

# 6531

## Indoor Dome IR Color 1.3 Megapixel IP Camera

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# Model 6531

Thank you for purchasing Channel Vision's 6531 indoor megapixel camera.  
Please take the time to read over these instructions to ensure proper installation and usage.

**The 6531 is an indoor 1.3 megapixel dome CMOS IP camera. Key features include:**

- Built-in web server, allows users to view high quality, real-time video with the Internet Explorer browser
- Uses H.264, MJPEG and MPEG4 codecs
- Live video can be recorded to a computer and played back remotely, as well as viewed from many mobile phones and other devices
- Designed for large commercial projects using hundreds of cameras or a single family house requiring a camera at the front door

**6531 Features:**

- Channel Vision's 6531 indoor IP Dome offers superior image quality with a 1.3 megapixel CMOS sensor and has the ability to capture images up to 1200 x 800 pixels
- With H.264 compression, less bandwidth and storage space are used, while delivering full resolution at max frame rate with faster speeds over the internet
- The 6531 also features event triggered micro SD card recording
- Monitoring can be done anywhere an internet connection is available even from a 3G Smartphone or touch-screen tablet

# Safety Warnings

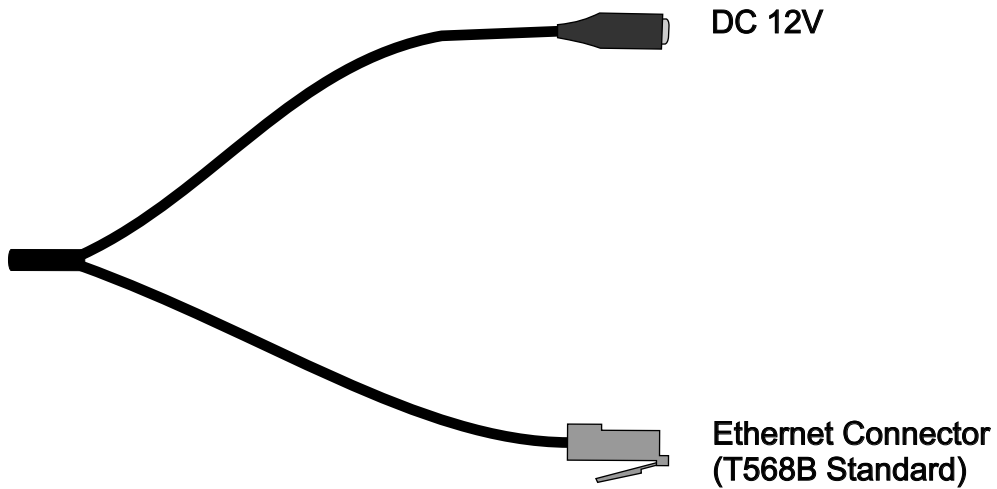
## IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions for future reference.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this device near water.
6. Clean only with a dry cloth.
7. Install in accordance with these instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
9. Do not defeat the safety purpose of the polarized-type plug. A polarized plug has two blades with one wider than the other. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point of exit from the apparatus.
11. Only use attachments/accessories specified by Channel Vision.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the inside of the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to 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.
15. The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance accompanying the appliance.
16. Inside of apparatus shall not be exposed to dripping or splashing and objects filled with liquids.

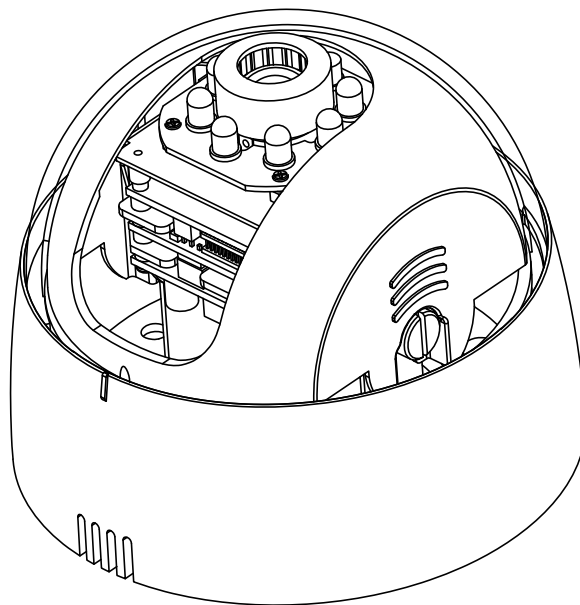
**CAUTION:** To reduce the risk of electric shock, do not remove the cover (or back). There are no user-serviceable parts inside, refer servicing to qualified service personnel.



## Cable Pin Out



**WARNING:**  
**DO NOT CUT THE BREAKOUT CABLE.**  
**CUTTING THE CABLE WILL VOID THE WARRANTY ON THE DEVICE.**  
Channel Vision will still provide technical support if the cable is cut,  
but cannot guarantee functionality.

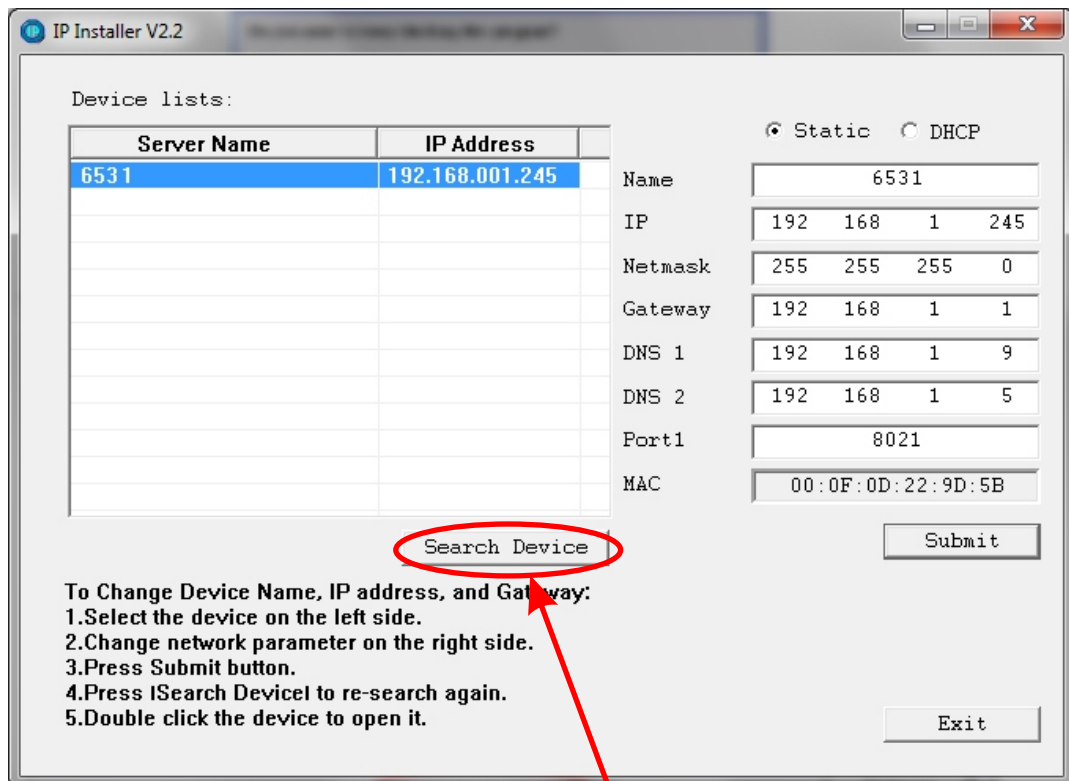


# Assigning an IP Address

1. Connect the IP camera to the switch/router.
2. Power on the IP camera.
3. Use the software, "IP Installer" to assign the IP address to your 6531. You can find "IP Installer" in the supplied CD.
4. Execute IP Installer. This is located on your disk under the folder "IP Installer".
5. Press "Search"
6. Click on the "Server name" that is found in IP Installer.
7. If Windows prompts you to unblock IP Installer, you must select "unlock".

There are 3 kinds of IP configuration:

- A. Fixed IP (Public IP or Virtual IP)
- B. DHCP (Dynamic IP)
- C. Dial-up (PPPoE)



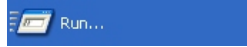
"IP Installer" will search all IP Cameras connected to your LAN network. The user can click "Search Device" to search again.

