EVA 101

Installation Guide

INFORMATION TO USER

⚡	**CAUTION**	⚠
	RISK OF ELECTRIC SHOCK, DO NOT OPEN	
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.		
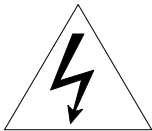
⚡	This symbol is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
⚠	This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Table of Contents

FEATURES

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(μLaw, 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)

PACKAGE CONTENTS

Unpack carefully and handle the equipment with care. The packaging contains:
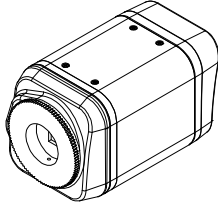
EVA 101   **DC power adaptor**
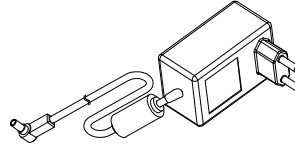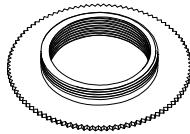
Mount ring   **9 Pin terminal block**

Rubber cap (for protecting CCD)   **Hexa wrench driver**

Adaptor for mounting the camera   **Screws**

Quick Installation Guide   **DC Jack Adaptor Cable**
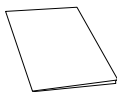
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Note   The above contents are subject to change without prior notice.

PART NAMES

Rear View
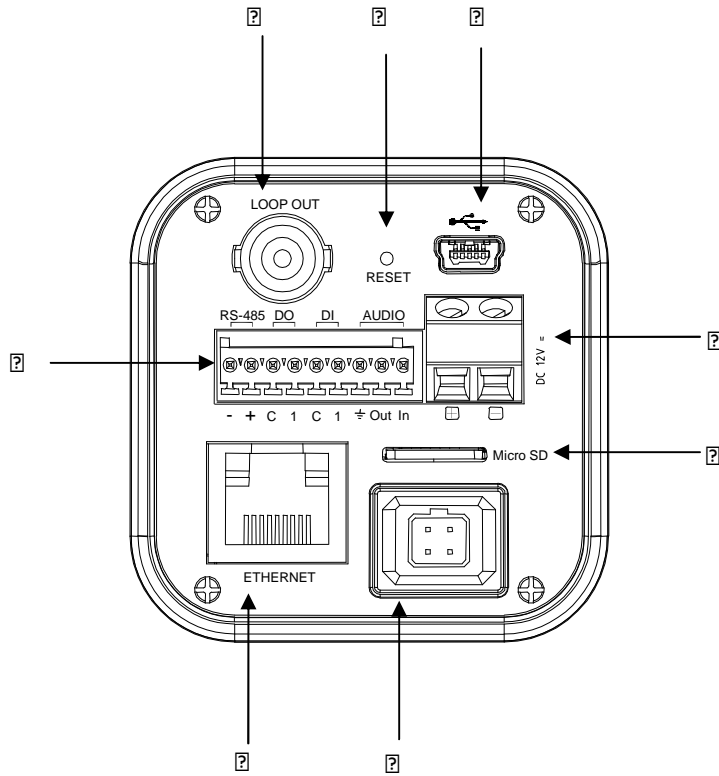
Bottom View
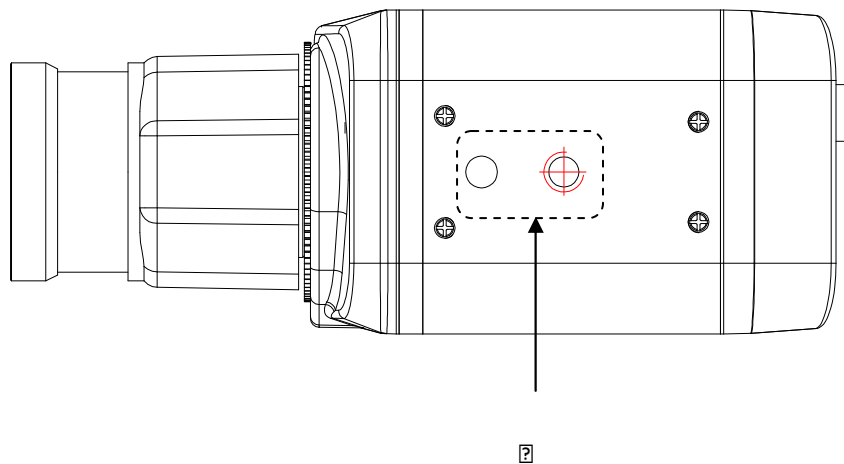
○,¹ **Analog video out**

It is an analog video output port.

