

EMD432

700TVL High Resolution

Outdoor IP67 Mobile IR Mini Ball Camera

User's Manual



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Release Date: Aug., 2014

Precautions

1. **Do not install the camera near electric or magnetic fields.** Install the camera away from TV/radio transmitters, magnets, electric motors, transformers and audio speakers since the electromagnetic fields generated from these devices may distort the video image or otherwise interfere with camera operation.
2. **Never disassemble the camera beyond the recommendations in this manual nor introduce materials other than those recommended herein.** Improper disassembly or introduction of corrosive materials may result in equipment failure or other damage.
3. **Try to avoid facing the camera toward the sun.** In some circumstances, direct sunlight may cause permanent damage to the sensor and/or internal circuits, as well as creating unbalanced illumination beyond the capability of the camera to compensate.
4. **Keep the power cable away from water and other liquids and never touch the power cord with wet hands.** Touching a wet power cord with your hands or touching the power cord with wet hands may result in electric shock.
5. **Never install the camera in areas exposed to oil, gas or solvents.** Oil, gas or solvents may result in equipment failure, electric shock or, in extreme cases, fire.
6. **Cleaning.** For cameras with interchangeable lenses, do not touch the surface of the sensor directly with the hands. Use lens tissue or a cotton tipped applicator and ethanol to clean the sensor and the camera lens. Use a damp soft cloth to remove any dirt from the camera body. Please do not use complex solvents, corrosive or abrasive agents for cleaning of any part of the camera.
7. **Do not operate the camera beyond the specified temperature, humidity or power source ratings.** This camera is suitable for indoor operation only. Use the camera at temperatures within $-10^{\circ}\text{C}\sim 50^{\circ}\text{C}$ ($14^{\circ}\text{F}\sim 122^{\circ}\text{F}$) and humidity less than 80%; this device is not rated as submersible. The input power source is 12VDC. Be sure to connect the proper + / - polarity and voltage, as incorrect polarity or too high a voltage will likely cause the camera to fail, and such damage is not covered by the warranty.
8. **Mounting.** Use care in selecting a solid mounting surface which will support the weight of the camera plus any wind, snow, ice or other loading, and securely attach the camera to the mounting surface using screws and anchors which will properly support the camera. If necessary (e.g. when mounting to drop ceilings) use a safety wire to provide additional support for the camera.

Safety Notice

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class A 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.

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.



ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.



This Product is RoHS compliant.



WEEE

Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused. This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste. Please, dispose of this equipment at your local community waste collection/recycling centre. In the European Union there are separate collection systems for used electrical and electronic product.

Please, help us to conserve the environment we live in!

1. Introduction

1.1 Packing List

- Camera Body x 1
- User Manual x 1
- Lock Screw x 1
- Mounting Screw x 4
- Hexagon Wrench x 1

1.2 Features

- High resolution of over 700 horizontal TV lines for astounding image
- Super HAD CCD II delivers amazing high sensitivity of 0.1lux – very low light sensitivity without DSS low light boost - Zero Ghosting guaranteed
- Astounding image quality from the 3.6mm lens
- Digital Wide Dynamic Range expansion to deliver properly exposed images despite bright light sources, deep shadows and/or unbalanced lighting in the scene
- Provides 2D- Noise Reduction to improve picture clarity
- IP67 Weather Resistant
- 12pcs IR LEDs for 8m/26ft.range (depending on scene IR reflectivity)
- Compact size for discreet surveillance

2. Cable Description

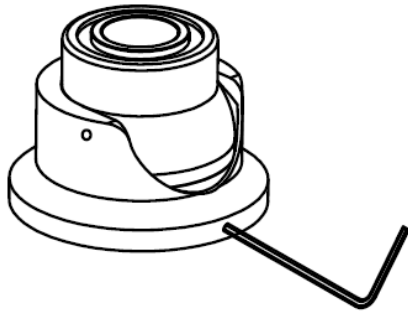


No.	Name	Descriptions
1	Power Cable	Connects to a 12VDC power source.
2	Video Output	Connects to a DVR or monitor, using a 75 Ohm BNC-type coaxial cable.

