AIDA IMAGING

NDI HX3 / IP IP66 Weatherproof 30X PTZ Broadcast-Grade Camera

PTZ4KWP-NDI3-X30

Operation Guide
Version 1.0

Please thoroughly read through this manual before operating the unit. Please retain this manual for future reference.

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This manual is for reference only. Future updates and changes may be different then the information provided in this guide in the future. We reserve the right to modify this manual or information contained herein anytime without notice.

Overview

Safety Guides

⚠ This camera may be powered using either IEEE 802.3bt (PoE++) or a regulated 12V DC power supply.

Use only PoE++ compliant network equipment or the supplied 12V DC power source. Use of an incorrect power source may result in malfunction, damage to the product, or reduced performance.

⚠ Do not install or operate the camera outside the specified operating temperature and humidity range. (INSERT RANGE HERE)

⚠ Avoid dropping the camera or subjecting it to strong impacts, vibration, or excessive mechanical stress during transportation, installation, or operation.

⚠ Do not attempt to disassemble, modify, or service the camera. There are no user-serviceable parts inside. Opening the housing may damage the product, compromise the environmental seal, and void the warranty.

⚠ Do not manually force the pan or tilt mechanism. Doing so may damage the internal drive system, reduce positioning accuracy, or cause product malfunction.

⚠ Keep hands and other objects clear of moving parts while the camera is in operation.

⚠ Do not point the camera directly at the sun, laser beams, welding arcs, or other high-intensity light sources. Prolonged exposure may damage the image sensor.

⚠ This camera may be equipped with high-intensity visible or infrared LEDs. Do not look directly into active LEDs or illuminators at close range.

⚠ Disconnect power before cleaning the camera. Use a soft, dry cloth to clean the exterior surfaces. Use a microfiber lens cloth when cleaning the lens.

⚠ Video quality may be affected by electromagnetic interference from nearby equipment. If image flicker occurs, adjust the anti-flicker and shutter settings as required.

Outdoor Installation (IP66)

⚠ This camera is rated IP66 when installed in accordance with the instructions provided in this manual.

⚠ To maintain the IP66 rating, all cable connections, waterproof couplers, cable glands, protective caps, and mounting interfaces must be properly installed and sealed.

⚠ Inspect all sealing components before installation. Damaged, worn, or improperly installed seals may allow water or dust ingress.

⚠ Route cables to prevent water from running along the cable and entering connectors. **A drip loop is recommended for all outdoor installations.**

⚠ Do not open the camera housing in outdoor environments or when moisture is present.

⚠ Periodically inspect all external seals, connectors, and cable assemblies to ensure continued environmental protection.

⚠ For outdoor installations, the use of appropriate grounding and surge protection devices is recommended to reduce the risk of damage caused by lightning or electrical surges.

⚠ Verify that the mounting surface and hardware can safely support the camera and withstand environmental loading conditions, including wind, vibration, and ice accumulation where applicable.

Box Contents

Please confirm the packing list below of all items provided with (1) purchase of one PTZ4KWP-NDI3-X30:

PTZ4KWP-NDI3-X30 1
Power Adapter + Intl. Conversions. 1

NOTE:
If you are missing any items, please contact our rma@aidaimaging.com team to assist in obtaining additional parts. Serial number and invoice will need to be provided to this.

If you would like to purchase additional accessories, please visit our ecommerce site at:

aidaimaging.shop

to purchase any spare parts.

Recommended Purchasable Accessories

These additional purchasable accessories are mounting add-ons that directly work with the PTZ4KWP-NDI3-X30.

WM-PTZWP – This bracket J-type pipe allows the camera to be mounted upright on a vertical wall. This piping helps seal away the cabling from under the PTZ, and through the piping.

Picture 1 – WM-PTZWP

JB-PTZWP – This junction box allows the connection endings to sit protected from the elements. The WM-PTZ-JTYPE can be also mounted on this accessory to achieve a vertical-mounted accessible cabling.

Picture 2 - JB-PTZWP

Picture 3 – WM-PTZWP & JB-PTZWP Combined

These accessories can be purchased at your nearest authorized AIDA dealer, or on our eshop – aidaimaging.shop

Features & Product Highlights

The PTZ4KWP-NDI3-X30 is AIDA's first weatherproof PTZ camera, engineered to deliver reliable 4K video performance in demanding outdoor environments. Combining a rugged IP66-rated enclosure with powerful Full-IP streaming capabilities, the camera supports NDI® HX2/HX3, SRT, RTMP, and RTSP for flexible integration into modern broadcast, ProAV, and live production workflows. Featuring a 30X optical zoom, Sony 1/1.8" CMOS sensor, environmental control systems, and PoE++ operation, the PTZ4KWP-NDI3-X30 is built to perform when conditions are at their toughest.

Enhanced NDI® HX3 Experience

The PTZ4KWP-NDI3-X30 is the first camera to introduce new NDI HX3 framerates – matching almost all NDI HX2 frame rates! This means more streaming potential under the higher quality HX3 without compromise.

Weatherproof IP66 Design

The PTZ4KWP-NDI3-X30 features a rugged IP66-rated housing designed to withstand challenging outdoor conditions. The weather-resistant enclosure helps protect the camera from dust, rain, and environmental exposure, making it suitable for permanent outdoor installations, sports venues, houses of worship, campuses, and remote production environments.

Environmental Control System

To help maintain reliable operation in changing weather conditions, the camera incorporates user adjustable environmental control systems featuring both internal heating and cooling functions. These systems assist with temperature regulation and help ensure stable camera performance in hot, cold, and unpredictable outdoor environments.

4K UHD Videos up to 60FPS

Capture sharp and detailed video with support for resolutions up to 3840 × 2160 at 60 frames per second. The PTZ4KWP-NDI3-X30 delivers exceptional UHD imaging suitable for broadcast, live production, streaming, corporate, and professional AV applications.

30X Optical Zoom with Sony CMOS Sensor

The camera combines a powerful 30X UHD optical zoom lens with a Sony 1/1.8" CMOS image sensor to deliver incredible image quality and long-range performance. This combination provides detailed image capture over extended distances while maintaining strong low-light performance, accurate color reproduction, and excellent image clarity.

Simultaneous Multi-Protocol Streaming

Support for NDI® HX2/HX3, SRT, RTMP, and RTSP allows the PTZ4KWP-NDI3-X30 to integrate into a wide range of production environments. Simultaneously deliver video across networks for internal and remote products, providing the lexibility needed for modern broadcast and AV workflows.

Full-IP PoE++ Operation

With PoE++ support, power, control, tally, and video can be delivered through a single Ethernet cable. This streamlined approach simplifies installation, reduces cable management requirements, and enables efficient deployment across permanent and temporary production environments.

On-Air Tally Integration

Integrated tally functionality provides clear visual indication of camera status during production. When used with supported NDI® workflows, the tally light can be controlled remotely to indicate program status, helping presenters and talent identify the active camera during live productions.

Low-Light Performance and Scene Illumination

Designed for challenging lighting environments, the PTZ4KWP-NDI3-X30 offers enhanced low-light image capture through its Sony Sensor. For additional flexibility, the camera includes adjustable IR-cut filter functionality and integrated white LED illumination to assist with color visibility in low-light conditions.

Purpose-Built for Outdoor NDI® Production

The PTZ4KWP-NDI3-X30 combines weather-resistant construction, integrated environmental controls, Full-IP connectivity, and professional imaging into a single solution. Designed specifically for outdoor NDI® / IP workflows, the camera eliminates the need for external protective housings while delivering the flexibility, reliability, and image quality required for modern broadcast, live production, and professional AV installations.

