

## REMOTE AUTOMATION SOLUTIONS

### FREEWAVE FGR3 SERIES 900MHZ INDUSTRIAL RADIO

The FGR3 radio offers best-in-class range and reliability, making it a great choice for connectivity to serial devices in the most demanding applications.

#### Features:

- Versatile - Operate as a Gateway, Repeater, or End Point or with simultaneous Endpoint and Repeater function
- Long Range - Up to 97 km (60 miles) with clear line of sight
- Low Power - Ideal for solar, battery, and DC applications
- Secure - Frequency Hopping Spread Spectrum (FHSS) technology; 128/256-bit AES encryption options
- Industrial Grade - Class 1, Division 2 certified; operating in temperatures from -40°C to +75°C
- Noise Immunity - Superior performance in noise-congested environments

### ZUMLINK™ IQ EDGE INTELLIGENT RADIO

FreeWave's ZumLink IQ offers the ultimate in ease of operationalization for IIoT gains, giving you IQ compute power, storage, and wireless communications links all in a single, hardened hardware product.

#### Features:

- IQ Onboard - Linux-based platform to deploy and run industrial applications. ZumLink IQ comes standard with the IQ Developer Edition with packages pre-loaded for Python, Node-RED, and Node.js. More Editions with 3rd party software coming soon.
- Leverages FreeWave's Network Accelerators - Packet Compression, packet aggregation, forward error correction, and adaptive spectrum learning to maximize network efficiency
- Uses Unlicensed 900 MHz Spectrum - Cost-effective, easy to deploy
- High Speed Data Rates - Five RF link rates supporting from 80 kbps to 4 Mbps
- Long Range - Up to 97 km (60 miles) with clear line of sight
- Secure - Frequency Hopping Spread Spectrum (FHSS) technology; SSH, SNMP, 128- and 256-bit AES counter mode encryption options
- Low Power - 355 mA @ 12V in transmit; 145 mA @ 12V in receive
- Safe for Hazardous Locations - Class 1, Division 2 certified
- Industrial Grade - Operating in temperatures from -40°C to +75°C



### CROSSFIRE INSTRUMENT AIR COMPRESSOR

The LCO Technologies CROSSFIRE Instrument Air Compressor is an ultra-low power device that produces over 1100 Standard Cubic Feet per Day of clean, dry compressed air at 35 PSI using solar power, or over 900 Standard Cubic Feet per Day at 50 PSI. It can allow users to maintain their existing standard pneumatic instrumentation in areas where the goal or requirement is to achieve zero venting.

#### Features:

- Designed to compress air to drive pneumatic instrumentation, eliminating methane venting
- Produces over 1100 Standard Cubic Feet per Day at 35 PSI
- Continuous duty rated
- Low power consumption with no inrush
- Compressor modulates when used with a pressure transmitter optimizing power consumption
- Simple robust design with easy field serviceability
- Minimal maintenance, a little grease is all that is needed
- Substantially less expensive than vaporized propane, the payback relative to the cost of the propane can be less than 3 months – put that propane budget back on the bottom line

### CROSSFIRE SOLAR POWERED CHEMICAL INJECTOR

The LCO Technologies CROSSFIRE Solar-powered Chemical Injection Pump is an ultra-low power device that is designed to reduce chemical costs, maintenance costs and methane emissions. It is a durable, energy-efficient solution like no other that can run for weeks – not days – even in areas with limited sunlight. It can be configured with one to four fluid ends, allowing you to replace up to four pneumatic pumps with one unit.

