

## **TFT LCD MONITOR**

### **USER MANUAL**

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HDVS IP Series (8 Channel versions)

Model No's. L101IP, L121IP, L152IP,  
L156IP, L172IP, L192IP, L215IP,  
L240IP, L270IP, L320IP, L420IP,  
L460IP.

TFT LCD Monitor with IP Input.



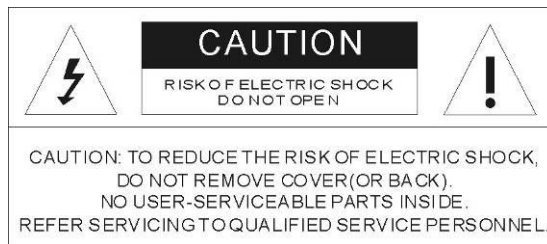
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## 1. **WARNING:**

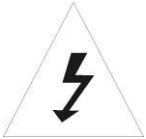
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

## **CAUTION:**



## **Explanation of Graphical Symbols**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## **Precautions**

### **Safety**-----

Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by the qualified personnel before operating it any further.

Unplug the unit from the wall outlet if it is not going to be used for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Allow adequate air circulation to prevent internal heat built-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.

### **Installation**-----

Do not install the unit in an extremely hot or humid place or in a place subject to excessive dust or mechanical vibration.

The unit is not designed to be waterproof. Exposure to rain or water may damage the unit.

### **Cleaning**-----

Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzene as they might damage the finish of the unit.

Retain the original carton and packing materials for safe transport of this unit in the future.

## **2. Safety Precautions**

### Federal Communications Commission (FCC) Statement

This Equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
- You are cautioned that changes or modifications not expressly approved by that party responsible for compliance could void your authority to operate the equipment.

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received including interference that may cause undesired

## **About this user manual**

This manual aims at assisting the user on how to operate the monitors described in this manual.

This manual is subject to rigid quality control. However, no guarantee can be given that mistakes are not present. We reserve the right to make changes to the manual without prior notice.

Before operating the appliance, please read this manual carefully and retain it for further reference. Verify that all appliance items are included in the delivery. Should items be missing, do not operate the appliance and contact your local dealer.

Never attempt to repair the appliance yourself. This should only be done by qualified service personnel.

Improper handling of the appliance will invalidate the warranty.

## **Package List**

|                         |                                  |
|-------------------------|----------------------------------|
| A. LCD IP input Monitor | x 1                              |
| B. Power Cord           | x 1                              |
| C. User Manual          | x 1                              |
| D. 12V Power Adapter    | x 1 [Except for the 32"/42"/46"] |
| E. USB Mouse            | x 1                              |

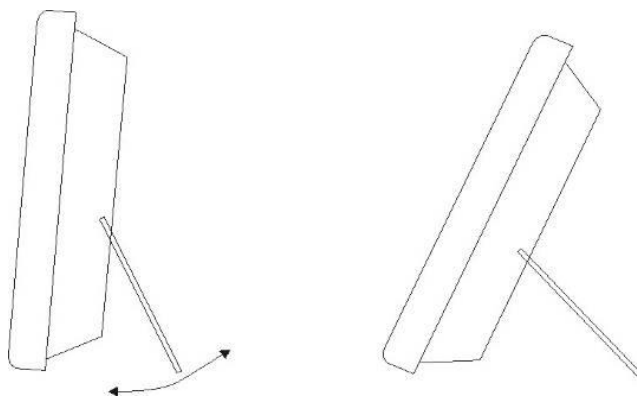
## **Revision History**

| Version | Date       | Page                           | Description                     |
|---------|------------|--------------------------------|---------------------------------|
| V 1.0   | 2015/03/31 | -                              | Initial (F/W: V4.0[20150124])   |
| V1.1    | 2015/04/01 | 1                              | Change IP Monitor cover picture |
|         |            | 18                             | Modify Stream type              |
| V1.2    | 2016/01/21 | -                              | Initial (F/W: V4.0[20150827])   |
|         |            | 1                              | Change IP Monitor cover picture |
|         |            | 14,15,16<br>18, 25             | Modify Stream type              |
|         |            | 23                             | Modify IP Channel Setting       |
| V1.3    | 2016/04/13 | 14,15,16<br>18, 19,21<br>23,25 | Modify Stream type              |

## **3. LCD Monitor Mounting Guide**

### **A. Desktop**

Adjust the viewing angle of LCD to fit most comfortable monitoring status.

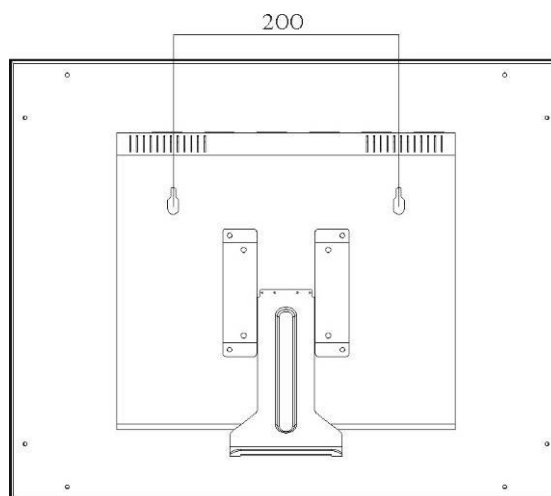


## B. Wall mount

Free your space with wall mount design.

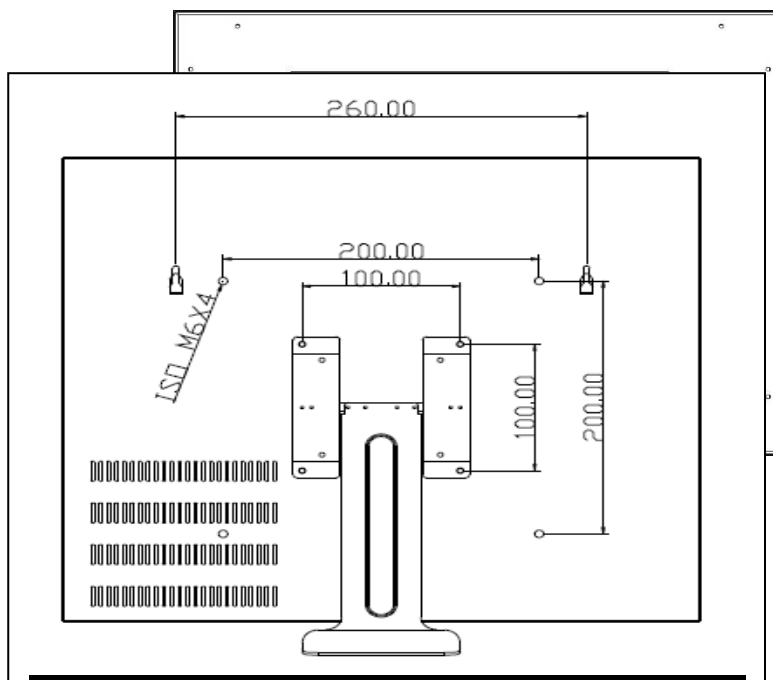
Please follow the fix-hole size in back panel to install the LCD to the wall.

12.1"/15"/15.6"/17"  
19"/21.5"/23.8"/27"

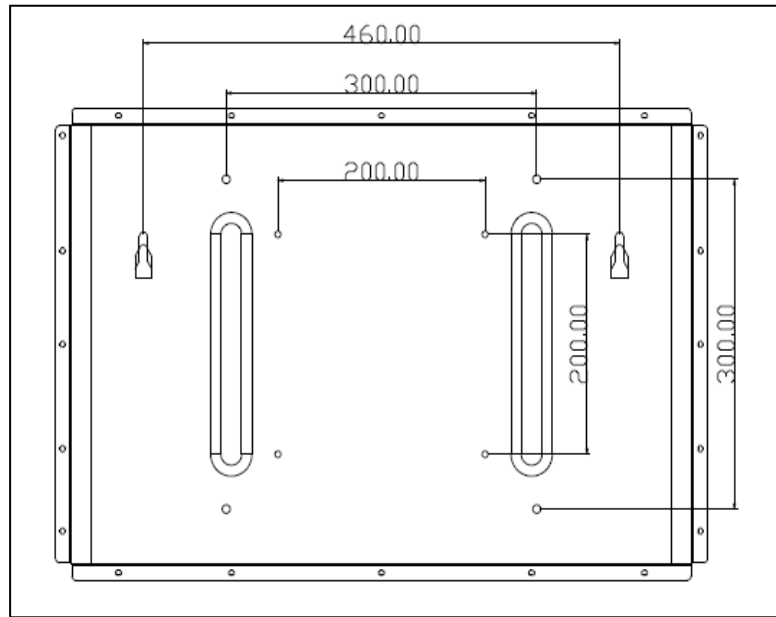


## C. VESA Bracket 12.1"/15"/15.6"/17"/19"/21.5"/23.8"/27"

VESA Bracket: 32"



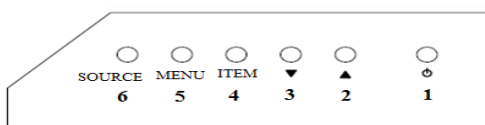
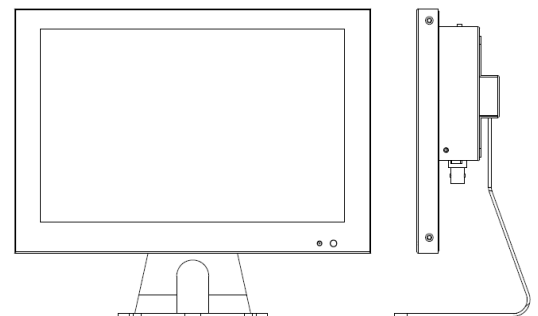
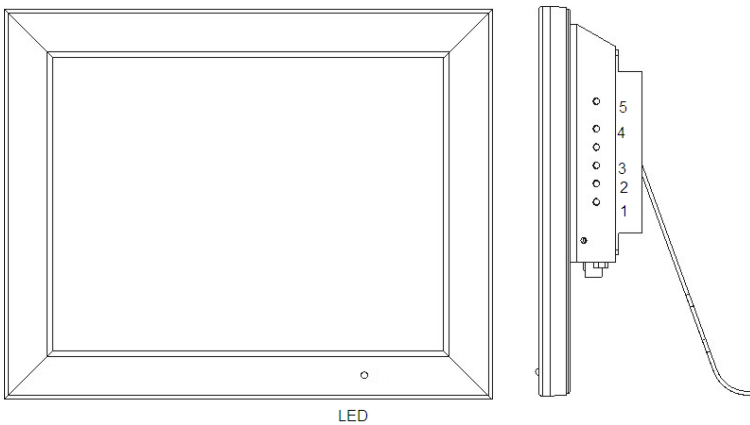
VESA Bracket: 42"/46"



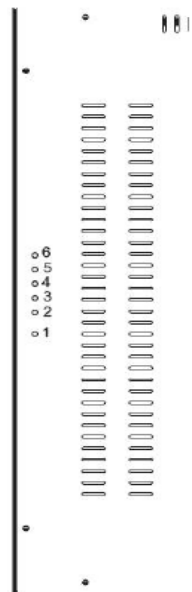
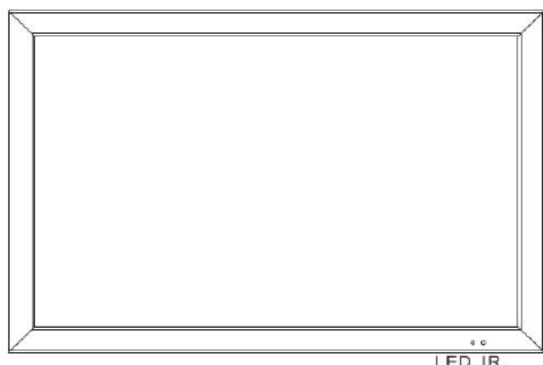
## 4. Monitor Controls

12.1"/15" 15.6"/17"/19"/21.5"/23.8"/27"

10.1"



32"/42"/46"



## Key Board

### **1. Power**

Push to turn on and turn off the unit.

