

CamConnect AI-Box1/ AI-Box1N

User Manual - English



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multilingual user manual, firmware, drivers,
and control modules, please visit
<https://www.MyLumens.com/support>

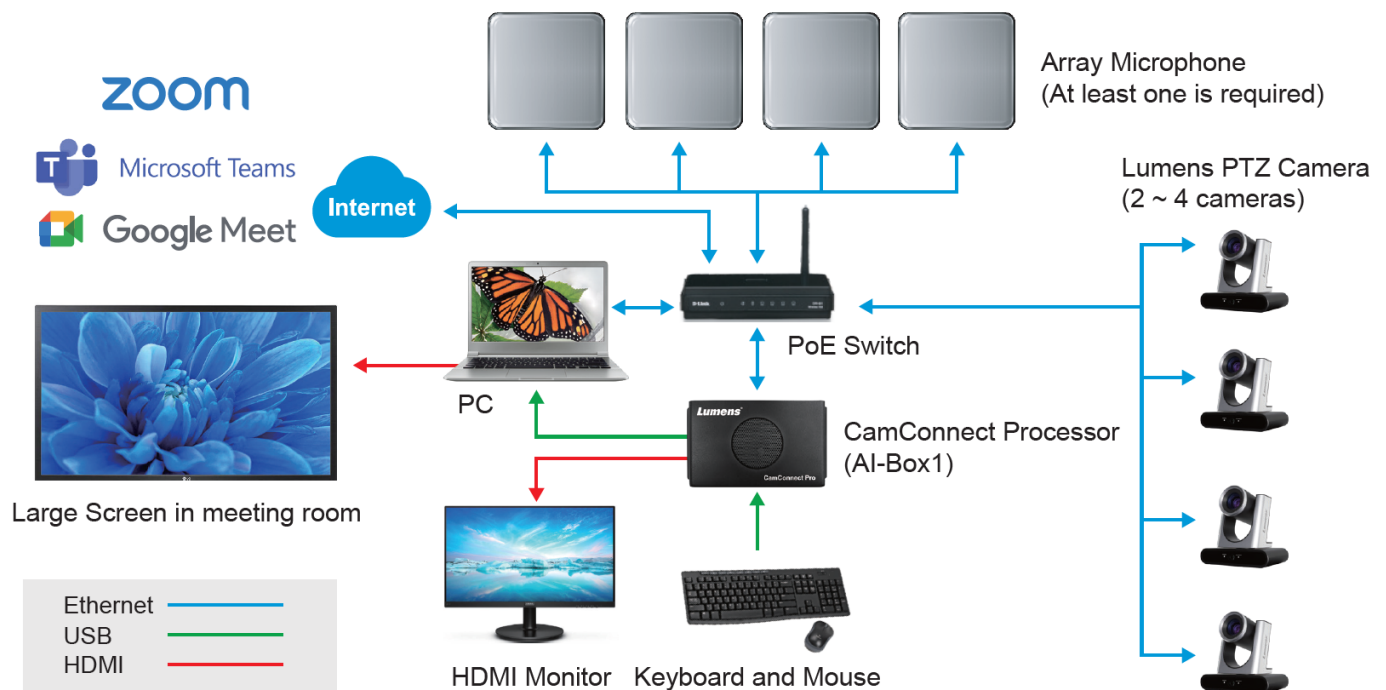
Table of Contents

1.1	System Connection.....	3
1.2	AI-Box1 IO Interface	3
Chapter 2	Operation Interface.....	4
2.1	(A)Device Setting.....	4
2.2	(B)Camera Control & Status.....	5
2.3	(D)Device & Camera Mapping	7
2.4	(E)Settings - System.....	8
2.5	(E)Settings – Network	9
2.6	(E)Settings – Dante	9
2.7	(F)Video Output Settings	10
2.8	(G)Start Video Output	12
2.9	(H)Extension	12
2.10	(I)Virtual Keyboard.....	14
2.11	(J) Zone Setting.....	14
2.12	(K) Firmware Information	15
Chapter 3	Web Interface.....	16
3.1	Device Settings	16
3.2	Zone Setting	19
3.3	Mapping Overview	21
3.3.1	Multiple Microphone Mapping Setup	23
3.4	Device - Camera List	26
3.5	Conversation Mode (Beta)	27
3.5.1	Auto	27
3.5.2	Advanced	28
3.6	Video Output Settings.....	29
3.7	System- Network.....	30
3.8	System- Profile	31
3.8.1	System- Settings-Device.....	31
3.8.2	System- Settings- Auto Connection	32
3.8.3	System – Settings - Dante	33
3.8.4	System – Settings - Extension Setup.....	34
3.8.5	System – Settings - Web User	35
3.8.6	System- Settings- Maintenance	36
3.9	About	36
Chapter 4	Connect to video conferencing software	37

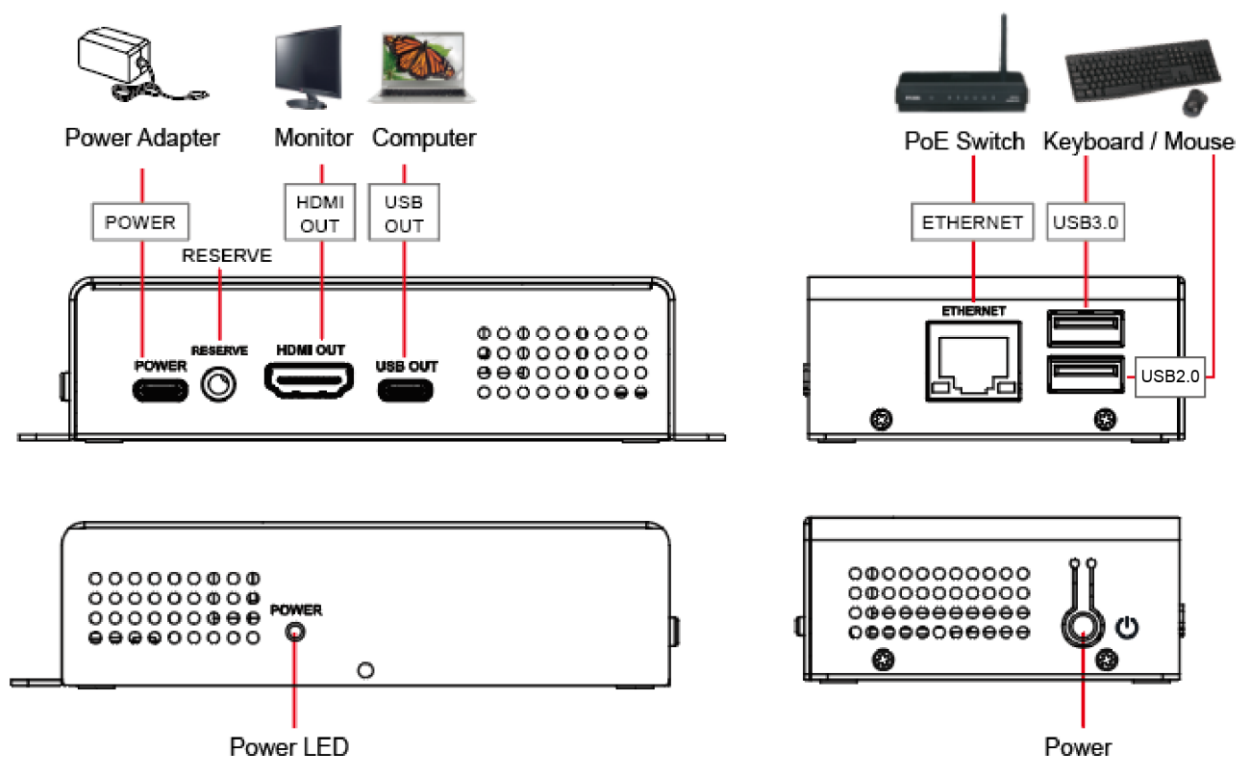
Chapter 5	Microphone Settings	38
5.1	Sennheiser	38
5.2	Shure.....	38
Chapter 6	Troubleshooting	39
Chapter 7	System Message	40
	Safety Instructions	41
	Copyright Information	43

System Connection

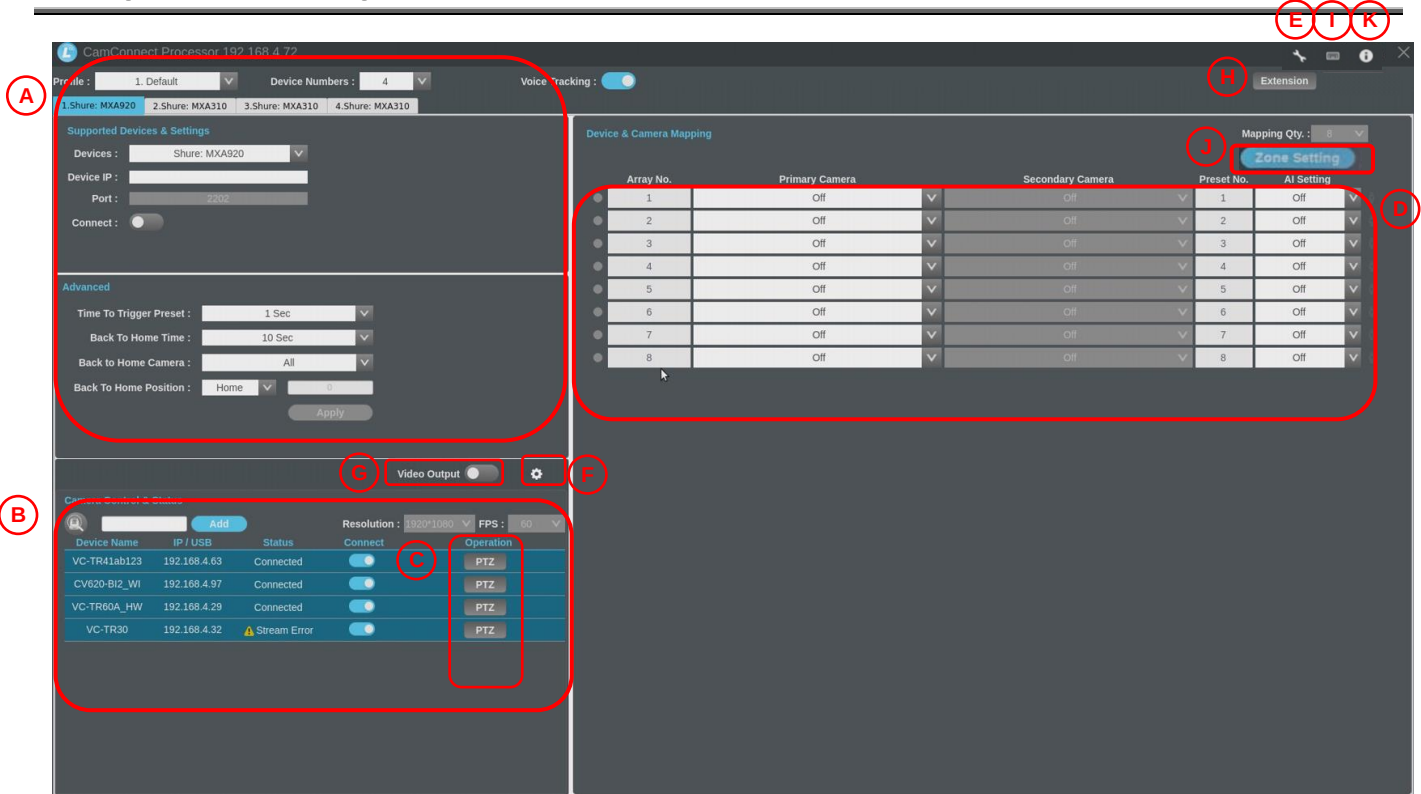
1.1 System Connection



1.2 AI-Box1 IO Interface



Chapter 2 Operation Interface



2.1 (A) Device Setting

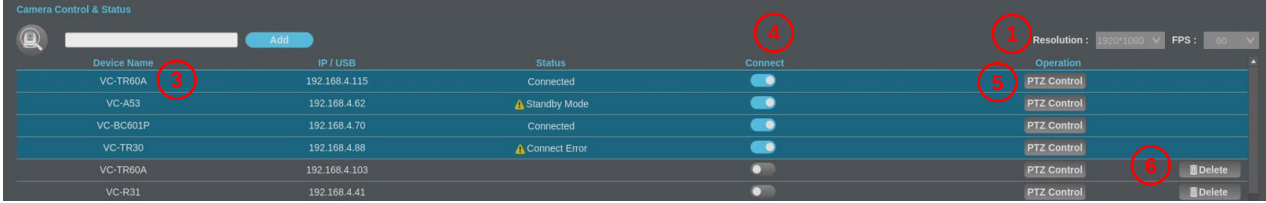
The screenshot shows the CamConnect Processor interface with the following callouts:

- 1**: Device Numbers dropdown.
- 2**: Device List tabs.
- 3**: Devices dropdown.
- 4**: Device IP input field.
- 5**: Port input field.
- 6**: Connect toggle.
- 7**: Voice Tracking toggle.
- 8**: Time To Trigger Preset dropdown.
- 9**: Back To Home Time dropdown.
- 10**: Back To Home Camera dropdown.
- 11**: Back To Home Position dropdown.
- 12**: Apply button.
- 13**: Video Output toggle.

No	Item	Function Descriptions
1	Device Number	Select the desired number of microphones to connect
2	Device List	Displays microphones in individual tabs
3	Devices	Select Microphone Device

		Note Please use a supported microphone (see Lumens website)
4	Device IP	Enter the IP address of the microphone
5	Port	Displays the microphone's port ▪ Shure: 2202 ▪ Sennheiser: 45 ▪ Sennheiser TCCM: 443 ▪ Nureva: 8931 ▪ Yamaha: 49280 ▪ Audio-Technica : 17300 Note Only Nureva allows customized PORT
6	Connect	Enable/Disable setting mode
7	Voice Tracking	When enabled, signals received by a microphone triggers camera preset positions. When setting camera presets, it is important to disable this function.
8	Audio Trigger Level > dB	Trigger when an audio source exceeds the selected dB value. ▪ Sennheiser:-90~0 (recommended -55) ▪ Nureva:0~120 (recommended 40+) ▪ Audio-Technica:0~60 (recommended 30) ▪ Yamaha:0~126 (recommended 80+ for RM-CG / 70+ for RM-W)
9	Time To Trigger Preset	Audio Reception Delay Settings When a second sound trigger occurs, there will be a delay in triggering camera preset based on the configured duration in seconds.
10	Back To Home Time	Return the camera to its home position If there is no audio input, the camera will move to its home position after the set seconds.
11	Back to Home Camera	Select one camera or select all cameras to move to home position.
12	Back To Home Position	Camera will return to either Home position or a specific preset position.
13	Apply	Confirms changes to settings.