# Assigning an IP Address, cont.

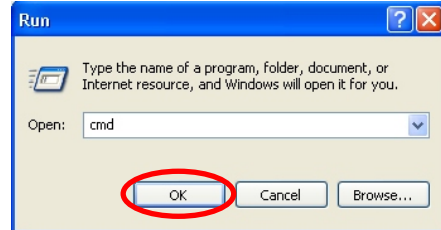
1. Click the start icon on your computer



2. Click the 'Run' icon on your computer.



3. Type in 'cmd' and press enter on your keyboard, or press ok.



4. Type in 'ipconfig /all' into the DOS prompt that appears. Press enter.

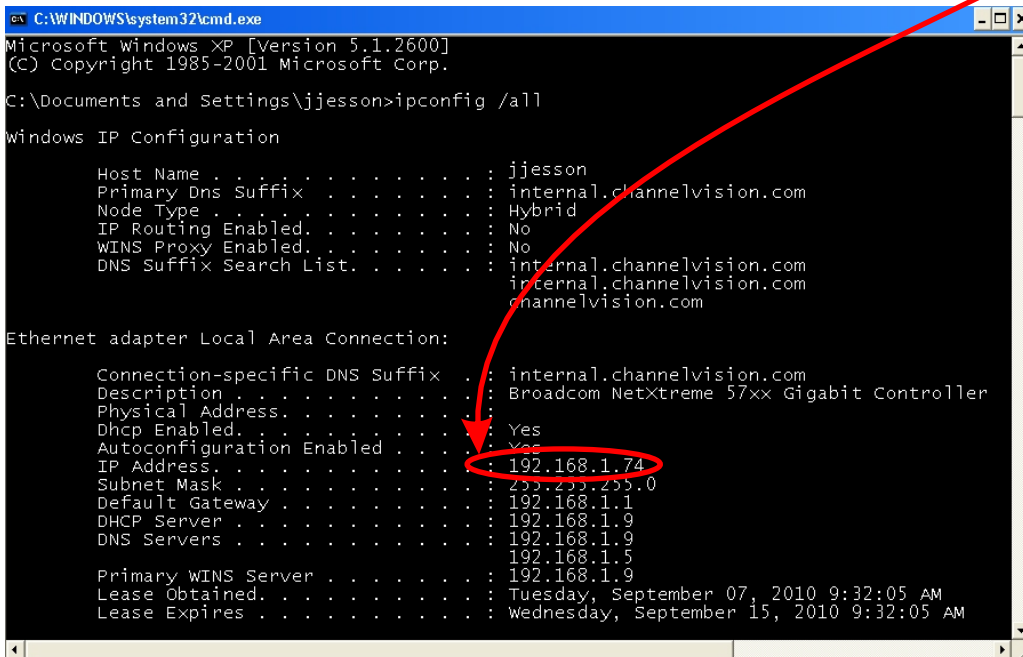
5. Write down your computer's IP address.

It is important that you do not use the same IP address for your IP Camera.

In the example below, the computer's IP address is 192.168.1.74.

The IP address of the IP Camera must be different than the IP address in the computer.

Each networkable device in your network has an IP address assigned. You need to be sure the IP you choose for your IP camera is not the same as any other device on your network.



# Assigning an IP Address, cont.

6. Copy/write down the following information from the DOS prompt:

- A. Default Gateway (Example 192.168.1.1)
- B. DNS Server (if 2 servers, use the first one, for example 192.168.1.9)
- C. Subnet Mask (Example 255.255.255.0)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\jjesson>ipconfig /all

Windows IP Configuration

    Host Name . . . . . : jjesson
    Primary Dns Suffix . . . . . : internal.channelvision.com
    Node Type . . . . . : Hybrid
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No
    DNS Suffix Search List. . . . . : internal.channelvision.com
                                     internal.channelvision.com
                                     channelvision.com

