AI-Box1 Quick Installation Guide

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1. Before You Get Started

1.1 What You Need

AI-Box1 | Array Microphone | PC | Display | Keyboard / Mouse | Router/ PoE Switch

HDMI Cable | RJ45 Cable | USB Cable (Type A-Type C)
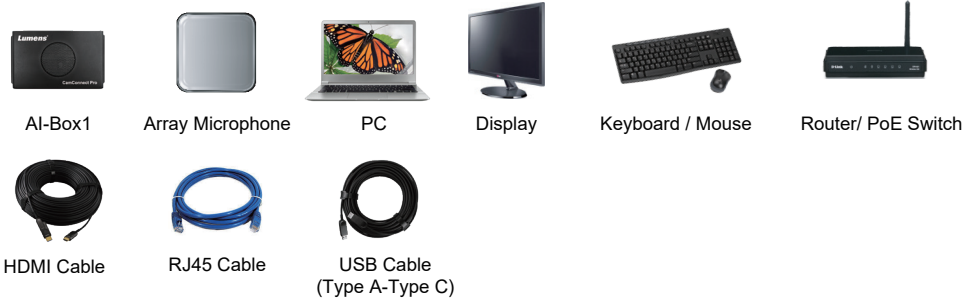
1.2 Array Microphone

Please confirm compatibility of the AI-Box1 with your array microphone. Ensure the microphone and any control software is installed.
Please see Lumens website for the latest supported microphones.

### 1.3 PTZ Camera (Maximum 4 units)

Configure the Camera settings as follows:
Make sure the Camera and the AI-Box1 are in the same IP range.

■ **Firmware Update**

Make sure the camera firmware is up to date. Go to the Lumens website support tab to download the latest version.

■ **Resolution Setting**

Please make sure that each camera and the AI-Box1 are on the same output resolution. AI-Box1 default is 1080p/60fps. (Please refer to **4. AI-Box1 Setting**)

※ Ensure AI-Box1 and the cameras are both outputting 1080P/ 60fps

Camera Control & Status
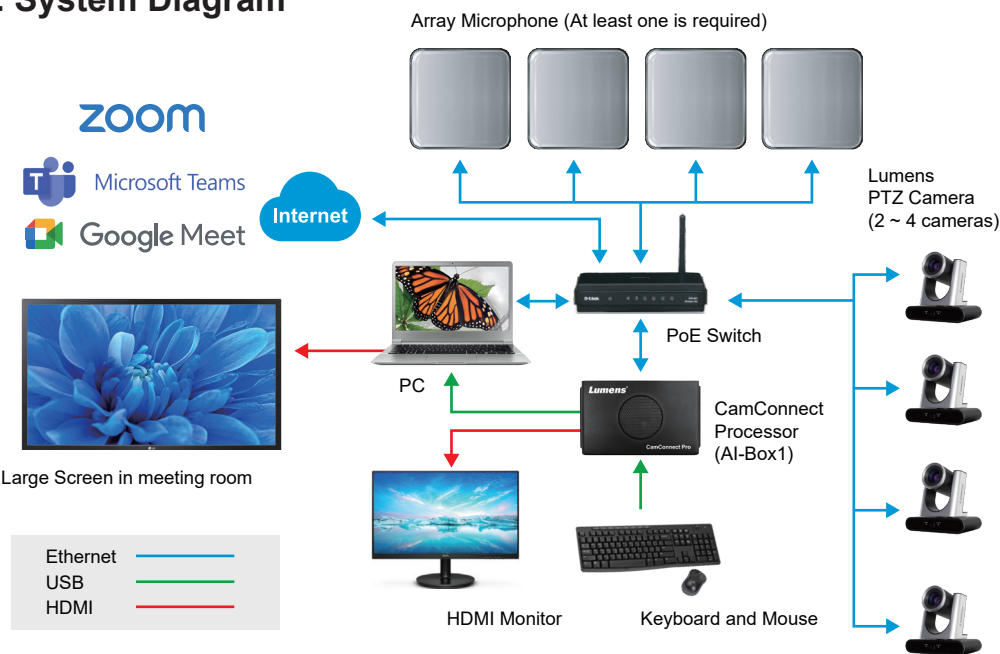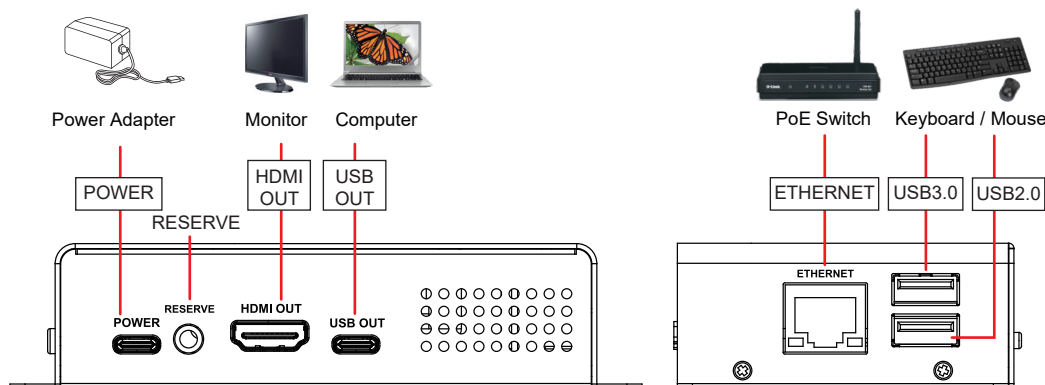Resolution : 1920*1080 ▾ FPS : 60 ▾
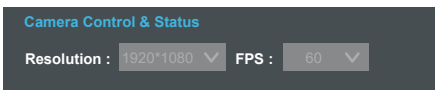
■ **Motionless Preset**

