

1. SeeSeaTV Camera Systems
 2. Thermal Imaging & Pan/Tilt/Zoom Cameras
 3. Scubar Video Inspection Systems
-



SeeSeaTV™

On Board Camera Systems, Video Switchers & Digital Recorders

Everything You Need for Safety, Security and Peace of Mind at Sea

2010 has been an extremely busy time for Iris Innovations. Advances in Thermal imaging technology have enabled us to launch our fantastic new IM-PTZ-16t Thermal Imaging camera only a couple of months after we introduced the amazing feature rich and compact IM-PTZ-16 controllable marine PTZ camera. You can learn more about these superb additions to our range in the second of our three brand new brochures.

We've also gone all out to introduce new additions to the ever popular SeeSeaTV™ range of marine camera systems.

Mindful that the look of the product in the luxury marine market is as important as it's performance, we've introduced a new range of finishes to our IM-DND-55 and IM-DND-60 cameras so they can be installed anywhere on board without standing out. Check out the new Carbon Fibre and Walnut finish in the product shots below and on page 3.

We've also added a couple of new dedicated monitors to the range. The IM-MON-05 and IM-MON-Q7 are extremely tough, waterproof to IP68 standards and feature multiple inputs - the IM-MON-05 displays up to 3 cameras whereas the IM-MON-Q7 not only has 4 camera inputs but also acts as a fully functional Video Quad Switcher!

Finally, we've also introduced a NEW 8 channel version of our extremely popular and feature rich Digital Video Recorder. The IM-DVR-08P, as the model name suggests, accepts up to 8 camera inputs - all in the same compact 1 DIN housing as it's little brother, the IM-DVR-04P. These devices are immensely powerful and allow control of PTZ cameras, remote connectivity, up to 40 days recording and many many more features.

Finally, don't forget to read through the other 2 brochures in this 3 part series. Part 2 covers our amazing new PTZ and Thermal Imaging Cameras and Part 3 covers our award winning Scubar submersible video inspection systems.

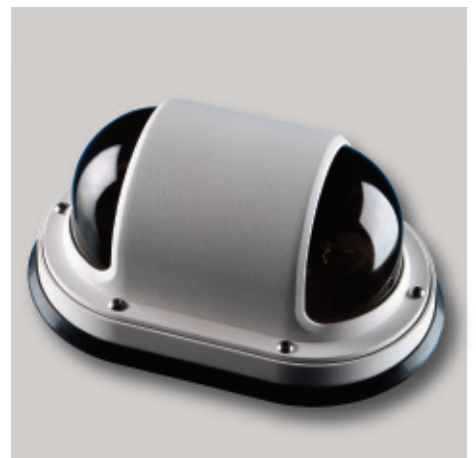
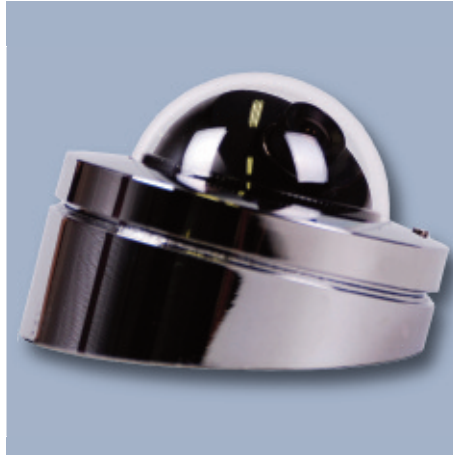


The New DND-60 Family! With Walnut and Carbon Fibre Effect Finishes. Just one of the Iris's new product introductions.

Cameras

Fixed Domes, Varifocal Domes and Engine Room Cameras

For Docking, Security, Engine Room Monitors and General Safety



TOP: IM-DND-60 Classic Mini-Dome.

MIDDLE: NEW! DND-60 Mini-Dome with Carbon Fibre Effect Finish.

BOTTOM: NEW! DND-60 Mini-Dome with Walnut Wood Effect Finish.

TOP: DND-55 Fixed Dome in High Chrome Finish with Wedge Fitting.

MIDDLE: GPC-20 Multi-Use Camera

BOTTOM: ERC-02 Engine Room Camera.

TOP: NEW! DND-55 Fixed Dome with Walnut Wood effect Bezel.

MIDDLE: DND-80 Vari-Focal Dome

BOTTOM: DCS-01 Dual Camera with 2 x Camera Module.

Cameras

Fixed and Varifocal Domes, Engine Room and WiFi Cameras

For Docking, Security, Engine Room Monitors and General Safety

All Cameras available in PAL or NTSC Video Format and with Standard or Mirror Image. Cameras shipped with 3.6mm Lens unless stated. Alternative Lens Options Available upon Request.

IM-DND-60 Miniature Day / Night Dome Camera

The best selling IM-DND-60 minidome measures only 6cm in diameter and 6cm high. It's solid cup and ball style fixing mechanism make it an ideal choice for many applications. Because it's so small and elegant the DND-60 can be used as a docking camera, engine room camera, saloon camera to name but a few applications. Now available in Carbon Fibre effect and Walnut Wood effect finish, the IM-DND-60 is a reliable, stylish all round performer. IP66, 6 x Automatic IR LED's (max 10 meter IR range). 480 TVL Resolution.

IM-DND-55 Miniature Day / Night Dome Camera

The IM-DND-55 is a truly stylish camera which blends in beautifully with the graceful lines of radar arches, overhead cockpits and freeboards. Measuring a mere 82mm in diameter it is easy to overlook the camera and mistake it for a flush mounting light fitting.

6 Built in IR LED's operate automatically when ambient light levels drop providing up to 10 meters visibility in pitch black conditions. Shipped with an optional wedge mounting bracket the IM-DND-55 can be used for a multitude of applications. Now available in Walnut Wood effect finish. IP66.

IM-DND-80 Vari-Focal Day / Night Dome Camera. Mid Range IR Illumination

For applications where greater IR illumination is required, the DND-80 is an immensely powerful option. The big brother to the IM-DND-60, The '80 provides up to 30 meters visibility in the dark, has user configurable vari-focal zoom and focus settings and an ultra high resolution Wide Dynamic Range (WDR) camera module. 625 TVL Resolution, 2.9~12mm Varifocal zoom range, 36 IR LED's, OSD menu options to configure camera controls. IP66 Waterproof Rating

IM-ERC-02 Engine Room Camera

Specifically targeted at Engine Room Safety, the IM-ERC-02 should be placed highly on to any boats manifest. With impressive environmental tolerances, the Stainless Steel housing has an IP68 rating, and a wide operating temperature range. The power and video cable are routed inside the cameras interlocking anti-vibration mounting bracket making for a neater and safer installation. If you suspect something amiss in the engine room avoid the instinct to rush in, possibly introducing fresh oxygen to a fire, and use your IM-ERC-02 to safely monitor the situation. IR LED's (10 meter range) 480 TVL

IM-GPC-20 Multi-Purpose Camera

Similar in look and style to the IM-ERC-02, the IM-GPC-20 has been introduced to the range as a value for money, general purpose solution. Power and video cables run through the fixing bracket, built in IR LED's provide up to 10 meters illumination. IP66 Environmental rating, 480 TVL resolution, Quick and Easy Install and operation.

