

Setting the standard with  
safe, reliable, cost effective  
CCTV solutions safeguarding  
people, equipment and the  
environment.



Photo: Øyvind Hagen, Statoil ASA

**Crouse-Hinds**  
by **EATON**





# Safeguarding people, facilities and the environment

HERNIS turnkey CCTV (Closed Circuit Television) solutions are designed to perform safely and reliably under the most extreme corrosive and physically demanding environments.

Clear video images of all critical areas enhance the safety of people and facilities and allows you to find faster solutions to issues that could cause down-time on the site.

HERNIS provides reliable surveillance where safety is key and incidents cost the most!

# CCTV...and so much more

## Buy purpose-fit

HERNIS CCTV provides reliable solutions to key challenges in the marine and oil & gas industry. Our equipment is Ex-proof and resistant to physical stress such as vibration, variation of temperature and humidity including drilling mud and chemicals that is devastating to most CCTV equipment on the market.

Designed for the extreme, our systems perform safely and reliably all over the world meeting international certification standards for technical equipment at sea and on oil & gas installations.

## The reliable choice

Since HERNIS launched our first CCTV package over 30 years ago, our certified range of EX camera stations have become famous for delivering impeccably year after year on oil & gas installations all over the world securing live video in the most extreme harsh and hazardous areas.

## Buy effortlessly

HERNIS' team of professionals offers unique expertise in high-quality CCTV components combined with engineering excellence in system architectures and more than 30 years' experience in project supervision and development with proven results.

We are uniquely qualified to provide end-to-end solutions designed to address the most pressing problems in the marine and oil & gas industry.

You can leave it up to us!

## Buy conveniently

HERNIS is a systems house covering all core business processes generating superior value for our customers. We offer complete CCTV packages addressing the customer's every need including:

- project management
- needs based design
- engineering
- testing
- commissioning
- training
- detailed documentation
- fast and competent systems lifetime support through global service network

As part of the global power management company Eaton, we are able to promote a vast range of products to our customers.

## Buy cost-effectively

HERNIS high quality CCTV systems are characterized by

- low installation costs
- low maintenance costs
- unrivalled durability

Our solutions are preferred by the world's most successful shipping companies and oil & gas operators again and again.



## Certification

While performing safely and reliably all over the world our equipment meets local certification standards for technical equipment at sea and on oil & gas installations.

### DNV Type Approval

HERNIS offer CCTV systems consisting exclusively of components Type Approved according to DNV ship class rules.

The Type Approval is a systematic procedure used to confirm that a product type is in conformity with a set of predefined requirements.

The requirements are based on DNV's Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas Offshore Standards.

The DNV Standard for Certification 2.4 specifies the environmental test specification applicable to all instrumentation and automation equipment. The standard encompasses both EMC (Electro Magnetic Compatibility) and physical environmental testing, such as vibration, temperature and humidity.

### Ex Certification

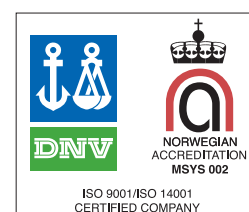
HERNIS has a complete

range of camera stations and monitors for hazardous areas, certified to standard ATEX directive 94/9/EC, IECEx, US NEC 500, INMETRO, GOST and CSA.

### Environmental Certification

HERNIS is proud to be an active contributor to the protection of the environment. Our environmental management system is certified according to ISO 14001:2004. We aim to assure conformity with this standard for ourselves and our suppliers and customers. We urge environmental awareness amongst our staff and useful environmental measures are inte-

grated in the day-to-day operation to fulfill our environmental responsibility.



**HERNIS offers CCTV systems consisting exclusively of components Type Approved according to DNV ship class rules.**



### 1. Multi system access

HERNIS' new generation modular CCTV architecture offers multi system access. The user logs on to his local CCTV system, but can access and control any external HERNIS CCTV system that he is authorized for. The user is hence able to control a virtually unlimited number of cameras spread over vast geographical areas. The solution caters for remote monitoring of comprehensive onshore and offshore installations.

### 2. Camera Control and video management software

HERNIS offer state of the art control software for our CCTV systems. Extensive CCTV expertise combined with the latest technology available has culminated in the highly efficient CCTV management environment HWIN. The interface gives preference to video management in one or multiple views by choice, and navigation is highly flexible bringing user experience to a new level.

### 3. Certification

All HERNIS CCTV components are designed for the extreme and while performing safely and reliably all over the world they meet local certification standards for technical equipment at sea and on oil & gas installations. HERNIS has a complete range of camera stations and monitors for hazardous areas, certified to standard ATEX directive 94/9/EC, IECEx, US NEC 500, INMETRO, GOST and CSA.

## CCTV

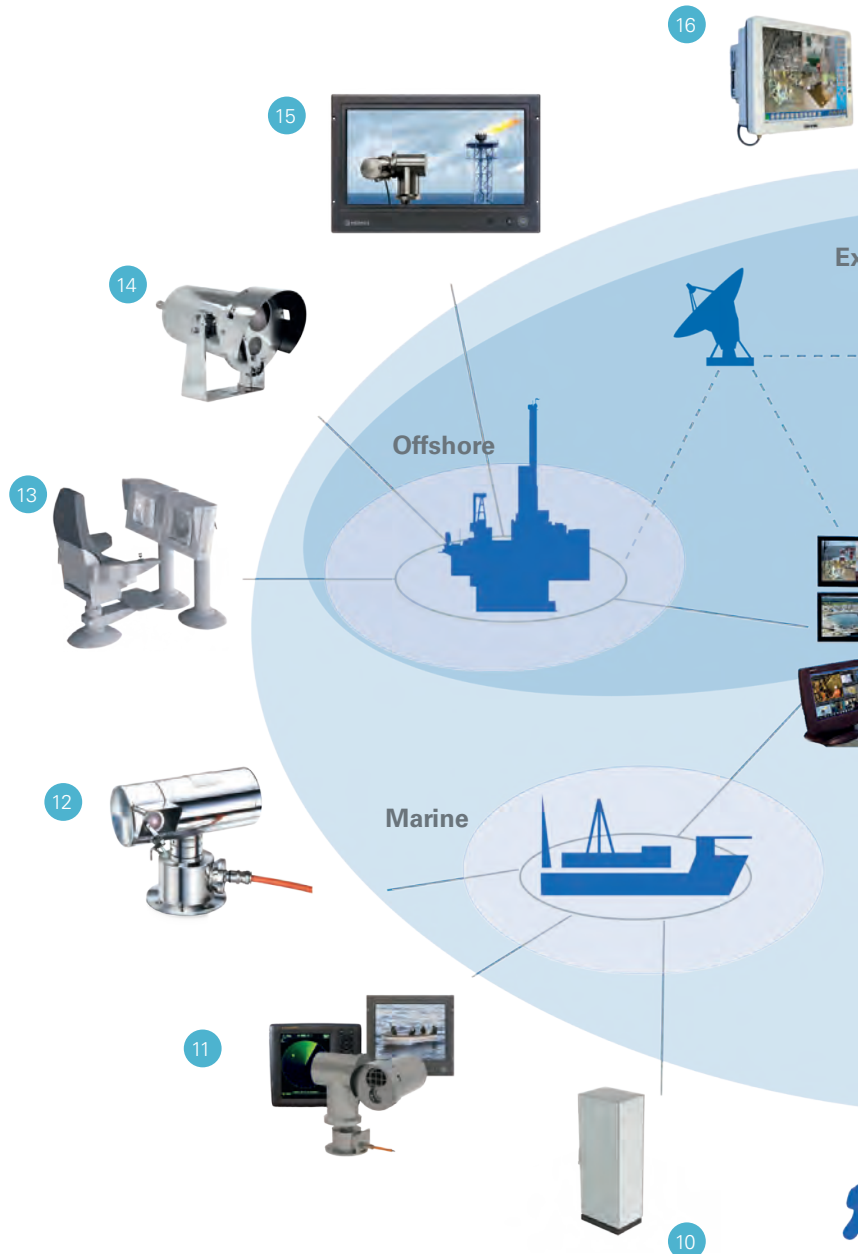
### Safety. Security. Efficiency.