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . : internal.channelvision.com
    Description . . . . . : Broadcom NetXtreme 57xx Gigabit Controller
    Physical Address. . . . . :
    Dhcp Enabled . . . . . : Yes
    Autoconfiguration Enabled . . . . . : Yes
    IP Address . . . . . : 192.168.1.74
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1
    DHCP Server . . . . . : 192.168.1.9
    DNS Servers . . . . . : 192.168.1.9
                          192.168.1.5
    Primary WINS Server . . . . . : 192.168.1.9
    Lease Obtained. . . . . : Tuesday, September 07, 2010 9:32:05 AM
    Lease Expires . . . . . : Wednesday, September 15, 2010 9:32:05 AM
```



# Assigning an IP Address, cont.

7. Enter the information you wrote down from step 6 on page 9 into the IP camera network page

- A. Default Gateway (Enter this number under “Gateway”)
- B. DNS Server (Enter this number under “DNS 1”)
- C. Subnet Mask (Enter this number under “Netmask”)

8. Giving the IP Camera a unique IP address.

Assign an IP address to the IP Camera by using the first 3 sets of numbers of your default gateway. An IP address, has 4 sets of numbers, each followed by a period. (Xxx.xxx.xxx.xxx) Using 192.168.1.1 as an example of the default gateway, the IP Camera’s address will start with 192.168.1.xxx

9. Make sure you use a number different than that of your computer’s IP address.

(Generally between 2-250) This number needs to be out of the range of DHCP.

DHCP is assigned with your router, and can be checked by logging into the router.

For example, if the IP address of the computer you are using is 192.168.1.74, the IP address 192.168.1.208 could be used for your IP Camera.

You must choose a number that is different from your computer’s IP.

If your IT technician has designated a static internal IP for your IP Camera, use that address.

10. To assign the port, choose a port between 5400-9000, and type it into “Port 1”. If a specific port has been designated for your security system, that can also be used, even if the number is not within the range of 5400-9000.

IP Installer V2.2

Device lists:

Server Name	IP Address
Parking Lot	192.168.001.209
North West Wall	192.168.001.208

Static  DHCP

Name: North West Wall

IP: 192 168 1 208

Netmask: 255 255 255 0

Gateway: 192 168 1 1

DNS 1: 192 168 1 5

DNS 2: 192 168 1 9

Port1: 8006

MAC: 00:0F:0D:20:F0:1B

Search Device Submit

To Change Device Name, IP address, and Gateway:  
1. Select the device on the left side.  
2. Change network parameter on the right side.  
3. Press Submit button.  
4. Press [Search Device] to re-search again.  
5. Double click the device to open it.

Exit

To change numbers, select the appropriate area on IP installer with your mouse, and type in the info.

\*Disclaimer: This is an example based on a general network setup. All networks do not match these settings exactly, as all networks are different

# Connecting To Your Camera

1. Open Internet Explorer. Type the IP address of the IP camera into the browser link window. Also, make sure to type the port at the end of the link.

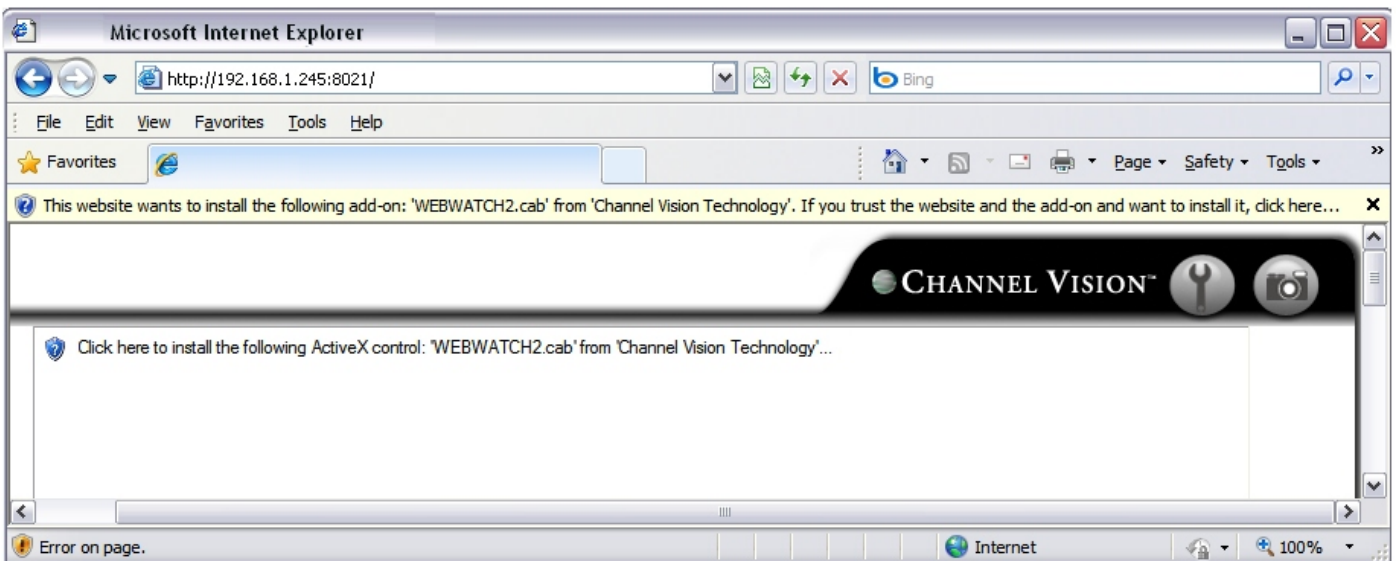
For example, **http://192.168.1.245:8021** has been used.

2. You will be prompted for a username and password.  
The default username is **'admin'**  
The default password is **'admin'**



# Installing The ActiveX Control

1.) The first time you connect to the camera via Internet Explorer, it will ask you to install the ActiveX control. Internet Explorer 6, 7, 8, or 9 must be used to run this ActiveX control.



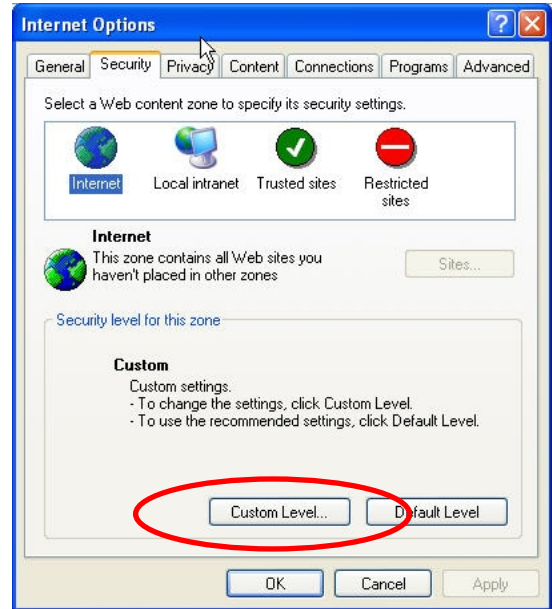
# Configuring Internet Explorer

If the installation of the ActiveX control fails, for example the browser page says “done” but you do not see your camera, please check the security settings for your IE browser. Follow the instructions below:

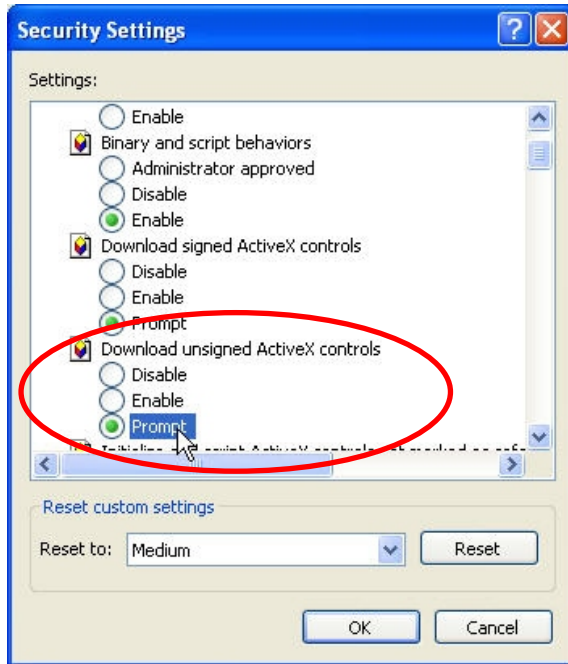
## Step 1



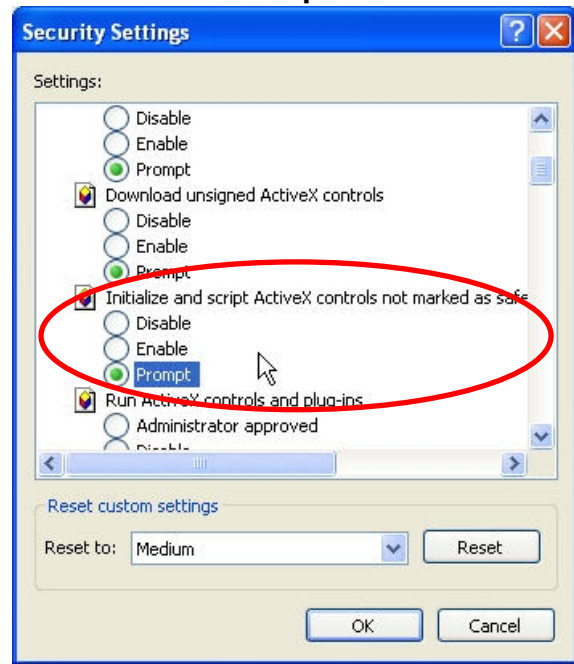
## Step 2



## Step 3

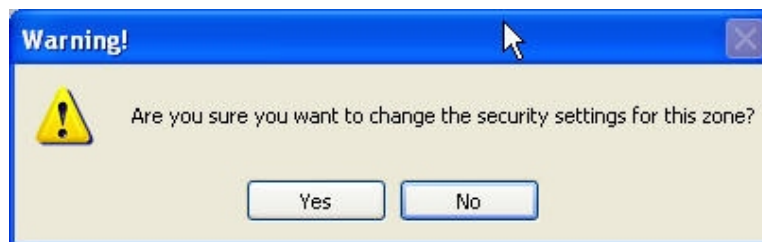


## Step 4



## Step 5

When the following dialogue box pops up, click “Yes”.



# Live Viewing

Once you connect, you will see a screen with the video feed from your camera. Below the icons and their functionality is described.

The screenshot shows the Channel Vision interface. At the top right, there are two icons: a wrench (Settings) and a camera (Snapshot). Red arrows point from the labels 'Snapshot' and 'Settings' to these icons. The main area is a video feed of a parking lot with a white pickup truck and a silver sedan. Below the video feed is a status bar with the following text: '1970/MAR/11 05:18:11 Size:1280x800 FPS: 30'. Below this status bar are three dropdown menus: 'default', 'Streaming 1', and 'Online Visitor : 1'. Red circles highlight these three elements. Red arrows point from descriptive text below to each of these elements. The text 'Reflects the physical size of the streaming video on the browser screen' points to the status bar. The text 'Controls the selection of the video stream that is being viewed' points to the 'default' dropdown. The text 'Shows the number of users connected at any given time' points to the 'Online Visitor : 1' dropdown. At the bottom left, the format 'Format: Year/Month/Day/Hour/Minute/Second/Image Size/Frames Per Second' is provided.

Snapshot

Settings

CHANNEL VISION

1970/MAR/11 05:18:11 Size:1280x800 FPS: 30

default

Streaming 1

Online Visitor : 1

Reflects the physical size of the streaming video on the browser screen

Controls the selection of the video stream that is being viewed

Shows the number of users connected at any given time

Format: Year/Month/Day/Hour/Minute/Second/Image Size/Frames Per Second

## Live Viewing, cont.

1. This icon opens the settings menu



2. This icon takes a snapshot



3. This icon show system time, video resolution, and video refreshing rate

2010/NOV/25 02:39:04 Size:800x592 FPS: 10

4. The bottom bar has an icon that allows you to select which stream you want to view. Stream 1 is usually the larger, better quality stream. Stream 2 is the smaller stream, generally used for mobile viewing



5. The bottom bar has an icon shows how many users are connected to the IP camera.

Online Visitor : 1

6. If you double click the video feed, it will make the video full screen.

To change video back to normal mode, press 'Escape' on your keyboard, or double click anywhere in the video feed a second time.

