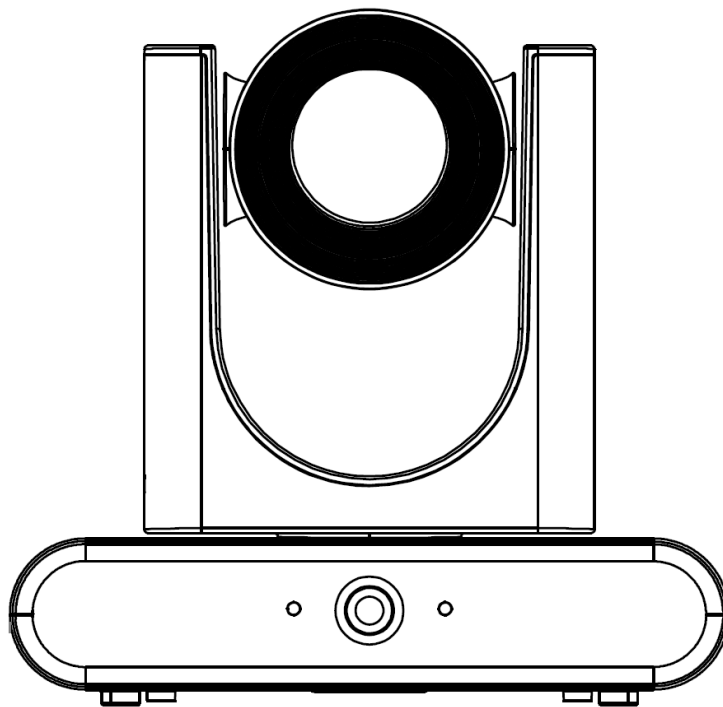


VC-TR41/ VC-TR41N

Auto Tracking Camera

User Manual - English



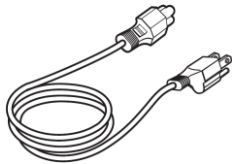
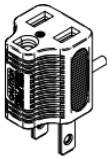
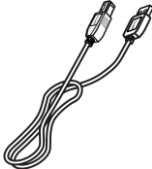
To download the latest version of Quick Start Guide,
multilingual user manual, software, or driver, etc.,
please visit Lumens

<https://www.MyLumens.com/support>

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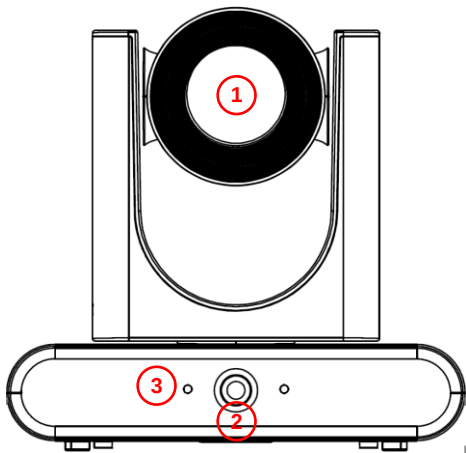
Chapter 1 Packing List

Power Adapter	Power Cord	3PIN-2PIN Connector	USB Cable - 2M (Type B to Type A)	Remote Control
	 Appearance may vary depending on county/ region	 (For Japan only)		

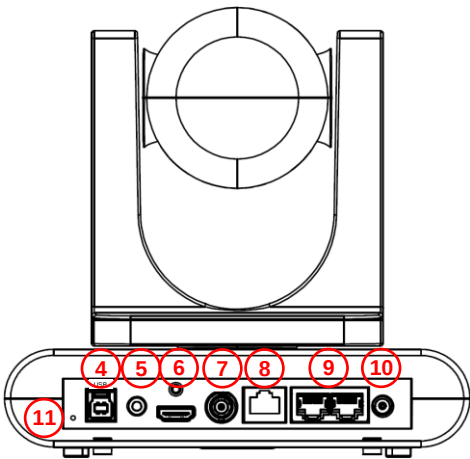
Chapter 2 Product Appearance

2.1 I/O interface

Front



Back



NO.	Item	Description
1.	Main camera lens	PTZ camera lens
2.	Panoramic lens	Panoramic camera lens
3.	Power/ Standby LED indicators	Displaying the camera status, please refer to 2.2 LED Indicator
4.	USB output	Connecting to the USB port of the computer and providing USB signal images
5.	Audio In	3.5mm LINE IN
6.	HDMI OUT	HDMI output
7.	3G-SDI OUT	3G-SDI output (BNC 75Ω · support SMPTE 425M)
8.	Ethernet	Network port, support PoE+ (IEEE802.3af)
9.	RS-232/ RS-422 IN-OUT	RS-232/ RS-422 input-output Pin out please refer to 3.4.3 RS-232/ RS-422Pin Definition
10.	DC IN 12V	DC supply connecting port
11.	Service	Reset the camera to the default

2.2 LED indicator

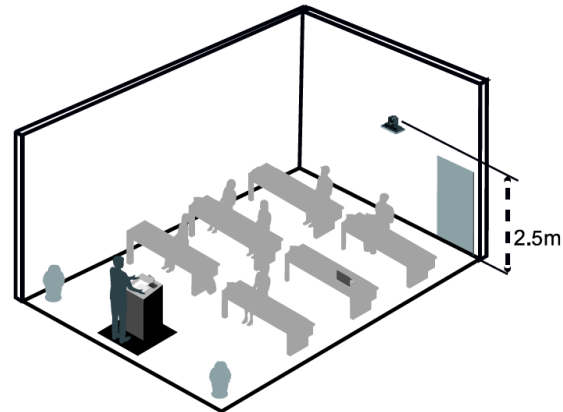
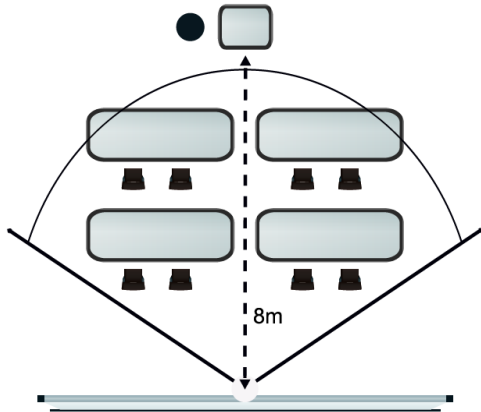
Status	Power	Standby
Power not connected	No light	No light
Startup in progress (initialization)	Green	Orange
Power on (In use)	Green	No light
Standby	No light	Orange
Tracking / Framing mode	Green Flickering	Green Flickering

Chapter 3 Installation Instructions

3.1 Scenario

3.4.1 VC-TR41(N) supported tracking distance: 2-14m

- Recommended tracking distance: 8m



Note To maintain optimal tracking performance, please avoid having posters, screens, monitors, or TVs with human images in the background.

- Mounting height: 2 - 3 m, best height recommended: 2.4 m

3.2 Preparation before installation

Installation and connection of PTZ camera requires special skills. To install by yourself, please follow necessary steps, ensure steady and tight installation of the device, and pay attention to your safety to avoid any accident.

3.2.1 Ensure the safety of the installation environment. Please do not install the device on unstable ceiling or in a place where the device is in danger of falling to avoid any accident.

3.2.2 Please check whether accessories in the box are complete or not. Please contact the supplier for any shortage, and make sure to keep the accessories in the box intact.

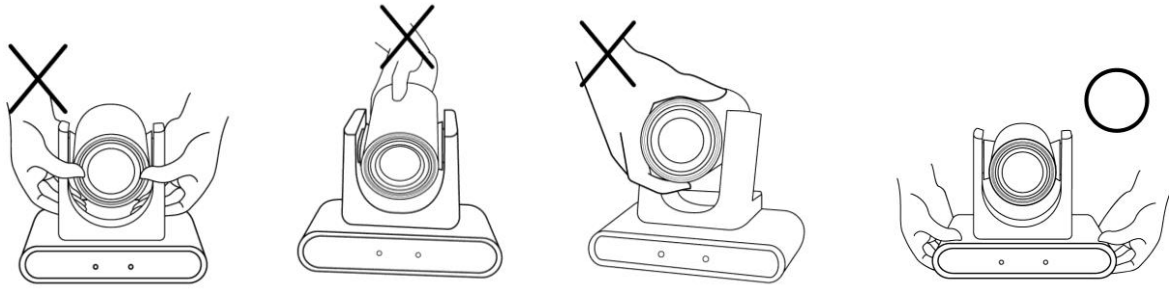
3.2.3 Please choose a proper place for installation of camera in advance. Please determine an installation place according to the following requirements

- Confirm the position for the object to be captured.
- Confirm whether the camera is set at a proper distance from other light sources.

3.3 Instruction for installation

3.3.1 I would like to install camera on the desk

- Please install the machine on a flat desk
- Do not grab the camera head by hand when handling the device
- Do not rotate the camera head by hand. Improper rotation may result in breakdown of the camera



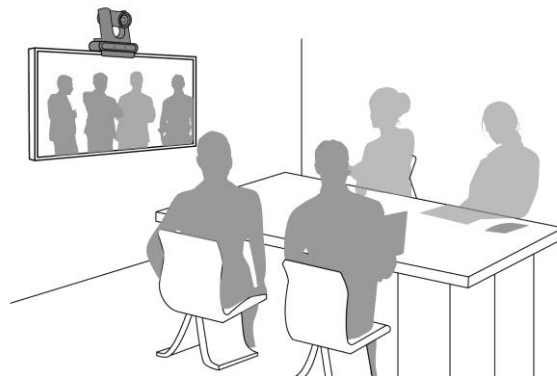
3.3.2 I would like to install the camera on the ceiling/wall/TV stand

Lumens can provide the following optional accessories. Please contact your Lumens distributor if needed for purchase

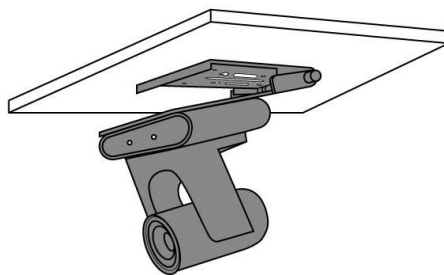
- VC-WM14 3 in 1 Folding Bracket
- VC-WM15 Ceiling Mounted Bracket

For installation of brackets, please download VC-WM14/VC-WM15 Quick Installation Guide from the Lumens website

