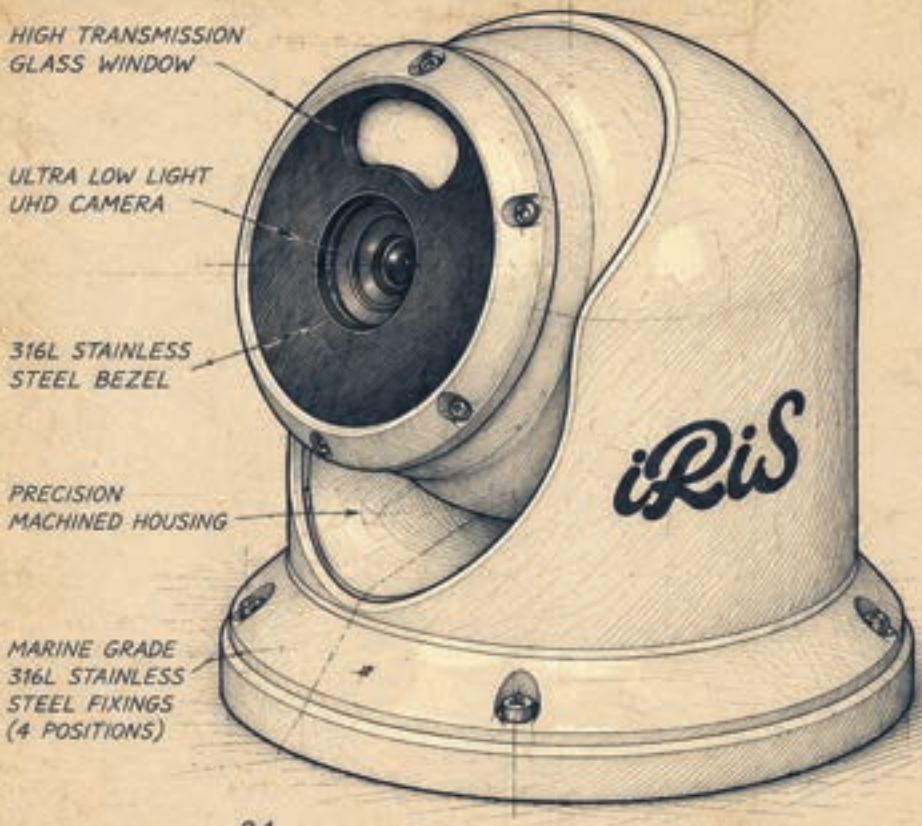
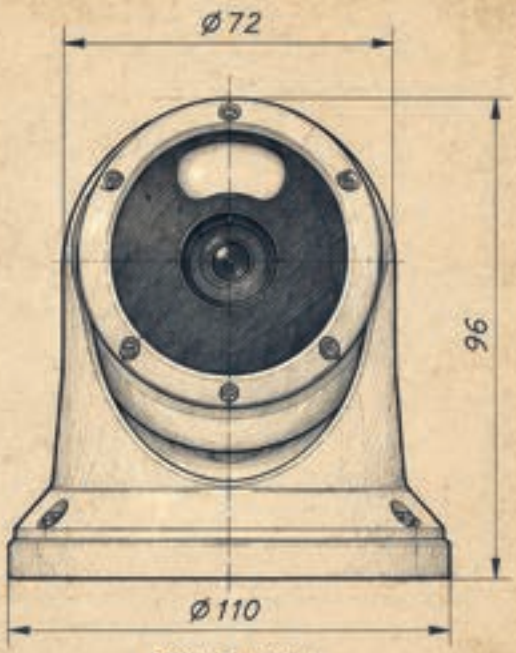
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Product 27 BROCHURE

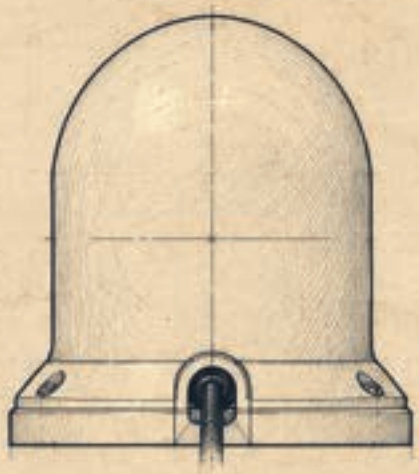




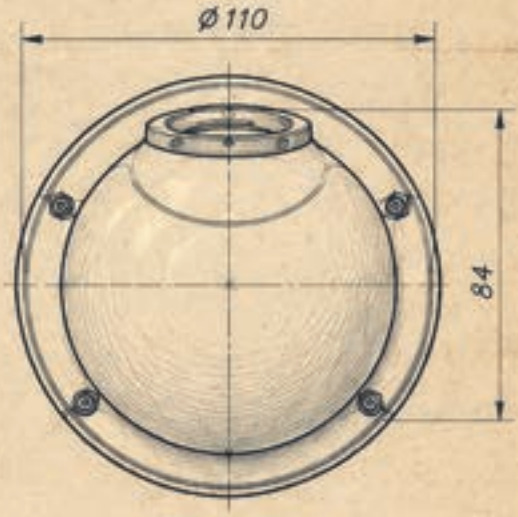
FRONT VIEW



SIDE VIEW



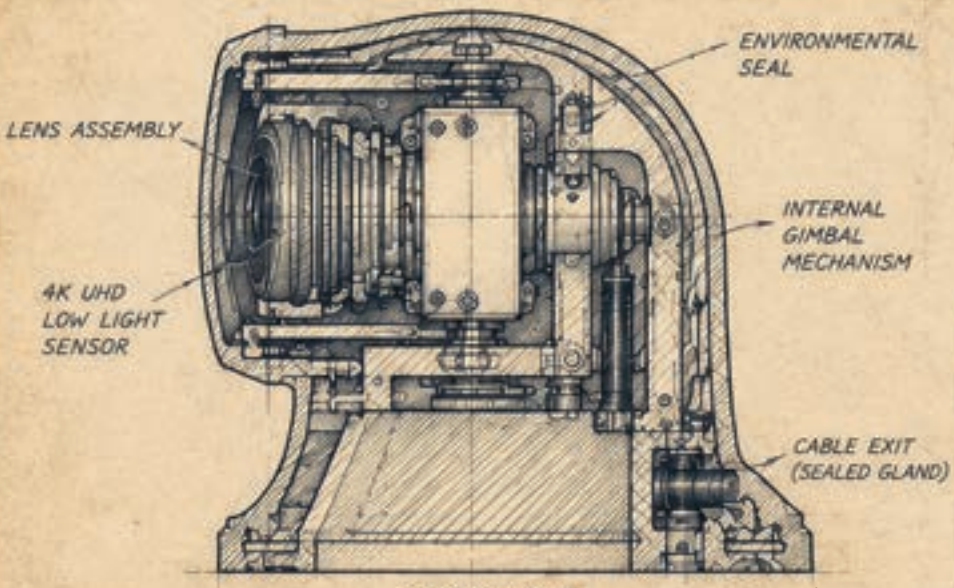
REAR VIEW



TOP VIEW



DETAIL - FRONT BEZEL
SCALE 2:1



SECTION A-A

SPECIFICATION (GENERAL)		
CASE MATERIAL	:	316L STAINLESS STEEL / MARINE GRADE ALLOY
FINISH :	:	GLOSS WHITE (STANDARD)
LENS WINDOW :	:	HIGH TRANSMISSION GLASS
FIXINGS :	:	316L STAINLESS STEEL
ENVIRONMENTAL	:	IP67 (MARINE)
MOUNTING :		SURFACE MOUNT (4 x FIXINGS)
DIMENSIONS :	:	Ø110mm (BASE) x 96mm (HEIGHT)
WEIGHT :		TBC

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78	PoE04v2 4ch + Uplink PoE Injector Hub
79	IRIS996 CCTV Tester

PHOTON

Ultra Low Light / 4K Ultra Hi-Def Night Vision Camera



Key Features:

- 4K Resolution (3840 x 2160) - 8.3MP
- Ultra Low Lux: 0.0003
- Full Colour Video in Starlight Conditions
- Remote Viewing
- Soft White LED for Enhanced Short-Range Illumination (100ft)
- 12mm & 2.8mm Lens Options
- PoE (IEEE802.3af)
- Compatible with Leading Chart-Plotters
- Multiple Streams
- EN60945 EMC Compliant
- NDAA Compliant
- ONVIF Compliant
- Environmental Rating: IP67
- Low Cost
- Easy Installation

Applications:

- Leisure & Commercial Marine
- Emergency & First Responders
- Commercial & Sports Fishing
- Off Road & Overlanding Vehicles
- Situational Awareness Aid
- Back-Up, Tender Monitoring and Forward Vision

Introducing the ground-breaking new Photon Ultra Hi-Def / Ultra Low Light Night Vision Camera from Iris, available in 12mm and 2.8mm lens options for long range and wide angle applications.

Photon uses state of the art video processing technology combined with AI analitics to enhance its ultra high definition 4K (3840 x 2160) output, producing full colour, realtime (25Hz) video in virtually pitch black conditions. Even in moonless skies, with just the faintest starlight, Photon's cutting edge processor analyzes each of its 8.3 million pixels, dynamically boosting and enhancing the output stream.

In addition to the camera's dynamic video processing, an integrated soft white LED illuminator is included to enhance visibility at short range.

Designed to overcome the shortcomings of expensive thermal imaging cameras, Photon is not bound by strict export controls, doesn't struggle in low thermal contrast scenarios, and isn't affected by lead time issues accentuated by geopolitical conflicts.

The camera's staggering ultra high definition output instantly adds value to leading chart-plotters offering 4K support, such as Garmins' superb 9000 series range*. Even if your display can't offer UHD, Photon can be configured to output video as required.

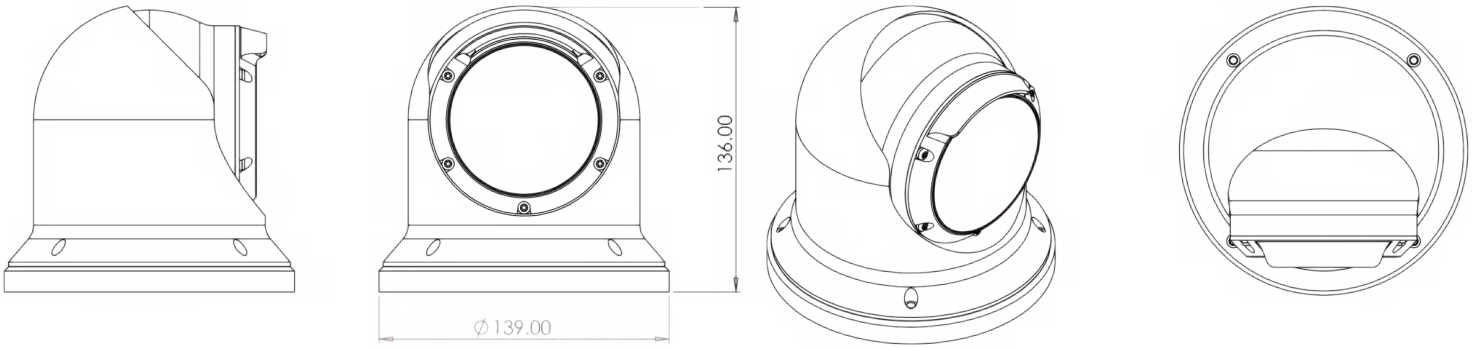
As the camera is powered via IEEE802.3af Power over Ethernet (PoE), installation couldn't be simpler, requiring a single CAT5 cable, and just 4 drill holes (plus cable entry).

If you need to run at night and don't want the hassle or price tag of a thermal camera, Photon takes the heat out of night vision and leads the way!

Iris Innovations Ltd. Unit 240 Ordnance Business Park, Aerodrome Road, Gosport, Hampshire PO13 0FG. United Kingdom
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PHOTON

Ultra Low Light / 4K Ultra Hi-Def Night Vision Camera



	Specifications
Sensor	1/1.2" CMOS Sensor
Resolution	8MP (3840*2160)@ 30/25fps; 5.3MP (3072*1728)@ 30/25fps; 3.6MP (2560*1440) @30/25fps; 2MP (1920*1080) @30/25fps; 720P (1280*720), Max 30/25fps;
Protocols	IPv4, IPv6, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, RTMP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, QoS, SSL/TLS, SSH, ONVIF (Profile S, Profile G, Profile T, Profile M)
Compression	U265, H.265, H.264, MJPEG
Minimum Illumination	Colour: 0.0003 lux (F1.0, AGC ON)
Shutter	Auto/Manual 1 to 1/100000 s
Adjustment Angle	Pan: 0˚ ~ 360˚ / Tilt: TBC - Manual Adjustment
S/N	>56 dB
WDR	130dB
Lens	12mm (Standard) / 2.8mm (Option)
Iris Type	Fixed
Iris	F1.0
Field of View	12mm Model: 54˚(H) x 30.7˚(V) x 63˚(D) / 2.8mm Model: 105˚(H) x 56.1˚(V) x 121˚(D)
Web Browser Compatibility	With Plugin: IE 10+, Chrome 45+, Firefox 52+, Edge 79+ / Without Plugin: Chrome 57+, Firefox 58+, Edge 16+
Power	DC12V ±25%, PoE IEEE802.3af / Max 6.0W
Security	NDAA Compliant
Operating Temperature	-20˚C ~ +60˚C
Environmental	EN60529 IP67
EMC / Safety	EN60945 Sections 9 & 10, EN55032, EN6100033, EN50130 / EN623681
Weight & Dimensions	1.2KG / 139mmø x 150(h)

IRIS-A295 / A395

Compact Dual Spectrum - IP+Visible Spectrum IP PTZ Camera 384x288 / 640x512



Key Features:

- Dual Spectrum Cameras - Thermal & Visible Spectrum
- Visible Spectrum Camera 2MP HD Resolution 10x Optical Zoom
- Thermal Cores available in 384x288 (A295) and 640x512 (A395) Resolutions - 4x Digital Zoom
- Miniature - Lightweight Compact Form Factor
- Dimensions 206mm x 160mmø / 2Kg Weight
- Available with single IP address or dual IP addresses
- Side mount or Rear mount Waterproof Cable Connector
- Push Lock Quick Connector - IP66
- 12µm Pixel Pitch
- Features IP and RS485 Serial Data Control
- 750mA @ +12VDC Power / 8.4W
- IP66 Environmental Rating

Applications:

- Marine Navigation & Safety
- Security & Surveillance
- Law Enforcement & Search and Rescue
- Perimeter Security & Monitoring
- Low Cost / Small Vessel Situational Awareness
- Work Boat & Commercial Shipping
- Sports Fishing / Commercial Fishing
- Rapid Deployment & Portable Surveillance
- Vehicle & Transport Applications

Introducing the new Atom Range, A295 and A395 dual spectrum IP PTZ cameras from Iris Innovations.

With two thermal resolution options, the cameras also feature a 2MP high definition visible spectrum camera core with excellent low light performace, sharp footage and 10x optical zoom capabilities.

Available with side entry or base entry cable options, the cameras are built into a robust yet compact waterproof case, designed to protect the unit from the harshest environmental conditions.

Each camera module has its own IP address meaning the cameras can be configured, controlled and switched seperately, and are compatible with many leading marine chart plotters.

An RS485 Serial Data connection is also provided to maximise control options, meaning as well as via an NVR or computer, the cameras can also be controlled from Iris's CMAC range of camera management systems or CCTV joystick controllers supporting the Pelco-D protocol.

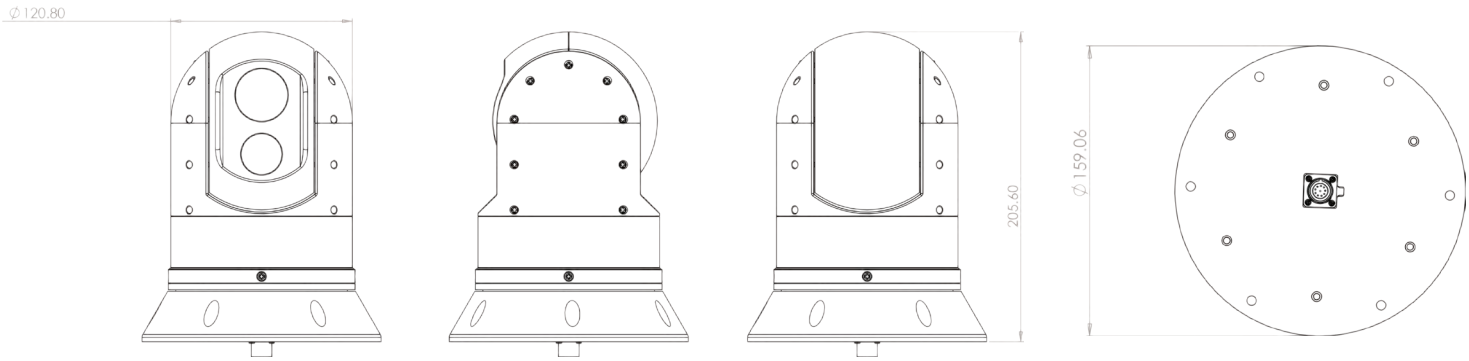
With its rugged, compact footprint and extremely competitive pricing, our new IP PTZ cameras are the perfect solution for vessels of all types and sizes and our industry leading thermal imaging technology opens up a world of boating at night in safety.

The A295 and A395 cameras are both ONVIF compliant.

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IRIS-A295 / A395

Compact Dual Spectrum - IP+Visible Spectrum IP PTZ Camera 384x288 / 640x512



Specifications:

	IRIS-A295	IRIS-A395
Thermal Camera Resolution	384 x 288	640 x x512
Thermal Camera Lens	19mm	
Pixel Pitch	17µm	12µm
Refresh Rate	25/30Hz	
Colour 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	

IRIS-A418

Compact, Hi-Definition Controllable IP PTZ Camera, Visible Spectrum with 30x Zoom



Key Features:

- Visible Spectrum Camera 2MP HD Resolution 30x Optical Zoom
- Miniature - Lightweight Compact Form Factor
- Dimensions 206mm x 160mmø / 2Kg Weight
- High Power Infrared LED's - Up to 80m Range
- True Day/Night Operation with IR Cut Switch
- Up to 255 User Presets Supported
- 4 x User Definable Patrols
- Home & Park Positions
- Side mount or Rear mount Waterproof Cable Connector
- Push Lock Quick Connector - IP66
- Features IP and RS485 Serial Data Control
- 750mA @ +12VDC Power / 8.4W
- IP66 Environmental Rating

Applications:

- Marine Navigation & Safety
- Security & Surveillance
- Law Enforcement & Search and Rescue
- Perimeter Security & Monitoring
- Low Cost / Small Vessel Situational Awareness
- Work Boat & Commercial Shipping
- Sports Fishing / Commercial Fishing
- Rapid Deployment & Portable Surveillance
- Vehicle & Transport Applications

Introducing the new Atom Range, A418 High Definition Visible Spectrum IP PTZ camera with 30x Optical Zoom from Iris Innovations.

Available with side entry or base entry cable options, the cameras are built into a robust yet compact waterproof case, designed to protect the unit from the harshest environmental conditions.

The A418 features a high end network camera module featuring leading digital image processing features such as noise reduction, image enhancement, wide dynamic range technology and boasts a powerful 30x optical zoom lens to identify targets at extreme distances.

As well as offering ultra-responsive pan and tilt control with proportional zoom movement, the camera boasts up to 255 user preset positions and a range of scnas and user configurable automated tours.

An RS485 Serial Data connection is also provided to maximise control options, meaning as well as via an NVR or computer, the cameras can also be controlled from Iris's CMAC range of camera management systems or CCTV joystick controllers supporting the Pelco-D protocol.

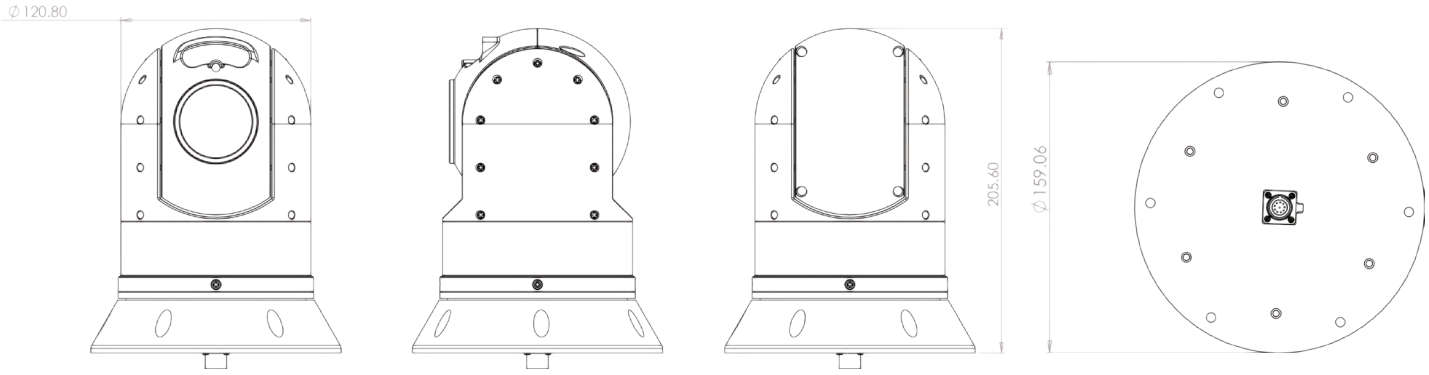
With its rugged, compact footprint and extremely competitive pricing, our new IP PTZ cameras are the perfect solution for vessels of all types and sizes and our industry leading thermal imaging technology opens up a world of boating at night in safety.

The A4418 camera is both ONVIF and NDAA compliant.

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IRIS-A418

Compact, Hi-Definition Controllable IP PTZ Camera, Visible Spectrum with 30x Zoom



Specifications:

	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

IRIS-A118

Compact, Hi-Definition Controllable 4-in-1 Analogue Hi-Def PTZ Camera, 30x Zoom



Key Features:

- Visible Spectrum Camera with 30x Optical Zoom
- 4-in-1 User Selectable Video Format
- 1920 x 1080P (HD-TVI / HD-CVI / AHD Hi-Def Formats)
- Composite Video (CVBS) Format (Standard Definition)
- Miniature - Lightweight Compact Form Factor
- Dimensions 206mm x 160mmø / 2Kg Weight
- High Power Infrared LED's - Up to 100m Range
- True Day/Night Operation with IR Cut Switch
- Side mount or Rear mount Waterproof Cable Connector
- Push Lock Quick Connector - IP66
- RS485 Serial Data Control / Pelco D Protocol
- Operates at +12VDC or PoE+ (IEEE802.3at / PoE A Standard)
- IP66 Environmental Rating
- Available in White, Black & Other Colour Options

Applications:

- Marine Navigation & Safety
- Security & Surveillance
- Law Enforcement & Search and Rescue
- Perimeter Security & Monitoring
- Low Cost / Small Vessel Situational Awareness
- Work Boat & Commercial Shipping
- Sports Fishing / Commercial Fishing
- Rapid Deployment & Portable Surveillance
- Vehicle & Transport Applications

Introducing the new Atom Range, A118 Multi Format Analogue Hi-Def Rugged PTZ Camera with 30x Optical Zoom and Hi Power LED Illumination.

Available with side entry or base entry cable options, the A118's high definition camera module is built into a robust yet compact water-proof gimbal mount enclosure, designed to protect the unit from the harshest environmental conditions.

The A118's multi-format camera module can be configured to output 3 analogue high definition formats (HD-TVI / CVI & AHD) orstandard definition composite (CVBS) video, maximising compatibility with the latest video management and recording systems or fitting into legacy installations.The camera is equipped with leading digital image processing features such as noise reduction, image enhancement, wide dynamic range technology and boasts a powerful 30x optical zoom lens to identify targets at extreme distance. An array of high power infra red LED illuminators is built into the brow of the camera to provide visibility in the dark to a range of up to 100 meters. The cameras image processing features work to boost the image gain in order to provide maximum clarity in low light.

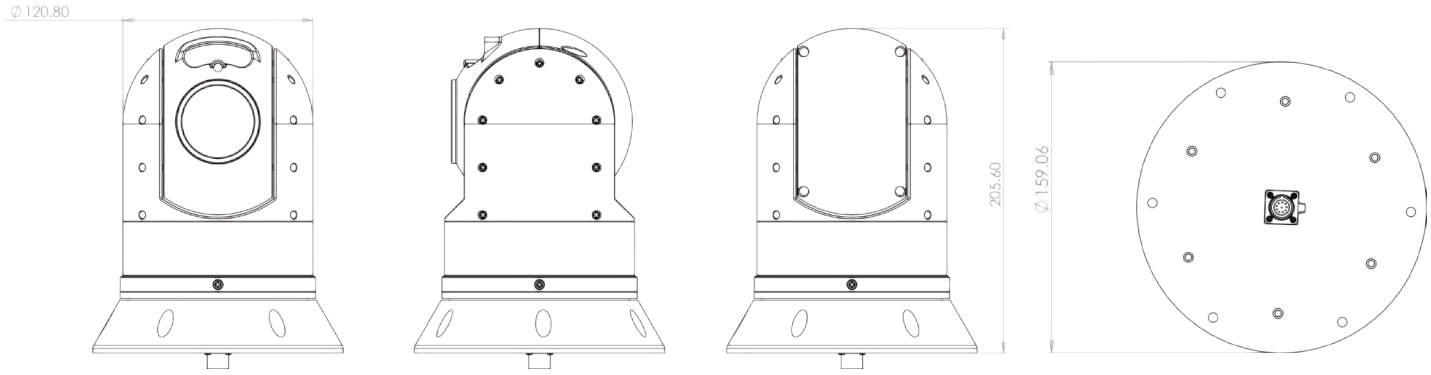
The camera is controlled over an RS485 Serial Data connection using industry standard Pelco D CCTV control communications for super accurate, high speed positioning. As well as offering ultra-responsive pan and tilt control with proportional zoom operation, the camera boasts up to 100 user preset positions and a range of scans and user configurable automated tours.

With its rugged, compact footprint and extremely competitive pricing, our new Atom range of PTZ cameras are the perfect solution for vessels of all types and sizes and our industry leading thermal imaging technology opens up a world of boating at night in safety.

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IRIS-A118

Compact, Hi-Definition Controllable 4-in-1 Analogue Hi-Def PTZ Camera, 30x Zoom



Specifications:

	IRIS-A418
Camera Resolution	1920 x 1080P (HD-TVI / HD-CVI / AHD Formats) / 960P (CVBS)
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 100m (328ft)
Home Position	Supported
Snapshot Storage	Optional - (D1/720P/1080P (default) / Contact Iris for Details
Cellular / Wifi / GPS	Optional - Contact Iris for Details
Protocols	Serial Data: RS485 / Pelco D
Power Requirements	+12vDC / 2000mA Max (IR ON) / 24W Max / PoE IEEE802.3at PoE+
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 / EAR99

IRIS106/1106/4106

Compact Recess Mounting Miniature Dome Camera with Optical Zoom
Available in Analogue / AHD / IP Formats





Optional Surface Mount Bracket. Part No. BRK106

Key Features:

- Available in multiple formats to suit your requirements
- Bezel Machined from 316 Marine Grade Stainless Steel.
- High Polish or White Powder Coat Finish
- High Definition 1920 x 1080 Resolution (Digital Models)
- High Resolution 1000 TVL (Analogue Model)
- PoE IEEE.802.3af (IRIS-4106 IP Model)
- Compatible with Raymarine / Axiom (L2 and Higher)
- Extremely Low Power Consumption
- Small, Compact and Discreet
- 10x Optical and 10x Digital Zoom
- Surface Mount Bracket Option Available (IRIS-BRK106)
- IP66 Environmental Protection

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing & Sports Fishing
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications

The IRISx106 range of multi-format miniature, controllable cameras are the smallest marine PTZ cameras available on the market and provide fast, smooth variable speed control in a variety of formats to suit your requirements:

IRIS106
High Resolution Analogue Sensor with 1000TVL Resolution / Composite (CVBS) video output - PAL / NTSC switchable.

IRIS1106
Analogue Hi-Def (HD-TVI / HD-CVI / AHD) selectable with 1920x1080P level Resolution. Use in conjunction with Iris TVI/HDMI convertor module to interface with chartplotters supporting HDMI inputs (Garmin 8xxx series, Simrad NSO etc). Real Time HD video.

IRIS4106
5MP High Definition Network IP Camera. Compatible (video only) with Raymarine / Axiom MFD's running LightHouse 2 (or above) interface.

x106 cameras can be powered via 12VDC or PoE (4106) and are very quick and easy to install.

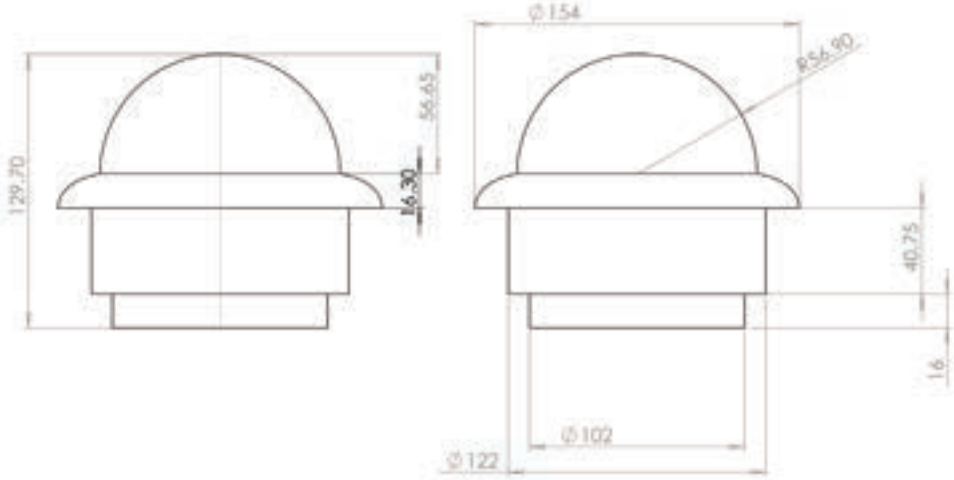
The 4106 supports up to 32 viewers at any one time and can be configured to output different resolutions at various frame rates.

The x106 range of cameras delivers high quality video in multi formats and is an extremely versatile device. Perfect for deck and companionway monitoring, on board security and for situation awareness and surveillance applicaitons.

