



# TCM-1111

**H.264 Megapixel Outdoor IP IR D/N PoE  
Bullet Camera  
Hardware User's Manual**

Ver. 2011/11/30



**ACTi**  
Connecting Vision

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# 0. Precautions

## **Read these instructions**

You should read all the safety and operating instructions before using this product.

## **Heed all warnings**

You must adhere to all the warnings on the product and in the instruction manual. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.

## **Servicing**

Do not attempt to service this video device yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

## **Trademarks**

All names used in this manual are probably registered trademarks of respective companies.

## **Liability**

Every reasonable care has been taken during the writing of this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

## **FCC/CE Regulation**

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the users will be required to correct the interference at their own expense.

# 1. Introduction

## Package Contents

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TCM-1111

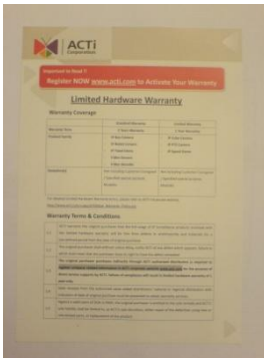


(No Bracket Included)

Product CD



Warranty Card



## Features and Benefits

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This is a cutting-edge digital video surveillance camera. It can compress and transmit real time images with outstanding image quality (18 FPS @ SXGA, 1280x1024) through a standard TCP/IP network. This camera is your best choice to build an intelligent IP surveillance system.

### **H.264/MPEG-4/MJPEG Triple Codec Dual Streaming**

This device supports 3 compression formats, H.264, MPEG-4 and MJPEG. It brings superior image quality at 18 frames per second up to a resolution of SXGA (1280 x 1024) pixels, and offers up to 26 frames per second in HD720 (1280x720). In D1 (720 x 480) / VGA (640 x 480) / QVGA / QQVGA the device reaches 30 frames per second.

### **Built-in Hardware Motion Detection**

No more external motion sensors are required. You may assign up to 3 video motion detection areas. By tuning the object size and sensitivity, it will reliably detect objects passing through in view. Hardware motion detection also offers better sensitivity and faster response time than software motion detection.

### **Powerful Bundled Surveillance Software**

To extend the capabilities of the camera, a powerful surveillance program is included in the package for free. Users can easily use an existing PC as a digital video recorder. Scheduled recording and manual recording keep every important video recorded in the local hard disk. Reliable and accurate motion detection with instant warning enables immediate response in every condition. Quick and simple search and playback function lets you easily find the images and video you want.

### **Software Development Kit Support**

This camera can be integrated or controlled by applications from third party software developers. Software developers can save considerable efforts by using our Streaming Library or ActiveX control. Please contact us for details on integration support.

## Safety Instructions

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### **Don't use the power supply with other voltages**

This device is likely to be damaged or damage other equipments / personnel, if you use a power supply with different voltage than the one included with this device. All warranty of this product will be voided in the situations above.

### **Cleaning**

Disconnect this video product from the power supply before cleaning.

### **Attachments**

Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

### **Water and Moisture**

Do not use this video product near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool and the like.

### **Don't use accessories not recommended by the manufacturer**

Only install this device and the power supply in a dry place protected from weather

### **Servicing**

Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

### **Damage Requiring service**

Disconnect this video product from the power supply immediately and refer servicing to qualified service personnel under the following conditions.

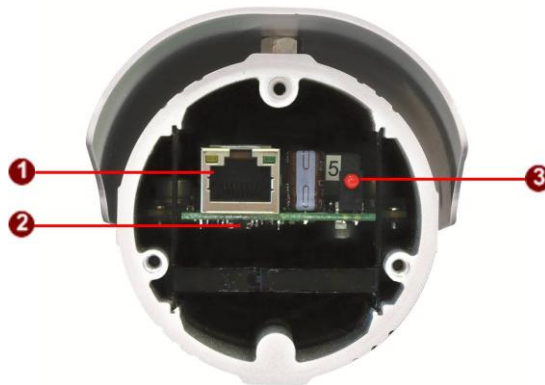
- 1) When the power-supply cord or plug is damaged
- 2) If liquid has been spilled, or objects have fallen into the video product.
- 3) If the video product has been directly exposed to rain or water.
- 4) If the video product does not operate normally by following the operating Instructions in this manual. Adjust only those controls that are covered by the instruction manual, as an improper adjustment of other controls may result in damage, and will often require

extensive work by a qualified technician to restore the video product to its normal operation.

