MATRIX SWITCHERS

SENDING THE PERFECT SIGNAL

Distribute Any Signal to Any Room at Any Time With Perfect Clarity

At the heart of every audiovisual integration is a matrix switching system – a well designed system ensures the sounds and images produced by source equipment such as satellite receivers, computers, DVD players, cameras, iPods and much more are available at every destination – at any time – with perfect clarity. After assessing the various signal styles, required cable types and distances and desired additional features you can create a check list to quickly select the ideal matrix switching system for any project. At AMX we have four matrix switching platforms to choose from starting with the most basic to more sophisticated. By navigating our line in this order you will quickly land on the perfect solution.

FIXED

- Comprised of a single video signal style, with or without audio, or audio alone
- Fixed input / output range
- Top selling, cost-effective, "off-the-shelf" ready for immediate delivery via our quick ship program
- Robust professional specifications and multiple control options built in

PRE-ENGINEERED

- Popular configurations with a single order number and a single price for ease of ordering
- Comprised of a single video signal style, with or without audio, or audio alone
- Pre-determined input / output range at the time of order; many can be easily upgraded at a later date in the field
- Robust professional specifications and multiple control options built in
- Most systems ship within five days of receipt of order

MIX-AND-MATCH

- The first customizable platform in our list allowing for multiple video and audio signal styles in the same system
- Save money, rack space, and power while maintaining a single control view
- Select custom control options
- Robust professional specifications and enhanced feature sets
- Build your own using the handy configuration guide in this catalog, or obtain a quick personalized custom quote over the phone, via email or by completing our "Custom Request Form" at www.amx.com/products/AutoPatchMatrixSwitchersCustomRequest.asp

MODULAR

- The most robust matrix switchers on the market
- Designed with flexibility in mind, our modular systems set the standard for total audiovisual system integration
- AMX offers modular solutions that tie together options like multiple signal styles, various I/O ranges, skewed and uncommon input and output options, field expandability, built-in twisted pair and fiber transport options, multiple control options and much more
- Obtain a quick personalized custom quote over the phone, via email, or by completing our "Custom Request Form" www.amx.com/products/AutoPatchMatrixSwitchersCustomRequest.asp

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	SYSTEM ARCHITECTURE					VIDEO SIGNALS					AUDIO			CONTROL	FEATURES			
PRECIS DSP	8x8, 18x18	X										X						X
PRECIS LT	4x4, 4x8, 8x4, 8x8	X				X						X						
PRECIS SD	8x4, 8x8, 12x4, 12x8	X				X						X						
OPTIMA SD	8x16, 12x12, 16x8, 16x16	X				X						X						
OCTAIRE	32x48 up to 64x64	X				X						X					X	
OPTIMA*	4x2, 4x4, 4x8, 8x4, 8x8, 15x15, 16x16, 16x24, 20x4, 20x20, 24x4, 24x16, 36x4		X	X		X	X	X	X		X	X	X					
MODULA (32X32)	4x4 to 32x32		X		X	X		X	X		X	X	X					
MODULA (60X4, 4X60)	4x60 to 16x48 or 48x16 to 60x4		X		X	X			X			X	X					
MODULA SERIES4	4x4 to 32x32		X		X	X						X	X					
OPTIMA/MODULA CAT PRO	4x4 to 32x32		X		X	X			X			X		X				
EPICA DGX 16/32	4x4 to 32x32		X		X	X		X		X	X	X		X	X	X	X	
EPICA DGX 144	16x16 to 144x144				X	X		X		X	X	X					X	
EPICA DG	16x16 to 144x144				X			X		X		X					X	
EPICA	16x16 to 256x256				X	X						X	X				X	
	I/O RANGE	FIXED	PRE-ENGINEERED	MIX-AND-MATCH	MODULAR	Analog Video	HDMI / HDCP	Digital Video	Integrated Twisted Pair Distribution Options	Integrated Fiber Distribution Options	Embedded Audio	Analog Audio	Digital Audio	Integrated NetLinx Control Port	Video Scaling	Video Signal Conversion	Redundant Power Supply	Audio Processing

* Signal type availability varies by I/O range - see Optima Custom Configuration Guide for details

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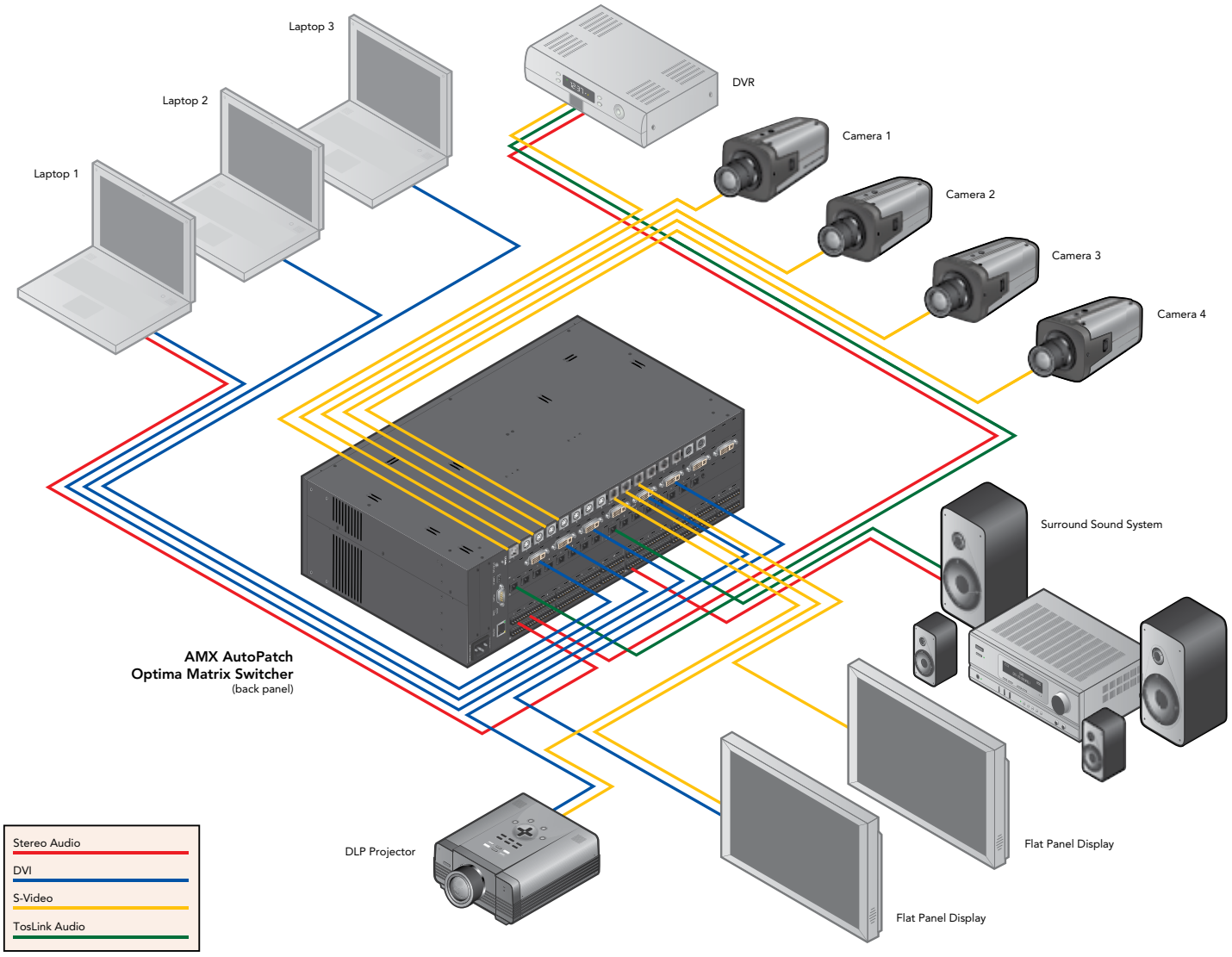
SYSTEM DIAGRAM



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HOW TO SELECT THE IDEAL MATRIX SWITCHER

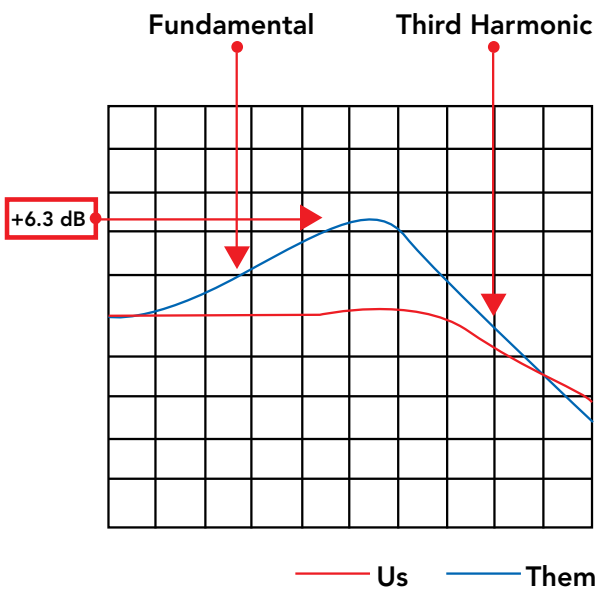
At the heart of every audiovisual integration is a matrix switching system – a well designed system ensures the sounds and images produced by source equipment such as satellite receivers, computers, DVD players, cameras, iPods and much more are available at every destination – at any time – with perfect clarity.

After assessing the various signal styles, required cable types and distances and desired additional features, you can create a check list to quickly select the ideal matrix switching system for any project.

At AMX we have four matrix switching platforms to choose from starting with the most basic to more sophisticated. By navigating our line in this order you will quickly land on the perfect solution.

A CLOSER LOOK

This chart represents both a Typical industry standard analog video bandpass (peaking as high as 6 dB) along with a Typical AutoPatch response which remains Ultra-Flat and well within our ±3 dB tolerance. This is just one more guarantee that we pay very close attention to the quality of every signal, at every cross point, in every system to ensure that the investment made in quality video sources is maintained throughout any installation.



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PRECISELY WHAT YOU NEED

Fixed Matrix Switchers

Fixed systems are comprised of a single video style, with audio, in a fixed input / output range. These cost-effective, "off the-shelf" units pack the same high-performance specifications as our custom lines and are ready for immediate delivery.

		VIDEO SIGNALS		AUDIO	CONTROL			FEATURES								
PRECIS DSP	8x8, 18x18			X	X		+	n/a	n/a	n/a				X	X	
PRECIS LT	4x4, 4x8, 8x4, 8x8	X	X	X	X	X	+	50,300	X	X						
PRECIS SD	8x4, 12x8	X	X	X	X	X	+	300	X	X	X	X		X	X	
OPTIMA SD	8x16, 12x12, 16x8, 16x16	X	X	X	X	X	+	500	X	X	X	X		X	X	
OCTAIRE	32x48 up to 64x64	X	X	X	X	X	X	150,500	X	X	X	X	X	X	X	X
	I/O RANGE	Composite, S-Video, Y/c, 3 Component	RGBHV	Stereo Audio	Standard RS-232, BCS Serial Control Protocol	Front Panel Control	APWeb TCP/IP Control	Video Bandwidth	Ultra-Flat Response (±3 dB)	Breakaway	Macros/Presets	Levels (programmable/Virtual Matricies)	Vertical Interval Switching	Digital Input Gain Control (Audio)	Digital Output Volume Control (Audio)	Redundant Power Supply

+ Optional
1 - Indicates digital audio can be passed using standard video boards.

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(1 video style; 1 audio style or both; analog signals)
Small (systems are 3 RU or smaller; inputs from 4 to 18; outputs from 4 to 18) ..... **450 – 468**
Medium (systems are 6 RU; inputs from 12 to 16; outputs from 8 to 16) ..... **469 – 475**
Large (systems are 4 RU to 24 RU; inputs from 32 to 64; outputs from 48 to 64) ..... **476 – 494**

MATRIX SWITCHERS

FIXED

PRE-ENGINEERED

MIX-AND-MATCH

MODULAR

Stereo
Audio

Precis DSP Fixed Matrix Switchers

Stereo Audio with RCA Digital Volume Control and Digital Signal Processing

AVS-PL-0808-00P	8x8 (1RU)	(FGP37-0808-00P)
AVS-PL-1818-00P	18x18 (2RU)	(FGP37-1818-00P)

OVERVIEW

The Precis DSP provides the ultimate solution for distributed audio by combining the functionality of a matrix switcher with the signal processing of an external equalization device. With robust features like a 10-band graphic equalizer, input gain, volume, tone, and balance control, the Precis DSP provides for exact customization of each output to support the attributes of the room or zone. The easy-to-use AutoPatch GraphicEQ setup software tool allows installers to manage all of the audio adjustments for the Precis DSP including adjusting the input gain to eliminate noticeable differences in volume as the user switches between various sources. Available in I/O sizes 8x8 or 18x18, the Precis DSP's standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system.

COMMON APPLICATION

The Precis DSP is ideal for any residential or small commercial distributed audio installation.

FEATURES

- 10-band graphic equalizer on each output
- Digital balance, tone and volume control on each output
- Digital input gain control to normalize audio input voltages
- Gold-plated RCA connectors
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Ships with free AutoPatch GraphicEQ setup software
- Rack mounting ears included
- Backed by our AMX 3 year warranty

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
Cut or boost frequencies by fine tuning your audio system to suit the physical characteristics of each room or zone. Then, sweeten the sound to suit the listener's taste.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

QUICK SHIP
These industry leading fixed systems are ready to for immediate delivery, most will ship the same day and all shipments are guaranteed to leave our factory within five days after receipt of order.

DSP
Enhance the beauty of sound in every room with AMX's DSP technology providing integrated 10-band EQ, volume, tone and balance on each output to easily support the acoustical attributes of each individual room / zone.

AWARD WINNER
The Precis DSP was awarded the Cedia "Manufacturer's Excellence" honoring the five best new products for the residential industry, 2007.

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

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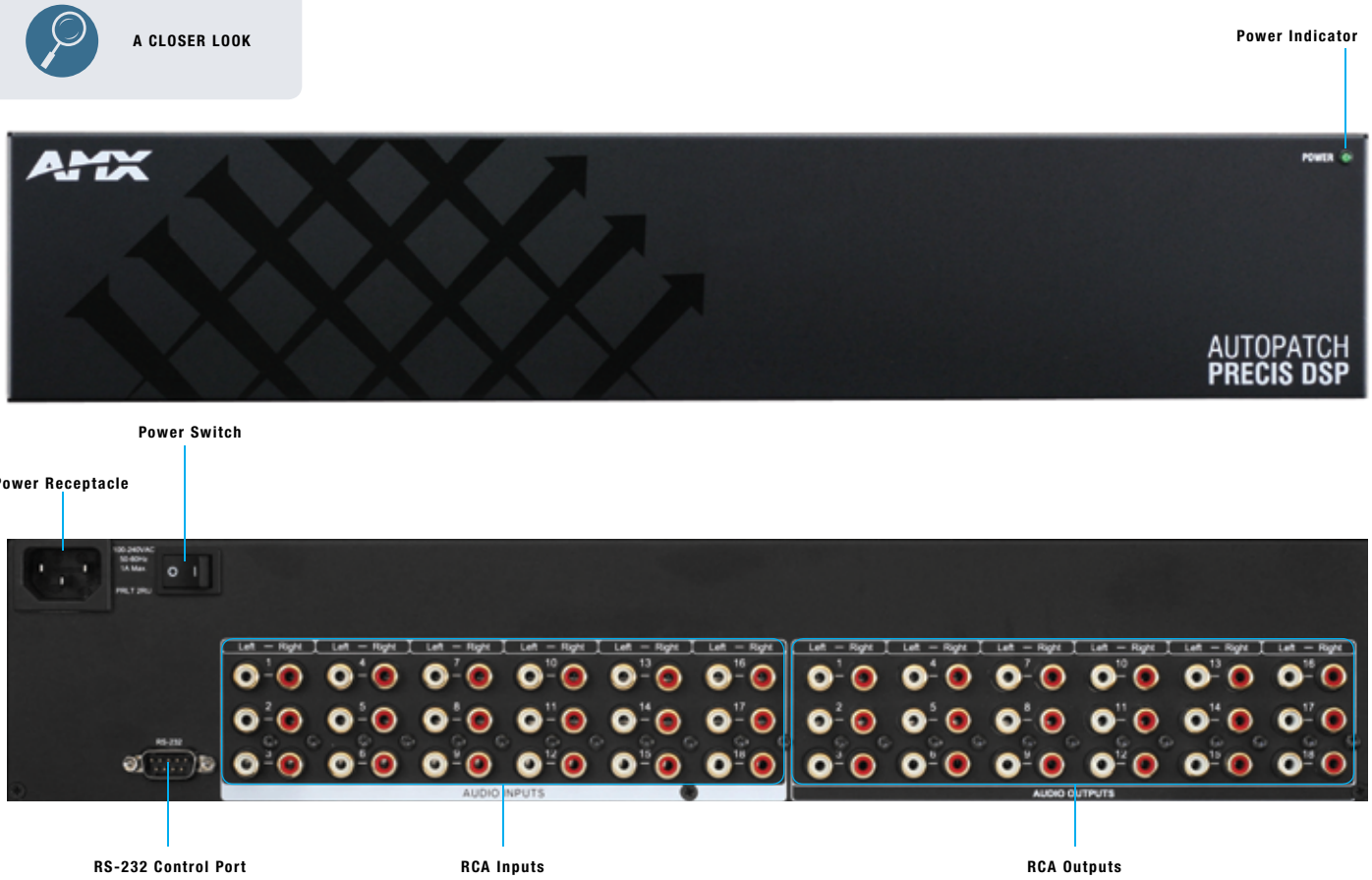
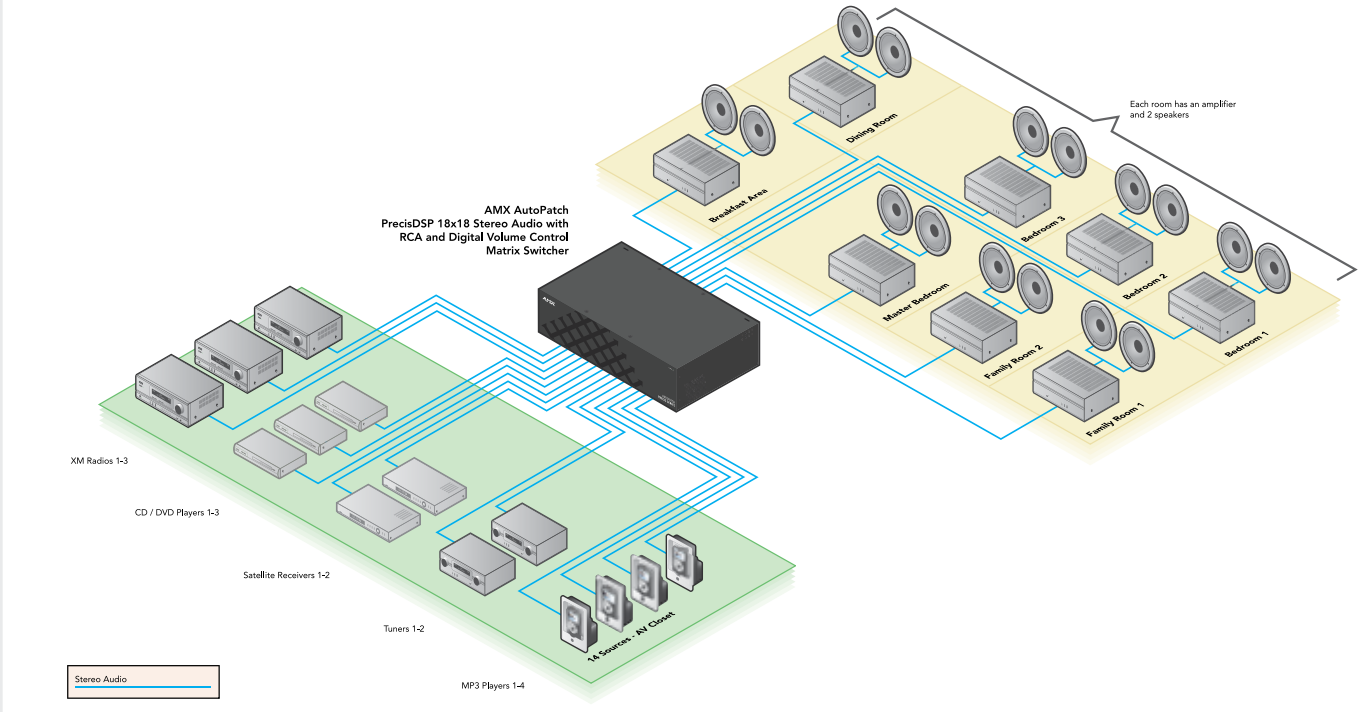
A CLOSER LOOK





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SPECIFICATIONS

I/O RANGE

- 8x8
- 18x18

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 80 Watts per enclosure
- Power Consumption (Typ): 45 Watts per enclosure, fully loaded enclosure
- BTU/HR (Max): 273
- BTU/HR (Typ): 154, fully loaded enclosure
- Operational Temperature: 32° to 95° F (0° to 35° C)
- Humidity: 0 to 90% non-condensing

8X8 DIMENSIONS (HWD) WITH RACK EARS

- 1 11/16 x 19" x 9 3/4"
- 4.3 cm x 48.3 cm x 24.8 cm

8X8 DIMENSIONS (HWD) WITHOUT RACK EARS

- 1 11/16" x 17 3/8" x 9 3/4"
- 4.3 cm x 44.2 cm x 24.8 cm
- RU: 1

18X18 DIMENSIONS (HWD) WITH RACK EARS

- 3 1/2" x 19" x 9 3/4"
- 8.9 cm x 48.3 cm x 24.8 cm

18X18 DIMENSIONS (HWD) WITHOUT RACK EARS

- 3 1/2" x 17 3/8" x 9 3/4"
- 8.9 cm x 44.2 cm x 24.8 cm
- RU: 2

WEIGHT

8x8: Appx. 7 lbs (3.18 kg)
18x18: Appx. 10.5 lbs (4.76 kg)

CERTIFICATIONS

UL, cUL, CE, RoHS/WEEE compliant

STANDARD AUDIO WITH DIGITAL VOLUME CONTROL

- Input Level (Max): +14 dBu, unbalanced
- Input Impedance: 2 kOhms
- Output Level (Max): +14 dBu, unbalanced
- Output Impedance: <5 Ohms
- Frequency Response: <0 to -0.8 dB (20 Hz to 20 kHz)
- THD + Noise: <0.1% (1 kHz, Vin = -10 to +10 dBu)
- Signal to Noise Ratio: >90 dB (20 Hz to 20 kHz, Vin = +14 dBu)
- Crosstalk: <-115 dB (1 kHz, Vin = +14 dBu)
- Input Gain Adj. Range: +10 dB to -10 dB, via serial commands / GraphicEQ software
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial commands / GraphicEQ software
- Coupling: AC Coupled
- Connectors: RCA (Gold-plated RCA connectors)

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Stereo | RGBHV
Audio • Video

Precis LT Fixed Matrix Switchers

RGBHV Video with HD-15, Stereo Audio with 3T Phoenix-style

AVS-PL-0404-844	4x4 (1RU)	(FGP37-0404-844)
AVS-PL-0408-844	4x8 (1RU)	(FGP37-0408-844)
AVS-PL-0804-844	8x4 (1RU)	(FGP37-0804-844)
AVS-PL-0808-844	8x8 (1RU)	(FGP37-0808-844)

OVERVIEW

The professional solution for RGBHV signal distribution, the Precis LT RGBHV + stereo matrix switchers are designed to route high resolution computer video and stereo audio signals. Video input and output signals are connected via HD-15 connectors and audio signals are connected via 3T Phoenix-style connectors. The Precis LT's front control panel allows for fast and convenient input and output selection. The standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system. Available in I/O sizes from 4x4 to 8x8, the Precis LT provides a minimum of 300 MHz (±3 dB) RGB video bandwidth when fully loaded.

COMMON APPLICATION

Easily connect multiple RGBHV sources such as computers and satellite receivers to multiple displays; such as in small boardroom applications.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Easily supports the highest analog video bandwidth requirements on the market
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Audio connections support unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes simple X/Y front mounted control panel
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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QUICK SHIP
These industry leading fixed systems are pre-boxed and ready for immediate delivery, many will ship the same day and all shipments are guaranteed to leave our factory within five days receipt of order.

PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

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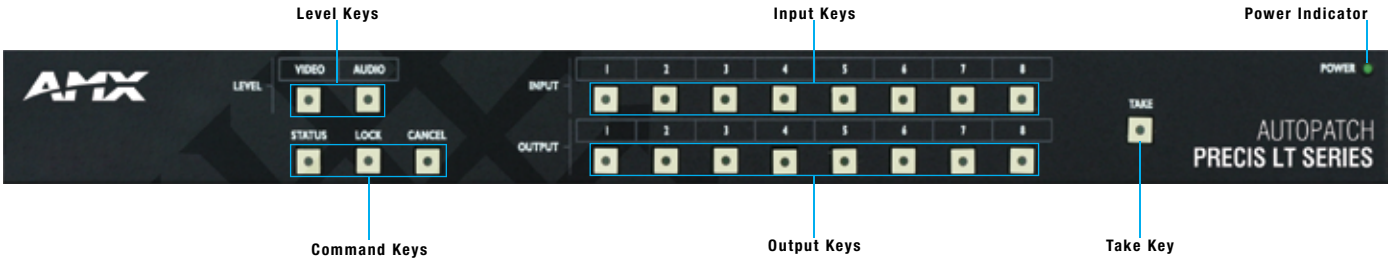
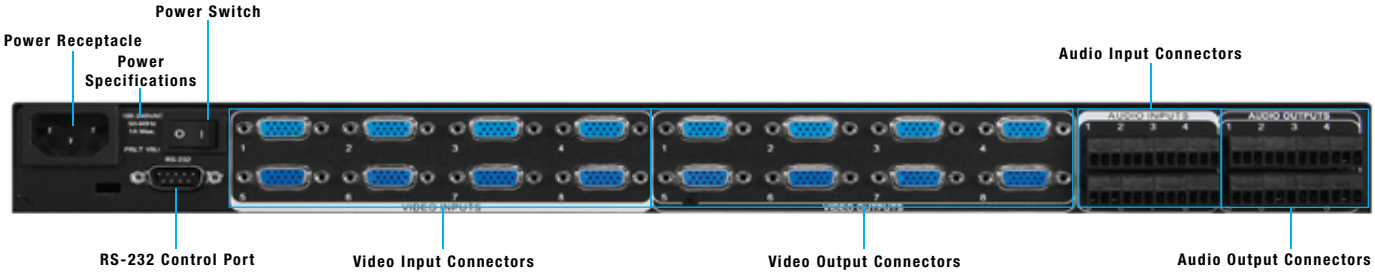
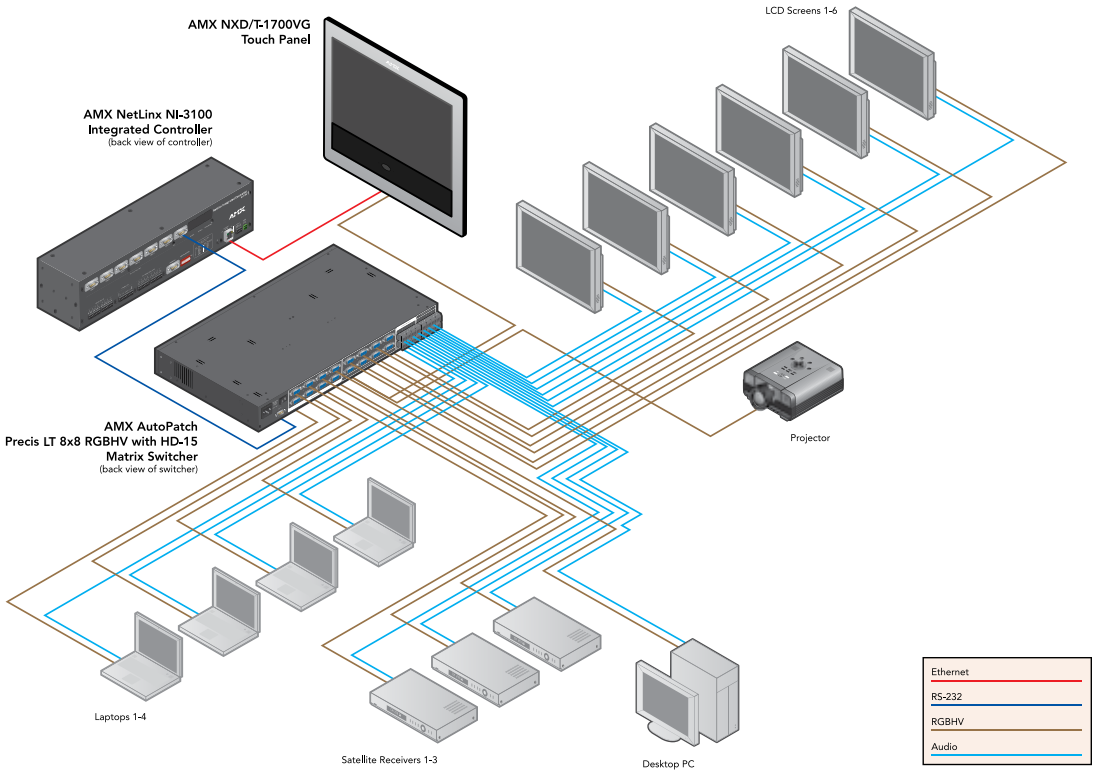
A CLOSER LOOK







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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 60 Watts
- Power Consumption (Typ): 35 Watts, fully loaded enclosure
- BTU/hr (Max): 205
- BTU/hr (Typ): 119, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

1 11/16" x 19" x 10 3/8" (4.3 cm x 48.3 cm x 26.4 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 1 11/16" x 17 3/8" x 10 3/8" (4.3 cm x 44.2 cm x 26.4 cm)
- RU: 1

WEIGHT

Appx. 7 lbs (3.18 kg) per enclosure

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

RGBHV

- Input Level (Max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Crosstalk:
  - <-65 dB (f = 5 MHz)
  - <-40 dB (f = 150 MHz)
- Signal To Noise Ratio: > 65 dB (Vin = 0.7 V, 100 IRE)
- HV Sync Input Level (Max): ±5 V
- HV Input Impedance: 22 kOhms
- HV Sync Output Level (Max): ±5 V (follows input)
- HV Output Impedance: 75 Ohms
- Connectors: HD-15

STANDARD AUDIO

- Input Level (Max): +14 dBu, unbalanced
- Input Impedance: 18 kOhms
- Output Level (Max): +14 dBu, unbalanced
- Output Impedance: 50 Ohms
- Frequency Response: < ±0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.025% (20 Hz to 20 kHz, Vin = -10 to +14 dBu)
- Signal To Noise Ratio: >105 dB (20 Hz to 20 kHz, Vin = +14 dBu)
- Crosstalk: <-105 dB (1 kHz, Vin = +2 dBu)
- Connectors: 3T

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Stereo | Component
Audio • Video

Precis LT Fixed Matrix Switchers

HDTV/Component Video with RCA, Stereo Audio with RCA

AVS-PL-0404-A43	4x4 (2RU)	(FGP37-0404-A43)
AVS-PL-0408-A43	4x8 (2RU)	(FGP37-0408-A43)
AVS-PL-0804-A43	8x4 (2RU)	(FGP37-0804-A43)
AVS-PL-0808-A43	8x8 (2RU)	(FGP37-0808-A43)

OVERVIEW

The professional solution for HD signal distribution, the Precis LT component + stereo matrix switchers are designed to route HDTV/Component video and stereo audio signals. Video input and output signals are connected via RCA connectors. Unbalanced audio signals are supported and connected via RCA connectors. The Precis LT's front control panel allows for fast and convenient input and output selection. The standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system. Available in I/O sizes from 4x4 to 8x8, the Precis LT provides a minimum of 300 MHz (±3 dB) video bandwidth when fully loaded.

COMMON APPLICATION

Easily connect multiple HDTV sources such as DVD players and satellite receivers to multiple displays; such as in sports bar, or lobby applications.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Supports the highest analog resolutions on the market, including but not limited to HDTV resolutions up to 1920 x 1080p
- Audio connections support unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes simple X/Y front mounted control panel
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty

BULLSEYE TARGET PRODUCT
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HELPFUL HINT
RCA component video connections offer the same high bandwidth capabilities of BNC connections and are often used in residential/consumer applications.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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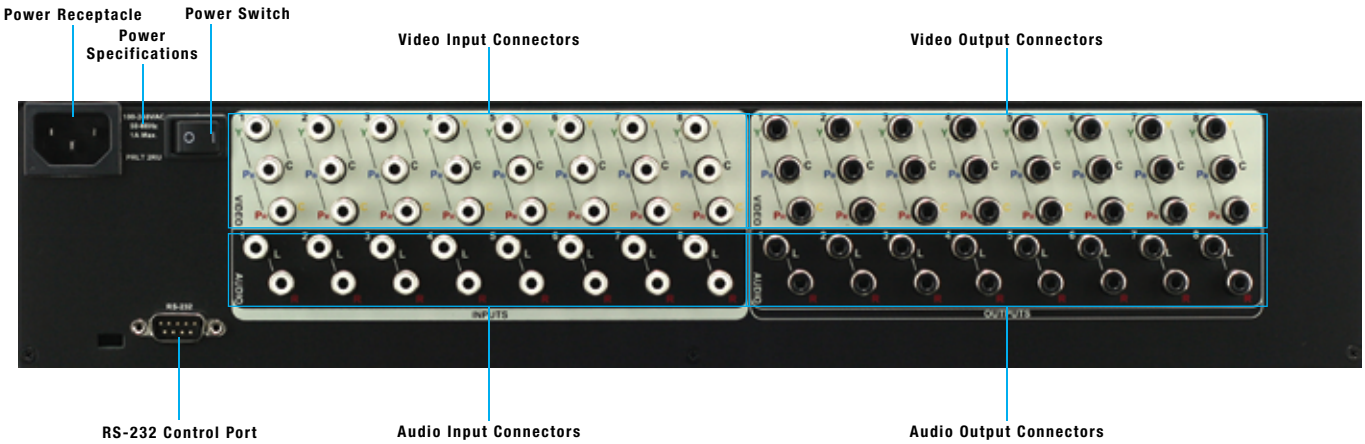
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 60 Watts
- Power Consumption (Typ): 35 Watts, fully loaded enclosure
- BTU/hr (Max): 205
- BTU/hr (Typ): 119, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 10 3/8" (8.9 cm x 48.3 cm x 26.4 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 10 3/8" (8.9 cm x 44.2 cm x 26.4 cm)
- RU: 2

WEIGHT

Appx. 10.5 lbs (4.76 kg) per enclosure

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

COMPONENT VIDEO (RCA)

- Input Level (Max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Crosstalk:
  - <-70 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal To Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Connectors: RCA

STANDARD AUDIO

- Input Level (Max): +14 dBu, unbalanced
- Input Impedance: 18 kOhms
- Output Level (Max): +14 dBu, unbalanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.025% (20 Hz to 20 kHz, Vin = -10 to +14 dBu)
- Signal To Noise Ratio: >105 dB (20 Hz to 20 kHz, Vin = +14 dBu)
- Crosstalk: <-105 dB (1 kHz, Vin = +2 dBu)
- Connectors: RCA

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Stereo | Component
Audio • Video

Precis LT Fixed Matrix Switchers

HDTV/Component Video with BNC, Stereo Audio with 5T Phoenix-style

AVS-PL-0404-345	4x4 (2RU)	(FGP37-0404-345)
AVS-PL-0408-345	4x8 (2RU)	(FGP37-0408-345)
AVS-PL-0804-345	8x4 (2RU)	(FGP37-0804-345)
AVS-PL-0808-345	8x8 (2RU)	(FGP37-0808-345)

OVERVIEW

The professional solution for HD signal distribution, the Precis LT component + stereo matrix switchers are designed to route HDTV/Component video and stereo audio signals. Video input and output signals are connected via BNC connectors. Balanced and unbalanced audio signals are supported and connected via 5T Phoenix-style connectors. The Precis LT's front control panel allows for fast and convenient input and output selection. The standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system. Available in I/O sizes from 4x4 to 8x8, the Precis LT provides a minimum of 300 MHz (±3 dB) video bandwidth when fully loaded.

COMMON APPLICATION

Easily connect multiple HDTV sources such as DVD players and satellite receivers to multiple displays; such as in sports bars or lobby applications.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Supports the highest analog resolutions on the market, including but not limited to HDTV resolutions up to 1920 x 1080p
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes simple X/Y front mounted control panel
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

QUICK SHIP
These industry leading fixed systems are pre-boxed and ready for immediate delivery, many will ship the same day and all shipments are guaranteed to leave our factory within five days receipt of order.

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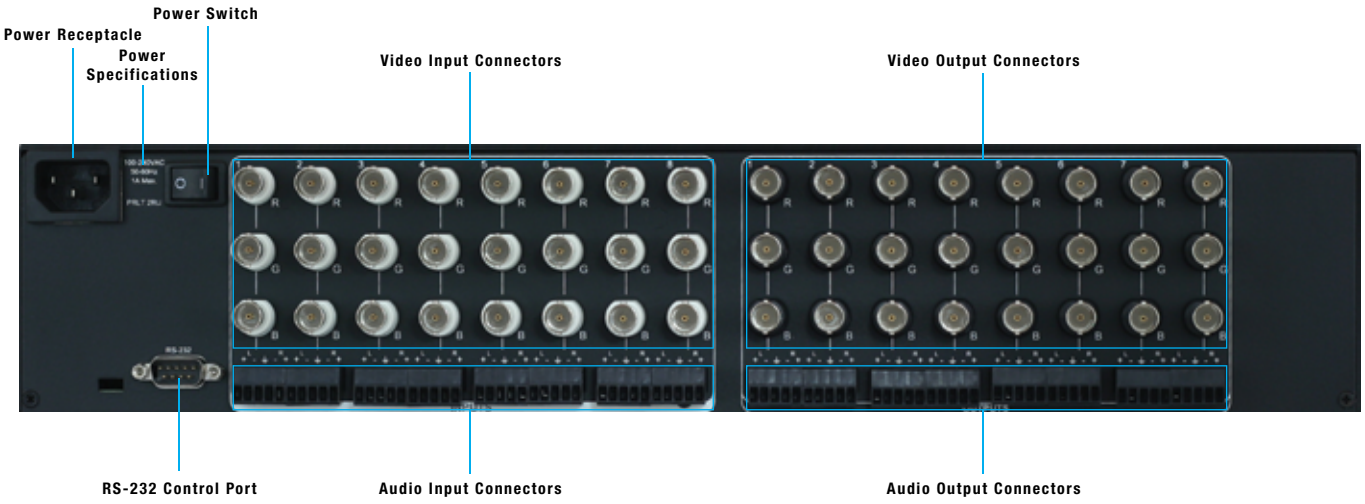
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 60 Watts
- Power Consumption (Typ): 35 Watts, fully loaded enclosure
- BTU/hr (Max): 205
- BTU/hr (Typ): 119, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 10 3/8" (8.9 cm x 48.3 cm x 26.4 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 10 3/8" (8.9 cm x 44.2 cm x 26.4 cm)
- RU: 2

WEIGHT

Appx. 10.5 lbs (4.76 kg) per enclosure

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

COMPONENT VIDEO (RCA)

- Input Level (Max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Crosstalk:
  - <-70 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal To Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +14 dBu, unbalanced
- Input Impedance: 18 kOhms
- Output Level (Max): +14 dBu, unbalanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.025% (20 Hz to 20 kHz, Vin = -10 to +14 dBu)
- Signal To Noise Ratio: >105 dB (20 Hz to 20 kHz, Vin = +14 dBu)
- Crosstalk: <-105 dB (1 kHz, Vin = +2 dBu)
- Connectors: 5T

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Stereo | S-Video
Audio • Video

Precis LT Fixed Matrix Switchers

S-Video (4-pin Mini-DIN), Stereo Audio with 5T Phoenix-style

AVS-PL-0404-615	4x4 (1RU)	(FGP37-0404-615)
AVS-PL-0408-615	4x8 (1RU)	(FGP37-0408-615)
AVS-PL-0804-615	8x4 (1RU)	(FGP37-0804-615)
AVS-PL-0808-615	8x8 (1RU)	(FGP37-0808-615)

OVERVIEW

Big matrix switching power in compact 1RU enclosures; the Precis LT S-Video and stereo audio fixed matrix switcher line delivers the same ultra-flat bandpass specifications (±3 dB) as our larger lines ensuring that the video and audio quality is maintained from every source to every device. The Precis LT's front control panel allows for fast and convenient input and output selection. The standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system. Available in I/O sizes from 4x4 to 8x8, the Precis LT supports both balanced and unbalanced audio signals.

COMMON APPLICATION

Easily connect multiple S-Video sources such as DVD players and gaming consoles to multiple displays.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes simple X/Y front mounted control panel
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Backed by our AMX 3 year warranty

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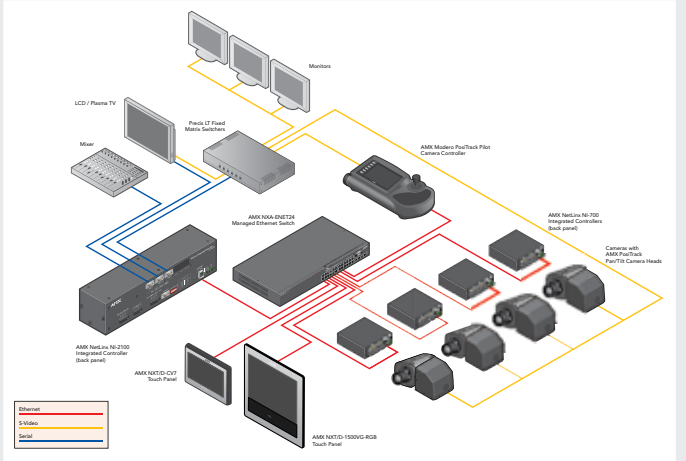

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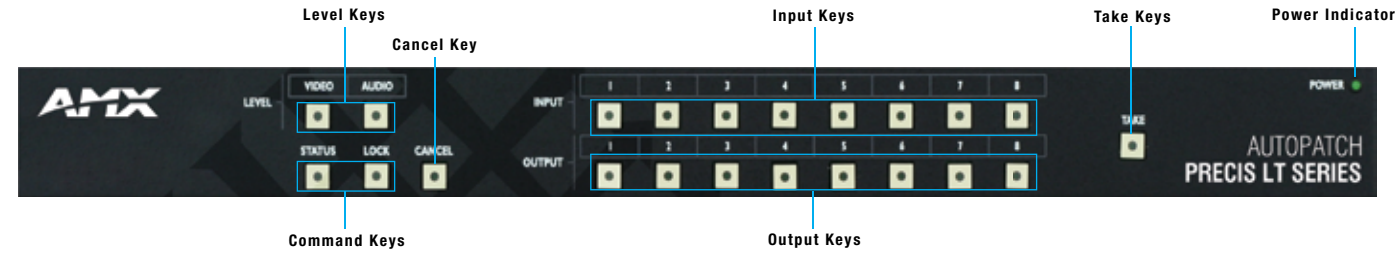
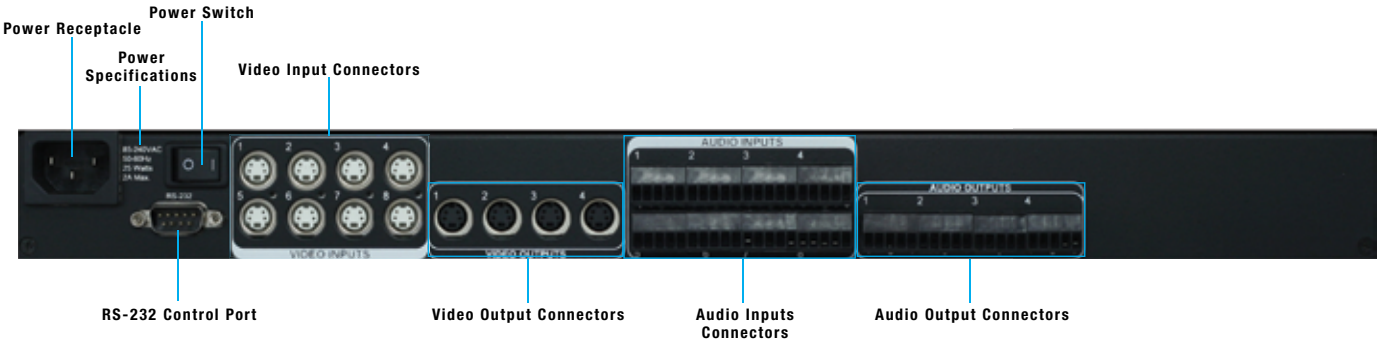
A CLOSER LOOK





SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 35 Watts
- Power Consumption (Typ): 20 Watts, fully loaded enclosure
- BTU/hr (Max): 119
- BTU/hr (Typ): 68, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

1 11/16" x 19" x 10 3/8" (4.3 cm x 48.3 cm x 26.4 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 1 11/16" x 17 3/8" x 10 3/8" (4.3 cm x 44.2 cm x 26.4 cm)
- RU: 1

WEIGHT

Appx. 7 lbs (3.18 kg) per enclosure

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

S-VIDEO

- Input Level (Max): ±1.9 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.9 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 15 MHz or better (±1 dB)
- Crosstalk: <-65 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal To Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: S-Video (4-pin Mini-DIN)

STANDARD AUDIO

- Input Level (Max): +14 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +14 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <± 0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.025% (20 Hz to 20 kHz, Vin = -10 to +14 dBu)
- Signal To Noise Ratio: >105 dB (20 Hz to 20 kHz, Vin = +14 dBu)
- Crosstalk: <-105 dB (1 kHz, Vin = +2 dBu)
- Connectors: 5T

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Stereo | Composite
Audio • Video

Precis LT Fixed Matrix Switchers

Composite Video with BNC, Stereo Audio with 5T Phoenix-style

AVS-PL-0404-115	4x4 (1RU)	(FGP37-0404-115)
AVS-PL-0408-115	4x8 (1RU)	(FGP37-0408-115)
AVS-PL-0804-115	8x4 (1RU)	(FGP37-0804-115)
AVS-PL-0808-115	8x8 (1RU)	(FGP37-0808-115)

OVERVIEW

Big switching power in compact 1RU enclosures; the Precis LT composite video and stereo audio fixed matrix switchers deliver the same ultra-flat bandpass specification (±3 dB) as our larger lines ensuring that the video and audio quality is maintained from every source to every device. The Precis LT's front control panel allows for fast and convenient input and output selection. The standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system. Available in I/O sizes from 4x4 to 8x8, the Precis LT supports both balanced and unbalanced audio signals.

COMMON APPLICATION

Easily connect multiple composite video sources such as cameras and VCRs to multiple displays.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes simple X/Y front mounted control panel
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Backed by our AMX 3 year warranty

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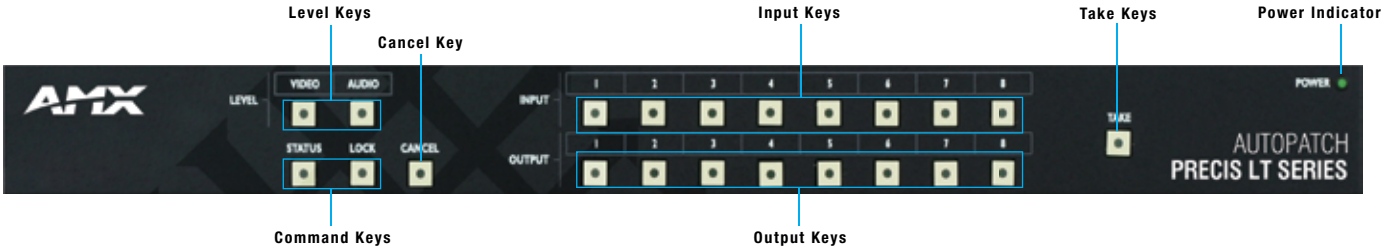
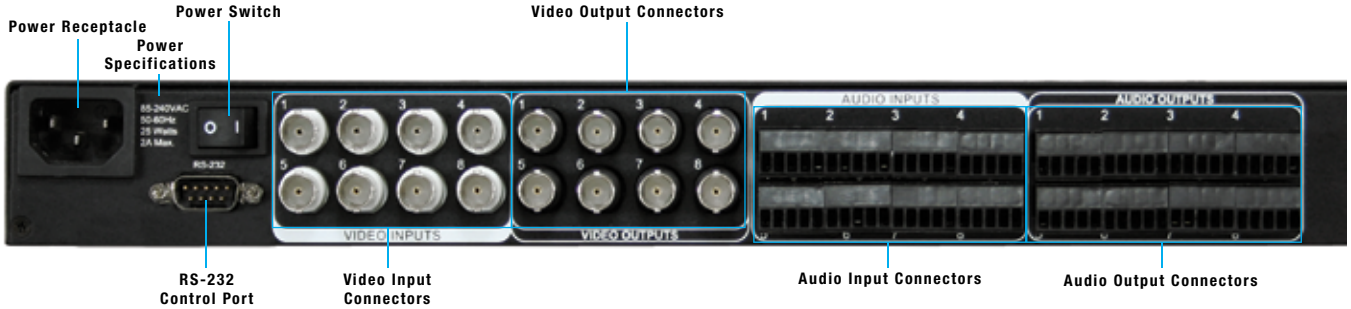
A CLOSER LOOK





SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 35 Watts
- Power Consumption (Typ): 20 Watts, fully loaded enclosure
- BTU/hr (Max): 119
- BTU/hr (Typ): 68, fully loaded enclosure
- Operational Temperature: 32° to 110°F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

1 11/16" x 19" x 10 3/8" (4.3 cm x 48.3 cm x 26.4 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 1 11/16" x 17 3/8" x 10 3/8" (4.3 cm x 44.2 cm x 26.4 cm)
- RU: 1

WEIGHT

Appx. 7 lbs (3.18 kg) per enclosure

CERTIFICATIONS

UL, cUL, CE, RoHS/WEEE compliant

COMPOSITE VIDEO

- Input Level (Max): ±1.9 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.9 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 15 MHz or better (±1 dB)
- Crosstalk: <-65 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal To Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +14 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +14 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.025% (20 Hz to 20 kHz, Vin = -10 to +14 dBu)
- Signal To Noise Ratio: >105 dB (20 Hz to 20 kHz, Vin = +14 dBu)
- Crosstalk: <-105 dB (1 kHz, Vin = +2 dBu)
- Connectors: 5T

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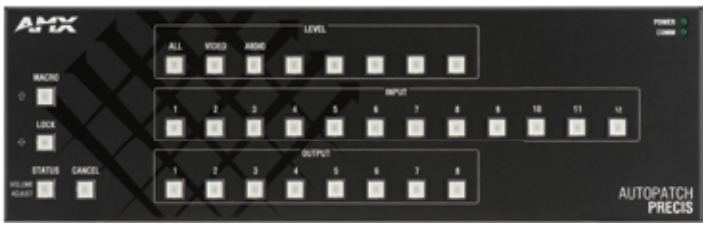
Stereo | RGBHV
Audio • Video

Precis SD Fixed Matrix Switchers

RGBHV Video 500 MHz with BNC

AVS-PR-0804-560SD	8x4 (3RU)	(FGP37-0804-560)
AVS-PR-0808-560SD	8x8 (3RU)	(FGP37-0808-560)
AVS-PR-1204-560SD	12x4 (3RU)	(FGP37-1204-560)
AVS-PR-1208-560SD	12x8 (3RU)	(FGP37-1208-560)



OVERVIEW

The Precis SD RGBHV Matrix Switcher is designed to exceed the requirements of the most demanding high resolution analog video system designs. Delivering 500 MHz RGB bandwidth when fully loaded, this extraordinary ultra-wideband performance ensures signals reach their final destination accurately and beautifully every time. Available in I/O sizes from 8x4 to 12x8, the Precis SD's front control panel allows for fast and convenient input and output selection. The standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system.

