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GW Security VDW16CH12C1361IP

GW Security 16-Channel 8MP AI Security Camera System User Manual

Model: VDW16CH12C1361IP

1. Product Overview

The GW Security 16-Channel 8MP AI Security Camera System is a commercial-grade surveillance solution designed for comprehensive property monitoring. This system features a 12MP NVR and sixteen 4K 8MP bullet cameras equipped with advanced AI detection capabilities, motorized zoom, and color night vision.

Key Features:

- **16-Channel 12MP NVR:** Supports up to 12MP recording resolution.
- **16 x 4K 8MP PoE Cameras:** Weatherproof bullet cameras with 2.7-13.5mm 5X optical motorized zoom lenses.
- **Advanced AI Detection:** Includes Face Recognition, Human/Vehicle Detection, and License Plate Recognition.
- **Starlight Color Night Vision:** Provides clear color images in low-light conditions, with IR night vision up to 160ft.
- **Built-in Microphone:** For audio recording.
- **H.265+ Video Compression:** Efficient storage and bandwidth usage.
- **Remote Access:** View and manage the system via computer, smartphone, or tablet.
- **TAA & NDAA Compliant:** Meets U.S. federal law requirements for government contracts.



Image 1.1: Overview of the GW Security 8MP AI Bullet Camera highlighting key features like 4K UHD, Face Recognition, License Plate Detection, Human/Vehicle Detection, 5X Motorized Zoom, Real-Time Recording, Built-in Mic, Weatherproof design, NDAA and TAA Compliance.

2. What's in the Box

Please check the contents of your package upon arrival. If any items are missing or damaged, contact GW Security support immediately.

- 1 x 16-Channel 12MP Network Video Recorder (NVR) with pre-installed 4TB Hard Drive
- 16 x 4K 8MP PoE IP Starlight Color Night Vision Bullet Cameras
- Ethernet Cables (for camera connection)
- Power Adapter for NVR
- USB Mouse
- Quick Start Guide
- Mounting Screws and Plugs

3. System Setup

Follow these steps to set up your GW Security camera system.

3.1 NVR Connection

1. **Connect to Display:** Connect the NVR to a monitor or TV using an HDMI or VGA cable.
2. **Connect Mouse:** Plug the USB mouse into a USB port on the NVR.
3. **Connect to Network:** Connect the NVR's LAN port to your router or network switch using an Ethernet cable. This is required for remote viewing and updates.
4. **Power On:** Connect the NVR power adapter to the NVR and then to a power outlet. The NVR will power on automatically.

