IRIS092

Compact Marine Grade 316 Stainless Steel Thermal Imaging Camera

User Guide

Important Legal Notice:

This product is classified as a dual use item by the UK Export Control Organisation with the classification 6A003B4B. This item is subject to export controls. Buyer agrees to comply with the laws and regulations relating to the import, export, re-export, transfer, shipping, sale, re-sale and use of the product within their country or territory.

Buyer agrees not to export, re-export, sell, distribute or transfer this product to any country, person or entity prohibited under laws, including but not limited to parties and entities located, organised or ordinarily resident in a country or territory that is, or whose government is, the target of UK trade sanctions, including Russia, Cuba, Iran, North Korea and Syria, or located, organised or ordinarily resident in a country or territory designated as a State Sponsor of Terrorism by the UK Government.

Unless specifically granted by licence issued by the UK Export Control Organisation, this item is prohibited for military use and must not be sold, re-sold, distributed or transferred to any person or organisation for this purpose.

Warnings and Regulatory Advise

Do not use harsh chemicals or cleaning solvents to clean the device.

Do not attempt to open the device.

Unauthorised modifications or attachments could damage the device and may violate regulations governing radio devices.

Avoid dropping, knocking or shaking the device. Rough handling can break internal circuit boards and fine mechanics.

Observe correct polarity when connecting power and data. Failure to do so could result in damage to the unit.

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: Re-orientate 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 1999/5/EC (Radio and telecommunications terminal equipment Directive).

Introduction:

Thank you for buying the IRIS092 Compact Thermal Imaging Camera.

The IRIS092 has been designed to deliver unparalleled vision at night and I now light situations, in the harshest of environments. Machined from marine grade 316 Stainless Steel, the IRIS092 is perfect for spotting obstacles at sea, on board deck, in engine rooms and companionways and is extremely effective when looking for objects, people or animals that have fallen overboard.

