

# Integrated multimedia communications systems for marine and offshore markets



*Powering Business Worldwide*



# Hazardous Area Communications

MEDC Oxalis IMCOS™ Sonix™ HERNIS™ Yuhua FHF

Eaton's Crouse-Hinds series hazardous area communications solutions are a comprehensive product suite for potentially explosive atmospheres, bringing together specialised products and systems solutions with trusted names such as MEDC, FHF, HERNIS™, Gitiessie and Oxalis. These products for harsh and hazardous environments bring together a range of world class specialist products and solutions for both safety and security in the fire & gas, telecommunications , PAGA and CCTV markets.

The marine and offshore industry relies on Eaton's highly respected MEDC range of signaling, alarms and loudspeakers. Designed harsh industrial and marine environments, Eaton offers a comprehensive range of innovative visual and audio notification solutions.

The Oxalis CCTV camera stations are specifically designed for use in the demanding marine and other extreme environments and use leading edge technology such as full High Definition (HD) over IP technology.

IMCOS™, Integrated Multimedia Communication System is tailor-made for your requirements. IMCOS™ is a world-class brand in the marine and offshore industries offering integrated solutions for internal communications and the distribution of alarms and signals.

HERNIS™ is a world leading product range for high quality, durable and low maintenance Closed Circuit Television Systems (CCTV) for the marine and harsh environment industries. Designed for the extreme, our systems perform safely and reliably, increasing efficiency and providing safety to both people and equipment.

Eaton offers a range of products and systems including the high integrity, fully monitored and highly efficient Sonix™ Public Address General Alarm (PAGA) system which in conjunction with the MEDC range of loudspeakers, flashing beacon and FHF telephones provides the most efficient and effective PAGA solution available.

Engineers, end users and employees in a wide range of industries rely on the innovative FHF range. Decades of experience in the fields of industrial communication and signaling backed up with the continuous drive for improvement and innovation, lead to products which are considered as best in class.



# Eaton communications solutions

Eaton provides a comprehensive range of high integrity communications solutions using reliable proven technology. This includes the Gitiessie integrated media communications system, IMCOS™ and the MEDC Sonix™ public address & general alarm system (PAGA)

IMCOS™ is an integrated media, communications, surveillance and data network package that combines several different but complementary systems to provide a high integrity single cohesive solution.

An IMCOS™ solution is custom designed, integrated and configured to meet the specification of the most demanding projects whilst optimising the ease of operation and therefore overall efficiency of the various systems.

With IMCOS™ being a high integrity solution there are options for certain aspects of the life safety systems to have optional redundancy built into the systems depending on the projects requirements. This comprehensive integrated systems solution has many advantages in terms of consolidation of equipment components into the same equipment racks therefore saving space, minimising systems interconnecting, interfacing and cabling installation.

There are major operational benefits with regard to the ease of both the up keep and maintenance scheduling as the vessel operator only needs to communicate with a single company to maintain IMCOS™

IMCOS™ is the optimum systems integrated solution for both offshore and Marine installations alike where system integrity, reliability, safety and security are paramount. The system has a comprehensive range of different type approvals depending on the system design, architecture and registration requirements.



Sonix™ public address & general alarm system (PAGA) is a dedicated high integrity PAGA system that uses proven and reliable technology for optimised design and has a range of innovative operational features to optimise operation and configuration.

The Sonix™ system can be custom designed and configured to meet industry mandatory requirements for fully duplicated and redundant systems. Use of compact 1U system components optimises rack capacity and therefore reducing equipment footprint in restricted areas where space is at a premium.

Sonix™ utilises a innovative power amplifier with patented technology for high efficiency and compact design. Additionally, Sonix™ uses a unique simplistic plug and play duplicated component interconnection architecture and is fully monitored for reliability and robust operation.

The system is also designed to interface with various external systems such as the PABX telephone system, fire and gas detection system and other shut down systems. Sonix™ is Type approved to ABS, BV, and DNV with UL and CSA pending.

The use of MEDC loudspeakers, sounders, flashing beacons, telephone handsets and the UPS enhances both the IMCOS™ and Sonix™ system solutions.

# IMCOS™

## Integrated multimedia communication system

IMCOS™ is an integrated communication solution for the worldwide Marine and Offshore markets.

The capacity of IMCOS™ to fully integrate all internal communication needs with a customised and tailored configuration for each individual project has meant it is the system of choice for a wide range of applications such as:

- Public Address & General alarm systems
- Intercom systems
- Closed circuit television surveillance
- Telecommunications
- Local area networks
- Entertainment systems
- Visual and audible signalling
- Audio visual status columns
- Visual Information systems

These are the fundamental aspects of the IMCOS™ capabilities. Each solution can be configured with a fail-safe philosophy and each section is governed by redundant processors, controlling and monitoring the overall system performances. Depending on the required application, IMCOS™ can be designed to include a range of products with specifications and certifications to suit your industry's needs.