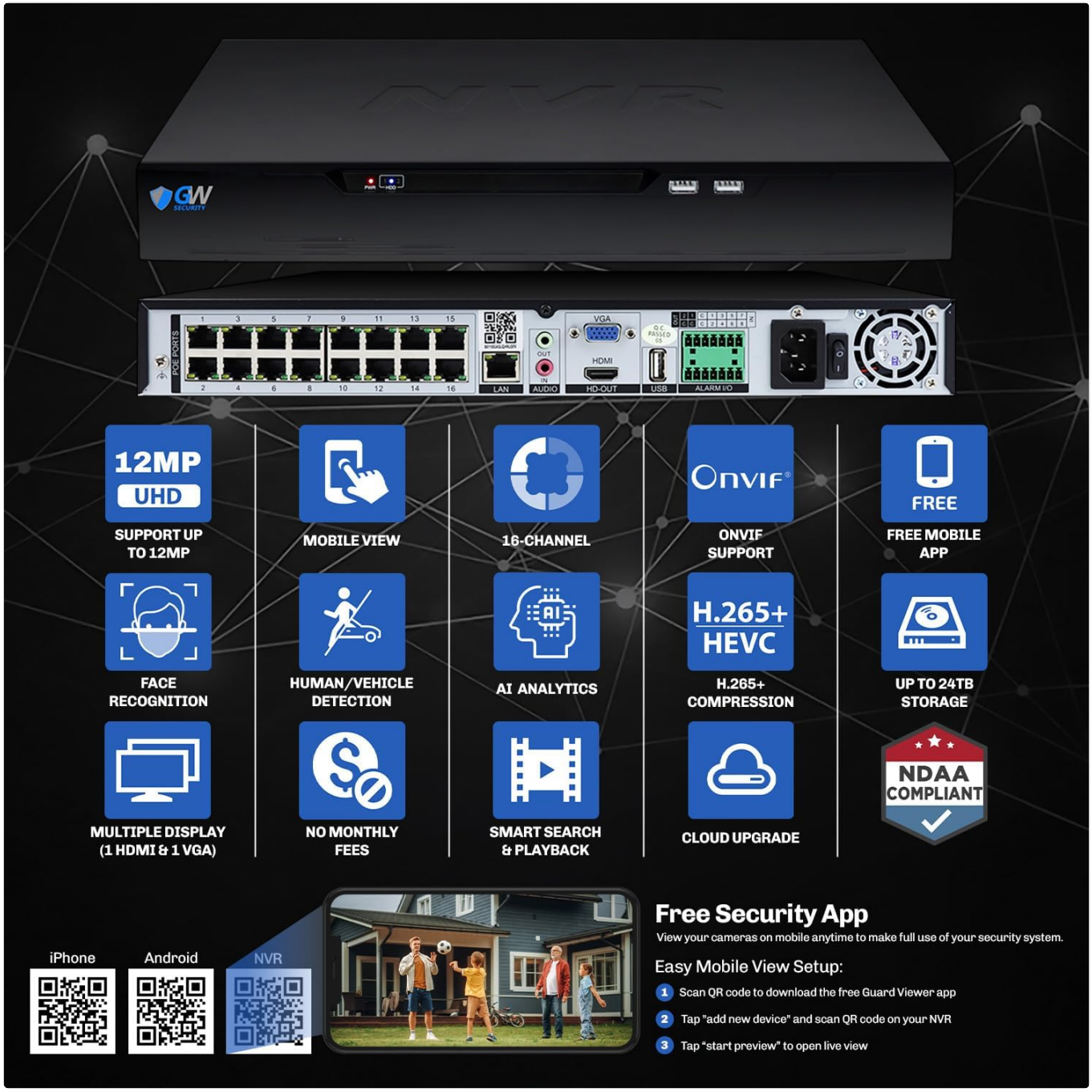

Image 3.1: Rear view of the GW Security NVR showing various ports including PoE camera inputs (1-16), LAN, Audio In/Out, HDMI, VGA, USB, and power input. This illustrates how to connect the NVR to cameras, network, and display.

3.2 Camera Installation and Connection

1. **Mount Cameras:** Choose suitable locations for your cameras, ensuring optimal viewing angles and coverage. Securely mount each camera using the provided screws.
2. **Connect Cameras:** Connect each IP camera to one of the NVR's PoE ports using Ethernet cables. The cameras

will receive power and data through a single cable.

3. **Verify Connection:** Once connected, the cameras should automatically be detected and display video on the connected monitor.

3.3 Mobile App Setup (Free Guard Viewer App)

Access your security system remotely using the free mobile application.

1. **Download App:** Scan the QR code below or search for "Guard Viewer" in your device's app store (available for iPhone and Android).
2. **Add Device:** Open the app, tap "add new device," and scan the QR code displayed on your NVR's screen (or enter the device ID manually).
3. **Live View:** Tap "start preview" to begin live viewing your cameras.



Image 3.2: Instructions for setting up the Free Security App, showing QR codes for iPhone (Scan for iPhone App) and Android (Scan for Android App) to download the Guard Viewer app.

4. System Operation

4.1 Live View and Recording

- **Real-time Monitoring:** View live feeds from all 16 cameras simultaneously on your connected display or through the mobile app/PC client.
- **High-Resolution Recording:** The system records video at 8MP (4K UHD) resolution at 25 frames per second (FPS) for smooth, detailed footage.
- **Video Compression:** Utilizes H.265+ compression to optimize storage space without compromising video quality.

4.2 Motorized Zoom and Focus

Each camera features a 2.7-13.5mm 5X optical motorized zoom lens. You can remotely adjust the camera's field of view (20-135°) and zoom in/out through the NVR interface, PC client, or mobile app.



Image 4.1: Demonstration of the 5X Motorized Zoom capability, showing a zoomed-in view of a vehicle's license plate for clear identification.

4.3 Smart AI Detection Functions

The system incorporates advanced Artificial Intelligence for enhanced security and reduced false alarms.

- **Face Recognition:** Identifies and records faces, allowing for recognition of familiar individuals.
- **Human/Vehicle Detection:** Distinguishes between humans, vehicles, and other moving objects, triggering alerts only for relevant events.
- **License Plate Detection:** Captures and recognizes vehicle license plates.
- **Other AI Functions:** Includes Intrusion Detection, Single/Double Line Crossing, Loitering, Wrong-way Detection, Illegal Parking, and People Counting.



Image 4.2: Visual representation of the AI detection capabilities, including Face Recognition (matching known faces), Human Detection (identifying people), and Vehicle Detection (identifying vehicles) in real-time scenarios.

