Avtech DGC5446SE

Avtech DGC5446SE 5MP Quadbrid Motorized Dome CCTV Camera User Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Avtech DGC5446SE 5MP Quadbrid Motorized Dome CCTV Camera. Please read this manual carefully before using the product to ensure proper setup and functionality. Keep this manual for future reference.

2. PRODUCT OVERVIEW

The Avtech DGC5446SE is a high-performance 5MP dome CCTV camera designed for both indoor and outdoor surveillance. It features a motorized varifocal lens, allowing for remote adjustment of focal length and focus. Its Quadbrid video output supports TVI, CVI, AHD, and CVBS formats, ensuring compatibility with various DVR systems.

Key Features:

- 1/2.5" CMOS sensor with 5MP video output.
- Motorized varifocal lens (f2.8 ~ 12mm) for remote focal length and focus adjustment.
- Quadbrid video output: TVI, CVI, AHD, and CVBS switchable.
- Low light sensitivity: 0.1 Lux / F1.4 ~ F2.8, 0 Lux with IR LED on.
- Effective IR distance up to 50 meters for 24-hour day and night surveillance.
- DWDR (Digital Wide Dynamic Range) for improved image clarity in challenging lighting.
- Built-in microphone for audio recording.
- IP66 rated for weather resistance, suitable for outdoor use.
- Noise reduction and automatic white balance (AUTO WB, AUTO AGC).

Camera Components:

The camera consists of a dome housing, a motorized lens, IR LEDs, and a built-in microphone. The main body houses the image sensor and processing unit.

Figure 1: Front view of the Avtech DGC5446SE dome camera, showing the lens and IR LEDs.
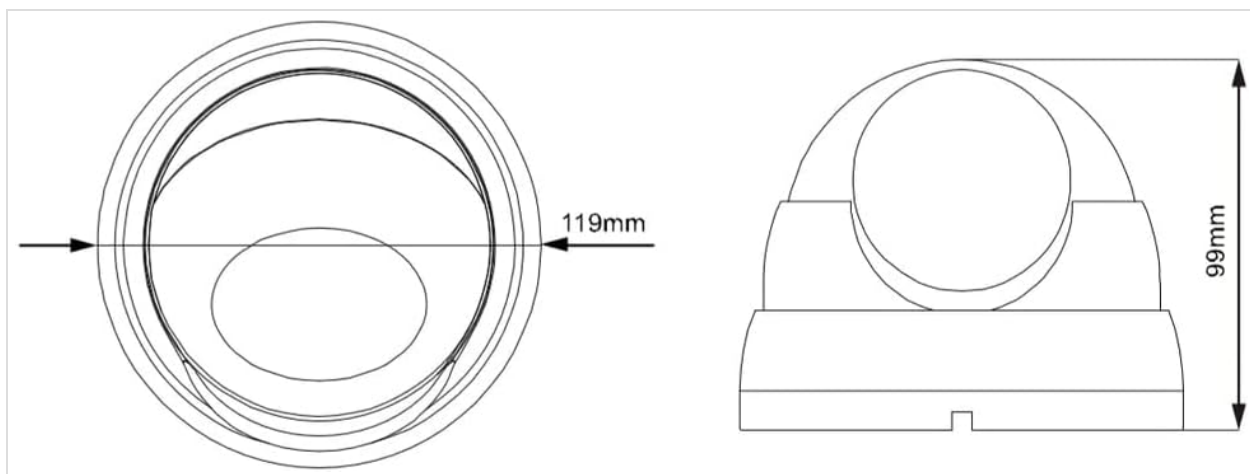
3. SETUP AND INSTALLATION

3.1 Mounting Location

The camera is designed for ceiling mounting and is suitable for both indoor and outdoor environments due to its IP66 weather resistance rating. Choose a location that provides the desired field of view and is within reach of power and video cabling.

3.2 Dimensions

Figure 2: Dimensional drawing of the camera, showing a diameter of 119mm and a height of 99mm.

3.3 Power Requirements

The camera requires a DC12V / 1A power supply. Ensure the power source is stable and meets these specifications to prevent damage or malfunction.

