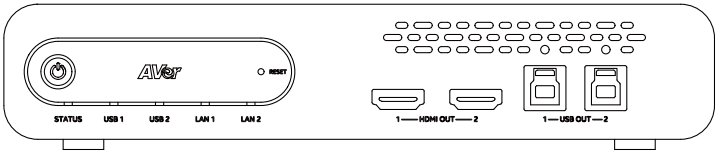

MT300/MT300N

Matrix Tracking Box

— User Manual —

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.

PSTI Statement of Compliance

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

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.

Caution

Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

More Help

For FAQs, technical support, software and user manual download, please visit:

Non-USA
Download Center: https://www.aver.com/download-center
Technical Support: https://www.aver.com/technical-support

USA
Download Center: https://www.averusa.com/pro-av/support/
Technical Support: https://averusa.force.com/support/s/contactsupport

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Tầng 5, 596 Nguyễn Đình Chiểu, P.3, Quận 3, Thành phố Hồ Chí Minh 700000, Việt Nam
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한국 에버 인포메이션 (주)
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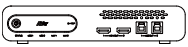
Tel: +82 (0) 2 722 8535

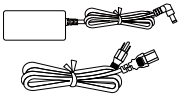
Contents

Overview

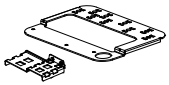
Package Contents



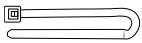
Matrix Tracking Box



Power Adapter &
Power Cord



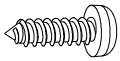
Cable Fixing Plate
(x2)



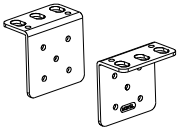
Cable Ties (x13)

3.0 x 5mm
Flat Head Screw (x5)

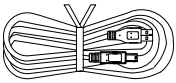
3.0 x 5mm
Truss Head Screw
(x4)



M3 x 10mm
Screws (x4)



Rack Mount Bracket
(x2)



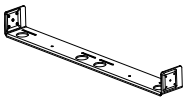
USB 3.0 Cable (x2)
1.5 m/4.92 ft

RS-422 Cable

Quick Start Guide

Warranty Card
(Japan only)

Optional Accessories

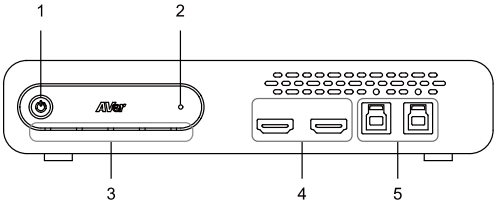


Server Rack Mount

3.0 x 5mm
Flat Head Screw (x3)

3.0 x 5mm
Truss Head Screw (x2)

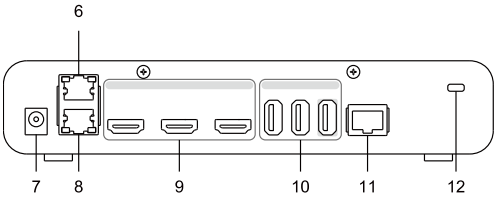
Parts Info



Front View

1. Power Button
2. Reset Button
3. LED Indicators
4. HDMI Out Port (x2)
5. USB Out 3.0 Type-B Port (x2)

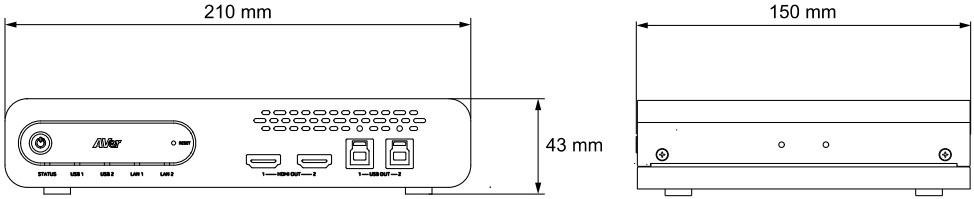
   (single USB out port per use only)



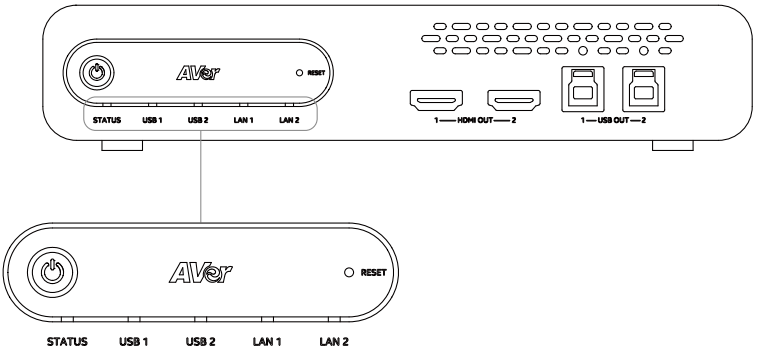
Back View

6. PoE+ Port IEEE 802.3AT
7. DC Power Jack
8. Ethernet Port
9. HDMI In Port (x3)
10. USB In 2.0 Type-A Port (x3)
11. RS-422 Port
12. Kensington Lock

Dimensions



LED Indicators



STATUS

Color	Status
Solid orange	Standby
Solid green	Normal
Flashing green	Firmware upgrade

USB 1, USB 2

Color	Status
Solid green	Connected
Flashing green	Streaming

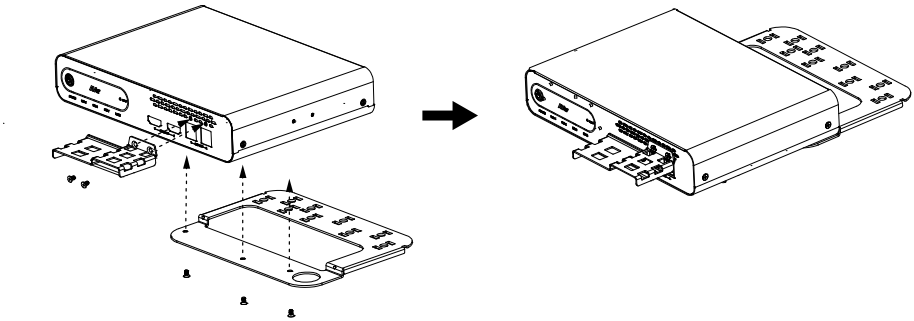
LAN 1, LAN 2

Color	Status
Solid green	Connected

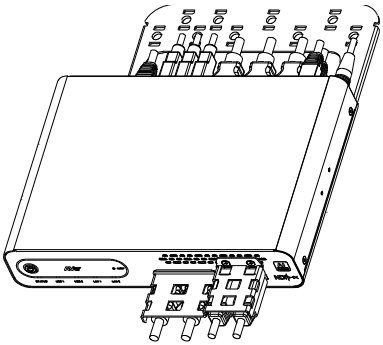
Installation

Cable Fixing Plate Installation

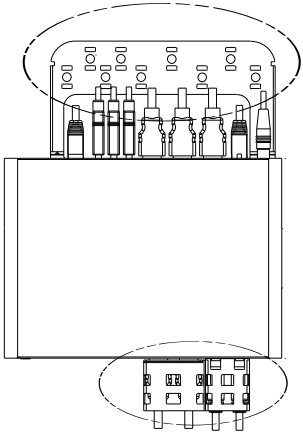
1. Secure the cable fixing plates to the tracking box with 5 flat hat 3.0 x 5 mm screws in the package.



2. Plug in cables.

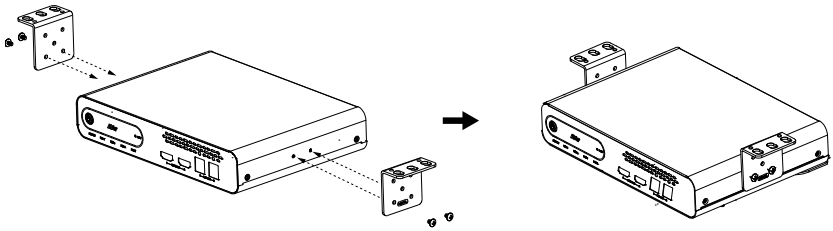


3. Use 13 cable ties in the package to secure the cables and cable fixing plates.

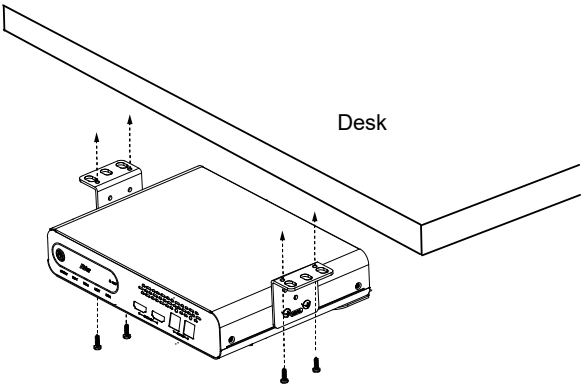


Desk Mount Installation

1. Secure the mount brackets on the tracking box.
   Screw: 4 truss head screws, 3.0 x 5 mm

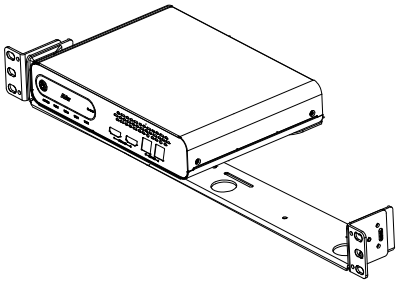


2. Install the mount brackets and the tracking box under the desk.
   Screw: 4 screws, M3 x 10 mm



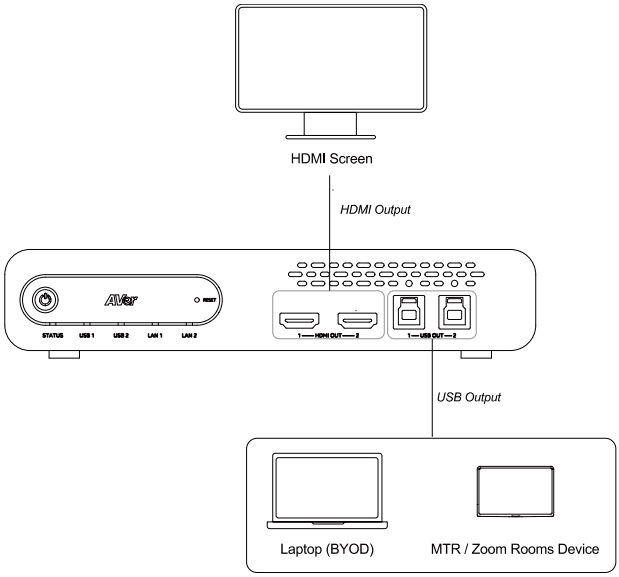
Server Rack Mount (Optional Accessories)

For details on optional accessories, consult your local dealer.

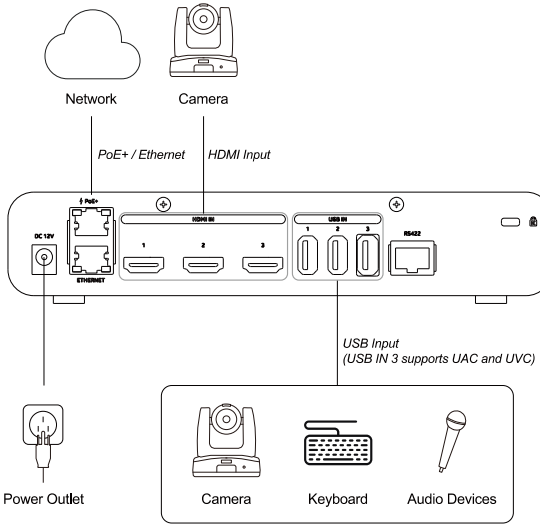


Connections

- **Front Panel**

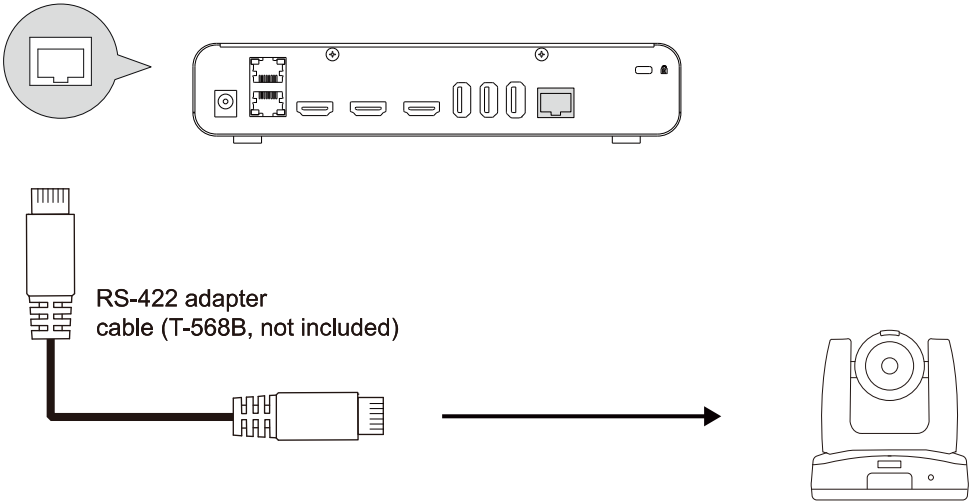


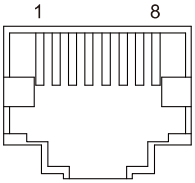
- **Back Panel**



RS-422 Connection

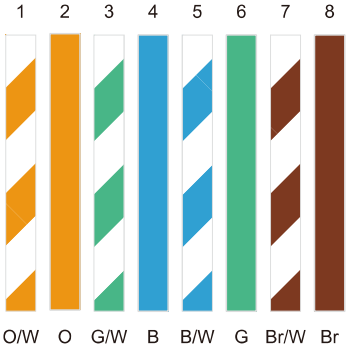
Use an RS-422 adapter cable to make a RS-422 connection to your control device.



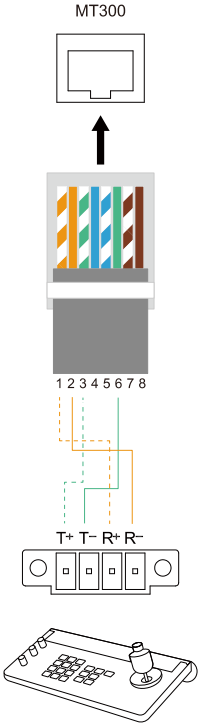


Pin #	Pin
1	TX+
2	TX-
3	RX+
4	TX+
5	TX-
6	RX-
7	RX+
8	RX-

RS-422 Port Pin Definition



T-568B Cable



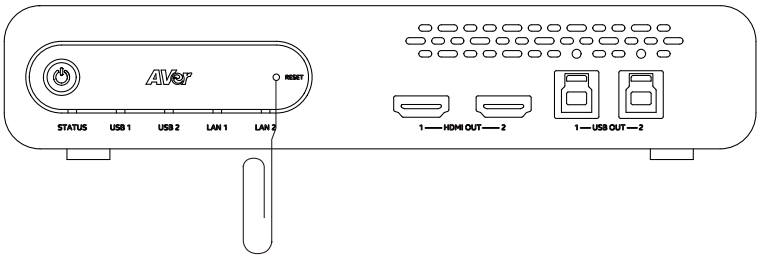
Get Started

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.



