

NETWORK CAMERA

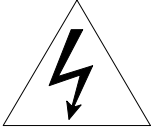

ZN-DT350VP(N)E
ZN-DNT350VP(N)E
ZN-DWNT350VP(N)E

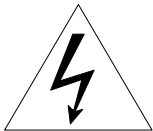
Installation Manual



GANZ[®]

INFORMATION TO USER

	<table border="1"><tr><td>CAUTION</td></tr><tr><td>RISK OF ELECTRIC SHOCK, DO NOT OPEN</td></tr></table>	CAUTION	RISK OF ELECTRIC SHOCK, DO NOT OPEN	
CAUTION				
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 SEERVICE 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.

Table of Contents

1. FEATURES	4
2. PACKAGE CONTENTS	5
3. PART NAMES	6
3.1. Internal View	6
4. INSTALLATION	7
4.1. Installation Template	8
4.2. Manual adjustment for 3-axis movements	9
4.3. Setting the Image Attribute	9
4.4. Operating the OSD Menu	9
5. CONNECTIONS	10
5.1. Connectors	10
6. CONFIGURATION	13
6.1. Set up network environment	13
6.2. View video on web page	13
6.2.1. View video using ZNS-GIT IPAdmin Tool	13
6.2.2. View video using IP address	16
6.3. Reset	16
6.4. Factory Default	16
APPENDIX (A): SPECIFICATIONS	17
Summary	17
Electrical Characteristics	18
Environment Condition	18
VCA (Video Content Analysis)	19
APPENDIX (B): POWER OVER ETHERNET	20
PoE compatibility	20
Power classification	20
APPENDIX (C): DIMENSIONS	21
APPENDIX (D): ACCESSORIES	21
APPENDIX (E): TROUBLE SHOOTING	22
Checking your Firmware	22
Support	22

1. FEATURES

Camera

- Indoor/Outdoor Fixed Dome IP Camera (Vandal Proof)
- High Quality Compression in real time streaming
- 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)
- Improvement of color rolling suppression

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(μ 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
- Micro SD card supported
- PoE supported
- Built-in Video Content Analysis
- OSD supported
- SDK (Software Development Kit) provided

VCA (Video Content Analysis)

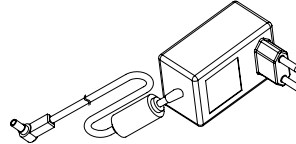
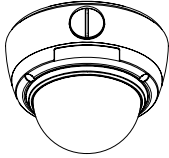
- VCA Presence (Included as basic)
- VCA Surveillance (Optional)

2. PACKAGE CONTENTS

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

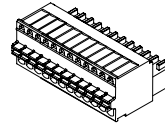
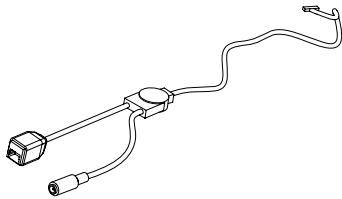
ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE

DC power adaptor



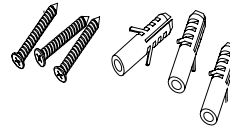
Extension cable
(for LAN and power connector)

11 Pin terminal block



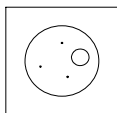
Hex wrench driver

Screws and Anchor blocks



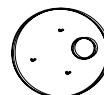
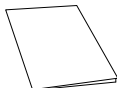
Installation Template