IM-DCS-01 Dual Camera Unit

Two miniature CCTV camera modules mounted on 3 axis adjustable brackets built into the worlds first purpose build marine docking camera housing. Designed specifically for near 180° coverage, the IM-DCS-01 put Iris Innovations on the map back in 2002 and has been going strong ever since. The IM-DCS-01 is ideally mounted either side of the vessel and the four video signals viewed via a Video Quad Switcher such as the IM-DCS-Q4 to provide near 360° coverage around the vessel. IP66, Toughened UV Stabilized ABS plastic corrosion free housing.

IM-RDC-01 Battery Operated Portable WiFi Camera

The IM-RDC-01 is a portable high resolution day / night camera that transmits it's pictures wirelessly using 2.4ghz WiFi. Powered by a high capacity rechargeable Lithium Ion battery, the camera can simply be suckered into place as and when required using the heavy duty suction bracket supplied. The IM-RDC-01 gets around the need for a multi-camera installation as it can be deployed as and when needed, and safely stowed when not required. Supplied with WiFi video receiver and cables for connection to chart plotter or monitor screen



Switchers & Monitors

Multi-Channel Video Switchers, Quads and TFT Monitors

Video Switchers & Quads to expand the capabilities of your Chart Plotter, and Dedicated TFT Monitors.



IM-DCS-Q4: Video Quad Switcher.

4 Inputs, 2 Outputs. Full Screen, Split Screen, Picture in Picture. Control via IM-KBD-Q4 Keypad (Supplied).

IM-DCS-06: Video Switcher

6 Inputs, 2 Outputs. Full Screen Only. Configurable Auto Sequence Function. Control via IM-KBD-06 (Supplied).



Switcher Keypads: IM-KBD-Q4 / IM-KBD-06

Nobody wants to see bundles of cables cluttering up the helm so Iris Video Switchers and Quads are designed to be installed well out of the way and controlled via very discreet waterproof keypads. For ease of installation, keypads connect to the switchers using CAT5 cables (although these devices are not based on ethernet technology), and keypads can be daisy-chained together to enable control from multiple positions.

The keypads themselves are manufactured from UV stabilized materials and are waterproof to IP66.



IM-MON-07: Dedicated 7" TFT Monitor. (FRONT)

Panel or Bracket Mounting. 2 Video Inputs. Touch Panel Operation. Brightness, Colour, Contrast Controls.



IM-MON-05: Waterproof Monitor (FRONT)

3 Video Inputs. Touch Panel Operation. Panel or Bracket Mount. Fully Waterproof (IP68). Extremely Rugged.

IM-MON-09: Dedicated 9" TFT Monitor. (REAR)

Panel or Bracket Mounting. 2 Video Inputs. Touch Panel Operation. Brightness, Colour, Contrast Controls.

IM-MON-Q7: Video Quad Monitor. (REAR)

4 Inputs. Built-in Quad Switcher. Full Screen, Quad Screen, Picture-in-Picture. Fully Waterproof (IP68).

Digital Video Recorders

Digital Video Recorders/Web Servers & Data Expanders

Turn your On Board Camera Systems into Sophisticated Security Systems with Remote Connectivity Capability.



IM-DVR-04P / 08P

Digital Video Recorder / Embedded Web Server

Protect your boat using Iris Innovation's features packed Digital Video Recorders.

Available as a four channel or eight channel unit, the DVR series from Iris records continuous footage from all cameras, allows you to view footage remotely via the internet or a cellular connection and reports alarm activity from integrated sensors or via a user configurable motion detection system.

The DVR unit has been conveniently designed into a standard 1 DIN casing which simplifies installation and reduces it's footprint. The case features an elegant control panel from which all operation and configuration is achieved. Alternatively control the device via a remote connection.

Amongst the DVR's impressive feature list is the ability to control supported Pan / Tilt / Zoom cameras such as the IM-PTZ-16 using the tactile panel controls. In addition the unit displays up to 4 cameras at a time in a Quad display.

Integrate your vessels security alarms via the 4 analogue inputs on the rear of the unit which can be programmed to operate relay outputs, send emails alerts and many other automated options. Two-way audio also allows you to communicate remotely with people on-board. Especially useful if your visitors are uninvited! The DVR-04 / 08 really is a powerful device.

Video footage and system information is stored on a 250gb hard-drive which is internally mounted on spring mounted shock absorbers to eliminate the vibrations of the vessels engines and rough seas.

As well as a high end security device, the DVR is also a fantastic accessory for recording your days on the water, or even for sports fishing trips! Now you can prove the one that got away really was a monster!

IM-EXP-485-04 / 08 /16

Serial Data Expander: 4 Channel / 16 Channel

A new addition to the Iris Innovations line up, the EXP-485 range of serial data expanders simplify the installation and wiring of devices communicating via the RS485 serial data protocol, such as the phenomenal IM-PTZ-16 Pan Tilt Zoom camera and the IM-PTZ-16t Thermal Imaging Camera.

The EXP-485 also allows multiple controllers to be connected easily reducing wiring and installation costs. Available as a 4 channel, 8 channel or 16 channel unit, our data expanders cater for large and small installations alike.



Accessories & Cables

Cables, Connectors, VDA's, Camera Mounts, Tools.

All the Bits and Bobs you need for the perfect installation!

IM-BRK-xx

Adjustable Surface / Mast Mounting Camera Brackets.

NEW! Adjustable camera mounting brackets from Iris. The perfect method for fixing cameras to masts and on surfaces where flush mounting isn't possible. Manufactured from marine grade stainless and coated aluminium and available for the following cameras in the SeeSeaTV™ range:

- IM-DCS-01
- IM-ERC-02
- IM-GPC-20
- IM-DND-55
- IM-DND-60
- IM-DND-80
- IM-PTZ-16
- IM-PTZ-16t

When ordering replace the xx with the numerical section of the camera part number. For example, IM-BRK-16 if you require the bracket for the IM-PTZ-16 camera.

IM-VDA-01/04

Video Distribution Amplifier

Boost the video signal of your camera or the output of a video switcher with the IM-VDA-01/04 distribution amplifier.

The IM-VDA-01/04 has four outputs meaning you can route a single video signal to up to four separate devices such as chart plotters, TV's or digital recorders.



Cables

Video, Power, Data and Combined Cables

Iris manufacture a range of pre-made video, power, data and combined cables to help make your installation easier and save money.

Cables lengths start at 5 meters and increase in increments of 5 meters up to 50 meters.

