

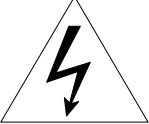
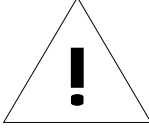
H.264 NETWORK CAMERA

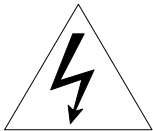
**ZN-Y11VP(N)E**  
**ZN-NH11VP(N)E**  
**ZN-NHW11VP(N)E**

| Installation Manual



## INFORMATION TO USER

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK, DO NOT OPEN	
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SEERIVCE PERSONEL.</p>		



This symbol is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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# Table of Contents

<b>1. FEATURES</b> .....	<b>5</b>
<b>2. PACKAGE CONTENTS</b> .....	<b>6</b>
<b>3. PART NAMES</b> .....	<b>7</b>
3.1. Rear View .....	7
3.2. Bottom View.....	7
<b>4. INSTALLATION</b> .....	<b>10</b>
4.1. Installing a C/CS Mounting lens.....	10
4.2. Installing an Auto IRIS lens .....	10
4.3. Setting the Image Attribute.....	11
4.4. Operating the OSD Menu .....	11
<b>5. CONNECTIONS</b> .....	<b>12</b>
5.1.Connectors .....	13
<b>6. CONFIGURATION</b> .....	<b>16</b>
6.1.Set up network environment .....	16
6.2. View video on web page .....	16
6.2.1. View video using ZNS-GIT I IPAdminTool .....	16
6.2.2. View video using IP address .....	19
6.3. Reset.....	19
6.4. Factory Default.....	19
<b>APPENDIX (A): SPECIFICATIONS</b> .....	<b>20</b>
Summary .....	20
Electrical Characteristics .....	21
Environment Condition .....	21
VCA (Video Content Analysis) .....	21
<b>APPENDIX (B): POWER OVER ETHERNET</b> .....	<b>23</b>
PoE compatibility .....	23
Power classification.....	23
<b>APPENDIX (C): DIMENSIONS</b> .....	<b>24</b>
<b>APPENDIX (D): ACCESSORIES</b> .....	エラー!ブックマークが定義されていません。
<b>APPENDIX (E): TROUBLE SHOOTING</b> .....	<b>25</b>
Checking your Firmware .....	25

Support..... 25

# 1. FEATURES

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## Camera

- Box type IP Camera
- Sony 1/3" Super HAD CCD & High Quality SS-HQ1 Full Kit Chip Set  
Sony 1/3" Vertical Double Density Color CCD (Optional)
- True Day / Night (ICR) and WDR (Optional)

## Streaming

- Dual streaming mode (such as different codec/resolution/bit rate and so on.)
- De-interlacing on DSP
- Burnt-in text supported
- Unicast/Multicast supported

## Video/Audio

- Video compression: H.264/MPEG/MJPEG, 25/30FPS@D1(PAL/NTSC)
- Audio compression: G.711( $\mu$ Law, aLaw)/PCM
- Analog video out for external monitors
- Video Motion Detection supported
- 2-way mono audio supported

## Network

- RTSP/ HTTP protocol supported
- 10/100 Base-T Ethernet

## Additional Features

- RS-485 supported
- USB 2.0 supported (External storage, Wireless LAN)
- Micro SD card supported
- PoE supported
- Built-in Video Content Analysis
- OSD supported
- SDK (Software Development Kit) provided

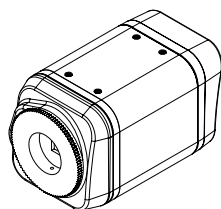
## VCA (Video Content Analysis)

- VCA Presence (Included as basic)
- VCA Surveillance (Optional)

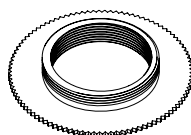
## 2. PACKAGE CONTENTS

Unpack carefully and handle the equipment with care. The packaging contains:

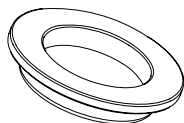
### ZN-Y11VE/ZN-NH11VE/ZN-NHW11VE



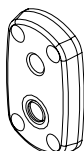
#### Mount ring



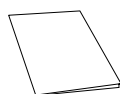
#### Rubber cap (for protecting CCD)