2.2 (B) Camera Control & Status

		
No	Item	Function Descriptions
1	Resolution / FPS	Resolution/FPS Settings (must match the camera output settings)
2	Refresh / Add	Click  to search for a camera on the network or manually enter the specified IP, and click [Add] to add it

		Note Please ensure that the camera and AI-Box1 are on the same network segment.
3	Device Name	Displays discovered cameras
4	Connect	Click to connect. Connected camera are highlighted in blue.
5	PTZ Control	Click to enable PTZ control Refer to 2.2.1 PTZ Control for function description
6	Delete	Delete a camera from the list.

2.2.1 (C)PTZ Control



No	Item	Function Descriptions
1	Preview window	Display the camera output
2	Mirror / Flip	Mirror or flip the image
3	Pan/Tilt/Home	Adjust the Pan/Tilt position of the camera Click [Home] button to return to the camera's central position
4	Preset setting	- Call Preset Position : Click a number first and then - Store Preset Position : Click a number first and then
5	AF/MF	Switch to Auto/Manual camera lens focus
6	Zoom	Lens Zoom In / Out
7	Exit	Exit the PTZ Control page

2.3 (D)Device & Camera Mapping

When a microphone is connected, the camera will move to a preset position corresponding to the sound position detected by the microphone.

Device & Camera Mapping

Mapping Qty. : 8

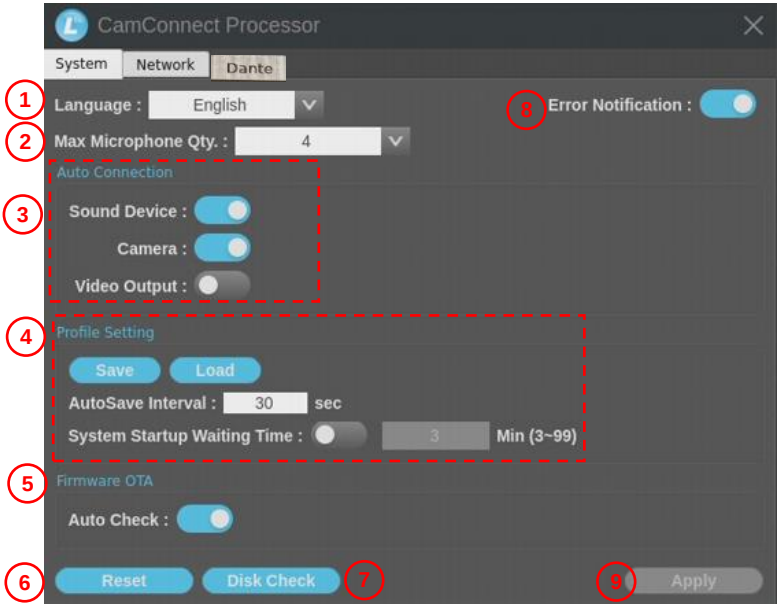
Azimuth Angle	Primary Camera	Secondary Camera	Preset No.	AI Setting
0 ~ 45	VC-TR41ab123(192.168.4.63)	VC-TR60A_HW(192.168.4.29)	1	Off
45 ~ 90	Off	Off	2	Off
90 ~ 135	Off	Off	3	Off
135 ~ 180	Off	Off	4	Off
180 ~ 225	Off	Off	5	Off
225 ~ 270	Off	Off	6	Off
270 ~ 315	Off	Off	7	Off
315 ~ 360	Off	Off	8	Off

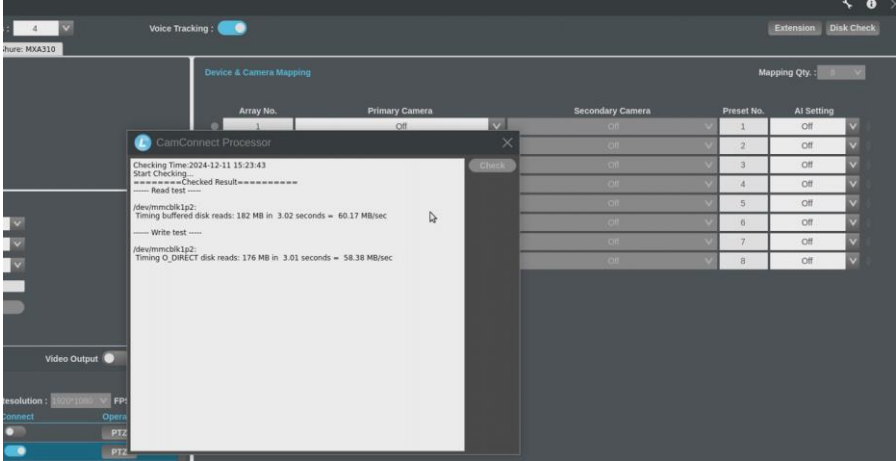
Mic. Array No.: 7

No	Item	Function Descriptions
1	Mapping Qty	Select the number of locations to be mapped. Up-to 128 presets supported. Note Shure MXA310/ MXA910/ MXA920/ Audio-Technica no supported Note Not supported with Shure MXA310/ MXA910/ MXA920 and Audio-Technica microphones.
2	Indicator light	Amber Light Indicates that sound is being detected, but the trigger condition has not been met, so the preset has not been recalled. Green Light Indicates that sound is being detected and the trigger condition has been met, so the preset has been recalled.
3	Array No. Azimuth Angle	- Array No.: Applicable to Shure / Audio-Technica devices - Azimuth Angle: Applicable to Sennheiser, Nureva, and Yamaha devices. Angles can be manually adjusted
4	Primary Camera	Select a desired Primary camera from the dropdown menu. If unable to connect with a previously saved camera, will be displayed.
5	Secondary Camera	Select the desired Secondary camera from the dropdown menu. When a camera is triggered to a preset position, and another preset position for the same camera is subsequently triggered, the Secondary camera will be the prior one to move to instead of the primary camera.

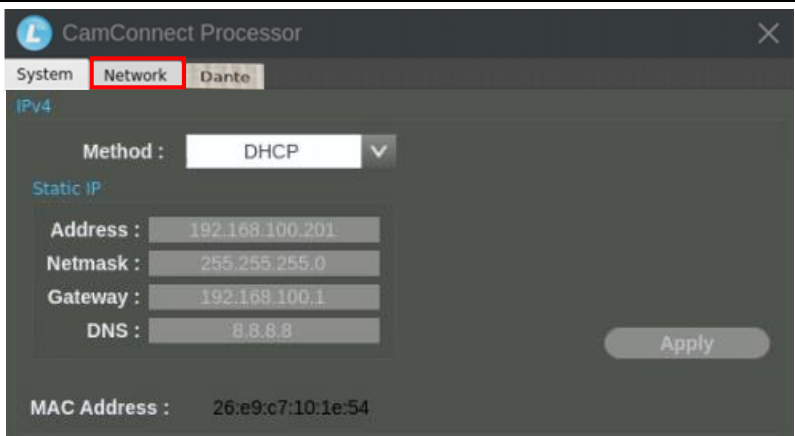
		Note: This feature is available only when Seamless Switching is enabled. If unable to connect with a previously saved camera, ⚠ will be displayed.
6	Preset No.	Select the preset position for the camera from the dropdown menu
7	AI Setting	Enable/Disable AI Tracking ➤ Continuous Tracking : The camera will continuously track the individual, keeping them in the center position. ➤ Center Stage : When the camera has been triggered to a preset position, the individual will be centered on the screen for 5 seconds before tracking stops.
8	Mic. Array No./ Mic. Azimuth Angle	Displays current trigger position / angle information of the camera.

2.4 (E)Settings - System

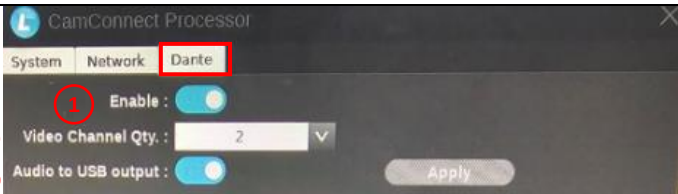
		
No	Item	Function Descriptions
1	Language	English
2	Max Microphone Qty.	Connect up-to 24 microphones.
3	Auto Connection	Auto-connected items setting after AI-Box1 power is turned on. ▪ Sound Device ▪ Camera ▪ Video Output
4	Profile Setting	▪ Save/ Load: Save or Load the desired profile. ▪ AutoSave Interval: Set the auto saving interval. ▪ System Startup Waiting Time: Set startup waiting time. After the AI-Box1 powers on, it will automatically search for microphones and cameras. If any connected device has a long boot-up time, the AI-Box1 may fail to connect properly when all devices are powered on simultaneously. To prevent

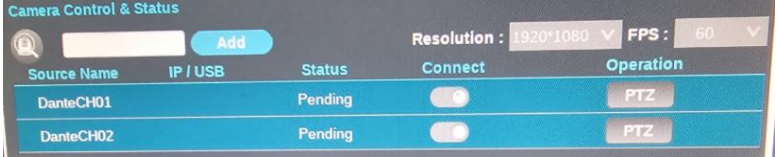
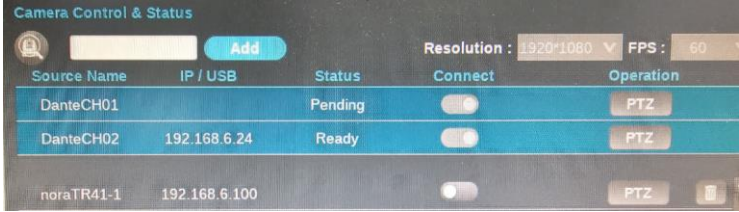
		this issue, please adjust the system's startup delay based on your current environment.
5	Firmware Auto Check	Automatically checks for firmware updates.
6	Reset	Resets the CamConnect Pro AI-Box1.
7	Disk Check	Measure the reading from the SD card to check if it is working properly. The reading data can be provided to Lumens personnel for further inspection. 
8	Error Notification	Turns on/off error message and notifications.
9	Apply	Confirm and apply settings.

2.5 (E)Settings – Network

		
No	Item	Function Descriptions
1	Network	Choose either DHCP or Static. The IP address can be modified in Static mode. Click Apply to save.

2.6 (E)Settings – Dante

		
No	Item	Function Descriptions

1	Enable	Enable or disable the Dante function. <Remark> Although the Dante section is visible even when the unit does not have Dante, it will not function unless the unit is Dante activated.
2	Video Channel Qty:	Choose from 0 to 4 to decide how many Dante devices will be displayed in the camera search list.  Use the Dante controller software to connect the desired Dante device. Once the connection is established, the camera's status will show Ready. 
3	Audio to USB output	Transmit Dante audio over USB output.

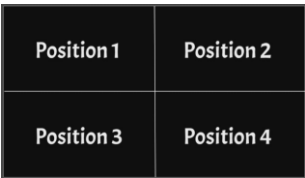
2.7 (F) Video Output Settings

		
No	Item	Function Descriptions
1	Video Output Mode	Select the HDMI+UVC or HDMI+RTSP output mode. The RTSP stream URL for HDMI+RTSP is as follows: rtsp://<AI-BOX1 IP>:8557/h264

		Note RTSP supports up to 4 simultaneous streams. <Note> When HDMI+UVC is selected, the HDMI frame rate may decrease to ensure stable UVC output. If HDMI output is the priority, select HDMI as the output mode.
2	Resolution	Set the video output resolution. 1920 × 1080 1280 × 720
3	FPS	Set the video output frame rate. 60 50 30 25
4	Video Output Layout	Configure the layout of the video output according to the provided reference in section 2.5.1 Video Output Layout - Cross: 4-split screen - PBP: Picture by Picture screen - Crop: Screen cropping function Note Choose either Cross/PBP only
5	Seamless Switching	The system is set up for single screen output, and camera switching is triggered by the microphone signal.
6	Source Position	Switch the camera display position, select "[Custom]" and then click on "[Edit]" to enter the editing mode. 

2.7.1 Video Output Layout

	Connecting with 1 camera	Connecting with 2 cameras	Connecting with 3 cameras	Connecting with 4 camera
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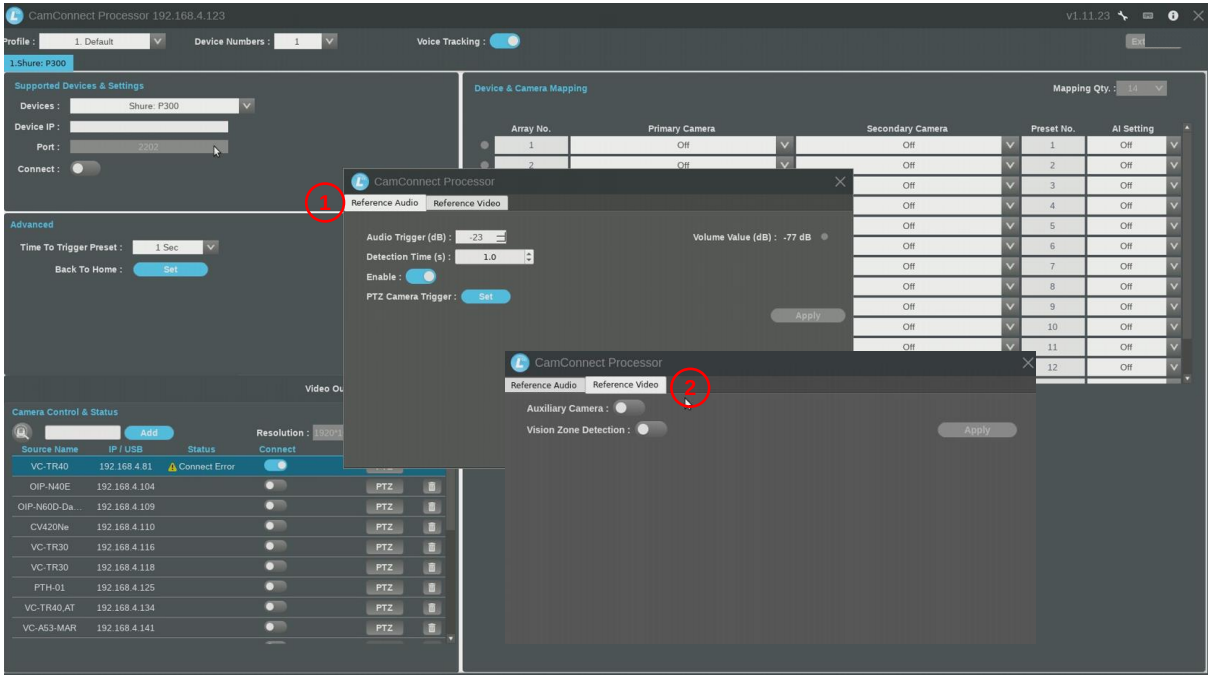
Cross				
PBP				

	Crop On	Crop Off
Crop		

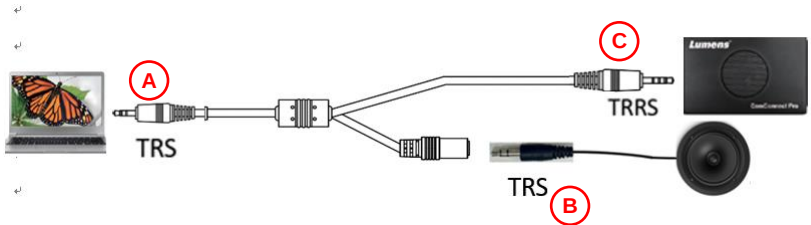
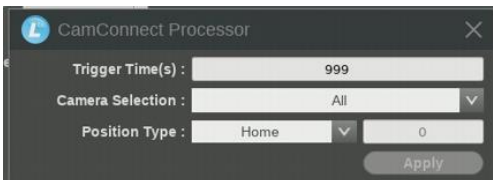
2.8 (G)Start Video Output

Click to output the camera video via HDMI+UVC or HDMI+RTSP.

