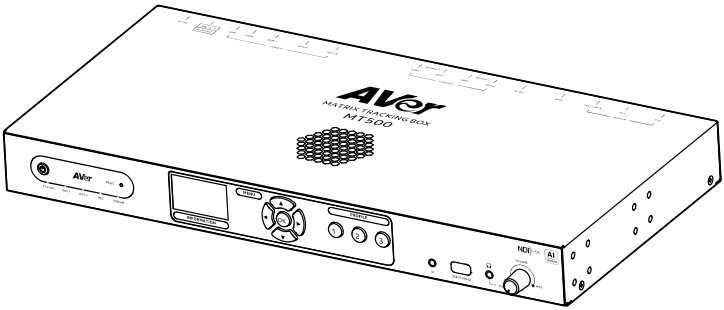

MT500

Matrix Tracking Box

User Manual

Firmware 0.0.0000.20

Federal Communication Commission

NOTE: 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. This equipment generates, uses, and can radiate radiofrequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

PoE

The PoE++ port is connected only to PoE networks without routing to the outside plant.

PSTI Statement of Compliance

Please refer to the following website: https://www.aver.com/product-security-advisory

VCCI-A

この装置は、クラス A 機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

(注)本製品同梱の電源ケーブルは、本製品同梱の電源アダプタでのみ使用してください。

本製品同梱の電源ケーブルは、他の電気機器では使用できません。

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Overview

The MT500 is a multi-camera matrix box with integrated voice-tracking technology. Supported AVer cameras automatically switch views based on the active speaker's position, while built-in AI video features further optimize the switching logic to keep people centered in the frame.

The matrix box supports multiple video input sources (USB, HDMI, IP via RTSP/NDI/Dante) and can output two independent video feeds simultaneously (USB, HDMI, IP). With AVer's human tracking technology and integration with major microphone brands for audio-based positioning, the MT500 is ideal for large meeting rooms, lecture halls, distance learning, and enterprise environments.

Key Features

- Dual independent video outputs and multi-source video input (USB, HDMI, IP)
- Three built-in modes: Live Mode, Manual Mode, Auto Mode
- AI-powered video functions: InstaConfig, FaceFocus, IntelliSwitch
- Recording and streaming

Compare Modes

- **Live Mode:** Preview live video and control PTZ. Settings are not saved, making it suitable for on-the-fly operation.
- **Manual Mode:** Save fixed camera presets and output layouts. Supports human tracking.
- **Auto Mode:** Uses two types of voice-tracking technology—based on microphone channels or coordinate-based positioning—to automatically frame the active speaker.

Feature	Live Mode	Manual Mode	Auto Mode - Channel	Auto Mode - Active Position
Live view camera count	4	4	4	–
Profiles	–	36	36	36
Presets	–	256	256	–
AVer camera + microphone groups	–	–	25	–
Human Tracking	–	✓	✓	–
3rd-party microphone integration	–	–	✓	✓
X, Y, Z coordinates input	–	–	–	✓

Understand Human Tracking

Human Tracking includes Presenter, Zone, Segment (supported models), and Hybrid Modes.

To enable human tracking with Manual Mode and Auto Mode (Channel), make sure you have configured required tracking modes on the camera web interface. Please refer to <Supported AVer Devices> for supported AVer devices and your camera's user manual for tracking mode settings.

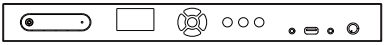
Example: Auto Mode (Channel) with Presenter Mode

Channel 1 detects voice

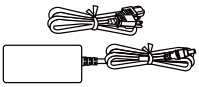
Camera moves to preset 1

Presenter Mode is turned on

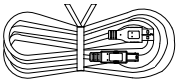
Package Contents



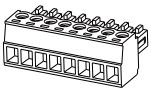
Matrix Tracking Box



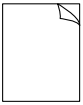
Power Adapter &
Power Cord



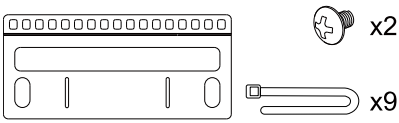
USB 3.0 Type-A to
Type-B Cable
(1.5 m/4.92 ft, x2)



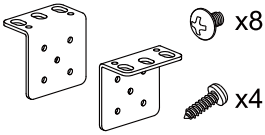
Phoenix® Combicon
8-Pos Connector



Quick Start Guide



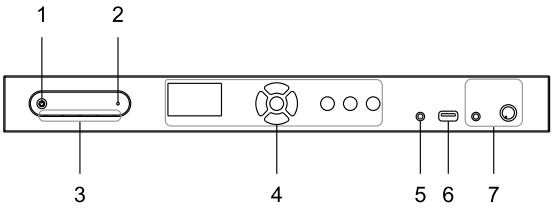
Cable Fixing Plate Installation Kit
Cable Fixing Plate
3.0 x 5 mm Truss Head Screws (x2)
Cable Ties (x9)

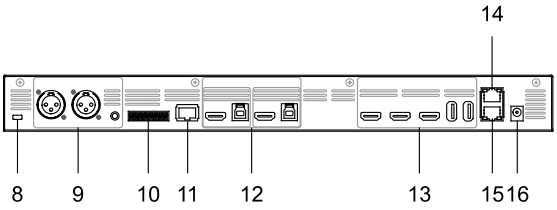


Rack Mount Installation Kit
Mount Brackets (x2)
3.0 x 5 mm Truss Head Screws (x8)
M3 x 10 mm Screws (x4)

* The rack mount installation kit can be used for both desk and server rack installation.
Please refer to the installation section for details or contact your local dealer.

Parts Info





Front View

1. Power Button
   - The device automatically powers on when connected to power
   - Press and hold for 5 seconds to enter Standby Mode. Press once to wake up.
2. Reset Button

   Insert a paper clip, push in and hold for 5 seconds to reset to default settings
3. LED Indicators
4. LCD Screen, Navigation and

   Profile Buttons
5. IR Extend Port (for future use)
6. USB 2.0 Storage Port
7. Audio Out Port, Volume Knob

Back View

8. Kensington Lock
9. Audio In Ports

   CH 1, CH 2, MIC/LINE IN
10. GPIO Port
11. RS-422 Port
12. Video Out Ports

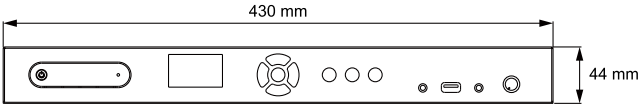
    USB 1 / HDMI 1, USB 2 / HDMI 2
13. Video In Ports

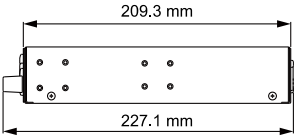
    USB 1-2, HDMI 1-3
14. PoE++ 802.3bt Port
15. Ethernet Port
16. DC Power Jack

LED Indicators

LED	Color	Status
STATUS	Solid green	Operational
	Solid orange	Standby
	Flashing green	Firmware update
USB OUT 1-2	Solid green	Connected to USB device
	Flashing green	Streaming over USB
REC	Solid green	Connected to storage device
	Flashing green	Recording
IP STREAM	Flashing green	Streaming over IP

Dimensions





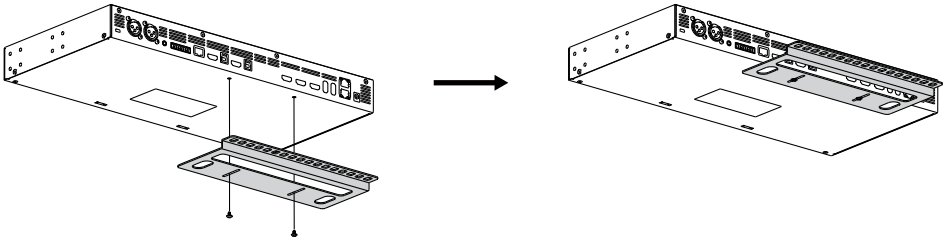
Installation

Cable Fixing Plate Installation

1. Secure the cable fixing plate to the device with the included 3.0 x 5 mm truss head screws (x2).

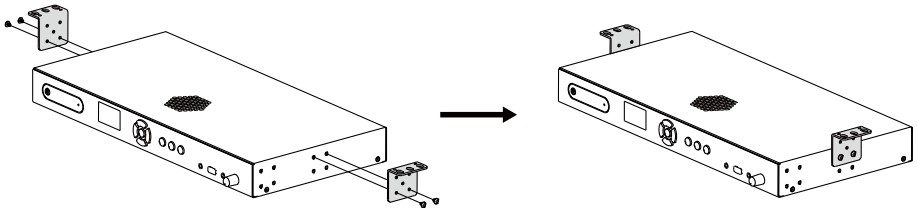
2. Connect the cables.

3. Use the cable ties to secure the cables and cable fixing plate.

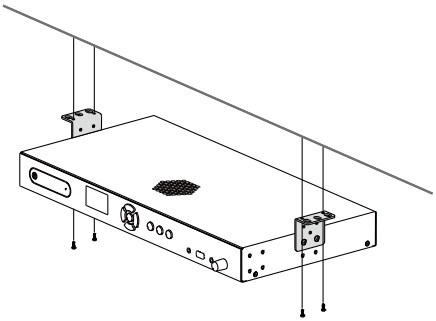


Desk Mount Installation

1. Secure the rack mount brackets to the device with the included 3.0 x 5 mm truss head screws (x4).



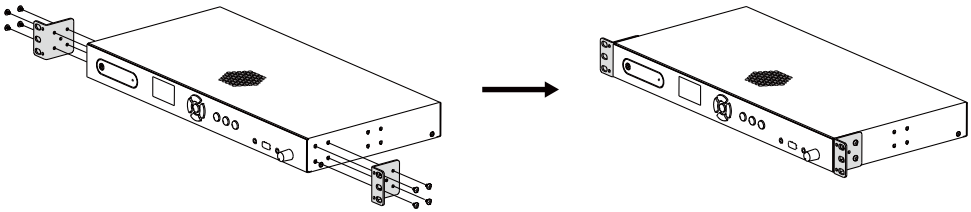
2. Install the rack mount brackets and device under the desk with the included M3 x 10 mm screws (x4). Make sure the fan vents aren't blocked.



Server Rack Mount Installation

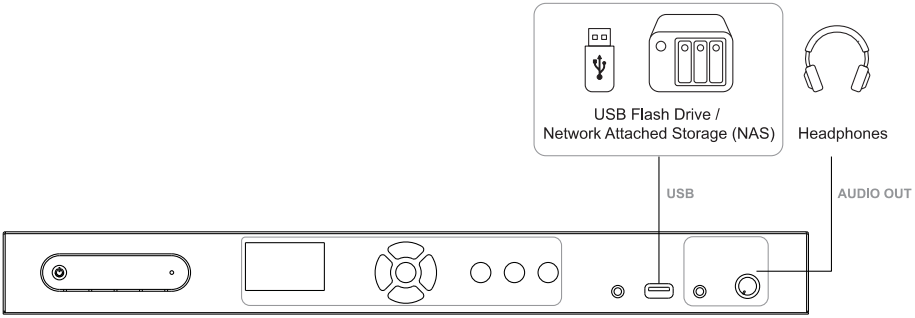
1. Secure the rack mount brackets to the device with the 3.0 x 5 mm truss head screws (x8).

2. Install the rack mount brackets and device to the server rack with appropriate screws.

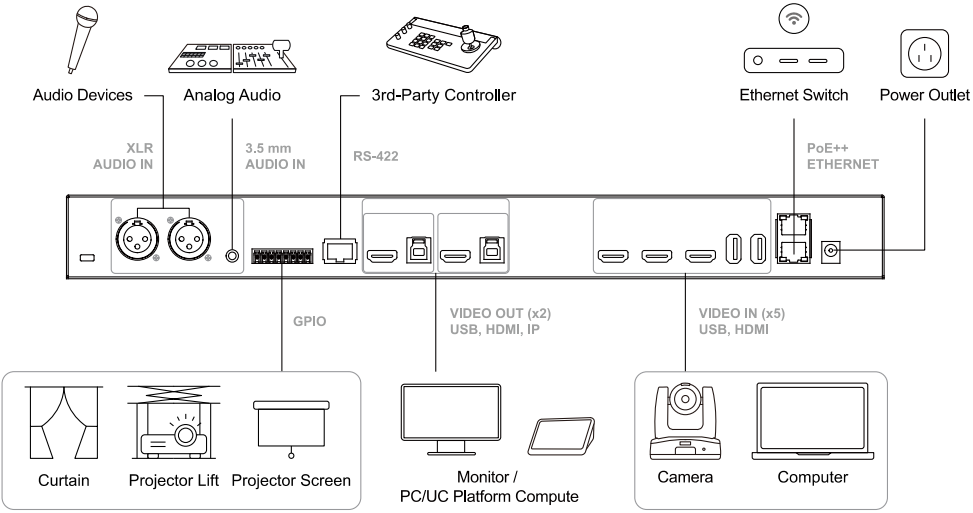


Connections

- **Front Panel**



- **Back Panel**



Port	Description
IR Extension Port	Reserved for future use.
USB-A 2.0 Storage Port	Connect to a USB flash drive or NAS (network storage).
3.5 mm Audio Output	Connect to external speakers.
XLR Audio Inputs CH1, CH2	Connect to professional audio devices such as condenser or dynamic microphones.
MIC/LINE IN Audio Input	Connect to handheld mics, tabletop mics, Bluetooth speakers, or mobile devices.
GPIO (General-Purpose I/O) Port	Connect to an 8-pos Phoenix® connector for configurable general purpose. For more information, see <Control>.
RS-422 Port	Connect to a 3rd-party controller to allow external control of the matrix box.
Video Output 1 USB-B 3.0, HDMI	Connect to an HDMI display or PC/UC (Unified Communications) host. • Output 1 and Output 2 can send different video feeds simultaneously. • For more information, see <Maximum Video Input/output Resolution>.
Video Output 2 USB-B 3.0, HDMI	
Video Inputs USB-A 3.0 (x2), HDMI (x3)	Connect USB and HDMI cameras, or enable USB Bypass to use the control box as a USB hub.
PoE++ 802.3bt Port	• The two LAN ports are configured as separate networks. ○ Upper LAN (Primary): - DHCP enabled - Can connect to a router - Used for external / public network access - Recommended for audio/video streaming ○ Lower LAN (Secondary): - Static IP only - For fixed internal network only, used to establish a private LAN environment - Recommended for device control (Web UI, CGI commands, etc.) • Dante Controller Discovery Logic: ○ Single-port Connection: The MT500 can be discovered by Dante Controller via the Upper LAN. ○ Dual-port Connection: If both ports are connected simultaneously, the Upper LAN takes priority for Dante Controller discovery.
Ethernet Port	
12V DC Power Jack	Connect to a power outlet using the included power adapter and power cord.

Get Started

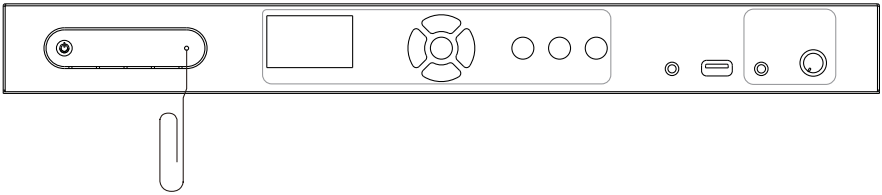
Power Your Device

The device automatically powers on when connected to power. No need to press the **power** button ⏻. Press and hold for 5 seconds to enter Standby Mode. Press once to wake up.

Reset Your Device

Insert a paper clip into the reset hole, push in and hold for 5 seconds to reset to the device to factory default settings.

Or press **OK** to access the LCD menu，go to **System** > **Factory Default** > **Proceed**.



Access the LCD Menu

1. **Home Screen**

   Displays the currently selected profile and mode.

2. **Status Bar**

   Storage / Streaming / Recording / Network settings

   (streaming includes RTSP、RTMP、NDI、DANTE、HLS)

Access the LCD menu: Press **OK** or the **Right** button.

Switch profiles: Press **1-3** to switch between Auto Mode profiles 1-3. You can also switch to other profiles through the LCD menu.

Level 1	**Level 2**	**Level 3**
Profile	Profile 1-36 (Auto)	
Storage	Storage Information	X/XX GB
Streaming	RTMP 1	Start Stream
		Cancel
	RTMP 2	Start Stream
		Cancel
Network	DHCP	ON
		OFF
System	Device Information	Model Name: MT500 IP Address 1 (PoE++): DHCP IP Address 2 (Ethernet): 192.168.168.168 Firmware Version: 0.0.0000.XX
	Factory Default	Proceed
		Cancel

Access the Web Interface

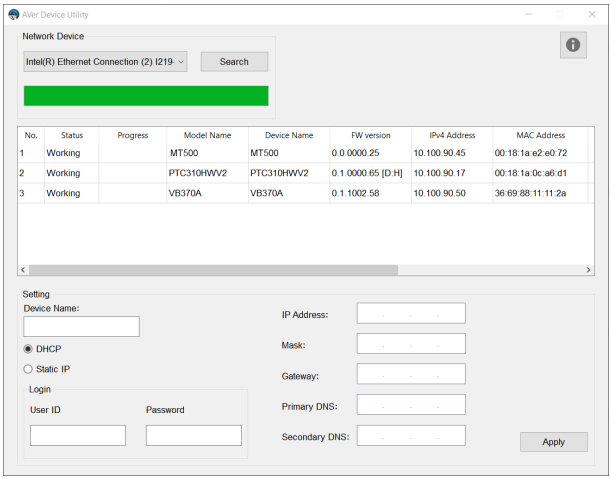
To access the web interface of the matrix box, you can use any of the following software to find its IP address:

- AVer Device Utility
- AVer Enterprise Management

Note:

- The default network setting is as follows:
  PoE+ port: DHCP (0.0.0.0. when disconnected)
  Ethernet port: Static IP 192.168.168.168
- The default username and password is **admin/admin**.

AVer Device Utility



To access the web interface:

1. Download AVer Device Utility from AVer Download Center (https://www.aver.com/download-center) and launch the software.

2. Click **Search** to see available devices on the same local area network (LAN).

   Note:

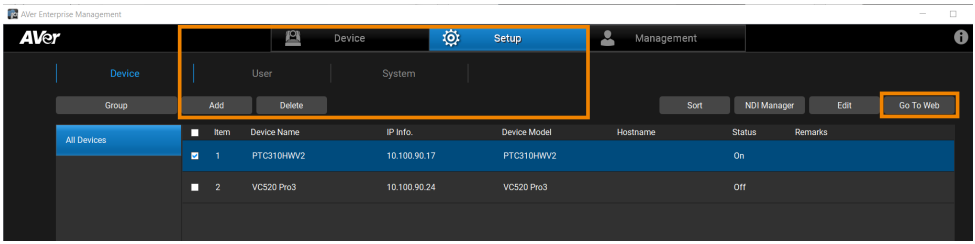
   - Make sure your device is connected to the internet.
   - AVer Device Utility and your device must be on the same LAN.

3. Double-click on your device's IP address in the **IPv4 Address** column to open the web interface in your browser.

To change your network to DHCP or static IP:

1. Select the checkbox of your device.
2. Enter the username and password in the **Login** field.
3. Select **DHCP** or **Static IP**, then enter your network settings if applicable in the **Settings** section.
4. Click **Apply**.

AVer Enterprise Management



Note: AVer Enterprise Management default username and password is **admin**/**admin**.

To access the web interface:

1. Download AVer Enterprise Management from AVer Download Center (https://www.aver.com/download-center) and launch the software.
2. Log in with the default username and password **admin**/**admin**.
3. Go to **Setup** > **Add**, then click **Auto Search** to see available devices on the same local area network (LAN).
4. Click to select your device, enter the username and password, then click **Save** to add the device to the device list.
5. Select the checkbox of your device, then click **Go to Web** button to open the web interface in your browser.

Log in for the First Time

When you log in for the first time, you'll be prompted to change the username and password. The username and password cannot be the same.

- Username: Use 1-32 characters.
- Password: Use 8-32 characters and a combination of uppercase letters, lowercase letters, and, numbers. Symbols (!$%'()*+,-./<=>?@[]^_{}~) are optional.

User Interface

From left to right:

1. **Live Mode Toggle**

2. **Profile Menu**

   A single profile can store both Manual Mode and Auto Mode settings, but only one mode can be active at a time. To switch modes, go to **Settings** > **Profile**.

   Note: When using non-AVer cameras, only Live Mode and Manual Mode are supported. Auto Mode (voice tracking) and camera control are not available.

3. **Output 1 and Output 2**

   The matrix box supports two simultaneous and independent video outputs.

4. **Device Status**

   Shows the number of online devices / total added devices.

5. **Account**

   Switch between Admin and User roles.

   Users can operate voice tracking but cannot modify settings.

6. **Settings**

   Add devices, configure voice tracking, and manage system settings.

Add, Edit or Delete Devices

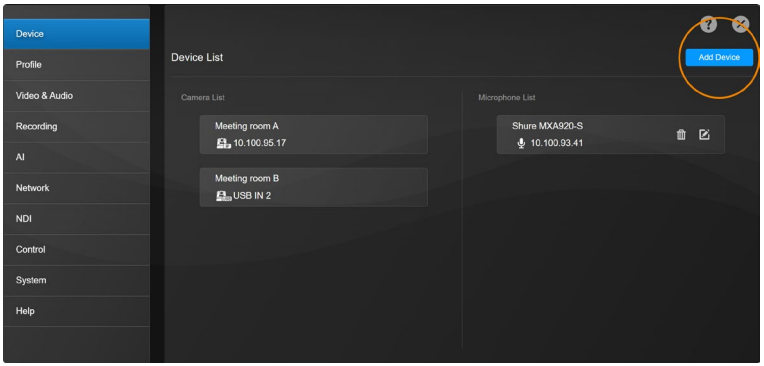
You can add up to 25 unique cameras and 25 unique microphones via USB, HDMI and IP.

Note: You can create up to 25 groups, but Auto Mode (Channel and Active Position) supports a maximum of 8 unique cameras. Multiple groups can share the same camera.

To add devices:

1. Access the web interface.

2. Go to **Settings** > **Device** > **Add device**.



3. Fill out the **Add New Device** dialog box:

- Camera

Item	Description
Select Camera or Microphone	Select camera.
Connect Camera via	Select the camera's connection method. • HDMI cameras must also be connected via IP to enable PTZ control and human tracking. • Non-AVer cameras support only Live Mode and Manual Mode. Auto Mode (voice tracking) and PTZ control are not supported.
IP Address	Click **Auto Search** or enter the IP address.
Camera Account	Enter the camera's username and password.
Camera Password	
Streaming via RTSP	• Real-Time Streaming Protocol (RTSP): Ensure both the camera and the receiving device/application support

Streaming via NDI	RTSP. • Network Device Interface (NDI): Ensure both the camera and the receiving device/application support NDI. You can optionally assign an NDI group name. • Digital Audio Network Through Ethernet (Dante). A Dante license is required. To purchase, please visit the Dante website (https://www.getdante.com/).
Streaming via Dante	
Device Name	Enter the name you want to display in the device list.

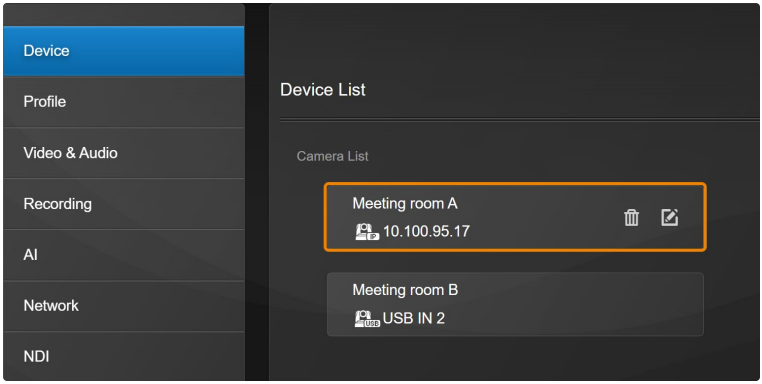
- Microphone

Item	Description
Select Camera or Microphone	Select microphone.
Microphone Brand	Select microphone brand.
IP Address	Enter the IP address.
Device Name	Enter the name you want to display in the device list.

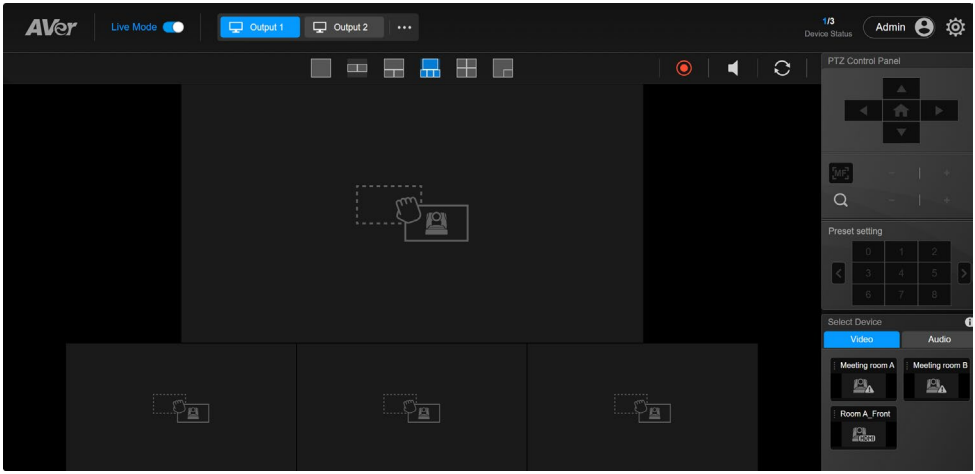
4. Click **Save**.

