E33

5MP Bullet with D/N, IR, Basic WDR,
Fixed lens
Hardware User's Manual

(PoE)

Ver. 2013/01/18

ACTi
Connecting Vision

Table of Contents

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 B 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

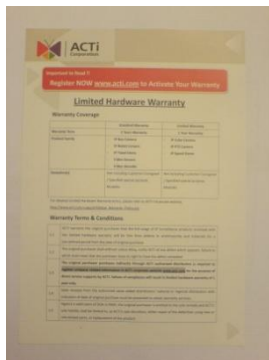E33 (Included camera stand/sun shield)

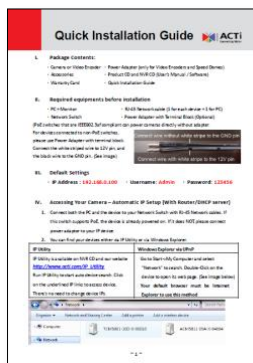Accessories

Conduit Gland

Lens Focus Tuner

Warranty Card

QIG

Features and Benefits

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

H.264 High Profile/MJPEG Multi-Codec Dual Streaming

This device supports 2 compression formats, H.264 High Profile and MJPEG. It brings superior image quality at 15 frames per second up to resolution of 2592 x 1944 pixels and 2048 x 1536 pixels. In Full HD 1080p (1920 x 1080), 720p (1280 x 720) and VGA resolution (640 x 480) 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 though is 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 IP Camera series, 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 IP 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

Don't open the housing of the product

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 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.
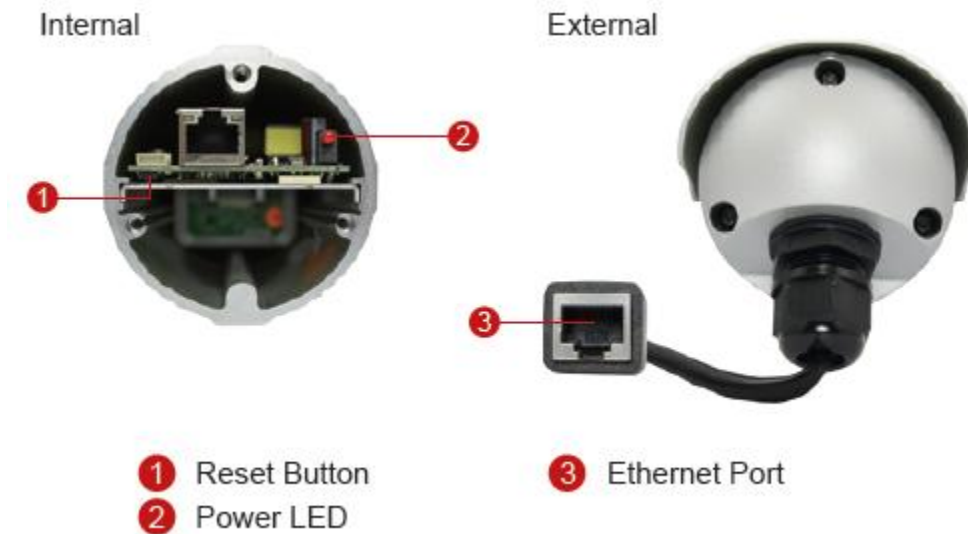
Damage Requiring service

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) Reset Button

Step 1: Press and continue to hold the Reset Button for 15 seconds (with a sharp tipped object, like a pen.) after the unit has successfully completed the boot process.

Step 2: The Ethernet LED light will turn off for about 1~2 seconds and flash on for another second. By this time the reset to default operation is already completed. You may then release the reset button. This length of time fluctuates slightly with the environment. The unit will come back on and stay on after a few more seconds. The unit will start up with factory default settings automatically.
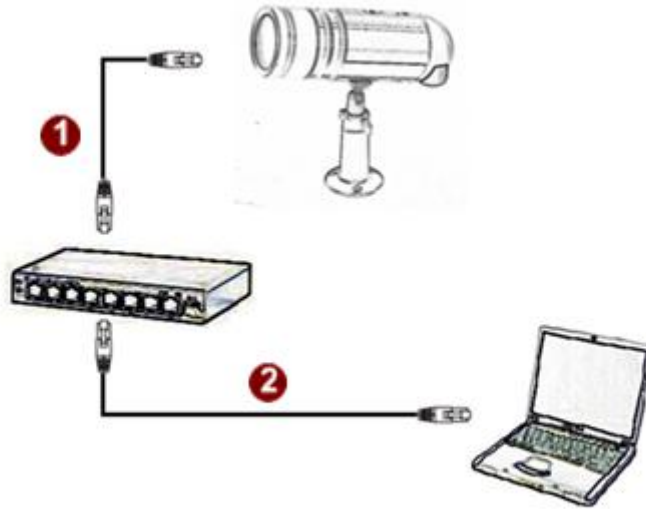
2) Power LED

