TD-1280 / TD-1281
FULLY COMPATIBLE TIA-232 / 7 CHANNEL RX/TX PAIR

fiberplex
TECHNOLOGIES, LLC

Overview

The TD-1280 and TD-1281 pair together to form a powerful balanced serial data transport solution. The DB-25 connectors are pinned out to directly support a TIA-232 serial link. However due to the transparency and flexibility of the design, the TD-1280/81 can be used as 3x2 independent 1 Mbps TIA-232 channels and 5x5 independent 120 Kbps TIA-232 channels.

This incredible versatility can solve a myriad of serial data communications problems. Your once limited serial links can not only be consolidated but extended to over 20 Km on a single fiber pair. SCADA (supervisory control and data acquisition), Telecommunications, Facility Automation and Control can all benefit from the TD-1280/81.

For more advanced systems, a 'Regeneration' switch on the TD-1281 allows users to toggle between synchronous applications that require Send Timing (ST) and asynchronous or synchronous applications that require Terminal Timing (TT).

Features:
- Compatible with:
  - TIA-232 / V.28
  - MIL-STD-188-114A unbalanced type 3
  - MIL-STD-188C
  - FED STD 1020A
- Can alternately be used for 3x2 high speed TIA-232 and 5x5 low speed TIA-232
- TIA-232 channels support data rates from DC to 1 Mbps
- Includes power adapter as well as a 3-position Phoenix™

Applications:
- SCADA
- Oil and Gas
- Home / Facility Automation
- Telecommunications
- Industrial Controls

How do we get so many channels?

By using a technology unique to FiberPlex products called 'transparency', we are able to use all the clock, data and control channels of the standard EIA-530 interface completely independently of one another. This provides the ability to have (2) bi-directional 1 Mbps TIA-232 serial with (1) unidirectional 1 Mbps TIA-232 and (5) bi-directional 120 Kbps TIA-232, or even independently as (3) 1 Mbps TIA-232 in one direction and (2) in the other [3x2] and (5) 120 Kbps TIA-232 in one direction and (5) in the other [5x5]. The table below shows how these channels are pinned out.

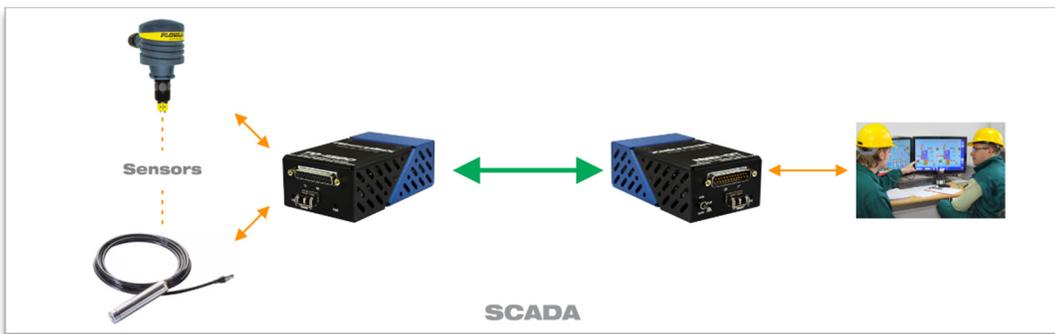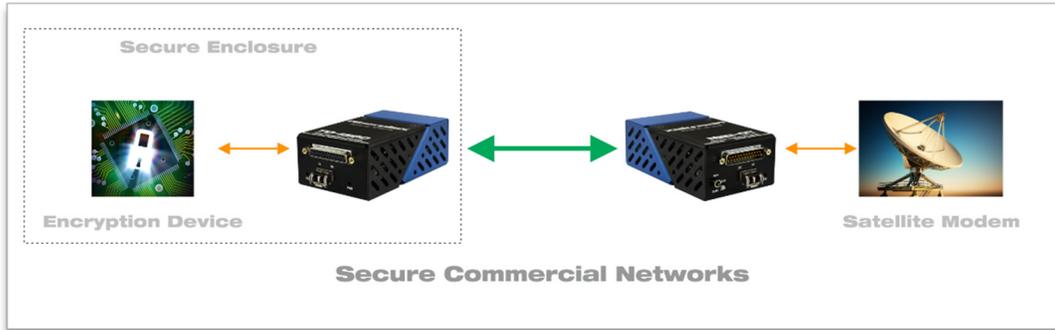| Pin	TD-1281 (To DCE) Direction	TD-1280 (To DTE) Direction	Individual TX/RX channels		TIA-232 Function
1			Chassis Ground		Chassis Ground
2	Out	In	1 Mbps TIA-232	TX	Send Data (SD)
3	In	Out		RX	Receive Data (RD)
4	Out	In	120 Kbps TIA-232	TX	Request To Send (RTS)
5	In	Out		RX	Clear To Send (CTS)
6	In	Out		RX	Data Set Ready (DSR)
7			Signal Ground		Signal Ground
8	In	Out	120 Kbps TIA-232	RX	Receiver Ready (RR)
9					
10					
11					
12					
13					
14	Out	In	120 Kbps TIA-232	TX	Secondary Send Data (S-SD)
15	In	Out	1Mbps TIA-232	RX	Send Timing (ST)
16					
17	In	Out	1 Mbps TIA-232	RX	Receive Timing (RT)
18	Out	In	120 Kbps TIA-232	TX	Local Loopback (LL)
19	Out	In		TX	Secondary Request To Send (S-RTS)
20	Out	In		TX	Terminal Ready (TR)
21					
22	In	Out	120 Kbps TIA-232	RX	Ring Indicator (RI)
23					
24	Out	In	1 Mbps TIA-232	TX	Terminal Timing (TT)
25	In	Out	120 Kbps TIA-232	RX	Test Mode (TM)

Data and clock signals (highlighted) have a maximum data rate of 1 Mbps. All other signals not highlighted are control signals with a maximum data rate of 120 Kbps.

Typical Applications

Secure Enclosure

Encryption Device

Satellite Modem

Secure Commercial Networks

Sensors

SCADA

Ordering Information

Accessories		Part Number	
TDP	6 Position Front Connect Powered Rack for TD Series Modules	TD-1280 - L5B	
TDR-01-AC	6 Position Rear Connect Powered Rack for TD Series Modules	**Optical Interface:**	
TTM	Truss Mount Chassis for TD Series Modules	L22 = multimode, 1310nm, 2km, LC	
TD-DINR	DIN Rail Mounting Bracket for TD Series Modules	L5B = singlemode, 1300nm, 20km, LC	
TNE-01	Enclosure for (1) TD Module, Outdoor Rated, Environmentally Sealed	C = SFP cage, no optical module _Other Optical interfaces available on our custom Catalog_	
TNE-03	Enclosure for (3) TD Modules, Outdoor Rated, Environmentally Sealed	**Model:** 1280 = DB-25 Female (DTE)	
PSA-T913	Spare Wall Power Adapter for TD Series Modules, 9V @ 1.3A	1281 = DB-25 Male (DCE)	