Manuals+ — User Manuals Simplified.

IRIS A118 Visible Spectrum PTZ Cameras User Guide

Contents

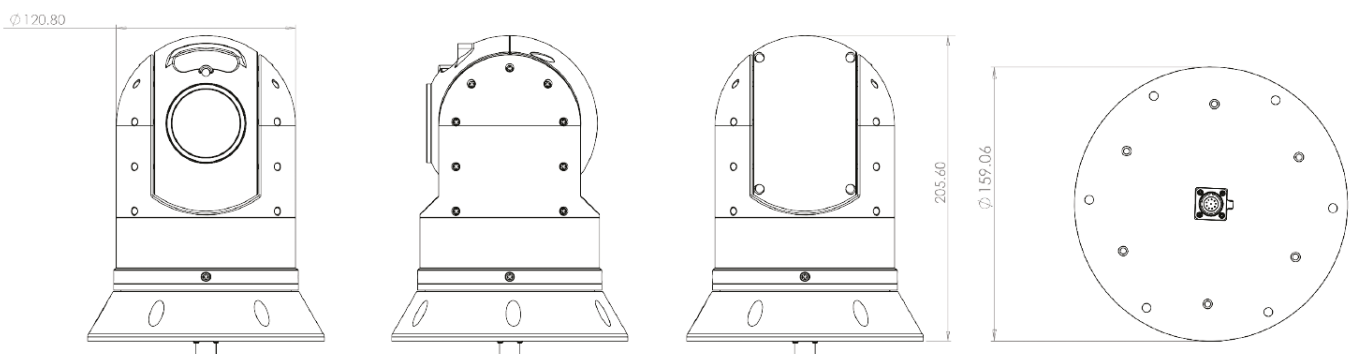**IRIS A118 Visible Spectrum PTZ Cameras**

Introduction

Thank you for purchasing your new ATOM imager. ATOM cameras have been designed and built to operate in the harshest conditions to provide the very best imaging quality whether you are on the water, operating fire trucks, emergency service or military vehicles or permanently located in hazardous environments – at a sensible price point. Atom cameras are available in a range of video formats and resolutions to meet your requirements including IP video, composite video, thermal imaging, and dual payload options. Cameras are available in single and dual payload options and several lens and resolution configurations are possible. ATOM cameras are waterproof and shock-resistant. They can be installed upright or in the hanging orientation and are shipped with a 2-year return to base warranty. This document contains safety, handling, disposal, and recycling regulatory and software information. To activate your warranty please follow the instructions within the guide. Please ensure your camera is installed according to the instructions and guidelines provided within this document. We recommend visiting **www.boat-cameras.com** from time to time to check for updates to the manual and observe the latest versions of the manual when released.

Model

Model Numbers & Specifications (A118 & A418 Models)

A118 and A418 Single Payload Visible Spectrum Models

	IRIS-A418
Camera Resolution	1920 x 1080P 2MP 25/30 frames/sec
Sensor	1/2.8" High-Performance Low Illumination CMOS Sensor (IMX327)
Zoom	30x Optical Zoom
Iris	F1.6 ~ F3.5
Focal Length	4.7mm ~ 141mm
Image Enhancement	DWDR
IR Range	4 x High Powered Infrared Lamps, 2 Groups (Low Beam / High Beam) Brown Glass Filter, Infrared Distance up to 80m (240ft)
Park Function	Supported
Video Format	AVI (D1/720P/1080P (default)
Snapshot Storage	Optional – (D1/720P/1080P (default)
Compression	H.264 / H.265
Bit Rate	32Kbps ~ 16Mbps
Frame Rate	1-25fps(50Hz) / 1-30fps(60Hz)
Streams	Supports dual-stream, main stream (1080P; 960P; 720P), Sub Stream (D1; VGA; CIF)
Cellular / Wifi / GPS	Optional – Contact Iris for Details
Protocols	Network Protocols: ONVIF Profile S / Others TBC Serial Data: RS485 / Pelco D
Power Requirements	+12vDC / 2000mA Max (IR ON) / 24W Max
Dimensions / Weight	160mm ø x 206mm(H) / 2Kg
Environmental / Certification	EN60529 / IP66 / TBC
Cable Options	Side Entry / Base Entry
CGEA Rating / NDAA	No Export Restrictions / NDAA-compliant

EXTENSION CABLE DETAILS

	Cable Type / Conductors	Gauge / Rating
Network Cable	4 pair twisted ethernet cable / CAT5	CAT5 / CAT5e / CAT6 – T-568B
Power Cable	2 Core (+12VDC / DC GND)	AWG 16 (2A Max @ 12VDC)
RS485 Serial Data Cable	2 Core (RS485 A / RS485B)	22 ~ 24 AWG

Model Numbers & Specifications (A295 & A395 Models)

A295 and A395 Dual Payload, Thermal + Visible Spectrum Models
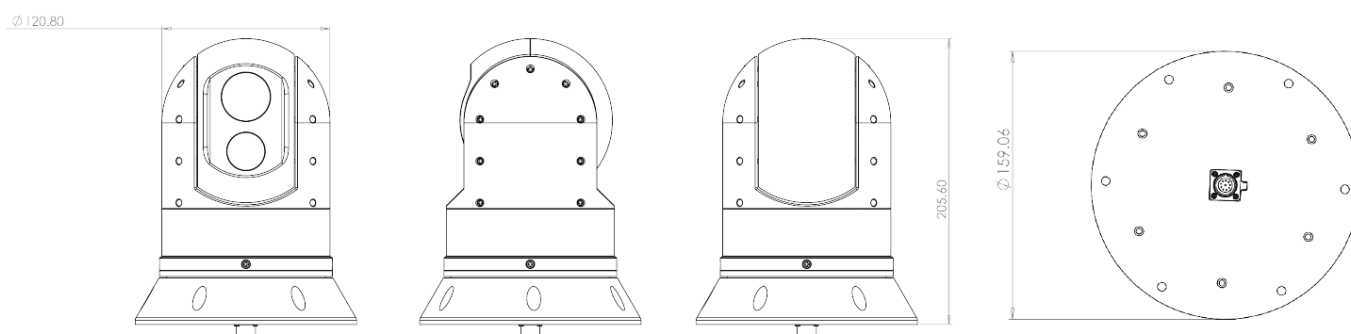
	IRIS-A4295	IRIS-A4395
Thermal Camera Resolution	384 x 288	640 x x512
Thermal Camera Lens	19mm	
Pixel Pitch	17 m	12 m
Refresh Rate	25/30Hz	
Color Palettes	White Hot / Black Hot / Fulgurite / Iron Red / Hot Iron / Medical / Arctic / Rainbow 1 / Rainbow 2 / Tint	
Image Enhancement	ICE® Image Contrast Enhancement – 7 Levels	
Zoom	x4 Smooth Digital Zoom – Continuous	

Visible Spectrum Camera	1/2.8" High-Performance Low Illumination SONY CMOS Sensor IMX327
Resolution	1920 x 1080 25/30 frames/sec
Focal Length / Iris / Zoom	F = 4.7mm ~ 94mm / F1.6 ~ F3.5 / 20x Optical Zoom
Compression	H.264 / H.265
Bit Rate	32Kbps ~ 16Mbps
Frame Rate	1-25fps(50Hz) / 1-30fps(60Hz)
Streams	Supports dual stream, main stream (1080P; 960P; 720P), Sub Stream (D1; VGA; CIF)
Cellular / Wifi / GPS	Optional – Contact Iris for Details
Protocols	Network Protocols: ONVIF Profile S / Others TBC Serial Data: RS485 / Pelco D
Power Requirements	+12vDC / 750mA / 8.4W
Dimensions / Weight	160mm ø x 206mm(H) / 2Kg
Environmental / Certification	EN60529 / IP66 / TBC
Cable Options	Side Entry / Base Entry
CGEA Rating / NDAA	6A003B4B / Check regional laws for export restrictions / NDAA-compliant

EXTENSION CABLE DETAILS

	Cable Type / Conductors	Gauge / Rating
Network Cable	4 pair twisted ethernet cable / CAT5	CAT5 / CAT5e / CAT6 – T-568B
Power Cable	2 Core (+12VDC / DC GND)	AWG 16 (2A Max @ 12VDC)
RS485 Serial Data Cable	2 Core (RS485 A / RS485B)	22 ~ 24 AWG

Conventions:

At various points within this guide, the following icons are used to illustrate important and/or potentially dangerous information:

- **INFORMATION:**

  ○ This symbol points out important information about the installation, operation, and maintenance of the camera.

- **WARNING:**

  ○ This symbol indicates a risk of damaging the camera or other items, or an important issue that may affect the operation of the camera.

- **DANGER:**

  ○ This symbol alerts the user/installer/maintainer of a serious risk of damage personal injury or death.

Export Regulations:

Certain models within the ATOM range feature imagers strictly controlled by international export regulations. ATOM Thermal Imaging cameras and dual payload models containing thermal imaging cores with a refresh rate above 9Hz are subject to international export regulations which strictly control their movement across international borders.

US Department of Commerce (DoC) Export Administration Regulations (EAR). Export control classification number: 6A003B4B. US Government authorization may be required for all destinations outside the US except Canada.

UK export controls are enforced by the UK Department for International Trade Export Control Organisation (ECO). Export control classification number: 6A003B4B – dual-use regulations. Prior authorization is required for all exports (permanent or temporary) to countries outside of the EU. To export outside of these territories export licences are required. These controls apply to the sale, re-sale, and also the transit of goods. It is your responsibility to ensure export controls are met by the laws of your jurisdiction. The buyer agrees not to export, re-export, see, distribute, disclose, or transfer any product or information provided to any country, person, or entity prohibited under these export laws to parties and entities located, organized, or ordinarily resident in a country or territory that is, or whose government is, the target of comprehensive UK or US trade sanctions, including the Crimea Region, Cuba, Iran, North Korea and Syria, located, organized or ordinarily resident in a country designated as a "State Sponsor of Terrorism" by the US Department of State or the UK Government, or identified on the Specially Designated Nationals and Blocked Persons List, the Denied Person List, the Entity List, the Unverified List or the Debarred list or any other applicable prohibited party list issued by the US or UK governments. Failure to comply with the export regulations of your jurisdiction could result in prosecution and severe penalties including imprisonment. Iris shall not be liable if any government export authorization is delayed, denied, revoked, restricted, or not renewed. Iris shall not be liable should the buyer contravene any international export restriction as outlined above or set out in law.

For more information on the export regulations of this technology contact Iris Innovations Limited or visit the following websites:

- USA: **www.bis.doc.gov**
- UK: **www.bis.gov.uk/exportcontrol**

Limited Warranty

DEFINITIONS:

'Iris' refers to Iris Innovations Limited, Iris Innovations LLC, or any of its subsidiaries.