2.9 (H)Extension



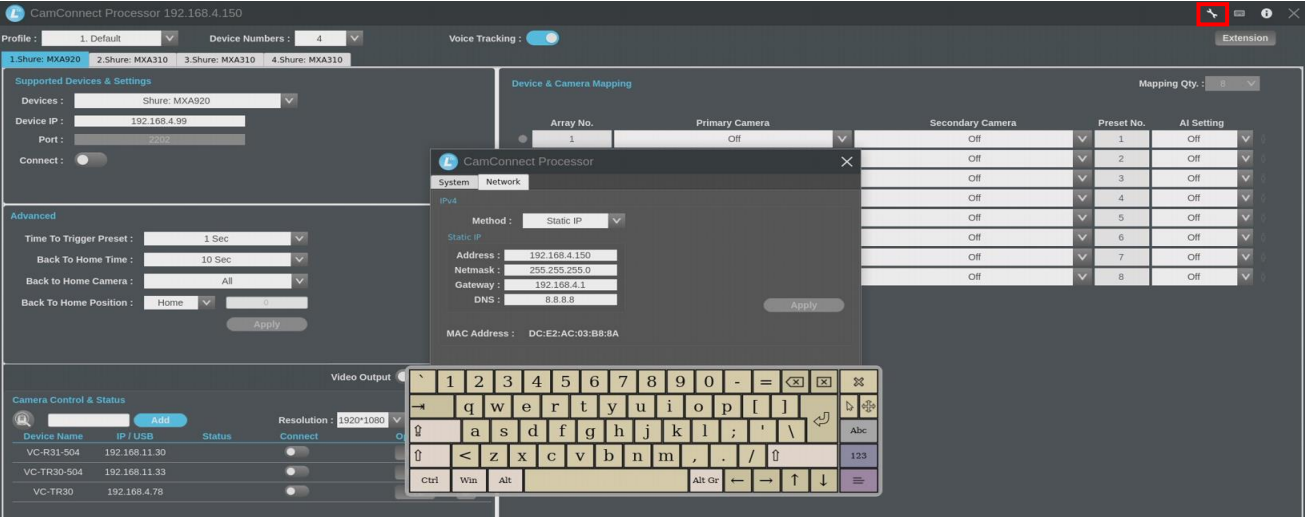
No	Item	Function Descriptions
1	Reference Audio (An audio cable splitter is required to enable this function.)	Scenario Application In a conference meeting, the microphone might pick up sound from the other side, accidentally triggering the camera and causing it to move to an unwanted preset position. With Reference Audio, the sound can now be censored and blocked to minimize interruptions from the other side, preventing the camera from moving to an

		unintended position. Connection: Converge the audio signals from CamConnect Pro (C) and the speaker (B), so they can be sent to a computer (A). Please refer to the connection method below to create the cable and make the connection.  Audio Trigger(dB): Set the audio detection threshold (-100~0 dB). The microphone will only trigger detection when the volume exceeds the set threshold. Detective Time(s): Set the duration of the detection (0~10 seconds) Enable: On / Off PTZ Camera Trigger Set: 1. Trigger Time: Set the range from 0 to 999 seconds. When set to 0, the camera will never be triggered. 2. Camera Selection: Select all cameras or a specific camera only. 3. Position Type: Choose between the home position or a specific preset position.  Apply: Click to apply the settings.
2.	Reference Video (The Lumens BC200 camera is required to enable this function.)	Scenario Application The camera may be triggered by any sound, whether it is caused by a human or just incidental noise. With the Lumens BC200 auxiliary camera, the system will no longer be triggered by sound alone. It will also use AI face recognition to detect people on site. The camera will only be triggered when an audio source is accompanied by a human face that can be detected. Connection: The Lumens BC200 auxiliary camera must be connected. The BC200 is set to be released in Q1 2025. For a more detailed introduction, please refer to the BC200 user manual at that time. Auxiliary Camera: Enable or disable the BC200 camera.

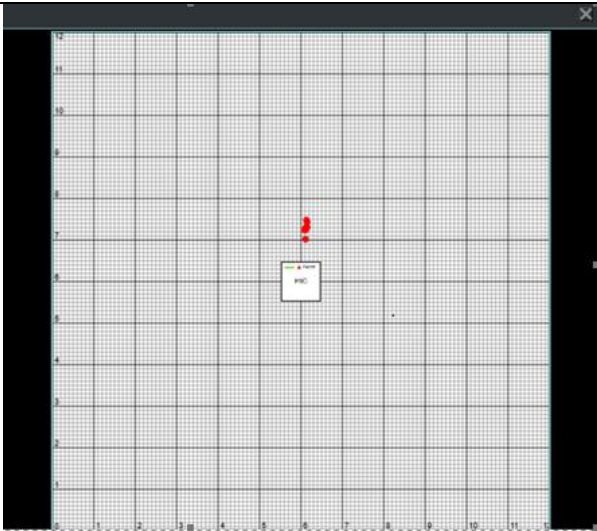
		Vision Zone Detection: This feature is not functional at the moment and is not for use. Apply: Click to apply the settings.
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2.10 (I)Virtual Keyboard

Click the keyboard icon to display the virtual keyboard.



2.11 (J) Zone Setting



Function Descriptions

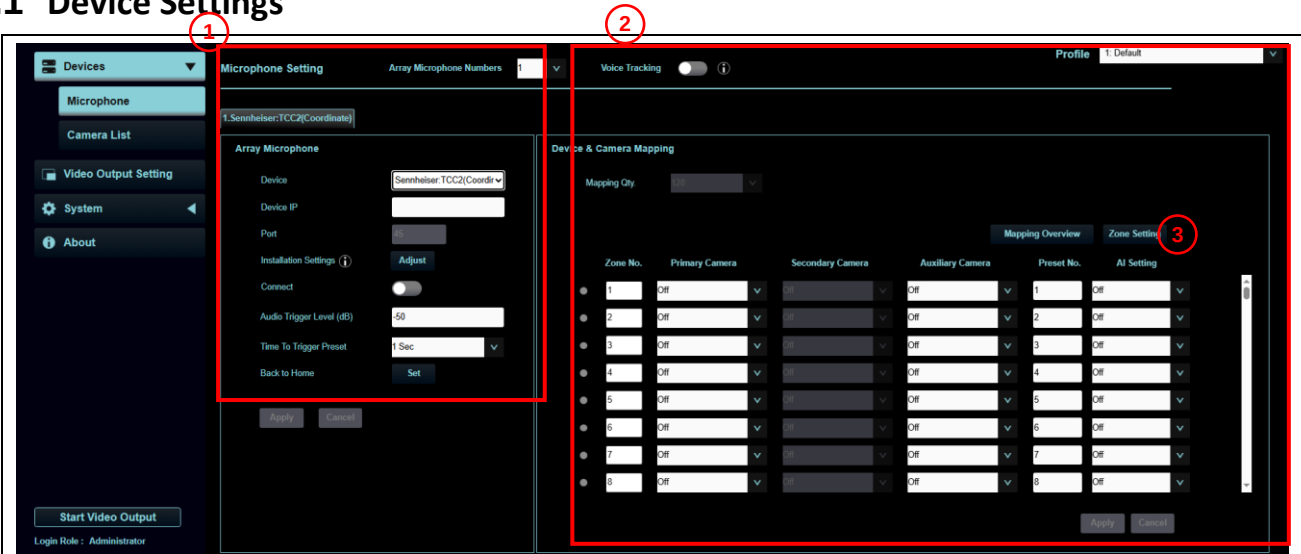
Zone settings allow the ceiling microphone to locate the audio source on the map and display its position using red dots. (Refer to *P18. Zone Setting section* for more details about configurations)

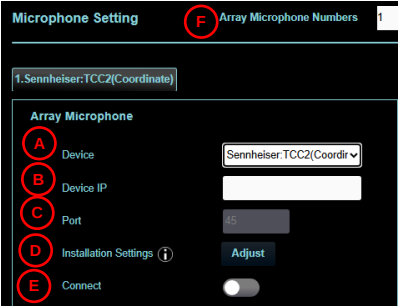
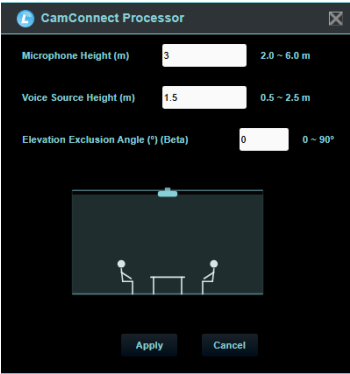
2.12 (K) Firmware Information


Function Descriptions
This window displays the software version information of AI-Box1. Click on Check to confirm the latest version and do apply updates. For technical support, please scan the QRcode on the right.

Chapter 3 Web Interface

3.1 Device Settings



No	Item	Function Descriptions
1	Array Microphone	 (A) Devices: Select the Microphone to connect. (B) Device IP: Enter the IP address of the microphone. (C) Port: Port used to connect to the microphone. 1. Shure: 2202 2. Sennheiser: 45 3. Sennheiser TCCM: 443 4. Nureva: 8931 5. Yamaha: 49280 6. Audio-Technica : 17300 <i>Note: Only Nureva microphones support customizable PORT</i> (D) Installation Settings: 

- Microphone Height(m): Enter the installation height of the ceiling microphone (2–6 m).
- Voice Source Height(m): Enter the height of the voice source (0.5–2.5 m).
- Elevation Exclusion Angle (°) (Beta): Set the elevation exclusion angle (0–90°).

*Note: This feature is only supported by the following microphones:
Sennheiser TCC2 and TCCM / Yamaha RM-CG / Audio-Technica ATND1061*

※Note (Audio-Technica ATND1061 only): When deploying two or more ATND1061 microphones on the same network, ensure each microphone is configured with a unique Multicast Port. Duplicate Multicast Port assignments may cause communication latency or unexpected behavior in CamConnect.

(E) Connect: Enable/Disable the microphone connection

(F) Array Microphone Numbers: Select how many microphones can be displayed in the list. (4 / 8 / 16 / 24)

(G) Audio Trigger Level (dB) : Triggered when audio level exceeds the specified dB value.

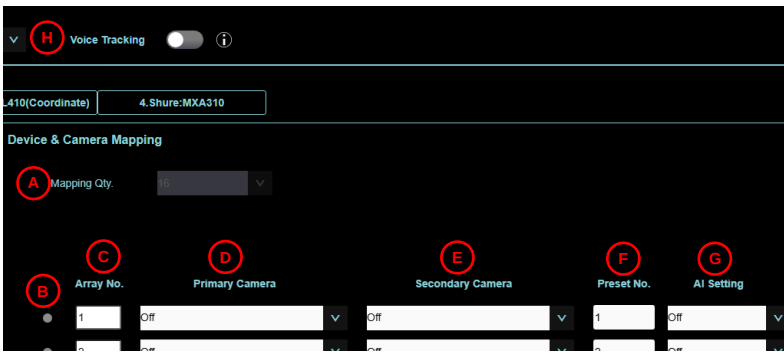
1. Sennheiser: -90~0 (recommended -55)
2. Nureva: 0~120 (recommended 40+)
3. Audio-Technica: 0~60 (recommended 30)
4. Yamaha: 0~126 (recommended 80+ for RM-CG / 70 up for RM-W)

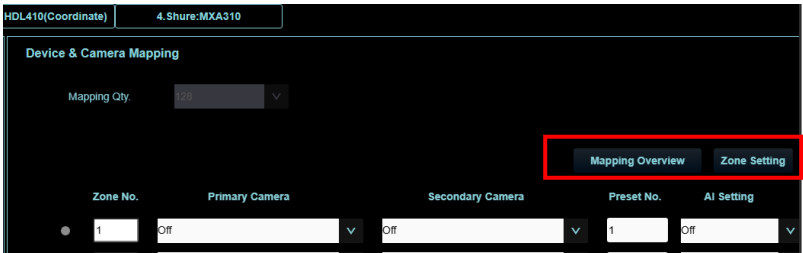
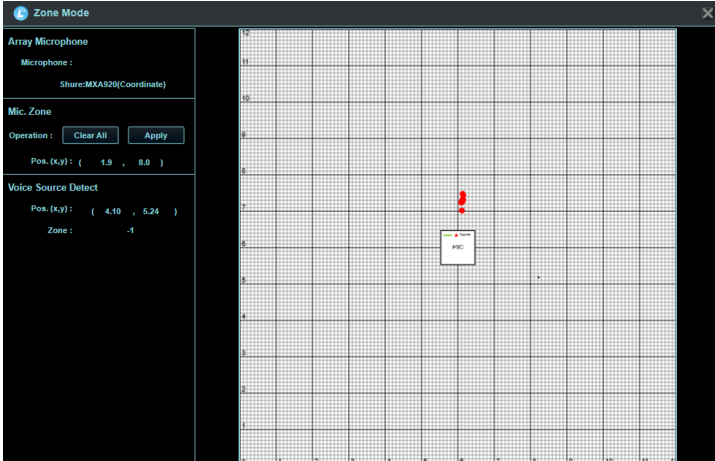
(H) Time To Trigger Preset:

Define how long the camera preset will be triggered after detecting sound.

(I) Back To Home setting:

- a. Back To Home Time: How long the camera will return to home position when there is no audio input. (0 ~ 999 seconds)
- b. Back To Home Camera: Decide which specific camera or all cameras will return to home position when there is no audio input.
- c. Back To Home Position: Choose the home position or a designated preset position.