LED Green light: Power on

LED Red light: Standby mode.

### **2. / 3. Adjust UP /DOWN**

UP: Used as UP function. Or Increase value on the OSD Menu.

And as a hot key for colour adjust function.

DOWN: Used as DOWN function. Or Decrease value on the OSD Menu.

And as a hot key for auto adjust function.

### **4. Item:**

Hot key for OSD adjustments of Volume, Contrast, Brightness, and Red, Green, Blue.

### **5. Menu**

Push to call out OSD menu. Or Used as Confirm function in OSD Menu.

### **6. Source**

Select input signal from D-SUB, HD, DVI, and IP.

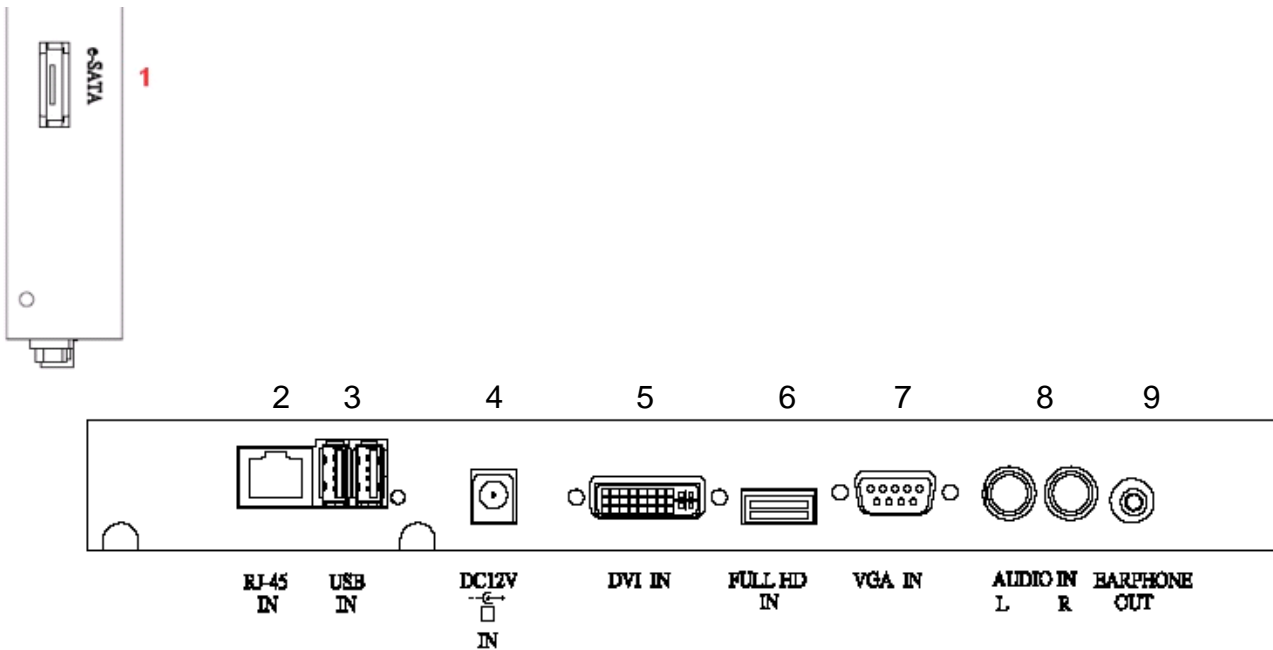
### **KEY Lock Function:**

Push "Menu" and "Item", OSD of screen will show "Key Lock on", Into key lock mode. And push again, OSD of screen will show "Key Lock off", into key unlock mode.



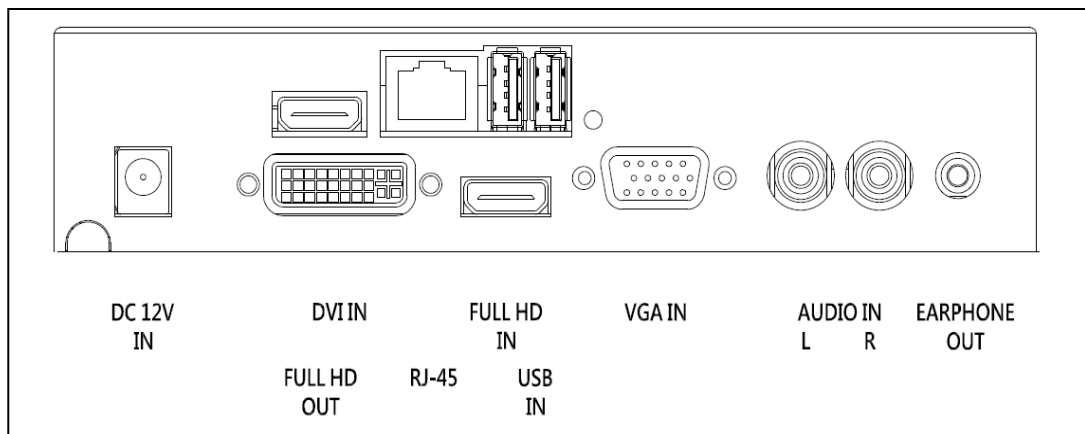
## 5. Connections: HDVS IP Series

12.1"/15"/15.6"/17"/19"/21.5"/23.8"/27"

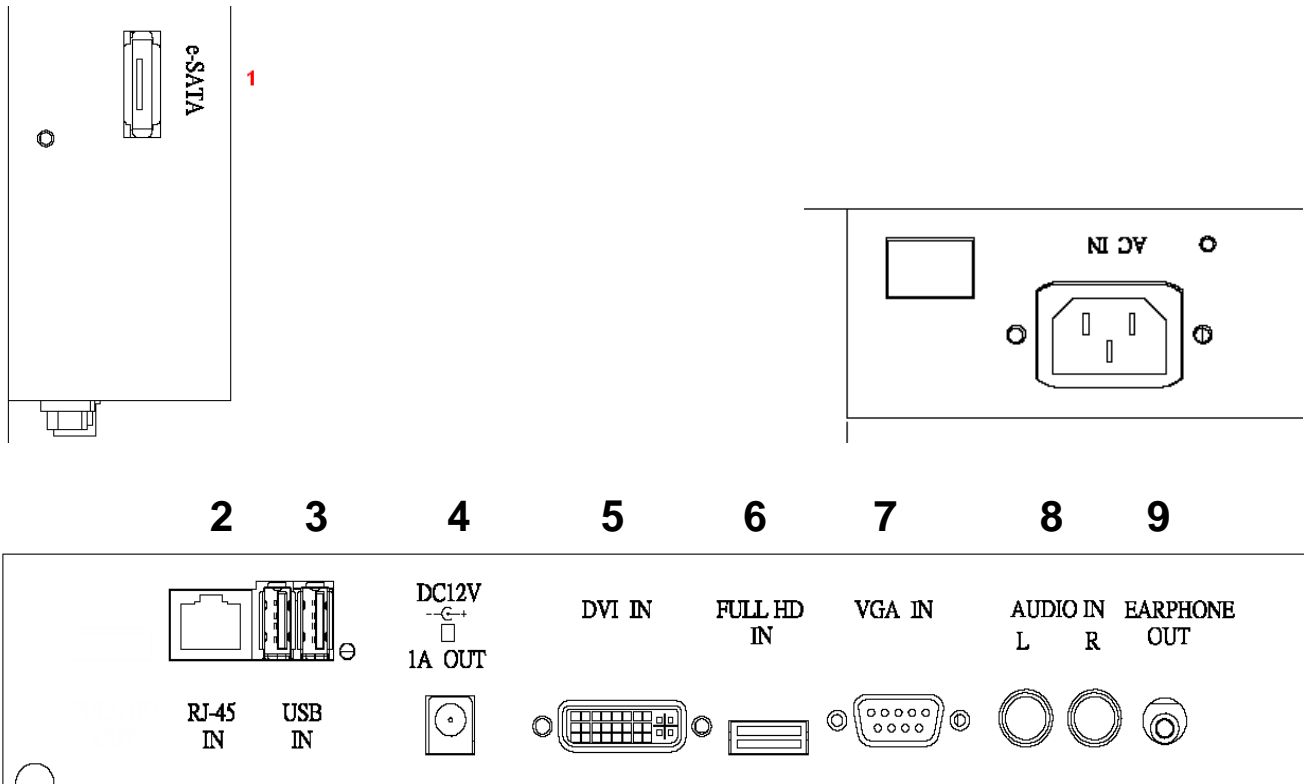


- 1: e-SATA
- 2: RJ-45 (Ethernet Interface)
- 3: USB IN \*2 (USB Mouse/Record Backup Connector)
- 4: DC 12V IN
- 5: DVI IN
- 6: Full HD IN
- 7: VGA IN
- 8: AUDIO R/L IN
- 9: Earphone OUT

10.1"



32"/42"/46"



- 1: e-SATA
- 2: RJ-45 (Ethernet Interface)
- 3: USB IN \*2 (USB Mouse/Record Backup Connector)
- 4: DC 12V OUT
- 5: DVI IN
- 6: Full HD IN
- 7: VGA IN
- 8: AUDIO R/L IN
- 9: Earphone OUT

## **6. LCD OSD Function**

|                                                                                |
|--------------------------------------------------------------------------------|
| Colour<br>Image Setting<br>OSD Menu<br>Signal Source<br>Audio<br>Misc.<br>Back |
|--------------------------------------------------------------------------------|

### **Colour:**

#### **Contrast**

Adjust background black level of the screen image.

#### **Brightness**

Adjust foreground white level of the screen image.

#### **Colour Adjust**

Adjust Red, Green, Blue, colour deepness for Users.