WARRANTY COVERAGE

This product is warranted to be free from defects in materials or workmanship for two years from the date of purchase. Within this period, Iris will, at its sole option, repair or replace any components that fail in normal use at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost, or any associated costs that arise as a result of international customs clearance processes.

EXCEPTIONS

This warranty does not apply to the following:

- Cosmetic damage such as scratches, nicks, and dents
- Consumable parts, such as batteries or removable data storage, unless damage has occurred due to a defect in materials or workmanship of the product.
- Damage caused by accident, abuse, misuse, water, flood, fire, or other acts of nature or external causes.
- Damage that has occurred due to poor installation practices.
- Damage caused by service performed by unauthorized service providers.
- Damage to a product that has been modified in any way, including painting, without the written permission of Iris.

- Damage to a product that has been connected to power or data cables not supplied by Iris or not suitable for the intended purpose
- The product is only warranted if sold to the original customer within 5 years from manufacture.
- Iris will refuse any warranty where the product has been resold, sold, or acquired via an unauthorized dealer, online auction, or acquired dubiously.

Iris cameras and camera systems are intended to be used as an aid to travel, situational awareness, and water safety and therefore must not be used for any purpose requiring precise measurement of direction, distance, location, or topography.

RETURN SHIPPING / WARRANTY SERVICE

To obtain warranty service contact your local authorized Iris vendor. If you purchased directly from Iris then contact your local Iris branch. You will be provided with shipping instructions and an RMA tracking number. Please note, that the RMA tracking number is a reference number generated to allow you to track the progress of the repair and does not relate to any shipping reference. You will need to provide the product serial number and a copy of the original sales receipt/invoice which is required as proof of purchase for warranty repairs. The product serial number and/or invoice reference will be used to determine whether the item is still covered within its original warranty period, or extended warranty period if applicable. Providing the goods are covered by the warranty term you will be issued with your RMA reference number. Securely pack the device along with a copy of the RMA form you will be issued. Please note – failure to securely pack the goods when returning may also result in the warranty becoming invalid as damage caused through poorly packaged shipments is not covered by the warranty. Please ensure, when returning any goods to us, that they are appropriately packed so as not to cause any damage that may invalidate your warranty. Iris is not responsible for any products that are lost during shipping and recommends consignments are adequately insured.

When your RMA reference is issued you will be provided a return shipping address by your location. The costs of returning items for warranty repair are not covered by the warranty, although Iris may arrange collection at its discretion depending on the circumstances. The same applies to any customs charges that may arise as a result of having to ship goods internationally for repair.
Upon receipt of the goods, Iris will, at its option, repair or replace (with a new or newly overhauled replacement product) the device or software or offer a full refund of the purchase price.

- If, upon inspection, Iris deems the goods to be in working order and a condition satisfactory to their age, Iris will notify the customer with details of their findings. Iris reserves the right to apply an inspection fee in this circumstance.
- If, upon inspection, it is clear that any damage has occurred as a result of any of the exceptions listed in the section 'Exceptions', the warranty claim will be rendered void. We will notify the customer and advise the cost to cover the inspection, replacement, or repair of the goods as well as a return shipping cost. In this circumstance, Iris reserves the right to retain the goods until the costs quoted to remedy the warranty claim, be it the inspection cost only or the inspection cost plus repair/replacement costs are paid in full.

Iris will endeavor to process warranty return claims as soon as possible so as not to inconvenience the customer, however, firm turnaround times cannot be given.

LIMITATIONS OF LIABILITY

In no event shall Iris be liable for any loss for any incidental, special, indirect, or consequential damages including any loss of profit or loss of opportunity whether or not caused by Iris's breach of this warranty document, whether resulting from the use, misuse, or inability to use Iris products. Iris is not liable for any costs relating to the removal and replacement of its products for and after warranty repair.

All costs associated with the return of goods for warranty service, including (without limitation) taxes, travel or transport, Product de-installation or re-installation (including but not limited to transducer de-installation and re-installation costs), launch or docking fees, hauling, shipping or towing fees, communication charges, accommodation or subsistence, customs, or any other associated costs arising from the replacement of a Product, are the Customer's responsibility.

Where products are controlled by export restrictions it is the customer's sole responsibility to ensure the correct, legally binding export procedures are followed and Iris accepts absolutely no responsibility for any legal issues arising from the incorrect and/or unlawful shipment of controlled goods.

Where Iris have repaired or replaced controlled goods they will be returned to the customer using the correct, legally binding export control procedures of the territory from which they will be shipped. If Iris must obtain an export license to return the goods, Iris is not responsible for the timeframe it takes to obtain the license, and should the license application be denied by the issuing authority Iris cannot be held responsible. Iris also reserves the right to levy charges to cover the time taken to apply for and manage the application of any necessary export licenses. Products repaired or replaced under warranty will be warranted only for the remaining balance of the applicable original limited warranty period.

SERVICE LOCATIONS:

Iris Innovations Limited (UK)

- Unit 240 Ordnance Business Park,
- Aerodrome Road
- Gosport
- Hampshire PO13 0FG
- United Kingdom.
- Tel: +44 (0)2392 556509
- email: **info@boat-cameras.com**

Iris Innovations USA

- 969 W Commercial Blvd
- Pine Ridge Plaza
- Fort Lauderdale
- Florida 33309
- United States of America
- Tel: +1 **754-755-5754**
- email: **info@boat-cameras.com**

SAFETY INFORMATION

Warnings & Product Information:

LEGAL NOTICE:

In some jurisdictions, it could be considered an invasion of privacy rights to take or publicly display photographs or videos of people or their vehicles using this product. It is your responsibility to know and comply with applicable laws and rights to privacy in your jurisdiction.

DISTRACTION WARNING:

This device is intended to enhance situational awareness when used properly. If used improperly you could become distracted by the display which could lead to an accident causing serious personal injury or death to yourself or others. Always maintain awareness of your surroundings and do not stare at the display or become distracted by the display. Focusing solely on the display and not on your surroundings could cause you to miss obstacles or hazards. Use the device at your own risk. Do not rely solely on the video from the camera to judge distances. Use the camera as a guide only to enhance your situational awareness.

INSTALLATION & OPERATION:

This product must be installed and operated by these instructions. Failure to do so may result in poor product performance, damage to the product or vessel, and/or personal injury. Installation should only be carried out by qualified personnel or by persons competent in the installation of electronic systems.

POWER SUPPLY & GROUNDING:

Ensure the boat's power supply is switched off during installation. Ensure suitably rated circuit breakers/fuses are used in the installation of the product by the electrical values shown in the technical specifications of the product. Never switch on power until the power connections are correctly terminated by the information provided in this document. Do not connect or disconnect the product with the power supply switched on. Never disconnect the DC ground with the power supply on. This could result in the DC power being grounded through the common video ground which could in turn damage the video output circuit of the camera.

WARNING: WIRING TERMINATIONS

Where the product's video, power, and data terminations are extended, ensure that suitable connectors are used and that the point of termination for each cable is adequately protected against moisture ingress. Ensure correct polarity is strictly observed. Do not cut or remove cable connectors without prior permission from Iris Innovations Limited.

WARNING: DO NOT OPEN THE UNIT

There are no user-serviceable parts within the product so there's no need to open the device other than temporarily removing the Camera Address DIP Switch window whilst setting addresses. Ensure the DIP switch window is correctly replaced and that the rubber seal is not lost, pinched, or damaged. The product has been certified to IP66 standards, however, submersion of the product or exposure to high-pressure washing will invalidate the warranty.

WARNING: DISCLAIMER

This product is intended to be used only as an aid to navigation and must never be used as an alternative to correct navigational practices and judgments made based on approved navigation methods. It is the user's responsibility to observe correct and proper navigational skills when using this product. Only officially approved charts and notices to mariners contain the current information required for safe navigation. Operating the camera or viewing the video input whilst the vessel is moving could cause a distraction and result in accidental collision resulting in property damage, injury, or death. Iris Innovations cannot be held liable for any incidental, special, indirect, or consequential damages whether resulting from the use, misuse,e or inability to use this product.

CAUTION: SWITCH CAMERA OFF WHEN NOT IN USE

To prolong the operation life of the thermal camera's micro-bolometer sensor we strongly advise that power to the camera is routed via a dedicated switch.

CAUTION: SERVICE AND MAINTENANCE

This product contains no user-serviceable parts. Please refer all maintenance and repair issues to your aauthorizedIris Innovations dealer. Any unauthorized work on the product may affect the warranty.

CAUTION: Care and Cleaning

This product is a sensitive piece of electronic, imaging equipment and must be handled and treated accordingly. Do not drop or shake the unit during installation. Never manually alter the pan or tilt position whilst the power to the unit is on as this may permanently damage themotors. Avoid exposure of the imager to direct sunlight where possible as this may degrade the camera's performance over time. When cleaning the device, ensure power is switched off to avoid unintentional movement of the camera's motors. Clean the camera housing with a soft cloth. Moisten the cloth and use a mild detergent if required but take care not to get detergent on the lens window. The lens window has a protective coating which may suffer damage as a result of improper cleaning. To clean the lens window use a soft cotton cloth. Moisten with clean water if necessary. For further advice on cleaning the lens window, contact Iris Innovations.

INFORMATION: PRODUCT DISPOSAL AND RECYCLING

Dispose of this product by the WEEE Directive. The Waste Electrical and Electronic Equipment (WEEE) Directive requires the recycling of waste electronic and electrical equipment. Iris Innovations supports the WEEE policy and politely requests you observe the correct disposal methods. For further information on how to correctly dispose of this product please contact Iris Innovations.

Please recycle unwanted packaging and documentation. The cardboard carton, all paper manuals and documents, and the protective plastic bag in which the camera is shipped are widely recyclable. Please check with your local recycling plant for confirmation.

