

VC540

User Manual



FEDERAL COMMUNICATIONS COMMISSION STATEMENT



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 equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.

DISCLAIMER

No warranty or representation, either expressed or implied, is made with respect to the contents of this documentation, its quality, performance, merchantability, or fitness for a particular purpose. Information presented in this documentation has been carefully checked for reliability; however, no responsibility is assumed for inaccuracies. The information contained in this documentation is subject to change without notice.

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NOTICE

- SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. THE INFORMATION CONTAINED HEREIN IS TO BE CONSIDERED FOR REFERENCE ONLY.
- THE CONTENTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. IF THE CONTENT IS WRONG, PLEASE INFORM US TO MAKE CORRECTIONS.

WARNING

- To reduce risk of fire or electric shock, do not expose this appliance to rain or moisture. Warranty will be void if any unauthorized modifications are done to the product.
- Do not drop the camera or subject it to physical shock.
- Use correct power supply voltage to avoid damaging camera.
- Do not place the camera where the cord can be stepped on as this may result in fraying or damage to the lead or the plug.
- Hold the bottom of the camera with both hands to move the camera. Do not grab the lens or lens holder to move the camera.

Remote Control Battery Safety Information

- Store batteries in a cool and dry place.
- Do not throw away used batteries in the trash. Properly dispose of used batteries through specially approved disposal methods.
- Remove the batteries if they are not in use for long periods of time. Battery leakage and corrosion can damage the remote control. Dispose of batteries safely and through approved disposal methods.
- Do not use old batteries with new batteries.
- Do not mix and use different types of batteries: alkaline, standard (carbon-zinc) or rechargeable (nickel-cadmium).
- Do not dispose of batteries in a fire.
- Do not attempt to short-circuit the battery terminals.

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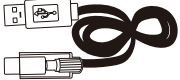


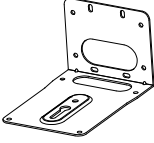


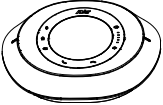
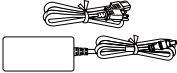
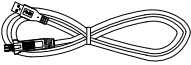
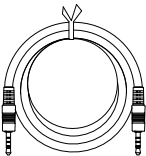
Technical support: EU.RMA@aver.com

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Package Contents

CAM540 Camera	Remote Control	Power Adapter Power Plus*	USB Cable
			
Screws for Mount	L-Mount Bracket	Quick Guide	Warranty Card
 USB Type-A to Type-C Adapter 			
Speakerphone Unit	Power Adapter Power Cord*	USB 2.0 Cable	3.5 mm Audio Cable (1m)
			

* The power plug and power cord will vary depending on the standard power outlet of the country where it is sold.

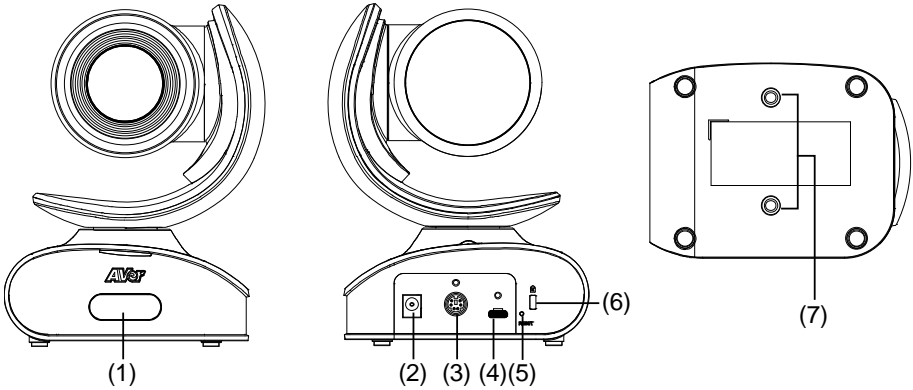
Optional Accessories

RS232 DIN6 to D-sub 9 Cable



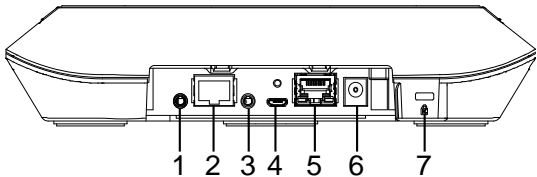
Product Introduction

Camera



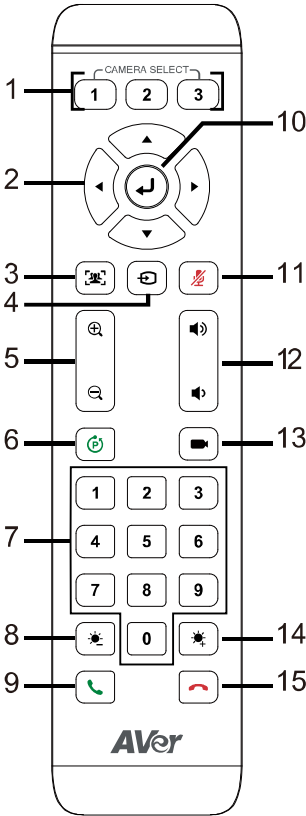
(1)	IR sensor	(5)	Reset button
(2)	Power port	(6)	Kensington Lock
(3)	RS232 port	(7)	Screw hole for mounting
(4)	USB port		


Speakerphone

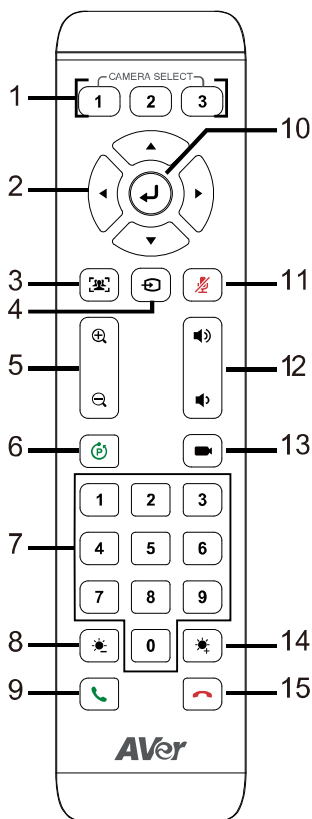


- | | |
|---|--------------------|
| 1. Phone in port | 3. Line out port |
| 2. Speakerphone port
(For extended speakerphone and
microphone / Red cable) | 4. USB port |
| | 5. Ethernet port |
| | 6. Power jack |
| | 7. Kensington Lock |

