

Mega Pixel IP Camera  
User Manual  
For INC-M20xx M13xx Series

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A new dialogue box appears, click [Run] or [Save] to download ActiveX, and then double-click the downloaded file “xdview.exe” to install it, see below picture:



Close current Internet Explorer, click “Install” button, the ActiveX will be automatically installed. After installation finishes, a dialog box with the message “Register OCX success!” will pop up.

## 2. Login

Open Internet Explorer, and input the IP address of INC-M20xx, enter into login page as follow. Input User name (Default: admin), Password (Default: admin), click “login” to enter into the main interface.

Default Factory:

IP: 192.168.1.200

User Name: admin

Password: admin



### 3. System Main Interface

See below for the system main interface:



In the Liveview interface, users can do operations like Snapping, Recording, Playback, Talkback, Monitoring, Clear Alarm, Log Search, Partial Zoom-in of Image, Full-screen Viewing, Lightness and Color Adjustment and Lens Control.

[Snap]:  click to snap an image and save it automatically in the storage directory of system settings.

[Record]:  Manually record video and save it to the storage directory of system settings.

[Playback]:  Click "Playback", the playback page will pop up for searching and playback of recorded files or snapped images.

[Call]:  After switch on the audio talkback switch, the talkback between PC and INC-M20xx can be performed given that audio talkback device is installed to the INC-M20xx.

[Listen]:  After switch on the monitoring switch, PC can monitor the sound at the device end.

[Alarm]:  **When there is an alarm, double-click [Alarm] to cancel the alarm manually.**

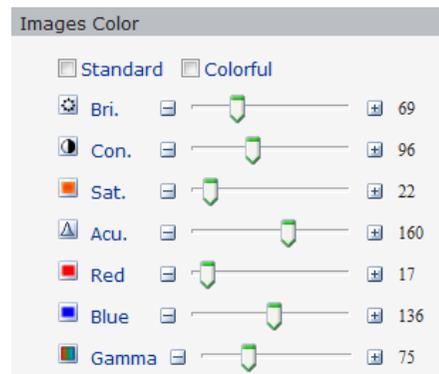
[Log]:  Users can search for operations and alarm logs, the maximum capacity is 512 entries of message, when the number of entries exceeds 512, and system will delete records of the earliest date automatically.

[Zoom In]: This feature allows the manual drag and drop of video display area to realize partial zoom in.

[Full Screen]: Allows full-screen video display, right click to exit full screen mode.

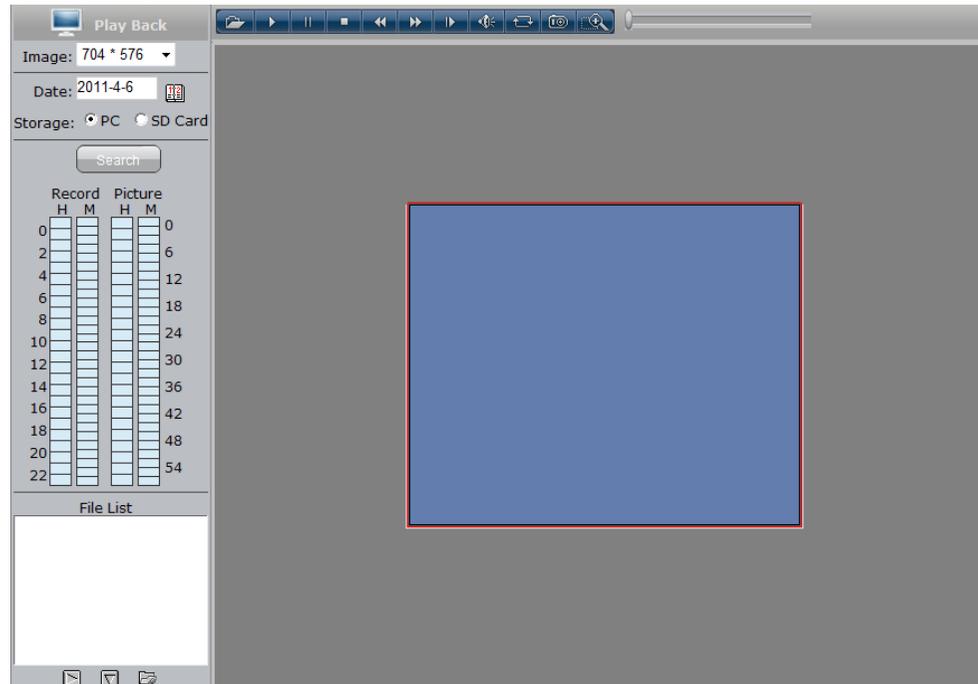
[Image Color]: Adjust image brightness, contrast, hue and saturation. See the picture at the left below:

[PTZ Control]: Allows PTZ operations like Zoom, Focus, Aperture, Light, Brush, Preset, and Recall, see the picture at the right below:



## 4. Playback

Click [Playback] button to enter into video playback page as follow:

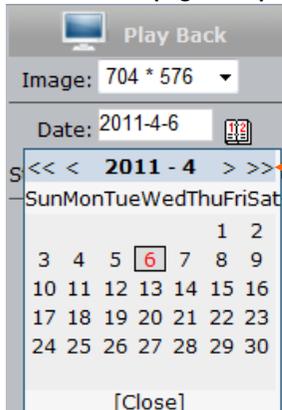


Users can search recorded image files or snapped pictures in local PC or storage device according to date.

[Image]: Users can choose the desired definition for playback. When selected definition exceeds display definition, it should be scaled accordingly.

[Date]: Users can select certain date to perform recorded image file or snapped picture searching, click "date" button ,

The calendar page will pop up as below:



Click " « " icon to go to previous year  
 Click " » " icon to go to next year  
 Click " < " icon to go to previous month  
 Click " > " icon to go to next month

Selecting a specific date will be automatically shut down the calendar page, if you want to display the current default date, please choose [Close] to close the calendar page.

[Local]: Users can select certain date to perform recorded image file or snapped picture searching.

[Device]: Users can select certain date to search for recorded image files or snapped pictures in storage device.

[File List]: Shows the recorded image files or snapped pictures searched in the File List.

The way to search for recorded image files or snapped pictures of a specific period:

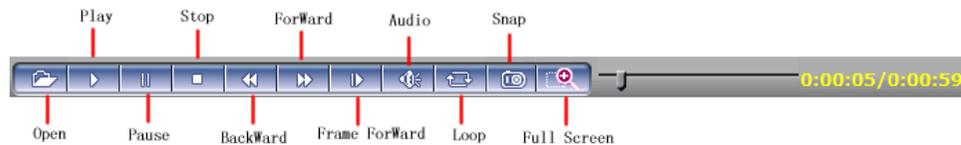
The screenshot shows the 'Play Back' interface. At the top, there is a dropdown for 'Image: 704 \* 576'. Below it is a date selector set to '2011-4-6'. The 'Storage' section has two radio buttons: 'PC' (selected) and 'SD Card'. A 'Search' button is located below the storage options. The main area contains two columns of time grids. The left column is labeled 'Record' and the right column is labeled 'Picture'. Each column has sub-columns for 'H' (Hour) and 'M' (Minute). The time ranges from 0 to 54 minutes. A yellow highlight is visible in the 'Record' column between 14 and 15 minutes. A blue highlight is visible in the 'Record' column between 20 and 21 minutes. Below the grids is a 'File List' section containing the entry '14\_50\_45.MP6'. At the bottom of the interface are three icons: a folder, a document, and a play button.

