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> Avtech DGM5907SVSGAT 5MP AI IP Dome Camera User Manual

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Model: DGM5907SVSGAT | Part Number: 635266

IMPORTANT SAFETY INSTRUCTIONS

Please read these instructions carefully before using the Avtech DGM5907SVSGAT IP Dome Camera. Keep this manual for future reference.

- Ensure proper power supply (PoE or compatible adapter) to prevent damage.
- Do not expose the camera to extreme temperatures, humidity, or direct sunlight beyond its operating specifications.
- Handle the camera with care. Avoid dropping or subjecting it to strong vibrations.
- Installation should be performed by qualified personnel and comply with local electrical codes.
- Do not attempt to disassemble or modify the camera. This will void the warranty.
- Clean the camera lens and housing with a soft, dry cloth. Avoid harsh chemicals.

PRODUCT OVERVIEW

The Avtech DGM5907SVSGAT is a 5MP AI IP Dome Camera designed for advanced surveillance. It features AI-based human and vehicle detection to minimize false alarms, ONVIF support for system integration, and Power-over-Ethernet (PoE) for simplified installation. The camera provides clear images with Starlight visibility, an integrated microphone for audio recording, and an effective IR range of up to 50 meters for night surveillance. Its WDR (Wide Dynamic Range) function enhances image clarity in challenging lighting conditions, and the IP66 housing ensures durability in various environments.



Figure 1: Front view of the Avtech DGM5907SVSGAT 5MP AI IP Dome Camera. This image shows the dome-shaped camera housing, the lens assembly, and the IR LEDs visible around the lens.

PACKAGE CONTENTS

Verify that all items are present in the package. If any items are missing or damaged, contact your dealer immediately.

- Avtech DGM5907SVSGAT 5MP AI IP Dome Camera
- Mounting Screw Kit (screws, wall anchors)
- Waterproof Connector for Ethernet Cable
- Quick Start Guide
- Drilling Template

SETUP

1. Physical Installation

Before mounting, ensure the installation location provides a clear field of view and is within range of your network infrastructure (PoE switch/injector).

1. **Prepare the Mounting Surface:** Use the provided drilling template to mark the screw holes on the wall or ceiling.
2. **Drill Holes:** Drill pilot holes at the marked positions. Insert wall anchors if mounting on drywall or masonry.
3. **Secure the Camera Base:** Attach the camera's mounting base to the surface using the supplied screws.
4. **Connect Network Cable:** Connect an Ethernet cable (RJ-45) from your PoE switch/injector to the camera's network port. Ensure the waterproof connector is properly sealed if installing outdoors.
5. **Adjust Camera Angle:** Loosen the adjustment screws on the dome to position the camera lens for the desired viewing angle. Tighten the screws once adjusted.



Figure 2: Illustrative diagram of the Avtech DGM5907SVSGAT camera mounting process. This image depicts the camera base being secured to a surface, with an Ethernet cable connected.

2. Network Configuration

The camera typically obtains an IP address automatically via DHCP. If your network does not use DHCP, you may need to use a discovery tool provided by Avtech or manually configure the IP address.

1. **Connect to Network:** Ensure the camera is powered via PoE and connected to your local network.
2. **Discover IP Address:** Use the Avtech IP Camera Utility software (available on the Avtech website) to discover the camera's IP address on your network.
3. **Access Web Interface:** Open a web browser (Internet Explorer 6+, Microsoft Edge, or Google Chrome) and enter the camera's IP address in the address bar.

4. **Login:** Enter the default username and password (refer to the Quick Start Guide for default credentials). It is highly recommended to change the default password immediately for security.
5. **Initial Setup Wizard:** Follow the on-screen wizard to configure basic network settings, date/time, and user accounts.

OPERATING INSTRUCTIONS

1. Live View and Recording

Once logged into the web interface, you can access the live video feed and manage recording settings.

- **Live View:** Navigate to the 'Live View' section to see the real-time video feed from the camera.
- **Recording to MicroSD:** The camera supports a MicroSD card up to 256 GB. Insert the card into the designated slot (usually accessible by opening the dome cover). Configure recording schedules and event-triggered recording (e.g., motion detection, AI detection) in the 'Storage' or 'Recording' settings.
- **Video Compression:** The camera supports H.265 and H.264 compression. H.265 offers better compression efficiency, reducing storage and bandwidth requirements. Adjust this in the 'Video Settings'.

2. AI Detection (Human and Vehicle)

The AI detection feature helps reduce false alarms by distinguishing between humans/vehicles and other moving objects.