COMMON APPLICATION

The Precis SD is the perfect solution for environments that require exceptional performance and dependability for switching high resolution computer-video without signal loss or degradation - such as command and control centers.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 500 MHz bandwidth, fully-loaded worst case scenario
- Easily supports the highest analog video bandwidth requirements on the market
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes simple X/Y front mount control panel featuring backlit buttons
- Front panel security lockout
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

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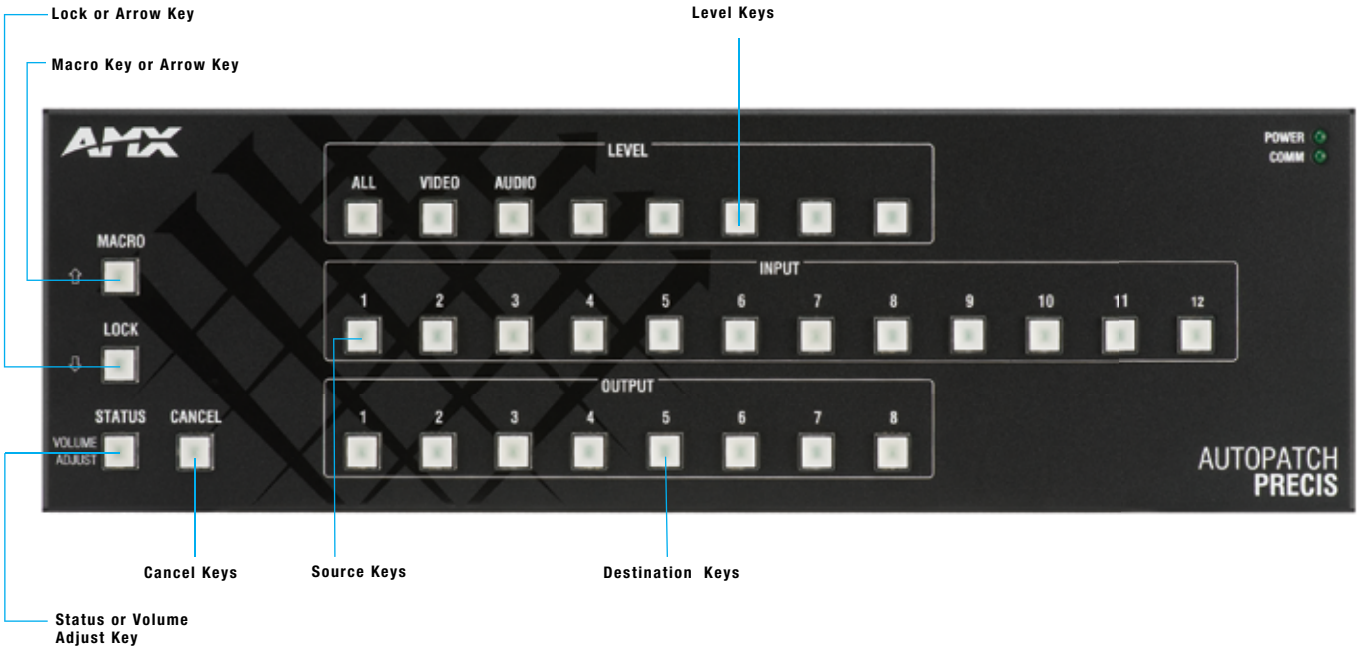
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 80 Watts
- Power Consumption (Typ): 57 Watts, fully loaded enclosure
- BTU/hr (Max): 273
- BTU/hr (Typ): 194, fully loaded enclosure
- Operation Temperature: 32° to 110° F (0° to 43°C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 3/16" x 19" x 10 3/8" (13.2 cm x 48.3 cm x 26.4 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 3/16" x 17 3/8" x 10 3/8" (13.2 cm x 44.2 cm x 26.4 cm)
- RU: 3

WEIGHT

Appx. 12 lbs (5.4 kg) per enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, ETL, cETL, RoHS/WEEE compliant

RGBHV 500 MHZ

- Input Level (Max): ±1.25 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.25 Volts
- Output Impedance: 75 Ohms
- Frequency Response: 500 MHz or better (±3 dB)
- Crosstalk: <-60 dB (f = 5 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

SYNC

- HV Sync Input Level (Max): ±5 Volts
- HV Sync Input Impedance: 22 kOhms
- HV Sync Output Level (Max): ±5 Volts
- HV Sync Output Impedance: 75 Ohms
- Connectors: BNC

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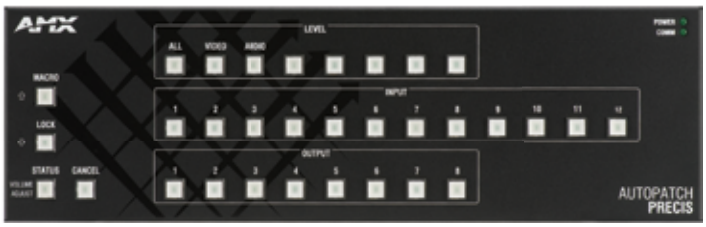
Stereo | RGBHV
Audio • Video

Precis SD Fixed Matrix Switchers

RGBHV Video 500 MHz with BNC, Stereo Audio with Digital Volume Control

AVS-PR-0804-567SD	8x4 (3RU)	(FGP37-0804-567)
AVS-PR-0808-567SD	8x8 (3RU)	(FGP37-0808-567)
AVS-PR-1204-567SD	12x4 (3RU)	(FGP37-1204-567)
AVS-PR-1208-567SD	12x8 (3RU)	(FGP37-1208-567)



OVERVIEW

The Precis SD RGBHV Matrix Switcher is designed to exceed the requirements of the most demanding high resolution analog video system designs. Delivering 500 MHz RGB bandwidth when fully loaded, this extraordinary ultra-wideband performance ensures signals reach their final destination accurately and beautifully every time. This Precis SD features digital volume control on each output and digital input gain control on each input to eliminate noticeable difference in volume as the user switches between various sources. Available in I/O sizes from 8x4 to 12x8 with stereo audio, the Precis SD's front control panel allows for fast and convenient input and output selection. The standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system.

COMMON APPLICATION

The Precis SD is the perfect solution for environments that require exceptional performance and dependability for switching high resolution computer-video without signal loss or degradation - such as corporate board rooms.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 500 MHz bandwidth, fully-loaded worst case scenario
- Easily supports the highest analog video bandwidth requirements on the market
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes simple X/Y front mount control panel featuring backlit buttons
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Includes AutoPatch's remote link for direct connect with AutoPatch remote panels and SBC control pads
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

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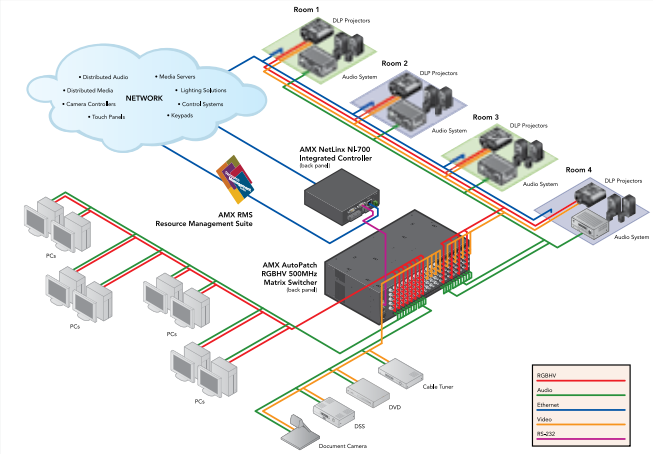
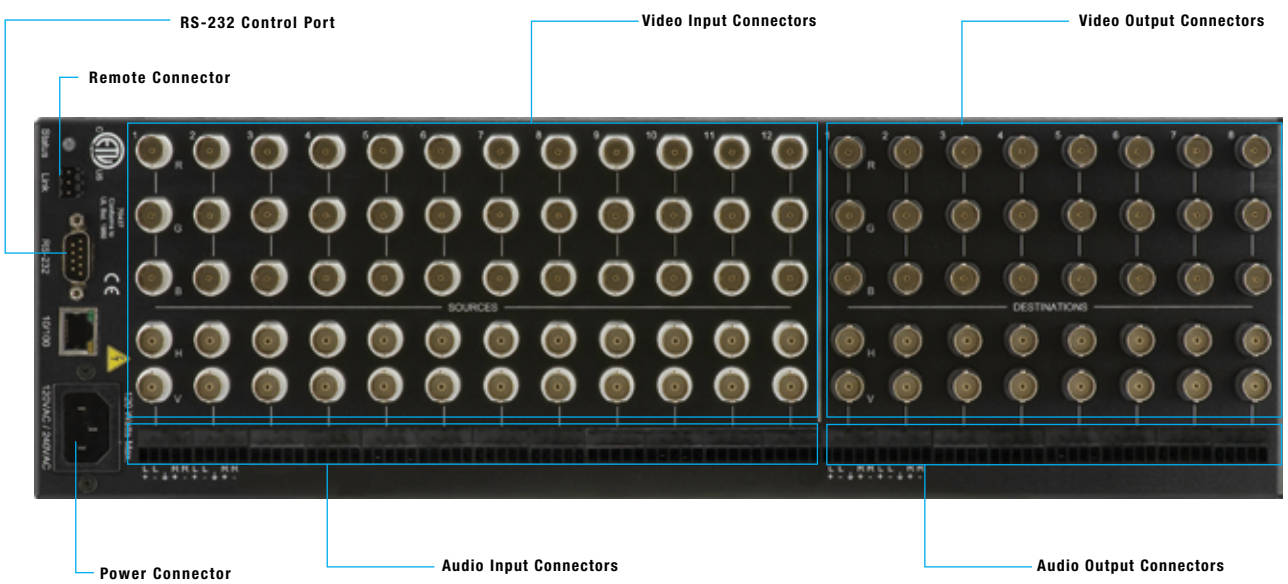


A CLOSER LOOK



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 80 Watts
- Power Consumption (Typ): 57 Watts, fully loaded enclosure
- BTU/hr (Max): 273
- BTU/hr (Typ): 194, fully loaded enclosure
- Operation Temperature: 32° to 110° F (0° to 43°C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 3/16" x 19" x 10 3/8" (13.2 cm x 48.3 cm x 26.4 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 3/16" x 17 3/8" x 10 3/8" (13.2 cm x 44.2 cm x 26.4 cm)
- RU: 3

WEIGHT

Appx. 12 lbs (5.4 kg) per enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, ETL, cETL, RoHS/WEEE compliant

RGBHV 500 MHZ

- Input Level (Max): ±1.25 volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.25 volts
- Output Impedance: 75 Ohms
- Frequency Response: 500 MHz or better (±3 dB)
- Crosstalk: <-60 dB (f = 5 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

SYNC

- HV Sync Input Level (Max): ±5 Volts
- HV Sync Input Impedance: 22 kOhms
- HV Sync Output Level (Max): ±5 Volts
- HV Sync Output Impedance: 75 Ohms
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +27 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +27 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.1 dB (20 kHz to 20 kHz)
- THD + Noise: <0.1% (20 Hz to 20 kHz, Vin = -10 dBu to +20 dBu)
- Signal to Noise Ratio: >80 dB (20 Hz to 20 kHz, Vin = +10 dBu)
- Crosstalk: <-90 dB (1 kHz, Vin = +14 dBu)
- Input Volume Adj. Range: +10 dB to -10 dB, via serial/control panel
- Output Volume Adj. Range: +10 dB to -70 dB, via serial/control panel
- Connectors: 5T

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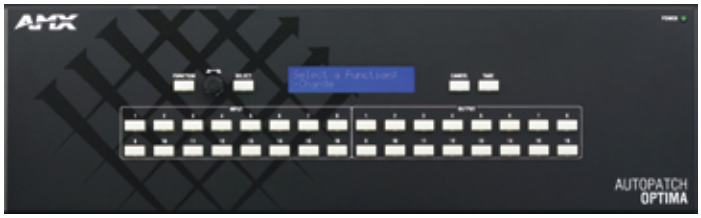
RGBHV
Video

Optima SD Fixed Matrix Switchers

RGBHV Video with BNC

AVS-OP-1212-560SD	12x12 (6RU)	(FGP46-1212-560)
AVS-OP-0816-560SD	8x16 (6RU)	(FGP46-0816-560)
AVS-OP-1608-560SD	16x8 (6RU)	(FGP46-1608-560)
AVS-OP-1616-560SD	16x16 (6RU)	(FGP46-1616-560)



OVERVIEW

The Optima SD RGBHV Matrix Switcher is designed to exceed the requirements of the most demanding high resolution analog video system designs delivering 500 MHz RGB bandwidth when fully loaded. This extraordinary ultra-wideband performance ensures signals reach their final destination accurately and beautifully every time. Available in I/O sizes 12x12, 8x16, 16x8, and 16x16 the Optima SD's front control panel allows for fast and convenient input and output selection. The standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system.

COMMON APPLICATION

The Optima SD is the perfect solution for environments that require exceptional performance and dependability for switching high resolution computer-video without signal loss or degradation - such as command and control centers.

FEATURES

- Super-flat video bandpass curve measured at a tight +4/-3 dB
- 500 MHz bandwidth, fully-loaded worst case scenario
- Superior video crosstalk specifications ensure signal isolation and security
- Easily supports the highest analog video bandwidth requirements on the market
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port supports BCS commands
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
- Includes AutoPatch's remote link for direct connect with Auto-Patch remote panels and SBC control pads
- Backed by our AMX 3 year warranty
- Local and global presets

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
6RU systems are comprised of two physical 3RU enclosures linked together; control systems view this as a single system and therefore only one front mounted control panel is included.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

QUICK SHIP
These industry leading fixed systems are pre-boxed and ready for immediate delivery, many will ship the same day and all shipments are guaranteed to leave our factory within five days receipt of order.

PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

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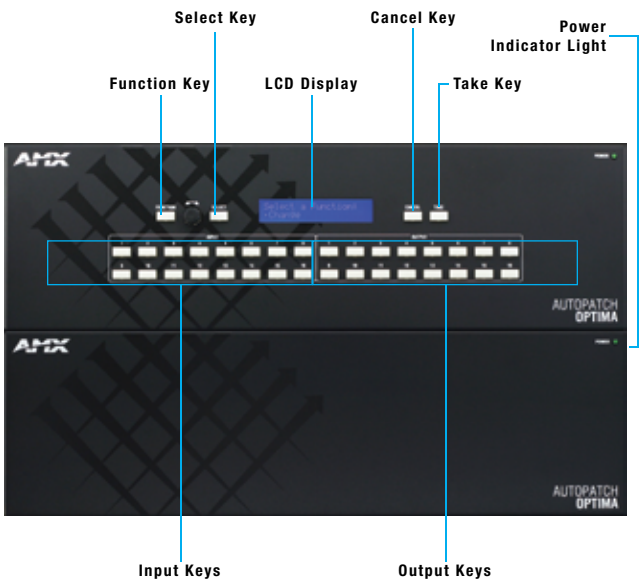
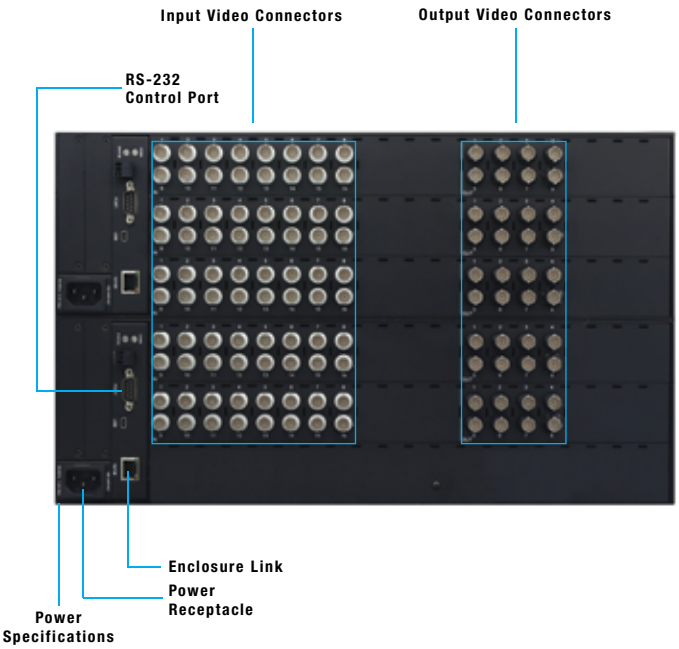
A CLOSER LOOK





SPECIFICATIONS

This model contains 2 enclosures and occupies 6 RU. Specifications listed below are for individual enclosures.

GENERAL

- AC Power: 100-240 VAC single phase (50-60 Hz)
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 135 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 512, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: 22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 3/16" x 19" x 12" (13.2 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 3/16" x 17 3/8" x 12" (13.2 cm x 44.2 cm x 30.5 cm)
- RU: 3

WEIGHT

Appx. 12 lbs (5.4 kg) per enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

ULTRA-WIDEBAND VIDEO

- Input Level (Max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response: 500 MHz or better (+4/-3 dB)
- Crosstalk:
  - < -70 dB (f = 5 MHz)
  - < -33 dB (f = 150 MHz)
- Signal to Noise Ratio: > 65 dB (Vin = 0.7 V, 100 IRE)
- Connector: BNC

SYNC

- Input Level Signal Range: 0 to +5.5 Volts
- Input Impedance: 22 kOhms
- Output Level Signal Range: 0 to +5.5 Volts
- Output Impedance: 75 Ohms
- In/Out Polarity: Active High or Low (output follows input polarity)
- Output Signal Level: Unity Gain
- Connectors: BNC

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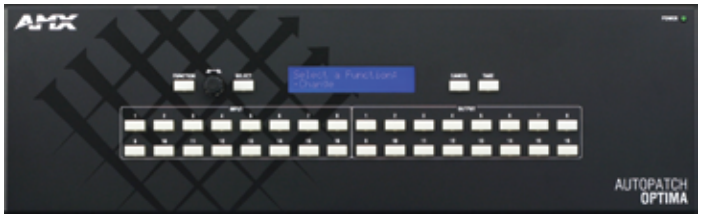
Stereo | RGBHV
Audio • Video

Optima SD Fixed Matrix Switchers

RGBHV Video with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OP-1212-567SD	12x12 (6RU)	(FGP46-1212-567)
AVS-OP-0816-567SD	8x16 (6RU)	(FGP46-0816-567)
AVS-OP-1608-567SD	16x8 (6RU)	(FGP46-1608-567)
AVS-OP-1616-567SD	16x16 (6RU)	(FGP46-1616-567)



OVERVIEW

The Optima SD RGBHV Matrix Switcher is designed to exceed the requirements of the most demanding high resolution analog video system designs. Delivering 500 MHz RGB bandwidth when fully loaded, this extraordinary ultra-wideband performance ensures signals reach their final destination accurately and beautifully every time. This Optima SD features digital volume control on each output and digital input gain control on each input to eliminate noticeable difference in volume as the user switches between various sources. Available in I/O sizes 12x12, 8x16, 16x8, and 16x16 the Optima SD's front control panel allows for fast and convenient input and output selection. The standard RS-232 control port utilizes AutoPatch's BCS serial control protocol which allows it to be quickly and easily programmed when integrated into a control system.

COMMON APPLICATION

The Optima SD is the perfect solution for environments that require exceptional performance and dependability for switching high resolution computer-video without signal loss or degradation - such as corporate board rooms.

FEATURES

- Super-flat video bandpass curve measured at a tight +4/-3 dB
- 500 MHz bandwidth, fully-loaded worst case scenario
- Easily supports the highest analog video bandwidth requirements on the market
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Includes AutoPatch's remote link for direct connect with Auto Patch remote panels and SBC control pads
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

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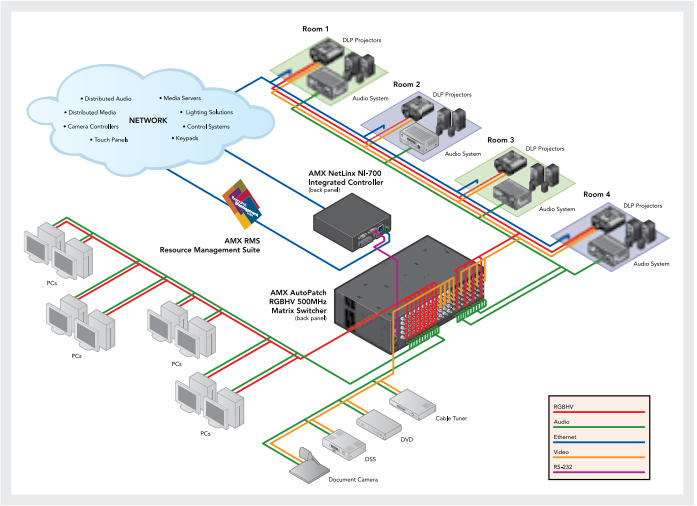
BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
6 RU systems are comprised of two physical 3 RU enclosures linked together; control systems view this as a single system and therefore only one front mounted control panel is included.

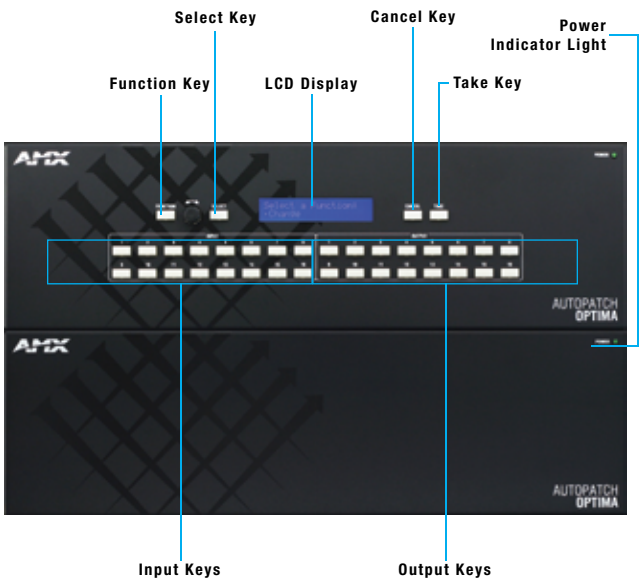
TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

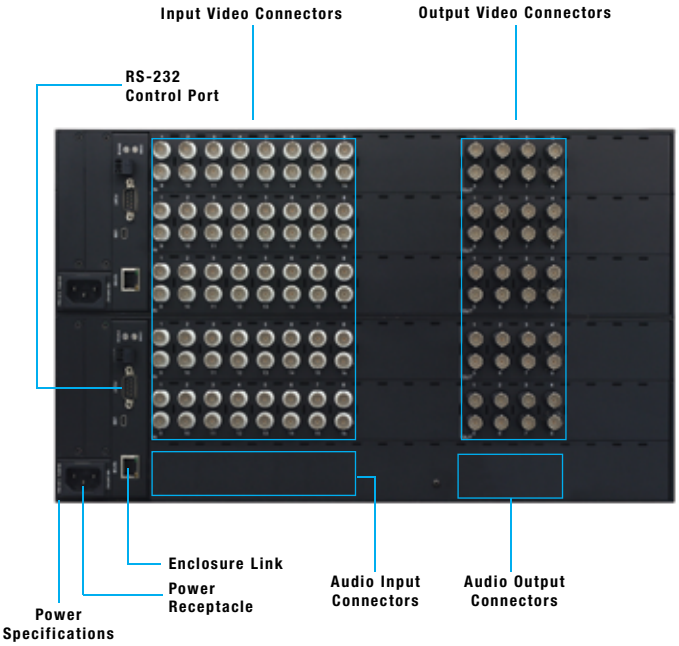
QUICK SHIP
These industry leading fixed systems are pre-boxed and ready for immediate delivery, many will ship the same day and all shipments are guaranteed to leave our factory within five days receipt of order.

PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.



A CLOSER LOOK





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SPECIFICATIONS

This model contains 2 enclosures and occupies 6 RU. Specifications listed below are for individual enclosures.

GENERAL

- AC Power: 100-240 VAC single phase (50-60 Hz)
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 135 Watts, fully loaded enclosure
- BTU/hr (Max): 887 BTU/hr
- BTU/hr (Typ): 512, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 3/16" x 19" x 12" (13.2 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 3/16" x 17 3/8" x 12" (13.2 cm x 44.2 cm x 30.5 cm)
- RU: 3

WEIGHT

Appx. 12 lbs (5.4 kg) per enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

ULTRA-WIDEBAND VIDEO

- Input Level (Max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response: 500 MHz or better (+4/-3 dB)
- Crosstalk:
  - <-70 dB (f = 5 MHz)
  - <-33 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector: BNC

SYNC

- Input Level Signal Range: 0 to +5.5 Volts
- Input Impedance: 22 kOhms
- Output Level Signal Range: 0 to +5.5 Volts
- Output Impedance: 75 Ohms
- In/Out Polarity: Active High or Low (output follows input polarity)
- Output Signal Level: Unity Gain
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <± 0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via software / control panel *
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via software / control panel *
- Connectors: 5T

* Total of input gain plus output gain cannot exceed +10 dB.

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Stereo
Audio

Octaire Fixed Matrix Switchers

Stereo Audio with 5T Phoenix-style with Digital Volume Control

AVS-OCT-3248-007	32x48 (4RU)	(FGP44-3248-007)
AVS-OCT-3264-007	32x64 (4RU)	(FGP44-3264-007)
AVS-OCT-4832-007	48x32 (4RU)	(FGP44-4832-007)
AVS-OCT-4848-007	48x48 (4RU)	(FGP44-4848-007)
AVS-OCT-4864-007	48x64 (4RU)	(FGP44-4864-007)
AVS-OCT-6432-007	64x32 (4RU)	(FGP44-6432-007)
AVS-OCT-6448-007	64x48 (4RU)	(FGP44-6448-007)
AVS-OCT-6464-007	64x64 (4RU)	(FGP44-6464-007)

OVERVIEW

Octaire Stereo Audio Matrix Switchers provide an extremely dense solution for professional level balanced stereo audio signals in varying configurations up to 64x64. Each system includes integrated digital output volume and input gain adjustments that can be controlled from the included front control panel or integrated TCP/IP and RS-232 control ports.

COMMON APPLICATION

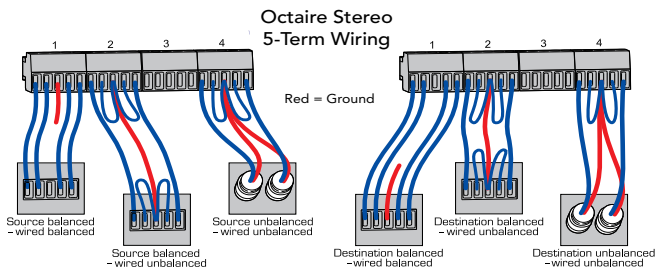
Commonly used as a comprehensive distributed audio system capable of managing a very large facility which allows audio sources located in various rooms to be utilized throughout the facility. Cruise ships, convention centers and entertainment venues are perfectly suited for the Octaire Stereo Audio Matrix Switchers.

FEATURES

- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Standard RS-232 control port supports BCS commands
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Backed by our AMX 3 year warranty
- Fully redundant power supplies with independent power paths for maximum reliability
- Global presets
- DAC (Detection Assignment and Control) eliminates the need for initial system setup; the Octaire automatically recognizes size and configuration parameters and is ready to accept switch commands as soon as it receives power

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
5-position terminal block connectors can be wired for balanced (differential) or unbalanced (single-ended) audio.



TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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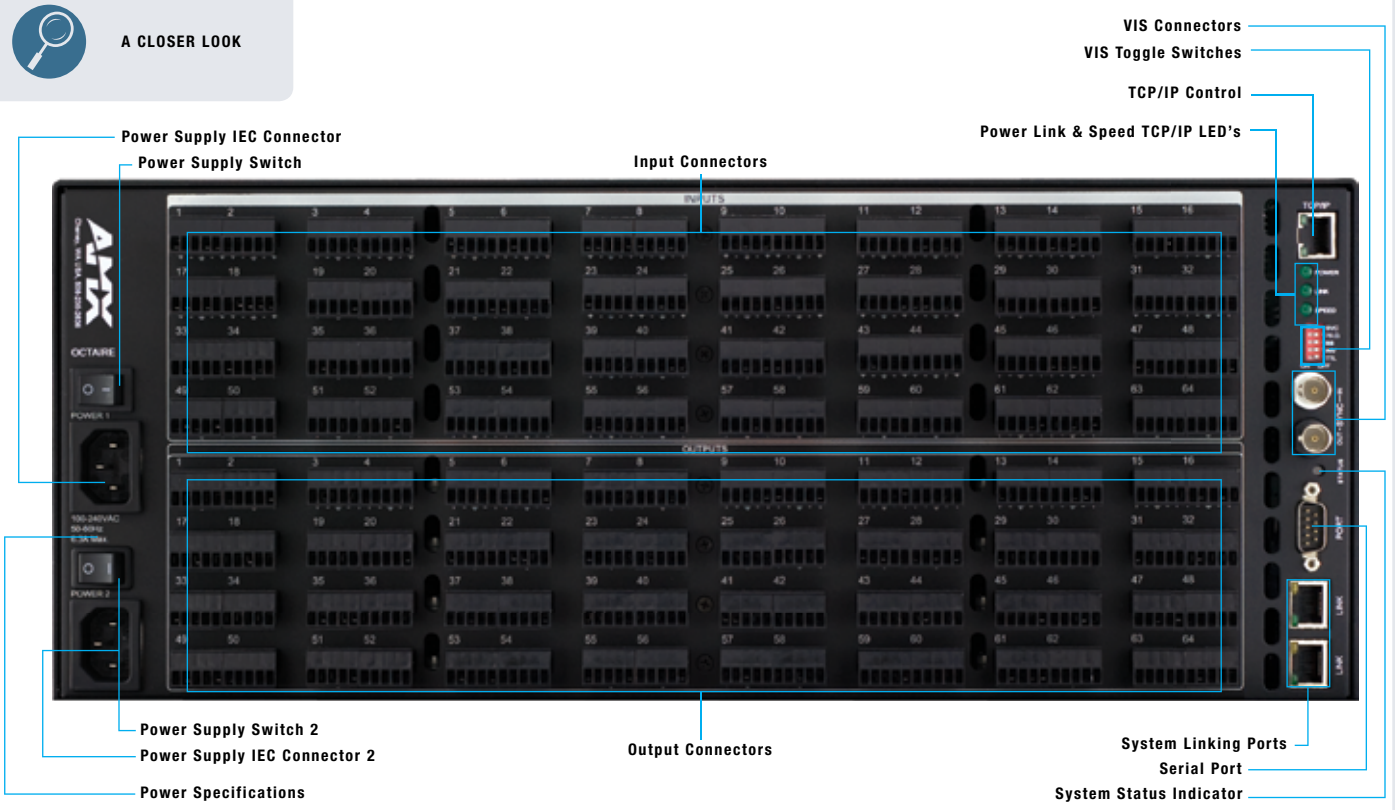
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 120 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 409, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

6 15/16" x 19" x 12" (17.6 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 6 15/16" x 17 3/8" x 12" (17.6 cm x 44.2 cm x 30.5 cm)
- RU: 4

WEIGHT

Appx. 20 lbs (9.07 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 24 lbs (10.89kg) per loaded enclosure

MTBF

66,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STEREO AUDIO WITH DVC

- Input Level (Max): +4 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +14 dBu, balanced (when +10 dB of gain is set via serial)
- Output Impedance:
  - 50 Ohms unbalanced
  - 100 Ohms balanced
- Frequency Response: <± 1 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (1 kHz, Vin = +2 dBu)
  - <0.5% (1 kHz, Vin = -10 to + 4 dBu)
- Signal to Noise Ratio: >84 dB (20 Hz to 20 kHz, Vin = +4 dBu)
- Crosstalk: <-100 dB (1 kHz, Vin = +14 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (muted), via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Connectors: 5T

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RGBHV
Video

Octaire Fixed Matrix Switchers

RGBHV Video with BNC

AVS-OCT-3248-560	32x48 (20RU)	(FGP44-3248-560)
AVS-OCT-3264-560	32x64 (20RU)	(FGP44-3264-560)
AVS-OCT-4832-560	48x32 (20RU)	(FGP44-4832-560)
AVS-OCT-4848-560	48x48 (20RU)	(FGP44-4848-560)
AVS-OCT-4864-560	48x64 (20RU)	(FGP44-4864-560)
AVS-OCT-6432-560	64x32 (20RU)	(FGP44-6432-560)
AVS-OCT-6448-560	64x48 (20RU)	(FGP44-6448-560)
AVS-OCT-6464-560	64x64 (20RU)	(FGP44-6464-560)

OVERVIEW

Octaire RGBHV Video Matrix Switchers provide an extremely dense solution for high resolution computer video matrix switching requirements up to 64x64. The Octaire wideband video boards have unparalleled specifications for a matrix of its size maintaining a full 600 MHz average bandwidth at our industry leading Ultra-Flat ±3 dB. Additionally, unmatched crosstalk specifications ensure channel to channel isolation for unprecedented noise reduction (eliminating "video artifacts") throughout the switching system. RGBHV systems are comprised of five linked enclosures; each one includes standard redundant power supplies to ensure zero downtime in mission critical installations. Standard features include vertical internal switching functionality, as well as integrated front panel control, TCP/IP and RS-232 control ports.

COMMON APPLICATION

Octaire RGBHV systems are ideal for network operating centers and command and control centers where proven BNC-based analog switching is preferred and multiple computer sources need to be routed to multiple displays.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 600 MHz average bandwidth, fully-loaded worst case scenario with 500 MHz minimum bandwidth
- Service Access Spacing on BNC connectors
- Easily supports the highest analog video bandwidth requirements on the market
- Digital PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display. Digital PureSync also actively regenerates and re-squares incoming sync pulses actually improving sync signals from input video source devices
- Integrated vertical interval sync
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, global presets, front panel lock and unlock, and more
- Backed by our AMX 3 year warranty
- Fully redundant power supplies with independent power paths for maximum reliability
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls
- DAC (Detection Assignment and Control) eliminates the need for initial system setup; the Octaire automatically recognizes size and configuration parameters and is ready to accept switch commands as soon as it receives power

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
All Octaire system include fully redundant power input paths on each enclosure. If a power feed is provided from a different upstream breaker, an added layer of redundancy is provided to the system.

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TRAINING AVAILABLE
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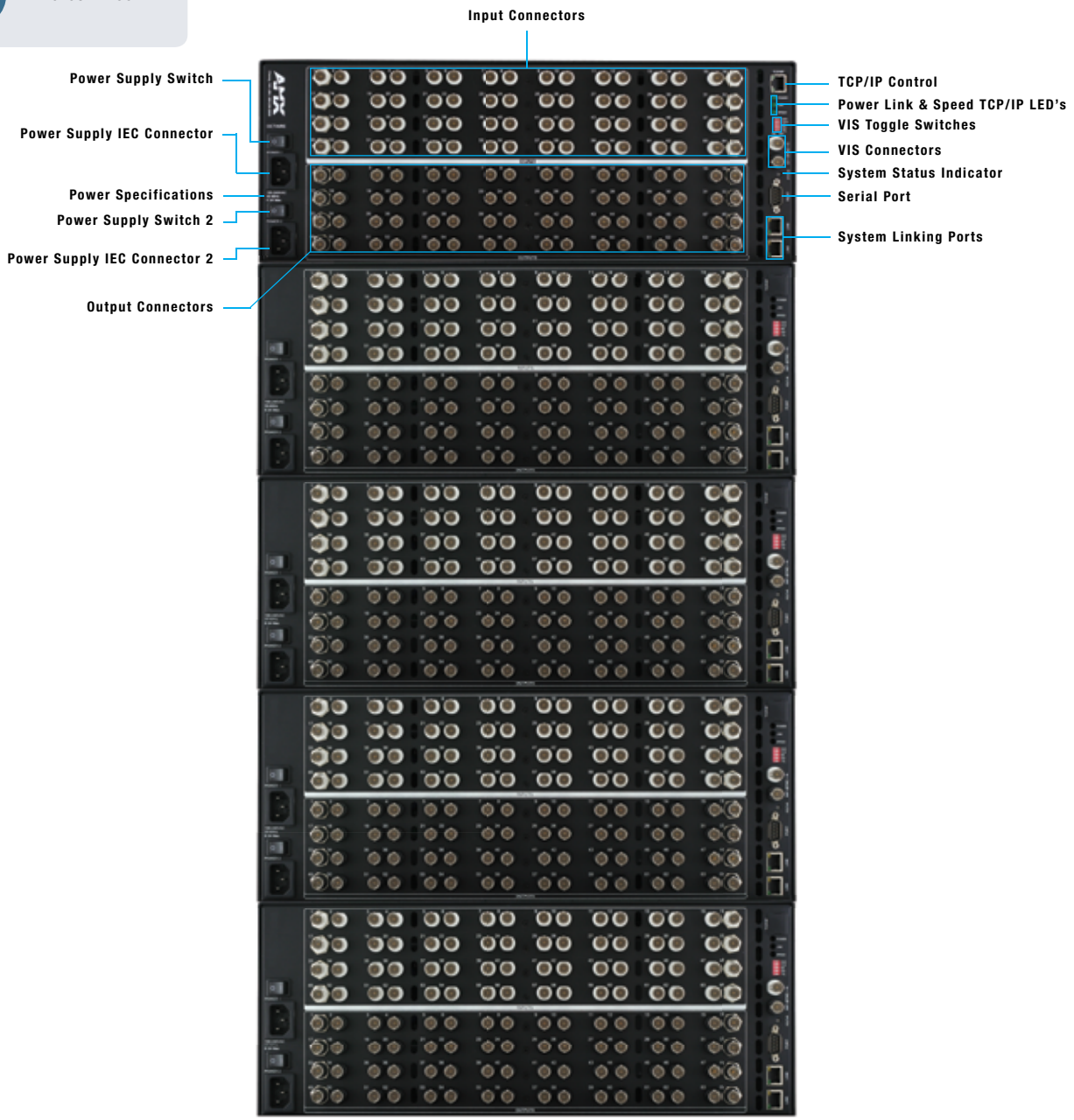
Digital PureSync™
Digital PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display. Digital PureSync also actively regenerates and re-squares incoming sync pulses actually improving sync signals from input video source devices

A CLOSER LOOK



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SPECIFICATIONS

This system is made up of 3 ultra-wideband video enclosures and 2 sync enclosures. It occupies 20 RU. Specifications listed below are for individual enclosures.

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 120 Watts , fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 409, fully loaded enclosure
- Humidity: 0 to 90% non-condensing
- Operational Temperature: 32° to 113° F (0° to 45° C)

DIMENSIONS (WITH RACK EARS)

6 15/16" x 19" x 12" (17.6 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 6 15/16" x 17 3/8" x 12" (17.6 cm x 44.2 cm x 30.5 cm)
- RU: 4

WEIGHT

Appx. 20 lbs (9.07 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 24 lbs (10.89 kg) per loaded enclosure

MTBF

66,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

ULTRA-WIDEBAND VIDEO

- Input Level (Max): ±1 Volt
- Input Impedance: 75 Ohm
- Output Level (Max): ±1 Volt
- Output Impedance: 75 Ohm
- Frequency Response:
  - >600 MHz ±3 dB Average, fully loaded
  - 500 MHz ±3 dB or better, fully loaded
  - 150 MHz or better or better, fully loaded (± 1.5 dB)
- Crosstalk:
  - <-80 dB (f = 1 MHz)
  - <-79 dB (f = 5 MHz)
  - <-74 dB (f = 10 MHz)
  - <-71 dB (f = 30 MHz)
  - <-60 dB (f = 100 MHz)
  - <-52 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Type: BNC

SYNC

- Input Level Signal Range: 0 to +5 Volts
- Input Impedance: 510 Ohms
- Input Trigger Voltage: +1.75 V
- Output Level Signal Range: 0 to +5 Volts
- Output Impedance: 50 Ohms
- In/Out Polarity: Active High or Low (output follows input polarity)
- Connectors: BNC

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Stereo | RGBHV
Audio • Video

Octaire Fixed Matrix Switchers

RGBHV Video with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OCT-3248-567	32x48 (24RU)	(FGP44-3248-567)
AVS-OCT-3264-567	32x64 (24RU)	(FGP44-3264-567)
AVS-OCT-4832-567	48x32 (24RU)	(FGP44-4832-567)
AVS-OCT-4848-567	48x48 (24RU)	(FGP44-4848-567)
AVS-OCT-4864-567	48x64 (24RU)	(FGP44-4864-567)
AVS-OCT-6432-567	64x32 (24RU)	(FGP44-6432-567)
AVS-OCT-6448-567	64x48 (24RU)	(FGP44-6448-567)
AVS-OCT-6464-567	64x64 (24RU)	(FGP44-6464-567)

OVERVIEW

Octaire RGBHV Video + Stereo Matrix Switchers provide an extremely dense solution for high resolution computer video matrix switching requirements up to 64 x 64 providing a full 600 MHz average bandwidth at our industry leading Ultra-Flat ±3 dB, unmatched crosstalk specifications to ensure channel to channel isolation for unprecedented noise reduction, and both audio input gain and output volume adjustments. RGBHV + stereo audio systems are comprised of six linked enclosures; each one includes standard redundant power supplies to ensure zero downtime in mission critical installations.

COMMON APPLICATION

Octaire RGBHV systems are ideal for network operating centers and command and control centers where proven BNC-based analog switching is preferred and multiple computer sources need to be routed to multiple displays.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 600 MHz average bandwidth, fully-loaded worst case scenario with 500 MHz minimum bandwidth
- Service Access Spacing on BNC connectors
- Easily supports the highest analog video bandwidth requirements on the market
- Digital PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display. Digital PureSync also actively regenerates and re-squares incoming sync pulses actually improving sync signals from input video source devices
- Integrated vertical interval sync
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port supports BCS commands
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Backed by our AMX 3 year warranty
- Fully redundant power supplies with independent power paths for maximum reliability
- Global presets
- DAC (Detection Assignment and Control) eliminates the need for initial system setup; the Octaire automatically recognizes size and configuration parameters and is ready to accept switch commands as soon as it receives power

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
All Octaire system include fully redundant power input paths on each enclosure. If a power feed is provided from a different upstream breaker, an added layer of redundancy is provided to the system.

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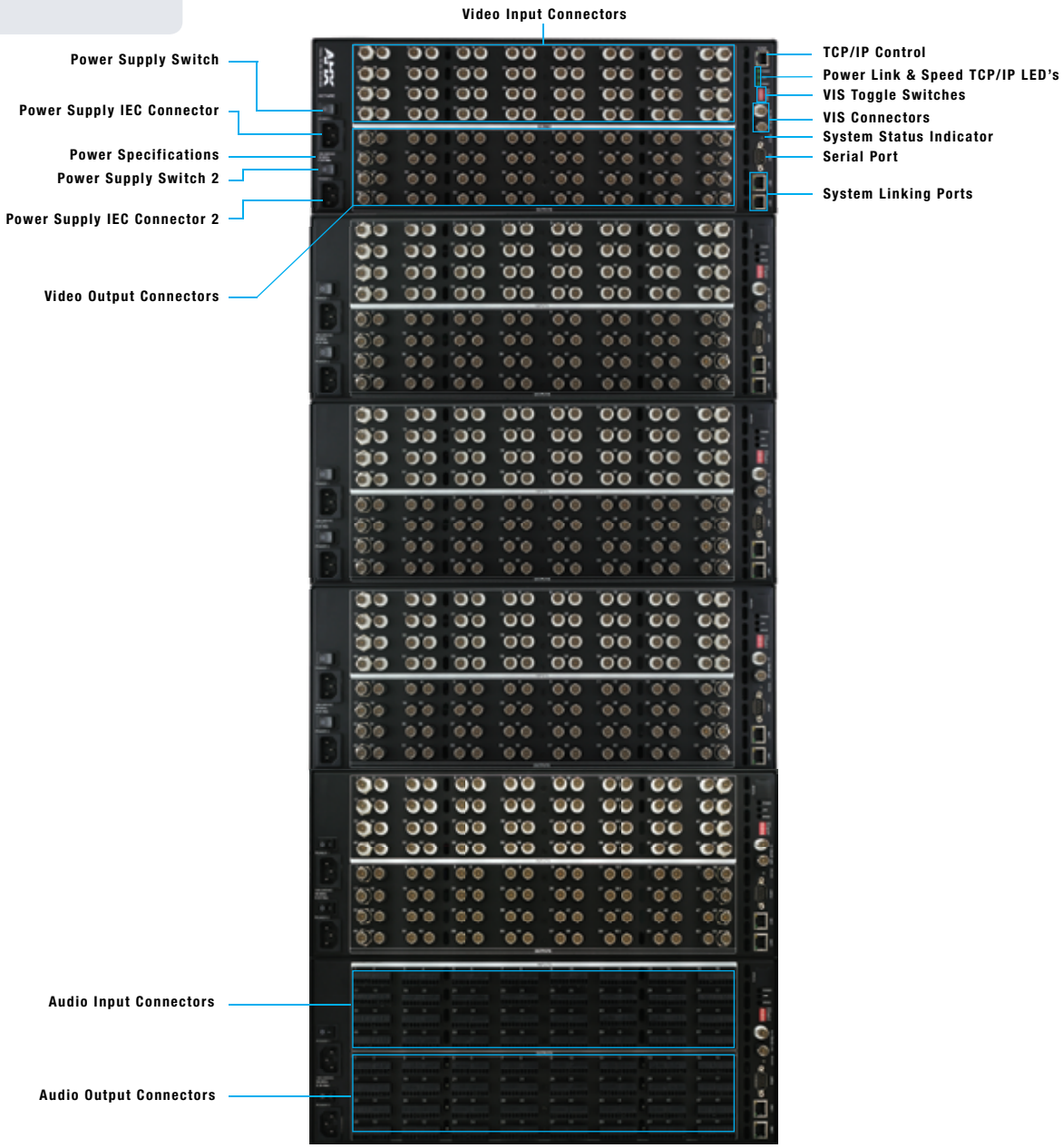
TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

Digital PureSync™
Digital PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display. Digital PureSync also actively regenerates and re-squares incoming sync pulses actually improving sync signals from input video source devices

A CLOSER LOOK



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SPECIFICATIONS

RGBHV with stereo systems are made up of 3 ultra-wideband video enclosures, 2 sync enclosures and 1 stereo audio enclosure

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 120 Watts , fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 409, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

6 15/16" x 19" x 12" (17.6 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 6 15/16" x 17 3/8" x 12" (17.6 cm x 44.2 cm x 30.5 cm)
- RU: 4

WEIGHT

Appx. 20 lbs (9.07 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 24 lbs (10.89 kg) per loaded enclosure

MTBF

66,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

ULTRA-WIDEBAND VIDEO

- Input Level (Max): ±1 Volt
- Input Impedance: 75 Ohm
- Output Level (Max): ±1 Volt
- Output Impedance: 75 Ohm
- Frequency Response:
  - >600 MHz ±3 dB Average, fully loaded
  - 500 MHz ±3 dB or better, fully loaded
  - 150 MHz or better or better, fully loaded (± 1.5 dB)
- Crosstalk:
  - <-80 dB (f = 1 MHz)
  - <-79 dB (f = 5 MHz)
  - <-74 dB (f = 10 MHz)
  - <-71 dB (f = 30 MHz)
  - <-60 dB (f = 100 MHz)
  - <-52 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Type: BNC

SYNC

- Input Level Signal Range: 0 to +5 Volts
- Input Impedance: 510 Ohms
- Input Trigger Voltage: +1.75 Volts
- Output Level Signal Range: 0 to +5 Volts
- Output Impedance: 50 Ohms
- In/Out Polarity: Active High or Low (output follows input polarity)
- Connectors: BNC

STEREO AUDIO WITH DVC

- Input Level (Max): +4 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +14 dBu, balanced (when +10 dB of gain is set via serial)
- Output Impedance:
  - 50 Ohms unbalanced
  - 100 Ohms balanced
- Frequency Response: <± 1 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (1 kHz, Vin = +2 dBu)
  - <0.5% (1 kHz, Vin = -10 to + 4 dBu)
- Signal to Noise Ratio: >84 dB (20 Hz to 20 kHz, Vin = +4 dBu)
- Crosstalk: <-100 dB (1 kHz, Vin = +14 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (muted), via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Connectors: 5T

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Component
Video

Octaire Fixed Matrix Switchers

HDTV/Component Video with BNC

AVS-OCT-3248-360	32x48 (12RU)	(FGP44-3248-360)
AVS-OCT-3264-360	32x64 (12RU)	(FGP44-3264-360)
AVS-OCT-4832-360	48x32 (12RU)	(FGP44-4832-360)
AVS-OCT-4848-360	48x48 (12RU)	(FGP44-4848-360)
AVS-OCT-4864-360	48x64 (12RU)	(FGP44-4864-360)
AVS-OCT-6432-360	64x32 (12RU)	(FGP44-6432-360)
AVS-OCT-6448-360	64x48 (12RU)	(FGP44-6448-360)
AVS-OCT-6464-360	64x64 (12RU)	(FGP44-6464-360)

OVERVIEW

Octaire HDTV/Component Video Matrix Switchers provide an extremely dense solution for high resolution component video matrix switching requirements up to 64 x 64 with unparalleled specifications for a matrix of its size maintaining a full 600 MHz average bandwidth at our industry leading Ultra-Flat ±3 dB. Additionally, unmatched crosstalk specifications ensure channel to channel isolation for unprecedented noise reduction (eliminating "video artifacts") throughout the switching system. Component video systems are comprised of three linked enclosures; each one includes standard redundant power supplies to ensure zero downtime in mission critical installations.

