# Marshall

# CV625-TB/TW/TBN/TWN

## 25X AI Tracking and Flow PTZ Camera



# User Manual

# Marshall

# Table of Contents

## Chapter 1: Package Contents

| Camera | Power Adapter | Power Cord | USB 3.0 Cable-2m |
|---|---|---|---|
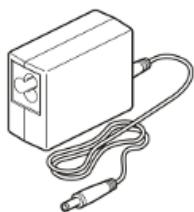


Power Cord: Appearance may vary depending on country/ region
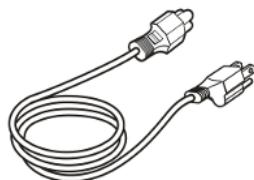
USB 3.0 Cable-2m: (Type B - Type A)
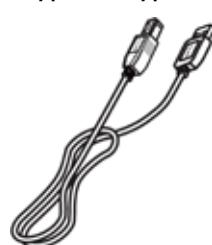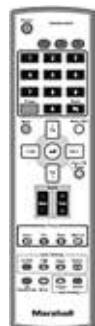
| Remote Control | Metal Plate A | Metal Plate B | M3 Screws |
|---|---|---|---|

M3 Screws: Silver x8/ Black x2

www.marshall-usa.com
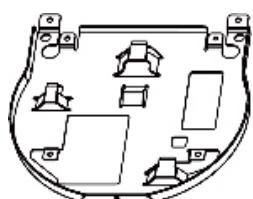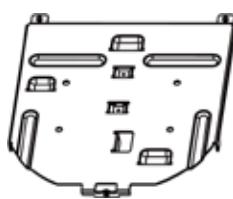
## Chapter 2: Product Appearance

## 2.1: I/O Interface
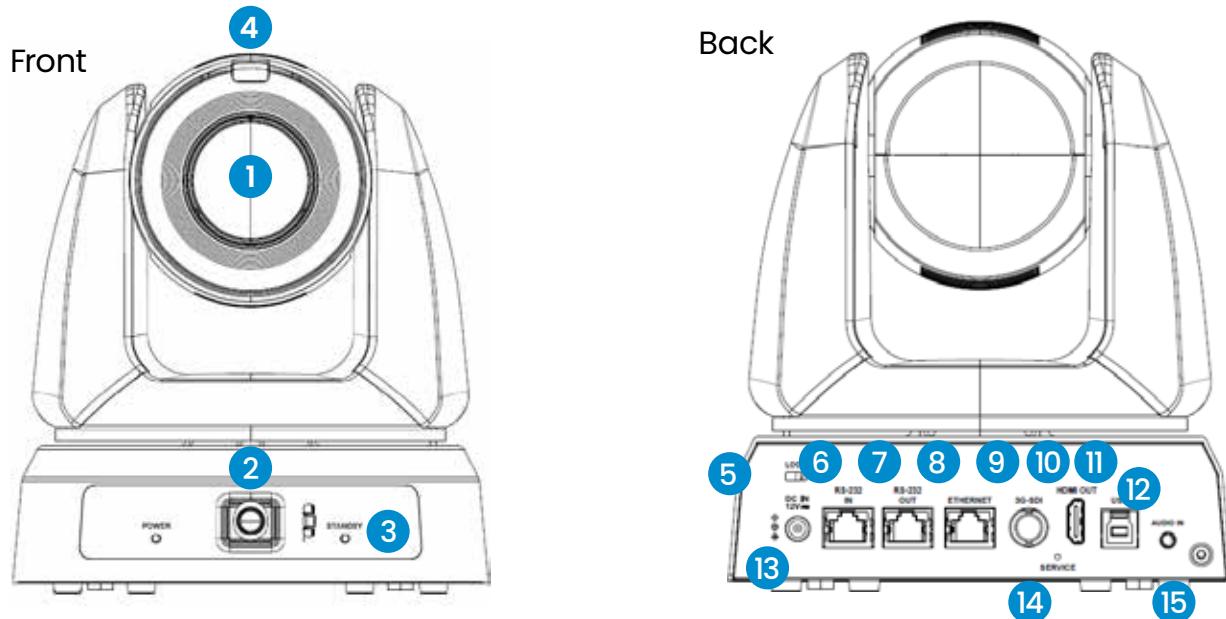


| NO. | Item | Function Description |
|---|---|---|
| 1. | Main Camera Lens | PTZ camera lens |
| 2. | Panoramic Lens | Panoramic camera lens<br>Note When the camera is installed at a height above **2 meters**, we recommend adjusting the tilt position.<br>Refer to **3.2.5 Tilting the Panoramic Lens** |
| 3. | LED Indicators | Displaying the status of the camera, refer to **2.2 LED Indicator** |
| 4. | Tally Lamp | Displays the Tally Lamp status of the camera |
| 5. | Lock | Safety lock slot |
| 6. | RS232 **IN** | RS-232 port, up to 7 cameras can be connected. |
| 7. | RS232 **OUT** | Pin out please refer to **3.3.2 RS-232 Pin Definition** |
| 8. | Ethernet | Network port, with PoE+ (IEEE802.3at) support |
| 9. | 3G-SDI | 3G-SDI output (BNC 75Ω / supports SMPTE 425M) |
| 10. | HDMI **OUT** | Video output |
| 11. | USB3.0 | Connect to the computer's USB port; delivers USB video |
| 12. | Audio In | 3.5mm Line in |
| 13. | DC IN 12V | DC supply connecting port |
| 14. | Service | Safety lock slot |
| 15. | Lock | Safety lock slot |

# Marshall

## 2.1: 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 |
| Privacy Mode | Orange | No Light |

## 2.1: Tally Lamp

The Tally lamp function can be enabled by an RS-232 command. Please refer to the RS-232 command set document

## Chapter 3: Installation Instructions

### 3.1: Scenario

CV625-TB/TW/TBN/TWN/TBN/TWN supports a tracking range of 2-18m
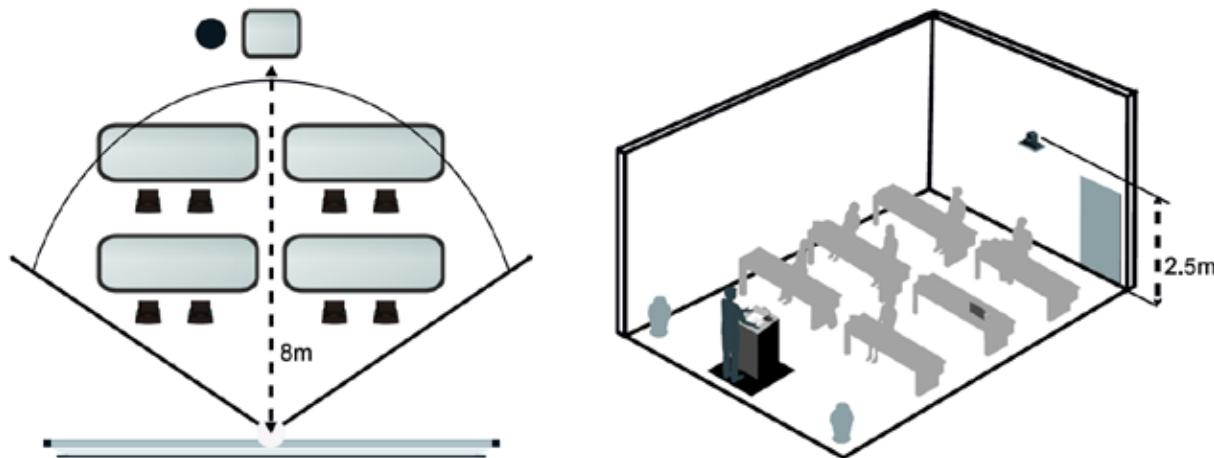


### 3.2: Installation Instructions

PTZ installation and connection requires special skills. It is important to securely install the device. Pay attention to your safety and to the safety of those around you during the installation. Ensure the safety of the installation environment. Do not install the device to an unstable ceiling or at a height that may risk injury to people below.

3.2.1  Please ensure installation safety, please do not mount the device on an unstable ceiling or in any location where it may fall, as this could lead to accidents.

3

**3.2.2** Please check that accessories in the box are complete. Please contact the supplier about any shortage, and make sure to keep the accessories in the box.

**3.2.3** Please choose an appropriate location for installation of camera in advance.
Please determine the installation site according to the following requirements:

(A) Confirm the position for the object to be captured.

(B) Confirm whether the camera is set at a proper distance from light sources

### 3.2.4 Handling Instructions

- Do not hold the camera by its pan/tilt head.

- Do not manually rotate the camera head. Improper rotation may result in damage.
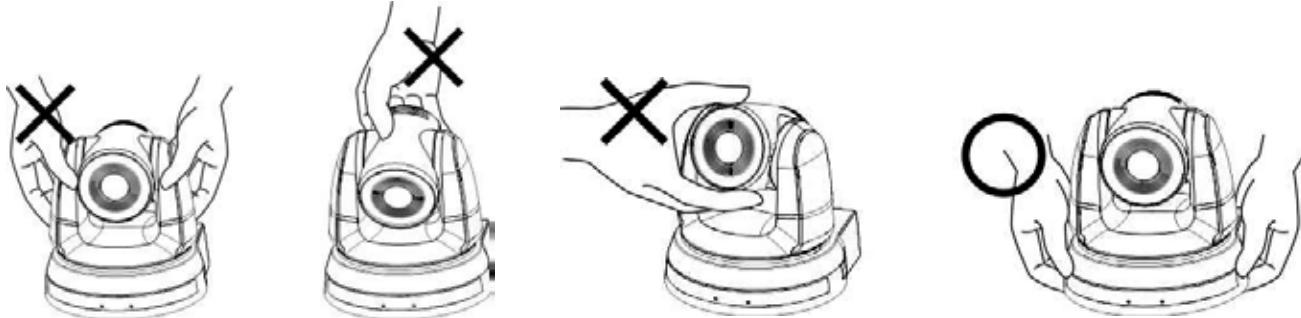


- Before installation, confirm the camera orientation relative to the object to be captured. It is recommended that the camera should be set at more than 1.5 meters from the object to be captured. Adjust the position to achieve your required shooting angle.
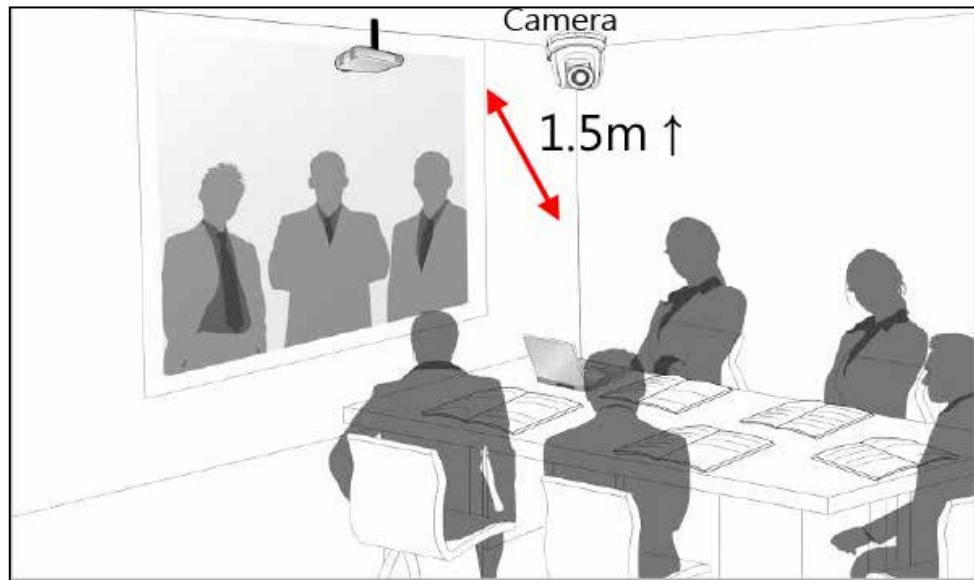


- The Camera (including metal plates) weighs approximately 2.7 kg. For ceiling mountain, use a hanger that has obtained UL security approval to prevent the unit from falling.

