



Hardware User's Manual

Megapixel Day & Night
Vandal Dome Network Camera
Quality Service Group
Vandal Dome Series

Review History:

1. Separate User Manual into HW and SW.
2. Merge VD-100A/ VD-130A/ VD-130N/ VD-300A/ VD-302A/ VD-300N/ VD-302N/ VD-500A / VD-502A/ VD-501Af series into this Hardware User Manual.
3. Add Waterproof Connector into accessory list.
4. Add new functions.
5. Merge VD-200Np V6/ VD-202Ne V6/ VD-300Np Star/ VD-302Ne Star/ VD-500Ap V6/ VD-502Ae V6/ VD-H200Np WDRPro/ VD-H300Np Star

Product name: Network Camera (Vandal Dome series)

Release Date: 2015/5

Manual Revision: V3.3

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Before You Use This Product

In many countries, there are laws prohibiting or restricting the use of surveillance devices. This Network Camera is a high-performance, web-ready camera which can be part of a flexible surveillance system. It is the user's responsibility to ensure that the operation of this camera is legal before installing this unit for its intended use.

Upon opening the product's package, verify that all the accessories listed on the "Package Contents" are included. Before installing the Network Camera, read the warnings in the "Quick Installation Guide" to avoid misuse. When installing the Network Camera, carefully read and follow the instructions in the "Installation" chapters to avoid damages due to faulty assembly or installation.

Regulatory Information

Federal Communication Commission Interference Statement

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 in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



IMPORTANT NOTE:



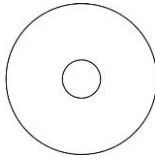


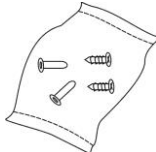
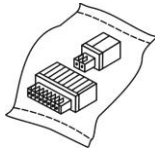



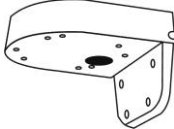
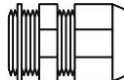
FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

Chapter 1 - Package Contents

<p>a. Network Camera</p> 	<p>b. Dry Bag, Strap Tie</p> 
<p>c. Product CD</p> 	<p>d. Location Sticker</p> 
<p>e. Warranty Card</p> 	<p>f. Screw Bag</p> 
<p>g. Terminal Block</p> 	<p>h. Allen Key</p> 
<p>i. Easy Installation Guide</p> 	<p>j. High Power PoE (*)</p> 
<p>k. Wall Mount Bracket: L-WM-01(*)</p> 	<p>l. Waterproof Connector: WPC-EU(M20)/ WPC-US (3/4'') (*)</p> 



NOTE - (*) These are optional features. Please refer to the Product List for the full list of optional features that are available for this product.

Chapter 2 - Vandal Dome Network Camera

Overview

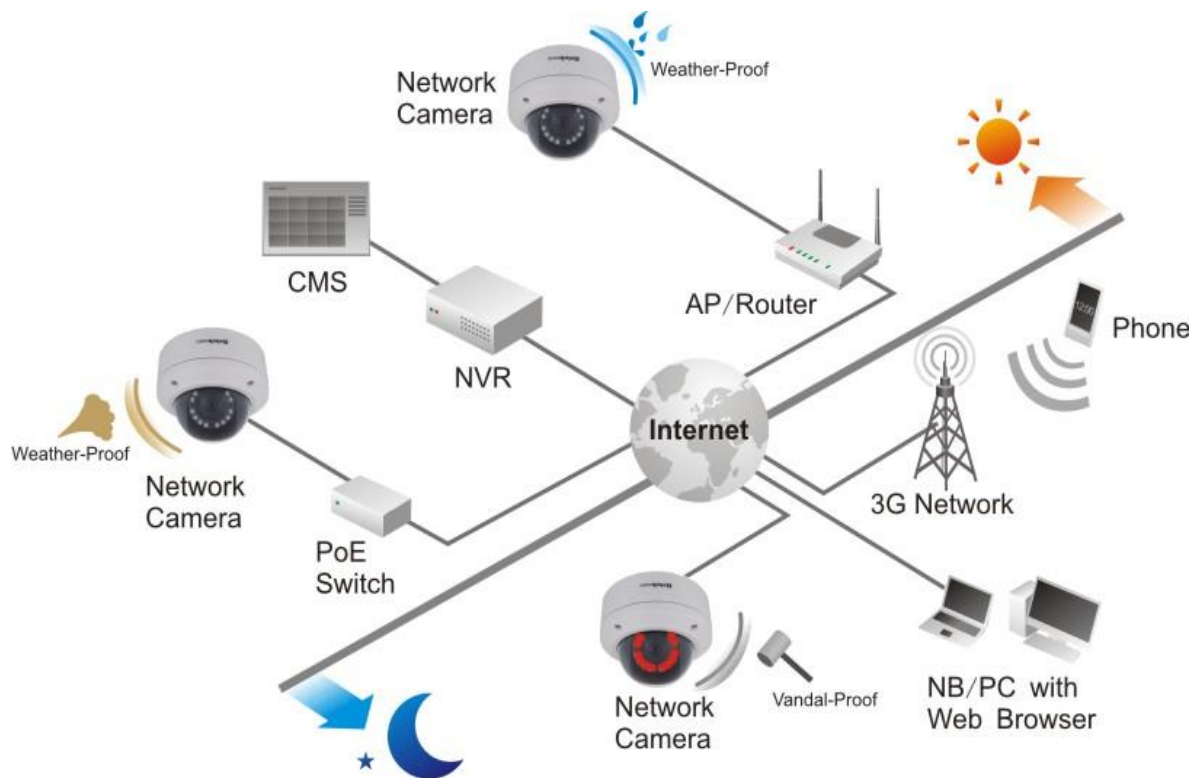
The VANDAL DOME SERIES is a full-featured, 3-axis, fixed-dome, network camera. With a megapixel progressive sensor and built-in IR-cut filter/ IR illuminator LEDs/ Auto Light sensor, it can provide 24-hour, indoor surveillance. The VANDAL DOME SERIES features a wide-angle and vari-focal lens, which offers wide view coverage of all angles.

The VANDAL DOME SERIES is designed to provide end users with high quality video feed for an easily accessible security system. The embedded high performance image sensor and CPU allow for each camera to stream real time, high resolution video at 30 fps. It can transmit video using many codec compression options, including MPEG-4/MJPEG/H.264, which reduce bandwidth and storage requirements without compromising image quality. For easy viewing of the video feed, users can view the live feed from anywhere through internet browsers or 3G portable devices.

Installation is simplified by the added support for Power over Ethernet which enables each camera to receive power through the same cable as for data transmission. The DI/DO function allows users to connect the VANDAL DOME SERIES to external alarm and sensor devices for added security protection.

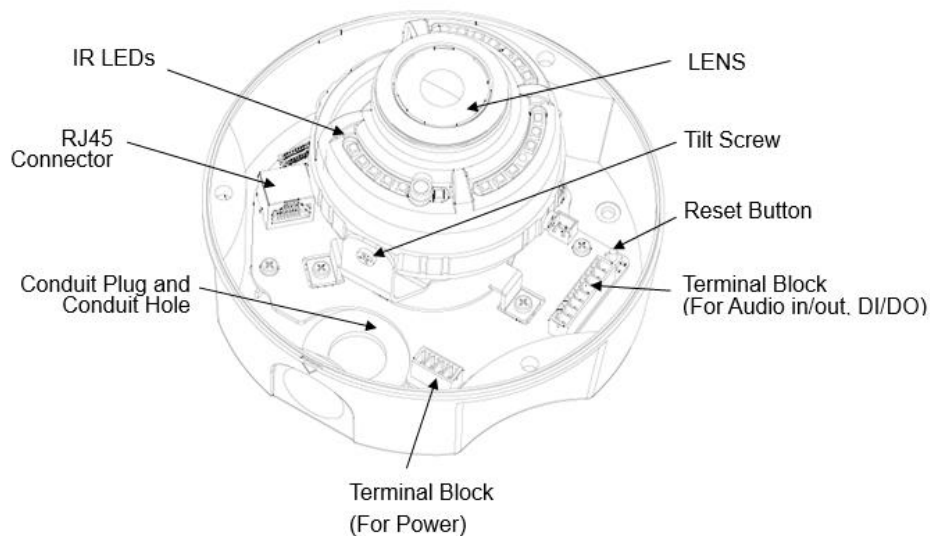
Users do not have to worry about their camera as its vandal proof enclosure protects it from damage caused by vandalism or harsh environments. With an IP66 certified enclosure, the VANDAL DOME SERIES is not only weather proof, but also dust and rust resistant. By utilizing a built-in industrial fan and heater, it can perform well in extreme temperatures.

