



**3G-SDI/HDMI IP
Controllable 10X Optical
Zoom Camera**

HD3G-IPC-MX10



**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

⚠ The camera power voltage is 12V DC, rated at 2A. We suggest you use the original power supply adapter supplied by the factory.

⚠ Please ensure all cables and connections are safe from moisture, corrosive liquid and hazardous conditions.

⚠ Operation temperature range should be from 0°C to 40°C (32°F to 104°F) up to 80% humidity.

⚠ Avoid stress, strong vibrations, and high humidity environments when transporting, storing, or installing. We recommend using the packaging foam when transporting the camera to stop any unnecessary damage to the camera.

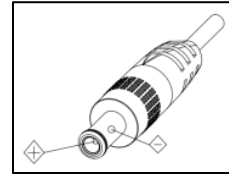
⚠ Do not unscrew, remove, or attempt to open the camera housing or cover. Doing so will result in a breach of warranty contract. Please contact our support team or authorized technicians to deal with problems.

⚠ Do not direct the camera lens towards intensive lights such as the sun. Doing so will damage the imaging sensor on board.

⚠ Use a dry, soft cloth to clean the housing. You may use neutral cleaning

agents for the camera housing. Please use microfiber lens cleaner to wipe the camera lens.

⚠ Power supply polarity is as shown.



*Video quality of the camera may be affected by specific electromagnetic frequencies, please adjust the anti-flicker and electronic shutter speed accordingly.

Box Contents

Please confirm the packing list below of all items provided with (1) purchase of one HD3G-IPC-Mx10

HD3G-IPC-MX10 Camera	1
Power Adapter + Intl. Conversions.	1
PoE+ Injector.	1
Breakout I/O Cable	1
IR Remote Controller	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.

Additional Purchasable Accessories for the HD3G-IPC Series:

CBL-BC12PIN-PWR – This accessory can replace your Bulky breakout cable with a cable dedicated only for the DC12V input. Note that you won't be able to change settings via this breakout cable, so keeping the old breakout cable to change settings is highly recommended. Best for

situations where the cable length needs to be a smaller profile. (USA / CANADA only, Global inquire your nearest AIDA Distributor)

CBL-BC12PIN-3M – This accessory maintains all the AIDA functions of the normal breakout cable, but extends it to 3M long. Perfect if you need need to feed the breakout cable line through tight spaces. (USA / CANADA only, Global inquire your nearest AIDA Distributor)

POE-ADP – This accessory splits PoE+ into power and network, allowing you to directly power and control the HD3G-IPC-MX10 camera over PoE+. Useful in applications where you want to run control and power to the camera with 1 cable, instead of 2. (USA / CANADA only, Global inquire your nearest AIDA Distributor)

You can purchase these at any AIDA authorized reseller / distributor. You can find your nearest reseller at:

aidaimaging.com/where-to-buy

Alternatively, they can also be purchased at our ecommerce shop:

aidaimaging.shop

Features & Product Highlights

The HD3G-IPC-MX10 is a small profile 10X optical zoom camera, with a 49mm thread over the lens to allow for versatile optics. Adding a ND filter lens, or macro zoom lens has never been easier! The ability to also control the camera over IPC makes it perfect for Industrial Applications, Sports, and more.

Versatile Micro POV Camera

The HD3G-IPC-MX10 outputs both HDMI and 3G-SDI simultaneously up to a max 1080p 60fps, giving you multiple options for your workflow. Its small, boxy form factor makes the camera discreet, non-distracting, and practical. Its 10x optical zoom module adds highly sought after autofocus, making production easier and less manual.

Video Performance

The HD3G-IPC-MX10 utilizes the same 1/2.8" Sony Progressive CMOS sensor seen in our IPC series, maximizing the quality of the stream without sacrificing low-light, and budget. With uncompressed video at 4:2:2 color spacing, capturing high quality video for your workflow just got a whole lot better.

49mm Threading

The HD3G-IPC-MX10 comes with a 49mm thread in front of the lens, which enables the user to add a ND filter, or macro lens to support more functions on the camera.

ND filters help filter sunlight, ensuring that images don't get overexposed. Macro lenses allows the camera to be set at a specific distance from a target, and quickly focus on the object at hand. Usually, these lenses come in numbers, which indicate the distance at which the lens should be from the camera.

Audio Input

All the camera's in this series come equipped with a line-in portion to embed audio over the 3G-SDI and HDMI line. (Line Level Audio Source) Getting synchronized audio and video has never been easier!

IPC Functionality

IPC, or I.P. Control allows all the HD3G-IPC series cameras to be controlled via VISCA over IP. Having a native RJ45 port through the cameras gives each camera the ability to be sent commands over the network hassle-free!

Full Parameter Control

Like any AIDA camera, you can fully control any portion of the cameras exposure, white-balance, and camera settings via the OSD menu, RS485, or VISCA over IP. You can directly control your camera using our free [IPC Software](#).

PoE+ Capable

Although the HD3G-IPC-MX10 is not directly PoE+ capable, with every purchase of the camera we throw in a PoE+ injector that you can use to directly power and transmit control over an ethernet cable!

10X Optical Zoom

For your zoom needs, the camera comes equipped with a 10X optical zoom, capable of capturing non-cropped / zoomed video up to 40ft / 13M effectively! With autofocus also built into the module, the potential its use cases are limitless!

Bottom Mounting Solution

The HD3G-IPC-MX10 comes with a standard tripod mount located on the bottom of the camera. For any mounting needs, feel free to search for any 1/4" 20 mounting solutions, as it's a very versatile standard!

Camera's Specs:

Sensor	1/2.8-inch Sony CMOS Sensor
Min. Lux	0.2Lux (day) 0.1 Lux (Night) 0.005 Lux (slow shutter ON)
Color Space	4:2:2 (YCbCr) 10 bit
Built-in 10X Optical Zoom Module Filter may change values	5mm - 47mm f-stop 1.6 - 3.0 HFOV: 60°~8°
Minimum Focus Distance (no filter) Filter may change values	~2in / ~5.08 cm

Video Formats (res/fps)

3G-SDI	1920x1080p (FHD): 60/59.94/50/30/29.97/25/24/23.98 1920x1080i (FHD-i): 60/59.94/50 1280x720p (HD): 60/59.94/50/30/29.97/25/24/23.98
HDMI	1920x1080p (FHD): 60/59.94/50/30/29.97/25/24/23.98 1920x1080i (FHD-i): 60/59.94/50 1280x720p (HD): 60/59.94/50/30/29.97/25/24/23.98

General Specs

Input Voltage	DC12V, optional PoE+ (IEEE802.AT standard)
Power	12VDC (+/- 10%)
Wattage Draw	0.25A, 3 Watt (min) 0.31A, 3.75 Watt (max)
Operating Temperature	32°F~104°F 0°C~42°C (+/- 10%)
Operating Humidity	<80%
Mounting Solution	1/4" 20 Mount (below)

Control Protocols

Control Protocols	RS485, SERIAL VISCA, SONY VISCA, VISCA UDP, SONY VISCA over IP, OSD Menu
Connection Type	RJ45, RS485
Controller	Joystick on I/O Cable. IR Remote Controller PC

Dimensions and Weights

Dimensions	9.5cm x 5.2cm x 5.2cm (3.75in x 2.05in x 2.05in)
Weight	0.4Kg / 0.88 lbs

Installing the Camera

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

Installing the camera on a flat surface (not recommended)

The HD3G-IPC-MX10 has a tiny 1/4" 20 notch at the bottom, making it hard to place on a table. We highly recommend using a tripod or mounting surface to make the camera sit upright.

Installing the camera on a Tripod

The 1/4" 20 mount is located on the bottom notch of the camera. Line up the hole with the tripod mounting surface, and twist the camera in a clockwise direction. If the tripod has a removable mount, it's recommended to remove the mount, screw on the camera, and place the mount back onto the camera. The 1/4" 20 is a versatile mount, so finding solutions online or in-store is easy.



