

GW Security VD16CH12C8550MIC

GW Security 16 Channel NVR 4K 8MP PoE Security Camera System User Manual

Model: VD16CH12C8550MIC

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your GW Security 16 Channel NVR 4K 8MP PoE Security Camera System. This system is designed for advanced surveillance, featuring 4K Ultra HD resolution, Power over Ethernet (PoE) for simplified installation, and intelligent AI detection capabilities including face recognition, human detection, and vehicle detection. Please read this manual thoroughly before using the product to ensure proper setup and functionality.

2. SAFETY INFORMATION

- Ensure all power connections are secure and meet the specified voltage requirements to prevent electrical hazards.
- Do not expose the NVR or cameras to extreme temperatures, humidity, or direct water contact unless specified for outdoor use.
- Handle the hard drive with care to avoid data loss or damage.
- Installation should be performed by qualified personnel or with careful adherence to instructions to prevent injury or equipment damage.
- Keep cables organized and secured to prevent tripping hazards and accidental disconnections.

3. PACKAGE CONTENTS

Verify that all components listed below are included in your package:

- 1x GW5516NPG 16-Channel H.265 NVR with 4TB Hard Drive
- 12x GW8550MIC 4K (8MP) IP Microphone Waterproof Smart AI Bullet Cameras
- 6x 60ft CAT6 Ethernet Cables (GWCAT60)
- 6x 100ft CAT6 Ethernet Cables (GWCAT100)
- Power Adapter for NVR
- USB Mouse



Figure 3.1: NVR unit showing front and back panel connections, along with a diagram illustrating mobile viewing setup.

4. SETUP

4.1 NVR Connection

1. Connect a monitor to the NVR's HDMI or VGA output port.
2. Connect the included USB mouse to a USB port on the NVR.
3. Connect the NVR to your network router using an Ethernet cable via the LAN port.
4. Connect the power adapter to the NVR and plug it into a power outlet. The NVR will power on automatically.

4.2 Camera Installation

The cameras utilize Power over Ethernet (PoE), meaning a single Ethernet cable provides both power and video transmission.

1. Mount each camera in the desired location using appropriate hardware. Ensure the camera's field of view covers the intended surveillance area.
2. Connect one end of an Ethernet cable to the camera's PoE port.
3. Connect the other end of the Ethernet cable to one of the NVR's PoE ports (LAN1-LAN16).
4. Repeat for all 12 cameras. The NVR will automatically detect and configure the cameras.



Figure 4.1: Diagram illustrating Power over Ethernet (PoE) connection from NVR to camera.

4.3 Initial Configuration

Upon first power-on, the NVR will guide you through an initial setup wizard. Follow the on-screen prompts to set up administrator passwords, time zone, and network settings.

5. OPERATING INSTRUCTIONS

5.1 Live View and Playback

Once the system is set up, you can view live camera feeds and playback recorded footage directly from the NVR's connected monitor using the mouse, or remotely via the mobile app or web browser.

5.2 Remote Access

To access your system remotely:

1. Download the free "RXCamView" app from your smartphone's app store (available for iPhone and Android).
2. Open the app and scan the QR code displayed on the NVR's monitor or enter the NVR's serial number (S/N) manually.
3. Follow the in-app instructions to add your device and begin live viewing and playback from anywhere.
4. Alternatively, access the NVR via a standard web browser on a computer (Mac or PC) by entering the NVR's IP address.



Figure 5.1: Icons representing remote viewing capabilities and the NVR unit.

5.3 Recording Modes

The NVR supports various recording modes:

- **Continuous Recording:** Records 24/7.

- **Motion Detection Recording:** Records only when motion is detected, conserving storage space.
- **Scheduled Recording:** Records during specific time periods.

Configure these settings through the NVR's main menu interface.



Figure 5.2: Illustration of 24/7 recording capability, hard drive storage, and H.265 video compression.

5.4 Smart AI Detections

The cameras feature advanced AI capabilities to enhance security and reduce false alarms:

- **Face Recognition:** Identifies familiar faces and sends alerts for unknown faces.
- **Human Detection:** Distinguishes human shapes from other moving objects, reducing alerts from animals or environmental factors.

- **Vehicle Detection:** Identifies vehicles, providing specific alerts for vehicle activity.

These settings can be configured within the NVR's AI detection menu.



Figure 5.3: Visual representation of AI-powered face recognition, human detection, and vehicle detection features.