Camera surveillance systems provide a complete view of all areas and processes on a site. A system can be accessed and managed from one or more control stations on site or remote.

CCTV surveillance is vital for the coordination of appropriate response in critical situations.

Proactive and reactive surveillance tasks increase safety, security, and efficiency for people, facilities and the environment.

HERNIS CCTV systems are self contained, modular and tailor-made. This makes our solutions suitable for projects of all sizes.



### 11. Radar Tracking solution

CCTV system allowing you to track up to 10 targets selected on your radar system for improved threat assessment ability and reduced risk. Stand-alone or integrated solution that can be supplied with a dual camera station for round the clock images.

### 12. Ex proof Camera Stations

HERNIS offer camera stations designed to perform in any immediate environment; Ex, heat, humidity, vibration, dust, low-light/no-light, etc. The Ex range is perfectly designed to meet the strict requirements of Ex zones and hazardous areas, and is certified for use in Zone 1 and 2, group IIC according to area classification standard IEC

NEK EN 60079-10. The Ex range comes with internal cabling, built-in telemetry receiver, and integrated Exe or Exd junction box for easy installation.

### 13. Real time video

For operations where no latency is tolerated on the video stream, the system can incorporate an analogue subsystem for cameras.



#### 4. Multi-cables

HERNIS Multi-cables supply both data, video and power in one cable. Designed to survive a lifetime in harsh environments, they enhance installation, reduce man-hour and material costs, and secure the quality required on onshore, offshore and marine installations.

#### 5. HERNIS Crane TV solutions

Cherished by crane operators worldwide, our Crane TV system can be supplied with up to 3 cameras, and provides optimal viewing during hoist operations.

#### 6. Flexible camera connectivity

HERNIS offers a whole range of camera stations flexible in transmission connectivity. Power and signalling flexibility ensures easy, cost saving installation utilizing the power and communication infrastructure that is available, whether it is wired or wireless.

#### 7. Control stations

HERNIS CCTV systems can be controlled via a standard networked computer as long as the required software is installed and the minimum

hardware requirements are met. Other control stations may include dedicated CCTV control panel, video wall, OEM HMI (e.g. drillers chair), Ex monitors, touch monitors and mobile units.

#### 8. Control panels

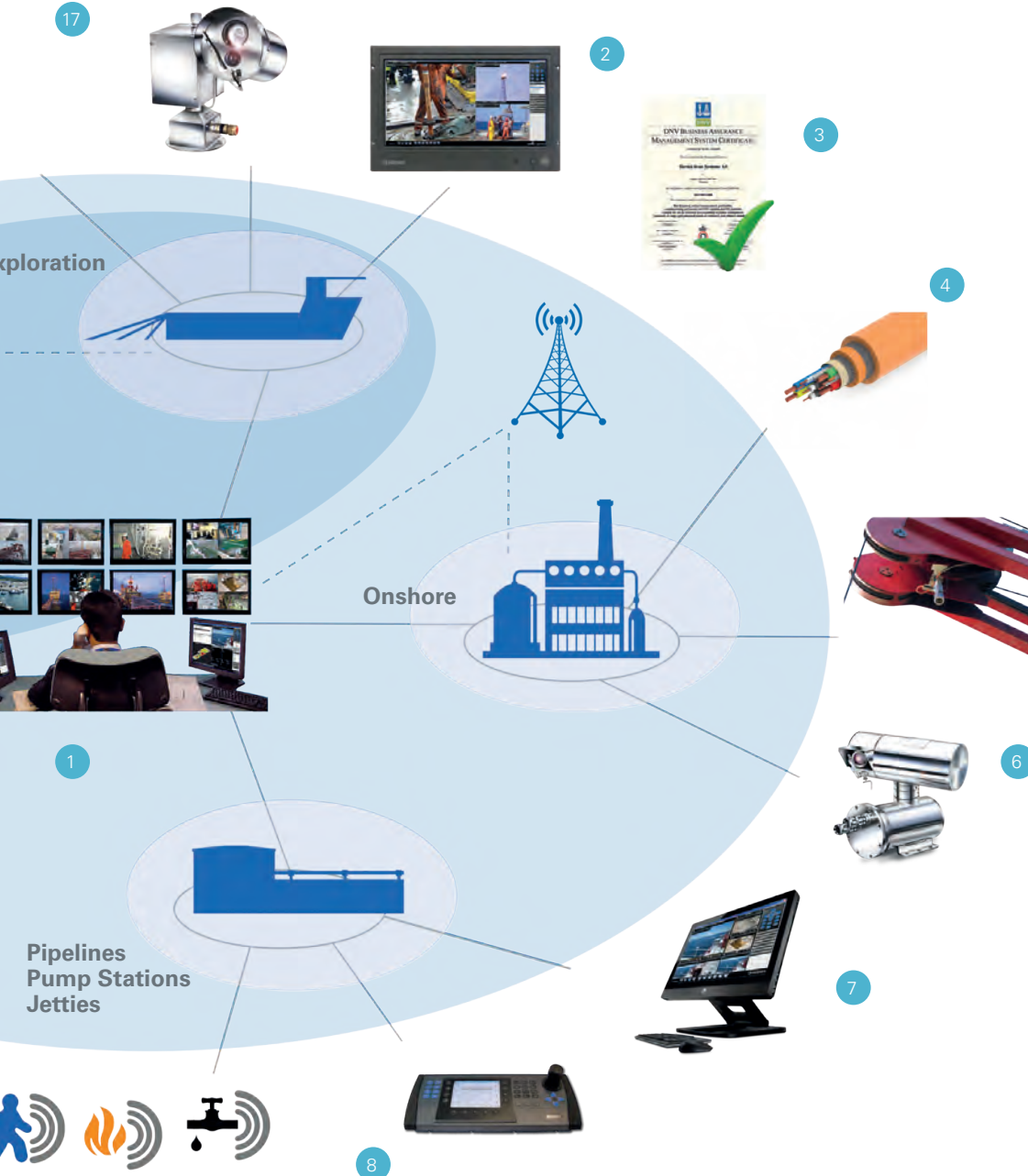
The control panel is the main point of access to the CCTV functionality. All controls available to the operator are done via the control panel. The HERNIS control panels can be flush or desk mount.

#### 9. VMD

VMD or Video Motion Detection technology allows for early detection of movement and can be used for detection of oil spill, leakage or intruders in a targeted area.

#### 10. Systems integration

HERNIS CCTV systems can be fully integrated into existing systems like management systems, distributed control systems, process control and fire, gas and intruder alarms. Full integration is normally achieved with HERNIS SDK.



#### 14. Thermal imaging

HERNIS offers thermal camera stations fitted in both explosion proof and weather proof enclosures compatible with any of our control systems. Thermal imaging provides low-light/no-light vision, and is typically used to detect people, oil spill or gas leakages regardless of the lighting conditions in the target area.

#### 15. Flare monitoring solutions

Provides live images of the flare to the operator through a fixed camera station connected to his control room monitor. The use of thermal sensitive camera and analysis of video detects flare absence. Delivered as a stand-alone system or an integrated part of a larger CCTV system.

#### 16. Touch application

HERNIS offer full touch-enabled applications requiring no mouse or keyboard. The applications set the standard for user-friendly operation of CCTV systems. A very intuitive user interface and touch-screen features makes the applications well suited for drilling operators. In-video pan & tilt, direct preset activation and direct quad activation makes operation easy.

#### 17. Weather proof camera stations

Designed specifically to withstand the most challenging environments these camera stations are as well suited for desert areas as for the corrosive environments on marine and offshore installations.

