DWC-PF5M1TIR

MEGApix PANO 5MP 180° and 360° Fisheye IP Camera

Before installing or operating the camera, please read and follow this manual carefully.

PRECAUTIONS

- Do not open or modify.
- Do not open the case except during maintenance and installation, for it may be dangerous and can cause damages.
- Do not put objects into the unit.
- Keep metal objects and flammable substances from entering the camera. It can cause fire, short-circuits, or other damages.
- Be careful when handling the unit.
- To prevent damages, do not drop the camera or subject it to shock or vibration.
- Do not install near electric or magnetic fields.
- Protect the camera from humidity and dust.
- Protect the camera from high temperature.
- Be careful when installing near the ceiling of a kitchen or a boiler room, as the temperature may rise to high levels.
- Cleaning: To remove dirt from the case, moisten a soft cloth with a soft detergent solution and wipe.
- Mounting Surface: The material of the mounting surface must be strong enough to support the camera. Q

FCC COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference, when the equipment is operated in a residential environment. This equipment generates, uses, and radiates radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications.

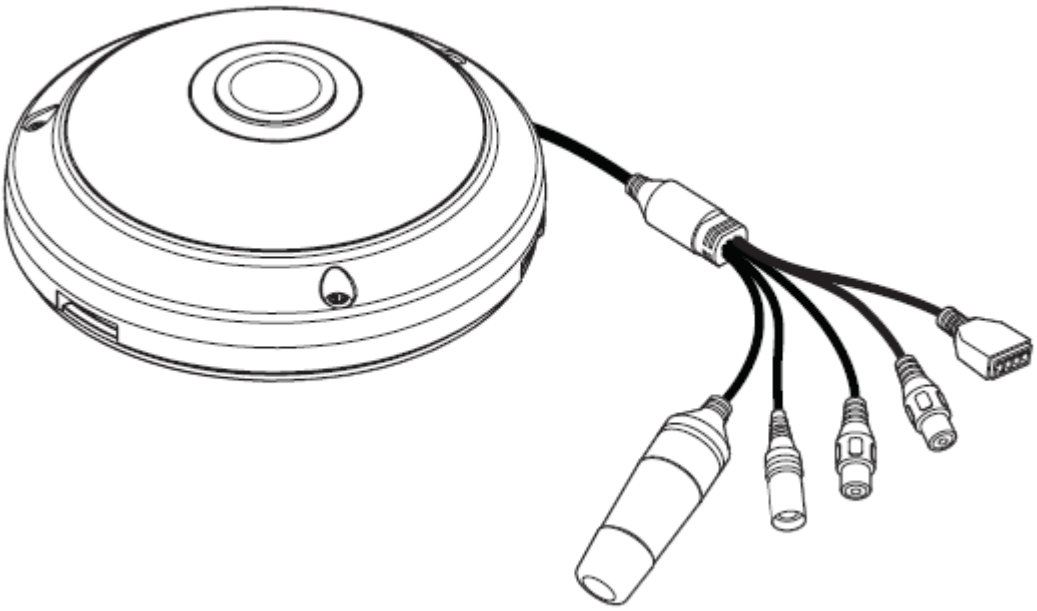
WARNING: Changes or modifications are not expressly approved by the manufacturer.

TABLE OF CONTENTS*

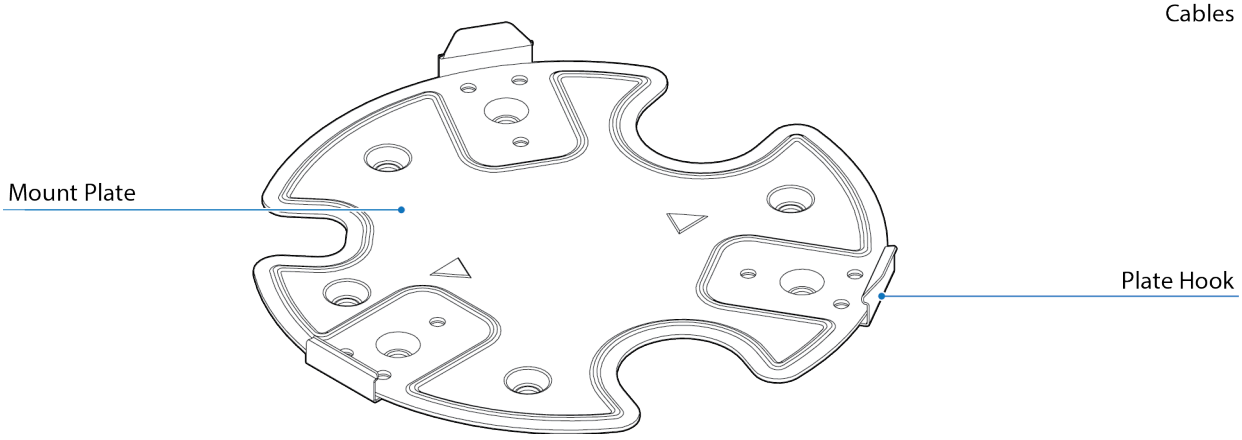
FEATURES*

- 1/1.8" Sony® IMX178 sensor (ExmorR, STARVIS)
- 5MP 360° Hemispheric Fisheye Camera
- Support 360° Hemispheric Fisheye view and 180° Panoramic view
- Multi Codecs (H.264, MJPEG, H.265) with Simultaneous Dual-Stream
- 1.55mm Fisheye Lens
- Edge-to-Edge Image Clarity
- Smart IR™ with Intelligent Camera Sync. 32ft Range
- True Wide Dynamic Range (WDR)
- ONVIF Conformant, Profile S
- Smart DNR™ 3D Digital Noise Reduction
- True Day/Night with Mechanical IR Cut Filter
- Web Server Built-in
- Auto Gain Control (AGC)
- Auto White Balance (AWB)
- Motion Detection
- Micro SD/SDHC Class 10 Card Slot [card not included]
- PoE and DC12V
- 5 Year Warranty

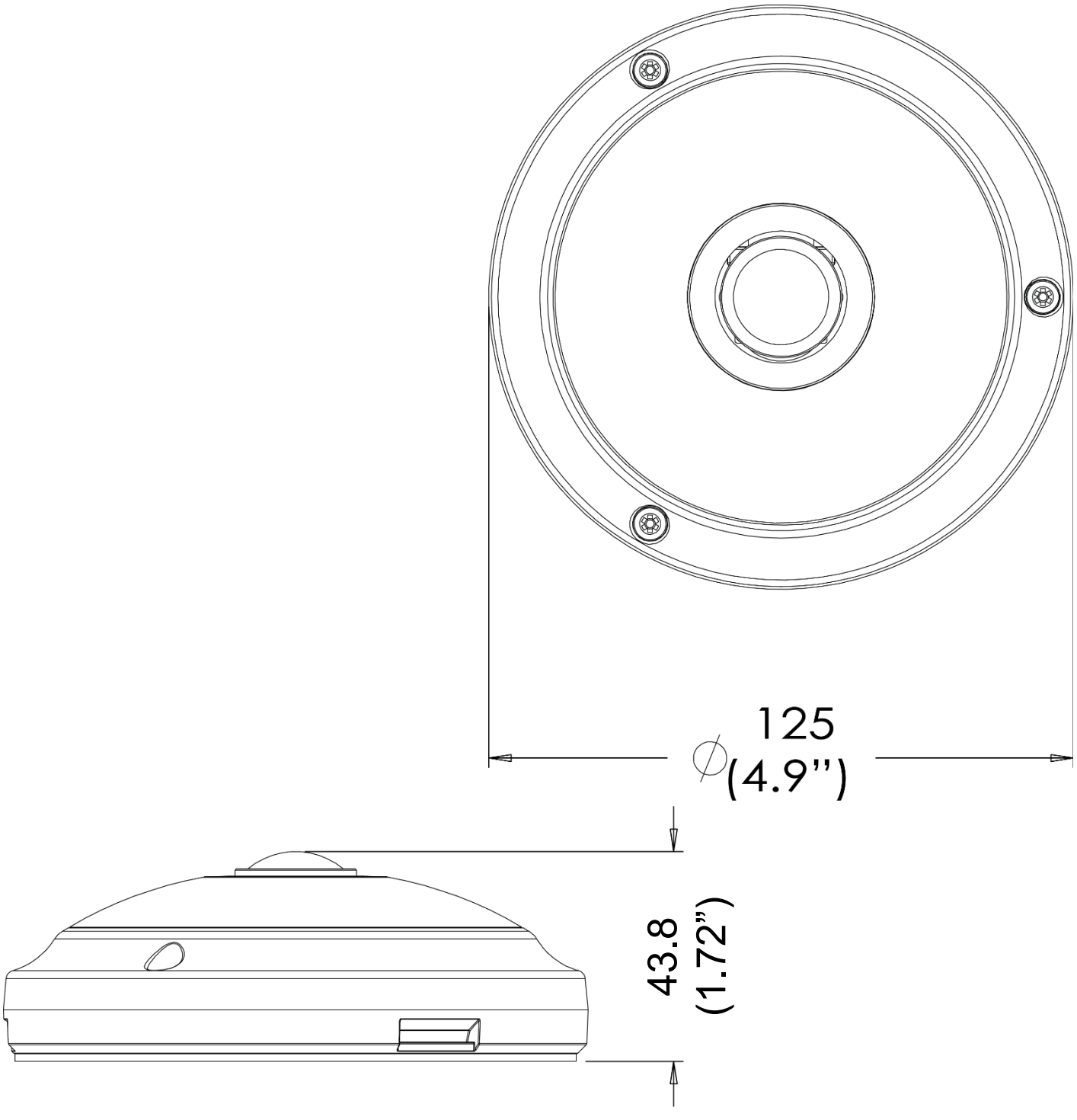
PARTS & DESCRIPTIONS*



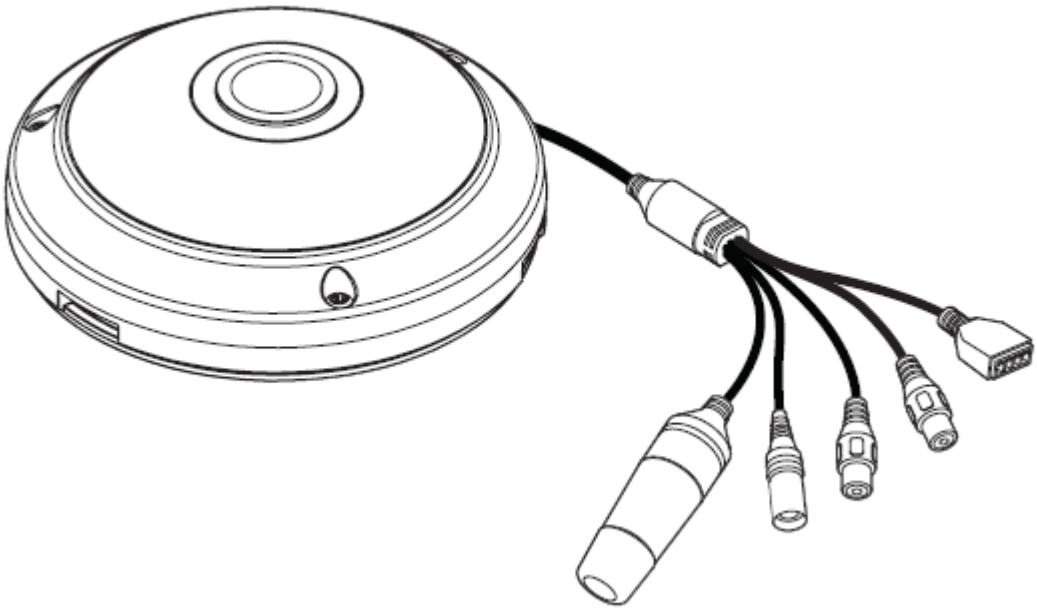
Cables

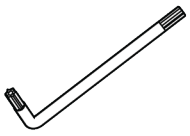


DIMENSIONS: mm (inch)*

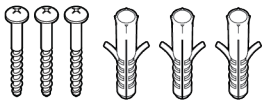


INCLUDED IN THE BOX*

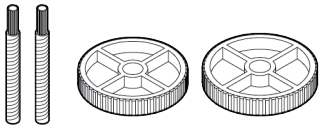




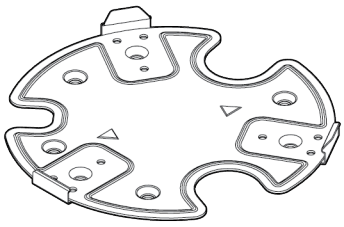
Torx Wrench



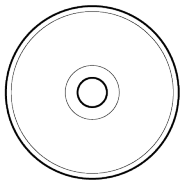
Screw &
Plastic Anchor-3pcs



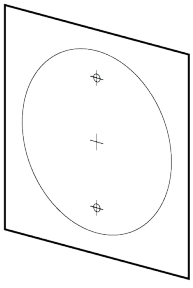
Mount Bolt & Nut



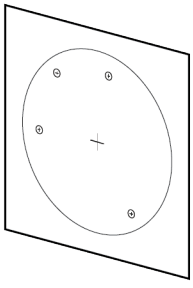
Mount Plate



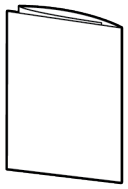
Manual CD



Template Sheet
for Installing by Bolt & Nut



Template Sheet
for Installing by Plate



Quick Manual

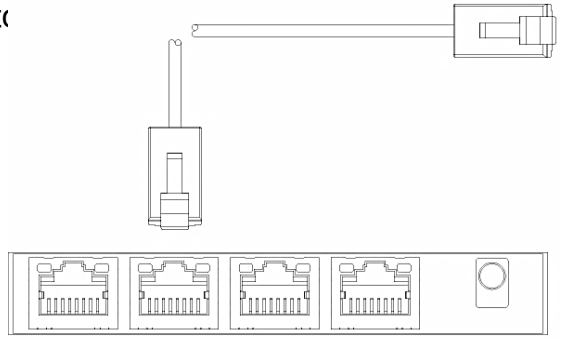
NETWORK CONNECTION*

There are two way to power a MEGApix® PANO™ camera.

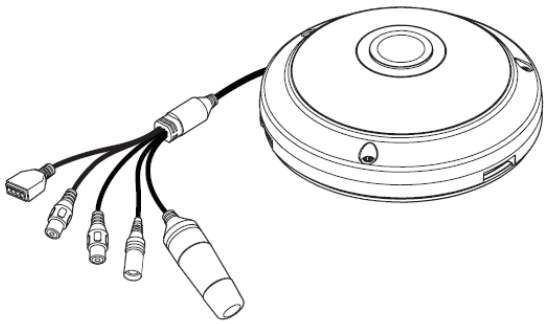
Use a PoE switch to connect data and power through a single cable and begin viewing and recording images instantly. A non-PoE switch will require an adaptor for power transmission.

1. *Using a PoE+ Switch / PoE+ Injector*

   The MEGApix® PANO™ Camera is PoE-Compliant, allowing transmission of power and data via a single Ethernet cable. PoE eliminates the need for the different cables used to power, record, or control the camera. Follow the illustration below to connect the camera to a PoE-enabled switch using an Ethernet cable. Please note that the camera requires a Class 3 PoE Switc

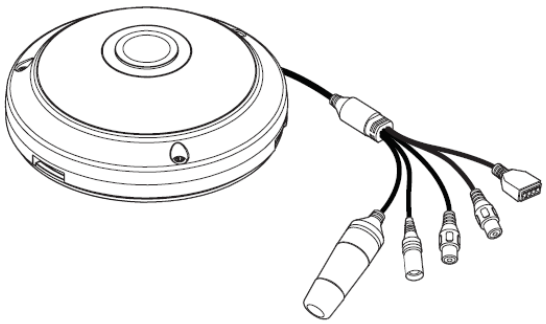


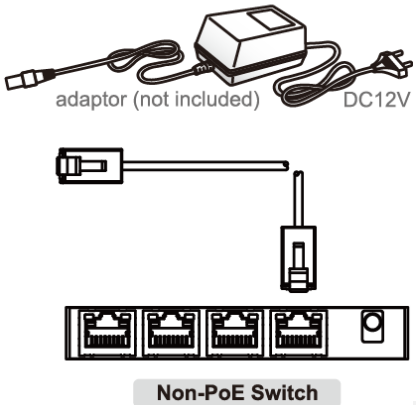
PoE Switch



2. *Using 12VDC*

   If a PoE switch is not available, use a power adaptor for power transmission and a non-PoE switch for data transmission. Follow the illustrations below to connect the camera without a PoE Injector.



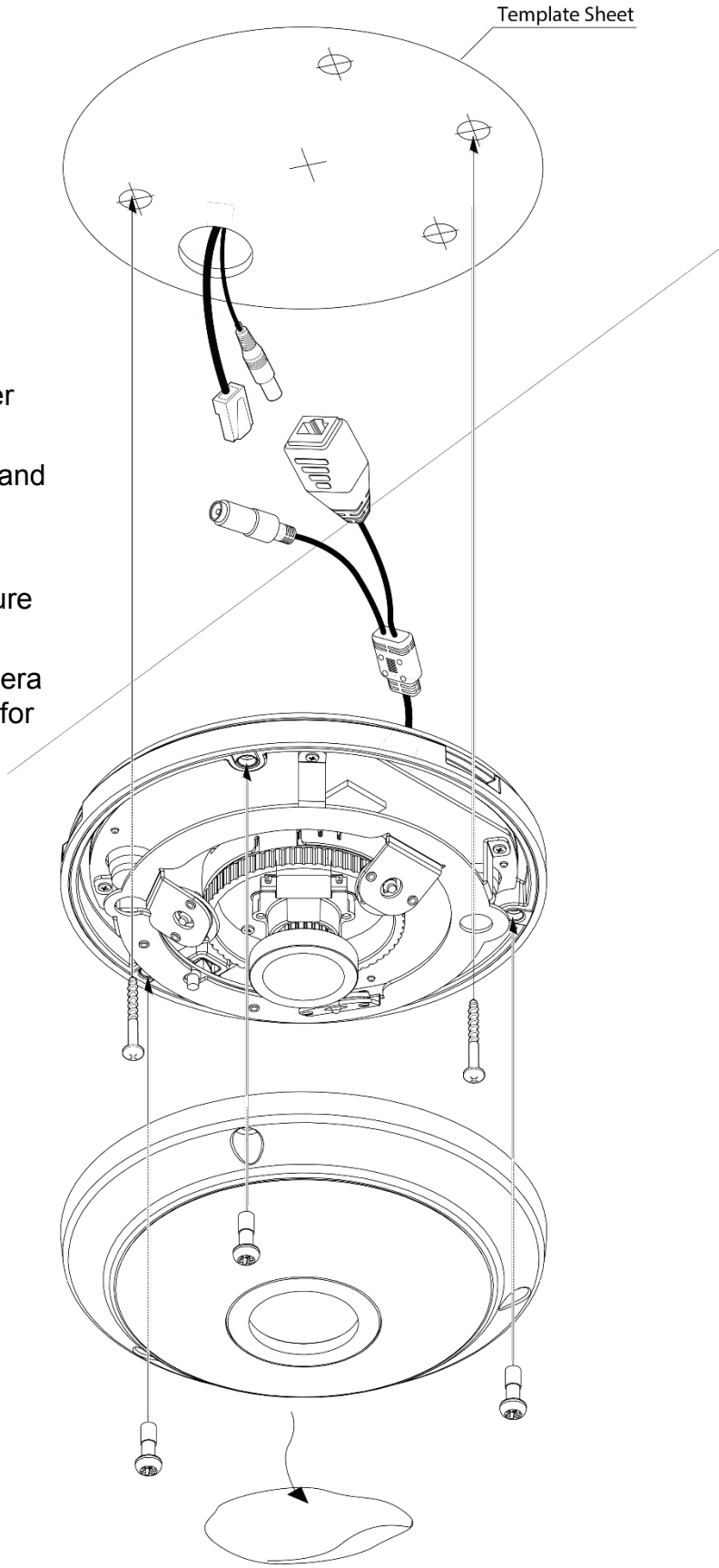


Non-PoE Switch

INSTALLATION*

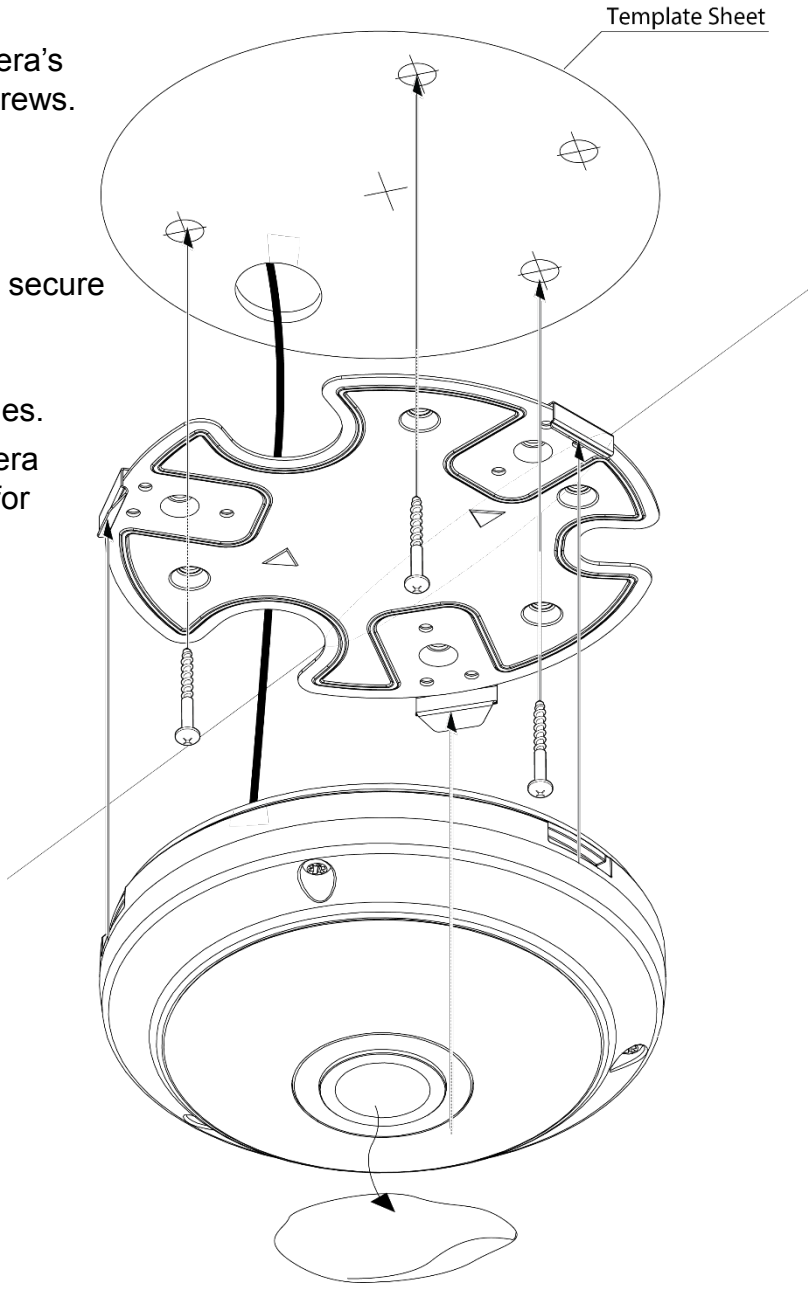
Easy Camera Installation

1. Detach the camera's cover dome from the camera's module by unscrewing the three cover dome screws using the L-Wrench.
2. Use the camera or mounting template to mark and drill the necessary holes in the wall or ceiling.
3. Pull wires through and make connections.
4. Using two (2) included screws, mount and secure the camera to the mounting surface.
5. Secure the camera's cover dome onto the camera base to complete the installation. See page 11 for assembly note.

