1. Overview

The RS-232 Fiber Optic Converter is used to extend serial transmission distance up to 2 kilometers, and allows data transmission at a speed of up to 115.2 Kbps.

2. Package Checklist

Before you install the Converter, verify that the package contains the following items:

- TCF-140 RS-232 (DB25) Fiber Optic Converter
- This User's Manual

Notify your sales representative immediately if any of the above items is missing or damaged.

5 Year Manufacturer's Warranty

Moxa warrants that the Product(s) shall be free from manufacturing defects in materials and workmanship for a period of five (5) years from the date of delivery provided that the Product was properly installed and used. Defects, malfunctions or failures of the warranted Product caused by damage resulting from acts of God (such as floods, fire, etc.), environmental and atmospheric disturbances, other external forces such as power line disturbances, host computer malfunction, plugging the board in under power, or incorrect cabling and damage caused by misuse, abuse and unauthorized alteration or repair are not warranted.
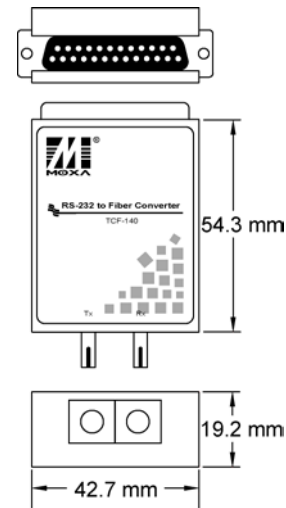
3. Schematic

Fig. 1: RS-232 (DB25) Serial-Port Fiber Converter

4. Installing the Fiber Optic Converter

- Wear a grounding device to guard against bodily injury caused by electrostatic discharge.
- Turn off the power of the device/station to which the fiber converter will be attached. Double check to make sure the device/station is not active.
- To save on cabling cost, the fiber converter can be attached directly to the RS-232 (DB25) port without using a cable. Fasten the screws after connecting the Converter to the port.
- Install the fiber cable. Connect the Tx (Rx) port of the Converter to the Tx (Rx) port of the opposing device.

NOTE:
1. When using an RS-232 cable, shielded cables are required at the DB25 side for EMC compliance.
2. **If your software uses flow control, you must ensure that the RTS/CTS signals on the device end are always on**. This is due to the nature of fiber optic data transmission.
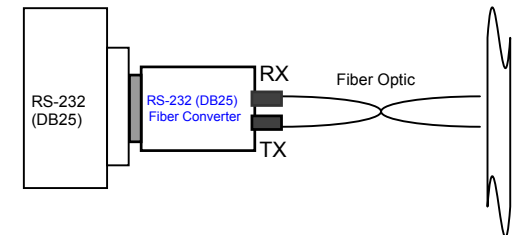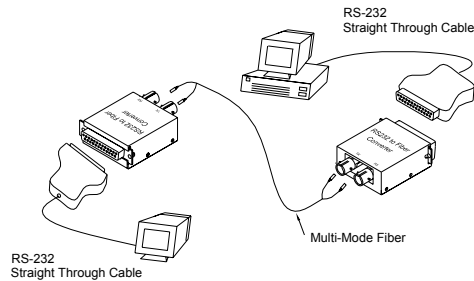
Fig. 2: Network Connection

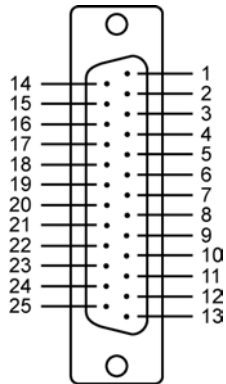| Pin No.	Signal
2	RxD
3	TxD
4	CTS
7	GND

Fig. 3: DB25 Port Pinouts

Note:
  Since TCF-140 is powered by the attached RS-232 device, instead of an external power supply, you need to connect the CTS pin in order to acquire the necessary power supply from the attached RS-232 device's RTS pin.

5. Technical Specifications

Model No.	**TCF-140**
Standards	TIA/EIA-574

Network Interface:	Configuration	Port
	RS-232 (DB25 Female)	1
	ST Fiber Transceiver	1

RS-232 Port	DB-25 (Female) for direct attachment
ST Fiber Port	Full duplex / Half duplex,
	Multi-mode fiber optic wavelength of 820 nm
	Optical Loss Budget of 10 dB
Fiber Cable	50/125, 62.5/125, or 100/140 μm
	multi-mode up to 2 km
Data Transfer Rate	up to 115.2 Kbps
Ambient Temperature	0 to 50°C
Humidity	5 to 90% RH
Dimensions	20.1(H) × 45.2(W) × 50.1(D) mm

Complies with FCC Part 15 Class A and CE Mark

Note:
  For connecting this device to a Router, Bridge, or Switch, please refer to the corresponding device's Technical Manual for detailed technical information.

TCF-140 RS-232 Fiber Converter
(DB25 to ST Multi-Mode)
User's Manual