Access the Web Interface

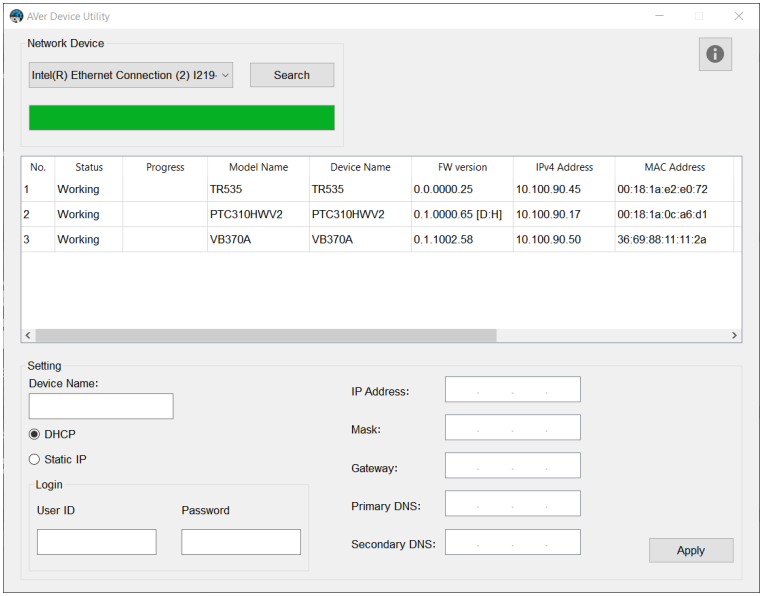
To access the web interface of the Matrix Tracking Box, you can use any of the following software to find its IP address:

- AVer Device Utility
- AVer Enterprise Management

Note:

- The default network setting is as follows:
  PoE+ port: DHCP
  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).

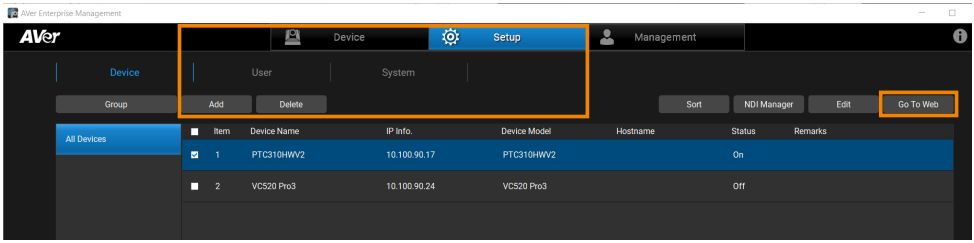
   Note:
   - Make sure your device is connected to the internet.
   - AVer Device Utility and your device must be on the same LAN.

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.

Change the Username and Password

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.

Compare Modes

The MT300 offers three built-in modes—**Live Mode**, **Manual Mode**, and **Auto Mode**—to help you present video feeds in a single, composited stream.

- **Live Mode** provides live camera views with PTZ control and presets, but doesn't save settings.
- **Manual Mode** supports camera presets and human tracking, with settings saved to profiles.
- **Auto Mode** uses voice tracking, either through pairing the camera with a third-party microphone or by receiving X, Y, Z coordinate data to frame the active speaker in real time.

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

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

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

TR535	TR530+
TR535N	PTC115+
	PTC500+

Professional PTZ Cameras (no Human Tracking)

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.

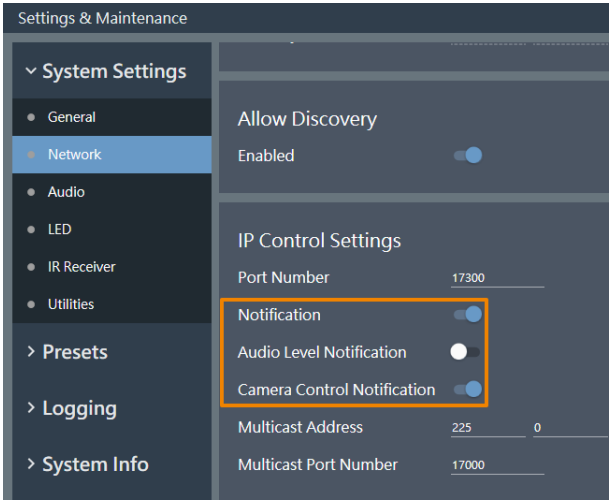
Audio-Technica

> ATND1061DAN, ATND1061LK
>
> ATUC-50
>
> ATUC-IR

To set up ATND1061 Beamforming Ceiling Array Microphone:

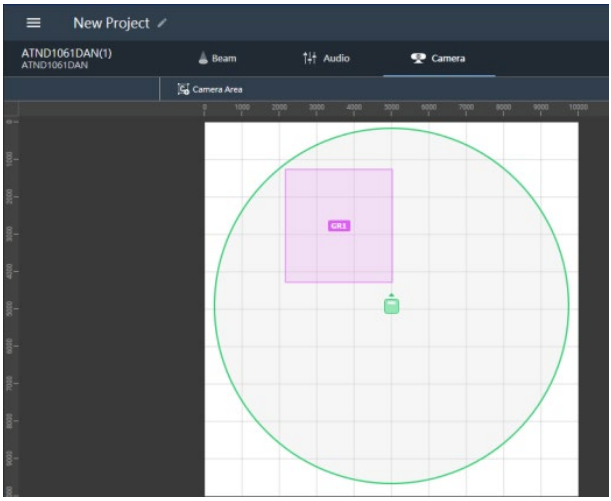
1. Open Digital Microphone Manager. Go to **Settings & Maintenance** > **System Settings** > **Network** > **IP Control Settings**.

2. Turn on **Notification** and **Camera Control Notification**.



3. Select a microphone in the main area.

4. Go to **Camera** > **Camera Area**. Add a Camera Area by dragging it within the microphone pickup area. Each Camera Area group corresponds to MT300 channel 1-8.

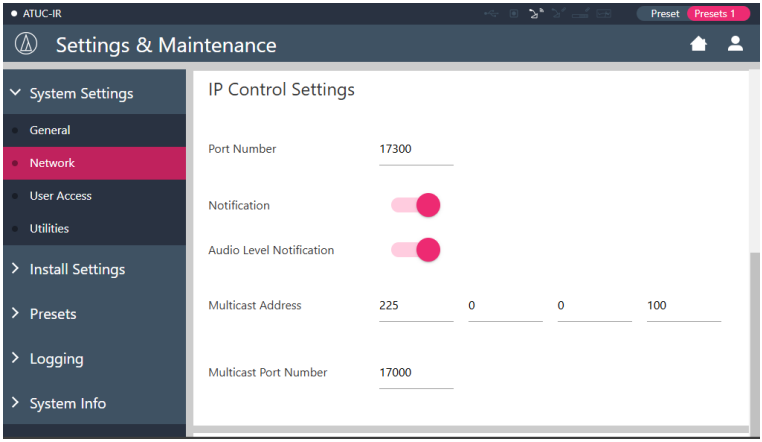


To set up ATUC-IRCU infrared control unit:

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

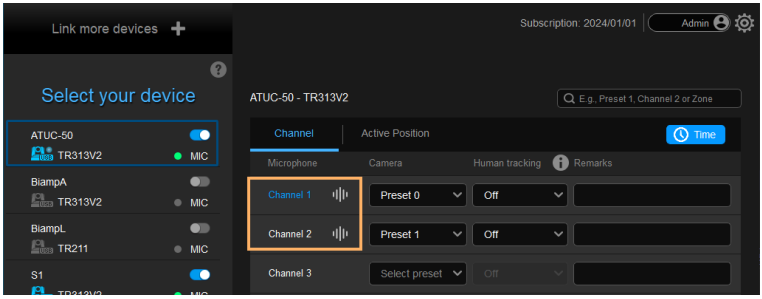
2. Turn on **Notification**.

> **Note:** If a powered-off ATUC-IRDU appears to be sending audio signal in MT300, 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 MT300 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.



Biamp

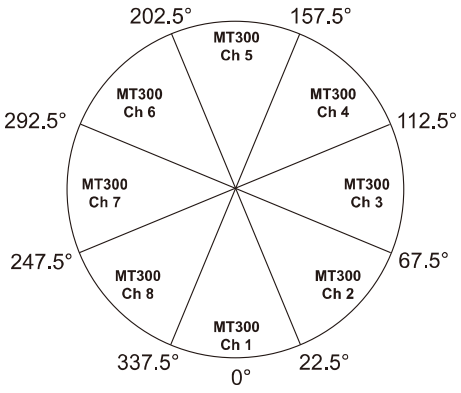
> Tesira Digital Signal Processor
>
> Parlé Ceiling Microphones (requires Parlé product revision A or B)

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. MT300 divides the microphones' horizontal angles into 8 equal parts, which correspond to MT300 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)

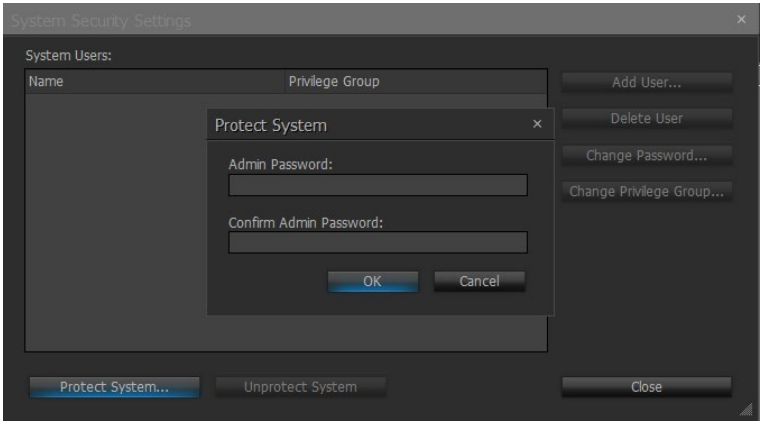
To enable system security:

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

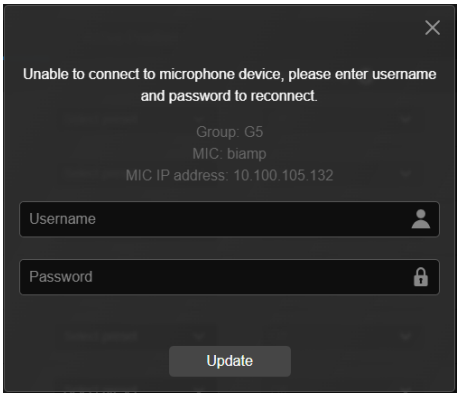
1. After the DSP has been configured, connect to the unprotected Tesira system with Tesira Designer Software.

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 MT300.



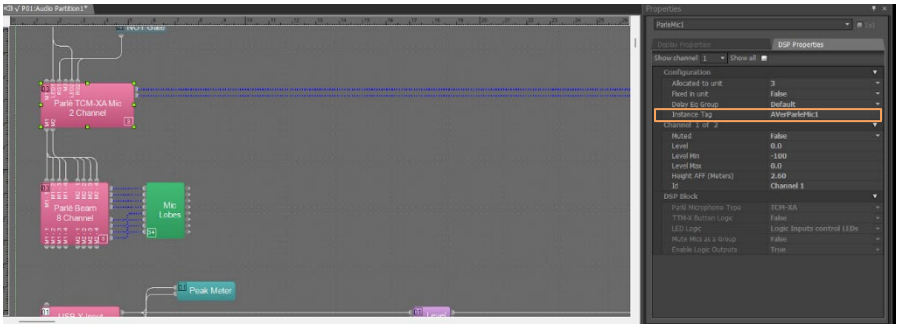
To set up Parlé TCM-X microphones:

1. Open Tesira Design Software.

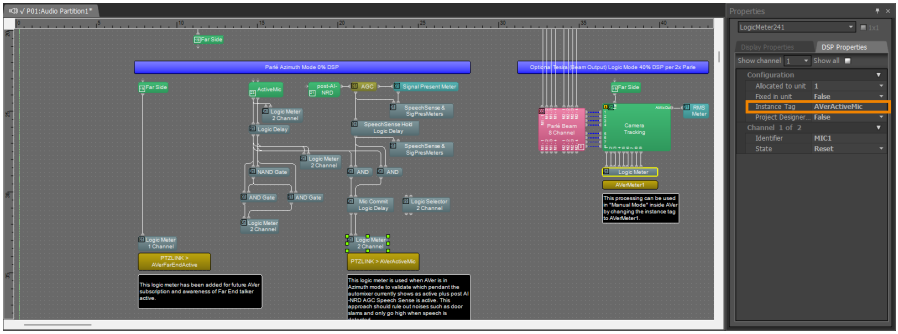
2. After the TCM-X microphone has been added to the layout, the instance tag of the Parlé microphone block or Logic Meter block to be controlled must use the following naming schemes.

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

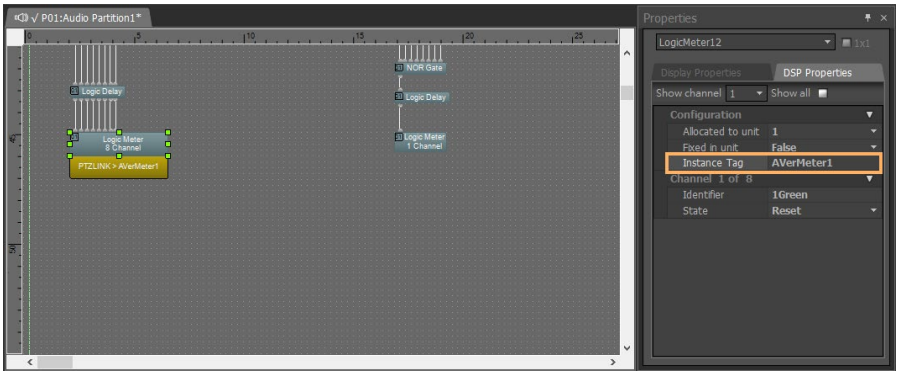
   - Parlé microphone block: **AVerParleMicX** (X=1–6 starting with 1)



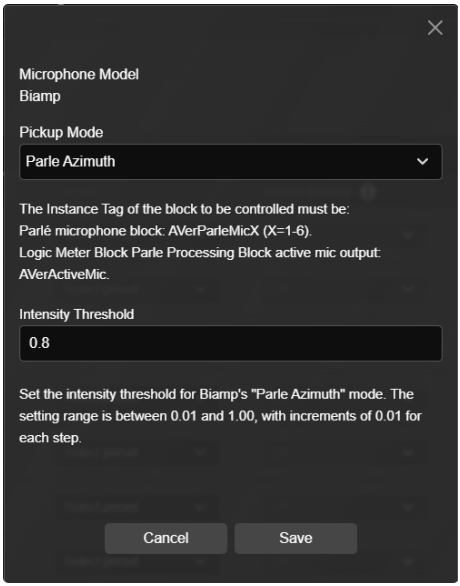
   - Logic Meter Parle Processing active mic output: **AVerActiveMic**



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



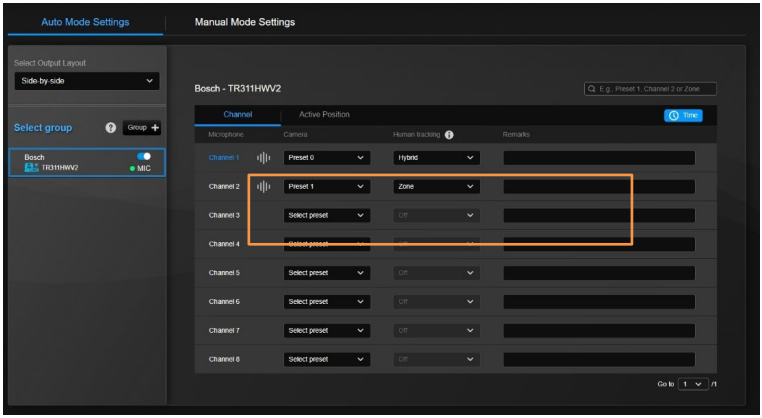
3. Click **Channel Configure** and select a pickup mode in MT300. Then lick **Save**.



