

USER MANUAL

3G IP Camera

EU Environmental Protection

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.



PAP

Model: GD8816

Version 1.0

Please read this user manual carefully before using this product.
Failure to understand operation procedures may result in injury.

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Safety Information

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Your new WCDMA 3G IP camera is a smart WCDMA terminal. It can be used in a WCDMA network for instant surveillance of your home, office, or any other place that may need video/audio monitoring; anytime, anywhere.

Thank you for selecting our 3G video surveillance camcorder. To use this product better, please carefully read through this user manual beforehand.

■ Tips

Due to the product version upgrade or other reasons, this manual is subject to update irregularly. This manual is used as a user guide only unless otherwise agreed. All the statements, information, and suggestions in this manual shall not make any explicit or implicit guarantee

Safety Precautions

Before using this wireless device, please carefully read the content in this section to ensure that you can use this wireless device correctly and safely.



Turn off the wireless device in the place where use of a wireless device is prohibited or use of a wireless device will lead to interference or danger.



Do not use the wireless device in driving, lest safe driving would be affected.



Observe the related regulations or rules in a medical site. Turn off the wireless device in the area close to medical equipment.



Turn off the wireless device before boarding the plane, lest the radio signal would interfere with signal control of the plane.



Turn off the wireless device in the area near to electronic equipment with high precision. Otherwise, the electronic equipment may fail.



Do not disassemble this wireless device or its accessories by yourself. Only the qualified maintainer can repair this wireless device.



Do not place this wireless device or its accessories in an instrument with a strong electromagnetic field.



Keep this wireless device far away from a magnetic device, because radiation of this wireless device may erase the information stored in the magnetic device.



Do not use this wireless device at a place with a high temperature or an inflammable gas, for example, nearby a gas station.



Place this wireless device and its accessories in a place out of reach of children. Do not let a child use this wireless device without supervision.



Use the fittings specified by our company.



When using this wireless device, please observe the related laws and regulations and respect the privacy and legal rights of others.

Product Overview

• Brief Introduction

The 3G video surveillance camcorder is a WCDMA-based wireless video surveillance terminal provided for industrial or home customers. It supports adaptive switching between the WCDMA network and GSM network. Through a mobile phone where the GHOME client is installed, the customer can view the real-time video in any place within WCDMA signal coverage such as the office, home, or the store anytime and anywhere.

• Functions

The 3G video surveillance camcorder provides the following four main functions:

1. Remote real-time surveillance through a mobile phone
Through a mobile phone where the GHOME client is installed, the user can view the real-time condition in the surveilled site anytime and anywhere.
2. PTZ remote control of infrared night vision
The user can remotely control the camera through the mobile phone to realize overall surveillance, for example, control video recording, directly capture the screen, freely adjust the angle, control the camera to rotate horizontally, upward, or downward, and adjust light. In addition, the camera provides the infrared function. Even if the environment is dark, the camera can transmit clear surveillance video and provide the user with more professional video surveillance service.
3. Automatic security alarm and video recording
After the security functions are armed at the mobile phone, the device can send an alarm message to the user-specified number upon finding any exception, and trigger automatic video recording. In addition, the user can select to store the video file at the device.
4. Plug and play, without wiring
The device can be used conveniently after being connected to a power supply. Wiring is not required.
The following table describes the specific functions (depending on the real subjects):

1. Surveillance	Audio and video surveillance	Supporting playing of the audio and video surveillance record at the mobile phone or PC client
	PTZ control	Controlling the camera to rotate upward, downward, leftward, and rightward through the management page and the mobile phone or PC client
2. Night vision function	Equipped with the infrared night vision function	Automatically starting the infrared function when the environment becomes dark, and implementing surveillance within 3m
3. Motion detection	Motion detection switch	Arming and disarming through the management page and the mobile phone or PC client
	Image change detection	Detecting image changes, with adjustable sensitivity
4. Video recording	Video recording triggered by motion detection	Starting video recording when the image changes; the pre-recording time is more than 8 seconds.
	Remote control on video recording	The mobile phone client can control video recording at a remote end.
5. Message alarm	Remote viewing and playing of video record	The mobile phone client can play the video record at a remote end.
	Message alarm of motion detection	Sending a message notice if the image changes when the security functions are armed
6. Management functions	Configuration and management	Managing and configuring the device through the PC management interface
	Version upgrade	Upgrading the version through the PC management interface

• Specification

Type	Function	Description	
Physical parameters	Weight	1 Kg (±0.2 Kg)	
	power consumption	8W	
	Dimensions	110 x 108 x 135 mm	
Use environment	Operating environment	Temperature: 0°C ~ 40°C Humidity: 20% ~ 80%	
	Transportation environment	Temperature: -20°C ~ 60°C Humidity: 15% ~ 85%	
	Installation mode		<ul style="list-style-type: none"> • Desktop installation • Ceiling installation • Wall mounting
Physical interface	Audio interface	Built-in MIC (select MIC IN) External interface: 2.54 mm audio interface (select LINE IN) Level: -20 ~ -3 Dbv; impedance: 1 Kohm	
	Network interface	Rj45 interface, with shielding, state indicator, and data indicator: 10baseT Ethernet/100baseTXFast Ethernet	
	3G antenna	Frequency 1: 2010 MHz ~ 2025 MHz Frequency 2: 1860 MHz ~ 1920 MHz Frequency 3: 900 MHz Frequency 4: 850 MHz 1. Voltage Standing Wave Ratio (VSWR): < 2.5:1 Gain: GSM ≥ 1 dBi; GPRS/UMTS ≥ 2 dBi Input impedance: 50 Ω Maximum power: 50 W Polarization mode: vertical polarization	
	Power supply	DC5V / 4A	
	RESET button	• A side button, used to restore factory parameters of the device	
	Storage card interface	• Self-eject TFLASH socket, supporting the SDHC protocol and the maximum capacity of 32 GB	
	GPIO	<ul style="list-style-type: none"> • Input: photoelectric isolation input (I, G), 0 VDC ~ 5 VDC • Output: relay output (A, B), 0.5 A at 125 VAC; 1 A at 24 VDC 	
	COMM	5V UART interface, 5V TTL level The maximum bit rate of 128 Kbps	
	Camera	Lens	<ul style="list-style-type: none"> • 1/5-inch CMOS camera, 4.5-mm focus • Day and night lens • Video size: VGA (480 × 600) • Frame raster: 30 frames • Signal to Noise Ratio (SNR): 50 dB
		Infrared lights	<ul style="list-style-type: none"> • When the illumination is lower than 5 lux, the infrared lights are turned on completely. The infrared night vision range is 3 m. • When the illumination is higher than 15 lux, the infrared lights are turned off completely. Normally, the best video distance is from 5m to 7m.
Visual angle		75°	