Remote Control



Name	Function
1. Camera select	<p>One remote can control up to 3 AVer VC/CAM. Use AVer PTZApp sets number associated with each camera, select which camera you like to control on the remote.</p> <p>[Note] If you only have one camera and don't need to do any setting, the default is camera 1.</p> <p>If you press camera 2 or 3 on the remote control, you will find your remote can't control your camera. In this case, please press camera 1 on your remote again.</p>
2. Camera direction control	<p>Use the direction button on the remote to control the direction of the camera. Press the direction button to move the camera or press and hold for continuous pan or tilt.</p>
3. SmartFrame	<p>One-click automatic FOV adjustment to fit all participants.</p> <p>Press  on the remote for 1 second can switch the Smart framing function between auto and manual mode; a message (as figure shown) will display on the screen to indicate in auto or manual mode.</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="background-color: black; color: white; padding: 5px 15px; border-radius: 5px;">Auto Framing</div> <div style="background-color: black; color: white; padding: 5px 15px; border-radius: 5px;">Manual Framing</div> </div> <p>[Note] While in conferencing meeting, participants must face the camera for face detection (Smart Framing).</p>
4. Line in**	<p>To connect to device and use it as a hands free speakerphone.</p>
5. Zoom in/Zoom out	<p>Increase/Decrease the camera zoom.</p>

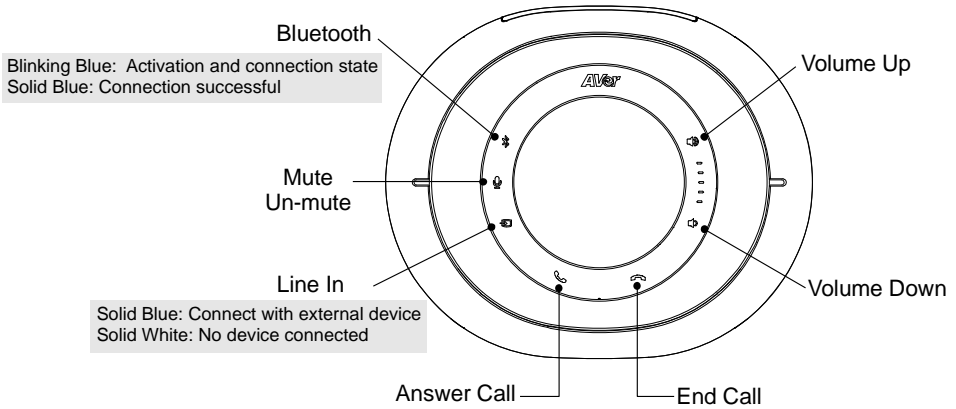


Name	Function
6. Preset	<p>1. To save the camera at the desired position, press and hold the preset button until the "saved message" is displayed on the PTZApp video screen or other video apps. Select preset position button 0 to 9 to save.</p> <p>2. Press "preset" + "preset position button" (0 ~ 9) will move the camera to the saved position.</p>
7. Preset position	<p>Preset position button is used in conjunction with the Preset button to save positions. There are a total of 0 to 9 saves.</p> <p>Press preset button and then press 0~9 to go to the saved position.</p>
8. Brightness -	Decrease the brightness.
9. Call/answer*	Answer a call or start a call.
10. Enter**	To confirm selection.
11. Mute/Unmute Speakerphone*	Mute/Unmute the speakerphone.
12. Volume up/down*	Adjust volume up or down.
13. Far site camera control**	Press the Far/Near button to control the far site camera for pan, tilt, or zoom functions.
14. Brightness +	Increase the brightness.
15. Hang up*	End the call.

* Function requires AVer PTZApp

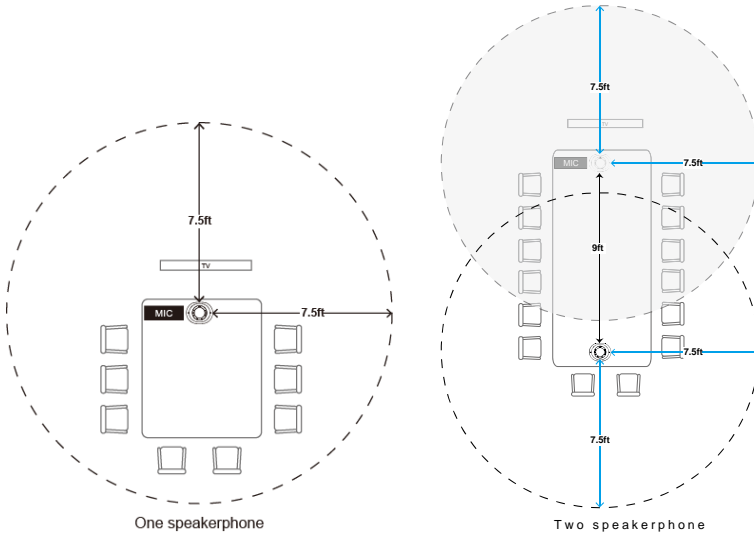
** Not supported for VC540

Speakerphone Indicator



Audio Signal Receive Range

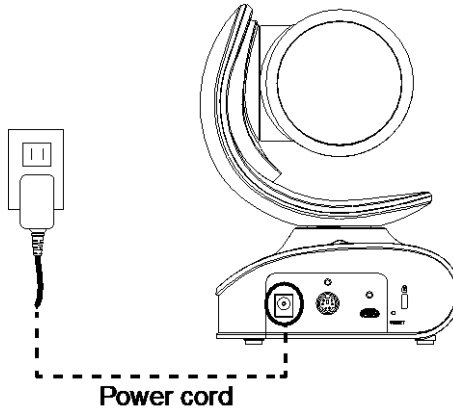
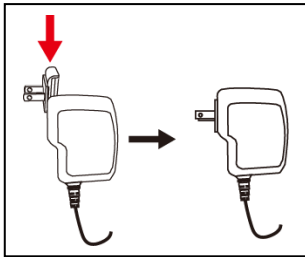
The best distance for speakerphone to receive audio signal is within 7.5feet in radius. When connecting two or more speakerphone, the distance between the speakerphones must be 9 feet.



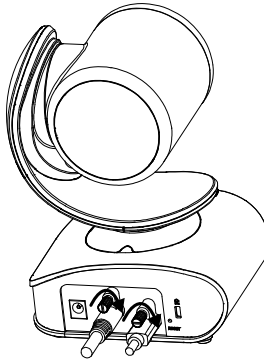
Installation

Camera Installation

1. Connect the camera to a power outlet.



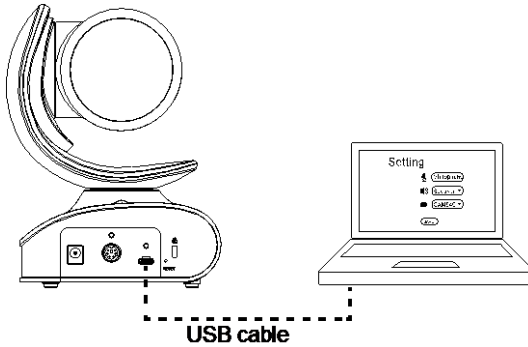
2. Connect other necessary cables.