Junction box and mounting accessories sold separately*

Camera Specs:

Image Sensor Size	1/1.8" Progressive CMOS
Effective Pixels	Horizontal: 1920, Vertical: 1080
Pixel Size	2.0μm (H) x 2.0 μm (V)
Resolution	1080p, 1080i, 720p
Resolution Rates	2160 60p/59.94/50p/30p/29.97p/25p/24p 1080 60p/59.94/50p/30p/29.97p/25p/24p 1080 60i/59.94i/50i 720 60p/59.94p/50p
Output	IP (NDI HX/HX3/SRT/RTMP/RTSP)
Color Space	4:2:2 (YcbCr) 10bit
Min Illumination	0.2Lux (day), 0.1Lux (night)

Pan-Tilt Motor

Pan Rotation Angle	+167° ~ -167° (334° range)
Tilt Rotation Angle	+49.5° ~ -59.5° (109° range)
Pan Rotation Speed	0.5°/s ~ 60°/s (24 steps)
Tilt Rotation Speed	0.2°/s ~ 34.2°/s (24 steps)

Optics / Audio

Lens	30X UHD Optical Zoom
Lens F-Stop	F1.35~F4.6
Lens HFOV (angle)	60° Wide, 2° Tele
Audio Input	3.5mm TRS Stereo Audio Input
Audio Embed	Over All IP Streams
Sample Rate	16/24/32 Bits

Power/Dimensions

Control	I/O Cable, IR Remote Commander (included), WebUI (UDP/NDI®)
Dimensions (home position)	10.1" x 5.92" x 12.1" / 25.5 cm x 12.5cm x 30.5cm
Dimensions (min clearance needed for full movement)	10.1" x 9.5" x 14.0" / 25.5 cm x 24.0 cm x 35.5 cm
Operation Temperature	14°F ~ 131°F / -10°C ~ 55°C +/-10%
Auxiliary Controls	Heating up to 104°F/40°C and Cooling Fan
Weight	11 lbs / 4.8kg
Power	12VDC (+9 - +15VDC) or PoE++ (IEEE 802.3bt)

*For HTTP API please head to aidaimaging.com/download or please contact our support@aidaimaging.com email.

Installation and Quick Start

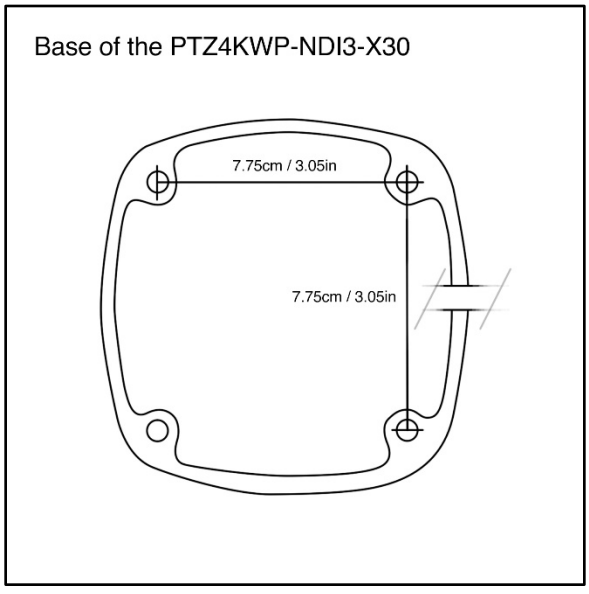
Installing the PTZ4KWP-NDI3-X30

For ease of installation, please make sure no cables and pinched, pressured or bent in a way that can damage the cable.

Mounting the PTZ4KWP-NDI3-X30

The PTZ4KWP-NDI3-X30 is a top-heavy camera, so it is recommended to install the camera on a completely flat surface.

For safety, the camera has 4 holes near the base to bolt the camera down to a mounting. Each hole is about 7.75cm (or 3.05 inches) C/C. The hole is 12mm wide with no threading.



⚠ Most importantly – the cable ends of the PTZ4KWP-NDI3-X30 are NOT weatherproof. These need to be sealed away from the elements. Failure to do may cause damage to the camera and void warranty.

Installing the J-Type / WP-Mounting Block (Sold Separately)

To install these separate installations, please check out our youtube channel for the tutorial video (COMING SOON)

Power Connection

The PTZ4KWP-NDI3-X30 can be powered via the DC12V adapter that came directly with the camera, or the Ethernet port with PoE++ power.

⚠ PoE+ power is sufficient to power the camera up – HOWEVER under wattage stress such as heater, fan, and constant movement it is recommended to have PoE++ for stability. If the camera restarts randomly during operation, please use either PoE++ or DC12V.

CAD files for Special Installations

Please find the CAD files on our website.

https://aidaimaging.com/download-tech-sheets/

Feel free to search for your model using the link. If you can't find what you are

looking for, please message our support@aidaimaging.com team for more help.

Quick Start

Connecting to the Network

To get the PTZ4KWP-NDI3-X30 running, please provide power using the recommended power supply or PoE++ rated network switch to power the camera.

Allow the PTZ a 1-3 minutes to properly boot up after receiving power. This wait should also be done if the PTZ power was removed, reset, or changed.

Next, connect a network cable (if using recommended factory power supply) to the PTZ, and connect it to your main network.

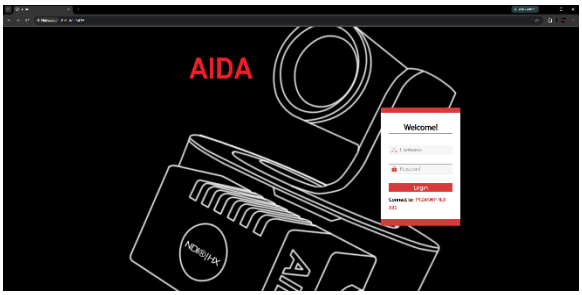
If you are using a managed switch / router, the PTZ will default try for a IP address on the network.

If you are using an unmanaged switch, after searching for an IP address will default to the standard IP address of:

192.168.1.188

We recommend using Studio Monitor in NDI tools to find your camera feed!

Once you find it, you will be met with the login screen for the camera.



You can log in with the following credentials:

Username: admin
Password: admin

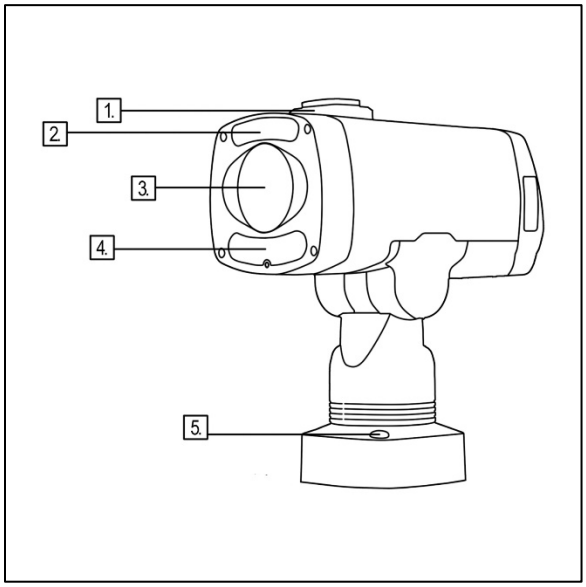
Once on the web UI, all the IP streaming tools are at your disposal. Natively, NDI® HX2 should already be running!

To modify any of these settings, click the settings tab on the right and find all the stream settings adjustable in the menu bar.

◊ NOTE: Any settings you set will be saved onto the camera, and will not turn off until changed / the camera is powered off. A good example is streaming to social media sites – if you set up a direct RTMP stream to it, the camera will continue to stream to the web as long as power, internet, and settings are good.

PTZ4KWP-NDI3-X30 Parts

Front



1. Mohawk Tally Light

Tally lights up red when camera receives tally program command (either VISCA or NDI®). If on startup the camera flashes yellow and red, that indicates insufficient power to the camera.

2. White LED Array

The PTZ4KWP-NDI3-X30 has 3 LED's on top of the zoom module to help brighten up dark scenes. This can be controlled manually or automatically.

3. 30X Lens Module

The PTZ4KWP-NDI3-X30 zoom module. Please make sure to use a neutral lens cleaner to clean the glass if any obstructions or dirt get on it.