PTZ		<ul style="list-style-type: none"> Supporting PTZ operations of upward, downward, leftward, rightward, center, horizontal, and vertical scanning, and multi-step angle selection; restoring the preset position after the device is restarted; the center position or the position before the device is turned off Horizontal PTZ rotation angle of 270°; vertical PTZ rotation angle of 60°; and multi-level rotation speed settings Horizontal PTZ rotation life: ≥ 10000 cycles Vertical PTZ rotation life: ≥ 10000 cycles
Circuit module	Chip	Hardware structure based on TI Da Vinci series SOC (ARM + DSP) chips
	Communication module	Built-in WCDMA module, supporting the dual modes of WCDMA and GSM
Battery (optional)	Lithium battery	<ul style="list-style-type: none"> Capacity: 1200 mAh Continuous operating time (coding transmission on state) when only the battery is used as a power supply: more than 15 minutes Battery life: charge/discharge times more than 300
Video coding	Video coding resolution	<ul style="list-style-type: none"> TVC QVGA320 × 240 (default) TVC 240 × 180 (optional) H.264 CIF (352 × 288) (optional)
	Video coding mode	CBR: Constant Bit Rate
	Video coding bit rate	25 kbps ~ 100 kbps;
	Frame rate size per second	≥ 12 fps
	Video quality	≥ 33 dB
3G communication mode	Module operating band	<ul style="list-style-type: none"> HSPA/UMTS 850/1900/2100 EDGE/GPRS/GSM 850/900/1800/1900 MHz Supporting automatic detection and selection of a network
	Transmission rate	<ul style="list-style-type: none"> Uplink rate of HSPA up to 2.0 Mbps Downlink rate of HSPA up to 7.2 Mbps Uplink rate of WCDMA (UMTS) up to 384Kbps Downlink rate of EDGE up to 237 Kbps and uplink rate up to 118 Kbps Downlink rate of GPRS up to 85.6 Kbps and uplink rate up to 42.8 Kbps
	SMS	Supporting concurrency of Short Message (SM) and data services
	Output power	<ul style="list-style-type: none"> Class 3 for UMTS/HSDPA/HSPA Class 4 for GSM 900 Class 1 for GSM 1800 Class E2 for EDGE 900/1800
Wired network	One RJ45 interface	10BaseT/100BaseTxwith Auto-MDIX IEEE 802.3/802.3u
Network protocol	Protocol	TCP/IP, DHCP, ICMP, DDNS, and HTTP 1.1
	Transfer protocol	VCSPDP
User Interface (UI)	Operation interface	Embedded WEB server pages or client software, supporting device configuration and maintenance
	Indicator	<ul style="list-style-type: none"> One yellow system indicator One red alarm indicator One yellow 3G network indicator One red 2G network indicator

• Examples of Application Scenarios

	
1) Care the elderly and children at home, turning your family into your visible concern. It is a happy thing to ensure security of your family.	2) When you go for an outing with your family, you can view the real-time video at home anytime and anywhere through your mobile phone, thus knowing the actual condition at home.
	
3) You can check the housework progress of the nursemaid and how the nursemaid takes care of your kids to witness the happy growth process of your kids.	4) You can control security of the enterprise by implementing real-time video surveillance in the garage and office. The product meets your practical video requirements in many aspects, making you more satisfied with your work.

• Others

1. Remote surveillance management of stores: Leisure-style management on multiple chain stores or stall frees you from exhausting work. With this product, you can implement surveillance anytime and anywhere through your mobile phone and realize management easily.
2. Remote care of a patient: What can you do if you are far away from home and cannot timely visit a sick relative or friend on the site due to inconvenient transportation? Our product enables you to know the latest information and surgery progress of the sick relative or friend through your mobile phone in real time. Your care is reachable anytime and anywhere.
3.

Use and Operations

• Packing List



• Support installation diagram



Indicator Description

Indicator	State	Description
1. SYS indicator (a single color/yellow)	Constantly on	▲ The system is starting. The indicator is constantly on after the system starts and the domain name server or center server is registered successfully. The device system operates normally.
	Blinking (once every 0.3s)	The device system is starting, or the domain name server or center server is being registered.
	Blinking (off for 1s every 3s)	A client logs in to the device.
2. ALARM indicator (a single color/red)	Off	▲ The securities functions are armed when the system starts. Armed successfully
	Blinking !	▲ The securities functions are not armed when the system starts. Disarmed successfully
3. 3G indicator (a single color/yellow)	Constantly on	Dialing succeeds and the device operates in the WCDMA mode.
	Off	2G indicator on: The device operates in a non-3G mode (when neither the 2G indicator nor the 3G indicator is on, the device operates in the wired mode). 2G indicator off: The SIM card is not detected.
	Blinking (once every 0.3s)	Dialing..
4. 2G indicator (a single color/red)	Constantly on	Dialing succeeds and the device operates in the GSM mode.
	Off	3G indicator on: The device operates in a non-2G mode. 3G indicator off: The SIM card is not detected.
	Blinking (once every 0.3s)	Dialing..
5. Horn	Two "beep" sounds (at an interval of 2s)	Armed successfully (motion detection and wired sensor arming and disarming)
	One "beep" sound (1.5s)	Disarmed successfully
	Three "beep" sounds (continual, short, and quick)	The horn sends three "beep" sounds at an interval of 1s, and howls cyclically every minute, indicating low power (when a battery is configured).

Quick Installation Guide

Interface Description



Quick Installation

Step 1: Install the antenna.
Turn to tighten the antenna clockwise by aligning it with the antenna interface.