Installation

PRE-INSTALLATION CONSIDERATIONS

Before you make any cuts or drill any holes the following points must be considered:

1. Does the desired mounting position provide the viewing angles you want the camera to deliver? We strongly recommend before deciding the final fixing position that you power up the camera and offer it into position to ensure it is going to cover all the areas you want it to.
2. Can you get the cables to where they need to be? Deciding on the camera position is one thing, but if you can't get the cables to where you want them you may need to re-think.
3. When installed, will the camera interfere with any other fixture such as the opening of doors, the travel of a crane arm, radar, sunshade, bimini, or outrigger?
4. Are there any electromagnetic considerations? Think about whether the proximity of the camera to devices such as radios, antenna, radar, or compasses could cause interference, to either the camera or to other devices. Even though the camera is designed to meet the necessary EMC approvals it's always best to check.
5. Ensure you have the correct fixings to securely mount the camera and any other fixtures required to safely mount the device without damaging the mounting surface – especially when drilling into GRP, which can easily shatter as screws and bolts are tightened. Installation for this device is extremely simple, however, installing anything on a boat or vehicle has its inherent idiosyncrasies and possible pitfalls. Therefore, a little time spent planning before mounting the camera can save a lot of potential problems down the line.
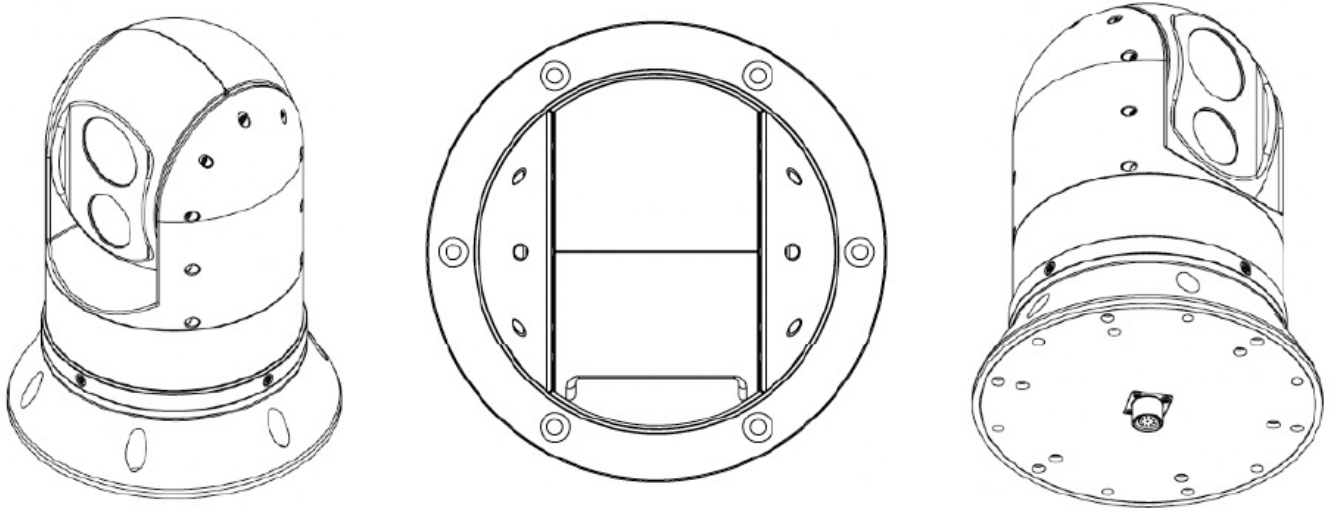
Cable Extensions

The ATOM camera is supplied with a 3-meter 'umbilical' cable that connects directly to either the base of the camera (standard models) or the side of the camera (side-entry models). The main connector onto the camera is a waterproof 9-pin multi-pole circular push-fit connector. In most installations, it will be necessary to run extension cables for power, network, and RS485 serial data. Details of the required cable types and ratings are provided in the table shown.

Mounting Preparation / Drilling

You will need:

25mm Hole Saw for Cable Entry Suitable Drill Bits for Fixing Positions (5mm Clearance if Bolting Camera into position or pilot hole drill bits appropriate for the material onto which the camera is to be mounted.
Once the mounting position has been established (see Pre Installations considerations above), use the supplied fixing template to drill the connector/cable entry hole and to either drill pilot holes for the 6 x base fixing screws or 5mm clearance holes for the 6 x fixing positions if bolts are being used rather than self tapper screws. If required, copies of the fixing template can be downloaded from the product page on our website, or you can offer the camera into place and mark off the fixing positions using the camera itself.
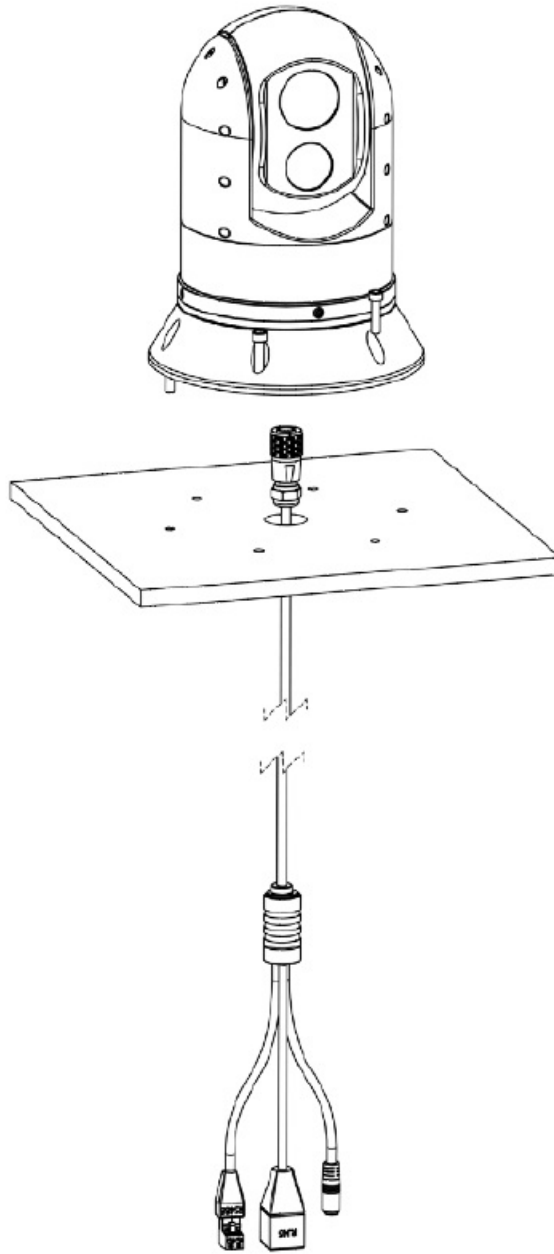
PLEASE NOTE – IF YOU ARE PRINTING A COPY OF THE FIXING TEMPLATE, PLEASE ENSURE YOUR PRINTER IS CORRECTLY CONFIGURED TO PRINT EXACTLY TO SCALE

Take care to ensure good practices are observed when drilling into materials such as GRP or metal surfaces. Remove any swarf that may cause damage to the cable sleeve and ensure there is sufficient clearance so cables are not too tight or become snagged when they are passed through the holes. Take care not to crack GRP and consider that GRP may crack when screws, especially self-tapping screws are tightened. Once the cable entry hole has been opened up, run extension cables as required and present through the cable entry hole, ready to terminate with the connectors on the camera's umbilical cable.

Terminate Extension Cables

Terminate the network, power, and RS485 serial data cable (if required) by the details below.

Camera Connector
Push-fit 9 Pin Multi-Pole Circular Connector
IP68 Rated

Power Connector
2.1mm DC Jack
Center Pin Positive

RJ45 Network Connector
Socket Type
Unshielded

RS485 Serial Data Jack
2 Pin Push Fit
Screw Terminal Type

3.0m
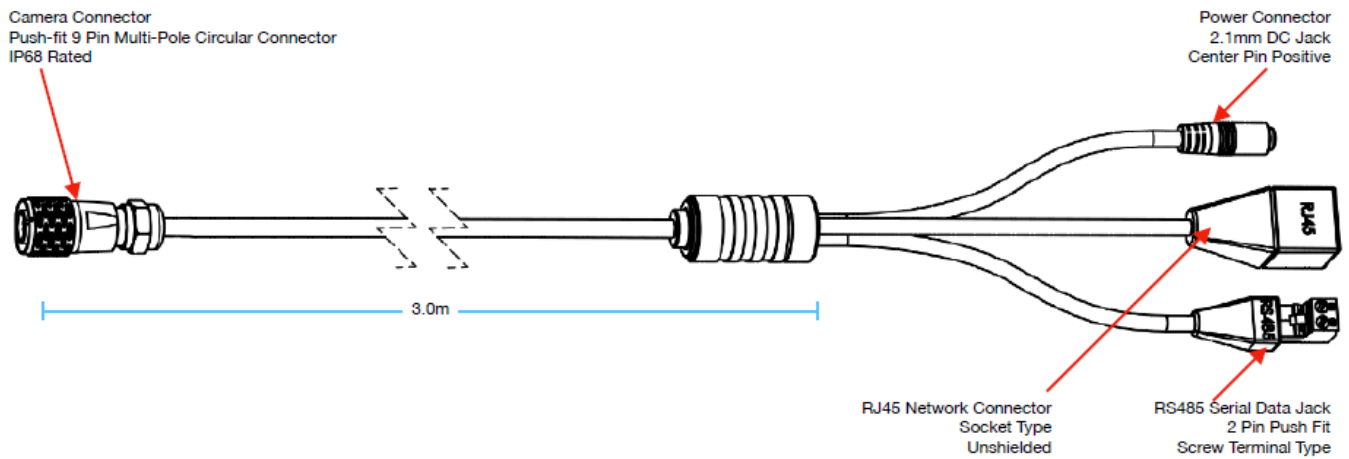
WARNING! ENSURE CORRECT POLARITY IS OBSERVED FOR POWER CABLES
WARNING! THIS DEVICE IS +12VDC ONLY.

3a – DC Power

A295 and A395 models are not compatible with PoE and therefore must be powered from a clean regulated +12VDC supply, fused at 2A. The power connector on the camera's umbilical cable is a standard 5mm x 2.1mmø DC jack socket – center pin positive. The camera is supplied with a mating screw terminal jack plug and polarity market. Observing the correct polarity, terminate your power wires into the DC jack plug and connect to the power connector on the umbilical cable.

3b Network

Using network termination convention T-568B, fit an RJ45 jack to the end of your network extension cable. Shielded cable is not necessary for the operation of the camera but may be used to counter possible electrical noise issues that are present in boats/vehicle systems.

RJ45 Pinout
T-568B

1 2 3 4 5 6 7 8

1. White Orange   5. White Blue
2. Orange   6. Green
3. White Green   7. White Brown
4. Blue   8. Brown
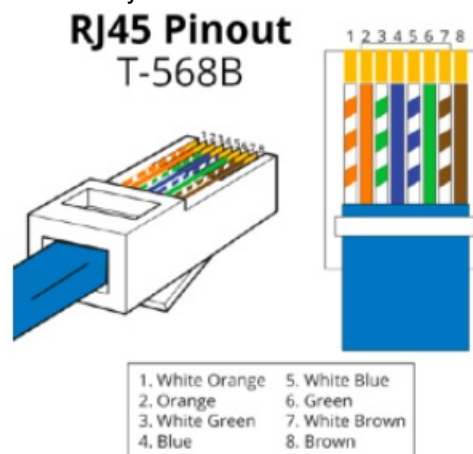
3c – RS485 Serial Data

If you are controlling the camera using serial data (ie, using an Iris control joystick or controller from an IRIS CMAC system), terminate the RS485 A and RS485 B wires into the screw terminal plug that is supplied with the umbilical cable. Please note, that you must observe the correct polarity for correct operation, however, the camera cannot be damaged if the RS485 polarity is incorrect. Once all terminations are made, connect the extension cable to the umbilical cable, ensuring the terminations are suitably waterproofed using a suitable sealing tape or junction box.

