

TOSHIBA

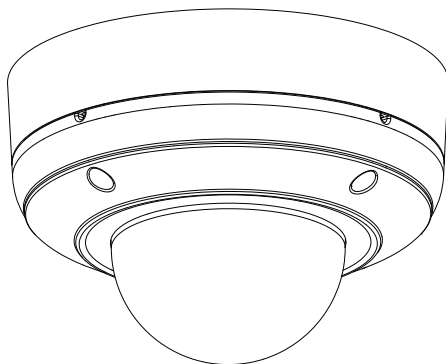
Leading Innovation >>>

NETWORK CAMERA

Model: IK-WR31A

Quick Start Guide and Important Safeguards

This guide describes the hardware installation.



Refer to the user's manual (PDF file) contained in the CD-ROM for settings, operations and other information.

The application Adobe® Reader® is needed to view PDF files. If you do not have this application, download it from the Adobe Systems Incorporated website.

■ <http://www.adobe.com/>

For information on our latest products and peripheral devices, refer to the following Website:

■ <http://www.toshibasecurity.com>

If the URL changes, refer to the Toshiba website (<http://www.toshiba.com>).

Introduction

FCC (USA)-INFORMATION

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION: Your authority to operate this FCC verified equipment could be voided if you make changes or modifications not expressly approved by the party.

Thank you for purchasing the IK-WR31A Network Camera. Before using the camera, read this quick start guide carefully to ensure correct usage. After reading this quick start guide, save it for future reference.

The design, specifications, software, and quick start guide contents are subject to change without prior notice.

Terms

- The term "OS" is used in this manual to indicate operating systems compatible with this product.
 - Microsoft® Windows Vista® Business Edition
 - Microsoft® Windows® 7 Professional Edition

NOTE

- The performance of the network camera may vary depending on the network environment.

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Important Safeguards

1. Read Instructions

Read all the safety and operating instructions before operating the product.

2. Retain Instructions

Retain the safety instructions and user's manual for future reference.

3. Warnings

Comply with all warnings on the product and in the user's manual.

4. Follow Instructions

Follow all operating and use instructions.

5. Cleaning

Disconnect this camera from the power supply before cleaning.

6. Attachments

Do not use attachments not recommended by the camera manufacturer as they may pose safety risks.

7. Accessories

Do not place this camera on an unstable cart, stand, tripod, bracket or table. The camera may fall, causing serious injury to a person, or serious damage to the product. Use only with stand, tripod, bracket, or table recommended by the manufacturer, or sold with the camera. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

8. Ventilation

This camera should never be placed near or over a radiator or heat register. If this product is placed in a built-in installation, verify that there is proper ventilation so that the camera temperature operates within the recommended temperature range.

9. Power Sources

This camera should be operated only from the type of power source indicated on the information label. If you are not sure of the type of power supply at your location, consult your product dealer.

10. Power-Cord Protection

Power cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, screws and the point where they exit the product.

11. Installation

Install this camera on a secure part of the ceiling or wall. If installed on an unsecured location, the camera could fall causing injury and damage.

12. Lightning

For additional protection on this camera during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the power supply and cable system. This will prevent damage to the camera due to lightning and power-line surges. If lightning occurs, do not touch the unit or any connected cables in order to avoid electric shock.

13. Overloading

Do not overload the power supply or extension cords as this can result in a risk of fire or electric shock.

14. Object and Liquid Entry

Never push objects of any kind into this camera through openings as they may touch dangerous electrical points or short-out parts that could result in a fire or electrical shock. Never intentionally spill liquid of any kind on the camera.

15. Servicing

Do not attempt to service this camera yourself as opening or removing covers may expose you to dangerous electrical or other hazards. Refer all servicing to qualified service personnel.

16. Damage Requiring Service

Disconnect this camera from the power supply and refer servicing to qualified service personnel under the following conditions.

- a. When the power-supply cord or plug is damaged.
- b. If liquid has been spilled, or objects have fallen into the camera.
- c. If the camera has been submerged in water.
- d. If the camera does not operate normally by following the operating instructions in the user's manual. Adjust only those controls that are covered by the user's manual as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the camera to its normal operation.
- e. If the camera has been dropped or the cabinet has been damaged.
- f. When the camera exhibiting a distinct change in performance which indicates a need for service.
- g. Other trouble.

17. Replacement Parts

When replacing parts, be sure the service technician uses parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

18. Safety Check

Upon completion of any service or repairs to this camera, ask the service technician to perform safety checks to determine that the camera is in proper operating condition.

Important Safeguards (Cont.)