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IRIS106/1106/4106

Compact Recess Mounting Miniature Dome Camera with Optical Zoom
Available in Analogue / AHD / IP Formats





Specifications:

	IRIS-106	IRIS-1106	IRIS-4106
Sensor	1/2.8" Sony IMX307		1/4" Omnivision OV9712 Sensor
Resolution	1000 TVL	1920x1080	Variable - 1920x1080P (2MP) Max
Interface	NA		RJ45 10/100 Base T Ethernet
Video Processing	1VP~P CVBS Composite Video 75Ω	HD-TVI / HD-CVI / AHD Switchable	H.264 Codec / Dual Stream
Protocols / Video Format	PAL / NTSC Selectable	HD-TVI / HD-CVI / AHD	TCP/UDP/HTTP/Multicast/UPnP/NTP/RTSP/ONVIF
Onvif	NA		Profile S v2.4
Bitrate	NA		VBR / CBR 32kbps ~ 8Mbps
Min Illumination	0.01 Lux		
Lens / Field of View	F1.6 ~ F2.5 / 4.7 ~ 47mm (70.9˚ Wide to 7.1˚ Tele)		
Zoom Level	Optical Zoom: 10x / Digital Zoom: 10x		
Pan Details	360˚ Continuous Rotation / Speed 0.5 ~ 300˚ sec		
Tilt Details	0~90˚ / Speed 0.5 ~ 300˚ sec		
Mirroring	Horizontal & Vertical - Configure via OSD Menu		Horizontal & Vertical - Configure via Browser
Automatic Gain Control	Supported / Multiple Levels		
Compatibility	All MFD's with Composite Video Input, TV via AV Input	MFD's with Digital (HDMI/DVI) Input with TVI-HDMI Convertor, MFD's via IRIS NVR/HVR	Raymarine / Axiom (LH2 or higher), PC based systems, MFD's with digital (HDMI / DVI) Input, MFD's via IRIS NVR/ HVR, IE Browser
Operating Temperature	-30 ~ +60˚C		
Connections	Video: BNC 75Ω Female Connector / DC Power Socket		Water Resistant RJ45 Socket / DC Power Socket / Female BNC (1090)
Material	316 Stainless Steel Bezel / Acrylic Dome / ABS Plastic Body		
Power	12VDC < 0.9A Max.		PoE IEEE802.3af / 12VDC <1A Max.
Weight & Dimensions	Weight: 1.1Kg / Dimensions: Bezel OD = 154mm, Panel Cutout = 122mm, Depth Behind Panel = 58mm (IRIS4106 = Allow additional space for RJ45 Connector - Draft = 73mm		
Environmental	IP66		

Iris Innovations Ltd. Unit 240 Ordnance Business Park, Aerodrome Road, Gosport, Hampshire PO13 0FG. United Kingdom
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IRIS-EX106 / EX4106

Stainless Steel, Explosion Proof PTZ Dome Camera
Available in Analogue & IP Formats



Key Features

- Available in Analogue/AHD & IP Formats
- 1920 x 1080P HD Resolution
- Manufactured from 316L Stainless Steel
- Explosion Proof
- Water Proof IP68
- ExMark ExIICT6Gb / ExtDA21
- ONVIF Profile S (EX4106 Model)
- Low Power 12VDC or Optional PoE
- RS485 Serial Data Control (EX106 Model)
- Built In LED Illumination - 40m Range
- 12x Optical Zoom Lens

Applications

- Engine Room & Deck Monitoring
- Petrochemical Industries
- Drilling Platforms
- Deck & Harardous Equipment Monitoring
- Miltary & Emergency Service Applications
- Offshore Vessel Surveillance

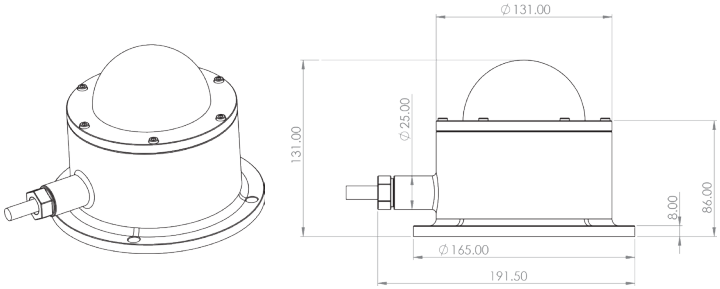
The IRIS-EX series PTZ camera, available in analogue hi-def formats (EX106) and IP format (EX4106) is a high definition, explosion proof, rugged PTZ camera specially designed for hazardous applications such as engine room monitoring, deck monitoring, chemical, petroleum, oil depot, drilling platform and other offshore vessel monitoring.

The camera body is manufactured from marine grade 316L stainless steel and is therefore not only extremely rugged, but also corossion proof. Explosion proof junction boxes and cable hoses are also available to provide complete protection.

The camera is designed to be used in flammable and explosive hazardous areas (iia, iib, iic flammable gas) and the temperature group rating is Zone 1 and Zone 2 of the T1~T6 group as well as Zones 20, 21 and 22 condustible dust mixture ratings.

The camera is powered by 12VDC as standard and PoE is available as an option (EX4106 version), supports multible compression rates, bitrates, streaming protocols and browsers.

The EX106 outputs composite video (CVBS - PAL / NTSC), and HD-TVI, HD-CVI, AHD video formats, and is controlled by RS485 Serial Data.



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IRIS-EX106 / EX4106

Stainless Steel, Explosion Proof PTZ Dome Camera
Available in Analogue & IP Formats

Specifications:	EX106	EX4106
Image Sensor	1/2.8” 2MP Progressive Scan CMOS	
Video Signal	CVBS: PAL / NTSC / AHD / HD-TVI /HD-CVI	NA
Min Illumination	Colour 0.05 Lux @ F1.2 AGC ON, 0 Lux with IR Operation	
Shutter Speed	1/25s to 1/100,000s	
Lens	5 ~ 60mm Motorised Lens	
Day / Night Operation	IR Cut Filter with Auto Switch (Photo Diode)	
Image Enhancement	BLC / 3D DNR / D-WDR	
Motion Detection	Supported	
Privacy Protection	Supported (4 user definable areas)	
Environmental Rating	IP68	
IR Switching / Wavelength / Range	0.5 ~ 3 Lux / 850nm / 60m	
Pan / Tilt Range & Speed	Pan: 0 ~ 355˚ @ 40˚/sec Tilt: 0 ~ 90˚ @ 40˚/sec	
Video Compression	NA	H.265+ / H.265 / H.264 / MJPEG
Video Bit Rate	NA	32Kbps ~ 12Mbps (CBR / VBR Selectable)
Audio Compression	G.711U	
Dual Streams	Yes	
Max. Image Resolution	AHD / HD-TVI / HD-CVI 1920*1080P(2MP)	1920*1080P
Frame Rate	50 / 60Hz	50/60Hz: Max 1920*1080 / 1280*960 / 1280*720 @ 25fps
Sub Stream	NA	50/60Hz: Max 704*576 / 640*360 / 352*288 @ 25fps
Image Settings	Rotate Mode, Saturation, Brightness, Contrast, Sharpness, Adjustable via client software, web browser or Smart-phone App	
Network Protocols	NA	HTTP, TCP, IP, IPV4, UPNP, UDP, SMTP, NTP, DHCP, DNS, IP FILTER, PPPOE, DDNS, IP SEARCH
General Functions	Anti Flicker, Mirror	Anti Flicker, Mirror, Password Protection, Privacy Mask, Watermark
System Compatibiity	All Displays / MFD’s with composite video input, HDMI via Iris TVI to HDMI convertor / IRIS CMAC	ONVIF, Media2, P6S, IRIS CMAC MFD’s: TBC
Interface	Video: BNC Female, Data: RS485 2 Wire	1 x RJ45 10M / 100M Ethernet Interface
DC Power	12VDC ± 10% <15W Max (LEDs ON)	12VDC ± 10% / PoE Optional <15W Max (LEDs ON)
Housing Material	Marine Grade 316L Stainless Steel	
Weight	4KG	
Dimensions	165mm ø x 131mm Height	
Certification	ExIICT6Gb / ExtDA21 / IP68/67/66 T80˚C	

IRIS599

Panel Mount Waterproof Controller Joystick



Shown with POD599 Mount
(Not Included)

Key Features:

- Super-Compact Form Factor (Only 2.75” in Diameter)
- Circular design for easy cut out and installation
- A316L Marine Grade Stainless Steel Case
- 4 Axis (Pan / Tilt / Zoom & Select) Joystick
- Scaled Speed Controls
- Intuitive Menu Control with 16 Coloured Feedback LED’s
- Dimmable LED’s
- Supports Call and Set Preset Positions (16)
- Supports Extended Thermal Camera Feature Operation
- Switches 16 Camera Inputs
- Low Power / +9~30VDC Operation
- Supports RS485 Serial Data (CANBus Version due 2025)
- IP66 Environemental Rating
- Pelco D + Iris Variant Protocol



The new IRIS599 Compact Controller not only features a waterproof 4 axis joystick (for pan, tilt, zoom and select controls), but also an indepth yet intuitive menu system to acheive deeper control of extended features such as Preset operartion (set and call), Home Position operation (set and call), absolute reference control, LED Brighness and a host of thermal camera functions such as colour palette select, non uniformity correction filter operation and Image Contrast Enhancement operation.

As well as control over camera features, the IRIS599 can also be used to switch between camera modules on our dual payload models, and be used to select up to 16 cameras, giving you full control of your vessels on board camera system from a single, compact control interface.

Manufactured from 316L marine grade stainless steel and measuring only 2.75” in diameter, the IRIS599 controller is easy to install and fits neatly at any helm. A dimmable ring of coloured LED’s provides feedback and a visual indication of camera position and menu and feature selection.

With its super compact form factor, the IRIS599 should fit neatly into most helms, but should helm-space be a premium, we’ve also developed a beautiful the POD599 mounting option to allow the unit to be fixed to a vertical or overhead space.

Whether used as an independent controller or in conjunction with our TE01 or CMAC, the IRIS599 is a powerful control interface for your on board or in vehicle camera system.

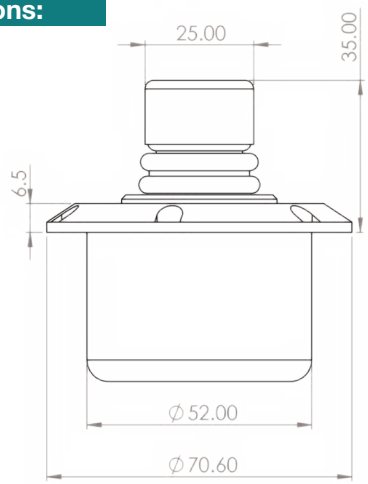
The IRI599 outputs RS485 Serial Data (Pelco D + Iris Variant Protocol) with a CANBus version due for release in 2025.

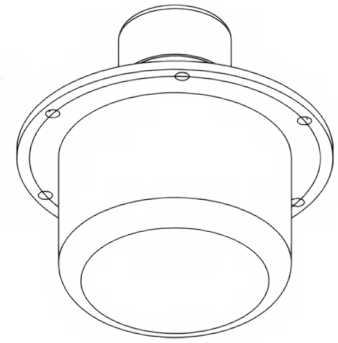
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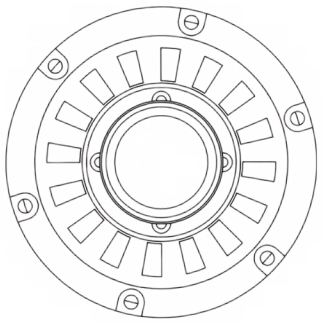
IRIS599

Panel Mount Waterproof Controller Joystick

Dimensions:







Specifications:

	IRIS735
Bezel Diameter	70mm / 2.75”
Material	Case & Bezel: 316L Marine Grade Stainless Steel - Polished Finish
LED Illumination	16 x Colour Changing LED's (provides positional feedback, feature select information and value information)
LED Brightness	Dimmable LED’s
Fixings	6 x 3mm (No.4) Fixings
Panel Cut-Out Hole	52mm ø
Connector Type	M12 5-Pin Circular DIN Connector (CAN style connector) - Field installable Connector Supplied
Connector Dimensions / Rating	21mmø x 41mm Long / IP67
Joystick	4 Axis: Pan / Tilt / Zoom (Return to Centre) - Scaled Spped Control + Push Down
Environmental	EN60529 IP66
Operating Temperature Range	-20 ~ +65˚C
Storage Temperature	-30 ~ + 70˚C
Mechanical Shock	ANSI EP455 5.14.1
Vibration	50 ~ 2000Hz, 2Hr each Axis ANSI EP455 5.15.2
Chemical Resisance	Designed to survive repeated exposure to salt water and most chemicas found in light industrial and off-highway applications
Firmware Features	Camera Select(1~16 cameras), Pan / Tilt / Zoom / Colour Palette Select (Thermal Cameras), ICE Level Select, Day/Night Toggle, Preset Set and Call (Up to 16 Presets), Home Position Set and Call, Image Flip, Non Uniformity Correction Filter Operation (Iris Thermal Cameras) Can be developed for bespoke applications
Operating Voltage	+9 ~ +30 VDC
Max Operating Power	1.5W Max Brightness
Serial Data	RS485 2 Wire / Supports Pelco D Protocol / Iris Variant Pelco D
CANBus Interface	TBC / Release Date Q1 2025
Weight	0.220g (0.265g with connector)

TE-01

Stainless Steel Rotary Encoder with Touch Screen



Key Features:

- Extremely Rugged & Compact Construction
- 316L Marine Grade Stainless Steel
- Easy Install - 1 x Cable Hole + 6 x Screw Position
- Field Installable Connector
- IP66 Environmental Protection (Connector - IP67)
- Customisation Options
- Wide Power Operating Range (4.75 ~ 18VDC)
- CAN Bus Data Protocol
- Field Installable Waterproof Connector
- Built in Backlit TouchScreen
- Rotary Encoder

Applications:

- Control Iris CMAC Systems & Video Switchers
- In Vehicle System Control
- Operates IRIS092 / IRIS093 Thermal Cameras
- Food Processing Plants
- Marine Applications
- Emergency Service & First Responders Vehicles
- Robotic Systems Control
- Medical Control Applications

The IRIS-TE01 is a stylish and rugged rotary touch controller with integrated touch screen interfaced designed to provide intuitive and responsive control to Iris products, such as their range of fixed thermal imaging cameras, CMAC camera management systems and IRIS-6xx video switchers.

With a software driven dynamic menu system, features are chosen and values selected using the smooth rotary wheel, whilst the touch screen provides visual feedback whilst at the same time also displaying user selectable elements.

Both the rotary controller and the low profile, easy install bezel are machined from marine grade 316L stainless steel and the touch screen itself is manufacture from impact resistant glass. The controller is waterproof to IP66 standards making it perfect for marine and vehicular applications.

The TE01 is supplied with a high end, waterproof field installable connector. Installation is extremely straight forward and only requires a 30mm cable entry hole.

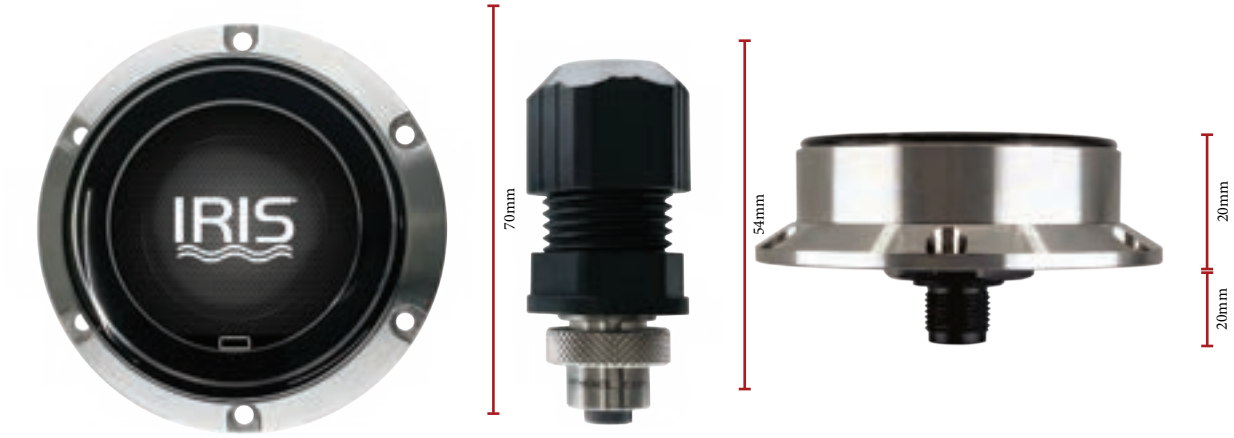
The TE01 is avialable with various firmware options to control your specific Iris product. A customisation service is also available should you wish to use the controller with your own product. The device is powered by a low voltage 4.75~18VDC supply making it ideal for vehicular use, and the data format is CAN bus. Iris can also provide protocol conversion interfaces upon request.

If you are looking for a small, tough and very stylish controller solution, the TE01 fits the bill perfectly.

TE-01

Stainless Steel Rotary Encoder with Touch Screen

IRISTE01 Dimensions



Specifications:

	IRIS735
Bezel Diameter	70mm / 2.75”
Display Diameter	33.5mm / 1.320”
Touchscreen	Projected Capacitive
Display Type	Circular Colour TFT, 320 x 300
Display Brightness	200cd/m2
Fixings	6 x 3mm (No.4) Fixings
Panel Hole	30mm / 1.1”
Connector Type	M12 5-Pin Circular DIN Connector (CAN style connector) - Field installable Connector Supplied
Connector Dimensions	54mm x 28mmø
Connector Cable Size	12.7mm / 0.5” Max
Environmental	Connector: IP67 / TE01: IP66
Operating Temperature Range	-20 ~ +65˚C
Storage Temperature	-30 ~ + 70˚C
Mechanical Shock	ANSI EP455 5.14.1
Vibration	50 ~ 2000Hz, 2Hr each Axis ANSI EP455 5.15.2
Chemical Resisance	Designed to survive repeated exposure to most chemicas found in industrial, off-highway and industrial applications
Firmware Features	Camera Select, Colour Palette Select (Thermal Cameras), ICE Level Select, Day/Night Toggle (Thermal Cameras) Basic Pan/Tilt, Zoom Control Can be developed for bespoke applications
Operating Voltage	4.75 ~ 18VDC
Max Operating Power	1.5W Max Brightness
CANBus Interface	J1939 Compliant
Weight	0.220g (0.265g with connector)

IRIS595

Panel Mount Waterproof Controller Joystick





Key Features:

- Panel Mount Waterproof Case
- Stylish Black Hard Anodised Finish
- Dynamic Menu System for Function Access
- Responsive 2 Axis Proportional Speed Thumbstick
- Supports Up To 6 Cameras and 18 Monitors
- Pelco D and Pelco D (Iris Variant) Protocols
- RS485 Serial Data
- Wide Operating Voltage - 6~36VDC
- Clear Backlit LCD Screen
- Easy, Intuitive Menu System for Feature Access

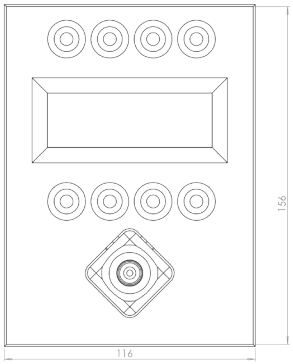
IRIS595	Specification
Weight & Dimensions	0.5Kg / 116mm x 156mm
Material	Aluminium, Hard Anodysed / Matte Black Finish
Data / Protocol	RS485 Serial Data / Pelco D - Iris Variant
Control Interface	2 Axis Proportional Control thumbstick / 8 Dynamic Buttons
Power	8~36 VDC / <300mA @ 12VDC
Environmental	EN60529 / IP66

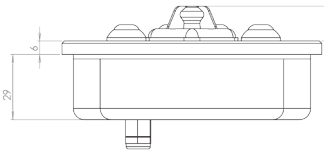
Control up to 16 on board PTZ and Thermal cameras with the stylish IRIS595 panel mount joystick.

Featuring a responsive 2 axis proportional speed thumbstick and 8 feature buttons, the IRIS595 can drive Iris's complete range of PTZ and Thermal cameras and also interface with our hybrid video recorder range and matrix switchers to select 16 cameras to 16 monitors.

The IRIS595 is very easy to install, with 2 wires for DC power and 2 wires for RS485 serial data and transmits Pelco D protocol and Iris Variant data. High end power circuitry means the device can be operate between 6~36VDC and also features reverse voltage protection.

The 8 feature buttons navigate through the device's dynamic intuitive menu system to access all the extended features built into Iris PTZ and Thermal PTZ cameras.





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On Board Camera Management & Control System
Featuring Iris Control App for HTML5 Interface Compatible Systems

You're in Control...
CMAC™ is a new feature rich command, management and control system for your on-board cameras. Upload your deck plans, set up your on board cameras and control everything from your chartplotter with the Iris Control App.

Compatible with analogue, IP and HD-TVI cameras, CMAC™ also supports remote P2P access which means you can even view and control your system whilst you're away from the boat.

Multiple Camera Formats
CMAC systems are available in Hybrid or IP only formats.. Hybrid models accept analogue, AHD (HD-TVI / HD-CVI) and IP formats. By supporting multiple formats, not only does CMAC offer maximum compatibility, but it also future proofs your system should you decide to upgrade your cameras.

High Definition Digital Output
CMAC systems feature a high definition HDMI digital video output to provide the very best live, high quality footage on compatible chart-plotters, TVs and dedicated monitors. CMAC can also be used with standard definition devices with any HDMI to Composite Video convertor.



IRIS Control HTML5 App
Manage and control your on-board cameras and alarms via our new Iris Control HTML5 App. Upload your deck plans and photos, drag and drop dedicated camera and alarm icons and you now have the most feature rich and intuitive marine security and surveillance system in the world. Navigate through your deck plans and select camera icons to switch video inputs, control PTZ cameras via the ultra-responsive virtual joystick, configure and select camera tours and scans, activate thermal colour palettes, gyro control and much much, more! Iris Control frees up helm space by removing the need for additional control hardware and joysticks.

USB Touch Control
In addition to control over your compatible MFD network, CMAC features a USB touch control interface. This means chart plotters with USB touch outputs, such as Garmin's 8000 series can be used to drive your PTZ cameras with pin-point accuracy.

WiFi / Remote P2P Connectivity
Connect CMAC to your on board WiFi router and view your cameras from around your boat on your smart phone, tablet or computer. Perfect for keeping an eye on what's happening above from below deck! CMAC can also be accessed remotely via P2P connectivity if you have internet access.

Integrated Network Video Recorder
CMACs built in recorder is fully configurable to maximise storage time, adjust resolutions and frame rates, set video motion detection and much more. Standard CMAC units support 1 x HDD drive bay (4TB capacity).

CMAC-HVR

Camera Management & Control System for Analogue, AHD and IP Cameras
Available with HTML5 Control Interface for Garmin, Raymarine, Navico & Furuno MFDs





Key Features:

- Plug'n'Play Black Box Solution
- Connect up to 8 x IP Cameras + 8 x Analogue / AHD Cameras
- Supports Analogue Hi-Def (AHD, TVI, CVI)
- Supports Legacy CVBS (Composite) Video
- Hosts IrisControl App for Chart Plotter HTML5 Platforms
- Anti-Vibration HDD Caddy with 1TB Drive (4TB Max)
- Built in Network Video Recorder
- USB Touch Interface for Garmin, Raymarine, Navico & Furuno
- Very Stylish & Compact Case with Rugged Connectos
- Hi-Def HDMI Video Output
- Wide Input Voltage Range
- Upload Deck Plans & Photos

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing, Sports Fishing & Hunting
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications

BoatingIndustry TOP PRODUCTS 2021

The CMAC-HVR is a fully featured and rugged hybrid recording and camera management device for your boat's camera system.

Available as a stand alone recorder or a full command and control system, the CMAC-HVR supports IP cameras as well as analogue (CVBS) and analogue high definition formats (HD-TVI, HD-CVI and AHD).

The unit is extremely rugged and features a removable anti vibration hard drive caddy. Footage can easily be extracted from the system by removing the caddy and commecting to a computer, or by plugging in a USB drive.

CMAC outputs high defintiion HDMI video, and can also be viewed and controlled via a web browser or the XMeye App.

On board, CMAC can also be controlled using our IrisControl App for HTML5 platforms such as Garmin's OneHelm platform, Raymarine's Lighthouse Apps, Navico and Furuno HTML5 integration

Your CMAC system is truly a multi-faceted device and works as a camera switcher, controller, alarm management system, digital network recorder and web server, meaning you can connect remotely via an internet connection to view live video footage, recorded events, switch and control your cameras.

Full details of the control possibilities offered by our IrisControl interface, including uploading deck-plans and configuring device and view icons can be found below on the IrisControl page.

CMAC is the worlds first fully dedicated camera and alarm command control and management system for boat owners!

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CMAC-NVR

Camera Management & Control System for IP Cameras

Available with HTML5 Control Interface for Garmin, Raymarine, Navico & Furuno MFDs



BoatingIndustry TOP PRODUCTS 2021

Key Features:

- Plug'n'Play Black Box Solution
- Connect up to 36 x IP Cameras
- Hosts IrisControl App for Chart Plotter HTML5 Platforms
- Anti-Vibration HDD Caddy with 1TB Drive (4TB Max)
- Built in Network Video Recorder
- USB Touch Interface for Garmin, Raymarine, Navico & Furuno
- Very Stylish & Compact Case with Rugged Connectos
- Hi-Def HDMI Video Output
- Wide Input Voltage Range
- Upload Deck Plans & Photos

Applications:

- Luxury Vessels
- Ferry Boats & Passenger Vessels
- Sports Fishing Boats
- Engine Room Monitoring
- Law Enforcement & Military
- Wind Farm Vessels
- Aquaculture & Fisheries
- Motor Cruisers
- Yachts



CMAC-NVR on board camera management, recording and control system from Iris is the definitive black box solution for your boat's surveillance, safety and security cameras. Hosting our feature rich and intuitive IrisControl App for Garmin's Onehelm platform, CMAC incorporates a network video recorder and hard drive in a quick release, anti vibration caddy and web connectivity for remote access.

Connect your network cameras, upload your deck plans and photos's, then configure your system by dragging and dropping device icons into place and setting up automated views and macro routines.

Switch your cameras or multi-cam views by choosing the corresponding icon on your deck plan. For larger vessels there are no limits to the number of plans or photos you can upload. As well as switching cameras, the IrisControl App supports an Automation feature with which you can set off a chain of instructions from an icon press.

The CMAC NVR is shipped with a 1TB HDD (expandable to 4TB) installed in a shock proof removable drive caddy which makes it easy to remove the drive to examine recorded video footage and events on an external computer.

Intuitive touch control is achieved using the IrisControl App for Garmin, Raymarine, Navico and Furuno chart plotters with further integration in the pipeline.

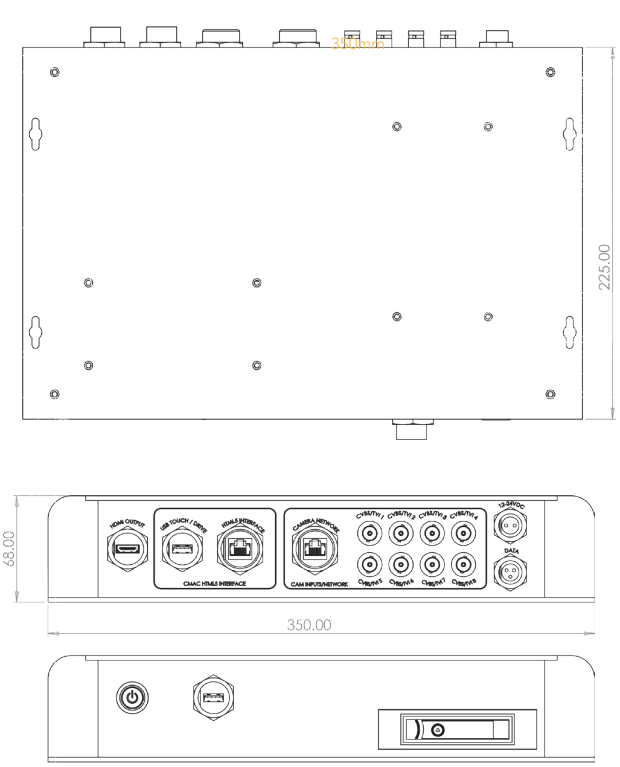
Use the IrisControl App for super accurate PTZ control and to access all your cameras extended features.

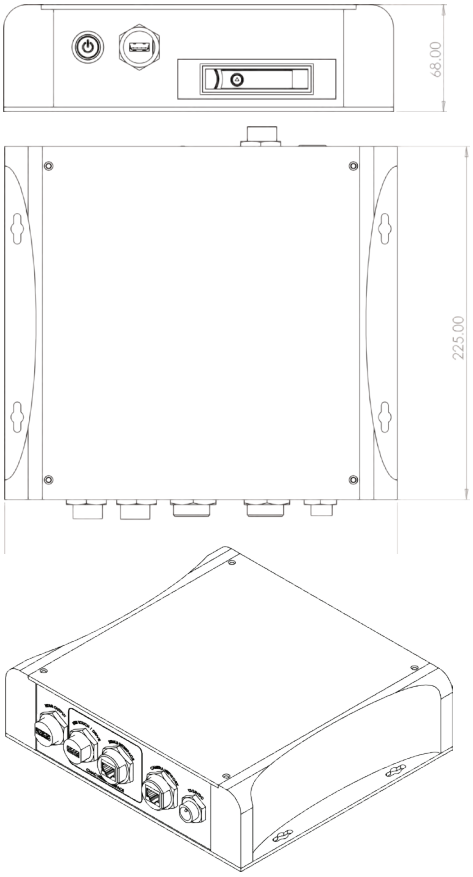
CMAC is user-upgradable, so as new features are announced you can easily add these to your interface making your system even more powerful.

