



CERI

Compact Ethernet Remote Interface



Overview

The Compact Ethernet Remote Interface, CERI, replaces the CPU or DEA-202 interface in a Compact Primary Rack and maps its I/O to Modbus/TCP. Users can then control the CERI via Ethernet from another PLC or SCADA (See Figure 1). This allows users to update the controller to a newer platform while retaining existing Compact racks and I/O.

Upgrading from any Compact processor to a Unity Pro or Concept-supported PLC is as simple as adding entries to the Quantum (or Premium or M340 or Momentum) Ethernet I/O Scanner for each CERI controlled rack. The CERI's powerful internal register mapper is configured using a standard Web browser. This mapper allows the CERI to group the Compact's input and output modules logically 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 CERI. The CERI provides an individual default value to each output register when there is a loss of remote control.

The CERI includes an LCD display with a five-button keypad. The LCD display and keypad allow access to basic configuration functions such as setting the IP address. The LCD also aids in diagnostics by displaying status and statistics on the front panel. The CERI includes a 3A power supply to power the Compact main rack and expansion racks with integrated Power and Overload indicators and an ON/OFF switch.

The potential Ethernet master of the CERI is limited to a list of allowed IP addresses. The keypad on the front panel allows users to halt or memory protect the rack to prevent unwanted modifications to the configuration through the Ethernet network, and the keypad can also be password protected, as can the Web configuration. CERI stores the configuration in Flash memory for retention during long-term power outages.

The 10/100BaseT Ethernet port provides a standard Cat5 connection to the LAN. A standard RJ-45 Modicon pinout RS-232 serial port supports Modbus/RTU protocol and allows easy configuration and troubleshooting.

"The CERI gives Modicon Compact PLC new life by turning it into Modbus/TCP Ethernet Distributed I/O."



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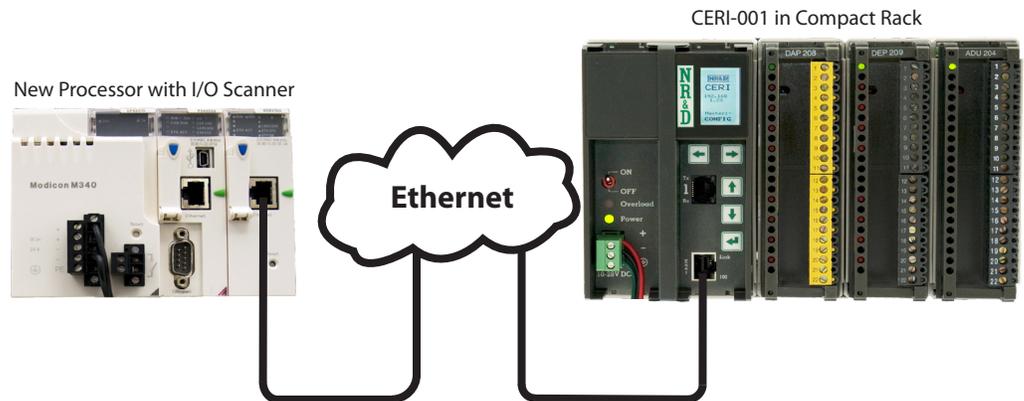


Figure 1: Control Compact Rack with Modbus/TCP I/O Scanner

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Features

- upgrade Compact control system without rewiring I/O
- flexible register mapper logically arranges I/O
- automatic expansion of multiplexed registers on analog modules
- reverts to default values on loss of communication
- supports the combined Read+Write message from Modicon PLC I/O Scanners
- supports a list of four allowed controlling IP Addresses
- default values configurable for every output word
- configuration stored in Flash memory
- supports I/O in up to three Extension Racks
- Web interface for configuration and troubleshooting
- does not require loadables

Ordering Information

The CER1 is available as:

- **CERI-001** Compact Ethernet Remote Interface, 10/100BaseT Ethernet, 3A power supply.

Related Equipment

The following equipment is also available:

- **MM1** RS-232 cable; RJ45 to PC COM: port DB9S

Supported Compact Modules (contact factory about unlisted I/O):

- **Analog/Specialty:** ADU204, ADU205, ADU206, ADU210, ADU211, ADU212, ADU214, ADU216, ADU254, ADU256, ADU257, BFK201, CUCM, DAU202, DAU204, DAU208, DAU252, MOT201, MOT202, ZAE201, ZAE204
- **Discrete:** DAO216, DAP204, DAP208, DAP209, DAP210, DAP211, DAP212, DAP216, DAP217, DAP218, DAP220, DAP250, DAP252, DAP253, DAP258, DAP292, DEO216, DEP208, DEP209, DEP210, DEP211, DEP214, DEP215, DEP216, DEP217, DEP218, DEP220, DEP254, DEP256, DEP257, DEP296, DEP297

Specifications

Warranty/Manual	The CER1-001 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 Compact Double Width Processor module. 3.2" wide by 5.2" tall by 4.5" deep. Approximately two pounds net.
Power Requirements	Input: 10 - 28 VDC, 20 Watts max; Output: 3A at 5VDC. Removable screw terminal power connector included.
Ethernet Port	10/100BaseT twisted pair Ethernet. Link and 10/100BaseT indicators on module front panel. MDI-X Auto-crossover. Modbus/TCP and HTTP protocols.
Serial Port	Modicon compatible RS-232 with same pinout as Modicon processor. RJ-45 connector, 9600 baud, even parity, Modbus/RTU. Diagnostics, configuration, and firmware updates only.
Indicators	Power, Power Supply Overload for power supply. Ethernet: Link and 100BaseT; Serial Port: Transmit and Receive
Interactive Display	LCD display for diagnostics and configuration. Five-button keypad for control interaction.
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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