2	Device & Camera mapping	 (A) Mapping Q'ty: Different microphones support different maximum mapping quantities. (B) Indicator light: Indicate which zone is detecting sound - Amber light: Indicates that sound is being detected, but the trigger condition has not been met, so the preset has not been recalled. - Green Light: Indicates that sound is being detected and the trigger condition has been met, so the preset has been recalled. (C) Array No. / Azimuth Angle : - Array No.: Applicable to Shure/ Audio-Technica devices - Azimuth Angle: Applicable to Sennheiser, Nureva, and Yamaha devices. The angle can be manually adjusted. (D) Primary Camera: Select a Primary camera from the dropdown menu (E) Secondary Camera: Select a desired Secondary camera from the dropdown menu. When a camera is triggered to a preset position, and another preset position for the same camera is subsequently triggered, the Secondary camera will be the prior one to move to instead of the primary camera. <i>Note: This feature is available only when Seamless Switching is enabled</i> (F)Preset No.: Select the preset position to be recalled when the camera is triggered (G) AI Setting : Enable / Disable AI tracking - Center Stage : The subject is centered for 5 seconds after the preset is triggered, then tracking stops. - Continuous Tracking : The camera continuously tracks the subject and keeps them centered. (H) Voice Tracking: When enabled, the microphone can receives signals, and the camera would moves to preset positions when triggered. When setting preset positions, please remember to disable this function for an easier setup.
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3	Zone Setting (Zone mode) / Mapping Overview	 The Zone Setting and Mapping Overview functions are available only when a microphone that supports coordinate positioning is connected. Coordination function available: Shure MXA920 /Sennheiser TCC2&TCCM /Yamaha RMCG / Audio-Technica ATND1061 Zone settings allow the ceiling microphone to locate the audio source on the map and display its position using red dots. (See next page for more details about configurations) 
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3.2 Zone Setting

Devices

Microphone

Camera List

Intelligent Director

Video Output Setting

System

About

Stop Video Output

Login Role : Administrator

Microphone Setting

Array Microphone Numbers

1

Voice Tracking

Profile

8: 2025/2/24

1.Televic-D-Cerno AE(HTTPS)

2.Yamaha-RM-CG

3.Shure-MXA310

4.Shure-MXA920(Coordinate)

Array Microphone

Device

Shure MXA920(Coordinate)

Device IP

Port

2002

Connect

Time To Trigger Preset

1 Sec

Back to Home

Set

Apply

Cancel

Device & Camera Mapping

Mapping City

City

Mapping Overview

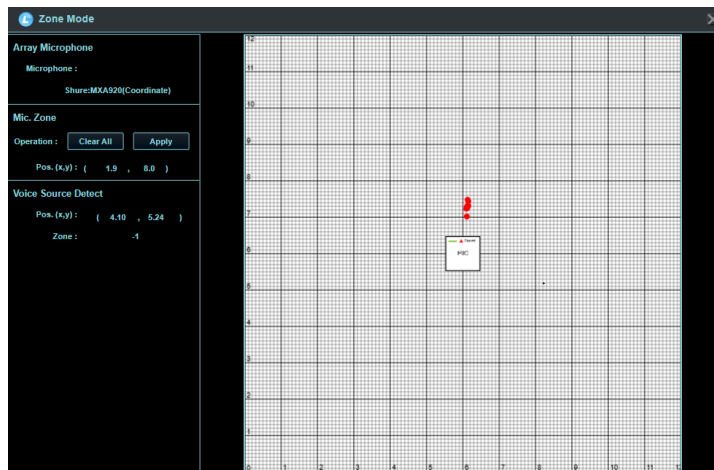
Zone Setting

Zone No.		Primary Camera		Secondary Camera		Preset No.		AI Setting
1	Off		Off		1	Off		
2	Off		Off		2	Off		
3	Off		Off		3	Off		
4	Off		Off		4	Off		
5	Off		Off		5	Off		
6	Off		Off		6	Off		
7	Off		Off		7	Off		
8	Off		Off		8	Off		

Apply

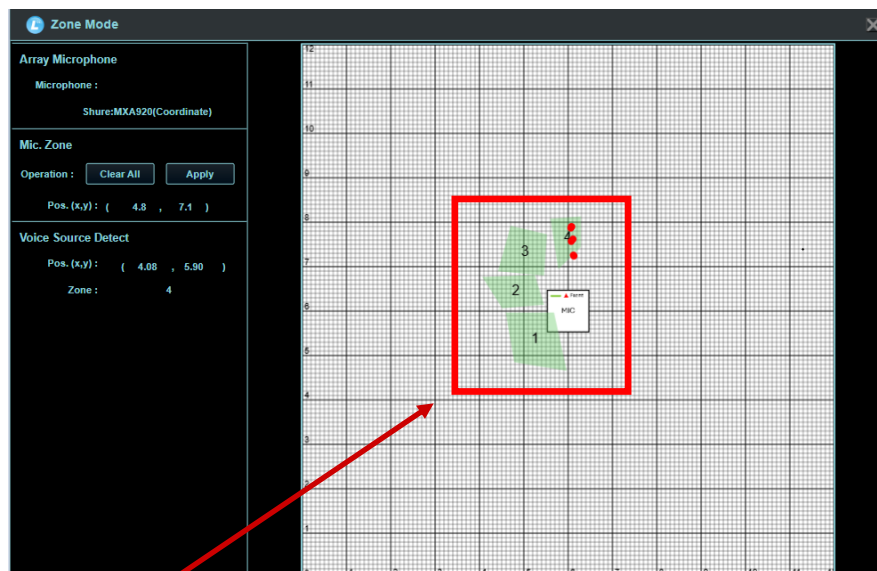
Cancel

No	Item	Description
1	Zone Setting	Setting Steps: 1. Make a sound near the ceiling microphone to confirm that red dots appear on the map, indicating the speaker's relative position.



2. Use the red dots as reference to determine how many zones you want to create on the map.

The zone numbers on the map correspond to the zone numbers shown in the UI.



Mapping Overview					Zone Setting	
Zone No.	Primary Camera	Secondary Camera	Preset No.	AI Setting		
☐ 1	VC-R31(10.0.0.5)	Off	1	Off		
☐ 2	VC-R31(10.0.0.5)	Off	2	Off		
☐ 3	VC-R31(10.0.0.5)	Off	3	Off		
☒ 4	VC-R31(10.0.0.5)	Off	2	Off		
☐ 5	VC-R31(10.0.0.5)	Off	2	Off		
☐ 6	VC-R31(10.0.0.5)	Off	3	Off		
☐ 7	Off	Off	7	Off		
☐ 8	Off	Off	8	Off		

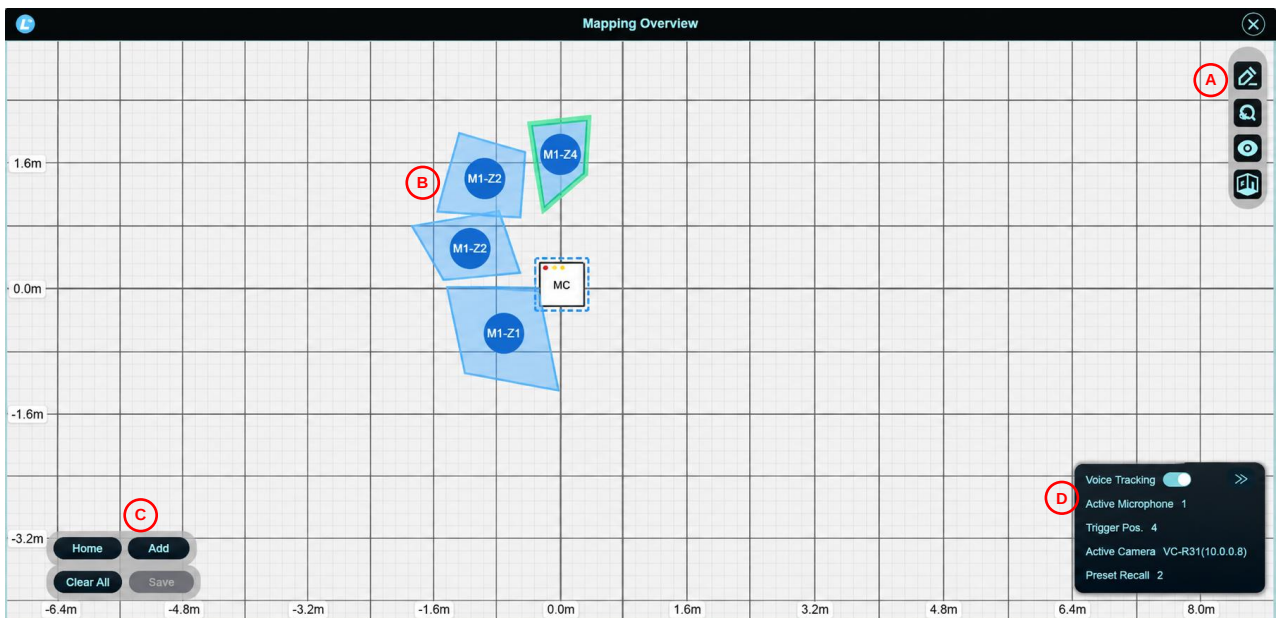
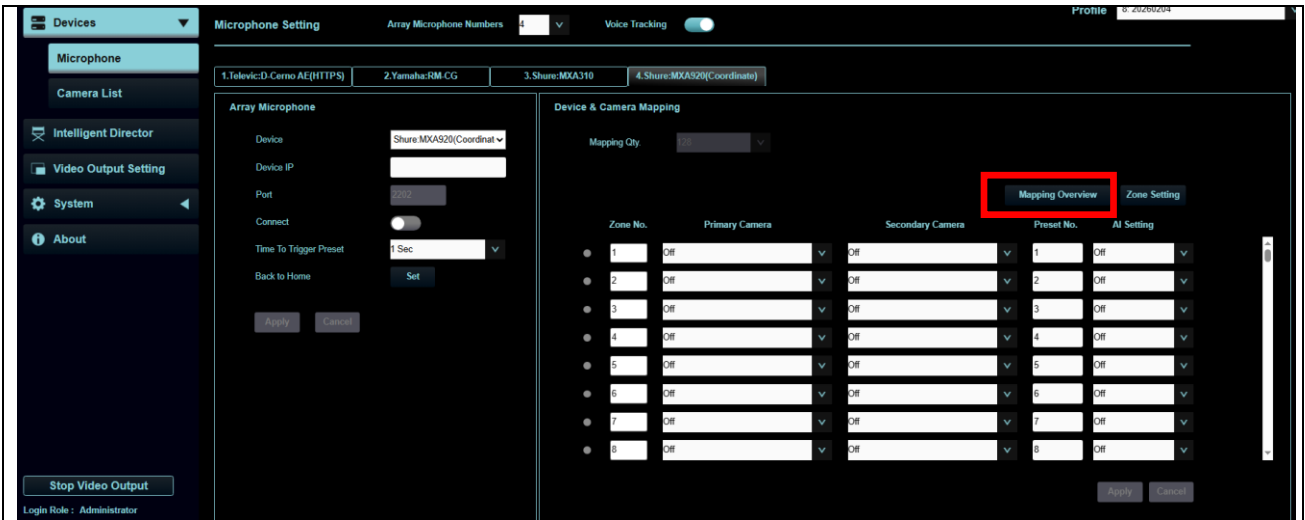
Expected Behavior:

A person makes a sound → The red dots appear in the corresponding zone you draw → The camera moves to the assigned Preset position.

Note: The camera will only move when the green light is on. The camera will not move when the amber light is on. The amber light indicates that the microphone

		has detected sound, but the level does not exceed the threshold required to trigger the assigned camera.
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3.3 Mapping Overview

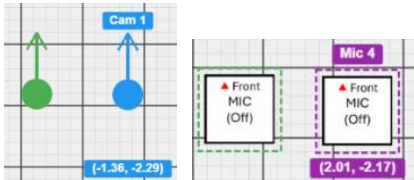
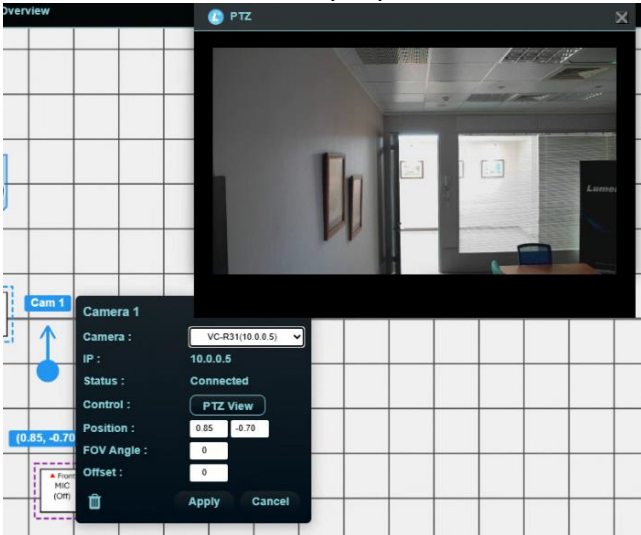


Mapping Overview Interface

The Mapping Overview data is synchronized with the Zone Setting map.