[Note]

- USB and RS232 cables need to be secured with the attached screw. RS232 optional cable may be purchased directly from AVer.
- Ensure the cable connector is properly seated before securing the cable with the attached screw.

3. Connect the camera to the laptop/PC.



[Note]

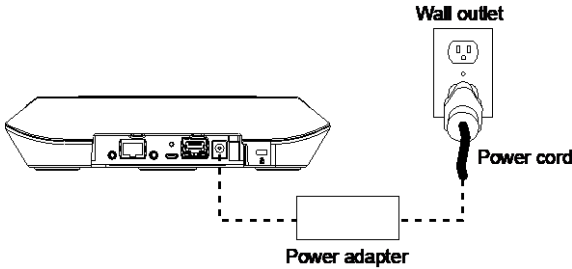
- Provided type-A to C adapter for newer PC's.
- Set the VC540 camera and speakerphone as your primary camera device in your application (Please consult your application setup guide for details).

Speakerphone LED Indicator

Button	LED Indicator	Status
	White light	Adjust the volume up and down. When adjusting the volume up and down, the volume LED indicator will light up in blue.
	White/Blue light	Touch to mute/un-mute the speakerphone volume. In mute status, the LED indicator will light up in red.
	Red light	Touch to hang up the call.
	Green light	Touch to answer the incoming call.
	<ul style="list-style-type: none"> ■ Blue light: Connects with external device ■ White light: Temporarily disconnects the connection with the device ■ Off: No connection with external devices 	When the Phone in port connects with the device, the LED indicator will light up in blue.
	<ul style="list-style-type: none"> ■ Activate Bluetooth and connect with laptop/cell phone. 	When connection is successful, the Bluetooth indicator will light up in Blue .

Speakerphone Installation

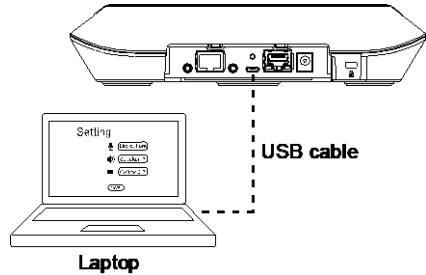
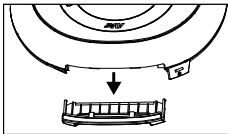
1. Connect the speakerphone to a power outlet.



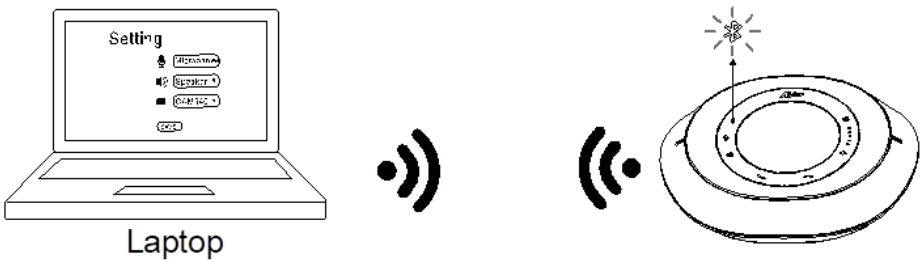
2. Connect the speakerphone to the laptop/PC.

[Note]


- Use the USB cable that is included in the package.
- Remove the back cover for cable installation.



Or, enable the Bluetooth function on the laptop/PC to make a wireless connection.



[Note]

- Press  on the speakerphone to activate Bluetooth and connect with laptop/cell phone.
- When connection is successful, the Bluetooth indicator will light up in **Blue**.

Expansion Speakerphone/Microphone Connection

Please purchase the expansion speakerphone and/or microphone directly from AVer or an AVer reseller.

Expansion Speakerphone Requirements:

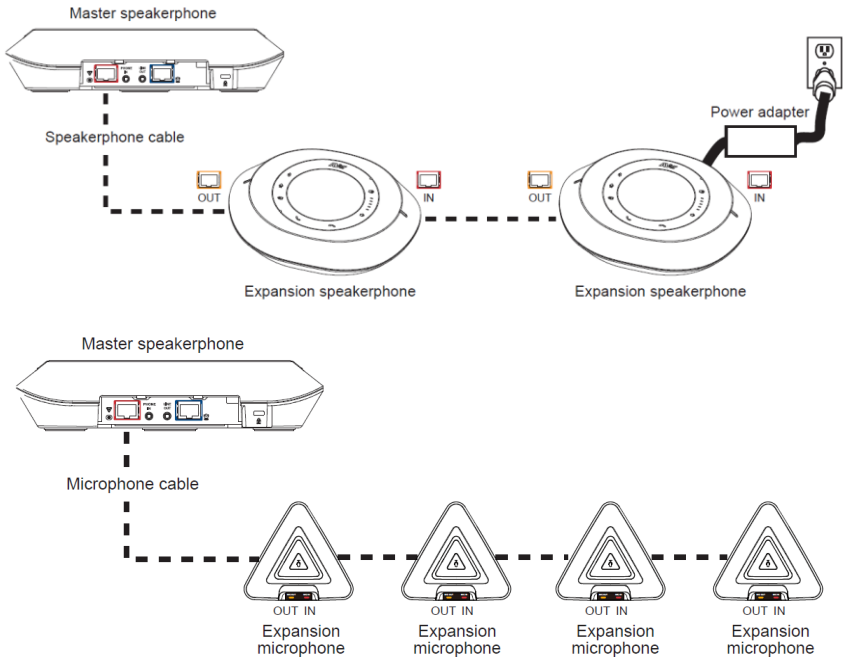
- FONE540 Firmware version: 7000.34 or later

[Note]

- The FONE540 can support up to two expansion speakerphones, however, the daisy-chain expansion cable cannot exceed over 40m in total.
- Please connect the power supply for the expansion speakerphone when daisy-chaining over 20m.
- Please connect the power supply when upgrading the firmware for the expansion speakerphone.
- The expansion speakerphone cannot be used as the main speakerphone; it can only be used with the FONE540.

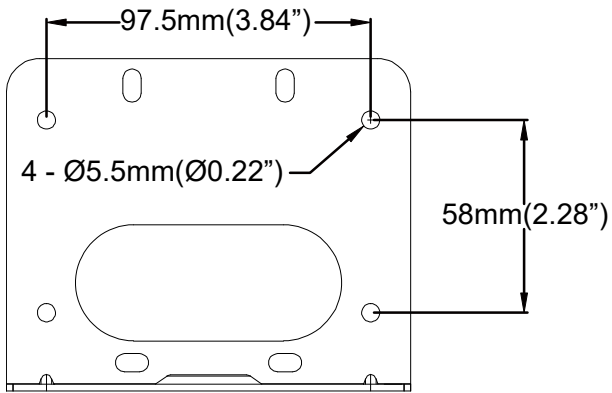
The speakerphone/microphone cables will be included in the package contents when the user purchases the expansion speakerphone/microphone.

