Brickcom

Hardware User's Manual

Megapixel Day & Night
Vandal Dome Network Camera
Quality Service Group

Vandal Dome V2 Series

Review History:

1. **Separate User Manual into HW and SW.**
2. **Merge VD-100A-series/ VD-130Np/ VD-300Ap /VD-502A series into this Hardware User Manual.**

Product name:	Network Camera (Vandal Dome series)
Release Date:	2011/09
Manual Revision:	V3.0
Web site:	www.brickcom.com
Email:	technical@brickcom.com info@brickcom.com
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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:

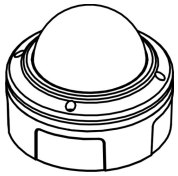
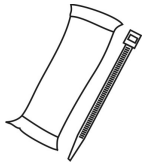
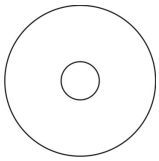
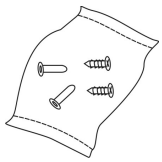
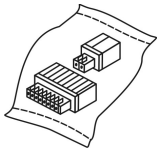
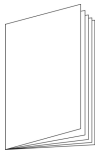
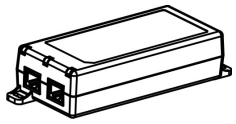
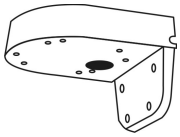
FCC Radiation Exposure Statement:

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

a. Network Camera **(Vandal Dome V2 Series)** 	**b. Dry Bag, Strap Tie** 
c. Product CD 	**d. Location Sticker**
e. Warranty Card 	**f. Screw Bag** 
g. Terminal Block 	**h. Allen Key**
i. Easy Installation Guide 	**j. High Power PoE (Optional)** 
k. L-WM-01(Optional) 	

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

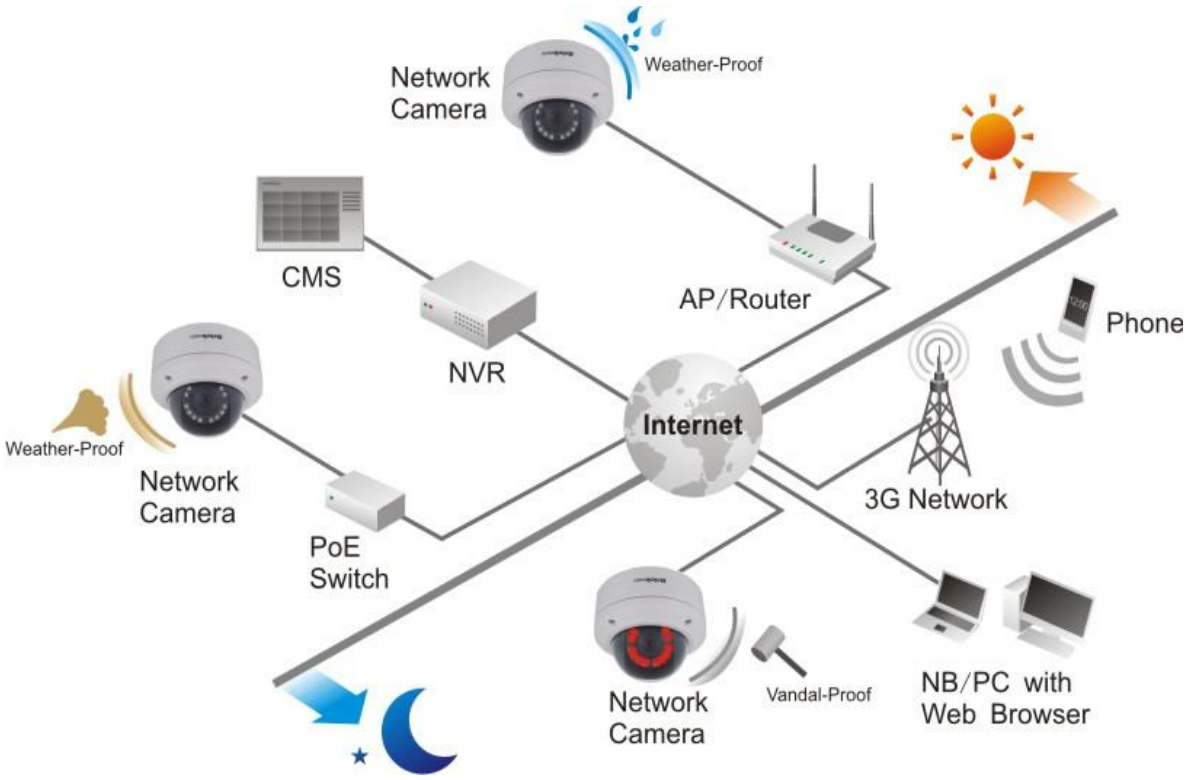
The VANDAL DOME SERIES is a full-featured, 3-axis, fixed-dome, network camera. With a megapixel progressive sensor and built-in IR-cut filter/ IR illuminator LEDs/ Auto Light sensor, it can provide 24-hour, indoor surveillance. The VANDAL DOME SERIES features a wide-angle and vari-focal lens, which offers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

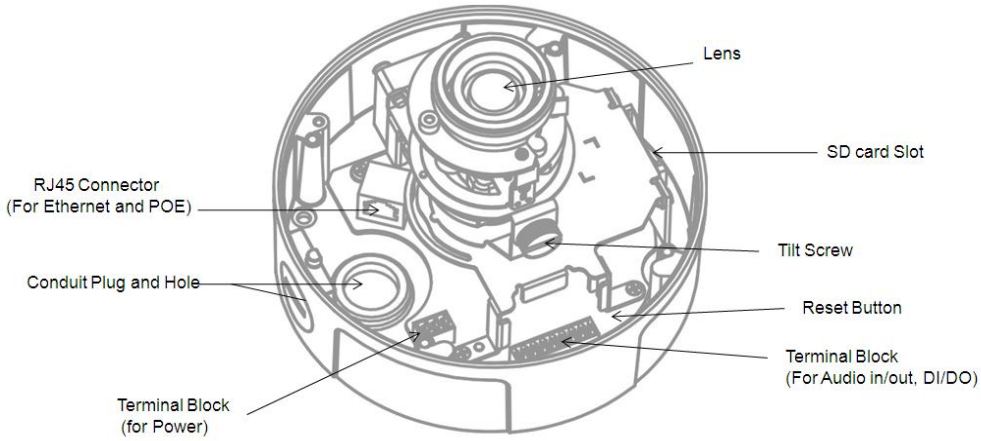
Users do not have to worry about their camera as its vandal proof enclosure protects it from damage caused by vandalism or harsh environments. With an IP66 certified enclosure, the VANDAL DOME SERIES is not only weather proof, but also dust and rust resistant. By utilizing a built-in industrial fan and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

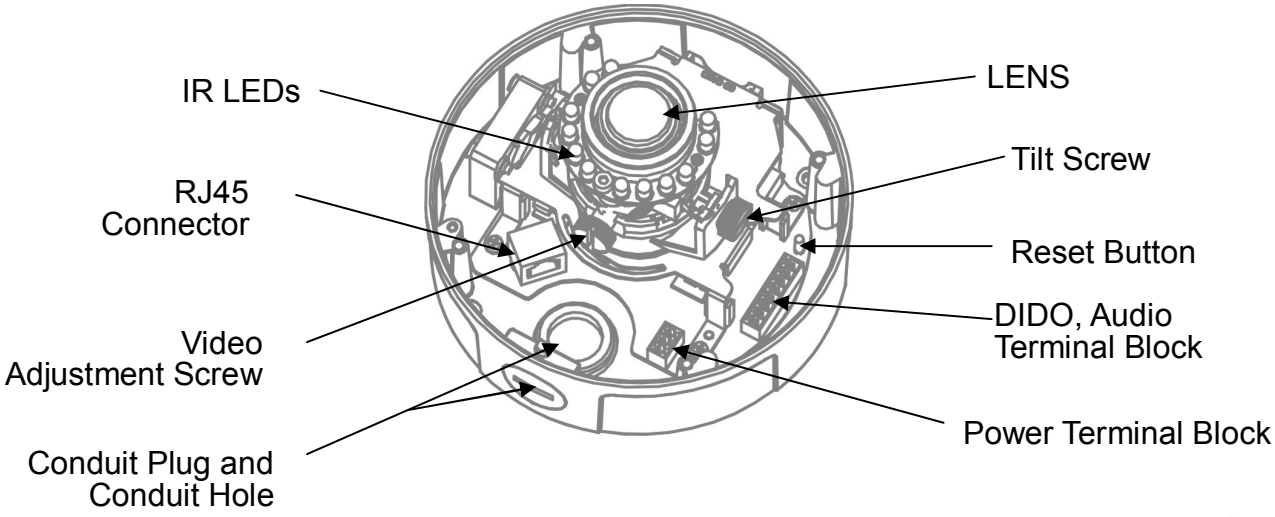

Network Camera
Weather-Proof
CMS
NVR
AP/Router
Phone
Internet
3G Network
Weather-Proof
Network Camera
PoE Switch
Network Camera
Vandal-Proof
NB/PC with Web Browser