4 – Connecting Up

When all terminations have been made, power up the camera and test for correct operation. When you are

satisfied all terminations are correct, down-power the camera and fix it into place using the appropriate fixings.

IT IS GOOD PRACTICE TO ENSURE THAT MOISTURE CAN INGRESS INTO THE MOUNTING SURFACE BY USING A SUITABLE SEALANT. APPLY A BEAD OF SEALANT AROUND THE CABLE ENTRY HOLE AND SCREW POSITIONS SO THAT WHEN THE CAMERA IS MOUNTED INTO PLACE A SEAL IS FORMED.

Refer to the operation manuals of third-party network equipment and control hardware for information on how to connect to other devices you are using if necessary.

Camera Configuration

ATOM cameras are categorized as 'IP' or 'Network' cameras. This means that they are designed to sit on a TCP/IP ethernet LAN or WAN network. Therefore it is necessary to set the camera up so it has an appropriate network address and to ensure other settings necessary for the device to work on the network. As well as configuring network address settings, depending on the nature of the network or viewing/control hardware, it may also be necessary to change other settings such as image resolution and encoding to ensure compatibility. Aside from the network settings, the camera can also be controlled via RS485 serial data, using the Pelco D CCTV camera control protocol. Pelco D is a leading industry control protocol but it does not include commands necessary to control the extended features of thermal imaging cameras such as the A295 and A395 support. Therefore, Iris has mapped the unsupported features to certain Pelco D commands. A full table of Pelco commands is provided in Appendix A to this guide for developers interested in integrating Atom camera control into their systems. This section provides information on how to configure your camera for network and RS485 operation.

Network Configuration / Third-Party Devices / Default IP Addresses

Your ATOM A295/A395 camera is accessed across a TCP/IP network using a separate address for each core. The default IP addresses for each core are as follows:

	Default IP address	Use This Column to Record Any Address Changes
Visible Spectrum Camera	192.168.1.211	
Thermal Imaging Camera	192.168.1.212	

The quickest and easiest way to connect to your camera is to use an internet browser. A list of compatible browsers is provided in Appendix X of this document. Please note – as compatibility may change outside of our control without notice, please also consult the Iris website (**www.boatcameras.Com** for the latest compatibility information. Before you can connect to your camera using a browser, however, you must ensure the camera's IP address is in the same range as the device you are using to connect. If the Network Interface of your device is configured to a different address range than your camera, you will not be able to connect.

If you are experienced in changing IP addressing then this process is simple, but if you need further information, a guide is provided in Appendix X of this document. Further to this information, we have also provided details of third-party software tools that you can download to help find devices on incompatible networks and make changes to your network settings from a user-friendly interface rather than negotiating the depths of your operating system – which may be daunting.

The IRIS996 CCTV Tester accessory is also a great tool for configuring, testing,n g and fault-finding your camera. For details visit: **https://www.boat-cameras.com/product/iris996-cctv-tester**

Log In

Open your browser and enter the address for the desired camera (thermal or visible) into the URL bar. If the camera is in the same range as your device, the camera login page (shown below) will load.
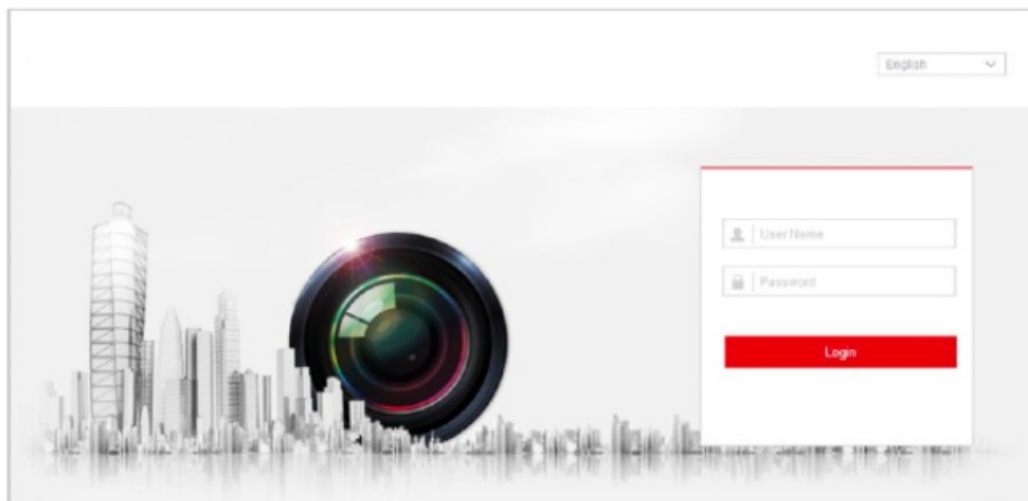
Appearance of Log In screen may vary depending on model

The default login credentials are listed in the table below. Passwords are case-sensitive:

	Default User Name	Default Password	Record New User Name Here	Record New Password Here
Visible Spectrum Camera	admin	admin		
Thermal Imaging Camera	admin	admin		

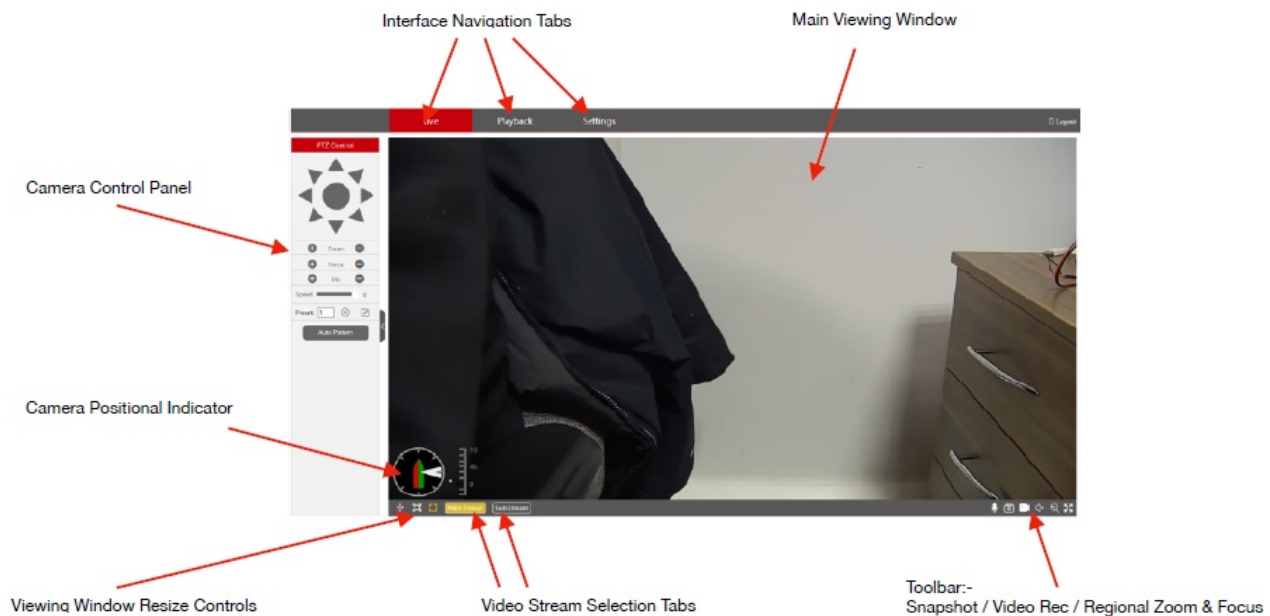Enter your username and password and click the LOGIN button.

Logging In from Chart Plotter / NVR / CMAC or other non-PC devices

Logging into your camera from a third-party device such as a chart-plotter, network video recorder (NVR), or Iris CMAC system, which do not offer browser interfaces, will differ. Some devices may not need login credentials, whereas others will need you to set up username and password credentials within their interface. Please consult the user guide of the specific device for further details.

Live Window

Once logged in, the camera's Live Window (shown below for each camera) will load. The Live Window is where you can both view and control features about the selected camera.

Visible Spectrum Camera:

Interface Navigation Tabs

Main Viewing Window

Camera Control Panel

Camera Positional Indicator

Viewing Window Resize Controls

Video Stream Selection Tabs

Toolbar:-
Snapshot / Video Rec / Regional Zoom & Focus

Thermal Imaging Camera
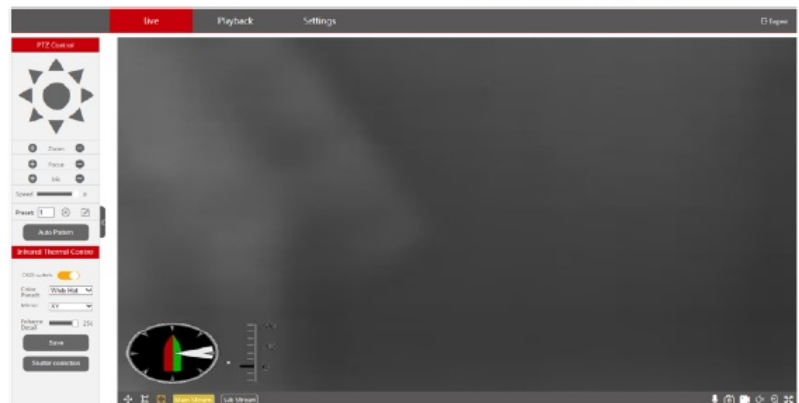
The layout for each camera module is the same, however, you will notice the camera control panel for the thermal camera module has more features. Each control panel is described below. Depending on the feature, controls are either activated by click, click, and slide or by direct value entry. When using third-party devices to control your camera these controls will be replaced with the controls of that device's interface, and the camera control panel will not be displayed.

Camera Control Panel

Visible Spectrum (Daylight) Camera — PTZ Control
- Pan & Tilt Controls
- Optical Zoom Wide / Telephoto Controls
- Focus Controls
- Manual Iris Controls
- PTZ Max Speed Control (Pan & Tilt Control Speed*)
- Preset Position Select. Call & Set
- Activate Auto Pattern Feature

Thermal Imaging Camera — PTZ Control
- Pan & Tilt Controls
- Digital Zoom Wide / Telephoto Controls
- Focus Controls (Not Supported in A295 / A395)
- Iris Controls (Not Supported in A295 / A395)
- PTZ Max Speed Control (Pan & Tilt Control Speed*)
- Preset Position Select. Call & Set
- Activate Auto Pattern Feature

Infrared Thermal Control
- Toggle On/Off On Screen Display Features
- Thermal Colour Palette Select
- Camera Orientation Control
- Image Contrast Enhancement Level
- Activate Non Uniformity Correction (NUC) Filter

Feature Description

Features common to both Visible Spectrum & Thermal Camera

Pan / Tilt	
Zoom	
Focus	
Iris	
PTZ Speed	
Preset Positions	
Auto Pattern	

Features Specific to Thermal Imaging Camera

OSD Switch	
Color Palette	
Mirror	
Enhance Detail	
Shutter (NUC)	

Toolbar Features

MIC	Audio Features Not Supported
Snapshot	Take Snapshot (define path in settings)
Record	Start/Stop SD Card Recording (not currently supported)
Regional Zoom	Use the mouse to define the regional zoom area

Settings Page: Network (Wired Network)

The camera's IP address, gateway, and DNS settings are configured here. To receive an IP address automatically when connected to a DHCP router (or device that acts as a DHCP router such as a Raymarine or Furuno MFD), you must set 'Obtain IP address automatically' to ON. Otherwise, set to off and enter your desired IP address values as required.

