2 Megapixel IP Height Strip FaceView Camera

WDP-4602MXV

Owner's Instructions

Please read carefully before using and keep in a safe place.
Design and specifications are subject to change without notice.

V.1.0

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INTRODUCTION

This manual provides information on installation and operation of the WDP-4602MXV IP camera. The WDP-4602MXV is a stand alone, non-PC based, fully embedded video codec capable of encoding video and audio from an analog video/audio source in real time.
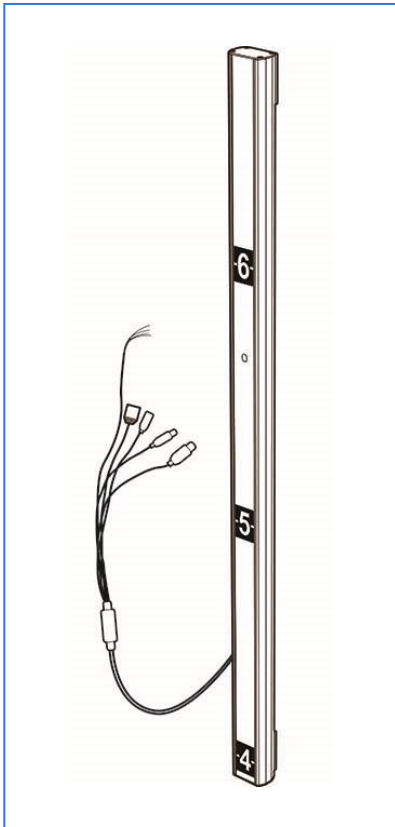
Features

- 2Megapixel Full HD IP Height Strip Camera

- Up to 30fps @1080p (H.264)

- Progressive Scan

- Dual Streaming (H.264 & MJPEG)

- Power over Ethernet

- Covert Design Housing

- F2.0 f=4.3mm Fixed Corn Lens
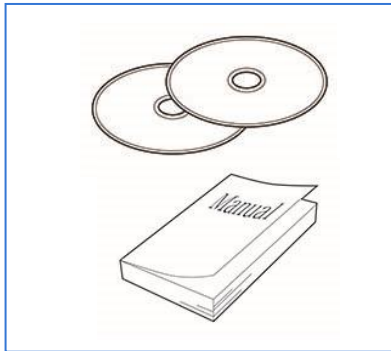
PC Requirements

- CPU : Intel Core2Duo 2.4GHz or above
- Memory : 2 GB or above
- Resolution : 1024x768 or higher
- Operating system : Window XP, Window Vista, Window 7
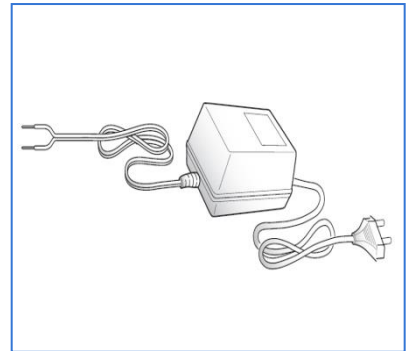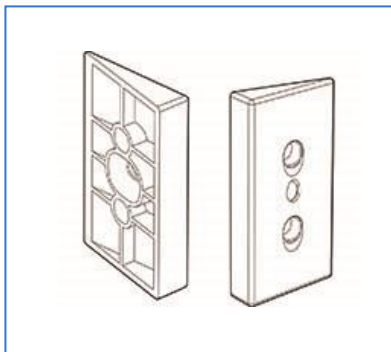- Web browser : Internet explorer 7.0 or higher, Firefox, Chrome, Safari

Package Contents

IP Camera – WDP-4602MXV

Installation CD
& Manual

12VDC Power Supply with
Power Code (Optional)

Angle Regulators

Screw

Specifications

Section		WDP-4602MXV
Camera	Image Sensor	Sony IMX122 1/3" 2Megapixel CMOS
	Scanning System	Progressive Scan
	Lens	F2.0 f=4.3mm Fixed Corn Lens
	Electronic Shutter Speed	Auto / Flk NTSC : 1/30sec ~ 1/50,000sec, PAL : 1/25sec ~ 1/50,000sec
	White Balance	AWB / MANUAL / INDOOR / OUTDOOR
	Backlight Compensation	BLC / HLC / Off
	ACCE	Low / Middle / High / Off
	AGC	Low / Middle / High
	Day & Night	Auto / BW / Color
	2D/3D-NR	2DNR / 3DNR / SMART NR
	S/N Ratio	More than 50dB
	Min. Illumination	1.0Lux(Color) , 0.5Lux(BW) , 0.02Lux (Sens-up x60)
Video	Compression	H.264 @HP, MJPEG
	Streaming	Simultaneous multiple streams H.264 streaming over UDP,TCP,HTTP or HTTPS MJPEG streaming over HTTP or HTTPS
	Resolution	640x480, 800x480, 800x600, 1024x768, 1024x720, 1280x1024, 1920x1080
	Frame Rate ⑵	up to 30fps @1080p
	Output	NTSC/PAL 1Vp-p 75ohm composite

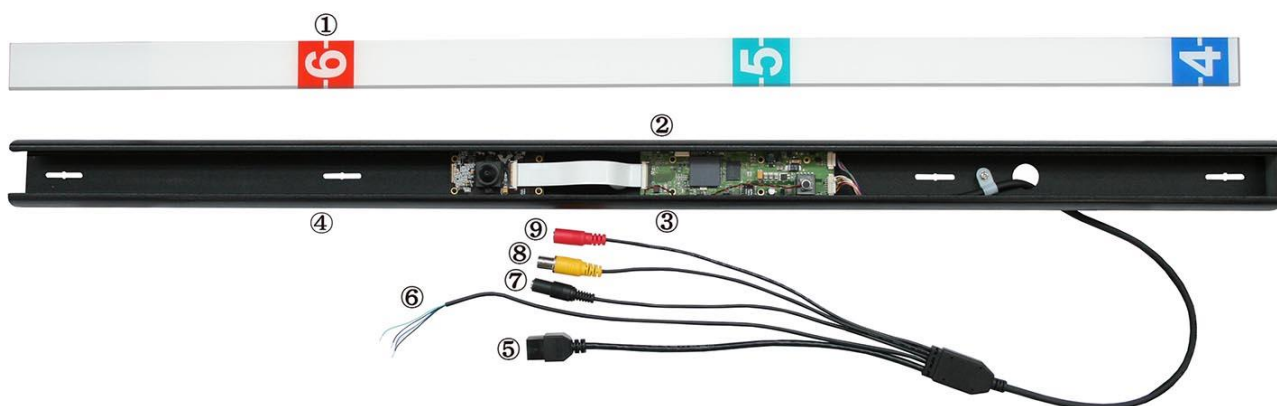| Section		WDP-4602MXV
Audio	Compression	G.711 /AAC
	Input	Internal C-MIC (-30dB)
	Output	1x Line Out
Networking	Interface	10/100 Mbps Ethernet, RJ-45
	Protocols	IPv4, IPv6, TCP/IP, HTTP, HTTPS, UPnP, RTP/RTSP, SMTP, FTP, DHCP, NTP, DNS, DDNS, SNMP
	ONVIF	Version 2.0 Support
	Users [1]	8 Clients monitoring at the same time
Alarm and Event Management	Motion Detection	On / Off (12 Zone Selectable)
	Sensor & Trigger out	1ch NO/NC input & 1ch active low output
	Notifications	Event notification using SMTP, FTP
Security	Security	Multi-level user access with password protection, IP address filtering, HTTPS encrypted data transmission
Maintenance	Firmware	Supports Firmware upgrade
	Dual Booting	Support for Firmware Recovery
	Factory Reset	Restores to factory default settings
Application	Application	SDK available for application development and system integration

Section		WDP-4602MXV
Power	Power Supply	9 VDC ~ 28 VDC Input
	Power over Ethernet (PoE) [2]	IEEE 802.3af
	Power Consumption	Max 5W
Housing	Height-Strip	Metal housing & Window acryl
	Design	Covert Design
Environmental	Operating Temperature	-10℃ ~ 60℃
	Humidity	0 ~ 90% RH, non condensing
System	Operating System	Embedded Linux
	Dimensions	47mm(W) x 29mm(D) x 869mm(H)
	Weight	800 g

Note

(1) Number of simultaneous connections will be reduced if 1080p@30fps is used.
(2) If PoE and external power are connected at the same time, external power will be used. If external power is removed, it will switch to PoE and vice-versa. The camera might reboot during power switching.

