Mega-Pixel Network Vandal Dome

CAM419

User's Manual

Version: 3.1

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Content

1. Preface

CAM419 Network Vandal Dome is a CMOS Network Vandal Dome. It builds in web server. User views real-time video via IE browser.

CAM419 supports MPEG-4 & M-JPEG video compression which provides smooth and high quality video. The video can be stored in the SD card, and can be playback remotely. The PoE model built-in support for Power over Ethernet allows the camera to receive both data and power over a single Ethernet cable.

2. Product Specifications

- MPEG-4 / MJPEG compression formats. Supports resolution up to SXGA (1280x1024), 1.3Mega pixels.
- MPEG-4 / MJPEG dual streaming.
- Self-Contained HTTP Web Server providing Internet capability for remote access
- Supports SD card for local recording
- 2-way audio
- Unbreakable housing
- Support IP66 water proof standard
- Built-in support for Power over Ethernet (available for PoE models)
- Online firmware upgrade
- Real-time video recording
- Recorded files compatible with Microsoft Windows Media Player

Hardware	
CPU	ARM 9 ,32 bit RISC
RAM	64MB
ROM	4MB
Image Sensor	1/4" CMOS, 1.3 Mega pixel
Digital I/O	1 In/ 1 Relay out (COM. & N.O.)
Audio In / Out	1 In / 1 Out
Power Consumption	DC12V, 700mA PoE model: Built-In PoE (IEEE 802.3af)
Network	
Ethernet	10/ 100 Base-T
Network Protocol	HTTP, TCP/IP, RTP/RTSP, 3GPP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP
System	
Video Resolution	1280x1024, 640x480, 320x240, 160x120
Video Adjustment	Brightness, Contrast, Exposure, Sharpness
Image Snapshot	Yes
Full Screen Monitoring	Yes
Compression Format	MPEG-4, MJPEG
Dual Streaming	Yes, MPEG-4 / MJPEG
Video Bitrate Adjustment	CBR, VBR
Motion Detection	Yes, 3 different areas
Triggered Action	Mail, FTP, Digital out, Save to SD card
Pre/ Post Alarm	Yes, configurable
Security	Password protection
Firmware Upgrade	HTTP mode, can be upgraded remotely
Simultaneous Connection	Up to 10
Audio	Yes, 2-way
SD card management	
Recording Trigger	Motion detection, Digital input, IP check, Network break down
Video Format	AVI, JPEG
Video Playback	Yes
File Management	Yes, can be deleted or overwrite
Web browsing requirement	
OS		Windows 2000, XP, 2003, Microsoft IE 6.0 or above

Hardware	Suggested	Intel-C 2.0G, RAM: 512MB, Graphic card: 64MB
	Minimum	Intel-C 1.6G, RAM: 256MB, Graphic card: 32MB

3. Product Installation

A. Hardware Installation
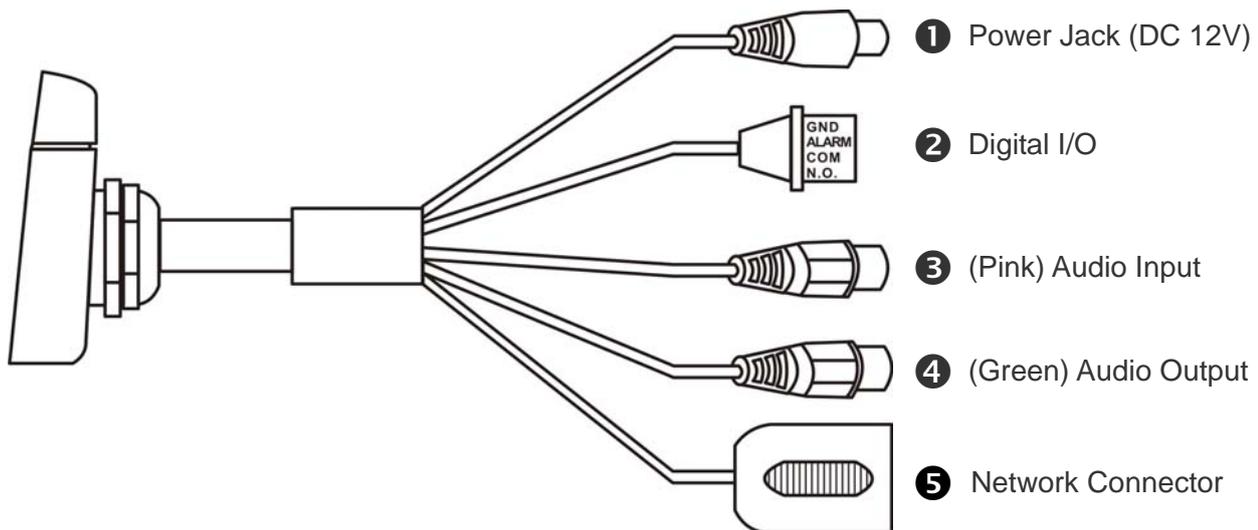
❶ Power Jack:	To connect the included power adapter.	
❷ Digital I/O:	Digital In and Digital Out.	
❸ Audio Input (Pink):	The RCA connector allows connect to a microphone or audio source, the connected audio will be heard at the remote site.	
❹ Audio Output (Green):	The RCA connector allows connect to an amplified speaker, you can hear the voice of the remote site from the speaker.	
❺ Network Connector:	The RJ-45 connector allows connect the Ethernet cable.	

