

# The Sage Advisor

## SCADA, SECURITY & AUTOMATION NEWSLETTER

Volume 16, Issue 2 • Fall/Winter 2006

A Publication of Sage Designs, Inc.



### SCADAPack<sup>2</sup> – The Next Generation Controller

Control Microsystems has recently introduced the first of its next generation of SCADAPack models, the SCADAPack<sup>2</sup>. Neatly packaged in a small footprint, this sophisticated RTU offers high performance and low-power functionality with built-in Ethernet, expanded memory and USB ports. With the combination of 32-bit processing, high speed LAN, USB communications and advanced power-saving features, this unit offers more than the customer expects.

In addition to the features found in all SCADAPacks, the SCADAPack<sup>2</sup> provides a more sophisticated platform for functions such as flow calculation and PID control. The

central processing unit includes a 32-bit microprocessor with 16MB FLASH ROM, and 4MB CMOS RAM for use in firmware and application programming. Custom power-saving features include multiple configurable power modes, Sleep Mode, 24V power shutdown as well as serial/LAN/USB port and clock frequency power consumption control.

The basic SCADAPack<sup>2</sup> comes with 6 analog inputs, 8 digital inputs/outputs, 3 counter inputs (including two turbine meter inputs) and 2 optional analog outputs. With the addition of the optional 5606 lower I/O module, an extra 32 digital inputs, 16 digital outputs, 8

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### SAGE SITING:

### La Palma's City Wide Facilities Security System

The Public Works Department of the City of La Palma, working with the Police Department in order to respond to the EPA's 9/11 Vulnerability Assessment, started making plans to implement a Security System to protect their water supply and other facilities in the city. Director of Public Works & City Engineer, Ismile Noorbaksh, stated, "Like most small cities, La Palma's budget and manpower considerations influenced the design and scope of the project." Sage Designs was asked to offer suggestions and budgetary figures to provide Industrial Video & Control (IVC) Cameras and Software for the Water Division of the Public Works Department. Using Urban Area Security Initiative (UASI) Grant funds, provided by Homeland Security through the Police Department and City's Water Funds, the City was able to move ahead with their program. The original plan was to provide Wireless Security Video for the two Reservoirs and Well sites. After a preliminary design and discussion, it was determined that the La Palma Police Department was also interested in sharing the technology for City's communications and security infrastructure. The 24/7 manpower of the Police Department would be involved with the monitoring of the security cameras.



Sample PureActiv Video Management Screen

Police Captain Eric Nunez said, "La Palma's highest priority with the available budget was to install and implement a secure and scalable Communication System for the City that could be expanded in the future." Sage Designs recommended the Firetide 4.9 GHz for Public Safety and First Responder FCC licensed Radios. The AutoMesh™ protocol allows the mesh to form automatically, and overcomes line-of-sight barriers that can cripple other wireless solutions. Seamless operation outdoors and indoors allows the network to extend into public facilities, such as administrative buildings, stadiums and convention centers. And where wiring does exist, the Ethernet Direct feature allows for use of a full-duplex 10/100 Mbps link to enhance performance even further. The Hot Port wireless mesh network is ideal for enhancing

*Continues on page 2*

### SCADA Seminars

Hosted by Black & Veatch

Our Fall SCADA Seminars will be hosted by Black & Veatch Corporation and be held at their offices in Rancho Cordova and Irvine, CA. Engineers from Black & Veatch will be discussing the topic of communications and protocol considerations in water and wastewater SCADA system design. Other speakers will address related topics.

Black & Veatch is a leading global engineering, consulting and construction company with the mission of *Building a World of Difference*®. Founded in 1915, Black & Veatch specializes in infrastructure development in energy, water, telecommunications, federal, management consulting and environmental markets. In 2006,

Engineering News Record (ENR) ranked Black & Veatch #1 Top 20 in Power Design Firms, #5 in Top 20 of both the Water Design and Sewer Waste Design Firm categories, and #10 Top 500 Design Firms.

Register for this free seminar using the form inside.