- Regularly check the stability and strength of the camera installation.

# Marshall

## 3.2.5 Tilting the Panoramic Lens

The panoramic lens supports three tilt positions: **Up** / **Normal** / **Down**

- When the camera is installed at a height above 2 meters, it is recommended to adjust the angle of the lens.
- Upright Installation: Adjust to the [Down] position.
- Inverted Installation: Adjust to the [Up] position.
- After adjusting the tilt angle, please go to [Tracking]> [Lens Tilt Direction] and select the corresponding value in the web interface.
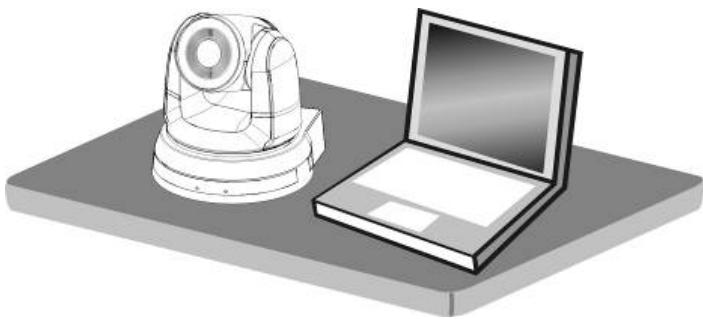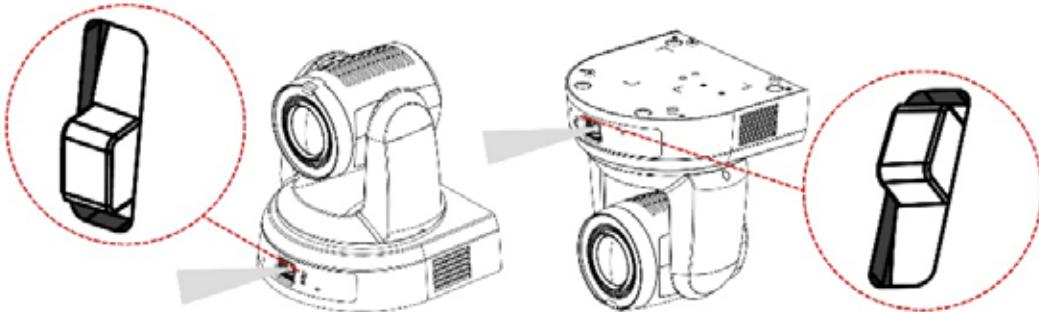


## 3.2.6 Installing the camera on the desk

Place the camera on a flat desk to ensure normal operation.



## 3.2.7 Mounting the camera to the ceiling

**(A) Prepare the following items:**

- Accessories in the box (metal plates A, B, M3 screw silver x 8, black x 2)
- 4x screws for locking the ceiling mounted hanger
- Drilling, screwdriver and ladder
- For dimensions of the camera and metal plates, please refer to **Chapter 7**
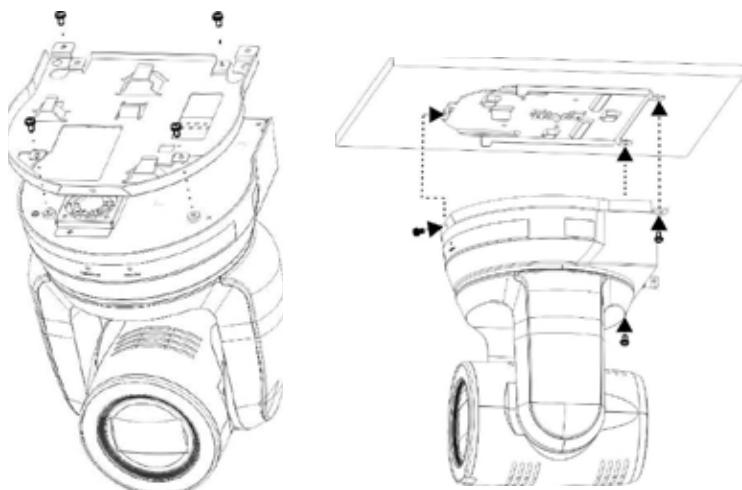
### Addendum

**(A) Installation Steps**

1. Fix the **Metal Plate** A to the camera base with:
2. 4x M3 silver screws
3. Lock the **Metal Plate B** on ceiling mounted hanger

### ! Caution:

- Please use a hanger that has obtained UL security approval.
- Please ensure space for cable access.

### 3.2.8  How to Remove

1.  Remove the connecting cables from the camera

2. Loosen the three screws that fix the metal plates **A** and **B** by pushing to the left to remove the camera

3. Remove the three screws
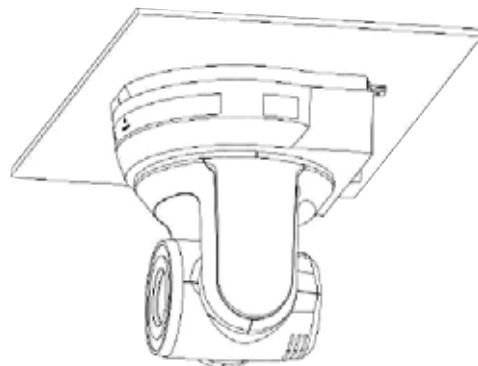
## 3.3: Connection

### 3.3.1 Connecting devices
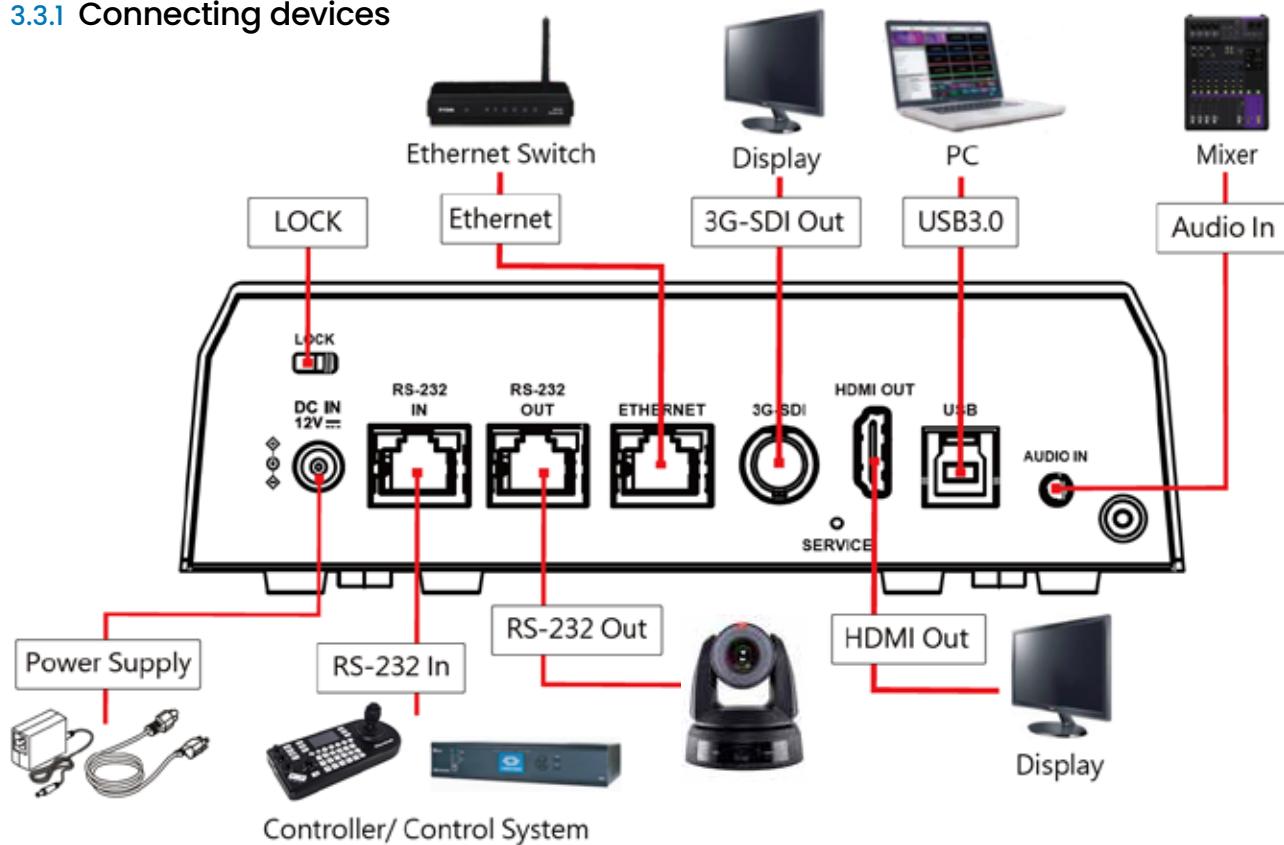


**NOTE:** Ethernet port supports PoE+ (IEEE802.3at)

### 3.3.2 RS-232 Pin Definition

**NOTE:** Daisy Chain for up to 7 connected cameras
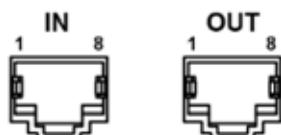


| Pin No. | IN | OUT |
|---------|-----|-----|
| 1 | NA | NA |
| 2 | NA | NA |
| 3 | GND | GND |
| 4 | TX | RX |
| 5 | RX | TX |
| 6 | DTR | DSR |
| 7 | NA | NA |
| 8 | NA | NA |