#### **Colour Temp**

Adjust colour temperatures for users.  
9300, 6500, 5800, RGB, USER

#### **Back**

Exit OSD menu.

### **Image Setting:**

#### **Clock**

Adjust image distortion appearing as vertical or “noise” on the screen.

#### **Phase**

Adjust image distortion appearing as horizontal or “noise” on the screen.

#### **Sharpness**

Adjust the clarity and focus of the screen images.

#### **H. Position**

Move the screen image left or right.

#### **V. Position**

Move the screen image up and down.

#### **Back**

Exit OSD menu.

### **OSD Menu:**

#### **OSD H. Pos**

Move the OSD menu position left or right.

#### **OSD V. Pos**

Move the OSD menu position up or down.

#### **OSD Timer**

Set the OSD menu display time.

#### **Language**

Select the desired language as English, French, German, Spanish, Traditional Chinese Simplified Chinese, and Japanese.

#### **Back**

Exit OSD menu.

### **Signal source**

Select the input signal VGA, HD, DVI, and IP.

#### **Back**

Exit OSD menu.

## **Audio**

### Volume

Control built-in speakers' output Volumes

### Mute

Disable the unit's sound output

### Back

Exit OSD menu.

## **Misc:**

### Auto Adjust

Adjust the best image.

### Colour Adjust

Adjust the best image colour.

### Reset

Return to factory default setting.

### Screen saver

Use the manual buttons to on/off the screen saver

## **Back:**

Exit the OSD menu.

## **7.PC Timing**

| Mode | Resolution   |
|------|--------------|
| 1    | 800*600@60   |
| 2    | 800*600@72   |
| 3    | 800*600@75   |
| 4    | 1024*768@60  |
| 5    | 1024*768@70  |
| 6    | 1024*768@75  |
| 7    | 1280*1024@60 |
| 8    | 1280*1024@75 |
| 9    | 1360*768@60  |
| 10   | 1920*1080@60 |

## **8.Features**

- H264 compression format
- VGA/ DVI-D and Full HD Input
- Real-time display
- Support HDMI video output (1920 x 1080 @30)
- Graphical and text interfaces (GUI)
- Use Ethernet connection control
- Supports up to four network cameras via HUB
- Supports network protocols TCP/IP, DHCP, DNS, HTTP, SMTP
- System login

## 9. Specification

|                       |                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Monitor model</b>  | <b>L101IP-8</b>                                                                                                                                                                                                                                                                               |
| LCD panel             | 10.1"                                                                                                                                                                                                                                                                                         |
| Visible area (mm)     | 216.96 x 135.6                                                                                                                                                                                                                                                                                |
| Picture format        | 17: 10                                                                                                                                                                                                                                                                                        |
| Max. resolution       | 1280 x 800                                                                                                                                                                                                                                                                                    |
| Pixel dot pitch (mm)  | 0.1695 x 0.1695                                                                                                                                                                                                                                                                               |
| Colours               | 16.2M                                                                                                                                                                                                                                                                                         |
| Brightness            | 350 cd/m <sup>2</sup> [LED]                                                                                                                                                                                                                                                                   |
| Contrast              | 800 :1                                                                                                                                                                                                                                                                                        |
| Response time (Tr/Tf) | 10/15 ms                                                                                                                                                                                                                                                                                      |
| View angle (U/D/L/R)  | 85/85/85/85                                                                                                                                                                                                                                                                                   |
| Full HD input         | 1 x Full HD                                                                                                                                                                                                                                                                                   |
| Audio input(R/L)      | 2 x (RCA)                                                                                                                                                                                                                                                                                     |
| PC input              | 1 x VGA input<br>1 x DVI-D input                                                                                                                                                                                                                                                              |
| Earphone out          | 1 x Phone jack ,3.5ψ                                                                                                                                                                                                                                                                          |
| Speaker               | 2 x built-in speaker (2 watt)                                                                                                                                                                                                                                                                 |
| IP Video support      | 8x(1280*960)+sub(640*480)+4Ref.+1Play<br>8x(1920*1080)+sub(640*480)+2Ref.+1Play<br>8x(720*576)+sub(352*288)+2Ref.+8Play<br>8x(1280*720)+sub(640*360)+1Ref.+4Play<br>8x(1280*960)+sub(720*576)+2Ref.+1Play<br>8x(1920*1080)+sub(720*576)+4Ref.+1Play<br>4x(1920*1080)+sub(720*576)+4Ref.+1Play |
| OSD setting           | Yes                                                                                                                                                                                                                                                                                           |
| Network Port          | 1 x RJ45, 10M/100M                                                                                                                                                                                                                                                                            |
| USB Port              | 2 x USB 2.0 ports                                                                                                                                                                                                                                                                             |
| HDD Port              | 1 x e-SATA port                                                                                                                                                                                                                                                                               |
| Power input           | AC 100-240V 50/60Hz, Adapter DC 12V/2A                                                                                                                                                                                                                                                        |
| Power consumption     | Approx. 8.5 watt                                                                                                                                                                                                                                                                              |
| Dimensions (WxHxD) mm | 255.1 x 173.7 x 69.1                                                                                                                                                                                                                                                                          |
| Weight                | TBD kg                                                                                                                                                                                                                                                                                        |
| Operating temperature | 0° to 40° C                                                                                                                                                                                                                                                                                   |

Subject to technical changes without prior notice. Error excepted.

| <b>Monitor model</b>  | <b>L121IP-8</b>                                                                                                                                                                                                                                                                               | <b>L152IP-8</b>             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| LCD panel             | 12.1"                                                                                                                                                                                                                                                                                         | 15.0"                       |
| Visible area (mm)     | 245.76 x 184.32                                                                                                                                                                                                                                                                               | 304.1 x 228.1               |
| Picture format        | 4: 3                                                                                                                                                                                                                                                                                          | 4: 3                        |
| Max. resolution       | 1024 x 768                                                                                                                                                                                                                                                                                    | 1024 x 768                  |
| Pixel dot pitch (mm)  | 0.24 x 0.24                                                                                                                                                                                                                                                                                   | 0.297 x 0.297               |
| Colours               | 16.2M                                                                                                                                                                                                                                                                                         | 16.2M                       |
| Brightness            | 350 cd/m <sup>2</sup> [LED]                                                                                                                                                                                                                                                                   | 300 cd/m <sup>2</sup> [LED] |
| Contrast              | 800 :1                                                                                                                                                                                                                                                                                        | 2000 :1                     |
| Response time (Tr/Tf) | 16/19 ms                                                                                                                                                                                                                                                                                      | 16/7 ms                     |
| View angle (U/D/L/R)  | 70/80/70/80                                                                                                                                                                                                                                                                                   | 88/88/88/88                 |
| Full HD input         | 1 x Full HD                                                                                                                                                                                                                                                                                   |                             |
| Audio input(R/L)      | 2 x (RCA)                                                                                                                                                                                                                                                                                     |                             |
| PC input              | 1 x VGA input<br>1 x DVI-D input                                                                                                                                                                                                                                                              |                             |
| Earphone out          | 1 x Phone jack ,3.5ψ                                                                                                                                                                                                                                                                          |                             |
| Speaker               | 2 x built-in speaker (2 watt)                                                                                                                                                                                                                                                                 |                             |
| IP Video support      | 8x(1280*960)+sub(640*480)+4Ref.+1Play<br>8x(1920*1080)+sub(640*480)+2Ref.+1Play<br>8x(720*576)+sub(352*288)+2Ref.+8Play<br>8x(1280*720)+sub(640*360)+1Ref.+4Play<br>8x(1280*960)+sub(720*576)+2Ref.+1Play<br>8x(1920*1080)+sub(720*576)+4Ref.+1Play<br>4x(1920*1080)+sub(720*576)+4Ref.+1Play |                             |
| OSD setting           | Yes                                                                                                                                                                                                                                                                                           |                             |
| Network Port          | 1 x RJ45, 10M/100M                                                                                                                                                                                                                                                                            |                             |
| USB Port              | 2 x USB 2.0 ports                                                                                                                                                                                                                                                                             |                             |
| HDD Port              | 1 x e-SATA port                                                                                                                                                                                                                                                                               |                             |
| Power input           | AC 100-240V 50/60Hz, Adapter DC 12V/5A                                                                                                                                                                                                                                                        |                             |
| Power consumption     | Approx. 15 watt                                                                                                                                                                                                                                                                               | Approx. 19 watt             |
| Dimensions (WxHxD) mm | 299 x 238.9 x 61.8                                                                                                                                                                                                                                                                            | 357 x 283 x 64              |
| Weight                | 2.3kg                                                                                                                                                                                                                                                                                         | 3.2kg                       |
| Operating temperature | 0° to 40° C                                                                                                                                                                                                                                                                                   |                             |

Subject to technical changes without prior notice. Error excepted.

|                       |                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Monitor model</b>  | <b>L156IP-8</b>                                                                                                                                                                                                                                                                               |
| LCD panel             | 15.6"                                                                                                                                                                                                                                                                                         |
| Visible area (mm)     | 344.1 x 193.5                                                                                                                                                                                                                                                                                 |
| Picture format        | 16: 9                                                                                                                                                                                                                                                                                         |
| Max. resolution       | 1920 x 1080                                                                                                                                                                                                                                                                                   |
| Pixel dot pitch (mm)  | 0.17925 x 0.17925                                                                                                                                                                                                                                                                             |
| Colours               | 262K                                                                                                                                                                                                                                                                                          |
| Brightness            | 300 cd/m <sup>2</sup> [LED]                                                                                                                                                                                                                                                                   |
| Contrast              | 600 :1                                                                                                                                                                                                                                                                                        |
| Response time (Tr/Tf) | 3/8 ms                                                                                                                                                                                                                                                                                        |
| View angle (U/D/L/R)  | 60/60/70/70                                                                                                                                                                                                                                                                                   |
| Full HD input         | 1 x Full HD                                                                                                                                                                                                                                                                                   |
| Audio input(R/L)      | 2 x (RCA)                                                                                                                                                                                                                                                                                     |
| PC input              | 1 x VGA input<br>1 x DVI-D input                                                                                                                                                                                                                                                              |
| Earphone out          | 1 x Phone jack ,3.5ψ                                                                                                                                                                                                                                                                          |
| Speaker               | 2 x built-in speaker (2 watt)                                                                                                                                                                                                                                                                 |
| IP Video support      | 8x(1280*960)+sub(640*480)+4Ref.+1Play<br>8x(1920*1080)+sub(640*480)+2Ref.+1Play<br>8x(720*576)+sub(352*288)+2Ref.+8Play<br>8x(1280*720)+sub(640*360)+1Ref.+4Play<br>8x(1280*960)+sub(720*576)+2Ref.+1Play<br>8x(1920*1080)+sub(720*576)+4Ref.+1Play<br>4x(1920*1080)+sub(720*576)+4Ref.+1Play |
| OSD setting           | Yes                                                                                                                                                                                                                                                                                           |
| Network Port          | 1 x RJ45, 10M/100M                                                                                                                                                                                                                                                                            |
| USB Port              | 2 x USB 2.0 ports                                                                                                                                                                                                                                                                             |
| HDD Port              | 1 x e-SATA port                                                                                                                                                                                                                                                                               |
| Power input           | AC 100-240V 50/60Hz, Adapter DC 12V/5A                                                                                                                                                                                                                                                        |
| Power consumption     | Approx. 15 watt                                                                                                                                                                                                                                                                               |
| Dimensions (WxHxD) mm | 401.5x 251 x60.3                                                                                                                                                                                                                                                                              |
| Weight                | 3.2kg                                                                                                                                                                                                                                                                                         |
| Operating temperature | 0° to 40° C                                                                                                                                                                                                                                                                                   |