LED light will light up while the power is on. LED light will light off after the unit has successfully completed the boot process.

3) 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).

Basic Connections

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 PoE Switch / Injector by CAT5 or CAT6 cables with RJ45 connector.
2) Connect your PoE Switch / Injector to PC with another CAT5 / CAT6 network cable.

Product Specification

• Device	E33
Device Type	Bullet Camera
Image Sensor	Progressive Scan CMOS
Day / Night	Yes
Minimum Illumination	Color: 0.1 lux at F1.8 (30 IRE, 2400°K); B/W: 0 lux (IR LED on)
Color to B/W switch	ISP based switch, configurable
Mechanical IR Cut Filter	Yes
IR Sensitivity Range	700 - 1100 nm
IR LED	IR LED x 20 (850 nm)
IR Working Distance	15 m (0 lux, 30 IRE, Max Exposure Gain)
Electronic Shutter	1/5 ~ 1/2,000 sec (manual mode); 1/5 ~ 1/10,000 sec (auto mode)
• Lens	
Focal Length / Aperture	Fixed focal, f4.2 mm / F1.8
Iris	Fixed iris
Focus	Fixed Focus
Mount Type	Board Mount
Horizontal Viewing Angle	64.1°
• Video	
Compression	H.264 HP, MJPEG
Maximum Frame Rate vs. Resolution	15 fps at 2592 x 1944; 15 fps at 2048 x 1536; 30 fps at 1920 x 1080 (Full HD 1080p); 30 fps at 1280 x 720 (HD 720p); 30 fps at 640 x 480 (VGA)
Multi-Streaming	Simultaneous dual streams based on two configurations
Bit Rate	28 Kbps - 6 Mbps (per stream)
Bit Rate Mode	Constant, Variable
Image Enhancement	Basic WDR; White Balance: automatic, hold and manual; Brightness; Contrast; Auto gain control; Digital noise reduction; Flickerless
Privacy Mask	4 configurable regions
Text Overlay	User defined text on video
On-Screen Graphics	User defined image layer on video
Image Orientation	Image flip and mirror
• Network	
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; Anonymous login; IEEE 802.1X network access control
• Alarm	
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
• General	
Power Source /	PoE Class 2 (IEEE802.3af) / 6.29 W (IR on)
Weight	584 g (1.29 lb)
Dimensions (Ø x L)	77 mm x 196.74 mm (3.04" x 7.7")
Bundled Accessories	Bracket
Environmental Casing	Weatherproof (IP66 rated)
Mount Type	Wall, Ceiling, Corner, Pole
Operating Temperature	-20 °C ~ 50 °c (-4 °F ~ 122 °F)
Operating Humidity	10% ~ 85% RH
Approvals	CE (EN 55022 Class B, EN 55024), FCC (Part15 Subpart B Class B), IP66
• Integration	
Unified Solution	Fully compatible with ACTi software
ISV Integration	Software Development Kit (SDK) available ; ONVIF compliant
Firmware Access Browser	Microsoft Internet Explorer 8.0 or newer (full functionality); Other browsers with VLC installed (partial functionality)

All specifications are subject to change without notice. Please check Data Sheet on our website for latest specifications.