Connectors & Tools

BNC Crimps, Power Connectors & Crimp Tools

Iris Innovations stock a complete range of connectors and tools for installing their on board camera products. From BNC crimps, power connectors, RJ45 connectors and their appropriate crimp tools.

Contact your local Iris agent or Iris Innovations directly for more information.

Video Cable	Part Number	Specification
100 Meter Reel RG59 Coaxial 75Ω	IM-CAB-59-100	1vP~P Composite Video
Pre Made Video Cable BNC~BNC Male Connectors	IM-BNC-xx	1vP~P Composite Video
DC Power Cable	Part Number	Specification
100 Meter Reel 0.6mm 2 core Red / Black	IM-CAB-POW-100	12VDC Max 5A
Pre Made Power Cable 2.1mm Jack / Stripped & Tinned	IM-POW-xx	12VDC Max 5A
Serial Data Cable	Part Number	Specification
100 Meter Reel Twisted Pair Data Serial Data Cable	IM-CAB-POW-100	Single Pair Unshielded Twisted
Pre Made Data Cable	IM-DAT-xx	Single Pair Unshielded Twisted
Combined Video / Power Cable	Part Number	Specification
100 Meter Reel RG59 Coax & 0.5mm 2 core red / black	IM-CAB-COMB-100	1vP~P Video / 12VDC Max 5A
Pre Made Combined Power/Video Cable	IM-COMB-xx	1vP~P Video / 12VDC Max 5A
Combined Video/Data/Power Cable	Part Number	Specification
100 Meter Reel Combined Power, Video, Data Cable	IM-CAB-PTZ-100	1vP~P / 12VDC-5A / UTP
Pre Made Combined Power, Video, Data Cable	IM-COMB-PTZ-xx	1vP~P / 12VDC-5A / UTP

DISTRIBUTION

Iris Innovations products are available from the following agents.

United Kingdom

Aztec Marine Limited

Hamble Point Marina, School Lane, Hamble. SO31 4NB. Tel: 02380 455112. www.aztecmarine.co.uk

E-Tech Group

jBoundary Road, Harfreys Industrial Estate. Great Yarmouth NR3 0LY. Tel: 01493 419800. www.etech-group.co.uk

Garmin Europe Ltd

Liberty House, Bulls Copse Road, Houndsdown Business Park. Southampton SO40 9LR. Tel: 02380 524000. www.garmin.co.uk

Landau UK

Unit C Building 9, Swanwick Marina, Swanwick. Hampshire SO31 1ZL. Tel: 01489 577588. www.landauuk.com

Maricom

Firefly House, Hamble Point Marina, Hamble. Hampshire SO31 4JD. Tel: 02380 454263. www.maricom.co.uk

Marine Electronic Installations (MEI)

j15 The Slipway, Port Solent, Portsmouth. Hampshire PO6 4TR. Tel: 02392 326366. www.mei ltd.co.uk

Redbay Boats

Coast Road, Cushendall, Co. Antrim. N.Ireland. BT44 0TE. Tel: 028 217 71331. www.redbayboats.com

Western Electrical

Unit 4~6 Breakwater Road, Plymstock, Plymouth. PL9 7HJ. Tel: 01752 484290. www.western-electrical.co.uk

United States

Seawide Marine Distribution

SE Office. 7137 24th Court East, Sarasota, Florida 34243. Tel: 866 732 9433. www.seawide.com

Win-Tron Electronics

800 Route 71, Spring Lake Heights, NJ 07762. Tel: 732 449 4211. www.wintronelectronics.com

Europe & Rest of the World

SA Pochon

Avenue Michel Crepeau, 17000 La Rochelle. France. Tel: 05 46 41 30 53. www.pochon.com

MAP Marine S.A.R.L

1 Quai de la Grande Bigue, Bat B, 13002, Marseille, France. Tel: 491 075 444. www.map-marine.com

Azimut Electronics

Calle dels Furs, 50 Apdo de correos 17, 46701 Gandia. Spain. Tel: 96 296 51 00. www.azimut.es

Cordland Marine

Kläppavägen 37, 439 51 Asa. Sweden. Tel: 64 94 40. www.cordland.se

Elcombe International LLC

Al Jadaf Shipyard, DY-159, PO Box 1788, Dubai. United Arab Emirates. Tel: 44049100. www.elcombe.ae

Electronic Navigation Ltd.

65 Gaunt Street, Westhaven. PO Box 5849. Auckland 1141. New Zealand. Tel: 9918 5545. www.enl.co.nz

Eletek Technology

Unit 1205 Sunbeam Center, 27 Shing Yip Street, Kwun Tong, Knowloon, Hong Kong. Tel: 8522343 9833. www.eletek.com

Sintech Security Co. Ltd.

A2109 Century Economic and Trade Building. 72, West 3rd Ring Rd. North Haidian District, Beijing, 100048, PRC
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About Thermal

A Brief History of Thermal Imaging Cameras

Background Information, How it works and Applications

Background Thermal Imaging cameras work by processing the infra red radiation (the heat signature) emitted by an object, measured in long wave radio waves, and converting the differences in electrical signals that are received on a specially manufactured sensor, called a microbolometer, into images. Virtually any object that has a heat signature can be seen in total darkness or through adverse conditions such as fog, smoke, rain and snow.

The technology inside today's Thermal Imaging cameras was developed as early as the 1950's for the military. Early cameras, as you can probably imagine, were both big in size and in price. In those days the cameras had to be cooled, usually by a gas such as liquid nitrogen. In addition to these restrictive factors, the technology was highly classified and restricted to the military.

This changed during the early 1970's when the US Military recognised the benefit in equipping soldiers with hand held personal devices. As a direct result, uncooled cameras were developed leading to military declassification and reducing the size of the camera engines and most noticeably, the price!

Now, with cameras being more portable and affordable, markets opened up throughout the emergency services, security industry, manufacturing and of course marine navigation, safety and security.

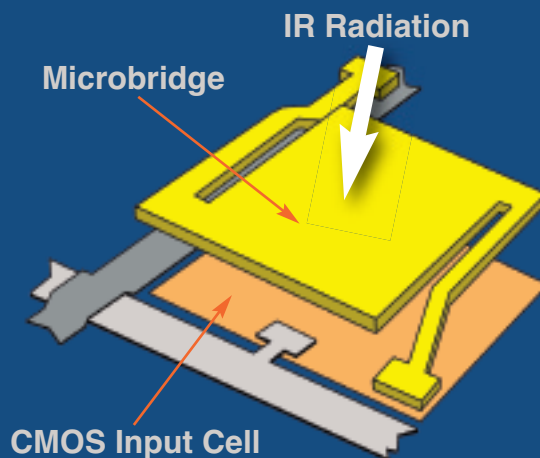
Why Thermal?

The most obvious benefit a Thermal Imaging Camera offers is the ability to see clearly at night and through fog, rain, snow and smoke.