INSTALLATION

Hardware Overview

Item	Description
① Height-Strip cover : Acryl	Height-Strip cover for the lens and unit protection.
② Factory reset switch	Press and hold this button for 5 seconds while the unit is turned on. - System LED should be turned ON when performing factory reset. - The LED next to the switch will flash 3 times after a successful reset.
③ C-MIC connector	Used for microphone input
④ Main body Set	Main body chassis
⑤ Ethernet port	Network port
⑥ Sensor-in/Alarm-out port	Used for sensor input & alarm output
⑦ Audio-out port	Use this port to output audio to speakers
⑧ Video-out port (1)	Composite Video Output
⑨ Power-in port	Power input port (not needed if PoE is being used)

Note   *(1) Video output connector is used only for installation purposes. It should not be used for recording or surveillance purposes.*
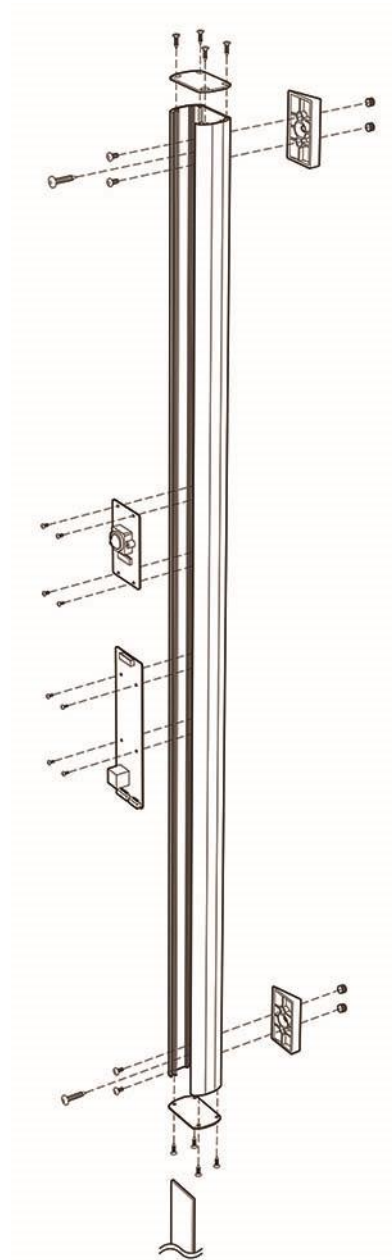
Precautions before installation

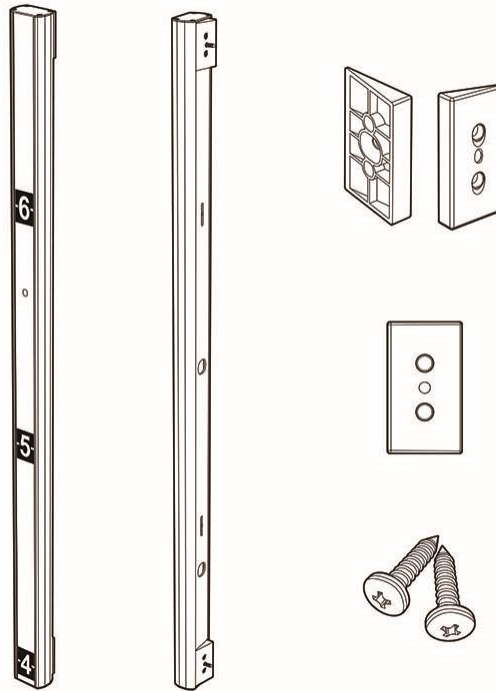Ensure you read out the following instructions before installing the camera:
- Select an installation site (wall) that can endure at least 5 times of the camera weight.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site. And put aside personal belongings from the site, just in case.

Disassembling

1. Using the screw driver, loosen 4 screws by turning top plate counterclockwise and remove the window acryl cover.

2. Using the screw driver, loosen 4 screws by turning them counterclockwise for Main board.

3. Using the screw driver, loosen 4 screws by turning them counterclockwise for Camera board.
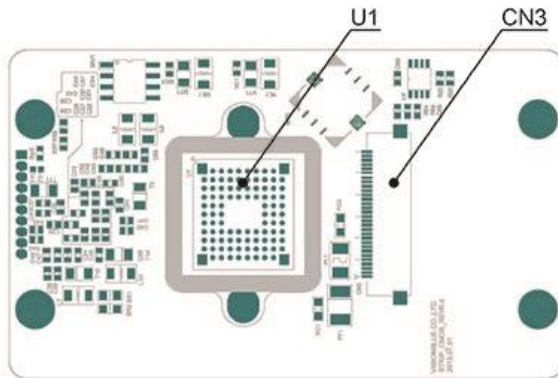
4. Disassemble the IP main harness cables.

Installing the camera on a wall

M4 tapping screw x 2(supplied)
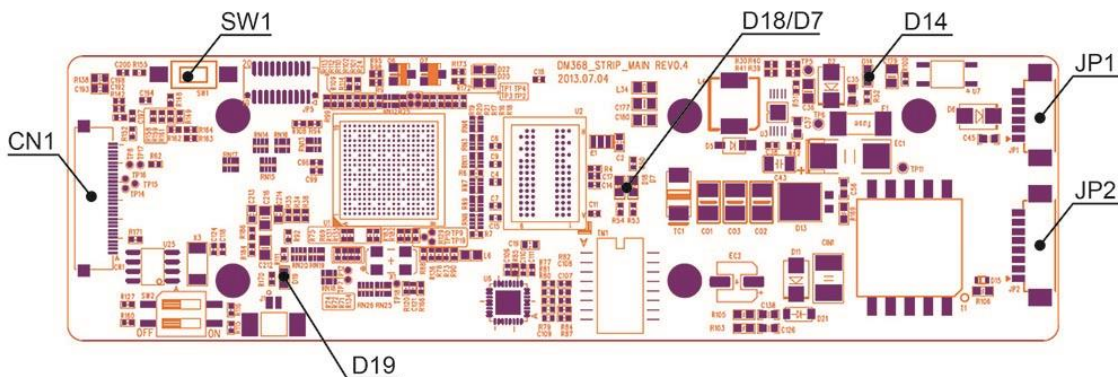
1. Assemble the Angle Regulator parts (supplied) to the rear surface.

2. Fix the case body on the wall by using Tapping Screws (BHT M4xL16).

3. Connect ethernet and accessory cables and arrange cable running not to damage or squeeze them.

4. Pass the ethernet and power accessory cables through the hole you want to pass them when mounting the main body on the case.

