LTV-ISDNO20-M2

Высокоскоростная уличная антивандальная купольная PTZ IP-камера

Инструкция по эксплуатации

Версия 1.0

Благодарим за приобретение нашего продукта. В случае возникновения каких-либо вопросов, связывайтесь с продавцом оборудования.

Данная инструкция подходит для видеокамеры LTV-ISDNO20-M2.

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Техника безопасности

- Прочитайте и сохраните данную инструкцию.

- Обратите внимание на все предупреждения.

- Следуйте всем положениям данной инструкции.

- Видеокамера не должна подвергаться воздействию воды.

- Протирайте только сухой мягкой тканью.

- Не блокируйте вентиляционные отверстия в корпусе видеокамеры.

- Устанавливайте видеокамеру в соответствии с данной инструкцией.

- Не устанавливайте видеокамеру вблизи источников тепла, таких как радиаторы, обогреватели, печи и другие приборы.

- Прокладывайте кабельные трассы аккуратно, обеспечьте удобный доступ к требуемым точкам подключения.

- Используйте только стандартную кабельную продукцию, разъемы и инструменты, рекомендуемые производителем.

- Соблюдайте осторожность при перемещении тележки или других грузовых устройств, не допускайте опрокидывания.

- Отключайте питание видеокамеры при затяжных грозах или в случае неиспользования в течение длительного времени.

- Не используйте камеру в очень жарких или холодных условиях, влажных, пыльных местах и не подвергайте воздействию сильного электромагнитного излучения.

- Перед использованием камеры убедитесь, что напряжение в источнике питания соответствует требуемому.

- Для проведения сервисного обслуживания или ремонта обратитесь к сертифицированным специалистам. Ремонт требуется в случае повреждения видеокамеры в таких случаях, как повреждение разъема или кабеля питания; на видеокамеру была пролита какая-либо жидкость, или внутрь корпуса попали посторонние предметы; устройство некорректно работает или его уронили.

ВНИМАНИЕ:В случае неправильной замены батареи существует опасность взрыва.При замене необходимо использовать батарею такого же типа.
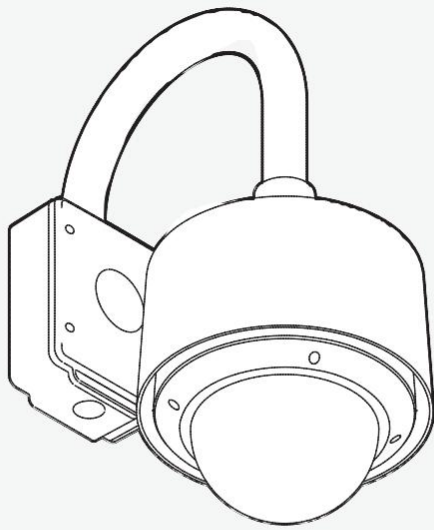
Данная инструкция по эксплуатации предназначена только для квалифицированного персонала. Для снижения риска поражения электрическим током не проводите монтажных, ремонтных или сервисных работ, не имея соответствующей квалификации.
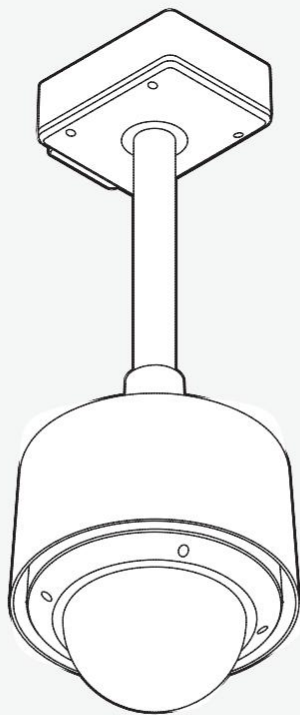
Contents

1. Product Features
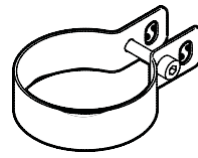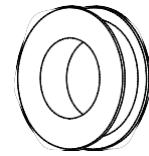
Product Accessories

Wall Mount
Type
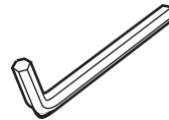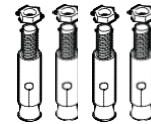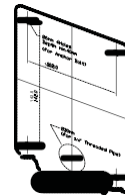
Ceiling Mount
Type

Housing Safety
Cable Hanger

Water Proof Tape

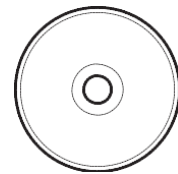Hexagonal Wrench

Anchor Bolt(4pcs)

Hole
Template

Manual
CD

Safety
Wire

Quick
Manual

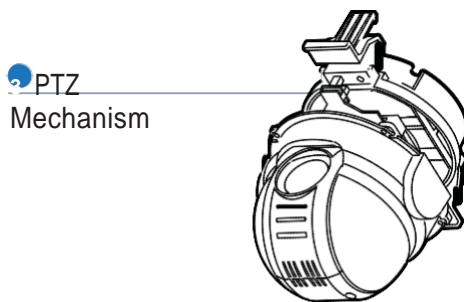❶Wall/Ceiling Mount Bracket

These are used to install the camera on the wall or ceiling and have a junction box. The junction box of the bracket accommodates inner box.

Ceiling Mount Bracket

Housing Safety Wire Hanger

❶Wall Mount Bracket

❷Sun Shield & Upper Housing

❸PTZ Mechanism

❹Dome Safety Wire
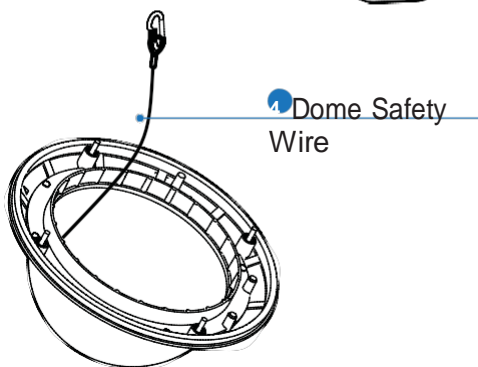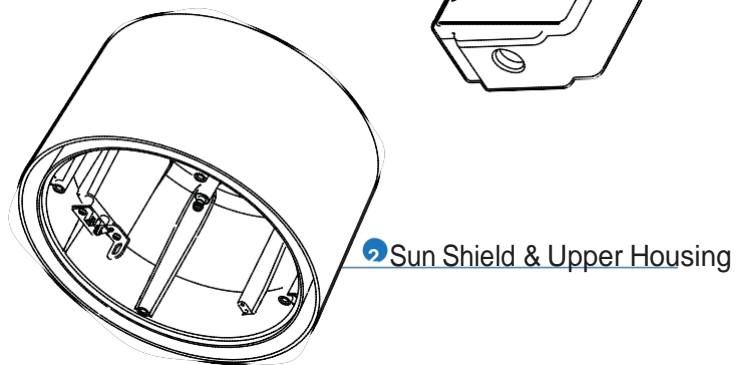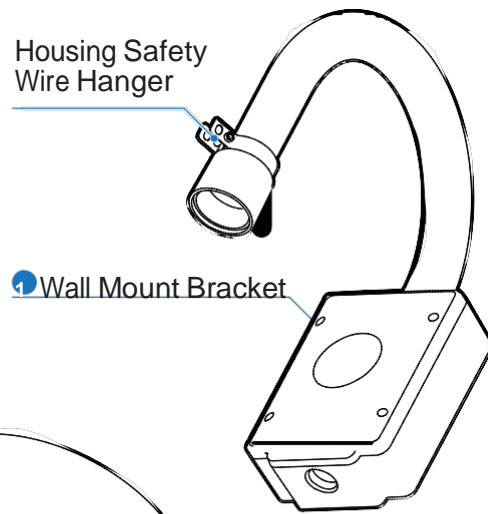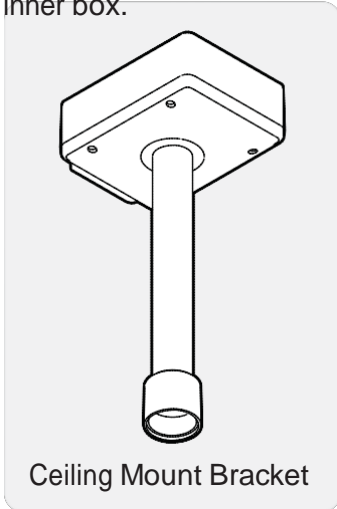
❺Dome Cover

❷ Sunshield & Upper Housing
The sunshield protects the bubble dome cover from sunlight and rainfall. In the sunshield, there is the upper housing which will accommodates the PTZ mechanism. In the upper housing, there is a fan and heater to remove moisture on the bubble dome. Also, the upper housing will be connected to both mounting brackets and dome cover.

❸ PTZ Mechanism
Control the PTZ operations of the camera.

❹ Dome Safety Wire
Prevents the dome cover from falling.

❺ Dome Cover
Do not detach protection film from dome cover before finishing all installation process to protect dome cover from scratches or dust

1 2nd Video Output Port
Video out check the screen during installation.

2 Alarm In/Output and 2nd Video Output Port
It connects to the alarm lights, siren or lamps, and it is activated according to the OSD menu or 'Setup' on the Web-viewer setting. The 2nd video output is used to check the screen during installation.

