



Telecast
Fiber Systems, Inc.

Rattler™

Mini HD/SDI Transmitter and Receiver
Ultra-miniature for fixed and temporary digital video links



**The HD/SDI problem solver in your pocket
with on-board optical power metering**

Telecast's Rattlers are miniature fiber optic serial digital video transmission modules that offer the industry's broadest range of digital rates while maintaining the signal quality that broadcasters demand. No matter what your format, the Rattlers allow you to transmit:

- 19.4 Mbps SMPTE 310M
- 143 to 540 Mbps SMPTE 259M/344M
- 1.5 Gbps SMPTE 292M HDTV
- DVB/ASI 270Mbps
- AES and MADI Audio

These modules are inter-operable with Telecast's Python™ series, Viper™I and Viper™II series frames and modules, so you can expand the systems that you already have and create a wide variety of network topologies.

The Rattler TX accepts a 75 ohm coaxial input and converts it into an optical stream via a standard ST connector. The RX unit reconverts the uncompressed signal back to a BNC output.

At just three inches in length, these tiny modules can be deployed almost anywhere! The transmitter modules include equalization for long lengths of coaxial cable, so you can use them at nearly any point in your HD/SDI chain.

Both the red transmitter and blue receiver modules include LED indicators to display Power On, HD/SDI Signal Presence and, on the RX, Received Optical Power level. This provides critical system diagnostic information without the need for additional test equipment, such as an optical power meter.

Verify your optical power with a glance at the convenient power meter



The Rattlers use their own wall-wart power supplies or accept any DC voltage from 5 to 16 volts via a mini-USB jack. And up to four Rattlers can be powered from a 4-port powered USB hub.

Features

- Portable, lightweight units
- Cool, efficient, reliable
- Quick, easy installation
- LED indicators show you:
 - Power on
 - HD/SDI data presence
 - RX Optical power levels
- 19.4 Mbps to 1.5 Gbps
- Compatible with SMPTE 310M, 292M, 259M & 297M
- Supports embedded audio
- Up to 20 km distance
- Low system jitter
- Power from 5-16 VDC
- USB power capable
- High durability design

Applications

- Sports teleproduction
Golf, skiing, racing, etc.
- Remote camera links
- Cross-town fiber links
- Cross-campus production
- Pre-fibered venues
- Courtesy feeds

Compliance

Laser Safety Class 1 Laser
EMI/RFI Complies with IEC/EN 60825-1
RoHS

Video

Transmission method	Digital
Input level	800 mV (peak to peak)
Input Impedance	75 ohms
Coax Equalization @ 1.485 Gbps	100m
Output Impedance	75 ohms
Bit-Error Rate (@ -22 dBm)	10 ⁻¹¹
Jitter (pathological data pattern)	< 0.2 UI
Rise/Fall Times	< 270 ps

Transmission

Operating wavelength	1310nm
Video connector in/out	BNC
Optical connector	ST
Optical Source	Laser Diode
Optical detector	PIN-TIA Diode
Transmitter output	-7 dBm
Receiver sensitivity	-20 dBm
Link Margin/Distance	13 dB/20 km
Fiber type	single mode or multimode

Mechanical/Environmental

Dimensions (LxWxH)	3.2" x 0.65" x 0.75"
Weight, each end	1.8 oz
Input Voltage	5-16 VDC
Power connector	mini USB, female
Power Consumption, each end (typ.)	600mW
Indicators	Power, signal, link, optical power
Temperature Range, operating	-25° C to +55° C
Humidity Range	0 to 95%RH, non-condensing