October 2007

NR&D News

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Modules Available Pre-loaded

Did you know you can order your Universal Communication Modules pre-loaded with the application of your choice? The **CUCM**, **MUCM**, or **QUCM** can be shipped with your choice of application pre-loaded and ready to use.

Any application listed online for the Communication Module you order can be pre-loaded onto that unit. Save yourself or your customers the time and trouble of downloading and then loading the application.

Communications Modules can be shipped pre-loaded with the application of your choice by ordering the line item part number PL-CPXXX, where XXX is the application number. Contact Niobrara at 800-235-6723 to find the CP number for your application. List price for this service is only $22.

We can also create custom kits which include the module and items like the loaded program, cabling, power supply, tophat cover, etc. You order one line item and we do the rest.

New Products

SERM-T: Access SY/MAX® I/O with Unity using NR&D SERM-T

The Niobrara R&D **SERM** module is a SY/MAX Ethernet Rack Master. It replaces the CPU or RI interface in a SY/MAX® local or remote rack and maps its I/O to Modbus/TCP. The **SERM** can then be controlled via Ethernet from another PLC or SCADA.

Upgrading from SY/MAX to Unity or Concept is now as simple as adding entries to the Quantum's (or Premium or M340 or Compact or Momentum) Ethernet I/O Scanner for each **SERM** controlled rack. The **SERM's** powerful internal register mapper may be configured using a standard web browser or included PC software. This mapper allows the SY/MAX input and output modules to be logically grouped together to minimize the number of Modbus/TCP messages required for control. Most systems will only need a single combination read+write I/O Scanner entry per **SERM**. The SY/MAX status of each module register is available to Modbus/TCP for monitoring blown fuses, analog over-range, etc. Each output register has its own default value that the **SERM** provides when there is a loss of remote control. For more information on the **SERM-T** visit www.niobrara.com. See the **SERM** online at serm.niobrara.com. List price for the **SERM-T** is $3,995.

SY/MAX rack with SERM-T

Modbus TCP I/O Scanner

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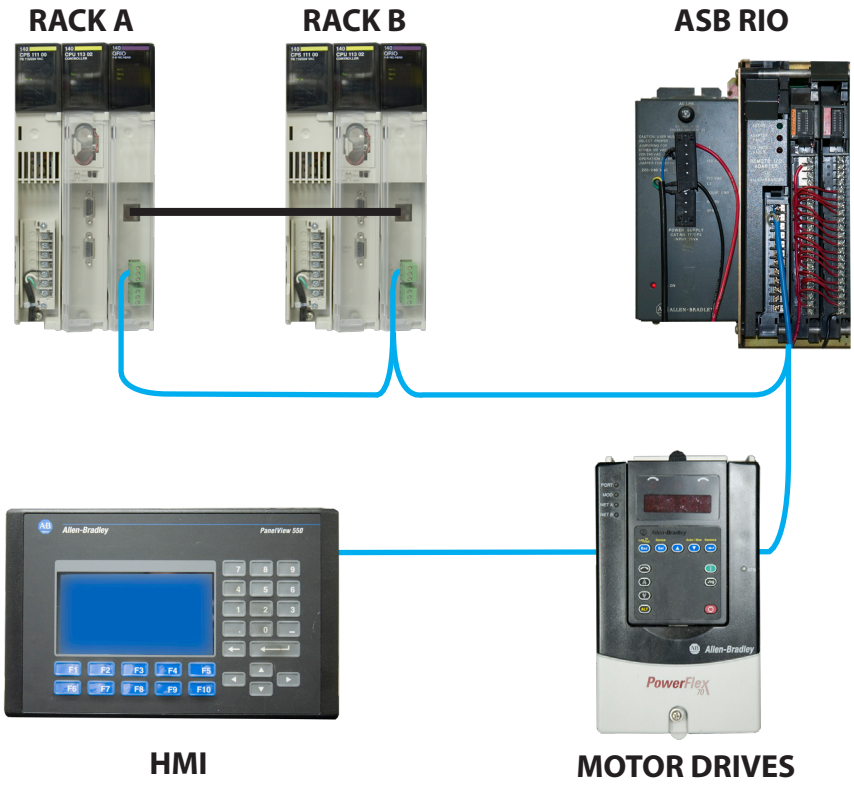
The QRIO-002 now supports Hot Standby

Improvements in the **QRIO** firmware now allow it to operate in a Quantum Hot Standby PLC system. When a QRIO is installed in each of the two primary PLC racks (RACK A and RACK B), the Hot Standby system can control Allen-Bradley™ RIO. The **QRIO** units collectively control up to two separate RIO networks, coordinating during a Hot Standby changeover to smoothly hand off control of the attached I/O. This firmware upgrade is compatible with all hardware revisions of the **QRIO**, but additional cabling is required to allow the **QRIOs** direct communication with one another in Hot Standby installations (contact the factory for more information). The list price for the **QRIO-002** is $3,175. For more information on the **QRIO-002** visit www.niobrara.com.



