



## Avonic 4K Conference Camera USB3.0

AV-CM22-VCU

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# INTRODUCTION

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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](http://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

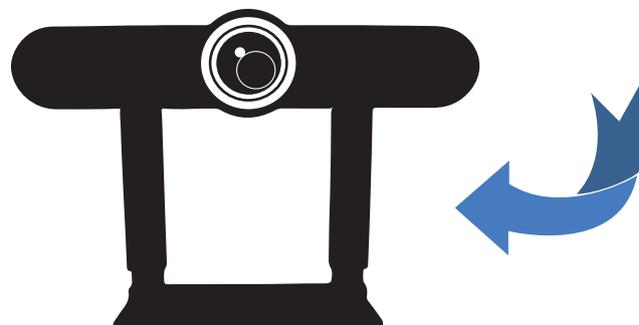
## Contents

Quantity	Description	Avonic SKU
1 pc	Device	AV-CM22-VCU
4 pc	USB Power Supply (EU, UK, US, AUS)	AV-CM20-PSU
1 pc	Remote Control	CM-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

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The Avonic CM22-VCU boasts a 4K, wide angle lens up to 120 degrees FOV that makes sure you can capture all attendees. It's Smart automatic and fully user configurable modes guarantee crystal clear video even under the most challenging light conditions. Built in user configurable dual microphones allow for easy audio capture.

A true integration product with a discrete design and mount developed for PRO-AV installations. It can be easily mounted either on top of or below a screen for optimal line of sight during a meeting. The mount can be used in combination with modern thin-bezel screens.

Designed to last the CM22-VCU comes with 3 year warranty



## Features

- Lens: Auto focus lens with 120° Horizontal FOV.
- Crystal Clear Image: : 4K Progressive CMOS sensor 2160P UltraHD
- Output: HDMI and USB3.0 up to 4K30 or 1080p30 when using USB 2.0
- Audio: Built in noise cancelling micorphones with 4 meter pick up range
- Control: Control the camera via any UVC based videoconference application or the included IR remote control
- Presets: 10 User definable presets with Digital Pan Tilt and Zoom including startup preset
- Mount: The CM22 comes with an included detachable integration mount with the ability to secure and mount the camer above or below a screen

## Applications

- Huddle Rooms
- Telemedicine
- Desktop Video Conferencing
- Small and Medium Size meeting rooms

