CN2600 Series

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

- LCD panel for easy IP address configuration (not included with wide temperature models)
- 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

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 keeps your applications running smoothly.

Dual-LAN Redundancy

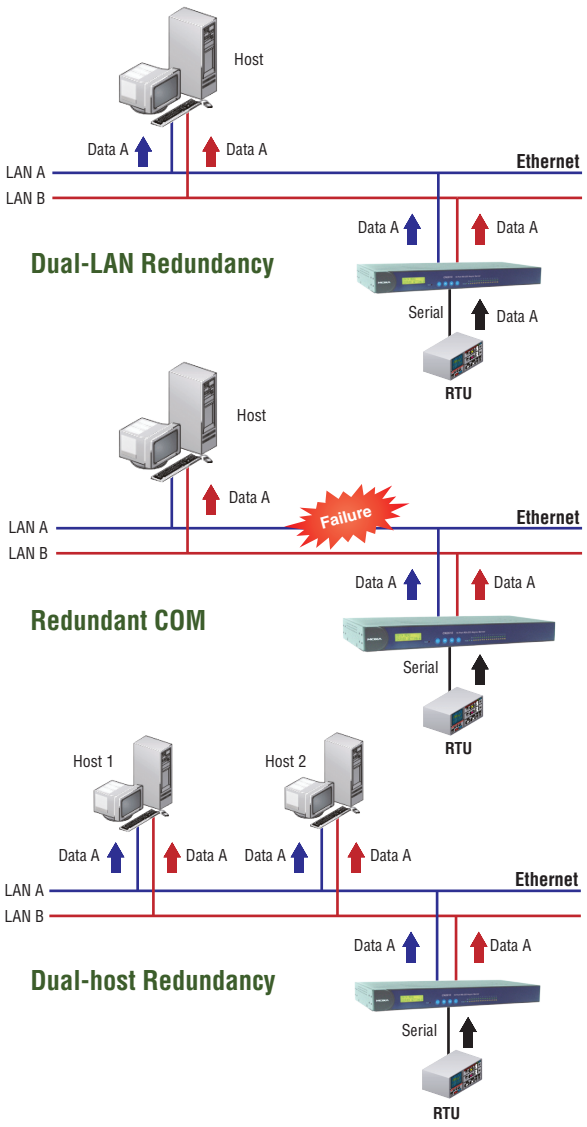
The CN2600 has two separate LAN ports that can be connected to separate LAN networks. Dual-LAN redundancy involves setting up two separate physical networks to connect the PC host with the CN2600. In this case, the PC host must also be installed with two LAN cards. If one of the networks fails, the PC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

Redundant COM

Moxa provides an easy-to-use function, called “Redundant COM,” for duplicating the CN2600’s data transmissions. In this case, when the CN2600 receives a data packet from a connected device, the CN2600 will automatically duplicate the packet and send both packets over separate LANs. If either of the two LANs fails, the other LAN will continue transmitting packets between the serial devices and the host to prevent lost packets. The Moxa driver is programmed to compare packets received from the two LANs, and then discard duplicate packets to prevent the host AP from receiving the same packet twice. The Redundant COM function not only prevents data loss when one of the LANs fails, but also prevents the host AP from receiving garbage data.

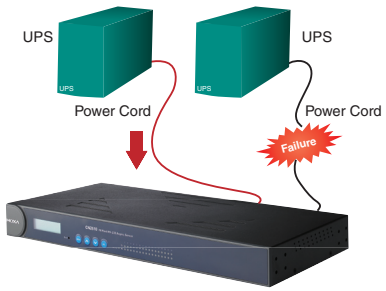
Dual-host Redundancy

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.