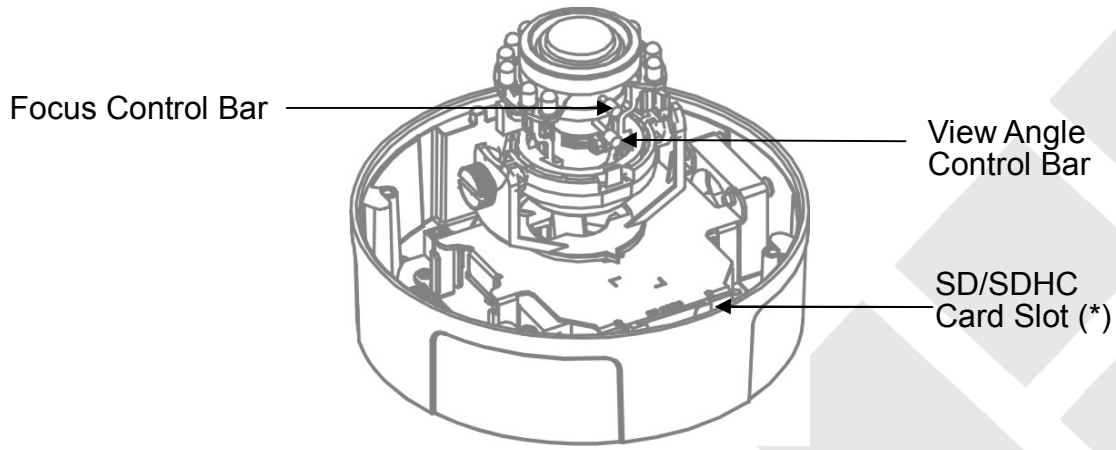
Chapter 3 - Device Appearance Description

1. Below " Device Appearance Description" is for VD-130Np/VD-502A-series



2. Below " Device Appearance Description" is for VD-100A-series/VD-300Ap





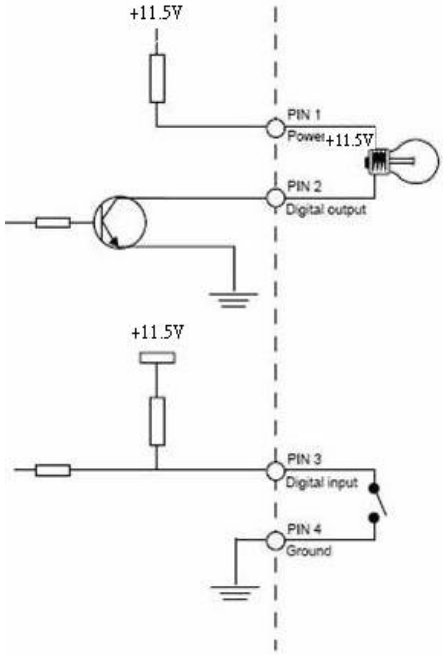
NOTE

1. **SD Card Capacity (*)** - The network camera is compatible with SD/SDHC (Maximum 32GB) cards.
2. (*) These are optional features. Please refer to the Product List for the full list of optional features available for the product.

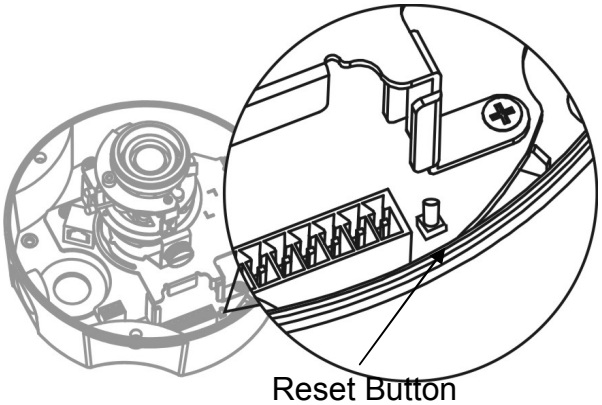
Chapter 4 - LED Behavior

Function	LED Behavior	Description
Power LED	Continuous illumination	Power on
Power LED	Unit	Power off
Link LED	Continuous illumination (Orange)	Link
Link LED	Blinking (Orange)	Connecting

< DI/DO Diagram >



< Hardware Reset >



The Reset Button can be used to reboot the camera or restore it to factory default settings. 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 Reboot

Press and hold the Reset Button for one second using a paper clip or thin object. Wait for the camera to reboot.

To Restore

Press and hold the Reset Button for ten seconds until the LED light turns off. When successful restored, the LED will be blue during normal operation.

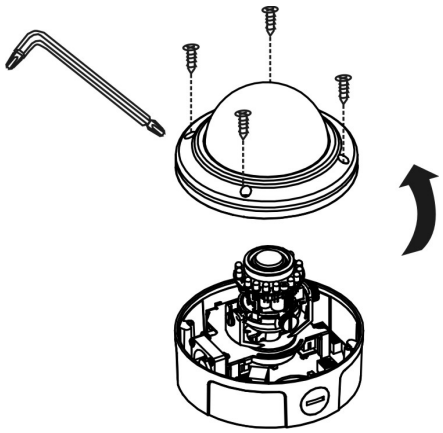
NOTE - By restoring the camera, all settings will be restored to the factory default settings.

Chapter 5 - Installation

5.1 Hardware Installation

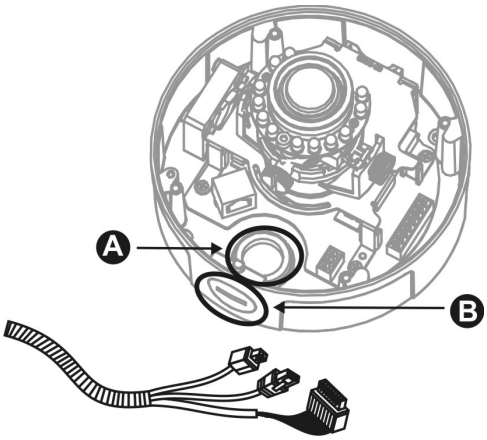
a. Remove the vandal dome cover:

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

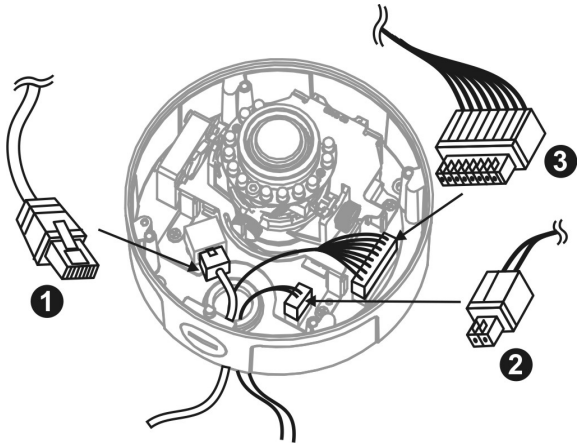


b. PoE, Power, DIDO, Audio Connection

i. Insert the PoE, DIDO, and Audio cable through conduit hole A or B.



ii. Connect the PoE (1), DIDO (2), and Audio (3) Cables to their respective terminals. See the next page for more details regarding the DIDO and Audio connection.



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	48V
Pin 2	GND

1) DIDO and Audio Connection

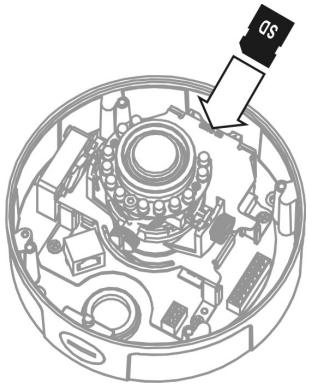
Please refer to the definition of the terminal blocks below. It is also printed on the motherboard.

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

Pin 8	DGND

c. For SD/SDHC card (*) installation:

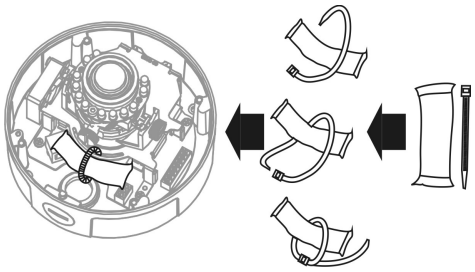
Insert the SD/SDHC card into the SD/SDHC card slot.



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

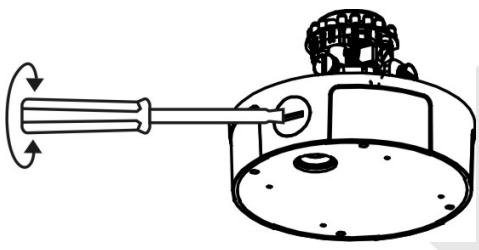
d. For dry bag installation:

Place the dry bag on the camera device and secure it using the strap tier



e. Open the conduit hole:

The conduit hole will allow for air to circulate through the camera device .Use a screwdriver to unscrew either the conduit plug from the side of the camera device

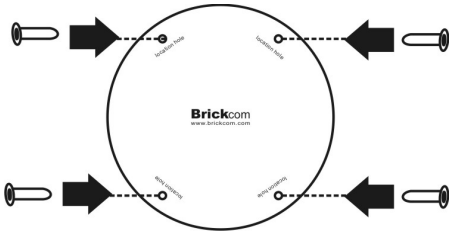


f. For wall installation:

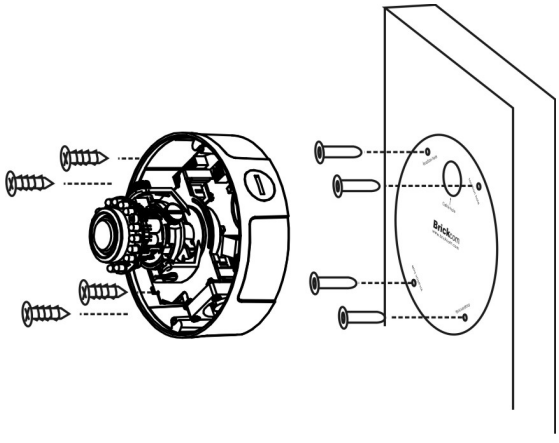
i. Chose the location on the wall to place the camera. Attach the location sticker to the desired spot.

ii. Drill four holes through the center of the four location holes on the sticker.

iii. Hammer the four plastic anchors which are provided in the product package into the four location holes.

