



Avonic 4K Video Conference Camera USB3.0

AV-CM20-VCU

User Manual

Contents

Introduction.....	3
Congratulations.....	3
Contact.....	3
Join Avonic.....	3
Safety Notes.....	3
Package contents and Accessories	4
Contents.....	4
Handling precautions.....	4
Product Overview	5
Features.....	5
Installation.....	6
Connections.....	6
Camera placement	6
Operation.....	7
Remote controller	7
OSD Menu.....	10
Maintenance.....	14
Camera Maintenance	14
Unauthorized Use.....	14
Troubleshooting.....	14
General advise.....	14
Power Issues.....	14
Image.....	15
Control	15
WebGUI (if applicable)	15
Appendix A Dimensions	16

Introduction

Congratulations

Thank you for your Avonic purchase. Before beginning to operate this device, please read the manual in order to make sure the best performance is obtained. Save this manual for future reference.

Contact

For any questions or suggestions, contact your reseller or the local distributor of Avonic. Find the local distributor on the website of Avonic. For the most recent version of the manual or datasheet, look at the Avonic website: www.avonic.eu

Join Avonic



[facebook.com/
avonicPTZ](https://facebook.com/avonicPTZ)



[linkedin.com/
company/avonic/](https://linkedin.com/company/avonic/)



[twitter.com/
avonic](https://twitter.com/avonic)

Safety Notes

- Installation and servicing should only be done by Qualified Service Personnel and conform to all local codes.
- This unit is designed for indoor use only and it must not be installed where exposed to water or other liquids and moisture.
- Before powering on the device, check the input power voltage carefully.
- Avoid shock and vibration when transporting and installing the device.
- Electronic devices produce heat. Do not block the ventilation slots of the device and make sure the installation environment is well ventilated to avoid overheating.
- Before cleaning, unplug the power cable. Use a soft, damp cloth to clean the device, do not use strong or abrasive detergent to clean that will damage the device.
- If you wish to dispose this product, please contact Avonic to obtain info about the disposal procedure.

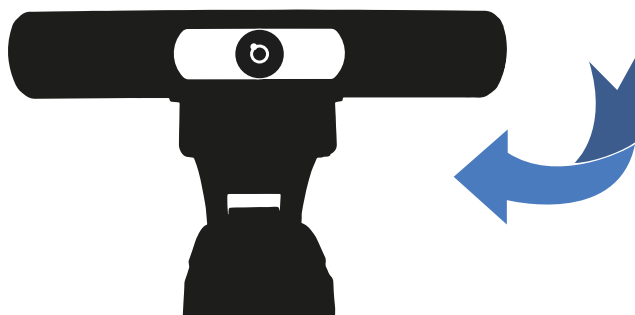
Package contents and Accessories

Contents

Quantity	Description	Avonic SKU
1 pc	Device	AV-CM20-VCU
1 pc	Power Supply	AV-CM20-PSU
1 pc	Remote Control	AV-CM20-RC
1 pc	USB 3.0 cable	AV-USB30-AB

Handling precautions

Be cautious to take the camera by its base and do not touch the lens.



Product Overview

The Avonic CM20-VCU is a high-quality 4K USB 3.0 video conferencing camera with integrated dual microphones. The camera is equipped with a 4K sensor and has digital PTZ capabilities.



Features

- Lens: Auto focus lens with 120° Horizontal FOV.
- Ultra HD 4K: 2160P ultraHD, 1/2.5 inch, progressive high quality CMOS sensor.
- Output: up to 2160p30 on both hdmi and USB3.0
- Control: Control the camera with UVC, IR remote control included
- Presets: Up to 10 presets with 0.1° accuracy.