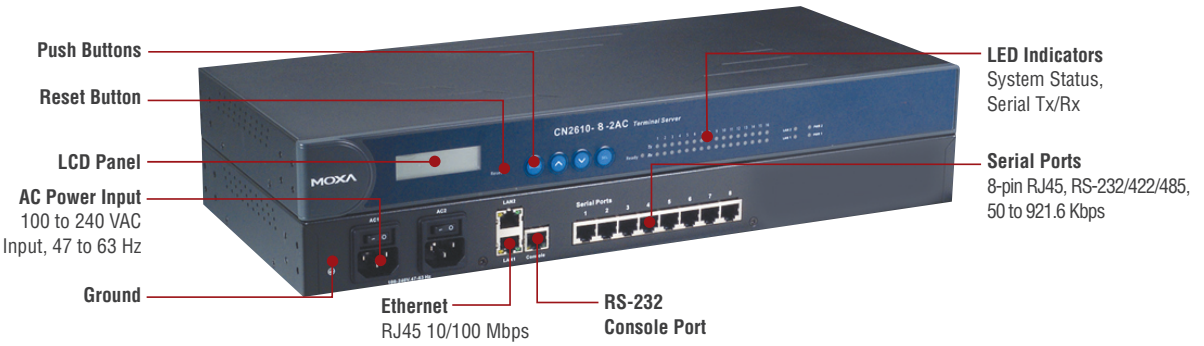


Dual-AC Model Supported

Dual-power redundancy uses two power inputs and redundant internal power supplies to ensure that all of the CN2600's functions will be available, even in the event of power circuit failures.



Appearance



Specifications

Note: Wide temp. models do not include LCD panel and push buttons.

Ethernet Interface

Number of Ports: 2 (2 IPs)
Speed: 10/100 Mbps, auto MDI/MDIX
Connector: 8-pin RJ45
Magnetic Isolation: 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
CN2650I: DB9 male
RS-485 Data Direction Control: ADDC® (Automatic Data Direction Control)
Serial Line Protection:
15 KV ESD protection for all signals
2 KV optical isolation (CN2650I)
Console Port: Dedicated RS-232 console port on rear panel (8-pin RJ45)

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, DTR/DSR, XON/XOFF
Baudrate: 50 bps to 921.6 Kbps
Pull High/Low Resistor for RS-485: 1 KΩ, 150 KΩ
Terminator for RS-485: 120 Ω

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 V1/V2c/V3, HTTP, SMTP, ARP, PPPoE, DDNS
Security Protocols: RADIUS, HTTPS, SSH, PAP, CHAP
Configuration Options: Web Console, Serial Console, Telnet Console, Windows Search Utility
Windows Real COM Drivers: Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7 x86/x64, Embedded CE 5.0/6.0, XP Embedded
Fixed TTY Drivers: SCO Unix, SCO OpenServer, UnixWare 7, UnixWare 2.1, SVR 4.2, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x
Linux Real TTY Drivers: Linux kernel 2.4.x, 2.6.x
Management: SNMP MIB-II
IP Routing: Static, RIP-I, RIP-II

Operation Modes

Standard: Real COM, TCP Server, TCP Client, UDP, RFC2217, Terminal, Reverse Telnet, PPP, DRDAS, Redundant COM, Disabled

Applications

Terminal Sessions: 8 sessions per port

Physical Characteristics

Housing: Metal, IP30 protection
Weight:
CN2610-8: 3525 g
CN2610-16: 3560 g
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
CN2650I-8: 3666 g
CN2650I-16: 3776 g
CN2650I-8-2AC: 3932 g
CN2650I-16-2AC: 4022 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:
Standare Models: 0 to 55°C (32 to 131°F)

Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature: -40 to 75°C (-40 to 167°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

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)

Standards and Certifications

Safety: UL 60950-1, EN 60950-1
EMC: CE, FCC
EMI: EN 55022 Class A, FCC Part 15 Subpart B Class A
EMS:
EN 55024,
EN 61000-4-2 (ESD) Level 4,
EN 61000-4-3 (RS) Level 3,
EN 61000-4-4 (EFT) Level 4,
EN 61000-4-5 (Surge) Level 2,
EN 61000-4-6 (CS) Level 2,
EN 61000-4-8 Level 4,
EN 61000-4-11
Freefall: IEC-68-2-34, IEC-68-2-32
Vibration: IEC-68-2-6
Green Product: RoHS, CRoHS, WEEE

