This manual mainly addresses the operation and programming of Infinova V1771N series 1.3 Megapixel IP domes.
Notice

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FCC Warning
The V1771N series Megapixel network PTZ Domes comply with the FCC rules.

Operation is subject to the following two conditions:
● This device will not cause harmful interference.
● This device must accept any interference received, including interference that may cause undesired operations.

The V1771N series Megapixel network PTZ Domes have been tested and found to comply with the limits for a Class A digital device, pursuant to the FCC rules. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation.
Important Safety Instructions and Warnings:

- Electronic devices must be kept away from water, fire or high magnetic radiation.
- Clean with a dry cloth.
- Provide adequate ventilation.
- Unplug the power supply when the device is not to be used for an extended period of time.
- Only use components and parts recommended by manufacturer.
- Position power source and related wires to assure to be kept away from ground and entrance.
- Refer to qualified personnel for all service matters.
- Save product packaging to ensure availability of proper shipping containers for future transportation.

⚠️ Indicates that the un-insulated components within the product may carry a voltage harmful to humans.

⚠️ Indicates operations that should be conducted in strict compliance with instructions and guidelines contained in this manual.

**Warning:** To avoid risk of fire and electric shock, keep the product away from rain and moisture!
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Chapter I System Introduction

1.1 Product Description

Infinova’s V1771N series 1.3 megapixel dome camera, leading in the industry, features high-definition IP video signals output.

Infinova’s V1771N series 1.3 megapixel dome camera provides the ability to view and control MPEG-4/MJPEG dual encoding video.

With GUI (graphic user interface) design, Infinova's V1771N series 1.3 megapixel high-definition dome facilitates setup and operation via web interface by using mouse. Powerful network management enables users to monitor the internal temperature, voltage and fan status at any time, which greatly enhances the stability of dome. The built-in clock module helps to make scheduled settings such as timing events, calling presets at regular time and so on. It also features remote upgrade.

Infinova's megapixel dome provides outstanding AI (artificial intelligence) functions such as protocol self-adaption, lens self-adaption, presets, patterns, autopsans and tours.

1.2 Product Features

- 1.3-megapixel 1/3” progressive scan CCD
- 18X optical zoom, 12X digital zoom
- MPEG-4/ MJPEG, dual stream encoding
- IP video output: 1280*960P@20 fps, 1280*720P@30 fps
- Bi-directional audio (optional)
- Alarm function (optional)
- Remote PTZ Control via RS-485 (optional) or network
- Web Graphic User Interface (GUI) and dome menu
- Infinova, Pelco-P/D protocol self-adaptable
- Preset/AutoPan/Pattern/Autoscan/Tour
- Super Wide Dynamic Range (WDR), illumination ratio up to 128X
- Privacy zone masking function
- Motion detection function
- Digital image flip
- Temperature, voltage, fan running status surveillance
- TCP/IP, HTTP, ICMP, PPPoE, DHCP, UDP, DNS, DDNS, SMTP, RT, RTSP, SNMP, ARP and other network protocols supported
- Remote upgrade via network
- 360 continuous Pan travel, auto flip vertically
- Smooth movement, high sensitivity, low noise
- Multiple mounting way for high adaptability
- 24VAC power supply

1.3 Product Model

This installation manual suits for Infinova product:
V1771N-18M2N1B6  1.3 Megapixels PTZ Dome, 18X, indoor, bracket, clear bubble, 24VAC
V1771N-18M2U1B6  1.3 Megapixels PTZ Dome, 18X, outdoor, bracket, clear bubble, 24VAC

1.4 Product Specifications

### Lens
- Optical zoom: 18X
- Digital zoom: 12X
- Aperture / Focal Length: F 1.6~F2.8, f=4.7~84.6mm
- Angle of View: 55.2° (Wide)/3.2° (Tele)
- Minimum Focal Range: 0.01m (Wide) ~1m (Tele)

### Operation
- Programmable Presets: 254
- Programmable Patterns: 4
- Programmable Autopans: 4
- Programmable Areas: 16
- Tour: 6
- Home Position: Yes
- Image Mirror: Yes
- Autoscans: Yes
- WDR: Yes
- FNR: Yes
- Menu Language: English
- Protocols: INFINOVA, PELCO-P/D self-adaptable
- Number of Address: 1~254
- Baud Rate: 2400/4800/9600bps

### Video
- Image Sensor: 6mm Dia. (1/3”) CCD
- Scanning System: Progressive scan
- Video compression: MPEG-4 SP/ MJPEG
- Dual stream encoding: Yes
- Resolution: 1.3M (1280*960) @ MPEG-4
  - Frame Rate (maximum): 20 fps @1280*960, 30fps @1280*720
- Horizontal: 800TVL (1280*960)
  - 600TVL (1280*720)
- Min Sensitivity:
  - IR-cut ON (1/30s): 1.8 Lux @ F1.6 (50IRE)
  - IR-cut OFF (1/4s): 0.02 Lux @ F1.6 (50IRE)
- Video output: 1 Ethernet port (RJ45, 10M/100M self-adaptive)