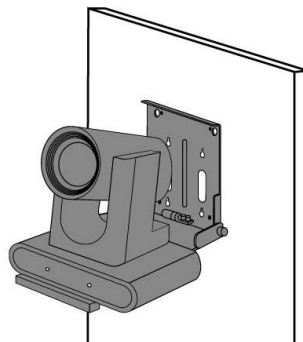
◆ Install on the TV



◆ Install on the ceiling

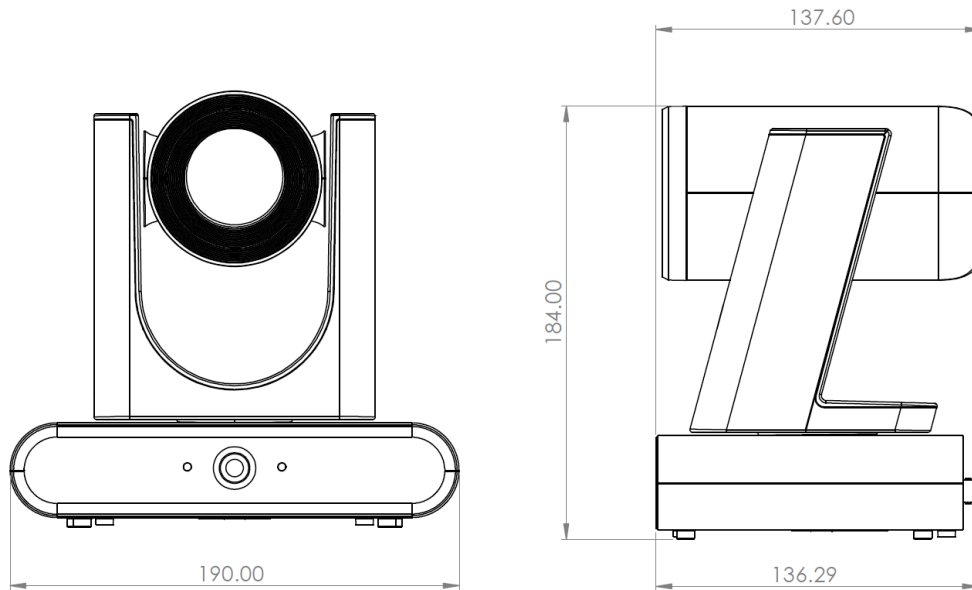


◆ Install on the wall



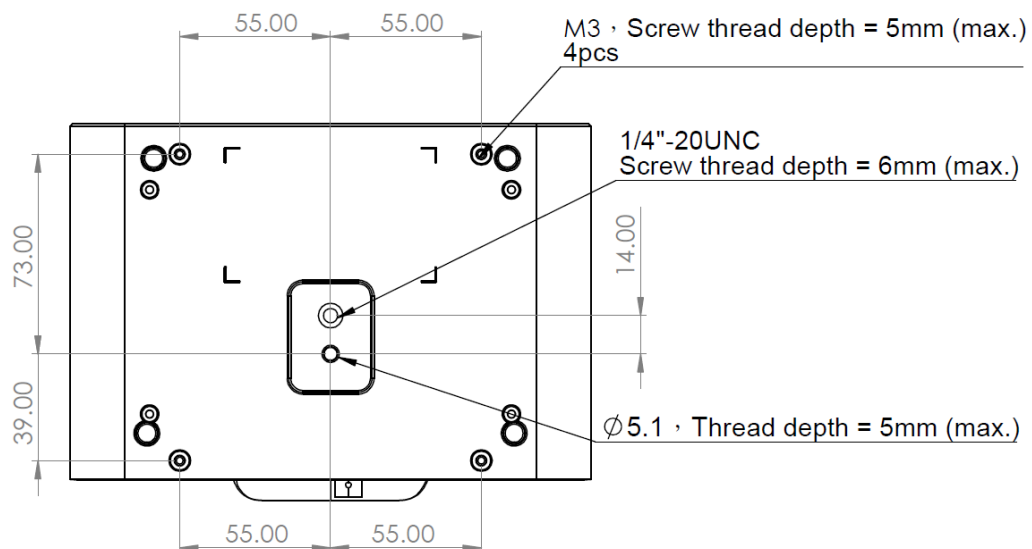
3.3.3 Camera Size

- Length x Width x Height:: 190 x 137.6x 184mm
- Weight: 1.5Kg



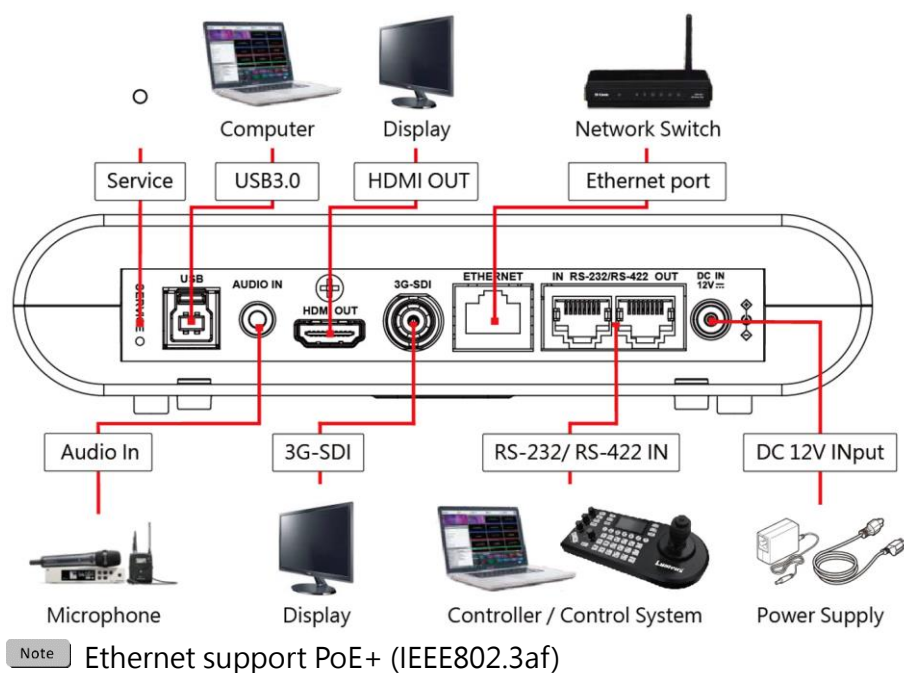
- Dimensions of the bottom

The camera can be mounted on a 1/4" - 20 UNC PTZ tripod deck by using the lock holes on the bottom for the tripod

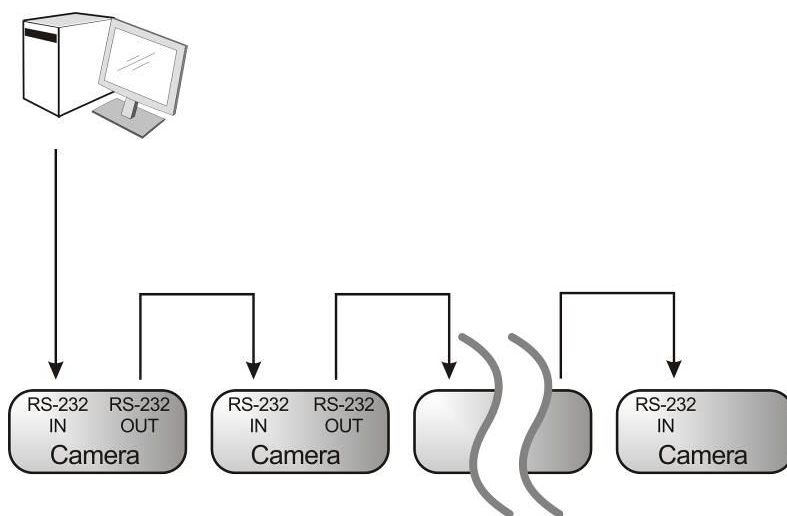


3.4 Connecting devices

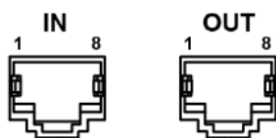
3.4.1 I/O Connection



3.4.2 RS-232/ RS-422 connection (Support max. 7 Lumens cameras can be connected)



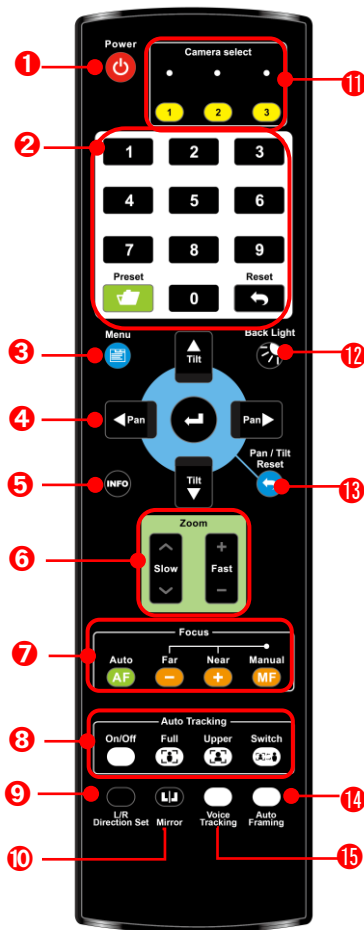
3.4.3 RS-232/ RS-422 pins definition



Pin No.	IN	OUT	RS-232/ RS-422
1	RX-	TX-	RS422
2	RX+	TX+	RS422
3	GND	GND	GND
4	TX	RX	RS232
5	RX	TX	RS232
6	DTR	DSR	RS232
7	TX-	RX-	RS422
8	TX+	RX+	RS422

Chapter 4 Remote Control and Setting Menu

4.1 Remote Control



No.	Item	Description
1.	Power	Power On/ Off
2.	Preset	- Numeric Keys 0 - 9: Click to call the preset - Preset: Appoint an ID (0 ~ 9) to save the current position data - Reset: Appoint an ID (0 ~ 9) to delete the current position data
3.	Menu	Display OSD menu
4.	Pan/ Tilt/ Enter	- Pan/Tilt: Move the lens - Home-Enter: Go back to the main page / Execute
5.	Info	Status information
6.	Zoom	- Fast: Adjust image size - Slow: Fine-tune image size
7.	Focus	- Auto: Auto focus - Manual: Enable Manual Focus - Far/Near: Adjust the focal length in Manual
8.	Auto Tracking	- On/Off: Enable/Disable Auto Tracking - Full: Full body tracking - Upper: Half body tracking - Switch: Switch tracking object
9.	L/R Direction Set	L/R Direction / Normal
10.	Mirror	Rotate the image (OFF / Mirror / Flip / Rotate)
11.	Camera select	Choose camera ID 1 ~ 3
12.	Back Light	Turn on/off back light compensation
13.	Pan/Tilt Reset	Clear the Pan/Tilt setting
14.	Voice Tracking	VC-TR41(N) not supported. Note For tracking cameras with voice tracking function only.
15.	Auto Framing	On/ Off Auto Framing

4.1.5 Preset numbers to avoid

Some preset numbers are reserved for specific functions. Avoid using these numbers for regular position presets.

Preset Number	Description
80/81	Turns tracking or framing on or off, depending on the selected mode.
109	Return the PTZ lens to a centered wide view, or to the user-defined Preset 109 position.
110	When tracking starts, the system automatically saves the current PTZ position as Preset 110 for the 'Back to Start Position' target-lost action.
111	The system stores the Stage Zone position as Preset 111.
101~104	Presets for Partiiton Tracking zone 1~4
105~108	Presets for Partiiton Framing zone 1~4
200	Custom Center Stage Position

4.2 Setting Menu

Press [Menu] on the remote control to enter the setting menu; Defaults value is shown with bold underlined.