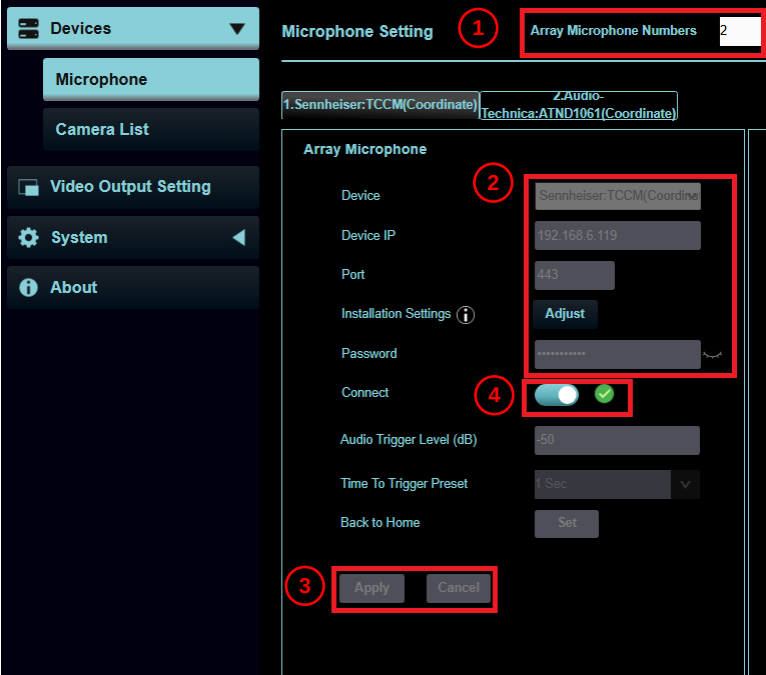
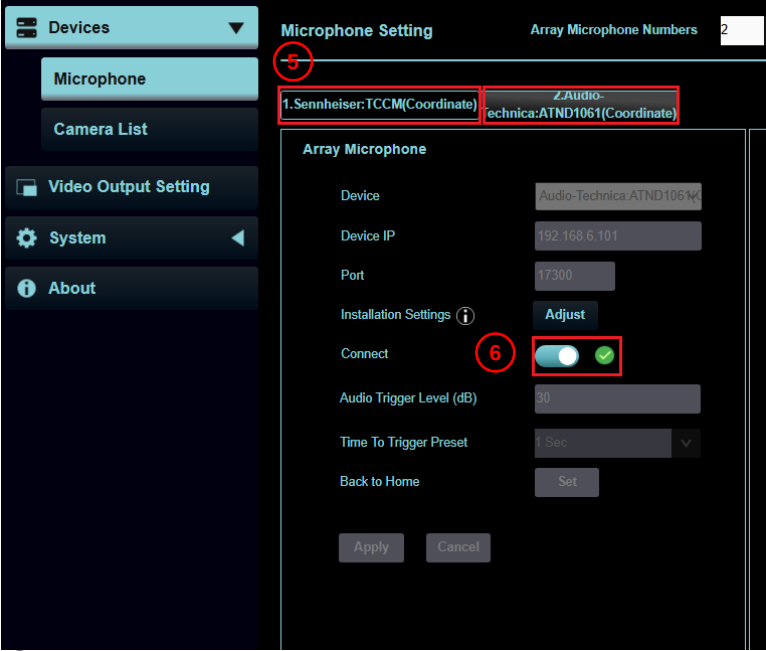
Any changes made in Zone Setting will be applied to Mapping Overview, and vice versa.

No	Item	Description
1.	Basics (A)	1. Edit detection zone: Clcik the button to draw zones on the map. 2. Device List: Select which cameras and microphones are displayed on the map. 3. View Data: Choose whether to display one camera or multiple cameras, and whether to show the drawn zones 4. Background Image Settings: Upload, remove, or adjust the background image on the map.

		(Supports PNG and JPEG/JPG formats, with a maximum file size of 10 MB)
2.	Interface (B)	Display the zones, microphones and cameras on the map. When a zone detects sound, the zone flashes green. 
3.	Menu (C)	1. Home: Return to the center of the map. 2. Add: Add cameras or microphones to the map.  Devices can be freely repositioned on the map.  Right click the microphone or camera on the map to display additional options for configuration options. 3. Clear all: Remove all devices on the map 4. Save: Save the current configuration.
4.	Status (D)	 1. Voice Tracking: Enable / Disable 2. Active microphone: Displays which microphone is active now. 3. Trigger Position: Displays which zone is detecting sound. 4. Active Camera: Displays which camera is being triggered. 5. Preset Recall: Display the preset position being recalled.

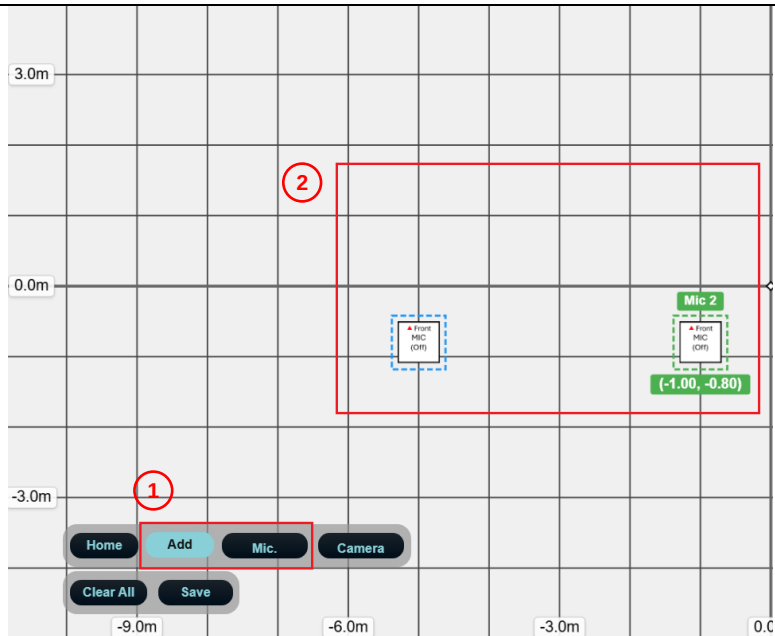
3.3.1 Multiple Microphone Mapping Setup

This section describes how to configure multiple microphones and create detection zones in the Mapping Overview interface.

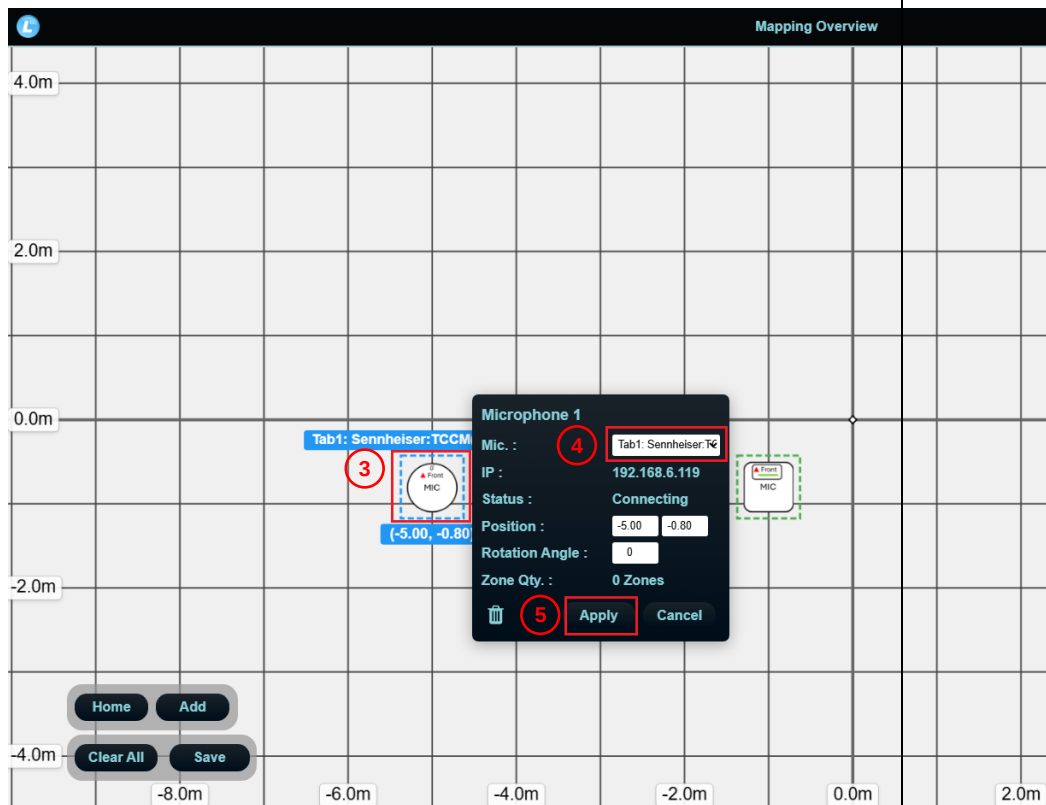
Step	Step Name	Description
1.	Configure Microphones	 ①. In Array Microphone Numbers, select 2 or more microphones. ②. Enter the required connection information for each microphone, including the Device IP, Port, and Password. ③. After entering the connection information, click Apply to save the settings. ④. Enable Connect and verify that a green check mark is displayed.
		 ⑤. Repeat Steps 2–4 to configure the remaining microphones. ⑥. Verify that a green check mark is displayed for each microphone.

2.

Configure Microphone Layout



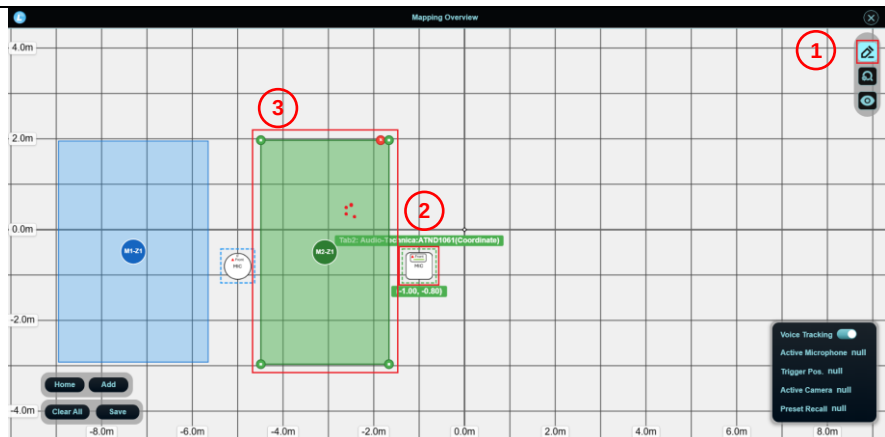
- ①. Open the Mapping Overview page (refer to [3.3 Mapping Overview](#)). Click Add, then click Mic to add microphones to the interface.
- ②. Verify that all configured microphones are displayed on the Mapping Overview interface.



- ③. Right-click the microphone to open the configuration options.
- ④. Select the corresponding connected microphone from the Mic list.
- ⑤. Click Apply to save the microphone configuration.

3.

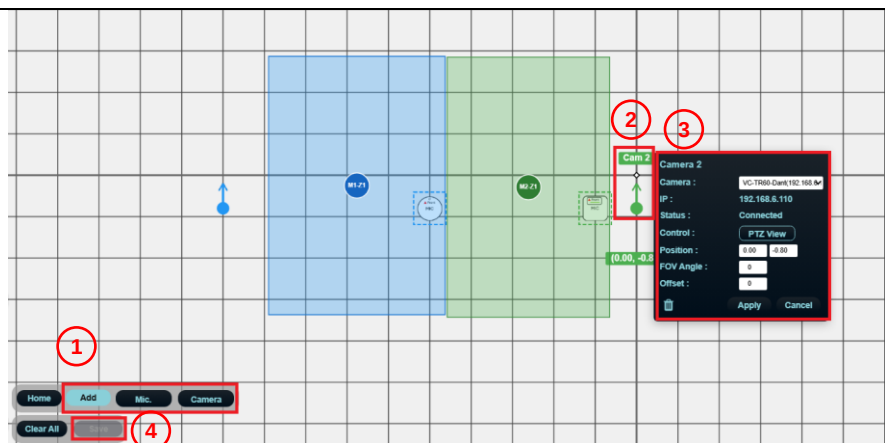
Configure Detection Zones



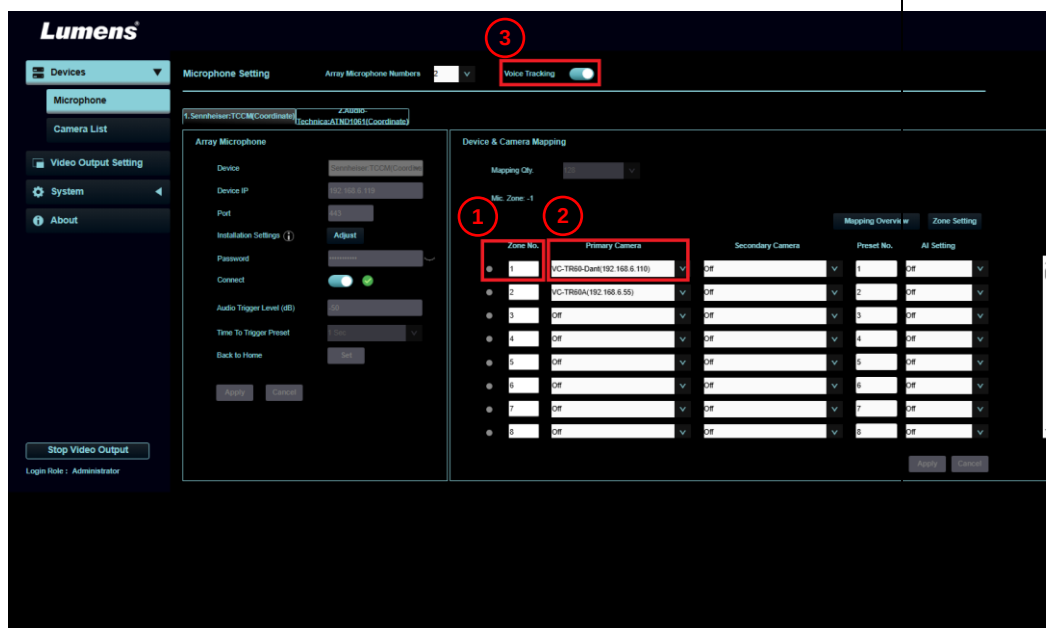
- ①. Click Edit Detection Zones to enter zone editing mode. .
- ②. Select the microphone to be configured.
- ③. Adjust the detection zone based on the microphone's pickup area.

4.

Assign Camera Mapping

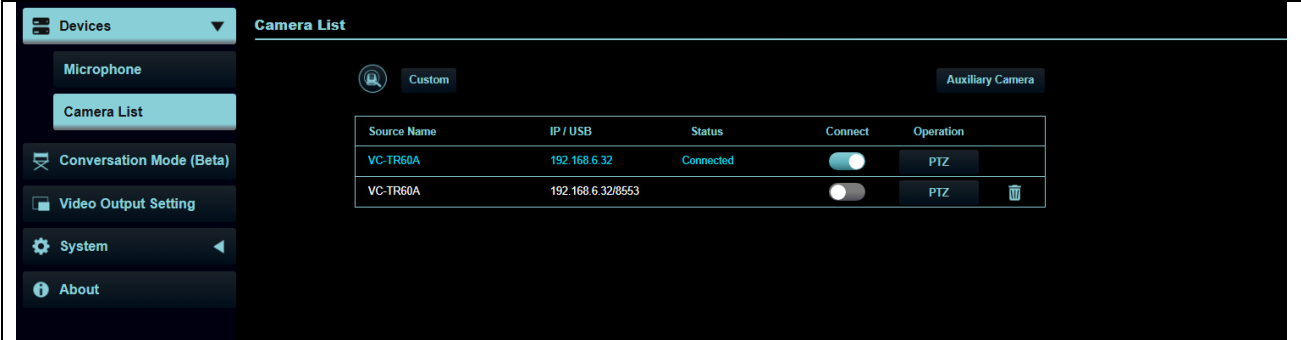


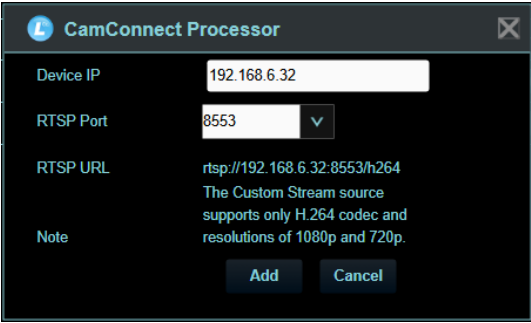
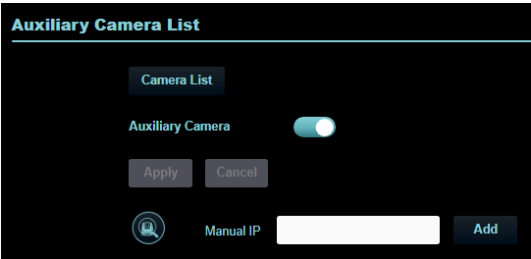
- ①. Click Add, then click Camera to add cameras to the interface.
- ②. Verify that all configured cameras are displayed on the Mapping Overview interface.
- ③. Right-click a camera to open the configuration options. Modify the camera settings as needed, then click Apply to save the changes.
- ④. Click Save to save all changes made in the Mapping Overview.