COMMON APPLICATION

Octaire HDTV/Component Video Matrix Switchers are an ideal solution for large entertainment venues, sports bars and retail environments where there is a need to distribute a large number of HDTV video sources to a multitude of independent zones or displays.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 600 MHz average bandwidth, fully-loaded worst case scenario with 500 MHz minimum bandwidth
- Service Access Spacing on BNC connectors
- Supports the highest analog resolutions on the market, including but not limited to HDTV resolutions up to 1920 x 1080p
- Integrated vertical interval sync
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port supports BCS commands
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, global presets, front panel lock and unlock, and more
- Backed by our AMX 3 year warranty
- Fully redundant power supplies with independent power paths for maximum reliability
- Global presets
- DAC (Detection Assignment and Control) eliminates the need for initial system setup; the Octaire automatically recognizes size and configuration parameters and is ready to accept switch commands as soon as it receives power

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
All Octaire systems include fully redundant power input paths on each enclosure. If a power feed is provided from a different upstream breaker, an added layer of redundancy is provided to the system.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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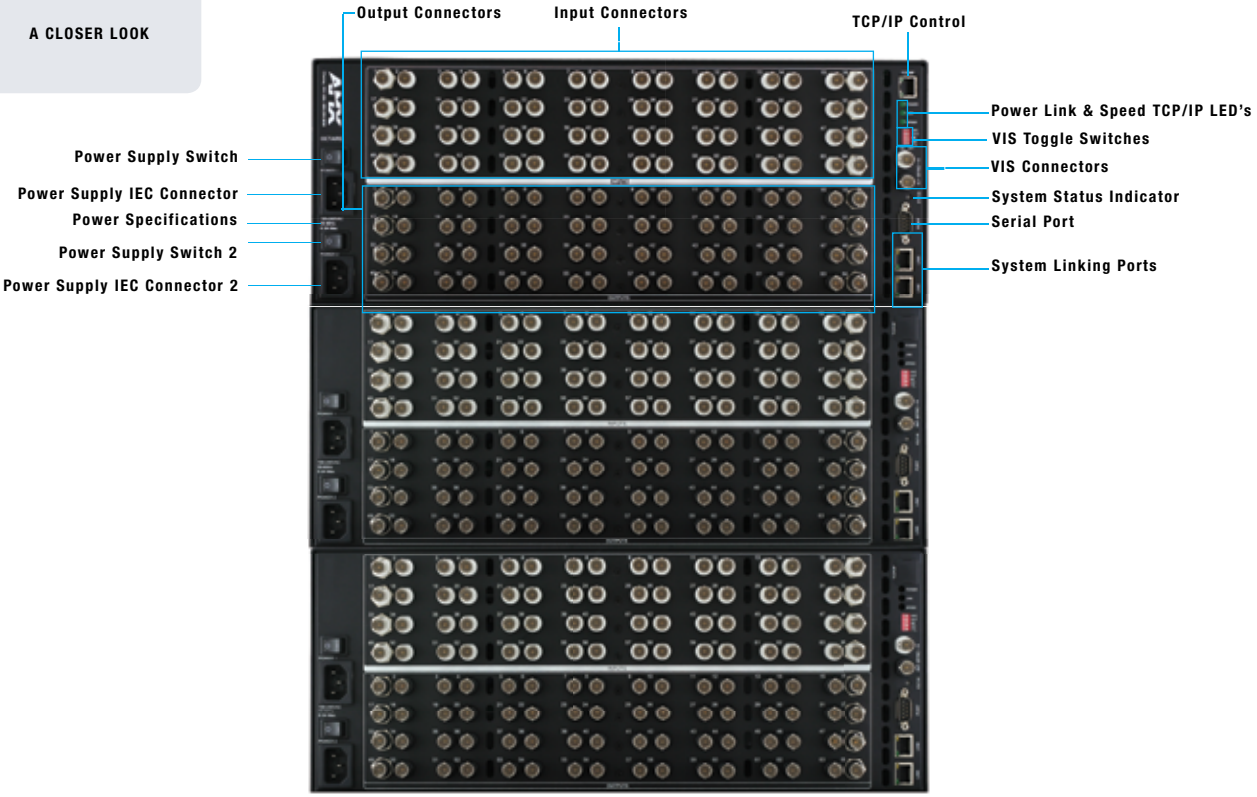
A CLOSER LOOK



SPECIFICATIONS

Component systems are made up of 3 ultra-wideband video enclosures

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 120 Watts , fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 409 , fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

6 15/16" x 19" x 12" (17.6 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 6 15/16" x 17 3/8" x 12" (17.65 cm x 44.2 cm x 30.5 cm)
- RU: 4

WEIGHT

Appx. 20 lbs (9.07 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 24 lbs (10.89 kg) per loaded enclosure

MTBF

66,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

ULTRA-WIDEBAND VIDEO

- Input Level (Max): ±1 Volt
- Input Impedance: 75 Ohm
- Output Level (Max): ±1 Volt
- Output Impedance: 75 Ohm
- Frequency Response:
  - >600 MHz ±3 dB Average, fully loaded
  - 500 MHz ±3 dB or better, fully loaded
  - 150 MHz or better or better, fully loaded (± 1.5 dB)
- Crosstalk:
  - <-80 dB (f = 1 MHz)
  - <-79 dB (f = 5 MHz)
  - <-74 dB (f = 10 MHz)
  - <-71 dB (f = 30 MHz)
  - <-60 dB (f = 100 MHz)
  - <-52 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Type: BNC

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Stereo | Component
Audio ▪ Video

Octaire Fixed Matrix Switchers

HDTV/Component Video with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OCT-3248-367	32x48 (16RU)	(FGP44-3248-367)
AVS-OCT-3264-367	32x64 (16RU)	(FGP44-3264-367)
AVS-OCT-4832-367	48x32 (16RU)	(FGP44-4832-367)
AVS-OCT-4848-367	48x48 (16RU)	(FGP44-4848-367)
AVS-OCT-4864-367	48x64 (16RU)	(FGP44-4864-367)
AVS-OCT-6432-367	64x32 (16RU)	(FGP44-6432-367)
AVS-OCT-6448-367	64x48 (16RU)	(FGP44-6448-367)
AVS-OCT-6464-367	64x64 (16RU)	(FGP44-6464-367)

OVERVIEW

Octaire HDTV/Component Video Matrix Switchers provide an extremely dense solution for high resolution component video and stereo audio matrix switching requirements up to 64x64 providing a full 600 MHz average bandwidth, unmatched crosstalk specifications ensure channel to channel isolation for unprecedented noise reduction, and audio input gain and output volume adjustments.

COMMON APPLICATION

Octaire HDTV/Component Video Matrix Switchers are an ideal solution for large entertainment venues, sports bars, retail environments and hospitality where there is a need to distribute a large number of HDTV video sources to a multitude of independent zones or displays with or without stereo audio. The flexibility of the Octaire allows for audio to be routed with video or independently, which is extremely useful in systems that include "audio only zones" in addition to zones that include multiple video displays for visual communication while only playing a single audio source at any given time.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 600 MHz average bandwidth, fully-loaded worst case scenario with 500 MHz minimum bandwidth
- Service Access Spacing on BNC connectors
- Supports the highest analog resolutions on the market, including but not limited to HDTV resolutions up to 1920 x 1080p
- Integrated vertical interval sync
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port support BCS commands
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Backed by our AMX 3 year warranty
- Fully redundant power supplies with independent power paths for maximum reliability
- Global presets
- DAC (Detection Assignment and Control) eliminates the need for initial system setup; the Octaire automatically recognizes size and configuration parameters and is ready to accept switch commands as soon as it receives power

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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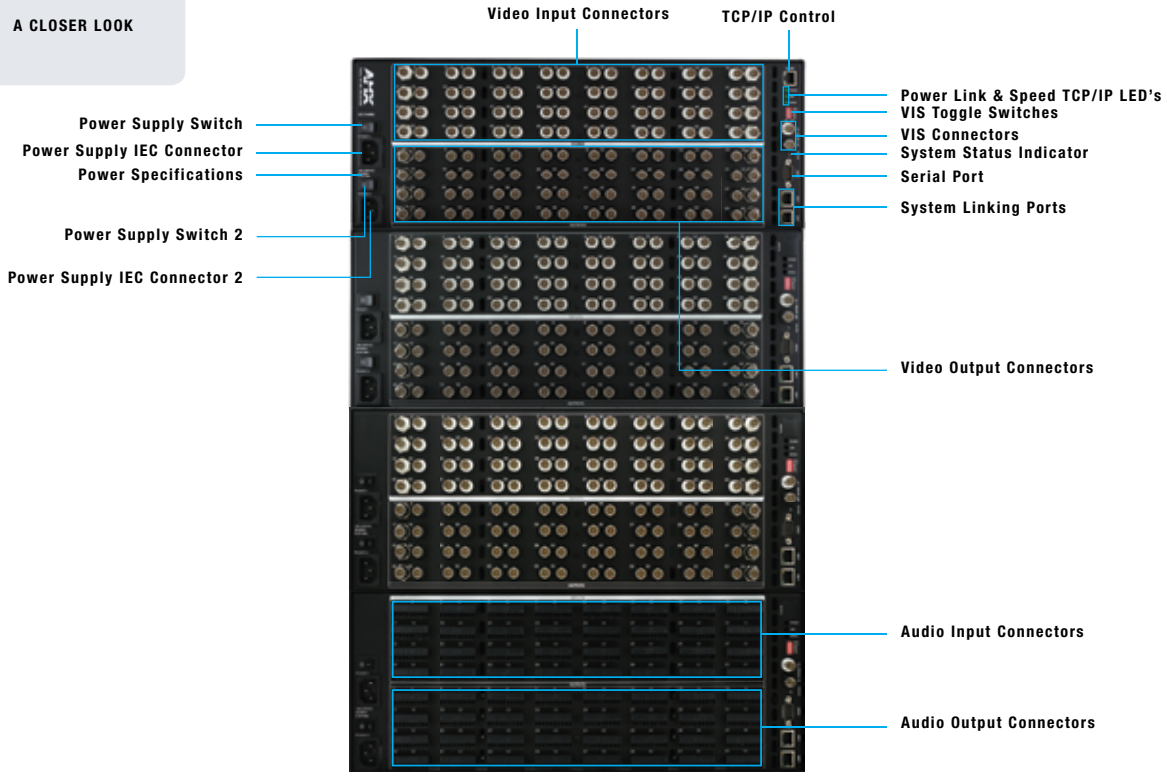
A CLOSER LOOK



SPECIFICATIONS

Component + video systems are made up of 3 ultra-wideband video enclosures and 1 stereo audio enclosure, for a total of 4 enclosures

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 120 Watts , fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 409, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

6 15/16" x 19" x 12" (17.6 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 6 15/16" x 17 3/8" x 12" (17.6 cm x 44.2 cm x 30.5 cm)
- RU: 4

WEIGHT

Appx. 20 lbs (9.07 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 24 lbs (10.89 kg) per loaded enclosure

MTBF

66,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

ULTRA-WIDEBAND VIDEO

- Input Level (Max): ±1 Volt
- Input Impedance: 75 Ohm
- Output Level (Max): ±1 Volt
- Output Impedance: 75 Ohm
- Frequency Response: >600 MHz ±3 dB Average, fully loaded, 500 MHz ±3 dB or better, fully loaded, 150 MHz or better or better, fully loaded (± 1.5 dB)
- Crosstalk: <-80 dB (f = 1 MHz), <-79 dB (f = 5 MHz), <-74 dB (f = 10 MHz), <-71 dB (f = 30 MHz), <-60 dB (f = 100 MHz), <-52 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Type: BNC

STEREO AUDIO

- Input Level (Max): +4 dBu, balanced
- Input Impedance: 18 kOhm
- Output Level (Max): +14 dBu, balanced (when +10 dB of gain is set via serial)
- Output Impedance: 50 Ohms unbalanced, 100 Ohms balanced
- Frequency Response: <±1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.03% (1 kHz, Vin = +2 dBu), <0.05% (1 kHz, Vin = -10 to + 4 dBu)
- Signal to Noise Ratio: >84 dB (20 Hz to 20 kHz, Vin = +4 dBu)
- Crosstalk: <-100 dB (1 kHz, Vin = +14 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (muted), via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Connectors: 5T

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Y/c
Video

Octaire Fixed Matrix Switchers

Y/c Video with BNC

AVS-OCT-3248-210	32x48 (8RU)	(FGP44-3248-210)
AVS-OCT-3264-210	32x64 (8RU)	(FGP44-3264-210)
AVS-OCT-4832-210	48x32 (8RU)	(FGP44-4832-210)
AVS-OCT-4848-210	48x48 (8RU)	(FGP44-4848-210)
AVS-OCT-4864-210	48x64 (8RU)	(FGP44-4864-210)
AVS-OCT-6432-210	64x32 (8RU)	(FGP44-6432-210)
AVS-OCT-6448-210	64x48 (8RU)	(FGP44-6448-210)
AVS-OCT-6464-210	64x64 (8RU)	(FGP44-6464-210)

OVERVIEW

Octaire Y/c Video Matrix Switchers provide an extremely dense yet flexible solution for Y/c video configurations up to 64x64. All models include robust professional features including vertical interval switching functionality, standard redundant power supplies. All models also include integrated front panel control as well as TCP/IP and RS-232 control ports.

COMMON APPLICATION

The Octaire Matrix Switcher is ideal for any application utilizing a large number of Y/c video sources such as SECAM playback.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Service Access Spacing on BNC connectors
- Integrated vertical interval sync
- Superior crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Fully redundant power supplies with independent power paths for maximum reliability
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls
- DAC (Detection Assignment and Control) eliminates the need for initial system setup; the Octaire automatically recognizes size and configuration parameters and is ready to accept switch commands as soon as it receives power

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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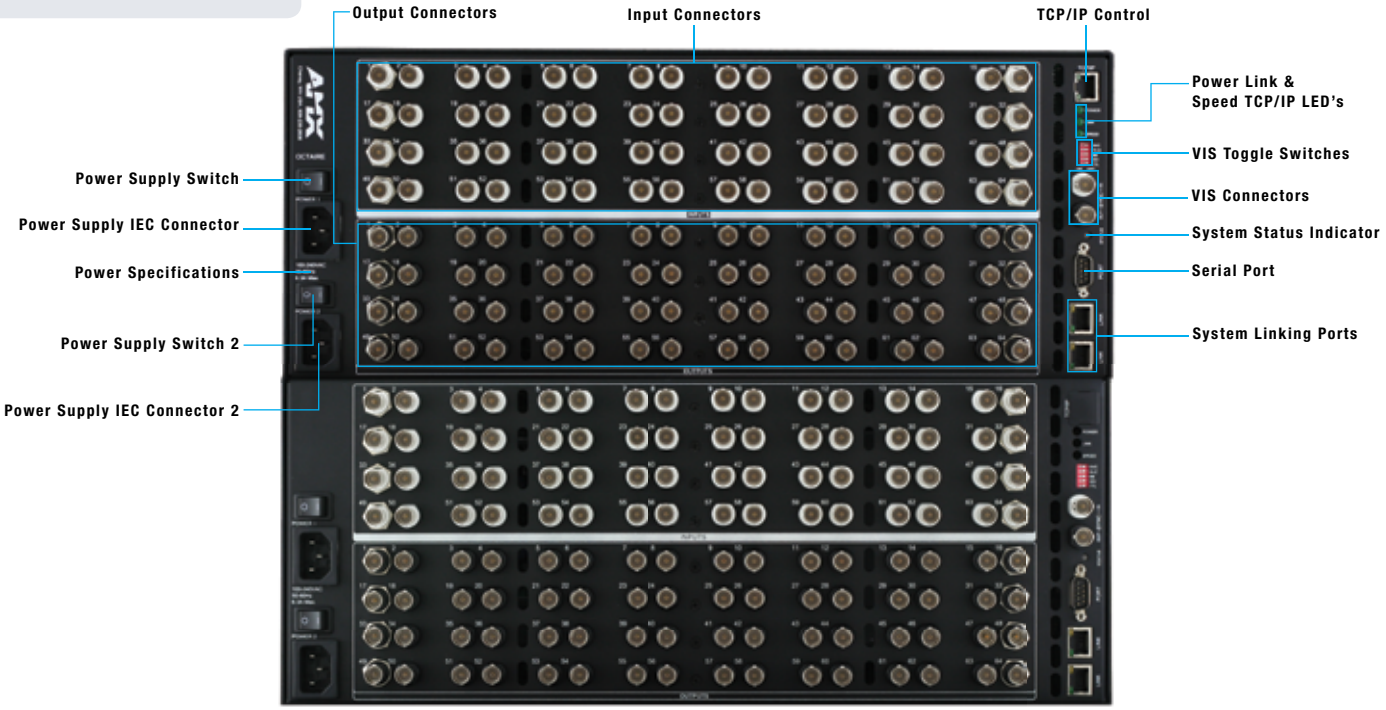
A CLOSER LOOK



SPECIFICATIONS

Y/c systems are made up of 2 standard video enclosures

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 120 Watts , fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 409, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

6 15/16" x 19" x 12" (17.6 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 6 15/16" x 17 3/8" x 12" (17.6 cm x 44.2 cm x 30.5 cm)
- RU: 4

WEIGHT

Appx. 20 lbs (9.07 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 24 lbs (10.89 kg) per loaded enclosure

MTBF

66,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD VIDEO

- Input Level (Max): ±1.25 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.25 Volts
- Output Impedance: 75 Ohms
- Frequency Response: 150 MHz or better (±3 dB)
- Crosstalk:
  - <-80 dB (f = 1 MHz)
  - <-75 dB (f= 5 MHz)
  - <-64 dB (f = 10 MHz)
  - <-57 dB (f=30 MHz)
  - <-53 dB (f=100 MHz)
  - <-51 dB (f=150 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

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Stereo | Y/c
Audio • Video

Octaire Fixed Matrix Switchers

Y/c Video with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OCT-3248-217	32x48 (12RU)	(FGP44-3248-217)
AVS-OCT-3264-217	32x64 (12RU)	(FGP44-3264-217)
AVS-OCT-4832-217	48x32 (12RU)	(FGP44-4832-217)
AVS-OCT-4848-217	48x48 (12RU)	(FGP44-4848-217)
AVS-OCT-4864-217	48x64 (12RU)	(FGP44-4864-217)
AVS-OCT-6432-217	64x32 (12RU)	(FGP44-6432-217)
AVS-OCT-6448-217	64x48 (12RU)	(FGP44-6448-217)
AVS-OCT-6464-217	64x64 (12RU)	(FGP44-6464-217)

OVERVIEW

Octaire Y/c Video Matrix Switchers provide an extremely dense yet flexible solution for Y/c video and stereo configurations up to 64x64. All models include robust professional features including vertical interval switching functionality, standard redundant power supplies, digital audio input gain and output volume controls. All models also include integrated front panel control as well as TCP/IP and RS-232 control ports.

COMMON APPLICATION

Correctional facilities and athletic training facilities are just a few environments where the Octaire Y/c video and stereo audio switchers are an ideal solution for freely switching between a facilities numerous inputs and outputs.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Service Access Spacing on BNC connectors
- Integrated vertical interval sync
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port supports BCS commands
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, global presets, front panel lock and unlock, and more
- Backed by our AMX 3 year warranty
- Fully redundant power supplies with independent power paths for maximum reliability
- Global presets
- DAC (Detection Assignment and Control) eliminates the need for initial system setup; the Octaire automatically recognizes size and configuration parameters and is ready to accept switch commands as soon as it receives power

BULLSEYE TARGET PRODUCT
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HELPFUL HINT
Vertical Interval Sync Switching provides Octaire the ability to switch between video sources precisely timed during the vertical blanking period of synchronized signals. This allows switching to happen without tearing or rolling of the video presented on the output display devices.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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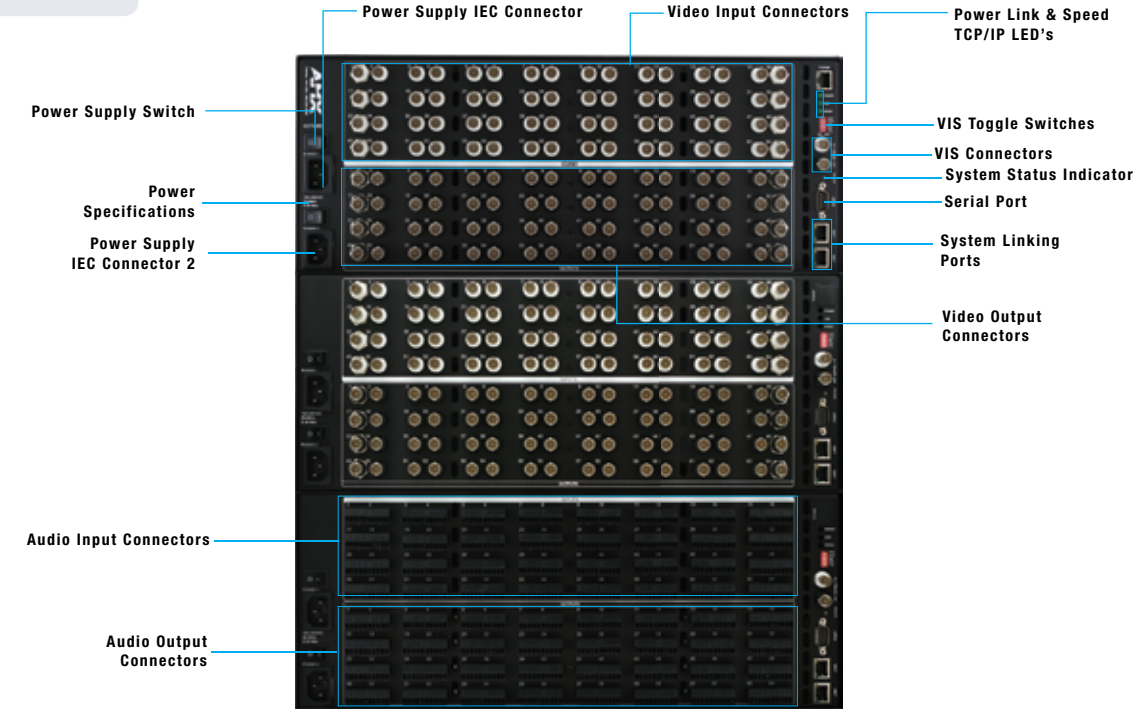
A CLOSER LOOK



SPECIFICATIONS

System is made up of 2 standard video enclosures and 1 stereo audio enclosure

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 120 Watts , fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 409 , fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

6 15/16" x 19" x 12" (17.6 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 6 15/16" x 17 3/8" x 12" (17.6 cm x 44.2 cm x 30.5 cm)
- RU: 4

WEIGHT

Appx. 20 lbs (9.07 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 24 lbs (10.89 kg) per loaded enclosure

MTBF

66,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD VIDEO

- Input Level (Max): ±1.25 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.25 Volts
- Output Impedance: 75 Ohms
- Frequency Response: 150 MHz or better, fully loaded (±3 dB)
- Crosstalk: <-80 dB (f = 1 MHz), <-75 dB (f= 5 MHz), <-64 dB (f = 10 MHz), <-57 dB (f=30 MHz), <-53 dB (f=100 MHz), <-51 dB (f=150 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

STEREO AUDIO WITH DVC

- Input Level (Max): +4 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +14 dBu, balanced (when +10 dB of gain is set via serial)
- Output Impedance: 50 Ohms unbalanced, 100 Ohms balanced
- Frequency Response: <±1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.03% (1 kHz, Vin = +2 dBu), <0.05% (1 kHz, Vin = -10 to + 4 dBu)
- Signal to Noise Ratio: >84 dB (20 Hz to 20 kHz, Vin = +4 dBu)
- Crosstalk: <-100 dB (1 kHz, Vin = +14 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (muted), via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Connectors: 5T

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Composite
Video

Octaire Fixed Matrix Switchers

Composite Video with BNC

AVS-OCT-3248-110	32x48 (4RU)	(FGP44-3248-110)
AVS-OCT-3264-110	32x64 (4RU)	(FGP44-3264-110)
AVS-OCT-4832-110	48x32 (4RU)	(FGP44-4832-110)
AVS-OCT-4848-110	48x48 (4RU)	(FGP44-4848-110)
AVS-OCT-4864-110	48x64 (4RU)	(FGP44-4864-110)
AVS-OCT-6432-110	64x32 (4RU)	(FGP44-6432-110)
AVS-OCT-6448-110	64x48 (4RU)	(FGP44-6448-110)
AVS-OCT-6464-110	64x64 (4RU)	(FGP44-6464-110)

OVERVIEW

Octaire Composite Video Matrix Switchers provide an extremely dense solution for composite video configurations up to 64x64. All models include vertical interval switching functionality and multiple control methods including front mounted control and integrated TCP/IP and RS-232 control ports.

COMMON APPLICATION

Correctional facilities, entertainment venues and any large facility with multiple composite video sources such as cameras and VCR decks are just a few of the environments where the Octaire Composite Video Matrix Switchers are an ideal solution.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Service Access Spacing on BNC connectors
- Integrated vertical interval sync
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port supports BCS commands
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Fully redundant power supplies with independent power paths for maximum reliability
- Global presets
- DAC (Detection Assignment and Control) eliminates the need for initial system setup; the Octaire automatically recognizes size and configuration parameters and is ready to accept switch commands as soon as it receives power

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
All Octaire systems include fully redundant power input paths on each enclosure. If a power feed is provided from a different upstream breaker, an added layer of redundancy is provided to the system.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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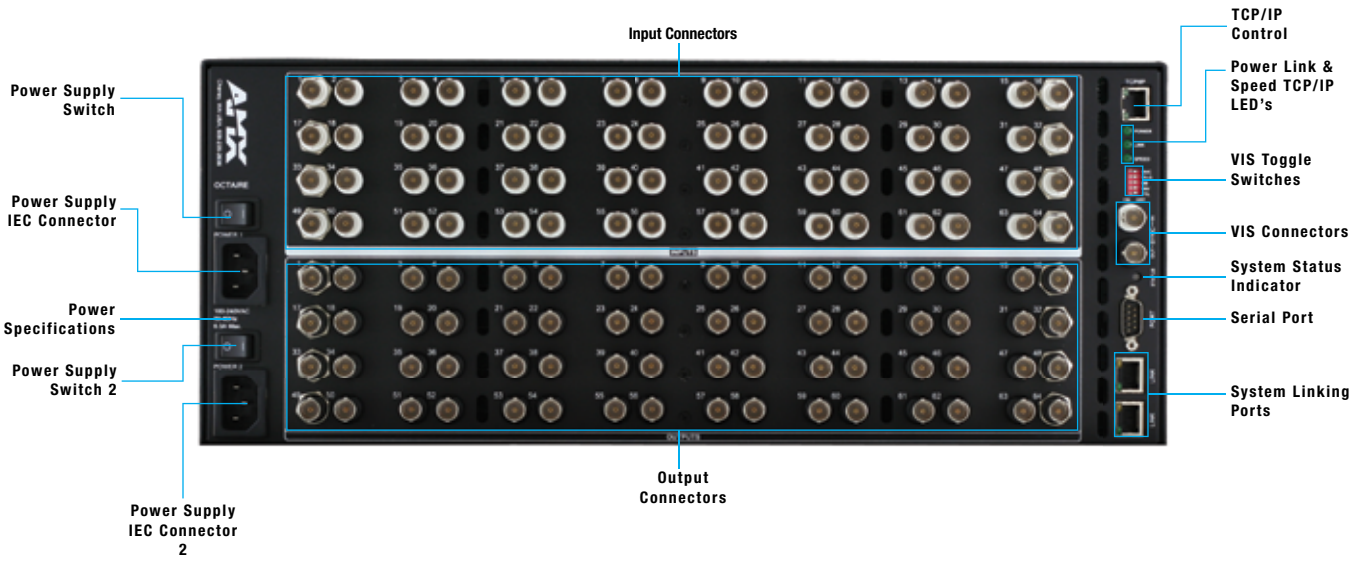
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 120 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 409, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

6 15/16" x 19" x 12" (17.6 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 6 15/16" x 17 3/8" x 12" (17.6 cm x 44.2 cm x 30.5 cm)
- RU: 4

WEIGHT

Appx. 20 lbs (9.07 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 24 lbs (10.89 kg) per loaded enclosure

MTBF

66,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD VIDEO

- Input Level (Max): ±1.25 Volts
- Input Impedance: 75 Ohms
- Frequency Response: 150 MHz or better, fully loaded (±3 dB)
- Crosstalk:
  - <-80 dB (f = 1 MHz)
  - <-75 dB (f= 5 MHz)
  - <-64 dB (f = 10 MHz)
  - <-57 dB (f=30 MHz)
  - <-53 dB (f=100 MHz)
  - <-51 dB (f=150 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

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Stereo | Composite
Audio • Video

Octaire Fixed Matrix Switchers

Composite Video with BNC, Stereo Audio with 5T Phoenix-style with Digital Volume Control

AVS-OCT-3248-117	32x48 (8RU)	(FGP44-3248-117)
AVS-OCT-3264-117	32x64 (8RU)	(FGP44-3264-117)
AVS-OCT-4832-117	48x32 (8RU)	(FGP44-4832-117)
AVS-OCT-4848-117	48x48 (8RU)	(FGP44-4848-117)
AVS-OCT-4864-117	48x64 (8RU)	(FGP44-4864-117)
AVS-OCT-6432-117	64x32 (8RU)	(FGP44-6432-117)
AVS-OCT-6448-117	64x48 (8RU)	(FGP44-6448-117)
AVS-OCT-6464-117	64x64 (8RU)	(FGP44-6464-117)

OVERVIEW

Octaire Composite Video with Stereo Audio Matrix Switchers provide an extremely dense solution for composite video and stereo audio configurations up to 64x64. Each compact 8 RU system includes robust professional features including vertical internal switching functionality, standard redundant power supplies, digital audio input gain and output volume controls. All models also include integrated front panel control as well as TCP/IP and RS-232 control ports.

COMMON APPLICATION

Correctional facilities and security operations are just a few environments where the Octaire Composite Video and Stereo Audio Matrix Switchers are an ideal solution for freely routing sources located in various rooms for use throughout the facility.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Service Access Spacing on BNC connectors
- Integrated vertical interval sync
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port supports BCS commands
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, global presets, front panel lock and unlock, and more
- Backed by our AMX 3 year warranty
- Fully redundant power supplies with independent power paths for maximum reliability
- Global presets
- DAC (Detection Assignment and Control) eliminates the need for initial system setup; the Octaire automatically recognizes size and configuration parameters and is ready to accept switch commands as soon as it receives power

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
All Octaire systems include fully redundant power input paths on each enclosure. If a power feed is provided from a different upstream breaker, an added layer of redundancy is provided to the system.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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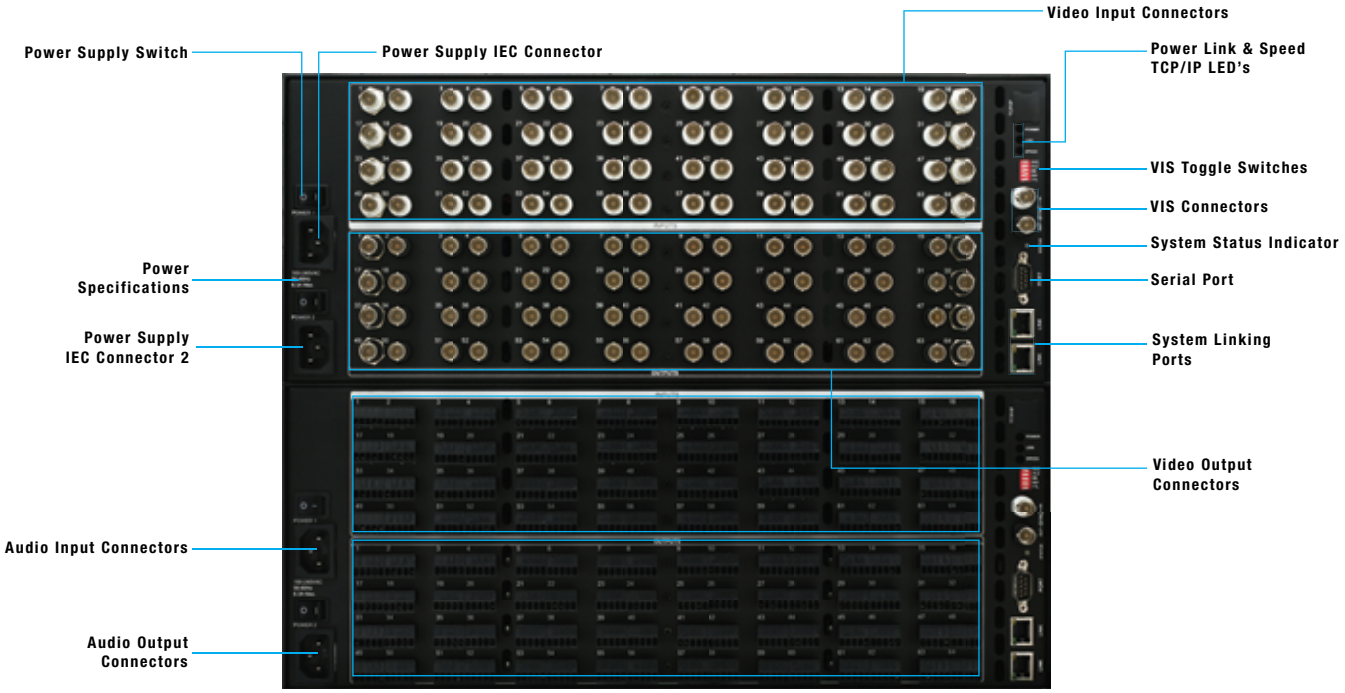
A CLOSER LOOK



SPECIFICATIONS

Composite with stereo systems are made up of 1 standard video enclosure and 1 stereo audio enclosure)

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 120 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 409, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

6 15/16" x 19" x 12" (17.6 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 6 15/16" x 17 3/8" x 12" (17.6 cm x 44.2 cm x 30.5 cm)
- RU: 4

WEIGHT

Appx. 20 lbs (9.07 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 24 lbs (10.89 kg) per loaded enclosure

MTBF

66,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD VIDEO

- Input Level (Max): ±1.25 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.25 Volts
- Output Impedance: 75 Ohms
- Frequency Response: 150 MHz or better (±3 dB)
- Crosstalk: <-80 dB (f = 1 MHz), <-75 dB (f= 5 MHz), <-64 dB (f = 10 MHz), <-57 dB (f=30 MHz), <-53 dB (f=100 MHz), <-51 dB (f=150 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

STEREO AUDIO WITH DVC

- Input Level (Max): +4 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +14 dBu, balanced (when +10 dB of gain is set via serial)
- Output Impedance: 50 Ohms unbalanced, 100 Ohms balanced
- Frequency Response: <±1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.03% (1 kHz, Vin = +2 dBu), <0.05% (1 kHz, Vin = -10 to + 4 dBu)
- Signal to Noise Ratio: >84 dB (20 Hz to 20 kHz, Vin = +4 dBu)
- Crosstalk: <-100 dB (1 kHz, Vin = +14 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (muted), via serial/control panel. Total of input gain plus output cannot exceed +10 dB
- Connectors: 5T

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THE POWER OF ONE

Pre-Engineered Matrix Switchers

Popular configurations with a single order number and a single price for ease of ordering. Comprised of a single video signal style, with or without audio, or audio alone. Pre-determined input / output range at the time of order; many can be easily upgraded at a later date in the field. Robust professional specifications and multiple control options built in. Most systems ship within five days of receipt of order.

	I/O Range	Composite	S-Video, Y/c	3 Component	RGBHV	DVI	SD-SDI	HD-SDI	Integrated Twisted Pair Distribution Options	Stereo Audio	S/PDIF, TosLink®	TosLink®	Standard RS-232, BCS Serial Control Protocol	Front Panel Control	APWeb TCP/IP Control	Integrated NetLinx Control Port	Redundant Power Supply	Video Bandwidth	Ultra-Flat (±3 dB)	Breakaway	Macros / Presets	Level (Programmable/Virtual Matrices)	Digital Input Gain Control (Audio)	Digital Output Volume Control (Audio)
OPTIMA PRE-ENGINEERED MATRIX SWITCHERS																								
STEREO AUDIO WITH 5T PHOENIX-STYLE	16x16, 16x24, 20x4, 20x20, 24x4, 24x16, 36x4									•			•	•	+			n/a	n/a		•	•	•	•
DIGITAL AUDIO WITH OPTICAL	8x8											•	•	•	+			n/a	n/a		•	•		
SD-SDI VIDEO WITH BNC	4x4, 8x8						•						•	•	+			n/a	n/a			•		
SD-SDI VIDEO WITH BNC, STEREO AUDIO WITH 5T PHOENIX-STYLE	8x8						•			•			•	•	+			n/a	n/a	•	•	•	•	•
HD-SDI VIDEO WITH BNC	8x8						•	•					•	•	+			n/a	n/a		•	•		
DVI VIDEO WITH DVI-I	4x4, 8x8					•							•	•	+			n/a	n/a		•	•		
RGBHV VIDEO WITH HD-15	15x15	•	•	•	•								•	•	+			300	•		•	•		
RGBHV VIDEO WITH HD-15, STEREO AUDIO WITH 5T PHOENIX-STYLE	15x15	•	•	•	•					•			•	•	+			300	•	•	•	•	•	•
RGBHV VIDEO WITH BNC	20x4, 20x20, 24x4, 24x16, 36x4	•	•	•	•								•	•	+			300	•		•	•		
RGBHV VIDEO WITH BNC, STEREO AUDIO WITH 5T PHOENIX-STYLE	20x4, 20x20, 24x4, 24x16, 36x4	•	•	•	•					•			•	•	+			300	•	•	•	•	•	•
RGBHV VIDEO WITH HD-15, WITH STEREO AUDIO WITH 5T PHOENIX-STYLE TO CATPRO WITH RJ-45	4x8, 8x8				•				•	•			•	•	+			n/a	n/a	•	•	•	•	•
HDTV / COMPONENT VIDEO WITH BNC	16x16, 16x24,20x4, 20x20, 24x4, 24x16, 36x4	•	•	•									•	•	+			300	•		•	•		
HDTV / COMPONENT VIDEO WITH BNC, DIGITAL AUDIO WITH S/PDIF AND TOSLINK	8x8	•	•	•							•		•	•	+			300	•	•	•	•		
HDTV / COMPONENT VIDEO WITH BNC, STEREO AUDIO WITH 5T PHOENIX-STYLE	16x16, 16x24, 20x4, 20x20, 24x4, 24x16,	•	•	•						•			•	•	+			300	•	•	•	•	•	•
S-VIDEO WITH 4-PIN DIN	16x16	•	•										•	•	+			50	•		•	•		
S-VIDEO WITH 4-PIN DIN, STEREO AUDIO WITH 5T PHOENIX-STYLE	16x16	•	•							•			•	•	+			50	•	•	•	•	•	•
Y/C VIDEO WITH BNC	8x8, 16x16, 16x24	•	•										•	•	+			50	•		•	•		
Y/C VIDEO WITH BNC, STEREO AUDIO WITH 5T PHOENIX-STYLE	8x8, 16x16, 16x24	•	•							•			•	•	+			50	•	•	•	•	•	•
COMPOSITE VIDEO WITH BNC	16x16, 16x24, 20x4, 20x20, 24x4, 24x16,	•											•	•	+			50	•		•	•		
COMPOSITE VIDEO WITH BNC, STEREO AUDIO WITH 5T PHOENIX-STYLE	16x16, 16x24, 20x4, 20x20, 24x4, 24x16, 36x4	•								•			•	•	+			50	•	•	•	•	•	•
MODULA PRE-ENGINEERED MATRIX SWITCHERS																								
STEREO AUDIO WITH 5T PHOENIX-STYLE	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4									•			•	•	+			n/a	n/a		•	•	•	•
HD-SDI VIDEO WITH BNC	16x20 up to 32x32						•	•					•	•	+			n/a	n/a		•	•		
SD-SDI VIDEO WITH BNC	16x20 up to 32x32						•						•	•	+			n/a	n/a		•	•		
RGBHV VIDEO WITH HD-15	4x16 up to 32x32	•	•	•	•								•	•	+			300	•		•	•		
RGBHV VIDEO WITH HD-15, STEREO AUDIO WITH 5T PHOENIX-STYLE	4x16 up to 32x32	•	•	•	•					•			•	•	+			300	•	•	•	•	•	•
RGBHV VIDEO WITH BNC	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4	•	•	•	•								•	•	+			300	•		•	•		
RGBHV VIDEO WITH BNC, STEREO AUDIO WITH 5T PHOENIX-STYLE	4x28 up to 32x32	•	•	•	•					•			•	•	+			300	•	•	•	•	•	•
RGBHV VIDEO WITH HD-15, STEREO AUDIO WITH 5T PHOENIX-STYLE, CATPRO WITH RJ-45	16x16 up to 32x32				•				•	•			•	•	+			n/a	n/a	•	•	•		•
HDTV / COMPONENT VIDEO	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4	•	•	•									•	•	+			300	•		•	•		
HDTV / COMPONENT VIDEO WITH BNC, STEREO AUDIO WITH 5T PHOENIX-STYLE	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4	•	•	•									•	•	+			300	•	•	•	•	•	•
S-VIDEO WITH 4-PIN MINI-DIN	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4	•	•										•	•	+			50	•		•	•		
S-VIDEO WITH 4-PIN MINI-DIN, STEREO AUDIO WITH 5T PHOENIX-STYLE	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4	•	•							•			•	•	+			50	•	•	•	•	•	•
Y/C VIDEO WITH BNC	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4	•	•										•	•	+			50	•		•	•		
Y/C VIDEO WITH BNC, STEREO AUDIO WITH 5T PHOENIX-STYLE	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4	•	•							•			•	•	+			50	•	•	•	•	•	•
COMPOSITE VIDEO WITH BNC	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4	•											•	•	+			50	•		•	•		
COMPOSITE VIDEO WITH BNC, STEREO AUDIO WITH 5T PHOENIX-STYLE	4x28 up to 32x32, 4x36 up to 4x60, 36x8 up to 60x4	•								•			•	•	+			50	•	•	•	•	•	•
EPICA DGX PRE-ENGINEERED MATRIX SWITCHERS																								
EPICA DGX 16	4x4 up to 16x16					•							•	•		•	•	digital						
EPICA DGX 32	4x4 up to 32x32					•							•	•		•	•	digital						

+ Optional

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(1 video style; 1 audio style or both, analog and digital signals)
Medium (systems are 2RU to 6RU; inputs from 4 to 36; outputs from 4 to 24; analog and digital signals) ..... **496 – 582**
Large (systems are from 3RU to 18 RU; inputs from 4 to 60; outputs from 4 to 60; analog and digital signals) ..... **583 – 588**

MATRIX SWITCHERS

FIXED

PRE-ENGINEERED

MIX-AND-MATCH

MODULAR

Stereo
Audio

Optima Pre-Engineered Matrix Switchers

Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OP-1616-007	16x16 (2RU)	(FGP46-1616-007)
AVS-OP-1624-007	16x24 (2RU)	(FGP46-1624-007)
AVS-OP-2004-007	20x4 (2RU)	(FGP46-2004-007)
AVS-OP-2020-007	20x20 (2RU)	(FGP46-2020-007)
AVS-OP-2404-007	24x4 (2RU)	(FGP46-2404-007)
AVS-OP-2416-007	24x16 (2RU)	(FGP46-2416-007)
AVS-OP-3604-007	36x4 (2RU)	(FGP46-3604-007)

OVERVIEW

Robust stereo audio matrix switcher featuring digital volume control that can be wired for balanced (differential) or unbalanced (single-ended) audio.

COMMON APPLICATION

Stereo audio distribution in any facility

FEATURES

- Digital input gain control on each output to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
Input gain control is provided to normalize input signals that have differing line level voltages. This eliminates the potential volume variances that can occur during switching, particularly when combining professional and consumer audio devices in the same system.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

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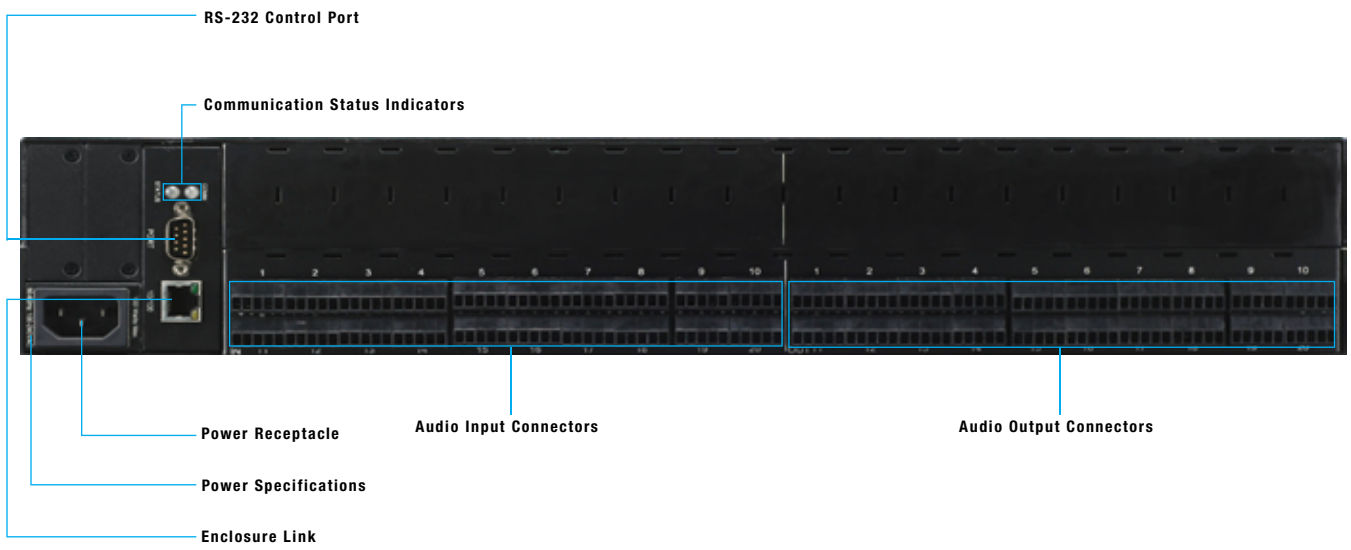
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 Hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Connectors: 5T

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TosLink®
Digital Audio

Optima Pre-Engineered Matrix Switchers

Digital Audio with TosLink®

AVS-OP-0808-00T 8x8 (2RU) (FGP46-0808-00T)

OVERVIEW

The Optima Digital Audio Matrix Switcher is designed for TosLink® digital audio signals.

COMMON APPLICATION

Digital audio distribution from 8 sources to 8 zones

FEATURES

- Digital audio supports CDR (Clock Data Recovery)
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

DIGITAL AUDIO

- Resolution: 16 bit to 24 bit
- Sample Rate: 32 kHz, 44.1 kHz, 48 kHz, 96 kHz
- Rise & Fall Time:<20 nS
- Jitter: <5 nS
- CDR (Reclocking): Yes
- Connectors: TosLink® (Optical)

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HDMI
Digital Video

Optima Pre-Engineered Matrix Switchers

Digital Video with HDMI

AVS-OP-0808-JD0 8x8 (2RU) (FGP46-0808-JD0)

OVERVIEW

Send pure uncompressed 1080p HDMI video to multiple displays without delays using the Optima 8x8 HDMI Matrix Switcher; the only matrix switcher on the market featuring AMX HDCP InstaGate® Technology to eliminate video stream interruption and latency to provide true HDMI signal distribution.

COMMON APPLICATION

Route up to 8 HDMI sources such as Blu-ray Players to 8 displays in any installation including home theater, whole home video, sports bars and more. The Optima HDMI Matrix Switcher is also an ideal solution for computer HDMI signal distribution at resolutions up to 1920x1200.

FEATURES

- True 8x8 HDMI Matrix Switching allowing any input to be switched to any or all outputs, in any combination
- HDMI 1.3 Compatible
- Fully HDCP Compliant, allows 1080p protected entertainment to be routed freely
- AMX HDCP InstaGate® Technology for low-latency switching of HDCP protected content
- Supports computer video up to 1900x1200
- Supports HDTV up to 1080p
- Pre-loaded with the most common EDID settings to ensure proper functionality with source devices
- Features our EDID Programmer allowing specific display EDID settings to be custom loaded on each input
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

WATCH THE VIDEO
See the Optima 8x8 HDMI in action by watching the video profile online at: www.amx.com/assets/videos/HDMI.mp4.

MAKING TECHNOLOGY GREEN
By consolidating matrix switching and individual distance transport solutions for each output in to a single system, along with consolidating power by sending it to receivers over UTP, we reduce overall size and demand while providing the system requirements.