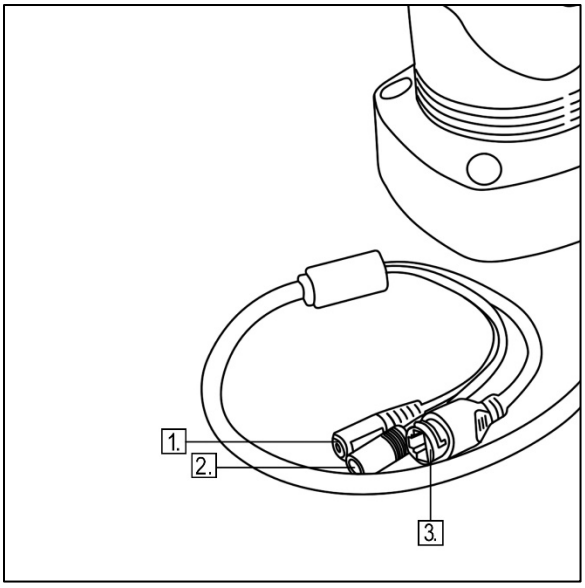
4. IR Array

The PTZ4KWP-NDI3-X30 has the ability for IR sensitivity given its IR array below the module. This mode can be controlled in the web UI.

5. PTZ Mounting Holes

All four mounting holes on the PTZ can be found here near the base of the camera. Refer to the previous installation portion of the camera for distance between the holes.

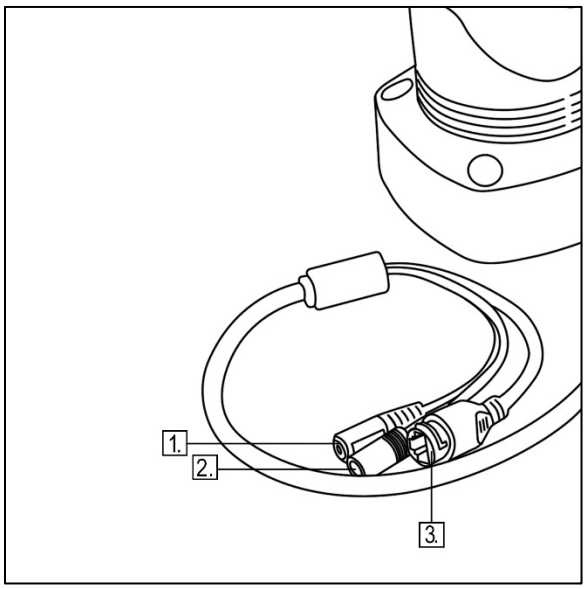
Output Cables



1. 3.5mm Stereo TRS Line Input

Audio input for a line level audio stereo TRS audio input. Will be embedded over all IP streams as long as Audio is enabled in the menu.

Output Cables (cont)



2. DC12V Input

The DC12V Input for the camera

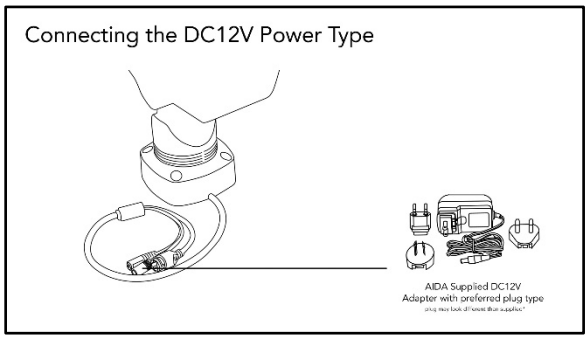
3. RJ45 Port

The RJ45 port input for PoE++ power and network communications.

Powering the PTZ4KWP-NDI3-X30

Connecting to the supplied DC12V power supply

Use the supplied factory adapter and preferred plug type to sufficiently supply power to the PTZ.



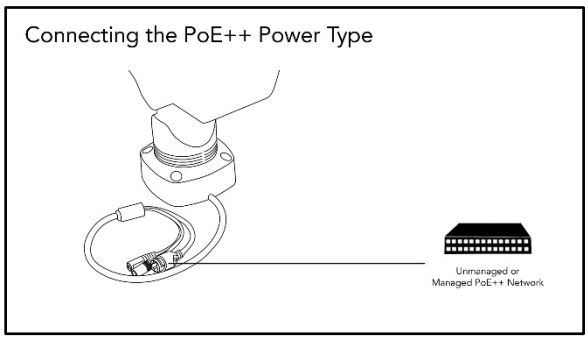
1 Pick your preferred plug type out of the adapters securely fasten the end with the supplied factory adapter.

2 Insert the barrel portion from the supplied power adapter into the DC12V input on the camera.

⚠ We highly recommend using the supplied factory adapter, and not a third party adapter. Doing so may cause internal damage to the device. If you are missing the adapter, please visit aidaimaging.shop to purchase a replacement.

Connecting the PTZ via PoE++ (Power over Ethernet Plus Plus/ IEEE802.3bt standard)

Please refer to the power supply of the switch you use for more info on power and wattage. The standard IEEE802.3bt is used when describing this.



1 Use a Cat6 or better patch cable to connect to a PoE++ compliant switch or router.

2 Insert one end into the LAN portion of the PTZ4KWP-NDI3-X30. Then fasten the other end of the ethernet wire into the PoE++ compliant switch.

3 Power will be submitted to the PTZ. No further action is necessary.

⚠ If the PTZ doesn't do its initialization action, the switch may not provide sufficient power to power the device. The

tally light on the camera will also flash yellow, red multiple times.

⚠ If you think PoE++ is working on the switch, then the PoE++ on the PTZ may be damaged. Please plug in the DC12V and see if the device powers on. If it does, then please reach out to our support team at support@aidaimaging.com for an RMA.

Web Menu Operations

The webUI is an important tool to help harness the true power of this camera! Get familiar with it, as it's a great way to change settings when needed.

If you have any questions or need more info on any of these settings, please feel free to message our support team.

Connecting to the Camera's Web UI

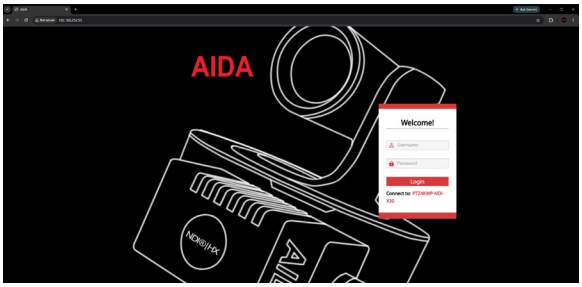
You can control the settings on the webUI as long as the connecting device (PC, MAC, IPAD, TABLET, PHONE) is on the same network of the camera.

◊ NOTE: Unfortunately, not all devices will get the same features. Do note that some features or options may be disabled depending on your viewing device, so its best to operate from a PC or MAC web browser.

1 To connect to the web UI, use a web browser such as Microsoft Edge, Google Chrome, or Safari. Once open, type in the IP address of the camera. You should be brought to the login page.

◊ NOTE: Since the PTZ4KWP-NDI3-X30 does NOT have a physical output, finding the IP address may be daunting. Your best bet to easily finding the IP address of the camera is to use NDI studio monitor from NDI tools, or use the AIDA engineering tool that can be found here (windows only)

◊ NOTE: If the web browser does not open the link, that means your device is not within the same IP range of the camera. This error is caused by the IP addresses on the PTZ and computer/device not being in the same range despite being physically connected. For more help on this issue, please view our tutorial on how to fix this.

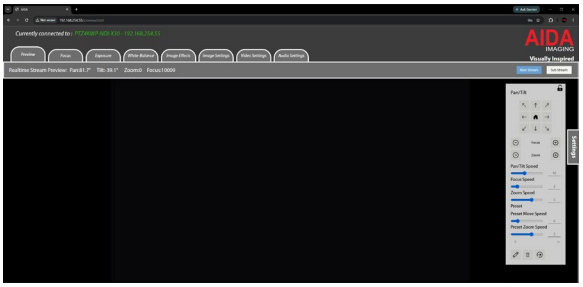


2 Upon being greeted by the login page, please enter the following credentials for first time use:

Username: admin
Password: admin

You can change these credentials later.