- ①. Verify that each detection zone is triggered by the corresponding microphone.
- ②. Verify that each detection zone is assigned to the correct camera.
- ③. Verify that Voice Tracking is enabled.

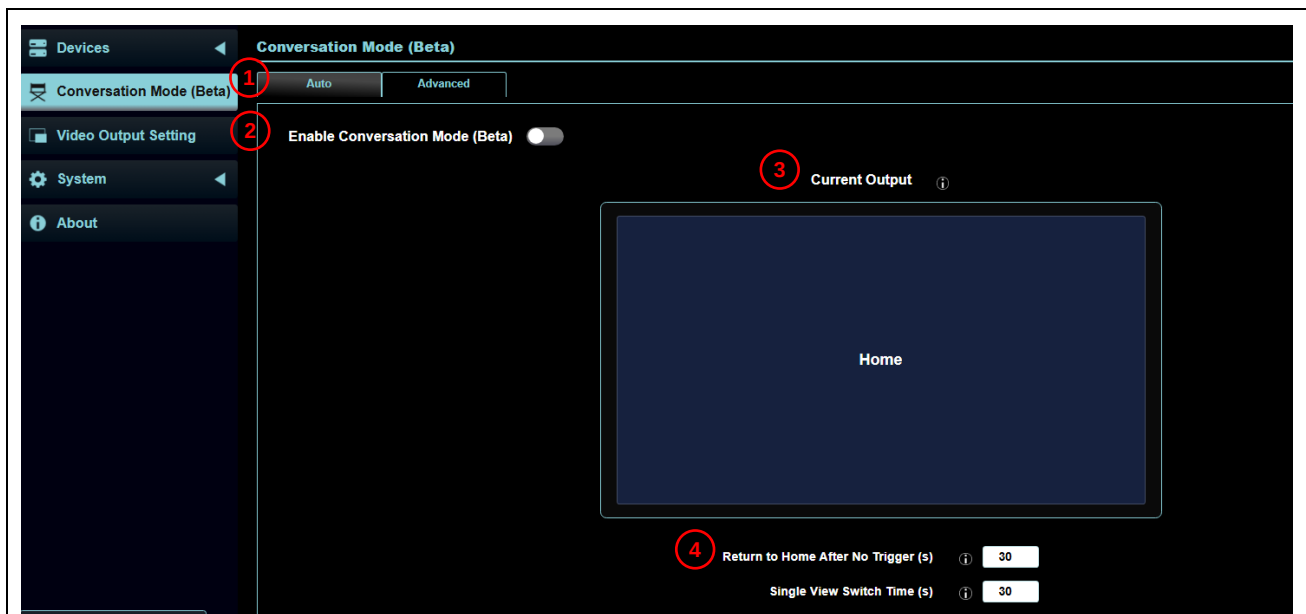
3.4 Device - Camera List



No	Item	Function Descriptions
1	Camera List	Refresh :  Search for cameras on the same network segment. Note Make sure the cameras and AI-Box1 are on the same network segment. ▪ Custom : Set the camera's IP address and RTSP port.  Note Custom Stream supports H.264 encoding and resolutions of 1080p and 720p only. ▪ Auxiliary Camera : Access the Auxiliary Camera settings page (BC-200 only)  - Auxiliary Camera : Enable / disable the Auxiliary Camera function. - Refresh :  Search for Auxiliary Cameras again. - Manual IP : Manually enter the Auxiliary Camera's IP address, then click  ▪ Connect/ Disconnect : Click [Connect] to connect the camera or [Disconnect] to disconnect it. ▪ PTZ : Click to access the camera's webpage for configuration. For more information, please refer to the camera's user manual.

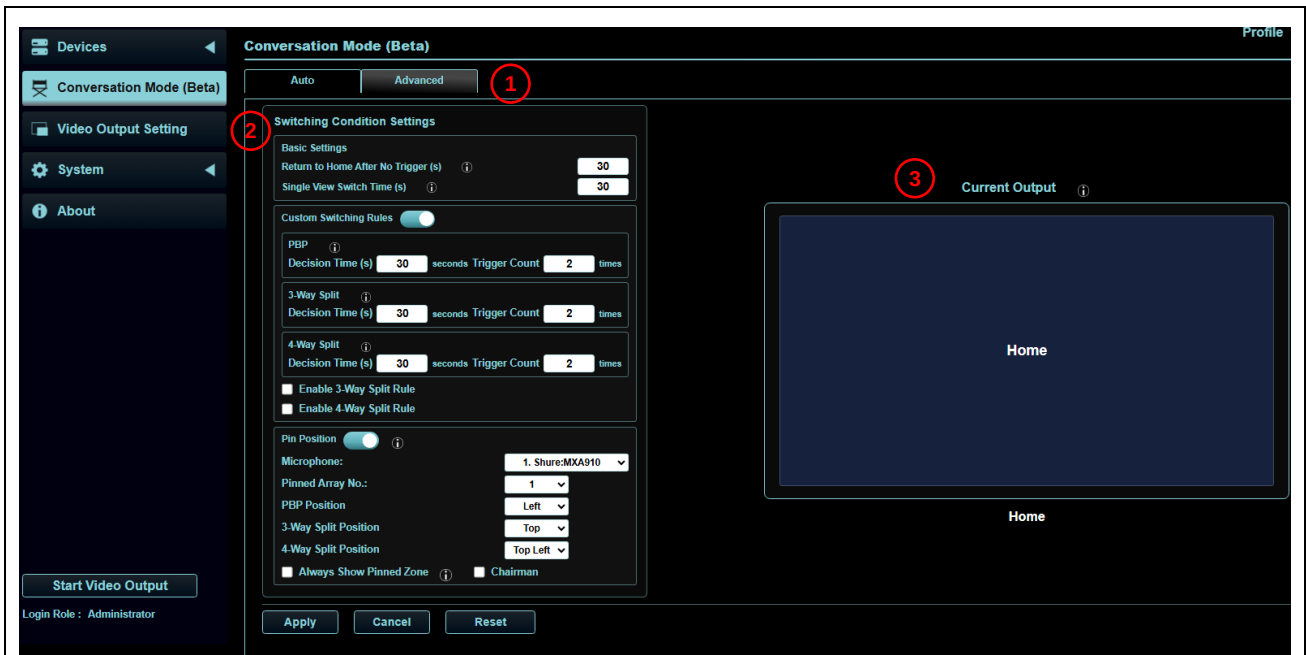
3.5 Conversation Mode (Beta)

3.5.1 Auto



No	Item	Function Descriptions
1.	Mode	Select the Auto or Advanced settings page.
2	Enable Conversation Mode (Beta)	Enable / disable Conversation Mode.
3	Current Output	Display the current output layout of Conversation Mode. (By default, Home displays the last triggered camera. A specific camera can also be assigned as the Home view.)
4	Conversation Mode Setting	- Return to Home After No Trigger (s) : Set the waiting time before returning to the Home view when no microphone is triggered. - Single View Switch Time (s) : Set the waiting time before switching to the single-camera view when the same speaker continues to trigger the microphone.

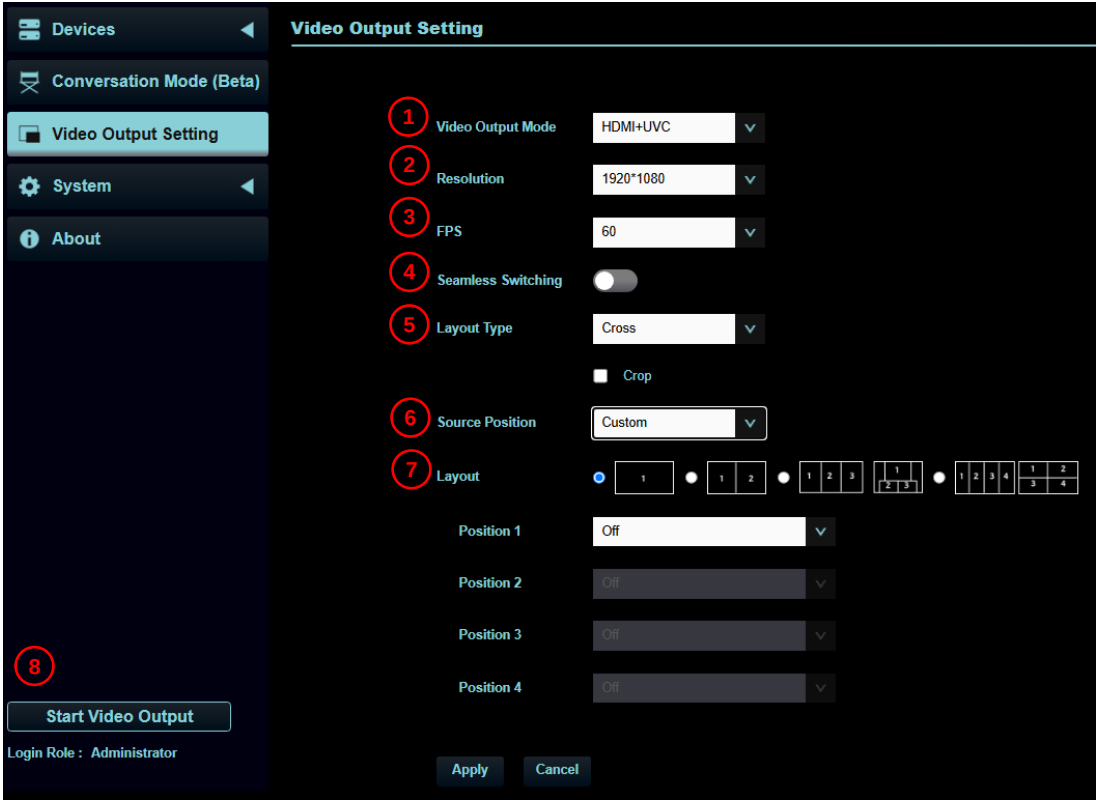
3.5.2 Advanced



No	Item	Function Descriptions
1.	Mode	Select the Auto or Advanced settings page.
2	Switching Condition Settings	Set the switching conditions for Conversation Mode. Basic Settings - Return to Home After No Trigger (s) : Set the waiting time before returning to the Home view when no microphone is triggered. - Single View Switch Time (s) : Set the waiting time before switching to the single-camera view when the same speaker continues to trigger the microphone. Custom Switching Rules : Enable / disable custom switching rules. - PBP : Set the trigger conditions for switching to the two-way split view. 3-Way Split : Set the trigger conditions for switching to the three-way split view. 4-Way Split : Set the trigger conditions for switching to the four-way split view. - Decision Time (s) : Set the time period for determining the trigger conditions. - Trigger Count : Set the number of triggers required within the decision time. - Enable 3-Way Split Rule : Enable / disable the three-way split switching rule. - Enable 4-Way Split Rule : Enable / disable the four-way split switching rule.

		Pin Position : Enable / disable the fixed display position function. - Microphone : Select the microphone to use. - Pinned Array No. : Select the Array number to be pinned. - PBP Position : Set the fixed position of the specified zone in the two-way split view. 3-Way Split Position : Set the fixed position of the specified zone in the three-way split view. 4-Way Split Position : Set the fixed position of the specified zone in the four-way split view. - Always Show Pinned Zone : Keep the specified zone displayed in the split view. - Chairman : Set the specified camera to remain displayed in the split view without being affected by microphone triggers.
3	Current Output	Display the current output layout of Conversation Mode. (By default, Home displays the last triggered camera. A specific camera can also be assigned as the Home view.)

3.6 Video Output Settings

		
No	Item	Function Descriptions
1	Video Output Mode	HDMI+UVC or HDMI + RTSP The RTSP stream URL for HDMI+RTSP is as follows: rtsp://<AI-BOX1 IP>:8557/h264 Note RTSP supports up to 4 simultaneous streams.

		<i>Note:</i> <i>When selecting HDMI+UVC, please be aware that the HDMI framerate may decrease slightly to allow stable UVC output.</i> <i>If HDMI image quality is your priority, please select HDMI only.</i>
2	Resolution	Set the output resolution : 1920 × 1080/ 1280 × 720
3	FPS	Set the output frame rate : 60/ 50/ 30/ 25 fps
4	Seamless Switching	Enable / disable microphone-triggered video switching. When using single-view output, the video switches according to the microphone trigger.
5	Layout Type	Configure the layout of the video output according to the provided reference in section 2.7.1 Video Output Layout ▪ Cross: 4-split screen ▪ PBP: Picture by Picture screen ▪ Crop: Screen cropping function Note Choose either Cross/PBP only
6	Source Position	Select the video source position mode : Custom/ Auto
7	Layout	Select the output layout: 1 × 1/ 1 × 2/ 1 × 3/ 1 × 4, 2 × 2. ▪ Position 1–4: Select the camera source for each position. Select Off or a connected camera.
8	Start Video Output	Click the button to start or stop video output.

