

# IRIS710

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Marine Network IP Camera - 5MP

## INSTALLATION & OPERATION GUIDE



## **Important Notices. Read before Use:**

This instruction manual is intended for administrators and users of the IRIS710 IP Camera, including instructions for using and managing the camera on your network. The use of video surveillance devices can be prohibited by laws that vary from country to country. It is the user's responsibility to ensure that the operation of such devices is legal before installing this unit for surveillance purposes.

Before installing the IP Camera, please read and follow all the safety and operating instructions to avoid any damages caused by faulty assembly and installation. The user must adhere to all the warnings on the product and in this manual.

### **Liability**

Every reasonable care has been taken in the preparation of this instruction manual. Iris can not be held responsible for any technical or typographical errors and reserves the right to make alterations to the product and manuals without prior notice. Iris makes no warranty of any kind with regard to the material contained within this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The user should verify the relevant information is current and complete before placing orders. All products are sold subject to Iris' terms and conditions of sale at the time of order acknowledgement.

Iris shall not be liable nor responsible for the applications and resale of its products or bundled software with statements different from or beyond the specification/parameters stated by Iris. Iris is under no obligation to provide any further technical support service or product/software alteration beyond Iris' representation.

### **CE/FCC Statement (EMC)**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. If the equipment is not installed and used in accordance with the instruction, it generates, uses, and can radiate radio frequency energy which may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his/her own expense will be required to take whatever measures may be required to correct the interference.

## Overview

The IRIS710 Network Marine Camera from Iris Innovations packs state of the art Internet Protocol CCTV technology into an incredibly compact, robust through-hull housing to deliver beautifully crisp, high resolution underwater footage.

Key features of the 710 camera include:

- High Definition 5 Mega Pixel Image Resolution
- 360 degree Hemi-Spherical Panoramic video.
- Compression: Motion JPEG, MPEG-4, H.264
- Streaming: Multiple Stream: Supports up to 2 independent streams, controllable framerate and bandwidth CBR/VBR.
- Built-in Micro SD card slot for local storage
- PoE 802.3af compliant, and DC 12V Power (optional).
- Aluminium Bronze Bezel
- Hard Anodized Aluminium
- IP68 Waterproof Design
- Waterproof RJ45 Connector
- Housing Dimensions: 118mmø Bezel. Shaft Length: 120mm. Shaft Diameter: 89mmø
- Hole Cut-Out: 90mm (3.54")
- Weight: 1.8Kg
- Browser Support: Microsoft IE, Firefox, Chrome

## **About IP Cameras**

An IP camera usually combines a standard CCTV type camera with additional circuitry and software to convert the signal from and communications to the camera into a digital format that can be accessed via the internet or an ethernet based network.

The circuitry within the camera literally hosts it's own website. IP cameras are simply CCTV cameras with integrated video web servers.

## **Package Contents:**

Contents may vary depending on model and specific OEM applications.

1. Marine Network Camera (IRIS710)
2. Waterproof CAT5e Ethernet Cable
3. User Guide

Please Note: PoE injectors are not supplied with the camera and must be ordered separately.

## Installation: IRIS710

### WARNING:

Installation of the IRIS710 necessitates a hole being cut into the structure of the vessel. Although guidelines are provided below, the responsibility to ensure the camera is installed correctly and is sealed sufficiently to prevent water ingress belongs to the installer, who must be suitably competent. Iris Innovations Limited and Iris Innovations USA Corporation accept no liability whatsoever for issues that may arise as the result of improper or sub standard installation that results in damage caused directly or indirectly as a result of leakage.

### IMPORTANT:

- ☉ Always ensure that the vessel's power source and battery are disconnected prior to installation
- ☉ Ensure a suitable fuse or circuit breaker are used. Iris recommend a 3A fuse.
- ☉ Prior to installation, ensure there is sufficient space within the vessel to accommodate the camera, taking into consideration room to tighten the cameras lock nut and facilitate access to connect and disconnect the cable.
- ☉ Although the camera housing and rear connector are waterproof, the PoE injector may not be. Ensure this is installed well away from any moisture or direct heat sources.

