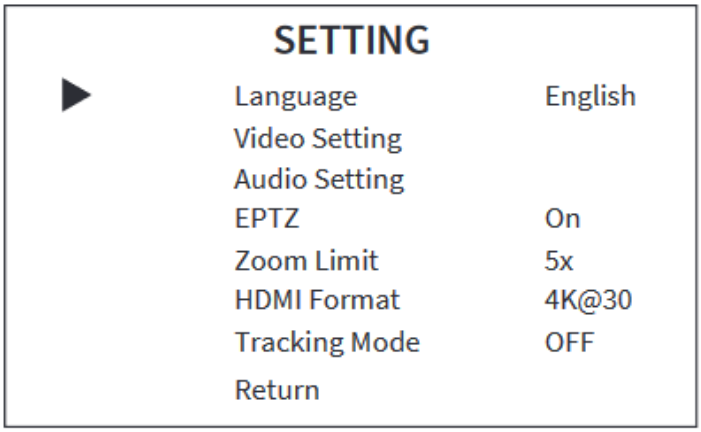
10.1 Menu

Press [MENU] key under normal image, the screen will display as below:



10.2 Setting

Move the cursor to "Setting" in the main menu, and press [OK] to enter the setting page as below:



 Copyright © Zenty AV

Language: English, Chinese, French.

Video Setting: Press [OK] key to confirm enter the Video Setting page to set the 2D NR, 3D NR, WDR Enable, Flip-H, OSD Mirroring.

Audio Setting: Press [OK] key to confirm enter the Audio Setting page to set the 3A Enable, Mic Equalizer.

EPTZ: On, Off.

Zoom Limit: 1.5x, 2x, 3x, 4x, 5x.

HDMI Format: 1080P60, 1080P50, 1080P30, 4K@30.

Tracking Mode: Off, Participants, Speaker, Smart Gallery.

Tracking Effect: Smooth, Instantaneous (effective only in Participants or Speaker of Tracking Mode).

Tracking Speed: Slow, Normal, Fast (effective only in Participants or Speaker of Tracking Mode).

11. Maintenance & Troubleshooting

Camera Maintenance:

- If camera is not use in long-term, please disconnect power switch after use.
- Use soft cloth or cotton paper to remove dust from the camera housing.
- When cleaning the camera lens, please use dry soft cloth to wipe, if dirt is serious, use neutral cleaner gently. Do not use strong or corrosive detergent to avoid lens scratch and affect image effect.

Avoid Using:

- Do not shooting particularly bright objects, such as sunlight, lights, etc.
- Do not work under unstable lighting conditions, otherwise the image will flash.
- Do not use around facilities that can transmit high-power radio waves, such as television station or radio-transmitting station.

Troubleshooting:

- The monitor shows no image

a. Ensure that the camera power supply is properly connected, the voltage is in normal and the power indicator is always on.

b. Ensure that the cable of video platform and TV in correct connection.

 Copyright © Zenty AV

- Image jitters after the camera is properly connected

a. Ensure that the camera installation is in stable position.

b. Check that any vibrating machinery or object near the camera.

- Remote control does not work

a. Check and replace with new batteries.

b. Ensure that the camera working mode is correct.

12. FCC & IC Statement

NOTE: 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:

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s licence-exempt RSS(s). Operation is subject to the following two conditions:

 Copyright © Zenty AV

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

 Copyright © Zenty AV



WWW.ZENTY.COM
9807 EMILY LANE
STAFFORD, TX 77477

(844) 200-1945
SUPPORT@ZENTY.COM
SALES@ZENTY.COM