○,² **Reset Switch (Reset)**

Reset switch is used for restarting EVA 101 or resetting EVA 101 as Factory Default (FD).
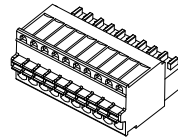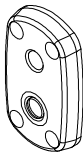

○,³ **USB connector**

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**

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

EVA 101 needs a DC12V for power supply.
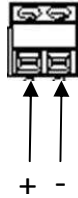
+ -

!

Caution   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.

Status LED Network LED
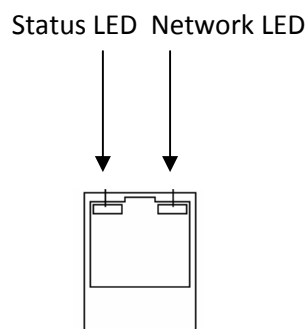
○,₈ **4 pin connector for Auto IRIS**

Only DC-drive type is supported.

○,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.

INSTALLATION

CCW

CW

CW

Set Screw

(For IRIS LENS)
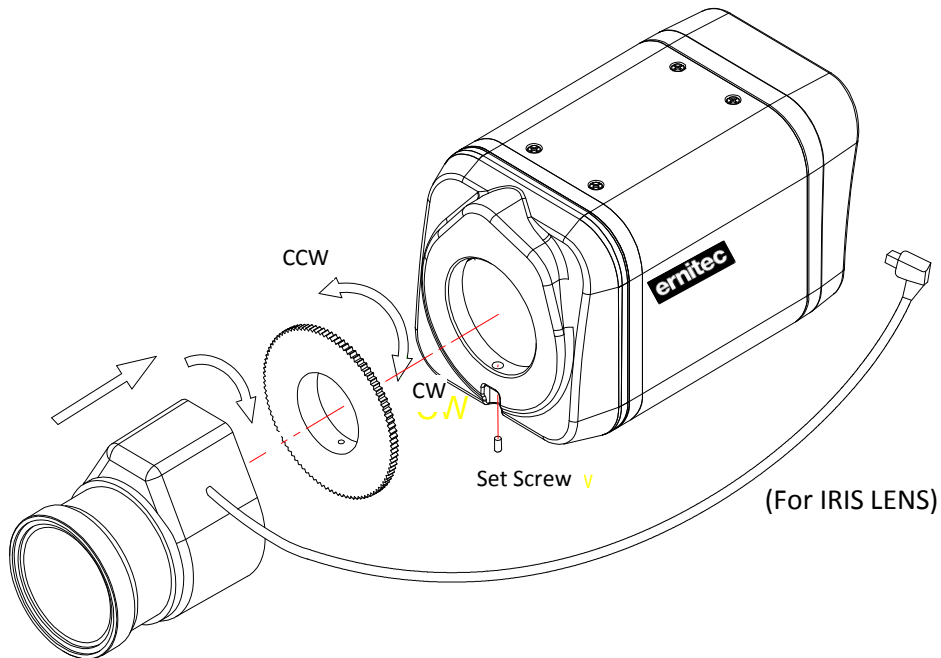
Installing a C/CS Mounting lens

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 hexa wrench in the package.