### Inside This Issue

- Free SCADA Seminars
- SCADAPack/Ladder Logic & ClearSCADA Training
- AMR Systems Using DNP3 Protocol
- New Products
- SCADAPacks in Paradise

# Sage Advice

## AMR Systems Using DNP3 Protocol

With the ever increasing popularity of DNP3 protocol in water systems, new uses for its features are emerging all of the time. The latest that we have seen is in the use of Automatic Meter Reading (AMR) systems. While there are a plethora of AMR systems for reading household utility meters, the needs of systems catering to Water utilities billing large municipal, commercial and industrial customers are not being served by these systems.

One of the problems is that the typical AMR system is equipped with a very short range radio transceiver and communicates to a mobile meter reading system that is driven around residential areas gathering information as it passes within range. While this is fine for totals, even the more modern systems with data logging capabilities can miss important peak flow data which can greatly affect billing rates in some systems.

Like the electric utilities, many water wholesalers rates to large customers have charges calculated on such things as maximum demand on a daily or monthly basis. The idea being that you can use financial incentives to get your large customers to use water on a more consistent flow basis rather than taxing your delivery system during brief periods. This means that simply getting the flow totals at the end of the billing period will not be sufficient and the price per volume of water used varies in much the same way as your electric utility rates vary with the time of day usage. Using this type of billing scheme can allow water suppliers to forestall expensive improvements

to their delivery systems.

SCADA systems using traditional polled protocols such as Modbus may not even be as good as data logging meters in many ways, as the rate of data retrieval is limited to your polling cycle. Programming an RTU to grab peak rates doesn't improve the situation much because without trending data, customers can dispute a single reading as noise or some other anomaly.

An RTU using DNP3 protocol can answer all of these concerns due to its ability to automatically log data on an exception basis with time stamping. This provides historic trend information synchronized across the system for complete and accurate usage information.

The open nature of the IEEE standard for DNP3 means that there are multiple vendors that can supply both the RTUs and the data acquisition software so requirements such as ODBC and SQL capabilities for databases can be met. Sampling rates don't matter either, as DNP logs data on an exception basis so that every change in input is logged based on a dead band, and can report by exception to the host software on a real-time basis, after a number of exceptions has been exceeded and/or on a periodic basis.

While this use for DNP3 doesn't have an application in many water systems, it does show how the powerful feature set of this open protocol can be used by systems with diverse needs. Please visit [www.dnp.org](http://www.dnp.org), [www.ControlMicrosystems.com](http://www.ControlMicrosystems.com) or [www.SageDesignsInc.com](http://www.SageDesignsInc.com) for more information.

## SAGE SITING: SCADAPacks in Paradise

FluidIQs (formerly Control Manufacturing Co.) has completed the installation and startup of an island-wide telemetry and control system for the County of Kauai, Department of Water (KDOW), on the Island of Kauai, Hawaii. The SCADA System initially integrated 83 Control Microsystems' SCADAPack32 SCADA controllers at remote sites (wells, intake shafts, tunnels, storage tanks, reservoirs, and booster pump stations) with KDOW's Pua Loke complex. This will allow KDOW personnel to monitor and control the island-wide water system from a central location.

The KDOW operates water production and distribution facilities to provide the entire island with potable water. The system is distributed over a large geographic area and links all major population centers on Kauai. There are approximately 17,000 meters in the KDOW system and an average system demand of approximately 11 million gallons per day (MGD).

The system is 100% ground water-based, drawing from a series of wells, intake shafts (pump-equipped sumps that naturally fill with water), and tunnels (free flowing ground water sources). There are a number of separate "systems" in the overall water system, and with the exception of inter-tie points, these zones are hydraulically independent. Each system or zone consists of one or more wells (including intake shafts and tunnels), tanks, and in some cases booster stations (tank-to-tank boosters as well as some in-line pressure boosting stations).

The rugged terrain of the island posed many challenges for establishing a reliable communication network. Timberline Engineering, of Albuquerque, NM, provided the



conceptual design for the communication network incorporating several different technologies to establish connectivity from the remote sites back to the Pua Loke complex. The solution incorporates 900 MHz unlicensed frequency hopping spread-spectrum radios and Verizon Hawaiian Frame Relay circuits. There are nine remote radio submaster sites, each of which communicate with nearby remote sites using radios (and in some cases leased line telephone circuits). The submaster sites are connected back to the Pua Loke complex via the telephone company's Frame Relay circuits.