# Marshall

## Chapter 4: Remote Control & Setting Menu
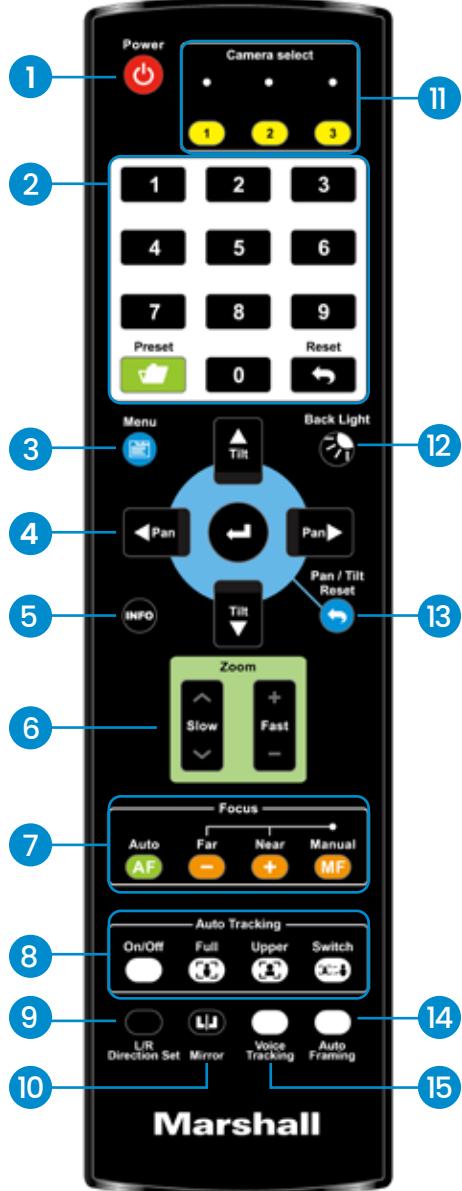


| No. | Item | Description |
|-----|------|-------------|
| 1. | Power | Power on / off |
| 2. | Preset | ■ 0-9: Click to call the preset<br>■ Preset: Assign a preset number (0-9) to save the current position<br>■ Reset: Select a preset number (0-9) to clear its position |
| 3. | Menu | Display OSD menu |
| 4. | Pan/ Tilt/ Enter | ■ Pan / Tilt: Move the camera head<br>■ Home / Enter: Go back to Home position / Execute |
| 5. | Info | Status information |
| 6. | Zoom | ■ Fast: high speed zoom / ■Slow: low speed zoom |
| 7. | Focus | ■ Auto: Auto focus<br>■ Manual: Enable Manual Focus<br>■ Far/ Near: Adjust the focus in Manual mode |
| 8. | Auto Tracking | ■ On/Off: Enable/Disable Auto Tracking<br>■ Full: Frames presenter's full body<br>■ Upper: Frames presenter's torso<br>■ Switch: Switch target to a different presenter |
| 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. | Auto Framing<br>(or ON/ OFF) | Enable/ Disable Auto framing |
| 15. | Voice Tracking<br>(or Trigger) | CV625-TB-TW-TBN-TWN not supported |

## 4.2: Setting Menu

**Press [MENU] on the remote control to call the on-screen menu. Default is indicated in bold**

| Layer 1 | Layer 2 | Layer 3 | Description |
|---|---|---|---|
| Exposure | Mode | Full Auto/ Shutter Priority/ Iris Priority/ Manual/ White Board | Exposure mode setting |
| | Exposure Comp | On/ Off | Turn on/off Exposure Compensation |
| | Exposure Comp. Level | -6-C-4 | Adjustable after Exposure Comp. s activated |
| | Spot Light | On/ Off | Turn on/ off Spot Light |
| | Spot Light Position | X(0-6)Y(0-4) | Adjustable after Spot Light is activated |
| | Gain Limit | 8-30dB | Max. limit value of electron gain |
| | WDR | Off/ 1/ 2/ 3 | WDR settings |
| | Anti-Flicker | 50Hz/ 60Hz/ Off | Activate the anti-flicker function to eliminate flicker from lighting. |
| | Shutter Speed | 1/10000-1/25 | Adjustable when the Exposure mode is set to Shutter Priority or Manual |
| | Iris Level | F1.8-C-F11/ Off | Adjustable when the Exposure mode is set to IRIS Priority or Manual |
| | Gain Level | 0~45dB | Adjustable when the Exposure mode is set to Manual |
| White Balance | Mode | 1.Auto<br>2.Indoor<br>3.Outdoor<br>4.One Push WB<br>5.ATW<br>6.Manual<br>7.Sodium Lamp | Select the color temperature<br>1.  4000k - 7000k<br>2.  3200k<br>3.  5800k<br>4.  1700k - 10000k<br>5.  1700k - 10000k<br>6.  Manual<br>7.  2800k |
| | One Push Trigger | ENTER | One push trigger |
| | Manual Red | 0-C-128 | Adjustable when the white balance mode is set to Manual |
| | Manual Blue | 0-C-128 | Adjustable when the white balance mode is set to Manual |
| Tracking | Type | Auto Tracking/ Auto Framing | |

# Marshall

| Layer 1 | Layer 2 | Layer 3 | Description |
|---|---|---|---|
| Picture | 3D NR | Off / Low/ **Typ**/ Max | 3D noise reduction |
| | Image Mode | **Default**/ Custom | Users can customize the selected image mode |
| | Gamma | 0-**C**-3 | Adjustable when **Image Mode** set to **Custom** |
| | Brightness | 0-**C**-25 | Adjustable when **Image Mode** set to **Custom** |
| | Contrast | 0-**C**-25 | Adjustable when **Image Mode** set to **Custom** |
| | Saturation | 0-**C**-25 | Adjustable when **Image Mode** set to **Custom** |
| | Sharpness | 0-**C**-11 | |
| Pan Tilt Zoom | Pan/Tilt Limit | On/ **Off** | On/ Off Set angle limit |
| | Pan Right Limit | 0-**170** | Limit the panning angle (right side) |
| | Pan Left Limit | **-170**-0 | Limit the panning angle (left side) |
| | Tilt UP Limit | 0-**90** | Limit the tilt angle (up) |
| | Tilt Down Limit | **-30**-0 | Limit the tilt angle (down) |
| | Pan Flip | On/ **Off** | Reverses the Pan direction |
| | Tilt Flip | On/ **Off** | Reverses the Tilt direction |
| | Preset Speed | 5/ 25/ 50/ 80/ **120** deg/sec | Set the robotic and zoom speed of the camera |
| | PTZ Speed Comp | On/ **Off** | Enable the zoom speed independent from the robotic speed |
| | D-Zoom Mode | **On**/ Off | Set the digital zoom limit |
| | Limit | **2x**-8x | Note<br>Digital zoom is not supported with:<br>■ 4K resolution<br>■ 1080P/ 720P, Stream/ UVC outputs |
| D-Effect | Mirror | **Off**/ Mirror/ Flip/ Mirror+Flip | Activate image rotation and/or mirroring |
| Auto Focus | AF Sensitivity | Low/ **Middle**/ High | Changes the sensitivity of the auto-focus |

| Layer 1 | Layer 2 | Layer 3 | Description |
|---|---|---|---|
| | AF Frame | Center Area/ <u>All Area</u> | Changes the focusing zone to the selected mode<br>■ Central area: focusing will be performed based on the center<br>■ Full Frame: focusing will be calculated based on the full screen |
| | Zoom tracking | On/ <u>Off</u> | Focus mode during lens zooming (It can be set to Manual Focus (MF) mode) |
| | PTZ Assist | On/ <u>Off</u> | Available when Focus is in Manual Mode<br>[Note] PTZ Assist is triggered only when the camera has moved in any axis. It will not dynamically respond to changes in the scene. |
| Ethernet | DHCP | <u>On</u>/ Off | Enable/Disable dynamic host configuration |
| | IP Address | <u>192.168.100.100</u> | Configurable when DHCP is set to Off |
| | Subnet mask | <u>255.255.255.0</u> | |
| | Gateway | <u>192.168.100.254</u> | |
| Audio | Audio In | <u>Line In</u> | 3.5m Line In |
| | Audio Enable | On/ <u>Off</u> | Turn on/off audio output |
| | Audio Volume | 0-<u>C</u>-10 | Volume Setting |
| | Audio Delay | On/ <u>Off</u> | When the audio is not synchronized with the video, enable this function to set an audio delay time |
| | Audio Delay Time(ms) | <u>-10</u>~-500ms | Set audio delay time |
| | Encode Sample Rate | <u>48 (AAC)</u> | Set the encode type and sample rate |
| System | Prompt | On/ <u>Off</u> | Turn on/off the prompt information on the display |
| | IR Receive | <u>On</u>/ Off | Turn On/off the infrared reception. When off, the remote control will not be able to control the camera. Re-start the camera to re-activate. |
| | IR Select | <u>1</u>/ 2/ 3 | Pair the remote controller with the camera. |

# Marshall

| Layer 1 | Layer 2 | Layer 3 | Description |
|---------|---------|---------|-------------|
| | Tally Lamp | On/ Off | Enables the camera's tally lamp. |
| | Tally CMMD Mode | Normal/ Link | Set whether the tally lamp is linked with RS232 commands.<br>■ Normal (Not linked): The tally lamp and mode are set separately.<br>■ When the tally lamp is on but the default mode is off, an additional command is required to set the indicator light mode<br>■ When the tally lamp is off, setting the mode will not trigger the indicator light<br>■ Link:<br>■ When the tally lamp is on, the default mode is a red light<br>■ When the tally lamp is off, setting the mode will turn on the tally lamp. |
| | Tracking Led Status | On/ Off | When enabled, LED on the front panel will flash green while the camera is tracking. |
| | Language | English | |
| | Initial Position | Last MEM/ 1st Preset | After turning on the camera, you can select the lens to be returned to Last MEM or 1st Preset<br>Note 1st Preset =Preset 0 |
| | Motionless Preset | On/ Off | The image will freeze when Preset is executed. Freeze will be released after the Preset move is completed |
| | Privacy Mode | On/ Off | 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 |
| | Protocol | VISCA | Supports VISCA protocol |
| | Baud Rate | 9600/38400 | Transmission speed of the control signal |
| | VISCA Address | 0-7 | The camera ID address can be manually assigned. |

| Layer 1 | Layer 2 | Layer 3 | Description |
|---------|---------|---------|-------------|
|  | Output Mode | 2160P 59.94/50/29.97/25<br>1080p 59.94/50/29.97/25<br>720p 59.94/50/29.97/25<br>1080i 59.94/50 | Set the output resolution<br>(1080i is only available via HDMI. If selected, SDI will still output 1080p) |
|  | Factory Reset | On/ Off | Engage factory default settings |
| Status |  |  | Display the current settings information |

## Chapter 5: Network Setting & Web Interface

### 5.1 Connecting Camera to Network

#### 5.1.1 Connection

Two common connection methods are shown below

**1.** Connect via switch or router



Cat5e cable          Cat5e cable

**2.** Connect directly via an Ethernet cable. The computer's IP address must match the network segment used by the camera.