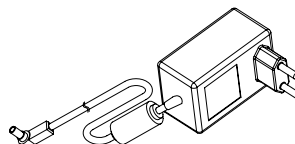
#### Adaptor for mounting the camera



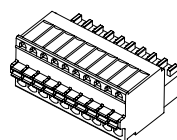
#### Quick Installation Guide



### DC power adaptor



### 9 Pin terminal block



### Hex wrench driver



### Screws



### DC Jack Adaptor Cable

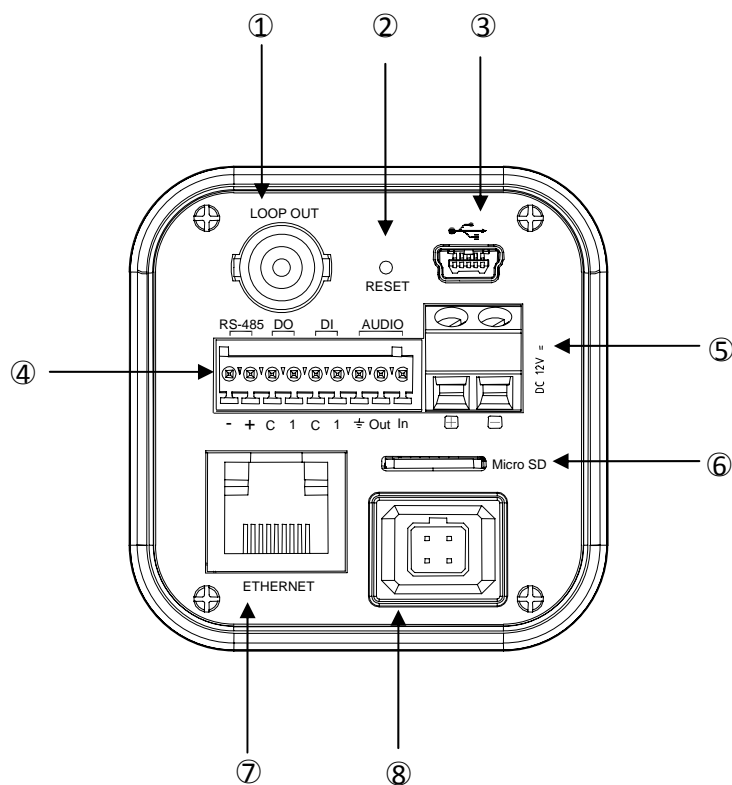


#### Note

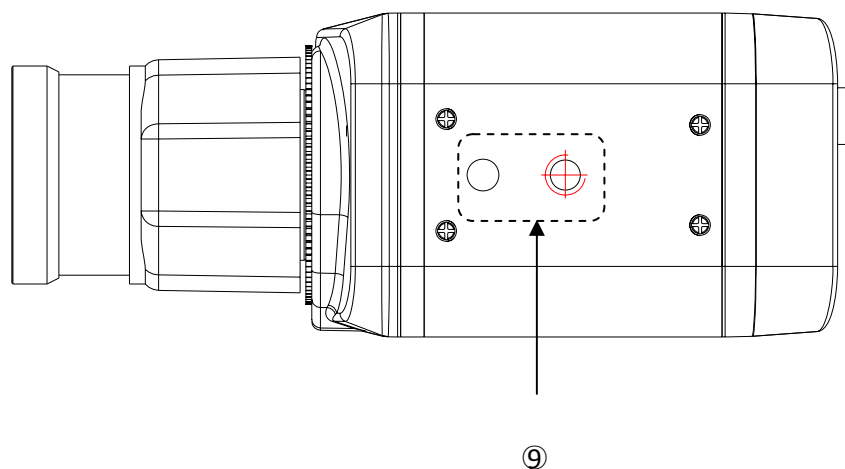
The above contents are subject to change without prior notice.

## 3. PART NAMES

### 3.1. Rear View



### 3.2. Bottom View



① **Analog video out**

It is an analog video output port.

② **Reset**

Reset switch is used for restarting ZN-Y11VE/ZN-NH11VE/ZN-NHW11VE or resetting ZN-Y11VE/ZN-NH11VE/ZN-NHW11VE as Factory Default (FD). Refer to the section “**6.3. Reset**” for more specific information.

③ **USB connector**

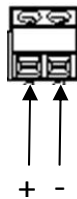
Insert a USB storage device or Wi-Fi devices. (Only Ralink RT73 chipsets based wireless devices are available.)

④ **9 pin terminal block for D/I, D/O, audio, and serial communication**

Refer to the section “**5.1.Connectors**” for more specific information.

⑤ **Power Adaptor Connector (DC 12V)**

ZN-Y11VE/ZN-NH11VE/ZN-NHW11VE needs a DC12V for power supply. Refer to the section “**Power Adaptor Connector (DC 12V)**” for more specific information.



---

Make sure the polarity is correct. Incorrect connection may cause malfunction or damage to the IP device.

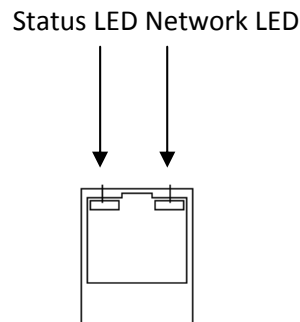
---

⑥ **Micro SD Card socket**

It is a memory card slot for external storage.

⑦ **LAN Connector (Ethernet)**

This is a RJ45 LAN connector for 10/100 Base-T Ethernet.