Step 2: Install the SIM card and the storage card.
Use the small resetting tool to press the button of the SIM card slot, take out the SIM card holder, place in the SIM card, then insert the SIM card and the card holder into the card slot. Insert the TF card into the TF card slot.

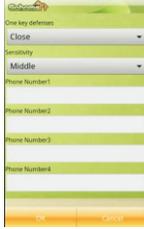


Step 2: Connect to view the video.

<p>1) After entering the client, enter the number (device ID) and password to log in the camera.</p>	<p>2) After successful connection, enter the video play interface.</p>
	

Step 3: Use the main functions.

1). Arm, disarm, SM number and advanced settings

<p>Arm, disarm, and SM number settings</p>	<p>Advanced settings</p>
	

2). Control functions of the digital camera

In the live broadcast list, select the digital camera for playing. You can perform operations such as PTZ control, image control, and recording.

<p>PTZ control, recording and snapshot</p>	
	

3). Change password

After logging in to the device, you can enter password settings to change the device access password.

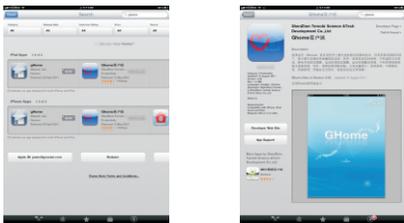

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● iPhone/iPad Operation Guide

Download, install, and use the client through iPhone/iPad according to the following steps:

Step 1: Download and install the client.

Open App Store, log in to the iTunes account, search and download the GHome client.



Step 2: Select the mobile phone access network.

You can select the 3G/2G network of your iPhone/iPad or the WIFI network to log in to the 3G video surveillance camcorder.

(1) Select the 3G/2G network.

Enter the setting interface, The mobile phone automatically enables the 3G/2G network. If the 3G video surveillance camcorder does not use the public network IP address (such as ADSL), you need to start the proxy server.

(2) Select the WIFI network.

Note: First make sure that your iPhone/iPad supports the WIFI network.

Enter the setting interface, and enable WIFI. The mobile phone automatically selects the WIFI network. If the 3G video surveillance camcorder does not use the public network IP address (such as ADSL), you need to start the proxy server in both the 3G video surveillance camcorder and the GHome client software. For the

method of starting the proxy server in the 3G video surveillance camcorder, see the "Advanced Options" description in the "PC operation guide".

Step 3: Set the dedicated domain server and proxy server for the 3G video surveillance camcorder.

(1) Log in to the mobile phone client, and enter the configuration interface.

(2) Set the domain name used to log in to the 3G video surveillance camcorder. As shown in the following figure, the domain name is set to mhomegmcc.com.

(3) Configure the DNS server.

Generally, use the default DNS server. You can also specify a DNS server according to the dealer.

(4) Configure the proxy server.

When the 3G video surveillance camcorder does not have a public network IP address, you must start the proxy server. For the method of starting the proxy server in the 3G video surveillance camcorder, see the "Advanced Options" description in the "PC operation guide".



Step 4: Log in to view the video.

(1) Connect to log in to the 3G video surveillance camcorder.

Enter the GHome client, and add the 3G video surveillance camcorder. Enter the device ID of the 3G video surveillance camcorder in the number box, and enter the last six digits of the ID for password. After being added, the 3G video surveillance camcorder is saved in the device list.



(4) View alarm video records.



Click surveillance (digital camera) to enter the video surveillance play interface.

(2) Video play control



Select upward, downward, leftward, or rightward to control video play accordingly.

(3) Security alarm settings

Set the alarm message receiving number and one-key arming. When the camera captures an image exception, the system sends an alarm message to the set number for receiving alarm messages.

After you select to view recorded video, the system displays the alarm video records in recent five weeks by default.



Click one recorded video in the video record list to directly play the record.

(5) Change the login password.



Enter the original password and the new password, and click Save to change the login password of the device.

● PC Operation Guide

1. Management Interface

Normally, you can use the mobile phone where the GHome client is installed to connect the device and view video after the device operates normally (the SYS indicator and 2G indicator are constantly on, or the SYS indicator and 3G indicator are constantly on).

The PC management interface is used by advanced users. Common users are not advised to set device parameters on the PC management interface. Before setting, carefully read through this section.

2. Login Management Interface

Procedure:

1) Modify network settings of the PC:

- Cancel proxy settings.
- Change the IP address: Double-click on the local connection icon, select **[Properties]**, and enter the **[General]** column. Find and select **[Internet Protocol(TCP/IP)]** in **[This connection uses the following items]**, select **[Properties]** → **[Use the following IP address]**, and set **[IP address]** to 192.168.1.100. Use the default value for **[Subnet mask]**, enter 192.168.1.1 in **[Default gateway]**, and click **[OK]** to complete IP settings for the PC.

2) Connect the PC and the camcorder to the same LAN: Use a network cable to connect the PC to the camcorder.

3) Login management interface

- Open the browser (IE for example), enter the IP address (http://192.168.1.120 by default) of the camcorder in the address bar, and press Enter. The following login dialog box is displayed (the dialog box varies slightly in different systems and browsers), prompting you to enter the username and password.



The default username and the default password are both “admin”. Enter the “admin” in the [username] box and the [password] box in turn, and click [OK] to log in to the setting page.



After successful login, the following page is displayed. You can click the left menu to complete related settings.



On the management interface, you can set and query the following device information:

- Running Status
- Network Options
- Media Options
- Alarm Settings
- Advanced Options
- Device Options
- System Tools

3. Running Status

The running status displays the current operating status and basic parameter information of the device, such as the local IP address, 3G network status, and connected server status.



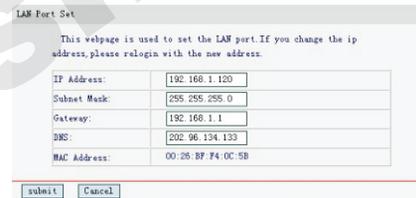
4. Network Options

Click the “Network Options” tab. The tab page displays its sub-tabs:

- LAN port
- 3G setting

1) LAN port

Click the “LAN port” sub-tab to set the LAN port. The following configuration page is displayed:



Set the host name, IP address, and corresponding subnet mask of the LAN port:

[Subnet Mask] : Set the corresponding subnet mask of the local IP address. After setting as required, you can handle the configuration result according to the corresponding operation below.