E.g. The camera's default IP address is 192.168.100.100. The computer's IP address should be set to the same segment, such as 192.168.100.101.



Cat5e cable
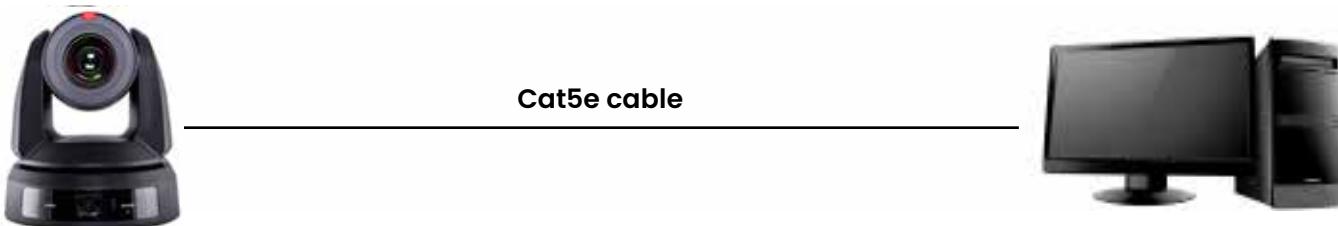
■ Modify the PC's network settings

# Marshall
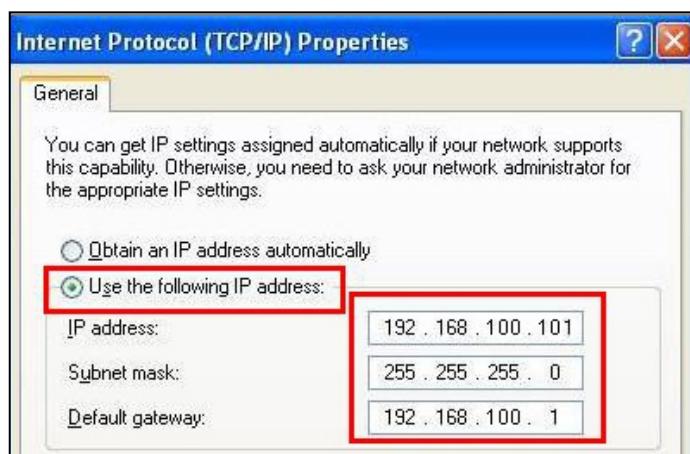
## 5.1.2 Use a Browser to view Images

■ 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 the Username and Password

  **NOTE**: Please refer to 5.2.12 System-User to change the default password.



**Marshall IP Camera**
■ Account: admin
■ Password: 9999
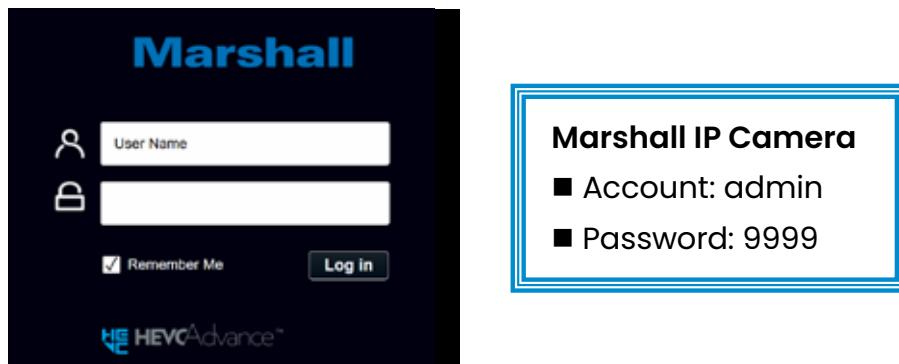
## 5.1.3 Use an RTSP Player to View Live Images

Free software can be used for RTSP connection, such as VLC, Quick Time or PotPlayer.
RTSP connection address formats are as follows:

■ RTSP Stream 1 => rtsp://camera IP:8554/hevc

                          rtsp://camera IP:8557/h264

■ RTSP Stream 2 => rtsp://camera IP:8556/h264

■ Panoramic Camera Output => rtsp://camera IP:8553/h264

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

■ rtsp://Username: Password@VC IP address:8557/stream1(or stream2)

■ To enable password authentication function, please refer to **5.2.10 System-Network**

**Example:** Open the VLC software, click [Open Network Streaming], and enter the URL:
rtsp://192.168.100.150:8557/h264
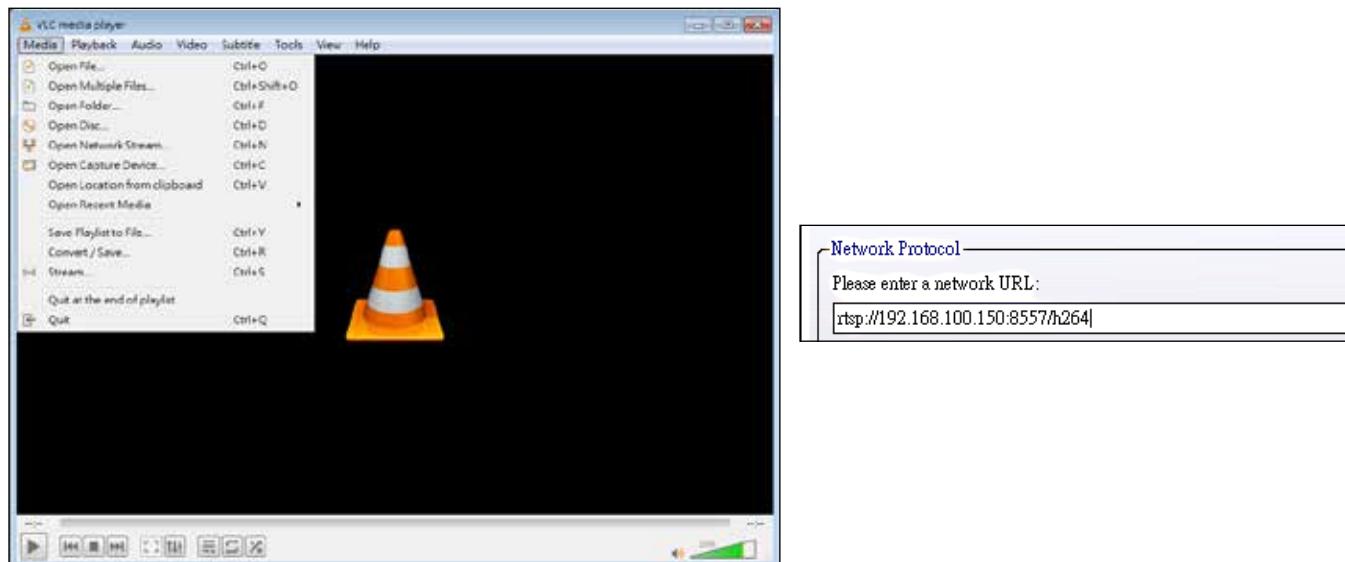
## 5.2 Web interface functions

### 5.2.1 Log in
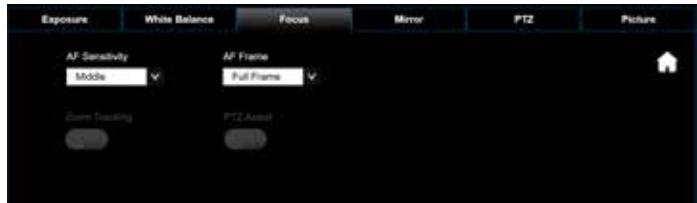


| No | Item | Function Descriptions |
|----|------|----------------------|
| 1 | User name | Enter user login credentials (default: admin) |
| 2 | Password | Enter user password (default: 9999)<br> Note Please refer to **5.2.12 System-User** to change the default password |
| 3 | Remember Me | Save the user name and password. When you log in next time, there is no need to re-enter them |
| 4 | Login | Log into the web interface |
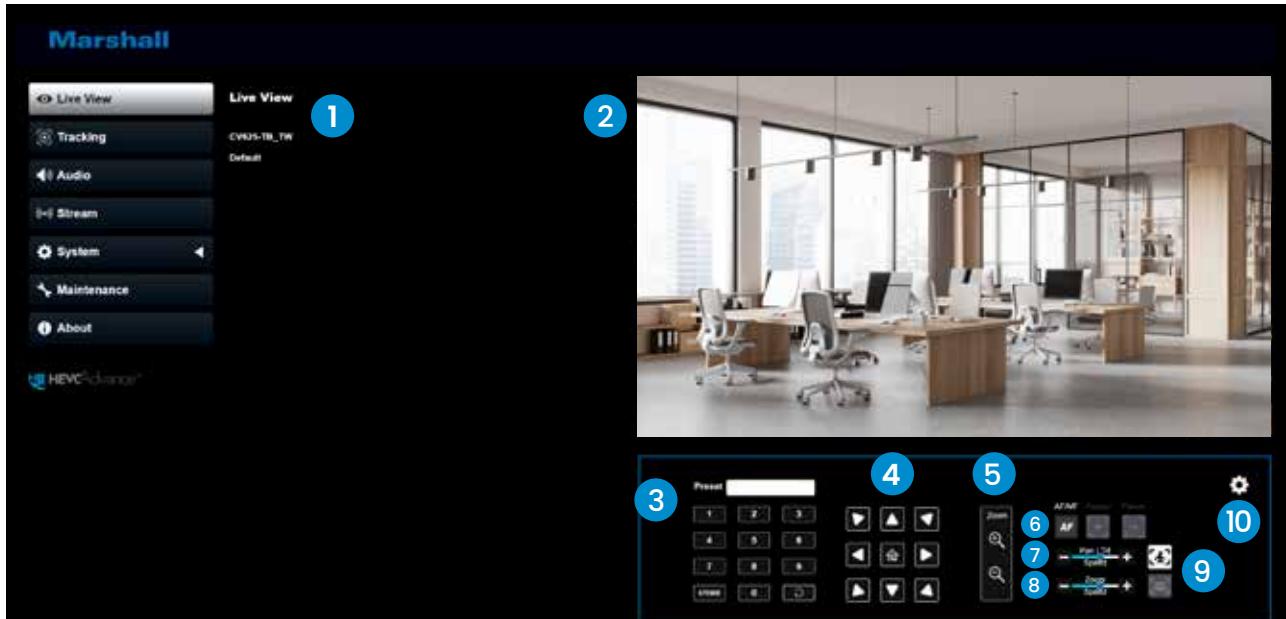
# Marshall
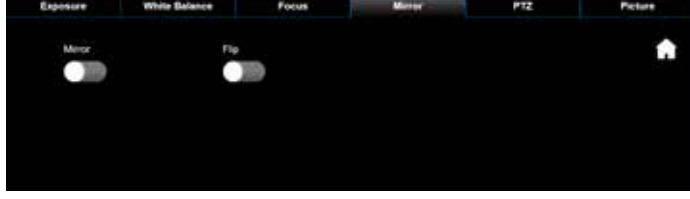
## 5.2.2 Live View