Layer 1	Layer 2	Layer 3	Description
Exposure	Mode	<u>Full Auto</u> / Shutter Pri/ Iris Pri/ Manual	Exposure mode
	Exposure Comp.	On / <u>Off</u>	Turn on/off Exposure Compensation
	Level	-5~5	Adjustable when Exposure Comp. is activated
	Spot Light	On / <u>Off</u>	
	Position	X(0~6)Y(0~4)	Adjustable when Spot Light is activated
	Shutter Pri	1/10000~1/25	Adjustable when the Exposure mode is set to Shutter Pri
	Iris Pri	F1.6~ <u>C</u> ~F6.3	Adjustable when the Exposure mode is set to Iris Pri
	Manual Gain	0-45dB	Adjustable when the Exposure mode is set to Manual
	Manual Speed	1/10000~1/25	Manually set the shutter
	Manual Iris	F1.6~ <u>C</u> ~F6.3	Manually set the iris
	Gain Limit	9- <u>45</u> dB	Max. limit value of electron gain
	Iris Limit	F1.6~ <u>C</u> ~F6.3	Max. limit value of iris
	WDR	<u>OFF</u> / 1/ 2 /3	WDR settings
White Balance	Mode	1. Auto 2. Indoor 3. Outdoor 4. One Push WB 5. ATW 6. Manual 7. Sodium Lamp 8. 3000K 9. 4300K 10. 5000K 11. 6500K 12. 8000K	Select the color temperature mode 1. 4000k ~ 7000k 2. 3200k 3. 5800k 4. 1700k ~ 10000k 5. 1700k ~ 10000k 6. Custom 7. 2800k
	One Push	ENTER	One push trigger
	Manual Red	0~ <u>C</u> ~128	Adjustable when the white balance mode is set to Manual
	Manual Blue	0~ <u>C</u> ~128	Adjustable when the white balance mode is set to Manual
Tracking	Type	Auto Tracking / Auto Framing	

Layer 1	Layer 2	Layer 3	Description
Picture	Picture effect	<u>OFF</u> / B&W	
	Advanced	On / <u>Off</u>	Enable to adjust the picture parameters.
	Sharpness	0~ <u>C</u> ~14	Adjustable when the Advanced is enabled.
	2D NR	OFF/ <u>1</u> / 2/ 3	Adjustable when the Advanced is enabled.
	3D NR	OFF/ Low/ <u>Typical</u> / Highest	Adjustable when the Advanced is enabled.
	Image Mode	<u>Standard</u> / LED mode/ Brilliant	
	Brightness	0~ <u>C</u> ~15	Adjustable when the Advanced is enabled.
	Hue	0~ <u>C</u> ~15	Adjustable when the Advanced is enabled.
	Saturation	0~ <u>C</u> ~15	Adjustable when the Advanced is enabled.
	Gamma	0~ <u>3</u>	Adjustable when the Advanced is enabled.
Pan Tilt Zoom	Pan/Tilt Limit	On / <u>Off</u>	Turn on/off the angle limit setting
	Pan Right Limit	0~ <u>170</u>	Limit the right angle
	Pan Left Limit	<u>-170</u> ~0	Limit the left angle
	Tilt UP Limit	0~ <u>90</u>	Limit the upward angle
	Tilt Down Limit	<u>-30</u> ~0	Limit the downward angle
	Pan Flip	On / <u>Off</u>	Activate the reverse Pan direction
	Tilt Flip	On / <u>Off</u>	Activate the reverse Tilt direction
	Preset Speed	5/ 25/ 50/ 80/ 120/ <u>160</u> / 200 deg/sec	Set the rotation speed of the cradle head when Preset is performed
	PTZ Speed Comp	On / <u>Off</u>	Set the Pan/Tilt moving speed to vary from the zoom position
	D-Zoom Limit	<u>x1</u> ~x12	Set the D-zoom limit
	PTZ Motion Syn)	On / <u>Off</u>	When activated, PTZ synchronization can be achieved by controlling with the Presets Note Refer to the Preset speed setting for this feature. The speed may be adjusted automatically due to the difference of PTZ moving range.

Layer 1	Layer 2	Layer 3	Description
D-Effect	Mirror / Flip	OFF / Mirror / Flip / Mirror + Flip	Set the mode at which the image is mirror or flipped
Auto Focus	AF Sensitivity	Low / <u>Mid</u> / High	For AF triggering speed, the higher the speed is, the faster AF is triggered
	AF Frame	Center Area / All Area / <u>Auto</u>	AF frame setting, when central area was set as AF frame, focusing will be on the center of the screen. When Full Frame was set as AF frame, focusing will be calculated based on the full screen
	Zoom tracking	Manual / <u>Curve Tracing</u> / Zoom Tracking	The focus mode during lens zooming (It can be set in the Manual Focus (MF) mode)
	PTZ Assist	On / <u>Off</u>	When PTZ Assist is enabled and PTZ control is in operation, the focus performs only once upon immediate execution. The focus will not be triggered afterward when the scene changes (It can be set in the Manual Focus (MF) mode)
	Preset AF	<u>On</u> / Off	Set whether to execute auto focus after Preset
	Smart AF	<u>On</u> / <u>Off</u>	Specify whether Smart AF prioritizes focusing on people.
Ethernet	DHCP	<u>On</u> / Off	Enable/Disable DHCP setting
	IP Address	<u>192.168.100.100</u>	When DHCP is disabled, manual configuration is available.
	Subnet mask	<u>255.255.255.0</u>	
	Gateway	<u>192.168.100.254</u>	
Audio	Audio In	<u>Line In</u> / Mic In	Set Audio In
	Audio Enable	On / <u>Off</u>	Turn on/off audio output
	Volume	0~ <u>C</u> ~10	Volume Setting
	Delay	On / <u>Off</u>	When audio and video are out of sync, enable this feature to set the audio delay time
	Delay Time(ms)	-1~-500ms	Set audio delay time
	Encode Type	<u>AAC</u>	Set encode type
	Encode Sample Rate	<u>48 KHz</u>	Set the encode type and sample rate

Layer 1	Layer 2	Layer 3	Description
System	Prompt	On / <u>Off</u>	Turn on/off the prompt information on the display
	IR Receive	<u>On</u> / Off	
	IR Select	<u>1</u> / 2 / 3	
	Language	<u>English</u> / 中文	
	Initial Position	<u>Last MEM</u> / 1st Preset	Set the camera lens to return to the last operated position or the first preset position after POWER ON Note 1st Preset = Preset 0
	Control Device	Encoder / <u>Controller</u>	Control Device setting, Controller: for joystick Encoder: for tracking system
	Motionless Preset	On / <u>Off</u>	When the function is enabled, the screen will Freeze when Preset is executed. Freeze will be released after Preset is completed.
	Privacy Mode	On / <u>Off</u>	Enable/Cancel Privacy Mode After the function is enabled, when the camera is turned off via the remote control or software, the lens will automatically turn to the bottom right to ensure the user' s privacy
	Control Port	<u>RS-232</u> /RS-422	Choose whether the control interface used is RS-232 or RS-422
	Protocol	<u>VISCA</u>	
	Baud Rate	<u>9600</u> /38400	Choose the transmission speed of the control signal
	VISCA Address	0~7	
	Output Mode	<u>1080p 60</u> /50/30/25 720p 60/50	Select the output resolution
	Factory Reset	On / <u>Off</u>	Resume the factory default setting
Status			Display the current setting status

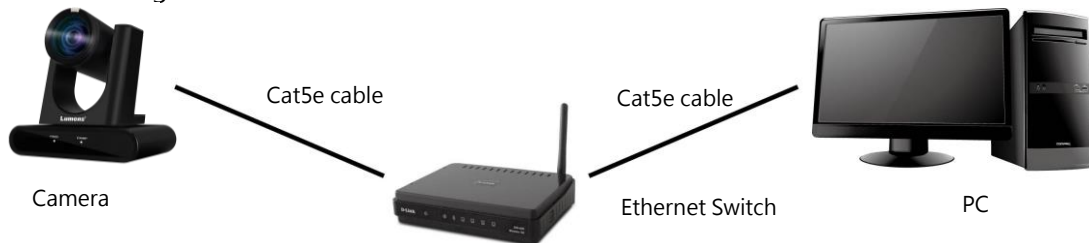
Chapter 5 Network setting and Web interface

5.1 Connecting Camera to Network

5.2.1 Connection

Please find the two common connection methods below.

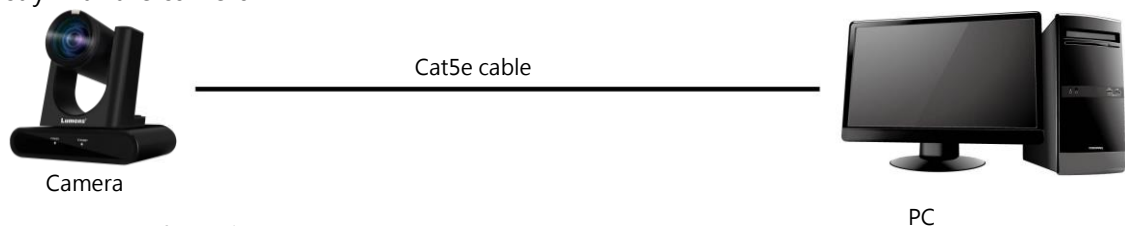
- Connecting via switch or router



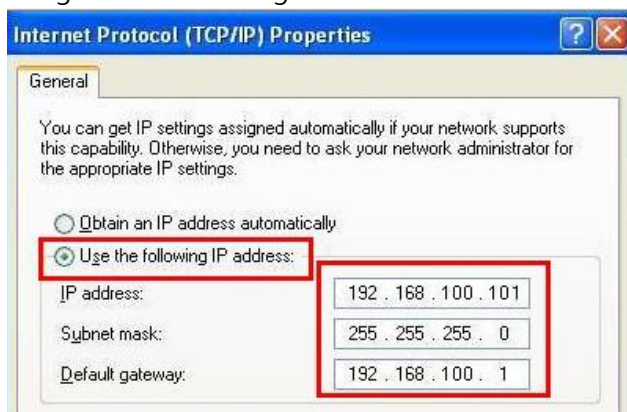
- Connecting directly to the PC

To connect directly through network cable, the IP address of the computer should be changed so that it is on the same network segment as the camera

E.g.: The default IP address of the camera is 192.168.100.100. The computer IP address must be set with the same network segment, such as 192.168.100.101, so that the computer can be connected correctly with the camera



- Change network settings



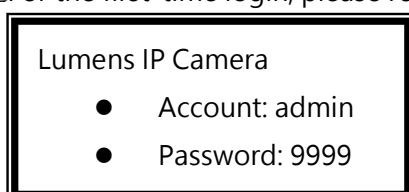
5.2.2 Using the Browser to View the Image

- Open the browser, and enter the IP address of the camera in the address bar

E.g.: <http://192.168.100.100> (default IP address)

- Enter Username and password

Note For the first-time login, please refer to [5.2.11 System - User](#) to change the default password



5.2.3 Using RTSP Player to View the Image

RTSP connections can be made using free software, e.g.: VLC, Quick Time, PotPlayer, etc.

