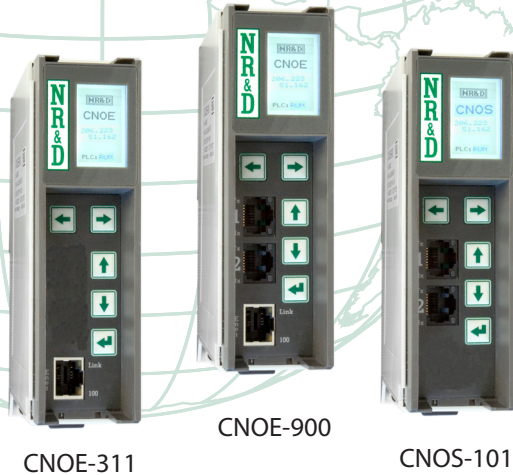


Compact Ethernet Module/ Compact Serial Option Module

Overview

The CNOE is an Ethernet option module for the TSX Compact PLC. It is simultaneously a router and a protocol converter. The module is available in two versions; **CNOE-311** and **CNOE-900**. Both models come with 10/100BaseT Ethernet. The **CNOE-311** has no serial ports while the **CNOE-900** has two serial ports

The **CNOS-101** is a serial port expansion module for Schneider Automation's TSX Compact PLC. It takes advantage of the Compact backplane communication channel. The module gives the Compact two additional serial ports that are selectable as RS-232 or RS-485.



CNOE-311

CNOE-900

CNOS-101

Product Description

The CNOE and CNOS are easier than ever to use. These modules come with an LCD screen and a 5-button keypad. The LCD and keypad allow access to basic functions such as configuring the IP address or serial port settings. The LCD also provides a location to display status messages and statistics on the front panel. The 10/100BaseT Ethernet port provides fast Ethernet speed access to the PLC.

| | |
|-----------------|---|
| CNOE-311 | 10/100BaseT Ethernet, no serial ports |
| CNOE-900 | 10/100BaseT Ethernet, two selectable RS-232 or RS-485 serial ports |
| CNOS-101 | No Ethernet, two selectable RS-232 or RS-485 serial ports |

Features

- Option Module for Compact PLC
- LCD Screen and 5-button keypad
- 10/100BaseT Ethernet port (if equipped)
 - Modbus/TCP, SY/MAX 802.3
 - 128 entry Modbus TCP I/O scanner
- Password protection from front panel

continued on next page...

CNOE/CNOS

Features (continued)

- Serial Ports (if equipped)
 - RJ45 connector
 - independently configurable to RS232 or RS422/485
 - independently configurable to mode, baud, parity, etc.
- Serial Port Protocols
 - Modbus RTU (master or slave)
 - Modbus ASCII (master or slave)
 - SY/MAX
 - PLOGIC, and others

Capabilities

Using MSTRs, 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, 4x reads via serial port;
- Modbus 0x and 4x writes via serial port;
- register reads/writes for any supported serial protocol;
- SY/MAX 802.3 reads and writes via Ethernet;
- SY/MAX, PLOGIC or RNIM reads and 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;
- program serial Modbus devices;
- bridge to the other Ethernet protocol, without PLC intervention;
- configure the CNOE.

External serial devices can:

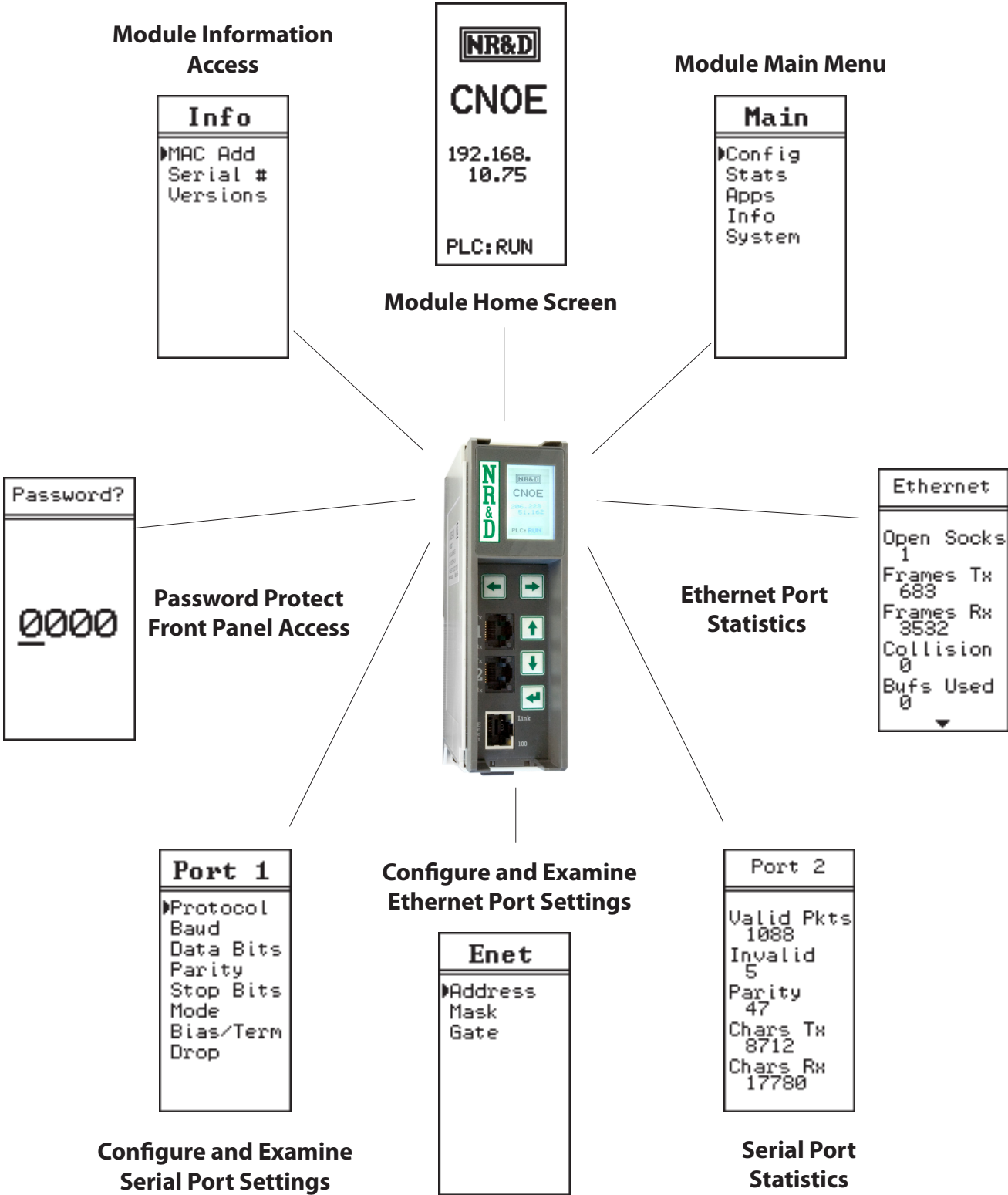
- read and write PLC registers;
- program the PLC;
- read and write devices on the other serial port: Modbus, Powerlogic, or RNIM slaves; or SY/MAX peers;
- program Modbus or SY/MAX devices on the other serial port;
- program, read or write Modbus/TCP or SY/MAX 802.3 devices on the Ethernet;
- configure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