#### Features:

- Eliminates methane venting from chemical injection
- Precise chemical injection
- Delivers chemical proportionate to flow
- Consistent chemical dispersion rate
- Delivers <1L/day to 720 L/day up to 10,000 psi
- High system autonomy
- Ultra-low power chemical injection pump that can run weeks, not days, using solar and batteries on most applications
- Standard 5100 series fluid ends for field familiarity
- Customization available based on fluid end size, packings, and O-rings based on application
- Comes complete with a smart controller that has MODBUS communications built in as a standard
- Option to upgrade to an advanced controller that has standalone automation capabilities
- User friendly operator and technician interface that is password protected

### FB3000

- Powerful, easy-to-use controller that offers scalability and expanded data capacity
- This flexible device for ultra-reliable measurement and control of liquids and/or gas offers users the customized logic and control needed to meet application requirements.
- Cloud-enabled functionality for licensing simplifies day-to-day operations. Digitally transform your operation by streamlining complex processes with the agile, intuitive FB3000 RTU. This new controller is also part of Emerson's next-generation FB Series measurement and control platform that offers a common set of configuration tools, including FBxConnect™, to expedite setup and facilitate commonly performed tasks.

### SERIES FB2100/FB2200/FB1100/FB1200

- A cost-effective, low-power, field-mount or Explosion-Proof device
- Measures and monitors gas and liquids flow for a differential pressure or linear meter run. For Single and/or Duel meter runs.

### OPENENTERPRISE SCADA

- Designed for remote oil and gas applications where data integrity and uptime are essential over complex communications networks, enabling you to improve productivity, enterprise integration, reliability, and profitability.

### DL8000 PRESET

- Designed for controlling the loading and unloading of hydrocarbon liquids in or out of transporting vessels such as tanker trucks, rail cars, ships, storage tanks, and pipelines.
- Capable of performing all blending, measurement, control, and monitoring needed to provide highly productive and rapid operations for most common loading configurations used in the industry.



## ZEDI CLOUD SCADA

### SOFTWARE PACKAGES & SERVICES

- Vital Oil and Gas Field Data Capture Software
- Zedi Access
- Measurement Schematics Software for Wellpads
- Composition Management Software for Oil and Gas
- Roughneck for Control of Oil and Gas Fixed Assets

## BRANDS

DANIEL FloBoss™ ROC™

ROSEMOUNT ROSEMOUNT Analytical

ROSEMOUNT Tank Gauging Zedi Cloud SCADA Solutions

FREEWAVE CROSSFIRE

## SERVICE & SUPPORT

LIFE CYCLE SERVICES

CONTROLWORX

24/7 SERVICE  
225-751-3788  
JOHNHCARTER.COM

CONTROLWORX  
A John H. Carter Company

## MEASUREMENT SOLUTIONS LOCATIONS

### Corporate Office

17630 Perkins Rd.  
Baton Rouge, LA 70810  
225-751-3788

### Metairie Office

28 N. Arnoult Rd.  
Metairie, LA 70002  
504-887-8550

### Mobile Office

2203 Perimeter Rd. Ste 300  
Mobile, AL 36615  
251-653-9898

### Sulphur Office

650 East Highway 108  
Sulphur, LA 70665  
337-583-8420

### Shreveport Office

9656 St. Vincent Ave.  
Shreveport, LA 71106  
318-861-0168

### Lafayette Office

401 Wall St.  
Lafayette, LA 70506  
337-233-8331

## OTHER LOCATIONS

BATON ROUGE  
GEISMAR  
LAFAYETTE  
LAKE CHARLES  
METAIRIE  
MONROE  
SHREVEPORT



## RELATED SOLUTIONS

ASSET MANAGEMENT  
CONTROL AND SAFETY SYSTEMS  
CONTROLWORX: SERVICE & SUPPORT SOLUTIONS  
EDUCATIONAL SERVICES  
ENGINEWORX: ENGINE & COMPRESSOR SOLUTIONS  
FISHER CONTROL VALVES & FLOW

INSTRUMENTATION  
MECHANICAL RELIABILITY SOLUTIONS  
PRESSURE MANAGEMENT SOLUTIONS  
REGULATORS  
VALVES & AUTOMATION  
WATER & WASTEWATER SOLUTIONS

## METERS & CONTROL VALVES

### DANIEL™ GAS ULTRASONIC FLOW METER 3410/3415/3416/3417/3418

- Rapidly processes critical gas ultrasonic flow data to ensure changing flow dynamics are communicated in a matter of seconds.
- Powerful electronics platform providing superior low-flow accuracy and linearity throughout the calibrated flow range. In addition, the streamlined electronics design simplifies installation and reduces maintenance time and costs.