3 Network Cable Port
Connect the crossover cable.

4 Fan
Defrosts the dome cover and removes moisture.

5 Heater
Defrost the dome cover in a low temperature by increasing the internal temperature of the housing.

6 Audio Output Port
Used to connect the audio output cable.

7 Audio Input Port
Used to connect the audio input cable.

8 Micro SD Memory Card Slot & Cover

9 Power Port
Connect the power source here.

Wall Mount Bracket
Installation

Ceiling Mount Bracket
Installation
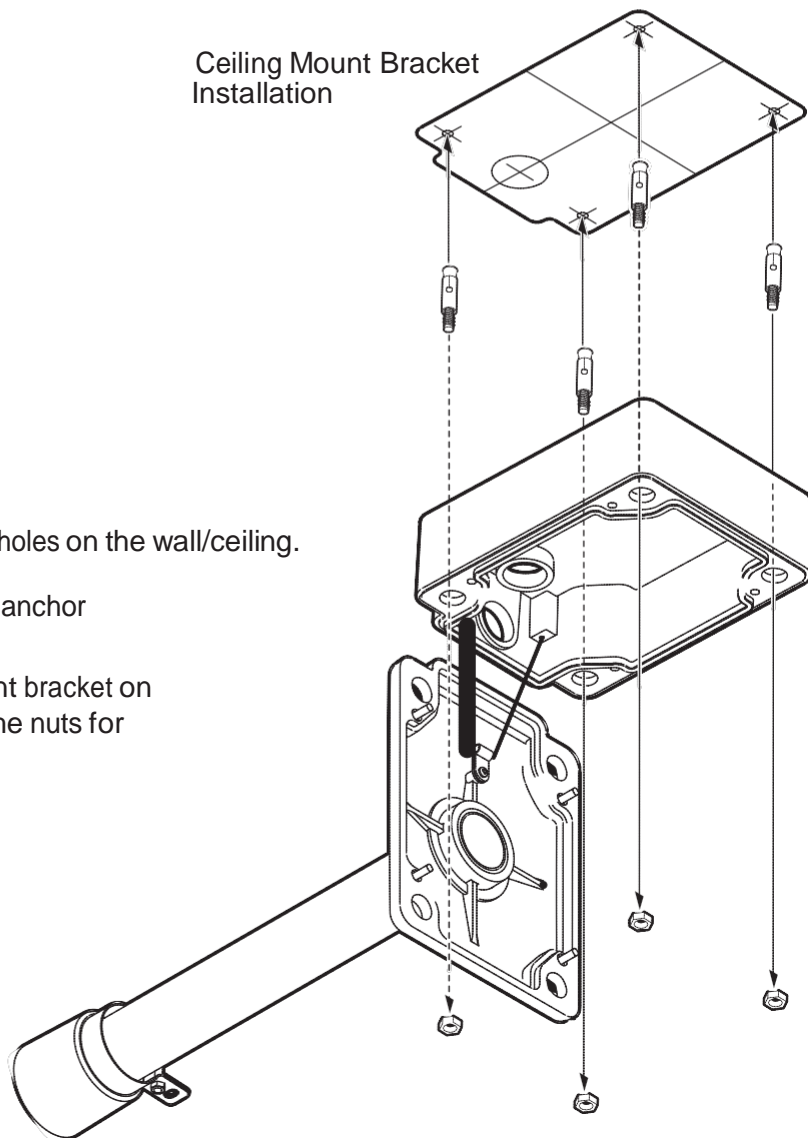
1. Using the hole template, mark the holes on the wall/ceiling.

2. After drilling the holes, fix the four anchor bolts into the holes.

3. After locating the wall/ceiling mount bracket on the anchor bolts properly, tighten the nuts for anchor bolts.
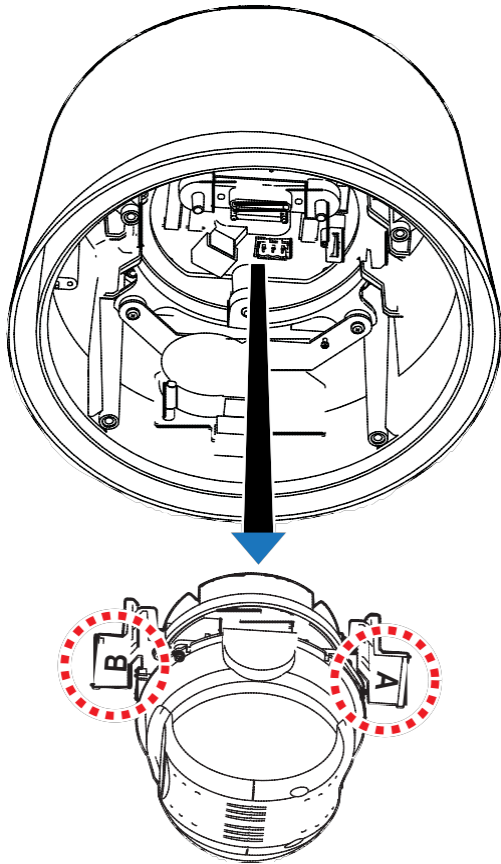
❹ You have to detach the PTZ mechanism from the upper housing to plug the connector of cable. To detach the PTZ mechanism, pressing down and holding up the black handles in both sides of PTZ mechanism.

> ※ You should remove the tape used to fix the PTZ mechanism after detaching the PTZ mechanism from the upper housing.
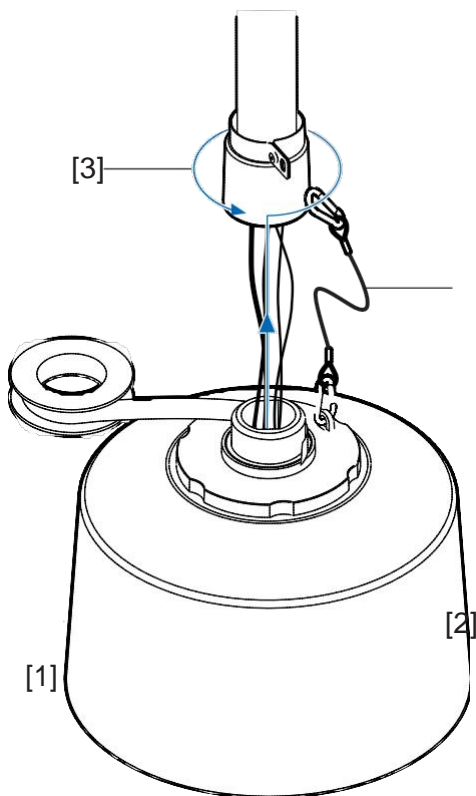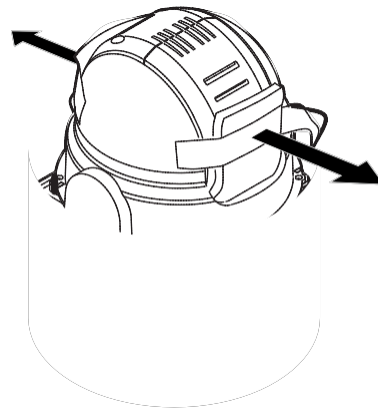
❺ [1] Wind the water proof tape on the pipe of upper housing. [2] Hooking the safety wire on the hole of pipe.
[3] Attach the upper housing to wall mount bracket by turning it at least seven turns.

> ※ To fix the upper body orientation, turn the handle of double nuts to clockwise tightly.
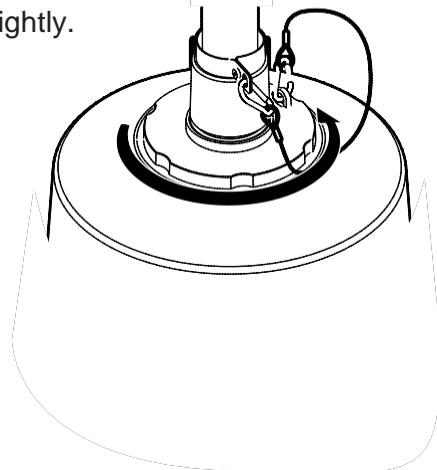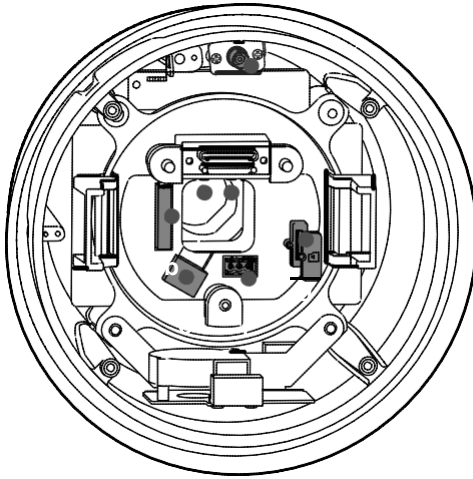
6 Connect each of the following cables to the applicable port and set the DIP switch to configure the camera ID, communication protocol.

ⓐ 2nd Video Output Port
ⓑ Alarm In/Output and 2nd Video Output Port
ⓒ Audio Output Port
ⓓ Audio Input Port
ⓔ Network Cable Port
ⓕ Power Port
ⓖ Micro SD Card Slot & Cover

- Refer to 14, 15 page for detail cablings.
- Refer to 16 page for detail audio cablings.
- Refer to 17 page for detail inserting SD card.
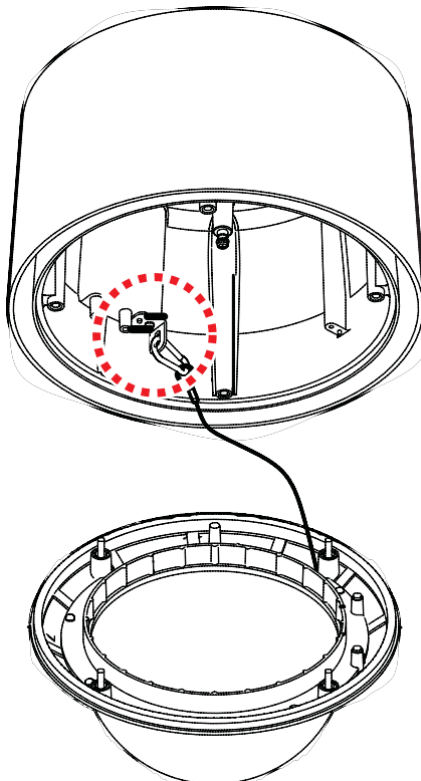
7 Make sure that the dome cover is connected firmly to the safety wire.
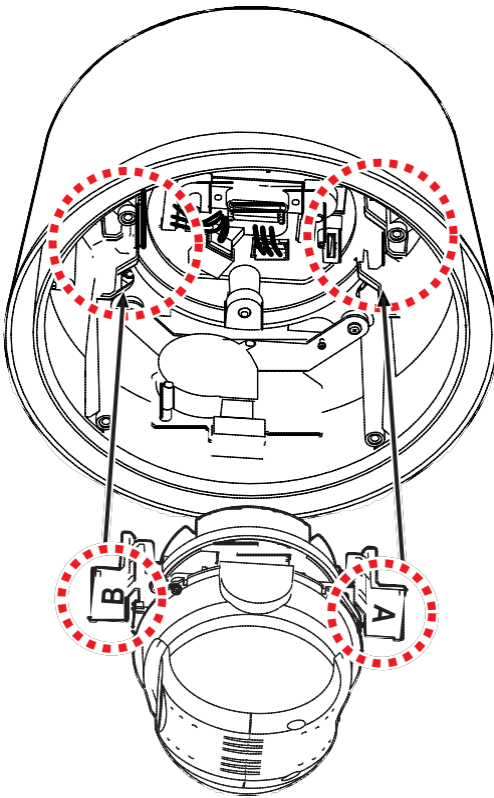
❽ Plug the connector of cable from junction box into properly. After checking the orientation of one touch connector in the upper housing, press the PTZ mechanism into the hooks in the upper housing.
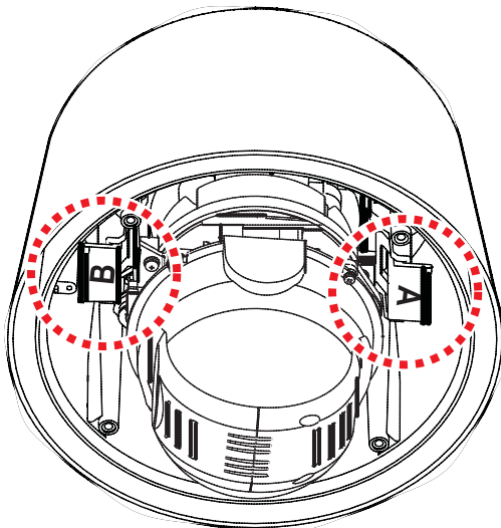
❾ To lock the PTZ mechanism to the upper housing, press the two black handles until it snaps.
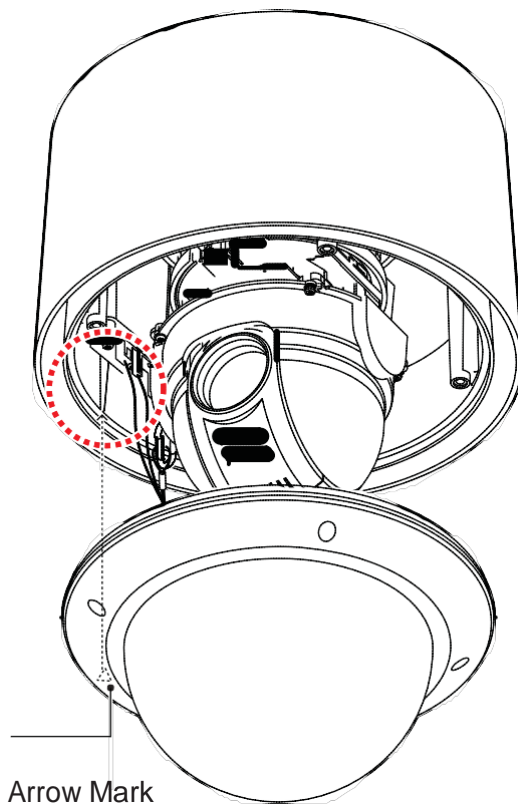
Arrow Mark