CAD files for Special Installations

We offer 2D CAD files (unfortunately no 3D) to download on our website:

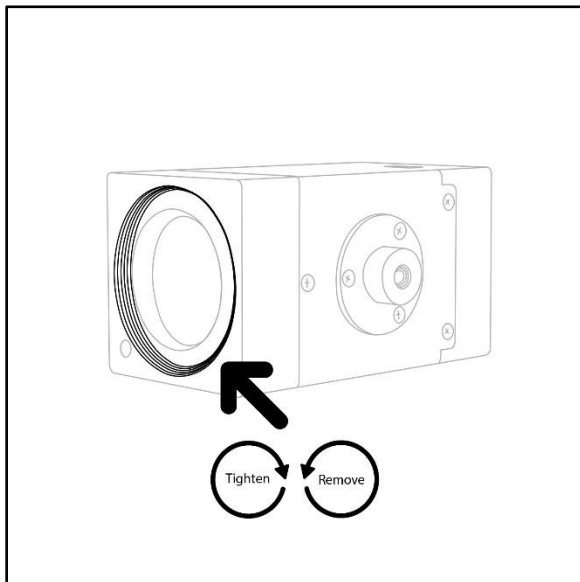
<https://aidaimaging.com/download-tech-sheets/>

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.

Installing a 49mm Filter

Installing a 49mm Filter thread on the camera is very simple! Around the module is a threaded ring that you can screw on a filter.

◇ NOTE: There is a setting in the menu of the camera for macro lenses – please enable that if you plan to use a macro filter lens!



ND Filter Information:

An ND (neutral density) filter cuts down the amount of light hitting the camera sensor without affecting color. It's useful in bright environments where you want to keep your shutter speed and aperture at ideal settings without overexposing the image. In production, it helps maintain a more cinematic look by letting

you control depth of field and motion blur, even in daylight.

Macro Filter Information:

A macro filter lets the camera focus on objects at a much closer distance than it normally can. It's great for capturing detailed shots of small items—like textures, labels, or components—without needing a dedicated macro lens. In production, it's a quick way to get tight, sharp close-ups without changing your whole setup.

Usually, on each macro filter is a number. That represents the diopter value, which gives you the distance in meters at which you should place the camera from the object. Some common examples are:

- +1 → focuses at 1 meter
- +2 → focuses at 0.5 meters
- +4 → focuses at 0.25 meters
- +10 → focuses at 0.1 meters (10 cm)

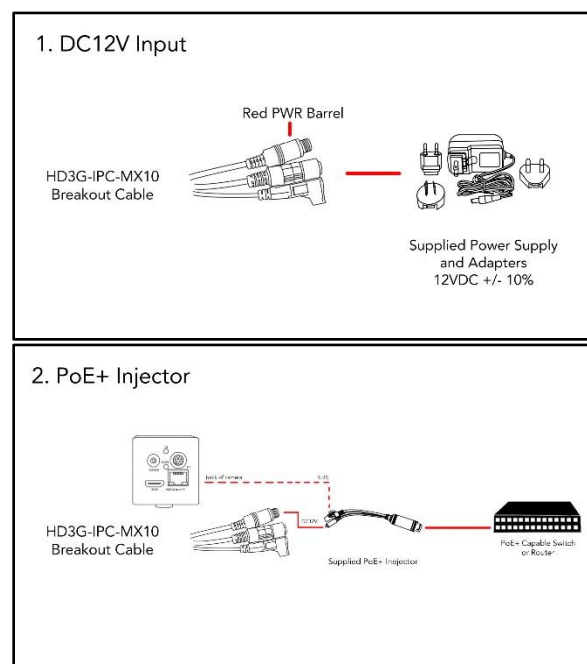
Purchasing Information:

Currently at this time, AIDA doesn't offer any solutions. We will update this when we do. You can purchase these filter kits at your favorite proAV store, online e-shops, or amazon. You can also google 49mm filters which will lead you to some filters to buy. 49mm is quite common, so you shouldn't have problems finding some.

Quick Start

Connecting the 3G-SDI Output

To get your SDI-IPC camera running, please provide power using the recommended power supply or PoE+ injector that came with the camera.



Give the camera 1 minute to boot up initially. Sometimes, the camera may load up faster.

Next, securely connect a 3G-SDI cable to the 3G-SDI connector on the back of the camera. You will then want to connect the other end of the 3G-SDI cable into your ingest.

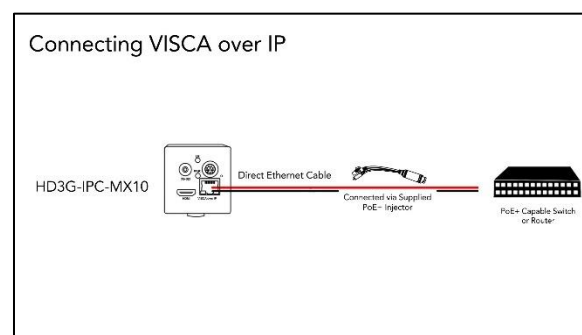
Default resolution of these outputs is 1080p 30fps. If your ingest does not support that, please use a field monitor

or capture card that supports the resolution, change it, and swap it back. Alternatively, you could send a VISCA command via IP or serial to set the resolution to your desired setting. The camera is fully functional after this!

OPTIONAL: Connecting VISCA over IP

The SDI-IPC cameras do not output via IP, and do not have a web UI. You will want to download our free IPC software (Windows only) at [IPC Software](#).

You will want to connect a RJ45 ethernet cable from your camera, to the network to get started. The RJ45 will either connect to the back of the camera's RJ45 port, or the RJ45 port located on the pigtail of the camera.



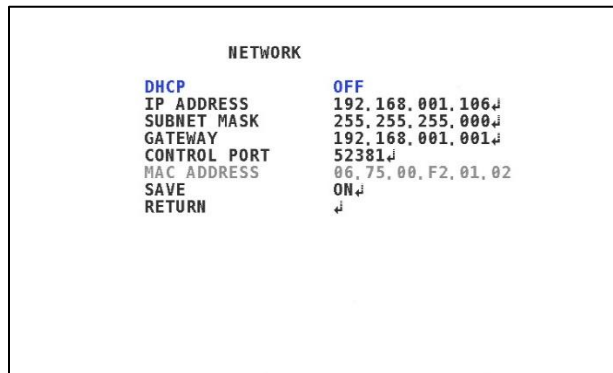
Once connected, using a computer or device connected on the network, you can send VISCA commands to the camera as long as its within the same IP address. Natively, the SDI-IPC cameras are set at the IP of:

192.168.1.188

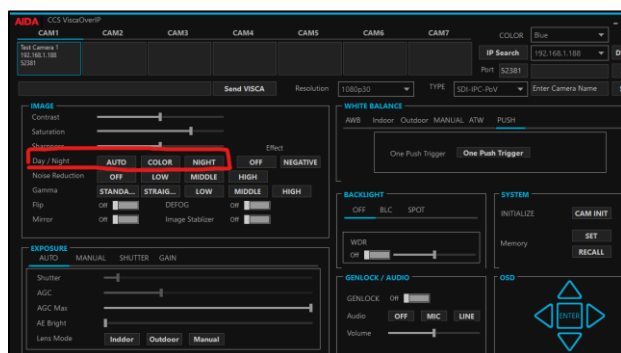
You can change this by entering the OSD menu of the camera using the 3G-SDI/HDMI image. Head to Settings, Network, and the ability to change the IP address or turn on DHCP are available.

each camera to not conflict with one another. More will be mentioned in the networking section of the manual.

Some example network settings you can change are below:



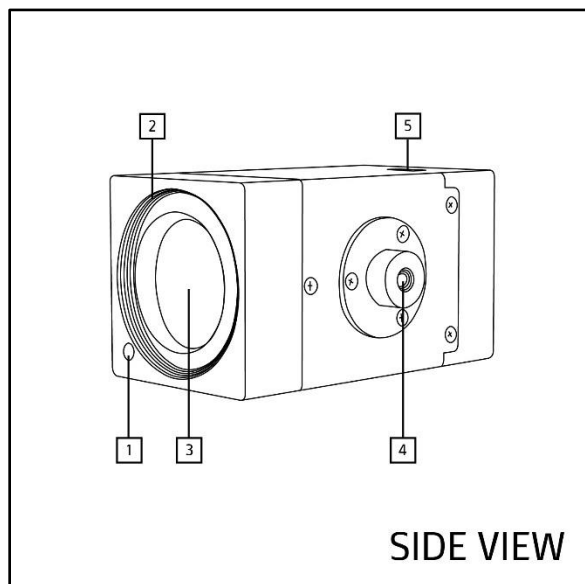
One of the best ways to test if a proper connection is made is using the day/night command. On the CCS-IPC program, after some setup if you click NIGHT mode with a proper connection, the image of your camera should turn black/white. Clicking color again should revert it back.