### IP Specification
- Network protocols: TCP/IP, HTTP, ICMP, PPPoE, DHCP, UDP, DNS, DDNS, SMTP, RT, RTSP, SNMP, ARP and other protocols
- Web Server: Yes
- Alarm (optional): 2 alarm input, 1 relay output
- Motion Detection Function: Yes
- Privacy zone masking: Yes
- Remote update: Yes

### Audio (optional)
- Audio compression: G.711 PCM 8kbit/s
- Ports:
  - 1 input (Linear level, Resistance: 1kΩ)
  - 1 output (Linear level, Resistance: 60Ω)

### Synchronization
- Internal: Built-in sync generator
- Line-locked: Remote V-phase adjustment

### Mechanical
- Manual Pan Speed: 0.08°~200° per second
- Manual Tilt Speed: 0.2°~100° per second
- Max. Preset Speed: 400° per second
- Pan Travel: 360° continuous
- Tilt Travel: 0°~90°
Preset Accuracy: ±0.1°  
Motor: Stepping motor

**Electrical**
Input Voltage: 24V AC
Power Surge Protection: Yes

**Environmental**
Operating Temperature: -4°F~122°F (-20~50℃)  
-40°F~140°F (-40~60℃) (w/ heater)
Operating Humidity: 0~90%RH (non-condensing)
Mounting: Bracket

**Other**
Unit Dimension (H×D): 287mm×Φ218mm (Indoor)  
287mm×Φ240mm (Outdoor)
Box Dimension (L×W×H): 485mm×280mm×300mm
Unit Weight: Indoor: 3.2Kg (Bracket), 2.8Kg (Ceiling)  
Outdoor: 3.8Kg (Bracket), 3.4Kg (Ceiling)
Shipping Weight: Indoor: 4.8Kg (Bracket), 4.3Kg (Ceiling)  
Outdoor: 5.4Kg (Bracket), 5.0Kg (Ceiling)

1.5 Notice
1. Re-power the IP dome 10 seconds after it powers off.
2. Refer to the descriptions above for details on the interface control when logging in as a common user.
3. Firstly perform Network Settings setting after login. Gateway IP address should be set as the gateway connected to the super domes.
4. IP address is not allowed to conflict with other devices’ IP address, otherwise the images couldn’t be viewed.
5. No need to restart the system after performing network settings.

---

**Chapter II IE Browser Setting**
- Support IE browser version: Internet Explorer 6.0 or greater;
- Before attempting to view the image, make sure the system have Directx 9.0c or greater image viewer software.
- Install Quicktime.

**2.1 Software Installation**

1. **Equipment Connection**
   - Connection order: Firstly connect the network cables; then connect the video (only used for servers)
   - Note: Check if the connection is tight or not before power-on. After turning on the power, the system will carry out self-checking which takes about 30 seconds.

2. **Installation Procedures**

The installation procedures of V1771N series Megapixel network PTZ Domes Image software are listed as follows:

1. **Download OCX**
   - First, user has to log in with the Infinova super ID and password (For more information, please refer to Chapter 3.1 Login). After successfully logging in, you will be informed that the browsing OCX is needed, which is pictured as below:

   ![Figure 2-1 OCX Installation](image)

2. **Install OCX**
   - According to the installation information, click “OK” button, then the system will automatically install OCX. Real-time video is displayed on the screen as follows after installation.

   ![Figure 2-2 Download OCX](image)
If the installation above fails, move forward according to the following steps to continue:

1. Install DirectX End-User Runtime (Directx 9.0c) version 9.0c or above, which can be downloaded at http://www.microsoft.com/downloads/details.aspx?FamilyId=0A9B6820-BFBB-4799-9908-D418CDEAC197&displaylang=en


Both of the two softwares above are in English and free of charge. As for the Chinese version, available link is provided on the same page.

Note: The steps mentioned above are not in sequence. Please try step 1 and 2 first, and if it fails, you can proceed with step 3 or 4.

The preparation of IE image browsing comes to an end.

2.2 Set IE Browser

You can watch the images and relative interfaces that caught by camera over IE browser or a kind of special software V2216, based on the applicable network to browse and control the video image. If the installation of OCX is done, the user also has to set the security property of Internet browser.

1. As shown in the following figure, kick the “Tool” in the menu bar, and ten click the pop-up Internet option.

2. Select “Security” in the pop-up Internet options, as shown in the following figure:

(3) Click “Custom Level” to pop up the following interface in Figure 2-5:

(4) Enable or Prompt the option of “Download unsigned ActiveX controls”.

(5) Select “low” in the “Reset custom settings”.

Figure 2-3

Figure 2-4

Figure 2-5
Chapter III Basic Function Operation

This chapter mainly introduces the settings and operation of V1771N series Megapixel network PTZ Domes.

3.1 Login

Please open IE browser after it powers on for about 50 seconds and enter http://192.168.1.100/ (the default IP address) in the IP address for example.