Video BNC Cable



Quick Installation Guide

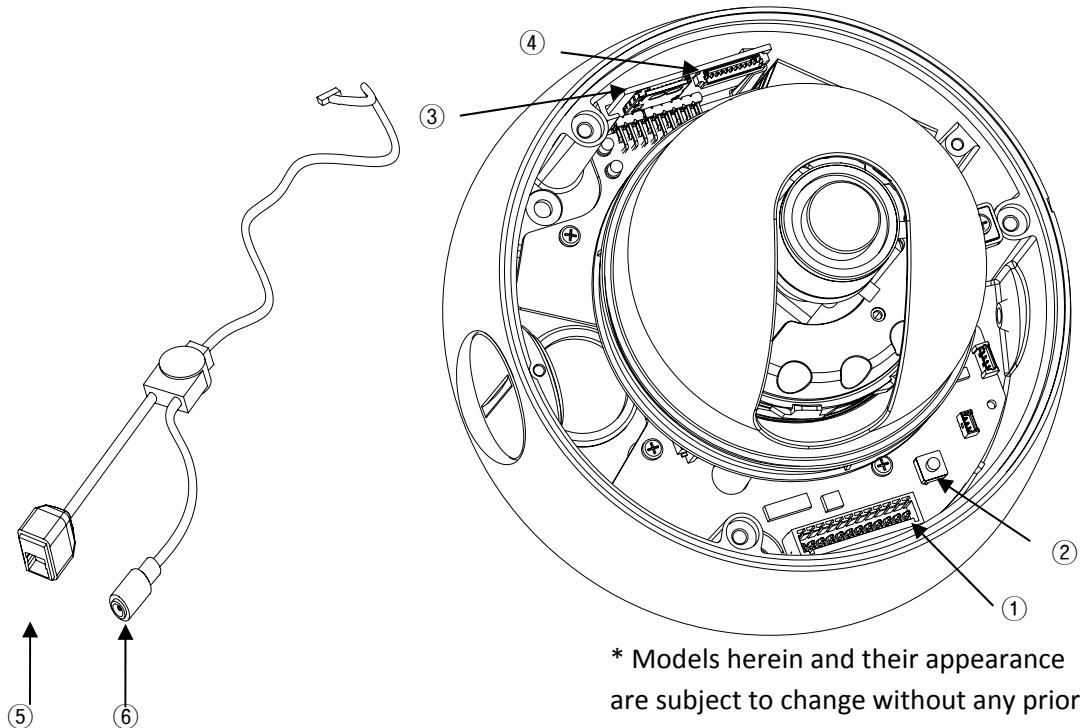
Surface Cushion
(for protection against dust)



The above contents are subject to change without prior notice.

3. PART NAMES

3.1. Internal View



* Models herein and their appearance are subject to change without any prior notice.

① 11 pin terminal block for D/I, D/O, audio, and serial communication

11 pin terminal block for D/I, D/O, Audio in /Out and serial communication. Refer to the section “5.1.Connectors” for more specific information.

② Reset

Reset switch is used for restarting ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE or resetting ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE to Factory Default (FD). Refer to the section “6.3. Reset” for more specific information.

③ Micro SD Card Socket

It is a memory card slot for external storage.

④ Extension cable Socket

It is a socket for LAN and power connector.

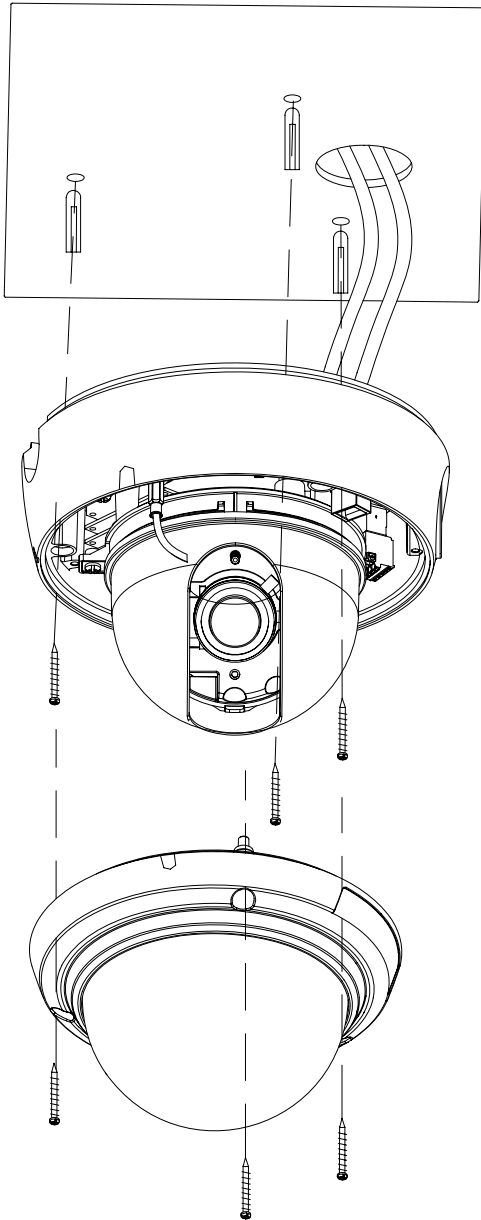
⑤ LAN Connector (Ethernet)