# HERNIS user friendly CCTV management environment

## Highly efficient design

Extensive CCTV expertise combined with the latest technology available has culminated in a highly efficient CCTV management environment. The layout gives preference to video management in one or multiple views by choice and highly flexible navigation takes the user experience to new levels.

## One foundation

HWIN Standard makes the foundation for any HERNIS CCTV control environment and is typically used alone to manage small to medium sized CCTV systems. State-of-the-art tools enhance the experience:

- multi video view
- drag & drop functionality
- pop-up menus & tooltips
- instant access to frequent tools
- camera browsing
- snapshot
- recordings

The intuitive environment makes it easy to set up camera sequences, multi-camera switching, and other configuration.

## Add on the features you require

With different software extensions HERNIS takes CCTV one step further.

The HWIN Advanced extension supports multi-system-access, meaning from one single work station you can now log onto multiple external CCTV systems on remote locations adding a whole new dimension to your CCTV architecture! This is the ultimate tool for controlling cameras in medium to large CCTV systems. Features such as layered maps with camera and alarm hotspots help you stay oriented and navigate efficiently. The advanced design provides the structure necessary to handle volumes of information without losing track.

Read more about other extensions such as Alarm management and Touch functionality on page 19.

To contact an Eaton salesperson for HERNIS CCTV solutions, please visit [www.hernis.com](http://www.hernis.com)

### Top: HWIN Live Mode

is the normal operating mode used for all live functions such as viewing live video, controlling the cameras, using presets, maps, video splits and more.

### Middle: HWIN Playback

is used to access any video or images that has been stored in the HERNIS 500 Video Recorders and on your local hard disk.

### Bottom: HWIN Configuration

is used to define individual cameras, camera groups, sequences, multi switches, alarm actions and more.

# The functionality you need in just one click



## Navigation and Control

With the latest technology available HERNIS has taken navigation to a new level. With optional tools available every user can find his preferred way of managing video and cameras in the system. Navigation is intuitive and time-saving, enhancing the user experience. The main navigation features are:

### Drag & Drop:

Drag a camera or a sequence from the menu list and drop it on a video pane to view the video.

### In-video pan/tilt:

Click directly in the video view to pan & tilt the camera. The pan & tilt speed depends on your position off centre.

### Maps:

Find and select cameras, alarms etc. by navigating the maps and interacting with the hotspots (graphical camera and alarm identifiers).

### Dynamic Context Menus:

Right click on any map, map hotspot, video, camera, preset position, alarm etc. to view a context menu/ tools related to the type of object you clicked.

### Toolbars:

The most relevant video functionality such as sound, video quality, snapshot and local recording is easy to reach in the strategically positioned toolbars available throughout the application.

### Joystick:

Control cameras and Pan/ Tilt/Zoom on 3-axis joystick with fully configurable buttons (Iris, Focus, Wipe, Wash, Camera Selection, Preset selection, Next/ Previous camera)



# HERNIS CCTV system architecture

- for projects of any size and complexity

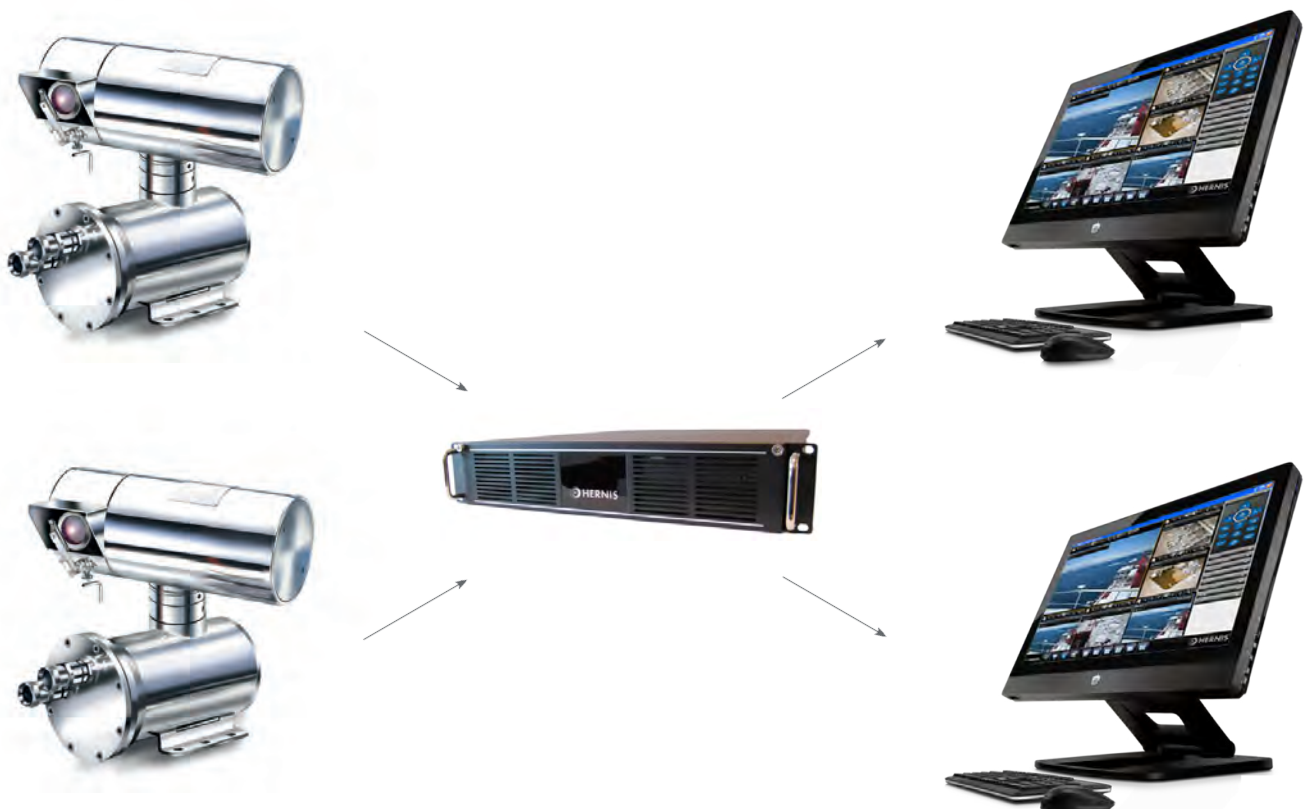
HERNIS is an experienced provider of CCTV solutions. Over the years we have developed control systems suitable for different requirements with respect to size, complexity and available infrastructure.

Today we can offer numerous solutions based on analogue or digital technology. In many cases both types of technologies are also combined within one system. Our focus is to be able to present an optimized package with respect to the image quality, user friendliness and life-cycle cost.

HERNIS' state of the art CCTV systems components and software are superbly designed, enabling the end user to meet extreme CCTV performance criteria in any EX or harsh environment, anywhere in the world.

## Bottom: The basic concept of HERNIS Flex IP CCTV System

The HERNIS Flex system supports distribution of video from the HERNIS IP-based camera stations to the HERNIS CCTV operator stations leveraging the existing IP network





# HERNIS Flex

HERNIS' Flex IP CCTV system offers full flexibility and infrastructure across multiple transmission technologies, creating a sophisticated CCTV system, limited only by your creativity.

HERNIS Flex CCTV achieves a complete IP architecture or accepts analog/serial signals if required.

Systems are deliberately designed to maximize high-speed manipulation, superior video quality and reliable recording requirements.

HERNIS' Flex CCTV architecture, including video and alarm management applications, utilize one common infrastructure provided by an Ethernet backbone and supervised by a system server. The accessibility of digital IT networks, copper and wireless, adds a high level of flexibility to the CCTV system.

A complete turnkey system easily incorporates with third party telecommunications, alarms, hardware, software or DCS management and security systems. Straight forward connection to external low-voltage input/output devices (such as visual/ audible alarms, PIR's, smoke, gas, flame detectors etc.) enables HERNIS Flex CCTV system to improve operator efficiency and reduce incident response time, significantly adding to the integrity of any system and safety of any facility.