With the included EasyConfig installation software, this series offers end-users easy installation without the need for a strong technical background. The 3-axis mechanical design makes the VANDAL DOME SERIES the perfect security camera for any school, bank, or corporate office surveillance system.

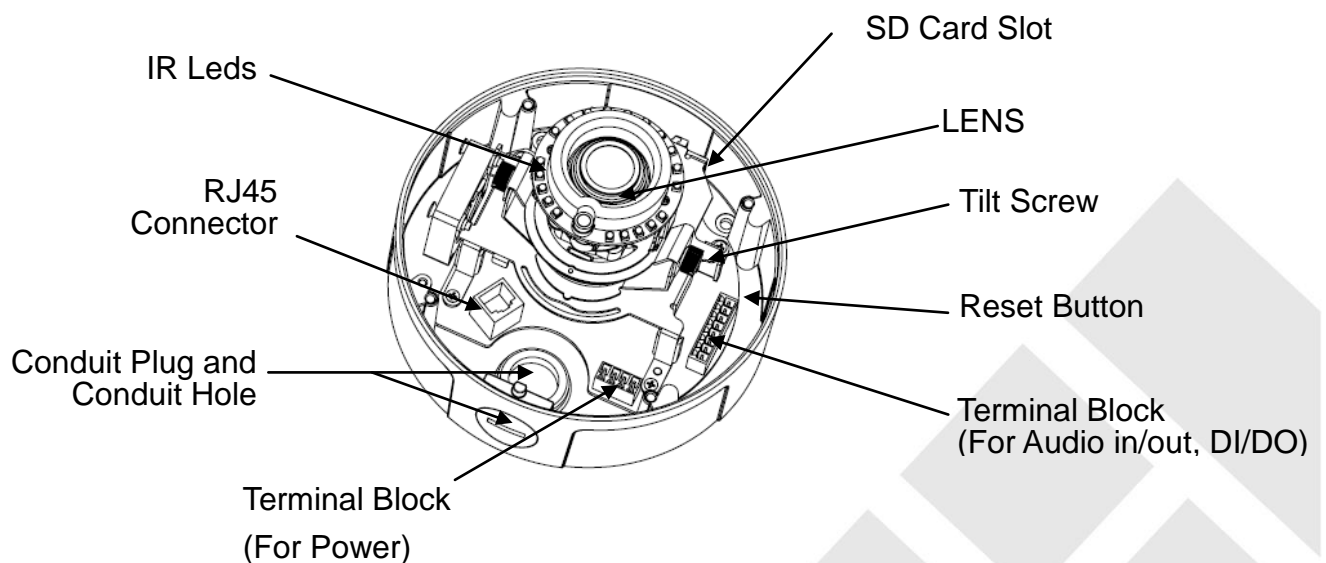


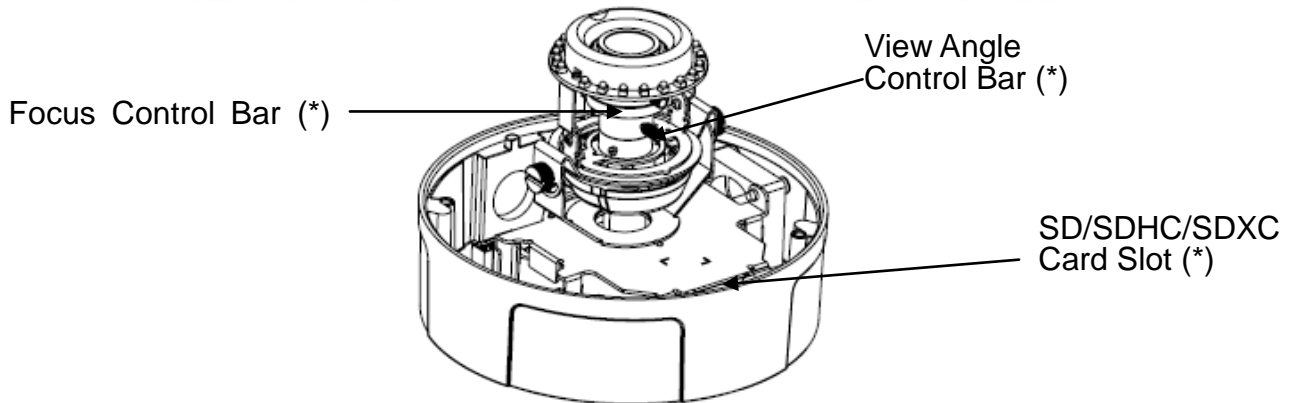
Chapter 3 - Device Appearance Description

- Below “ Device Appearance Description” is for VD-200Np V6/ VD-202Ne V6/ VD-300Np Star/ VD-302Ne Star/ VD-500Ap V6/ VD-502Ae V6/ VD-H200Np WDRPro/ VD-H300Np Star

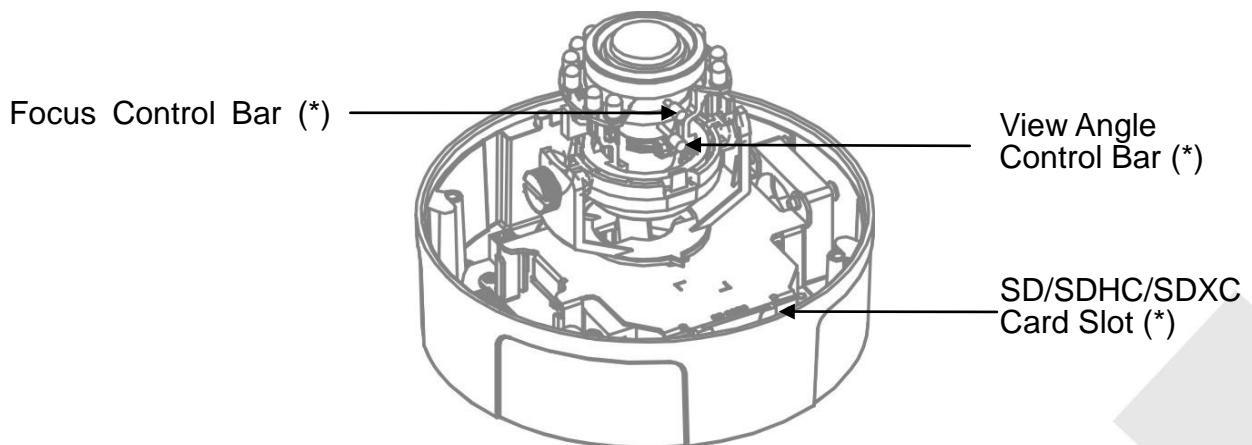
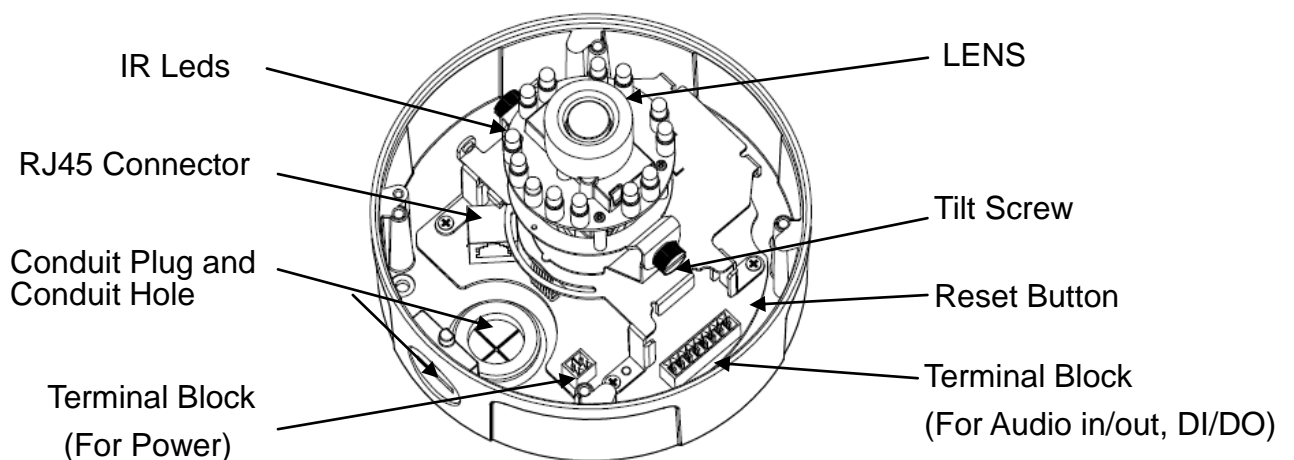