2. Installation

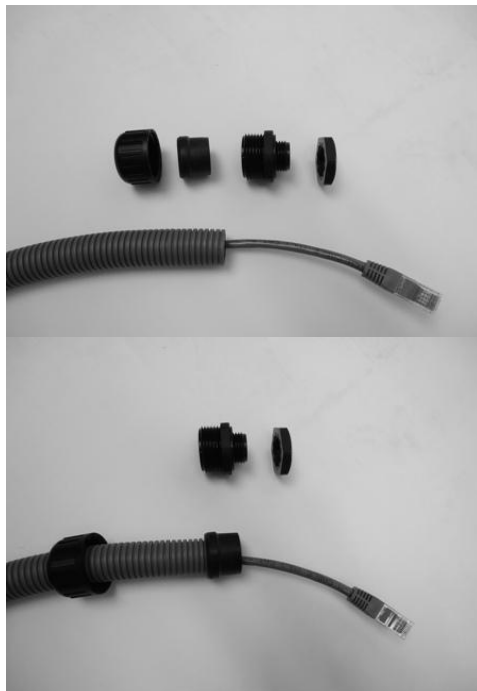## How to Do the Waterproof with Conduit Installation

Beside the bundled network cable, you also can use conduit and follow the installation procedure to make 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.

Disassemble the conduit gland as shown on the photo.

1.   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.

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

3.   Remove the bundled network cable and connector from back side cover of the camera.

4.   The third piece of conduit gland 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.
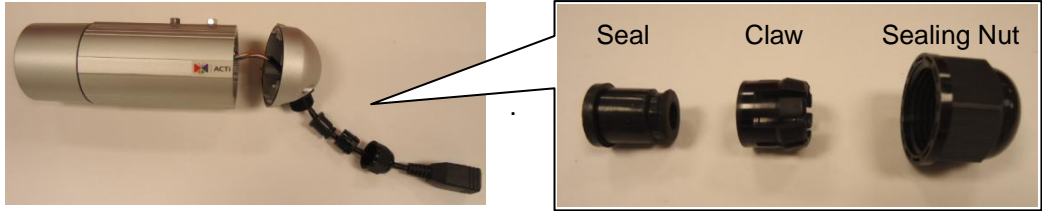
How to replace pre-installed network cable with cable gland

The camera bundled cable gland with pre-installed network cable is M20 X 1.5 Matric thread. It is resistant to salt water, weak acid, alcohol, oil, grease and common solvency.
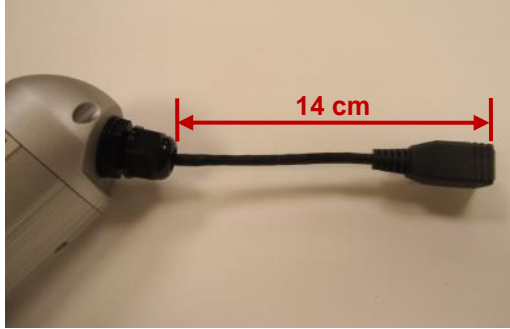
The cable gland consists of five parts: Lock Nut, Body, Seal, Claw and Sealing Nut as shown below.

The cable gland can hold cable firmly and have a wide range of network cable sizes, you can change suitable network cable quickly and easily to fulfil the installation environment. It is not necessary to dismantle the cable gland any further than illustrated below.
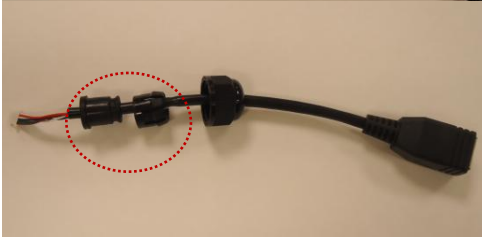

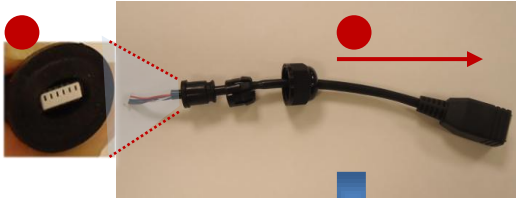The naked length of pre-installed network cable is around 14 cm.