-

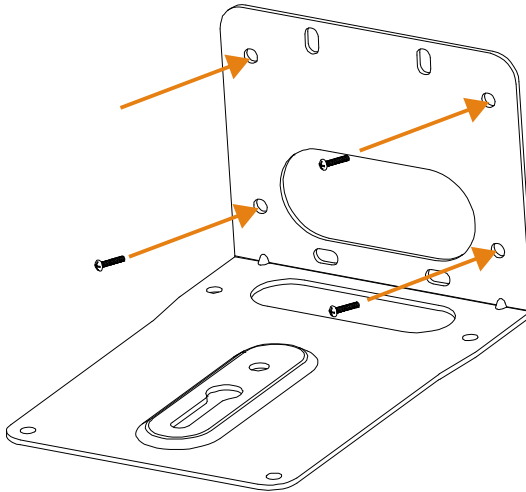


Wall Mount Installation

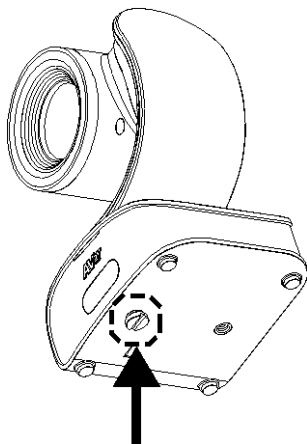
1. According to below figure to drill the hole on the wall where the user wants to mount the camera.



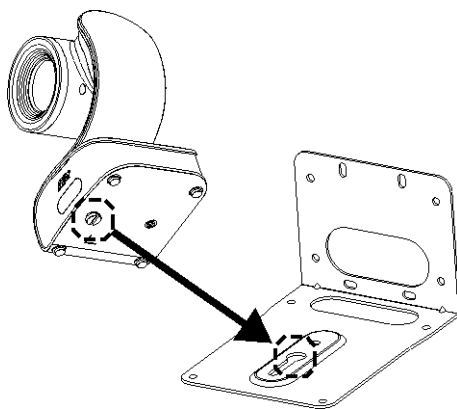
2. Secure the wall mount bracket on the wall within screws.



3. Secure the screw to the camera. Don't screw tight, leave some space for later installation.

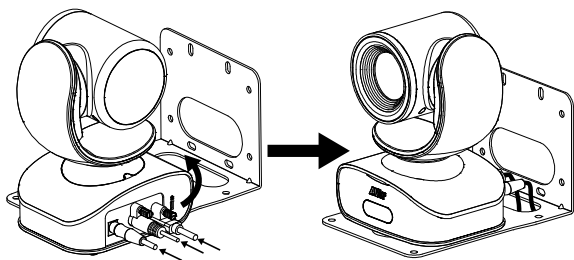


4. Install the camera to the wall mount bracket.

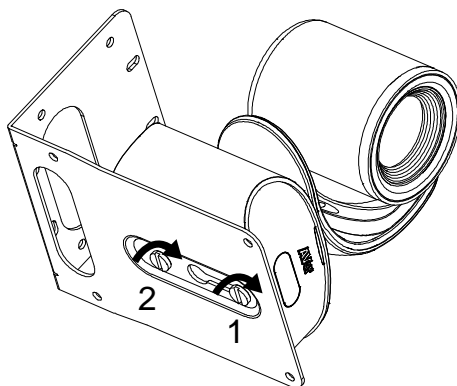


5. Connect the necessary cables to the camera.

[Note] You may use cable ties to organizer cables.



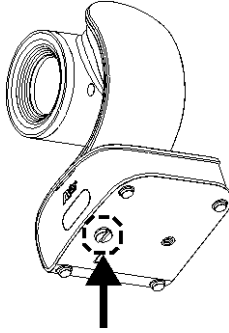
6. Secure the camera with screws; please follow the order as figure shown to secure the camera.



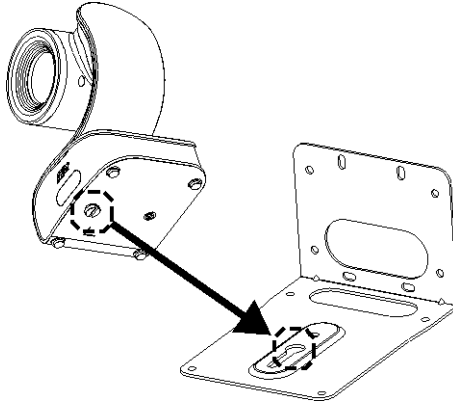
Celling Mount and Switch Box Installation

The camera can be mounted on the ceiling, please refer the following steps.

1. Secure the screw on to the camera. Don't screw tight, leave some space for later installation.

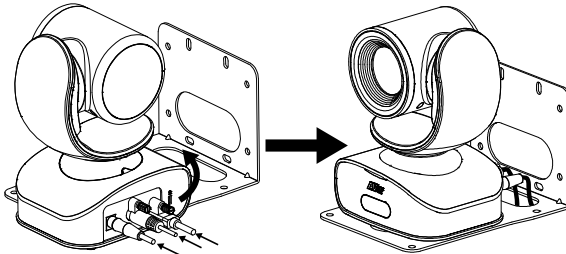


2. Place the camera to the wall mount bracket.

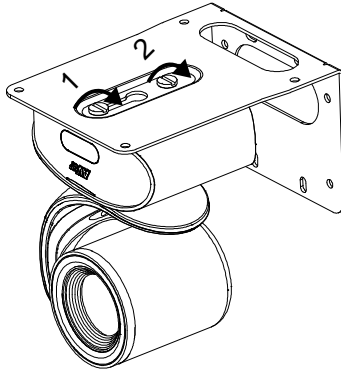


3. Connect the necessary cables to the camera.

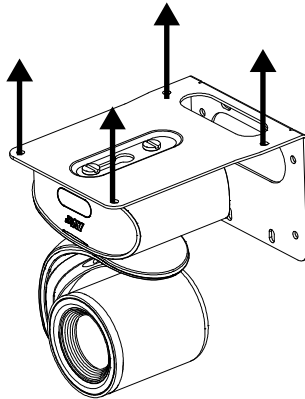
[Note] You may use cable ties to organizer cables.



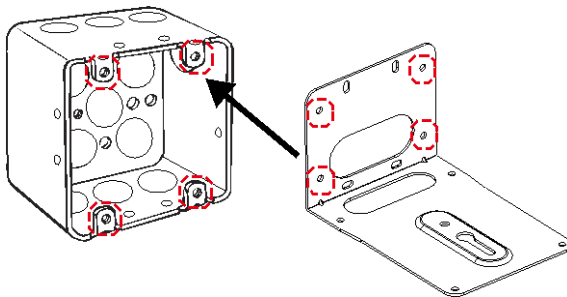
4. Secure the camera with screws; please follow the order as figure shown to secure the camera.



