

SDI Module with dual AES Audio for the Viper II



Features

- Up to 30 dB optical link budget
- 270 Mbps SDI transport
- DVB-ASI Transport
- Single SDI video plus two AES inputs
- Equalizes coax input up to 100 meters
- Reclocked RX video output
- Error-free pathological data
- Low system jitter ($\leq 200\text{ps}$)
- Single mode or multimode fiber
- Universal 16-slot card cage
- Rack modules or stand-alone
- Easy rack mount module conversion
- Wide temperature range
- Low power consumption
- High reliability design
- C/WDM multiplexing optional
- Up to 16 SDI/32 AES per fiber via CWDM

The Viper II™ video mux module set for transporting 270 Mbps SDI plus two AES Audio signals

Telecast's 5269 fiber optic serial digital video module set offers the industry's highest SDI transmission performance in a flexible, easy to use package. The module set supports the 270 Mbps serial component and DVB-ASI digital video formats.

And dual AES Audio, too!

The 5269 module set also transports and multiplexes two asynchronous AES/EBU signals via BNC connectors, eliminating the need for embedders and de-embedders and simplifying your SDI transport.

Up to 30 dB of Optical Margin

The 30 dB dynamic optical range gives you all the distance you need. The system also equalizes up to 100 meters of incoming coax.

These modules are available as "throw down" stand alone units, or may be rack mounted in our Viper II card frame. Conversion kits are available for this purpose.

Applications

- Metropolitan video distribution
- Telco and CATV "last mile"
- Campus and building SDI networks
- Government facilities
- Studio-Transmitter Links

Specifications

Video

Transmission Method	Digital
Input Level	800 mV (peak to peak)
Input Impedance	75 Ohms
Output Impedance	75 Ohms
Bit-Error Rate (@ -30 dBm)	10^{-12}
Jitter (pathological data pattern)	<0.2 UI
Rise/Fall Times	<270 ps

Audio

Transmission Method	Digital. TDM
Input Impedance	75 Ohms
Output Impedance	75 Ohms



Electro-Optical

Operating wavelengths	1310nm, 1550nm
Link margin	up to 30 dB
Transmitter output	-8 dBm & 0 dBm
Receiver sensitivity	0 to -30 dBm
Optical source	Laser diode
Optical detector	PIN-TIA
Fiber type	single or multimode

Mechanical/Environmental

Dimensions (WxLxD)	3.35" x 7.65" x 0.94"
Weight (per stand alone module)	10 ounces
Video/Audio connectors	BNC
Input Voltage Range	10 to 18 VDC
Power Consumption (per module)	2 watts
Temperature Range	-25° to +55°C
Humidity Range	0 to 95% RH, Noncond.

Operating Notes for: 5269 SDI+AES Modules for the Viper II

Power Requirements

All Viper II modules typically consume less than 3 watts. The stand-alone modules accept a 10-18VDC, 350mA power cube with a 2.5mm jack, center pin positive. When mounted in the V2 frame, the modules are powered via the 24-pin Future-Bus connector on the top right side of the module.

Connections

Video Input to the TX module is via a standard 75 ohm coaxial BNC. For best performance, care should be taken to make coaxial runs as short as possible. The TX unit has a single input and loop output. The RX unit has dual outputs.

AES I/O is via a standard 75 ohm coaxial BNC. Each path is independent of the other and asynchronous.

Fiber Each TX and RX has a bulkhead ST receptacle that accepts a standard singlemode (8/125 μ m) or multimode (50/125 μ m) fiber terminated with ST type connectors. The opcal wavelength and output power of the TX is indicated on the TX label. The Input optical sensitivity is indicated on the RX label.

The 5269's are not cross-compatible with other Telecast SDI modules or systems.

Note that the presence of an SDI video signal is not required to transport only AES audio. In this case, the SIGNAL LED will remain red but the AES LED will indicate green.

Faceplate Indicators

The TX5269 (and the MTX5269) has a **SIGNAL** LED indicator. It displays three states for the module:

- | | |
|--------------|-----------------|
| 1. No LED | No DC power |
| 2. Red LED | No Data Input |
| 3. Green LED | Good Data Input |

The RX5269 (and the MRX5269) has an **RX LOCK** LED indicator. It displays three states for the module:

- | | |
|--------------|-------------------------------|
| 1. No LED | No DC power |
| 2. Red LED | No fiber link |
| 3. Green LED | Valid data in/good fiber link |

Common to both the TX and RX modules, lit GREEN LEDs indicate the presence of 270 SDI video, DVB-ASI video and AES 1 and AES 2 audio.



Using Wavelength-Division Multiplexers (WDM and CWDM)

WDM couplers can be used to combine a 5269 signal with a signal of a different wavelength on the same fiber. For Coarse WDM (CWDM), which allows up to 16 different wavelengths to share a common fiber, each TX5269 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.

Embedded Signals in the SDI Data Stream

Pre-embedded SMPTE compliant SDI signals are transparent to the system. The 5269 does not perform the embedding or extraction.

Installation, Care and Maintenance

As stand-alone modules, the 5269 can be installed in any orientation but keyholes are furnished to allow the units to easily be hung on any vertical surface. Velcro™ may also be used.

Troubleshooting

The 5269's are truly "plug and play" devices, and contain no user serviceable parts. The faceplate LEDs indicate fiber and/or data problems. 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 3 phillips screws that secure rear plate
2. Carefully remove the rear plate and store it for future use
3. Using the same 3 screws, attach module to rack "sled".
4. Connect the ribbon cable from the module to faceplate
5. Secure the fiber optic jumper from the module to the chassis mount ST connector barrel on the rear of the rack "sled"



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

Ordering Information

- | | |
|--------------|--|
| (M)TX5269-A | -8 dBm @ 1300nm laser output |
| (M)TX5269-B | 0 dBm @ 1300nm laser output |
| (M)TX5269-E | -8 dBm @ 1550nm laser output |
| (M)TX5269-CW | 0 dBm @ 1550nm range distributed feedback laser |
| | <i>Specify DFB wavelength for CWDM; see Telecast CWDM brochure</i> |
| (M)RX5269 | 0 to -30 dBm received optical power range |
- Values are the same for Stand Alone and Rack Mount modules