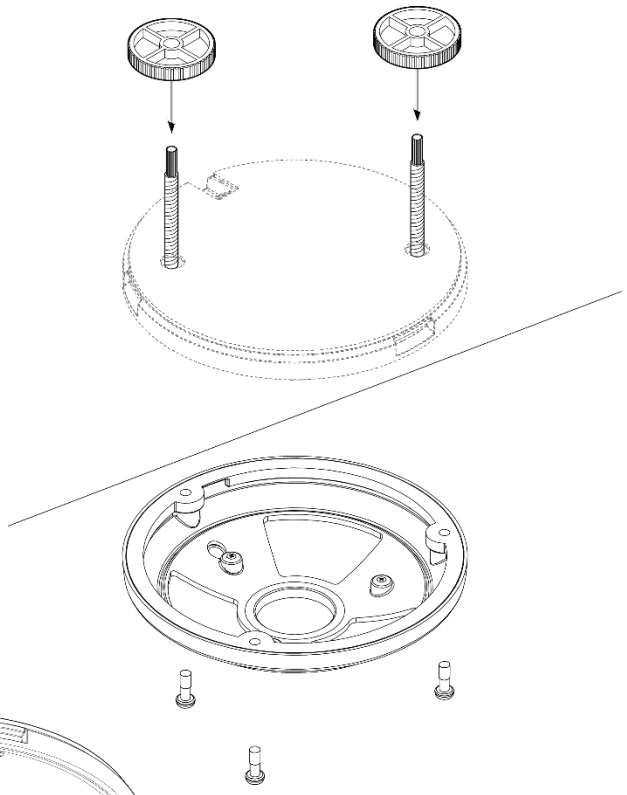


INSTALLATION USING MOUNT PLATE*

1. Detach the camera's cover dome from the camera's module by unscrewing the three cover dome screws.
2. Using the metal mount plate, mark and drill the necessary holes in the wall or ceiling.
3. Pull wires through and make connections.
4. Using the three (3) included screws, mount and secure the camera to the wall or ceiling.
5. Attach the camera base to the metal mount by snapping it into place using the two metal handles.
6. Secure the camera's cover dome onto the camera base to complete the installation. See page 11 for assembly note.



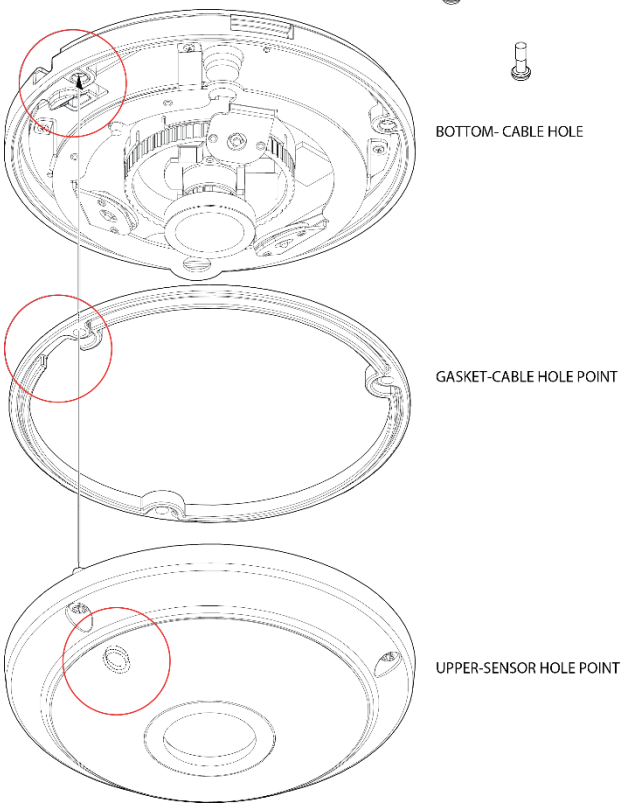
INSTALLATION USING MOUNT BOLT & NUT*



1. Using the template sheet, make and drill the cabling holes on the wall/ceiling.
2. Secure the two long mounting screws to the camera's base.
3. Pass the wires through the mount bracket and make all necessary connections.
4. Mount the camera to the mounting surface by using the 2 mounting nuts. Rotate the locking discs over the screws until the camera is held tightly from the mounting surface
5. Secure the camera's cover dome onto the camera base to complete the installation.

ASSEMBLING THE CAMERA*

1. The camera includes a sensor at the camera's module. For the sensor to function properly, the camera's dome includes a special hole for the sensor.
2. When assembling the camera together, please make sure the sensor hole in the camera's dome is positioned right on top of the sensor on the camera's module.



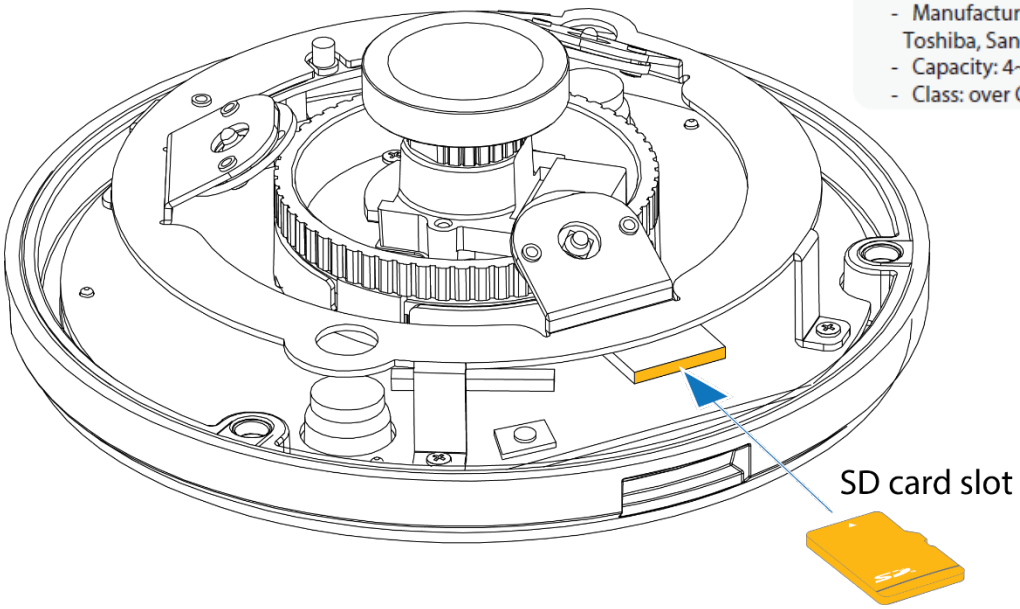
INSTALLATION*

Installing the SD Card

1. Detach the camera's cover dome from the camera's module by unscrewing the cover dome screws.
2. The SD Card slot is located next to the rest button.
3. Insert a Micro SD/SDHC Class 10 card according to the diagram.
4. To remove the SD card, press the card gently into the card slot to release it. The card will pop out automatically.

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/SDXC)
- Manufacturer: Transcend, Kingston, Toshiba, Sanddisk
- Capacity: 4~128GB
- Class: over Class 10

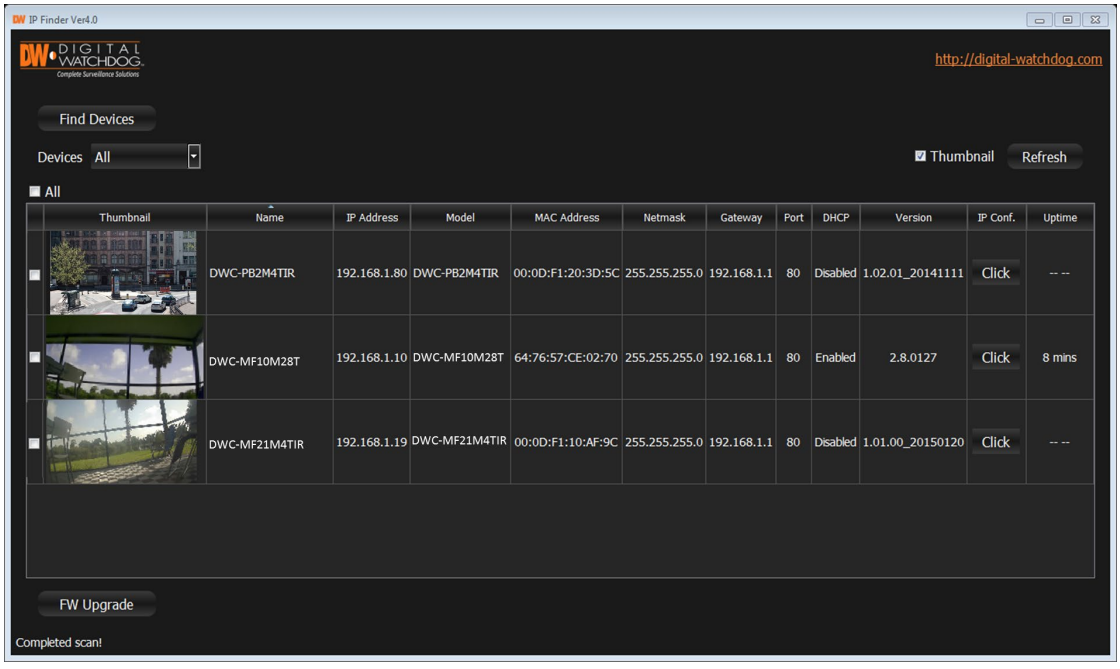


DW IP Finder™ *

Installing DW IP Finder™ Software

DW IP Finder™ searches for all available Digital Watchdog devices currently connected to your network.

1. Install ***DW IP Finder*** to find the MEGApix® PANO™ camera on your local network. The software can be found on the included User Manual CD. Run ***DW IP Finder*** and install onto your PC.
2. When setup is complete, launch ***DW IP Finder***.
3. The software will automatically search your network for all Digital Watchdog® supported devices. Your camera will appear as ” **DWC-PF5M1TIR**.”
4. Double-click on the camera name and select ‘View Camera Website’ to launch the camera’ web viewer.

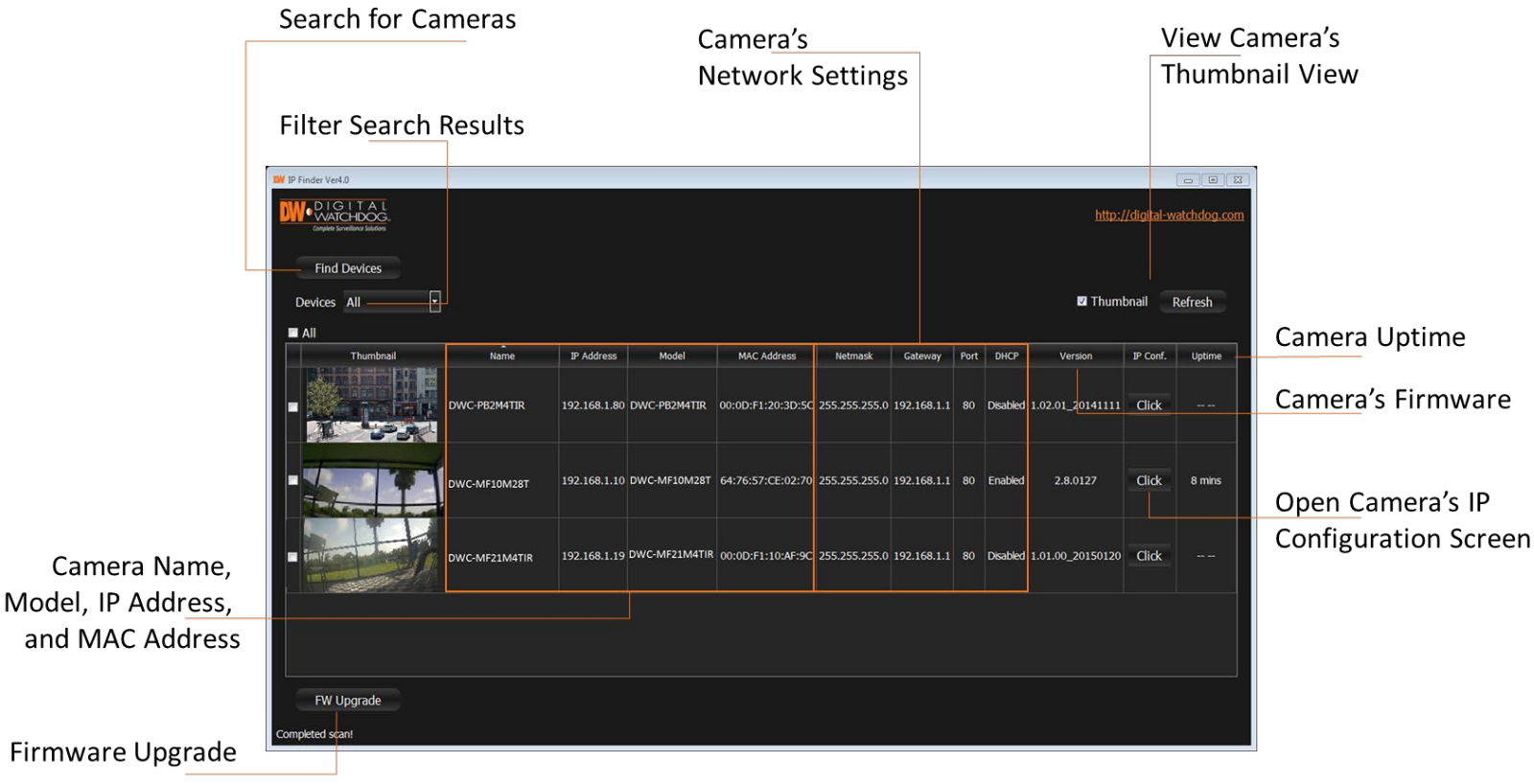


*Install the ***DW IP Finder*** to a computer located on the same Subnet Mask as the MEGApix® PANO™ camera.

DW IP Finder™ *

Using DW IP Finder™ Software

Use DW IP Finder™ to change the basic settings of your MEGApix® camera or to connect to your MEGApix® camera.

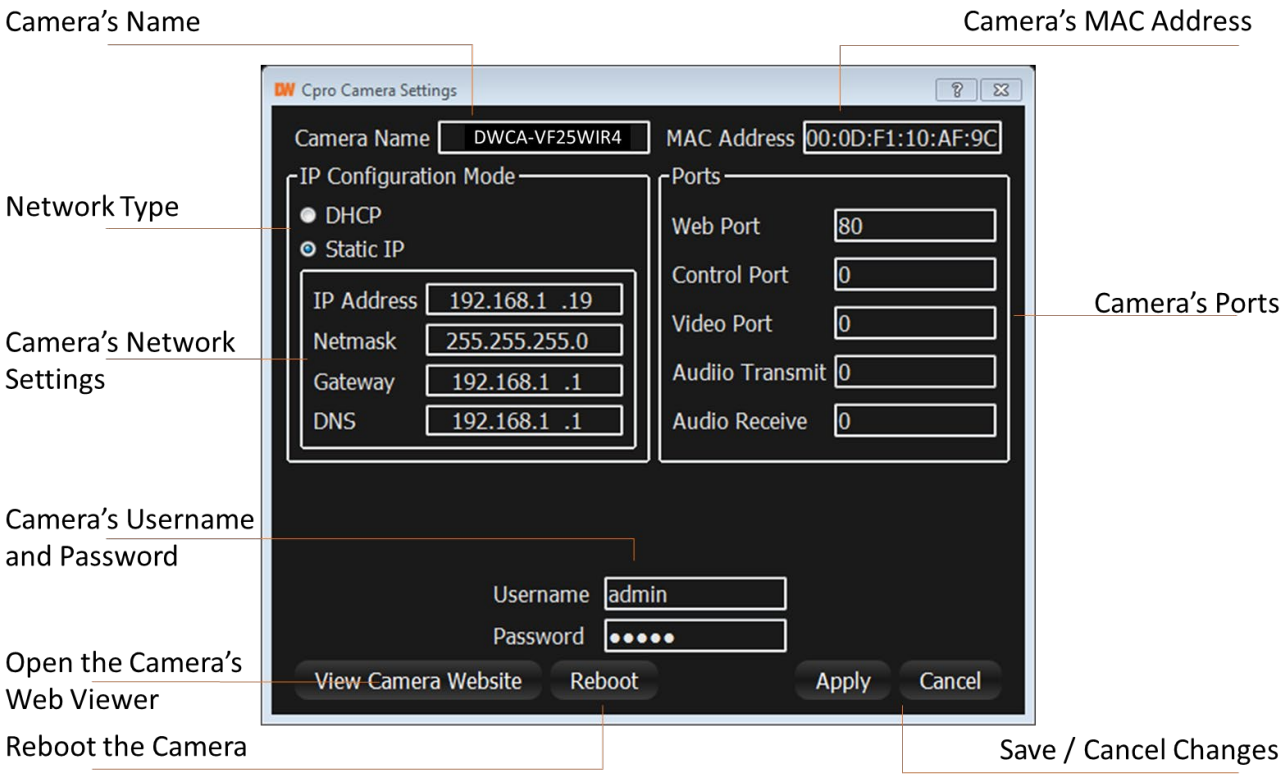


DW IP Finder™ *

Using DW IP Finder™ Software

Use IP Finder to set the connection type and the IP address information for your MEGApix® PANO™ camera.

1. **DHCP**: Select DHCP to access the camera within the same internal network. For further explanation on DHCP, please see page 16.
2. **Static IP**: Select Static to connect to the camera from an external network. For further explanation on Static, please see page 16.



*If you change the camera's IP, write down the camera's MAC Address for identification in the future.

DW IP Finder™ *

DHCP

The Dynamic Host Configuration Protocol (DHCP) is a network configuration protocol that allows a device to configure automatically according to the network it is connected to.

If your network supports DHCP and your MEGApix® PANO™ camera is set to DHCP, IP Finder will automatically find and set your MEGApix® PANO™ camera to correspond with your network requirements.

Static

Static IP addresses are recommended when using a network that does not support DHCP or when setting your device to be accessed externally via the internet. If Static is selected, you must manually enter the correct network settings for your MEGApix® PANO™ camera. The settings will correspond with your network. To set your camera to a static IP address, we recommend that you (1) setup the camera to DHCP, (2) allow it to configure itself according to your network, and (3) change the settings to a static IP address.

1. To set your MEGApix® PANO™ camera to Static, highlight the desired device from the search results list, and click on **Configuration**. In the “Network Configuration” window, make sure **Static** is selected.
2. Enter the following information: **IP Address**, **Netmask**, **Gateway**, and **Preferred DNS**.
3. Click **Apply** and **Reboot** to save all changes.