Select to search for recorded files and snapped pictures in PC or storage device

The list of recorded files searched displays on the left  
The list of snapped pictures searched displays on the right  
The hour range is on the left, each grid stands for 1 hour.  
The minute range is on the left, each grid stands for 1 minute  
Yellow: Selected time range  
Blue: Recorded files or snapped pictures exist within the time range

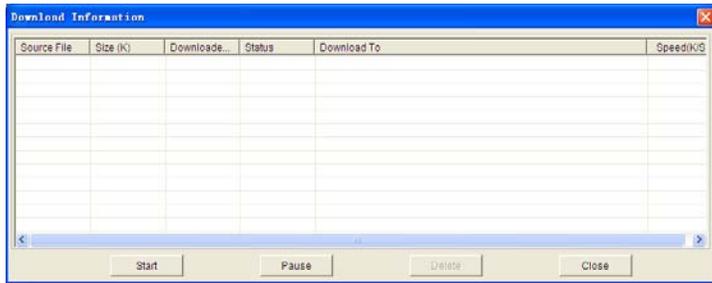
Display the recorded files or snapped pictures searched within the selected time range

[Play]: Choose the recorded image or snapped picture in file list, right click the file or picture or click "play" button  to play. The contents will be displayed in the right window, users can view the playing information and control the process, see below picture:



[Download]: Select the recorded files or snapped pictures searched from SD card in the file list, click "download" button  to download the files to PC.

[Download information]: Users can view the information downloaded after clicking "Download", see below picture:

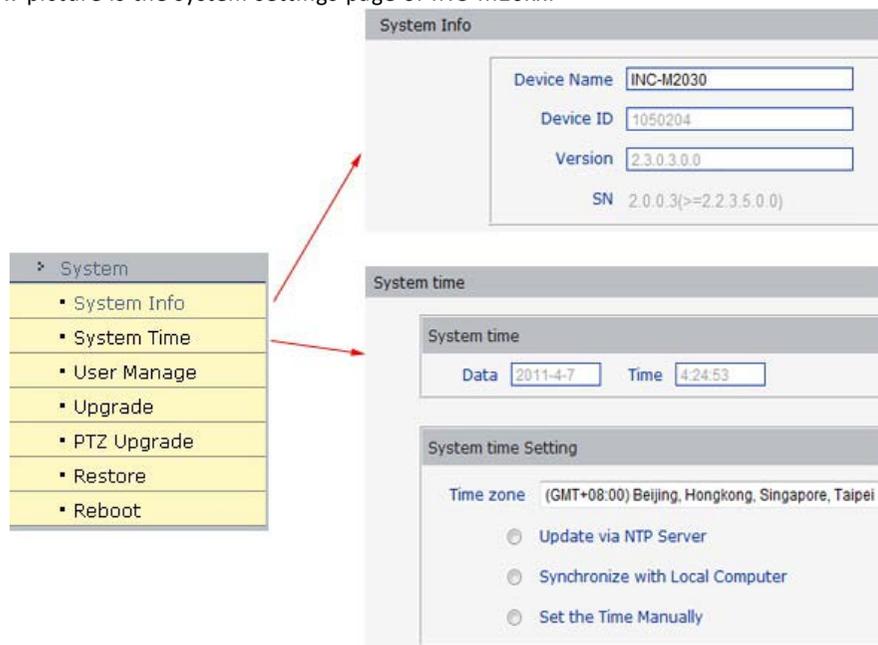


Click [Pause] to pause download manually, click [Start] to continue to download the unfinished files, click [Delete] to delete the downloaded files, click [Close] to close the download information interface.

## 5. INC-M20XX System Settings

### 5.1 System

Below picture is the system settings page of INC-M20xx:



[System Time]: set date and time for INC-M20xx, click “synchronize with PC” to synchronize the date and time of INC-M20XX with those of the PC.

[System Information]: Display device name, device number and video mode. The device name can be user-defined. Two video modes: PAL and NTSC.

[System time Settings]: when starting NTP function, INC-M20xx will correct the INC-M20xx system clock on NTP server regularly according to its setting.

[Upgrade]: Click "Browse..." button, and select correct file of upgrade (kernel file, suffix.uot), click [upgrade], then you can upgrade your system, the completion rate will be displayed during this process. After completion, INC-M20xx will restart automatically. Re-log in device, enter into system settings page, check to see whether the kernel edition is the upgraded edition.

Note: Don't cut off the power and internet connection when upgrading.

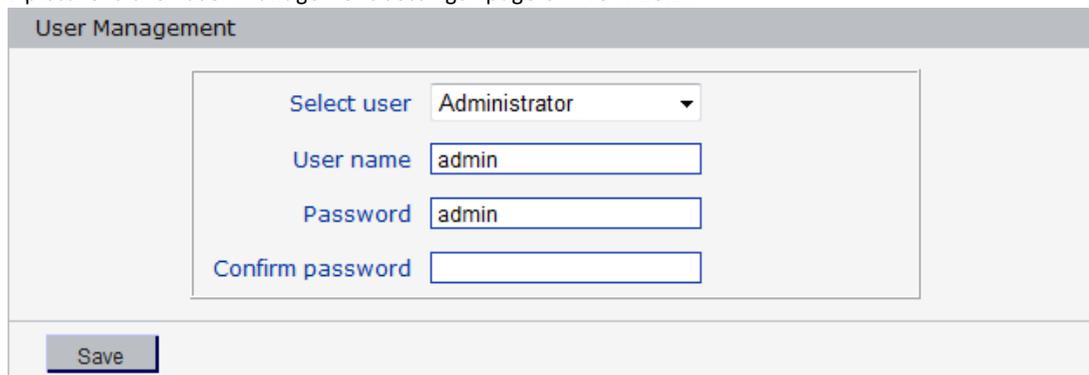
[Restore]: All INC-M20xx parameters (excluding physical address) will be recovered as factory setting values.

Note: Please use this function with caution!

[Reboot]: Click [Reboot], the INC-M20xx will restart automatically.

## 5.2 User Management

Below picture is the "user management settings" page of INC-M20xx:



**Notice:**User name,Password may consist of a-z, 0-9, underscores, and a single dot (.), 1 to 16 characters;capitalization matters.

Modify User name or Password,please login again.

You can set three users for every INC-M20xx, one is Administrator, and the others are general users. Administrator can set parameters for the INC-M20xx. However, Guest cannot set parameters for INC-M20xx.

Note: User name and password must be 1-16-character-strings consisted by letters, numbers, underlines or dots. The Characters are case sensitive.

Default Administrator Name: admin	password: admin
Default Guest1 Name: guest 1	password: guest1
Default Guest2 Name: guest 2	password: guest2

**Note:** User name and password are case-sensitive

## 5.3 Network Settings

### 5.3.1 Basic Settings

Below picture is the “network settings” page of INC-M20xx:

LAN setting

Enable DHCP

IP address

Subnet mask

GateWay

MAC

Preferred DNS

Alternate DNS

Save

#### [Basic Parameters]

IP Address: Set the device IP of INC-M20xx

Subnet mask: default value is 255.255.255.0 (users are recommended not to change it)

Gateway: Set the gateway IP of INC-M20xx, for example when the device is connected to WAN via a router, the gateway IP is the router IP.

MAC: the MAC address of INC-M20xx (users are recommended not to change it).

Data port: default value is 5000 (users are recommended not to change it).

Web port: default value is 80 (users are recommended not to change it).

Multi-cast IP: send the IP address of multi-cast data. The range is 224.0.0.0~239.255.255.255.

Multi-cast port: default value is 5000 (users are recommended not to change it).

DNS address: Set the DNS address as your local DNS address.

Note: after revise and save parameters, the device will restart. If it is applied in LAN, please pay attention to avoid conflict between its IP address and the IP addresses of other devices or PC in the LAN.