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.

| **i** **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. |

| **i** **Note** | Only DC-drive type is supported. |
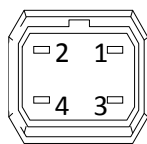
4 pin connector for IRIS

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

Analog Video Out

LOOP OUT

RESET

RS-485 DO   DI   AUDIO

- + C 1 C 1 ÷ Out In

DC 12V ═

DC   Jack   Adaptor

Power Adaptor

LAN Cable

Micro SD

ETHERNET

4 pin connector for iris
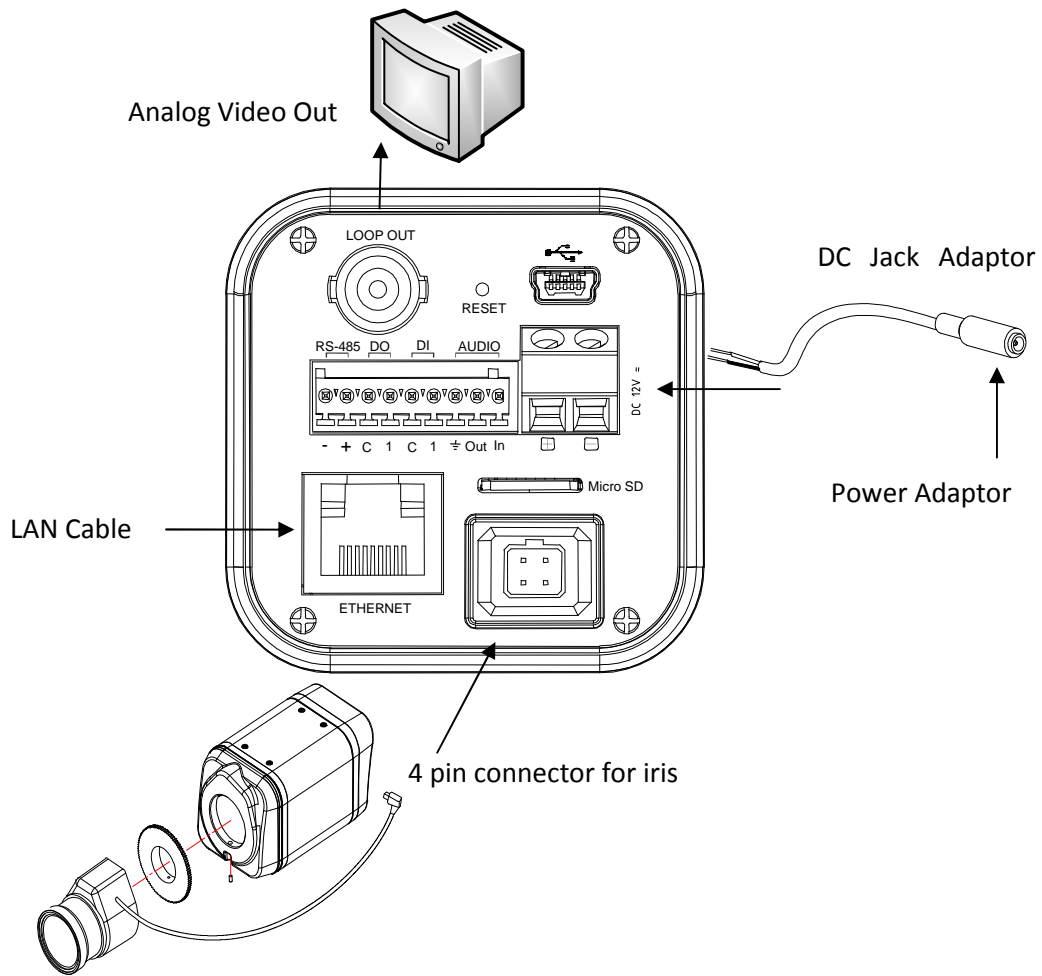
!
Caution

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

CONNECTIONS

9 pin terminal block