Thermal cameras can also see objects that are much further away than the coverage of a standard Lamp or Infra-Red Illuminator, and not having to worry about separate illuminators means you don't have to worry about running costs and the cost and hassle of replacing bulbs and maintenance. The positive knock-on effect of this is that energy costs and CO2 emissions are reduced.

At sea, the benefits in terms of increased safety are immeasurable. For Man Over Board situations a Thermal Imaging Camera a body in the water is much easier to spot, especially in heavy seas and in bad weather conditions.

How it Works



The Microbolometer is a tiny detector made from Amorphous Silicon which changes temperature as a photon hits it. This in turn effects the electrical resistance which is converted by the CMOS cell into an electrical signal which forms part of the image.

Infrared Radiation is emitted by all objects that have a temperature greater than absolute zero - even inanimate objects that absorb heat from the atmosphere. The amount of IR radiation increases with temperature and it is this radiation that changes the electrical resistance of the microbolometer inside a thermal imaging camera, which in turn, builds up the image 'scene', processed by the camera.

Important Considerations

Because of the sensitive Military implications of the functionality of Thermal Imaging Cameras, importing and exporting certain devices to certain territories is restricted and import licenses may be required. Devices equipped with the lower frequency refresh rate are generally restriction free, but devices fitted with the higher refresh frequency of 25Hz (PAL) / 30Hz (NTSC) may need an import license from the appropriate governmental agency.

For more information contact your Iris Innovations agent or visit www.boat-cameras.com

If you'd like to see the amazing performance of the NEW IM-PTZ-16t Thermal Imaging Camera, sample videos are available to view at the Iris Innovations website: www.boat-cameras.com.

Introducing

IM-PTZ-16t & IM-PTZ-16 Controllable Cameras

Thermal Imaging & Convention Low-Light Cameras

Iris Innovations proudly introduce their New range of Pan Tilt Zoom and Thermal Imaging Cameras, the ultimate Navigational tool and on board Safety aid. Navigation at night and through adverse weather conditions has now become a whole lot easier.

With an emphasis on simplicity, the IM-PTZ-16 Low Light Pan Tilt Zoom camera and IM-PTZ-16t Thermal Imaging Camera have been designed especially to allow boaters to navigate safely and confidently at night or through poor visibility, seeing obstructions, buoys or other vessels. Compatible with all video equipped chart plotters, video images can be viewed in real time at the helm improving overall situational awareness.

Control the cameras locally using the IM-KBD-16 joystick controller (IM-KBD-16t controller with the IM-PTZ-16t Thermal Camera), via a compatible touchscreen chart plotter controller, built-in controls via the IM-DVR-04/08P Digital Video Recorder/Web Server or remotely via an internet or cellular connection.*

The IM-PTZ-16 features an extremely powerful high resolution Day/Night camera module that switches automatically to monochrome in low light conditions for fantastically sharp and clear pictures in near pitch dark conditions and a huge x26 Optical and x10 digital zoom ratio with auto-focus.

The IM-PTZ-16t Thermal Imaging Camera features a British made uncooled thermal imaging engine with an impressive 384 x 288 (total pixels 110,592) pixel high resolution sensor with x2 and x4 digital zoom, various colour modes and 5 contrast settings.

Both versions of the camera are built into the same ultra compact, corrosion proof housing and feature 360° continuous rotation and 205° tilt with auto-flip.



The new IM-PTZ-16 and IM-PTZ-16t cameras are built into an extremely compact housing measuring only 16cm x 13cm.

IM-PTZ-16

Controllable Pan Tilt Zoom Camera

True Day/Night Filter for Extreme Low-Light Operation

Unrivalled The PTZ-16 fully controllable PTZ camera is simply head and shoulders above the competition.

Imagine being able to spot and identify objects several kilometers away. Imagine the ability to detect and follow objects at night in virtually complete darkness!

With the IM-PTZ-16 you can, thanks to an immensely powerful, true Day / Night Sony camera engine, complete with 26x Optical Zoom, 10x Digital Zoom and unrivalled low light processing. Even the faintest ambient light is enough to drive the highly sensitive CCD sensor.

Unlike most PTZ's available, the IM-PTZ-16 packs it's top end features into an ultra-compact 16cm x 13cm, anti-corrosion housing that's been especially designed to withstand the harsh marine conditions as well as complement the stylish aesthetic demanded in luxury marine applications.

Control can be achieved via a number of methods, such as the dedicated IM-KBD-16 Joystick controller, compatible touch-screen chart-plotter devices, the IM-DVR-04P digital video recorder or via a remote cellular or internet connection.

Features

- Extremely Compact Housing Measures 16cm High by 13cm in Diameter
- Waterproof to IP66
- 360 degree Continuous Pan/Tilt -15degree ~ 90degree with Auto Flip
- Operates in Extremely Low Light - 0.01 Lux (Day / Night Operation)
- 26 x Optical Zoom / 12 x Digital Zoom
- Full Weather Proof / Anti Corrosion / Anti Vibration
- Multi-Protocol Telemetry Control
- Cruise, Auto Scan, Pattern Scan
- High Precision Positioning / Stable PTZ
- 100 User definable Preset Memory Positions
- Up to 40 Preset Positions can be used for Auto Cruise Function
- Compatible with IM-DVR-04P for Remote PTZ Control
- Extremely Simple Operation
- Compatible with IM-PTZ-TRK Object Tracking Interface

IM-PTZ-16t

Controllable Pan Tilt Zoom Thermal Imaging Camera

Uncooled Amorphous Silicone Engine

Features

- Extremely Compact Housing Measures 16cm High by 13cm in Diameter
- Waterproof to IP66
- High Resolution 384 x 288 pixels (Total pixels 110, 592)
- 15mm Lens (35° Horizontal Field of View)
- 360 degree Continuous Pan/Tilt -15degree ~ 90degree with Auto Flip
- 5 Viewing Modes: Automatic, Night, Adverse Weather, Docking, MoB
- x2 and x4 Digital Zoom
- Full Weather Proof / Anti Corrosion / Anti Vibration
- Extremely Sensitive Thermal Response - Less than 50mK
- Cruise, Auto Scan, Pattern Scan
- High Precision Positioning / Stable PTZ
- 100 User definable Preset Memory Positions
- Up to 40 Preset Positions can be used for Auto Cruise Function
- Compatible with IM-DVR-04P for Remote PTZ Control
- Extremely Simple Operation
- Compatible with IM-PTZ-TRK Object Tracking Interface



