*Tele*Eye NX Series

Network Camera & Video Server

NX173 / NX288 / NX301

NX589 / 599

Installation Guide

*Tele*Eye
www.TeleEye.com

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Version 1.02

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Introduction

Contents

1. Introduction

TeleEye NX Series is a complete portfolio of professional and practical network camera and video server utilising our proprietary SMAC-M compression technology. The NX range offers the balanced combination of high-quality video, mobility, scalability and cost effectiveness. By using TeleEye NX, users can build an integrated, scalable, wired or wireless IP & mobile video surveillance solution over existing network infrastructure. With the support of TeleEye versatile back-end applications, users can gain extra control over their business management beyond security.

1.1. Hardware Features

NX173 Outdoor Vandal Resistant Network Dome

Outdoor and vandal resistant IP surveillance
- f = 3.6mm fixed iris lens
- 0.5 Lux / F1.2
- IP66 weather proof & vandal resistant
- Auto gain control
- Back light compensation
- Supporting mobile phone viewing

NX288 IR Vandal Resistant Network Dome

IP surveillance in complete darkness
- Ultra Hi-Resolution 1/3" CCD, HQ1 Technology
- f = 2.9-10mm vari-focal auto-iris IR lens
- True day & night operation with switchable IR-cut filter
- 10 IR LEDS, ~15m illumination range
- 0.13 Lux / F1.3 (IR OFF), 0.0 Lux (IR ON)
- IP66, vandal resistant, 3-axis adjustment
- Power over Ethernet
- Supporting mobile phone viewing

Introduction

NX589/NX599 High Speed Dome

IP-based high speed dome for all round surveillance
- Optical zoom: 26X, Digital zoom: 12X
- 128 presets, 6 patrols, 3 patterns
- Day / night minimum illumination: 0.01 Lux
- 8 privacy zone maskings
- IP66 weather proof standard
- Supporting mobile viewing

NX301 Video Server

Converting analogue camera into IP-based or mobile surveillance
- 1 video in, 1 audio in / out, 1 alarm in / out, 1 RS485 out
- Refreshing rate up to 25/30fps
- USB connection for mobile data modem
- Power over Ethernet
- Power output for DC 12V camera
- *sure*LINK for dynamic IP Internet connection
- Supporting popular third party telemetry protocols
- Supporting mobile phone viewing

1.2. Functional Features

- **Scalable and Flexible Network Configuration**

    - Flexible connections: LAN, ADSL, mobile network, etc.

    - sureLINK, support both static and dynamic IP

    - Monitoring and recording up to 16 cameras with TeleEye WX-M16 Multi-site software

    - Live video delivery over bursty and limited network resources with TeleEye proprietary SMAC-M video compression technology

- **Advanced Security Design**

    - Connection with user name and password protect

- **Mobile and Portable Video Surveillance**

    - Mobile monitoring with TeleEye M-303 mobile video monitoring software

    - 3G USB modem supported (NX301 only)

- **Professional and Robust Design**

    - Switchable IR-cut filter (NX288 only)

- **Cost-effectiveness for All Infrastructures**

    - Power over Ethernet (PoE) (NX301 and NX288 only)
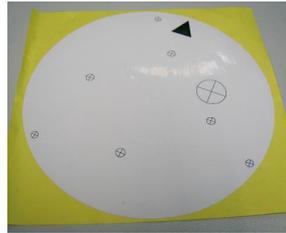
Introduction

Packages Contents

After removing the package, make sure you have the following items:

For NX173

- NX173 network camera
- Warranty card and registration code
- User Guide
- Software CD

- Analog video cable

- RJ-45 Ethernet adapter

- Power jack converter

- Screws driver

- Wall mount screws and plastic wall plugs

Introduction

- Label

For NX288

- NX288 network camera
- Warranty card and registration code
- User Guide
- Software CD

- Analog video cable

- RJ-45 Ethernet adapter

- Screws driver, wall mount screws and plastic wall plugs

Introduction

For NX589/NX599

- NX589/NX599network camera
- Warranty card and registration code
- User Guide
- Software CD

- RJ-45 Ethernet adapter

- Network and alarm cable

- AC Adapter

- AC and Earth cable

- wall mount screws, bracket screws and acrylic dome shield screws

Introduction

For NX301

● NX301 video server

● Warranty card and registration code

● User Guide

● Software CD

● Wall mount screws and plastic wall plugs

● DC Adapter

● Power cord

● RJ-45 Ethernet cable

For NX301

Introduction

2. Hardware Installation

2.1. Cautions

- Do not install the camera in extreme temperature conditions. Do use the camera under conditions where temperatures are within 0°C ~ +50°C : (32°F ~ 122°F)
- Do not install the camera under unstable lighting conditions. Severe lighting change or flicker can cause the camera to work improperly.
- Do not install or use the camera in an environment where the humidity is high. It can result in poor-quality image.
- Do not disassemble the camera. There are no user serviceable parts inside it. Opening or removing the camera's cover may expose you to dangerous voltage or other hazards. Refer all servicing to qualified personnel only.
- Do not touch the imaging surface of sensor. Use a soft cloth with alcohol to clean the surface if it is touched accidentally.
- Ensure the supply voltage is correct before operation!
- Do not focus the camera on the sun directly.
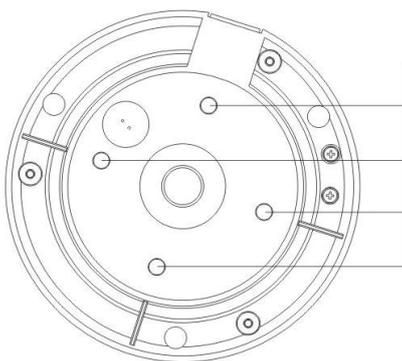
2.2. NX173