RTSP connection address formats are as follows:

- RTSP Stream 1 => <rtsp://Camera IP:8557/h264>
- RTSP Stream 2 => <rtsp://CameraIP:8556/h264>
- RTSP Panoramic view=> <rtsp://Camera IP:8553/h264>

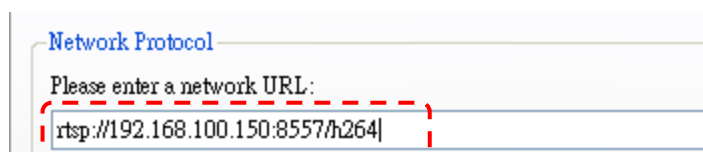
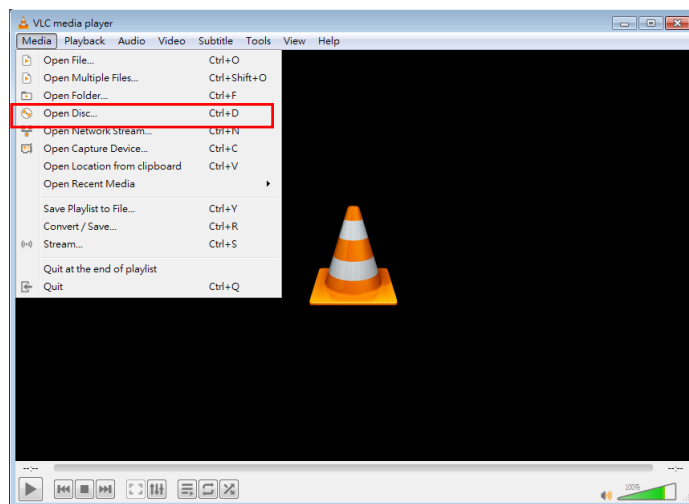
If password authentication is enabled, the RTSP connection address is as follows:

- <rtsp://Username:Password@VC IP address:port/h264>
- To enable password authentication function, please refer to [5.2.8 System - Network](#)

Example:

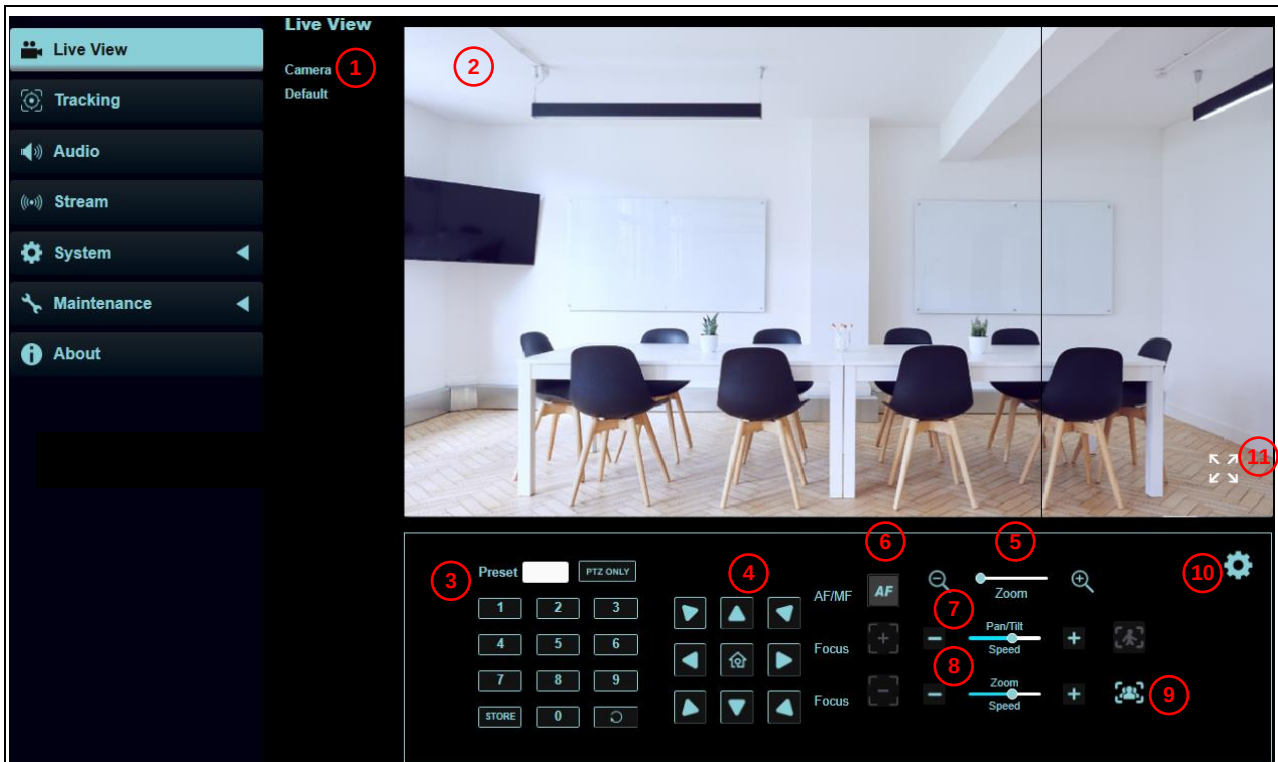
Open the VLC software, click [Open Network Streaming], and enter the URL:

<rtsp://192.168.100.150:8557/h264>



5.2 Web Interface

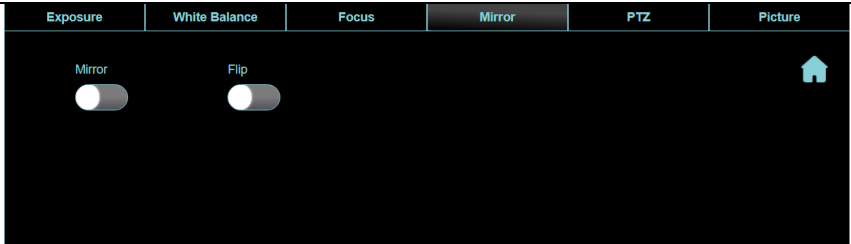
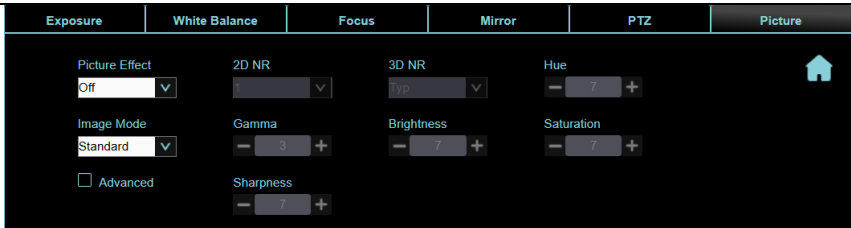
5.2.1 Live View



No	Item	Descriptions
1	Camera ID/ location	Display camera ID/location. Please refer to 5.2.6 System-Device
2	Preview window	Display the screen currently captured by the camera
3	Preset	Select the number first and then select [STORE] or [Call].
4	Pan/Tilt	Adjust the Pan/Tilt position of the camera screen
5	Zoom	Zoom In/Zoom Out ratio
6	AF/MF	Switch to Auto Focus/Manual Focus. Focus can be adjusted in Manual Focus
7	Pan/ Tilt Speed	Adjust the horizontal/vertical moving speed
8	Zoom speed	Adjust the zoom speed
9	Tracking	Enable/Disable Auto Tracking / Auto Framing Note Select Auto Tracking or Auto Framing.
10	Camera Setting	Please refer to 5.2.2 Live View-Camera Setting for related settings
11	Enlarge	Enlarge the preview image

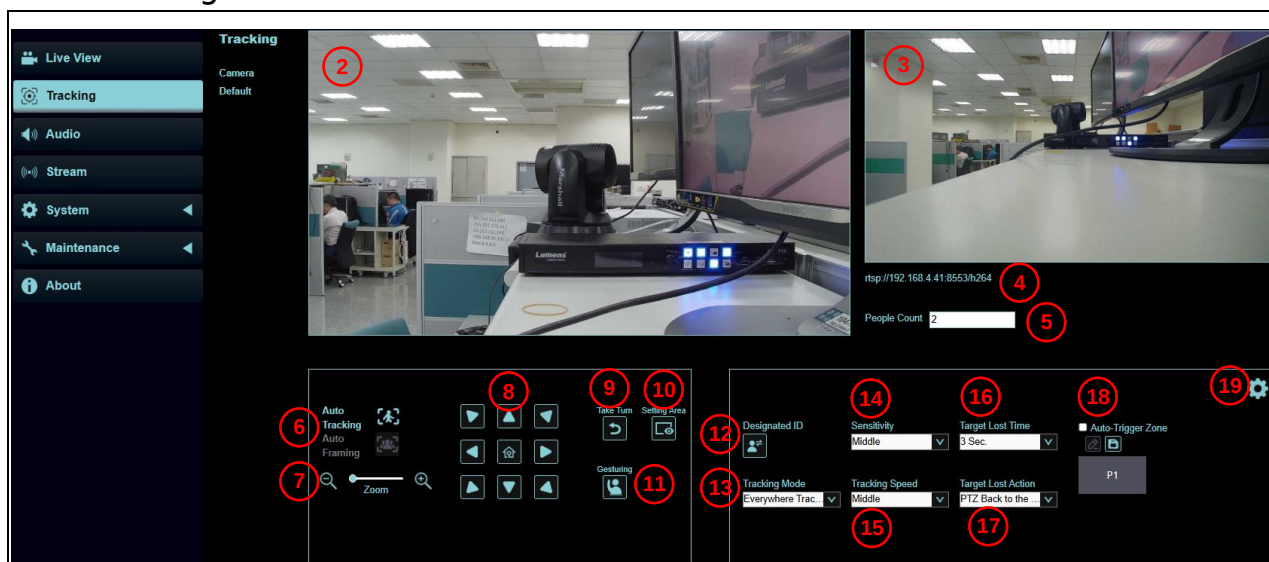
5.2.2 Live View-Camera Setting

No	Item	Descriptions
1.	Exposure	■ Mode: Select exposure mode (Full Auto/Shutter Pri/Iris Pri/Manual) ■ Gain Level: Adjust the gain level (adjustable under the “Manual”) ■ WDR: Set the level of wide dynamic range (WDR) in order to obtain better images. (The WDR can only be adjusted after you enable the Advanced in the Picture section.) ■ Anti-Flicker: Activate the anti-flicker function to eliminate flicker from lighting. ■ Exposure Comp. Level: Select exposure compensation level (The Exposure Comp. level can only be adjusted after you enable the Advanced in the Picture section.) ■ Iris Level: Adjust the size of iris (adjustable under the “Manual” or “Iris Priority”) ■ Shutter Speed: Adjust the shutter speed (adjustable under the “Manual” or “Shutter Priority”)
2.	White Balance	■ Mode: Select the color temperature ■ One Push: Executes a one time color temperature adjustment (configurable in [One Push WB] mode) ■ Manual Red/Blue: Manually adjust red/blue color temperature
3.	Focus	■ AF Sensitivity: change the sensitivity of the auto focus. ■ AF Frame: Changes the focusing zone to the selected mode. ■ Zoom Tracking: The focus mode during lens zooming (can be set in “Manual”) ■ PTZ Assist: Check whether auto focus is enabled if there is any changes of PTZ (can be set in “Manual”) Note When PTZ Assist is enabled, focus will be triggered after PTZ control, but won’ t be triggered when the scene changes.

