

Specifications — Matrix 3200/6400 Series

Video— wideband video BME

Routing	16 x 8 or larger matrix up to 32 x 32 or 64 x 64, depending on model and configuration
Gain	Unity
Bandwidth	
Matrix Wideband	430 MHz (-3 dB), fully loaded
0 - 10 MHz	No more than +0.1 dB to -0.1 dB
0 - 130 MHz	No more than +4 dB to -0.25 dB
Phase between I/Os.....	<1.28° at 3.58 MHz
Differential phase error	0.1%, 3.58 MHz and 4.43 MHz
Differential gain error	0.1°, 3.58 MHz and 4.43 MHz
Max. propagation of delay.....	5 ns typical (±1 ns)
Crosstalk.....	-80 dB @ 1 MHz, -62 dB @ 10 MHz, -52 dB @ 30 MHz
Switching speed	200 ns (max.)

Video— low resolution video BME

Routing	16 x 8 or larger matrix up to 32 x 32 or 64 x 64, depending on model and configuration
Gain	Unity
Bandwidth	
Matrix Low Res	150 MHz (-3 dB), fully loaded 0 MHz to 10 MHz: no more than +0.1 dB to -0.1 dB 0 MHz to 30 MHz: no more than +0.5 dB to -0.5 dB
Crosstalk.....	80 dB @ 1 MHz, -62 dB @ 10 MHz, -52 dB @ 30 MHz
Switching speed	200 ns (max.)

Video input— wideband video BME

Number/signal type.....	Up to 32 or 64 (varies with configuration) RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, composite video
Connectors	Female BNC (quantity varies with configuration)
Nominal level	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB and for R-Y and B-Y of component video 0.3 Vp-p for C of S-video
Minimum/maximum levels.....	Analog: 0.5 V to 1.5 Vp-p with no offset
Impedance.....	75 ohms
Return loss.....	-30 dB @ 5 MHz

Video input— low resolution video BME

Number/signal type.....	Up to 32 or 64 (varies with configuration) RGsB, RsGsBs, component video, S-video, composite video, HDTV
Connectors	Female BNC (quantity varies with model)
Nominal level	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB and for R-Y and B-Y of component video 0.3 Vp-p for C of S-video
Minimum/maximum level.....	Analog: 0.5 V to 1.5 Vp-p with no offset
Impedance.....	75 ohms
Return loss.....	-30 dB @ 5 MHz
External sync (genlock)	0.3 V to 12 Vp-p, 75 ohms

Video output— wideband video BME

Number/signal type.....	Up to 32 or 64 (varies with configuration) RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, composite video
Connectors	Female BNC (quantity varies with configuration)
Nominal level	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB and for R-Y and B-Y of component video 0.3 Vp-p for C of S-video

Specifications — Matrix 3200/6400 Series, cont'd

Maximum level.....	2 Vp-p
Impedance.....	75 ohms
Return loss.....	-25 dB to input section up to 50 MHz
DC offset.....	±10 mV typical with input at 0 offset
Switching type.....	Triple-Action™
Slew rate.....	>200 V/ms

Video output— low resolution video BME

Number/signal type.....	Up to 32 or 64 (varies with configuration) RGSB, RsGsBs, component video, S-video, composite video, HDTV
Connectors.....	Female BNC (quantity varies with configuration)
Nominal level.....	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB and for R-Y and B-Y of component video 0.3 Vp-p for C of S-video
Minimum/maximum levels.....	0.5 V to 1.5 Vp-p
Impedance.....	75 ohms
Return loss.....	-40 dB to input section at 3.58 MHz/4.43 MHz
DC offset.....	±10 mV maximum with input at 0 offset
Switching type.....	Vertical interval
Slew rate.....	>200 V/ms

Sync— sync BME

Input and output types.....	Software configurable for RGBHV or RGBS
Sync connectors.....	Up to 64 or 32 BNC female (quantity varies with configuration)
Input level.....	0.5 V to 5 Vp-p (4 Vp-p nominal)
Output level.....	5 Vp-p
Gain.....	AGC to TTL : 4.0 V to 5.0 Vp-p
Input impedance.....	Inputs 1 - 16: 510 ohms or 75 ohms, switchable Inputs 17 - 64: 510 ohms
Output impedance.....	75 ohms
Horizontal frequency.....	15 kHz to 150 kHz
Vertical frequency.....	30 Hz to 150 Hz
Polarity.....	Positive or negative (follows input)

