

## IP Network Camera Setting

User Manual

### **WH Network Cameras**

Ideal for Professional Surveillance



Fixed Cameras



Outdoor Cameras



PTZ Domes



PTZ Cameras

## 1. FIRST TIME USE INSTRUCTIONS

### **INSTALL NVR**

Install **NVR** video surveillance software. **NVR** is a software utility to find your IP network camera on the network.

### **WHICH BROWSER TO USE?**

We strongly recommend Microsoft IE browser version 6 or higher. Mozilla Firefox and similar others are not guaranteed to work with this product.

### **POWER ON IP Network camera**

Power on IP network camera by using power adapter provided in the product package. Connect power adapter to 110-220v AC socket.

### **CONNECTING TO NETWORK**

Connect a standard CAT5 Ethernet cable to RJ45 socket on WH IP network camera and connect other end to your network hub/switch. Make sure the PC you want to access the WH IP network camera is on the same network domain.

### **FACTORY SETTING - INITIAL IP ADDRESS**

**IP Address: - 192.168.1.2**

**Gateway: - 192.168.1.1**

## 2. ACCESS IP NETWORK CAMERA

### BROWSER

- Open IE browser
- Type IP address of IP network camera

For ex. **Default IP is 192.168.1.2**

- Initial username and password are...

**Login: root**

**Password: pass**

Click **Login** button to go to web view.



### INITIAL USERNAME & PASSWORD

#### Administrator

- Default ID/Password = **root/pass**.

- Only password is changeable.
- Full access right to view, control system settings.

### Guest accounts

- ID/Password not necessary.
- Basic view and some action buttons can work.

## VIEWING PAGE

When you log in successfully with ROOT/PASS as **administrator**, the viewer screen will display as shown below.



For Guest login, the lay-out is the same except the guest user can only view but no control or configure.

1. Notice top right corner of viewing page has a toggle button to take you between web configuration page & viewing page. Always click that if you want to move from one page to the other.
2. Several controls options are available on the right side.

3. OSD is displayed on top left corner of the screen (time, date, IP network camera name)

## **Control Panel Settings**

### ■ Video/Resolution

Following table describes resolution values for each video format

Resolution	CIF	QCIF	D1
NTSC	352X240	704X480	720X480
PAL	352X288	704X576	720X576

### ■ Video / Bit rates

- Choose a particular value and it is applied within few seconds. Video on the screen will pause briefly.

32/64/128/256/384/500/750/1000/1500/2000/3000 (kbps)

### ■ Audio / Enable check box

- Enable or disable function for audio will result in video flicker for a second and then return back to normal. This is not an error.

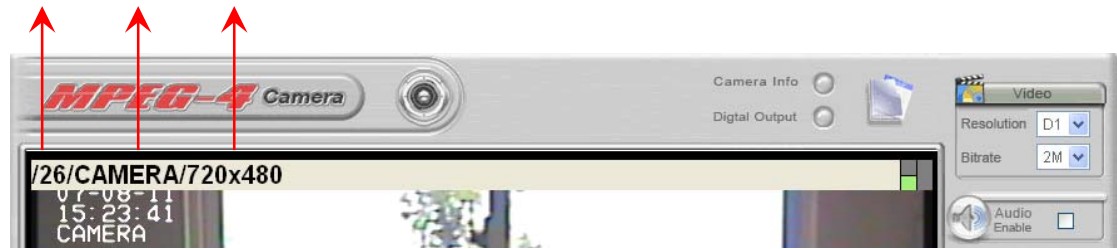
### ■ P/T/Z camera controls (will need PTZ controller)

- Z (Zoom): zoom in (+) / zoom out (-).
- Pan/Tilt.
- F (Focus): focus in (+) / focus out (-).

### ■ IP Network Camera Information.

- Shows video information of the transferred data on the upper left corner of the video screen such as frame rate (fps), channel name, resolution.

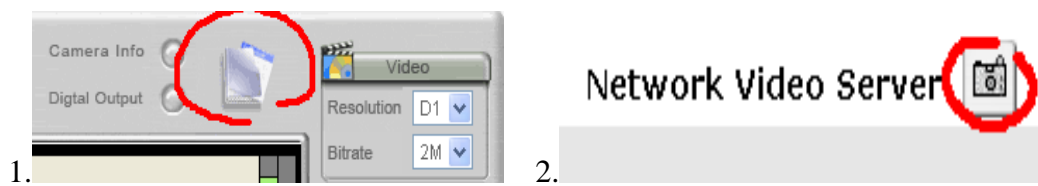
**FPS Name Resolution**




■ Digital Output

- When enabled, DO provide contact close and acts purely as a switch.

### 3. WEB INTERFACE SETTINGS



IP network camera built-in web interface offers more advanced settings. On the viewing page, click on (top-right) the SETUP ICON to enter server settings page. It is a toggle button to switch between Config and view pages.

**IP Surveillance** Network Video Server 

[Status](#)

**Basic**

[Network](#)

[Video](#)

[Event Rule](#)

[Video Record](#)

[Date / Time](#)

[OSD](#)

**Expert**

[PTZ Control](#)

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**Status**

Network Status (Wired)	
MAC Address	00:19:6C:30:02:1D
IP Address	192.168.1.115
Subnet Mask	255.255.255.0
Gateway	192.168.1.1
Default DNS	168.95.1.1

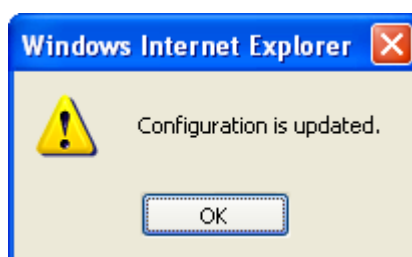
Model Info	
Model	MPEG-4 Camera
Serial Number	J148000441
Firmware Version	1.2.1 Build 20070828

## STATUS

- Initial view of web Config interface is status page.
- Hardware & Firmware information along with network status such as current IP and related details are clearly shown.

