



TX/RX280 TX/RX380

Fiber Optic Audio/Intercom/Control Module Set



Features

- 18-bit digital mux, 1-fiber
- Expandable to 8 audio/fiber plus simultaneous Auxiliary data, intercom, closures
- DC to 25 kHz, 96+dB audio
- Switchable Mic/Line Inputs
- 2-ch. Sony RM-M7/P3 CCU or RS422 compatible data
- 2 Tally/Call switch closures
- 2-ch. Hi-fi intercom; 4-wire or RTS, Telex, Clear-Com
- Up to 20 kilometer range
- Miniature plug-in modules
- Low power consumption
- High reliability design

Complementary Viper™ module sets that combine multiple program audio, intercom, camera control, and relay closure data—all on a single optical fiber

Applications

- Audio/Video Production
- Remote Studios
- Campus Distribution
- CATV/Telco Backhaul

Telecast's **TX/RX280** and **TX/RX380** module sets are important elements of Telecast's **Viper** system, and bring video/audio communications to a new level. These miniature transmitter (TX) and receiver (RX) modules are multiplexers that combine to simultaneously transmit up to 8 audio channels and, optionally, 2 intercom channels plus 2 high speed data/control channels plus 2 switch closures — all on one optical fiber. Input impedance and level switches give you total control.

Flawless Audio—96+ dB, 25 kHz
Telecast provides outstanding audio quality. Flat, wide and quiet.

True 2W/4W Intercom Interface
Two independent channels of 4-wire (balanced) or 2-wire (RTS, Telex or Clear-Com compatible) intercom. Power to belt packs.

Sony CCU, High Speed Data
The Auxiliary option gives you two high speed data channels. Interfaces include Sony camera control units (RM-M7 and RM-P3), RS422 and RS423 (TTL).

Relay/Switch Closures
Two relay/closure paths for Tally, Call, or control of remote devices.

Expandable in pairs, up to 8 Audio/Fiber

The primary TX/RX280 set delivers two channels of audio on a single optical fiber. By plugging-in TX/RX380 expansion modules, you can add up to six more audio channels, two at a time, on the same fiber—for a total of eight channels per fiber. The TX/RX280 also interface to the optional two-way dual intercom/data/switch closure interface submodule for a complete program/control/communications system.



Modules plug into Viper 19" rack frames or portable Mussel Shell enclosures

Specifications

Audio

Transmission Method	Digital, Time Division Multiplexing (TDM)
Input Impedance	600 Ohms balanced or 5 kOhms balanced (switchable)
Output Impedance	30 Ohms balanced
Maximum Input Level (600 Ω balanced mode "Low Z _{in} " setting)	
Unity Gain Setting	+18 dBm (peak)
+10 dB Gain Setting	+8 dBm (peak)
+40 dB Gain Setting	-22 dBm (peak)
Maximum Input Level (5 kΩ balanced mode "High Z _{in} " setting)	
Unity Gain Setting	+16 dBV (peak)
+10 dB Gain Setting	+6 dBV (peak)
+40 dB Gain Setting	-24 dBV (peak)
Maximum Output Level (from 30 Ω balanced)	
Unity Gain Setting	+ 18 dBm into 600 Ω
10 dB Attenuate Setting	+ 8 dBm into 600 Ω
Frequency Response (@ 8 dBm)	
from DC to 25 kHz	±0.2 dB
Total Harmonic Distortion + Noise	
from 20 Hz to 20 kHz (@ +8 dBm)	<0.05%
at 1 kHz (@ +18 dBm)	<0.01%
Intermodulation Distortion (SMPTE), 60 Hz + 3 kHz mixed 4:1 @ +8 dBm	<0.04%
Signal to Noise Ratio, unweighted , 20 Hz -20 kHz, ref. to +18 dBm clip level	>95 dB
Aggregate Digital Data Rate	43 Mbaud

Mechanical/Electrical/Environmental

Dimensions (WxLxD)	1.2" x 5" x 2"
Weight (per module)	4 ounces
Audio Connectors (on enclosure)	3-pin XLR (male & female)
Intercom Connectors (on enclosure)	3-pin or 5-pin XLR (male)
CCU/Data Connectors (on enclosure)	5-pin XLR (male)
Relay/Data Connectors (on enclosure)	5-pin XLR (male)
Optical Connector (on TX/RX280 only)	ST-type
Power Connector (on enclosure)	4-pin XLR (male)
Input Voltage Range (enclosure)	12 to 24 VDC (30 VDC max.)
Power Consumption (per module)	2 watts
Temperature Range	-40° to +65°C
Humidity Range	0 to 95% non-condensing

Auxiliary (optional)

Intercom

Interface	4-Wire (Balanced) or 2-Wire "RTC" (RTS/Telex/Clear-Com)
Input/Output Level	0 dBm (nominal), +10 dBm (peak)
Input Impedance	600 ohm (Balanced) or "RTC" compatible
Output Impedance	50 ohm (Balanced) or "RTC" compatible
Frequency Response, 50 Hz to 15 kHz	+1, -6 dB
Signal to Noise Ratio (ref. to +10 dBm)	70 dB