Subject to technical changes without prior notice. Error excepted.

| <b>Monitor model</b>  | <b>L172IP-8</b>                                                                                                                                                                                                                                                                               | <b>L192IP-8</b>             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| LCD panel             | 17.0"                                                                                                                                                                                                                                                                                         | 19.0"                       |
| Visible area (mm)     | 337.920 x 270.336                                                                                                                                                                                                                                                                             | 376.32 x 301.056            |
| Picture format        | 5: 4                                                                                                                                                                                                                                                                                          | 5: 4                        |
| Max. resolution       | 1280 x 1024                                                                                                                                                                                                                                                                                   | 1280 x 1024                 |
| Pixel dot pitch (mm)  | 0.264 x 0.264                                                                                                                                                                                                                                                                                 | 0.294 x 0.294               |
| Colours               | 16.7M                                                                                                                                                                                                                                                                                         | 16.7M                       |
| Brightness            | 250 cd/m <sup>2</sup> [LED]                                                                                                                                                                                                                                                                   | 250 cd/m <sup>2</sup> [LED] |
| Contrast              | 1000 :1                                                                                                                                                                                                                                                                                       | 1000 :1                     |
| Response time (Tr/Tf) | 3.8/1.2 ms                                                                                                                                                                                                                                                                                    | 3.6/1.4 ms                  |
| View angle (U/D/L/R)  | 80/80/85/85                                                                                                                                                                                                                                                                                   | 80/80/85/85                 |
| Full HD input         | 1 x Full HD                                                                                                                                                                                                                                                                                   |                             |
| Audio input(R/L)      | 2 x (RCA)                                                                                                                                                                                                                                                                                     |                             |
| PC input              | 1 x VGA input<br>1 x DVI-D input                                                                                                                                                                                                                                                              |                             |
| Earphone out          | 1 x Phone jack ,3.5ψ                                                                                                                                                                                                                                                                          |                             |
| Speaker               | 2 x built-in speaker (2 watt)                                                                                                                                                                                                                                                                 |                             |
| IP Video support      | 8x(1280*960)+sub(640*480)+4Ref.+1Play<br>8x(1920*1080)+sub(640*480)+2Ref.+1Play<br>8x(720*576)+sub(352*288)+2Ref.+8Play<br>8x(1280*720)+sub(640*360)+1Ref.+4Play<br>8x(1280*960)+sub(720*576)+2Ref.+1Play<br>8x(1920*1080)+sub(720*576)+4Ref.+1Play<br>4x(1920*1080)+sub(720*576)+4Ref.+1Play |                             |
| OSD setting           | Yes                                                                                                                                                                                                                                                                                           |                             |
| Network Port          | 1 x RJ45, 10M/100M                                                                                                                                                                                                                                                                            |                             |
| USB Port              | 2 x USB 2.0 ports                                                                                                                                                                                                                                                                             |                             |
| HDD Port              | 1 x e-SATA port                                                                                                                                                                                                                                                                               |                             |
| Power input           | AC 100-240V 50/60Hz, Adapter DC 12V/5A                                                                                                                                                                                                                                                        |                             |
| Power consumption     | Approx. TBD watt                                                                                                                                                                                                                                                                              | Approx.17 watt              |
| Dimensions (WxHxD) mm | 387.1 x 321.5x61.1                                                                                                                                                                                                                                                                            | 425.5 x 352.2 x 64.2        |
| Weight                | TBD kg                                                                                                                                                                                                                                                                                        | 4.5 kg                      |
| Operating temperature | 0° to 40° C                                                                                                                                                                                                                                                                                   |                             |

Subject to technical changes without prior notice. Error excepted



| <b>Monitor model</b>  | <b>L215IP-8</b>                                                                                                                                                                                                                                                                               | <b>L238IP-8</b>             | <b>L270IP-8</b>             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|
| LCD panel             | 21.5"                                                                                                                                                                                                                                                                                         | 23.8"                       | 27.0"                       |
| Visible area (mm)     | 476.64 x 268.11                                                                                                                                                                                                                                                                               | 527.04 x 296.46             | 597.6 x 336.15              |
| Picture format        | 16 : 9                                                                                                                                                                                                                                                                                        | 16:9                        | 16:9                        |
| Max. resolution       | 1920 x 1080                                                                                                                                                                                                                                                                                   | 1920 x 1080                 | 1920 x 1080                 |
| Pixel dot pitch (mm)  | 0.24825 x 0.24825                                                                                                                                                                                                                                                                             | 0.2745 x 0.2745             | 0.31125 x 0.31125           |
| Colours               | 16.7M                                                                                                                                                                                                                                                                                         | 16.7M                       | 16.7M                       |
| Brightness            | 250 cd/m <sup>2</sup> [LED]                                                                                                                                                                                                                                                                   | 250 cd/m <sup>2</sup> [LED] | 300 cd/m <sup>2</sup> [LED] |
| Contrast              | 3000 :1                                                                                                                                                                                                                                                                                       | 3000:1                      | 5000:1                      |
| Response time (Tr/Tf) | 13/5 ms                                                                                                                                                                                                                                                                                       | 10/6 ms                     | 3.5/5 ms                    |
| View angle (U/D/L/R)  | 89/89/89/89                                                                                                                                                                                                                                                                                   | 89/89/89/89                 | 89/89/89/89                 |
| Full HD input         | 1 x Full HD                                                                                                                                                                                                                                                                                   |                             |                             |
| Audio input(R/L)      | 2 x (RCA)                                                                                                                                                                                                                                                                                     |                             |                             |
| PC input              | 1 x VGA input<br>1 x DVI-D input                                                                                                                                                                                                                                                              |                             |                             |
| Earphone out          | 1 x Phone jack ,3.5ψ                                                                                                                                                                                                                                                                          |                             |                             |
| Speaker               | 2 x built-in speaker (2 watt)                                                                                                                                                                                                                                                                 |                             |                             |
| IP Video support      | 8x(1280*960)+sub(640*480)+4Ref.+1Play<br>8x(1920*1080)+sub(640*480)+2Ref.+1Play<br>8x(720*576)+sub(352*288)+2Ref.+8Play<br>8x(1280*720)+sub(640*360)+1Ref.+4Play<br>8x(1280*960)+sub(720*576)+2Ref.+1Play<br>8x(1920*1080)+sub(720*576)+4Ref.+1Play<br>4x(1920*1080)+sub(720*576)+4Ref.+1Play |                             |                             |
| OSD setting           | Yes                                                                                                                                                                                                                                                                                           |                             |                             |
| Network Port          | 1 x RJ45, 10M/100M                                                                                                                                                                                                                                                                            |                             |                             |
| USB Port              | 2 x USB 2.0 ports                                                                                                                                                                                                                                                                             |                             |                             |
| HDD Port              | 1 x e-SATA port                                                                                                                                                                                                                                                                               |                             |                             |
| Power input           | AC 100-240V 50/60Hz, Adapter DC 12V/5A                                                                                                                                                                                                                                                        |                             |                             |
| Power consumption     | Approx. 24 watt                                                                                                                                                                                                                                                                               | Approx. 27watt              | Approx. 35watt              |
| Dimensions (WxHxD) mm | 531.2 x 322.5 x 71.2                                                                                                                                                                                                                                                                          | 586 x 353.3 x 61.6          | 658 x 396.5 x 63.9          |
| Weight                | 5.7 kg                                                                                                                                                                                                                                                                                        | 5.8 kg                      | 7kg                         |
| Operating temperature | 0° to 40° C                                                                                                                                                                                                                                                                                   |                             |                             |

Subject to technical changes without prior notice. Error excepted

| <b>Monitor model</b>  | <b>L320IP-8</b>                                                                                                                                                                                                                                                                               | <b>L420IP-8</b>             | <b>L460IP-8</b>             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|
| LCD panel             | 32.0"                                                                                                                                                                                                                                                                                         | 42.0"                       | 46.0"                       |
| Visible area (mm)     | 698.4 x 392.8                                                                                                                                                                                                                                                                                 | 930.24 x 523.26             | 1018.08 x 572.76            |
| Picture format        | 16 : 9                                                                                                                                                                                                                                                                                        | 16 : 9                      | 16 : 9                      |
| Max. resolution       | 1920 x 1080                                                                                                                                                                                                                                                                                   | 1920 x 1080                 | 1920 x 1080                 |
| Pixel dot pitch (mm)  | 0.36375 x 0.37375                                                                                                                                                                                                                                                                             | 0.4845 x 0.4845             | 0.53025 x 0.53025           |
| Colours               | 16.7M                                                                                                                                                                                                                                                                                         | 16.7M                       | 1073.7M                     |
| Brightness            | 350 cd/m <sup>2</sup> [LED]                                                                                                                                                                                                                                                                   | 400 cd/m <sup>2</sup> [LED] | 500 cd/m <sup>2</sup> [LED] |
| Contrast              | 3000:1                                                                                                                                                                                                                                                                                        | 4000:1                      | 4000:1                      |
| Response time (Tr/Tf) | 6.5ms                                                                                                                                                                                                                                                                                         | 6.5ms                       | 6.5ms                       |
| View angle (U/D/L/R)  | 89/89/89/89                                                                                                                                                                                                                                                                                   | 89/89/89/89                 | 89/89/89/89                 |
| Full HD input         | 1 x Full HD                                                                                                                                                                                                                                                                                   |                             |                             |
| Audio input(R/L)      | 2 x (RCA)                                                                                                                                                                                                                                                                                     |                             |                             |
| PC input              | 1 x VGA input<br>1 x DVI-D input                                                                                                                                                                                                                                                              |                             |                             |
| Earphone out          | 1 x Phone jack ,3.5ψ                                                                                                                                                                                                                                                                          |                             |                             |
| Speaker               | 2x built-in speaker (2 watt)                                                                                                                                                                                                                                                                  |                             |                             |
| IP Video support      | 8x(1280*960)+sub(640*480)+4Ref.+1Play<br>8x(1920*1080)+sub(640*480)+2Ref.+1Play<br>8x(720*576)+sub(352*288)+2Ref.+8Play<br>8x(1280*720)+sub(640*360)+1Ref.+4Play<br>8x(1280*960)+sub(720*576)+2Ref.+1Play<br>8x(1920*1080)+sub(720*576)+4Ref.+1Play<br>4x(1920*1080)+sub(720*576)+4Ref.+1Play |                             |                             |
| OSD setting           | Yes                                                                                                                                                                                                                                                                                           |                             |                             |
| Network Port          | 1 x RJ45, 10M/100M                                                                                                                                                                                                                                                                            |                             |                             |
| USB Port              | 2 x USB 2.0 ports                                                                                                                                                                                                                                                                             |                             |                             |
| HDD Port              | 1 x e-SATA port                                                                                                                                                                                                                                                                               |                             |                             |
| Power input           | AC 100-240V 50/60Hz                                                                                                                                                                                                                                                                           |                             |                             |
| Power consumption     | Approx. 58 watt                                                                                                                                                                                                                                                                               | Approx. 78watt              | Approx.107 watt             |
| Dimensions (WxHxD) mm | 761.6 x 454.6 x 93.2                                                                                                                                                                                                                                                                          | 994.6 x 587.2 x 82.7        | 1081.5 x 635.5 x 80.5       |
| Weight                | 13.2 kg                                                                                                                                                                                                                                                                                       | 23kg                        | 25kg                        |
| Operating temperature | 0° to 40° C                                                                                                                                                                                                                                                                                   |                             |                             |