- Below “ Device Appearance Description” is for VD-200N series / VD-202N series / VD-300N series / VD-302N series / VD-200A series / VD-202A series / VD-300A series/ VD-302A series/ VD-500A series/ VD-502A series





3. Below “ Device Appearance Description” is for VD-501Af-series



NOTE

1. **SD Card Capacity (*)** - The network camera is compatible with SD/SDHC /SDXC (Maximum 64GB) cards.
2. (*) These are optional features. Please refer to the Product List for the full list of optional features available for the product.

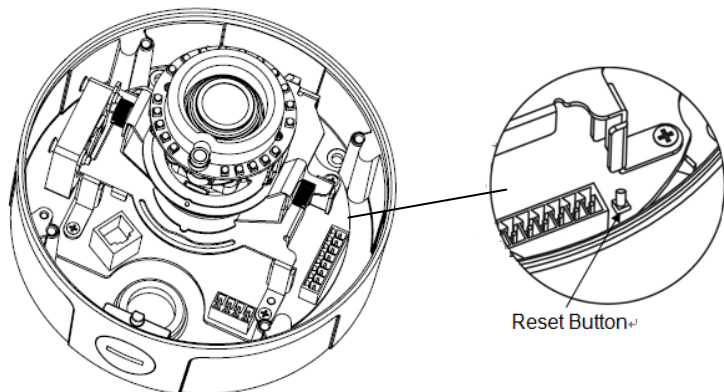
Chapter 4 - LED Behavior

Function	LED Behavior	Description
Power LED	Continuous illumination (Green)	Power on
Power LED	Unlit	Power off
Link LED	Continuous illumination (Red)	Link
Link LED	Blinking (Red)	Connecting

< DI/DO Diagram >

Models	VD-501Af-series	Others
Diagram	<p>The diagram for the VD-501Af-series shows a 4.5V power supply connected to PIN 1 (Power +4.5V) and PIN 2 (Digital Output). PIN 3 is a Digital input connected to a 4.5V supply, and PIN 4 is Ground.</p>	<p>The diagram for other models shows a +12V power supply connected to PIN 1 and PIN 2 (Digital Output). PIN 3 is a Digital input connected to a +12V supply, and PIN 4 is Ground.</p>

< Hardware Reset >



The Reset Button can be used to reboot the camera, restore it to factory default settings, or switch on FocusEasy. If the camera experiences a problem, rebooting the camera may correct the problem. If the problem remains, please restore the camera to factory default settings and reinstall the software.

To Start/Cancel FocusEasy

To Start FocusEasy, please press and hold the reset button for 2-3 seconds. The camera will play the melody indicating FocusEasy is already started. Then follow the beeps to adjust the focus. To cancel FocusEasy, please press and hold the reset button again for 2-3 seconds. The camera will play another melody indicating FocusEasy is already shut down.



NOTE -FocusEasy is supported only on the Specific professional manual-focal cameras, and is NOT supported on any moto-focal cameras.

To Reset

Press and hold the Reset Button for more than 10 seconds using a paper clip or thin object. Wait for the camera to reset to default.



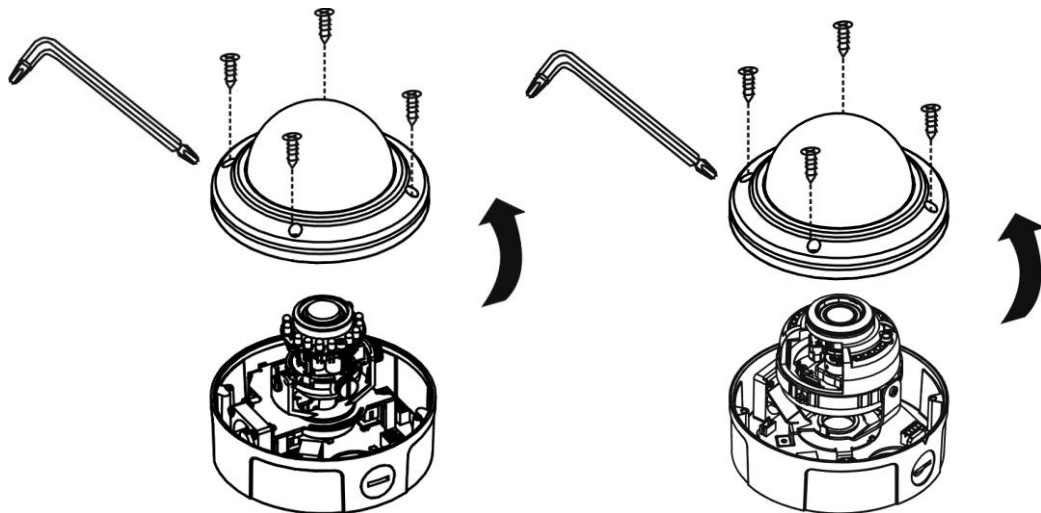
NOTE - By resetting the camera, all settings will be restored to the factory default settings.

Chapter 5 - Installation

5.1 Hardware Installation

a. Remove the vandal dome cover:

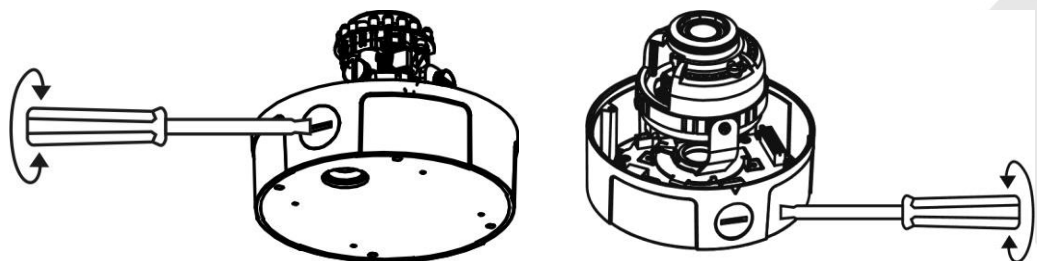
Use the Allen Key to unscrew the four screws and remove the dome cover from the camera device.



b. Open/Close The Conduit Hole:

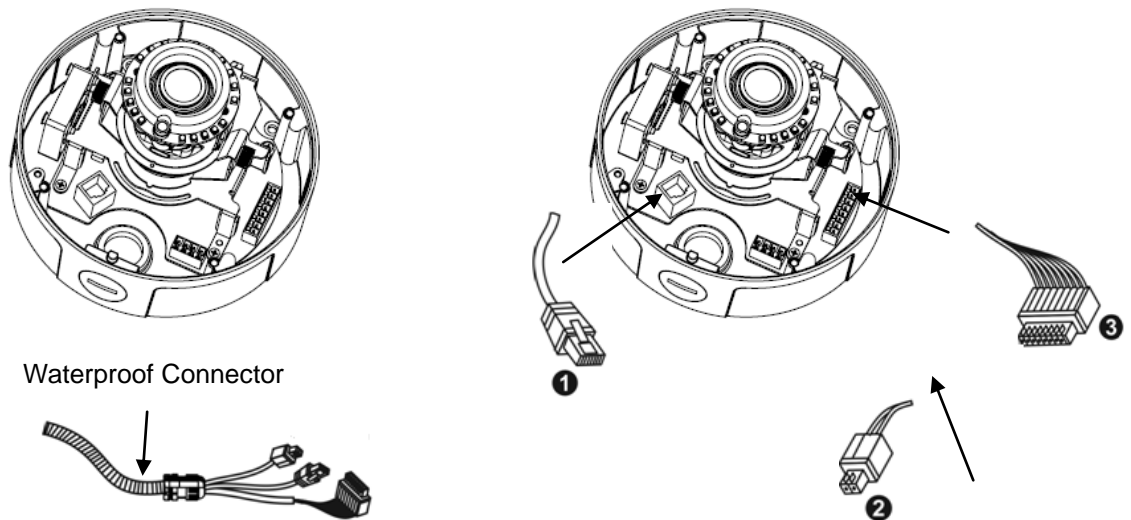
The conduit hole allows the air to circulate through the camera device. By default, a lid is attached to the conduit hole on the side of the camera device, and the conduit hole on the bottom of camera device is open.