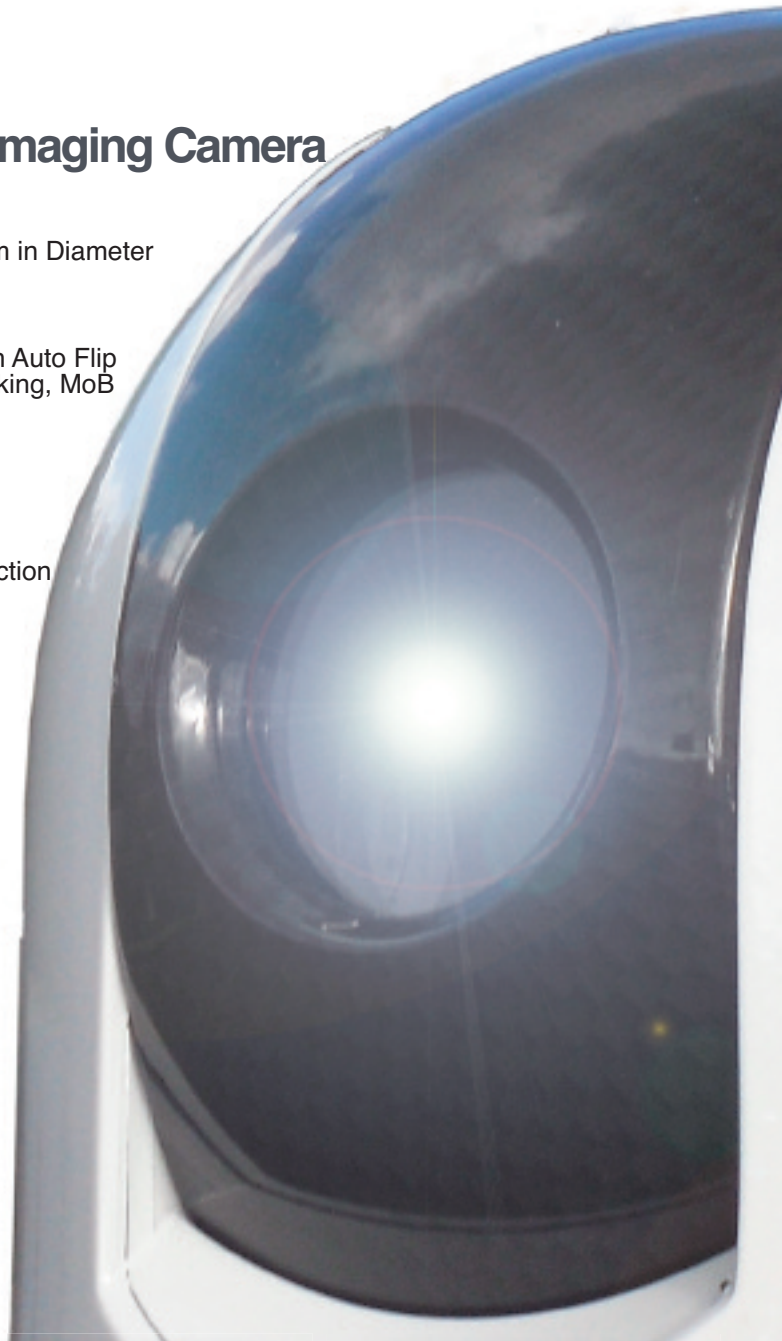
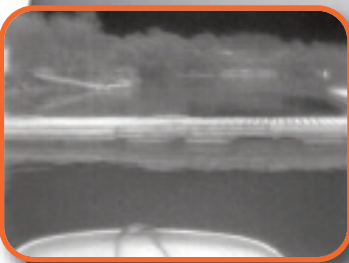
Introducing the IM-PTZ-16t Thermal Imaging PTZ Camera from Iris Innovations. The ultimate navigational aid, safety device and security system all in an extremely compact 16cm x 13cm case.

Control the camera using the KBD-16t joystick controller, compatible touch screen chart plotters or via a remote internet / cellular connection.

The ability to see clearly at night and through all types of adverse weather must be every captain's dream, and now it's not only possible, but affordable with the amazingly compact and feature packed IM-PTZ-16t.

In designing the PTZ-16t we've paid special attention to the look and size of the device, understanding the need to offer boat owners high end technology that fits in with its surroundings and without compromising functionality.

The PTZ-16t boasts a picture resolution 44% greater than its rivals with a considerably fast pan and tilt speed.



Controllers

IM-KBD-16 & IM-KBD-16t Joystick Controllers

Compact, Waterproof Panel Mount Controllers

Each controller station consists of a head unit (as seen above) and a controller box. The controller box acts as a hub into which both the head unit and camera data are connected. Each camera must have its own controller station, although multiple control stations can be used to control a single camera using the IM-EXP-485 serial data expander. The joystick head unit is designed to complement the aesthetic of contemporary, high end control gear and fits in perfectly on any helm station. Connection to the controller box is via a dedicated 2 meter data cable (supplied).

IM-KBD-16

3 Axis Joystick Controller for IM-PTZ-16 Camera.



IM-KBD-16t

3 Axis Joystick Controller with feature keys for IM-PTZ-16t Thermal Imaging Camera.



Specifications

IM-PTZ-16t & IM-PTZ-16 Controllable Cameras

Thermal Imaging & Convention Low-Light Cameras

IM-PTZ-16 PTZ Camera	Dimensions	160(H)mm x 130Ø(D)mm
	Weight	1.2Kg
	Material	Durable, UV Stabilized Rugged Plastic Housing. Aluminum Fixing Plate
	Image Resolution	480 TVL
	Illumination	0.01 Lux / Mechanical Day/Night Colour/Mono Filter
	Video System	PAL / NTSC
	Video Output	1 x BNC Connector / 1vP~P, 75Ω Composite Video
	Lens	f1.6 ~ f3.8 / f = 3.5 ~ 91mm / Auto Focus, Manual Focus
	Camera Module	Sony FCB-EX980
	Picture Effects	E-Flip, Nega Art, Black & White, Mirror Image
	Pan / Tilt Speed	Pan: 0.05~240°/sec ; Tilt: 0.03~160°/sec
	Pan / Tilt Range	Pan: 0~360° Continuous Rotation ; Tilt: -15°~90° with Auto Flip Feature
	White Balance	Auto, Auto-Trace (ATW), Indoor, Outdoor, One-Click Manual Modes
	Gain Control	Auto / Manual (-3~28db, 2db stepping)
	Control Mode	RS485 Serial / Pelco D Protocol
Relative Humidity	5% ~ 90~	
Power	12vdc / 15W Max	
Operating Temperature	-25°C ~ +70°C	