Subject to technical changes without prior notice. Error excepted

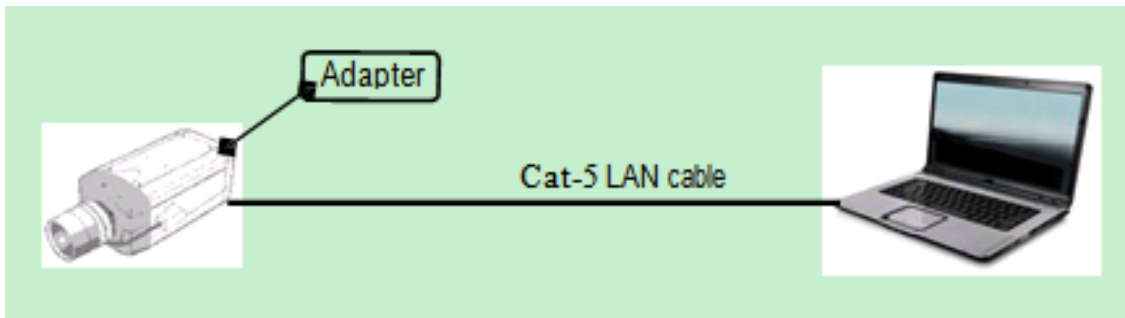
## 10. Appendixes. Troubleshooting for Display problem

The tables provided below include some problems that the user may encounter while using the display and the corresponding solutions. Please refer to the contents of this section prior to contacting service personnel.

| Problem                   | Possible Causes                                                                                                                                                                                                                        | Solutions                                                                                                                                                                                                                                                                             |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No picture                | <ol style="list-style-type: none"> <li>1. Is the power cable connected to the unit?</li> <li>2. Is the unit turned on?</li> <li>3. Is the signal cable connected to the unit?</li> <li>4. Is the unit in power saving mode?</li> </ol> | <ol style="list-style-type: none"> <li>1. Make sure the power cable has been properly connected to the unit.</li> <li>2. Turn on the unit.</li> <li>3. Make sure the signal cable has been properly connected to the unit.</li> <li>4. Press any key on computer keyboard.</li> </ol> |
| Strange colour            | <ol style="list-style-type: none"> <li>1. Is the signal cable connected to the unit?</li> </ol>                                                                                                                                        | <ol style="list-style-type: none"> <li>1. Make sure the signal cable has been properly connected to the unit.</li> </ol>                                                                                                                                                              |
| Picture distortion        | <ol style="list-style-type: none"> <li>1. Is the signal cable connected to the unit?</li> <li>2. Is the video input signal within the unit's specified frequency range?</li> </ol>                                                     | <ol style="list-style-type: none"> <li>1. Make sure the signal cable has been properly connected to the unit.</li> <li>2. Make sure the input signal is within the unit's specified frequency range.</li> </ol>                                                                       |
| Picture is too dim        | <ol style="list-style-type: none"> <li>1. Have the unit's brightness and contrast settings been set to the lowest level?</li> </ol>                                                                                                    | <ol style="list-style-type: none"> <li>1. Adjust brightness and contrast</li> </ol>                                                                                                                                                                                                   |
| Only sound but no picture | <ol style="list-style-type: none"> <li>1. Is the connection of the input signal correct?</li> </ol>                                                                                                                                    | <ol style="list-style-type: none"> <li>1. Check connection of input signal.</li> <li>2. Make sure the signal cable has been properly connected.</li> </ol>                                                                                                                            |
| Only picture but no sound | <ol style="list-style-type: none"> <li>1. Is the signal cable connected to the unit?</li> <li>2. Has the volume been set to the min level?</li> <li>3. Is the audio cable connected to the unit?</li> </ol>                            | <ol style="list-style-type: none"> <li>1. Make sure the signal cable has been properly connected to the unit.</li> <li>2. Adjust the volume to an appropriate setting.</li> <li>3. Make sure the audio cable has been properly connected to the unit.</li> </ol>                      |

Please contact the customer service centre of your local dealer if you have any questions regarding the unit after reading the information provided above.

## 11 IP Camera Device Side Setting



### IP Camera Network Configuration

Direct connector to a computer.

Configure your IP Camera Network settings.

Please reference your IP Camera manual.

Run the IE browser and login to setup.

To set an IP address for the Camera unit.

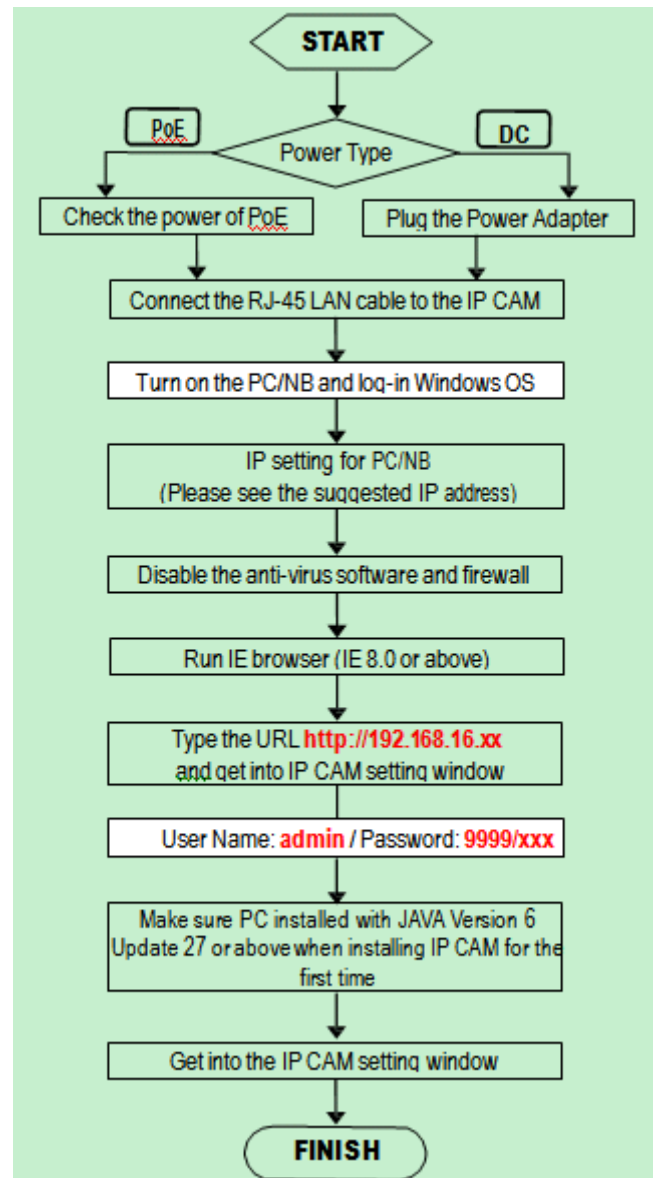
Disable DHCP setting.

Stream Type: Dual (Main and Sub Stream)

Resolution: 2M→1080p;VGA

Resolution: 1M→720p;VGA

Stream Codec Profiles: H.264

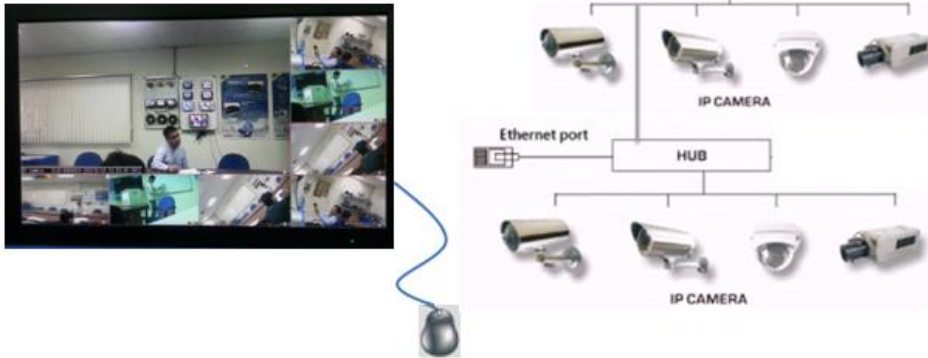


### IP Monitor (NVR) Support Stream Type list:

|                  |                                                                                                                                                                                                                                                                                                 |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP Video support | 8x(1280*960)+sub(640*480)+4Ref.+1Play<br>8x(1920*1080)+sub(640*480)+2Ref.+1Play<br>8x(720*576)+sub(352*288)+2Ref.+8Play<br>8x(1280*720)+sub(640*360)+1 Ref.+4Play<br>8x(1280*960)+sub(720*576)+ 2Ref.+1Play<br>8x(1920*1080)+sub(720*576)+4Ref.+1Play<br>4x(1920*1080)+sub(720*576)+4Ref.+1Play |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

8x[1920\*1080]+sub[720\*576]+4Ref.+1Play  
 8x[1280\*960]+sub[640\*480]+4Ref.+1Play  
 8x[1920\*1080]+sub[640\*480]+2Ref.+1Play  
 8x[720\*576]+sub[352\*288]+2Ref.+8Play  
 8x[1280\*720]+sub[640\*360]+1Ref.+4Play  
 8x[1280\*960]+sub[720\*576]+2Ref.+1Play  
 8x[1920\*1080]+sub[720\*576]+4Ref.+1Play  
 4x[1920\*1080]+sub[720\*576]+4Ref.+1Play

## 12 HDVS IP Host Side Operation



### Start System

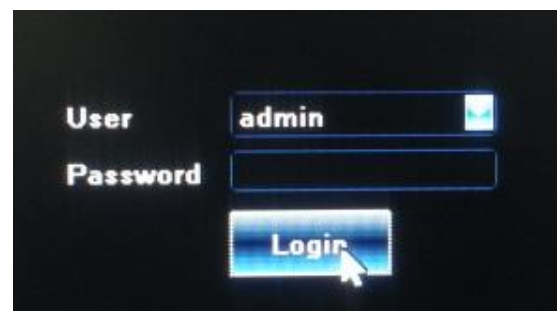
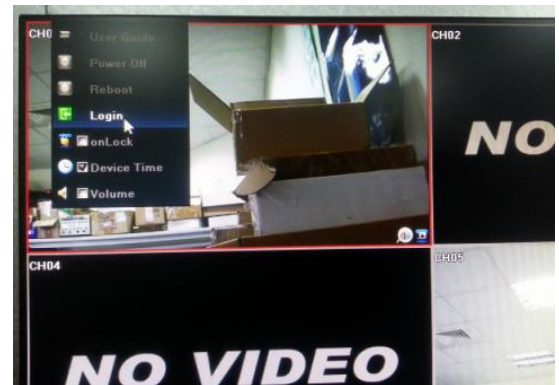
Plug in power cable and connect the RJ-45 LAN cable, USB mouse, e-SATA HDD cable (if record the image) to the HDVS IP Monitor. For the first time when plug in power cable the HDVS IP Monitor will booting automatically.