### **Safety Check**

Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine if the video product is in proper operating condition.

## Physical description



### 1) Ethernet Port

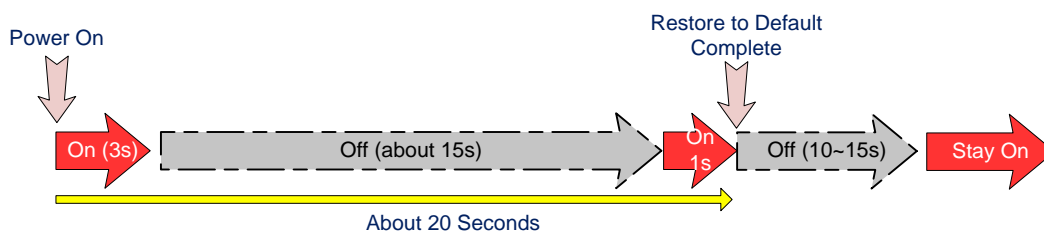
The IP device connects to the Ethernet via a standard RJ45 connector. Supporting NWAY, this IP device can auto detect the speed of local network segment (10Base-T/100Base-TX Ethernet).

### 2) Reset Button

**Step 1:** Switch off IP device by disconnecting the power cable

**Step 2:** Press and continue to hold the Reset Button (with a sharp tipped object, like a pen.)

**Step 3:** **Reconnect the power cable while continuing to hold the reset button.** The red Power LED light will flash on for 3 second first, turn off for about 15 seconds, flash on for another second and turn off again. By this time the reset to default operation is already completed. **This will take around 20 seconds from power up.** You may then release the reset button. This length of time fluctuates slightly with the environment. The Power LED light will come back on and stay on after a few more seconds. The unit will start up with factory default settings automatically.





### 3) Power LED Indicator

The LED indicator lights up once the power is turned up. It will light up again when the device is fully booted up.

## Preparing for Installation

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Remove the back cover by unscrewing the three attachments



Remove the sunshade by unscrewing the two screws

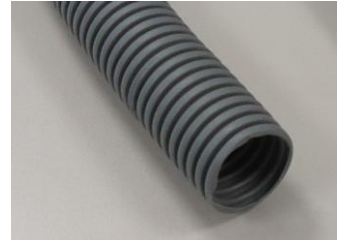


## How to Do the Waterproof Installation

The following installation procedure makes the camera be water-resistant even for the situations where the camera can easily be flooded by pouring rain.

### The important part to focus on during the installation:

The protection of the cabling has to be done by a proper flex conduit. The size of the flex conduit that matches with the conduit gland is 1/2". Please note that the **conduit gland is included to the package** of the bullet camera.



The following images show the step-by-step procedure of completing the water-proof installation.



1. Disassemble the conduit gland as shown on the photo.

2. Pull the network cable through the flex conduit. Please note that the size of the conduit and the gland is big enough to let the RJ-45 connector pass through all the way.



3. Two pieces from the conduit gland set will be attached to flex conduit first.



4. The third piece goes through the back side cover of the camera.



5. The fourth piece (locking nut) is used to lock the gland firmly from the inside of the back side cover.



6. Pull the network cable through the back side cover of the camera.



7. Connect the flex conduit to the back side cover of the camera.



8. Tighten the domed sealing nut.



9. Plug the network cable into the camera's RJ-45 connector before closing the back side of the camera. If you are not using PoE and need an additional power cord then please connect it at this stage, too.