This is a RJ45 LAN connector for 10/100 Base-T Ethernet. This socket can also be used to power the ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE via PoE (Optional).

⑥ Power Adaptor Connector (DC 12V)

ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE needs a DC 12V 1A adapter for power supply.

4. INSTALLATION



1) Connect the LAN cable, power supply cable, and the video loop out cable with the ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE.

2) Place the installation template on the ceiling.

3) Drill three holes on the template and insert anchor blocks into the holes. Fasten the ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE with screws.

4) Put the dome cover on the main body of the ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE. Make sure the main body and the cover fit each other into place.

5) Fasten the cover with screws.



Note

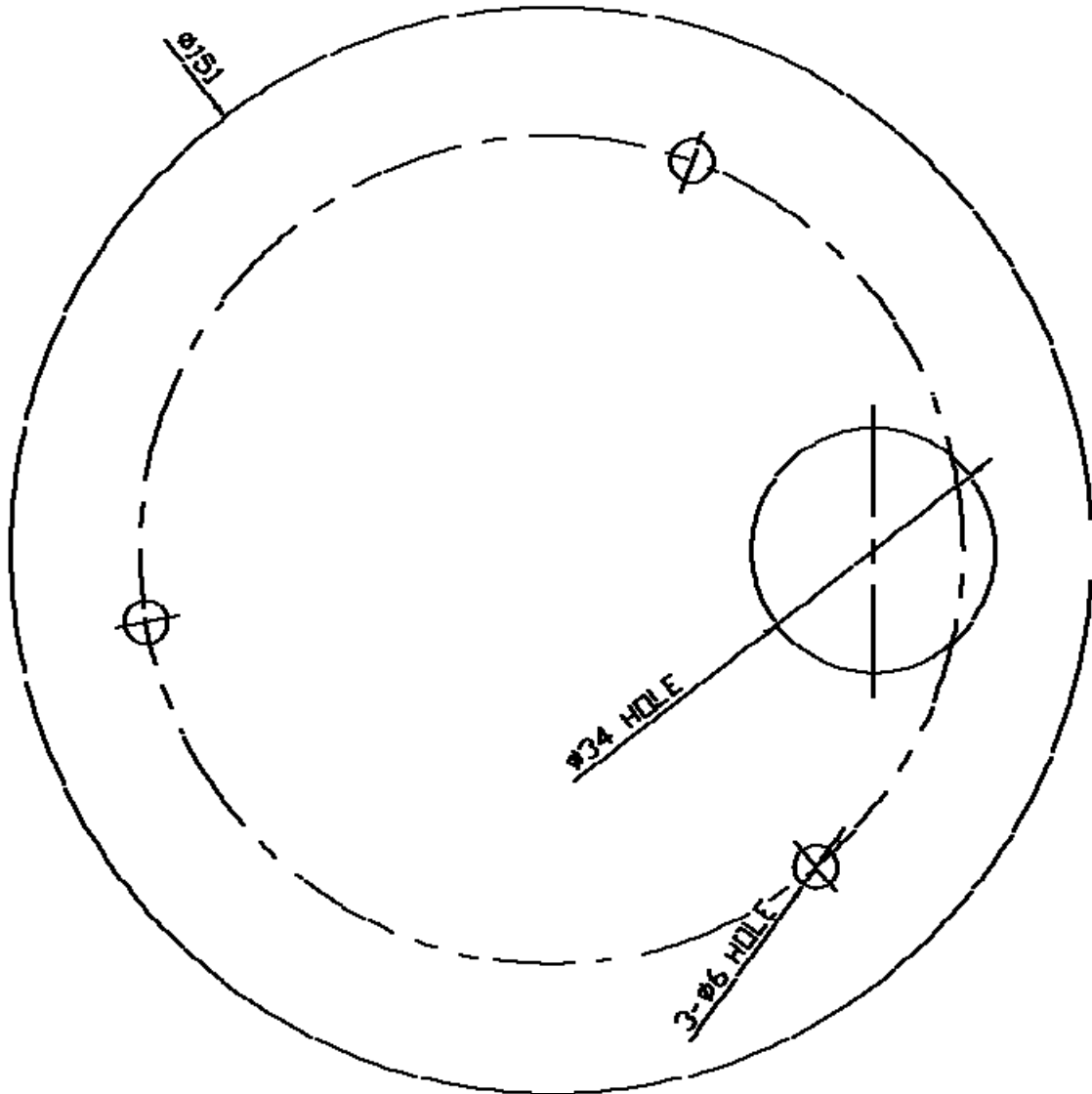
When assembling the main body of the ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE and its dome cover, make sure they fit each other into place.