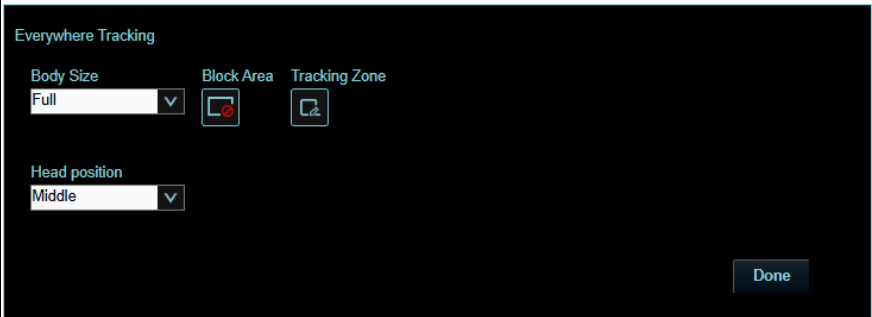
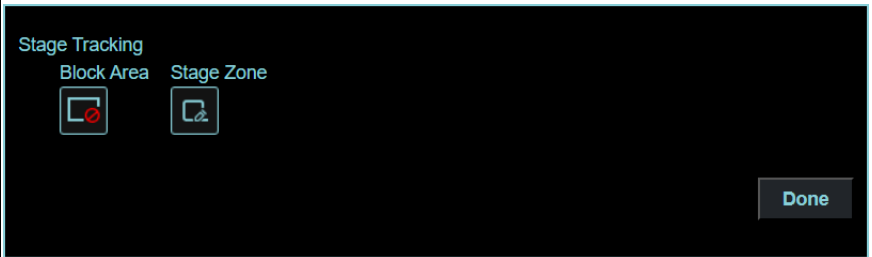
		■ Smart AF: Specify whether autofocus gives priority to human subjects. ■ Preset AF: Set whether to perform auto focus after Preset ■ One Push AF: When manual focus mode is on, click this function for one-time autofocus
4.	Mirror	 ■ Mirror: Set image mirroring ■ Flip: Set the mode at which the image is turned
5.	Pan Tilt Zoom (PTZ)	 ■ Pan/Tilt Limit: Enable to set the pan/tilt limit ■ Pan/Tilt Flip: Set On and the Pan/Tilt directions will be reversed. ■ Preset Speed: Set the rotation speed of the cradle head when Preset is executed ■ PTZ Speed Comp: After it is activated, the Pan/Tilt moving speed will vary from the zoom position ■ Initial Position: Set the camera lens to return to the last MEM or the 1st Preset after POWER ON Note 1st Preset= Preset 0 ■ Motionless Preset: When the function is enabled, the screen will Freeze when Preset is executed. Freeze will be released after Preset is completed ■ D-Zoom Limit: Set the digital zoom limit ■ PTZ Motion Sync: Enable to achieve PTZ synchronization when operating Preset. Note This function refers to the preset speed setting but may automatically adjust the speed based on the PTZ movement range.
6.	Picture	 ■ Picture Effect: Set picture effect, Off/ Black and White ■ Image Mode: User can customize the desired image mode ■ Advanced: Check to enable advanced settings. ■ 2D NR: 2D noise reduction settings ■ 3D NR: 3D noise reduction settings

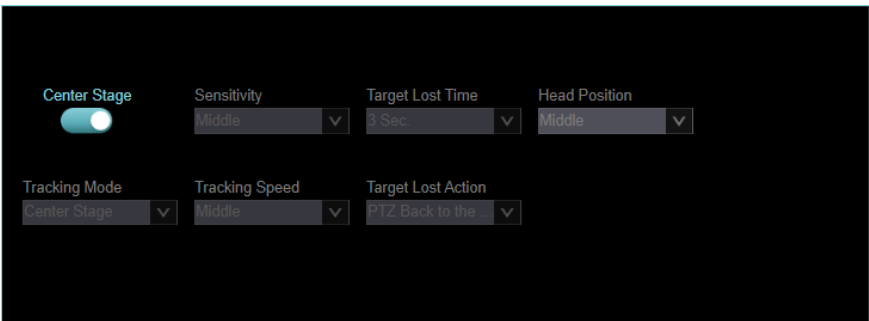
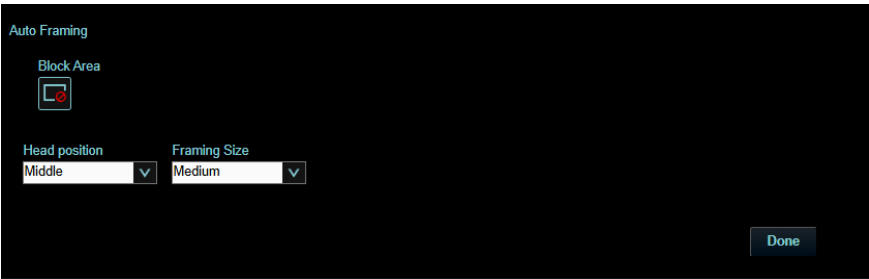
		■ Gamma: Gamma Level adjustment; Adjustable when the Advanced is enabled. ■ Brightness: Brightness adjustment of the image; Adjustable when the Advanced is enabled. ■ Hue: hue adjustment of the image; Adjustable when the Advanced is enabled. ■ Saturation: Saturation adjustment of the image; Adjustable when the Advanced is enabled. ■ Sharpness: Sharpness adjustment of the image; Adjustable when the Advanced is enabled.
7.	PTZ Control	Go back to PTZ Control page

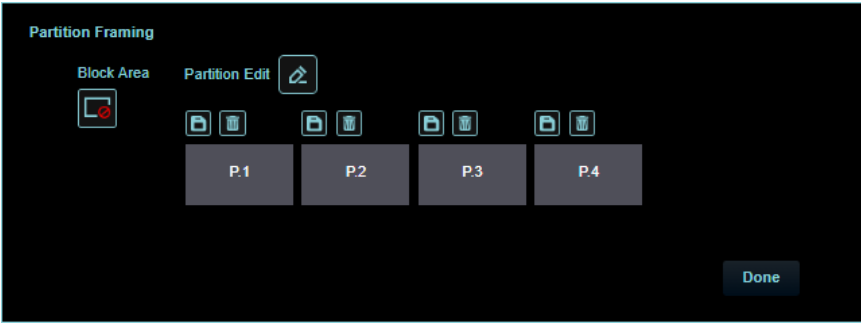
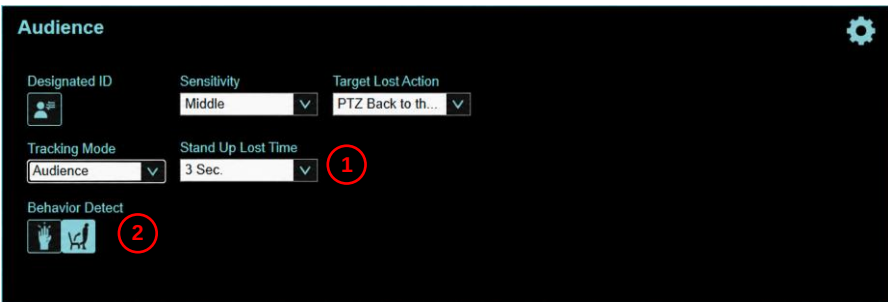
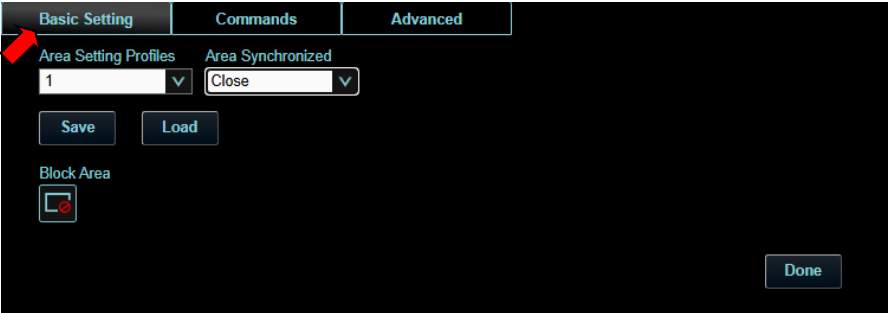
5.2.3 Tracking



No	Item	Descriptions
1.	Camera ID/Location	Display camera ID/ location. Please refer to 5.2.6 System-Device
2.	PTZ preview	Display the current view of the main lens.
3.	Panoramic preview	Display the current view of the panoramic lens
4.	RTSP URL for panoramic view	rtsp://Camera IP:8553/h264
5.	People Count	Display the calculated number of people in the screen.
6.	Tracking	Enable/ Disable Auto Tracking/ Auto Framing Note ▪ Select Auto Tracking or Auto Framing. ▪ Not applicable with [Center Stage] mode
7.	Zoom	Zoom In/ Zoom Out image
8.	Pan/ Tilt	Adjust the Pan/Tilt of the camera Note PTZ setting is not supported when tracking function enabled.
9.	Take turn	Switch the target. Note Applicable for [Auto Tracking] mode only
10.	Setting Area	Display the configured tracking and blocked areas in the panoramic preview screen. Note Applicable for [Auto Tracking] mode only
11.	Gesturing	On/ Off Gesturing function. Support the following gesture, the tracking target will automatically switch when the speaker raises both hands. 
12.	Designated ID	Display individuals the camera has detected.

		Target ID can be switched by clicking on a subject with the mouse. Note Not applicable for [Center Stage] mode
13.	Tracking Mode	Set the Tracking Mode ▪ Auto Tracking: Everywhere Tracking/ Stage Tracking/ Partition Tracking ▪ Center Stage ▪ Auto Framing: Auto Framing/ Partition Framing
14.	Sensitivity	Set tracking sensitivity
15.	Tracking Speed	Set tracking speed
16.	Target Lost Time	Set a delay to take action after a tracking target is lost
17.	Target Lost Action	Set the action after a tracking target is lost
18.	Auto-trigger zone	After a person enters the area for 3 seconds, tracking/ framing will be triggered. Note ▪ [Tracking Mode]> [Center Stage] is not supported. ▪ Enabling Auto Tracking/ Auto Framing will disable the [Auto-trigger zone] function. ▪ Stopping Auto Tracking/ Auto Framing will reactivate the [Auto-trigger zone] function.
19.	Tracking Mode Setting	Advanced settings for tracking.
19.1	Everywhere tracking	 ■ Body Size: Set Full/ Half Body ■ Head Position: Set the head position of the person in the screen ■ Block Area: Click the left mouse button to draw a frame on the panoramic view to set a blocked area. ■ Tracking Zone: Click the left mouse button to draw a frame on the panoramic view to set a designated tracking area.
19.2	Stage Tracking	 ■ Block Area: Click the left mouse button to draw a frame on the

		panoramic view to set a blocked area. ■ Stage Zone: Click the left mouse button to draw a frame on the panoramic view to set a designated stage area.
19.3	Partition Tracking	Set Partition Tracking. Up to 4 zones can be set. When a person enters the specific zone, the camera switches to the partition. Tracking will not be performed within the zone, while outside the zone, everywhere tracking will be active.  ■ Body Position: Set to Full or Half. ■ Head Position: Set the position of the person's head in the image. ■ Block Area: Click the left mouse button to draw a frame on the panoramic view to set a blocked area. ■ Partition Edit: Edit and save partition positions
19.4	Center Stage	 After selecting [Tracking Mode]> [Center Stage], click the button above to enable/disable this feature.
19.5	Auto Framing	 ■ Block Area: Click into the Edit mode, frame by holding the left mouse button and set the block area ■ Head Position: Adjust the position of the subject's head within the frame. ■ Framing Size: Adjust the amount of space around the subject during auto framing.

