RS-422/RS-485 Async Fiber Optic Modem

TC1520

- **Async Data Rates up to 500 Kbps***
- **RS-422, 2 or 4-wire RS-485**
- **Hardened Temperature Version (optional)**
- **Ring or Point-to-point Topologies**
- **Distances up to 80km**
- **Multimode or Single Mode (850/1300/1550nm)**
- **Six Diagnostic LEDs**
- **Sturdy Compact Metal Case**

TC1520 Wallmount Base Unit

Versatile and competitively priced, the TC1520 fiber optic modem supports RS-422 and 2-wire or 4-wire RS-485 interfaces. It transmits asynchronous data at speeds up to 500 Kbps.* Distances up to 80km are possible over single mode fiber, 4km over multimode fiber.

Because the TC1520 can be multi-dropped on the electrical side (RS-485), it is ideal for poll and response applications such as SCADA and Process Control. It will support one Remote Terminal Unit via the RS-422 interface.

Six visual indicators are provided for troubleshooting: Power, RS-485, Driver Mode, Receive Data, Transmit Data, Optic Sync. Four DIP switches are provided for RS-485 Transition Time and Termination Resistor settings.

The TC1520 is compatible with all popular types and sizes of multimode (850nm/1300nm) or single mode (1300/1550nm) fiber optic cable. Fiber optic connectors are ST or FC. The electrical connectors are terminal blocks. Power is 12VDC or 115/230VAC with an external power cube. A hardened temperature version (-20°C to 70°C), Model TC1520T, is also available.

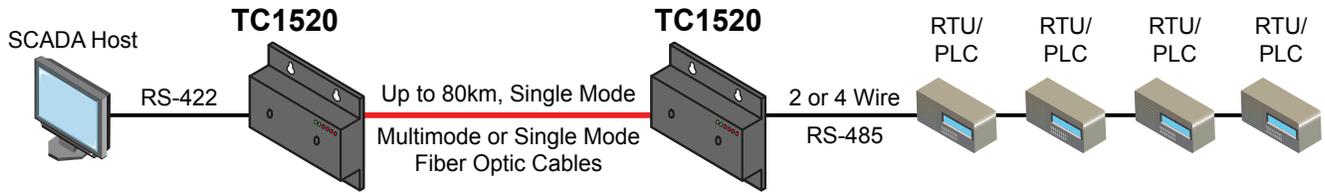## TC COMMUNICATIONS®
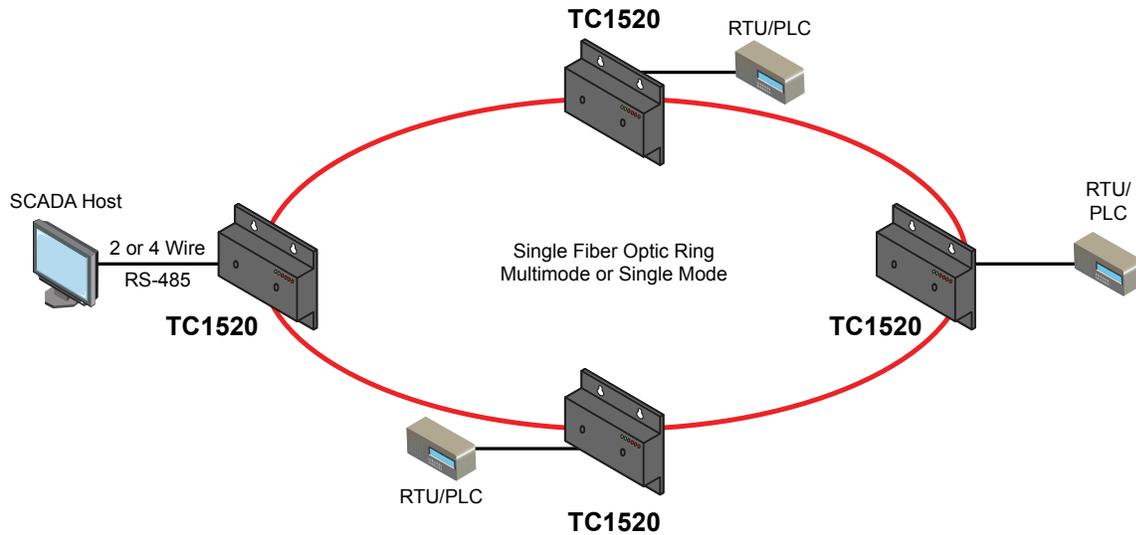### FIBER OPTIC CONNECTIVITY

Applications

The TC1520 is often used to link various process control systems in manufacturing plants, refineries, etc. It is also commonly used to connect Remote Terminal Units to SCADA hosts, to monitor Power and Water plant devices and to link security networks.

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*Contact factory for higher requirements

Typical Point-to-Point Application Using TC1520 RS-422/RS-485 Fiber Optic Modems

Typical Application Using TC1520 RS-485 Fiber Optic Modems in a Ring Topology

Data Rates
Async.......................up to 500 Kbps*

Optical
Transmitter.........................LED/ELED
Receiver.............................PIN Diode
Wavelength.............850/1300nm MM
.............................1300/1550nm SM
Fiber Optic Connectors
...................................ST, Optional FC
Loss Budget* - 850/1300/1550nm
Multimode @62.5/125μm...........15dB
Single Mode @9/125μm..............20dB

Electrical
Connector..................Terminal Blocks
Interface................................RS-422
....................or RS-485 (2 or 4-wire)

System
Bit Error Rate.............1 in 10^{10} or better

Visual Indicators
LEDs...................PWR, TD, RD, RS-485,
....................DRV Mode, Optic Sync

Power
Standard...................12VDC @200mA
Optional..........................115/230VAC
...................(w/ extenal power cube)

Temperature
Operating.......................–10°C to 50°C
Hi-Temp (optional)........–20°C to 70°C
Storage...........................–40°C to 90°C
Humidity............95% non-condensing

Physical (Standalone Unit)
Height.........................(2.24 cm) 0.88”
Width.........................(10.05 cm) 3.96”
Depth...........................(4.40 cm) 1.73”
Weight.......................(104 gm) 3.67 oz

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TC COMMUNICATIONS®
FIBER OPTIC CONNECTIVITY

ISO 9001
QMI-SAI Global
#1045959

Certified System ™

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Note: Information contained in this data sheet is subject to change without prior notice.