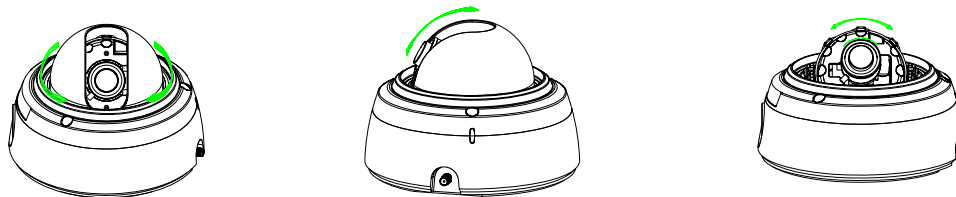
Caution

The ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE may fall off the ceiling even after the proper installation and mounting. To prevent any accident, make sure the ceiling is firm and stable enough to support the ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE. If any reinforcement is needed, consult with your safety personnel and proceed with the installation.

4.1. Installation Template



4.2. Manual adjustment for 3-axis movements



After installation, make a manual adjustment on the inner liner. Perform 3-axis movements manually by turning the inner liner to different directions as above, and check if it moves properly.

4.3. Setting the Image Attribute

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

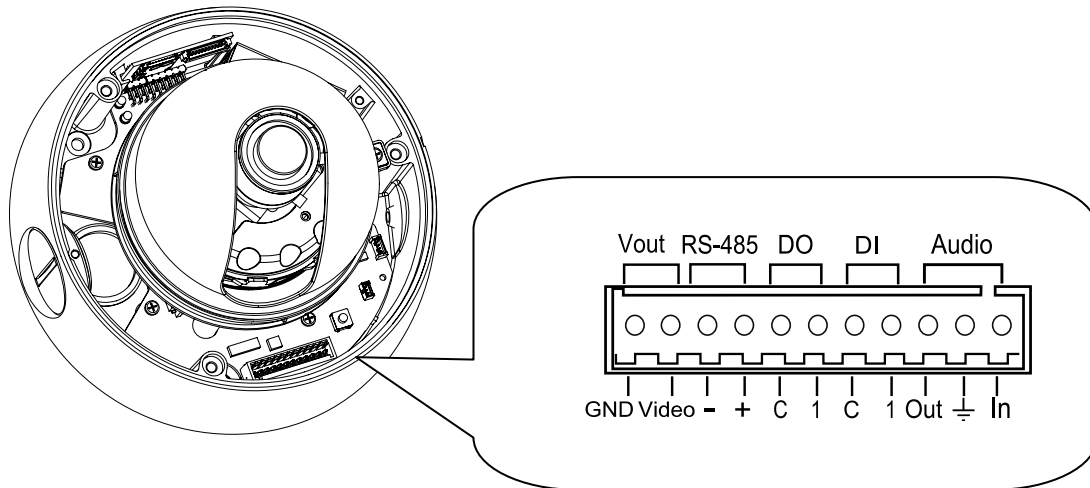
The menu of image attribute can be seen under **Setup > Video & Audio > Video-in > Attribute Setting**. Brightness, contrast, hue, saturation and sharpness can be adjusted.