Once that is done, you can now control the camera using VISCA over IP. Do note that if you have multiple cameras, you will need to change the IP address of

Camera Parts

HD3G-IPC-MX10 Side



1. IR Sensor

The IR Sensor is responsible for taking in the IR remote commander inputs. Make sure this is in line of sight when using the controller.

2. 49mm Lens Thread

This portion of the camera is where you would place an optional 49mm lens thread. This threading is very common, and you can easily find lenses online searching 49mm filters.

3. 10X Zoom Module

This is the camera's zoom module. Ensure that the lens is clear and unobstructed from any debris or objects.

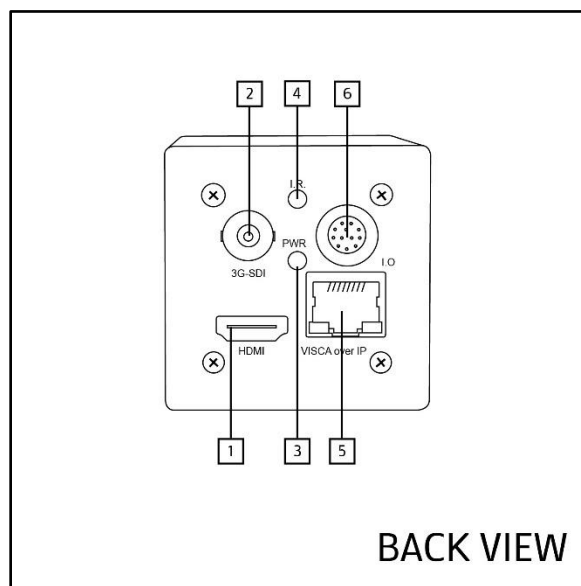
4. 1/4" 20 Mounting Hole

This is the mounting hole for the HD3G-IPC-MX10.

5. SVC Port

This service port is used when doing firmware upgrades. To find the latest upgrades, please head over to our [website](#).

HD3G-IPC-MX10 Back



1. HDMI Input

This is the HDMI output of the camera.

2. 3G-SDI Output

This is the 3G-SDI output of the camera.

3. PWR Indicator

This LED lets you know if the camera is ON and accepting power.

4. I.R. Sensor

This is the back IR sensor responsible for taking in IR remote commander inputs. Make sure this is in line of sight when using the controller.

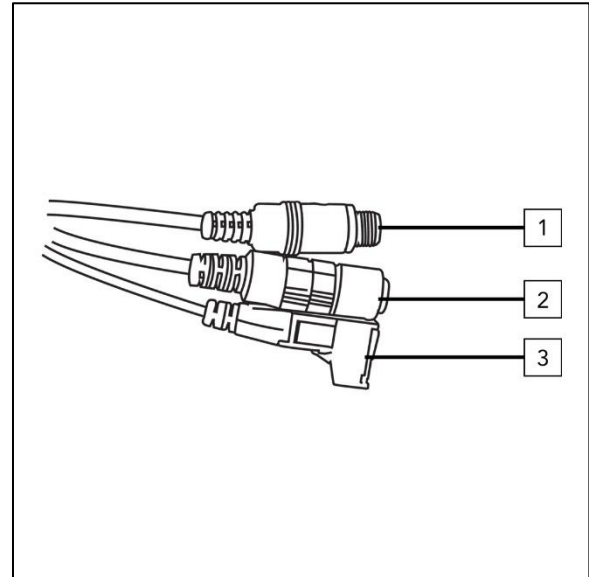
5. RJ45 Input

This is the VISCA over IP input. This will give you access to controlling the camera over network.

6. I.O Cable

This is where you connect the I.O cable to the camera. Line up the red lines on the cable and camera side for easier connecting.

HD3G-IPC-MX10 I/O



1. DC12V Input

The red barrel is the DC12V input, to be used with the supplied power adapter or PoE+ injector. Remember that power should be within the 12V+/- (10%) tolerance range.

2. 3.5mm Line Input

If you want to embed audio over the SDI / HDMI input, you can insert your line in microphone output into here.

Microphones will require pre-amps if not at line level.

3. RS485 Connection

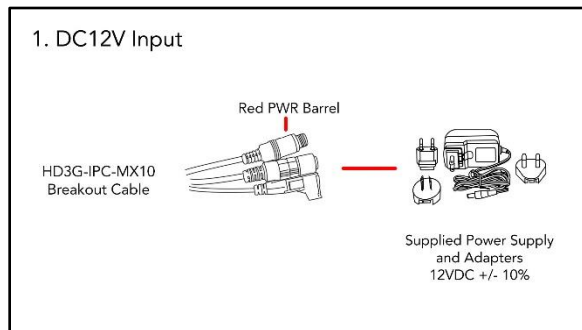
To use RS485 serial connection, the green terminal block at the end of the I/O cable can be used to communicate serial VISCA to the camera.

Connecting and Operating

Powering the Camera

Connecting to the supplied DC12V power supply

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



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

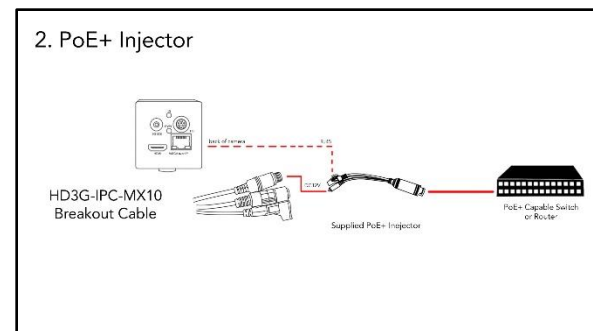
2 Fasten the barrel portion of the supplied factory adapter into the red barrel of either the I/O adapter, or pigtail of the camera.

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

aidaimaging.shop to purchase a replacement.

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

Every purchase comes with a PoE+ injector, which you can use to make the camera PoE+ adaptable. Please refer to the power supply of the switch you use for more info on power and wattage.



1 Use a Cat5e or better patch cable to connect to a PoE+ compliant switch or router.

2 Fasten the PoE+ injector's male barrel into the female red barrel of the I/O adapter or pigtail. Next, fasten the male RJ45 portion into the back of the camera, or pigtail RJ45 of the camera.

3 Lastly, insert the male Ethernet connection going from the PoE+ switch into the female adapter of the PoE+ injector.

⚠ If the camera does not turn on, please check the PoE+ injector to see if there is a LED light lit up. If it is lit up, then power is being processed through the injector.

⚠ If you think the PoE+ injector is causing an issue, try swapping it with another one (if purchased more than 2 units), or purchase one from our store at aidaimaging.shop.

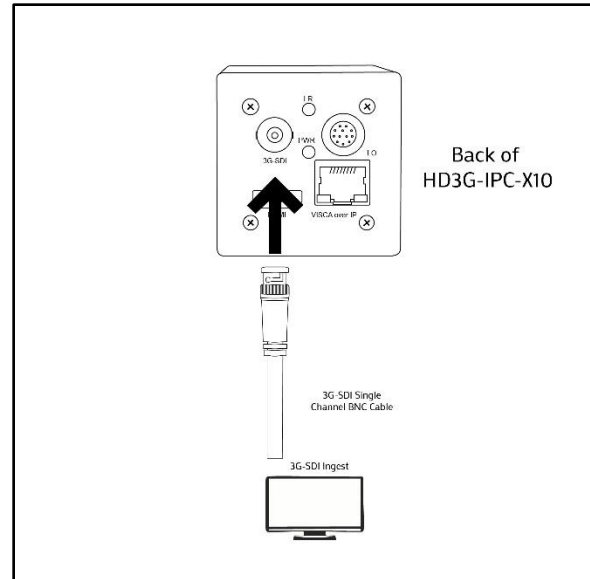
◇ NOTE: In some cases, PoE can be known to power the camera (if the wattage exceeds the 18+ initial draw.) We recommend PoE+ as it's the most reliable with the adapter.

Connecting to a Ingest

Connecting to an SDI Ingest

Easily connect to a field monitor, SDI broadcast equipment, or adapter by securely connecting the SDI port to the ingest.