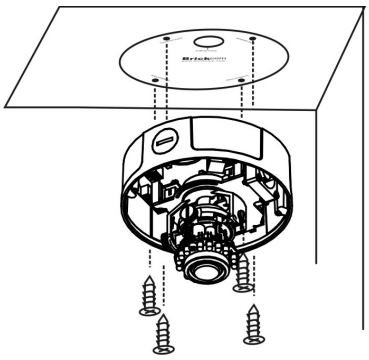


iv. Mount the camera on the wall and position the four screw slots over the plastic anchors. Insert the screws into the holes and use the screwdriver to tighten the screws clockwise until they are secure.



g. For ceiling installation:

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



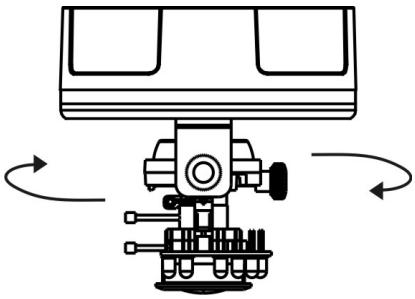
WARNING: Do not mount the camera on a soft material. The camera may fall and be damaged.POE, Power, DIDO, Audio Connection:

h. Adjust the Lens Focus Range and Zoom Viewing

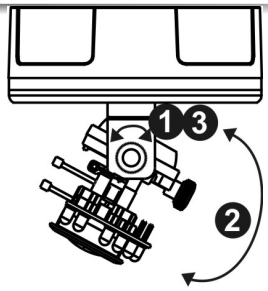
(This function is only for VD-100A series/VD-300A)

1) Adjust the lens angle

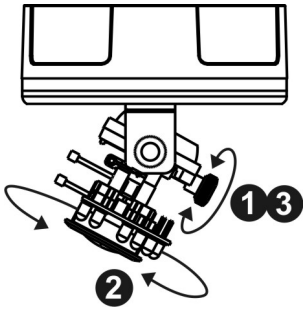
i. The lens can be rotated to the left or right.



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



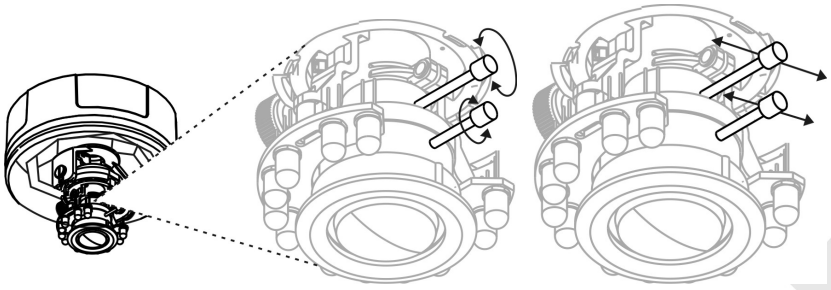
iii. Release the video adjustment screw and to adjust the lens direction. After completion, tighten the video adjustment screw.



2) Adjust the view angle and focus range

i. Release the viewing angle controller bar and then slide it left or right to adjust the viewing angle. After completion, tighten the viewing angle controller.

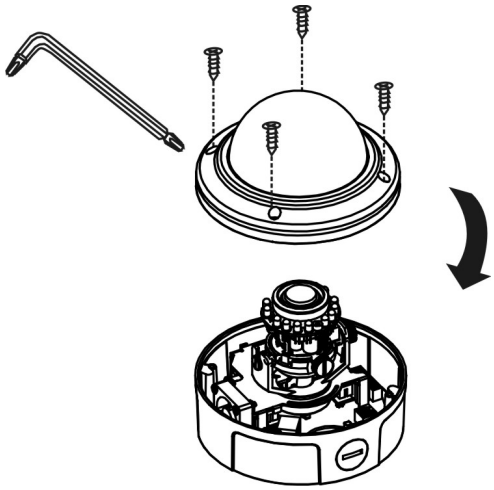
ii. Release the focus controller bar and slide it left or right to adjust the focus range. After completion, tighten the focus controller.



i. Complete the Installation

a. Place the dome cover on the camera device and slowly turn it until it is in the desired position.

b. Use the Allen Key and attached four dome screws to secure the dome cover to the camera device.

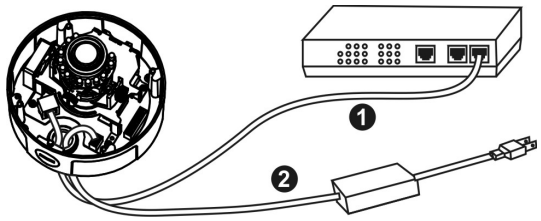


5.2 Camera Connection

b. Basic Connection (Without PoE)

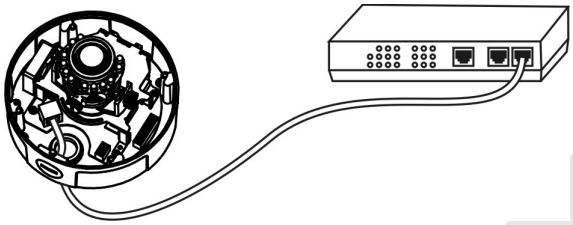
a. Connect the camera device to the Ethernet hub using a RJ45 Ethernet cable.

b. Connect the power adaptor to the camera device.

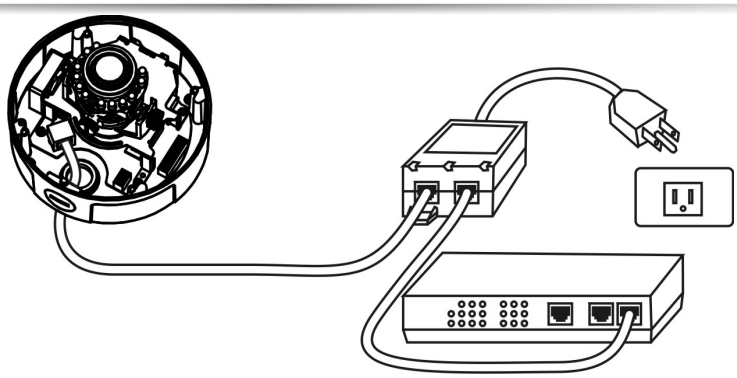


c. Power over Ethernet (PoE) Connection

a. Connect the camera to a PoE-enabled hub using a single Ethernet cable.



b. Connect the camera to a non-PoE hub using the PoE Injector.



5.3 System Requirements

Operating System:
Microsoft Windows XP Home Edition SP2
Microsoft Windows XP Professional SP2

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.

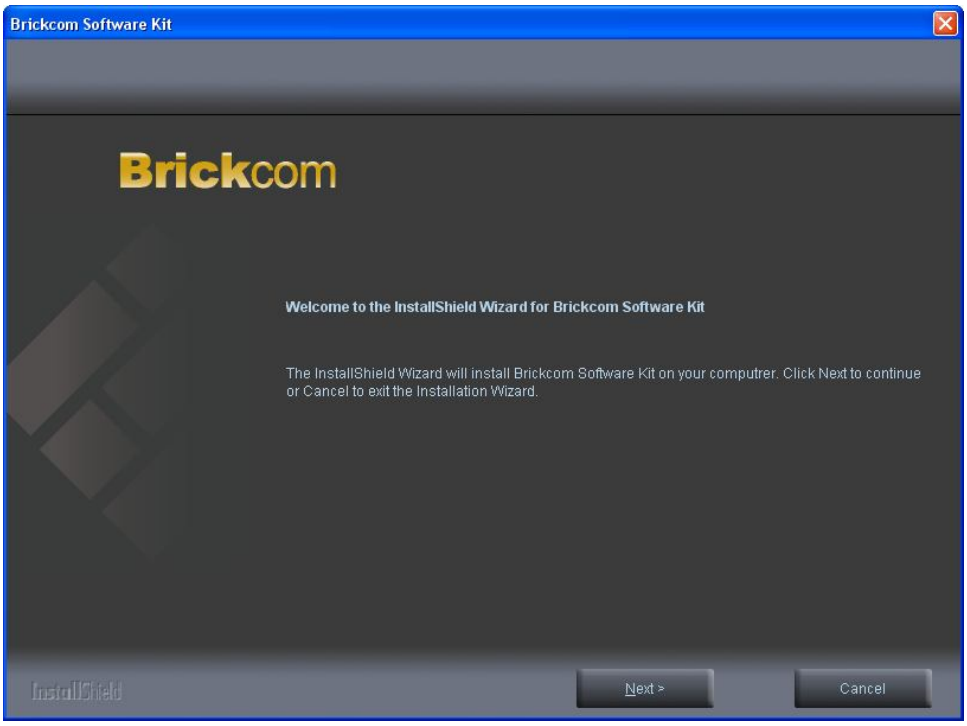
5.4 Software Installation

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.

