



# **AF-2MVD-VARIB / AF-2MVD-VARIW User Manual**

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# Welcome

Thank you for purchasing an Amcrest camera!

This user manual is designed to be a reference tool for the installation and operation of your camera. Here you can find information about the camera's features and functions, as well as information to aid in troubleshooting.

Many of the setup and installation sections have corresponding videos on YouTube. To access the setup videos, please go to <http://amcrest.com/videos>.

For access to other support related materials and information, please visit us at <http://amcrest.com/support>.

To contact Amcrest support, please do one of the following:

- Visit <http://amcrest.com/contacts> and use the email form.
- Call Amcrest Support using one of the following numbers:
  - Toll free: (888)212-7538 ○ International Callers (Outside of the US): +1-713-893-9656 ○ USA: 713-893-8956 ○ Canada: 437-888-0177 ○ UK: 203-769-2757
- Email Amcrest Customer Support: [support@amcrest.com](mailto:support@amcrest.com)

## Important Safeguards and Warnings

### 1. Electrical Safety

All installation and operation should conform to your local electrical safety codes. The product must be grounded to reduce the risk of electrical shock. We assume no liability or responsibility for any fires or electrical shock caused by improper handling or installation.

### 2. Transportation Security

Heavy stress, violent vibrations, and excess moisture should not occur during transportation, storage, and installation of the device.

### 3. Installation

Handle the device with care. Do not apply power to the camera before completing installation. Do not place objects on top of the camera.

### 4. Repair Professionals

All the examination and repair work should be performed by a qualified service engineer. We are not liable for any problems caused by unauthorized modifications or user attempted repair.

### 5. Environment

The camera should be kept in a cool, dry place away from direct sunlight, flammable materials, explosive substances, etc. This product should be transported, stored, and used only in the specified environments as stated above. Do not aim the camera at a strong light source as it may cause overexposure of the picture or affect the longevity of the camera's sensors. Ensure the camera is in a well-ventilated area to prevent overheating.

## 6. Operation and Maintenance

Do not touch the camera sensor or lens directly. To clean dust or dirt off the lens, use an air blower or a microfiber cloth.

## 7. Accessories

Be sure to use only the accessories recommended by the manufacturer. Before installation, please open the package and check to make sure that all the components are present. Contact the retailer that you purchased from or Amcrest directly if anything is broken or missing in the package.

# Product Introduction

This series of camera is adopted with CMOS image sensors that provide high performance, high megapixel resolution that supports HD video and 4x Optical zoom performance. It supports monitoring signals via a coaxial transmission and standard BNC connection. Transmission distances can range more than 300m (984.25ft) based on 75-3 coaxial cable. This series can also support CVI/TVI/AHD/Analog output as well as recognize high speed, long distance, and real time video transmissions.

# Features



- 1/2.8" 2.16MP Sony STARVIS CMOS
- 100dB ROI Window WDR
- Auto Defog, HLC, Privacy Mask, motion detection, 32x Sense up.
- 2D/3D DNR, anti-ghosting effect.
- HD-CVI/HD-TVI/AHD (Output Selectable OSD Switch) & CVBS output simultaneously.
- Mult-language OSD Control from Recorder
- DC12V, 2.0A

## Installation

- 1) Locate the position in which you would like to place your camera and apply the included mounting sticker to the surface.
- 2) Using a drill bit that is the same diameter or slightly smaller, than the included drywall anchors, drill out the smaller circles on the sticker and insert the drywall anchors.

**Note:** The drywall anchors should be in the same bag as the screws and are designed to secure the screws to the mounting surface.

- 3) Using the included wrench, unscrew the three bolts holding the vandal dome cover to the back plate.

**Note:** Before proceeding with the next step you will want to break out the cable routing channel with a pair of needle nose pliers if you wish to mount the camera with the wires outside of the wall or mounting surface.

- 4) Attach the power and desired video feed cabling.
- 5) Match the holes of the base plate to the holes on the mounting surface and secure the base plate to the mounting surface using a Phillips head screwdriver.
- 6) Position the camera with the framing you desire and secure the vandal dome cover to the base of the camera using the included wrench.