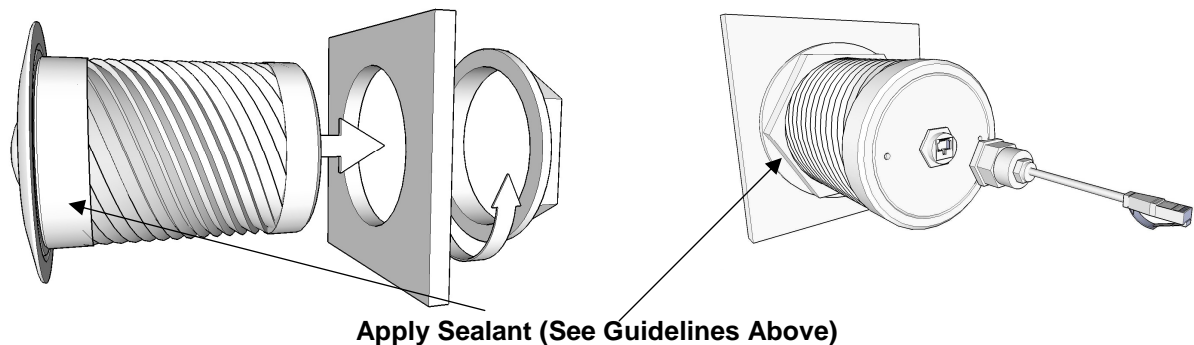
### Procedure:

- 1) Locate the camera as desired, taking into consideration internal or external obstacles that may affect the performance of the camera or inhibit the installation.
- 2) The camera should be positioned on a flat surface. Ensure the external surface of the hull (or transom) are even and parallel. It may be necessary to sand or grind the surface.
- 3) Once the installation area is prepared, drill a 90mm (3.54") hole using a suitable pilot hole and hole saw.
- 4) Ensure the inner hull surface is sealed to prevent water intrusion into the hull before the camera is secured in place.
- 5) Ensure that the hull surface is free from dirt, grease and debris. Remove anti-foul from the hull surface where the camera bezel will sit.
- 6) Use a suitable marine adhesive sealant (3M 4200 for example) to apply a liberal bead of sealant around the entire circumference of the back side of the bronze bezel. A channel is machined into the back of the bezel - ensure this is completely filled with sealant.
- 7) Apply a bead of sealant around the edge of the 90mm (3.54") hole.
- 8) Carefully slide the camera into the hole, ensure the orientation of the camera is as required. The camera is shipped with a removable stick-on arrow to indicate the 'top' of the cameras field of view.
- 9) From inside the vessel, slide the rubber spacer rings over the camera shaft as required to ensure the lock nut will provide a suitably tight fixing. Two rings are supplied.
- 10) Screw the lock nut in place and hand tighten. Do not lock fully in place at this stage.
- 11) Connect the waterproof RJ45 plug into the back of the camera. Details on connecting to the network via a PoE injector are listed above.
- 12) Ensure the camera orientation is as desired. Make any changes to the cameras orientation now before the sealant cures and the lock nut is fully tightened.

### Procedure (Continued...):

- 13) Disconnect the cable from the camera.
- 14) Follow the sealant manufacturers instructions on curing time before fully tightening the camera lock nut.
- 15) From inside the vessel, apply another bead of sealant fully around the circumference of the camera shaft.
- 16) Allow the sealant to fully cure before putting the boat back into the water.
- 17) Connect the waterproof CAT5 cable to the camera connector, ensuring the connector sits true in the receptacle and the connector lock-nut is fully tightened without cross threading.
- 18) Now connect the cable to your network and follow the setup instructions below.