1. Connect the cable of Digital I/O, Audio output and Audio input if you want to use these functionalities.
2. Connect Ethernet cable for network connection.
3. Connect power adapter to turn on the camera.
4. If the camera is PoE model, the power adapter is not necessary. The camera will get the power from the Ethernet cable. Please follow the below figure for the connection.
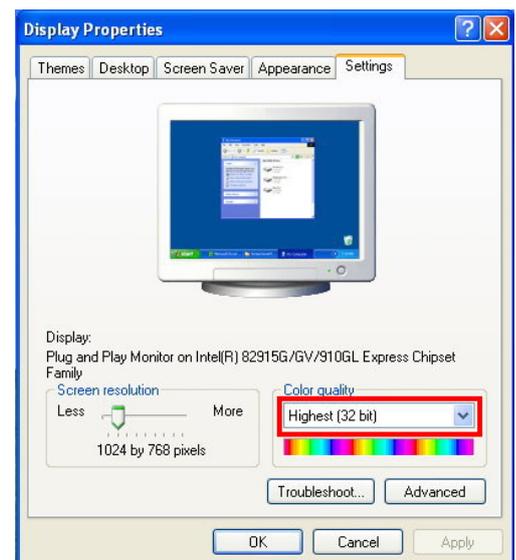
PC — Switch — Midspan — Network Camera

—— Ethernet   —— Power
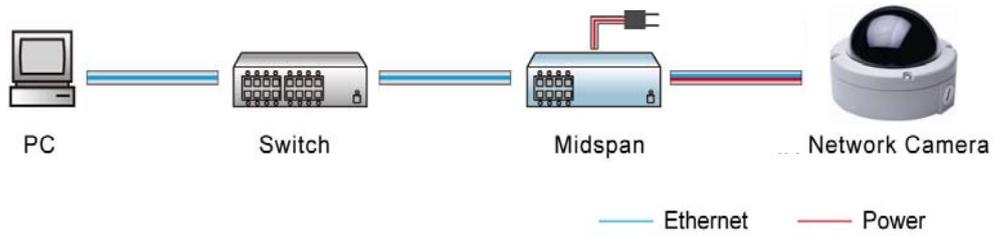
5. Set up the network configurations according to the network environment. For further explanation, please refer to chapter 6.

B. Monitor Setting

1. Right-Click on the desktop. Select [Properties]

2. Change color quality to "Highest (32bit)".

C. IP Assignment

➢ Always consult your network administrator before assigning an IP address to your camera in order to avoid using a previously assigned IP address.

➢ MAC Address: Each network camera has a unique Ethernet address (MAC address) shown on the sticker of the camera.

➢ One final note, although the IP Search is able to find and configure any network camera on the LAN except those that are behind a router, it is a good idea to set the host PC to the same subnet. In order to connect to the Web-based user interface of the network camera, the host PC must be in the same subnet. For more information about subnets, please consult your network administrator.

There are 3 kinds of IP configuration:

● Fixed IP (Public IP or Virtual IP)

● DHCP (Dynamic IP)

● Dial-up (PPPoE)

IP Search is a utility that provides an easier, more efficient way to configure the IP address and network settings of the network camera. It even provides a convenient way to set the network settings for multiple devices simultaneously. Moreover, IP Search can save the network settings for all devices as a backup and restore them when necessary.

The software can be installed from the attached software CD.

1. Once IP Search has been successfully installed on the computer, double click the IP Search icon on the desktop to run the software.
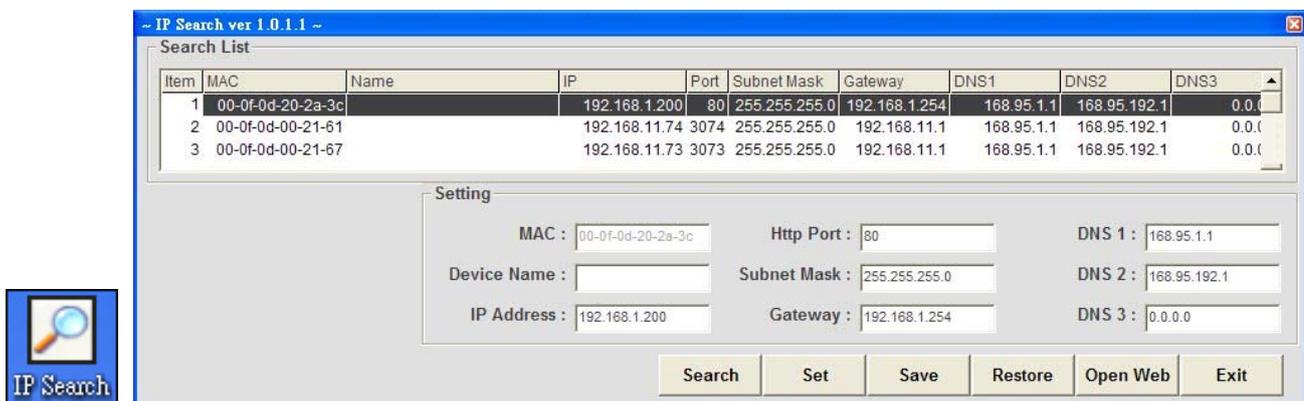
2. IP Search searches all the network devices which connect to the intranet and lists on the window. Click [Search] button to search again.

3. From the list, select the device with the MAC Address that corresponds to the device that is to be configured.

4. Click one of the network devices, the network configuration of this device will show on the bottom.

5. After filling in the IP Address, Subnet Mask, Gateway and the others, click [Set] button to complete the configuration settings and save into the remote device.

6. You can assign a name to identify the camera. Type the name in "Device Name" field, click [Save] and then click [Search] button, the name will be displayed in the list.

7. Wait for 1 minute to let camera update the settings, and then click [Search] button again to re-search the network devices. Click the network device listed on the window and click [Open Web] button. It will open an IE browser and connect to this device directly.

D. Install ActiveX Control

For the first time to view the camera video via IE, it will ask you to install the ActiveX component.

If the installation failed, please check the security setting for the IE browser.