Main Preview Screen



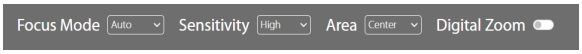
The main preview screen after login serves as a live web-rtc preview you can use to view the stream. The top bars are the image parameter settings, while the right houses the pan tilt mechanics and settings.

The top bar indicates the camera that is currently connected, as well as the IP address.

You can also see the pan, tilt, zoom, focus, and NTP data on the lower bracket.

By clicking on each tab like this, it will dynamically change the menu displayed underneath the bar. This is one of the best ways to adjust the cameras settings on the fly due to its ease.

Focus



- **Focus Mode:** Changes the camera's focus mode here.
- **Sensitivity:** Change how sensitive the camera should try to focus if movement is detected via the PTZ.
- **Area:** Change the area in which the PTZ autofocus algorithm will be based off (relative to the current image)
- **Digital Zoom:** Enable more zoom after 30X optically by digitally cropping the sensor. Quality may be lost, and image may appear shaky depending on zoom.

Exposure

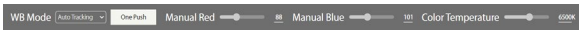
Depending on the mode, features may or may not be accessible. Here are some accessible features when you toggle through the Exposure modes.

- **Exposure Mode:** Select between 5 exposure modes
- **Anti-Flicker:** Adjust the anti-flicker settings of the camera. Try to match with the power source of the country in use.
- **Gain:** Adjust the GAIN of the image here.
- **Iris:** Adjust the IRIS of the camera.

- **Shutter:** Adjust the rate of the electronic shutter speed – 1/30~1/10000.
- **Brightness:** Adjust the brightness of the overall image.

Manual mode usually gives you the most comprehensive control over the imaging sensor.

White Balance



Just like exposure mode, some modes will not be available depending on your white balance mode. If the slider is not lit blue, then the feature is not available in that mode.

- **WB Mode:** Choose between a selection of white balancing settings.
- **One Push:** A calibration setting for One Push mode. Hold a blank white piece of paper in front of the lens (within focus distance) and click this button. Best option for shading multi-cameras.
- **Manual Red:** When set to manual white balance, red gain will adjust red seen on the image.
- **Manual Blue:** When set to manual white balance, blue gain will adjust blue seen on the image.
- **Color Temperature:** When set to temperature white balance, adjust the WB on the K scale.

Image Effects

- **Miror:** Flip the image on the Y Axis.
- **Flip:** Flip the image on the X axis.
- **BLC:** Backlight compensation setting that helps tame brighter lights in the image.
- **D-WDR:** Enables WDR, which helps with brightening darker areas compared to lighter areas on screen.
- **D-WDR Number:** Determines level of WDR. (higher is stronger)
- **GAMMA:** Allow for the overall brightness of the image in respect to the darker areas of the image.

Image Settings

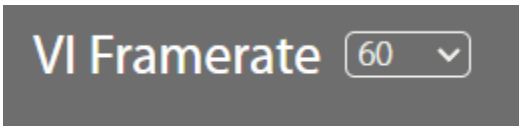
- **Brightness:** Adjust the overall brightness of the image.
- **Sharpness:** Allows for overall sharpness / edge enhance on the image.
- **Saturation:** Change the saturation of the image with this setting
- **Contrast:** Change the contrast of the cameras image.

- **2D Noise Reduction:** Allows for some noise reduction on a frame-by-frame

basis, good for still or little motion videos. The higher it is, the less noise in the image but resolution may be affected.

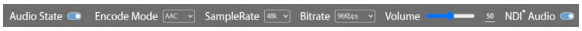
- **3D Noise Reduction:** Allows for noise reduction both frame-by-frame and temporally – it detects the difference between noise and movement, limiting the amount of noise on frame.

Video Settings

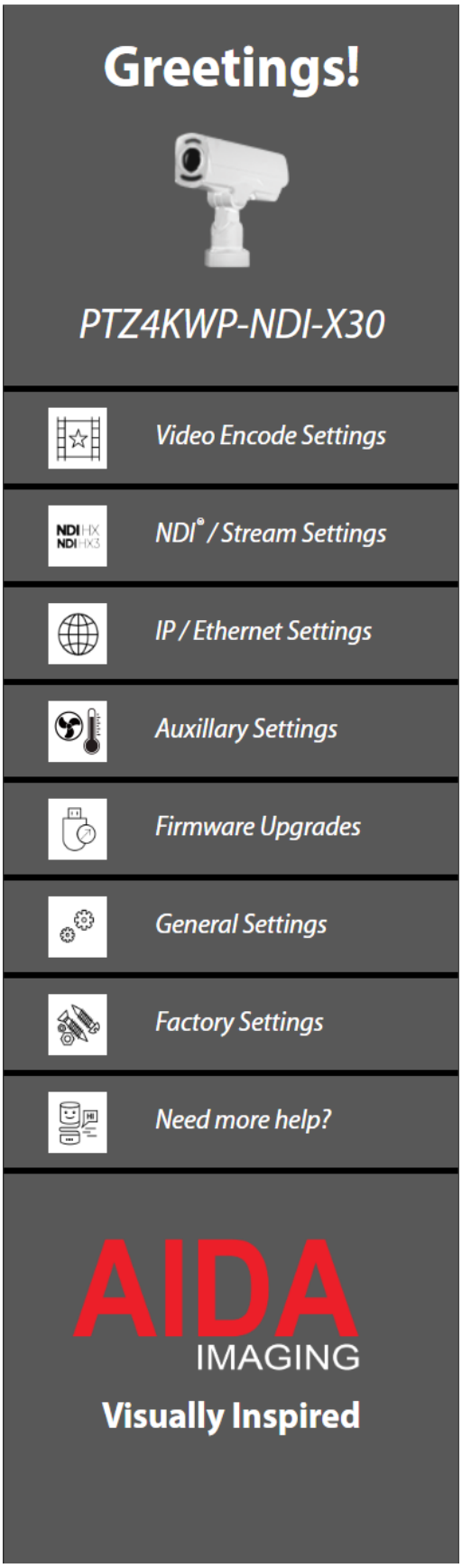


- **VI Framerate:** An important setting used to delegate PTZ resources to that specific framerate. This setting should match the framerate of the main output you plan to use.

Audio Settings



- **Audio State:** Enable or disable audio embedment over the PTZ's outputs.
- **Input:** Choose whether the input or output of the audio is line or mic level.
- **Encode Mode:** Choose between different codecs to improve audio embedment over the outputs.
    - **LCPM** – Mono output
    - **AAC** – Standard TRS Stereo Output
    - **OPUS** – Best latency audio, however at high bitrates may sound distorted
- **Bitrate:** Adjust the bitrate to increase or decrease the quality of audio.
- **Volume:** Increase the gain of the audio. Increasing too high may cause a lot of unwarranted noise, so try to keep to a minimum.
- **NDI® Audio:** Allow for audio embedment over NDI®.



Settings

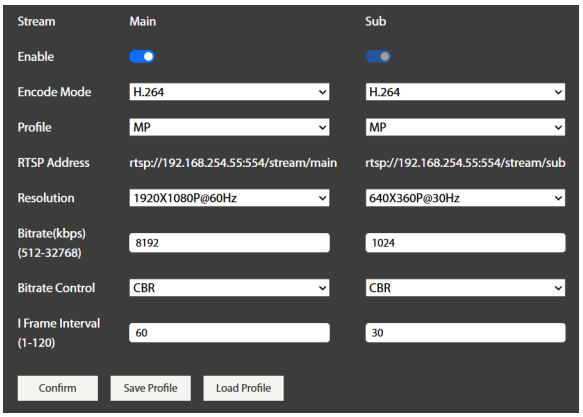
By clicking the settings tab on the right of the screen, you will be presented with a list of options.

At the top is a greetings message with your camera model and picture of the camera.

Through the menu you will have a list of the stream settings, FW upgrades, and account settings of the camera.

Lastly, you will have a “need more help” button which will lead to our support page.