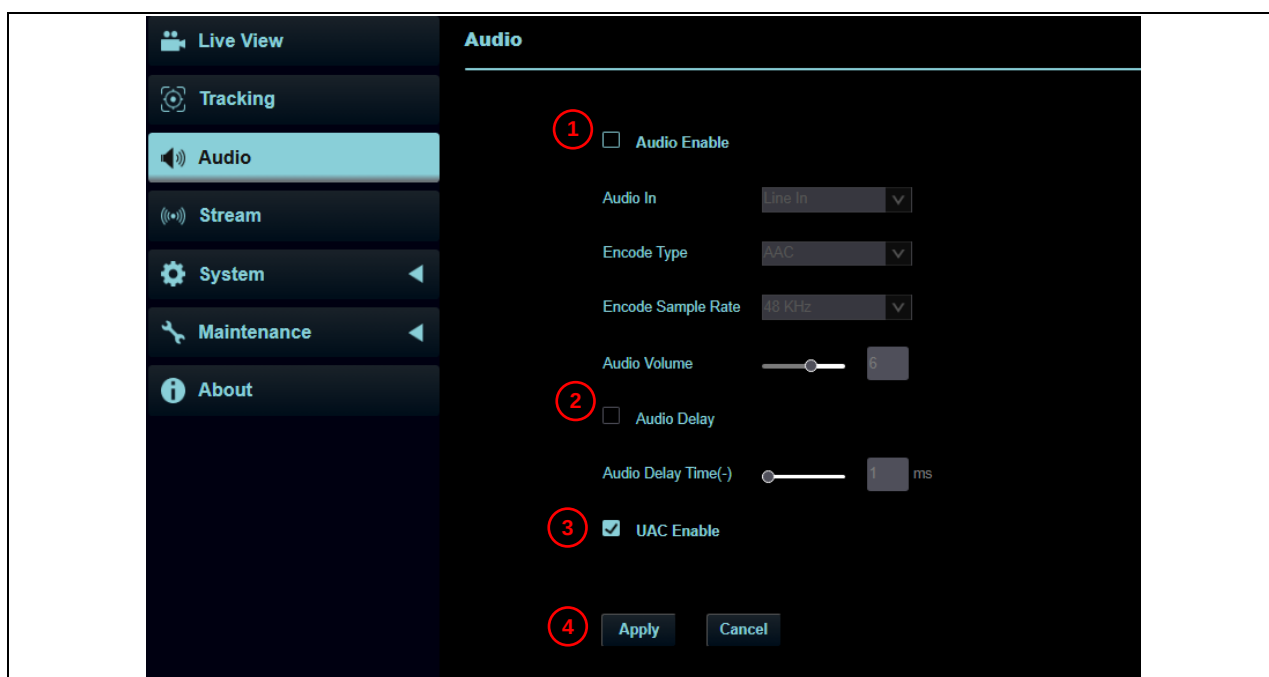
19.6	Partition Framing	 ■ Block Area: Click the left mouse button to draw a frame on the panoramic view to set a block area. ■ Partition Edit: Edit and save partition positions
19.7	Audience	 ①. Stand Up Lost Time: Set the time for determining when the stand-up target is lost. ②. Behavior Detect: Select the audience behavior to detect (Raising Hand or Stand Up). Basic Setting  ■ Area Setting Profiles: Select the audience tracking area to configure. 1–15 profiles are available. ■ Area Synchronized: Select the audience tracking area to synchronize. Select Close or 1–15. ■ Block Area: Click into the Edit mode, frame by holding the left mouse button and set the block area. Commands

- Send Times: Set the number of times to send the tracking command. Select Once or Always send.
- Stand Up: Set the tracking command for the stand-up behavior.
- Close Up: Set the close-up tracking command.
- Multi-Obj.: Set the multi-object tracking command.
- Sit Down: Set the tracking command for the sit-down behavior.

Advanced

- Protocol: Select the TCP or UDP communication protocol.
- Director IP: Enter the IP address of the Director.
- Director Port: Enter the communication port of the Director.

5.2.4 Audio



No	Item	Descriptions
1	Audio Enable	Select to enable Audio function ■ Audio In: Set Line In/ MIC In ■ Encode type: AAC ■ Encode sample rate: 48KHz ■ Volume: Adjust Audio Volume
2	Audio Delay	Check to set the audio delay time (-1 ~ -500 ms)
3	UAC Enable	Enable or disable the USB Audio Class (UAC) function to transmit audio over USB.
4	Apply/ Cancel	Apply/ Cancel Audio Settings

5.2.5 Stream

Note NDI function is only applicable to the VC-TR41N.

The screenshot shows the 'Stream' settings page. On the left is a sidebar with 'Live View', 'Tracking', 'Audio', 'Stream' (highlighted), 'System', 'Maintenance', and 'About'. The main area is titled 'Stream' and has three tabs: 'Stream1', 'Stream2', and 'NDI'. The 'Stream1' tab is active. It contains settings for Codec (H.264), Resolution (1080P), Frame Rate (50 fps), Bit Rate (7000 kbps), Rate Control (CBR), and GOP (30). There are checkboxes for RTSP and RTMP/RTMPS. The RTSP section includes an RTSP URL, an 'Enable Multicast' checkbox, and authentication fields (Account, Password). The RTMP/RTMPS section includes a 'Server URL', 'Stream Key', and authentication fields. The SRT section is checked, showing 'Connect Status: SRT Enable', 'Connection Mode' (Listener), and a 'Port' (10000). Numbered callouts are: 1. Stream tab, 2. Codec, 3. RTSP checkbox, 4. RTMP/RTMPS checkbox, 5. SRT checkbox, 6. NDI tab.

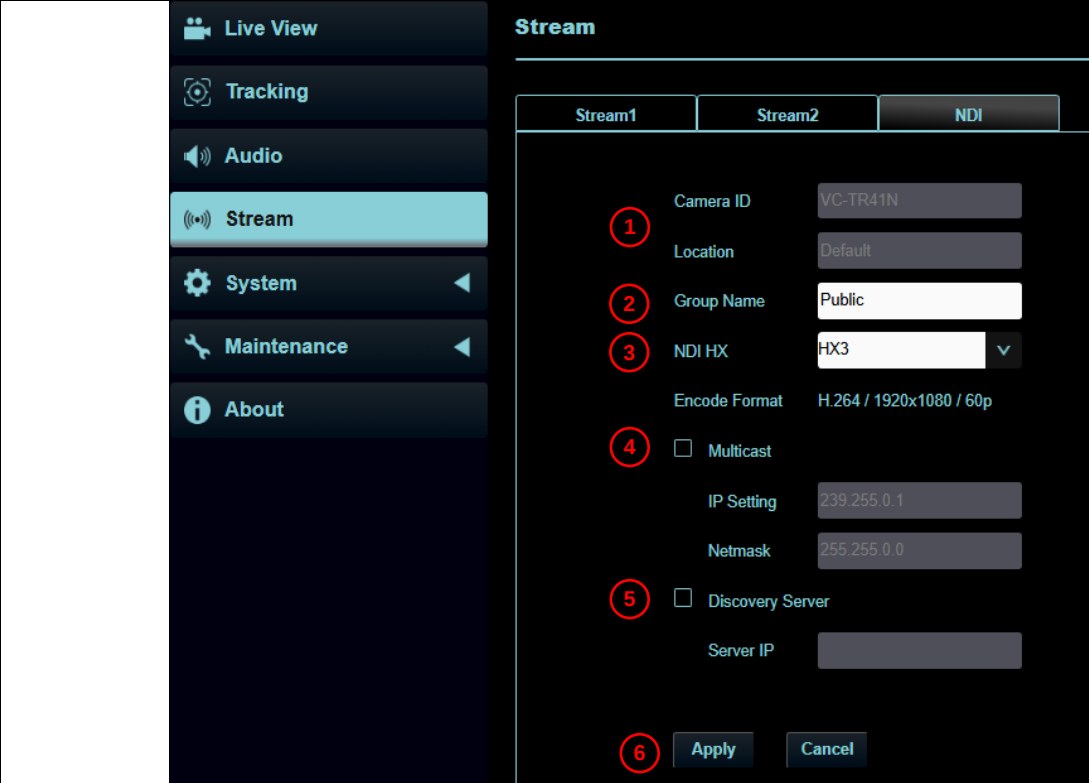
No	Item	Descriptions
1	Stream	Supporting 2 streams and NDI Note NDI function is only applicable to the VC-TR41N.
2	Stream settings	Please refer to 5.2.5.1 Stream Settings .
3	RTSP	Select to enable RTSP ■ Enable/ Disable Multicast Multicast is recommended when the stream is being watched by more than 4 viewers. ■ Enable/Disable Password Authentication ➢ Please refer to 5.1.3 Using RTSP Player to View the Images for the connection format. ➢ The username/ password is the same as the web login password of the camera, please refer to 5.2.11 System Settings - User to add/modify account information
4	RTMP/ RTMPS	Use the RTMP URL provided by the RTMP service platform to publish the camera live view to the platform. For YouTube streaming, please refer to 5.2.4 Audio to turn on the audio function
5	SRT	■ Check to enable and set SRT streaming After the SRT streaming is opened, it will be connected automatically upon camera startup. ■ The port number must be set in the range above 1024 with a maximum value of 65535 Note The following ports are used by the camera. Setting the ports may result in connection issues. 8554, 8556, 8557, 8080, 9090, 1935 ■ Latency can be set between 20-8000 microseconds. (Default is 120)

		microseconds
6	NDI	The NDI function is only applicable to the VC-TR41N. Please refer to 5.2.6 Stream – NDI .