⑧ **4 Pin connector for Auto IRIS**

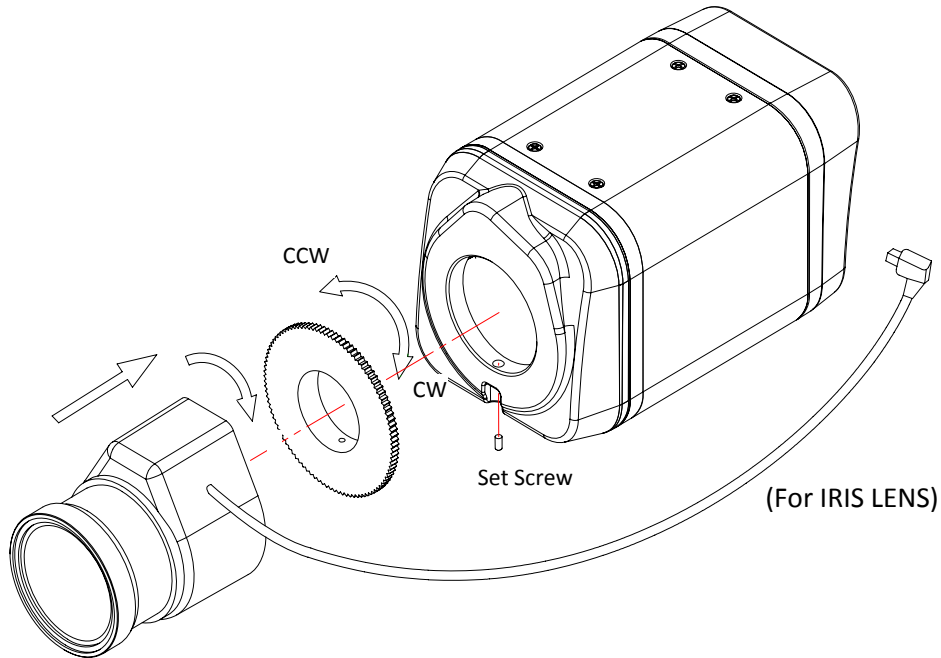
Only DC-drive type is supported. Refer to the section “4.2. Installing an Auto IRIS lens” for more specific information.

⑨ **Adaptor for mounting the camera**

Mounting points adaptor is provided on the bottom (or the top) of the camera for mounting the camera on a bracket or tripod.

## 4. INSTALLATION

---



### 4.1. Installing a C/CS Mounting lens

1. Remove the protective rubber cap from the front of the camera.
2. Install the mount ring for lens and adjust the mount ring to fit C or CS lens.
3. Tighten the setscrews using the hex wrench in the package.

### 4.2. Installing an Auto IRIS lens

1. Remove the cover of the auto iris lens plug and connect it with the lens cable.
2. Connect the auto iris lens plug to the 4-pin lens terminal on the back of the camera.



**Note**

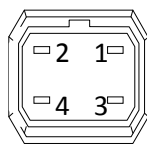
Use the connection recommended by the manufacturer. For best performance, read the lens manual carefully. You may need to set the flange back focus.



**Note**

Only DC-drive type is supported.

---



4 pin connector for IRIS

PIN	DC IRIS Lens
1	Damp-
2	Damp+
3	Drive+_
4	Drive-

### 4.3. Setting the Image Attribute

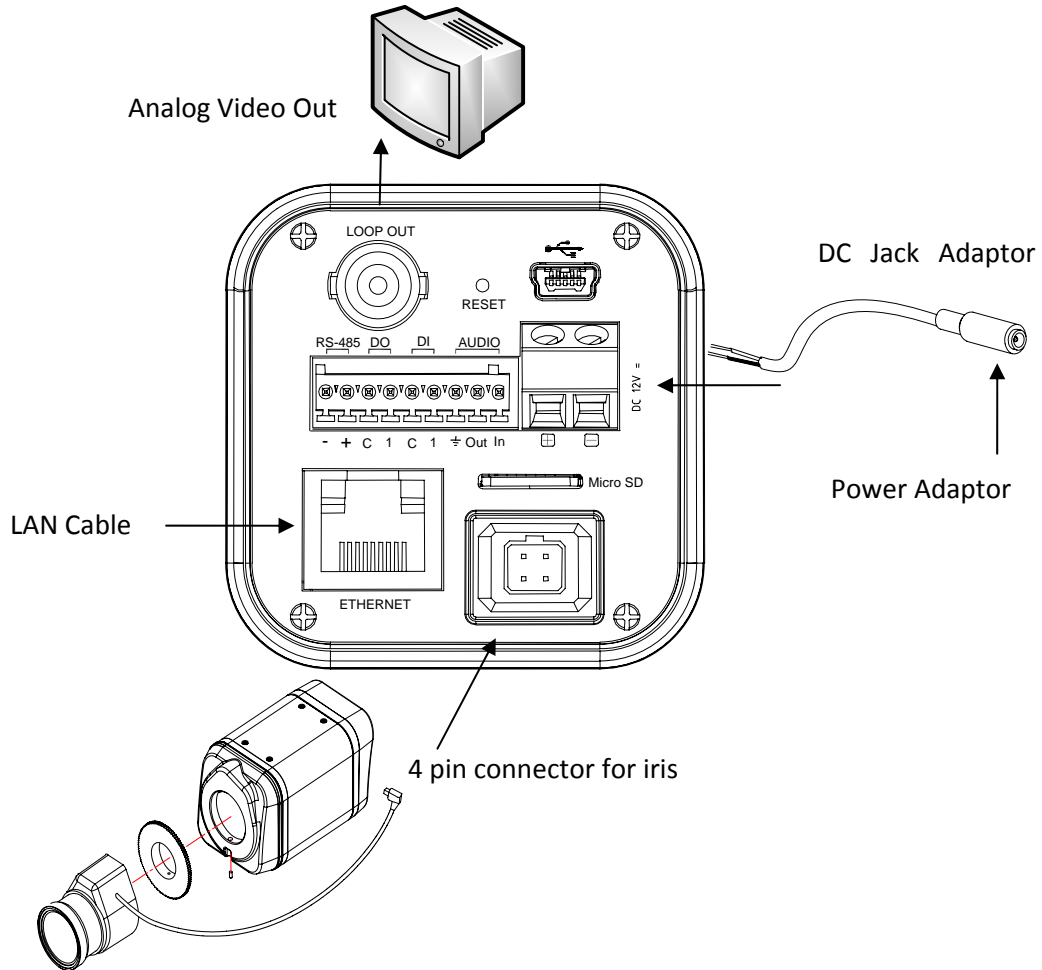
You can set the image attribute of camera through the webpage.