Note: The language of webpage will be different based on operating system. That is, the interface is in English to English operating system and in Chinese to Chinese operating system. We introduce the English interface in this manual. The login dialog box displays as below:

![Figure 3-1. User Login](image)

If this is the first time to run the software, you should enter the default super username and password. There are two default IDs for selection: (1) INFINOVA (password: INFINOVA); (2) Administrator (password: Infinova). Click ‘Login’ button to log on. If the username or password is not correct, the system will return to the above dialog box.

Click ‘Reset’ to clear the old username and password, and then enter the new username and password.

1. If login as the super user, the following interface will display:

![Figure 3-2. Super User Interface after Login](image)

2. If login as the common user, the following interface will display:

![Figure 3-3. Common User Interface after Login](image)

After login successfully, you can click “MJPEG” button to enter real-time video interface under MJPEG format as shown in figure 3-4.

Note: The default of resolution under MJPEG is set as closed. Change the setting then you can view live video.

![Figure 3-4. MJPEG interface](image)

User can enter system setting interface by click the button “Settings” above the video image.

System setting interfaces of super and common user are shown as follows:

![Figure 3-5. Setting Interface for Super User](image)
In the “settings” interface, Super user can perform the following functions:
- System information view
- Account settings (add/delete user, change password)
- Network settings (including IPv4 network setting, SMTP settings, FTP settings)
- Time-zone and time synchronization settings,
- Alarm setting
- PTZ setting (device address/protocol/ baud rate setting),
- System log view
- Optimize setting
- SD card management
- Recording settings
- Advanced setting (including Software update, Factory settings and Reboot)

Common user only can view system information, change his own password, system log and recording replay.

⚠️ Note: The following descriptions are used for the super user.

#### 3.2 System Information
The initial interface of System Settings displays related system information. You can get to know most of system information from this interface such as: basic information of system, network setting, NTP setting, video parameter setting, alarm setting, MPEG4 video settings, MJPEG video settings etc.

#### 3.3 Account Settings
After logging on as a super user, click the button. When the button turns to be high light, the following account information will display:

1. **Add Users**
   - Note: support a maximum of 8 accounts. 🥇 stands for super user, while 🥈 stands for common user.
   1. Click “add user”, enter the interface of “Add a User”.
   2. Enter the desired User Name and Password (Special characters are not allowed to appear in User Name or Password, and number of password characters can be from 8-20, number of user name can be from 1-30.)
   3. Click “OK” button. If the setting is successful, the new user name will appear in the following account list. Take adding “1” as the new user for example.
   4. If the user exists, the following interface will display: 

2. **Delete Users**
   - Note: Only super user can delete common user, plus super user cannot delete other super user.
Click button behind the common user you want to delete in the account list, then the following figure will display:

![Delete User Confirmation](image1)

Figure 3-12

Click “OK” button, the selected user would be deleted and the account list would be automatically updated.

**3. User Password Change**

Click button in the account list, the dialog box of Edit User Information will pop up:

![Edit User Information](image2)

Figure 3-13

Input the old password, enter your desired new password for twice and then click “OK” button, the following picture will appear:

![Password Change Confirmation](image3)

Figure 3-14

**Important notes:**

1) Super user’s password can only be edited by himself.
2) Common user’s password can be edited by both super user and himself.

For the sake of safety, please change the password as soon as possible.

**3.4 Network Settings**

Click button in the navigation bar, the following interface concerning network parameter would display:

![Network Settings](image4)

**3.4.1 MAC address**

**MAC Address:** display MAC address of the device.

**3.4.2 IPv4 setting**

Users can set IP address, subnet mask and gateway of IPv4.

- **Address Type:** display the way of IP address distribution: manually configured or DHCP dynamic distributed. If “manually configured” is selected, relevant settings can be set in the following fields.
- **Unit IP address:** used to set the IP address of V1771N IP dome.
- **Subnet mask:** used to set subnet mask of V1771N IP dome.
- **Gateway IP address:** used to set the gateway address of V1771N IP dome.

When all settings are finished, click “Set” button. The following interface will appear:

![IPv4 Setting Confirmation](image5)

Figure 3-15

Click “OK” button, the system will skip to login interface automatically.

**Note:** The IPv6 setting is reserved.

**3.4.3 FTP settings**

V1771N series dome has the function of alarm associated with FTP upload.

Configure server IP, user name and password in the FTP settings.
and enable FTP alarm in alarm settings, then alarm associate with FTP upload can be achieved.

### 3.4.4 SMTP Settings

- **Server IP**: Set mail server address.
- **From**: Set sender’s mail address.
- **To**: Mail address of recipient.
- **CC**: Mail address of the person copy to.
- **Authentication**: Enable or disable authentication function. This function should be set according to authentication requirements of mail server.
- **User name**: Sender’s name, it can be set according user’s needs.
- **Password**: Set sender’s password.

**Note**: there is no limit for Sender’s name and password settings. After setting completes, click “Set” button to take effect.

If user selects “mail” in “Alarm Settings” interface, system will send mail according to SMTP settings.