IMCOS™ customised cabinets are designed in house with an exclusive patent design, allowing easy access to the interior without having to remove any of the components. This design not only allows easy access for installation and maintenance but is also available in light alloy, offering a weight saving of up to 66%. IMCOS™ is available with a comprehensive range of Type Approvals depending on the requirements of the project specification.



One solution  
One manufacturer





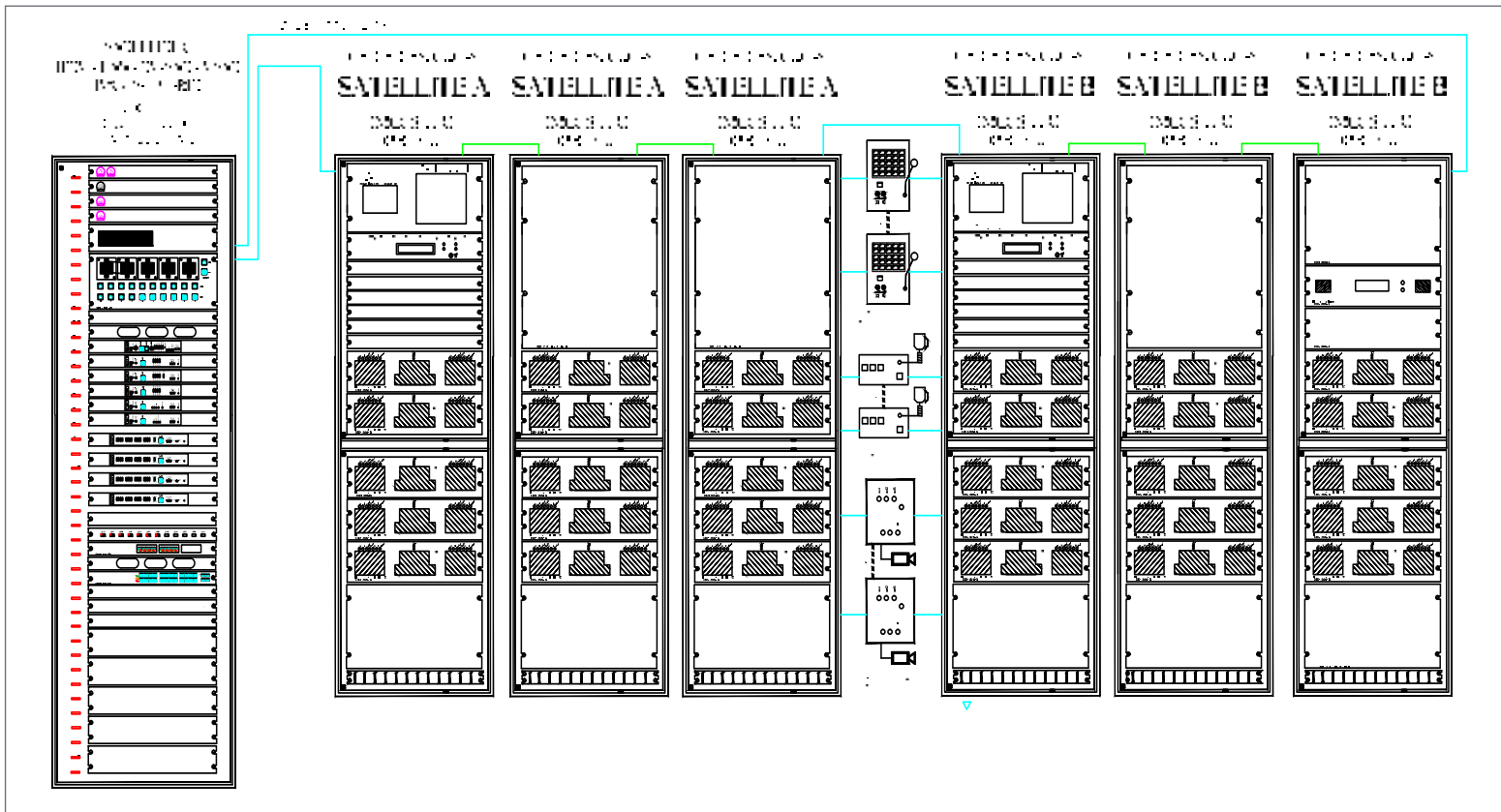
## Marine

Gitiessie with its IMCOS™, Integrated Multimedia Communications System offers bespoke solutions perfectly suited for most type of marine vessels, cruise ships, cargo vessels, tankers, barges, offshore support vessels and even naval vessels.