7. If you right click on the video, you have access to several different functions.

A. Snapshot: Takes a snapshot

B. Record Start : Records video to your computer

C. Full Screen: Maximizes the video to full screen

D. Zoom

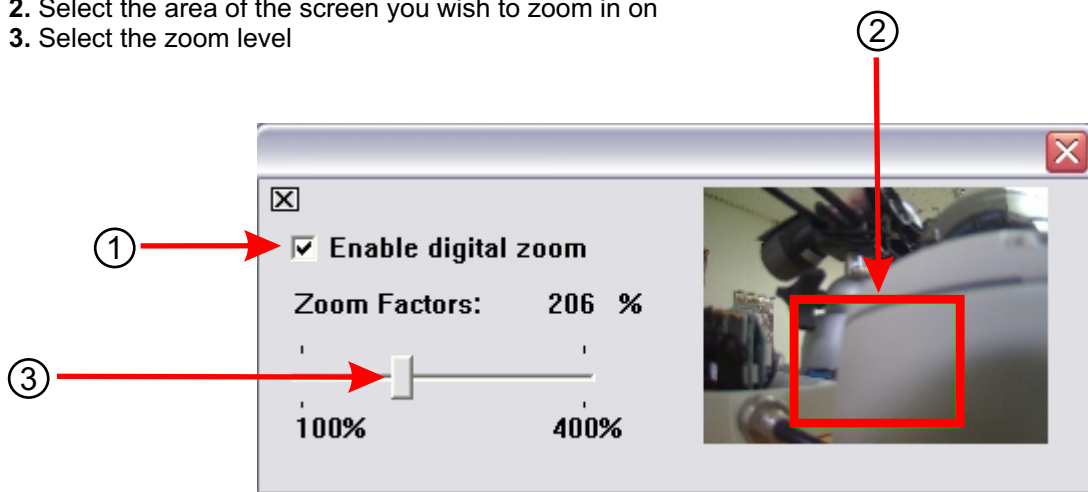
Snapshot  
Record Start  
Full Screen  
Zoom

### Digital zoom

1. Select "Enable digital zoom"

2. Select the area of the screen you wish to zoom in on

3. Select the zoom level





# Configuration

1. Select this icon to enter the settings menu



①



2. Select this icon to go back to your live video feed



②



**System Information**

**Server Information**

MAC Address: 00:0F:0D:22:9D:5B

Server Name:   Status Bar

LED Indicator:  ON  OFF

Language :  English  繁體中文  简体中文  French  
 Russian  Italian  Spanish  German  
 Portuguese  Polish  Japanese

**OSD Setting**

Time Stamp:  Enabled  Disabled

Text:  Enabled  Disabled

**OSD Display** **Text Edit**

**Time Setting**

Server Time: 1970/3/11 5:38:24 Time Zone: GMT+08:00

Date Format:  yy/mm/dd  mm/dd/yy  dd/mm/yy

Time Zone: GMT-08:00

Enable Daylight Saving:

NTP :

NTP Server : 198.123.30.132

Update : 6 Hour

Time Shift : 0 Minutes [-1440..1440]

Synchronize with PC's time

Date : 2012/2/20

Time : 9:53:52

Manual

Date : 2012/2/20

Time : 9:53:47

The date and time remain the same

**Apply**

# System Configuration

## System Information:

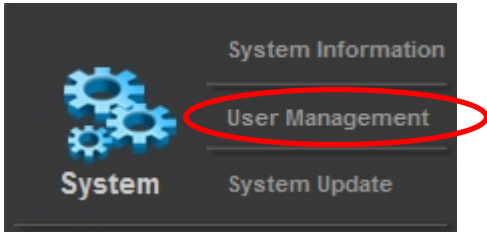
Use the number scheme below for a description of each item:

- 1. MAC Address:** (Media Access Control) address; This is a unique identifier assigned to IP devices for communication with the network. Your IP camera is pre-set with a MAC address
- 2. Server name:** Select to edit the camera name
- 3. LED Indicator:** Select On/Off to toggle the blinking LED light in the camera
- 4. Language:** Select a language to change the language of the ActiveX interface
- 5. Status Bar:** Select On/Off to toggle the information bar (below the main video stream)
- 6. Time Stamp:** Select Enabled/Disabled to turn the video timestamp on or off
- 7. Text:** Select Enabled/Disabled to specify the name that can be displayed on the top left area of the screen
- 8. Server Time:** This shows the current time on your IP camera
- 9. Date Format:** Select to choose your desired date format
- 10. Time Zone:** This shows your current time zone
- 11. NTP:** The Network Time Protocol is a protocol for synchronizing the clocks of computer systems
- 12. NTP Server:** If you have a NTP server, input it here
- 13. Update:** If using an NTP server, select this drop down menu to choose the update interval
- 14. Time Shift:** Time shift is used to compensate for the time it takes to server to process the sync request for your time. This is usually not needed.
- 15. Synchronize with PC's time:** Select this to match your computer's clock to your IP camera
- 16. Apply:** Select this button to save your changes

The screenshot shows the 'System Information' configuration page. It is divided into several sections: 'Server Information', 'OSD Setting', 'Time Setting', and 'Manual'. Each section contains various settings with radio buttons, checkboxes, and text input fields. Red circles with numbers 1 through 16 are overlaid on the image to identify specific settings mentioned in the text above.

- 1. MAC Address:** 00:0F:0D:21:3C:F5
- 2. Server Name:** (Empty text field)
- 3. LED Indicator:** ON (selected), OFF
- 4. Language:** English (selected), 繁體中文, 简体中文, French, Russian, Italian, Spanish, German, Polish
- 5. Status Bar:**  Status Bar
- 6. Time Stamp:** Enabled, Disabled (selected)
- 7. Text:** Enabled, Disabled (selected)
- 8. Server Time:** 2010/11/25 3:28:44 Time Zone: GMT+08:00
- 9. Date Format:** yy/mm/dd (selected), mm/dd/yy, dd/mm/yy
- 10. Time Zone:** GMT-08:00
- 11. NTP:**  NTP
- 12. NTP Server:** 198.123.30.132
- 13. Update:** 6 Hour
- 14. Time Shift:** 0 Minutes [-1440..1440]
- 15. Synchronize with PC's time:**  Synchronize with PC's time
- 16. Apply:** Apply button

# User Management



## User management:

This IP camera supports 3 different types of users.

- 1.) Administrator
- 2.) General
- 3.) Anonymous

A screenshot of the 'User Management' web interface. It includes a 'Setting' button for 'Anonymous User Login' with 'YES' selected. Below is an 'Add User' section with 'Username:', 'Password:', and 'Confirm:' fields. At the bottom is a 'User List' table with columns for 'Username', 'User Group', 'Modify', and 'Remove'. The 'admin' user is listed with 'Administrator' as the group. The 'Modify' column has an 'Edit' button, and the 'Remove' column has an 'Add/Set' button. Red circles and arrows highlight the 'YES' radio button, the 'Add/Set' button, and the 'Edit' button.

Click "Yes" to allow anonymous user access

Click "Add/Set" to add a user.

Click "Edit" to modify a user.

When you click edit, the following window will pop up:

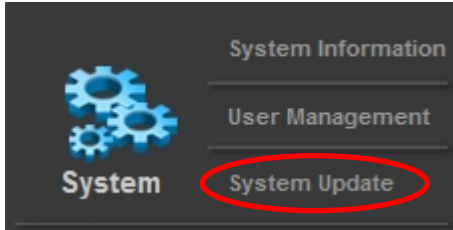
(Shown below.)

A screenshot of a 'User Setup' dialog box in a Windows Internet Explorer browser window. The dialog has fields for 'Username:' (containing 'admin'), 'Password:', and 'Confirm:'. An 'OK' button is circled in red. The browser address bar shows 'http://192.168.1.207:8005/muser.html'.

Add the username and password, and click "OK" to save your new user.

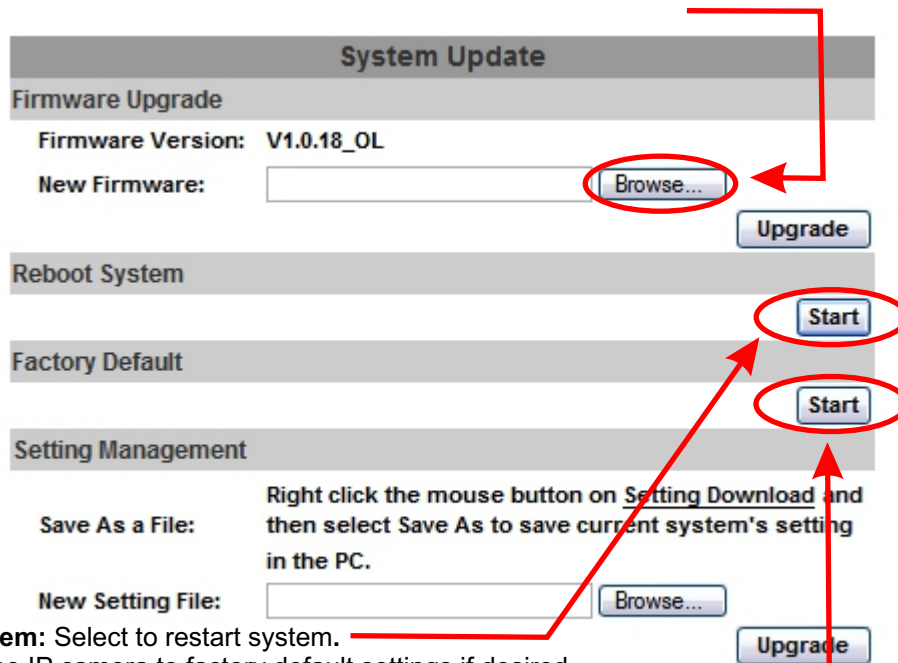


# System Update



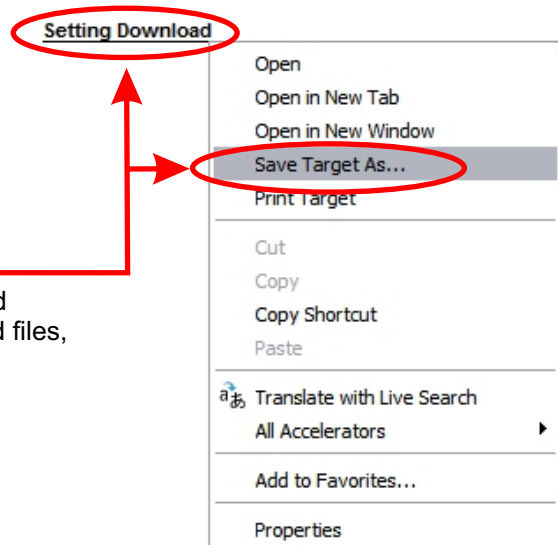
**System Update:** This menu is used to perform the following functions:

- 1. Firmware Update:** Channel Vision will update the firmware from time to time. By registering your IP camera, you have access to all firmware improvements and extended warranty options. See our warranty web page for more information: <http://www.channelvision.com/index.php/product-warranty/> To load new firmware, press “Browse” and select the firmware.bin file.

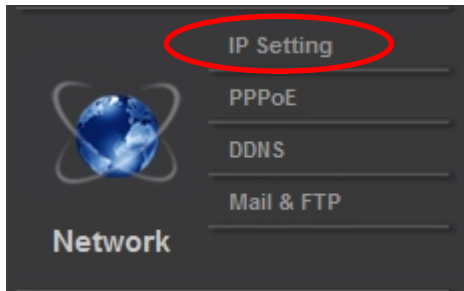


- 2. Restart System:** Select to restart system. You can reset the IP camera to factory default settings if desired. If you backup your settings, you can load your backup file where it says “New Setting File”.

- 3. Settings backup:** You can backup your settings by right clicking your mouse on “Setting Download” and selecting “Save Target As”. You may also load previously saved settings files this way. When loading previously saved files, click “Browse” and then “Upgrade”