To edit or delete devices:

1. Hover over the device.
2. Click the **Pencil** icon to edit it. Or click the **Trash can** icon to delete it.



Live Mode

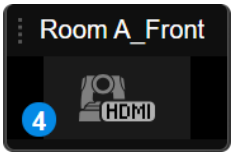


Live Mode lets you preview live video, control PTZ, adjust the video layout, and select audio sources. Settings are not saved, making this mode ideal for temporary or on-the-fly operation.

To set up:

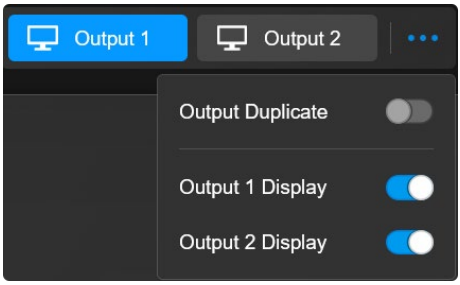
1. Toggle on **Live Mode**.
2. Select an output layout.

3. Drag a camera icon from Select Camera onto the grid. The blue number on each camera icon indicates its position in the layout.



4. To clear the settings, click the **Reset** button .

5. (Optional) Configure dual video outputs:

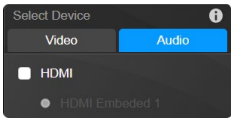


Note: These output toggles control both video and audio.

- Two different outputs: Click **Output 2**, repeat Steps 1–3, then click ••• to toggle on Output 1 Display and Output 2 Display.
- Duplicate outputs: Click •••, then toggle on Output Duplicate.

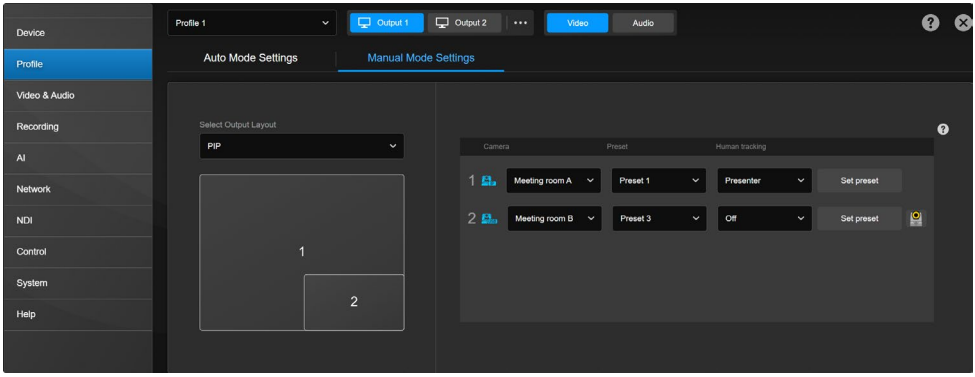
To control a camera:

1. Click a grid to select a camera. The selected camera is highlighted with a blue frame, and the PTZ control panel becomes active.
2. Do any of the following:
   - PTZ control
   - Switch between PTZ and wide-angle lenses (dual-lens camera only): Click the **switch lens** button .
   - Load a preset: Click its preset number.
   - Select audio inputs, adjust volume, or toggle on VC Mode: Click **Audio** tab.



   - Adjust volume: Click the **volume** button .
   - Start recording: Click the **recording** button .

Manual Mode



Manual Mode allows you to save fixed camera presets and output layouts for the room, and use human tracking to frame the speaker. Before using Manual Mode, make sure the required tracking mode is configured in each camera's web interface.

To set up:

1. Go to **Settings** ⚙ > **Profile** > **Manual Mode Settings**.

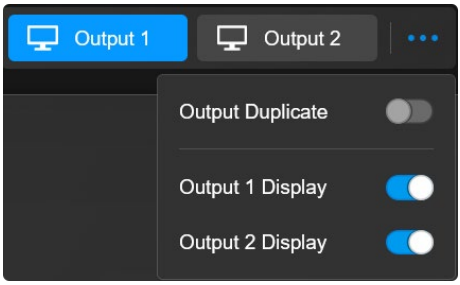
2. From the Profile drop-down menu, select the profile you want to save. To rename a profile, select the profile and click **Rename**.

> **Note:** A single profile can store both Manual Mode and Auto Mode settings, but only one mode can be active at a time.

3. Select an output layout, then choose the camera, preset, and human tracking mode.

   To add a preset, click **Save preset** > use PTZ control to move the camera > click a preset number > click **Save** > click **Back** to return to the profile page.

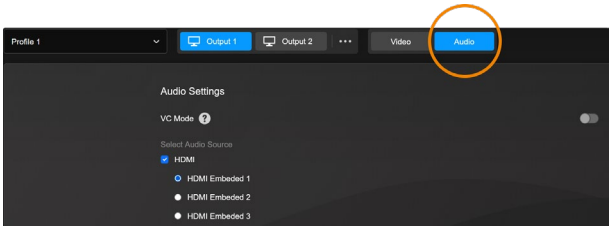
4. (Optional) Configure dual video outputs:



Note: These output toggles control both video and audio.

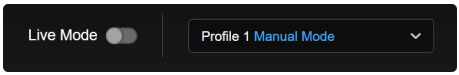
- Two different outputs: Click **Output 2**, repeat Steps 1–3, then click ••• to toggle on Output 1 Display and Output 2 Display.
- Duplicate outputs: Click •••, then toggle on Output Duplicate.

5. (Optional) To select audio inputs, adjust volume, or toggle on VC Mode, click **Audio**.
   - All selected audio sources will be mixed and transmitted with the video.
   - VC Mode prevents echo by managing the **USB PC In** audio. Click the ? or refer to <VC Mode (Video Conferencing Mode)> for details.

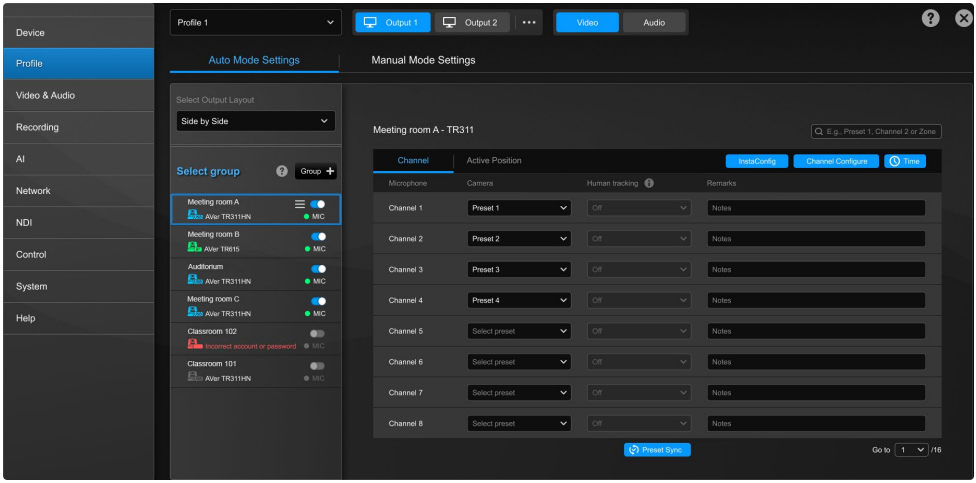


6. Click ✕ to exit the profile page. Your settings are automatically saved and applied.

   You can confirm the active mode from the profile drop-down list on the home screen.



Auto Mode (Channel)



Auto Mode (Channel) integrates supported third-party microphone systems from Audio-Technica, Biamp, Bosch, ClearOne, Nureva, Sennheiser, Shure, and Yamaha. By pairing AVer camera presets with microphone channels, the system uses voice tracking to automatically frame the active speaker.

Note: Third-party microphones may require configuration in their manufacture software. For microphone settings, please refer to <Supported Microphones>.

To set up:

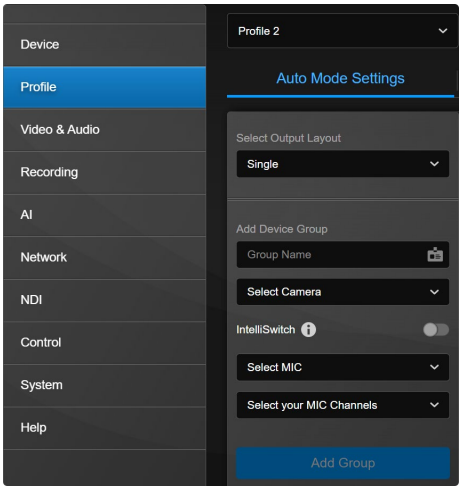
1. Go to **Settings** ⚙ > **Profile** > **Auto Mode Settings**.

2. From the Profile drop-down menu, select the profile you want to save. To rename a profile, select the profile and click **Rename**.

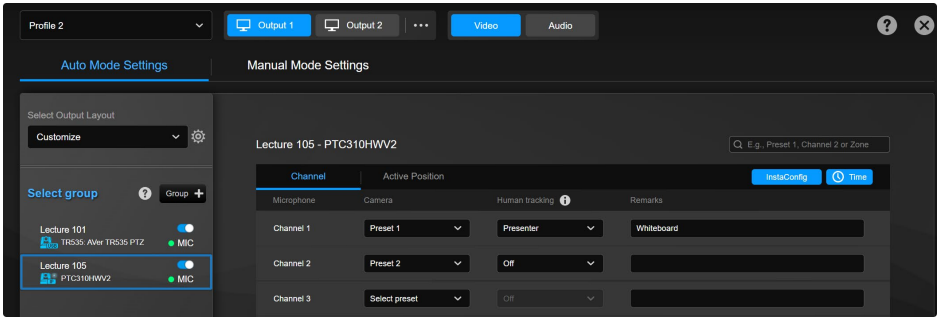
Note: A single profile can store both Manual Mode and Auto Mode settings, but only one mode can be active at a time.

3. Select an output layout, then create groups by pairing the cameras you want with microphones and selecting the number of microphone channels.

> **Note:** You can create up to 25 groups, but Auto Mode (Channel and Active Position) supports a maximum of 8 unique cameras. Multiple groups can share the same camera.



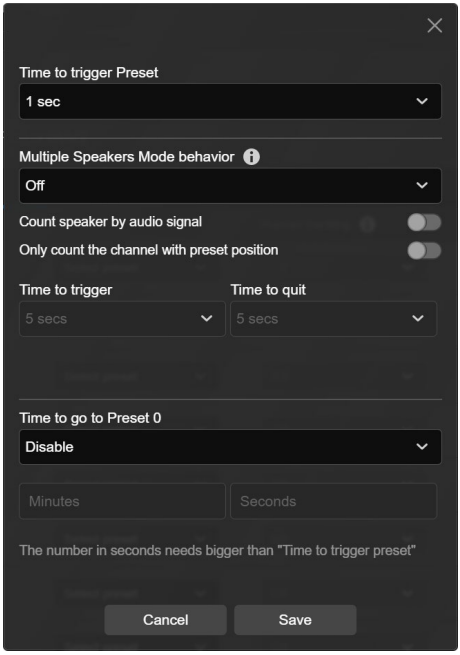
4. Newly created groups appear under **Select Group**. Click Group + to add additional groups.



5. Create presets and pair them with microphone channels.
   - Manual setup: Use the camera remote or click the group's hamburger menu ≡ > **Set preset** to create presets according to the seating arrangement. Then pair each preset with the appropriate microphone channel.
   - Automatic setup: If you have many cameras or seats, use InstaConfig to speed up the process. Click **InstaConfig** and follow the on-screen instructions.

6. If you are using Shure MXA920 microphones, configure lobes or coverage areas in the Shure software. Refer to <Supported Microphones> for instructions.

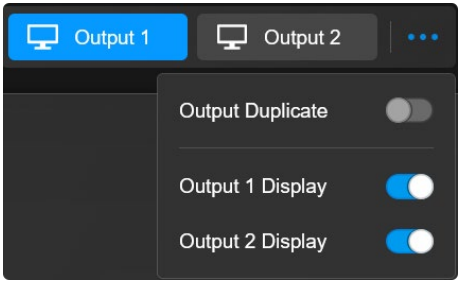
7. (Optional) Click Time to set a delay before the camera moves to a preset.



Item	Description
Time to trigger Preset	The group's camera moves to a preset after the delay time you set.
Multiple Speakers Mode behavior	When the microphone picks up multiple people speaking at the same time, the group's camera moves to preset 0. The purpose of this feature is to frame the whole room instead of switching rapidly between individual speakers. Refer to <Configure Multiple Speakers Mode>.
Time to go to Preset 0	When the microphone picks up no sound, the group's camera moves to preset 0 after the delay time you set. You can optionally choose a different preset other than preset 0 by assigning a priority group. **Note:** The duration of **Time to go to Preset 0** must be longer than **Time to trigger Preset**.
Far end speakers trigger Preset 0	When the microphone picks up audio from far-end participants on a video conferencing software, the group's camera moves to

(Sennheiser TCC2/TCCM only)	preset 0. This purpose of this feature is to show the whole room and prevent false tracking. You can optionally choose a different preset other than preset 0 by assigning a priority group.

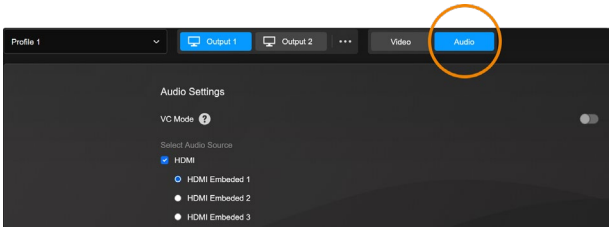
8. (Optional) Configure dual video outputs:



Note: These output toggles turn video and audio on or off together.

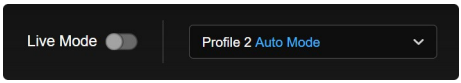
- Two different outputs: Click **Output 2**, repeat Steps 1–7, then click ••• to toggle on Output 1 Display and Output 2 Display.
- Duplicate outputs: Click •••, then toggle on Output Duplicate.

9. (Optional) To select audio inputs, adjust volume, or toggle on VC Mode, click **Audio**.
   - All selected audio sources will be mixed and transmitted with the video.
   - VC Mode prevents echo by managing the **USB PC In** audio. Click the ? or refer to <VC Mode (Video Conferencing Mode)> for details.

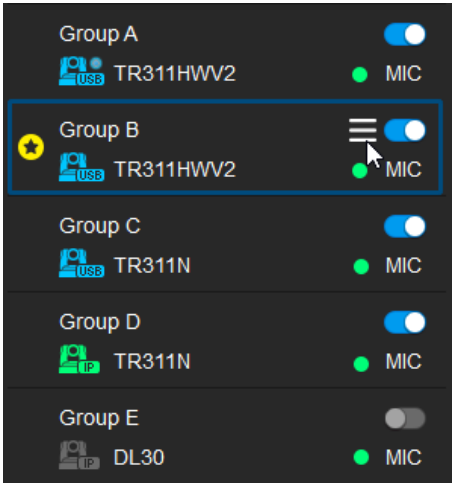


10. Click ✕ to exit the profile page. Your settings are automatically saved and applied.

    You can confirm the active mode from the profile drop-down list on the home screen.



Add, Edit or Delete Groups



To add groups:

1. Access the web interface.
2. Go to **Settings** > **Profile** > **Auto Mode Settings** > Click Group +.

To edit or delete groups:

1. Hover over a group.
2. Click the hamburger menu , and do any of the following:
   - Set preset: Add camera presets.
   - Edit group
   - Delete group
   - Group overlay priority: Assign a priority group .
3. (Optional) Toggle a group on or off to enable or disable a group.

Device Status

- Camera

Color	Status
	Camera is sending data to MT300
	Device online
	Device offline
	Incorrect account or password

- Microphone

Color	Status
Green	Online
Gray	Offline

Assign a Priority Group

You can assign a priority group for the camera to go to when:

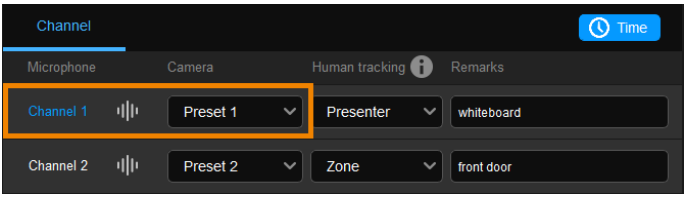
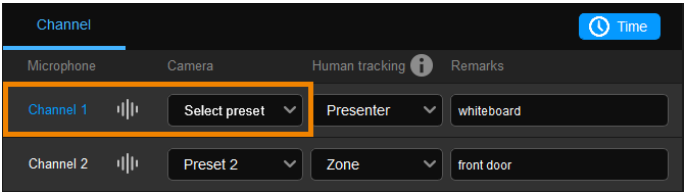
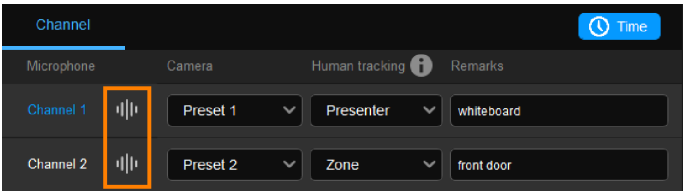
- Multiple groups share a camera.
- Microphone detects no sound (default preset 0).
- Multiple Speakers Mode activates (default preset 0).
- Microphone detects far end speakers (Sennheiser TCC2/TCCM only, default preset 0)

To assign:

1. Hover over a group, then click the hamburger menu .
2. Click **Group overlay priority**.

   A **star** icon will appear next to the priority group.
3. Click **Group overlay priority** again to cancel priority group.

Understand Active Channels

Channel Type	Example
Active channel (blue highlight) + a preset An active channel indicates the camera's location.	
Active channel (blue highlight) (no preset) An active channel can be without a preset.	
Audio signal icon An audio signal icon channel indicates that the channel detects sound.	

Configure Multiple Speakers Mode

When the microphone picks up multiple people speaking at the same time, the group's camera moves to preset 0. The purpose of this feature is to frame the whole room instead of switching rapidly between individual speakers.

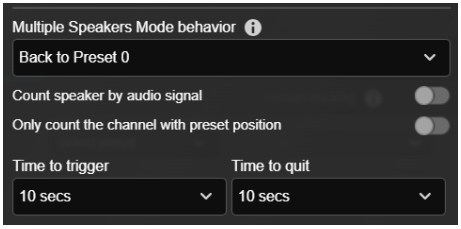
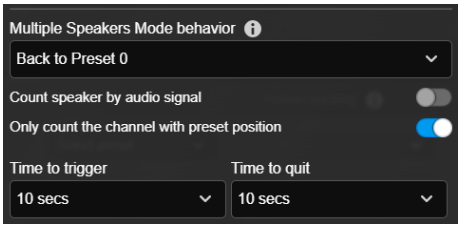
To set up:

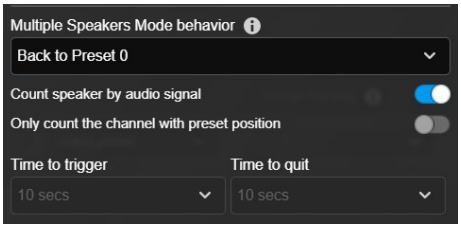
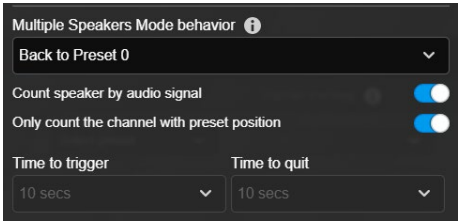
1. Go to **Settings** > **Profile** > **Auto Mode Settings** > select a group > click Time.
2. Enable the mode by selecting **Back to Preset 0**.

   You can optionally choose a different preset other than preset 0 by assigning a priority group.
3. Set **Time to trigger** and **Time to quit** to enter and exit the mode.

   Important: Set both **Time to trigger** and **Time to quit** to 3X the **Time to trigger preset**, so the system has enough time to detect multiple simultaneous speakers.

4. Depending on your microphone type, toggle filters to adjust how speakers are detected:

Type	Filter	Trigger Behavior
Ceiling microphone	Both toggles off  	Detecting sound from 3 different active channels within the selected **Time to trigger**. *(Active channels with or without presets.)*
	Toggle on **Only count the channel with preset positions**  	Detecting sound from 3 different active channels **with presets** within the selected **Time to trigger**.

Gooseneck microphone	Toggle on **Count speaker by audio signal**  	Detecting 2 or more audio signal at the same time. *(Active channels with or without presets.)*
	Both toggles on  	Detecting 2 or more audio signal with presets at the same time.

Configure Output Layout

Customize your video layout with a Single view, Side-by-side view, Active Speaker view, Picture-in-Picture view, Customized view and more. The default setting dynamically adds up to 4 channels and keeps a fixed grid layout, but you can also enable Layout Reduction to hide inactive channels.

Output Layouts

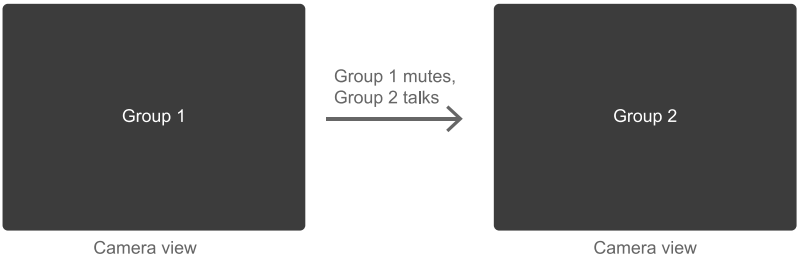
To select an output layout, go to **Settings** > **Profile** > **Auto Mode Settings** > select a group > **Select Output Layout**.

- **Single**

Displays current active channel's camera view in full-screen.

When all channels are muted, it shows the camera view of the first group on the list.

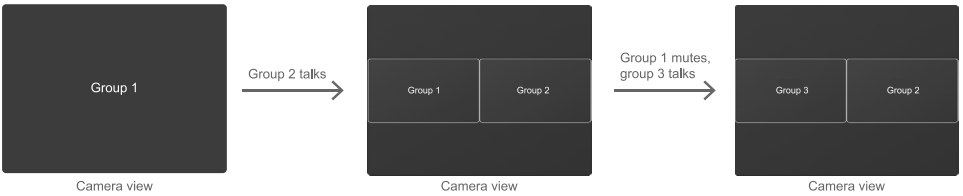
When one channel is muted, the next active channel will take over the full-screen.



- **Side-by-side**

Displays the camera views of two active channels side by side.

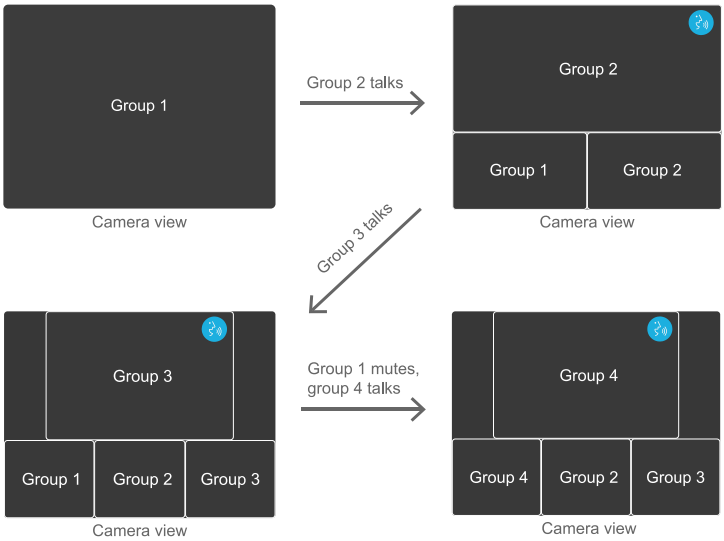
When one channel is muted, the next active channel takes the first available grid.



- **Active Speaker**

Dynamically displays the current active channel in the top large grid, while up to three standby channels appear in smaller grids on the second row.

When one channel is muted, the next active channel takes the first available grid.