5. Refer to the figure shown which the holes to secure the wall mount bracket with camera to the ceiling.



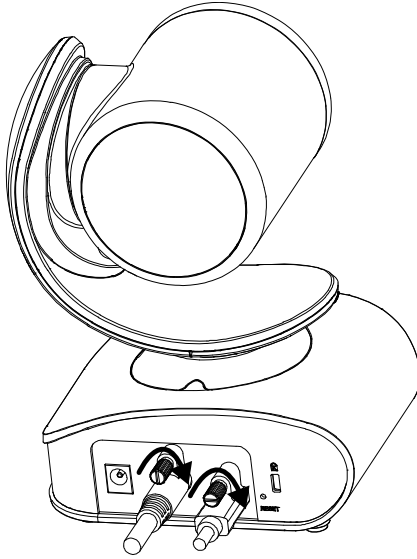
For the switch box installation, refer to the figure shown to secure the wall mount bracket to the switch box. Then, refer to wall mount installation steps.



Secure USB Cable

Install the cable first and secure the cable.

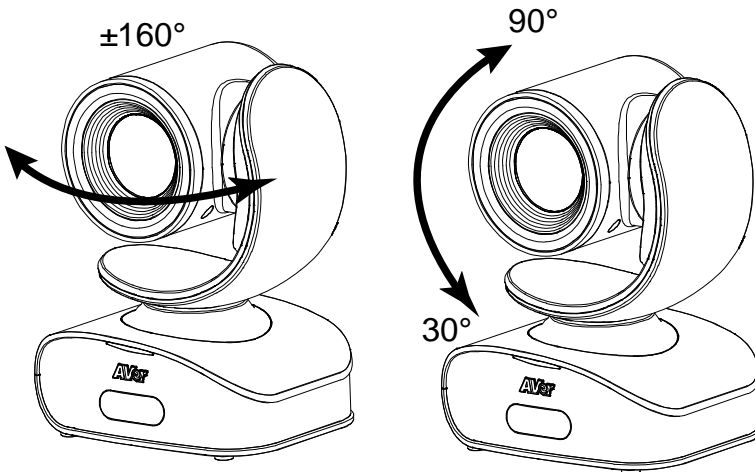
[Note] Make sure the cable is well connect to the connector on the camera before secure the cable



Pan and Tilt Angle

Up and down is $90^{\circ} \sim 30^{\circ}$

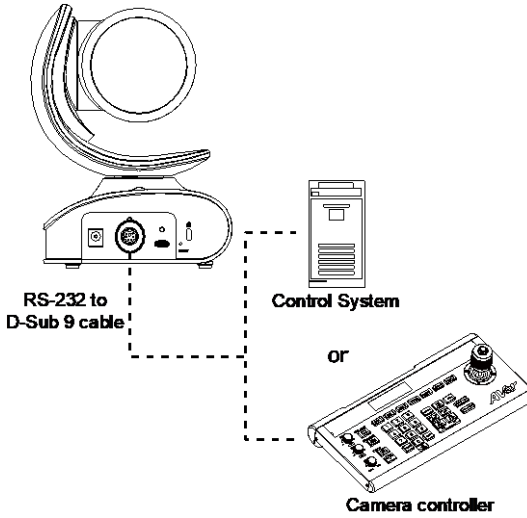
Left to right is 160° on both sides.



RS232 Connection

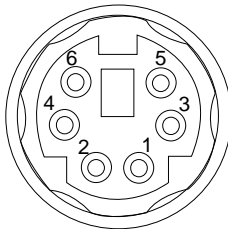
With RS232 connection, the user can control the camera unit.

[Note] The RS232 DIN 6 to D-Sub 9 cable can be purchased from AVer.

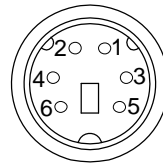
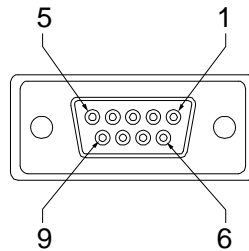


■ RS232 Port PIN Definition (Camera)

No.	Pin
1	DTR
2	DSR
3	NC
4	TXD
5	GND
6	RXD



■ DIN 6 to D-Sub 9 Cable PIN Definition



Make a Video Call

1. Make sure VC540 and PC/laptop are well connected and power is on.
2. Run your video application (Skype™, Skype for Business, Google Hangouts™, Zoom™, WebEx™, Adobe Connect™, WebRTC, TrueConf, V-Cube, U-meeting, Ringcentral, BlueJeans, Fuze...etc.) on your PC or laptop.
3. Set the VC540 camera and speakerphone as the primary camera for your video application (refer to your video application user guide). You can now make your call.

[Note] The VC540 is a plug-and-play conference camera. The system requires no special drivers, but we do recommend installing the AVer PTZApp for a better user experience. For information on how to install and use the AVer PTZApp, refer to the AVer PTZApp section in this user manual.

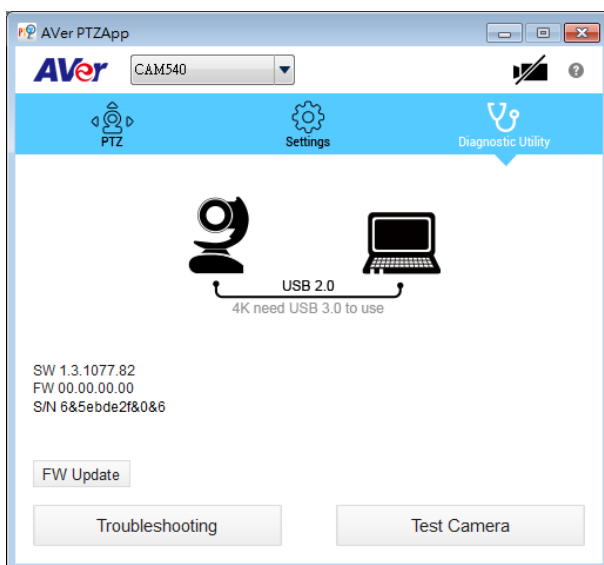
AVer PTZApp

Install AVer PTZApp

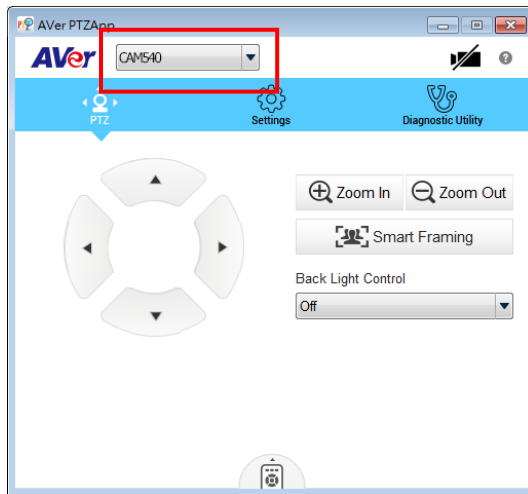
Please go to <http://www.aver.com/download-center> to download the AVer PTZApp. After downloading, double-click on the file and follow the on-screen instructions to complete the installation.