## Connection

This camera series will have three leads at the end of the wiring harness. Their functions are as follows:

**Green:** TVI,CVI,AHD

**Yellow:** Analog (CVBS)

**Red:** DC12V, 2.0A power input

**Note:** If the proper mode configuration is not set, **you will not be able to view your camera on your DVR.** Please make sure you have the proper settings on your camera before you begin setting up or installing.

To connect your camera to your DVR, please follow the steps provided below:

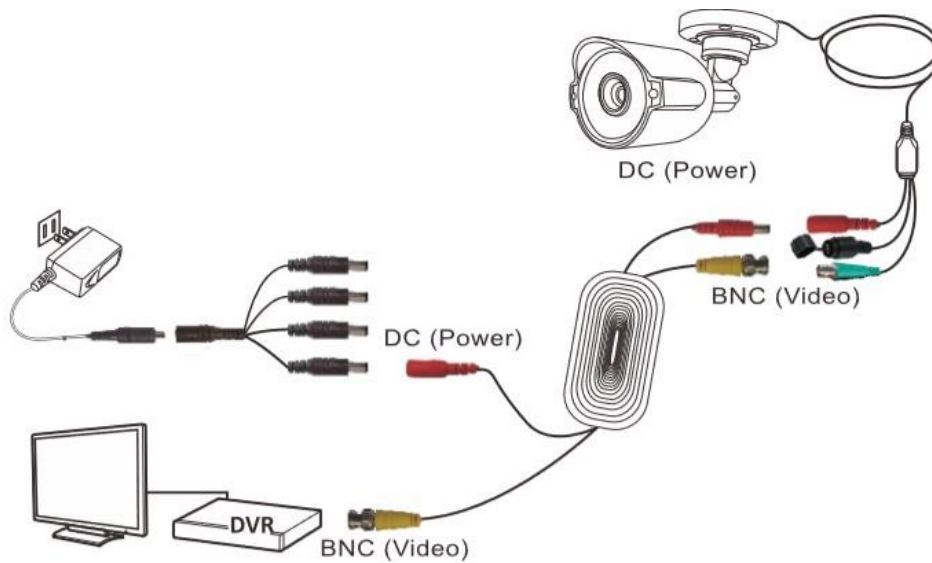
**Step 1:** Connect a BNC (coaxial) cable to the video out connection of your camera.

**Step 2:** Connect the male end of the DC power connector of the BNC (coaxial) cable to the female end of the power connector of the camera.

**Step 3:** Connect the BNC (coaxial) cable to a video out channel on the back of your DVR.

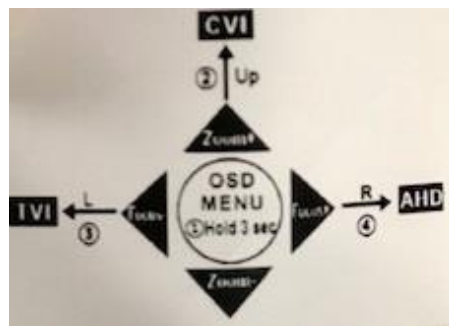
**Step 4:** Connect the male end of the DC power connector of the power adapter to the female end of the power connector of the BNC (coaxial) cable. Plug in the power adapter to apply power to the camera.

For more information on the installation process described, refer to the image below for more details.