Installation/Configuration
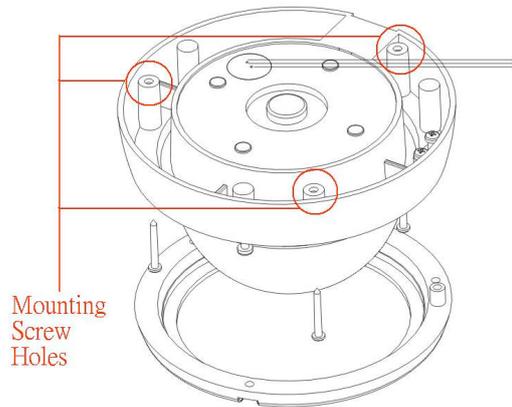
The positions marked with circles show the holes for mounting screw.
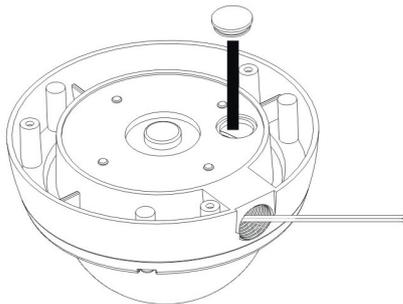
There is an alternate hole for the power cable, Ethernet cable and alarm cable. When this hole is used, the upper hole has to be sealed with the plastic cork.


These 4 plastic corks should never be removed when water-proof is a critical requirement.
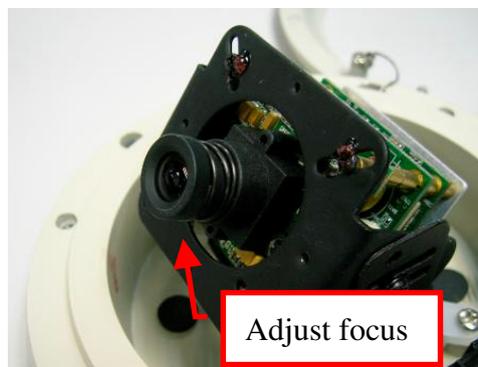
Hardware Installation

With reference to the following figure, connect the power cable with a 12V DC supply, Ethernet cable through the LAN adapter and alarm cable to the camera.

Power cable (DC12V IN)

Ethernet cable

Alarm cable
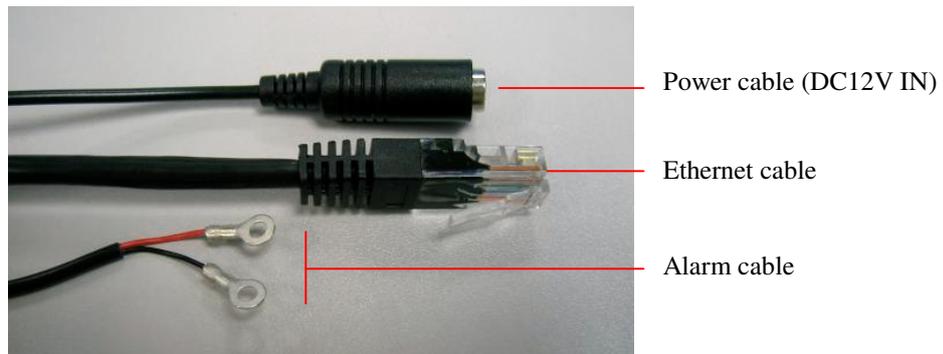
After mounting the camera on the wall or ceiling, connect the analog video output to a monitor by using the analog video cable. Loose the screw to adjust the direction (pan/tilt) of the camera.
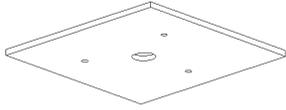

Video output
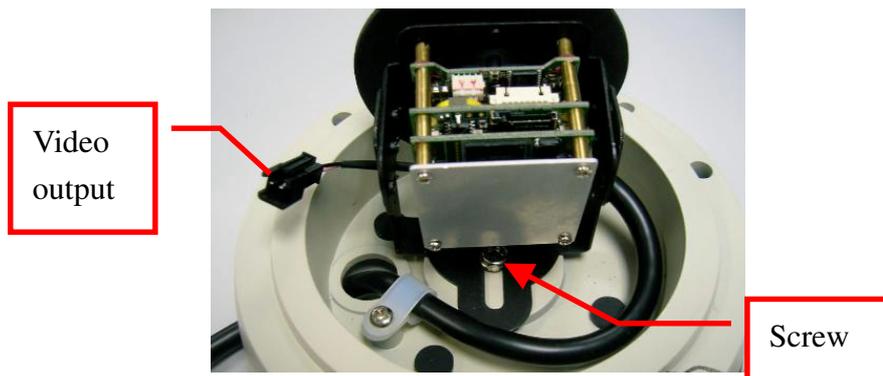
Screw

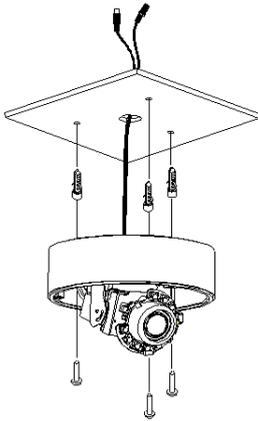Tighten the screw to fix the direction of the lens. Then, adjust the focus by tuning the ring of the lens.

Adjust focus

Finally, disconnect the analog video cable and close the camera cover.

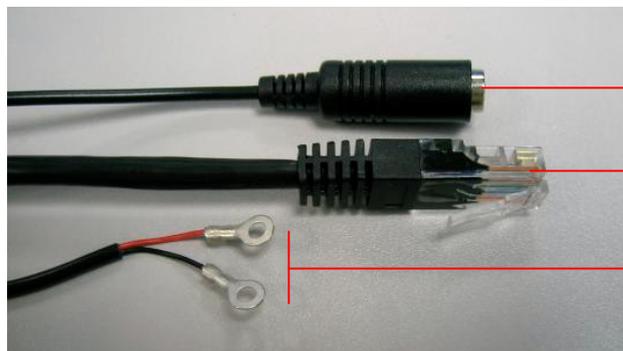**Hardware** Installation

2.3. NX288

Installation/Configuration

Drill φ25mm hole on the ceiling for video and power connector cable to pass through.