## NOTE

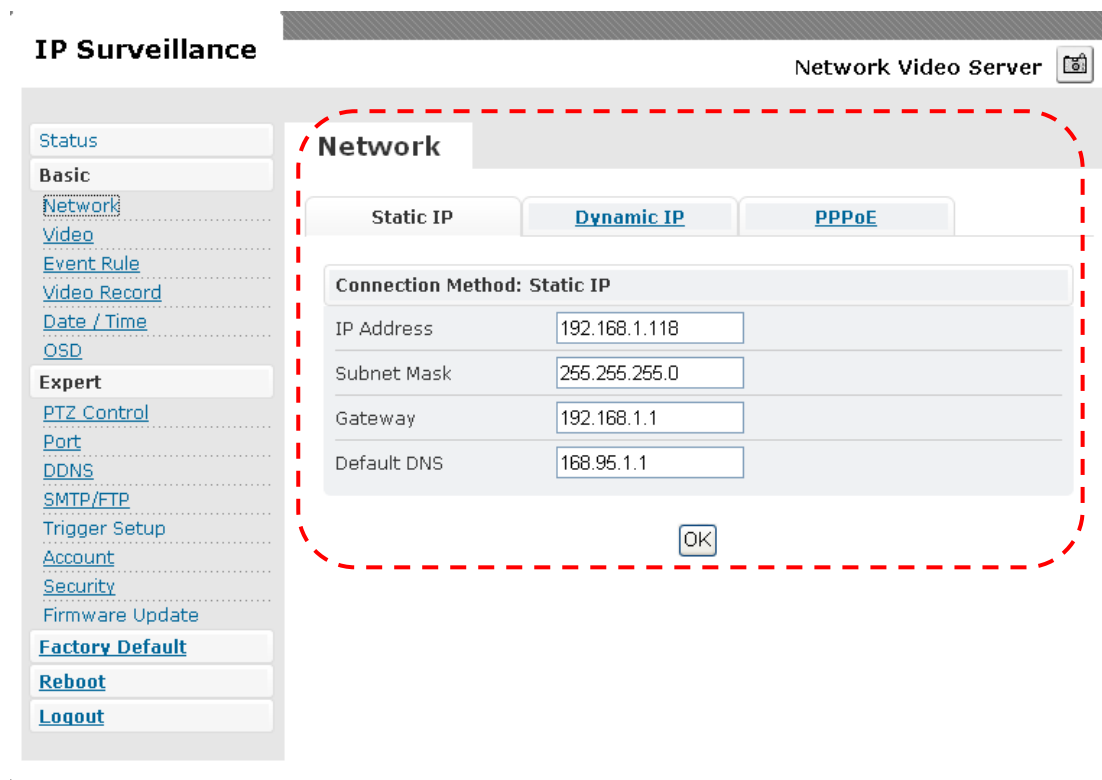
Remember to press “**OK**” after you have changed settings in a particular settings page which has “**OK**” button. After few seconds, you can see a confirmation dialog box informing that settings have been updated. Pressing **OK** will return to the same page.



## NETWORK

Three configuration types are available for wired network connection **STATIC**, **DYNAMIC** & **PPPoE**.

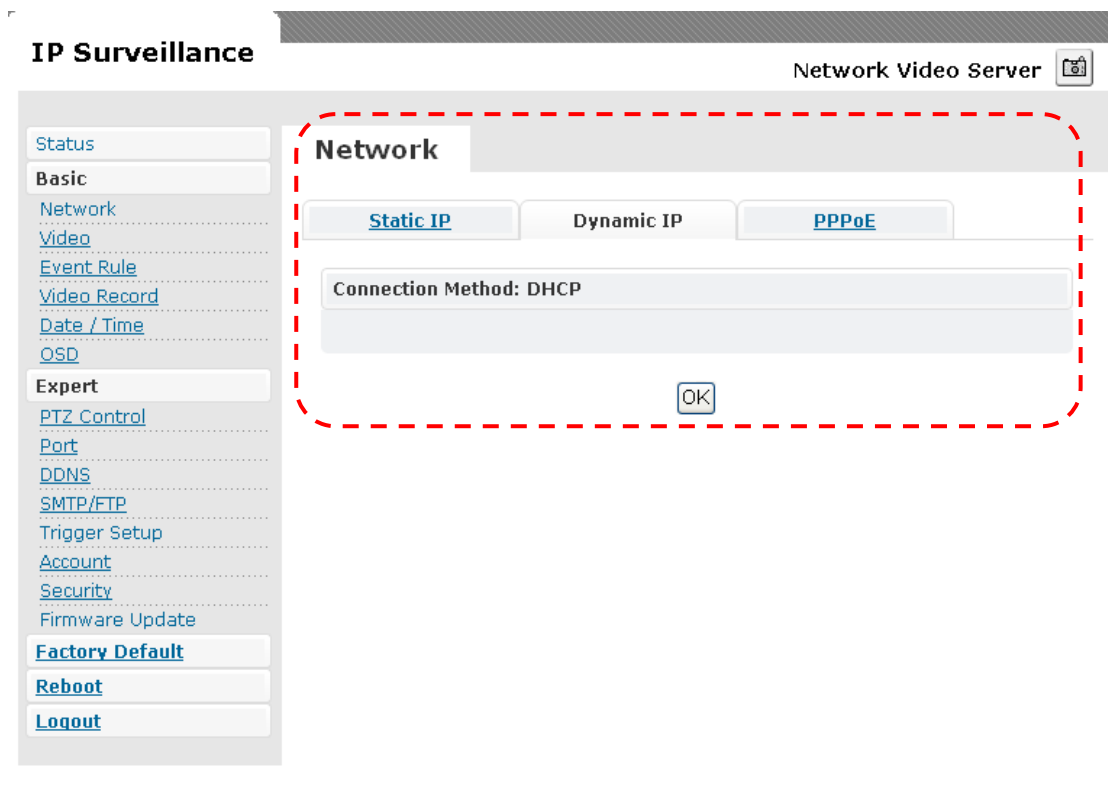
### Static IP



- IP Address
  - Confirm with network administrator.
- Subnet Mask/Gateway/Default DNS
  - Confirm with network administrator.
- Always click “**OK**” to save changes in a particular page.
- Reboot is required and will be automatically triggered after you press “**OK**”.  
 Wait for count down timer to finish and page will refresh automatically and you should see initial login page.



## Dynamic IP



- If DHCP server is on LAN and you want to allocate Dynamic IP address, use DHCP.
- Click “**OK**” button.
- Reboot is required and will be automatically triggered after you press “**OK**”.  
Wait for count down timer to finish and page will refresh automatically and you should see initial login page.

## PPPoE Settings

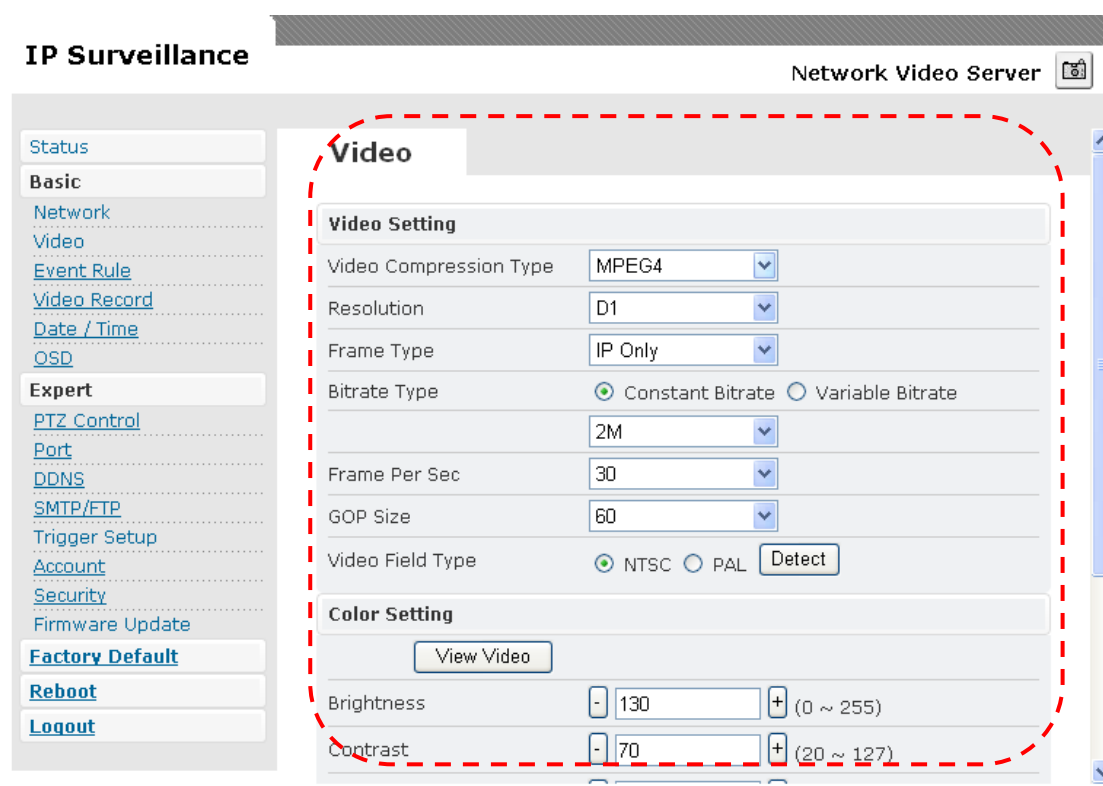
The screenshot shows the 'Network' configuration page for an IP Surveillance system. The 'PPPoE' tab is selected, and the 'Connection Method' is set to 'xDSL'. The following fields are visible:

- User ID: pppoe\_user
- User Password: (empty)
- MTU: 1412
- DNS Server: Auto (selected)
- DNS: 168.95.1.1

An 'OK' button is located at the bottom of the configuration area.