The IRIS092 is used by professional, commercial and leisure marine customers as well as police authorities, fire, search and rescue services, wind farm support vessel operators and aquaculture businesses around the world.
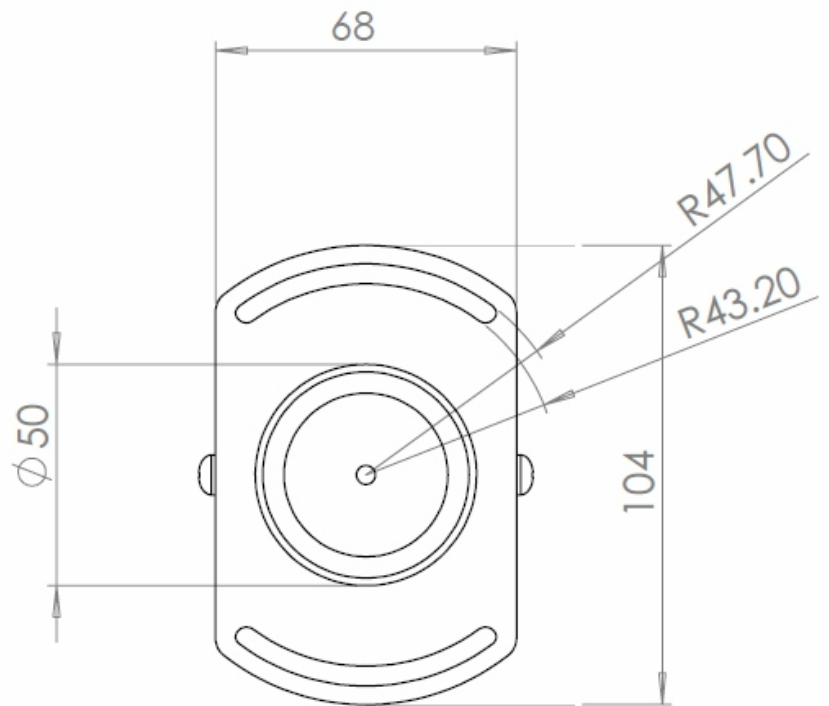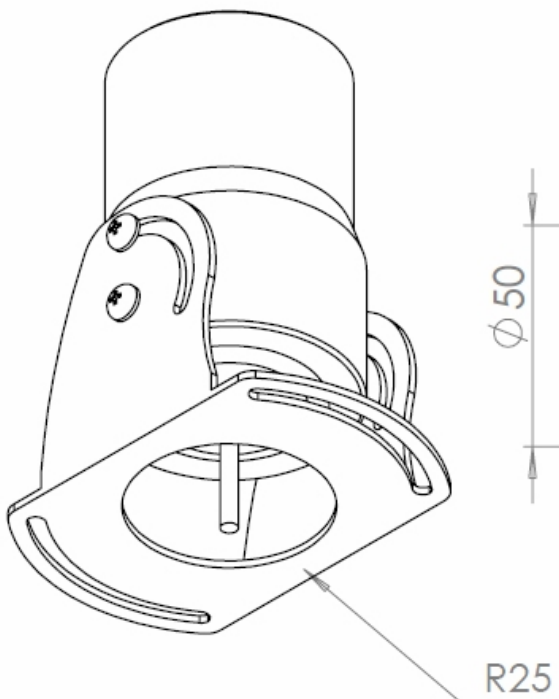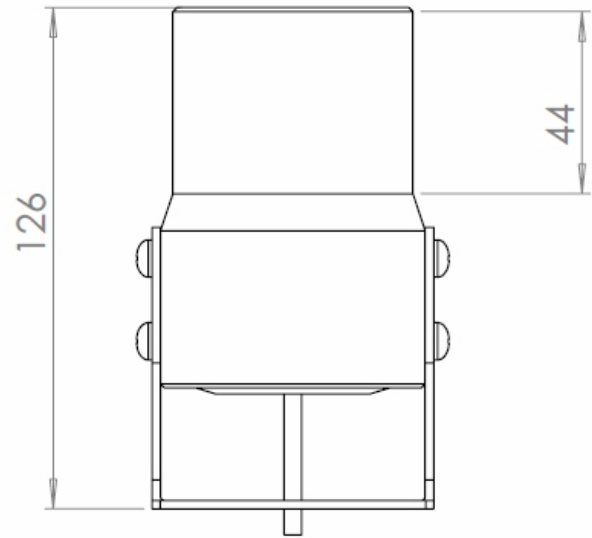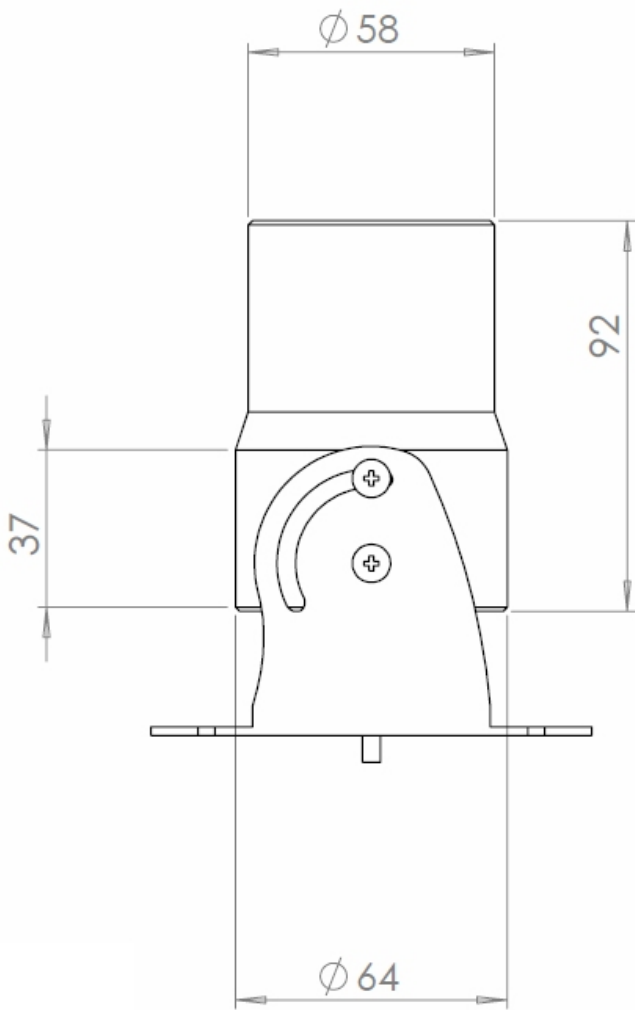
Key Features Include:

Compact Bullet Style Housing with Adjustable Tilt Bracket.
316 Marine Grade Stainless Steel Case
384 x 288 Resolution with 19mm Lens
Multiple Colour Palettes
ICE™ Image Enhancement
17µm Pitch
<50mK Thermal Sensitivity
8~14µ Transmission Range
IP68 Environmental Protection
Salt / Mist Proof

Suggested Applications:

Perfect for Extreme Environments
Work & Tug Boats
Fishing Vessels
Engine Room Monitoring
Law Enforcement & Military
Wind Farm Vessels
Aquaculture & Fisheries
Luxury Vessels
Passenger Ferries & Cruise Liners

Dimensions:

Installation Instructions:

Warning:

Installation of this product must only be carried out by a marine electronics professional or competent person. Failure to observe these installation guidelines and good electrical practices could result in fatal damage to the product, other on board equipment and personal injury. Observe electrical codes and practices of the region in which the device is being installed.

When installing on board, it is essential to observe electrical safety precautions associated with the installation and operation of DC powered electronic equipment in and around water. Ensure the waterproof integrity of the camera, cables and connection of the device are never breached or compromised. Always power the device from an appropriately rated fuse board or distribution panel.

Preparation:

The IRIS092 is designed to be mounted onto a flat surface such as a deck, ceiling or bulk head. The camera is supplied with a mounting bracket which can be discarded if you wish to use an alternative mounting bracket.
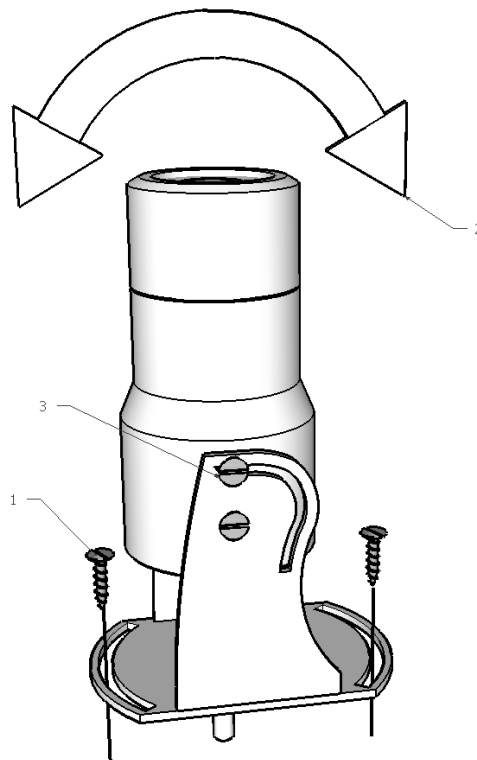
The base of the supplied bracket features an arched cut-out slot through which the camera can be screwed into place.

Please use suitable cutting tools and appropriately sized drill bits for mounting in accordance with the material the mounting surface is manufactured from.

It is recommended that the camera is powered up and checked to ensure the desired view can be realised before any holes are drilled and the camera is fixed into place.

Procedure:

1. Adjust the horizontal viewing angle using the slotted holes in the bracket before the mounting screws are fixed.

2. Loosen up the screws attaching the camera to the bracket to adjust the viewing angle and then tighten up all screws to fix the camera in position and secure the bracket to the mounting surface.
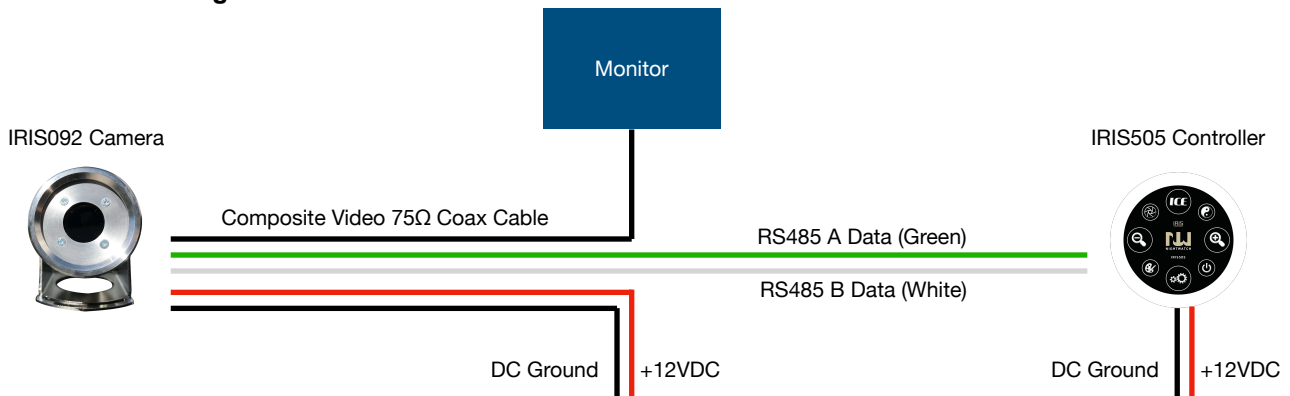
Connection:

1. The camera is supplied with a breakout cable terminating at one end with a bayonet fitting water resistant circular connector. This connects to the back of the camera. Also included are screw terminal push-fit jack plugs and sockets to enable easy connection of the DC power wires and RS485 data wires. These are for your convenience and do not have to be used if you have your own connectors or method of connection.

2. The cable tail features a 75Ω coaxial cable fitted with a male BNC connector for the video output signal of the camera.

3. The cable tail features four additional wires colour coded accordingly:

   RED WIRE   +12VDC
   BLACK WIRE   DC GROUND
   GREEN WIRE   RS485 A Serial Data
   WHITE WIRE   RS485 B Serial Data

4. Connect the four wires accordingly ensuring the correct polarity is observed. Failure to do so could result in damage to the camera.

5. Ensure the correct voltages are applied to the camera. Incorrect voltages could result in damage to the camera.

6. When using with an IRIS505 controller, ensure the RS485 A wires are connected together and the RS485 B wires are connected together. Incorrect polarity of the data lines will not damage the equipment but it will prevent it from working.

Connection Diagram:

Power Note: The IRIS092 draws less than 200mA. Please ensure the DC power to the camera is protected by a suitable fuse or breaker.

Features:

The IRIS092 camera can be used as a basic fixed camera or you can access extended features using the IRIS505 control keypad.

Details of the cameras extended features are as follows:

1) **Digital Zoom**
The camera features x4 Digital Zoom+ multiple steps (57 steps). To access the zoom feature use the Zoom- and Zoom out keys on the 505 keypad.

2) **ICE**
The camera features 7 levels of Image Contrast Enhancement, referred to as ICE.
To operate the ICE feature, press the ICE button on the 505 keypad. You can now use the Zoom+ and Zoom- buttons. The level of image contrast is displayed by the blue LED's around the outside of the keypad.

To exit ICE mode, press the ICE button once more. The LED ring should return to white.

3) **White Hot / Black Hot**
In the monochrome colour palette, use the Palette Invert button to toggle between White Hot and Black Hot.

4) **Set Up**
Access the set up mode by pressing the gear key on the 505 keypad. You will see the LED indicator ring change to red to indicate you are in set up mode.

LED Brightness
Once in Set Up mode, use the Zoom+ and Zoom- buttons to change the brightness of the LED indicator ring.

To exit SET UP mode, press the SET UP button once more. The LED ring should return to white.

5) **Colour Palettes**
Toggle the colour palette button on the 505 to select the desired colour palette. There are 8 available palettes.

6) **Shutter (Non Uniformity Correction (NUC))**
Press the shutter key on the 505 keypad to manually trigger the Non Uniformity Correction shutter. This can be used to improve the picture in scenes of low thermal contrast where the image is not very sharp.

IRIS
INNOVATIONS