



CNOE-800

TSX Compact Ethernet & Serial Option Module

“The CNOE-800 is an option module, gateway, router & protocol converter.”

The CNOE-800 is an Ethernet & serial option module for Schneider Automation's TSX Compact™. It takes advantage of the new Compact communication channel; appearing as an option module instead of an I/O module. Along with an Ethernet port, the module gives the Compact two more serial ports. It has all of the capabilities of the CNOE-211 plus many others.

Those familiar with Niobrara's products will recognize the CNOE-800 as a Compact Universal Communication Module (CUCM) running the CRPC application; the engine in Niobrara's EPE5, MEB, and QUUM with the additional benefits of a comm channel interface to the PLC and I/O scanning.



Gateway, router & protocol converter

The CNOE-800 is simultaneously a router and a protocol converter. Internally, the CNOE-800 has 4 ports: the Ethernet port, the two serial ports and the PLC "port" (via backplane comms). The Ethernet port speaks Modbus/TCP and SY/MAX 802.3 protocols. The serial ports speak Modbus RTU or ASCII (master or slave), SY/MAX, PLOGIC, RNIM, mixed Modbus/SY/MAX or others. Messages from any of the 4 ports can be routed out any other port. As messages move between the ports they are translated from one protocol to another. Using an MSTR instruction the PLC can issue:

- Modbus/TCP 0x, 1x, 3x and 4x reads via Ethernet.
- Modbus/TCP 0x and 4x writes via Ethernet.
- Modbus 0x, 1x, 3x and 4x reads via a serial port.
- Modbus 0x and 4x writes via a serial port.
- SY/MAX 802.3 reads & writes via Ethernet.
- SY/MAX, PLOGIC or RNIM reads & writes via serial port.
- configuration commands to the CNOE.

External Ethernet devices can use Modbus/TCP or SY/MAX 802.3 to:

- read or write the PLC registers.
- program the PLC.
- read or write Modbus, SY/MAX or Powerlogic devices on a serial port
 - even program serial Modbus devices.
- bridge to the other Ethernet protocol, without PLC intervention.
- configure the CNOE.

An I/O scanning table allows the CNOE-800 to read & write Modbus/TCP devices over Ethernet. This table is configured via PC software (included) or MSTR instructions.

All trademarks and registered trademarks are the property of their respective owners.

“Using an MSTR the PLC can issue 0x, 1x, 3x and 4x reads, or 0x and 4x writes via Ethernet or serial port.”



The two serial ports have RJ45 connectors and are independently switch-selectable RS-232 or RS-422/485. Ports are independently configurable as to mode, baud rate, and etc. External serial devices can:

- read and write PLC registers.
- program the PLC.
- read & write devices on the other serial port: Modbus, Powerlogic, or RNIM slaves; or SY/MAX peers.
- program Modbus or SY/MAX devices on the other serial port.
- program, read or write Modbus/TCP or SY/MAX 802.3 devices on the Ethernet.
- configure the CNOE.

Requirements

- TSX Compact PLC (with '386 processor).
- Free slot in the main rack (slots 3, 4 or 5).
- Compact PLC Executive version 2.07 or greater.

Miscellaneous

IP configuration can occur over Ethernet via BOOTP or DHCP, from the PLC via MSTR or config extensions*, or from the serial port using Modbus or SY/MAX protocol. Multiple CNOEs can work in a single rack. No web pages are served by the module. Though the CNOE-800 uses CUCM hardware it is not user-programmable. Modules come with a user manual, configuration software, 1-year warranty** and 1-year free firmware upgrades.

Compact Communication Module Part Numbers

CNOE-800 Compact Network Option - Ethernet & two serial ports
CNOE-211 Compact Network Option - Ethernet only.
Contact Factory for availability.

* Contact Schneider Automation for programming software that supports Ethernet configuration extensions for the Compact PLC (not available at time of printing).

** See Niobrara's Standard Terms and Conditions of Sale for warranty information.

SPECIFICATIONS:

<i>Dimensions</i>	Single-width Compact module. 1.6" wide by 5.5" tall by 4.5" deep (40 x 140 x 114 mm).
<i>Power Requirements</i>	From Compact bus; 5 VDC, up to 550mA (350mA typical).
<i>Operating Conditions</i>	0 to 60 degrees C; humidity up to 90% noncondensing; pressure altitude -200 to +10,000 feet MSL.
<i>Ethernet Port</i>	Front-mounted 10BaseT, RJ45 connector. Read, write or program the PLC or configure the CNOE through this port.
<i>Ethernet Protocols</i>	Modbus/TCP and/or SY/MAX 802.3 protocols with bridging. TCP, IP, BOOTP, DHCP, PING and Telnet.
<i>Serial Ports</i>	Two switch-selectable RS-232/RS-422/485 ports with RJ45 connectors. Standard Modicon pinouts.
<i>Serial Protocols</i>	Modbus RTU (Host or Gate), Modbus ASCII (Master or Slave), SY/MAX, Net-to-Net, RNIM (Master or Slave), Plogic, Chevron, Peripheral, Multidrop, IDEC, Gateway, Transparent, Share, or Transfer.
<i>Indicators</i>	LED indicators for Module Power, Busy, Run, Error; Ethernet Active, Error, Link, and Collision; Port 1 Transmit & Receive; Port 2 Transmit & Receive; PLC Run; and Backplane Comms Active. 18 total indicators.
<i>Mailbox Registers</i>	2,048 4x registers. Available at Modbus drop 255 (configurable). Non-volatile.
<i>Setup Registers</i>	4x registers accessible by PLC across backplane, by external device through Ethernet port or from serial ports; stored in non-volatile RAM.
<i>PLC Interface</i>	Compact bus connector on back uses the new option module interface.