CAUTION TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER
SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO REDUCE THE RISK OF FIRE OR
ELECTRIC SHOCK, DO NOT SUBMERGE
THIS CAMERA IN WATER.

FIELD INSTALLATION MARKING:

WORDED: "THIS INSTALLATION SHOULD BE MADE BY A QUALIFIED SERVICE
PERSON AND SHOULD CONFORM TO ALL LOCAL CODES."

This product is intended to be supplied by a Listed Power Adapter with LPS, rated PoE 36-57V, 0.35-0.15A or 12V DC, 2.1A minimum.

The product is not likely to require connection to an Ethernet network with outside plant routing, including campus environment; and the installation instructions clearly state that the ITE is to be connected only to PoE networks without routing to the outside plant.

Ce produit est conçu pour être alimenté par un adaptateur secteur Listed avec LPS, classé PoE 36-57V, 0.35-0.15A ou 12V DC, 2.1A minimum.

Le produit ne est pas susceptible de nécessiter une connexion à un réseau Ethernet avec l'extérieur routage des plantes, y compris l'environnement de campus; et les instructions d'installation clairement que l'état ITE doit être raccordé uniquement aux réseaux PoE sans routage vers le installations extérieures.

Notes on Use and Installation

- **Do not aim the camera at the sun**

Never aim the camera at the sun even with the camera power off.

- **Do not shoot intense light**

Intense light such as a spotlight may cause a bloom or smear. A vertical stripe may appear on the screen. However, this is not a malfunction.

- **Treat the camera with care**

Dropping or subjecting the camera to intense vibration may cause it to malfunction.

- **Never touch internal parts**

Do not touch the internal parts of the camera other than the parts specified.

- **Do not submerge in water**

The camera has some protection to water (see IP rating), and can be used indoors or outdoors. If the camera was submerged in water, turn off the power and contact your dealer.

- **Keep the camera installation away from video noise**

If cables are wired near electric lighting wires or a TV set, noise may appear in images. In this event relocate cables or reinstall equipment.

- **Check the ambient temperature and humidity**

Avoid using the camera where the temperature is hotter or colder than the specified operating range. Doing so could affect the internal parts or cause the image quality to deteriorate. Special care is required to use the camera at high temperature and humidity.

- **Should you notice any trouble**

If any trouble occurs while you are using the camera, turn off the power and contact your dealer. If you continue to use the camera when there is something wrong with it, the trouble may get worse and an unpredictable problem may occur.

Setting the Network Camera Environment

Items needed for network camera monitoring

● Administrator's personal computer

The personal computer that allows setting, operating, monitoring and other functions with the network camera is called the "administrator's personal computer" in this guide.

* The personal computer for viewing monitored images is called the "user's personal computer" in this quick start guide. The network camera can be viewed by more than one personal computer at the same time.

● Recommended personal computer system requirements:

-- Windows Vista® Business, or Windows® 7 professional.

-- Internet Explorer® Ver 8.0

-- CPU: Intel® Core™ 2 Duo 2GHz or greater

-- Memory: 1GB RAM or greater

● Connection equipment such as LAN cables, and switch or router.

-- The LAN cable type differs depending on the connection method.

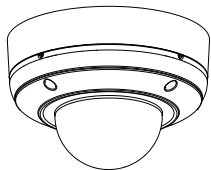
● Camera search application "Installation Wizard"

-- Install this application from the CD-ROM supplied as an accessory (Double-click "Setup.exe" in the CD-ROM and install the application by following the onscreen instructions.)

-- This application is the tool to discover the IP address of a camera. Using this application, the IP address of a camera can be easily determined.

Package Contents

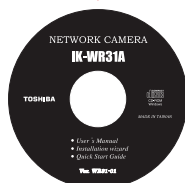
- IK-WR31A



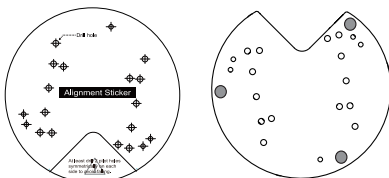
- AV Out cable



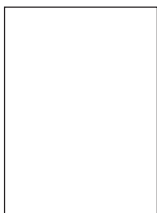
- CD-ROM



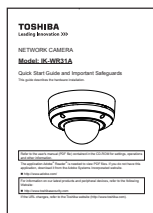
- Alignment Sticker/Mounting Plate



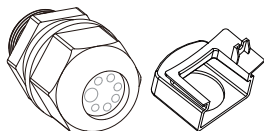
- Warranty Card



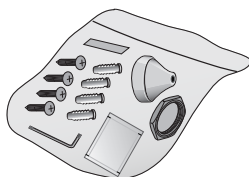
- Quick Start Guide and Important Safeguards



