IRIS436
Mini Marine IP Dome Camera

QUICK-START GUIDE

Regulatory Information

Disposal of Waste Equipment by Users in Private Household in the European Union.

This symbol on the product or its packaging indicates that it must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment
by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling please contact your local city office, your
household waste disposal service or the shop where you purchased the product.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance
with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorientate or relocate the receiving antenna; Increase the separation between the equipment and the receiver, connect the equipment to an outlet on a different circuit from that to which the receiver is connected; consult the dealer or an experienced radio / TV technician for help.

We hereby declare that the product is in compliance with the essential requirements and other relevant provisions of European Directive 2004/108/EC, the RoHS Directive 2011/65/EU.

IRIS436 User Guide

Warnings & Important Product Information

WARNING: Installation and Operation
This product must be installed and operated in accordance with 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 be qualified personnel or by persons competent in electrical systems.

WARNING: Power Supply and Grounding
Ensure the boats power supply is switched off during installation. Ensure suitably rated circuit breakers / fuses are used in the installation of the product in accordance with the electrical values shown in the technical specifications of the product. Never switch on power until the power connections are correctly terminated in accordance with 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.

WARNING: Wiring terminations
Where the products 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. The product has been certified to IP66 standards, however, submersion or 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 judgements made on the basis of approved navigation methods. It is the users responsibility to observe correct and proper navigational skill 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 or inability to use this product.

CAUTION: Switch Camera Off When Not in Use.
To prolong the operation life of the the cameras 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 authorized Iris Innovations dealer. Any unauthorized work to 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. Avoid exposure of the imager to direct sunlight where possible as this may degrade the cameras performance over time.

When cleaning the device, ensure power is switched off. Clean the camera housing with a soft cloth. Moisten the cloth and use a mild detergent if required. 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 advise on cleaning the lens window, contact Iris Innovations.

INFORMATION: Product Disposal and Recycling
Dispose of this product in accordance with 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 request you observe 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.

Introduction

Thanks for buying the IRIS436 Miniature IP Dome Camera from Iris Innovations.

The IRIS436 is an IP version of our best selling IRIS036 range of dome cameras, made successful due to its stylish, miniature design and quality reliable performance.

By using IP cameras, installation and cabling costs are reduced, video and control can be networked easily around your vessel, and you can even view and control your cameras from your smart phone, tablet or computer wirelessly. By hooking your new IRIS436 camera into your onboard network and connecting that in turn to a WAN using a cellular, satellite, wired or WiFi connection, you can also view and control the cameras when you are at home or in the office!

The IRIS436 camera is an extremely versatile device. It is widely used to monitor decks, companionways, engine rooms, as a back up camera and as a docking camera.

The IRIS436 is an ONVIF compliant device which means it can be viewed on any ONVIF hardware, including DVR's, computers and compatible MFD's such as Raymarine's Axiom and other network plotter.

Overview of Key Features

Here's a brief list of some of the IRIS436's key features:

- 1280 x 720P Resolution
- Mechanical IR Cutout filter for True Day / Night Operation
- Low Power 12VDC Operation <100mA
- IP66 Ingress Protection
- Small, Compact Housing
- Marine Grade A316 Stainless Steel Housing
- Suitable for Multiple Applications, such as on-board security, sports fishing, engine room monitoring and vehicle monitoring.
- Wide Operating Temperature Range
- Compatible with ONVIF compliant Chart Plotters such as the Raymarine Axiom and all other Raymarine network MFD's running Lighthouse II & III software.

Contents of Package

Please unpack your IRIS436 and check to make sure the following items are included. If there are any items missing please contact your Iris dealer:

- 1 x IRIS436 Marine Mini Dome Camera
- 1 x Fixing Pack
- 1 x Instruction Manual
- 1 x Water Resistant RJ45 connector kit

Camera Dimensions

	NAME	SIGNATURE	DATE				TITLE:		
DRAWN									
CHK'D									
APPV'D									
MFG									
Q.A				MATERIAL:			DWG NO.		

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS
SURFACE FINISH:
TOLERANCES:
  LINEAR:
  ANGULAR:

FINISH:

DEBURR AND
BREAK SHARP
EDGES

DO NOT SCALE DRAWING

REVISION

WEIGHT:

SCALE:1:2

DWG NO.