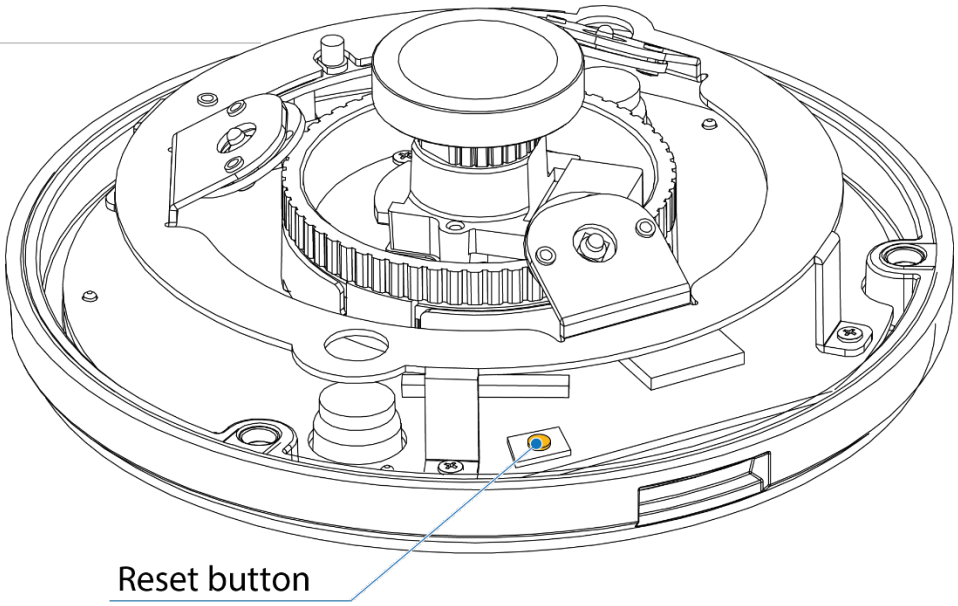
CAMERA REBOOT*

Resetting the Camera

Pressing the reset button on the camera's back for five (5) seconds will initialize all environmental variables to factory default. Previous setup for IP default, time, etc. will be deleted. If a system's IP address is lost, reset the camera back to factory default.

The following are the default network settings for a network with no DHCP option. In a network with DHCP, the camera's IP address, subnet mask and gateway will be set automatically to match the network's settings.

IP Mode	**192.168.1.2**
Subnet Mask	**255.255.255.0**
Gateway	**192.168.1.1**
HTTP Port	**80**



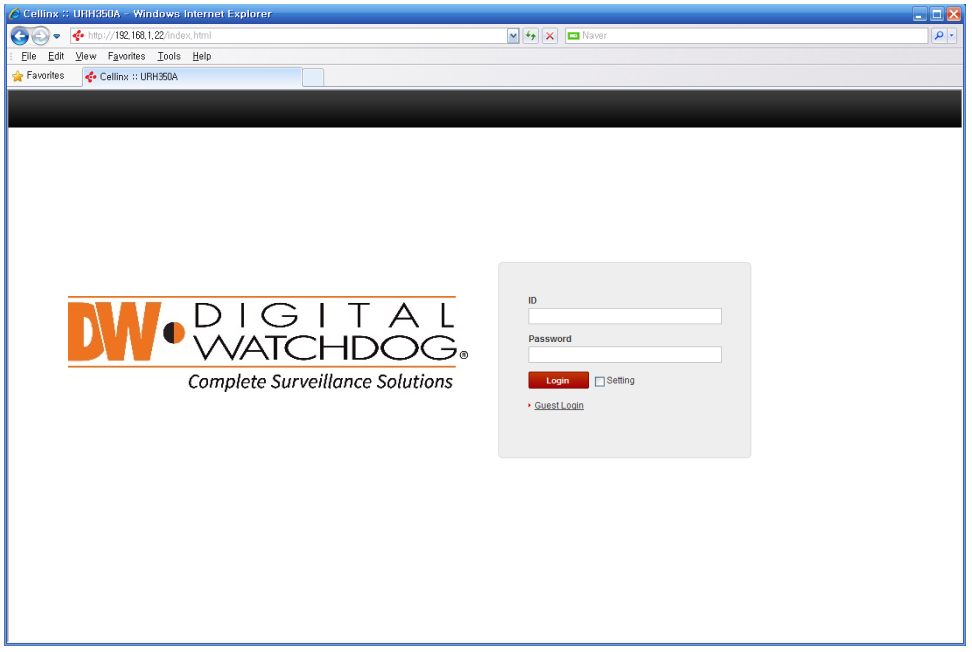
* Frequent use may cause system error.

Remote Video Monitoring Via Web Browser

Login options.

1. Administrator connection (on the initial page)
    a. [ID] admin (Unchangeable)
    b. [Password] admin (the default password can be changed in the web setting page)
    c. Type the ID and password and click the button “Login’, the web monitoring page shows up.
    d. You can also type the ID and password and click “Login” after checking the box “Setting”’ to go directly to the camera’s settings page.

2. Guest connection (on the initial page)
    a. [Guest Login] click the text “Guest Login” below the button “Login” without an ID and a password.
    b. Under the guest connection, only restrictive functions will be available. Settings page cannot be accessed as a guest.

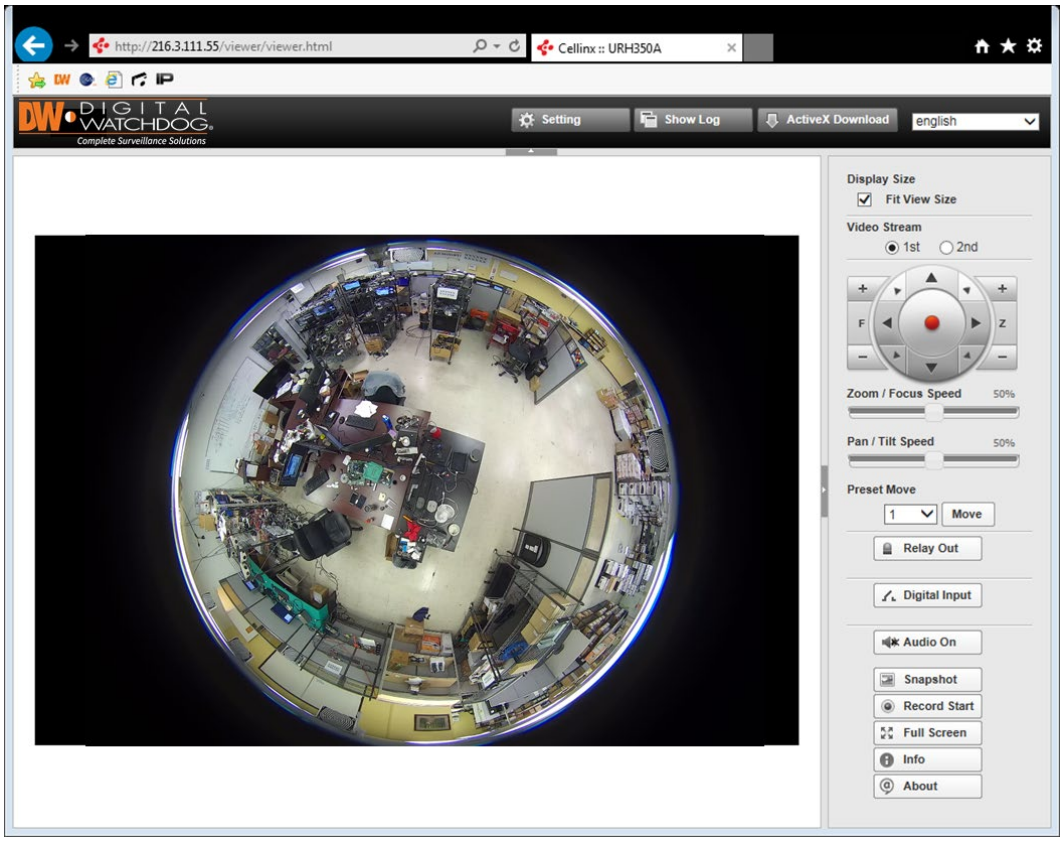


WEBVIEWER*

Remote Video Monitoring Via Web Browser

Monitor and configure the MEGApix® PANO™ camera through a built-in web viewer.

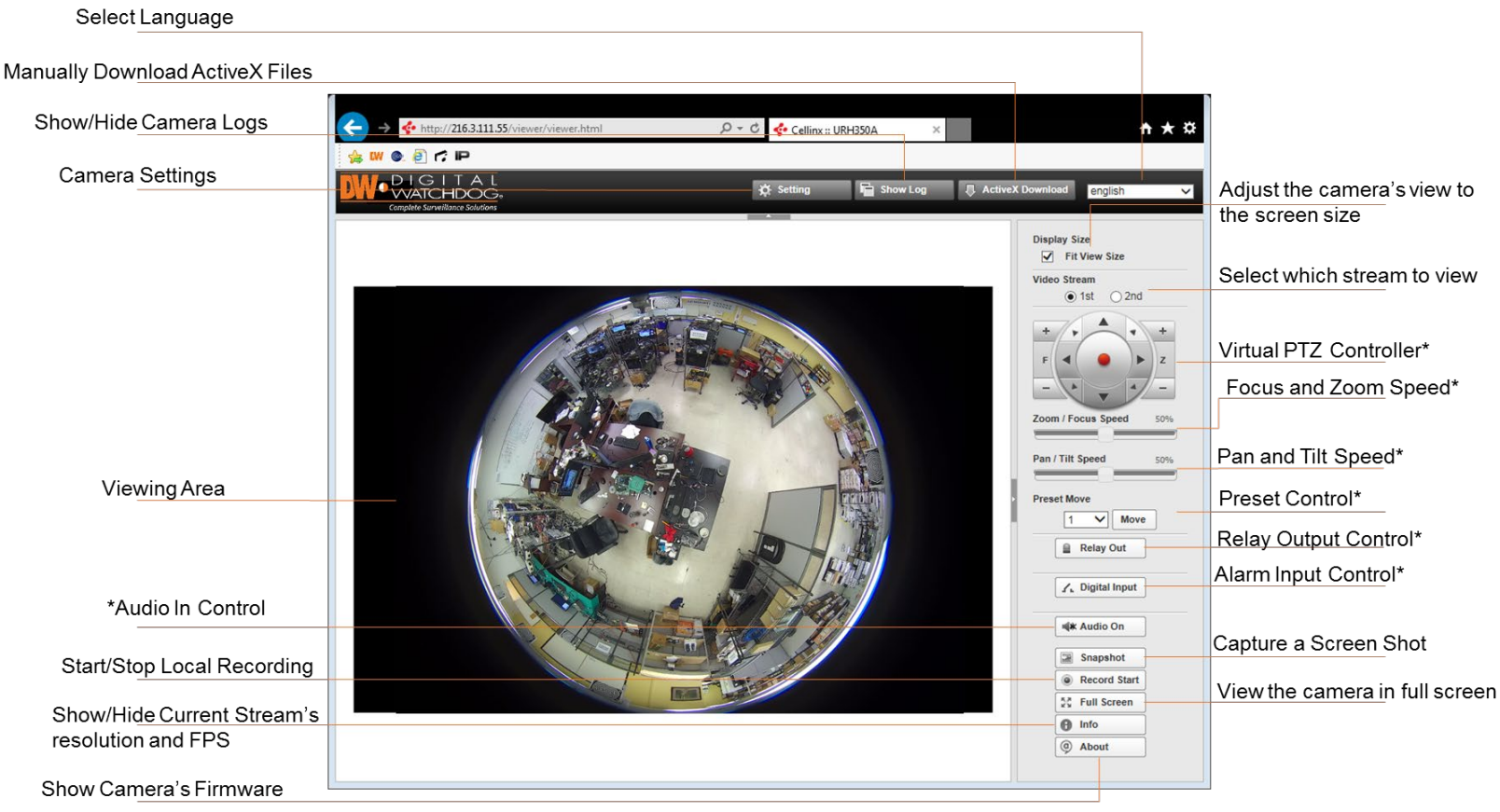
1. Type the camera's IP address in a web browser. Enter **Username** and **Password.** Default: Username: admin | Password: admin
2. The web browser may ask to install **ActiveX** to view video from the camera. Once it has been installed, Internet Explorer will display video images from the camera.
3. Internet Explorer version 8.0 or higher are recommended.
4. The Web Client is also available in Google Chrome, Safari and Firefox web viewers. Please note that features may be limited.



WEBVIEWER*

GUI Description

Monitor and configure the MEGApix® camera through a built-in web viewer.



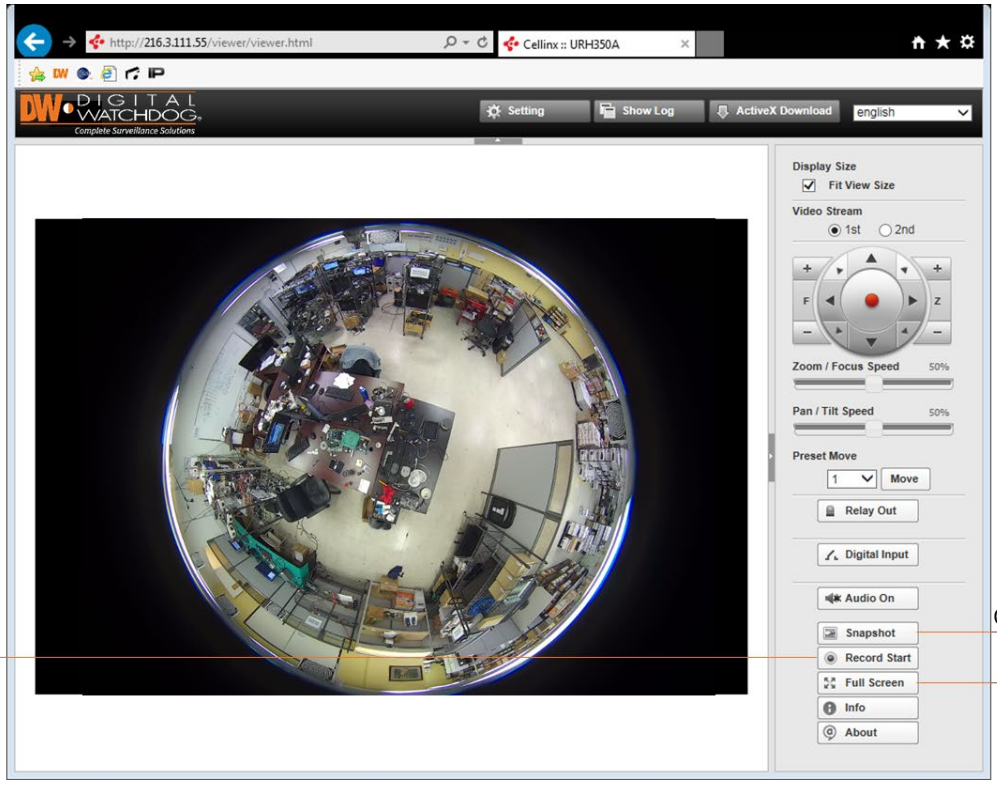
* Not supported on the DWC-PF5M1TIR

WEBVIEWER*

GUI Description

Monitor and configure the MEGApix® camera through a built-in web viewer.

5. Snapshot: Capture a still image from the camera's live view. The image is saved as a .jpeg file to your local downloads directory.
6. View the camera in full screen: you can hide all the settings and menu options and display the camera's view across your entire monitor. Press Esc to exit the full screen mode.
9. Local Recording: Record short videos from the camera's streaming and save them locally.
    1. Click the Record button to start recording. A red frame will appear around the display area.
    2. Click the Record button a second time to stop recording.
    3. the recorded video will be saved locally to your directory.



Start/Stop Local Recording

Capture a Screen Shot

View the camera in full screen

WEBVIEWER*

Settings> Status

View the camera's basic settings and status.

Network Status:

Displays the camera's current network information, including MAC Address, IP Address, Subnet Mask, Gateway, Default DNS, IPv4, Received Data velocity, Transmitted Data velocity, and the connection status for Link Speed / Duplex Mode.

Model Information

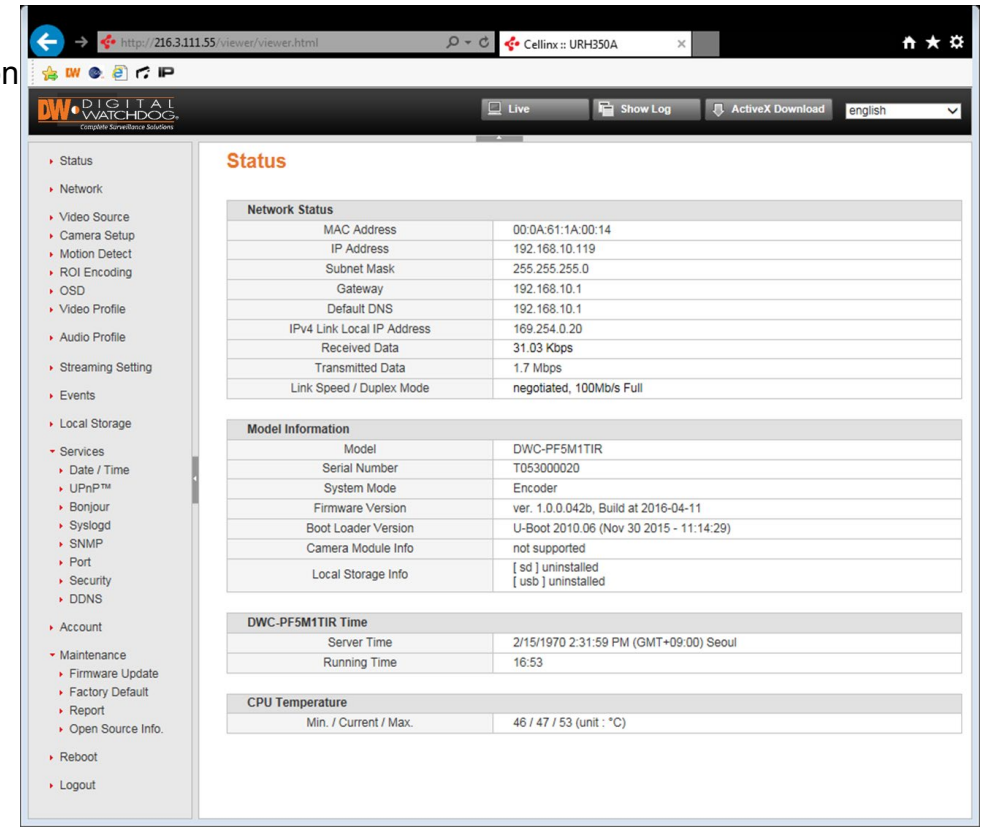
Displays the camera's hardware information, including Firmware and Boot Loader versions, camera's Model, Serial Number, System Mode and local storage information.

NVT Time

Display the camera's time information including the camera's current time settings and the running time (how long the camera has been running since the last time it booted up).

CPU Temperature

Show the camera's CPU running temperature, including proper range in °C.

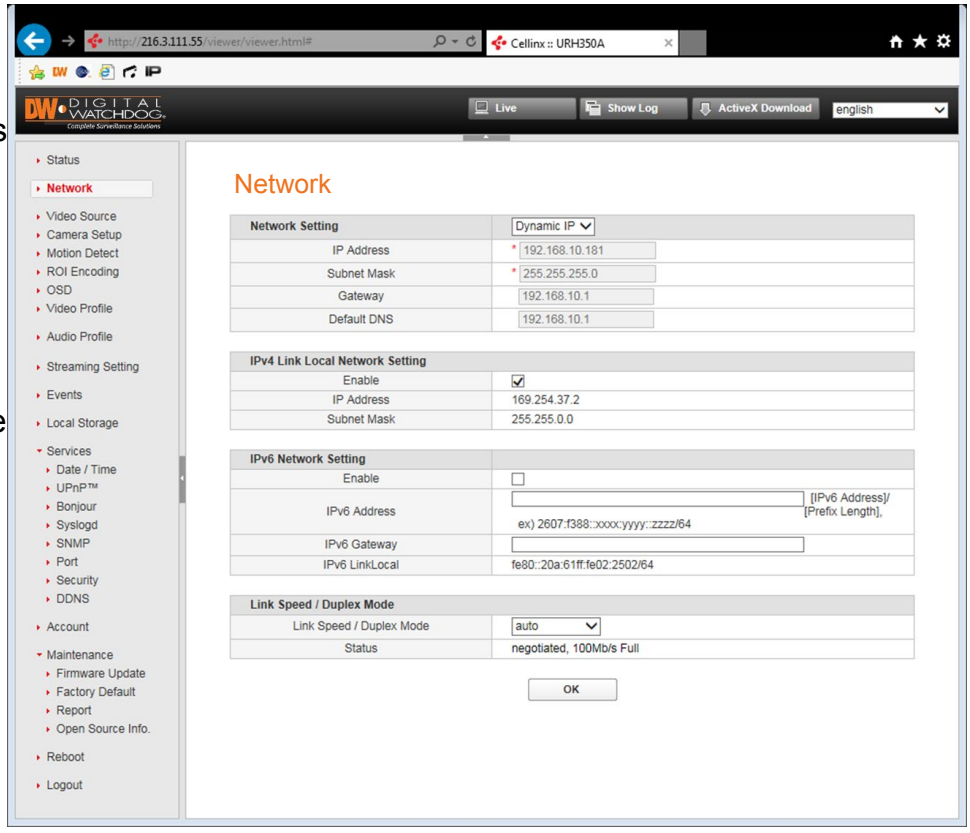


WEBVIEWER*

Settings> Network

View the MEGApix® PANO™ camera's network information.