| No | Item | Function Descriptions |
|---|---|---|
| 1 | Camera ID/ Location | Display camera ID/ Location<br>Please refer to 5.2.8 System-Device |
| 2 | Preview screen | Display the live view of the camera |
| 3 | Preset setting | Select the number first and then select Store or Load |
| 4 | Pan/Tilt | Adjust the Pan/Tilt position of the camera |
| 5 | Zoom | Zoom In/Zoom Out |
| 6 | AF/ MF | Switch Auto Focus/ Manual Focus. |
| 7 | Pan/ Tilt Speed | Adjust the pan/ tilt speed |
| 8 | Zoom speed | Adjust the zoom speed |
| 9 | Tracking | Enable/ Disable Auto Tracking/ Auto Framing<br>Note Select Auto Tracking or Auto Framing |
| 10 | Camera Setting | Please refer to 5.2.3 Live View - Camera Setting for related settings |

### 5.2.3 Live View - Camera Setting
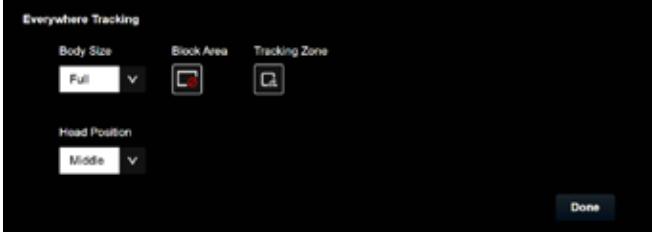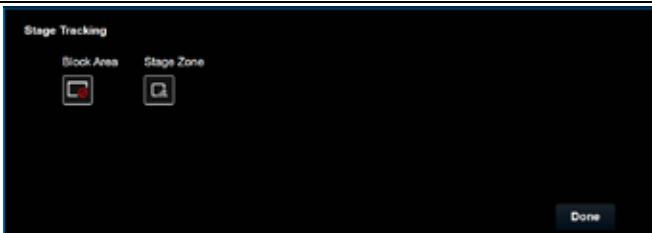


| No | Item | Descriptions |
|----|------|--------------|
| 1. | Exposure | ■ Mode: Exposure mode (Full Auto/ Shutter Pri/ Iris Pri/ Manual/ White Board)<br>■ WDR: set the level to change the dynamic range of the picture<br>■ Exposure Comp. Level: select exposure compensation level<br>■ Gain Level: adjust gain level (adjustable under "Manual"mode.)<br>■ Iris Level: adjust the aperture (adjustable under "Manual" or "Iris Priority" mode)<br>■ Shutter Speed: adjust the shutter speed (adjustable under "Manual" or "Shutter Priority" mode)<br>■ Anti-Flicker: Activate to eliminate flicker from lighting<br>■ HDR: Enable/Disable HDR (HDR is not supported when the resolution is set to 59.94 or 50 fps). |
| 2. | White Balance | <br>■ Mode: Select the color temperature<br>■ One Push: Executes a one-time color temperature adjustment (configurable in [One Push WB] mode)<br>■ Manual Red/Blue: Manually adjust red/blue color temperature |
| 3. | Focus | <br>■ AF Sensitivity: change the sensitivity of the auto focus.<br>■ AF Frame: Changes the focusing zone to the selected mode.<br>■ Zoom Tracking: The focus mode during lens zooming (can be set in "Manual")<br>■ PTZ Assist: Available when Focus is in Manual Mode<br>　Note　PTZ Assist is triggered only when the camera has moved in any axis. It will not dynamically respond to changes in the scene. |

| | | |
|---|---|---|
| 4. | Mirror | <br>■ Mirror: Set image mirroring<br>■ Flip: Set the mode at which the image is turned |
| 5. | Pan Tilt Zoom (PTZ) | <br>■ Pan/Tilt Limit: Enable to set the pan/tilt limit<br>■ Pan/Tilt Flip: Set On to reverse the Pan/Tilt direction.<br>■ Preset Speed: Set the rotation speed of the robotic head when a Preset is executed<br>■ Initial Position: Set the camera lens to return to the **Last MEM** or the **1st Preset** after POWER ON<br>　[Note]1st **Preset**= Preset 0<br>■ D-Zoom Mode: Enable/ Disable digital zoom<br>■ D-Zoom Limit: Set the digital zoom limit<br>　[Note]Stream/ USB/ 4K resolution does not support digital zoom<br>　PTZ Speed Comp: The Pan/Tilt robotic speed will vary according to the zoom position<br>■ Motionless Preset: Image will freeze when a preset is activated. Freeze will be released after a Preset camera move has been completed |
| 6. | Picture | <br>■ 3D noise reduction: 3D noise reduction settings<br>■ Image Mode: Users can customize image parameters<br>■ Brightness: Adjustable when **Image Mode** is set to **Custom**<br>■ Gamma: Adjustable when **Image Mode** is set to **Custom**<br>■ Saturation: Adjustable when **Image Mode** is set to **Custom**<br>■ Sharpness: Adjusts the sharpness level<br>■ Contrast: Adjustable when **Image Mode** is set to **Custom** |
| 7. | PTZ Control | Go back to PTZ Control page |
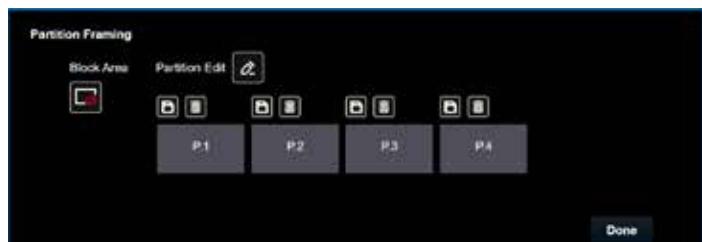
### 5.2.4 Tracking



| No | Item | Descriptions |
|---|---|---|
| 1. | Camera ID/Location | Display camera ID/ location. Please refer to 5.2.8 System-Device |
| 2. | PTZ preview | Display the live view of the main lens. |
| 3. | Panoramic preview | Display the live view of the panoramic lens |
| 4. | Lens Tilt Direction | Set the tilt position for the panoramic lens<br>[Note] Ensure the setting matches the actual installed tilt angle of the camera. Please refer to 3.2.5 Tilting the Panoramic Lens |
| 5. | People Count | Display the number of people visible to the panoramic camera |
| 6. | Tracking | Enable/ Disable Auto Tracking/ Auto Framing<br>[Note]<br>■ Select Auto Tracking or Auto Framing<br>■ Not applicable with [Center Stage] mode |
| 7. | Zoom | Zoom In/Zoom Out image |
| 8. | Pan/ Tilt | Adjust the Pan/Tilt of the camera<br>[Note] PTZ setting is not supported when tracking is enabled |
| 9. | Take turn | Switch the target<br>[Note] Applicable in [Auto Tracking] mode only |
| 10. | Setting Area | Display the configured tracking and blocked areas in the panoramic preview screen.<br>[Note] Applicable in [Auto Tracking] mode only |
| 11. | Designated ID | Display individuals the camera has detected<br>Target ID can be switched by clicking on a subject with the mouse<br>[Note] Not applicable in [Center Stage] mode |
| 12. | Tracking Mode | Set the Tracking Mode<br>■ Auto Tracking: Everywhere Tracking/ Stage Tracking/ Partition Tracking<br>■ Center Stage<br>■ Auto Framing: Auto Framing/ Partition Framing |

| 13. | Sensitivity | Set tracking sensitivity |
|---|---|---|
| 14. | Tracking Speed | Set tracking speed |
| 15. | Target Lost Time | Set a delay to take action after a tracking target is lost |
| 16. | Target Lost Action | Set the action after a tracking target is lost |
| 17. | Auto-trigger zone | After a person enters the area for 3 seconds, tracking/ framing will be triggered<br><br>Note<br>■ [Tracking Mode]> [Center Stage] is not supported.<br>■ Enabling Auto Tracking/ Auto Framing will disable the [Auto-trigger zone] function<br>■ Stopping Auto Tracking/ Auto Framing will reactivate the [Auto-trigger zone] function |
| 18. | Tracking Mode Setting | Advanced settings for tracking |
| 18.1 | Everywhere tracking | <br><br>■ Body Size: Set Full/ Half Body<br>■ Head Position: Set the head position of the person in the screen<br>■ Block Area: Click the left mouse button to draw a frame on the panoramic view to set a blocked area<br>■ Tracking Zone: Click the left mouse button to draw a frame on the panoramic view to set a designated tracking area |
| 18.2 | Stage Tracking | <br><br>■ Body Size: Set Full/ Half Body<br>■ Head Position: Set the head position of the person in the screen<br>■ Block Area: Click the left mouse button to draw a frame on the panoramic view to set a block area<br>■ Tracking Zone: Click the left mouse button to draw a frame on the panoramic view to set a designated tracking area |
| 18.3 | Partition Tracking | Set Partition Tracking. Up to 4 zones can be set |

| 18.3 | Partition Tracking | When a person enters the specific zone, the camera switches to the partition. Tracking will not be performed within the zone. Outside the zone, everywhere tracking will be active.<br><br><br><br>■ Head Position: Set the head position of the person on the screen<br>■ Block Area: Click into the Edit mode, frame by holding the left mouse button and set the blocked area<br>■ Block Area: Click the left mouse button to draw a frame on the panoramic view to set a blocked area<br>■ Partition Edit: Edit and save partition positions |
|---|---|---|
| 18.4 | Auto Framing | <br><br>■ Block Area: Click to enter the Edit mode. Frame by holding the left mouse button and set the block area |
| 18.5 | Partition Framing | <br><br>■ Block Area: Click the left mouse button to draw a frame on the panoramic view to set a block area<br>■ Partition Edit: Edit and save partition positions |

