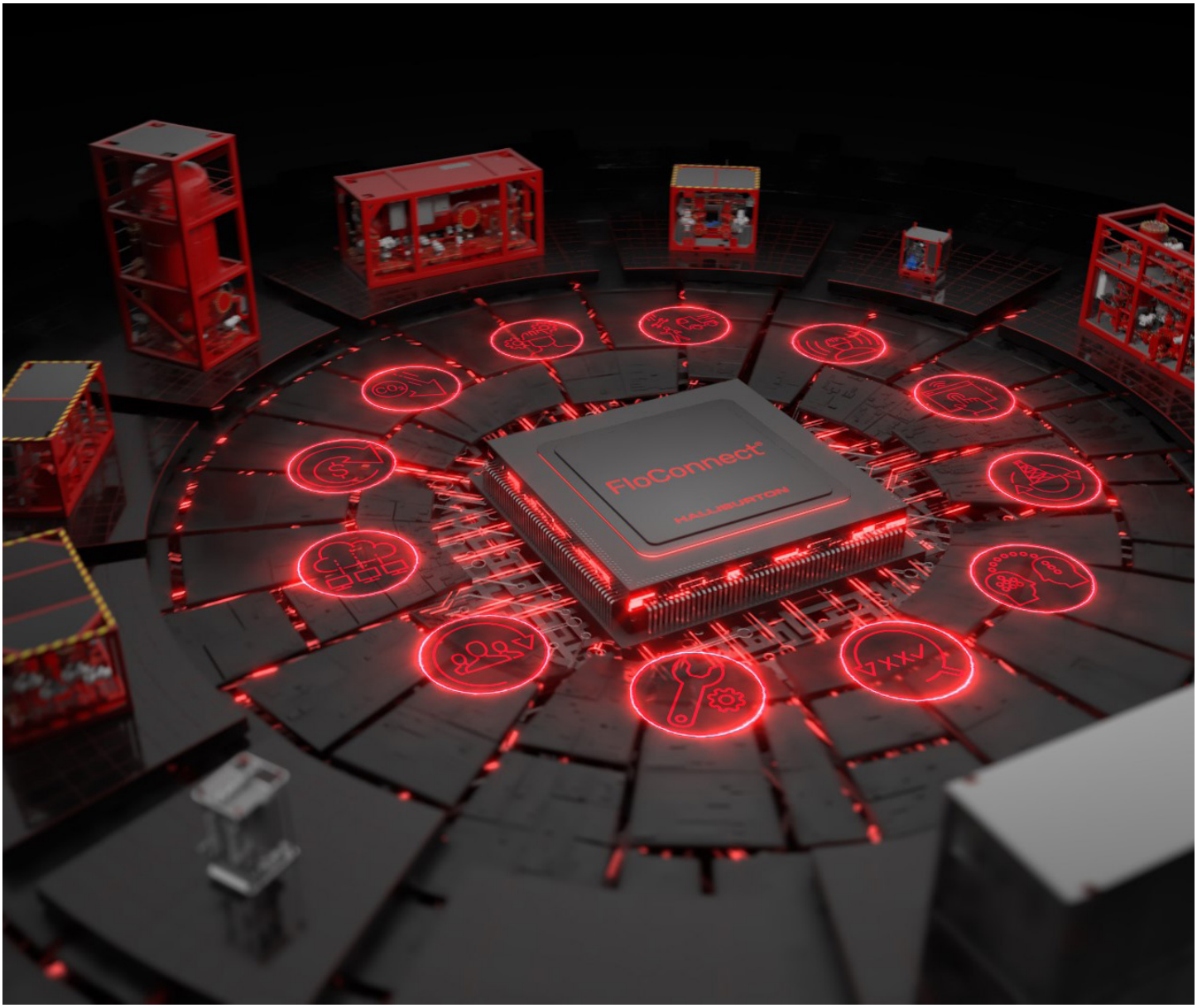


FloConnect® Surface Automation Platform

FULLY AUTOMATED AND SCALABLE SOLUTIONS FOR EFFICIENT AND SAFE SURFACE WELL TESTING OPERATIONS

HALLIBURTON | Testing & Subsea

Halliburton Leads the Well Testing Evolution Through Process Control and Process Safety, Enabling Environmentally Conscious Decisions in Real-time

MANAGING SWT THROUGH AUTOMATED WORKFLOWS

Traditional surface well testing (SWT) methods leave much to be desired in terms of well and process control, often having a negative impact on efficiency, safety, and sustainability.

