I-2541
# RS-232/422/485 to Fiber Optic converter

General Description

The I-2541 is an RS-232/422/485 to fiber optic converter that ensures data transmission security by using fiber optic transmission technology to provide immunity from EMI/RFI interference. The I-2541 is designed for RS-232/422 point-to-point connections and RS-485 multi-drop applications which require a signal to be transmitted for distances of up to 2Km (6,600 ft), and is a perfect solution in applications where transmission must be protected from electrical exposure, power surges, lightning strikes or chemical corrosion.

Specifications

- Fiber Port: ST (Multi-mode)
- Wavelength: 850nm
- Fiber Cable: 62.5/125μm
- Speed: Internal "Self Tuner", auto switching Baud Rate, 300~115200 bps
- Transmission Distance: Signals can be transmitted up to 2Km.
- Isolation voltage: 3000V DC
- Optical isolation: 3570Vrms
- DIN rail mount for industrial usage
- Provides LEDs for network and power monitoring
- Dimensions: 32.30 x 99.00 x 77.50 mm (w x h x d)
- Power requirements: Unregulated +10V DC ~ +30V DC.
- Power consumption: 2.0W max.
- ESD Protection:
    - 4KV Contact Discharge
    - 8KV Air-Gap Discharge

■ Connectors & Cables
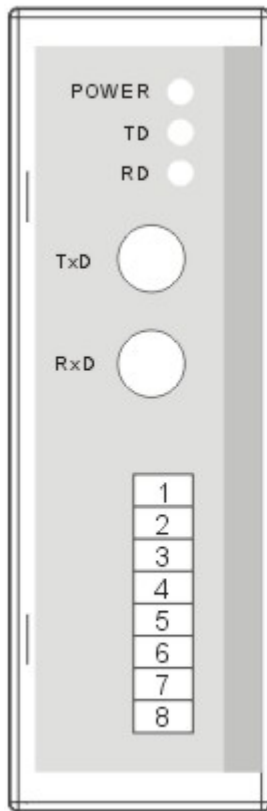
Terminal NO.	Pin name
TxD	Fiber TxD
RxD	Fiber RxD
1	Tx+/DATA+
2	Tx-/DATA-
3	Rx+
4	Rx-
5	NC
6	GND
7	TxD
8	RxD

RS-232/422/485 Converter connection

Serial communication	
RS-232 Signals	TxD, RxD, GND
RS-422 Signals	Tx+, Tx-, Rx+, Rx-
RS-485 Signals	Data+, Data-
Baud Rate	300bps to 115.2kbps

Fiber Cables

The I-2541 uses a wavelength of 850nm and also supports MM (multimode) fiber cables. A 62.5/125mm MM cable is recommended.

Interpreting the LED Indicators

LED	Status	State	Interpretation
POWER	Power status	ON	Converter is on.
		OFF	Converter is off.
TD	Transit Data	ON	Transiting on Fiber port.
		OFF	No link or the link is faulty.
RD	Receive Data	ON	Receiving on Fiber port
		OFF	No link or the link is faulty.

■ Making Network Connections

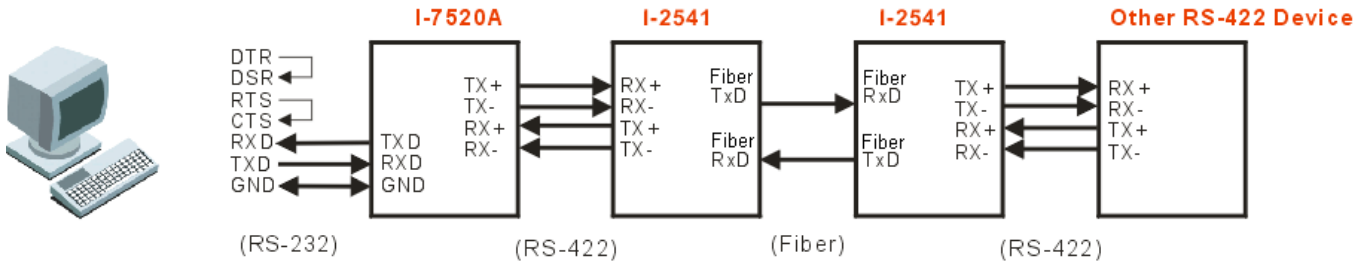**Important note:**   RS-232/485/422 protocols cannot be used simultaneously.

