

# Specifications — MVX VGA A Series Matrix Switchers

## Video

### Routing

MVX 44 VGA A .....	4 x 4 matrix
MVX 48 VGA A .....	4 x 8 matrix
MVX 84 VGA A .....	8 x 4 matrix
MVX 88 VGA A .....	8 x 8 matrix

Gain ..... Unity

Bandwidth ..... 300 MHz (-3 dB), fully loaded

Crosstalk ..... <-60 dB nominal @ 10 MHz, <-39 dB @ 100 MHz

Switching speed ..... 20 ms (max.)

## Video input

### Number/signal type

MVX 44/48 VGA A .....	4 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs, component video (bi-level and tri-level sync), S-video, composite video
MVX 84/88 VGA A .....	8 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs, component video (bi-level and tri-level sync), S-video, composite video

### Connectors

MVX 44/48 VGA A ..... 4 female 15-pin HD

MVX 84/88 VGA A ..... 8 female 15-pin HD

Nominal level ..... 1 V<sub>p-p</sub> for Y of component video and S-video, and for composite video  
0.7 V<sub>p-p</sub> for RGB  
0.3 V<sub>p-p</sub> for R-Y and B-Y of component video, and for C of S-video

Minimum/maximum levels ..... Analog: 0.3 V to 1.5 V<sub>p-p</sub> with no offset at unity gain

Impedance ..... 75 ohms

Horizontal frequency ..... 15 kHz to 145 kHz

Vertical frequency ..... 30 Hz to 170 Hz

Return loss ..... <-40 dB @ 5 MHz

DC offset (max. allowable) ..... 1.5 V

## Video output

### Number/signal type

MVX 44/84 VGA A .....	4 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs, component video (bi-level and tri-level sync), S-video, composite video
MVX 48/88 VGA A .....	8 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs, component video (bi-level and tri-level sync), S-video, composite video

### Connectors

MVX 44/84 VGA A ..... 4 female 15-pin HD

MVX 48/88 VGA A ..... 8 female 15-pin HD

Nominal level ..... 1 V<sub>p-p</sub> for Y of component video and S-video, and for composite video  
0.7 V<sub>p-p</sub> for RGB  
0.3 V<sub>p-p</sub> for R-Y and B-Y of component video, and for C of S-video

Minimum/maximum levels ..... 0.3 V to 1.5 V<sub>p-p</sub> (follows input)

Impedance ..... 75 ohms

Return loss ..... <-40 dB @ 5 MHz

DC offset ..... <20 mV with input at 0 offset

Switching type ..... Triple-Action™

## Sync

Input type ..... RGBHV, RGBS, RGsB, RsGsBs

Output type ..... RGBHV, RGBS, RGsB, RsGsBs (follows input)

Standards ..... Computer scan rates and also NTSC 3.58, NTSC 4.43, PAL, SECAM

Input level ..... 0.5 V to 5.0 V<sub>p-p</sub>

Output level ..... TTL: 5.0 V<sub>p-p</sub>, unterminated

Input impedance .....	510 ohms
Output impedance .....	75 ohms
Max. propagation delay .....	Horizontal: 90 ns nominal Vertical: 160 ns nominal
Max. rise/fall time .....	4 ns
Polarity .....	Positive or negative (follows input)

## Audio

### Routing

MVX 44 VGA A .....	4 x 4 stereo matrix
MVX 48 VGA A .....	4 x 8 stereo matrix
MVX 84 VGA A .....	8 x 4 stereo matrix
MVX 88 VGA A .....	8 x 8 stereo matrix
Throughput gain .....	Adjustable. At default (when input gain is set to 0 dB and output level is set to "Pro"), overall gain is 12 dB for balanced output. The gain range is -6 dB to +22 dB for balanced output when the output level is set to "Pro".
Frequency response .....	20 Hz to 20 kHz, $\pm 0.2$ dB
THD + Noise .....	0.05% @ 1 kHz, 0.3 % @ 20 kHz at nominal level
S/N .....	>90 dB at maximum output (unweighted)
Crosstalk .....	<-65 dB @ 20 kHz, <-80 dB @ 1 kHz or below 60 Hz
Stereo channel separation .....	>80 dB @ 1 kHz, >55 dB @ 20 Hz to 20 kHz