1. IP Address:
    1. Dynamic IP– Select Dynamic IP if you are using a DHCP Server. The camera will obtain all its network information automatically from the server.
    2. If you do not have a DHCP server, or wish to manually enter the camera's network information, select static IP Address from the drop-down options. Contact your Internet Service Provider (ISP) or Network Administrator for more information.
2. Subnet Mask – The camera is set to DHCP. Subnet will change according to network settings.
3. Gateway – This is your router's external IP address. This address is used when accessing the camera remotely from outside the network. The router will channel the data request to the appropriate port associated with the camera.
4. Default DNS – Enter a Domain Name Server (DNS) address. This translates a web addresses to an IP addresses.
5. IPv4 Link Local Network Setting – Enabled by default.
    1. IP Address, Subnet Mask – These are set automatically based on your settings in the Network Setting section.

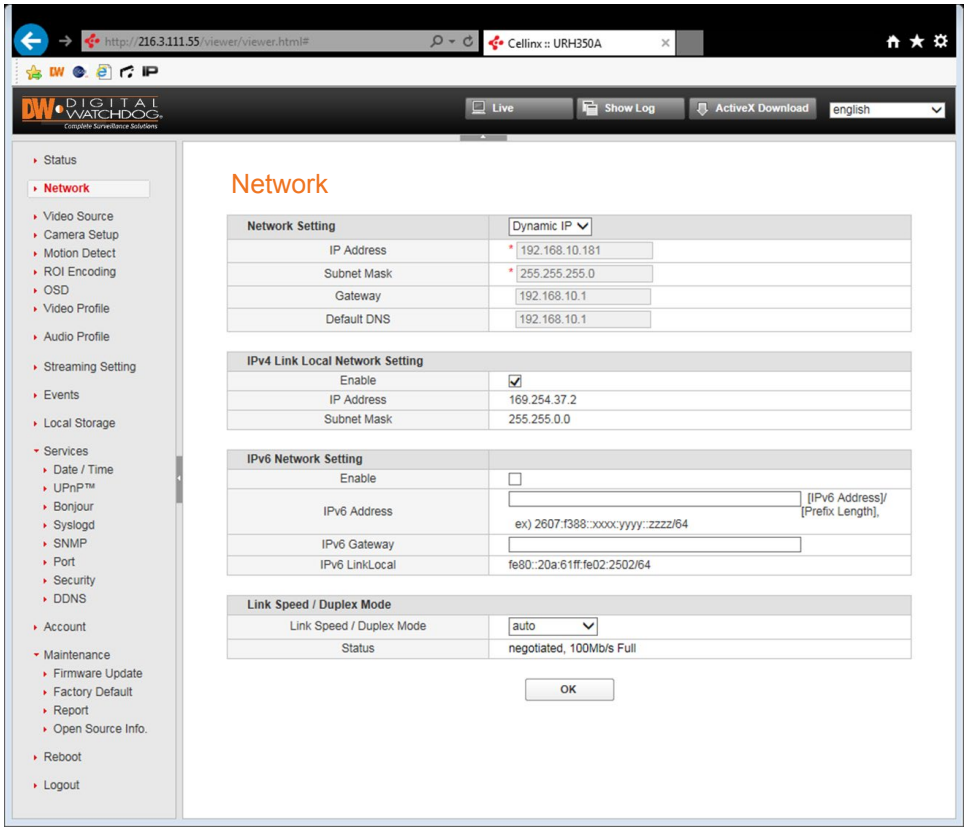


WEBVIEWER*

Settings> Network

View the MEGApix® PANO™ camera's network information.

6. IPv6 Network Setting – Disabled by default.
    1. Manually set the camera's IP address and gateway. The number next to "/" on IPv6 Address are the setting value for the sub-network.
    2. IPv6 LinkLocal – Set automatically by the communication between the local network devices. This is disabled by default.
7. Link Speed / Duplex Mode – If the auto negotiation mode has a problem with the connected network device, use a specified value. The value of the camera and the network device should be the same.
8. Status – The status of the current network connection.
9. Click OK to apply any changes to the settings.



WEBVIEWER*

Settings> Video Source

Adjust the camera's input source, add OSD text and adjust the camera's image settings.

Camera Input Source:

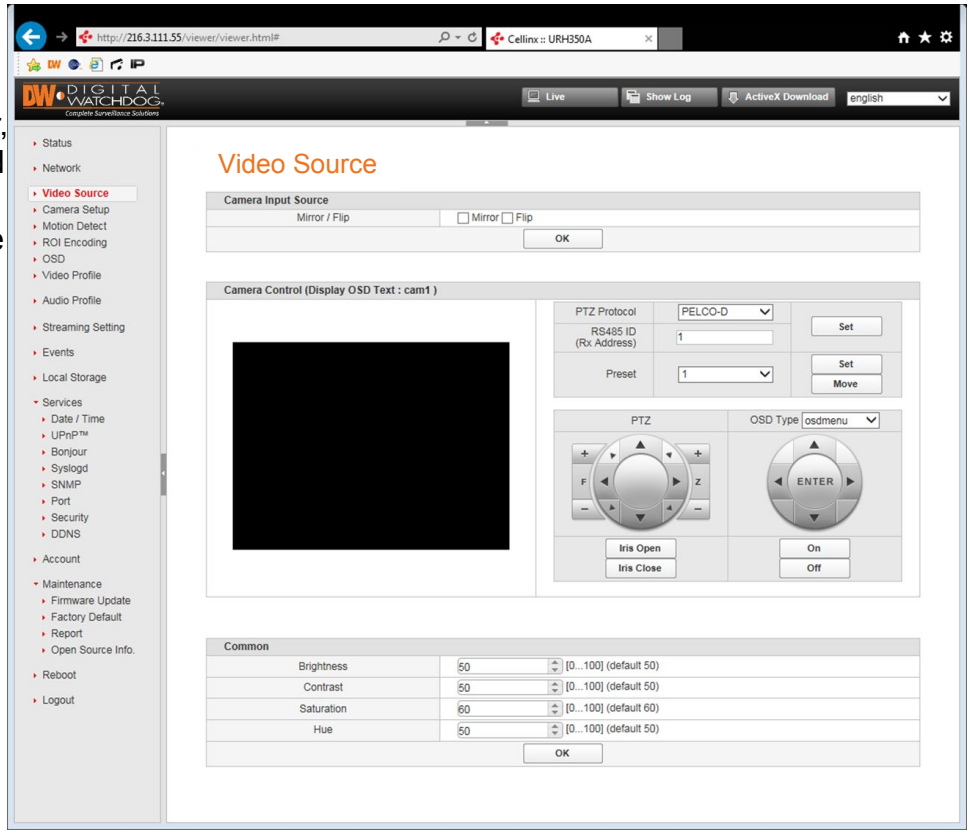
1. Mirror / Flip – Select to reverse or flip the camera's image.
2. Click OK to apply any changes to the settings.

Camera Control (Display OSD Text):

1. The camera supports Zoom and Focus on the virtual PTZ controller.

Common:

1. Brightness – The higher the number, the brighter the image will appear. Default value is 50.
2. Contrast – The higher the number, the contrast between the dark and bright areas in the camera's FoV will be more distinct. Default value is 50.
3. Saturation – The higher the number, the more vibrant the colors will appear on the camera's image. The lower the number, the more black and white the image will appear. Default value is 50.
4. Hue – The higher the number, the camera's image will use warmer tones. The lower the number, the camera's image will use cooler tones. Default value is 50.



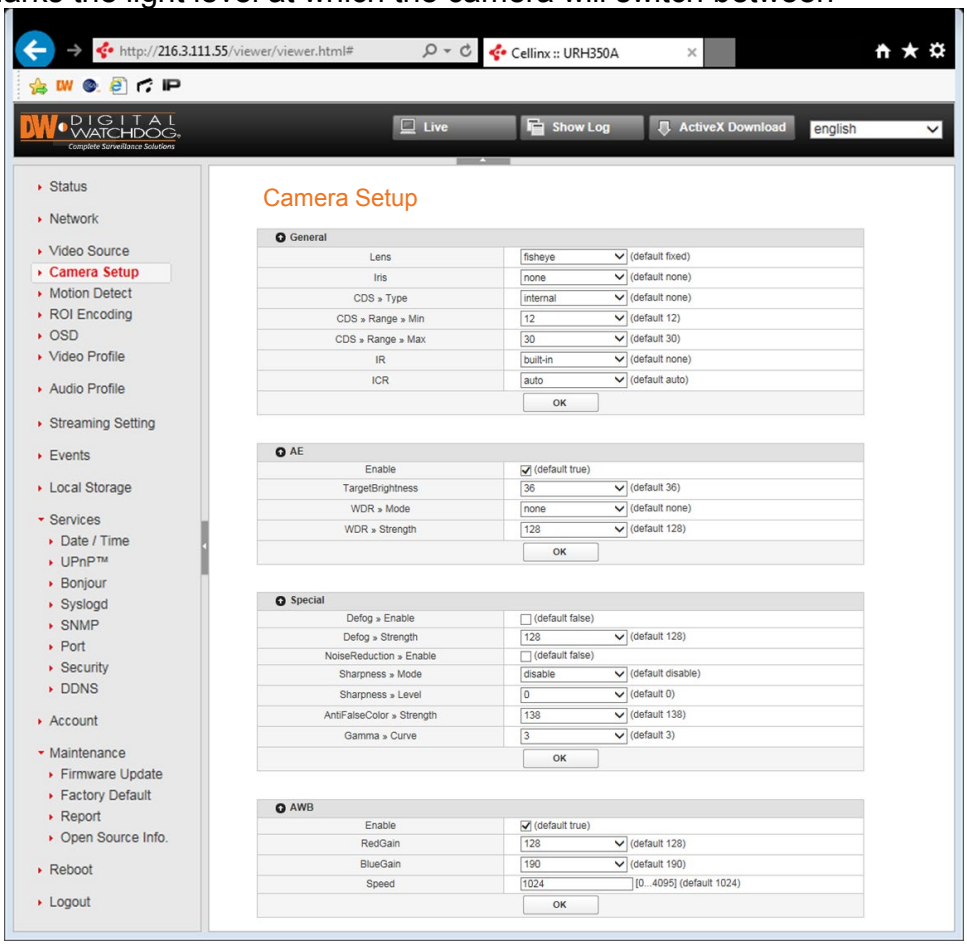
WEBVIEWER*

Settings> Camera Setup

Monitor and configure the MEGApix® camera through a built-in web viewer.

General: This section allows you to adjust the camera's lens, iris and day/night mode.

1. Lens – Sets the type of the Lens. Select from Fixed, Fisheye, Varifocal or MFZ. Please note that options may not be available based on the camera's model and lens.
2. Iris – sets the type of the Iris (on supported cameras).
3. CDS >> Type – sets the type of the CDS from internal or none. The CDS affects the day/ night transition.
4. CDS >> Range >> Min & Max – Marks the light level at which the camera will switch between color and B/W. Set the minimum and maximum values for the CDS threshold. Default values are mentioned next to the drop-down menu.
5. IR – You can manually activate the cameras IR LED board. Select Built-in to activate the IR LEDs in the camera when low light is detected. If you are using an external light source, or the camera's own IR LEDs interfere with other LEDs in the system, you can set it to non, and manually disable it.
6. ICR – This allows you to set the camera's day/night mode. You can select to keep the camera in color or B/W regardless of the lighting conditions, or set to auto. If auto is set, the camera will switch between color and B/W according to the CDS settings set above.



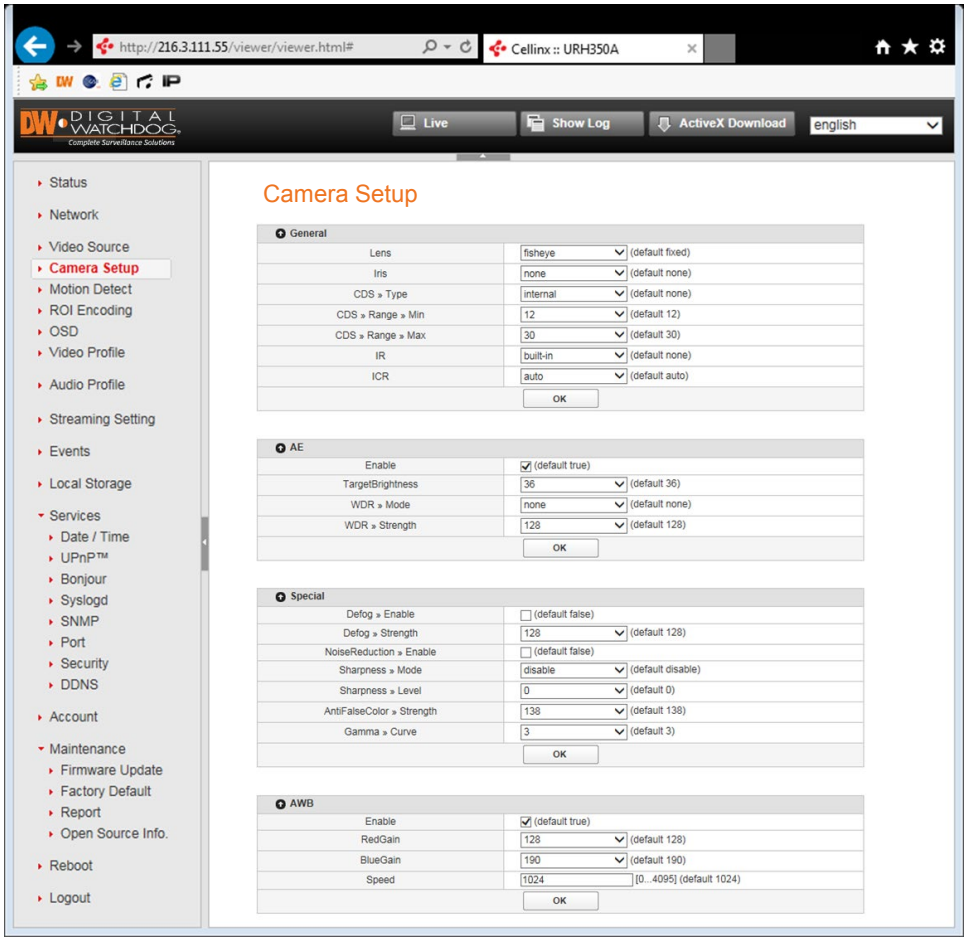
WEBVIEWER*

Settings> Camera Setup

Monitor and configure the MEGApix® camera through a built-in web viewer.

AE: This section allows you to adjust the camera's Auto Exposure settings.

1. Enable – Enable the camera's auto exposure settings. If enabled, the camera's exposure settings such as brightness and WDR will be set automatically.
2. Target Brightness – You can set the camera's brightness manually by adjusting the brightness values from the drop-down options. The higher the number, the brighter the image will appear.
3. WDR >> Mode – Select D-WDR to enable WDR. The Wide Dynamic Range is used when there are extremely bright and extremely dark areas in the VoF of the camera.
4. WDR >> Strength – Adjusts the strength of the WDR. The higher the value, the stronger the WDR treatment will appear on the camera's image.



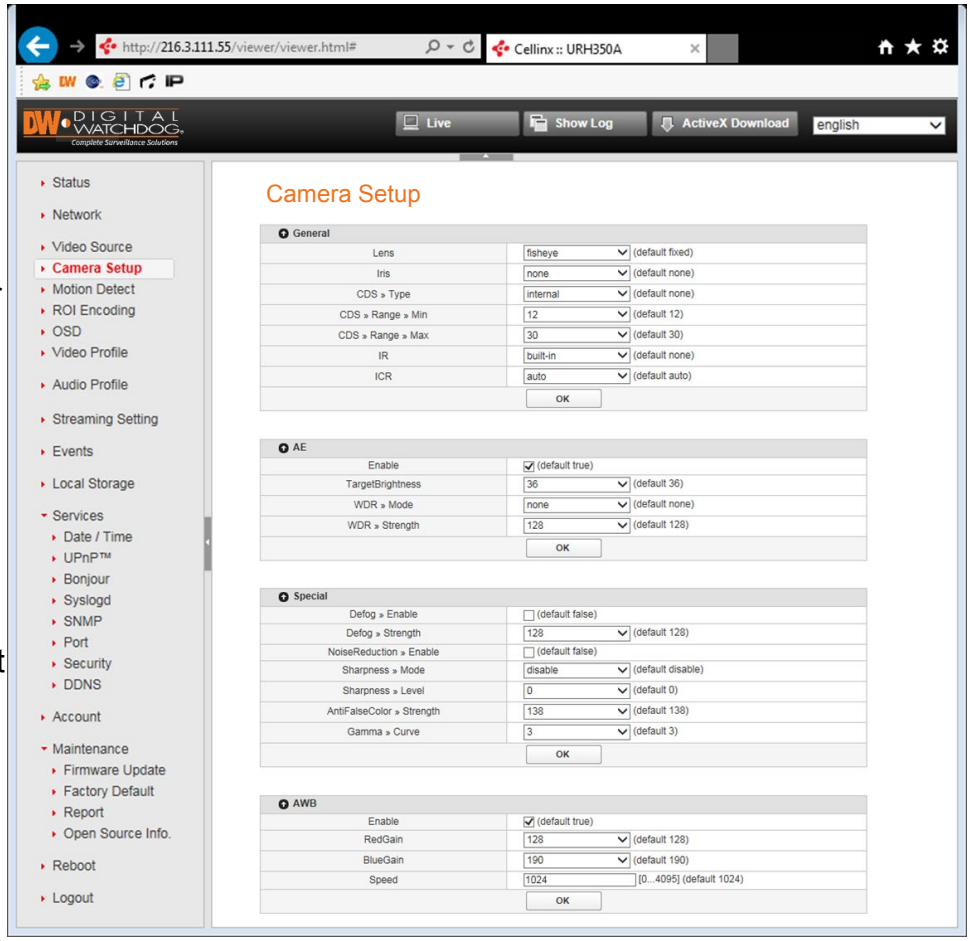
WEBVIEWER*

Settings> Camera Setup

Monitor and configure the MEGApix® camera through a built-in web viewer.

Special: Use this section to adjust the camera's De-Fog, Smart DNR(T)), Sharpness, and gamma.

1. Defog >> Enable – Select to enable the camera's De-Fog feature. This allows the camera to process a scene that is obscured by fog or weather conditions and provides a visibly improved image.
2. Defog >> Strength – Adjusts the strength of the defog. The higher the number, the stronger the De-Fog treatment will appear on the camera's image.
3. Noise Reduction >> Enable – (Smart 3D DNR™ Digital Noise Reduction) – Control the level of noise in the image. If enabled, the camera will manipulate the image to reduce digital noise, but it may also increase lagging when motion occurs.
4. Sharpness >> Mode – Select Auto or Manual to activate the camera's enhanced sharpness, or Disable.
5. Sharpness >> Level – Sets the image sharpness. The higher the number, the sharper the image.
6. Anti-False Color >> Strength – This feature can be used when the color display is wrong in certain lighting conditions. It is recommend to leave at the default values.
7. Gamma >> Curve – Set the desired gamma level.
8. Click OK to apply any changes to the settings.



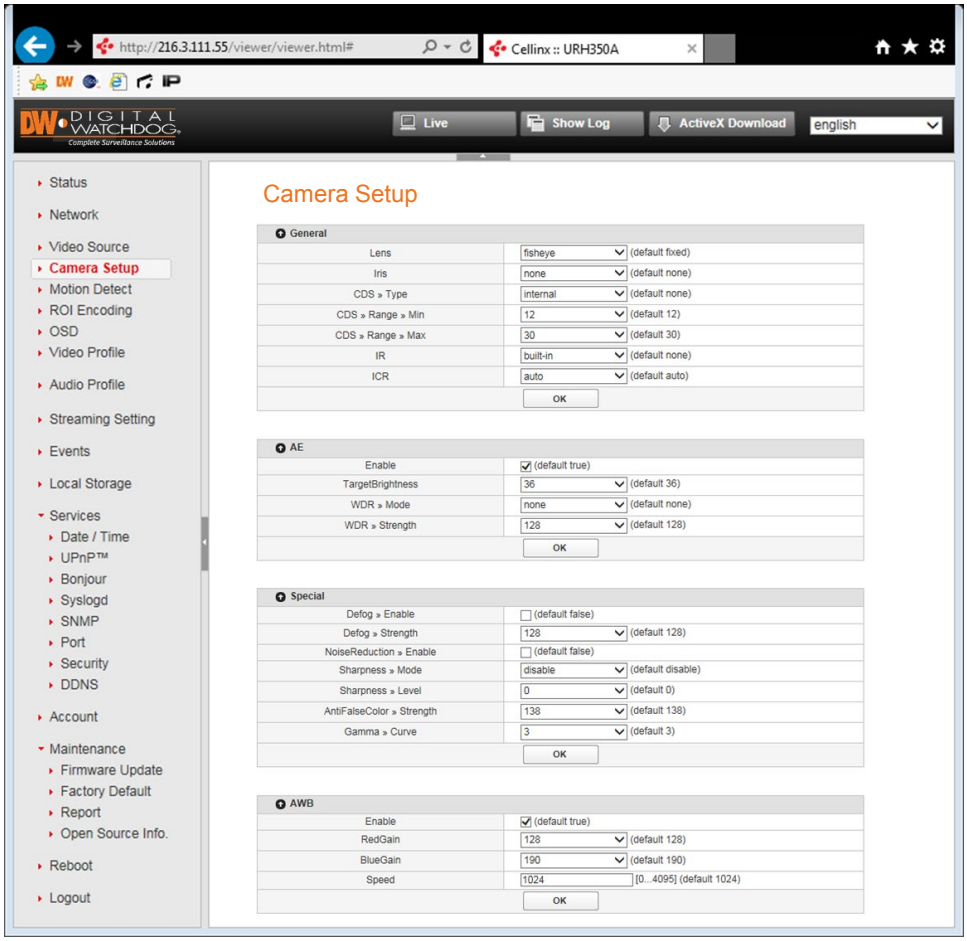
WEBVIEWER*

Settings> Camera Setup

Monitor and configure the MEGApix® camera through a built-in web viewer.