Settings Page: Network Priority

Set connection priority order. As default (and for MFD use) leave it as 'Automatically'

Settings Page: Advanced Settings

For more in-depth configuration. These settings should only be changed by advanced users / IT professionals. It should not be necessary to change any of these settings for standard operation.
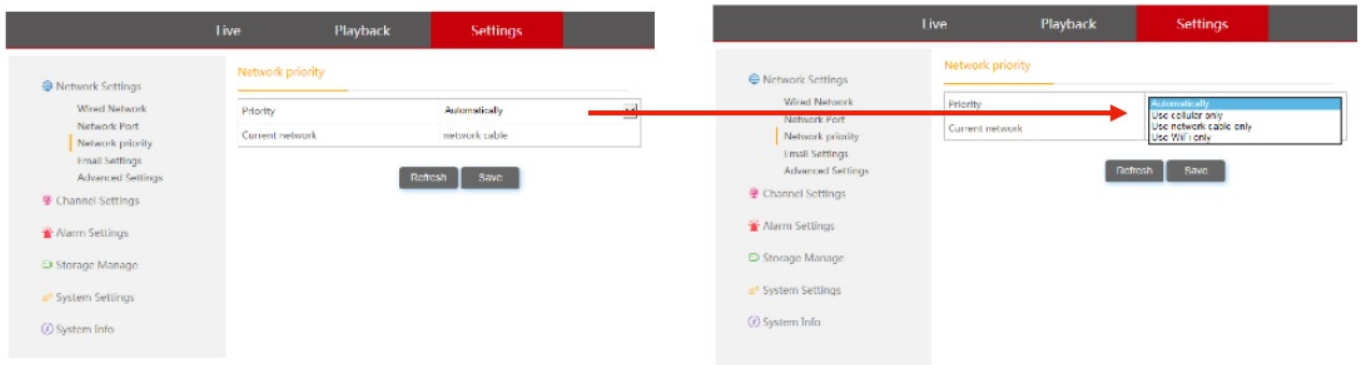
Settings Page: Email Settings

Not enabled in software as default. Contact Iris for further information.

Settings Page: Advanced Settings

For more in-depth configuration. These settings should only be changed by advanced users / IT professionals. It should not be necessary to change any of these settings for standard operation.

FTP Settings

DDNS Settings

Routing Settings

Settings Page: Channel Settings (Coding Settings)

View and set encoding methods, video quality, and video size (resolution) of both the main and sub-streams. These settings are important when configuring cameras to work with compatible MFDs. Consult the latest information on our website or contact Iris technical support for the latest information on compatibility and settings as this can change without notice beyond our control.

- **Options:**
  - **Video Coding:**
    - H264/H265
  - **Video Size:**
    - **Main Stream:**
      - 1920*1080 (1080P)

- 1280*960 (960P)
- 1280*720 (720P)
- 704*576 (D1)
- **Sub Stream:**
  - 704*576 (D1)
  - 640*480 (VGA)
- **Video Quality:**
  - Best/Good/Normal/Bad/Worse

Settings Page: Channel Settings (Image Settings / Image Adjustment)

- View and set camera image parameters

Parameters:

- Brightness: (0-100, default 50)
- Contrast: (0-100, default 50)
- Saturation: (0-255, default 128)
- Hue: (0-100, default 50)
- Sharpness: (0-255, default 128)
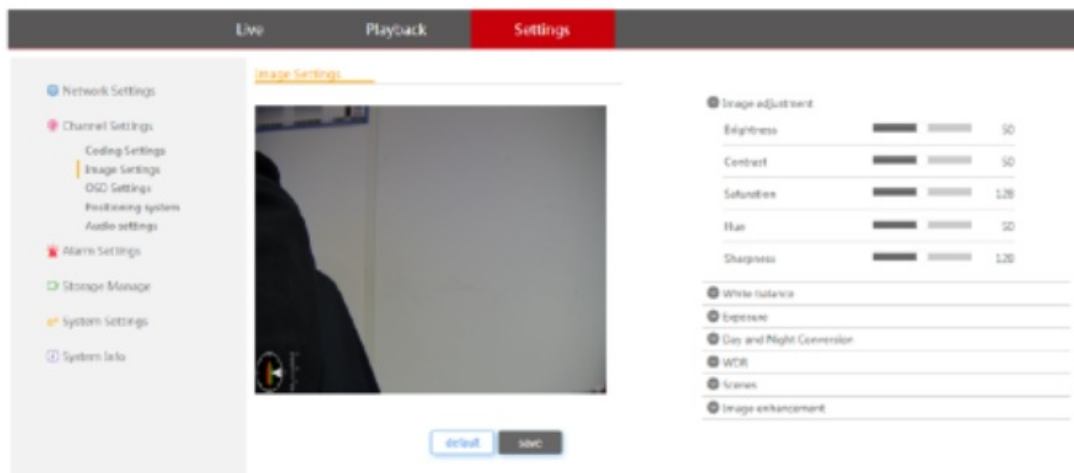
Settings Page: Channel Settings (Image Settings / White Balance)

- View and set the camera's White Balance settings. It is highly recommended this is left set to Automatic.
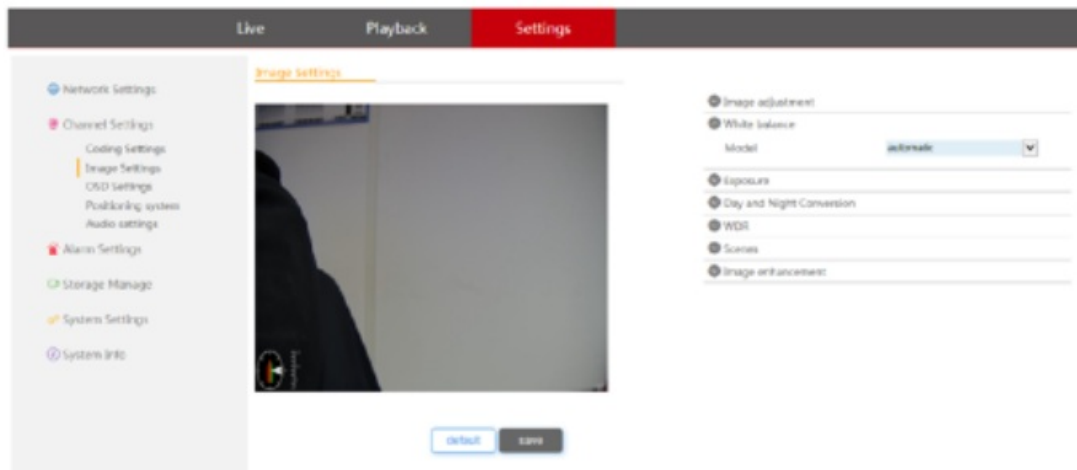
Settings Page: Channel Settings (Image Settings / Exposure)

View and set cameras Iris, Shutter, and Gain settings. It is recommended that these values be left set to Automatic for standard operation.
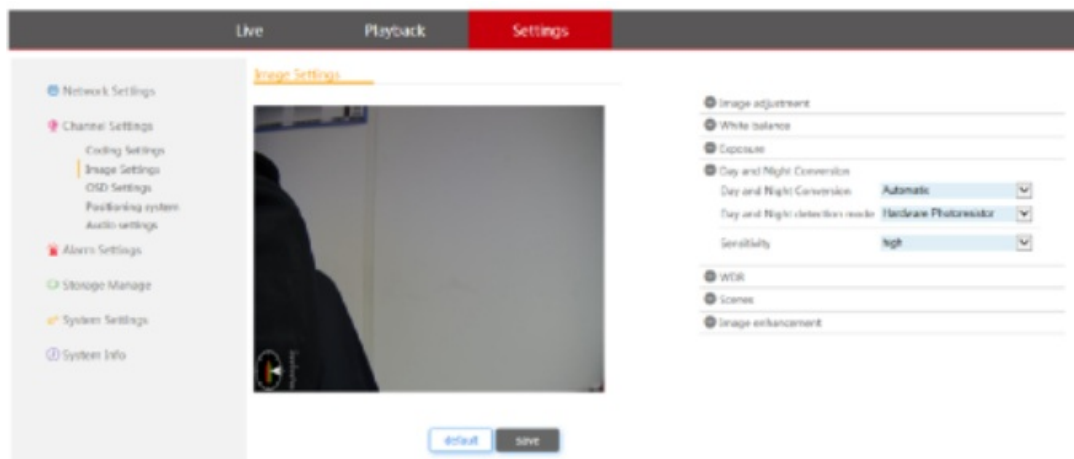
- **Iris:**
  - Automatic / Manual
- **Electronic Shutter:**
  - Automatic
  - 1/1000s
  - 1/500s
  - 1/250s
  - 1/100s
  - 1/50s
- **Gain:**
  - Automatic / Manual

Settings Page: Channel Settings (Image Settings / Day Night Conversion)

Only applicable to A418 models, and not relevant to A295 / A395 models. View and set Day/Night switching parameters.

- **Day and Night Conversion:**

- Automatic
- Day
- Night

- **Day and Night detection mode:**
  - Hardware Photoresistor
    - **Sensitivity:**
      - High
      - Mid
      - Low
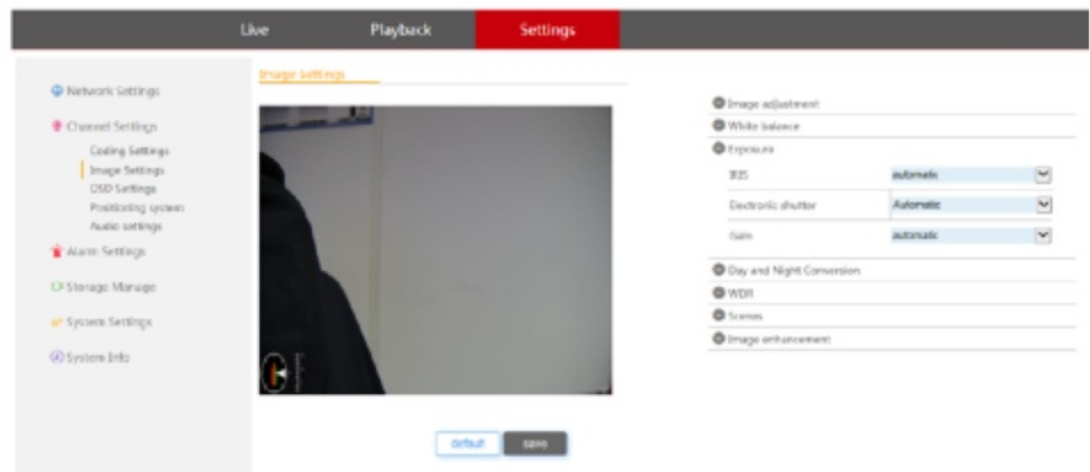
Settings Page: Channel Settings (Image Settings / Wide Dynamic Range)

View and set cameras Wide Dynamic Range image enhancement settings (day camera only). This has no effect on the thermal core of the A295 and A395 models.