5. Assemble the Height-Strip Cover [Window Acryl].

6. Fasten 4 screws by turning top plate clockwise.

CMOS Board layout of the camera

Location Number	Description
U1	CMOS Sensor device
CN3	FPC/FFC 30pin Cable

MAIN Board layout of the camera

Location Number	Description
CN1	FPC/FFC 30pin Cable to connect the CMOS Board
SW1	Factory Reset switch
D19	Factory Reset indicator
D14	Power Indicator
D18/D7	Ethernet Link / Activity indicator
JP1	Power/Video out/Audio out/Sensor in/Alarm out signals
JP2	Ethernet/Power over Ethernet signals

Connection - sensor input

Connect the sensor's NO or NC wire to the blue wire of the accessory cable.
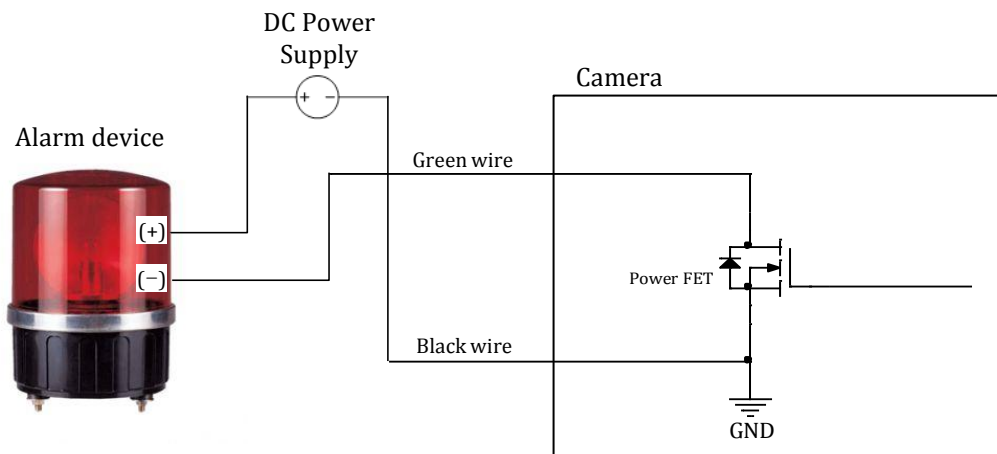Connect the sensor's GND to the black wire of the accessory cable.

Camera

Sensor

+3.3V   +3.3V

Resistor   Resistor

Capacitor

GND   Black wire

Photo Coupler

NO or NC   Blue wire

Connection - alarm output

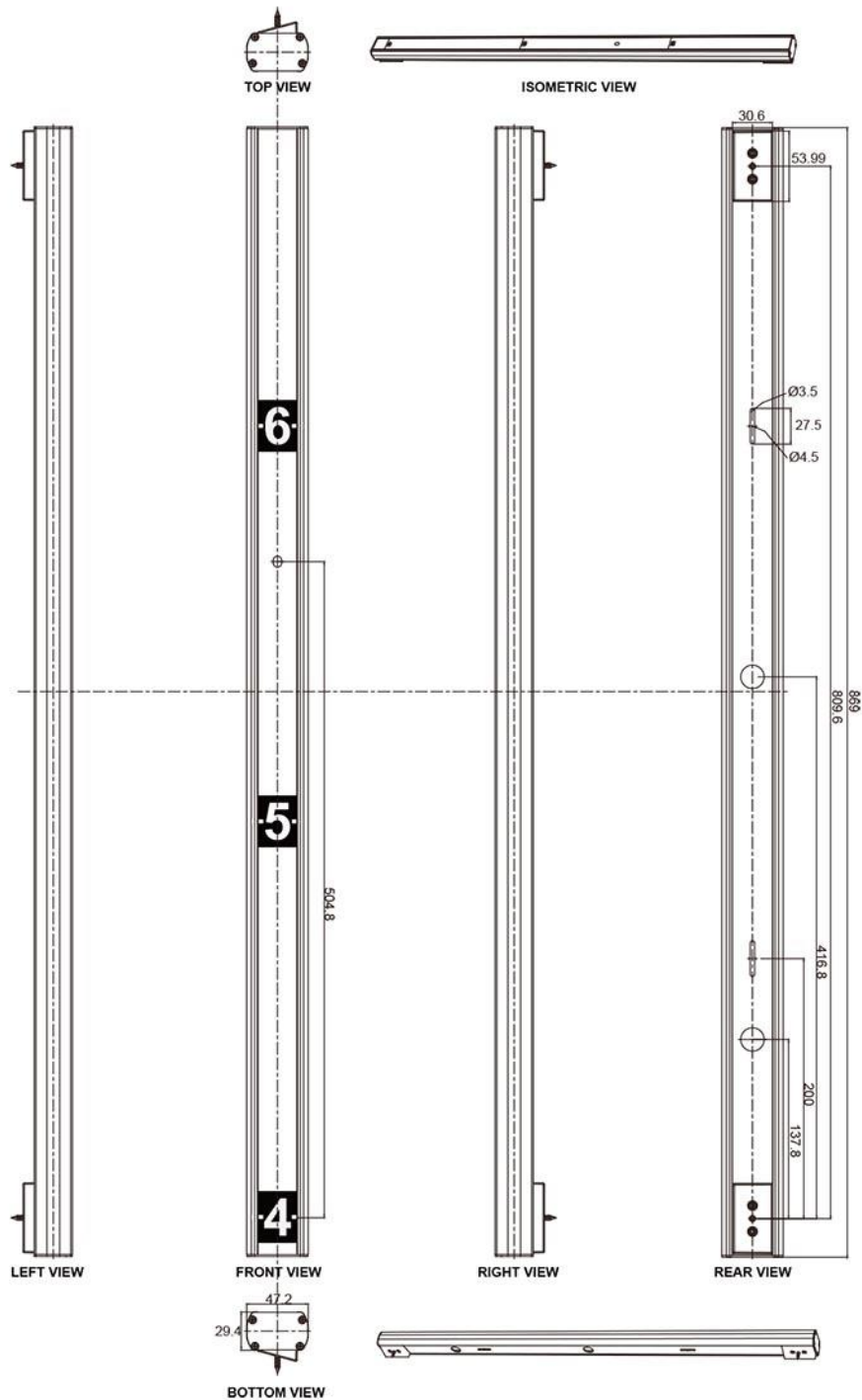Connect the alarm device's GND wire to the green wire of the accessory cable.
Connect the accessory cable's black wire to the GND of the power supply where the device is connected to.
Only DC alarm device are supported. If alarm devices 2A or higher are used, an external relay is required.

DC Power
Supply

Camera

Alarm device

+ −

Green wire

(+)

(−)

Power FET

Black wire

GND

Dimensions

NETWORK INSTALLATION & SETUP

Network Initial Setup

This section describes how to initially set up your Weldex network camera. Initial setup consists of the following series of steps:

- Locating the unit on the network
- Changing the network settings

Initial setup of the unit requires a computer connected to the same network as the unit(s). Each Weldex network camera is shipped with the following factory default connection settings:

Setting	Value
IP address (1)	DHCP
IP subnet mask (1)	DHCP
IP gateway address (1)	DHCP
Administrator Login ID	admin
Password	9999

Note   *(1) If the Network Camera is not able to obtain an IP address from a DHCP server, it will automatically switch to the following static IP settings:*
- *IP address : 192.168.0.200*
- *Subnet mask : 255.255.255.0*
- *Gateway address : 192.168.0.1*

The following Transmission Control Protocol (TCP) ports must be open on the network:

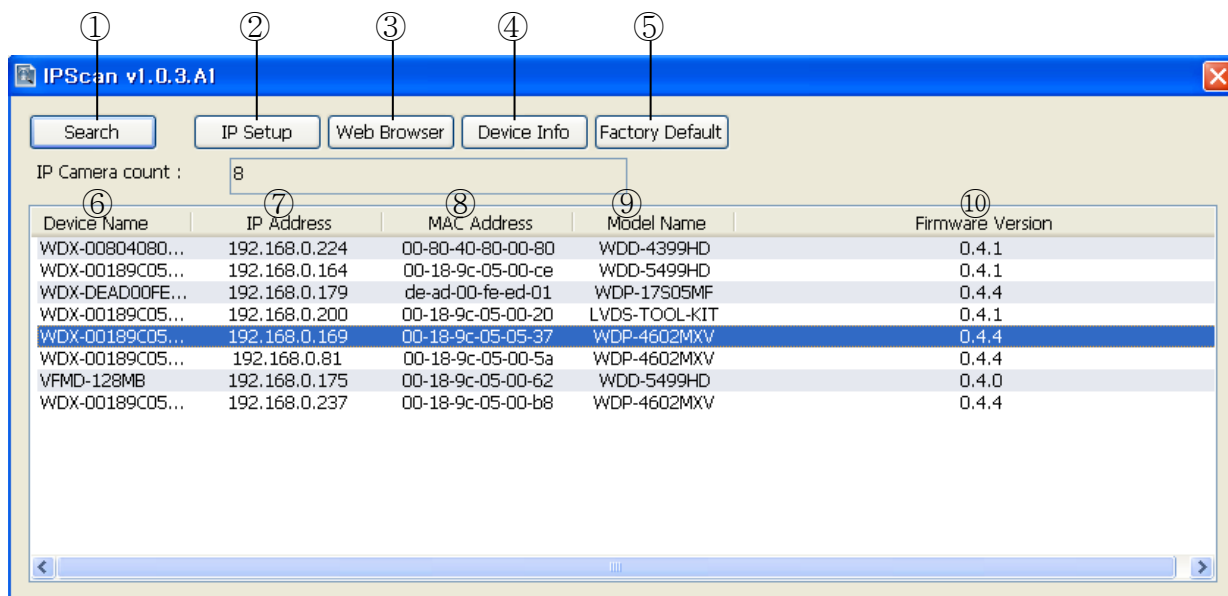- 80 (web based configuration port)
- 554~558 (RTSP video delivery port)

Once you have initially set up your unit, you are ready to configure the rest of the unit's settings.