1. In IE, click on [Tools] → [Internet Options…]

2. Click on [Security] Tab → [Custom Level…]

3. In Security Settings, under [Download unsigned ActiveX controls], select "Enable" or "Prompt".

4. In Security Settings, under [Initialize and script ActiveX controls not marked as safe], select "Enable" or "Prompt".

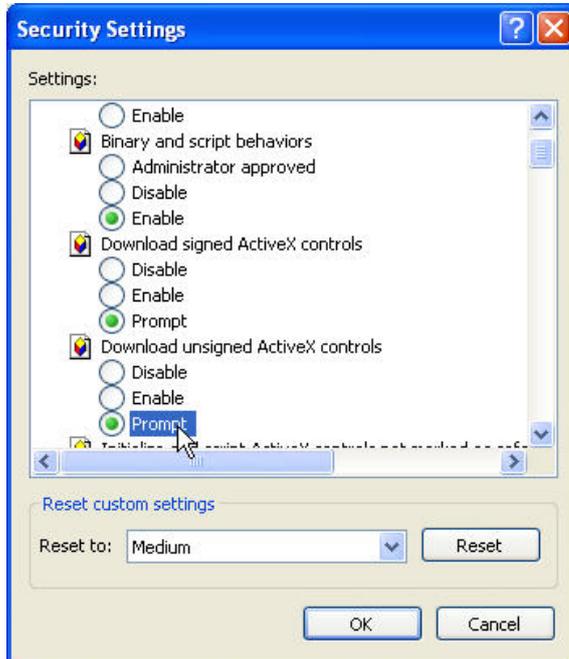5. When pop-up window with warning message, click [Yes] to save the settings.
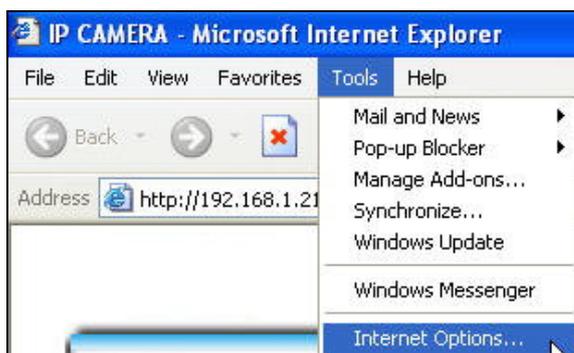
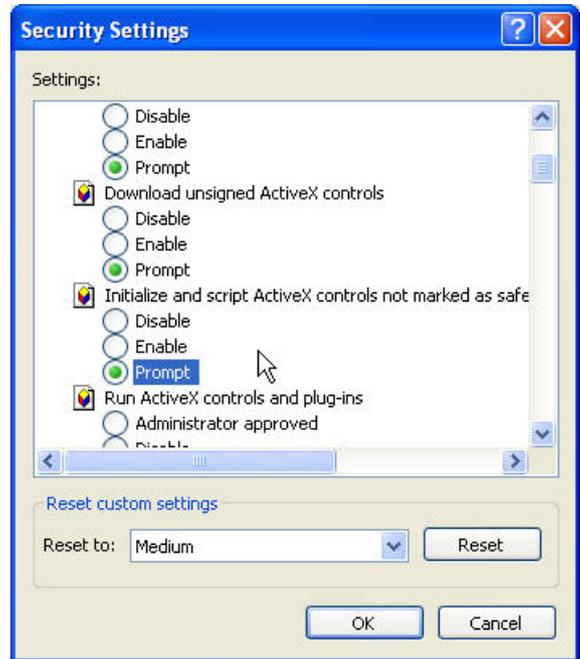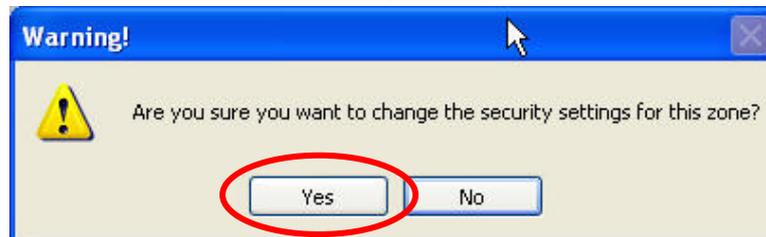**1**   **2**
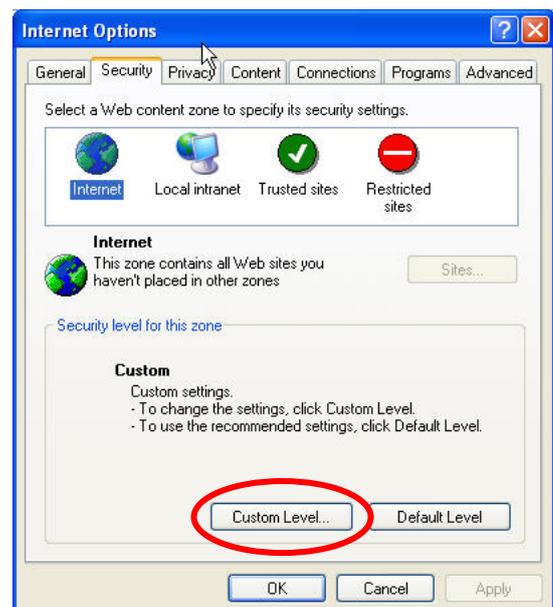
3

4

5

When popup the following dialogue box, click [Yes].

4. Live Video

Start the IE browser, type the IP address of the network camera in the address field. It will show a dialogue box. Key-in the user name and password.

The default user name and password are "**admin**" and "**admin**".

When connect to the CAM419, the following GUI shows.

❶ **Streaming :** If the streaming 2 is enabled, select the streaming from the pull-down list to display.