- PPPoE is used in case network supports PPPoE like xDSL
- Request Internet Service Provider for PPPoE ID/Password
- **User ID / Password**
  - PPPoE user ID / Password
- **Service Name**
  - Service name of ISP
- **MTU**
  - Maximum transmission unit of data
- IP address of DNS sever can be set to be created automatically.
- If xDSL does not use static IP, you should use DHCP.

## VIDEO



### VIDEO SETTINGS

#### ■ Video Compression Type

- MPEG4

#### ■ Resolution

- CIF / QCIF / D1

#### ■ Frame Types

This setting deals with the Group of Pictures (GOP) structure - which could be a combination of I and P frames.

I - I frames - also referred to as Key frames contain information for a complete picture, and can be decoded independent of any other frame. I frames are the largest (and least compressed) frames. Therefore for same quality, they consume high bit rate.

P - P frames are encoded using information from the previous I or P frame, and can only be decoded correctly if the previous I / P frame is available. P frames are smaller than I frames.

- I Only / IP Only
- IP - Simple Profile - Medium bit rates for same quality.  
I - Highest bit rates for same quality.

#### ■ Bit rate Type

- Constant and Variable bit rates control allows flexibility in choosing how much bandwidth is available on network and quality of video required.

#### ■ Constant Bit rates

- 3M / 2M / 1.5M / 1M / 750K / 500K / 384K / 256K / 128K / 64K / 32K

#### ■ Variable Bit rates

- 2 ~ 31 (quality is best in case value is “2”)

#### ■ Frame per Second.

- 1 ~ 30

#### ■ Group Size

- Adjusts the ration between “I” frames and “P” frames. Lower the group sizes better the quality.
- 5 / 10/ 15 / 30 / 60 / 90

#### ■ Video Type

- NTSC / PAL

## COLOR SETTINGS

Fine adjustments to video quality can be made using more detailed settings as shown below.

Brightness	-	<input type="text" value="130"/>	+	(0 ~ 255)
Contrast	-	<input type="text" value="70"/>	+	(20 ~ 127)
Saturation	-	<input type="text" value="90"/>	+	(0 ~ 127)
Hue	-	<input type="text" value="0"/>	+	(0 ~ 255)

### BRIGHTNESS

Adjusts the image on a scale from darkness to brightness.

### CONTRAST

Adjusts the extent to which adjacent areas on a video differ in brightness

### SATURATION

Adjusts the chromatic purity of video thereby effecting vividness.

### HUE

Adjusts the video by effecting color depth

## VIDEO PREVIEW

Preview makes choices easier when tuning video settings for specific locations.

By clicking the **View Video** button, you can see the following

**Color Setting**

Enable Preview

Click **Stop** to exit preview. You could change other video parameters and press **TEST** to see how the changes look like. You can press **Reset** anytime to return back to the default settings. Click **Enable Preview** checkbox to save the current settings – and its takes effect right after settings have been changed.

## **CLIENT LIMIT**

Maximum users (client) limit allows users accessing the video stream. For higher bit rates and resolution, the client limit is much lower and vice versa.

- Maximum number of clients can be restricted depending on how much video quality is required and network band with is available.
  - 0 ~ 10 (value 0 means maximum allowable)

**DO NOT FORGET TO PRESS “OK” BUTTON TO SAVE YOUR SETTINGS.**

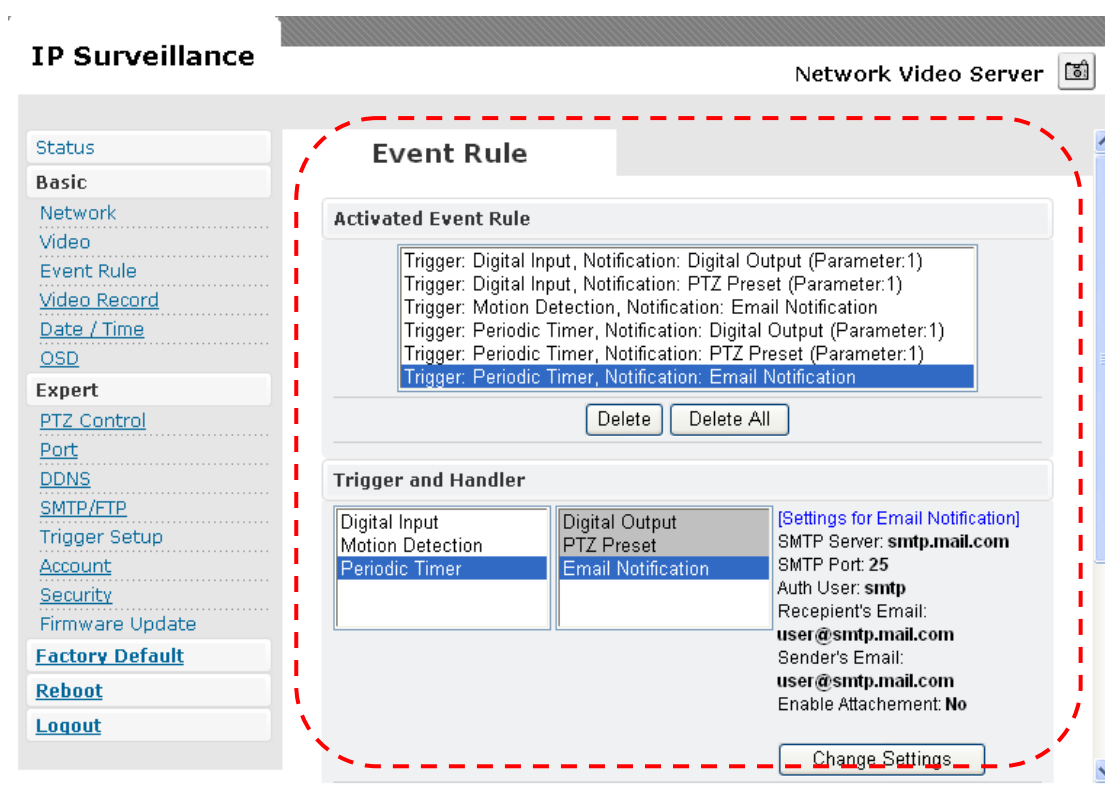
## **EVENT**

### **Events handled**

1. Digital IN
2. Motion Detection
3. Periodic Timer

### **Actions supported**

1. Digital Output
2. PTZ Preset
3. E-mail Notification



## EVENTS HANDLED

### Motion Detection

If motion is detected on the areas defined on the video stream, an event will be triggered based on the rule lists.

