CN2600 Series

8 and 16-port RS-232/422/485 terminal servers with LAN redundancy

> LCD panel for easy IP address configuration
> Dual-LAN cards with two independent MAC addresses and IP addresses
> Redundant COM function available when both LANs are active
> Dual-host redundancy can be used to add a backup PC to your system
> Dual AC power inputs
> Real COM/TTY drivers for Windows and Linux

The certification logos shown here apply to some or all of the products in this section. Please see the **Specifications** section or Moxa's website for details.

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: Overview

Redundancy is an important issue for industry, and several different solutions have been developed to prevent damage caused by equipment or software failures. "Watchdog" hardware is required to utilize redundant hardware, and a "Token" switching mechanism is required for software. The CN2600 terminal server uses its built-in dual-LAN ports to implement a "redundant COM" mode that keep your applications running smoothly.
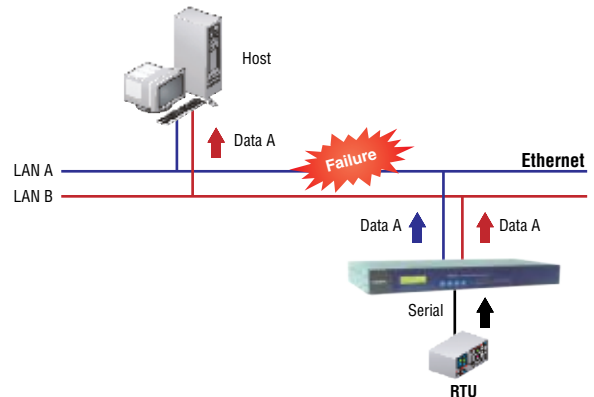
: Dual-LAN Redundancy

The CN2600 has two separate LAN ports that can be connected to separate LAN networks. Dual-LAN redundancy involves setting up two separate physical networks to connect the PC host with the CN2600. In this case, the PC host must also be installed with two LAN cards. If one of the networks fails, the PC host will still be able to communicate with your serial devices over the redundant LAN.
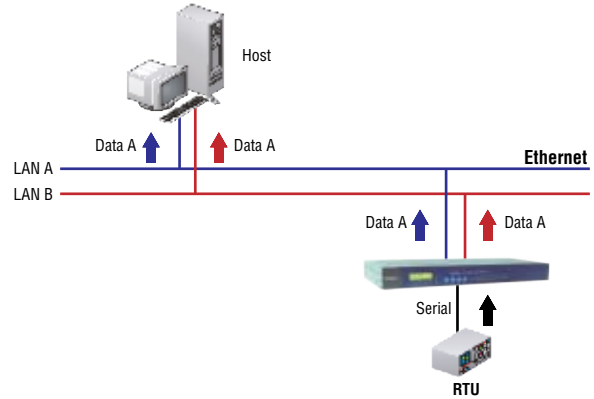
: Redundant COM

The "Redundant COM" (patent pending) operation mode can be used to set up a redundant LAN between the CN2600's COM ports and the host computer. The redundant structure involves using the CN2600's two LAN ports to set up two independent LANs that connect the CN2600 to the host computer. If either of the two LANs fails, the other LAN will continue transmitting packets between the serial devices and the host, with the data transmitted through the CN2600. One of the biggest advantages of using Moxa's Redundant COM mode is that the "switching time" is zero. What this means is that if one of the LANs fails, data transmission between the PC host the serial devices will not be interrupted.
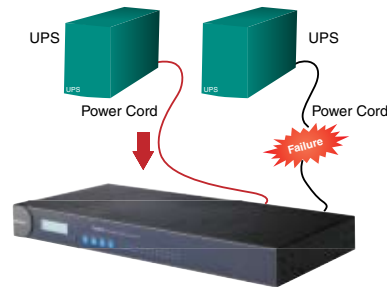
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: Dual-host Redundancy