[Submit] : Save the current settings.

[Cancel] : Cancel the current configuration operation.

The set parameters take effect after the system restarts.

2) 3G setting

Click the "3G setting" sub-tab, and set the 3G parameters of the device. The following configuration interface is displayed:

3G Net Setting

This Page is used to set the 3G network parameters, you need to restart the system to make it works after modifying the parameters.
When the wireless is in GSM mode, the maximum video coding bit rate is limited to 30K.

User:	<input type="text" value="3gpp"/>
Password:	<input type="text" value="3gpp"/>
Phone Number:	<input type="text" value="*99#"/>
Access Point Name:	<input type="text" value="3gpp"/>
Mode:	<input type="text" value="Auto"/>
	<input checked="" type="checkbox"/> Enable Wireless

This tab is used to set the parameters used for 3G network dialing. Please consult the local service provider or mobile operator.

【User】 : 3gpp

【Password】 : 3gpp

【Phone Number】 : *99#

【Access Point Name】 : 3gpp

【Mode】 : Automatic mode: the WCDMA or GSM mode is selected automatically. After wireless connection is enabled, GSM dialing starts automatically. If it is not enabled, the system is accessed in the wired mode or the manual dialing mode.

After setting as required, you can handle the configuration result according to the corresponding operation below:

【Submit】 : Save the current settings.

【Cancel】 : Cancel the current configuration operation.

The set parameters take effect after the system restarts.

5. Media Options

Click the "Media Options" tab. The tab page displays its sub-tabs:

- LiveView
- Image
- Media
- Record

1) LiveView



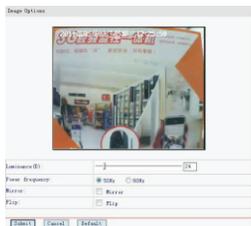
【PTZ Control】 : : resetting; : upward/downward scanning; : stopping; : horizontal scanning; you can control the camera turn direction.

【Step angle】 : These angles are available: 5°, 10°, 15°, 20°, 25°, and 30°. You can change it as required. The maximum horizontal rotation angle is 270°, and the maximum upward/downward angle is 60°.

【PTZ start position】 : The position after the device is powered off and restarts

Note: If you want to play the current video record here, you need to download the IE plug.

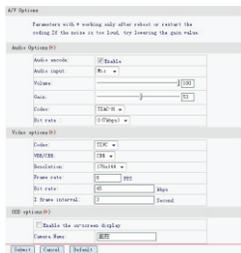
2) Image



【Mirror】 and **【Flip】** : Set the image according to the product position. When the device is installed reversely, select **【Mirror】** and **【Flip】** at the same time.

【Power frequency】 : 50 Hz or 60 Hz; the power supply frequency is 50 Hz in China.

3) Media



Select the channel of audio and video source to be used. This setting takes effect upon completion. Click **【Submit】** to save the set parameters. These parameters take effect after the system restarts. Click **【Cancel】** to cancel the medication. The current parameters are displayed.

Audio parameters

【Bit rate】 : the mode used for audio coding; for example, the “O (7 kbps)” option indicates that mode O requires a 7 kbps bandwidth. The higher the bit rate, the better the audio quality. Select a proper mode based on the video bit rate and network conditions.

Video parameters

【VBR/CBR】 : Click the dropdown list box to select a video coding mode.

【Resolution】 : the resolution of the coded image; the higher the resolution, the clearer the image.

【Frame rate】 : You need to specify the frame rate. The higher the frame rate, the more smooth the video, but the coder and the player need to process more data. Usually 8 frames are proper.

【Bit rate】 : The higher the bit rate, the better the image quality, but the higher the occupied network bandwidth. Fill in a proper bit rate according to the network bandwidth. The bit rate is from 30 kbps to 100 kbps. In the WCDMA mode, the recommended value is 60 kbps.

【I frame interval】 : the interval based on which one I frame is generated; fill in three times of the frame rate, namely, one I frame is generated every 3s.

4) Record

You can select a date and view the record saved before this day.



6. Alarm Settings

Click the “Alarm Settings” tab. The tab page displays its sub-tabs:

- Motion
- Alarm IO
- Alarm Scheme
- Alarm SMS
- Alarm Record

1) Motion

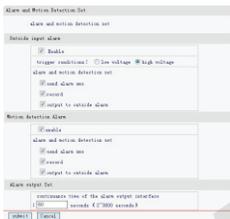


Motion detection area settings are not provided temporarily, so they are not introduced here.

[Sensitivity] : The greater the value, the higher the sensitivity.

[Threshold] : Use the default parameter.

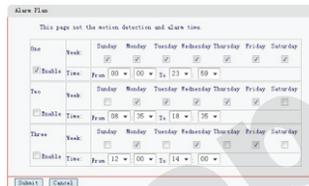
2) Alarm IO



- **Outside Input Alarm:** means that the external alarm input through the GPIO interface can trigger alarm reporting of the device. In addition, the device starts recording and sends a short message to the user. This function is used by advanced users.
- **Motion Detection Alarm:** means that the device is triggered to send an alarm when the camera detects an image change. In addition,

the device starts recording and sends a short message to the user. The user can also set this function in the mobile phone client.

3) Alarm Scheme



- You can set an alarm time segment. The security alarm functions such as motion detection of the camera and external alarm are invalid beyond the set alarm time segment.
- The system provides three groups of alarm plans. Alarm plan 1 (the alarm function is set for 7*24 hours every week) is enabled by default. You can modify or adjust the plan as actually required. Alarm plan 2 and alarm plan 3 are disabled by default. You can enable the plans at the same time as required, and select different time segments when the alarm function is set.

4) Alarm SMS

Set this function according to local Short Message Center (SMC) numbers. An SM can be sent to the set mobile phone number. At most four numbers can be filled in.