### Periodic Timer

In a pre-defined time interval, an event will be triggered based on the rule lists.

## ACTIONS TRIGGERED

### PTZ Preset (Speed dome PTZ camera)

PTZ set to a particular preset value can be triggered based on occurrence of an event listed out in “**Rule Lists**”.

### E-mail Notification

E-mail can be sent based on occurrence of an event listed out in “**Rule Lists**”.

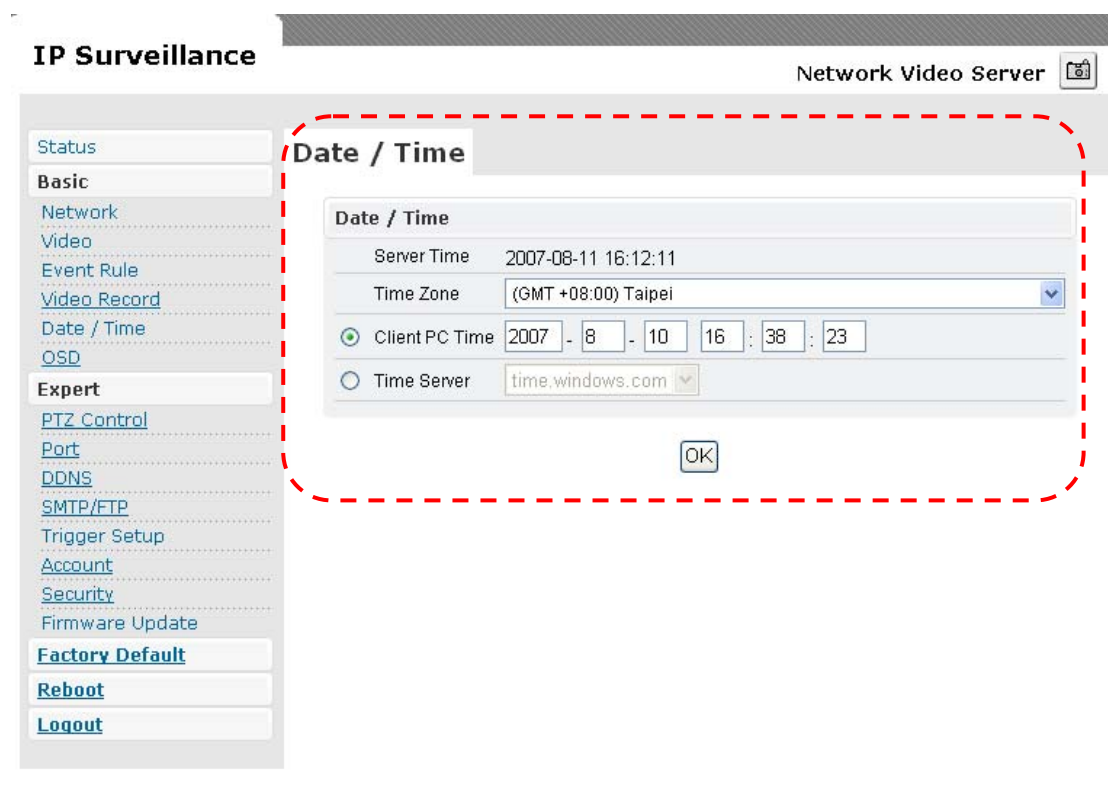
## RULE LISTS - ADDING/DELETING

Select an event and select corresponding action. Click **add** button and notice that is added in the **Rule lists** Information box.

## MODIFYING RULE LISTS

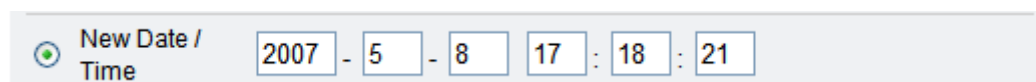
Rule list items can be deleted individually or wholly by clicking **Delete All** button.

## DATE & TIME



- Date and time settings can be changed directly by editing the time fields.

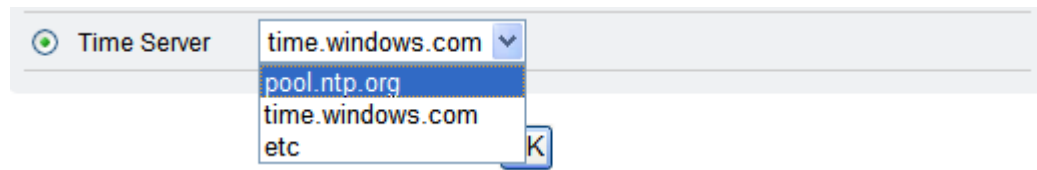
Click “**OK**” after you have made selection.



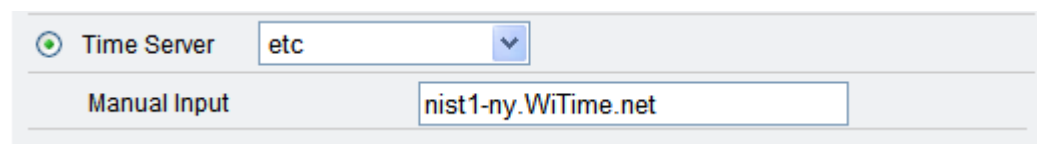
- Time zone can be chosen by choosing either of the two time servers listed
- Either of the two time servers can be chosen to synchronize video server time.



They are listed as follows should you choose **Time Server**. Click “**OK**” after you have changed settings.

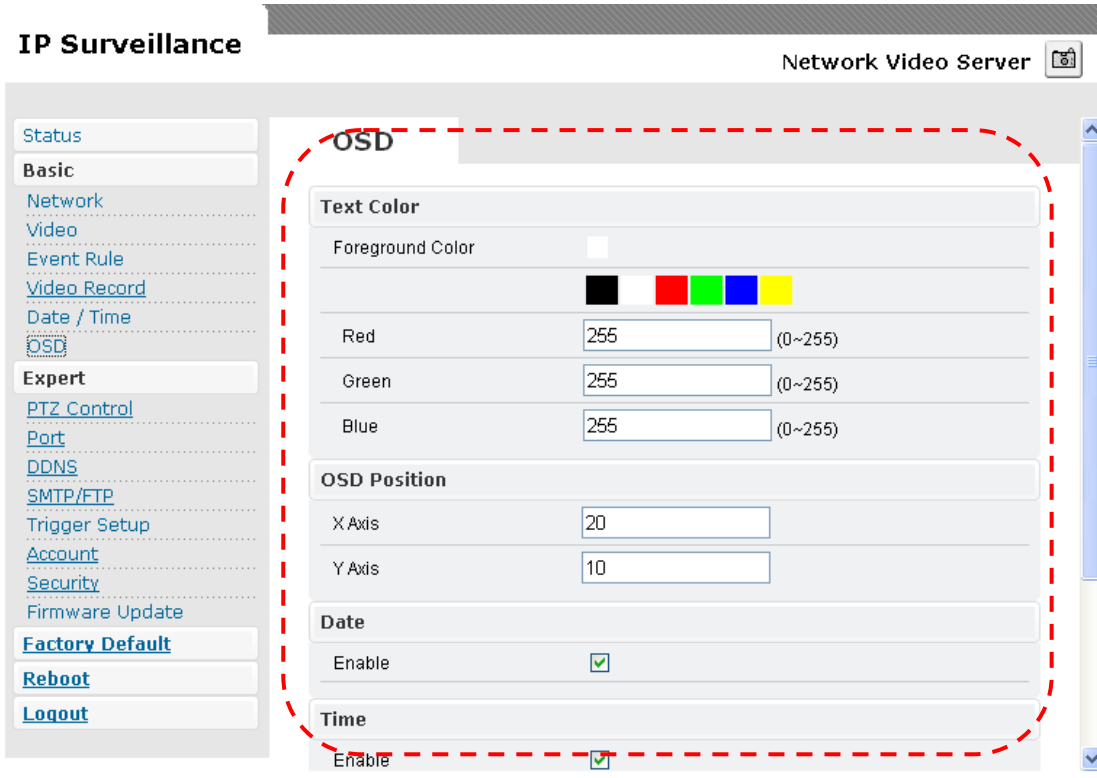


- If you want to manually input time server, choose “etc” then you can find a manual input edit box appear. Key in your preferred time server and click “**OK**”.