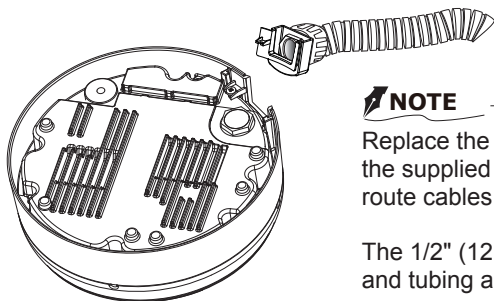
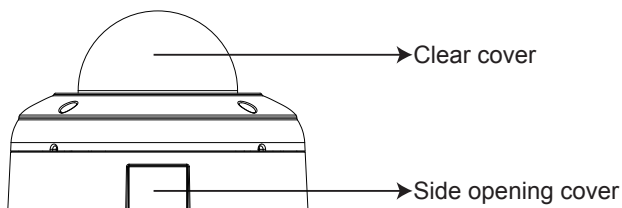
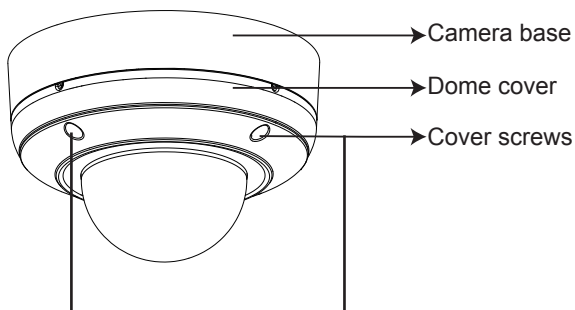
- Waterproof Connector & Bushing



- Gasket, Torx Wrench, Silica Gel and tape, Hex Nut, Screws and Anchors



Physical Description



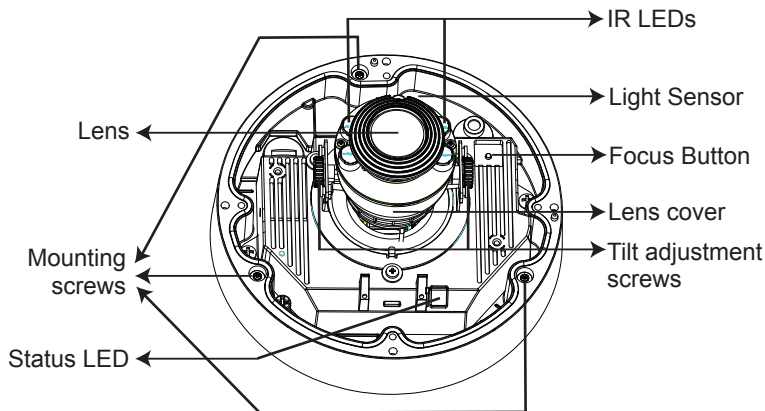
NOTE

Replace the side opening cover with the supplied bushing if you want to route cables from the side of camera.

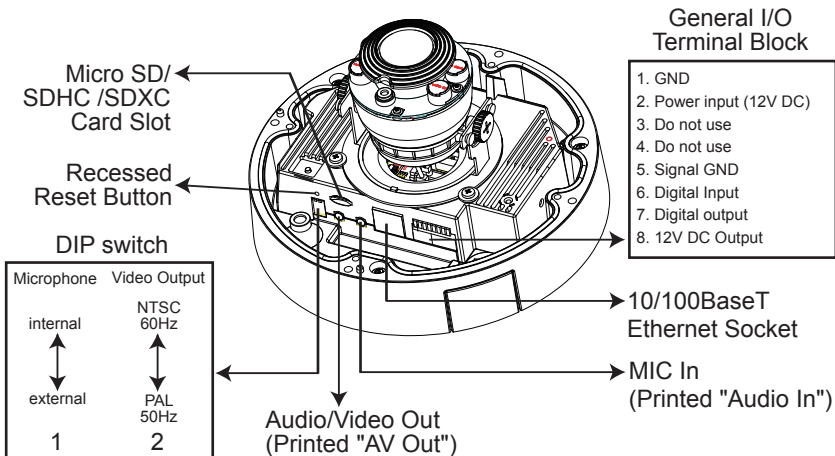
The 1/2" (12.7mm) protection conduits and tubing are not supplied.