Bosch

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

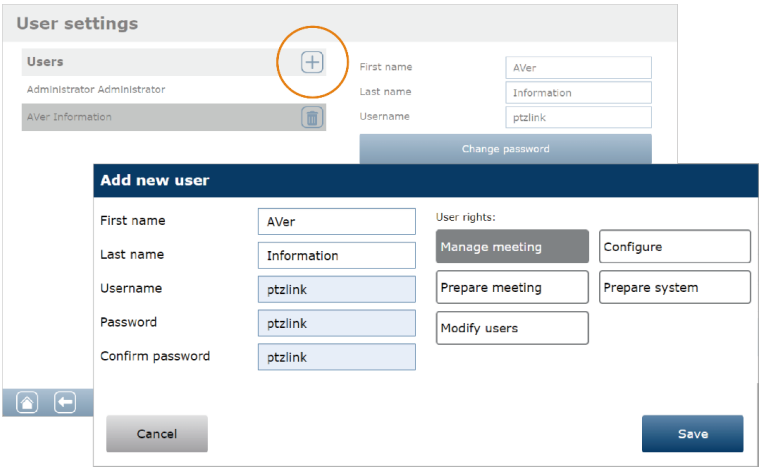
- Each CCS 1000 D Control Unit supports up to 80 Discussion Devices.
- Assign each CCS 1000 D Discussion Device to one MT300 channel by changing the seat name.
- A discussion unit whose talk button is pressed first takes priority over others until it is mute. For example, Channel 1 (pressed first) takes priority over Channel 2 whose talk button is also pressed.



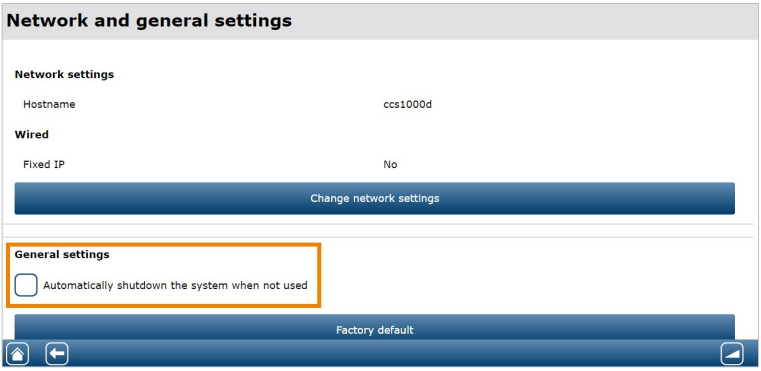
To set up CCS 1000 D:

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

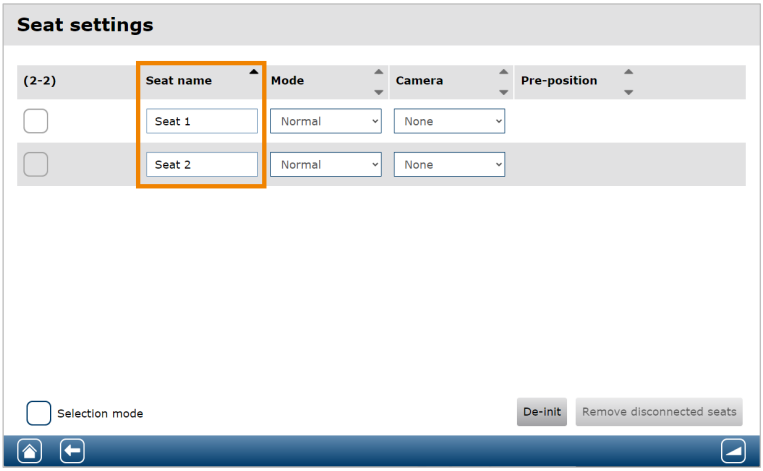
2. Go to **System Settings** > **Users**, create a user for MT300 with the default username/password **ptzlink**/**ptzlink**. The password can be changed later. For **User rights**, select **Manage meeting**.



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.



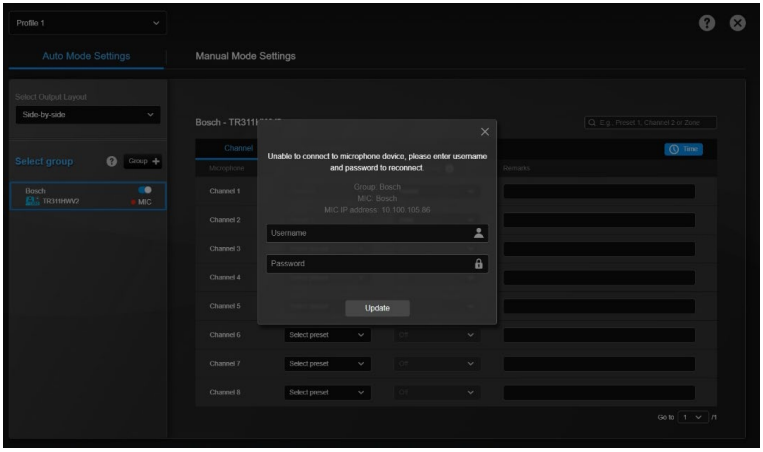
4. Go to **System Settings** > **Seats**, rename the **Seat name** ending with a space and a number to assign each discussion device to one MT300 channel of the same number.



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

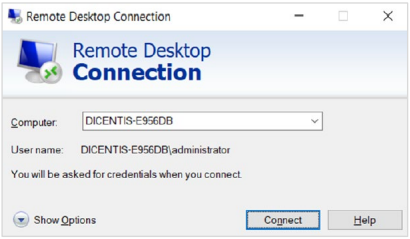
5. You'll be prompted to enter the same set of username and password when connecting to Bosch microphones in MT300.

Note: CCS 1000 D Control Unit allows one login at a time. When connecting CCS 1000 D Discussion Devices to MT300, make sure you are not logged in anywhere else.



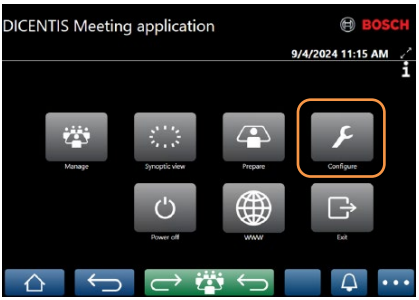
- **To log in to DICENTIS System Server:**

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

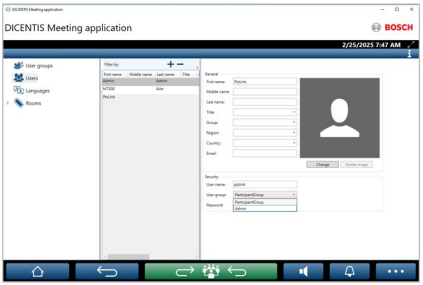


2. Enter the credentials you purchased from Bosch. On security message pop-up window, click **Yes**.

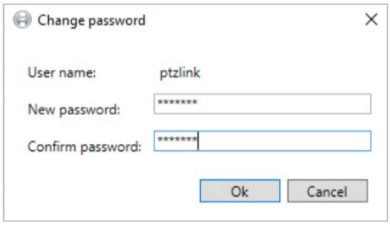
3. Open **Bosch Meeting Application**, enter your credentials to log in. Go to **Configure** for further meeting room and user settings.



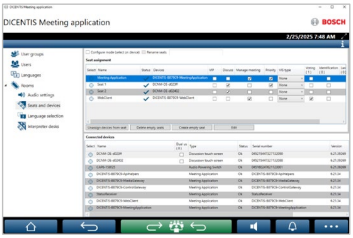
4. Click **Users** and click the Add icon to add a new user. In **Security**, select **Admin** as the User group, and then click **Change Password**.



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



6. Go to **Rooms** > **Seats and devices** to assign each microphone to MT300 channels. Seat 1 corresponds to channel 1, seat 2 to channel 2, and so on.



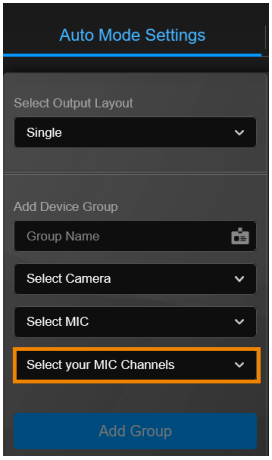
ClearOne

> BMA 360 + CONVERGE® Pro 2 DSP Mixers

- CONVERGE® Pro 2 connects up to 3 daisy-chained BMA 360 microphone arrays.
- MT300 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

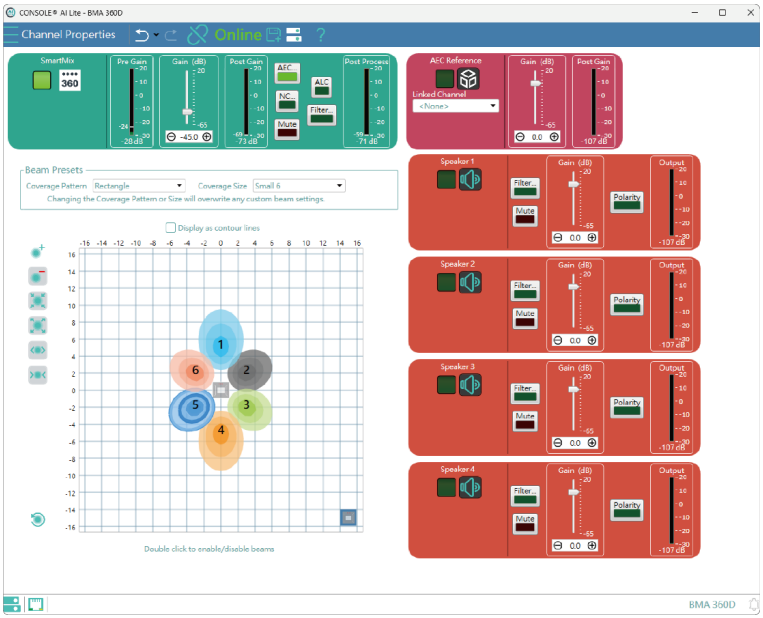
- When adding your device in MT300, select your MIC channels in the drop-down list according to the number of BMA 360 daisy-chained.



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 MT300 channel of the same number.

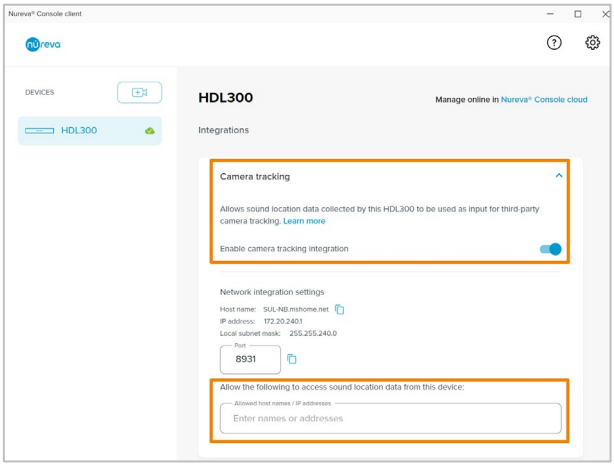


Nureva

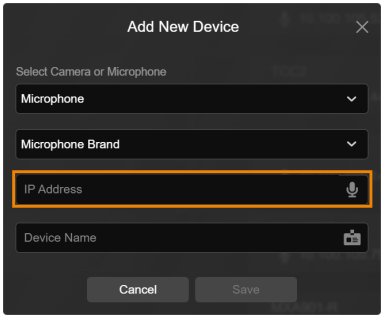
> HDL300
>
> HDL310
>
> Dual HDL300
>
> HDL410

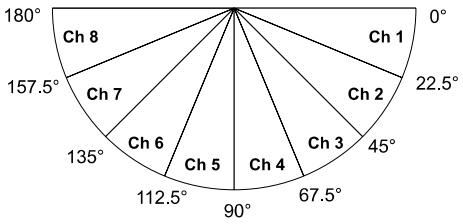
To set up HDL microphones:

1. In Nureva Console Client, turn on **Enable camera tracking integration**, then enter the IP address of the MT300 in the **Allowed host names / IP addresses** field.



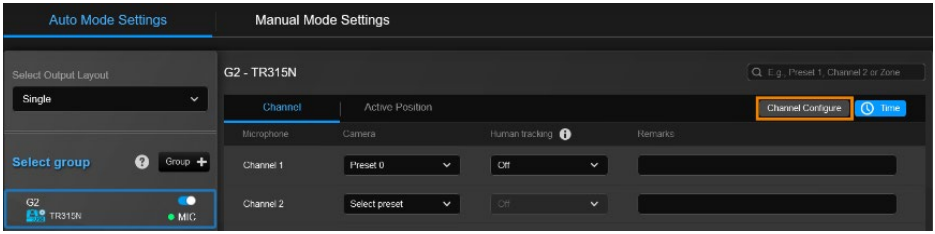
2. On the MT300 web interface, enter the IP address of the computer running Nureva Console Client in the **IP Address** field when adding microphones.
   MT300 divides HDL microphones' horizontal angles into 8-24 equal parts, which correspond to MT300 channel 1-24.





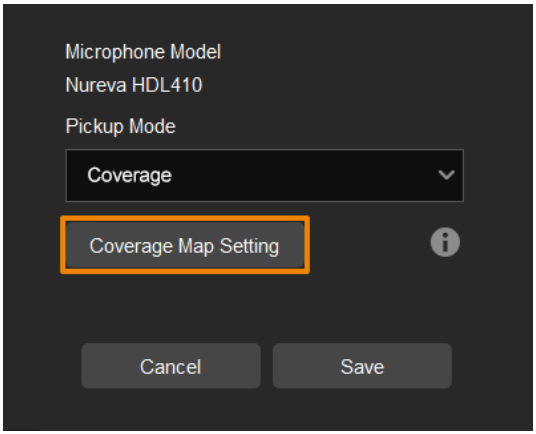
To add a coverage area for HDL410 in MT300:

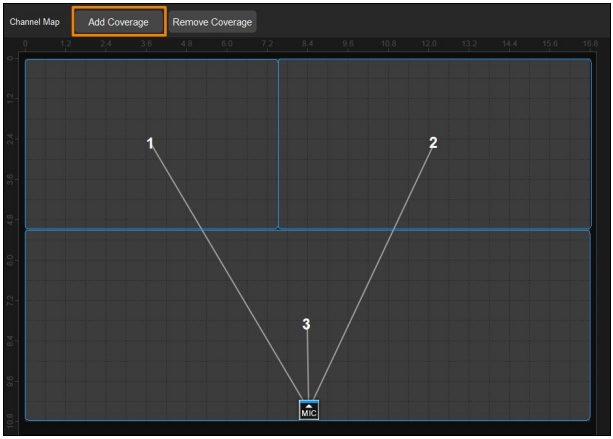
1. Go to **Auto Mode Settings** > **Channel** > **Channel Configure**.