AWB: This section allows you to adjust the camera's Auto White Balance settings.

1. Enable – Enable the camera's auto white balance function.
2. Red Gain – Adjusts the amount of red in the image.
3. Blue Gain – Adjusts the amount of blue in the image.
4. Speed – Set a duration for collecting data for Auto white balance. It is recommend to leave at the default value.



WEBVIEWER*

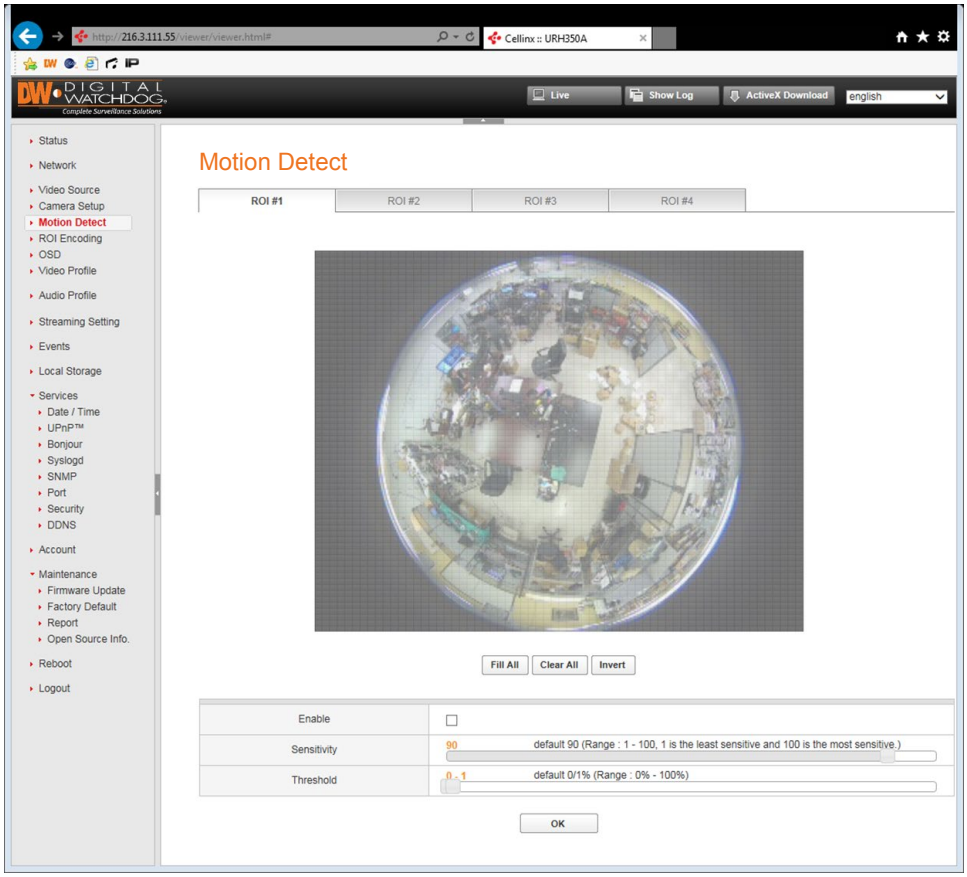
Settings> Motion Detection

Monitor and configure the MEGApix® camera through a built-in web viewer.

Overview

To setup a motion detection mask on the camera's view, click on any point in the camera's preview and drag to make a detection range. once a motion detection mask is set, a red mark will appear on the upper bar of the video image on the web monitoring page. The camera supports four (4) different motion detection masks. Each one can be setup individually be selecting the appropriate tab (ROI#1~4 tab).

1. Fill All – If enabled, the entire camera's FoV will be set to motion detection.
2. Clear All – Deselects the selected area.
3. Invert – Inverts the selected area.
4. Enable – Check the box for the activation.
5. Sensitivity – The higher the value, the more sensitive to motion the area will be.
6. Threshold – When the ratio of the moving parts to the whole image is on the range, the detection is checked.
7. Click OK to apply any changes to the settings.



WEBVIEWER*

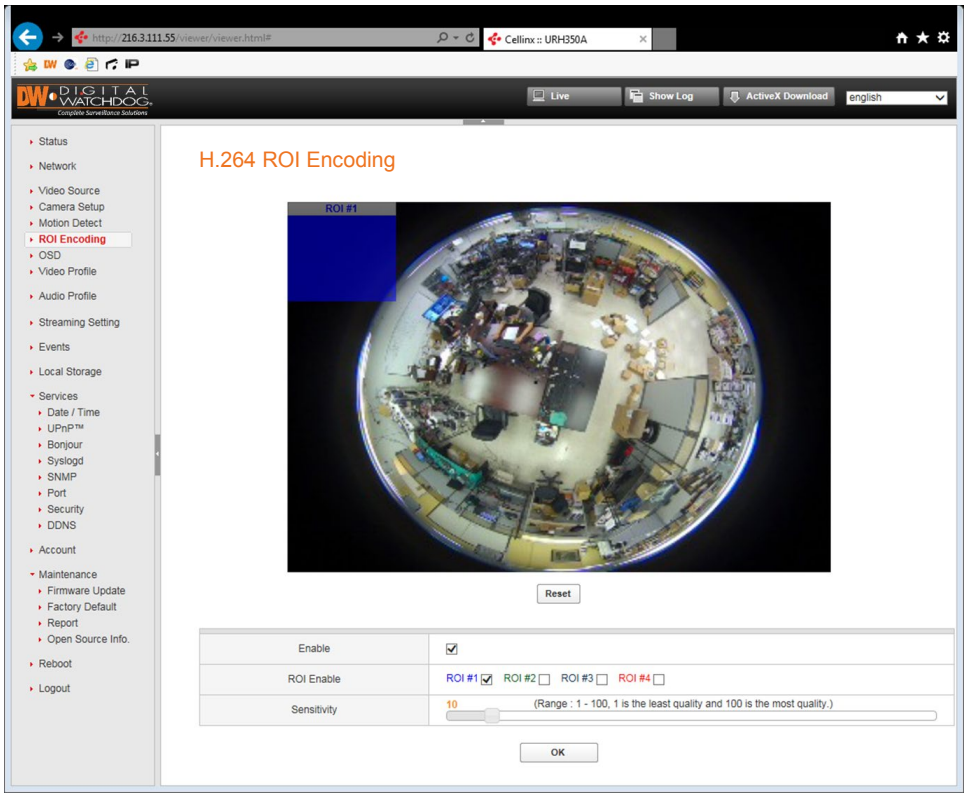
Settings> ROI Encoding

ROI (Region of Interest) Encoding function: the region specified by a ROI is encoded to transmit a relatively good image compared to other regions.

1. To activate, check the Enable box.
2. The camera supports up to four (4) separate ROIs. Select out of "ROI#1~4". Once you check the box next to a specific ROI, a colored mask will appear in the camera's display. Click and drag the mask to adjust the position and size of the region.
3. Sensitivity – Set from 1~100. The higher the value, the higher the mask's sensitivity. (If the video bit rate is set to less than the recommended bit rate, the image quality of the ROI will be affected.)
4. Click OK to apply any changes to the settings.

Setting an example

1. Condition: 1920x1080 resolution encoding,1.5 Mbps network bandwidth.
2. Setting: setting the ROI to 1/4 of the entire image and the sensitivity to a value out of 40~60.
3. Effect: The quality of the image set to the ROI is similar to the image that is transferred by the transfer rate "4Mbps" (the default value of 1920x1080 resolution). You can also monitor the non-ROI part.



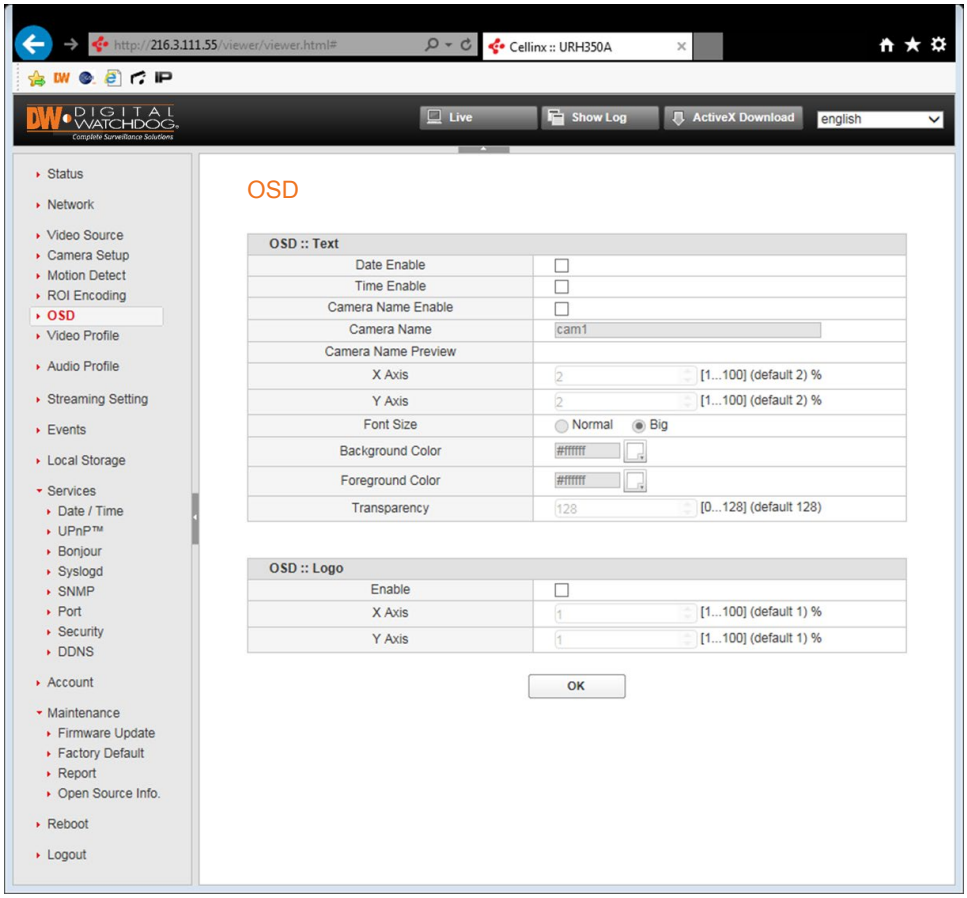
WEBVIEWER*

Settings> OSD

Add OSD text or a logo to the camera's view.

OSD :: Text

1. Date / Time / Camera Name Enable – check the box next to the information you want to show on the camera's image. If the Camera Name is enabled, enter an appropriate name for the camera.
2. X Axis – Adjust the X axis position of the OSD text.
3. Y Axis – Adjust the Y axis position of the OSD text.
4. Font Size – Adjust the size of the OSD text.
5. Background Color – Select a color for the text's background.
6. Foreground Color – Select a color for the text's font.
7. Transparency – Adjust the transparency of the OSD text.



OSD :: Logo

NOTE: Before using the OSD Logo feature, refer to the firmware update / OSD Logo Update entries and upload a logo file.

1. Enable – Check for the activation
2. X Axis – Adjust the X axis position of the OSD Logo.
3. Y Axis – Adjust the Y axis position of the OSD Logo.
4. Click OK to apply any changes to the settings.

WEBVIEWER*

Settings> Video Profile

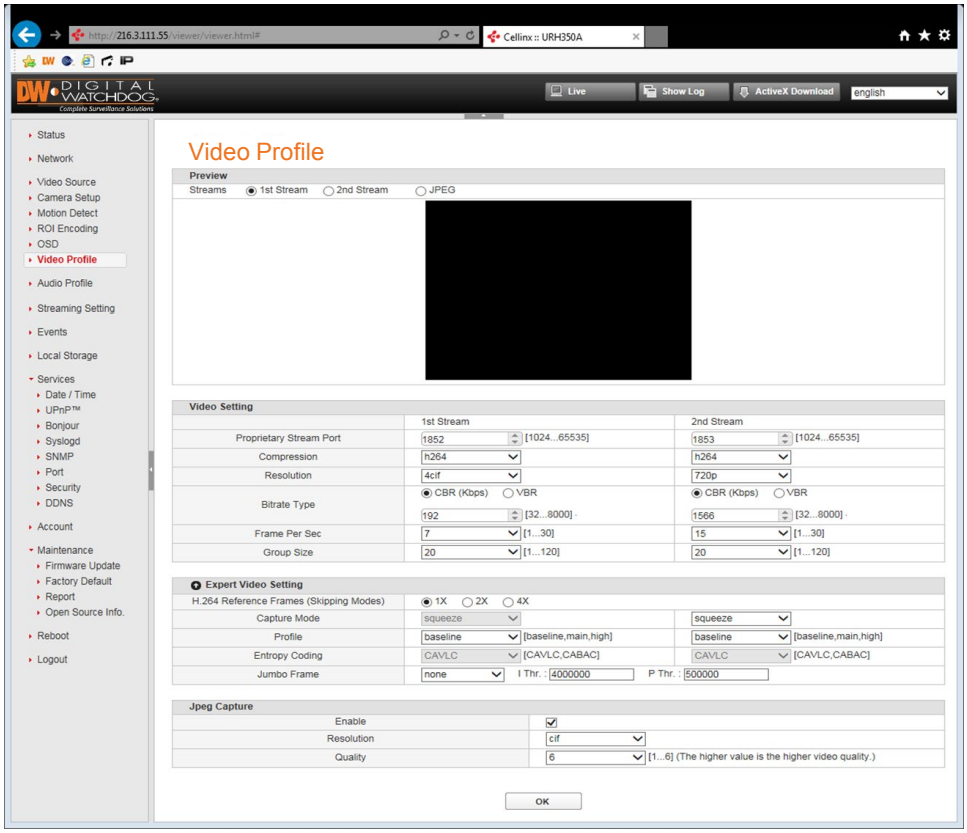
Adjust the camera's streams, resolution, bit rate etc.

Preview

1. Streams – Select which stream to show in the preview and adjust in the settings of this page. The camera supports two simultaneous stream plus a JPEG stream.

Video Setting

1. Proprietary Stream Port – The port number for transferring the video and audio data.
2. Compression – Select the compression type for the stream (H.265 / H.264 / MJPEG).
3. Resolution – Set the image size. The camera supports up to 5MP resolution.
4. Bitrate Type –
    1. CBR: the unit is kbps. Bitrate Recommendation:
       2592X1944 -> 8000,
       2048X1536 -> 6000,
       1080p -> 4000~6000,
       720p -> 2000~3000,
       D1 -> 1000~1500,
       CIF -> 500~750
    2. VBR: 1 (best)~6
5. Frame Per Sec – The number of frames transferred in a second (default: 30)
6. Group Size – This sets the number of I-frames and P-frames per second. If GOP is set to 30, the camera will record 1 I-frame and 29 P-frames. To improve the recording quality, lower the GOP number. However, the lower the number, the larger the streaming file size will be. (default: 60)



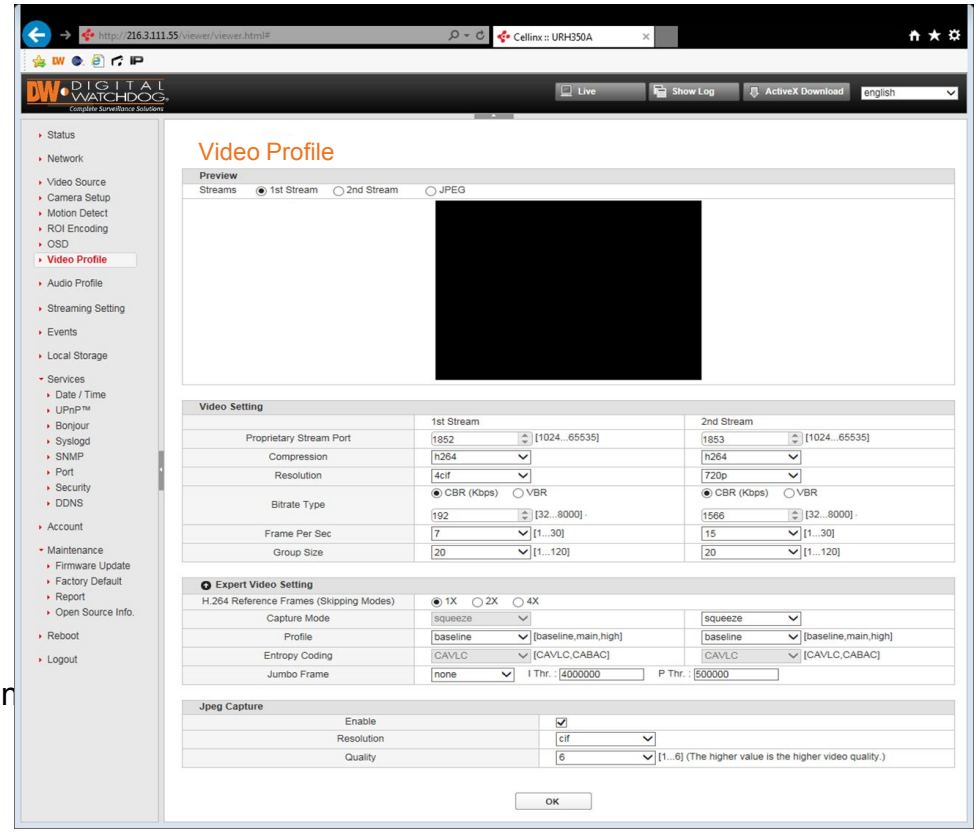
WEBVIEWER*

Settings> Video Profile

Adjust the camera's streams, resolution, bit rate etc.

Expert Video Setting

1. H.264 Reference Frames (Skipping Modes) – Once the value is set to "4X", the camera will play recorded video at "4X" with less system resources.
2. Capture Mode – In case the resolution of the monitor is SD (Standard Definition), the HD (High Definition) video ratio (16:9) will be changed to the SD video ratio (4:3).
    1. Squeeze: stretches the video horizontally to make the ratio 4:3.
    2. Crop: crops the video by the left and right end (the video ratio is kept).
3. Profile – Set the video's encoding to decoding settings. Baseline is set as the default profile. Compression ratio, system load: baseline < main < high. The bandwidth of "high profile" is less by 20% than that of "baseline".
4. Entropy Coding – The camera runs as CAVLC. (compression ratio: CAVLC < CABAC, system load: CAVLC < CABAC)
5. Jumbo Frame – Discards or processes the I-frames or P-frames in excess of a specific value. (I Thr.: I frame threshold, P Thr.: P frame threshold).



JPEG Capture

1. Enable – Capture the camera's view as JPEG.
2. Resolution – Adjusts the resolution
3. Quality – Set 1 (Best) ~ 6.
4. Click OK to apply any changes to the settings.

WEBVIEWER*

Settings> Streaming Setting

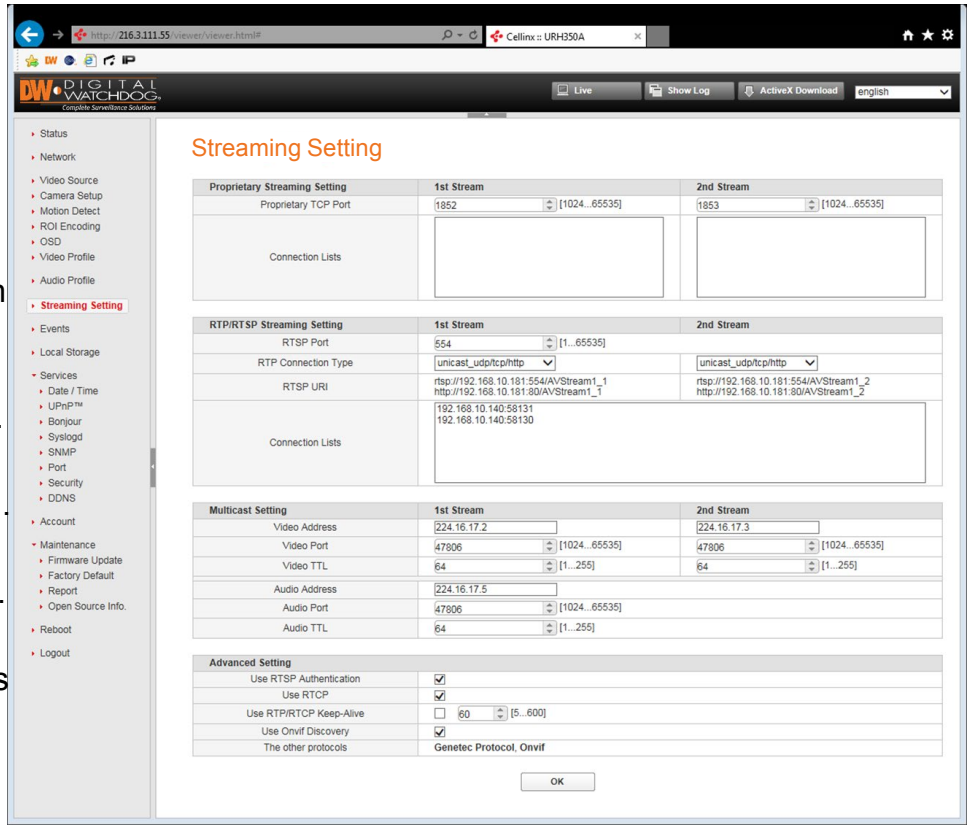
Adjust the camera's streams and their advanced settings such as RTSP, TCP and Multi-cast.