# Network



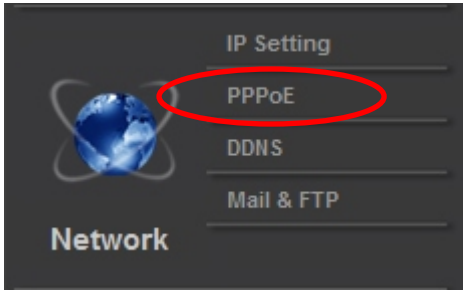
**Network Setup/IP Setting:** This setting is for the external viewing of camera over the internet. Once setup, you will be able to view this camera from anywhere in the world. This IP camera supports DHCP and Static settings. If you are new to installing an IP camera, use #2 (**Static IP**).

1. **DHCP:** If you use this setting, your IP information will be pulled automatically from your router. This not recommended if you are going to view this camera outside of the building that it resides in.
2. **Static IP:** This is an IP that you manually set. This IP must not be the same as any other device within your network. You must also set default gateway, DNS server, subnet mask, and DNS server. Please refer to page 6 & 7 for instructions on how to obtain these numbers.
3. **Port Assignment:** You can assign different ports for your camera. (Explained below.)
  - A. **Web Page Port:** (This is the port that 99% of installations will use)  
A web page port is used to transmit data out of your network. For example, if the external IP address is **http://67.88.12.50**, and the port was 5400, the final address would be **http://67.88.12.50:5400**  
For information on network ports, please refer to the link below:  
[http://en.wikipedia.org/wiki/Network\\_ports](http://en.wikipedia.org/wiki/Network_ports)
  - B. **RTSP Transmitting Port:** For information on RTSP, please refer to the link below.:  
[http://en.wikipedia.org/wiki/Real\\_Time\\_Streaming\\_Protocol](http://en.wikipedia.org/wiki/Real_Time_Streaming_Protocol)
  - C. **RTP start and end port:**  
In RTSP mode, you may use TCP and UDP for connecting  
TCP connection uses RTSP port (554) UDP connection uses RTP start & end port.
4. **UPnP:** This IP camera supports UPnP. If this service is enabled on your computer, the camera will be automatically detected and a new icon will be added to "My Network Places". For information on UPnP, please refer to the link below:  
<http://en.wikipedia.org/wiki/UPNP>

Below are instructions on how to activate UPnP on your computer:

- A. Open the control panel from the start menu
- B. Select "Add/Remove programs"
- C. Select "Add/Remove Windows components"
- D. Open "Networking Services" section
- E. Click "Details" and select UPnP to setup the service
- F. Once activated, the IP camera icon will appear in "My Network Places"
- G. You can now double click that icon to access the camera with your IE browser

# Network, cont.



**Network/cont:** Below is an example of the network settings menu. This is where you key in all of your IP information from your network. These settings must be entered correctly in order for the IP camera to be viewable over the network.

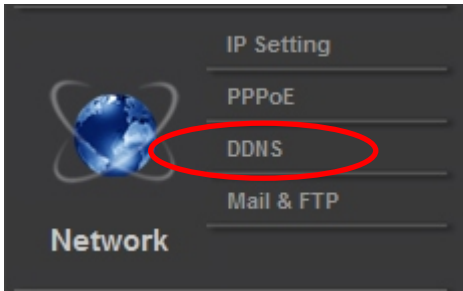
A screenshot of the 'IP Setting' configuration page. It is divided into several sections: 'IP Assignment' with radio buttons for 'DHCP' and 'Static' (selected); 'IP Address' (192.168.1.207), 'Subnet Mask' (255.255.255.0), 'Gateway' (192.168.1.1), 'DNS 0' (192.168.1.5), and 'DNS 1' (192.168.1.9); 'Port Assignment' with 'Web Page Port' (8005), 'RTSP Port' (554), 'RTP Start Port' (5000) and range [1024..10000], and 'RTP End port' (9000) and range [1025..10000]; and 'UPnP' with 'UPnP' (Enabled), 'UPnP Port Forwarding' (Disabled), 'External Web Port' (80), and 'External RTSP Port' (554). An 'Apply' button is at the bottom right.

5.) **PPPoE:** Check the PPPoE “Enabled” button to activate this function.

A screenshot of the 'PPPoE' configuration page. It has a section 'PPPoE Setting' with radio buttons for 'Enabled' (circled in red) and 'Disabled'. Below are 'Username:' and 'Password:' input fields. A section 'Send mail after dialed' has a checkbox for 'Enabled' which is unchecked. Below is a 'Subject:' field with the text 'PPPoE From IPcam' and an 'Apply' button.

You can key in a username and password for the connection if you are using ADSL. Send mail after dialed: When connected to the internet, this IP camera will send a email to the specified email account. To configure the IP camera email settings, please refer to the “Mail and FTP Settings”

# Network, cont.



## Network/cont: DDNS:

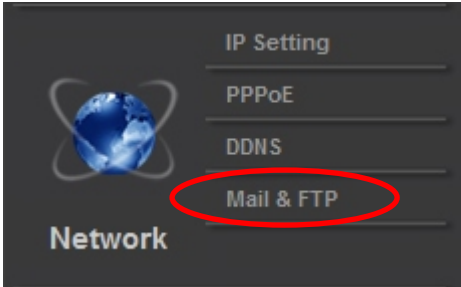
This IP camera supports DDNS (Dynamic DNS) service. Select "Enabled" to enable the DDNS service.

To view the cameras over the internet while using a dynamic (rotating) IP address, there are many services available online. Channel Vision offers a free DDNS service. To find out more information, go to the [www.channelvision.com](http://www.channelvision.com) and navigate to the 6531 product page.

A screenshot of the DDNS configuration page. The page title is 'DDNS'. Under 'DDNS Setting', there are two radio buttons: 'Enabled' (circled in red) and 'Disabled'. Below this are fields for 'Provider:' (a dropdown menu showing 'dyndns.org'), 'Hostname:', 'Username:', and 'Password:' (all three circled in red). The 'Schedule Update:' field is set to '1440' and 'Minutes' (circled in red). Below these fields is a 'State' section with a dropdown menu showing 'Idle'. At the bottom right of the configuration area is an 'Apply' button (circled in red). A red line connects the 'Apply' button to the 'Enabled' radio button. Another red line connects the 'Apply' button to the 'Provider:' dropdown. A third red line connects the 'Apply' button to the 'Schedule Update:' field. A fourth red line connects the 'Apply' button to the 'Username:' field. A fifth red line connects the 'Apply' button to the 'Password:' field. A sixth red line connects the 'Apply' button to the 'Hostname:' field. A seventh red line connects the 'Apply' button to the 'State' dropdown.

1. Enable the service
2. Key in the DynDNS server name, username, and password
3. Set up the IP update refresh rate
4. Click "Apply"
5. If it updates too often, the IP will be blocked by DynDNS.  
Channel Vision recommends you set it to update once per day (1,440 minutes).

# Network, cont.



**Mail & FTP:** Enter your Mail and FTP information into the menu below:

**Mail:** Mail is a way the IP camera can send you an email when certain actions occur, for example motion, a contact closure on the sensor, etc.

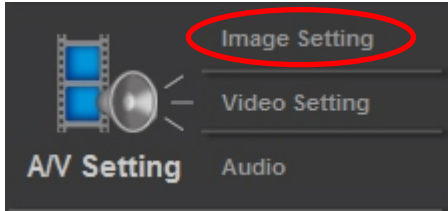
