

Videotek® VMM-4SNY

Integrated Test and Measurement Module for Sony®



The Videotek® VMM-4SNY module is the first integrated, professional test and measurement device for Sony® LCD monitors, and represents a new concept in monitoring for video and audio sources.

Providing a cost-effective alternative to test equipment housed in separate rackmount units, the VMM-4SNY module fits into the following Sony monitors: BVM-E170, BVM-E250, BVM-L170, BVM-L230, LMD-1751W, LMD-2050W, LMD-2051W, LMD-2450W, LMD-2451W, LMD-4250W, LMD-4251W, PVM-L1700, PVM-L2300, and PVM-L3200. The audio output is connected to the monitor's internal speakers (when available) with no external connections.

The VMM-4SNY comes standard with two HD-SDI/SD-SDI input connections with embedded audio support, an AES input connection and an external reference connection. The unit offers optional 3G-SDI capability. Waveform, vector, gamut, timing, picture, alarms or audio can be viewed in a quadrant or as individual full-screen displays. The module also offers a scalable waveform, vector and picture display, and can meter 16 channels of embedded audio and/or the AES input.

Functional control is enabled through a standard Ethernet connection via a Web browser or an optional remote control panel (RCU-CMS).

Product Features

- Modular test and measurement solution for professional Sony® LCD monitors; includes internal audio (internal speakers in the monitor are required and available only in certain Sony® models) and video connections to the monitor
- Cost-effective alternative to test and measurement equipment in separate rackmount units
- HD/SD-SDI capabilities with optional upgrade to 3G-SDI
- Control via web interface or RCU-CMS
- Meters 16 channels of embedded audio
- Two terminating SDI inputs
- One AES audio input
- One external reference input
- MLT display with independent size and position of waveform, vector and picture
- Selectable quad or full-screen display of picture, waveform, vector, gamut, timing, picture, alarms and audio
- Powered by the monitor; no external power supply
- 99 presets

Images/Diagrams

VMM-4SNY Module



VMM-4SNY Connections



Optional RCU-CMS Front Panel



Specifications

Specifications and designs are subject to change without notice

Inputs	
Input Type	2 terminating inputs
Input Connector Type	BNC female
Input Impedance	75 ohms nominal
Signal Source Amplitude	800 mV nominal
Signal Source DC Offset	±0.5 VDC
SD-SDI Input	
Input Return Loss	≤-25 dB, 5 to 270 MHz
Cable EQ	≥300 m, Belden 8281
HD-SDI Input	
Input Return Loss	≤-15 dB, 5 MHz to 1.485 GHz
Cable EQ	≥100 m, Belden 8281
3 Gb/s SDI Input	
Input Return Loss	≤-10 dB, 1.485 to 2.97 GHz
Cable EQ	≥80 m, Belden 1694A
External Reference Input	
Input Connector Type	BNC female
Input Type	Terminating
Input Impedance	75 ohms nominal
Blackburst Input Amplitude	NTSC: sync and burst 286 mV nominal PAL: sync and burst 300 mV nominal
Blackburst Input Amplitude Tolerance	±6 dB
Tri-Level Sync Amplitude	600 mV pk-pk
Tri-Level Sync Amplitude Tolerance	±3 dB
Return Loss	≤-40 dB
Digital Audio Input	
Audio Formats	AES/EBU and embedded
AES Input Connector Type	1 BNC female
AES Input Impedance	75 ohms nominal
AES Input Return Loss	>25 dB, 0.1 to 6 MHz
AES Input Level	0.2 to 2 V
Input Sample Rate	AES 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz (internal sample rate converted to 48 kHz)
Audio Monitoring	
Number/Connector	Internal
Source	Any audio input pair may be selected for the audio monitoring (internal monitor speakers) output
Communication Interfaces	
Ethernet	1 Ethernet Port, RJ45 connector 10/100Base-T
LTC/GPIO	2 LTC/GPIO connector push-pin type
LTC	Nominal input amplitude: 2 V pk-pk
4 General-Purpose Inputs	Input Impedance: 10 K ohms returned to +3.3 VDC

Waveform/Vector Display – SDI Inputs	
Line Select	
Waveform Formats	YCbCr; RGB; YRGB; YCbCr + alpha; RGB + alpha; SDI as composite
Sweep Rates	1H, 2H, 3H, 4H, 1V, 2V, 3V, 4V
Sweep Magnification	x0.50, x1, x5, x10
Waveform/Vector Gain	Fixed: steps of 1x, 2.5x, 5x Variable: 0.5x to 15x in 0.01 steps
Power Requirements	
Power Consumption	12 W nominal from monitor power supply
Mechanical	
Dimensions (H X W X D)	0.77 x 7.90 x 6.30 in. (1.96 x 20.01 x 16.08 cm)
Weight	1.30 lbs (0.59 kg)
Environmental	
Operating Temperature	32° to 95° F (0 to 35° C)
Storage Temperature	-4° to 140° F (-20° to 60° C)
Humidity (non condensing)	Operating: 30% to 80% Non-operating: 5% to 90%
Transportation	24 in. (9.5 cm) impact-drop survivable in original factory packaging
Altitude	6562 ft (2000 m)
Pollution Degree	2

Ordering Information

VMM-4SNY	Video and audio monitoring module for Sony® monitors. Supports HD-SDI and SD-SDI input formats and up to 16 channels of embedded audio, as well as 1 AES audio input. The VMM-4SNY supports external reference of black burst or tri-level sync. The 720p 60 Hz internal output is supported by several Sony® LCD monitors, including the BVM-E170, BVM-E250, BVM-L170, BVM-L230, LMD-1751W, LMD-2050W, LMD-2051W, LMD-2450W, LMD-2451W, LMD-4250W, LMD-4251W, PVM-L1700, PVM-L2300, and PVM-L3200
VMM-4SNY-3GB	Video and audio monitoring module for Sony® monitors. Supports 3G-SDI, HD-SDI and SD-SDI input formats and up to 16 channels of embedded audio, as well as 1 AES audio input. The VMM-4SNY supports external reference of black burst or tri-level sync. The 720p 60 Hz internal output is supported by several Sony® LCD monitors, including the BVM-E170, BVM-E250, BVM-L170, BVM-L230, LMD-1751W, LMD-2050W, LMD-2051W, LMD-2450W, LMD-2451W, LMD-4250W, LMD-4251W, PVM-L1700, PVM-L2300, and PVM-L3200
VMM-H23GBF	Field upgrade for 3G-SDI input option. Software upgrade enables the 3G-SDI input formats
RCU-CMS	Remote control panel option. Provides the remote control panel for desktop applications. Includes Ethernet connection software for setup of the RCU and IP addresses of connected units. Controls up to 32 units
PTC-4	Portable case with tilt stand for RCU-CMS desk top application
DRT-4	Double rackmount tray for RCU-CMS and CMN-41, use BLK-4 to fill unused space if needed