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.

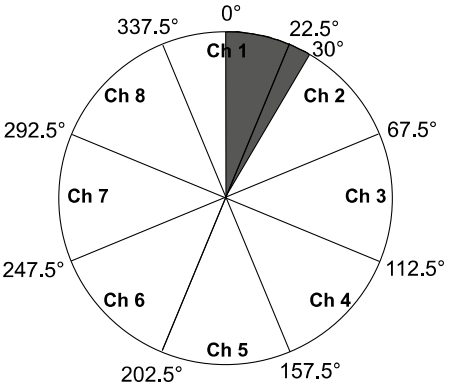
Sennheiser

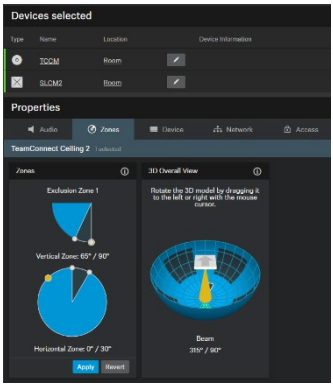
> TeamConnect Ceiling 2
>
> TeamConnect Ceiling Medium
>
> EW-DX EM 2
>
> EW-DX EM 2 Dante
>
> EW-DX EM 4 Dante
>
> EW-DX TS 3-Pin (and compatible microphones)
>
> EW-DX TS 5-Pin (and compatible microphones)

MT300 divides TeamConnect Ceiling 2's and TeamConnect Ceiling Medium's horizontal angles into 8-24 equal parts, which correspond to MT300 channel 1-24.

- **TeamConnect Ceiling 2**

  An Exclusion Zone set in Sennheiser Control Cockpit also affects the corresponding channel in MT300.

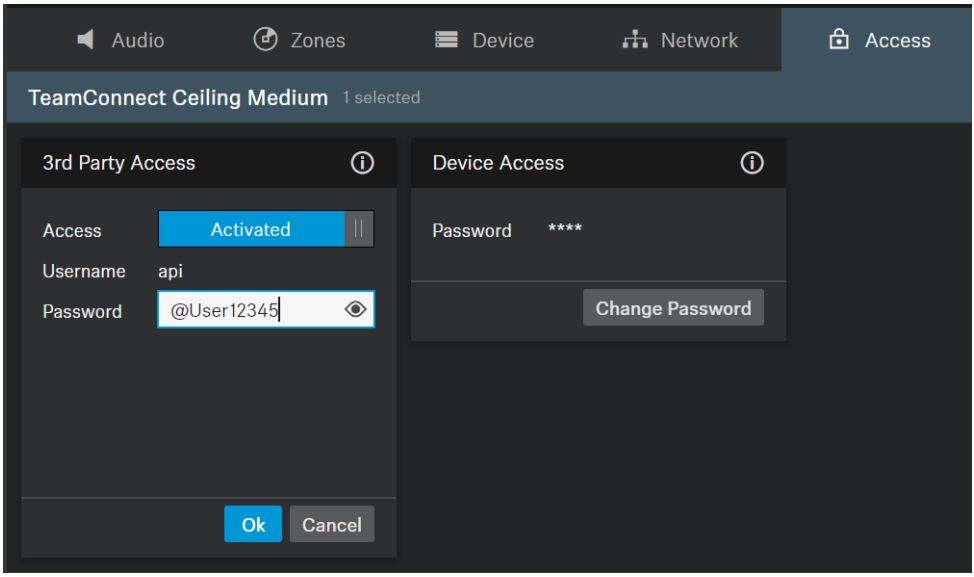




Sennheiser Control Cockpit

- **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.

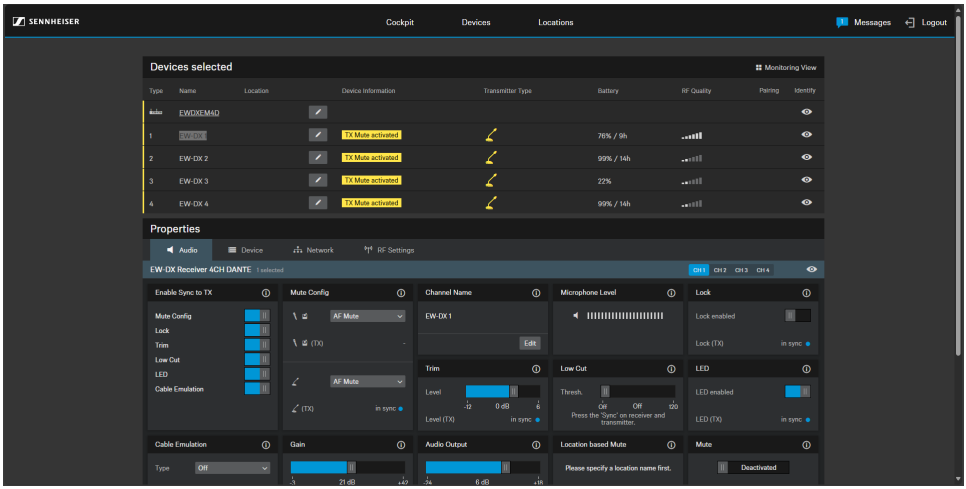
Note:

- 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 4 Dante and Transmitters**

Each transmitter will connect to EW-DX 1-4, which correspond to MT300 channel 1-4.

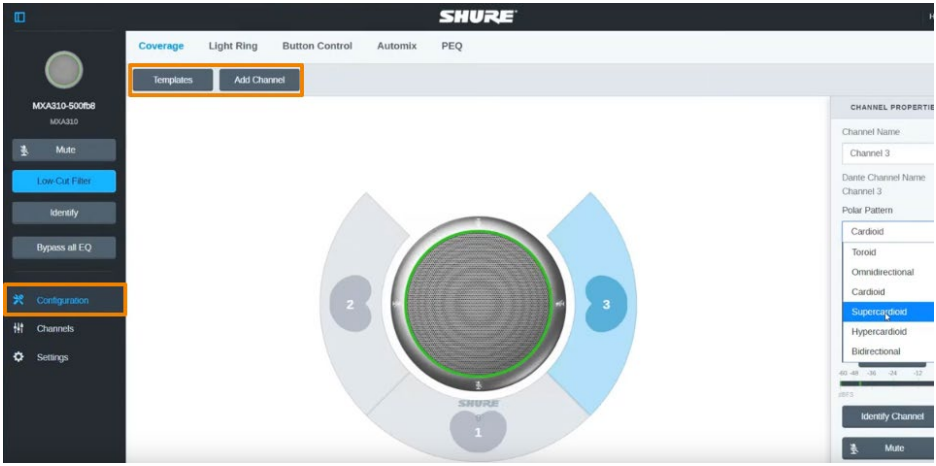
You may log in to Sennheiser Control Cockpit to view the status of each transmitter.
For connecting the receiver with the transmitters, please refer to Sennheriser official website:
https://docs.cloud.sennheiser.com/en-us/ew-d/ew-d/ew-dx-connecting-synchronizing-em.html



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

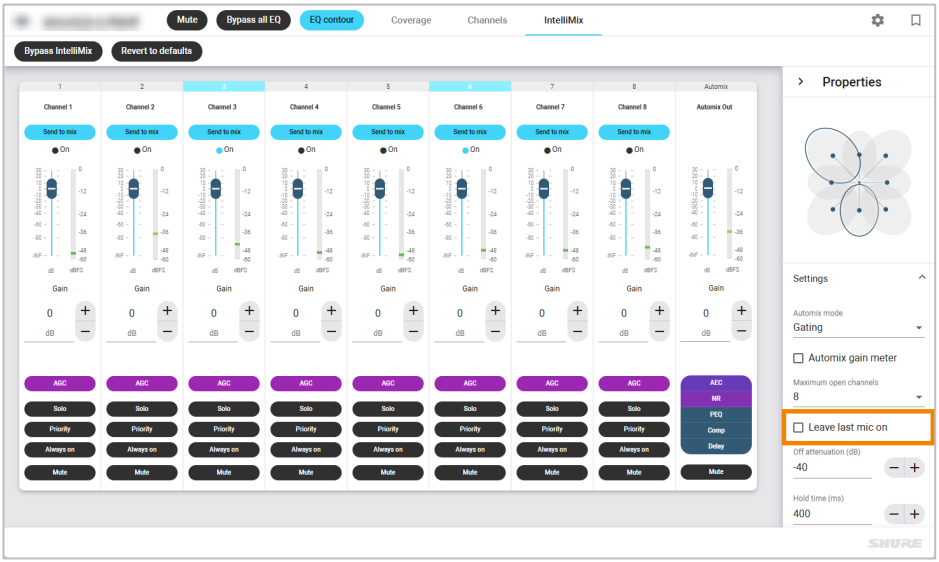
- **MXA310 Table Array Microphone**



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. MT300 does not support single channel for the MXA310.

- **MXA910 Ceiling Array Microphone**

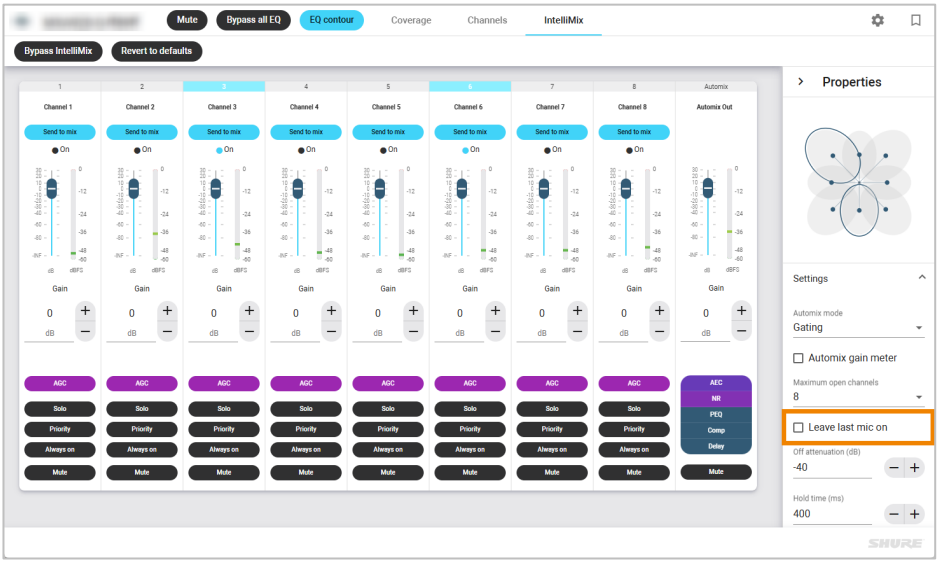


Web Application

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

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

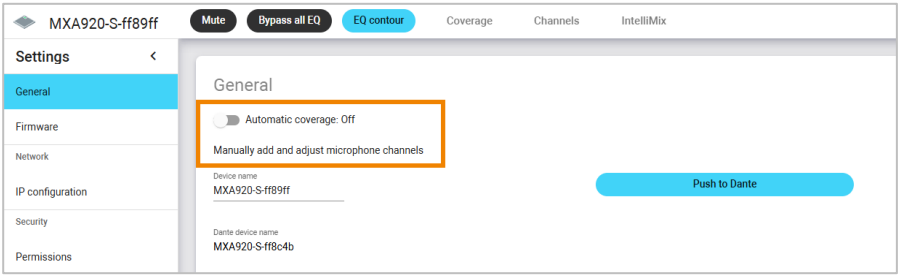
Note: To integrate with supported AVer camera tracking system via active talker positions, refer to <Auto Mode (Active Position)>.



Web Application

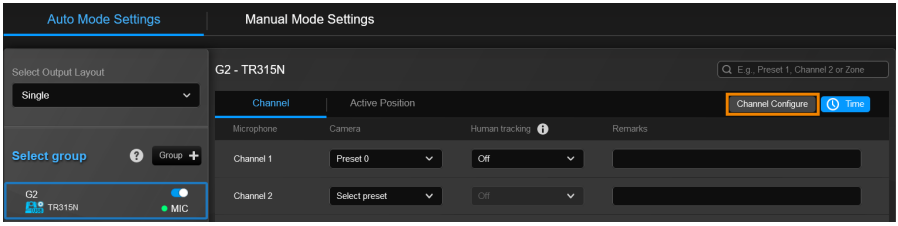
To manually position up to 8 lobes:

1. Go to **Settings** > **General** > Turn off **Automatic coverage**.

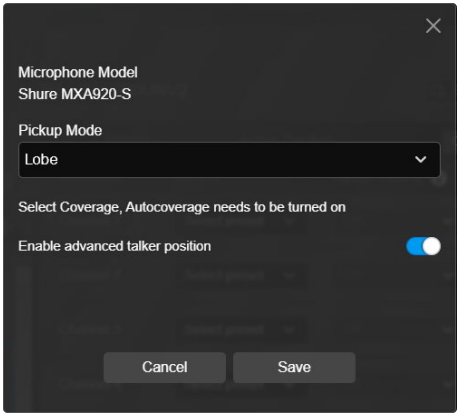


2. Go to **IntelliMix** > **Automixer Properties** > Deselect **Leave last mic on**.

3. Go to **Auto Mode Settings** > **Channel** > **Channel Configure** in MT300 > Select **Lobe** as **Pickup Mode**: The lobes you have positioned in the MXA920's web application correspond to MT300 channel 1-8.

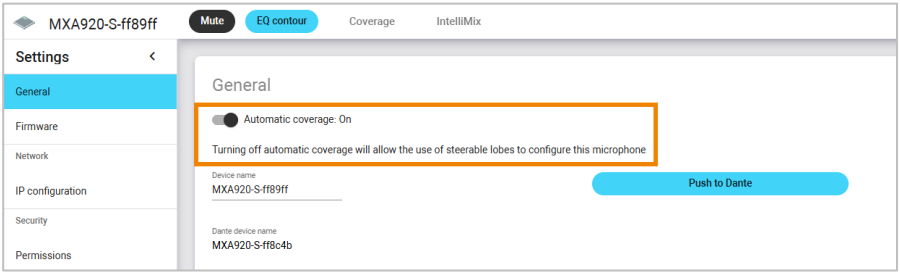


4. Turn on **Enable advanced talker position** to detect voice.



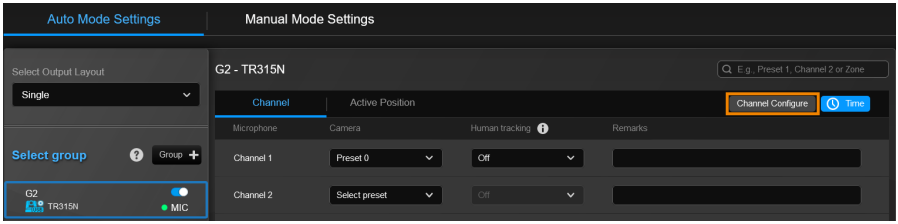
To add a mix of up to 8 dynamic and dedicated coverage areas:

1. Go to **Settings** > **General** > Turn on **Automatic coverage**.
   The default setting is a 30 by 30 foot (9 by 9 meter) dynamic coverage area.