HELPFUL HINT
The Optima 8x8 HDMI matrix switcher features HDCP InstaGate® – An AMX technology that eliminates the latency on all displays in a system typically experienced when High-Bandwidth Digital Content Protection (HDCP) authenticates High-Definition Multimedia Interface (HDMI) source and destination devices. This technology effectively 'opens the gate' by pre-authorizing all connected source and destination devices to satisfy HDCP authentication. InstaGate provides interruption-free delivery of all HDMI content.

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

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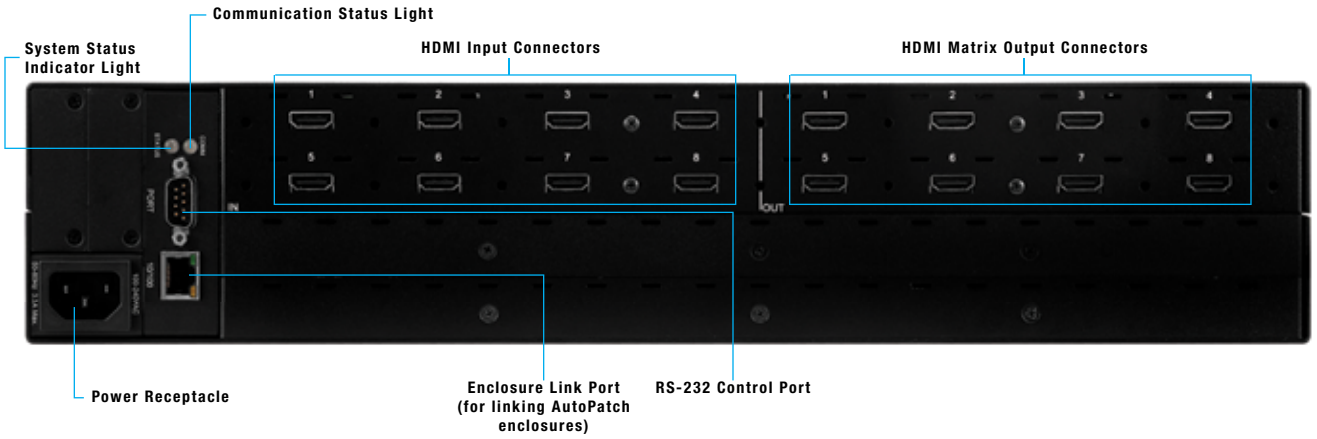
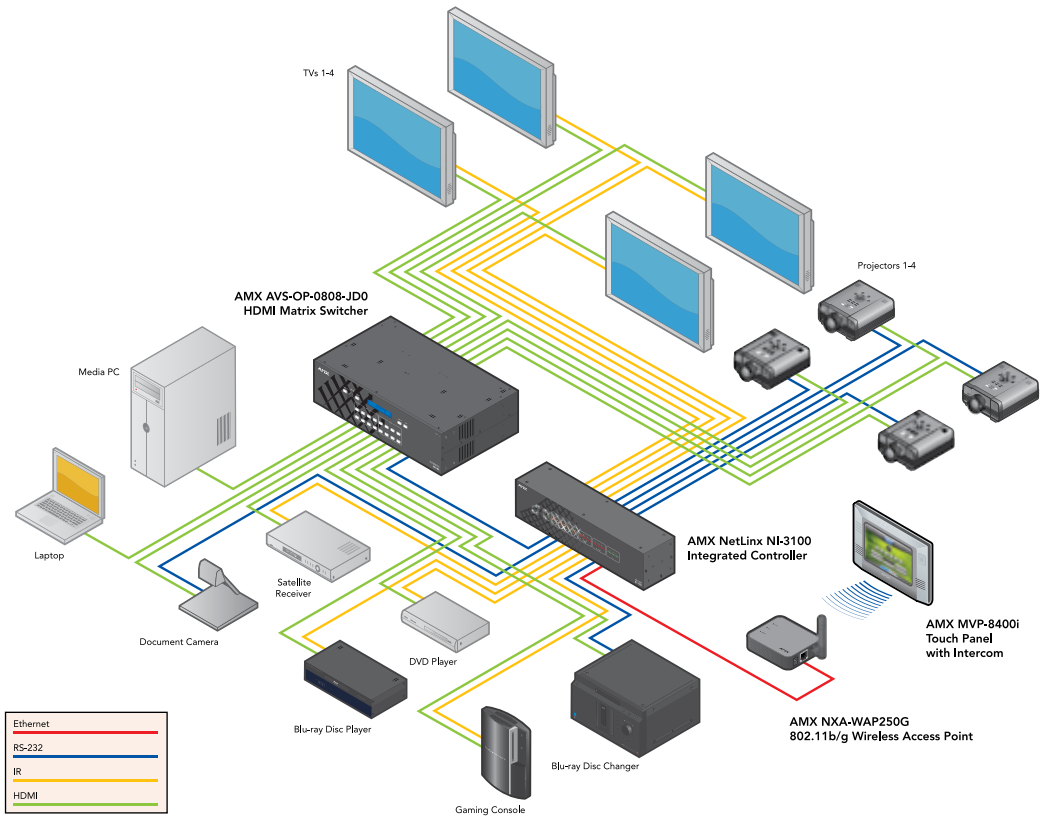
A CLOSER LOOK





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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/HR (Max): 887
- BTU/HR (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

- 3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 Hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

HDMI VIDEO

- Compatible Formats: HDMI 1.3a (HDCP 1.3), DVI 1.0
- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- Progressive Resolution Support: 480p up to 1920x1200 @ 60 Hz (1600x1200 @ 60 Hz and higher requires reduced blanking)
- Interlaced Resolution Support: 480i, 576i, 1080i
- Audio Format Support: Dolby Digital*, DTS*, L-PCM
- Audio Resolution: 16 bit to 24 bit
- Audio Sample Rate: 32 kHz, 44.1 kHz, 48 kHz, 96 kHz**, 192 kHz**
- Signal Type Support: HDMI, DVI-D (Single Link With Cable Adapter)
- DDC/EDID Support
  - EDID Provided by the Optima
  - EDID is user re-programmable
- HDCP Support
  - Yes, full matrix HDCP support (includes any input to any or all outputs)
  - AMX HDCP InstaGate® Technology
- Input Voltage (Nominal): 1.0 Vpp Differential
- Output Voltage (Nominal): 1.0 Vpp Differential
- Output Re-clocking (CDR): Yes
- Output +5 V DDC Pin: 50 mA max per output port
- Output Rise Time / Fall Time:
  - 75 ps min - 144 ps max (20% - 80%)
  - 0.12 UI min - 0.24 UI max (@ 1.65 Gbps, 20% - 80%)
- Connectors: HDMI Type A Female

* Dolby Digital and DTS support up to 48 kHz, 5.1 channels.

** 2 Channel L-PCM support up to 192 kHz at 1080p (50,59 60 Hz).
2 Channel L-PCM support up to 96 kHz at 720p (50,59 60 Hz), 1080p (24, 25, 30, 50, 59, 60 Hz), 1080i (50, 59, 60 fields).
2 Channel L-PCM support up to 48 kHz at all resolutions.

EDID

- Standard Timing Identification:
  - ID 1: 1920 x 1080 @ 60 Hz (This is the preferred timing identified in the EDID.)
  - ID 2: 1680 x 1050 @ 60 Hz
  - ID 3: 1600 x 1200 @ 60 Hz
  - ID 4: 1280 x 800 @ 60 Hz
  - ID 5: 1280 x 720 @ 60 Hz
  - ID 6: 1280 x 1024 @ 60 Hz
  - ID 7: 1360 x 765 @ 60 Hz
  - ID 8: 1440 x 900 @ 60 Hz
  - ID 9: 2048 x 1152 @ 60 Hz
  - ID 10: 1600 x 900 @ 60 Hz
  - ID 11: 1400 x 1050 @ 60 Hz
  - ID 12: 1280 x 960 @ 60 Hz
- Established Timing:
  - 640 x 480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz
  - 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 832 x 624 @75 Hz
  - 1024 x 768 @60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @75 Hz
  - 1152 x 870 @75 Hz
- Detailed Timing Blocks:
  - 1920 x 1080 @ 60 Hz 148.5 MHz
  - 1920 x 1080 @ 60 Hz 138.5 MHz
  - 1920 x 1080 @ 60 Hz 141.5 MHz
  - 1920 x 1200 @ 60 Hz 158.25 MHz
  - 1920 x 1200 @ 60 Hz 154.0 MHz
- CEA Video Information Code (VIC) Formats:
  - VIC = 1, 640 x 480p 59.94/60 Hz 4:3
  - VIC = 2, 720 x 480p 59.94/60 Hz 4:3
  - VIC = 3, 720 x 480p 59.94/60 Hz 16:9
  - VIC = 4, 1280 x 720p 59.94/60 Hz 16:9
  - VIC = 5, 1920 x 1080i 59.94/60 Hz 16:9
  - VIC = 6, 720(1440) x 480i 59.94/60 Hz 4:3
  - VIC = 7, 720(1440) x 480i 59.94/60 Hz 16:9
  - VIC = 14, 1440 x 480p 59.94/60 Hz 4:3
  - VIC = 15, 1440 x 480p 59.94/60 Hz 16:9
  - VIC = 16, Native 1920 x 1080p 59.94/60 Hz 16:9
  - VIC = 17, 720 x 576p 50 Hz 4:3
  - VIC = 18, 720 x 576p 50 Hz 16:9
  - VIC = 19, 1280 x 720p 50 Hz 16:9
  - VIC = 20, 1920 x 1080i 50 Hz 16:9
  - VIC = 21, 720(1440) x 576i 50 Hz 4:3
  - VIC = 22, 720(1440) x 576i 50 Hz 16:9
  - VIC = 29, 1440 x 576p 50 Hz 4:3
  - VIC = 30, 1440 x 576p 50 Hz 16:9
  - VIC = 31, 1920 x 1080p 50 Hz 16:9
  - VIC = 32, 1920 x 1080p 23.97/24 Hz 16:9
  - VIC = 33, 1920 x 1080p 25 Hz 16:9
  - VIC = 34, 1920 x 1080p 29.97/30 Hz 16:9
  - VIC = 39, 1920 x 1080i 50 Hz 16:9
  - VIC = 41, 1280 x 720p 100 Hz 16:9
  - VIC = 42, 720 x 576p 100 Hz 4:3
  - VIC = 43, 720 x 576p 100 Hz 16:9
  - VIC = 44, 720(1440) x 576i 100 Hz 4:3
  - VIC = 45, 720(1440) x 576i 100 Hz 16:9
  - VIC = 47, 1280 x 720p 119.88/120 Hz 16:9
  - VIC = 48, 720 x 480p 119.88/120 Hz 4:3
  - VIC = 49, 720 x 480p 119.88/120 Hz 16:9
- Audio Data Block::
  - 2 Channel L-PCM 32, 44.1, 48, 88.2, 96, 176.4 192 kHz Sampling Frequency at 16, 20 or 24 bits per sample.
  - AC-3 (Dolby Digital) 6 Channels (5.1) 48 kHz Sampling Frequency
  - DTS 6 Channels (5.1) 48 kHz Sampling Frequency

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HD-SDI
Video

Optima Pre-Engineered Matrix Switchers

HD-SDI Video with BNC

AVS-OP-0808-HD0 8x8 (2RU) (FGP46-0808-HD0)

OVERVIEW

The Optima High Definition Serial Digital Interface (HD-SDI) matrix switcher provides high-quality, true digital HD-SDI routing in a small, economical footprint.

COMMON APPLICATION

Ideal for installations such as broadcast, post-production or medical facilities that use HD-SDI cameras, playback equipment or other sources and destinations.

FEATURES

- Conforms to HD-SDI SMPTE standards including SMPTE-259M, SMPTE-292M, SMPTE-344M, and SMPTE-372M
- HD-SDI systems / boards can also route SD-SDI
- HD-SDI boards pass embedded audio, metadata or any additional ancillary data included in the video stream
- HD-SDI boards support CDR (Clock Data Recovery)
- HD-SDI boards provide cable equalization up to 140 m
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
Dual link HD-SDI offers an even greater data rate (2.970 Gbit/s) and is required to pass 1080p in the SDI format. The Optima HD-SDI matrix switcher can easily be custom ordered with an additional HD-SDI board to support Dual-Link HD-SDI as defined by SMPTE-372M.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts , fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375 , fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

HIGH DEFINITION SERIAL DIGITAL VIDEO (HD-SDI)

- Standard: Conforms to SMPTE-259M, SMPTE-292M, SMPTE-344M, SMPTE-372M* (*Data not available for SMPTE-372M dual-link format)
- Input Impedance: 75 Ohms
- Input Level (Max): 0.8 Vpp, ±10%
- Output Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp, ±10%
- Timing Jitter: <0.1 UI @ 1.485 Gbps
- Alignment Jitter: <0.1 UI @ 1.485 Gbps
- Bit Rates: 143 Mbps, 177 Mbps*, 270 Mbps, 360 Mbps, 540 Mbps*, 1.485 Gbps (*Data not available for 177 & 540 Mbps bit rate)
- Data Type: 8 bit or 10 bit
- Auto Cable Equalization:
  -Up to 140m of Belden 1694A or equivalent @ 1.485 Gbps
  -Up to 100m of Belden 8281 or equivalent @ 1.485 Gbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC

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SD-SDI
Digital Video

Optima Pre-Engineered Matrix Switchers

SD-SDI Video with BNC

AVS-OP-0404-9D0	4x4 (2RU)	(FGP46-0404-9D0)
AVS-OP-0808-9D0	8x8 (2RU)	(FGP46-0808-9D0)

OVERVIEW

The Optima Standard Definition Serial Digital Interface (SD-SDI) matrix switcher provides high-quality, true digital SD-SDI routing in a small, economical footprint.

COMMON APPLICATION

Ideal for installations such as broadcast, post-production or medical facilities that use SD-SDI cameras, playback equipment or other sources and destinations.

FEATURES

- Conforms to SD-SDI SMPTE standards including SMPTE-259M, and SMPTE-344M
- SD-SDI boards support CDR (Clock Data Recovery)
- SD-SDI boards provide cable equalization up to 350m
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via APWeb
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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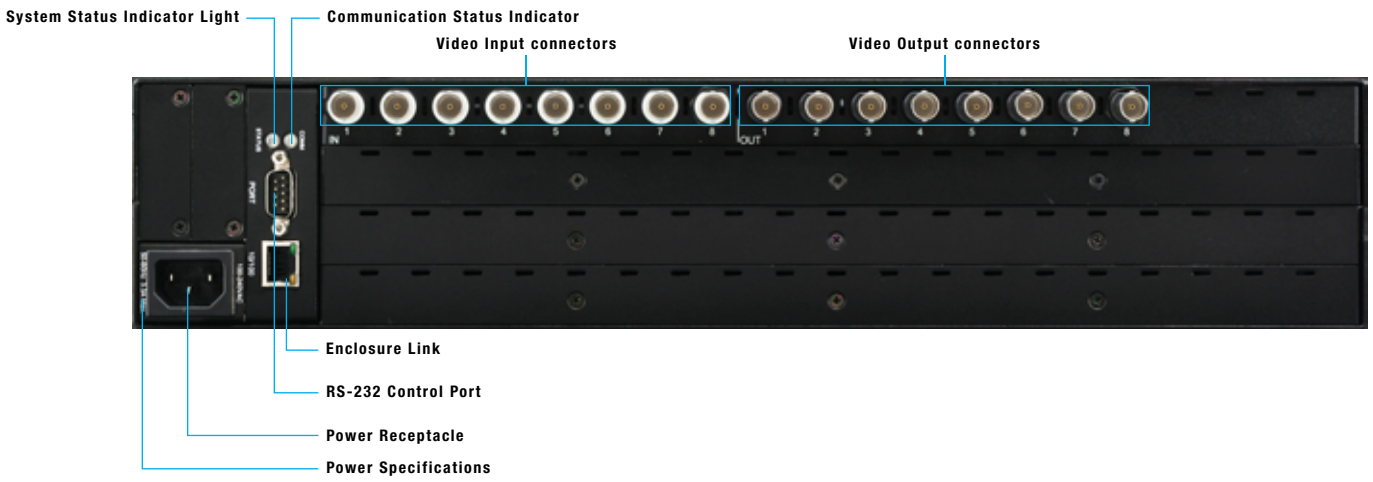
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 Hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD DEFINITION SERIAL DIGITAL VIDEO (SD-SDI)

- Standard: Conforms to SMPTE-259M, SMPTE-344M
- Input Impedance: 75 Ohms
- Input Level (Max): 0.8 Vpp, ±10%
- Output Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp, ±10%
- Timing Jitter: <0.1 UI @ 360 Mbps
- Alignment Jitter: <0.1 UI @ 360 Mbps
- Rise and Fall Time: 600 ps, ±100 ps (20%-80%)
- Bit Rates: 143 Mbps, 177 Mbps*, 270 Mbps, 360 Mbps, 540 Mbps* (*Data not available for 177 & 540 Mbps bit rate)
- Data Type: 8 bit or 10 bit
- Auto Cable Equalization: Up to 350m of Belden 8281 or equivalent @ 270 Mbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC

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Stereo | SD-SDI
Audio • Digital Video

Optima Pre-Engineered Matrix Switchers

SD-SDI Video with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OP-0808-9D7 8x8 (2RU) (FGP46-0808-9D7)

OVERVIEW

The Optima Standard Definition Serial Digital Interface (SD-SDI) with analog audio matrix switcher provides high-quality, true digital SD-SDI routing in a small, economical footprint

COMMON APPLICATION

Ideal for installations such as broadcast, post-production or medical facilities that use SD-SDI cameras, playback equipment or other sources and destinations

FEATURES

- Conforms to SD-SDI SMPTE standards including SMPTE-259M, and SMPTE-344M
- SD-SDI boards support CDR (Clock Data Recovery)
- SD-SDI boards provide cable equalization up to 350m
- Digital volume control on each analog audio output
- Digital input gain control on each analog audio input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 Hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD DEFINITION SERIAL DIGITAL VIDEO (SD-SDI)

- Standard: Conforms to SMPTE-259M, SMPTE-344M
- Input Impedance: 75 Ohms
- Input Level (Max): 0.8 Vpp, ±10%
- Output Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp, ±10%
- Timing Jitter: <0.1 UI @ 360 Mbps
- Alignment Jitter: <0.1 UI @ 360 Mbps
- Rise and Fall Time: 600 ps, ±100 ps (20%-80%)
- Bit Rates: 143 Mbps, 177 Mbps*, 270 Mbps, 360 Mbps, 540 Mbps* (*Data not available for 177 & 540 Mbps bit rate)
- Data Type: 8 bit or 10 bit
- Auto Cable Equalization: Up to 350m of Belden 8281 or equivalent @ 270 Mbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Connectors: 5T

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DVI
Digital Video

Optima Pre-Engineered Matrix Switchers

Digital Video with DVI

AVS-OP-0404-DDO	4x4 (2RU)	(FGP46-0404-DDO)
AVS-OP-0808-DDO	8x8 (2RU)	(FGP46-0808-DDO)

OVERVIEW

Optima DVI Matrix Switchers are designed to route and distribute high-resolution computer DVI signals to multiple displays while maintaining a true, digital signal. Both models support resolutions up to 1920x1200, and are pre-loaded with the most common EDID settings to ensure proper functionality with source devices. The newer 8x8 model also includes features that simplify the complexity of DVI integration, such as cable equalization, signal reclocking and a new EDID (Extended Display Identification Data) Programmer allowing custom EDID settings to be loaded on each input.

COMMON APPLICATION

The Optima DVI Matrix Switchers are ideal for any installation that requires high-resolution digital computer video be displayed on multiple screens such as auditoriums, command and control centers, digital signage applications and more.

FEATURES

- True uncompressed DVI digital matrix switching ensures the purity of the digital image is never compromised
- Pre-loaded with the most common EDID settings to ensure proper functionality with source devices
- The 8x8 model features our EDID Programmer allowing specific display EDID settings to be custom loaded on each input
- The 8x8 model provides additional power on output's 1-4 commonly used to power external DVI extenders
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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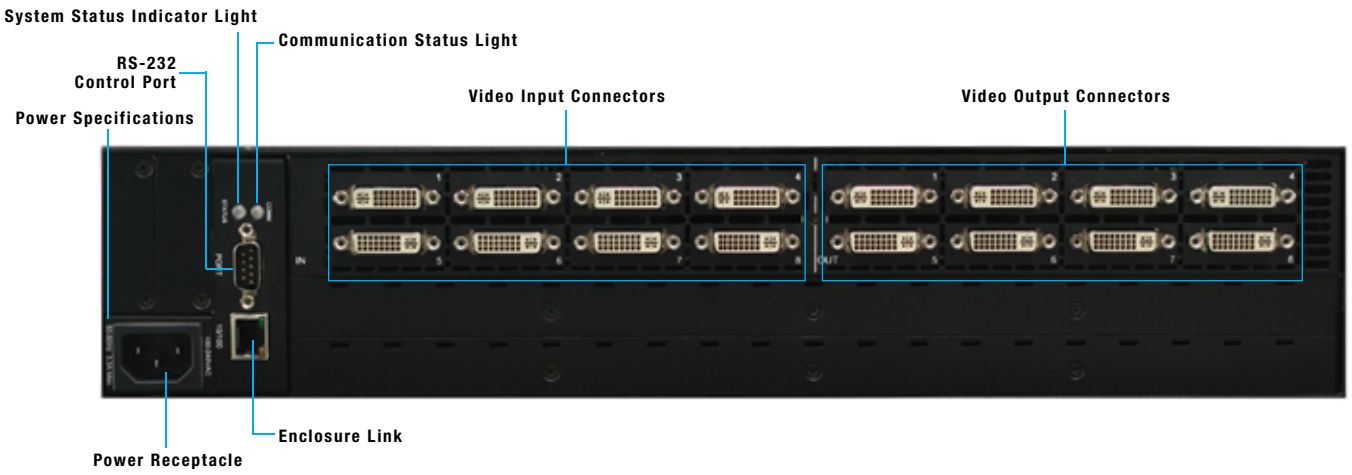
A CLOSER LOOK



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

DIGITAL VIDEO (8X8 DVI)

- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- Resolution Support: Up to 1920x1200 @ 60 Hz
- Signal Type: DVI-D (Single Link)
- DDC/EDID Support:
  - EDID provided by Optima
  - EDID is user re-programmable
- HDCP Support: No
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Voltage (Max): 1.5 Vpp Differential
- Input Equalization: Up to 40 dB Automatic
- Input Cable Length (Typ): Up to 50 ft, 1920x1200 @ 60 Hz over high quality DVI cable
- Input Cable Length (Max): Up to 100 ft, 1920x1200 @ 60 Hz over high quality DVI 24 AWG, shielded-twisted pair cable. Requires a source signal amplitude of 1 Vpp driving the cable.
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Re-clocking (CDR): Yes
- Output Pre-emphasis: Yes, for improved cable drive
- Output +5 V DDC Pin:
  - 1 A shared total available on outputs 1 - 4
  - 270 mA shared total available on outputs 5 - 8
- Output Rise Time / Fall Time:
  - 80 ps min - 200 ps Max (20% - 80%)
  - 0.13 UI min - 0.33 UI Max (@ 1.65 Gbps, 20% - 80%)
- Connectors: DVI-I female (DVI-D Single Link is the supported signal type)

8X8 EDID

- Standard Timing Identification:
  - ID 1: 1920 x 1200 @ 60 Hz (This is the preferred timing identified in the EDID)
  - ID 2: 1920 x 1080 @ 60 Hz
  - ID 3: 1680 x 1050 @ 60 Hz
  - ID 4: 1600 x 1200 @ 60 Hz
  - ID 5: 1280 x 800 @ 60 Hz
  - ID 6: 1280 x 720 @ 60 Hz
  - ID 7: 1280 x 1024 @ 60 Hz
  - ID 8: 640 x 480 @ 120 Hz
- Established Timing:
  - 720 x 400 @70 Hz, 88 Hz
  - 640 x 480 @60 Hz, 67 Hz, 72 Hz, 75 Hz
  - 800 x 600 @56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 832 x 624 @75 Hz
  - 1024 x 768 @60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @75 Hz
  - 1152 x 870 @75 Hz

DIGITAL VIDEO (4X4 DVI)

- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- Resolution Support: Up to 1600x1200 @ 60 Hz
- Signal Type: DVI-D (Single Link)
- DDC/EDID Support: EDID provided by Optima
- HDCP Support: No
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Voltage (Max): 1.5 Vpp Differential
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Re-clocking (CDR): Yes
- Output +5 V DDC Pin: 50 mA available on each output
- Output Rise Time / Fall Time:
  - 75 ps min - 240 ps Max (20% - 80%)
  - 0.12 UI min - 0.4 UI Max (@ 1.65 Gbps, 20% - 80%)
- Connectors: DVI-I female (DVI-D Single Link is the supported signal type)
- NOTE: Power requirements for this board allow for no more than 4 boards in a single enclosure

4X4 EDID

- Standard Timing Identification:
  - ID 1: 1600 x 1200 @ 75 Hz (This is the preferred timing identified in the EDID)
  - ID 2: 640 x 480 @120 Hz
  - ID 3: 1024 x 768 @ 120 Hz
  - ID 4: 1280 x 1024 @ 85 Hz
  - ID 5: 800 x 600 @ 120 Hz
  - ID 6: 1152 x 864 @120 Hz
  - ID 7: 1600 x 1200 @60 Hz
  - ID 8: 1280 x 800 @60 Hz
- Established Timing:
  - 720 x 400 @70 Hz, 88 Hz
  - 640 x 480 @60 Hz, 67 Hz, 72 Hz, 75 Hz
  - 800 x 600 @56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 832 x 624 @75 Hz
  - 1024 x 768 @60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @75 Hz
  - 1152 x 870 @75 Hz

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RGBHV
Video

Optima Pre-Engineered Matrix Switchers

RGBHV Video with HD-15

AVS-OP-1515-840 15x15 (2RU) (FGP46-1515-840)

OVERVIEW

Distribution of multiple RGBHV sources with stereo such as computers to multiple displays.

COMMON APPLICATION

Any place computer or other RGBHV sources are distributed throughout a facility from small boardroom applications to larger command and control operations.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Easily supports the highest analog video bandwidth requirements on the market
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
AMX breakout cables allow for easy integration of sources or destinations with BNC connections in the HD-15 format

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

RGBHV (HD-15)

- Input Level (Max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- HV Input Level Signal Range: 0 to +5.5 Volts
- HV Input Impedance: 22 kOhms
- HV Output Level Signal Range: 0 to +5.5 Volts
- HV Output Impedance: 75 Ohms
- HV In/Out Polarity: Active High or Low (output following input polarity)
- HV Output Signal Level: Unity Gain
- Connectors: HD-15

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Stereo | RGBHV
Audio • Video

Optima Pre-Engineered Matrix Switchers

RGBHV Video with HD-15, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OP-1515-847 15x15 (3RU) (FGP46-1515-847)

OVERVIEW

Save rack space and installation time by routing RGBHV over HD-15 boards

COMMON APPLICATION

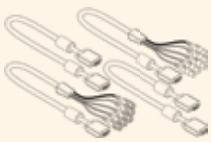
Any place computer or other RGBHV sources with audio are distributed throughout a facility such as boardrooms and auditoriums

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Easily supports the highest analog video bandwidth requirements on the market
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
AMX breakout cables allow for easy integration of sources or destinations with BNC connections in the HD-15 format



TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

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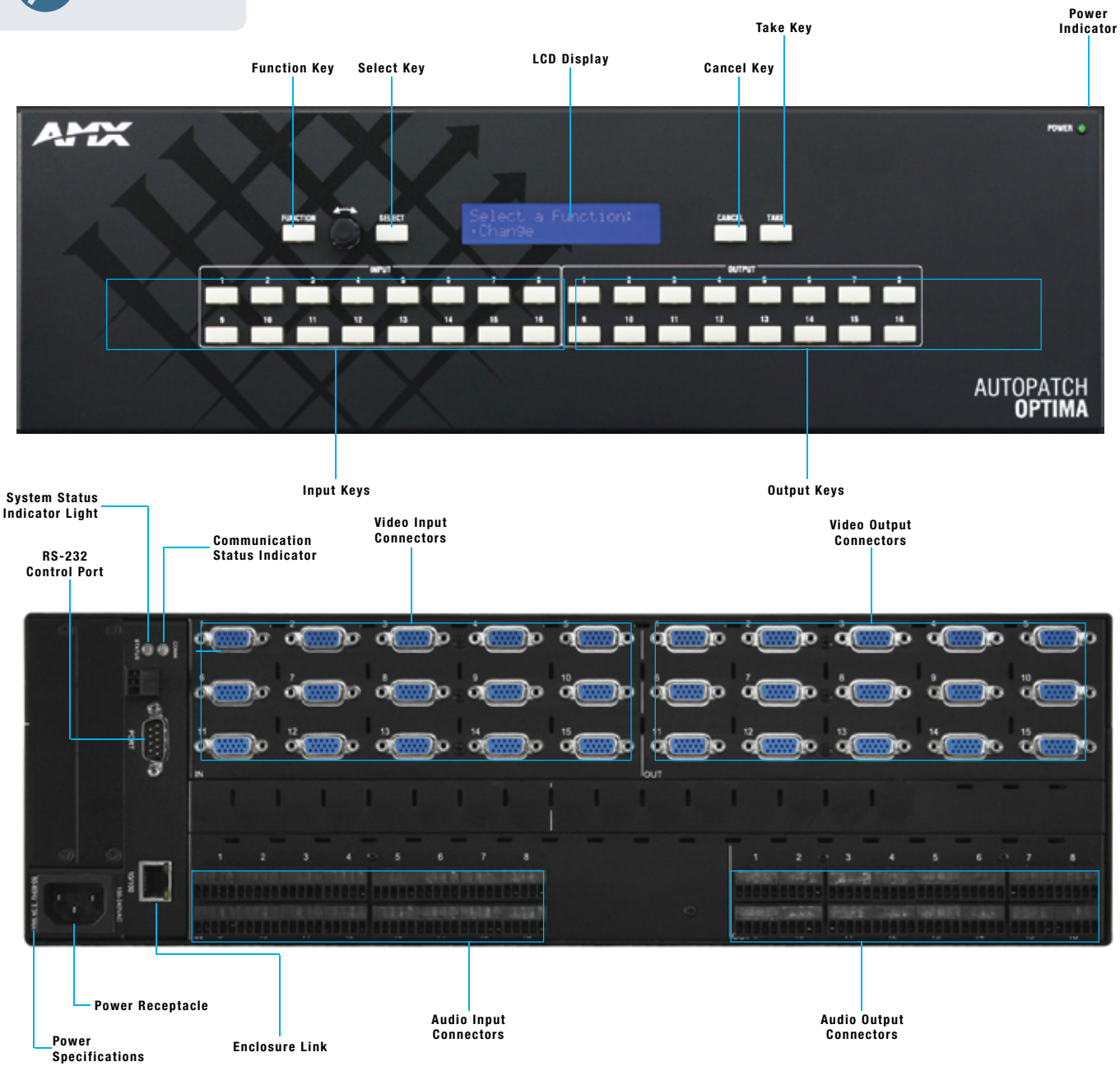
A CLOSER LOOK



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 150 Watts, Fully Loaded Enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 512, Fully Loaded Enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 3/16" x 19" x 12" (13.2 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 3/16" x 17 3/8" x 12" (13.2 cm x 44.2 cm x 30.5 cm)
- RU: 3

WEIGHT

Appx. 12 lbs (5.44 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

RGBHV (HD-15)

- Input Level (Max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- HV Input Level Signal Range: 0 to +5.5 Volts
- HV Input Impedance: 22 kOhms
- HV Output Level Signal Range: 0 to +5.5 Volts
- HV Output Impedance: 75 Ohms
- HV In/Out Polarity: Active High or Low (output following input polarity)
- HV Output Signal Level: Unity Gain
- Connectors: HD-15

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Connectors: 5T

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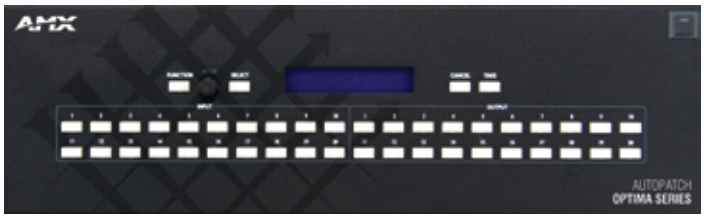
RGBHV
Video

Optima Pre-Engineered Matrix Switchers

RGBHV Video with BNC

AVS-OP-1624-540	16x24 (5 RU)	FGP46-1624-540
AVS-OP-2004-540	20x4 (5 RU)	FGP46-2004-540
AVS-OP-2020-540	20x20 (5 RU)	FGP46-2020-540
AVS-OP-2404-540	24x4 (5 RU)	FGP46-2404-540
AVS-OP-2416-540	24x16 (5 RU)	FGP46-2416-540
AVS-OP-3604-540	36x4 (5 RU)	FGP46-3604-540



OVERVIEW

Optima RGBHV with BNC matrix switchers are ideal if you prefer BNC connections over HD-15 for passing high-resolution video. At 300 MHz This robust professional matrix switcher can distribute the highest resolution analog signals on the market while maintaining our ultra-flat ±3 dB frequency response. This means true, pure clean video at every destination, every time.

COMMON APPLICATION

Any place computer or other RGBHV sources are distributed throughout a facility from small boardroom and digital signage applications to larger command and control operations.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Easily supports the highest analog video bandwidth requirements on the market
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
5 RU systems are comprised of two physical enclosures linked together; control systems view this as a single system and therefore only one front mounted control panel is required.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

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SPECIFICATIONS

RGBHV systems are made up of 1- 3 RU enclosure and 1- 2 RU enclosure

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ):
  - 150 Watts, fully loaded enclosure (3 RU)
  - 110 Watts fully loaded enclosure (2 RU)
- BTU/hr (Max): 887)
- BTU/hr (Typ):
  - 512, fully loaded enclosure (3 RU)
  - 375, fully loaded enclosure (2 RU)
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

- 5 3/16" x 19" x 12" (13.2 cm x 48.3 cm x 30.5 cm) (3 RU)
- 3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm) (2 RU)

DIMENSIONS (WITHOUT RACK EARS)

- 5 3/16" x 17 3/8" x 12" (13.2 cm x 44.2 cm x 30.5 cm) RU: 3
- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm) RU: 2

WEIGHT

- Appx. 12 lbs (5.44 kg) per loaded enclosure (3 RU)
- Appx. 10 lbs (4.54 kg) per loaded enclosure (2 RU)

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

RGBHV (BNC)

- Input Level (Max): ±1.5 Volts
- Input Level (Max 20x20): ±1.2 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Level (Max 20x20): ±1.2 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Frequency Response (20x20):
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±2 dB)
  - 50 MHz or better (±1.5 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Options: BNC

SYNC

- Input Level Signal Range: 0 to +5.5 Volts
- Input Impedance: 22 kOhms
- Output Level Signal Range: 0 to +5.5 Volts
- Output Impedance: 75 Ohms
- In/Out Polarity: Active High or Low (output follows input polarity)
- Output Signal Level: Unity Gain
- Connectors: BNC

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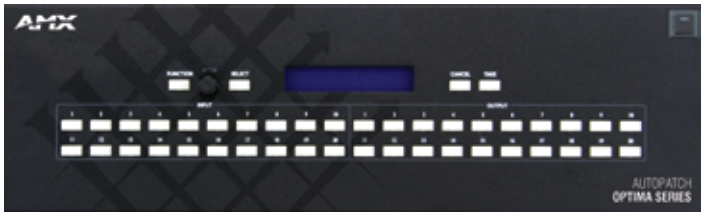
Stereo | RGBHV
Audio • Video

Optima Pre-Engineered Matrix Switchers

RGBHV with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OP-1624-547	16x24 (6 RU)	FGP46-1624-547
AVS-OP-2004-547	20x4 (6 RU)	FGP46-2004-547
AVS-OP-2020-547	20x20 (6 RU)	FGP46-2020-547
AVS-OP-2404-547	24x4 (6 RU)	FGP46-2404-547
AVS-OP-2416-547	24x16 (6 RU)	FGP46-2416-547
AVS-OP-3604-547	36x4 (6 RU)	FGP46-3604-547



OVERVIEW

Optima RGBHV with BNC matrix switchers are ideal if you prefer BNC connections over HD-15 for passing high-resolution video and also require balanced or unbalanced stereo audio. At 300 MHz This robust professional matrix switcher can distribute the highest resolution analog signals on the market while maintaining our ultra-flat ±3 dB frequency response. This means true, pure clean video at every destination, every time.

COMMON APPLICATION

Any place computer or other RGBHV sources are distributed throughout a facility from small boardroom and digital signage applications to larger command and control operations.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Easily supports the highest analog video bandwidth requirements on the market
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
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- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

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TRAINING AVAILABLE
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PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

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SPECIFICATIONS

RGBHV Stereo Audio systems are made up of 2- 3 RU enclosures

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 150 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 512, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 3/16" x 19" x 12" (13.2 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 3/16" x 17 3/8" x 12" (13.2 cm x 44.2 cm x 30.5 cm)
- RU: 3

WEIGHT

Appx. 12 lbs (5.44 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

RGBHV (BNC)

- Input Level (Max): ±1.5 Volts
- Input Level (Max 20x20): ±1.2 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Level (Max 20x20): ±1.2 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Frequency Response (20x20):
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±2 dB)
  - 50 MHz or better (±1.5 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Options: BNC

SYNC

- Input Level Signal Range: 0 to +5.5 Volts
- Input Impedance: 22 kOhms
- Output Level Signal Range: 0 to +5.5 Volts
- Output Impedance: 75 Ohms
- In/Out Polarity: Active High or Low (output follows input polarity)
- Output Signal Level: Unity Gain
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Connectors: 5T

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Stereo | RGBHV
Audio • Video

Optima Pre-Engineered Matrix Switchers

RGBHV Video + Stereo Audio to CatPro

AVS-OP-CBBD-PRO	4x8 (2RU)	(FGP46-CBBD-PRO)
AVS-OP-DBBD-PRO	8x8 (2RU)	(FGP46-DBBD-PRO)

OVERVIEW

Integrate routing and transmission of RGBHV + stereo over twisted pair, eliminating the need for external transmission devices. With the ability to maintain resolutions up to 1600x1200 or 1920x1080 @ 60 Hz even at distances of up to 1,000 feet, you don't have to compromise video quality to run long distances.

COMMON APPLICATION

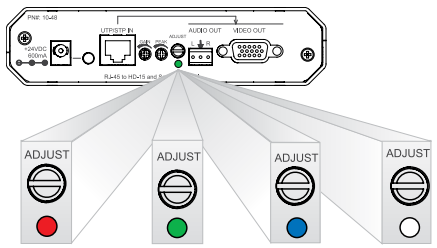
Ideal for any small application sending local computer video to long distance outputs, such as lobby areas, education, portable command-and-control, or museum kiosk areas

FEATURES

- Integrated CatPro Technology to route and transmit RGBHV and stereo over twisted pair
- Easily supports the highest analog video bandwidth requirements on the market
- Intuitive gain, peak and skew adjustments at the touch of a button at each destination via CatPro RX
- Output volume control at each destination via CatPro RX
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port supports BCS commands
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
Make precise gain, peak and skew adjustments in seconds. Each receiver features a simple dial and LED indicator for simple skew adjustments. A push of the dial and the LED illuminates with the color activated for adjustment (red, green, or blue). And, white indicates stereo audio volume control. Gain and peak adjustments are also simple via external potentiometers.



Shown here:
CatPro RGBHV + Stereo Receiver

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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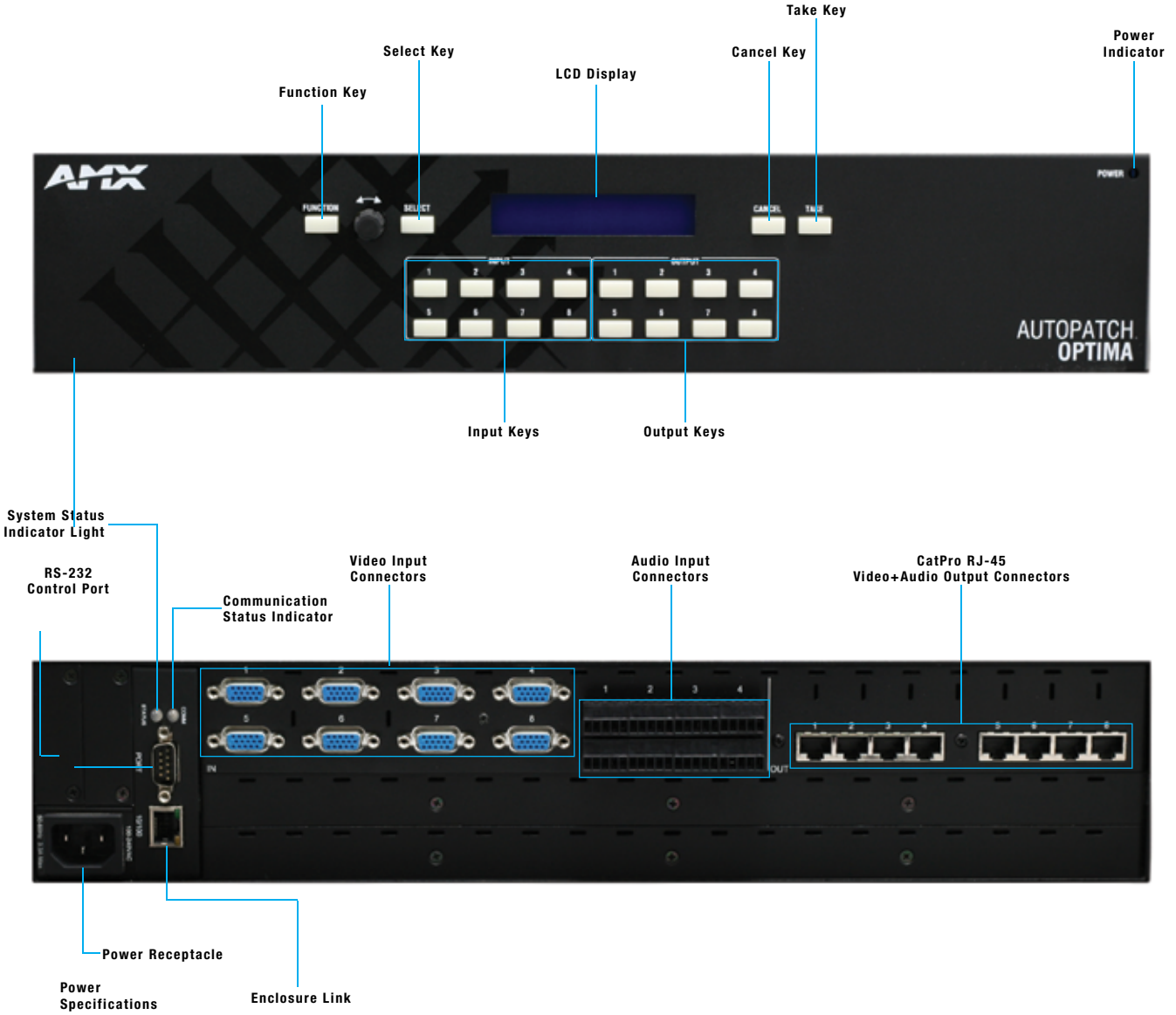
CatPro
Integrated CatPro Technology brings professional audiovisual quality and twisted pair together by transmitting RGBHV at resolutions up to 1600x1200, providing intuitive digital gain, peak and skew adjustments at every receipt point within the system (up to 62 ns in 2 ns increments), while including true left / right stereo audio on the same cable.

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

A CLOSER LOOK



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SPECIFICATIONS

All Specs are defined for use in conjunction with a CatPro Receiver

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

RGBHV + STEREO (IN) TO CATPRO (OUT)*

- Signal Types:
  -Input: RGBHV + Stereo Audio (HD-15 & 5T)
  -Output: CatPro RGBHV + Stereo Audio (RJ-45)
- Maximum Resolution: 1600x1200(4:3) and 1920x1080p(16:9) @ 60 Hz up to 1000 ft
- RGB In Signal Level Range (Max): +0.75 V to -0.3 V Typ (terminated)
- RGB Out Signal Level Range (Max): +0.75 V to -0.3 V Typ (terminated, user adjustable with gain and peak using CatPro Receiver)
- RGB Out Skew Adjustment: 0 to 62 ns, in 2 ns increments on RGB channels (user adjustable using CatPro Receiver)
- RGB In/Out Impedance: 75 Ohms
- RGB SNR: >50 dB (Vin = 0.7 V, 100 IRE)
- RGB Crosstalk: <-60 dB (f = 5 MHz), <-45 dB (f = 30 MHz)
- Sync In Impedance: 2.2 kOhms
- Sync In/Out Polarity: Active High or Low (output follows input polarity)
- Sync Out Signal Levels: Low = 0 V, High = +5 V (unterminated)
- Audio In/Out Signal Type: Stereo, Balanced or Unbalanced In / Unbalanced Out
- Audio In/Out Signal Level (Max): +8 dBu
- Audio In Impedance: 18 kOhms
- Audio Output Impedance: <5 Ohms
- Audio Frequency Response: <±0.3 dB, 20 Hz to 20 kHz
- Audio THD+N: <0.04 %, 1 kHz, -10 dBu to +4 dBu
- Audio Crosstalk: <-95 dB (1 kHz, Vin = +4 dBu)
- Audio SNR: >85 dB, 20 Hz to 20 kHz Vin=+8 dBu
- Audio Out Volume Adj. Range: Mute to +6 dB (user adjustable at CatPro Receiver)
- RGBHV Input Connector: Female HD-15
- Stereo Audio Input Connector: 5T
- RGBHV + Stereo Output Connector: Female RJ-45
- Compatible Cable Types: Category Cable 5, 5e, 6, 6e, UTP, and STP. All measurements were taken using Cat5e Cable

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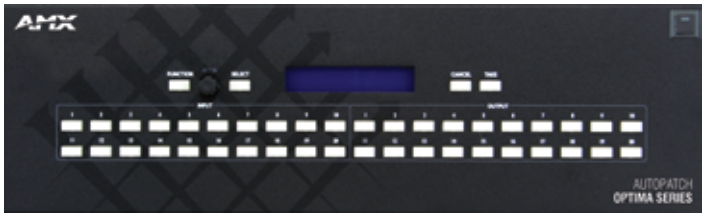
Component
Video

Optima Pre-Engineered Matrix Switchers

HDTV/Component Video with BNC

AVS-OP-1616-340	16x16 (3RU)	(FGP46-1616-340)
AVS-OP-1624-340	16x24(3RU)	(FGP46-1624-340)
AVS-OP-2004-340	20x4(3RU)	(FGP46-2004-340)
AVS-OP-2020-340	20x20(3RU)	(FGP46-2020-340)
AVS-OP-2404-340	24x4(3RU)	(FGP46-2404-340)
AVS-OP-2416-340	24x16(3RU)	(FGP46-2416-340)
AVS-OP-3604-340	36x4(3RU)	(FGP46-3604-340)



OVERVIEW

True high definition video distribution from multiple sources to multiple displays or zones

COMMON APPLICATION

Distribution of HD satellite video throughout the facility such as sports bars and retail environments

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Supports the highest analog resolutions on the market, including but not limited to HDTV resolutions up to 1920x1080p
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
Easily reconfigure your system in the field into multiple smaller matrices. For example, a 20x20 component video system can easily be used as a 10x10 component video + 10x10 S-Video + 10x10 composite video. Contact AMX technical support with your original serial order number for a new configuration file.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 150 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 512, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 3/16" x 19" x 12" (13.2 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 3/16" x 17 3/8" x 12" (13.2 cm x 44.2 cm x 30.5 cm)
- RU: 3

WEIGHT

Appx. 12 lbs (5.44 kg) per loaded enclosure

MTBF

92,000 hours

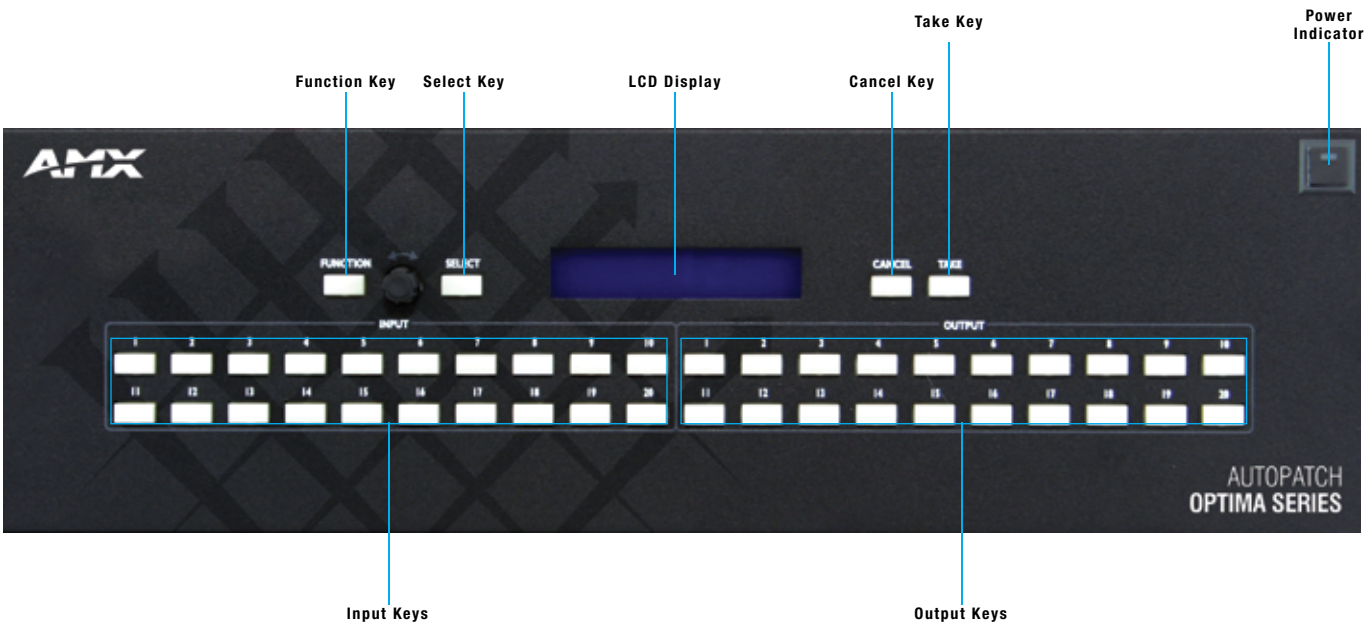
CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

COMPONENT VIDEO

- Input Level (Max): ±1.5 Volts
- Input Level (Max 20x20): ±1.2 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Level (Max 20x20): ±1.2 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Frequency Response (20x20):
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±2 dB)
  - 50 MHz or better (±1.5 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

A CLOSER LOOK



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Digital | Component
Audio • Video

Optima Pre-Engineered Matrix Switchers

HDTV/Component Video with BNC, Digital Audio with S/PDIF and TosLink

AVS-OP-0808-34B 8x8 (2RU) (FGP46-0808-34B)

OVERVIEW

The Optima HDTV/Component Video + Digital Audio Matrix Switcher provides true HDTV video distribution with digital audio from 8 sources to 8 destinations while maintaining true, pure video and clear, crisp audio.

