

**Nearity**

# CONFERENCE CAMERA

User Manual

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Model: AW-V415

V1.0

# Content

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# 1. Product Overview

## ● 1.1 Product Introduction

NEARITY V415 is an UHD PTZ conference camera, designed for medium and large conference rooms. 4K ultra high-definition image output, 15x zoom lens and super expansive view ( $\pm 175^\circ$  horizontal rotation range) bring life-like meeting experience to all remote collaborators. Smart privacy protection design reassures the enterprise safety, USB plug and play makes the meeting more efficient. Simply yet powerful, V415 is all you need for video conference.

## ● 1.2 Features



### - Professional Clarity with a 15x hybrid zoom

Enhance your communication by showing every detail precisely and smoothly. With 5x optical + 3x digital zoom lens and autofocus optics, V415 is able to capture every detail in the conference room.



### - 4K video, present complex product details in crystal-clear quality

Embedded with high performance Sony CMOS sensor, V415 can deliver 4K video output with excellent sharpness and smoothness, accurately reproducing every detail, color and awarding you a vivid video experience.



### - AI Smart Mode

Can be achieved with AI smart-tracking and auto-framing, creating a more engaging and efficient meeting experience.



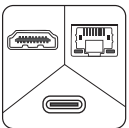
### - High Dynamic Range

Regardless of the intensity of ambient light, the V415 automatically balances colors and upgrades the image quality to instantly display the most realistic images and enhance the meeting experience of remote participants.



### - Wide PTZ Range + 4 Preset Positions

The V415 has a 350-degree pan range and a 60-degree tilt range. Quickly switching between up to 4 presets, never miss a key shot of every key person.



### - Multiple Interfaces, Plug&Play design

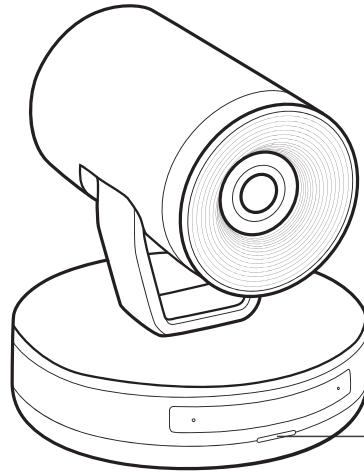
Besides the traditional USB port, we add HDMI and RJ45 ports to connect the console center and enable video output to the screen.

## ● 1.3 Packing List

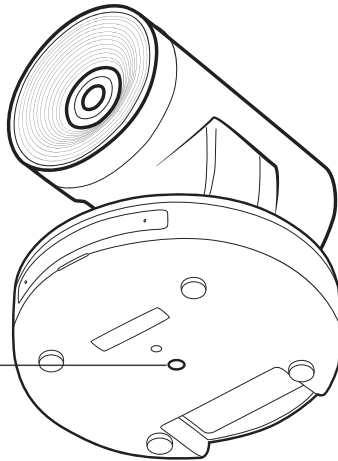
V415 * 1	USB Cable * 1	Power Adaptor* 1	Remote * 1	User Manual * 1