### 3.5 Time Settings

Click **Time settings** button in the navigation bar to display the following Time Zone Settings interface:

**Time zone**: Select the desired time zone in the scroll box, and then click “Set” to save it. There are 26 time zones for selection: GMT-12:00–GMT–GMT+13:00, and the default setting is GMT Greenwich Mean Time. For Daylight Saving Time enable region, please tick “Automatically adjust clock for daylight saving changes”.

**Synchronize with computer time**: used to check whether the time of system is the same as that of local PC. Click “Set” to adjust.

**Synchronize with NTP server**: whether to select NTP server or not. Select “NTP” to enable NTP server, or otherwise disable NTP server.

If NTP server is selected, you can input NTP server address into IP bar. Click “Set” to finish. If so, the system will adjust time with NTP server automatically.

### 3.6 Alarm settings

Click **Alarm Settings** button in the navigation bar to display the following Alarm Settings interface:

**I/O In**: Settable 2-channel alarm input In1/In2.

Each alarm input has 2 modes

1. **Grounded Circuit**
2. **Open Circuit**

**Recommended**: Grounded Circuit

**Alarm out Contact**: used to set sending way of alarm.

- **Local Contact**: unable to send alarm through net, only local alarm output. Default: Local Contact.
- **Net Contact**: send alarm via net.

**Note**: This function needs to be supported by digital video surveillance management software like V2216. If Net Contact is selected, user has to set Alarm Server IP the same as the IP address of V2216-CMS server. After setting finished, user can remotely control the relay via V2216 software. For detailed information, please refer to V2216 manual.

**Alarm Server IP**: used to set the IP address of alarm server when NET contact is selected. If alarm occurs, it will inform the alarm server.

Users can set alarm handling ways for alarm input or motion detection alarm, like sending Mail, FTP upload, audible alarm, SD storage (trigger recording), Relay output (1 channel). After setting completes, click “Set” button to take effect.

### 3.7 PTZ Settings

Click **PTZ settings** button in the navigation bar to display the PTZ Setting box:

**Camera Address**: used to set the IP address of the PTZ camera.

**Baud rate**: used to set the communication speed.

**Protocol**: used to set the communication protocol.

**Note**: This function needs to be supported by digital video surveillance management software like V2216.
Camera Address: set the address of V1771N series Megapixel network PTZ Domes.

Baud rate: set the communication baud rate, the default value is 2400 bps.

Protocol: select the corresponding protocol of camera. The built-in service software in this IP dome supports Pelco-P, Pelco-D and Infinova.

3.8 System Log

Click System Log button on the navigation bar to enter the system log interface shown as below:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-02-05 05:06:47</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R640P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 14:10:42</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R640P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 14:10:33</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R640P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 14:02:32</td>
<td>User:11111111111111111111111111111111 had been deleted.</td>
<td></td>
</tr>
<tr>
<td>2015-02-08 14:01:50</td>
<td>Add New User : 11111111111111111111111111111111</td>
<td></td>
</tr>
<tr>
<td>2015-02-09 14:01:30</td>
<td>User:11111111111111111111111111111111 had been deleted.</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 14:01:06</td>
<td>Add New User : 11111111111111111111111111111111</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 11:39:15</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R640P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 11:37:14</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R640P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 11:30:25</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R720P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 11:04:45</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R720P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 10:50:50</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R720P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 10:42:02</td>
<td>Add New User : 11111111111111111111111111111111</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 10:16:21</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R720P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 10:50:50</td>
<td>Video Resolution is changed [MPEG4 major stream resolution]: R720P</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 09:45:37</td>
<td>User: [INFINOVA’s password is changed].</td>
<td></td>
</tr>
<tr>
<td>2015-02-05 09:47:31</td>
<td>User: [INFINOVA’s password is changed].</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3-20

It can display 30 logs on a page. User can turn over the page by clicking the below arrows or skip to the designated page by clicking “Goto”. Click “Delete logs”, a prompt will come out. Then, click “Yes” to clear logs.

3.9 Optimize settings

Click Optimize Settings button, and then comes out the Optimize Settings interface:

![Optimize Settings](image)

If you select “QuickTime” as the player, you’d better set Optimize Video to “Optimize For QuickTime”. If you select “Infinova player” as the player, you’d better set Optimize Video to “Optimize For infinova”.

Note: Only the super user can set this option.

3.10 SD Card

Click SD Card button to enter the interface shown below:

![SD Card](image)

User can view the total size and the free space of the SD card, and format the card.

If you want to pull out the SD card when the SD card is working, please click the button “Safe pull out SD card” and the prompt will display as below:

![Safe pull out SD card](image)

3.11 Recording Settings

Click Recording Settings button to manage recording control and recording replay.

3.11.1 Recording Control

![Recording Control](image)

Recording storage mode: circle mode or stop mode selectable. Circle mode means if SD card has no free space, the latest recording will automatically replace the earlier recording. For Stop mode, if SD card has no free space, the camera will automatically stop recording.

Manual Recording Control: start or stop manual recording.

