# MODULUS

**Web SCADA Controllers**

# Web Technology at work for you

**MORE FUNCTIONALITY FOR LESS, WITHOUT MAINTAINENCE AND SERVICE FEES.**

Modulus SCADA controller modules utilize the latest web technology. There's no software to buy or install *. Just log in with your favorite browser and go! Windows, Apple, desktops, laptops, tablets or smart phones; all work with Modulus. Use one module as a stand-alone node, or snap together multiple units for larger configurations.

With Modulus, everything is included. There's no mysterious remote hosting services "in the cloud" to pay for. Other than monthly carrier fees if you choose to use cellular, there are no ongoing recurring charges or maintenance fees. Technical support and updates are also free.

# Modular solution for
## all of your SCADA needs

**EACH MODULE IS A COMPLETE SCADA SOLUTION WITH ALL SCADA FUNCTIONS INCLUDED AT NO EXTRA COST.**

### PRECISION ANALOG AND DIGITAL I/O

High-resolution isolated and protected analog Inputs ensure accurate readings while rejecting transients, surges, and ground loops. Modulus also supports all Scadaflex II battery powered and wireless remote I/O.

### COMMUNICATIONS

Every module includes Ethernet and from 1 to 5 serial ports. Some also have USB. Access any module on the bus from any Ethernet port; no external Ethernet switches are needed. All modules support Modbus, as well as Allen Bradley and GE PLC communications. Some also support DNP3, BACNET, HART and SDI-12 protocols.

### HISTORICAL TRENDING AND EVENT LOGGING

Each module has a solid state flash disk, as well as a micro SD memory card slot. Record over 100 years of data! Retrieve and display historical data with the built-in web tools, and download or automatically transfer them as standard spreadsheet files to your computer.

### REPORTING

Reports can be created in minutes with live values, production totals, trend and event data, alarm summaries, etc. Customize reports with your own logos and graphics. Call up reports on demand, or have them automatically e-mailed to you or transferred to a "Host" server.

### GRAPHICAL, MOBILE, AND LOCAL HMIs

Configurable graphical web and mobile device interfaces are built into every unit. The front panel display can also be customized to show live process values and states, and make setting changes.

### ALARMING

A Modulus system can manage thousands of alarms, annunciating them by text message, e-mail, voice and simple contact closures. Each module maintains a journal file of when alarms occurred, when they were acknowledged, by whom, and when the alarm conditions cleared.

### PROGRAMMABLE LOGIC

Each module supports programmable logic; any mix of ladder logic, function block and text languages. Programmable logic can be used for anything that can't be done with the built-in fill-in-the forms web pages. A full IEC-61131 package is an option for advanced units.

### PID AND PUMP CONTROL

Since SCADA systems frequently utilize Proportional, Integral and Derivative (PID) and pump control, Modulus modules have built-in support for four PID loops and a triplex Pump Controller (float or level control with alternation).

### REDUNDANCY

Modulus modules and power supplies support redundancy for enhanced reliability. If a unit goes off-line, a designated backup can take over automatically.

### GAS FLOW CALCULATIONS

Some modules include a multi-run gas flow computer with AGA-3, AGA-7, AGA-8 and V-Cone calculations. They exceed the requirements of API 21-1 and the Canadian ERCB Directive 17 for accuracy, logging, and calibration with long-term journaling of production, events, configuration and calibration.

**\*** Note: a one-time purchase of a Scadabuilder license pack is required to run Scadabuilder programs on Modulus Advanced Communications modules.

## MODULUS MODULES HAVE . . .

• PRECISION ANALOG AND DIGITAL I/O

• ETHERNET AND SERIAL COMMUNICATIONS

• HISTORICAL TRENDING

• EVENT LOGGING

• REPORTING

• GRAPHICAL, MOBILE AND LOCAL HMIS

• ALARMING

• PROGRAMMABLE LOGIC

• PID AND PUMP CONTROL

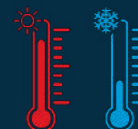• REDUNDANCY SUPPORT

• GAS FLOW CALCULATIONS

## EASY EXPANSION

Snap modules together on DIN rail mount pluggable connectors. No card racks are required. Modulus modules can be distributed up to 1000 feet with just two low-cost twisted pair wires.

## FRONT PANEL HMI

All Modulus I/O and communications modules have a built-in HMI display for local configuration, as well as I/O and status display. It is also easily customized to display any internal values and to make setting changes.

## INDUSTRIAL HARDENED

Modulus modules are rated for continuous operation over a $-40^{o}C$ (-40$^{o}$F) to +70$^{o}$C (+158$^{o}$F) extended temperature range. All internal connectors are gold plated, and the circuit boards and components are conformal coated to resist corrosive environments. Every Modulus module is backed by an industry leading 3-year factory warranty.