## 2. Basic Information

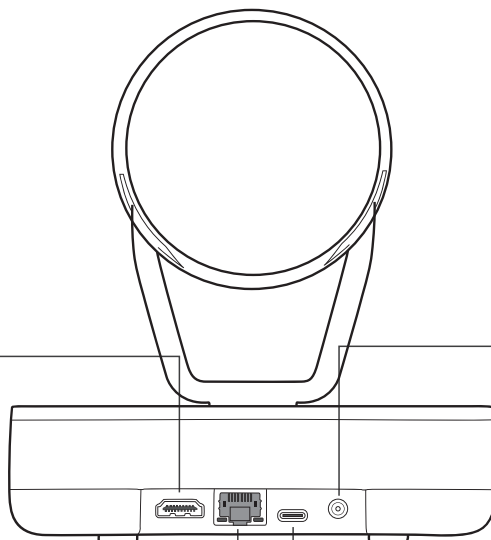
### ● 2.1 Physical Structure



① LED indicator



② Universal Tripod  
1/4" Interface



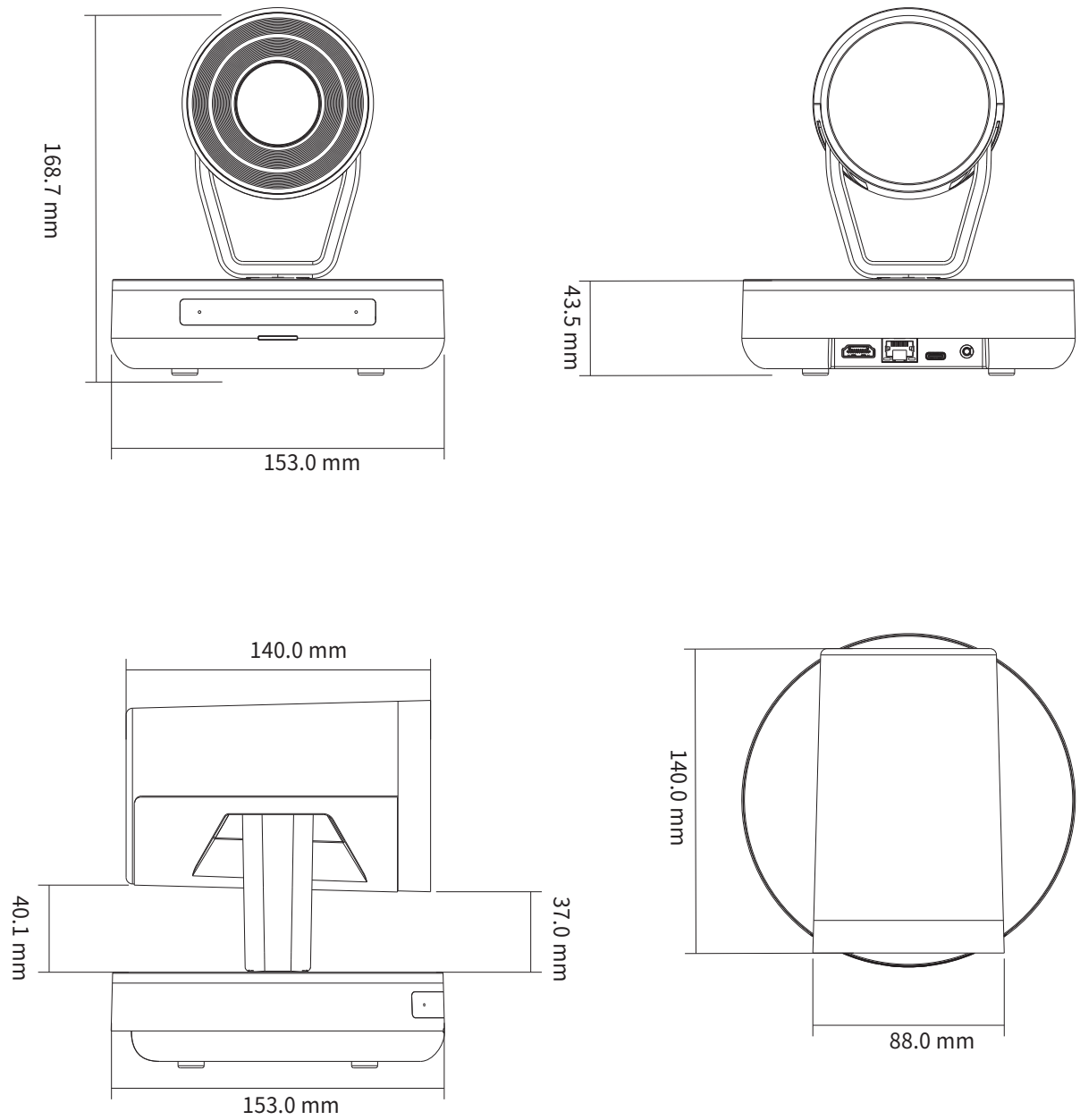
③ HDMI OUT interface

⑥ Power Port (DC 12V)