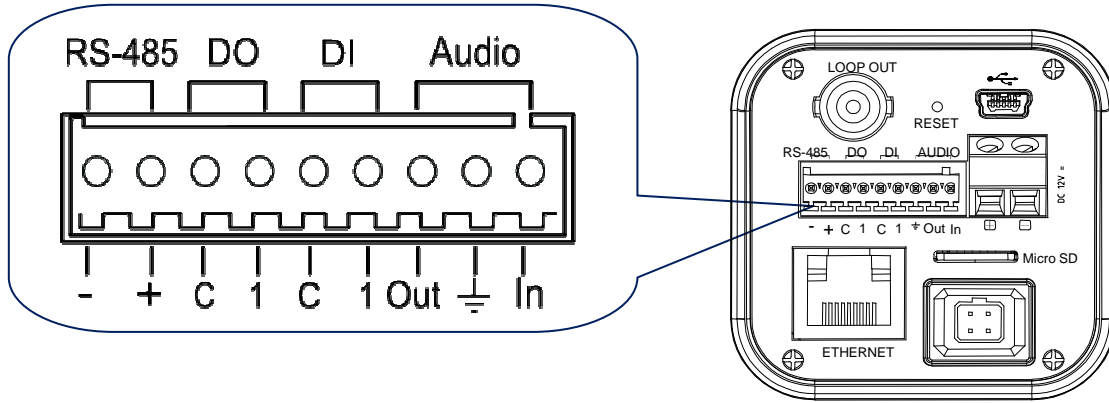
RS-485

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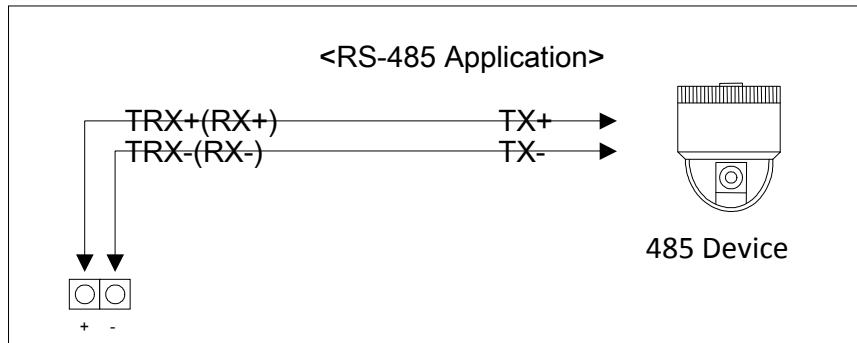
RS-485 Connection

Sensor (DI) connection

EVA 101 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.

Relay Type   Voltage Type
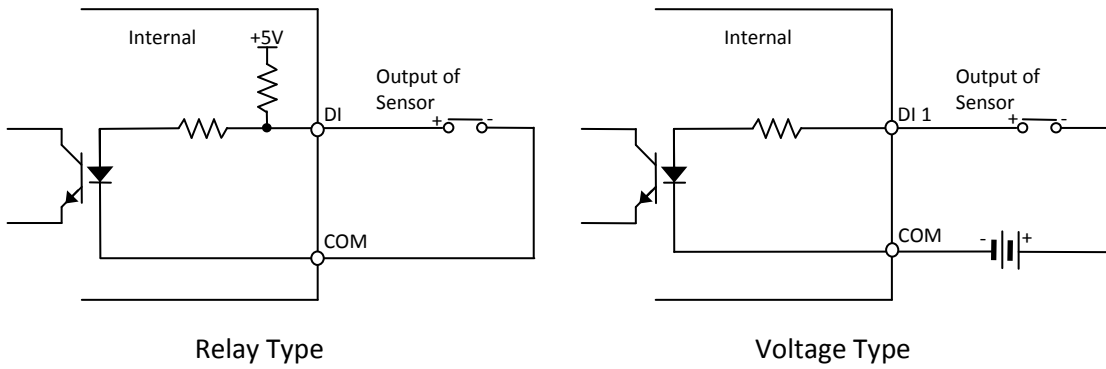
Alarm (DO) connection
Only the relay type is supported.
Relay Rating: Max 24VAC 500mA or 12VDC 1A

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Caution   Do not exceed the maximum relay rating.
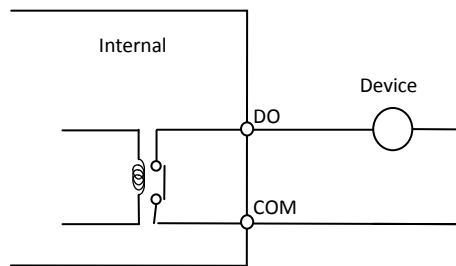
Relay Type

Audio connection
EVA 101 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.)