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## 5.2.5 Audio
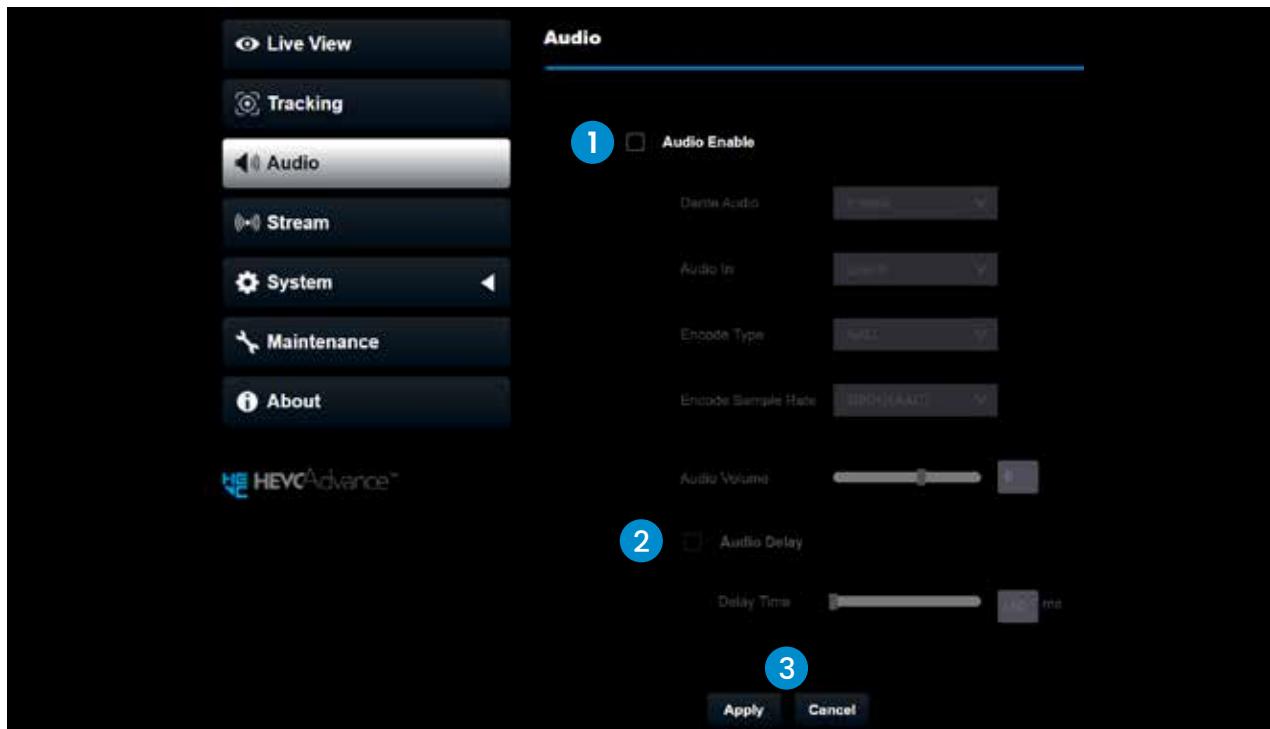


| No | Item | Descriptions |
|---|---|---|
| 1 | Audio Enable | Select to enable Audio function<br>■ Audio In: Line In<br>■ Encode type: AAC<br>■ Encode sample rate: 48KHz (AAC)<br>■ Volume: Adjust Audio Volume |
| 2 | Audio Delay | Check to set the audio delay time (10 - -500 ms) |
| 3 | Apply/ Cancel | Apply/ Cancel Audio Settings |

## 5.2.6 Stream



| No | Item | Descriptions |
|---|---|---|
| 1 | Stream | Supports 2 streams/ NDI/ Pnoramic live stream |
| 2 | Stream settings | Please refer to 5.2.6.1 Stream Settings. |
| 3 | RTSP | Select to enable RTSP<br>■ Enable/ Disable Multicast<br>  Multicast is recommended when the stream is watched by more than 4 viewers<br>■ Enable/Disable Password Authentication<br>  ■ Please refer to 5.1.3 Using RTSP Player to View the Images for the connection format<br>  ■ The username/ password is the same as the web login password of the camera. Refer to 5.2.12 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<br>For YouTube streaming, refer to 5.2.5 Audio to turn on the audio function |
| 5 | SRT | ■ Check to enable and set SRT streaming<br>  After the SRT streaming is opened, it will be connected automatically upon camera startup<br>■ The port number must be set in the range above 1024 with a maximum value of 65535<br>Note The following ports are used by the camera. Setting the ports may result in connection issues. |

**5.2.6.1 Streaming Settings**

| Function | | Stream 1 | Stream 2 |
|---|---|---|---|
| Encode Format | | HEVC/ H.264 | H.264 |
| Resolution | | 4K/ 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 | |

### 5.2.7 Stream - NDI



| 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<br>■ If no group is assigned, the machine belongs to Public. As the default of Access Manager includes Public, Studio Monitor can discover this machine.<br>■ If a group is assigned, but this group is not added into Access Manager, Studio Monitor cannot discover this machine.<br>■ If a group is assigned and this group is added into Access Manager, Studio Monitor can discover this machine.<br>Note The name can contain commas (,) to distinguish different groups<br>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.<br>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 |

### 5.2.8 System - Device



| Descriptions |
|---|
| Edit camera ID/ Location<br>  ■ Camera ID: Supports 1 - 32 characters<br>  ■ Location: Supports 1 - 30 characters<br>  ■ Supports English, Chinese and numbers. Special symbols such as "/" and "space" cannot be used<br>  [Note] Modifying this field will also update the ONVIF device name/location. |

**5.2.9** **System - Output**
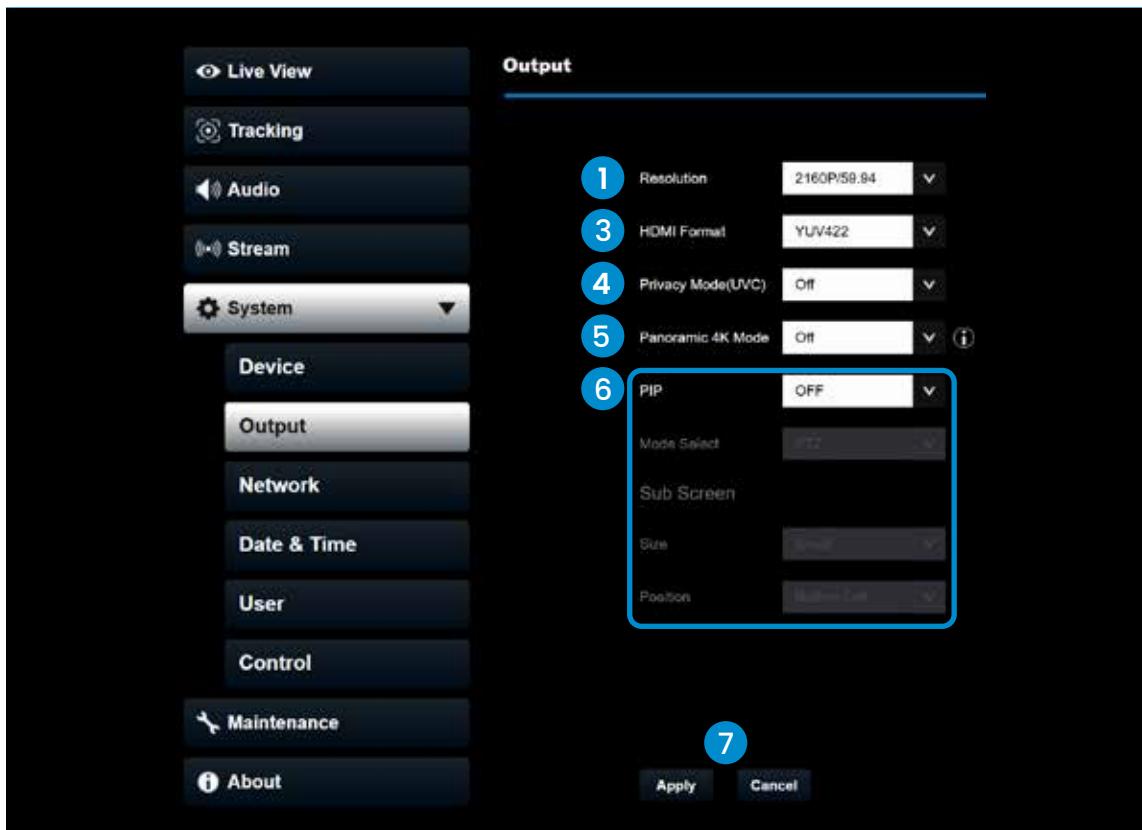


| No | Item | Descriptions |
|---|---|---|
| 1 | Resolution | Set the resolution of the camera<br>(1080i is only available via HDMI. If selected, SDI will still output 1080p)<br>Note After changing resolution, the camera will restart. The browser will need to be refreshed |
| 2 | HDMI Output Source | Configure PTZ/ Panoramic Output |
| 3 | HDMI Format | Supporting YUV422/ RGB |
| 4 | 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 |
| 5 | Panoramic 4K Mode | Supports 4K output<br>Note<br>This mode is available when the resolution is set to 4K 60/30fps<br>UVC is limited to 720p when Panoramic 4K mode is selected<br>After changing resolution, the camera will restart. The browser will need to be refreshed |
| 6 | PIP | Enable/Disable PIP(Picture-in-Picture)<br>Mode Select: PTZ / Panoramic<br>Sub Screen<br>Size: Set the size of the sub-screen<br>Position: Set the display position of the sub-screen |
| 7 | Apply/ Cancel | Apply/ Cancel Setting |

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### 5.2.10 System - Network



| 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 |

### 5.2.11 System - Date & Time



| Description |
|---|
| Display the current camera/PC date/time and set the display format. Manually set [Time Settings], Date & Time or synchronize with your PC. |

