

SPECIFICATIONS

Desktop Unit... Model 4163 (Cat No. 304163) Board Unit... Model 4164 (Cat No. 304164)

High Speed Ruggedized Ethernet-to-RS485/422/232 Interface Converter

The Model 4163/4164 is a **RoHS compliant** high speed ruggedized Ethernet to RS485/422/232 interface converter from Electro Standards Laboratories. This unit converts Ethernet 10/100 Mbps IEEE 802.3 compliant data from a standard LAN/WAN connection to a serial asynchronous data interface over RS232, or RS485/422 networks with a user selectable baud rate of up to 921,600 bps. When operating in RS485/422 mode, the converter can be configured for 2-wire half duplex or 4-wire full duplex operation. This converter provides an industrial solution for remote monitoring and control of various devices from virtually anywhere over a LAN/WAN or Internet connection. Typical devices include PLC, motor controls, power monitoring, multi-drop data collection devices such as POS, barcode readers, time clocks, scales, data entry terminals, ATMs and other remote serial communications devices. Typical applications include building automation, industrial manufacturing, utilities, transportation and retail POS.

The Model 4163/4164 is designed to operate from -40° C to $+85^{\circ}$ C and is a member of Electro Standards Laboratories rugged community media converter family. The



unit features ESD protection circuitry on all receivers and transmitters for both RS232 and RS485/422 interfaces. The unit's power input is protected from transients and features 1kVDC isolation to prevent system ground loops. It can be powered from a wide input range of 10VDC-36VDC, with models also available for other voltage ranges such as 4.5VDC-9VDC and 19VDC-72VDC. Other features include dual DB9 power connectors (board only) for convenience in bused power applications, Ethernet Link Speed and Activity LEDs, TX, RX and Power indicator LEDs. The converter is available as a board only with front mounting threaded brackets for rack mounting in embedded applications. It is also available in a desk top package for applications that require an enclosure. Accessories include DIN rail mounting hardware and various AC input voltage power supplies.

Specifications:

Ethernet Network Interface:

Connectors: RJ45

Link Speed Ethernet 10Base-T or 100Base-T (Auto Sensing)

Ethernet Network Options:

Network Protocols: ARP, UDP/IP, ICMP, Telnet, TFTP,

SNMP, Auto IP, DHCP, and HTTP

Serial Port Protocols: TCP. UDP. and Telnet

Network Management: Internal Web Server, SNMP,

Serial or Telnet Login

Network Security: Password Protection and Locking Features (Optional Rijndael 128, 192 or 256-bit Encryption)

Serial Bit Rate Options (user selectable):

Format: Asynchronous Data Bits: 7 or 8 Stop Bits 1 or 2 Parity: Odd, Even, None

Flow Control: Software (XON/XOFF), None

Data Speed: Normal Mode- 300 to 230,400 bps @

-40°C to +85°C (-40°F to 185°F)

High Performance Mode - 300 to 921,600 bps @

 -40° C to $+75^{\circ}$ C (-40° F to 167° F)

RS232 Serial Monitor Port:

Full Duplex RS232 Monitor Capability

Connector: 5-pin Single Row Header (Board Only) Connector: Optional RJ45 or Customer Specified (Desktop)

Serial Copper Interface:

Connectors: DB9, Female

RS232: (DTE/DCE-Default) Jumper Selectable

Compatible with MIL-STD 188C.

RS485/422: (2-wire/4-wire Default) Jumper Selectable Termination: RS485 120 Ohm Jumper Selectable

Serial Network Configurations:

RS232: Point-to-Point

RS485/422: Point-to-Point/Multi-Point

Multi-Point Options:

Ethernet Control - TX Disable Time depends upon

Serial Bit Rate

(9.6Kbps ~ 120uSec, 230.4Kbps ~ 12uSec,

921.6Kbps ~ 5uSec)

Timer Control - Default RX Disable Time \sim 280uSec, (User Configurable TX Disable Time via a single thru-

hole resistor)

Indicators:

Power Indicator LED

Serial DB9: TXD and RXD LEDs

Ethernet RJ45: Link Speed and Activity LEDs

Power:

Input Power: 10VDC-36VDC Standard 4.5VDC-9VDC, 19VDC-72VDC, Others at 2W. Connectors: DC Power Jack (Desktop Unit)

Dual DB9F for Power Daisy Chaining

(Board Only)

Isolation: 1kVDC for power input,

3750 Vrms between data interface.

Model 4164 Mechanical (Board Only):

Model / Cat No: 4164 / 304164 Size: 4.8" x 3.9" x 0.63" Weight: 3.5 oz (99g)

Mounting: Mounting Holes, Rt Angle Brackets

Model 4163 Mechanical (Desktop Unit):

Model / Cat No: 4163 / 304163 Size: 5" x 4.25" x 1.4" Weight: 10.1 oz (286g)

Mounting: 4 Threaded Holes Std, DIN Rail Optional

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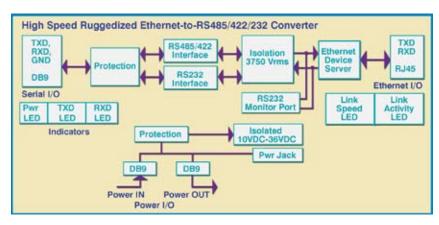
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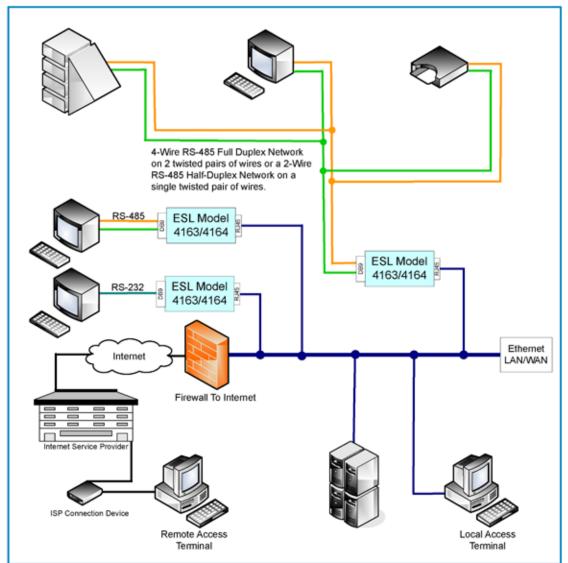
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