Parameters:

- On/Off
- Grade: (0-255 / 80 default)
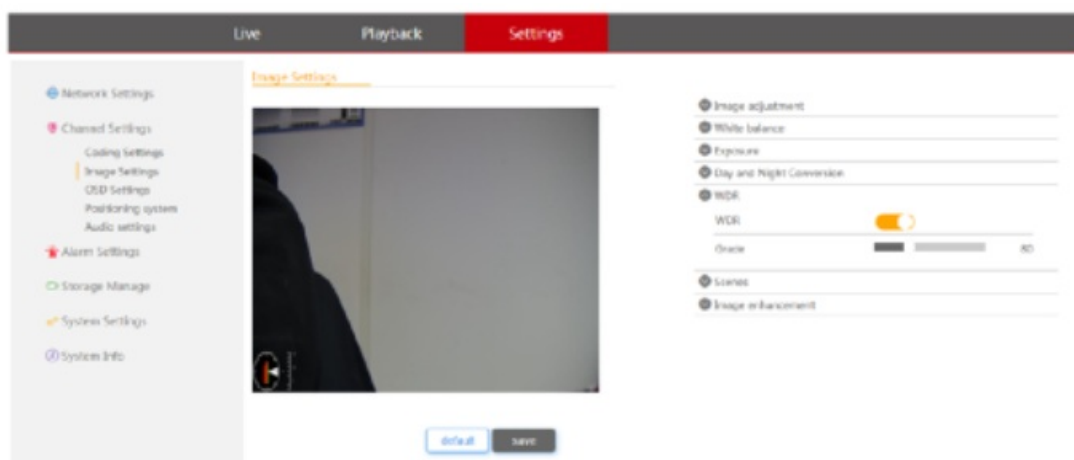
Networking & Viewing on Computers

Atom cameras are network / IP devices designed to be integrated into your camera system via our CMAC or other NVR devices but they can also be used with a computer. Whether the camera is being configured on a CMAC, NVR, or Computer, it is necessary to ensure all devices are set in the correct IP address range. If you are not

experienced with configuring network devices we recommend consulting your IT expert.

Details on you to set the IP address of the camera are covered in this manual. For information on setting up an IP address on a CMAC system or third-party device consult the documentation for the specific device.
When using the camera on a computer, there are various software tools available to allow you to discover the device on your network and set its address, however to access the camera browser interface (to view, control, and configure the camera) you will need to ensure you are either using a compatible browser (such as Internet Explorer) or, if using a browser such as Microsoft Edge, you will need to configure the browser to allow the URL of the camera to be displayed in Internet Explorer mode. You will also need to ensure the NIC (Network Interface Controller card) in your computer that you are using to connect to the camera is set to the correct range. Once you have successfully accessed the camera you can make any necessary changes to the camera's address and other network parameters as required and then change the NIC address back.

Default IP Address and Login Credentials:

Cameras are shipped with the following default IP addresses and login credentials (all values are case sensitive:

ATOM-A418 Visible Spectrum IP PTZ Camera

- Default IP address: 192.168.1.211
- Default User Name: admin
- Default Password: admin

ATOM-A295 / A395 Dual Payload Thermal / Visible Spectrum IP PTZ Camera

- Default IP address: 192.168.1.211 – Visible Spectrum Camera
- Default IP address: 192.168.1.212 – Thermal Imaging Camera
- Default User Name: admin
- Default Password: admin

Therefore, to access the camera via a browser you will first need to either use a software tool (or other device such as our IRIS996 CCTV Test and Configuration unit) to change the address of the camera within the range of your computer's NIC, or you will need to change the address of your computer's NIC within the same range as the cameras current IP address.

Changing the Address of your Computer's NIC (Network Interface Card)

The following instructions pertain to connecting your camera directly to a computer or laptop and do not apply when connecting devices across a more complex network. If you have multiple cameras connected to multiple computers on a network you could either set up each device individually or refer to your network administrator for advice.

The method of changing the address of the NIC your camera is connected to is relatively simple but will depend on your computer'ss operating system, and may change if the version of your OS changes. These instructions pertain to Microsoft Windows 10. Please refer to the appropriate OS instructions if necessary – especially if the instructions below do not match what you are seeing due to different OS versions.
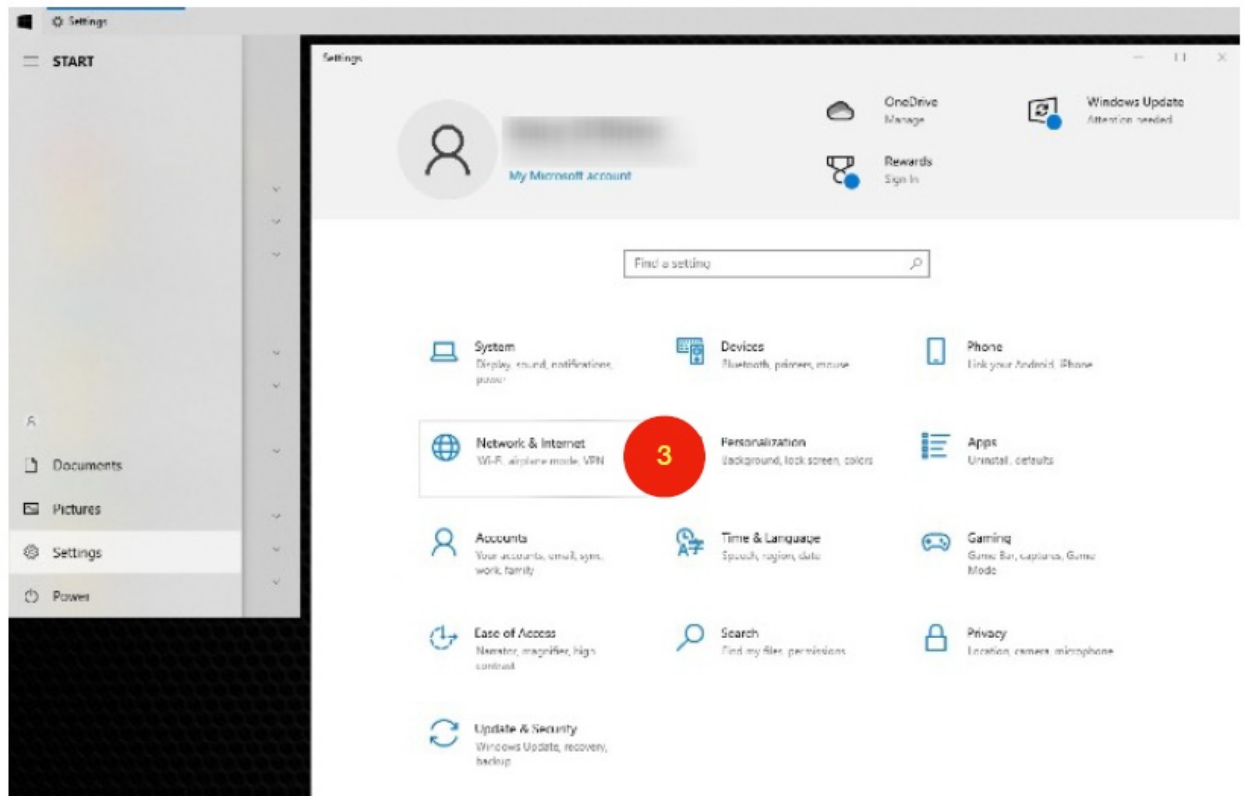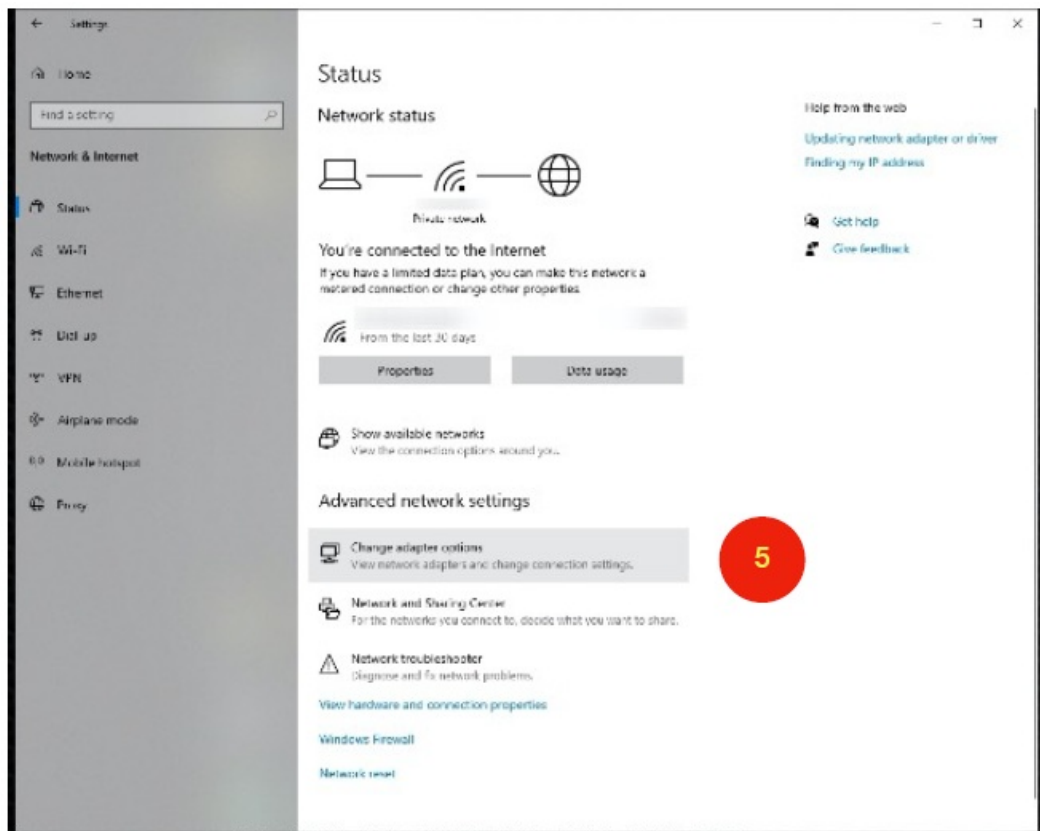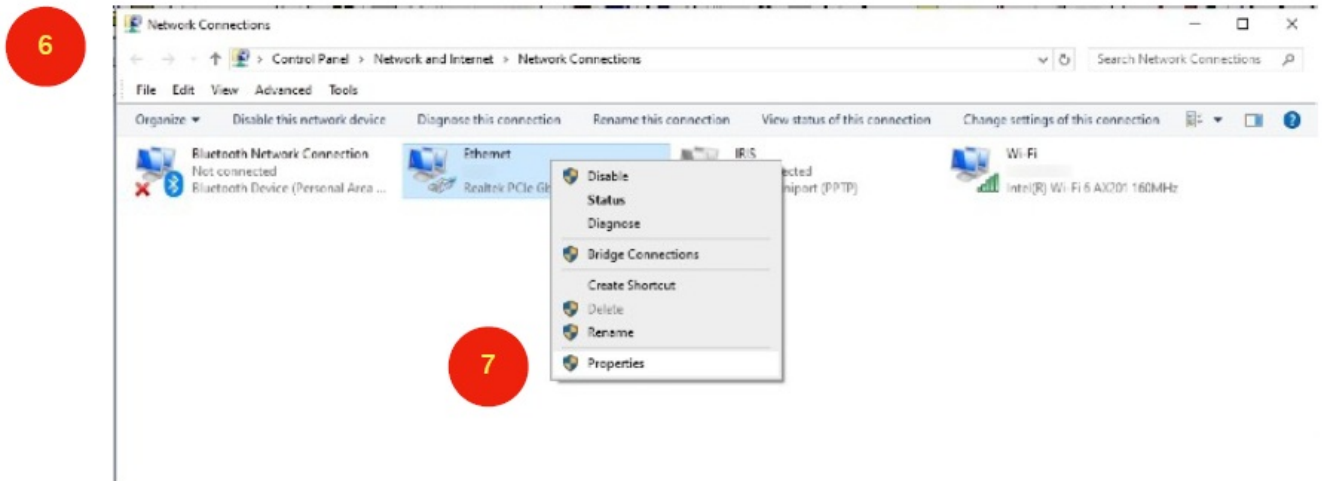
1. From your Desktop, click on the START menu
2. Click on Settings
3. Click on Network & Internet
4. Click on Status