The Pua Loke complex is the home of the redundant SCADA computers, and SQL Database computer for historical information, four SCADA Workstations, two Operator Workstations, and all the infrastructure network equipment.

The project included providing and installing six monopole radio antenna towers varying in height from 40 feet to 100 feet tall. Almost all of the sites required instrumentation of some sort to provide information about storage tank levels, booster pump pressures and water flow rates. Back on the Mainland, the well-tanned and relaxed FluidIQs team is looking forward to more opportunities to work with Timberline Engineering and the County of Kauai, Hawaii. For more information, contact their Napa, CA headquarters at 707-258-8400 or visit [www.FluidIQs.com](http://www.FluidIQs.com).

**FluidIQs**

## SAGE SITING: La Palma's City Wide Facilities Security System

*Continued from page 1*

public safety with around-the-clock video surveillance. The IVC Digital video cameras can be installed wherever needed. The multiple real-time video feeds are then delivered simultaneously to a central location for monitoring and/or recording.

A Specification was written to include the IVC Digital Cameras at 3 sites initially, using a total of 13 Cameras, both PTZ and Fixed Manual Zoom. Multiple cameras were linked to the radios via Cat 5 Cable and Control Microsystems' Ethernet 5 port switches. The Firetide 4.9GHz

Radios were installed at each site which will give the City the ability to view Wireless Security Video, and the capability of providing commercial Wi-Fi, multipoint-to-multipoint communications throughout the City. At the Central Monitoring site, Sage Designs was able to add PureTech Systems' PureActiv wide-area surveillance management software to the specifications to complete the City's Security System. PureActiv Security Management software is based on a Geographic Information System, including advanced video

scene analysis, and policy-based detection and notification rules engine. This software will allow the Police Department to minimize nuisance alarms, and maximize situational awareness. The software will provide advanced scene analysis, which turns cameras into smart object detection and tracking sensors. A 50" Flat Screen Monitor was provided for viewing multiple camera views, including satellite overviews of the city, various sites, and camera positions.

Installation and wiring of the IVC Cameras, Firetide Radios, and the

PureActiv Management Hardware and Software was awarded to Halcyon Electric, the contractor for the project. Halcyon Electric worked closely with the City of La Palma, Sage Designs, and the suppliers to install, wire, and test the system. Training for the city personnel was provided by the manufacturers, IVC for the cameras, and PureActiv for the management software. The City of La Palma looks forward to expand the system as funds become available.



Now you can have a functional SCADA system in hours and for less than you thought possible!

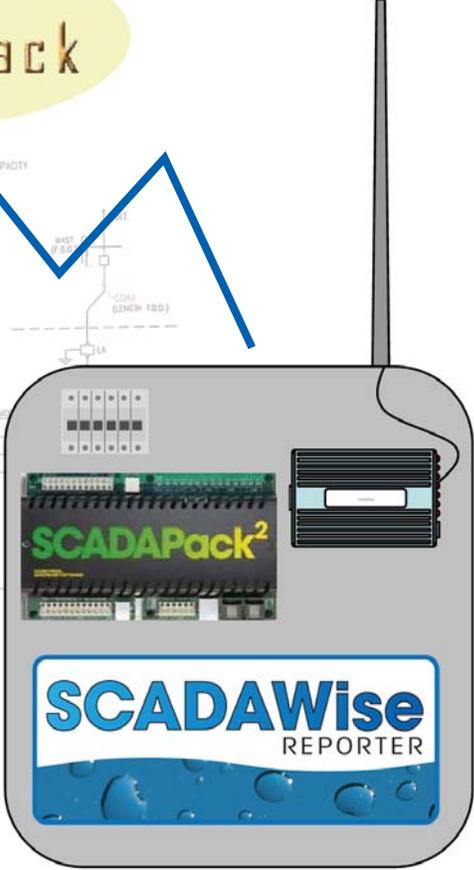
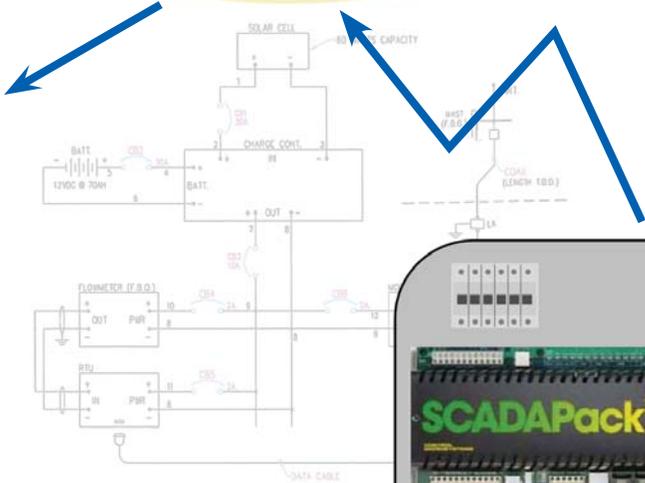
Enter Turbidity Performance Standard (A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub>, or A<sub>4</sub>) **A<sub>3</sub>** **NTU**  
**MONTHLY SUMMARY OF MONITORINGS**  
**FOR SURFACE WATER TREATMENT REGULATIONS**