Video 5.1: Demonstration of AI Face Detection capabilities, showing how the system identifies and tracks faces.

5.5 Varifocal Lens Adjustment

The 2.8-12mm varifocal lens allows manual adjustment of the camera's angle of view. A smaller focal length (e.g., 2.8mm) provides a wider field of view, while a larger focal length (e.g., 12mm) offers a narrower, more zoomed-in view for distant objects.

VARIFOCAL ZOOM LENS

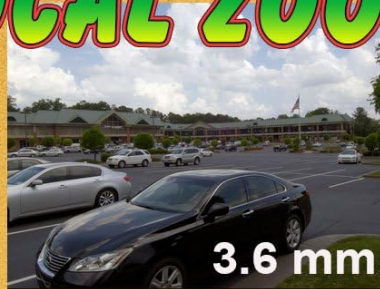


Figure 5.4: Comparison of different focal lengths (2.8mm to 12mm) demonstrating the adjustable field of view of the varifocal lens.

5.6 Night Vision and Audio

- **Color Night Vision:** The cameras provide color night vision under low-light conditions, offering more detailed images than traditional black and white infrared night vision.
- **Built-in Microphone:** Each camera includes a built-in microphone for audio monitoring, enhancing surveillance capabilities.



Figure 5.5: Visual comparison highlighting the difference between normal night vision and GW Security's starlight color night vision in low-light environments.



Figure 5.6: Icon representing the built-in microphone feature for audio recording.

6. MAINTENANCE

6.1 Hard Drive Management

The NVR comes with a pre-installed 4TB hard drive and supports up to two SATA HDDs, with a maximum capacity of 14TB each (total 28TB). Regularly check the hard drive status through the NVR's menu. Configure automatic overwriting of old footage to ensure continuous recording.

6.2 Firmware Updates

Periodically check the GW Security website for firmware updates. Keeping your NVR and camera firmware updated ensures optimal performance, security, and access to new features. Follow the provided instructions carefully when performing updates.

6.3 Cleaning

Gently clean camera lenses and NVR surfaces with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials that could damage components.

7. TROUBLESHOOTING

- **No Video Display:** Check power connections to the NVR and monitor. Ensure the HDMI/VGA cable is securely connected. Verify cameras are powered via PoE and connected to the NVR.
- **Remote Access Issues:** Confirm the NVR is connected to the internet. Check network settings and ensure the mobile app is correctly configured with the NVR's serial number or IP address.
- **Recording Not Working:** Verify hard drive status and ensure it is initialized. Check recording schedules and motion detection settings.
- **Poor Image Quality:** Clean camera lenses. Adjust the varifocal lens for optimal focus. Ensure sufficient lighting in the surveillance area.
- **False Motion Alerts:** Adjust motion detection sensitivity or configure AI detection zones to minimize unwanted triggers.

8. SPECIFICATIONS

Brand	GW Security
Model Number	VD16CH12C8550MIC
Connectivity Technology	Ethernet
Video Capture Resolution	4K UHD 2160p (3840x2160)
Number of Channels	16
Memory Storage Capacity	4 TB (expandable up to 28TB)
Lens Type	Varifocal (2.8-12mm)
Night Vision Range	Up to 150 feet
Frame Rate	15 fps @ 4K
Video Compression	H.265+
Special Features	Image Sensor, Motion Sensor, Face Recognition, Human Detection, Vehicle Detection, Built-in Microphone, Color Night Vision
Video Input	VGA, HDMI
Power Source	Corded Electric

**Operating
Temperature**

Refer to product documentation for specific range

9. WARRANTY INFORMATION

This GW Security product is covered by a **2-year manufacturer's warranty**. This warranty covers defects in materials and workmanship under normal use. For detailed terms and conditions, please refer to the warranty card included with your product or visit the official GW Security website.

10. SUPPORT

For technical assistance or any questions regarding your GW Security system, please contact our US-based technical support team.

Support Hours: Monday - Friday, 8:30 AM - 5:00 PM PST

Contact Information: Refer to the contact details provided in your product packaging or on the official GW Security website.



Free US-Based Tech Support



Call our highly-trained techs support staff
for any issues that may arise, we are more than
happy to assist you in securing your life.

Monday - Friday
8:30am - 5:00pm PST

Figure 10.1: Image of the GW Security technical support team, available to assist with product inquiries.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question