#### [Wireless network transmission mode]

Enable or disable wireless network transmission mode which applies to devices that are connected to wireless network of carriers.

#### [DDNS setting]

Bind the device with a fixed domain name by DNNS setting so that visiting to the device can be realized no matter how the public IP changes.(refer to Appendix 3 for detailed steps)

DDNS On/Off: enable or disable DDNS function.

DDNS User Name: User registered in DDNS server.

DDNS Password: User password registered in DDNS server.

DDNS Domain Name: The Domain Name set for long-distance access after user log in.

DDNS Address: DDNS server address. When DDNS address is the domain Name, please set the DNS address in [Basic Parameters] correctly.

DDNS Port: Default is 30000

Data Mapping Port: When INC-M20xx is mapped to public network via router, fill in the public data port number after mapping.

Web Mapping Port: When INC-M20xx is mapped to public network via router, fill in the public web port number after mapping.

#### **[PPPOE setting]**

PPPOE switch: enable or disable PPPOE dial-up function.

PPPOE address: after successful setting of device dial-up, it will display the public IP Address.

PPPOE user name: ADSL dial-up account, obtain from the IP service provider.

PPPOE password: ADSL dial-up password, obtain from the IP service provider.

On-line duration: start timing after dial-up to see the online duration after successful dial-up.

After setting all the parameters, click [save] to make the parameters valid.

### **5.3.2 Advanced Settings**

#### **[Mail setting]**

To set the mailbox addresses and parameters of alarm mails and WAN IP mails.

SMTP server: the address of servers that send the mails, the address format of mail servers varies from provider to provider, e.g. the SMTP server of 163 mailboxes is smtp.163.com.

Mail sending address: mailbox that sends mails.

Mail receiving address: mailbox that receives mails.

SMTP user name: the login user name of the mailbox that sends mails.

SMTP password: the login password of the mailbox that sends mails.

Mail title: title of mails.

SMTP Port: port of SMTP port, different mail server has different port. For example, the server port of Gmail is 465.

Commonly used mail server configuration:

Gmail mail server:

SMTP server: smtp.gmail.com

SMTP user name: username@gmail.com

SMTP port: 465

SSL: enabled

Yahoo mail server:

SMTP server: smtp.mail.yahoo.com

SMTP user name: username@yahoo.com or username@yahoo.com.cn

SMTP port: 465

SSL: enabled

163 mail server:

SMTP server: smtp.163.com

SMTP user name: username

SMTP port: 25

SSL: disabled

#### **[FTP setting]**

FTP server sends the record files and snapped images generated after alarm has been triggered in FTP mode to specified FTP server, supports 2 FTP servers, when the preferred one goes wrong, system will switch to the alternate one.

FTP URL: the IP address or HTTP address of FTP server.

FTP port: port of FTP server, the default port is 21.

Remote path: path on remote FTP server, if the path doesn't exist or has not been filled in, the device will create a file folder under the root directory of FTP server.

FTP user name and password: user name and password of FTP server.

Note: Users must have the authority to write on the FTP server in order to upload record files and snapped images.

#### **[Directional Sending]**

Target IP: set the target IP address.

Port: set the port of target IP address.

On/Off: sending data packet to specified IP address and port or not.

#### **[Public IP mail notification]**

Mail notification on/off: enable or disable public IP mail notification function.

Interval: select the interval of public IP mail notifications.

After enable this function, when INC-M20xx starts or detects public IP change, it will send notification mail to the mail address set in "mail setting".

#### **[Wi-Fi setting]**

Note: applies to models with Wi-Fi function only.

A wireless router needs to be deployed in order to use the Wi-Fi function of INC-M20xx.

1 Network parameters setup for wireless router

First enter into the wireless router "network parameter" page under the menu "LAN Setting", set the IP of wireless router

Wireless setting

Enable WiFi

IP address 192.168.1.160

Subnet mask 255.255.255.0

GateWay 192.168.1.1

SSID 123

Password ●●●●

Type of encryption WEP

Auxiliary encryption Shared Key

Encryption way ASCII

Frequency band Auto

Mode Auto

Save

Router Wireless Setting

Wireless Setup Settings AP(Access Point):

Enable  Display

wireless ID (SSID) 123

Channel 6

Security WEP

Authentication Type  Open System  Shared Key  Both

WEP 64 Bit

Password ASCII

WEP pwd 1  88888

pwd 2

pwd 3

pwd 4

2 Turn to the “basic setting” page under “wireless parameters” menu,

(1) Set SSID:

This SSID is for identity authentication of wireless network, it must be the same as the SSID setting of the INC-M20xx.

(2) Frequency range

It determines the frequency range of the network, which is 1~13, default value is 6.

Note: If your neighbor also uses wireless network and its frequency is 6, you should consider revise this parameter to 1 or 13 to reduce radio interference between the two routers.

(3) Mode

Set the working mode of wireless router. The mode must be compatible with the supported modes of INC-M20xx.

Wireless mode supported by INC-M20xx: 802.11b/g protocol (small power Wi-Fi model)

802.11a/b/g/n protocol (high power Wi-Fi model)

(4) Enable Wi-Fi function (compulsory)

(5) Enable security setting (optional)

This option can enable the security certification of wireless router. If it is enabled, users need to select the corresponding security mode (encryption mode) and set up authentication password.

(6) Select security type (encryption mode)

WEP, WPA and WPA2

(7) Security options

WEP security type: developing system, sharing key and auto-selection

WPA, WPA2 security type: TKIP and AES

(8) Set key (authentication key)

123 is the login SSID number of Wi-Fi for identity authentication

Check this option to enable Wi-Fi function

Security setting is the password for identity authentication; the password is empty if this option is not checked

3 The Wi-Fi function settings of INC-M20xx:

(1) Wireless network on/off

Select this switch will enable Wi-Fi function of INC-M20xx.

(2) IP address

Set the wireless IP address of INC-M20xx, e.g. 192.168.1.160.

(3) Gateway

Set the IP address of current wireless gateway, e.g. 192.168.1.1.

(4) SSID number:

It is the login name of Wi-Fi for identity authentication; it must be the same as the SSID number of the wireless router (e.g. 123).

(5) Password

It is the login name of Wi-Fi for identity authentication; it must be the same as the key of the wireless gateway (router/AP).

(6) Master authentication encryption type

Three encryption types are WEP, WPA and WPA2. Its selection must be the same as the security type setting of wireless gateway (router/AP).

(7) Auxiliary encryption mode

WEP encryption type: developing system, sharing key and auto-selection;

WPA, WPA2 encryption type: TKIP and AES

It must be the same as the security option setting of wireless gateway (router/AP).

After setting completes, save all parameters. Then disconnect the network cable, INC-M20xx can be visited via wireless IP, such as 192.168.1.160.

Note:

The wireless network IP address and cable network IP address cannot be in the same segment.

The Wi-Fi switch appears to be grey when INC-M20xx doesn't have Wi-Fi function.

#### **[UPNP setting]**

Auto mapping of port, when there is server with UPNP function in the LAN, server will map the port to WAN automatically upon starting of this function.

UPNP NIC: the type of NIC connecting UPNP server.

UPNP Mode: specified mode and auto mode:

Specified mode means to specify data mapping port and web mapping port to server.

Auto mode means data mapping port and web mapping port are set up by server.

