KRAMER

VSM-4x4X
4x4 Matrix Switcher, Videowall & Multiviewer

Kramer's VSM 4x4X 4K 4x4 Seamless Matrix Switcher/Multi Scaler. VSM 4x4X has four HDMI™, one DisplayPort, and two user definable (universal) analog video inputs (each can be set as computer graphics, composite video, s-Video (Y/C) or component video).

It up- or down scales to selectable output resolutions (up to 4K/UHD) and provides glitch-free switching between sources through fast FTB™ (fade-thru-black) switching technology. The scaled signal outputs simultaneously to a 15 pin HD computer graphics and an HDMI connector output.

Rich audio support is also included, with digital audio embedding and de-embedding, as well as 7 analog stereo inputs; and analog, S/PDIF, and speaker outputs. VSM 4x4X is housed in a 19" 1U rack mountable enclosure, with rack "ears" included, and is fed from a 100-240 VAC universal switching power supply

FEATURES

PixPerfect™ Scaling Technology - Kramer's precision pixel mapping and high quality scaling technology

Fast Fade-Thru-Black (FTB™) Switching - Video switching transitions are clean and fast. The video fades to black and the new input fades from black for smooth, glitch-free switching. The output signal provides constant sync so the display never glitches

Output Resolutions - With selectable refresh rates up to 4K/UHD

Noise Reduction - Built-in noise reduction and picture enhancement features

Built-in Time Base Corrector - Stabilizes video sources with unstable sync

Reduces Chroma Noise - Specifically designed to improve video quality by reducing chroma noise

Powerful Audio Features - Via DSP technology including audio equalization, mixing, delay and so on

HDMI Support - HDR, CEC, ARC, 4K@60Hz, 3D, Deep Color, x.v.Color™, Lip Sync, 7.1 PCM, Dolby TrueHD, DTS-HD, 32 channels of uncompressed audio as specified in VHDMI 2.0

Includes numerous filters and algorithms for eliminating picture artifacts

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TECHNICAL SPECIFICATIONS

Inputs	1 HDMI: On a female HDMI connector
	1 Stereo Analog Unbalanced Audio: On a 3.5mm mini jack
	1 Unbalanced Stereo Audio: On a 3.5mm (1/8") TRS
	1 Balanced Stereo Audio: On a 5−pin terminal block
Outputs	1 Fiber Optic: On 2 LC connectors
	1 Balanced Stereo Line Level: On a 5−pin terminal block connector
	1 Stereo or 1 Mono Speaker On a 4−pin large terminal block
Line/Mic Level Input	Impedance Unbalanced >10 kΩ
	Impedance Balanced >10 kΩ
	Impedance Microphone 3.4 kΩ
	Nominal level Unbalanced −10 dBV (0.3 Vrms)
	Nominal level Balanced +4 dBu (1.23 Vrms)
	Nominal level Microphone
	Maximum level (Balanced) +20 dBu (7.75 Vrms)
	Sensitivity Unbalanced Full power @ −10 dBV (0.3 Vrms)
	Sensitivity Balanced Full power @ +4 dBu (1.23 Vrms)
	Sensitivity Microphone
	Phantom Power 48 VDC on/off per input
Line Level Output	Impedance Unbalanced 20Ω
	Impedance Balanced 150Ω
	Frequency Response 20Hz − 20kHz @ +/−1dB
	S/N Ratio: >110 dB, 20Hz − 20kHz, at unity gain (unweighted)
	Audio THD + Noise: <0.01%, 20 Hz − 20 kHz, at unity gain
	Crosstalk <−85 dB, 20Hz to 20kHz
Amplifier	Class D
	Output Power 2 x 60W @ 4Ω or 8Ω 1 x 120W @ 70V or 100V
	Maximum Voltage Gain 26dB SE / 32dB BTL
	Dynamic Range 119dB
	Frequency Response 20Hz to 20kHz @ +/−1dB
	S/N Ratio >110 dB, 20Hz − 20kHz, at unity gain (unweighted)
	Audio THD + Noise <0.01%, 20 Hz to 20 kHz, at unity gain
	Crosstalk <−85 dB, 20Hz to 20kHz
Total System Efficiency	PA−120Z: 89%
	PA 240Z: 90%

