MOXA®

CN2600 Series
Quick Installation Guide

Second Edition, November 2010

1. Overview

The Moxa CN2600 dual-LAN terminal servers have 8 or 16 RS-232 or RS-232/422/485 ports and dual 10/100 Mbps Ethernet LAN ports, and some models come with dual AC power inputs. The CN2600 terminal servers are used to connect terminals, modems, printers, and other serial devices to LAN hosts, and all models comply with TCP/IP and IEEE802.3 specifications using standard twisted pair 10/100BaseTX cable as the transmission medium.

2. CN2600 series Models

Model Name	Description
CN2610-8	8 RS-232 ports with RJ45 connectors, 100-240 VAC input.
CN2610-8-2AC	8 RS-232 ports with RJ45 connectors, 2 100-240 VAC input.
CN2610-16	16 RS-232 ports with RJ45 connectors, 100-240 VAC power input
CN2610-16-2AC	16 RS-232 ports with RJ45 connectors, 2 100-240 VAC power input
CN2650-8	8 RS-232/422/485 ports with RJ45 connectors, 100-240 VAC power inputs
CN2650-8-2AC-T	Dual-LAN, dual-AC-power terminal server with 8 RS-232/422/485 ports, -40 to 75°C operating temperature
CN2650-8-2AC	8 RS-232/422/485 ports with RJ45 connectors, 100-240 VAC power inputs
CN2650-16	16 RS-232/422/485 ports with RJ45 connectors, 100-240 VAC power inputs
CN2650-16-2AC-T	Dual-LAN, dual-AC-power terminal server with 16 RS-232/422/485 ports, -40 to 75°C operating temperature
CN2650-16-2AC	16 RS-232/422/485 ports with RJ45 connectors, 2 100-240 VAC power inputs
CN2650I-8	8 RS-232/422/485 ports with DB9-M connectors and 2 KV isolation protection, 100-240 VAC power input
CN2650I-8-2AC	8 RS-232/422/485 ports with DB9-M connectors and 2 KV isolation protection, 2 100-240 VAC power input

CN2650I-16	16 RS-232/422/485 ports with DB9-M connectors and 2 KV isolation protection, 100-240 VAC power inputs
CN2650I-16-2AC	16 RS-232/422/485 ports with DB9-M connectors and 2 KV isolation protection, 2 100-240 VAC power inputs

3. Package Checklist

The CN2600 dual-LAN terminal server products are shipped with the following items:

- 1 CN2600 series Terminal Server
- Power cord (AC models only)*
- Document and & Software CD-ROM
- Quick Installation Guide (this guide)
- 1 DB9 serial cable (CBL-RJ45F9-150)
- 1 DB25 serial cable (CBL-RJ45M25-150)

* Power cords are available with US, Euro, UK, and JP plugs.

Optional Accessories

- CBL-RJ45M9-150: RJ45 (8-pin) to DB9 (male) cable, 150 cm
- CBL-RJ45F9-150: RJ45 (8-pin) to DB25 (female) cable, 150 cm
- CBL-RJ45M25-150: RJ45 (8-pin) to DB25 (male) cable, 150 cm
- CBL-RJ45F25-150: RJ45 (8-pin) to DB25 (female) cable, 150 cm

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

4. Hardware Introduction

NOTE The wide temperature model does not support the LCM Display panel or push buttons. The LCM description below applies only to standard temperature models.

Front Panel
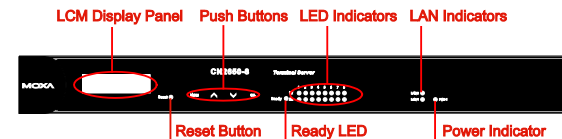
LED	Color	Description
Reset	None	Press the Reset button for 5 seconds to load factory defaults. The CN2600 will beep twice when the configuration has been reset.
Ready	Red	Used for configuring the IP address and other parameters.
	Green	Lights up when the CN2600 system is ready.
Serial Tx	Green	Flashes to indicate serial port transmission.
Serial Rx	Yellow	Flashes to indicate serial port reception.