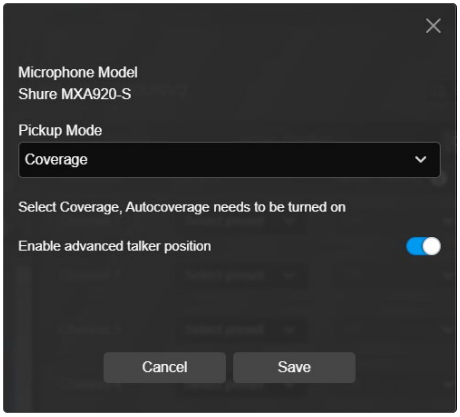


2. To add more coverage areas, go to **Coverage** > **Add coverage**.

3. Go to **Auto Mode Settings** > **Channel** > **Channel Configure** in MT300 > select **Coverage** as **Pickup Mode**: The coverage areas you have positioned in the MXA920's web application correspond to MT300 channel 1-8.



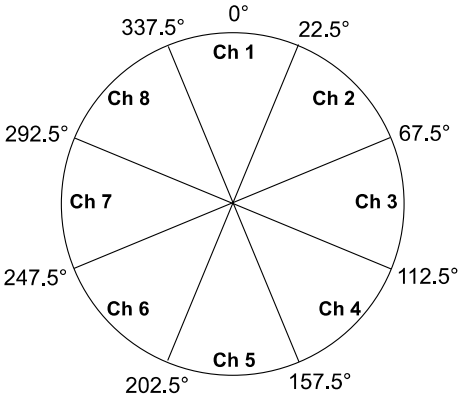
4. Turn on **Enable advanced talker position** to detect voice.



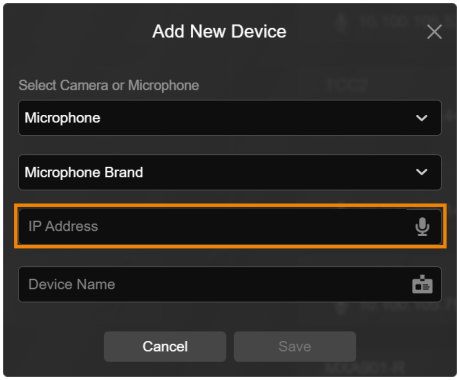
Yamaha

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

- MT300 divides RM-CG's horizontal angles into 8-24 equal parts, which correspond to MT300 channel 1-24.

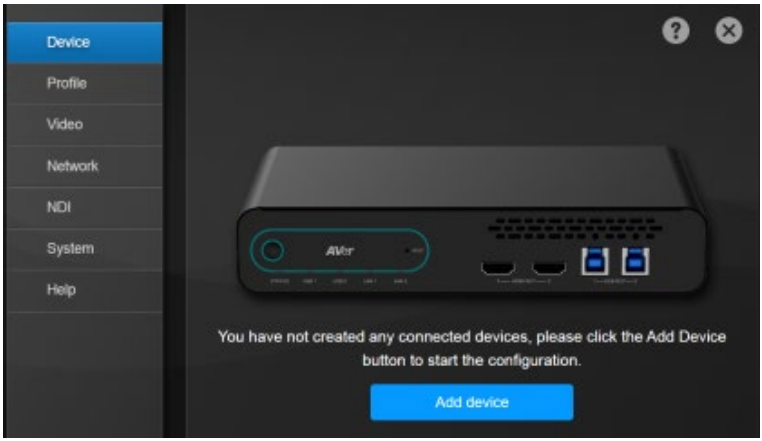


- MT300 voice tracking function requires linking more than one RM-TT or RM-W microphones for location data.
- When linking RM-TT or RM-W microphones to the RM-CR Remote Conference Processor, enter the processor's IP address in the **IP Address** field when adding microphones in MT300.



Set up Your Device

Add Devices



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

Note: Although you can add up to 25 groups, Auto Mode (Channel and Active Position) supports only 7 unique cameras. Multiple groups can share the same camera.

Camera connection limits:

- IP and/or USB cameras: up to 4
- HDMI cameras: up to 3

To add cameras and microphones:

1. Click **Add Device**.
   Or click the **Settings** icon on the top-right corner > **Device** > **Add device**.

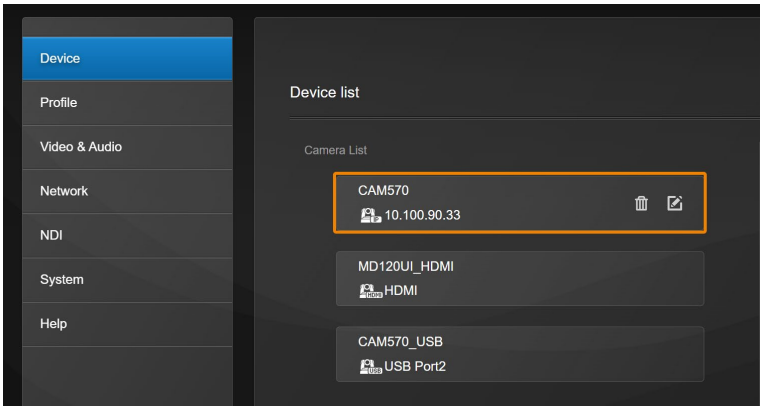
2. Fill out the **Add New Device** dialog box.

Item	Description
Select Camera or Microphone	Add a camera or a microphone.
Connect Camera	• IP: Connect to Ethernet or PoE+ port. • USB Port 1 and 2: Stream video. • USB Port 3: Stream audio and video. • HDMI: Select **Control via IP** for Human Tracking

	functions. • Non-AVer camera via IP: Select **Streaming via RTSP** and enter RTSP URL or **Streaming via NDI** and enter NDI group. **Note:** When using non-AVer cameras, only Live Mode and Manual Mode are available. Auto Mode (voice tracking) and camera control are not supported.
Microphone Brand	Select a brand from the drop-down list.
IP Address	Click **Auto Search** or enter IP address.
Camera Account Camera Password	Enter camera account and password.
Streaming via RTSP Streaming via NDI	• Real-Time Streaming Protocol (RTSP): Make sure your camera and receiving device or application support RTSP. • Network Device Interface (NDI): Make sure your camera and receiving device or application support NDI. Enter a name for your NDI group (optional).
Device Name	Enter a name to be displayed on the device list.

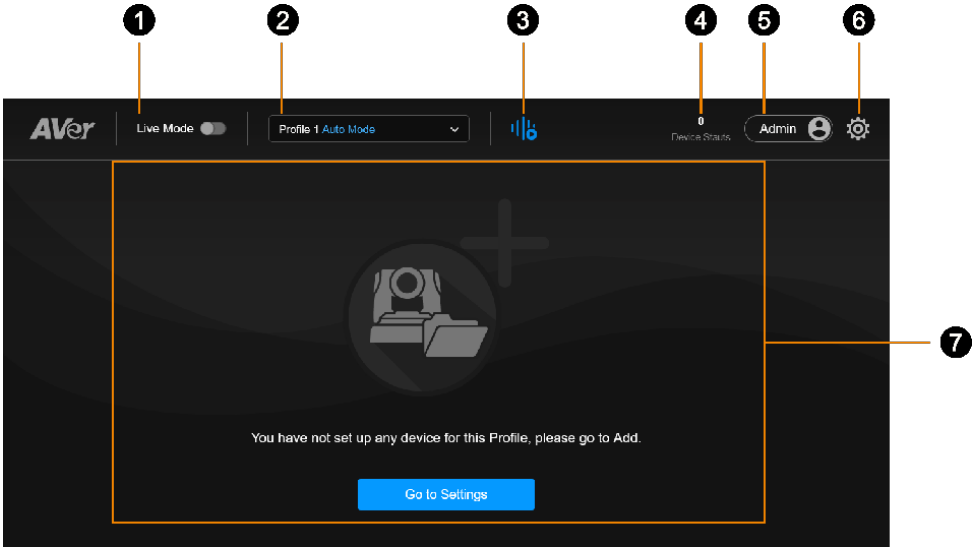
3. Click **Save**.

Edit or Delete Devices



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

User Interface



1. **Live Mode Toggle**

2. **Select Profile**

   - A profile can include settings for both Auto Mode and Manual Mode, but only one mode is applied at a time.
   - To switch modes, click the **Settings** icon > **Profile**.

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

3. **Pause / Resume Voice Tracking**

4. **Device Count**
   Online device / added device count.

5. **Account**
   Switch between admin and user accounts. A user can use voice-tracking but cannot edit settings.

6. **System Settings**

7. **Camera Live View**

Live Mode

See camera live views, change layouts, and use pan, tilt, zoom controls.

To set up Live Mode:

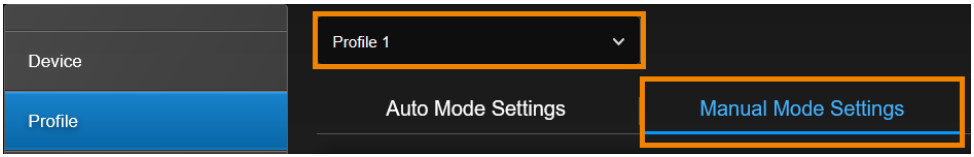
1. Toggle on **Live Mode**.
2. Select a layout.
3. Drag and drop a camera from **Select Camera** to a live view grid.
   A blue circled number will appear on the camera icon to indicate the grid position.

To control a camera:

- Click to select a live view.
  The selected live view will be in a blue frame.
- Click a number to load a preset.
- Click the **Camera Switch** Button (TR535, TR535N only) to switch between PTZ camera and Wide-Angle camera.
- Toggle off **Live Mode** to exit Live Mode. Live Mode settings are saved automatically. Your last selected profile in **Setting** > **Profile** will be applied when you return to the main page.
- To clear settings, click **Reset** to reset Live Mode to factory default settings.

Manual Mode

Use presets and Human Tracking modes to follow the presenter. You can set up a Manual Mode profile for each meeting room.
Make sure you have defined required presets and configured required tracking modes on the camera web interface.

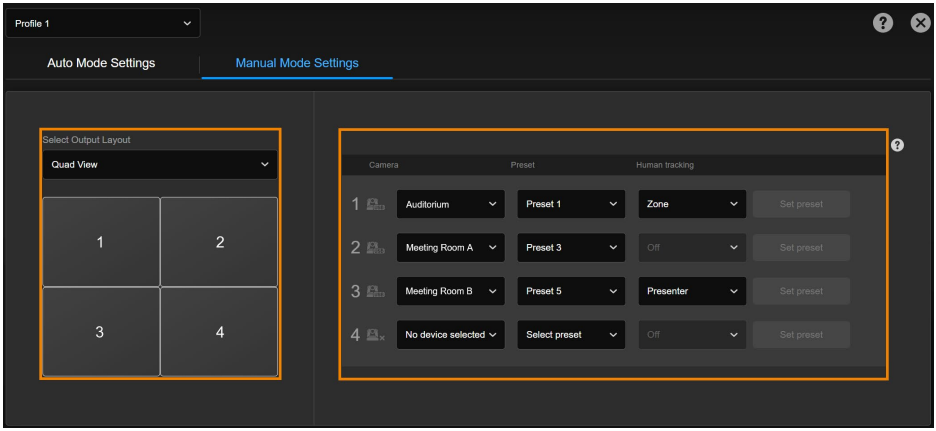


1. Click the **Settings** icon on the top-right corner > **Profile** > **Manual Mode Settings**.

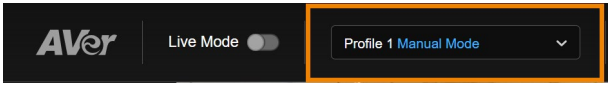
2. Create a profile.
   Choose a profile from the **Profile** drop-down list. To rename it, scroll to the bottom and click **Rename.**

   Note: A profile can include settings for both Auto Mode and Manual Mode, but only one mode is applied at a time.

3. Select a live view layout for up to 4 cameras, then select **Camera**, **Preset**, **Human Tracking**.

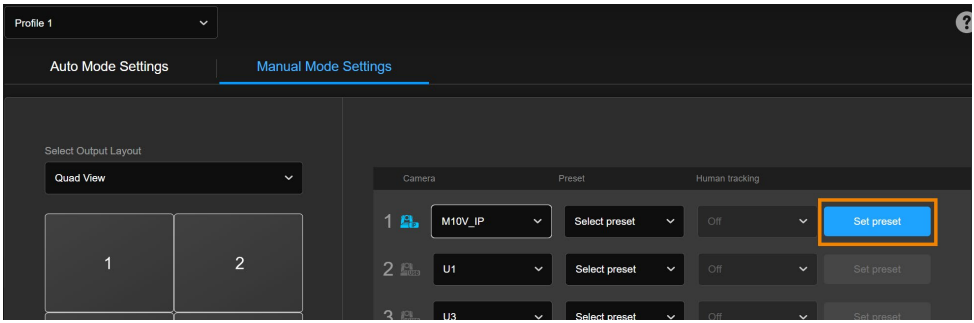


4. The profile is saved and applied automatically when you close the **Profile** page by clicking .
   Your Manual Mode profile will now be applied.



Add Presets

You can also add presets on MT300.



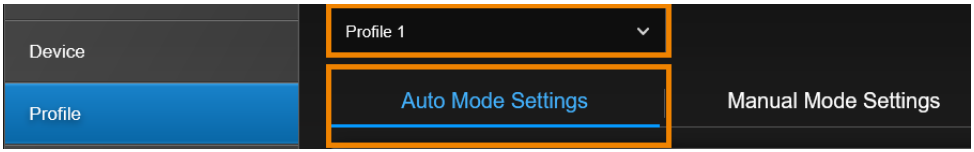
1. Click **Set preset** to add presets.
2. Position your camera using pan, tilt, zoom controls, click a number, then click **Save** to save that position.
3. Click **Back** to return to the **Profile** page.

Auto Mode (Channel)

Frame the active talkers with voice tracking functionality by pairing AVer cameras with third-party microphone systems (supported models) from Audio-Technica, Biamp, Bosch, ClearOne, Nureva, Sennheiser, Shure and Yamaha.

Third-party microphone systems may require setup in their manufacture software. For microphone settings, refer to <Supported Microphones>.

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

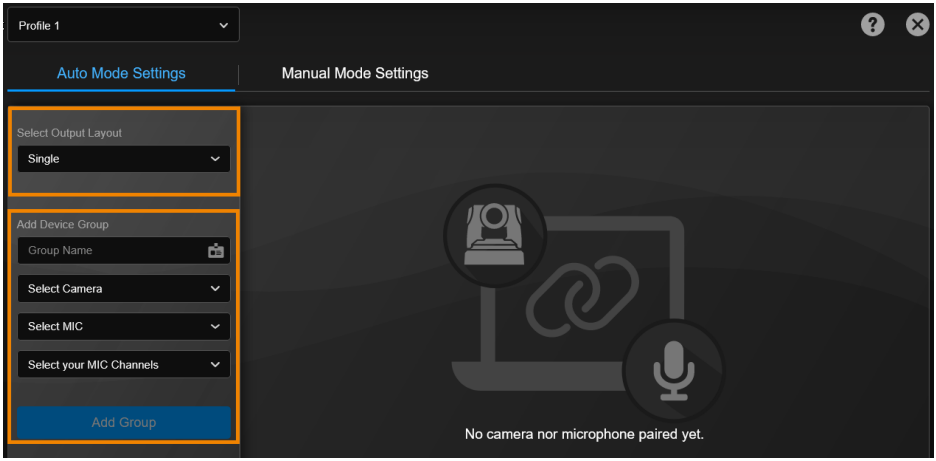


1. Click the **Settings** icon on the top-right corner > **Profile** > **Auto Mode Settings**.

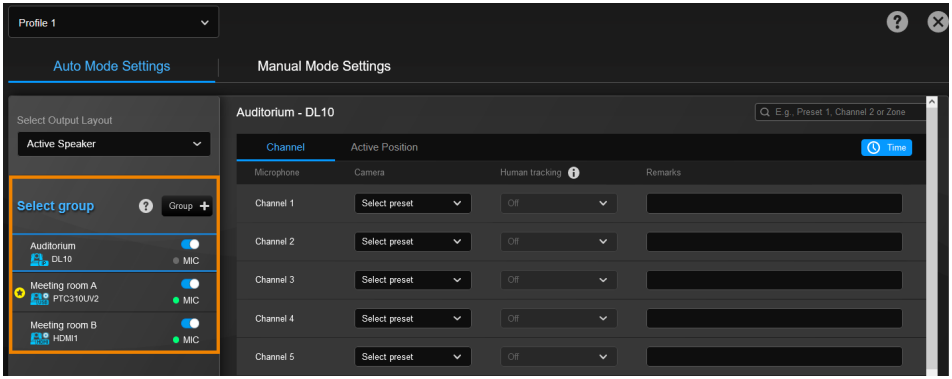
2. Create a profile.
   Choose a profile from the **Profile** drop-down list. To rename it, scroll to the bottom and click **Rename.**

   Note: A profile can include settings for both Auto Mode and Manual Mode, but only one mode is applied at a time.