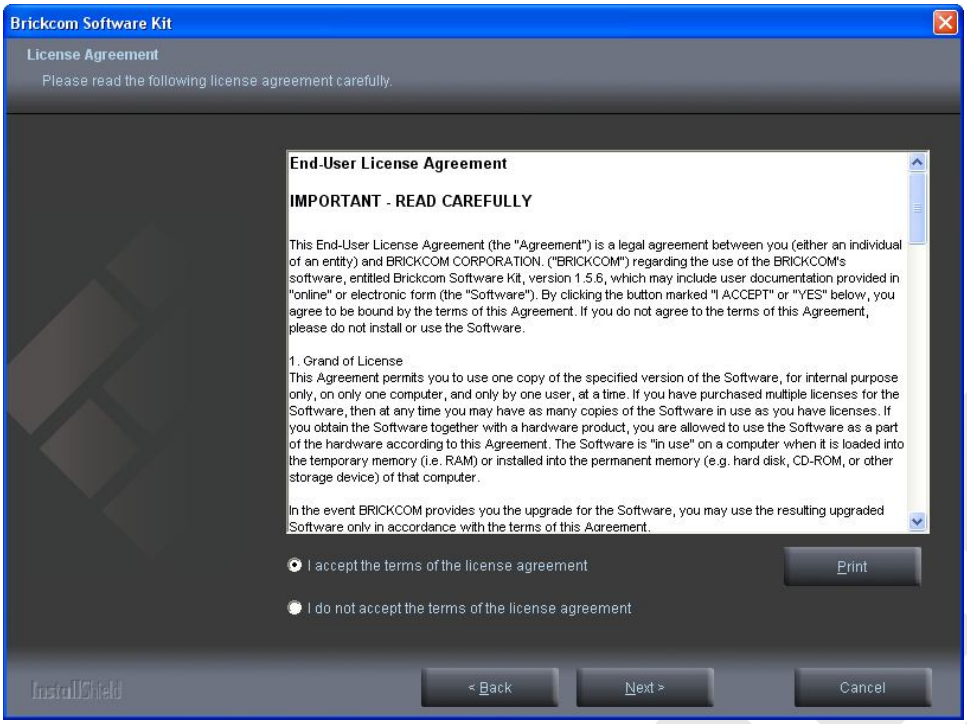
After checking the hardware connection, run the Installation Wizard program included on the product's CDROM to automatically search the intranet for the camera. There may be many cameras on the local network. Differentiate the cameras using the serial number which is printed on the labels on the carton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



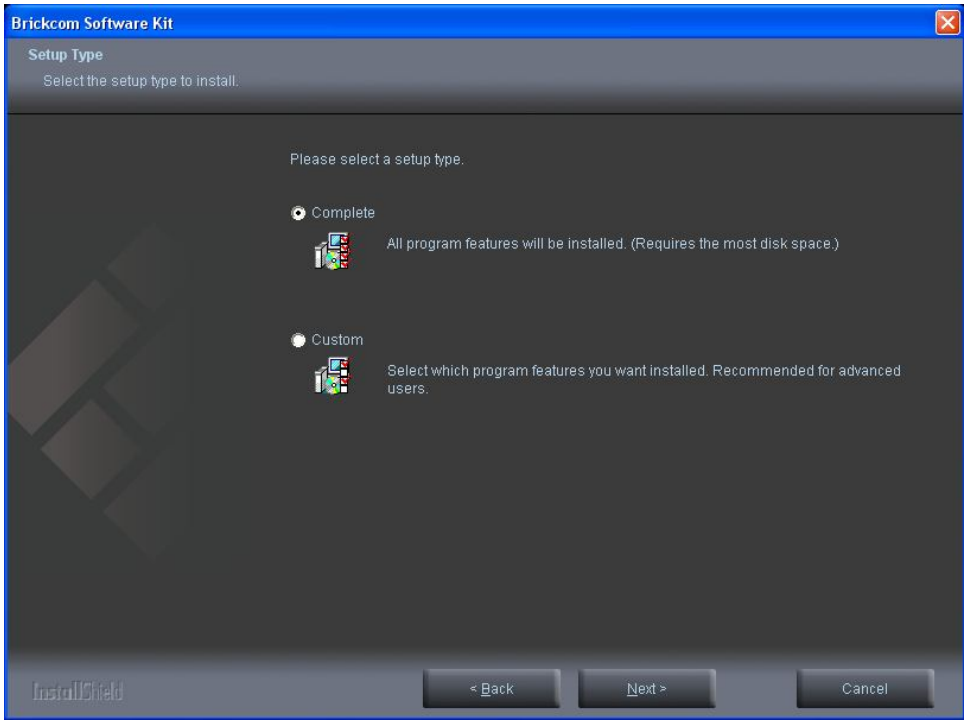
C. Read the End-User License Agreement and check the option “I accept the terms of the license agreement”. Click <Next> to continue.



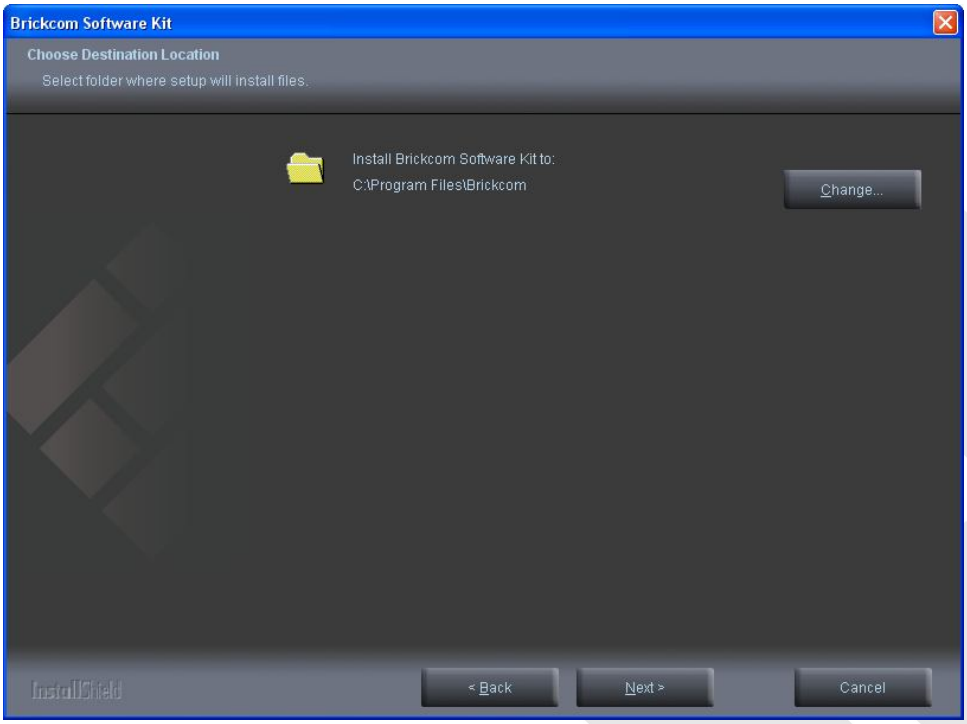
D. Select either “Complete” setup or “Custom” setup to install the system.

a. If COMPLETE SETUP is selected:

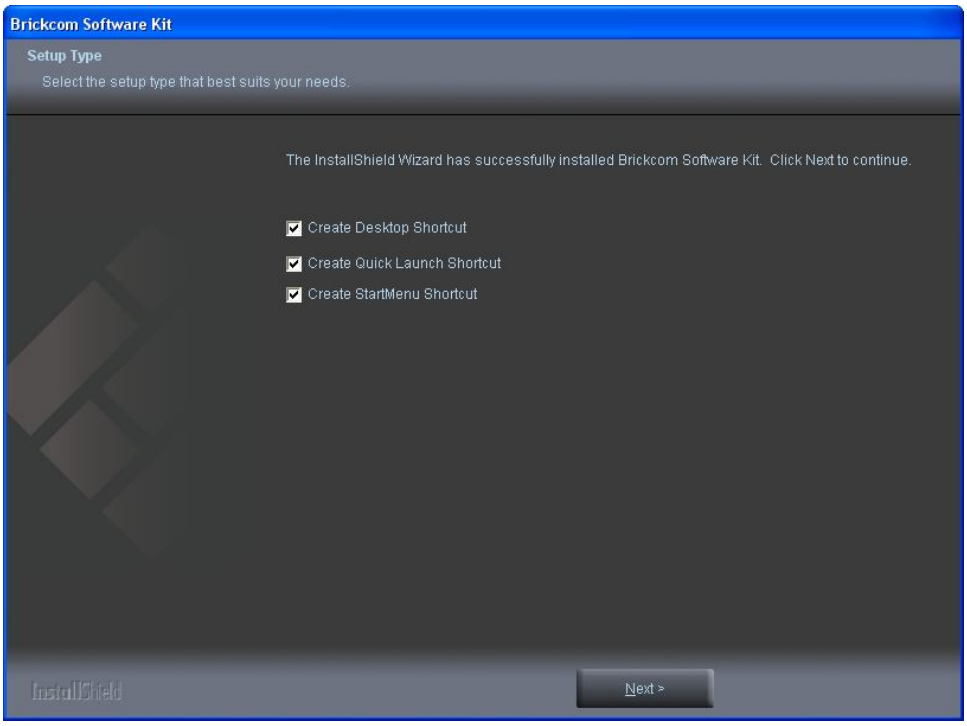
i. **All program features** will be installed into the default directory. Check the option “**Complete**” and then click <Next>.



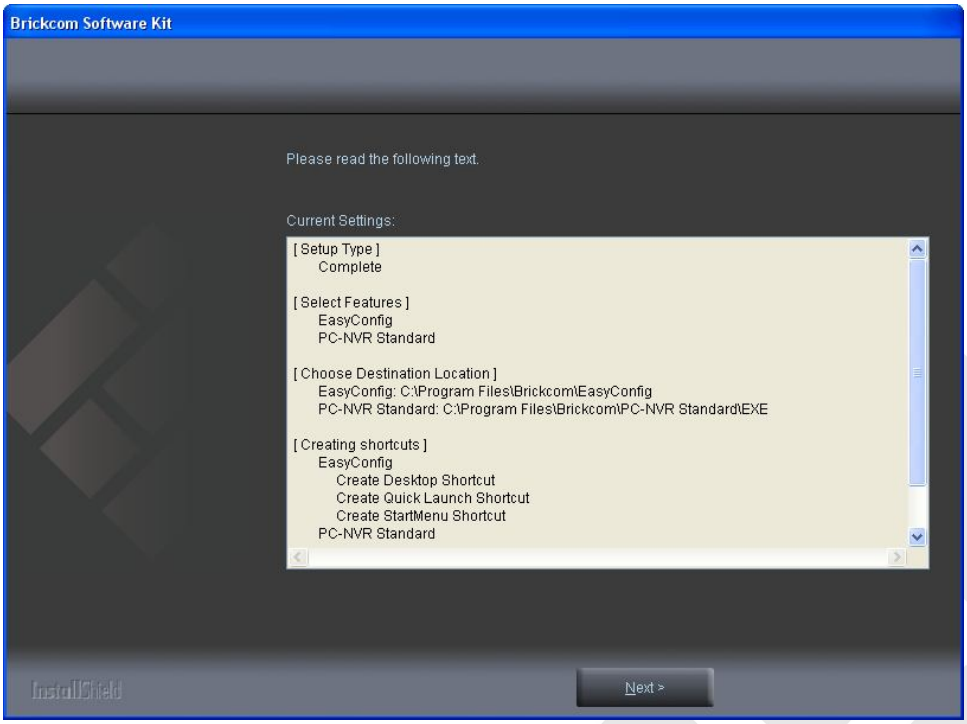
ii. Click <Change> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