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CMAC Specifications

CMAC Camera Control Interface / IrisControl App Host





Model	CMAC-H16-1TB-G
HVR System Processor	Hi3521D
Video Codec	H.265
Camera Inputs	8 x BNC Female Connectors for CVBS, AHD, HD-TVI, HD-CVI Camera Inputs
Network Camera Capacity	Up to 16 Cameras (at 1080P) via Camera Network RJ45 10/100 Connection
Network Camera Resolution (Recording)	16 x 2MP, 4 x 5MP, 4 x 3MP
Hybrid Camera Resolutions (Recording)	8 x 4MP ANALOGUE + 8 x 4MP IP
Analogue Camera Resolution (Recording)	8 x 5MP, 8 x 4MP, 8 x 2MP (CVBS, AHD, HD-TVI, HD-CVI)
Additional Network Connectivity	Network RJ45 Gigabit Connection for Hosting HTML5 Iris Control Camera Interface Application
Control Interface	IrisControl App for Garmin OneHelm Platform / Raymarine LightHouse & Navico Available Soon
IrisControl Features	User-Uploadable Deck plans / photos, Camera selection, PTZ camera, Single Screen - Split Screen Select, Thermal Camera Features: Gyro, Trim, NUC, Palettes, Memory Presets, Scans Tours, Absolute Referencing, ICE Image Enhancement, NVR Controls
Firmware Upgrade	Via USB (auto-upgrade from root directory of USB Drive)
Chartplotter Compatibility	Garmin 7xxx: Requires HDMI to CVBS Convertor (USB Touch not available) / Garmin 8xxx - All Features. IrisControl for Raymarine LightHouse Apps and Navico Apps available Soon
Storage	1 x 2.5" SATA II Drive Caddy 8TB capacity / Second Drive Bay Option Available
Video Output	1 x HDMI Output
Serial Data Port	Built In 3 Pin Connection for RS485 Serial Data / PTZ Control (Multi Protocol Support)
USB Interface	2 x USB 3 Drives / Drive 1 for Processor Board Functions (USB Touch, File Upload etc) / Drive 2 for NVR Features (File Transfer, NVR Mouse + KBD)
HTML5 User Interface	IRIS Control Camera Management HTML5 Application Host
Operating Temperature	-10˚C ~ +55˚C
Power	+12VDC ~ 24VDC / <2A @ 12VDC
Weight & Dimensions	2.8Kg / 350mm Width x 225mm Depth x 68mm Height
Material	Anodised Aluminium Plates / ABS Plastic End Cheeks with Wood Effect Veneer

	CMAC-N16-1TB-G
HVR System Processor	Hi3521D
Video Codec	H.265
Camera Capacity	16 x IP Cameras @ 1920 x 1080P Resolution,
Connectivity	Single RJ45 for Connection to Camera Network, RJ45 Connection for Garmin Network, USB for Garmin Touch / System Upgrade, USB for NVR Configuration & file management, HDMI Video Output, DC Power Input
Storage	1 x Anti Vibration SATA II 2.5" HDD Caddy for Removable Storage (1TB HDD Supplied) / 8TB Capacity
Video Output	1 x HDMI
Control Interface	IrisControl App for Garmin OneHelm Platform / Raymarine LightHouse & Navico Available Soon
USB Touch	Additional USB Touch Control for Supported MFD's / Devices
IP Camera Support	All IRIS IP Cameras / ONVIF Profile-S Compliant IP Cameras
IrisControl Features	User-Uploadable Deck plans / photos, Camera selection, PTZ camera, Single Screen - Split Screen Select, Thermal Camera Features: Gyro, Trim, NUC, Palettes, Memory Presets, Scans Tours, Absolute Referencing, ICE Image Enhancement, NVR Controls
Firmware Upgrade	Via USB (auto-upgrade from root directory of USB Drive)
Alarm Integration	TBA
AIS Tracking Features	TBA
Chart Plotter Compatibility	Garmin 7xxx: Requires HDMI to CVBS Convertor (USB Touch not available) / Garmin 8xxx - All Features. Others TBA
Power	+12VDC ~ +24VDC / <2A @ 12VDC
Operating Temperature	-10˚C ~ +55˚C
Dimensions	250 x 255 x 68mm
Weight	4.45Kg
Material	Anodised Aluminium Plates / ABS Plastic End Cheeks with Wood Effect Veneer

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IrisControl

HTML5 Camera Managent & Control App for Chart Plotters

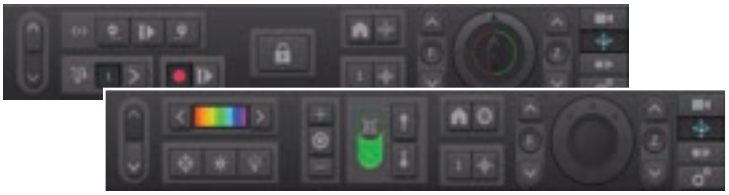




Upload deckplans & photos and configure with camera, alarm and automation icons for one-touch activation (above). Feature Rich Controller Panels (below).







CUSTOMISE

Up-load deck plans or photos into your CMAC™ system then drag and drop camera, preset and alarm icons to provide instant switching and control. Load up as many deck plans or photos as you like and navigate using scroll buttons which neatly animate through your plans.
Use your own photos to represent instrumentation panels and then simply place preset icons over your dials and displays to instantly drive a PTZ camera to look at the readings.

Alarm icons will flash when triggered and can be armed and disarmed via the icon.
Preset icons can be placed to send PTZ cameras to monitor a specific position at the touch of a button.
If you don't want to upload your own images, simply select your devices from the scroll-down text menu.

RECORD

CMAC™ systems feature a built-in digital video recorder and the Iris Control App includes a virtual control panel to provide access to the recorder's functions.
The NVR control panel within Iris Control provides access to the record module's menu system for full device configuration, including input naming, video motion detection settings, search and playback of recordings and much more.

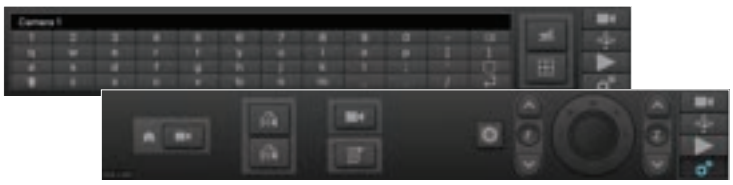


CONTROL

Iris Control's virtual joystick provides smooth, accurate control of your PTZ and Thermal cameras from networked chart-plotters completely eliminating the need for additional controller hardware on your helm.
As well as Pan, Tilt, Zoom and focus controls, we've included thermal palette and shutter controls, gyro toggle and trim controls, day / night and Infra Red LED ON/OFF controls, scan and preset controls and buttons to jump to AIS tracking controls and Drone operation.
As well as pan and tilt control using the virtual joystick, CMAC™ also supports USB Touch Control to allow precise touch control from the video feed from Chart-Plotters or screens supporting USB Touch.

CONFIGURE

As well as naming cameras, deck plans, photos, alarm and preset icons, Iris Control's set up menus are simple and intuitive and let you configure preset positions, camera image and configure mirror and invert, PTZ camera home position and software upgrades.



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CMAC Interface Boxes

CMAC Camera Control Interface / IrisControl App Host
For Systems where recording is not required

CMAC-INT001
IrisControl Interface for IP Cameras



CMAC-INT001	Specification
IP Cameras	32
Analogue Cameras	NA
TVI / CVI / AHD	NA
IrisControl HTML5 App	YES
RS485 Serial Data	YES
Recording	NO
USB Touch Option	Supported
HDMI Video Output	YES
Max. Storage	NA
Dimensions	280x 170 x 60cm
Weight	Approx 1KG
Power	12~24VDC
Keypad Option	YES
TE01 Option	YES

CMAC-INT002
Hybrid IrisControl Interface



CMAC-INT002	Specification
IP Cameras	32
Analogue Cameras	Up to 8
TVI / CVI / AHD	Up to 8
IrisControl HTML5 App	YES
RS485 Serial Data	YES
Recording	NO
USB Touch Option	Supported
HDMI Video Output	YES
Max. Storage	NA
Dimensions	280x 170 x 60cm
Weight	Approx 1KG
Power	12~24VDC
Keypad Option	YES
TE01 Option	YES

CMAC-INT003A
IrisControl Interface for PTZ Cameras



CMAC-INT003A	Specification
IP Cameras	32
Analogue Cameras	NA
TVI / CVI / AHD	NA
IrisControl HTML5 App	YES
RS485 Serial Data	YES
Recording	NO
USB Touch Option	YES
HDMI Video Output	YES
Max. Storage	NA
Dimensions	200 x 230 x 65cm
Weight	Approx 1.1KG
Power	12~24VDC
Keypad Option	NO
TE01 Option	NO

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CMAC for Garmin TD50

CMAC / IrisControl App for Garmin TD50 Mini TouchScreen Display





Key Features:

- Designed especially for systems with chart plotters set back on the helm or for clients who do not have a Garmin MFD.
- Garmins TD50 Hardware
- Miniature Panel Mount 5” Touchscreen
- Garmins Operating System
- Specially formatted version of IrisControl Software works as a control interface. View camera images full screen whilst controlling from the TD50.
- Upload your own deckplans
- Drag and Drop Icons to represent camera positions and PTZ preset memory positions
- Use TD50 independently with CMAC or on your Garmin Network
- IrisControl App feature upgrades Free of Charge as released

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing, Sports Fishing & Hunting
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications

If you do not have a compatible chart plotter, or if your compatible chart plotter is set back on the helm and out of arms reach, Iris have released a special edition of the IrisControl App for CMAC to run exclusively on Garmins excellent miniature touch screen TD50.

The TD50 is a compact 5” high bright touchscreen which can either sit on Garmins network or run independently, connecting directly to you CMAC camera management system. You can then switch, control, configure and review your on board camera system using the TD50 as a dynamic mini touchscreen controllers and with the video output from the CMAC system routed directly to your screen or MFD.

Thing of the TD50 as a mini panel mount or bracket mount tablet running the IrisControl App to control cameras and devices connected to your CMAC system.

IrisControl for TD50 was developed especially to enable clients with chart plotters from other manufactures to control their on board camera systems.

Garmins excellent little TD50 mini-MFD is water proof and can be mounted internally or externally. It’s small form factor make it perfect to mount in cramped helms or captains chairs, or in panels around the vessel to allow crew to switch and control onboard cameras.

The specially formatted IrisControl App has been designed specially to work around the TD50’s screenspace and features change dynamically when navigating through the intuitive IrisControl interface. As with the full scale IrisControl App, clients can upload their deckplans into their CMAC in the appropriate format then drag and drop camera icons to allow device selection by a simple touch.

IrisControl is the worlds only dedicated boat camera control and management system which when combined with Garmins world beating harware delivers an unbeatable experience

CMAC-INT001

IP Camera Management Interface Box / IrisControl App Host - Multiple Formats



Key Features:

- IP Camera Interface for Chart Plotters
- Up to 32 x IP cameras (up to 4K resolution)
- RS485 Serial Data Output for PTZ Control
- USB Touch Interface for compatible MFD's
- Hosts the IrisControl App for Chart Plotter HTML Platforms
- Built in Web Encoder for Remote / Wireless Connection
- Switch Cameras, Quad and Multi-Screen Views
- Facilitates Full On Board CCTV system from your MFD
- Compatible with Garmin, Raymarine, Simrad & Furuno ChartPlotter

Applications:

- On Board CCTV Systems
- Camera Switcher
- Quad and Cameo Switching
- Camera Interface for Garmin, Raymarine, Simrad, Furuno and other MFD's*
- Multi Camera Systems
- Connect and Control Remotely
- Ideal for all Vessel Types
- View otherwise incompatible cameras on MFD's

*Functionality can be limited by performance of chart plotter.



IrisControl Interface for MFD Integration



IrisControl Interface for MFD Integration

The CMAC-INT001 camera interface is a camera switching / encoding module designed to integrate multiple types and makes of IP cameras so they may be viewed on the leading marine chart plotter systems.

With capacity for up to 32 IP cameras (up to 4K resolution), the CMAC-INT001 also hosts our IrisControl interface app, designed for third party HTML5 platforms (Garmin OneHelm, Raymarine LightHouse Apps, Simrad Apps and Furuno Apps).

Once you connected your cameras, and configured any IP cameras on your boats camera network, the CMAC-INT001 displays video via a high defintion HDMI output, and when connected to your chart plotter network, hosts the IrisControl Interface. From the interface you can upload your vessels deck-plans and drag and drop icons to represent the position of each camera or device. Switching video is then simply by choosing the approporiate deckplan and camera icon from your MFD. As well as individual full screen video from each camera, the CMAC-INT001 can display quad images, cameo images, picture in picture and a whole range of viewing configurations. From the IrisControl App you can alo control PTZ cameras using the super responsive virtual joystick, configure preset icons to automatically switch and control PTZ cameras and many more features.

For non compatible MFD's or if a seperate control method is required (when the IrisControl App is not required), the CMAC-INT001 can also be used with our TE01, IRIS599 or IRIS595 joystick to function as a camera system switcher / quad display unit. The CMAC-INT001 can be accessed wirelessly whilst onboard from a WiFi hotspot (such as our Cloudlink2), or remotely using marina WiFI, a cellular modem (Cloudlink 2 or alternative) or a satellite link up.

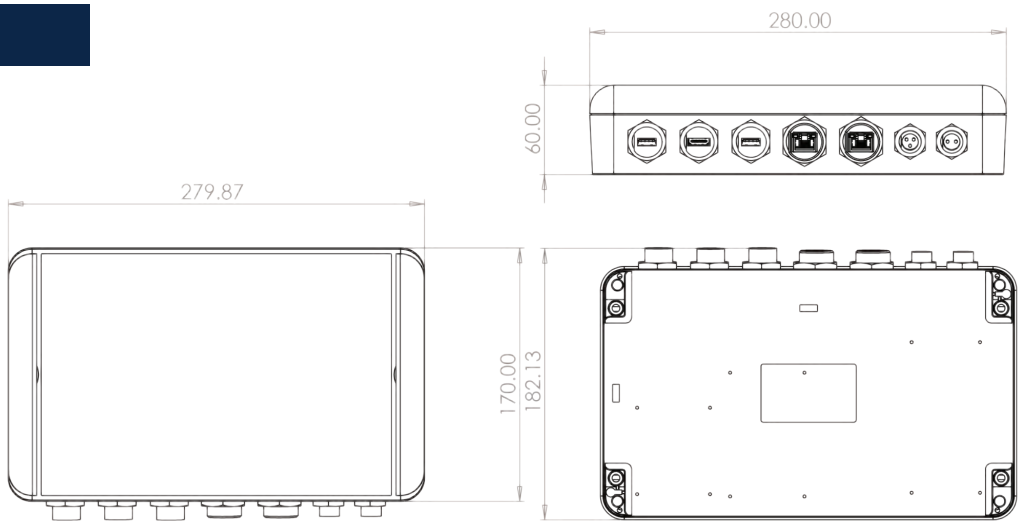
CMAC interfaces open up your vessels on board camera system by providing integration capabilities, and provide camera management features your MFD's cant.

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CMAC-INT001

IP Camera Management Interface Box / IrisControl App Host - Multiple Formats

Dimensions:

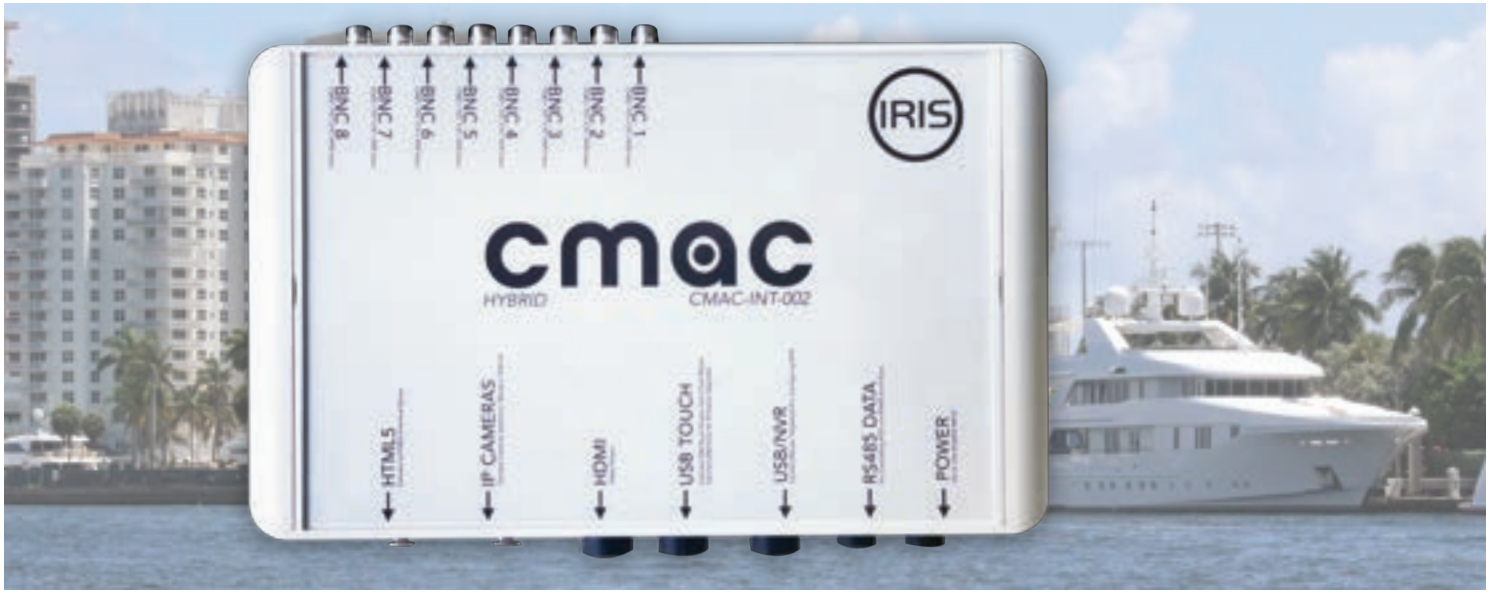


Specifications:

	CMAC-INT001 Hybrid Camera Management Interface / IrisControl Host
System Processor	Novatek NT98323
Video Codec	H.264, H.264+, H.265
Camera Inputs	Analogue Cameras Not Supported
Network Camera Capacity	Up to 32 Cameras (at 1080P) via Camera Network RJ45 10/100 Connection
Network Camera Resolution	16 x 2MP, 4 x 5MP, 4 x 3MP 4 x 4K
Network Connectivity Control Interface	IrisControl App for Garmin OneHelm Platform / Raymarine LightHouse Apps, Simrad and Furuno Apps
IrisControl Features	User-Uploadable Deck plans / photos, Camera selection, PTZ camera, Single Screen - Split Screen Select, Thermal Camera Features: Gyro, Trim, NUC, Palettes, Memory Presets, Scans Tours, Absolute Referencing, ICE Image Enhancement, NVR Controls
Firmware Upgrade	Via USB (auto-upgrade from root directory of USB Drive)
Chartplotter Compatibility	Garmin 7xxx: Requires HDMI to CVBS Convertor (USB Touch not available) / Garmin 8xxx - All Features / NVR Version Compatible with MFD's via HDMI/CVBS port and used in conjuntion with IRIS595 or TE01 Control interface IrisControl for Raymarine LightHouse Apps, Furuno Apps and Navico Apps available Q2 2023
Video Output	1 x HDMI High Definition
Serial Data Port	Built In 3 Pin Connection for RS485 Serial Data / PTZ Control (Multi Protocol Support)
HTML5 User Interface	IRIS Control Camera Management HTML5 Application Host
Hardware Control Options	IRIS-TE01 Rotary Controller with Touchscreen / IRIS595 Panel Mount Joystick Controller
USB Touch	Supported (Compatible with Garmin 8xxx series MFD's)
Power	+12VDC ~ 24VDC / During Boot-up Peak at 1.5A, 400mA Nominal
Operating Temperature	-10˚C ~ +55˚C
Weight	0.920Kg
Dimensions	280 x 192 x 60mm
Approvals	CE, REACH, RoHS, WEEE, UKCA, FCC, IC, CB, RCM, E-Mark, NDAA Compliant
Compliance	EN IEC 62368-1:2020+A11:2020 / EN60945:2002 Section 9&10

CMAC-INT002

Hybrid Camera Management Interface Box / IrisControl App Host - Multiple Formats



Key Features:

- Hybrid Functionality (Analogue / AHD & IP Cameras)
- Up to 8 Analogue / Analogue HD Cameras
- Up to 32 x IP cameras (up to 4K resolution)
- RS485 Serial Data Output for PTZ Control
- USB Touch Interface for compatible MFD's (Gamrin 8xxx)
- Hosts the IrisControl App for Garmin OneHelm
- IrisControl for All Leading MFD's in Development
- Built in Web Encoder for Remote / Wireless Connection
- Switch Cameras, Quad and Multi-Screen Views
- Facilitates Full On Board CCTV system from your MFD

Applications:

- On Board CCTV Systems
- Camera Switcher
- Quad and Cameo Switching
- Camera Interface for Garmin, Raymarine, Simrad, Furuno and other MFD's*
- Multi Camera Systems
- Connect and Control Remotely
- Ideal for all Vessel Types
- View otherwise incompatible cameras on MFD's

*Functionality can be limited by performance of chart plotter.



IrisControl Interface for Garmin OneHelm Camera Control Page



IrisControl Interface for Garmin OneHelm Camera Selection Page

The CMAC-INT002 camera interface is a camera switching / encoding module designed to work with analogue (CVBS / Composite), Analogue Hi-Def (AHD/TVI/CVI) and IP video formats.

With capacity for up to 8 x Analogue/Analogue HD cameras and 32 IP cameras (ip to 4K resolution), the CMAC-INT002 also hosts our IrisControl interface app, designed to run on many leading chart plotter interfaces, such as Garmin OneHelm.

Once you connected your cameras, and configured any IP cameras on your boats camera network, the CMAC-INT002 displays video via a high defintion HDMI output, and when connected to your chart plotter network, hosts the IrisControl Interface. From the interface you can upload your vessels deck-plans and drag and drop icons to represent the position of each camera or device. Switching video is then simple be choosing the approporiate deckplan and camera icon from your MFD. As well as individual full screen video from each camera, the CMAC-INT002 can display quad images, 3x3 cameo images, picture in picture and a whole range of viewing configurations. From the IrisControl App you can alo control PTZ cameras using the super responsive virtual joystick, configure preset icons to automatically switch and control PTZ cameras and many more features.

With IrisControl already available for Garmin OneHelm, and other platforms in development, for non compatible MFD's or if a seperate control method is required, the CMAC-INT002 can also be used with our TE01 Rotary Touch Screen controller or IRIS595 joystick.

The CMAC-INT002 also works as a web-encoder and can be accessed wirelessly whilst onboard from a WiFi hotspot (such as our Cloudlink2), or remotely usnig marina WiFI, a cellular modem (Cloudlink 2 or alternative) or a satellite link up.

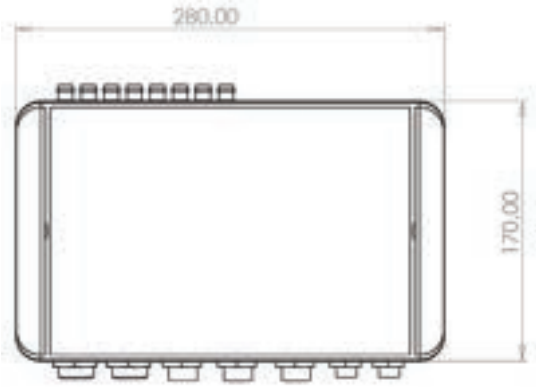
CMAC interfaces open up your vessels on board camera system by providing integration capabilities, and provide camera management features your MFD's cant.

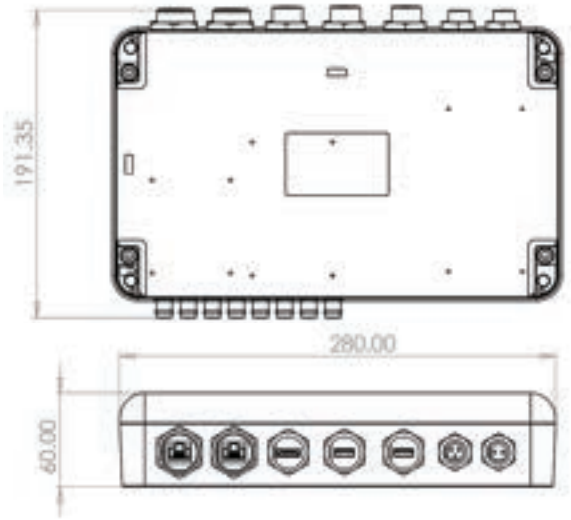
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CMAC-INT002

Hybrid Camera Management Interface Box / IrisControl App Host - Multiple Formats

Dimensions:





Specifications:

	CMAC-INT002 Hybrid Camera Management Interface / IrisControl Host
System Processor	Novatek NT98323
Video Codec	H.264, H.264+, H.265
Camera Inputs	8 x BNC Female Connectors for CVBS, AHD, HD-TVI, HD-CVI Camera Inputs
Network Camera Capacity	Up to 8 Cameras (at 1080P) via Camera Network RJ45 10/100 Connection
Network Camera Resolution	16 x 2MP, 4 x 5MP, 4 x 3MP 4 x 4K
Network Connectivity Control Interface	IrisControl App for Garmin OneHelm Platform / Raymarine LightHouse Apps, Simrad and Furuno Apps Due Q2 2023
IrisControl Features	User-Uploadable Deck plans / photos, Camera selection, PTZ camera, Single Screen - Split Screen Select, Thermal Camera Features: Gyro, Trim, NUC, Palettes, Memory Presets, Scans Tours, Absolute Referencing, ICE Image Enhancement, NVR Controls
Firmware Upgrade	Via USB (auto-upgrade from root directory of USB Drive)
Chartplotter Compatibility	Garmin 7xxx: Requires HDMI to CVBS Convertor (USB Touch not available) / Garmin 8xxx - All Features / NVR Version Compatible with MFD's via HDMI/CVBS port and used in conjuntion with IRIS595 or TE01 Control interface IrisControl for Raymarine LightHouse Apps, Furuno Apps and Navico Apps available Q2 2023
Video Output	1 x HDMI High Definition
Serial Data Port	Built In 3 Pin Connection for RS485 Serial Data / PTZ Control (Multi Protocol Support)
HTML5 User Interface	IRIS Control Camera Management HTML5 Application Host
Hardware Control Options	IRIS-TE01 Rotary Controller with Touchscreen / IRIS595 Panel Mount Joystick Controller
USB Touch	Supported (Compatible with Garmin 8xxx series MFD's)
Power	+12VDC ~ 24VDC / During Boot-up Peak at 1.5A, 400mA Nominal
Operating Temperature	-10˚C ~ +55˚C
Weight	0.920Kg
Dimensions	280 x 192 x 60mm
Approvals	CE, REACH, RoHS, WEEE, UKCA, FCC, IC, CB, RCM, E-Mark, NDAA Compliant
Compliance	EN IEC 62368-1:2020+A11:2020 / EN60945:2002 Section 9&10

CMAC-INT003A

IP Camera Interface with HDMI Ouput / RS485 Data & IrisControl App for MFD's





Key Features:

- Converts Up to 32 IP Video Stream to HDMI Video
- Hosts IrisControl App for Control via Chart Plotter
- Povides RS485 Serial Data to PTZ Cameras
- Designed to Interface IP Cameras with Chart Plotters such as Garmin, Raymarine, Simrad, B&G and Furuno
- Upload Unlimited Deck Plans to IrisControl App
- Drag and Drop Configuration
- Plug & Play Installation
- Small & Compact Form Factor

Applications:

- On Board CCTV Systems
- Camera Switcher
- Quad and Cameo Switching
- Camera Interface for Garmin, Raymarine, Simrad, Furuno and other MFD's*
- Perfect for Center Console / Sports Fishing / RIBs
- Connect and Control Remotely
- Ideal for Vehicle based Cameras
- View otherwise incompatible cameras on MFD's

*Functionality can be limited by performance of chart plotter.



IrisControl Interface for Garmin OneHelm Camera Control Page



IrisControl Interface for Garmin OneHelm Camera Selection Page

The CMAC-INT003A is a small and compact interface box that manages your onboard camera system whilst hosting our IrisControl App for Garmin OneHelm, Raymarine LightHouse Apps, Navico and Furuno third party App platforms.

Connect up to 32 cameras (4K max resolution) via the Camera Network port, your chartplotter network via the MFD Network port and you now have full access to view and control your vessels cameras.

Video is supplied to the MFD via the CMAC's high definition HDMI port which connects directly on compatible models (such as Garmin 8000 / 9000 series, Simrad NSO units, Furuno TZT3 (16" and above) and Raymarine Axion XL range) and via our HDMI2IP-01 video encoder modules on devices which do not support HDMI.

Camera switching and PTZ control is provided by our IrisControl App which appears when you hook the MFD Network port of the CMAC up to your chartplotter or chartplotter network. Simply configure a suitable COMBO screen on the MFD showing the video input and IrisControl App and you have full control.

CMAC-INT003A provides a RS485 serial data port in order to control compatible PTZ cameras such as our ATOM2 range, IRIS4106 and EX4106, and any other PTZ camera which uses RS485/Pelco D.

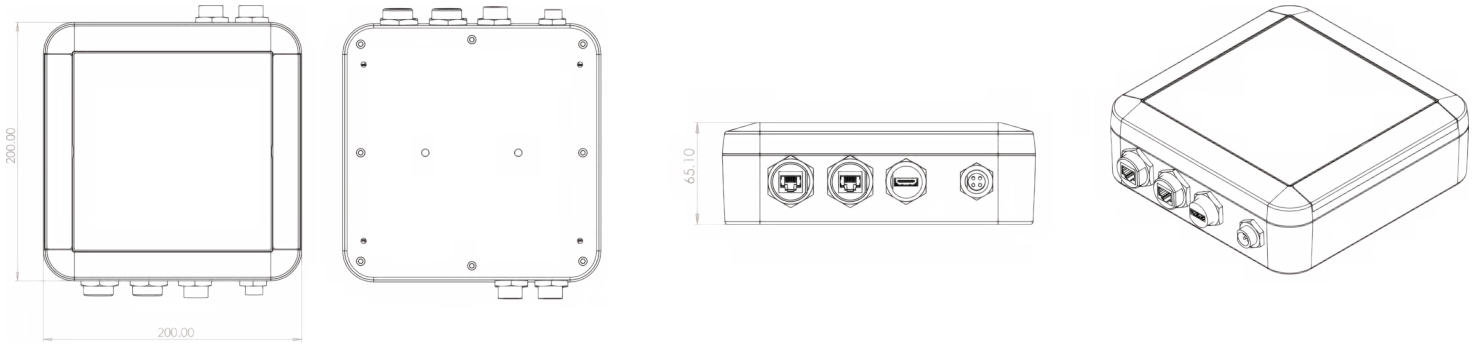
The CMAC-INT003A is an extremely powerful and low cost IP to HDMI re-coder with full interfacing capabilities. and can be used in conjunction with other CMAC's in larger systems where independent camera control is required on multiple chart plotters.