④ RJ45 interface

⑤ USB 2.0 Type-C

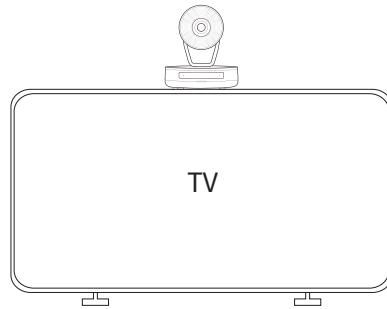
## ● 2.2 Dimension



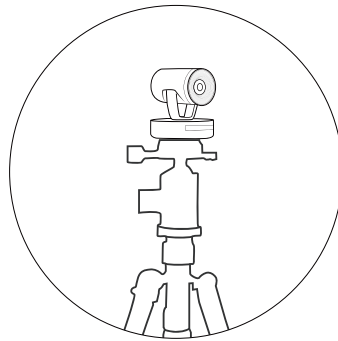
## 3. Deployment

1. Connection/system topology
2. Installation Guidelines (TV mounting/Tripod/Wall mounting/Ceiling mounting)

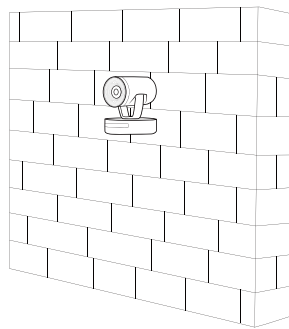
### ① TV mounting



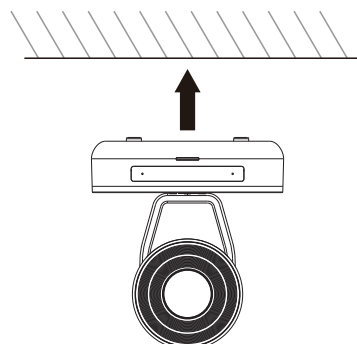
### ② Tripod



### ③ Wall mounting



### ④ Ceiling Mounting

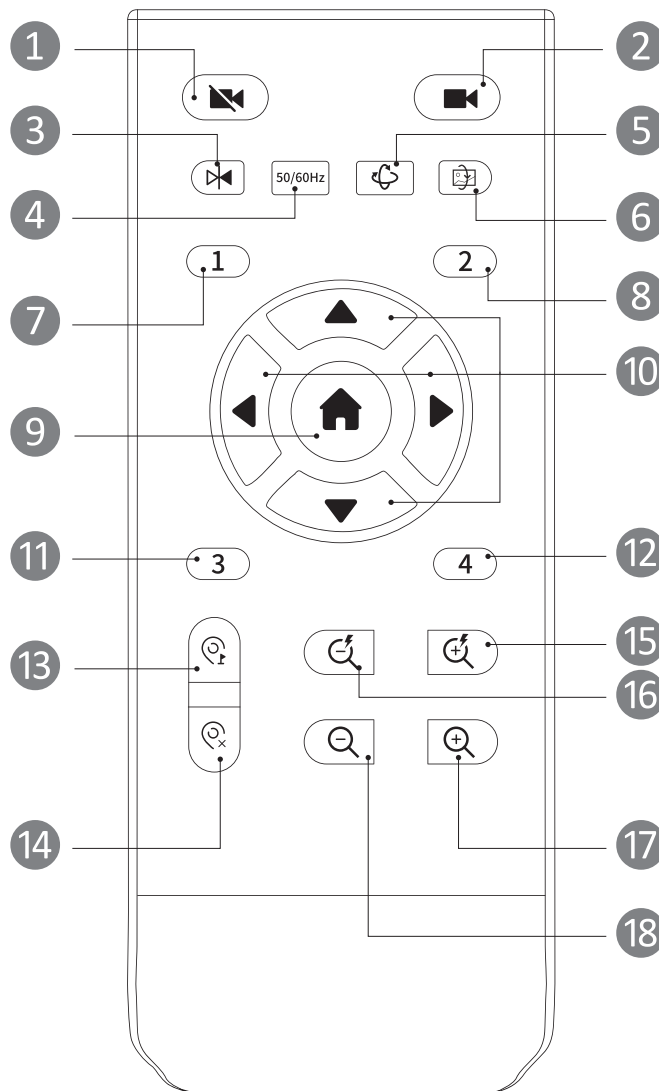


## 4. Functions

### ● 4.1 Indicators

Solid white:	power connected, and the USB already connected with Laptop/PC
Solid white off after 4 seconds:	power connected, but USB not connected
Flash white:	firmware upgrading

### ● 4.2 Remote Control



S/N	Function	Description
1	Camera Off	Turn off the device camera
2	Camera On	Turn on the device camera
3	Mirror	Mirroring the image
4	Flicker frequency switch	Switch between 50Hz and 60Hz
5	Reset and Self-check	PTZ self-check and calibrate position
6	Flip vertically	Flip the image vertically, can be installed inverted
7	Preset 1	Switch to preset 1; press "set preset" to change preset 1 to the current position
8	Preset 2	Switch to preset 2; press "set preset" to change preset 2 to the current position
9	Menu&Panorama mode	Long press: turn on/off OSD menu Short press: switch to panorama mode, the PTZ will reset to default position
10	PTZ control	Control pan/tilt function of the PTZ
11	Preset 3	Preset 3 Switch to preset 3; press "set preset" to change preset 3 to the current position
12	Preset 4	Switch to preset 4; press "set preset" to change preset 4 to the current position; Back
13	Set preset	Set the current position to preset 1/2/3/4
14	Clear preset	Clear preset 1/2/3/4
15	Fast zoom in	Fast zoom in the image
16	Fast zoom out	Fast zoom out the image
17	Zoom in	Zoom in the image
18	Zoom out	Zoom out the image

## 4.2.1 Remote control menu

Long press the remote control image panorama button (number 9 button above) to open the menu bar.