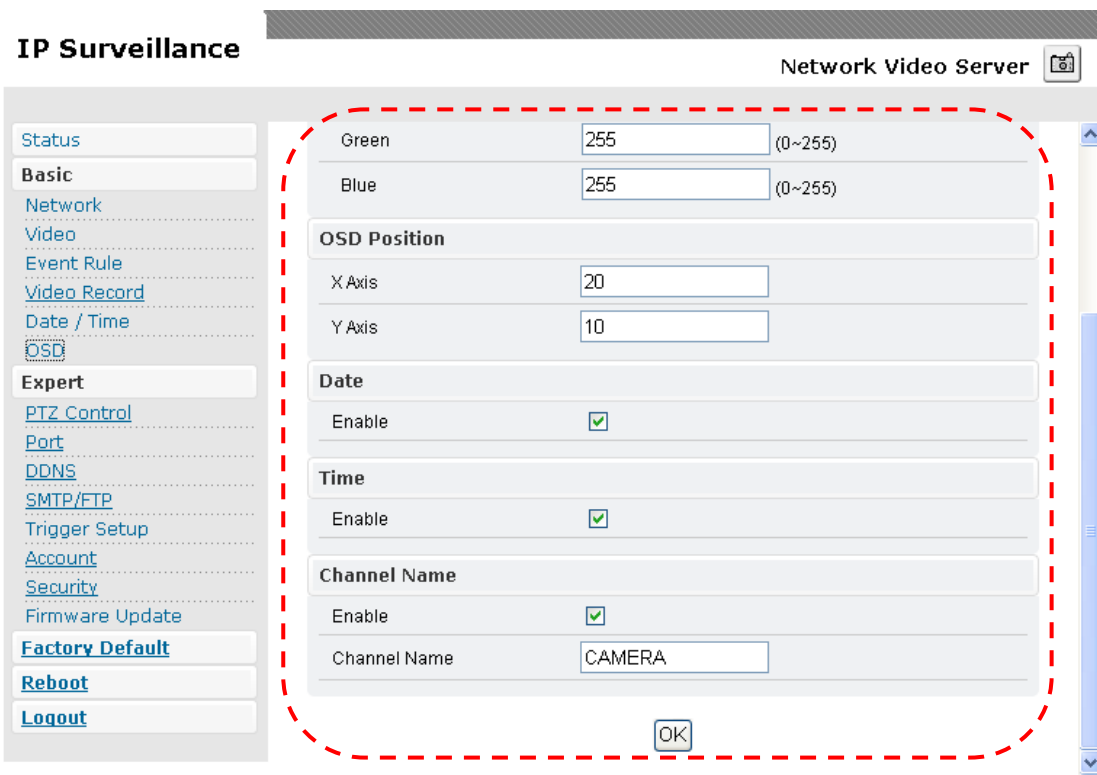


## **OSD**

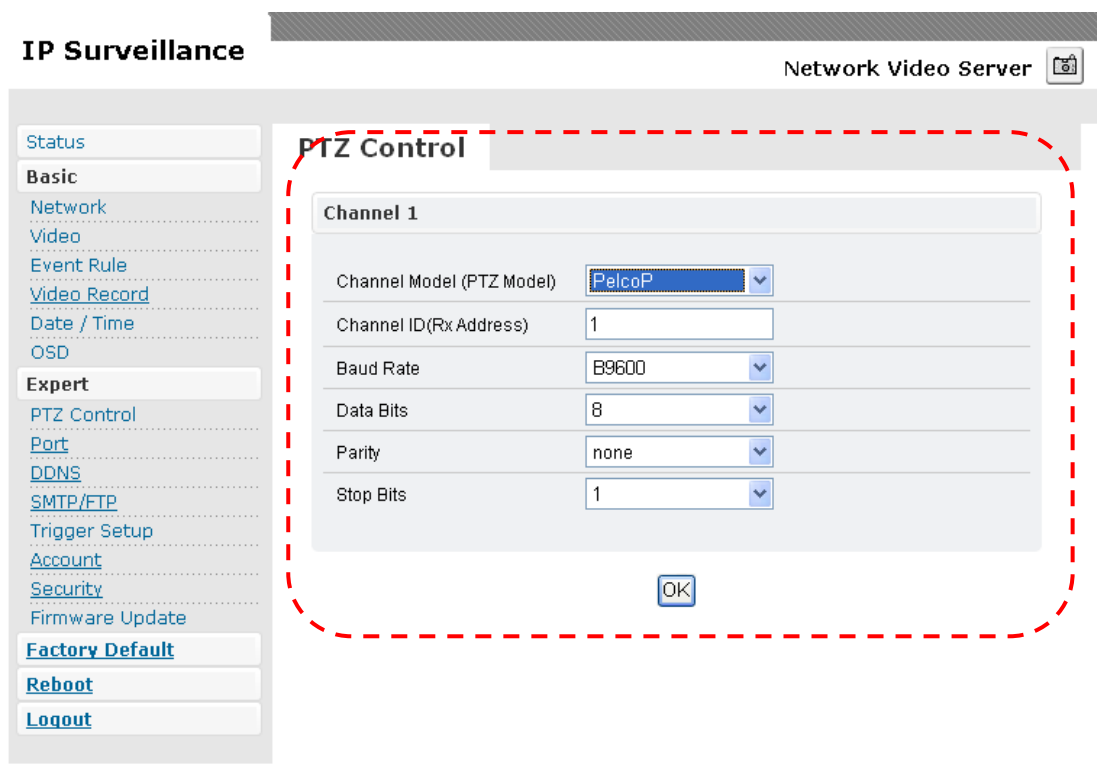
Click on your desired choice of color. Values will change accordingly for R, G, and B. If you desire some other color, you can manually define those corresponding R, G, B values in the boxes as appropriate. Position of OSD can be changed by defining the X, Y values. Date & Time can be individually enabled/disable by checkboxes.



Channel name can be shown/ hidden by the channel name “**Enable**” checkbox. It can be manually typed in the “**Channel name**” text box and changes can be noticed.



## PTZ



### ■ PTZ model (Speed dome PTZ camera)

- Default is none.
- PelcoP / PelcoD / Default can be chosen.

### ■ RS-485 Address

- Give address value - default is zero.

### ■ Baud rate / Data bits / Parity / Stop bits

- Depending on the protocol used, the values of baud and related settings are to be assigned accordingly.