The FloConnect® surface automation platform from Halliburton Testing and Subsea helps transcend traditional SWT operational methods, addressing complex challenges in multiple applications with highly scalable and configurable solutions while minimizing the environmental impact of testing.

The data-centric platform automates testing operations while monitoring and measuring factors related to the production of hazardous effluents. It helps reduce operational variability and optimizes workforce deployment, allowing more time and focus on data monitoring, collection, and quality. The platform combines pivotal data visualization with interactive analytics to aid decision-making and quick identification and resolution of potential issues.

BREAKTHROUGH TECHNOLOGY

Surpassing previous SWT limitations, the FloConnect surface automation platform is a breakthrough in terms of well controllability, process safety/assurance, and emissions quantification and abatement. It facilitates a truly collaborative work environment, allowing personnel data-sharing access in real time while permitting process monitoring and control from a command center or secondary remote location.

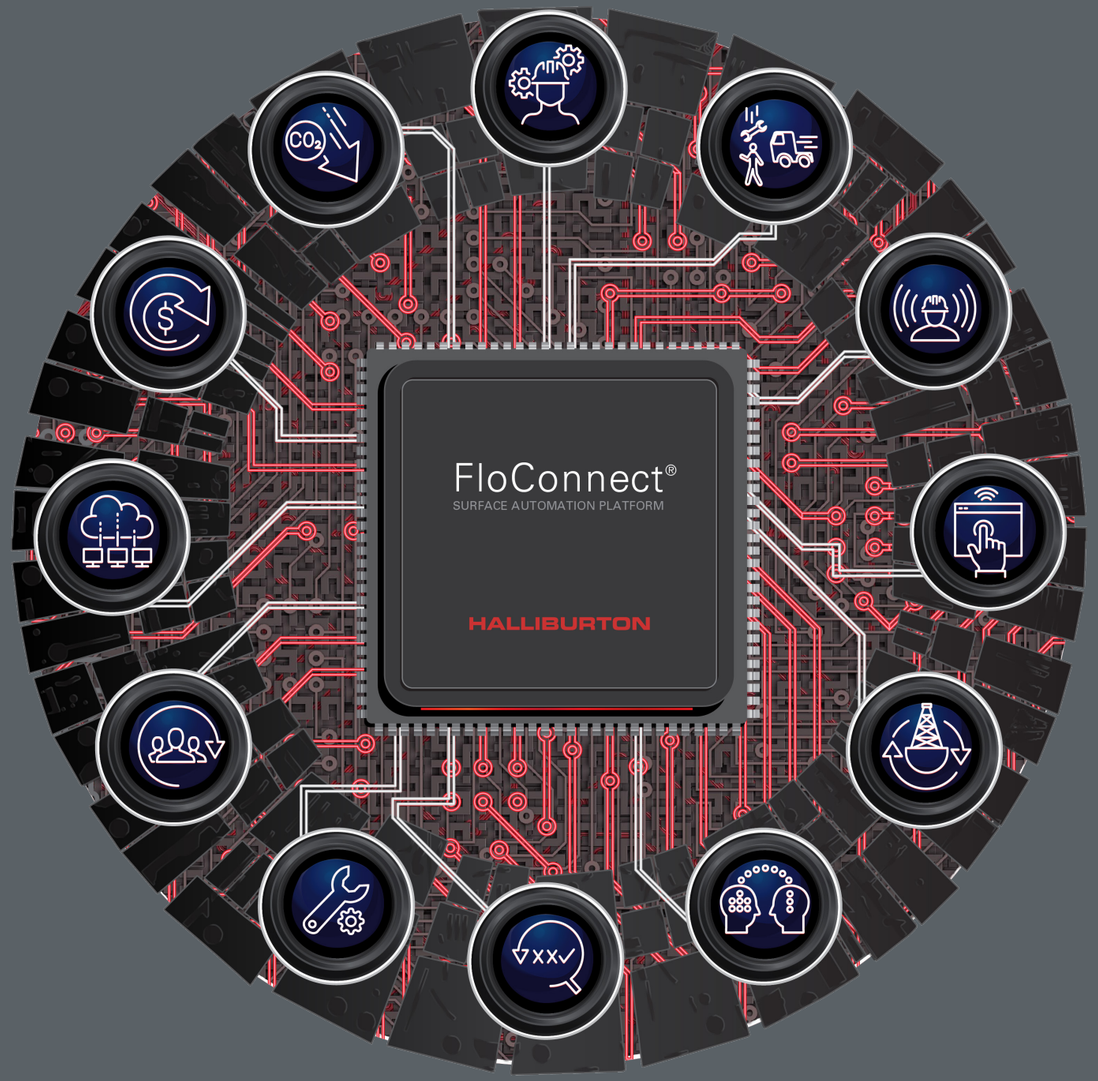
Unlike purely remote-control systems, the FloConnect platform provides advanced decision-making support to the operator, ensuring process conformance while maintaining situational awareness. Additionally, subject matter experts (SMEs) can further support operations via head mounted tablets, allowing field engineers and SMEs to interact.