COMMON APPLICATION

Distribution of HD satellite video and DVD players with digital audio throughout the facility such as whole home audiovisual distribution, sports bars and retail environments; easily "breakaway" audio for selection of one audio source to a zone even if multiple video feeds are being shown.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario (RGB)
- Easily supports the highest analog video resolutions on the market, including but not limited to 1080p
- Superior video crosstalk specifications ensure signal isolation and security
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via APWeb
- Virtual Matrix technology allows endless possible breakaway and "signal Follow signal" user defined routing scenarios
- Local and global presets
- Rack mounting ears included

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
The digital audio board incorporated into the Optima HDTV/Component Video + Digital Audio Matrix Switcher has 4 S/PDIF (RCA) input and output connections and 4 TosLink (optical) input and output connections and can route and convert between the two formats freely allowing any input to be routed to any or all outputs in any combination.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

COMPONENT VIDEO

- Input Level (Max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

DIGITAL AUDIO

- Resolution: 16 to 24 bit
- Sample Rate: 32 kHz, 44.1 kHz, 48 kHz, 96 kHz
- Rise & Fall Time: <20 nS
- Jitter: <5 nS
- Input Signal Amplitude: 0.2 Vpp to 2.5 Vpp terminated (S/PDIF)
- Output Signal Amplitude: 0.4 Vpp to 1.0 Vpp terminated into 75 Ohms (S/PDIF)
- CDR (Reclocking): Yes
- Connectors: S/PDIF (RCA) and TosLink (Optical)

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Stereo | Component
Audio • Video

Optima Pre-Engineered Matrix Switchers

HDTV/Component Video with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OP-1616-347	16x16 (4RU)	(FGP46-1616-347)
AVS-OP-1624-347	16x24 (4RU)	(FGP46-1624-347)
AVS-OP-2004-347	20x4 (4RU)	(FGP46-2004-347)
AVS-OP-2020-347	20x20 (4RU)	(FGP46-2020-347)
AVS-OP-2404-347	24x4 (4RU)	(FGP46-2404-347)
AVS-OP-2416-347	24x16 (4RU)	(FGP46-2416-347)
AVS-OP-3604-347	36x4 (4RU)	(FGP46-3604-347)

OVERVIEW

True high definition video distribution with stereo audio from multiple sources to multiple displays or zones

COMMON APPLICATION

Distribution of HD satellite video with stereo throughout the facility such as sports bars and retail environments; easily "breakaway" audio for selection of one audio source to a zone even if multiple video feeds are being shown.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Supports the highest analog resolutions on the market, including but not limited to HDTV resolutions up to 1920x1080p
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
4 RU systems are comprised of two physical 2 RU enclosures linked together; control systems view this as a single system and therefore only one front mounted control panel is included.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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SPECIFICATIONS

This model contains 2 enclosures and occupies 4 RU. Specifications listed below are for individual enclosures.

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

COMPONENT VIDEO

- Input Level (Max): ±1.5 Volts
- Input Level (Max 20x20): ±1.2 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Level (Max 20x20): ±1.2 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Frequency Response (20x20):
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±2 dB)
  - 50 MHz or better (±1.5 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Connectors: 5T

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S-Video
Video

Optima Pre-Engineered Matrix Switchers

S-Video (4-pin Mini-DIN)

AVS-OP-1616-610 16x16 (2RU) (FGP46-1616-610)

OVERVIEW

The Optima Matrix Switcher is a robust S-Video solution.

COMMON APPLICATION

Routing of multiple analog DVD players or cameras to various displays

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via APWeb
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

S-VIDEO

- Input Level (Max): ±2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 15 MHz or better (±1 dB)
- Crosstalk: <-60 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: S-Video (4-pin Mini-DIN)

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Stereo | S-Video
Audio • Video

Optima Pre-Engineered Matrix Switchers

S-Video (4-pin Mini-DIN), Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OP-1616-617 16x16 (2RU) (FGP46-1616-617)

OVERVIEW

The Optima is robust professional solution for S-Video and stereo audio matrix switchers applications.

COMMON APPLICATION

Routing of multiple analog DVD players or cameras with audio to various displays

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via APWeb
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

TRAINING AVAILABLE
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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

S-VIDEO

- Input Level (Max): ±2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 15 MHz or better (±1 dB)
- Crosstalk: <-60 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 Mhz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: S-Video (4-pin Mini-DIN)

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Connectors: 5T

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Y/c
Video

Optima Pre-Engineered Matrix Switchers

Y/c Video with BNC

AVS-OP-1616-210	16x16 (2RU)	(FGP46-1616-210)
AVS-OP-1624-210	16x24 (2RU)	(FGP46-1624-210)
AVS-OP-2004-210	20x4 (2RU)	(FGP46-2004-210)
AVS-OP-2020-210	20x20 (2RU)	(FGP46-2020-210)
AVS-OP-2404-210	24x4 (2RU)	(FGP46-2404-210)
AVS-OP-2416-210	24x16 (2RU)	(FGP46-2416-210)
AVS-OP-3604-210	36x4 (2RU)	(FGP46-3604-210)

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

OVERVIEW

Robust Y/c video matrix switchers

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via APWeb
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

Y/C VIDEO

- Input Level (Max): ±2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB),
  - 15 MHz or better (±1 dB)
- Crosstalk: <-60 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

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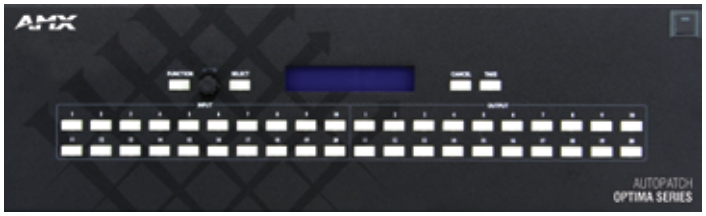
Stereo | Y/c
Audio • Video

Optima Pre-Engineered Matrix Switchers

Y/c Video, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-OP-1616-217	16x16 (3RU)	(FGP46-1616-217)
AVS-OP-1624-217	16x24 (3RU)	(FGP46-1624-217)
AVS-OP-2004-217	20x4 (3RU)	(FGP46-2004-217)
AVS-OP-2020-217	20x20 (3RU)	(FGP46-2020-217)
AVS-OP-2404-217	24x4 (3RU)	(FGP46-2404-217)
AVS-OP-2416-217	24x16 (3RU)	(FGP46-2416-217)
AVS-OP-3604-217	36x4 (3RU)	(FGP46-3604-217)



OVERVIEW

Robust Y/c video with stereo matrix switchers that feature audio input gain and output volume control

FEATURES

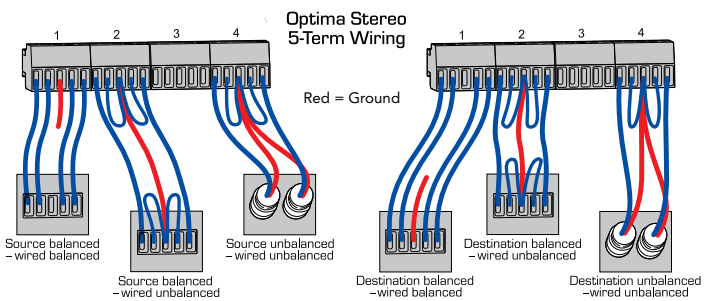
- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via APWeb
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local and global presets

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
Input gain control is provided to normalize input signals that have differing line level voltages. This eliminates the potential volume variances that can occur during switching, particularly when combining professional and consumer audio devices in the same system.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

A CLOSER LOOK
5-position terminal block connectors can be wired for balanced (differential) or unbalanced (single-ended) audio.



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 150 Watts fully loaded enclosure
- BTU/hr (Max): 887)
- BTU/hr (Typ): 512 fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

- 5 3/16" x 19" x 12" (13.2 cm x 48.26 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 3/16" x 17 3/8" x 12" (13.2 cm x 44.2 cm x 30.5 cm)
- RU: 3

WEIGHT

- Appx. 12 lbs (5.44 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

Y/C VIDEO

- Input Level (Max): ±2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 15 MHz or better (±1 dB)
- Crosstalk: <-60 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Connectors: 5T

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Composite
Video

Optima Pre-Engineered Matrix Switcher

Composite Video with BNC

AVS-OP-1616-110	16x16 (2RU)	(FGP46-1616-110)
AVS-OP-1624-110	16x24 (2RU)	(FGP46-1624-110)
AVS-OP-2004-110	20x4 (2RU)	(FGP46-2004-110)
AVS-OP-2020-110	20x20 (2RU)	(FGP46-2020-110)

OVERVIEW

Robust composite video matrix switchers

COMMON APPLICATION

Routing of multiple composite video cameras to various displays

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via APWeb
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Front panel security lockout
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

COMPOSITE VIDEO

- Input Level (Max): ±2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response: 50 MHz or better (±3 dB), 15 MHz or better (±1 dB)
- Crosstalk: <-60 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

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Stereo | Composite
Audio • Video

Optima Pre-Engineered Matrix Switchers

Composite Video BNC, Stereo Audio 5T Phoenix-style and Digital Volume Control

AVS-OP-1616-117	16x16 (2RU)	(FGP46-1616-117)
AVS-OP-1624-117	16x24 (2RU)	(FGP46-1624-117)
AVS-OP-2004-117	20x4 (2RU)	(FGP46-2004-117)
AVS-OP-2020-117	20x20 (2RU)	(FGP46-2020-117)
AVS-OP-2404-117	24x4 (2RU)	(FGP46-2404-117)
AVS-OP-2416-117	24x16 (2RU)	(FGP46-2416-117)
AVS-OP-3604-117	36x4 (2RU)	(FGP46-3604-117)

OVERVIEW

Robust composite video with stereo matrix switchers that feature audio input gain and output volume control.

COMMON APPLICATION

Routing of multiple VCRs or analog cameras with audio to various displays

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- Standard RS-232 control port supports BCS commands
- Optional TCP/IP control via APWeb
- Includes intuitive CP-15 front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, input gain, output volume, mute, level commands and more
- Front panel security lockout
- Backed by our AMX 3 year warranty
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
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HELPFUL HINT
Input gain control is provided to normalize input signals that have differing line level voltages. This eliminates the potential volume variances that can occur during switching, particularly when combining professional and consumer audio devices in the same system.

TRAINING AVAILABLE
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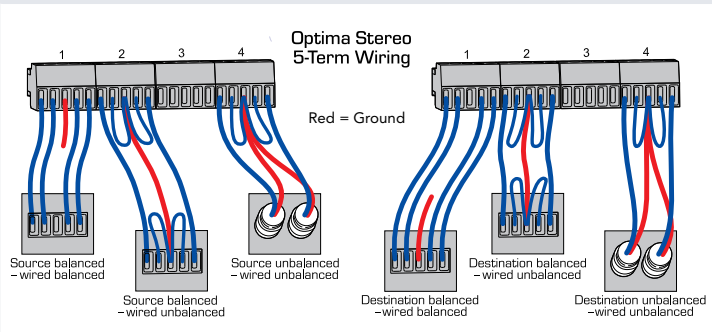
A CLOSER LOOK
5-position terminal block connectors can be wired for balanced (differential) or unbalanced (single-ended) audio.



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 110 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 375, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

3 1/2" x 19" x 12" (8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 3 1/2" x 17 3/8" x 12" (8.9 cm x 44.2 cm x 30.5 cm)
- RU: 2

WEIGHT

Appx. 10 lbs (4.54 kg) per loaded enclosure

MTBF

92,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

COMPOSITE VIDEO

- Input Level (Max): ±2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 15 MHz or better (±1 dB)
- Crosstalk: <-60 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Connectors: 5T

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Stereo
Audio

Modula Pre-Engineered Matrix Switchers

Stereo Audio 5T Phoenix-style with Digital Volume Control

AVS-MD-0440-007	4x40 (3RU)	(FGP34-0440-007)
AVS-MD-0444-007	4x44 (3RU)	(FGP34-0444-007)
AVS-MD-0448-007	4x48 (3RU)	(FGP34-0448-007)
AVS-MD-0452-007	4x52 (3RU)	(FGP34-0452-007)
AVS-MD-0456-007	4x56 (3RU)	(FGP34-0456-007)
AVS-MD-0460-007	4x60 (3RU)	(FGP34-0460-007)
AVS-MD-0828-007	8x28 (3RU)	(FGP34-0828-007)
AVS-MD-0832-007	8x32 (3RU)	(FGP34-0832-007)
AVS-MD-0836-007	8x36 (3RU)	(FGP34-0836-007)
AVS-MD-0840-007	8x40 (3RU)	(FGP34-0840-007)
AVS-MD-0844-007	8x44 (3RU)	(FGP34-0844-007)
AVS-MD-0848-007	8x48 (3RU)	(FGP34-0848-007)
AVS-MD-0852-007	8x52 (3RU)	(FGP34-0852-007)
AVS-MD-0856-007	8x56 (3RU)	(FGP34-0856-007)
AVS-MD-1228-007	12x28 (3RU)	(FGP34-1228-007)
AVS-MD-1232-007	12x32 (3RU)	(FGP34-1232-007)
AVS-MD-1236-007	12x36 (3RU)	(FGP34-1236-007)
AVS-MD-1240-007	12x40 (3RU)	(FGP34-1240-007)
AVS-MD-1244-007	12x44 (3RU)	(FGP34-1244-007)
AVS-MD-1248-007	12x48 (3RU)	(FGP34-1248-007)
AVS-MD-1252-007	12x52 (3RU)	(FGP34-1252-007)
AVS-MD-1628-007	16x28 (3RU)	(FGP34-1628-007)
AVS-MD-1632-007	16x32 (3RU)	(FGP34-1632-007)
AVS-MD-1636-007	16x36 (3RU)	(FGP34-1636-007)
AVS-MD-1640-007	16x40 (3RU)	(FGP34-1640-007)
AVS-MD-1644-007	16x44 (3RU)	(FGP34-1644-007)
AVS-MD-1648-007	16x48 (3RU)	(FGP34-1648-007)
AVS-MD-2024-007	20x24 (3RU)	(FGP34-2024-007)
AVS-MD-2028-007	20x28 (3RU)	(FGP34-2028-007)
AVS-MD-2032-007	20x32 (3RU)	(FGP34-2032-007)
AVS-MD-2420-007	24x20 (3RU)	(FGP34-2420-007)
AVS-MD-2424-007	24x24 (3RU)	(FGP34-2424-007)
AVS-MD-2428-007	24x28 (3RU)	(FGP34-2428-007)
AVS-MD-2432-007	24x32 (3RU)	(FGP34-2432-007)
AVS-MD-2808-007	28x8 (3RU)	(FGP34-2808-007)
AVS-MD-2812-007	28x12 (3RU)	(FGP34-2812-007)
AVS-MD-2816-007	28x16 (3RU)	(FGP34-2816-007)
AVS-MD-2820-007	28x20 (3RU)	(FGP34-2820-007)
AVS-MD-2824-007	28x24 (3RU)	(FGP34-2824-007)
AVS-MD-2828-007	28x28 (3RU)	(FGP34-2828-007)
AVS-MD-2832-007	28x32 (3RU)	(FGP34-2832-007)
AVS-MD-3208-007	32x8 (3RU)	(FGP34-3208-007)
AVS-MD-3212-007	32x12 (3RU)	(FGP34-3212-007)
AVS-MD-3216-007	32x16 (3RU)	(FGP34-3216-007)
AVS-MD-3220-007	32x20 (3RU)	(FGP34-3220-007)
AVS-MD-3224-007	32x24 (3RU)	(FGP34-3224-007)
AVS-MD-3228-007	32x28 (3RU)	(FGP34-3228-007)
AVS-MD-3232-007	32x32 (3RU)	(FGP34-3232-007)
AVS-MD-3608-007	36x8 (3RU)	(FGP34-3608-007)
AVS-MD-3612-007	36x12 (3RU)	(FGP34-3612-007)
AVS-MD-3616-007	36x16 (3RU)	(FGP34-3616-007)
AVS-MD-4004-007	40x4 (3RU)	(FGP34-4004-007)
AVS-MD-4008-007	40x8 (3RU)	(FGP34-4008-007)
AVS-MD-4012-007	40x12 (3RU)	(FGP34-4012-007)
AVS-MD-4016-007	40x16 (3RU)	(FGP34-4016-007)
AVS-MD-4404-007	44x4 (3RU)	(FGP34-4404-007)
AVS-MD-4408-007	44x8 (3RU)	(FGP34-4408-007)
AVS-MD-4412-007	44x12 (3RU)	(FGP34-4412-007)
AVS-MD-4416-007	44x16 (3RU)	(FGP34-4416-007)
AVS-MD-4804-007	48x4 (3RU)	(FGP34-4804-007)
AVS-MD-4808-007	48x8 (3RU)	(FGP34-4808-007)
AVS-MD-4812-007	48x12 (3RU)	(FGP34-4812-007)
AVS-MD-4816-007	48x16 (3RU)	(FGP34-4816-007)
AVS-MD-5204-007	52x4 (3RU)	(FGP34-5204-007)
AVS-MD-5208-007	52x8 (3RU)	(FGP34-5208-007)
AVS-MD-5212-007	52x12 (3RU)	(FGP34-5212-007)
AVS-MD-5604-007	56x4 (3RU)	(FGP34-5604-007)
AVS-MD-5608-007	56x8 (3RU)	(FGP34-5608-007)
AVS-MD-6004-007	60x4 (3RU)	(FGP34-6004-007)

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OVERVIEW

Robust stereo audio matrix switcher featuring digital volume control on each output and digital input gain on each input.

COMMON APPLICATION

The Modula Stereo Audio Matrix Switcher is ideal for any place stereo audio is being distributed from multiple sources to multiple zones such as retail environment, museums and cruise ships.

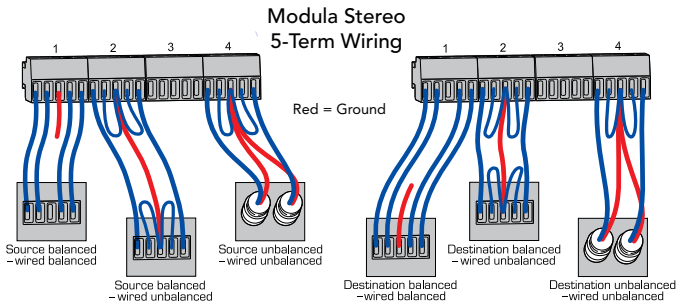
FEATURES

- Digital volume control on each output
- Audio connections support balanced and unbalanced audio
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

HELPFUL HINT
5-position terminal block connectors can be wired for balanced (differential) or unbalanced (single-ended) audio.



D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

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A CLOSER LOOK

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD AUDIO WITH DVC

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <± 0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.03% (20 Hz to 20 kHz) Vin = -10 to + 20 dBu
- Crosstalk: <-95 dB (1 kHz, Vin = +20 dBu)
- Signal to Noise Ratio: >100 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: -6 dB to +6 dB
- Output Gain Adj. Range: -10 to +6 dB
- Output Volume Adj. Range: +10 dB to -70 dBU (muted), via serial/control panel
- Connectors: 5T

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HD-SDI
Digital Video

Modula Pre-Engineered Matrix Switchers

HD-SDI Video with BNC

AVS-MD-1620-HD0	16x20 (3RU)	(FGP34-1620-HD0)
AVS-MD-1628-HD0	16x28 (3RU)	(FGP34-1628-HD0)
AVS-MD-2016-HD0	20x16 (3RU)	(FGP34-2016-HD0)
AVS-MD-2020-HD0	20x20 (3RU)	(FGP34-2020-HD0)
AVS-MD-2024-HD0	20x24 (3RU)	(FGP34-2024-HD0)
AVS-MD-2028-HD0	20x28 (3RU)	(FGP34-2028-HD0)
AVS-MD-2032-HD0	20x32 (3RU)	(FGP34-2032-HD0)
AVS-MD-3216-HD0	32x16 (3RU)	(FGP34-3216-HD0)
AVS-MD-3220-HD0	32x20 (3RU)	(FGP34-3220-HD0)
AVS-MD-3224-HD0	32x24 (3RU)	(FGP34-3224-HD0)
AVS-MD-3228-HD0	32x28 (3RU)	(FGP34-3228-HD0)
AVS-MD-3232-HD0	32x32 (3RU)	(FGP34-3232-HD0)

OVERVIEW

The Modula HD-SDI Matrix Switchers provide high-quality routing in a very economical footprint. The Modula HD-SDI Interface Board automatically configures each input to perfectly replicate all standard SMTPE 292M (1.485 Gbit/s), 259M (143/270/360 Mb/s) and 344M (540 Mbit/s) frame rates and clocking speeds to any and or all output signals. It is capable of passing embedded audio, metadata or any additional ancillary data included in the video stream.

COMMON APPLICATION

The Modula HD-SDI is ideal for installations such as broadcast, post-production or medical that use HD-SDI cameras, playback equipment or other sources.

FEATURES

- Conforms to HD-SDI SMPTE standards including SMPTE-259M, SMPTE-292M, SMPTE-344M, and SMPTE-372M
- HD-SDI systems / boards can also route SD-SDI
- HD-SDI boards support CDR (Clock Data Recovery)
- HD-SDI boards provide cable equalization up to 140m
- 2 Standard RS-232 control ports supports BCS commands
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Local and global presets

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

TRAINING AVAILABLE
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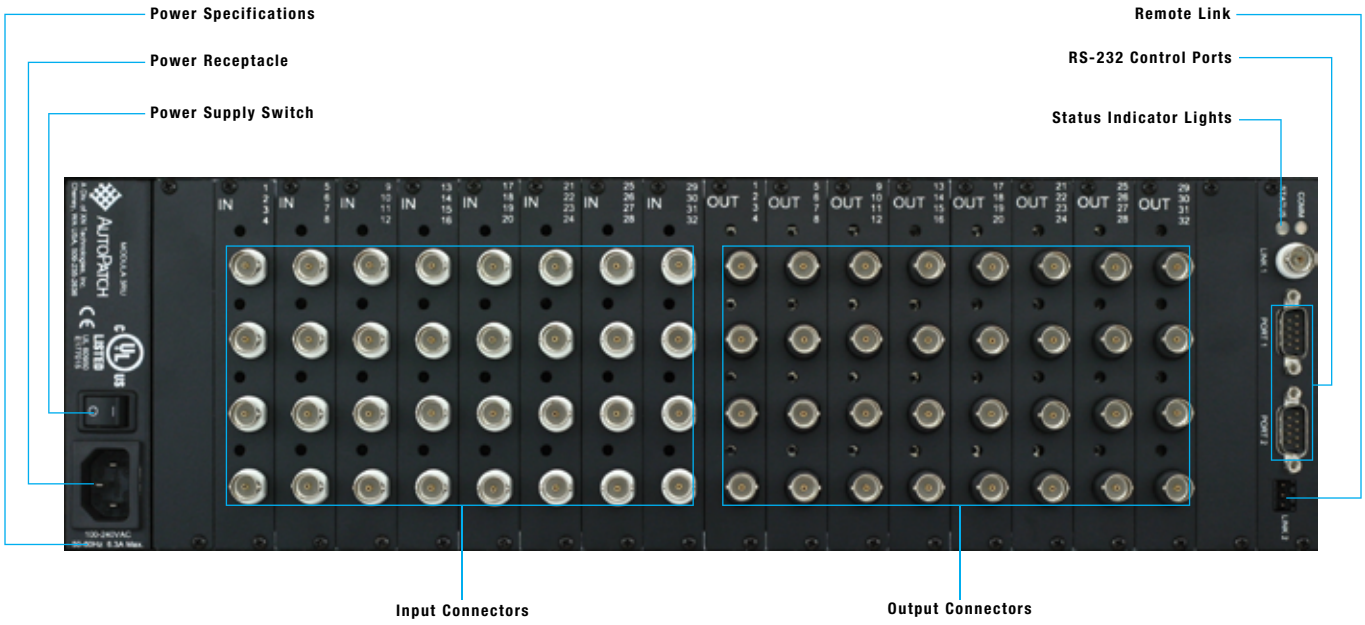
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

HD-SDI VIDEO (BNC)

- HD-SDI : Conforms to SMPTE-259M, SMPTE-292M, SMPTE-344M
- Input Level (Max): 0.8 Vpp ±10%
- Input Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp ±10%
- Output Impedance: 75 Ohms
- Timing Jitter: <0.2 UI @ 1.485 Gbps
- Alignment Jitter: <0.1 UI @ 1.485 Gbps
- Bit Rate: 143 Mbps, 177 Mbps*, 270 Mbps, 360 Mbps, 540 Mbps*, 1.485 Gbps (*Data not available for 177 & 540 Mbps bit rate)
- Data Type: 8 bit or 10 bit
- Auto Cable Equalization: Up to 140m of Belden 1694A or equivalent @ 1.485 Gbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC

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SD-SDI
Digital Video

Modula Pre-Engineered Matrix Switchers

SD-SDI Video with BNC

AVS-MD-1620-9D0	16x20 (3RU)	(FGP34-1620-9D0)
AVS-MD-1628-9D0	16x28 (3RU)	(FGP34-1628-9D0)
AVS-MD-2016-9D0	20x16 (3RU)	(FGP34-2016-9D0)
AVS-MD-2020-9D0	20x20 (3RU)	(FGP34-2020-9D0)
AVS-MD-2024-9D0	20x24 (3RU)	(FGP34-2024-9D0)
AVS-MD-2028-9D0	20x28 (3RU)	(FGP34-2028-9D0)
AVS-MD-2032-9D0	20x32 (3RU)	(FGP34-2032-9D0)
AVS-MD-3216-9D0	32x16 (3RU)	(FGP34-3216-9D0)
AVS-MD-3220-9D0	32x20 (3RU)	(FGP34-3220-9D0)
AVS-MD-3224-9D0	32x24 (3RU)	(FGP34-3224-9D0)
AVS-MD-3228-9D0	32x28 (3RU)	(FGP34-3228-9D0)
AVS-MD-3232-9D0	32x32 (3RU)	(FGP34-3232-9D0)

OVERVIEW

The Modula SD-SDI Standard Definition Serial Digital Interface (SD-SDI) passes high quality digital video with ease. Conforming to broadcast standards SMPTE-259M, SMPTE-344M; this matrix switcher is ideal for standard definition digital video in any environment.

COMMON APPLICATION

The most common usage of the Modula SD-SDI Matrix Switcher is to route multiple digital video cameras such as in medical and broadcast facilities.

FEATURES

- Conforms to SD-SDI SMPTE standards including SMPTE-259M, and SMPTE-344M
- SD-SDI boards support CDR (Clock Data Recovery)
- SD-SDI boards provide cable equalization up to 350m
- 2 Standard RS-232 control ports support BCS commands
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local and global presets

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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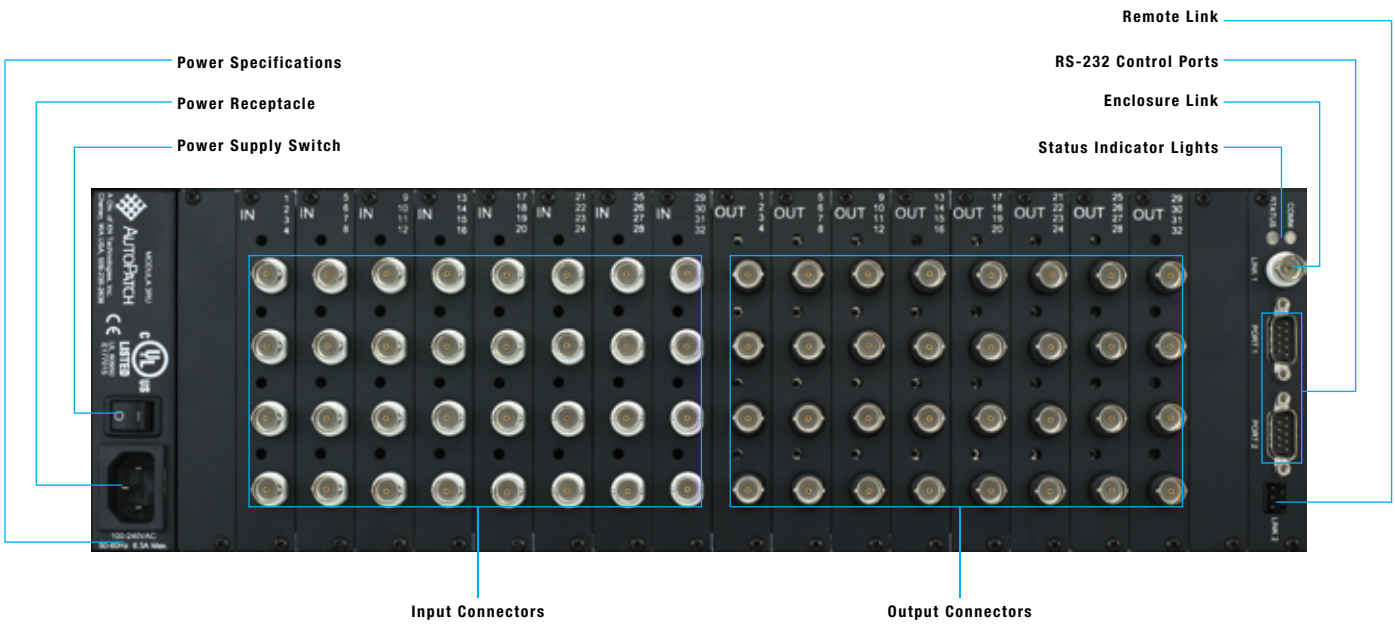
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

SD-SDI VIDEO (BNC)

- SD-SDI : Conforms to SMPTE-259M, SMPTE-344M
- Input Level (Max): 0.8 Vpp ±10%
- Input Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp ±10%
- Output Impedance: 75 Ohms
- Timing Jitter: <0.1 UI @ 360 Mbps
- Alignment Jitter: <0.1 UI @ 360 Mbps
- Rise and Fall Time: 600 ps, ±100 ps
- Bit Rate: 143 Mbps, 177 Mbps*, 270 Mbps, 360 Mbps, 540 Mbps* (*Data not available for 177 & 540 Mbps bit rate)
- Data Type: 8 bit or 10 bit
- Auto Cable Equalization: Up to 350m of Belden 8281 or equivalent @ 270 Mbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC

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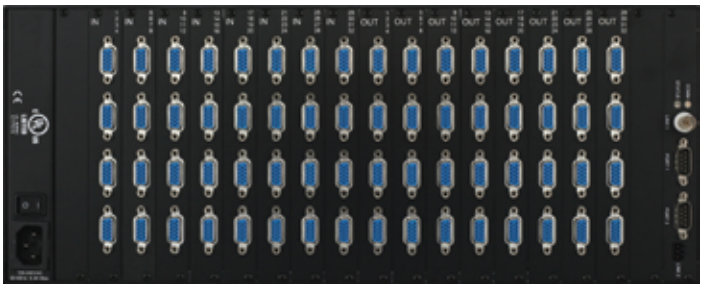
RGBHV
Video

Modula Pre-Engineered Matrix Switcher

RGBHV Video with HD-15



AVS-MD-0820-840	8x20 (4RU)	(FGP34-0820-840)
AVS-MD-0824-840	8x24 (4RU)	(FGP34-0824-840)
AVS-MD-0828-840	8x28 (4RU)	(FGP34-0828-840)
AVS-MD-0832-840	8x32 (4RU)	(FGP34-0832-840)
AVS-MD-1220-840	12x20 (4RU)	(FGP34-1220-840)
AVS-MD-1224-840	12x24 (4RU)	(FGP34-1224-840)
AVS-MD-1228-840	12x28 (4RU)	(FGP34-1228-840)
AVS-MD-1232-840	12x32 (4RU)	(FGP34-1232-840)
AVS-MD-1620-840	16x20 (4RU)	(FGP34-1620-840)
AVS-MD-1624-840	16x24 (4RU)	(FGP34-1624-840)
AVS-MD-1628-840	16x28 (4RU)	(FGP34-1628-840)
AVS-MD-1632-840	16x32 (4RU)	(FGP34-1632-840)
AVS-MD-2004-840	20x4 (4RU)	(FGP34-2004-840)
AVS-MD-2008-840	20x8 (4RU)	(FGP34-2008-840)
AVS-MD-2012-840	20x12 (4RU)	(FGP34-2012-840)
AVS-MD-2016-840	20x16 (4RU)	(FGP34-2016-840)
AVS-MD-2020-840	20x20 (4RU)	(FGP34-2020-840)
AVS-MD-2024-840	20x24 (4RU)	(FGP34-2024-840)
AVS-MD-2028-840	20x28 (4RU)	(FGP34-2028-840)
AVS-MD-2032-840	20x32 (4RU)	(FGP34-2032-840)
AVS-MD-2404-840	24x4 (4RU)	(FGP34-2404-840)
AVS-MD-2408-840	24x8 (4RU)	(FGP34-2408-840)
AVS-MD-2412-840	24x12 (4RU)	(FGP34-2412-840)
AVS-MD-2416-840	24x16 (4RU)	(FGP34-2416-840)
AVS-MD-2420-840	24x20 (4RU)	(FGP34-2420-840)
AVS-MD-2424-840	24x24 (4RU)	(FGP34-2424-840)
AVS-MD-2428-840	24x28 (4RU)	(FGP34-2428-840)
AVS-MD-2432-840	24x32 (4RU)	(FGP34-2432-840)
AVS-MD-2804-840	28x4 (4RU)	(FGP34-2804-840)
AVS-MD-2808-840	28x8 (4RU)	(FGP34-2808-840)
AVS-MD-2812-840	28x12 (4RU)	(FGP34-2812-840)
AVS-MD-2816-840	28x16 (4RU)	(FGP34-2816-840)
AVS-MD-2820-840	28x20 (4RU)	(FGP34-2820-840)
AVS-MD-2824-840	28x24 (4RU)	(FGP34-2824-840)
AVS-MD-2828-840	28x28 (4RU)	(FGP34-2828-840)
AVS-MD-2832-840	28x32 (4RU)	(FGP34-2832-840)
AVS-MD-3204-840	32x4 (4RU)	(FGP34-3204-840)
AVS-MD-3208-840	32x8 (4RU)	(FGP34-3208-840)
AVS-MD-3212-840	32x12 (4RU)	(FGP34-3212-840)
AVS-MD-3216-840	32x16 (4RU)	(FGP34-3216-840)
AVS-MD-3220-840	32x20 (4RU)	(FGP34-3220-840)
AVS-MD-3224-840	32x24 (4RU)	(FGP34-3224-840)
AVS-MD-3228-840	32x28 (4RU)	(FGP34-3228-840)
AVS-MD-3232-840	32x32 (4RU)	(FGP34-3232-840)

OVERVIEW

The Modula RGBHV Matrix Switcher is already a trusted cornerstone in thousands of mission-critical installations worldwide. This robust professional RGBHV video matrix switcher featuring HD-15 connections is capable of passing high resolution computer video, in a fully loaded state, while maintaining our industry leading Ultra-Flat bandpass measured at a tight ±3 dB.

COMMON APPLICATION

Command and control, large educational facilities, digital signage applications, stadiums and arenas are just a few of the installations where the Modula RGBHV Matrix Switchers provide the ideal solution for connecting multiple computers or other RGBHV video sources (often located in different rooms) throughout a facility with ease.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Superior video crosstalk specifications ensure signal isolation and security
- PureSync™ Technology guarantees the quickest possible rise time of the sync signals leading edge, eliminating the possibility of video loss at the display
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

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BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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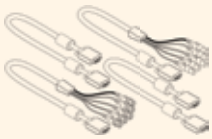
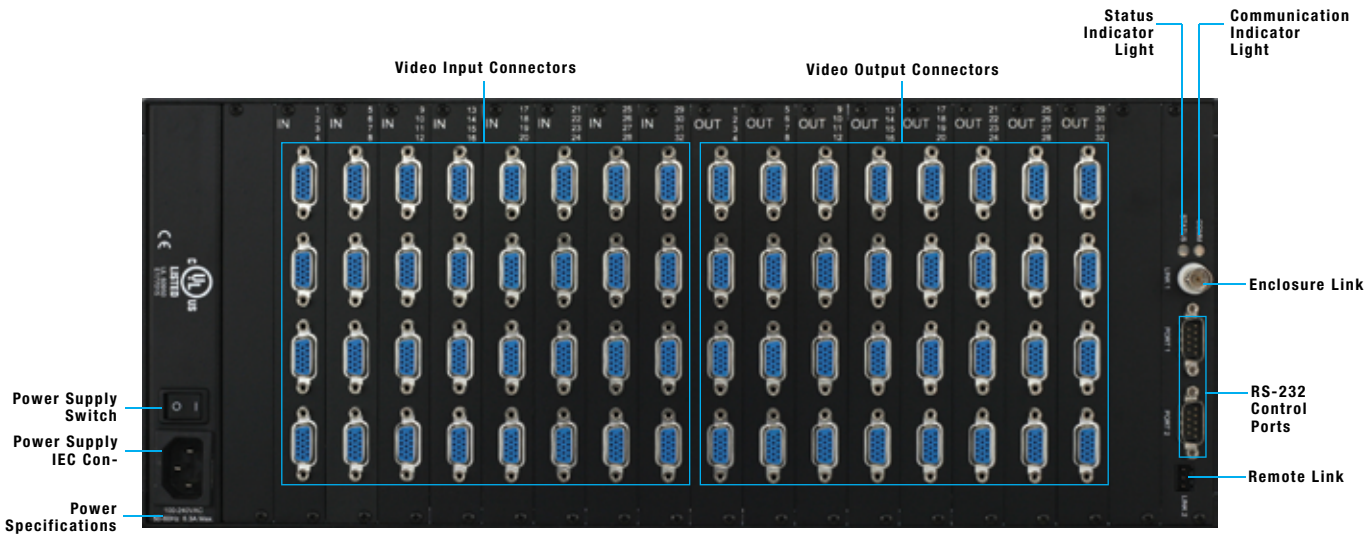
HELPFUL HINT
AMX breakout cables allow for easy integration of sources or destinations with BNC connections in the HD-15 format



PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

A CLOSER LOOK



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 105 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 358, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

7.0" x 19" x 17" (17.8 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 7.0" x 17 3/8" x 17" (17.8 cm x 44.2 cm x 43.2 cm)
- RU: 4

WEIGHT

Appx. 22-24 lbs (9.98-10.88 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

WIDEBAND VIDEO (HD-15)

- Input Level (Max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Frequency Response: 300 MHz or better (±3 dB),
- Crosstalk:
  - <-50 dB (f = 5 MHz)
  - <-30 dB (f = 150 MHz)
- Signal to Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Sync Input/Output Level: TTL
- Connector: HD-15

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Stereo | RGBHV
Audio • Video

Modula Pre-Engineered Matrix Switchers

RGBHV Video with HD-15, Stereo Audio 5T Phoenix-style with Digital Volume Control

AVS-MD-0820-847	8x20 (7RU)	(FGP34-0820-847)
AVS-MD-0824-847	8x24 (7RU)	(FGP34-0824-847)
AVS-MD-0828-847	8x28 (7RU)	(FGP34-0828-847)
AVS-MD-0832-847	8x32 (7RU)	(FGP34-0832-847)
AVS-MD-1220-847	12x20 (7RU)	(FGP34-1220-847)
AVS-MD-1224-847	12x24 (7RU)	(FGP34-1224-847)
AVS-MD-1228-847	12x28 (7RU)	(FGP34-1228-847)
AVS-MD-1232-847	12x32 (7RU)	(FGP34-1232-847)
AVS-MD-1620-847	16x20 (7RU)	(FGP34-1620-847)
AVS-MD-1624-847	16x24 (7RU)	(FGP34-1624-847)
AVS-MD-1628-847	16x28 (7RU)	(FGP34-1628-847)
AVS-MD-1632-847	16x32 (7RU)	(FGP34-1632-847)
AVS-MD-2004-847	20x4 (7RU)	(FGP34-2004-847)
AVS-MD-2008-847	20x8 (7RU)	(FGP34-2008-847)
AVS-MD-2012-847	20x12 (7RU)	(FGP34-2012-847)
AVS-MD-2016-847	20x16 (7RU)	(FGP34-2016-847)
AVS-MD-2020-847	20x20 (7RU)	(FGP34-2020-847)
AVS-MD-2024-847	20x24 (7RU)	(FGP34-2024-847)
AVS-MD-2028-847	20x28 (7RU)	(FGP34-2028-847)
AVS-MD-2032-847	20x32 (7RU)	(FGP34-2032-847)
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AVS-MD-2428-847	24x28 (7RU)	(FGP34-2428-847)
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AVS-MD-2820-847	28x20 (7RU)	(FGP34-2820-847)
AVS-MD-2824-847	28x24 (7RU)	(FGP34-2824-847)
AVS-MD-2828-847	28x28 (7RU)	(FGP34-2828-847)
AVS-MD-2832-847	28x32 (7RU)	(FGP34-2832-847)
AVS-MD-3204-847	32x4 (7RU)	(FGP34-3204-847)
AVS-MD-3208-847	32x8 (7RU)	(FGP34-3208-847)
AVS-MD-3212-847	32x12 (7RU)	(FGP34-3212-847)
AVS-MD-3216-847	32x16 (7RU)	(FGP34-3216-847)
AVS-MD-3220-847	32x20 (7RU)	(FGP34-3220-847)
AVS-MD-3224-847	32x24 (7RU)	(FGP34-3224-847)
AVS-MD-3228-847	32x28 (7RU)	(FGP34-3228-847)
AVS-MD-3232-847	32x32 (7RU)	(FGP34-3232-847)

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OVERVIEW

The Modula RGBHV Matrix Switcher is already a trusted cornerstone in thousands of mission-critical installations worldwide. This robust professional RGBHV video matrix switcher featuring HD-15 connections is capable of passing high resolution computer video, in a fully loaded state, while maintaining our industry leading Ultra-Flat bandpass measured at a tight ±3 dB.

COMMON APPLICATION

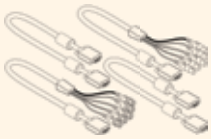
Command and control, large educational facilities, digital signage applications, stadiums and arenas are just a few of the installations where the Modula RGBHV Matrix Switchers provide the ideal solution for connecting multiple computers or other RGBHV video sources (often located in different rooms) throughout a facility with ease.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Digital volume control on each output
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
AMX breakout cables allow for easy integration of sources or destinations with BNC connections in the HD-15 format



TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

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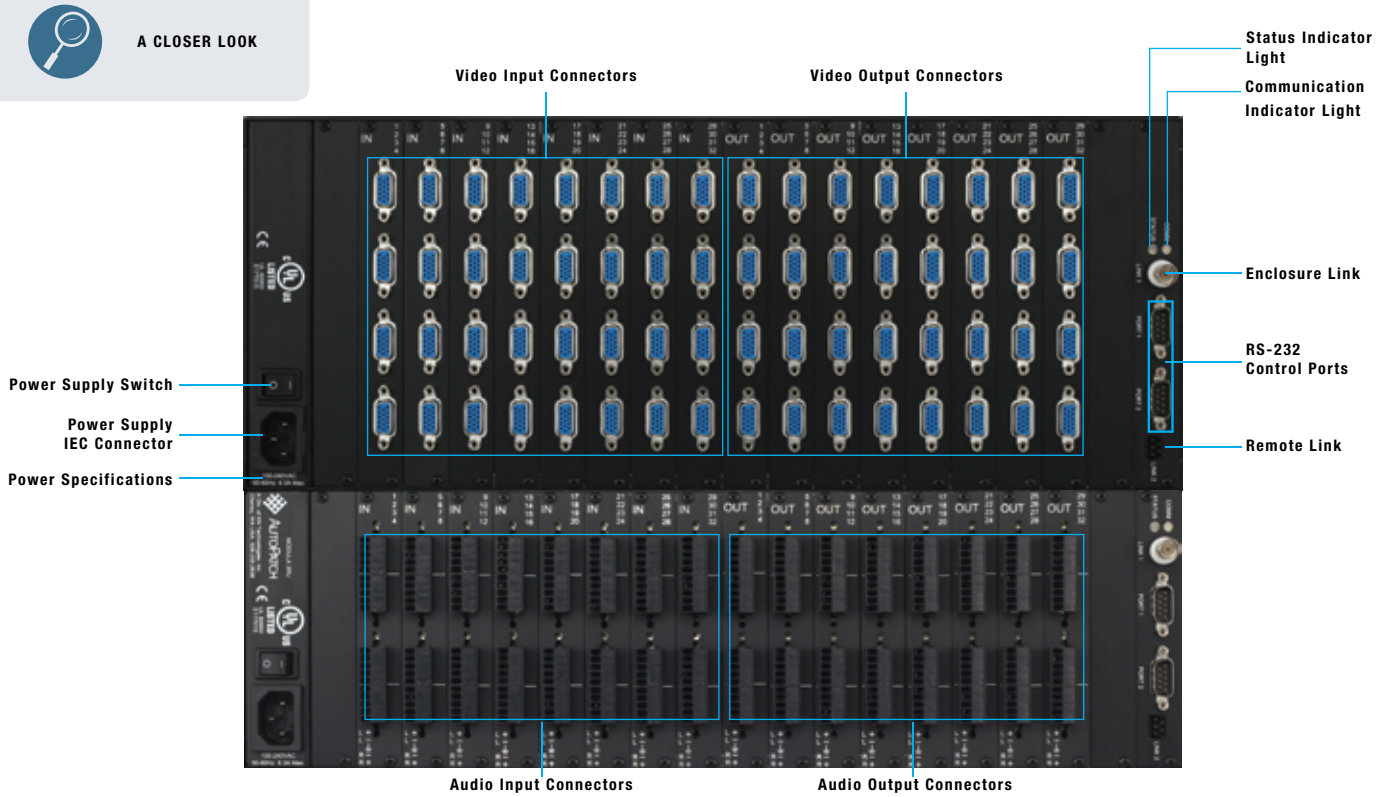
A CLOSER LOOK



SPECIFICATIONS

Most RGBHV HD-15 systems are made up of 1- 4 RU enclosure and 1- 3 RU enclosure

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption 4 RU (Typ): 105 Watts, fully loaded enclosure
- Power Consumption 3 RU(Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr 4 RU (Typ): 358, fully loaded enclosure
- BTU/hr 3 RU (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

- 4 RU: 7.0" x 19" x 17" (17.8 cm x 48.3 cm x 43.2 cm)
- 3 RU: 5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 4 RU: 7.0" x 17 3/8" x 17" (17.8 cm x 44.2 cm x 43.2 cm)
- 3 RU: 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)

WEIGHT

- 4 RU: Appx. 22-24 lbs (9.98-10.88 kg) per loaded enclosure
- 3 RU: Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

WIDEBAND VIDEO

- Input Level (max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Frequency Response: 300 MHz or better (±3 dB)
- Crosstalk:
  - <-50 dB (f = 5 MHz)
  - <-30 dB (f = 150 MHz)
- Signal to Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Sync Input / Output Level: TTL
- Connections: HD-15

STEREO AUDIO WITH DVC

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <± 0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.05% (1 kHz) Vin = -10 to +20 dBu)
- Crosstalk: <-92 dB (1 kHz, Vin = +20 dBu)
- Signal to Noise Ratio: >100 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: -6 to +6 dB
- Output Gain Adj. Range: -10 to +6 dB
- Output Volume Adj. Range: +10 dB to -70 dB (muted), via serial/control panel
- Connectors: 5T

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RGBHV
Video

Modula Pre-Engineered Matrix Switchers

RGBHV Video with BNC

AVS-MD-0440-540	4x40 (15RU)	(FGP34-0440-540)
AVS-MD-0444-540	4x44 (15RU)	(FGP34-0444-540)
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AVS-MD-0456-540	4x56 (15RU)	(FGP34-0456-540)
AVS-MD-0460-540	4x60 (15RU)	(FGP34-0460-540)
AVS-MD-0828-540	8x28 (15RU)	(FGP34-0828-540)
AVS-MD-0832-540	8x32 (15RU)	(FGP34-0832-540)
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AVS-MD-0848-540	8x48 (15RU)	(FGP34-0848-540)
AVS-MD-0852-540	8x52 (15RU)	(FGP34-0852-540)
AVS-MD-0856-540	8x56 (15RU)	(FGP34-0856-540)
AVS-MD-1228-540	12x28 (15RU)	(FGP34-1228-540)
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AVS-MD-1252-540	12x52 (15RU)	(FGP34-1252-540)
AVS-MD-1628-540	16x28 (15RU)	(FGP34-1628-540)
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AVS-MD-2024-540	20x24 (15RU)	(FGP34-2024-540)
AVS-MD-2028-540	20x28 (15RU)	(FGP34-2028-540)
AVS-MD-2032-540	20x32 (15RU)	(FGP34-2032-540)
AVS-MD-2420-540	24x20 (15RU)	(FGP34-2420-540)
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AVS-MD-2808-540	28x8 (15RU)	(FGP34-2808-540)
AVS-MD-2812-540	28x12 (15RU)	(FGP34-2812-540)
AVS-MD-2816-540	28x16 (15RU)	(FGP34-2816-540)
AVS-MD-2820-540	28x20 (15RU)	(FGP34-2820-540)
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AVS-MD-2832-540	28x32 (15RU)	(FGP34-2832-540)
AVS-MD-3208-540	32x8 (15RU)	(FGP34-3208-540)
AVS-MD-3212-540	32x12 (15RU)	(FGP34-3212-540)
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AVS-MD-3224-540	32x24 (15RU)	(FGP34-3224-540)
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AVS-MD-3232-540	32x32 (15RU)	(FGP34-3232-540)
AVS-MD-3608-540	36x8 (15RU)	(FGP34-3608-540)
AVS-MD-3612-540	36x12 (15RU)	(FGP34-3612-540)
AVS-MD-3616-540	36x16 (15RU)	(FGP34-3616-540)
AVS-MD-4004-540	40x4 (15RU)	(FGP34-4004-540)
AVS-MD-4008-540	40x8 (15RU)	(FGP34-4008-540)
AVS-MD-4012-540	40x12 (15RU)	(FGP34-4012-540)
AVS-MD-4016-540	40x16 (15RU)	(FGP34-4016-540)
AVS-MD-4404-540	44x4 (15RU)	(FGP34-4404-540)
AVS-MD-4408-540	44x8 (15RU)	(FGP34-4408-540)
AVS-MD-4412-540	44x12 (15RU)	(FGP34-4412-540)
AVS-MD-4416-540	44x16 (15RU)	(FGP34-4416-540)
AVS-MD-4804-540	48x4 (15RU)	(FGP34-4804-540)
AVS-MD-4808-540	48x8 (15RU)	(FGP34-4808-540)
AVS-MD-4812-540	48x12 (15RU)	(FGP34-4812-540)
AVS-MD-4816-540	48x16 (15RU)	(FGP34-4816-540)
AVS-MD-5204-540	52x4 (15RU)	(FGP34-5204-540)
AVS-MD-5208-540	52x8 (15RU)	(FGP34-5208-540)
AVS-MD-5212-540	52x12 (15RU)	(FGP34-5212-540)
AVS-MD-5604-540	56x4 (15RU)	(FGP34-5604-540)
AVS-MD-5608-540	56x8 (15RU)	(FGP34-5608-540)
AVS-MD-6004-540	60x4 (15RU)	(FGP34-6004-540)

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OVERVIEW

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FEATURES

- Ultra-flat response measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
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HELPFUL HINT
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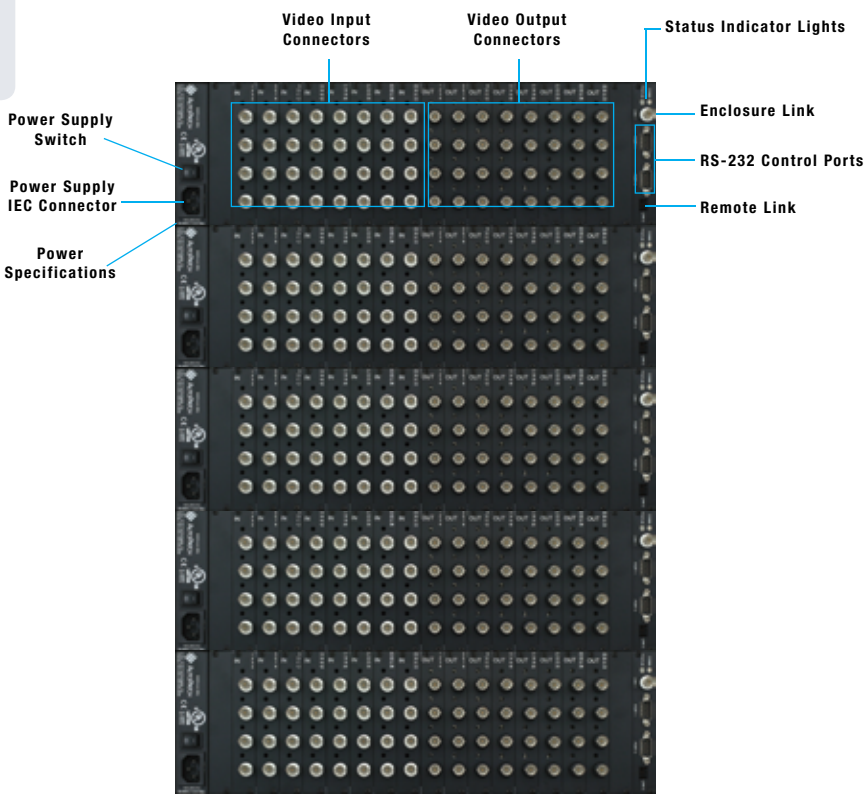

SPECIFICATIONS

This model contains 5 enclosures and occupies 15 RU. Specifications listed below are for individual enclosures.