System Name: \_\_\_\_\_ System Number: \_\_\_\_\_  
 Plant Name: \_\_\_\_\_ Month/Year: **Jul 01**

Turbidity under turbidimeter every four hours (2010)

Date	Flow Recycled Water Turbidity	Flow From Water Turbidity	Flow Settled Water Turbidity	Max to 4:00 am	4:00 am to 8:00 am	8:00 am to Noon	Noon to 4:00 pm	4:00 pm to 8:00 pm	8:00 pm to Midnight	Average
Mon 1										
Tue 2										
Wed 3										
Thu 4										
Fri 5										
Sat 6										
Sun 7										
Mon 8										
Tue 9										
Wed 10										
Thu 11										
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Wed 24										
Thu 25										
Fri 26										
Sat 27										
Sun 28										
Mon 29										
Tue 30										
Wed 31										

\*For continuous turbidity monitoring, a discrete turbidity value must be taken off the record sheet at four hour intervals.  
 \*New under turbidity must be monitored after returned flow.



- The SCADAwiseReporter will automatically collect and transmit your input data to the SentryTrackSystem.
- Monthly forms can be filled out automatically and submitted via the web.
- Data is stored on a secure server for guaranteed data security.
- Components are the building blocks to a complete open architecture SCADA system.
- Completely pre-configured RTU that can be customized by local integrators for your control application.
- The Control Microsystems' SCADAPack<sup>2</sup> supports industry-standard protocols and programming languages, providing an open architecture entry into a powerful and flexible SCADA system.