Take off the dome cover from the camera. Use specified holes inside the camera base for installation.

Finally, with reference to the following figure, connect the power cable with a 12V DC supply, Ethernet cable through the LAN adapter and alarm cable to the camera.
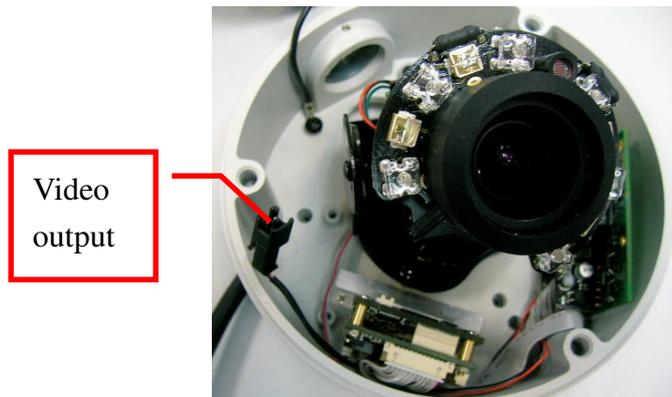
Power cable (DC12V IN)

Ethernet cable

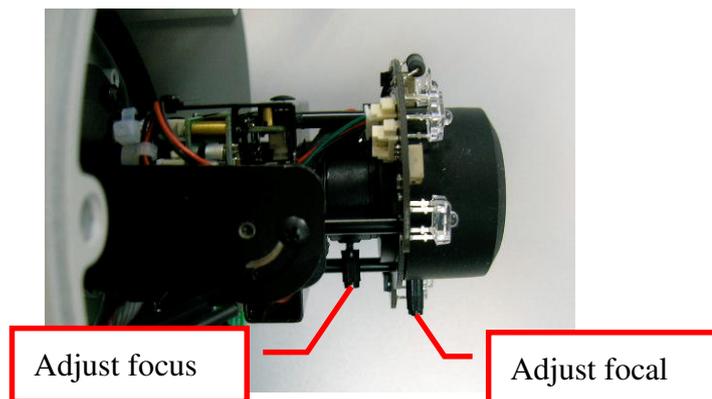Alarm cable

Hardware Installation

After mounting the camera on the wall or ceil, connect the analog video output to a monitor by using the analog video cable.
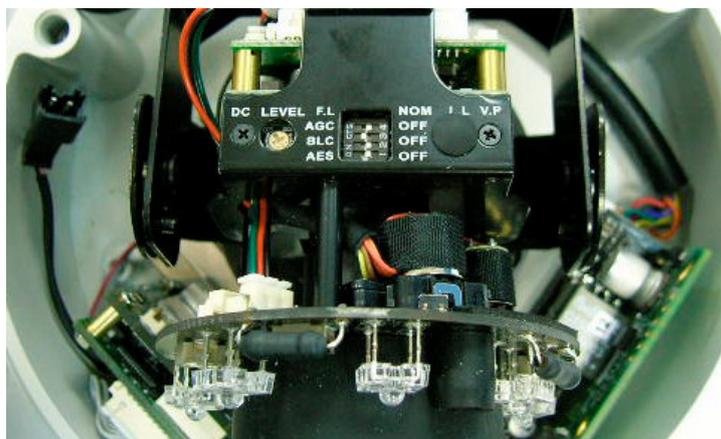

Adjust the direction (pan/tilt/rotation) of the camera.

Adjust the focal and focus by sliding the sticks at the side of the lens.

Hardware Installation

Adjust the IRIS level of Auto Iris lens by tuning the "DC LEVEL" as shown in the following figure.

Adjust the switches with reference to the following description.

FL: Flickerless
        FL: In FL mode, the shutter speed is 1/100sec. (NTSC system) / 1/120sec. (PAL).
             If choose FL mode, [AES] switch should be off.
        NOM: Normal position

AGC: Automatic Gain Control
        ON: AGC level of gain varies from 0 to 26dB.
        OFF:AGC OFF. The level of gain is fixed at 0dB.

BLC: Backlight Compensation
        When the object is dark by strong light, please turn on BLC to make object become bright.

AES: Automatic Electronic Shutter
        ON: The range of shutter speed from 1/60 (1/50sec.) to 1/100,000 sec.. This mode is employed for using a manual iris lens.
        OFF: The shutter speed is 1/60sec. (1/50sec.).

        When an auto iris lens is applied, AES should be off.

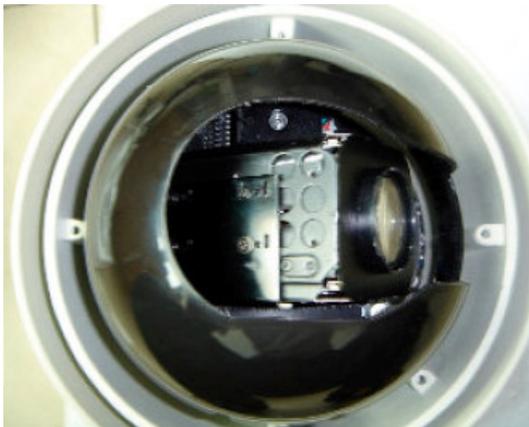Finally, disconnect the analog video cable and close the camera cover.

Hardware Installation

2.4. NX589/NX599

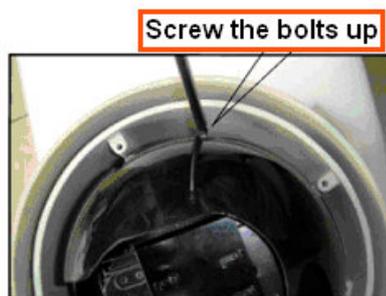## Installation/Configuration

-Installation steps of shield dome.

1. The positions marked with circles show the fixing holes of acrylic shield, i.e. four M3 screw holes.

2. Aim the open end of shield dome at the lens of camera. Aim the 4 holes on the shield to the 4 M3 screw holes on the dome device.