Motionless preset momentarily holds the last frame when the camera changes position to create a clean switch without seeing camera movement on screen.
Activate the motionless preset mode on the cameras.

- OSD Menu : **[System]** > **[Motionless Preset]** > **[On]**
- Webpage : depending on the camera model, the setting is either in **[Setting]** > **[Camera]** > **[Pan Tilt Zoom]** > **[Motionless Preset]** > **[On]** or **[Live View]** > **[Camera Setting ⚙]** > **[PTZ]** > **[Motionless Preset]** > **[On]**

2. System Diagram

Array Microphone (At least one is required)

ZOOM
Microsoft Teams
Google Meet
Internet

Lumens PTZ Camera (2 ~ 4 cameras)

PoE Switch
PC
CamConnect Processor (AI-Box1)

Large Screen in meeting room

Ethernet	
USB	
HDMI	

HDMI Monitor | Keyboard and Mouse

3. Hardware Connection

Power Adapter | Monitor | Computer | PoE Switch | Keyboard / Mouse

POWER
RESERVE
HDMI OUT
USB OUT
ETHERNET | USB3.0 | USB2.0

POWER | RESERVE | HDMI OUT | USB OUT
ETHERNET

4. AI-Box1 Setting

※ Connect the AI-Box1 to a keyboard and mouse. Connect a monitor via HDMI.
※ Go to the Information tab ❶ to confirm that AI-Box1 is on the latest firmware.
※ Settings can also be operated on AI-Box1 webpage.
(IP listed on the title bar of CamConnect Processor)
Please refer to the AI-Box1 User Manual for webpage settings.
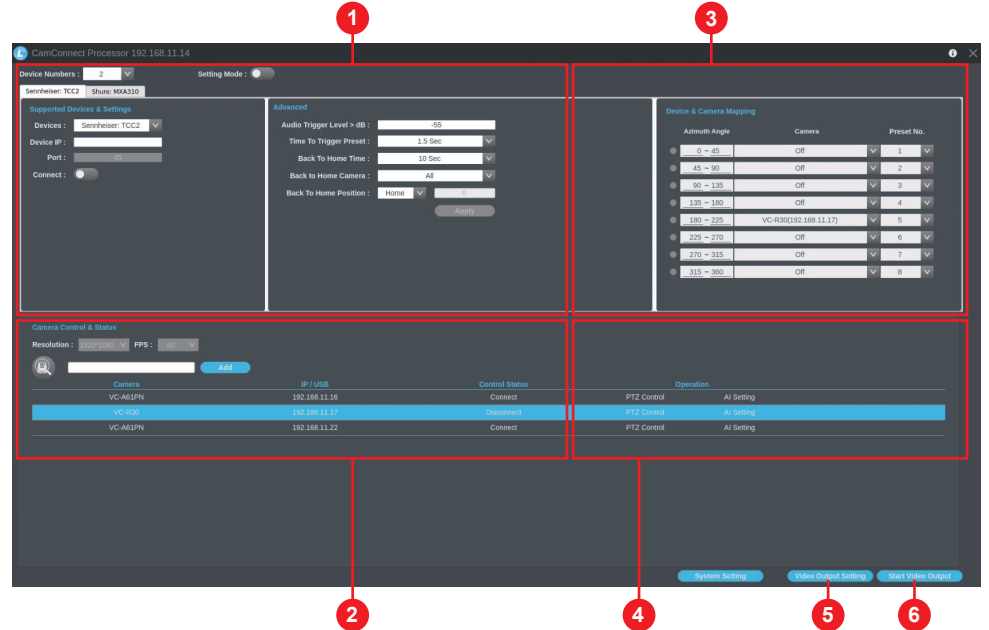
4.1 Array Microphone Setting