Please use the screw driver to screw/ unscrew the lid. Please note that the lid and the waterproof connector must be tightly screwed to the conduit hole to achieve IP67.



c. PoE, Power, DIDO, Audio Connection

Put all the cables, such as PoE ❶, 12VDC power ❷, DI / DO / Audio cable ❸, together as one single cable and run it through the waterproof connector. Then attach the waterproof connector to the conduit hole ❶ or ❷, and attach the lid tightly to the other hole. All cables are user-supplied.



A compliant waterproof connector shall be attached tightly to the conduit hole of the Vandal Dome Network Camera, and all the cables shall run through the connector for the camera to be IP67-compliant.

1) Power over Ethernet (PoE) Connection

2) Power Adapter Connection

Please refer to the definition of the terminal blocks below. It is also printed on the motherboard.

Terminal Block	
Pin No.	Function
Pin 1	GND
Pin 2	12V DC
Pin 3	24V AC*
Pin4	24V AC*

*V5&V6 (WDRPro & Star & StarPlus) Series Supported

3) DIDO and Audio Connection

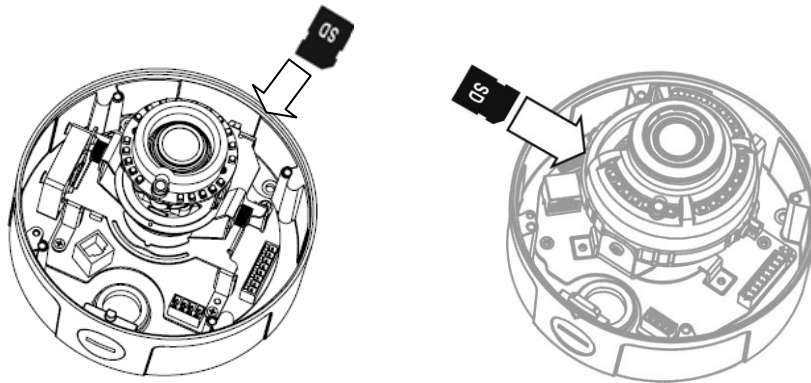
Please refer to the definition of the terminal blocks below. It is also printed on the motherboard.

Terminal Block			
Pin No.	Function	Pin No.	Function
Pin 1	5V/12V*	Pin 5	Audio OUT
Pin 2	D_0	Pin 6	DGND
Pin 3	D_1	Pin 7	Mic/Line in
Pin 4	DIDO GND	Pin 8	DGND

*V5&V6 (WDRPro & Star & StarPlus) Series Supported

d. For SD/SDHC/SDXC Card Installation(Optional):

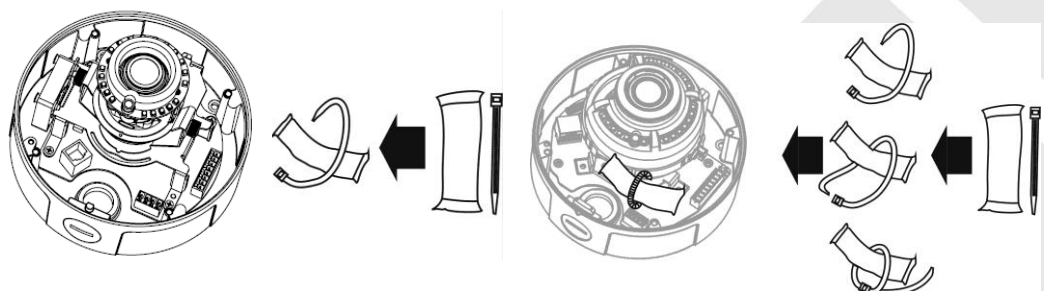
Insert the SD/SDHC/SDXC card into the SD/SDHC/SDXC card slot.



The SD/SDHC/SDXC card is not included in the product package and needs to be purchased separately.

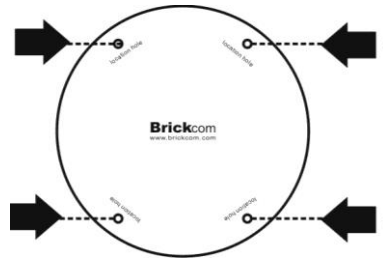
e. Dry Bag Installation:

Open the silver packing of the dry bag, then place the dry bag inside the camera device and secure it using the strap tie.

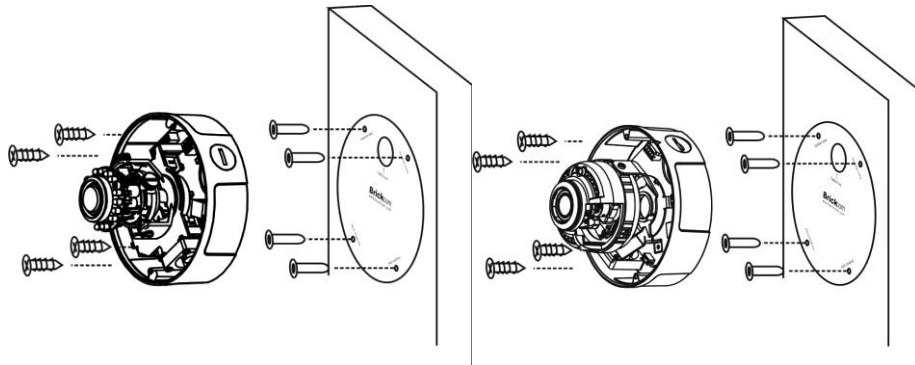


f. Mount The Camera To The Wall:

- i. Choose the location on the wall to place the camera. Attach the location sticker to the desired spot.
- ii. Drill four holes as instructed on the sticker.

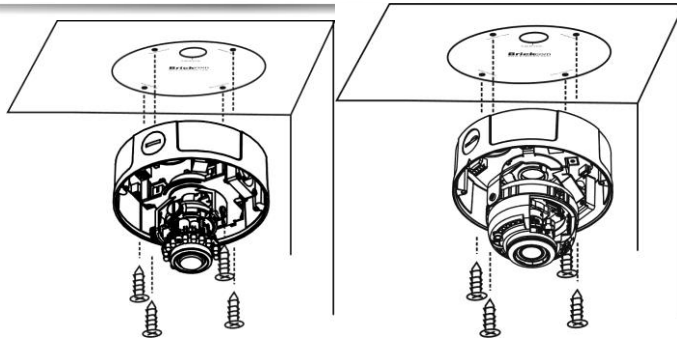


- iii. Hammer the four plastic anchors which are provided in the product package into the four location holes. Mount the camera on the wall and position the four screw holes over the plastic anchors. Insert the screws into the holes and use the screwdriver to tighten the screws clockwise into the holes until they are fixed.



g. Mount The Camera To The Ceiling:

Mount the camera device on the desired location. Use the screwdriver to tighten the four included screws clockwise through the four holes of the device as shown below. The best place to mount the camera is the ceiling stud.