5. Under the Advanced Network Settings title click on Change Adapter Options

6. A new window will open labeled network Connections, displaying your hardware connections

7. Right Click on the appropriate device/adapter and select Properties from the drop-down menu

8. Double click Internet Protocol Version 4 (TCP/IPv4) Properties
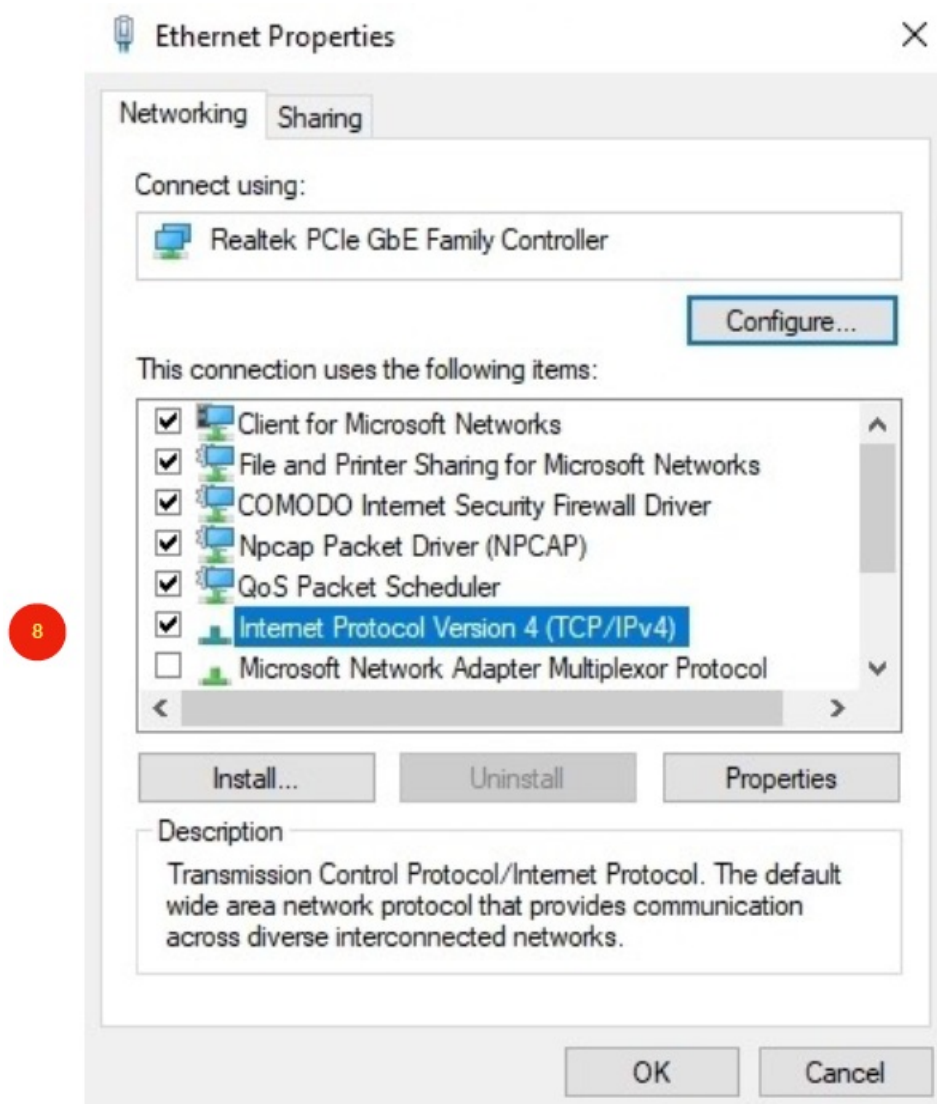
9. Make a note of the current settings so you can revert to these if necessary after you have finished
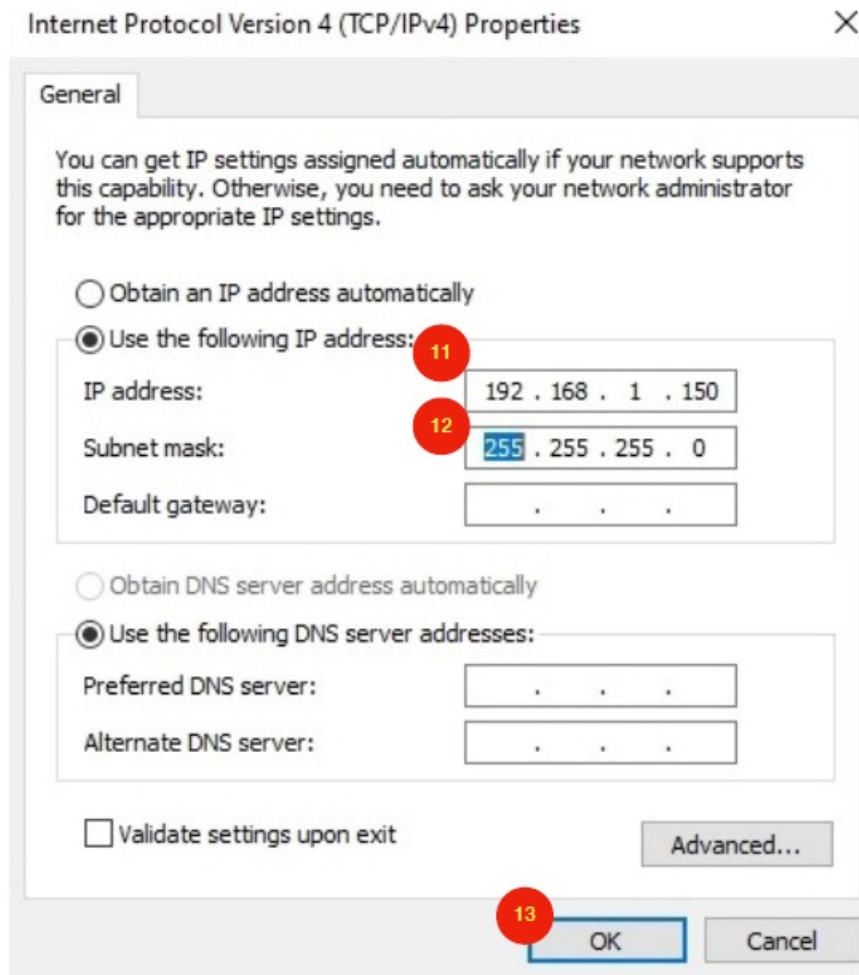
10. If not already selected, click on Use the Following IP Address

11. Now enter an IP address within the same range as your camera ensuring the first three bytes of the address are the same as those set on the camera. For example, the camera address is set as default to 192.168.1.100, therefore the first three bytes must be set to 192.168.1 and the last byte can be anything between 1 and 255 but must be unique (therefore, you cannot choose 100 as this address is already assigned to the camera). Ie set the NIC address to 192.168.1.151

12. Next set the Subnet Mask address to 255.255.255.0 (as this is designed to be a simplified step by step guide there is no need to explain this further here)

13. Click OK

    - You have now set your camera and computer in the same IP address range so they can communicate successfully with each other. You can test communications between the computer and camera by sending a Ping command from the Command Prompt Window. Instructions on how to do this are listed below.