HERNIS Flex CCTV Systems, from straightforward small systems to large complex systems, are designed and engineered for the following functional capabilities:

- Remote and local system transmission and control via satellite, radio link, Internet, analog and serial
- Complete system diagnostics, down to each component
- Remote administration

- User friendly software that accesses many layers of information

HERNIS Flex system camera stations are linked to a camera-dedicated network via an integrated transmitter/ receiver unit. The video signal from the IP camera station is encoded and streamed to a HERNIS Video Extender (HVE), allowing a virtually unlimited number of cameras and users to access the video. The architecture supports dual video streams from each camera enabling image quality from each encoder to be controlled individually and set to transmit at different rates to meet different user requirements and adapt to possible hardware/network limitations. Authorized operators are able to control cameras, and monitor live as well as recorded video from any camera at any point on the network, depending upon user profile priority.

The Flex system is designed for robust flexibility. Uptime

is maximized by employing separate communication networks, redundant system servers and power supplies in the main central equipment. The use of RAID discs for video storage assures dependable archived video without loss in case of damage to discs. Flexible recording capabilities increase the integrity of the Flex CCTV system.

- Recordings can be generated, viewed and saved at different locations in the system
- Resolution and frame rate can be set individually for the main and sub stream from each camera
- Recording duration can be set individually for each video stream

The HERNIS Flex system has continuous self-monitoring system and component functionality.

A HERNIS Flex system central cabinet is typically equipped with:

- HERNIS system server w/ software correlating to the number of cameras connected to the system
- Built in recording & IP streaming capability
- System Node with communication and integration to fire & gas and other alarm systems
- Local power supply for camera stations and/or fibre optical equipment for transmission over longer distances
- LAN switches designed and dimensioned for IP traffic and optimal operation
- Dual power inlet if UPS/ normal power feeds are used

The HERNIS Flex architecture uses industry standard networks and integration protocols thereby catering for easy and efficient increases in the number of cameras, control stations, system servers and geographic expansion to meet future requirements.

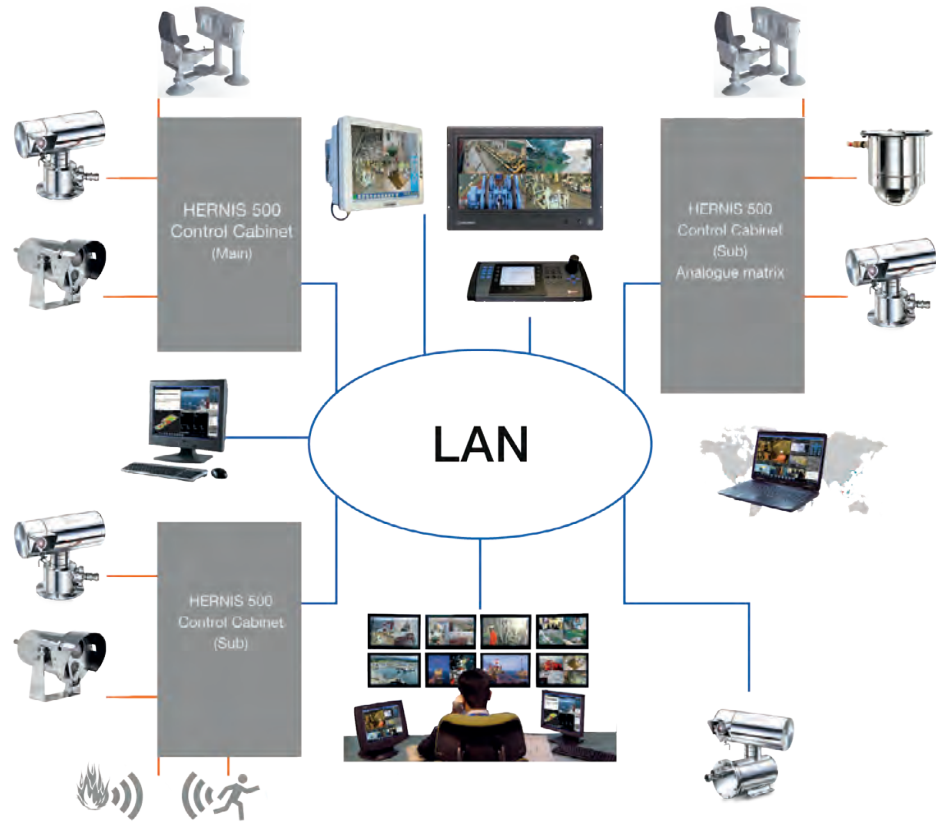


# HERNIS 500

The HERNIS 500 digital video management system eliminates the need for a traditional analogue video matrix utilising the common infrastructure provided by an Ethernet backbone. The HERNIS 500 NVR encodes the video signal, which can be streamed to hard disc and/or directly to the network/backbone. The image quality from each encoder can be controlled individually and set to transmit at various rates depending on user requirements. For operations where no latency is tolerated on the video stream, the HERNIS 500 system can incorporate an analogue subsystem.

A HERNIS 500 CCTV system cabinet is normally equipped with:

- CPU with HERNIS CCTV server & video management software
- NVR with built in recording & IP streaming capacity
- System Node with cards for camera control, communication and integration to fire & gas alarm systems
- Local power supply of camera stations and/or fibre optical equipment for transmission over longer distances
- Dual power inlet if UPS/normal power feeds are used
- LAN switches





## HERNIS 400

The HERNIS 400 CCTV system is an analogue system consisting of an analogue video matrix and a PC based system server.

The internal communication of the HERNIS 400 system operates on a Controller Area Network (CAN) making it easy to add new communication nodes for camera stations and control panels.

The modular design enables easy and virtually limitless expansion and use of decentralized systems. Its integration capabilities to external systems such as drilling, process, automation, security and safety systems on serial, TCP/IP, I/O or relay interfaces, makes the HERNIS 400 a versatile system.

The 400 system can be remotely controlled (slave) constituting a part of larger CCTV systems, or it can be used to control other systems (master). A programmable text generator enables camera names, prepositions and alarms to be shown in the video image adding to the operator's level of control.



The 400 system matrix may be equipped with audio. A redundant CPU makes the system less susceptible to hardware failures thus improving the systems overall uptime. The HERNIS 400 can easily be upgraded to a hybrid system including both analogue and digital (IP

based) features, by including an NVR allowing for simultaneous recording and streaming of all cameras.

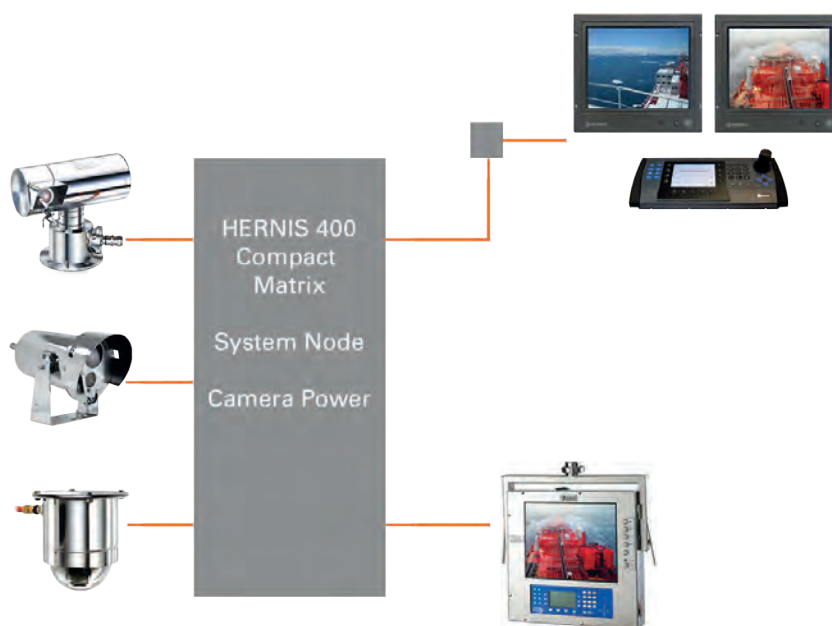
## HERNIS 400 Compact

The HERNIS 400 Compact is a down-scaled version of the HERNIS 400 analogue system, developed to serve as the centre of a medium sized CCTV system.