IRIS X36

A4

SHEET 1 OF 1
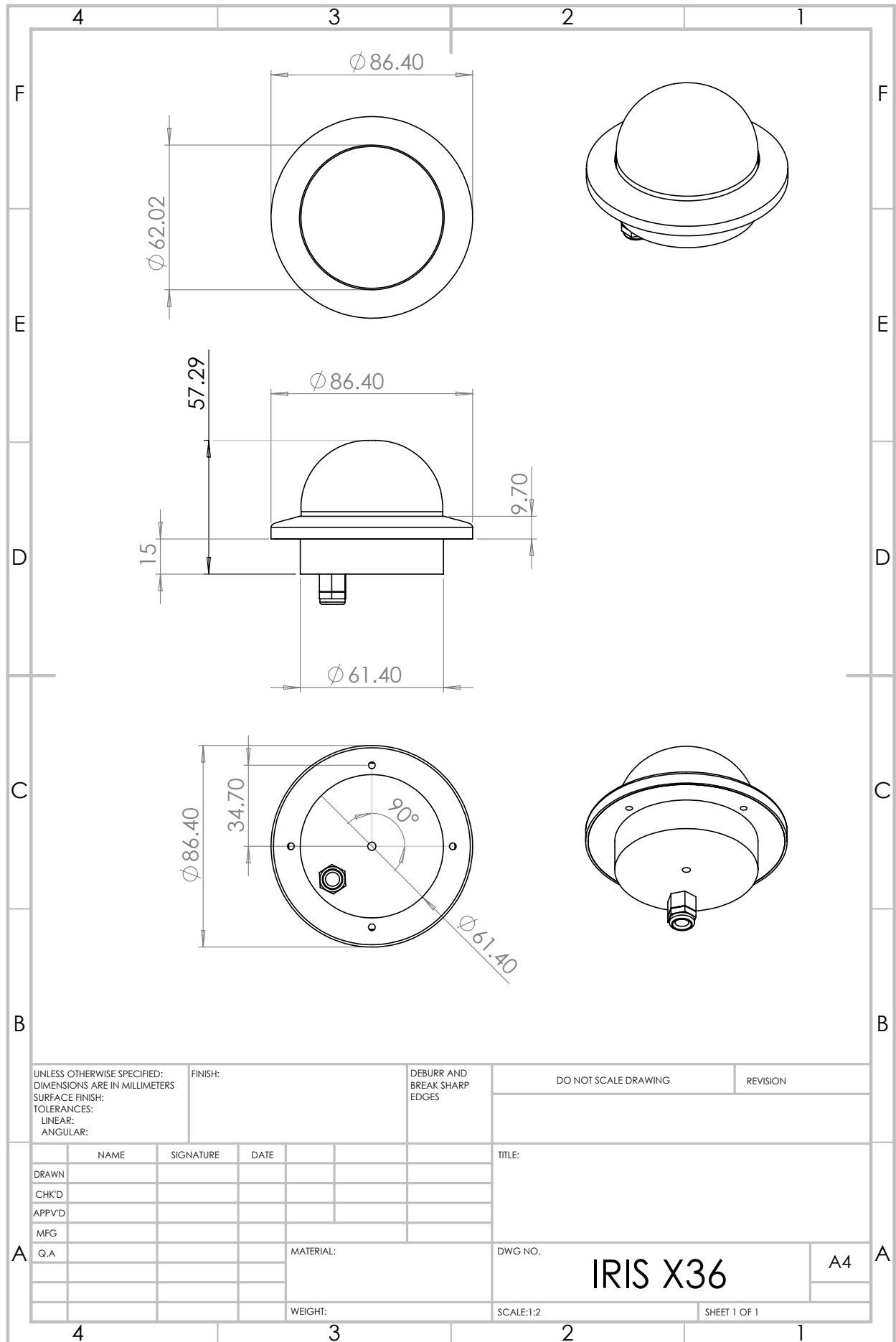
Installation

WARNING!

Only trained electrical installers or competent persons should install this product. Incorrect installation could lead to personal injury or death and/or damage to property. Ensure the electrical regulations specific to your region are observed, and observed wiring colour conventions.

Ensure the cameras power supply is connected via a suitably rated fuse or circuit breaker.

Switch off the power supply you are working on whilst installing the camera, until the product is correctly installed.

Step 1:

Decide the mounting position of your camera and use a small drill to make a pilot hole where the center of your camera will be installed.

TIP!

Power up camera and check to ensure you have the desired field of view prior to drilling any holes and mounting the camera in place.

Step 2:

Use a 62mm hole saw to drill the hole necessary to fit the camera body. Prior to drilling, ensure it is safe to do so and there are no cable runs behind the panel.

Step 3:

Offer the camera up into the hole you have just made, ensuring that you will be able to sufficiently adjust the camera module position prior to screwing the housing into place. The camera module within the housing has limited 'Pan' axis adjustment so ensure you can manipulate the camera to the desired position before proceeding. Twist the camera as desired then mark off the fixing holes ready for drilling your pilot holes.