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CMAC-INT003A

IP Camera Interface with HDMI Ouput / RS485 Data & IrisControl App for MFD's

Dimensions:



Specifications:

	CMAC-INT003A
System Processor	Quad core 64-bit ARM-Cortex A72 running at 1.5GHz
Video Codec	H.264, H.264+, H.265
Network Camera Capacity	Up to 32 Cameras via Camera Network RJ45 10/100 Connection
Network Camera Resolution	Up to 4K Max (32 Cameras)
Analogue Camera Compatibility	Not Supported
Network Connectivity Control Interface	IrisControl App for Garmin OneHelm Platform / Raymarine LightHouse Apps, Simrad and Furuno Apps
IrisControl Features	User-Uploadable Deck plans / photos, Camera selection, PTZ camera, Single Screen - Split Screen Select, Thermal Camera Features: Gyro, Trim, NUC, Palettes, Memory Presets, Scans Tours, Absolute Referencing, ICE Image Enhancement, NVR Controls
Firmware Upgrade	Via USB (auto-upgrade from root directory of USB Drive)
Chartplotter Compatibility	Garmin 7xxx: Requires HDMI to CVBS Convertor (USB Touch not available) / Garmin 8xxx & 9xxx - All Features / NVR Version Compatible with MFD's via HDMI/CVBS port and used in conjuntion with IRIS595, IRIS599 or TE01 Control interface IrisControl for Garmin OneHelm, Raymarine LightHouse Apps, Furuno Apps and Navico Apps / NSO = HDMI / NSS = Iris HDMI to IP Encoder or HDMI to CVBS Convertor
Video Output	1 x HDMI High Definition
Serial Data Port	RS485 Serial Data / PTZ Control (Pelco D - Iris Variant)
HTML5 User Interface	IRIS Control Camera Management HTML5 Application Host
Supported PTZ Cameras	Iris ATOM-A418, A295, A395, AX295, AX395, AX1280HD, IRIS4106, IRIS-EX4106
USB Touch	Compatible with Garmin 8xxx / 9xxx series MFD's
Power	+12VDC ~ 24VDC / During Boot-up Peak at 1.5A, 400mA Nominal
Operating Temperature	-10˚C ~ +55˚C
Weight	1.1KG
Dimensions	200 x 200 (230 inc panel connectors) x 65mm
Approvals	CE, REACH, RoHS, WEEE, UKCA, FCC, IC, CB, RCM, E-Mark, NDAA Compliant
Compliance	EN IEC 62368-1:2020+A11:2020 / EN60945:2002 Section 9&10

CMAC-INT004

Hybrid Camera to HDMI Interface with RS485 Serial Data Switching / PTZ Control



Key Features:

- Supports Up to 8 x IP cameras (up to 4K resolution)
- Single Analogue Input (CVBS, TVI, CVI, AHD)
- RS485 Serial Data Output for PTZ Control
- Control from IRIS595 Controller
- Switch Full Screen / Quad & Multiscreen Views
- High Definition HDMI Video Output
- CMAC-INT004F Hosts IrisConrol App
- Plug & Play Installation
- Small & Compact Form Factor

Applications:

- On Board CCTV Systems
- Camera Switcher
- Quad and Cameo Switching
- Camera Interface for Garmin, Raymarine, Simrad, Furuno and other MFD's*
- Multi Camera Systems
- Connect and Control Remotely
- Ideal for all Vessel Types
- View otherwise incompatible cameras on MFD's

*Functionality can be limited by performance of chart plotter.



IrisControl Interface for Garmin OneHelm Camera Control Page (CMAC-INT004F)



IrisControl Interface for Garmin OneHelm Camera Selection Page (CMAC-INT004F)

The CMAC-INT004 from Iris is a multi camera interface unit used to convert video streams from up to 8 x IP cameras and 1 x analogue / AHD camera and display on a chart plotter supporting HDMI or any other HDMI display or system.

As well as converting the video, the CMAC-INT004 also supports RS485 serial control from Iris switching and joystick controllers in order to switch individual, quad and multi-screen video, and control attached PTZ cameras from the Iris range of controllable cameras, thermal imagers and data enabled fixed thermal cameras.

The CMAC-INT004 can be used to convert video from third party network CCTV cameras and display them on devices via their HDMI port. The control input of the CMAC-INT004 allows you to switch inputs and drive PTZ cameras, turning your chart plotter into a multi-camera CCTV display.

Available in two models, the CMAC-INT004A is used as an interface only and facilitates control via a physical controller (such as the IRIS595) whereas the CMAC-INT004AG version also hosts our IrisControl HTML5 App for chart plotters (Garmin, Raymarine, Simrad, Furuno).

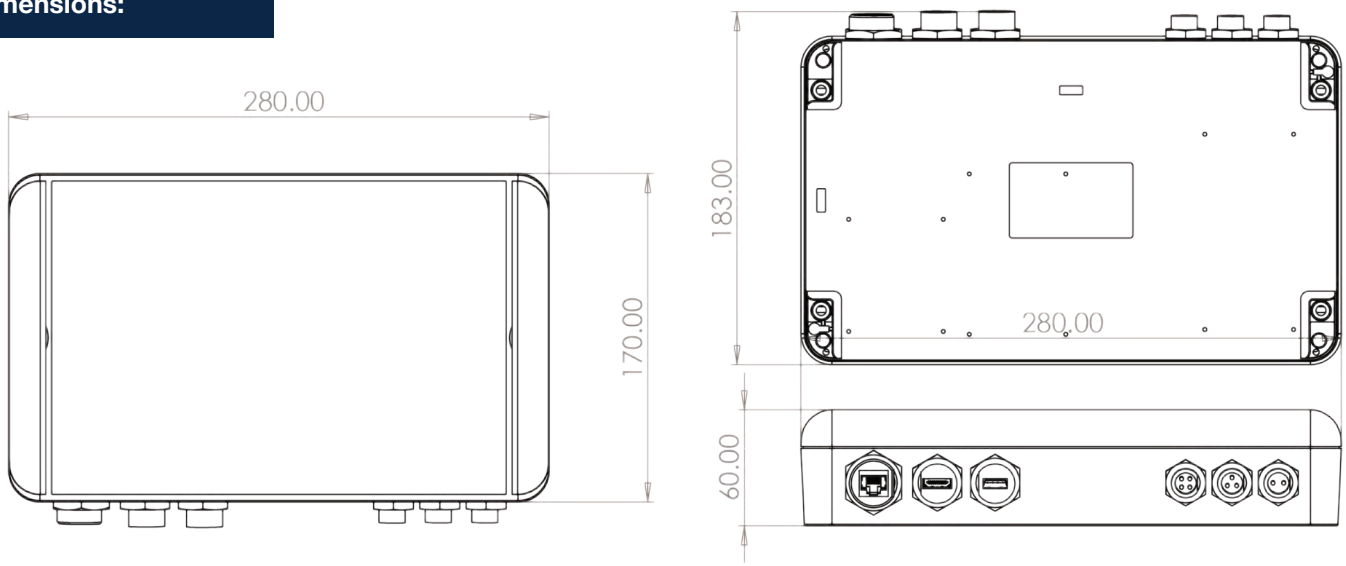
Iris's CMAC range of camera management systems and interfaces have been designed especially to allow users to manage and control their on-board cameras intuitively via our hardware controllers or software interfaces running on all leading MFD's, extending the capabilites and possibilites of their system.

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CMAC-INT004A

Hybrid Camera to HDMI Interface with RS485 Serial Data Switching / PTZ Control

Dimensions:



Specifications:

	CMAC-INT004A Hybrid Camera Management Interface / CMAC-INT004GA Interface + IrisControl Host
System Processor	Novatek NT98323
Video Codec	H.264, H.264+, H.265
Network Camera Capacity	Up to 8 Cameras via Camera Network RJ45 10/100 Connection
Network Camera Resolution	Up to 4K Max
Analogue Camera Compatibility	1 x Anologue Video / Supports 4-in-1 Analogue Hi-Def Formats - CVBS (PAL/NTSC), HD-TVI, HD-CVI, AHD
Network Connectivity Control Interface	IrisControl App for Garmin OneHelm Platform / Raymarine LightHouse Apps, Simrad and Furuno Apps
IrisControl Features	User-Uploadable Deck plans / photos, Camera selection, PTZ camera, Single Screen - Split Screen Select, Thermal Camera Features: Gyro, Trim, NUC, Palettes, Memory Presets, Scans Tours, Absolute Referencing, ICE Image Enhancement, NVR Controls
Firmware Upgrade	Via USB (auto-upgrade from root directory of USB Drive)
Chartplotter Compatibility	Garmin 7xxx: Requires HDMI to CVBS Convertor (USB Touch not available) / Garmin 8xxx & 9xxx - All Features / NVR Version Compatible with MFD's via HDMI/CVBS port and used in conjuntion with IRIS595 or TE01 Control interface IrisControl for Raymarine LightHouse Apps, Furuno Apps and Navico Apps / NSO = HDMI / NSS = Iris HDMI to IP Encoder or HDMI to CVBS Convertor
Video Output	1 x HDMI High Definition
Serial Data Port	RS485 Serial Data / PTZ Control (Pelco D - Iris Variant)
HTML5 User Interface	IRIS Control Camera Management HTML5 Application Host - CMAC-INT004F Version Only
Hardware Control Options	IRIS-TE01 Rotary Controller with Touchscreen (Requires CAN interface box) / IRIS595 Panel Mount Joystick Controller via RS485
USB Touch	Supported on CMAC-INT004F Model (Compatible with Garmin 8xxx / 9xxx series MFD's)
Power	+12VDC ~ 24VDC / During Boot-up Peak at 1.5A, 400mA Nominal
Operating Temperature	-10˚C ~ +55˚C
Weight	0.920Kg
Dimensions	280 x 192 x 60mm
Approvals	CE, REACH, RoHS, WEEE, UKCA, FCC, IC, CB, RCM, E-Mark, NDAA Compliant
Compliance	EN IEC 62368-1:2020+A11:2020 / EN60945:2002 Section 9&10

Chart-Plotter INTEGRATION: CMAC

Boaters are recognising the value cameras can bring for a multitude of applications on board their vessels. But their on-board electronics and Nav-Units were never really designed with this application in mind. Iris's CMAC (Camera Management and Control) System has been designed fundamentally to simplify the integration of an on-board camera system with your boats navigation system, whilst opening up the wealth of possibilities on board camera systems offer...

Chartplotters were never really designed to integrate the wide array of camera products available that have become indispensable tools for boat owners as their on electronics setups develop. Over time, as chart plotters have evolved and software interfaces have updated, manufacturers have to some extent added varying degrees of camera integration, but this has either been locked to their limited range of own brand products or greatly limited in terms of scale, function and variety of cameras supported.

Iris developed CMAC as a method to deliver more choice to boat owners, extending the possibilities of camera integration across the range of available chart plotters. The hardware facilitates connection of all types of cameras whilst increasing the capacity of cameras that can be connected directly to a chart plotter. The software element of the system provides an intuitive interface from which to switch and control your cameras across many of the leading chart plotter models.

Inevitably, due to the vast difference in requirements from customers, what started out as just a couple of models has now expanded to a whle range of interface modules, recorders and switchers, each designed to deliver specific levels of functionality in accordance with the capabilities of the various models or chart-plotters installer on board.

Futhermore, due to the array of chart plotter models available and the differences in their capabilities and interfacing options, in some cases CMAC will interface directly with your chart plotter, whereas with other MFD's it may be necessary to use additional video encoder modules due to the limitations of the MFD"s hardware.

Sound complicated? To the uninitiated it may be, but this guide will hopefully provide all the information you need to understand the capabilities of CMAC and how it can be used to deliver a fully featured and intuitive camera system to your vessels Chart-Plotter based electronics package.

CMAC - The History...

CMAC is an acronym for Iris's 'Camera Management and Control' system. It was originally conceived to be available in two configurations. An NVR version (Network Video Recorder for IP cameras only) and an HVR version (Hybrid Video Recorder for IP cameras, legacy analogue cameras and the more up to date 4-in-1 Analogue Hi-Def video formats such as AHD, HD-TVI. HD-CVI and AHD). Each unit consisted of two elements; a switcher/recording part (complete with 2.5" 1TB HDD (expandable to 4TB) featuring a single HDMI hi-def video output - and a single board processor element hosting our IrisControl HTML5 app for Garmin's OneHelm third party integration platform. If clients did not have a Garmin MFD, we also released a version for Garmin's TD50 mini 5" touchscreen controller, which would work solely as a handy mini touch control interface based on Garmin's hardware, with the video from the CMAC unit feeding their chart plotter - be they Raymarine, Simrad or Furuno - assuming of course their hardware supported an HDMI video input.

No sooner had we released the original incarnation of CMAC however, it became clear, as is typical in this industry, that customers were asking for variations to suit their own varied setup and/or budget. Where the original models featured recording some customers wanted to use the IrisControl interface as a camera switcher and controller only and weren't bothered with recording. Some customers didn't want to use the IrisControl App as a control interface at all and were requesting a hardware switching / controlling interface (such as our IRIS595 joystick controller or TE01 Rotary Touch Controller). Simultaneously the other main MFD manufacturers began opening up their platforms for third party integration such as Raymarine's LightHouse Apps, Simrad Apps, Furuno Apps etc. We therefore now had the opportunity to both increase the hardware range to accommodate a variety of additional offerings, and also to extrapolate the IrisControl App to interface with the other main MFD manufacturers platforms.

The range now consists of two recording options with multi platform chart plotter integration (Garmin, Raymarine, Simrad, B&G and Furuno) and a number of 'interface only' options that don't feature recording but can be used as switchers and either support the IrisControl Interface, external hardware control or both. (To confuse matters further, even the recoding units are available with Comms Board accessories to facilitate external control devices).

CMAC - What Does It Do...?

CMAC is a system hub, into which you connect your camera devices (the quantity and type depend on the model of CMAC you have, as will be explained shortly), your control devices - be they your chart plotter(s), external hardware controllers, or both, and out of which you connect your monitoring and control device(s). It forms the basis of your vessels on board camera system and manages video switching, camera control and recording (depending of course on your hardware and configuration).

Where each model of chart plotter is greatly limited in terms of the quantity, type and functionality of cameras that can be connected and supported directly, CMAC provides a much higher capacity, more complex camera management environment whilst taking the load away from the chartplotter.

Cameras are connected to the CMAC unit (either directly or via a network hubs / PoE switches) and configured on the system. From the IrisControl HTML5 App for Chart Plotters, clients can upload their own or their customers deck plans and photos and use these as 'maps' onto which icons can be dragged and dropped into the appropriate place to represent devices or views. Users then simply touch icons as desired to either switch a camera video or to automatically drive a controllable (PTZ) camera to a specific pre-defined memory position (known as a Preset), thus providing a superb, slick and intuitive user interface - perfect for complex systems. Other customers may simply want to switch their camera inputs from a list view, or may want to use external helm mounted joystick controllers hooked into CMAC to select and drive their cameras.

As well as individual full screen camera views, CMAC offers quad, splitscreen and numerous picture in picture modes and supports a huge list of extend pan, tilt, zoom and thermal controls.

The IrisControl App for MFD control, is hosted on the CMAC device, so once CMAC is hooked up to the Chartplotter network, it is networked to all compatible connected MFD's. This makes an installers life a breeze, doing away with the need to run control cables to each MFD position.

Sadly however, due to the methodology (and limitations) of various makes and model of chartplotter, pumping the video to multiple MFD's can be a little more involved, as we shall explore...

CMAC - Managing Video

CMAC converts video from connected cameras to a high definition HDMI output to provide crystal clear footage in real time. Depending on your model of chart plotter, this can be directly input to the MFD or if your chart plotter does not support HDMI inputs, the video can be converted using additional hardware to either analogue composite video (CVBS) or re-encoded as an IP stream in a format the chart plotter can display. Check the specifications of your chart plotter to determine what direct video input formats are supported.

Video Considerations: How the MFD handles video

As well as the video format, another thing you need to consider is how your chart plotter handles video streams over their network. This is important if you want to use your cameras on multiple chart plotters.

Devices such as Garmin's 8000 and 9000 series MFD's not only feature HDMI inputs, but they also broadcast the video feed to any other compatible MFD over the Garmin network*. Other devices such as Simrad's NSS EVO3 do not feature an HDMI input so we need to route the HDMI output from CMAC into an IRIS HDMI2IP convertor in order to re-encode the HD video to an IP stream which the NSS treats as an IP camera. With the video feed now encoded, it too will be displayed on all compatible MFD's on the Simrad network. Raymarine and Furuno machines without HDMI inputs can also use this method to obtain the video stream from CMAC and display across their network.

Consult the specifications of your chart plotter to determine your chart plotters video input capabilities. To determine if and how video is networked please either contact your chart plotter technical support service or contact Iris.

The diagrams below provide examples of how to configure a variety of chart plotter models.

* Garmin 8000/9000 MFD's display main stream resolution on the MFD used to connect the HDMI input and then sub stream resolution on networked MFD's. If full main stream resolution is required it will be necessary to use either multiple CMAC interface boxes (one per MFD), or to distribute HDMI from the CMAC to each MFD. Iris provide a range of low cost / high quality HDMI distribution and transmission products for this purpose. Please visit http://boat-cameras.com/products/HDMI for more details.

Connecting Cameras

Cameras connect to the CMAC interface using the port labelled IP Camera. This is an RJ45 network socket (unscreened).

Please note: CMAC does not feature built in Power over Ethernet (PoE) support.If you want to power your camera via PoE connect the Camera Network port of the CMAC to the uplink port of your PoE injector/switch device and then connect your cameras to the PoE ports. Check the specifications of your camera to determine PoE functionality.

CMAC hardware features a single network connection to connect cameras. For installations with multiple IP cameras, network switching hardware is required.

Controlling Pan / Tilt / Zoom Cameras:

Iris controllable (PTZ) cameras all feature RS485 serial data control, and this is our preferred method of sending precise control data to the camera.

The CMAC devices convert data broadcast from our IrisControl App on the chart plotter to RS485 format data to the camera. We use RS485 data as to date NMEA does not support the commands necessary to control the many features our cameras offer.

To simplify cabling, Iris offer a combined CAT5+2 core cable for either network data and power or network data and RS485.

PoE - WARNING - NOT ALL PoE Injectors are the same!

One of the most frequent issues we see concerns the use of Power over Ethert (PoE) injectors and hubs.

PoE is a method of 'injecting' device power over the same twisted pair (often refered to as CAT5) cable used to connect the network device. It's governed by a set of very specific standards which determine the amount of power that can be delivered to a device and the method of delivery (for example, which configuration of wires is used to carry the power and how the delivery of power is managed between the inector and PoE transformer).

The main PoE standards typically used are as follows:

IEEE802.3af	Delivers up to 15W per channel
IEEE802.3at	Delivers up to 30W per channel (PoE+)
IEEE802.3bt	Deliverys up to 100W per channel (PoE++)

PoE can greatly simplify an installers life and reduce installation costs as it facilitates the removal of a seperate power cable, however, it is vital to fully understand how PoE works and what must be considered when planning an installation. Cutting corners can cause significant (even fatal) damage to the hardware and could even endanger life in extreme circumstances.

PoE injectors will output 48VDC to the device (camera for example). The device will feature a PoE transformer built in (typically larger cameras such as the IRIS490 or A418) or built into the device cable tail (typically smaller products that do not have sufficient space to integrate the PoE transformer within the product case - See photo below). The PoE transformer, when powered 'communicates' with the device to establish the power requirements and pin configurations with the device circuitry. Accordingly, the PoE transformer outputs the required voltage (usually 12VDC with our products) using the established pins.

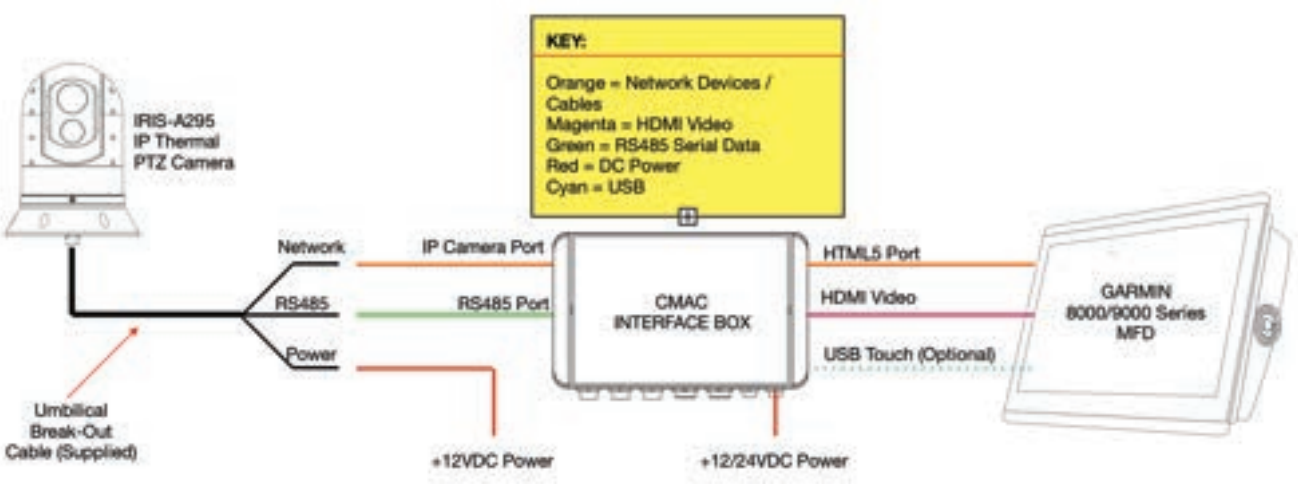
Although PoE can be cost effective in terms of reducing cabling and installation costs, the PoE hardware itself naturally has a price. Iris provide PoE injectors which are designed to operate over a wide DC input voltage (+9 ~ +30VDC), making them perfect for battery powered applications such as vehicles or boats, and this invariably makes them more expensive than other PoE injectors or hubs on the market - or the client simply doesnt want to bare the additional cost, and this drives some people to search for cheaper alternatives. This is where the internet is our worst enemy, for within a few minutes of searching, its easy to find a plethora of hardware marketed as 'PoE injectors' that even look exactly like genuine injectors, but are significantly cheaper. This is because they are not in-fact PoE injectors and do not feature the necessary circuitry or functionality to carry out the hand-shaking required for the product to be classified as IEEE802.3xx compliant. These cheaper products are really nothing more than passive 'baluns' that use certain pairs of wires within the twisted pair cable to carry power to the product. If the wires used by these non-compliant baluns are not the correct wires used by the product, you've got a potentially serious problem on your hands and risk destroying the product - or worse!

Therefore its imperative that genuine IEEE802.3xx PoE injectors or switches are used and you do not use non compliant, often cheaper, devices which simply carry power over certain wires. We do not insist you use Iris PoE products, but we do advise you understand how PoE works and chose your injectors wisely.

PoE is nothing to be scared of, and once the basics are understood is a great way to simplify installations, tidy up cabling and reduce costs overall. Cut corners at your peril!

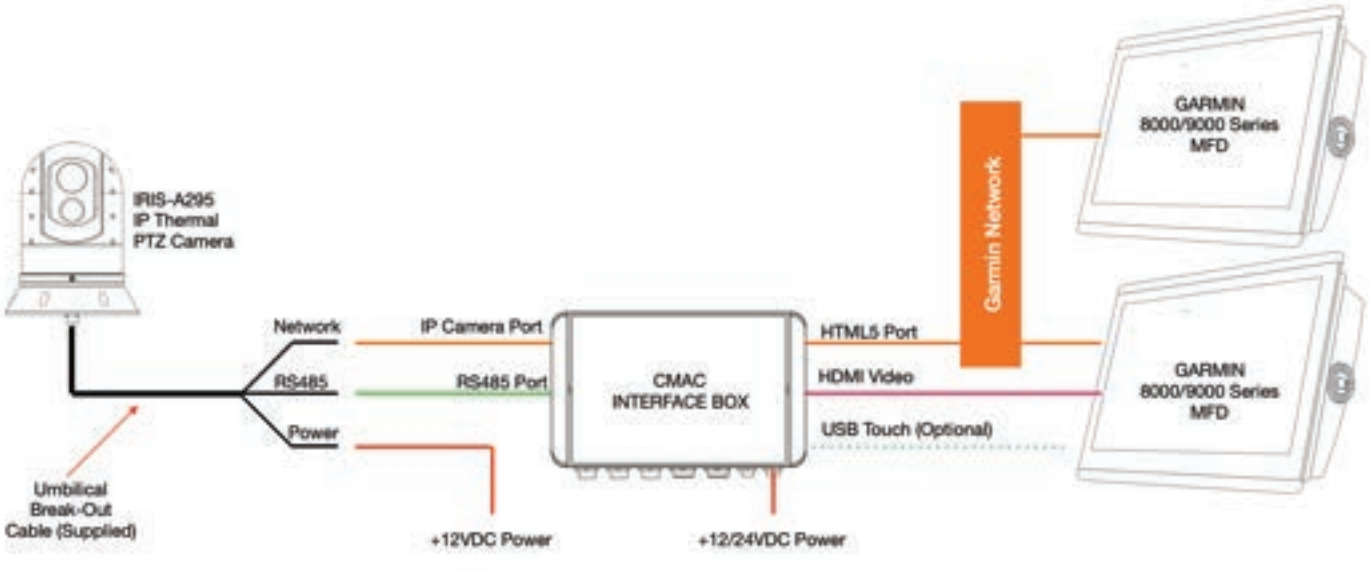
Connection Example 1: A295 Thermal IP PTZ to Single Garmin 8000/9000 MFD's

This example illustrates how to integrate an Iris A295 IP Thermal PTZ to a Garmin 8000/9000 series MFD.
The HDMI video output from the CMAC connects directly to the MFD and the HTML5 port connects to the Garmin network. Where the camera is controlled over the HTML5 connection using our IrisControl App, Garmin also handily feature a USB Touch output so you can also control the camera's pan and tilt features when viewing in full screen HDMI mode. This is optional and not necessary for the operation of the camera.



Connection Example 2: A295 Thermal IP PTZ to Multiple Garmin 8000/9000 MFD's

Where there are multiple Garmin 8000/9000 MFD's it is only necessary to connect to one MFD. Garmin network both the video and HTML5 interface, however, the sub stream from the camera is displayed rather than the main stream. USB Touch is not networked.

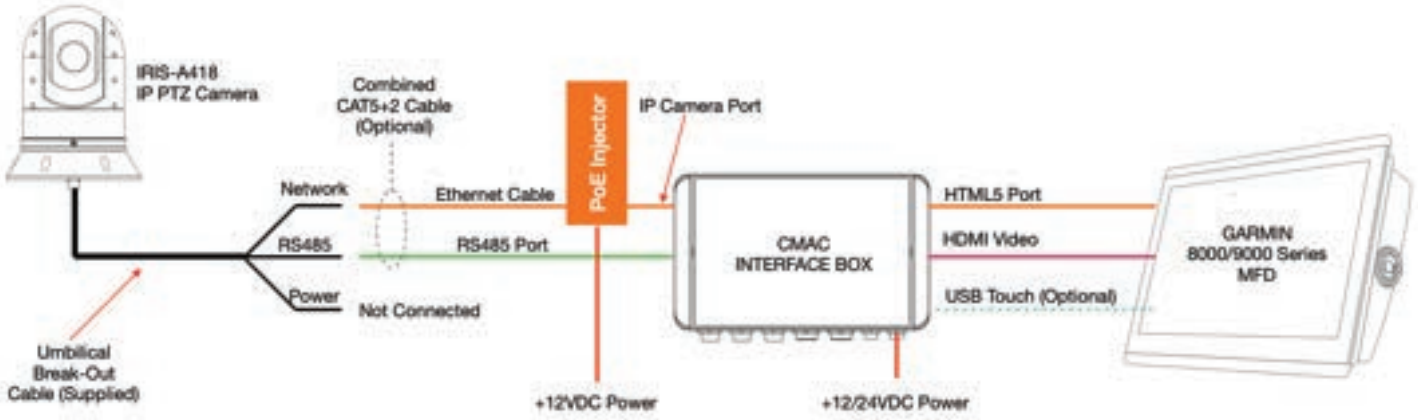


Dont Forget!

Garmin will only display the Main Stream resolution on the plotter the HDMI connection from CMAC is physically connected to. Other connected MFD's will display the image in the Sub Stream resolution. This may be perfectly accesptable for many clients, but if full resolution is required at each MFD, either HDMI distribution is required, or you can use multiple CMAC interfcae units (one per MFD). The benefit of this is that cameras can be viewed independently on weach MFD (In a typical installation where only one CMAC is used, the same video will be displayed on each MFD).

Connection Example 3: Connecting PoE Pan Tilt Zoom (PTZ) Cameras

Where your camera supports Power over Ethernet, the PoE injector/switch should connect to the CMAC Interface via the IP Camera Port and your camera to the PoE injector/switch. Use combined CAT5+2 Core Cable to simplify wiring.



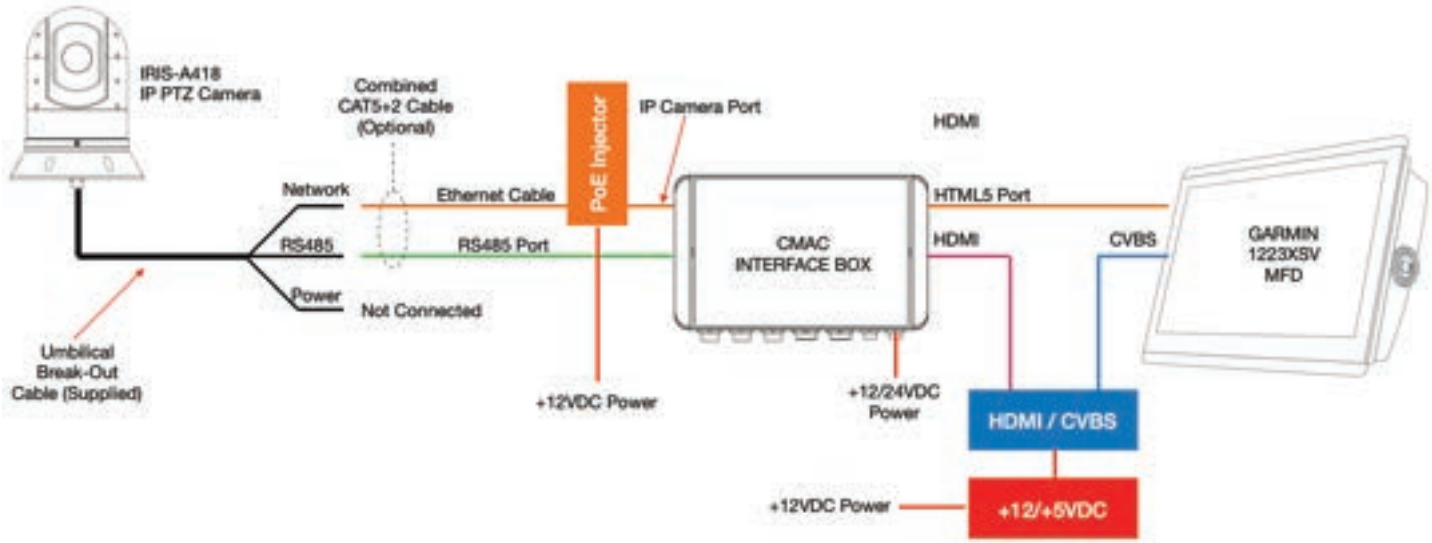
Connection Example 4: Connecting to a Garmin MFD without an HDMI input via the Composite Video Input

If you are interfacing with a Garmin MFD without an HDMI input it will be necessary to convert the video to a format the MFD supports. There are a number of ways to do this depending on your MFD.

Many older chart-plotters only support analogue video input(s) - also referred to as Composite Video or CVBS. In this case, a simple HDMI to CVBS convertor is required. This are inexpensive and easy to source - although you may find that these are often powered from a 5VDC supply so a 12~5VDC convertor is required. Iris supply HDMI to CVBS convertors with voltage convertors.