The compact system has no PC and slightly less functionality. It is possible to connect 16 to 32 camera stations and 16 monitors in the system. Any camera station within the HERNIS product range can be used.

On the control side it is possible to fit monitors of suitable size and operate the system from any HERNIS control panel.

HERNIS can also offer a hybrid solution combining the digital HERNIS 500 System with the analogue HERNIS 400 System.

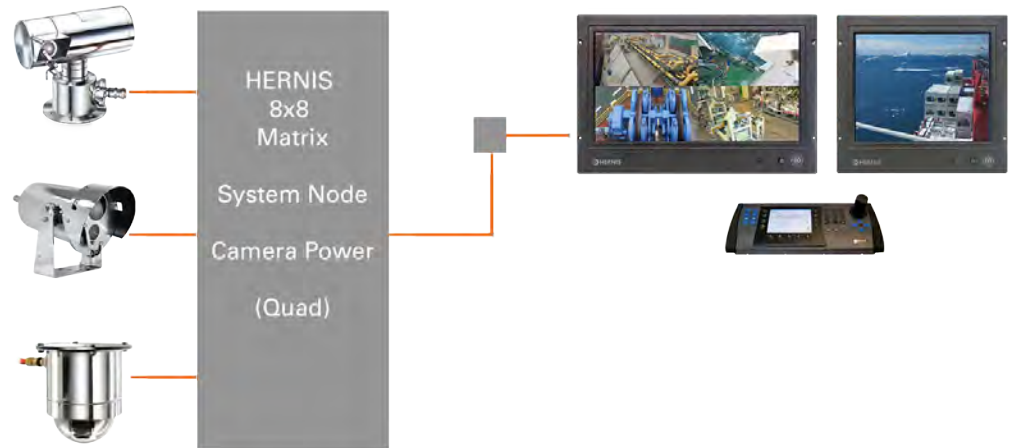


This combined solution offers both the clarity of an analogue video system and lets you utilize all aspects of a digital CCTV system.

## HERNIS 8x8

The HERNIS 8x8 CCTV system is the smallest analogue CCTV system in the HERNIS product range, the primary difference is that it does not include text.

The small physical size of the video matrix is suitable for spaces of limited size, still covering the basic CCTV requirements.

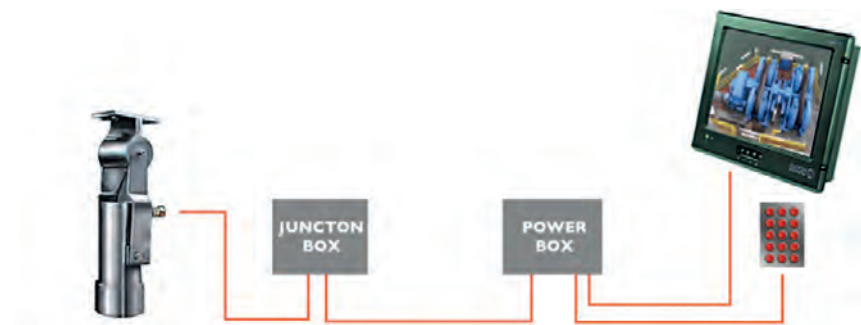


## HERNIS Crane TV

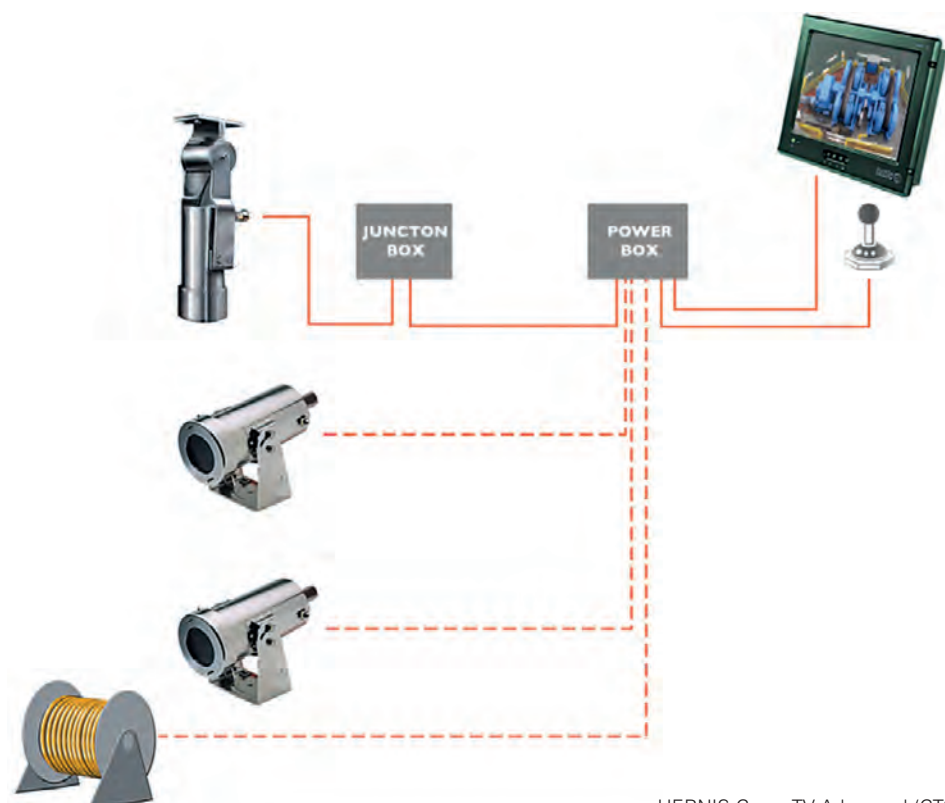
HERNIS offers a well proven range of Crane TV systems meeting the requirements of crane operators worldwide.

HERNIS Crane TV can be supplied with up to 3 cameras and picture in picture function. The automatic object tracking function makes operation easier as the zoom automatically follows the cargo providing optimal viewing during hoist operations. An oil damper keeps the camera housing in a stable vertical position and eliminates vibration.

The interface unit uses an analogue feedback signal from the wire drum. All camera functions such as iris, zoom, focus and camera selections can be operated from the joystick or push-button controls. Camera selection can also be done from an external PLC (Programmable Logic Controller).



HERNIS Crane TV Basic (CT10Ex)



HERNIS Crane TV Advanced (CT30Ex)



# HERNIS Radar Tracking System

With access to live video of one or several radar targets the operator can easily monitor events improving their threat assessment ability and reducing risk.

The HERNIS Radar Tracking Solution can be delivered as a compact standalone system or integrated in your HERNIS CCTV solution.

To offer the optimal solution in each project HERNIS camera stations will be chosen for their ability to meet customer requirements, such as;

- Purpose
- Distance
- Physical environment

By employing a dual camera station the operator can choose between Charge-coupled device (CCD) images and thermal images providing optimal viewing in different conditions.

HERNIS offer dual camera stations for both EX and Safe areas.

The HERNIS camera station tracks the targets selected in your radar system via messages received from the radar system on the

NMEA protocol format (National Marine Electronics Association). The radar system must be verified for compatibility by HERNIS.

The CCTV system gains access to the target's positioning data once the target has been selected on the radar.

You can track up to 10 targets at a time, dwelling on each target sequentially for as long specified in the configuration. Default dwell time is 10 seconds.

When radar tracking is enabled you control the camera by simply selecting a target with the cursor on your radar screen. The camera will immediately position itself to track the target you specified upon receiving the positioning data.



When tracking is disabled, the camera station can be controlled manually by the dedicated touch control panel HERNIS OK160, that provides smooth operation of the Radar Tracking camera and functions.