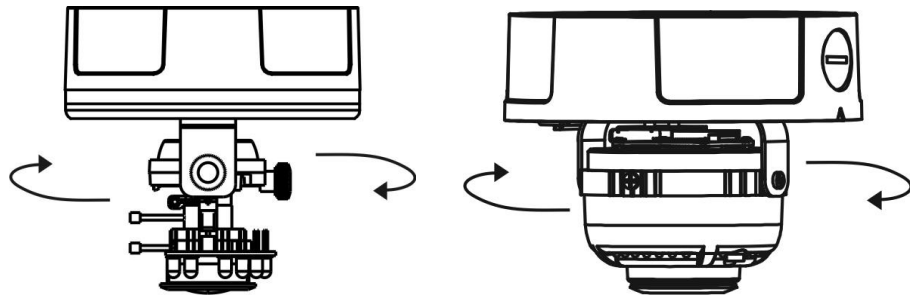


WARNING: Do not mount the camera on any soft material. The camera may fall and be damaged. POE, Power, DDO, Audio Connection:

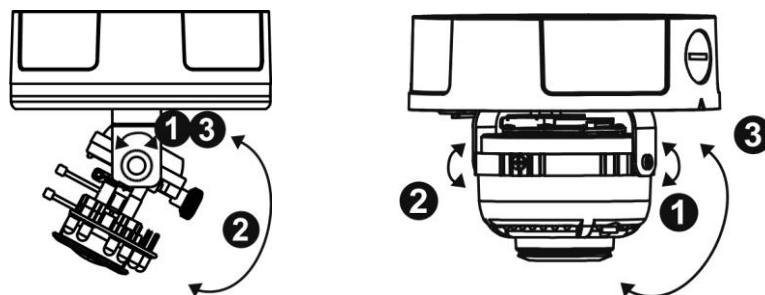
h. Adjust the Lens (This function applies to all VD series, except for the VD-***Nf and VD-***Af.)

1) Adjust The Lens Angle

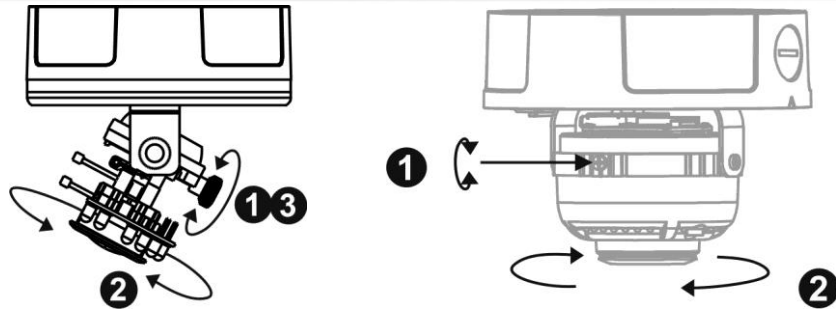
- i. The lens holder can be rotated clockwise or counter clockwise.



- ii. Release the tilt screw on both side of the device to tilt the lens up or down. After completion, tighten the tilt screw.

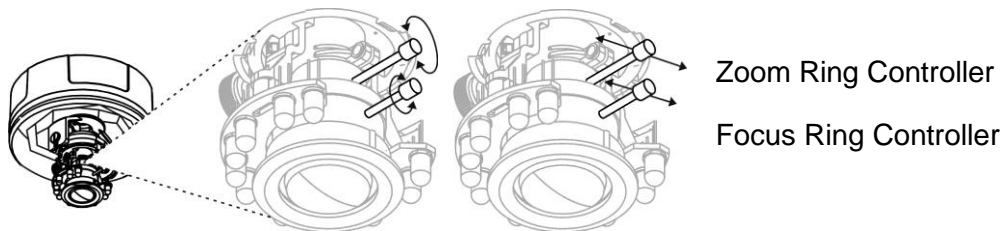


- iii. Release the video adjustment screw and to adjust the lens direction. After completion, tighten the video adjustment screw.



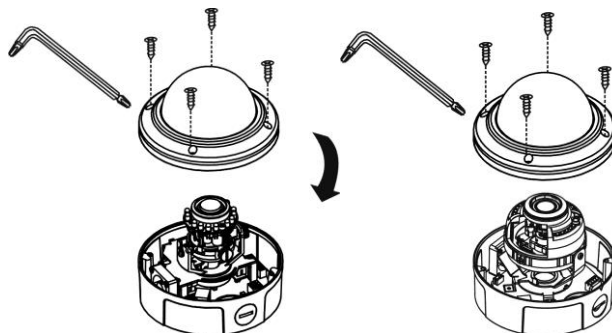
2) Adjust The View Angle and Focus

- i. Release the zoom ring controller bar and then slide it left or right to get the desired field of view. After completion, tighten the zoom ring controller.
- ii. Release the focus ring controller bar and slide it left or right to make the image in focus. After completion, tighten the focus ring controller.



i. Complete the Installation

- 1) Place the dome cover on the camera device and slowly turn it until it is in the desired position.
- 2) Use the Allen Key to attach the four dome screws to fix the dome cover onto the camera device.

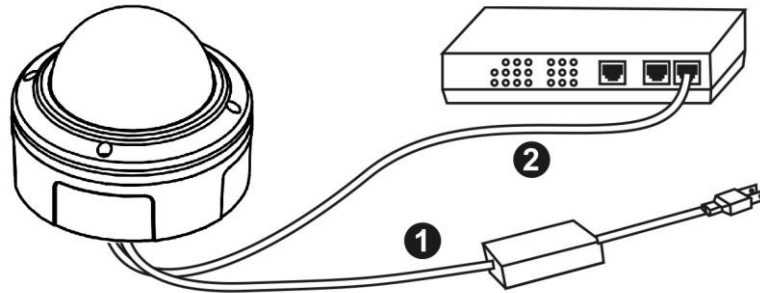


⚠ Please make sure the light sensor is not blocked by the dome cover.

5.2 Camera Connection

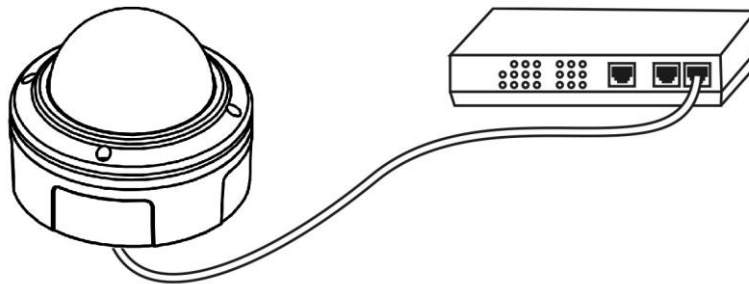
a. Ethernet and DC12V Connection

- i. Connect the power adaptor to the camera device.
- ii. Connect the camera to the Ethernet hub using a RJ45 Ethernet cable.

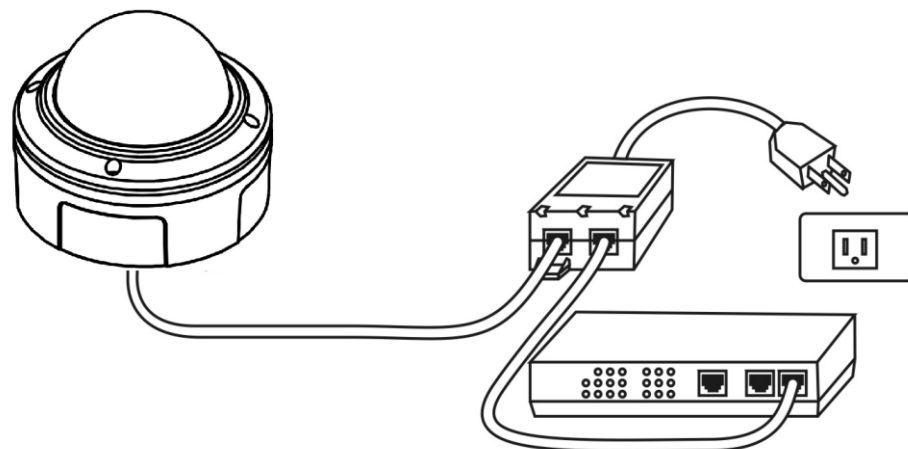


b. Power over Ethernet (PoE) Connection

- i. Connect the camera to a PoE switch using a single Ethernet cable.



- ii. Connect the camera to a non-PoE switch using the PoE Injector.



