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› [TMEZON AHD 2MP Outdoor Security Camera with 2.8-10mm Manual Zoom Lens User Manual](#)

TMEZON MZ-VA-CAH4020A

TMEZON AHD 2MP Outdoor Security Camera User Manual

Model: MZ-VA-CAH4020A

1. PRODUCT OVERVIEW

This manual provides instructions for the installation, operation, and maintenance of your TMEZON AHD 2MP Outdoor Security Camera. This camera features a 2-megapixel high-definition sensor, a 2.8-10mm manually adjustable varifocal lens, and robust IP66 weatherproofing, making it suitable for various outdoor surveillance applications.

Key Features:

- 2.0 Megapixel High Definition:** Captures clear images and video at 1080P resolution.
- 2.8-10mm Manual Varifocal Lens:** Allows for manual adjustment of zoom and focus to cover specific areas.
- 42 Infrared LEDs:** Provides night vision capabilities with an infrared illumination distance of up to 30 meters.
- IP66 Weatherproof Rating:** Designed for outdoor use, resistant to dust and water.
- Durable Metal Casing:** Ensures longevity and protection against environmental elements.
- IR-CUT Filter:** Automatically switches between day and night modes for optimal image clarity in varying light conditions.

Note: This camera is an AHD 1080P device. Please ensure your DVR or recording system is compatible with AHD 1080P input before purchase.

2. PACKAGE CONTENTS

Please check the package for the following items:

- TMEZON AHD 2MP Outdoor Security Camera (MZ-VA-CAH4020A)
- Mounting Screws and Wall Plugs
- Hex Wrench (for lens adjustment)
- User Manual

3. INSTALLATION

3.1. Mounting Location

Choose a suitable location for the camera, considering the desired surveillance area, power source availability, and cable routing. The camera is IP66 rated for outdoor use.



Figure 1: Various mounting options for the TMEZON AHD Security Camera, including ceiling and wall mounts, demonstrating the 3-axis adjustable bracket.

3.2. Physical Installation

- Mark Drilling Holes:** Use the camera base as a template to mark the positions for drilling holes on the wall or ceiling.
- Drill Holes:** Drill holes at the marked positions. Insert wall plugs if mounting on masonry.
- Secure Camera:** Attach the camera base to the mounting surface using the provided screws.
- Adjust Angle:** Loosen the adjustment screws on the camera bracket to set the desired viewing angle. Tighten the screws once the angle is set. The bracket allows for 3-axis adjustment (pan, tilt, and rotation).



Figure 2: Dimensions of the TMEZON AHD Security Camera (approximately 22cm long, 8cm high) and illustration of the BNC cable connection point.

3.3. Wiring Connections

- Video Connection:** Connect the camera's BNC output to the video input of your AHD DVR using a BNC cable.
- Power Connection:** Connect the camera to a 12V 2A power adapter (not included) using the power input cable. Ensure the power source is stable.

4. OPERATION

4.1. Powering On

Once the camera is securely mounted and connected to power and your DVR, power on your DVR system. The camera will automatically begin transmitting video.

4.2. Adjusting Zoom and Focus

This camera features a manual varifocal lens, allowing you to adjust the field of view and sharpness. This adjustment is typically done using small screws or rings on the camera body, often requiring the included hex wrench.

1. **Access Adjustment:** Locate the zoom and focus adjustment screws/rings on the camera. These are usually under a protective cover or on the lens barrel.
2. **Adjust Zoom:** While viewing the camera's feed on your monitor, adjust the zoom control to achieve the desired field of view.
3. **Adjust Focus:** After setting the zoom, adjust the focus control until the image appears sharp and clear. This may require fine-tuning.
4. **Secure Settings:** Once satisfied with the zoom and focus, ensure any locking screws are tightened to prevent accidental changes.

Tip: It is recommended to perform zoom and focus adjustments with two people: one at the camera and one at the monitor for real-time feedback.

4.3. Night Vision

The camera is equipped with an ambient light sensor. When light levels drop, the camera will automatically switch to infrared (IR) mode, activating its 42 IR LEDs for clear black-and-white night vision up to 30 meters.



Figure 3: The TMEZON AHD Security Camera demonstrating its night vision and weatherproof capabilities, suitable for outdoor installation even in adverse weather.

5. MAINTENANCE

5.1. Cleaning

- Regularly clean the camera lens and housing with a soft, damp cloth to remove dust, dirt, or water spots.
- Do not use harsh chemicals or abrasive cleaners, as these can damage the lens or finish.