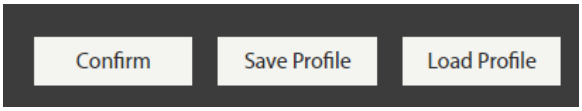
Video Encode Settings



Here you have access to the Main and Sub streams of the camera. Sub stream is unable to be turned off due to NDI® requirements, once you turn off all NDI® related streams in the camera, then the option to turn sub field will become available.

◊ NOTE: Video encode is the main properties of the NDI®, RTSP, RTMP, SRT, and all other functional streams out the RJ45 port. They all share the same properties and cannot be individualized unfortunately.

- **Enable:** Enables the Main or sub stream
- **Encode Mode:** Choose between H.264 or H.265 encoding. H.264 has slightly better quality than H.265, while H.265 has slightly better latency than H.264. (under ideal conditions)
- **Profile:** Under profile are the MP and HP options. Main profile is the most universal encode profile that will 99% work well with other software / hardware. High Profile is a higher quality profile; however, it isn't as universal as MP.
- **RTSP address:** You can copy and paste the RTSP address of the camera from here.
- **Resolution:** Change the cameras streaming resolution here. Note that changing some settings may cause certain resolutions to disappear, like when NDI HX3 is enabled.
- **Bitrate:** Choose the bitrate in kbps output from the RJ45 port. The higher the bitrate, the better quality the stream. Ensure your switch / router has enough headroom if you enable max bitrate with multiple items on the network.
- **Bitrate Control:** CBR and VBR options are available. CBR is constant bitrate, and the most stable. VBR is variable bitrate, which is will automatically raise or lower the bitrate, but not quite as stable as CBR.
- **I Frame Interval:** This determines how many increments before an I-frame is taken. If the increments are high, than less bandwidth is consumed resulting in lower picture quality. Lower increments increases quality, but it costs higher bandwidth and potential quality drop during movements on video.



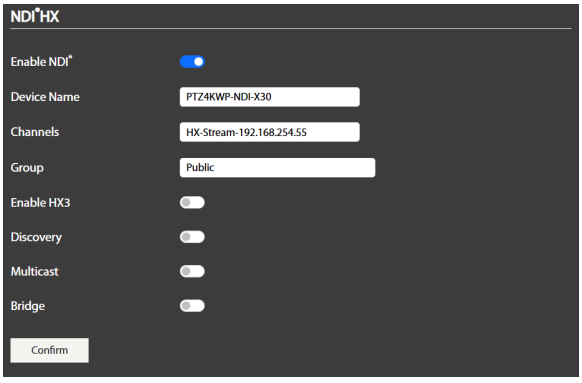
Once you have chosen you desired settings, please press confirm to save those settings.

Alternatively, you can click save profile to save the settings in a config.txt file that you can then upload to other AIDA cameras with the same config settings, that way you can simplify setup easily!

Load profile will then accept the saved .txt file from the previous step.

NDI® / Stream Settings

Under NDI Stream settings, you can see the options related to NDI, RTMP and SRT.



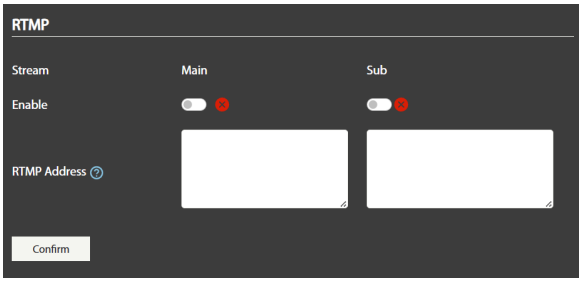
- **Enable NDI®:** This is a generalized setting for NDI HX and NDI HX3 streaming. Enable or disable it here.
- **Device Name:** Change the device name that pops up when accessing the NDI stream.
- **Channels:** Change the channel name that pops up when accessing the NDI stream.
- **Group:** Change the group name that the camera should belong in.

◊ NOTE: Changing this setting without knowledge of NDI® groups may cause your stream to not appear on your device! Just change it back to Public if you are unsure. You have been warned!

- **Enable HX3:** Change the NDI HX stream to a HX3 stream. HX3 provides higher bandwidth, lower i-frame settings, and overall higher quality/latency than the standard HX formula.

◊ NOTE: HX3 on our WP PTZ has introduced a plethora of new resolutions to use! This is unlike our older NDI3 cameras.

- **Discovery:** Enable and enter the discovery server if you are planning on using NDI network discovery.
- **Multicast:** Enable the NDI® multicast function here.
- **Bridge:** NDI Bridge is NDI tools latest technology to send NDI sources over WAN! You can run a NDI bridge server from a computer at your remote station, and have this camera's video port number sent out the local WAN address and send directly to the remote station like it's a local device! This is especially helpful in remote productions with multiple networks. To learn more about Bridge, please follow this article.



RTMP also has a main and sub field. They are off by default.

- **Enable:** Enables the Main or sub RTMP stream
- **RTMP Address:** Input the RTMP address you are trying to stream to. These can directly stream to live streaming platforms like Youtube, Facebook, and others.

Streaming RTMP examples

1、rtmp://192.168.6.188:1935/app/rtmpstream0

2、rtmp://a.rtmp.youtube.com/live2/f1e5-4a42-81e7-dwqv

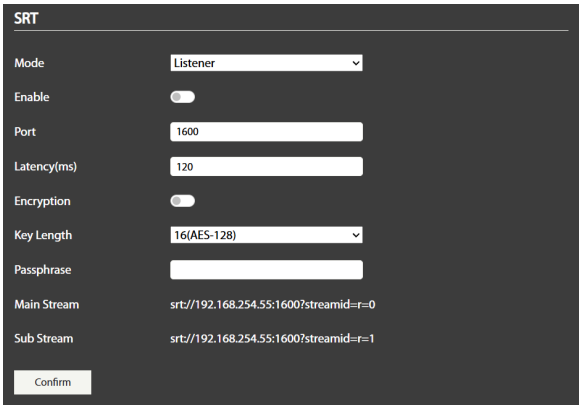
3、rtmps://live-api-s.facebook.com:443/rtmp/159001718833947?s_bl=1&s_sml=3&s_sw=0&s_vt=api-s&a=AbwTqU3PuEvtzAdn

Once your settings are complete, you will see a X or ✓ depending on if the camera is successfully sending a RTMP stream. Once you are done, click submit to start the stream.

◊ NOTE: RTMP streams continue to run until turned off, or connection to the host site is gone. If you do not plan on streaming anymore, make sure you turn off the stream.

◊ NOTE: If you are unable to connect directly to certain streaming sites, ensure that DHCP or the proper port forwarding is enabled for the camera to reach the internet. If the camera is unable to connect to the internet, RTMP streaming service will not work. Here is a guide on how to set that up:

◊ NOTE: Sometimes, the checkmark will appear blue but the stream may not appear. This may be because AUDIO needs to be enabled for the stream to be accepted. Make sure that AAC, and audio are enabled to get it working.

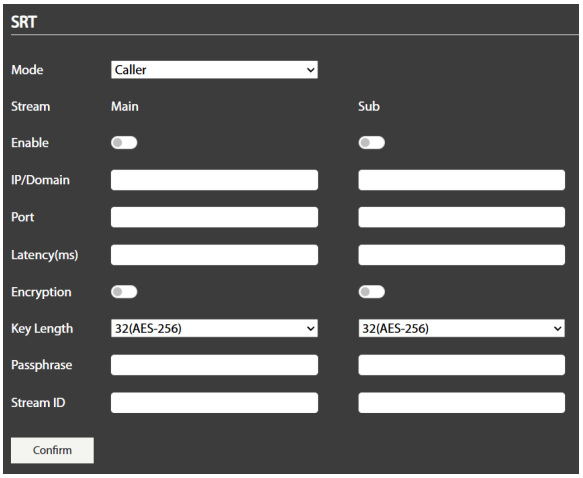


Under SRT, you are able to send a stream via listener, caller, or rendezvous. To learn more about them, please visit the official Haivision documentation here.

- **Mode:** choose the camera's SRT mode by selecting caller, listener, or rendezvous.