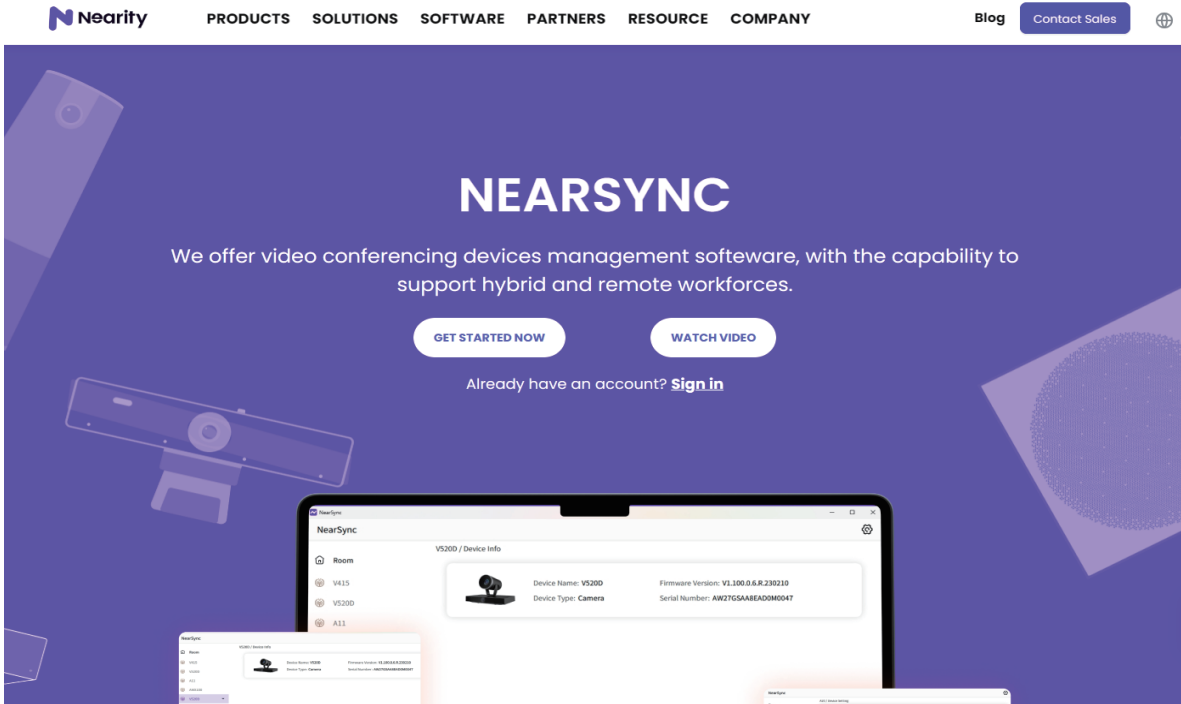
1. Exposure: anti-flicker 50/60Hz switching
2. Image: customize to adjust image brightness and chromaticity (0~20)  
Enable/turn horizontal, vertical, subtitle flipping, and HDR on
3. PTZ: Enable/disable privacy protection and boot preset bit 1
4. Mode switching: switch to select manual mode, intelligent tracking, and auto framing  
Manual mode: PTZ gimbal control  
Intelligent tracking: The automatic tracking technology realized by the combination of computer vision and motion control technology automatically tracks and captures participant information in a predefined area, and keeps it in the center of the video picture at all times  
Auto framing: Always keep the identified object or person in the center or designated position of the picture, and adjust the size and scale of the image appropriately to make the picture clearer, more stable and comfortable
5. Enable/turn off restore default image style