The menu of image attribute can be seen under **Setup > Video & Audio > Video-in > Attribute Setting**. Brightness, contrast, hue, saturation and sharpness can be adjusted.

### 4.4. Operating the OSD Menu

To operate the OSD of camera, refer to the '**OSD Menu Control Manual**' in the SDK.

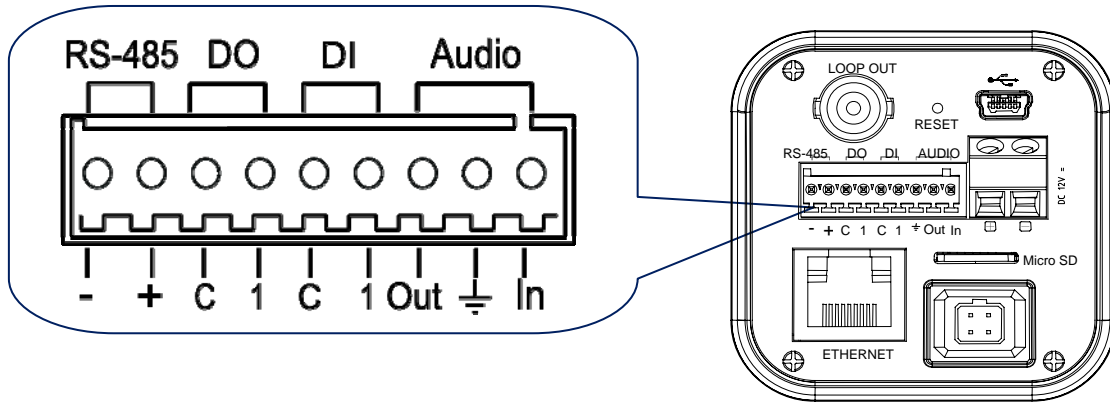
## 5. CONNECTIONS



**Caution** When connecting the DC power supply, make sure the polarity is correct. Incorrect connection may cause malfunction or damage to the camera.

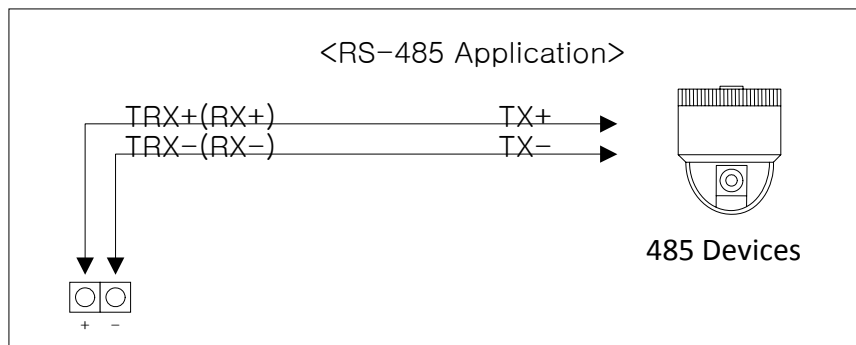
## 5.1.Connectors

### ① 9 pin terminal block



### ② RS-485

The RS-485 serial port consists of TRX+(RX+) and TRX-(RX-) as following the following image.



RS-485 Connection

### ③ Sensor (DI) connection

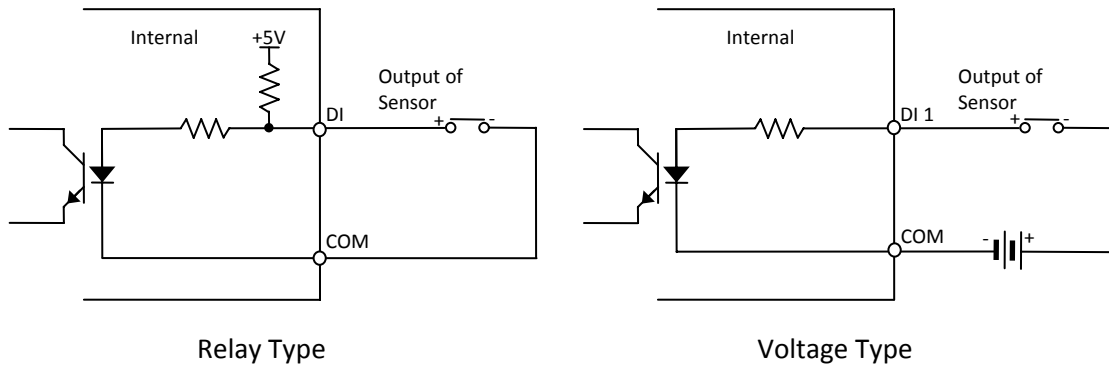
ZN-Y11VE/ZN-NH11VE/ZN-NHW11VE provides 1 channel D/I. It can be connected to either a voltage type sensor or a relay type sensor as the following figures. It can be selected by software.

Input voltage range: 0 VDC minimum to 24 VDC maximum

Input voltage threshold: 1 V



Do not exceed the maximum input voltage or relay rate.