❷ **Configuration :** Go into the configuration page to set the parameters if necessary.

❸ Shows system date/time, video resolution and video refresh rate (FPS).

❹ **Online Visitor :** Shows how many users connect to this network camera.

❺ **Function Buttons :** Click these buttons will perform the following functions.

	Fit to Window : Resize the video to fit the window for view. Click this button again to back to the original size.
	Full Screen : Click this button or double-click the video, the video will change to full screen mode. Press [Esc] key or double-click the video again, it will back to normal mode.
	Snapshot : Click this button to take snapshot of the video. The image will be displayed in a pop-up window, click 💾 to save as a jpg picture.
	Record : Click this button to record the video into the local PC. It will ask you where to save the video. To stop recording, click this button again. The saved video format is AVI. The recorded file can be played by Microsoft Media Player. Note, MPEG4 decoder must be installed to play the recorded file. You can install "FFdshow" from the included CD for the decoder.
	Chatting : The camera supports 2-way audio. Click this button, then you can use microphone which connected to the PC to talk to the camera side.
	Voice : Click this button to turn on the audio from camera. Click again to turn off it.
	Digital Zoom : Click this button, a pop-up window appears. You can enable / disable the digital zoom, and adjust the ratio.

	Relay Out (ON/OFF Switch) : Click the button to manually turn on / off the Relay via the built-in Digital Out.
	Relay Out (Time Switch) : Click the button to manually turn on the Relay via the built-in Digital Out, after the interval time is passed, the Relay will be turned off automatically. The interval time can be set up in "Configuration" -> "Event Handling" -> "I/O".

5. Configuration

Click [Configuration] button to get into the configuration page. Click [Live View] button to back to the live video page.

A. System

System Information

Set up the camera name, select language, and set up the camera time.

Information

System Information

Server Information

Server Name:	IP_Camera
MAC Address:	00:0F:0D:20:11:02
Language:	⊙ English ○ Traditional Chinese ○ Simplified Chinese

Time Setting

Server Time:	2008/1/9 7:36:44 Time Zone: GMT+05:30
Date Format:	⊙ yy/mm/dd ○ mm/dd/yy ○ dd/mm/yy
Time zone:	GMT+08:00
○ Synchronize with NTP Server	
NTP Server:	198.123.30.132
○ Synchronize with PCs time	
Date:	2008/1/9
Time:	10:12:11
○ Input Date & Time	
Date:	2008/1/9
Time:	10:11:49
⊙ The date and time remain the same	
	Apply

Server Name

This is the Camera name.

Language

Select the language for the user interface.

Time Setting

Date Format: Select the format to display the date.

Time Zone: Select the GMT to match your time zone.

Synchronize with NTP Server: Select this option will synchronize the camera time with the NTP server via network.

Synchronize with PC's time: Select this option will synchronize the camera time with the PC's time.

Input Date & Time: Manually input the date and time.

The date and time remain the same: Keep the current date and time without change.

After set up, click [Apply] to save the settings.

User Management

You can add, remove and manage the users in this page.

User

Add User

To add a new user, type the user name and password, then click [Add/Set] to save the user.

User List

Edit: To change the username and password, click [Edit] and modify the user in the pop-up window.

Remove: To remove the user, click [Remove].

System Update

This page allows user to upgrade firmware, restart camera and manage the settings.

System Update

Firmware Upgrade

> The firmware can be upgraded online. Note, after upgrade firmware, all settings including Network, A/V and Event settings will be restored to the factory defaults. We strongly recommend you save the current settings before upgrade the firmware, and then reload the settings after upgrade.

> To update the firmware, click [Browse…] to select the new firmware file, and then click [Upgrade] to the procedure.

Reboot System

> To restart the camera, click [Start] and then click [Yes] on the prompted window.

Factory Default

> To load the factory defaults, click [Start] and then click [Yes] on the prompted window. Note, all settings including Network, A/V and Event settings will be restored to the factory defaults.

Setting Management

> **Save As a File:** To backup the current settings to PC, right-click [Setting Download] and click [Save AS…] in the context window, select a location to save the file. The filename of this file is "Settings.CFG".

New Setting File: To load the backup settings into the camera, click [Browse…] to select the file (filename is "Settings.CFG"), and then click [Upgrade].

Log List

Log List

System Logs

Click the [Logs] button on the right side to list the logs of system status.

Motion Detection Logs

Click the [Logs] button on the right side to list the logs of motion detection.

I/O Logs

Click the [Logs] button on the right side to list the logs of digital input and output.

All Logs

Click the [Logs] button on the right side to list all logs.

B. Video/Audio Settings

Image Setting

In this page, adjust "Brightness", "Contrast", "Exposure", "Sharpness" and "Automatic Gain Control" to get clear video.

Night Mode: This function can be set at different Frame rate to increase night illumination. Lower the Frame rate set, slower the frame refresh rate, but better the night illumination. Night mode will be activated automatically depending on lux illumination, if set at 15 frame rate, when night mode activated at night, the frame rate will not be more than 15FPS.

Video Orientation: Change the orientation to display the video.

Default: Click [Default] will load the default settings.

Video Setting

CAM419 supports MPEG4/MJPEG Dual Mode and Dual Streaming, set the video parameters in this page.

Streaming 1 Setting

Video

Basic / Advanced Mode: Select the mode to configure the parameters. Advanced mode provides more detail parameters for setting.

Resolution: Select the resolution from the pull-down list.

- SXGA – 1280x1024 (NTSC), 720X576 (PAL)
- VGA – 640X480 (Up to 30FPS / 25FPS)
- QVGA – 320X240 (Up to 30FPS / 25FPS)
- QQVGA – 160X120 (Up to 30FPS / 25FPS)

Video Frame Rate: The video refreshing rate per second. Select the frame rate from the pull-down list.