Listener Mode:

- **Enable:** Enable the SRT function to stream. This will remain on until turned off.
- **Port:** Enter the desired port you want to send or receive SRT from.
- **Latency:** Adjust the desired latency of the stream. Setting it too low may decrease stream quality.
- **Encryption:** If you want to add a passkey to access the stream, you can enable that here. If this is not on, SRT will still stream, but it will be public to others on the network if they have the camera data.
- **Key Length:** Choose the length of the passkey and available lettering.
- **Passphrase:** Enter the password here.
- **Main / Sub stream:** Copy this stream code and paste it into the software accepting the SRT stream in caller mode.

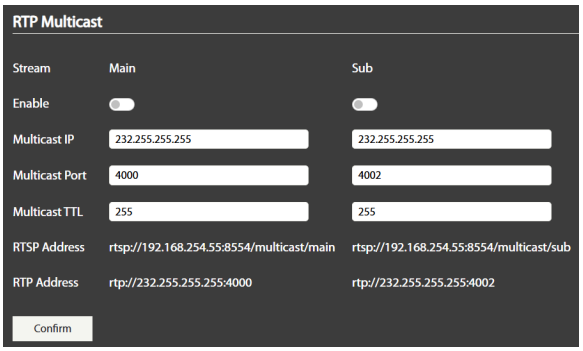


Caller/Rendezvous Mode:

- **Enable:** Enable the SRT function to stream. This will remain on until turned off.
- **IP/Domain:** enter the domain or IP of the device you want to send the stream to.
- **Port:** Enter the desired port you want to send or receive SRT from.
- **Latency:** Adjust the desired latency of the stream. Setting it too low may decrease stream quality.
- **Encryption:** If you want to add a passkey to access the stream, you can enable that here. If this is not on, SRT will still stream, but it will be public to others on the network if they have the camera data.
- **Key Length:** Choose the length of the passkey and available lettering.
- **Passphrase:** Enter the password here.
- **Stream ID:** The unique indicator when entering the stream into your listener software. Equivalent to the r=0 found in listener mode.

◊ NOTE: Sometimes, you may have to fill out all fields in order to activate SRT. Make sure there is a value there, even if its not being enabled. E.G: Passphrase

RTP Multicast Mode:



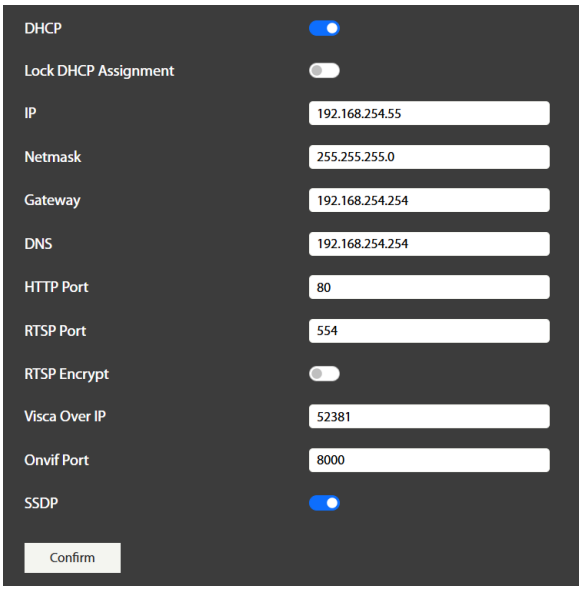
- **Enable:** Enable or disable RTP multicast streaming for the selected stream (Main or Sub).
- **Multicast IP:** Enter the multicast group IP address that receivers will subscribe to in order to view the stream. Devices listening to this address will receive the video stream.
- **Multicast Port:** Specify the UDP port used to send the multicast stream. Receivers must use the same port to connect.
- **Multicast TTL:** Set the Time To Live (TTL) value for multicast packets. Higher values allow the stream to travel across more network routers; lower values keep traffic within the local network.
- **RTSP Address:** Displays the RTSP URL for the stream. This address can be used by compatible software or devices to connect to the stream using RTSP.
- **RTP Address:** Displays the RTP multicast address and port being used for the stream. Compatible receivers can use this address to join the multicast stream directly.
- **Main:** Configure the primary video stream, typically the highest quality or resolution stream available.
- **Sub:** Configure the secondary video stream, typically used for lower bandwidth viewing, recording, or monitoring.

Hit confirm to save the changed settings.

IP Settings

In this tab, you will find all the IP settings of the camera.

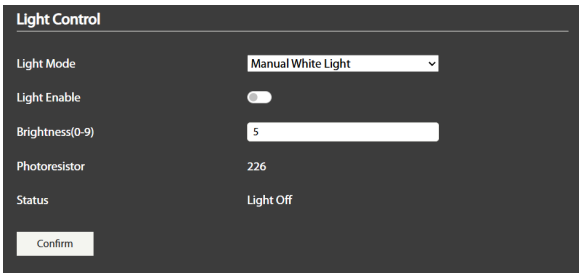
⚠ Do not attempt to change any options you are unsure of. Changing any options can temporarily make access to your PTZ harder or not possible. Only change settings that you know about, or ask our support team for more info.



- **DHCP:** Enable or disable the cameras DHCP protocol.
- **IP:** This is the main system IP, and the IP you will use to connect to the web UI.
- **Netmask:** You can adjust the netmask settings here.
- **Gateway:** You can adjust the gateway settings here.
- **DNS:** You can adjust the DNS settings here.
- **HTTP Port:** You can adjust the HTTP port here (leave this at 80 for your standard webUI connection support.)
- **RTSP Port:** Change the RTSP port number here.
- **RTSP Encrypt:** Enable RTSP encryption by toggling this option on.
- **VISCA over IP:** Change the VISCA over IP port number here. 52381 is a standard in the industry, and we recommend not changing it.
- **ONVIF Port:** Change the ONVIF port number here.
- **SSDP:** Enable or disable simple service discovery protocol here.

Auxiliary Settings

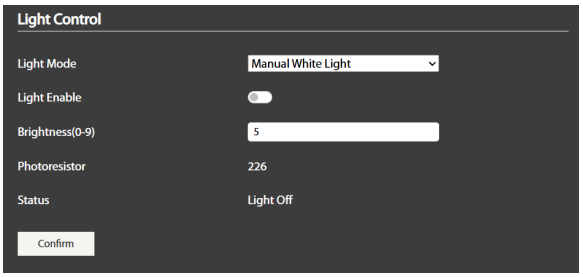
In this tab, you will the weatherproof options to help the PTZ4KWP-NDI3-X30 survive in certain environments.



With Light control, you can take control of the white LED and IR filter built into the camera.

- **Light Mode:** This allows you to choose the control of the LED / IR filter on the camera. We will go over each mode on the next page.

Manual White Light Mode:



- **Light Enable:** Manually turn the white LED on the PTZ ON / OFF.
- **Brightness:** Adjust the brightness of the cameras white LED from 0-9.
- **Photoresistor:** Gives you a reading of the current amount of light in scene. If there is a lot of light, the photoresistor will be low. If there is little to no light, it will max out at 255.
- **Status:** Lets you know what the status of the LED are.

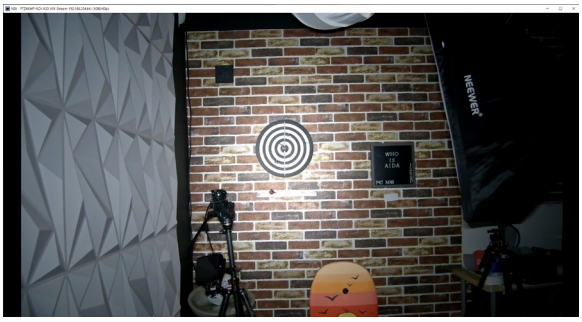
⚠ WARNING

The integrated LED light emits high-intensity visible light. Do not look directly into the light source during operation. Do not intentionally shine the light into the eyes of any person, particularly at close distances. Exposure to bright light may cause temporary visual impairment or discomfort. Always operate the LED light responsibly and only for its intended purpose.