The CN2600's dual LAN cards can also be used to set up "dual-host" redundancy. In this case, both networks (LAN A and LAN B in the figure) are connected to two different hosts. If either of the two hosts shuts down unexpectedly, the other host will continue transmitting packets to (and receiving packets from) the serial devices connected to the CN2600.
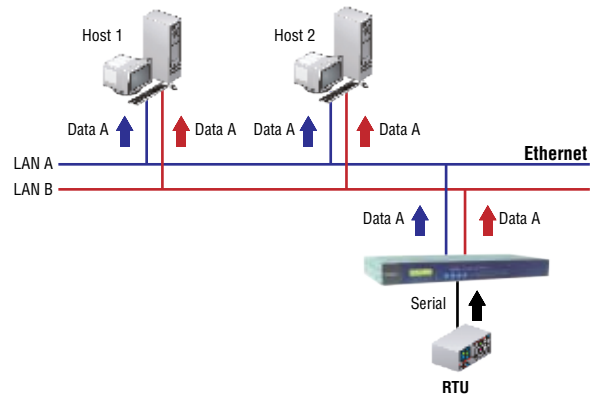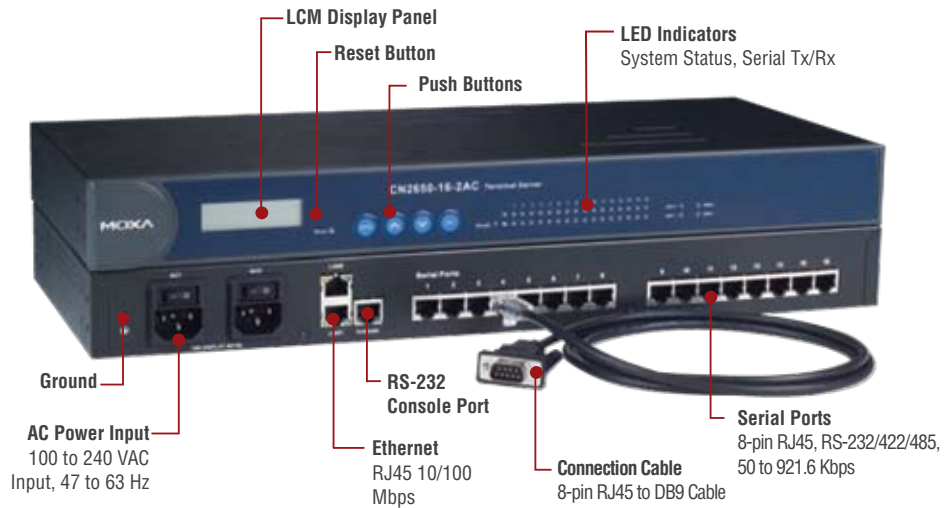
: Dual-AC Model Supported

Dual-power redundancy uses two power inputs and redundant internal power supplies to ensure that the CN2600's console port, serial ports, and LAN ports will be available, even in the event of power circuit failure.

: Appearance

- **LCM Display Panel**
- **Reset Button**
- **Push Buttons**
- **LED Indicators**
  System Status, Serial Tx/Rx
- **Ground**
- **AC Power Input**
  100 to 240 VAC
  Input, 47 to 63 Hz
- **Ethernet**
  RJ45 10/100 Mbps
- **RS-232 Console Port**
- **Connection Cable**
  8-pin RJ45 to DB9 Cable
- **Serial Ports**
  8-pin RJ45, RS-232/422/485,
  50 to 921.6 Kbps

: Specifications

Ethernet Interface

Number of Ports: 2
Speed: 10/100 Mbps, auto MDI/MDIX
Connector: 8-pin RJ45
Magnetic Isolation Protection: 1.5 KV built-in

Serial Interface

Number of Ports: 8 or 16
Serial Standards:
CN2610: RS-232
CN2650/2650I: RS-232/422/485

Connector:
CN2610/2650: 8-pin RJ45
CH2650I: DB9 male
ESD Protection: 15 KV for all signals
RS-485 Data Direction Control: ADDC® (Automatic Data Direction Control)
Optical Isolation: 2 KV (CN2650I)
Console Port: Dedicated RS-232 console port on rear panel (8-pin RJ45)

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Serial Communication Parameters

Data Bits: 5, 6, 7, 8

Stop Bits: 1, 1.5, 2

Parity: None, Even, Odd, Space, Mark

Flow Control: RTS/CTS, XON/XOFF

Baudrate: 50 bps to 921.6 Kbps

Serial Signals

RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND

RS-422: Tx+, Tx-, Rx+, Rx-, GND

RS-485-4w: Tx+, Tx-, Rx+, Rx-, GND

RS-485-2w: Data+, Data-, GND

Software

Network Protocols: ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, DNS, SNMP, HTTP, SMTP, ARP, PPPoE, DDNS

Security Protocols: RADIUS, https, SSH, PAP, CHAP

Configuration Options: Web Console, Serial Console, Telnet Console, Windows Search Utility

Driver Support:
Windows Real COM drivers (for Windows 95, 98, ME, NT, 2000, XP, 2003, Vista, XP x64, 2003 x64, Vista x64), Linux Real TTY driver, fixed TTY drivers (for SCO Unix, SCO OpenServer, UnixWare 7, UnixWare 2.1, SVR 4.2, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i)
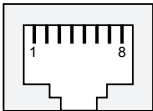
Management: SNMP MIB-II

IP Routing: Static, RIP-I, RIP-II

Applications

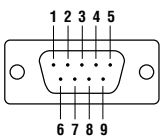**Terminal Sessions:** 8 sessions per port