1 Securely fasten a 3G-SDI cable to the output of the camera, and securely fasten the other end to your ingest.

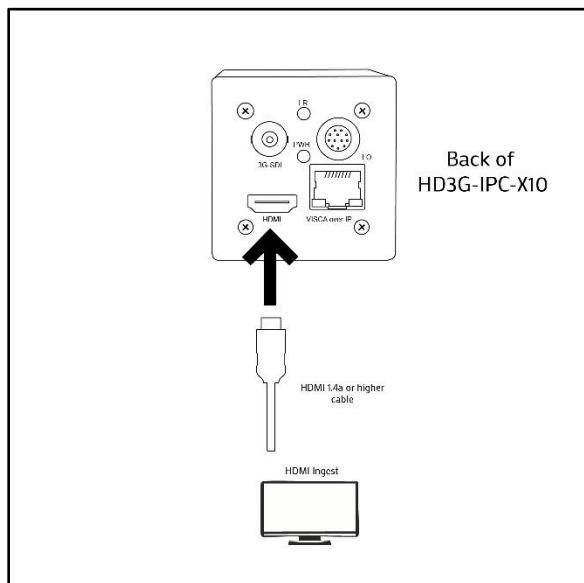


◇ NOTE: Some SDI monitoring equipment will display a “out of range” or blank image. This is most likely due to the incorrect resolution between the camera and equipment. The cameras are default at 1080p 30fps. If you need to change it, we recommend plugging it into a device that can read all resolutions, or using VISCA over IP to change the resolution of the camera if you don't have a device that can connect.

Connecting to an HDMI Ingest

Connect to a HDMI supported monitor, TV, or capture device using the HDMI output of the camera.

- 1 Securely fasten a HDMI cable to the output of the camera. Insert the other end of the HDMI cable into your HDMI ingest.



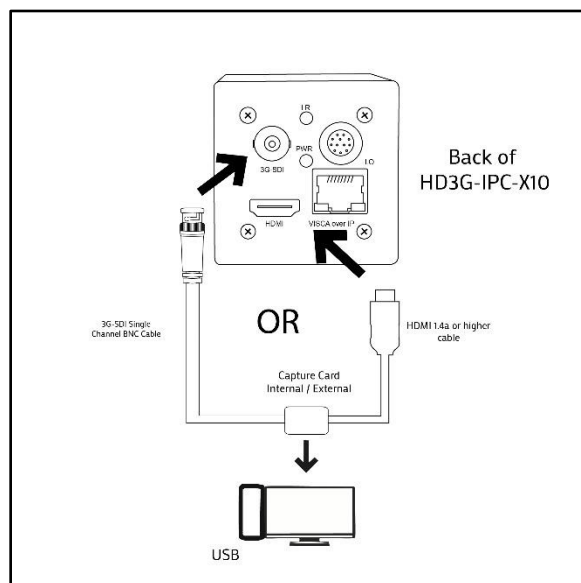
◆ NOTE: Some HDMI monitoring equipment will display a “out of range” or blank image. This is most likely due to the incorrect resolution between the camera and equipment. The cameras are default at 1080p 30fps. If you need to change it, we recommend plugging it into a device that can read all resolutions, or using VISCA over IP to change the resolution of the camera if you don’t have a device that can connect.

Connecting to a Computer or Laptop via SDI / HDMI

Laptops and Computers don’t directly ingest video. You will need an 3G-SDI or HDMI to USB adapter. (sold by various retailers)

- 1 Connect desired cable to the output on the back of the camera. Plug the other end into your capture card.

- 2 Follow the instructions from your capture card and plug into your computer / laptop.



◆ NOTE: Not all capture cards are built the same. Please ensure you have a capture card that matches your production needs, such as HD, 60fps, etc.

Connecting an Ethernet Cable for VISCA over IP

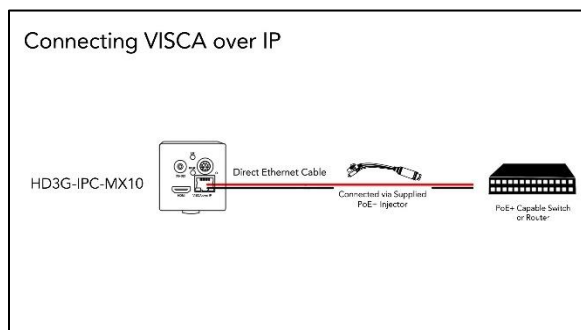
To utilize VISCA over IP, an ethernet cable establishing connection to your switch or router is required.

1 Connect a ethernet cable to the back of the camera.

2 Connect the other end of the Ethernet cable back into your designated switch, network or router.

◇ NOTE: To avoid packet loss and communication errors, we recommend keeping these VISCA over IP devices on a separate network from your internet. This is not required, but can be helpful for situations where the cameras are having a hard time with commands.

◇ NOTE: The default VISCA over IP address of the cameras are 192.168.1.188. If you want to connect multiple of these, you would need to set them up in the OSD menu of the camera.

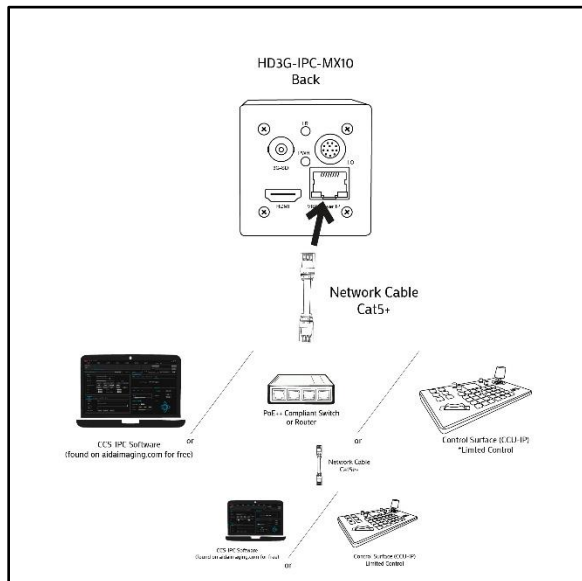


Connecting to a Controller

The HD3G-IPC-MX10 can be controlled via the RS485 and the RJ45 port on the cameras. The camera supports both VISCA Serial, and VISCA over IP (UDP).

Connecting to a VISCA over IP device

The main feature of this camera allows for easier setup of VISCA over IP cameras for a micro-POV camera.



1 You can directly connect a ethernet cable to the back of the camera to a computer, control surface, or switch/router to get VISCA over IP running. You could also connect to other devices on the same network using a network switch.

2 Once you are connected, ensure that the cameras are on the same network as the devices. The default IP of the HD3G-IPC-MX10 will be 192.168.1.188. If you want to change the IP address of the camera, please visit the OSD options under settings -> network to change any of these settings.

3 When connecting for control, the following settings usually work:

Communication / Type: VISCA UDP, SONY VISCA

IP Address – IP Address of your camera.

VISCA port Number: 52381

You can change any of these settings in the web UI of the camera.

◇ NOTE: Majority of the time, errors in connection are usually because the IP of the devices are not in the same range. Ensure that the first 3 triplets match the cameras, with the last triplet being a different number to make a unique network ID.

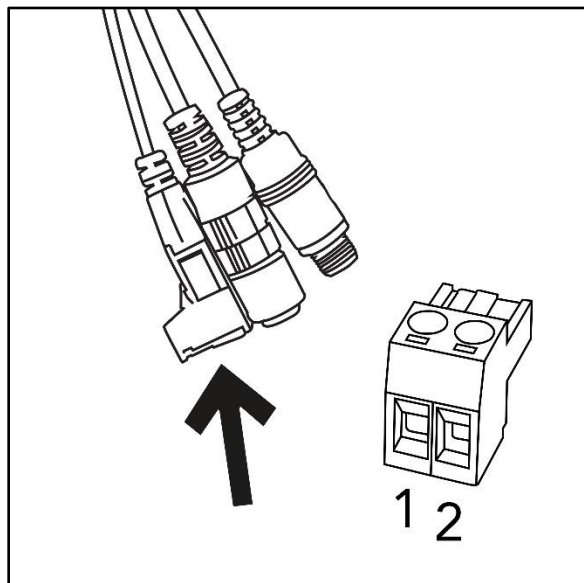
Ex:

Camera – **192.168.1.188**

Controller / PC – **192.168.1.(2-254)**

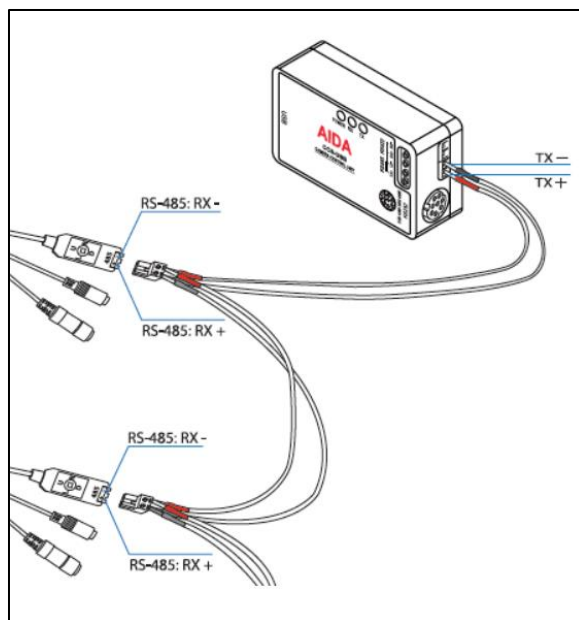
Connecting to a RS485 device

The IPC series cameras can connect to the traditional RS485 workflows if necessary! Each I/O cable or pigtail comes with a green RS485 terminal block you can use to communicate serial Visca.