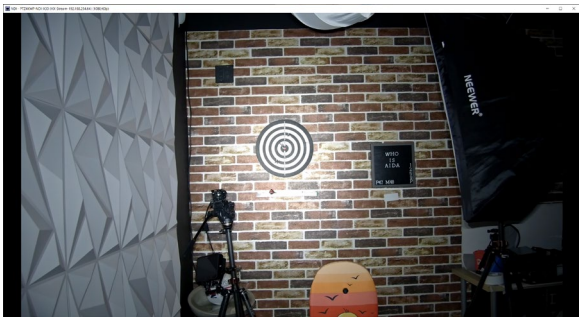
Examples of the White LED in action:

Level 2 Brightness:

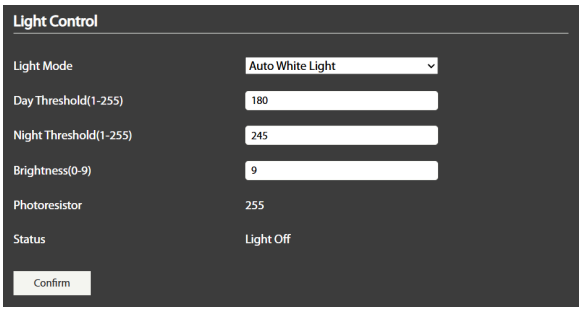
Level 6 Brightness:



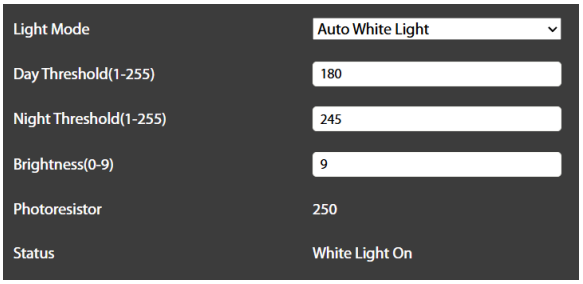
Level 9 Brightness (MAX):



Auto White Light Mode:

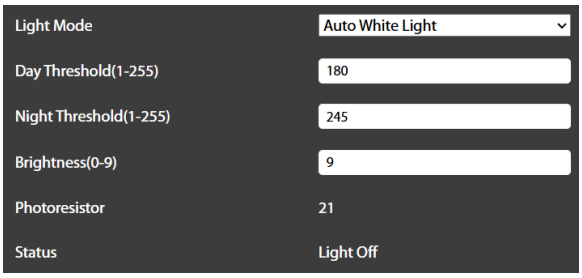


Auto White Light allows the camera to automatically enable the white LED when a certain threshold is met. Depending on how much light is being detected, the lights will turn on based off of the threshold set by the user.



In this scenario, the white light turns ON because the photo resistor is passed the night threshold (245). This will remain ON until it dips below.

Brightness and intensity will start to slightly dim as it approaches Day threshold. Once enough light detected passes the DAY threshold, the light will turn OFF.



-**Day Threshold:** The base limit when the white LED will turn OFF. If the photoresistor value drops below this, the camera will shut the LED off.

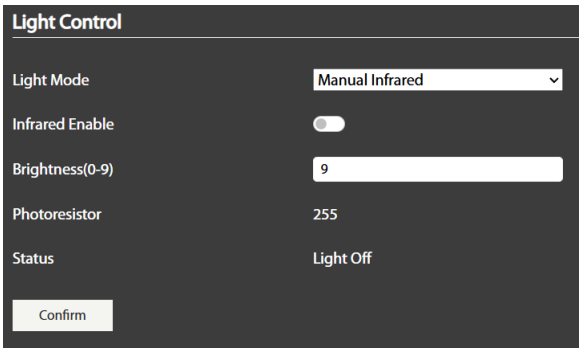
-**Night Threshold:** The upper limit when the camera will turn on the LED's. If the photoresistor value is higher than this, then the lights will turn on.

-**Brightness:** Adjusts the brightness of the auto-light.

-**Photoresistor:** Gives you a reading of the current amount of light in scene. If there is a lot of light, the photoresistor will be low. If there is little to no light, it will max out at 255.

- **Status:** Lets you know what the status of the LED are.

Manual Infrared Mode:

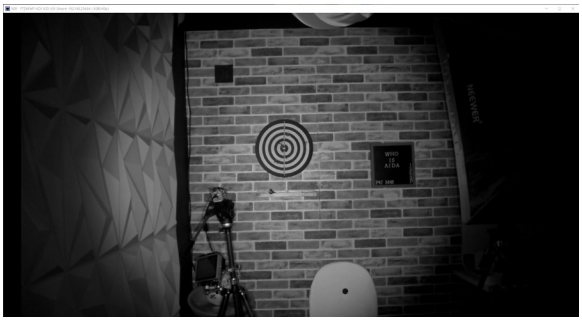


Manual Infrared removes the IR filter over the sensor and allows for IR sensitivity, while also supplying IR light through the IR array on the front of the camera.

-Infrared Enable: Enables infrared light and sensitivity.
-Brightness: Adjust the amount of infrared light from the IR array on the camera.
-Photoresistor: Gives you a reading of the current amount of light in scene. If there is a lot of light, the photoresistor will be low. If there is little to no light, it will max out at 255.
- **Status:** Lets you know what the status of the LED are.

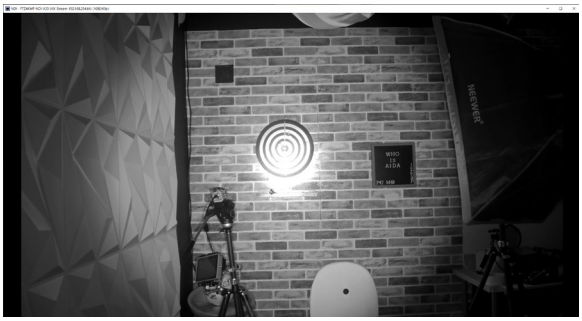
Examples of the Infrared in action:

Level 2 Brightness:



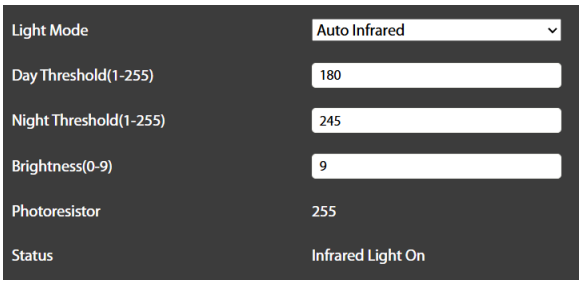
Level 6 Brightness:

Level 9 Brightness (MAX):



Auto Infrared Mode:

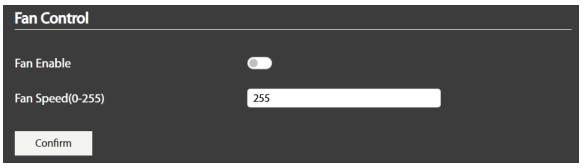
This has the same premise as Auto White Light – however instead of turning on LEDs this will turn on the IR array and remove the IR filter in front of the sensor.



-**Day Threshold:** The base limit when the IR array will turn OFF. If the photoresistor value drops below this, the camera will shut the IR array OFF and put the IR filter back over the sensor.
-**Night Threshold:** The upper limit when the camera will turn on the IR array and remove the filter in front of the lens. If the photoresistor value is higher than this, then the action will follow through.
-**Brightness:** Adjusts the brightness of the IR array.
-**Photoresistor:** Gives you a reading of the current amount of light in scene. If there is a lot of light, the photoresistor will be low. If there is little to no light, it will max out at 255.
- **Status:** Lets you know what the status of the IR array is.

Fan Control:

Given hot environments, the PTZ4KWP-NDI3-X30 has a built-in fan to help cool in hotter and humid environments. This can manually be enabled and left on as needed.

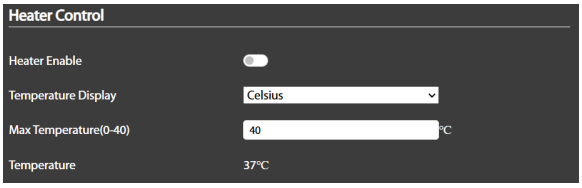


-**Fan Enable:** Enables the internal fan.
-**Fan Speed:** Change the fan speed from speeds 0~255.