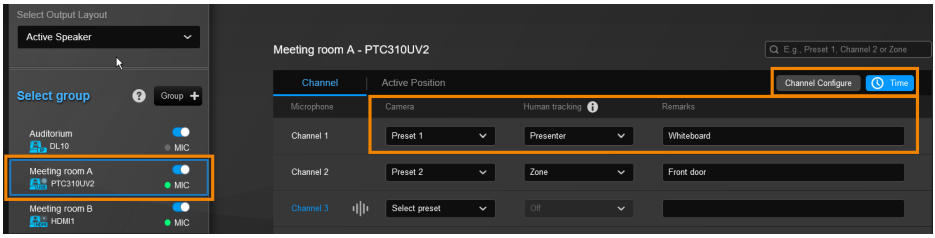
3. Select a layout for up to 4 cameras, then add up to 25 AVer camera and microphone groups. Refer to <Select Group Panel> for layout details.



4. Added device groups will appear under **Select group**.
   You can also assign a priority Group if multiple device groups share the same camera. Refer to <Assign a Priority Group>.



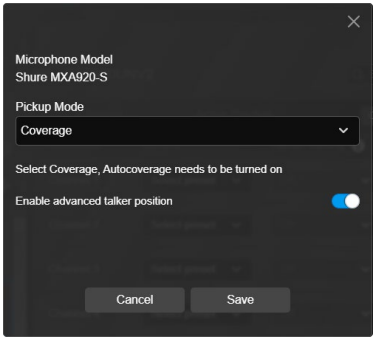
5. Select a device group to pair microphone channels with presets.
   A blue frame indicates that it is selected.



6. Select a preset and Human Tracking mode for each channel.

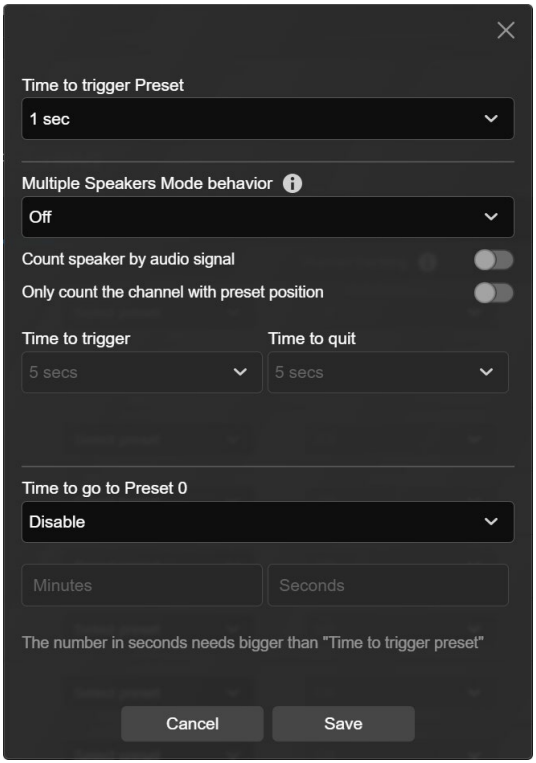
7. Add remarks to help identify the location.

8. Click **Channel Configure** to select a pickup mode based on your microphone setting. Then click **Save**.

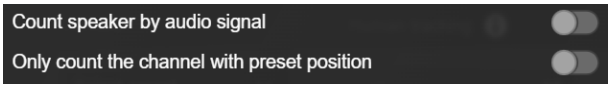


9. Click the **Time** button 

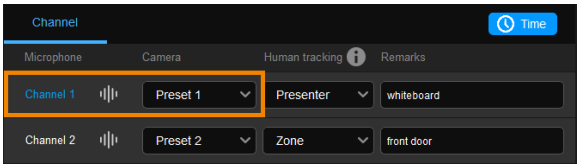
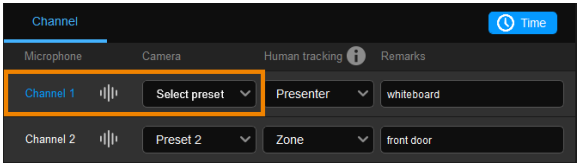
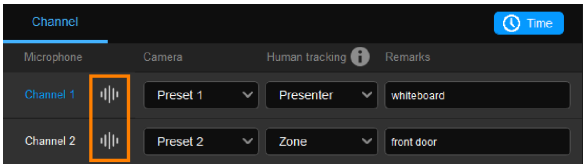
to set a delay before the camera goes to a preset.



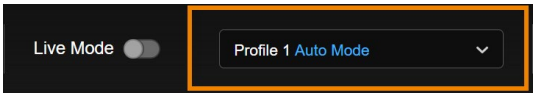
Item	Description
Time to trigger Preset	Set a delay before the camera goes to a preset.
Multiple Speakers Mode behavior	Controls how the camera reacts when multiple people are speaking: 1. Enable the mode by selecting **Back to Preset 0**. The last-used camera will go to Preset 0. **Note:** To choose a different preset other than Preset 0, you can assign a priority group. 2. Set a delay before entering and exiting Multiple Speakers Mode in **Time to trigger** and **Time to quit**. 3. Optionally, adjust how speaker are detected by toggling these filters on or off. Refer to <How Multiple Speakers Mode Works> for details.

	
Time to go to Preset 0	Set a delay before the last-used camera goes to preset 0 when the microphone detects no sound. **Note:** • To choose a different preset other than Preset 0, you can assign a priority group. • The duration of **Time to go to Preset 0** must be longer than **Time to trigger Preset**.
Far end speakers trigger Preset 0 (Sennheiser microphones only)	If the microphone detects voice from the far end of the room, such as during a video conference, the last-used camera will go to preset 0. **Note:** To choose a different preset other than Preset 0, you can assign a priority group.

10. Check the active channel (blue highlight) or audio signal to confirm the camera's location and preset status.

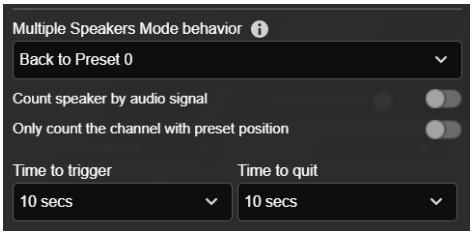
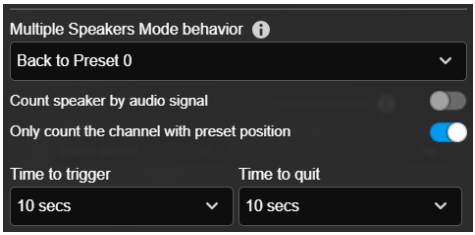
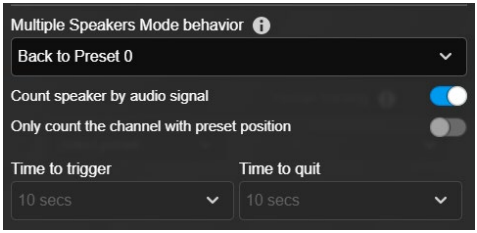
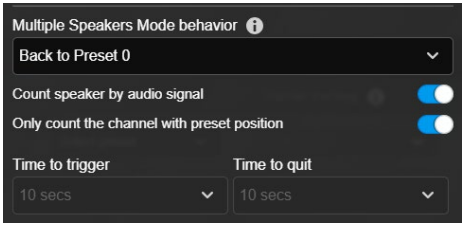
Type of channels	Example
Active channel (blue highlight) + a preset An active channel indicates the camera's location.	
Active channel (blue highlight) (no preset) An active channel can be without a preset.	
Audio signal icon An audio signal icon channel indicates that the channel detects sound.	

11. Click ⊗ to close and save the profile. The profile will be applied automatically.



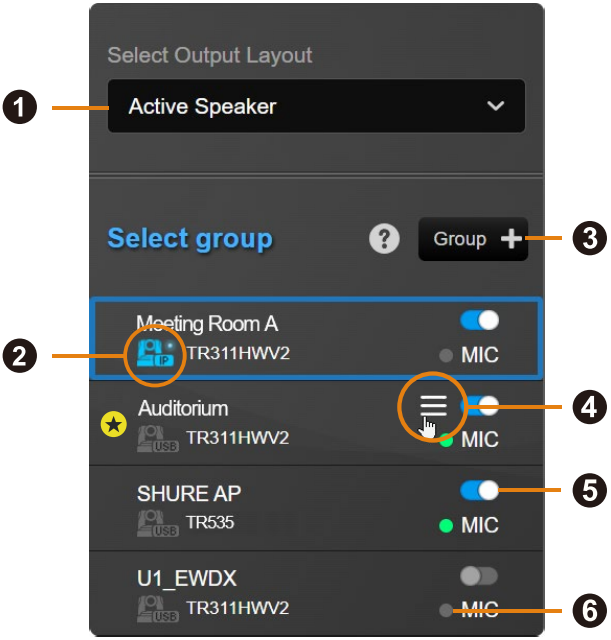
How Multiple Speakers Mode Works

Multiple Speakers Mode automatically moves the camera to a defined preset to frame the group when multiple people are speaking. For ceiling microphone and gooseneck microphone, we recommend you use different settings as the follows:

Suggested Microphone	Filter	Enter Multiple Speakers Mode After
Ceiling microphone	Both toggles off 	Detecting sound from 3 different active channels within the selected **Time to trigger**. *(Active channels with or without presets.)*
Ceiling microphone	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.)*
Gooseneck microphone	Both toggles on 	Detecting 2 or more audio signal with presets at the same time.

Note: The durations of **Time to trigger** and **Time to quit** must each be at least 3 times that of **Time to trigger preset**.

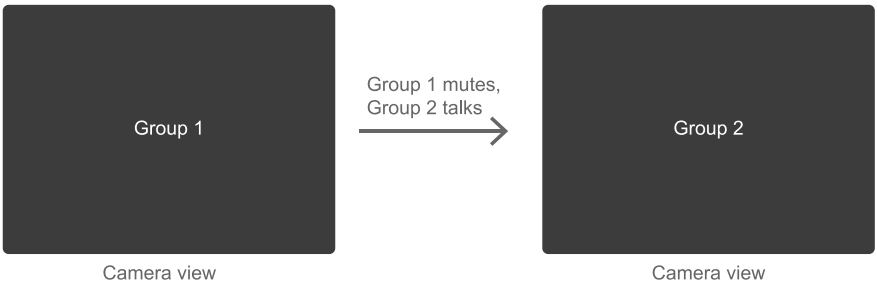
Select Group Panel



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

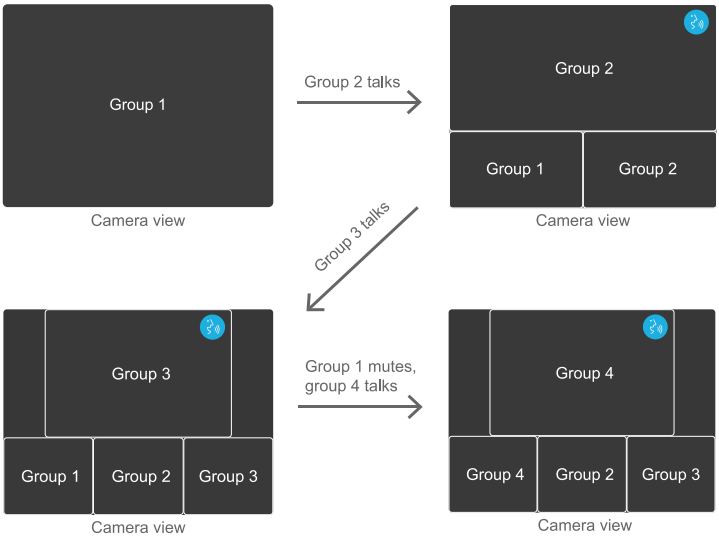


- **Side-by-side:**

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.

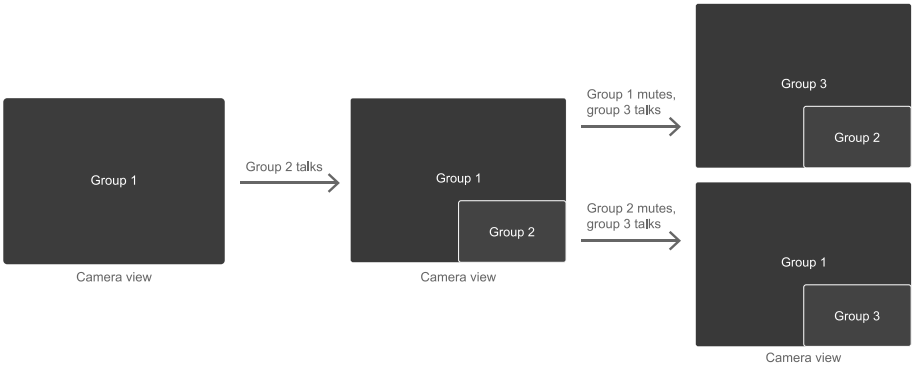
- **Active Speaker:**

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.



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

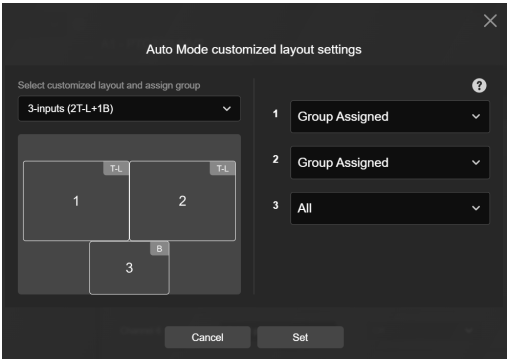
  Displays two active channels in full-screen with a smaller grid.
  When one channel is muted, the next active channel takes the first available grid.



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

- **Customized:**

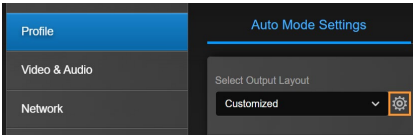
  ① Customize your display layout by selecting an option from the drop-down list and reviewing the layout preview.
  ② Select one, multiple, or all camera groups to assign to the layout grids.
  ③ When finished, click **Set**, the drop-down list will display “Group Assigned” or “All”.



