

NR&D



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SERI

SY/MAX Ethernet Remote Interface

Overview

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

Upgrading from SY/MAX to Unity Pro or Concept is now as simple as adding entries to the Quantum (or Premium or M340 or Compact or Momentum) Ethernet I/O Scanner for each SERI-controlled rack. Users can configure the SERI's powerful internal register mapper with a standard Web browser or included PC software. This mapper logically groups the SY/MAX input and output modules 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 SERI. The SY/MAX status of each module register is available to Modbus/TCP for monitoring blown fuses, analog over-range, etc. SERI provides an individual default value to each output register when there is a loss of remote control.

The SERI does not support Remote I/O from the local rack. Users must install a SERI in each Remote I/O rack.

Features

- Web interface for configuration and troubleshooting
- PC program for online/offline configuration and troubleshooting
- flexible register mapper:
 - to arrange I/O logically
 - pack/unpack bytes or nybbles
 - reverse bit order
- reverts to default values on loss of communication
- default values configurable for every output word
- configuration stored in Flash memory
- supports a list of four allowed controlling IP Addresses
- supports the combined Read+Write message from Modicon PLC I/O Scanners
- supports "Disable Outputs" feature of SY/MAX rack for system testing
- allow upgrade of SY/MAX PLC control system without rewiring I/O

"The SERI gives SY/MAX PLC I/O new life by turning it into Modbus/TCP Ethernet Distributed I/O."

Collaborative Automation
by
Schneider
Electric

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SY/MAX rack with SERI-T



Modbus TCP I/O Scanner



Ethernet

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Supported SY/MAX Equipment

NR&D Modules:

AIM4, EPE5, IBSM, IBSS, RM14K, SPE4, SPXM, UCM4

Register and Digital racks:

CRK-100, CRK-200, CRK-210, CRK-300, DRK-210, DRK-300, GRK-110, GRK-210
HRK-100, HRK-150, HRK-200, RRK-100, RRK-200, RRK-300

Input:

CIM-101, CIM-131, CIM-141, CIM-151, CIM-161, CIM-191, DIM-101, DIM-141, DIM-161,
HIM-101, HIM-131, HIM-141, HIM-151, HIM-161, HIM-191, RIM-101, RIM-121, RIM-123,
RIM-125, RIM-126, RIM-127, RIM-131, RIM-144, RIM-331, RIM-361, RIM-731

Output:

COM-221, COM-231, COM-241, COM-251, COM-252, COM-261, COM-271, COM-281, COM-291
DOM-221, DOM-225, DOM-231, DOM-235, DOM-241, DOM-251, GOM-221, GOM-231,
HOM-211, HOM-221, HOM-231, HOM-241, HOM-251, HOM-261, HOM-271,
RAO-208, ROM-121, ROM-122, ROM-141, ROM-221, ROM-271, ROM-431, ROM-441, ROM-871

Ordering Information

The SERI is available as:

- **SERI-T** SY/MAX Ethernet Rack Master, 10BaseT Ethernet

Related Equipment

The following equipment is also available:

- **SC902** six-foot programming cable

Specifications

Warranty/Manual	The SERI is furnished with a user manual on CD and carries a one-year warranty from the date of shipment. During the warranty period, free firmware upgrades are available. See Niobrara's Standard Terms and Conditions of Sale for additional warranty information.
Dimensions	Standard SY/MAX register module; 1.5" wide by 13" tall by 6.5" deep. Approximately four pounds net. Rugged welded steel enclosure with baked-on finish.
Power Requirements	From SY/MAX bus. 5 volts, 0.8 A.
Keyswitch	Three-position keyswitch (Run, Run/Program, and Halt) on front panel to lock out changes when configured.
Ethernet Port	10BaseT twisted pair Ethernet. Link and Collision indicators on module front panel. Modbus/TCP and HTTP protocols.
Serial Port	SY/MAX compatible RS-422 with same pinout as SY/MAX processor; DB9 female connector with slide lock posts. 9600 baud, even parity, SY/MAX or Modbus/RTU; diagnostics, configuration, and firmware updates only.
Indicators	Power, Run, Program, Memory Error, I/O Error, Outputs Disabled, Configuration Error, Ethernet Error (all on top panel). Transmit and Receive indicators for serial port. Transmit, Receive, Link, and Collision indicators for Ethernet, on bottom of front panel. Fourteen indicators total.
Setup Registers	Processor equivalent registers store the configuration of the unit. These registers are maintained by rack power when present. Setup is restored from Flash memory after power cycle.
Operating Conditions	0 to 60 Celsius operating temperature; -40 to 80 Celsius storage. Humidity up to 90 percent noncondensing. Pressure altitude -200 to + 10,000 feet MSL.

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