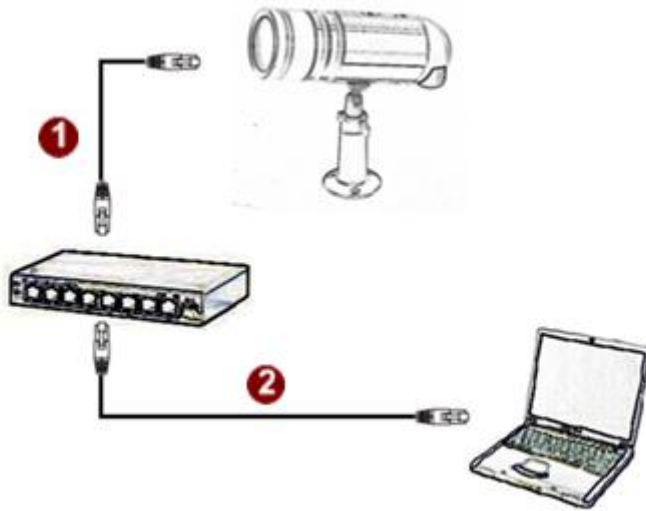
10. Tighten the screws of the back side of the camera properly.



11. Finally, the bullet camera with properly mounted flex conduit as well as with proper outdoor bracket would look like this. The camera is now ready to withstand even the most severe rain storms.

## Basic Connections

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Follow the procedures below to connect the IP device to the respective apparatuses.

**Please use a PoE (Power over Ethernet) supported switch or injector:**

- 1) Connect your IP Camera to the Switch / Injector by CAT5 or CAT6 cables with RJ45 connector.
- 2) Connect your Switch / Injector to PC with another CAT5 / CAT6 network cable.

## Product Specification

<b>TCM-1111</b>	
<b>• Device</b>	
Device Type	Bullet Camera
Image Sensor	Progressive Scan CMOS
Sensor Size	1/3" (4.8 x 3.6 mm)
Day / Night	Yes
Minimum Illumination	Color: 0.5 lux at F1.0 (30 IRE, 2400°K); B/W: 0 lux (IR LED on)
Color to B/W switch	CDS sensor based switch
Mechanical IR Cut Filter	Yes
IR Sensitivity Range	700 - 1100 nm
IR LED	IR LED x 20 (850 nm)
Electronic Shutter	1/30 - 1/1,000 sec (60Hz); 1/25 - 1/1,000 sec (50Hz) (manual mode) 1/5 - 1/15,000 sec (auto mode)
<b>• Lens</b>	
Focal Length	Fixed focal, f4.2 mm / F1.8
Iris	Fixed iris
Focus	Fixed Focus
Horizontal Viewing Angle	64.7°
<b>• Video</b>	
Compression	H.264, MPEG-4 SP, MJPEG
Maximum Frame Rate vs. Resolution	18 fps at 1280 x 1024 (SXGA); 26 fps at 1280 x 720 (HD 720p); 30 fps at 640 x 480 (VGA); 30 fps at 320 x 240 (QVGA); 30 fps at 160 x 112 (QQVGA)
Multi-Streaming	Simultaneous dual streams based on two configurations
Bit Rate	28 Kbps - 6 Mbps (per stream)
Bit Rate Mode	Constant, Variable
S/N Ratio	More than 44 dB
Image Enhancement	White balance: automatic, hold, predefined and manual; Brightness; Saturation; Contrast; Sharpness; Automatic gain control; Auto exposure: automatic, predefined and manual; Flickerless
Privacy Mask	4 configurable regions
Text Overlay	User defined text on video
Image Orientation	Image flip and mirror
<b>• Network</b>	
Protocol & Service	TCP, UDP, HTTP, HTTPS, DHCP, PPPoE, RTP, RTSP, IPv6, DNS, DDNS, NTP, ICMP, ARP, IGMP, SMTP, FTP, UPnP, SNMP, Bonjour
Ethernet Port	1, Ethernet (10/100 Base-T), RJ-45 connector
Security	IP address filtering; HTTPS encryption; Password protected user levels; IEEE 802.1X network access control
<b>• Alarm</b>	
Alarm Trigger	Video motion detection (3 regions)
Alarm Response	Notify control center; Change camera settings; Command other devices; E-mail notification with snapshots; Upload video, snapshot to FTP server
<b>• General</b>	
Power Source / Consumption	PoE Class 2 (IEEE802.3af) / 5.76 W (IR on)
Weight	610 g (1.35 lb)
Dimensions (Φ x H)	77 mm x 193 mm (3.04"x7.60")
Operating Temperature	-20 °C ~ 50 °C (-4 °F ~ 122 °F)
Operating Humidity	10% ~ 85% RH
Approvals	CE, FCC, IP66
<b>• Integration</b>	
Unified Solution	Fully compatible with ACTi software
ISV Integration	Software Development Kit (SDK) available
Firmware Access Browser	Microsoft Internet Explorer 6.0 or newer