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3//8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

WIDEBAND VIDEO (BNC)

- Input Level (Max): ±1.75 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.75 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 200 MHz or better (±1.5 dB)
  - 60 MHz or better (±1 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-30 dB (f = 150 MHz)
- Signal to Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Sync Input/Output Level: TTL
- Connectors: BNC

SYNC (BNC)

- Input Level: 0 V to +5 V
- Output Level: 0 V to +5 V
- Sync Polarity: Output follows Input
- Connectors: BNC

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Stereo | RGBHV
Audio • Video

Modula Pre-Engineered Matrix Switchers

RGBHV Video with BNC
Stereo Audio 5T Phoenix-style with Digital Volume Control

AVS-MD-0440-547	4x40 (18RU)	(FGP34-0440-547)
AVS-MD-0444-547	4x44 (18RU)	(FGP34-0444-547)
AVS-MD-0448-547	4x48 (18RU)	(FGP34-0448-547)
AVS-MD-0452-547	4x52 (18RU)	(FGP34-0452-547)
AVS-MD-0456-547	4x56 (18RU)	(FGP34-0456-547)
AVS-MD-0460-547	4x60 (18RU)	(FGP34-0460-547)
AVS-MD-0828-547	8x28 (18RU)	(FGP34-0828-547)
AVS-MD-0832-547	8x32 (18RU)	(FGP34-0832-547)
AVS-MD-0836-547	8x36 (18RU)	(FGP34-0836-547)
AVS-MD-0840-547	8x40 (18RU)	(FGP34-0840-547)
AVS-MD-0844-547	8x44 (18RU)	(FGP34-0844-547)
AVS-MD-0848-547	8x48 (18RU)	(FGP34-0848-547)
AVS-MD-0852-547	8x52 (18RU)	(FGP34-0852-547)
AVS-MD-0856-547	8x56 (18RU)	(FGP34-0856-547)
AVS-MD-1228-547	12x28 (18RU)	(FGP34-1228-547)
AVS-MD-1232-547	12x32 (18RU)	(FGP34-1232-547)
AVS-MD-1236-547	12x36 (18RU)	(FGP34-1236-547)
AVS-MD-1240-547	12x40 (18RU)	(FGP34-1240-547)
AVS-MD-1244-547	12x44 (18RU)	(FGP34-1244-547)
AVS-MD-1248-547	12x48 (18RU)	(FGP34-1248-547)
AVS-MD-1252-547	12x52 (18RU)	(FGP34-1252-547)
AVS-MD-1628-547	16x28 (18RU)	(FGP34-1628-547)
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AVS-MD-1648-547	16x48 (18RU)	(FGP34-1648-547)
AVS-MD-2024-547	20x24 (18RU)	(FGP34-2024-547)
AVS-MD-2028-547	20x28 (18RU)	(FGP34-2028-547)
AVS-MD-2032-547	20x32 (18RU)	(FGP34-2032-547)
AVS-MD-2420-547	24x20 (18RU)	(FGP34-2420-547)
AVS-MD-2424-547	24x24 (18RU)	(FGP34-2424-547)
AVS-MD-2428-547	24x28 (18RU)	(FGP34-2428-547)
AVS-MD-2432-547	24x32 (18RU)	(FGP34-2432-547)
AVS-MD-2808-547	28x8 (18RU)	(FGP34-2808-547)
AVS-MD-2812-547	28x12 (18RU)	(FGP34-2812-547)
AVS-MD-2816-547	28x16 (18RU)	(FGP34-2816-547)
AVS-MD-2820-547	28x20 (18RU)	(FGP34-2820-547)
AVS-MD-2824-547	28x24 (18RU)	(FGP34-2824-547)
AVS-MD-2828-547	28x28 (18RU)	(FGP34-2828-547)
AVS-MD-2832-547	28x32 (18RU)	(FGP34-2832-547)
AVS-MD-3208-547	32x8 (18RU)	(FGP34-3208-547)
AVS-MD-3212-547	32x12 (18RU)	(FGP34-3212-547)
AVS-MD-3216-547	32x16 (18RU)	(FGP34-3216-547)
AVS-MD-3220-547	32x20 (18RU)	(FGP34-3220-547)
AVS-MD-3224-547	32x24 (18RU)	(FGP34-3224-547)
AVS-MD-3228-547	32x28 (18RU)	(FGP34-3228-547)
AVS-MD-3232-547	32x32 (18RU)	(FGP34-3232-547)
AVS-MD-3608-547	36x8 (18RU)	(FGP34-3608-547)
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AVS-MD-4016-547	40x16 (18RU)	(FGP34-4016-547)
AVS-MD-4404-547	44x4 (18RU)	(FGP34-4404-547)
AVS-MD-4408-547	44x8 (18RU)	(FGP34-4408-547)
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AVS-MD-4816-547	48x16 (18RU)	(FGP34-4816-547)
AVS-MD-5204-547	52x4 (18RU)	(FGP34-5204-547)
AVS-MD-5208-547	52x8 (18RU)	(FGP34-5208-547)
AVS-MD-5212-547	52x12 (18RU)	(FGP34-5212-547)
AVS-MD-5604-547	56x4 (18RU)	(FGP34-5604-547)
AVS-MD-5608-547	56x8 (18RU)	(FGP34-5608-547)
AVS-MD-6004-547	60x4 (18RU)	(FGP34-6004-547)

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COMMON APPLICATION

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FEATURES

- Ultra-flat response measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
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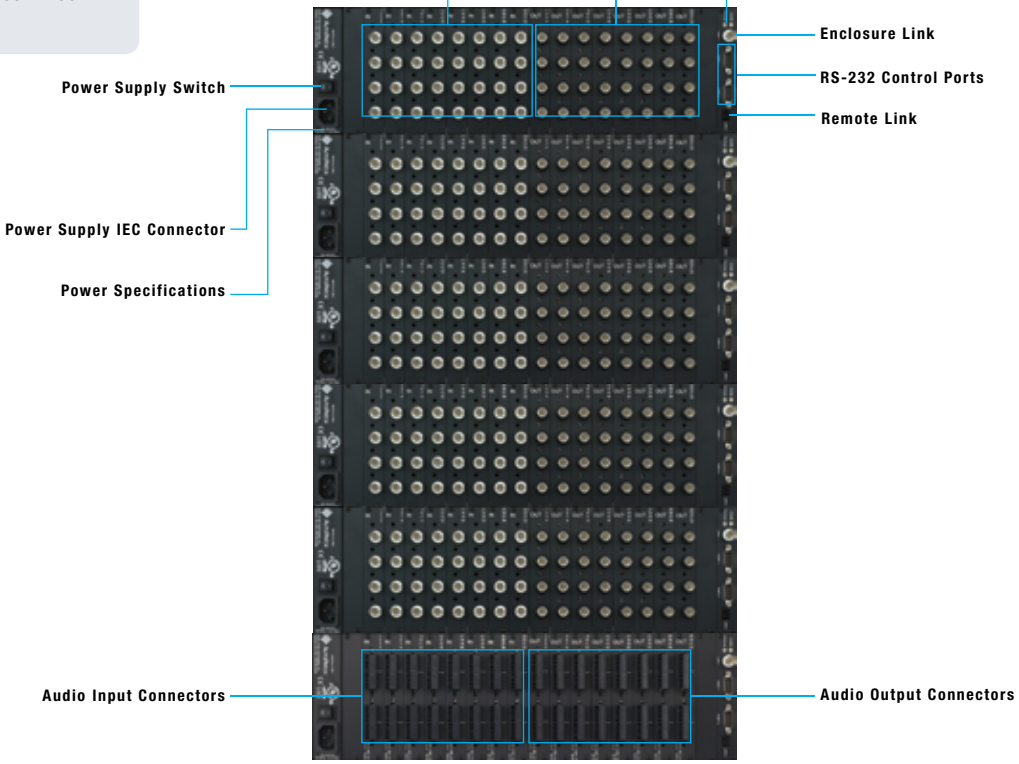
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

WIDEBAND VIDEO (BNC)

- Input Level (Max): ±1.75 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.75 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 200 MHz or better (±1.5 dB)
  - 60 MHz or better (±1 dB)
- Crosstalk
  - <-60 dB (f = 5 MHz)
  - <-30 dB (f = 150 MHz)
- Signal to Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Sync Input/Output Level: TTL
- Connectors: BNC

SYNC (BNC)

- Input Level: 0 V to +5 V
- Output Level: 0 V to +5 V
- Sync Polarity: Output follows Input
- Connectors: BNC

STANDARD AUDIO WITH DVC

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <± 0.1 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz) Vin = -10 to + 20 dBu
  - <0.05% (1 kHz) Vin = -10 to + 20 dBu, stereo volume control in a WB cage
- Crosstalk: <-95 dB (1 kHz, Vin = +20 dBu)
- Signal to Noise Ratio: >100 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: -6 dB to +6 dB
- Output Gain Adj. Range: -10 to +6 dB
- Output Volume Adj. Range: +10 dB to -70 dBU (muted), via serial/control panel
- Connector Options: 5T

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Stereo | RGBHV
Audio ▪ Video

Modula CatPro

Pre-Engineered Matrix Switchers RGBHV (HD-15) and Stereo, Phoenix-style to CatPro (RJ-45)

AVS-MD-BLBL-PRO	32x32(4RU)	(FGP34-BLBL-PRO)
AVS-MD-BLGB-PRO	32x16(4RU)	(FGP34-BLGB-PRO)
AVS-MD-GBBL-PRO	16x32(4RU)	(FGP34-GBBL-PRO)
AVS-MD-DGDG-PRO	8+16x8+16(4RU)	(FGP34-DGDG-PRO)
AVS-MD-DDDD-PRO	8+8x8+8(4RU)	(FGP34-DDDD-PRO)

OVERVIEW

The Modula CatPro Series was designed to receive, route, and transmit uncompressed RGBHV + stereo over twisted pair without worrying about exact cable measurements or readjusting gain, peak, and skew when routing signal paths of various lengths. Once your system is set up, there is no need to readjust when switching between sources and devices that have different distance runs. Our intuitive CatPro Software Wizard allows for simple adjustment of gain, peak and skew on every Cat5 input received. This brings all signals back to a distance of zero -- ready to be sent to any destination device without the hassle of readjustment. Pair the Modula CatPro with the AutoPatch CatPro Transmitter/Receiver boxes for the ultimate flexibility when combining local and/ or long distance source devices with local and/or long distance destination devices.

COMMON APPLICATION

Perfect for a number of commercial applications including schools, universities, hospitals and presentation facilities that need to receive, route and transmit uncompressed RGBHV + stereo signals over twisted pair with distances of up to 1,000 feet.

FEATURES

- Integrated CatPro Technology to receive, route and transmit RGBHV and stereo over twisted pair
- Transmit high-resolution RGBHV / 1600x1200 (4:3) and 1920x1080p (16:9) @ 60 Hz up to 1000 feet over twisted pair
- CatPro Wizard provides a quick and easy software application for gain, peak and skew adjustments on each CatPro (RJ-45) RX board
- Intuitive gain, peak and skew adjustments at the touch of a button at each destination via CatPro RX
- 2 Standard RS-232 control ports
- Free upgrade to a lifetime warranty
- Superior video crosstalk specifications ensure signal isolation and security
- Local and global presets

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
Make precise gain, peak and skew adjustments in seconds. Each receiver features a simple dial, and LED indicator for simple skew adjustments. A push of the dial and the LED illuminates with the color activated for adjustment (red, green, or blue). And, white indicates stereo audio volume control. Gain and peak adjustments are also simple via external potentiometers.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

CatPro
Integrated CatPro Technology brings professional audiovisual quality and twisted pair together by transmitting RGBHV at resolutions up to 1600x1200, providing intuitive digital gain, peak and skew adjustments at every receipt point within the system (up to 62 ns in 2 ns increments), while including true left / right stereo audio on the same cable.

D-TOOLS CERTIFIED PRODUCT
This product can be found in the D-Tools manufacturer product database and specified as a third party device when building and proposing a system using D-Tools System Integrator software.

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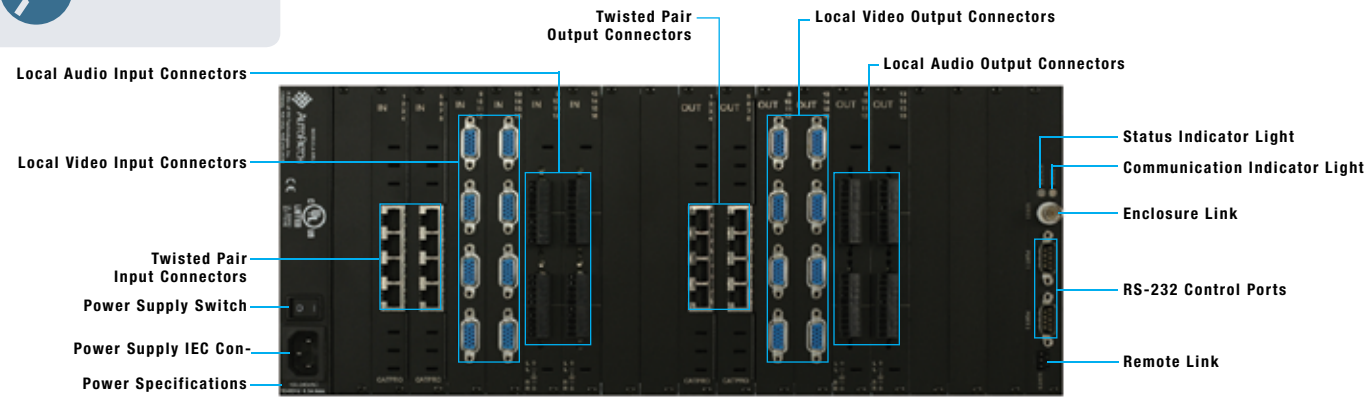
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC 50-60 Hz
- Power Consumption (Max): 520 Watts
- Power Consumption (Typ): 255 Watts, fully loaded enclosure
- BTU/hr (Max): 1774
- BTU/hr (Typ): 870, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

7" x 19" x 17" (17.8 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 7" x 17 3/8" x 17" (17.8 cm x 44.2 cm x 43.2 cm)
- RU: 4

WEIGHT

Appx 22-24 lbs (9.98-10.88 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

CATPRO RGBHV + STEREO (RJ-45)

- Signal Types: RGBHV + stereo audio. All specs are defined for use in conjunction with a CatPro Transmitter and Receiver
- Maximum Resolution: 1600x1200 (4:3) and 1920x1080p (16:9) @ 60 Hz up to 1000 ft. Overall transmission distance including input and output cannot exceed 1000 ft. from source to destination.
- RGB In Signal Level Range (Max): +0.75 V to -0.3 V Typ (terminated, user adjustable with gain and peak using CatPro Wizard)
- RGB Out Signal Level Range (Max): +0.75 V to -0.3 V Typ (terminated, user adjustable with gain and peak using CatPro Receiver)
- RGB In Skew Adjustment: 0 to 62 nS, in 2 nS increments on RGB channels (user adjustable using CatPro Wizard)
- RGB Out Skew Adjustment: 0 to 62 nS, in 2 nS increments on RGB channels (user adjustable using CatPro Receiver)
- RGB In/Out Impedance: 75 Ohms
- RGB SNR: >50 dB
- RGB Crosstalk: <-50 (f=5 MHz), <-35 (f=30 MHz)
- Sync In Impedance: 510 Ohms
- Sync In/Out Polarity: Active High or Low (output follows input polarity)
- Sync Out Signal Levels: Low = 0 V, High = +5 V (unterminated)
- Audio In/Out Signal Type: Stereo, Unbalanced
- Audio In/Out Signal Level (Max): +8 dBu
- Audio In Impedance: 2 kOhms
- Audio Output Impedance: <5 Ohms
- Audio Frequency Response: <± 0.2 dB, 20 Hz to 20 kHz
- Audio THD+N: <0.04 %, 1 kHz, -10 dBu to +4 dBu
- Audio Crosstalk: <-98 dB (1 kHz, Vin = +4 dBu)
- Audio SNR: >83 dB, 20 Hz to 20 kHz Vin = +4 dBu
- Audio Out Volume Adj. Range: +6 dB to Mute (user adjustable at CatPro Receiver)
- RGBHV + Stereo In/Out Connector: Female RJ-45
- Compatible Cable Types: Category Cable 5, 5e, 6, 6e, and STP*
  *All measurements were taken using Cat5e Cable

CATPRO RGBHV (HD-15)

- Input/Output Level (Max): +0.75 V to -0.3 V
- I/O Impedance: 75 Ohms
- Maximum Resolution: 1600x1200(4:3) and 1920x1080p(16:9) @ 60 Hz up to 1000 ft (Cat5)
- Crosstalk: <-50 (f = 5 MHz), <-35 (f = 30 MHz), <-30 (f = 150 MHz)
- Signal to Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Sync I/O Level: TTL
- Compatibility: These boards can be used to break into and out of the CatPro RGBHV + Stereo boards
- Connectors: HD-15

CATPRO STEREO AUDIO (PHOENIX-STYLE)

- Input Level (Max): +8 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +8 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.25 dB (20 Hz to 20 kHz)
- THD + Noise: <0.06% (1 kHz, -10 dBu to +4 dBu)
- Crosstalk: <-95 dB (1 kHz, Vin = +4 dBu)
- Signal to Noise Ratio: >80 dB (20 Hz to 20 kHz, Vin= +4 dBu)
- Input Gain Adj. Range: +6 dB to -6 dB, via potentiometer
- Output Volume Adj. Range: +10 dB to -70 dB (muted), via software / control panel
- Connectors: 5T
- Compatibility: These boards can be used to break into and out of the CatPro RGBHV + Stereo boards

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Component
Video

Modula Pre-Engineered Matrix Switchers

HDTV/Component Video with BNC

AVS-MD-0440-340	4x40 (9RU)	(FGP34-0440-340)
AVS-MD-0444-340	4x44 (9RU)	(FGP34-0444-340)
AVS-MD-0448-340	4x48 (9RU)	(FGP34-0448-340)
AVS-MD-0452-340	4x52 (9RU)	(FGP34-0452-340)
AVS-MD-0456-340	4x56 (9RU)	(FGP34-0456-340)
AVS-MD-0460-340	4x60 (9RU)	(FGP34-0460-340)
AVS-MD-0828-340	8x28 (9RU)	(FGP34-0828-340)
AVS-MD-0832-340	8x32 (9RU)	(FGP34-0832-340)
AVS-MD-0836-340	8x36 (9RU)	(FGP34-0836-340)
AVS-MD-0840-340	8x40 (9RU)	(FGP34-0840-340)
AVS-MD-0844-340	8x44 (9RU)	(FGP34-0844-340)
AVS-MD-0848-340	8x48 (9RU)	(FGP34-0848-340)
AVS-MD-0852-340	8x52 (9RU)	(FGP34-0852-340)
AVS-MD-0856-340	8x56 (9RU)	(FGP34-0856-340)
AVS-MD-1228-340	12x28 (9RU)	(FGP34-1228-340)
AVS-MD-1232-340	12x32 (9RU)	(FGP34-1232-340)
AVS-MD-1236-340	12x36 (9RU)	(FGP34-1236-340)
AVS-MD-1240-340	12x40 (9RU)	(FGP34-1240-340)
AVS-MD-1244-340	12x44 (9RU)	(FGP34-1244-340)
AVS-MD-1248-340	12x48 (9RU)	(FGP34-1248-340)
AVS-MD-1252-340	12x52 (9RU)	(FGP34-1252-340)
AVS-MD-1628-340	16x28 (9RU)	(FGP34-1628-340)
AVS-MD-1632-340	16x32 (9RU)	(FGP34-1632-340)
AVS-MD-1636-340	16x36 (9RU)	(FGP34-1636-340)
AVS-MD-1640-340	16x40 (9RU)	(FGP34-1640-340)
AVS-MD-1644-340	16x44 (9RU)	(FGP34-1644-340)
AVS-MD-1648-340	16x48 (9RU)	(FGP34-1648-340)
AVS-MD-2024-340	20x24 (9RU)	(FGP34-2024-340)
AVS-MD-2028-340	20x28 (9RU)	(FGP34-2028-340)
AVS-MD-2032-340	20x32 (9RU)	(FGP34-2032-340)
AVS-MD-2420-340	24x20 (9RU)	(FGP34-2420-340)
AVS-MD-2424-340	24x24 (9RU)	(FGP34-2424-340)
AVS-MD-2428-340	24x28 (9RU)	(FGP34-2428-340)
AVS-MD-2432-340	24x32 (9RU)	(FGP34-2432-340)
AVS-MD-2808-340	28x8 (9RU)	(FGP34-2808-340)
AVS-MD-2812-340	28x12 (9RU)	(FGP34-2812-340)
AVS-MD-2816-340	28x16 (9RU)	(FGP34-2816-340)
AVS-MD-2820-340	28x20 (9RU)	(FGP34-2820-340)
AVS-MD-2824-340	28x24 (9RU)	(FGP34-2824-340)
AVS-MD-2828-340	28x28 (9RU)	(FGP34-2828-340)
AVS-MD-2832-340	28x32 (9RU)	(FGP34-2832-340)
AVS-MD-3208-340	32x8 (9RU)	(FGP34-3208-340)
AVS-MD-3212-340	32x12 (9RU)	(FGP34-3212-340)
AVS-MD-3216-340	32x16 (9RU)	(FGP34-3216-340)
AVS-MD-3220-340	32x20 (9RU)	(FGP34-3220-340)
AVS-MD-3224-340	32x24 (9RU)	(FGP34-3224-340)
AVS-MD-3228-340	32x28 (9RU)	(FGP34-3228-340)
AVS-MD-3232-340	32x32 (9RU)	(FGP34-3232-340)
AVS-MD-3608-340	36x8 (9RU)	(FGP34-3608-340)
AVS-MD-3612-340	36x12 (9RU)	(FGP34-3612-340)
AVS-MD-3616-340	36x16 (9RU)	(FGP34-3616-340)
AVS-MD-4004-340	40x4 (9RU)	(FGP34-4004-340)
AVS-MD-4008-340	40x8 (9RU)	(FGP34-4008-340)
AVS-MD-4012-340	40x12 (9RU)	(FGP34-4012-340)
AVS-MD-4016-340	40x16 (9RU)	(FGP34-4016-340)
AVS-MD-4404-340	44x4 (9RU)	(FGP34-4404-340)
AVS-MD-4408-340	44x8 (9RU)	(FGP34-4408-340)
AVS-MD-4412-340	44x12 (9RU)	(FGP34-4412-340)
AVS-MD-4416-340	44x16 (9RU)	(FGP34-4416-340)
AVS-MD-4804-340	48x4 (9RU)	(FGP34-4804-340)
AVS-MD-4808-340	48x8 (9RU)	(FGP34-4808-340)
AVS-MD-4812-340	48x12 (9RU)	(FGP34-4812-340)
AVS-MD-4816-340	48x16 (9RU)	(FGP34-4816-340)
AVS-MD-5204-340	52x4 (9RU)	(FGP34-5204-340)
AVS-MD-5208-340	52x8 (9RU)	(FGP34-5208-340)
AVS-MD-5212-340	52x12 (9RU)	(FGP34-5212-340)
AVS-MD-5604-340	56x4 (9RU)	(FGP34-5604-340)
AVS-MD-5608-340	56x8 (9RU)	(FGP34-5608-340)
AVS-MD-6004-340	60x4 (9RU)	(FGP34-6004-340)

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OVERVIEW

The Modula Component Video Matrix Switcher is a robust professional video matrix switcher featuring BNC connections capable of passing the highest analog video quality on the market today with ease including 1920 x 1080p.

COMMON APPLICATION

High quality component video applications such as sports bars, sports books, lodges, casinos and retail will benefit from the superior professional performance of the Modula Component Video Matrix Switcher. The investment in high quality video sources such as satellite receivers and DVD players will not be compromised – even when they are sent to as many as 60 displays.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Supports the highest analog resolutions on the market, including but not limited to HDTV resolutions up to 1920x1080p
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

BULLSEYE TARGET PRODUCT

This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT

The Modula is available in skewed enclosures that provide an extremely cost-effective solution for installations with very uneven I/O requirements such as 4x60, 8x56, and 12x52.

TRAINING AVAILABLE

For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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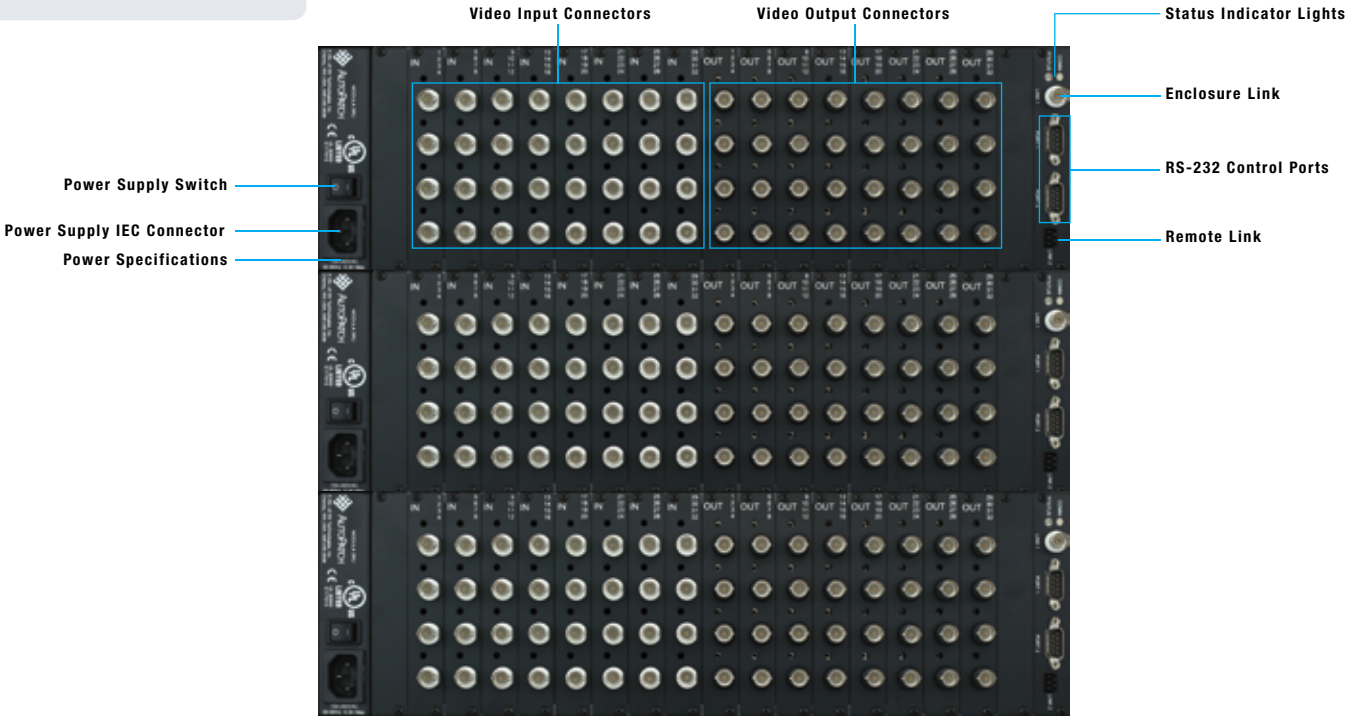
A CLOSER LOOK



SPECIFICATIONS

HDTV/Component systems are made up of multiple 3 RU enclosures

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

WIDEBAND VIDEO

- Input Level (Max): ±1.75 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.75 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 200 MHz or better (±1.5 dB)
  - 60 MHz or better (±1 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-30 dB (f = 150 MHz)
- Signal to Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Sync Input/Output Level: TTL
- Connector: BNC

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Stereo | Component
Audio • Video

Modula Pre-Engineered Matrix Switchers

HDTV/Component Video with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-MD-0440-347	4x40 (12RU)	(FGP34-0440-347)
AVS-MD-0444-347	4x44 (12RU)	(FGP34-0444-347)
AVS-MD-0448-347	4x48 (12RU)	(FGP34-0448-347)
AVS-MD-0452-347	4x52 (12RU)	(FGP34-0452-347)
AVS-MD-0456-347	4x56 (12RU)	(FGP34-0456-347)
AVS-MD-0460-347	4x60 (12RU)	(FGP34-0460-347)
AVS-MD-0828-347	8x28 (12RU)	(FGP34-0828-347)
AVS-MD-0832-347	8x32 (12RU)	(FGP34-0832-347)
AVS-MD-0836-347	8x36 (12RU)	(FGP34-0836-347)
AVS-MD-0840-347	8x40 (12RU)	(FGP34-0840-347)
AVS-MD-0844-347	8x44 (12RU)	(FGP34-0844-347)
AVS-MD-0848-347	8x48 (12RU)	(FGP34-0848-347)
AVS-MD-0852-347	8x52 (12RU)	(FGP34-0852-347)
AVS-MD-0856-347	8x56 (12RU)	(FGP34-0856-347)
AVS-MD-1228-347	12x28 (12RU)	(FGP34-1228-347)
AVS-MD-1232-347	12x32 (12RU)	(FGP34-1232-347)
AVS-MD-1236-347	12x36 (12RU)	(FGP34-1236-347)
AVS-MD-1240-347	12x40 (12RU)	(FGP34-1240-347)
AVS-MD-1244-347	12x44 (12RU)	(FGP34-1244-347)
AVS-MD-1248-347	12x48 (12RU)	(FGP34-1248-347)
AVS-MD-1252-347	12x52 (12RU)	(FGP34-1252-347)
AVS-MD-1628-347	16x28 (12RU)	(FGP34-1628-347)
AVS-MD-1632-347	16x32 (12RU)	(FGP34-1632-347)
AVS-MD-1636-347	16x36 (12RU)	(FGP34-1636-347)
AVS-MD-1640-347	16x40 (12RU)	(FGP34-1640-347)
AVS-MD-1644-347	16x44 (12RU)	(FGP34-1644-347)
AVS-MD-1648-347	16x48 (12RU)	(FGP34-1648-347)
AVS-MD-2024-347	20x24 (12RU)	(FGP34-2024-347)
AVS-MD-2028-347	20x28 (12RU)	(FGP34-2028-347)
AVS-MD-2032-347	20x32 (12RU)	(FGP34-2032-347)
AVS-MD-2420-347	24x20 (12RU)	(FGP34-2420-347)
AVS-MD-2424-347	24x24 (12RU)	(FGP34-2424-347)
AVS-MD-2428-347	24x28 (12RU)	(FGP34-2428-347)
AVS-MD-2432-347	24x32 (12RU)	(FGP34-2432-347)
AVS-MD-2808-347	28x8 (12RU)	(FGP34-2808-347)
AVS-MD-2812-347	28x12 (12RU)	(FGP34-2812-347)
AVS-MD-2816-347	28x16 (12RU)	(FGP34-2816-347)
AVS-MD-2820-347	28x20 (12RU)	(FGP34-2820-347)
AVS-MD-2824-347	28x24 (12RU)	(FGP34-2824-347)
AVS-MD-2828-347	28x28 (12RU)	(FGP34-2828-347)
AVS-MD-2832-347	28x32 (12RU)	(FGP34-2832-347)
AVS-MD-3208-347	32x8 (12RU)	(FGP34-3208-347)
AVS-MD-3212-347	32x12 (12RU)	(FGP34-3212-347)
AVS-MD-3216-347	32x16 (12RU)	(FGP34-3216-347)
AVS-MD-3220-347	32x20 (12RU)	(FGP34-3220-347)
AVS-MD-3224-347	32x24 (12RU)	(FGP34-3224-347)
AVS-MD-3228-347	32x28 (12RU)	(FGP34-3228-347)
AVS-MD-3232-347	32x32 (12RU)	(FGP34-3232-347)
AVS-MD-3608-347	36x8 (12RU)	(FGP34-3608-347)
AVS-MD-3612-347	36x12 (12RU)	(FGP34-3612-347)
AVS-MD-3616-347	36x16 (12RU)	(FGP34-3616-347)
AVS-MD-4004-347	40x4 (12RU)	(FGP34-4004-347)
AVS-MD-4008-347	40x8 (12RU)	(FGP34-4008-347)
AVS-MD-4012-347	40x12 (12RU)	(FGP34-4012-347)
AVS-MD-4016-347	40x16 (12RU)	(FGP34-4016-347)
AVS-MD-4404-347	44x4 (12RU)	(FGP34-4404-347)
AVS-MD-4408-347	44x8 (12RU)	(FGP34-4408-347)
AVS-MD-4412-347	44x12 (12RU)	(FGP34-4412-347)
AVS-MD-4416-347	44x16 (12RU)	(FGP34-4416-347)
AVS-MD-4804-347	48x4 (12RU)	(FGP34-4804-347)
AVS-MD-4808-347	48x8 (12RU)	(FGP34-4808-347)
AVS-MD-4812-347	48x12 (12RU)	(FGP34-4812-347)
AVS-MD-4816-347	48x16 (12RU)	(FGP34-4816-347)
AVS-MD-5204-347	52x4 (12RU)	(FGP34-5204-347)
AVS-MD-5208-347	52x8 (12RU)	(FGP34-5208-347)
AVS-MD-5212-347	52x12 (12RU)	(FGP34-5212-347)
AVS-MD-5604-347	56x4 (12RU)	(FGP34-5604-347)
AVS-MD-5608-347	56x8 (12RU)	(FGP34-5608-347)
AVS-MD-6004-347	60x4 (12RU)	(FGP34-6004-347)

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OVERVIEW

The Modula Component Video + Stereo Matrix Switcher is a robust professional video matrix switcher featuring BNC connections capable of passing the highest analog video quality on the market today with ease including 1920x1080p. The stereo enclosure features digital volume control on each output and digital input gain control on each input ensuring the highest quality professional audio in any environment.

COMMON APPLICATION

High quality component video applications such as sports bars, sports books, lodges, casinos and retail will benefit from the superior professional performance of the Modula Component Video Matrix Switcher. The investment in high quality video sources such as satellite receivers and DVD players will not be compromised – even when they are sent to as many as 60 displays.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- Supports the highest analog resolutions on the market, including but not limited to HDTV resolutions up to 1920x1080p
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view

- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT

This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT

The Modula is available in skewed enclosures that provide an extremely cost-effective solution for installations with very uneven I/O requirements such as 4x60, 8x56, and 12x52.

TRAINING AVAILABLE

For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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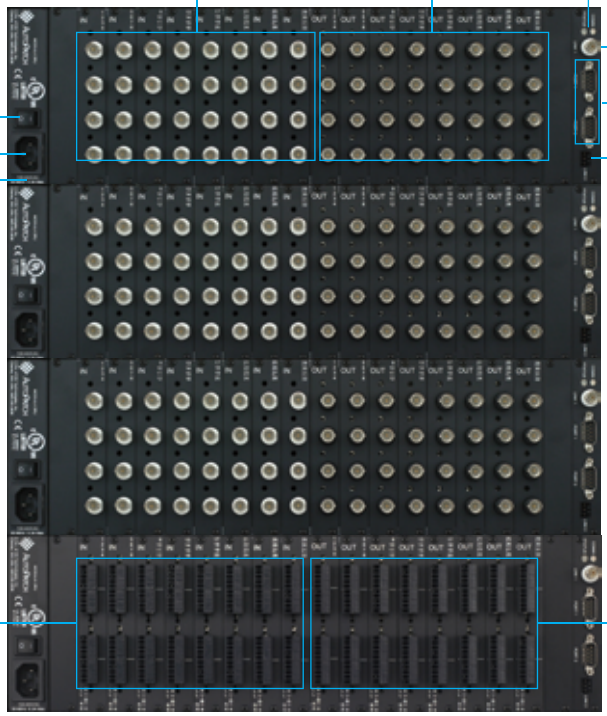
A CLOSER LOOK



SPECIFICATIONS

HDTV/Component systems are made up of multiple 3 RU enclosures

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

WIDEBAND VIDEO

- Input Level (Max): ±1.75 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.75 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 200 MHz or better (±1.5 dB)
  - 60 MHz or better (±1 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-30 dB (f = 150 MHz)
- Signal to Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Sync Input/Output Level: TTL
- Connector: BNC

STANDARD AUDIO WITH DVC

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.1 dB (20 Hz to 20 kHz)
- THD + Noise: < 0.03% (20 Hz to 20 kHz) Vin = -10 to + 20 dBu
- Crosstalk: <-95 dB (1 kHz, Vin = +20 dBu)
- Signal to Noise Ratio: >100 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: -6 dB to +6 dB
- Output Gain Adj. Range: -10 to +6 dB
- Output Volume Adj. Range: +10 dB to -70 dBU (muted), via serial/control panel
- Connectors: 5T

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S-Video
Video

Modula Pre-Engineered Matrix Switchers

S-Video (4-pin Mini-DIN)

AVS-MD-0440-610	4x40 (3RU)	(FGP34-0440-610)
AVS-MD-0444-610	4x44 (3RU)	(FGP34-0444-610)
AVS-MD-0448-610	4x48 (3RU)	(FGP34-0448-610)
AVS-MD-0452-610	4x52 (3RU)	(FGP34-0452-610)
AVS-MD-0456-610	4x56 (3RU)	(FGP34-0456-610)
AVS-MD-0460-610	4x60 (3RU)	(FGP34-0460-610)
AVS-MD-0828-610	8x28 (3RU)	(FGP34-0828-610)
AVS-MD-0832-610	8x32 (3RU)	(FGP34-0832-610)
AVS-MD-0836-610	8x36 (3RU)	(FGP34-0836-610)
AVS-MD-0840-610	8x40 (3RU)	(FGP34-0840-610)
AVS-MD-0844-610	8x44 (3RU)	(FGP34-0844-610)
AVS-MD-0848-610	8x48 (3RU)	(FGP34-0848-610)
AVS-MD-0852-610	8x52 (3RU)	(FGP34-0852-610)
AVS-MD-0856-610	8x56 (3RU)	(FGP34-0856-610)
AVS-MD-1228-610	12x28 (3RU)	(FGP34-1228-610)
AVS-MD-1232-610	12x32 (3RU)	(FGP34-1232-610)
AVS-MD-1236-610	12x36 (3RU)	(FGP34-1236-610)
AVS-MD-1240-610	12x40 (3RU)	(FGP34-1240-610)
AVS-MD-1244-610	12x44 (3RU)	(FGP34-1244-610)
AVS-MD-1248-610	12x48 (3RU)	(FGP34-1248-610)
AVS-MD-1252-610	12x52 (3RU)	(FGP34-1252-610)
AVS-MD-1628-610	16x28 (3RU)	(FGP34-1628-610)
AVS-MD-1632-610	16x32 (3RU)	(FGP34-1632-610)
AVS-MD-1636-610	16x36 (3RU)	(FGP34-1636-610)
AVS-MD-1640-610	16x40 (3RU)	(FGP34-1640-610)
AVS-MD-1644-610	16x44 (3RU)	(FGP34-1644-610)
AVS-MD-1648-610	16x48 (3RU)	(FGP34-1648-610)
AVS-MD-2028-610	20x28 (3RU)	(FGP34-2028-610)
AVS-MD-2032-610	20x32 (3RU)	(FGP34-2032-610)
AVS-MD-2420-610	24x20 (3RU)	(FGP34-2420-610)
AVS-MD-2424-610	24x24 (3RU)	(FGP34-2424-610)
AVS-MD-2428-610	24x28 (3RU)	(FGP34-2428-610)
AVS-MD-2432-610	24x32 (3RU)	(FGP34-2432-610)
AVS-MD-2808-610	28x8 (3RU)	(FGP34-2808-610)
AVS-MD-2812-610	28x12 (3RU)	(FGP34-2812-610)
AVS-MD-2816-610	28x16 (3RU)	(FGP34-2816-610)
AVS-MD-2820-610	28x20 (3RU)	(FGP34-2820-610)
AVS-MD-2824-610	28x24 (3RU)	(FGP34-2824-610)
AVS-MD-2828-610	28x28 (3RU)	(FGP34-2828-610)
AVS-MD-2832-610	28x32 (3RU)	(FGP34-2832-610)
AVS-MD-3208-610	32x8 (3RU)	(FGP34-3208-610)
AVS-MD-3212-610	32x12 (3RU)	(FGP34-3212-610)
AVS-MD-3216-610	32x16 (3RU)	(FGP34-3216-610)
AVS-MD-3220-610	32x20 (3RU)	(FGP34-3220-610)
AVS-MD-3224-610	32x24 (3RU)	(FGP34-3224-610)
AVS-MD-3228-610	32x28 (3RU)	(FGP34-3228-610)
AVS-MD-3232-610	32x32 (3RU)	(FGP34-3232-610)
AVS-MD-3608-610	36x8 (3RU)	(FGP34-3608-610)
AVS-MD-3612-610	36x12 (3RU)	(FGP34-3612-610)
AVS-MD-3616-610	36x16 (3RU)	(FGP34-3616-610)
AVS-MD-4004-610	40x4 (3RU)	(FGP34-4004-610)
AVS-MD-4008-610	40x8 (3RU)	(FGP34-4008-610)
AVS-MD-4012-610	40x12 (3RU)	(FGP34-4012-610)
AVS-MD-4016-610	40x16 (3RU)	(FGP34-4016-610)
AVS-MD-4404-610	44x4 (3RU)	(FGP34-4404-610)
AVS-MD-4408-610	44x8 (3RU)	(FGP34-4408-610)
AVS-MD-4412-610	44x12 (3RU)	(FGP34-4412-610)
AVS-MD-4416-610	44x16 (3RU)	(FGP34-4416-610)
AVS-MD-4804-610	48x4 (3RU)	(FGP34-4804-610)
AVS-MD-4808-610	48x8 (3RU)	(FGP34-4808-610)
AVS-MD-4812-610	48x12 (3RU)	(FGP34-4812-610)
AVS-MD-4816-610	48x16 (3RU)	(FGP34-4816-610)
AVS-MD-5204-610	52x4 (3RU)	(FGP34-5204-610)
AVS-MD-5208-610	52x8 (3RU)	(FGP34-5208-610)
AVS-MD-5212-610	52x12 (3RU)	(FGP34-5212-610)
AVS-MD-5604-610	56x4 (3RU)	(FGP34-5604-610)
AVS-MD-5608-610	56x8 (3RU)	(FGP34-5608-610)
AVS-MD-6004-610	60x4 (3RU)	(FGP34-6004-610)

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OVERVIEW

The Modula S-Video Matrix Switcher is ideal for any large scale S-Video routing requirement.

