Reducing Complex Components in Your Wellhead Panels



System Requirements

- Simplify device connectivity: Reduce the complexity of panel design and networking architecture to minimize engineering effort
- Enable remote diagnostics: The controller should support I/O diagnostic features that instantly send alarms to SCADA upon I/O failure
- Ensure cybersecurity compliance: All devices must meet strict regulatory standards and feature robust cybersecurity measures

Why Moxa

- Seamless intelligent integration: Consolidates control, networking, and field protocols into a single platform with an integrated Layer 2 managed switch to reduce project design time and the engineer's knowledge learning curve
- Fault-tolerant modular hardware design: Features a flexible, LEGO-like mechanical backplane with hot-swappable I/O and comprehensive system redundancies to ensure nonstop field performance and effortless maintenance
- Unified engineering tool: Simplifies configuration, programming, and diagnostics through the IINxpress software, delivering reliable HART I/O monitoring backed by strict multilayered "Security by Design"

Featured Products

ioPAC 6500

Fully modular programmable IIN controllers



In wellhead operations, production performance is only part of the equation. Monitoring other critical operational indicators, such as artificial lift conditions, environmental safety, pipeline corrosion, or cybersecurity, is equally essential for maximizing efficiency, ensuring asset health, and preparing for future challenges. As a result, the increased number of connections and devices in the control cabinet makes cabinet design more complex. It also requires automation engineers to master diverse technologies from multiple device vendors, increasing project integration time, raising spare parts costs, and making troubleshooting more difficult.

Moxa's Solution

This project demanded robust equipment capable of eliminating the traditional "component stack" in control cabinets, reducing engineering hours, and simplifying device management. To ensure continuous field operations, the solution required high fault tolerance, intuitive configuration tools, and seamless maintenance workflows.

The ioPAC 6500 meets these field demands. By consolidating control, field protocols, and networking into a single platform with an integrated Layer 2 managed switch, the ioPAC 6500 eliminates hardware clutter, simplifies panel design, and helps engineers get up to speed faster.

Engineered for uninterrupted operation in harsh environments, the solution features multilayered cybersecurity protection to ensure full compliance with stringent industrial regulations. The unified IINxpress software streamlines configuration and maintenance, delivering reliable HART I/O monitoring and instant remote diagnostics. To guarantee nonstop performance in harsh wellhead environments, the ioPAC 6500 boasts a flexible, LEGO-like mechanical backplane with hot-swappable I/O modules and comprehensive system redundancies, making field maintenance effortless.