IM-PTZ-16t Thermal Camera	Dimensions	160(H)mm x 130Ø(D)mm
	Weight	1.2Kg
	Material	Durable, UV Stabilized Plastic Housing. Aluminum Fixing Plate. Carbon Effect Body
	Image Resolution	384 x 288 Pixels (Total Pixels: 110,592)
	Thermal Engine	Uncooled Amorphous Silicone (a-Si) Microbolometer Thermal Core
	Video System / Output	PAL / NTSC - 1 x BNC Connector / 1vP~P, 75Ω Composite Video
	Range	Detect @ 375m; Recognise @ 95m; Identify @ 47m
	Lens	15mm Fixed Lens (35° Horizontal Field of View)
	Image Frequency	8.3 or 25 Hz (PAL) / 7.5 or 30Hz (NTSC) / LWIR (Long Range Infra Red)
	Modes	Greyscale, Red-Black, Ironbow, 4 x Selectable Contrast settings
	Pan / Tilt Speed	Pan: 0.05~240°/sec ; Tilt: 0.03~160°/sec
	Pan / Tilt Range	Pan: 0~360° Continuous Rotation ; Tilt: -15°~90° with Auto Flip Feature
	Zoom Control	2 Levels of Digital Zoom, x2 & x4
	Shock / Vibration	MIL-PRF-28800F, Class 2 Sctn 4.5.5.3.1 / MIL-PRF-28800F, Class 2 Sctn 4.5.5.4.1
	Control Mode	RS485 Serial / Iris Protocol
Relative Humidity	5% ~ 90~	
Power	12vdc / 15W Max	
Operating Temperature	-25°C ~ +70°C	

Please Note, Certain Functions are Restricted by the Make and Model of Controller Used to Drive the Camera

DISTRIBUTION

Iris Innovations products are available from the following agents.

United Kingdom

Aztec Marine Limited

Hamble Point Marina, School Lane, Hamble. SO31 4NB. Tel: 02380 455112. www.aztecmarine.co.uk

E-Tech Group

jBoundary Road, Harfreys Industrial Estate. Great Yarmouth NR3 0LY. Tel: 01493 419800. www.etch-group.co.uk

Garmin Europe Ltd

Liberty House, Bulls Copse Road, Houndsdown Business Park. Southampton SO40 9LR. Tel: 02380 524000. www.garmin.co.uk

Landau UK

Unit C Building 9, Swanwick Marina, Swanwick. Hampshire SO31 1ZL. Tel: 01489 577588. www.landauuk.com

Maricom

Firefly House, Hamble Point Marina, Hamble. Hampshire SO31 4JD. Tel: 02380 454263. www.maricom.co.uk

Marine Electronic Installations (MEI)

j15 The Slipway, Port Solent, Portsmouth. Hampshire PO6 4TR. Tel: 02392 326366. www.meiltd.co.uk

Redbay Boats

Coast Road, Cushendall, Co. Antrim. N.Ireland. BT44 0TE. Tel: 028 217 71331. www.redbayboats.com

Western Electrical

Unit 4~6 Breakwater Road, Plymstock, Plymouth. PL9 7HJ. Tel: 01752 484290. www.western-electrical.co.uk

United States

Seawide Marine Distribution

SE Office. 7137 24th Court East, Sarasota, Florida 34243. Tel: 866 732 9433. www.seawide.com

Win-Tron Electronics

800 Route 71, Spring Lake Heights, NJ 07762. Tel: 732 449 4211. www.wintronelectronics.com

Europe & Rest of the World

SA Pochon

Avenue Michel Crepeau, 17000 La Rochelle. France. Tel: 05 46 41 30 53. www.pochon.com

MAP Marine S.A.R.L

1 Quai de la Grande Bigue, Bat B, 13002, Marseille, France. Tel: 491 075 444. www.map-marine.com

Azimut Electronics

Calle dels Furs, 50 Apdo de correos 17, 46701 Gandia. Spain. Tel: 96 296 51 00. www.azimut.es

Cordland Marine

Kläppavägen 37, 439 51 Asa. Sweden. Tel: 64 94 40. www.cordland.se

Elcombe International LLC

Al Jadaf Shipyard, DY-159, PO Box 1788, Dubai. United Arab Emirates. Tel: 44049100. www.elcombe.ae

Electronic Navigation Ltd.

65 Gaunt Street, Westhaven. PO Box 5849. Auckland 1141. New Zealand. Tel: 9918 5545. www.enl.co.nz

Eletek Technology

Unit 1205 Sunbeam Center, 27 Shing Yip Street, Kwun Tong, Knowloon, Hong Kong. Tel: 8522343 9833. www.eletek.com

Sintech Security Co. Ltd.

A2109 Century Economic and Trade Building. 72, West 3rd Ring Rd. North Haidian District, Beijing, 100048, PRC
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email: info@boat-cameras.com
web: www.boat-cameras.com

SCUBAR Video Inspection Systems

1. SeeSeaTV Camera Systems
 2. Thermal Imaging & Pan/Tilt/Zoom Cameras
 3. **Scubar Video Inspection Systems**
-

Introducing

Scubar Video Inspection Systems

Submersible, Portable Search and Inspection Tools.



Since its launch in 2004, Scubar has been used by thousands of professionals, emergency service teams, military personnel and of course boat owners, saving time, money and even helping to save lives.

Continually changing regulation in health and safety laws means that visual inspection tools play an increasingly important part in day to day tasks. Scubar has proved itself to be the tool of choice for marine and aviation engineers, bridge inspectors, maintenance personnel.

Many Police and Fire authorities and marine units around the world are now using Scubar as an immediate way of carrying out first hand searches. Customs officials and Coast Guards check vessels and vehicles for contraband, and the military use Scubars for improvised explosive device searches and to assess damage to vessels where previously dive services, ROV inspections and even lifts would be required.

Scubar has recently been used by disaster response teams in Haiti and Indonesia in collapsed building and sub-surface searches.

Designed originally for boat owners to carry out quick and easy close-hull inspections, Scubar soon became the simplest way to check anode erosion, anti-foul condition, potential damage to running gear and bow thrusters and any other sub-surface issues where cost, health and safety or accessibility is prohibitive.

Available in two system options, with a number of optional accessories, the following features are NEW to 2011 Scubar models:

- NEW Camera Module! Completely encapsulated with an optically clear, salt water and chemical resistant Epoxy Resin.
- NEW 7" TFT Monitor (Scubar-Pro Systems)
- NEW Higher Capacity Batteries
- Toughened Bracketry and Fixtures
- NEW Super-Bright LED Illumination

New for 2011

Scubar Video Inspection Systems

Submersible, Portable Search and Inspection Tools.