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## 5.2.12  System – User



| Description |
|---|

Add/Modify/Delete user account
- User name and password supports 4 - 32 characters
- Use uppercase, lowercase letters or numbers. Special symbols cannot be used
- Account permissions:
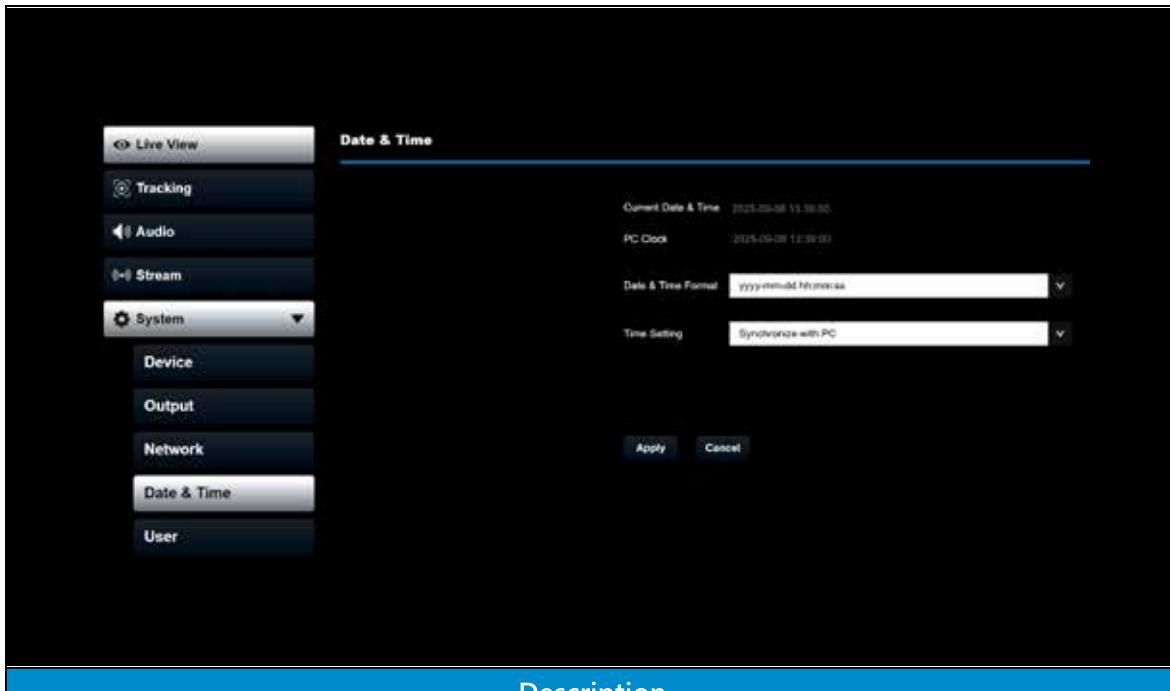
| User Type | Admin | Operator | Viewer |
|---|---|---|---|
| Live View | V | V | V |
| Settings | V | V | X |
| Account management | V | X | X |

Note  Performing a factory reset will clear all user data.

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| No | Item | Function Descriptions |
|----|------|----------------------|
| 1 | Protocol | Supports VISCA protocol |
| 2 | Baud Rate | Select the transmission speed of the control signals |
| 3 | VISCA address | The camera ID address 0 - 7 can be assigned |
| 4 | Tracking LED status | When enabled, the LED on the front panel will flash green during tracking |
| 5 | Tally Lamp | Enable/ disable the tally lamp |
| 6 | Tally CMMD Mode | Set whether the tally lamp is linked with RS232 commands<br>■ Normal (Not linked): The tally lamp and mode are set separately<br>　When the tally lamp is on but the default mode is off, an additional command is required to set the indicator light mode<br>　When the tally lamp is off, setting the mode will not trigger the indicator light<br>■ Link:<br>　When the tally lamp is on, the default mode is red light<br>　When the tally lamp is off, setting the mode will turn on the tally lamp. |
| 7 | Apply/ Cancel | Apply/ Cancel Setting |

### 5.2.14 Maintenance
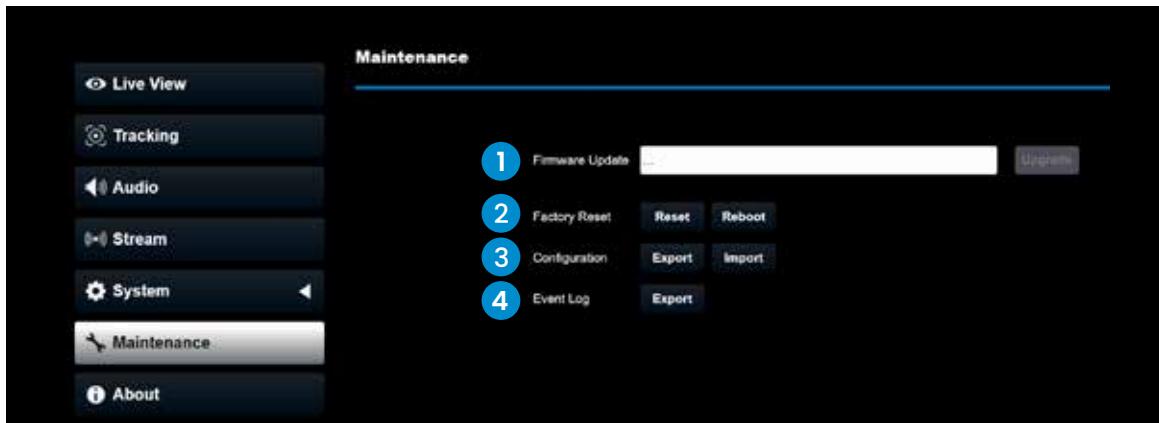


| No | Item | Descriptions |
|---|---|---|
| 1 | Firmware Update | Click [....] to select the firmware file and click [Upgrade] to start updating<br><br>**Note**<br>■ The update process takes 2-3 minutes<br>■ Do not operate or turn off the power of the device during the update to avoid firmware failure |
| 2 | Factory Reset | ■ Reset all configurations to default settings<br>■ Reboot the camera |
| 3 | Configuration | Save parameters as a Profile. Users can share camera setup parameters |
| 4 | Event Log | If the camera operates abnormally, please export event log and provide it to Marshall Electronics for investigation |

### 5.2.15 About



| Description |
|---|
| Display the firmware version, serial number, and other related information. For technical support, please scan the QR code at the bottom right. |

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

| No. | Problems | Solutions |
|---|---|---|
| 1. | No power to the device | 1. Make sure you plug in the power cord<br>2. When using a PoE connection, ensure that the power supply supports PoE+ (IEEE802.3at) |
| 2. | There is no image output from camera | 1. Check the power supply or PoE supply functions<br>2. Confirm whether the camera resolution can be used with the connected display<br>■ If the camera is set to 4K resolution, output, confirm the display supports 4K output<br>3. Replace the cable and make sure it's not faulty |
| 3. | Camera image is severely delayed | Use 60/50 fps rather than 25/30 fps signals |
| 4. | RS-232 cannot be controlled | 1. Confirm the connection is correct (RS-232 In/ Out)<br>2. Please make sure the Baud rate setting is the same as the control device |
| 5. | ONVIF software cannot discover the camera | Please make sure that [System]> [Device]> [Camera ID]/ [Location] in the web page uses only English letters or numbers. The ONVIF software cannot find the camera if you use special symbols or space |
| 6. | The camera does not save 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<br>■ OSD Menu: [System]> [Initial Position]<br>■ Web page: [Live View]> [Setting⚙]> [PTZ]> [Initial Position] |
| 7. | How to log into the webpage if you have forgotten the password | Please contact your local distributor or Marshall technical support |
| 8. | Admin password when deleting the User Account | Please contact your local distributor or Marshall technical support |
| 9. | No image on SDI output when resolution is set to 1080i | This camera does not support 1080i output over SDI. If 1080i is selected, the SDI port will continue to output 1080p.<br>If 1080i is required, consider using an HDMI-to-SDI converter to output the image from the HDMI port. |
| 10. | No Image on HDMI output | Check EDID date from HDMI displays. EDID data is required for HDMI displays to function correcctly. |

# Chapter 7: Addendum

## 7.2 Camera Size

- Length x Width x Height: 174 x 186.65x 197.11mm

- Weight: 2.2Kg
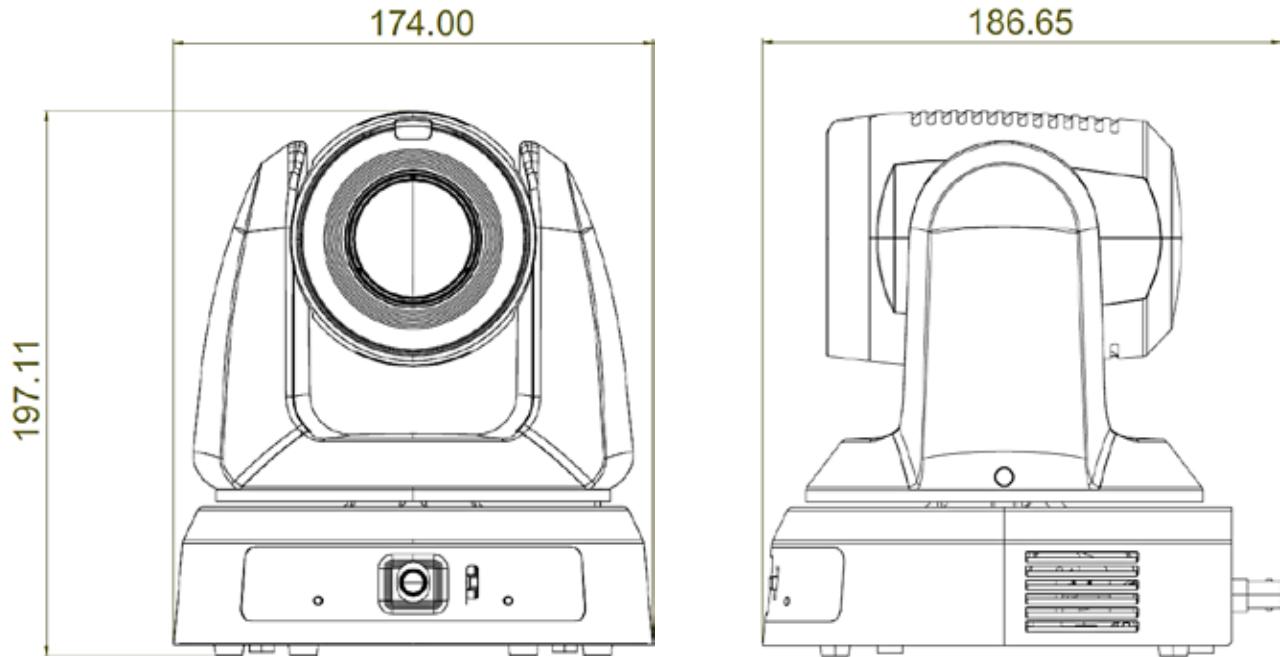


## 7.3 Dimensions of the Base

The camera can be mounted on a 1/4"-20 UNC PTZ tripod head by using the locking holes on the bottom.