Press the power switch button (on the right rear side and reference page-9 “Keyboard” function), the power LED will be on and the HDVS IP Monitor will start.

Notice: After booting, the video output default to multi-window output mode. If the booting time is within the record setting time period, the system will auto enable the record function.

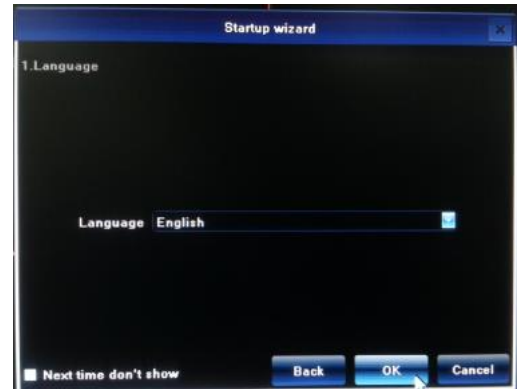
### System Login

After normal booting, right click to bring the menu, select **【Start】** → Login, Input the user name: admin and password blank (default to be blank) in the input box



After login successfully, system will pop out the Start up wizard UI on the screen.

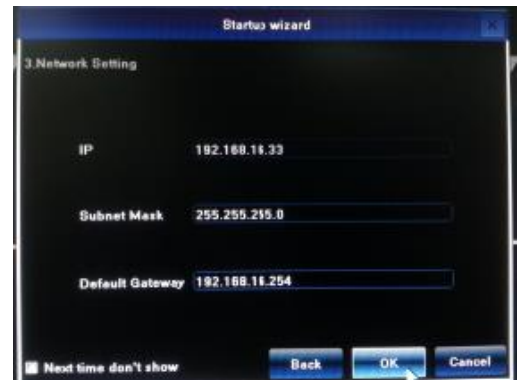
- Language: select different language according to the necessary, after that need restart the device.



- Display Setting: The resolution default setting is 1024x768; please select the best resolution according to the monitor or it will affect the image definition.

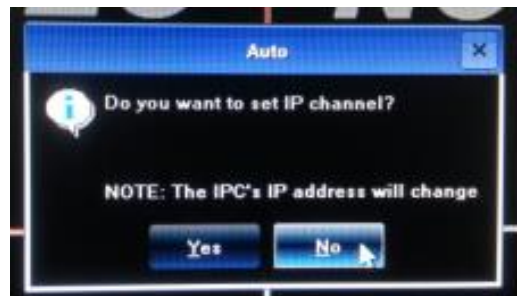


- Network Setting: The IP, Subnet Mark, Default Gateway is HDVS IP Monitor host side default setting



### IP Channel Setting

IP address setting menu, recommend used “Manual” to setting the IP Channel, and please click “No”



### Power off

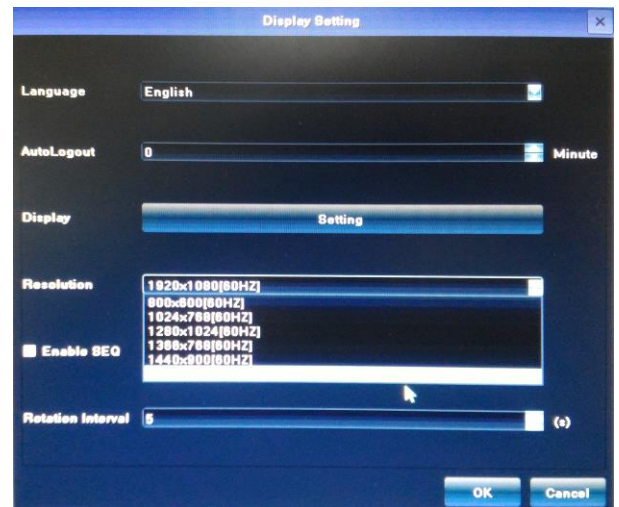
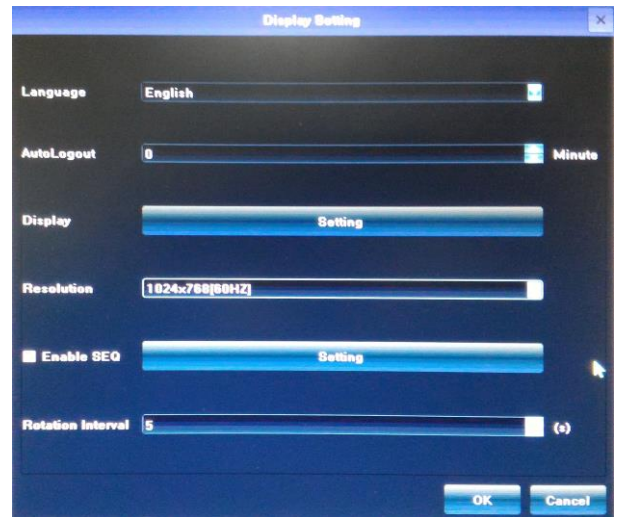
1. Click the power switch at the rear panel can shut down the device.
2. 【Main Menu】 → 【Power Off】 , select 【Yes】 (By this way, user need have shutdown authority)  
(Suggest to shutdown device in this way, it can avoid damaging the device from v electricity cut-off by accident).

**Note:** Before changing the HDD operation, please shutdown the device and cut the power supply first.

## 13 HDVS IP Display Setting

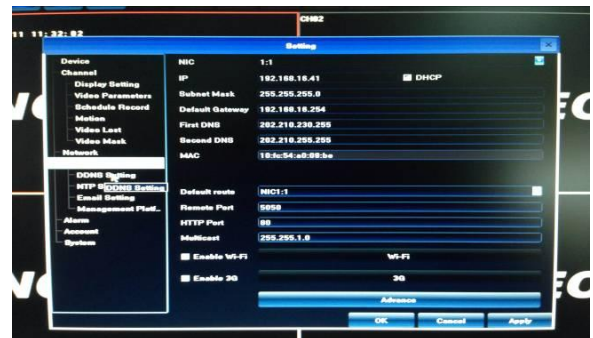
Click 【Display】 on the menu bar; Show the menu as the right side:

- 1) Language: select different language according to the necessary, after that need restart the device.
- 2) Auto Logout: system automatic logout and lock time.
- 3) Display: set monitor lightness, contrast, saturation and colour.
- 4) Resolution: the default setting is 1024x768; please select the best resolution according to the monitor or it will affect the image definition.
- 5) Rotation interval: Setup the time interval of rotation. Tick “Enable SEQ” to start rotation.



## 14 HDVS IP Network Setting

Connect HDVS IP Series with network cable to LAN switch. After power on, click 【Setting】 on the menu bar → Network → Network Setting to enter setting menu, set HDVS IP address, subnet mask, and gateway and so on. Then use PC to run ping command to check HDVS IP has connected with LAN



**⚠ Notice:** IP address might conflict with each other, please set the gateway correctly, or HDVS might fail to work.

Please ensure all the IP addresses in LAN are unique.

**Remote port setting:** the default is 5050, if there are several IPs in the LAN, need to change this port is for login IP by IE, CMS. Login IP by mobile, the port should be +3 based on the device port.

**HTTP port:** the default port is 80, suggest modifying it. This port is for login IP by IE, input IP address or domain name; need to add colon and HTTP port number.

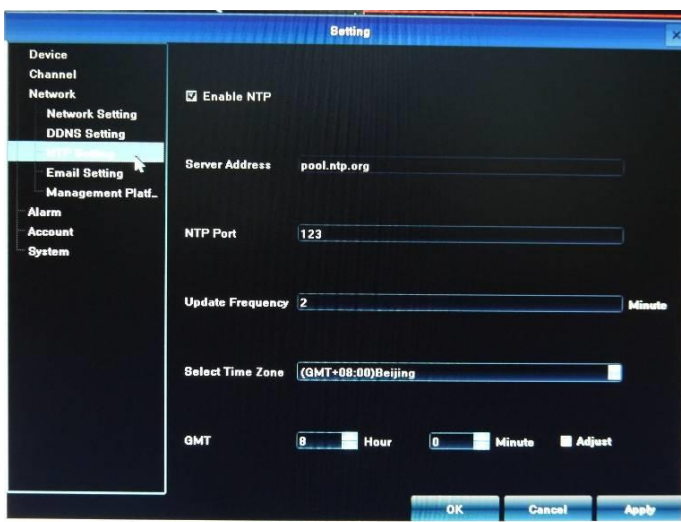
**Example:** show as the above right picture, access IP by IE in LAN, first add 2 forwarding rules in the router, the IP address is 192.168.1.188, the forwarding ports are 5050-5053, 80. Please input <http://192.168.1.188:80> at IE browser and download ActiveX, then close the IE before install the ActiveX, after installing it successfully, then reopen IE with <http://192.168.1.188:80>, it will show login menu, input device port:5050, user name: admin, no password, can access IP. If access IP by IE in WAN, please use static IP or dynamic domain name, the operation is same as LAN.