3.7 System- Network

Devices

Video Output Setting

System

Network

Profiles

Settings

About

Network

Method

DHCP

IP Address

192.168.100.201

Netmask

255.255.255.0

Gateway

192.168.100.254

DNS

8.8.8.8

MAC Address

dc:e2:ac:00:57:c7

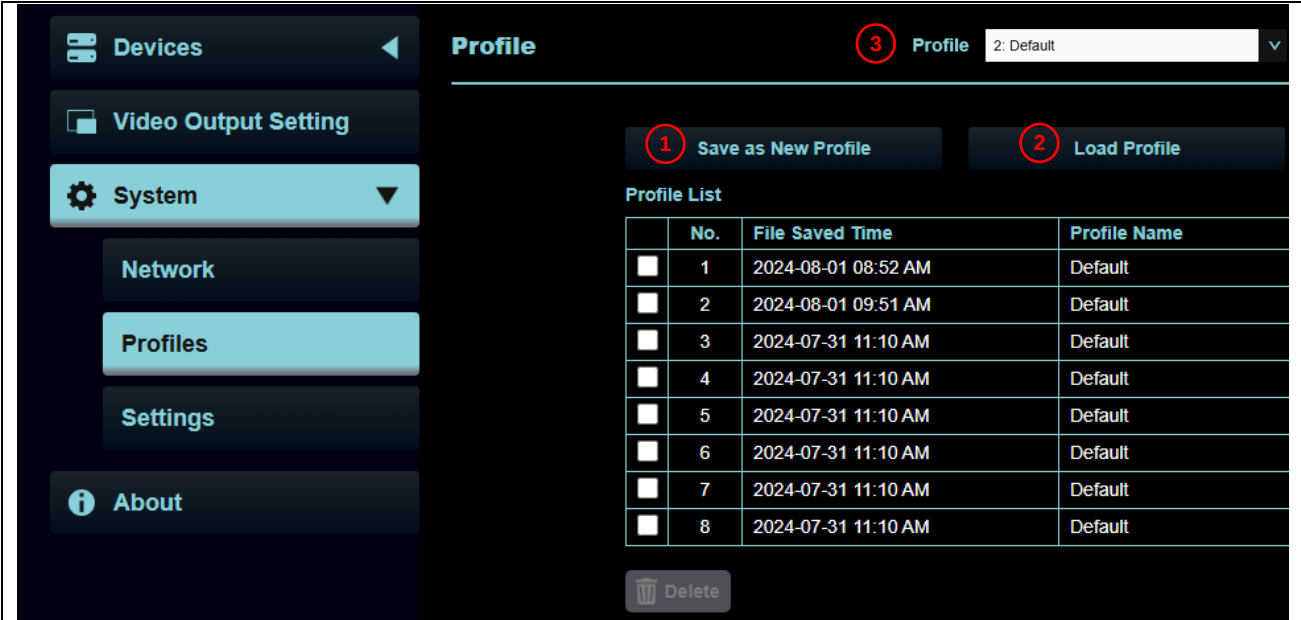
Apply

Cancel

Function Descriptions

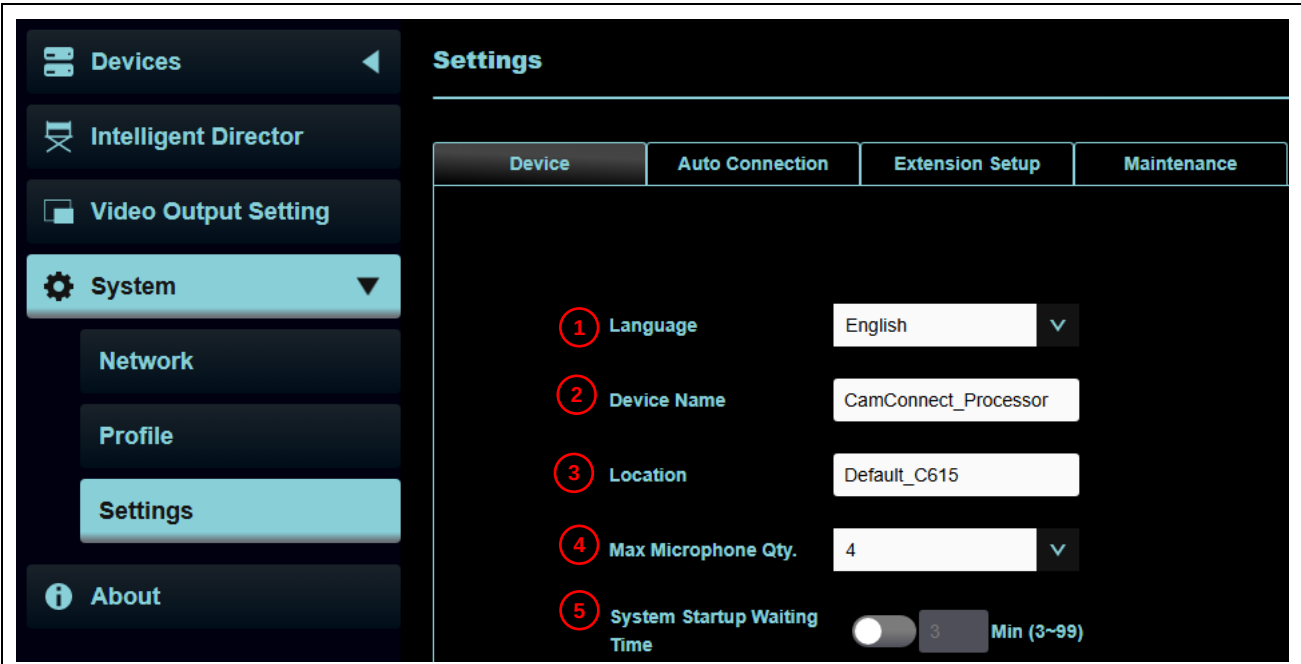
Ethernet Settings. When it is set to Static IP, settings can be modified. Once the settings are complete, click Apply.

3.8 System- Profile



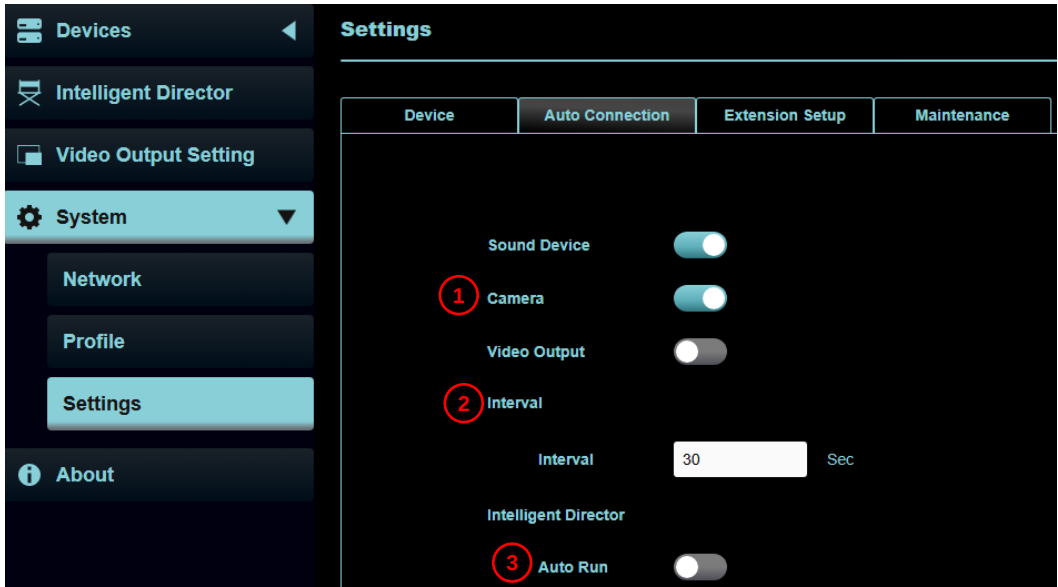
No	Item	Function Descriptions
1	Save as New Profile	Save the current settings as a new profile / layout template.
2	Load Profile	Load a saved profile / layout template.
3	Profile	The button will appear on every page and serves the same function as Load Profile.

3.8.1 System- Settings-Device

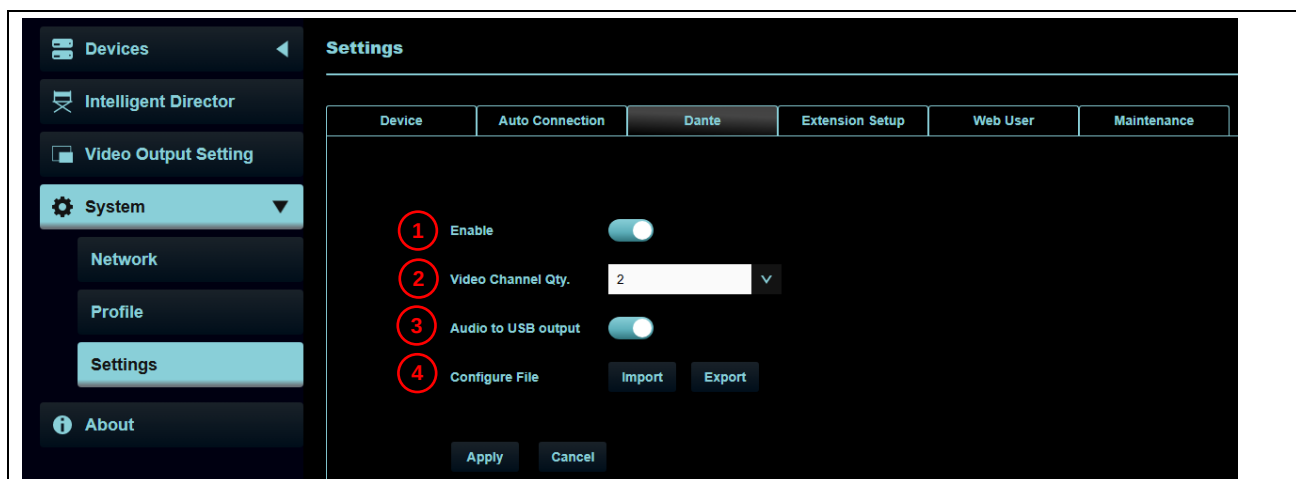


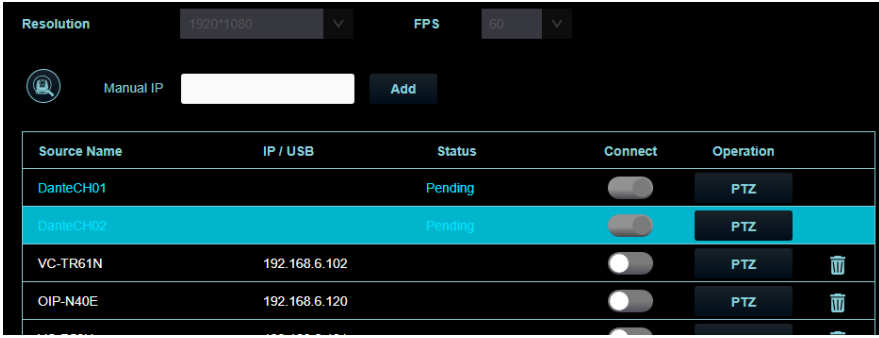
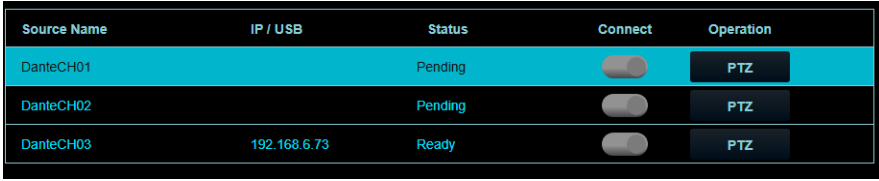
No	Item	Function Descriptions
1	Language	Select the display language : English/ Traditional Chinese/ Simplified Chinese.
2	Device Name	Set the device name.
3	Location	Set the device location description. Default : Default_XXXX (XXXX represents the last four digits of the MAC address).
4	Max Microphone Qty.	4 / 8 / 16 / 24
5	System Startup Waiting Time	After the AI-Box1 powers on, it will automatically search for microphones and cameras. If any connected device has a long boot-up time, the AI-Box1 may fail to connect properly when all devices are powered on simultaneously. To prevent this issue, please adjust the system's startup delay based on your current environment.

3.8.2 System- Settings- Auto Connection

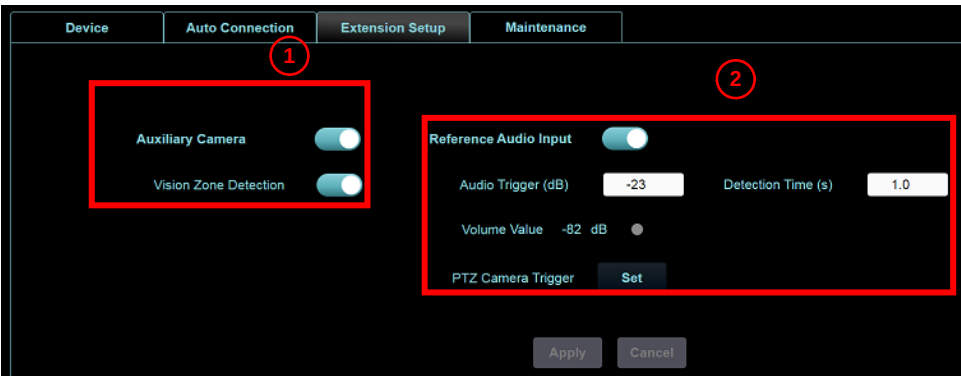
		
No	Item	Function Descriptions
1	Auto Connection (Sound / Camera / Video)	The microphone, camera and Video output can reconnect automatically after restarting the AI Box.
2	Auto Save	The profile can be saved automatically after a specific interval time.
3.	Auto Run	Intelligent Director will run automatically.

3.8.3 System – Settings - Dante



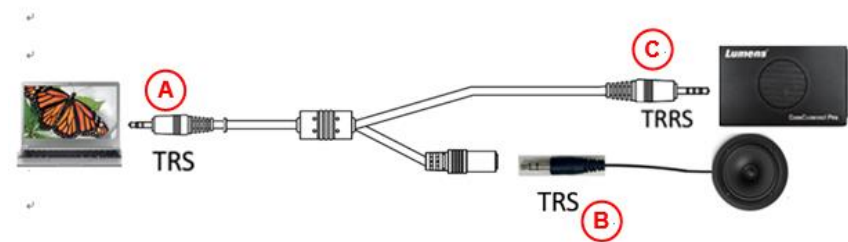
No	項目	功能説明
1	Enable	Enable or disable the Dante function. <Remark> Although the Dante section is visible even when the unit does not have Dante, it will not function unless the unit is Dante activated.
2	Video Channel Qty.	Choose from 0 to 4 to decide how many Dante devices will be displayed in the list.  Use the Dante controller software to connect the desired Dante device. Once the connection is established, the camera's status will show Ready. 
3	Audio to USB output	Transmit Dante audio over USB output.
4	Configuration File	Import or export the Dante related configuration.