5) Alarm Record

- Pre-recorded time: recording starts 5s-15s (configurable) before the time when recording is triggered by motion detection of the camera.
- Time of video file: the total recording time when motion detection of the camera is triggered each time.
- Video Plan Options: the device can record in the time segment set by the user. The system provides three groups plans, which are all disabled by default. You can enable a plan and set time as required. You can enable a single plan only or enable the three groups of plans at the same time.
- Memory card status: the capacity and available space prompt of the current storage card.
- When memory card is full: cyclic recording is selected by default. When cyclic recording is selected, the system automatically overwrites the previous record and saves the new record if the storage card is full. When SM notice is selected, the system sends an SM about the full storage card to the SM receiving numbers set in Alarm Notice in the above interface.

7. Advanced Options

Click the “Advanced Options” tab. The tab page displays the following sub-tabs:

- Streamserver
- Device Access

1) Streamserver

You can set the parameters related to the streaming server, including the following streaming parameters:

【Data port(UDP)】: the default value is 9000.

【Command Port(TCP)】: the default value is 8895.

【IE Live Port(TCP)】: the default value is 9001. On the Web page, operations such as video browsing are performed through this port.

【Maximum number of users online(1-4)】: the number of PC and mobile phone clients connected to this device at the same time

【Client Login password】: you can change the password. The new password takes effect after the system restarts.

2) Device Access

Device Access Parameters

This page is used to set the device access parameters, including access server parameters, the domain name server parameters, point to point mode (SS mode) and platform distribution mode (DS mode) parameters. Parameters with changed working only after reboot or restart the code.

Registered Domain Name Setting

Registered Domain Name: Device ID | mhomegmcc.com
Registered IP Address: Gateway IP Local IP

Access Server Setting

Enable Access Server:
Access Server Address: portal.3gphone.com
Access Server Port: 6005

DDNS & Proxy Server Setting

DDNS Address: dns.goscamdvr.com
DDNS Port: 5355
Enable Proxy:
Proxy server Address: proxy.goscamdvr.com
Proxy server Port: 12983

Equipment access parameters are classified into two types:

- Registered Domain Name Setting:
Function switch (enabled by default):
 - ① Registered Domain Name:
You can select to register a domain name through the mobile phone number or the device ID. Here, mhomegmcc.com is the default level-2 domain name.
 - ② Registered IP Address:
When the device accesses the network through ADSL or another mode and port mapping is required, select the gateway IP address as the registered IP address of domain name. When the device uses a public network IP address or is in the same subnet as the client (for example, the device uses the TD access mode), select the IP address of this device.
- Access Server Setting (disabled by default):
After the access server is enabled, the "Registered Domain Name Setting" is invalid. These parameters are uniformly allocated by the access server set here. The access server function is disabled by default. To enable this function, contact the local Unicom operator.
- DDNS & Proxy Server Setting:
 - ① DDNS Address and DDNS Port:
The domain name registration and resolution server is provided. After starting, this device continuously reports the local domain

name and the IP address used for the current access network to the RBS server. The PC or mobile phone client obtains the IP address used for this device from the RBS server according to the domain name of this device, and sets up a bidirectional network connection with this device. However, the PC or mobile phone client and this device are in the same subnet (the same LAN or VPN).

- ② Enable Proxy (enabled by default):
When the client and the device are not on the same network and cannot directly communicate with each other, but two ends can access Internet, the proxy server provides the transparent transmission function of network relay for the client and the device, and establishes a point-to-point connection path.

8. Device Options

Click the "Device Options" tab. The tab page displays the following sub-tabs:

- Device
- WCDMA Module

1) Device

View the related information of the device.

Device Information	
Device Information	
Device Name	GHone B816
Device ID	908996225874947
Hardware Version	V2.0
Software Version	2.6.10
Kernel Version	2.1 #75 Thu Dec 23 18:30:57 CST 2010
Video Codec	V1.20-2009.10.21
Audio Codec	V1.10-2009.05.31

2) WCDMA Module

View the related information of the WCDMA module.

3G Module Manage	
Information of the current 3G modules in use.	
IMEI:	352347037795449
Module Information:	LQA0062_240085_6.1.1#0106_EFS1.5

9. System Tools

Click the "System Tools" tab. The tab page displays the following sub-tabs:

- Date&Time
- Update
- Restore
- Admin Settings
- Restart
- System Log

1) Date&Time

Date/Time	
Set the time manually or get the time by NTP server. Device will get the NTP time automatically and automatically synchronize once every seven days after.	
Date:	<input type="text" value="2011-11-03"/> YYYY-MM-DD
Time:	<input type="text" value="14:08:25"/> HH:MM:SS <input type="button" value="Get Computer Time"/>
Time Zone:	(GMT+08:00) Irkutsk, Ulan Bator, China, Taiwan, Hong Kong, Philippines
NTP Server:	<input type="text" value="clock.isc.org"/> <input type="button" value="Get NTP Time"/>
<input type="button" value="Submit"/> <input type="button" value="Cancel"/>	

Time setting procedure:

Manual setting: First select your time zone, enter the date and time values according to the presented formats, and click "Submit" to validate the settings. Alternatively, you can click "Get Computer Time" behind to set the time of the current management PC to the device time.

Setting the NTP server:

Enter the NTP server domain name or IP address in the "NTP Server" box. Click "Get NTP Time". The device starts to obtain the network time. After the device is powered on or the NTP time is obtained manually, the device time is automatically synchronized with the RTC time every seven days.

2) Update

Update	
You will get some new features after update.	
Select the update file:	<input type="text"/> <input type="button" value="浏览..."/> <input type="button" value="Update"/>
Current software version:	2.6.10
Notice: Please select the suitable software with the current hardware. You must not power off the device when updating otherwise the device will be damaged and can not be used. The device will automatically restart after updated.	

Procedure of software upgrade:

Step 1: Log in to this Web site , and

download the latest software version of this device.

Step 2: Enter the full path file name of the downloaded file in the "Select the update file" box, or click "Browse" to select this file to upgrade.

Note: That the suffix of this file is "mhd".

Step 3: Click "Update" to start the update program. Pay attention to the progress bar in the status bar of the Web page.

Step 4: After the upgrade, restart system to validate the new program.