Proprietary Streaming Setting

1. Proprietary TCP Port – The port for the transmission by the proprietary protocol (based on the settings under "Video Profile / Video Setting / Proprietary Stream Port ").
2. Connection Lists – The IP address and port information of the monitoring devices that are connected to the camera.

RTP/RTSP Streaming Setting

1. RTSP Port – The port number used for RTSP transmission.
2. RTP/RTSP Connection Type – When a network device supports multicast, "multicast_udp" can be selected to improve network bandwidth. Additional settings are required under the Multicast settings. See next page for more information.
3. RTSP URI (Uniform Resource Identifier) – This is the path that is used on the monitoring program for playing RTSP stream from the camera. The default paths are:
    1. 1st Stream > rtsp://192.168.1.2:554/AVStream1_1
    2. 2nd Stream > rtsp://192.168.1.2:554/AVStream1_2
    3. 3rd Stream > rtsp://192.168.1.2:554/AVStream1_3
4. Connection Lists – The IP address and port information of the monitoring devices that are connected to the camera.



WEBVIEWER*

Settings> Streaming Setting

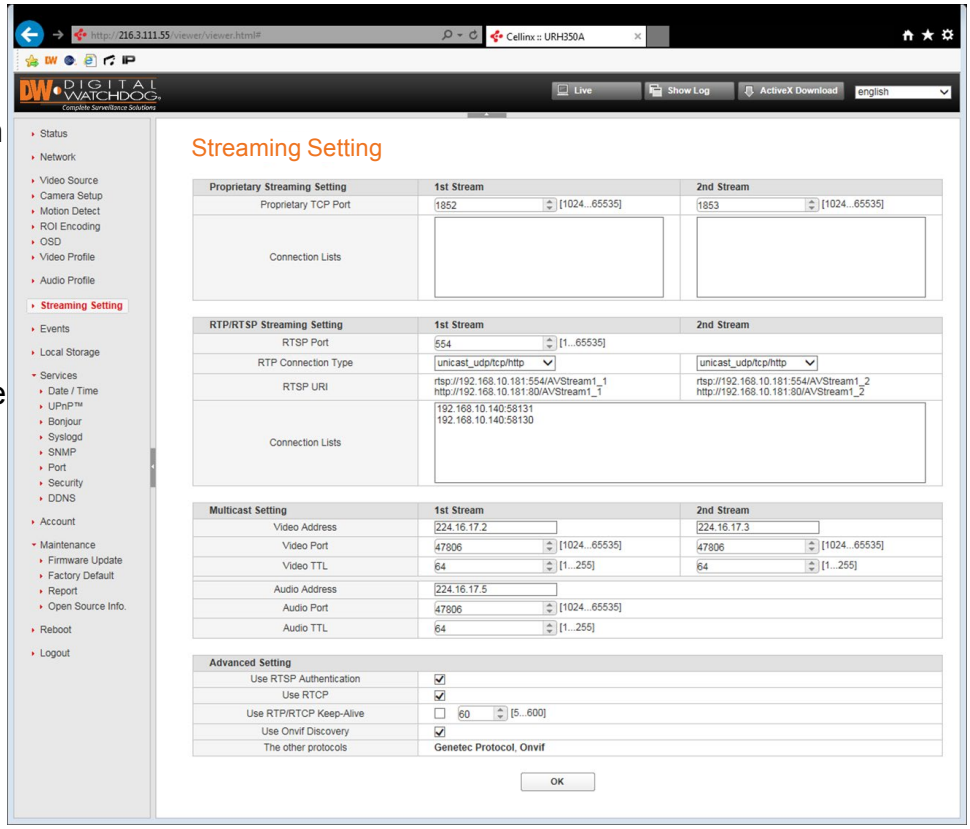
Adjust the camera's streams and their advanced settings such as RTSP, TCP and Multi-cast.

Multicast Setting

1. Video Address – The IP address for video data transmission.
2. Video Port – The port number for video data transmission.
3. Video TTL – Set the number of the routers that pass when transmitting the video data.
4. Audio Address – The IP address for audio data transmission.
5. Audio Port – The port number for audio data transmission.
6. Audio TTL – Set the number of the routers that pass when transmitting the audio data.

Advanced Setting

1. Use RTSP Authentication – Check the box if an authentication process is required.
2. Use RTCP – Check the box if RTCP function is required.
3. Use RTCP Keep-Alive – Check the box if the stream times-out.
4. The other protocols – Displays the supported protocols.
5. Click OK to apply any changes to the settings.



WEBVIEWER*

Settings> Local Storage

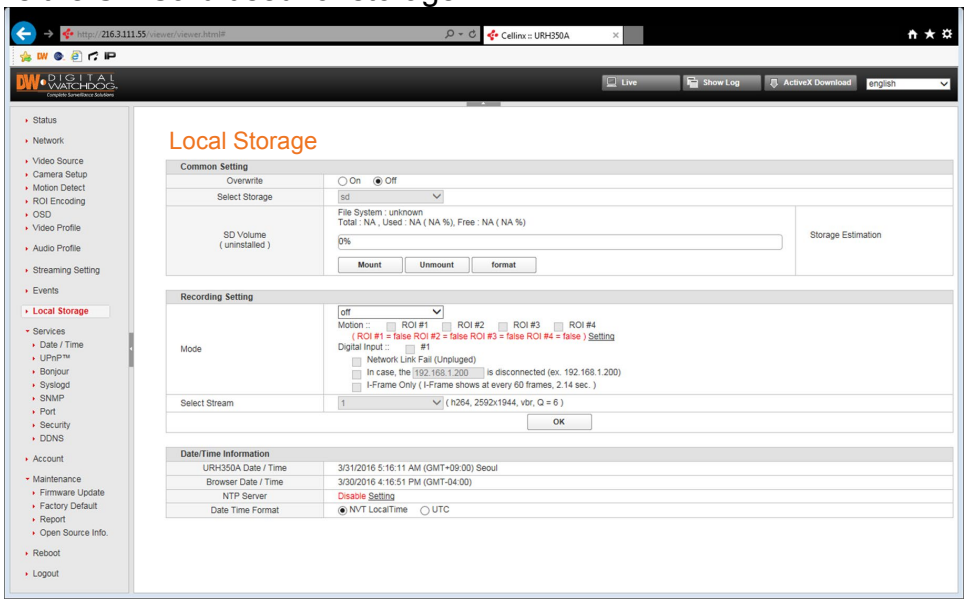
The camera supports SD/SDHC memory card for local recording.

Overview

1. Time synchronization issues
    1. The video and the camera's internal time are saved together on the local storage function.
    2. If there is a time difference between the camera and the monitoring PC, it is required to synchronize the time periodically with a specific server. See Date/Time for more information.
2. VLC media player
    1. When the page is loaded for the first time, VLC media player should be installed.
    2. The related ActiveX program can be downloaded during an internet connection.

Common Setting

1. Overwrite – Select whether to overwrite old data when the card is full.
2. Select Storage – This section shows the SD Card used for storage.
3. SD Volume – Shows memory information:
    1. File System: FAT32
    2. Total: 14.83 GBytes
    3. Used: 14.33 GBytes (96.65%)
    4. Free: 508 MBytes (3.35%)
4. Storage Estimation – Shows the estimated time that can be saved.



WEBVIEWER*

Settings> Local Storage

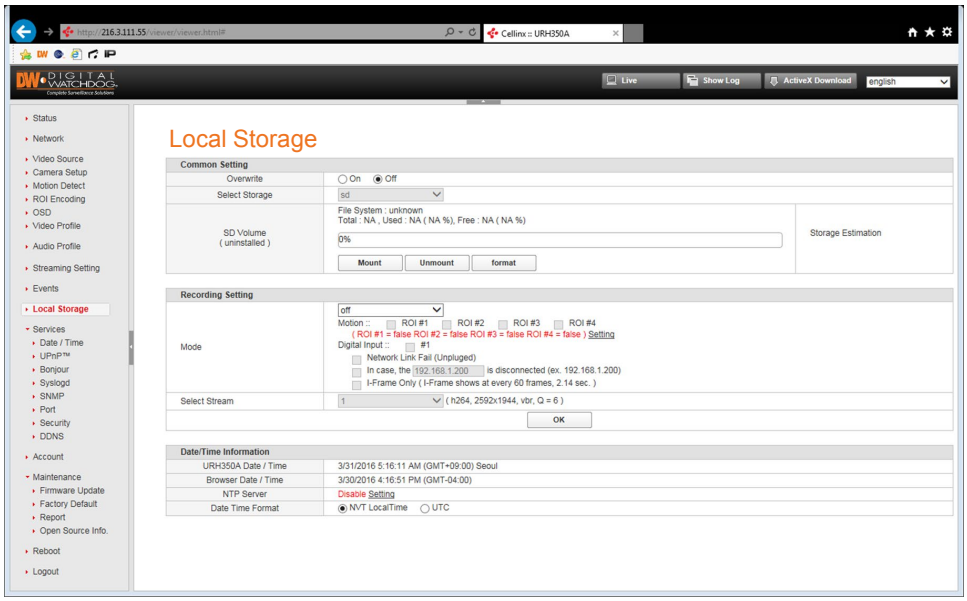
The camera supports SD/SDHC memory card for local recording.

Recording Setting

1. Mode – Select off (not saving) / continuous (continuous recording) / event (records when an event occurs)
2. Event types that can be selected
    1. Motion: When motion occurs using the motion detection values in the ROI setup page.
    2. Sensor: When a sensor is activated using the camera's Digital Input Settings.
    3. Network Link Fail (Unplugged): When the camera's network connection with the monitoring PC is lost.
    4. I-Frame Only (I-Frame shows at every 60 frames, 2 sec.): the camera will record only the main frames of the video. The contents of the blank "(...)" are the values that are set on the "Video Profile" settings.
3. Select Stream – Select which stream to record.
4. Click OK to apply any changes to the settings.

Date/Time Information

1. Model name Date / Time – Shows the camera's time information.
2. Browser Date / Time – Shows the time information of the monitoring PC.
3. NTP Server – Enable the local storage to sync with the time synchronization settings.
4. Date Time Format – Select NVT (camera) LocalTime / UTC".



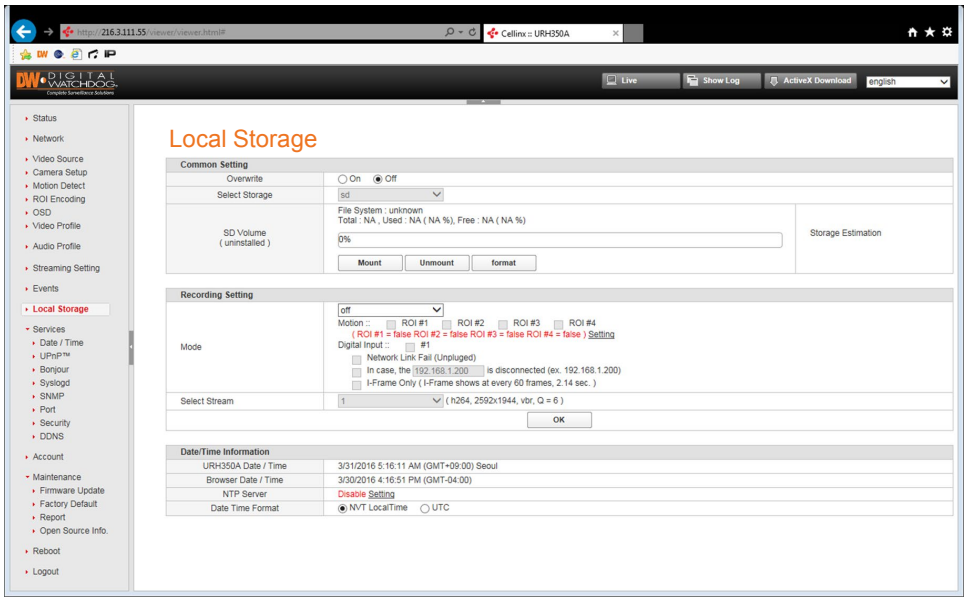
WEBVIEWER*

Settings> Local Storage

The camera supports SD/SDHC memory card for local recording.

File Lists

1. Time (bar) – Displays the time for recorded data.
2. Calendar – Select a date and search the data.
3. File format – Stream / Start / End / Encoding / Size.
4. Download button – Download the selected files.
5. Delete button – Delete the selected files on the memory.



WEBVIEWER*

Settings> Services> Date/ Time

Use this menu to adjust the camera's local date, time, and time server settings.

Date / Time

1. Date / Time – Displays the current time.
2. New Date / Time (Manual) – Adjust the camera's time manually. Click the "Set" button to apply the changes.
3. New Date / Time (Auto) – Synchronize the time with the time of the monitoring PC. Click the "Set" button to apply the changes.
4. Specify OSD Date / Time Format – Set the date and time format. Click the "Set" button to apply the changes.

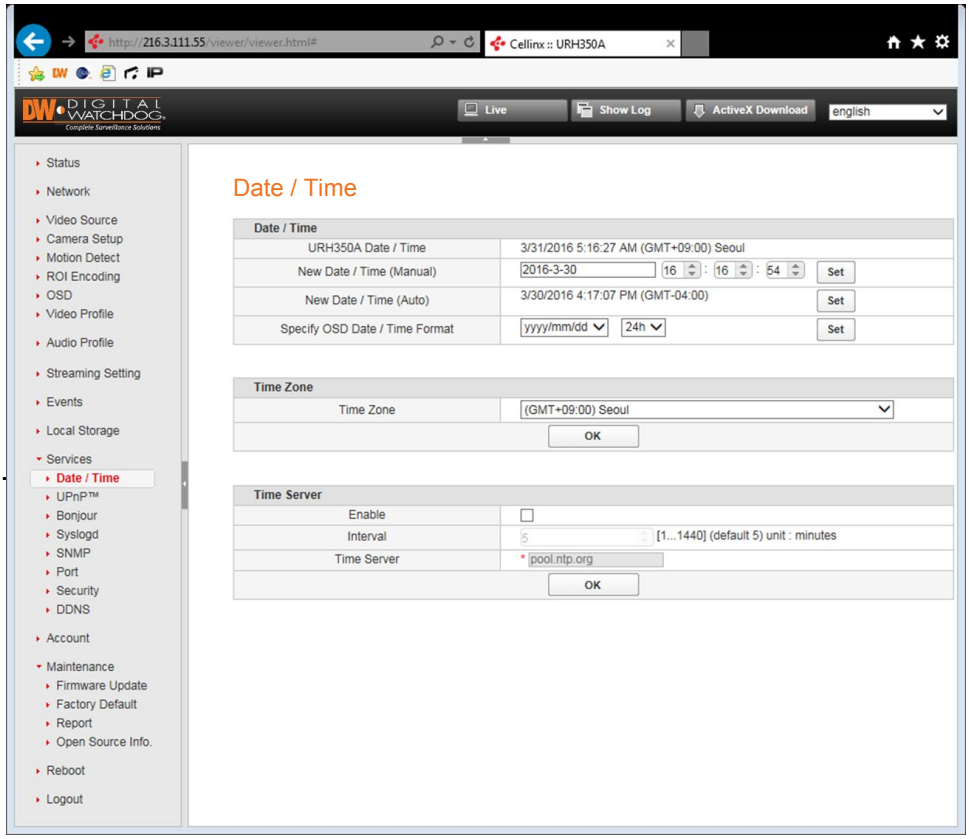
Time Zone

1. Time Zone – Select the time zone from the available options.
2. Click OK to apply any changes to the settings.

Time Server

If enabled, the camera will synchronize its date and time with a time server.

1. Enable – Check the box to enable.
2. Interval – Set the request time intervals (in minutes),
3. Time Server – Enter the IP address or hostname of a time server.
4. Click OK to apply any changes to the settings.

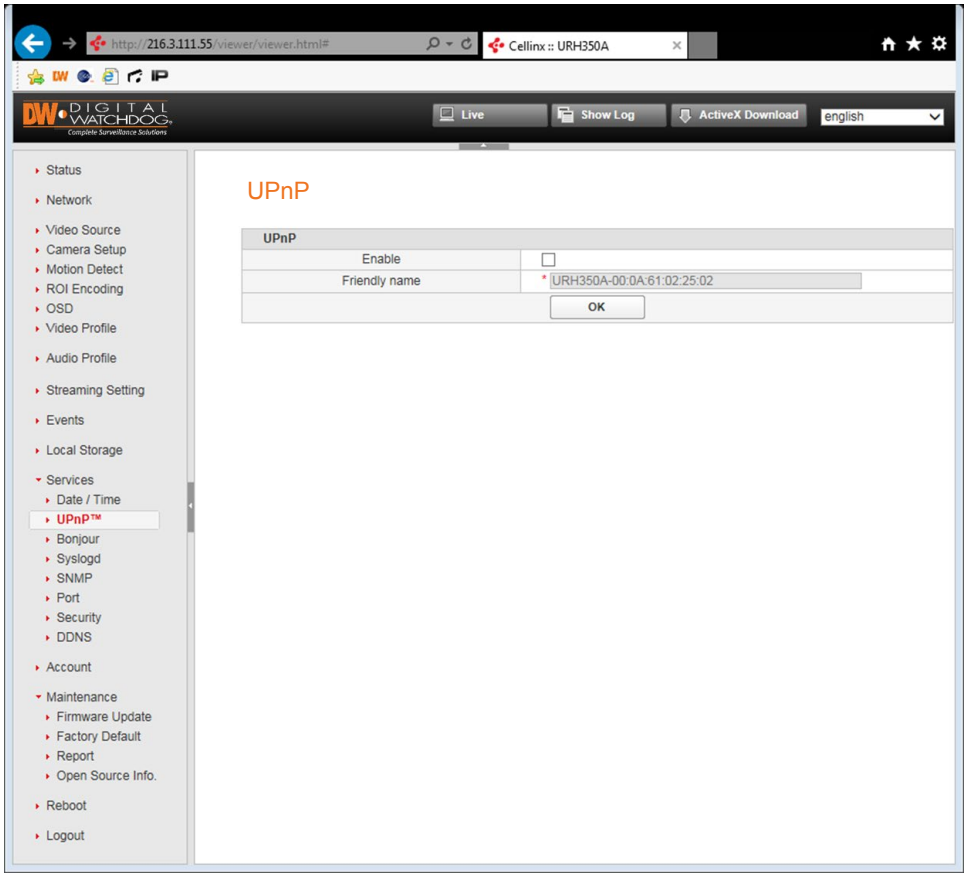


WEBVIEWER*

Settings> Services> UPnP™

The camera supports UPnP for auto detection with Windows explorer.

1. Enable – Check to enable UPnP.
2. Friendly name – This is the name identifying the camera when using the UPnP search. It is created by the camera's MAC address. You can modify it as needed.
3. Click OK to apply any changes to the settings.

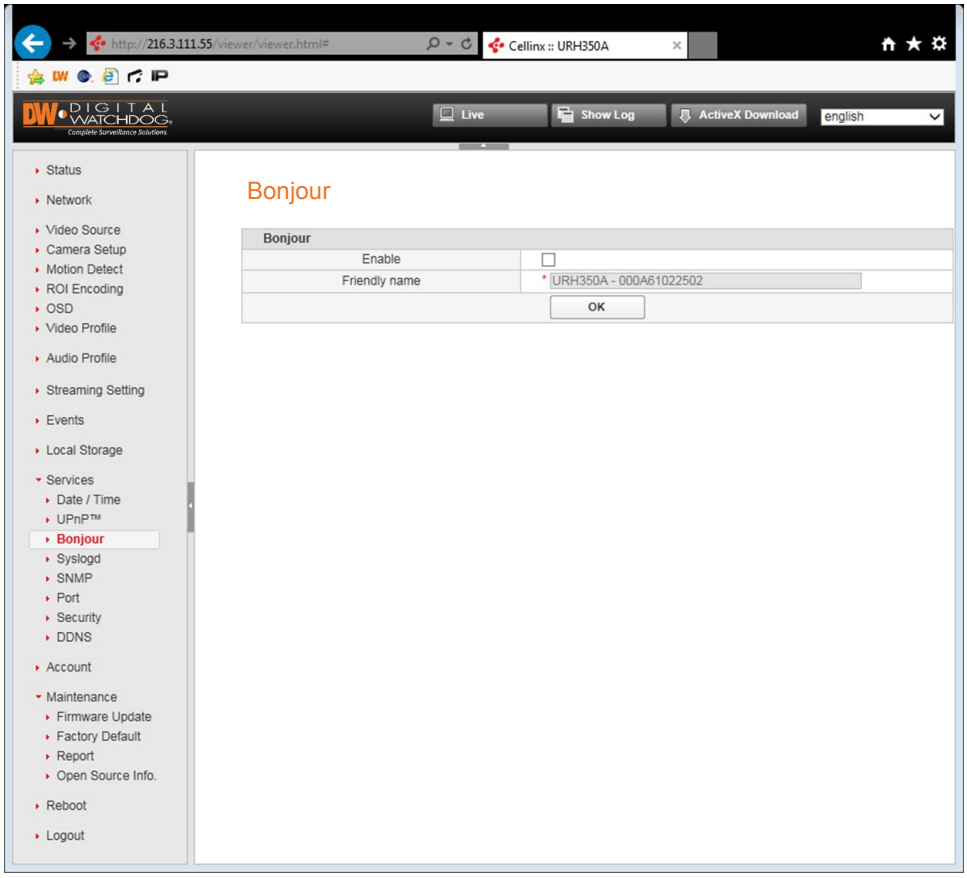


WEBVIEWER*

Settings> Services> Bonjour

The camera supports Bonjour for auto detection with Windows explorer.