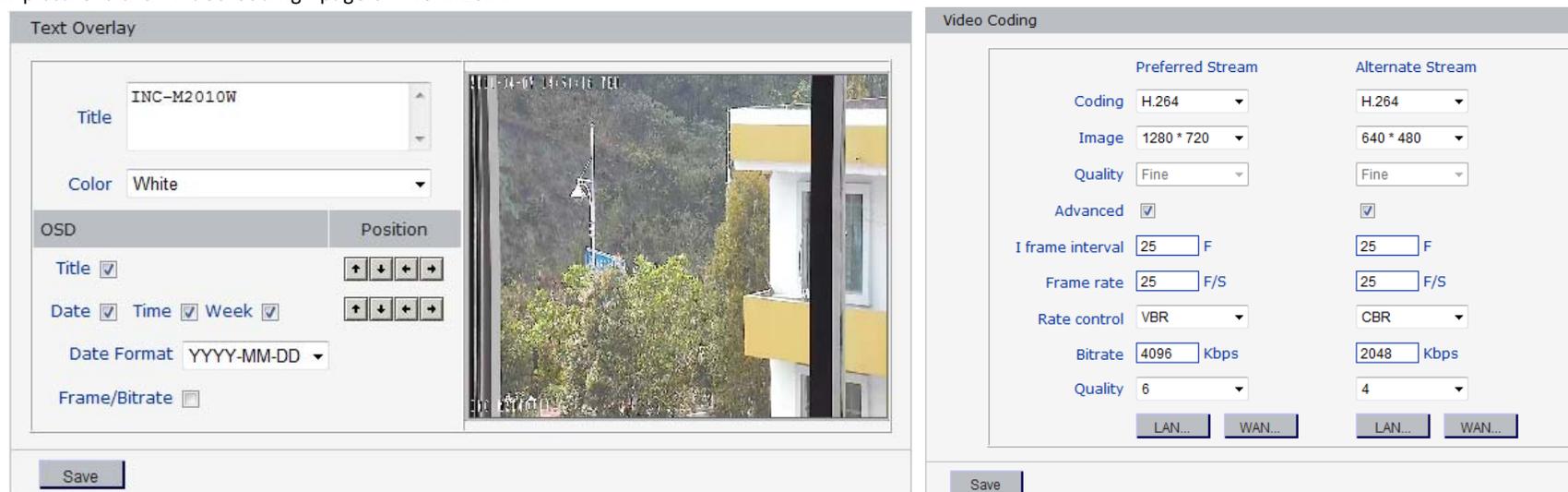
UPNP server: gateway address of IP server with UPNP function.

[RTSP setting]: check RTSP switch to enable RTSP function, the default RTSP port is 554.

After setting all the parameters, click [save] to make the parameters valid.

## 5.4 Video Settings

Below picture is the “Video Coding” page of INC-M20xx:



In here, refer to some words need to explain.

[Coding]: Select H.264 or MJPEG compress.

[Definition]: set definition of images, modes supported are:

PAL mode – four definitions formats: D1 (704\*576)/Half-D1 (704\*288)/CIF (352\*288)/QCIF (176\*144)

NTSC mode – four definitions formats: D1 (704\*480)/Half-D1 (704\*240)/CIF (352\*240)/QCIF (176\*120).

[Image Quality]: users can choose the right quality according to their needs: Best, Good, Normal, and the parameters can also be user-defined by checking [advanced settings] checkbox.

[I frame interval]: adjustable between 5~200. Smaller I frame interval means higher image bit-rate and better image quality. It is recommended to set the frame interval as above 25.

[Frame Rate]: set encoding frame rate per second. Under poor network condition, frame rate can be reduced to control encoding bit-rate to make motion images flow more smoothly.

[Rate control]: CBR and VBR are optional. CBR adopts constant encoding bit-rate; VBR adopts variable encoding bit-rate.

[Bit-rate]: the range of preferred and alternate stream is 30~16384Kbps. Higher bit-rate setting can generate better image quality, but it occupies more bandwidth, please adjust the setting according to your actual bandwidth.

Under CBR setting, [Bit-rate] is the constant bit-rate of encoding.

Under VBR setting, [Bit-rate] is the variable bit-rate of encoding.

[Image quality]: Under CBR setting, bit-rate range is set via [Image quality], 1 means that bit-rate range is control by the software, 2~6 stands for a bit-rate range of  $\pm 10\% \sim \pm 50\%$

Under VBR setting: set image quality via "Image Quality", smaller value of image quality means better quality and higher bit-rate, but the bit-rate will not exceed its set value.

[LAN default value]: I frame interval: 100, frame rate: 25, bit-rate: VBR, 2048kbps, image quality: 2

[WAN default value]: I frame interval: 25, frame rate: 5, bit-rate: CBR, 384kbps, image quality: 4

Note: Non-professional users please use "Advanced Settings" with caution

[Video Masking On/Off]: enable or disable video masking.

[Mask Area Setup]: right click and move cursor to set image masking area, an image can be entirely or partially masked, maximum 4 areas supported.

[All]: mask the whole image.

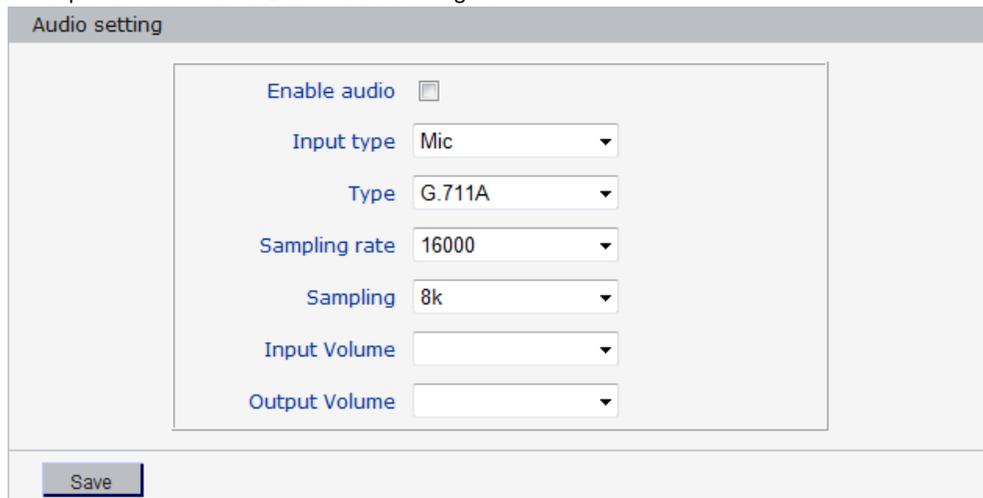
[Clear]: clear masked areas.

[Parameter setup for snapping function]: supports only images of JPG format currently, definition is the same as set in [video definition].

After setting all the parameters, click [save] to make the parameters valid.

## 5.5 Audio Settings

See below picture for "INC-M20xx Audio Settings":



The screenshot shows the "Audio setting" dialog box. It contains the following controls:

- Enable audio**:
- Input type**: Mic
- Type**: G.711A
- Sampling rate**: 16000
- Sampling**: 8k
- Input Volume**: [Dropdown menu]
- Output Volume**: [Dropdown menu]

A **Save** button is located at the bottom left of the dialog.

[Input type]: select your audio device input type mic or line in.

[Type]: select audio compress type.

[Audio on/off]: open or close the audio of INC-M20xx. After switch on this switch, PC can monitor the sound at the device end.

Note: 1 when there is no need for audio, close audio input to save network resource.

2 audio is disabled by default.

[Sampling rate]: Supports sample rates of 8k and 32k.

After setting all the parameters, click [save] to make the parameters valid.