Automatic recording when network anomaly: Enable or disable automatic recording when network anomaly function.
3.11.2 Recording Replay

The Player consists of six parts: Video Replay Window, Search Condition, Replay progress, Video record distribution, Replay Control and Record Type Icon & Play Speed.

Note: Before video replay, user needs to search and select replay file.

Search Record File
For local and network video replay, the record files can be found by defining the time section.

Local Search:
For local search, user can define time section at search condition section, with VOD unselected, as shown in Figure 3-26.

Remote Search:
For remote record file search, user can define time section at search condition section, with VOD selected, as shown in Figure 3-28.

If there is file that fit the condition, green, orange and/or red boxes will be displayed on the video record distribution section, as shown in Figure 3-27.

Note: The Video Record Distribution section displays the video record files in a month. For example, if date for search is set to “2009-11-17”, the Video Record Distribution section will display all the record files of this camera in November 2009. In the Video Record Distribution table, the green box indicates auto record file, orange box indicates manual record file and red box indicates alarm record file. And the flashing white box indicates the time set in the search condition section. During record file replay process, the white box will move as the time passes, for time indication purpose.

Record Playback:
There are two methods for record playback.

Method One: Playback record by selecting record file from search result. Select a video play window, and then double clicks on the green, orange or red box to play video.

Method Two: Define specific time at Search Condition section, search the file at that time and then play the file. If there is video recorded at that time (If there is file recorded at the time, the Replay Progress table will display green, orange or red bar), press the button on replay control bar to play video.

During record playback process, the time scale of play progress can be defined by mouse dragging.

Record Playback is shown in figure below:

Playback Control:
During record playback, user can perform snapshot, frame backward/forward and download manager, as shown in Figure 3-30. When the record file playback is finished, the video window will restore initial state.
Snapshot: Snapshot the image during record playback. Click button to take photo. If the image is snapshot, the prompt below will come out.

Frame Backward/Forward: To perform frame backward or forward play during record playback. All the movement of the motion objects can be seen clearer under this operation.

Download Manager: The Download Manager can download remote record files and convert local files to AVI format. Click button on replay control bar to activate Download Manager.

Remote Record Download: Define storage path for file download, select camera, define time range, and then click “Download” button to download remote record file, as shown in Figure 3-32.

To cancel file download, select the record file and then press “Cancel” button. User can also select several files and then cancel download process.

Local File Conversion to AVI:
Define storage path for converted file, select camera, define time range, and then press “Convert” to convert local record file to AVI format, as shown in Figure 3-33.

Note: The AVI conversion operation is for local record file only. For conversion of remote record file, the file must be downloaded to local before the conversion.

3.12 Advanced Settings
V1771N series provides a series of advanced functions, such as Software Update, Factory Settings and Online Reboot.

Click button to enter the interface shown below:

3.12.1 Software Update
Free software update is provided for V1771N series Megapixel network PTZ Domes, and this update service can reduce system maintenance budget. You can download the latest software from the Internet.

Click “Browse” button above, then select program update in the pop-up dialog box. After that, click “Upload” button, the system begins to update.
If update successfully, the following information will appear on the current interface:

![Image](image1)

Figure 3-35

If the type of updating file is wrong, the following information will come out:

![Image](image2)

Figure 3-36

At this time, re-check the updating file and camera system, or otherwise choose other program to update.

Note: After update successfully, it needs to restart the system.

### 3.12.2 Factory Settings

Click “Set” button, the following hint would display:

![Image](image3)

Figure 3-37

Click “OK”, system starts to reset to the factory default. It takes about 15 seconds to undertake this process, when finishing, the figure below would appear:

![Image](image4)

Figure 3-38

Click “OK” button to close the webpage.

Note: When factory setting is finished, IP address resumes to 192.168.1.100, while subnet code resumes to 255.255.255.0.

### 3.12.3 Online Reboot

Click “Reboot”, the system will be automatically re-started. And after 80 seconds the webpage closes.
Chapter IV MPEG4 Video and Alarm Settings

When login successfully, the interface will be "MPEG4" (as shown in figure 3-2 or 3-3). It can switch to full-screen mode by double clicking the video window, and exit full-screen mode by double clicking again. A serial buttons on the left help you to set concerning parameters such as video setting, motion detection, OSD, audio, stream type, player and so on. The system supports dual encoding stream, and it can set video parameters under Major stream and Minor stream separately. Below, take the video settings under Major stream as an example. Common user is just able to set the four items: video size, stream type, audio and player. You can hide the menu by using the shortcut button , When the menu is hidden, you can click to show the menu.

4.1 Video Size

If Resolution is set to 960P or 720P, user can set appropriate video size in "Video Size" interface. The following figure is the interface when Resolution is set to 960P.

1X: display the original video size. 
Scaled 960: video size is 720*540.

4.2 Player

Click “Player” button, and Player setting interface will be shown as follows:

Users can select player to play video:
Infinova Player: Choose Infinova player to play video.
QuickTime: Choose QuickTime Player to play video.
Note: Available merely for the super user.