In this situation you will also need to establish how your MFD's handle video on a network. For example, if there are several MFD's on a network, and they only support composite video, do the MFD's network the analogue video around to each connected device or will you need to distribute the converted analogue video to each connected MFD?

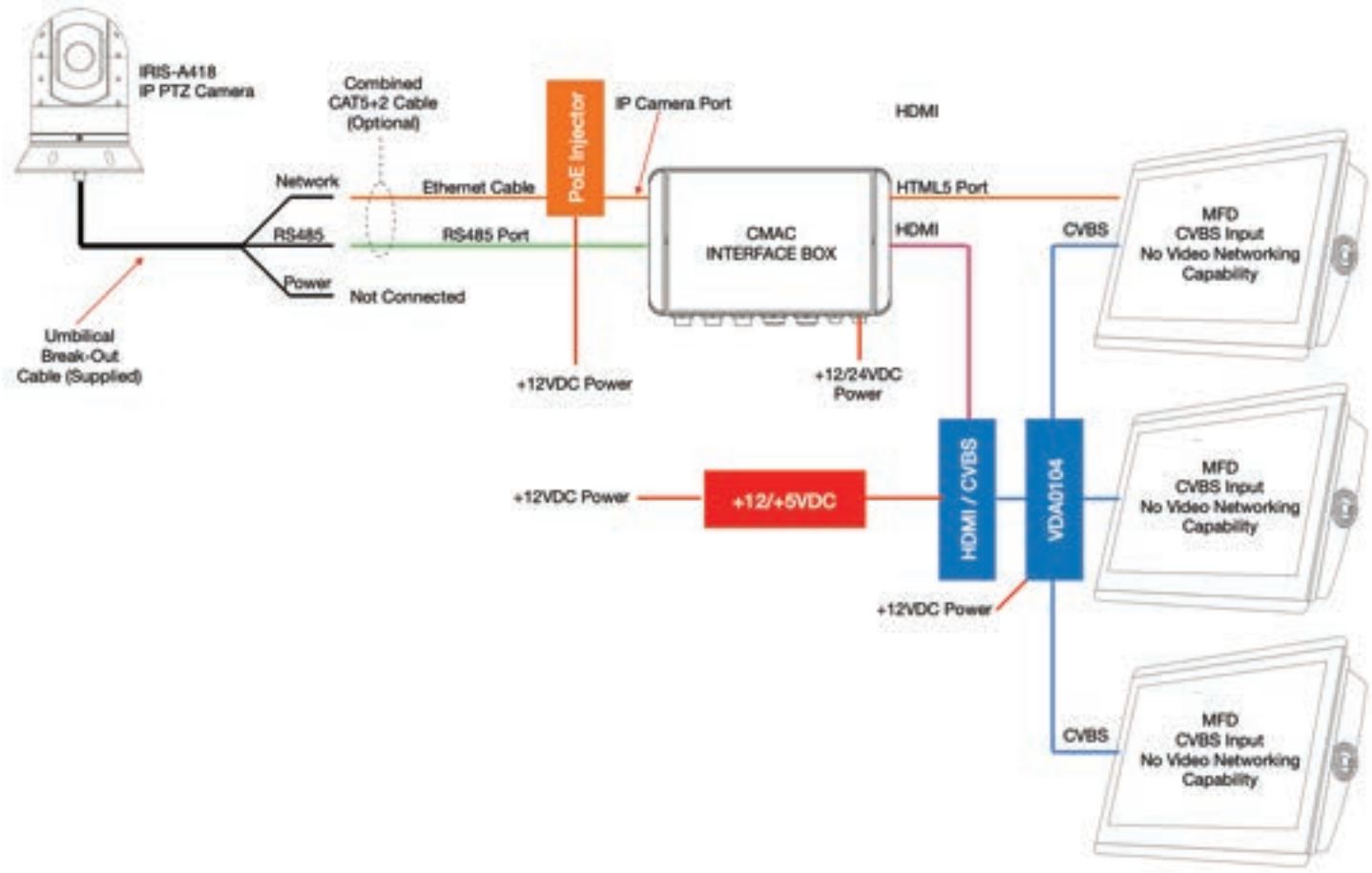
Iris provide a range of HDMI and CVBS video transmission and distribution products.



In this example, as the Garmin 1223xsv does not support HDMI inputs the hi-def output from CMAC has to be converted to standard definition composite video (or CVBS) using a small, inexpensive in-line convertor. Note, many of these devices are powered by +5VDC and so Iris include a +12/+5VDC convertor with their convertors.

If the chart plotter does not network composite video to other connected MFD's the CVBS output from the convertor can be routed through a video distribution amplifier, such as Iris's VDA0104 (1 x input to 4 x output) and then a coax cable (75Ω such as RG6 or RG59) run to each chart plotter. See the example below.

Connection Example 5: Composite Video (CVBS) Input to MFD's if MFD Doesn't Network Video

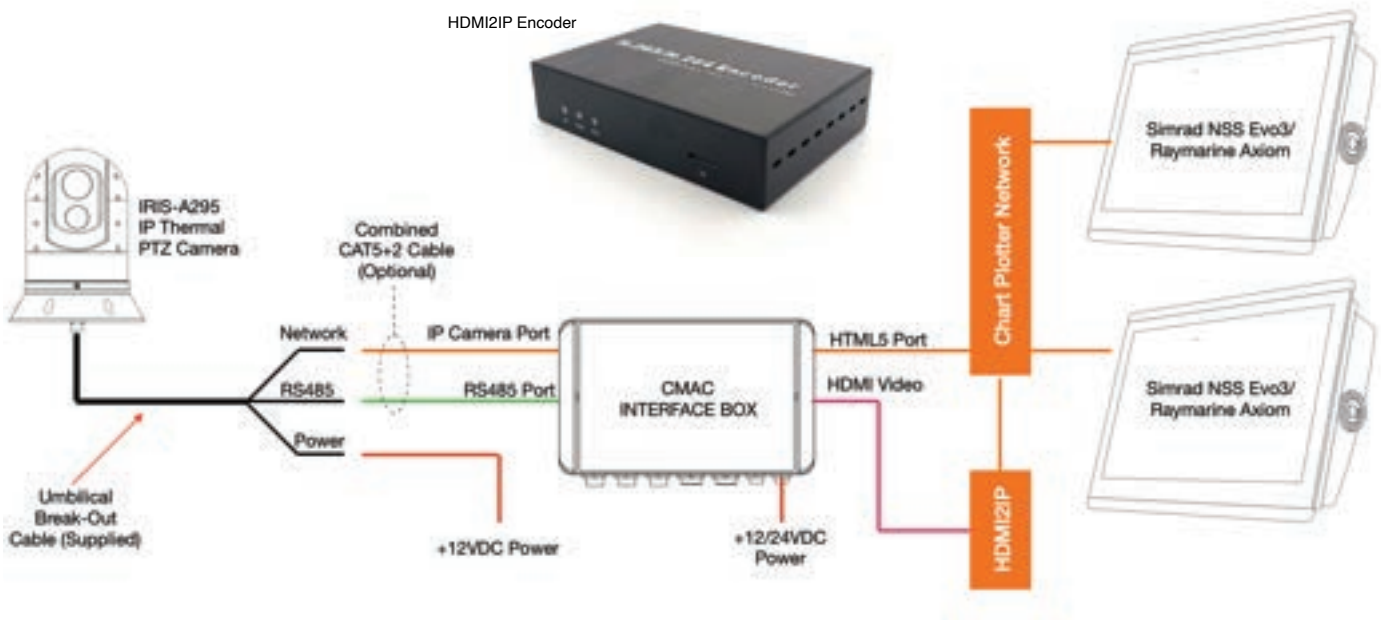


Iris supply a range of analogue and HDMI video transmission and distribution options. Please contact your Iris dealer for details and advise prior to ordering and installation.

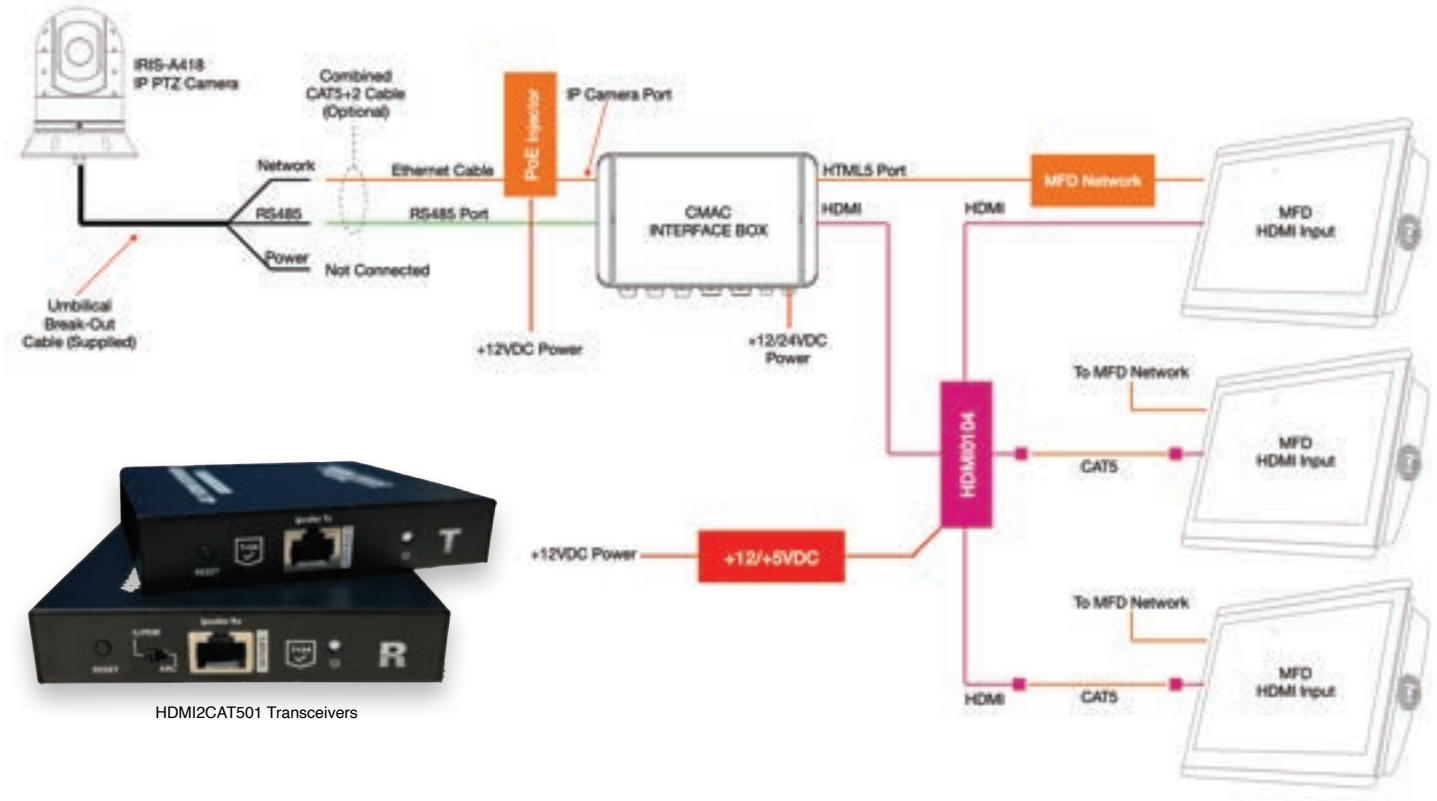
Please note, although it may be necessary to distribute the video, if your MFD does not network video, the IrisControl HTML5 App should be available on all networked chart-plotters - providing of course the chart plotter supports third party Apps via platforms such as Garmin's OneHelm, Raymarine's LightHouse Apps and Apps for
Simrad and Furuno platforms.

Connection Example 6: Encoding the HDMI output of CMAC as an IP camera.

Where certain chart plotters do not feature HDMI inputs but support IP cameras, or do feature HDMI inputs but don't network the HDMI video to other connected MFD's, you can use our HDMI2IP video encoder to encode the HDMI output of the CMAC unit to an IP stream. The chart plotter can then be configured to display the output from CMAC as if it were an IP camera. This is a perfect solution when using MFD's such as Raymarine's Axiom Pro or Simrad's NSS EVO3 chart plotters (as they don't feature HDMI) or Simrad's NSO chart plotters as although they do feature an HDMI input, they do not broadcast the video around their network.



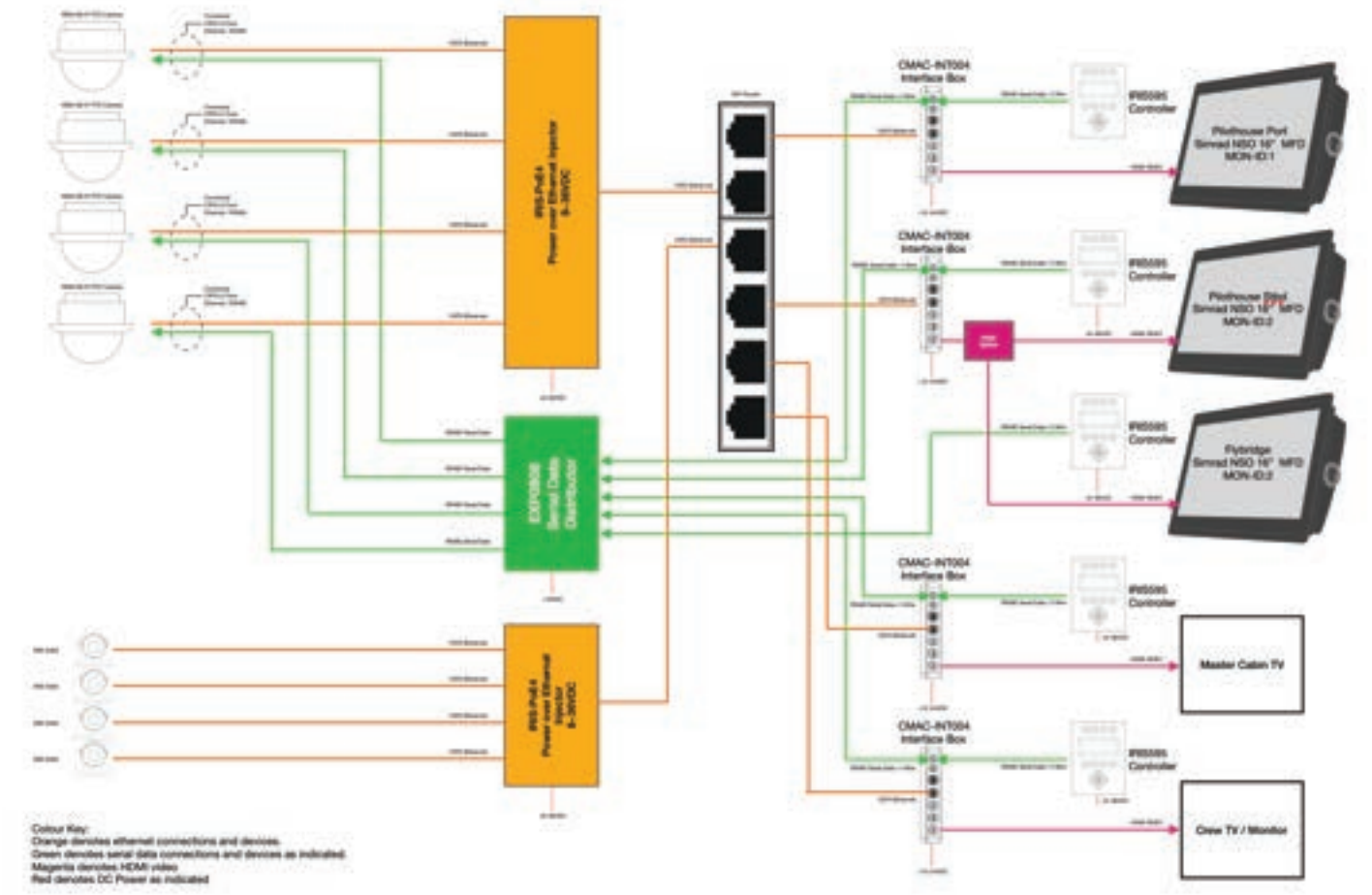
Connection Example 7: Distributing HDMI Video to Multiple MFD's



The example system on the previous page illustrates how HDMI transmission can be used to feed video to multiple chart plotters where the use of IP encoders is not possible or desirable.
The HDMI output from the CMAC unit feeds the input of one of our HDMI distributors. Typically, one output from the distributor will feed the closest MFD directly which the other outputs are then routed through our HDMI2CAT5 baluns. CAT5 cable is then used to feed each chartplotter position where another HDMI2CAT5 balun converts the video back to HDMI. This is a very easy and inexpensive way to send high defintion video around the vessel in real time.
Our HDMI2CAT5 blauns can be used for many applications, such as cabling to on-board TV's and projectors, which cabling is an issue.

Connection Example 8: Using Multiple CMAC Interface Units to Provide Independent Switching on Multiple MFD's

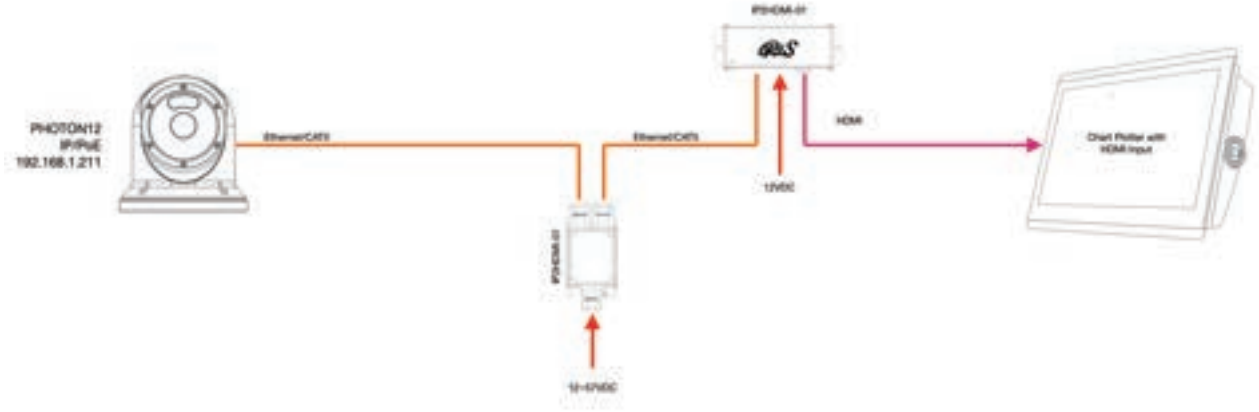
In this final example, we illustrate how multiple CMAC interface boxes are used to provide independent switching across a number of MFD's and TV screens.
As CMAC itself only features a single HDMI video output, in a standard 'single CMAC' system, the same video will be displayed across however many monitors / MFD's are connected. This isn't usually an issue for smaller installations with perhaps an MFD at each of the lower and upper helms, but for larger installations with numerous control and monitoring positions it may be desirable to be able to view different cameras at different positions simultaneously.
To acheive this, a CMAC recorder or interface (typically one 'master recording unit and then CMAC interfaces as required) is associated with each MFD position or monitor position in the case of this example, where the MFD's are running the IrisControl App to facilitate switching and a hardware controller is used to switch and control the cameras displayed on TV's or monitors.
This type of system effectively uses each CMAC as a node in a 'distributed matrix' style configuration and can be used also to increase the number of devices able to view IP cameras where the camera may limit streaming to a finite number of devices (usually 3 streams are available). By implementing a distributed matrix style system design, the cameras are configured on a master CMAC (usually but not necessarily the recorder), and then each subsequent CMAC is configured to point to the master device, which has a much higher capacity to serve mutilple video streams.



Integrating Photon & Other Cameras using our IP2HDMI-01 Video Stream to HDMI Convertor

Where there are direct compatibility issues with IP video streams on certain makes and model of chart-plotter, we have developed our compact, low cost IP2HDMI-01 Video Decoder, which processes the IP video stream from the camera and converts to HDMI at up to 4K resolution depecnding on the cameras native stream resolution.

The IP2HDMI-01 was fundamentally developed in conjunction with our 4K Photon camera, but will work with any of our IP cameras and is a great way to both combat incompatibility issues as well as deliver a full 4K or HD (depending on the resolution of your camera) HDMI video input to your MFD in real time.



IRIS-S060 / S160 / S460

316 Marine Grade Stainless Steel Static Dome Camera Analogue, AHD & IP



Key Features:

- Available in multiple formats to suit your requirements
- Machined from 316 Marine Grade Stainless Steel.
- Available in High Polish, White or Black as standard
- Custom Painted Finish also available*
- High Definition 2304 x 1296 Resolution (S460 IP Models)
- High Definition 1920 x 1080P Resolution (S1060 AHD Models)
- High Resolution 1000 TVL (Analogue Model)
- Compatible with Raymarine / Axiom (LH2 and Higher)
- Compatible with SIMRAD MFD's inc. SIMRAD, Lowrance and B&G
- Built In Infra Red LED Illumination (10m Range)
- PoE Option (IRISS460 IP Model)
- Extremely Low Power Consumption
- IP66 Environmental Protection

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing & Sports Fishing
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications



Also available in white and black

Iris's Sx60 range of miniature marine grade stainless steel cameras are available in multiple formats and deliver the highest quality video to suit your application.

The range comprises a high resolution analogue solution designed for maximum compatibility with most marine chart plotters (IRISS060), a high definition TVI model which delivers 1920x1080 resolution in real time† (IRISS160) - now directly compatible with Garmins 9000 series MFDs - and a high definition 3MP IP camera which is directly compatible with Raymarine chart plotters (running LH2 / LH3 software). Simrad NSS, NSO and NSX devices and Furuno TZT devices as well as Timezero v4.1 and above.

The SX60's 316 stainless steel housing provides the ultimate protection in the harsh marine environment, and is therefore the perfect solution for deck monitoring aboard work boats, fishing vessels and passenger vessels, whilst fitting in equally as well with the high end aesthetic of luxury vessels and mega yachts.

Measuring only 58mm high by 60mm in diameter, the SX60 range is small enough to provide unobtrusive surveillance and also for use in areas where space is tight, such as engine rooms or anchor wells.

Whether you need a high quality and rugged camera as part of your on board surveillance system, for engine room, deck and companion way monitoring or as a robust and stylish docking or backup camera, the IRIS-SX60 range of cameras is the perfect solution

ONVIF

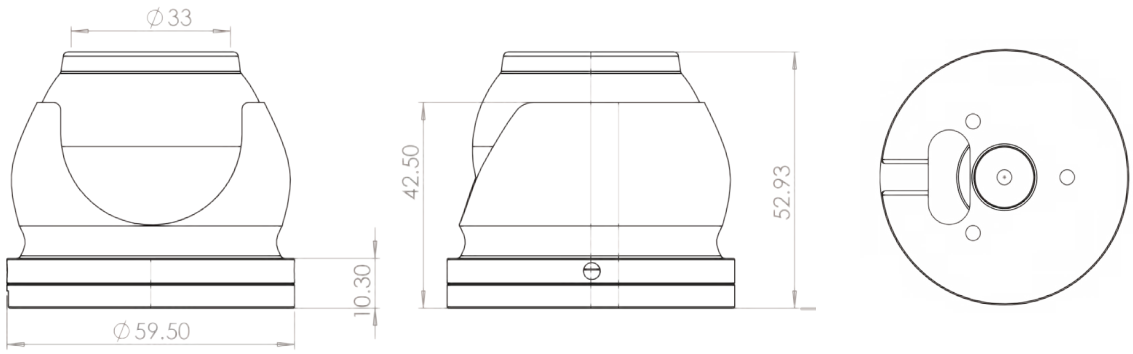
* Non Standard Finishes may incur additional costs

† May Require Additional Convertor Hardware Depending on Model of MFD

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

IRIS-S060 / S160 / S460

316 Marine Grade Stainless Steel Static Dome Camera Analogue, AHD & IP



Camera Options:

Model No.	Format	Resolution	Lens	Horizontal Field of View
S060	Analogue	1000TVL	3.6mm Standard, 1.8mm & 2.8mm Option	3.6mm: 80˚HFOV 2.8mm: 120˚ HFOV, 1.8mm 160˚HFOV
S160	HD-TVI	1920 x 1080		
S460	IP	2304 x 1296		

Specifications:

	IRIS-S060	IRIS-S160	IRIS-S460
Sensor	1/3" Sony CCD Sensor		1/4" CMOS Sensor
Resolution	1000 TVL	1920x1080	Variable - 2304x1296P (3MP) Max
Interface	NA		RJ45 10/100 Base T Ethernet
Video Processing	1VP~P CVBS Composite Video 75Ω	HD-TVI / HD-CVI / AHD Switchable	H.264 Codec / Dual Stream
Protocols / Video Format	PAL / NTSC Selectable	HD-TVI / HD-CVI / AHD	TCP/UDP/HTTP/Multicast/UPnP/NTP/RTSP/ONVIF
Onvif	NA		Profile S v2.4
Bitrate	NA		VBR / CBR 32kbps ~ 8Mbps
Illumination	6 x 850nm Infra Red - 10 meter Range		
Lens / Field of View	3.6mm Standard (80˚HFOV) / 2.8mm Option / 1.8mm Wide Angle Option		
Mirroring	Horizontal & Vertical - Configure via OSD Menu		Horizontal & Vertical - Configure via Browser
Automatic Gain Control	Supported / Multiple Levels		
Compatibility	All MFD's with Composite Video Input, TV via AV Input, CMAC Camera Management Systems	MFD's with Digital (HDMI/DVI) Input with TVI-HDMI Convertor, MFD's via IRIS NVR/HVR, CMAC Camera Management Systems. Garmin 9000 series MFDs	Raymarine / Axiom (LH2 or higher), NAVICO MFD's inc SIMRAD / LOWRANCE, B&G, Furuno Timezero v4.1 and higher. PC based systems, MFD's with digital (HDMI / DVI) Input, MFD's via IRIS NVR/HVR, IE Browser, CMAC systems
Operating Temperature	-30 ~ +60˚C		
Connections	Video: BNC 75Ω Female Connector / DC Power Socket		Water Resistant RJ45 Socket / Non PoE with DC Power Socket
Material	316 Stainless Steel		
Power	12VDC < 200mA Max.		PoE IEEE802.3af / 12VDC <200mA Max.
Weight & Dimensions	0.420Kg / 59.5mm ø x 52.93mm H		
Environmental	IP66		

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

IRIS-S060T

Micro 316 Grade Stainless Thermal Imaging Analogue Dome Camera



Key Features:

- Available in High Polish, White or Black
- Machined from 316 Marine Grade Stainless Steel.
- Custom Painted Finish also available*
- Composite (CVBS) Video Output
- 640x512 Thermal Resolution
- Compatible with All Chart Plotters with Composite Video Input (CVBS) or convert to IP with IRIS CVBS2IP01 encoder.
- Black Hot / White Hot Colour Palettes
- 12µm Pixel Pitch
- 13.5mm Lens
- IP66 Environmental Rating

* Non Standard Finishes may incur additional costs

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing & Sports Fishing
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications

Introducing the new IRIS-S060T, a groundbreaking miniature thermal imaging camera designed to redefine night-time and low-light navigation for both boats and vehicles.

Compact, stylish, and incredibly robust, the IRIS-S060T sets a new standard for performance, durability, and affordability in thermal vision technology.

Built into a tiny 316L marine-grade stainless steel housing, this innovative camera is as tough as it is elegant. Available in high-polish, white, or black finishes, with custom color-coding options, the IRIS-S060T blends seamlessly into any vessel or vehicle design—making it as unobtrusive as it is powerful.

Delivering razor-sharp 640x512 thermal resolution video via a composite video output, the IRIS-S060T provides unmatched clarity in the most challenging environments. Whether navigating through darkness, fog, or heavy rain, users can rely on its 13.5mm lens to detect hazards, obstacles, and heat signatures with precision and confidence.

Designed with versatility in mind, the IRIS-S060T is ideal for a wide range of applications:
• Leisure and sports boating – for safer night-time cruising
• Commercial fishing – for enhanced awareness and productivity
• Military and law enforcement – for tactical operations and surveillance
• Overlanding and off-road adventures – for all-terrain exploration and safety

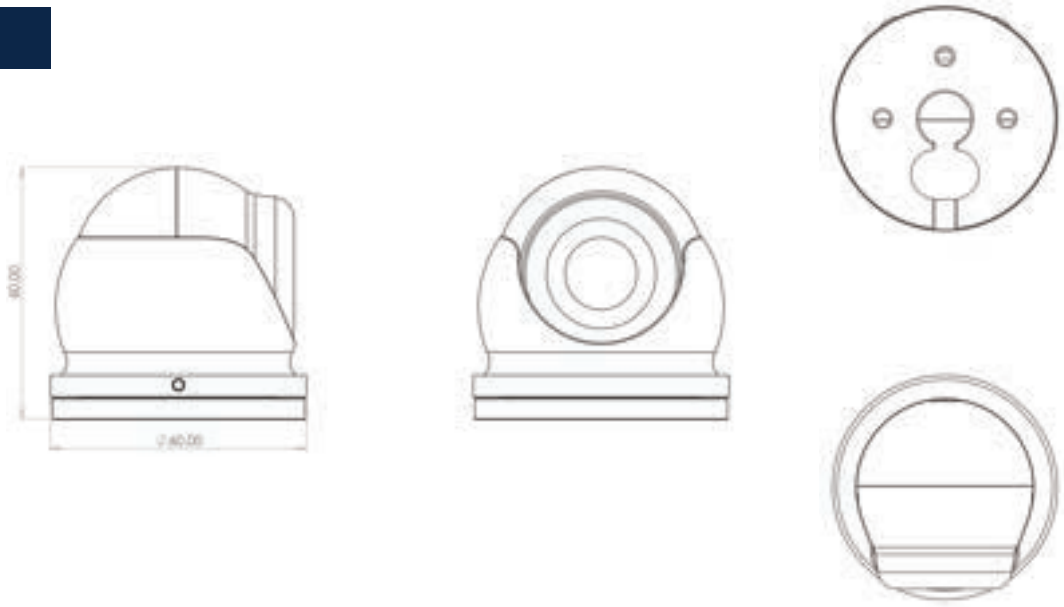
The IRIS-S060T is not just a camera—it's a new benchmark in thermal imaging, combining cutting-edge performance, marine-grade strength, and sleek design in a package smaller than anyone thought possible.