COMMON APPLICATION

This large scale S-Video matrix switcher is ideal any place a large number of S-Video sources is incorporated into an installation – especially commercial applications such as lobbies or restaurants that are utilizing consumer gear in a professional environment.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

BULLSEYE TARGET PRODUCT
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TRAINING AVAILABLE
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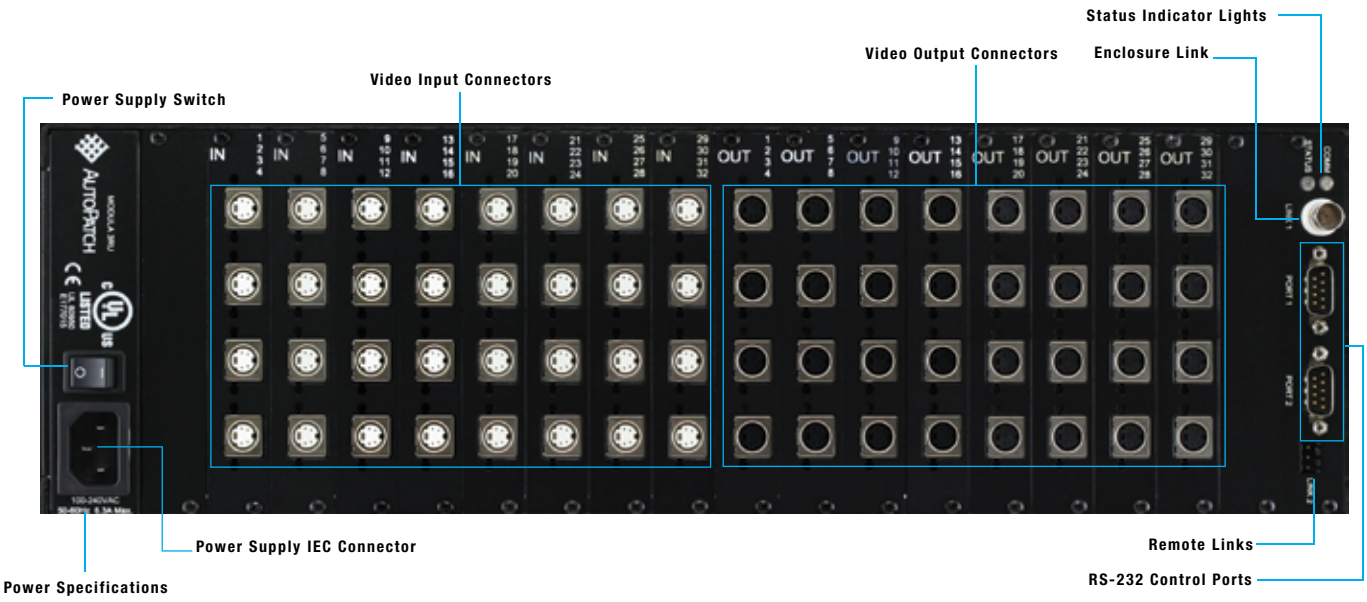
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD VIDEO

- Input Level (Max): ±2 Volts
- Input Impedance: 75 Ohms
- Output Level (Max) ±2 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 20 MHz or better (±1 dB)
- Crosstalk: <-50 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Options: S-Video (4-pin Mini-DIN)

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Stereo | S-Video
Audio • Video

Modula Pre-Engineered Matrix Switchers

S-Video (4-pin Mini-DIN), Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-MD-0440-617	4x40 (6RU)	(FGP34-0440-617)
AVS-MD-0444-617	4x44 (6RU)	(FGP34-0444-617)
AVS-MD-0448-617	4x48 (6RU)	(FGP34-0448-617)
AVS-MD-0452-617	4x52 (6RU)	(FGP34-0452-617)
AVS-MD-0456-617	4x56 (6RU)	(FGP34-0456-617)
AVS-MD-0460-617	4x60 (6RU)	(FGP34-0460-617)
AVS-MD-0828-617	8x28 (6RU)	(FGP34-0828-617)
AVS-MD-0832-617	8x32 (6RU)	(FGP34-0832-617)
AVS-MD-0836-617	8x36 (6RU)	(FGP34-0836-617)
AVS-MD-0840-617	8x40 (6RU)	(FGP34-0840-617)
AVS-MD-0844-617	8x44 (6RU)	(FGP34-0844-617)
AVS-MD-0848-617	8x48 (6RU)	(FGP34-0848-617)
AVS-MD-0852-617	8x52 (6RU)	(FGP34-0852-617)
AVS-MD-0856-617	8x56 (6RU)	(FGP34-0856-617)
AVS-MD-1228-617	12x28 (6RU)	(FGP34-1228-617)
AVS-MD-1232-617	12x32 (6RU)	(FGP34-1232-617)
AVS-MD-1236-617	12x36 (6RU)	(FGP34-1236-617)
AVS-MD-1240-617	12x40 (6RU)	(FGP34-1240-617)
AVS-MD-1244-617	12x44 (6RU)	(FGP34-1244-617)
AVS-MD-1248-617	12x48 (6RU)	(FGP34-1248-617)
AVS-MD-1252-617	12x52 (6RU)	(FGP34-1252-617)
AVS-MD-1628-617	16x28 (6RU)	(FGP34-1628-617)
AVS-MD-1632-617	16x32 (6RU)	(FGP34-1632-617)
AVS-MD-1636-617	16x36 (6RU)	(FGP34-1636-617)
AVS-MD-1640-617	16x40 (6RU)	(FGP34-1640-617)
AVS-MD-1644-617	16x44 (6RU)	(FGP34-1644-617)
AVS-MD-1648-617	16x48 (6RU)	(FGP34-1648-617)
AVS-MD-2024-617	20x24 (6RU)	(FGP34-2024-617)
AVS-MD-2028-617	20x28 (6RU)	(FGP34-2028-617)
AVS-MD-2032-617	20x32 (6RU)	(FGP34-2032-617)
AVS-MD-2420-617	24x20 (6RU)	(FGP34-2420-617)
AVS-MD-2424-617	24x24 (6RU)	(FGP34-2424-617)
AVS-MD-2428-617	24x28 (6RU)	(FGP34-2428-617)
AVS-MD-2432-617	24x32 (6RU)	(FGP34-2432-617)
AVS-MD-2808-617	28x8 (3RU)	(FGP34-2808-617)
AVS-MD-2812-617	28x12 (6RU)	(FGP34-2812-617)
AVS-MD-2816-617	28x16 (6RU)	(FGP34-2816-617)
AVS-MD-2820-617	28x20 (6RU)	(FGP34-2820-617)
AVS-MD-2824-617	28x24 (6RU)	(FGP34-2824-617)
AVS-MD-2828-617	28x28 (6RU)	(FGP34-2828-617)
AVS-MD-2832-617	28x32 (6RU)	(FGP34-2832-617)
AVS-MD-3208-617	32x8 (6RU)	(FGP34-3208-617)
AVS-MD-3212-617	32x12 (6RU)	(FGP34-3212-617)
AVS-MD-3216-617	32x16 (6RU)	(FGP34-3216-617)
AVS-MD-3220-617	32x20 (6RU)	(FGP34-3220-617)
AVS-MD-3224-617	32x24 (6RU)	(FGP34-3224-617)
AVS-MD-3228-617	32x28 (6RU)	(FGP34-3228-617)
AVS-MD-3232-617	32x32 (6RU)	(FGP34-3232-617)
AVS-MD-3608-617	36x8 (6RU)	(FGP34-3608-617)
AVS-MD-3612-617	36x12 (6RU)	(FGP34-3612-617)
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AVS-MD-4008-617	40x8 (6RU)	(FGP34-4008-617)
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AVS-MD-4404-617	44x4 (6RU)	(FGP34-4404-617)
AVS-MD-4408-617	44x8 (6RU)	(FGP34-4408-617)
AVS-MD-4412-617	44x12 (6RU)	(FGP34-4412-617)
AVS-MD-4416-617	44x16 (6RU)	(FGP34-4416-617)
AVS-MD-4804-617	48x4 (6RU)	(FGP34-4804-617)
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AVS-MD-4816-617	48x16 (6RU)	(FGP34-4816-617)
AVS-MD-5204-617	52x4 (6RU)	(FGP34-5204-617)
AVS-MD-5208-617	52x8 (6RU)	(FGP34-5208-617)
AVS-MD-5212-617	52x12 (6RU)	(FGP34-5212-617)
AVS-MD-5604-617	56x4 (6RU)	(FGP34-5604-617)
AVS-MD-5608-617	56x8 (6RU)	(FGP34-5608-617)
AVS-MD-6004-617	60x4 (6RU)	(FGP34-6004-617)

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OVERVIEW

The Modula S-Video + Stereo Matrix Switcher is ideal for any large scale S-Video routing requirement. This robust matrix switcher maintains our ultra-flat video response, digital audio volume control on each output and digital audio input gain on each input. In addition, our advanced locking S-Video connectors when used in conjunction with our S-Video cables eliminate the common problem of S-Video cables disconnecting.

COMMON APPLICATION

This large scale S-Video matrix switcher is ideal any place a large number of S-Video sources are incorporated into an installation-especially commercial applications such as lobbies or restaurants that are utilizing consumer gear in a professional environment.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports supports BCS commands
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Local and global presets

BULLSEYE TARGET PRODUCT

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SPECIFICATIONS

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- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
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MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

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- Input Level (Max): ±2 Volts
- Input Impedance: 75 Ohms
- Output Level (Max) ±2 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 20 MHz or better (±1 dB)
- Crosstalk: <-50 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Options: S-Video (4-pin Mini-DIN)

STANDARD AUDIO WITH DVC

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <± 0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.03% (20 Hz to 20 kHz) Vin = -10 to + 20 dBu
- Crosstalk: <-95 dB (1 kHz, Vin = +20 dBu)
- Signal to Noise Ratio: >100 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: -6 dB to +6 dB
- Output Gain Adj. Range: -10 to +6 dB
- Output Volume Adj. Range: +10 dB to -70 dBU (muted), via serial/control panel
- Connectors: 5T

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Modula Pre-Engineered Matrix Switchers

Y/c BNC

AVS-MD-0440-210	4x40 (6RU)	(FGP34-0440-210)
AVS-MD-0444-210	4x44 (6RU)	(FGP34-0444-210)
AVS-MD-0448-210	4x48 (6RU)	(FGP34-0448-210)
AVS-MD-0452-210	4x52 (6RU)	(FGP34-0452-210)
AVS-MD-0456-210	4x56 (6RU)	(FGP34-0456-210)
AVS-MD-0460-210	4x60 (6RU)	(FGP34-0460-210)
AVS-MD-0828-210	8x28 (6RU)	(FGP34-0828-210)
AVS-MD-0832-210	8x32 (6RU)	(FGP34-0832-210)
AVS-MD-0836-210	8x36 (6RU)	(FGP34-0836-210)
AVS-MD-0840-210	8x40 (6RU)	(FGP34-0840-210)
AVS-MD-0844-210	8x44 (6RU)	(FGP34-0844-210)
AVS-MD-0848-210	8x48 (6RU)	(FGP34-0848-210)
AVS-MD-0852-210	8x52 (6RU)	(FGP34-0852-210)
AVS-MD-0856-210	8x56 (6RU)	(FGP34-0856-210)
AVS-MD-1228-210	12x28 (6RU)	(FGP34-1228-210)
AVS-MD-1232-210	12x32 (6RU)	(FGP34-1232-210)
AVS-MD-1236-210	12x36 (6RU)	(FGP34-1236-210)
AVS-MD-1240-210	12x40 (6RU)	(FGP34-1240-210)
AVS-MD-1244-210	12x44 (6RU)	(FGP34-1244-210)
AVS-MD-1248-210	12x48 (6RU)	(FGP34-1248-210)
AVS-MD-1252-210	12x52 (6RU)	(FGP34-1252-210)
AVS-MD-1628-210	16x28 (6RU)	(FGP34-1628-210)
AVS-MD-1632-210	16x32 (6RU)	(FGP34-1632-210)
AVS-MD-1636-210	16x36 (6RU)	(FGP34-1636-210)
AVS-MD-1640-210	16x40 (6RU)	(FGP34-1640-210)
AVS-MD-1644-210	16x44 (6RU)	(FGP34-1644-210)
AVS-MD-1648-210	16x48 (6RU)	(FGP34-1648-210)
AVS-MD-2024-210	20x24 (6RU)	(FGP34-2024-210)
AVS-MD-2028-210	20x28 (6RU)	(FGP34-2028-210)
AVS-MD-2032-210	20x32 (6RU)	(FGP34-2032-210)
AVS-MD-2420-210	24x20 (6RU)	(FGP34-2420-210)
AVS-MD-2424-210	24x24 (6RU)	(FGP34-2424-210)
AVS-MD-2428-210	24x28 (6RU)	(FGP34-2428-210)
AVS-MD-2432-210	24x32 (6RU)	(FGP34-2432-210)
AVS-MD-2808-210	28x8 (6RU)	(FGP34-2808-210)
AVS-MD-2812-210	28x12 (6RU)	(FGP34-2812-210)
AVS-MD-2816-210	28x16 (6RU)	(FGP34-2816-210)
AVS-MD-2820-210	28x20 (6RU)	(FGP34-2820-210)
AVS-MD-2824-210	28x24 (6RU)	(FGP34-2824-210)
AVS-MD-2828-210	28x28 (6RU)	(FGP34-2828-210)
AVS-MD-2832-210	28x32 (6RU)	(FGP34-2832-210)
AVS-MD-3208-210	32x8 (6RU)	(FGP34-3208-210)
AVS-MD-3212-210	32x12 (6RU)	(FGP34-3212-210)
AVS-MD-3216-210	32x16 (6RU)	(FGP34-3216-210)
AVS-MD-3220-210	32x20 (6RU)	(FGP34-3220-210)
AVS-MD-3224-210	32x24 (6RU)	(FGP34-3224-210)
AVS-MD-3228-210	32x28 (6RU)	(FGP34-3228-210)
AVS-MD-3232-210	32x32 (6RU)	(FGP34-3232-210)
AVS-MD-3608-210	36x8 (6RU)	(FGP34-3608-210)
AVS-MD-3612-210	36x12 (6RU)	(FGP34-3612-210)
AVS-MD-3616-210	36x16 (6RU)	(FGP34-3616-210)
AVS-MD-4004-210	40x4 (6RU)	(FGP34-4004-210)
AVS-MD-4008-210	40x8 (6RU)	(FGP34-4008-210)
AVS-MD-4012-210	40x12 (6RU)	(FGP34-4012-210)
AVS-MD-4016-210	40x16 (6RU)	(FGP34-4016-210)
AVS-MD-4404-210	44x4 (6RU)	(FGP34-4404-210)
AVS-MD-4408-210	44x8 (6RU)	(FGP34-4408-210)
AVS-MD-4412-210	44x12 (6RU)	(FGP34-4412-210)
AVS-MD-4416-210	44x16 (6RU)	(FGP34-4416-210)
AVS-MD-4804-210	48x4 (6RU)	(FGP34-4804-210)
AVS-MD-4808-210	48x8 (6RU)	(FGP34-4808-210)
AVS-MD-4812-210	48x12 (6RU)	(FGP34-4812-210)
AVS-MD-4816-210	48x16 (6RU)	(FGP34-4816-210)
AVS-MD-5204-210	52x4 (6RU)	(FGP34-5204-210)
AVS-MD-5208-210	52x8 (6RU)	(FGP34-5208-210)
AVS-MD-5212-210	52x12 (6RU)	(FGP34-5212-210)
AVS-MD-6004-210	60x4 (6RU)	(FGP34-6004-210)

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OVERVIEW

The Modula Y/c Matrix Switcher is ideal for any large scale Y/c routing requirement.

COMMON APPLICATION

This large scale Y/c matrix switcher is ideal any place a large number of Y/c sources are incorporated into an installation -- especially commercial applications such as lobbies or restaurants that are utilizing consumer gear in a professional environment.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

BULLSEYE TARGET PRODUCT

This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT

Systems that are indicated as 3RU are comprised of a single enclosure that contains both the "Y" and "c" video paths; systems that indicate they are 6 RU contain a 3RU enclosure for all "Y" video paths and a second 3RU enclosure for all "c" video paths. These enclosures are linked so control systems (including the mounted front panel controller) view them as a single system.

TRAINING AVAILABLE

For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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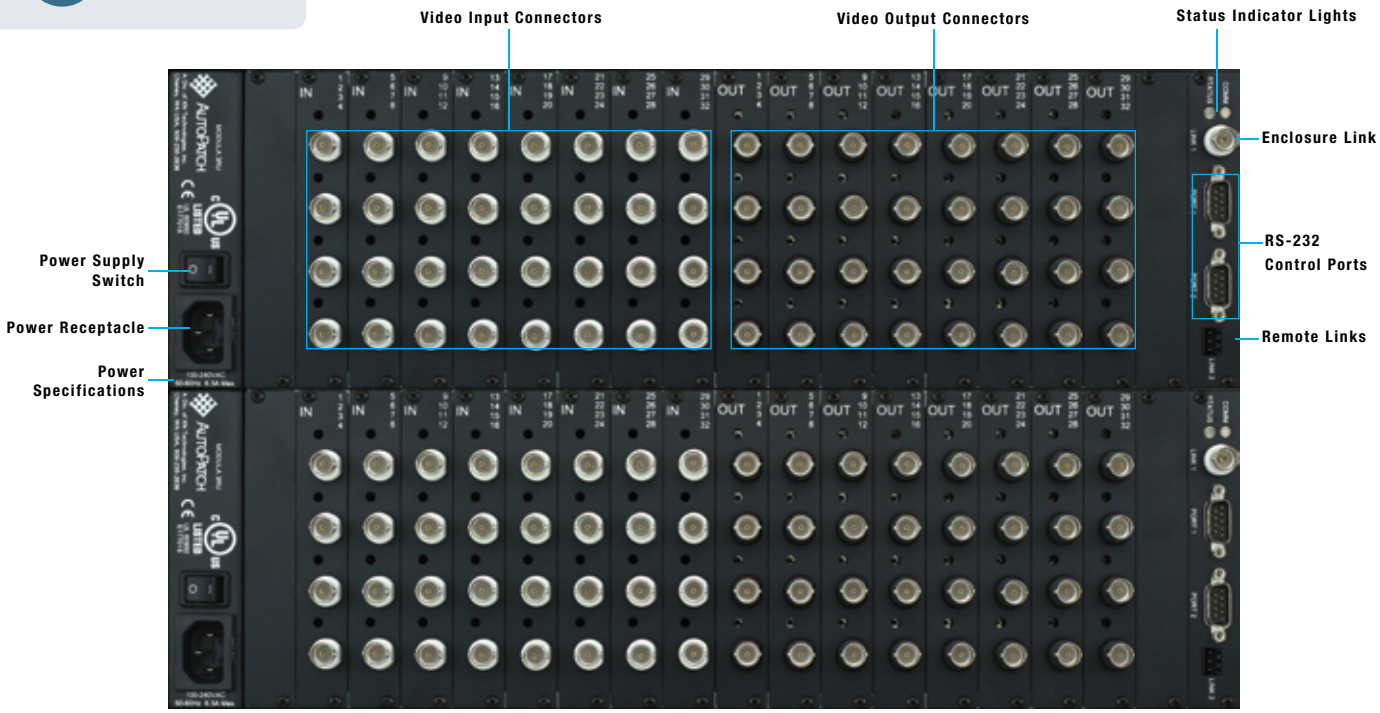
A CLOSER LOOK



SPECIFICATIONS

Some Y/c systems are made up of multiple 3 RU enclosures

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD VIDEO

- Input Level (Max): ± 2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 20 MHz or better (±1 dB)
- Crosstalk: <-50 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Options: BNC

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Stereo | Y/c
Audio • Video

Modula Pre-Engineered Matrix Switchers

Y/c Video with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-MD-0440-217	4x40 (9RU)	(FGP34-0440-217)
AVS-MD-0444-217	4x44 (9RU)	(FGP34-0444-217)
AVS-MD-0448-217	4x48 (9RU)	(FGP34-0448-217)
AVS-MD-0452-217	4x52 (9RU)	(FGP34-0452-217)
AVS-MD-0456-217	4x56 (9RU)	(FGP34-0456-217)
AVS-MD-0460-217	4x60 (9RU)	(FGP34-0460-217)
AVS-MD-0828-217	8x28 (9RU)	(FGP34-0828-217)
AVS-MD-0832-217	8x32 (9RU)	(FGP34-0832-217)
AVS-MD-0836-217	8x36 (9RU)	(FGP34-0836-217)
AVS-MD-0840-217	8x40 (9RU)	(FGP34-0840-217)
AVS-MD-0844-217	8x44 (9RU)	(FGP34-0844-217)
AVS-MD-0848-217	8x48 (9RU)	(FGP34-0848-217)
AVS-MD-0852-217	8x52 (9RU)	(FGP34-0852-217)
AVS-MD-0856-217	8x56 (9RU)	(FGP34-0856-217)
AVS-MD-1228-217	12x28 (9RU)	(FGP34-1228-217)
AVS-MD-1232-217	12x32 (9RU)	(FGP34-1232-217)
AVS-MD-1236-217	12x36 (9RU)	(FGP34-1236-217)
AVS-MD-1240-217	12x40 (9RU)	(FGP34-1240-217)
AVS-MD-1244-217	12x44 (9RU)	(FGP34-1244-217)
AVS-MD-1248-217	12x48 (9RU)	(FGP34-1248-217)
AVS-MD-1252-217	12x52 (9RU)	(FGP34-1252-217)
AVS-MD-1628-217	16x28 (9RU)	(FGP34-1628-217)
AVS-MD-1632-217	16x32 (9RU)	(FGP34-1632-217)
AVS-MD-1636-217	16x36 (9RU)	(FGP34-1636-217)
AVS-MD-1640-217	16x40 (9RU)	(FGP34-1640-217)
AVS-MD-1644-217	16x44 (9RU)	(FGP34-1644-217)
AVS-MD-1648-217	16x48 (9RU)	(FGP34-1648-217)
AVS-MD-2024-217	20x24 (9RU)	(FGP34-2024-217)
AVS-MD-2028-217	20x28 (9RU)	(FGP34-2028-217)
AVS-MD-2032-217	20x32 (9RU)	(FGP34-2032-217)
AVS-MD-2420-217	24x20 (9RU)	(FGP34-2420-217)
AVS-MD-2424-217	24x24 (9RU)	(FGP34-2424-217)
AVS-MD-2428-217	24x28 (9RU)	(FGP34-2428-217)
AVS-MD-2432-217	24x32 (9RU)	(FGP34-2432-217)
AVS-MD-2808-217	28x8 (6RU)	(FGP34-2808-217)
AVS-MD-2812-217	28x12 (6RU)	(FGP34-2812-217)
AVS-MD-2816-217	28x16 (6RU)	(FGP34-2816-217)
AVS-MD-2820-217	28x20 (6RU)	(FGP34-2820-217)
AVS-MD-2824-217	28x24 (6RU)	(FGP34-2824-217)
AVS-MD-2828-217	28x28 (6RU)	(FGP34-2828-217)
AVS-MD-2832-217	28x32 (6RU)	(FGP34-2832-217)
AVS-MD-3208-217	32x8 (9RU)	(FGP34-3208-217)
AVS-MD-3212-217	32x12 (9RU)	(FGP34-3212-217)
AVS-MD-3216-217	32x16 (9RU)	(FGP34-3216-217)
AVS-MD-3220-217	32x20 (9RU)	(FGP34-3220-217)
AVS-MD-3224-217	32x24 (9RU)	(FGP34-3224-217)
AVS-MD-3228-217	32x28 (9RU)	(FGP34-3228-217)
AVS-MD-3232-217	32x32 (9RU)	(FGP34-3232-217)
AVS-MD-3608-217	36x8 (9RU)	(FGP34-3608-217)
AVS-MD-3612-217	36x12 (9RU)	(FGP34-3612-217)
AVS-MD-3616-217	36x16 (9RU)	(FGP34-3616-217)
AVS-MD-4004-217	40x4 (9RU)	(FGP34-4004-217)
AVS-MD-4008-217	40x8 (9RU)	(FGP34-4008-217)
AVS-MD-4012-217	40x12 (9RU)	(FGP34-4012-217)
AVS-MD-4016-217	40x16 (9RU)	(FGP34-4016-217)
AVS-MD-4404-217	44x4 (9RU)	(FGP34-4404-217)
AVS-MD-4408-217	44x8 (9RU)	(FGP34-4408-217)
AVS-MD-4412-217	44x12 (9RU)	(FGP34-4412-217)
AVS-MD-4416-217	44x16 (9RU)	(FGP34-4416-217)
AVS-MD-4804-217	48x4 (9RU)	(FGP34-4804-217)
AVS-MD-4808-217	48x8 (9RU)	(FGP34-4808-217)
AVS-MD-4812-217	48x12 (9RU)	(FGP34-4812-217)
AVS-MD-4816-217	48x16 (9RU)	(FGP34-4816-217)
AVS-MD-5204-217	52x4 (9RU)	(FGP34-5204-217)
AVS-MD-5208-217	52x8 (9RU)	(FGP34-5208-217)
AVS-MD-5212-217	52x12 (9RU)	(FGP34-5212-217)
AVS-MD-5604-217	56x4 (9RU)	(FGP34-5604-217)
AVS-MD-5608-217	56x8 (9RU)	(FGP34-5608-217)
AVS-MD-6004-217	60x4 (9RU)	(FGP34-6004-217)

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OVERVIEW

The Modula Y/c + Stereo Matrix Switcher is ideal for any large scale Y/c routing requirement. This robust matrix switcher maintains our ultra-flat video response, audio digital volume control on each output and digital input gain on each input.

COMMON APPLICATION

This large scale Y/c matrix switcher is ideal any place a large number of Y/c sources are incorporated into an installation.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

BULLSEYE TARGET PRODUCT

This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

TRAINING AVAILABLE

For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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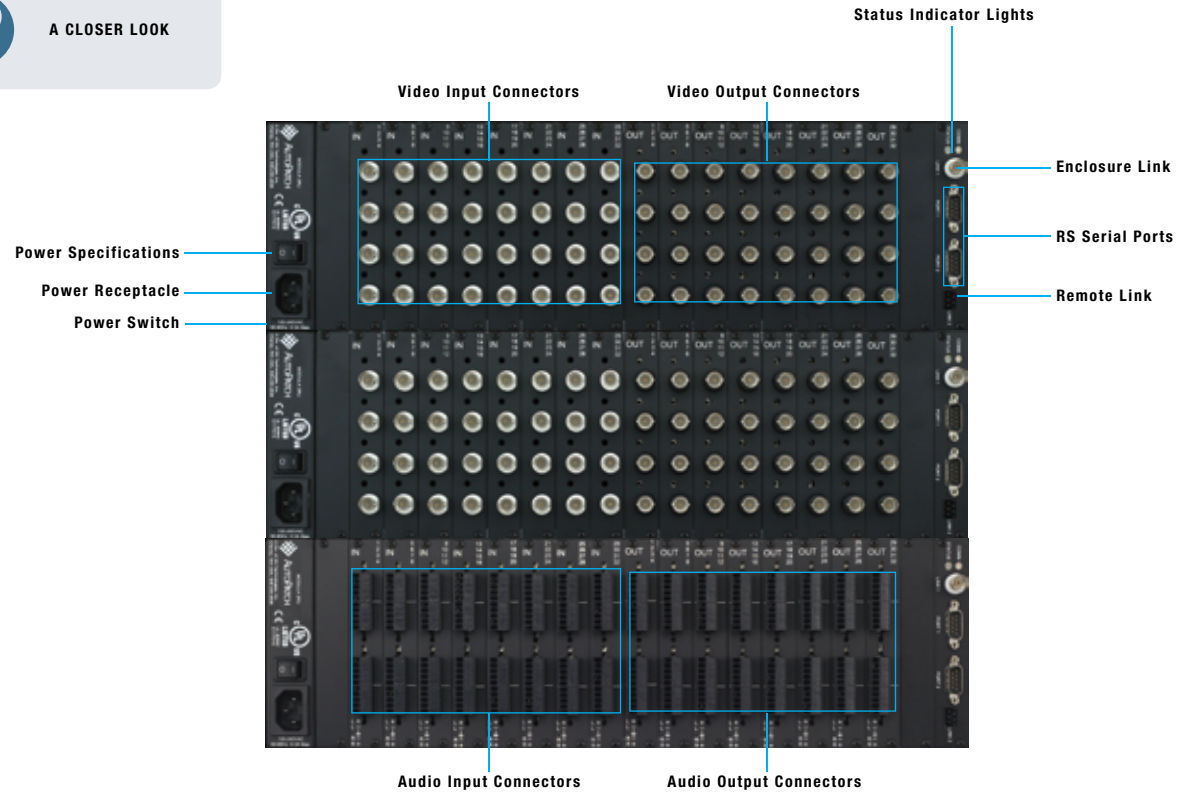
A CLOSER LOOK



SPECIFICATIONS

Y/c systems are made up of multiple 3 RU enclosures

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD VIDEO

- Input Level (Max): ±2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 20 MHz or better (±1 dB)
- Crosstalk: <-50 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Options: BNC

STANDARD AUDIO WITH DVC

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <± 0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.03% (20 Hz to 20 kHz) Vin = -10 to + 20 dBu
- Crosstalk: <-95 dB (1 kHz, Vin = +20 dBu)
- Signal to Noise Ratio: >100 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: -6 dB to +6 dB
- Output Gain Adj. Range: -10 to +6 dB
- Output Volume Adj. Range: +10 dB to -70 dBU (muted), via serial/control panel
- Connectors: 5T

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Composite
Video

Modula Pre-Engineered Matrix Switchers

Composite Video with BNC

AVS-MD-0440-110	4x40 (3RU)	(FGP34-0440-110)
AVS-MD-0444-110	4x44 (3RU)	(FGP34-0444-110)
AVS-MD-0448-110	4x48 (3RU)	(FGP34-0448-110)
AVS-MD-0452-110	4x52 (3RU)	(FGP34-0452-110)
AVS-MD-0456-110	4x56 (3RU)	(FGP34-0456-110)
AVS-MD-0460-110	4x60 (3RU)	(FGP34-0460-110)
AVS-MD-0828-110	8x28 (3RU)	(FGP34-0828-110)
AVS-MD-0832-110	8x32 (3RU)	(FGP34-0832-110)
AVS-MD-0836-110	8x36 (3RU)	(FGP34-0836-110)
AVS-MD-0840-110	8x40 (3RU)	(FGP34-0840-110)
AVS-MD-0844-110	8x44 (3RU)	(FGP34-0844-110)
AVS-MD-0848-110	8x48 (3RU)	(FGP34-0848-110)
AVS-MD-0852-110	8x52 (3RU)	(FGP34-0852-110)
AVS-MD-0856-110	8x56 (3RU)	(FGP34-0856-110)
AVS-MD-1228-110	12x28 (3RU)	(FGP34-1228-110)
AVS-MD-1232-110	12x32 (3RU)	(FGP34-1232-110)
AVS-MD-1236-110	12x36 (3RU)	(FGP34-1236-110)
AVS-MD-1240-110	12x40 (3RU)	(FGP34-1240-110)
AVS-MD-1244-110	12x44 (3RU)	(FGP34-1244-110)
AVS-MD-1248-110	12x48 (3RU)	(FGP34-1248-110)
AVS-MD-1252-110	12x52 (3RU)	(FGP34-1252-110)
AVS-MD-1628-110	16x28 (3RU)	(FGP34-1628-110)
AVS-MD-1632-110	16x32 (3RU)	(FGP34-1632-110)
AVS-MD-1636-110	16x36 (3RU)	(FGP34-1636-110)
AVS-MD-1640-110	16x40 (3RU)	(FGP34-1640-110)
AVS-MD-1644-110	16x44 (3RU)	(FGP34-1644-110)
AVS-MD-1648-110	16x48 (3RU)	(FGP34-1648-110)
AVS-MD-2024-110	20x24 (3RU)	(FGP34-2024-110)
AVS-MD-2028-110	20x28 (3RU)	(FGP34-2028-110)
AVS-MD-2032-110	20x32 (3RU)	(FGP34-2032-110)
AVS-MD-2420-110	24x20 (3RU)	(FGP34-2420-110)
AVS-MD-2424-110	24x24 (3RU)	(FGP34-2424-110)
AVS-MD-2428-110	24x28 (3RU)	(FGP34-2428-110)
AVS-MD-2432-110	24x32 (3RU)	(FGP34-2432-110)
AVS-MD-2808-110	28x8 (3RU)	(FGP34-2808-110)
AVS-MD-2812-110	28x12 (3RU)	(FGP34-2812-110)
AVS-MD-2816-110	28x16 (3RU)	(FGP34-2816-110)
AVS-MD-2820-110	28x20 (3RU)	(FGP34-2820-110)
AVS-MD-2824-110	28x24 (3RU)	(FGP34-2824-110)
AVS-MD-2828-110	28x28 (3RU)	(FGP34-2828-110)
AVS-MD-2832-110	28x32 (3RU)	(FGP34-2832-110)
AVS-MD-3208-110	32x8 (3RU)	(FGP34-3208-110)
AVS-MD-3212-110	32x12 (3RU)	(FGP34-3212-110)
AVS-MD-3216-110	32x16 (3RU)	(FGP34-3216-110)
AVS-MD-3220-110	32x20 (3RU)	(FGP34-3220-110)
AVS-MD-3224-110	32x24 (3RU)	(FGP34-3224-110)
AVS-MD-3228-110	32x28 (3RU)	(FGP34-3228-110)
AVS-MD-3232-110	32x32 (3RU)	(FGP34-3232-110)
AVS-MD-3608-110	36x8 (3RU)	(FGP34-3608-110)
AVS-MD-3612-110	36x12 (3RU)	(FGP34-3612-110)
AVS-MD-3616-110	36x16 (3RU)	(FGP34-3616-110)
AVS-MD-4004-110	40x4 (3RU)	(FGP34-4004-110)
AVS-MD-4008-110	40x8 (3RU)	(FGP34-4008-110)
AVS-MD-4012-110	40x12 (3RU)	(FGP34-4012-110)
AVS-MD-4016-110	40x16 (3RU)	(FGP34-4016-110)
AVS-MD-4404-110	44x4 (3RU)	(FGP34-4404-110)
AVS-MD-4408-110	44x8 (3RU)	(FGP34-4408-110)
AVS-MD-4412-110	44x12 (3RU)	(FGP34-4412-110)
AVS-MD-4416-110	44x16 (3RU)	(FGP34-4416-110)
AVS-MD-4804-110	48x4 (3RU)	(FGP34-4804-110)
AVS-MD-4808-110	48x8 (3RU)	(FGP34-4808-110)
AVS-MD-4812-110	48x12 (3RU)	(FGP34-4812-110)
AVS-MD-4816-110	48x16 (3RU)	(FGP34-4816-110)
AVS-MD-5204-110	52x4 (3RU)	(FGP34-5204-110)
AVS-MD-5208-110	52x8 (3RU)	(FGP34-5208-110)
AVS-MD-5212-110	52x12 (3RU)	(FGP34-5212-110)
AVS-MD-5604-110	56x4 (3RU)	(FGP34-5604-110)
AVS-MD-5608-110	56x8 (3RU)	(FGP34-5608-110)
AVS-MD-6004-110	60x4 (3RU)	(FGP34-6004-110)

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OVERVIEW

The Modula Composite Matrix Switcher is ideal for any large scale routing requirement.

COMMON APPLICATION

This large scale composite matrix switcher is ideal for any installation that requires multiple composite video sources be distributed to various displays; such as security systems.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

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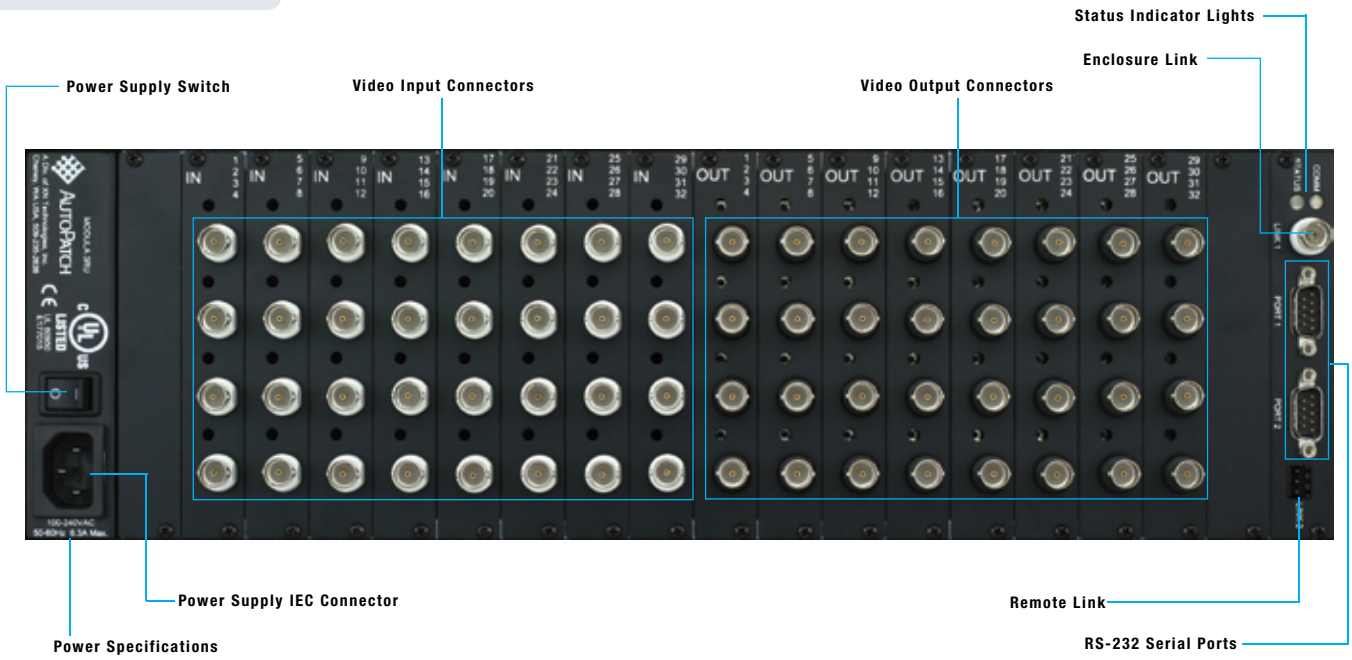
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD VIDEO

- Input Level (Max): ±2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 20 MHz or better (±1 dB)
- Crosstalk: <-50 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Options: BNC

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Stereo | Composite
Audio • Video

Modula Pre-Engineered Matrix Switchers

Composite Video with BNC, Stereo Audio with 5T Phoenix-style and Digital Volume Control

AVS-MD-0440-117	4x40 (6RU)	(FGP34-0440-117)
AVS-MD-0444-117	4x44 (6RU)	(FGP34-0444-117)
AVS-MD-0448-117	4x48 (6RU)	(FGP34-0448-117)
AVS-MD-0452-117	4x52 (6RU)	(FGP34-0452-117)
AVS-MD-0456-117	4x56 (6RU)	(FGP34-0456-117)
AVS-MD-0460-117	4x60 (6RU)	(FGP34-0460-117)
AVS-MD-0828-117	8x28 (6RU)	(FGP34-0828-117)
AVS-MD-0832-117	8x32 (6RU)	(FGP34-0832-117)
AVS-MD-0836-117	8x36 (6RU)	(FGP34-0836-117)
AVS-MD-0840-117	8x40 (6RU)	(FGP34-0840-117)
AVS-MD-0844-117	8x44 (6RU)	(FGP34-0844-117)
AVS-MD-0848-117	8x48 (6RU)	(FGP34-0848-117)
AVS-MD-0852-117	8x52 (6RU)	(FGP34-0852-117)
AVS-MD-0856-117	8x56 (6RU)	(FGP34-0856-117)
AVS-MD-1228-117	12x28 (6RU)	(FGP34-1228-117)
AVS-MD-1232-117	12x32 (6RU)	(FGP34-1232-117)
AVS-MD-1236-117	12x36 (6RU)	(FGP34-1236-117)
AVS-MD-1240-117	12x40 (6RU)	(FGP34-1240-117)
AVS-MD-1244-117	12x44 (6RU)	(FGP34-1244-117)
AVS-MD-1248-117	12x48 (6RU)	(FGP34-1248-117)
AVS-MD-1252-117	12x52 (6RU)	(FGP34-1252-117)
AVS-MD-1628-117	16x28 (6RU)	(FGP34-1628-117)
AVS-MD-1632-117	16x32 (6RU)	(FGP34-1632-117)
AVS-MD-1636-117	16x36 (6RU)	(FGP34-1636-117)
AVS-MD-1640-117	16x40 (6RU)	(FGP34-1640-117)
AVS-MD-1644-117	16x44 (6RU)	(FGP34-1644-117)
AVS-MD-1648-117	16x48(6RU)	(FGP34-1648-117)
AVS-MD-2024-117	20x24 (6RU)	(FGP34-2024-117)
AVS-MD-2028-117	20x28 (6RU)	(FGP34-2028-117)
AVS-MD-2032-117	20x32 (6RU)	(FGP34-2032-117)
AVS-MD-2420-117	24x20 (6RU)	(FGP34-2420-117)
AVS-MD-2424-117	24x24 (6RU)	(FGP34-2424-117)
AVS-MD-2428-117	24x28 (6RU)	(FGP34-2428-117)
AVS-MD-2432-117	24x32 (6RU)	(FGP34-2432-117)
AVS-MD-2808-117	28x8 (6RU)	(FGP34-2808-117)
AVS-MD-2812-117	28x12 (6RU)	(FGP34-2812-117)
AVS-MD-2816-117	28x16 (6RU)	(FGP34-2816-117)
AVS-MD-2820-117	28x20 (6RU)	(FGP34-2820-117)
AVS-MD-2824-117	28x24 (6RU)	(FGP34-2824-117)
AVS-MD-2828-117	28x28 (6RU)	(FGP34-2828-117)
AVS-MD-2832-117	28x32 (6RU)	(FGP34-2832-117)
AVS-MD-3208-117	32x8 (6RU)	(FGP34-3208-117)
AVS-MD-3212-117	32x12 (6RU)	(FGP34-3212-117)
AVS-MD-3216-117	32x16 (6RU)	(FGP34-3216-117)
AVS-MD-3220-117	32x20 (6RU)	(FGP34-3220-117)
AVS-MD-3224-117	32x24 (6RU)	(FGP34-3224-117)
AVS-MD-3228-117	32x28 (6RU)	(FGP34-3228-117)
AVS-MD-3232-117	32x32 (6RU)	(FGP34-3232-117)
AVS-MD-3608-117	36x8 (6RU)	(FGP34-3608-117)
AVS-MD-3612-117	36x12 (6RU)	(FGP34-3612-117)
AVS-MD-3616-117	36x16 (6RU)	(FGP34-3616-117)
AVS-MD-4004-117	40x4 (6RU)	(FGP34-4004-110)
AVS-MD-4008-117	40x8 (6RU)	(FGP34-4008-110)
AVS-MD-4012-117	40x12 (6RU)	(FGP34-4012-110)
AVS-MD-4016-117	40x16 (6RU)	(FGP34-4016-110)
AVS-MD-4404-117	44x4 (6RU)	(FGP34-4404-117)
AVS-MD-4408-117	44x8 (6RU)	(FGP34-4408-117)
AVS-MD-4412-117	44x12 (6RU)	(FGP34-4412-117)
AVS-MD-4416-117	44x16 (6RU)	(FGP34-4416-117)
AVS-MD-4804-117	48x4 (6RU)	(FGP34-4804-117)
AVS-MD-4808-117	48x8 (6RU)	(FGP34-4808-117)
AVS-MD-4812-117	48x12 (6RU)	(FGP34-4812-117)
AVS-MD-4816-117	48x16 (6RU)	(FGP34-4816-117)
AVS-MD-5204-117	52x4 (6RU)	(FGP34-5204-117)
AVS-MD-5208-117	52x8 (6RU)	(FGP34-5208-117)
AVS-MD-5212-117	52x12 (6RU)	(FGP34-5212-117)
AVS-MD-5604-117	56x4 (6RU)	(FGP34-5604-117)
AVS-MD-5608-117	56x8 (6RU)	(FGP34-5608-117)
AVS-MD-6004-117	60x4 (6RU)	(FGP34-6004-117)

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OVERVIEW

The Modula Composite Video + Stereo Audio Matrix Switcher is a robust professional solution featuring audio breakaway. Listed systems are comprised of either a single 3RU enclosure or two linked 3RU enclosures.

COMMON APPLICATION

This composite video and stereo matrix switcher is ideal for any installation that requires multiple composite video and stereo sources be distributed to various displays.

FEATURES

- Ultra-flat response measured at a tight ±3 dB
- Digital volume control on each output
- Digital input gain control on each input to normalize audio input voltages
- Audio connections support balanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Superior video crosstalk specifications ensure signal isolation and security
- 2 Standard RS-232 control ports supports BCS commands
- Optional TCP/IP control via external APWeb module
- Includes sophisticated CP-20A front mount control panel
- Free upgrade to a lifetime warranty available
- Local and global presets

BULLSEYE TARGET PRODUCT

This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT

Systems that are indicated as 3RU are comprised of a single enclosure that contains both composite video and stereo audio; systems that indicate they are 6RU are comprised of one 3RU video enclosure and one 3RU audio enclosure. Systems that contain two enclosures include a link cable and are viewed as a single system and thus can be controlled, grouped, and programmed as such. For this reason a single front mount control panel is included with each multiple enclosure system.

TRAINING AVAILABLE

For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

SPECIFICATIONS

Most Composite systems are made up of multiple 3 RU enclosures

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)
- RU: 3

WEIGHT

Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

STANDARD VIDEO

- Input Level (Max): ±2.5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 50 MHz or better (±3 dB)
  - 20 MHz or better (±1 dB)
- Crosstalk: <-50 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <± 0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.03% (20 Hz to 20 kHz) Vin = -10 to + 20 dBu
- Crosstalk: <-95 dB (1 kHz, Vin = +20 dBu)
- Signal to Noise Ratio: >100 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: -6 dB to +6 dB
- Output Gain Adj. Range: -10 to +6 dB
- Output Volume Adj. Range: +10 dB to -70 dBu (muted), via serial/control panel
- Connectors: 5T

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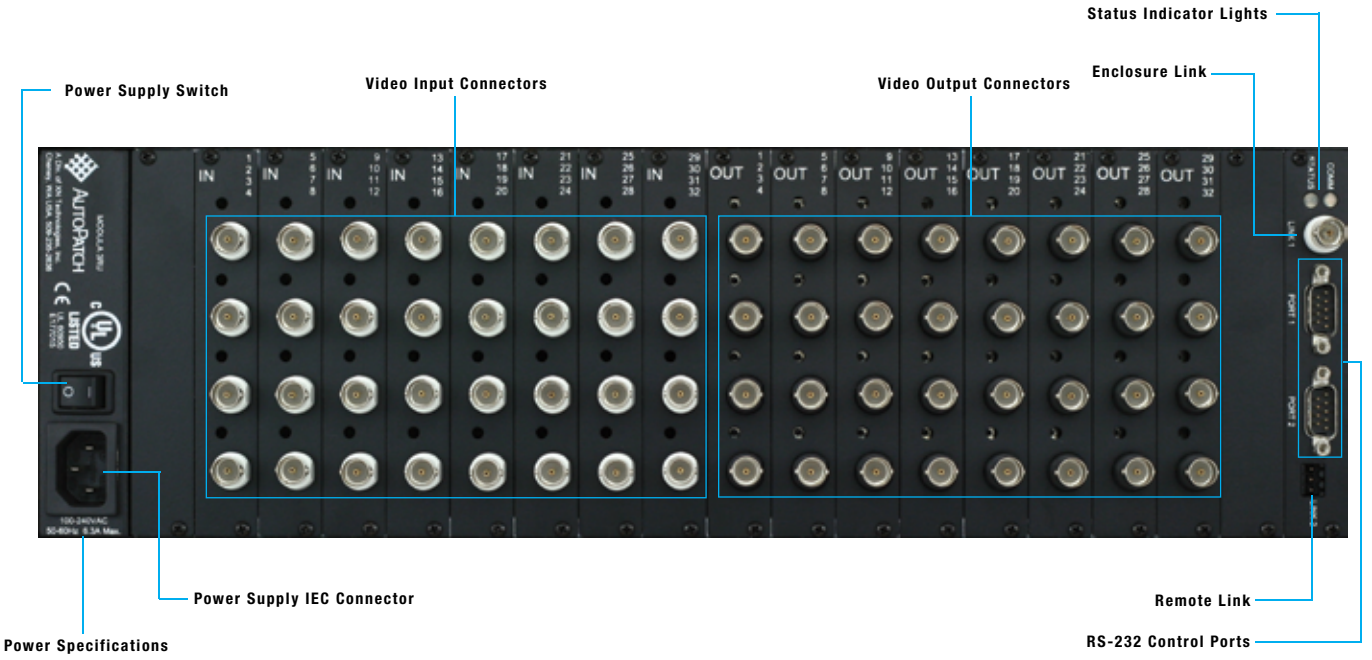
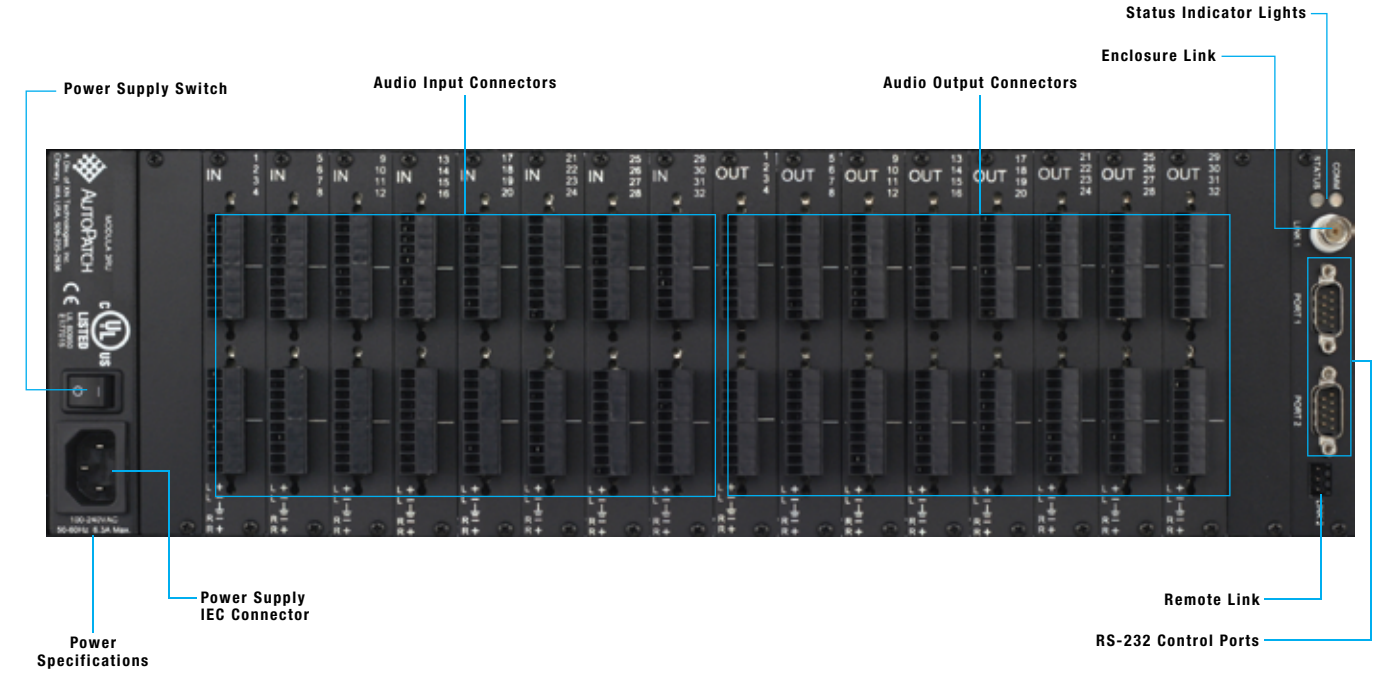
A CLOSER LOOK





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Epica DGX 16
Pre-Engineered Matrix Switchers
Digital Video with DVI

AVS-EPDGX16-1616-DD0	16x16(4RU)	(FGP57-1616-DD0)
AVS-EPDGX16-0816-DD0	8x16 (4RU)	(FGP57-0816-DD0)
AVS-EPDGX16-1608-DD0	16x8 (4RU)	(FGP57-1608-DD0)

OVERVIEW

The Epica DGX 16 DVI Matrix Switchers are designed to route and distribute high-resolution computer DVI signals to multiple displays while maintaining a true digital signal.

The Epica DGX 16 includes several new key features that simplify the complexity of DVI integration, such as cable equalization, signal re-clocking and the easy to use EDID (Extended Display Identification Data) Programmer that is pre-loaded with the most common EDID settings and also allows custom EDID settings to be loaded on each input. Supporting 4.95 Gbps, the DGX ensures perfect pixel for pixel reproduction for all video resolutions up to 1920x1200. Designed with flexibility, the compact 4RU enclosure is available in various I/O size combinations including 8x16, 16x8 and 16x16. It features several integrator friendly tools designed to simplify setup and reduce installation issues including hot-swappable I/O boards, real-time system monitoring, and fully redundant, hot-swappable power supplies with redundant power feeds.

COMMON APPLICATION

The Epica DGX 16 DVI Matrix Switchers are ideal for any installation that requires high-resolution digital computer video be displayed on multiple screens such as auditoriums, command and control centers, digital signage applications and more.