1. **Enable AI Detection:** Go to 'Event' or 'AI Settings' in the web interface. Enable 'Human Detection' and/or 'Vehicle Detection'.
2. **Configure Detection Zones:** Draw specific areas on the live view where you want AI detection to be active.
3. **Set Sensitivity:** Adjust the sensitivity levels to optimize detection performance and minimize false positives.
4. **Configure Actions:** Specify actions to be taken upon detection, such as recording, sending notifications, or triggering alarms.

3. Image Enhancement Features

- **IR Night Vision:** The camera automatically switches to IR mode in low light conditions, providing clear black and white images up to 50 meters. Ensure the IR LEDs are not obstructed.
- **WDR (Wide Dynamic Range):** Enable WDR in 'Image Settings' to improve image quality in scenes with both very bright and very dark areas, such as entrances or windows.
- **Starlight Visibility:** This feature enhances low-light performance, allowing the camera to capture color images in very dim conditions before switching to IR mode.

MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your camera.

- **Cleaning:** Periodically clean the camera lens and housing with a soft, lint-free cloth. For stubborn dirt, use a mild cleaning solution specifically designed for optical lenses. Do not use abrasive cleaners.
- **Firmware Updates:** Check the Avtech official website regularly for firmware updates. Firmware updates can improve performance, add new features, and enhance security. Follow the instructions provided with the firmware update package carefully.
- **Storage Management:** If using a MicroSD card for recording, periodically review recorded footage and manage storage space. Format the MicroSD card occasionally to maintain performance.
- **Cable Inspection:** For outdoor installations, inspect network cables and waterproof connectors for any signs of wear or damage.

TROUBLESHOOTING

This section addresses common issues you might encounter with your camera.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No image/video feed	No power; Network connection issue; Incorrect IP address	Check PoE connection; Verify network cable; Use IP utility to find camera IP; Ensure firewall is not blocking access.
Camera offline	Network cable disconnected; Router/switch issue; IP address conflict	Check physical network connections; Restart network equipment; Verify unique IP address.
Poor image quality	Dirty lens; Incorrect resolution settings; Insufficient lighting; WDR not enabled	Clean the lens; Adjust resolution in settings; Ensure adequate lighting or enable IR; Enable WDR for high contrast scenes.
Frequent false alarms	Sensitivity too high; Detection zone too wide; Environmental factors (e.g., moving branches)	Adjust AI detection sensitivity; Refine detection zones; Ensure AI detection is enabled for human/vehicle only.
Cannot access web interface	Incorrect IP address; Browser compatibility; Firewall blocking	Verify IP address; Use recommended browsers (IE, Edge, Chrome); Temporarily disable firewall for testing.

SPECIFICATIONS

Detailed technical specifications for the Avtech DGM5907SVSGAT IP Dome Camera.

Image Sensor: 1/2.8" CMOS

Maximum Resolution: 2592 x 1944 (5MP)

Lens: f2.7 ~ 13.5mm / F1.6 ~ F2.2

Viewing Angle (Diagonal): Tele 40° ~ Wide 117°

Minimum Illumination: 0.001 Lux (IR off), 0 Lux (IR on)

Shutter Speed: AUTO, 1/25s ~ 1/100000s

IR LEDs: 4 units

Effective IR Distance: Up to 50 meters

Day/Night Mode: Automatic

WDR: Yes (120dB)

RTC (Real-Time Clock): Yes

MicroSD Slot: Up to 256 GB

Video Compression: H.265 / H.264

Main Stream Resolution: 5MP (2592x1944) / 4MP (2560x1440) / 3MP (2304x1296) / 2MP (1080P) / 720P

Frame Rate: 5MP @ 25FPS

Multiple Video Streams: 2 streams

Bitrate Control: 512Kbps - 12Mbps, VBR/CBR

Image Enhancement: WDR / BLC / HLC / 2D DNR / 3D DNR

Audio: Integrated Microphone

Network Protocols: ONVIF supported

Power: PoE (Power-over-Ethernet)

Housing: IP66 Weatherproof

Compatibility: Internet Explorer 6+, Microsoft Edge, Google Chrome, Windows 10/8/7, DirectX 9.0+

WARRANTY AND SUPPORT

Avtech products are designed for reliability and performance. This product comes with a standard manufacturer's warranty against defects in materials and workmanship.

- **Warranty Period:** Please refer to your purchase documentation or the Avtech official website for specific warranty terms and

duration applicable in your region.

- **Technical Support:** For technical assistance, troubleshooting, or warranty claims, please contact Avtech customer support.
- **Online Resources:** Visit the official Avtech website for FAQs, driver downloads, firmware updates, and additional product information.

Contact Information:

Website: www.avtech.com.tw

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