**FTP:** FTP is for uploading recorded files to a designated FTP site

Mail & FTP	
<b>Mail Setting</b>	
Login Method:	Account <input type="button" value="v"/>
Mail Server:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="text"/>
Sender's Mail:	<input type="text"/>
Receiver's Mail:	<input type="text"/>
Bcc Mail:	<input type="text"/>
Mail Port:	25 (Default 25)
<input type="button" value="Test"/>	
<b>FTP Setting</b>	
FTP Server:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="text"/>
Port:	21
Path:	/
Mode:	PORT <input type="button" value="v"/>
Create the folder:	Yes <input type="button" value="v"/> (ex:Path/20100115/121032m.avi)
<input type="button" value="Test"/>	
<input type="button" value="Apply"/>	

Please note: Due to spam settings, you may not be able to use the following free services:

- Live.com
- Hotmail.com
- Yahoo.com
- Gmail.com
- Mail.com
- Apple.com
- MSN.com

# Video Settings



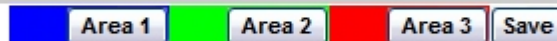
**Image Setting:** You can adjust the following items on this camera:

1. **Brightness:** This adjusts the brightness level of the camera
2. **Contrast:** This adjusts the difference in color and light between parts of an image
3. **Hue:** This adjusts the hue level of the image
4. **Saturation:** This adjusts the color saturation in the image
3. **Sharpness:** This adjusts how sharp the image appears
4. **AGC:** This adjusts the automatic gain control
6. **Shutter Time:** This regulates the amount of light allowed into the camera
7. **Sense-Up:** This adjusts shutter speeds
8. **D-WDR:** This is digital wide dynamic range
9. **Video Orientation:** This will allow you to flip or mirror the video stream
10. **Video Noise:** This allows adjustment of the video noise

## Camera



## Privacy Mask



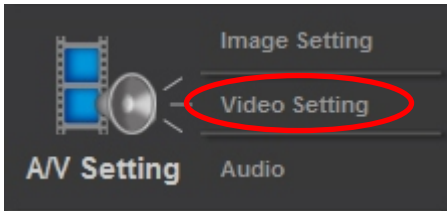
## Image Setting

- |   |                           |   |   |
|---|---------------------------|---|---|
| ① | <b>Brightness:</b>        | 0   | ▼ |
| ② | <b>Contrast:</b>          | 0   | ▼ |
| ③ | <b>Hue:</b>               | 0   | ▼ |
| ④ | <b>Saturation:</b>        | 0   | ▼ |
| ⑤ | <b>Sharpness:</b>         | 0   | ▼ |
| ⑥ | <b>AGC:</b>               | 16x   | ▼ |
| ⑦ | <b>Shutter Time:</b>      | Auto  | ▼ |
| ⑧ | <b>Sense-Up:</b>          | 1/30  | ▼ |
| ⑨ | <b>D-WDR:</b>             | Off   | ▼ |
| ⑩ | <b>Video Orientation:</b> | <input type="checkbox"/> Flip <input type="checkbox"/> Mirror |   |
| ⑪ | <b>Denoise:</b>           | 2   | ▼ |



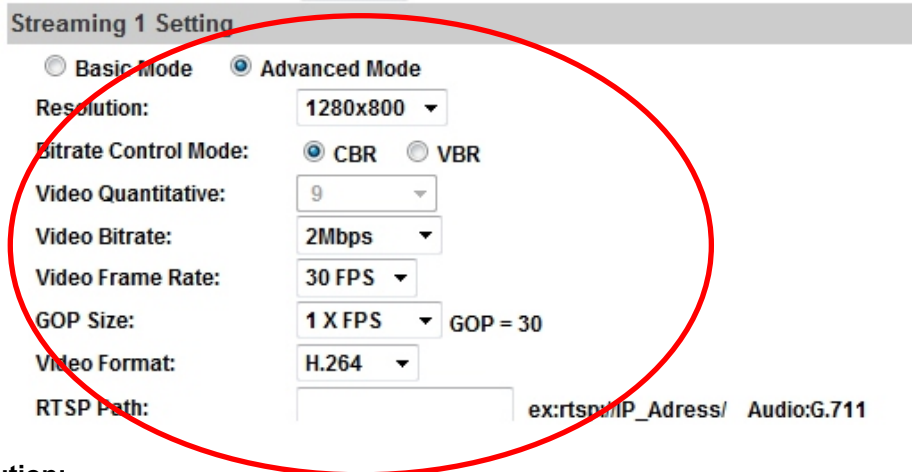
You can reset your IP camera's image settings to default by pressing the "default" button.

# Video Settings, cont.



## Stream 1&2 Setting:

Click the drop down list to select Input Type (NTSC or PAL)



### 1.) Resolution:

There are 5 resolutions you can choose from:

- 1280x800@30fps
- 1280x720@30fps
- 640x480@30fps
- 320x240@30fps
- 176x144@30fps

### 2.) Quality:

There are 5 levels you can adjust to:

Best, High, Standard, Medium, & Low.

If you use the highest settings, the network streaming speed will be slower.

Also, if you record any files, the higher the quality, the larger the file will be.

### 3.) Video Frame Rate:

The video refresh rate per second. Setting max is 30 FPS (NTSC) and 25 FPS (Pal) at 1280x800 and best quality

### 4.) Video Format:

This describes the codec use for compression.

H.264 is newer and higher quality, and MJPEG (JPEG) is an older, but may stream faster.

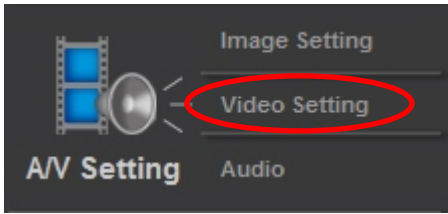
### 5.) RTSP Path:

RTSP output name.

Rtsp path would be as follows: **rtsp://camera/v2**



# Video Settings, cont.



## Stream 1&2 (Advanced Mode):

**Streaming 1 Setting**

Basic Mode  Advanced Mode

Resolution: 1280x800 ▾

Bitrate Control Mode:  CBR  VBR

Video Quantitative: 9 ▾

Video Bitrate: 2Mbps ▾

Video Frame Rate: 30 FPS ▾

GOP Size: 1 X FPS ▾ GOP = 30

Video Format: H.264 ▾

RTSP Path:  ex:rtsp://IP\_Adress/ Audio:G.711

### 1. Resolution:

There are 5 resolutions you can choose from:

- 1280x800@30fps
- 1280x720@30fps
- 640x480@30fps
- 320x240@30fps
- 176x144@30fps

### 2. Bitrate Control mode:

There are 2 choices: CBR (Constant Bit Rate) and VBR (Variable Bit Rate)

**A. CBR: 32Kbps-8Mbps** (The higher the CBR, the better your video quality will be)

**B. VBR: 1 (Low) -10 (High)** Compression rate. The higher the compression rate the higher the picture quality, and vice versa. The balance between VBR and network bandwidth will affect your picture quality. When using VBR, it is less likely that your streaming video will break up or lag.

### 3. Video Frame Rate: The video refreshing rate per second

NTSC: Max 30 frames per second PAL: Max 25 Frames per second (stream 1)

NTSC: Max 15 frames per second PAL: Max 10 Frames per second (stream 2)

**4. GOP Size:** This means "Group of Pictures." The higher the GOP is, the better the quality of the images.

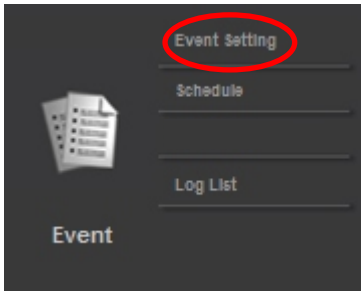
**5. Video Format:** This describes the codec use for compression. H.264 is newer and higher quality, and MJPEG (JPEG) is older, but will stream faster

### 6. RTSP Path: RTSP output connecting route


For example, **rtsp://camera/v2**



# Event List



### Event Setting

A screenshot of a camera view showing three overlapping motion detection areas: a green area at the top, a blue area on the left, and a red area on the right. Each area is outlined with a grid pattern.

<b>Area Setting:</b>	<span style="background-color: blue; color: white; padding: 2px 5px;">Area 1</span>	<span style="background-color: green; color: white; padding: 2px 5px;">Area 2</span>	<span style="background-color: red; color: white; padding: 2px 5px;">Area 3</span>	
<b>Sensitivity:</b>	<span style="border: 1px solid black; padding: 2px;">5 ▾</span>	<span style="border: 1px solid black; padding: 2px;">5 ▾</span>	<span style="border: 1px solid black; padding: 2px;">5 ▾</span>	
<input type="checkbox"/> Area 1:	<input type="checkbox"/> E-mail	<input type="checkbox"/> FTP	<input type="checkbox"/> Save to SD card	<input type="checkbox"/> Samba
<input type="checkbox"/> Area 2:	<input type="checkbox"/> E-mail	<input type="checkbox"/> FTP	<input type="checkbox"/> Save to SD card	<input type="checkbox"/> Samba
<input type="checkbox"/> Area 3:	<input type="checkbox"/> E-mail	<input type="checkbox"/> FTP	<input type="checkbox"/> Save to SD card	<input type="checkbox"/> Samba