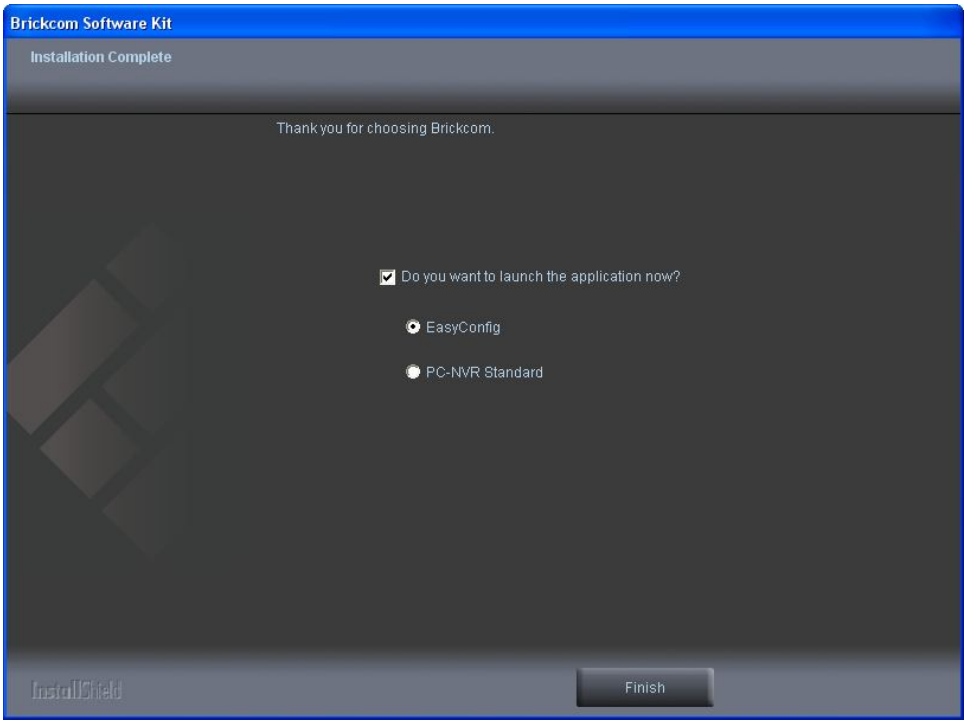
iii. Select to create shortcuts. Click <Next> to continue.



iv. The installation information will be displayed. Click <Next> to continue.



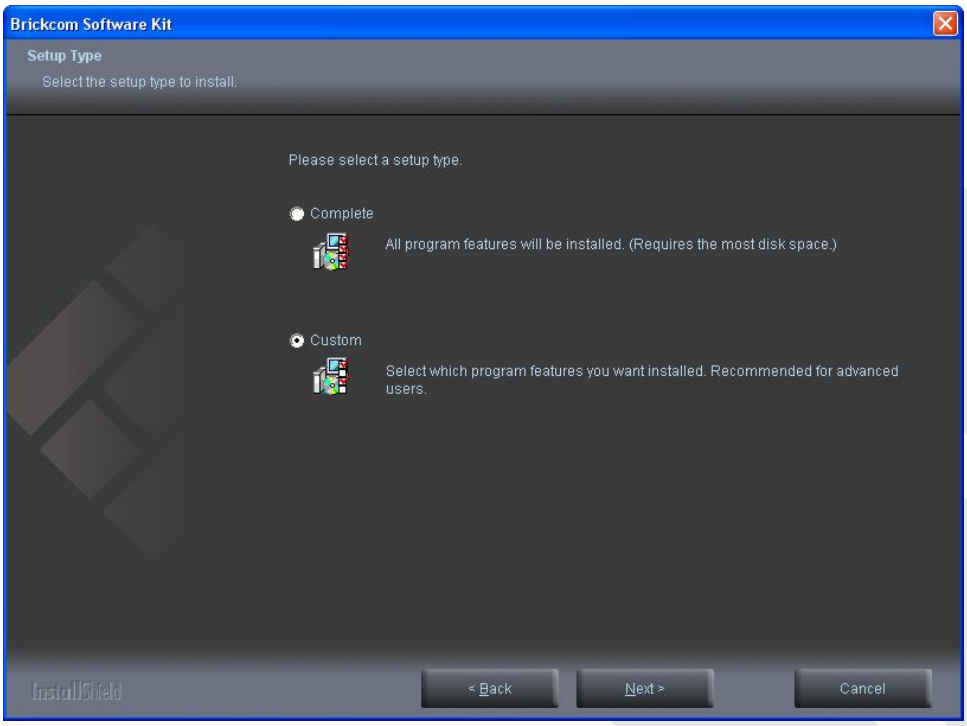
v. To launch EasyConfig or PC-NVR Standard, select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.



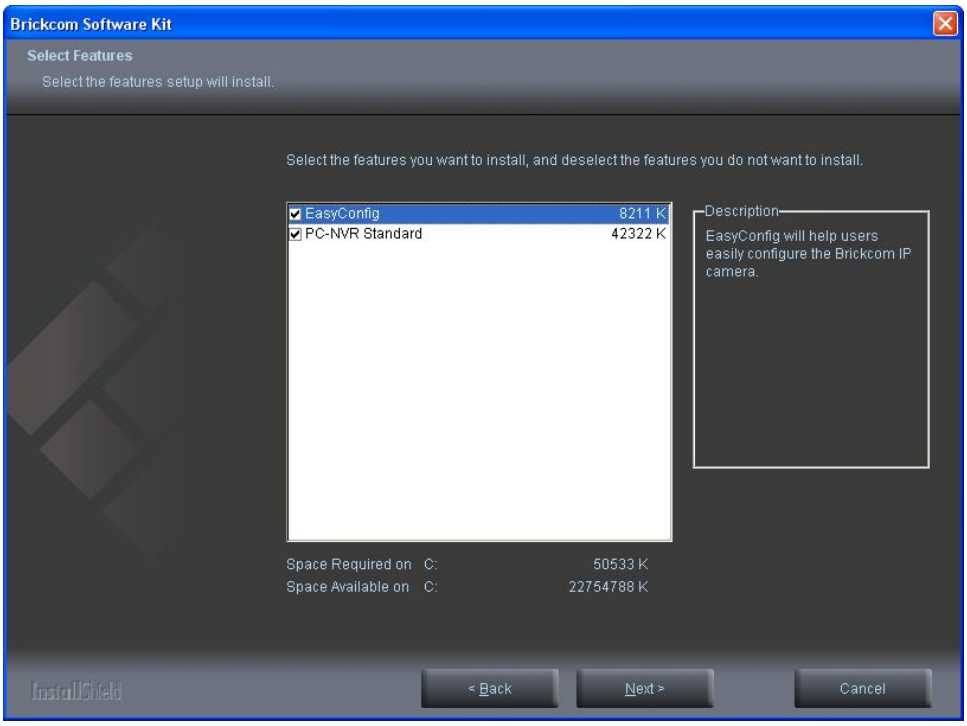
b. If CUSTOM SETUP is selected:

i. This option is recommended for advanced users. It can be used to install the system to a preferred directory or to select specific program feature(s).

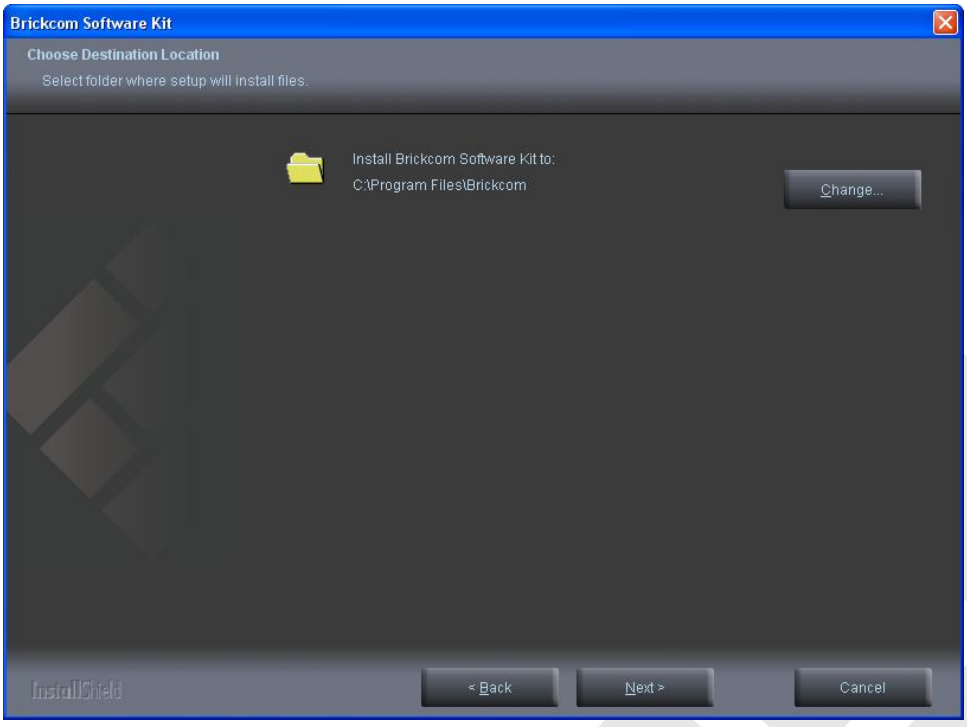
ii. Check the option “Custom”, and then click <Next>.