1 For RS485 control, there are only 2 ports – the TX A+, and TX B- (we will refer to them as +/-.)

2 Connection to these ports will require conductive wire, such as spliced ethernet wire, or fine copper wire. The guide to connecting these to devices (Such as our CCS-USB) will require a match between the +/- and -/- of the devices.



3 Once connected, you can change the settings of the serial settings on the camera via the OSD menu, where you can find the baudrate, address ID, etc.

◇ NOTE: Serial VISCA requires a bit more attention, as the baudrate, address ID, and system settings for most devices need to match. Double check wiring, and when in doubt, just flip the wires! You got a 50/50 chance anyway.. 😊

Using the IR Controller

To operate the camera, you can simply use the IR remote control that comes with the camera to get the basic functions out of the camera! No connections required.
(2 AA battery required, not supplied)

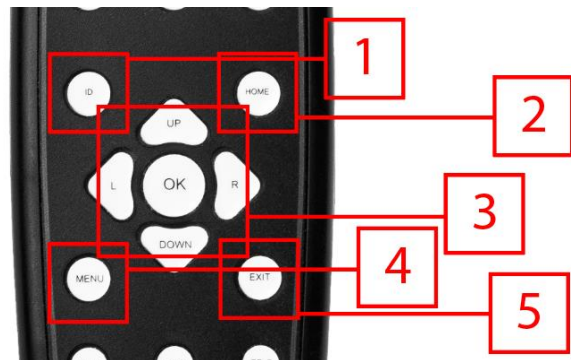


To operate the camera, you can simply use the IR remote control that comes with the camera to get the basic functions out of the camera! No connections required.



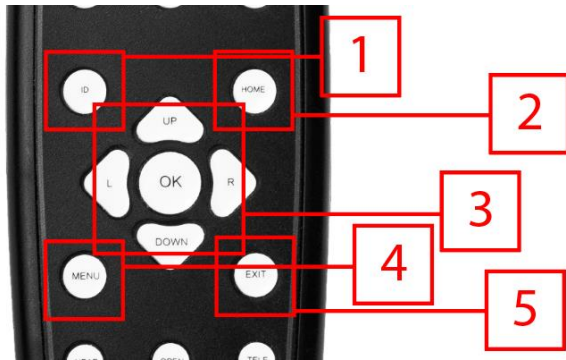
1. Power Button

Wakes or puts the camera on standby.



1. ID Button

Changes the IR ID of the camera. Perfect when there are multiple of the same camera. To change, press the number you would like to set the frequency to, and then hold the ID button.



2. Home Button

Resets the camera to the home position, and refreshes the video feed.

3. UP/L/R/DOWN/OK

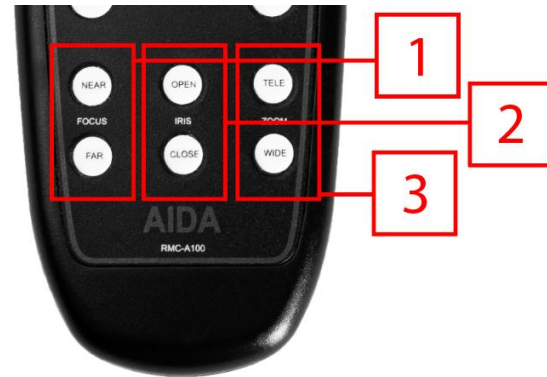
This navigation section is useful when entering the OSD menu.

4. MENU

This button enters the OSD of the camera. Use the directional pads to navigate through said menu.

5. Exit

Use this button to exit the OSD menu.



1. FOCUS

If the focus is set to manual, NEAR and FAR will allow you to adjust the focus.

2. IRIS

In IRIS priority exposure, these buttons will allow you to open or close the IRIS via the module's steps.

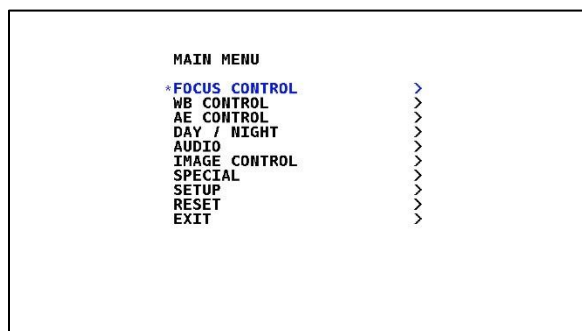
3. ZOOM

Last but not least, the zoom buttons allowing you to zoom in or out with the camera.

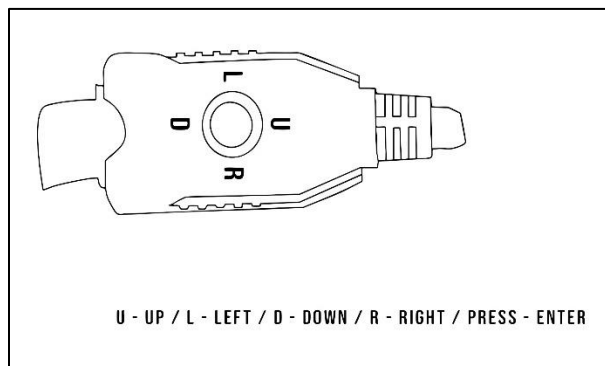
OSD Menu Operation

The OSD menu operation is the best way to fully change all the settings on your camera. Here we will explore the options you have at your disposal to get the most out of your AIDA camera!

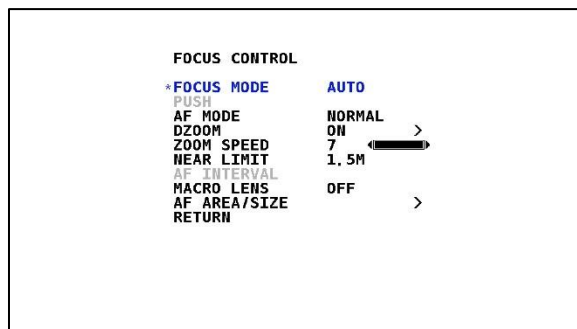
If you have any questions or need more info on any of these settings, please feel free to message our support team.



Using the joystick attached on the I/O cable, or pigtail of the camera, you can navigate through the menu using the U, D, L, R movements, and click of the joystick in neutral position.

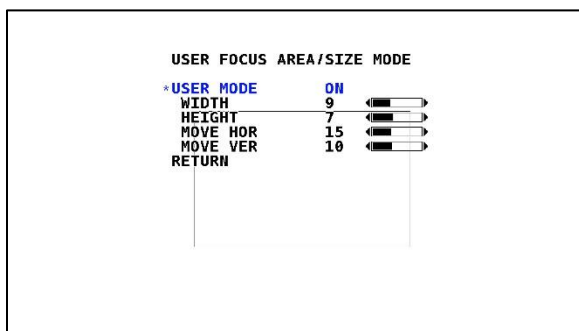


Focus Control



- **FOCUS MODE:** Changes the Focus from Auto or Manual Mode.
- **PUSH:** When in manual mode, push will trigger the module to focus in the AF area defined. (default center of image)
- **AF MODE:** Change between Normal, Trigger, and Interval timed zooms.
- **DZOOM:** Enable Digital zoom to digitally crop past 10x optical zoom.
- **ZOOM SPEED:** Change the speed at which the module zooms in and out.
- **NEAR LIMIT:** Change the proper distance between the glass of the camera, and the object for optimal focus.
- **AF INTERVAL:** If AF trigger mode is selected, then this interval will control how often the zoom module will push for focus.
- **MACRO LENS:** If you have a macro lens installed on the 49mm thread, turn this option ON to optimize the lens.