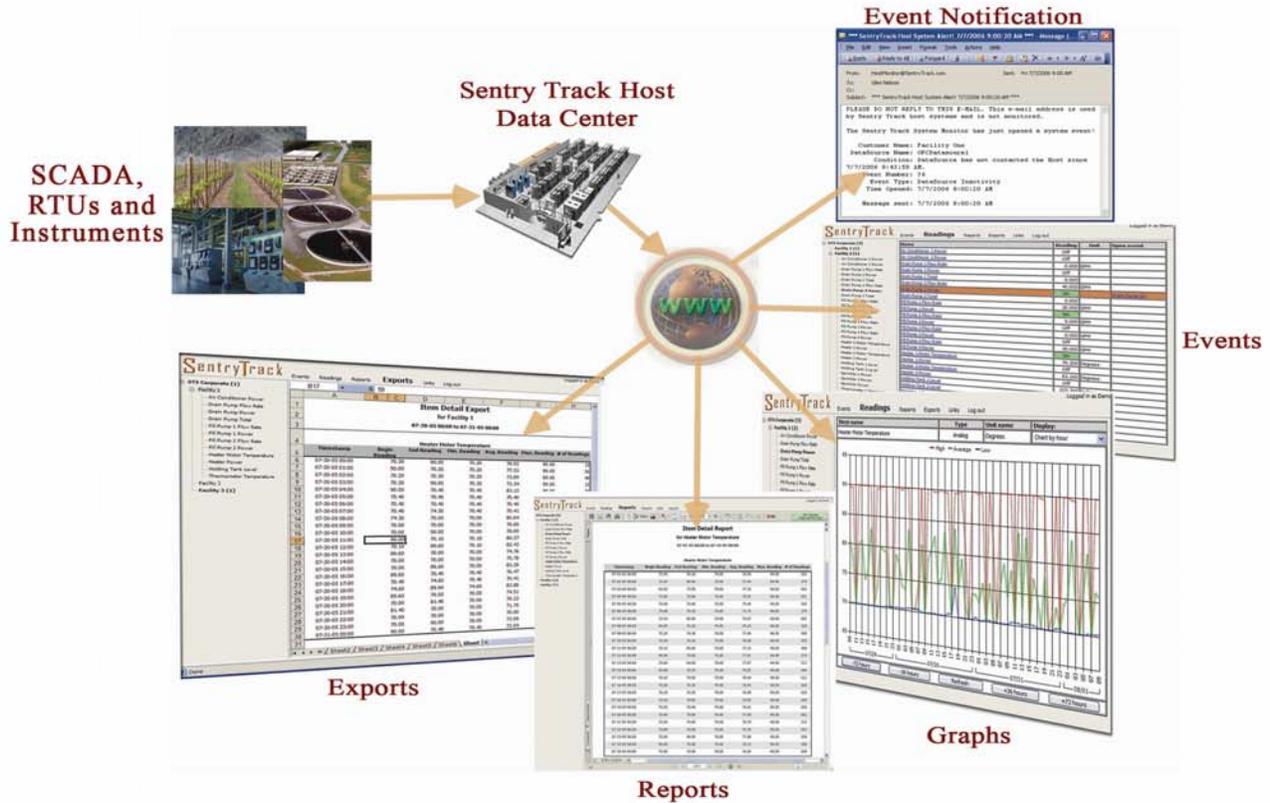
Call or email Sage Designs for a demonstration or quotation

1-888-ASK-SAGE or info@SageDesignsInc.com



# Sentry Track

## Web-Based Data Collection, Monitoring and Reporting



### Sentry Track Features

- Provides a low cost solution that gets your sensor readings to the Web.
- Collects sensor readings from your SCADA Software, PLC, or RTU.
- Stores near Real-Time and Historical data.
- Monitors sensor readings and provides email Event Notifications.
- Secure website contains numerous Views, Reports, Graphs and Exports.
- Fast and easy implementation.
- Lower cost than many traditional SCADA solutions.

For more information contact:

Sage Designs, Inc.  
150 Shoreline Hwy. Suite 8A  
Mill Valley, CA 94941-3634  
1-88-ASK-SAGE

or

Visit the Sentry Track Website at [www.sentrytrack.com](http://www.sentrytrack.com)

# Free SCADA Seminars

**Nov. 1, 2006**

Black & Veatch  
10995 Gold Center Dr., Suite 100  
Rancho Cordova, CA 95670  
8:00 AM – Noon

**Nov. 2, 2006**

Black & Veatch  
15615 Alton Parkway  
Irvine, CA 92618  
8:00 AM – Noon

## A G E N D A

Sage Designs' Fall SCADA Seminars will be hosted by Black & Veatch Corporation, a leading global engineering, consulting and construction company specializing in infrastructure development in energy, water, information and government markets. The seminars will focus on how communications and protocol considerations impact the design of water and wastewater SCADA systems.

Featured Black & Veatch speakers will include Dave Roberts, P.E., National Practice Leader - I&C Services and Dave Kubel, P.E., Regional I&C Manager. Tony Sannella, President of Sage Designs, will speak on the differences between Modbus and DNP3 with an emphasis on why the IEEE standard DNP3 is finding a home in the water and wastewater SCADA industries. Other speakers will address related topics.

This technical presentation is intended for people responsible for specification, engineering, maintenance or implementation of SCADA systems who wish to gain a better understanding of the world of SCADA communication systems and protocols. We have limited seating for this event and ask that only persons interested in SCADA attend.