The following images show the step-by-step procedure of replacing network cable and completing the water-proof installation.
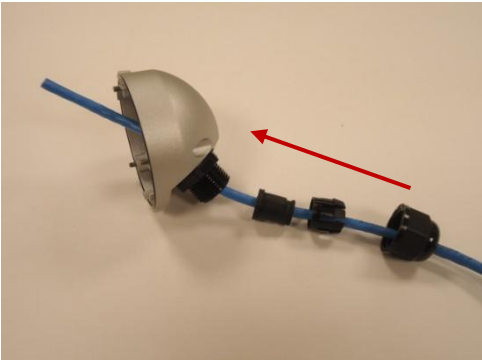
1.Open the back side cover from camera, and remove the network cable, and loosen the sealing nut to release the network cable from camera.

2.Separate the seal from the claw.

3.Squeeze the seal and then pull out the bundled network cable.

4.Pull the new network cable through Sealing Nut, Claw, Seal and cable gland on the back side cover of camera sequentially.

5.Assemble the Seal and Claw, and then Insert the network cable to RJ-45 PoE connector.

6. Tighten the screws of the back side cover on the camera properly

7.Tighten the sealing nut as far as possible.

8.Finally, the bullet camera is now properly mounted with waterproof cabling and is ready to attach to the proper outdoor bracket.
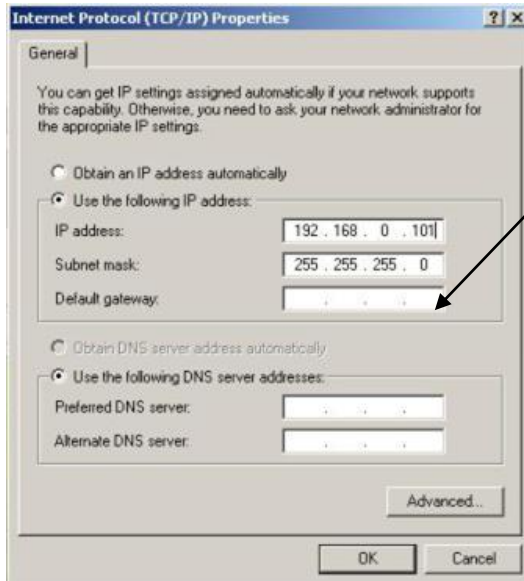
3. Accessing Camera

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/Utility

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 255.555.255.0.

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.

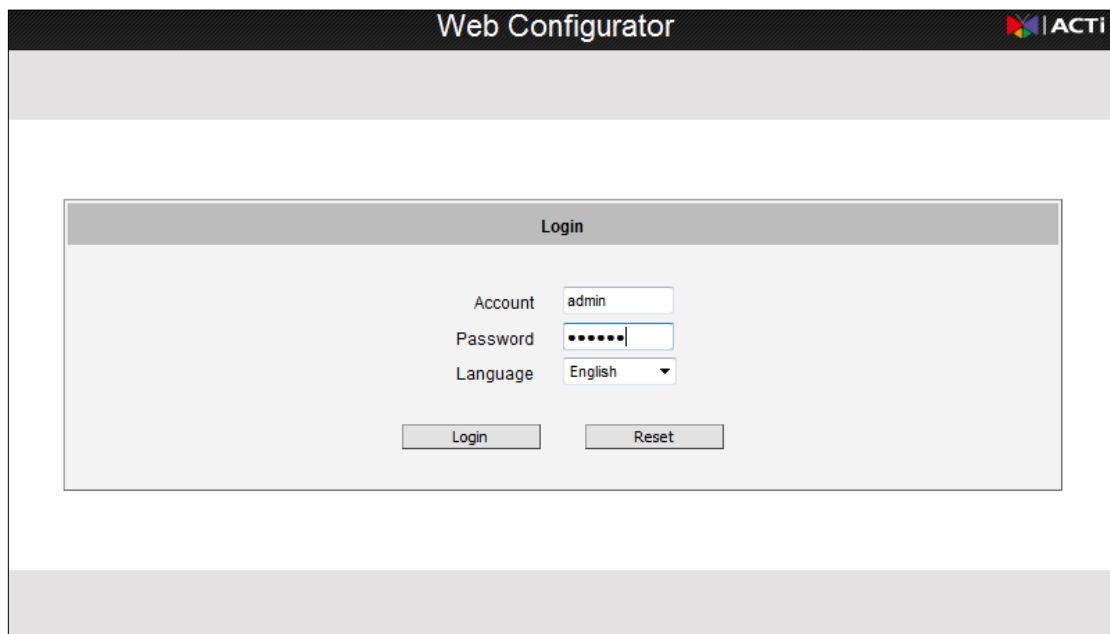- IP address: 192.168. 0.xxx
- Subnet mask: 255.255.255. 0

(**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 same network.)

