

DVM-2000 & DVM-2200

1 Ch 12 Bit Video, 6 Ch 24 Bit Audio & 3 Ch Data Fiber Optic Multiplexer

- Supports 1 video, 6 audio and 3 RS-232 simplex data channels
- All digital processing exceeds RS-250C Short Haul specifications.
- Video bandwidth 8 MHz with 75dB S/N; audio 20Hz to 20KHz with 90dB S/N.
- Video gain and 1000 ft cable equalization adjustments for input & output.
- Transport **Analog Video & Audio** or **SDI** up to 540 Mbit/sec with Automatic Switch-over on the same fiber (Option for DVM-2200 only).
- Singlemode or multimode configurations.
- 12 Bit Video with a **Signal to Noise** ratio greater than **75 dB** and a **Signal to Quantizing Noise** ratio of **74 dB**.
- Differential Gain and Phase of 0.2% and 0.2°, respectively.
- Video, Audio and Optical front panel status indicators with dry alarm relay contacts.
- Available in **portable, rack-mount** and **modular configurations** with all optical wavelengths, LED Multimode and Laser Single-mode.
- Support analog video, analog audio, serial digital video and digital audio in the same tray.



DESCRIPTION

The DVM-2000 series is designed for applications that demand high quality video (12 bit), audio (24 bit) and data transmission over fiber. Applications include links from **studio to transmitter (STL)**, **studio to studio**, **studio to CATV head-end**, **common carrier**, **RBOC Telco circuits**, distance learning, **Intelligent Transportation Systems** & back-haul feeds from special events. This series supports NTSC, PAL, SECAM as well as video with diplexed audio carriers at 4.5MHz, 5.8 MHz and 6.4 MHz (Option for 10 MHz). The design features differential video and audio inputs that greatly reduce hum and noise.

The DVM-2000 is a compact unit designed for stand alone, wall mount or rack-mount applications, while the DVM-2200 modular card plugs into one of our UTIL-200-DVM series card trays for high density rack mounting. The DVM-2200 with –SDI IN and –SDI OUT options supports analog video and audio or SDI with embedded audio. The analog video and audio do not operate while in the SDI mode. The UTIL-200-DVM card tray can also accommodate cards for other formats such as SDI, analog/AES digital audio and reclocking for maximum flexibility. Advanced CWDM technology is available which enables up to 8 units to be put on one strand of fiber.

SPECIFICATIONS

Video Performance:

Signal to noise.....	> 75 dB
Differential gain	< +/- 0.2 %
Differential phase	< +/- 0.2 °
Chrominance to luminance gain.....	< +/- 0.5%
Chrominance to luminance delay.....	< +/- 5 nsec.
Frequency response to 6 MHz	< +/- 0.05 dB
3 dB Bandwidth	8 MHz
Luminance non-linearity	< 0.2 %
Ringings	< +/- 0.5 %
Tilt	< +/- 0.2 %
Video output & input impedance	75 Ohms
Delay, throughput.....	1.24 micro sec.
Data channels	3 RS-232C@ 9600 Baud

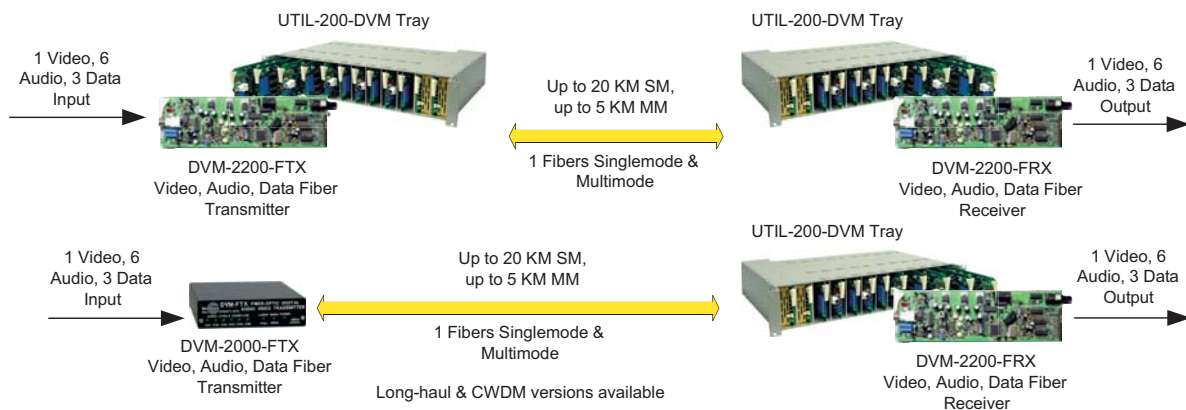
Audio Performance:

Signal to noise.....	> 90 dB
Frequency response to 20 Hz to 20 KHz	< +/- 0.1 dB
Distortion	< 0.05 %
Audio output level, adjustable	Unity, +/- 6 dBm
Maximum input & output level, 600 Ohm	+18 dBm
Audio output impedance, balanced.....	50 Ohms
Audio input impedance, balanced (selectable)	600 Ohms or High
Power dissipation	< 15 Watts, per unit
AC operation	110 or 220VAC (opt 48VDC)
Operating temperature	0 to +50 °C
Storage temperature	-40 to +95 °C
Portable and Wall-mount:.....	7" L x 5 3/4" W x 1 3/4" H
Triple Rack-mount Kit for 3 modules:.....	7" L x 19" W x 1 3/4" H

ORDERING INFORMATION

Fiber Optics, Broadcast Multiplexers, 12 Bit Video, 24 Bit Audio and Data, Stand-alone, Multimode: (SIN 58-6)	
DVM-2000-FTX-2	12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs. with 1310nm Multimode LED -14 dBm with ST connector. (May require -DVMAUDIO20, -DVMXLR20, -RMT, -BLANK and -WALL)
DVM-2000-FRX-2	12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Receiver; exceeds RS-250C Short-haul specs, Multimode PIN with ST connectors, Sensitivity -24 dBm. (May require -DVMAUDIO20, -DVMXLR20, -RMT, -BLANK and -WALL)
Fiber Optics, Broadcast Multiplexers, 12 Bit Video, 24 Bit Audio and Data, Stand-alone, Singlemode: (SIN 58-6)	
DVM-2000-FTX-50	12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs. with 1310nm Single-mode Laser -8 dBm with FC connector. (May require -DVMAUDIO20, -DVMXLR20, -RMT, -BLANK and -WALL)
DVM-2000-FTX-52	12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs with 1310nm Single-mode Laser -3 dBm with FC connector (May require -DVMAUDIO20, -DVMXLR20, -RMT, -BLANK and -WALL)
DVM-2000-FTX-53	12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs with 1310nm Single-mode Laser +0 dBm with FC connector (May require -DVMAUDIO20, -DVMXLR20, -RMT, -BLANK and -WALL)
DVM-2000-FTX-6	12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs with 1550nm Single-mode Laser +0 dBm with FC connector (May require -DVMAUDIO20, -DVMXLR20, -RMT, -BLANK and -WALL)
DVM-2000-FTX-7-xxxx	12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs with CWDM 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610nm Single-mode Laser -0 dBm with SC connector. Supports up to 8 wavelengths or channels per fiber optic cable. (Enter wavelength for xxxx) (May require -DVMAUDIO20, -DVMXLR20, -RMT, -BLANK and -WALL) (May requires CWDM Mux & Demux Accessories)
DVM-2000-FRX-50	12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Receiver; exceeds RS-250C Short-haul specs, Singlemode PIN with FC connectors, Sensitivity -28 dBm. (May require -DVMAUDIO20, -DVMXLR20, -RMT, -BLANK and -WALL)
Accessories (SIN 58-6)	
-RMT	Triple Rack-mount Kit (1 kit)
-BLANK	Blank panel for rack-mounting kit
-WALL	Wall-mount Kit (1 set)
-DVMAUDIO20	Audio screw terminal break-out adapter for DVM2000
-DVMXLR20	XLR Audio Adapter Cable for DVM2000
-NOAUDIO	No Audio Option, price adjustment for units without the 6 audio channels (subtract \$200 per transmitter or receiver)