IM-SUB-CAM

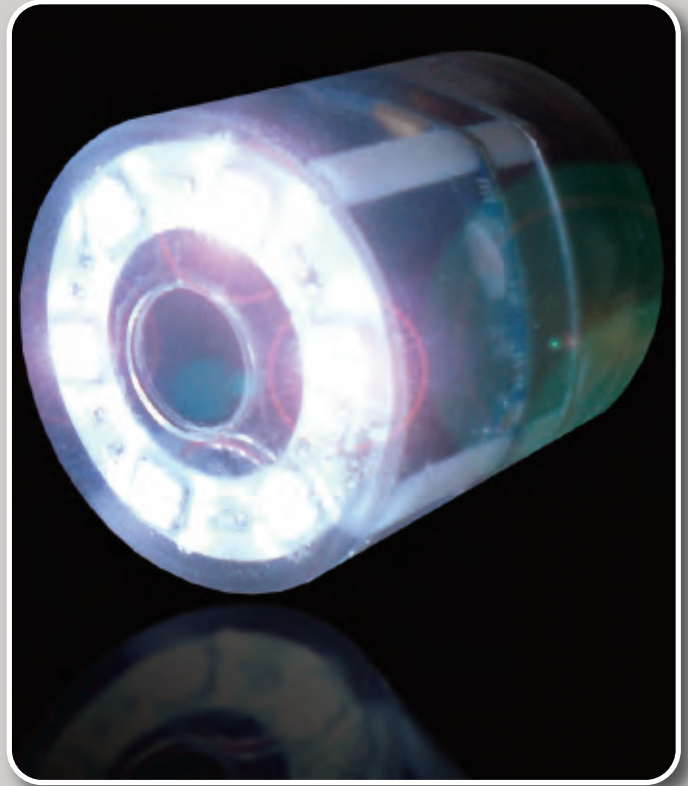
Submersible Camera Module / Ultra-Bright LED's

The new IM-SUB-CAM has been developed to provide improved optical clarity and brightness to Scubar Systems.

A NEW high resolution 520TVL board camera module with Sony CCD provides a sharper image and an amazingly bright 6 piece LED ring cuts through the darkest scene.

The camera head is potted in a water-white optically clear epoxy resin which has been chosen especially for its superb resistance to salt water and chemicals and also eliminates condensation built up. Waterproof to over 300 feet, the camera is available as part of the Scubar Camera Head or separately for bespoke applications.

The IM-SUB-CAM is rugged to the extreme, and provides crystal clear sub-surface vision.



IM-SCU-MON-PRO

Monitor / Battery Unit with Digital Video Recorder

At the heart of the Scubar-Pro system is the IM-SCU-MON-PRO unit, which provides system power through its new higher capacity batteries and houses the monitor and Digital Video Recorder.

NEW for 2011 we've introduced an improved 7" TFT monitor screen which is not only 1.5" larger than the previous model but also considerably brighter. Monitor settings such as brightness, colour and contrast are adjustable via an intuitive on screen menu system and the screen is installed into a toughened metal bezel.

The monitor unit also features a digital battery level meter, and improved recording capabilities. Images and video footage are recorded onto a removable SD card and can be played back directly onto the screen or via a PC.



IM-SCU-01

Standard Scubar System

Originally designed for hull inspections, Scubar incorporates a high resolution colour camera with equipped with a 6.0mm lens and 6 x high bright white LED's, with a spun-fibre telescopic extension pole and a light weight 5.6" TFT monitor.

To carry out fast and easy inspections, surveys or searches, simply plug the camera head into the pole and connect the flexible cable into the monitor pack. Alternatively, the camera head can be connected to the monitor with just a cable providing you with a useful hand-held camera.

The extension pole telescopes between 1.5 ~ 4 meters allowing boat owners and marine professionals the ability to carry out a full inspection without having to have the boat lifted or rely on dive services.

Scubar is used extensively by the military, emergency services, coast guards and many other professional services as well as boat owners and marina operators.

Dimensions	Pole: 1500 Closed, 4073 Open / Camera 630mm Long, 44mm Ø Monitor Case: 300mm x 260mm x 100mm
Material	Pole: Spun Glass Fibre, Polyurethane Grips, ABS Clamps Camera: Black Anodised Aluminium Case, Acetol&316 Stainless Wand Protective Camera Boot: Rubber EPDM 55, Monitor Case: HPX Resin (Storm 2050)
Video System	PAL (NTSC version available as special order)
VideoOutput	1 x BNC 1vP~P / 75Ω Composite Video
Lens	Fixed 6.0mm Standard. Options: 2.9mm, 3.6mm, 6.00mm, 8.00mm
Camera Module	1/3" Sony Super HAD CCD
Total Pixels	752(h) x 582(v)
Scanning Frequency	H: 15.625KHz / V: 50hz
Sensitivity	0.1 lux (f1.4) 0.0 lux when LED's on
Shutter Speed	1/50 ~ 1/10,000 sec
Gain Control	Automatic
Burst	40 IRE
Illumination	6 x White LED
Power	Camera: 12VDC 120mA(LED OFF) / 250mA(LED ON), Monitor Unit: 300mA
Battery Capacity	12VDC / 4Ah
Operating Temperature	-10°C to +60°C
Environmental Protection	Camera, Pole and Extension Cables: IP68
Weight	Camera Head: 400g, Pole: 1.25kg (loaded) / 850g (without camera) Monitor Unit: 0.6kg
Monitor Screen Size	5.6" TFT
Monitor Functions	Factory Set
Connectors	Monitor Case & Extension Pole: Amphenol C Series, Head, Micro Con X IP68





IM-SCU-PRO

Professional Scubar System with DVR

With Scubar being used more extensively by professional organisations comes the need for a more rugged solution as well as the ability to record video footage and still images at the touch of a button. For these applications, the IM-SCU-PRO is the ideal camera system.

Incorporating the same camera and pole combination as the IM-SCU-01 Standard system, the PRO unit features a brand NEW 7" TFT monitor unit housed in a rugged Storm equipment case with built in digital video recording and auxiliary 12VDC operation.

Video footage and stills are recorded directly onto a removable SD card where it can be played back directly onto the monitor or removed for viewing / editing on your PC.

System batteries last up to 4 hours between charges and the unit has been designed with portability in mind so that it packs down into a single hand carryable monitor case and pole bag.

Dimensions	Pole: 1500 Closed, 4073 Open / Camera 630mm Long, 44mm Ø Monitor Case: 300mm x 260mm x 100mm
Material	Pole: Spun Glass Fibre, Polyurethane Grips, ABS Clamps Camera: Black Anodised Aluminium Case, Acetol&316 Stainless Wand Protective Camera Boot: Rubber EPDM 55, Monitor Case: HPX Resin (Storm 2050)
Video System	PAL (NTSC version available as special order)
VideoOutput	1 x BNC 1vP~P / 75Ω Composite Video
Lens	Fixed 6.0mm Standard. Options: 2.9mm, 3.6mm, 6.00mm, 8.00mm
Camera Module	1/3" Sony Super HAD CCD
Total Pixels	752(h) x 582(v)
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Sensitivity	0.1 lux (f1.4) 0.0 lux when LED's on
Shutter Speed	1/50 ~ 1/10,000 sec
Gain Control	Automatic
Burst	40 IRE
Illumination	6 x White LED
Power	Camera: 12VDC 120mA(LED OFF) / 250mA(LED ON), Monitor Unit: 300mA
Battery Capacity	12VDC / 4Ah
Operating Temperature	-10°C to +60°C
Environmental Protection	Camera, Pole and Extension Cables: IP68
Weight	Camera Head: 400g, Pole: 1.25kg (loaded) / 850g (without camera) Monitor Unit: 1.5kg
Monitor Screen Size	7" TFT / 9" TFT version available as special order
Monitor Functions	ON / OFF / Brightness / Colour
Recording (SD MEDIA)	24kb/s @ 2gb SD = up to 23 Hours 69kb/s @ 2gb SD = up to 8 Hours 160kb/s @ 2gb SD = up to 3.5 Hours
Frame Rate	1, 2, 3, 4, 5, 13, 25 Frames Per Second
Resolution Settings	320 x 240, 720 x 480, 1280 x 720
Operation	13 x Tactile Membrane Keys for Monitor and DVR Controls
Connectors	Monitor Case & Extension Pole: Amphenol C Series, Head, Micro Con X IP68
Battery Level Meter	Curtis 906 Digital LED

Accessories

Scubar Video Inspection Systems

Submersible, Portable Search and Inspection Tools.