4.3 Stream Type

Click “Stream Type” button, and Stream Type interface will be shown as follows:

There are two options: Major stream and Minor stream. The settings to each stream are separate.

4.4 Motion Detection

Click 【Motion Detection】 button to display the following interface regarding motion detection sensitivity:

Sensitivity: set the sensitivity, the value is between 1 and 30. Recommended setting: 15

Motion detection area 1-4: Two coordinates determine an area. The line between those two points is the diagonal of detection area. Each point extends along 2 lines perpendicular to the X-axis and Y-axis, and the rectangle formed by those 4 crossed lines is the motion detection area.

If there is any motion detection alarm in the preset area, the alarm icon on the webpage will turn red . If it’s normal, the icon is grey .

[ON]: Open motion detection alarm.
[OFF]: Close motion detection alarm.
Note: If the motion detection alarm is on, you need to wait about 5 seconds for motion detection alarm checking.

4.5 OSD Settings

Click “OSD” button in the navigation bar to display the following interface:
Figure 4-5

OSD settings include: Text OSD, Date OSD and Time OSD.

**Text OSD:**
It is used to set the contents of text, its position where to display and display status.
- **Text:** the contents of the title. Display no more than 30 characters.
- **X Axis & Y Axis:** the title Axis location. Both X Axis and Y Axis can be any of a whole number from 0 to 99.
Click “Display” to enable text display.

**Date OSD:**
It is used to set date format, its display position and display status.

**Time OSD:**
It is used to set time display position and display status.
After all settings finished, click “Set” button. If display enabled, then the setting will appear on the screen at designated location.

### 4.6 Qos Setting
Click “QoS” button, and network Qos setting interface will be shown as follows:

There are 4 network Qos modes to be selected:
1. Normal Service
2. Max Reliability
3. Max Throughput
4. Min Delay

Select the desired setting, and then click “Set” button to save the configured parameters.

**Recommended:** Normal Service.

**Note:** Available only for super user. Plus the revision comes into valid only after reboot.

### 4.7 Resolution Settings
Click the “Resolution” button in the navigation bar to display the graphic mode interface:

There are three modes available: 960P, 720P and closed.
Click “Set” after finishing the corresponding settings.

**Note:** If you set “Minor Stream” in the “Stream Type” interface, there will be different options in “Resolution” interface.

### 4.8 I/P Rate
Click “I/P Rate” button in the navigation bar to display the following interface.

I/P rate means the ratio of I frame to P frame in compressed video images. Different I/P bit rates could be selected according to different system configurations. The higher bit rate (data transmission speed) is, the faster data transmitting will be. Select the corresponding value and click “Set” to confirm.

**Recommended setting:** 15.

The adjustable bit rates include: 2, 4, 8, 15, 20, 25 and 30.

### 4.9 Frame Rate
Click the “Frame Rate” button in the navigation bar to display the Frame Rate interface:
Frame Rate, means the number of compressed frames produced by V1771N-M IP PTZ Dome per second.

The bigger the number of frame is, the better the image continuity will be, but the CPU performance is lowered. The smaller the number of frame is, the worse the image continuity will be, but the CPU could handle more events.

Click “Set” after finishing the corresponding settings. Recommended setting: NTSC: 30; PAL: 25

4.10 Bit Rate

Click the “Bit Rate” button in the navigation bar to display the following interface:

When the setting goes with fixed bit rate, then the image is transmitted under a fixed bandwidth. The optional values include: 1M, 2M, 3M, 4M, 5M, 6M, and 7M.

Note: the above instruction is for stream type as “Major Stream”. If setting as “Minor Stream”, the options of bite rate will be different.

4.11 Audio

Click “Audio” button, and Audio setting interface will be shown as follows:

V1771N series IP dome can offer bi-directional voice function. In: indicates sound comes from the PC and then is outputted from the front-end camera. If you want to obtain audio input function, select “on” in the scroll field of In and click “Set” to save it. Out: indicates sound comes from the camera audio port, then outputted from the PC. If you want to obtain audio output function, select “on” in the scroll field of Out and click “Set” to save it.

Audio Sample Rate: 8K/44K optional. At present, for Infinova Player, 8K and 44K are available; for QuickTime Player, only 8K is available.

Take setting for Infinova player as example:

1. Connect an input device like a microphone to V1771N-M and connect an output device like a sound box to PC. Open DM355 IP dome web page and set “out” to “on”, the sound will be sent from site to console. Real-time surveillance will be performed.

2. Connect an output device like a sound box to V1771N-M and connect an input device like a microphone to PC. Open DM355 IP dome web page and set “in” to “on”, the sound will be sent from console to site. Real-time surveillance will be performed.

Note: When QuickTime Player activated, sample rate set to 8K along with both In and Out set to off, audio output is available automatically.

4.12 Snapshot

Click “Snapshot” button in the navigation bar to display the following interface:

Pathname: set the image storage location. Default path is “C:". Click the pathname frame and you can select your desired path in the prompt show as below:

If clicking “Shot”, the desired image will be captured and saved to the desired path.
Chapter V MJPEG Video Setting

User can also click “MJPEG” button to enter “MJPEG” video (as shown in figure 3-4). Super users can set such settings via the buttons on the left as resolution, image quality, frame rate, snapshot and so on, while common users can only view resolution and image quality.