The RS-485 pin assignment of the I-2541

Terminal Number	TxD	RxD	1	2	3	4	5	6	7	8
Pin Name	Fiber TxD	Fiber RxD	DATA+	DATA-	—	—	—	—	—	—
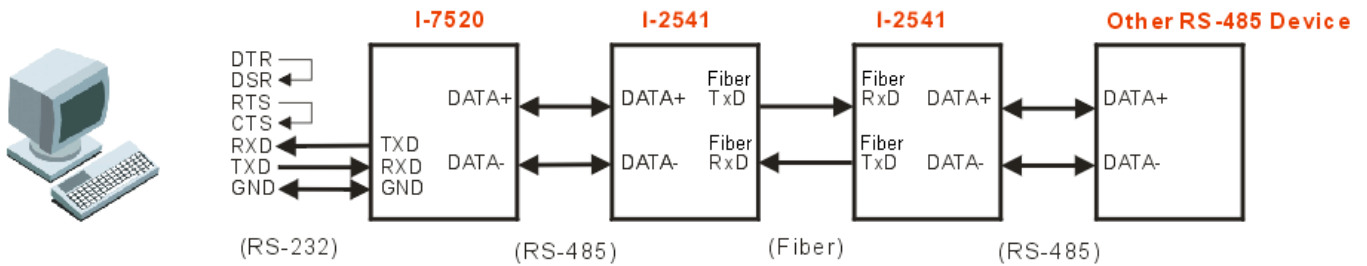
The RS-422 pin assignment of the I-2541

Terminal Number	TxD	RxD	1	2	3	4	5	6	7	8
Pin Name	Fiber TxD	Fiber RxD	Tx+	Tx-	Rx+	Rx-	—	—	—	—

The RS-232 pin assignment of the I-2541

Terminal Number	TxD	RxD	1	2	3	4	5	6	7	8
Pin Name	Fiber TxD	Fiber RxD	—	—	—	—	—	GND	TxD	RxD
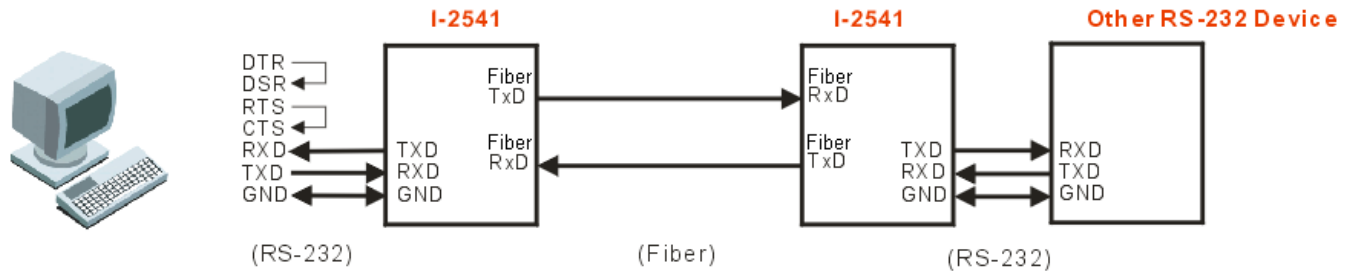
All pin assignments for the I-2541

Terminal Number	TxD	RxD	1	2	3	4	5	6	7	8
Pin Name	Fiber TxD	Fiber RxD	Tx+ DATA+	Tx- DATA-	Rx+	Rx-	NC	GND	TxD	RxD

Note: RS-232/485/422 protocols cannot be used simultaneously.