Installation

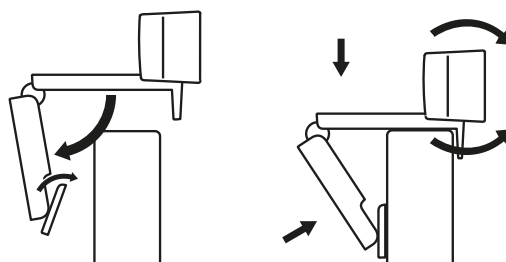
Connections



1. Audio Line in (not in use)
2. HDMI output
3. USB 3.0 connector

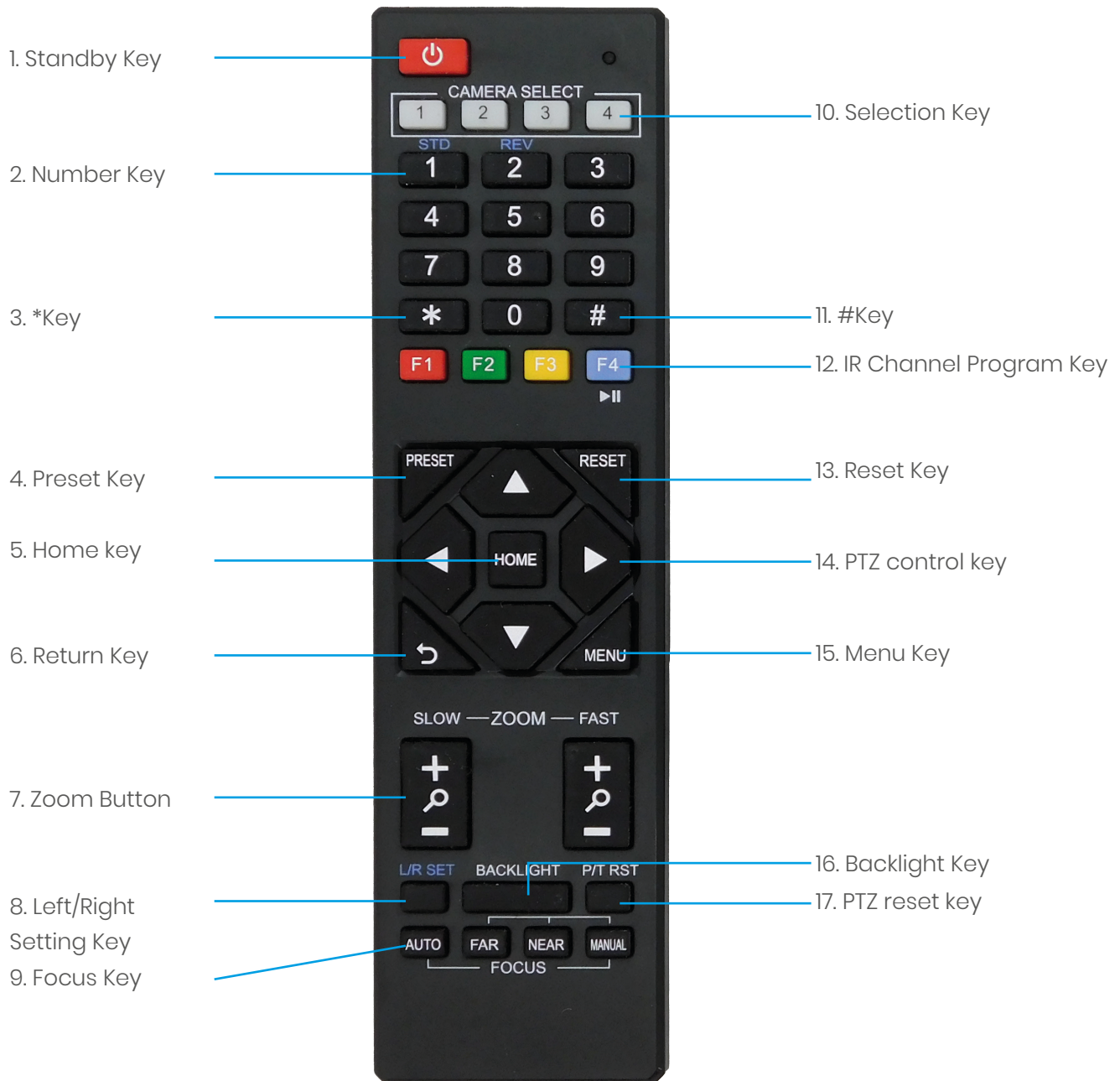
Camera placement

The Avonic CM20-VCU is designed to be placed on top of a computer monitor.



Operation

Remote controller



1. Standby Key

This button has no function with this camera.

2. Number Key

Call preset PTZ position.

3. *Key

Used with other keys.

4. Preset Key

Preset memory in combination with numeric keys (0-9)

5. Home Key

The PTZ camera/image will go back to the center position, or "enter" function in "On Screen Display (OSD)" menu.

6. Return Key

Return back tot the previous level of the menu.

7. Zoom + -

Zoom the camera with these buttons. Slow zoom in and out/ fast zoom in and out.

8. Left/Right Setting Key

This button has no function with this camera.