5.1 Resolution

![Figure 5-1](image1)

There are 2 options: 960P and Closed.

**Note:** when the major stream in MPEG4 Video Type interface is set as 960P and minor stream is closed, the MJPEG resolution interface will be shown as the figure above. But if the major and minor stream of MPEG4 is set as different values, the MJPEG resolution interface will also has different options. The resolution of MPEG4 and MJPEG can affect each other.

5.2 Image Quality

![Figure 5-2](image2)

As shown in the figure above, there are 5 levels available: Highest, High, Average, Low, Lowest. The image quality will be worse in sequence. You can choose what you want.

5.3 Frame Rate

![Figure 5-3](image3)

As shown above:
The frame rate can be chosen from: 2, 4, 5, 10, 15. You can choose what you want.
5.4 Snapshot

A “Shot” button is provided for image snapshot. Click the “Shot” button, the current image will be snapshot.

![Snapshot button](image)

If clicking “shot”, the desired image will be captured. Then you can press the image to save the image to your desired path.

![Snapshot image](image)

Chapter VI Menu Settings

Note: The common users have no such settings.

There are two ways for users to enter menu:
1. Click the [Enter menu] button on MPEG real-time video interface to enter menu.
2. Call up preset to enter menu.

The preset area on real-time video interface is like below:

![Preset area](image)

(1) Enter the preset number “95” into the preset field.
(2) Click [ or ] to enter into the main menu.

The main menu provides access to eleven sub-menus as well as some other system functions, which are briefly outlined in the following section.

For details the 4 sub menus of Super dome OSD menu, other system items and menu overview, please refer to appendix:

1 SYSTEM INFO SET

1.1 SYSTEM SET
- Display the dome's current S/N number;
- Allow users to input a new S/N number;
- Set the camera ID;
- Display the board ID;
- Display controlling protocol;
- Set baud rate;
1. Display lens type;
2. Display dome software version.

Note: When the address and baud rate is set via DIP switch, the ID and baud rate displayed on the menu are unchangeable.

1.2 DOME TITLE SET
- Set title
- Set the position of the title determined by row and column
- Enable/disable current dome title display
- Clear title

1.3 PASSWORD SET
- Set/change system access password;
- Confirm password;
- Password protection.

1.4 DATE TIME SET
- Enable/disable time display;
- Date adjust;
- Time adjust;
- Display the week.

1.5 SYSTEM INFO DISPLAY
- Display exposure mode;
- Display focus mode;
- Display IRIS level;
- Display B/W mode;
- Display fan speed (reserved);
- Display temperature.

1.6 FACTORY DEFAULT
- System default;
- Camera default;
- All title clear;
- PTZ information clear.

1.7 DOME RESTART

2 CAMERA SET
2.1 ZOOM SET
- Enable/disable digital zoom
- Set zoom speed
- Enable/disable zoom display

2.2 IRIS SET
- Set IRIS mode;
- Set IRIS level;
- Set IRIS default.

2.3 FOCUS SETUP
- Focus limit;
- Set focus mode.

2.4 WHITE BALANCE SET
- Select white balance mode
- White balance R gain
- White balance B gain

2.5 EXPOSURE SET
- Set exposure mode;
- Set level;
- Disable/enable backlight;
- Set DSS (reserved);
- Display B/W mode;
- Display B/W sensitivity;
- Disable/enable WDR;
- Set Stabilize (reserved).

2.6 SPECIAL FUNCTION
- Enable/disable mirror;
- Freeze (reserved);
- Adjust camera sharpness;
- Set NR mode (reserved);
- Set NR level when NR mode is manual (reserved);
- Set CHROMA;
- Set slow AE (reserved).

2.7 VIDEO OPTIMIZE
- Adjust Gamma;
- Adjust DAC gain.

3 PTZ FUNCTION
3.1 PRESET SET
- Enable/disable preset title display;
- Select Preset S/N;
- Set Preset title;
- Clear title;
- Clear preset.

3.2 AUTOPAN SET
- Enable/disable autopan title display;
- Select AUTOPAN S/N;
- Direction;
- Speed;
- Time;
- Set autopan Title;
- Clear title;
- Clear AUTOPAN.

3.3 PATTERN SET
- Enable/disable Pattern title display;
- Select PATTERN S/N;
- Set PATTERN title;
- Clear title;
- Clear PATTERN.

3.4 HOME RETURN
- Set auto home position related action;
- Auto home position time;
- Power off position save;

3.5 Time TOUR SET
- Set time TOUR mode;
Set the time and action of calling up tour according to TOUR mode.

3.6 Normal TOUR set
Up to 6 TOURs can be set. Each TOUR can link with 14 actions, the action can be preset 1–32, pattern or AUTOPAN, and the period could be set independently.

3.7 MOTOR SPEED SET
Select the running speed of motor, there are HIGH, LOW and MEDIUM for selection. The default is MEDIUM.