Video Format: Choose MPEG4 or JPEG format to output the video stream.

MPEG4: The video stream will be compressed in MPEG4 format. Choose CBR (Constant Bit Rate) or VBR (Variable Bit Rate) in Bitrate Control Mode.

- CBR: Set the Video Bitrate from 32Kbps ~ 2Mbps depend on the upload bandwidth.
- VBR: Set the Video Quantitative from 1 ~ 10, the higher value will get

better video quality.

JPEG: The video stream will be compressed in MJPEG format.

- Quality: 5 levels for select. The higher quality will get bigger file size.

Video System: Change the orientation to display the video.

- Please select "60Hz" (NTSC) if you are in America, Taiwan…
- Please select "50Hz" (PAL) if you are in Europe, China…

RTSP Path: Assign a name to identify this video stream. When view the video stream with RTSP connection, the URL should be "rtsp://<Public IP of camera>:<RTSP port>/<RTSP path>".

Streaming 2 Setting

This camera supports Dual Streaming, you can enable and configure the streaming 2.

Note: when the Resolution is SXGA, it is not allowed to enable the streaming 2. Please select VGA, QVGA or QQVGA as the Resolution for streaming 1 first.

Mode: Select the mode to enable or disable the streaming 2.

- Basic / Advanced Mode: Enable and configure the streaming 2. Advanced mode provides more detail parameters for setting.

- 3GPP Mode: Enable the streaming 2 as 3GPP mode, it allows a 3G mobile phone to view the video.
- Close: Disable the streaming 2.

Resolution: Select the resolution from the pull-down list.

- VGA – 640X480
- QVGA – 320X240
- QQVGA – 160X120

Video Frame Rate: The video refreshing rate per second. The total frame rate of streaming 1 and 2 is up to 30FPS (NTSC) / 25FPS (PAL). Before set the frame rate of streaming 2, you have to reduce the frame rate of streaming 1, and then set the frame rate of streaming 2.

Video Format: Choose MPEG4 or JPEG format to output the video stream.

MPEG4: The video stream will be compressed in MPEG4 format. Choose CBR (Constant Bit Rate) or VBR (Variable Bit Rate) in Video Control Mode.

- CBR: Set the Video Bitrate from 32Kbps ~ 2Mbps depend on the upload bandwidth.
- VBR: Set the Video Quantitative from 1 ~ 10, the higher value will get better video quality.

JPEG: The video stream will be compressed in MJPEG format.

- Quality: 5 levels for select. The higher quality will get bigger file size.

RTSP Path: Assign a name to identify this video stream. When view the video stream with RTSP connection, the URL should be "rtsp://<Public IP of camera>:<RTSP port>/<RTSP path>".

Streaming 2 Setting – 3GPP Mode

When configure the streaming 2 as 3GPP mode, the resolution is fixed to QQVGA (160X120) and the video format is MPEG4.

Since the bandwidth of 3G is not fast usually, recommend set the Video Bitrate to 32Kbps.

The 3GPP Path is for assign a name to identify this video stream. When view the video stream with RTSP connection, the URL should be "rtsp://<Public IP of camera>:<RTSP port>/<RTSP path>".

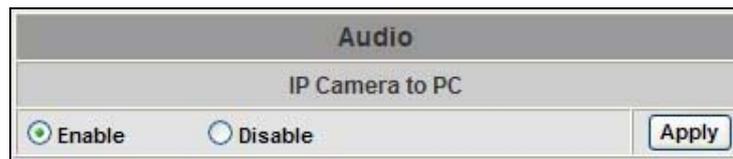*After set up, click [Apply] to save the settings.*

Audio

CAM419 supports **2-way audio**.

Audio from Camera to Local PC

For network camera to local PC, select [Enabled] and then click [Apply] to start this function.

Audio

Audio	
IP Camera to PC	
⊙ Enable ○ Disable	Apply

Audio from Local PC to Camera

For local PC to network camera, click "Chatting" button in the Live View page.

C. Network

Network Information

Network

IP Setting	
IP Assignment	
○ DHCP	
⊙ Static	
IP Address:	192.168.11.71
Subnet Mask:	255.255.255.0
Gateway:	192.168.11.1
DNS 1:	168.95.1.1
DNS 2:	168.95.192.1
Port Assignment	
Web Page Port:	80
RTSP Port:	554
RTP Start Port:	5000 [1024..10000]
RTP End Port:	9000 [1025..10000]
UPnP	
UPnP:	⊙ Enable ○ Disable
	Apply

IP Assignment

DHCP: If the camera behinds a router and the router provides DHCP service, using DHCP, the camera will get all network parameters from the router automatically.

Static: Assign IP address, subnet mask, gateway, and DNS manually.

Port Assignment

Set the ports if necessary. If the camera will be connected via Internet, configure the NAT (Network Address Translate) in router to match the port assignment.

Web Page Port: Set the port for HTTP connection.

RTSP Port: Set the port for transfer the video and audio.

RTP Port: Set the port range of RTP port.

UPnP

Enable or disable the UPnP protocol.

After set up, click [Apply] to save the settings.

PPPoE

If the camera connects to an ADSL modem directly and want to use PPPoE connection, set the parameters in this page.

PPPoE

PPPoE Setting

Select [Enabled] to use PPPoE. Type in username and password for the ADSL connection.

Send Mail After Dialed

If select [Enable], when connect to the Internet via PPPoE, the camera will send a mail with the Subject to a specific mail account. To set the mail account, please refer to "Mail and FTP" settings.

After set up, click [Apply] to save the settings.

DDNS

CAM419 supports DDNS, set the parameters in this page.

DDNS

DDNS Setting

There are several DDNS providers can be selected. Select the provider from the pull-down list, input Hostname, Username, Password and the Schedule Update time, and then click [Apply] to connect to the DDNS provider.