Note:

- T: Top, L: Large, B: Bottom.
- In live view, when a channel is muted, the next active channel takes its assigned grid.
- If you wish to disable human tracking for a specific display grid, make sure that you clear all camera presets for the group assigned to that grid. *(Profile > Auto Mode Settings > Select group)*
- Priority group function is not available when selecting customized layout.

④ To change layout and assigned groups, click on the **Setting** icon on **Select Output Layout**.



2. **Camera status**

Click the **question mark** icon for descriptions.

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

3. **Group +**

Add a camera and microphone group.

4. **Hamburger Menu**

Hover your cursor over a device group to see the hamburger menu.

- Set preset: Add camera presets.
- Edit group
- Delete group
- Group overlay priority: Assign a priority group .
- Pin this group (Hybrid layout only): Pin a group to the top grid.

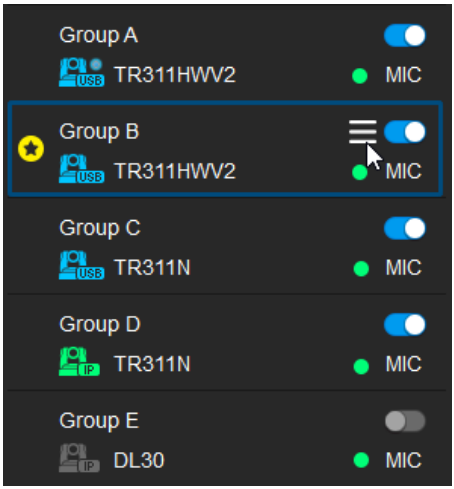
5. **Toggle**

Enable or disable a device group.

6. **Microphone Status**

- Green: Online
- Gray: Offline

Assign a Priority Group



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

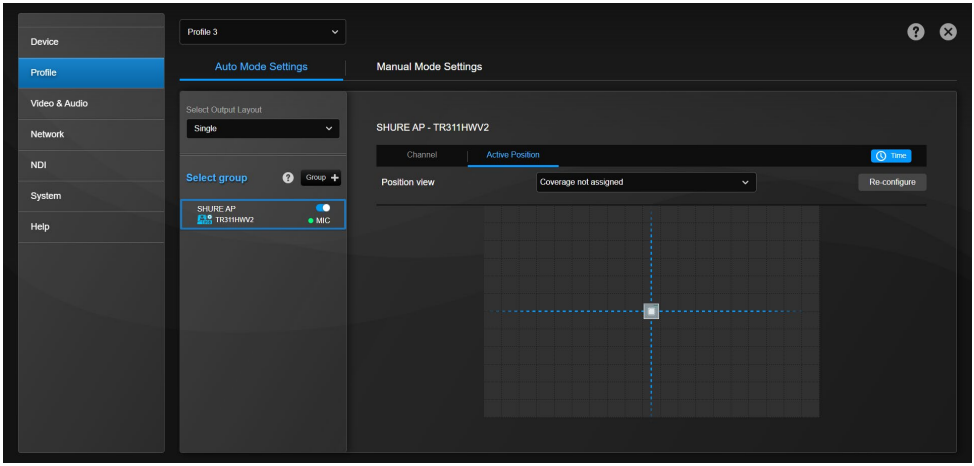
- Multiple groups share a camera.
- Microphone detects no sound (default preset 0).
- Multiple Speakers Mode activates (default preset 0).
- Microphone detects far end speakers (Sennheiser microphones only, default preset 0)

1. Hover the cursor over a group, then click the **hamburger** icon .
2. Select **Priority**. The **star** icon will indicate a priority group.
3. To cancel priority, deselect **Priority**.

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

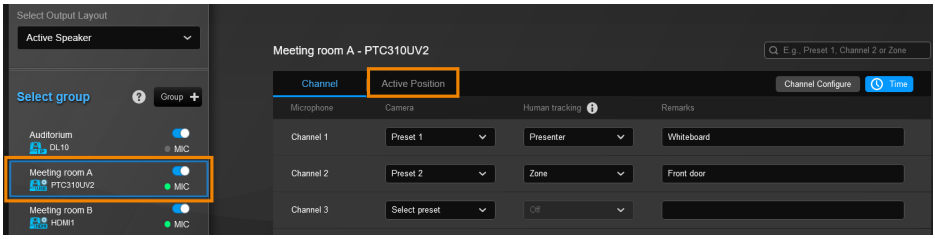
Shure® MXA920-S / MXA920-R Ceiling Array Microphone

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

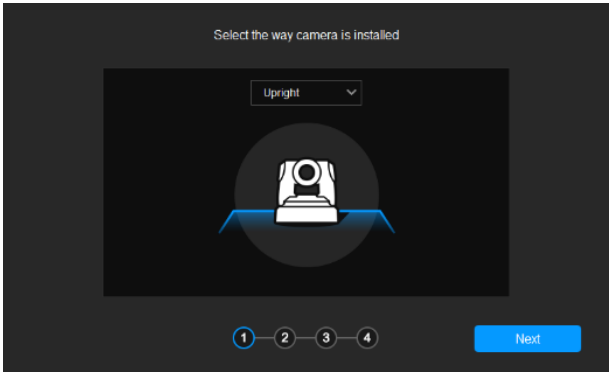
Square Microphone Calibration

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

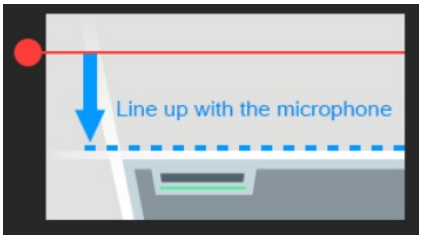
2. Click to select a device group. A blue frame will indicate that it is selected.



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

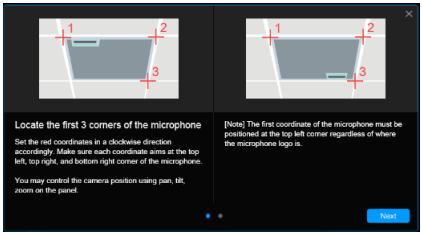


① Drag the red dot to align the red line to the top or bottom edge of the microphone.

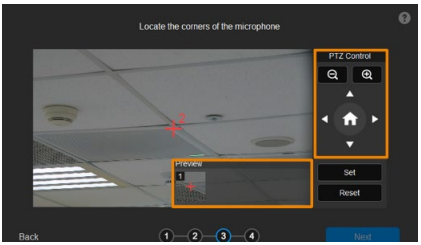


② The microphone doesn't need to be in the center of the live view, as long as the red line is aligned to the edge.
Adjust the camera angle using pan, tilt and zoom controls, if the microphone appears at a slight angle.

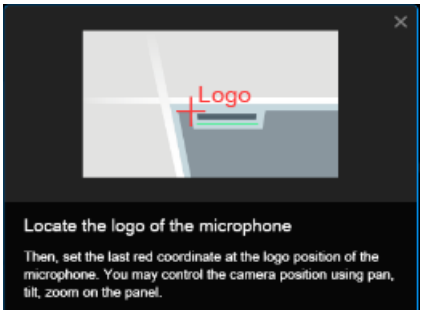
③ Starting from the top left, locate 3 microphone corners in a clockwise direction with a red cross.



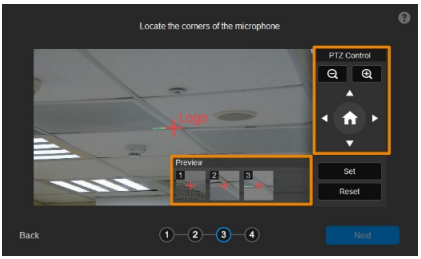
④ Click Set. The saved location will appear in the thumbnail.



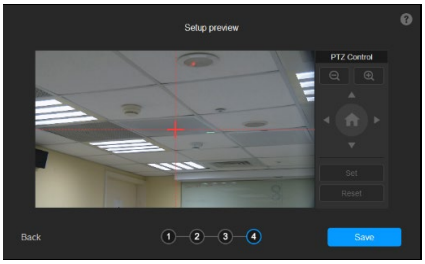
⑤ Finally, locate the logo on the microphone to indicate its orientation. Depending on the microphone orientation, the logo corner may be the same as one of the 3 corners.



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



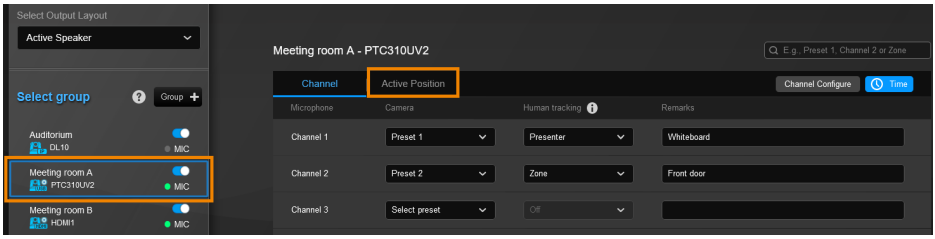
⑦ Make sure the red cross appears in the center of the microphone, and click **Save**. Or click **Back** to reconfigure.



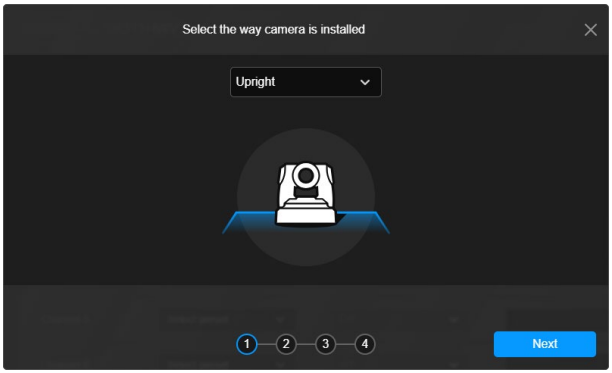
Round Microphone Calibration

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

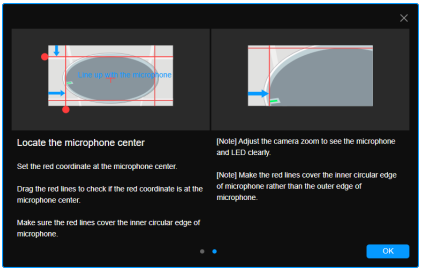
2. Click to select a device group. A blue frame will indicate that it is selected.



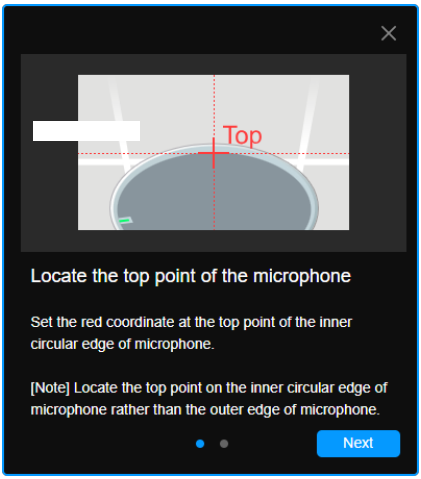
3. Click the **Active Position** tab and follow the setup wizard.
   Click the question mark in the top-right corner for instructions.



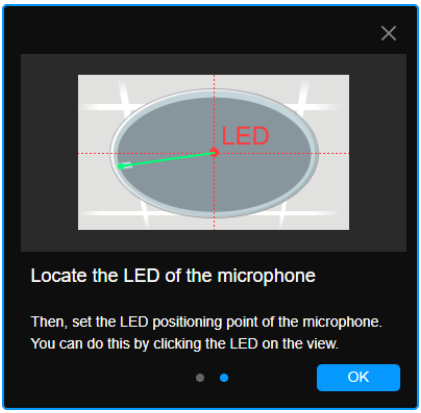
① Dragging the red dot to align the red lines to the top and left edge of the inner diameter so that the red cross appears at the center.



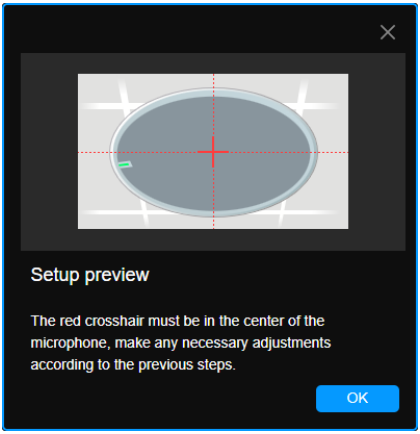
② Locate the top point of the inner diameter with the red cross.



③ Click to mark the position of the LED.

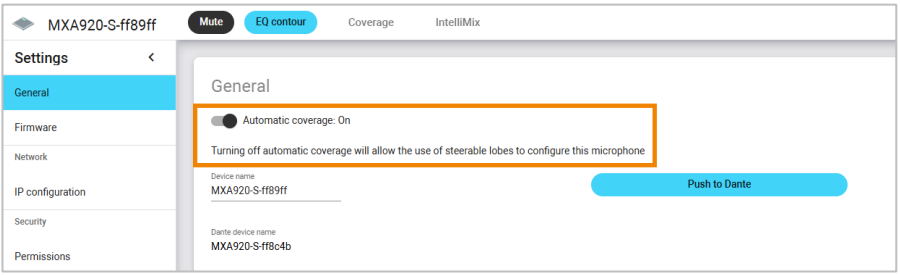


④ Make sure the red cross appears in the center of the microphone, and click **Save**. Or click **Back** to reconfigure.

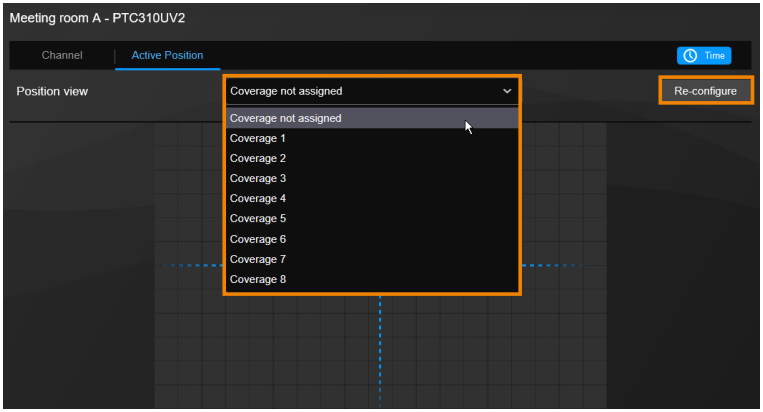


Add a Coverage Area

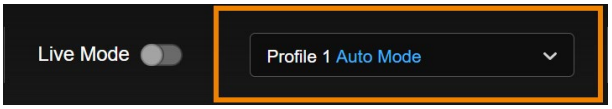
1. On the MXA920 web application, go to **Settings** > **General** > **Automatic coverage**.
2. Turn on **Automatic coverage** to add a mix of up to 8 dynamic and dedicated coverage areas,. The default setting is a 30 by 30 foot (9 by 9 meter) dynamic coverage area.



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 MT300.