IP Scan Tool

After physically connecting the network camera to the network, run the '**IPScan.exe'** application on the software CD. This program will scan for Weldex cameras on the network, regardless of the unit's IP address. Once you locate a unit, you may change the network settings

Note   *Verify that the computer where you will run the 'IPScan.exe' file is on the same network as the unit you wish to locate. Units on a different network will not appear when running the search function.*

IP Scan Tool Functions

Item	Functions
① Search	Searches for the connected Weldex network camera.
② IP Setup	View/Edit IP settings for the *selected* Network Camera (Device ID, IP address, Subnet mask and Gateway). Administrator's password is required.
③ Web Browser	Connects to the *selected* Network Camera using the default web-browser.
④ Device Info	Displays device info for the *selected* Network Camera.
⑤ Factory Default	Restores factory defaults for the *selected* Network Camera Administrator's password is required.

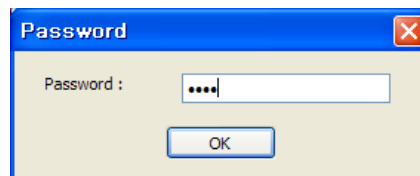| Item	Function
⑥ Device ID	Displays device ID of the camera.
⑦ IP Address	Displays IP address of the camera.
⑧ MAC Address	Displays MAC address of the camera.
⑨ Model Name	Displays model number of the camera.
⑩ Firmware Version	Displays firmware version of the camera.

Configuring Network Settings Using IP Scan Tool

Run '*IPScan.exe*' executable file and click **[Search]**. Network connected Weldex cameras will be listed in the window.

1. Select the camera to be configured by clicking on your mouse.
2. Click on the **[IP Setup]** button to access the IP setup window for the selected camera.

3. You will be prompted to enter the admin's password

Note   Default admin password is **[admin]**

4. Make the desired changes to the IP settings and click **[Setup]** to save changes.

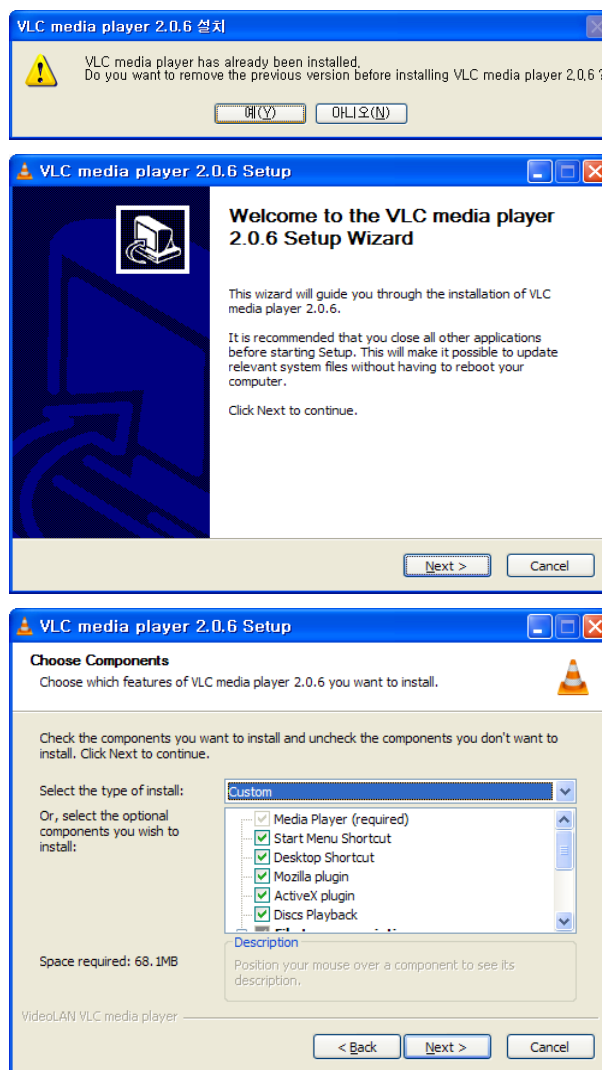Note   *MAC Address cannot be changed*

WEB Viewer

VLC Player Installation using the executable file (recommended)
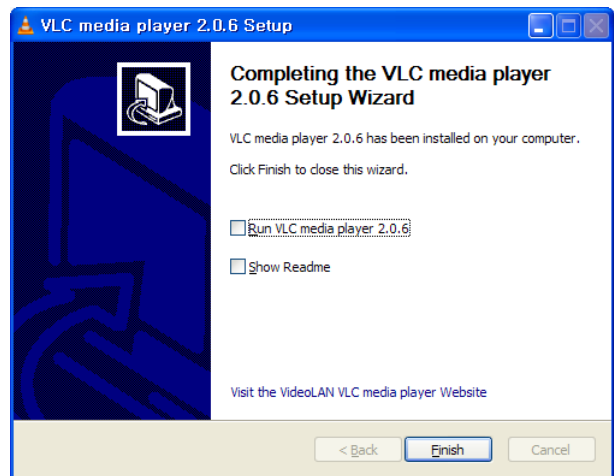
VLC Player installation is required to view live image and control the network camera on a web-browser.

| Note | *Previous installations of VLC Player should be completely uninstalled from the PC. Weldex uses a customized and proprietary version of VLC Player which requires that all other VLC versions be removed from the PC, even if the installed version is newer than what's provided by Weldex.* |

1. Install the **'vlc-2.0.6-win32-weldex.exe'** executable file from the installation CD.
2. Previous installations of VLC player should be uninstalled.
3. Start the installation process.

4. From the **[Select the type of install]** dropdown menu, choose **[custom]**.
5. Confirm the installation path and click **[Next]** to start copying files to the PC.
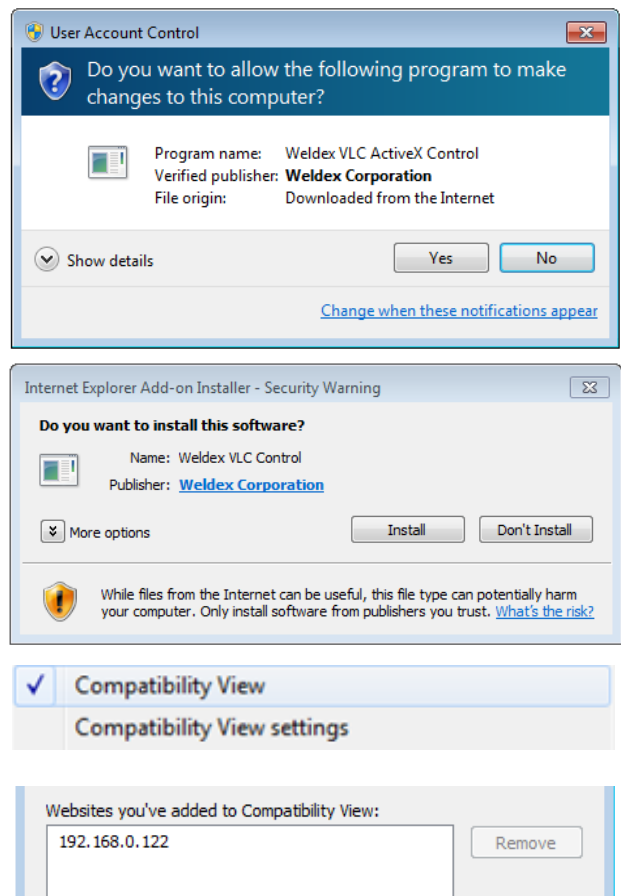
6. Uncheck the **[Run VLC media player 2.0.6]** checkbox
7. Click on the **[Finish]** button to complete the installation.