10 Close the dome cover. Care must be taken to locate the dome cover by matching the 'Arrow Mark'.

Arrow Mark
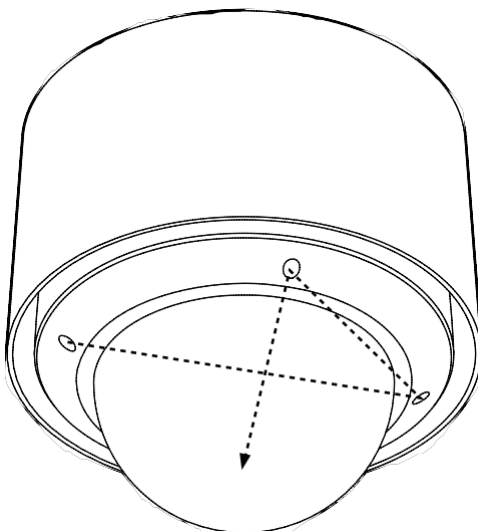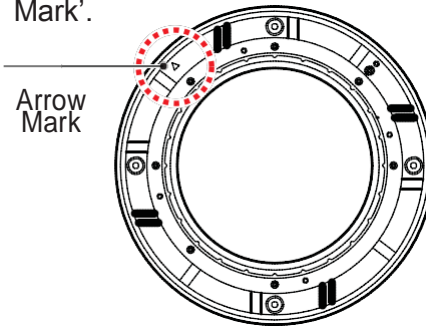
11 Tighten four screws on the dome cover in sequence as shown in the picture.

※ To maintain the best sealing, the torque of each screw must be in the range between 0.5 ~ 1.0 N·m(0.3 ~ 0.73 lbf·ft).

● Network
  Connection

❷ Power
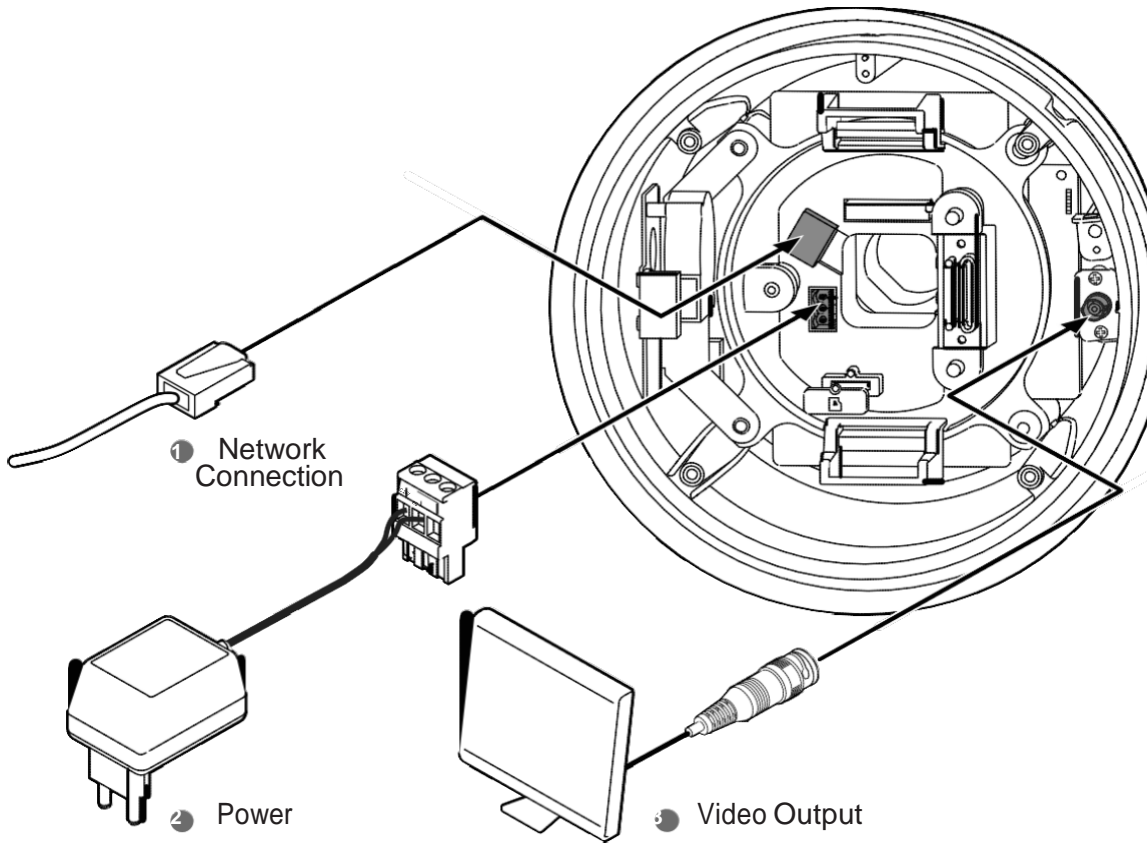
❸ Video Output

❶ Network Connection
Connect the crossover cable into
the RJ-45.

❷ Power Connection
 - Please, check the voltage and current
   capacity of rated power carefully.

Rate Power	Current Consumption	PoE
AC 24V	Heater Off: 23W Heater On: 55W	802.3at class 4

❸ Video Output
Video out check the screen during installation.

Alarm in/Output and 2nd Video Output

④ Alarm In/Sensor

⑤ Alarm Out

⑥ 2nd Video Output

IN1 IN2 OUT2 VIDEO

In1 COM
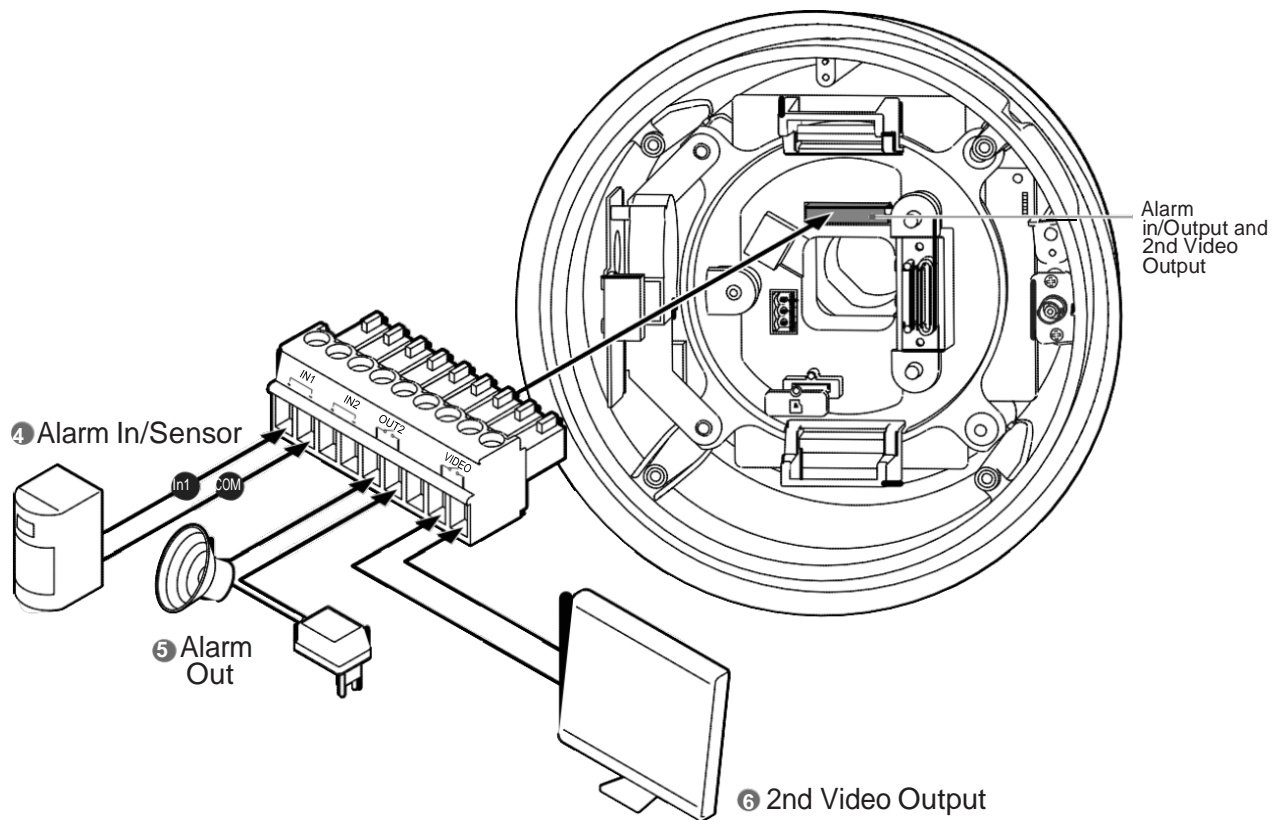
④ **Alarm Input/Sensor**
If you want to use alarm input, the types of sensor must be selected in Setup menu. The sensor types are 'Normal Open' and 'Normal Close'. If sensor type is not selected properly, the alarm can be activated reversely.

⑤ **Alarm Output**
There are 4 alarm outputs and all of them are relay contact type. Therefore, you do not have to care about polarity, AC/DC, and isolations between channels. Care must be taken for the power capacity of relay contact written above.

⑥ **2nd Video Output**
Video out check the screen during installation.