CCU/Data

Interface	EIA RS422, or Sony CCU (e.g., RM-M7 & RM-P3)
Transmission Rate	
RS422	Balanced TTL levels 0 to 150 kBits/sec
RS423	TTL level 0 to 150 kBits/sec
Sony® CCU . Bidirectional, single line	0 to 20 kBits/sec
*Higher data rates possible dependent on user jitter tolerance.	
Jitter	1.12 μsec

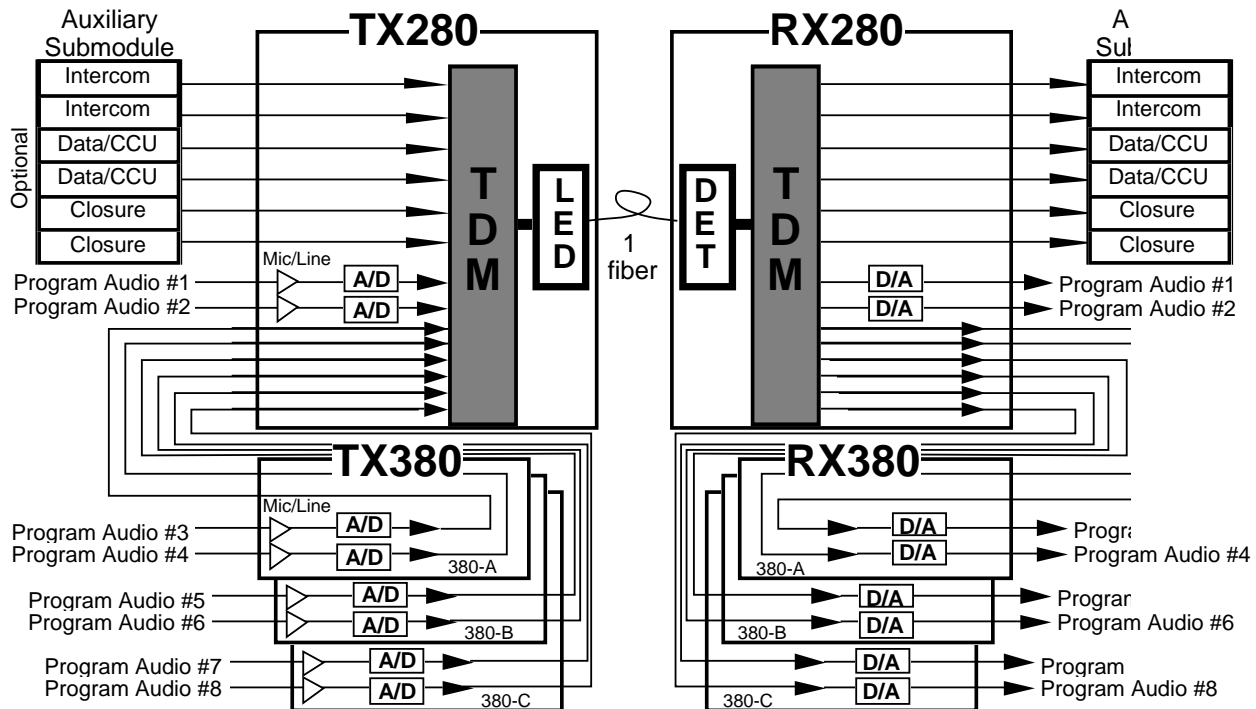
Contact Closure Ports

Input	Normally High TTL level
Logic 1=open remote contacts; connect to ground (logic 0) to actuate	
Output	Form 1A SPST, "Normally Open" isolated contacts
Switch Voltage Rating	200 VDC
Switch Current Rating	500 mA
Carry Current Rating	1.2 A
Contact Resistance	200 mΩ

Note: Bidirectional Auxiliary communications requires two similarly equipped **TX/RX280** sets configured to transmit in opposite directions.

Electro-Optical

Operating Wavelength	850 nm	1300 nm	1550nm
TX Output into cable	-17 dBm	-13 dBm	-13 dBm
RX Sensitivity	-26 dBm	-30 dBm	-30 dBm
<u>Distance Limits</u>			
Multimode (50 or 62.5/125 μm)	1 km	5 km	5 km
Single Mode (8.7/125 μm)	-----	20 km	20 km



For more information about Telecast's video, audio, intercom and data systems, see the **Adder™**, **Viper™** and **Sidewinder™** data sheets.

© 1995 Telecast Fiber Systems, Inc.
 Sony is a registered trademark of Sony Electronics Inc.
 Specifications subject to change without notice. Made in USA



102 Grove Street; Worcester, MA 01605
 Phone: (508)754-4858 FAX: (508)752-1520