5.3 System Requirements

Operating System:

Microsoft Windows 8.1/8/7/Vista/XP/2000

Computer:

IBM PC/AT Compatible

CPU:

Pentium 3GHz or faster

Memory:

1024 MB or more

Monitor:

1024 x 768 pixels or more, 24-bit True color or better

Network Interface:

10/100Mbps Network interface card must be installed

Web Browser:

Microsoft Internet Explorer 6.0 SP2 or higher

Adobe Reader:

Adobe Reader 8.0 or higher

Audio:

The audio function will not work if a sound card is not installed in the PC. Audio may be interrupted depending on network traffic.

5.4 Software Installation

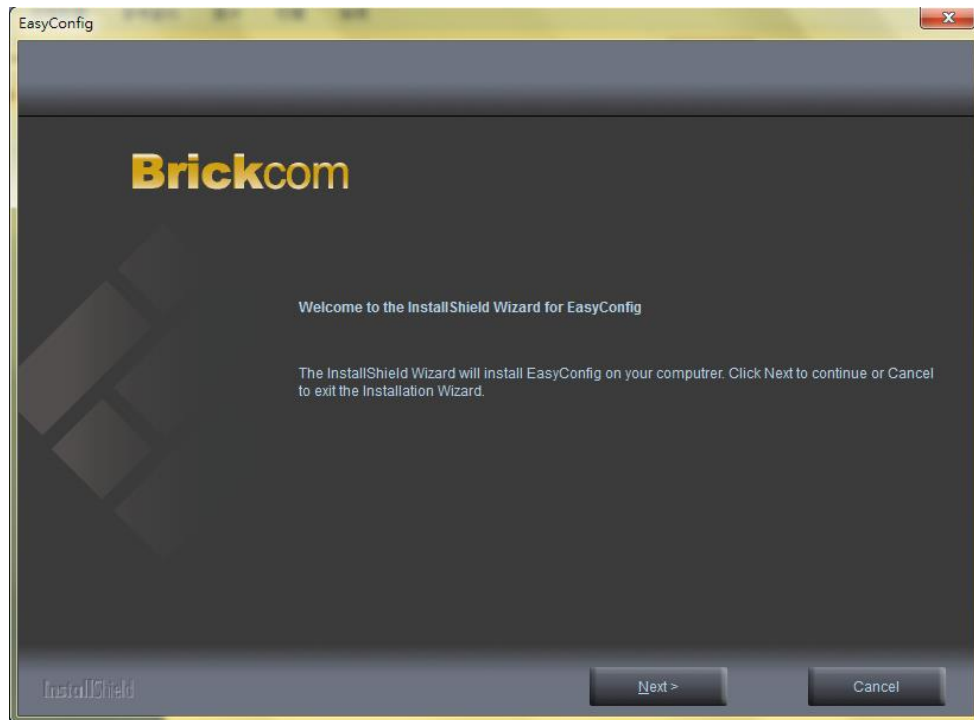
In this manual, "User" refers to whoever has access to the Network Camera, and "Administrator" refers to the person who can configure the camera and grant user access to the camera.

After checking the hardware connection, run the Installation Wizard program included on the product's CDROM to automatically search the intranet for the camera. There may be many cameras on the local network. Differentiate the cameras using the serial number which is printed on the labels on the carton and the bottom of the camera.

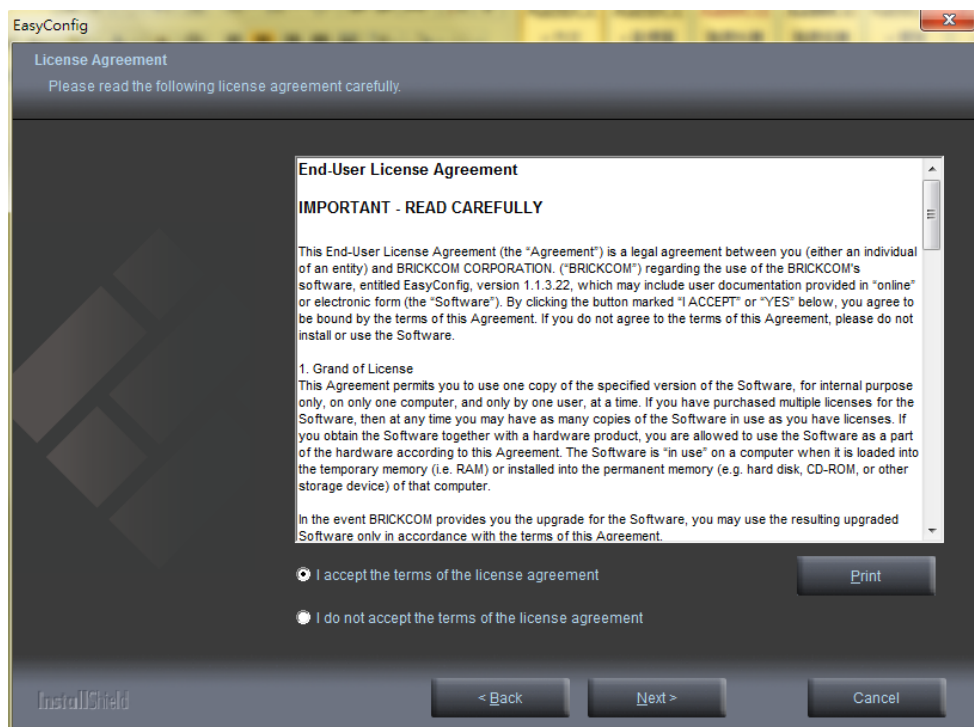
- A. Insert the Installation CD into the CD-ROM driver. Run Auto-Run Tool directly from the CD-ROM to start the installation. When installing the Brickcom software kit for the first time, select a desired language for the interface. The available languages are listed in the scroll box. Click **<Install>** and follow the steps to install the EasyConfig wizard on the desired computer.



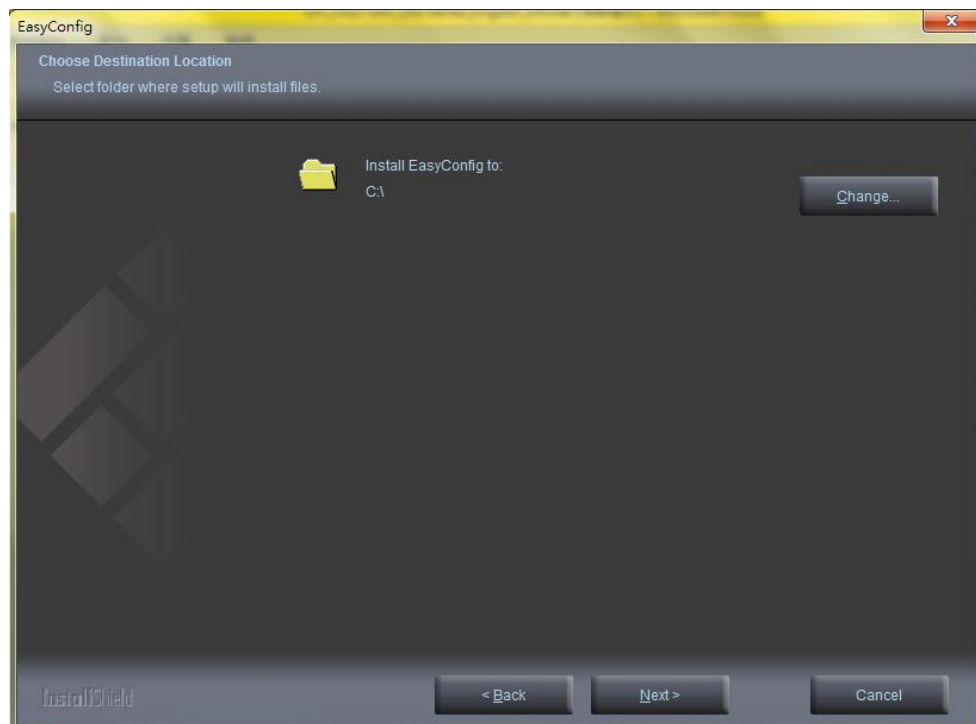
B. In the Install Shield Wizard dialog box, click <Next> to continue.