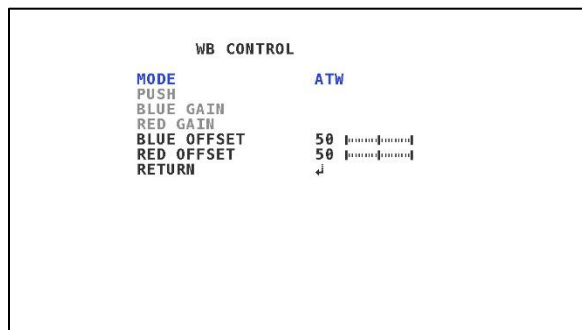
Cont.



USER FOCUS AREA/SIZE MODE

- **USER MODE:** Allows you to choose between
- **WIDTH:** Change the width of the focus box, making it longer or shorter.
- **HEIGHT:** Change the height of the focus box, making it taller or shorter.
- **MOVE HOR:** Move the focus box on the X axis of the image.
- **MOVE VER:** Move the focus box on the Y axis of the image.

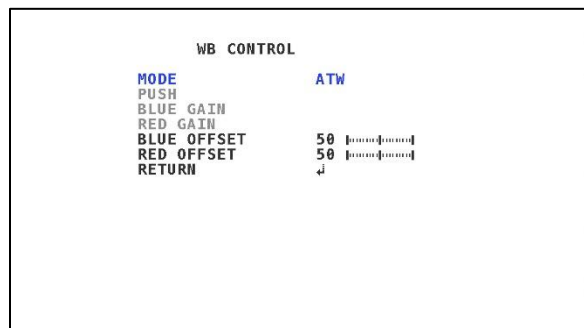
WB Control (White Balance)



- **Mode:** Changes in between the white balance modes of the camera.

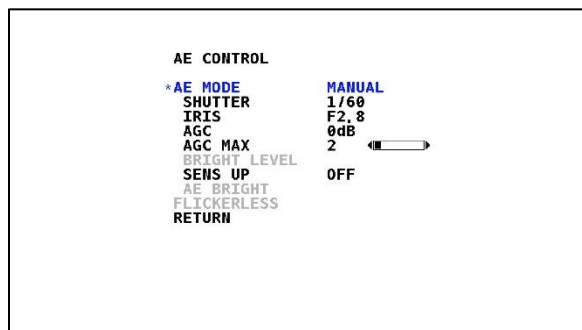
- **ATW:** Autotracking allows the temperatures to rise up to the 11000K mark.
- **AWB:** Auto white balance allows temperatures to rise up to the 7000K mark.
- **PUSH:** A calibration setting for One Push mode. Hold a blank white piece of paper in front of the lens (within focus distance) and click this button. Best option for shading multi-cameras.
- **INDOOR:** Keeps the white balance cooler (higher K)
- **OUTDOOR:** Keeps the white balance warmer (lower K)
- **MANUAL:** Manually adjust the white balance red and blue.
- **PUSH:** Push becomes available in PUSH WB mode. Use when ready to calibrate the white balance.
- **BLUE GAIN:** Change the blue gain of the white balance when MANAUL mode is selected.

Cont.



- **RED GAIN:** Change the red gain of the white balance when MANAUL mode is selected.
- **BLUE OFFSET:** When AWB is selected, adjust the blue coloring if the image appears to be slightly off.
- **RED OFFSET:** When AWB is selected, adjust the red coloring if the image appears to be slightly off.
- **RETURN:** Head back to the main menu.

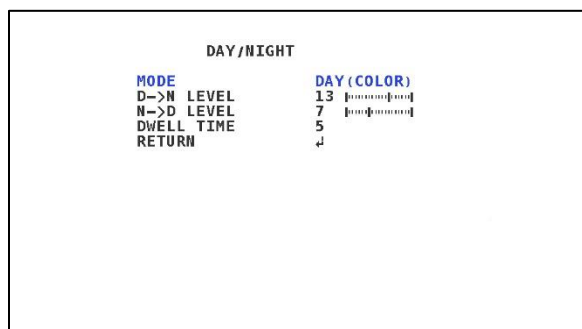
AE Control (AutoExposure)



- **AE Mode:** Changes in between the AE modes of the camera.
 - o **AUTO:** Automatically adjusts the exposure no matter the lighting condition.

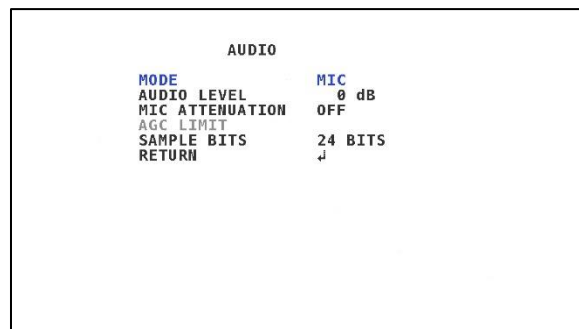
- o **MANUAL:** Manually adjust the camera's exposure, such as shutter, AGC and brightness.
- o **SHUT FIX:** Manually adjust the electronic shutter speed, max AGC and brightness.
- **SHUTTER:** Depending on the mode, the shutter speed can be adjusted. Auto gives you a deblur option, while manual and shutter fix allow you to manually set the electronic shutter speed.
- **IRIS:** Adjust the Iris of the lens by directly changing the F-stop of the module.
- **AGC:** AutoGainControl helps assist in adding light to darker areas on scene. By raising this, you will be brightening the darker portions of the scene.
- **AGC MAX:** AGC Max sets a top limit on how much AGC can be added to a scene. Perfect for when the AGC over-assists, you can keep a threshold just in case.
- **BRIGHT LEVEL:** Adjust the brightness prio of the camera.
- **SENS UP:** Sensitivity up allows the sensor to increase light intake, but sacrifices frame capture in scene.
- **AE BRIGHT:** Adjusts the overall brightness of the scene, regardless of how well-lit the target is.
- **FLICKERLESS:** When in auto mode, adjust the flicker rate to get rid of rolling bars.
- **RETURN:** Head back to the main menu.

Day/Night Settings



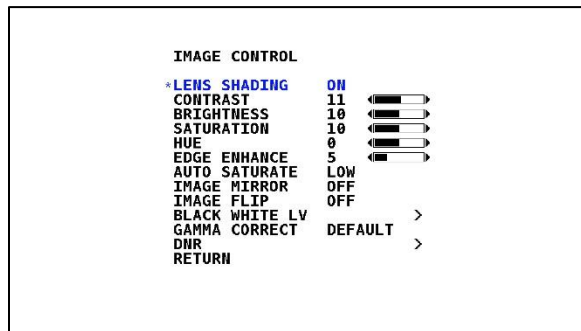
- **MODE:** Swap between the camera's day and night function. Activating night removes the IR filter, and increases IR receptivity in the dark.
 - o **DAY (COLOR):** Normal setting amongst operation of the camera. IR filter is activated in this mode.
 - o **NIGHT(B&W):** Toggles the IR filter out so the camera because sensitive to IR lighting. This effectively removes color from the image.
 - o **AUTO:** Depending on the amount of light the sensor captures, this will automatically toggle the IR filter without having to change settings.
- **D->N LEVEL:** Change the change amount of sensitivity to light it requires to swap from day to night.
- **N->D LEVEL:** Change the change amount of sensitivity to light it requires to swap from night to day.
- **DWELL TIME:** Change the amount of time before the initiation of transition is done. The higher the dwell time, the longer it takes to swap between the modes.
- **RETURN:** Head back to the main menu.

Audio Settings



- **MODE:** Toggle on or off the camera's audio embedment feature.
 - o **OFF:** Audio embedment is off
 - o **MIC:** Use if the audio you are using is a microphone.
 - o **LINE:** Use if the audio you are using is at line level.
- **AUDIO LEVEL:** Increase or decrease the input's source audio. We recommend not increasing too high as unwanted noise may accumulate / be produced.
- **MIC ATTENUATION:** Reduces the intensity of the audio signal over embedment.
- **AGC LIMIT:** Sets a threshold for how much gain is added to the signal, to stop from producing unwanted noise.
- **SAMPLE BITS:** Change the sample audio size up to 32 bit.
- **RETURN:** Head back to the main menu.