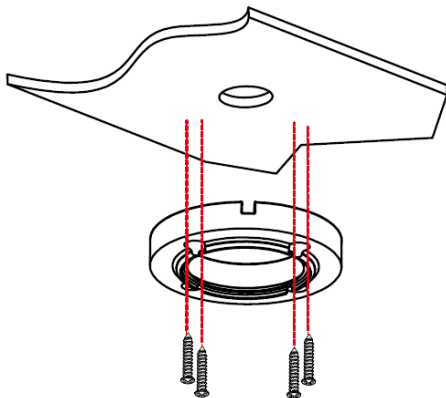
3. Installation

3.1 Installation and Adjustment

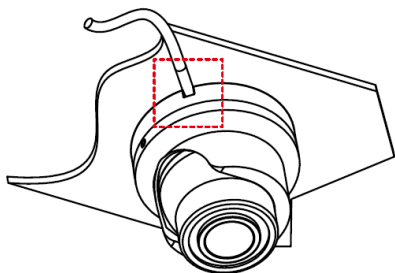
1. Loosen the lock screw using the supplied hexagon wrench and remove the base plate by rotating counter-clockwise.



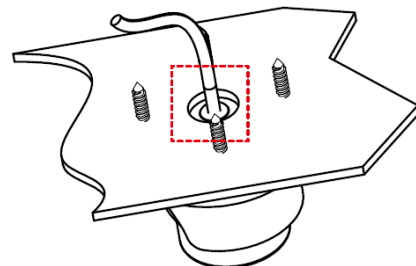
2. Attach the base plate on the position where you want to install the camera, and then secure the base plate using the supplied four mounting screws.



3. Put the camera body back to the base plate by rotating clockwise, especially noted the two ways on cable wiring as following illustration:

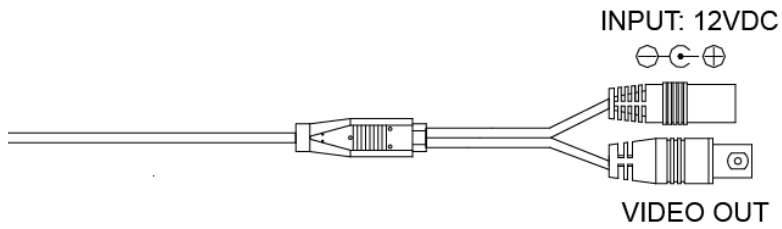


Wire the Cables from the Side of the camera base

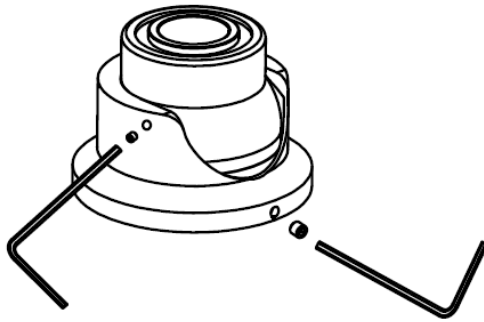


Wire the cables through the wall / ceiling

4. Connect the camera to the 12VDC power source while connecting the video-out cable to the monitor.



5. After selected the desired angle, then tighten the two lock screws (as shown in the figure) using the supplied hexagon wrench.
(Note: the upper lock screw is for protecting the lens from shaking when the vehicle running on the uneven road.)



4. Specifications

P/N	EMD432
Pickup Device	1/3" Sony Color Super HAD II CCD
Video Format	NTSC/PAL
Picture Elements	1020 x 508 (NTSC) / 1020 x 596 (PAL)
Effective Pixels	976 x 494 (NTSC) / 976 x 582 (PAL)
Scanning System	2:1 Interlace
Horizontal Resolution	700 TVL
Sensitivity	0Lux with IR on, 0.1Lux native from sensor
S/N Ratio	Over 50 dB (AGC OFF)
Electronic Shutter	1/60 (1/50) ~ 1/100,000s
Video Output	BNC 1.0Vp-p 75Ω
Gamma Correction	0.45
Lens Type	3.6mm
Lens Option	Fixed
BLC	Off/BLC/ HLC Selectable
Auto Gain Control	Off/Low/Middle/High
White Balance	ATW/AWB/AWC → SET/Anti.CRL/Manual
Sync Mode	Internal
Day/Night	Auto, Color, B/W, Ext
IR LED	12 Units
IR Distance	Up to 8m/26ft. (max.)
View Angle	75°
OSD Languages	English, Spanish, Portuguese, German, Russian, Japanese, Chinese, French
Digital Noise Reduction	On / Off
D-WDR	On / Off
Motion Detection	4 selectable zones
Privacy Mask	8 selectable zones
Environmental	IP67 Weather Resistant
Power Source	12VDC
Power consumption	140mA, 1.8w (max.)
Operating Temperature	-10°C~50°C / 14°F~122°F
Humidity	Less than 80%
Dimensions(H x D)	54 x 43mm/ 2.13" x 1.69"
Weight(g/lbs)	106g / 0.234lbs.
Certifications	CE / FCC / RoHS

Specifications and designs are subject to change for improving the functionality of this product without notice.

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