3. Screw the four M3 bolt up

Hardware Installation

## -Installation Instruction of the Acrylic Dome Shield

Installation of the Acrylic Dome Shield

1. Remove Acrylic DOME shield (Please do not scrape the Acrylic shield. It is recommended to wear

cotton gloves when operate).

2. As shown in the figure below, first take the flexible flat cable through connector above the base

plate and buckle it on the connector. Then buckle the cable on the connection below the CAMERA.

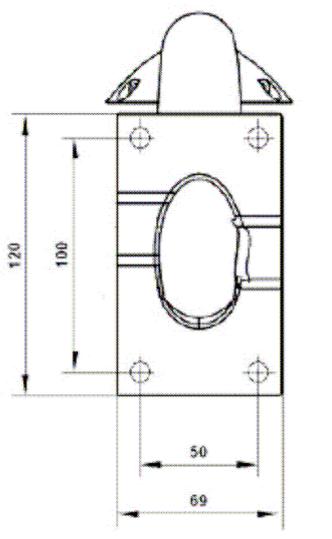3. Lock the CAMERA up and fix the screws.

4. Install Acrylic shield
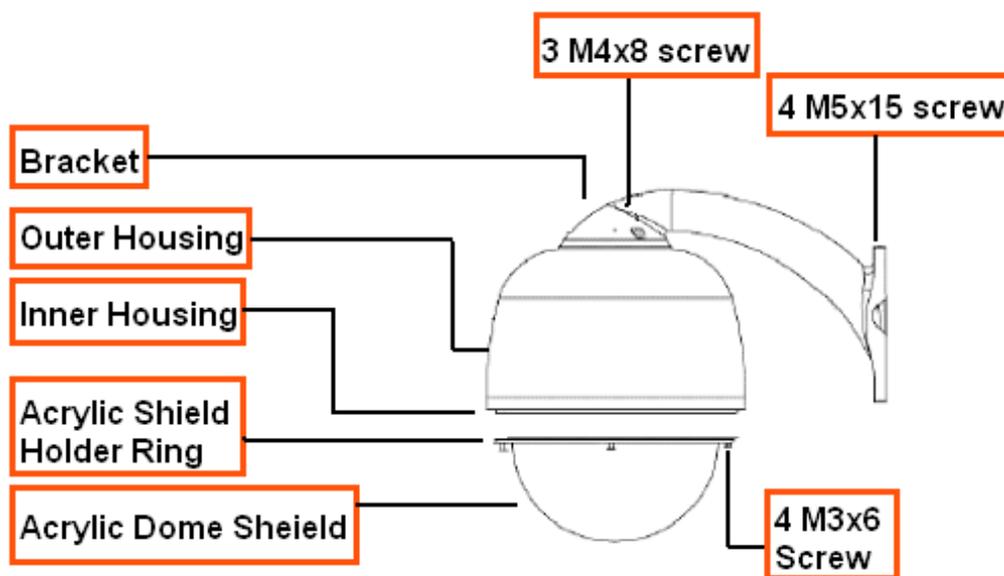
-Install Bend-Tube-Style Bracket

1. Connecting the dome to the wall mount with the bracket.
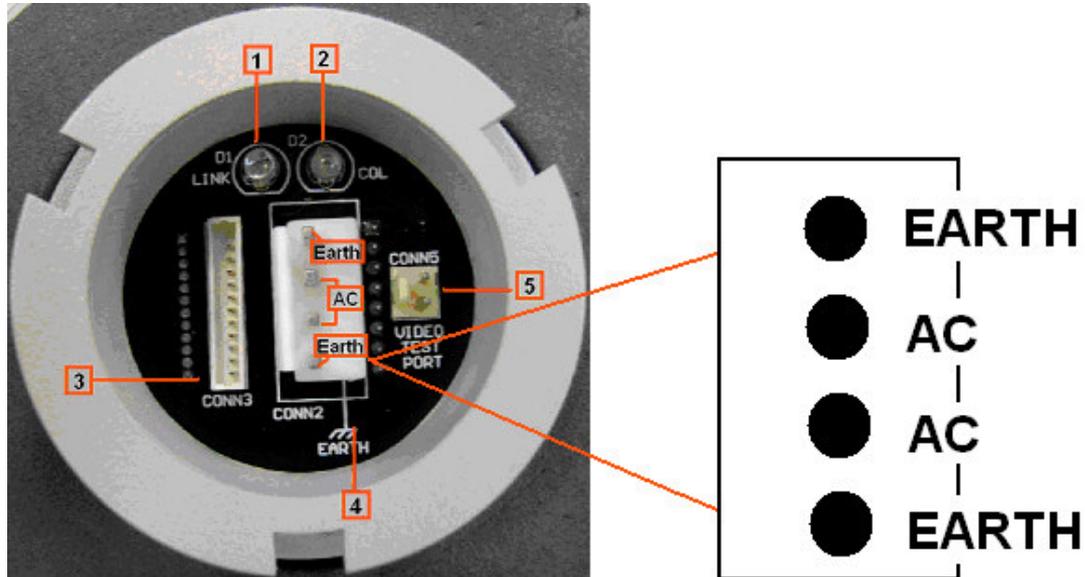

Hardware Installation
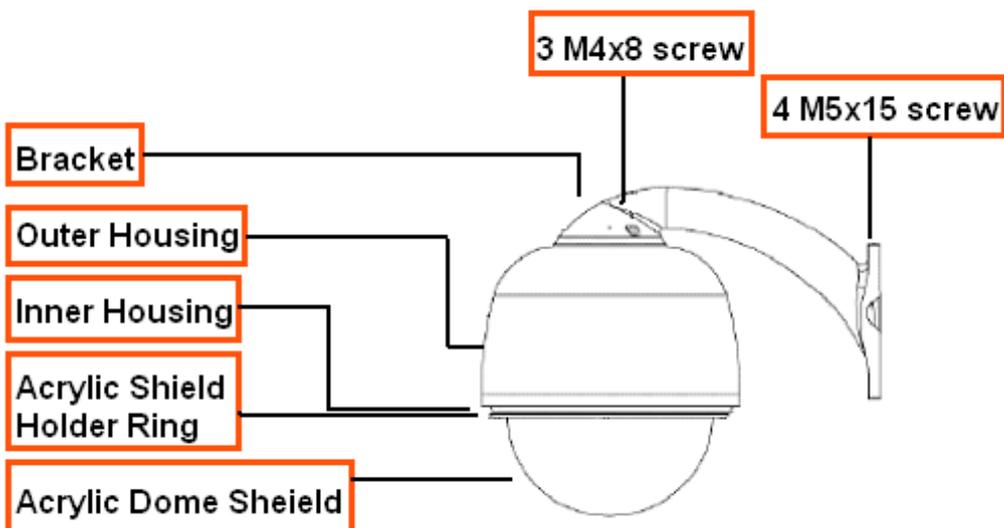
2. Wall mount bracket installation

-Wiring of Dome System

Finally, with reference to the following figure, connect the AC Adapter and AC and Earth cable, network cable through the LAN adapter and alarm cable to the camera. During installation, you can use the analog video cable to connect to a video monitor for testing.

Bottom of the NX589/NX599

1: LINK LED.

2: COL LED.

3: Network and alarm connector.

