# Oil and Gas Software Solutions















# Real-time Supervision of Assets for Operational Excellence

Oil and gas production, transmission and refinement involves constantly evaluating a variety of assets dispersed across vast areas. The ability to monitor the condition, production and efficiencies of equipment by operators or executives drives continuous improvement throughout facilities.



#### **Real-time Asset Management**

Integrate assets from different systems into a single hierarchical view with ISA-95 standardized asset classes that define visualization, trending, fault analysis, commanding and workflow. From the wellhead, to meters, to storage tanks and throughout the pipeline, the innovative Asset Navigator provides instant access to equipment.

- · Quickly navigate assets by region or system level
- · Instantly visualize equipment status in real time
- Receive Fault Detection and Diagnostics (FDD) alerts



#### Mission-critical HMI/SCADA

Well supervised production depends on real-time HMI and SCADA systems to deliver scalable mission-critical performance. Advanced graphics and alarm management integrates information from a wide variety of data sources. Establish scalable and flexible alarming and trending modules to maintain proper functionality throughout your wellsite. ICONICS redundant solutions assure the safety of your data in the most critical of circumstances.

- Leverage redundancy with distributed architecture
- · Scale alarms, trends and data historians
- Immediately acknowledge alarms and alerts



### **Reliable Fault Detection and Diagnostics**

Continuously commission assets and receive recommendations for improvement using real-time FDD. Monitor compressor characteristics, ensure proper pipeline flow rate and provide alert notifications for abnormal performance. The moment failures occur, automated fault diagnostics analyze sensor readings and offer a list of possible causes of failure while providing guidance to the service technician. This systematically reduces Mean Time to Diagnose (MTTD) and helps to lower maintenance costs.

- · Access real-time monitoring and reporting
- · Identify system faults and failures with FDD
- Reduce maintenance and determine probable cause



#### **Scalable and Robust Data Logging**

ICONICS' high-performance Hyper Historian™ provides continuous archiving of vital production data for instant visualization, reporting, alarm notification and trend replay. Analyze long-term historical data and compare it to ideal standards for maximum production. Connect to multiple data sources across your enterprise to instantly gather and log large volumes of data from an entire system.

#### **IoT in Oil and Gas Operations**

ICONICS' IoTWorX™ brings a vast communications infrastructure to the oil and gas industry by allowing users to store and access information securely on the cloud. IoTWorX communicates with Microsoft Azure or third-party applications by publishing on-premises data to the cloud via secure transport protocols such as AMQP and MQTT. ICONICS' visualization, data historian, analytics and mobile solutions then subscribe to and consume the data, which gives operators insightful data intelligence from any device. IoTWorX provides oil and gas operators with fully connected facilities to maximize system productivity.

#### **Universal Connectors**

Configuration and integration with OPC UA is simplified with built-in support for native object oriented organization of data. Effortless device discovery on ICONICS' network makes integration seamless and efficient. Information is collected, aggregated and normalized from a wide variety of protocols and interfaces, including:

- OPC UA
- OPC
- BACnet
- SNMP

- Modbus
- Web Services
- Databases
- DNP3

#### **Advanced Mobile Capabilities**

Instantly asses KPIs for your entire wellsite from any mobile device through MobileHMI™. Access all of your data from anywhere at any time with the reassurance that you are operating on a secure network. MobileHMI metrics give field managers and operators the power to remain highly productive from anywhere, while ICONICS' responsive design technology scales all visuals within a system.

#### **Benefits**

- · Reduce engineering and deployment costs
- Enhance system-wide visibility into operations
- Integrate field equipment with MES and IT data
- Deliver rich 2D and 3D visualization
- Ensure highest level of system security
- Protect critical data with redundant solutions
- · Analyze and review real-time and historical data
- Effectively monitor widely dispersed assets

## **Industry Applications**

- Field Production
- Distribution Pipelines
- Storage Facilities
- Drilling Operations
- Well Automation
- Pipeline Leak Detection
- Refineries
- Offshore Production
- Fracking Facilities
- Custody Transfer

Future-proof your HMI/SCADA and Analytics Investment



Founded in 1986, ICONICS is an award-winning independent software provider offering real-time visualization, HMI/SCADA, energy management, fault detection, manufacturing intelligence, MES, and a suite of analytics solutions for operational excellence. ICONICS solutions are installed in 70 percent of the Global 500 companies around the world, helping customers to be more profitable, agile and efficient, to improve quality, and to be more sustainable.

ICONICS is leading the way in cloud-based solutions with its HMI/SCADA, analytics, mobile and data historian to help its customers embrace the Internet of Things (IoT). ICONICS products are used in manufacturing, building automation, oil and gas, renewable energy, utilities, water and wastewater, pharmaceuticals, automotive, and many other industries. ICONICS' advanced visualization, productivity, and sustainability solutions are built on its flagship products: GENESIS64™ HMI/SCADA, Hyper Historian™ plant historian, AnalytiX® solution suite, and MobileHMI™ mobile apps. Delivering information anytime, anywhere, ICONICS' solutions scale from the smallest standalone embedded projects to the largest enterprise applications.

ICONICS promotes an international culture of innovation, creativity, and excellence in product design, development, technical support, training, sales, and consulting services for end users, systems integrators, OEMs, and channel partners. ICONICS has over 350,000 applications installed in multiple industries worldwide.

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## For more, visit www.iconics.com/oilgas

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