■ **Device Numbers** : Select the number of microphones you are using.
(AI-Box1 supports the use of different types of microphone)
■ **Devices** : Select the microphone you want to set up.
■ **Device IP** : Type in the IP Address of microphone.
■ **Port** : Use Default except for Nureva where the port should be selected.
■ **Connect** : To activate the microphone to detect sound.
■ **Advanced** : Settings for audio trigger level, time to trigger preset and back to Home parameters.

4.2 Camera Connection (Only Lumens Cameras are supported)

■ The Resolution / FPS must match the AI-Box1 (Please refer to **1. Before You Get Started**)
■ Click search 🔍 to display all IP cameras on the same local Network.
■ Click **[Connect]** to link to a camera. (When connected, the line is highlighted in blue)
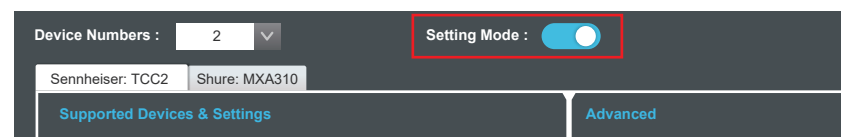
Camera	IP / USB	Control Status
VC-A61PN	192.168.11.16	Connect
VC-R30	192.168.11.17	Disconnect
VC-A61PN	192.168.11.22	Connect

4.3 Camera Preset Position Setting

※ Please follow **6. Example Azimuth / Array Configurations**.

4.3.1 Enable Setting Mode.
Microphone will receive the audio signal, but won't trigger camera preset when setting mode enabled.

Device Numbers :	2 ▾		Setting Mode : ⬤
Sennheiser: TCC2	Shure: MXA310		
Supported Devices & Settings			Advanced

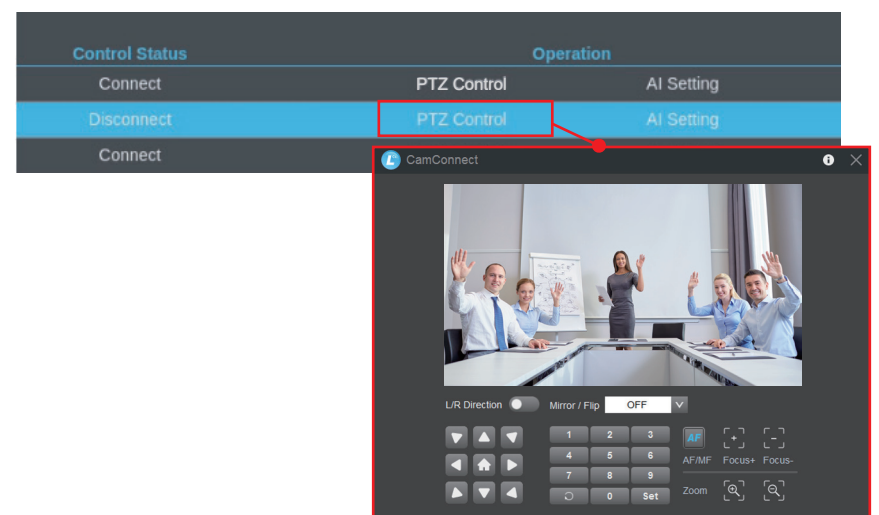**4.3.2** When the camera is connected, the microphone starts scanning the room for voices. When a voice is detected the corresponding Azimuth Angle will turn green. This will help you set up presets for the room.