CAMERA BASE

● Front View



● Rear View

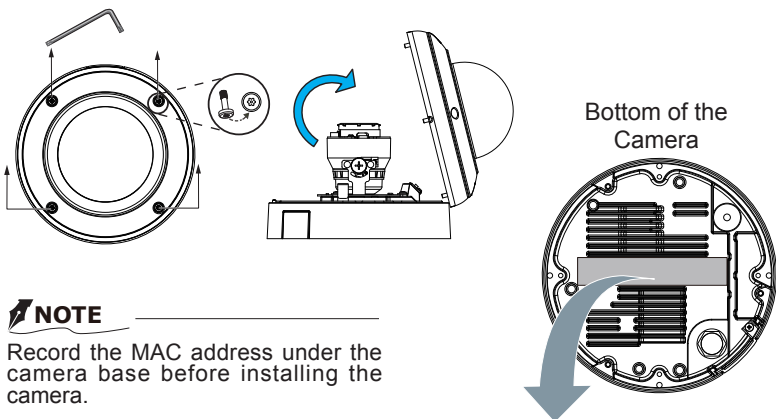


NOTE

Fix microphone switch to external, because the IK-WR31A doesn't have a built-in microphone.

Hardware Installation

First, use the supplied torx wrench to detach the dome cover from the camera base. Then, follow the steps below to install the camera; either to a ceiling or to a wall.



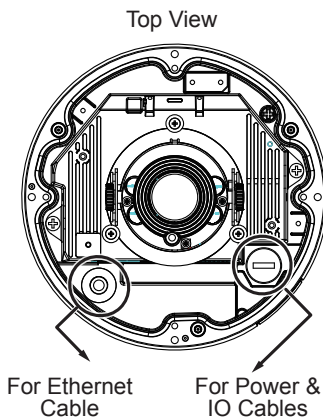
NOTE

Record the MAC address under the camera base before installing the camera.



Cabling Assembly

Connect the appropriate power cables and external devices such as sensors and alarms, to the general I/O terminal block.



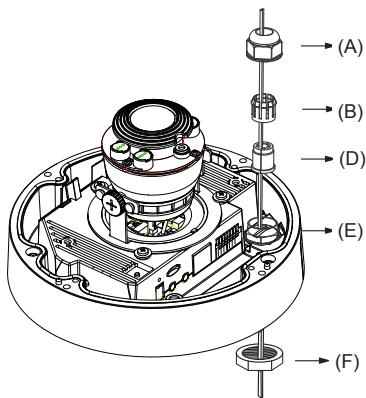
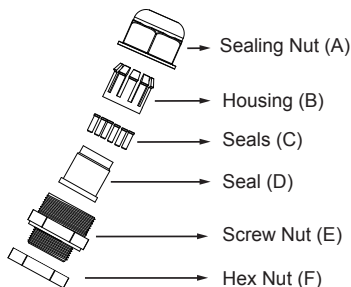
Power and IO cables pass through a waterproof connector. The Ethernet cable should be routed through the supplied gasket. All cables are user-supplied.

Operating environment:

12V DC: $-30^{\circ}\text{C} \sim +50^{\circ}\text{C}$ $\{-22^{\circ}\text{F} \sim 122^{\circ}\text{F}\}$
PoE: $-20^{\circ}\text{C} \sim +50^{\circ}\text{C}$ $\{-4^{\circ}\text{F} \sim 122^{\circ}\text{F}\}$

When the camera is installed and operated in low temperatures below -10°C $\{14^{\circ}\text{F}\}$, normal images may not be obtained immediately after startup. In such a case, wait until the camera warms up (taking more than 1 hour) and start adjustment after turning on the power again.

Waterproof Connector



Assembling Steps

1. Disassemble the components of the waterproof connector into parts (A) ~ (E) as shown above. And Hex Nut is including in the accessory separately.
2. Place the screw nut (E) as shown.
3. Feed the power cables through the waterproof connector (F --> E --> D --> B --> A) as the illustration shows. Then connect the power cables to the power source. Note: There are 8 holes on the seal (D), and the widest holes with a crack on the side are specific for power cables.
4. If you have external devices such as sensors and alarms, feed the cables through

the waterproof connector (F --> E --> D --> B --> A) as previously described. Refer to the pin definition to connect them to the general I/O terminal block. Note: The recommended cable gauge is 2.0 ~ 2.8 mm.

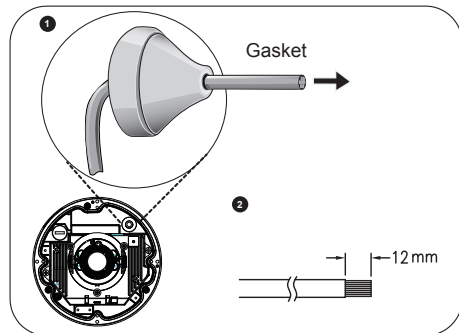
5. Push the seal (D) into the housing (B).
6. Insert the seals (C) into unused holes on the seal (D) to avoid moisture.
7. Secure the sealing nut (A) tightly and hex nut (F) from the bottom of the camera.