Audio— audio BME

Routing.....	Up to 64 x 64 mono or stereo matrix (in increments of 8), balanced/unbalanced
Gain (selectable per output).....	Unbalanced output: 0 dB (as shipped), or -6 dB (jumper-selectable) Balanced output: +6 dB (as shipped), or 0 dB (jumper-selectable)
Frequency response.....	20 Hz to 20 kHz, ±0.05 dB
THD + Noise.....	0.03% @ 20 Hz to 20 kHz, +15 dBu input, +21 dBu output nominal level
S/N.....	>85 dB, balanced, at rated maximum output
Crosstalk.....	<-70 dB @ 20 Hz to 20 kHz, fully loaded
Stereo channel separation.....	>70 dB @ 20 Hz to 20 kHz
CMRR.....	>+75 dB, 20 Hz to 20 kHz

Audio input— audio BME

Number/signal type.....	(8 to 64) (in increments of 8) mono or stereo, balanced/unbalanced
Connectors.....	(8 to 64) 3.5 mm captive screw connector, 5 pole (stereo) or 3 pole (mono)
Impedance.....	>10k ohms unbalanced/balanced, DC coupled
Nominal level.....	-10 dBV (316 mV)
Maximum level.....	+21.5 dBu, (balanced or unbalanced) at 1%THD+N

Input gain adjustment -15 dB to +9 dB, adjustable per input via RS-232 control or front panel

NOTE $0\text{ dBu} = 0.775\text{ Vrms}$, $0\text{ dBV} = 1\text{ Vrms}$, $0\text{ dBV} \approx 2\text{ dBu}$

Audio output— audio BME

Number/signal type..... Up to 64 (in increments of 8) mono or stereo, balanced/unbalanced
Connectors 3.5 mm captive screw connectors, 5 pole (stereo) or 3 pole (mono) (quantity varies with configuration)
Impedance..... 50 ohms unbalanced, 100 ohms balanced
Gain error ± 0.1 dB channel to channel
Maximum level (Hi-Z) $>+26.0$ dBu, balanced at 1%THD+N
Maximum level (600 ohm)..... $>+24.0$ dBm, balanced at 1%THD+N

Control/remote — switcher

Serial control port..... RS-232 or RS-422, Female 9-pin D connector
Baud rate and protocol..... 9600 baud, 8 data bits, 1 stop bit, no parity
Serial control pin configurations. 2 = TX, 3 = RX, 5 = GND
System intercommunications 2 RJ-11 connectors
Remote key pad control (2) 5 mm, 5-pole captive screw connectors
Program control..... Extron control/configuration program for Windows®
Extron Simple Instruction Set (SIS™)

General

Power*..... 100 VAC to 240 VAC, 50-60 Hz; internal
Matrix 6400 wideband..... 110 watts at 115 VAC, 60 Hz
Matrix 3200 wideband..... 50 watts at 115 VAC, 60 Hz
Matrix 6400 video..... 90 watts at 115 VAC, 60 Hz
Matrix 3200 video..... 40 watts at 115 VAC, 60 Hz
Matrix 6400 sync..... 65 watts at 115 VAC, 60 Hz
Matrix 3200 sync..... 35 watts at 115 VAC, 60 Hz
Matrix 6400 audio..... 195 watts at 115 VAC, 60 Hz
*A redundant power supply is available.
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
Cooling Fan, left to right as viewed from front panel
Mounting
Rack mount Yes
Enclosure type Metal
5U dimensions 8.75" H x 17.0" W x 14.1" D (5U high, full rack wide)
22.2 cm H x 43.2 cm W x 35.8 cm D
(Depth excludes connectors. Width excludes rack ears.)
7U dimensions 12.25" H x 17.0" W x 14.1" D (7U high, full rack wide)
31.1 cm H x 43.2 cm W x 35.8 cm D
(Depth excludes connectors. Width excludes rack ears.)
Shipping/product weight, rack height
Matrix 6400 wideband... 42 lbs (20 kg)/29.1 lbs (13.2 kg), 7U
Matrix 3200 wideband... 30 lbs (14 kg)/22.2 lbs (10.1 kg), 5U
Matrix 6400 video..... 33 lbs (15 kg)/25.3 lbs (11.5 kg), 5U
Matrix 3200 video..... 30 lbs (14 kg)/22.4 lbs (10.2 kg), 5U
Matrix 6400 sync..... 44 lbs (20 kg)/31.4 lbs (14.2 kg), 7U
Matrix 3200 sync..... 29 lbs (14 kg)/21.0 lbs (9.5 kg), 5U
Matrix 6400 audio..... 38 lbs (18 kg)/28.4 lbs (12.9 kg), 5U
DIM weight, international 44 lbs (20 kg)
Vibration ISTA 1A in carton (International Safe Transit Association)

Specifications — Matrix 3200/6400 Series, cont'd

Regulatory compliance

- Safety..... CE, c-UL, UL
- EMI/EMC CE, FCC Class A
- 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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