*Pre-registration Required*

## Registration Form

Complete and fax to 1-888-FAX-SAGE or 415-331-8969.

- I would like to attend:**
- Rancho Cordova Seminar on Nov. 1, 2006, 8:00-Noon
  - Irvine Seminar on Nov. 2, 2006, 8:00-Noon

**Name:** \_\_\_\_\_ **Title:** \_\_\_\_\_

**Company:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **Fax:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**I want to receive CEUs for attending (4 hours):**

*There is no charge for this event, but we would appreciate a call if you need to cancel your reservation.  
Seating is limited.*

# Fall Training Classes

## ClearSCADA

## SCADAPack

### ClearSCADA Programming Course November 13-16, 2006

- Day 1 8AM - 4PM Installing ClearSCADA, Introduction to ClearSCADA, Components, Using ViewX, Using WebX, ClearSCADA Help
- Day 2 8AM - 4PM Configuring using ViewX, Database Organization, Basic Telemetry Configuration, Creating Mimics, Creating Trends
- Day 3 8AM - 4PM Configuring using ViewX, Templates & Instances, Logic Languages, Security, Communications Diagnostics
- Day 4 8AM - 4PM Reports, System Configuration, System Architecture, Questions

**Cost:** ClearSCADA Training Course \$1,875

### SCADAPack & TelePACE Ladder Logic Programming Course November 28-30, 2006

*An optional SCADAPack or SCADAPack32 is available at a special price\* with the course—an excellent way to get started using Control Microsystems' Controllers.*

- Day 1 8AM - 4PM SCADAPack controller operation, Series 5000 I/O, TelePACE introduction
- Day 2 8AM - 4PM TelePACE advanced programming techniques and advanced functions
- Day 3 8AM - 4PM Controller communications, Modbus Master/Slave protocol, Diagnostics, Modems

**Cost:** SCADAPack & LLD Course \$1,075  
\* Course with SPT Training Kit \$2,045  
\* Course with SPT32 Training Kit \$2,135

**Instructor:** Tony Sannella, Sage Designs, a Control Microsystems' Factory-certified Instructor.

**Location:** Sage Designs' offices at 150 Shoreline Hwy, Bldg. A, Suite 8, Mill Valley, CA 94941. Those requiring overnight accommodations should call the Holiday Inn Express next door, 160 Shoreline Highway for reservations at 415-332-5700.

**What should I bring?** It is a requirement of the course to bring a Laptop Computer with a minimum of Win98 with 1GB of free disk space, 512MB RAM (1GB preferred), CD ROM and RS232 serial port. You also need to have software permissions/passwords to install course software on your PC.

**What is provided?** Lunch and coffee, soft drinks and snacks each day.

*\* Optional training kit for SCADAPack & Ladder Course Only - Limit one per organization.* Training Kits will be shipped N/C to training facility, provided your registration is received approximately 3 weeks before the first day of the course. **SPT Training Kit**, a \$3,748 value, consists of a SCADAPack Controller (#P1-132-01-0-1), TelePACE Ladders, Hardware Manual (on CD-ROM), 5699 I/O Simulator board, AC/2 Transformer, & programming cable. **SPT32 Training Kit**, a \$4,567 value, consists of a SCADAPack32 Controller (P4-102-01-0-1), TelePACE Ladders, Hardware Manual (on CD-ROM), 5699 I/O Simulator board, AC/2 Transformer, & programming cable.

### Please send me the Registration Form

- ClearSCADA Course
- SCADAPack & Ladder Logic Course

**Sage Designs, Inc.**  
SCADA & Industrial Automation Products

Name (please print):	Title:
Company:	Phone:
Address:	Fax:
	Email:
City/State/Zip:	

**\* \* \* Registration Deadline: 3 weeks before 1<sup>st</sup> day of course \* \* \***

All registrations are subject to cancellation fees. A confirmation notice will be sent to all registrants on or before the deadline date.