Notes:

- Select the software version consistent with the hardware version. Otherwise, upgrade may fail.
- Ensure that the device is powered constantly in the software upgrade process. Otherwise, the device may be damaged and cannot be used.
- You must manually restart the system after the software upgrade.
- After the software upgrade, the device may restore the factory parameters.

3) Restore

You can click "Restore factory settings" to restore all the data to the factory values.

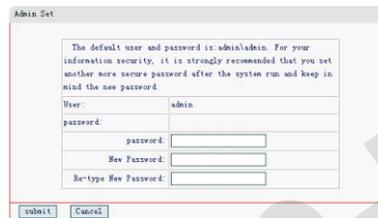
Restore factory settings

Click on this button will restore all settings to factory default state, the system will automatically restart.

Restore factory settings

4) Admin Settings

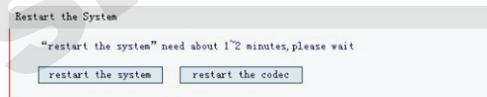
You can change the password used to log in to the device management page. To change the password, first enter the current password and the new password. If your input is correct, the new password is validated immediately after you click "Submit". In addition, the page for logging in to the device is displayed. Enter the new password to re-log in to the device management interface.



The screenshot shows a web form titled "Admin Set". It contains a message: "The default user and password is admin/admin. For your information security, it is strongly recommended that you set another more secure password after the system run and keep in mind the new password." Below the message are four input fields: "User:" with "admin" pre-filled, "password:" (empty), "New Password:" (empty), and "Re-type New Password:" (empty). At the bottom are "submit" and "Cancel" buttons.

5) Restart

For example, after you upgrade the software, modify network parameters, modify 3G settings, or change the default port in device management through Web login or other parameters, you must restart the system. It takes about one to two minutes. Please wait with patience.



The screenshot shows a dialog box titled "Restart the System". It contains the text: "restart the system" need about 1~2 minutes, please wait. At the bottom are two buttons: "restart the system" and "restart the codec".

Note:

After you change the parameters with "*" in the "Media Options" → "Audio/Video Settings" and "Advanced Options" → "Media Services Options", you can select "restart the system" or "restart the codec". The "restart the codec" takes less time.

● Querying and controlling the device state by sending an SM

You can send an SM instruction to the terminal device to query or control the terminal state. Operate as follows:

- (1) First make sure that the mobile phone number for sending the SM has been set to the SM receiving number.
- (2) Edit an SM instruction in your mobile phone, and then send it to the card number of the terminal device. The following table describes the related instructions:

Function	SM content	Normal reply
State query	CX	GHome: PPP activation failed. The system has run for 22 days and 12 hours, GSM/-45dBm; device sharing is enabled, and security functions have been armed (alarm SM enabled); the free space of the storage card is 200 M.
Arm	BF	GHome: armed successfully
Disarm	CF	GHome: disarmed successfully
Disable alarm SM	TZDX	GHome: The alarm SM function of the device has been disabled.
Enable alarm SM	KGDX	GHome: The alarm SM function of the device has been enabled.
Restart device	CQ	No reply for CQ

Notes:

1. The SM content is case-insensitive. You will not receive any reply if the terminal is powered off or the signal is poor.
2. The terminal identities only the SM sent from a number in the list of SM receiving numbers in "Security Settings".

FAQ

● Charge

1. What kinds of charges are generated for using the 3G video surveillance service?

Answer: When you use the 3G video surveillance service, both the 3G video surveillance camcorder number and the mobile number generate charges namely, the charge for 3G video surveillance and the charge for the mobile phone client. For details of the charge package, contact your local operator.

2. Will the user be charged if the device sends an alarm SM? What is the charge standard?

Answer: The user will be charged additionally for the alarm SM. For details of the charge standard, contact your local operator.

3. How the charge is calculated if the traffic exceeds the package?

Answer: Please contact your local operator.

4. How long video can be used/viewed if the 1G package is paid?

Answer: The 1G package provides the local data traffic of 1G, converted to a video view duration of about 46 hours (about two days).

5. Will traffic be generated if only the device is powered on? How much traffic is generated?

Answer: Traffic will be generated only when the device is connected to a mobile phone client. If the device is powered on, but no client is connected and used to view video, almost no traffic is generated. If the device is always operating and no client is connected and

used to view video, the generated traffic is about 10 k/month.

8. How to pay for/recharge the 3G video surveillance camcorder?

Answer: For the payment of 3G sim card charges, please to check with local dealer

● **Operation problems of the 3G video surveillance camcorder**

1. What is the normal operating state of the 3G video surveillance camcorder?

Answer: When the camcorder operates normally, the 2G or 3G indicator is constantly on, and the SYS indicator is constantly on or constantly blinks.

2. What is the most clear shooting distance of the 3G video surveillance camcorder?

Answer: The most clear shooting distance is within 5 m in the daytime and within 3 m in the dark environment.

3. Can the device shoot in the dark environment? Are images clear?

Answer: The device automatically turns on the infrared lights in the dark environment and can shoot. Images are black and white, and clear.

4. Can the device be used anywhere?

Answer: The device can be used in any place with coverage of Unicom signals.

5. Can only a 3G mobile phone number be used to view video?

Answer: The mobile phone number is not restricted. Both the 2G number and the 3G number are supported, but the data service must be enabled.

6. Which models of mobile phones can be used only?

Answer: The mobile phone can be used so long as it supports the GHome client software specified for the service. At present, the device is adaptive to more than one hundred mainstream mobile phone models of Motorola, iPhone, Samsung, Dopod, and Nokia. For details, please contact your local operator.

7. How to download and install the GHome client software?

Answer: Please contact your local operator.

8. How to customize/enable the 3G video surveillance service at the mobile phone ?

Answer: Please contact your local operator and learn the flow of enabling the 3G video surveillance service. A preferential package may be available. You can order a desired package from the operator as needed. You are advised to select a traffic package of 1G ~ 3G per month at the device end (the SIM function must be supported if the device uses an UIM card), and select a traffic package of 300M ~ 1G per month at the mobile phone end.