5.2.5.1 Streaming settings

Function		Stream 1	Stream 2
Encode Format		H.264	H.264
Resolution		1080p/ 720p	720p
Bit rate	Bit rate	2,000~20,000	2,000~20,000
	Default	7,000	3,000
Rate Control		CBR / VBR	
Frame Rate/ Group of Pictures		Setting according to the supported resolution	
Encode Format		Setting according to the supported resolution	

5.2.6 Stream – NDI (For VC-TR41N only)

		
No	Item	Function Descriptions
1	Camera ID/ Location	Displaying ID/location according to [System] > [Output] settings
2	Group Name	The group name can be modified here and set with Access Manager - Receive in NDI Tool ■ If no group is assigned, the machine belongs to Public. As the default of Access Manager includes Public, Studio Monitor can discover this machine. ■ If a group is assigned, but this group is not added into Access

		Manager, Studio Monitor cannot discover this machine. ■ If a group is assigned and this group is added into Access Manager, Studio Monitor can discover this machine. Note The name can contain commas (,) to distinguish different groups Example: "default, 123, abc" means this machine belongs to three groups at the same time (default/ 123/ abc)
3	NDI HX	HX2/ HX3 is supported
4	Multicast	Multicast Settings. It is recommended to enable this feature when there are more than 4 viewers online simultaneous
5	Discovery Server	Check to enter the Server IP address
6	Apply	After the setting has been modified, click this button to apply the settings

5.2.7 System - Device

Live View

Tracking

Audio

Stream

System ▼

Device

Output

Device

Camera ID

Location

Apply

Cancel

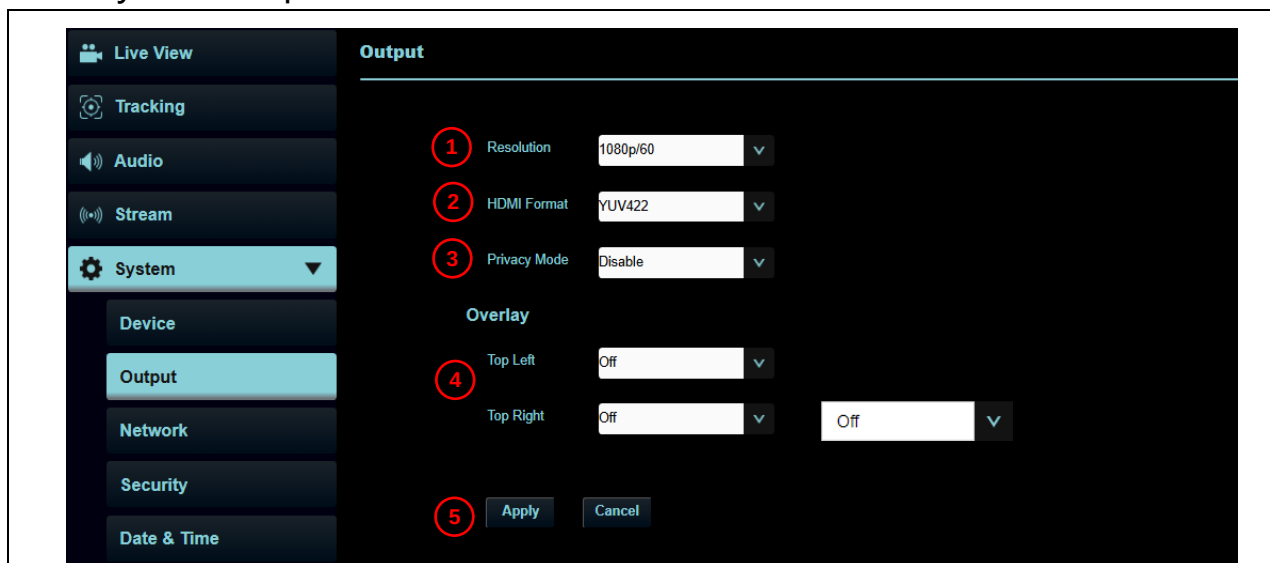
Descriptions

Edit camera ID/ Location

- Camera ID: Supporting 1 - 12 characters
- Location: Supporting 1 - 11 characters
- Supporting English, Chinese and numbers. Special symbols such as "/" and "space" cannot be used

Note Modifying this field will also update the ONVIF device name/location.

5.2.8 System - Output



No	Item	Descriptions
1	Resolution	Set the resolution of the camera Note After changing resolution, the camera will restart. The browser will need to be refreshed.
2	HDMI Format	Supporting YUV422/ RGB
3	Privacy Mode (UVC)	After the privacy mode is enabled, when the camera is turned off via the remote control or software, the lens will automatically turn to the bottom right to ensure the user' s privacy.
4	Overlay	Set the stream to display "date and time" or "custom content" and to display location
5	Apply/ Cancel	Apply/ Cancel Setting

5.2.9 System - Network

Live View Tracking Audio Stream System Device Output Network Security Date & Time User Control Maintenance Network Tracking Data Output DHCP IP Address Netmask Gateway DNS MAC Address HTTP Port HTTPS Port Apply Cancel		
No	Item	Descriptions
1	DHCP	Camera network settings. Configurable when DHCP is set to Off.
2	HTTP Port	Set HTTP port. The default Port value is 80
3	HTTPS Port	Set HTTPS port. The default Port value is 81
4	Apply/ Cancel	Apply/ Cancel Setting
5	Tracking Data Output	FreeD Enable Serial Output IP Output Destination IP Port Apply Cancel When enabled, PTZ position information can be fed back when the camera is moving 1. Serial port output: The protocol must be set to VISCA, and the baud rate should be 38400 2. IP output: It can set IP address and communication port 3. The port numbers should be > 1024. Port 3702, 5353, 8080, 8554, 8556, 8557, 52380, 52381 cannot be used. NoteThe performance of the camera may be affected when Tracking Data Output is enabled

5.2.10 System - Security

Live View

Tracking

Audio

Stream

System

Device

Output

Network

Security

Date & Time

User

Control

Maintenance

About

Security

802.1x Setting

Enable

EAP Identify

EAP Password

EAP Method

PEAP

Import

Choose File

CA Certificate

Issuer DN

Subject DN

Available Period

-

Apply

Cancel

Descriptions

Enable/Disable 802.1x Protocol. Setting can be made after enabling.

Note

In order to enable this function, the router must support 802.1x Protocol.

5.2.11 System – Date & Time

Live View

Tracking

Audio

Stream

System

Device

Output

Network

Security

Date & Time

User

Date & Time

Time in Camera

Date

2025/03/27

Time

09:38:06

Time Setting

Set Manually

Date

2025/03/27

Hours

17

Minutes

36

Seconds

56

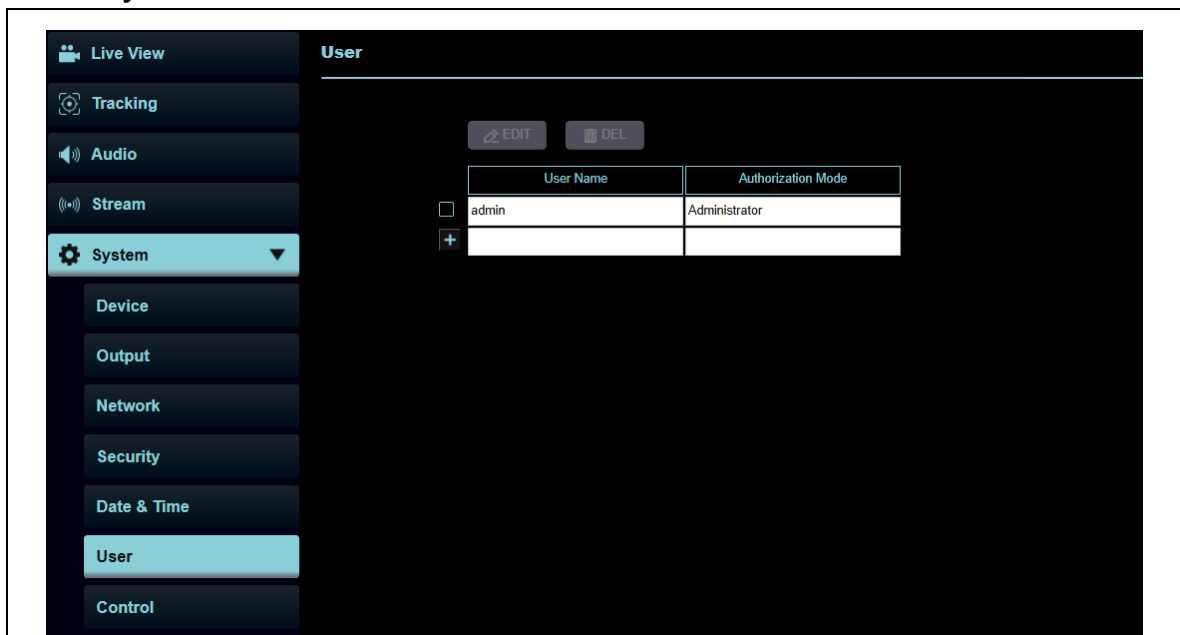
Apply

Cancel

Descriptions

Display the date and time of the camera, set synchronization methods or manually set the date and time.

5.2.12 System - Control



Descriptions

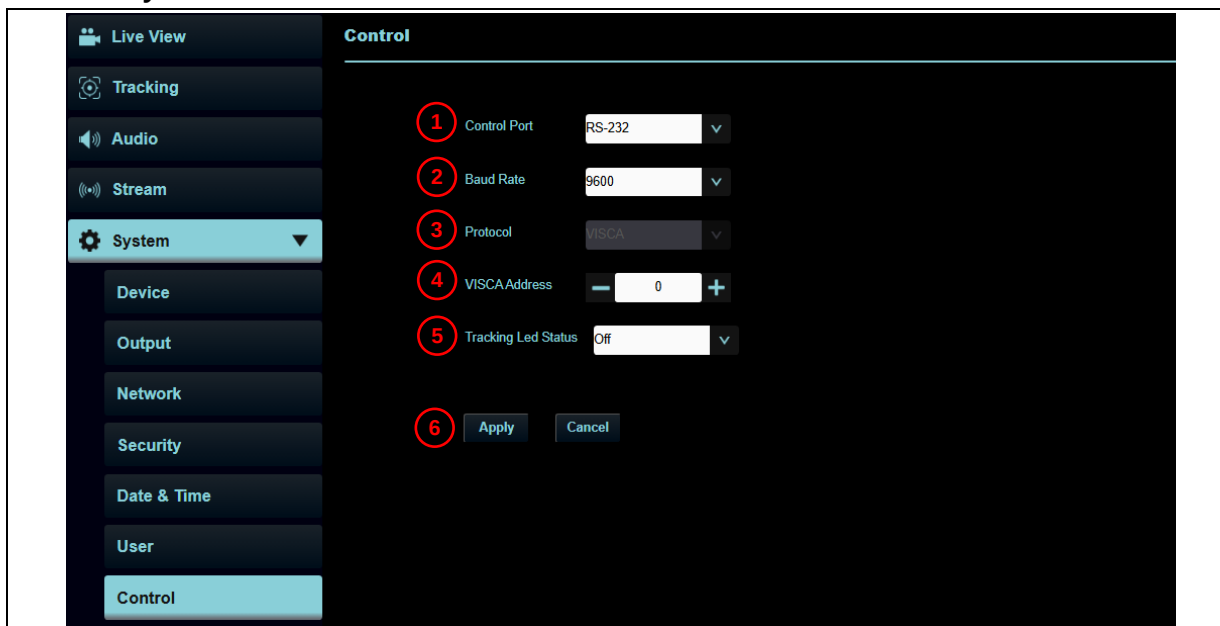
Add/ Modify/ Delete user account

- Supporting 4 - 32 characters for user name and password
- Please mix uppercase and lowercase letters or numbers for characters. Special symbols or the underlined cannot be used
- Authentication Mode: Set the new account management permissions