## 5.6 Alarm Settings

### 5.6.1 Motion Alarm

Below picture is the “motion alarm settings” page of INC-M20xx:

Motion Detection

Motion Detection Area

Area set All Cjs

Motion Detection

Enable detect Sensitivity 4 \*

Deployment Time

Time 1 Time 2

0 : 0 -- 23 : 59  0 : 0 -- 23 : 59

Alarm Output  Alarm output duration 10 S E-mail

Event	Channels	Snap	spacing / time	File save mode
Snap	<input type="checkbox"/>	1	* 1 S	<input type="checkbox"/> E-mail <input type="checkbox"/> Ftp
Record	<input type="checkbox"/>		60 S	<input type="checkbox"/> E-mail <input type="checkbox"/> Ftp

Save

In here, refer to some words need to explain.

In this page, users can set features like motion detection on/off, sensitivity, detection time, linkage alarm output, linkage output duration, E-mail sending after alarm has been triggered, linkage device snapping/snapping, etc.

[Detection On/Off]: open or close motion detection.

[Sensitivity]: set the sensitivity of motion detection, its range is 1~5, greater value means higher sensitivity.

[Motion detection time setup]: set the period of motion detection. Any period in each day can be set up.

[Linkage alarm output]: When alarm is triggered, the built-in relays will be driven to output alarm.

[Alarm Output Duration]: Set the duration of the linkage alarm output after being triggered (in seconds), the range of the duration is 0~86400s.0 means that there is no limit for alarm output.

[E-mail sending]: Send motion detection alarm information to users via E-mail, details about E-mail setting please refer to [Network Settings].

[Linkage Snapping]: Drive device snapping after alarm has been triggered, and save pictures to device HDD. For snapping parameters, if the number of pictures snapped at one time is set as 5, and the snapping interval is 1 second, that means when there is an alarm, 5 pictures will be snapped and the interval between each picture is 1 second. The pictures snapped can be saved via E-mail sending or FTP uploading.

[Linkage Recording]: Drive device recording after alarm has been triggered, and save record files to device HDD. The record files can be saved via FTP uploading.

Note: Record packing duration= Alarm duration + duration set in linkage recording parameters.

[Set detective area]: left click and drive the mouse to set the surveillance areas (4 areas at most).

[All]: set the whole video as motion detection area.

[Clear]: clear all motion detection area.

After setting all the parameters, click [save] to make the parameters valid.

## 5.6.2 Video Loss Alarm

Below picture is the "Video Loss Alarm" page of INC-M20xx:

Event	Channels	Snap	spacing / time
Snap	<input type="checkbox"/>	1	≈ 1 S
Record	<input type="checkbox"/>		60 S

- \* Snap time for a float number, such as: 0.5 seconds, 1.5 seconds, and so on.
- \* When device has storage (hard disk, SD card, USB disk), linkage Snap, linkage Record document will be saved to storage.

In here, refer to some words need to explain.

In this page, users can set features like video loss detection on/off, linkage alarm output, linkage output duration, E-mail sending after alarm has been triggered, linkage device snapping/snapping, etc.

[Detection On/Off]: open or close video loss detection.

[Linkage alarm output]: When alarm is triggered, the built-in relays will be driven to output alarm.

[Alarm Output Duration]: Set the duration of the linkage alarm output after being triggered (in seconds), the range of the duration is 0~86400s. 0 means that there is no limit for alarm output.

[E-mail sending]: Send video loss detection alarm information to users via E-mail, details about E-mail setting please refer to [Network Settings].

[Linkage Snapping]: Drive device snapping after alarm has been triggered, and save pictures to device HDD. For snapping parameters, if the number of pictures snapped at one time is set as 5, and the snapping interval is 1 second, that means when there is an alarm, 5 pictures will be snapped and the interval between each picture is 1 second. The pictures snapped can be saved via E-mail sending or FTP uploading.

[Linkage Recording]: Drive device recording after alarm has been triggered, and save record files to device HDD. The record files can be saved via FTP uploading.

Note: Record packing duration= Alarm duration + duration set in linkage recording parameters.

[Set detective area]: left click and drive the mouse to set the surveillance areas (4 areas at most).

[All]: set the whole video as video loss detection area.

[Clear]: clear all video loss detection area.

After setting all the parameters, click [save] to make the parameters valid.

### 5.6.3 Sensor Alarm

Below picture is the “sensor alarm settings” page of INC-M20xx:

**Sensor Detection Setting**

**Sensor Detection**

Enable detect    Sensor type **NO** \*

**Deployment Time**

Time 1                      Time 2

0 : 0 -- 23 : 59     0 : 0 -- 23 : 59

Alarm Output                       Alarm output duration **10** S                      E-mail

Event	Channels	Snap	spacing / time	File save mode
Snap	<input type="checkbox"/>	<b>1</b>	* <b>1</b> S	<input type="checkbox"/> E-mail <input type="checkbox"/> Ftp
Record	<input type="checkbox"/>		<b>60</b> S	<input type="checkbox"/> E-mail <input type="checkbox"/> Ftp

**Save**

- \* Snap time for a float number, such as: 0.5 seconds, 1.5 seconds, and so on.
- \* When device has storage (hard disk, SD card, USB disk), linkage Snap, linkage Record document will be saved to storage first and do related process based on file storage. Or it will be saved to memory for the moment and do related process based on file storage.

In this page, users can set features like sensor alarm detection on/off, sensor type, detection time, linkage alarm output, linkage output duration, E-mail sending after alarm has been triggered, linkage device snapping/snapping, etc.

[Detection On/Off]: open or close sensor alarm detection.

[Sensor mode]: NO and NC mode.

[Detection time setup]: set the time period of motion detection. Any period in each day can be set up.

[Linkage alarm output]: When alarm is triggered, the built-in relays will be driven to output alarm.

[Alarm Output Duration]: Set the duration of the linkage alarm output after being triggered (in seconds), the range of the duration is 0~86400s.0 means that there is no limit for alarm output.

[E-mail sending]: Send video loss detection alarm information to users via E-mail, details about E-mail setting please refer to [Network Settings].

[Linkage Snapping]: Drive device snapping after alarm has been triggered, and save pictures to device HDD. For snapping parameters, if the number of pictures snapped at one time is set as 5, and the snapping interval is 1 second, that means when there is an alarm, 5 pictures will be snapped and the interval between each picture is 1 second. The pictures snapped can be saved via E-mail sending or FTP uploading.

[Linkage Recording]: Drive device recording after alarm has been triggered, and save record files to device HDD. The record files can be saved via FTP uploading.

Note: Record packing duration= Alarm duration + duration set in linkage recording parameters.

[Set detective area]: left click and drive the mouse to set the surveillance areas (4 areas at most).

[All]: set the whole video as motion detection area.

[Clear]: clear all motion detection area.

After setting all the parameters, click [save] to make the parameters valid.

## 5.6.4 Network Failure

Below picture is the “network failure alarm settings” page of INC-M20xx:

Event	Channels	Snap	spacing / time
Snap	<input type="checkbox"/>	1	*1 S
Record	<input type="checkbox"/>		60 S

- \* Snap time for a float number, such as: 0.5 seconds, 1.5 seconds, and so on.
- \* When device has storage (hard disk, SD card, USB disk), linkage Snap, linkage Record document will be saved to storage.

In this page, users can set features like network failure detection on/off, linkage alarm output, linkage output duration, E-mail sending after alarm is triggered, linkage device snapping/snapping, etc.

[Detection On/Off]: open or close network failure alarm detection.

[Linkage alarm output]: When alarm is triggered, the built-in relays will be driven to output alarm.

[Alarm Output Duration]: Set the duration of the linkage alarm output after being triggered (in seconds), the range of the duration is 0~86400s.0 means that there is no limit for alarm output.

[E-mail sending]: Send video loss detection alarm information to users via E-mail, details about E-mail setting please refer to [Network Settings].