Custom Programming Available

Do you need to communicate with a device that is not listed on the NR&D web site? NR&D can write a custom program specifically for you. All that is needed is the communication protocol for the devices to be attached and access to samples of the devices. Call us at 800-235-6723 to discuss your application or request a quote.

The programming language is similar to BASIC in its simplicity, but contains powerful communication and register manipulation extensions. Programs are also compiled, rather than interpreted by a runtime module, so they are fast. Using a favorite text editor, the user writes the code for the application at hand. The completed program is then compiled and loaded into the UCM's flash memory. The compiler is furnished with each UCM.

Application Notes

QUCM Thermostat Control

The QUCM and Home Automation.

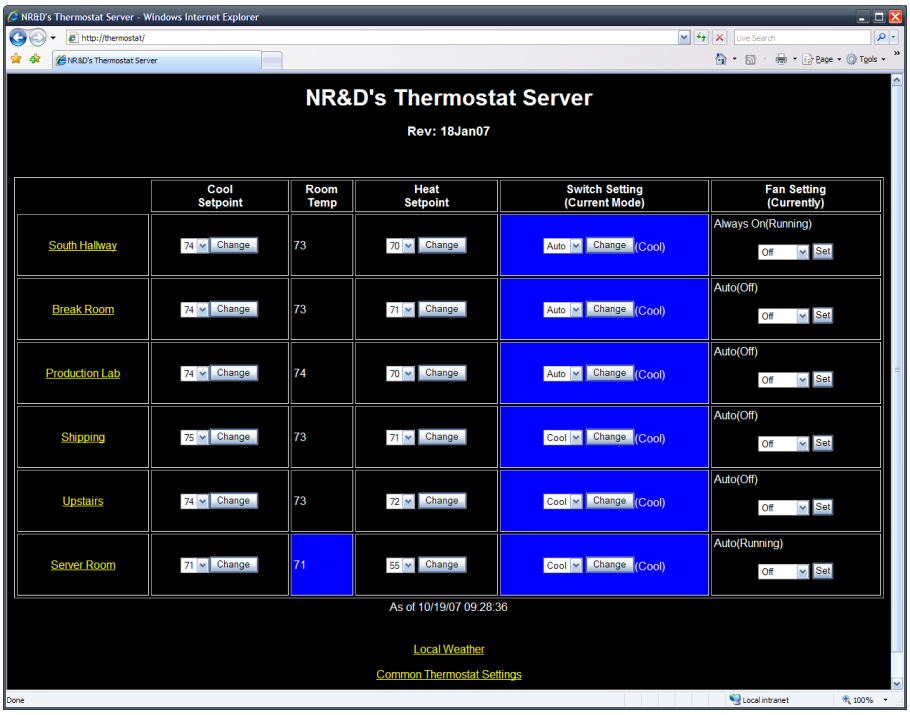
Although the **QUCM** in its current arrangement may not be the ideal solution for the home automation system integrator, this application illustrates what can be done with a little creativity. Looking for an application to showcase the flexibility of the Universal Communication Modules, Kevin Carder, an application engineer here at NR&D, set up a **QUCM** in a stand-alone application to control the thermostats at the Niobrara R&D facility.

Thermostats with serial capability were installed at NR&D and Kevin created an application using the **QUCM** programming language that allows a **QUCM** to remotely monitor and control thermostats throughout the NR&D facility. Remote access to the **QUCM** is available through its web site at thermostat.niobrara.com. The **QUCM** hosts the web-based interface by generating the HTML with data from the thermostats.

Though the web page is available to everyone, the **QUCM** configuration only allows certain clients to make changes through the web site.

In order to keep the thermostats operating together, the **QUCM** synchronizes the time of all the thermostats with the time it downloads from NIST each morning.

This application was a textbook case of what Niobrara R&D can do with your piece of equipment that has serial communications capability. Our engineer requested and received the serial protocol from the thermostat manufacturer and used it to program the **QUCM** to communicate with the thermostats.



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Important Contact Information

Our office will be closed for the Thanksgiving Holiday November 22nd and November 23rd.

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All current literature, price list, and software are available for download at...
www.niobrara.com

For additional literature requests, call or email...
marketing@niobrara.com

For pricing, availability, or order status, call or email...
sales@niobrara.com

For pre-sales product selection advice or technical support, call or email...
techsupport@niobrara.com

Niobrara Trivia

How did Niobrara NR&D get its name?

Email newsletter@niobrara.com with your answer and contact information.
Three correct responses will be drawn at random and receive a prize.

September Trivia Winners

The winners of September 2007 Niobrara Trivia are…… (drum roll)……

Jeffrey Jerabek, Commonwealth Controls Corporation, Richmond, VA
David Baier, Rexel Inc., Dallas, TX
John Cleveland, Schneider Electric, Tulsa, OK

Thank you to everyone that submitted an answer. Be sure to answer this month's question.
You can't win if you don't play.