Ports	1 IR On a 3.5mm mini jack for IR link extension
	1 USB On a female USB−B connector for USB link extension
	1 RS-232 On a 3−pin terminal block for serial link extension
	1 RS-232 On a 3−pin terminal block for device control
	1 100BaseT Ethernet On an RJ−45 female connector for device control and LAN extension
Extension Line	Compliance HDBaseT 2.0
	Optical Fiber Multi−mode (MM) or single−mode (SM)
	Fiber Line 2 simplex strands
	Optical Module 10Gbps SFP+ IEEE 802.3ae compliant
Multi-mode Line	Compliance G.651.1 OFNR fiber
	Nominal Peak Wavelength 850nm
	Max Data Rate 10.2Gbps
	Typical Optical Transmission Power −2.5dBm
	Typical Optical Maximum Loss Budget 8.6dB
	Max Reach over OM3 MM Fiber 500m (1640ft)
Single-mode Line	Compliance G.652D OFNR fiber
	Nominal Peak Wavelength 1310nm
	Max Data Rate 10.2Gbps
	Typical Optical Transmission Power −2.5dBm
	Typical Optical Maximum Loss Budget 11.9dB
	Max Reach over OS1 SM Fiber 10Km (6.2 miles)
Video	Max Bandwidth 10.2Gbps (3.4Gbps per graphic channel)
	Max Resolution 4K UHD @60Hz (4:2:0) 24bpp resolution
	Compliance HDMI 2.0 and HDCP 1.4
Controls	Rear Panel DIP−switches
	Front Panel EDID SELECT and EDID READ buttons
Indication LEDs	Front Panel 10 Output LEDs 1 Input LED 1 Power on LED
Analog Audio	Max Vrms Level 1
	THD + NOISE 0.03% @1kHz at nominal level
Extended USB	Host Compliance 1.1 and 2.0
	Max Extended Line Rate Bandwidth 127Mbps (out of max 480 USB)
	Max Devices 7
	Max Hubs 2
	Max Ports per Hub 8
Extended Ethernet	Max Transmission Bandwidth 100Mbps
Extended RS-232	Baud Rate 300 to 115200
Control RS-232	Baud Rate 115200
Supported Web	Windows 7 Internet Explorer, Firefox, Chrome, Safari

Browsers	Windows 10 Internet Explorer, Edge, Firefox, Chrome
	MAC 10.11 Safari
	iOS 10.3.2 Safari
	Android N/A
Power	Consumption 12V DC, 1300mA
	Source 12V DC, 2A
Environmental Conditions	Operating Temperature 0° to +40°C (32° to 104°F)
	Storage Temperature −40° to +70°C (−40° to 158°F)
	Humidity 10% to 90%, RHL non−condensing
Regulatory Compliance (Standards Compliance)	Safety CE, UL
	Environmental RoHs, WEEE
Enclosure	Size Half 19" 1U
	Type Aluminum
	Cooling Convection Ventilation
General	Net Dimensions (W, D, H) 00.00cm x 16.3 cm x 4.36cm (8.45" x 6.42" x 1.7")
	Shipping Dimensions (W, D, H) 00.0cm x 00.0cm x 7.2cm (13.82" x 8.35" x 2.8")
	Net Weight 0.95 kg (2.1lbs)
	Shipping Weight 1.45 kg (3.2lbs) approx
Accessories	Included Power adapter cord
	Optional For optimum range and performance use the recommended USB, Ethernet, serial and IR Kramer cables available at www.kramerav.com/product/VSM−4x4X