TIP!

Use a CCTV tester if available (or connect to your plotter or a test laptop) to ensure the correct field of view is achieved before screwing the camera housing into place.

Step 4:

Present your cables to the camera through the hole you've just drilled. If you have a PoE version of the camera, this will just be a single CAT5 cable. If you have a non PoE version, you will need a CAT5 cable and 2 cores 18AWG for the DC power. Ensure terminations are sufficiently protected from any moisture ingress. Details on how to fit the waterproof plug are on the next page.

Step 5:

Fit the field installable water resistant RJ45 back-shell over the CAT5 cable and terminate the RJ45 connector in accordance with T568B wiring specifications. Refer to Page 8 for further details.

Step 6:

Plug your RJ45 jack into the cameras RJ45 socket. Make sure the fit is good and you hear the connects 'click' into place. Now ensure the water resistant back shell is tightened into place. If you have a Non PoE version of the camera, connect your DC power ensuring correct polarity is observed.

Step 7:

Slide the 'slack' cable from the camera back through the hole in your panel, ensuring connectors are still in tact and sit the inner dome onto the protective foam / rubber ring on the base.

Step 8:

Offer the camera up into the hole you have made, line up the fixing holes with your screw pilot holes (if you've made them) and screw firmly into place.

Step 9:

Adjust the pan and tilt position of the camera module as desired. Once the camera is pointing in the correct position, lock the adjustment screws into place to prevent the camera module moving under vibration. Power up the camera and test to ensure you are happy with the final position. Leave the camera running for 30 minutes without the dome cover and then finally carefully screw the bezel cover into place, taking care to avoid cross-threading.

How to fit Field Installable Waterproof RJ45 Jacket

When installing in an external location, or any position that will be prone to moisture ingress or harsh weather, it is important the the waterproof RJ45 connector (supplied) is used to protect the cameras connections.

| Part No	Description
1	Cameras Network Interface Socket
2	O Seal
3	RJ45 Network Connector
4	Waterproof End Cap
5	Rubber Gasket
6	Lock Nut
7	Network cable to Router / Switch / Hub / etc..
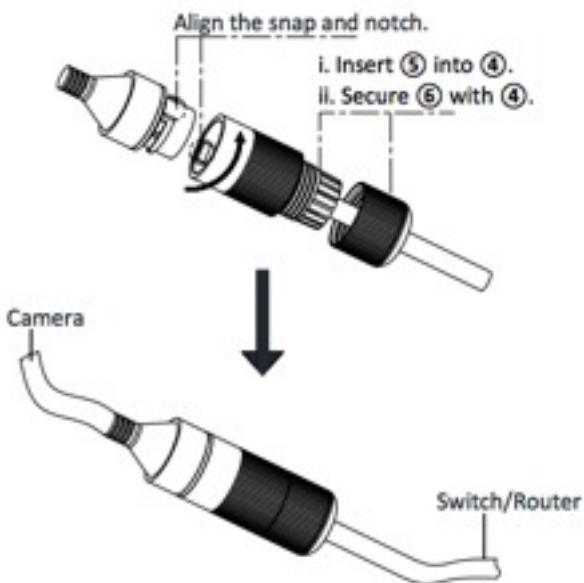
Method

Step.1:
Feed the plug-less network cable (7) through the lock nut (6), waterproof rubber gasket (5) (ensuring the rubber gasket inset ridge faces the end-cap (4).

Step.2:
Crimp an RJ45 Network plug (3) onto the end of the cable in accordance with the diagram below, taking care to ensure the wires are terminated in the correct order and are not crossed.

EIA 568B
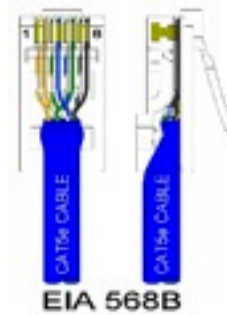
Pin No	Wire Colour
1	White / Orange
2	Orange
3	White / Green
4	Blue
5	White / Blue
6	Green
7	White / Brown
8	Brown

Step.3:
Place the O Seal (2) onto the end of the cameras network interface socket (1).

Step.4:
Insert the network plug (3) into the cameras network interface socket (1).

Step.5:
Insert the waterproof rubber gasket (5) into the waterproof end-cap (4) and secure lock nut (6) with the waterproof end cap (4).

Step.6:
Align the snap on waterproof end-cap (4) with the notch on the cameras network interface socket (1) and then secure the waterproof end-cap (4) to the cameras network interface socket (1).

Configuring the Camera over the LAN

WARNING: Stay Secure!