4.4. Operating the OSD Menu

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

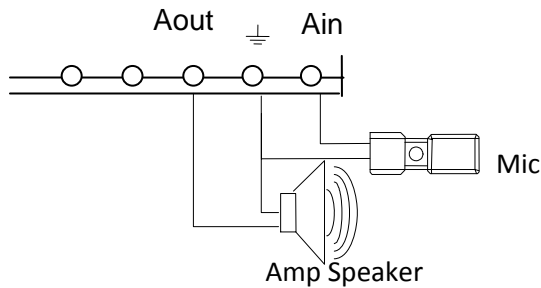
5. CONNECTIONS

5.1.Connectors



① Audio In / Out

ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE 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).



② Sensor (DI) connection

ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE 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.

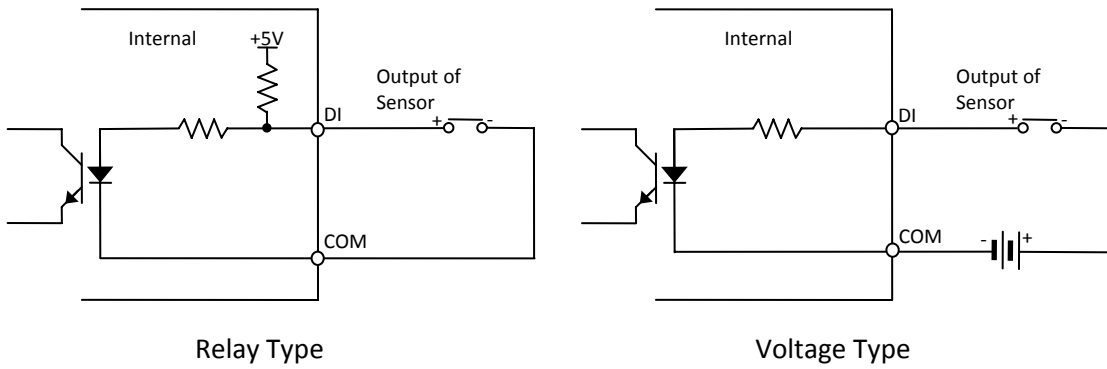
Input voltage range: 0 VDC minimum to 24 VDC maximum

Input voltage threshold: 1 V



Caution

Do not exceed the maximum input voltage or relay rate.



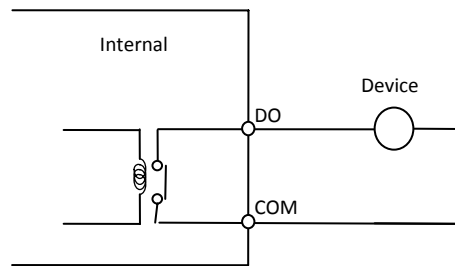
③ Alarm (DO) connection

Only the relay type is supported.

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



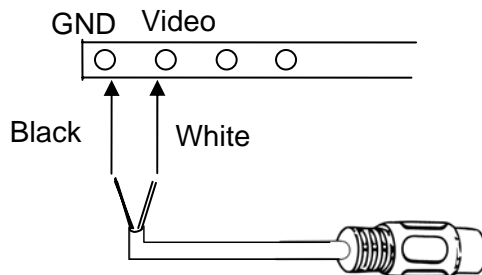
Do not exceed the maximum relay rating.