## Xtreme Support SCADAPack & ClearSCADA Support

Need to know what is the latest version of your ClearSCADA or TelePACE Ladder Logic Editor, or perhaps obtain a dimensional drawing of a SCADAPack module? Customers can register at Control Microsystems' INFOCenter and access product manuals, dimensional drawings and technical bulletins. One feature of the INFOCenter is that a member can subscribe to be notified of changes to a document, so that you can, for example, request notification of technical upgrades to CMI software, such as ClearSCADA or TelePACE Ladder Logic Editor,

then when a change is made to that document, those who subscribed will be sent an e-mail notification advising them of the change, thus keeping you informed of the most current information about your CMI products. The login URL is accessible through CMI's website: Go to [www.controlmicrosystems.com](http://www.controlmicrosystems.com), select the "Support" tab, "Online Technical Support", "INFOCenter Sign-In".

### Enhanced Training

Control Microsystems has enhanced their training offer with new courses, people and facilities,

making access to effective training easier for all our customers. In addition to standard courses on SCADAPacks, ISaGRAF (IEC 61131), RealFLO and ClearSCADA the company will offer advanced courses for ISaGRAF and an entirely new course on DNP3.

The training team has grown significantly with the addition of Patricia Simpson as CMI's full time Training Coordinator responsible for organizing the myriad of activities, and with Joel Weider, Jeff Laytham and Ryan Rogers taking on new responsibilities within the training organization in Kanata, Calgary and Leiden. Adding to CMI's global facilities new training rooms have been placed in our Calgary and Leiden offices. Additionally, Sage Designs offers factory-certified training in California and Nevada.

From an on-line perspective, CMI's Webinar Series will continue this year with a new set of time-efficient educational modules. As always these modules are made available to CMI customers on-line as recorded and downloadable files.

For a complete view of training courses, schedules and on-line content visit CMI's web site: [www.controlmicrosystems.com](http://www.controlmicrosystems.com).

## Cirronet Serial & Ethernet Radios

Sage Designs now offers the Cirronet line of license-free, Spread Spectrum Serial and Ethernet Radio Modems. Since 1987, Atlanta-based Cirronet has created high-performance components for industrial wireless applications. Cirronet's industrial wireless products utilize a proprietary frequency hopping spread spectrum (FHSS) technology to provide reliable, long-range, error-free data communications in extreme environments. Cirronet's industrial products are available in three license-free frequency bands: 900 MHz, 2.4 GHz and 5.8 GHz. Cirronet also offers products incorporating standards-based wireless technologies including Bluetooth, IEEE-802.11, IEEE 802.15.4 and ZigBee. Cirronet's product lines today encompass the industry's broadest range of technologies and options, ensuring that customers' needs are met precisely. For more information, call us at 888-ASK-Sage.



## SCADAPack<sup>2</sup> – The Next Generation Controller

*Continued from page 1*

analog inputs and 2 analog outputs are available; and support for Control Microsystems Series 5000 I/O expansion modules further increases the controller's I/O capacity and versatility.

New to SCADAPack controllers are the USB ports which provide a whole new level of SCADA flexibility. The two USB2.0 compliant ports provide full speed (12MB/s) and low speed (1.5MB/s) connections. One of the ports is a peripheral port used for connection to a PC in configuration and communications applications. The second is a host port to attach third-party hardware such as mass storage devices (memory sticks). The serial ports (one RS-485, one RS-232/485 and one RS-232) offer Modbus RTU, Modbus ASCII and DNP3 communication protocols. For applications requiring high-speed Ethernet LAN or WAN communication, a fully integrated 10/100BaseT Ethernet port furnishes Modbus/TCP, Modbus

RTU/ASCII in UDP, DNP in TCP, DNP in UDP and ICMP (ping).

For those challenging remote applications, a fully integrated, license-free spread spectrum wireless module is available at 900 MHz and 2.4 GHz. The SCADAPack<sup>2</sup> also supports external radios and dial-up modem communications. In solar panel-powered applications the SCADAPack2 offers further cost reduction by allowing smaller solar panels and batteries to be used.