Micro SD
Power
Audio In
Audio In
Audio Out
Audio Out
Network
Amplifier
Mic.
Line Out Connection
Direct Connection
Mic.
Line In
Connection
Speaker
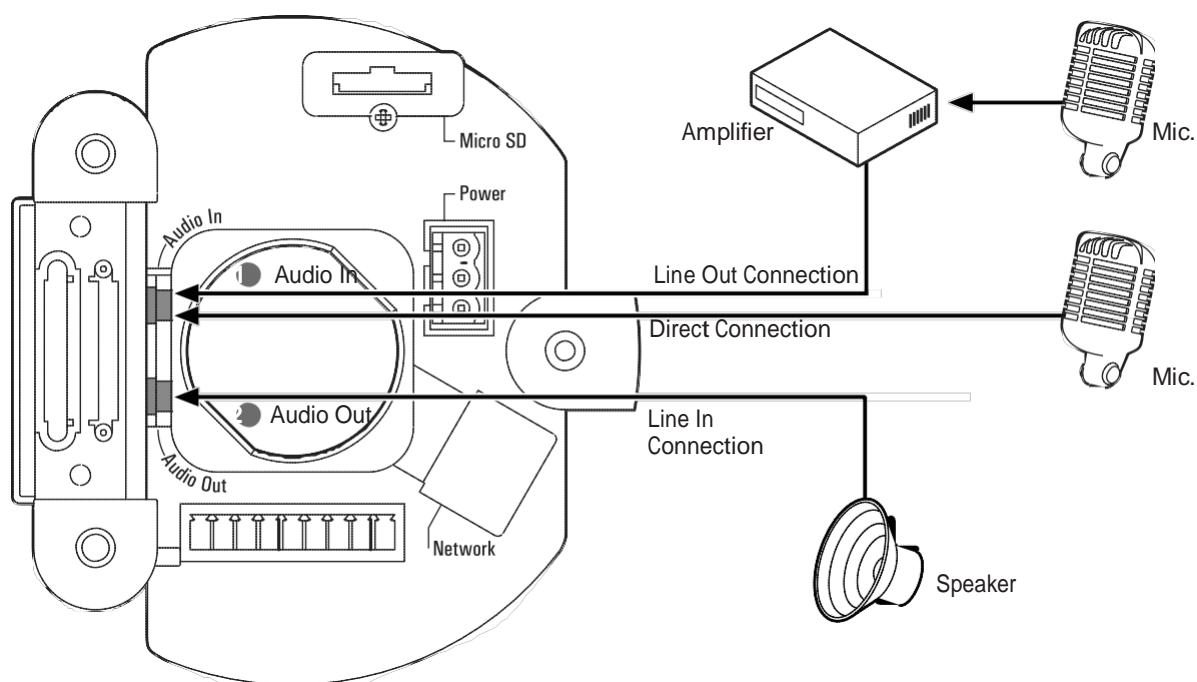
❶ Connect the 'Audio In' port of the camera to the microphone directly or 'Line Out' port of the amplifier connected with microphone.

❷ Connect the 'Audio Out' port of the camera to the 'Line In' port of the speaker.

※ In case the microphone connects directly to 'Audio Out' port, the speaker does not work. The 'Mic In' function is not supported.
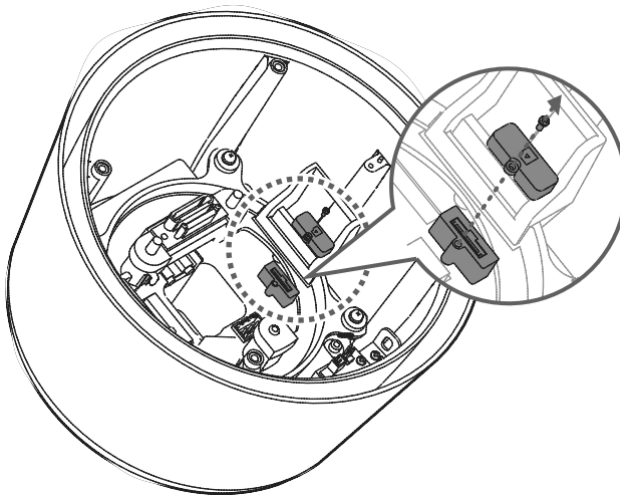
The memory card is an external data storage device that has been developed to offer an entirely new way to record and share video, audio, and text data using digital devices.

Recommended SD Card Specification (*Not Included*)
- Type: Micro SD (SDHC)
- Manufacturer: Transcend, Kingston, Toshiba, Sandisk
- Capacity: 4~16G
- Class: over Class 6
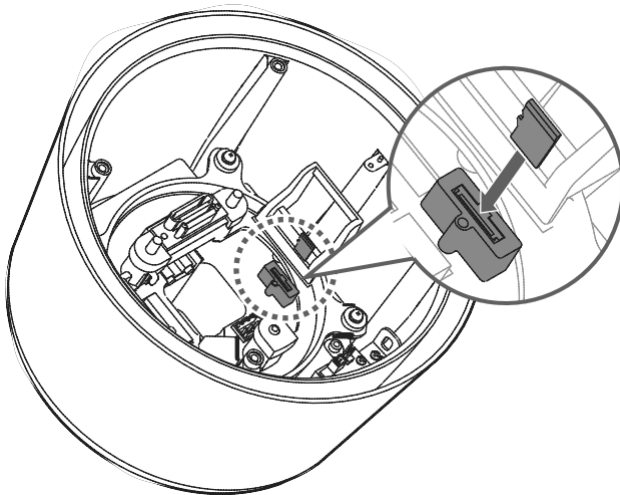
❶ Inserting an SD Memory Card
Loosen the screw before removing the SD memory card cover. Insert the SD card in the arrow direction.

※Don't insert the SD memory card while it's upside down by force. Otherwise, it may damage the SD memory card.
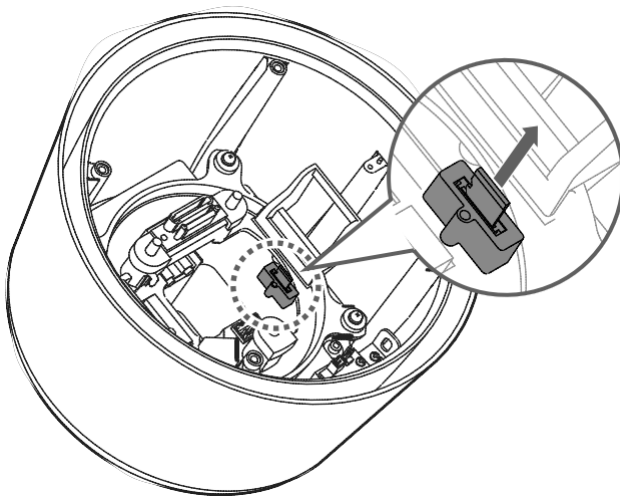
❷ Removing an SD Memory Card
Gently press down on the exposed end of the memory card as shown in the diagram to eject the memory card from the slot.

※Pressing too hard on the SD memory card can cause the card to shoot out uncontrollably from the slot when released.

※If you have saved data in the SD memory card, removing the SD memory card prior to setting record to OFF will cause damage to the data stored in the card.

2. Accessing the Camera

Follow the instructions in the PTZ Installation Guide to install the camera.

The PTZ could be accessed with most standard operating systems and browsers. The recommended browser is Internet Explorer for Windows.

2.1 Access from a browser

1. Start a browser (Internet Explorer)

2. Enter the IP address or host name of the camera in the Location/Address field of your browser. Press Enter.
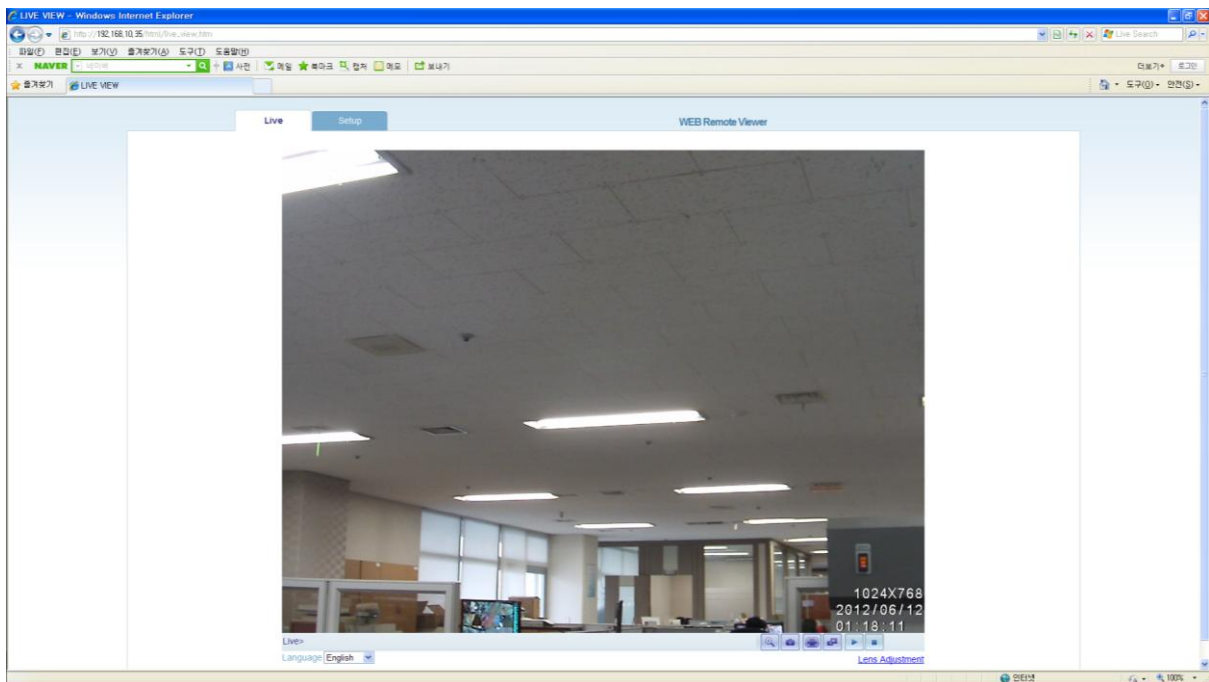
3. Login dialog will appear when the camera is accessed for the first time.

4. The default user name is **ADMIN**, and password is **1234**.

5. The camera's Live View page is now displayed in your browser.

Note: The layout of the live view page in the camera may have been customized to meet specific requirements. Consequently, some of the examples and functions featured here may differ from those displayed on your own Live View page.

2.2 Accessing the camera from the Internet

Once installed, the camera is accessible on the local network (LAN). Configure the router/firewall to allow incoming data traffic to access the camera from the Internet. For security reasons this is usually done on a specific port. Please refer to the documentation for router/firewall for further instructions.