Reliability

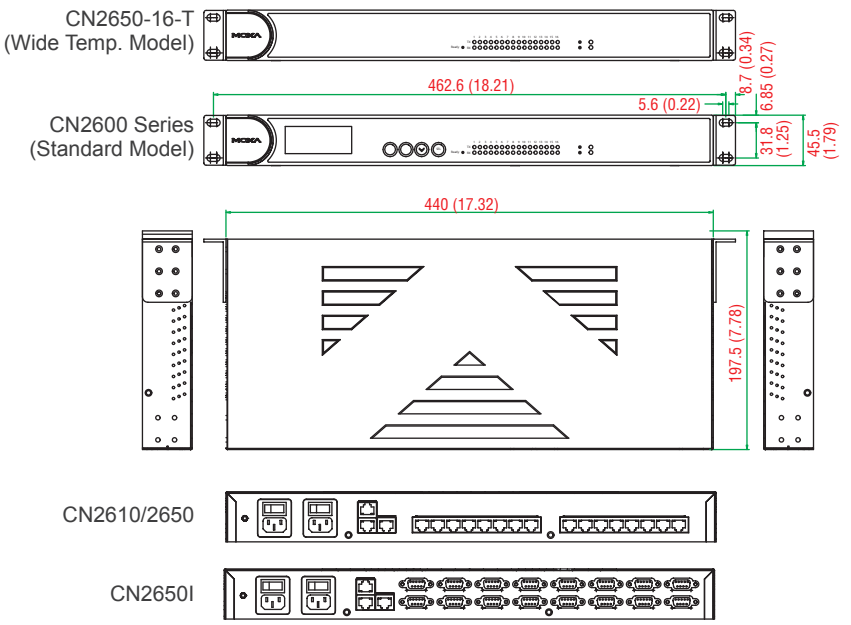
Alert Tools: Built-in buzzer and RTC (real-time clock)
Automatic Reboot Trigger: Built-in WDT (watchdog timer)
MTBF (mean time between failures): 99,302 hrs

Warranty

Warranty Period: 5 years
Details: See www.moxa.com/warranty

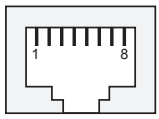
Dimensions

Unit: mm (inch)



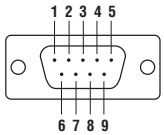
Pin Assignment

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	–	–

Ordering Information

Available Models

CN2610-8: Dual-LAN terminal server with 8 RS-232 ports, 0 to 55°C operating temperature
CN2610-16: Dual-LAN terminal server with 16 RS-232 ports, 0 to 55°C operating temperature
CN2610-8-2AC: Dual-LAN, dual-AC-power terminal server with 8 RS-232 ports, 0 to 55°C operating temperature
CN2610-16-2AC: Dual-LAN, dual-AC-power terminal server with 16 RS-232 ports, 0 to 55°C operating temperature
CN2650-8: Dual-LAN terminal server with 8 RS-232/422/485 ports, 0 to 55°C operating temperature
CN2650-16: Dual-LAN terminal server with 16 RS-232/422/485 ports, 0 to 55°C operating temperature
CN2650-8-2AC: Dual-LAN, dual-AC-power terminal server with 8 RS-232/422/485 ports, 0 to 55°C operating temperature
CN2650-16-2AC: Dual-LAN, dual-AC-power terminal server with 16 RS-232/422/485 ports, 0 to 55°C operating temperature
CN2650I-8: Dual-LAN terminal server with 8 RS-232/422/485 ports and 2 KV optical isolation, 0 to 55°C operating temperature
CN2650I-16: Dual-LAN terminal server with 16 RS-232/422/485 ports and 2 KV optical isolation, 0 to 55°C operating temperature
CN2650I-8-2AC: Dual-LAN, dual-AC-power terminal server with 8 RS-232/422/485 ports and 2 KV optical isolation, 0 to 55°C operating temperature
CN2650I-16-2AC: Dual-LAN, dual-AC-power terminal server with 16 RS-232/422/485 ports and 2 KV optical isolation, 0 to 55°C operating temperature
CN2650-8-2AC-T: Dual-LAN, dual-AC-power terminal server with 8 RS-232/422/485 ports, -40 to 75°C operating temperature
CN2650-16-2AC-T: Dual-LAN, dual-AC-power terminal server with 16 RS-232/422/485 ports, -40 to 75°C operating temperature

Package Checklist

- 1 CN2600 terminal server
- CBL-RJ45F9-150: 8-pin RJ45 to DB9 female connection cable, 150 cm
- 2 power cords (AC models only)
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card

Optional Accessories (can be purchased separately)

Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.

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