1. Enable – Check to enable UPnP.
2. Friendly name – This is the name identifying the camera when using the UPnP search. It is created by the camera's MAC address. You can modify it as needed.
3. Click OK to apply any changes to the settings.

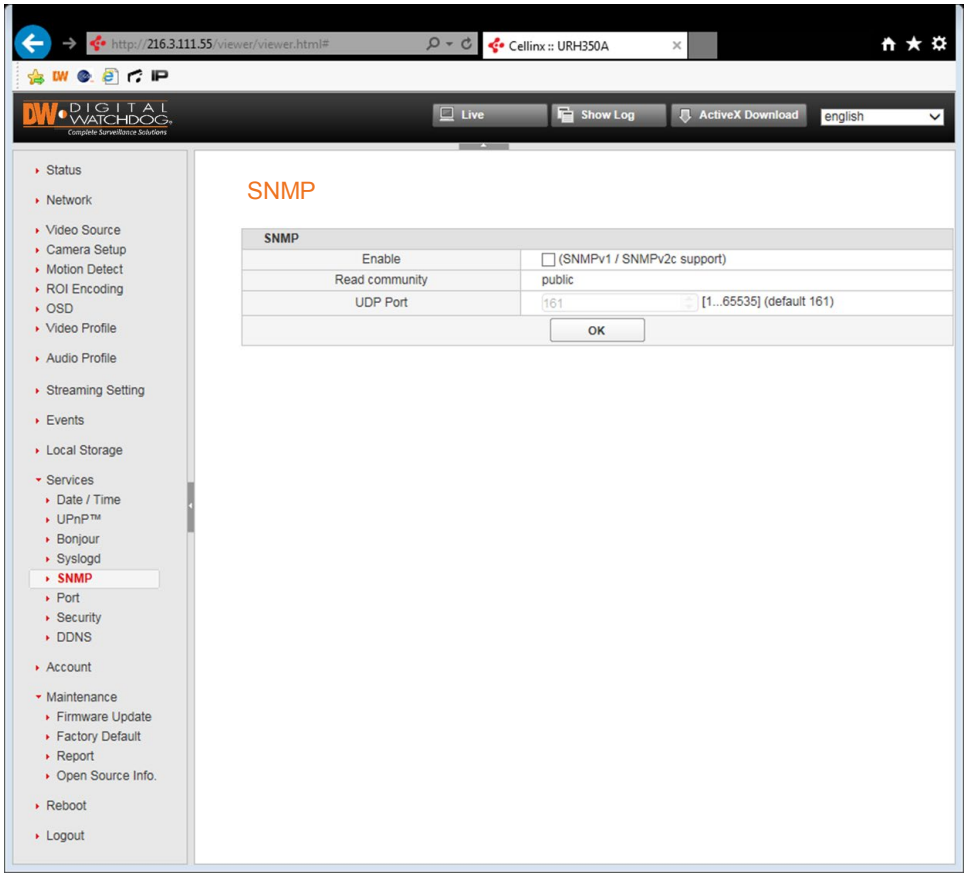


WEBVIEWER*

Settings> Services> SNMP

Use this menu to set the camera's SNMP settings.

1. Enable – Check to enable.
2. Read community – Shows the running mode as "public". (fixed)
3. UDP Port – Enter the port number for use
4. Click OK to apply any changes to the settings.

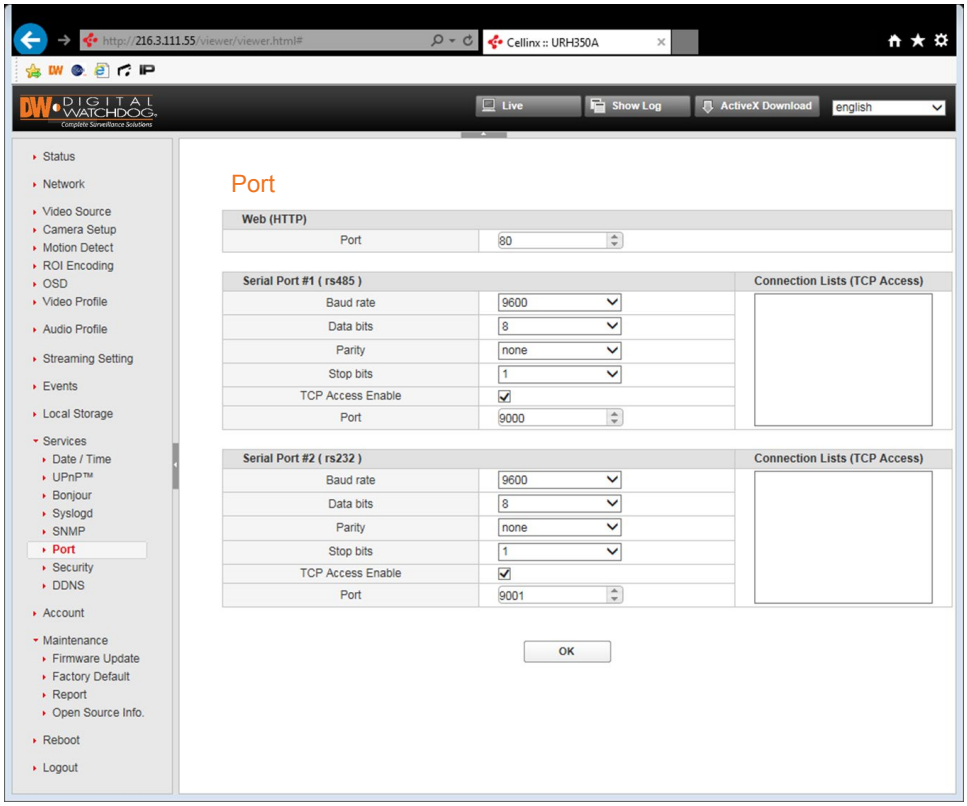


WEBVIEWER*

Settings> Services> Port

Use this menu to Set up the port number for the data communication.
Web (HTTP) – The camera's web port is set by default to 80. You can modify it as needed.
Serial Port #1 (RS485) (Currently not supported)
Serial Port #2 (RS232) (Currently not supported)

Click OK to apply any changes to the settings.

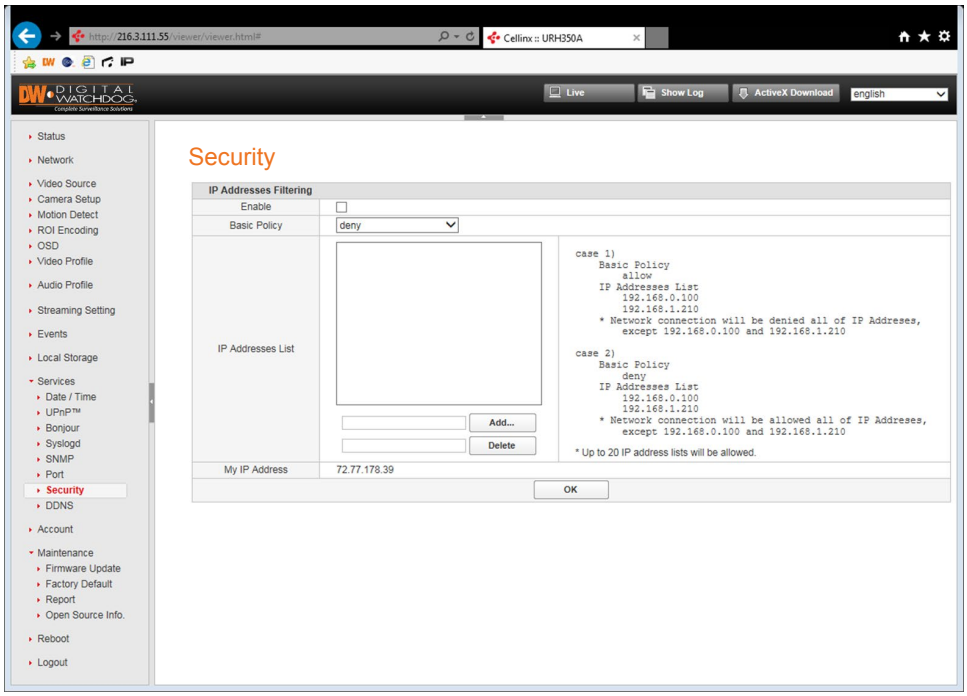


WEBVIEWER*

Settings> Services> Security

This menu allows you to restrict access to the camera according to IP addresses.

1. Enable – Check to enable.
2. Basic Policy – Select "allow" / "deny“.
3. IP Addresses List – Create the IP address list for filtering. Press the ‘Add’ button to add new IP addresses to the list, or ‘delete’ to remove them from the list.
4. My IP Address – Displays the IP address of the PC currently connected to the camera.
5. Click OK to apply any changes to the settings.

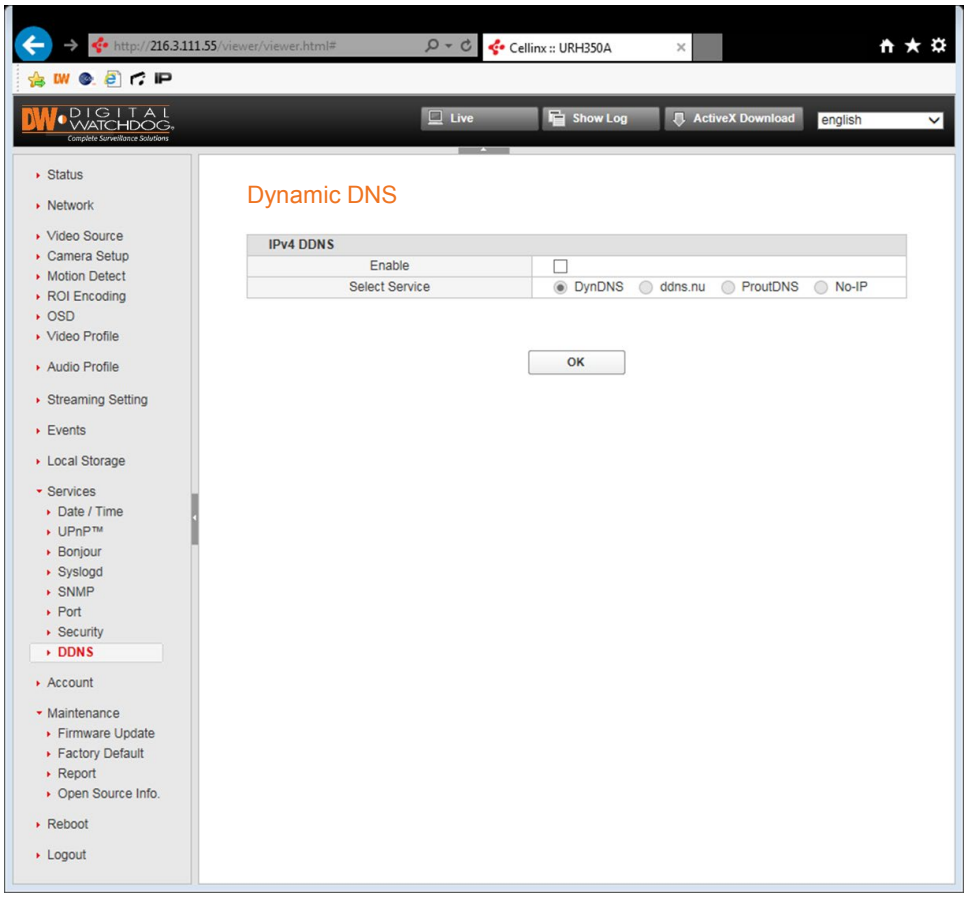


WEBVIEWER*

Settings> Services> DDNS

The camera supports a Dynamic DNS feature. Please note that these are third-part DDNS services, and some may require subscription or payment.

1. Enable – Check to enable.
2. Select Service – Select a service to use.
3. Type the information that is used on the registration process of the DDNS server homepage.
4. Click OK to apply any changes to the settings.



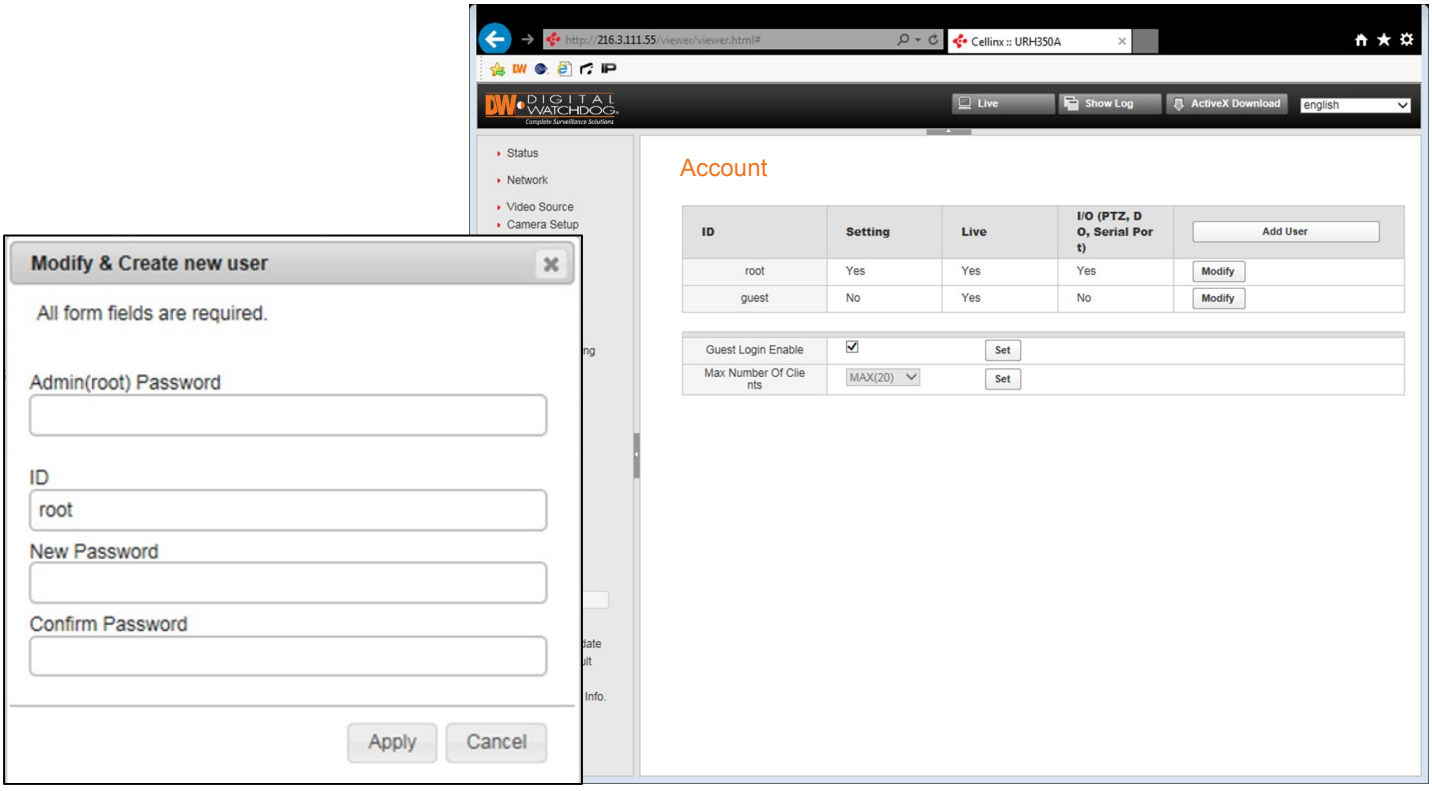
WEBVIEWER*

Settings> Account

The camera supports multiple users with different permission levels.

To add a new user, press the “Add User” button. To modify an existing user, press the “Modify” button next to that user’s name. The Modify & Create New user page will appear:

1. Admin Password – Enter the administrator’s password.
2. ID – Enter or modify the ID for the user.
3. New Password, Confirm Password – Enter or modify the password for the ID to be added.
4. Apply / Cancel button – Click “Apply" to save the changes or "Cancel" to cancel.
5. Guest Login Enable check box – Check this box to enable guest login services. Click "Set" to apply the changes.
6. Max Number Of Clients – The maximum allowed connections are 20. (fixed)



WEBVIEWER*

Settings> Maintenance> Firmware Update

Use this menu to update the camera's firmware when needed.

Firmware Update

1. Current Firmware Version – Displays the current firmware version.
2. Firmware file –
    1. Click "Browse..." and select the file to upload.
    2. Click "Upload" to start updating.
    3. The camera's power supply must not be interrupted. Updates can take up to 10 minutes.
3. Network setting will remain the same, however, video settings may be reset during the update.

Logo Update

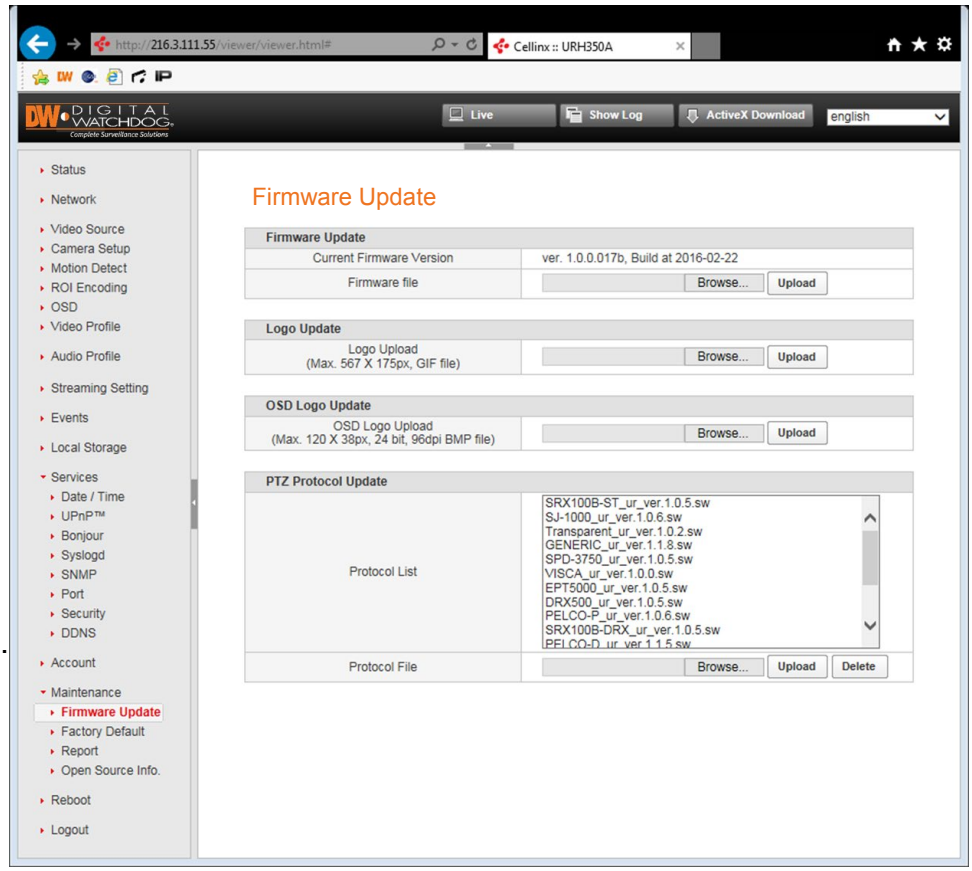
1. Logo Upload –
    1. Click "Browse..." and select the file to upload.
    2. Click "Upload" to start updating.

OSD Logo Update

1. OSD Logo Upload –
    1. Click "Browse..." and select the file to upload.
    2. Click "Upload" to start updating.

PTZ Protocol Update (not supported).

NOTE: If a new protocol is uploaded, select the new protocol in the Video Source settings page and apply it by clicking "Set".