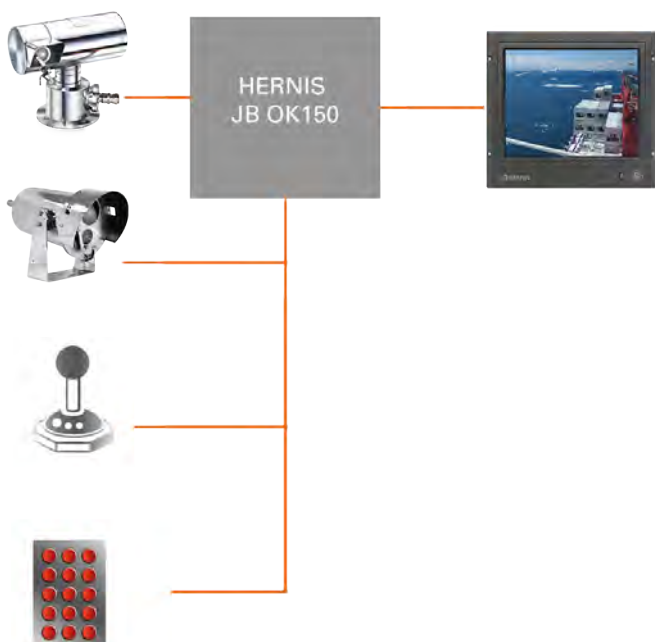
The camera station can not be released and controlled by any other HMI.

A configuration tracking program is included as standard for easy configuration of the radar tracking unit.



HERNIS OK160

## JB OK150 Control Unit



This space efficient solution is perfect where one operator needs visual through one or two camera stations to improve safety and efficiency in operations. The JB OK 150 serves as a control unit for the camera stations.

The small system can utilize two camera stations, for example accommodating for thermal and CCD images.

The system is controlled with a joystick or a control panel of the customer's own choice. The control buttons can be configured with the functionality suiting your specific needs.

Typical functions would be zoom, focus, pan, tilt, iris, wipe and wash depending on the type of camera stations deployed.

The recommended cable length is 10m between the JB OK150 control unit

and the HERNIS supplied joystick or third party control panel.

The monitor and cameras are normally powered locally. Camera stations, cameras, monitors and multicables are optional from the wide range of HERNIS Ex and safe area equipment.

Our experienced team will be able to recommend the perfect solution for your requirements.

The reliable CCTV systems-house preferred by the world's most successful shipping companies and oil & gas operators - again and again

#### 1. Onshore Drilling Facilities

Land rigs

Key projects:

- NOV AC Ideal rigs
- 15 SurgutNefteGas rigs
- Marriott Drilling rig 46

Img: © HERNIS

#### 2. Offshore Drilling Facilities

Jack-ups, semi-sub, drillships, drilling barges

Key projects:

- Maersk Discoverer
- Olinda Star
- Seadrill West Auriga

Img: © Seadrill

#### 3. Onshore Production Facilities

Refineries, LNG

Key projects:

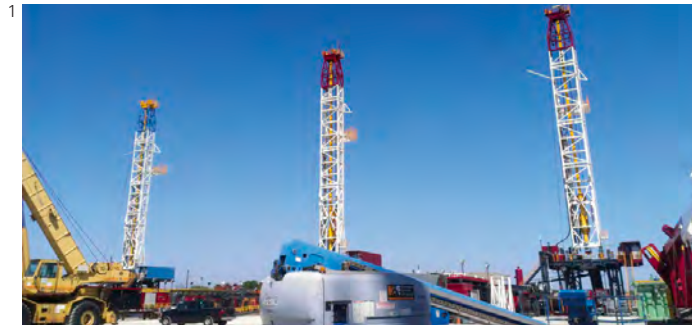
- Algiers refinery
- Nyhamna
- Snøhvit

Img: © Svein Roger Ivarsen, Shell

## A selection of references, Oil & Gas

HERNIS works with the leading companies in the oil & gas industry worldwide. Below are a few selected partners:

- Cameron
- Diamond Offshore
- ExxonMobil
- Fluor
- Kentz
- Maersk Drilling
- NOV
- Pacific Drilling
- Petrobras
- Sakhneftegas
- Seadrill
- Statoil
- Technip
- Total
- Transocean
- WorleyParsons



#### 4. Offshore Production/Storage

Platforms, FPSOs, FSOs, FSUs, FSRUs, FLNGs

Key projects:

- Ekofisk
- Gudrun
- Arkutun-Dagi

Img: © Kjetil Alsvik/ConocoPhillips

#### 5. Petrochemical plants

Vinyl factories

Key projects:

- JAM Petrochemical Plant
- IKRA PVC plant
- Ethydcoc Ethylene Plant EEP2

Img: © JAM Petrochemical Co.

#### 6. Terminals/Pipelines

Pipelines, Jettys, Offloading terminals

Key projects:

- Vankor
- Sakhalin
- Stureterminalen

Img: © Rosneft

To contact an Eaton salesperson or local agent for HERNIS CCTV solutions, please visit [www.hernis.com](http://www.hernis.com)



# Special applications & recording features

## Video Motion Detection

VMD or Video Motion Detection technology allows for early detection of movement and can be used for detection of oil spill, leakage or intruders in a target area. The same technology may also be used in reverse to detect flameouts, in which case the ceasing of movement triggers predefined actions in the CCTV system.

In the event of an incident the CCTV system can be programmed to instantly relay live video images from that specific area to one or more specific monitors, alarming the control station operator. By detecting irregularities

like oil and gas leakages and triggering alarms at a very early stage, VMD solutions on board oil & gas installations enable fire prevention rather than the conventional fire alarming. Time critical decisions based on facts, rather than presumptions enhance the safety of people and equipment. HERNIS offer VMD solutions as stand-alone systems or part of a larger CCTV solution enhancing the company's overall security system.

Below are typical areas of application of video motion detection in HERNIS CCTV solutions:

### HERNIS Flare Monitoring

As an important feature to our flare surveillance systems HERNIS offers Intelligent Flare Monitoring.

The system uses an IR sensitive camera, which only reproduces rays emitted from the heat of the flare, discarding the rays of visible light, like reflections, shifting weather conditions, or the general difference between day and night time that would otherwise influence/disturb the surveillance. The video image is fed to and analysed by a PC with special software suitable for this purpose. In the event that the flare stops burning, the operators are notified by an alarm. The incident may also be recorded.



### HERNIS Smoke & Leakage Detection

HERNIS Leakage Detection combines remote surveillance, image analysis and digital storage in one system. Typical applications are smoke detection and oil leakage detection, where prevention of fire outbreaks is vital. When an irregularity is detected the video sequence is immediately displayed on the monitor, and the person on duty is notified by an alarm. The alarm image includes the date and time the alarm was triggered, camera position and a short description of the situation. Time is a critical factor, and with HERNIS Leakage Detection you can immediately examine the video image to make fast decisions and take appropriate action.

### HERNIS Perimeter Protection

HERNIS offers perimeter security for marine vessels and petroleum related installations onshore and offshore. HERNIS perimeter protection is customised to meet the customer's security philosophy and may be integrated into the general surveillance system at the site.

Unique for HERNIS is the pre- and post alarm recording facility that enables operators to watch recordings of events leading up to and following an alarm.

### Multi Video Recording

Unique for HERNIS CCTV is the DVR-M Multichannel digital video recorder. The HERNIS recording device is capable of recording up to 16 individual channels simultaneously at full frame rate. The recorder is operated via any HERNIS control panel and is integrated in our Control Software. Offering a wide range of hard-disk capacity HERNIS CCTV recording facilities really stand out.

### Multi Video Decoding

The HERNIS Multi Video Decoder for the HERNIS 500 system is designed to decode streamed video to composite video and represents a cost-saving means of utilizing existing analogue monitors in IP systems.