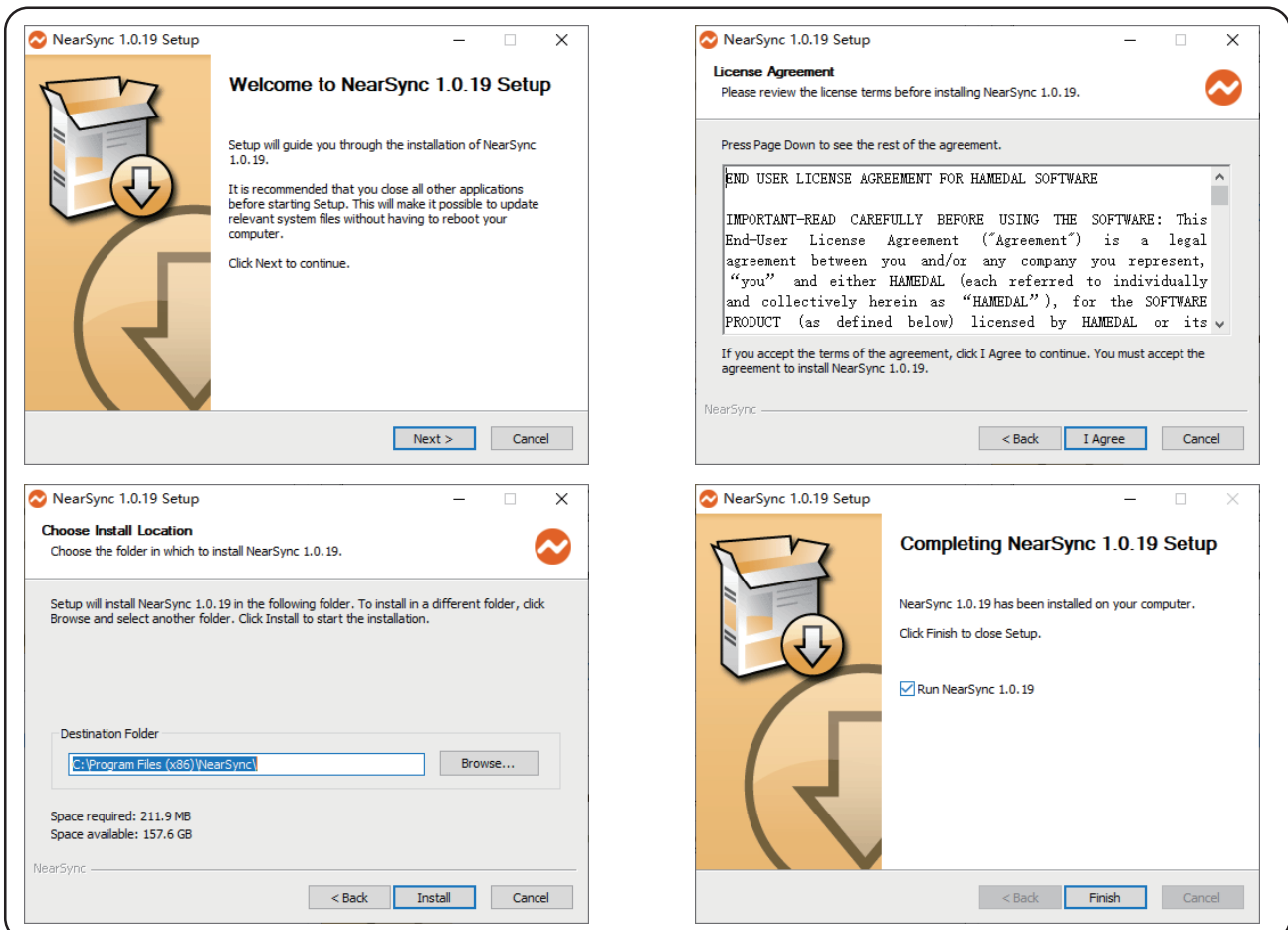
## ● 4.3 Nearsync Tool

### 4.3.1 Downloading link

Download the Nearsync on the official website. <https://nearity.co/resources/dfu>