Connecting RJ45 Ethernet Cable

RJ45 Cable Dimension (unit: mm)

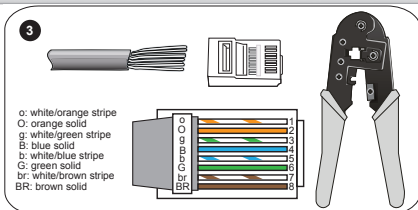
Recommended cable gauge: 24AWG (0.51 mm)

Assembling Steps:



1. Drill a hole on the supplied gasket and insert an Ethernet cable through the opening.

2. Strip part of the sheath from the Ethernet cable.

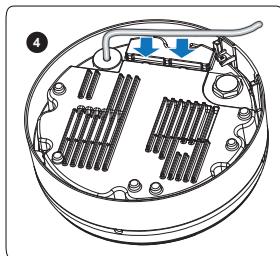


3. You will need an RJ45 crimping tool to attach the Ethernet wires to a connector. When done, connect the cable to the camera's Ethernet socket .

NOTE

- RJ45 crimping tool and plug are not included.
- Use Category (Cat) 5e or higher cable.

4. Press the Ethernet cable into the routing path at the bottom of the camera so that the cable will not get in the way when the mounting plate is attached.



Ceiling and Wall mount

Notes:

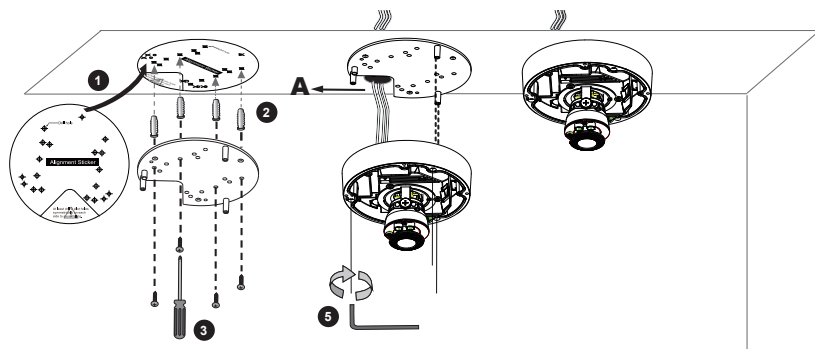
- The included screws and anchors are used to install the camera to a solid surface. (e.g. concrete) If installing on loose or thin material surfaces , use the appropriate anchors (not included) with the screws.
- Generally point the status LED towards the object.
- Install the camera securely.

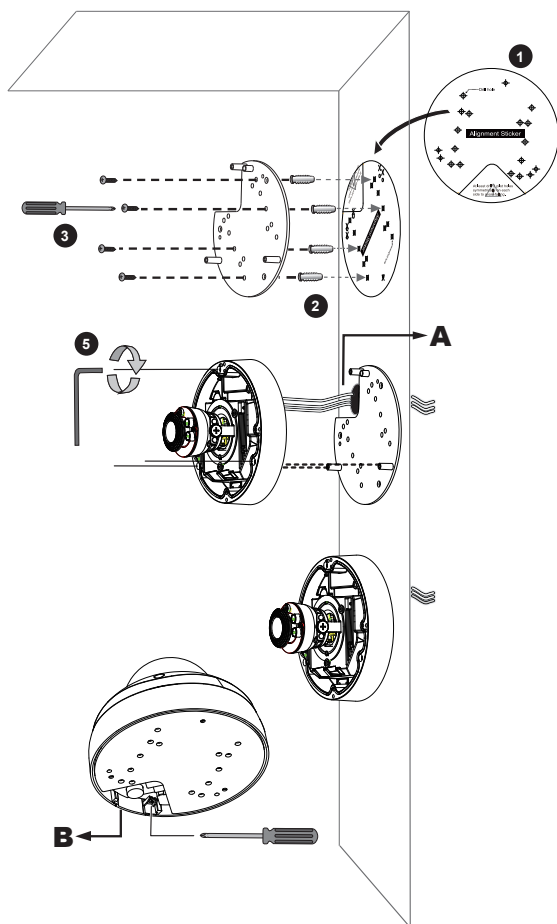
1. Attach the supplied alignment sticker to the ceiling or wall.
2. Using the circle marks on the sticker, drill four pilot holes ($\varnothing 4.8\text{mm} \times 26\text{mm(D)}$) symmetrically on each side into the ceiling. Then hammer the four supplied plastic anchors into the holes.
3. Through four holes on the mounting plate, insert the supplied screws into the corresponding holes and secure the mounting plate with a screwdriver.
4. Drill a hole ($\varnothing 1.0\text{inch}(\varnothing 25\text{mm})$) in the triangular cutout of mounting plate, and lead the cables through this hole. (A)
5. Align the three mounting holes of the camera with the three studs on the mounting plate and tighten them with a supplied torx wrench securely.