Relay Type

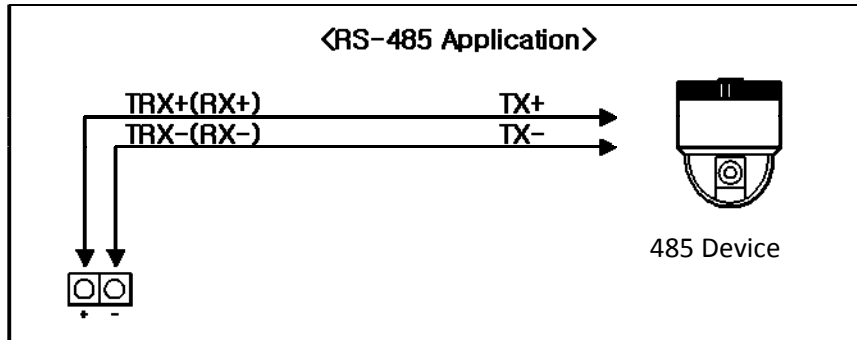
④ Video Out

ZN-DT350VE/ZN-DNT350VE/ZN-DWNT350VE provides 1 video loop out.



⑤ RS-485

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



RS-485 Connection

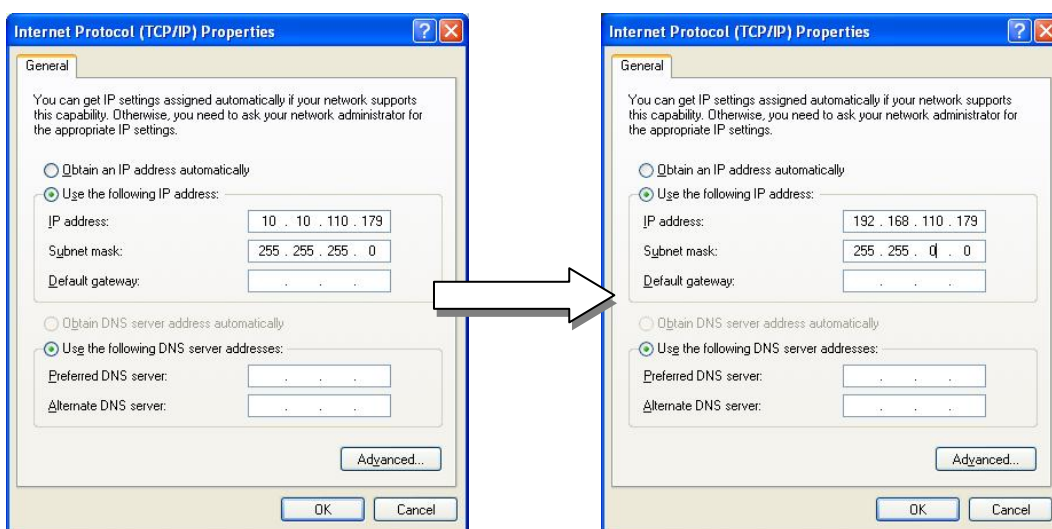
6. CONFIGURATION

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 IPAdminTool or enter the IP address on the web page.