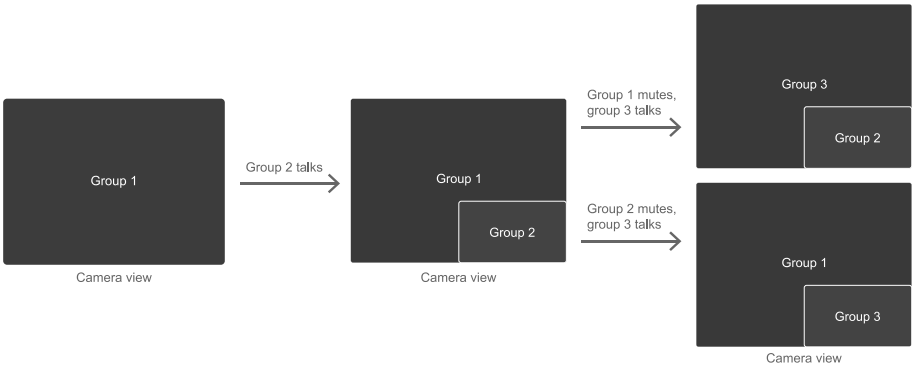


- **Picture-in-Picture (PIP)**

Displays two active channels in full-screen with a smaller grid.

When one channel is muted, the next active channel takes the first available grid.

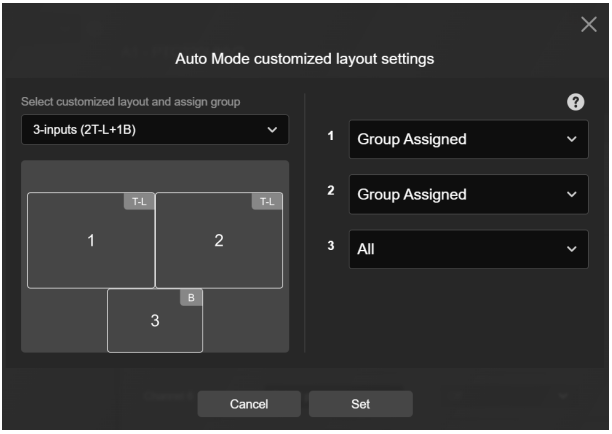
Note: When all channels are muted, it shows the camera view of the first group on the list, sorted alphabetically. To change the order, rename the group accordingly.



- **Customize** *(priority group unavailable)*

1. Select a customized layout from the pop-up window, or click ⚙ next to Customized.

   For a layout without blank space, we recommend using **4-inputs (1T-F+3B)**.



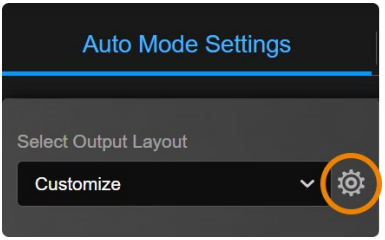
T = Top

L = Large

B = Bottom

F = Full screen (no blank space)

2. Assign one, multiple, or all groups to each grid using the drop-down lists.
   - Newly assigned grids display “Group Assigned” or “All.” Displaying group names are unavailable at this time.
   - When a channel is muted, the next active channel takes its assigned grid.
3. When finished, click **Set**.
4. To edit a customized layout and re-assign groups, click ⚙ next to Customize.

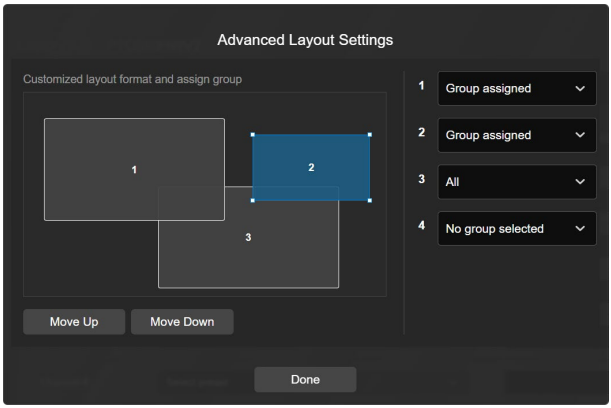


5. (Optional) To disable human tracking for a specific grid, go to **Profile** > **Auto Mode Settings** > select the grid’s group > set every channel’s human tracking to **Off**.

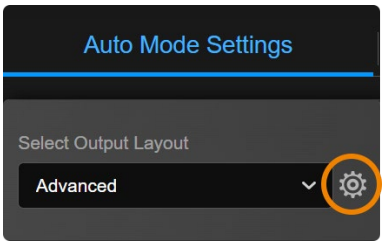
- **Advanced** *(priority group unavailable)*

Create responsive layouts with up to 4 draggable, resizable and removable grids.

1. Assign one, multiple, or all groups to each grid using the drop-down lists.
   - Newly assigned grids appear on the preview and display “Group Assigned” or “All.” Displaying group names are unavailable at this time.
   - When a channel is muted, the next active channel takes its assigned grid.



2. Click to select a grid. The selected grid is highlighted blue.
3. With the grid selected, do any of the following:
   - Change position: Drag it where you want.
   - Resize: Drag the white handles.
   - Bring forward or send backward: Click **Move Up** or **Move Down**.
4. To remove a grid, deselect all groups for the grid using the drop-down lists.
5. When finished, click **Done**.
6. To edit an advanced layout and re-assign groups, click ⚙ next to Advanced.



How to Hide Inactive Grids

Hiding inactive channels can reduce the number of grids displayed on the output layout and draw more attention to those who are speaking. You can hide inactive grids for any of the layouts except the Single view and Customized view.

To hide inactive grids, go to **Settings** > **Video & Audio** > toggle on **Layout Reduction** and enter a delay time. If a channel is silent after, say 15 seconds (the delay time you set), their grid will be hidden.

AI Features

InstaConfig

InstaConfig allows you to quickly complete the initial setup of Auto Mode (Channel) by automatically pairing camera presets with microphone channels, whether the cameras are installed upright or upside-down. This significantly reduces configuration time.

For a list of supported camera models, see <Supported AVer Devices>.

To set up:

1. **Connect up to 8 cameras via IP, USB, or HDMI.**

   Go to **Settings** > **Device** > **Add Device** to add all cameras and microphones.

   HDMI cameras must also be connected via IP to enable PTZ control.

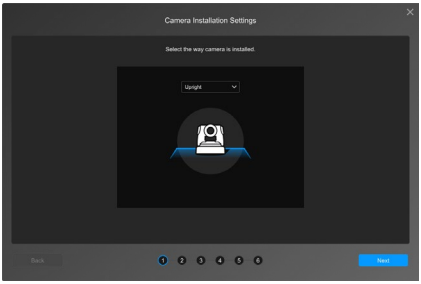
2. **Create camera and microphone groups.**

   Go to **Settings** > **Profile** > **Select Group**, then click Group + to create groups by pairing each camera with its microphone.

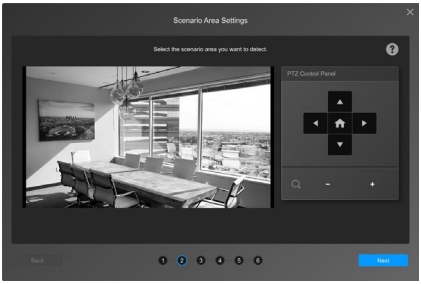
3. **Automatically pair presets and microphone channels.**

   Click **InstaConfig** and follow the on-screen instructions to complete the setup.

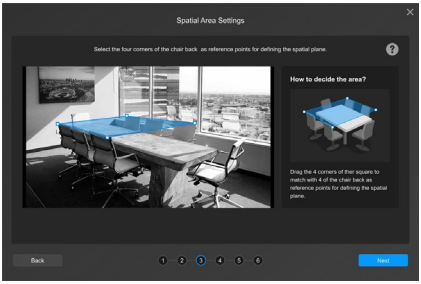
   ① Select how the camera is installed.



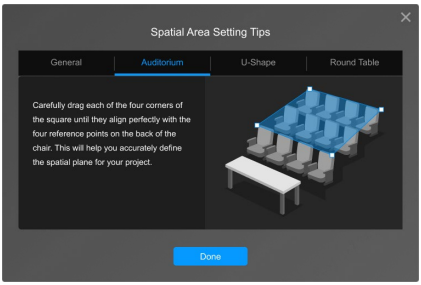
② Use PTZ control to adjust the room view to the proper size. Click **Next**, and the camera will first move to the upper-left corner to set a reference point.



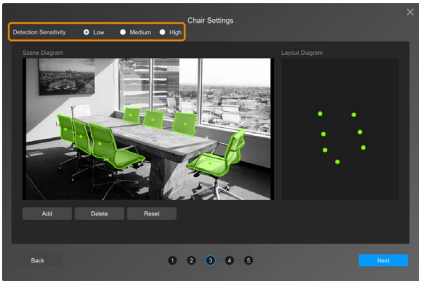
③ Drag the four anchors of the blue rectangle to outline the room's horizontal plane. You can use tables or chair backs as visual guides.



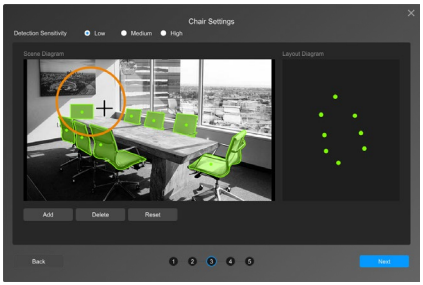
④ Click the ? in the upper-right corner to view examples of how to set the horizontal plane for different room layouts.



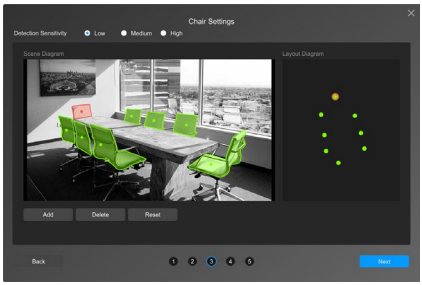
⑤ The matrix box automatically detects and marks chairs in the preview. You can also adjust the detection sensitivity.



⑥ To add a chair: drag a rectangle on the live preview. To delete a chair: select a chair and click **Delete**.



Add



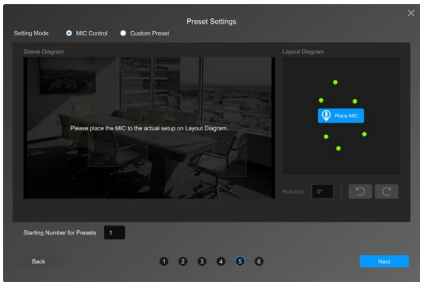
Delete

⑦ Select the positioning method:

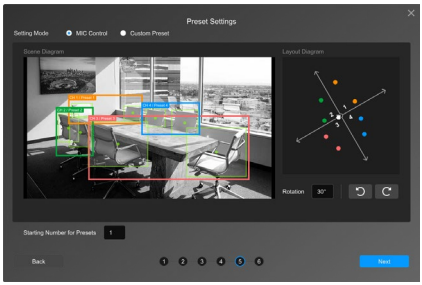
- MIC Control: Designed for microphones with fixed 360° coverage divided into zones, such as Sennheiser TCC2/TCCM, Yamaha RM-CG, and Shure MXA310.

  Note:
  - When connected to Sennheiser TCC2/TCCM, or Yamaha RM-CG, the layout diagram is displayed with 8 microphone quadrants.
  - When connected to Shure MXA310, the layout diagram is displayed with 4 microphone quadrants.

  Mark the microphone location on the Layout Diagram, adjust the microphone orientation, and set the starting preset number.

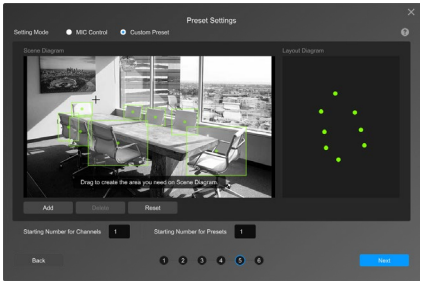


Mark mic location

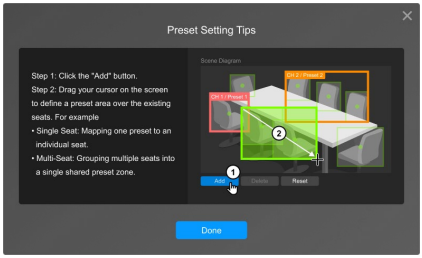


Adjust mic orientation

- Custom Preset: Designed for microphones that support adjustable lobes or configurable coverage areas, such as Shure MXA910 and MXA920. Drag a rectangle over the marked chairs to define the preset you want, then set the starting numbers for presets and channels.

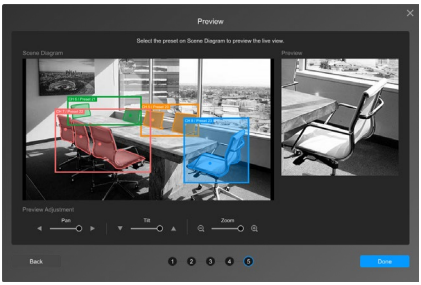


Drag rectangle over marked chairs to define preset



Click the ? in the upper-right corner to view examples of how to define presets.

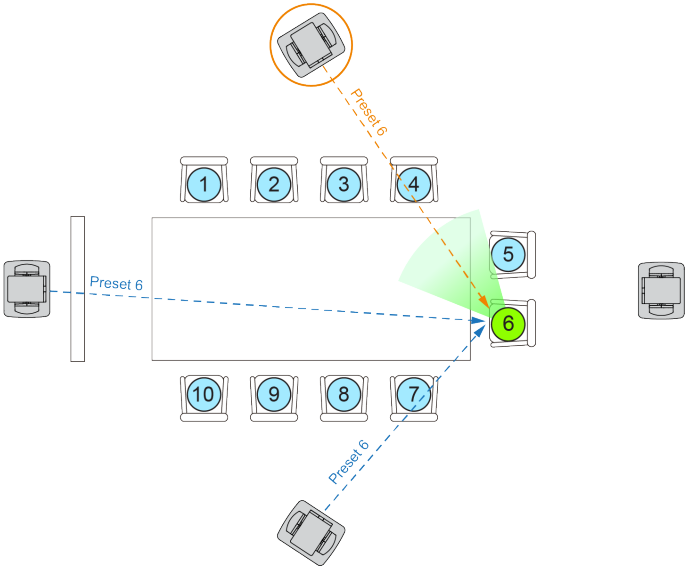
⑧ Select a preset and fine-tune it using PTZ control to complete the configuration.



FaceFocus

FaceFocus analyzes the speaker's face orientation across all connected cameras and automatically selects the camera that provides the most frontal view. When the angle difference between two cameras is small (≤10°), the matrix box will not switch views to avoid unnecessary transitions.

For a list of supported camera models, see <Supported AVer Devices>.



When participant #6 turns toward #4 while speaking, FaceFocus evaluates all three cameras and selects the right-side camera because it provides the most frontal angle.

Important:

- Supported when using Auto Mode (Channel), Single Output layout, and upright installation.
- Cannot be used together with IntelliSwitch.
- Supports up to 1080p60 video input.
- FaceFocus relies on accurate voice tracking to function effectively. To ensure optimal performance, it is recommended to assign only one person per preset.

Tips:
Mount all cameras at consistent height. Avoid extreme side angles. Create presets that place the speaker near the center of the frame.

To set up:

1. **Connect up to 8 cameras via IP, USB, or HDMI.**

   Go to **Settings** > **Device** > **Add Device** to add all cameras and microphones.

   HDMI cameras must also be connected via IP to enable PTZ control.

2. **Create camera and microphone groups.**

   Go to **Settings** > **Profile** > **Select Group**, then click Group + to create groups by pairing each camera with its microphone.

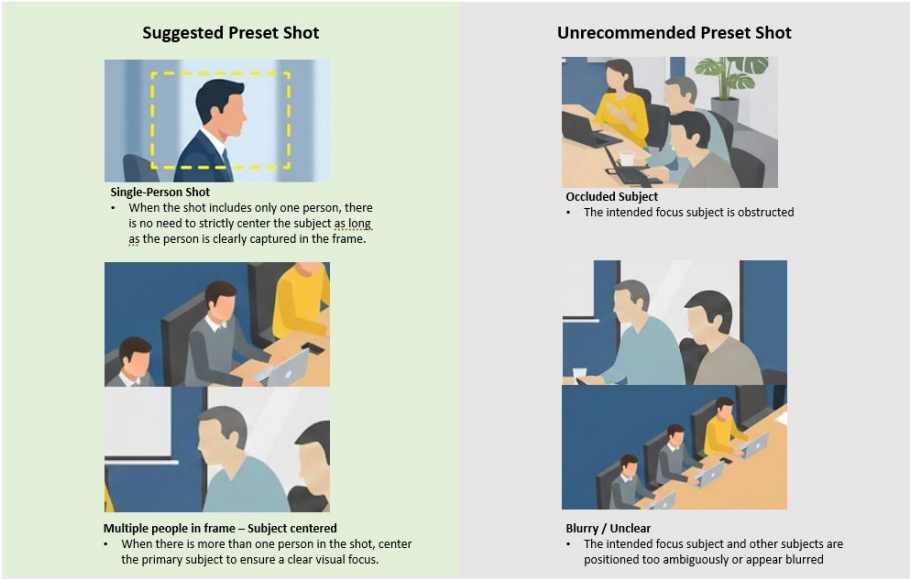
   Important: The number of groups must match the number of cameras. All cameras share the same microphone. Example: With three cameras, create three groups.

3. **Create presets and pair them with microphone channels.**

   Important: Each camera must have presets with the same numbering and same relative position. Example: Preset 1 on all three cameras must represent “front of the room.”

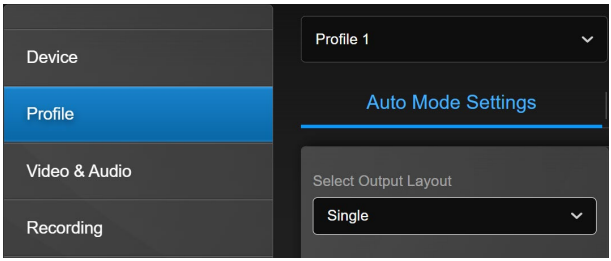
   - Manual setup: Use the camera remote or click the group’s hamburger menu > **Set preset** to create presets according to the seating arrangement. Then pair each preset with the appropriate microphone channel.
   - Automatic setup: If you have many cameras or seats, use InstaConfig to speed up the process. Click **InstaConfig** and follow the on-screen instructions.

- Recommended preset framing:



4. Select the single layout.

Go to **Settings** ⚙ > **Profile** > **Auto Mode Settings** > **Select Output Layout** > **Single**.



5. Enable FaceFocus.

Go to **Settings** ⚙ > **AI** > turn on **FaceFocus**.

FaceFocus uses your preset configuration to determine which cameras are eligible for tracking.

6. **Test by turning your head or having participants speak in sequence.**

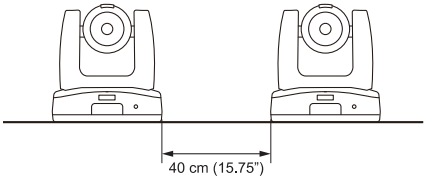
IntelliSwitch

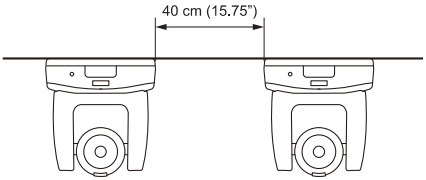
IntelliSwitch automatically predicts the next active speaker when two cameras are installed on the same side of the room, switching in advance to the camera with the better viewing angle.

Once a new speaker is detected, the system switches directly from the primary camera to the secondary camera, keeping transitions smooth and preventing back-and-forth movement between presets.

Important:

- Supported when using Auto Mode (Channel), and either an upright or upside-down installation.
- Cannot be used together with FaceFocus.
- For a list of supported camera models, see <Supported AVer Devices>.
- Installation requirements:





Condition	Description
Model	Two AVer cameras of the same model.
Input source	Both cameras must use the same video input source (USB, HDMI, or IP).
Distance	Recommended spacing within 40 cm (15.75").
Same side	Cameras must be installed on the same side, not one in front and one behind.
Height & level	Cameras must be mounted at the same height and on the same horizontal plane to maintain consistent viewing angles.

To set up:

1. **Connect two cameras of the same model using the same input source.**

   Go to **Settings** ⚙ > **Device** > **Add Device** to add both cameras and the shared microphone.

   HDMI cameras must also be connected via IP to enable PTZ control.

2. **Create a camera and microphone group.**

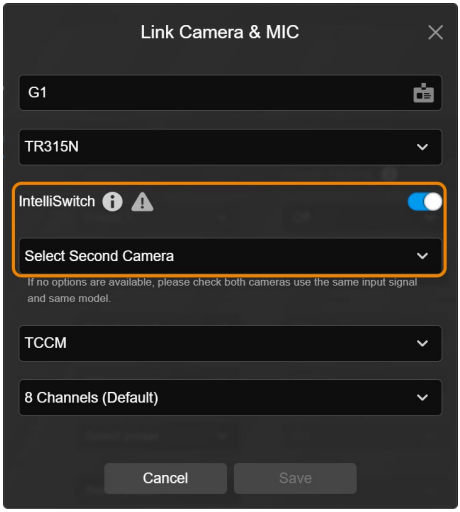
   Go to **Settings** ⚙ > **Profile** > **Select Group**, then click Group + to group one of the cameras with

the microphone. If this camera already has all required presets, continue to Step 4.

3. **Create presets and pair them with microphone channels.**
   - Manual setup: Use the camera remote or click the group's hamburger menu > **Set preset** to create presets according to the seating arrangement. Then pair each preset with the appropriate microphone channel.
   - Automatic setup: If you have many cameras or seats, use InstaConfig to speed up the process. Click **InstaConfig** and follow the on-screen instructions.

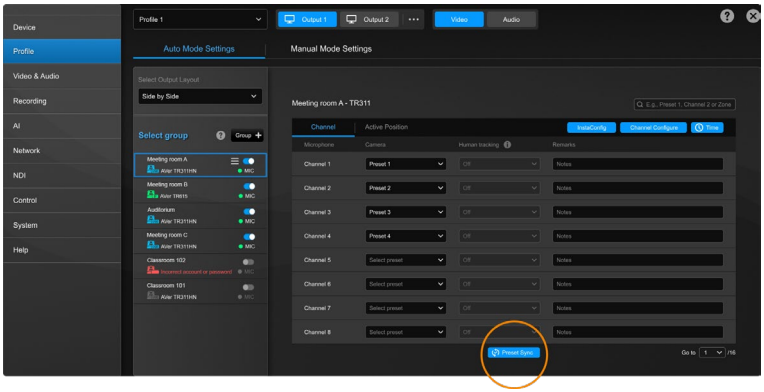
4. **Enable IntelliSwitch.**

   Click the group's hamburger menu > **Edit group** > turn on **IntelliSwitch** > select the second camera > **Save**.



5. **Synchronize presets between the two cameras.**

Click **Preset Sync** and select how the cameras are installed. The algorithm will automatically match presets between the two cameras to ensure similar viewing angles.



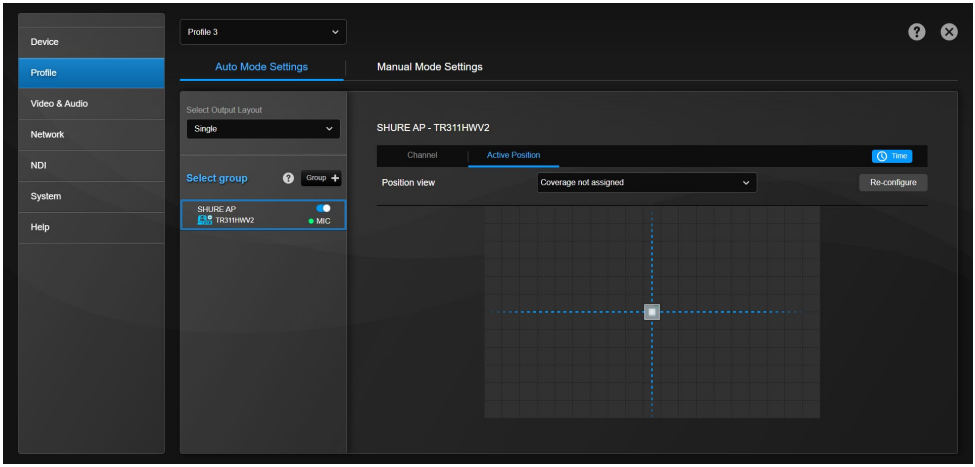
6. **Test the switching behavior.**

When two speakers take turns speaking, the view should switch naturally between the two cameras instead of the same camera repeatedly moving between presets.

Auto Mode (Active Position)

Active Position reports active talker positions from supported microphones in the form of X, Y, Z coordinates to deliver enhanced camera tracking.

Note: When using non-AVer cameras, only Live Mode and Manual Mode are available. Auto Mode (voice tracking) and camera control are not supported.



Supported Devices

USB- and IP-connected supported AVer Devices

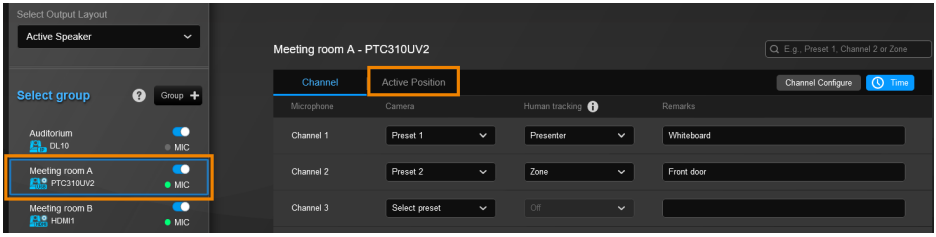
Shure® MXA920-S / MXA920-R / MXA901 Ceiling Array Microphone

Note: For optimal audio tracking performance, you can go to Shure microphone web application to set the height value.