Cable installation

If possible, lead all cables behind the camera body through a wall or ceiling.

If this is not possible, remove the side opening cover with a screwdriver (B), and to route the cables through the side. (Refer to the page 11.)





CAUTION

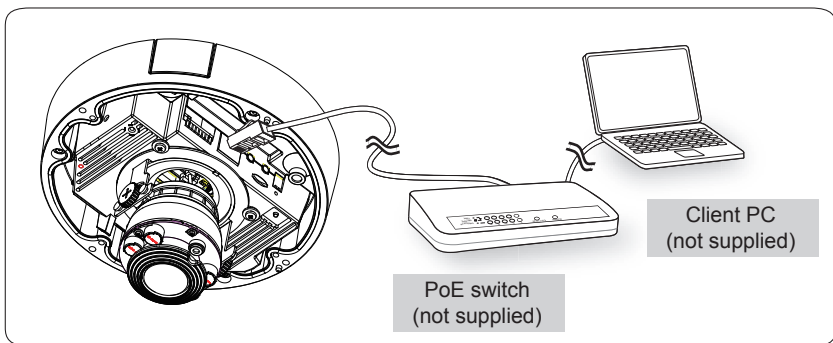
- Installation should be done only by qualified personnel and conform to all local codes.
- Install this camera on a firm and solid part of the ceiling or wall.
If installed improperly or on a weak surface, the camera could fall causing injury and damage.

Network Deployment

Power over Ethernet (PoE)

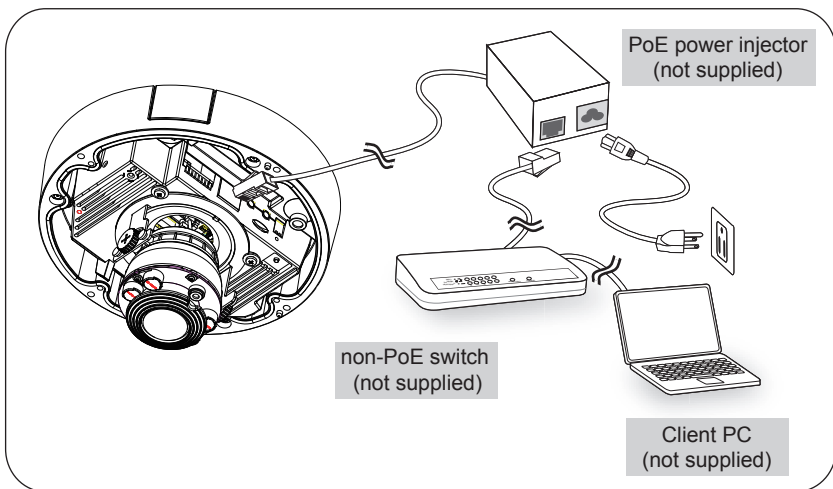
• When using a PoE-enabled switch

The camera is PoE-compliant, allowing transmission of power and data via single LAN cable. See the following illustration to connect the camera to a PoE switch via LAN cable.



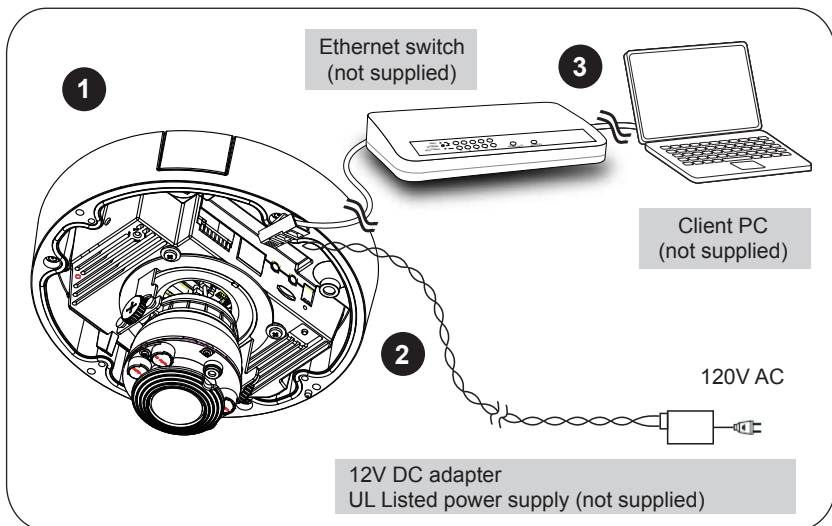
• When using a non-PoE switch

Use a PoE power injector (not supplied) to connect between the camera and a non-PoE switch.