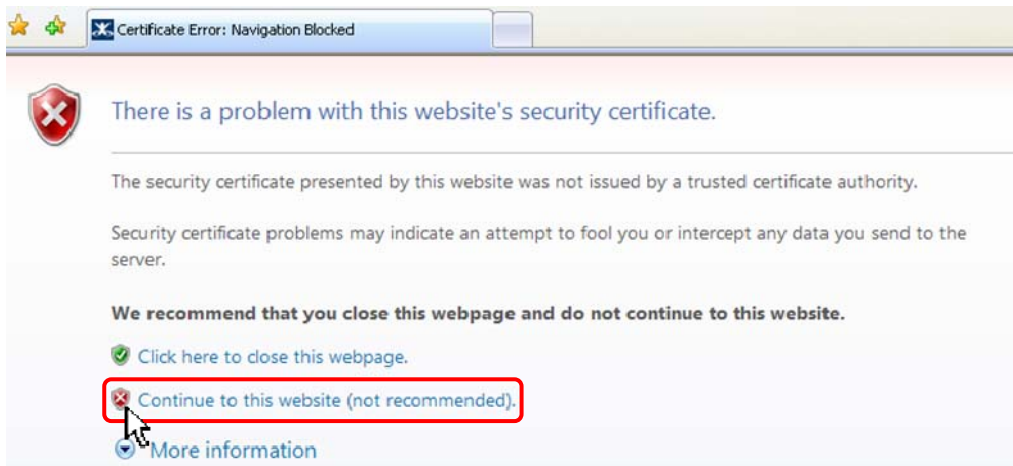
6.2.1. View video using ZNS-GIT IPAdmin Tool

ZNS-GIT IPAdminTool automatically searches all activated GANZ network camera and encoder series 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-up blocked** and install the ActiveX control as below. You need to install the ActiveX for displaying the images.



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

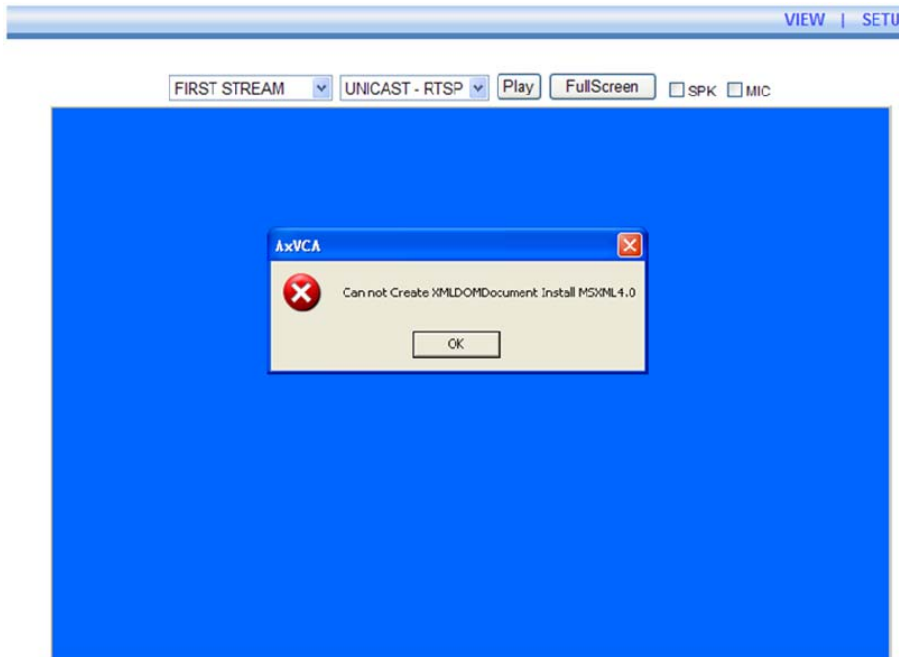


Plugin1 Plugin2

v1.20.00

- 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.)

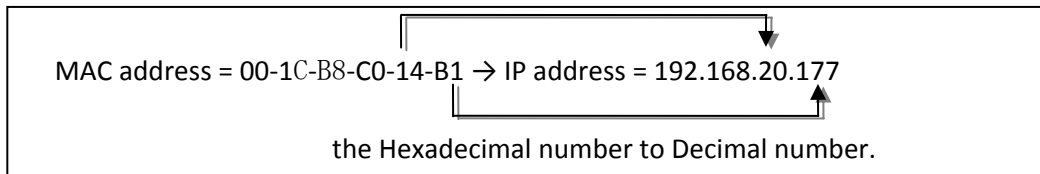


6.2.2.View video using IP address

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 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 as below. 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 button.
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-DT/DNT350VE	ZN-DWNT350VE	
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		2.8~10.5 mm F1.2 DC Auto Iris Board Vari-Focal		
Day & Night		SW (ZN-DT350VE) IR Cut Filter Remove (ZN-DNT350VE)	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
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)
Audio	
Input/output	1/1 channel
Compression Format	G.711
Function	
Digital Input/output	1/1 channel
RS-485	Supported
Network	10/100 Base-T
Power over Ethernet	Supported
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
SD Slot	Supported (MicroSD) ※ Micro SD Card is not included
Material	Aluminum Die Casting-2
Dimensions	Housing : 150.8(∅) 113(H) mm Dome : 100(∅) mm
Color	White Pearl