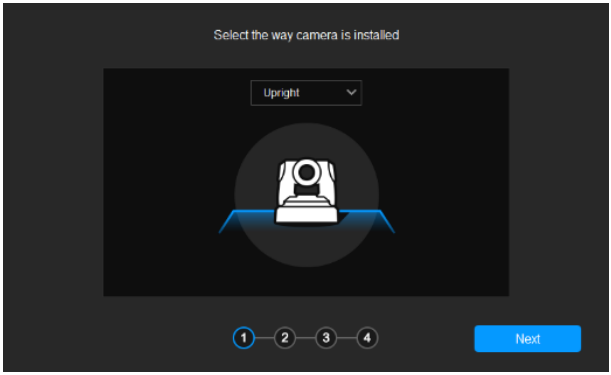
Square Microphone Calibration

1. Make sure the camera has been paired with a microphone.

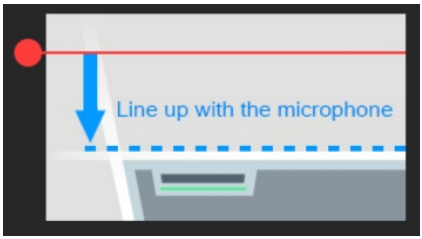
2. Click to select a device group. A blue frame will indicate that it is selected.



3. Click the **Active Position** tab and follow the setup wizard.
   Click the question mark in the top-right corner for instructions.

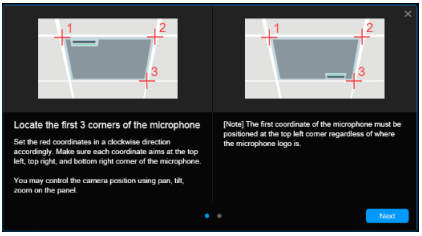


① Drag the red dot to align the red line to the top or bottom edge of the microphone.

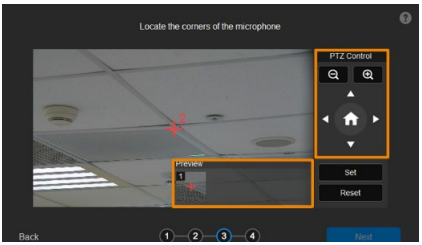


② The microphone doesn't need to be in the center of the live view, as long as the red line is aligned to the edge.
Adjust the camera angle using pan, tilt and zoom controls, if the microphone appears at a slight angle.

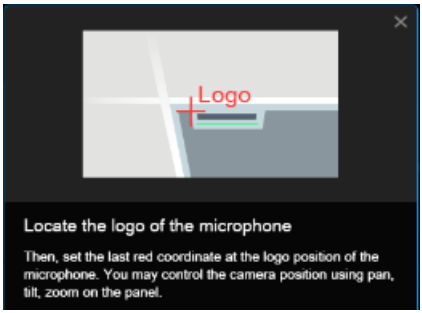
③ Starting from the top left, locate 3 microphone corners in a clockwise direction with a red cross.



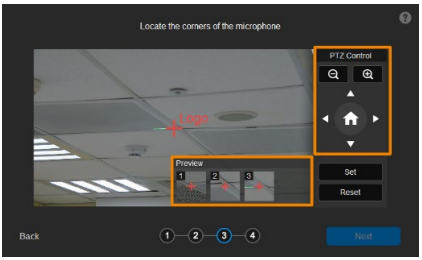
④ Click Set. The saved location will appear in the thumbnail.



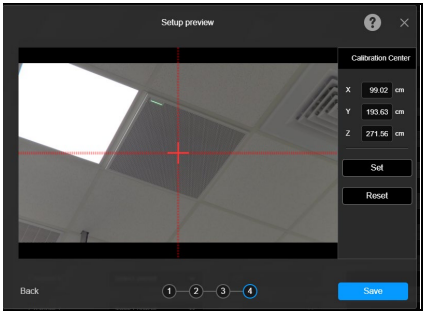
⑤ Finally, locate the logo on the microphone to indicate its orientation. Depending on the microphone orientation, the logo corner may be the same as one of the 3 corners.



⑥ Click Next after locating 3 corners and the logo. Or click Reset to relocate all of them.



⑦ Make sure the red cross appears in the center of the microphone, and click Save. If the red cross appears off center, you can use a laser measure and tweak the initial calibration values (x, y, z) on the right.

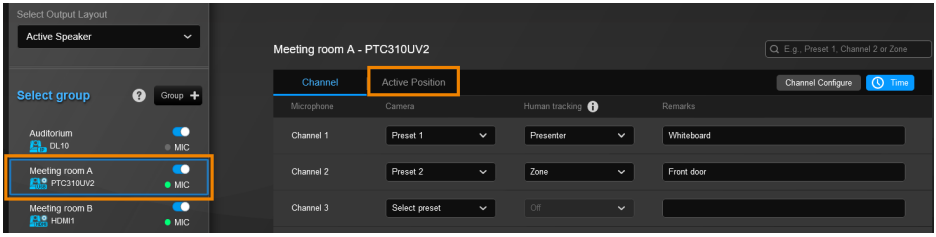


Click Reset to restore the initial calibration values. Or click Back to reconfigure.

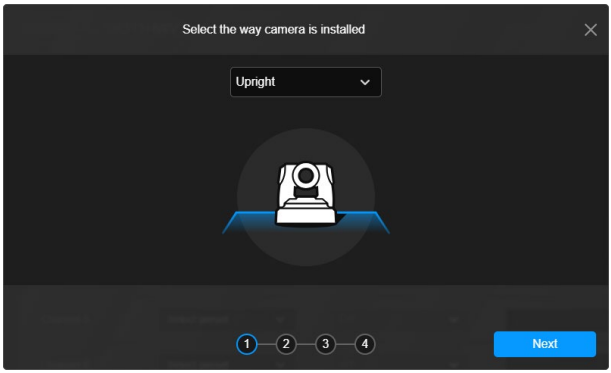
Round Microphone Calibration

1. Make sure the camera has been paired with a microphone.

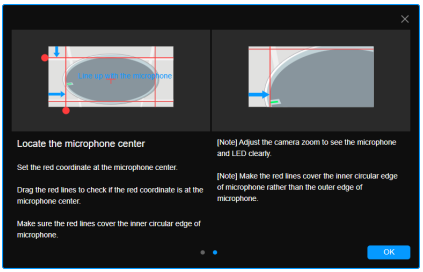
2. Click to select a device group. A blue frame will indicate that it is selected.



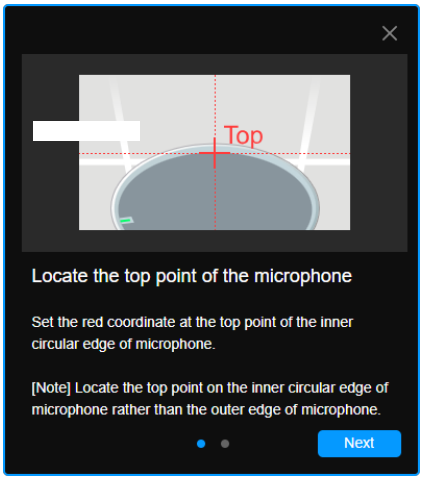
3. Click the **Active Position** tab and follow the setup wizard.
   Click the question mark in the top-right corner for instructions.



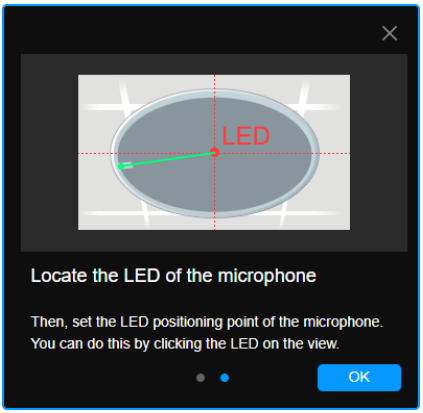
① Dragging the red dot to align the red lines to the top and left edge of the inner diameter so that the red cross appears at the center.



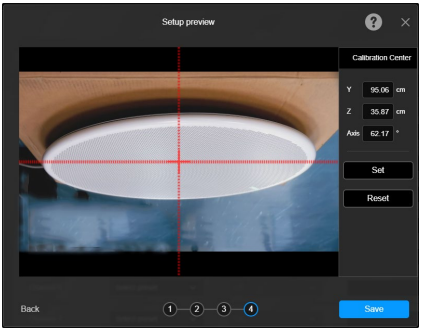
② Locate the top point of the inner diameter with the red cross.



③ Click to mark the position of the LED.



④ Make sure the red cross appears in the center of the microphone, and click Save. If the red cross appears off center, you can use a laser measure and tweak the initial calibration values (y, z, axis) on the right.

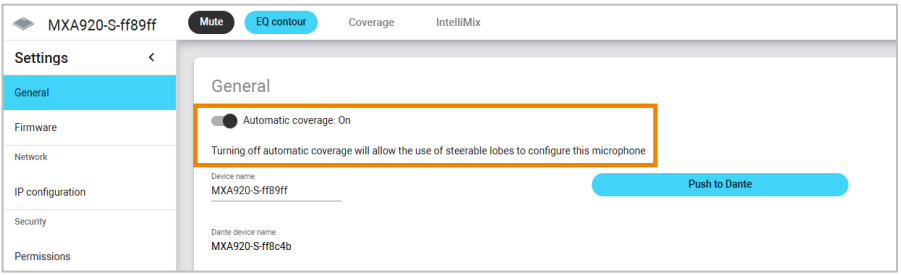


Note: When tweaking the axis value, the live view will not update. Adjust the initial axis value depending on how the camera is mounted. The axis angle range is -180 to 180.

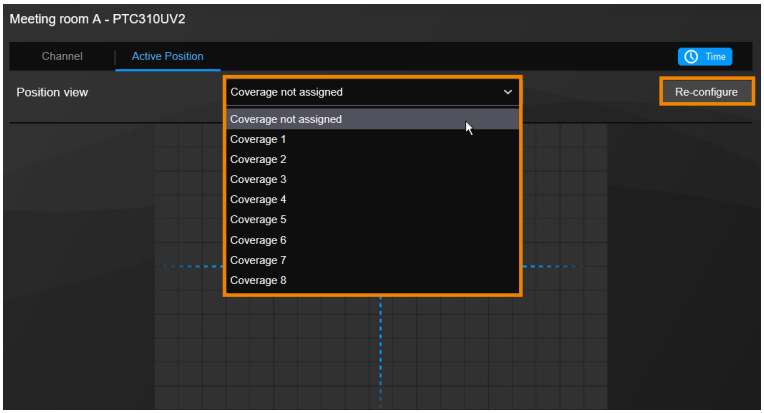
⑤ Click Reset to restore the initial calibration values. Or click Back to reconfigure.

Add a Coverage Area

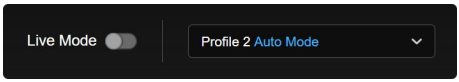
1. On the MXA920 web application, go to **Settings** > **General** > **Automatic coverage**.
2. Turn on **Automatic coverage** to add a mix of up to 8 dynamic and dedicated coverage areas,. The default setting is a 30 by 30 foot (9 by 9 meter) dynamic coverage area.



3. To add more coverage areas, go to **Coverage** > **Add coverage**.
4. Go to **Active Position** tab > select **Coverage not assigned** to use all coverage areas. Or select a coverage area that you have added in the microphone web application from the drop-down list. Talker positions outside of the selected coverage area won't be picked up by MT500.

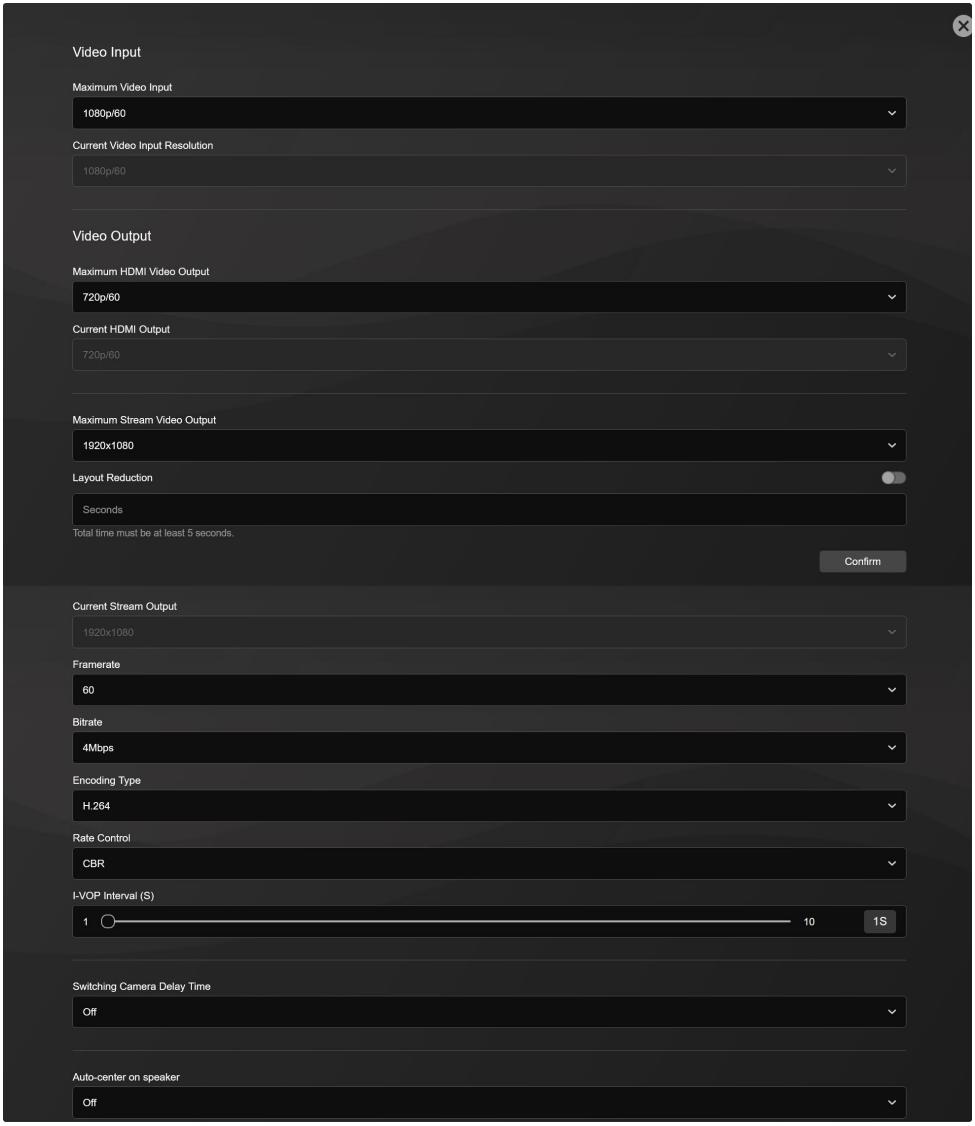


5. To change coverage areas, click **Re-configure**.
6. The profile is saved and applied automatically when you close the **Profile** page by clicking ⊗. Your Auto Mode profile will now be applied.



System Settings

Video & Audio

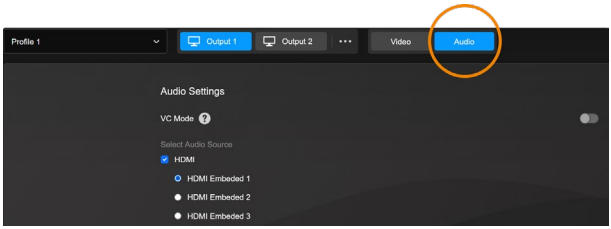


Maximum Video Input/output Resolution

Note: When switching to or from a 4K input via HDMI, you must restart the matrix box for the new resolution to take effect.

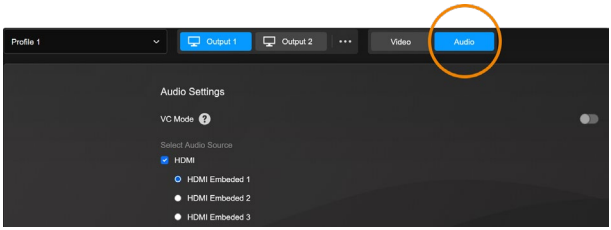
Max. Input Resolution	Outputs	Max. Output Resolution	Output Layout	
			Auto Mode	**Manual Mode**
1080p60 (default)	Two (default)	HDMI, USB, IP: 1080p60 (default)	Single SBS Active Speaker PiP Customize Advanced	Single SBS Main Speaker (3-input, 4-input) PiP Quad Advanced
	Duplicate	HDMI, USB, IP: 2160p30		
	Single	HDMI, IP: 2160p60 USB: 2160p30		
2160p30	Duplicate	HDMI, USB, IP: 2160p30		
	Single	HDMI, IP: 2160p60 USB: 2160p30		
2160p60	Single	HDMI, IP: 2160p60 USB: 2160p30	Single SBS PiP	Single SBS PiP

Mix Audio Inputs



When a profile uses multiple audio inputs, the matrix box automatically mixes them and transmits the mixed audio with the video to all connected output devices (USB, HDMI, or IP) and recordings.

Dante Audio Output for Split and Merged Rooms



You can assign different Dante channels to Output 1 and Output 2 to play separate audio in each split room. Or you can mix the two Dante channels and transmit the same audio to a merged room.

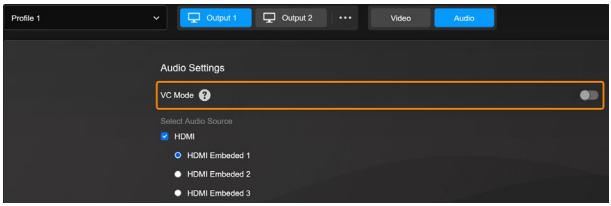
For a split room:

1. Select **Output 1** > click **Audio** > select **Dante CH1**.
2. Select **Output 2** > click **Audio** > select **Dante CH2.**

For a merged room

1. Click ••• > toggle on **Output Duplicate** to duplicate outputs.
2. Click **Audio** > select both **Dante CH1** + **CH2** to mix audio.

VC Mode (Video Conferencing Mode)



VC Mode prevents echo by managing the **USB PC In** audio coming from the computer hosting the video call. It stops the remote meeting participants' own voices from being sent back to them.

		INPUT						
		HDMI In	USB Device In	Mic/Line In	XLR	Dante In	RTSP Device In	USB PC In
OUTPUT	HDMI Out / 3.5 mm Audio Out	X	X	X	X	X	X	V
	Dante Out	X	X	X	X	X	X	V
	USB PC Out	V	V	V	V	V	V	X
	RTSP (RTMP) Out	V	V	V	V	V	V	V
	NDI Out	V	V	V	V	V	V	V
	Recording	V	V	V	V	V	V	V

Video Input

Item	Description
Maximum Video Input	Select the maximum resolution for video input. **Note:** When switching to or from a 4K input via HDMI, you must restart the matrix box for the new resolution to take effect.
Current Video Input Resolution	Displays the current video input resolution.

Video Output

Item	Description
Maximum HDMI Video Output	Select the maximum resolution for the HDMI video output.
Current HDMI Output	Displays the current HDMI output resolution.
Maximum Stream Video Output	Select the maximum resolution for streamed video output.
Layout Reduction	When toggled on, the matrix box hides inactive channels to reduce the number of layout grids after the delay time you set.
Current Stream Output	Displays the current streamed video output resolution.
Framerate	Choose a framerate.
Bitrate	Choose a bit rate.
Encoding Type	Choose **H.264** or **H.265**.
Rate Control	Choose Variable Bit Rate (VBR) or Constant Bit Rate (CBR).
I-VOP Interval (S)	Sets how often a keyframe (or I-frame) is inserted in the video stream. • A keyframe is a full image frame used as a reference point in video. Shorter intervals improve video quality, but increase file size.
Switching Camera Delay Time	Choose a delay time to avoid displaying the live view when the camera is in motion; it will refresh once the delay time is up.
Auto-center on speaker	Keep the speaker at the center of the screen after the camera moves to a preset. **Note:** • Auto-center on speaker is available for IP cameras, HDMI cameras (when controlled by IP), and in Auto Mode – Channel only. • This feature is unavailable when human tracking is enabled. To use it, turn off human tracking.

Audio Input

Item	Description
Mic / Line In	Select Microphone or Line input.
XLR	Select the appropriate input setting based on the audio device and environment to achieve optimal signal level and audio quality: • Line In 0 dB: For standard line-level devices (e.g., keyboards, mixers). • Line In 4 dB: For devices requiring a slight signal boost. • Line In 10 dB: For higher-level professional audio equipment. • Mic In: For dynamic microphones (no external power). • Mic In +48V: For condenser microphones; provides phantom power.

Audio Output

Item	Description
Enable UAC	Enable 1-way audio input from the camera to the computer.
Audio Out Assignment	Select whether Video Output 1 or Video Output 2 is used as the audio source for the 3.5 mm audio output port.

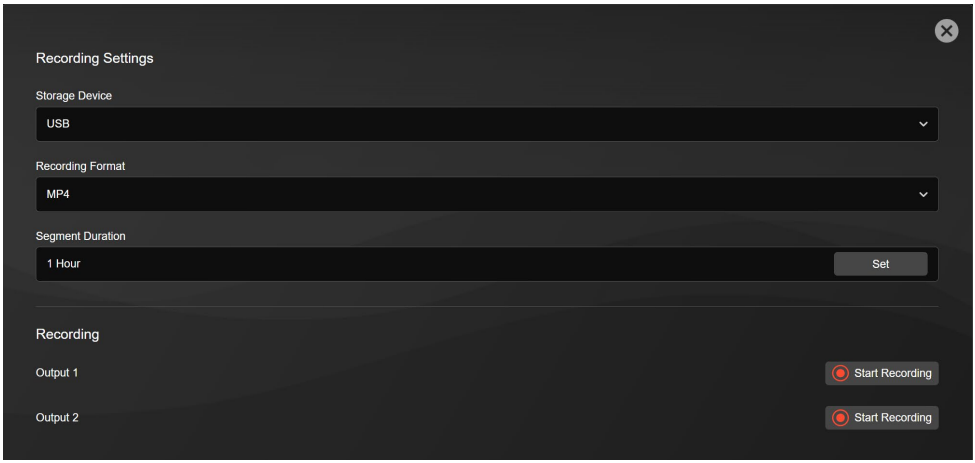
USB Bypass

Item	Description
USB 1	Uses USB-connected A/V peripherals as the video and audio source. When enabled, the MT500 functions only as a USB hub.
USB 2	

Dante-Enabled

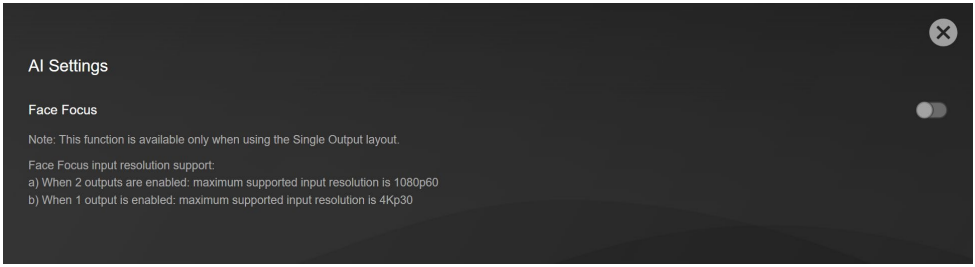
Item	Description
Dante-Enabled	Enables Dante (Digital Audio Network Through Ethernet) audio and video over IP. • The matrix box's Dante SDK supports 1 channel of Dante video and 2 channels of Dante audio." • A Dante license is required. To purchase, please visit the Dante website (https://www.getdante.com/).
Dante Video	The matrix box's Dante SDK supports 1 channel of Dante video. 1. Toggle on **Dante-Enabled**. 2. Select an output as your Dante video.