**Tip:** Azimuth Angle values can be changed to suit your room.

	Azimuth Angle	Camera	Preset No.
○	0 ~ 45	Off ▾	1 ▾
●	45 ~ 90	Off ▾	2 ▾

4.3.3 After confirming the azimuth settings, click **[PTZ Control]** to set camera preset positions. (Presets also can be set on the remote control.)

Control Status	Operation	
Connect	PTZ Control	AI Setting
Disconnect	PTZ Control	AI Setting
Connect		

4.3.4 To save a Camera position, select a preset number.

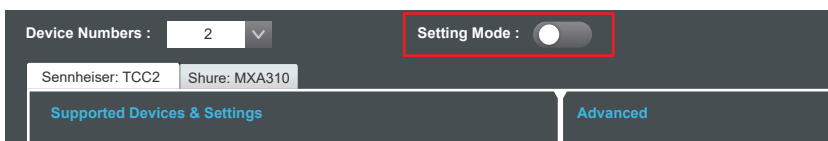| Azimuth Angle	Camera	Preset No.
0 ~ 45	Off ⌄	1 ⌄
● 45 ~ 90	Off ⌄	2 ⌄
90 ~ 135	Off ⌄	Off
135 ~ 180	Off ⌄	1
		2
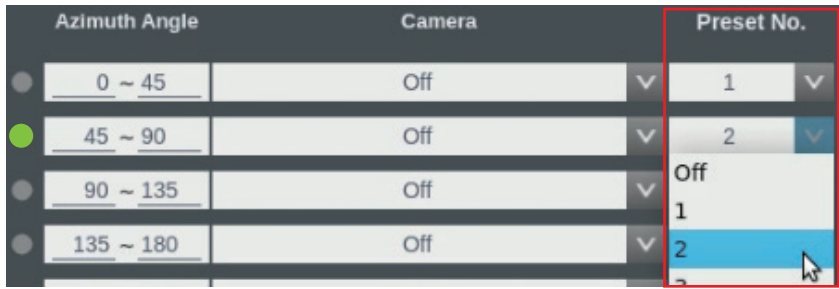
4.3.5 If multiple cameras are connected to the AI-Box1 select the preferred camera from the drop-down menu under Device and Camera mapping.

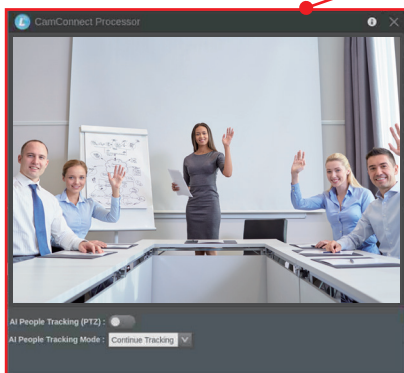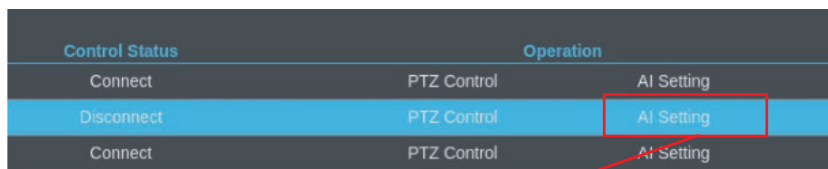| Azimuth Angle	Camera	Preset No.
0 ~ 45	Off ⌄	1 ⌄
● 45 ~ 90	Off ⌄	2 ⌄
90 ~ 135	Off	3 ⌄
135 ~ 180	VC-A51PN(192.168.4.114)	4 ⌄
	VC-A61P(192.168.4.29)	
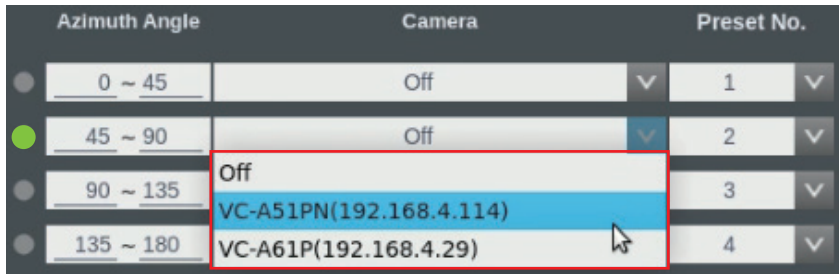
4.3.6 Disable Setting Mode
After Device & Camera Mapping completed, disable the setting mode to trigger camera to the preset position.

| Device Numbers :	2 ⌄	Setting Mode : ⬤
Sennheiser: TCC2	Shure: MXA310	
Supported Devices & Settings		Advanced

4.4 AI Setting

- AI people-tracking：Keeps the target in the center of the frame.
- Center Stage：After triggering to the preset position, the tracking target will be centered, and the tracking will stop after 5 seconds.
- Continuous Tracking：The camera will automatically track the target.