9. Focus Key

This button has no function with this camera.

10. Selection Key

Select IR channel 1 to 4 to control multiple cameras individually.

11. # Key

Used with other keys.

12. IR Channel Program Key

[* + # + F1/F2/F3/F4]: program camera to IR channel 1 to 4

13. Reset Key

Delete the memory preset in combination with the numeric keys (0-9).

14. PTZ Control Key

When zoomed in, move the image with the up/down/left/right keys.

15. Menu Key

This Menu button opens of closes the the OSD menu. If the menu is not in English, please press [*]+[#]+[1] to change the Menu language to English.

16. Backlight Key

This button has no function with this camera.

17. PTZ Reset Key

This button has no function with this camera.

Quick Codes list

[*]+[#]+[1] : OSD menu default English

[*]+[#]+[4] : 1080P@30fps default hdmi resolution

[*]+[#]+[5] : From firmware 8.2.29 Disable microphone,
setting is persistent even after power cycle

[*]+[#]+[6]: Factory default

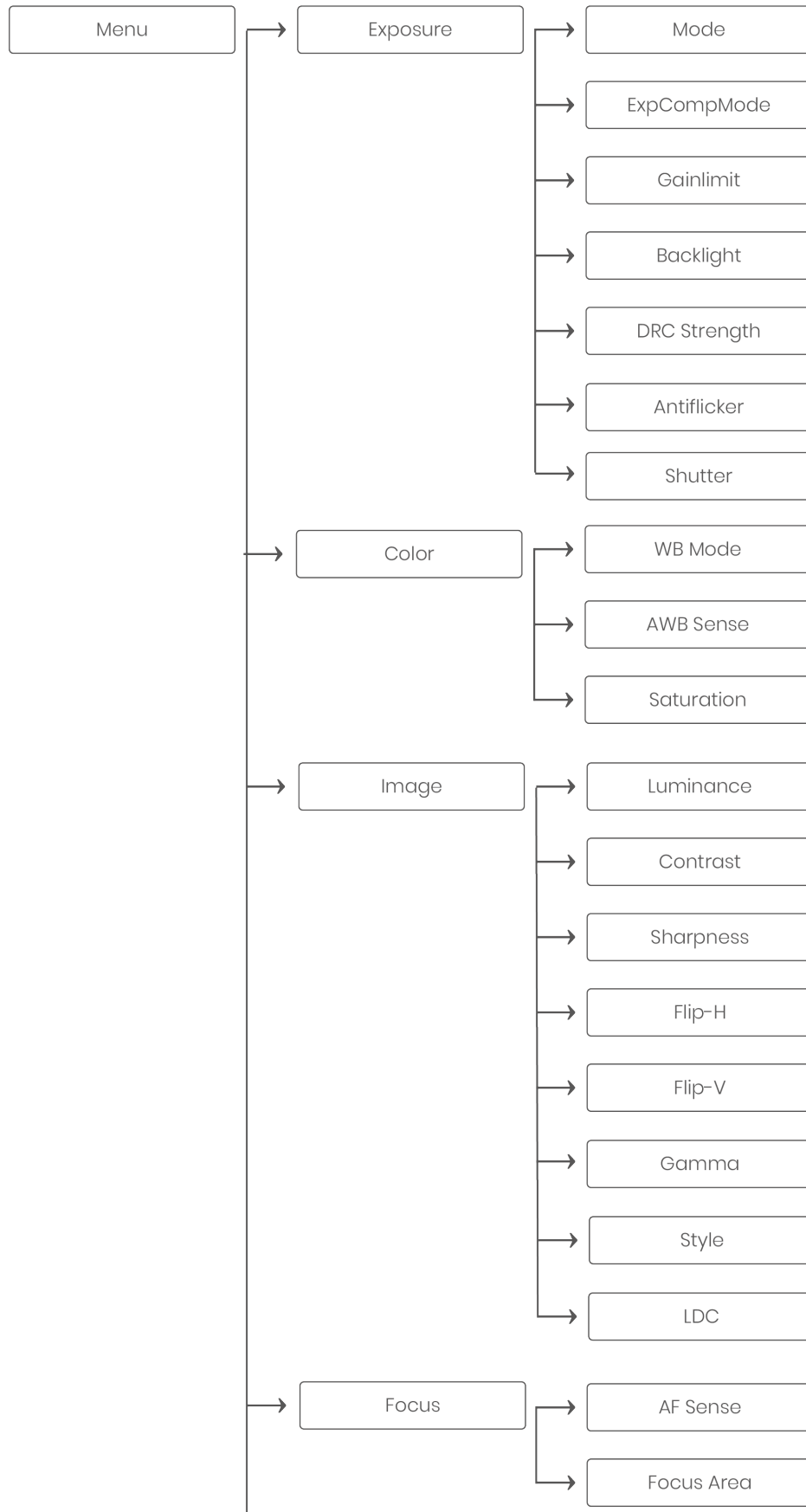
[*]+[#]+[7]: 1080P@60fps default resolution