Recording



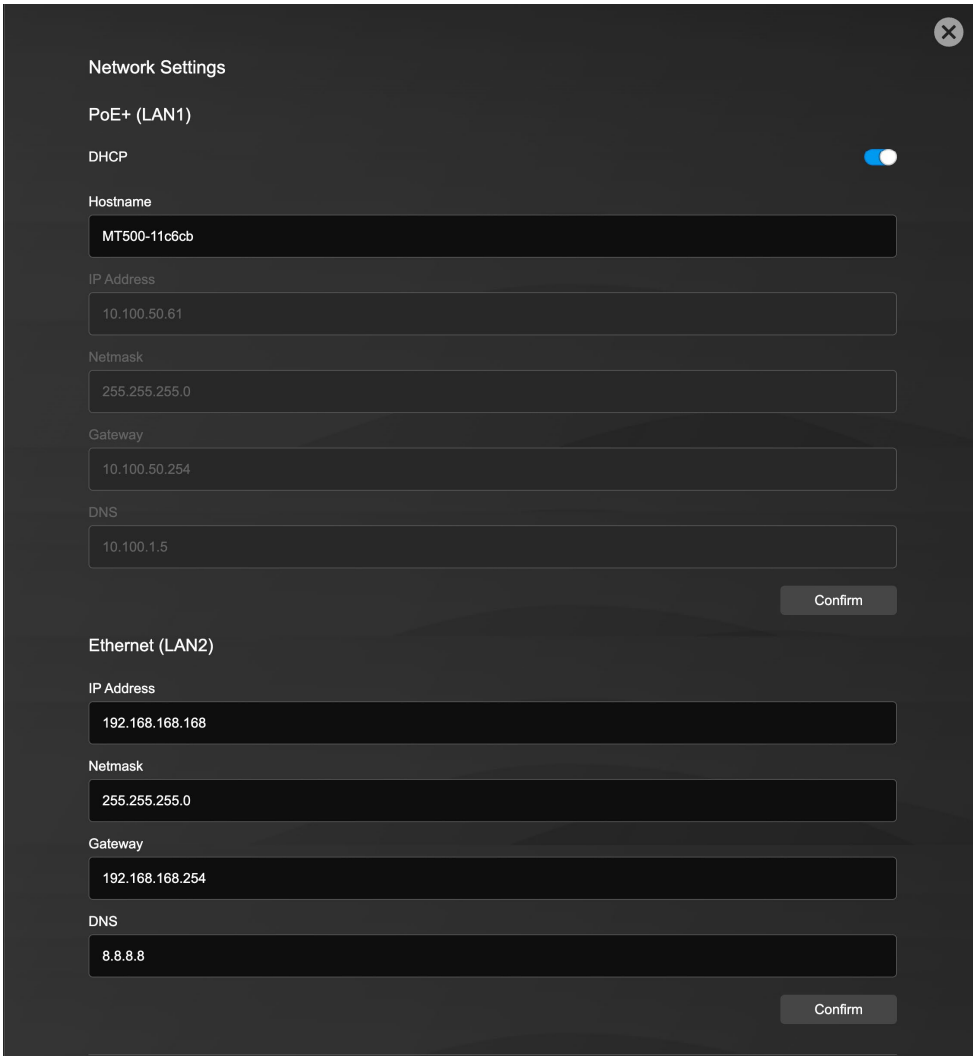
Record one video feed at a time, and save them directly to a USB 2.0-connected storage device on the matrix box, with the option to split your recordings into segments ranging from 5 minutes to 2 hours.

AI



Enable FaceFocus to ensure the active speaker is always seen head-on. For detailed settings, please refer to <FaceFocus>.

Network



PoE++ (LAN1)

Item	Description
DHCP	Toggle DHCP on or off.
Hostname	Enter a hostname that is displayed on devices such as an IP router. The default is [Model name]-[last 6 digits of PoE++ MAC Address].
IP Address	Toggle off DHCP first, then enter your network settings to set up a static

Netmask	IP connection.
Gateway	
DNS	

Ethernet (LAN2)

Item	Description
IP Address	Enter your network settings to set up a static IP connection.
Netmask	
Gateway	
DNS	

RTMP Settings

Item	Description
RTMP Streaming 1	Stream live video to a video platform such as YouTube. To enable live streaming on YouTube: 1. Go to YouTube. 2. From the top right, click **Create** > **Go live**. 3. Copy and paste your YouTube server URL and stream key into RTMP Streaming 1 or 2. 4. Assign an output to the **RTMP Out Assignment** for your RTMP streams. 5. Click **Start Stream** to start streaming, **Stop** to stop streaming.
RTMP Streaming 2	

RTSP Settings

Item	Description
RTSP Security	Turn on Real-Time Streaming Protocol (RTSP) Security to protect your video stream on media players such as VLC, PotPlayer and QuickTime by ensuring that only authorized users can access it. • When RTSP Security is turned off, enter your device's RTSP URL into the media player. Output 1 URL: rtsp://[device IP address]:[port]/live_st1 Output 2 URL: rtsp://[device IP address]:[8554]/live_st2 Example: rtsp://192.168.1.100:554/live_st1 **Note:** The port number for output 2 must be 8554. • When RTSP Security is turned on, enter your camera's RTSP URL and username/password into the media player. Output 1 URL: rtsp://[username:password]@[device IP

	address]:[port]/live_st1 Output 2 URL: rtsp://[username:password]@[device IP address]:[8554]/live_st2 Example: rtsp://1:1@192.168.1.100:554/live_st1 username/password: camera's username/password (web interface login)

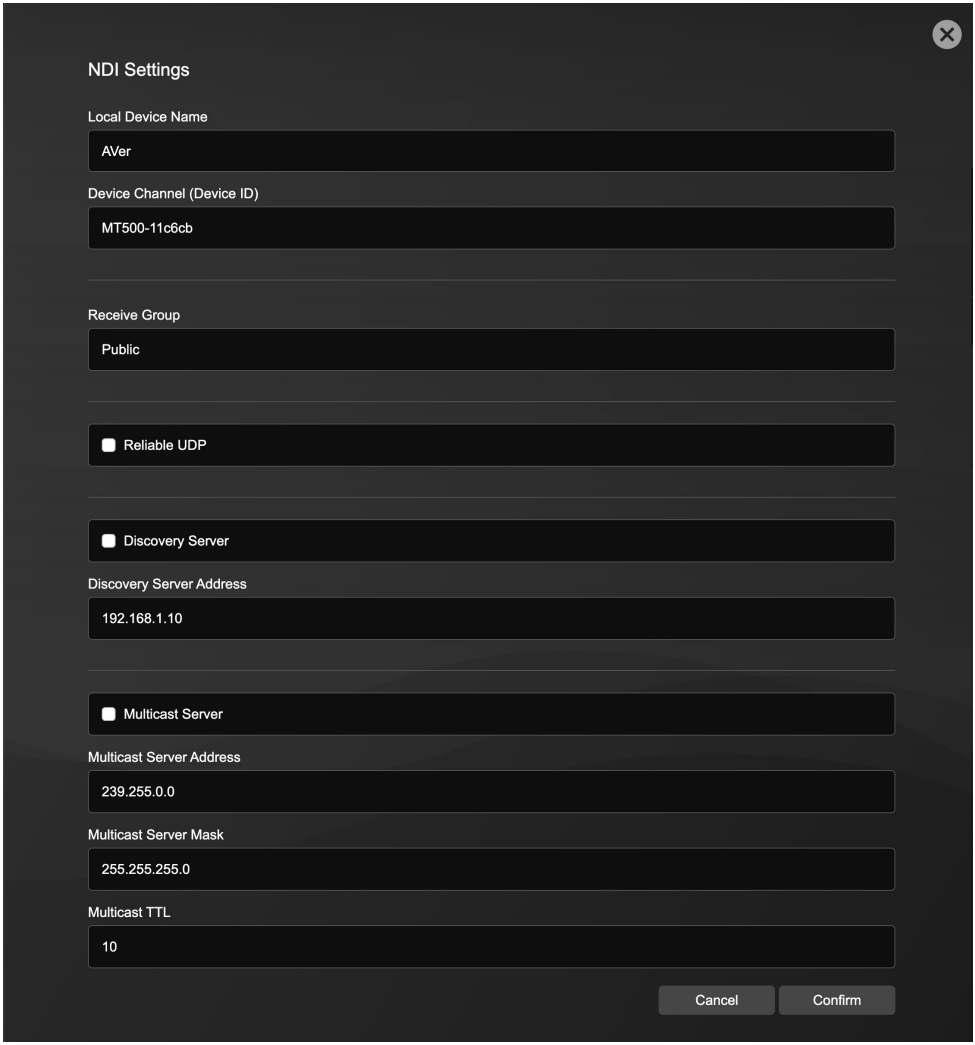
HLS Settings

Item	Description
Stream URL	Configure HTTP Live Streaming (HLS) settings to provide adaptive bitrate streaming, which ensures smooth playback and minimizes buffering. 1. Enter the stream URL obtained from the streaming service or server. 2. Assign an output to the **HLS Out Assignment** for your HTTP streams. 3. Click **Start Stream** to start streaming, **Stop** to stop streaming.

HTTP Settings

Item	Description
TCP Command String Control Port	Set a control port number. The default is 1315.
HTTPS	Enable HTTPS to establish a secure connection between your browser and your camera. To enable HTTPS access on your camera: 1. Obtain a SSL certificate for encryption and decryption in base-64 encoded format and use a private key in PKCS#8 format (unencrypted). 2. Package the required certificate content into PEM format. The SSL certificate uploaded to the camera must be in PEM format. 3. Click **Browse** to select the certificate file, and then click **Upload**. 4. Turn on **HTTPS**.

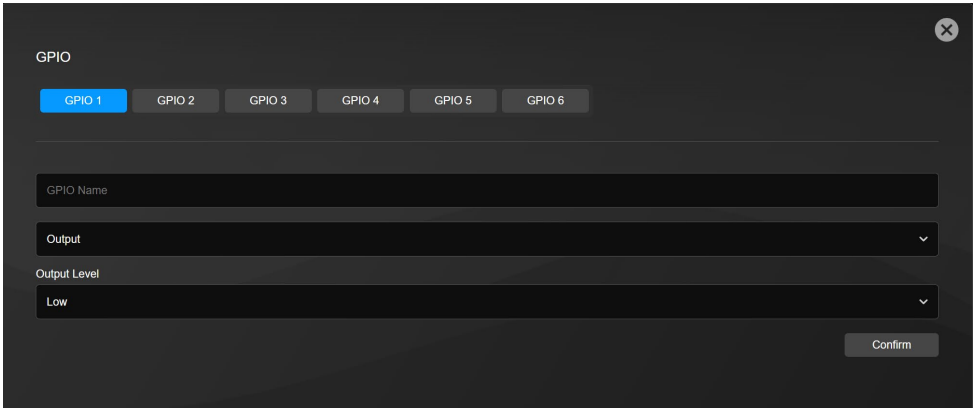
NDI



Item	Description
Local Device Name	Enter a name that identifies your camera group on the NDI software. • The default is AVer.
Device Channel (Device ID)	Enter a name that identifies your camera on the NDI software. • The default is [Model name]-[last 6 digits of PoE++ MAC Address].

	• Use no more than 10 characters, upper and lowercase letters, numbers and punctuation marks (! @ % ^ , . / : + ? [ ] { } - _ ~).
Receive Group	Enter a name for a receive group. • All devices in the receive group receive the same NDI streams. • The receive group should remain **public**. If this is changed, you will need to join the group through NDI® Access Manager.
Reliable UDP	Enable Reliable User Datagram Protocol (RUDP) to improve streaming quality.
Discovery Server	Select the checkbox to enable discovery server to allow devices to discover and connect to each other on a network automatically.
Discovery Server Address	Enter the IP address of a server running a discovery server application.
Multicast Server	Select the checkbox to enable multicast server to allow efficient distribution of NDI streams to multiple receivers without overwhelming the network.
Multicast Server Address	Enter the IP address of a group of recipients that receive NDI streams from a multicast server.
Multicast Server Mask	Enter the network mask to specify the range of IP addresses that are eligible to receive NDI streams.
Multicast TTL	Enter a multicast time to live (TTL) value between 1-255 to control the distance multicast packets can travel.

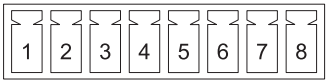
Control



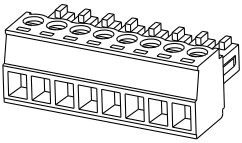
The matrix box is supplied with an 8-pole Phoenix® connector with six GPIO pins that operate at TTL digital signal levels, and can be set to high or low level (Push-Pull). The direction of the pins can be input or output (adjustable). Voltage ranges for GPIO inputs are the following:

	Input voltage [V]	Output voltage [V]	Max. output current [mA]
Logical low level	0 - 0.8	0 - 0.5V	30
Logical high level	2.3 - 5	4.5 - 5V	18

The maximum total current for the six GPIO pins is 180 mA.



Pin nr.	Signal
1	Configurable
2	
3	
4	
5	
6	
7	5V
8	Ground

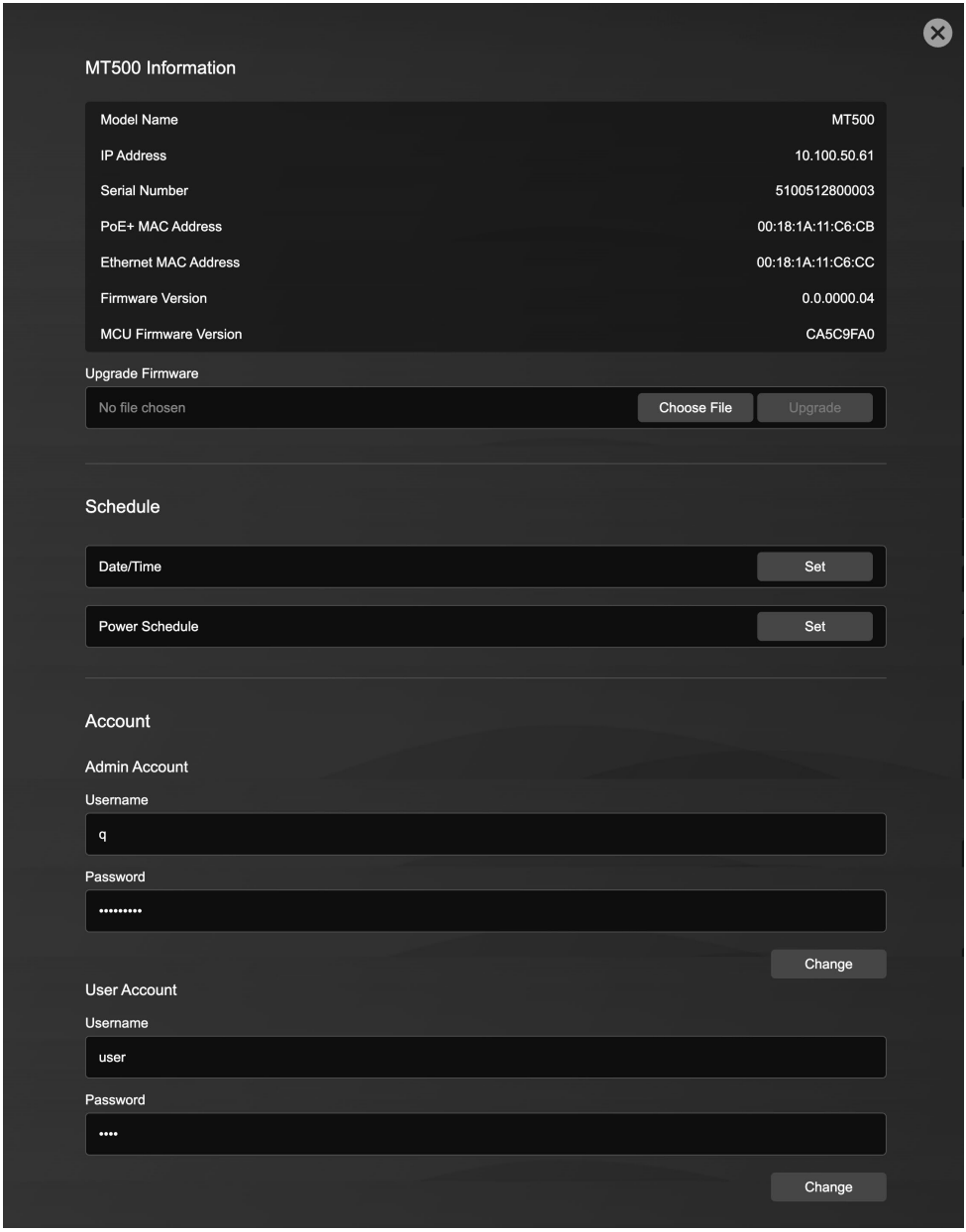


GPIO connector and plug pin assignments

INFO:

- Cable: The recommended cable for the connectors is the AWG24 (0.2 mm² diameter) or the generally used 'alarm cable' with 4x0.22 mm² wires.
- Compatible plug type: Phoenix® Combicon series (3.5mm pitch 8-pole), type: MC 1.5/8-ST-3.5.

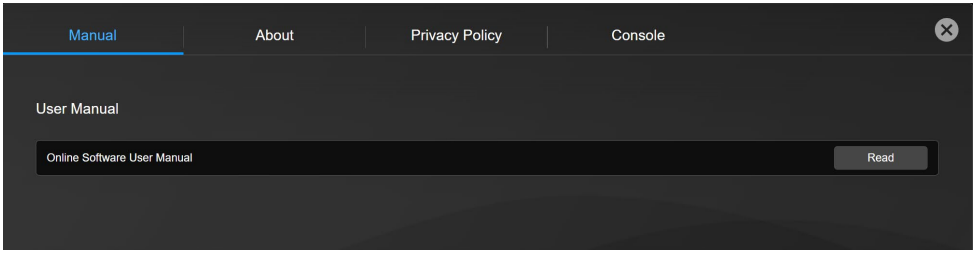
System



Item	Description
MT500 Information	Display the matrix box information such as the IP address.

Upgrade Firmware	Download the latest firmware from AVer Download Center (https://www.aver.com/download-center).
Schedule	Date/Time: Set date and time for your matrix box. Power Schedule: Schedule specific times for your matrix box to start up, reboot, or shut down.
Account	Edit your admin and user account for login. • Admin: The default username/password is **admin/admin**. • User: The default username/password is **user/user**.
General	• Language: Change the web interface language. • Help us improve: Opt-in or opt-out of providing anonymous usage data. • Factory default: Erase all data and settings and reset the matrix box to factory default settings. • Reboot: Restart your matrix box. • Camera behavior after pause tracking: Select the camera's positioning when tracking is paused.
Export / Import Settings	Export or import your matrix box settings and save debug files.
Shortcuts Key Setting	Set shortcuts for your USB keyboard or computer keyboard. You may set up to 36 shortcut keys.
Watermark Setting	Show or hide watermark on camera view. You can upload your own watermark image, and select a watermark position from the drop-down list. • Support file format: PNG only. • File size: Max. 2MB.

Help



Item	Description
Manual	View software user manual online.
About	View software terms and condition.
Privacy Policy	View software privacy policy.
Console	View and download real-time data on the camera-microphone action status for debugging purpose.

MT Control Panel App

Control your AVer matrix boxes from a desktop, tablet, mobile or the AVer CP10 G2 Collaboration Controller. The app gives you access to the same settings as the web interface, with added convenience—as an admin, you can add up to 3 matrix boxes and easily switch between their video feeds.

- Available on Windows, macOS, and Android.
- Defaults back to the user account after closing and reopening the app to protect system settings.
- Supports:

  MT100 Matrix Box
  MT300 Matrix Tracking Box
  MT300N Matrix Tracking Box
  MT500 Matrix Tracking Box

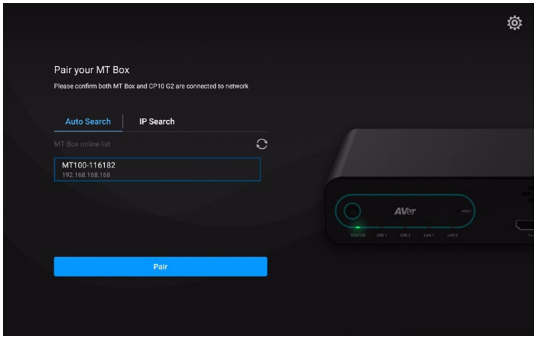
Install MT Control Panel

Download and install MT Control Panel to your desktop, tablet or mobile from AVer Download Center. (https://www.aver.com/download-center) and open the app.

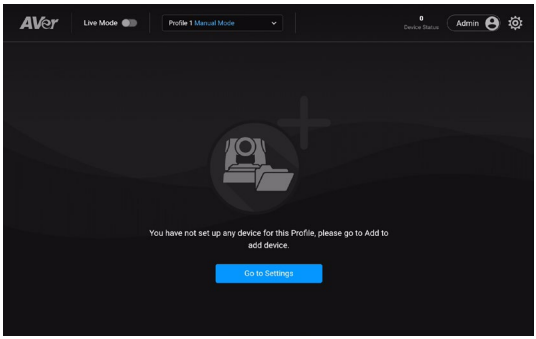
Note: For iPadOS and iOS, please download AVer Control Panel. This app gives you access to the same settings as the web interface.

Pair with MT Control Panel

1. Make sure the MT Control Panel and the matrix box are connected to the same LAN.
2. Open MT Control Panel app. The app will auto search for available matrix boxes. Or tap **IP Search** and enter your matrix box's IP address.
3. Tap to select your matrix box, tap **Pair**, then enter the username and password to start pairing.



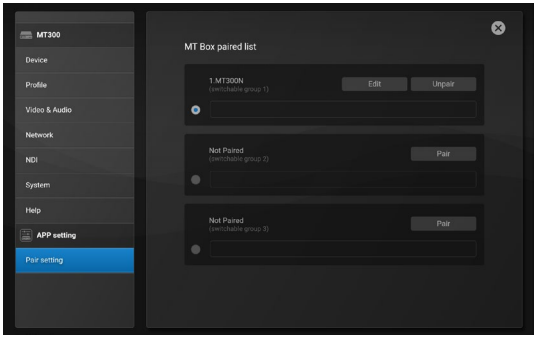
4. You will now be logged in to the matrix box.
   Configure settings as you would on its web interface.



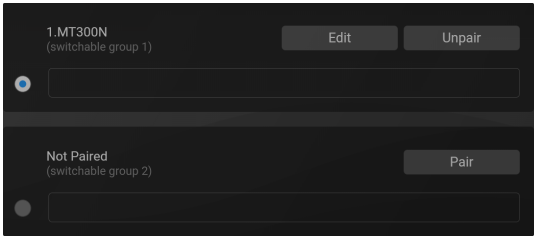
Add and Switch between Matrix Boxes

1. Make sure you are logged in as an admin.
   Or tap the **account** icon on the top-right corner to switch to the admin account.

2. Tap the **gear** icon in the top-right corner to enter system settings.



3. Tap **Pair setting** and do one of the following:



- To add a matrix box, tap **Pair**.
- To remove a matrix box, tap **Unpair**.

- To replace a matrix box with another, tap **Edit**.
- To switch between video feeds, tap the **radio button** ◉ to select the matrix box you want.

4. (Optional) Enter a description in the blank fields to help you identify the matrix boxes.