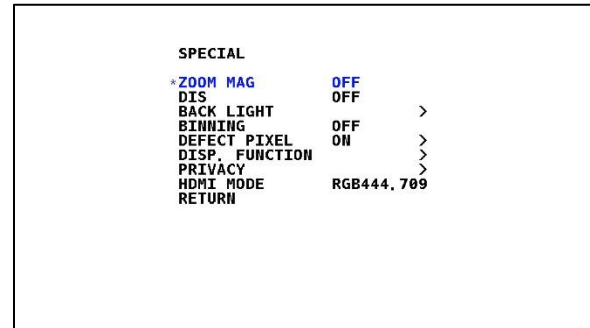
Image Control



- **LENS SHADING:** Adds a slight lens shade around the edges of the image.
- **CONTRAST:** Adjust the contrast of the overall image.
- **BRIGHTNESS:** Adjust the brightness of the overall image.
- **SATURATION:** Adjust the saturation of the overall image.
- **HUE:** Adjust the overall color hue of the image.
- **EDGE ENHANCE:** Adjust the sharpness of the overall image
- **AUTO SATURATE:** Automatically have the camera adjust the saturation by level.
- **IMAGE MIRROR:** Flip the image on the Y Axis.
- **IMAGE FLIP:** Flip the image on the X Axis.
- **BLACK WHITE LEVEL:** Adjust the black or white level of the camera by increasing the appearance of each respective color.
- **GAMMA CORRECT:** Adjust the gamma correction with this setting.

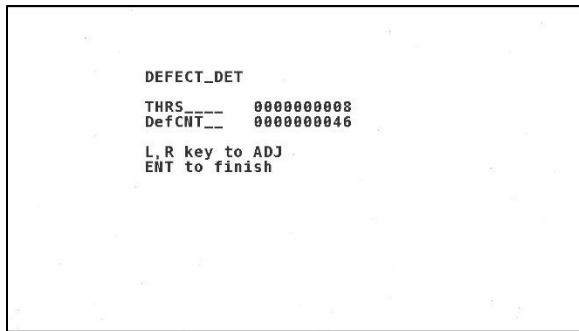
- **DNR:** Digital noise reductions helps reduce noise within the image.
- **RETURN:** Head back to the main menu.

Special



- **ZOOM MAG:** Shows the zoom magnification on screen.
- **DIS:** Digital Image Stabilization allows the camera to slightly crop to lessen the impact of vibrations capture on video.
- **BACK LIGHT:** Gives options to help improve scene quality between the subject and background being captured.
- **BINNING:** Clump pixels together to increase sensitivity to light in dark applications.
- **DEFECT PIXEL:** This option helps remove dead/stuck pixels on screen. By entering it, you will be met with the following screen:

Cont.

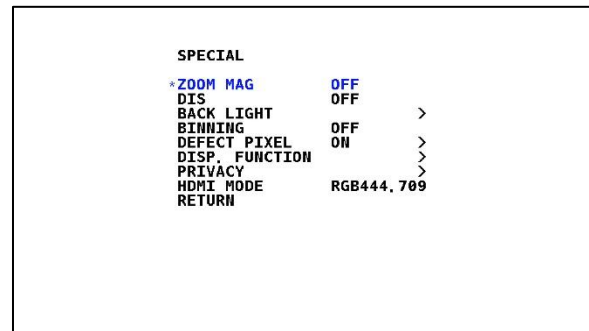


First, you will start off by completely blacking out the image on the camera (covering the camera lens, or blocking any light from hitting the lens)

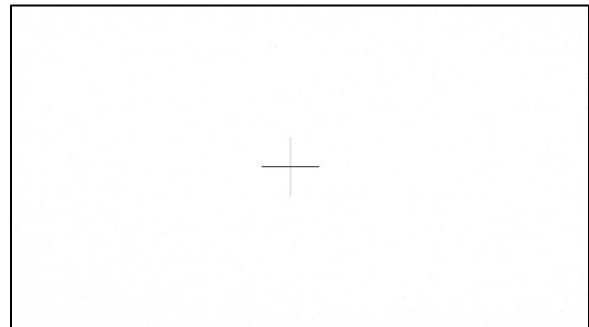
Next, take a look at DefCNT - this is the amount of pixels that are “defective” or blinking in a sense.

You will then click R on the joystick to raise the THRS (threshold.) Raising this number will eventually get rid of the majority of defective pixels on screen. Once done, you just need to press the joystick once or twice to get out of the menu.

◇ NOTE: Once you set this setting, if you enter the defect pixel setting, it will revert back to the original setting.



- **DISP Function:** Adjust certain image effects such as freeze, contrast, saturation, and edge in these settings.
- **PRIVACY:** Allows you to set up privacy bars and shapes to block out certain information. These privacy shapes can be manipulated by size, color and placement. Some creative examples that privacy shapes can create our crosshairs in the center of screen.

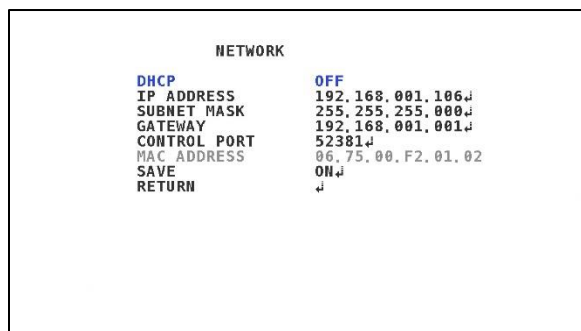


- **HDMI MODE:** Cycle through some HDMI modes for compatibility with different monitors or ingests.
- **RETURN:** Head back to the main menu.

Setup



- **CAM TITLE:** Adds a small bar at the top of the screen that shows the address ID.
- **COMMUNICATION:** Adjust the camera ID and baudrate for serial VISCA here.
- **SYSTEM INFO:** Gives you the model name and software version of the camera.
- **NETWORK:** Adjust the camera's IP and VISCA over IP information here.



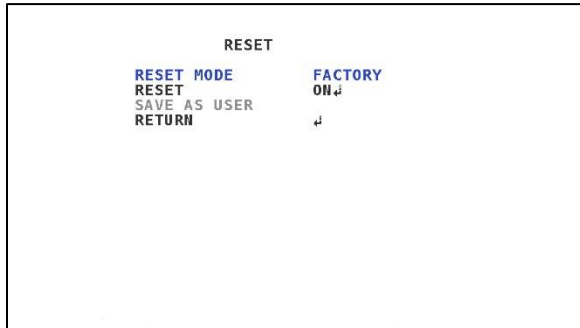
- **DHCP:** Enable DHCP services, to automatically assign a IP Address to the camera
- **IP ADDRESS:** Change the IP address of the camera here. By entering this selection, you can use the UDLR to change each number, and head back to this menu by clicking once.

- **SUBNET MASK:** Adjust the subnet mask of the camera here.
- **GATEWAY:** Adjust the gateway of the camera here.
- **CONTROL PORT:** Adjust the VISCA over IP port for the camera here.
- **MAC ADDRESS:** You cannot change the mac address of the camera, but you can view it here.
- **RETURN:** Head back to the SETUP menu.



- **OUTPUT FORMAT:** Scroll left and right through the formats to choose the desired output you want. Clicking once will confirm the setting, which will then tell you to confirm the setting.
- **RETURN:** Head back to the main menu.

Reset (Factory Reset)



- **RESET MODE:** Choose between factory and user reset.
- **RESET:** Choose if you want to reset the camera. There is no confirmation, so clicking so will reset right away.
- **SAVE AS USER:** If USER reset is saved, the desired profile saved on the camera will be recalled to those specific settings.
- **RETURN:** Head back to the main menu.

Setting up the CCS-IPC

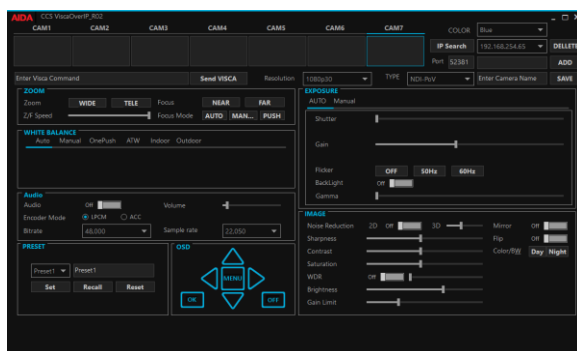
Software

With VISCA over IP, you make controlling the camera easier than RS485! To commemorate such a feat, we made a free software available via the Microsoft store (sorry Apple users 😞).