Camera Settings

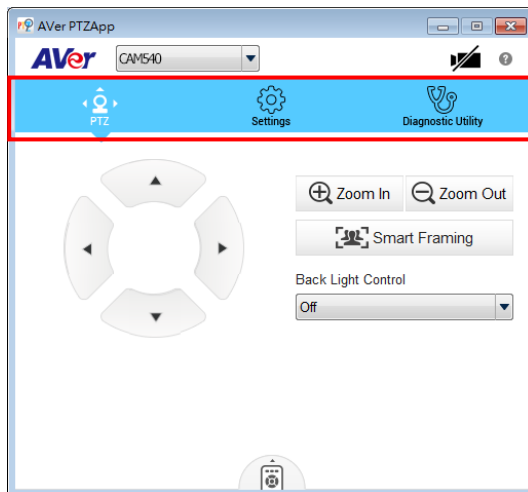
1. Run your video application.
2. During your video call, you can use the AVer PTZApp to pan, tilt and zoom the camera in/out and enable/disable the backlight feature.
3. For the first time use, you can check the connection, camera, and setup the camera's parameters. Each function will be described below:



- **Currently selected device:** This field displays currently selected VC or CAM device controlled by PTZApp. If you have more than one AVer VC or CAM devices connected to this PC/Mac PTZApp is running, you can click on the drop-down list to select other AVer VC or CAM device.
[Note] VC540 camera will be displayed under CAM540 name in PTZApp.



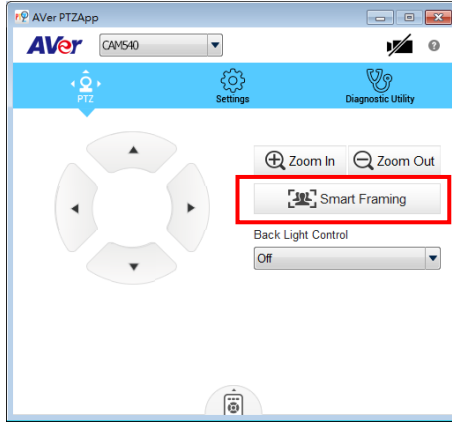
- **Function icon:** Click it to switch to the function's page.



■ **PTZ:** To control the camera direction, zoom in and out, and to enable/disable the backlight compensation during your video call.

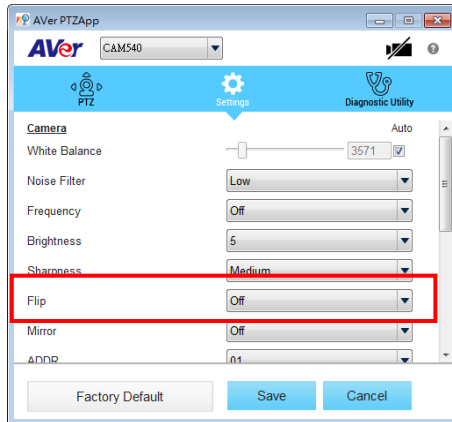
➤ **Smart Framing:** One-click automatic FOV adjustment to fit all participants. Click “**Smart Framing**” button to enable Smart Framing manually.

[**Note**] While in conferencing meeting, participants must face the camera for face detection (smart framing).

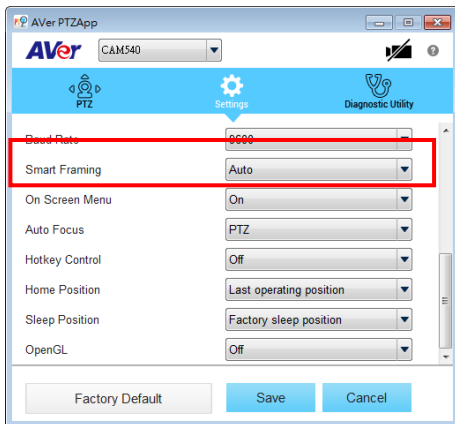


■ **Settings:** To setup parameters of the camera. Click the **Save** button to save all settings. To change all the settings, back to the default values, click the **Factory Default** button.

➤ **Flip :** If the VC540is installed in the upside down position, please enable the "**Flip**" function in the AVer PTZApp , and the screen will display normally.



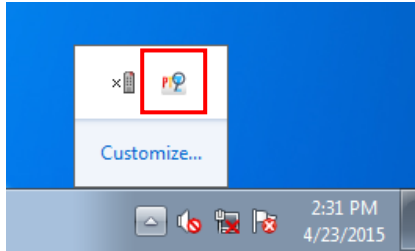
- **Smart Framing:** One-click automatic FOV adjustment to fit all participants. The user can set Smart Framing to manual or auto mode.
[Note] While in conferencing meeting, participants must face the camera for face detection (Smart Framing).




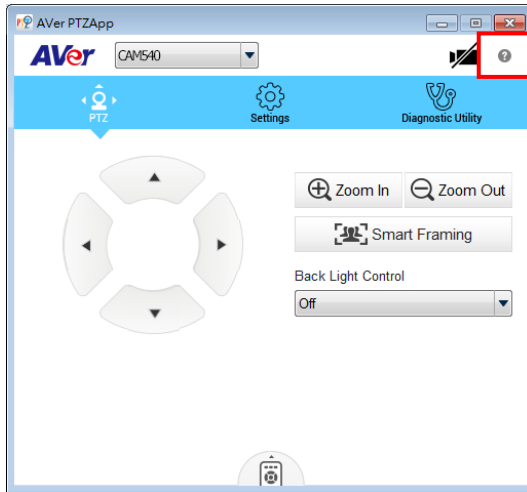
- **Diagnostic Utility:** To display the SW and F/W version and the devices connection status. You can also update the firmware of the camera.



- **Minimize:** Minimize the app to system tray. To quit the application, right-click the icon on the system tray and select **Quit**.



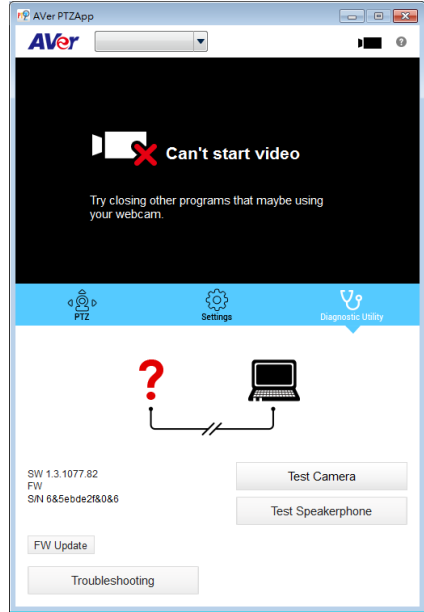
-  : Click icon will launch the browser and connect to the AVer PTZApp web page.



