



CN2510 Series Quick Installation Guide

Fourth Edition, June 2008

1. Overview

Welcome to Moxa CN2510 Async Server, a communication server with 8/16 asynchronous RS-232 ports and 10/100 Mbps Ethernet LAN port. CN2510 Async Server can be used to connect terminals, modems, printers, and other asynchronous serial devices to LAN hosts. CN2510 complies with TCP/IP and IEEE 802.3 specifications using standard Ethernet 10/100BaseT and twisted pair 10/100BaseTX cable as the physical medium.

2. Package Checklist

CN2510 Async Server products are shipped with the following items:

- 1 CN2510 Async Server
- 1 ac power Cord (only for CN2510-16 or CN2510-8)
- 1 Software and Documentation CD-ROM
- Quick Installation Guide
- 1 RJ45 Loopback Tester
- Product Warranty Booklet
- Rackmount kit including 2 brackets and 8 screws
- 1 CBL-RJ45F9-150
- 1 CBL-RJ45M25-150

Optional Accessories

- CBL-RJ45M9-150 8-pin RJ45 to Male DB9 cable, 150 cm
- CBL-RJ45F9-150 8-pin RJ45 to Female DB9 cable, 150 cm
- CBL-RJ45M25-150 8-pin RJ45 to Male DB25 cable, 150 cm
- CBL-RJ45F25-150 8-pin RJ45 to Female DB25 cable, 150 cm

NOTE: Notify your sales representative if any of the above items is missing or damaged.

3. Hardware Introduction

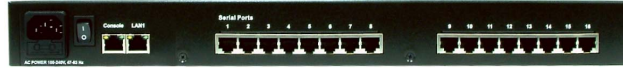
Front Panel



P/N: 1802025100100

LED	Color	Description
Reset	None	If you forget the password, use a pointed object, such as a straightened paper clip or toothpick, to press the reset button. The Ready LED will blink on and off while the factory default settings are being loaded. Once the Ready LED stops blinking (after about 5 seconds), release the reset button. You will hear a beep, which indicates that the default settings have been restored, and CN2510 has rebooted.
Ready	Red	Power is on and CN2510 is booting up.
Ready	Green	Power is on and CN2510 is ready.
Serial Tx	Green	Serial port is transmitting data.
Serial Rx	Yellow	Serial port is receiving data.

Rear Panel



Connector	Function
AC Power Input	Automatic detection of 100-240V, 47-63Hz AC power supply (CN2510-16 or CN2510-8). Automatic detection of 12-48VDC, 1.01A at 12V, 240 mA at 48V DC power supply (CN2510-16-48V or CN2510-8-48V)
Power On/Off Switch	I indicates power on; O indicates power off
RS-232 Console Port	One RJ45 connector for console terminal connection
LAN	Auto detecting 10/100 Mbps port
Serial Ports	8 or 16 RJ45 connectors for DCE (modem) connections

LCM Display

We recommend using the LCM display and four push buttons to configure the IP address for the first time.

Basic Operation

If the CN2510 is working properly, the LCM panel will display a green color. The red Ready LED will also light up, indicating that the CN2510 is receiving power. After the red Ready LED turns to green, you will see a display similar to:

```
C N 2 5 1 0 - 1 6 _ 3
1 9 2 . 1 6 8 . 1 2 7 . 2 5 4
```

CN2510-16 is the CN2510's name
3 is the CN2510's serial number
192.168.127.254 is the CN2510's IP address

There are four push buttons on CN2510's nameplate. Going from left to right, the buttons are:

Button	Name	Action
MENU	menu	activates the main menu, or returns to an upper level
▲	up cursor	scrolls up through a list of items shown on the LCM panel's second line
▼	down cursor	scrolls down through a list of items shown on the LCM panel's second line
SEL	select	selects the option listed on the LCM panel's second line

The buttons are manipulated in a manner similar to the way a modern cellular phone operates. As you move through the various functions and setting options, note that the top line shows the current menu or submenu name, and the bottom line shows the submenu name or menu item which is activated by pressing the SEL button.

Refer to the CN2510 Async Server User's Manual for more details.

4. Hardware Installation

1. Installing CN2510

Open the package, and place CN2510 on a desktop, or attach it to a standard rack cabinet.

2. Wiring Requirements

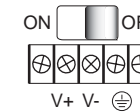
- Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the intersection point.
- NOTE:** Do not run signal or communication wiring and power wiring in the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.
- Where necessary, it is strongly advised that you label wiring to all devices in the system.

3. Connecting the Power

AC: Connect CN2510 100-240 VAC power line with its AC connector. If the power is properly connected, the "Ready" LED will show a solid red color until the system is ready, at which time the "Ready" LED will change to a green color.

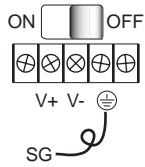
DC: Connect CN2510-16/8-48V's power cord to CN2510's DC connector, and then follow the steps given below:

- Loosen the screws on the V₊ and V₋ terminals of CN2510-8/16-48V's terminal block.
- Connect the power cord's 48 VDC wire to the terminal block's V₊ terminal, and the power cord's DC Power Ground wire to the terminal block's V₋ terminal, and then tighten the terminal block screws. (Note: CN2510-8/16-48V can still operate even if the DC 48V and DC Power Ground are reversed.)



If the power is properly connected, the "Ready" LED will show a solid red color until the system is ready, at which time the "Ready" LED will change to a green color.