3.8.4 System – Settings - Extension Setup



No	項目	功能説明
1	Reference Video (The Lumens BC200 camera is required to enable this function.)	The problem to address The camera may be triggered by any sound, whether it is caused by a human or just incidental noise. With the Lumens BC200 auxiliary camera, the system will no longer be triggered by sound alone. It will also use AI face recognition to detect people on site. The camera will only be triggered when an audio source is accompanied by a human face that can be detected. Connection: The Lumens BC200 auxiliary camera must be connected. The BC200 is set to be released in Q1 2025. For a more detailed introduction, please refer to the BC200 user manual at that time. Auxiliary Camera: Enable or disable the BC200 camera. Vision Zone Detection: This feature is not functional at the moment and is not for use. Apply: Click to apply the settings
2	Reference Audio (An audio cable splitter is required to enable this function.)	Scenario Application In a conference meeting, the microphone might pick up sound from the other side, accidentally triggering the camera and causing it to move to an unwanted preset position. With Reference Audio, the sound can now be censored and blocked to minimize interruptions from the other side, preventing the camera from moving to an unintended position. Connection: Converge the audio signals from CamConnect Pro (C) and the speaker (B), so they can be sent to a computer (A). Please refer to the connection method below to create the cable and make the

connection.



Audio Trigger(dB): Set the audio detection threshold (-100~0 dB).
 The microphone will only trigger detection when the volume exceeds the set threshold.
Detective Time(s): Set the duration of the detection (0~10 seconds)

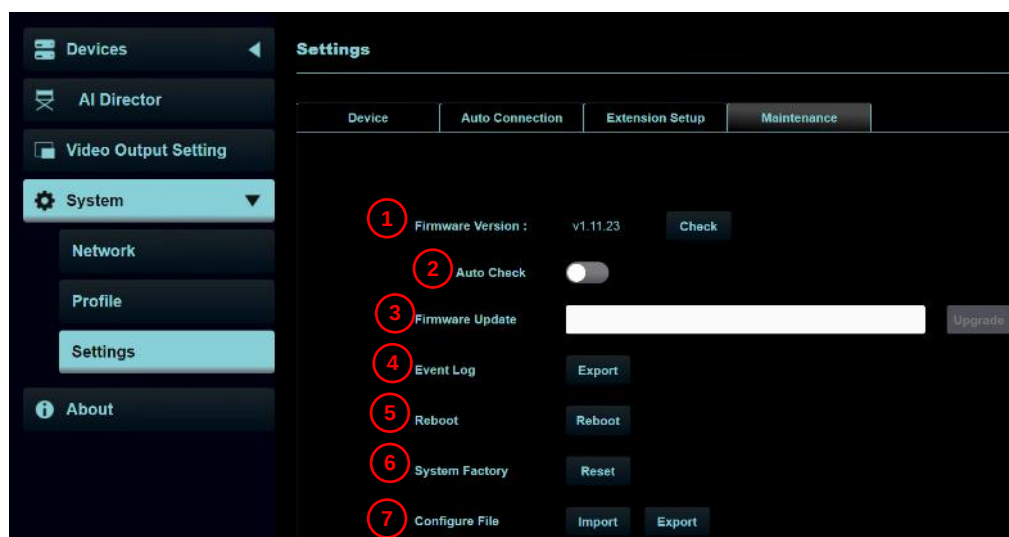
- PTZ Camera Trigger:**
1. Trigger Time: Set the range from 0 to 999 seconds. When set to 0, the camera will never be triggered.
 2. Camera Selection: Select all cameras or a specific camera only.
 3. Position Type: Choose between the home position or a specific preset position.

Apply: Click to apply the settings.

3.8.5 System – Settings - Web User

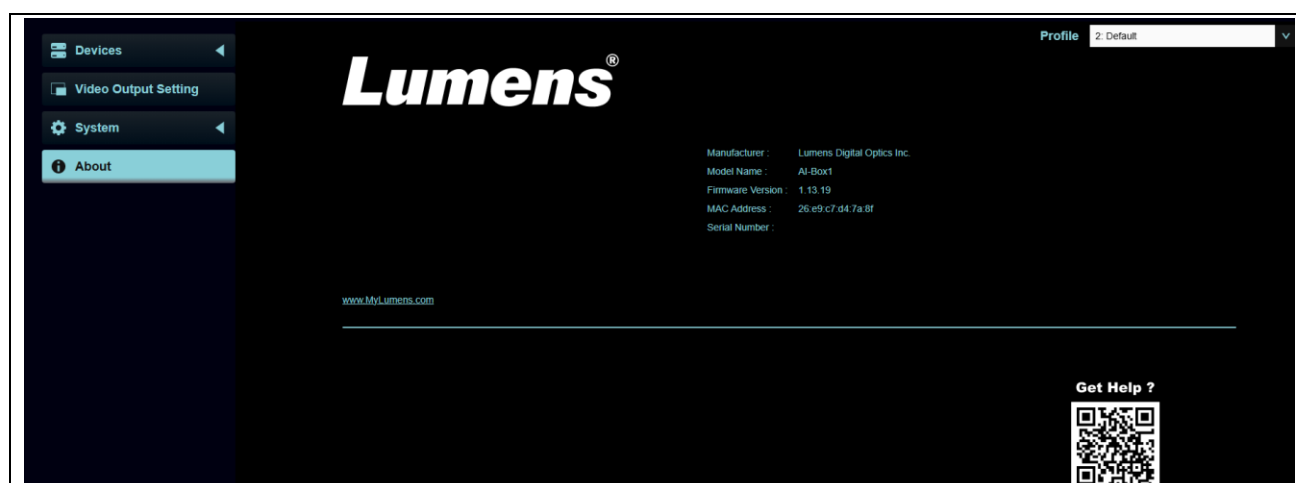
Item	Function Descriptions
Password	Set your own password for web page access. (Default:9999) A factory reset will return it to the default value.

3.8.6 System- Settings- Maintenance



No	Item	Function Descriptions
1	Firmware Version	Displays the current firmware version of the device.
2	Auto Check	Automatically checks if new firmware is available.
3	Firmware Update	Allows you to select and update a firmware file from your computer.
4	Event Log	The log file records activity over time and can be exported.
5	Reboot	Restarts the device.
6	System Factory	Resets the device to its factory default settings.
7	Configure File	Import /Export the current configuration.

3.9 About

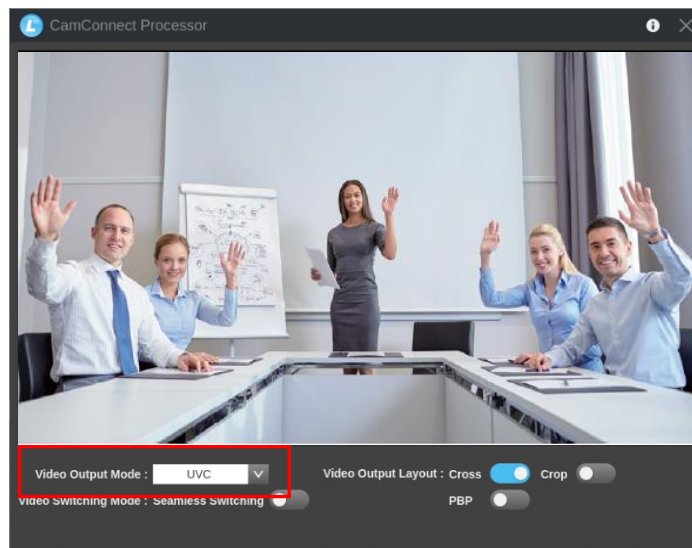


Function Descriptions

This window displays the version information of AI-Box1.
For technical support, please scan the QR code at the bottom right

Chapter 4 Connect to video conferencing software

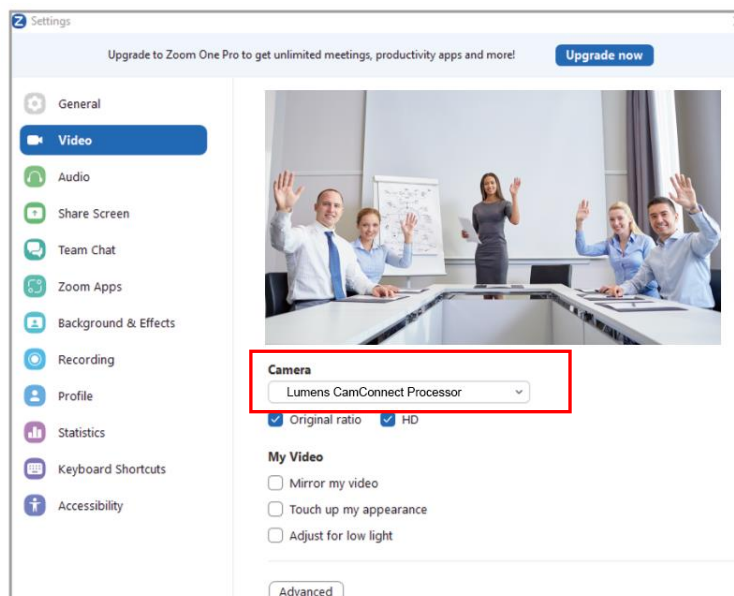
Set the output mode of AI-Box1 to UVC or HDMI+UVC, then click the Video output button



Launch software (such as Skype, Zoom or Microsoft Teams)

Select CamConnect as the video source

- Video Source Name: Lumens CamConnect Processor



Chapter 5 Microphone Settings

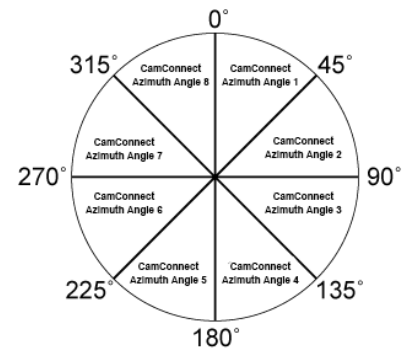
Please check the latest list of supported microphones on the Lumens website.

Below are examples. Compatibility is not limited to these microphones.

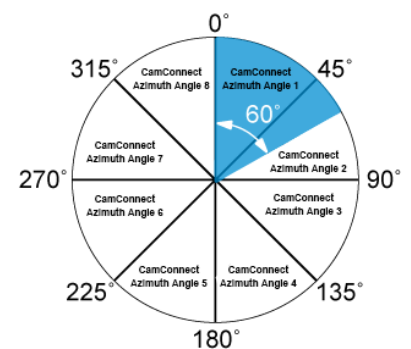
Before installing AI-Box1, third-party microphone systems may require configuration.

5.1 Sennheiser

When using TCC2 with CamConnect, set and configure the channels on the Sennheiser Control Cockpit software first. By default, Sennheiser divide a space into 8 equal parts in a horizontal angle of view. They correspond to CamConnect Azimuth Angle 1 to 8.

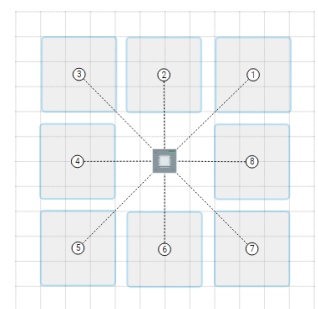


If a blocked area is enabled on the Sennheiser Control Cockpit software, the corresponding position of CamConnect will also be affected. Example: If the blocked area is set to 0° to 60°, the audio signal from 0° to 45° of CamConnect Array Azimuth 1 and 45° to 60° of Array Azimuth 2 will be ignored.

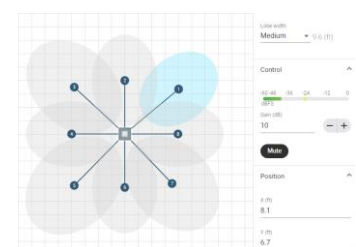


5.2 Shure

Suitable for large-area positioning when Shure Designer Automatic coverage is On.

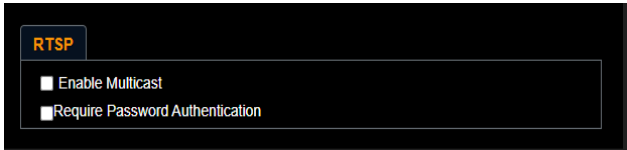
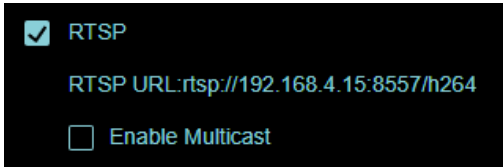


If more accurate positioning is required, disable Automatic coverage, adjust Gain value/Position manually and reduce the beamforming angle, to achieve accurate positioning.



Chapter 6 Troubleshooting

This chapter describes problems you may encounter while using AI-Box1. If a problem still occurs, please contact your distributor or the service center.

NO	Problems	Solutions
1.	Unable to search camera devices	1. Check the power supply of camera or PoE power supply is stable. 2. Make sure the cameras are on the same network as the CamConnect AI-Box1. 3. Replace the cables and make sure they are not faulty
2.	The microphone fails to detect the position of a sound	Please confirm that the microphone device is in Connected status
3.	When using a Sennheiser microphone, there is no response at a specific angle	1. Make sure the Azimuth Angle settings in the CamConnect software include that angle position 2. Check the blocked zones in the Sennheiser Control Cockpit software. Refer to 5 Microphone Settings for details.
4.	When setting camera preset positions, the camera moves when it hears a sound from another direction.	Please refer to 2.1 Device Setting to disable voice tracking during the camera set-up process.
5.	Unable to connect camera.	Please access the camera's web interface and go to the Network tab. Make sure Multicast is disabled. When Multicast is opened, the AI-Box1 cannot connect the camera.  
6.	Cannot upgrade firmware by OTA.	1. Please check if you are using static IP. Turn to DHCP and try update again.

Chapter 7 System Message

No	Warning message	Action
1	Microphone cannot be found. Please check Microphone connection status and try to connect again.	Ensure that the microphone's port has been typed correctly and check if the IP address is on the same network as the AI-Box. You can also refer to the link below from for more information about the setup method with compatible ceiling microphones. https://www.mylumens.com/en/Downloads/3?id2=5&keyword=ai%20box&keyword2=&pageSize=10&ord=
2	Connection Loss.	The connection between the AI-box and the microphone has been lost. Please check if the microphone has been accidentally turned off or if there is another network issue. Refer to 3.1 Device - Microphone Setting to check the microphone's status.
3	Camera connection failure	Check if the camera's resolution and FPS have been configured correctly with the AI Box. Access the camera's webpage to confirm its network connectivity. Refer to 3.2 Device - Camera List to check resolution of AI-Box1.

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 numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par l'Industrie.

■ EN55032 CE Warning

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

Copyright Information

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