The decoder provides excellent image quality with very low latency and is capable of decoding up to 16 video streams simultaneously. This makes it a low cost alternative when multiple channels are required. To illustrate

its' capacity, one HERNIS Multi Video Decoder can replace 16 PCs with monitor applications traditionally required for analogue video outputs from a HERNIS 500 system. The unit thus also saves space.

# Camera Stations

## EX proof

The HERNIS Explosion Proof Camera Stations are approved for use in potentially hazardous atmospheres; Zone 1 and 2, group IIC



Ex 286W



Ex 286W PTZ JB



Ex285W



Ex292W



Ex270 dome



EX291 with sun screen



Ex291 Subsea



Ex285W FM



Ex285WT PTZ Dual



Ex285WT fixed



Ex Crane camera

### Ex Camera Stations

The HERNIS explosion proof camera stations are approved for use in potentially hazardous atmospheres; Zone 1 and 2, group IIC.

The camera stations come in one unit, ready to be mounted on the floor, wall or ceiling with a maximum of 4 bolts.

With internal cabling, built-in telemetry receiver, integrated Exe or Exd junction box and all relevant features the HERNIS explosion proof camera stations are perfectly designed to meet the strict requirements of EX zones and hazardous areas.

### Low Temperature Camera Stations

HERNIS offer EX and safe area camera stations that are certified for operation in temperatures down to minus 60 degrees Celcius.

### Thermal Camera Stations

HERNIS offers thermal camera stations fitted in both explosion proof and weather proof enclosures compatible with any of our control systems.

Thermal imaging systems render the energy of objects as different shades of infrared light, i.e. they enable us to differentiate objects in the images based on the variation of heat they generate.

This type of camera is used to detect people, oil spill or gas leakages regardless of the lighting conditions.



# Camera Stations

## Weather proof

The HERNIS weather proof camera stations are purpose-fit to withstand environmental challenges such as humidity, vibration, dust, chemicals and temperature variations.



PT9W



PT9 PTZ JB



S36WT PTZ Dual



S7



S7IR



S9W



S36WT Fixed



S71 Fixed



S71 Indoor Fixed



PT70 Indoor



PT70WP

### Weather proof Camera Stations

Thermoelectric heat control, tempered glass and electropolished stainless steel enclosures reflecting the sun are features that make the HERNIS weather proof camera stations as well suited for desert areas as for the corrosive environments on marine and offshore installations.

### Indoor Domes

HERNIS Indoor ceiling domes come with an integrated fire pot for added fire protection. The domes are designed for high-vibration conditions making them the reliable choice for offshore and marine installations.

To contact an Eaton salesperson or local agent for HERNIS CCTV solutions, please visit [www.hernis.com](http://www.hernis.com)

# User Interface and Transmission

HERNIS' CCTV systems is tailored to the customer's requirement. All communication can be transmitted throughout the HERNIS CCTV systems using coax cables, twisted pair cables, fibre optics, digital data lines, etc.

HERNIS CCTV systems are compatible with all the common communication infrastructures: SDH, Ethernet and LAN.

## Displays

HERNIS delivers a wide variety of high-quality monitors and display units for industrial and explosion-endangered areas, each carefully selected to meet customer requirements and the extreme performance criteria in the marine and oil & gas industry. The display units vary from small field service monitors of 5,6" and slightly larger crane cabin displays to large screens of up to 60". Resolution depends on type and performance requirements. We supply 4:3 and 16:9 formats and all units can be supplied in PAL or NTSC. Monitors can be flush mount, desk mount, wall or ceiling mount. HERNIS' staff is thoroughly trained to give advice and help the customer select the correct display unit for any area of the facility.



## HERNIS Control Panels

The Control Panel is the main point of access to the CCTV functionality. All controls available to the operator are done via the control panel.

HERNIS control panel OK450 comes with a joystick and can be flush or desk mounted at the customers discretion.



**Above:**  
Control Panel OK 450.

**Right:**  
OK160, flush mount colour LCD with touch and adjustable backlight (developed for the HERNIS Radar Tracking Solution).



## HERNIS Multi-Cables

Enhancing installation, reducing man-hour and material costs and securing the quality required for exposed CCTV systems HERNIS offers our own range of CCTV multi-cables supplying both data, video and power in one cable. The multi-cables are designed specifically to survive a life time in harsh environments and meet the requirements for onshore, offshore and marine installations complying with EMC regulations.

Depending on the project nature one or several of the HERNIS multi-cables can be relevant for installation purposes.

The cable is chosen for

- its ability to perform over time in the immediate physical environment that it will be exposed to
- cable length and voltage level requirements
- tensile strength requirements
- mechanical protection requirements
- camera station power and signal requirements

Our experienced team offer expert advice on the choice of multi-cable ensuring the optimal solution is found for your project.

The multi-cables most commonly used in HERNIS CCTV systems are listed below:



025118  
Ships cable  
with screen



025119  
Ships cable  
with screen and  
armour



025106  
Offshore cable  
with screen



025044  
Offshore cable  
with screen and  
armour



020792  
Flexible  
CraneTV cable  
with screen



025108  
CraneTV cable  
with screen



025122  
Coax and power



025223  
Offshore cable  
with power  
and Cat 6 with  
screen



025233  
Power & Fibre  
with Screen



025333  
Power & Fiber  
with Screen  
and Armour



# Software

## Control Software

### ONE FOUNDATION

#### HWIN Standard

HERNIS HWIN Standard is the primary application for control of HERNIS CCTV systems. HWIN is developed for the Microsoft .NET platform and may be run on Windows XP, Windows Vista, or Windows 7.

Details on HWIN, its features and user interface is found on page 6.

### NEEDS BASED EXTENSIONS

Additional functionality is available as software extensions. See what add-ons suit your requirements:

#### HWIN Advanced

HWIN Advanced is the ultimate tool for controlling cameras in medium to large CCTV systems. This solution supports multi-system-access, meaning from one single work station you can now log on to multiple external CCTV systems on remote locations adding a whole new dimension to your CCTV architecture!

Features such as layered maps with camera and alarm hotspots help you stay oriented and navigate efficiently. The advanced design provides the structure necessary to handle volumes of information without losing track.

#### Alarm management:

As the name indicates this extension is used to manage alarms triggered in the CCTV system.

#### HWIN Standard Alarm

HWIN Standard Alarm provides instant overview of the alarms in the CCTV system. The user can easily select any camera activated by an alarm and get close-ups of the situation. The view can be split by choice

so that multiple video images can be displayed simultaneously.

Alarm acknowledgement, easy access to recordings, etc makes this an important tool for the CCTV operator.

#### HWIN Advanced Alarm

(extension to HWIN Advanced) includes map navigation. Alarms are displayed as symbols in the maps and active alarms are highlighted for quick and easy navigation to the cameras on site. Moreover HAM advanced lets you manage alarms in all CCTV systems connected to your own system.

#### Touch functionality:

HERNIS offer fully touch-enabled applications requiring no mouse or keyboard.

#### HWIN Touch Advanced

(extension to HWIN Advanced) This extension adds touch-screen-functionality to your CCTV control application. Camera stations are indicated in maps/drawings making it very easy to identify and select cameras on the screen. When an alarm is activated the relevant camera is automatically highlighted in the map easing navigation to real-time images from the critical location. After taking appropriate measures alarms are easily acknowledged by interacting directly with the symbols on the screen.

#### HWIN Touch Basic

sets the standard for user-friendly operation of small CCTV systems. Together with a very intuitive user interface its' touch-screen attribute makes this application well suited for drilling operators.

The application gives preference to video images and ease of use.

Features like

- in-video pan & tilt
- direct preset activation
- quad operation

make operation intuitive and easy.

The application can connect to HERNIS systems using comport or network making it compatible with all our current control systems.

### WEB ACCESSIBILITY

#### HWIN Web

HWIN Web will allow you to connect to HERNIS CCTV systems over the internet / intranet. The application runs on a Web Server set up with secure HTTP, and you use Internet Explorer to access the web page and log on to the system. HWIN Web offers navigation by maps that show the location of camera stations, and lets you select camera directly. Activating preset positions on pan/tilt cameras, and playing back recorded video from the HERNIS CCTV system are other valued features of the HWIN Web CCTV control application.