Status

This field will display the message to indicate the status of DDNS service.

Updating: Information update.

Idle: Stop service.

http://<hostname (username)>.<provider>.com: DDNS registration successful, can now link to the camera with the URL address.

Update Failed, the name is already registered: The hostname or username has already been used. Please change it.

Update Failed, check your internet connection: Network connection failed.

Update Failed, please check the account information with you provider: The input hostname, username or password may be wrong.

D. Event Handling

Event Setting

CAM419 supports multiple event settings.

Motion Detection

CAM419 allows 3 areas for detecting motion. When motion is triggered, it can send the video to specific mail address, transmit the video to remote FTP server, trigger the relay, and save video to local SD card.

Set the Area: To set up or clear the motion area, click [Draw/Clear Area] button of [Area Setting:] line. Use mouse to drag the area on the video.

Adjust the Sensitivity: To adjust the sensitivity of detection, select the level from the pull-down list.

Activate Motion Detection: To activate the motion detection, enable the "Detect Area" check box, and then select the actions when the motion is triggered.

Subject: The subject of the E-mail.

Interval: The interval time between multiple detections. For example, if the time set to 10 seconds, when the motion detection is triggered at time 10H:05M:10S, the next detection will be accepted after 10H:05M:20S. The detections between 10H:05M:10S to 10H:05M:19S will not be accepted.

Record File

There are 3 methods to record the event video in SD card or send out via E-mail, FTP:

AVI File: The event video will be recorded as still image with AVI format. The beginning and ending time of the file is depending on the Record Time Setting.

JPEG Files: This option is available when set Video Format as "JPEG" in Video Setting. When event is triggered, the camera will take a series of snapshot with JPG format. The beginning and ending time of the snapshot is depending on the Record Time Setting.

JPEG File: This option is available when set Video Format as "JPEG" in Video Setting. When event is triggered, the camera will take a snapshot with JPG format. The interval time of the snapshots is depending on the Interval Setting.

Record Time Setting

Configure the record time for the event recording file. For example, if set "Pre Alarm" as 3 seconds and set "Post Alarm" as 5 seconds, when motion detection is triggered at time 10H:05M:10S, the video will be recorded from 10H:05M:07S to 10H:05M:14S.

Network Dis-connected

When the network is down, it will save the video to local SD card.

Network IP Check

For the use of recording software, CAM419 supports the detection of the connection of camera and PC. Whenever the connection is down, it records the video to local SD card to make sure the video recording is continuous.

IP Check – Enable / Disable: Select to enable or disable this function.

IP Address: The IP address or URL of the PC which installed the recording software.

Interval: The interval time of the detection.

Dis-connected – Save to SD Card: Enable this check box will save the video to local SD card once the network connection of PC is down.

After set up, click [Apply] to save the settings.

Mail & FTP

To send out the video via mail or FTP, please set up the configuration first.

Mail & FTP

Mail Setting

Login Method: The camera provides 2 kinds of mail settings. "Anonymous" for the mail server which doesn't need login with username and password. "Account" for the mail server which needs login with username and password.

Mail Server: The IP address or URL of the send-mail server.

Username / Password: The username and password of the sender to login mail server and send the mail.

Sender's Mail: The sender's mail address.

Receiver's Mail: The receiver's mail address.

BCC Mail: The mail address to receive the mail also.

Mail Port: The port of the mail service. Default is 25.

FTP Setting

FTP Server: The IP address or URL of the FTP server.

Username / Password: The username and password to log in the FTP server.

Port: The port of the FTP service. Default is 21.

Path: The path to save the sent video.

After set up, click [Apply] to save the settings.

Test the Settings

You can click [Test] button, the camera will send a test mail to receiver's mail box, or save a test file to FTP site, to make sure the settings of mail or FTP are correct.

SD Card

In this page, if a SD Card is inserted, you can play back and manage the recorded files in the SD Card.

Install SD Card

Make sure the direction and pushing SD card into the slot completely. Note, the use of the SD Card will affect the operation of the CAM419 slightly, such as affecting the frame rate of the video.
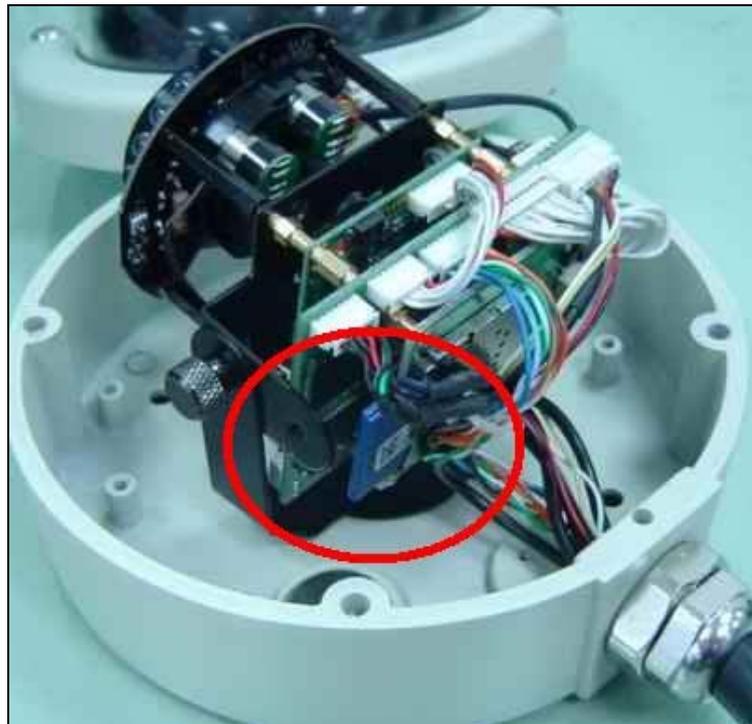
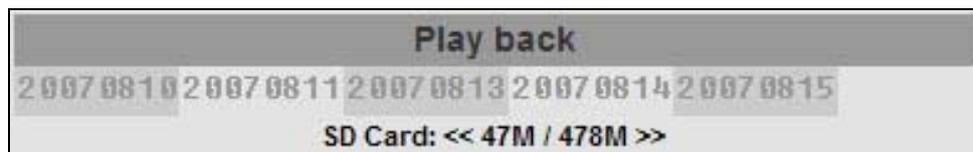## Record

Enable "Save to SD Card" option of each page in Event Setting and I/O Setting, the video can be recorded into the card once the event is triggered. When the SD Card is full, it will remove the oldest video automatically.