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

IRIS-S060T

Micro 316 Grade Stainless Thermal Imaging Analogue Dome Camera

Dimensions:



Specifications:

Sensor	Uncooled Vanadium Oxide Microbolomoeter Sensor
Resolution	640 x 512 / 12µm
Lens / Field of View	13.5mm / 32.1(h)˚ x 25.8(v)˚
Thermal Sensitivity (NETD)	<50mK at 25˚C / <40mK Optical
Wavelength	8 ~ 12µm
Optical / Digital Zoom	Not Supported
Colour Palettes	Black Hot / White Hot
Mirror Image	Horizontal / Vertical / Diagonal
Image Enhancement	Iris Image Contrast Enhancement
Lens Window	Germanium AR / DLC Coating
Compatibility	All MFD's with Composite Video Input, TV via AV Input, CMAC Camera Management Systems. Also MFD's supporting IP Cameras using IRIS-CVBS2IP01 Video Encoder
Operating Temperature	-40 ~ +80˚C
Connections	Video: BNC 75Ω Female Connector / DC Power Socket / 2 Wire RS485
Material	316 Stainless Steel
Power	12VDC < 200mA Max.
Weight & Dimensions	0.420Kg / 59.5mm ø x 52.93mm H
Environmental	IP66

IRIS-S076/S476

Bulkhead/Vertical Mount Static Camera in Corrosion Proof 316L Case





Key Features:

- Corrosion Proof 316L Marine Grade Stainless Steel
- Available in 4-in-1 (CVBS, TVI, CVI, AHD) & IP Formats
- Analogue Hi-Def Resolutions up to 1920x1080P Resolution
- IP Version - Max 3MP Hi-Def Resolution
- Super Wide Angle 160˚ Lens (other lens options available)
- IP Version Supports PoE and 12VDC - Ultra Low Power
- Built in Infra Red LED Illumination (10m Range)
- EN60945, EN55032, EN55035, EN50529 (IP66) , FCC, CE
- Shock & Vibraton Proof
- Super Rugged and Easy to Install

Applications:

- Perfect For Extreme Environments
- Work Boat & Tugs
- Fishing Vessels
- Engine Room Monitoring
- Law Enforcement & Military
- Wind Farm Vessels
- SUV's, RV's, Work Vehicles and Trucks
- Luxury Vessels
- Passenger Ferries & Cruise Liners

Iris' Sx76 series camera is the first of its kind designed to be installed into a bulkhead or vertical surface. Its waterproof stainless steel case is machined from marine grade 316L stainless steel which means it will not corrode in harsh salt water environments, making it a great option as a back up or docking camera for boats. By mounting the camera in the sides of your boat it can even be used when mooring alongside jetties or pontoons.

During installation, the camera's inner ball can be adjusted and then locked into position by simply tightening the outer bezel to acheive the desired view.

Two models of the camera are available depending on your system requirements. For IP based systems, the S476 features 3MP high definition resolution and 12VDC or PoE power, or for analogue or analogue hi-def (such as TVI / CVI / AHD) systems, the S076 version features 1080P resolution. The camera also outputs a CVBS signal for legacy composite video systems.

Both versions of the camera feature a 1.8mm (160˚HFOV) wide angle lens as standard, with 3.6mm and 2.8mm lens options available. Built in infra red LED illuminators provide short range night vision around the camera to a range of around 10m.

As well as marine aplications, the cameras tough case and small footprint make it a perfect visibility aid for recreational vehicles, fire and rescue trucks, and other applications where a robust and reliable, high definition camera is required.

The camera is certified to EN60945, EN55032, EN55035 and EN60529 (IP66) and is ONVIF compliant. For marine applications, the camera is directly compatible with Raymarine LH2 and above, Simrad, Lowrance and B&G. For Garmin systems, use in conjunction with Iris CMAC systems.

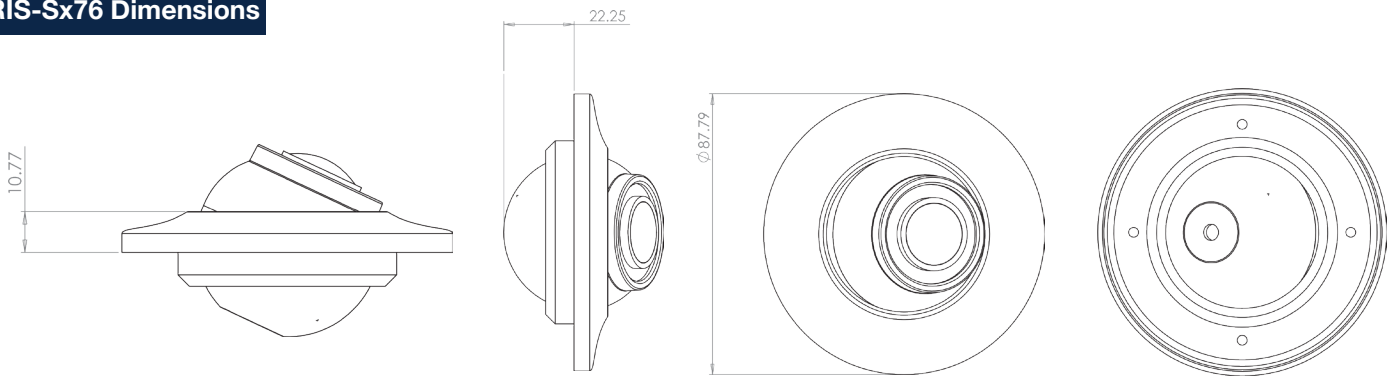
ONVIF

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IRIS-S076/S476

Bulkhead/Vertical Mount Static Camera in Corrosion Proof 316L Case

IRIS-Sx76 Dimensions



	IRIS-S076	IRIS-S476
Sensor	1/4" CMOS Sensor	
Resolution	CVBS: 960H / AHD, HD-TVI. HD-CVI: 1920 x 1080	Variable - 3MP Max (2304 x 1296)
Interface	OSD Menu via in-line Joystick in Cable Tail	RJ45 10/100 Base T Ethernet
Video Processing	Analogue / Analogue HD	H.264 Codec / Dual Stream
Protocols / Video Format	1VP~P / 75Ω Composite / AHD/TVI/CVI Formats	TCP/UDP/HTTP/Multicast/UPnP/NTP/RTSP/ONVIF
Onvif	NA	Profile S v21.06
Bitrate	NA	VBR / CBR 32kbps ~ 8Mbps
Illumination	6 x 850nm Infra Red - 10 meter Range	
Lens / Field of View	3.6mm Option (80˚HFOV) / 2.8mm Option (120˚ HFOV / 1.8mm Standard (160˚ HFOV)	
Mirroring	Horizontal & Vertical - Configure via OSD	Horizontal & Vertical - Configure via Browser
Automatic Gain Control	Supported / Multiple Levels	
Compatibility	CVBS: All MFD's / Screens featuring Composite Video Input AHD/TVI/CVI via Interface or IRIS CMAC System	Raymarine / Axiom (LH2 or higher), Simrad / B&G / Lowrance (Latest NOS / NEON OS) / PC based systems, MFD's with digital (HDMI / DVI) Input, MFD's via IRIS NVR/HVR, IE Browser, Furuno TZT
Operating Temperature	-30 ~ +60˚C	
Connections	Video - 75Ω BNC Female / 2.1mm DC Socket	Water Resistant RJ45 Socket / Non PoE with DC Power Socket
Material	Marine Grade 316L Stainless Steel (High Polished as standard / Brushed / Powder Coat Options available)	
Power	+12VDC (+10 ~ +15VDC Range) / 1W Nominal / 1.8W Max (LED's ON)	+12VDC (+10 ~ +15VDC Range) / 1W Nominal / 1.8W Max (LED's ON)
Power Over Ethernet (PoE)	NA	IEEE802.3af
Weight & Dimensions	0.420KG / 88mm ø x 22.25mm above and below mounting surface	
Environmental	EN60529 / IP66	
EMC	EN55032:2015/A11:2020 & EN55035:2017/A11:2020 EN60945:2002 Sections 9 & 10 / FCC Part 15 A & B	EN55032:2015/A11:2020 & EN55035:2017/A11:2020 EN60945:2002 Sections 9 & 10 / PoE with Compliant PoE Injector / FCC Part 15 A & B
RoHS	EN6300:2018	

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IRIS036/1036/436

Mini Recess Mount Fixed Domes, Analogue, IP & AHD Models



Key Features:

- Available in multiple formats to suit your requirements
- Machined from 316 Marine Grade Stainless Steel.
- High Polish Finish
- 3MP High Definition 2304x1296 Resolution (IP Model)
- 2MP HD 1920x1080P Resolution (AHD Model)
- High Resolution 1000 TVL (Analogue Model)
- PoE IEEE.802.3af (IRISS490 IP Model)
- Compatible with Raymarine / Axiom (L2 and Higher)
- Compatible with NAVICO MFD's inc. SIMRAD, Lowrance and B&G and Furuno TZT / Timezero 4.1 or higher
- Extremely Low Power Consumption
- Small, Compact and Discreet
- White Powder Coat Bezel Option
- IP66 Environmental Protection

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing & Sports Fishing
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications

Introducing the IRISx36 range of recess mount, micro dome marine cameras from Iris Innovations.

For maximum compatibility the x36 series is now available in three formats:

IRIS036 Hi-Resolution Analogue Sensor, 1000TVL with composite video output

IRIS436 Hi-Def Ethernet IP Camera

IRIS1036Hi-Def Real Time Analogue HD Digital Video Output

For the first time ever, the x36 range offers customers a choice of video formats to suit their MFD or monitoring solution. The IRIS036 will interface directly with any chart plotter that features a composite video input. Its 1000TVL resolution is the highest available for an analogue camera, and it also boasts on screen configuration functionality to set the camera up exactly as required - including a video mirror switch for rear view applications. Set up is carried out via an integrated thumb stick built into the cable tail.

The IRIS1036 Analogue Hi-Def model outputs 1920x1080 resolution video in AHD, TVI or CVI format which provides stunning real time high definition video - Now directly compatible with Garmin 9000 series MFD's. Compatibility with other MFDs using our format convertors †.

Finally, the IRIS436 is an IP camera that will interface with Raymarines Axiom family of MFD'srunning LightHouse 2 and above, Simrad, B&G and Furuno Timezero 4.1 and above. The camera supports both12VDC and IEEE802.3af Power over Ethernet and offers 3MP resolution.

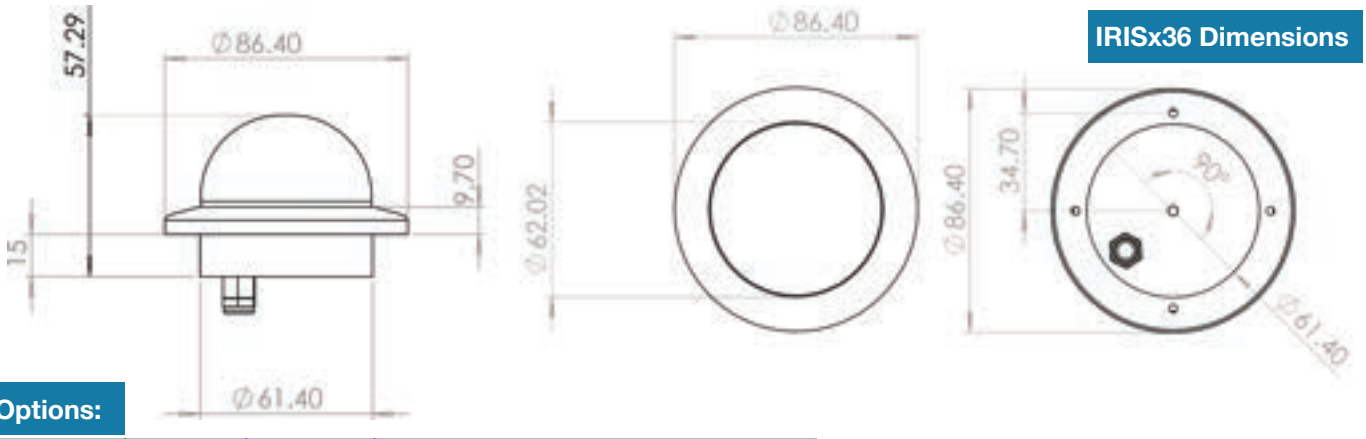
† May require HDMI convertor or use in conjunction with IRIS HVR / DVR products.

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IRIS036/1036/436

Mini Recess Mount Fixed Domes, Analogue, IP & AHD Models

IRISx36 Dimensions



Camera Options:

Model No.	Format	Resolution	Lens	Horizontal Field of View
IRIS036	Analogue	1000TVL	3.6mm Standard, 1.8mm & 2.8mm Option	3.6mm: 80˚HFOV 2.8mm: 120˚ HFOV, 1.8mm 160˚HFOV
IRIS1036	HD-TVI	1920 x 1080		
IRIS436	IP	2304 x 1296		

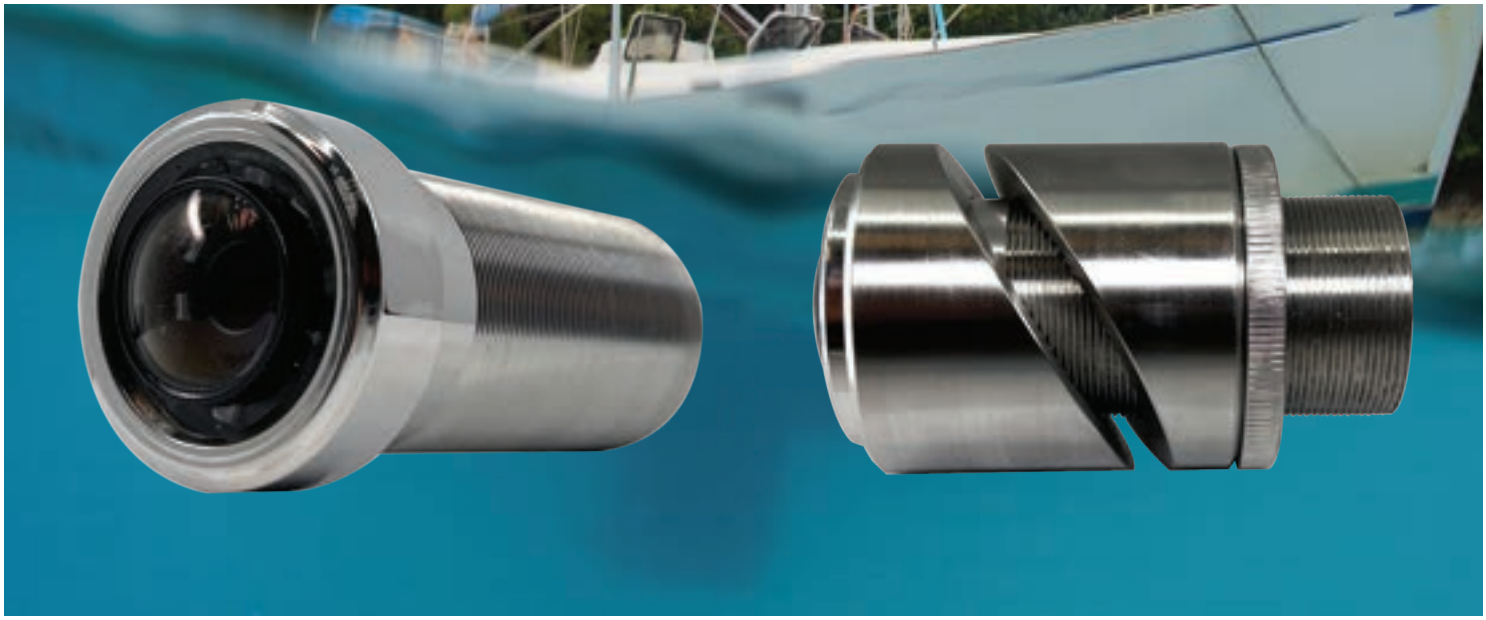
Specifications:

	IRIS-S060	IRIS-S160	IRIS-S436
Sensor	1/3" Sony CCD Sensor		1/4" CMOS Sensor
Resolution	1000 TVL	1920x1080	Variable - 2304x1296P (3MP) Max
Interface	NA		RJ45 10/100 Base T Ethernet
Video Processing	1VP~P CVBS Composite Video 75Ω	HD-TVI / HD-CVI / AHD Switchable	H.264 Codec / Dual Stream
Protocols / Video Format	PAL / NTSC Selectable	HD-TVI / HD-CVI / AHD	TCP/UDP/HTTP/Multicast/UPnP/NTP/RTSP/ONVIF
Onvif	NA		Profile S v2.4
Bitrate	NA		VBR / CBR 32kbps ~ 8Mbps
Illumination	NA		
Lens / Field of View	3.6mm Standard (80˚HFOV) / 2.8mm Option / 1.8mm Wide Angle Option		
Mirroring	Horizontal & Vertical - Configure via OSD Menu		Horizontal & Vertical - Configure via Browser
Automatic Gain Control	Supported / Multiple Levels		
Compatibility	All MFD's with Composite Video Input, TV via AV Input, CMAC Camera Management Systems	MFD's with Digital (HDMI/DVI) Input with TVI-HDMI Convertor, MFD's via IRIS NVR/HVR, CMAC Camera Management Systems. Garmin 9000 Directly Compatible	Raymarine / Axiom (LH2 or higher), NAVICO MFD's inc SIMRAD / LOWRANCE, B&G ,Furuno Timezero v4.1 and higher.PC based systems, MFD's with digital (HDMI / DVI) Input, MFD's via IRIS NVR/HVR, IE Browser, CMAC systems
Operating Temperature	-30 ~ +60˚C		
Connections	Video: BNC 75Ω Female Connector / DC Power Socket		Water Resistant RJ45 Socket / DC Power Socket / Female BNC (1090)
Material	316 Stainless Steel / Acrylic Dome		
Power	12VDC < 200mA Max.		PoE IEEE802.3af / 12VDC <200mA Max.
Weight & Dimensions	Weight: 0.25Kg / Dimensions: 86.5mmø x 58mm (Panel Cut Out 62mm)		
Environmental	IP66		

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IRIS-S435 / S1435

Multi-Purpose Recess Mounting Hi-Def Submersible Bullet Camera for Above or Below Water



Key Features:

- Available in IP or Analogue (CVBS, TVI, CVI, AHD) Formats
- Machined from 316 Marine Grade Stainless Steel or Aluminium
- 3MP HD Resolution (IP Models)
- 2MP HD Resolution (Analogue Model (TVI, CVI or AHD mode)
- SD Analogue (CVBS) format 1000TVL Resolution
- Compatible with Raymarine / Axiom (LH2 and Higher)
- Compatible with Furuno TZT / TimeZero 4.1
- Compatible with Navico MFD's inc. SIMRAD, Lowrance and B&G
- Compatible with CMAC for use with Garmin MFD's
- Built In Infra Red LED Illumination (8m Range)
- PoE Option (IRISS460 IP Model)
- Use Above or Below Water Level
- IP68 Environmental Protection

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing & Sports Fishing
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications

Looking for a discrete backup or tender watch camera, covert security camera or through hull/through transom camera? Look no further - the IRIS-S435 (IP) / S1435 (Analogue / Analogue HD) compact bullet style camera is what you need.

Available in marine grade 316L stainless steel or anodised aluminium, the S435/S1435 is available as an IP camera (IRIS-S435) based on our best selling S460 camera engine and also in analogue/analogue HD formats (IRIS-S1435).

The camera features built in infra red LED illumination for close range (10m) visibility in the dark, and is supplied with 60˚ wedge adapters to enable you to angle the camera if necessary.

The IP version of the camera (IRIS435) is directly compatible with Raymarine, Navico (Simrad, B&G, Lowrance) and Furuno chart plotters. Compatibilty with Garmin MFD's is achieved in conjunction with our CMAC camera management system for boats.

The analogue/analogue HD version of the camera can interface with all chart plotters supporting composite video in CVBS mode, and when switched to any of the three analogue HD modes (AHD, TVI, CVI) interfaces either through our CMAC system or by using an Iris TVI~HDMI convertor to provide HD resolution in real time.

The camera can be supplied with 80˚ or 120˚ lens options and is ONVIF profile S compliant.

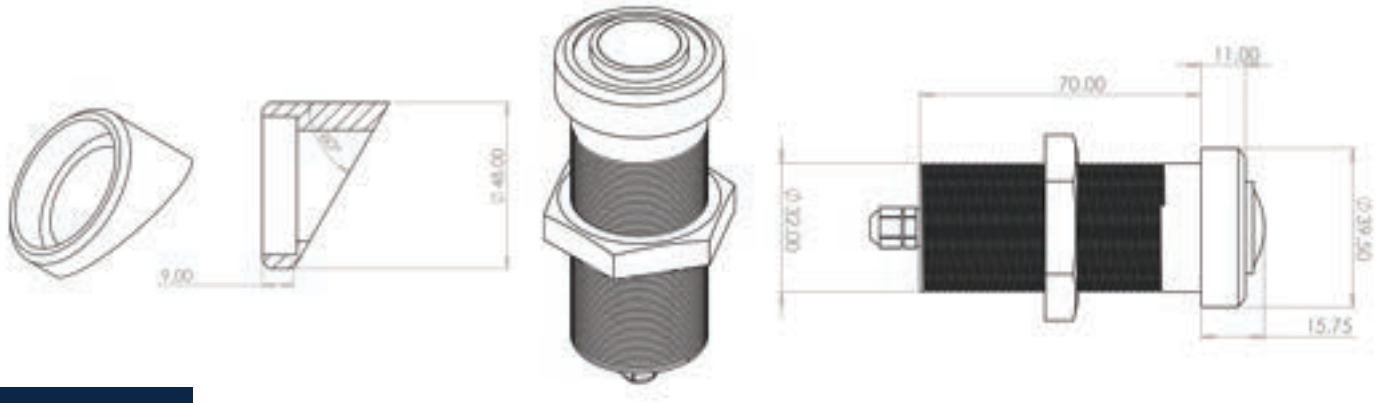
Finally, with an IP68 environmental rating, the camera can also be used below the water line to keep an eye on running gear, film your fishing adventures or even attached to a pole and used as an underwater inspection camera.

ONVIF

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IRIS-S435 / S1435

Multi-Purpose Recess Mounting Hi-Def Submersible Bullet Camera for Above or Below Water



Camera Options:

Model No.	Format	Resolution	Lens	Horizontal Field of View
			2.8mm (Stand-ard) / 3.6mm (Option)	2.8mm: 120˚ HFOV, 3.6mm 90˚HFOV
S1435	HD-TVI	1920 x 1080		
S435	IP	2304 x 1296		

	IRIS-S435	IRIS-S1435
Sensor	1/4" CMOS Sensor	1/3" Sony CCD Sensor
Resolution	Variable - 2048 x 1536 (3MP) Max	CVBS: 1000TVL / AHD, CVI, TVI: 1920x1080
Interface	RJ45 10/100 Base T Ethernet / Setup through Browser	On Screen Overlay
Video Processing	H.264 / H.265 Codec / Dual Stream (Main / Substream) 3 Instances Max	1VP~P CVBS Composite Video 75Ω / HD-TVI / HD-CVI / AHD Switchable
Protocols / Video Format	TCP/UDP/HTTP/Multicast/UPnP/NTP/RTSP/ONVIF	CVBS (PAL / NTSC) HD-TVI / HD-CVI / AHD
Onvif	Profile S v2.4	NA
Bitrate	VBR / CBR 32kbps ~ 8Mbps	NA
Illumination	6 x 850nm Infra Red - 10 meter Range / Available with White LED Illumination on Request	
Lens / Field of View	3.6mm (80˚HFOV) / 2.8mm (120˚HFOV)	
Mirroring	Horizontal & Vertical - Configure via Browser Interface	Horizontal & Vertical - Configure via OSD Menu
Automatic Gain Control		
Compatibility	Raymarine / Axiom (LH2 or higher), NAVICO MFD's inc SIMRAD / LOWRANCE, B&G, Furuno Timezero v4.1 and higher.PC based systems, MFD's with digital (HDMI / DVI) Input, MFD's via IRIS NVR/HVR, IE Browser, CMAC systems, Garmin when used with CMAC Systems	MFD's with Digital (HDMI/DVI) Input with TVI-HDMI Convertor, MFD's via IRIS NVR/HVR, CMAC Camera Management Systems. All MFD's with Composite Video Input, TV via AV Input, CMAC Camera Management Systems
Operating Temperature	-30 ~ +60˚C	
Connections	Water Resistant RJ45 Socket (Field Installable Backshell Supplied) / Non PoE with 2.5mm DC Power Socket	Video: 75Ω BNC Female Connector / Power: 2.5mm Standard DC Socket Connector
Material	316L Marine Grade Stainless Steel / Aluminium Option Available	
Power	PoE IEEE802.3af / 12VDC <200mA Max.	12VDC < 200mA Max.
Weight & Dimensions	0.XXKG (Stainless) / 0.XXKG (Aluminium ~ 40mmø x 86mm Length (27mm Above Panel)	
Environmental	IP68	

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IRIS-090 / 1090 / 490

316 Marine Grade Stainless Steel Static Pipe Style Cameras - Analogue / HD-TVI and IP Formats



IRIS490 Series



IRIS090 Series

Key Features:

- Available in multiple formats to suit your requirements
- Machined from 316 Marine Grade Stainless Steel.
- High Polish Finish
- High Definition 5MP Resolution (IRIS490 IP Model)
- 20m Optional Cable Extension (IP68)
- High Definition 2MP Resolution (Analogue Hi-Def Model)
- High Resolution 1000 TVL (Analogue Model)
- Built In Infra Red LED Illumination (10m /20m Range)
- Submersible Option Available
- PoE IEEE.802.3af (IRISS490 IP Model)
- Compatible with Raymarine / Axiom (L2 and Higher)
- Compatible with Navico MFD's inc. SIMRAD, LOWRANCE and B&G
- Extremely Low Power Consumption
- IP66 Environmental Protection

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing & Sports Fishing
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications

† May Require Additional Convertor Hardware Depending on Model Of MFD

Iris's x90 range of marine grade stainless steel cameras are available in multiple formats and deliver the highest quality video to suit your application.

The range comprises a high resolution analogue solution designed for maximum compatibility with most marine chart plotters (IRISS090), a high definition TVI model which delivers 1920x1080 resolution in real time† (IRISS1090) - compatible directly with Garmin 9000 series plotters and a high definition 5MP IP camera (IRIS490) which is directly compatible with Raymarine chart plotters (running LH2 / LH3 software and above) Navico MFD's (Simrad NSS, NSO and NSX and B&G) and Furuno TZT chart plotters. An optional 20m IP68 Extension cable is also available for the IRIS490 model.

The x90's 316 stainless steel housing provides the ultimate protection in the harsh marine environment, and is therefore the perfect solution for deck monitoring aboard work boats, fishing vessels and passenger vessels, whilst fitting in equally as well with the high end aesthetic of luxury vessels and mega yachts.

Equipped with high power infra red LED's, the x90 series provides high definition video cover even at night to a range of 20 meters.

The x90 range is small enough to provide unobtrusive surveillance and also for use in areas where space is tight, such as engine rooms or anchor wells.

Whether you need a high quality and rugged camera as part of your on board surveillance system, for engine room, deck and companion way monitoring or as a robust and stylish docking or backup camera, the IRISx90 range of cameras is the perfect solution, favoured by luxury boat owners and commercial vessel operators alike.

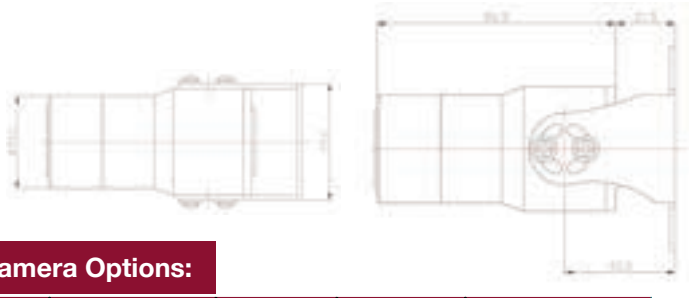
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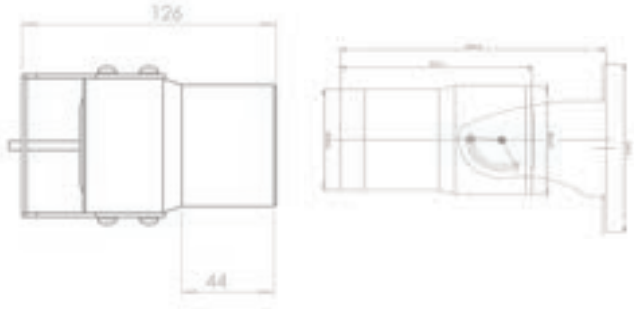
IRIS-090 / 1090 / 490

316 Marine Grade Stainless Steel Static Pipe Style Cameras - Analogue / HD-TVI and IP Formats

IRIS090 Dimensions



IRIS490 / 1090 Dimensions



Camera Options:

Model No.	Format	Resolution	Lens	Horizontal Field of View
IRIS090	Analogue	1000TVL	3.6mm Standard 2.8mm Option	3.6mm: 80˚HFOV 2.8mm: 120˚ HFOV
IRIS1090	HD-TVI	1920 x 1080	3.6mm Standard 2.8mm Option	3.6mm: 80˚HFOV 2.8mm: 120˚ HFOV
IRIS490	IP	5MP	3.6mm Standard 2.8mm Option	3.6mm: 80˚HFOV 2.8mm: 120˚ HFOV

Specifications:

	IRIS090	IRIS1090	IRIS490
Sensor	1/3" Sony CCD Sensor		1/4" CMOS Sensor
Resolution	1000 TVL	1920x1080	Variable - 5MP Max
Interface	NA		RJ45 10/100 Base T Ethernet
Video Processing	1VP~P CVBS Composite Video 75Ω	HD-TVI / HD-CVI / AHD Switchable	H.264 Codec / Dual Stream
Protocols / Video Format	PAL / NTSC Selectable	HD-TVI / HD-CVI / AHD	TCP/UDP/HTTP/Multicast/UPnP/NTP/RTSP/ONVIF
Onvif	NA		Profile S v2.4
Bitrate	NA		VBR / CBR 32kbps ~ 8Mbps
Illumination	6 x 850nm Infra Red - 10 meter Range	2 x High Power Infra Re 850nm - 20 Meter Range	
Lens / Field of View	3.6mm Standard (80˚HFOV) / 2.8mm Option		
Mirroring	Horizontal & Vertical - Configure via OSD Menu		Horizontal & Vertical - Configure via Browser
Automatic Gain Control	Supported / Multiple Levels		
Compatibility	All MFD's with Composite Video Input, TV via AV Input, CMAC Systems	MFD's with Digital (HDMI/DVI) Input with TVI-HDMI Convertor, MFD's via IRIS NVR/HVR, CMAC Systems	Raymarine / Axiom (LH2 or higher), NAVICO MFD's inc SIMRAD / LOWRANCE, B&G, PC based systems, MFD's with digital (HDMI / DVI) Input, MFD's via IRIS NVR/HVR, IE Browser, CMAC Systems, Furuno TZT
Operating Temperature	-30 ~ +60˚C		
Connections	Video: BNC 75Ω Female Connector / DC Power Socket		Water Resistant RJ45 Socket / DC Power Socket / Female BNC (1090)
Material	316 Stainless Steel		
Power	12VDC < 200mA Max.		PoE IEEE802.3af / 12VDC <200mA Max.
Weight & Dimensions	0.660Kg / 108mm x 49mm	1.170Kg / 126mm x 64mm	
Environmental	IP66	IP66 Standard / IP68 Submersible Option Available	

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IRIS-092

Static Marine Grade 316 Stainless Steel Thermal Camera



Key Features:

- Bullet Style Camera, with Adjustable Tilt Bracket
- 316 Marine Grade Stainless Steel Case come with 10 Year Warranty*
- Available in 400x300 Resolution
- Multiple Colour Palettes
- 17µm Pitch
- <50mK Thermal Sensitivity
- IP68 Environmental Protection
- Cosr Effective Thermal Solution
- ICE™ Image Contrast Enhancement Technology

Applications:

- Perfect For Extreme Environments
- Work Boat & Tugs
- Fishing Vessels
- Engine Room Monitoring
- Law Enforcement & Military
- Wind Farm Vessels
- Aquaculture & Fisheries
- Luxury Vessels
- Passenger Ferries & Cruise Liners

For extreme applications, Iris's new IRIS092 fixed thermal imaging camera delivers unparalleled vision at night and in low light situations. The IRIS092 is the perfect tool for spotting obstacles at sea, on board deck, engine room and companionway safety and finding people or animals in zero light.