4: AC power and Earth connector.

5: NC

Hardware Installation
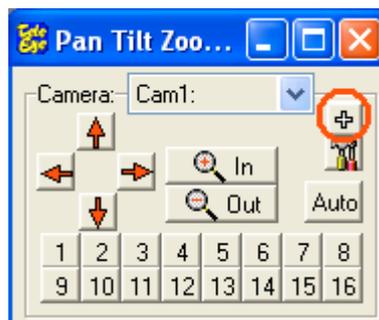
-Network Configuration
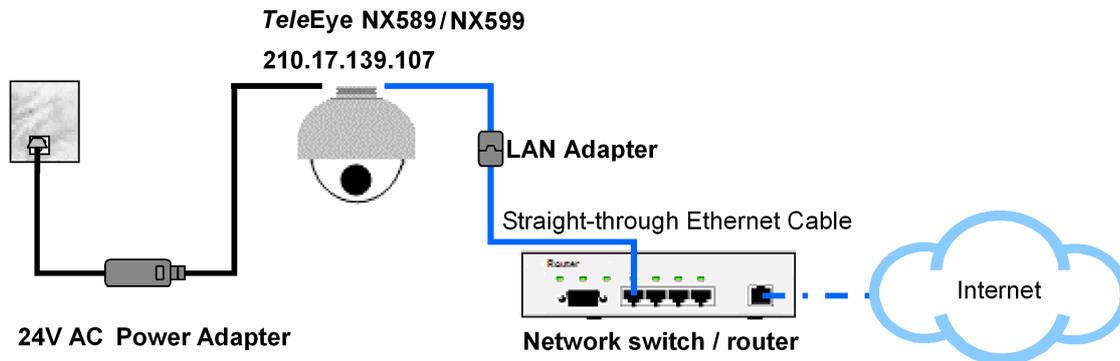

-NX589/NX599 OSD Control

Use of the main menu:
In WX-M4lite, pop up a PTZ screen by clicking the PTZ icon
on the left corner of the control panel.

And click the maximize screen icon

Hardware Installation

Then, click the [Additional] tab page. After click the OSD icon, an OSD menu on the video can be seen. The up and down arrows can be use as option selection. The left and right arrows can be use as enter the submenu or change the value or setting of an option. Press the Close Iris icon when quit the sub menu or main menu.
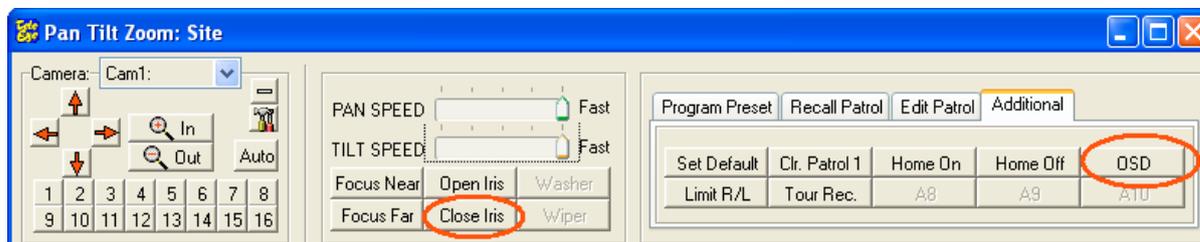
-Privacy Zone Mask Setting

Set in OSD main menu -> Camera options -> Mask setting

1.Number (1 ~~ 8)　<<　Mask sector number selection, press left / right arrow to select.

2.Mask Edit　<<　Mask editing, press left / right arrow or [Open Iris] to enter, then use pan / tilt / zoom to select region of video to be covered by a black mask, press [Close Iris] to exit to previous menu.

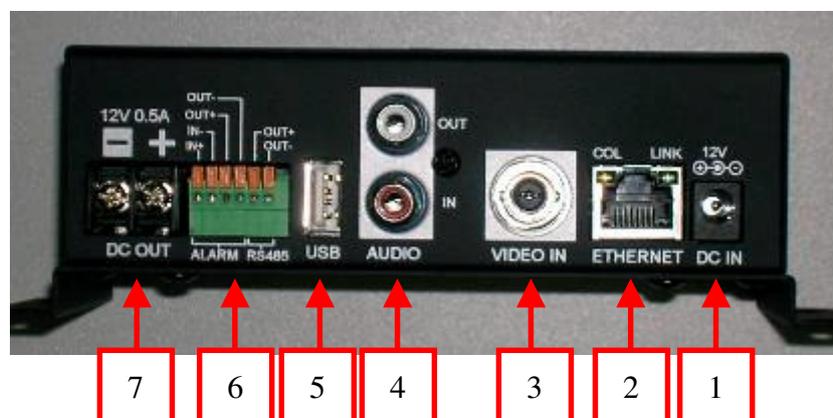3.Mask Display ON/OFF　<<　Mask Display ON/OFF, press left / right arrow to select.

