The Extron MVX Series Matrix Switchers are designed to route most common high resolution computer-video signals with stereo audio. Available in I/O sizes from 4x4 to 16x16, the MVX Series offers wideband switching performance with the convenience of 15-pin HD connectors for all computer-video connections.

MVX Series Matrix Switchers are ideal for applications such as conference rooms, classrooms, mobile and emergency operation centers, and video conference rooms.
### FEATURES

- **Ultra-wideband performance** – 350 MHz to 500 MHz (-3 dB), depending on model – MVX Series models in I/O sizes from 4x4 to 12x8 provide a minimum of 350 MHz (-3 dB) RGB video bandwidth, fully loaded. Larger sizes, from 12x12 to 16x16, provide a minimum of 500 MHz (-3 dB) at full performance capability, when one input drives all outputs.
- **Compatible with RGBHV, RGBS, RGsB, and HDTV component video**
- **Audio breakaway** – Provides the capability to break an audio signal away from its corresponding video signal, allowing the audio channels to be operated as a separate matrix switcher.
- **View I/O mode** – Allows users to easily view which individual inputs and outputs are actively connected.
- **QS-FPC - QuickSwitch Front Panel Controller** – Provides a discrete button for each input and output, allowing for simple, intuitive operation.
- **Global presets** – Individual I/O configurations may be saved and recalled either from the QuickSwitch front panel or through the serial controls. This time-saving feature allows you to set up I/O configurations and keep them in memory for future use.
- **Front panel security lockout** – Ideal for unsecured environments, this feature locks out all front panel functions; however, these same functions are available through RS-232 serial control.
- **RS-232 control port** – Using serial commands, the MVX Series can be controlled and configured via the included Windows®-based control software, or integrated into third-party control systems. Extron products use the SIS - Simple Instruction Set command protocol, a set of basic ASCII code commands that allow for quick and easy programming. The RS-232 port also makes it easy to install firmware updates.

### UNIQUE FEATURES FOR 4X4 TO 8X8 MODELS

- **Switchable audio output levels** – Output levels can be switched between +4 dBu professional and -10 dBV consumer levels, allowing a mix of professional- and consumer-level audio equipment.
- **Unbalanced stereo audio** – Accepts unbalanced PC audio on convenient 3.5 mm mini stereo jacks. Audio output is buffered and can be output as a balanced or unbalanced signal.
- **Triple Action Switching™ RGB Delay** – blanks the screen when switching to a new source. The new sync signals precede the RGB signals, so there is no glitch shown during the transition. The time delay between the RGB and sync signals is adjustable up to five seconds.
- **Includes removable rack ears**
- **Optional IR 501 handheld IR remote control** – Provides remote control from up to 30 feet (9 meters) away.

### UNIQUE FEATURES FOR 12X8 TO 16X16 MODELS

- **ADSP™ - Advanced Digital Sync Processing** – An exclusive, all-digital process that regenerates the sync signal waveform and restores incoming sync level to 5.0 V p-p specifications. This ensures a stable image for improved signal compatibility with any LCD, DLP, plasma, or other digital display device.
- **Front panel I/O label windows** – I/O buttons may be labeled with names, alphanumeric characters, or bitmap icons for easy and intuitive input and output selection.
- **Balanced and unbalanced stereo audio** – Accepts both balanced and unbalanced stereo audio signals on captive screw connectors.
- **Audio output volume control** – Can be set dynamically for each channel through the front panel or serial control, eliminating the need for audio preamplifiers in many system designs.
**VIDEO**

Gain ............................................. Unity

Bandwidth  
- 44-128 models: 350 MHz (-3 dB), fully loaded  
- 1212-1616 models: 500 MHz (-3 dB), fully loaded

Crossstalk  
- 44-88 models: < -60 dB nominal @ 10 MHz, < -30 dB @ 100 MHz  
- 128 model: < -80 dB @ 1 MHz, < -55 dB @ 10 MHz, < -37 dB @ 100 MHz

1212/168/1616 Series:  
- 90 dB @ 1 MHz, 78 dB @ 5 MHz, 70 dB @ 10 MHz, -60 dB @ 30 MHz, -52 dB @ 100 MHz

**VIDEO INPUT**

Number/signal type  
- VGA, UXGA RGBHV, RGBS, RLG, RLGaS, HDTV, component video (bi-level and tri-level sync), S-video, composite video

Nominal level  
- 0.7 Vp-p for Y of component video and S-video, and for composite video  
- 0.3 Vp-p for C of S-video

Minimum/maximum levels  
- 44-128 models: Analog: 0.3 V to 2.0 Vp-p with no offset  
- 1212-1616 models: Analog: 0.3 V to 2.0 Vp-p with no offset

Horizontal frequency  
- 15 kHz to 145 kHz

Vertical frequency  
- 30 Hz to 170 Hz

**VIDEO OUTPUT**

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  
- 44-128 models: 0.3 V to 2.0 Vp-p (follows input)  
- 1212-1616 models: 0 V to 2.0 Vp-p (follows input)

Return loss  
- < -40 dB @ 5 MHz

**SYNC**

Input type  
- RGBHV, RGBS, RLG, RLGaS

Output type  
- RGBHV, RGBS, RLG, RLGaS (follows input)