[Linkage Snapping]: Drive device snapping after alarm has been triggered, and save pictures to device HDD. For snapping parameters, if the number of pictures snapped at one time is set as 5, and the snapping interval is 1 second, that means when there is an alarm, 5 pictures will be snapped and the interval between each picture is 1 second. The pictures snapped can be saved via E-mail sending or FTP uploading.

[Linkage Recording]: Drive device recording after alarm has been triggered, and save record files to device HDD. The record files can be saved via FTP uploading.

Note: Record packing duration= Alarm duration + duration set in linkage recording parameters.

[Set detective area]: left click and drive the mouse to set the surveillance areas (4 areas at most).

[All]: set the whole video as motion detection area.

[Clear]: clear all motion detection area.

After setting all the parameters, click [save] to make the parameters valid.

## 5.7 Storage Settings

### 5.7.1 Device Management

Below picture is the “device management” page of INC-M20xx:

Device setting

Storage device Info

ChooseNo.	TotalSize(M)	FreeSize(M)	State

Format Refresh

Storage device record parameters

Code stream Preferred St Record file packet time 1 M Record Save 0 Day

Other parameters

Overwrite old files when disk is full

Auto search the storage device when start

Save

[Storage Device information]: view information of SD card here, including total capacity, free capacity, and formatting status. Users can also click [Formatting] button to format SD card, during the formatting process, please click [Refresh] button to the display formatting completion percentage.

[Device Recording Parameters]

Stream selection: set record stream for the device, preferred stream and alternate stream are selectable.

Record files packing interval: set packing intervals for each segment of record file when recording.1 means files will be packed every 1 minute.

[Other Parameters]

Auto delete old files when storage device gets full: when the storage capacity of SD card is used up, the device will delete old files automatically. The way to delete old files: first delete the files of the earliest date, if the space is still not enough, then delete the files of the earliest date but one, then go on like this if necessary. If the record files are taken on the current date, then first delete the files of the earliest hour. But files of the current hour cannot be deleted, if the disk gets full in one hour, the device will stop recording and capturing images. After the one-hour session ends, system will delete the files of the hour and continue to record and snap.

Scan the disk when device starts: check SD card or not when INC-M20xx starts.

🔗 **Note:**

1 Hot-plugging is not recommended for SD card, compulsory hot-plugging may damage the SD card, causing data loss or abnormal operation.

2 As disk formatting needs to take a long time, don't stop power supply during the process.

3 ext2 file is used to format system by default.

4 Storage INC-M20xx doesn't support hard disk that is formatted into logical partition or multiple partitions, so it is recommended to format the hard disk into only one main partition.

After setting all the parameters, click [save] to make the parameters valid.

## 5.7.2 Record Schedule

Below picture is the "record schedule" page of INC-M20xx:

Record setting

Record schedule

Time 1 Time 2

0 : 0 -- 23 : 59  0 : 0 -- 23 : 59

File save mode

E-mail  Ftp

Save

\* When device has storage (hard disk, SD card, USB disk), schedule Record will be saved to the storage first and do related process based on file storage. Or it will be saved to memory for the moment and do related process based on file storage.

[Device Record Schedule]: set the period of scheduled recording, any period of each day can be set up.

[Record file storage mode]: set to save scheduled recorded files to FTP server via FTP uploading, **FTP server can be set up in [FTP settings]**.

Note: record files are saved via FTP uploading. HDD or SD card is needed for cache memory support, otherwise record files will be overwritten by new files due to insufficient cache memory space.

After setting all the parameters, click [save] to make the parameters valid.

## 5.7.3 Snap Schedule

Below picture is the “snap schedule” page of INC-M20xx:

Snap setting

Snap parameter

Snap spacing\* 1.0 S

Snap schedule

Time 1 Time 2

0 : 0 -- 23 : 59  0 : 0 -- 23 : 59

File save mode

E-mail  Ftp

Save

\* When device has storage (hard disk, SD card, USB disk), schedule Snap will be saved to the storage first and do related process based on file storage. Or it will be saved to memory for the moment and do related process based on file storage.

[Picture snapping parameters of the device]: set the interval of INC-M20xx picture snapping, minimum interval is 1 second.

[Snap Schedule]: set the period of scheduled snapping, any period of each day can be set up.

[Snapped files saving mode]: INC-M20xx snapped pictures can be saved via E-mail sending or FTP uploading. E-Mail server can be set up in [Mail Settings], FTP server can be set up in [FTP Settings].

After setting all the parameters, click [save] to make the parameters valid.

## 5.8 COM Settings

Below picture is the “Front-end settings” page of INC-M20xx:

COM Setting

COM RS485

Baudrate: 9600

Data bits: 8

Stop bits: 1

Check type: None

Flow ctrl: None

COM RS232

Baudrate: 9600

Data bits: 8

Stop bits: 1

Check type: None

Flow ctrl: None

[Serial port settings]: When INC-M20xx is connected to RS485 (or RS232) communication or control device (e.g. PTZ decoder, dome camera), the parameters of RS485 (or RS232) need to set according to the settings of the communication control device (address, protocol, baud rate), and the corresponding protocol need to be downloaded.

Note: Only when the parameters and protocol are correctly set that the control of add-on communication control device can be implemented.

[PTZ decoder protocol]

Decoder address: 1~255.

Built-in protocol: echo the built-in protocol name of current INC-M20xx.

PTZ decoder protocol files uploading: to upload the decoder/dome camera communication protocol selected by users. The system supports hundreds of decoder/dome camera communication protocol, it can also be defined by users according to the standard format of protocol.

After setting all the parameters, click [save] to make the parameters valid.

## 5.9 Local Settings

Below picture is the “Visit Settings” page of INC-M20xx:

Local config

PC live view parameter setting

Code stream Preferred Stream

Preview mode Real time

Reset Mosaic

PC Storage parameter

Record file packet time 1 M

Record file path C:\XDNVS\ (Non-essential cases. Please keep the default path[C:\XDNVS])

Save

[PC live view parameter setting]

Stream selection: set video stream for PC real-time preview, preferred stream and alternate stream are selectable. The parameters of preferred and alternate stream can be set up in [Video Settings].

Preview mode: users can choose real-time priority or fluency priority mode according to their needs.

[Anti-crack]: select this option to make image quality better, but CPU usage rate will be higher at the same time.

[PC record storage settings]

Record files packing time: set packing time of record file for local PC when recording.

Record/snapped files storage directory: set the storage directory for local records and snapped files, the default path is C:\XDINC.

## Appendix 1 Network Interface for INC-M20xx

The default network ports of INC-M20xx are:

TCP	80	Web port
	5000	Communication port, audio/video data transmission port, talkback data transmission port
UDP	5000	Audio/video data transmission port
Multi-cast port	Multicast original port + channel number	

## Appendix 2 Default Network Parameters

Default network parameters

Cable Network:	
IP Address: 192.168.1.200	Data Port: 5000
Subnet mask: 255.255.255.0	Web Port: 80
Gateway: 192.168.1.1	DHCP: off
Wireless Network:	
Network IP Address: 192.168.1.160	Frequency range: Auto
Gateway: 192.168.1.1	Mode: Auto
Subnet mask: 255.255.255.0	

Note:

The wireless network IP address and cable network IP address cannot be in the same segment.

## Appendix 3 Apply for DDNS domain name service

### 1 INC-M20xx DDNS Introduction

#### ➤ The DDNS function of INC-M20xx

DDNS (Dynamic Domain Name Service) refers to the real-time analysis of a fixed domain name and the dynamic WAN IP address of the IP camera. With this function, all Internet users

can visit the IP camera via a fixed domain name.