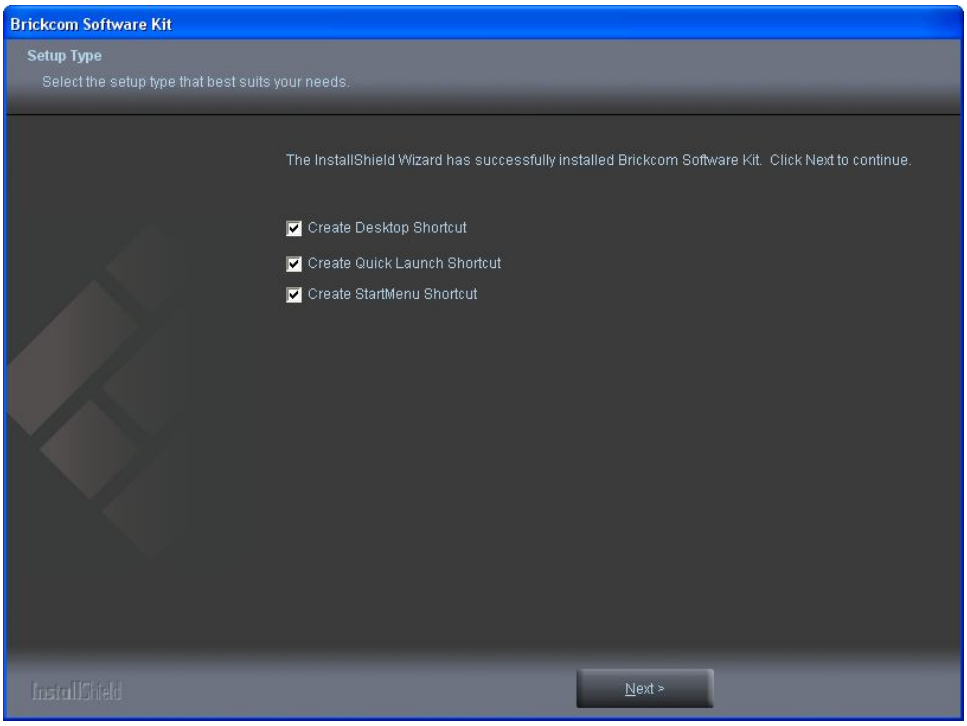
iii. Select the features to install. Click <Next> to continue.



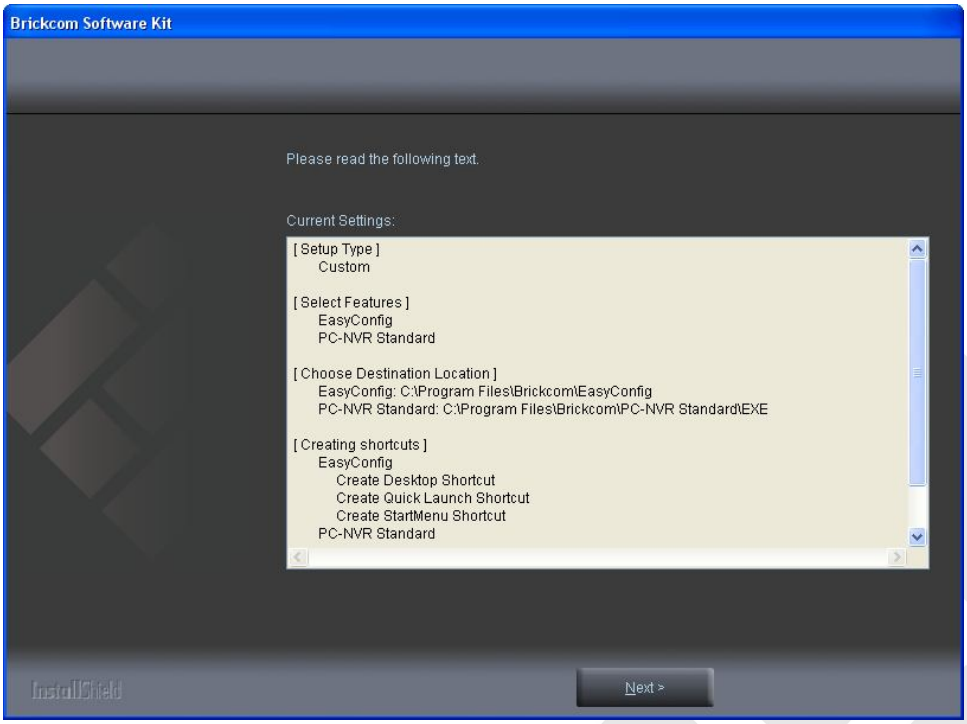
iv. Click <Change> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



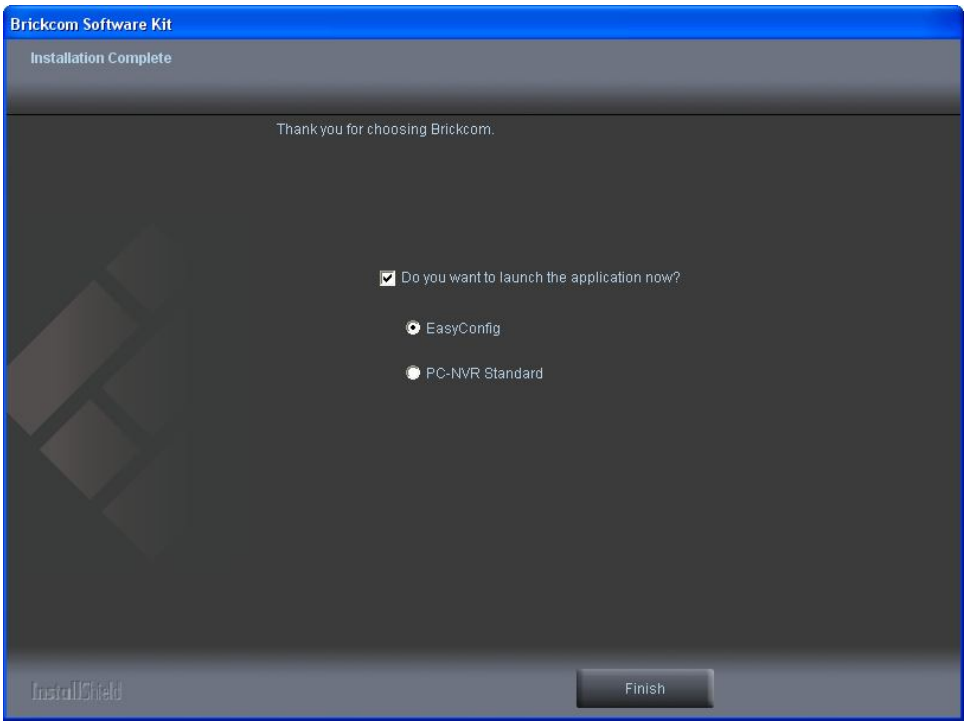
v. Select programs to create shortcuts. Click <Next> to continue.



vi. The installation information will be displayed. Click <Next> to continue.