Aout ── Speaker

Ain ── Mic
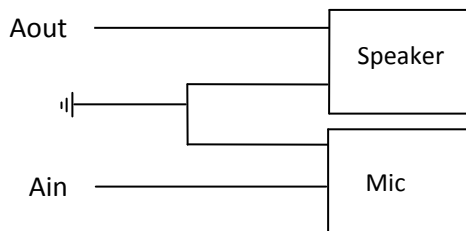
Power Adaptor Connector (DC 12V)

Power adaptor connector connects to DC Jack adapter cable.
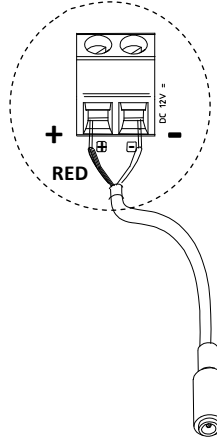
⚠ **Caution**	Make sure the polarity is correct. Incorrect connection may cause malfunction or damage to the IP device
⚠ **Caution**	Power Adaptor Connector (DC 12V)

CONFIGURATION

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**
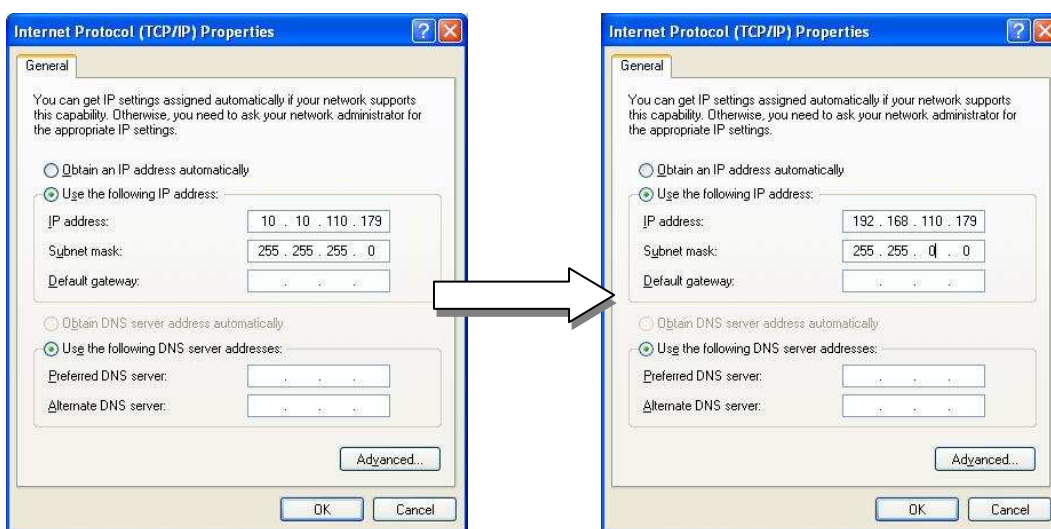
View video on web page

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

View video using IPAdmin Tool

IPAdminTool automatically searches all activated ERNITEC EVA series and shows the product name, IP address, MAC address and etc. IPAdminTool is provided with SDK at the following SDK path.
{SDK root}\BIN\TOOLS\AdminTool\

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

1. Start IPAdminTool. Names and info of currently activated ID 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)
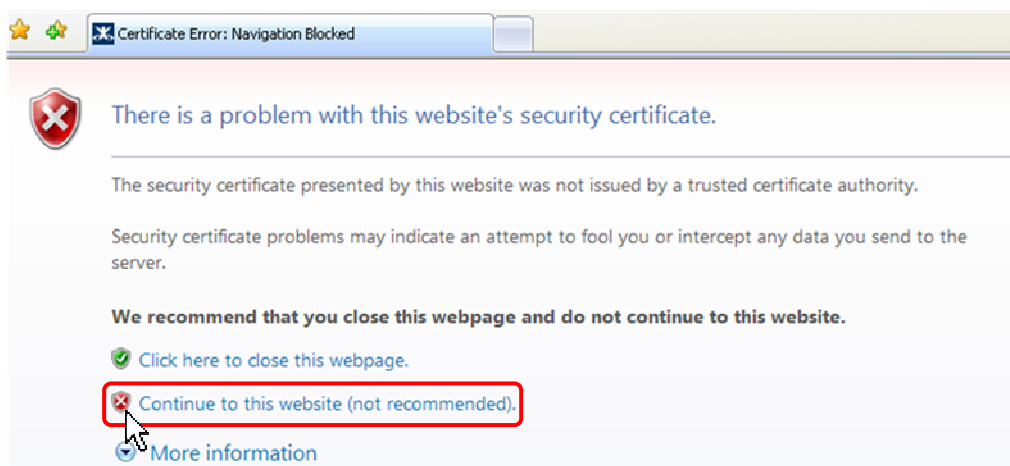
4. Click **pop-up blocked** and install the ActiveX control as below. You need to install the ActiveX for displaying the images.