➤ The DDNS process of INC-M20xx is as follow:



The DDNS process flow diagram of INC-M20xx

## 2 Apply for DDNS domain name service

Step 1: Sign up

Users need to sign up to manage and inquire about domain name status when using this dynamic domain name management system for the first time. Visit DDNS server (<http://www.mvddns.net>) to sign up. See the picture below:

**Login**

UserID:

Password:

[Forget Password?](#)

**Announce**

[User announcement](#)

动态域名 **Dynamic Domain**

**Dynamic Domain service has made much more convenience for you:**

Before we had to use the special cable to operate other's device by network. But unfortunately, it is too expensive to stop using. Now we have Domain Management System--the latest solution "Dynamic Domain Service+Network Camera", it solves the all troubles!

[Register Now](#)

动态域名 **Dynamic Domain**

**Dear Users:**

The DDNS server has been upgraded, New system reserves some customer's data, the password was changed to 888888. Please login, revise the password and Email address (Get the password when you forget it). Sorry for inconvenience to upgrade the system!

2007.09.03

Home == > Register

Take \* of have to fill in

UserID: *	<input type="text"/>
Password: *	<input type="password"/> (The minimal 6, the most 18)
Confirm password: *	<input type="password"/>
Name:	<input type="text"/>
ID card number:	<input type="text"/>
Address:	<input type="text"/>
Telephone:	<input type="text"/>
Email: *	<input type="text"/>
Hint problem:	Your native place <input type="button" value="v"/> (Used for finding back a password)
Key:	<input type="text"/> (Used for finding back a password, inside 200 words)
<input type="button" value="Confirm"/> <input type="button" value="Reset"/>	

### Step 2: User login

Enter registered user name and password, click "login" to enter into domain name management interface as follow:

Home ==> Login

Login	
UserID:	<input type="text" value="test2009"/> <a href="#">Register</a>
Password:	<input type="password" value="••••••"/> <a href="#">Forget Password</a>
<input type="button" value="Login"/> <input type="button" value="Reset"/>	

### Step 3: Domain name registration

A domain name must be registered first, then put into use. Click "Domain name management", a page appears as follow:

Customer

- ZHMONTH (58.251.136.51)
  - Account
  - Domain
  - Information
  - Password
  - LogOut

Dynamic Domain list

Domain: http://  .mvddns.net

Remarks:

PrevPage NextPage

Domain	IP	Device Name	IsOnline	Allow Analyze	Operation
zhmonth	221.182.46.87	IPCam305110	Off-line	Using	<a href="#">Delete</a>   <a href="#">Detail</a>

1

- Add an domain not a demand an importation an ex- suffix , eg:demo1.mvddns.net Only Demand importation 'demo1'.
- Click 'allow analyze' item, can carry on a modification to the domain's information.

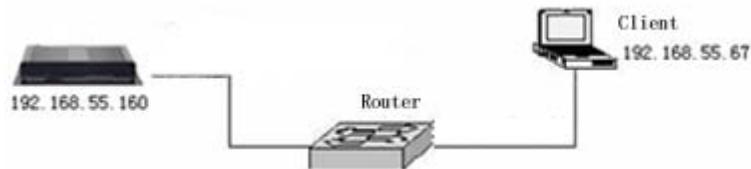
Register and submit the domain name to be used. For example: "test.mvddns.net".

## Appendix 4 Visits INC-M20xx under different network environments

You can use your PC to connect INC-M20xx through LAN or WAN, the following contents will tell you how to use INC-M20xx under different network environments.

### 1 LAN

Your network administrator assigns a LAN IP address to INC-M20xx. The IP of your PC and INC-M20xx must be in the same network segment to make visiting possible. See below picture for the network topology:



Please refer to below picture for the network settings:

Basic Parameters	
Enable DHCP	<input type="checkbox"/>
IP address	192.168.1.200
Subnet mask	255.255.255.0
GateWay	192.168.1.1
MAC	00-4a-20-b0-02-d2 <input type="checkbox"/>
Data port No.	5000
HTTP port No.	80
Preferred DNS	202.96.134.133
Alternate DNS	202.106.0.20

Setup steps:

Step 1: Log in INC-M20xx via IE browser (the default IP is 192.168.1.200).

Step 2: Switch to the page [network settings], fill in the device IP address assigned by network administrator in to [Basic Parameters], e.g. 192.168.1.200;

Step 3: Fill in subnet mask, default value is 255.255.255.0;

Step 4: Fill in gateway address, default value is 255.255.255.0;

Click [Save] to save the parameters. Starts the device, enter its IP address into IE browser to visit it.

### 2 Internet

You have three ways to connect your INC-M20xx to Internet:

- Fixed IP mode;
- Broadband and router sharing Internet access mode (dynamic obtainment of extranet IP address mode) like ADSL and so on;
- PPPoE dial-up access.

After INC-M20xx is connected to Internet, remote Internet users can visit INC-M20xx directly via domain name or IP address.

### ➤ Fixed IP mode

See below picture for the network topology:



Please refer to below picture for the network settings:

Basic Parameters	
Enable DHCP	<input type="checkbox"/>
IP address	192.168.1.200
Subnet mask	255.255.255.0
GateWay	192.168.1.1
MAC	00-4a-20-b0-02-d2 <input type="checkbox"/>
Data port No.	5000
HTTP port No.	80
Preferred DNS	202.96.134.133
Alternate DNS	202.106.0.20

#### Setup steps:

Step 1: Log in INC-M20xx via crossover cable direct connection.(For details, please refer to [Hardware Installation])

Step 2: Switch to the page [network settings], fill in the device IP address requested from network service provider in to [Basic Parameters], e.g. 218.84.31.168;

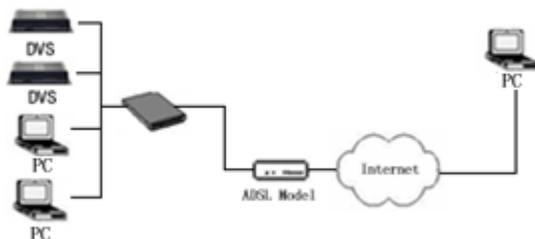
Step 3: enter correct subnet mask, e.g. 255.255.255.192;

Step 4: enter correct gateway, e.g. 218.84.31.131;

After setup completes, click [Save] and restart the device, then connect it to public network so that all Internet users can visit the INC-M20xx remotely via entering <http://218.84.31.168> to IE browser.

➤ Broadband and router sharing Internet access mode (dynamic obtainment of extranet IP address mode) like ADSL and so on;

For dial-up access with router, see below picture for the network topology:



Users can set up DDNS domain name service at the same time. Fill the username and password which were applied in the DDNS server into the DDNS setting item, implement port mapping from the router. The router judges and points to the INC-M20xx that need to be visited according to different ports, long-distance Internet users can visit the INC-M20xx on the network via domain name directly.