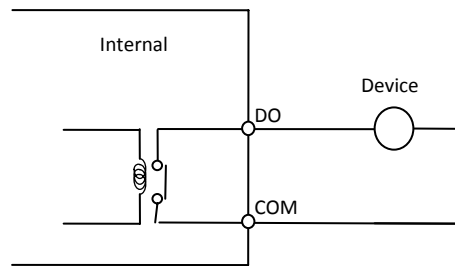
**④ Alarm (DO) connection**

Only the relay type is supported.

Relay Rating: Max 24VAC 500mA or 12VDC 1A



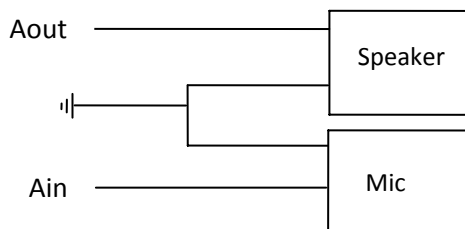
Do not exceed the maximum relay rating.



Relay Type

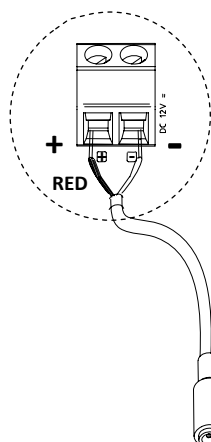
**⑤ Audio connection**

ZN-Y11VE/ZN-NH11VE/ZN-NHW11VE has a mono audio input and a mono audio output. As the output power for the audio is low, amplifier speaker is needed. (Do not use a headphone or earphone directly to the camera.)



⑥ **Power Adaptor Connector (DC 12V)**

Power adaptor connector connects to DC Jack adapter cable.



Make sure the polarity is correct. Incorrect connection may cause malfunction or damage to the IP device



Power Adaptor Connector (DC 12V)



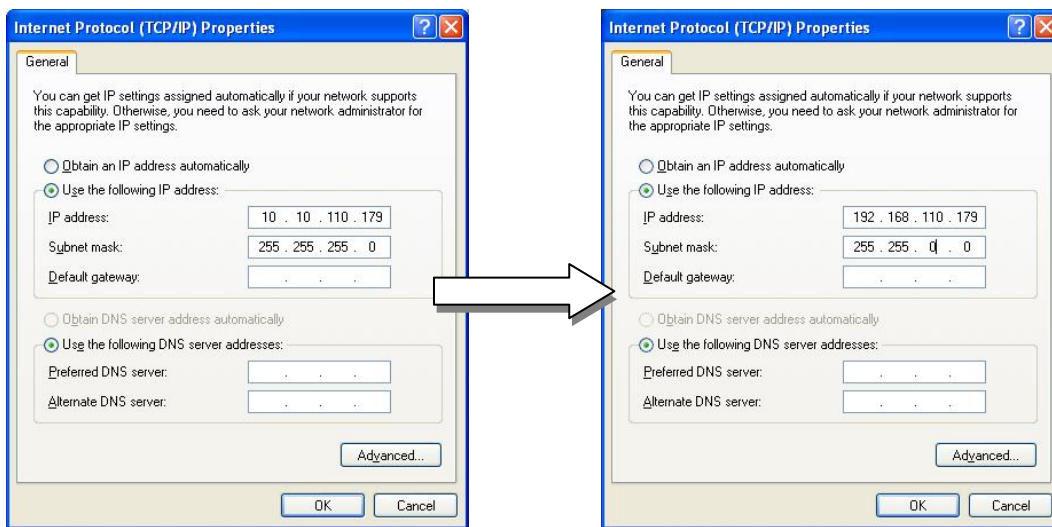
## 6. CONFIGURATION

### 6.1. Set up network environment

The default IP address of your IP device is 192.168.XXX.XXX. You can find the available IP address from the MAC address of your device. Please make sure the device and your PC are on the same network segment before running the installation. If the network segment between your PC and the device is different, change your PC's settings as below.

IP address : **192.168.xxx.xxx**

Subnet mask: **255.255.0.0**



### 6.2. View video on web page

View the live video on a web page using your IP device and its IP address. You can use the ZNS-GIT I IPAdminTool or enter the IP address on the web page.