The various different systems that contribute to the IMCOS solution are manufactured to exacting standards and have a proven track record in continuous operation within the most demanding environments both above and below decks.

With extensive knowledge and experience in the marine communications industry, Gitiessie fully understands customers' needs and technical specifications to provide an integrated multimedia communications solution which fully meets the needs of both operational requirements and specific mandatory type approval of the marine industry.

### Typical marine duplicated IMCOS solution with entertainment rack





# IMCOS™ communications system



## CCTV cameras and systems

Eaton deliver unrivaled quality and performance in CCTV systems for both hazardous and non hazardous applications



## Fire & Gas detection field equipment

Eaton can provide a wide range of audio, visual and MCP / ESD pushbuttons for fire and gas detection systems for hazardous areas



## Loudspeakers

A complete range of ceiling speakers and surface mount loudspeakers for both hazardous and non hazardous applications



## Power amplifiers

Type approved amplifiers for public address and general alarm systems



## Telephones

A full range of automatic and powered telephones available in both hazardous and non hazardous models including VoIP



## Cable glands, adaptors and reducers

A large range of connection equipment is available from Eaton market leading brands. Cable glands, adaptors, reducers, blanking plugs & breather drains



## Control & connection

Terminal boxes, connection boxes and local control stations. Eaton has a complete range in 4 materials. GRP, stainless steel, cast aluminum & cast iron for hazardous areas



Digital IMCOS™ cabinet

# n application



## Public Address and General Alarm for critical applications

Gitiessie provides systems for public address and general alarm, providing life safety announcements and general messaging facilities



## Status signal lights

Status lights in multiple permutations and materials for applications requiring multiple color warning systems



## IMCOS™ master clocks

Microprocessor master clock with full range of slave clocks with fast forward and backward facility



## D.M.B digital storage memory bank

Secure and safe storage of routine and safety alarm messages



## TVSAT

Satellite TV entertainment systems



## Marine UPS

Full range of marine and offshore UPS products, type approved by major classification societies. Hardened mechanical design and vibration protection mechanisms



IMCOS cabinet





# Solutions

## IMCOS™

The system has a comprehensive range of different type approvals depending on the system design architecture or application.



IMCOS™ provides bespoke customised engineered solutions to meet the demanding needs of energy, marine and naval projects. The following applications demonstrate the ability to provide a single integrated solution.

## PA / GA

Designed, engineered and manufactured according to individual project specifications and industry regulations. The system uses the latest in digital technology and can be integrated with a wide range of Eaton products to ensure the integrity of your assets in even the most demanding of environments.

## CCTV

Eaton offer a wide range of HERNIST™ and Oxalis cameras and software applications providing weatherproof, explosion proof and IP cameras, both fixed and PTV solutions, designed for durability and reliability. With our solutions and experience we can fulfil your specification requirements.



## Telecommunications

Whether a traditional analogue, digital, VoIP or Hybrid telephone system is what you require we can provide the solution you need. A wide range of standard, weatherproof, explosion proof and IP phones and signalling equipment guarantees the best solution.

## Local Area Network

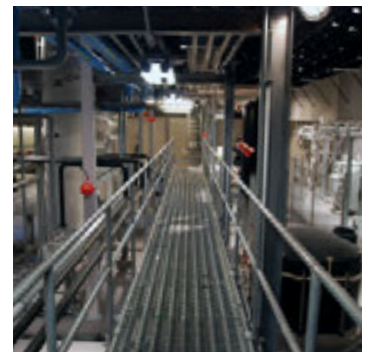
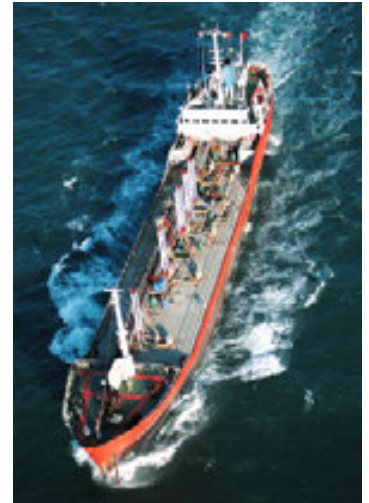
With IMCOS™ and the latest developments in technology, Eaton are able to provide a single network which provides reduced cable architecture. Our LAN systems are able to share a highway of information and resources, interlinking video, voice and data with our VoIP telephones, IPTV streaming, CCTV, PA/GA and Intercom systems through one fibre or copper backbone.