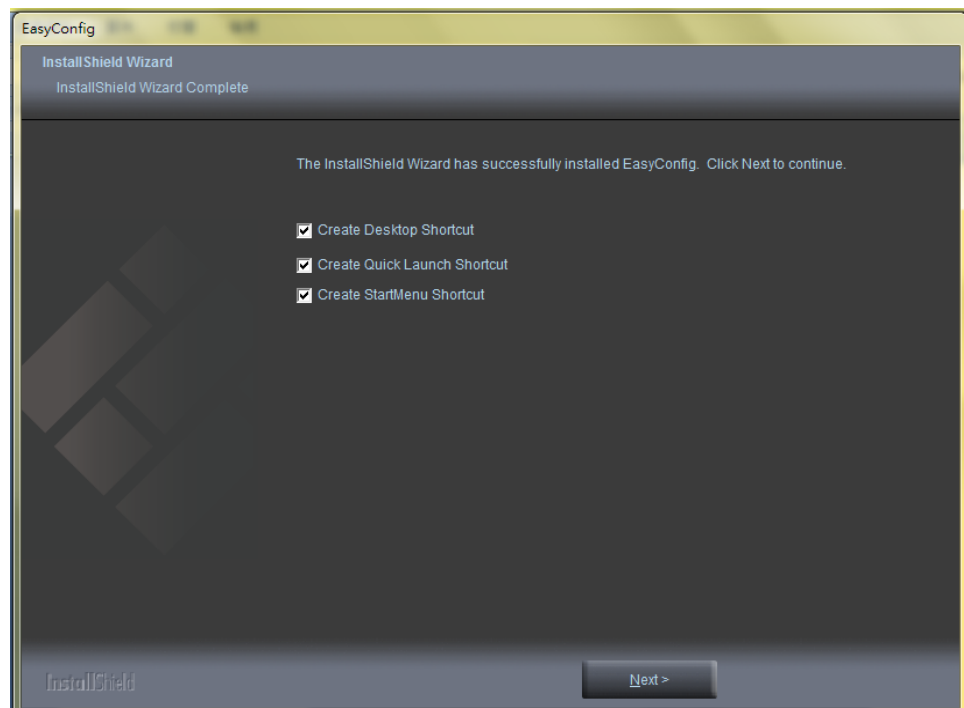
C. Read the End-User License Agreement and check the option "I accept the terms of the license agreement". Click <Next> to continue.



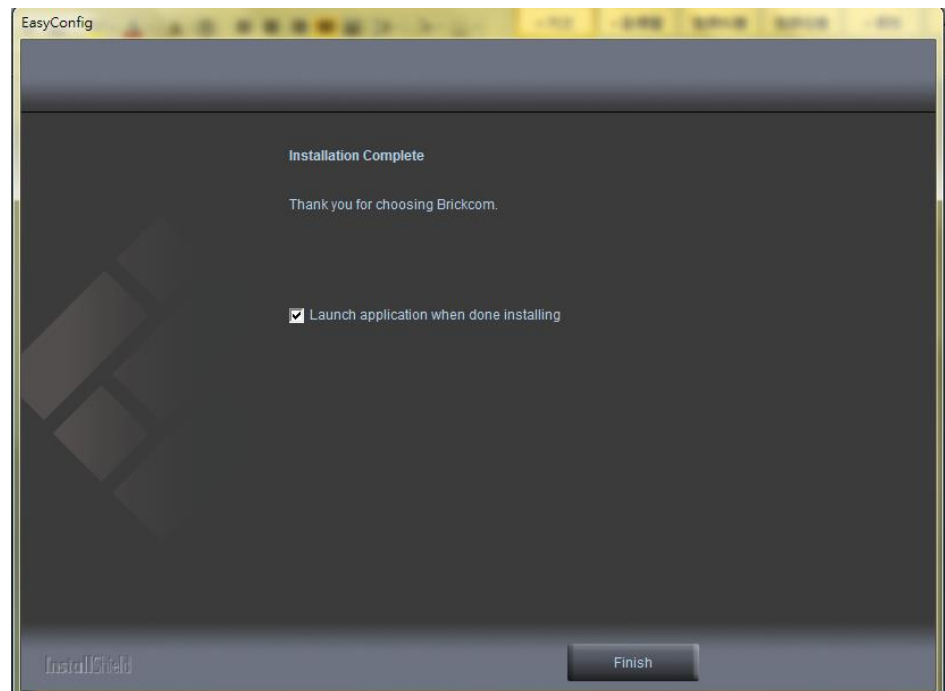
- D. Click <Change> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



- E. Select to create shortcuts. Click <Next> to continue.

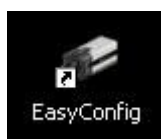


- F. Select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.



5.4.1 EasyConfig

To launch EasyConfig, select EasyConfig from the start menu. If Complete Setup type was used in the software installation, an EasyConfig icon was installed on the desktop. Double click to open the icon.

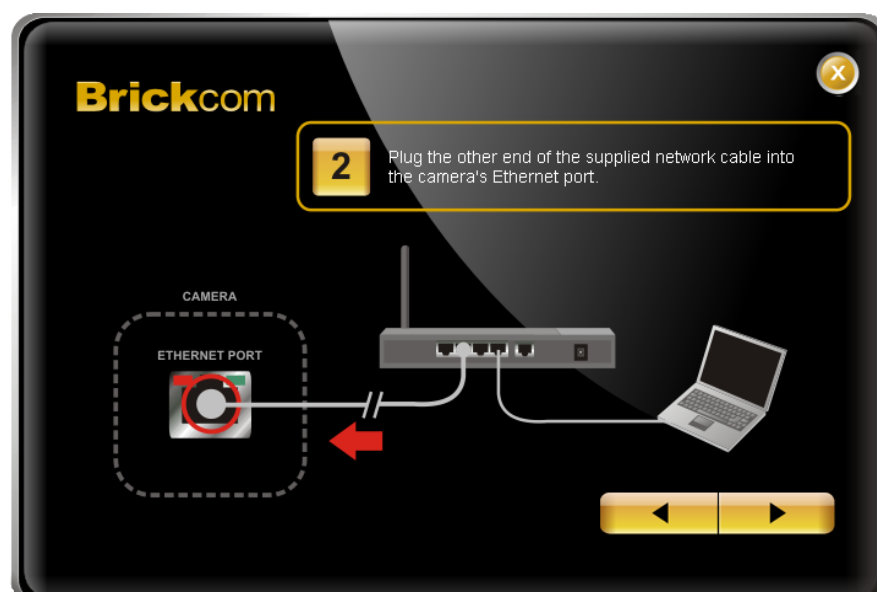
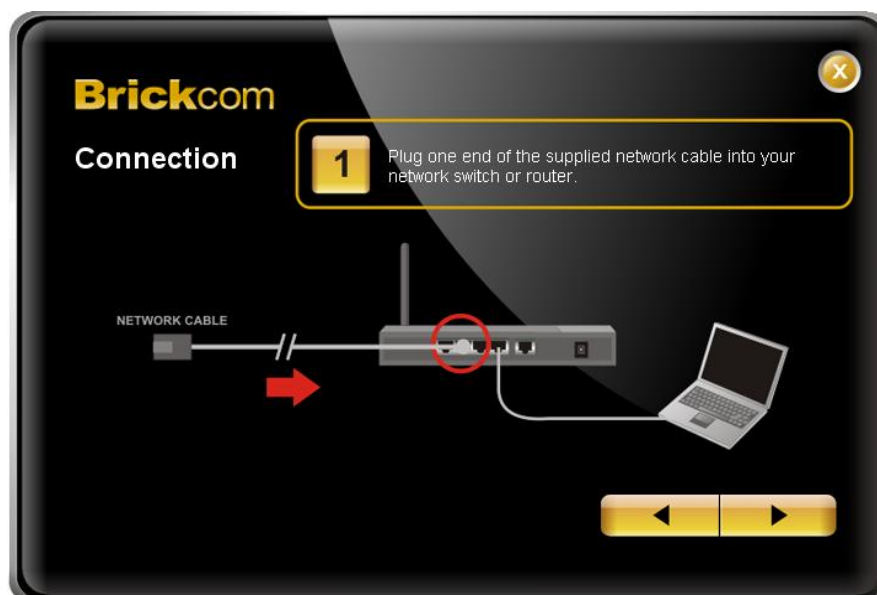