## Audio input

### Number/signal type

MVX 44/48 VGA A .....	4 stereo, unbalanced
MVX 84/88 VGA A .....	8 stereo, unbalanced

### Connectors

MVX 44/48 VGA A .....	4 female 3.5 mm stereo mini jacks: tip (L), ring (R), sleeve (GND)
MVX 84/88 VGA A .....	8 female 3.5 mm stereo mini jacks: tip (L), ring (R), sleeve (GND)
Impedance .....	>18k ohms unbalanced, DC coupled
Nominal level .....	-10 dBV (316 mV) (default), but also compatible with +4 dBu (1.23 V), 0 dBu (0.775 V), -20 dBV (100 mV)
Maximum level .....	>+12 dBV (4 V), (unbalanced) at 1%THD+N
Input gain .....	-18 dB to +10 dB, adjustable per input; default = 0 dB. (this is referenced to the internal bus signal level. It can be verified by measuring the unbalanced output when the output level is set to "Consumer".)

**NOTE** 0 dBu = 0.775 V, 0 dBV = 1 V, 0 dBV  $\approx$  2 dBu.

## Audio output

Output gain .....	0 dB unbalanced (Consumer) or +12 dB balanced (Pro), selectable; default = +12 dB, balanced, when output level is set to "Pro"
Number/signal type	
MVX 44/84 VGA A .....	4 stereo, balanced/unbalanced
MVX 48/88 VGA A .....	8 stereo, balanced/unbalanced
Connectors	
MVX 44/84 VGA A .....	(4) 3.5 mm captive screw connectors, 5 pole
MVX 48/88 VGA A .....	(8) 3.5 mm captive screw connectors, 5 pole
Impedance .....	50 ohms unbalanced, 100 ohms balanced
Gain error .....	$\pm 0.1$ dB channel to channel
Nominal level .....	+4 dBu (1.23 V) (default) balanced (Pro), or -10 dBV (316 mV) unbalanced (Consumer), selectable
Maximum level (Hi-Z) .....	>+22 dBu, balanced; >+14 dBV, unbalanced at 1%THD+N at default settings
Maximum level (600 ohm) .....	>+20 dBu, balanced; >+12 dBV unbalanced at 1%THD+N at default settings

# Specifications — MVX VGA A Series Matrix Switchers (cont'd)

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## Control/remote — switcher

Serial control port .....	RS-232, 9-pin female D connector
Baud rate and protocol .....	9600, 8-bit, 1 stop bit, no parity
Control pin configurations .....	2 = TX, 3 = RX, 5 = GND, 9 = hardwired IR input
IR controller module .....	IR 501 (optional remote control)
Program control .....	Extron's control/configuration program for Windows® Extron's Simple Instruction Set (SIS™)

## General

Power .....	100 VAC to 240 VAC, 50/60 Hz, 30 watts, internal, autoswitchable
Temperature/humidity .....	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Rack mount .....	Yes, with included brackets, part #70-077-03, or furniture mountable with an optional under-desk mounting bracket, part #70-222-01
Enclosure type .....	Metal
Enclosure dimensions .....	1.75" H x 17.4" W x 8.5" D (1U high, full rack wide) 4.4 cm H x 44.2 cm W x 21.6 cm D (Depth excludes connectors and knobs. Width excludes rack ears.)
Product weight .....	7.0 lbs (3.2 kg)
Shipping weight .....	10 lbs (5 kg)
Vibration .....	ISTA 1A in carton (International Safe Transit Association)
Listings .....	UL, CUL
Compliances .....	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF .....	30,000 hours
Warranty .....	3 years parts and labor

**NOTE** All nominal levels are at  $\pm 10\%$

**NOTE** Specifications are subject to change without notice.

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