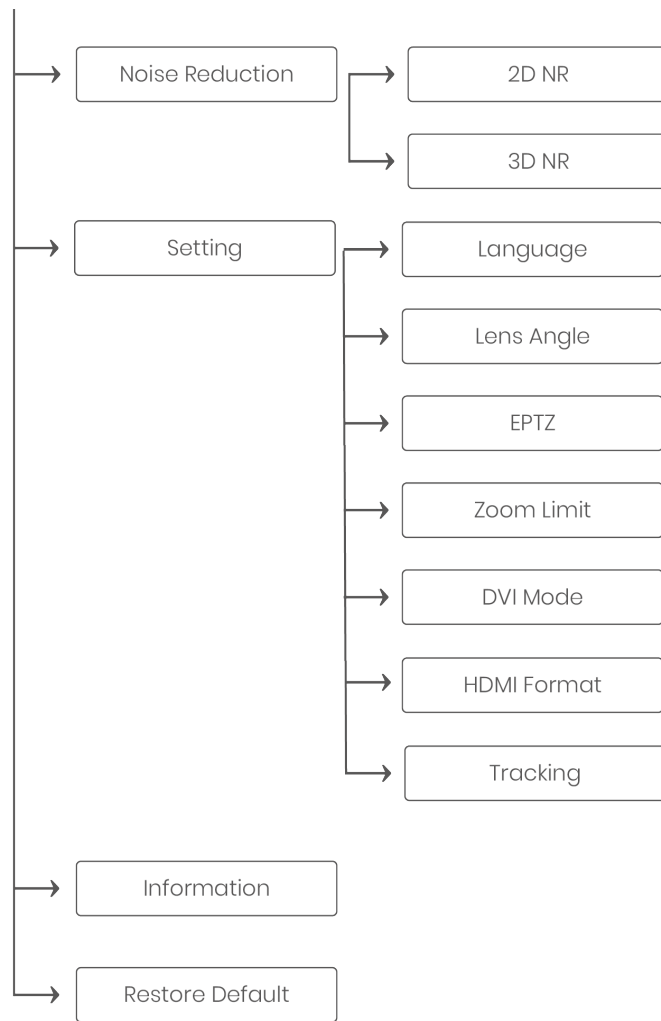
[*]+[#]+[9]: From firmware 8.2.29 Enable microphone,
setting is persistent even after power cycle

Contact Avonic for latest firmware info@avonic.eu

OSD Menu

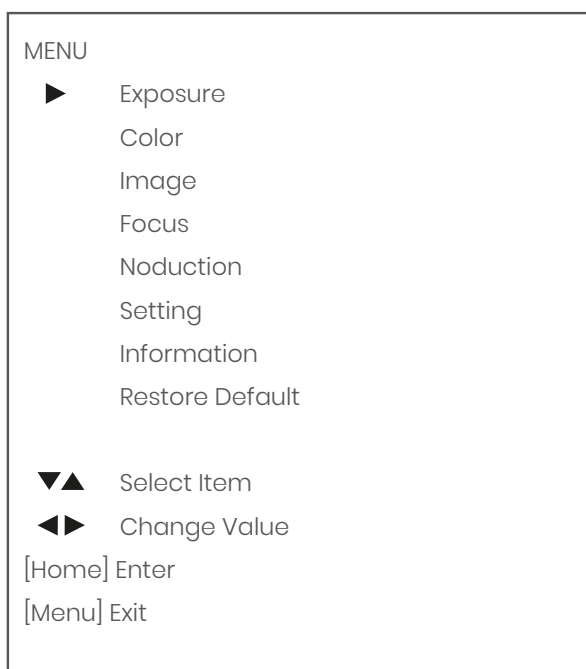
The OSD menu can be accessed by the Remote Control or an Avonic PTZ controller. In the following pages, the navigating is described for using the IR Remote Control.