Playback

When open this page, the date of recorded files shows.

SD Card

Play back

20070810 20070811 20070813 20070814 20070815

SD Card: << 47M / 478M >>

Click the date, it will show the list of the video.

2007/08/13			Del
Time	Video	Event Type	☐
09:12:12	091212m.avi	Motion Detection	☐
09:13:14	091314m.avi	Motion Detection	☐
09:15:21	091521m.avi	Motion Detection	☐
09:20:58	092058m.avi	Motion Detection	☐
09:37:24	093724m.avi	Motion Detection	☐
09:40:37	094037m.avi	Motion Detection	☐
09:41:24	094124m.avi	Motion Detection	☐
09:41:59	094159m.avi	Motion Detection	☐
09:42:45	094245m.avi	Motion Detection	☐
09:45:06	094506m.avi	Motion Detection	☐
1 2 3 4 5 6 7 8 9 10 11 12			

The video format is AVI. Click the video to start Microsoft Media Player to play it. Note, the video format is AVI with MPEG4 compression, the PC must install the MPEG4 decoder such as FFdshow or Xvid to play the file.

Delete Recorded File

To delete the recorded file, check the check box of the file, then click [Del] button.

I/O Setting

CAM419 supports digital input and digital output. When the digital input is triggered, it can send the video to specific mail address, transmit the video to remote FTP server, trigger the digital out, and save video to local SD card.

I / O

I/O Setting		
Input Setting		
Input 1 Sensor:	N.O	
Input 1 Action:	☐ E-mail ☐ FTP ☑ Out1 ☐ Save to SD card	
Subject:	GPIO In Detected!	
Interval:	10 sec	
Output Setting		
Mode Setting:	○ On Off Switch ⦿ Time Switch	
Interval:	10 sec	
		Apply

Input Setting

Input 1 Sensor: Select the type of the sensor. "N.O" means "Normally Opened", this type of sensor will be triggered when it is closed. "N.C" means "Normally Closed", this type of sensor will be triggered when it is opened.

Input 1 Action: Select the actions when the sensor is triggered.

Subject: The subject of the E-mail.

Interval: The interval time between multiple detections. For example, if the time set to 10 seconds, when the digital input is triggered at time 10H:05M:10S, the next trigger will be accepted after 10H:05M:20S. The triggers between 10H:05M:10S to 10H:05M:19S will not be accepted.

Output Setting

Mode Settings: Select the type of the digital output switch. "On/Off Switch" will be triggered to On or Off constantly. "Time Switch" will be triggered to "On" and lasting for a period time, and then "Off" automatically.

Interval: If the digital output switch is a "Time Switch", the lasting time of the "On" period can be set here.

After set up, click [Apply] to save the settings.