### DANIEL™ LIQUID ULTRASONIC FLOW METER 3804/3810/3812/3814/3818

- Highly accurate meters offering exceptional rangeability and linearity to minimize measurement uncertainty of liquid hydrocarbons.

### DANIEL™ LIQUID TURBINE METER 1200/1500

- Ideal for a variety of crude oil and refined product applications
- Volumetric flow measurement instruments of choice for petroleum manufacturers and distributors worldwide.

### DANIEL™ ORIFICE METER – SENIOR/JUNIOR/OFU/TUBES

- Differential pressure flow meter reigning as the most widely used device for unparalleled measurement accuracy in accordance with AGA 3, API 14.

### SERIES 700 CONTROL VALVES (MODELS 788, 707 AND 500)

- This versatile, cost-effective line enables a single valve body to be equipped with a variety of pilots, allowing one valve to serve multiple functions. Unit-built construction allows all internal parts to be removed without interfering with the valve body or connections, simplifying maintenance and maximizing uptime. Ideal for load racks, batching, tank safety, and back pressure control.

### SERIES 700 NITROGEN-LOADED CONTROL VALVES (MODELS 762, 763, 765, 766 AND 767)

- Engineered to instantaneously respond to pipeline surges and pressure to protect personnel and mitigate equipment damage.



## TANK GAUGING

### 5900S/5900C

- 0.5/2 mm (0.020/0.08 in.) instrument accuracy, reducing level measurement uncertainty to a minimum. It enhances your storage operation by providing certified custody transfer accuracy, better inventory management and reliable loss control data.

### 2410 TANK HUB

- Handles data communication between field devices and the control room, and is available in two versions for single or multiple tanks.

### 2230 GRAPHICAL FIELD DISPLAY

- It provides all tank data directly in the field, and offers different view options. This back-lit user-friendly display is designed for tough environments and can be installed in hazardous (Ex) areas, on the tank roof or at the foot of the tank. It is approved for legal custody transfer.

### 765/565/566

- Enables correct product volume calculations.
- Rosemount multiple spot temperature sensors measure temperature with up to 16 Pt-100 spot elements placed at different heights to provide a tank temperature profile and an average temperature.
- Only fully immersed elements are used to determine product temperature. One of the temperature sensor elements may be installed inside the water level probe. Each sensor is connected to the Rosemount 2240S transmitter.

### 2240S

- It can be used with a Rosemount 565, 566, or 765 temperature sensor. The Rosemount 2240S connects up to sixteen 3- or 4-wire temperature spot elements and an integrated water level sensor.

### 2460 SYSTEM HUB

- Transfers real time tank gauging data from field devices to the Rosemount TankMaster Inventory Management Software and/or a Host/DCS system.



## ROSEMONT ANALYTICAL

### ROSEMOUNT™ 370XA GAS CHROMATOGRAPH

0.5/2 mm (0.020/0.08 in.) instrument accuracy, reducing level measurement uncertainty to a minimum. It enhances your storage operation by providing certified custody transfer accuracy, better inventory management and reliable loss control data.

### ROSEMOUNT™ 570 NATURAL GAS CHROMATOGRAPH

The Rosemount 570 Gas Chromatographs offer the broadest range of analysis options available today in a field-mounted gas chromatograph.



## FABRICATED SOLUTIONS

### DESIGNED & BUILT TO CUSTOMER SPECIFICATIONS

- Built to Customer Specification
- Blending Solutions
- Turnkey
- Changeover Panels
- Custom Solutions
- Customized Building/Shelter



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ROSEMOUNT™ Tank Gauging Zedi Cloud SCADA Solutions

FREEWAVE™ CROSSLINE™

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