2.3 Adjusting the Image and Focus

To adjust the position of the lens:

1. Open the **Live View** page in your web browser.
- Select the **Setup** tab, and open the **Video -> Camera** page.
- Click 'Lens Adjustment'**.**

2. Set the desired Zoom position.

3. Click 'One Push Focus' button for adjust focus automatically or set focus manually.
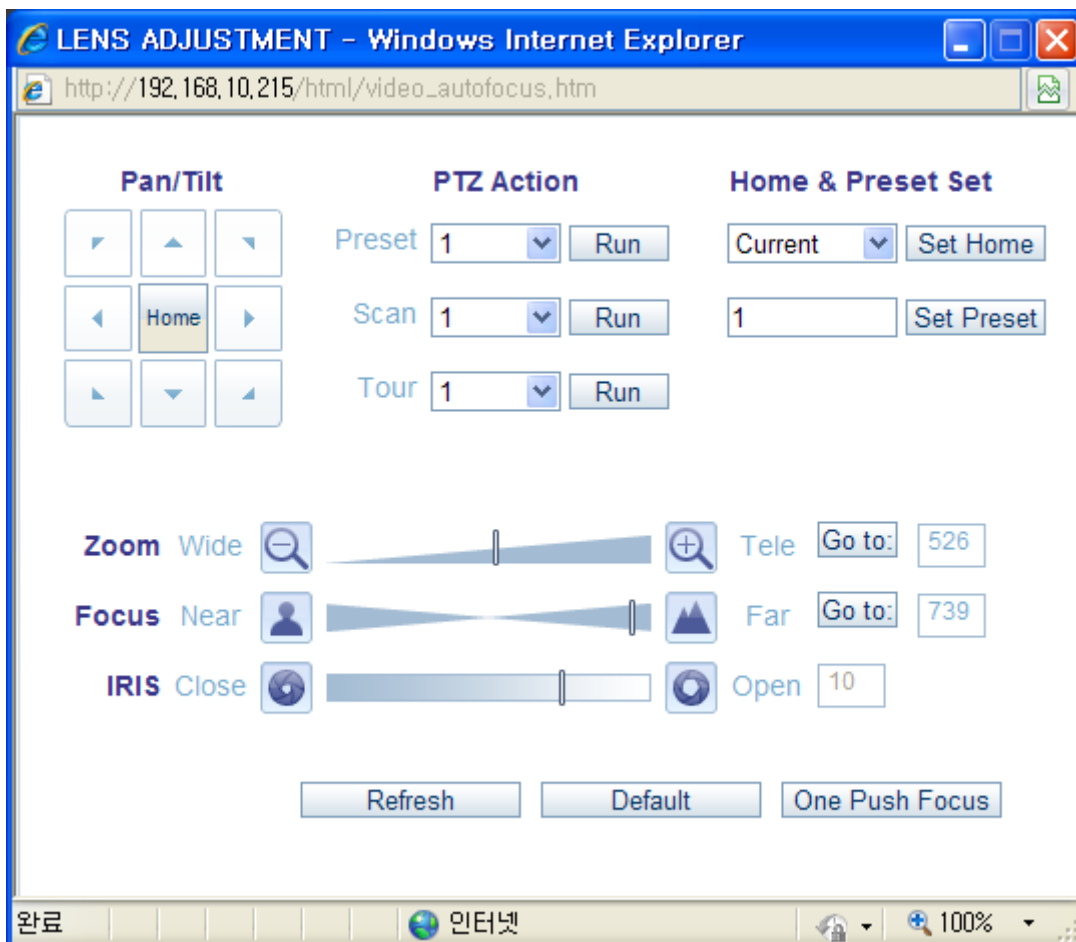
NOTE: *DC Auto-Iris should always be disabled while focusing the camera. This will set the iris to the wide open position, which yields the smallest depth of field, and thus the best conditions for focusing the lens. When the focus has been set by using this method, it will maintain its focus in any kind of lighting conditions.*

2.4 The Live View page

PC(Client) Speaker

PC(Client) Microphone

 Digital Zoom

 Snap Shot

 Full Screen

Video Stream change: First stream ⇔ Second stream

 Play: Click this button by manually to start the stream

 Stop: Click this button by manually to stop streaming

NOTE: It is possible that not all the buttons described below will be visible unless the Live View pagehas been customized to display them.

2.5 Video stream types

Motion JPEG
This format uses standard JPEG still images in the video stream. These images are then displayed and updated at a rate sufficient to create a stream that shows constantly updated motion.

The Motion JPEG stream uses considerable amounts of bandwidth, but also provides excellent image quality and access to every individual image contained in the stream.

H.264 protocols and communication methods

• **RTP** (**R**ealtime**T**ransport**P**rotocol) is a protocol that allows programs to manage thereal-time transmission of multimedia data, via unicast or multicast.

• **RTSP** (**R**eal **T**ime **S**treaming **P**rotocol) serves as a control protocol, to negotiate the type of transport protocol to use for the stream. RTSP is used by a viewing client to start a unicast session.

• **UDP** (**U**ser **D**atagram **P**rotocol) is a communications protocol that offers limited service for exchanging data in a network which uses the Internet Protocol (IP). UDP is an alternative to the Transmission Control Protocol (TCP). The advantage of UDP is that, it is not required to deliver all data and may drop network packets when there is network congestion. This is suitable for live video, as there is no point in re-transmitting old information that will not be displayed anyway.

• **Unicasting** is communication between a single sender and a single receiver over a network. This means that the video stream goes independently to each user, and each user gets own stream. A benefit of unicasting is, incase one stream fails, it only affects one user.

• **Multicasting**is bandwidth-conserving technology that reduces bandwidth usage by simultaneously delivering a single stream of information to multiple network recipients. This technology is used primarily on delimited networks (intranets), as each user needs an uninterrupted data flow and should not rely on network routers.

2.6 How to stream H.264

Deciding on the combination of protocols and methods to use depends on your viewing requirements, and on the properties of your network. Setting the preferred method(s) is done in webpage.

RTP+RTSP
This method (actually RTP over UDP and RTSP over TCP) should be your first consideration for live video, especially when it is important to always have an up-to-date video stream, even if some images are lost due to network problems. This could be configured as multicast or unicast.

RTP/RTSP/Multicasting provides the most efficient usage of bandwidth, especially when there are large numbers of clients viewing simultaneously. Note however, that a multicastbroadcast couldnot pass a network router unless the router is configured to allow this. For example, it is impossible to multicast over the Internet.

RTP/RTSP/Unicasting should be used for video-on-demand broadcasting, so that there is no video traffic on the network until a client connects and requests the stream. However, as more and more unicast clients get connected, the traffic on the network will increase and may cause congestion. Although there is a maximum of 10 unicast viewers, note that all multicast users combined count as 1 unicast viewer.

RTP/RTSP
This unicast method is RTP tunneled over RTSP. This could be used to exploit the fact that it is relatively simple to configure firewalls to allow RTSP traffic.

RTP/RTSP/HTTP
These methods could also be used to traverse firewalls. Firewalls are commonly configured to allow the HTTP protocol, allowing RTP to be tunneled.

3. The Setup

The PTZ is configured from the Setup link, which is available on the top left hand side in the web interface. This configuration could be done by:

• **Administrators**, who have unrestricted access to all settings under the Setup tab.
• **Users**, who have access to the Video & Image, Live View, and Event Configuration sections.

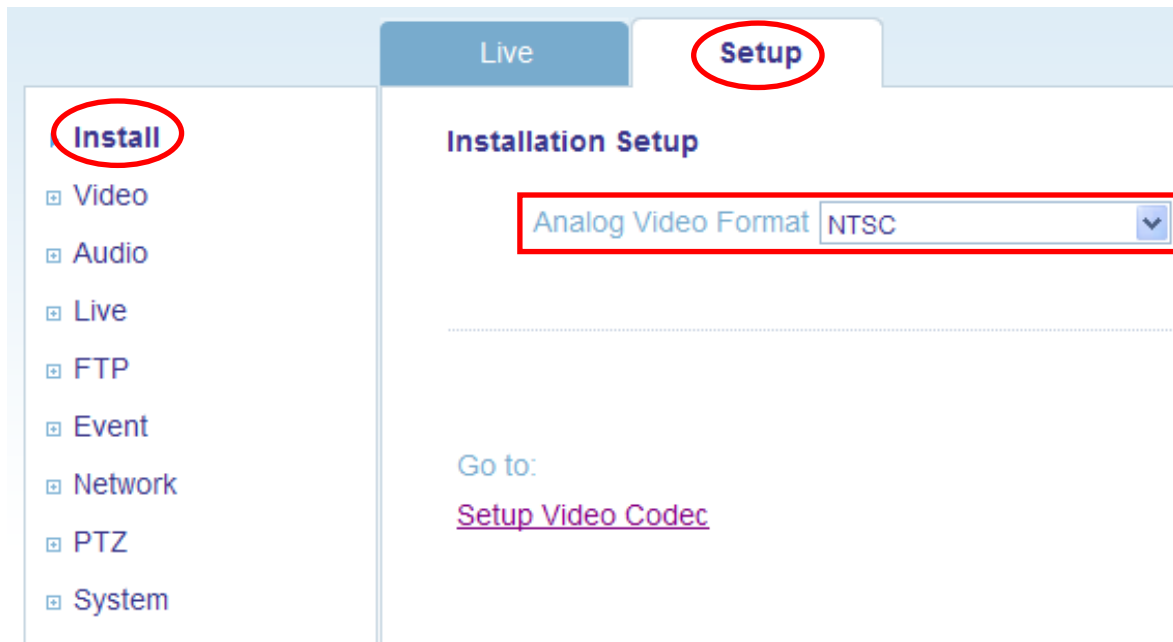Accessing the Setup link from a browser

1. Start your web browser and enter the IP address or host name of the camera into the address bar.

2. The Live View page is now displayed. Click on the Setup tap.
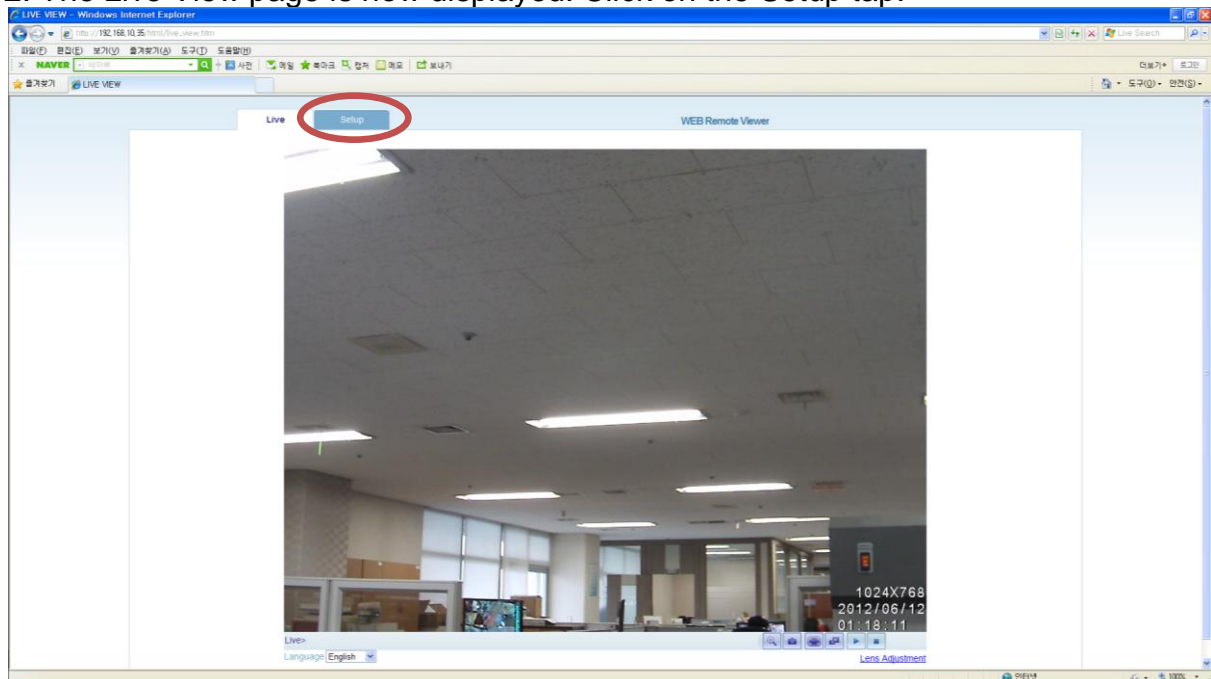
4. Installation

The following descriptions show examples of some of the features available in the PTZ.