Please refer to below picture for the network settings:

DDNS Parameters	
Enable DDNS	<input checked="" type="checkbox"/>
DDNS provider	<input type="text" value="mvdns.net"/>
DDNS regName	<input type="text" value="mvs66149"/>
DDNS password	<input type="text" value="123456"/>
DDNS domain	<input type="text" value="mvs66149.mvdns.net"/>
DDNS server URL	<input type="text" value="www.mvdns.net"/>
DDNS server Port	<input type="text" value="30000"/>
Data port map No.	<input type="text" value="5000"/>
HTTP port map No.	<input type="text" value="80"/>

#### DDNS setup steps:

Step 1: Log in DNNS server (e.g. <http://www.mvdns.net>), register user account and password: (for details, please refer to Appendix 3)

Step 2: Click to open DDNS;

Step 3: Select DDNS service provider, e.g. mvdns.net;

Step 4: Fill in the registration name to log into DDNS server;

Step 5: Fill in the registration password to log into DDNS server;

Step 6: fill in the domain name applied on DDNS server, e.g. test.mvddns.net;

Step 7: Fill in DDNS server address, e.g.www.mvddns.net;

Step 8: fill in the port of DDNS server, default value is 30000 (users are recommended not to change it);

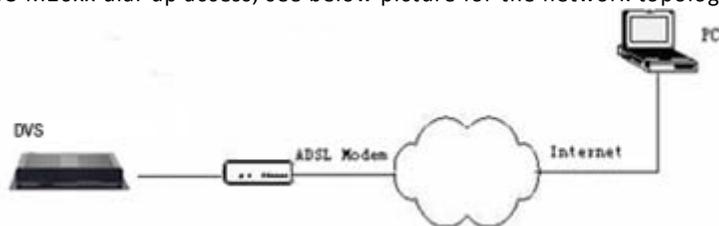
Step 9: fill in the port number of public network data after mapping, the default port is 5000.If several storage video servers are connected to one router, different data ports need to be specified for each device, and port mapping needs to be done for every specified port.

Step 10: fill in the port number of public network web after mapping, the default port is 80.If several IP cameras are connected to one router, different web ports need to be specified for each device, and port mapping needs to be done for every specified port.

After set up all the parameters, click [save] and restart to make the parameters valid.

### ➤ **PPPoE dial-up access**

For INC-M20xx dial-up access, see below picture for the network topology:



#### **Setup steps:**

Step 1: Log in INC-M20xx via crossover cable direct connection.(For details, please refer to [Hardware Installation])

Step 2: Set PPPoE parameters.(for details, please refer to [PPPOE settings])

Step 3: Connect INC-M20xx to Internet.

Step 4: If DDNS service is successfully set for the device, the device can be visited via entering domain name into IE browser.

See below picture for PPPoE settings:

PPPOE Parameters	
Enable PPPOE	<input checked="" type="checkbox"/>
PPPOE URL	<input type="text"/>
PPPOE username	sz20129800@163.gd
PPPOE password	●●●●●●●●
Online time	0minutes

## Appendix 5 FAQ

### 1. Forget Password

Solution: There is a [RESET] button on the back panel of the INC-M20xx, press it to retrieve all default parameters (Factory Setting), user name and password are both “admin”.

Note: Please don’t press RESET if you are not a professional operator. After reset, all parameters will restore factory settings (except for the physical network address).

### **INC-M20xx audio/video function fails after abnormalities or abnormal power cut occur during upgrade, core edition is V4.0.0.0 (Backup file)**

Solution: Connect the power cord and network cable of INC-M20xx, press on RESET button and release it after 10 seconds, system will run the back-up programme automatically. After enter into the back-up programme, upgrade system. The back-up programme offers only upgrade and parameter setup functions, audio and video functions are not available.

### 2. No video image displayed in IE browser

Possible reason: ActiveX not installed

Solution: ActiveX must be installed when visiting INC-M20xx for the first time via Internet Explore.

How to install: Visit INC-M20xx, click [Download Address], file download dialog will pop up, select [Run] or [Save] to download. After download finishes, installation interface will pop up, click “install”, the installation of ActiveX will start automatically, “Register OCX success” dialog box will pop up to remind the completion of installation process.

### 3. Fail to visit INC-M20xx via IE after upgrade

Solution: Delete the caching of Browser.

Steps: Open IE—click “Tools”—select “Internet Options”—click “delete files” button in “Internet temporary files”, select “delete all offline contents”, then click “OK” and re-log in INC-M20xx.

### 4. The images do not flow

Possible reason 1: The frame rate of INC-M20xx is too low.

Solution: Improve the video frame rate

Possible reason 2: Too many users are viewing the image.

Solution: Block some clients or reduce the video frame rate.

Possible reason 3: The bandwidth is low.

Solution: Reduce video frame rate or video compression bit-rate.

#### **5. Cannot visit INC-M20xx via IE browser**

Possible Reason 1: Network is disconnected.

Solution: Connect your PC to network, checking whether it works properly or not. Check whether there is cable failure or network failure caused by PC virus, until PCs can be connected with the command of Ping.

Possible reason 2: IP Address has been occupied by other devices

Solution: Stop the connection between INC-M20xx and Network, hook up INC-M20xx to the PC separately, and reinstall IP address according to the proper operations recommended.

Possible reason 3: IP addresses are in different subnets.

Solution: Check IP address, subnet masking address of the INC-M20xx and the settings of Gateway.

Possible reason 4: Physical address of network conflict with INC-M20xx

Solution: modify the physical address of INC-M20xx.

Possible Reason 5: Web port has been modified

Solution: Contact Network Administrator to obtain related information.

Possible Reason 6: Unknown

Solution: Press RESET to retrieve default settings then connect it again, the default IP address is 192.168.55.160, subnet mask is 255.255.255.0

#### **6. The color of images is abnormal (green or other colors)**

Solution: Sometimes INC-M20xx images cannot display properly for the difference between Graphics Cards, the images appears to be green or other colors, then you should run the programme Config.exe (or run C:\windows\system32\Config.exe)to set the following parameters of display buffer: auto-detection, used display card memory or system memory, then reopen IE and connect INC-M20xx.

#### **7. There is no sound while monitoring**

Possible Reason: No audio input connection

Solution: Check audio connection of the host

Possible Reason 2: the audio option of INC-M20xx is off

Solution: Check audio parameter settings to see if you have opened the audio.

## 8. Search INC software cannot find device

Possible reason: Search INC software adopts multicast protocol to perform searching. But the firewall forbids multicast data packet.

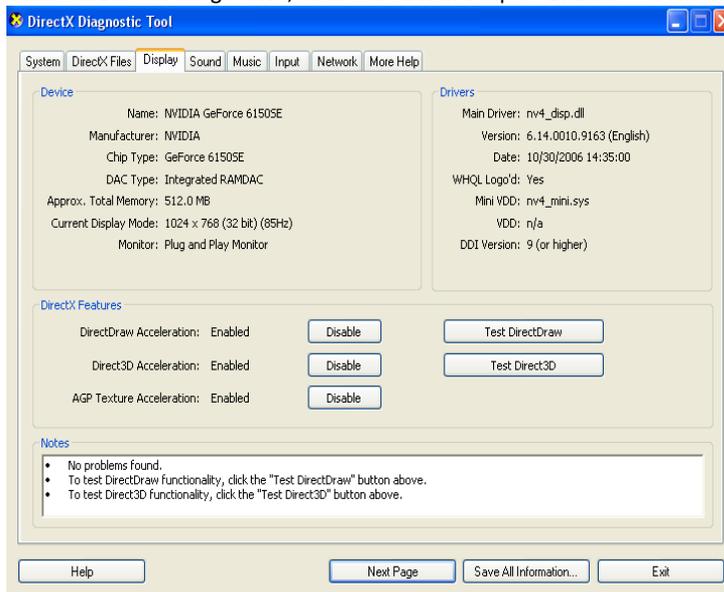
Solution: disable the firewall.

## 9. Image processing doesn't work properly

Possible Reason 1: system issue, DirectX function is disabled, which will cause slow display of images and abnormal color.

Possible Reason 2: hardware issue, graphics card doesn't support image acceleration and hardware zooming functions.(For hardware issue, the only solution is to replace graphics card)

Solution: install DirectX image drive, then Start→Run→input "DXDIAG" as follows:



Note:

Enable DirectDraw speedup, Direct3D speedup, AGP veins speedup in DirectX function. If they can not be enabled, that means DirectX installation fails or hardware not supportive.