Coupled with real-time communications using industry-standard Modbus and DNP protocols, the SCADAPack2 integrates easily with Control Microsystems' SCADA management software ClearSCADA and the SCADAPack Vision series of operator interface terminals. It also integrates with a wide range of third-party SCADA software, MMIs, DCS systems, intelligent instrumentation and remote I/O control applications.

A flexible controller that can be used in both Modbus master and slave configurations, the SCADAPack<sup>2</sup> supports report-by-exception and store-and-forward messaging and can also make the most of DNP3's advanced protocol functionality, including maintenance polling, unsolicited messaging and data-backfilling.

Control Microsystems is the largest independent supplier of SCADA products in the world. The company produces the renowned SCADAPack™ Series of RTUs, telemetry networking and communication hardware, flow and pressure measurement products, SCADA management software and much more. These best-of-breed products are engineered for remote installation in harsh, unattended environments and thus withstand extremes of temperature and humidity, poor power quality and interference from lightning and other transients.

The SCADAPack Series of RTUs include nine models ranging from the SCADAPack100 that is targeted at small applications, to the SCADAPackES that is targeted at applications requiring Ethernet and very high computational throughput. SCADAPack controllers are programmable in TelePACE Relay Ladder Logic, compiled multitasking C, or IEC 61131-3. All SCADAPacks are available with Ethernet or integrated Wireless options. All SCADAPack products are backed by a three year warranty and the best customer support program in the industry. For more information on Control Microsystems products and services, contact Sage Designs or visit: [www.controlmicrosystems.com](http://www.controlmicrosystems.com).

**CONTROL  
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SCADA products...  
for the distance

# The Sage Advisor

## SCADA, SECURITY & AUTOMATION NEWSLETTER

### Calendar of Events

- September 7, 2006 CWEA Tri-Counties Section September Workshop & Vendor Exhibit, San Luis Obispo, CA
- September 17-19, 2006 CWEA Northern Regional Training Conference (NTRC), John Ascuaga's Nugget, Sparks, Nevada
- September 24-27, 2006 National Rural Water Association (NRWA), Dallas, TX
- September 27-29, 2006 Tri-State Seminar on the River, Primm, NV
- October 2-6, 2006 CA-NV-AWWA 2006 Fall Conference, Hyatt Regency, Long Beach, CA
- October 21-25, 2006 WEFTEC '06, Dallas Convention Center, Dallas, TX
- November 1, 2006 Free SCADA Seminar hosted by Black & Veatch, Rancho Cordova, CA\*
- November 2, 2006 Free SCADA Seminar hosted by Black & Veatch, Irvine, CA\*
- November 9-10, 2006 Remote Monitoring & Networking 2006 & Onsite Power 2006, The Westin Long Beach, Long Beach, CA
- November 13-16, 2006 ClearSCADA Programming Training Class, Mill Valley, CA.\*
- November 28-30, 2006 SCADAPack & Ladder Logic Training Class, Mill Valley, CA\*
- December 5-8, 2006 ACWA 2006 Fall Conference, Disneyland Hotel, Anaheim, CA
- March 4-7, 2007 AWWA IMTech, Austin, Texas
- April 16-20, 2007 CA-NV-AWWA 2007 Spring Conference, Las Vegas, NV  
<http://ca-nv-awwa.org/CA-NV>
- April 17-21, 2007 CWEA Annual Conference, Ontario, CA

\* Download the [registration form](#) from our website or call for more information.

### Your Leading Source for **SCADA**



**CONTROL  
MICROSYSTEMS**

**SCADAPack ClearSCADA**

#### SCADA & Security Management Solutions

Industrial Video & Control Security Cameras  
Lookout™ HMI/SCADA Software  
Cirronet™ Serial & Ethernet Radios  
PureTech Systems PureActiv™ Infrastructure Surveillance Technology  
ProSoft RadioLINX SCADA Radios  
Sentry Track Web-based Info Management  
Teledesign Systems SCADA Radios  
WIN-911® Alarm Notification Software

...Everything to meet your SCADA system needs!

**Sage Designs, Inc.**

SCADA & Industrial Automation Products

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SCADA & Industrial Automation Products

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PRESORTED  
STANDARD MAIL  
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POINT TO POINT

♻️ **SAVE A TREE**  
Address Service Requested