

Oil and Gas Flow-Control Module

Solutions in Action

ProSoft In-Chassis Oil and Gas Flow Computer

Challenge

In an effort to cut costs and increase efficiencies, many oil and gas producers are transitioning from single-well pad fields to multi-well pad sites. These more complex operations have much greater data and control requirements, which can make measurement difficult and lead to higher capital spend for producers.

Solution

ProSoft Technology developed the **In-Chassis Oil and Gas Flow Computer** to reduce the cost and complexity of well pad automation systems. The solution effortlessly integrates with Rockwell Automation® PLCs to help oil and gas producers overcome the obstacles of traditional RTU sites, all while providing greater efficiencies and lower costs.

With the In-Chassis Oil and Gas Flow Computer, producers now have one architecture for control and measurement (figure 1). This can help them reduce their hardware, software and licensing costs, optimize operations, and simplify deployment and scalability for future well site or system expansions.



Background

Using a standalone PLC and flow computer in a well pad site typically requires additional hardware so the two devices can share information. This additional hardware – such as a gateway module, Modbus interface card or separate RTU – adds cost. And the mix of all these devices can complicate revision control, introduce more programming environments and require additional employee skill sets (figure 2).

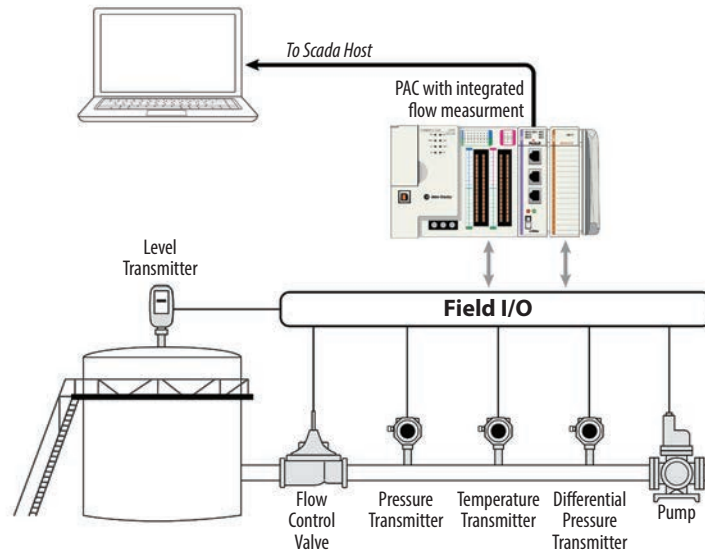
The ProSoft flow computer connects seamlessly with Rockwell Automation® Logix controllers to support a ConnectedProduction™ solution. Consolidating to an integrated solution for control and measurement can help producers simplify their architecture and realize substantial cost savings (figure 1). The higher the well count, the more a producer can save through reduced spare parts, engineering, cabling and personnel training. One producer using an integrated solution saved an estimated \$50,000 in equipment costs per pad.

Also, when data moves from one system to another, integrity is at risk. An integrated solution helps producers maintain data integrity. Furthermore, an integrated solution can provide a more granular level of data, including flow information down to the millisecond, to help protect data accuracy at custody transfer. Producers can also send transmitter data wirelessly to avoid downtime associated with cable maintenance.

For more information, contact your local [sales office or distributor](#).

Gain the Benefits of a Single Architecture

Figure 1 - Modern well site with integrated flow computer



Lower Cost and Complexity

- One architecture for control and measurement
- Elimination of integrated RTUs and standalone flow computers for each well site
- Decreased control house size and minimized cabinet space
- Reduced support and maintenance costs
- Reduced wiring with distributed I/O support
- Elimination of licensing fees for flow computer configuration and additional measurement points
- Easier and cost-effective scalability for future production and system expansions

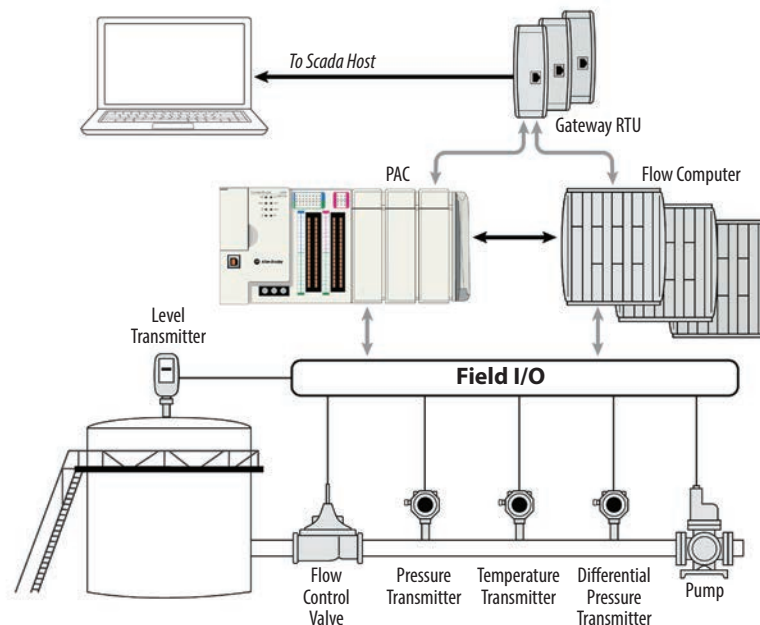
Optimized Production

- Single high-speed connection to a SCADA system
- Improved data integrity and data accuracy at custody transfer
- Integration with the Rockwell Automation ConnectedProduction solution for visualization and optimization of production, from wellhead to point of transfer

Compliance and Compatibility

- Compliant with AGA and API standards
- Independently certified by NMI for OIIML, WELMEC and MID-type approval
- Compatible with all Rockwell Automation PLC systems

Figure 2 - Traditional well site with external flow computer(s)



Product Specifications

Specification	Description
Backplane Current Load	800 mA @ 5 VDC 3 mA @ 24 VDC
Operating Temperature	32°F to 140° F (0°C to 60°C)
Storage Temperature	-40°F to 185°F (-40°C to 85°C)
Shock Vibration	30g operational, 50g non-operational 5g from 10 to 150 Hz
Relative Humidity	5% to 85% RH, with no condensation
LED Indicators	Module Status, Backplane Transfer Status, Application Status, Serial Activity
Ethernet port	
1 Ethernet Application Port	10/100 Mbps, RJ45 Link and Activity LED Auto crossover (Auto MDIX)
Serial Application Ports (P1 & P2)	
2 Serial Application Ports	RJ45 (DB-9M with supplied cable) RS-232, RS-485, RS-422 jumper selectable RS-232, handshaking configurable 500V optical isolation from backplane Full hardware handshaking control, providing radio, modern and multi-drop support
Shipped with Unit	RJ45 to DB-9M cables for each port 6-foot DB-9F to DB-9F null modem cable

Archive records: 1,440 hourly (60 days) and 1,440 daily (4 years)
Temperature rating 0°C to 60°C

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