- [REDACTED] **(Camera):** Click it to view the camera live view. Click the camera icon again to close the camera live view. If the live video did not appear, please check the camera and the laptop/PC connection to make sure all are corrected and well connected.

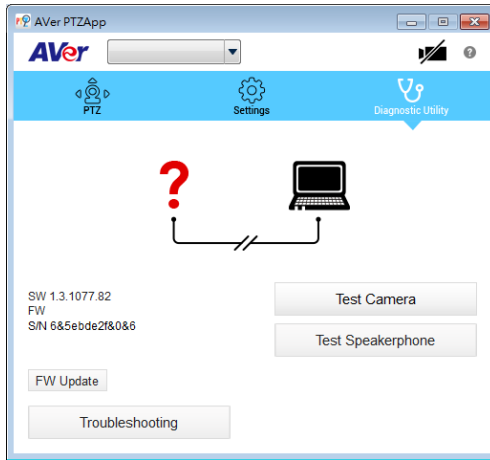


Normal



Un-normal

- Connection diagnostic:** Display devices connection status. If the AVer PTZApp has detected that camera and laptop/PC are not connected well, the diagram will display an “?” on the camera to indicate the connection has a problem. If the camera is in use by another application, it will display “Can’t start video” warning.

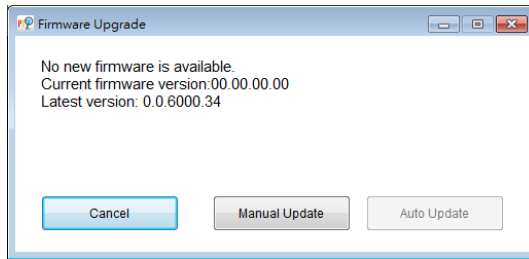


- Test Camera:** Click the “**Test Camera**” to check the camera video display status. You can adjust the camera direction and view of the zoom in/out. To leave the page, click the **Abort Diagnostic** button.



- FW Update:** Allows the user to update the VC540 camera’s firmware.
 - Click” **FW Update**”.
 - A dialog will display the current firmware version and available new firmware version (internet

connection is required).



3. To auto update, click "**Auto Update**" and update process will start. The new firmware will be downloaded first; then, the new firmware will be uploaded to the camera.

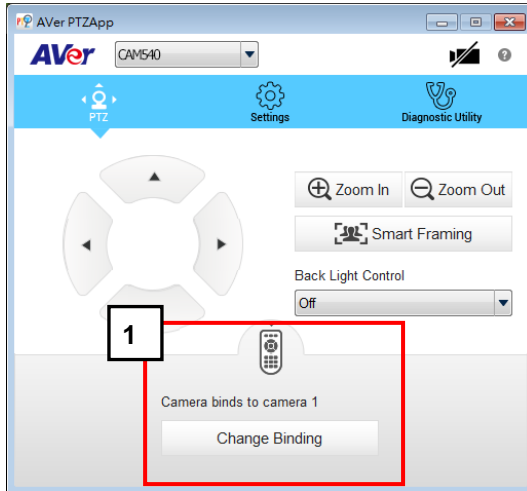
[Note] Please make sure camera, power, and laptop/PC are all well connected and stay connected during the entire process.

4. To update the firmware manually, click "**Manual Update**" and locate the new firmware to start the process.
- **Troubleshooting:** collect more system information for troubleshooting before you contact AVer technical support.

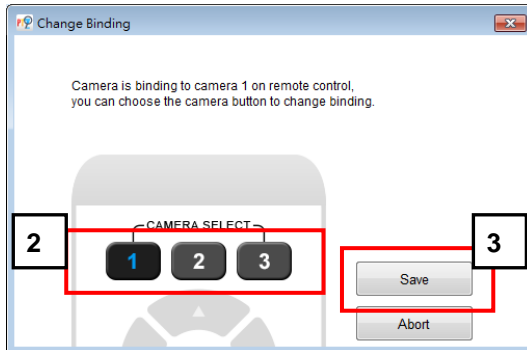
Set the Camera Number

With multiple cameras connection, users can set each camera to buttons 1 to 3 on the remote control.

1. If PTZApp detects computer connects to multiple VC/CAM/VB cameras, you can select which camera you like to control through the dropdown list.
2. Next, Click **Change Binding** button.



3. Select which camera number of remote control it maps to.
4. Click **Save** to save settings. To un-save the settings, click **Abort**.

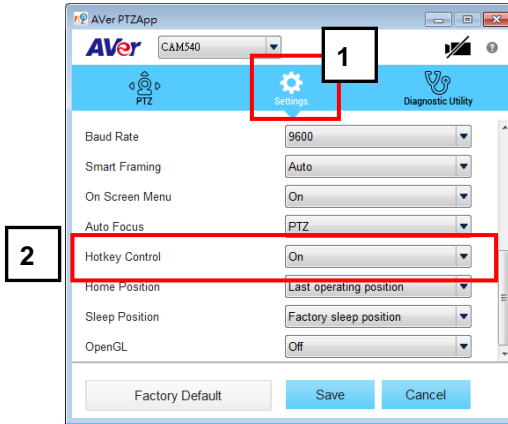


[Note] If you only have one camera and don't need to do any setting, the default is camera 1. If you press camera 2 or 3 on the remote control, you will find your remote can't control your camera. In this case, please press camera 1 on your remot again.

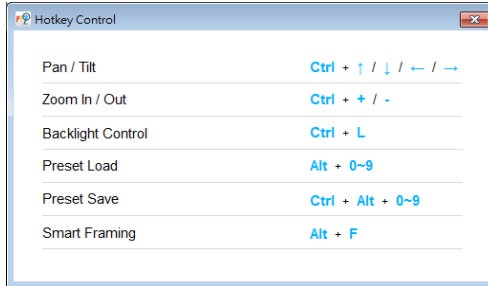
Hotkey Control

Enable hotkey control to use keyboard control camera's movement, backlight, and Smart Framing.

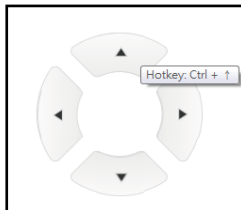
1. Select **"Settings"**
2. Set Hotkey Control to **"On"**.



3. A hotkey description as below figure shown:



4. When hotkey control is enabled, a hotkey tip will display when mouse is moved to the PTZ control button in PTZ mode.



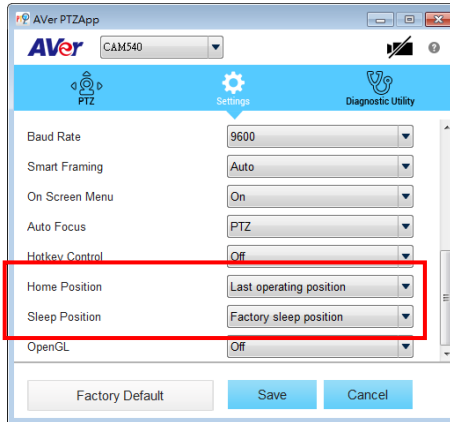
5. If the hotkey function is enabled after installed PTZApp, PTZApp auto launch next time PC reboot. Therefore, the customer can use all the hotkey commands since PTZApp is auto running in system tray.