Control Status	Operation	
Connect	PTZ Control	AI Setting
Disconnect	PTZ Control	AI Setting
Connect	PTZ Control	AI Setting

4.5 Video Output Setting

- Video Output Mode：Select HDMI or UVC
  HDMI：Output to a display or matrix
  UVC：USB output to video conferencing software
- Video Output Layout：Set the output layout. Cross, PBP and Crop.
- Seamless Switching：Display the current target in full screen. Image switching will be triggered by Microphone signals.
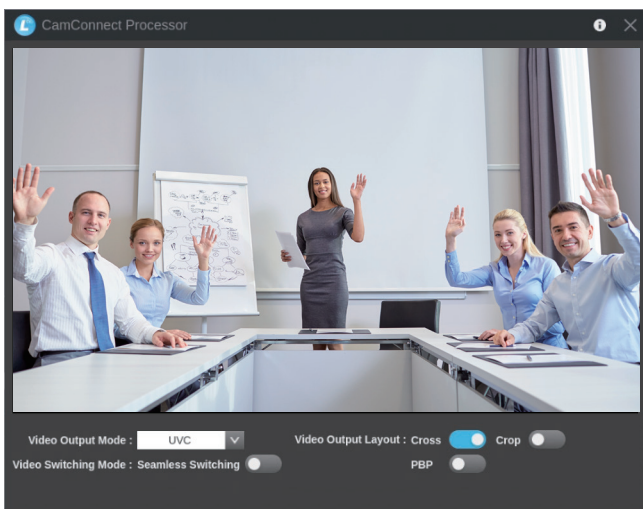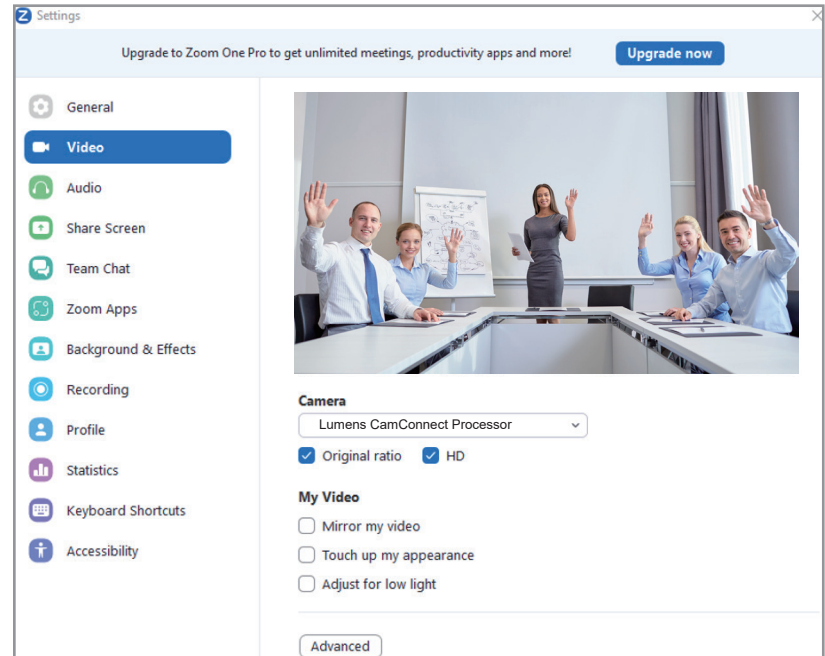
4.6 Start Video Output