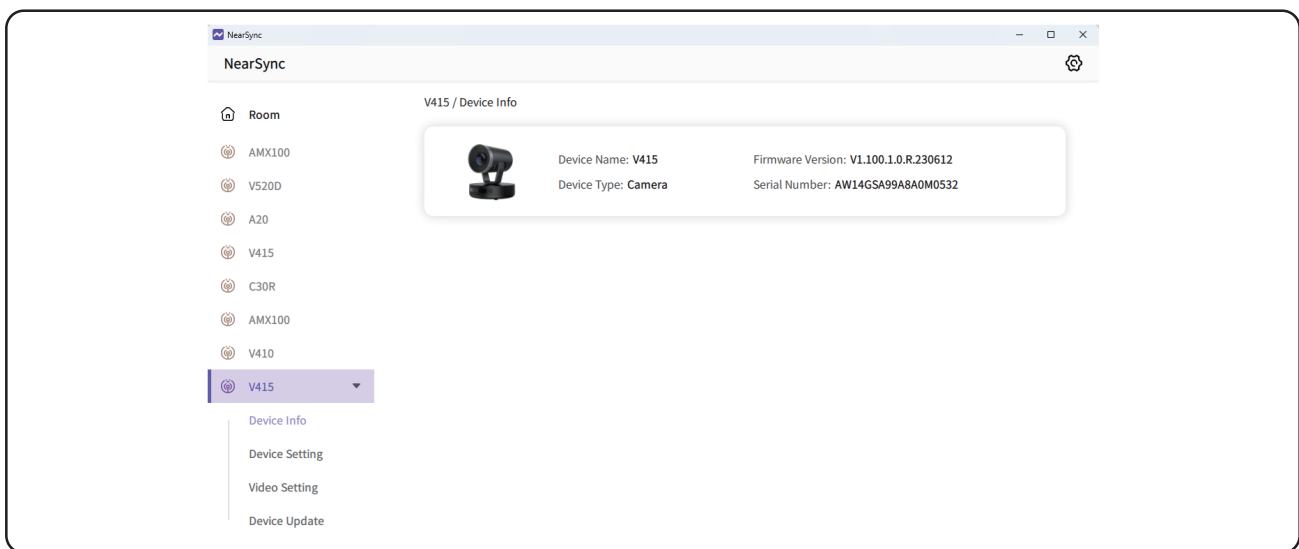
### 5.3.2 Install Nearsync



## 4.3.2 Operation

### 4.3.2.1 Home page

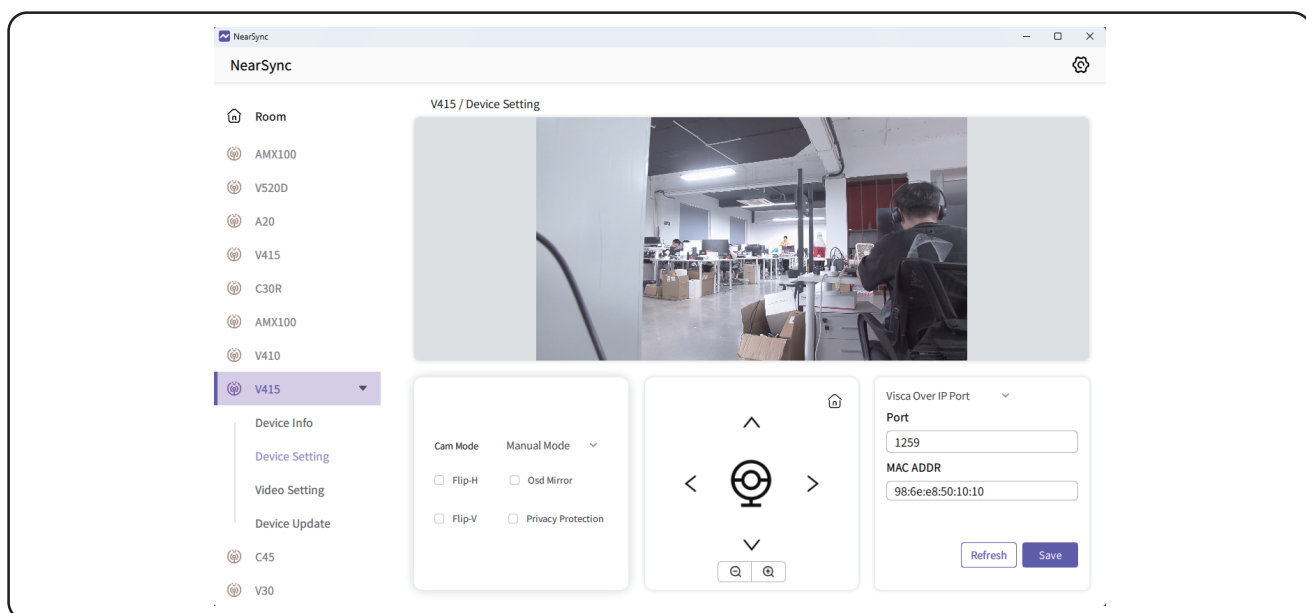
After the V415 is connected to the computer via USB, the nearsync automatically recognizes the device information.



Information include:

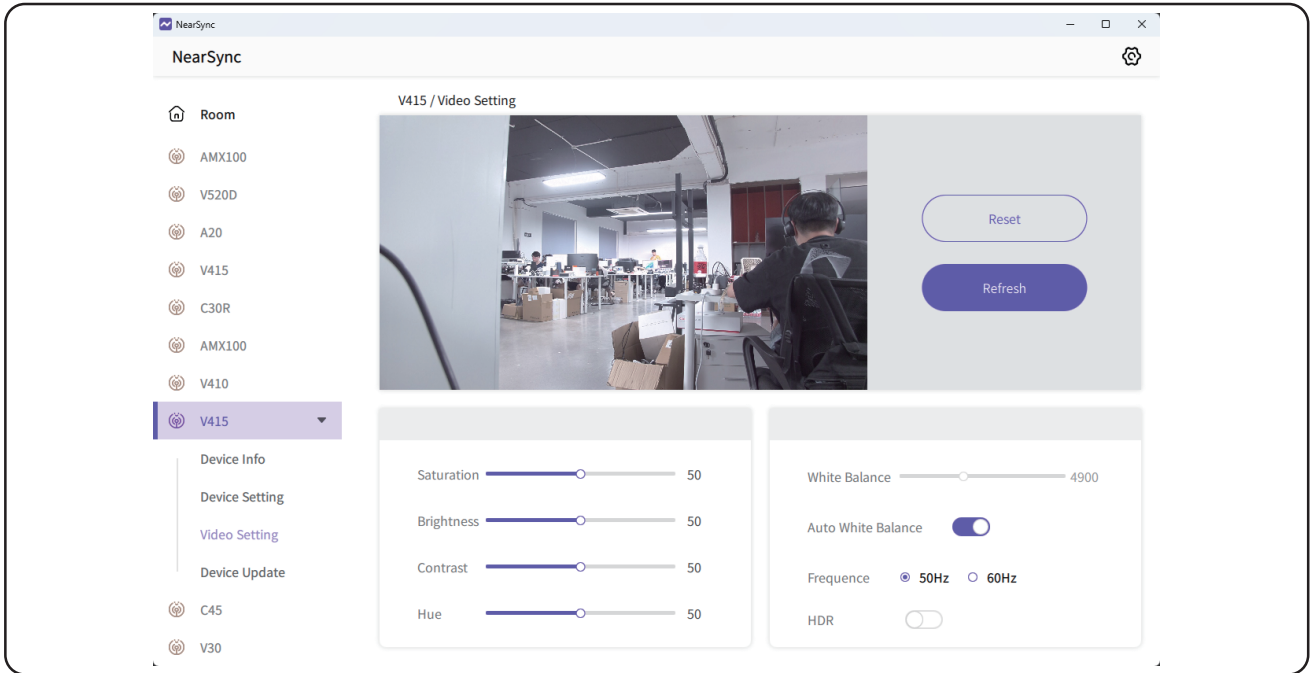
1. Product picture
2. Product information: product model, firmware version, product SN