## Signalling and alarms

Eaton have developed a wide range of products specifically designed for harsh environments where there is a risk of explosion for both onshore and offshore applications. This range of products including manual activation, visual and audible alarms, and loud-speakers, can be connected delivering the best combination of performance and safety.

## Entertainment Packages

Simple and effective communication of safety procedures can be transmitted in both routine and emergency situations through TV screens conveniently located within our system. Within our network streaming video and audio capabilities also provide entertainment for the well-being of onsite personnel. This is yet another example of how Eaton aims to provide the best in class for communication and safety solutions.



One solution  
One manufacturer



# Engineering services

Our specialised team is highly qualified to ensure all aspects of engineering, design and configuration within your project are fulfilled - from its initial stages of concept through to its lifetime maintenance



## Acoustic surveys

Stringent reports are undertaken by our professionally trained engineers to ensure optimal speaker coverage. Our reports ensure the best solution is selected from our range of products from the early design stage of the project.

## Engineering

Fully trained engineers construct all of your solution's system design and engineering drawings, guaranteeing all applications comply to the relevant standards before during and after installation.

## Project management

Each project is uniquely managed throughout each stage of its lifecycle from engineering, documentation, factory acceptance test and commissioning. We have the ability to provide you with the necessary support you need worldwide.

## Commissioning

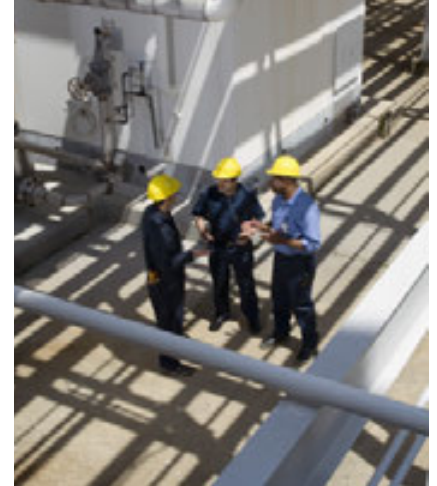
As part of our standard commissioning services we not only arrange factory site acceptance tests but once our solutions are installed, we ensure they are once again subjected to engineering tests to guarantee full, immediate functionality.

## Training

In order to ensure the benefits of our solutions are fully utilised we can provide your team the necessary training for any application. We want your staff to feel competent and confident that our solutions conform to your requirements.

## Technical support

In the case that additional support is required after installation, our Customer Service team is available 24 hours a day for service and onsite technical support to make certain that any issue is resolved effectively and efficiently.



# Hazardous Area Communications

## Loudspeakers

Eaton's range of hazardous, heavy duty, industrial and commercial speakers are designed to meet the requirements for public address, voice alarm (evacuation) and background music



## Visual alarms

Eaton offer a range of beacons and combination units including flashing, steady-state indicators and rotating units. These may be used to warn of potential hazards or indicate the status of plant items, gas and oil leaks, evacuation alerts and many more



## Call points

Manual alarm call points are designed for the purpose of raising an alarm manually once verification of a fire or emergency condition exists, by operating the push button or break glass the alarm signal can be raised



## Camera stations

Eaton leads the way in developing advanced camera-based surveillance systems for marine and oil & gas installations worldwide. Our solutions contribute to increased efficiency and provide safety for people and equipment in hazardous areas and under extreme conditions



## Telephones

Eaton supply a full range of automatic and sound powered telephones suitable for any kind of application: digital with loudspeaker, analogue standard, water proof, EEx proof. Extra audio and optical devices are also available as an option



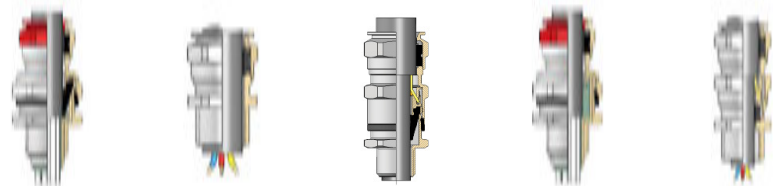
## Control and distribution

Eaton can offer standard and bespoke control and distribution units for harsh and hazardous areas. As a leading manufacturer of hazardous area and explosion proof equipment, Eaton can provide hazardous and safe area control units in a range of dimensions to suit your required specification