# Marshall
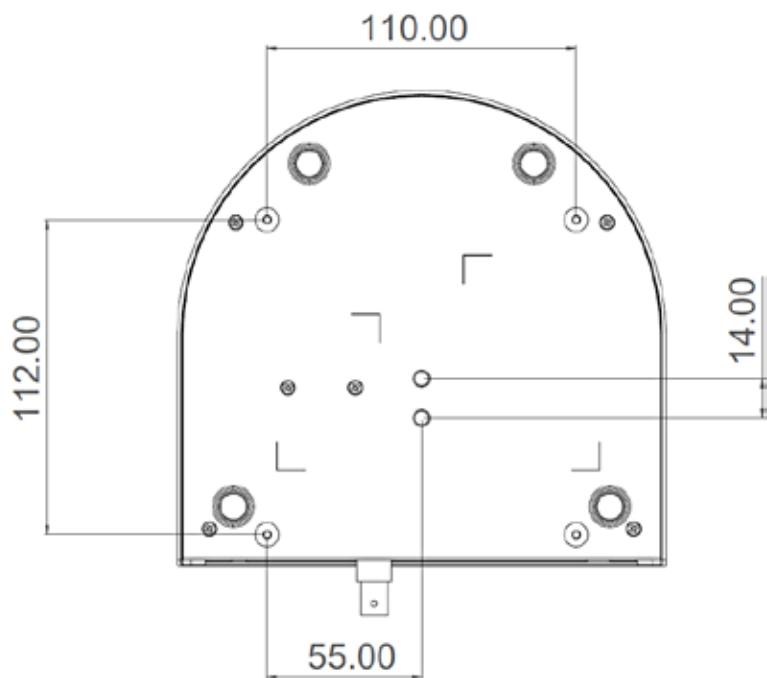
## 7.4 Metal Plate Diagram

**(1)** Metal Plate A - Camera Side



Metal Plate A - Camera Side

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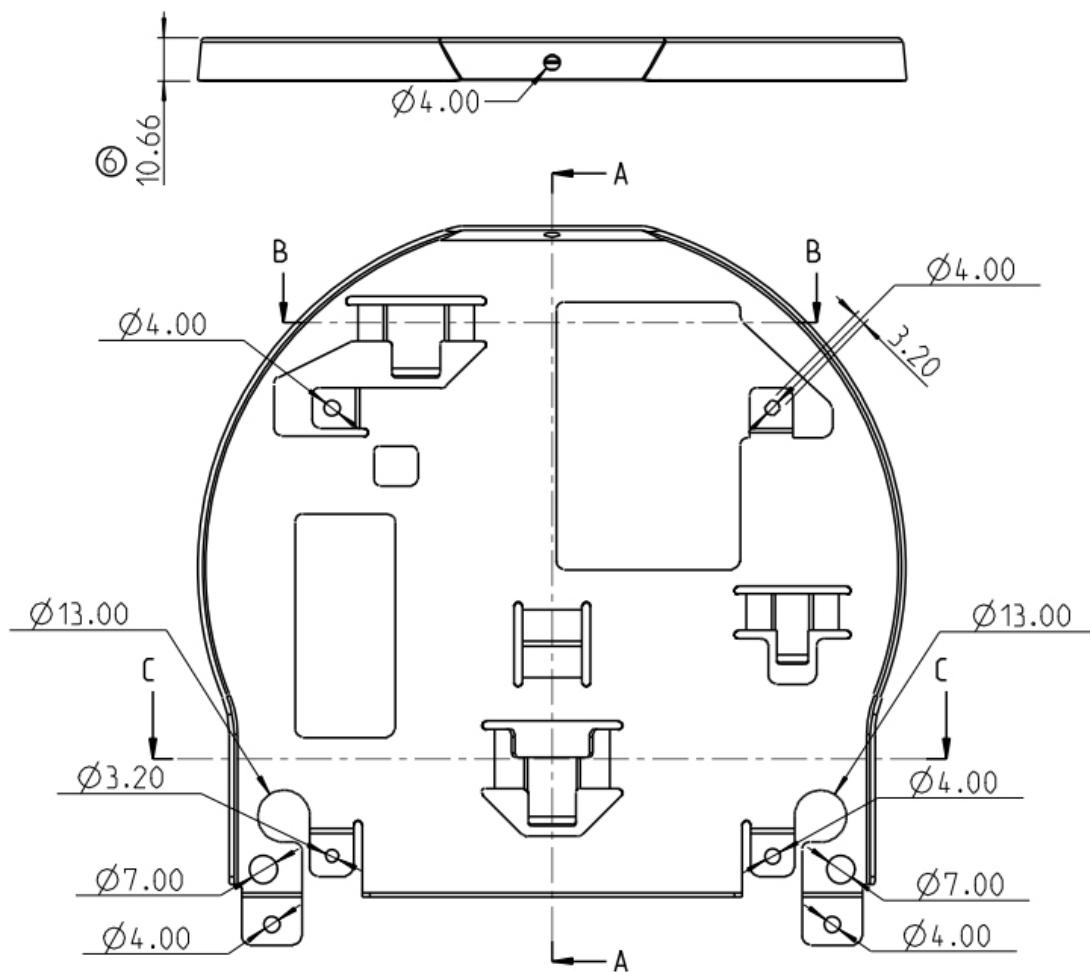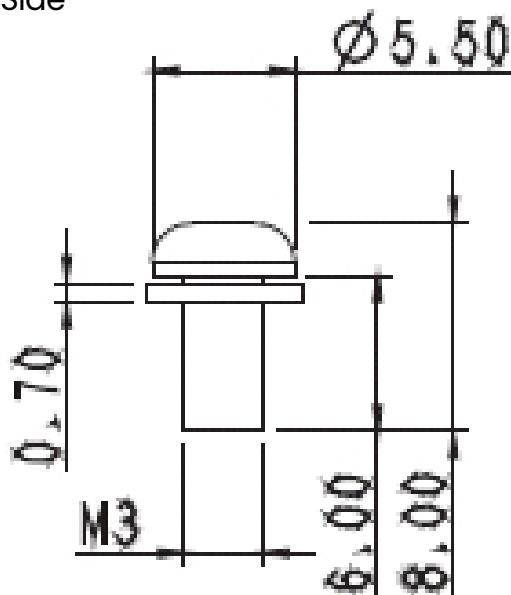
**(2)** Metal Plate B - Ceiling Side



Metal Plate B - Ceiling Side

# Marshall
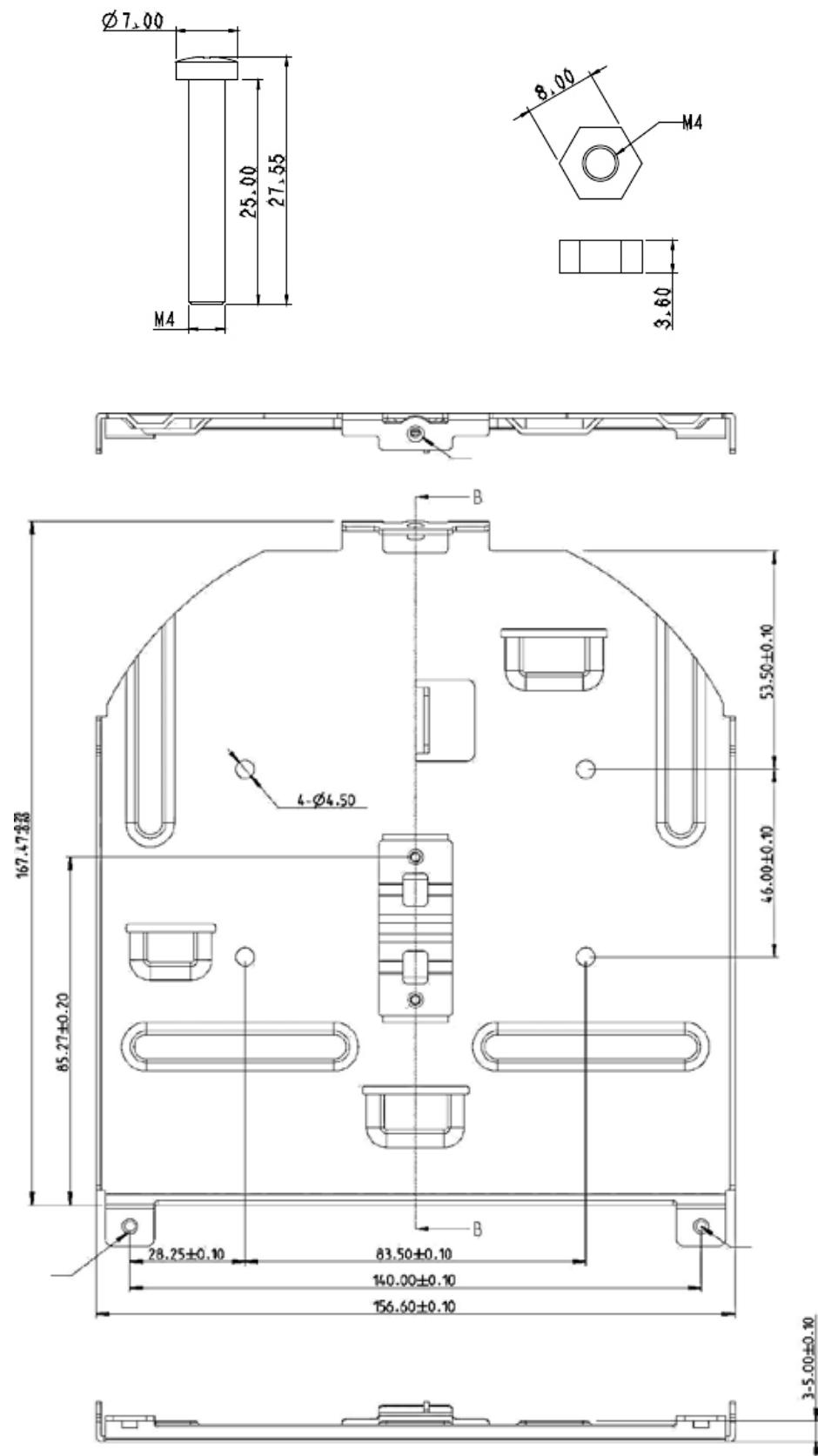
## Chapter 8: Safety Instructions

Always follow these safety instructions when setting up and using PTZ Video 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. **To prevent sparks or a fire, do not insert the product's power plug into a multi-plug or power strip.**

**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 if the following situations happens:**

- **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.**

- **Installation**

| | 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 manual for 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.

- 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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## Copyright Information

## Warranty

For Warranty information please refer to Marshall website page:

https:marshall-usa.com/company/warranty.php

www.marshall-usa.com