

Specifications — CrossPoint Plus Series Matrix Switchers

Video

Routing	84 Series	8 x 4 matrix
	88 Series	8 x 8 matrix
	124 Series	12 x 4 matrix
	128 Series	12 x 8 matrix
	168 Series	16 x 8 matrix
	1616 Series	16 x 16 matrix
	2412 Series	24 x 12 matrix
	2424 Series	24 x 24 matrix
	3216 Series	32 x 16 matrix
	3232 Series	32 x 32 matrix
Gain	Unity	
Bandwidth	425 MHz (-3dB), fully loaded	
	84/88/124/128/168/1616 Series	
	0 - 10 MHz	no more than +0.1dB to -0.1dB
	0 - 130 MHz	no more than +6dB to -0.8dB
	2412/2424/3216/3232 Series	
	0 - 10 MHz	no more than +0.1dB to -0.1dB
	0 - 130 MHz	no more than +4dB to -0.1dB
Crosstalk		
	84/88/124/128/168/1616 Series	
		-80dB @ 1 MHz, -65dB @ 10 MHz, -55dB @ 30 MHz, -42dB @ 100 MHz
	2412/2424/3216/3232 Series	
		-55dB @ 10 MHz, -45dB @ 30 MHz, -37dB @ 100 MHz
Switching speed	200 ns (max.)	

Video input

Number/signal type	8, 12, 16, 24, or 32 RGBHV, RGBS, RGsB, RsGsBs, HDTV, component video, S-video, composite video
Connectors	84/88 Series 8 x 5 BNC female
	124/128 Series 12 x 5 BNC female
	168/1616 Series 16 x 5 BNC female
	2412/2424 Series 24 x 5 BNC female
	3216/3232 Series 32 x 5 BNC female
Nominal level	1V p-p for Y of component video and S-video, and for composite video
	0.7V p-p for RGB
	0.3V p-p for R-Y and B-Y of component video, and for C of S-video
Minimum/maximum levels	Analog: 0.5V to 2.0V p-p with no offset
Impedance	75 ohms
Return loss	-30dB @ 5 MHz
Maximum DC offset	1.5V

Video output

Number/signal type	4, 8, 12, 16, 24, or 32 RGBHV, RGBS, RGsB, RsGsBs, HDTV, component video, S-video, composite video
Connectors	84/124 Series 4 x 5 BNC female
	88/128 Series 8 x 5 BNC female
	168 Series 8 x 5 BNC female
	1616 Series 16 x 5 BNC female
	2412 Series 12 x 5 BNC female
	2424 Series 24 x 5 BNC female
	3216 Series 16 x 5 BNC female
	3232 Series 32 x 5 BNC female
Nominal level	1V p-p for Y of component video and S-video, and for composite video
	0.7V p-p for RGB
	0.3V p-p for R-Y and B-Y of component video, and for C of S-video
Minimum/maximum level	2V p-p

Impedance	75 ohms
Return loss	-30dB @ 5 MHz
DC offset	±5mV maximum with input at 0 offset
Switching type	Triple-Action™

Sync

Input type	RGBHV, RGBS, RGsB, RsGsBs
Output type	RGBHV, RGBS, RGsB, RsGsBs
Input level	0.5V to 5.0V p-p, 4.0V p-p normal
Output level.....	AGC to TTL: 4V to 5V p-p, unterminated
Input impedance	
84/88/124/128 Series	Inputs 1 to 4 75 or 510 ohms, switchable
	Inputs 5 to 12 510 ohms
168/1616 Series	Inputs 1, 3, 5, 7 75 or 510 ohms, switchable
	Inputs 2, 4, 6, 8, and 9 to 16 ... 510 ohms
2412/2424/3216/3232 Series	
	Inputs 1 to 8 75 or 510 ohms, switchable
	Inputs 9 to 32 510 ohms
Output impedance	75 ohms
Polarity	Positive or negative (follows input)

Audio — audio models only

Routing	84 Series	8 x 4 stereo matrix
	88 Series	8 x 8 stereo matrix
	124 Series	12 x 4 stereo matrix
	128 Series	12 x 8 stereo matrix
	168 Series	16 x 8 stereo matrix
	1616 Series	16 x 16 stereo matrix
	2412 Series	24 x 12 stereo matrix
	2424 Series	24 x 24 stereo matrix
	3216 Series	32 x 16 stereo matrix
	3232 Series	32 x 32 stereo matrix
Gain		
8-, 12-, 16-input models ..	Unbalanced output: 0dB; balanced output: +6dB	
24- and 32-input models	Unbalanced output: -6dB; balanced output: 0dB	
Frequency response	20 Hz to 20 kHz, ±0.05dB	
THD + Noise	0.03% @ 1 kHz at rated nominal level	
S/N	>90dB, balanced, at rated maximum output (21dBu)	
Crosstalk	<-80dB @ 1 kHz, fully loaded	
Stereo channel separation	>80dB @ 1 kHz	
CMRR	>75dB @ 20 Hz to 20 kHz	