9. How is the mobile phone linked to the device to display surveillance video?

Answer: Log in to the GHome client. Click the **【Preference】** → **【Devices】** → click the “+” icon, enter the device DID (15 digits) in the 3G number box, enter the device password (the initial password is the last six digits of the device DID; for the device ID, see the package, camera, or the network base label) in the password box, enter the device name (which can be set by the customer) in the name box, and click **【OK】** to add the device. You can double click to connect to the device and enter the real-time video display interface.

If you have added your device to the GHome client of your mobile phone, log in the GHome client, directly click **【Devices】**, and click the corresponding device to play the real-time surveillance video (one-key play of real-time surveillance video).

10. Why does the mobile phone prompt that the remote modem disconnects this connection or the number of connections reaches the maximum value when the user wants to log in to the device?

Answer: It indicates that the 3G video surveillance service is not enabled in the user's mobile phone, and so dialing fails and the device cannot be connected. Please first enable the 3G video surveillance service at the mobile phone end. For the operation method, see the preceding answer.

11. After the device is started, a dark screen is displayed when the device is connected through a mobile phone. The system does not prompt any information. How to operate?

Answer: The following two possibilities exist:

1) The device fails to operate normally: Observe whether the indicator at the device is normal (the 3G or 2G indicator is constantly on). If not, it indicates that the device fails to dial, fails, or is disconnected from power supply. Please check.

2) Connection of the mobile phone fails, and the indicator at the device end is normal (the 3G or 2G indicator is constantly on): Please wait for a while, or exit the GHome client, re-log in, and attempt connection again.

12. The SYS indicator, ALARM indicator, and 3G indicator at the device end constantly blink, and the 2G indicator is off. What does it mean?

Answer: It means that the device is dialing. Please wait. When the 3G or 2G indicator is on, it indicates that dialing succeeds. Now, you can log in to the GHome client at the mobile phone, and connect the device to view real-time video.

13. How to control recording of the device at the mobile phone end?

Answer: For details, Please refer to “real-time video surveillance control” : recording, screen capture, and direction control.

14. How to perform real-time screen capture operation at the mobile phone end?

Answer: For details, Please refer to “real-time video surveillance control” : recording, screen capture, and direction control.

15. How to control rotation of the camera at the mobile phone end?

Answer: For details, Please refer to “real-time video surveillance control” :recording, screen capture, and direction control.

16. How to arm/disarm security functions at the mobile phone end?

Answer: For details, Please refer to “mobile phone client arming/disarming” .

17. How to set an alarm SM sending number at the mobile phone end?

Answer: For details, Please refer to “setting of alarm SM sending numbers” .

18. How to bind one terminal with multiple mobile phone numbers?

Answer: Directly log in to the client at the mobile phone , Click the 【Preference】 → 【Devices】 → click the “+” icon, and enter the device number and password. In theory, the number of mobile phones connected to the same terminal is not restricted, but the number of concurrent connections for viewing video is restricted. The maximum number of mobile phones connected to the same terminal for viewing real-time video concurrently is five.

19. How long can the video be recorded in a 2G TF storage card?

Answer: The time length of the stored surveillance video record is from three days to four days. Usually the recording trigger function is advised, so that the record duration can be longer.

20. Does the device use AC or DC power supply?

Answer: Please use the power adapter provided together with the device. The input voltage of the power adaptor for this device is 220VAC. Do not use an adaptor not configured for this device.

21. What are meanings of the indicators on the device?

Answer: When the device is operating normally , the indicators are as follows: The SYS indicator is constantly on/constantly blinks, and the 3G indicator or the 2G indicator is constantly on; there is no special requirement for the ALARM indicator on the device horn.

Indicator status	Description	
	The SYS indicator blinks once every 0.3s. Neither the 2G indicator nor the 3G indicator is on.	The SIM card is inserted incorrectly. Check whether the SIM card is inserted or the SIM card is in poor contact.
	① Both the 2G indicator and the SYS indicator blink once every 0.3s.	Indicating that the device is connecting to the 2G network.
	② The 2G indicator is constantly on, and the SYS indicator blinks once every 0.3s.	The device is connected to the 2G network already, and being registered at the RBS.
	③ Both the 2G indicator and the SYS indicator are constantly on.	The device operates normally on the 2G network.
	④ The 2G indicator is constantly on, and the SYS indicator blinks once every second.	A client has logged in to the device after the device is connected to the 2G network.
	① Both the 3G indicator and the SYS indicator blink once every 0.3s.	The device is connecting to the 3G network.
	② The 3G indicator is constantly on, and the SYS indicator blinks once every 0.3s.	The device is connected to the 3G network already, and being registered at the RBS.
	③ Both the 3G indicator and the SYS indicator are constantly on.	The device operates normally on the 3G network.
	④ The 3G indicator is constantly on, and the SYS indicator blinks once every second.	A client logs in to the device after the device is connected to the 3G network.
	① The ALARM indicator is constantly on.	The security functions are armed successfully when the system starts.
	② The ALARM indicator is off.	The security functions are not armed successfully when the system starts.
	③ The ALARM indicator blinks.	The device is recording. In this moment. Don't pull out the SD card.

22. Can the 3G video surveillance camcorder be used to access Internet?

Answer: This device is not a 3G router and does not support the Internet access function.

23. How to log in to the background of the 3G video surveillance camcorder to view and modify parameter settings?

Answer: Log in to the device background according to the following flow:

1) Check whether a proxy is enabled in the PC (LAN settings). If yes, disable the proxy.

2) Change the PC IP address: Right-click on the local connection icon, select **Properties**, and enter the **General** column. In **This connection uses the following items**, find and select **Internet Protocol(TCP/IP)**, choose **Properties** → **Advanced**, complete advanced TCP/IP settings, and click **Add** to add the IP address "192.168.1.100". The value of **Subnet mask** is the default value. Click **OK** to set the PC IP address.

3) Connect one end of the network cable to the network cable interface of the device and the other end to the network cable interface of the PC.

4) Start the device, and wait for the device indicator to become normal (the 3G or 2G indicator is constantly on).