5.2. Cable Inspection

Periodically inspect all cables for signs of wear, damage, or loose connections, especially for outdoor installations. Ensure all connections are secure and protected from moisture.

5.3. Firmware Updates

Check the TMEZON official website or contact support for any available firmware updates for your camera model. Follow the provided instructions carefully for any update procedures.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
No image or black screen	No power to the camera. Loose or faulty video cable connection. Incompatible DVR/recording system.	Check power adapter and connections. Ensure BNC cable is securely connected to both camera and DVR. Verify DVR supports AHD 1080P input.
Blurry image	Lens out of focus. Protective film still on lens. Dirty lens.	Manually adjust the focus ring/screws on the camera lens. Remove any protective film from the lens. Clean the lens with a soft cloth.
Poor night vision	IR LEDs obstructed. Insufficient power. IR sensor malfunction.	Ensure no obstructions are blocking the IR LEDs. Verify power supply meets camera requirements. Contact customer support if the issue persists.
Image flickering or wavy lines	Power supply interference. Ground loop issues. Cable quality.	Use a stable, filtered power supply. Ensure proper grounding. Try a higher quality BNC cable.

7. SPECIFICATIONS

Feature	Detail
Video Capture Resolution	1080p
Effective Pixels	2.0 Megapixels
Lens Type	2.8-10mm Manual Varifocal Lens
Infrared LEDs	42 pieces
Night Vision Range	Up to 30 meters
Material	Metal
Weatherproof Rating	IP66
Connectivity Technology	Wired (BNC)
Power Source	Corded Electric (12V 2A adapter recommended)
Mounting Type	Wall Mount
Dimensions (Approx.)	26.3 x 13.2 x 13.2 cm; 690 g

Feature	Detail
Recommended Use	Security, Monitoring (Indoor/Outdoor)

8. WARRANTY AND SUPPORT

8.1. Warranty Information

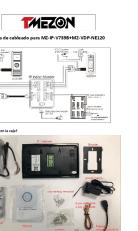
This product comes with a **1-year warranty** from the date of purchase. If you encounter any quality issues or defects within this period, please contact TMEZON customer support for assistance.

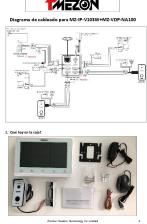
8.2. Customer Support

For technical support, troubleshooting assistance, or warranty claims, please contact TMEZON customer service. Refer to your purchase documentation or the TMEZON official website for contact details.

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Related Documents - MZ-VA-CAH4020A

 <p>Tmezon 4-Wire Digital-Analog Hybrid System Installation and Operation Guide</p> <p>Comprehensive guide for the Tmezon 4-wire digital-analog hybrid system, covering installation, wiring diagrams, specifications, and app integration for models like MZ-IP-V1026TW and MZ-IP-V726TW. Learn about AHD/TVI/CVI 2MP resolution and Tuya Smart APP features.</p>
 <p>TMEZON 4-Wire Digital-Analog Hybrid Video Intercom System Manual</p> <p>Comprehensive guide for the TMEZON 4-wire digital-analog hybrid video intercom system, detailing installation, operation, specifications, and network setup with Tuya Smart APP compatibility.</p>
 <p>TMEZON MZ-IP-V739B+MZ-VDP-NE120 Video Intercom System: Wiring and Installation Guide</p> <p>Comprehensive guide for installing and wiring the TMEZON MZ-IP-V739B+MZ-VDP-NE120 video intercom system. Includes detailed wiring diagrams, troubleshooting tips, and instructions for using extension cables and connecting multiple monitors.</p>
 <p>Tmezon 4-Wire IP Video Door Phone 10" Touch Screen Series Quick Guide</p> <p>This document provides a quick guide for the Tmezon 4-Wire IP Video Door Phone, 10" Touch Screen Series. It covers installation, wiring, specifications, and app connection for indoor monitors and outdoor doorbells.</p>
 <p>TMEZON 4-Wire IP Video Door Phone 10" Touch Screen Series Operation Manual</p> <p>Comprehensive operation manual for TMEZON's 4-Wire IP Video Door Phone 10" Touch Screen Series, covering installation, wiring, specifications, and app connectivity for models like MZ-IP-V103W and MZ-IP-V142B.</p>



[TMEZON Video Intercom System Installation Guide and Wiring Diagram](#)

Comprehensive guide for installing and wiring TMEZON video intercom systems, including models MZ-IP-V103W, MZ-VDP-NA100, MZ-IP-V739, and MZ-VDP-738EM. Covers setup, troubleshooting, extension cable usage, and multi-monitor configuration.