VLC Player Installation through the ActiveX Control (Internet Explorer Only)
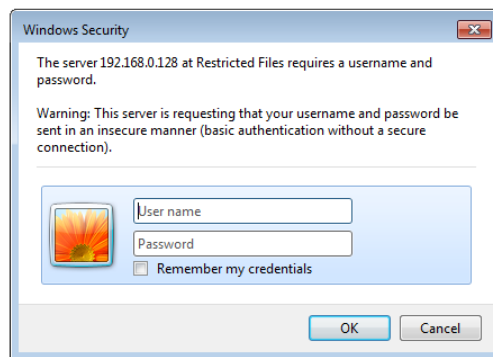
1. Using your IE browser, type in the camera's IP address in the URL address bar.
2. After a successful connection, you will be prompted to install the ActiveX.
3. When prompted to install **[Weldex VLC ActiveX Control]**, click on the **[Install]** button to start the installation.
4. When prompted to install **'Weldex VLC Control'**, click on the **[Install]** button to start installation.
5. Choose the desired language.
6. Follow the steps "VLC Player Installation" of this manual for the rest of VLC Player installation.
7. After a successful installation, refresh the page and confirm that the image appears properly.
8. For newer version of IE (IE9, IE10), the '**Compatibility View'** might need to be enabled for the WEB Viewer to display properly.
9. For IE11, the IP address of the camera should be added to the Compatibility View Settings (Tools>Compatibility View Settings)
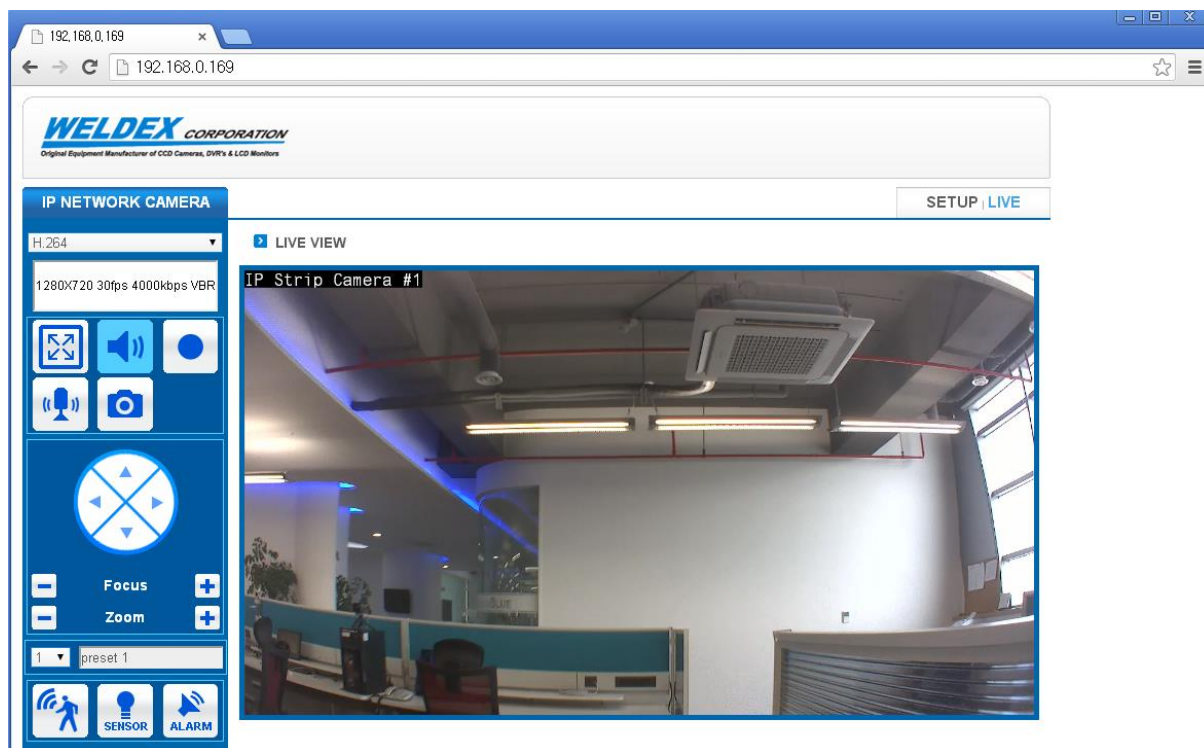
WEB Viewer Login

Username and password is required to access the camera through the web browser.

1. Enter the network camera's IP address in the URL address bar of your web browser.
2. You will be prompted to enter an username and password. Default username is **[admin]** and the default password is **[admin]**.
3. After a successful login, the WEB Viewer screen will be displayed in your web browser.
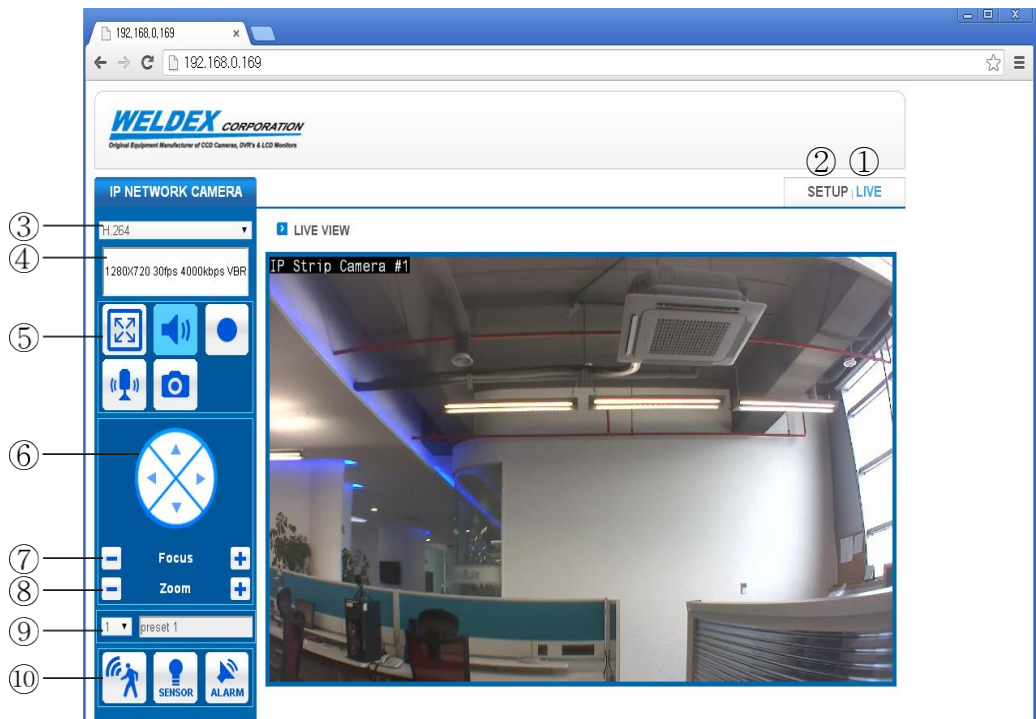

Note   *It is highly recommended that the [admin] account's password be changed for security reasons.*

Live View Functions

Use the WEB Viewer the view live image, control various camera's functions and to access the setup menu.