Specifications

Video	Video Input	2x USB 3.0, 3x HDMI
	Maximum Video Connection Number	Max : 25 (RTSP + NDI + Dante*) *Dante: Only 1
	Maximum Decode Number	8x 1080p IP (including USB) + 3x 1080p HDMI
	Video Input Signal	HDMI, USB, IP
	Video Input Resolution	2160p/60, 2160p/30, 1080p/60
	Maximum Video Output Signals	2 - Output 1: HDMI 1/USB 1/IP - Output 2: HDMI 2/USB 2/IP
	NDI	Yes. Encoding: NDI®HX2 Decoding: NDI®HX3
	Dante	Yes, Dante AV-H
	Video Output Layout	Auto Mode (6): Single, Side-by-side, Active Speaker, PiP, Customize, Advanced Manual (7): Single, Side-by-side, Main Speaker(3 inputs), Main Speaker (4 inputs), PiP, Quad View, Advanced
	Video Output Layout Aspect Ratio Selection	Yes, via Manual Mode or Auto Mode Select Output Layout > Advanced
Audio	Audio Input	2x XLR balanced audio 1x 3.5 mm line in/mic in
	Audio Output	1x 3.5 mm
	Audio Input Signal	USB, HDMI, IP(RTSP/Dante), XLR, 3.5mm
	Audio Output Signal	USB, HDMI, IP(RTSP/NDI/Dante), 3.5mm
	Dante audio	Yes
	USB Audio Bypass	Yes
	Audio Mixing	Yes
	Output Master Volume Adjustment	Yes, via web UI
IP Streaming	Resolution	Up to 2160p/60 (Maximum decode resolution up to 2160p/60)
	Network Video Compress Formats	H.264, H.265, MJPEG
	Maximum Frame Rate	60 fps
	Bit-Rate Control Modes	VBR, CBR (selectable)
	Range of Bit-Rate Setting	512 Kbps to 32 Mbps, and Auto

	Network Interface	10 / 100 / 1000 Base-T
	Multi-Stream Capability	Input Maximum up to 8 Up to 2160p/60 : IP, NDI-HX3 Output Unlimited connections Up to 2160p/60: IP, NDI-HX2 720p/10: MT500 Web-Interface
	Network Protocols	IPv4, TCP, UDP, ARP, ICMP, IGMP, HTTP, HTTPS, DHCP, RTP / RTCP, RTSP, RTMP, HLS, NDI, LLDP, VISCA over IP
	NDI®HX2	Encoding
	NDI®HX3	Decoding
	Dante	Dante AV-H
USB	Input Connectors	USB 3.0 (UVC, UAC)
	Output Connectors	USB 3.0 (UVC, UAC)
	Output Video Formats	MJPEG, YUY2
	Maximum Output Video Resolution	2160p/30- MJPEG, YUY2
	USB Video Class (UVC)	UVC 1.1
	USB Audio Class (UAC)	UAC 1.0
I/O Interface	HDMI in	3
	USB in	2
	HDMI out	2
	USB out	2
	RS-422	1
	RJ45	2 (x1 PoE++, x1 Ethernet)
	Power	12V/7.5A
	GPIO	Yes, 8Pol Phoenix
	USB Storage	Yes, USB 2.0
Controls and Indicators	LED Indicators	5x. STATUS, OUTPUT 1 , OUTPUT 2, REC, STREAM
	Power Push Button	Yes, 1x
	Reset Button	Yes, 1x (recessed)
	Profile Button	3x (1/2/3), w/ backlight LED (green)
	2" LCD Screen	Yes, 1x
	Menu Button	Yes, 5x (Up, down, left, right, enter)

	Volume Control Knob	Yes, Only control 1x Audio Out。
Main Feature	Camera Control Protocols	VISCA (IP), CGI (IP)
	Recording	NAS, USB 2.0 for Local Storage. Supports maximum 1080p30 recording in MP4, MOV, FLV formats.
	Voice Tracking	Yes, PTZ Link Premium license included
	InstaConfig	Yes
	IntelliSwitch	Yes
	FaceFocus	Yes
	Supported 3rd Party Audio Vendor	8 (Shure, Senheisser, Yamaha, AT, Nureva, Bosch, Biamp, Clearone)
Software Tool	Device Utility	Support Windows® 10 or later
	Room Management	Support Windows® 7 or later, macOS 11.6 or later
	Enterprise Management	Support Windows® 10 or later
	Cloud Management	Support Google Chrome™, Microsoft Edge
	MT Control Panel	Support Windows® 7 or later, macOS® 10.14 or later, Android 8.0 or later
	PTZ Link	Built-in with Premium license activated
General	Power Requirement	802.3bt class5
	Power Consumption	23W
	PoE	PoE++
	Dimension	430 mm (L) x 227.1 mm (W) x 44 mm (H)
	Net Weight	2.48 (±0.2) kg
	3rd Party Control	Yes, Visca, CGI
	Installation	Rack mountable, Under the table, Inside the podium, Behind the display
	Warranty	5-year
	Operating Conditions	Temperature: 0°C to 40°C Humidity: 20% to 80%
	Storage Conditions	Temperature: -20°C to +60°C Humidity: 20% to 95%
	Cable Fixing Plate	Yes
	Rack Mount Brackets	Yes
	Kensington Lock	Yes
	Package Content	1x MT500 unit
		1x Power Adapter & 1x Power Cord
		Cable Fixing Plate (1x)
		Cable Tie (9x)

		3.0 x 5 mm Truss Head Screw (10x)
		M3 x 10 mm Screw (4x)
		Rack Mount Bracket (2x)
		USB 3.0 Cable (USB-A to USB-B) - 1.5 m/4.92 ft (2x)
		Quick Start Guide
		1x Phoenix® Combicon 8-pole connector
	Optional Accessories	3.0 x 5 mm Flat Head Screws (3x)
		3.0 x 5 mm Truss Head Screws (2x)

Specifications are subject to change without prior notice.

Troubleshoot

Using non-AVer cameras.

When using non-AVer cameras, only Live Mode and Manual Mode are available. Auto Mode (voice tracking) and camera control are not supported.

The device is optimized for AVer equipment. Performance with third-party cameras is not guaranteed.

No human tracking.

- Make sure your camera supports human tracking. For supported AVer devices, refer to <Supported AVer Devices>.
- If your camera is connected via HDMI, make sure you select **Control via IP**.
  Hover over the device in the device list and click the **Pencil** icon to edit.

Camera is too sensitive and flickering between presets.

- Select a longer duration for Time to Trigger Preset.
- If your camera is shared among several camera and microphone groups, assign a priority group.

Stop voice-tracking.

- Click the **voice tracking** icon on the main page to pause voice tracking for the current profile.
- Mute the microphone by pressing its physical button or accessing its web interface.
- Use the toggle switch on the Select Group Panel to disable the group.
  Single video output: Audio is muted while video is still transmitting.
  Multiple video output: Both audio and video stop transmitting.

Cameras ping-pong with a multi-microphone setup.

We recommend using the following microphones which have been optimized for a multi-microphone setup:

Audio-Technica ATND1061 (requires setup in Digital Microphone Manager)

Sennheiser TeamConnect Ceiling 2 / TeamConnect Ceiling Medium

Shure MXA920 / 901 / 310 / 710 / 910

Appendix

Supported AVer Devices

Note: When using non-AVer cameras, only Live Mode and Manual Mode are available. Auto Mode (voice tracking) and camera control are not supported. The device is optimized for AVer equipment. Performance with third-party cameras is not guaranteed.

Professional Tracking Cameras

- Single Lens

AI Features		
TR211	TR311HWV2	TR310
TR315	TR313V2	TR311
TR315N	TR323V2	TR311HN
TR335	TR323NV2	TR313
TR335N	TR333V2	TR331
TR615	PTC310HWV2	TR333
	PTC310UV2	PTC310
	PTC320UV2	PTC310N
	PTC320UNV2	PTC310U
	PTC330UV2	PTC330
		PTC330U

- Dual Lens

AI Features	
TR535	TR530+
TR535N	PTC115+
	PTC500+

Professional PTZ Cameras (no Human Tracking)

AI Features	
PTZ211	PTZ310
PTZ231	PTZ310N
PTZ310UV2	PTZ310W
PTZ310UNV2	PTZ330
PTZ330UV2	PTZ330N
PTZ330UNV2	PTZ330W

Video Conferencing Cameras (no Active Position)

CAM520 Pro3	VC520 Pro3
CAM550	VC550
CAM570	

Distance Learning Camera (no Active Position)

DL30

Supported Microphones

Important Note on Voice Tracking Installation
When installing voice tracking systems, consider the environment, materials, and distances to ensure optimal performance. Assess the room size, layout, and acoustics, as these factors impact accuracy. Different surfaces affect sound reflection and absorption, influencing effectiveness. Measure and maintain appropriate distances between devices and the coverage area for clear tracking. To achieve the best experience, connect with an AVer technical expert who can tailor the installation to your specific needs.

Note:
- Third-party microphone systems may require setup in their manufacture software.
- Make sure you have turned on **Multicast** on the router before setting up your microphone.

Audio-Technica

ATND1061DAN, ATND1061LK

ATUC-50

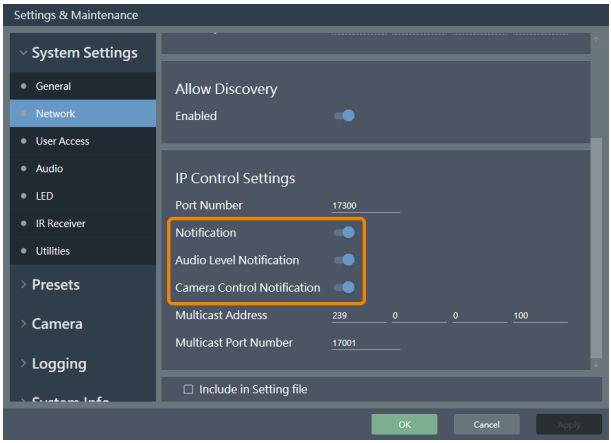
ATUC-IR

Engineered Sound® Wireless – ESW-R4180DAN

To set up ATND1061 Beamforming Ceiling Array Microphone:

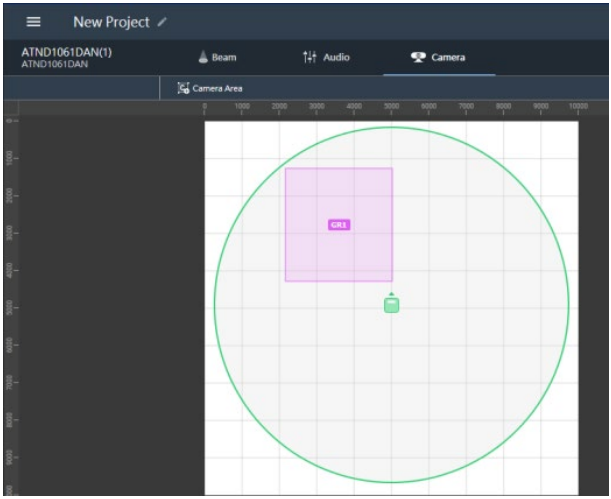
1. Open Digital Microphone Manager. Go to **Settings & Maintenance** > **System Settings** > **Network** > **IP Control Settings**.

2. Turn on **Notification**, **Audio Level Notification**, and **Camera Control Notification**.

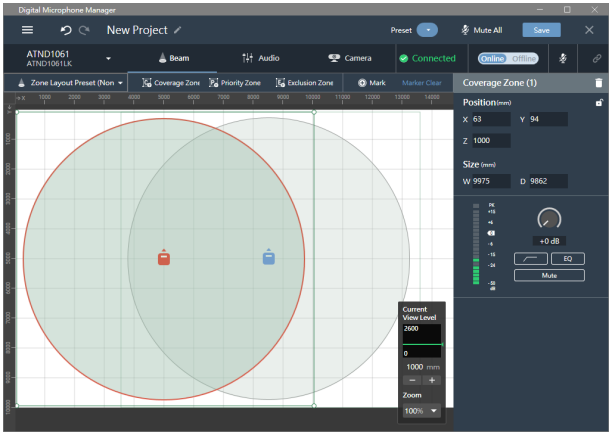


3. Select a microphone in the main area.

4. Go to **Camera** > **Camera Area**. Add a Camera Area by dragging a rectangle within the microphone pickup area. Each Camera Area group corresponds to the matrix box channel of the same number.



5. Go to **Beam** >**Coverage Zone**. Add a Coverage Zone by dragging a rectangle that covers the entire microphone pickup area.



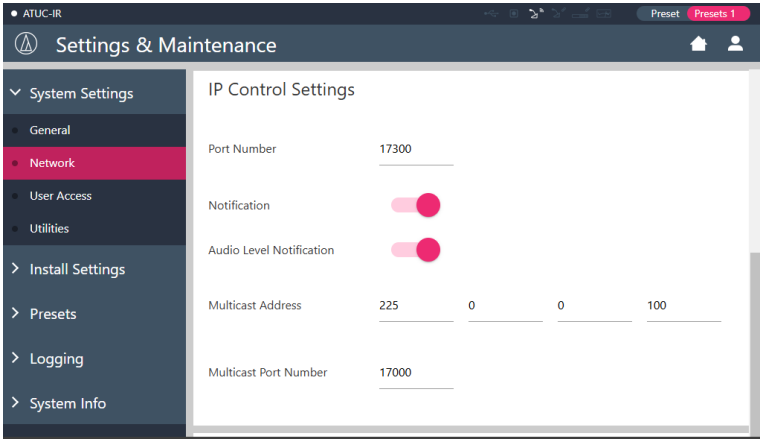
6. Repeat steps 4-5 for all microphones, if any.

To set up ATUC-IRCU infrared control unit:

1. On the ATUC-IRCU Web Remote interface, go to **Settings & Maintenance** > **System Settings** > **Network** > **IP Control Settings**.

2. Turn on **Notification**.

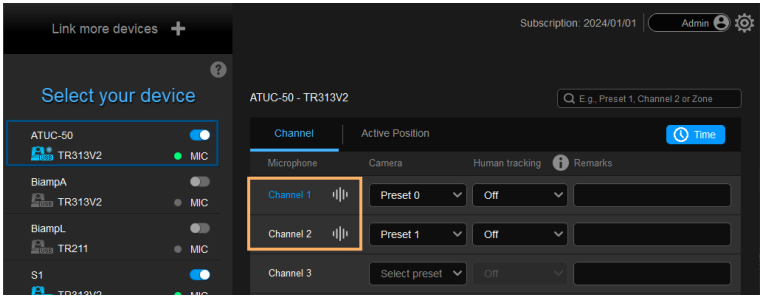
> **Note:** If a powered-off ATUC-IRDU appears to be sending audio signal in MT500, turn on **Audio Level Notification** to resolve the issue.



Pairing ATUC-50 with AVer camera presets for voice tracking :

- Each ATUC-50DU or ATUC-IRDU discussion unit corresponds to an MT500 channel.

- A discussion unit whose talk button is pressed first takes priority over others until it is mute. For example, Channel 1 (pressed first) takes priority over Channel 2 whose talk button is also pressed.

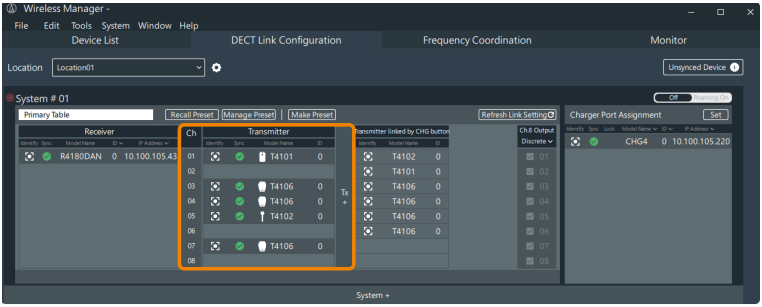


To set up Engineered Sound® Wireless – ESW-R4180DAN:

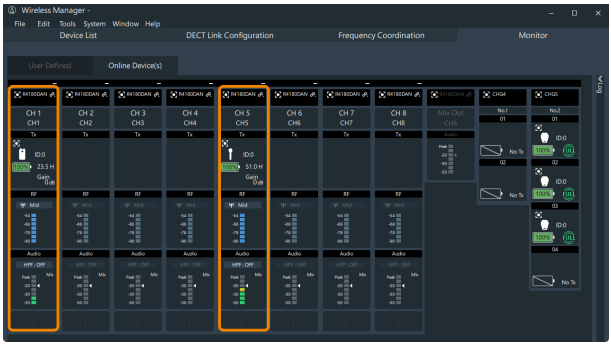
1. Open Wireless Manager and configure the links to each device.

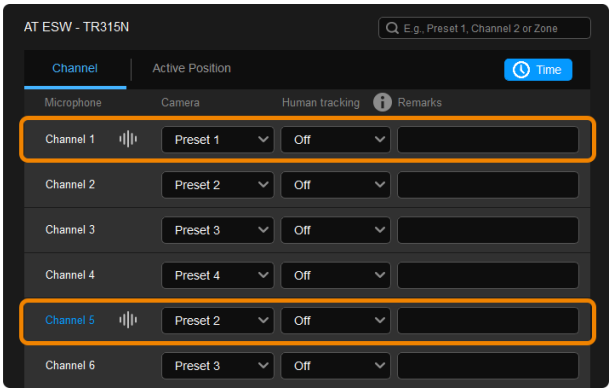
2. You can reconfigure a transmitter's link to a different channel by dragging it there.

   - The linked channel number is mapped to the matrix box's channel of the same number.



   - Audio signals are displayed on the matrix box when sound is detected on a channel. The active channel is triggered by the channel with the highest audio level.





- Please note that the TCP port for the Engineered Sound® Wireless – ESW-R4180DAN is 17200, whereas the ATND1061 uses port 17300.

Table 2-1 Communication Interfaces

No	Item	Content	Remarks
1.	Communication system	Full duplex	
2.	Transmission speed	10Mbps / 100Mbps	
3.	Port number	TCP (control): 17200	Cannot be changed. (Fixed value)
		UDP (notification): 17000	Can be changed. (17000 at factory shipment)

Biamp

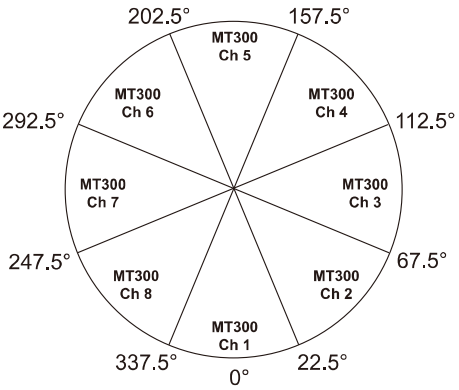
> Tesira Digital Signal Processor
>
> Parlé Ceiling Microphones (requires Parlé product revision A or B)

Hardware and Channels Overview

Tesira Digital Signal Processor	Tesira Forte X, Tesira Forte Rackmount, Tesira Server IO, Tesira Server.
Parlé TCM-X	Plenum network box + one ceiling-mount microphone array
Parlé TCM-XA	Plenum network box with built-in amplifier+ one ceiling-mount microphone array
Parlé TCM-XEX	One expansion ceiling-mount microphone array

One ceiling microphone arrays is permitted for network box (one TCM-X or TCM-XA with TCM-XEX).

Each ceiling microphone array has 8 channels. MT500 divides the microphones' horizontal angles into 8 equal parts, which correspond to MT500 Channel 1 - 8.



Microphone	Channel Start/End
AVerParleMic1	1-8 (ceiling mic 1) 9-16 (ceiling mic 2)
AVerParleMic2	17-24 (ceiling mic 1) 25-32 (ceiling mic 2)
AVerParleMic3	33-40 (ceiling mic 1) 41-48 (ceiling mic 2)
AVerParleMic4	49-56 (ceiling mic 1) 57-64 (ceiling mic 2)
AVerParleMic5	65-72 (ceiling mic 1) 73-80 (ceiling mic 2)
AVerParleMic6	81-88 (ceiling mic 1) 89-96 (ceiling mic 2)

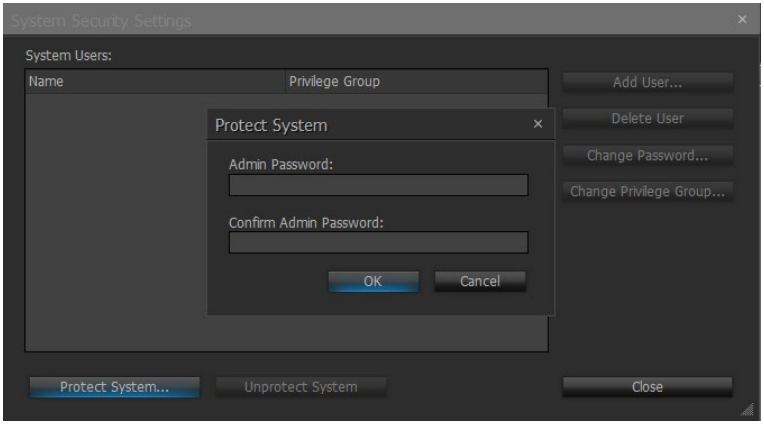
To enable system security:

You can protect 3rd party media control access for the Tesira system using username and password.

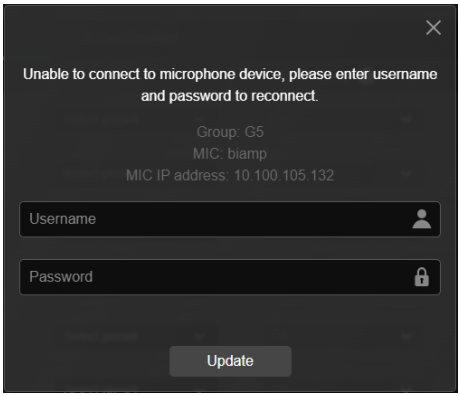
1. After the DSP has been configured, connect to the unprotected Tesira system with Tesira Designer Software.

2. Open the **System** page > **Security** menu > **Manage System Security...**

3. Click the **Protect System...** button to create the admin user and password.



4. You'll be prompted to enter the same set of username and password when connecting to Biamp microphones in MT500.



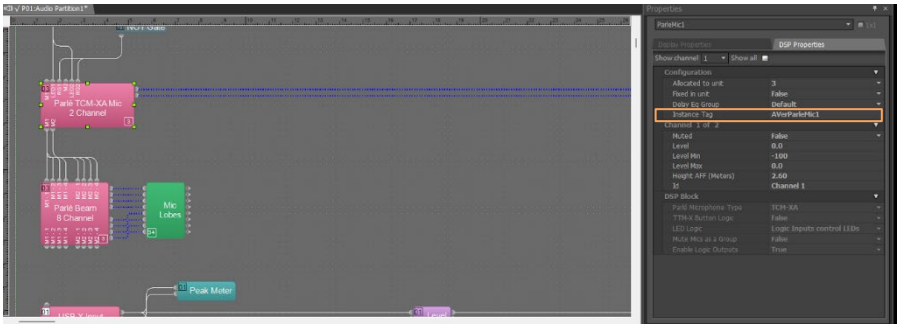
To set up Parlé TCM-X microphones:

1. Open Tesira Design Software.

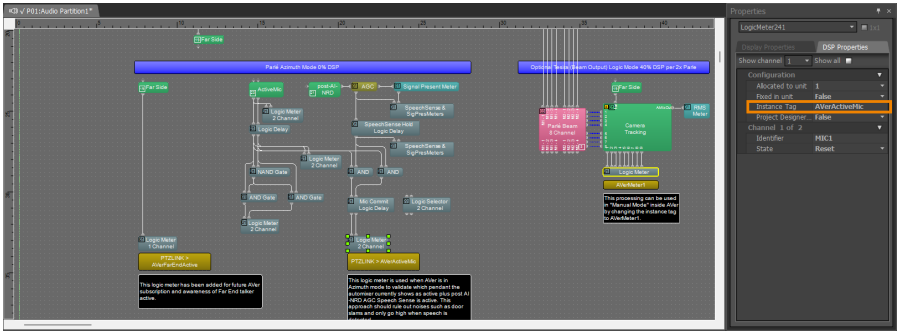
2. After the TCM-X microphone has been added to the layout, the instance tag of the Parlé microphone block or Logic Meter block to be controlled must use the following naming schemes.

   To check or rename the instance tag of a specific block, click on that block, go to **Properties** panel > **DSP Properties** tab > **Instance Tag**.

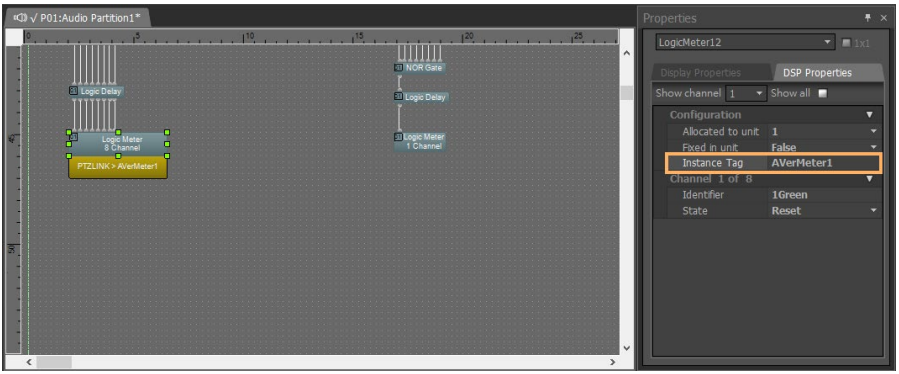
   - Parlé microphone block: **AVerParleMicX** (X=1–6 starting with 1)



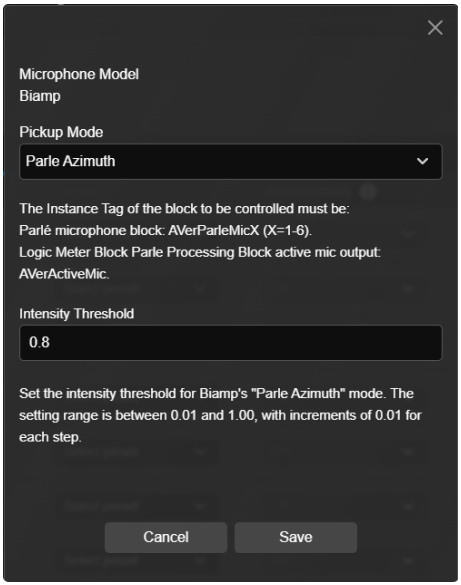
   - Logic Meter Parle Processing active mic output: **AVerActiveMic**



- Logic Meter block: **AVerMeterX** (X=1–4 starting with 1)



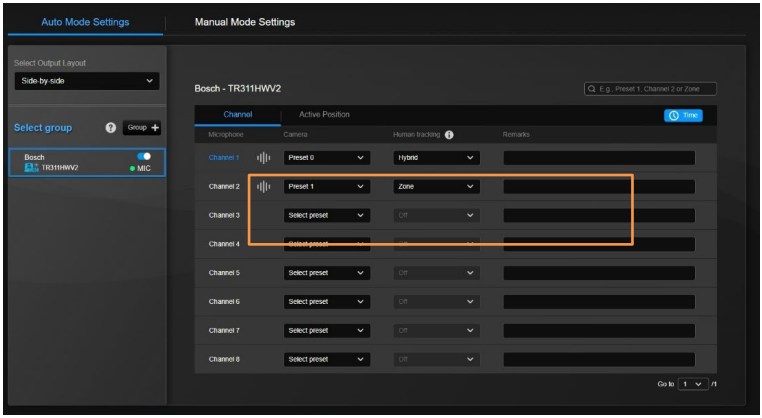
3. Click **Channel Configure** and select a pickup mode in MT500. Then lick **Save**.