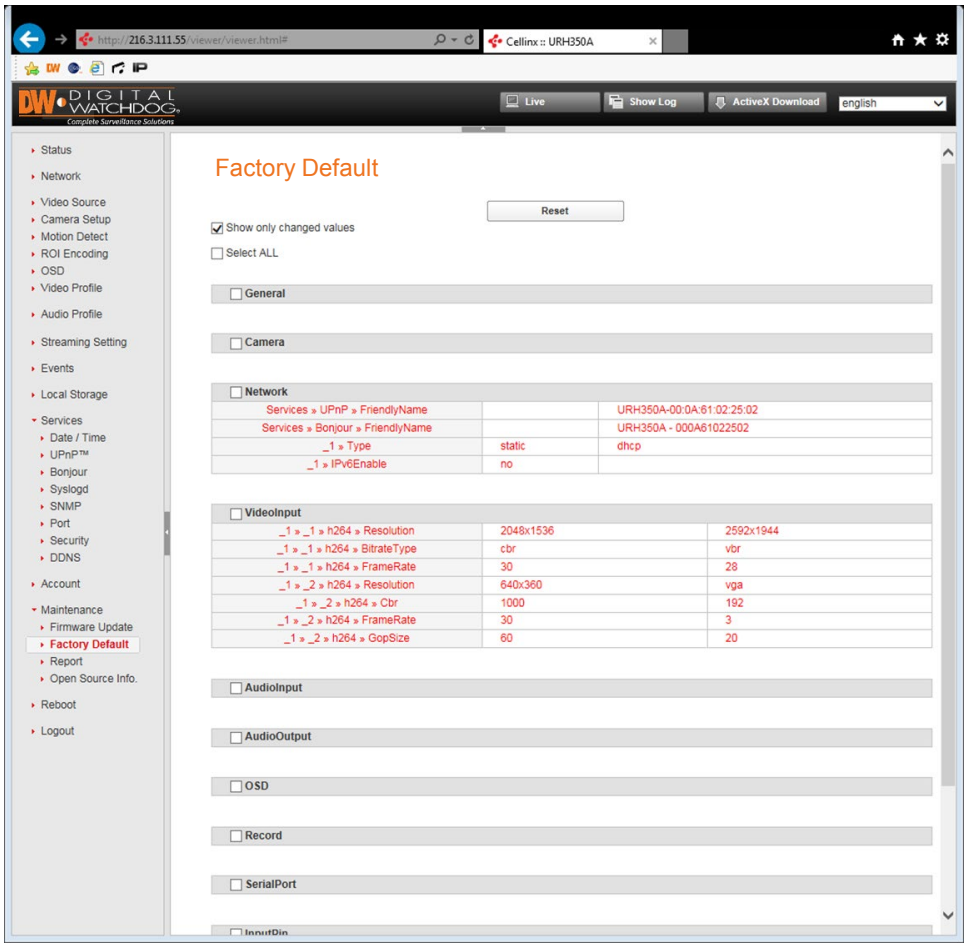


WEBVIEWER*

Settings> Maintenance> Factory Default

When necessary, you can reset the camera to its factory default settings.

1. Reset button – Click the button to initialize the reset of the selected values. Please note to click the reset button only **after** selecting the values to be initialized.
2. Show only changed values check box – Check to display only the changed values (default).
3. Select All check box – You can manually check the box next to each settings you want to reset, or use the Select All button to selects all groups to be initialized.

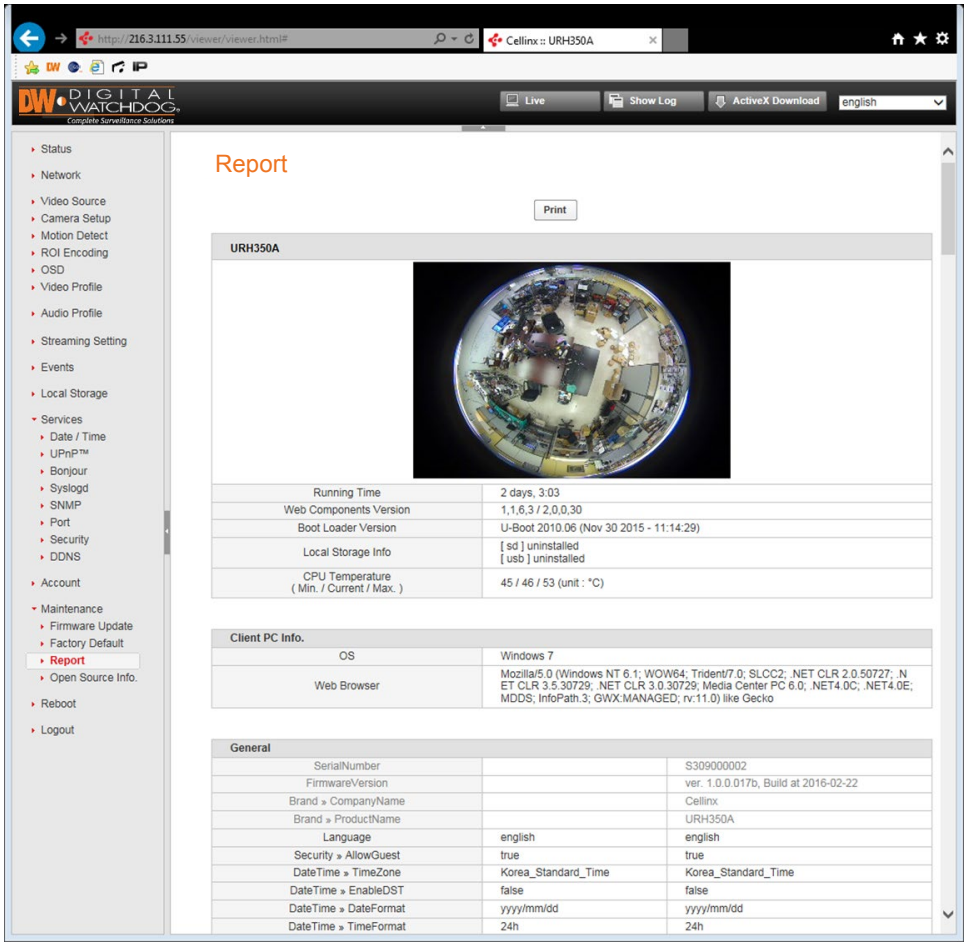


WEBVIEWER*

Settings> Maintenance> Report

This page displays the camera's current setting and can be printed or saved as a PDF file for reference.

1. Use the "Print" button to export the report for your records.



WEBVIEWER*

Settings> Maintenance> Open Source Info.

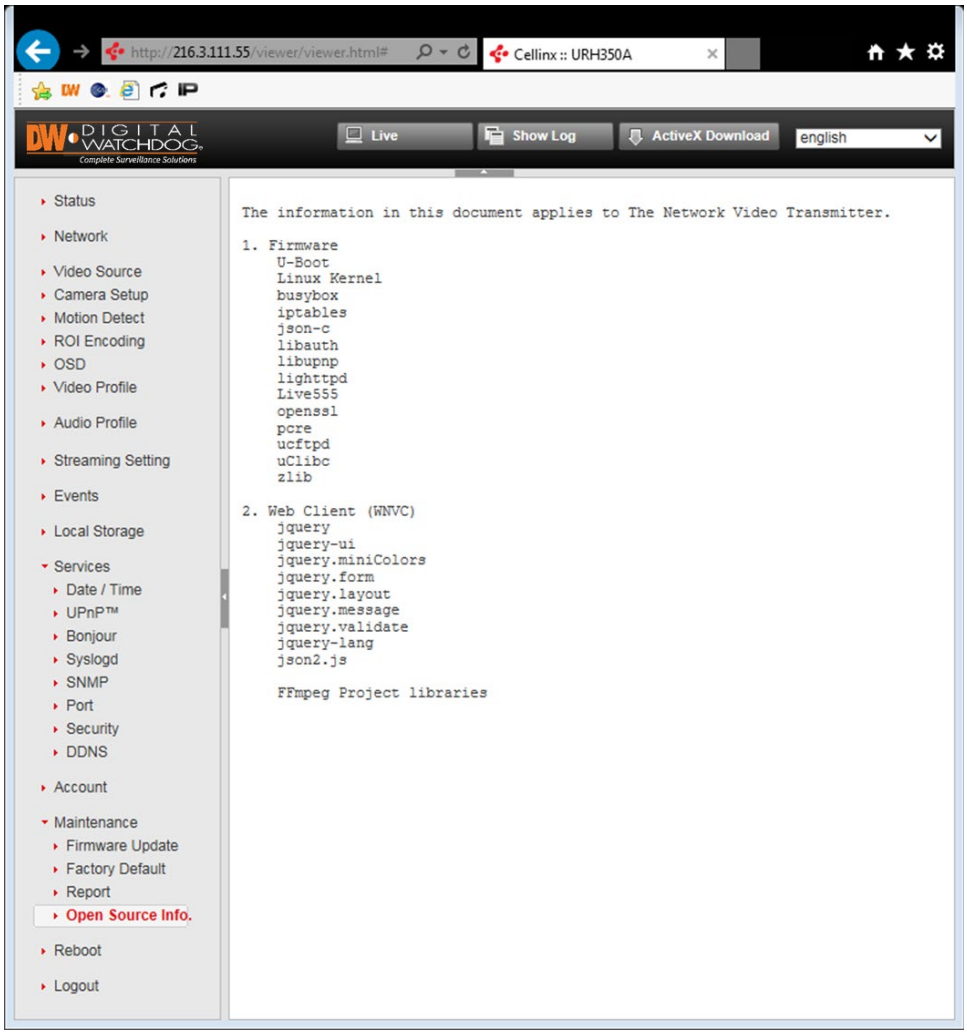
This page documents the camera's firmware and web client information for open source integrations.

Settings> Reboot

You can select to reboot the camera as needed. A confirmation window will appear to confirm the reboot.

Settings> Logout

To protect the camera and administrator's information, you can use this to log out of the camera when you no longer use it.



SPECIFICATIONS*

IMAGE	
Image Sensor	1/1.8” Sony® IMX178 sensor (ExmorR, STARVIS)
Effective Pixels	3096(H) x 2094(V)
Minimum Scene Illumination	F2.5 (30IRE): 0.2Lux [Color] F2.5 (30IRE): 0.2Lux [B&W]
Maximum Resolution	5MP
Focal Length	1.55m Fisheye Camera
IR Distance	32ft IR
Horizontal Field of View (HFOV)	185°x185°x185°
NETWORK	
LAN	IEEE 802.3af compliant, 10/100 Based-T, RJ-45 Connector
Video Compression Type	H.265, H.264 or MJPEG
Resolution / Frame Rate	Up to 30FPS @ 2592x1944
Protocols	TCP, UDP, IP, HTTP, DHCP, DNS, ICMP, ARP, DDNS, NTP, SNMP, UPnP, Bonjure, ZeroConf RTP/RTSP, Onvif, Genetec Protocol
Stream Capability	H.265 Dual Stream or Simultaneous H.265 / H.264 / MJPEG
Maximum User Access	10 Users
Web Viewer	Browser: IE 8.0 or above OS: Windows® 7, Windows® 8, Windows® 10, Vista, XP, 2000
Video Management Software	DW Spectrum™ IPVMS
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ 50°C (14°F ~ 122°F), Less than 80% (Non-Condensing)
ELECTRICAL	
Power Requirement	12V DC, PoE [IEEE802.3at, Class 3]
Power Consumption	12VDC: 6W (LED On) PoE: 7W
MECHANICAL	
Material	Aluminum Die-Casting
Dimensions	4.9 x 1.72” (125 x 43.8mm)
Weight	1.08 lbs (0.42kg)

TROUBLESHOOTING

Before sending your camera for repair, check the following or contact your technical specialist.

I can't find my MEGApix® PANO™ camera on the IP Finder software.

- Is the PoE cable connected properly?
  Make sure cable is tightly connected at both ends. It should make a "click" sound when connected properly. Make sure cable is intact and there are no cuts or exposed wires.
- If Yes, are the camera's LED light turned on and blinking?
  The camera's LED lights indicate that the camera is powered on. Blinking LED light indicate that the camera has finished booting up and is transmitting data.
- If Yes, is the internet working properly?
  Make sure you can connect to the internet with other devices on the network (ex. Your Computer). Your internet could be temporarily down.
- If Yes, if using a power adaptor, does it meet camera's power requirements?
  Power Requirements: DC12V (12VDC: 6W (LED On), PoE Class 3 (7W). Please note that if you plug the camera into PoE but then plug that switch into a PoE it will not work properly/
- If Yes, if using PoE Switch, is it connected to a proper internet outlet and operating properly?
  Make sure the PoE Switch is connected to a router/modem and the ports that have devices connected to them have a green LED on.
- If Yes, is the computer on the same network as the MEGApix® PANO™ camera?
  Camera and computer should be connected to the same router. Contact your network administrator if you have more than one network available.
- If Yes, try connecting the camera to a different port in the PoE Switch.
  That specific Switch Port may be damaged or currently not working properly.
- If Yes, try resetting the camera to default settings.
  Press the 2 buttons in the back together and hold for 5 seconds. The camera will return to factory default with default IP address set to DHCP. The camera will be found using the DW IP Finder software with an IP address that matches your network's requirements.

TROUBLESHOOTING

Before sending your camera for repair, check the following or contact your technical specialist.

I can't connect to my MEGApix® PANO™ camera through the Web Browser

- Are the camera's LEDs on and blinking?
  The camera's LED indicates the camera is On. If the LED blinks, the camera has finished booting up and is transmitting data.
- If Yes, is the internet working properly?
  Make sure you connect to the internet with other devices on the network (ex. Your Computer). Your internet could be temporarily down.
- If Yes, is the computer on the same network as the IP camera?
  Camera and computer should be connected on the same router. Contact your network administrator if you have more than one network available.
- If Yes, try pinging the MEGApix® PANO™ camera's IP address as it appears on the DW IP finder.
  From your desktop, go to Start > Programs > Accessories > Command Prompt. Type "ping" followed by the camera's IP address; then, press Enter. If you get the message "Request timed out," camera is not connected. If you get data back, that means the camera is connected.
- If Yes, try connecting the camera, to a different port in the PoE Switch.
  That specific Switch Port may be damaged or currently not operating properly.
- If Yes, check your security settings on your internet browser.
  Try adding the camera's IP address to the trusted sites list in your Internet Options. *Setup may vary depending on the browser you use.

TROUBLESHOOTING

Before sending your camera for repair, check the following or contact your technical specialist.

I can't see the live video of my MEGApix® PANO™ camera.

- Are you trying to view the camera's video from an Internet Explorer browser?
  Make sure you have the minimum PC requirements to view the camera. *See below for more information.
- If Yes, did you install all required **ActiveX** files? These are VLC media files that allows the camera to stream its video to the web client.
  When you connect to your MEGApix® PANO™ camera for the first time, your browser will ask you to install **ActiveX**. Make sure your Web Browser's security settings do not block pop-up windows and allows **ActiveX** files to be installed and used. *Setup may vary depending on the browser you use.
- If Yes, make sure nothing is blocking the camera's lens.

TROUBLESHOOTING

Before sending your camera for repair, check the following or contact your technical specialist.

Setting the IP Address for your PC

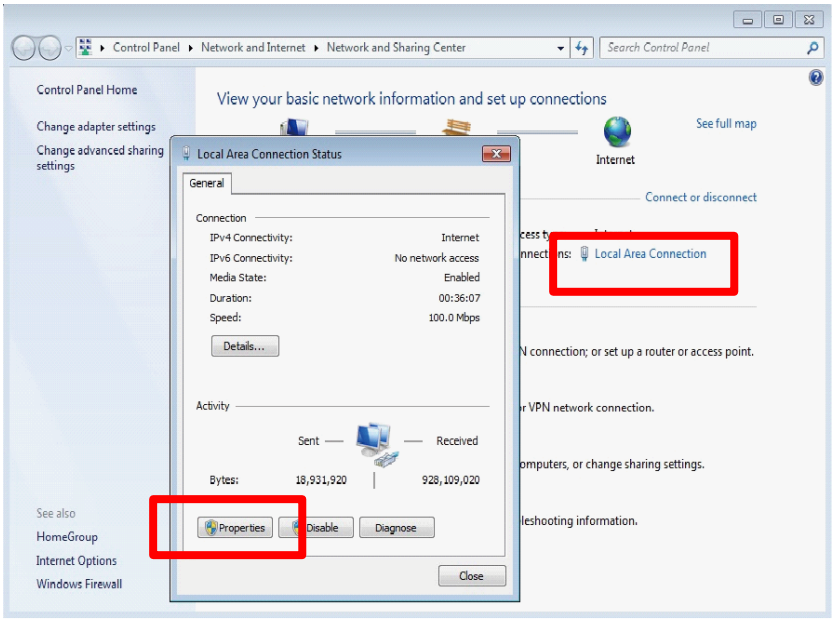
Dynamic Host Configuration Protocol (DHCP) is the default setting for the camera.

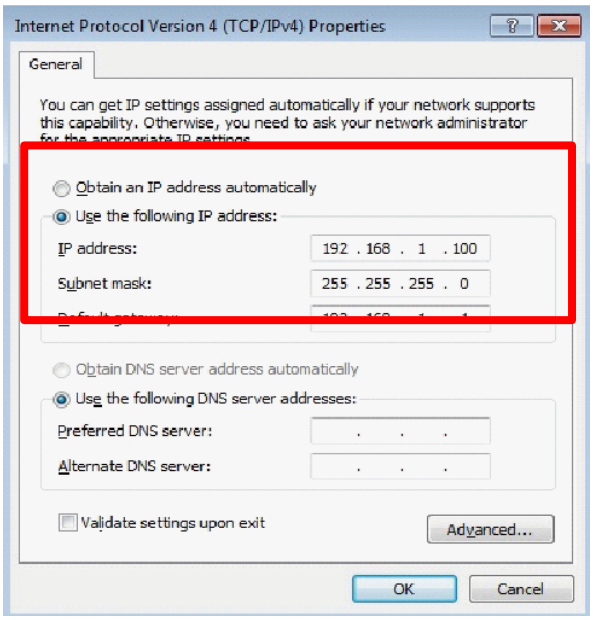
If the MEGApix® PANO™ camera is connected to a DHCP network and the camera's IP Configuration Mode is set to DHCP, the server will automatically assign an IP address to the camera. If the camera is using DHCP, the camera will automatically obtain an IP Address from the network, and the default subnet mask will be 255.255.255.0.

The MEGApix® PANO™ camera can also connect to the web viewer using a static IP address. This will allow you to set your own IP address manually.

Setup the Network Protocol on your PC.

1. Go to Network icon on your PC.
2. Right-click and select Properties.
3. Double-click Local Area Connection.
4. Click Properties.
5. Double-click Internet Protocol Version 4 (TCP/IPv4).
6. Select Obtain an IP address automatically to set the computer to a dynamic IP address, or select Use the following IP address to set the computer to a static IP address.
7. If the option Use the following IP address has been selected, setup the IP address as 192.168.1.XXX. The last three digits should be a number between 1 and 254.



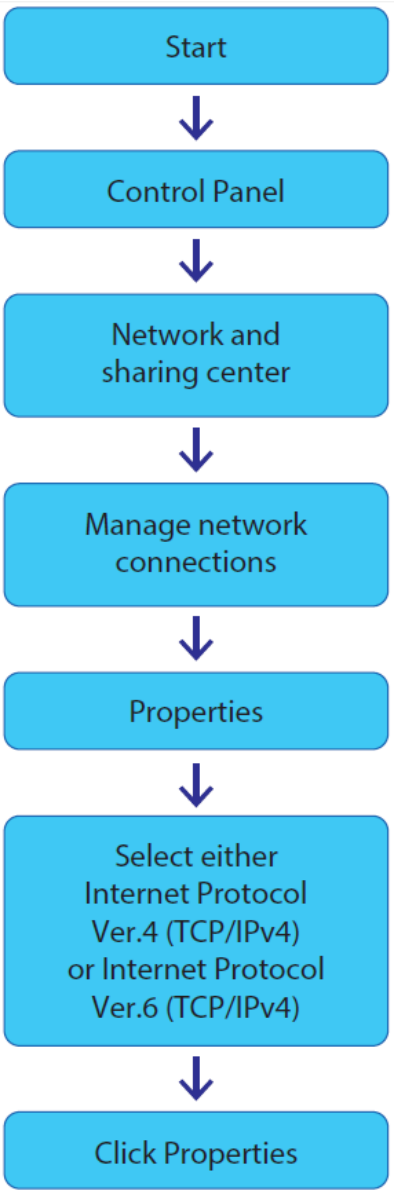


TROUBLESHOOTING

Current TCP/IP Settings

If your IP settings are obtained automatically, you could use the MS-DOS prompt (or Command Prompt) to determine your IP address.

To check your PC's TCP/ IP Settings (Windows Vista or Windows 7):



Under the 'General' tab of the TCP/IP Properties you will see your IP address information.

WARRANTY INFORMATION*

Digital Watchdog (referred to as “the Warrantor”) warrants the Camera against defects in materials or workmanships as follows:

Labor: For the initial five (5) years from the date of original purchase if the camera is determined to be defective, the Warrantor will repair or replace the unit with new or refurbished product at its option, at no charge.

Parts: In addition, the Warrantor will supply replacement parts for the initial five (5) years.

To obtain warranty or out of warranty service, please contact a technical support representative at 1-866-446-3595 Monday through Friday from 9:00AM to 8:00PM EST.

A purchase receipt or other proof of the date of the original purchase is required before warranty service is rendered. This warranty only covers failures due to defects in materials and workmanship which arise during normal use. This warranty does not cover damages which occurs in shipment or failures which are caused by products not supplied by the Warrantor or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustments of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, rental use of the product or service by anyone other than an authorized repair facility or damage that is attributable to acts of God.

LIMITS & EXCLUSIONS*

There are no express warranties except as listed above. The Warrantor will not be liable for incidental or consequential damages (including, without limitation, damage to recording media) resulting from the use of these products, or arising out of any breach of the warranty. All express and implied warranties, including the warranties of merchantability and fitness for particular purpose, are limited to the applicable warranty period set forth above.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights from vary from state to state.

If the problem is not handled to your satisfaction, then write to the following address:

Digital Watchdog, Inc.
ATTN: RMA Department
5436 W Crenshaw St
Tampa, FL 33634

Service calls which do not involve defective materials or workmanship as determined by the Warrantor, in its sole discretion, are not covered. Cost of such service calls are the responsibility of the purchaser.

Headquarters Office: 5436 W Crenshaw St, Tampa, FL 33634
Sales Office: 16220 Bloomfield Ave., Cerritos, California, USA 90703
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Technical Support PH:
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International 1+ (813) 888-9555
French Canadian 1+ (514) 360-1309
Technical Support Hours: Monday-Friday
9:00am to 8:00pm Eastern Standard Time