Rear Panel
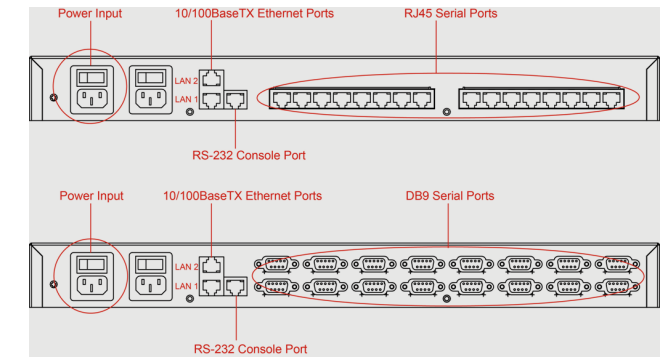
Connector	Function
AC Power Input	Automatic detection of 100-240V, 47-63 Hz AC power supply.
Power On/Off Switch	I indicates power on; O indicates power off.
RS-232 Console Port	One RJ45 connector for console terminal connection.
LAN1	Auto detecting 10/100 Mbps port.
LAN2	Auto detecting 10/100 Mbps port.
Serial Ports	8 or 16 RJ45 or DB9 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 CN2600 is working properly, the LCM panel will display a green color. The red Ready LED will also light up, indicating that the CN2600 is receiving power. After the red Ready LED turns to green, you will see a display similar to the following: (Example)

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

CN2610-16:   The CN2610's name
03:     The CN2610's serial number
192.168.127.254:   The CN2610's IP address

There are four push buttons on the CN2600 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 that is activated by pressing the SEL button.

Refer to CN2600 series User's Manual for more details.

5. Hardware Installation

1. Installing the CN2600

Open the package, and attach the CN2600 to a desktop, or fasten it to the rack cabinet.

2. Wiring Requirements

A. 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.

B. 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.

C. Where necessary, we strongly advised that you label wiring to all devices in the system.

3. Connecting Power

AC: Connect the CN2600 100-240 VAC power line with its AC connector. If the power is properly supplied, 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.

If the power is properly supplied, 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.

4. Connecting to the Network

Connect one end of the Ethernet cable to the CN2600 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, the CN2600 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 the CN2600 and the serial device.

6. Connecting to a Console

A console is a combination of keyboard and monitor, and is 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; PComm by Moxa). Use an RJ45-to-DB25 or RJ45-to-DB9 cable to connect the terminal to the console socket. Refer to the CN2600 User's Manual for more details.

## 6. Software Installation

Entering the Console Utility

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.

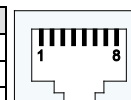Refer to the CN2600 User's Manual for more details.

7. Pin Assignments and Cable Wiring

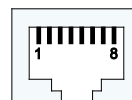### 10/100BaseTX Port Pinouts   Console Port Pinouts

Pin	Signal
1	Tx+
2	Tx-
3	Rx+
6	Rx-
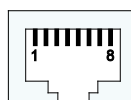
Pin	RS-232
1	DSR (in)
2	RTS (out)
3	GND
4	TxD (out)
5	RxD (in)
6	DCD (in)
7	CTS (in)
8	DTR (out)

RJ45 RS-232/422/485 Port

PIN	RS-232	RS-422/485 (4W)	RS-384 (2W)
1	DSR (in)	---	---
2	RTS (out)	TxD+	---
3	GND	GND	GND
4	TxD (out)	TxD-	---
5	RxD (in)	RxD+	Data+
6	DcD (in)	RxD-	Data-
7	CTS (in)	---	---
8	DTR (out)	---	---

DB9 (male) RS-232/422/485 Port
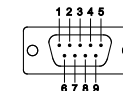
PIN	RS-232	RS-422/485 (4W)	RS-485 (2W)
1	DCD	TxD-(A)	---
2	RxD	TxD+(B)	---
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	---	---
7	RTS	---	---
8	CTS	---	---
9		---	---

10/100BaseTX Cable Wiring

Straight-Through Cable   Cross-Over Cable

RJ45 Plug Pin 1   RJ45 Plug Pin 1

Cable Wiring   Cable Wiring

3	—	3		3	—	1
6	—	6		6	—	2
1	—	1		1	—	3
2	—	2		2	—	6
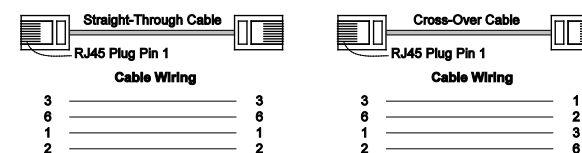
8. Environmental Specifications

Power requirements

Power Input	100 to 240 VAC, 47 to 63 Hz
Power Consumption	235 mA for 100V, 145 mA for 240V
Operating temperature	Standard Models: 0 to 60°C (32 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage temperature	-40 to 75°C (-40 to 167°F), 5 to 95% RH
Dimensions (W×D×H)	198 × 45 × 440 mm (7.8 × 1.77 × 17.3 in)
Surge protection	15 KV ESD for serial ports

Magnetic isolation	1.5 KV for Ethernet ports
Power line protection	1 KV Burst (EFT), EN61000-4-4
	2 KV Surge, EN61000-4-5
Regulatory approvals	**EMC:** CE: EN55022 Class A/EN55024
	FCC: FCC part 15 subpart B, Class A
	Safety: UL: UL60950
	TUV: EN60950