Hardware Installation

2.5. NX301

Front Panel

There is a red LED on the front panel. It flashes when just powered on and indicates the NX is starting. It lights continuously when the starting process is completed.

Rear Panel

The following figure shows the rear panel of NX301.

1. DC in: Connect power supply (12V DC). If Ethernet jack is connected to a switch/router with PoE supported, the DC-IN is not necessary.
2. Ethernet Jack (10/100 Base-T):
    - This socket is used for connecting NX to the network (e.g. LAN)
    - This socket includes {COL LED} and {LINK LED}
    - {COL LED}: When ON, indicates that collision is occurring on the network
    - {LINK LED}: When ON, indicates that NX is connecting to the network and ready to function
3. Standard BNC connector for video source input
4. Audio in: Connect audio input device with RCA jack for audio monitoring and recording
    Audio out: Connect audio output device (e.g. speaker) with RCA jack for public addressing
5. USB: For connecting to 3G USB modem
6. Alarm in: Alarm input
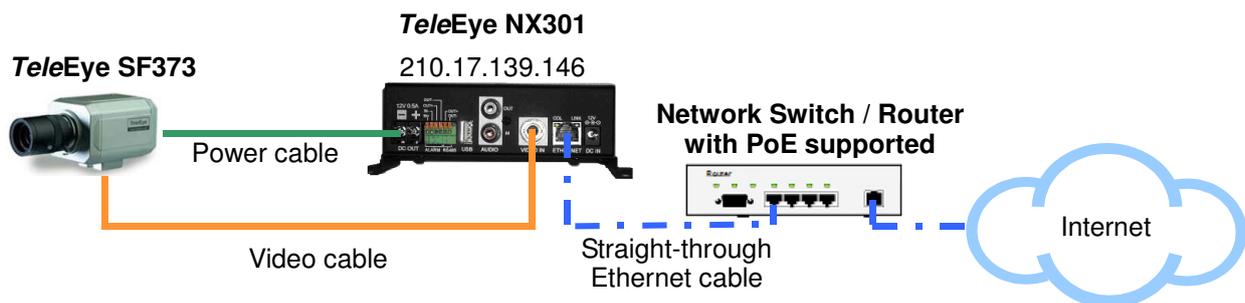   Alarm out: Relay (switch) output

Hardware Installation

RS485 out: 2-way terminal block for connecting a PTZ camera

7. DC output: Supply 12V, 0.5A DC to camera.

# Installation / Configuration

Two configurations are available:

Configuration 1: Through Ethernet network

Step 1:   Connect a camera to NX301 with video cable
Step 2:   Connect NX301 to a router/switch with a Ethernet cable
Step 3:   If the router/switch does not support "Power over Ethernet (PoE)", connect NX301 with a power adapter
Step 4:   When power is applied, the front panel LED is flashing. Wait for around 1 minute for the LED to light continuously.

Configuration 2: Through 3G network
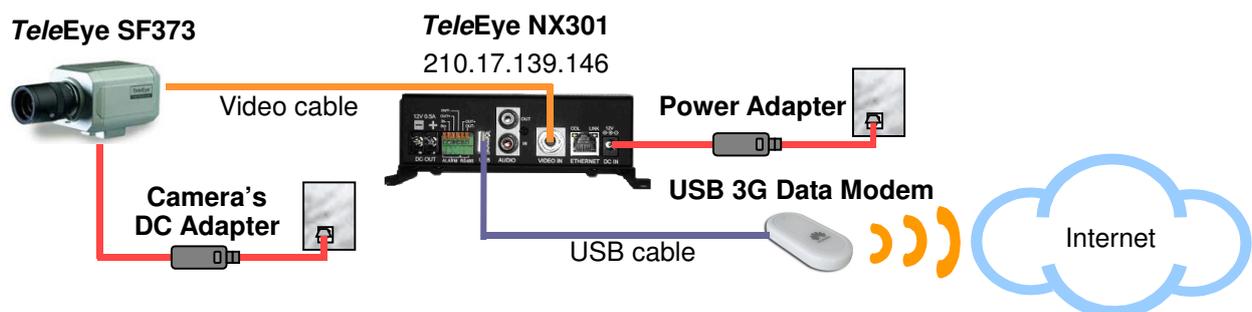
Step 1:   Connect a camera to NX301
Step 2:   Connect NX301 to a USB mobile data modem
Step 3:   Connect NX301 with a power adapter
Step 4:   When power is applied, the front panel LED is flashing. Wait for around 1 minute for the LED to light continuously.

Hardware Installation

3. Software Installation

3.1. PC Requirements

|	
Computer	Personal Computer
Processor	Intel Pentium IV 2.4GHz or above
Memory	1GB RAM or above
Hard Disk	Minimum 1GB hard disk space required
Drive	CD-ROM
Display	1024x768, true colour, with Direct3D supported
Sound	Sound card is required
Ethernet Card	10/100Mbps or above
Port	Serial Port
Operating System	Microsoft Windows 2000 / XP / Vista

3.2. IP Setup Utility

- Click [Next] in the welcome screen and following instructions in the installer.