Item	Function
① LIVE	Click to display the Live View window.
② SETUP	Click to access the Setup window.
③ Profile Type	Use this dropdown menu to select the desired streaming profile. Selectable options: H.264, MJPEG, JPEG Web View.
④ Profile Info	Displays the selected profile information.
⑤ MISC Functions	⬚ Switches to Full screen (ESC keyboard button to exit). You can also duble-click on the image area. 🔊 Switches the camera MIC's audio to On or Mute. ● Saves Live View Images to the camera's internal SDHC Card. 🎤 Sends PC MIC audio to the camera (used in Two-Way Audio). 📷 Captures the Live View image to the connected PC.

Item	Function
⑥ Pan/Tilt Control	⊗ Controls PTZ's Pan/Tilt.
⑦ Focus Control	▬ Controls PTZ's Focus far. ✚ Controls PTZ's Zoom near.
⑧ Zoom Control	▬ Controls PTZ's Zoom out. ✚ Controls PTZ's Zoom in.
⑨ Preset Control	Moves to PTZ's Preset Location.
⑩ Status Icons	🏃 Flashes when motion is detected. 💡 Flashes when alarm sensor-in is active. 📢 Flashes when alarm-out is active.

Note	*WDP-4602MXV does not support ⑥ Pan/Tilt Control, ⑦ Focus Control, ⑧ Zoom Control, ⑨ Preset Control functions*

CONFIGURATION

Click the **[SETUP]** button to access the setup screen and view/edit various camera settings.

AUDIO & VIDEO

- **VIDEO PROFILE**

H.264, MJPEG Video Stream values can be configured independently of each other.
Video streaming might be lost while making changes to the settings.

Item	Description
Use	Enable/Disable H.264, MJPEG Stream.
Resolution	Selectable options: 640x480, 800x480, 800x600, 1024x768, 1280x720, 1280x1024, 1920x1080 . The selection can be limited depending on the resolution you choose. Ex) If Stream1 is set to 1920x1080, Stream2 will be limited to 1280x1024 or lower
Frame Rate	Frames per second. Select between 1~30 fps .

Item	Description
Bit Rate Control	Compression methods: CBR(Constant Bitrate), VBR(Variable Bitrate). - CBR varies the image quality and outputs a fixed bit rate. - VBR varies the bit rate and prioritizes image quality.
Bit Rate	Amount of data output per second. The selection range will change depending on the selected resolution. If VBR is selected, the maximum bitrate that can be configured is indicated next to the input box.
GOP (Group of Picture)	Key frame insertion interval. Selectable range: 1~90. If you increase this value, the data output size will be decreased. However, in the event of a frame loss, it will take longer for the image to be restored.
Quality	Quality of the MJPEG. Selectable range: 5~95.

Note *Stream1(H.264) is the main stream and it is used for monitoring and local recording. Stream2(MJPEG) is a sub-stream and it is used for email, FTP, and motion detection setup pages. Stream2 can also be used for network streaming.*

- **VIDEO SETUP**

Item	Description
Video Output	Switch CVBS analog output between NTSC and PAL.
Live Mirror	Mirror/Flip the streaming output. Options: OFF, HORIZONTAL, VERTICAL, HORIZONTAL+VERTICAL
OSD	On-Screen-Display that will be embedded to the streaming. Date/Time and custom text up to 20 characters can be embedded.

- **AUDIO SETUP**

Use this page to view/edit audio settings.

IP NETWORK CAMERA		SETUP | LIVE
AUDIO&VIDEO	**AUDIO&VIDEO > AUDIO SETUP**	

VIDEO PROFILE VIDEO SETUP >> AUDIO SETUP CAMERA SETUP PTZ SETUP	Enable Audio	⦿ On ◯ Off
	Mode	MIC AND SPEAKER ⌄
	Encoding	AAC-LC ⌄
NETWORK	Sample Rate	8 Khz
	Input Gain	7 ⌄
EVENT	Output Gain	7 ⌄
	File Play	☐ Enable ALERT SOUND 1 ⌄
SYSTEM		Save

Item	Description
Enable Audio	Enable/Disable audio.
Mode	Select from the following operating modes: MIC ONLY, SPEAKER ONLY, MIC AND SPEAKER.
Encoding	Select the desired audio codec. G.711: Use this codec for network streaming audio. **This codec will not work for local recording.** AAC-LC: Use this codec for both network streaming audio and local recording.
Sample Rate	Audio sampling rate. Fixed to 8 KHz.
Input Gain	Audio input gain value. Selectable between 1~10.
Output Gain	Audio output gain value. Selectable between 1~10.
File Play	Enable/Disable event alert sound. Select options: ALERT SOUND1, ALERT SOUND2 .

Note   *WDP-4602MXV does not support the local recording storage.*

G.711 will not save audio to the local recording.

Improper gain values can cause low quality sound or howling sound effects.

- **CAMERA SETUP**

Use this page to adjust camera image settings.
Double click on the video image area to switch to full screen mode and vice-versa.

CAMERA SETUP > Exposure

- Adjust camera exposure settings using this page.

Item	Description
Lens Type	Select the appropriate lens type: MANUAL, VIDEO, DC
Shutter Speed	Select the desired electronic shutter speed: Auto, 1/30~1/50000
AGC	Select the desired Auto Gain Control to adjust gain sensitivity during low-light conditions: OFF, LOW, MIDDLE, HIGH
2DNR – 2 Digital Noise Reduction	Enable/Disable 2DNR. 2DNR applies NR to individual frames.
3DNR – 3 Digital Noise Reduction	Enable/Disable 3DNR. 3DNR compares multiple frames to apply NR.
3DNR Level	Adjust 3D NR level

Item	Description
SMART NR	Enable/Disable SMART NR. SMART NR is a function of the 3DNR. It applies less NR in motion intensive images and more NR in images with moderate to little motion. Use SMART NR to reduce ghost effect with images that are motion intensive when using 3DNR.
ACCE (Adaptive Contrast and Color Enhancement)	Automatic adjustment of Contrast & Color in low-light conditions. Selectable options: LOW, MIDDLE, HIGH.
Sense-up	Adjust the sensitivity to achieve bright images during low-light conditions. If the sensitivity is set to x8 or higher, the Frames Per Second might be decreased resulting in a blurred image for moving objects.

CAMERA SETUP > White Balance

- Adjust white balance settings.

Item	Description
Mode	ATW : Automatic color correction. AWC SET : Corrects the colors to be optimized to the current light condition and screen mode. INDOOR : Optimized for indoor applications. OUTDOOR : Optimized for outdoor applications. MANUAL : Manual adjustment.
Red Gain	Red gain level adjustment in manual mode.
Blue Gain	Blue gain level adjustment in manual mode.

CAMERA SETUP > Backlight

- Back Light Compensation

Item	Description
Backlight	BLC : Adjust the Back Light Compensation level for backlit objects. HSBLC : Highlight Suppression Back Light Compensation will adaptively control the luminance by darkening highlights and brightening dark portions. Selectable options: OFF, BLC, HSBLC.

CAMERA SETUP > Brightness

Item	Description
Brightness	Adjust brightness of the image. Selectable between 0~100.

CAMERA SETUP > Day & Night

- Color and B/W switching for day and night mode.

Item	Description
Mode	Auto : Operates in color mode during daylight conditions, and automatically switches to B/W in low-light conditions. Color : Always color. BW : Always B/W. Selectable options: Auto, Color, B/W

> Note   *WDP-4602MXV relies on AGC for the auto color-B/W switching. If the AGC is turned off, auto switching will not operate.*

CAMERA SETUP > Gamma

- Adjust contrast of the image.

Item	Description
CRT	It optimizes Gamma for CRT monitors.
LCD	It optimizes Gamma for LCD monitors. Selectable options: Auto, 0.45~1.00.

CAMERA SETUP > Sharpness

Item	Description
Use	Enable/Disable Sharpness function.
Level	Adjust sharpness level.
Filter	Adjust Sharpness Filter. Selectable options: Weak, Strong.

NETWORK SETUP

• **TCP/IP**

Use this page to configure basic network connection settings.
It might take up to 20 seconds for the changes to take effect. Reconnect using the new TCP/IP settings.