Bosch

> CCS 1000 D Digital Discussion System
>
> DICENTIS Wireless Conference System
>
> DICENTIS Conference System

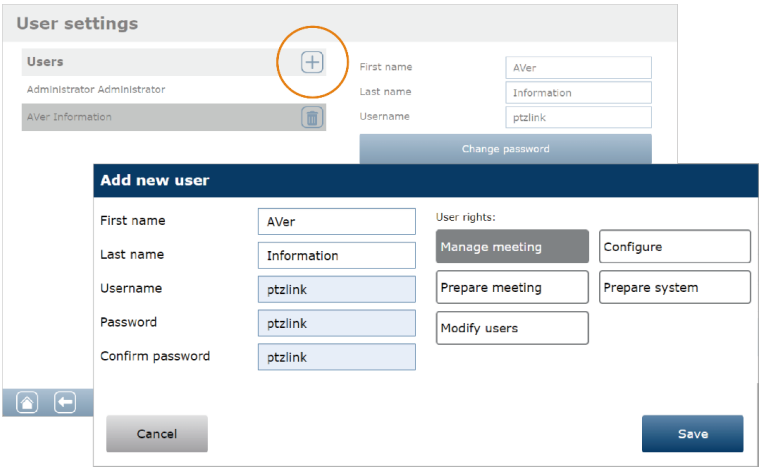
- Each CCS 1000 D Control Unit supports up to 80 Discussion Devices.
- Assign each CCS 1000 D Discussion Device to one MT500 channel by changing the seat name.
- A discussion unit whose talk button is pressed first takes priority over others until it is mute. For example, Channel 1 (pressed first) takes priority over Channel 2 whose talk button is also pressed.



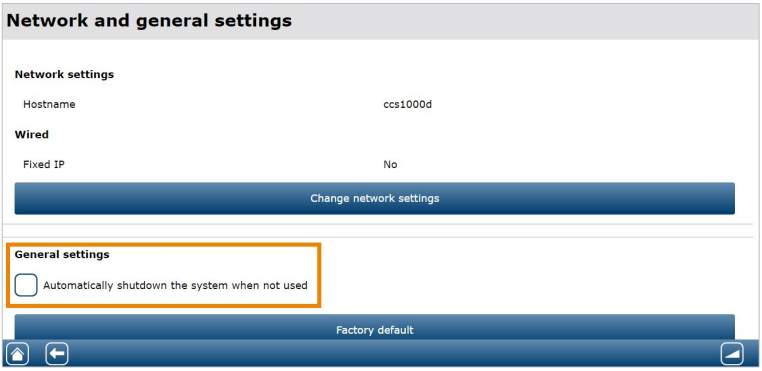
To set up CCS 1000 D:

1. Connect to the CCS 1000 D Control Unit through IP. Access the web interface with an administrator account.

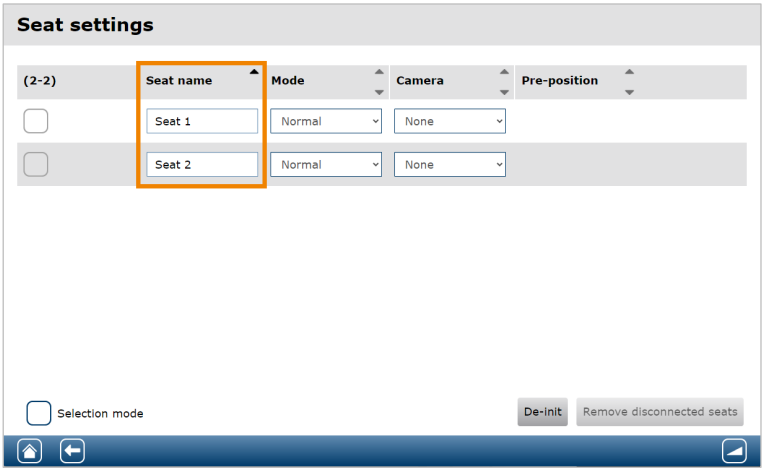
2. Go to **System Settings** > **Users**, create a user for MT500 with the default username/password **ptzlink**/**ptzlink**. The password can be changed later. For **User rights**, select **Manage meeting**.



3. Go to **System Settings** > **Network and general settings** > **General settings**, deselect **Automatically shut down the system when not used** to avoid entering standby mode.



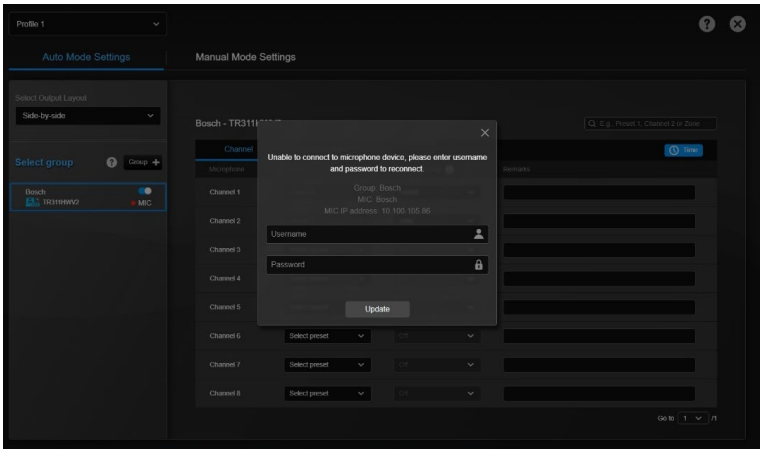
4. Go to **System Settings** > **Seats**, rename the **Seat name** ending with a space and a number to assign each discussion device to one MT500 channel of the same number.



Seat 1 corresponds to channel 1, seat 2 to channel 2, and so on.

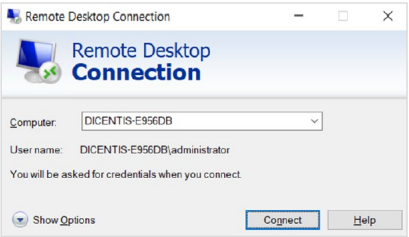
5. You'll be prompted to enter the same set of username and password when connecting to Bosch microphones in MT500.

Note: CCS 1000 D Control Unit allows one login at a time. When connecting CCS 1000 D Discussion Devices to MT500, make sure you are not logged in anywhere else.



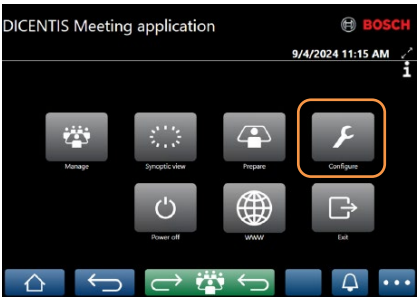
- **To log in to DICENTIS System Server:**

1. Open **Remote Desktop Connection** on your computer. Enter the DICENTIS server name printed on the product label.

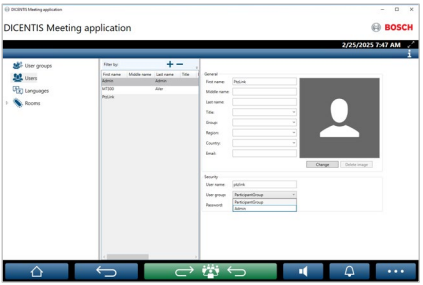


2. Enter the credentials you purchased from Bosch. On security message pop-up window, click **Yes**.

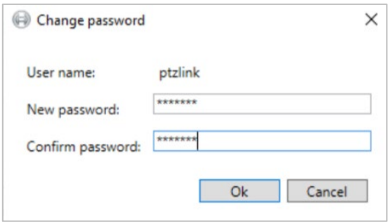
3. Open **Bosch Meeting Application**, enter your credentials to log in. Go to **Configure** for further meeting room and user settings.



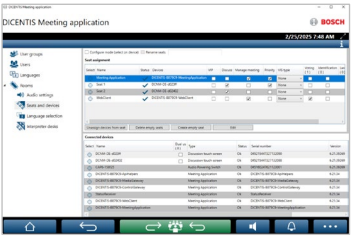
4. Click **Users** and click the Add icon to add a new user. In **Security**, select **Admin** as the User group, and then click **Change Password**.



5. Enter the default password: **ptzlink**. When finished, click **OK**.



6. Go to **Rooms** > **Seats and devices** to assign each microphone to MT500 channels. Seat 1 corresponds to channel 1, seat 2 to channel 2, and so on.



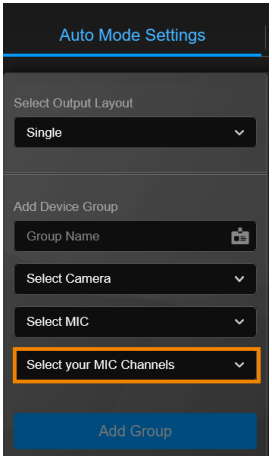
ClearOne

> BMA 360 + CONVERGE® Pro 2 DSP Mixers

- CONVERGE® Pro 2 connects up to 3 daisy-chained BMA 360 microphone arrays.
- MT500 assigns 12 channels to each BMA 360. Unused channels are retained in the assigned BMA 360.

Daisy-Chained	Channel Start/End
1st BMA 360	1-12
2nd BMA 360	13-24
3rd BMA 360	25-36

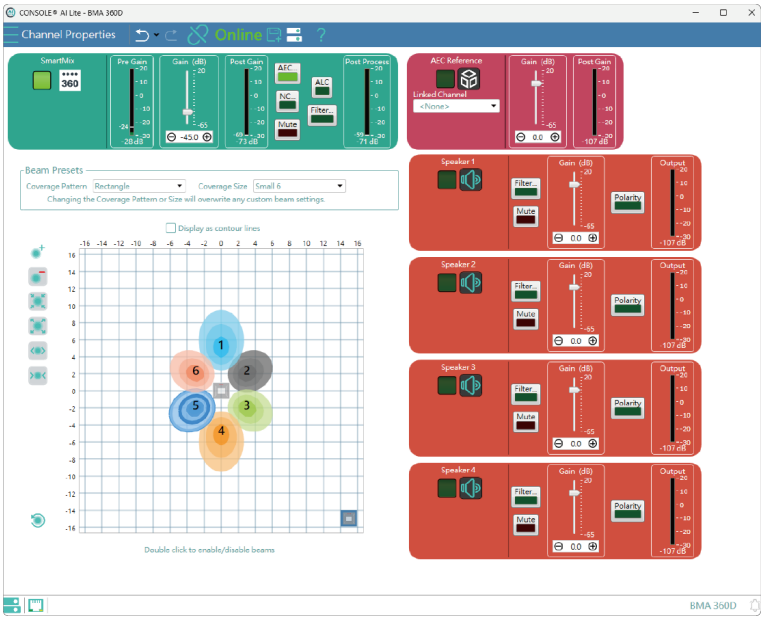
- When adding your device in MT500, select your MIC channels in the drop-down list according to the number of BMA 360 daisy-chained.



BMA 360D

- Use CONSOLE AI Lite software to select preset beam patterns for common room or custom pattern for unique floorplans of up to 12 beams.

- Each microphone beam corresponds to one MT500 channel of the same number.

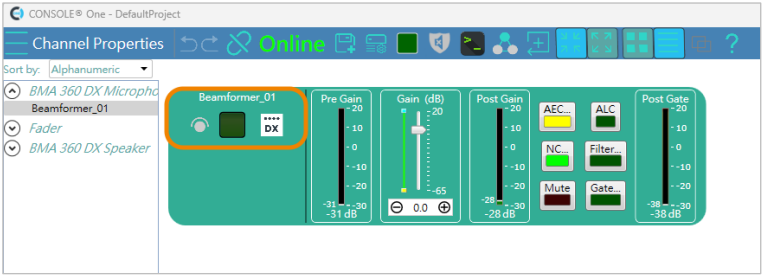


BMA 360DX

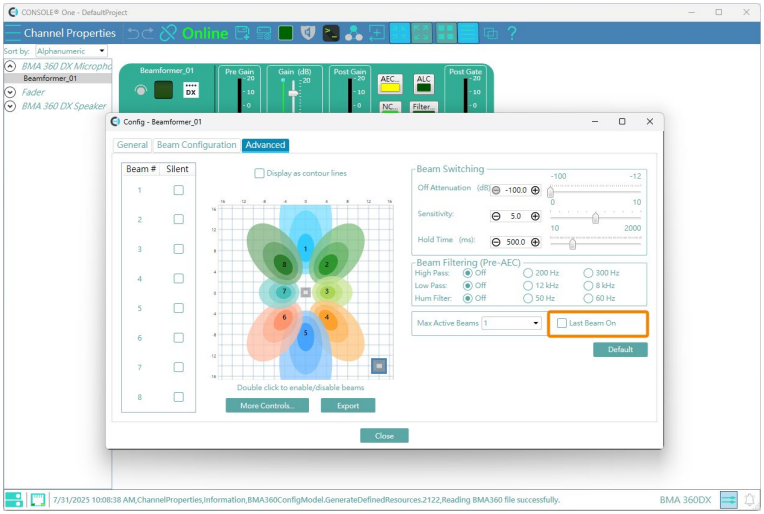
To set up BMA 360DX:

1. Connect the BMA 360DX to the CONSOLE One software to select preset beam patterns for common room or custom pattern for unique floorplans of up to 12 beams.

2. Go to **Channel Properties** > click **DX** next to **Beamformer**.



3. Go to **Advanced** > deselect **Last Beam On**.
   This prevents the last active channel from appearing active in MT500 when the room is silent.



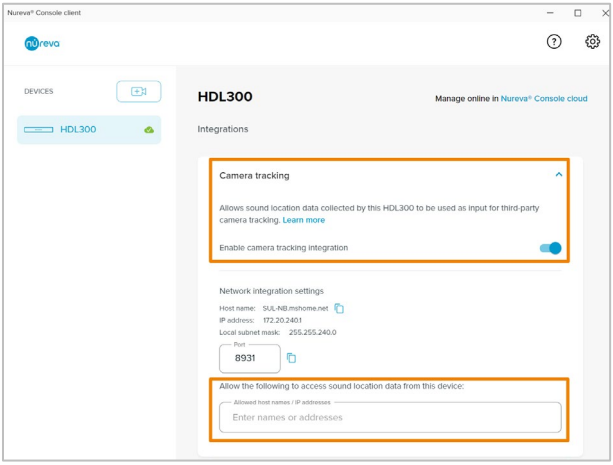
4. Each microphone beam corresponds to one MT500 channel of the same number.

Nureva

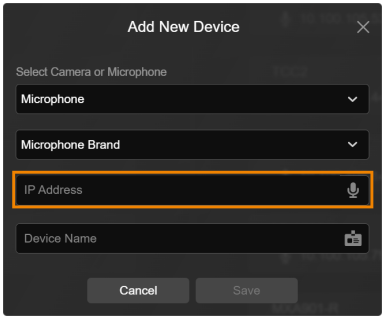
> HDL300
>
> HDL310
>
> Dual HDL300
>
> HDL410

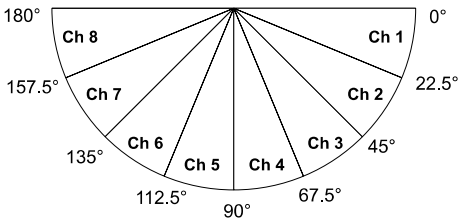
To set up HDL microphones:

1. In Nureva Console Client, turn on **Enable camera tracking integration**, then enter the IP address of the MT500 in the **Allowed host names / IP addresses** field.



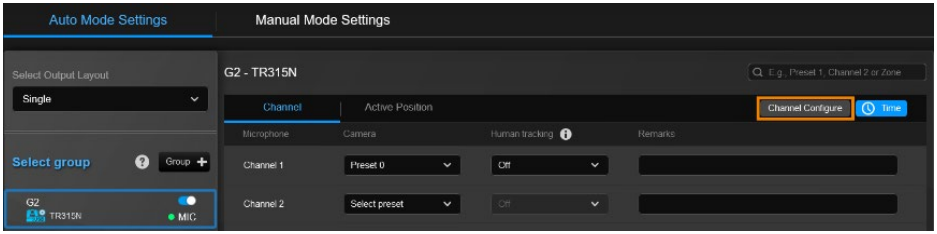
2. On the MT500 web interface, enter the IP address of the computer running Nureva Console Client in the **IP Address** field when adding microphones.
   MT500 divides HDL microphones' horizontal angles into 8-24 equal parts, which correspond to MT500 channel 1-24.





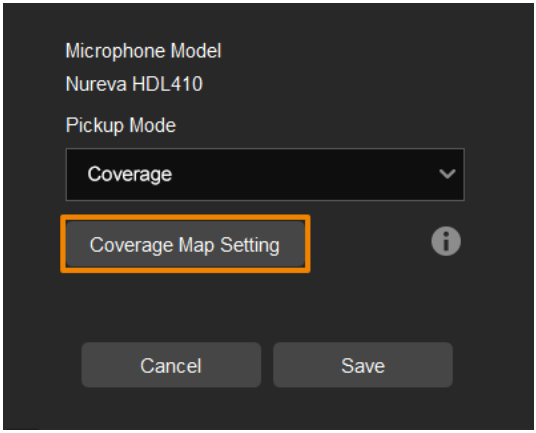
To add a coverage area for HDL310 and HDL410:

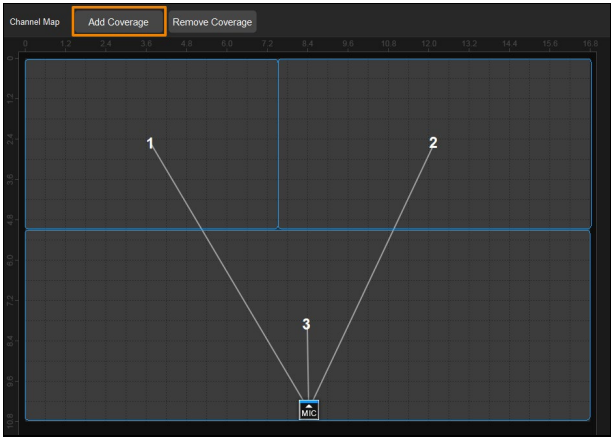
1. Go to **Auto Mode Settings** > **Channel** > **Channel Configure**.



2. Select **Coverage** from the **Pickup Mode** drop-down list.

3. Click **Coverage Map Setting** > Click **Add Coverage**.





4. Add a coverage area by dragging it.
    - You can add up to 8 coverage areas per microphone.
    - When coverage areas overlap, the microphone will default to the area with the smaller number.

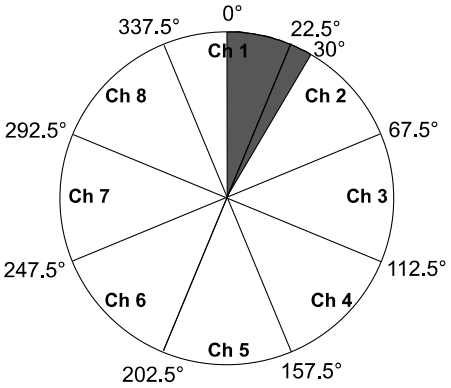
Sennheiser

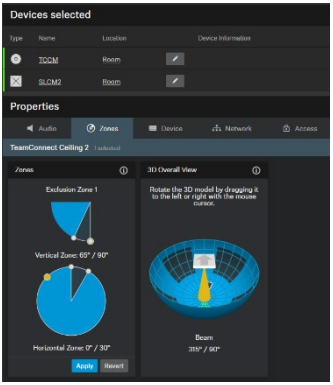
> TeamConnect Ceiling 2
>
> TeamConnect Ceiling Medium
>
> EW-DX EM 2 Half Rack Receiver
>
> EW-DX EM 2 Dante Half Rack Receiver
>
> EW-DX EM 4 Dante Full Rack Receiver
>
> EW-DX TS 3-Pin Table Stand Transmitter (and compatible microphones)
>
> EW-DX TS 5-Pin Table Stand Transmitter (and compatible microphones)

MT500 divides TeamConnect Ceiling 2's and TeamConnect Ceiling Medium's horizontal angles into 8-24 equal parts, which correspond to MT500 channel 1-24.

- **TeamConnect Ceiling 2**

  An Exclusion Zone set in Sennheiser Control Cockpit also affects the corresponding channel in MT500.





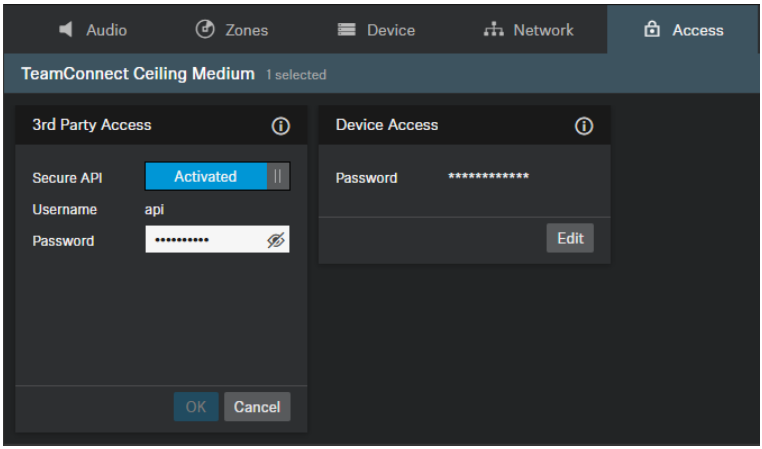
Sennheiser Control Cockpit

- **TeamConnect Ceiling Medium**

The 3rd party media control access for TeamConnect Ceiling Medium is encrypted and protected using username and password. It has to be enabled using Sennheiser Control Cockpit before use.

To set a 3rd Party device control password:

1. Open Sennheiser Control Cockpit. Go to the **Access** tab in the device configuration page.



2. Activate the toggle switch.
3. Enter a password.
4. You can use the username "api" and configured password for your API calls.

Note:

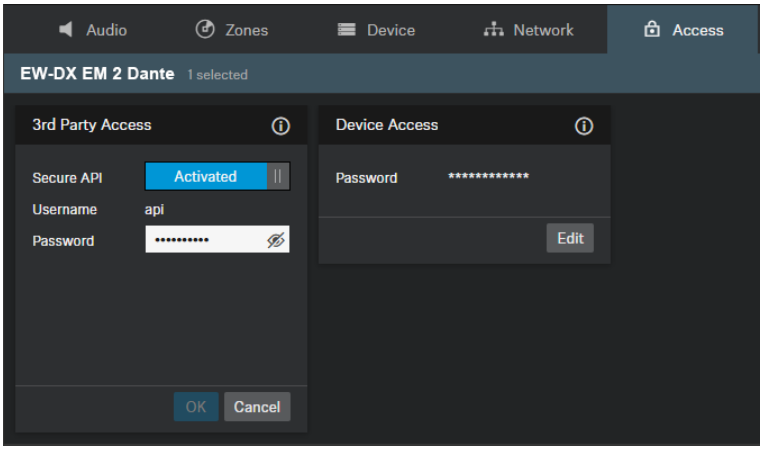
- If you deactivate 3rd party access, the previously set password will be deleted.
- Password must be at least 10 characters and no more than 64 characters. Use at least one lowercase letter, one uppercase letter, one number and one special character (!#$%&()*+,-./:;<=>?@[]^_{|}~).

- **EW-DX EM 2, EW-DX EM 2 Dante, EW-DX EM 4 Dante**

The 3rd party media control access for EW-DX EM receivers is encrypted and protected using username and password. It has to be enabled using Sennheiser Control Cockpit before use.

To set a 3rd Party device control password:

1. Open Sennheiser Control Cockpit. Go to the **Access** tab in the device configuration page.



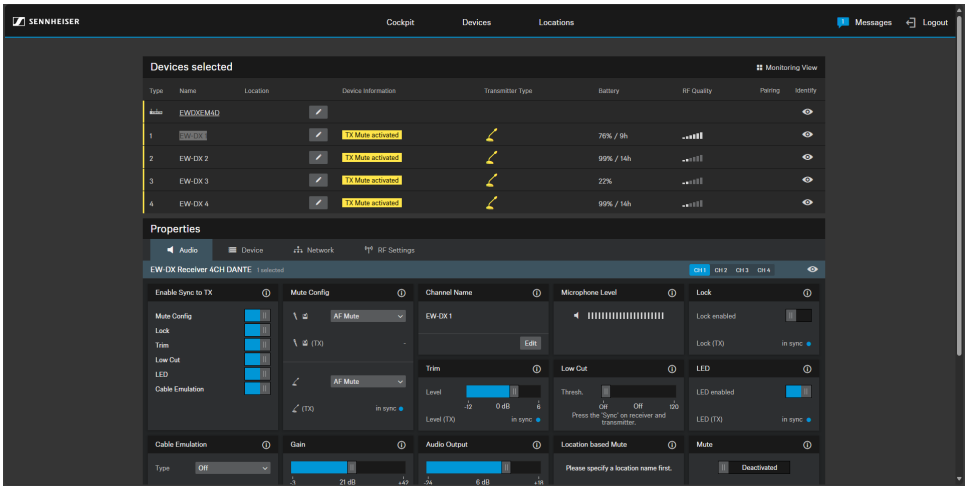
2. Activate the toggle switch.
3. Enter a password.
4. You can use the username "api" and configured password for your API calls.