4.1 Installation Setup

Installation Mode allows use of the analog BNC output from the camera to connect the camera

5. Camera and Image

The following descriptions show examples of some of the features available in the PTZ.

5.1 Video Codec

These are the tools for adjusting the H.264, MJPEG settings and controlling the video bit rate.

Motion JPEG

This format uses standard JPEG still images in the video stream. These images then are displayed and updated at a rate sufficient to create a stream that shows constantly updated motion.

The Motion JPEG stream uses considerable amounts of bandwidth, but also provides excellent image quality and access to every individual image contained in the stream.

Note also that multiple clients accessing Motion JPEG streams could use different image settings.

H.264

This is a video compression standard that makes good use of bandwidth and which could provide high-quality video streams at less than 1 Mbit/s.

The H.264 standard provides scope for a large range of different coding tools for use by various applications in different situations, and the PTZ provides certain subsets of these tools.

Using H.264, it is also possible to control the bit rate, which in turn allows the amount of bandwidth usage to be controlled. CBR (Constant Bit Rate) is used to achieve a specific bit rate by varying the quality of the H.264 stream. While using VBR (Variable Bit Rate), the quality of the video stream is kept as constant as possible, at the cost of a varying bit rate.

Codec

H.264 or MJPEG

Size

Video output resolution. See the next page for the output resolution table.

Frame rate

2.5~30fps in normal mode (1~30fps for slow shutter mode)

Note: *If the slow shutter mode is turned on and the low light condition is met, the frame rate is automatically goes down. In this case, the frame is half of the normal mode.*

Bit-rate control (CBR or VBR)

When using H.264 compression, if there is only limited bandwidth available, a constant bit rate(CBR) is recommended, although this may compromise image quality. Use a variable bit rate(VBR) for the best possible image quality.

Average Bit-rate (512Kbps ~ 10Mbps)

Anti-Flicker mode (Flicker less mode)
60Hz: NTSC
50Hz: PAL or flicker-free mode(to use the camera in locations lit by fluorescent lighting).

Bandwidth Limit

Limit the bandwidth that the PTZ can use during a network connection.

MAX Bandwidth

Specify the maximum bandwidth that the PTZ can use during a network connection.

< Resolution Table >

1st stream	2nd stream							
1920x1080	704x480	640x480	640x360	352x288	352x240	320x240	-	-
1280x1024	704x480	640x480	640x360	352x288	352x240	320x240	-	-
1024x768	704x480	640x480	640x360	352x288	352x240	320x240	-	-
1280x720	1280x720	704x576	704x480	640x480	640x360	352x288	352x240	320x240
704x576	704x576	640x480	640x360	352x288	-	-	-	-
704x480	704x480	640x480	640x360	352x240	-	-	-	-
640x480	640x480	320x240		-	-	-	-	-
640x360	640x360	320x240						
352x288	352x288	-		-	-	-	-	-
352x240	352x240	-		-	-	-	-	-
320x240	320x240	-		-	-	-	-	-

5.2 Camera

This section allows you to adjust various camera settings.

5.2.1 Exposure Control

Enable AE (Auto Exposure)

ON: Use this setting for automatic exposure control.
OFF: Use these settings to control camera exposure manually.

To compensate for poor lighting conditions, you can adjust the Color level, Brightness, Sharpness, Contrast and Exposure control.

NOTE: *When AE is enabled, some of the submenus (AGC Gain, e-Shutter Speed) will be disabled.*

Slow shutter mode
For low light conditions, turn on slow shutter mode.

Max AGC Gain
For low light conditions, adjust to a higher value, such as 30dB.

BLC Control (Back Light Compensation)
The BLC adjusts the exposure of scenes with strong backlight in the center-bottom of the image.When the image background is too bright, or the subject too dark, backlight compensation makesthe subject appear clearer. The settings for low light behavior determine how the camerabehavessat low light levels. These settings affect video image quality and how much noise is in the images.

5.2.2 Day & Night Control

Day & Night Mode

Auto/On/Off- Set this filter to OFF to allow the camera to 'see' infrared light, at night for example, and/or when using an infrared lamp. This makes the image clearer. If set to Auto, the camera will automatically switch between IR cut filter On and Off, according to the current lighting conditions.

5.2.3 White Balance Control

WB Mode

ON:ATW (Automatic White balance)
OFF: MWB (Manual White balance)

The White balance adjustment setting is used to make the colors in the image appear consistent,compensating for the different colors present in different light sources.

The PTZ camera can be set to automatically identify the light source and compensate forits color temperature. If necessary, the type of light source could be set manually..
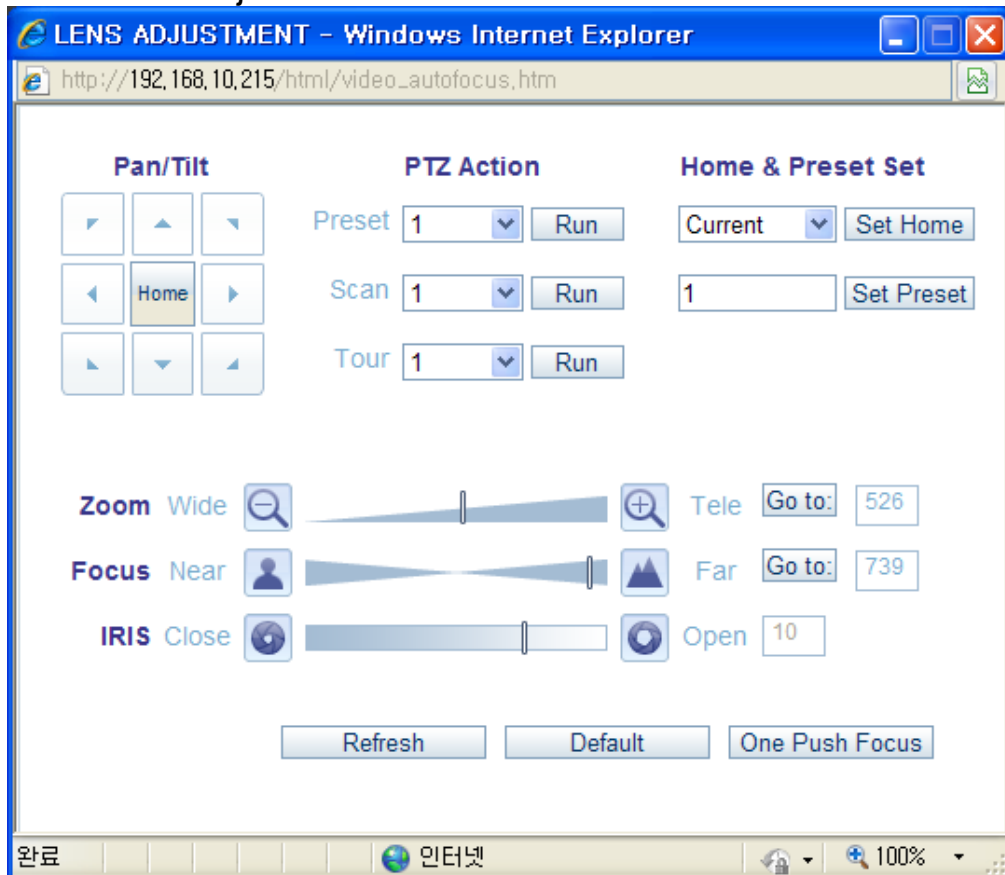
5.2.4 Image Property Control

Modify the video signal parameters, such as: Brightness, Sharpness, andContrast.

Sharpness (Default: 8, Range: 1~15)
Brightness (Default: 15, Range: 0~30)
Contrast (Default: 15, Range: 0~30)

5.2.5 Lens Adjustment

- Pan/Tilt: camera movement

- Home: Depends on User-specified Home setting

- PTZ Action –User specified Preset, Scan, Tour can be accessed by choosing set number and clicking Run.

- Set Home: User specified Preset, Scan, Tour can be set as Home.

- Zoom: Zoom In, Zoom Out

- Focus: Press Near/Far button or Input

- IRIS -
Exposure mode: Auto– Iris: Auto
Exposure mode: Manual – Iris: Manual

- Refresh: Check

- One Push Focus: Camera will automatically adjust the focus.

- Default: Back to original factory default position.

6. Audio
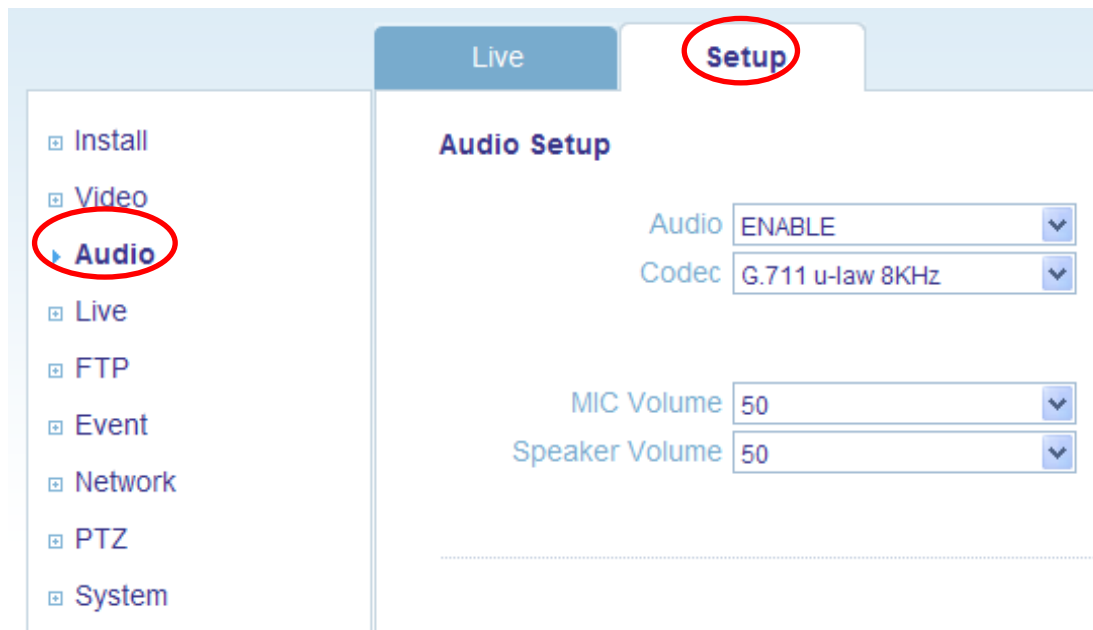
The PTZ can transmit audio to other clients, and can also play audio received from other clients. This section describes the basic audio settings, such as setting the communication codec and adjusting the sound levels for the microphone and speakers connected to the camera.