## SERVICES

The screenshot shows the 'IP Surveillance' web interface for a 'Network Video Server'. The left sidebar contains navigation options: Status, Basic, Network, Video, Event Rule, Video Record, Date / Time, OSD, Expert, PTZ Control, Port, DDNS, SMTP/FTP (highlighted), Trigger Setup, Account, Security, Firmware Update, Factory Default, Reboot, and Logout. The main content area is titled 'SMTP/FTP' and is divided into two sections: 'Remote SMTP Setup' and 'Remote FTP Setup'.

Remote SMTP Setup	
SMTP Server	smtp.mail.com
SMTP Port	25
Authentication	<input type="checkbox"/>
Sender's Email	user@smtp.mail.com
Receipient's Email	user@smtp.mail.com
Enable Attachement	<input type="checkbox"/>

Remote FTP Setup	
FTP Server	192.168.1.1
FTP Port	21
Auth User	ftpuser
Login Password	••••••

An e-mail notification & FTP upload service offered by WH IP network camera notifies events or uploads snapshots to a remote FTP server.

### E-MAIL – SMTP SETTINGS

Fill in the details of SMTP server such as port number, user name, password, server name information. If you would wish to send attached snapshots, please check the appropriate check box.

Sometimes Authentication is not always required by SMTP servers. Wherein only the SMTP server name and e-mail address details are enough to be input.

Remote SMTP Setup	
SMTP Server	smtp.mail.com
SMTP Port	25
Authentication	<input checked="" type="checkbox"/>
Auth User	smtp
Auth Password	●●●●●●●●
Sender's Email	user@smtp.mail.com
Receipient's Email	user@smtp.mail.com
Enable Attachement	<input checked="" type="checkbox"/>

## FTP SETTINGS

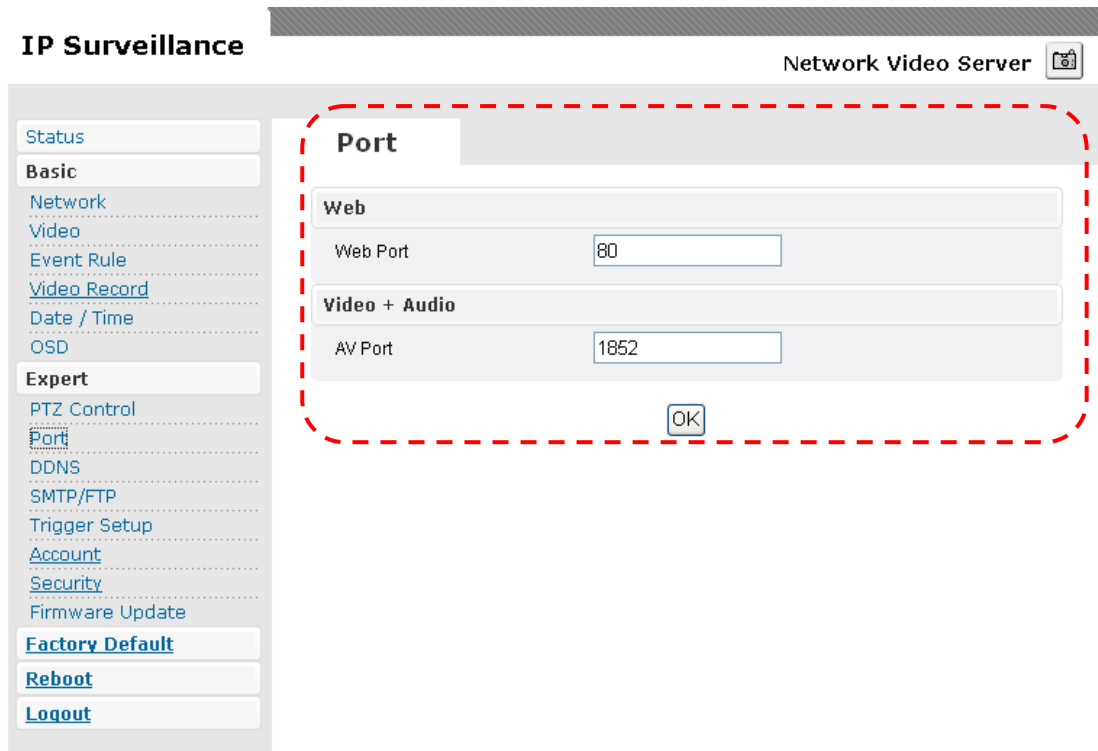
Fill in the details of remote FTP server, port number and user name, password.

Remote FTP Setup	
FTP Server	192.168.1.1
FTP Port	21
Auth User	ftpuser
Login Password	ftppass

OK

## PORT

The values of WEB and AV port can be changed as necessary.



## Web

- Web Port default is 80

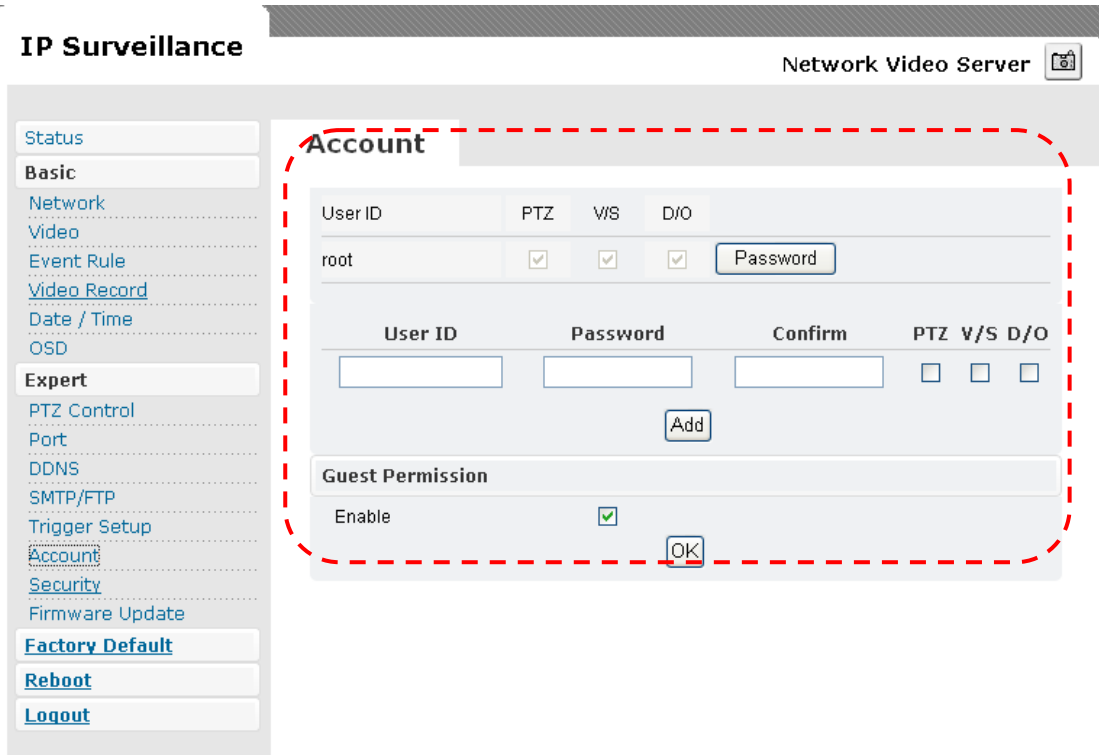
## Video + Audio

- Default is 1852 for video/audio data transmission.