E. To launch EasyConfig or PC-NVR Standard, select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.



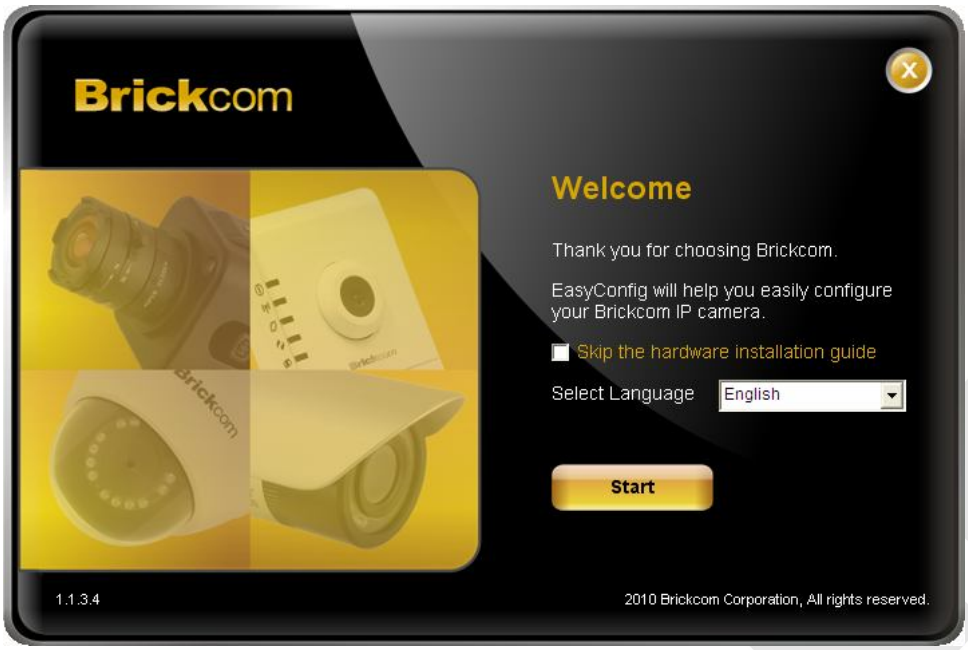
5.3.1 EasyConfig

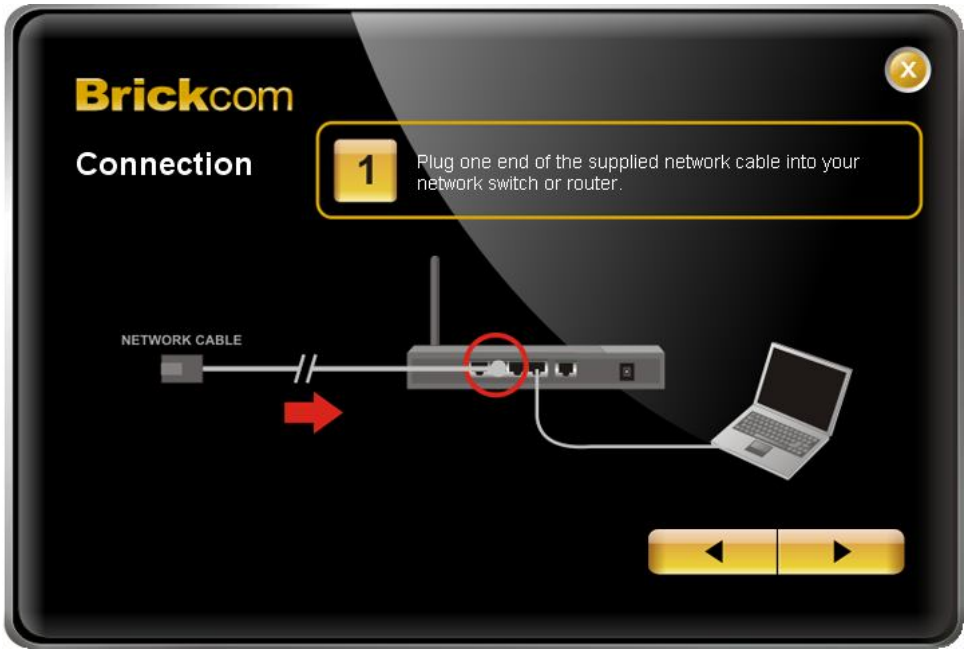
To launch EasyConfig, select EasyConfig from the start menu. If Complete Setup type was used in the software installation, an EasyConfig icon was installed on the desktop. Double click to open the icon.

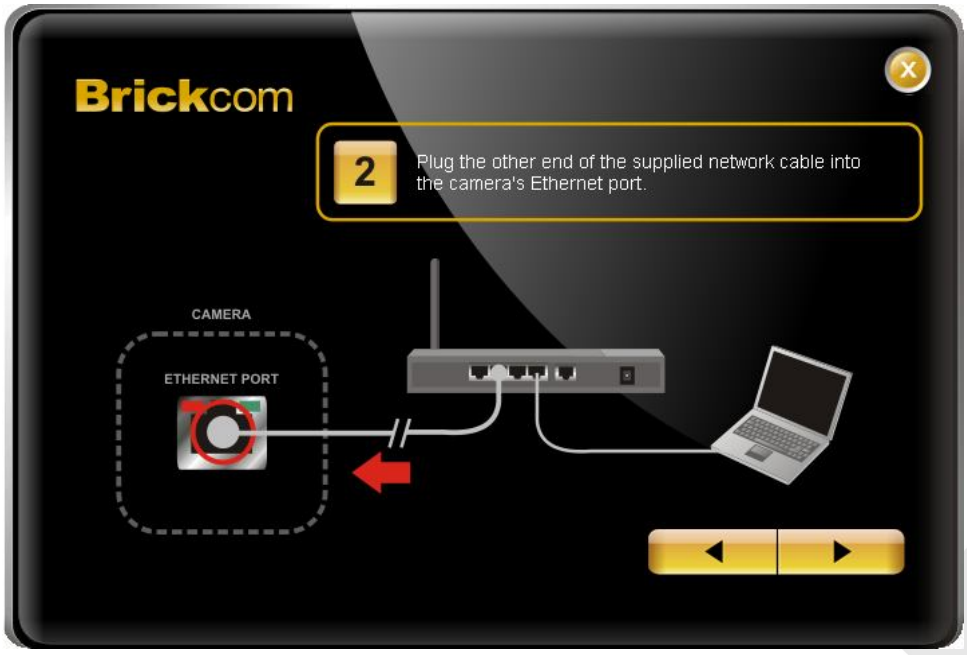
If Custom Setup type was used in the software installation and an EasyConfig icon was not installed on the desktop, the program will be installed under C:\Program Files\Brickcom\EasyConfig unless the program was saved to a preferred directory.

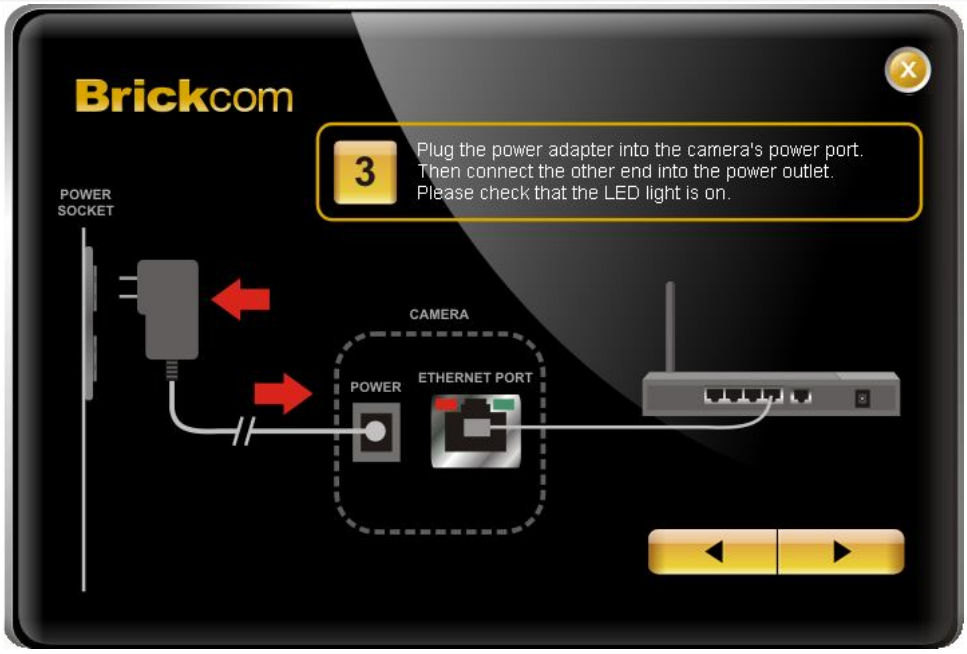
A. Click <Start> to continue. The program will automatically search for the camera in the intranet.

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.

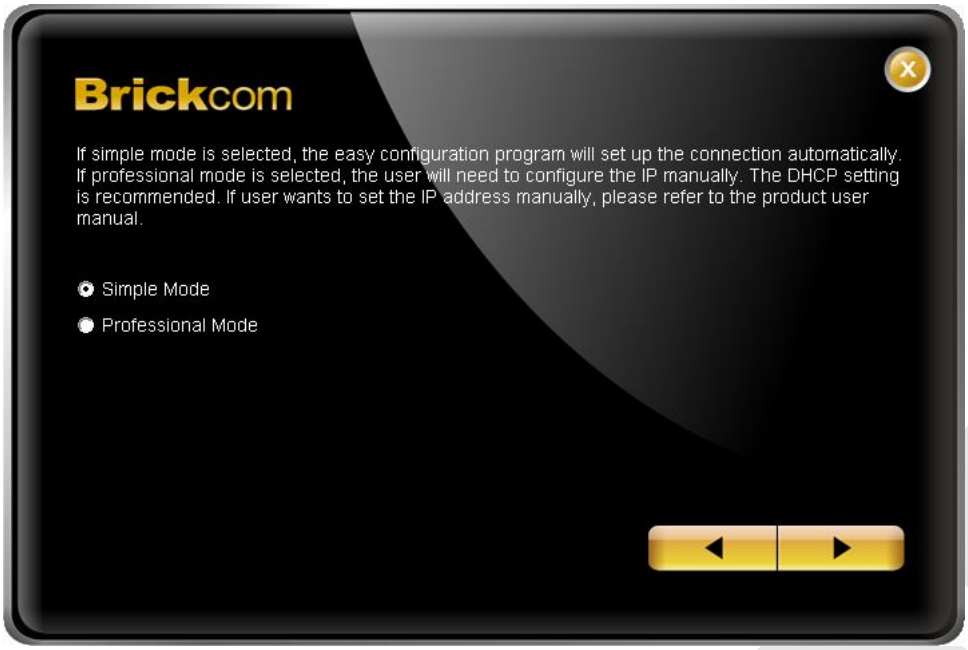



Brickcom
Connection
1
Plug one end of the supplied network cable into your network switch or router.
NETWORK CABLE

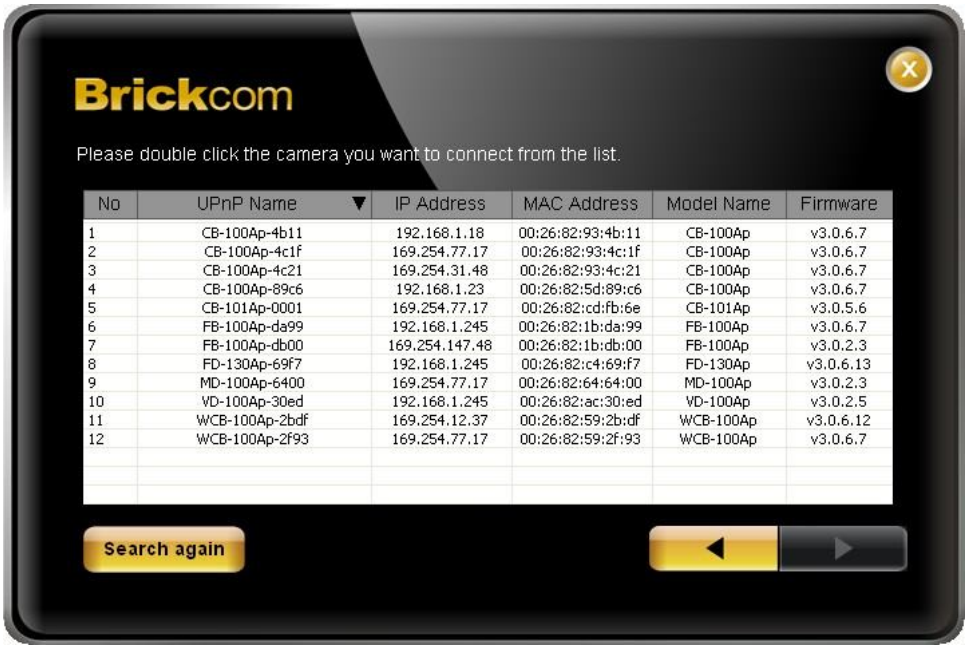

Brickcom
2
Plug the other end of the supplied network cable into the camera's Ethernet port.
CAMERA
ETHERNET PORT



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.