#### 6.2.1. View video using ZNS-GIT I IPAdminTool

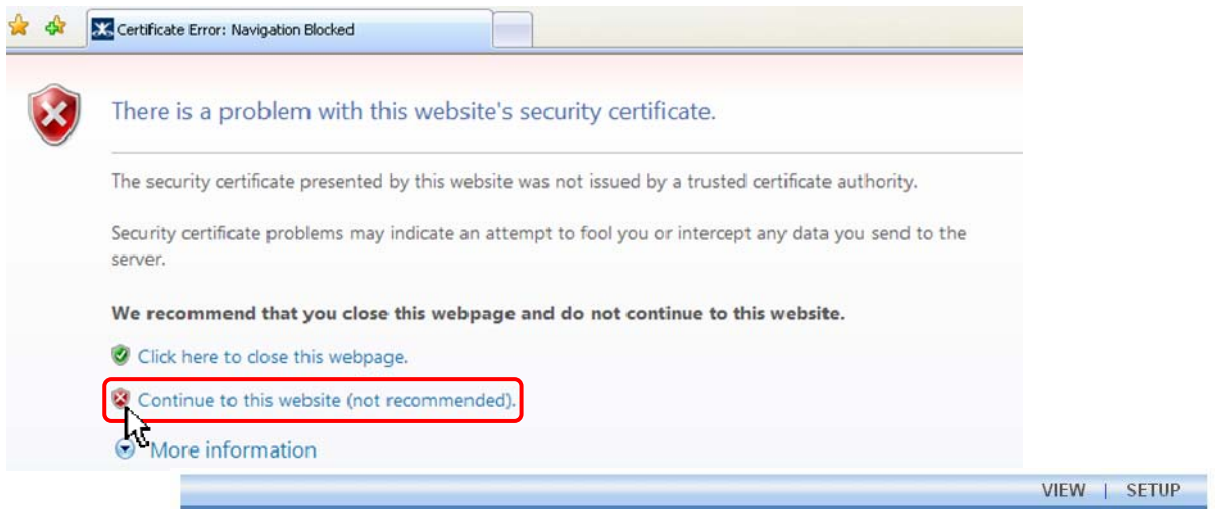
ZNS-GIT IPAdmin Tool automatically searches all activated GANZ Encoders and network cameras and shows the product name, IP address, MAC address and etc. ZNS-GIT IPAdminTool is provided with SDK at the following SDK path.

```
{SDK root}\BIN\TOOLS\AdminTool\
```



To use the ZNS-GIT IPAdminTool and view the live video on a web page:

1. Start ZNS-GIT IPAdminTool. Names and info of currently activated devices appear as a list.
2. Right-click on the desired device and select **Web view**.
3. Select **Continue to this website** on the Security Certificate Alert page.  
(The explanation and captured images at this manual are mainly on the basis of Internet Explorer 7.0)



4. Click **pop-ActiveX** fo



5. Wait for a few seconds while the web page loads. The live video is displayed as below.



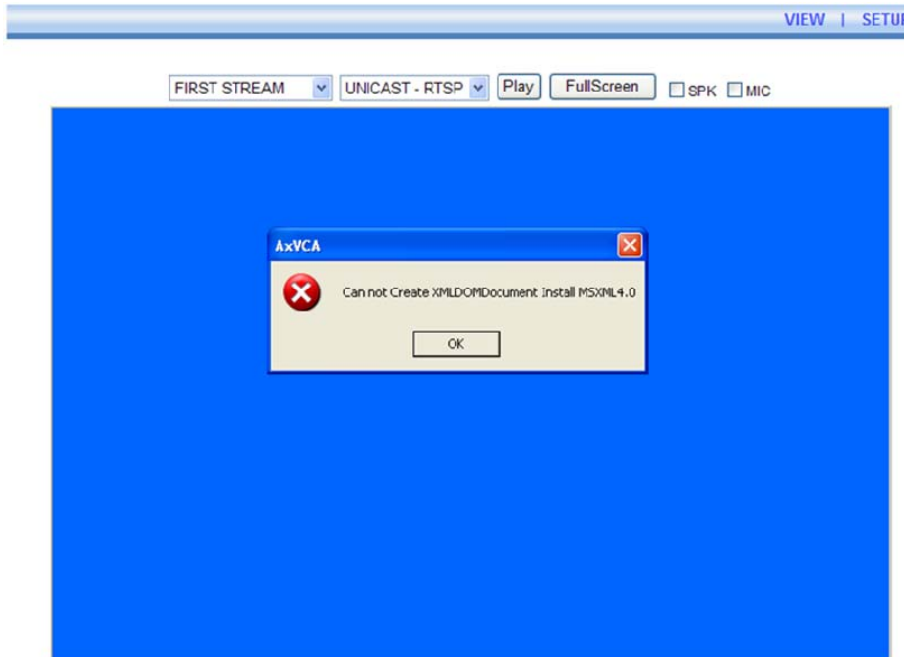
Plugin1 Plugin2

v1.20.00

6. If the live video is not displayed and “Can not Create XMLDOMDocument Install MSXML4.0” message is shown as below, please download and Install from the link below.

<http://www.microsoft.com/downloads/details.aspx?familyid=3144B72B-B4F2-46DA-B4B6-C5D7485F2B42&displaylang=en>

(VCA Library requires MS XML 4.0 library which is an xml parser made by Microsoft.)

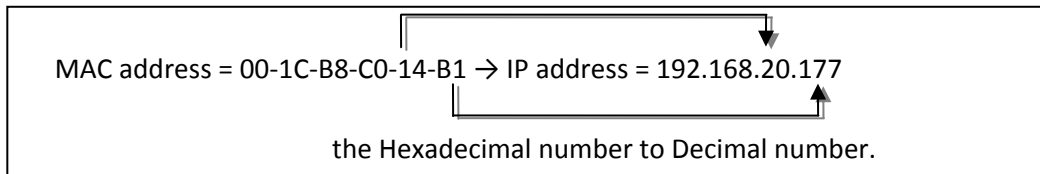


## 6.2.2. View video using IP address

View the live video on a web page using your IP device and its IP address. To have the correct IP address ready and use it on a web page:

1. Convert a MAC address to an IP address or check the IP address on the ZNS-GIT I IPAdminTool.

(The MAC address is attached on the side or bottom of the device.)