## 15 NTP Setting

### IP camera time synchronization

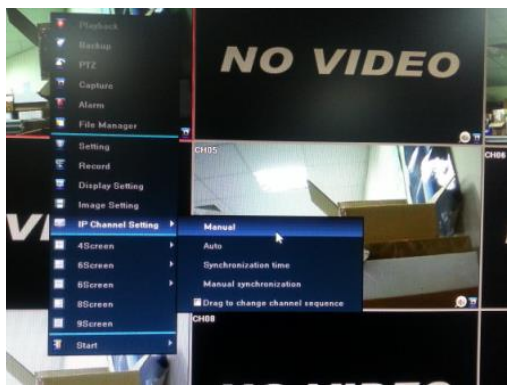
To click **【Setting】** on the menu bar → Network → NTP Setting to enter setting  
Server Address:” pool.ntp.org”

**⚠ Note:** Time is not synchronized to avoid errors arising from IP camera.



## 16 Connect with IP Camera

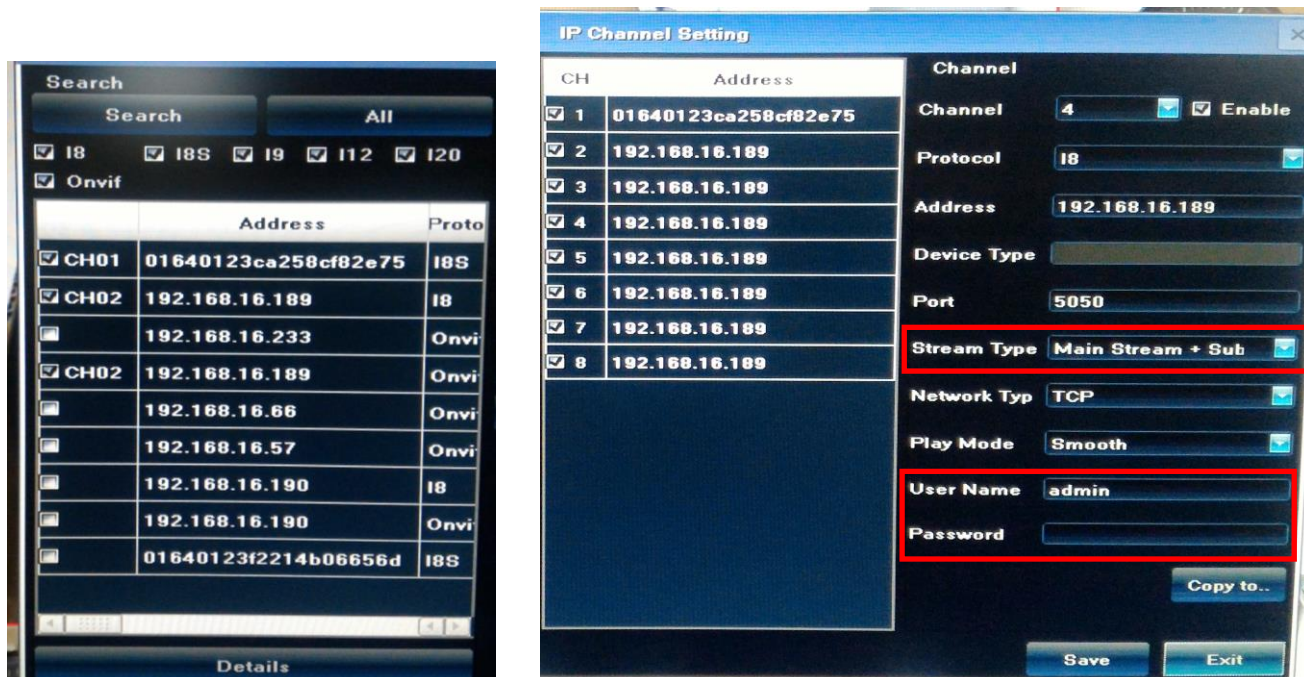
Right click to select **【IP Channel Setting】** → **【Manual】** click “Search” button The HDVS IP Monitor will search out all IP cameras in the LAN, it will take 18-30 seconds, after finishing the configuration, click Save to logout, then the image will come out.



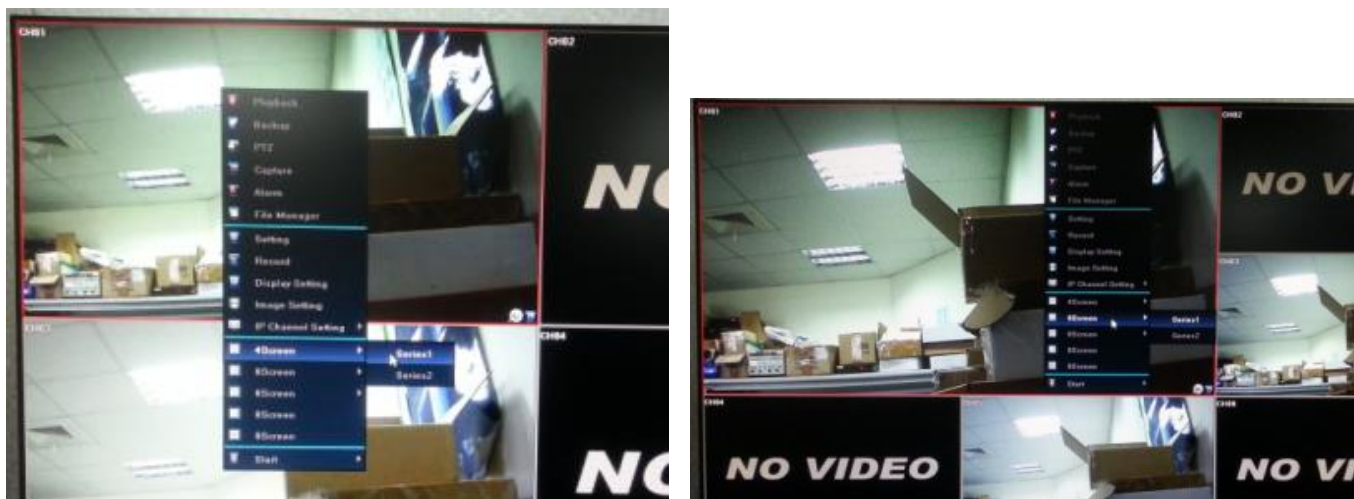
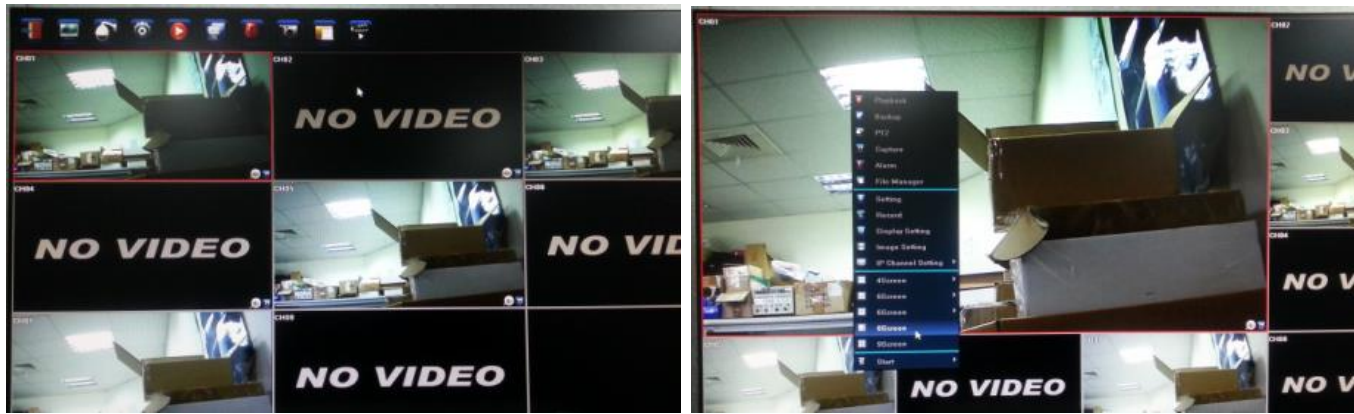


Onvif device select UDP network Type.  
 IPCAM device select TCP network Type.

**Example:**



To click "Save" and click "Exit" button than the image will come out.



## 17 Drag to Change channel Sequence

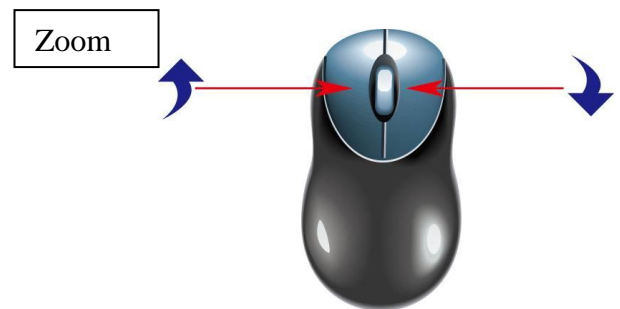
During real video surveillance, it's very important to have preview channel position of IPC image. Simple image dragging could not meet the need of multi-channel simultaneous playback and it's frustrating to match channel position respectively when searching. Dragging channel sequence can better solve this problem.

Right Mouse to click 【IP channel setting】 , choose 【drag to change channel sequence】



## 18 Digital Zooming

During image preview and playback, roll mouse roller to do digital zooming, it zoom the image as mouse pointer as the centre. The max can do 15X zooming. Drag the zoomed image by mouse to see image detail.



# 19 System Device Setting

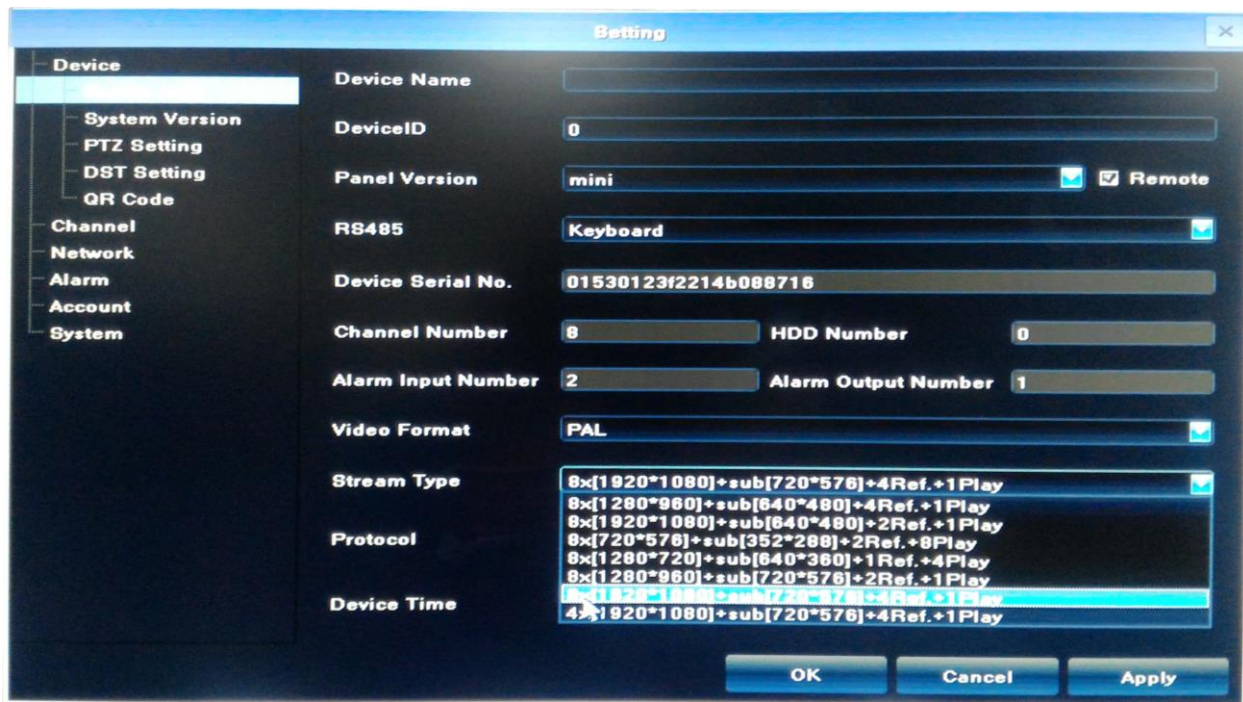
## Device Parameter

Click **【Setting】** → Device → Device info to check device spec, information and time setting

**Attention:** select mode according the connected IP camera channels and resolution, after change the model, click save and reboot the device.