Developed as part of Iris's marine range, the IRIS092 is also used by police authorities, fire, search and rescue services, wind farm support vessel operators and aquaculture businesses around the world.

The IRIS092's key benefit is its solid marine grade stainless steel case which makes it one of the worlds toughest night vision cameras.

With a 400x300 resolution and 15mm lens, the IRIS092 is enhanced further by Iris's ICE™ Image processing feature which dynamically analysis each video frame to enhance object edges, making them easier to spot. The camera also features multiple colour palettes and 4x digital zoom.

At sea, the IRIS092 is perfect as a forward facing camera for spotting channel markers and bouys, floating debris and objects undetectable by radar. As an aft facing camera, the IRIS092 can help docking at night and monitor tenders and other objects under tow. It's extremely small form factor also make it ideal for monitoring engine rooms.

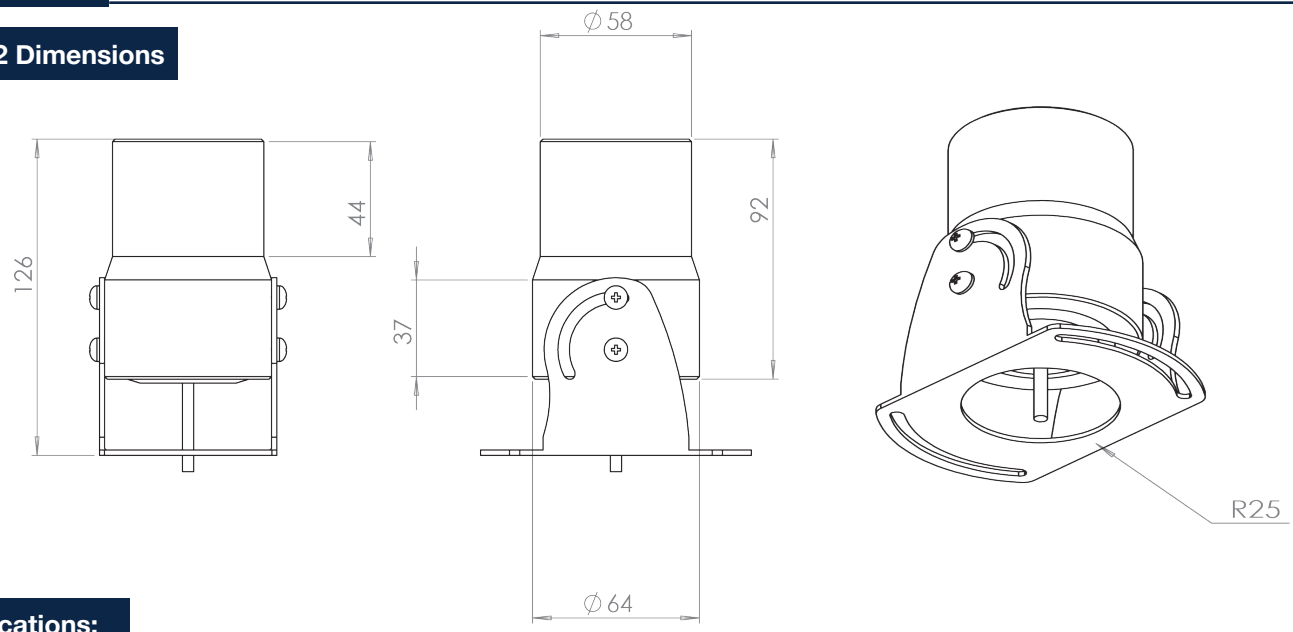
The IRIS092 is extremely compact, rugged and delivers excellent value for money, costing less than any other thermal camera in its class.

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IRIS-092

Static Marine Grade 316 Stainless Steel Thermal Camera

IRIS092 Dimensions



Specifications:

	IRIS092
Sensor	Uncooled Amorphous Silicone Microbolometer
Resolution	Sensor Resolution 400x300
Pixel Pitch	17µm
Video Processing	1VP~P CVBS Composite Video 75Ω
Protocols / Video Format	PAL / NTSC Selectable 30Hz/60Hz (NTSC, 360x240, 320x240) 25Hz/50Hz (PAL, 384x288, 360x288)
Focal Length	15mm/f1.0
Focus / Zoom	Fixed Focus / Digital Zoom 4x Continuous
Spectral Range	8~14µm
Field of View	25˚ x 19˚
Mirroring	Horizontal / Vertical
Colour Palettes	10 Palettes
Image Enhancement	IRIS ICE® Image Contrast Enhancement
Compatibility	All MFD's with Composite Video Input, TV via AV Input, Composite DVR;s / Video Switchers
Communication	RS485 Serial Data Communication / Iris Protocol
Operating Temperature	-40 ~ +70˚C
Connections	Video: BNC 75Ω Female Connector / DC Power Socket / 6 Pin Body Mount Connector Option
Material	316 Stainless Steel
Power	12VDC < 200mA Max.
Weight & Dimensions	Weight: XKg / Camera Body 92mm x 64mmø
Environmental	IP66 (IEC 60529)

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IRIS-093 / 093R

Marine Grade 316 Stainless Steel Thermal Camera with Radiometric Option



Key Features:

- Bullet Style Camera, with Adjustable Tilt Bracket
- 316 Marine Grade Stainless Steel Case come with 10 Year Warranty*
- Available in 640x512 Resolution
- Multiple Colour Palettes
- 17µm Pitch
- <50mK Thermal Sensitivity
- IP66 Environmental Protection
- Cost Effective Thermal Solution
- ICE™ Image Contrast Enhancement Technology

Applications:

- Perfect For Extreme Environments
- Work Boat & Tugs
- Fishing Vessels
- Engine Room Monitoring
- Law Enforcement & Military
- Wind Farm Vessels
- Aquaculture & Fisheries
- Luxury Vessels
- Passenger Ferries & Cruise Liners



For extreme applications, Iris's new IRIS093 fixed thermal imaging camera delivers unparalleled vision at night and in low light situations. The IRIS093 is the perfect tool for spotting obstacles at sea, on board deck, engine room and companionway safety and finding people or animals in zero light. The 093 is also a powerful tool for first responders and search and rescue teams, at on land.

Developed as part of Iris's 'EXtreme' range, the IRIS093 is also used by police authorities, fire, search and rescue services, wind farm support vessel operators and aquaculture businesses around the world.

The IRIS093's key benefit is its solid marine grade stainless steel case which makes it one of the worlds toughest night vision cameras.

With a 640x512 resolution and 15mm lens, the IRIS093 is enhanced further by Iris's ICE™ Image processing feature which dynamically analysis each video frame to enhance object edges, making them easier to spot. The camera also features multiple colour palettes and 4x digital zoom.

The IRIS093R option offers a range of on-screen radiometric readings such as target + hottest object, target + coldest target, hottest and coldest target and region measurements, which allows a user definable target to be measured.

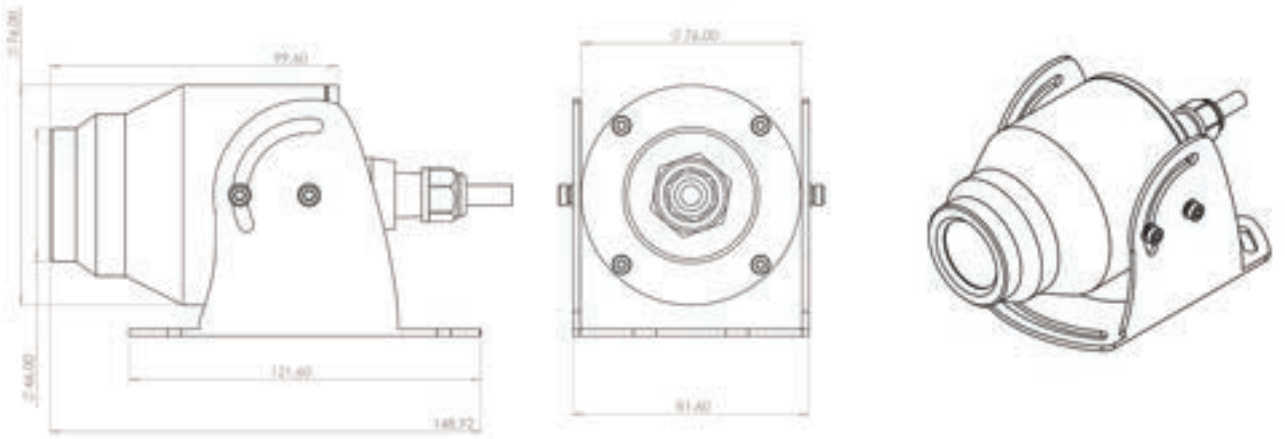
The 093R also features the same multiple colour palettes as the standard 093 option.

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IRIS-093 / 093R

Marine Grade 316 Stainless Steel Thermal Camera with Radiometric Option

IRIS093 Dimensions



Specifications:

	IRIS093
Sensor	Uncooled Amorphous Silicone Microbolometer
Resolution	Sensor Resolution 640 x 512
Pixel Pitch	17µm
Video Processing	1VP~P CVBS Composite Video 75Ω
Protocols / Video Format	PAL / NTSC Selectable 30Hz/60Hz (NTSC, 640x512) 25Hz/50Hz (PAL, 640x512)
Focal Length	25mm/f1.0
Focus / Zoom	Fixed Focus / Digital Zoom 4x Continuous
Spectral Range	8~14µm
Field of View	25˚ x 19˚
Mirroring	Horizontal / Vertical
Colour Palettes	10 Palettes
Image Enhancement	IRIS ICE® Image Contrast Enhancement
Radiometric Features	Target + Hottest / Target + Coldest / Hottest & Coldest / User Definable Target
Compatibility	All MFD's with Composite Video Input, TV via AV Input, Composite DVR;s / Video Switchers
Communication	RS485 Serial Data Communication / Iris Protocol
Operating Temperature	-40 ~ +70˚C
Connections	Video: BNC 75Ω Female Connector / DC Power Socket / 6 Pin Body Mount Connector Option
Material	316 Stainless Steel
Power	12VDC < 200mA Max.
Weight & Dimensions	Weight: 1.1Kg / Camera Body 92mm x 64mmø
Environmental	IP66 (IEC 60529)

IRIS-735

Micro-Compact Flush Mounting 316L Stainless Steel Camera



Key Features:

- Micro-compact form factor - 28mmø x 58mm
- 316L Stainless Steel
- 4-in-1 Video Format (CVBS, TVI, CVI, AHD)
- 2.9mm Wide Angle Lens
- Starlight Sensor for Ultra Low Light Operation
- Compatible with All Chart Plotters with Composite Input
- Compatible with CMAC-HVR systems
- Compatible with TV's via HDMI convertor (TVI mode)
- IP67 Enviromental Rating
- Low Power Consumption

Applications:

- Perfect For Extreme Environments
- Road Traffic Surveillance
- Monitoring Dynamic Digital Signage
- Engine Room Monitoring
- Deck Monitoring
- FIshing Vessel Monitoring & Surveillance
- Emergency Vehicle Camera Applications
- Animal / Food Processing Applications

Introducing the worlds smallest through hull camera - the IRIS735 machined from corrosion resistant marine grade 316L stainless steel and measuring only 28mmø by 58mm long.

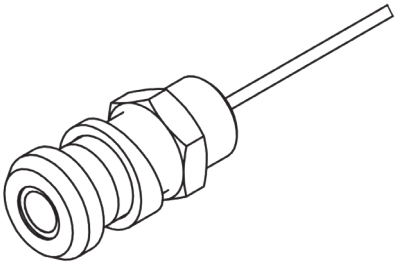
The 735 has been designed to sit flush into the hull, super structure or transom of your vessel to provide all round coverage without impacting on the lines of your vessel, with a bezel height of only 8.5mm.

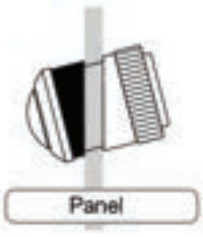
The camera module itself features a Sony Starlight sensor to provide excellent performance in low light, and can be user-set to output composite (CVBS) or analogue Hi-Def (TVI, CVI, AHD) video formats. When set to CVBS, the 735 is compatible with all chart plotter models that support composite video inputs. When set to TVI, the 735 will provide hi-definition real time video which can be viewed on an MFD via our CMAC systems or fed to a TV via our TVI~HDMI convertors.

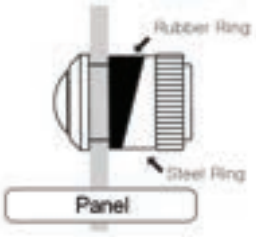
The camera has a 140° wide angle field of view which makes it great to position along the sides and transom of your vessel to provide all round coverage whilst docking, and is also a great solution for sports fishing applications.

If you are looking for a tiny, cost effective docking camera, sports fishing camera or for unobtrusive cameras to add to your onboard security set up, the IRIS735 is the perfect solution.







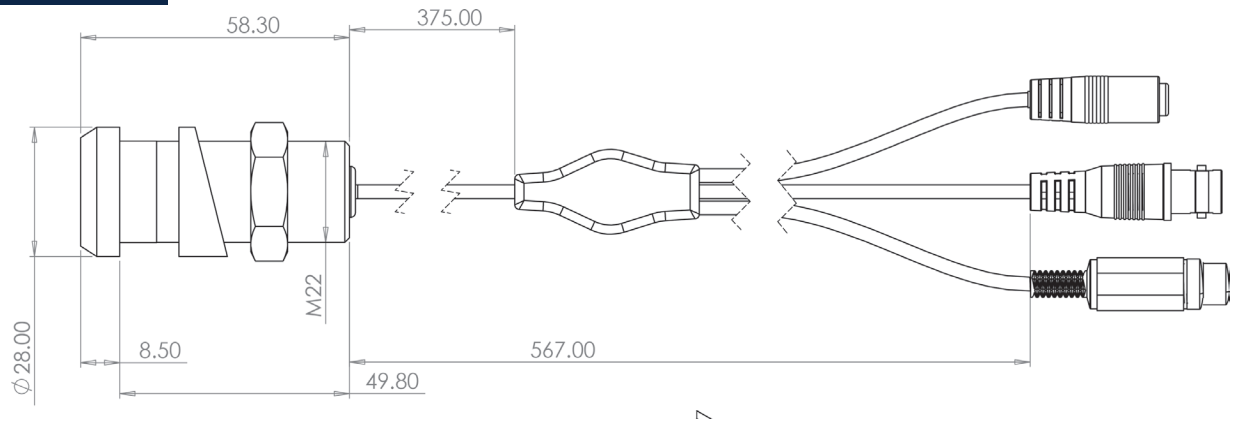


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IRIS-735

Micro-Compact Flush Mounting 316L Stainless Steel Camera

IRIS735 Dimensions



Specifications:

	IRIS735
Sensor	1/2.8” SONY STARVIS CMOS Sensor
Resolution	1920 x 1080P @ 30fps (NTSC) / 25fps (PAL) / 906H in CVBS mode
Minimum IlluminatiON	0.001 Lux (F-1.2)
Day & Night Operation	Auto / Colour / Monochrome / External
Video Output Modes	Analogue HD Modes: HD-TVI, HD-CVI, AHD / Analogue: Composite Video (CVBS) NTSC / PAL
Lens	2.9mm
Shutter Speed	Auto / Manual (1/50(60) - 1/50,000 sec)
Horizontal Field of View	140˚
Defog	Off / Auto
White Balance	ATW / AWC / INDOOR / OUTDOOR / MANUAL / AWB
Back Light Compensation	OFF / BLC / HSBLC
D-WDR	Off / 0~8
SENS-UP	Off / x2 ~ x30
DNR	Off / Low / Middle / High
Brightness	0 - 100
Motion Detection	Off / On
Image Mirror	Off / Mirror / V-Flip / Rotate
Sharpness	0 ~ 10 Steps
Material	316L Marine Grade, Corrosion Resistant Stainless Steel
Power	DC12V ±10% / 125mA (1.5W)
Weight	0.1Kg
Dimensions	28mmø x 58mm
Environmental / EMC	EN60529 IP67 / EMC EN60945 (TBC)
Operating Temperature	-10˚C ~ + 50˚C / <90% Hummidity

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IRIS-750

Fully Submersible (50m) 316L Stainless Wide Camera with Adjutable LED's





Key Features:

- Submersible to 50 Meters
- Hi-Def HD-TVI / AHD Format
- 15x High Bright Adjustable LED's
- Fully Dimmable LED Control to Reduce Back Scatter
- 316L Marine Grade Stainless Steel Case
- Excellent Low Light Performance / Sony Exmor 1/2.9" Sensor
- 3.6mm Lens / 80°HFOV
- Very Low Power Consumption - Max 4.0 Watt
- Compact Form Factor - 49.5mmø x 70mm
- Supplied with Mounting Bracket

Applications:

- Marine Wildlife Observation
- Checking Sub-Surface Fixtures
- Sacrificial Anode Inspection
- Inspect Props and Running Gear
- Provides Visibility in Unsafe Environments
- Aquaculture & Fish Farming
- Sub Sea Engineering Applications
- Sports Fishing, Swimming & Documentary Making

Iris's 750 Submersible camera is an extremely robust and versatile, high defintion video solution for deployment beneath the waves or in hazardous scenarious.

Whether you're making an under water film or documentary, inspecting running gear or sacrificial anodes on your hull, sports fishing or just keen to watch aquatic wildlife on the TV in your boat's salon, the 750, with its 1080P realtime high definition output is the perfect choice.

The 750 outputs analogue high definition formats such as AHD, HD-TVI, HD-CVI and standard definition CVBS composite video. Routing the video into your TV via our plug'n'play TVI~HDMI convertor produces crisp HD underwater video in realtime - without the potential streaming and buffering issues seen with IP cameras.

The camera case is machined from AISI 316L marine grade stainless steel to ensure the very best protection from salt water and exposure to other substances other cameras cannot withstand. The device is rated to depths of 50 meters and is supplied with a 20m cable, with extension cables available seperately.

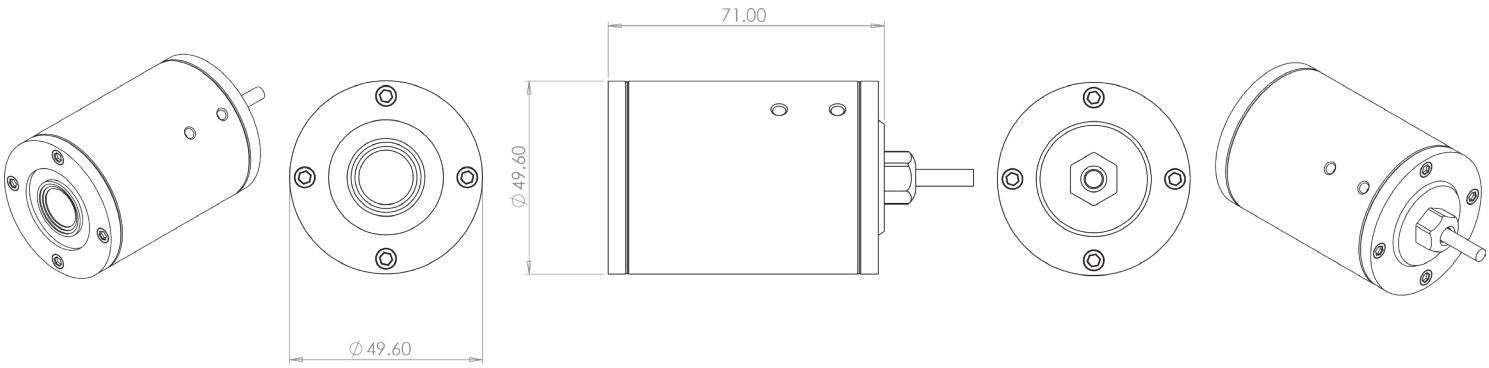
Adding to its impressive feature set, the 750 boasts an array of 15 high strength bright-white LED illuminators, the intensity of which can be controlled manually using a plug in rotary LED controller switch (supplied). This is great when inspecting items close up in order to reduce the effects of particular back-scatter in the water - making the camera perfect for engineers, boat owners wishing to check out their running gear, impellers, anodes and props.

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IRIS-750

Fully Submersible (50m) 316L Stainless Wide Camera with Adjutable LED's

IRIS750 Dimensions



Specifications:

	IRIS750
Sensor	1/2.9" Sony Exmor CMOS Image Sensor
Resolution	1920 x 1080P (2MP)
Minimum IlluminatiON	0Lux - With LED's ON, Colour: 1.0lux, Mono: 0.5lux, Colour DSS: 0.002 Lux, Mono DSS: 0.0008lux
Day & Night Operation	Manual LED Operation / Automatic
Video Output Modes	4-in 1 Video Output Modes - CVBS (PAL / NTSC), HD-TVI, HD-CVI, AHD - Factory Set (Specify When Ordering)
Lens	3.6mm MP Lens - 80˚HFOV
Back Light Compensation	Off / BLC / HSBLC
D-WDR	Off / 0~8
SENS-UP	Off / X2 ~ X30
DNR	Off / Low / Middle / High
LED Brightness	Controlled Via Plug-In Rotary Switch (Supplied)
Motion Detection	Off / On
Image Mirror	Supported
Privacy Masks	4 Masks
Material	AISI 316L Marine Grade Stainless Steel
Power	DC12V ± 10% / Max Power (LEDs on Full) 4.0 Watt
Weight	0.760KG
Dimensions	49.5mmø x 70mm (L)
Environmental / EMC	EN60529 IP68 / EMC EN60945 (TBC)
Operating Temperature	-20˚C ~ + 60˚C / 10%~85% Hummidity

IRIS730/740

Multi-Format Range of Through Hull Cameras



Key Features:

- IRIS740 Model Compatible with Raymarine MFD's (Axiom / LH2 and above) Simrad, B&G and Furuno Time Zero v4.1 and above.
- IRIS740 ModelCompatible with Garmin via CMAC Interface
- IRIS740 Model PoE and 12VDC
- IRIS730 Model features multiple formats - CVBS (Analogue) / HD-TVI / HD-CVI and AHD. PAL/NTSC Switchable
- HD-TVI/CVI & AHD provide Hi-Def Video in Real Time without Network Latency Problems
- IRIS730 Analogue HD model Directly Compatible with Garmin 9000 Series Chart Plotters for 1920x1080P Resolution
- Rugged Hard Anodysed Case
- Aluminium Bronze Bezel
- IP68 Waterproof
- Plug and Play Connectivity
- Low Power

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing, Sports Fishing & Hunting
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications

Introducing Iris's 7xx series of Through Hull Cameras, providing fantastic sub surface visibility in Analogue, HD-TVI / HD-CVI / AHD and IP Formats

The IRIS740 delivers crisp 2304x1296P Resolution >3MP Hi-Def video onto compatible chartplotters and on-board computer based systems and with optional PoE, installation couldn't be simpler. The IRIS740 is currently compatible with Raymarine (LH2 and above), Simrad, B&G , Axiom and Furuno Timezero v4.1 and above, with more MFD models currently in development. IRIS740 features PoE and 12VDC.

For viewing on all chartplotters with composite video input, TV's with AV input or for interfacing into a PC via a video capture device, the IRIS730 features a high resolution analogue camera with SONY EF-FIO-P chipset, 1000TVL resolution, WDR (Wide Dynamic Range) and DNR (Digital Noise Reduction) processing as well as user configurable setup parameters via a plug in configuration key pad.

The IRIS730 can also be configured to output HD-TVI / HD-CVI and AHD analogue High Definition formats, providing up to 1920x1080P resolution in real time (without the latency issues sometimes apparent with IP systems). Set to TVI and use in conjunction with Iris HVR's or Video Switchers with HDMI output for real time high definition on MFD's with digital inputs, such as Garmin's 8000 series chart plotters. New for 2026 - TVI model directly compatible with Garmiin 9000 MFD's.

Iris's Through Hull cameras have an aluminium bronze bezel, hard anodized body and reinforced, scratch resistant, optically clear lens window.

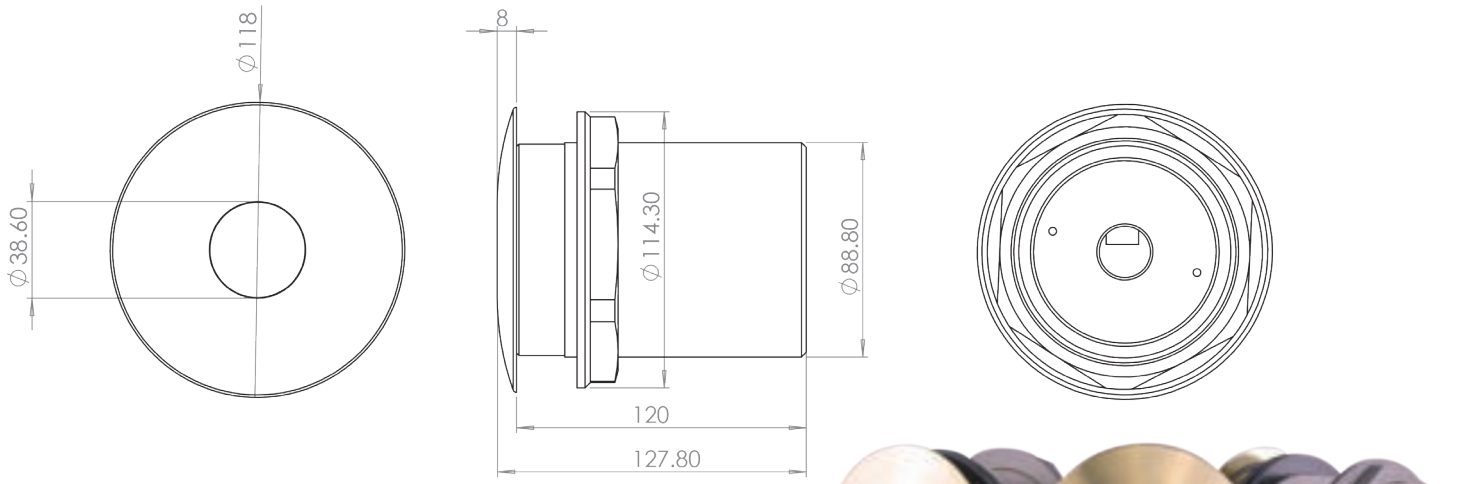
Iris Through Hull cameras produce excellent, high resolution video and are ideal as part of a sports fishing monitoring system, for sub-surface security, monitoring running gear or simply as a camera for watching the amazing world beneath the waves!

ONVIF

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IRIS730/740

Multi-Format Range of Through Hull Cameras





Specifications:

	IRIS730 (CVBS MODE)	IRIS730 (HD-TVI/CVI/AHD MODE)	IRIS740 IP Model
Sensor	1/3" Panasonic CMOS Sensor		1/4" CMOS Sensor
Resolution	1000 TVL	1920x1080	Variable - 2304x1296 (3MP) Max
Interface	NA		RJ45 10/100 Base T Ethernet
Video Processing	1VP~P CVBS Composite Video 75Ω	HD-TVI / HD-CVI / AHD Switchable	H.264 Codec / Dual Stream
Protocols / Video Format	PAL / NTSC Selectable	HD-TVI / HD-CVI / AHD	TCP/UDP/HTTP/Multicast/UPnP/NTP/RTSP/ONVIF
Onvif	NA		Profile S v2.4
Bitrate	NA		VBR / CBR 32kbps ~ 8Mbps
Illumination	NA		
Lens / Field of View	3.6mm Standard (80˚ HFOV) / 2.5mm (120˚ HFOV) Option Available		
Mirroring	Horizontal & Vertical - Configure via OSD Menu		Horizontal & Vertical - Configure via Browser
Automatic Gain Control	Supported / Multiple Levels		
Compatibility	All MFD's with Composite Video Input, TV via AV Input, CMAC Systems	MFD's with Digital (HDMI/DVI) Input with TVI-HDMI Convertor, MFD's via IRIS NVR/ HVR, via IRIS604 Switcher (TVI) and IRIS1608 Switcher (TVI), CMAC Systems, Garmin 9000	Raymarine / Axiom (LH2 or higher), NAVICO MFD's inc SIM-RAD / LOWRANCE, B&G , Furuno Time Zero v4.1 or higher, PC based systems, MFD's with digital (HDMI / DVI) Input, MFD's via IRIS NVR/HVR, IE Browser, CMAC Systems
Operating Temperature	-30 ~ +60˚C		
Connections	Video: BNC 75Ω Female Connector / DC Power Socket		Water Resistant RJ45 Socket / DC Power Socket / Female BNC (1090)
Material	Hard Anodised Black Aluminium 6082 (HE30) Body / Aluminium Bronze Bezel. Supplied with Rubber Washers to insulate housing from hull.		
Power	12VDC < 0.2A Max.		PoE IEEE802.3af / 12VDC <1A Max.
Weight & Dimensions	Bezel ø: 118mm / Panel Cut Out ø:90mm / Overall Length: 128mm / Depth Behind Panel: 120mm : Weight: 1.55Kg		
Environmental	IP68		

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IRIS780

316L Stainless Steel Fully Submersible IP Camera
Submersible to 100m



Key Features:

- Submersible to 100 meters
- 5MP (2560 x 1920) Resolution @ 30fps
- AISI 316L Marine Grade Stainless Steel Case
- IEEE802.3af Power over Ethernet
- Built in High-Bright White LED Illumnation
- Triple Stream (H.265, H.264, MJPEG)
- 2.8mm Fixed Lens (120˚ HFOV)
- 20m Built in Waterproof Cable (50m Cable Option Available)
- Extension Cable Options
- ONVIF and NDAA Compliant

Applications:

- Work Boat & Commercial Shipping
- Luxury Motor Yachts
- Fishing, Sports Fishing & Hunting
- Ferry Boats & Passenger Vessels
- Law Enforcement & Emergency Services
- Rapid Deployment Applications
- Vehicle & Transport Applications

Combining crystal-clear 5-megapixel video, powerful integrated LED illumination and an exceptionally robust marine-grade stainless steel enclosure, the IRIS780 sets a new standard for compact, professional underwater video surveillance.