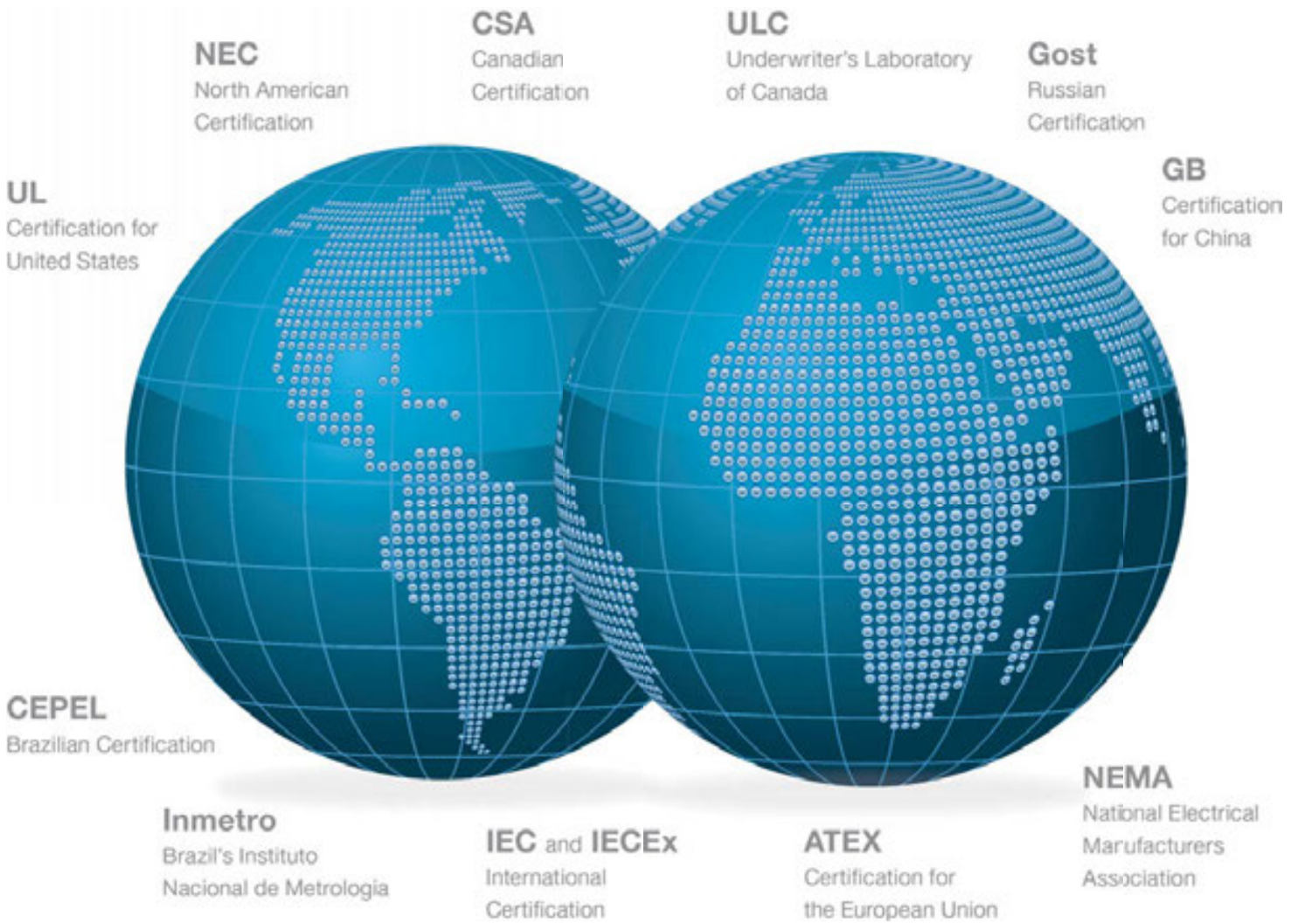


## Cable glands

Complete termination solutions for cable applications which meet international standards. Their ease of cable termination provides labour and time management productivity. Eaton's explosion-protected connections contribute to safe operation in harsh and hazardous environments







## Global certifications and Type Approvals

Eaton HAC offers customers the most competitive, compliant product and service portfolios as a single stop for end-to-end communication solutions for hazardous area communication.

Whether your vessel is a cruise, bulk carrier, fast ferry or support vessel, pumping or refining, we have a comprehensive knowledge of the codes and standards. Our products are built to meet and exceed certifications applicable to locations around the world to ensure the safety of your employees and equipment. The knowledge and expertise we leverage every day to help your operation run smoother and safer lies not in one mind, but in thousands of Eaton employees. We continuously collaborate with customers to ensure that you have the services and support needed to reach optimal performance.





Eaton

# The safety you rely on.

See the complete offering at [www.crouse-hinds.com/hac](http://www.crouse-hinds.com/hac)

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