

Very High Speed Ruggedized ST Fiber-to-Multi-Point RS485/422/232 Interface Converter

• Ideal for RS485 Multi-Point Application

The **Models 4152, 4152-DIN, and 4153** are high speed ruggedized **ST Fiber to RS485/422/232** interface converters. Typical operating speeds are up to 1.5 Mbps for RS232 to fiber conversion and up to 5 Mbps for RS485/422 to fiber conversion. When operating in RS485/422 mode, the converters can be configured for 2-wire half duplex or 4-wire full duplex operation.

Applications: The converters provide an industrial solution for applications requiring a single point-to-point or a **multi-point communications link** over short and long distances. Applications include: PC to PC long distance communications, factory automation, multi-drop data collection devices, barcode readers, time clocks, scales, data entry terminals, ATM's and serial communications in harsh environments

All three models are designed to operate from -40°C to +85°C. The units feature ESD protection circuitry on all receivers and transmitters for both RS232 and RS485/422 interfaces. The power input is protected from transients and features 3kVDC isolation to prevent system ground loops. The converters can be powered from a wide input range of 10VDC-36VDC. Additional models are available for voltage ranges such as 4.5VDC-9VDC and 19VDC-72VDC. Other features include user selectable fiber polarity, dual DB9 power connectors (board only) for convenience in bused power applications, TX, RX and Power indicator LEDs.

Select your configuration: **Model 4152** Desktop Unit, for applications requiring an enclosure; **Model 4152-DIN**, for applications requiring mounting on a DIN rail; and the **Model 4153** (board only) for embedded applications. The board has front mounting threaded brackets that facilitate rackmounting.



Specifications:

Fiber Interface:

Connectors: Fiber Optic ST
TX Power: -12.5 dBm
RX Sensitivity: -27.5 dBm
Optical Budget: 15 dB
Max. Link Distance with 62.5/125 μm fiber:
5.35 km at up to 5 Mbps, 25°C
3.75 km at up to 5 Mbps, -40°C to +85°C
Wavelength: 820 nm/850 nm, multimode
Fiber Size: 50/125 μm, 62.5/125 μm, 100/140 μm

Fiber Polarity:

Logical 1 = Light ON/OFF: Jumper Selectable

Copper Interface:

Connectors: DB9, Female
Type: RS232, RS485 (2-wire/4-wire)
Terminations: RS485 120 Ohm jumper selectable

Bit Rate (nom.):

RS232: 0 to 1.5 Mbps
RS485/422 0 to 5 Mbps

Network Configurations:

RS232: Point-to-Point
RS485/422 Point-to-Point
Multi-Point (Default ~280 uSec TX disable time)

(User configurable TX disable time via a single thru-hole resistor)

Indicators:

LEDs: TXD, RXD, PWR

Power:

Input Power: 10VDC-36VDC std, 4.5VDC-9VDC, 19VDC-72VDC, Others at 1.5W.
Isolation: 3 kVDC
Connectors: Dual DB9F for Power Daisy Chaining (board only), DC Power Jack (desktop unit)

Operating Environment:

-40°C to +85°C

Model 4152 Mechanical (Desktop Unit):

Model 4152, Cat No: 304152
Size: 5" x 4.25" x 1.4"
Weight: 10.1 oz (286g)

Model 4152-DIN Mechanical (DIN Rail Mounted Unit):

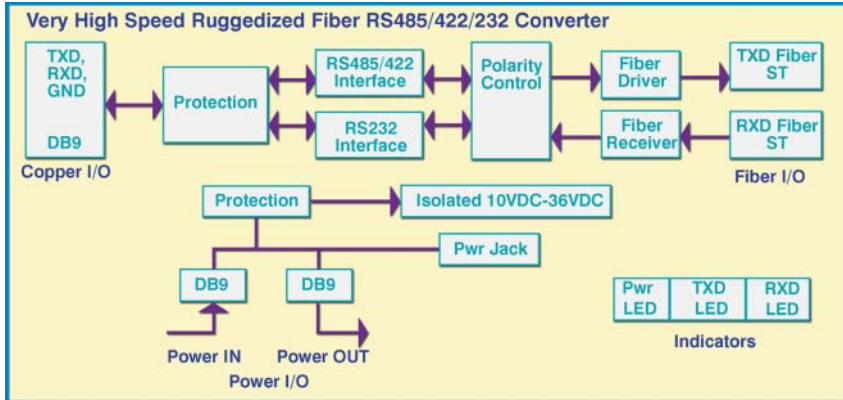
Model 4152-DIN, Cat No: 304152-DIN
Size: 5" x 4.25" x 1.4"
Weight: Approx. 9.8 oz (278g)
Mounting: 2 Threaded Holes Standard, DIN rail
DIN Rail Bracket Size: 2.84" x 1.24" x 0.16"
DIN Rail Bracket Weight: 0.9 oz (25.5g)

Model 4153 Mechanical (Board Only):

Model 4153, Cat No: 304153
Size: 4.8" x 3.9" x 0.63"
Weight: 3.5 oz (99g)
Mounting: Mounting Holes, Rt Angle Brackets

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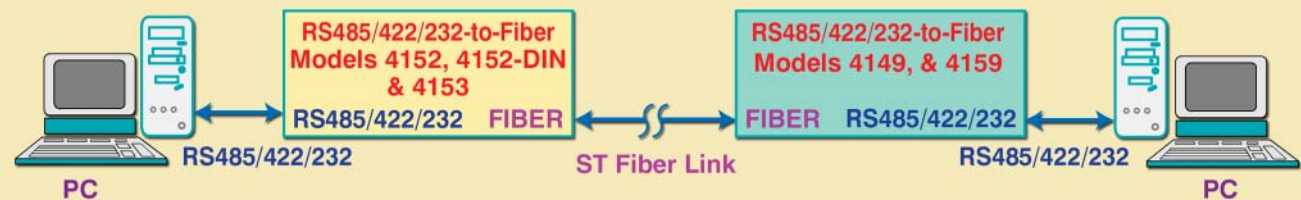


Models 4152, 4152-DIN, and 4153 RS485 Multi-Point Application:



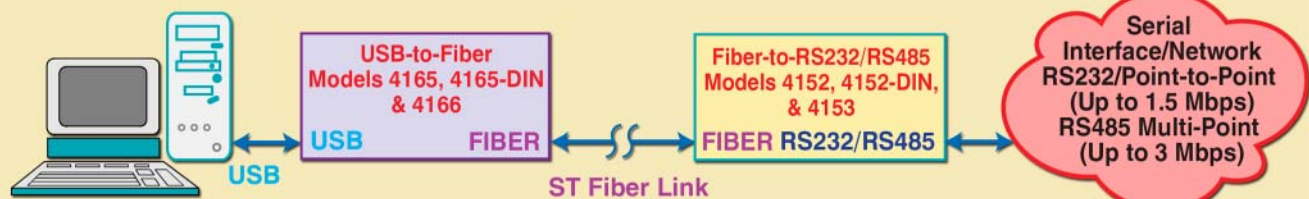
Isolated PC RS485/422/232 communications to fiber serial interface/network.

Models 4152, 4152-DIN, and 4153 to Models 4949, 4159 Application:



Point-to-Point Isolated PC RS485/422/232 Communications.

Models 4165, 4165-DIN, and 4166 to Models 4152, 4152-DIN and 4153 Application:



Isolated PC USB to RS232/RS485 communications serial interface/network.