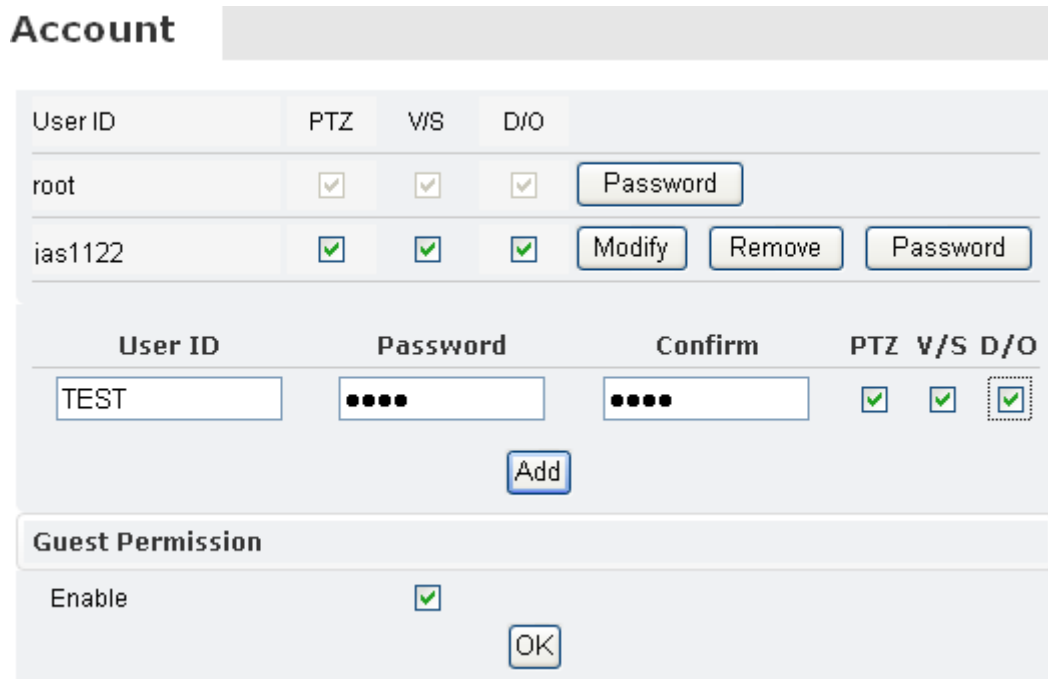
## ACCOUNT

Administrator can create user accounts. Login as an administrator and create user accounts by pressing “**Add**”. Each account has **PTZ**, Video settings and Digital Out privileges. They can be turned on or off anytime by the administrator.

There are limits on user name and password length and will be notified by dialog boxes if the user name/password exceeds or under-runs that limit.



For each account, guest permissions can be turned ON/OFF. Any time, an account’s settings can be modified by pressing the “**Password**” button.



Administrator account can also be modified by the same “Password” button. Any alternation or changes need to be confirmed by pressing “Modify” button. To

remove an existing account please press “Remove” button.

## Modify

Modify Password	
ID	jas1122
Old Password	<input type="text"/>
New Password	<input type="password"/>
Confirm	<input type="password"/>

Modify

### Account Limitations

- Administrator can add up to a maximum of 5 users and assign properties for each of them.

### Guest Permissions

- Guest account can be turned ON/OFF anytime.



## DDNS

**IP Surveillance** Network Video Server

**DDNS**

**IPv4 DDNS**

Enable

Which Service  ddns.nu  dyndns.org

**dyndns.org**

Hostname

DDNS ID

DDNS Password

DDNS is the function that maps an IP address to a host name. If IP network cameras are set to dynamic IP address, the host name by DDNS (Dynamic Domain Name Service) must be used instead of the IP address for credibility of network connection.

### IPv4 DDNS

- Check “**Enable**” and select a service out of available two.
- Both services are required to register some items on each DDNS service site.
- For use of “**ddns.nu**” register at [www.ddns.nu](http://www.ddns.nu) and for **dyndns** find the information at [dyndns.org](http://dyndns.org)

## Trigger Setup

The screenshot shows the 'IP Surveillance' web interface. The top bar includes 'IP Surveillance' on the left and 'Network Video Server' with a camera icon on the right. A sidebar menu on the left lists various settings: Status, Basic (Network, Video, Event Rule, Video Record, Date / Time, OSD), Expert (PTZ Control, Port, DDNS, SMTP/FTP, Trigger Setup, Account, Security, Firmware Update), Factory Default, Reboot, and Logout. The 'Trigger Setup' page is active, with four tabs: Digital Input, Periodic Timer, Motion Detection, and Video Loss. The 'Digital Input' tab is selected, displaying a 'Sensor Type' field with two radio button options: 'N.O (Normal Open)' (selected) and 'N.C (Normal Close)'. An 'OK' button is positioned below the options.

Three different types of EVENTS can be configured.

### **Digital INPUT**

Can be **Normal OPEN (N.O)** or **Normal Close (N.C)**

Choose based on the type of input and press **OK** to save the settings.

### **PERIODIC TIMER**

Timer interval can be set in terms of seconds. This will trigger an event when the time out is achieved.

## Trigger Setup

**Periodic Timer**

Time Interval(secs)

### Motion Detection

■ Detection Area

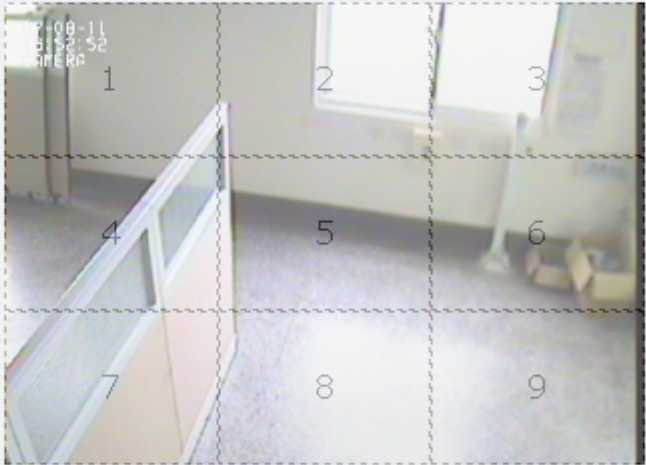
- Total viewing screen area is divided into 9 square blocks and each of them is called area 1, area 2 etc., Click specific areas you want motion detection to be enabled. If a detection area is selected color changes to dark gray.

## Trigger Setup

**Input Setting**

Enable

Detect Area



Selected (Red)

- Sensitivity value
  - Defines sensitivity of the motion detection. The range of the value is 1 to 100.
- Motion Vector value
  - To detect even slightest movement for objects in selected area, please select a lower motion vector value. The range of the value is 3750 to 4650.
- SAD value.
  - To only detect flashing light or any such significant activities on immovable objects, low SAD value should be chosen. In most cases, high SAD level is recommended. The range of the value is 20 to 150.