2. Open a web browser and enter the IP address of the device.
3. Click **Continue to this website** on the Security Certificate Alert page.
4. Click **pop-up blocked** and install the ActiveX control. You need to install the ActiveX for displaying the images.
5. Wait for a few seconds while the web page loads. The live video is displayed.

## 6.3. Reset

1. While the device is in use, press and hold the Reset .
2. Release the Reset button after 3 seconds.
3. Wait for the system to reboot.

## 6.4. Factory Default

1. Disconnect the power supply from the device.
2. Connect the power to the device with the Reset button pressed and held.
3. Release the Reset button after 5 seconds.
4. Wait for the system to reboot.

The factory default settings can be inferred as follows:

IP address:	192.168.xx.yy
Network mask:	255.255.0.0
Gateway:	192.168.0.1
User ID:	root
Password:	pass

# APPENDIX (A): SPECIFICATIONS

## Summary

Camera Module				
Model		ZN-Y11VE /ZN-NH11VE	ZN-NHW11VE	
CCD	Image Sensor	Sony 1/3" Super HAD CCD, 410K Pixel	SONY 1/3" Vertical Double Density Color CCD	
	Effective Pixels	NTSC: 768(H) x 494(V) PAL: 752(H) x 582(V)		
	Size	1/3 inch interline transfer CCD		
	Scanning system	2:1 Interlace		
Sync	Frequency	NTSC: 15.734 KHz (H) 59.94 Hz(V) PAL:15.625 KHz(H) 50.00 Hz (V)		
ELECTRICAL	Resolution	540 TV Lines	560 TV lines (Color), 600 TV lines (B/W)	
	S/N (Y signal)	50dB (AGC Off)	52dB (AGC Off)	
	Min. Illumination	0.3Lux/F1.2(Color), 01.Lux/F1.2(B/W), 0.002Lux (Sens-up)	0.3Lux/F1.2(Color), 0.03Lux/F1.2(B/W)	
	Wide Dynamic Range	Not supported	52dB(x128)	
	Color	ON/AUTO		
	AGC Control	OFF/LOW/MIDDLE/HIGH Selectable		
	White Balance	ATW/AWC/MANUAL (1,800° K~10,500° K)		
	Electronic Shutter Speed	AUTO/ MANUAL (NTSC: 1/60~1/120,000, PAL: 1/50~1/120,000)	AUTO/ MANUAL (NTSC: X256~1/60sec~ 1/120,000sec, PAL: X256~1/50sec~ 1/120,000sec) Sens-up and Sens-up Limit is selectable / Flickerless	
	Sens-Up	OFF/AUTO		
	DNR	OFF/LOW/MIDDLE/HIGH (Noise Reduction)	ON (Level 0~32) / OFF Selectable	
Lens	3~8 mm Day & Night Vari-focal Auto Iris (Optional)			
Day & Night	ZN-Y11VE: S/W ZN-NH11VE : IR Cut Filter Remove	IR Cut Filter Remove		
Video				

Compression Format	H.264, MPEG-4, MJPEG Selectable per Stream
Number of Streams	Dual Stream, Configurable
Resolution	D1, 4CIF, VGA, CIF, QCIF, QVGA
Compression FPS	25/30 fps@D1 (PAL/NTSC)
Deinterlacing	Supported (DSP)
Motion Detection	Supported
OSD	Supported (DSP)
Burnt-in Text (Digital)	Supported (DSP)
Output	1 Loop Out (BNC connector)
<b>Audio</b>	
Input / Output	1/1 channel
Compression Format	G.711
<b>Function</b>	
Digital Input / Output	1/1 channel
RS-485	Supported
Network	10/100 Base-T
Protocol	TCP/IP, UDP/IP, HTTP, RTSP, RTCP, RTP/UDP, RTP/TCP, SNTP, mDNS, UPnP, SMTP, SOCK, IGMP, DHCP, FTP, DDNS, SSL v2/v3, IEEE 802.1X, SSH
USB 2.0	Supported
SD Slot	Supported (Micro SD) ※ Micro SD Card is not included
Material	Aluminum
Dimensions	55(W) x 55(H) x 94.2(D) mm

## Electrical Characteristics

Analog Video Output	1Vp-p, 75Ω
Audio Input	Linein, 1.43Vp-p (Min 1.35Vp-p, max 1.49 Vp-p), 39 KΩ
Audio Output	Lineout, 46mW Power, 16 Ω
Sensor(D/I)	TTL level 4.5V threshold, Max 50mA
Alarm(D/O)	Max 500mA@24VAC or 1A@12VDC
Power Source(Approx)	12 V DC 340 mA or PoE IEEE802.3af(class 0)

## Environment Condition

Operating Temperature	0 °C ~ 50 °C (32 °F ~ 122 °F)
Operating Humidity	Up to 85% RH

## VCA (Video Content Analysis)

<b>VCA Presence (Included as Standard)</b>	
High Performance	Advanced Tracking Algorithm, Low False Alarm Rate
Easy to Use	Intuitive Web Browser Interface
Detection Zones	Multi-segment Polygons and Lines
On-screen Display	Real-time Display of Tracking Data and Events
Burnt-in Annotation	Stream or Analog video out (※Analog video out support can vary depending on the device model and hardware version and the firmware version)
<b>VCA Surveillance (Optional)</b>	
Detection Behavior	Camera Tampering, Direction, Stopping, Loitering, Entering, Exiting, Appear, and Disappear Filters
3D Behavior	Perspective Corrected Size and Speed Filters
Statistics	Counting Functions and Other Statistics
Meta Data	Binary XML Format
<b>Image Stabilization (Optional)</b>	
Electronic Stabilization	Removes Camera Sway

## APPENDIX (B): POWER OVER ETHERNET

---

The Power over Ethernet(PoE) is designed to extract power from a conventional twisted pair Category 5 Ethernet cable, conforming to the IEEE 802.3af Power-over-Ethernet (PoE) standard. IEEE 802.3af allows for two power options for Category 5 cables.