4. ASSISTANT FUNCTIONS

4.1 MASK SET
- Enable/disable privacy mask function;
- Set the mask color;
- Select mask no.;
- Enable/disable the selected mask;
- Set mask area.

4.2 DIRECTION SET
- Enable/disable orientation and angle display
- Set North point
- Save parameter or not

Each submenu contains “RETURN and EXIT”. Click RETURN to return to previous menu; and click “EXIT” to quit OSD menu setting.

The following sections introduce the menu function and operation.

Chapter VII Camera Control

The camera control keyboard is illustrated as below:

![Camera Control Keyboard](image)

The keys could be divided into three function areas:
1. Area one: Lens direction control, totally eight directions control;
2. Area two: Lens property setting, including iris, zoom, and focus;
3. Area three: Lens additional function, including pattern, preset, auto pan, speed, auto-scan, 180° flip and etc.

7.1 Lens Direction Control

Shown in the following Figure:

![Lens Direction Control](image)

When the mouse moves on the direction key, the color of the direction key turns light. When the mouse clicks the direction key, the color returns to former status, and at this point, the camera starts to move.

The direction key not only controls the camera’s moving directions, but co-works with the menu. When a super user logs in, the Up/down/left/right key could be adjusted to change the menu option. When entered the menu, only the Up/down/left/right key works.

7.2 Lens Function Setting

When the mouse moves on or , the button will turn light when clicking it with the mouse, it returns to former status, which means it works.
7.3 Camera Control Function

Shown in the following figure:

![Figure 7-3](image)

Figure 7-3

**Indicates iris operation.**

(1) means Iris Close. Click it to close the iris to make the images darker.

(2) means Iris Open. Click it to open the iris to make the images brighter.

**Indicates zoom operation.**

(1) means zoom out. Click it to zoom out.

(2) means zoom in. Click it to zoom in.

**Indicates focus operation.**

(1) means focus far. Click it to manually adjust the lens focus on the distant object.

(2) means focus near. Click it to manually adjust the lens focus on the near object.

7.3.2 Setting Preset and Calling up Preset

**Setting Preset**

(1) Enter the preset number in \[1 \sim 254\];

(2) Deflect the direction key to change the lens location;

(3) Click to save the setting;

**Calling up Preset**

Enter the preset number to be called up in \[\] and click in the “Setting preset” area to call up.

7.3.3 Setting Pattern and Calling up Pattern

**Setting a Pattern**

(1) Enter the pattern number in \[\] ;

(2) Click in the “Pattern Area” to start setting a pattern;

(3) Use the direction button to perform a series of pan, tilt and zoom operation to finish a navigation course;

(4) Click in the “Pattern Area” to save the navigation course as the pattern;

(5) Repeat Step 1-4 to set pattern 2.

**Calling up a Pattern**

(1) Enter the pattern number in \[\] ;

(2) Click in the “Pattern Area” to call up pattern. The domes will automatically repeat the navigation course recorded before.

7.3.4 Setting Autopan and Calling up Autopan

**Setting Autopan**

(1) Click in the “Autopan area” to start setting a autopan;

(2) Use the direction button to perform automatically move left and right between two pre-defined positions when no manual operation is performed;

(3) Click in the “Autopan area” to save the navigation course as the Autopan.

**Calling up Autopan**

Click button in the “Autopan area” to call up autopan. The domes will automatically repeat the navigation course recorded before.

**Note:** The direction of autopan can be set via menu.

7.3.5 Calling up Autoscan

Click to call up scanning track of the camera.

7.3.6 Lens Flip 180°

Click to auto flip 180°.
Appendix I Magnetic Ring Filter Instruction

To reduce electromagnetic interference that power supply generates, it is necessary to install a magnetic ring filter with the power cable.

**To install a magnetic ring filter with power supply:**

**Step 1:** Open the magnetic ring filter and lead the power cable through.

**Step 2:** Wire the power cable on the magnetic ring filter 3 rounds or more (Make sure the filter can be well closed).

**Step 3:** Close the magnetic ring filter.

**Notice:** The magnetic ring filter should be installed no more than 50 mm away from the power output connector. As shown in Figure 3, the cable length from A to B should be 50mm at most.
## Appendix II Questions & Solutions

The following table describes the symptoms causes, and solutions for the problems.

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<th>Solutions</th>
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</thead>
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<td>Reconnect power cable</td>
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<tr>
<td></td>
<td>Power supply failure</td>
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</tr>
<tr>
<td></td>
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<td>Replace the fuse</td>
</tr>
<tr>
<td>The IP dome can’t be controlled after successful initiation.</td>
<td>New camera ID has not been activated</td>
<td>Recycle the power</td>
</tr>
<tr>
<td></td>
<td>Camera ID was set wrong</td>
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</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>No video signal displayed</td>
<td>Don’t correctly install the inserter to view the images</td>
<td>Refer to the inserter Installation to reinstall it</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>Or manually adjust the camera focus</td>
</tr>
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