**DO NOT LAUNCH THE VESSEL UNLESS THE SEALANT IS FULLY CURED IN ACCORDANCE WITH THE SEALANT MANUFACTURERS INSTRUCTIONS AND YOU ARE SATISFIED THERE ARE NO LEAKS.**



### Setup

1. Connect the camera to a powered Ethernet source so that the unit is connected directly or indirectly to a DHCP server.
2. The camera will adopt an I.P. address provided by the DHCP server (Please refer to Router/DHCP server manual for relevant instructions).
3. Once this is connected, new I.P and network details can be viewed via the Setup then System Information page.
4. In the event of there being problems connecting the camera to your network, please contact your network administrator or IP specialist quoting the cameras individual MAC address which can be found printed on the carton label.

By default the camera is set to DHCP. Once connected directly or via your network to a DHCP router or server, the camera should automatically assume the address it has been assigned.

A software discovery tool is provided with the camera to assist camera discovery and assigning addresses if necessary. Once installed, the tool can be set to SCAN the network for any connected IRIS710 cameras. It does this by broadcasting specific information across the network which only an Iris camera will respond to. In doing so, the camera will return its current IP address.



## Accessing the Camera

Viewing Live Video:

Once the camera has been correctly addressed and set up on your network, live video can be viewed in two ways:

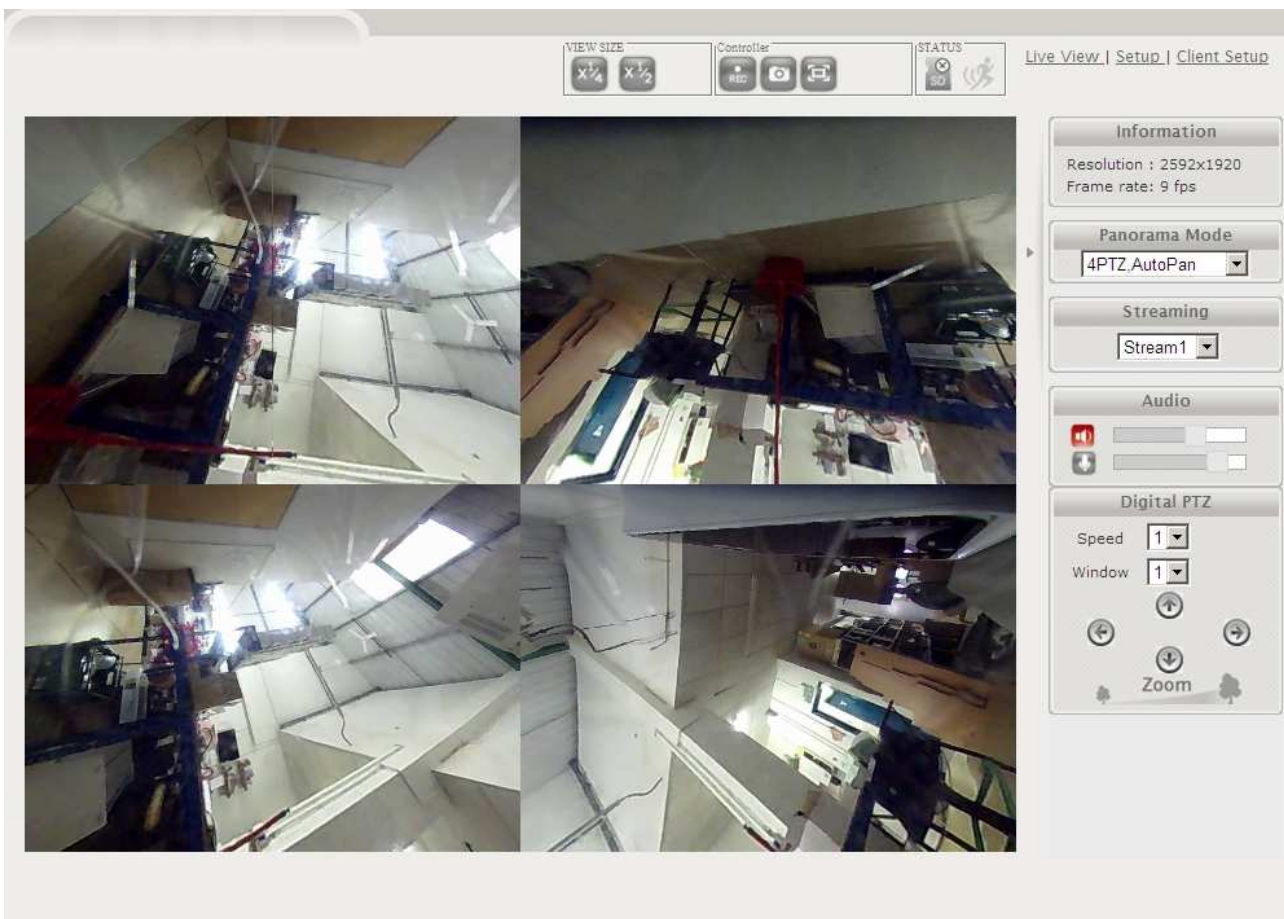
- Web Browser: Simply launch your Web browser and enter the IP address of the camera.
- Installing the IRIS Centre software from the enclosed CD.