Audio input — audio models only

Number/signal type	8, 12, 16, 24, or 32 stereo, balanced/unbalanced
Connectors	(8, 12, 16, 24, or 32) 3.5 mm captive screw connectors, 5 pole
Impedance	>10 kohm, balanced/unbalanced, DC coupled
Nominal level	-10dBV (316mV)
Maximum level	+19.5dBu, (balanced or unbalanced) at 1%THD+N
Input gain adjustment	
84/88/124/128/168/1616 Series	
	-15dB to +9dB, adjustable per input by RS-232/422 or front panel
2412/2424/3216/3232 Series	
	-18dB to +24dB, adjustable per input by RS-232/422 or front panel

Specifications — CrossPoint Plus Series Matrix Switchers (cont'd)

Audio output — audio models only

Number/signal type	4, 8, 12, 16, 24, or 32 stereo, balanced/unbalanced
Connectors	(4, 8, 12, 16, 24, or 32) 3.5 mm captive screw connectors, 5 pole
Impedance	50 ohms unbalanced, 100 ohms balanced
Gain error	±0.1dB channel to channel
Maximum level (Hi-Z)	>+21dBu, balanced or unbalanced at 1%THD+N
Maximum level (600 ohm)	>+15dBm, balanced or unbalanced at 1%THD+N

NOTE 0dBu = 0.775 volts (RMS).

Control/remote — switcher

Serial control port	1 RS-232 or RS-422, 9-pin female D connector
Baud rate and protocol	9600, 8-bit, 1 stop bit, no parity
Serial control pin configurations	2 = TX, 3 = RX, 5 = GND
Ethernet control port	2412/2424/3216/3232 Series only: 1 RJ-45 female connector
Ethernet data rate	2412/2424/3216/3232 Series only: 10/100Base-T, half/full duplex with autodetect
Ethernet protocol	2412/2424/3216/3232 Series only: ARP, ICMP (ping), TCP/IP, Telnet, HTTP
Program control	
2412/2424/3216/3232 Series	Extron's control program for Windows® Extron's Simple Instruction Set™ – SIS™ Microsoft Explorer, Netscape Navigator, Telnet
All other models	Extron's control program for Windows® Extron's Simple Instruction Set™ – SIS™

General

Power	
8-, 12-, 16-input models ..	100VAC to 240VAC, 50/60 Hz, internal, autoswitchable
84/88/124/128	30 watts
168/1616	36 watts
24- and 32-input models .	2 (primary and redundant), 100VAC to 240VAC, 50/60 Hz, internal, autoswitchable
2412/2424 Series	150 watts
3216/3232 Series	180 watts
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing Operating +32° to +104°F (0° to +40°C) / 10% to 90%, non-condensing
Rack mount	Yes, with included parts
Enclosure type	Metal
Enclosure dimensions	
84/88/124/128 Series	5.25" H x 17.0" W x 9.4" D (3U high, full rack width) 13.3 cm H x 43.2 cm W x 23.9 cm D (Depth excludes connectors. Width excludes rack ears.)
168/1616 Series	10.5" H x 17.0" W x 9.7" D (6U high, full rack width) 26.7 cm H x 43.2 cm W x 24.6 cm D (Depth excludes connectors. Width excludes rack ears.)
2412/3216 HV and HVA Series	14.0" H x 17.0" W x 12.0" D (8U high, full rack width) (35.5 cm H x 43.2 cm W x 30.5 cm D) (Depth excludes connectors. Width excludes rack ears.)
2424/3232 HV and HVA Series	17.5" H x 17.0" W x 12.0" D (10U high, full rack width) (44.5 cm H x 43.2 cm W x 30.5 cm D) (Depth excludes connectors. Width excludes rack ears.)

Product weight

84/88/124/128 Series	14.4 lbs (6.5 kg)
168/1616 Series	19.4 lbs (8.8 kg)
2412/3216 Series	32 lbs (14.5 kg)
2424/3232 Series	36 lbs (14.5 kg)

Shipping weight

84/88/124/128 Series	21 lbs (9.5 kg)	
	DIM weight	25
168/1616 Series	26 lbs (11.8 kg)	
	DIM weight	34
2412/3216 Series	35 lbs (15.9 kg)	
	DIM weight	77
2424/3232 Series	40 lbs (18.1 kg)	
	DIM weight	77

Vibration ISTA/NSTA 1A in carton (International Safe Transit Association)

Listings UL, CUL

Compliances

2412/2424/3216/3232 Series
CE, FCC Class A, VCCI, AS/NZS, ICES

All other models CE, FCC Class A

MTBF 30,000 hours

Warranty 3 years parts and labor

NOTE *Specifications are subject to change without notice.*

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