

Human Operator Interface systems

Cavotec is a leading cleantech company that designs and delivers connection and electrification solutions to enable the decarbonization of ports and industrial applications.

Cavotec manufactures advanced Human Operator Interface (HOI) systems that enable remote controlled, tele-operation and semi-autonomous operation.

Designed for the harshest of environments, our HOI video systems are used with a broad range of equipment including rock breakers, construction and demolition machines, underground scoops and continuous loaders, terminal cranes and at offshore applications.

Key benefits:

Enhanced safety

- Increased safety by removing operators from hazardous areas.
- Improved working environment for operators.
- Additional visual features to reduce risk of incidents.

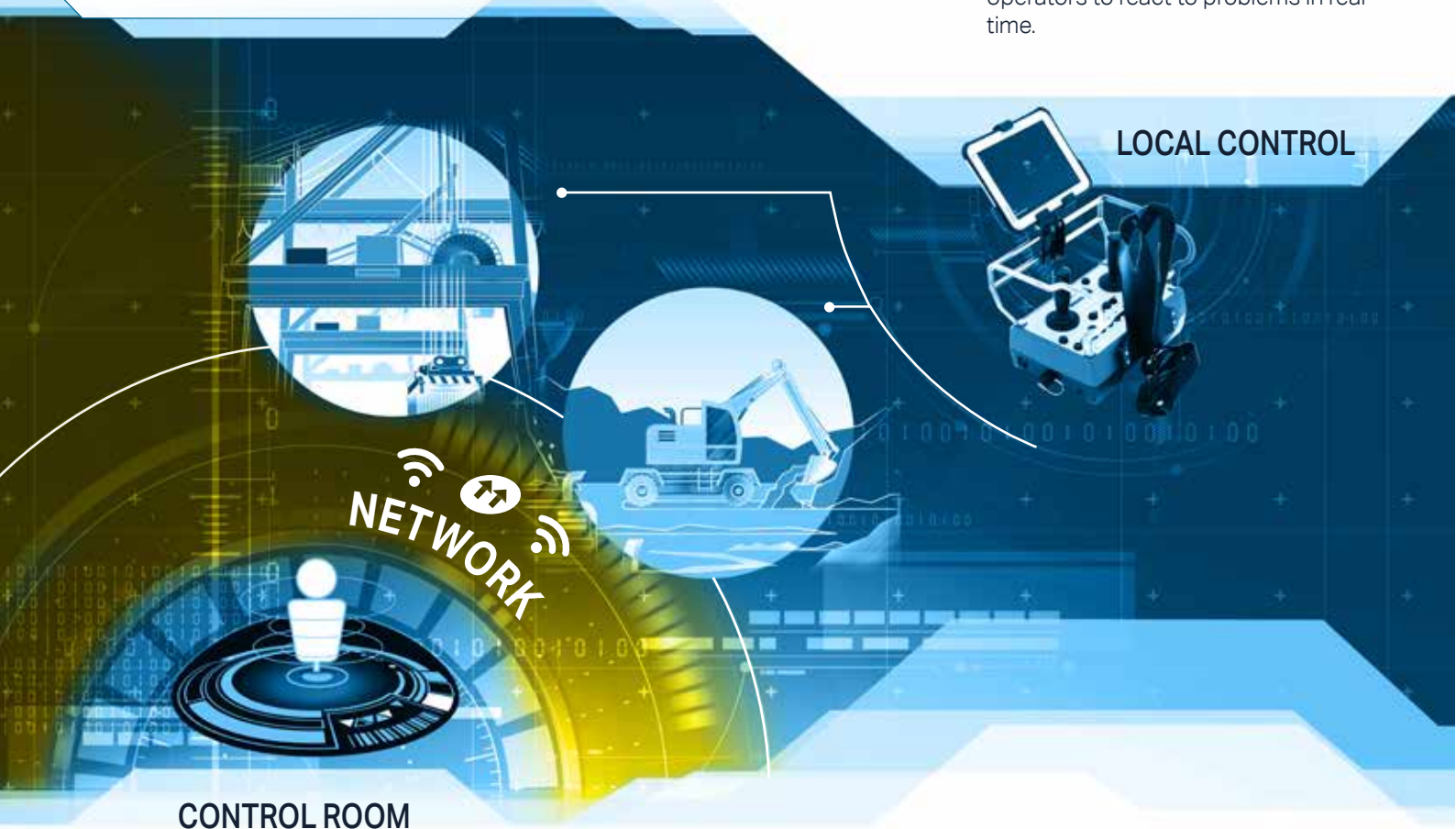
Improved productivity

- Safer and faster movement of materials.
- Improved operations accuracy to reduce downtime and maintenance.

Optimised operations

- Real-time process monitoring and data storage on remote displays and in control rooms.
- Visual and audio features supporting operators to react to problems in real time.

HOI Overview



CONTROL ROOM

LOCAL CONTROL

NETWORK

HOI devices

Radio Remote Control (RRC)

Our RRC systems are available in a wide variety of terminal designs and receiver options, ranging from hand-held solutions, to full belly packs with colour display screens and receivers. These work as stand-alone mini-PLC to fully PLC-integrated solutions. Cavotec RRC comply with all relevant international standards, including IEC 61508, (SIL3) and EN13849, (Cat3 PI d and PIe).



Fully integrated operating centres

We manufacture several types of operating centres:

- Ergonomic control desk and chair: pre-wired and equipped with monitors.
- Cabins: complete cabin with integration of the control chair, joysticks, RRC, monitors.
- Containerised office: complete container equipped with all control desks and chairs, video and air-conditioning.



Visualisation devices

Our HOI systems are readily integrated with real-time video and audible feedback through the use of industrial tablets and monitors. These are sealed to IP66, and are fully HD1080P-compliant.



Cameras

All our cameras are designed for use in industrial environments. They are available in analogue and digital versions, with long service life and high shock and vibration resistance.



Communication protocols

Our systems include the following communication protocols specifications: Wireless LAN, Wireless Real-Time, Ethernet TCP/IP and fibre optics.



Controllers

Industrial controllers and joysticks are used in a wide range of applications. From fingertip operation to full control chairs ready for PLC integration, our range of industrial controllers is unrivalled.



References

Ports & Maritime

Tenova Takraf, Mexico
HOI for bulk shiploader (2016)
DP world, India and Turkey
HOI for automatic connection of ERTG crane (2016)
Rolls-Royce, Norway
HOI for marine crane (2013)

Mining

Canadian Mines, Canada
HOI for underground loader (2017 and ongoing)
Epiroc, Sweden
HOI for underground loader (2016 and ongoing)
Sandvik Mining & Construction, Indonesia
HOI for rock breaker boom (2012 and ongoing)

Industry

Bergmann, Germany
HOI for material transporters (2017 and ongoing)
Gjermundshaug, Norway
HOI for excavation and hauling equipment (2009)

Have Cavotec contact you!

To discuss your specific requirements
for making your operations safer, more
efficient and more sustainable.

Simply book a call at
www.cavotec.com/contact-us



Disclaimer: specifications are subject to change
without notice.

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