- Select the installation folder in the following window. Then click [Next].
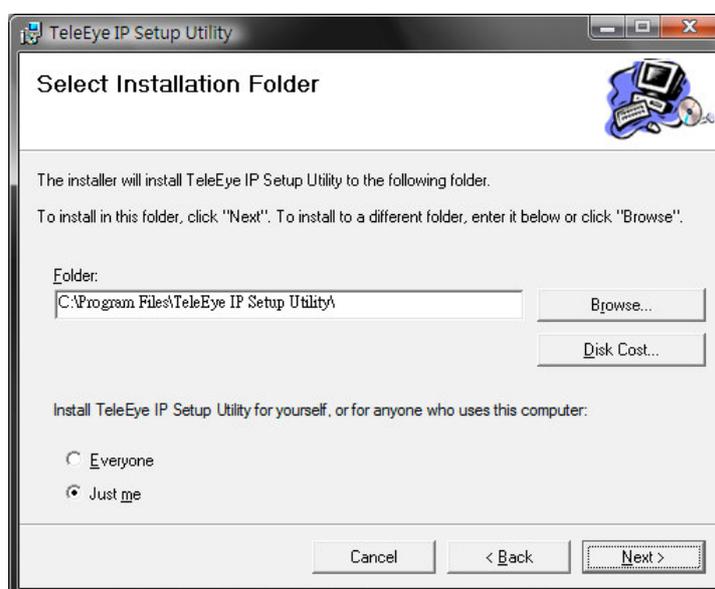
- Click [Next] to confirm the installation and wait the installation complete.

Software Installation

3.3. WX-M4Lite

- Click [Next] in the welcome screen and follow the instructions in the installation wizard. Select [Typical] in the following screen and click [Next].
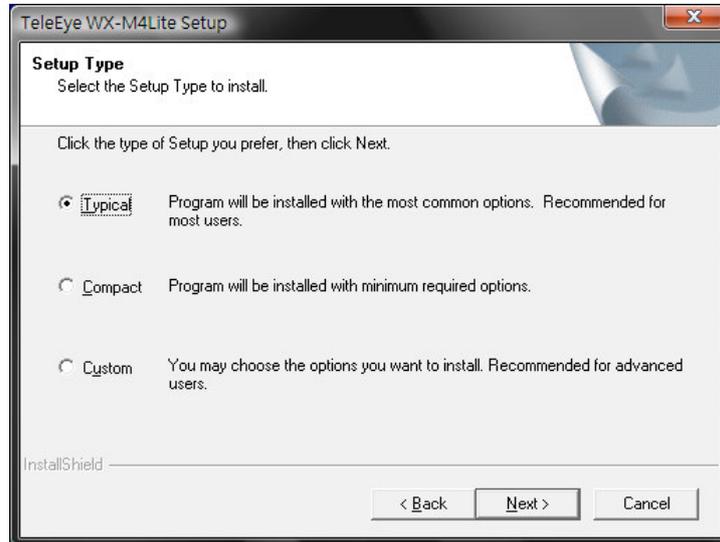

- Click [Next] to confirm the installation and wait the installation complete.

- When the installation is successful, it is recommended to restart the PC before using the software. Click [Finish] to complete the installation process.

Software Installation

4. Connecting

NX173/NX288/NX589/NX599/NX301

4.1. Configuration

Step 1: Double click the [TeleEye IP Setup Utility] icon on the Windows desktop to run the utility.
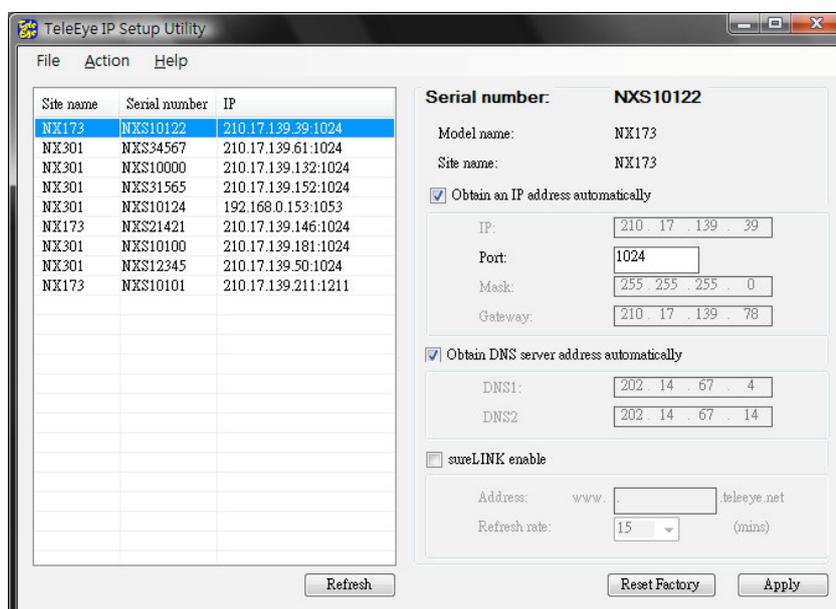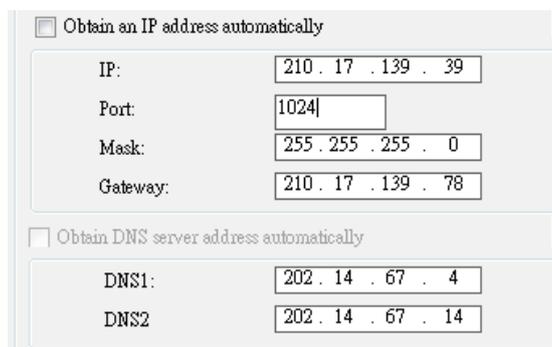

Step 2: The list on the left shows the NX network cameras inside the network of the PC. By comparing the [Serial number] column with the serial number of the camera to be configured, click on that row. The basic information such as IP address and model number is shown on the right.

Note: If the camera is not found, try to press the [Refresh] button and wait for a while.

Step 3: To use another port number instead of the default port, enter the desired port number in the [Port] field.

Step 4: To specify another IP address, mask or gateway, un-tick the [Obtain an IP

address automatically]. Then, enter the corresponding information in the fields.

Step 5:   To enable the sureLINK service, tick the [sureLINK enable]. Then, enter the address and select the refresh rate as the following figure.

Step 6:   Click [Apply] to apply the settings.