- Click to start streaming **Start Video Output** output live video.
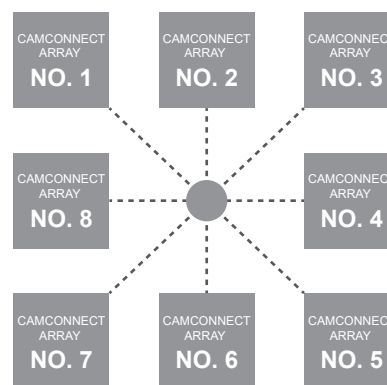
5. Use AI-Box1 with Video Conference Software

- Set AI-Box1 Video Output Mode to UVC and click **[Start Video Output]**.
- Launch your video conference software. (e.g., Skype, Zoom, and Teams)
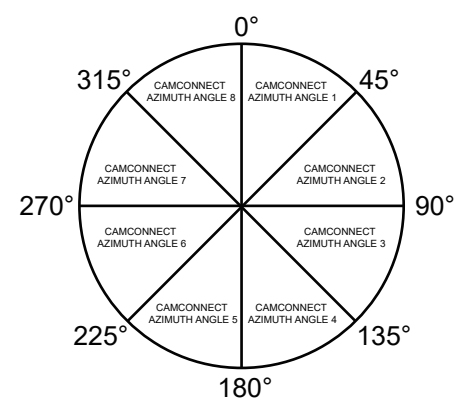- Select Video Source: **[Lumens CamConnect Processor]**
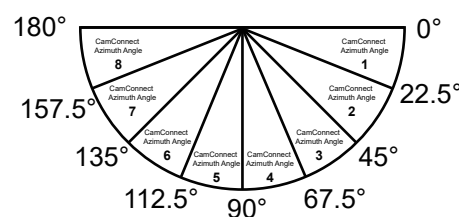
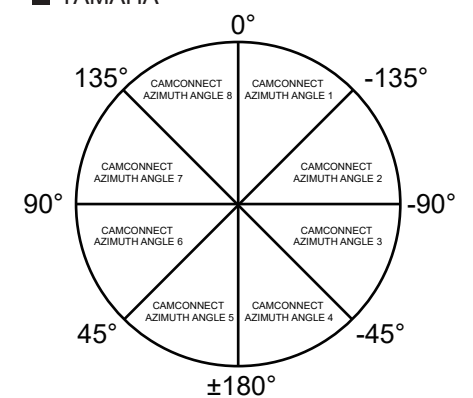## 6. Example Azimuth / Array Configurations

■ SHURE

CAMCONNECT ARRAY NO. 1	CAMCONNECT ARRAY NO. 2	CAMCONNECT ARRAY NO. 3
CAMCONNECT ARRAY NO. 8		CAMCONNECT ARRAY NO. 4
CAMCONNECT ARRAY NO. 7	CAMCONNECT ARRAY NO. 6	CAMCONNECT ARRAY NO. 5

■ SENNHEISER

0°
315° / 45°
CAMCONNECT AZIMUTH ANGLE 8 / CAMCONNECT AZIMUTH ANGLE 1
CAMCONNECT AZIMUTH ANGLE 7 / CAMCONNECT AZIMUTH ANGLE 2
270° / 90°
CAMCONNECT AZIMUTH ANGLE 6 / CAMCONNECT AZIMUTH ANGLE 3
225° / 135°
CAMCONNECT AZIMUTH ANGLE 5 / CAMCONNECT AZIMUTH ANGLE 4
180°

■ NUREVA

180° / 0°
CamConnect Azimuth Angle 8 / CamConnect Azimuth Angle 1
157.5° / 22.5°
CamConnect Azimuth Angle 7 / CamConnect Azimuth Angle 2
135° / 45°
CamConnect Azimuth Angle 6 / CamConnect Azimuth Angle 3
112.5° / 67.5°
CamConnect Azimuth Angle 5 / CamConnect Azimuth Angle 4
90°

■ YAMAHA

0°
135° / -135°
CAMCONNECT AZIMUTH ANGLE 8 / CAMCONNECT AZIMUTH ANGLE 1
CAMCONNECT AZIMUTH ANGLE 7 / CAMCONNECT AZIMUTH ANGLE 2
90° / -90°
CAMCONNECT AZIMUTH ANGLE 6 / CAMCONNECT AZIMUTH ANGLE 3
45° / -45°
CAMCONNECT AZIMUTH ANGLE 5 / CAMCONNECT AZIMUTH ANGLE 4
±180°

* Please visit https://www.youtube.com/mylumens to watch related videos.