## 2. Accessing Camera

### If you have DHCP server / router in your network:

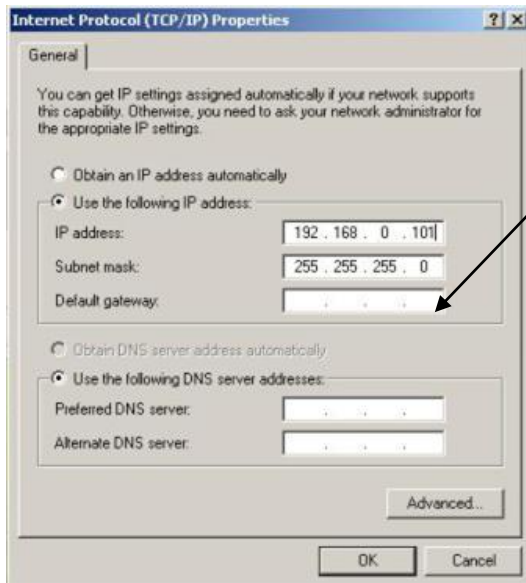
Many network server / routers are able to automatically provide IP addresses through DHCP. If you are using such a network, just plug in your computer and IP Camera into the network and your IP device will acquire network address by itself. Find and access the device with our IP Utility program. You may download it at:

***[http://www.acti.com/product/detail/Software/ACTi\\_Utility\\_Suite](http://www.acti.com/product/detail/Software/ACTi_Utility_Suite)***

### If you do ***NOT*** have DHCP server / router in your network:

1. Configure your PC to use the same subnet by changing your PC's IP address to the subnet with prefix 192.168.0.XXX. The last number should be anything from 1 to 254 except 100 and other occupied IP addresses. Subnet mask should be 255.255.255.0.
2. **The default IP used by this device is 192.168.0.100. Please make sure your PC is NOT using this address and that no two equipments use the same IP address in the network.**
3. Change your IP address by going to Control Panel ->Manage Network Connections -> Right click on the connection to change -> Option -> TCP/IP IPv4 Properties.





Please set the settings as below.

- 
- IP address: 192.168.0.xxx
- Subnet mask: 255.255.255.0

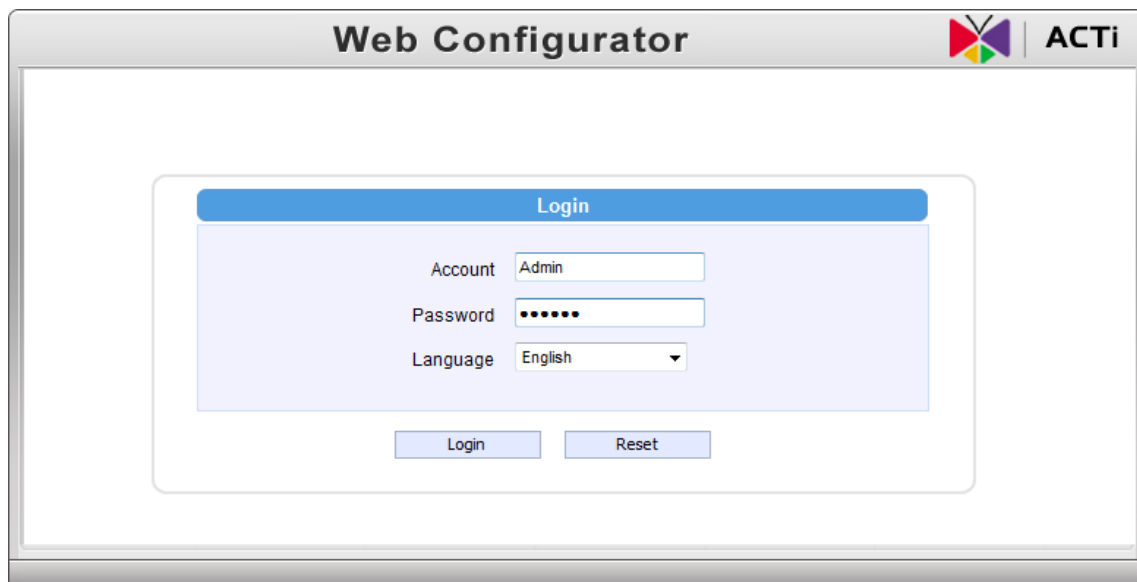
(NOTE: xxx should be a number from 1 to 254 except 100, which is used by the IP device. Please also make sure that no two equipments use the same IP address in the