# INSTALLATION

## Connections

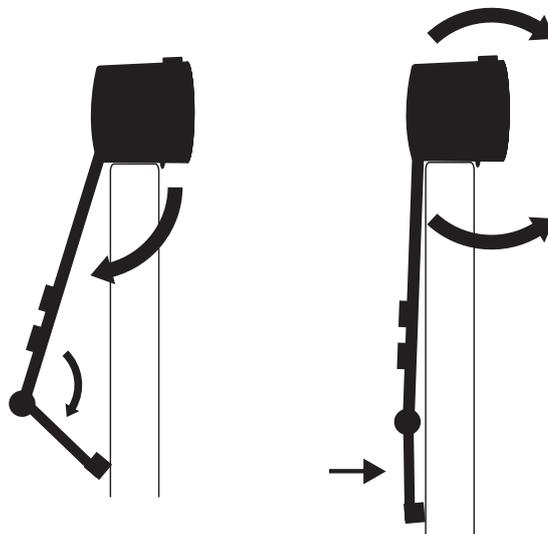


1. HDMI output
2. USB 3.0 connector

## Camera placement

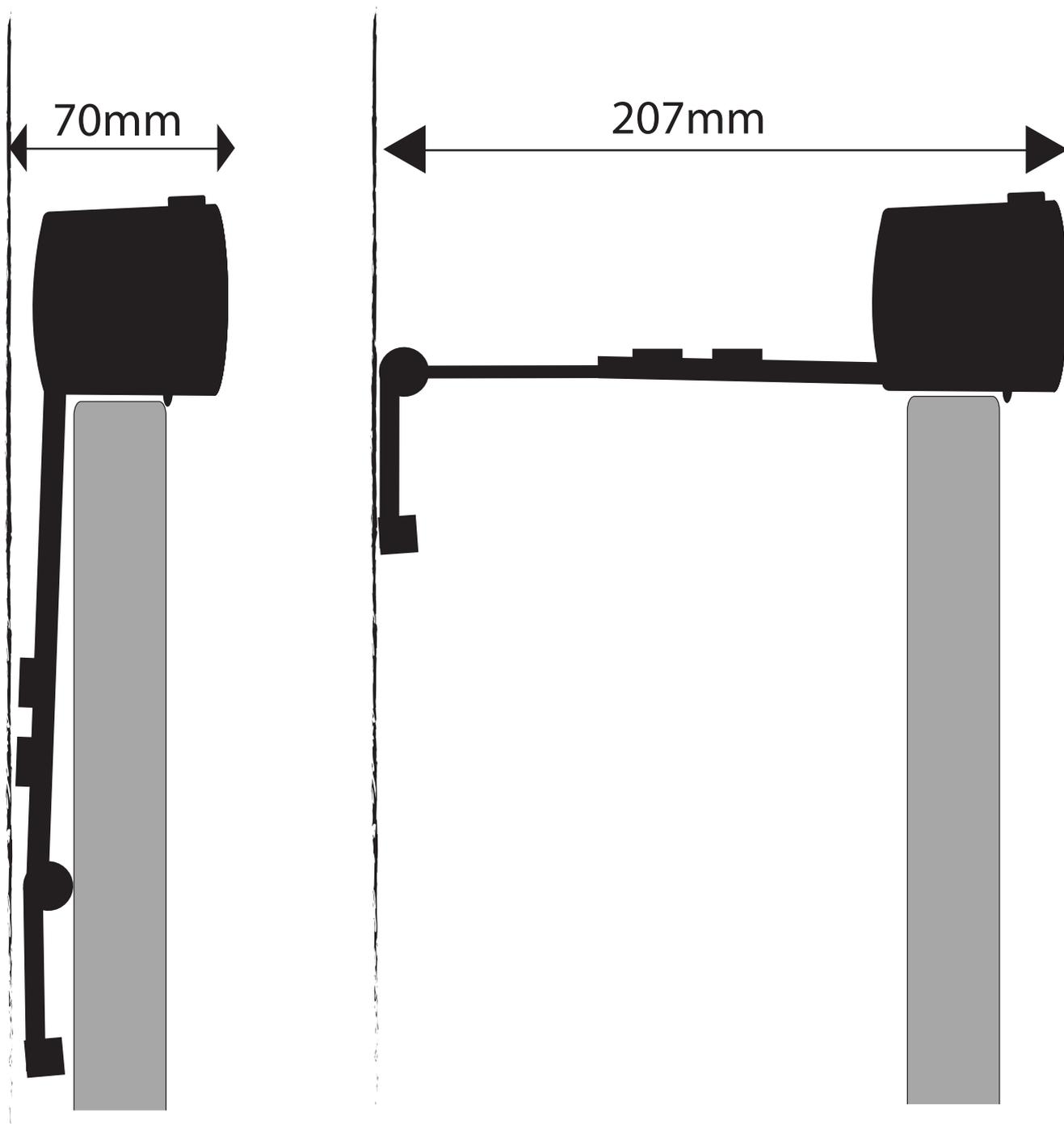
The CM22 comes with a detachable integration mount with multiple placement options:

1. Monitor placement :



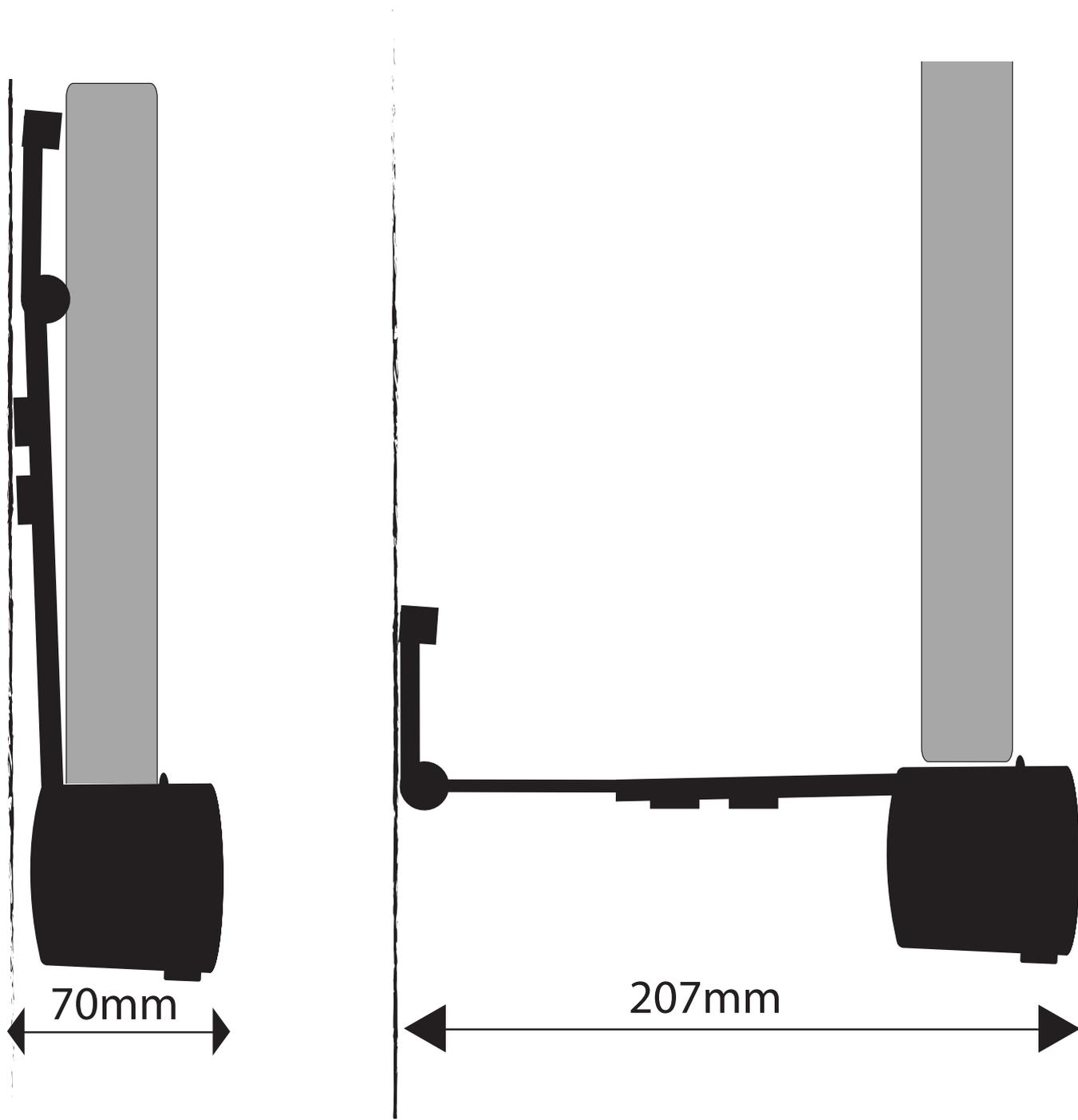
2.. Wall mounted above a screen:

The minimum (depending on connector type used) and maximum depth are indicated, due to the dual articulated sliding mount design there are numerous variations to make.



