Telecast
Fiber Systems, Inc.

A BELDEN BRAND

6080

8-Channel Audio Multiplexer Modules for the Viper II

The Viper II™ module set for transmitting up to eight channels of analog audio on one fiber

Telecast's 6080 fiber optic audio transmitter and receiver module set efficiently multiplexes and transmits eight channels of your analog audio on one fiber, with a signal to noise level greater than 100 dB. The module set supports line level audio input and output, and provides more than 20 kHz of audio frequency response with extremely low distortion.

Eight line level audio inputs are digitized by the TX5060, using 24-bit sampling, digitally multiplexed and transmitted via Telecast's advanced laser technology. The RX5060 faithfully reconverts these signals into the original analog audio channels.

Durable and Flexible

The module set is available as stand alone "throw down" modules (MTX6080 and MRX6080), or as rack mount (TX6080 and RX6080) modules to fit our Viper II 16-slot frame. Or use our easy, rack mount conversion kit to reconfigure them as you like.

Features

- *Rack modules or stand-alone*
- *Broadcast quality audio*
- *S/N ratio > 100 dB*
- *24 dBm max. audio level*
- *20Hz to 20 kHz at full level*
- *Digitally transmitted, 24 bit*
- *AC coupled inputs and outputs*
- *Up to 30 dB optical link budget*
- *Durable construction*
- *Easy rack mount module conversion*
- *Battery back-up option in Viper II Frame*
- *Wide temperature range*
- *Low power consumption*
- *High reliability design*
- *WDM/CWDM multiplexing optional*
- *TelePort/TeleThon compatible*

Applications

- *Campus A/V networks*
- *Government facilities*
- *In-building audio distribution*
- *Recording Studios*
- *Radio Transmission links*
- *Television broadcast production*

Audio

Transmission method	Digital, TDM
Digital sampling	48 ksamples/sec@24-bits
Input impedance	10 kΩ
Output impedance	< 100 Ω
Freq. response, at +24dBm	±0.2 dB, 20Hz to 20kHz
Signal to noise ratio	> 100 dB
Total harmonic distortion	<0.02%, 20Hz to 10kHz
	<0.1%, 10kHz to 22kHz
Intermod distortion (60 Hz + 3 kHz mixed 4:1)	<0.04%

Electro-Optical

Operating wavelength	
Standard	1300 nm
Optional	1550 nm
Transmitter output power	
Standard	-10 dBm
Opitonal	0 dBm
Receiver sensitivity range	-4 to -30 dBm
Optical source/detector type	Laser diode/PIN
Fiber compatibility	Single mode or multimode

Mechanical/Environmental

Dimensions (WxLxD)	3.35" x 7.65" x 0.94"
Weight (per stand alone module)	10 ounces
Audio connectors	DB25 Femalle
Optical connector	ST type
Power Req. (typ., per module)	3 watts @ 10 to 18VDC
Temperature Range	-25° to +55°C
Humidity Range	0 to 95% RH, Noncond.

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Specifications subject to change without notice. Made in USA
6080-0110

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Operating Notes for: 6080 Audio Mux/Demux Modules for Viper II

Power Requirements
Most Viper II modules typically consume only 3 watts. The stand-alone module accepts a 10-18VDC, 350mA power cube wth a 2.5mm locking jack, center pin positive. When mounted in the V2 frame, the modules are powered via a 24-pin Future-Bus connector.

Connections
Audio — All audio connections are made via a DB25 female (shown). Pin-outs are indicated on the TX and RX sideplate diagrams. Audio inputs and outputs are AC coupled for protection.

Fiber — Each TX and RX has a bulkhead ST receptacle that accepts a standard multimode or single-mode fiber terminated with ST type connectors.

Faceplate Indicators
The **TX6080** also has nine LED indicators:

LASER	When green, indicates proper laser operation
CH 1	Flashes green with varying Audio 1 input levels
CH 2	Flashes green with varying Audio 2 input levels
CH 3	Flashes green with varying Audio 3 input levels
CH 4	Flashes green with varying Audio 4 input levels
CH 5	Flashes green with varying Audio 5 input levels
CH 6	Flashes green with varying Audio 6 input levels
CH 7	Flashes green with varying Audio 5 input levels
CH 8	Flashes green with varying Audio 6 input levels

The **RX6080** front panel also has nine LED indicators and is the same as the TX except for the top LED:

LINK	When green, received optical power is okay. When red, optical link is no good. Bi-color is marginal.

4-Segment Display
On TX modules the display is controlled via the MODE button just below it. On the TX you can see line level, volume and temperature. On the RX you can see these plus received optical power.

Other Features
Both the TX and RX allow you to monitor (via the MON input)each of the audio channels via a 1/8" stereo-mini plug that is a standard on most portable ear buds. The CHANNEL SELECT switch allows you to toggle through the 8 channels and the appropriate LED will blink RED to let you know what channel you are listening to. The volume switch allows easy adjustment of the listening levels.

Using Wavelength-Division Multiplexers (WDM and CWDM)
WDM couplers can be used to combine a 6080 signal with a signal of a different wavelength on the same fiber. For Coarse WDM (CWDM), which allows up to 8 different wavelengths to share a common fiber, each TX6080 module must be equipped with a distributed feedback (DFB) laser of a different wavelength, e.g. 1511 nm, 1531 nm, etc. Contact Telecast for more details pertaining to WDM and CWDM applications.

Installation, Care and Maintenance
As stand-alone modules, the MTX6080 or MRX6080 can be installed in any orientation. Keyholes are furnished to allow the units to easily be hung on any vertical surface. Velcro™ may also be used.

Troubleshooting
The 6080 's are truly "plug and play" devices. LEDs indicate optical and signal status. There are no user adjustments or switches. If the units seem to malfunction, contact Telecast for a return materials authorization (RMA) number.

Conversion to Rack Mount
Five steps are required to convert from "stand-alone" modules into rack mountable modules. An RMK (rack mount conversion kit) for each particular module is required to make this conversion.

1. Remove the two phillips screws each on top and bottom edges
2. Remove the two phillips screws near connectors on right side
3. The cover will now come free
4. Replace Connector-side plate by removing the two screws under and any nuts on the BNC connectors
5. Replace the Faceplate by removing the two screws under. Use care when re-installing the new faceplate and cover.

Perform steps in reverse order to revert to a stand-alone module.

Ordering Information

(M)TX6080-A	-10 dBm @ 1300nm laser output
(M)TX6080-B	0 dBm @ 1300nm laser output
(M)TX6080-E	-10 dBm @ 1550nm laser output
(M)TX6080-F	0 dBm @ 1550nm laser output
(M)TX6080-13CW	0 dBm 1310 window CWDM laser output
(M)TX6080-15CW	0 dBm 1550 window CWDM laser output
(M)RX6080	-4 to -30 dBm receiver

The "M" in front of part number denotes "Throw-Down"

Represented by:

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