Home / Sleep Position

Home Position: There are three options: Last operating position/Factory central position/ Preset 0

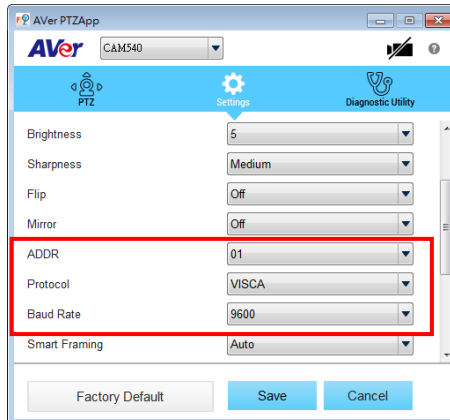
Sleep Position: There are two options -- Factory sleep position/ Preset 9

If the camera idles for more than 3 minutes, it will enter sleep mode.



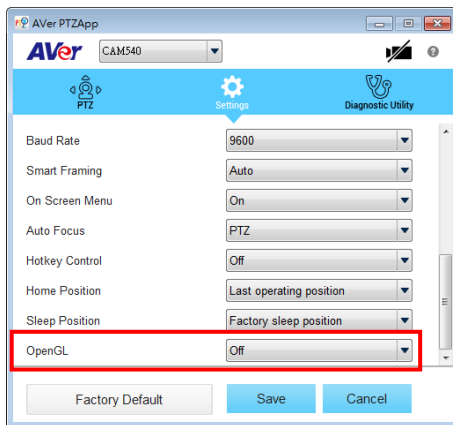
ADDR / Protocol/Baud Rate

These settings are related to RS232 functions. Please choose the corresponding value while connecting with external control panels.



OpenGL

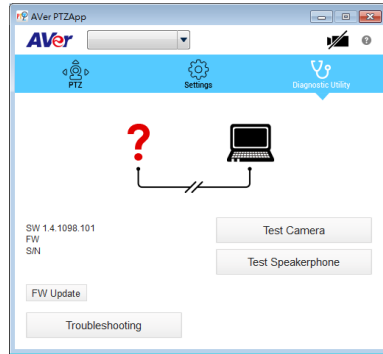
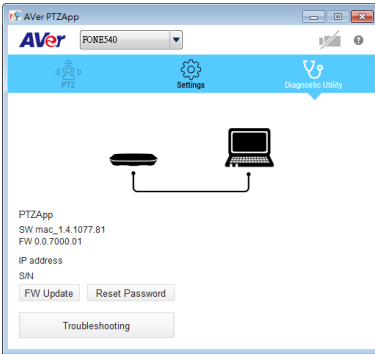
The default setting is Off. If your PC has installed OpenGL, you can get better frame rate and smoother video quality by turn on it. If your PC is without OpenGL, it will cause video display problem after enable it.



Speakerphone Settings

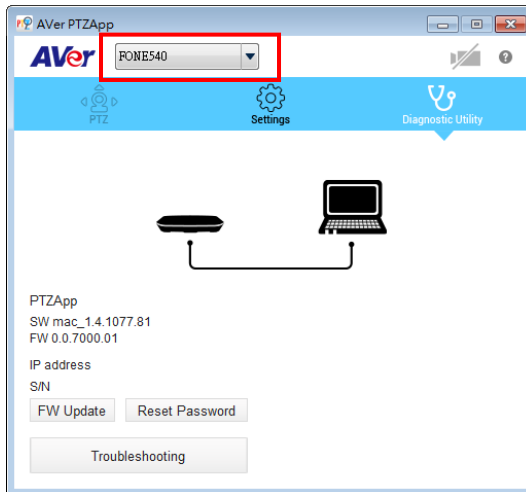
Run the AVer PTZApp and your video application on the PC/laptop.

- **Check connection status:** You can check the connection status. If the AVer PTZApp doesn't find the speakerphone, a "?" is displayed.

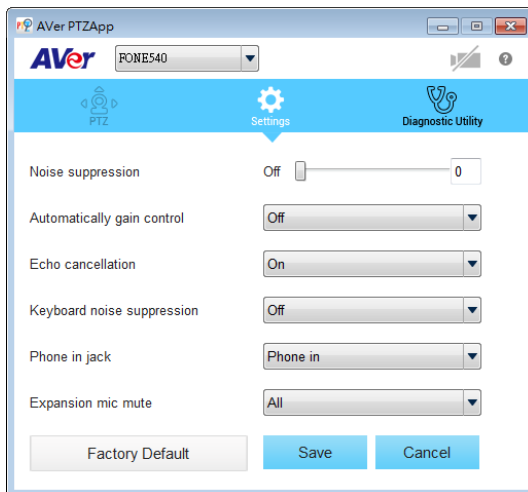


- **Select device:** Select the speakerphone from drop-down list if your PC/laptop has connected more than on AVer camera/speakerphone devices.

[Note] VC540 speakerphone will be displayed under PONE540 name in PTZApp.



- **Parameters setting:** Setup speakerphone function parameters. Select “**Factory Default**” will back to factory default value.
 - **Noise suppression:** Reduce ambient noise.
 - **Automatically gain control:** Enable/disable the auto gain control.
 - **Echo cancellation:** Enable/disable echo situation.
 - **Keyboard noise suppression:** Enable/disable keyboard noise reduction.
 - **Phone in jack**
 - **Phone in:** When the mobile phone is connecting to Phone in port, please select “Phone in” option.
 - **3.5 mm microphone only:** The speakerphone will transfer the sound that it receives from the external microphone (connected on phone in port) to far site.
 - **3.5 mm microphone mix in:** The speakerphone will transfer the sound that it receives from the external microphone (connected on phone in port) and speakerphone to far site.
 - **Expansion mic mute**
 - **All:** To mute all connected speakerphones.
 - **Individual:** To individually mute a speakerphone and not the extended speakerphones.



Install EZLive

Please go to <http://www.aver.com/download-center> to download the AVer EZLive software. After downloading, double-click on the file and follow the on-screen instructions to complete the installation.

Use AVer EZLive

During a video call, EZLive can help user to do:

- (1) Camera ePTZ
- (2) Volume control for the speaker connected
- (3) Capture camera's still images
- (4) Record video
- (5) Live stream to Youtube, Livehouse.in, USTREAM...etc.
- (6) Camera Zoom in/out
- (7) Capture PC screen shot
- (8) Record PC screen video
- (9) Set up livestream
- (10) Open file management to retrieve photos and video files
- (11) Livestream setting
- (12) Drawing tool.