General Connection (without PoE)

1. Connect the camera to an Ethernet switch via LAN cable.
2. Connect the power cable from a power unit (not supplied) to the appropriate port of the general I/O terminal.
(See page 12).
3. Connect the PC to an Ethernet switch via Ethernet cable.

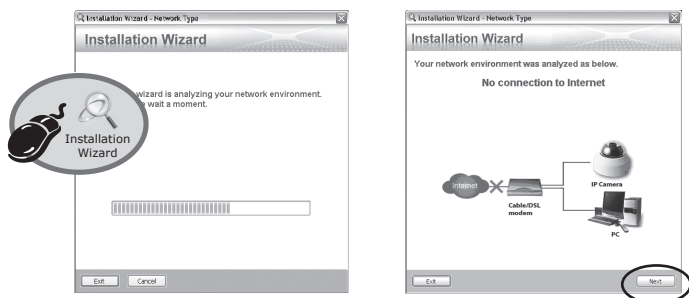


CAUTION

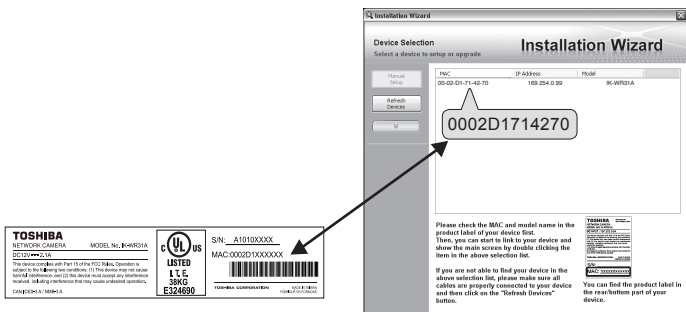
- Recommended power cord is twisted pair line with a minimum wire size of 18 AWG.
- The recommended power supply for this camera is 30 watts minimum.
- When PoE is connected, do not supply 12V DC to the I/O terminal.

Assigning IP Address

1. Install the "Installation Wizard" under the Software Utility directory from the CD-ROM.
2. The program will analyze your network environment. After your network is analyzed, please click on the "Next" button to continue the program.



3. The program searches for other Network Cameras on the same network.
4. After searching, the main installer window will pop up. Double click on the MAC address of the appropriate device to connect to the Network Camera.



NOTE

- If "Installation Wizard" does not find the camera during the search, try turning off the wireless LAN of a PC.
- Installation Wizard can search the location of the Network Camera even though DHCP is not used on the network. In this scenario, assign the camera a static IP address because the IP address of the Network Camera has been assigned 169.254.*.* by default.

Retrieving Images

1. Access the Network Camera from the network.
2. Retrieve live video through Internet Explorer®.



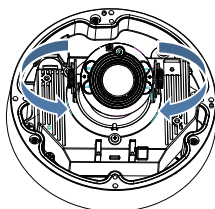
For more information on camera configuration, please refer to user's manual on the CD-ROM.

Adjusting the Lens

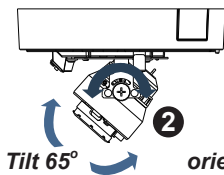
Based on the live image retrieved from the camera, adjust the camera lens by performing the following:

To adjust the viewing angle

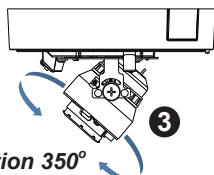
1. Turn the lens module left and right.
2. Loosen the tilt adjustment screws on both side of the camera and then turn the lens module up and down. Upon completion, tighten the screws.
3. Turn the lens cover to adjust the image orientation.



● Pan 350°



Tilt 65°



orientation 350°

DO NOT over rotate the lens. Doing so will damage the camera lens module

Wall mounting

This camera is adjusted to the optimal position for ceiling mounting by default.

When installing to the wall, don't turn a lens cover 180 degrees.

And change the "Video orientation" of the camera.

Audio and Video>Image>General settings>Video settings> Video orientation:

Flip Mirror

Monitoring on the television

This camera is able to output an analog NTSC or PAL video signal and sound from the Audio/Video Out jack.

Adjustment of Viewing angle is possible using a portable monitor without using a personal computer when installing.

Use the included AV Out cable for this purpose.

Focus button

When adjusting the viewing angle, the camera focus may shift.