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:
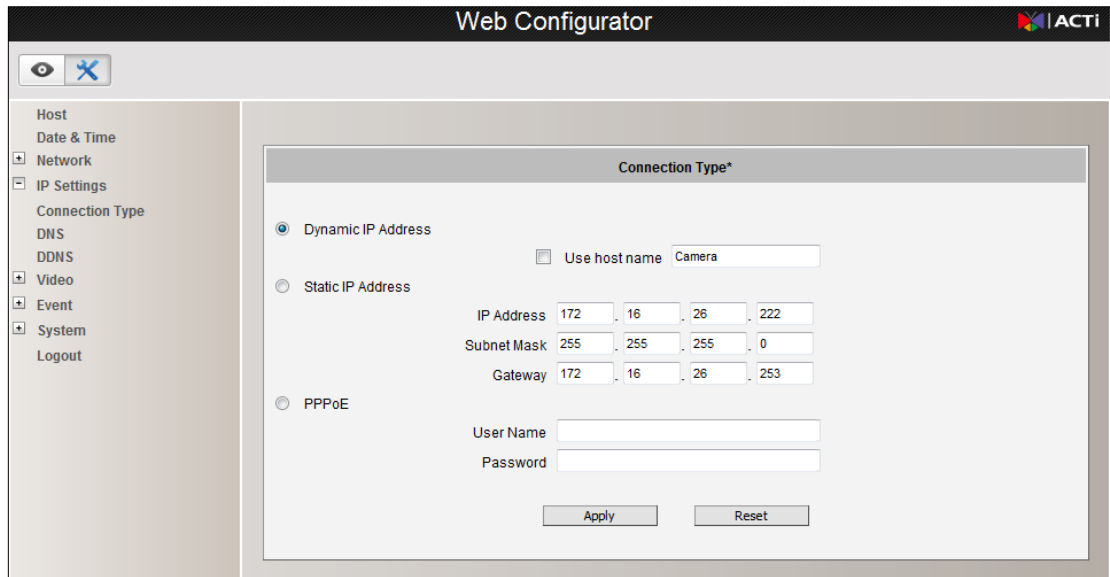**Default User: Admin   Password: 123456**

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.

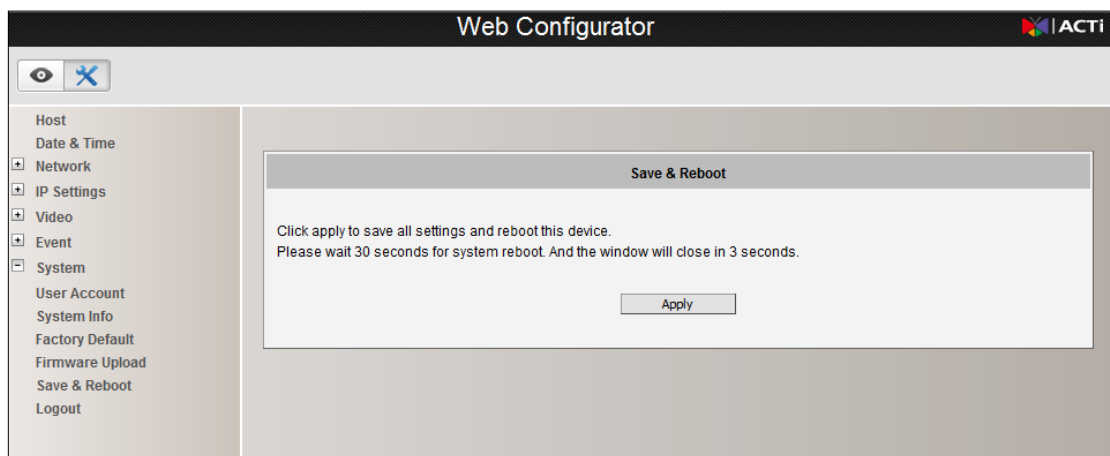If you are using a single camera, this is enough to access the device.

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
    Please refer the firmware manual for the detail information.