FEATURES

- Modular plug-and-play technology that easily integrates with other SWT equipment
- Built-in programmable logic controller
- Common data-centric platform with control functionality
- Standard operating procedure (SOP) execution and compliance
- Predictive maintenance alarms and tracking for health checks/status
- Emissions dashboard helps meet current and future regulatory requirements
- User-friendly interface, supporting situational awareness

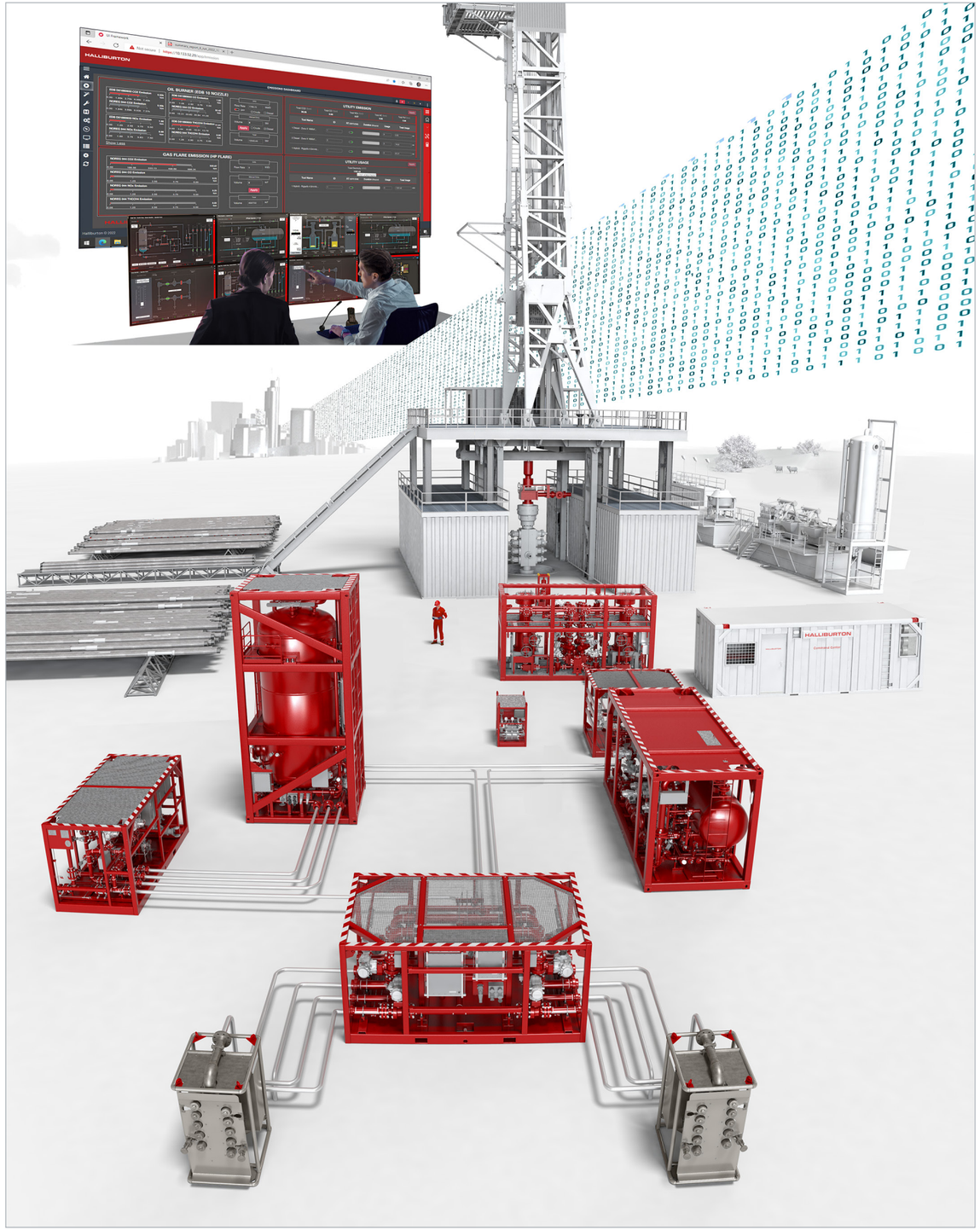
BENEFITS

- Improved operational efficiency by automating manual workflows, reducing errors and improving quality and speed thus reducing rig/operational times
- Leverages expert personnel know-how
- Removes personnel from the red zone supporting dangerous/complex operations
- Workforce deployment optimized
- Provision of critical emissions data to support quantification of produced emissions
- Improved equipment availability and reliability resulting in increased up-time



Level of Automation	Processes and procedures are accomplished with minimal operator assistance.
Out of the Line of Fire	Safety is enhanced by removing personnel from the red zone.
Increased Situational Awareness	Operators can view and monitor well testing operations with the capability to respond immediately when issues are observed.
Fingertip Control	Equipment is controlled using a rugged, hazardous zoned tablet or by means of a command center.
Reduces Variabilities in Operations	Equipment is consistently operated as per standard operational procedures (SOP) and guidelines.
Speeds Up Knowledge Transfer	Operators collaborate and interact with surface equipment through graphical displays, icons, and alarms, which supports personnel development.
Enables Better Decision Making	Operators gain instant awareness through pivotal data visualizations with interactive data analytics, helping with identification and mitigation of potential upset conditions.
Equipment Condition Monitoring (ECM)	ECM brings additional protection layers, which are outside of the traditional emergency shut-down system, through process control and preventative maintenance alarms.
Optimizes Workforce Deployment	Through automation, the number of personnel onsite is optimized, reducing HSE exposure.
Access to Subject Matter Experts (SME)	Real-time video surveillance and/or head mounted tablet's allow SMEs to support operations remotely.
Improves Efficiencies	Automation of manual workflows improves efficiencies in operations by minimizing disruptive events from procedures that are poorly executed.
Emissions Management Solutions	Operators can manage emissions with several technologically advanced solutions, including proprietary hardware and software tools.

Providing a breakthrough in well controllability, process safety/assurance, and emissions quantification, the innovative FloConnect surface automation platform facilitates a truly collaborative work environment, allowing data-sharing access in real time, and process monitoring and control from a command center or secondary remote location.



The highly automated, electronically controlled FloConnect platform is designed specifically to improve on current surface well testing operating philosophies, reduce variabilities in operations, optimize workforce deployments, and enhance safety by removing personnel from the red zone.

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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