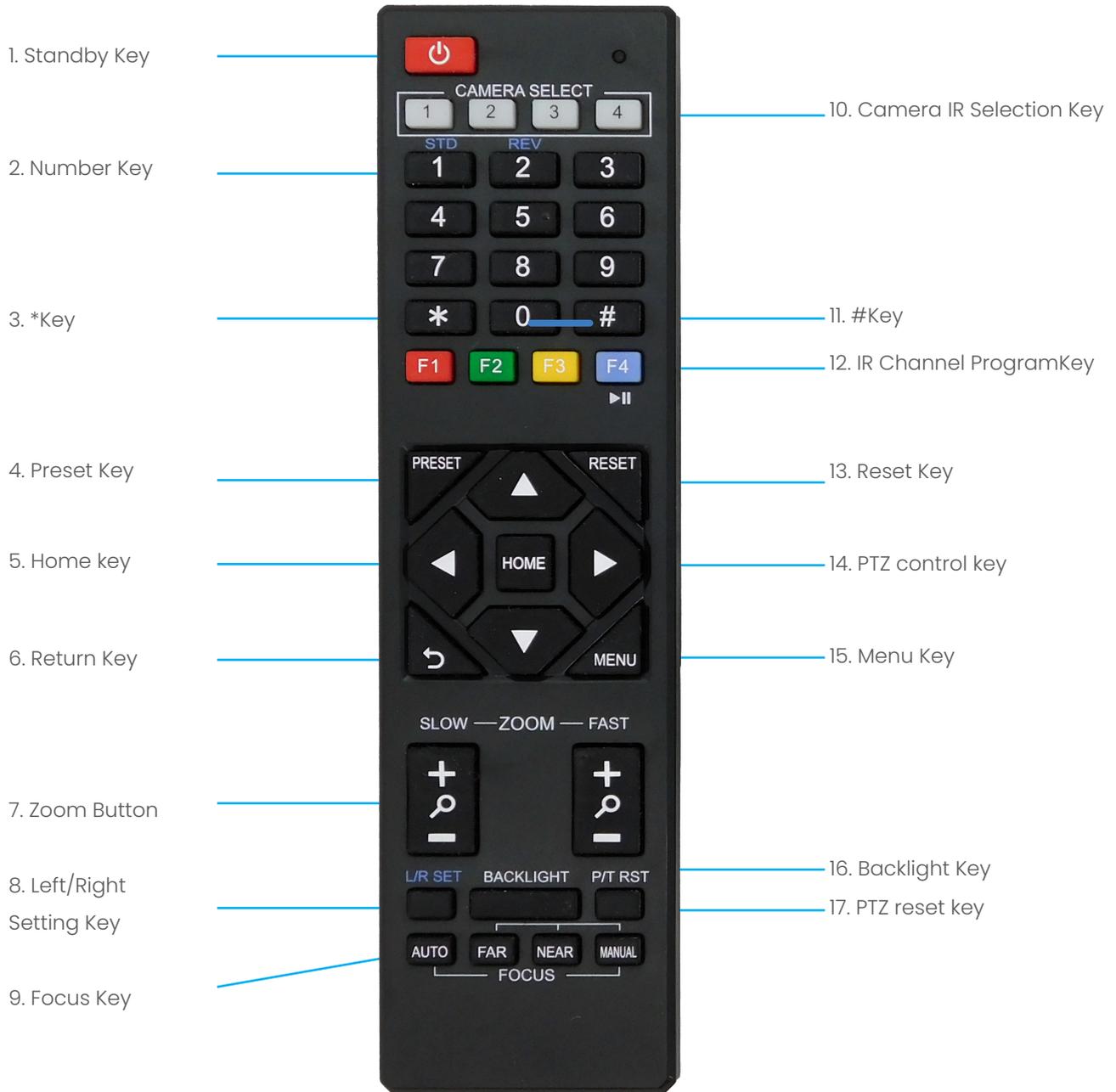
2.. Wall mounted below a screen:

The minimum (depending on connector type used) and maximum depth are indicated, due to the dual articulated sliding mount design there are numerous variations to make.



# 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] : Disable microphone, setting is persistent even after power cycle