### 4.3.2.2 Device setting



1. Preview
2. Mode Select: Manual mode, Smart Track, Auto framing
3. Flip horizontally ON/OFF
4. Flip OSD ON/OFF
5. Flip vertically ON/OFF
6. Privacy protection ON/OFF
7. PTZ: Control pan/tilt rotation, image panorama, image rapid zoom in/out
8. Visca Over IP port configuration, network configuration, Rtsip configuration

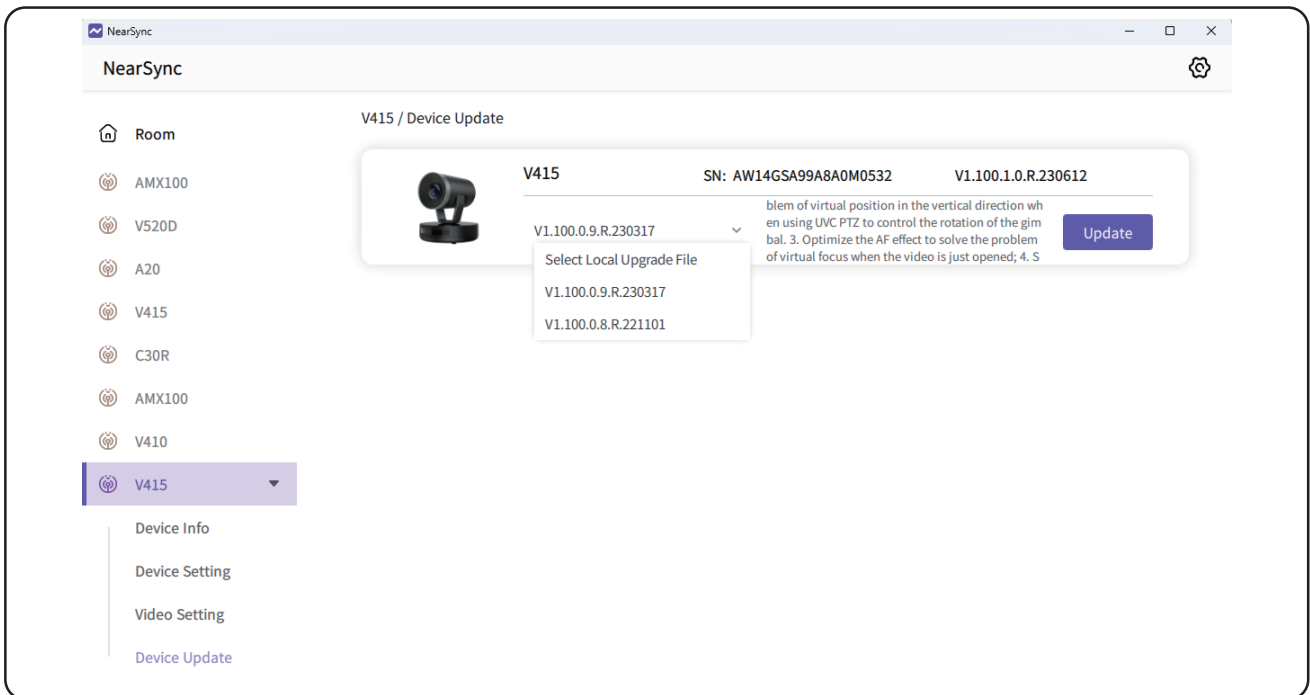
### 4.3.2.3 Video Setting



1. Preview
2. Reset image parameters, refresh the page
3. Adjust image: Saturation, brightness, contrast, chromaticity
4. Auto/Manual white balance
5. Switch flicker frequency 50/60Hz


### 4.3.2.4 Firmware upgrading

#### 4.3.2.4.1 Online Upgrading



1. Go Device Update menu.
2. The latest firmware versions will display in the drop-down menu.
3. Choose the firmware you want to update. And then click the update button to update firmware, the process will be shown as follows. The device will restart after update finished.