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

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.)

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 IPAdminTool.

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

MAC address = 00-13-23-01-14-B1 → IP address = 192.168.20.177

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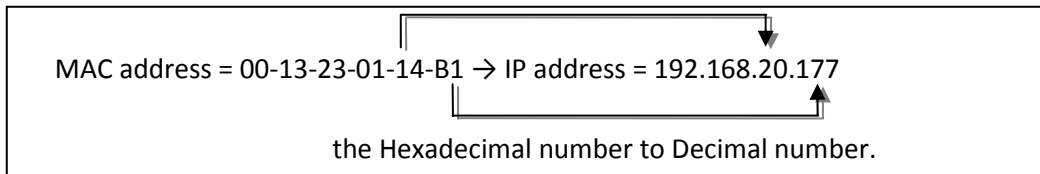
2. Open a web browser and enter the IP address of the device.
3. Click **Continue to this website** on the Security Certificate Alert page.
4. Click **pop-up blocked** and install the ActiveX control as below. You need to install the ActiveX for displaying the images.
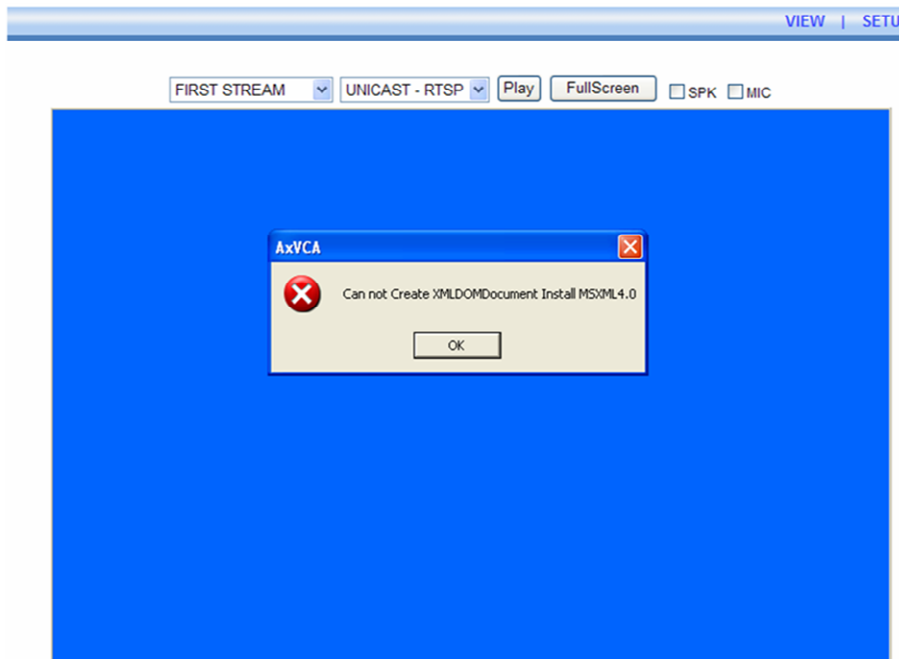5. Wait for a few seconds while the web page loads. The live video is displayed.

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.

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.