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

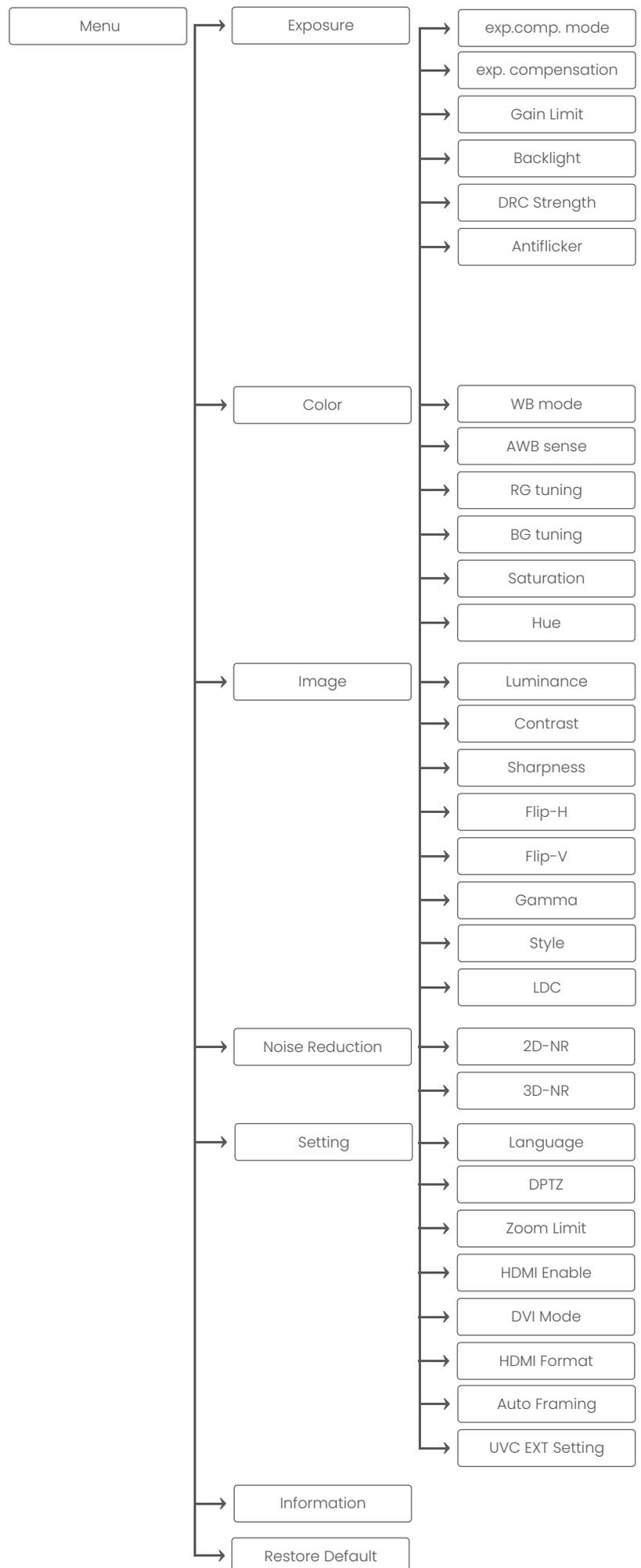
[\*]+[#]+[7] : 1080P@60fps default resolution

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

Contact Avonic for latest firmware [info@avonic.eu](mailto:info@avonic.eu)

## OSD Menu

The OSD menu can be accessed by using the IR Remote Control. 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.

MENU

- ▶ Exposure
- Color
- Image
- Noise Reduction
- Setting
- Information
- Restore Default

▼▲ Select Item

◀▶ Change Value

[Home] Enter

[Menu] Exit

## 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
	RG Tuning	-10 ~ 10
	BG Tuning	-10 ~ 10
	Saturation	60 % ~ 200%
	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 / EXT / Default
	Style	Default / Normal / Clarity / Bright / PC / Clarity (LED) / Face
	LDC	-10 ~ 10

▼▲ Select Item

◀▶ Change Value

[Menu] Back

### 5. NOISE REDUCTION

#### NOISE REDUCTION

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

▼▲ Select Item

◀▶ Change Value

[Menu] Back

## 6. SETTING

SETTING	
▶ Language	English / Chinese
DPTZ	ON / OFF
Zoom Limit	1.5x / 2x / 3x / 4x / 8x
HDMI Enable	On / Off
DVI Mode	DVI / HDMI
HDMI Format	4K30 / 1080p30 / 1080i60 / 1080i50
Auto Framing	OFF / ON
▼▲	Select Item
◀▶	Change Value
[Menu]	Back

## 7. INFORMATION

Read out of model and firmware version
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## 8. RESTORE DEFAULT

RESTORE DEFAULT	
▶ Restore default?	NO / YES
▼▲	Select Item
◀▶	Change Value
[Menu]	Back
[Home]	OK

# MAINTENANCE

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## 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 neutral detergent. Do not use any type of solvents, which may damage the surface.

## Unauthorized Use

- Do not film extreme bright objects for a prolonged period of time, such as sunlight, light sources, etc.
- Do not operate in unstable lighting conditions, otherwise the produced image could be less than optimal.
- Do not operate close to powerful electromagnetic radiation, such as TV or radio transmitters, etc.

# TROUBLESHOOTING

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## General Advice

- Turn the camera off and on again and check if the problem persists.
- Restore to Factory Default

## Power Issues

- No power LED
  - Check the net power
  - Check the power supply
  - Check the USB connection to the computer

## 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, white balance, color temp, Red and Blue tuning

## Control

- Camera not responding to the IR remote control
  - check if the batteries are full and correctly placed in the remote control
  - check if the remote control is set to the correct IR camera select channel