[IPC Software Link Here:](#)

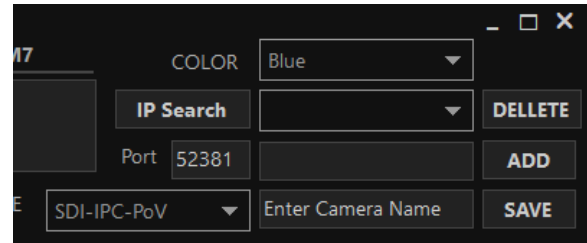
For setup – please refer to page 24 on how to connect your camera to your network to get VISCA over IP started.

When opening the software for the first time, you will be met with a plethora of features:



The first step to setting up a camera is to select which CAM you want to get started with. Usually, a normal person would click Camera 1, but feel free to click whichever camera you want to set up first.

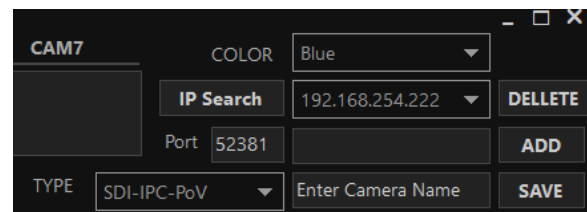
Once highlighted, you will look at the top right section.



Ignoring color, IP search is an automatic way to help find AIDA cameras on the network. Once you click it, it will scan the network for AIDA cameras. If you set up everything properly, then IP addresses will populate here and make your job easier!

If you don't, don't feel bad! You can enter the manual IP next to the ADD section.

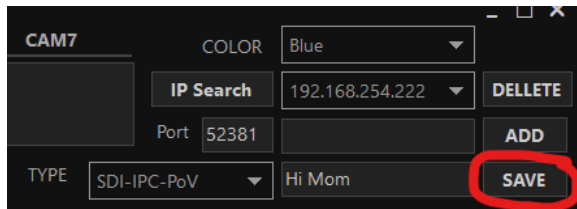
Once your IP is loaded up, you will then check the next two slots: PORT and TYPE:



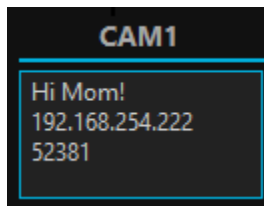
Port should be the standard VISCA over IP port AIDA uses, 52381. Type refers to the type of AIDA Camera you are trying to use. Since this is a SDI-IPC guide, you will

most likely have a SDI-IPC camera, so SDI-IPC-POV is the type to choose.

Once you set those two settings, all that's left to do is set up a name and save the setting!



After clicking save, you will notice whichever camera you chose to save on should now have settings populated:



Congrats! You connected to your first camera. The best way to test connectivity arguably is using the NIGHT / COLOR effect. By toggling between these two settings, your camera should go in and out of color.

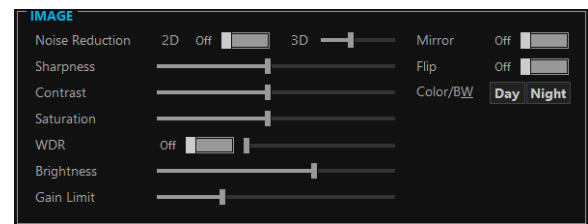


If not, double check your connection, IP addresses, and connections to the camera. Its most likely something was inputted correctly!

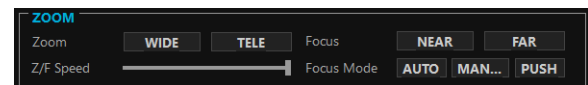
If you have multiple cameras, this is where you set them up individually. Don't forget to choose a different CAM, or you may overwrite your settings on another camera. This software allows you to only control up to 7 cameras, so choose wisely!

Touring the CCS-IPC Software

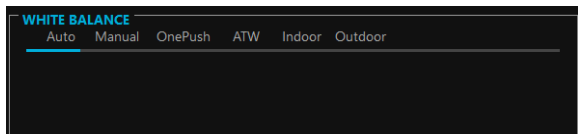
With the CCS-IPC software, you almost all settings from the OSD in the software.



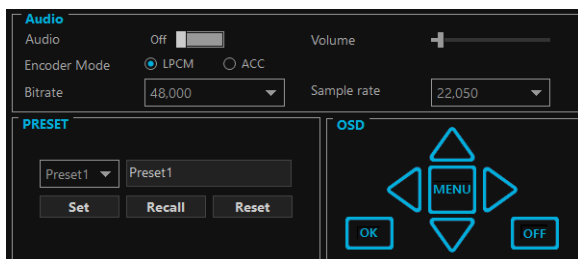
Under image, you have all the settings you find in image control of the camera.



Under zoom, you get the options to change focus, zoom in / out, speed, and focus options.



Choose a white balance on the fly using the white balance sliders!

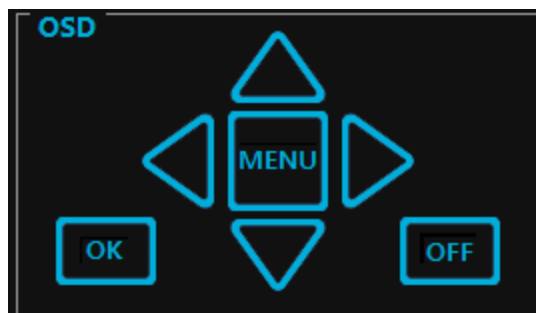


Here you can adjust the Audio of the camera, along with the presets of the camera.



Resolution allows you to change the resolution of the camera easily! Note that some resolutions aren't available for all cameras, so don't use one that's not available to your camera!

If you see something you want to control on the OSD, but can't get into the menu you can use the OSD directional pads to navigate the menu just like you would using the joystick!



You also have access to CAM INIT (factory reset) and setting and recalling the camera's status. Do note that SET and RECALL are PC based, so if you use this program on another computer but same camera, those saved settings WONT be saved.

CAM1	CAM2	CAM3	CAM4
Hi Mom! 192.168.254.222 52381	AIDA rules! 192.168.254.70 52381	Is it your? 192.168.254.87 52381	Or you're? 192.168.254.88 52381
Enter Visca Command			Send VISCA

Lastly, if you want to enter a specific VISCA command not found, then you can enter it in the line below.

VISCA Protocol

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

Troubleshooting

How do I tell if my camera is on?

The best way to tell if the HD3G-IPC-MX10 camera is on is via the PWR indicator on the back of the camera. If it is lit up red, then power is successfully being transmitted to the camera.

I'm not getting any video out of any outputs.

Since the camera comes default at 1080p 30fps, some monitors or devices that are set to a different resolution / framerate will not display the video. The best option is to change the ingest resolution to match the camera first, then change it to your desired setting. If that doesn't work, you can always use VISCA over IP to connect to the camera and change the resolution via our CCS-IPC program!

I can't connect my camera to my network.

If you are using VISCA over IP, the majority of issues that pop up are networking. Since the cameras come at the 192.168.1.188 IP address, if you connect multiple cameras at the same time to your network, they will all be fighting for that IP address. Its best if you connect one at a time, change each individually, and then set up your network.

If set up properly, you should be able to ping each address of the camera (since it doesn't have a web UI.) You can then use the CCS-IPC to control the cameras.

Can this camera be powered on forever?

Our cameras are stress test for extended periods of time before being sent out!

Theoretically under perfect conditions, yes the camera can stay on forever. We recommend power cycling the camera once in awhile, as electronics do tend to glitch when on for long periods of time. We also cant promise that extreme conditions like power outages, voltage surges, and other dangers wont effect the camera, so its best to practice turning off the camera when you can!

The IR Remote Controller is not controlling the camera?

Firstly, make sure that the remote controller has 2 AA batteries, as it does not come supplied with it!

Next, make sure you are in front of the IR sensor (located on the front or back of the camera) If this is not in line of sight of the remote, this will not work!

Lastly, if you are correct about the first 2, the IR address of the camera might be different. You can fix that by visiting page 19 of this manual and checking how to change the ID of the camera. Try setting it back to 1, and seeing if that helps! If all else fails, contact our support team please.

Is this model weatherproof?

Unfortunately, the HD3G-IPC-MX10 is not weatherproof. If you want to use this outside, we recommend you getting a IP65 enclosure that stops water from getting to it. There are plenty of companies (such as Sony!) that create enclosures for cameras.

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