## Maintenance Software

#### HERNIS System Maintenance (HSM)

The HERNIS System Maintenance application provides close supervision of the CCTV system's operating status. Operational failures anywhere in the system - be it camera stations, operating panels or computers - are detected and logged for easy reference. Having malfunctions pinpointed in such detail allows for highly effective diagnosing and problem solving decreasing the downtime normally brought on by operational failures.

The System Maintenance application is further used for remote updating of software on field equipment such as camera stations and control nodes, making it perfect for unmanned systems. HERNIS

recommends this cost-saver for the HERNIS 400 and 500 systems.

## Development Software

#### HERNIS Software Development Kit

The HERNIS Software Development Kit is software containing the information and examples you need to develop your own User Interface (UI) to the HERNIS 400/500 System.

The kit enables implementers to control and to some extent configure the HERNIS system.

Each use of the developed interface requires a license.

## Additional Software

#### HERNIS Large Screen Application (HLSA)

The HERNIS Large Screen Application supplements HWIN Advanced. This application accommodates display of multiple videos on a large-screen (i.e. large LCD/Plasma/LED screen, projector or any other display that can be connected to a PC). The application runs as a stand-alone application on a dedicated PC.

Remote control of the application is available from HWIN Advanced which allows you to select cameras and change the layout of the videos displayed. All the advanced control features in HWIN are compatible with the Large Screen controller (i.e. in-video pan/tilt, drag & drop, maps, etc.)

# Our presence



## Onshore

HERNIS pioneered the integration of CCTV with other systems including process control and fire, gas and intruder alarms, thereby providing systems perfectly suited for onshore installations within the petroleum industry.

Today HERNIS systems are in use in refineries, tank farms, jetties, pipe lines and terminals worldwide and are renowned for their high quality and unrivalled durability.

The company's latest development includes advanced modular CCTV architectures based on the markets' need for remote monitoring of comprehensive onshore installations across signalling methods. The systems are able to cover vast geographical distances and meet the appurtenant demands for reliability and maintainability.



## Offshore

HERNIS CCTV equipment was developed specifically for the offshore market.

With high-technology equipment built to resist the most corrosive environments HERNIS CCTV is ideal for surveillance of operations such as drilling, pipe handling and process control. During marine operations CCTV adds to the safety onboard.

HERNIS has experience ranging from arctic drilling rigs to tropical installations, supplying all from basic CCTV systems to taking full responsibility for turnkey projects. All housings and ancillary equipment are selected to meet the given environmental and operational conditions. Quick replacement of modules, coupled with excellent support and backup services makes HERNIS the reliable choice for offshore projects.



## Marine

HERNIS offers advanced CCTV systems for all types of marine vessels such as LNG/LPG tankers, shuttle and crude oil tankers and special purpose ships such as seismic, offshore support vessels, containers, Ro-Ro, cruise and naval vessels. Typical surveillance areas include engine rooms, cargo handling & mooring, pump & compressor rooms and even sub sea mating for shuttle tankers. Built to resist the most corrosive environments HERNIS high technology CCTV equipment is perfectly suited for marine operations.





### Sales and service agents

With well over 40 HERNIS business partners and service stations worldwide, as well as 24hour first-line technical support line, the HERNIS customer can always count on someone being there for them.

To maintain high-quality customer service HERNIS conducts annual agent training seminars bringing the appointed agents up-to-date with the latest development and technology within the CCTV market.

### HERNIS Scan Systems Asia Pte Ltd

Since 2000 our wholly owned subsidiary in Singapore, HERNIS Scan Systems Asia Pte Ltd have handled sales, marketing and service for the Asia Pacific region. As of 2013 the subsidiary also includes an assembly facility and a reinforced technical department to serve the growing market in the region.

With the new engineering and assembling capabilities the team and the facilities

in Singapore are able to handle activities from pre sales to a complete delivery. This strategic investment will further strengthen our presence in this region to meet the growing customer base and oil and gas activities in Asia Pacific.

### HERNIS Scan Systems US Inc

Another subsidiary established in Houston in 2006 handles marketing and sales for the Americas.

### HERNIS Scan Systems do Brasil

Since 2007 HERNIS is also represented with a service office in Brazil to be closer to our export markets.

To contact an Eaton salesperson or local agent for HERNIS CCTV solutions, please visit [www.hernis.com](http://www.hernis.com)

### Technical support

Service and support has always been an essential part of HERNIS CCTV deliveries. HERNIS' professional service crew provides regular advice and backup to customers and operators.

### In-House Services

- Specification Review
- Engineering
- Documentation
- Testing and FAT
- Inhouse Repair
- 24/7 first-line technical support

### On Site Services

- Site Survey
- Mechanical Completion
- Installation Supervision
- Cable Termination
- Commissioning
- Training

## Emergency hotline

Use our 24 hour first-line technical support line to get initial support and help us define the issue for efficient problem resolution:

**+47 90 84 87 25**



The reliable CCTV systems-house preferred by the world's most successful shipping companies and oil & gas operators - again and again

#### 1. Military & Navy vessels

Key projects:

- Frigate KNM Helge Ingstad
- Knud Rasmussen
- KBV NB564

Img: © Hæren/Forsvarets mediesenter

#### 2. Seismic & Research vessels

Key projects:

- Ramform Challenger
- Polarcus Naila
- Geco Western Trident

Img: © Chris Howell

#### 3. Construction/Flexlay vessels

Pipelay, Construction, cable lay

Key projects:

- Seven Pacific
- Normand Installer
- Deep Energy

Img: © Subsea 7

## A selection of references, Marine

HERNIS works with the leading companies in the marine industry worldwide. Below are a few selected partners:

- BW Gas
- Golar
- Hoegh
- Intership
- KOTC
- MOL
- MTU
- NYK
- PGS
- Seajacks
- Sovcomflot
- Subsea 7
- Technip
- Teekay
- Unicom



#### 4. Offshore Support vessels

PSV, OSV, AHTS, ROV, Subsea

Key projects:

- Maersk Logger
- Esvagt Bergen
- Far Saga

Img: © Farstad Shipping

#### 5. Tankers

LNG, LPG, product, shuttle, crude oil tankers

Key projects:

- KOTC Product Carriers
- Dynagas LNG vessels
- Teekay LNG tankers

Img: © Teekay Corporation

#### 6. Other marine vessels

RoPax, Container ships, Bulk, Dredger, Heavy Lifting

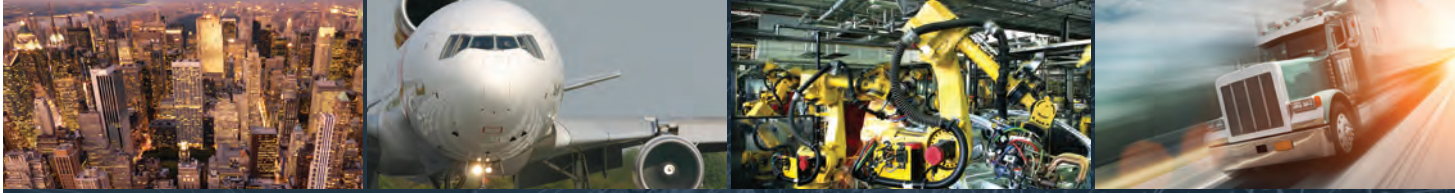
Key projects:

- Sea Installer
- Seajacks Scylla
- Nobiskrug passenger vessels

Img: © A2SEA

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- **Aerospace solutions** that make aircraft lighter, safer and less costly to operate, and help airports operate more efficiently
- **Vehicle drivetrain and powertrain solutions** that deliver more power to cars, trucks and buses, while reducing fuel consumption and emissions

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# Reliable surveillance where incidents cost

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