4.2. Web Browsing

4.2.1. Connecting to Remote Site

Step 1:   Run a web browser such as Internet Explorer. Enter the IP address or sureLINK address in the address bar. The following window pops up. Alternatively, double click the corresponding entry on the list in IP Setup Utility which will open the Internet Explorer and go to that address directly.

Note: Java Runtime Environment is required for the web browser. Please go to http://www.java.com, follow the instruction to download and install it if it has not been installed.

Connecting NX173/NX288/NX589/NX599/NX301

Step 2:   Enter the password and select the connection speed, then press [Enter]. If the
          password is correct, the video should be shown as the following figure.

Connecting NX173/NX288/NX589/NX599/NX301

4.2.2. Settings

There are four buttons under the video screen. The buttons and the corresponding functions are shown as follows:

 :   **Change to smaller resolution**
 :   Change to larger resolution
 :   Select the video quality
 :   Toggle the switch
:   Event status - no event
:   Event status - Event triggering, press to clear the event
:   Event status - Event triggered, press to clear the event

Connecting NX173/NX288/NX589/NX599/NX301

Appendix A: Specifications

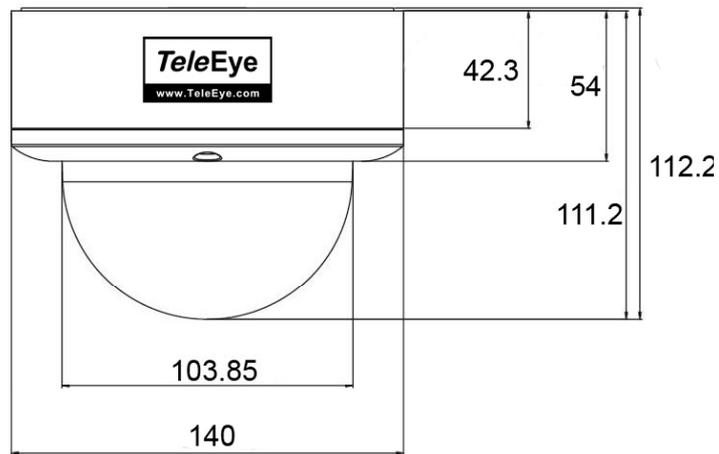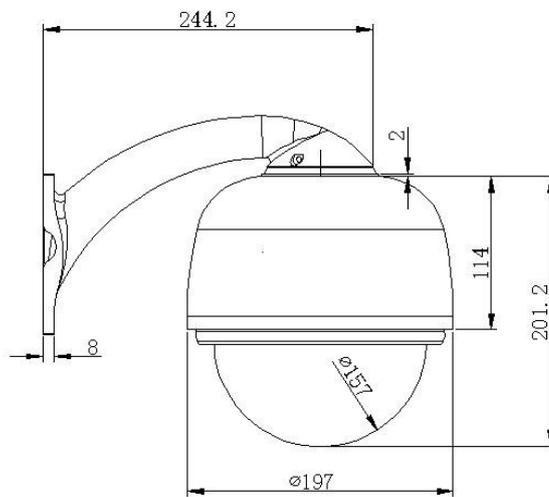| MODEL	NX301	NX288	NX173	NX589/NX599
	Single Channel Video Server	IR Vandal Resistant Network Dome	Vandal Resistant Network Dome	Network Speed Dome
VIDEO AND AUDIO				
IMAGE SENSOR	–	1/3″ colour CCD		1/4″ colour CCD
RESOLUTION	(P): 720 × 576, 360 × 288; (N) 720 × 480, 360 × 240			
MINIMUM ILLUMINATION	–	0.0 Lux (IR On)	0.5 Lux (F=1.2)	Day: 0.07 Lux Night: 0.01 Lux (F=1.6)
LENS	–	f = 2.9 - 10mm Vari-focal auto-iris lens	f = 3.6mm Fixed iris lens	F=3.5 – 91mm Optical:26x / Digital: 12x
IR RANGE	–	15m	–	–
VIDEO INPUT	PAL / NTSC (auto)		–	
AUDIO INPUT	1 channel, RCA, line level		–	
AUDIO OUTPUT	1 channel, RCA, line level		–	
AUDIO BIT RATE	7.2 / 32kbps		–	
VIDEO REFRESHING FRAME RATE	25/30fps			
TELEMETRY				
RS485 OUTPUT	Yes		–	
PRIVACY ZONE MASKING	–		On / Off, 8 masks	
AUTO RUN	–		128 Presets, 6 Patrols, 3 Patterns	
CONNECTIVITY				
NETWORK INTERFACE	Ethernet (RJ-45 Wired, 10/100 Base-T)			
NETWORK PROTOCOL	TCP/IP, DHCP, HTTP, SNTP, DDNS, DNS, SMTP			
CONCURRENT USERS	6			
WEB SERVER	Built-in			
USB INTERFACE	USB 2.0, 480Mbps		–	
VIDEO COMPRESSION				
COMPRESSION	SMAC-M Multi-stream			
EVENT HANDLING				
EVENT	External alarm, motion detection, video loss			
ACTION	Dial back, email, relay switch		Dial back, email	
ALARM INPUT	1			
RELAY OUTPUT	1		–	
POWER				
POWER RATING	DC 12V, 12W (max)	DC 12V, 12W (max)	DC 12V, 7.4W (max)	AC 24V, 47W (max)
POWER OVER ETHERNET	Yes		–	
POWER OUT	Yes (12V DC, 500 mA)		–	
OPERATING ENVIRONMENT				
AMBIENT TEMPERATURE	0°C - 50°C		-22°C - 60°C	
RELATIVE HUMIDITY	< 85% (no condensation)		–	
MECHANICAL DESIGN				
WEATHER PROOF	–		IP66	
VANDAL RESISTANT	–	Yes		optional
DIMENSION	164mm × 88mm × 50mm		Please refer appendix B	
NET WEIGHT	0.44kg	1.02kg	0.63kg	3.6kg

Appendix A: Specifications

Appendix B: Camera Dimension

NX173

NX288

NX589/NX599

Appendix B: Camera Dimension