4.4 Night Vision and Audio

- **Starlight Color Night Vision:** Cameras provide full-color video in low-light conditions, offering more detail than traditional black and white IR night vision.
- **IR Night Vision:** Built-in Super IR lights provide up to 160ft of black and white night vision in complete darkness.
- **Built-in Microphone:** Each camera includes a microphone for audio recording, providing an additional layer of security.



Image 4.3: A comparison showing the difference between standard black and white night vision and GW Security's Starlight Color Night Vision under low-light conditions, demonstrating superior color detail.



Image 4.4: Illustration of the camera's built-in microphone for UltraHD 4K video and audio monitoring, showing a microphone icon and a meeting scenario.

4.5 Storage and Backup

- **Local Storage:** The NVR comes with a pre-installed 4TB hard drive. It supports up to two SATA drives, with a total capacity of up to 24TB (12TB per drive).
- **Cloud Storage:** Supports integration with cloud storage services like Google Drive and Dropbox for off-site backup.
- **USB Backup:** Easily back up recorded footage to a USB drive.



Image 4.5: Display of the NVR unit, highlighting its 12MP Ultra HD capability, support for 2 HDDs up to 20TB (note: product specs state up to 24TB total), and H.265+ HEVC compression. A Seagate SkyHawk HDD is shown.

5. Maintenance

- **Camera Cleaning:** Periodically clean camera lenses with a soft, damp cloth to ensure clear image quality. Avoid abrasive cleaners.
- **Firmware Updates:** Regularly check for and install firmware updates for both the NVR and cameras to ensure optimal performance and security. Updates can often be performed with one-click cloud upgrade.
- **Cable Inspection:** Periodically inspect all cables for wear or damage, especially outdoor cables, to prevent connectivity issues.
- **NVR Ventilation:** Ensure the NVR is placed in a well-ventilated area to prevent overheating. Keep vents clear of obstructions.
- **Data Backup:** Regularly back up important footage to an external drive or cloud storage.

6. Troubleshooting

If you encounter issues with your system, try the following basic troubleshooting steps:

- **No Video Display:**
  - Check all cable connections (HDMI/VGA, Ethernet, power).
  - Ensure the monitor is on and set to the correct input.
  - Restart the NVR.
- **Camera Not Showing Video:**
  - Verify the Ethernet cable is securely connected to both the camera and the NVR's PoE port.
  - Try connecting the camera to a different PoE port on the NVR.
  - Ensure the camera lens is clean and unobstructed.
- **Remote Viewing Issues:**
  - Ensure the NVR is connected to the internet (check network cable and router status).
  - Verify your mobile device has an active internet connection.
  - Check app settings and ensure the NVR is correctly added.
- **Poor Image Quality:**
  - Clean the camera lens.
  - Check for obstructions in the camera's field of view.
  - Adjust camera settings (brightness, contrast, resolution) via the NVR interface.

For further assistance, please contact GW Security Technical Support.

7. Specifications

Feature	Detail
Brand	GW Security
Model Number	VDW16CH12C1361IP
NVR Channels	16 Channels
Video Capture Resolution	4K UHD 2160p (8MP)
Frame Rate	25 FPS (8MP) / 30 FPS (general)
Camera Lens	2.7-13.5mm 5X Motorized Zoom Auto-focus
Viewing Angle	20-135 degrees
Night Vision Range	Up to 160 feet (IR)
Special Features	Face Recognition, Human/Vehicle AI Detection, License Plate Detection, Starlight Color Night Vision, Built-in Microphone, PoE, TAA & NDAA Compliant

Memory Storage Capacity	4TB HDD pre-installed (expandable up to 24TB total)
Connectivity Technology	Wired (Power Over Ethernet)
Operating System Support	Mobile (iPhone/Android), PC (Windows/Mac)
Weather Resistance	Weatherproof (IP66 rating implied by 'outdoor camera' and 'weatherproof')
Item Dimensions	30 x 15 x 20 inches (System Package)
Item Weight	50 pounds (System Package)

8. Warranty and Support

8.1 Warranty Information

This GW Security product is covered by a **Two-Year Warranty** from the date of purchase. This warranty covers defects in materials and workmanship. Please retain your proof of purchase for warranty claims.

8.2 Technical Support

GW Security provides **US-based Free Lifetime Technical Support**. Our support team is available to assist with installation questions, camera connection, network configuration, system setup, mobile app setup, remote viewing, system updates, and system maintenance.

Support Hours: Monday - Friday, 6:00 AM to 5:00 PM PST.

For support, please refer to the contact information provided with your product or visit the official GW Security website.



Image 8.1: Information regarding GW Security's Free Lifetime Tech Support and Two-Year Warranty, including support hours and common support topics.

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