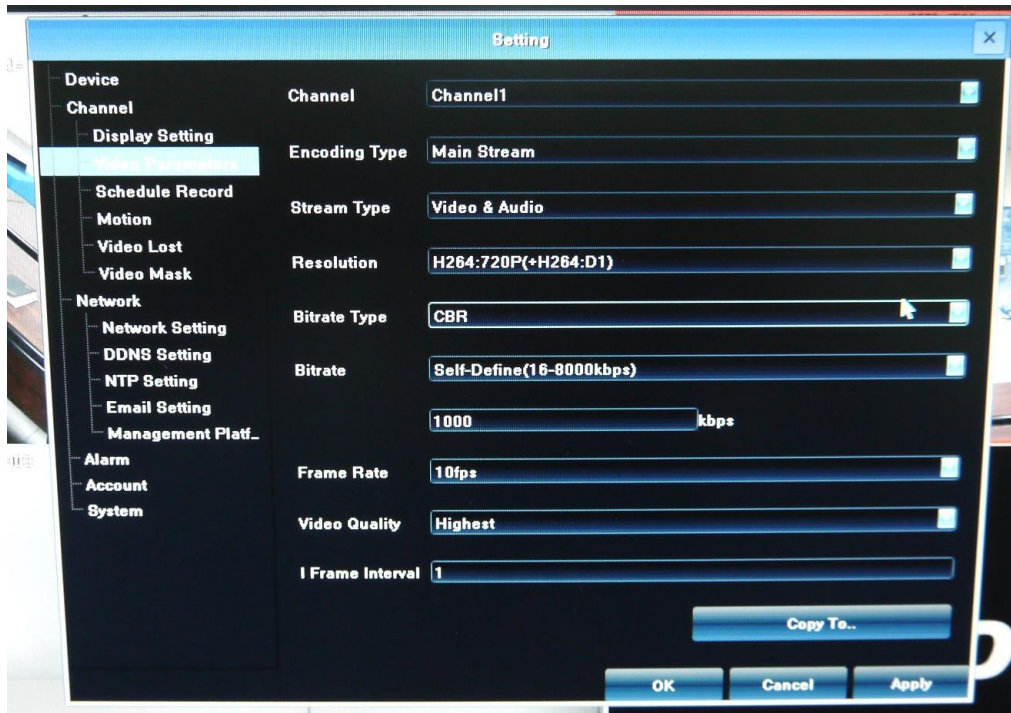
When the image is good in 4CH screen modes, after double click the image to zoom, the image is stuck or become black screen change to 1080p mode can solve it.

- 8x(1280\*960)+sub(640\*480)+4Ref.+1Play
- 8x(1920\*1080)+sub(640\*480)+2Ref.+1Play
- 8x(720\*576)+sub(352\*288)+2Ref.+8Play
- 8x(1280\*720)+sub(640\*360)+1 Ref.+4Play
- 8x(1280\*960)+sub(720\*576)+ 2Ref.+1Play
- 8x(1920\*1080)+sub(720\*576)+4Ref.+1Play
- 4x(1920\*1080)+sub(720\*576)+4Ref.+1Play



## 20 Channel Information

Click **【Setting】** →Channel→Video Parameters, to adjust IP camera preview and recording resolution.



### 1) **Encoding Type:**

Main Stream (Normal), Sub Stream, Main Stream (Event) for selection

**Main Stream:** double click to show single image or full screens image are main stream, also recording playback is main stream.

**Sub Stream:** screens display are using sub stream, IE or mobile viewing are sub stream also.

**Main Stream (Event):** motion detection and alarm trigger recording are using this.

### 2) **Stream Type:** there are video, video & audio two types for selection.

When connect with audio, please select video & audio mode, or there will be no audio when playback.

### 3) **Resolution:** IP will get IP camera main stream and sub stream resolution automatically, when the image is not good, adjust from here according to necessary.

### 4) **Bitrate Type:** set variable bit rate(VBR) and constant bit rate(CBR).

### 5) **Bitrate:** set the bit rate upper limit for coding.

main stream are 1080P: 6000kbps, 720P: 4000kbps ;

set the bit rate upper limit for coding sub stream is 512-1024kbps.

### 6) **Frame Rate:** suggest to set full frame 25/30.

### 7) **Video Quality:** suggest to select highest.

When all the IP cameras connected with IP are the same brand, after finish setting 1<sup>st</sup> channel, click **Copy To** to apply the setting to all channels is capable, then click **Save**.

## 21 Recording - Manual Recording & Schedule Record

### Manual Recording

Right click to bring main menu, click **【Record】** to enter record setting.

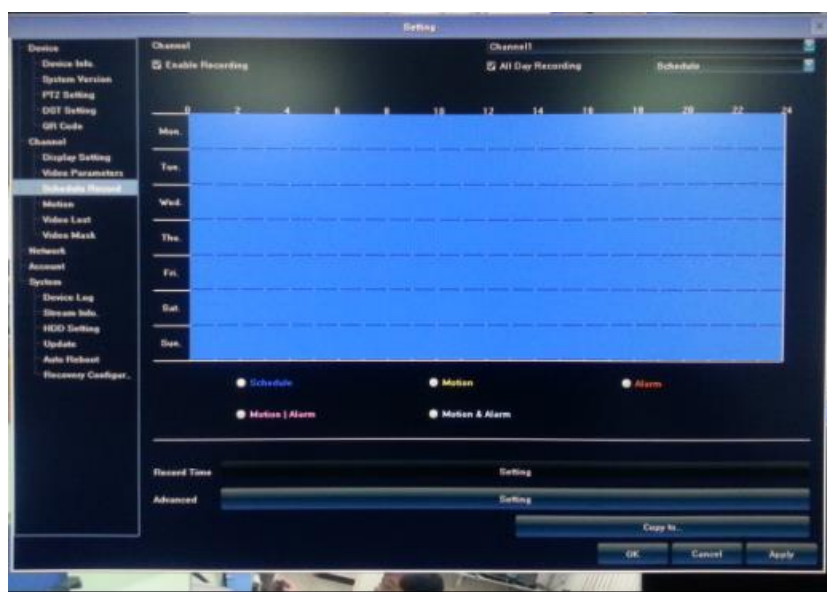
Manual recording has the highest priority, after performing **Manual**, the corresponding channel will begin recording.



### Schedule Record

Right click to bring main menu, click **【Setting】** → Channel → Schedule Record, the default setting is 24 hours recording, users can set the recording plan according to the necessary and copy it to other channel

**Note:** If IP stop recording in a regular time, please check schedule record status, the schedule might be wrong, please adjust them to manual record.



## Playback

Right click to bring main menu, click **【playback】** to open the window :



**Channel Select:** Select the channels that need do playback, system will find the required recording file. The date that has recording is highlighted by red color in calendar.

**Date Select:** Select the playback date.

**Playback:** The split screens will show on A-AREA, first choose channel on B-AREA, then choose dates shown on C-AREA to play the video during specific time (D-AREA) .

**Stop:** Stop the playback.

**Frame Play:** Play video frame by frame.

## Record Backup

Before back up, please make sure the hard disk has been saved with video.

**Preview Backup:** Right click to bring the main menu, click **【Backup】** to enter the backup interface firstly, then select the backup time and channel, insert the USB memory to backup.

Insert a USB external storage device, click **Refresh** to detect USB devices. There are three backup file format: H.264, MP4, AVI. Recommend back up to MP4 format which can use document management to check the backup file, and computer player to play.



## File Manager

Right click to bring main menu, click **【File Manager】** icon, the back up file of external storage device and local captured picture will list in the folder.



### 1) **Check photo in the hard disk:**

Select date on calendar, if there was any capture in that day , it would be displayed in the list form.

### 2) **Check the U disk and other mobile storage devices:**

Click **Refresh** ,then drop-down to select USB drive paths, the photo and video files in the drive will be displayed, double-click it to show its content.

You can capture the screen while viewing the video.

## 22 System HDD/e SATA Setting

### HDD Setting

Click **【Setting】** →System→HDD setting

In order to ensure a linear drive file management to better identify and written disk space, it is recommended to format the HDD first before recording.

**⚠** Host system supports format of the hard disk. If the hard disk has been used, please note whether it is FAT32 format. The embedded network digital video recorder supports only FAT32 format, otherwise there will be a hidden danger. Note: Please format hard disk when it is the first time for you to use

## **23 Troubleshooting for IP Camera Problem**

### **1. Internet disconnected to HDVS IP Monitor system**

Possible reasons:

- 1) Please check if your physical network is normal or not.
- 2) Please check your HDVS IP Monitor parameter setting.
- 3) Please if there is IP conflict with each other, please set the gateway correctly.
- 4) Please ensure all the IP addresses in LAN are unique.

### **2. No preview image**

Possible reasons:

- 1) IP cameras time synchronization with HDVS IP Monitor.
- 2) The Onvif device camera needs to select UDP network type.
- 3) The IPCAM device camera needs to select TCP network type.
- 4) Please check the channel select correctly.
- 5) HDVS IP Monitor's username and password should be correctly filled in.

### **3. IP Camera IP address can be searched, multi-images sub stream and single image main stream all cannot have image**

Possible reasons:

- 1) Please check your IP channel setting "Stream Type"
- 2) Adjustment of stream type, choose "Mainstream" or "Sub stream"
- 3) The username and password should be correctly filled in.

### **4. The multi-images sub stream has image and single image mainstream is on black screen or still image as well as black-screen playback**

Possible reasons:

- 1) Adjustment of stream type to 1080p mode.
- 2) Users need to adjust HDVS IP Monitor mainstream with resolution ratio for 1080p or 720p.

### **5. The colour preview image may be Rubbish**

Possible reasons:

- 1) Please check your IP channel setting "Stream Type"
- 2) Adjustment of stream type, choose "Mainstream" or "Sub stream"