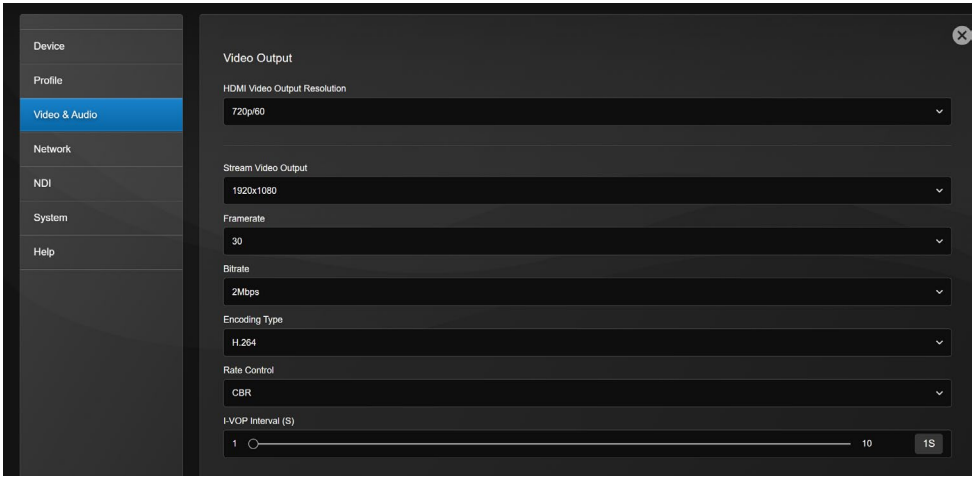


5. To change coverage areas, click **Re-configure**.
6. The profile is saved and applied automatically when you close the **Profile** page by clicking ⊗. Your Auto Mode profile will now be applied.



System Settings

Video & Audio



Video Output

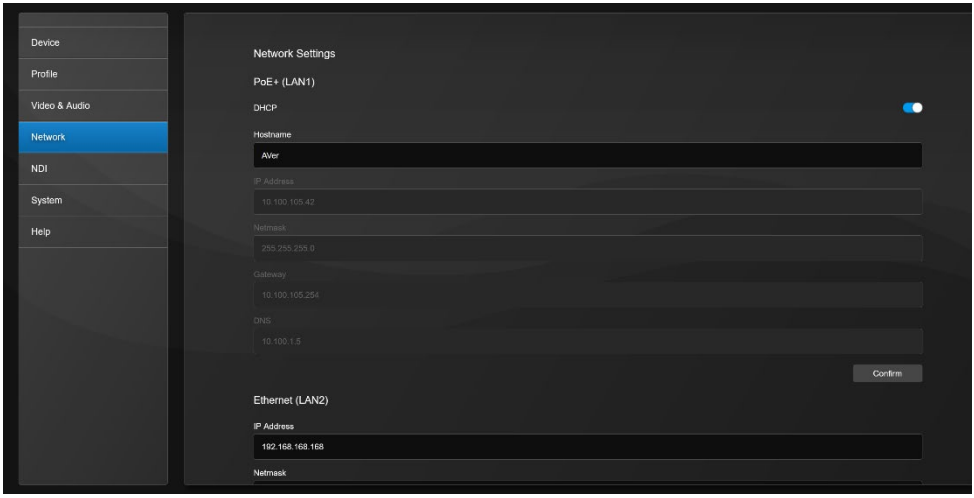
Item	Description
HDMI Video Output Resolution	Choose a video output resolution.
Stream Video Output	Choose a streaming output resolution for the live view.
Framerate	Choose a framerate.
Bitrate	Choose a bit rate.
Encoding Type	Choose **H.264** or **H.265**.
Rate Control	Choose Variable Bit Rate (**VBR**) or Constant Bit Rate (**CBR**).
I-VOP Interval (S)	Drag the slider to choose how often I-VOPs appear in a video stream. • Shorter I-VOP intervals result in higher video quality but also larger file sizes.
USB Output	Choose a USB output source. • Auto: Automatic detection. • USB #1: USB out port 1. • USB #2: USB out port 2.
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 Output

Item	Description
Enable UAC	Enable 1-way audio input from the camera to the computer.
2-way UAC	Enable audio input from the computer to speaker connected to the USB port 3 on MT300.

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 IP connection.
Netmask	
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 RTMP Streaming 2	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 the web interface. 4. Click **Start Stream** to start streaming, **Stop** to stop streaming.

RTSP Settings

Item	Description
RTST 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 camera's RTSP URL into the media player. RTSP URL: rtsp://[camera IP address]/live_st1 Example: rtsp://192.168.1.100/live_st1 ● When RTSP Security is turned on, enter your camera's RTSP URL and username/password into the media player. RTSP URL: rtsp://[username:password]@[camera IP address]/live_st1 Example: rtsp://1:1@192.168.1.100/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. Click **Start Stream** to start streaming, **Stop** to stop streaming.

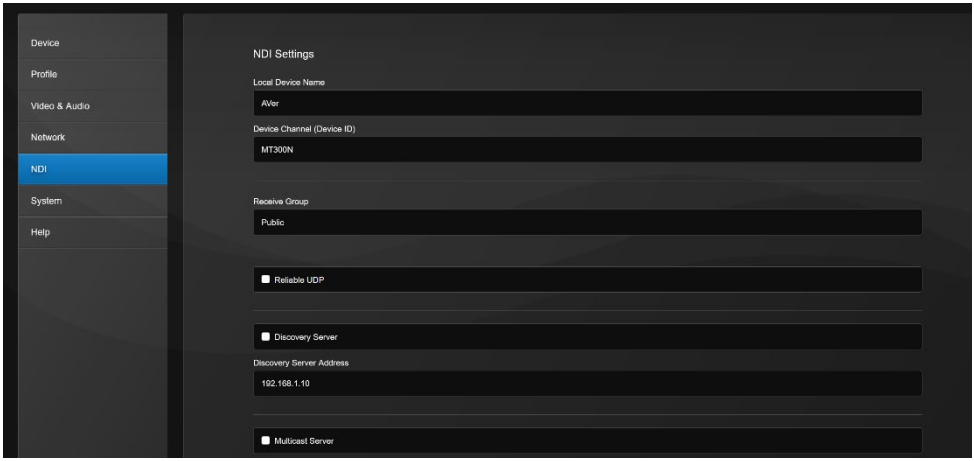
HTTP Settings

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

Network Device Interface (NDI) protocol transmits high-quality, low-latency video and audio streams over IP networks.

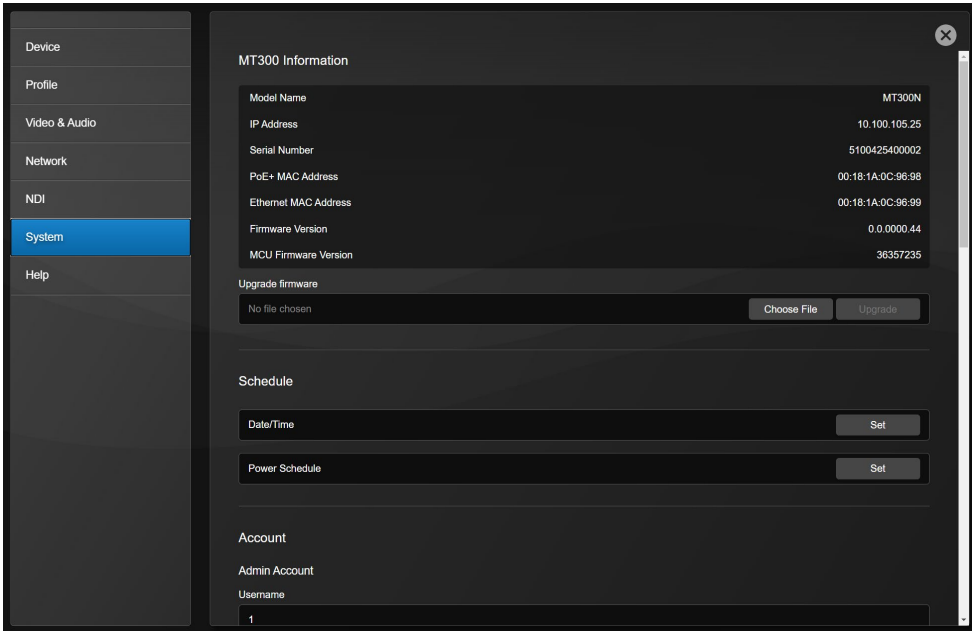
Tracking box comes in two models: MT300 (without NDI) and MT300N (with NDI). To purchase NDI|HX upgrade, please visit NewTek Online Store (https://store.newtek.com/ndi-hx-upgrade-for-cameras.html#).



Item	Description
Local Device Name	Enter a name that identifies your camera group on the NDI software.
Device Channel (Device ID)	Enter a name that identifies your camera on the NDI software. ● The default is MT300 or MT300N. ● 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.

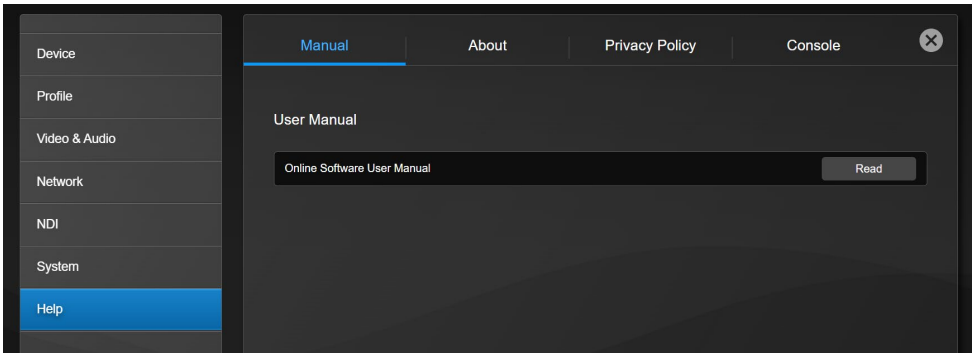
System



Item	Description
MT300 Information	Display MT300 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 tracking box. Power Schedule: Schedule specific times for your tracking 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 your tracking box to factory default settings. ● Reboot: Restart your tracking box.
Export / Import Settings	Export or import your tracking 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 may 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.

Specifications

DC Power	12V/1.5A
PoE+	42.5-57V / 0.6A
Reset Button	Yes
USB Inputs	3, Type-A for peripherals input #1,#2 are UVC only #3 can be UVC or UAC
USB Outputs	2, Type-B for user application Non-simultaneous output Automatic switch to the port that is connected to host. Port #1 has higher priority if both ports are connected to host (PC or MTR),. Resolution, providing 4K, 1080p FPS: 15, 30, 60
HDMI Inputs	3 Input resolution: up to 1080p per channel
HDMI Outputs	2 Simultaneous display, same configuration 1080p, 25Hz / 1080p, 50Hz / 1080p, 30Hz / 1080p, 60Hz / 4K, 25Hz / 4K, 50Hz / 4K, 30Hz / 4K, 60Hz
Ethernet	2, 1 PoE+, 1 RJ-45 Max connection number: 5 (Web/RTSP/RTMP) Resolution, providing 1080p and 4K FPS: 1, 5, 10, 15, 30, 60
LED Indicators	Yes
	Status, USB 1, USB 2, network 1, network 2
Security	Kensington security lock
RS-422	Yes
Operating Temperature	0-50°c
Dimension	4.3 x 21 x 15 cm (1.7 x 8.3 x 5.9 in.)
Installation	2, mountable in a rack or under a table

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 you 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.

Appendix

HTTP Requests

Function	Request	Description
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, 1,1,1,1,1,1,1,1,1,1,1,0_"	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 http://[account]:[password]@[IP Address]/cgi-bin?Set=sys_reboot_time_en,3,1	0: disable 1: enable
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 2-way UAC	http://[account]:[password]@[IP Address]/cgi-bin?Get=TrkBox_Two_way_uac_on	0: disable 1: enable
Set 2-way UAC	http://[account]:[password]@[IP Address]/cgi-bin?Set=TrkBox_Two_way_uac_on,3,0 http://[account]:[password]@[IP Address]/cgi-bin?Set=TrkBox_Two_way_uac_on,3,1	0: disable 1: enable
Get USB output	http://[account]:[password]@[IP Address]/cgi-bin?Get=TrkBox_Usb_output_switch	0: Auto 1: USB#1 2: USB#2
Set USB output	http://[account]:[password]@[IP Address]/cgi-bin?Set=TrkBox_Usb_output_switch,3,0 http://[account]:[password]@[IP Address]/cgi-bin?Set=TrkBox_Usb_output_switch,3,1 http://[account]:[password]@[IP Address]/cgi-bin?Set=TrkBox_Usb_output_switch,3,2	0: Auto 1: USB#1 2: USB#2
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: {

		"currentGroup":1, // current group ID
		"enableVoiceTracking":1, // pause or resume
		"isCurrent":1,
		// is current profile
		"layoutAuto":4,
		// auto mode layout
		"layoutManual":3, // manual mode layout
		"mode":0,
		// auto mode or manual mode
		"pid":1,
		// profile ID 1~36
		"profileName":"", // profile name naming by user
		"profileOrder":1
		}

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
		}

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), ...

PTZ Control Panel

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: camera ID camView: 0(Single lens camera), 1 (The

	deviceTbCamDid]&camView=[camView Index]	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), ...

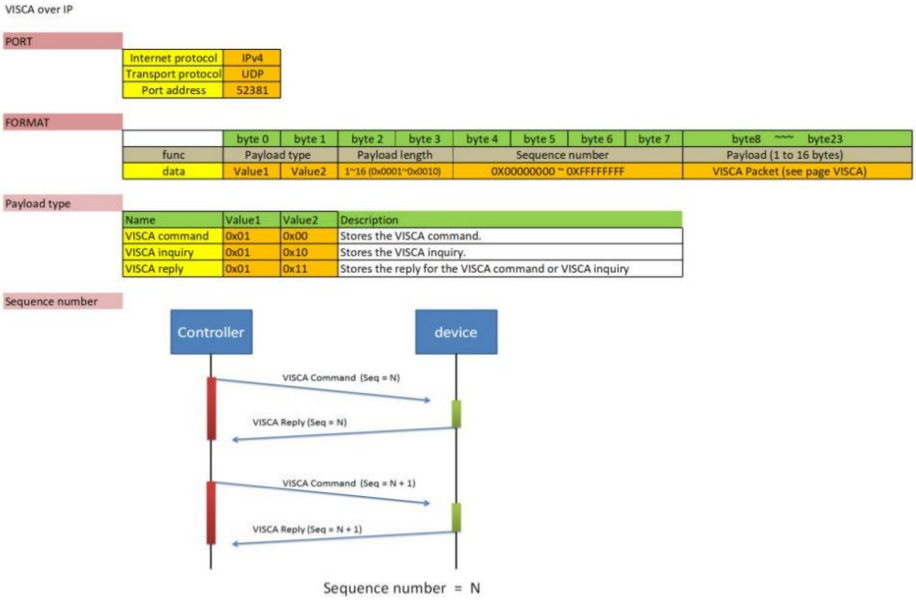
FocusOutStart	http://[account]:[password]@[IP Address]/request=ptzFocusOutStart&camDid=[deviceTbCamDid]&camView=[camView Index]	deviceTbCamDid: camera ID camView: 0(Single lens camera), 1 (The first lens of multi-lens camera), 2 (The second lens of multi-lens camera), ...
FocusOutStop	http://[account]:[password]@[IP 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

MT300(N) also can be controlled via below VISCA over IP commands, but does not support VISCA RS-422 commands.



Command Set	Command	Command Packet	Comments
Power	OFF	8x 01 04 00 03 FF	Power off MT300
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 MT300
	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 MT300
Voice Tracking	Pause	01 00 00 07 00 00 00 01 81 01 04 7D 03 00 FF	Pause voice tracking