<b>Subject:</b>	<input style="width: 100%;" type="text" value="IP Camera Warning!"/>			
<b>Interval:</b>	<span style="border: 1px solid black; padding: 2px;">10 sec ▾</span> a period of time between every two motions detected.			
<input type="checkbox"/> Based on the <u>schedule</u>				
<b>Record File</b>				
<b>File Format:</b>	<input style="width: 100%;" type="text" value="AVI File(with Record Time Setting)"/>			

**1. Event Setting:** The purpose of this menu is to configure what the camera will do when an “event” is generated.

## 2. Motion Detection

The 6531 allows 3 areas of motion detection. (Area Setting) When motion is triggered, the camera can send the video, in the form of events to a specific mail address, transmit the live video to a remote FTP server and save events in the form of video to local micro SD card. To set up the motion area, click “Area Setting”. Use the mouse to click and drag a box of the area you want to select. The same method is used for area 2 and area 3.

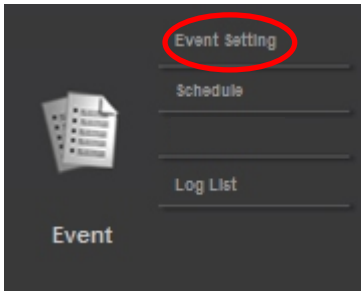
**3. Record File Setting:** The 6531 allows 3 different types of recording files:

**A. AVI File** (With time stamp) This is the largest file size option to choose, and the video will be the highest quality available.

**B. JPEG (MJPEG)** File (With time stamp) This is a smaller file size to choose, and will be lower quality than the AVI format.

**C. JPEG (MJPEG)** Single file with interval setting.

# Event List, cont.



### Event Setting

Area Setting:	Area 1	Area 2	Area 3
Sensitivity:	1(Low)	5	5

### Record Time Setting

Pre Alarm: 5 sec      Post Alarm: 5 sec

### Network IP Check

IP Check:  Enabled  Disabled

IP Address:

Interval:

IP Check:  Save to SD card Apply

#### 4. Record Time Setting:

Pre Alarm and Post Alarm setups for record start and end time when motion is detected, or to trigger a relay. Note: Pre/Post Alarm record time based on record time setting and 6531's built-in memory. The ability to store data is limited, so if the video quality is set very high, this will cause a drop in the recorded FPS. This will also decrease pre or post recording time.

#### 5. Network IP Check:

This option does two things. One, it checks your internet connection (Interval) to make sure your network connection has not been lost. Two, if your connection is lost, you can set this to automatically record to the SD card until it is full.

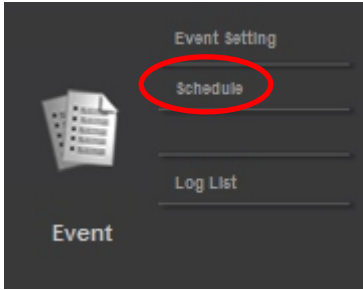
“IP Check” enables or disables this feature.

“IP Address” is what the camera will use to check if the internet is still working.

“Interval” is how often the camera will test your internet connection.

“IP Check” (lower option) has a box to check. When you check this box, you will record to your micro SD card upon network failure.

# Schedule



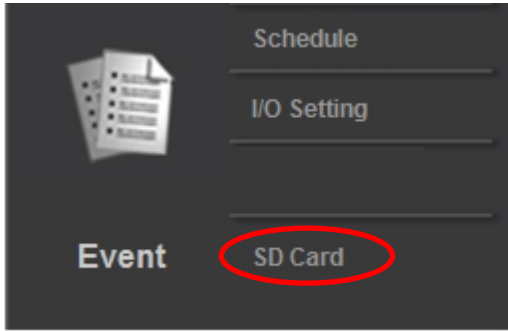
- 1. Schedule:** Complete schedule setup to tell the 6531 when to record data.
- 2. Snapshot:** After enabling the snapshot function, user can select the storage location of the snapshot, the time of snapshot, and the file name of snapshot.

The image shows two configuration screens. The top screen is titled 'Schedule' and features a grid with days of the week (Mon. to Sun.) on the y-axis and hours (0 to 23) on the x-axis. A red circle highlights three green boxes in the Monday row at hours 16, 17, and 18. A red arrow points from this circle to the 'Apply' button. Below the grid is a legend: a green box followed by the text 'With schedule setup.' The bottom screen is titled 'Snapshot' and has several options: 'Enabled' (radio button, circled in red) and 'Disabled' (radio button, selected). Below this are three checkboxes: 'E-mail', 'FTP', and 'Save to SD card' (all circled in red). There is also an 'Interval' field set to '10' and a 'File Name' field set to 'Snapshot'. A red arrow points from the 'Apply' button to the 'Enabled' radio button. Another red arrow points from the 'Apply' button to the 'Save to SD card' checkbox. A third red arrow points from the 'Apply' button to the 'Schedule' grid.

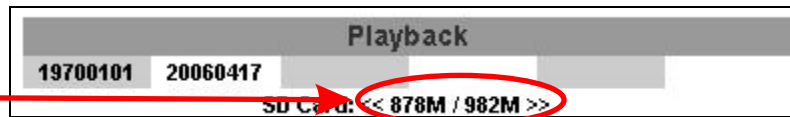
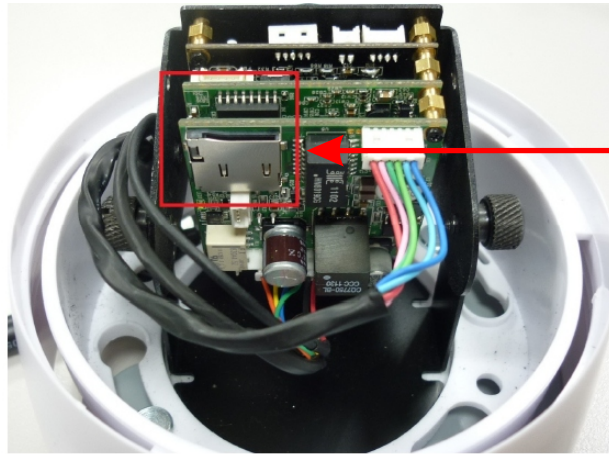
Click "Enabled" to enable snapshot.  
Select the E-mail, FTP, or Save to micro SD card option to enable.

Click the desired areas (boxes) to designate recording time.  
Green=record

# Micro SD Card



Below is a picture showing the location of the micro SD card in the 6531 dome. Using the micro SD card option could affect the frame rate of the video. Make sure the micro SD card is pushed into the slot completely.



The capacity of the SD card is shown in the SD card menu. Below is a list of the video files recorded. The video format recorded to the SD card is AVI.

Double click the video to open Windows Media Player and play the selected file.

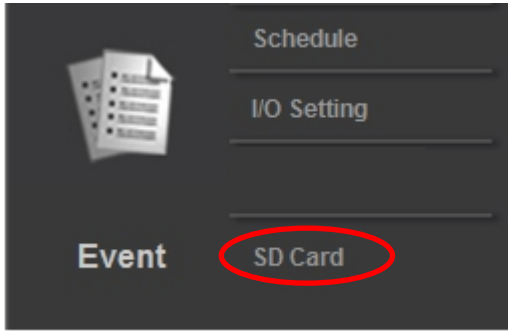
To delete the video, check it with the mouse, then click the Del button.

When the SD card is full, it will automatically delete the oldest video files.

2008/04/17			
Time	Video	Event Type	<input type="checkbox"/>
09:05:21	090522f.avi	Network Dis-connected	<input type="checkbox"/>
09:05:52	090552f.avi	Network Dis-connected	<input type="checkbox"/>
09:06:22	090622f.avi	Network Dis-connected	<input type="checkbox"/>
09:06:52	090652f.avi	Network Dis-connected	<input type="checkbox"/>
09:07:22	090722f.avi	Network Dis-connected	<input type="checkbox"/>
09:07:52	090752f.avi	Network Dis-connected	<input type="checkbox"/>
09:08:22	090822f.avi	Network Dis-connected	<input type="checkbox"/>
09:08:51	090851f.avi	Network Dis-connected	<input type="checkbox"/>
09:09:21	090921f.avi	Network Dis-connected	<input type="checkbox"/>
09:09:51	090951f.avi	Network Dis-connected	<input type="checkbox"/>

1 2 3 4 5

## Micro SD Card, cont.



Below is a list of Micro SD cards that Channel Vision has tested and confirmed full functionality with the 6531 IP Camera:

ADATA 4G	SiliconPower 128M
ADATA 512M	SiliconPower 256M
Blast 128M	TEKQ 128M
GIGATEK 128M	TEKQ 256M
Kingmax 256M	Toshiba 128M
Kingston 128M	Toshiba 256M
Kingston 256M	Toshiba 4G
Kingston 512M	Transcend 128M 80X
Kingston 1G	Transcend 256M 80X
Kingston 32G	Transcend 1G 80X
Phast 256M	Transcend 2G 150X
Photofast 256M	Transcend 4G 150X
PK 128M	Transcend 512M 80X
PRETEC 128M	Transcend 4G
READY 128M	Transcend 8G
SanDisk 128M	Transcend 16G
SanDisk 256M	Transcend 32G
SanDisk 512M	TwinMOS 128M
SanDisk 1G	TwinMOS 256M