Pin Assignment

8-pin RJ45 connector

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

DB9 male connector

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	–	–

Physical Characteristics

Housing: SECC sheet metal (1 mm), IP30 protection

Weight:
CN2610-8-2AC: 3760 g
CN2610-16-2AC: 3810 g
CN2650-8: 3740 g
CN2650-16: 3790 g
CN2650-8-2AC: 3900 g
CN2650-16-2AC: 3980 g

Dimensions:
Without ears: 440 x 198 x 45 mm (17.32 x 7.80 x 1.77 in)
With ears: 480 x 198 x 45 mm (18.9 x 7.80 x 1.77 in)

Environmental Limits

Operating Temperature: 0 to 55°C (32 to 131°F)

Operating Humidity: 5 to 95% RH

Storage Temperature: -20 to 70°C (-4 to 158°F)

Surge Protection: 15 KV ESD protection embedded

Power Requirements

Input Voltage: 100 to 240 VAC, 47 to 63 Hz

Power Consumption: 235 mA @ 100 VAC, 145 mA @ 240 VAC

Power Line Protection: 1 KV burst (EN61000-4-4: EFT/B), 2 KV surge (EN61000-4-5)

Regulatory Approvals

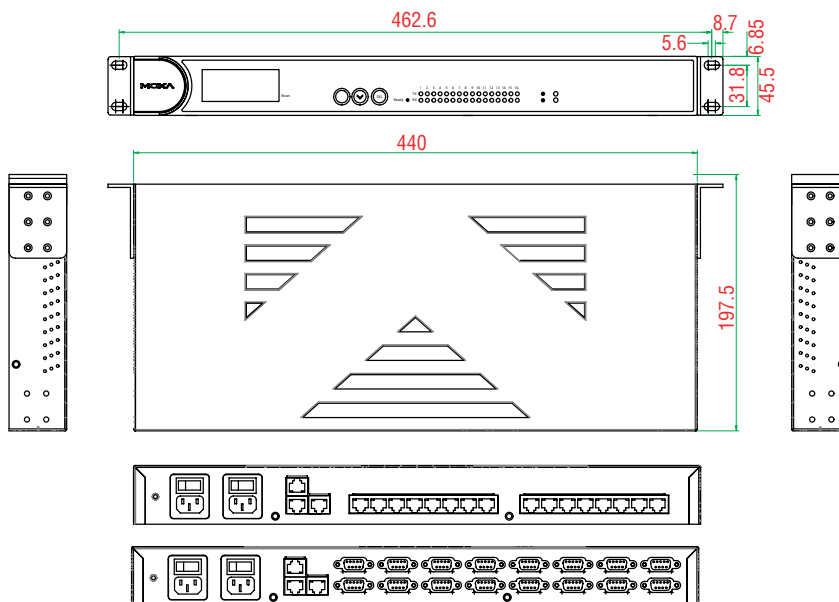**EMC:** CE (EN55022 Class A, EN55024), FCC Part 15 Subpart B Class A

Safety: UL (UL60950), TÜV (EN60950)

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions

⦂ Ordering Information

Available Models

CN2610-8: Dual-LAN terminal server with 8 RS-232 ports

CN2610-16: Dual-LAN terminal server with 16 RS-232 ports

CN2610-8-2AC: Dual-LAN, dual-AC-power terminal server with 8 RS-232 ports

CN2610-16-2AC: Dual-LAN, dual-AC-power terminal server with 16 RS-232 ports

CN2650-8: Dual-LAN terminal server with 8 RS-232/422/485 ports

CN2650-16: Dual-LAN terminal server with 16 RS-232/422/485 ports

CN2650-8-2AC: Dual-LAN, dual-AC-power terminal server with 8 RS-232/422/485 ports

CN2650-16-2AC: Dual-LAN, dual-AC-power terminal server with 16 RS-232/422/485 ports

CN2650I-8: Dual-LAN terminal server with 8 RS-232/422/485 ports and 2 KV optical isolation

CN2650I-16: Dual-LAN terminal server with 16 RS-232/422/485 ports and 2 KV optical isolation

CN2650I-8-2AC: Dual-LAN, dual-AC-power terminal server with 8 RS-232/422/485 ports and 2 KV optical isolation

CN2650I-16-2AC: Dual-LAN, dual-AC-power terminal server with 16 RS-232/422/485 ports and 2 KV optical isolation

Package Checklist

- CN2600 terminal server
- CBL-RJ45F9-150: 8-pin RJ45 to DB9 female connection cable, 150 cm
- CBL-RJ45M25-150: 8-pin RJ45 to DB25 male connection cable, 150 cm
- 2 power cords (AC models only)*
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card

* Note: Power cords are available with US, Euro, UK, and JP plug types.

Optional Accessories (can be purchased separately)

Serial Cables and Adaptors: Please see "Appendix A: Accessories" for details

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