Note:

- If you deactivate 3rd party access, the previously set password will be deleted.
- Password must be at least 10 characters and no more than 64 characters. Use at least one lowercase letter, one uppercase letter, one number and one special character (!#$%&()*+,-./:;<=>?@[]^_{|}~).

- **EW-DX EM 4 Dante Receiver and Transmitters**

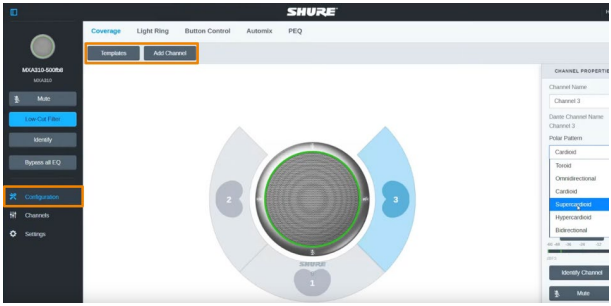
Each transmitter will connect to EW-DX 1-4, which correspond to MT500 channel 1-4.
You can log in to Sennheiser Control Cockpit to view the status of each transmitter.
For connecting the receiver with the transmitters, please refer to Sennheriser official website:
https://docs.cloud.sennheiser.com/en-us/ew-d/ew-d/ew-dx-connecting-synchronizing-em.html



Shure

> Shure® IntelliMix® P300 Audio Conferencing Processor
>
> Shure® IntelliMix® Room Audio Processing Software
>
> Shure® MXA310 Table Array Microphone
>
> Shure® MXA710 Linear Array Microphone
>
> Shure® MXA910 Ceiling Array Microphone
>
> Shure® MXA901 Conferencing Ceiling Array Microphone
>
> Shure® MXA920-S / MXA920-R Ceiling Array Microphone
>
> Shure® Microflex® Complete Wireless (MXCW) System

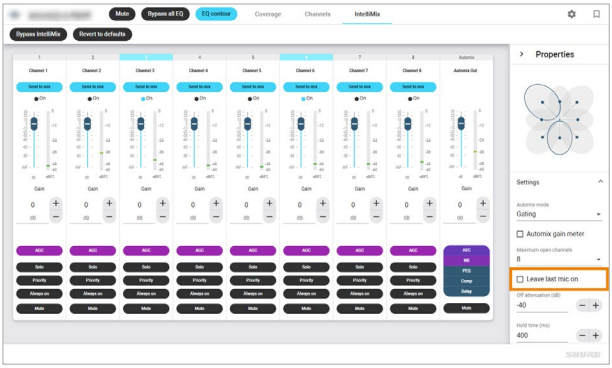
- **MXA310 Table Array Microphone**



Web Application

1. Open the **Configuration** tab.
2. Select **Template** to apply a multi-channel option or select **Add Channel** to add more than 1 channel. MT500 does not support single channel for the MXA310.

- **MXA910 Ceiling Array Microphone**



Web Application

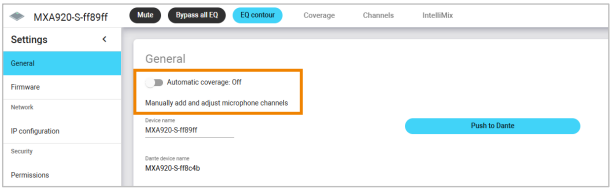
Go to **IntelliMix** > **Automixer Properties** > Deselect **Leave last mic on**.

- **MXA920-S / MXA920-R Ceiling Array Microphone**

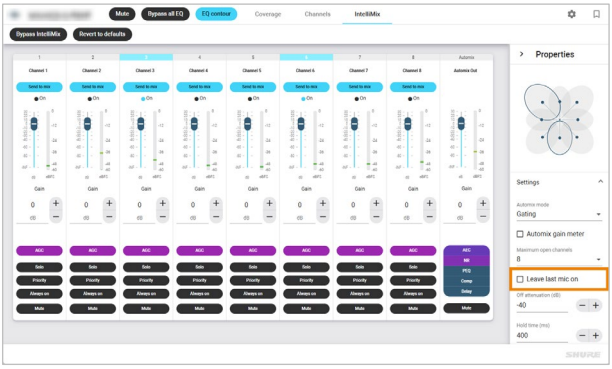
> **Note:** To integrate with supported AVer camera tracking system via active talker positions, refer to <Auto Mode (Active Position)>.

To manually position up to 8 lobes:

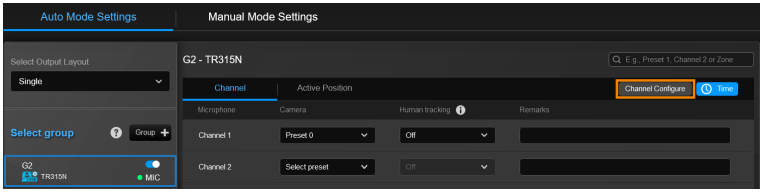
1. In the microphone's web application, go to **Settings** > **General** > Turn off **Automatic coverage**.



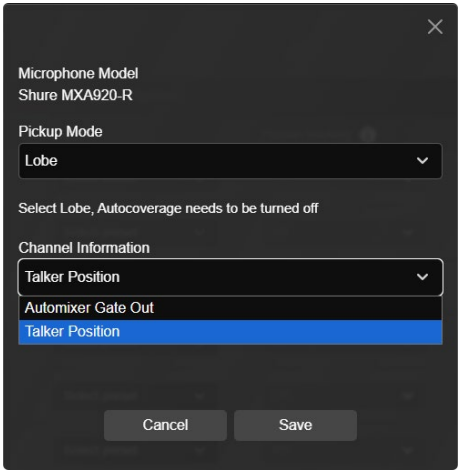
2. Go to **IntelliMix** > **Automixer Properties** > Deselect **Leave last mic on**.



3. In the matrix box's web interface, go to **Auto Mode Settings** > **Channel** > **Channel Configure** in MT500 > Select **Lobe** as **Pickup Mode**: The lobes you have positioned in the MXA920's web application correspond to MT500 channel 1-8.

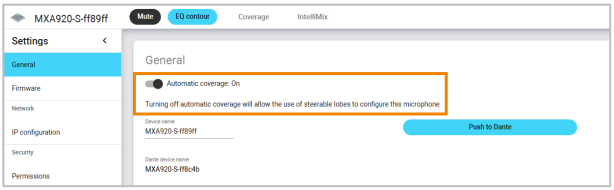


4. Select one of the following from the **Channel Information** drop-down list:
   - Automixer Gate Out (default): Detects all sounds
   - Talker Position: Detects active talkers



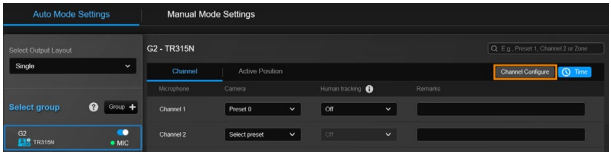
To add a mix of up to 8 dynamic and dedicated coverage areas:

1. In the microphone's web application, go to **Settings** > **General** > turn on **Automatic coverage**. The default setting is a 30 by 30 foot (9 by 9 meter) dynamic coverage area.

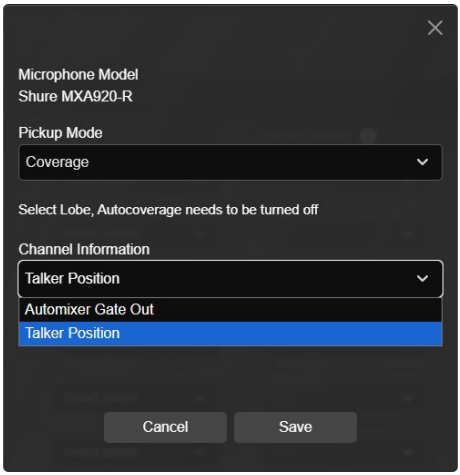


2. To add more coverage areas, go to **Coverage** > **Add coverage**.

3. In the matrix box's web interface, go to **Auto Mode Settings** > **Channel** > **Channel Configure** > select **Coverage** as **Pickup Mode**: The coverage areas you have positioned in the microphone's web application correspond to MT500 channel 1-8.

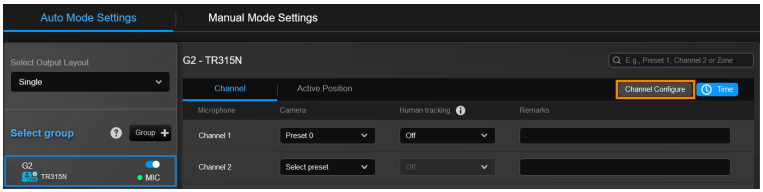


4. Select one of the following from the **Channel Information** drop-down list:
   - Automixer Gate Out (default): Detects all sounds
   - Talker Position: Detects active talkers

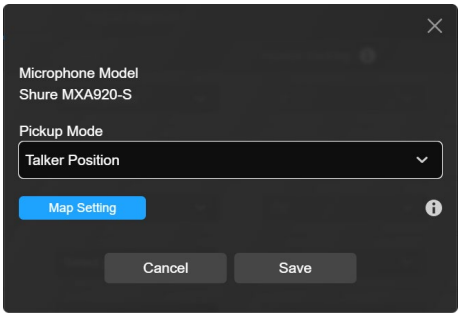


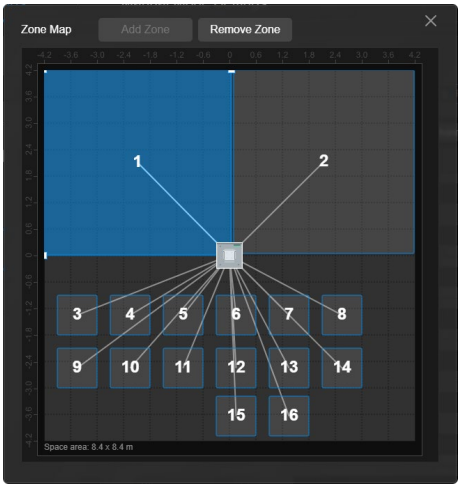
To add up to 16 dedicated coverage areas:

1. In the matrix box's web interface, go to **Auto Mode Settings** > **Channel** > **Channel Configure** > select **Talker Position** as **Pickup Mode**.



2. Click **Map Setting** > **Add Zone**.
   You can add up to 16 coverage areas per microphone. Move and resize as needed.

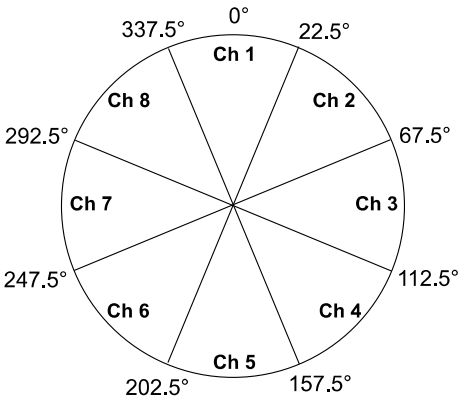




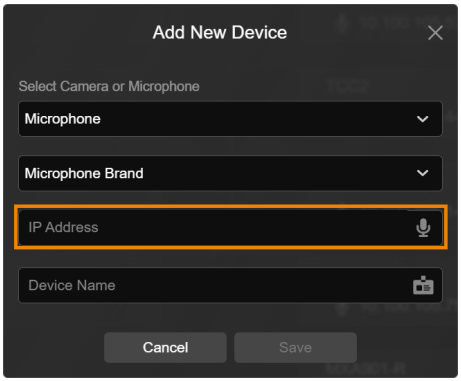
Yamaha

> RM-CG Ceiling Array Microphone
>
> RM-TT Tabletop Array Microphone
>
> RM-CR Remote Conference Processor
>
> RM-W Wireless Microphone System

- MT500 divides RM-CG's horizontal angles into 8-24 equal parts, which correspond to MT500 channel 1-24.



- MT500 voice tracking function requires linking more than one RM-TT or RM-W microphones for location data.
- When linking RM-TT or RM-W microphones to the RM-CR Remote Conference Processor, enter the processor's IP address in the **IP Address** field when adding microphones in MT500.



HTTP Requests

Function	Request	Description
Get current output	http://[account]:[password]@[IP Address]/request=getCurrentOutput	{"outputId":1}
Set current output	http://[account]:[password]@[IP Address]/request=setCurrentOutput&output=[output ID]	[output ID]: 1 or 2
Get output settings	http://[account]:[password]@[IP Address]/request=getOutputSettings	{"output1":0, "output2":1, "duplicate":0}
Set output settings	http://[account]:[password]@[IP Address]/request=setOutputSettings&[key]=[s]	[key]: output1 [s]: 0,1 [key]: output1 [s]: 0,1 [key]: duplicate [s]: 0,1 [s]: 0(off) or 1(on)
Get audio settings	http://[account]:[password]@[IP Address]/request=getAudioSettings	[{"HDMI":1,"State":{"HDMI1":1,"HDMI2":0,"HDMI3":0}}, {"USB":1,"State":{"USB1":0,"USB2":0}}, {"MIC":0}, {"XLR":0}, {"Dante1":1}, {"Dante2":1}, {"RTSP":1,"Did":deviceTbCamDid}, {"volume":50}]
Set audio settings	http://[account]:[password]@[IP Address]/request=setAudioSettings&[key]=[s]	[key]: HDMI [s]: 0,1,2,3 // 0(off) or 1(HDMI1) or 2(HDMI2) or 3(HDMI3) [key]: USB [s]: 0,1,2 // 0(off) or 1(USB1) or 2(USB2) [key]: MIC [s]: 0,1 // 0(off) or 1(MIC) [key]: XLR [s]: 0,1 // 0(off) or 1(XLR) [key]: Dante1 [s]: 0,1 // 0(off) or 1(Dante1) [key]: Dante2 [s]: 0,1 // 0(off) or 1(Dante2) [key]: RTSP [s]: 0,1&[key]: Did [s]: deviceTbCamDid // 0(Select Camera) or deviceTbCamDid [key]: volume [s]: 0~100 // 0~100

Query webui loading status	http://[account]:[password]@[IP Address]/request=queryLoadingStatus	status=0 // webui is not loading
		status=1 // webui is loading

Pause all groups	http://[account]:[password]@[IP Address]/request=pause	
Resume all groups	http://[account]:[password]@[IP Address]/request=resume	
Query pause status of all groups	http://[account]:[password]@[IP Address]/request=queryPauseStatus	
Disable all groups	http://[account]:[password]@[IP Address]/request=disableAll	
Enable all groups	http://[account]:[password]@[IP Address]/request=enableAll	
Disable a specified group	http://[account]:[password]@[IP Address]/request=disable&group=[Group ID]	
Enable a specified group	http://[account]:[password]@[IP Address]/request=enable&group=[Group ID]	
Query status of a specified group	http://[account]:[password]@[IP Address]/request=queryStatus&group=[Group ID]	
Set profile	http://[account]:[password]@[IP Address]/request= setProfile&profile=[number]	
Reboot	http://[account]:[password]@[IP Address]/cgi-bin?OnePush=!	
Get power schedule	http://[account]:[password]@[IP Address]/cgi-bin?GetData=sys_power_schedule	Hours are separated by a “, “. Days are separated by an “_”.
Set power schedule	http://[account]:[password]@[IP Address]/cgi-bin?SetData=sys_power_schedule,"0,1,0,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1_1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1_1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1_1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1_1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1_1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1_1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,0_"	Hours are separated by a “, “. Days are separated by an “_”. An “_” must precede the end quote.
Get auto reboot status	http://[account]:[password]@[IP Address]/cgi-bin?Get=sys_reboot_time_en	0: disable 1: enable
Set auto reboot status	http://[account]:[password]@[IP Address]/cgi-bin?Set=sys_reboot_time_en,3,0	0: disable 1: enable

	http://[account]:[password]@[IP Address]/cgi-bin?Set=sys_reboot_time_en,3,1	
Get auto reboot time	http://[account]:[password]@[IP Address]/cgi-bin?GetString=sys_reboot_time	"02:00"
Set auto reboot time	http://[account]:[password]@[IP Address]/cgi-bin?SetString=sys_reboot_time,"02:00"	
Get device status	http://[account]:[password]@[IP Address]/request=queryDeviceStatus	Device Info: name=device name, type=camera or microphone, port=USB1~3, HDMI1~3, or IP status=online or offline
Get general mode	http://[account]:[password]@[IP Address]/request=getGeneralMode	0 (profile mode), 1 (live mode)
Set general mode	http://[account]:[password]@[IP Address]/request=setGeneralMode&generalMode=[generalMode ID]	generalMode ID: 0 (profile mode), 1 (live mode)
Enable live mode	http://[account]:[password]@[IP Address]/request=enableLiveMode	
Disable live mode	http://[account]:[password]@[IP Address]/request=disableLiveMode	
Get live mode layout	http://[account]:[password]@[IP Address]/request=getLiveLayout	liveLayout: PIP(0), Single(1), Side-by-side(2), Main Speaker(3), Main Speaker(4), Quad View(5)
Set live mode layout	http://[account]:[password]@[IP Address]/request=setLiveLayout&liveLayout=[liveLayout ID]	liveLayout: PIP(0), Single(1), Side-by-side(2), Main Speaker(3), Main Speaker(4), Quad View(5)

Query all profile info	http://[account]:[password]@[IP Address]/request=queryAllProfileTbInfo	response profile data array.
		
		array item:
		{
		"pid":1,
		// profile ID 1~36
		"profileName":"",
		// profile name naming by user
		"profileOrder":1,
		"isCurrent":1,
		// is current profile

		"mode":0,
		// auto mode or manual mode
		"currentGroup":1,
		// current group ID
		"enableVoiceTracking":1, // pause or resume
		"layoutAuto":4,
		// auto mode layout
		"layoutManual":3,
		// manual mode layout
		
		"mode2":0,
		// auto mode or manual mode
		"currentGroup2":1,
		// current group ID
		"enableVoiceTracking2":1, // pause or resume
		"layoutAuto2":4,
		// auto mode layout
		"layoutManual2":3
		// manual mode layout
		
		"duplicate":0,
		// 1: duplicated
		}

Get current profile mode	http://[account]:[password]@[IP Address]/request=getMode	auto or manual mode
Set current profile mode	http://[account]:[password]@[IP Address]/request=setMode&mode=[mode ID]	mode ID=0(auto mode), 1(manual mode)
Query device status	http://[account]:[password]@[IP Address]/request=queryOnlineDevice	

Query live mode all layout settings	http://[account]:[password]@[IP Address]/request=queryLiveModeData	response live mode data array.
		
		array item:
		{
		"camView":0
		// camView: 0 (Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
		"deviceTbCamDid":43, // camera ID
		"liveModeLayout":1, // layout ID: 0~5

		"sourceOrder":1 // source order: 1~4 }
Reset live mode data	http://[account]:[password]@[IP Address]/request=clearLiveModeData	

Get live mode device list	http://[account]:[password]@[IP Address]/request=queryLiveModeDeviceInfo	response live mode device array.
		
		array item:
		{
		"camLensCount":1 // 0(Unknown), 1(single-lens camera), 2(dual-lens camera), ...
		"deviceTbCamDid":1, // camera ID
		"name":"USB1", // device name
		"port":"USB1",
		// device port or IP address(IP cam)
		"type":"camera" // device type
		"status":"offline" or "online" // device status
		streamingType:-1 // -1(NONE), 0(RTSP), 1(NDI), 2(Dante)
		}

Set camera to live mode layout source	http://[account]:[password]@[IP Address]/request=setLiveModeSource&liveLayout=[liveLayout ID]&srcOrder=[sourceOrder]&camDid=[deviceTbCamDid]&camView=[camView Index]	liveLayout ID: 0~5 sourceOrder: 1~4 deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
RTMP Start streaming	http://[account]:[password]@[IP Address]/cgi-bin?Set=vdo_rtmp_enable, 3, 1	
RTMP Stop streaming	http://[account]:[password]@[IP Address]/cgi-bin?Set=vdo_rtmp_enable, 3, 0	

AVer Control Panel (formerly PTZ Control Panel)

Function	Request	Description
HOME	http://[account]:[password]@[IP Address]/request=ptzHome&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
PanLeftStart	http://[account]:[password]@[IP Address]/request=ptzLeftStart&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
PanLeftStop	http://[account]:[password]@[IP Address]/request=ptzLeftStop&camDid=[deviceTbCamDid]&camView=[camView Index]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
PanRightStart	http://[account]:[password]@[IP Address]/request=ptzRightStart&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
PanRightStop	http://[account]:[password]@[IP Address]/request=ptzRightStop&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
TiltUpStart	http://[account]:[password]@[IP Address]/request=ptzUpStart&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
TiltUpStop	http://[account]:[password]@[IP Address]/request=ptzUpStop&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
TiltDownStart	http://[account]:[password]@[IP Address]/request=ptzDownStart&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
TiltDownStop	http://[account]:[password]@[IP Address]/request=ptzDownStop&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens

		camera), ...
ZoomInStart	http://[account]:[password]@[IP Address]/request=ptzZoomInStart&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
ZoomInStop	http://[account]:[password]@[IP Address]/request=ptzZoomInStop&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
ZoomOutStart	http://[account]:[password]@[IP Address]/request=ptzZoomOutStart&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
ZoomOutStop	http://[account]:[password]@[IP Address]/request=ptzZoomOutStop&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
FocusInStart	http://[account]:[password]@[IP Address]/request=ptzFocusInStart&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
FocusInStop	http://[account]:[password]@[IP Address]/request=ptzFocusInStop&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
FocusOutStart	http://[account]:[password]@[IP Address]/request=ptzFocusOutStart&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
FocusOutStop	http://[account]:[password]@[IP Address]/request=ptzFocusOutStop&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
GoPreset	http://[account]:[password]@[IP Address]/request=ptzGoPreset&camDid=[deviceTbCamDid]&presetNum=[preset number]&camView=[camView Index]	deviceTbCamDid: camera ID presetNum: 0~255 camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...

SavePreset	http://[account]:[password]@[IP Address]/request=ptzSavePreset&camDid=[deviceTbCamDid]&presetNum=[preset number]&camView=[camView Index]	deviceTbCamDid: camera ID presetNum: 0~255 camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
GetFocusMode	http://[account]:[password]@[IP Address]/request=ptzGetFocusMode&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID focusMode: 0:AF 1:MF -1:NO Focus function device camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
SetFocusMode	http://[account]:[password]@[IP Address]/request=ptzSetFocusMode&camDid=[deviceTbCamDid]&focusMode=[0:AF 1:MF]&camView=[camView Index]	deviceTbCamDid: camera ID focusMode: 0:AF 1:MF -1:NO Focus function device camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...

TCP Commands

A TCP command string starts with AVER:[account]:[password]:/request=X, and ends with \r\n.
X is as HTTP requests above. For example, AVER:[account]:[password]:/request=pause\r\n, AVER:[account]:[password]:/request=resume \r\n, and so on.

VISCA Command Table

MT500 can be controlled via below VISCA over IP commands, but doesn't support VISCA RS-422 commands at this time.

VISCA over IP

PORT

Internet protocol	IPv4
Transport protocol	UDP
Port address	52381

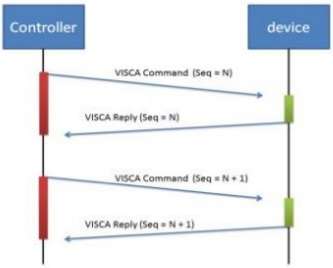
FORMAT

	byte 0	byte 1	byte 2	byte 3	byte 4	byte 5	byte 6	byte 7	byte8 ~~~ byte23
func	Payload type		Payload length		Sequence number				Payload (1 to 16 bytes)
data	Value1	Value2	1~16 (0x0001~0x0010)		0X00000000 ~ 0XFFFFFFFF				VISCA Packet (see page VISCA)

Payload type

Name	Value1	Value2	Description
VISCA command	0x01	0x00	Stores the VISCA command.
VISCA inquiry	0x01	0x10	Stores the VISCA inquiry.
VISCA reply	0x01	0x11	Stores the reply for the VISCA command or VISCA inquiry

Sequence number



Sequence number = N

Command Set	Command	Command Packet	Comments
Power	OFF	8x 01 04 00 03 FF	Power off MT500
Voice Tracking	Pause	8x 01 04 7D 03 00 FF	Pause voice tracking
	Resume	8x 01 04 7D 02 00 FF	Resume voice tracking
System	Change Profile	8x 01 04 40 01 YY FF	YY = profile num(0x01~0x24)
		8x 01 04 3F 02 YY FF	Preset recall, YY = profile num(0x01~0x24)
	Reboot	8x 01 04 A4 FF	Reboot MT500
	Switch USB Output	8x 01 7E 03 01 FF	USB port 1
		8x 01 7E 03 02 FF	USB port 2

Command samples:

Command Set	Command	Command Packet	Comments
Power	OFF	01 00 00 07 00 00 00 01 81 01 04 00 03 FF	Power off MT500
Voice Tracking	Pause	01 00 00 07 00 00 00 01 81 01 04 7D 03 00 FF	Pause voice tracking