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

Input level  
- 0.2 V to 5.0 Vp-p

Output level  
- AGC to TTL: 4.0 V to 5.0 Vp-p, unterminated

Output impedance  
- 510 ohms

Input impedance  
- 1212-1616 models: 75 ohms

Outputs  
- Inputs 1 to 8: 75 or 50 ohms, switchable  
- Inputs 9 to 12 or 16: 50 or 75 ohms, switchable

**AUDIO**

Frequency response  
- 44-128 models: 20 Hz to 20 kHz, ±0.2 dB  
- 1212-1616 models: 20 Hz to 20 kHz, ±0.05 dB

THD + Noise  
- 44-128 models: 0.05% @ 1 kHz, 0.3% @ 20 kHz at nominal level  
- 1212-1616 models: 0.03% @ 1 kHz, 0.003% @ 20 kHz at nominal level

S/N  
- 44-128 models: > -90 dB, balanced, at maximum output (unweighted)  
- 1212-1616 models: > -100 dB, balanced, at maximum output (21 dBu) (unweighted)

**AUDIO INPUT**

Impedance  
- 44-88 models: > 18k ohms unbalanced, DC coupled  
- 128-1616 models: > 10k ohms unbalanced/balanced, DC coupled

Nominal level  
- 44-88 models: -10 dBV (316 mV) (default)  
- 128-1616 models: -10 dBV (316 mVrms), 0 dBu (775 mV)

Maximum level  
- 44-88 models: > +12 dBV (4 V), (unbalanced) at 1% THD+N  
- 128-1616 models: > +19.5 dBV, (balanced or unbalanced) at 0.01% THD+N

Input gain  
- 44-88 models: -18 dB to +10 dB, adjustable per input  
- 128-1616 models: -18 dB to +24 dB, adjustable per input

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV = 2 dBu

**AUDIO OUTPUT**

Nominal level (output volume range)  
- 44-88 models: +4 dBu (1.23 V) (default) balanced (pro), or -10 dBV (316 mV) unbalanced (consumer), selectable

128-1616 models: 0 to 64 (-75.8 dB to 0 dB) in 1 dB increments

Maximum level (Hi-Z)  
- 44-88 models: > +22 dBu, balanced; > +14 dBV, unbalanced at 1% THD+N

128-1616 models: > +21 dBu, balanced or unbalanced, at 0.1% THD+N

Maximum level (600 ohm)  
- 128-1616 models: > +20 dBu, balanced; > +12 dBV unbalanced at 1% THD+N at default settings

- 1212-1616 models: > +15 dBu, balanced or unbalanced, at 0.1% THD+N at default settings

**CONTROL/REMOTE — SWITCHER**

Serial control port  
- 44-88 models: 1 RS-232, 9-pin female D connector  
- 1212-1616 models: 1 bidirectional RS-232 or RS-422, rear panel 9-pin female D connector

Baud rate and protocol  
- 44-88 models: 9600 (default), 19200, 38400, 115200 baud

- 128-1616 models: adjustable, 8 data bits, 1 stop bit, no parity

IR controller module  
- 44-88 models: IR 501 (optional)

Program control  
- Extron’s control/configuration program for Windows®

**GENERAL**

Power  
- 44-88 models: 30 watts  
- 1212-1616 models: 48 watts

Enclosure dimensions  
- 44-88 models: 1.75” H x 17.4” W x 8.5” D (1U high, full rack width)  
- 1212-1616 models: 1.75” H x 17.4” W x 8.5” D (1U high, full rack width)

- (Depths excludes connectors and knobs. Width excludes rack ears.)

- 1212 model: 3.5” H x 17.0” W x 9.4” D (2U high, full rack width)

- (Depths excludes connectors and knobs. Width excludes rack ears.)

- 1212-1616 models: 5.25” H x 17.0” W x 9.4” D (3U high, full rack width)

- (Depths excludes connectors. Width excludes rack ears.)

Product weight  
- 44-88 models: 7.0 lbs (3.2 kg)  
- 128 model: 9.4 lbs (4.3 kg)

- 1212-1616 models: 14.4 lbs (6.5 kg)

Regulatory compliance  
- Safety: CE, cUL, UL

- EMI/EMC: CE, C-tick, FCC Class A, ICES, VCCI

MTBF  
- 30,000 hours

Warranty  
- 3 years parts and labor

NOTE: All nominal levels are ±10%

NOTE: Specifications are subject to change without notice.

**Model**  
- MVX 44 VGA A  
- 4x4 VGA and Stereo Audio

- MVX 48 VGA A  
- 4x8 VGA and Stereo Audio

- MVX 84 VGA A  
- 8x4 VGA and Stereo Audio

- MVX 88 VGA A  
- 8x8 VGA and Stereo Audio

- MVX 128 VGA A  
- 12x8 VGA and Stereo Audio

- MVX 168 VGA A  
- 16x8 VGA and Stereo Audio

- MVX 1212 VGA A  
- 12x12 VGA and Stereo Audio

- MVX 1616 VGA A  
- 16x16 VGA and Stereo Audio

**Part Number**  
- 60-635-21

- 60-637-21

- 60-638-21

- 60-835-01

- 60-836-01

- 60-837-01

- 60-838-01

- 60-839-01

Specifications are subject to change without notice.