4. Open Internet Explorer (Version 6.0 or above) , and type in the Default IP:

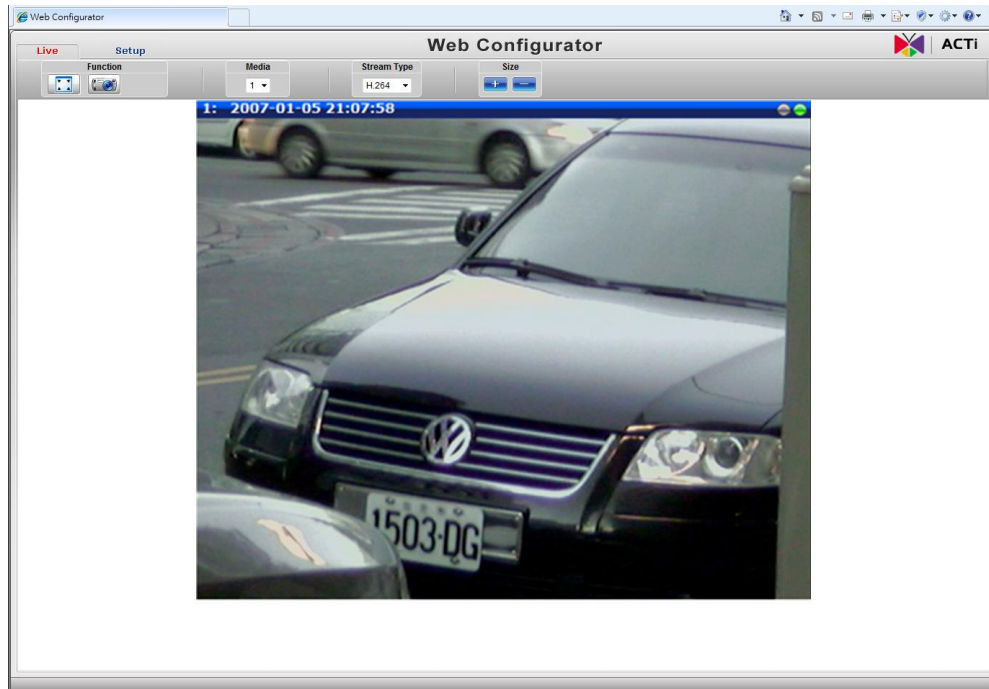
**192.168.0.100**

5. When you see the login window, please input default user and password:

**Default User: Admin    Password: 123456**



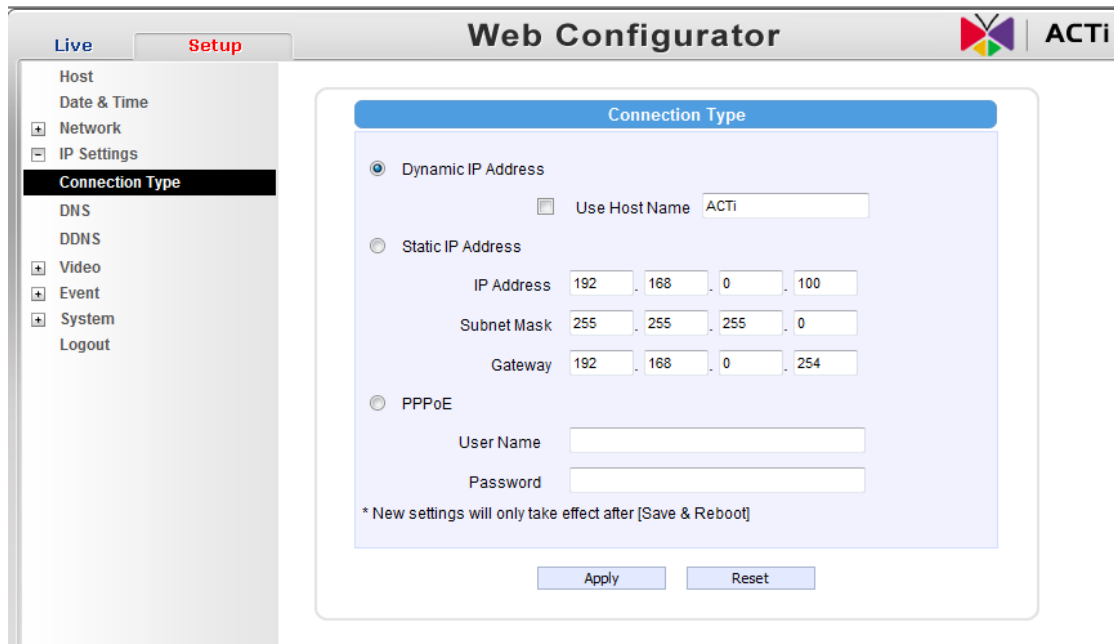
6. After logging in, you will see the video from camera. To go to the main menu, click the "Setup" button on the top left.