IM-SCU-LED Camera / Illuminator

Although the IM-SCU-CAM Scubar Head features 6 Bright White LED's to light the way, sometimes conditions dictate that more light is required on the scene. The IM-SCU-LED Camera Head features two adjustable arms, the first with the standard 6mm Camera Module, and the second with a dedicated LED module which bombards the scene with white light.



IM-SCU-MAG Camera / Magnet

Initially developed for the Police, the IM-SCU-MAG camera head incorporates a second arm onto which is fitted a compact, powerful magnet which can haul up to 6kg underwater. The IM-SCU-MAG is extremely popular with police authorities for retrieving discarded evidence, and by marine engineers who've had experience of dropping tools overboard!

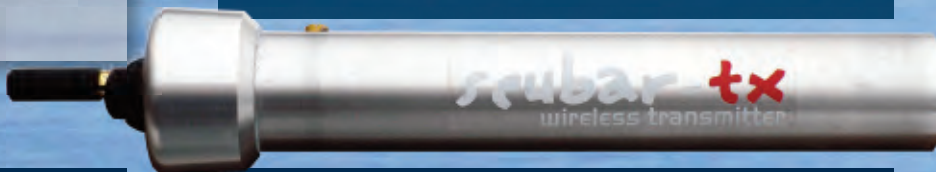


IM-SCU-SF Wireless Scubar Kit

Principally designed for Sports Fisherman who need to capture those, 'Special Moments' when the fish of a lifetime is hooked by the boat and fighting for it's life. Scubar-SF enables you to plunge the waterproof hi-res colour video camera directly in the fish's face and record him growl, capturing your memory on digital media and wirelessly transmitting video for all to see. The system incorporates a 520 TVL camera on a flexible neck that connects into a spun fibre telescopic pole, which in turn features a built in battery unit and video transmitter. Images are beamed back to a receiver unit mounted at the helm and displayed on your chart plotter, TV or dedicated video monitor. The system can be maximized by incorporating our new IM-DVR-04P Digital Video Recorder so you'll never again have to convince your friends, colleagues and family of The One That Got Away!

With new conservation regulations changing the face of Sports Fishing forever, Scubar-SF can also be used as a vital tool for recording Tag and Release catches, providing first hand video evidence of your catches and activity.

Scubar-SF is shipped with a high resolution camera head, 1.5~4 meter telescopic extension pole, Video Transmitter/Battery Cannister, Video Receiver and connection cable. A variety of alternative poles and camera heads are also available as accessories.



IM-SCU-BIC Mini Inspection Camera

For those situations where size matters, the IM-SCU-BIC features an extremely small 12mm CCD camera head, with built in LED's, a 750mm long fully adjustable waterproof neck and a lightweight easy grip handle. Compatible with all Scubar and Iris camera products, the IM-SCU-BIC is an essential tool for marine engineers, mechanics, Police search teams and emergency services.



SCUBAR ACCESSORIES

Auxiliary Long-Life Battery Box	IM-SCU-BAT-BOX	12vdc / 7Ah
Extension Cable Caddy	IM-SCU-CAB-EXT	50 Meters
Full Size 3 Section Long Reach Extension Pole	IM-SCU-10MP	3 ~ 10 Meters
Compact 9 Section Long Reach Extension pole	IM-SCU-C10MP	1.5 ~ 10 Meters
Vehicle Charger	IM-SCU-CAR-CHG	12vdc Lighter Plug
Scubar-SF Panel Mounting Kit (inc. Cable)	IM-SCU-SF-PMK	3m Cable & Bezel

REPLACEMENT PARTS

Scubar Cable Set	IM-SCU-CAB	-
Scubar-Pro Cable Set	IM-SCU-CAB-PRO	-
Scubar Pole Bag	IM-SCU-BAG-P	-
3 Meter Scubar Pole Bag	IM-SCU-BAG-10P	-
Mains Battery Charger	IM-SCU-CHG-XX	XX = UK, US, EU
Scubar Battery Set	IM-SCU-BAT	2 x 6vdc SLA
SD Digital Media Storage Card	IM-SCU-SDC-XX	XX = 2gb, 4gb, 8gb

Scubar in Use...

Examples of how Scubar is deployed in many applications.

The photographs below are genuine examples of Scubar in use in real applications. From Top Left: Dutch Coastguard checking for contraband, Drain Inspection by local authority, Police Dive Unit, Fire & Rescue Authority looking into submerged vehicle, Fire Training at Disaster City Texas and Boat Scrubber Ltd. carrying out maintenance.



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j15 The Slipway, Port Solent, Portsmouth. Hampshire PO6 4TR. Tel: 02392 326366. www.mei ltd.co.uk

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Western Electrical

Unit 4~6 Breakwater Road, Plymstock, Plymouth. PL9 7HJ. Tel: 01752 484290. www.western-electrical.co.uk

United States & Canada

Ocean Systems Inc

3901 Smith Avenue, Everett, WA. Tel: 800 355 4234. www.splashcam.com

Win-Tron Electronics

800 Route 71, Spring Lake Heights, NJ 07762. Tel: 732 449 4211. www.wintronelectronics.com

CMC Electronics / Esterline Co.

3600B Laird Road, Unit 12, Mississauga, ON, Canada L51 6A7. Tel: 905 607 4262. www.CMCElectronics.ca

Europe & Rest of the World

SA Pochon

Avenue Michel Crepeau, 17000 La Rochelle. France. Tel: 05 46 41 30 53. www.pochon.com

MAP Marine S.A.R.L

1 Quai de la Grande Bigue, Bat B, 13002, Marseille, France. Tel: 491 075 444. www.map-marine.com

Azimut Electronics

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Cordland Marine

Kläppavägen 37, 439 51 Asa. Sweden. Tel: 64 94 40. www.cordland.se

Elcombe International LLC

Al Jadaf Shipyard, DY-159, PO Box 1788, Dubai. United Arab Emirates. Tel: 44049100. www.elcombe.ae

Electronic Navigation Ltd.

65 Gaunt Street, Westhaven. PO Box 5849. Auckland 1141. New Zealand. Tel: 9918 5545. www.enl.co.nz

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