When connecting any device to a network with access over the internet brings risks to the security of your network and your data. Your IRIS436 features built in User Name and Password authentication but it is also your responsibility to strengthen your network security where ever possible. Please contact your IT expert for further advise. Iris cannot provide support with any aspect of your network security, other than the cameras built in security settings.

Basic Setup: Single Camera / Computer

The diagram below shows a very basic setup, with a single camera being viewed on a PC (or laptop).

Network Cable **PoE Injector** Network Cable

**IRISPoE1
6~36VDC**
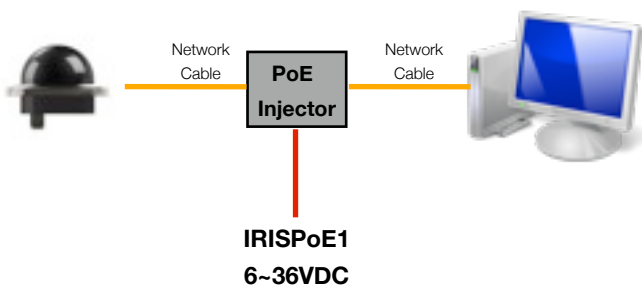
Use a standard 568B ethernet CAT5 cable to hook your computer up to the PoE injector, and then another 568B cable to hook the camera up to the injector.

With this type of installation, you must ensure the IP address of the camera is in the same range as the network adapter in your computer used to communicate with the camera. Consult documentation for your computer for information on how to view (and edit) your network adapter IP address.

The camera is set as default to DHCP, which means it has no IP address set, and awaits for a router on your network to assign the address.

To find your camera on the network, use an IP camera discovery tool, or an ONVIF Device Manager.

A great Onvif Device Manager can be found here:https://sourceforge.net/projects/onvifdm/

Once you've downloaded and installed the Device Manager software, open the program and then click the REFRESH button at the bottom of the device list on the left hand side. If everything is hooked up correctly, the details of your camera, including its IP address, will be displayed in the list.

If the cameras IP address falls outside the range of the IP address of your computers network adapter, you'll have to change the address on your adapter so it corresponds with the address of the camera. Once this is done (and you'll usually need to reboot your computer) you should simply be able to open your web browser, type the IP address of the camera into the address bar and access the camera. From here, if required, you can change the IP address of the camera as desired - back to the original address range of your computer for example. If you do this, then you will also have to change the address of your network adapter back to its previous range.

Basic Setup: Single Camera / Computer via Router using DHCP (default)

The diagram below shows a simple one camera / one computer device, but this time a router is used to manage your network devices and address allocation.

Network Cable

Network Cable **PoE Injector** Network Cable **Router**

**IRISPoE1
6~36VDC**
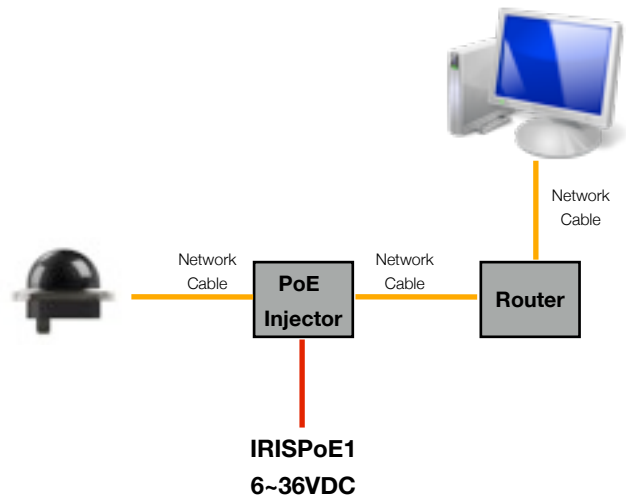
As mentioned previously, the camera as default is set to obtain its IP address automatically via DHCP. This means that once connected, your router will detect the device and assign it an IP address within its designated range (refer to the documentation for your router for further details). You must also ensure the network adapter for your computer is set to obtain its address via DHCP.

Operation

Once you have discovered the cameras IP address, or set the address to fit within your network address range, open a supported browser, and type the address into the search bar. After a few seconds, the cameras Log-In page will be displayed:

The default login details are as follows:

Username: admin

Password: no password set

You can change security settings / passwords and authorizations once you are logged in.

Enter the username and password, and the main interface window will be displayed, with a sub-window prompting you to select the desired streams:

Appendix:

VLC URL: Assuming the camera has an IP address of 192.168.1.200, the VLC Network URL for streams is as follows:

rtsp://192.168.1.200:554/user=admin_password=_channel=1_stream=0.sdp?real_stream

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