Requirements

- TSX Compact PLC (-258, -265, -275, -285 only)
- free slot in the main rack (slots 3, 4, or 5)
- Compact PLC Executive version 2.07 or greater

CNOE/CNOS

CNOE Examples



Niobrara Research & Development Corporation

www.niobrara.com

Ordering Information

- **CNOE-311** Compact Ethernet Module, 10/100BaseT, no serial ports
- **CNOE-900** Compact Ethernet Module, 10/100BaseT, two selectable (RS-232 or RS-422/485) serial ports (RJ45)
- **CNOS-101** Compact Serial Option Module, two selectable (RS-232 or RS-422/485) serial ports (RJ45)

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Related Equipment

- **MM1** Programming Cable, RS-232, RJ45 to DB9S
- **BB85** Breakout box; RJ45 to terminal block; DIN-rail mount; includes MM0 cable to connect to RJ45
- **DDC2I** RS232 to RS422/485 data-level converter; optically isolated; RJ45 RS-232 connector; DB9 and removable screw terminal RS-485 connectors; DIN-rail mount; includes TR92W 110 volt wall transformer and MM0 cable for multidropping RS-485 devices off of an RS-232 port

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Specifications

| | |
|------------------------------|---|
| Warranty / Manual: | The CNOE-311, CNOE-900, and CNOS-101 are furnished with a user manual on CD and carry 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: | Single-width Compact module. 1.6" wide by 5.5" tall by 4.5" deep (40 x 140 x 114 mm). |
| Power Requirements: | From Compact bus; 5 VDC, up to 650mA (450mA typical). |
| Operating Conditions: | 0 to 60 degrees C; humidity up to 90% noncondensing; pressure altitude -200 to +10,000 feet MSL. |
| Serial Ports: | CNOE-900 (2 ports), CNOE-311 (0 ports), CNOS-101 (2 ports); RS-232 or RS-422/485 ports data I/O ports. 50, 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, or 19200 baud; 7 or 8 data bits; odd, even, or no parity; 1 or 2 stop bits. RJ-45 female connectors, Modicon Compact pinout. Ports are configured through front panel or via network. |
| Serial Port Modes: | Each port can independently operate in any of the following modes: Modbus RTU (Host or Gate); Modbus ASCII (Master or Slave); SY/MAX; Net-to-Net; PNIM; RNIM (Master or Slave); PLogic; Chevron; Peripheral; Multidrop; IDEC; Gateway; Transparent; Share; Transfer. User programmable through any communication port. |
| Ethernet Port: | CNOE-311 and CNOE-900: Front-mounted 10/100BaseT, RJ45 connector. Read, write, or program the PLC or configure the CNOE through this port. MDI-X Auto-crossover. Modbus/TCP and HTTP protocols. |
| Ethernet Protocols: | Modbus/TCP and/or SY/MAX 802.3 protocols with bridging. BOOTP, DHCP, PING, and Telnet. |
| Indicators: | LED indicators on serial ports for TX and RX. LED indicators on Ethernet port for Link and 100Mbit. LCD panel for configuration and diagnostics. |
| Switches: | Five front panel mounted push buttons for control and interaction with LCD display. |
| Mailbox Registers: | 2,048 4x registers. |
| Setup Registers: | 4x registers accessible by PLC across backplane or by external device via Ethernet port. Setup must be stored to EEPROM for non-volatile storage. |
| PLC Interface: | Compact bus connector on back uses the option module interface. Compatible with TSX Compact PLC (-258, -265, -275, -285 only) |