Either of these methods will require a login to the camera. The default username to login with is “root” and the password is “pass”. Please ensure these are both entered in lowercase letters.

### Web Browser software:

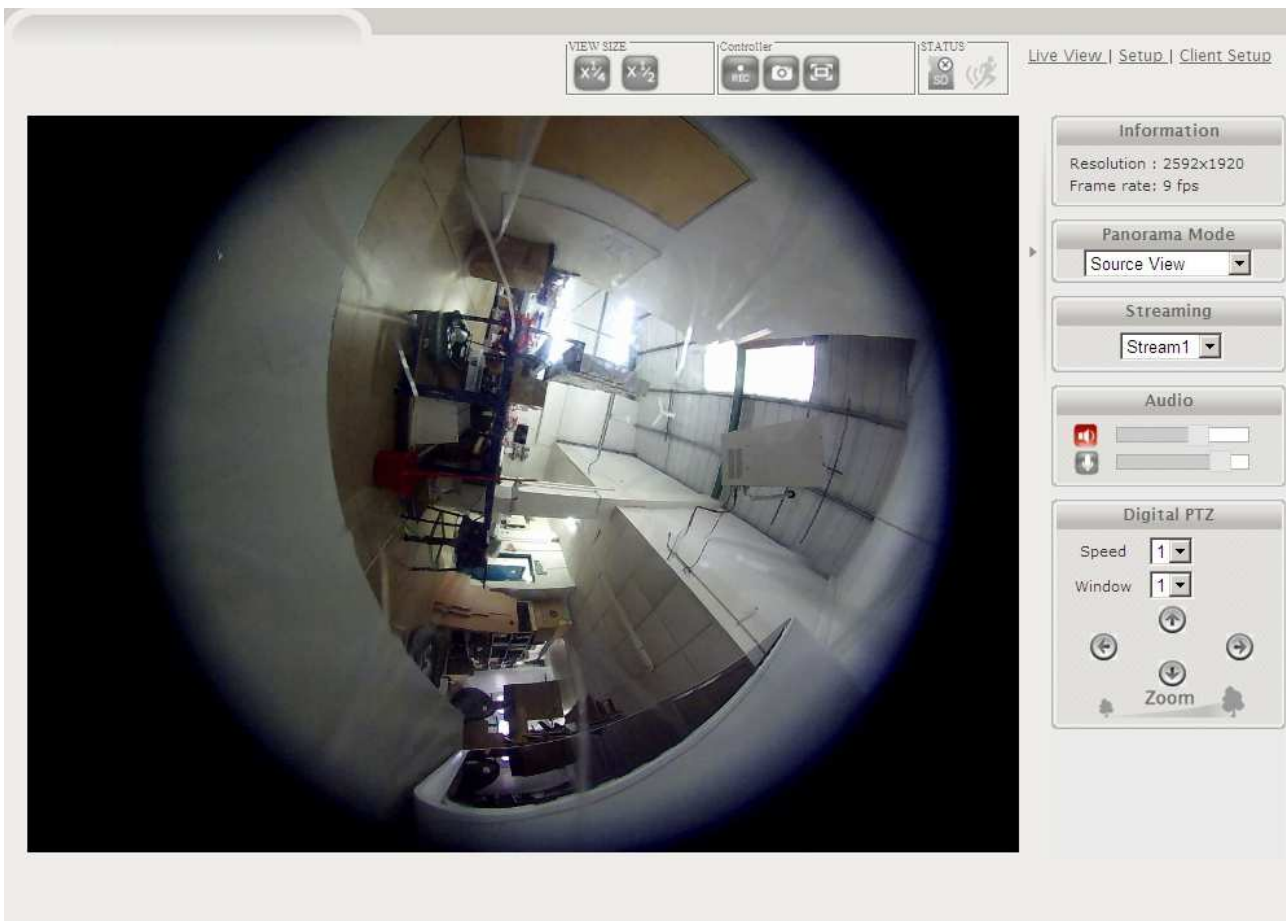
Once you have the IP address of the newly connected camera, either from your DHCP server or from using the IRIS Centre Software, you can just type this address directly into your Web-Browser to access the video from the camera and its features.