APPENDIX (A): SPECIFICATIONS

Summary

Camera Module			
Model		EVA 101-DN	EVA 101-WDR
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		Day & Night Vari-focal Auto Iris (Optional)	
Day & Night		EVA 101-DN: S/W EVA 101- : 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)
Audio	
Input / Output	1/1 channel
Compression Format	G.711
Function	
Digital Input / Ouput	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, PPPoE, SSL, v2/v3, IEEE 802.1X, SNMP, SSH, and IPv6
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

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
VCA Surveillance (Optional)	
Detection Behavior	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

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

Environment Condition

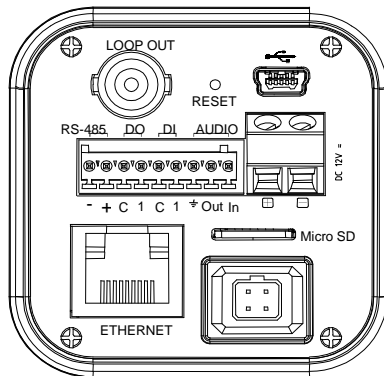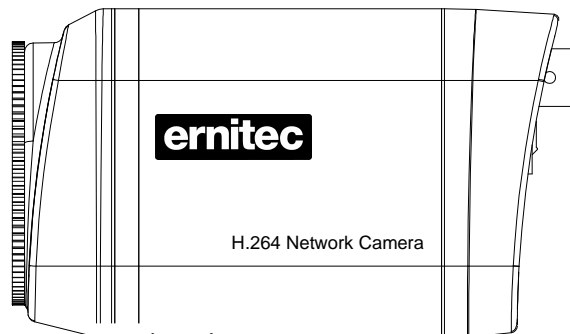| Operating Temperature	0 ˚C ~ 50 ˚C (32˚F ~ 122 ˚F)
Operating Humidity	Up to 85% RH

APPENDIX (B): DIMENSIONS
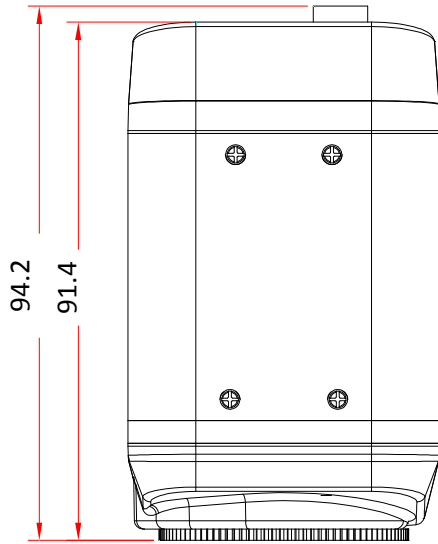
Top view
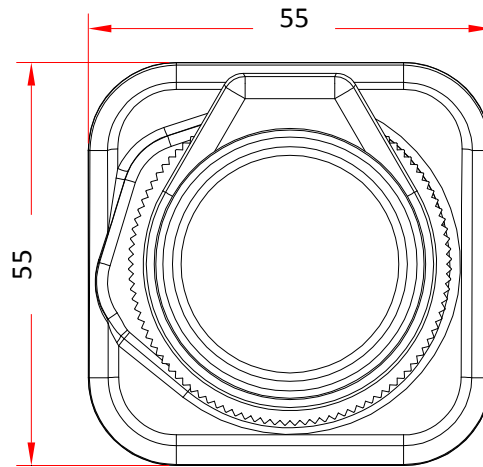
Front view

Rear view

Right side view

UNIT: mm

APPENDIX (C): ACCESSORIES

APPENDIX (D): 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 or go direct to our Technical Support Team. (support@udptechnology.com)

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.

REVISION HISTORY

MAN#	DATE(D/M/Y)	Comments
01A.01	12/03/2009	Created.
01A.02	23/06/2009	Modified
01A.03	25/06/2009	Added TroubleShooting
01A.04	26/06/2009	Added Model specification
02A.00	24/07/2009	FW 1.00.07 official release version
02A.01	06/08/2009	PoE is supported by default. Added images to package contents
02A.02	24/08/2009	Added the requirement of VCA : MSXML4.0