User Type	Admin	Operator	Viewer
View images	V	V	V
Settings	V	V	X
Account management	V	X	X

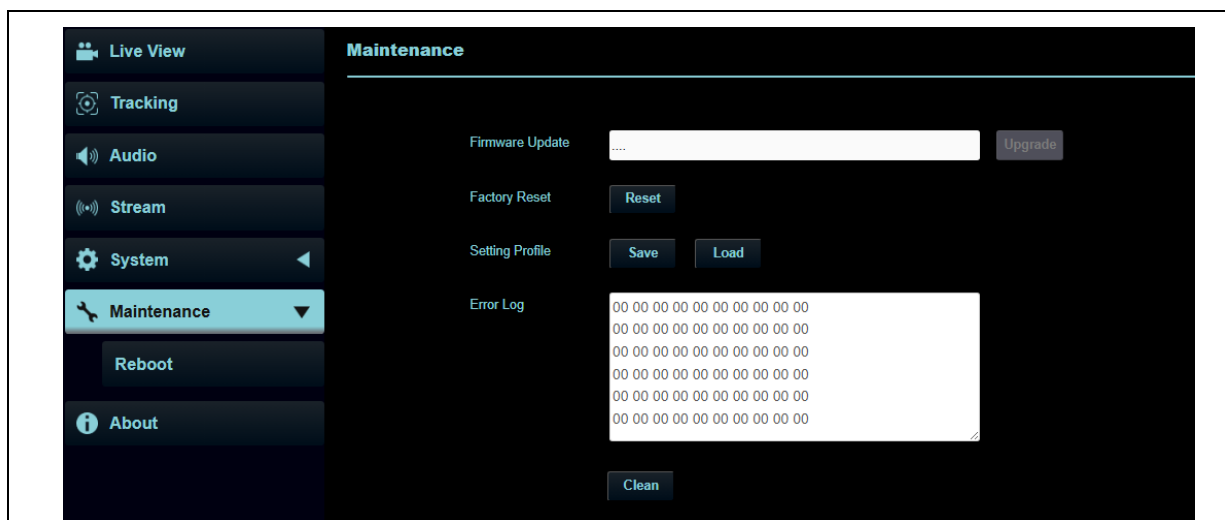
Note Factory Reset will also clear the User' s data

5.2.13 System - Control



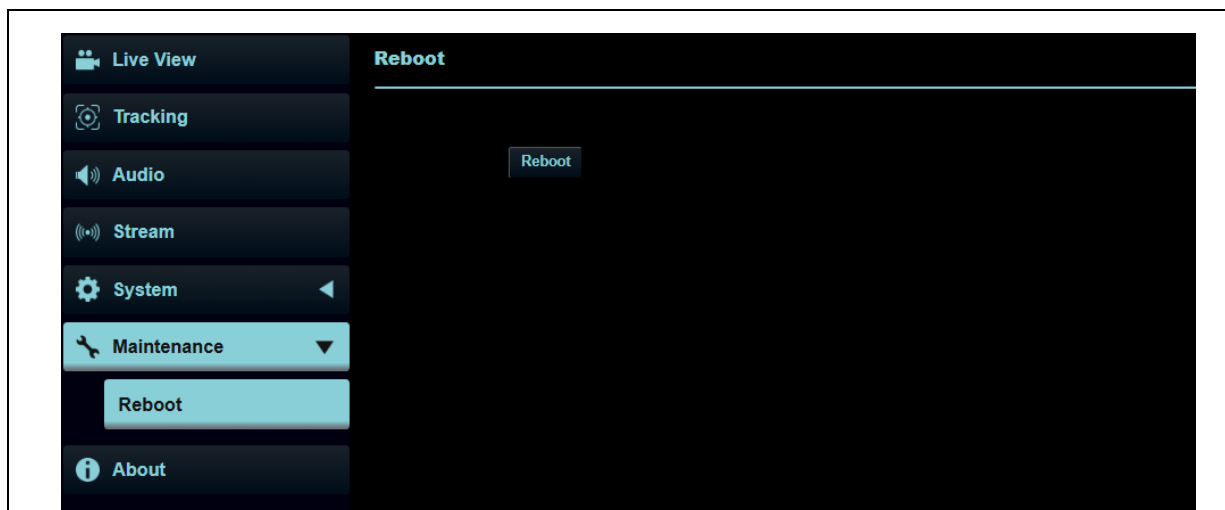
No	Item	Descriptions
1	Control Port	RS-232/ RS-422
2	Baud Rate	Choose the transmission speed of the control signal as 9600/38400
3	Protocol	VISCA protocol is supported
4	VISCA address	The camera ID address 0 ~ 7 can be assigned
5	Tracking LED status	When enabled, LED on the front panel will flash green while the camera is tracking.
6	Apply/ Cancel	Apply/ Cancel Setting

5.2.14 Maintenance



No	Item	Descriptions
1	Firmware Update	Select the firmware file, and click [Upgrade] to update the firmware Note Update takes about 2 - 3 minutes Note Please do not operate or turn off the device during the update to avoid firmware update failure
2	Factory Reset	Reset all configurations to factory default settings
3	Setting Profile	The camera setting parameters can be exported and imported/applied to another cameras.
4	Error Log	If the camera encounters errors, an error code log will be established Note When an error code appears, please try to clear it to check whether the issue has occurred repetitively

5.2.15 Maintenance -Reboot



No	Item	Descriptions
1	Reboot	Reboot immediately

5.2.16 About

Live View

Tracking

Audio

Stream

System

Maintenance

About

Lumens®

Manufacturer : Lumens Digital Optics Inc.

Model Name : VC-TR41

Firmware Ver : VUJF103h_VUJ105d_VVD100

MAC Address : dc:e2:ac:00:58:5b

Serial Number : VE8A00039

Uptime : 32_min

www.MyLumens.com

Get Help ?



Descriptions

Display the firmware version, serial number, and other related information of the camera.
For technical support, please scan the QR code at the bottom right for assistance

Chapter 6 Troubleshooting

This chapter describes problems you may encounter while using Lumens camera. If you have questions, please refer to related chapters and follow all the suggested solutions. If the problem still occur, please contact your local distributor or Lumens.

No.	Problems	Solutions
1.	No power	1. Make sure you have plugged in the power cord. 2. When using a PoE connection, ensure that the power supply supports PoE(IEEE 802.3af)
2.	No image output from the camera	1. Check the power supply or PoE supply functions. 2. Confirm if the camera resolution is compatible with the display. 3. Replace the cables and make sure they are not faulty.
3.	Camera image is severely delayed	Please use 1080p or 720p 60/50 fps rather than 25/30 fps signals
4.	RS-232/ RS-422 cannot be controlled	1. Confirm the connection is correct (RS-232/ RS-422 In/ Out) 2. Please make sure the Baud rate setting is the same as the control equipment
5.	ONVIF software cannot locate the machine	Please be sure to use only English alphabets or numbers in [System]> [Device]> [Camera ID]/ [Location] of the webpage. Using special characters or space will cause the ONVIF software unable to search the machine.
6.	The camera does not save the relevant parameters (PTZ, AWB ...) after reboot	Please make sure if the Initial Position is set to [Last MEM] from the setting menu or web page ■ Setting Menu: System - Initial Position ■ Web page: Live View - Camera Setting - PTZ
7.	Tracking Data Output is delayed or not updated	Please make sure that the camera is not in the following conditions. The following function settings may cause data output to be delayed or not updated: - Modify output resolution - Modify camera mode - Modify HDMI format - Enable OSD menu - Streaming setting - Audio setting
8.	How to log into the webpage when you forget the password	Please contact the local distributor or Lumens.

Chapter 7 Safety Instructions

Always follow these safety instructions when setting up and using the Document Camera:

1 Operation

- 1.1 Please use the product in the recommended operating environment, away from water or source of heat
- 1.2 Do not place the product on a tilted position or unstable trolley, stand or table.
- 1.3 Please clean the dust on the power plug prior to usage. Do not insert the product's power plug into a multiplug to prevent sparks or a fire.
- 1.4 Do not block the slots and openings in the case of the product. They provide ventilation and prevent the product from overheating.
- 1.5 Do not open or remove covers, otherwise it may expose you to dangerous voltages and other hazards. Refer all servicing to licensed service personnel.
- 1.6 Unplug the product from the wall outlet and refer servicing to licensed service personnel when the following situations happen:
 - If the power cords are damaged or frayed.
 - If liquid is spilled into the product or the product has been exposed to rain or water.

2 Installation

- 2.1 For security considerations, please make sure the standard hanging rack you bought is in line with UL or CE safety approbations and installed by technician personnel approved by agents.

3 Storage

- 3.1 Do not place the product where the cord can be stepped on as this may result in fraying or damage to the lead or the plug.
- 3.2 Unplug the product during thunderstorms or if it is not going to be used for an extended period.
- 3.3 Do not place the product or accessories on top of vibrating equipment or heated objects.

4 Cleaning

- 4.1 Disconnect all the cables prior to cleaning and wipe the surface with a dry cloth. Do not use alcohol or volatile solvents for cleaning.

■ Precautions

	This symbol indicates that this equipment may contain dangerous voltage which could cause electric shock. Do not remove the cover (or back). No user-serviceable parts inside. Refer servicing to licensed service personnel.		WARNING
			This symbol indicates that there are important operating and maintenance instructions in this User Manual with this unit.

■ Battery Warning (for products or accessories with batteries)

General Safety Warnings:

- Do not heat or dispose of the battery in fire, as it may explode or leak.
- Avoid short-circuiting: Do not connect the positive and negative terminals directly or use metallic objects to connect them.
- Do not disassemble, crush, puncture, or modify the battery.
- Do not immerse the battery in water or any other liquids.

Usage and Storage Warnings:

- Do not store the battery in high-temperature environments (above 60°C) or in areas with high humidity.
- Keep away from direct sunlight and heat sources.
- If not in use for a long period, remove the battery and store it in a cool, dry place.

Disposal and Recycling Warnings:

- Do not dispose of the battery in household waste; follow local regulations for proper disposal and recycling.
- If leakage occurs, avoid contact with the leaked substance and clean the affected area immediately.

Child Safety Warnings:

- This product contains a button battery. Ingestion of a button battery can cause severe internal burns within 2 hours and may result in death.
- If a battery is swallowed or if internal battery material is contacted, seek medical attention immediately.
- Store batteries (whether new or used) in a place that is out of reach of children.
- If the battery compartment does not close securely, stop using the product and keep it away from children.

■ **FCC Warning**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

Notice :

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

■ **IC Warning**

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Cet appareil numerique respecte les limites de bruits radioelectriques applicables aux appareils numeriques de Classe A prescrites dans la norme sur le material brouilleur: "Appareils Numeriques," NMB-003 edictee par l'Industrie.

■ **EN55032 CE Warning**

Operation of this equipment in a residential environment could cause radio interference.

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