3.4 Video Output Connection

Connect the camera's video output to a compatible DVR (Digital Video Recorder). The camera supports TVI, CVI, AHD, and CVBS formats. Ensure your DVR is set to the correct video format to receive the signal.

4. OPERATING INSTRUCTIONS

4.1 Motorized Lens Adjustment

The motorized varifocal lens allows for remote adjustment of the focal length (zoom) and focus. This feature is typically controlled through the connected DVR or a compatible controller. Refer to your DVR's manual for specific instructions on accessing and controlling the camera's OSD (On-Screen Display) menu for lens adjustments.

4.2 Day and Night Mode

The camera automatically switches between day (color) and night (black and white with IR illumination) modes based on ambient light conditions. The built-in IR LEDs provide illumination for clear images in low-light or complete darkness, up to 50 meters.

4.3 Audio Recording

The integrated microphone captures audio from the surveillance area. Ensure your DVR is configured to record audio along with video if this feature is desired.

4.4 Image Enhancement Features

The camera includes DWDR (Digital Wide Dynamic Range) to improve image quality in scenes with both very bright and very dark areas. Noise reduction helps to produce clearer images, especially in low light. These settings can often be adjusted via the camera's OSD menu through the DVR.

5. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your camera.

- **Cleaning:** Periodically clean the camera's dome cover with a soft, damp cloth. Avoid abrasive cleaners that could scratch the surface.

- **Inspection:** Regularly check cables and connections for any signs of wear or damage. Ensure the mounting is secure.
- **Firmware Updates:** Check the Avtech official website for any available firmware updates for your camera model. Follow the provided instructions carefully for any update procedures.

6. TROUBLESHOOTING

If you encounter issues with your camera, refer to the following common troubleshooting steps:

- **No Image:**
  - Verify the power supply is connected and providing the correct voltage (DC12V).
  - Check all video cable connections between the camera and the DVR.
  - Ensure the DVR's input channel is correctly configured for the camera's video format (TVI, CVI, AHD, or CVBS).

- **Poor Image Quality:**
  - Clean the camera's dome cover.
  - Adjust the focus and zoom using the motorized lens controls via the DVR.
  - Check for strong light sources directly facing the camera, which can cause glare.
  - Ensure the video cable is not too long or of poor quality, which can degrade signal.

- **No Audio:**
  - Verify the DVR is configured to record and play back audio.
  - Check the audio settings within the camera's OSD menu, if available.

- **IR Not Working:**
  - Ensure the camera is in a dark environment for the IR LEDs to activate automatically.
  - Check power supply; insufficient power can affect IR performance.

If problems persist after attempting these steps, contact Avtech technical support or your product reseller.

7. SPECIFICATIONS

Model	DGC5446SE
Image Sensor	1/2.5" CMOS Pick-up Element
Number of Pixels	2560 (H) x 1920 (V)
Video Frame Rate	5MP @ 20 fps
Min. Illumination	0.1 Lux / F1.4 (Wide)~F2.8 (Tele), 0 Lux (IR LED ON)
S/N Ratio	More than 48dB (AGC OFF)
Shutter Speed	AUTO: 1/20 sec ~ 1/20000 sec
Motorized Lens	f2.8 ~ 12mm / F1.4 ~ F2.8
Lens Angle (Wide)	113.5° (horizontal) / 59.3° (vertical) / 137° (diagonal)

Lens Angle (Tele)	33.4° (horizontal) / 18.7° (vertical) / 38.2° (diagonal)
IR LEDs	4 units
Effective IR Distance	Up to 50 meters
Video Modes	TVI, CVI, AHD, CVBS (Switchable)
Audio	Built-in Microphone
Image Features	DWDR, Noise Reduction, BLC, AUTO White Balance, AUTO AGC
IP Rating	IP66
Power Supply	DC12V / 1A (±10%)
Current Consumption	120mA (IR LED OFF); 340mA (IR LED ON) (±10%)
Dimensions	Diameter 119mm; Height 99mm
Net Weight	0.75 kg
Color	White
Mounting Type	Ceiling
Indoor/Outdoor Use	Outdoor, Indoor

8. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided at the time of purchase or contact your authorized Avtech dealer. For technical support, product inquiries, or service, please reach out to your product reseller or visit the official Avtech website for contact details.