V415 / Device Update




<b>V415</b>	SN: AW14GSA99A8A0M0532	V1.100.1.0.R.230612
V1.100.0.9.R.230317	blem of virtual position in the vertical direction when using UVC PTZ to control the rotation of the gimbal. 3. Optimize the AF effect to solve the problem of virtual focus when the video is just opened; 4. S	

Updating

#### 4.3.2.4.2 Updating locally

Before you update, make sure that you've already got the right version from our technical team.



<b>V415</b>	SN: AW14GSA99A8A0M0532	V1.100.1.0.R.230612
V1.100.0.9.R.230317	blem of virtual position in the vertical direction when using UVC PTZ to control the rotation of the gimbal. 3. Optimize the AF effect to solve the problem of virtual focus when the video is just opened; 4. S	

Update

V1. Select Local Upgrade File


Select Local Upgrade File

V1.100.0.9.R.230317

V1.100.0.8.R.221101

1. Select local upgrade file
2. Choose the right firmware you want to update on your local PC/Laptop.
3. click to update, the process will be shown as follows. The device will restart after update finished.

V415 / Device Update



<b>V415</b>	SN: AW14GSA99A8A0M0532	V1.100.1.0.R.230612
Select Local Upgrade File	D:/FIRMWARE/General_MC_[Hamedal_V415]_V1.100.1.0.R.230612/General_MC_[Hamedal_V415]_V1.100.1.0.R.230612.bin	

Updating

## 5. Key Specification

	Technical Specifications
Camera Features	Aperture: F/1.8~2.8
	Sensor: 1/2.8 inches CMOS, 8MP
	5x optical zoom + 3x digital zoom
	FOV(D): 95°
	FOV(H): 85°
	FOV(V): 55°
	Non-distortion lens
Video Characteristics	Anti-flickering supported
	Auto-exposure supported
	Automatic white balance supported
	High Dynamic Range(HDR) supported
	3D noise suppression
	Support AI mode: Smart tracking/Auto-framing
	UHD [4K]
	Aspect ratio: 16:9
	YUV: max of 480P@30fps MJPEG: max of 1080P@30fps H264: max of 2160P@30fps
PTZ Features	Pan/Tilt range: pan $\pm 175^\circ$ ; tilt $\pm 30^\circ$
	Pan speed: $1.7^\circ \sim 100^\circ/s$
	Tilt speed: $0.7^\circ \sim 28^\circ/s$
	H & V flip supported

PTZ Features	4 position presets
	Privacy protection supported
Audio Features*	Built-in 2 noise-reduction microphone
	Pickup distance: 2 meters
Physical Characteristics	Height: 166mm(6.5 inches) Width: 153mm (6 inches) Depth: 153mm(6 inches)
	Net weight: 1117.5g(39.42 oz)
	Color: Dark Gray
Optional Mounts	Tripod bracket / TV bracket / Wall bracket
Power and Connectivity	USB 2.0 Type-C
	HDMI port
	RJ45 Ethernet
	External power supply: DC 12V/1.5A
Compatible Operating Systems	Windows/Mac/Linux
Packing List	1x V415
	1x USB cable(3m)
	1x Power adapter
	1x Remote control
	1x User manual

\*Only the new version (delivered after May.2023) of V415 has the built-in microphone design. Please check with our salesman if you have the new or old.

## 6. Caution

- Unauthorized removal and strong impact may cause damage to the device.
- The device should be kept away from high temperature environment, heat source, strong magnetic field, strong electric field.
- Do not immerse the device in water or other liquids. Keep in a dry, cool place.
- Be sure to fix the camera in case it falls out.
- Do not touch the surface of the lens or clean the product with a cotton swab or cotton cloth, use a non-abrasive cleaner to remove dirt from the product or the surface of the lens, and avoid using any corrosive solutions.

## 7. FAQ

**Q: Can the V415 conference camera support HDMI and USB output at the same time?**

A: Yes. Nearity V415 can support HDMI and USB video output simultaneously.

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**Q: Does the V415 PTZ support Daisy-chain with Speakermic A20 or other microphone devices?**

A: No. There's no audio input port on the camera. And the PTZ ethernet port is only for 3rd protocol access. Can not cascade speakermic.

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**Q: Does the AI smart tracking mode same as speaker tracking function?**

A: No, the Smart Tracking mode is using the human detection technology, so even the presenter not talks, the camera still track him/her. Speaker tracking only works when the presenter is talking.