The PoE module signature and control circuit provides the PoE compatibility signature and power classification required by the Power Sourcing Equipment (PSE) before applying up to 15W power to the port.

The high efficiency DC/DC converter operates over a wide input voltage range and provides a regulated low ripple and low noise output. The DC/DC converter also has built-in overload and short-circuit output protection.

### PoE compatibility

#### With non Power Sourcing Equipment (PSE)

When it is connected with non PSE, the power adaptor should be connected.

#### With power adaptor

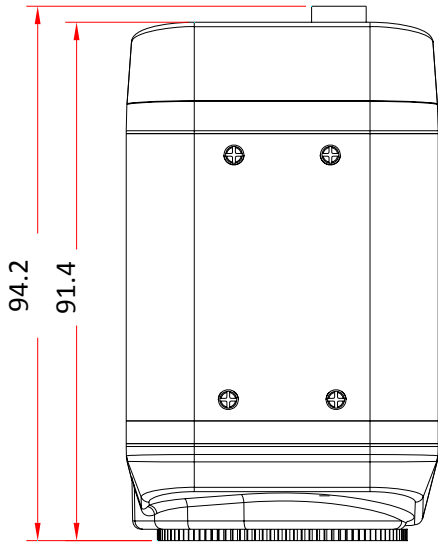
Connecting both PSE and power adaptor does not do any harm to the products. Disconnecting power adaptor while it is operating does not stop operation. The product continues to work without rebooting.

### Power classification

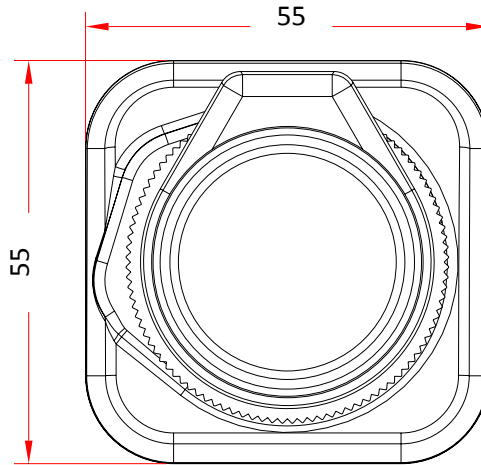
The PoE Power Class supported by the IP device is Class 0.

Class	Usage	Minimum Power Levels Output at the PSE	Maximum Power Levels at the Powered Device
0	Default	15.4W	0.44 to 12.95W

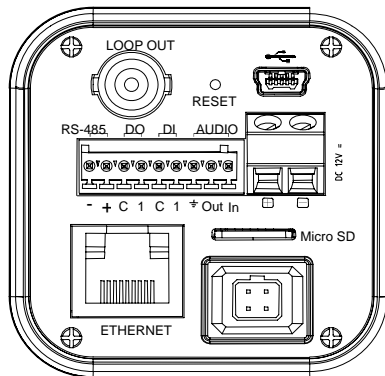
# APPENDIX (C): DIMENSIONS



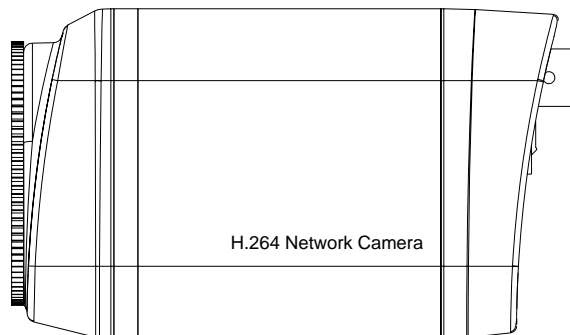
Top view



Front view



Rear view



Right side view

UNIT: mm



# APPENDIX (E): TROUBLE SHOOTING

---

## Checking your Firmware

Firmware is software that determines the functionality of the device. One of your first actions when troubleshooting a problem should be to check the currently installed version. The latest version may contain a correction that fixes your particular problem. The current firmware version in your device can be seen under Setup > About > Version.

New firmware can be downloaded at the FTP site. When you download firmware from the FTP, your product will receive the latest available functionality. Always read the upgrade instructions and release notes available with each new release, before updating the firmware. Please contact us to get an FTP account.

## Support

If you cannot resolve an issue, for additional assistance, please contact your supplier or system integrator.

If you contact our support, please help us help you resolve your problems expediently by providing a server report, log file and a brief description of the problem.

1. In the address bar of your browser, after the unit IP address enter following CGI command.

```
<IP ADDRESS> /nvc-cgi/admin/param.cgi?action=list
```

The server report contains important information about the device, as well as a list of the current parameters.

2. The Log messages in the device can prove a useful diagnostic tool for troubleshooting.  
Go to Setup > Maintenance > System Log > LOG LIST > message.