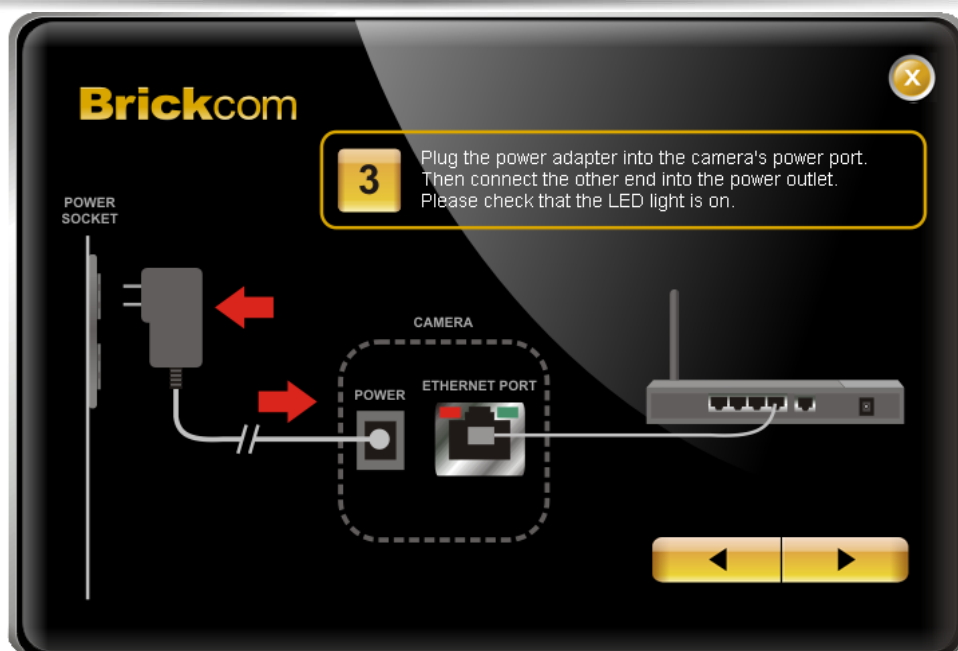
If Custom Setup type was used in the software installation and an EasyConfig icon was not installed on the desktop, the program will be installed under C:\Program Files\Brickcom\EasyConfig unless the program was saved to a preferred directory.

- A. Click <Start> to continue. The program will automatically search for the camera in the intranet.



NOTE - Check “Skip the hardware installation guide” to skip checking the hardware connection. To check the hardware installation settings, do not check the option box.





- B. Select either “Simple Mode” or “Professional Mode” to obtain the camera’s IP settings. If “Simple Mode” is selected, EasyConfig will set up the connection automatically. If “Professional Mode” is selected, the user will need to configure the IP settings manually.



- C. There may be many cameras in the local network. Differentiate the cameras using their UPnP name. Double click on the camera from the survey list to connect.



- D. For configuring the IP address settings, select either <Settings remain the same>, <Automatically obtain an IP Address (DHCP)> or <Set IP Address configuration manually>. The DHCP setting is recommended.



- E. If <Set IP Address configuration manually> is selected, the following pages will be displayed.

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Select the IP Address settings.

☐ Settings remain the same

☐ Automatically obtain an IP Address (DHCP)

☒ Set IP Address configuration manually



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Enter the Static IP Address to configure IP Camera.

IP Address

169 . 254 . 105 . 144

Subnet Mask

255 . 255 . 0 . 0

Gateway



169 . 254 . 105 . 134

DNS1

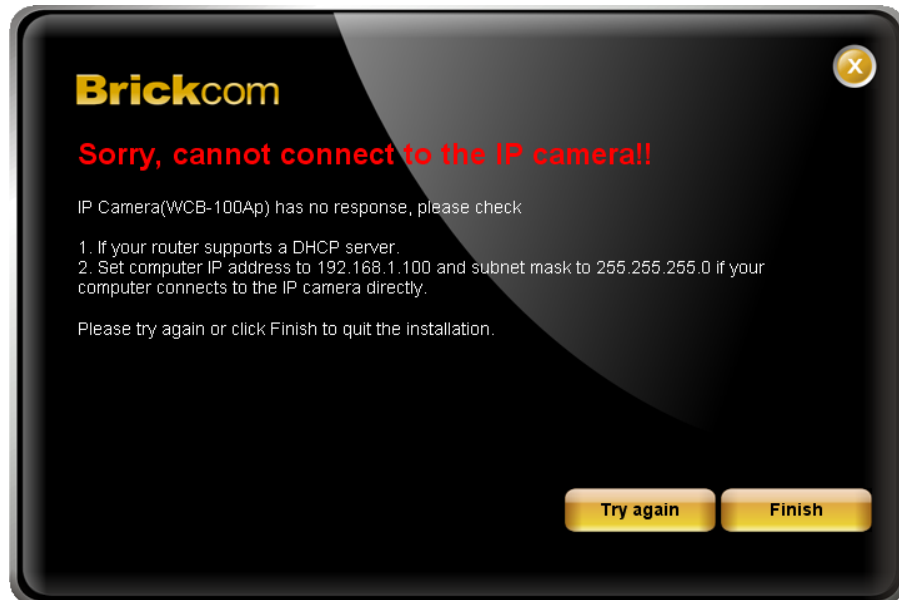
0 . 0 . 0 . 0

DNS2

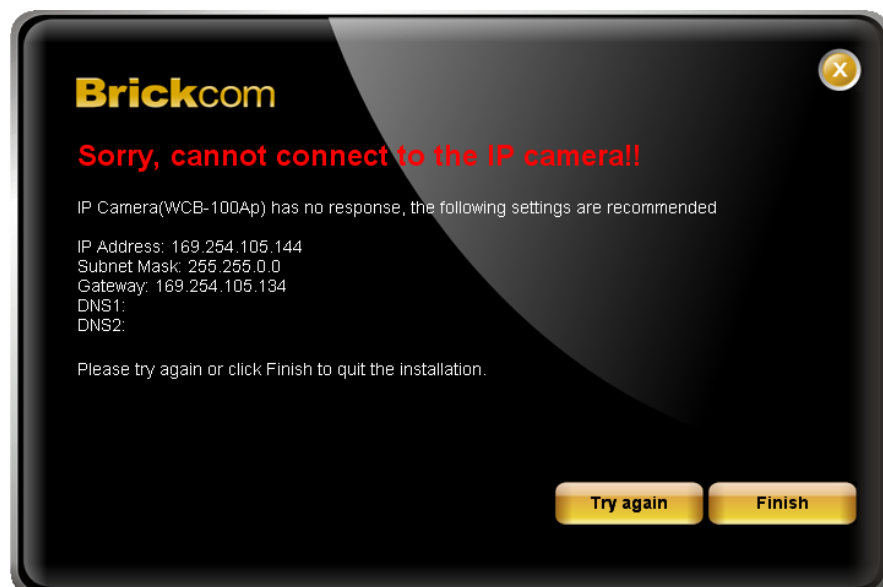
0 . 0 . 0 . 0



- F. When the IP address settings have been configured, the screen will either display a successful or failed connection message. If the connection failed, either try again or quit the installation.
- a. If “DHCP IP address settings” was selected, the failure page will be displayed as below:



- b. If “Static IP address settings” was selected, the failure page will be displayed as below:



- c. If the connection was successful, the user will see the message: "Congratulations. The installation of the camera is complete."

When this window is displayed, click <PC-NVR> to start the PC-NVR program, <Live View> to view the live video from the connected IP camera, or <X> in the top right corner of the screen to close the installation window. If the user starts the PC-NVR program, please refer to the PC-NVR user manual.

Click <Live View> to view the live video feed of the network camera.



Enter the default user name (admin) and password (admin) in the prompt request dialogue.

After connecting to the network Vandal Dome Camera, the request for installing the ActiveX control will appear below the URL bar. Right click on the bar, and click "Install Brickcom ActiveX Control." to permit ActiveX control installation.

In the pop-up security warning window, click "Install" to start downloading Viewer software on the PC.

Click "Finish" after Viewer installation is complete.