Fiber Optics, Broadcast Multiplexers, 12 Bit Video, 24 Bit Audio and Data, Modular, Multimode: (SIN 58-6)	
DVM-2200-FTX-2	Modular, 12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs. with 1310nm Multimode LED -14 dBm with ST connector for the UTIL-200-DVM Tray. (Optional -DVMAUDIO22, -DVMXLR22, -SDI IN and -SDI OUT)
DVM-2200-FRX-2	Modular, 12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Receiver; exceeds RS-250C Short-haul specs, Multimode PIN with ST connectors, Sensitivity -24 dBm for the UTIL-200-DVM Tray. (Optional -DVMAUDIO22, -DVMXLR22, -SDI IN and -SDI OUT)
Fiber Optics, Broadcast Multiplexers, 12 Bit Video, 24 Bit Audio and Data, Modular, Singlemode:	
DVM-2200-FTX-50	Modular, 12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs. with 1310nm Single-mode Laser -8 dBm with FC connector for the UTIL-200-DVM Tray. (Optional -DVMAUDIO22, -DVMXLR22, -SDI IN and -SDI OUT)
DVM-2200-FTX-52	Modular, 12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs. with 1310nm Single-mode Laser -3 dBm with FC connector (Optional -DVMAUDIO22, -DVMXLR22, -SDI IN and -SDI OUT)
DVM-2200-FTX-53	Modular, 12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs. with 1310nm Single-mode Laser +0 dBm with FC connector (Optional -DVMAUDIO22, -DVMXLR22, -SDI IN and -SDI OUT)
DVM-2200-FTX-6	Modular, 12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs. with 1550nm Single-mode Laser +0 dBm with FC connector (Optional -DVMAUDIO22, -DVMXLR22, -SDI IN and -SDI OUT)
DVM-2200-FTX-7-xxxx	Modular, 12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Transmitter; exceeds RS-250C Short-haul specs with CWDM 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590 or 1610nm Single-mode Laser 0 dBm with SC connector. Supports up to 8 wavelengths or channels per fiber optic cable. (Enter wavelength for xxxx) (Optional -DVMAUDIO22, -DVMXLR22, -SDI IN and -SDI OUT) (May requires CWDM Mux & Demux Accessories)
DVM-2200-FRX-50	Modular, 12 bit Video, 6 Channels of 24 bit Audio and 3 Channels of RS232 Data, Fiber Optic Receiver; exceeds RS-250C Short-haul specs, Singlemode PIN with FC connectors, Sensitivity -25 dBm for the UTIL-200-DVM Tray. (Optional -DVMAUDIO22, -DVMXLR22, -SDI IN and -SDI OUT)
-SDI IN	Serial Digital Video input for DVM-2200-FTX Transmitter with auto switch-over from analog video to SDI when present (optional).
-SDI OUT	Serial Digital Video output for DVM-2200-FRX Receiver with auto switch-over from analog video to SDI when present (optional).
Modular Utility Trays and Power Supplies & Accessories (SIN 58-6)	
UTIL-200-DVM-2RU-AC	Analog, Digital and Fiber, up to 10 Slots, 2RU, Modular Utility Tray, with one 85-265 VAC Power Supply & Line Cord. Supports the DVM-2200 & DTV-220/230 SDI cards.
PS-200-DVM-AC	Modular 85-265 VAC Power Supply & Line Cord for 200 series trays
-DVMAUDIO22	Audio screw terminal break-out adapter for DVM2200
-DVMXLR22	XLR Audio Adapter Cable for DVM2200

APPLICATION DIAGRAM



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