Enable Audio

ON/OFF: Check this to enable audio in the PTZ.

Codec

G.711 u-law

Audio Input

Audio from a connected a line source could be connected to the Audio in connector of the PTZ. If there are problems with the sound input being too low or high, you canadjust the **input gain** for the microphone connected to the PTZ.

7. Live

PTZ can support up to 10 simultaneous users via unicast.

With multicasting, PTZ can support an unlimited number of users. If supported on the network, consider using the multicast function, as the bandwidth consumption will be much lower.

Viewer Setup

 LiveView Protocol

   RTP Unicast (UDP) / RTP Multicast (UDP) / RTP over RTSP (TCP)

 Buffering Time (frame based)

   Determines (0 ~ 90) x 1/30 sec (0 ~ 3sec)

Viewer OSD Setup

Date: Determines whether the date is displayed.

Resolution: Determines whether the camera resolution is displayed.

Event State: Determines whether the event state is shown on display window.

Event State: (as shown in Live View)

8. FTP

8.1 FTP >Config (Configuration)

Server Configuration

When it is set as Enable, the FTP client could download the saved content.
.
Client Configuration

It is setting page to transmit the still shot to remote sites, using the FTP server.
It could not be used when the Installation mode is on. Please set the first stream
1920x1080 in Video-> Codec setting and second stream to MJPEG or None.
Set the information for FTP transmission by inserting the IP address, Username and
Password of the remote FTP Server.

8.2 FTP > Event

Event FTP Sending

It is setting page to transmit the still shot to the FTP server at remote sites when event such as Alarm In happens. It could not be used when the Installation mode is on. Please set the first stream 1920x1080 in Video-> Codec setting and second stream to MJPEG or None.

Difference is that instead of saving the still shot on Alarm In, it transmits to the Ftp server set on the Client Configuration of FTP->Config menu.

8.3 FTP > Periodical

Periodical FTP Sending

It is setting page to transmit the still shots periodically to the FTP server of remote sites.

Before using the FTP, turn off the Installation mode. Please set the first stream 1920x1080 in Video-> Codec setting and second stream to MJPEG or None.

The difference is that instead of saving the still shot on Alarm In event, it transmits to the Ftp server set on the Client Configuration of FTP->Config menu.

9. Event

9.1 Event > Alarm Port

Alarm Input - Used for connecting external alarm devices and triggering images for specific alarm-based events. The input is typically connected to a motion detector or any other external security device, and images could be uploaded whenever the detector is activated. Maximum 5VDC is allowed on the input.

Currently only supports one alarm input.

Output - This could drive a maximum load of 50VDC or 35VAC at 110mA directly or heavier loads by connecting additional relay circuitry. If the output is used with an external relay, a diode must be connected in parallel with the load for protection against any voltage transients.

Duration -
This parameter sets the minimum tampering period, that is, an alarm will not be triggered until this period has lapsed, even if the tampering conditions are otherwise met. This could help to prevent false alarms for known conditions that affect the image.

Caution! *Connecting AC to the inputs/outputs will damage the unit.*

9.2 Event > Mapping
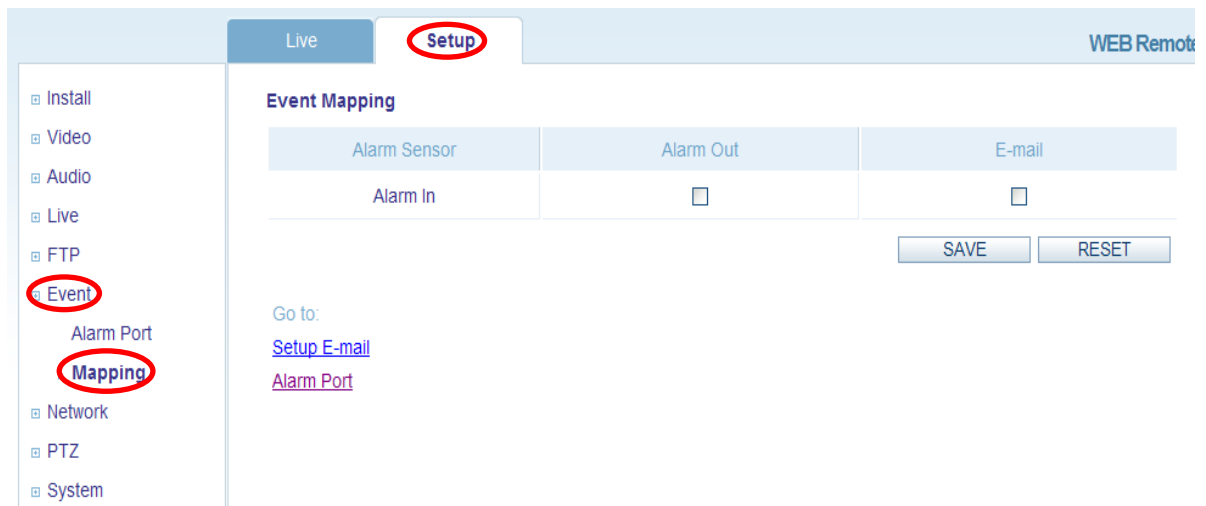
Event Mapping

It is possible to define conditions that would cause the camera to respond with certain actions.

A triggered event happens as a result of an event which is mapped within this menu. This could be caused by motion detection or an external alarm input.

Alarm Out events could be triggered by either **Alarm In**.
E-mail notification could be sent by either **Alarm In.**

10. Network

10.1 Network > IP Setup

Network Settings
Click the **Setup > Network > IP Setup** to see the current network settings.

IP Address Configuration -
The PTZ supports both IP version 4 and IP version 6 **(IPv6 will be supported in V3.00)**. Both versions may be enabled simultaneously, and at least one version should be always enabled.

When using IPv4, the IP address could be set automatically via DHCP, or a static IP address could be set manually.If IPv6 is enabled, your camera receives an IP address according to the configuration in the network router.

There are also options for setting up notification of changes in the IP address, and for using the Internet Dynamic DNS Service.

Notes: • *To receive notification whenever the camera's IP address changes (via e.g. DHCP), configure the options for notification of IP address change. See Services below. • If your DHCP server could update a DNS server, you could access the NCDby a host name which is always the same, regardless of the IP address.*
DNS Configuration

DNS (Domain Name Service) provides the translation of host names to IP addresses on your network.

•**Primary DNS server**

Enter the IP address of the primary DNS server for your network.

•**Secondary DNS server**

Enter the IP of the Secondary DNS, which is used if the Primary DNS server is unavailable.

How to assign IP address

Default setting is set to "DHCP" and "UPnP" function is set to ON. If your network has DHCP server and UPnP function is enabled on your PC, you can find the network camera in "My network".

If DHCP server is not available in your network, please assign IP address as following process.

1) Execute Admintool.exe and click "Search" button.
2) After the camera is listed in camera list, select the camera.
3) Type in the all network information.
4) Click "Apply" button, the setting will be showed in the list.
5) Click "Setting" Button to set network information to the camera.
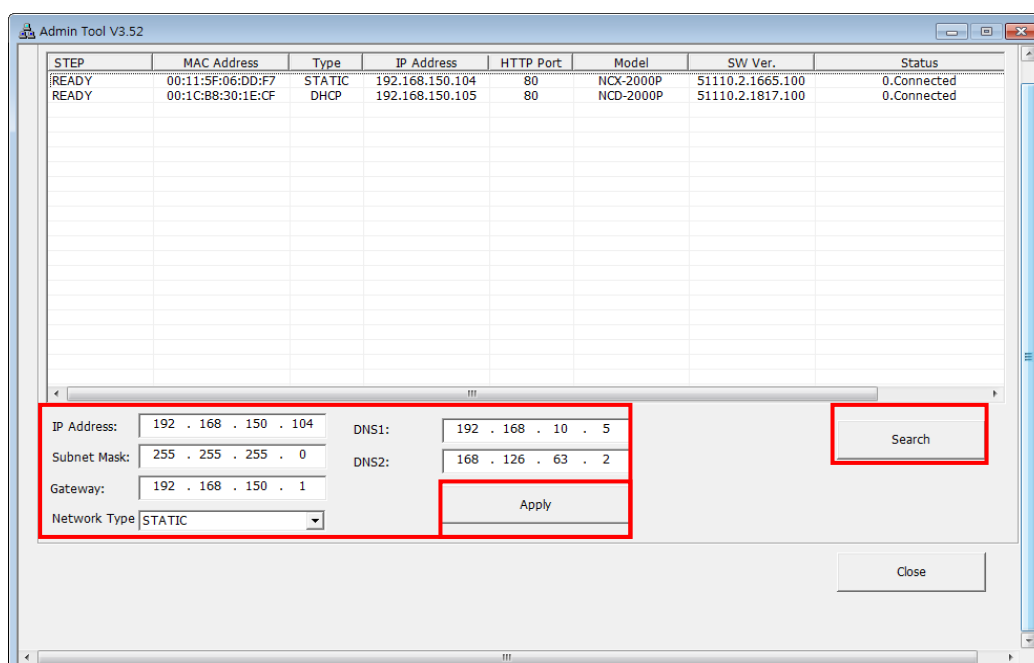
When you double-click the camera within the list, the default web browser (Internet Explorerorcompatible equivalent) will open and automatically connect to the camera.

10.2 Network > Service Port

Service Port

HTTP port- The default HTTP port number **(80)** could be changed to any port within the range 1-65535. This is useful for simple port mapping.

RTSP port- The RTSP protocol allows a connecting client to start an H.264 stream. Enter the RTSP port number to use. The default setting is 554.

Note) After changing the default port to any other ports,   the user can forget the ports number. In this case, please use the "ADMIN Tool" to search and connect automatically.

10.3 Network > E-mail

You must turn Notification to 'On' and then enter the host names or addresses for your mail servers inthe fields provided, to enable the sending of event and error email messages from the camera topredefined addresses via SMTP.