Electrical Characteristics

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 300 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)

VCA Presence (Included as Standard)	
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)
VCA Surveillance (Optional)	
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
Image Stabilization (Optional)	
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

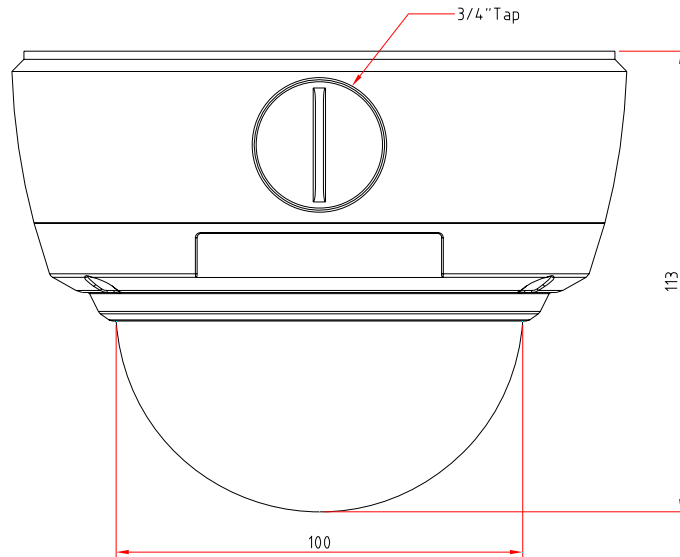
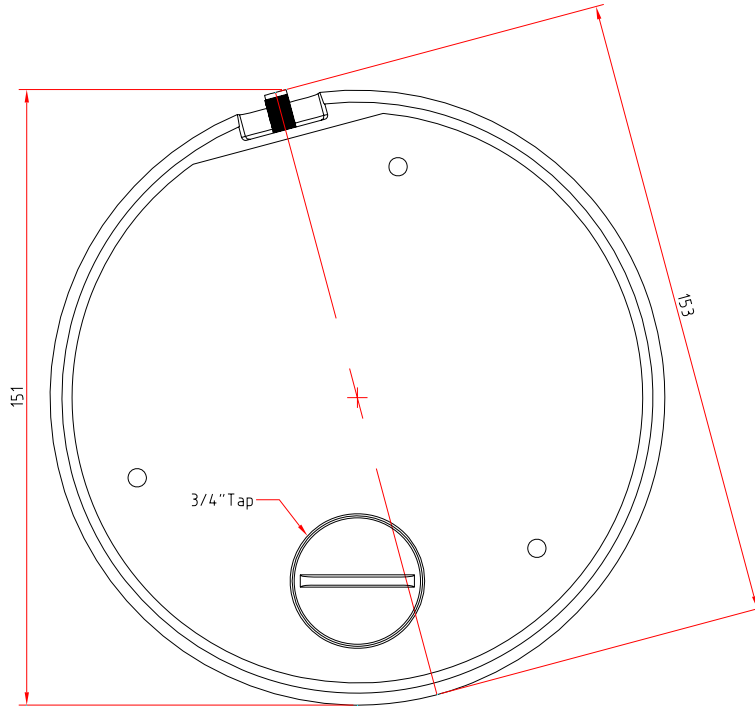
Connecting both PSE and power adaptor does not do any harm to the products. Disconnecting power adaptor while it is operating does not stop operation. The product continues to work without rebooting.

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



(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.