## Understanding the OSD menu

Most Amcrest Analog 4-in-1 Varifocal cameras, will come equipped with a toggle switch. This toggle switch is used to access the OSD menu as well as manually control and switch between different modes on your camera. Attached to these devices are an instructional set highlighting the basic uses of the toggle switch:



### Switching Modes

The camera can be switched between TVI, CVI, AHD, and Analog modes, depending on the device it is hooked up to, using the toggle switch. To switch the camera to CVI mode, press and hold the menu (1) button for 5 seconds then, while holding, move the switch upward (2). To switch to TVI mode, press and hold the menu (1) for 5 seconds then, while holding, move the switch to the left (3). To switch to AHD or analog, press and hold the menu (1) button for 5 seconds then, while holding, move the switch to the right (4). **Most Amcrest products function in CVI so it is recommended to keep the camera in CVI mode for best results.**

### OSD Menu Functions

OSD stands for On-Screen Display. To access the OSD menu for your camera, press the menu (1) button and hold for 3 seconds. The OSD menu will appear:



Below is a brief description of each feature located in the OSD menu:

**Lens:** Sets the levels and mode of the lens such as, deblur and normal.

**Exposure:** Sets how light or dark the image will appear.

**White Bal:** Regulates preset color temperatures for the camera.

**Backlight:** Sets backlight settings for the camera.

**DNR:** Sets the noise reduction settings for the camera.

**Day & Night:** Sets preset day and night delays for the camera.

**Image:** Sets sharpness, color gain, and display output settings for the camera.

**Special:** Controls system settings related to display output, color space CVBS, etc. Sets privacy settings, motion detection, shading, color bars and lens adjustments.

**Return:** Allows the user to exit the OSD menu or return to previous screens.

Use the toggle switch to navigate the OSD menu. The up and down directions toggle the on-screen arrow up and down. To select a menu, press the center menu button. To select or adjust an option in the menu, use the left and right directions on the toggle switch.

#### **Zoom**

Using the OSD toggle switch, press the following directions: Zoom in: Up, Zoom Out: Down, Focus – Left, Focus +: Right.

## Technical Specifications

<b>Model</b>	<b>AF-2MVD-VARIB / AF-2MVD-VARIW</b>
<b>Camera</b>	
Image Sensor	1/2.8" 2.16MP Sony STARVIS CMOS
Effective Pixels	1080P (1920 x 1080)
Signal System	NTSC/PAL
Synchronization	Internal Synchronization
Video Output	CVI (1080P@25fps), TVI (1080P@30fps), AHD (1080P@30fps), CVBS (1280 x 576, 1280 x 480)
Min. Illumination	Color: 0.1Lux@(F1.2, AGC On), B&W: 0.01Lux@(F1.2, AGC On)
<b>Function</b>	
Day & Night	Ext. /Auto / Color / B & W
White Balance	Auto / Manual
NR	2DNR/3DNR
Smart IR	Support
DWDR	On / Off
Shutter	Auto
Defog	Auto
Optical Zoom	4x
OSD	English/Chinese
<b>General</b>	
Power Supply	DC12V, 2.0A



Working Temperature / Humidity	-30°C ~ +50°C (-22°F ~ +122°F), Humidity 90% or less (non-condensing)
Storage Temperature	-20°C ~ +60°C (-4°F ~ +140°F)

## FCC Statement

1. 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.
2. The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes, or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.
3. (b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual: NOTE: 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 or more 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.
4. RF exposure warning: This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

## IC Warning Statement

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and (2) This device must accept any interference, including interference that may cause undesired operation of the device. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter

tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body. Pour se conformer aux exigences de conformité CNR 102 RF exposition, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil et toutes les personnes.

## Appendix A: Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Sheet Metal(Case)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plastic Parts (Panel)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Circuit Board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastener	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wire and Cable/Ac Adapter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packing Material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Accessories	○	○	○	○	○	○
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O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

**Note:**

- **To view setup videos for many of the steps outlined in this guide, go to <http://amcrest.com/videos>**
- **This user manual is for reference only. Slight differences may be found in the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **All trademarks and registered trademarks mentioned are the properties of their respective owners.**

To contact Amcrest support, please do one of the following:

Visit <http://amcrest.com/contacts> and use the email form.

Call Amcrest Support using one of the following numbers:

Toll Free US: (888) 212-7538

International Callers (Outside of US): +1-713-893-8956

USA: 713-893-8956

Canada: 437-888-0177

UK: 203-769-2757

Email Amcrest Customer Support [support@amcrest.com](mailto:support@amcrest.com)

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