1. MENU

Press [MENU] button to display the main menu on the screen. Use the arrow buttons to move the cursor to the item to be set. Press the [HOME] button to enter the corresponding sub-menu.



2. EXPOSURE

EXPOSURE		
►	Mode	Full Auto / Bright / Shutter Priority
	ExpCompMode	ON / OFF
	Exposure Compensation	-7 ~ 7
	Gainlimit	0 ~ 15
	Backlight	ON / OFF
	DRC Strength	0 ~ 8
	Antiflicker	50hz / 60hz / OFF
▼▲		
◀▶	Select Item	
	Change Value	
[Menu] Back		

3. COLOR

COLOR		
►	WB Mode	auto / indoor / outdoor / One Push / manual / VAR
	AWB Sense	low / middle / high
	Saturation	60 % ~ 200%
	Focus	
	Noise Reduction	
▼▲	Select Item	
◀▶	Change Value	
[Menu] Back		

4. IMAGE

IMAGE		
►	Luminance	0 ~ 14
	Contrast	0 ~ 14
	Sharpness	0 ~ 14
	Flip-H	ON / OFF
	Flip-V	ON / OFF
	Gamma	0.45 / 0.50 / 0.56 / 0.63 / Default
	Style	Clarity / Bright / PC / Clarity (LED) / Normal
	LDC	-10 ~ 10
▼▲	Select Item	
◀▶	Change Value	
[Menu] Back		

5. FOCUS

FOCUS

- ▶ AF Sense Low / High / Medium
- Focus Area Middle / Upper half / Lower half / All

- ▼▲ Select Item
- ◀▶ Change Value

[Menu] Back

6. NOISE REDUCTION

NOISE REDUCTION

- ▶ 2D NR Close / Auto / 1 ~ 5
- 3D NR Close / 1 ~ 8

- ▼▲ Select Item
- ◀▶ Change Value

[Menu] Back

7. SETTING

SETTING

- ▶ Language English / Chinese
- EPTZ ON / OFF
- Zoom Limit .5x / 2x / 3x / 4x / 8x
- DVI Mode DVI / HDMI
- HDMI Format 4K30 / 1080p30 / 1080i60
- Tracking 0.45 / 0.50 / 0.56 / 0.63 / Default

- ▼▲ Select Item
- ◀▶ Change Value

[Menu] Back

8. INFORMATION

Read out of model and firmware version

9. RESTORE DEFAULT

RESTORE DEFAULT

- ▶ Restore default? NO / YES

- ▼▲ Select Item
- ◀▶ Change Value

[Menu] Back

[Home] OK

Maintenance

Camera Maintenance

- If the camera will not be used for a long time, please turn off the power switch, disconnect AC power cord of AC adaptor to the outlet.
- Use soft cloth or tissue to clean the camera cover.
- Please use the soft dry cloth to clean the lens. If the camera is very dirty, clean it with diluted neuter detergent. Do not use any type of solvents, which may damage the surface.

Unauthorized Use

- No filming of extreme bright objects for a prolonged period of time, such as sunlight, light sources, etc.
- No operating in unstable lighting conditions, otherwise the image could be flickering.
- No operating close to powerful electromagnetic radiation, such as TV or radio transmitters, etc.

Troubleshooting

General advise

- Turn the camera off and on again and check if the problem persists.

Power Issues

- No self-test (applies only to PTZ cameras) and no power LED
 - Check the net power
 - Check the power supply

Image

- No image
 - Check power of camera and monitor
 - Check video cable quality and length
 - Check if video specifications of monitor match the specs of the camera
- Abnormal image
 - Check video cable quality and length
 - Check cable connections
- Dithering or flickering image
 - Check camera fixation and nearby vibration sources
 - Check anti-flickering setting in OSD
 - Check Noise Reduction settings in OSD
- Color issues
 - Check options in OSD, like exposure, color temp, Red and Blue tuning

Control

- No self-test (PTZ cameras only) and no power LED
 - Check the net power
 - Check the power supply
- Remote Controller does not work
 - Check power of the controller
 - Check RS-232 or RS-485 cable quality, length, polarity and network architecture
 - Check serial communication settings on both camera and controller
 - Check VISCA / PELCO address settings on both camera and controller

WebGUI (if applicable)

- Cannot enter WebGUI
 - Check network cable
 - Check if PC is in the same subnet as camera
- Firmware update failed
 - Check firmware file integrity, download it again.

Appendix A Dimensions