If you are using a single camera, this is enough to access the device.

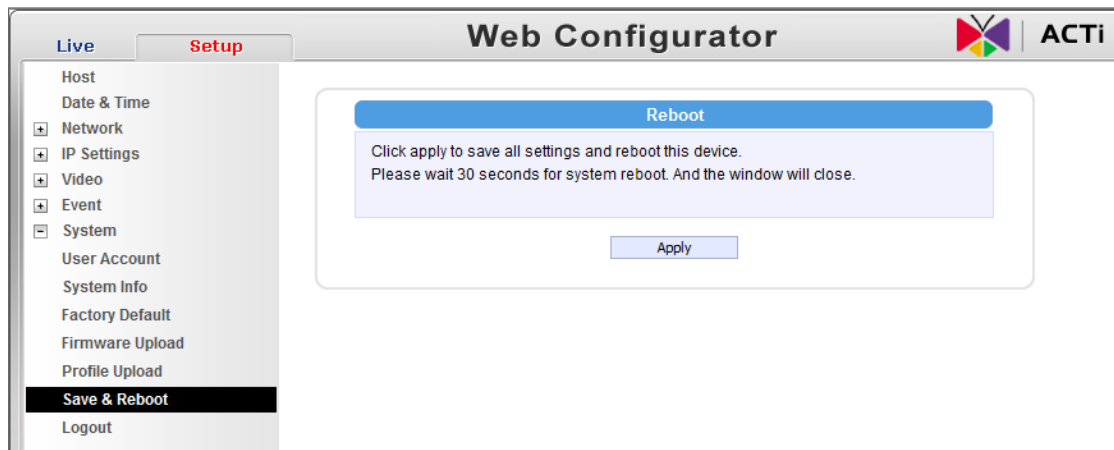
If you are using multiple devices, you need to change the current device to another unused IP address, so that when the next device is connected to the network, no two devices use the same IP. Please perform the following steps.

7. Go to IP Settings -> Connection Type
8. Change the IP mode to Static.
9. Change the IP to 192.168.0.101 or any other unused IPs. Do NOT use the PC's IP address or 192.168.0.100.). If this is not the first device you add to the network, please also avoid other devices' IPs.




10. Click “Apply”

11. Please go to System -> Save & Reboot, and click “Apply”. Internet Explorer will close after a few seconds. This is normal.



12. Wait for 30 seconds, and open IE again to connect to the **new IP**. (In this example, 192.168.0.101). For the second device or more you add into the network, please type the correct IP.

13. Adjust the default Video setting by going to Video -> Video


**Web Configurator** 

**Live** **Setup**

- Host
- Date & Time
- Network
- IP Settings
- Video
- Video**
- OSD/Privacy Mask
- Event
- System
- Logout

**Video**

1: 2007-01-05 21:07:58



**Activity**

**Image** Motion Detection Compression Exposure/White Balance

Video Flipping  Video Mirror  Lens Compensation

Day Profile		Night Profile	
Brightness	0 50 100 25	0 50 100 25	
Contrast	0 50 100 50	0 50 100 50	
Saturation	0 50 100 67		
Sharpness	160	Sharpness 160	

Apply Reset