IP NETWORK CAMERA		SETUP | LIVE
AUDIO&VIDEO	NETWORK > TCP/IP	

NETWORK	Mode	⊙ Static IP ○ DHCP
≫ TCP/IP	IP address	192 . 168 . 0 . 191
PORT	Subnet mask	255 . 255 . 255 . 0
UPNP	Gateway	192 . 168 . 0 . 1
SNMP	DNS	164 . 124 . 101 . 2
DDNS	MAC address	00:18:9C:05:00:B8
HTTPS		Save
IP FILTER		
BONJOUR		
EVENT		
SYSTEM		

Item	Description
Mode	Static IP : Manually assign a static IP address. DHCP : Automatic IP address assignment from a DHCP server.
IP address	Displays the current IP address (DHCP mode). Modify IP address in Static IP mode (Static IP mode).
Subnet mask	Displays the current Subnet mask (DHCP mode). Modify Subnet mask in Static IP mode (Static IP mode).
Gateway	Displays the current Gateway (DHCP mode). Modify Gateway in Static IP mode (Static IP mode).
DNS	Displays the current DNS address (DHCP mode). Modify DNS in Static IP mode (Static IP mode).
MAC address	Displays the camera's MAC address.

- **PORT**

Use this page to configure network ports.
It might take up to 20 seconds for the changes to take effect. Reconnection is automatic.

Item	Description
HTTP	Configure HTTP port. This port is used for the web browser. Default value: '80'. This value should be either '80' or greater than '1024'.
HTTPS	Configure HTTPS port. This port is used for the web browser. Default value: 443. This value should be either '443' or greater than '1024'.
RTSP	RTSP port image transmission. Default value: 554~558 554 : H.264 Streaming. 555 : MJPEG Streaming. 556~558 : Reserved. Specify the starting port number (in the above case:554), and the next consecutive port numbers will be selected automatically. H.264 rtsp URL: rtsp://*ip_address:port*/wdx/media/stream.h264 MJPEG rtsp URL: rtsp://*ip_address:port*/wdx/media/stream.mjpeg
RTSP Authentication	Enable/Disable RTSP Authentication. If enabled, username and password is required when connecting through RTSP protocol.
Auto port forwarding	Enable/Disable Auto port forwarding. If enabled, the connected router can automatically setup port forwarding (the router should support this function).

- **SNMP**

Use this page to configure SNMP protocol. SNMP is an internet standard protocol for managing devices on IP networks. SNMP exposes management data in the form of variables on the managed systems.

Item	Description
Enable SNMP Agent	Enable/Disable SNMP Agent.
Enable SNMP v1	Enable/Disable SNMP Version 1.
Enable SNMP v2c	Enable/Disable SNMP Version 2.
Read Community	Configure Read Community to access SNMP information. Default value: 'public'.
Write Community	Configure Write Community to access SNMP information. Default value: 'write'.
Enable Traps for SNMP v1/v2c	Enable/Disable SNMP Trap. SNMP Trap transmits critical Event & Status information. The camera can transmit the following: Power On, IP settings change, SNMP Enable/Disable.
Trap Receiver	Enter the message recipient IP address.
Trap Community	Enter the recipient Trap Community name. Default value: 'public'.
Enable SNMP v3	Enable/Disable SNMP Version 3.
User Password	Enter the password for SNMP Version 3.

- **DDNS**

Use this page to configure DDNS. DDNS is a method of automatically updating a name server in the DNS. It is used to resolve a friendly-name to an IP address that my change frequently.

Item	Description
Use	Enable/Disable DDNS.
Server	Select the desired DDNS service.
ID / Password	Enter the registered ID & password for the DDNS.
Domain	Enter the registered domain name for the DDNS.
Update interval	Enter the IP address update interval.

Note   *Please refer to the DDNS service provider for more details on how to set up DDNS.*

- **HTTPS**

Use this page to configure HTTPS for a secure and encrypted connection.
Use of a corrupted certificate will result in failed connections and a factory reset might be required.

HTTPS > CONNECTION TYPE

Item	Description
HTTP	If HTTP is selected, the SSL is disabled.
HTTPS (self-signed)	Uses self-signed SSL certificate (after you select this option, simply click on the [Save] button to install the self-signed SSL).
HTTPS (signed)	Uses signed SSL from a public Certificate Authority.

HTTPS > INSTALL SIGNED CERTIFICATE

Item	Description
Certificate Name	Enter the certificate name.
Certificate File	Select the certificate file to be installed.
Key File	Select the key file for the certificate.
CA File	Select the CA file for the certificate.
INSTALL	Once you have selected the required certificate files, click [INSTALL] to install the certificate.
DELETE	Click on the [DELETE] button to remove the certificate.

• **IP FILTER**

Use IP filter to Allow of Deny connections from specific IP addresses.

IP FILTER > IP FILTER CONFIGURATION

Item	Description
Enable	Enable/Disable IP Filter.
Type	Select between Allow/Deny mode

IP FILTER > IP ADDRESS LIST

Item	Description
IP Address List	Displays the registered IP address.
IP Address	Enter the IP address to Allow or Deny.
Add	Adds the IP address to the List.
Delete	Select an IP address from the list using your mouse and click Delete to remove the IP address.
Apply	Click to apply changes.

• **UPnP**

Use this page to configure UPnP. UPnP permits network devices to seamlessly discover each other.

Item	Description
Enable	Enable/Disable UPnP.
Friendly Name	Enter user-friendly name for UPnP.

• **BONJOUR**

Use this page to configure Bonjour. Bonjour is Apple's implementation of Zero configuration networking.

Item	Description
Enable	Enable/Disable Bonjour.
Friendly Name	Enter user-friendly name for Bonjour

EVENT SETUP

- **FTP**

Use this page to configure FTP upload of camera images during an event.

IP NETWORK CAMERA		SETUP	LIVE
AUDIO&VIDEO	EVENT > FTP		
NETWORK	URL	192.168.0.1	
EVENT	Port	21	
>> FTP	ID	ftpuser	
SMTP	Password	••••	
SCHEDULE	Upload path	default_folder	
MOTION DETECTION		Save	
SENSOR INPUT			
NETWORK UNLINKED			

Item	Description
URL / Port	Enter FTP server's IP address and port number. Default value: '192.168.0.1'/'21'.
ID	Enter FTP server's login ID.
Password	Enter FTP server's login password.
Upload path	Specify path for the upload files.

- **SMTP**

Use this page to configure SMTP transmission of camera images (email) during an event.

IP NETWORK CAMERA		SETUP | LIVE
AUDIO&VIDEO	EVENT > SMTP	

URL	smtp.gmail.com	
	☐ STARTTLS authentication ☐	
Port	465	
ID	kim@gmail.com	
Password	••••	
Send to	jane@domain.com	
CC		You could use the "," for each CC separator.
From	kim@domain.com	

AUDIO&VIDEO

NETWORK

EVENT
  FTP
» SMTP
  SCHEDULE
  MOTION DETECTION
  SENSOR INPUT
  NETWORK UNLINKED

SYSTEM

Save

Item	Description
URL / Port	Enter SMTP server's URL and port number. Default value: 'smtp.gmail.com'/'465'.
STARTTLS authentication	Enable/Disable TLS authentication.
ID	Enter SMTP login ID.
Password	Enter SMTP login password.
Send to	Enter the 'Send to' E-mail (recipient) address.
CC	Enter cc address. Multiple addresses can be entered using "," separator.
From	Enter the 'From' E-mail (sender) address.

- **SCHEDULE**

Use this page to configure schedule for FTP upload.
Schedule behaves as an event independently from other events. If you enable schedule, the camera will continuously upload to FTP for the duration of the schedule independently from other events such as motion detection, sensor input or network unlinked.

SCHEDULE > SCHEDULE TABLE

- Check the desired day of the week for FTP uploading.

- Configure time by either moving the time bar from both ends or by entering the time manually.

SCHEDULE > SCHEDULE EXPIRATION

- Configure schedule expiration date using the calendar. Starting date is the current date.