5) Open a new IE page, and enter "192.168.1.120" in the address bar. Both the account name and default password of the Web address are "admin". Confirm to enter the configuration page. You can modify the related parameters such as image parameters, media parameters, and alarm response parameters.

24. Can the 3G video surveillance camcorder transmit sound in addition to video?

Answer: Yes. The standard camera is provided with a built-in microphone. You can see the site video and hear the site sound through your mobile phone.

25. Can the camera of the 3G video surveillance camcorder be used anywhere?

Answer: In principle, the 3G video surveillance camcorder can be used in the area with coverage of WCDMA or GSM signals where the GPRS/EDGE/HSPA data server is enabled.

Note that the HB-8816 does not provide the waterproof, fireproof, or shockproof function. Usually it is placed at a fixed position indoors. Note that the place where the device is installed must have a sufficient strength of GSM or WCDMA signal.

26. How to set the device when there is exception, start recording automatically?

Answer: In the arming state, recording is triggered automatically if an exception occurs in the surveillance picture of the device. For details of the arming operation, see the preceding description.

27. How many persons can be supported by the 3G video surveillance camcorder to view the surveillance video?

Answer: The number of persons for viewing surveillance video is not restricted. So long as the GHome client software is installed in the mobile phone (this client does not restrict the persons who install the client software), the user can use the correct device number and password to connect to the device and view video. However, the number of persons viewing video concurrently cannot exceed five. Specifically, when the WCDMA signal is good, one 3G wireless video surveillance gateway can be used by 2~5 mobile phones to view surveillance video at the same time. When the EDGE signal is good, one 3G wireless video surveillance gateway can be used by one mobile phone to view surveillance video.

28. Why are surveillance video images displayed on my mobile phone black and white?

Answer: When the light around the camera is insufficient, the camera automatically enters the infrared night surveillance mode (the infrared lights at the edge of the camera are turned on). In this case, the surveillance video images displayed on the mobile phone are black and white.

29. Why are surveillance video images displayed on my mobile phone inverted?

Answer: If the camera is installed reversely on a support, you need to select **【Mirror】** OR **【Flip】** in the "Image" sub-tab under "Media Options" described.

30. What kind of technical service and warranty is provided for the 3G video surveillance camcorder? What is the after-sales promise?

Answer: The user of 3G video surveillance enjoys the following service promised: guaranteed return within one week, guaranteed replacement within 15 days after purchase, and one-year warranty service (excluding the damages arising from human factors; if a user needs to replace a part, the part cost will be charged according to the defined standard).

31. The surveillance video images displayed on my mobile phone are not real time. Why?

Answer: Due to the video data processing, there is a certain delay

in the video transmission. In addition, the delay is largely related to the local wireless signal interference, attenuation, and the number of users in the same cell at that time. Generally, the video delay is about 10s.

32. Why does the SYS indicator of the 3G video surveillance camcorder blink for a longer time sometimes after the camcorder is powered on?

Answer: In some cases, the mobile network can be accessed after multiple times of dialing. You need to wait for a longer time, which does not exceed 10 minutes usually. The SYS indicator is constantly on after dialing succeeds and the server is connected properly. If the network cannot be accessed after 10 minutes, the signal may be weak. You can change the device position or contact the customer service personnel.

33. Why does buffer occur frequently when a mobile phone is used to view video?

Answer: 1) First check whether the mobile phone signal is strong enough. If the mobile phone signal is weak or the user is moving at a high speed, buffer occurs frequently when a mobile phone is used to view video. 2) If you make sure that the mobile phone signal is strong enough, check the device. Check whether login to the device is normal. If the 3G or 2G indicator blinks, the device is dialing or dialing fails. If the dialing process is long, the signal in the position where the device is located is poor. Reposition the device to a place with a stronger signal, and try again.

34. How many devices can be added by using the GHome software?

Answer: The GHome mobile phone client software does not restrict the number of device that can be added by the user.

35. How to solve the problem if the mobile phone always prompts a dialing failure?

Answer: Usually the problem is caused by poor signal. You can power off and restart the software. If it does not work after several attempts, delete all the access points in the connection. When being restarted, the software prompts that the network configuration is incorrect and asks you whether to confirm the modification. Just confirm the modification.

Safety Information

To correctly and safely operate your wireless device, carefully read through the following safety precautions.

◆ Electronic device

When use of a wireless device is prohibited or use of the device may lead to an interference or safety problem of the electronic device, please power off the wireless device.

◆ Medical equipment

In the medical treatment or health care site where use of a wireless device is prohibited expressly, please observe the regulations of the site, and power off this wireless device.

Some wireless devices may interfere with the audiphones. If so, power off the wireless device, and consult your doctor.

If other personal medical devices are used, consult the doctor or the equipment manufacturer to know whether operation of this wireless device interfaces with the medical device.

◆ Inflammable and explosive area

In the area with inflammable or explosive materials, turn off your wireless device, and observe relevant label instructions, to avoid explosion or fire. Areas with inflammable or explosive materials include but are not limited to the following areas:

Gas station

Fuel zone (such as the compartment under the deck of a ship)

Transportation and storage facilities of fuel or chemical products

Area where the air contains chemical substances or particles (such as granule, dust, and metal powder)

Area with a sign of explosion hazard

Area with a sign of "power off the bidirectional wireless device"

Area where you are always advised to turn off the car engine

◆ Traffic safety

Observe the regulations on use of a wireless device during driving of a vehicle that are provided in the local law or code of the related country or region.

RF signals may affect the electronic system of a car. For more information, consult the car manufacturer.

Do not put the wireless device above the car safety airbag or in the area that can be touched by the expanded airbag. Otherwise, the

wireless device will bear a strong external force when the airbag is expanded or broken, which may lead to a severe injury to persons in the car. When travelling by plane, please observe the regulations and rules of the airline company that related to use of a wireless device. Before the plane takes off, turn off the wireless device, lest the radio signal would interfere with the plane control signal.

◆ Children's health

Do not let a child use this wireless device without supervision of an adult. The wireless device contains some small sharp parts, which may injure children or lead to a choking hazard if they are swallowed by children.

◆ Environmental protection

Observe the local decree on disposing of device packaging materials, and abandoned wireless devices and accessories, and support the recycling activity.