**Testing Communications from your Computer to the Camera (using PING)**

1. From your Desktop press the Windows Key and 'R' together to present the RUN window
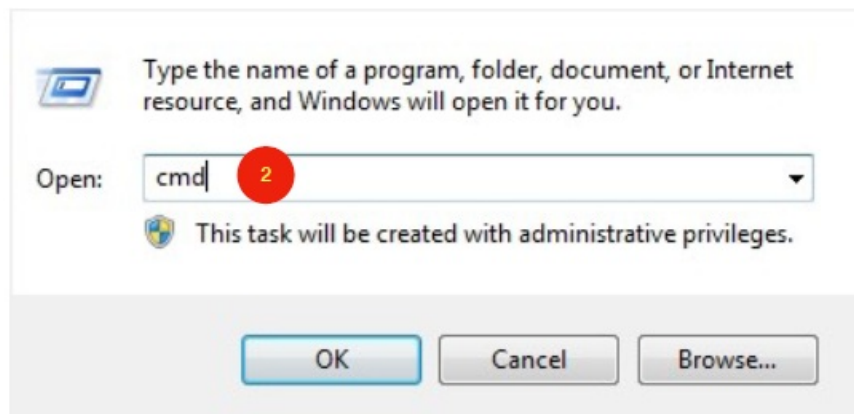
2. Type "CMD" then press OK to open the Command Prompt Window
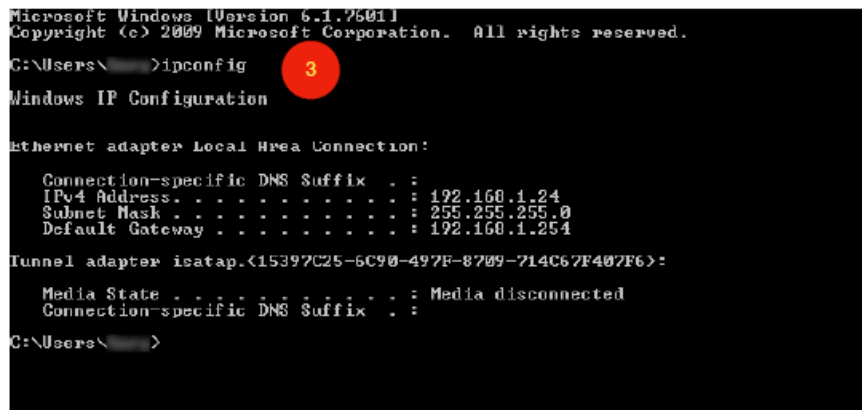
3. Type IPCONFIG and press enter to confirm IPv4 the address of the local ethernet adapter. This will confirm the IPv4 address of your Network Interface Card (NIC) as set in the previous step. In this example, the address of the NIC has been set to 192.168.1.24

4. Type "PING" and the IP address of the target device (ie, the ATOM camera) to ensure a connection can be made. Ie. "PING 192.168.1.101", and you should see a "Reply from" message, and sent and received packets should be equal. If receive a "Destination host unreachable" message then there is an issue with either the host device or target device IP configuration or connection.
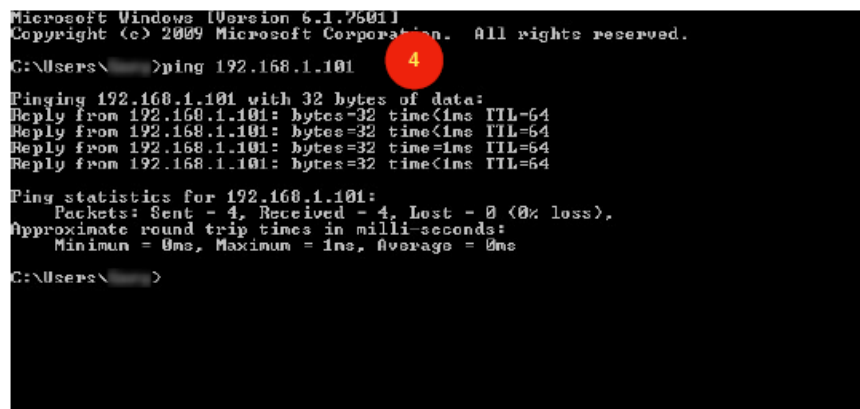

Accessing The Camera from your Web Browser (MS Internet Explorer or MS Edge)

ATOM cameras can be directly accessed on older operating systems from the Internet Explorer browser by simply typing the IP address of the camera (192.168.1.100 for example) into the address bar.
For newer operating systems, Internet Explorer has been made obsolete, replaced by Microsoft Edge, and so it is necessary to configure the browser to open the camera's webpage in Internet Explorer Mode from within Microsoft Edge. Instructions as follows:

1. Open Microsoft Edge and click on the three dots in the top right corner of the scre.
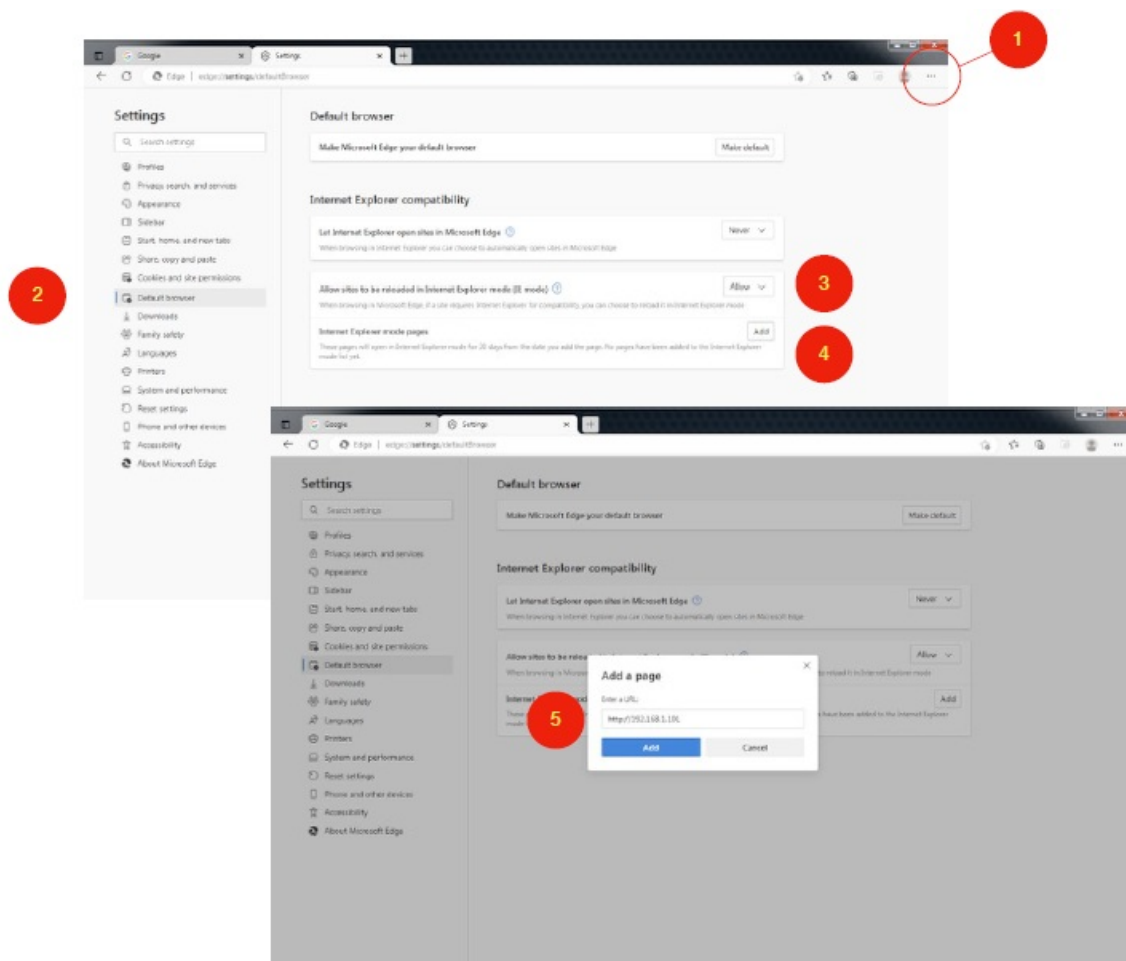
2. Click Settings and then Default Browser.

3. Ensure the option to Allow Sites to be Reloaded in Internet Explorer Mode (IE Mode) is set to ALLOW

4. Click Add in the Internet Explorer Mode Pages option to open the Add a Page dialogue box

5. Enter the full address of the camera (ie. **http://192.168.1.101**)

6. This adds the webpage of the camera to the Internet Explorer Mode Pages list. If you want to add another camera (for example if you have an ATOM-A295 / A-395 dual payload camera) simply repeat stages 4 and 5.
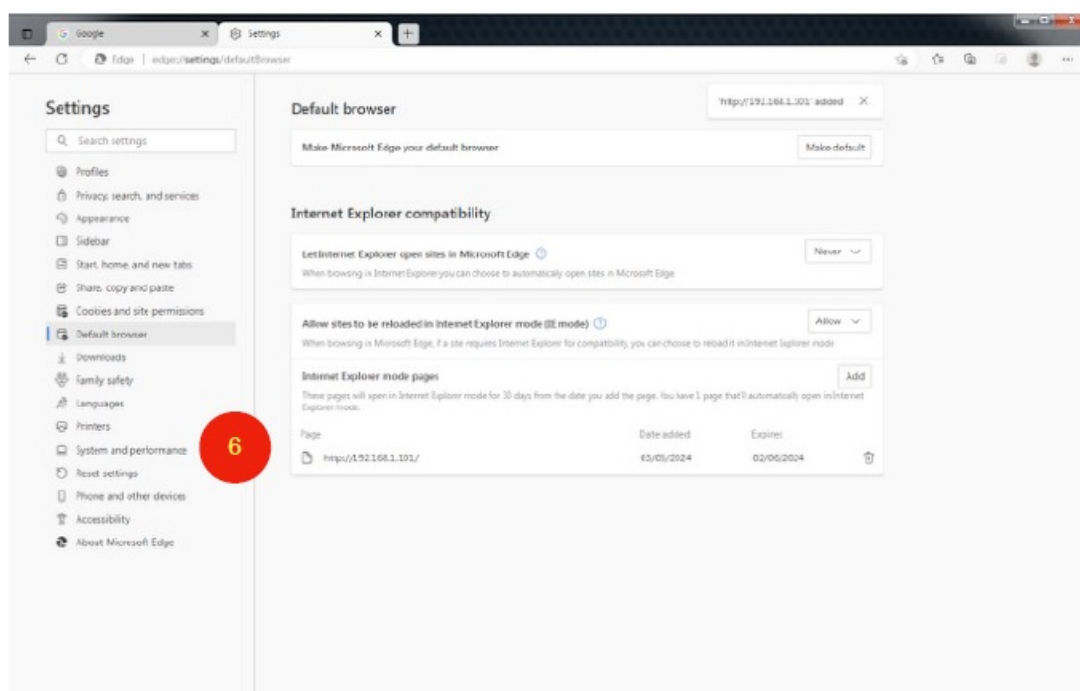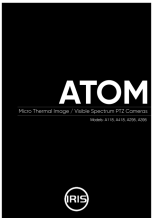

Once you have completed these steps you should now be able to connect to the camera and view its webpages by simply entering the IP address of the camera (such as 192.168.1.100 or 192.168.1.101). There's no need to

add the http://prefix. If the camera's webpage does not display correctly it may be necessary to refresh the page (either press F5, or CTRL+F5 to force a page to reload) You may also receive a prompt to download an OCX file (usually presented as a yellow box which appears at the bottom of the screen). This is a file hosted by the camera necessary to display the video on your browser and will need to be allowed.

CONTACT INFORMATION

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- **www.boat-cameras.com**

Documents / Resources

IRIS A118 Visible Spectrum PTZ Cameras [pdf] User Guide
A118 Visible Spectrum PTZ Cameras, A118, Visible Spectrum PTZ Cameras, PTZ Cameras, Cameras

References

- 🌐 **Your Ultimate Guide to Cameras and Photography**
- 🌐 **Export Control Joint Unit - GOV.UK**
- **User Manual**