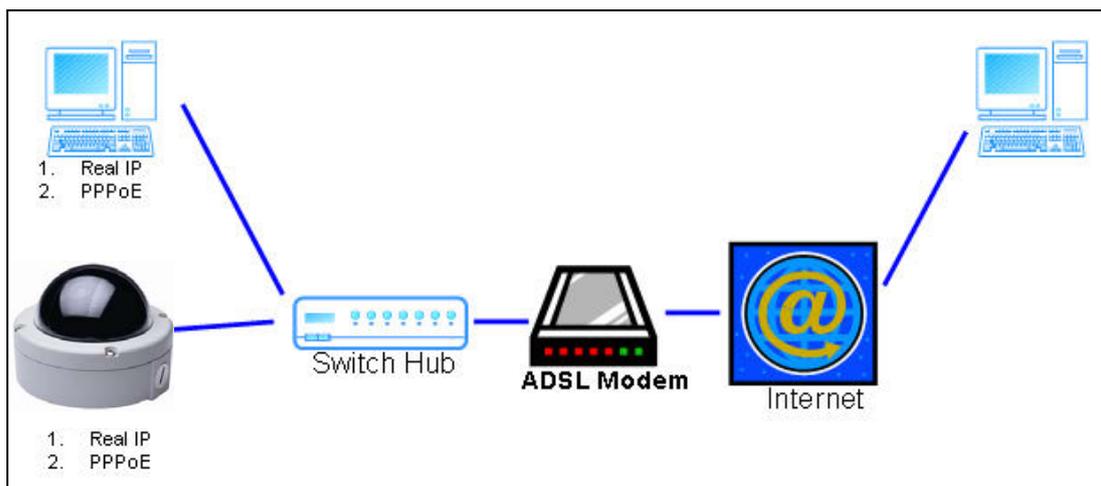# 6. Network Configuration

Configuration 1
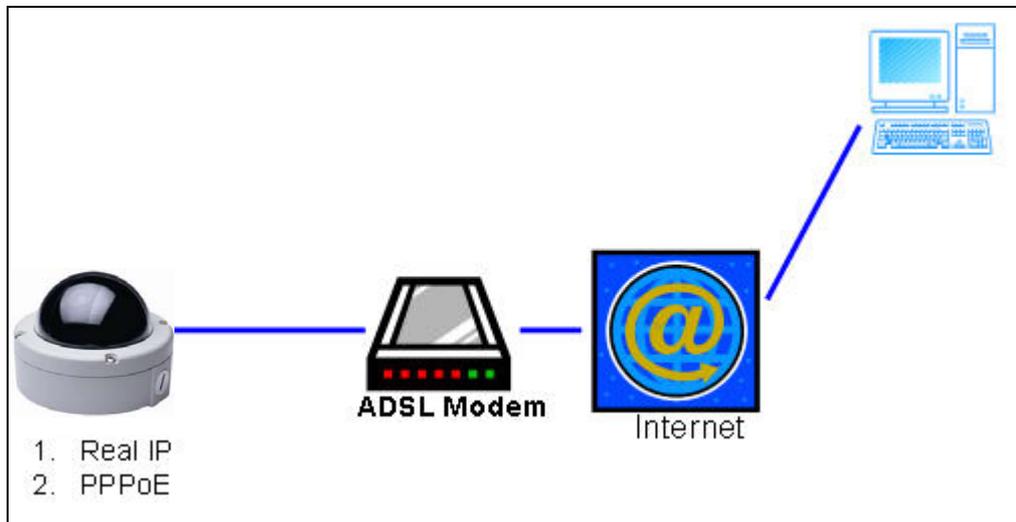
- Internet Access: ADSL or Cable Modem
- IP address: One real IP or one dynamic IP
- Only CAM419 connects to the Internet
- For fixed real IP, set up the IP into CAM419. For dynamic IP, start PPPoE.

Configuration 2

- Internet Access: ADSL or Cable Modem
- IP address: More than one real IP or dynamic IP
- CAM419 and PC connect to the Internet

⚫ Device needed: Switch Hub

⚫ For fixed real IP, set up the IP into CAM419. For dynamic IP, start PPPoE.

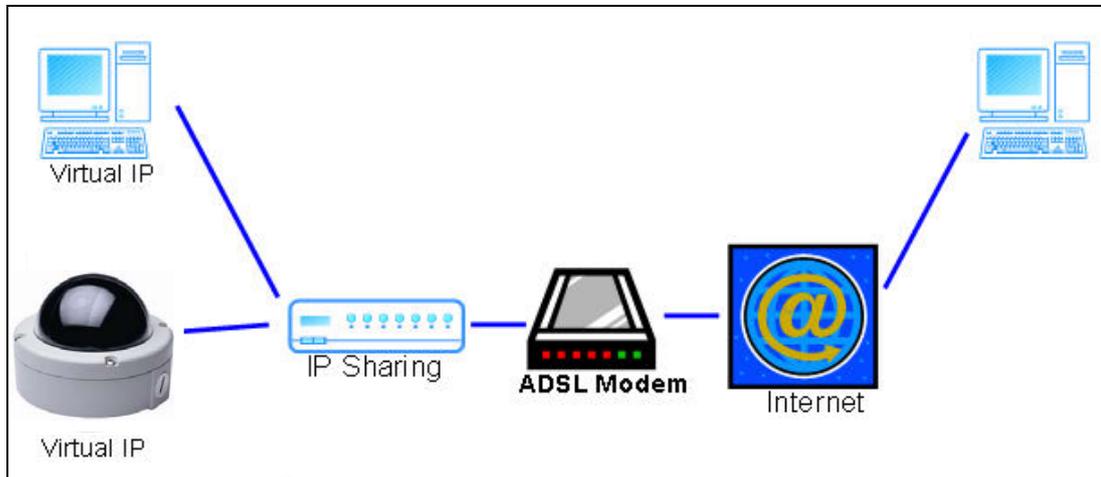# Configuration 3

⚫ Internet Access: ADSL or Cable Modem

⚫ IP address: one real IP or one dynamic IP

⚫ CAM419 and PC connect to the Internet

⚫ Device needed: IP sharing router

⚫ Use virtual IP, set up Network Address Translate, Virtual Server or other Port Forwarding function in IP sharing router.

Appendix

The compatible list of SD Card

Vendor	Test Result	Status
SanDisk 128M	OK	Recommend
SanDisk 256M	OK	Recommend
SanDisk 512M	OK	Recommend
SanDisk 1G	OK	Recommend
SanDisk 2G	OK	Recommend
Transcend 128M 80X	OK	Recommend
Transcend 256M 80X	OK	Recommend
Transcend 512M 80X	OK	Recommend
Transcend 1G 80X	OK	Recommend
Transcend 2G 150X	OK	Recommend
Transcend 4G 150X	OK	Recommend
ADATA 4G	OK	
ADATA 512M	OK	
Toshiba 128M	OK	
Toshiba 256M	OK	
PRETEC 128M	OK	
Photofast 256M	OK	
Phast 256M	OK	
PK 128M	OK	

Vendor	Test Result	Status
READY 128M	OK	
SiliconPower 128M	OK	
SiliconPower 256M	OK	
TEKQ 128M	OK	
TEKQ 256M	OK	
TwinMOS 128M	OK	
TwinMOS 256M	OK	
UMAX 128M	OK	
Blast 128M	OK	
U-TEK 128M	OK	
GiGATEK 128M	OK	
Kingston 128M	OK	The speed is slower
Kingmax 256M	OK	The speed is slower
Kingston 512M	OK	The speed is slower
Kingston 1G	OK	The speed is slower
AFMC 128M	Fail	Card Reader also Fail
PDA 128M	Fail	Card Reader also Fail
Apacer 128M	Fail	
JENOPTIK 128M	Fail	
FDC 256M	Fail	
NCP 128M	Fail	Card Reader also Fail
UMAX 256M	Fail	