In this case, push the focus button on the camera body for 2 seconds or more. The zoom lens will move to a wide position and the focus will move to the optimal position.

NOTE

- Depending on an object's conditions, the focus may not move to the optimal position. In this case, focus the lens manually from your personal computer.

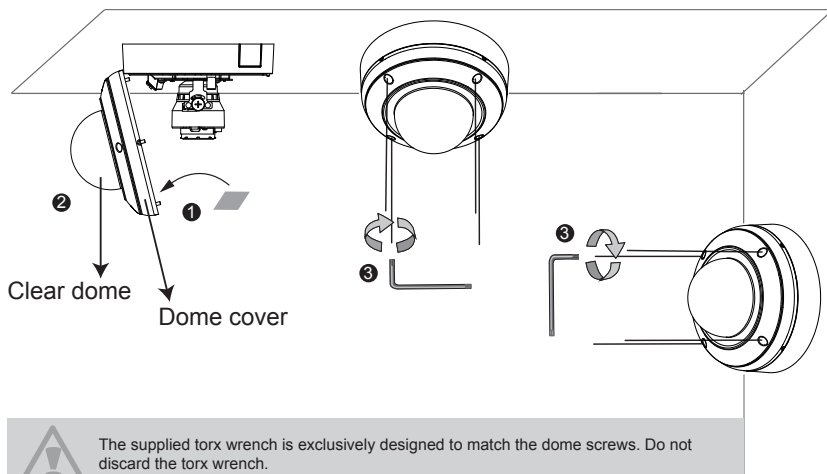


IMPORTANT:

Zoom and Focus adjustment is made via the Remote Focus function on your web browser. There is no mechanical zoom or focus adjustment for the camera.

Dome cover

1. You will find a silica gel bag attached to the dome cover.
Remove the supplied silica gel from the aluminum foil bag, and replace it to new silica gel with supplied double-sided tape.
(Please replace the silica gel with a new one if you open the dome cover after installation.)
2. Attach the dome cover to the camera and aligning with the mounting holes.
Note: Don't touch the lens and clear cover when installing. Clean the clear cover if you touch it. After attaching the dome cover, make sure not to cover the light sensor with dome cover.
3. Secure the four dome screws with the supplied torx wrench. Make sure all parts of the camera are securely installed.



The supplied torx wrench is exclusively designed to match the dome screws. Do not discard the torx wrench.

Treat silica gel bag with care. Do not tear the silica gel package.



WARNING:

*Keep the silica gel out of the reach of babies, infants, and children.
DO NOT EAT, HARMFUL IF SWALLOWED*

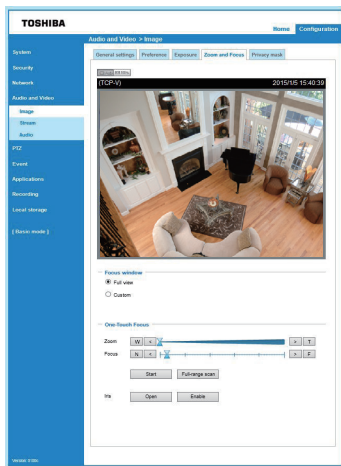
Adjusting the Zoom and Focus

Access the Network Camera from the browser interface, and click the configuration button on the main page. Then click the following:

Audio and Video → Image → Zoom and Focus

To adjust the zoom factor and focus range

1. Use the **Zoom** slide bar to find an optimal view of the area of interest where you want to adjust its focus. Click and drag the double-triangle pointer to rapidly adjust the zoom ratio. Use the "W", "<" or "T", ">" button to adjust the zoom ratio definitely. The **Focus** pointer moves with the Zoom pointer correspondingly.
2. Select Full view from the bottom of the screen.
3. Click on the Iris "Open" button, and wait 5 seconds. Lens iris will be open.
4. Click on the Focus "Start" button or "Full-range scan" button, and wait for the scan to complete. When selected "Full-range scan", a full-range scan through the camera's entire focal length can take about 80 seconds. When selected "Start", the focus scan will only go through the length where optimal focus may occur, and that takes about 25 seconds.
5. After a short time, the clearest image obtained should be displayed. Then, click on the Iris "Enable" button. Use the "N", "<" or "F", ">" button to fine tune the focus if you are not satisfied with the results.



NOTE

- The focus may shift due to the refractive index of the dome cover. To avoid this, verify the zoom and focus from your personal computer after installation.
- Due to a change in temperature, the focus may shift after installation. Verify the focus after installation and periodically.
- (One-Touch Focus) Depending on an object's conditions, focus may not move to the optimal position. In this case, adjust the focus manually via the browser.
- For more information, please refer to user's manual on the CD-ROM.

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