11. PTZ

11.1 Preset :preset is a pre-defined camera view than can be quickly and easily moved to and viewed, simply by selecting the preset.
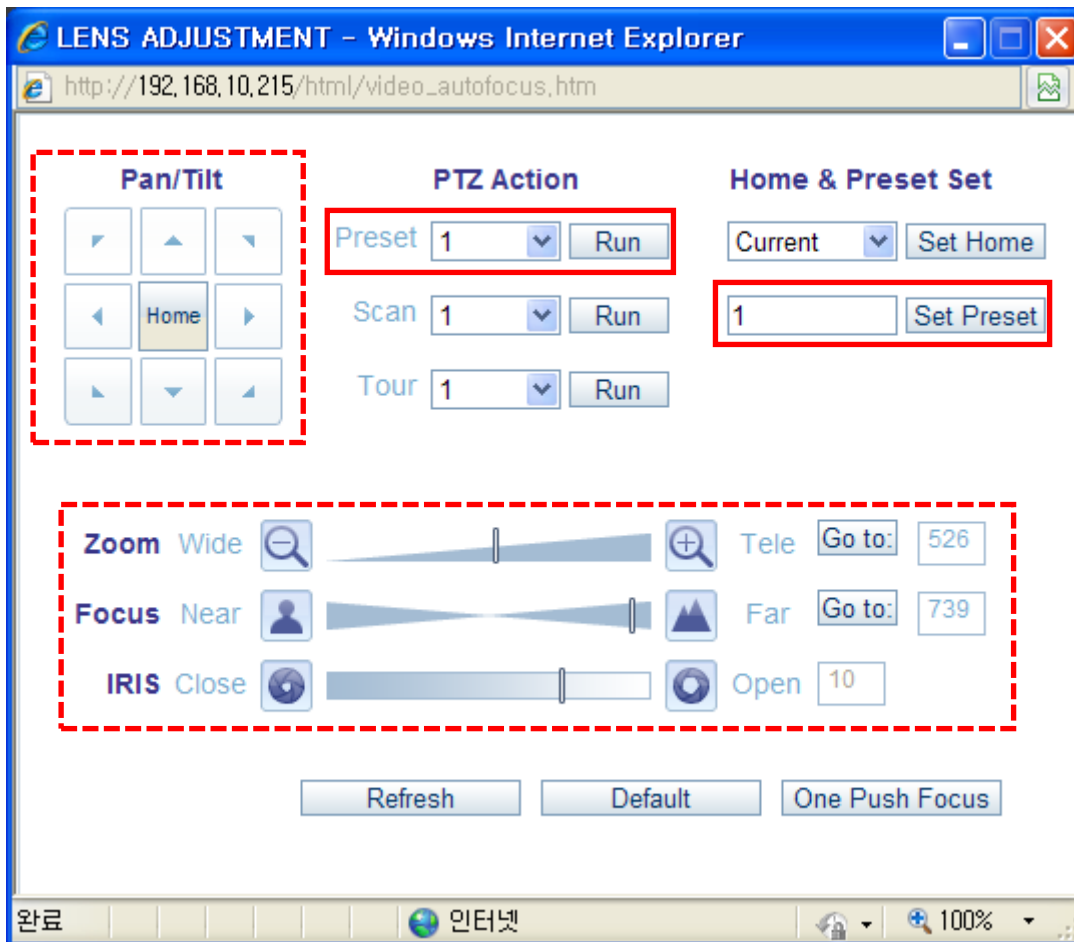
- If Preset button is pressed, Preset Settings window pops up.

- Adjust theLens(Pan, Tilt, Zoom, Focus or IRIS)

- Input Preset number

- Press 'Set Preset' button: Already specified number of redirection during the previous settings (Zoom, Focus, Iris, Pan, Tilt) is cleared and the newly specified value Saved

11.2 Scan : Tour displays the video stream from different preset positions

- Select 'Preset 1/2'. : Set two points to the location specified by Preset scan to operate
- Select 'Direction'.: Auto operation, the shortest distance to behave in a counter-clockwise direction, CCW, CW clockwise operation
- Click Add button: Save and add User settings
- Click 'SAVE' button.
- Select 'Scan Dwell Time': User specified scan behavior to begin after set time.
- Select 'Speed'.: Set degree of movement per second

11.3 Tour : Set the camera movement.

- Select 'Tour Dwell Time': Standstill at one location during tour.
- Set 'Tour Speed'.: Set degree of movement per second
- Select 'Sequence Number'. (Preset or Scan or Tour)
- Click 'Save' button.

12. System

12.1 System > User

Access the camera and the **Configure Root Password** dialog appears.
Enter the User name: **ADMIN** and password is 1234 to log in.

To changed password or add a user click SETUP > SYSTEM > USER. Fill the User ID, Password and E-mail server. Select Group. Then press ADD button and click SAVE.

Note: *The default administrator user name* ***ADMIN*** *is permanent and could not be deleted or altered.*

12.2 System > Date & Time

Date & Time Format

Specify the formats for the date and time (12h or 24h) displayed in the Live View video streams.

Network Time Server

Synchronize the time from an NTP server every 60 minutes. Specify the IP address or host name ofthe NTP server you are using.

Time zone setup

You may select your time zone from the drop-down list.

D.S.T (Daylight Saving Time)

Toggle automatic DST clock adjustment on/off.

12.3 System > Maintenance
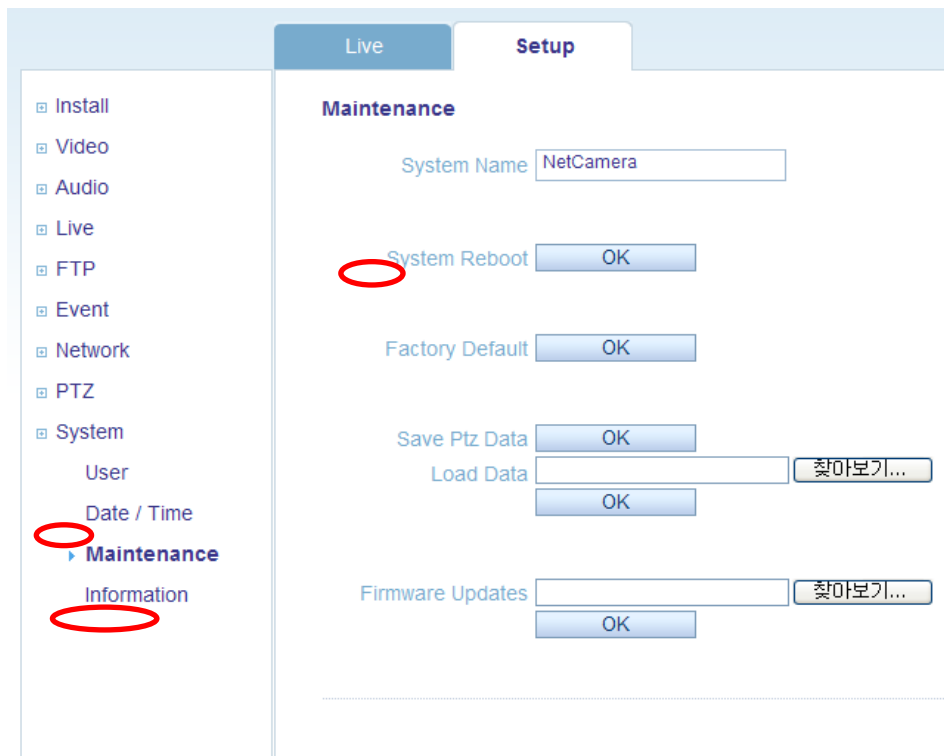
System Name
Choose a system name to identify the camera when using e-mail notifications.

System Reboot
Reboots the camera.

Factory Default
To reset the camera back to the original factory default settings.

Save Ptz Data
System settings can be saved to a PC.

Load Data
The system settings can be reloaded in case of accidental factory reset or can be transferred toanother camera if multiple units need to be installed with the same settings.

Firmware Update
From time to time, ITX will release firmware updated for the NCD camera, which willcontain feature additions and other improvements. Always read the upgrade instructions andrelease notes that accompany each new firmware release, before updating the firmware.

NOTE: *Preconfigured and customized settings should be saved before the firmware is upgraded.*

Firmware Update Procedure

1. Save the firmware file to your computer.

2. Go to Setup > System > Maintenance within the camera web browser setup.
3. In the Firmware Update section, browse to the desired firmware file on your computer. Click OK.

NOTE: *Do not disconnect power to the unit during the upgrade. The unit will restart automaticallyafter the upgrade has completed. (1~5 minutes)*
4. If you suspect the firmware upgrade for the camera has failed, always wait at least 5-10 minutesbefore restarting the upgrade process.
5. ITX reserves the right to charge for any camera repair which can be attributed to faulty upgradingby the user. Always read the upgrade instructions and firmware release notes before updating thefirmware.

System Reset (Factory Default Reset)

There are two ways to reset the camera back to factory default.

Using the web browser:

1. Go to SETUP > System > Maintenance.
2. Click Factory Default Button and wait 1 minute for camera to reboot.

Using the Reset Button on rear panel of the camera:

1. Disconnect the power adapter (or the network cable, if PoE is being used).
2. Press and hold the Reset button while reconnecting power.
3. Keep the Reset button pressed until the Status Indicator color changes to RED and startsblinking (which may take up to 15 seconds).
4. Release the Reset button.
5. When the Status Indicator changes to Green (which may take up to 1 minute), the process iscomplete and the camera has been reset.

NOTE: *The unit will now have the default IP address from a DHCP server.*
Use the 'ADMIN Tool' to discover and connect to the camera.

12.4 System > Information

System Information
After updating firmware, you can confirm the new F/W version here.

13 Specification

Модель	LTV-ISDNO20-M2
Камера Матрица	1/2.8" Progressive scan CMOS
Электронный затвор	1-1/10 000с (22 установки)
Разрешение	Full HD (1080p)
Частота кадров	До 30/25 к/с при любом разрешении
Чувствительность	1.7 лк (цвет) / 0.3 лк (ч/б) / 0.095 лк (Sens-up) при F1.6
Соотношение сигнал/шум	>50dB
Кодек	H.264, MJPEG
Объектив Тип объектива	Объектив-трансфокатор x20 с автофокусировкой
Фокусное расстояние	f=4.7-94.0 мм, F1.6-3.5
Оптическое увеличение	20x
Цифровое увеличение	10x
Управление диафрагмой	DC
Аналоговый выход (только для настройки) Видеовыход	BNC 1.0 Vp-p
Частота сканирования	50 кГц / 60 кГц
Разрешение	720x576 / 720x480
Аудио Вход / Выход	Линейный вход, линейный выход
Кодек	G.711
Функции Режим «день-ночь»	Есть, механический ИК-фильтр
Регулировка усиления	AGC: Авто / Вручную
Баланс белого	Авто / Вручную / В помещении / На улице
Расширенный динамический диапазон	WDR
Детектор движения	Есть
Тревожные входы/выходы	2 входа / 1 выход
Поддержка карт памяти Micro SD	SDHC
Нагреватель	Есть
Вентилятор	Есть
PTZ Диапазон поворота	360° без ограничения
Диапазон наклона	180°, автопереворот изображения
Горизонтальный угол обзора	1080p: 55.4°-2.9°
Сеть Сеть	10/100BASE-T
Протоколы	IPv4, ONVIF, TCP/IP, UDP/IP, RTP(UDP), RTSP, NTP, HTTP, DNS, DDNS, DHCP, FTP, SMTP, TCP/IP
Web-браузер	Есть
Безопасность	Защита паролем, HTTPS(SSL)
Физические параметры Питание	24В (AC) 23Вт (с нагревателем 55Вт)
Исполнение	Уличное, антивандальное
Класс защиты	IP66
Рабочая температура	-40°C…+50°C
Габариты (DxB)	259x265.7 мм
Вес	6 кг

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Предлагаем посетить профильный сайт, посвящённый оборудованию торговой марки LTV http://www.ltv-cctv.ru.

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