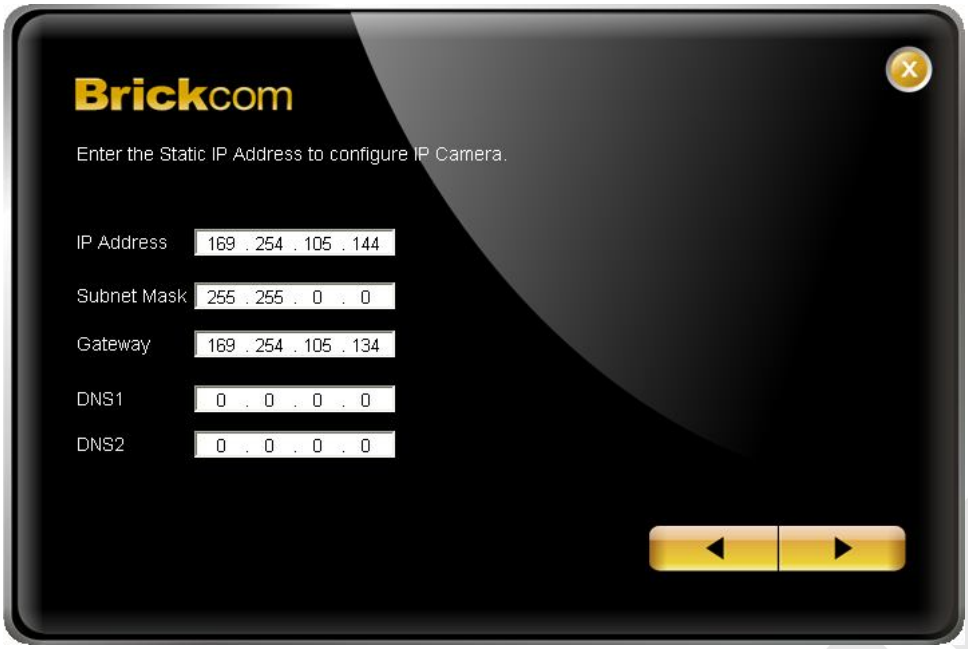


C. There may be many cameras in the local network. Differentiate the cameras using their UPnP name. Double click on the camera from the survey list to connect.

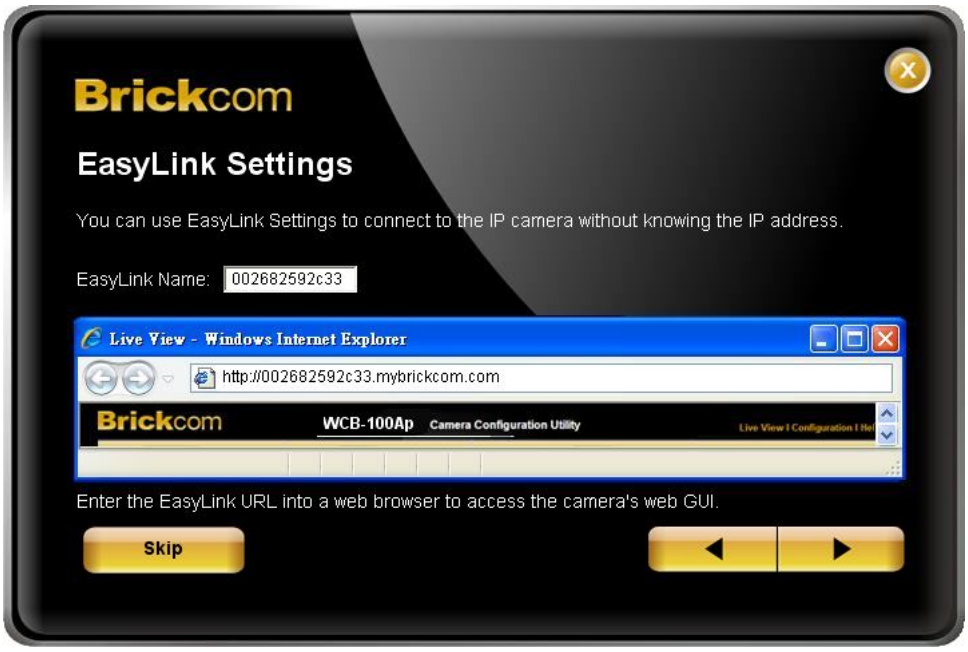


D. For configuring the IP address settings, select either <Settings remain the same>, <Automatically obtain an IP Address (DHCP)> or <Set IP Address configuration manually>. The DHCP setting is recommended.

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



E. **If the camera supports the EasyLinkTM function**, the following page **will** be displayed. Otherwise, this page **will not** be shown. *If desired, click <Skip> to skip this setting.



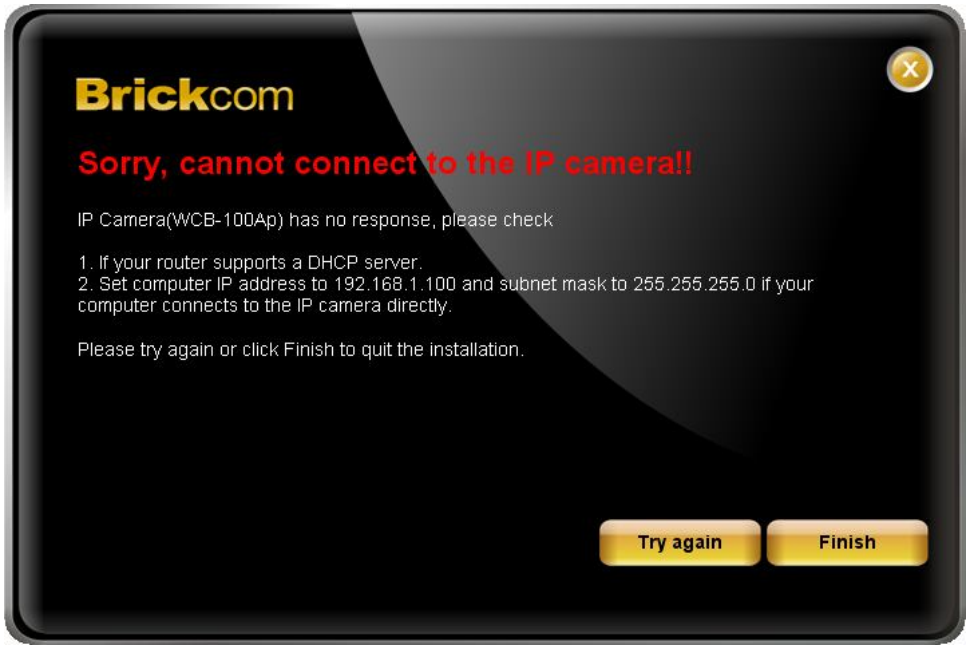
EasyLinkTM is a unique Brickcom function which allows users to assign a unique EasyLink name to their network camera's IP address. There is no need to configure the router to open up ports or remember hard-to-memorize IP addresses. Users can log onto [uniqueEasyLinkname].mybrickcom.com to view the camera's web GUI and live view.

a. Enter a unique EasyLink name whose length must be between 5-32 characters.

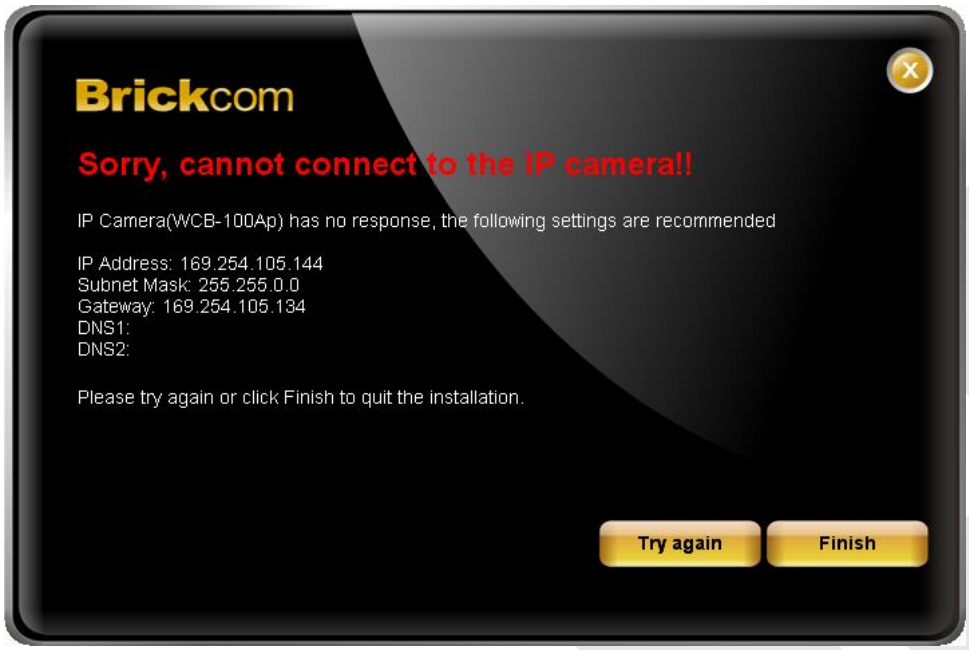
b. When finished, click the arrow button to continue.

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.

Once installation is complete, the Administrator should proceed to the next section "Accessing the Network Camera" for necessary changes and configurations