If you want to reference the temperature of the PTZ, please see the heater control section below.

Heater Control:

In colder environments, you can run the heater to keep the camera warm.



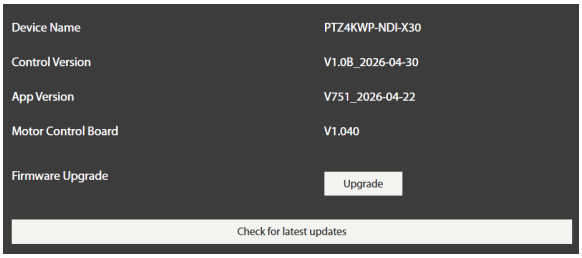
-**Heater Enable:** Enables the heater of the camera
-**Temperature Display:** Change the camera's heat unit from C° to F°.
-**Max Temperature:** Enables the heat until max temperature is reached. Once the

temperature reaches this point, the heater will turn off. If the PTZ temp drops below this point again, the heater will re-enable itself.
-**Temperature:** Gives you the current temperature of the PTZ for reference.

◊ NOTE: Yes.. you can have both the heater and fan on at the same time... but why would you want to do that??

Firmware Upgrades:

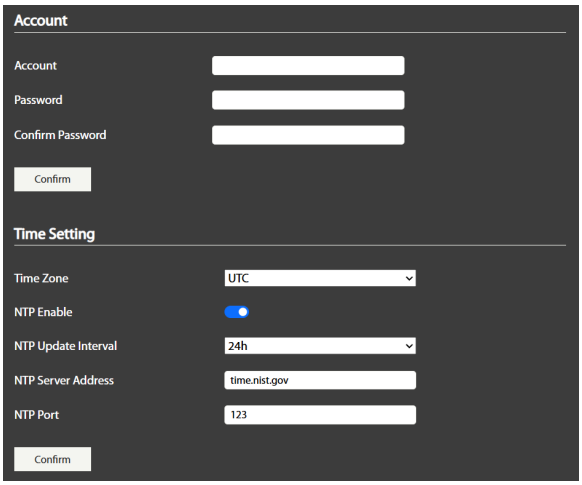
This tab allows you to check the control / system / app version of the PTZ. Note that the most important things to look for are the numbers, not dates! Some FW will release later than others, but have a earlier completion date.



For firmware upgrades, the download from our site will accompany instructions on how to install the firmware. You can click the “check for latest updates” button at the bottom to automatically lead you to our website where you can see if a new update is available for your camera.

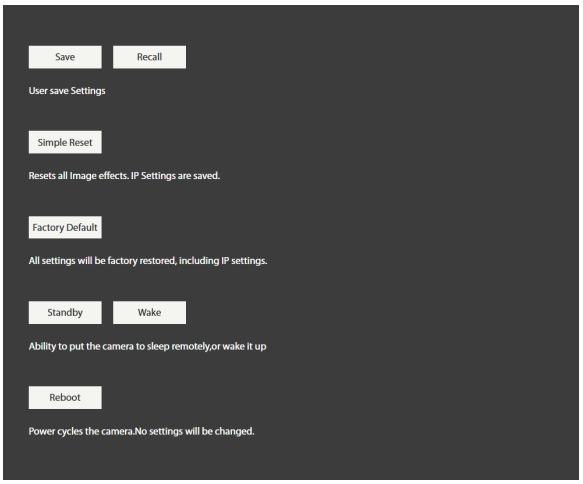
General Settings:

Here you will find the PTZ account and time settings of the camera. You can change the account credentials here through the account and password tab.



For Time Setting, you can allow the camera to be synced up to a NTP server of your choosing. Automatically, it will point to the time.nist.gov site. This is especially useful if you want to sync of video streams in live/post production!

Factory Settings:



- **Save Recall User Settings:** Saving user settings allows you to save the camera state onto a config file, and upload via the recall tab. Perfect for multi-camera installations.
- **Simple Reset:** Use this button to reset all image effects. IP settings will not be changed.
- **Factory Default:** Return the camera to its factory state.

◊ NOTE: Factory resets can help deal with bugs and memory leaks. If you are having issues connecting or settings not saving, try giving the camera a factory reset.

- **Standby / Wakeup:** Put the camera to sleep, or wake it with these options. (power may still be consumed when on standby.)
- **Reboot:** Power-cycle the PTZ with this option.

VISCA Protocol

For the full extensive VISCA protocol list, please download the file found here, or our download page at aidaimaging.com/download.

NDI® Protocol

NDI, a fast-growing tech company, is removing the limits of video connectivity. NDI – Network Device Interface – is used by millions of customers worldwide and has been adopted by more media organizations than any other IP standard, creating the industry's largest IP ecosystem of products.

NDI allows multiple video systems to identify and communicate with one another over IP; it can encode, transmit, and receive many streams of high-quality, low-latency, frame-accurate video and audio in real time. The growth of NDI is backed by a growing community of installers, developers, AV professionals, and users who are deeply engaged with the company through community events and initiatives. NDI is a part of Vizrt. For more information: https://ndi.video/

HTTP Protocol

If you want to create your own scripts or program to connect to our PTZ, please email our support team for the HTTP access document.

Troubleshooting

My PTZ is in an endless cycle of rebooting?

If the PTZ is being powered over PoE or PoE+, it may not be adequate enough power to boot up the device. Please ensure a proper PoE++ or the supplied DC12V source is connected to the camera to power it.

I can't connect my PTZ to my PTZ controller?

Out of the box, the PTZ4KWP-NDI-X30 supports VISCA over IP and HTTP commands. IF you are running into issues with these protocols please check the documentation and or IP settings.

I can't connect to the IP of the camera?

The PTZ4KWP-NDI3-X30 natively has DHCP on, so it will grab an IP address on a managed IP. If there is no managed network present, the camera will default to 192.168.1.188. To connect to that, you must have a computer on that same physical network have the same IP range as 192.168.1.xxx. From there you should easily be able to connect. If you are having issues with connecting, we have a short 2 minute tutorial on how to connect them.

Is this PTZ weatherproof?

The casing on the camera is a IP66 rated, meaning that it can withstand environments with moisture, dust, and water jets from all directions. This is NOT meant to be submerged. The CASING is IP66, not the endings. Please make sure all endings and connection ports are protected from the environment or risk damage to the camera.

Can the Auxiliary controls be left on 24/7?

The components for the environmental control system for the PTZ were chosen were constant use. Although they may last 24/7, we always recommend to turn off the camera when not in use, and or turning off auxiliary controls when not needed to remove unnecessary stress from the camera.

Can this PTZ be powered on forever?

The PTZ's are aged in our factory for a good amount of time, powered nonstop without issue. Our recommendation is that these electronics can be on as long as power is supplied, but do keep in mind

it’s always a good idea to power cycle the camera after a week or two of usage.

Some reliable ways to do this would be managed switches with PoE++ that can automatically switch on / off the power supplied, smart plugs, and regular power cycles through the intended power.

Warranty and Support

Warranty:
AIDA Imaging warrants its cameras and items to be free from defects under normal use. With that in mind, we fulfill 2 years of warranty from the date of purchase unless otherwise noted. Please refer to our website for more information at: aidaimaging.com/support

Support:
If you would like additional support or explanation on anything on this manual, please feel free to go to our FAQ page on our website at aidaimaging.com/support.

If you are in need of additional help, or have any
general questions, please feel free to contact us in these various ways:

Telephone: 909.333.7421

Email: Support@aidaimaging.com

Website: aidaimaging.com/support

We are open yearly, Mon-Fri 8A.M. to 5P.M. PST, excluding major U.S.A holidays and events.

Also, keep up to date with firmwares and new releases from AIDA Imaging by signing up for our newsletter, found on our website.

We do showcases on how our customers use our products on our Linkedin. If you are interested in submitting your case, we will happily extend the warranty of your product for another year if all criteria is met for your use case. For more info, please reach out to our marketing team at marketing@aidaimaging.com