SanDisk 2G	UMAX 128M
SanDisk 4G	U-TEK 128M
SanDisk 8G	
SanDisk 16G	
SanDisk 32G	



# Port Forwarding

In order to view the IP camera from outside of your home or business network, port forwarding configuration will be required in your router.

Below are several points of reference regarding port forwarding.

1.) [Http://en.wikipedia.org/wiki/Port\\_forward](http://en.wikipedia.org/wiki/Port_forward)

The wikipedia page explains what port forwarding is, how it is used, and what its applications are.

***\*This website is not affiliated with Channel Vision***

2.) [Http://screenshots.portforward.com/](http://screenshots.portforward.com/)

This website contains picture by picture walkthroughs on how to port forward most routers on the market.

***\*This website is not affiliated with Channel Vision***

## Port Forwarding LG Routers

In the example below, there is a 6531 running on port 8002 on the LAN.

1. Add the IP information, including the desired port into the port forwarding tab of "advanced" in the router
2. Check "Enable Port Forwarding"

**Enable Port Forwarding**

Description :	IP Dome
Local IP :	192.168.2.64
Protocol :	Both ▾
Local Port :	8002
Public Port :	8002

3. Click "Add".

4. Click "Select".

**Current Port Forwarding Table :**

NO.	Description	Local IP	Local Port	Type	Public Port	Select
1	IP Dome	192.168.2.64	8002	BOTH	8002	<input type="checkbox"/>

5.) Select "Apply" to enable your new port forwarding rule

## Port Forwarding, cont.

Over the course of setting up hundreds of DVR's and IP Cameras, Channel Vision has found some routers to be problematic.

- 1.** Some modem/router combinations do not work the customary way with this IP Camera. You cannot set up the IP Camera on "LAN" and must select "DHCP" in IP Installer. Once you do this, there is a good chance that the IP Camera will show up in the modem/router, allowing you to port forward the IP Camera. If you give the IP Camera a LAN address, the modem/router will not detect it, and you cannot port forward it. In some cases, if you assign the IP camera a static IP in the modem/router, it will be detected. Generally, this is not the case.
- 2.** Port forwarding does not work in all routers. Sometimes, a router doesn't have the ability to do port forwarding. This is very rare.
- 3.** Port forwarding may not work in a router because it is defective, though this should not be the first assumption that is made.
- 4.** The router is set up for port forwarding, and the IP Camera works inside of the network, however, the IP Camera does not work externally. (From a different network)  
There are many reasons this could happen, for example:
  - A.** The IP Camera network page is not set up properly.  
For example, the IP Camera may be missing the DNS server, or the subnet mask is wrong. It will still connect internally usually, but not externally.
  - B.** A network with 2 routers installed. An IP camera cannot be port forwarded properly if two routers exist in the same network. The only exception to this is if one router is completely disabled and being used only as a wireless access point.

## 6531 Specifications

<b>CPU:</b>	ARM 9; 32 Bit RISC
<b>DDR2:</b>	256MB
<b>Flash:</b>	16MB
<b>Image Sensor:</b>	1/4" CMOS (1.3 Megapixel)
<b>Sensitivity:</b>	0 Lux (IR On)
<b>DC Iris:</b>	Yes
<b>Lens Type:</b>	Fixed 4.2mm
<b>Power Consumption:</b>	12vDC 0.24A
<b>Ethernet:</b>	10/100 Base T
<b>Network Protocol:</b>	HTTP, HTTPS, SNMP, QoS/DSCP, Access list, IEEE, 802.1X, RTSP, TCP/IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UpNP, 3GPP, Samba
<b>Video Resolution:</b>	1280x800@30fps, 1280x720@30fps, 640x480@30fps, 320x240@30fps, 176x144@30fps
<b>Triple Streaming:</b>	Yes
<b>Image Snapshot:</b>	Yes
<b>Full Screen Monitor:</b>	Yes
<b>Privacy Mask:</b>	Yes
<b>Compression:</b>	H.264, JPEG, MPEG-4
<b>Bit-rate Adjustment:</b>	CBR, VBR
<b>Motion Detection:</b>	3 Areas
<b>Triggered Actions:</b>	Mail, FTP, Save to Micro SD card; Samba
<b>Security:</b>	Password protection, IP address filtering, HTTPS encrypted data transmission 802.1X port based authentication for network protection
<b>Infrared Illumination</b>	7 IR LEDs
<b>LED Wavelength</b>	850nm

## SD Card Management

<b>Recording Trigger:</b>	Motion Detection, IP check, Network Failure, (wire only) Schedule
<b>Video Format:</b>	AVI, JPEG
<b>Video Playback:</b>	Yes
<b>Specific File Deletion:</b>	Yes

## System Requirements

<b>OS:</b>	Windows 2000, XP, Vista, 7
<b>Browser:</b>	Microsoft IE 6.0 or above
<b>Suggested Hardware:</b>	Intel Dual Core 1.66G, RAM: 1024MB, Graphic card: 128MB
<b>Minimum Hardware:</b>	Intel-C 2.8G, RAM: 512MB, Graphic card: 64MB

\*Specifications subject to change without notice.





## **1 Year Limited Warranty**

Channel Vision Technology will repair or replace any defect in material or workmanship which occurs during normal use of this product with new or rebuilt parts, free of charge in the USA, for one year from the date of original purchase. This is a no hassle warranty with no mail in warranty card needed. This warranty does not cover damages in shipment, failures caused by other products not supplied by Channel Vision Technology, or failures due to accident, misuse, abuse, or alteration of the equipment. This warranty is extended only to the original purchaser when purchased through an authorized reseller. A purchase receipt, invoice, or other proof of original purchase date will be required before warranty repairs are provided.

Mail in service can be obtained during the warranty period by calling (800) 840-0288 toll free. A Return Authorization number must be obtained in advance and can be marked on the outside of the shipping carton.

This warranty gives you specific legal rights and you may have other rights (which vary from state to state). If a problem with this product develops during or after the warranty period, please contact Channel Vision Technology, your dealer or any factory-authorized service center.

Channel Vision products are not intended for use in medical, lifesaving, life sustaining or critical environment applications. Channel Vision customers using or selling Channel Vision products for use in such applications do so at their own risk and agree to fully indemnify Channel Vision for any damages resulting from such improper use or sale.



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