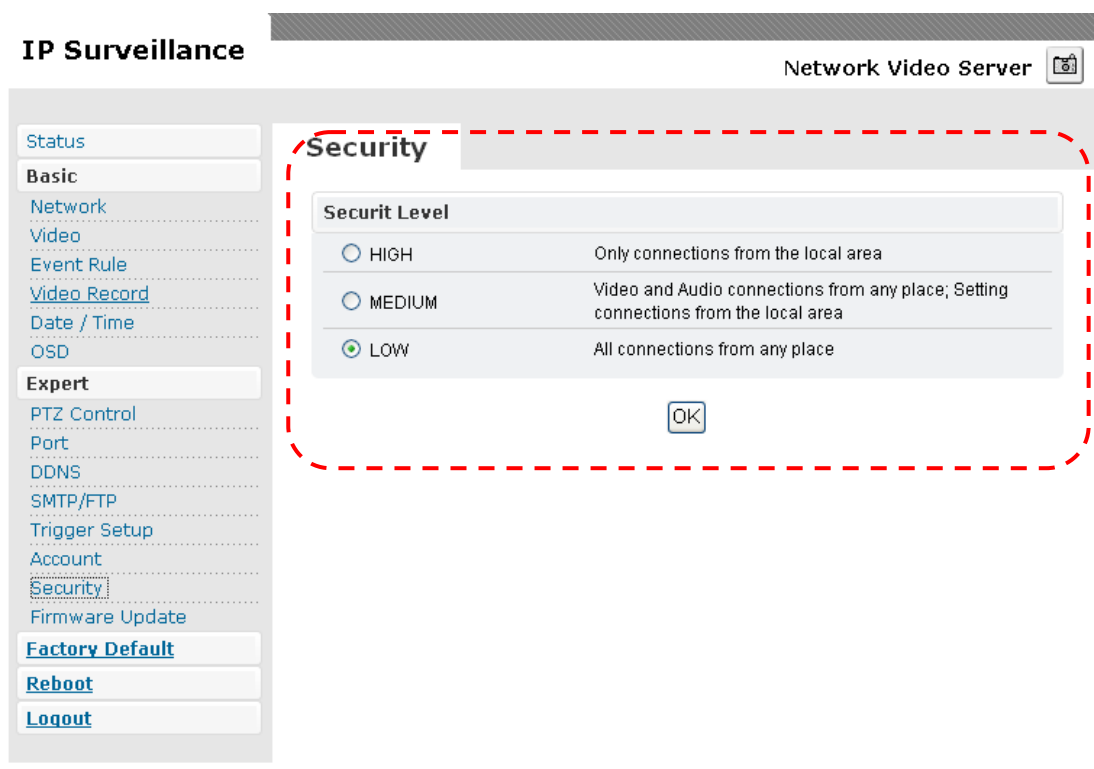
Sensitivity	<input type="text" value="20"/>	(1 ~ 100)
Motion Vector	<input type="text" value="4000"/>	(3750 ~ 4650)
SAD	<input type="text" value="80"/>	(20 ~ 150)

Motion detection enabled areas look as shown below. A simple click can select any of the boxes on detect area.



## SECURITY

The basic settings are **LOW** by default.



#### ■ HIGH

- ONLY LAN connections are allowed.

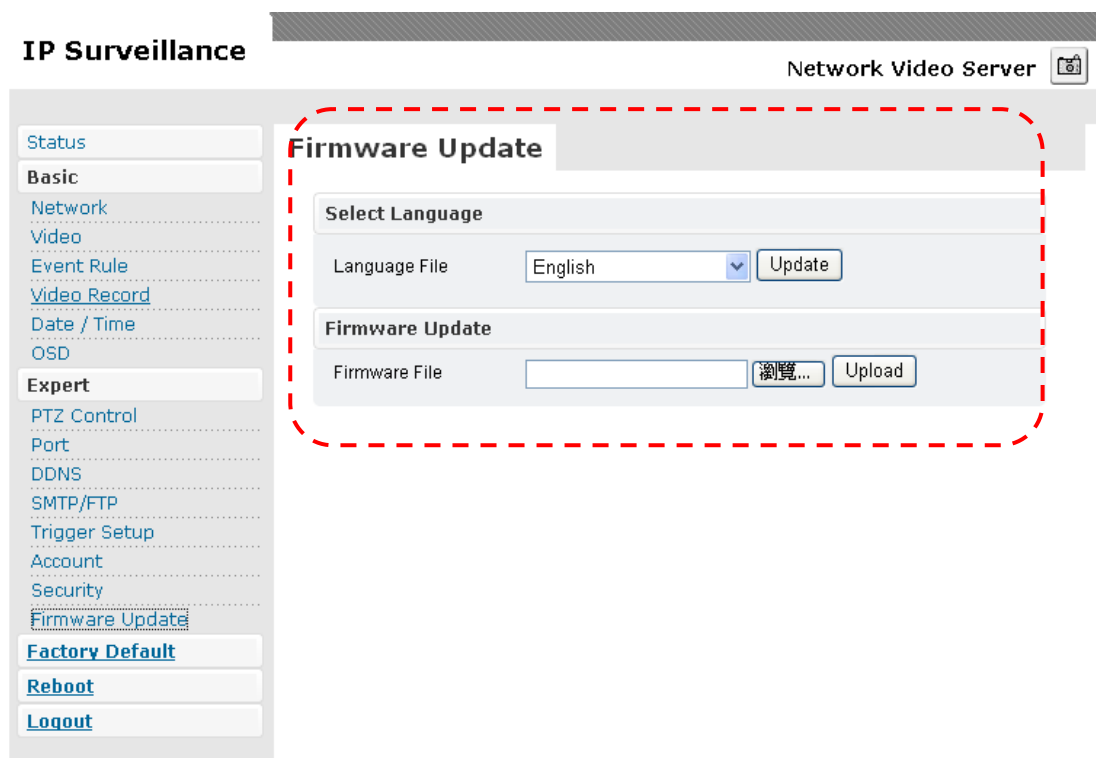
#### ■ MEDIUM

- Video and audio connections from any location and settings from LAN are permitted.

#### ■ LOW

- All connections from any location are permitted.

## FIRMWARE UPDATE



### Language

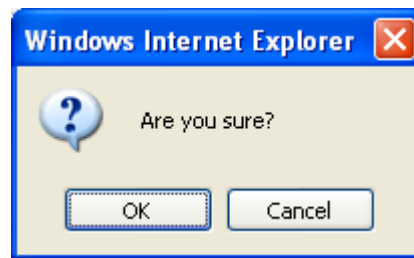
- Default settings are in English. A choice of Traditional Chinese is available.

### Firmware update

- Firmware update binary file can be obtained from our FTP site or in the software CD. Choose that and click **upload**. When uploading is done, reboot is required and will be automatically triggered.

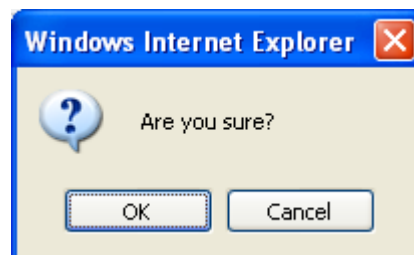
## 4. FACTORY DEFAULT

After a confirmation dialog box, clicking **OK** button, will load default settings and do a reboot. You will see the reboot countdown timer running. Once done, you will see the login page. Please login with root/pass.



## 5. REBOOT

If you click **OK** on the dialog box, you will see the reboot countdown timer running. Once done, you will see the login page. Please login with root/pass or other appropriate login information.



## 6. LOGOUT

To return to the login screen, simply click **logout**. You should see yourself in the login page within seconds.

**World Helmsman Technology Co., Ltd.**

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