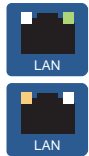
Grounding CN2510-16/8-48V:



Grounding and wire routing helps limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting devices. The Shielded Ground (sometimes called Protected Ground) contact is the second contact from the right of the 5-pin power terminal block connector located on the rear panel of CN2510-8/16-48V. Connect the SG wire to the Earth ground.

4. Connecting to the Network

Connect one end of the Ethernet cable to CN2510's 10/100M Ethernet port and the other end of the cable to the Ethernet network. There are 2 LED indicators located on the top left and right corners of the Ethernet connector. If the cable is properly connected, CN2510 will indicate a valid connection to the Ethernet in the following ways:



The top right corner LED indicator maintains a solid green color when the cable is properly connected to a 100 Mbps Ethernet network.

The top left corner LED indicator maintains a solid orange color when the cable is properly connected to a 10 Mbps Ethernet network.

5. Connecting to a Serial Device

Connect the serial data cable between CN2510 and the serial device.

6. Connecting to a Console

A console is a combination of keyboard and monitor that are used to configure settings and to monitor the status of your system. If you do not have a network environment, use a terminal, a PC running UNIX, or a PC with terminal emulation software (e.g., HyperTerminal in Windows; PCComm by Moxa). Use an RJ45-to-DB25 or RJ45-to-DB9 cable to connect the terminal to the console socket. Refer to the CN2510 Async Server User's Manual for more details.

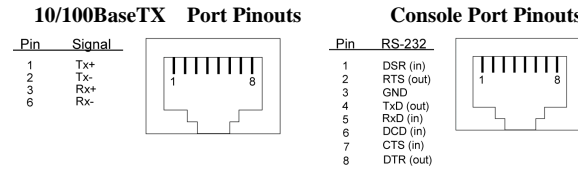
5. Software Installation

Entering the Console Utility

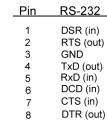
The Console Utility is the main application needed to set up the server/port configuration, and to execute utilities such as ping, diagnosis, monitor, and upgrade. There are two ways to enter the Console Utility. One is to use terminal emulation through a console terminal, and the other is to telnet from a network terminal.

Refer to the CN2510 Async Server User's Manual for more details.

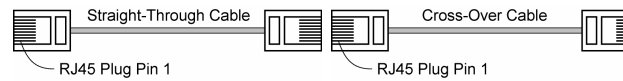
6. Pin Assignments and Cable Wiring



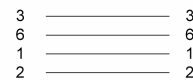
Async RS-232 Port Pinouts



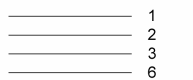
10/100BaseTX Cable Wiring



Cable Wiring

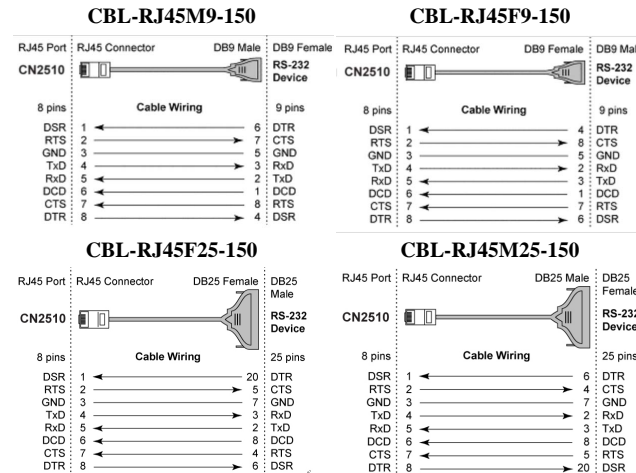


Cable Wiring



Async RS-232 Cable Wiring:

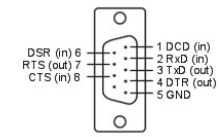
Note: The following cables are optional accessories.



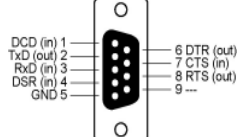
DB9 and DB25 connector pinouts:

The following figures illustrate standard connector pinouts. However, pinouts for serial devices differ from manufacturer to manufacturer. Refer to the serial device's user's manual for the exact pinouts of your device.

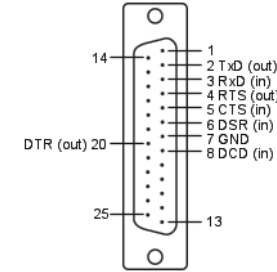
DB9 Male Connector



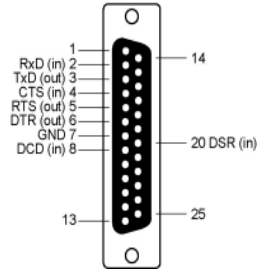
DB9 Female Connector



DB25 Male Connector



DB25 Female Connector



7. Environmental Specifications

Power requirements

Power Input 100 to 240 VAC, 47 to 63 Hz, or 12-48 VDC

Power Consumption

CN2510-8/16 235 mA for 100V, 145 mA for 240V
 CN2510-8/16-48V 250 mA (at 48V max.)

Operating temp.

0 to 55°C (32 to 131°F)

Operating humidity

5 to 95% RH

Dimensions (W×D×H)

190 × 44.5 × 478 mm (including ears)
 190 × 44.5 × 440 mm (without ears)

Serial line protection

15 KV ESD for all signals

Magnetic isolation

1.5 KV for Ethernet

Power line protection

4 KV Burst (EFT), EN61000-4-4
 2 KV Surge, EN61000-4-5

Regulatory approvals

FCC Class A, CE Class A, UL, CUL, TÜV

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