The default video display is a four way “quad” split-screen, and shows four different views from the camera simultaneously:



The first image will be automatically panning around, but the others can be moved by selecting which view you wish to change from the “window” selector, and then by using the below arrow buttons to move around the image.

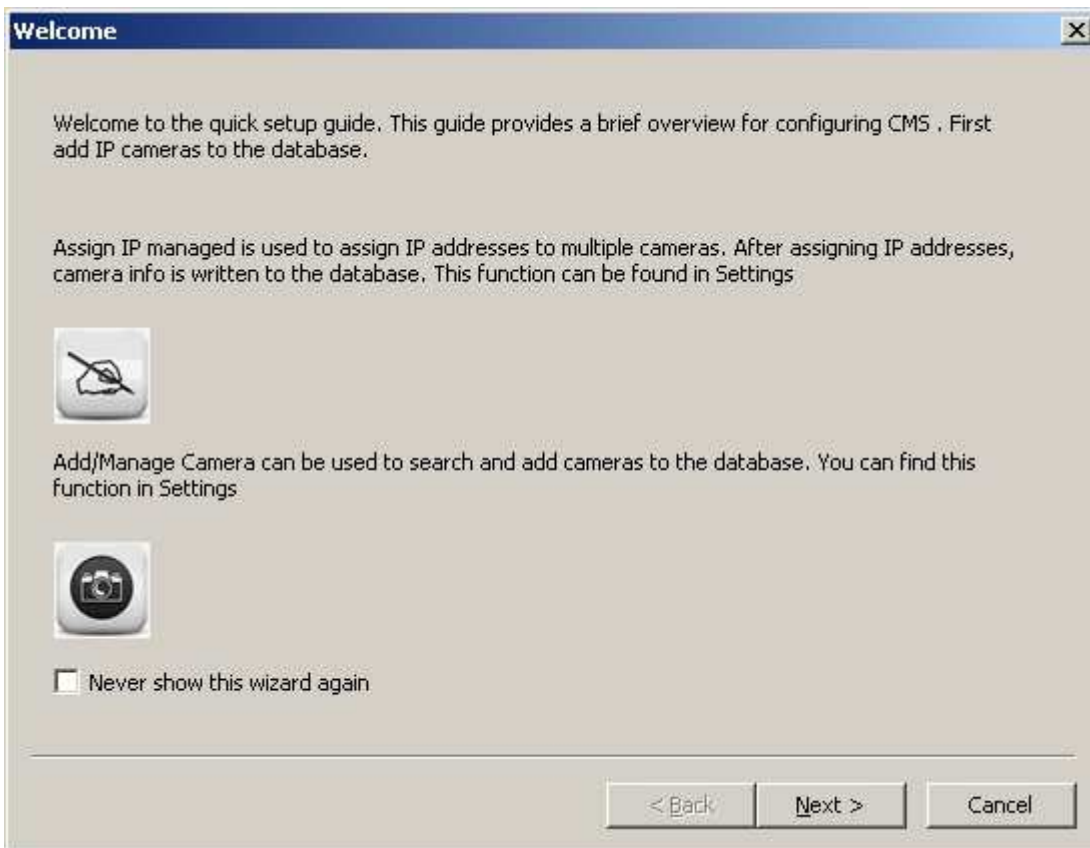
By selecting “Source View” from the Panorama Mode selector, you can also view the raw 360 degree image captured by the camera:



From the “Setup” Menu at the top it is possible to adjust all IP settings to suit your specific network installation, but please contact your network administrator if these need to be changed.

## IRIS Centre Software:

If you are using the Iris Centre software, once you have installed the accompanying software appropriate for your PC specifications (either the x86 or x64 version) and run it, you will be presented with firstly a login prompt (which is “root” as “pass” in lower case) and then a welcome page and a camera setup wizard:



To add your new camera to the system, you must select the Add/Manage camera button, and then “Scan” from the following “Add New Device” prompt:



Any connected IRIS 710 camera should now be visible in a displayed list. By selecting this camera from the list, then following the on-screen prompts, including re-entering the password when requested, this camera will be added to the system.

### **IRIS Centre Software (Continued...):**

Multiple 710 cameras can be added to this system, and also configured in groups of cameras, but as default there is a single group which should now contain one camera. By double-left-clicking the group from the device list on the right of the screen, and then double-clicking the camera with the new IP address, it will be displayed on the screen.

As per the Web-Browser interface, the default view will be a quad split-screen showing four different views from the same camera, but as the IRIS Centre software can show multiple cameras there will also be three other empty boxes displayed if you only have a single camera connected.

To view only the selected camera, then the "1x1" option from the Live View list on the right of the screen can be selected to achieve this.

You can move each of these images to the desired positions by clicking and dragging within each section. Using the mouse-wheel you can also zoom in and out of the image. Please note that when zoomed all the way out, there will be less movement available as more of the original 360 source image is already being displayed.

If a single larger video feed is desired, then by right-clicking the camera image, the "Panoramic monitoring properties" menu offers multiple display options, including "single PTZ Screen" which will achieve this.

If a Single PTZ video feed is selected then the "Panoramic monitoring properties" menu will also allow you to set the "Auto-Pan Speed" to the desired value. This would need to be set to 0 if you just wish to control the camera manually.

## Technical Specifications : IRIS710

Material:	Aluminium Bronze Bezel, Hard Anodised Aluminum Housing
Connection:	IP68 Waterproof RJ45 Connection
Dimensions:	118°mm Bezel. Shaft: 128mm. Shaft Diameter
Hole Cut-out:	90mm (3.54")
Weight:	1.737Kg
Image Sensor:	5MP 1/2.5"
Lens:	1.05mm Fisheye (180° HFOV), F2.8
Power:	PoE - IEEE 802.3af, Max 4.5W
Approvals:	CE EN55022 Class A, EN55024, LVD, RoHS. FCC Part15-B
IP Resolution:	2592 x 1920
Compression:	Motion JPEG, MPEG-4, H.264
Streaming:	Multiple Stream: Supports up to 2 independent streams, controllable framerate and bandwidth CBR/VBR.
Local Storage:	microSD/SDHC
Browser Support:	Microsoft IE, Firefox, Chrome
Network Protocols:	TCP/IP, UDP, DHCP, PPPoE HTTP, HTTPS, DNS, DynDNS, NTP, FTP, SMTP, RTP, RTSP, RTCP, 3GPP, UPnP, IPv4, SAMBA (Client), (NAS), IGMP, ICMP, ARP

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