SCHEDULE > ON SCHEDULE BEHAVIOR

Item	Description
Upload via FTP server	Enable/Disable FTP upload by schedule.

- **MOTION DETECTION**

Motion detection can trigger alarm output, alarm sound output, FTP/SMTP image transmissions.

MOTION DETECTION > AREA SETTING

- Up to 12 motion detection areas can be individually selected.

- Using your computer mouse, click on a motion detection area to select/deselect.

- Click on [Hide Grid] to remove the grid (vice-versa).

- Click on [Clear all] to deselect all motion detection areas.

- Click on [Set all] to select all motion detection areas.

MOTION DETECTION > BEHAVIOR SETTING

Item	Description
Use	Enable/Disable motion detection.
Sensitivity	Select motion detection sensitivity. Selectable between 1~10.
On M/D Behavior	Configure motion detection behavior.
Upload JPEG image to FTP server	Upload JPEG images to the FTP server for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.
Send email with JPEG image	Send JPEG images to the SMTP server for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.
Alarm output	Outputs alarm signal for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.
Play alarm sound	Outputs alarm sound for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.

Note   *Streaming 2 should be enabled for the motion detection setup page image to display properly:*
'SETUP > AUDIO&VIDEO > VIDEO PROFILE'

In Internet Explorer web browser motion detection setup page image is 1 frame per second.

In Safari, Chrome web browsers, the motion detection setup page image frame rate is normal.

- **SENSOR INPUT**

Sensor input can trigger alarm output, alarm sound output, FTP/SMTP image transmissions.

IP NETWORK CAMERA		SETUP | LIVE
AUDIO&VIDEO	**EVENT > SENSOR INPUT**	

Use	☑
Type	NORMAL OPEN ▾
On Sensor Behavior	Upload JPEG image to FTP server OFF ▾ Send email with JPEG image. OFF ▾ Alarm output OFF ▾ Play alarm sound OFF ▾

EVENT
- FTP
- SMTP
- SCHEDULE
- MOTION DETECTION
- ≫ SENSOR INPUT
- NETWORK UNLINKED
- EVENT RECIPIENTS

Save

Item	Description
Use	Enable/Disable sensor input.
Type	Configure Sensor type. Selectable values: NORMAL OPEN, NORMAL CLOSE.
On Sensor Behavior	Configure sensor trigger behavior.
Upload JPEG image to FTP server	Upload JPEG images to the FTP server for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.
Send email with JPEG image	Send JPEG images to the SMTP server for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.
Alarm output	Outputs alarm signal for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.
Play alarm sound	Outputs alarm sound for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.

- **NETWORK UNLINKED**

It detects unlinked networks and can trigger alarm output, alarm sound output.

Item	Description
Use	Enable/Disable Network unlinked event.
On Sensor Behavior	Configure network unlinked event behavior.
Alarm output	Outputs alarm signal for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.
Play alarm sound	Outputs alarm sound for the selected duration. Selectable values: OFF, 10s, 30s, 1m, 5m, 10m.

SYSTEM SETUP

- **INFORMATION**

It displays camera configuration settings and status information.

INFORMATION > SYSTEM

- Model #, Serial #, Firmware Version, Date & Time, Video Profile.
- Use this section to enter Device Name, Location. Device name will be displayed in *"IP Scan Tool"*.

INFORMATION > NETWORK

- Displays current IP address and various network protocol information.

- **USER**

Use this page to configure users for the WEB Viewer.

Item	Description
ID	It displays the User ID for the selected user in the list. You can also enter new user ID using this box.
New Password	Enter the new user's password.
Confirm Password	Confirm new user's password.
Authority	Change selected user's access level or assign authority to a new user. Administrator : Full access Operator : Full access EXCEPT for the [SYSTEM] section. Viewer : Live View Area Only.
Add	Registers the newly created user.
Delete	Delete an existing user. [admin] account cannot be deleted.
Edit	Change an existing user's password.

Note *Only Administrators can edit USER information.*

- **DATE / TIME**

DATE / TIME > CURRENT TIME IN DEVICE

- Displays the current date and time.

DATE / TIME > SET TIME

Item	Description
Synchronization mode	Select the desired time sync method: Computer: Syncs with the connected computer. NTP server: Syncs with NTP server. Manual: Manual setup.
Locale	Select the locale (GMT) – (NTP mode only).
Daylight saving	Enable/Disable Daylight saving.
NTP server	Enter the desired NTP server address – (NTP mode only).
Date	Manually enter date. – (Manual mode only).
Time	Manually enter time. – (Manual mode only).

DATE / TIME > FORMAT

- Select the desired display format for the date/time.

- **MAINTENANCE**

Use this page to perform firmware upgrades, import/export settings, restore factory defaults and reboot the device.
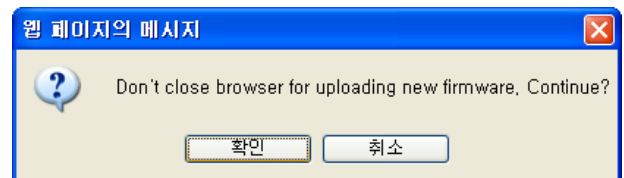

CONFIGURATION

- Import / Export configuration settings.
  Click on the **[Browse]** button and select the configuration file from the connected PC. Click **[IMPORT]** to apply the selected configuration file settings.
  Export will download the configuration file to the connected PC.
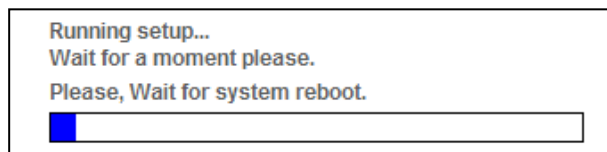- The device will reboot after a successful Import.

UPGRADE

- Use this menu to upgrade the firmware.
- The device will reboot after a successful firmware upgrade.

1. Click on the **[Browse]** button and select the firmware upgrade file.
2. Click on the **[UPGRADE]** button to start the upgrade process.
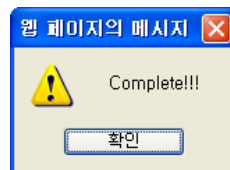3. If a pop-up message appears, click continue.

| Note | Do not close the Web browser during the upgrade process. |

4. The upgrade progress bar will display the status of the upgrade.

> Running setup...
> Wait for a moment please.
> Please, Wait for system reboot.

5. After a successful upgrade, **[Complete]** message window will pop-up.

6. Click **[Confirm]** and the device will reboot. Reconnect to the device and confirm that the new firmware has been upgraded by checking the version number

> 웹 페이지의 메시지
> ⚠ Complete!!!
> 확인

| Note | *All settings will be restored to factory default settings after a firmware upgrade including the IP address, username and password. Export the settings before upgrading the firmware and use the IP Scan Tool find the camera on the network.* |

FACTORY DEFAULT

Item	Description
Set factory default	Restores to the factory default settings. The device will reboot after a factory default.
Reboot	Reboot the device by clicking on the **[REBOOT]** button.

- **LOG**

It displays system log and event information.

Item	Description
OLD DAY	Moves to the oldest log date page.
PREVIOUS DAY	Moves to the previous day from the current date on display.
NEXT DAY	Moves to the next day from the current date on display.
Refresh	Refreshes the log display.
Delete log	Deletes all log entries.

TROUBLESHOOTING

Issue	Recommendation
No power	▪ Check power cable/plug for a proper connection. ▪ If PoE is being used, check that the cable is properly connected. Replace the cable if the cable is defective.
Unable to connect using a web-browser	▪ Check network settings. ▪ Check for a proper network cable connections. ▪ Confirm that a DHCP server is present in the network if DHCP mode is used. ▪ If a router is used, check for correct port forwarding settings.
I get disconnected from the live view	▪ The live view will be disconnected if another user makes changes to the camera settings ▪ Check for a proper network connection.
IP Scan Tool cannot find the network camera	▪ Disable the PC's firewall or add IP Scan Tool to the exceptions list.