Designed to operate at depths of up to 100 metres, the IRIS780 opens up a world of possibilities for underwater observation, inspection, security and monitoring across leisure marine, commercial, industrial and defence applications.

At the heart of the IRIS780 is an advanced 5-megapixel high-definition imaging sensor, delivering remarkably detailed underwater video at a smooth 30 frames per second.

Whether monitoring a vessel's hull and running gear, inspecting underwater infrastructure, observing marine life or conducting professional sub-surface surveillance, the IRIS780 provides operators with the clarity and detail needed to see beneath the waterline with confidence.

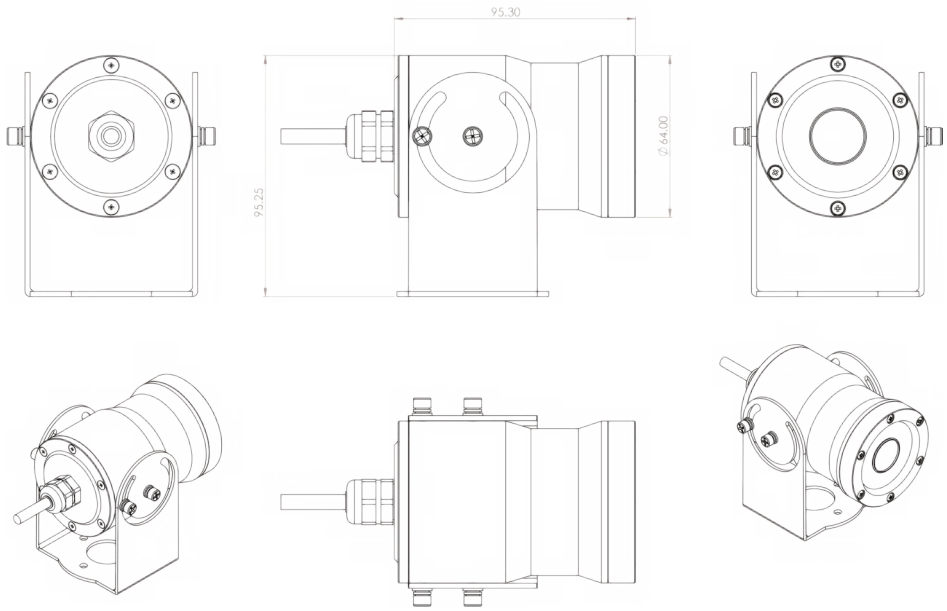
To overcome the challenges of underwater visibility and reduced ambient light, the camera incorporates high-brightness white LED illumination, conveniently activated through the camera's integrated web interface. This powerful onboard lighting system enables effective observation in low-light conditions, providing illumination precisely when and where it is required, without the need for additional external lighting equipment.

With support for the ONVIF interoperability standard, the IRIS780 also offers integration opportunities with compatible third-party video management and surveillance platforms. Furthermore, NDAA compliance makes the camera particularly attractive for government, defence, security and other applications where equipment procurement and supply-chain requirements are critical considerations.

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IRIS780

316L Stainless Steel Fully Submersible IP Camera
Submersible to 100m



Specifications	IRIS-780 Submersible IP Camera
Sensor	1/2.8" Sony 5.69MP Starvis Image Sensor
Resolution	2560x1920 / 2560x1440 / 2048x1536 1600x1200 / 1920x1080 / 1280x1024 1280x960 / 640x480 / 640x360 / 320x240/320x180
Lan Interface	RJ45 10/100-base-T Ethernet auto sensing PoE (IEEE 802.3af)
Video Processing	H.265 / H.264 / MJPEG
Protocols / Video Format	TCP/IP, UDP/IP, RTP, RTSP, RTCP, NTP, HTTP, DHCP, FTP, SMTP, DNS, DDNS
Onvif	ONVIF Profile S version 17.06
Bitrate / Video Quality	H.265: Bitrate Control H.264: Bitrate Control MJPEG: Quality Level Control
Illumination	Hi-Bright White LED Illumination - Operate through Browser Interface / Auto Operation
Lens / Field of View	2.8mm Fixed Lens / 120˚ HFOV
Mirroring	Invert and Flip - Operated through Browser Interfac
Image Settings	Automatic Gain Control, Real Wide Dynamic Range, 3D Digital Noise Rediction, 2D Digital Noise reduction
Compatibility	Raymarine / Axiom (LH2 or higher), NAVICO MFD's inc SIMRAD / LOWRANCE, B&G , Furuno Time Zero v4.1 or higher, PC based systems, MFD's with digital (HDMI / DVI) Input, MFD's via IRIS NVR/HVR, IE Browser, CMAC Systems
Operating Temperature	0˚C to 50˚C
Connections	20m Waterproof Cable with IP68 Rated M12 Multipole Circular Connector. 50m Extension Cables Available Seperately. 50m Hardwired Cable Option Available
Material	AISI 316L Marine Grade Stainless Steel
Power	PoE - IEEE802.3af / DC12V ±10%
Weight & Dimensions	ø64mm x 103mm (overall length excluding bracket) / 0.920KG (not including cable)
Environmental	IP68 - Submersible to 100m

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IRIS-IX82

Dual Spectrum Temperature Monitoring Camera with PoE



Key Features:

- 256x192 Thermal Resolution
- 1600x1200 Visible Camera
- 12µ Pixel Pitch (Thermal)
- Alarm Contact
- <60mK Sensitivity
- IP67 Environmental Rating
- Extremely Robust Cast Housing
- Multiple Temperature Measurement Rules
- Motion Alarms
- Object Left / Object Removed Alarm
- Temperature Range -20˚~+150˚C
- Image Enhancement
- Easy to Install

Applications:

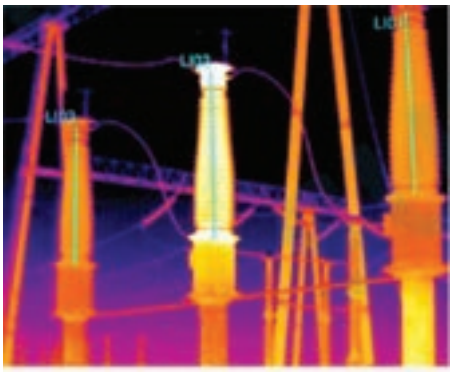
- Engine Room Monitoring
- Deck / Companion Way Monitoring
- Electrical Cabinet Monitoring
- Data-Center Monitoring
- Process / Manufacturing Monitoring
- Thermal management Applications
- Monitoring Illegal Encroachment
- Gas and Liquid Leakage Monitoring

The IRIS-IX82 Thermal Monitoring Camera provides boat owners, engineers, managers and mechanics peace of mind by monitoring critical equipment on board or in other hazardous environments. Use the IRIS-IX82 to keep check on engines, exhaust manifolds, electronics cabinets, shaft bearings and other vital equipment on board before serious problems develop.

The IX82 isn't limited to marine applications. The camera is a vital tool for any process or application where temperature could be an issue, such as data center and control room monitoring, within electrical cabinets and as part of manufacturing and production lines. The IX82 can be used as a presence detection tool for monitoring Illegal Encroachment into protected areas.

With various different methods of measuring temperature (including temperature increase, temperature comparison), alarms over IP and via contact closure, motion detection, left object detection and object removed detection, the IX82 is a powerful detector with added features to complement your on board security system as well as your fire safety system.

The IX82 is nitrogen sealed and waterproof to IP66. It's housing is extremely rugged, cast from toughened aluminium and finished with a protective coating.



Line Temperature Measurement example.

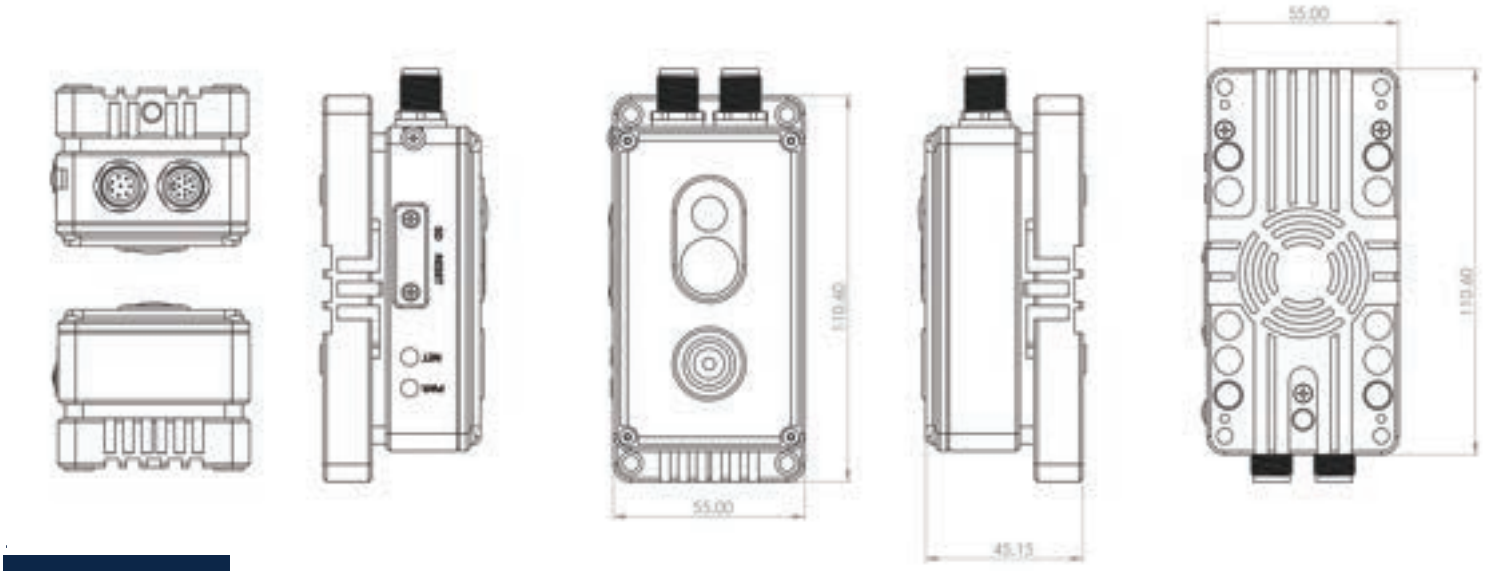


Area Temperature Measurement example.

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IRIS-IX82

Dual Spectrum Temperature Monitoring Camera with PoE



Specifications:

	IRIS-IX8
Thermal Detector Type	Uncooled VOx Micro Bolometer 256 x 192
Thermal Camera Resolution	256(H) x 192(V) - Image can be scaled up to 704 x 576
Thermal Sensitivity	<60mK @ F1.0, 300K
Spectral Range	8 ~ 14µm
Image Settings	Brightness / Sharpness / Contrast / Mirror / FFC / 3D DNR
Colour Palettes	White Hot / Black Hot / Rainbow / Ironbow / + 17 additional Colour Modes
Lens / Field of View	Fixed F1.-0 Lens - H: 95˚ x V: 75˚
Visible Camera Sensor	1/2.8" Sony CMOS
Effective Resolution	1600 (H) x 1200(V)
Shutter Speed	1/5 ~ 1/20,000s
Min Illumination	0 Lux with LED ON
Lens / Field of View	Fixed F2.0 Lens - H: 136.2˚ x V: 77.3˚
Zoom	Digital Zoom 16x
Alarm Functions	Motion Detection / Disk Alarm / I/O Alarm / Temperature Alarms
IVS	Perimeter, Single Virtual Fences, Double Virtual Fences, Object Left, Object Removed
Network Protocols	IPv4 / IPv6 / HTTP / RTSP/RTP/RTCP / TCP/UDP / DHCP / DNS / PPPOE / SMTP / 802.1x / ONVIF
Browser Support	IE11, Chrome, Firefox, Microsoft Edge
Power	+10 ~ +30VDC / Power over Ethernet (PoE) IEEE802.3af / Max 5.4W
Operating Temperature	-20˚C ~ +150˚C / ±2˚C Temperature Accuracy
Dimensions	92(H) x 65(W) x 43(D)mm
Weight	0.52KG
Material	High Strength Aluminium Die-Cast, Anodysed, Anti Corrosion Coating, Nitrogen sealed.

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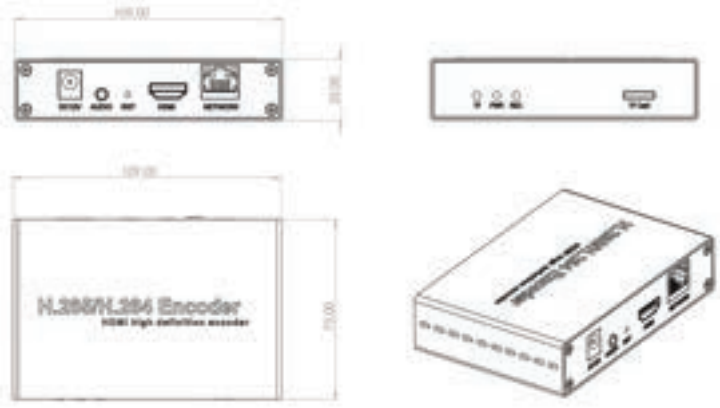
HDMI2IP-01

Single Channel HDMI to IP Encoder - H.265 / H.264 Compression



Key Features & Applications:

- Converts High Definition HDMI video into IP video streams using H.265 / H264 Compression
- Compatible with Raymarine, Navico (Simrad / B&G) and Furuno Chart-Plotters
- HDMI Devices Handled as IP Cameras by Compatible MFD's
- Perfect for Displaying HD Video Ouput from CMAC on your Chartplotter
- Connect to MFD Network to View Video on all Connected, Compatible Devices
- Low Power, +12VDC Operation.
- Small, Compact and Easy to Install
- Supports Audio
- Can be Used to Encode any HDMI Video Source



Convert your HDMI video source to a high definition IP stream compatible with Raymarine, Simrad, B&G and Furuno Chart-Plotters using the HDMI2IP-01 Single Channel Encoder from Iris Innovations.

This small and compact little box takes your HDMI video and uses H.265 / H.264 compression algorythms to encode the video into a high definition IP stream which leading chartplotters process as if it were an IP camera devices. Simply configure the device to sit on your MFD network, hook up your HDMI camera and then configure your MFD in the same way you would configure an IP camera. If your MFD works as an RTSP server (such as Raymarine Axiom and Furuno TZT devices) simply set the HDMI2IP unit to accept its IP address via RTSP and you are good to go.

Your MFD will treat the stream as if it were an IP camera, which means once configured, the video will display on all compatible devces connected to your MFD network, greatly simplifying installation.

Measuring only 109 x 73 x 25 and weighing only 155g, the HDMI2IP-01 packs a lot of processing power into its compact form factor.

The device is powered from your vessel (or vehicle's) +12VDC supply and draws less than 200mA.

Default IP address is 192.168.1.120
Default User: admin
Default Password: 12345

ONVIF

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HDMI Switching / Transmission

1 Input x 4 Output Distributor / 4 Input x 4 Output Matrix / HDMI over CAT5 Extender



With an increasing number of chart plotters now supporting HDMI high definitiion digital video inputs, Iris have added a range of HDMI switchers, distributors and transmission kits to our range to enable users to get more our of their MFD's.

Although we've added these items to our range predominatly to facilitate HD video from our CMAC systems, our switchers, distributors and extenders can be used for a whole range of applications on board, such as broadcasting video from media players, computers, chart-plotter HDMI outputs, games consoles etc to other HDMI monitoring devices such as other MFD's, TV's and projectors.

HDMI01x04
Split a single HDMI input into four balanced outputs using the HDMI01x04. Particularly useful with Garmin MFD's where only the substream is networked by the MFD, use this device to ensure main stream resolution to up to four Garmin chart-plotters.

HDMIMAX-0404
This four input / four output matrix switcher can be used to switch any of the four HDMI inputs to four HDMI ouputs. Also features serial control to facilitate switching from a remote interface such as our IrisControl App for chart-plotters or our TE01 Rotary Encoder.

HDMI2CAT5-01
Supplied as a set comprising a transmitter (TX) unit and a reciever (RX) unit, convert your HDMI signal to run over CAT5 cable up to 90 meters away. This transmission set allows you to overcaome the standard maximum distance for HDMI of around 12 meters, and because transmission is over CAT5 cable, its super afforable and makes the installers life much easier. Perfect for running a video source to a TV where running HDMI cable is eaither not possible due to length or routing options.

Key Features & Applications:

- Distribute HDMI Video Around the Vessel to Chart-Plotters, Monitors, TV's etc
- Extend Distance Between Device Up To 90m
- Use Low Cost, Small Diameter CAT5 cable to Transmit HDMI - Greatly Simplifying Install
- Real Time Transmission - No Latency
- Switch Matrix Inputs and Outputs from External Devices Such as Chart-Plotters (via IrisControl App), and Iris Control Devices such as TE01, IRIS595 and IRIS599.
- Low Power / Small Form Factor
- Supplied with +12VDC to +5VDC Convertors
- Plug & Play Operation

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IP2HDMI-01

Single Channel IP to HDMI Decoder





Key Features:

- Converts IP Camera Stream to HDMI (and VGA)
- Perfect for showing IP Cameras on TV and Chart Plotters
- Supports Up to 4K Ultra Hi-Def Video
- Supports all major IP Camera Formats and Compression
- Small, Compact and Low Cost
- Easy Installation and Low Power Consumption
- Supports ONVIF Profile S
- Ideal for On Board and In Vehicle Camera Systems

IP2HDMI-01	Specification
Weight & Dimensions	171mm x 60mm x 36mm / 0.25KG
Material	Aluminium, Hard Anodised
Video Output Formats	1 x HDMI port / 1 x VGA port (Simultaneous output)
Camera Input	1 x Ethernet RJ45 10/100
Supported Resolution	Variable - Up to 4K (8MP)
Protocols	TCP/IP, P2P, UPnP, NTP, DHCP, PPPoE, HTTP, HTTPS, DNS, DDNS, SMTP, RTSP, ONVIF
Compression	Ultra 265/H.265/H.264
Input Voltage	12VDC
Power Consumption	<5W
Environmental	IP30 - Install in a Dry Dust Free Environment. Do not expose to moisture

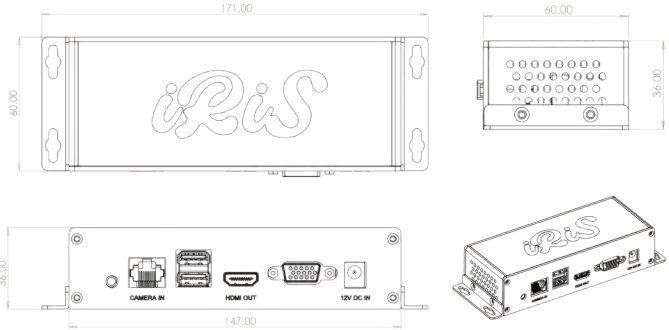
The IP2HDMI-01 module processes video and audio streams from IP cameras and converts them to an HDMI format output.

Supporting up to 4K resolution, the IP2HDMI is the perfect tool for displaying Ultra High Definition IP cameras, such as the IRIS-PHOTON range on a chart plotter that supports 4K video inputs, such as Garmin's 9000 series MFD's, or displaying the cameras on a UHD TV.

With a secondary VGA output for legacy systems the device simply needs to be configured onto your camera network and then the IP address of your camera set.

Small, lightweight and lowpower, with surface mounting ears, the device can easily be installed behind a TV or chart plotter with very little power budget required.

The device is ONVIF Profile S compliant and supports all leading IP camera protocols.



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HDMI-MAX0404

HDMI Matrix - 4 x Inputs / 4 x Outputs with RS485 Control



Introducing HDMI-MAX0404, a compact, intelligent 4-input, 4-output HDMI video matrix designed to transform the way video sources are managed and distributed aboard modern vessels.

The HDMI-MAX0404 enables users to connect up to four independent HDMI video sources and intelligently route any input to any of its four HDMI outputs, providing exceptional flexibility in how video is displayed, shared and controlled throughout a vessel

The HDMI-MAX0404 provides an elegant solution, effectively turning a single HDMI input on a compatible chartplotter into a gateway to multiple video sources.
By connecting up to four HDMI devices to the matrix, operators can select which source is displayed on their chartplotter without the need to physically disconnect or reconnect cables.

This opens up a wealth of possibilities, including the ability to display live camera footage, video recorder outputs, laptop screens and even navigation information from chartplotters manufactured by other brands, all through a single HDMI connection..

At the heart of the HDMI-MAX0404 is its integration with IrisControl, Iris Innovations' camera and video management application for marine multifunction displays.
Compatible with supported Garmin, Navico, Raymarine and Furuno chartplotter platforms, IrisControl allows operators to manage video switching directly from their chartplotter interface, providing intuitive control without the need for additional switching panels or dedicated hardware controllers.
Using the IrisControl application, operators can select the desired video source and direct it to any of the matrix's four HDMI outputs, making video management simple, convenient and accessible directly from the helm.

Key Features & Applications:

- HDMI Cross Point Video Matrix - 4x Inputs / 4x Outputs
- Manage Video on Your MFD's and TV
- Controlled via IrisControl App & RS485 Serial Data
- Uses Iris's Monitor Switching Protocol
- Compaible with Garmin OneHelm, Raymarine Lighthouse, Navico Apps and Furuno Apps via CMAC
- Compact Rugged Formfactor
- Low Power 12VDC Operation
- Supports 4K HDMI Video Resolution @ 60Hz
- Low Cost & Easy Plug & Play Installation

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IRIS-PoE1v2

Single Channel Power over Ethernet (PoE) Injector



Key Features:

- Compact, Easy-Install design
- Wide Input Voltage Range of 10~36VDC
- Perfect for Boats and Vehicles
- 15W Power Budget
- IEEE802.3af Compliantl
- Plug and Play Operation - No Configuration required
- 48VDC PoE Output Voltage to your Device
- Provides Power to Devices up to 100m Cable Length
- EN60945
- Simplifies Installations

IRIS PoE4v2	Specification
Weight & Dimensions	0.210Kg / 94 x 74 x 34mm
Material	Formed Steel Enclosure, Hard Black Anodised
PoE Ports / Standard	1 x Input / 1 x IEEE80s.3af Output 48VDC Gigabit Ethernet
Total PoE Budget	15W
Maximum Cable Length	100 Meters
Approvals / Standards	CE, UKCA, FCC, IC, REACH, RoHS, WEEE / EN IEC 62368:12020+A11:2020 EN60945:2002 Section 9&10 / IEEE802.3af
Input Voltage Range	6 ~ 36VDC
Output Voltage	48VDC
Power Consumption	Max 16.8W
Environmental	IP30 - Install in a Dry Dust Free Environment. Do not expose to moisture

The PoE-1v2 Power over Ethernet Injector from Iris Innovations is a small form factor, plug and play device designed specifically for battery powered applications such as boats and vehicles.

Simply connect the input side of the injector to your network with a CAT5 cable, the output side to your PoE camera or device and power the unit from your battery supply.

Operating over a wide DC input voltage range of +10 ~ +36VDC, the unit facilitates operation of your device even when the batteries are getting low or there is unstable voltage.

Conforming to IEEE802.3af, the injector negotiates with the PoE circuit in your device to establish the required power budget and connections. The PoE-1 supplies an output voltage of 48VDC which is then stepped down as required by your camera or device.

The PoE1 simplifies your install as only a single network cable is required to connect and power your devices, reducing cost and adding convenience.

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IRIS-PoE01W

IP68 / Rugged Single Channel Power over Ethernet (PoE) Injector



Key Features:

- Compact, Easy-Install design
- Wide Input Voltage Range of 12~57VDC
- Perfect for Boats and Vehicles
- 90W Max Power Budget
- IEEE802.3af/at/bt Compliant
- Plug and Play Operation - No Configuration required
- 48VDC PoE Output Voltage to your Device
- Provides Power to Devices up to 100m Cable Length
- IP67 Waterproof, Rugged Case
- Simplifies Installations

IRIS PoE4v2	Specification
Weight & Dimensions	0.144Kg / 92 x 84 x 38mm
Material	Cast, Sealed Metal Case for IP67 Cable Entry Glands
PoE Ports / Standard	1 x Input / 1 x IEEE80s.3af/at/bt Output 48VDC Gigabit Ethernet
Total PoE Budget	90W
Maximum Cable Length	100 Meters
Approvals / Standards	CE, UKCA, FCC, IC, REACH, RoHS, WEEE / EN IEC 62368:12020+A11:2020 EN60945:2002 Section 9&10 / IEEE802.3af/at/bt
Input Voltage Range	12 ~ 57VDC
Output Voltage	48VDC
Power Consumption	Max 16.8W
Environmental	EN60529 IP67

Power your Photon camera and other Iris devices with our rugged PoE01W Power over Ethernet (PoE) injector built for harsh environments and perfect for battery powered applications such as boats, vehicles and solar projects.

Using PoE simplifies installations and reduces costs, as only a single network cable is needed to connect and power your device.

Waterproof (IP67), single channel PoE injector with wide DC input voltage range (+12 ~ +57VDC) and 90W Max output power budget.

Conforms to IEEE-802.3af/at/bt standards.er your Photon camera and other Iris devices with our rugged PoE01W Power over Ethernet (PoE) injector built for harsh environments and perfect for battery powered applications such as boats, vehicles and solar projects.

Using PoE simplifies installations and reduces costs, as only a single network cable is needed to connect and power your device.

Waterproof (IP67), single channel PoE injector with wide DC input voltage range (+12 ~ +57VDC) and 90W Max output power budget.

Conforms to IEEE-802.3af/at/bt standards.

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IRIS-PoE4v2

Power over Ethernet (PoE) Switch / 4 Ports + Uplink





Key Features:

- Compact and Robust Housing
- Wide Input Voltage Range of 9~30VDC
- Perfect for Boats and Vehicles
- 60W Power Budget
- IEEE802.3af / 3at Compliant
- Up to 30W per channel
- Plug and Play Operation - No Configuration required
- 48VDC PoE Output Voltage to your Devices
- Provides Power to Devices up to 100m Cable Length
- Simplifies Installations

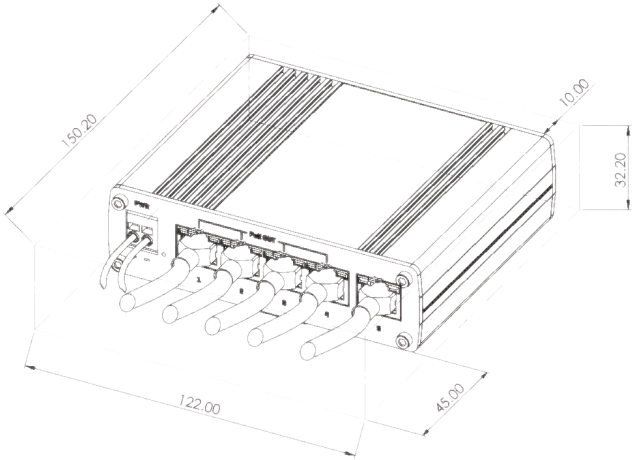
IRIS PoE4v2	Specification
Weight & Dimensions	0.350Kg / 115mm x 32mm x 95mm
Material	Aluminium, Soft Anodised
PoE Ports / Standard	Ports 1~4 IEEE802.3af / 802.3at + 1 Uplink Port (non PoE)
Total PoE Budget	60W accross 4 PoE Ports
Maximum Cable Length	100 Meters
Approvals / Standards	CE, UKCA, FCC, IC, REACH, RoHS, WEEE / EN IEC 62368:12020+A11:2020 EN60945:2002 Section 9&10
Input Voltage Range	9 ~ 30VDC
Output Voltage	48VDC
Power Consumption	Idle: 0.8W / Max: 2.2W / PoE Max: 106W
Environmental	IP30 - Install in a Dry Dust Free Environment. Do not expose to moisture

The new PoE4v2 from Iris Innovations is a four channel plus uplink Power over Ethernet switch which operates over a wide DC input voltage range of 9~30VDC making it perfect for powering IEEE802.3af/3at devices from battery sources such as boats and vehicles.

The PoE4v2 outputs 48VDC to your PoE device with a power budget of 60W in total and up to 30W per port, providing power to up to 4 devices at 15W each, 2 devices at 30W each or 1 device at 30W and a further 2 devices at 15W.

The unit features a passive uplink port to enable connection to other network switch equipment, routers or modems.

The PoE4v2 simplifies your install as only a single network cable is required to connect and power your devices, reducing cost and adding convenience.



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IRIS996

Multi Format IP/CVB/TVI, CVI, AHD CCTV TESTER





Key Features:

- Test CVBS, AHD, HD-TVI & HD-CVI Analogue Formats
- Test IP Cameras
- 7” Responsive Touch Screen
- Android Operating System
- Built-In SD Card Recorder
- Battery Powered with +12VDC Output
- Built in Flash Light
- Auto-Sensing PAL / NTSC Formats
- HDMI Video Input and Output
- RS485 Serial Data (Multi Protocol) for PTZ Control
- Supplied with all necessary cables in Hard Clam-Shell Case

Applications:

- Fault-Finding & Testing CCTV Systems
- Commissioning New CCTV Installations
- Checking and Confirming Lens / Focus
- Recording Footage for Analysis and to Show Clients
- Power Devices in-situ
- USe Colour Bar Generator to Test Third Party Displays
- Discovering and Configuring IP Camera

The IRIS996 CCTV Tester is the essential tool for IRIS dealers and anyone installaing CCTV cameras - be they analogue, AHD or IP.

Featuring a 7” high bright touchscreen, the unit hosts an intuitive touch controlled interface designed to provide configuration, commissioning and fault finding features for all types of CCTV cameras (analogue CVBS, AHD, TVI, CVI and IP cameras). There is also an HDMI input and colour bar generator for testing external monitors, recorders and switchers.

Powered by a rechargable Lithium Ion battery for maximum portability, the IRIS996 features an auxiliary 12VDC output so you can also test cameras locally, powering from and viewing/controlling with the Tester. The IRIS996 features extensive network testing and configuration tools, CAT5 cable tester, and many other essential networking tools. Discover and configure IP addresses, set authentication and test network speeds.

Use the tester with analogue of analogue HD formats such as AHD, HD-TVI and HD-CVI to check video formats. The unit also auto-senses PAL and NTSC video formats.

As well as testing and recording video inputs, the IRIS996 also features a multi-protocol RS485 serial data port to drive PTZ cameras. Many of the industries most common protocols are supported, including Pelco D and its possible to congure parameters such as baud rate and data parity. IP PTZs can also be controlled via the touch screen interface.
As the IRIS996 also boasts a built in SD card recorder, its also possible to record video footage for analysis and to show your clients.
Supplied in a handy clam-shell case, the IRIS996 and its cables and accessories pack down conveniently into a hard wearing and compact package making it the perfect tool to assist you on your installation.

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