FEATURES

- True uncompressed DVI digital matrix switching ensures the purity of the digital image is never compromised
- Supports DVI resolutions up to 1920x1200 @ 60 Hz
- Provides additional power on every DVI output commonly used to power external DVI extenders
- Pre-loaded with the most common EDID settings on each of the matrix switcher's input connectors to emulate the display's response when queried, which ensures transmission of the video from the source device
- Custom EDID settings can be loaded on each input with the use of the included EDID Programmer
- Equipped with advanced diagnostics, the Epica DGX 16 ensures verification of power on each board, signal on each input and output, temperature detection for multiple points in the enclosure, and detection of overall power draw
- Pre-Engineered Epica DGX 16 systems can be field upgraded by adding (as space allows) or replacing boards; this includes adding DGX SC Optical input and output boards for integrated signal transmission over fiber
- Standard RS-232 control port
- Standard USB (mini-B) port can be used as a virtual Com port for serial communication with a PC
- Supports AutoPatch's simple BCS serial control protocol
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Supports Native NetLinx over the TCP/IP port
- Rack mounting ears included
- Free upgrade to a lifetime warranty available
- Fully redundant power supplies with independent power paths for maximum reliability
- Local and global presets

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KEY DEALER BENEFITS

- Cost Effective Mid-Size DVI Switching Solution – The Epica DGX 16 DVI Matrix Switcher enables dealers to offer the game-changing capabilities of the DGX Family in a smaller enclosure at an aggressive price point
- Simplified DVI Integration – The Epica DGX 16 DVI Matrix Switcher offers several key features that enhance integration convenience and ease of set-up including cable equalization, signal re-clocking, and EDID Programmer
- Field Serviceable and Upgradable – Easily add or replace I/O boards at any time after deployment - the system automatically recognizes the new configuration and activates the boards

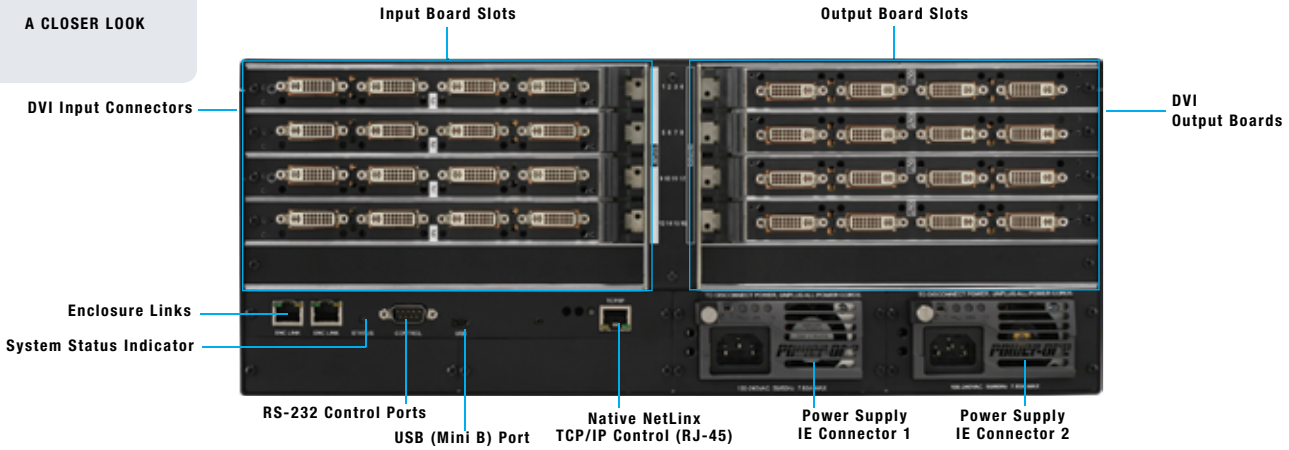
BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

WATCH THE VIDEO
See the DGX in action by watching the video profile online at: www.amx.com/assets/videos/DGX.mp4.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

DGX
The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV and DVI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.

A CLOSER LOOK



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 785 Watts
- Power Consumption (Typ): 210 Watts, fully loaded enclosure
- BTU/hr (Max): 2679
- BTU/hr (Typ): 717, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Storage Temperature: -22° to 158° F (-40° to 70° C)
- Humidity: 0 to 90% non-condensing
- Note: Specifications are subject to change

DIMENSIONS

6 13/16" x 19" x 15" (17.4 cm x 48.3 cm x 38 cm)

DIMENSIONS WITH EXTRACTORS

- 6 13/16" x 19" x 16" (17.4 cm x 48.3 cm x 40.6 cm)
- RU: 4

WEIGHT

Appx. 34 lbs (15.4 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 40 lbs (18.1 kg) per loaded enclosure

MTBF

170,000 hours

CERTIFICATIONS

CE, FCC Class A, UL, cUL, RoHS/WEEE compliant

DVI

- Signal Type: DVI-D Input (Single Link)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- DDC/EDID Support:
  - EDID provided by Epica DGX 16
  - EDID is user re-programmable
- HDCP Support: No
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Equalization: Up to 50 ft
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Re-clocking: Yes
- Output +5 V DDC Pin: 250 mA
- Output Rise Time / Fall Time:
  - 80 ps min - 200 ps Max (20% - 80%)
  - 0.13 UI min - 0.33 UI Max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 1 us
- DVI Output Board Propagation Delay: 2 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

EDID

- Standard Timing Identification:
  - ID 1: 1920x1200 @ 60 Hz (This is the preferred timing identified in the EDID.)
  - ID 2: 1920x1080 @ 60 Hz
  - ID 3: 1680x1050 @ 60 Hz
  - ID 4: 1600x1200 @ 60 Hz
  - ID 5: 1280x800 @ 60 Hz
  - ID 6: 1280x720 @ 60 Hz
  - ID 7: 1280x1024 @ 60 Hz
  - ID 8: 640x480 @ 120 Hz
- Established Timing:
  - 640 x 480 @60 Hz, 72 Hz, 75 Hz
  - 800 x 600 @56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024 x 768 @60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @75 Hz

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Epica DGX 32
Pre-Engineered Matrix Switchers
Digital Video with DVI

AVS-EPDGX32-1616-DD0	16x16(6RU)	(FGP56-1616-DD0)
AVS-EPDGX32-1624-DD0	16x24 (6RU)	(FGP56-1624-DD0)
AVS-EPDGX32-1632-DD0	16x32 (6RU)	(FGP56-1632-DD0)
AVS-EPDGX32-2416-DD0	24x16(6RU)	(FGP56-2416-DD0)
AVS-EPDGX32-2424-DD0	24x24 (6RU)	(FGP56-2424-DD0)
AVS-EPDGX32-2432-DD0	24x32 (6RU)	(FGP56-2432-DD0)
AVS-EPDGX32-3216-DD0	32x16(6RU)	(FGP56-3216-DD0)
AVS-EPDGX32-3224-DD0	32x24 (6RU)	(FGP56-3224-DD0)
AVS-EPDGX32-3232-DD0	32x32 (6RU)	(FGP56-3232-DD0)

OVERVIEW

The Epica DGX 32 DVI Matrix Switchers are designed to route and distribute high-resolution computer DVI signals to multiple displays while maintaining a true digital signal. The Epica DGX 32 includes several new key features that simplify the complexity of DVI integration, such as cable equalization, signal re-clocking and the easy to use EDID (Extended Display Identification Data) Programmer that is pre-loaded with the most common EDID settings and also allows custom EDID settings to be loaded on each input. Supporting 4.95 Gbps, the DGX ensures perfect pixel for pixel reproduction for all video resolutions up to 1920x1200. Designed with flexibility, the compact 6RU enclosure is expandable from 16x16 to 32x32 by increments of 4. It features several integrator friendly tools designed to simplify setup and reduce installation issues including hot-swappable I/O boards, real-time system monitoring, and fully redundant, hot-swappable power supplies with redundant power feeds.

COMMON APPLICATION

The Epica DGX 32 DVI Matrix Switchers are ideal for any installation that requires high-resolution digital computer video be displayed on multiple screens such as auditoriums, command and control centers, digital signage applications and more.

FEATURES

- True uncompressed DVI digital matrix switching ensures the purity of the digital image is never compromised
- Supports DVI resolutions up to 1920x1200 @ 60 Hz
- Provides additional power on every DVI output commonly used to power external DVI extenders
- Pre-loaded with the most common EDID settings on each of the matrix switcher's input connectors to emulate the display's response when queried, which ensures transmission of the video from the source device
- Custom EDID settings can be loaded on each input with the use of the included EDID Programmer
- Equipped with advanced diagnostics, the Epica DGX 32 ensures verification of power on each board, signal on each input and output, temperature detection for multiple points in the enclosure, and detection of overall power draw
- Pre-Engineered Epica DGX 32 systems can be field upgraded by adding (as space allows) or replacing boards; this includes adding DGX SC Optical input and output boards for integrated signal transmission over fiber
- Standard RS-232 control port
- Standard USB (mini-B) port can be used as a virtual Com port for serial communication with a PC
- Supports AutoPatch's simple BCS serial control protocol
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Supports Native NetLinx over the TCP/IP port
- Rack mounting ears included
- Free upgrade to a lifetime warranty available
- Fully redundant power supplies with independent power paths for maximum reliability
- Local and global presets

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KEY DEALER BENEFITS

- Cost Effective Mid-Size DVI Switching Solution – The Epica DGX 32 DVI Matrix Switcher enables dealers to offer the game-changing capabilities of the DGX Family in a smaller enclosure at an aggressive price point
- Simplified DVI Integration – The Epica DGX 32 DVI Matrix Switcher offers several key features that enhance integration convenience and ease of set-up including cable equalization, signal re-clocking, and EDID Programmer
- Field Serviceable and Upgradable – Easily add or replace I/O boards at any time after deployment - the system automatically recognizes the new configuration and activates the boards

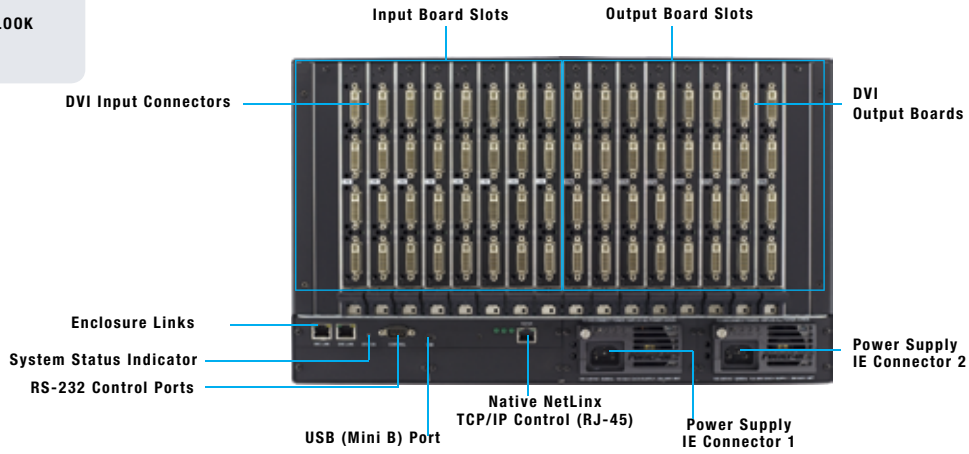
BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

WATCH THE VIDEO
See the DGX in action by watching the video profile online at: www.amx.com/assets/videos/DGX.mp4.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

DGX
The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV and DVI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.

A CLOSER LOOK



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 785 Watts
- Power Consumption (Typ): 445 Watts, fully loaded enclosure
- BTU/hr (Max): 2679
- BTU/hr (Typ): 1518, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Storage Temperature: -22° to 158° F (-40° to 70° C)
- Humidity: 0 to 90% non-condensing
- Note: Specifications are subject to change

DIMENSIONS

10 7/16" x 19" x 20 1/16" (26.5 cm x 48.3 cm x 51 cm)

DIMENSIONS WITH EXTRACTORS

- 10 7/16" x 19" x 21 1/16" (26.5 cm x 48.3 cm x 53.5 cm)
- RU: 6

WEIGHT

Appx. 60 lbs (27.2 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 70 lbs (31.8 kg) per loaded enclosure

MTBF

102,000 hours

CERTIFICATIONS

CE, FCC Class A, UL, cUL, RoHS/WEEE compliant

DVI

- Signal Type: DVI-D Input (Single Link)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- DDC/EDID Support:
  - EDID provided by Epica DGX 32
  - EDID is user re-programmable
- HDCP Support: No
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Equalization: Up to 50 ft
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Re-clocking: Yes
- Output +5 V DDC Pin: 250 mA
- Output Rise Time / Fall Time:
  - 80 ps min - 200 ps Max (20% - 80%)
  - 0.13 UI min - 0.33 UI Max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 1 us
- DVI Output Board Propagation Delay: 2 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

EDID

- Standard Timing Identification:
  - ID 1: 1920x1200 @ 60 Hz (This is the preferred timing identified in the EDID.)
  - ID 2: 1920x1080 @ 60 Hz
  - ID 3: 1680x1050 @ 60 Hz
  - ID 4: 1600x1200 @ 60 Hz
  - ID 5: 1280x800 @ 60 Hz
  - ID 6: 1280x720 @ 60 Hz
  - ID 7: 1280x1024 @ 60 Hz
  - ID 8: 640x480 @ 120 Hz
- Established Timing:
  - 640x480 @60 Hz, 72 Hz, 75 Hz
  - 800x600 @56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024x768 @60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280x1024 @75 Hz

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THE FINAL PIECE TO ANY PUZZLE

Mix-and-Match Matrix Switchers

Mix-and-match systems start with a list of boards, and allow you to combine them in the enclosure in any combination (as space allows), or in multiple linked enclosures. The benefit? Each board is really a stand alone mini matrix switcher and when combined in a common system save rack space, consolidate power, and maintain a single control view allowing for groupings, macros and presets across the entire system.

		VIDEO SIGNALS						AUDIO			CONTROL			FEATURES				
OPTIMA* MIX-AND-MATCH	4x2, 4x4, 4x8, 8x4, 8x8, 15x15, 16x16, 16x24, 20x4, 20x20, 24x4, 24x16, 36x4	●	●	●	●	●	●	●	●	●	●	+	+	●	●	●	●	●
	I/O RANGE	Composite, S-Video, Y/c, 3 Component	RGBHV	DVI	HDMI \ HDCP	SD-SDi, HD-SDI	Integrated Twisted Pair Distribution Options	Stereo Audio	S/PDIF, TosLink®	AES 75 Ω[1] ,S/PDIF1	Standard RS-232, BCS Serial Control Protocol	Front Panel Control	APWeb TCP/IP Control	Breakaway	Macros/Presets	Levels (programmable/Virtual Matrices)	Digital Input Gain Control (Analog Audio)	Digital Output Volume Control (Analog Audio)

+ Optional
* Signal type availability varies by I/O range - see Optima Custom Configuration Guide for details
1 - Indicates digital audio can be passed using standard video boards.

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Audio Board List ..... 593 – 594
Video Board List..... 595 – 603
Options and Control..... 604

MATRIX SWITCHERS

FIXED

PRE-ENGINEERED

MIX-AND-MATCH

MODULAR

Analog & Digital | Analog & Digital
Audio • Video

Optima Custom Mix-and-Match Matrix Switcher

This unique mix-and-match style matrix switcher has more than 50 board options. Simply choose the boards that solve your integration puzzle.

CONSOLIDATE SPACE WHILE EXPANDING CONTROL

Eliminate multiple small matrix switchers with one Optima matrix switching system and combine everything under a single control view. This allows ultimate routing flexibility, consolidates power consumption, saves rack space, uses a single RS-232 connection on your control master and much more.

FEATURES

- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario (RGB)
- Easily supports the highest analog video bandwidth requirements on the market
- Supports the highest analog resolutions on the market, including but not limited to HDTV resolutions up to 1080p
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display
- Intuitive gain, peak and skew adjustments at the touch of a button at each destination via CatPro RX
- Transmit high-resolution RGBHV / 1600x1200 (4:3) and 1920x1080 (16:9) @ 60 Hz up to 1000 ft over twisted pair
- Conforms to HD-SDI SMPTE standards including SMPTE-259M, SMPTE-292M, SMPTE-344M, and SMPTE-372M
- Conforms to SD-SDI SMPTE standards including SMPTE-259M, and SMPTE-344M
- HD-SDI systems / boards can also route SD-SDI
- HD-SDI boards pass embedded audio, metadata or any additional ancillary data included in the video stream
- HD-SDI boards support CDR (Clock Data Recovery)
- SD-SDI boards support CDR (Clock Data Recovery)
- SD-SDI boards provide cable equalization up to 350m
- HD-SDI boards provide cable equalization up to 140m
- True DVI digital matrix switching ensures the purity of the digital image is never compromised
- Pre-loaded with the most common EDID settings to ensure proper functionality with source devices
- The 8x8 DVI board features our EDID Programmer allowing specific display EDID settings to be custom loaded on each input
- The 8x8 DVI board provides additional power on output's 1-4 commonly used to power external DVI extenders
- Digital volume control on each analog audio output
- Digital input gain control on each analog audio input to normalize audio input voltages
- Analog audio connections support balanced and unbalanced audio
- Virtual Matrix Technology allows endless possible breakaway and "signal-follow-signal" user defined scenarios
- Superior video crosstalk specifications ensure signal isolation and security
- Digital audio supports CDR (Clock Data Recovery)
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Choice of front mounted control or blank front panel
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Includes AutoPatch's remote link for direct connect with AutoPatch remote panels and SBC control pads
- Rack mounting ears included
- Backed by our AMX 3 year warranty
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local and global presets

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BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

AMX-GREEN
Replacing multiple small Matrix switchers with an Optima consolidates and saves power

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

QUICK SHIP
These industry leading fixed systems are pre-boxed and ready for immediate delivery, many will ship the same day and all shipments are guaranteed to leave our factory within five days receipt of order.

PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

ENCLOSURE OPTIONS
- 2RU
- 3RU
- Link Multiple Enclosures

BOARD OPTIONS*
- 4x2, 4x4, 4x8
- 8x4, 8x8
- 15x15
- 16x16, 16x24
- 20x4, 20x20
- 24x4, 24x16
- 36x4

AVAILABLE SIGNAL TYPES*
- Composite, S-Video, Y/c
- HDTV, Y/Pb/Pr, YUV
- RGB, RGsB, RGBS, RGBHV
- SD-SDI, HD-SDI, DVI, HDMI
- Mono audio, Stereo audio
- S/PDIF, TosLink
- RGBHV + Stereo (in) to CatPro (RJ-45) out

* The available I/O range for each signal type may vary. Please see the complete "Optima Configuration Guide" on the following pages or www.amx.com for complete board list and simple mix-and-match configuration instructions.

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OPTIMA CUSTOM CONFIGURATION GUIDE

To customize an Optima Matrix Switcher, simply mix-and-match from the available boards, add up the total slots those boards fill, and purchase enclosure(s) to accommodate that total. For systems comprised of two or more linked enclosures, we will provide a link cable or hub at no additional charge.*

Since each board has its own input and output connectors, the physical signal path must be routed from inputs on the board to outputs on the same board. For multiple component signals, (such as RGBHV), boards can then be combined in logical groups via software configuration.

As always, our trained staff is available to provide matrix design assistance. Please contact us if you have questions.

*A link cable is provided with two-enclosure systems, and hub and link cables are provided with systems that contain three or more linked enclosures.

Audio Board List

STANDARD AUDIO

(5T, phoenix style connectors)

Designed for mono and stereo audio signals, all standard audio boards feature input gain control and output volume control accessible via front panel and serial commands.

I/O	FG#	MODEL	SLOTS
8x4	FG1046-539	AVS-OP-0804-AIO-ST-DVC-1S	1
8x8	FG1046-494	AVS-OP-0808-AIO-ST-DVC-1S	1
16x16	FG1046-533	AVS-OP-1616-AIO-ST-DVC-2S	2
16x24	FG1046-548	AVS-OP-1624-AIO-ST-DVC-2S	2
20x4	FG1046-473	AVS-OP-2004-AIO-ST-DVC-2S	2
20x20	FG1046-416	AVS-OP-2020-AIO-ST-DVC-2S	2
24x4	FG1046-500	AVS-OP-2404-AIO-ST-DVC-2S	2
24x16	FG1046-434	AVS-OP-2416-AIO-ST-DVC-2S	2
36x4	FG1046-425	AVS-OP-3604-AIO-ST-DVC-2S	2

HELPFUL HINT

The standard audio board connectors are designed for balanced stereo; however, they can be wired for unbalanced stereo or balanced or unbalanced mono.

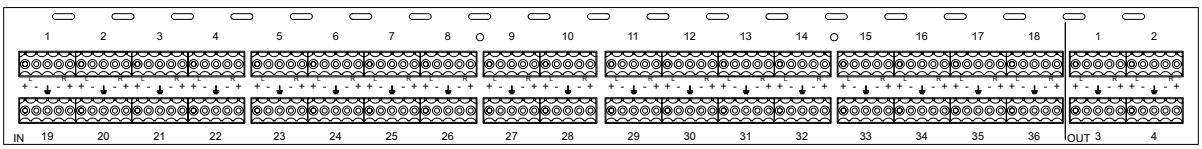
SPECIFICATIONS

STANDARD AUDIO

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.2 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -10 to +10 dBu)
  - <0.01% (20 Hz to 20 kHz, Vin = 0 to +22 dBu)
- Signal to Noise Ratio: >120 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-110 dB (1 kHz, Vin = +20 dBu)
- Input Gain Adj. Range: ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Connectors: 5T

A CLOSER LOOK

Shown here: 36x4 Standard Video Board



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Audio Board List (cont.)

DIGITAL AUDIO
(optical and/or RCA connectors)

Designed for S/PDIF and TosLink® digital audio signals, FG1046-461 can also convert between S/PDIF and TosLink®.

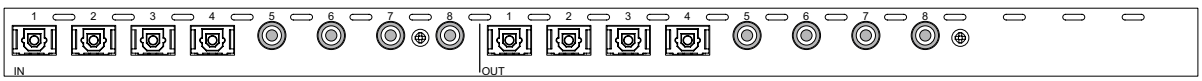
I/O	FG#	MODEL	SLOTS
8x8 TosLink - optical connectors	FG1046-455	AVS-OP-0808-AIO-TOSLINK-1S	1
8x8 8x8 S/PDIF - RCA connectors	FG1046-458	AVS-OP-0808-AIO-ST-DVC-1S	1
8x8 TosLink - S/PDIF - optical and RCA connectors	FG1046-461	AVS-OP-0808-AIO-TOSLINK-SPDIF-1S	1

SPECIFICATIONS

DIGITAL AUDIO (S/PDIF & TOSLINK)

- Resolution: 16 to 24 bit
- Sample Rate: 32 kHz, 44.1 kHz, 48 kHz, 96 kHz
- Rise & Fall Time: <20 nS
- Jitter: <5 nS
- Input Signal Amplitude: 0.2 Vpp to 2.5 Vpp terminated (S/PDIF)
- Output Signal Amplitude: 0.4 Vpp to 1.0 Vpp terminated into 75 Ohms (S/PDIF)
- CDR (Reclocking): Yes
- Connectors: S/PDIF (RCA) & TosLink® (optical)

A CLOSER LOOK
Shown here: 8x8 TosLink, S/PDIF Board



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Video Board List

STANDARD VIDEO
(BNC connectors)

Designed for composite video (50 MHz)

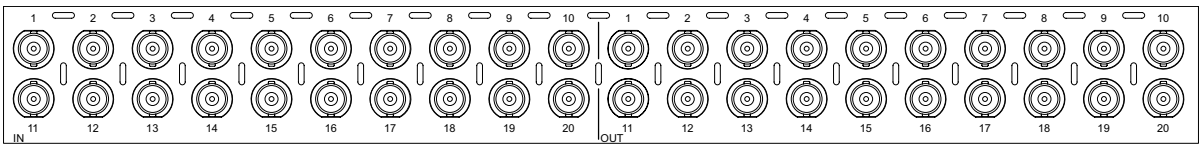
I/O	FG#	MODEL	SLOTS
8x8	FG1046-440	AVS-OP-0808-VIO-STD-1S	1
16x16	FG1046-485	AVS-OP-1616-VIO-STD-2S	2
16x24	FG1046-545	AVS-OP-1624-VIO-STD-2S	2
20x4	FG1046-470	AVS-OP-2004-VIO-STD-2S	2
20x20	FG1046-413	AVS-OP-2020-VIO-STD-2S	2
24x4	FG1046-515	AVS-OP-2404-VIO-STD-2S	2
24x16	FG1046-431	AVS-OP-2416-VIO-STD-2S	2
36x4	FG1046-422	AVS-OP-3604-VIO-STD-2S	2

SPECIFICATIONS

STANDARD VIDEO (COMPOSITE, S-VIDEO, Y/C)

Input Level (Max): ±2.5 Volts
Input Impedance: 75 Ohms
Output Level (Max): ±2.5 Volts
Output Impedance: 75 Ohms
Frequency Response: 50 MHz or better (±3 dB), 15 MHz or better (±1 dB)
Crosstalk: <-60 dB (f = 5 MHz)
Differential Gain: <0.2% or better (f = 3.58 MHz)
Differential Phase: <0.2° or better (f = 3.58 MHz)
Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
Connector Options: BNC, S-Video (4-pin Mini-DIN)

A CLOSER LOOK
Shown here: 20x20 Standard Video Board

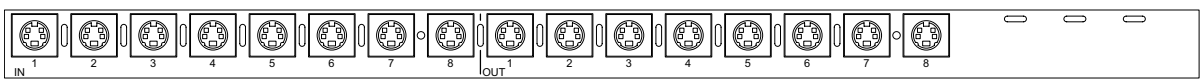


S-VIDEO
(4-pin Mini-DIN connectors)

Designed for S-Video signals (50 MHz)

I/O	FG#	MODEL	SLOTS
8x8	FG1046-446	AVS-OP-0808-SVID-STD-1S	1
16x16	FG1046-488	AVS-OP-1616-SVID-STD-2S	2

A CLOSER LOOK
Shown here: 8x8 S-Video Board

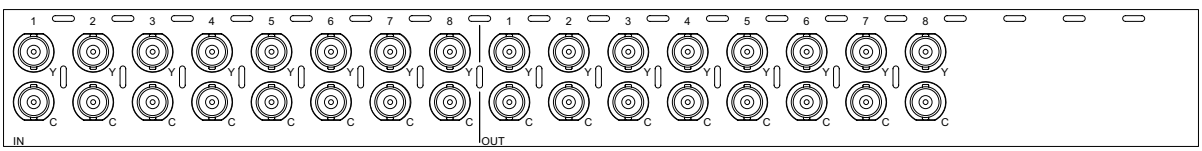


Y/C
(BNC connectors)

Designed for Y/c video signals (50 MHz)

I/O	FG#	MODEL	SLOTS
8x8	FG1046-476	AVS-OP-0808-VID-YC-2S	2

A CLOSER LOOK
Shown here: 8x8 Y/c Board



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Video Board List (cont.)

WIDEBAND VIDEO
(BNC connectors)

Designed for RGB and RGsB, video signals (300 MHz)

I/O	FG#	MODEL	SLOTS
8x8	FG1046-437	AVS-OP-0808-VIO-WB-1S	1
16x16	FG1046-482	AVS-OP-1616-VIO-WB-2S	2
16x24	FG1046-542	AVS-OP-1624-VIO-WB-2S	2
20x4	FG1046-467	AVS-OP-2004-VIO-WB-2S	2
20x20	FG1046-410	AVS-OP-2020-VIO-WB-2S	2
24x4	FG1046-503	AVS-OP-2404-VIO-WB-2S	2
24x16	FG1046-428	AVS-OP-2416-VIO-WB-2S	2
36x4	FG1046-419	AVS-OP-3604-VIO-WB-2S	2

WIDEBAND VIDEO
(HD-15 connectors)

Designed for RGBHV (300 MHz)

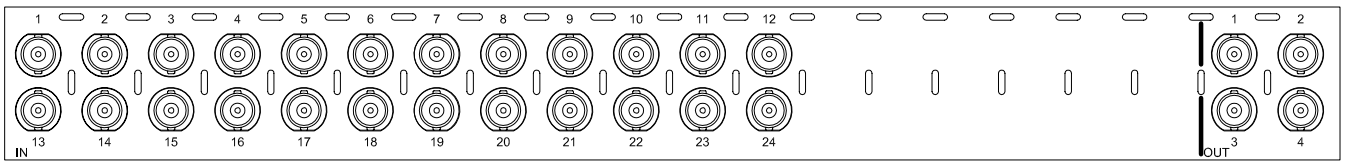
I/O	FG#	MODEL	SLOTS
4x2	FG1046-530	AVS-OP-0402-VIO-HD15-1S	1
8x4	FG1046-497	AVS-OP-0804-VIO-HD15-2S	2
8x8	FG1046-536	AVS-OP-0808-VIO-HD15-2S	2
15x15	FG1046-593	AVS-OP-1515-VIO-HD15-3S	3

SPECIFICATIONS

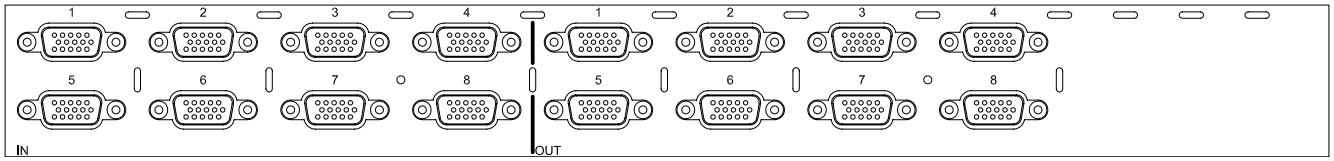
WIDEBAND VIDEO (RGB)

- Input Level (Max): ±1.5 Volts
- Input Level (Max 20x20): ±1.2 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.5 Volts
- Output Level (Max 20x20): ±1.2 Volts
- Output Impedance: 75 Ohms
- Frequency Response:
  - 300 MHz or better (±3 dB)
  - 100 MHz or better (±1.5 dB)
- Frequency Response (20x20):
  - 300 MHz or better (±3 dB),
  - 100 MHz or better (±2 dB)
  - 50 MHz or better (±1.5 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-35 dB (f = 150 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Options: BNC, HD-15

A CLOSER LOOK
Shown here: 24x4 Wideband Video Board



A CLOSER LOOK
Shown here: 8x8 HD-15 Board



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Video Board List (cont.)

SYNC
(BNC connectors)

Designed for horizontal and vertical sync (H and V)

I/O	FG#	MODEL	SLOTS
8x8*	FG1046-443	AVS-OP-0808-SIO-HI-2S	2
16x16	FG1046-569	AVS-OP-1616-SIO-HI-2S	2
16x24	FG1046-566	AVS-OP-1624-SIO-HI-2S	2
20x4	FG1046-470	AVS-OP-2004-VIO-STD-2S	2
20x20	FG1046-560	AVS-OP-2020-SIO-HI-2S	2
24x4	FG1046-515	AVS-OP-2404-VIO-STD-2S	2
24x16	FG1046-554	AVS-OP-2416-SIO-HI-2S	2
36x4	FG1046-422	AVS-OP-3604-VIO-STD-2S	2

HELPFUL HINT

Each sync board contain one BNC connection per input/output number. Thus, a 20x4 board contains 20 input connections and 4 output connections. Use two 20x4 boards to route 20x4 H and V.

SPECIFICATIONS

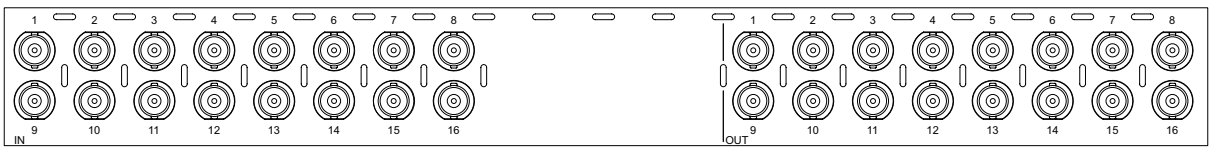
SYNC

- Input Level Signal Range: 0 to +5.5 Volts
- Input Impedance: 22 kOhms
- Output Level Signal Range: 0 to +5.5 Volts
- Output Impedance: 75 Ohms
- In/Out Polarity: Active High or Low (output follows input polarity)
- Output Signal Level: Unity Gain
- Connectors: BNC

*The 8x8 sync board has H and V on the same board, thus it has 16 input connections and 16 output connections. All other sync boards contain one BNC connection per input/output number

A CLOSER LOOK

Shown here: 16x16 Sync Board



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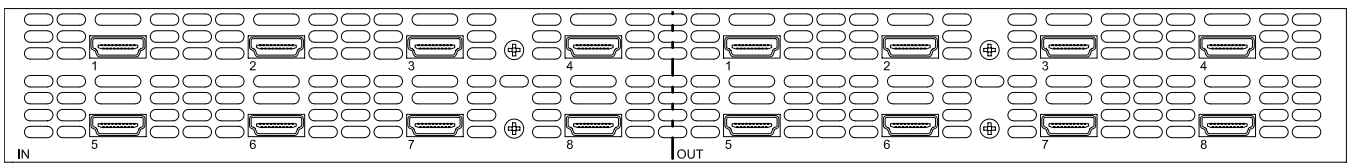
Video Board List (cont.)

HDMI DIGITAL VIDEO
(HDMI Connectors)

I/O	FG#	MODEL	SLOTS
8x8	FG1046-614	AVS-OP-0808-HDMI-2S	2

The Optima HDMI board is designed to route eight different HDMI sources, with HDCP authentication, to any or all 8 connected displays. While supporting resolutions up to 1920x1200 (including 1920x1080p), this HDMI 1.3 compatible true matrix switching solution features AMX's HDCP InstaGate® Technology allowing HDMI signal switching without delays due to HDCP re-authentication, and eliminating video stream interruption to existing HDMI signal paths. The board is pre-loaded with the most common EDID (Extended Display Identification Data) settings to ensure proper functionality with source devices, and allows specialized EDID settings to be loaded on each input through the included EDID Programmer application.

A CLOSER LOOK
Shown here: 8x8 HDMI



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SPECIFICATIONS

DIGITAL VIDEO (HDMI)

- Compatible Formats: HDMI 1.3a (HDCP 1.3), DVI 1.0
- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- Progressive Resolution Support: 480p up to 1920x1200 @ 60 Hz (1600x1200 @ 60 Hz and higher requires reduced blanking)
- Interlaced Resolution Support: 480i, 576i, 1080i
- Audio Format Support:
  - Dolby Digital, DTS, L-PCM
  - Dolby Digital and DTS support up to 48 kHz, 5.1 channels
- Audio Resolution: 16 bit to 24 bit
- Audio Sample Rate:
  - 32 kHz, 44.1 kHz, 48 kHz, 96 kHz, 192 kHz
  - 2 Channel L-PCM support up to 192 kHz at 1080p (50,59 60 Hz), 2 Channel L-PCM support up to 96 kHz at 720p (50,59 60 Hz), 1080p (24, 25, 30, 50, 59, 60 Hz), 1080i (50, 59, 60 fields),
  - 2 Channel L-PCM support up to 48 kHz at all resolutions
- Signal Type Support:
  - HDMI
  - DVI-D (Single Link With Cable Adapter)
- DDC/EDID Support
  - EDID Provided by the Optima
  - EDID is user re-programmable
- HDCP Support
  - Yes, full matrix HDCP support (includes any input to any or all outputs) with AMX HDCP InstaGate® Technology
- Input Voltage (Nominal): 1.0 Vpp Differential
- Output Voltage (Nominal): 1.0 Vpp Differential
- Output Re-clocking (CDR): Yes
- Output +5 V DDC Pin: 50 mA max per output port
- Output Rise Time / Fall Time:
  - 75 ps min - 144 ps max (20% - 80%)
  - 0.12 UI min - 0.24 UI max (@ 1.65 Gbps, 20% - 80%)
- Connectors: HDMI Type A Female

EDID

- Standard Timing Identification:
  - ID 1: 1920x1080 @ 60 Hz (This is the preferred timing identified in the EDID.)
  - ID 2: 1680x1050 @ 60 Hz
  - ID 3: 1600x1200 @ 60 Hz
  - ID 4: 1280x800 @ 60 Hz
  - ID 5: 1280x720 @ 60 Hz
  - ID 6: 1280x1024 @ 60 Hz
  - ID 7: 1360x765 @ 60 Hz
  - ID 8: 1440x900 @ 60 Hz
  - ID 9: 2048x1152 @ 60 Hz
  - ID 10: 1600x900 @ 60 Hz
  - ID 11: 1400x1050 @ 60 Hz
  - ID 12: 1280x960 @ 60 Hz
- Established Timing:
  - 640x480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz
  - 800x600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 832x624 @75 Hz
  - 1024x768 @60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280x1024 @75 Hz
  - 1152x870 @75 Hz
- Detailed Timing Blocks:
  - 1920x1080 @ 60 Hz 148.5 MHz
  - 1920x1080 @ 60 Hz 138.5 MHz
  - 1920x1080 @ 60 Hz 141.5 MHz
  - 1920x1200 @ 60 Hz 158.25 MHz
  - 1920x1200 @ 60 Hz 154.0 MHz
- CEA Video Information Code (VIC) Formats:
  - VIC = 1, 640x480p 59.94/60 Hz 4:3
  - VIC = 2, 720x480p 59.94/60 Hz 4:3
  - VIC = 3, 720x480p 59.94/60 Hz 16:9
  - VIC = 4, 1280x720p 59.94/60 Hz 16:9
  - VIC = 5, 1920x1080i 59.94/60 Hz 16:9
  - VIC = 6, 720(1440)x480i 59.94/60 Hz 4:3
  - VIC = 7, 720(1440)x480i 59.94/60 Hz 16:9
  - VIC = 14, 1440x480p 59.94/60 Hz 4:3
  - VIC = 15, 1440x480p 59.94/60 Hz 16:9
  - VIC = 16, Native 1920x1080p 59.94/60 Hz 16:9
  - VIC = 17, 720x576p 50 Hz 4:3
  - VIC = 18, 720x576p 50 Hz 16:9
  - VIC = 19, 1280x720p 50 Hz 16:9
  - VIC = 20, 1920x1080i 50 Hz 16:9
  - VIC = 21, 720(1440)x576i 50 Hz 4:3
  - VIC = 22, 720(1440)x576i 50 Hz 16:9
  - VIC = 29, 1440x576p 50 Hz 4:3
  - VIC = 30, 1440x576p 50 Hz 16:9
  - VIC = 31, 1920x1080p 50 Hz 16:9
  - VIC = 32, 1920x1080p 23.97/24 Hz 16:9
  - VIC = 33, 1920x1080p 25 Hz 16:9
  - VIC = 34, 1920x1080p 29.97/30 Hz 16:9
  - VIC = 39, 1920x1080i 50 Hz 16:9
  - VIC = 41, 1280x720p 100 Hz 16:9
  - VIC = 42, 720x576p 100 Hz 4:3
  - VIC = 43, 720x576p 100 Hz 16:9
  - VIC = 44, 720(1440)x576i 100 Hz 4:3
  - VIC = 45, 720(1440)x576i 100 Hz 16:9
  - VIC = 47, 1280x720p 119.88/120 Hz 16:9
  - VIC = 48, 720x480p 119.88/120 Hz 4:3
  - VIC = 49, 720x480p 119.88/120 Hz 16:9
- Audio Data Block:
  - 2 Channel L-PCM 32, 44.1, 48, 88.2, 96, 176.4 192 kHz Sampling Frequency at 16, 20 or 24 bits per sample.
  - AC-3 (Dolby Digital) 6 Channels (5.1) 48 kHz Sampling Frequency
  - DTS 6 Channels (5.1) 48 kHz Sampling Frequency

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Video Board List (cont.)

DVI
(DVI connectors)

I/O	FG#	MODEL	SLOTS
4x4	FG1046-479	AVS-OP-0404-VIO-DVI-1S	1
8x8	FG1046-659	AVS-OP-0808-VIO-DVI-2S	2

HELPFUL HINT
DVI boards are designed to route digital computer video.

SPECIFICATIONS

DIGITAL VIDEO (4X4 DVI)

- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- Resolution Support: Up to 1600x1200 @ 60 Hz
- Signal Type: DVI-D (Single Link)
- DDC/EDID Support: EDID provided by Optima
- HDCP Support: No
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Voltage (Max): 1.5 Vpp Differential
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Re-clocking (CDR): Yes
- Output +5 V DDC Pin: 50 mA available on each output
- Output Rise Time / Fall Time: 75 ps min - 240 ps Max (20% - 80%)
- 0.12 UI min - 0.4 UI Max (@ 1.65 Gbps, 20% - 80%)
- Connectors: DVI-I female (DVI-D Single Link is the supported signal type)
- Special Note: Power requirements for this board allow for no more than 4 boards in a single enclosure.

4X4 EDID STANDARD TIMING IDENTIFICATION:

- ID 1: 1600x1200 @75 Hz*
- ID 2: 640x480 @120 Hz
- ID 3: 1024x768 @ 120 Hz
- ID 4: 1280x1024 @ 85 Hz
- ID 5: 800x600 @ 120 Hz
- ID 6: 1152x864 @120 Hz
- ID 7: 1600x1200 @ 60 Hz
- ID 8: 1280x800 @ 60 Hz

* This is the preferred timing identified in the EDID.

4X4 ESTABLISHED TIMING

- 720 x 400 @ 70 Hz, 88 Hz
- 640 x 480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz
- 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
- 832 x 624 @ 75 Hz
- 1024 x 768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
- 1280 x 1024 @ 75 Hz
- 1152 x 870 @ 75 Hz

DIGITAL VIDEO (8X8 DVI)

- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- Resolution Support: Up to 1920x1200 @ 60 Hz
- Signal Type: DVI-D (Single Link)
- DDC/EDID Support: EDID provided by Optima
- EDID is user re-programmable
- HDCP Support: No
- Input Voltage (Nominal): 1.0 Vpp Differential
- Input Voltage (Max): 1.5 Vpp Differential
- Input Equalization: Up to 40 dB Automatic
- Input Cable Length (Typ): Up to 50 ft, 1920x1200 @ 60 Hz Over High Quality DVI Cable
- Input Cable Length (Max): Up to 100 ft, 1920x1200 @ 60 Hz* Over High Quality DVI 24 AWG, Shielded-Twisted Pair Cable
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Re-clocking (CDR): Yes
- Output Pre-emphasis: Yes, for improved cable drive
- Output +5 V DDC Pin: 1 A shared total available on outputs 1 - 4, 270 mA shared total available on outputs 5 - 8
- Output Rise Time / Fall Time: 80 ps min - 200 ps Max (20% - 80%), 0.13 UI min - 0.33 UI Max (@ 1.65 Gbps, 20% - 80%)
- Connectors: DVI-I female (DVI-D Single Link is the supported signal type)

* Requires a source signal amplitude of 1 Vpp driving the cable.

8X8 EDID STANDARD TIMING IDENTIFICATION:

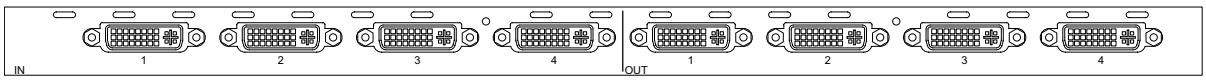
- ID 1: 1920x1200 @ 60 Hz*
- ID 2: 1920x1080 @ 60 Hz*
- ID 3: 1680x1050 @ 60 Hz
- ID 4: 1600x1200 @ 60 Hz
- ID 5: 1280x800 @ 60 Hz
- ID 6: 1280x720 @ 60 Hz
- ID 7: 1280x1024 @ 60 Hz
- ID 8: 640x480 @1 20 Hz

* This is the preferred timing identified in the EDID.

8X8 ESTABLISHED TIMING:

- 720x400 @ 70 Hz, 88 Hz
- 640x480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz
- 800x600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
- 832x624 @ 75 Hz
- 1024x768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
- 1280x1024 @ 75 Hz
- 1152x870 @ 75 Hz

A CLOSER LOOK
Shown here: 4x4 DVI Board



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Video Board List (cont.)

SD-SDI DIGITAL VIDEO
(BNC connectors)

SD-SDI conforms to SMPTE-259, SMPTE-344M

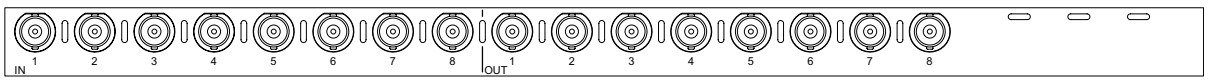
I/O	FG#	MODEL	SLOTS
4x4	FG1046-527	AVS-OP-0404-VIO-SDI-1S	1
8x8	FG1046-491	AVS-OP-0808-VIO-SDI-1S	1

SPECIFICATIONS

DIGITAL VIDEO (SD-SDI)

- Standard: Conforms to SMPTE-259M, SMPTE-344M
- Input Impedance: 75 Ohms
- Input Level (Max): 0.8 Vpp, ±10%
- Output Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp, ±10%
- Timing Jitter: <0.1 UI @ 360 Mbps
- Alignment Jitter: <0.1 UI @ 360 Mbps
- Rise and Fall Time: 600 ps, ±100 ps (20%-80%)
- Bit Rates: 143 Mbps, 177 Mbps*, 270 Mbps, 360 Mbps, 540 Mbps* (*Data not available for 177 & 540 Mbps bit rate)
- Data Type: 8 bit or 10 bit
- Auto Cable Equalization: Up to 350m of Belden 8281 or equivalent @ 270 Mbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC

A CLOSER LOOK
Shown here: 8x8 SD-SDI Board



HD-SDI DIGITAL VIDEO
(BNC connectors)

HD-SDI conforms to SMPTE-259M, SMPTE-292M, SMPTE-344M. dual-link HD-SDI can be achieved by using two HD-SDI boards

I/O	FG#	MODEL	SLOTS
8x8	FG1046-590	AVS-OP-0808-VIO-HDSD-1S	1

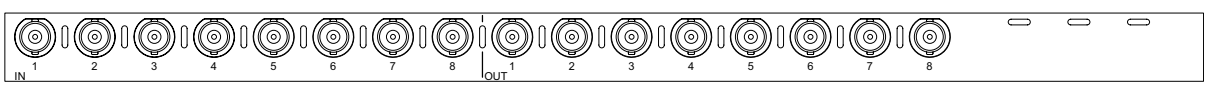
HELPFUL HINT
HD-SDI conforms to SMPTE-259M, SMPTE-292M, SMPTE-344M. dual-link HD-SDI can be achieved by using two HD-SDI boards.

SPECIFICATIONS

DIGITAL VIDEO (HD-SDI)

- Standard: Conforms to SMPTE-259M, SMPTE-292M, SMPTE-344M, SMPTE-372M* (*Data not available for SMPTE-372M dual-link format)
- Input Impedance: 75 Ohms
- Input Level (Max): 0.8 Vpp, ±10%
- Output Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp, ±10%
- Timing Jitter: < 0.1 UI @ 1.485 Gbps
- Alignment Jitter: <0.1 UI @ 1.485 Gbps
- Bit Rates: 143 Mbps, 177 Mbps*, 270 Mbps, 360 Mbps, 540 Mbps*, 1.485 Gbps (*Data not available for 177 & 540 Mbps bit rate)
- Data Type: 8 bit or 10 bit
- Auto Cable Equalization
- Up to 140m of Belden 1694A or equivalent @ 1.485 Gbps, Up to 100m of Belden 8281 or equivalent @ 1.485 Gbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC

A CLOSER LOOK
Shown here: 8x8 HD-SDI Board



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Video Board List (cont.)

CATPRO RGBHV + STEREO
(HD-15 + 5T Phoenix style to RJ-45)

The Optima CatPro boards integrate routing and transmission of RGBHV + Stereo over twisted pair, eliminating the need for external transmission devices. With the ability to maintain resolutions up to 1600x1200 or 1920x1080 @ 60 Hz even at distances of up to 1,000 feet, you don't have to compromise video quality to run long distances. These boards are ideal for any small application sending local computer video to long distance outputs, such as lobby areas, education, portable command-and-control, or museum kiosk areas.

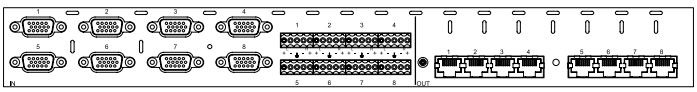
I/O	FG#	MODEL	SLOTS
4x8	FG1046-581	AVS-OP-0408-CATPRO-X-RGBHV- STI	2
8X8	FG1046-575	AVS-OP-0808-CATPRO-X-RGBHV-STI	2

HELPFUL HINT

Video is brought into the CatPro boards via HD-15 connections while stereo is via 5T (phoenix style) connections. Then, those two discrete signal paths are combined and transmitted out via a single RJ-45 connection. At the destination device a CatPro Receiver is required to receive the signals via a RJ-45 connection and break them back into their native HD-15 and phoenix style connections.

A CLOSER LOOK

Shown here: 8x8 RGBHV + Stereo to CatPro Board



SPECIFICATIONS

All Specs are defined for use in conjunction with a CatPro Receiver

RGBHV + STEREO IN TO CATPRO OUT

- Signal Types:
  Input: RGBHV + Stereo Audio (HD-15 & 5T)
  Output: CatPro RGBHV + Stereo Audio (RJ-45)
- Maximum Resolution: 1600x1200(4:3) and 1920x1080p(16:9) @ 60 Hz up to 1000 ft
- RGB In Signal Level Range (Max): +0.75 V to -0.3 V Typ (terminated)
- RGB Out Signal Level Range (Max): +0.75 V to -0.3 V Typ (terminated, user adjustable with gain and peak using CatPro Receiver)
- RGB Out Skew Adjustment: 0 to 62 ns, in 2 ns increments on RGB channels (user adjustable using CatPro Receiver)
- RGB In/Out Impedance: 75 Ohms
- RGB SNR: > 50 dB (Vin = 0.7 V, 100 IRE)
- RGB Crosstalk:
  - < -60 dB (f = 5 MHz)
  - < -45 dB (f = 30 MHz)
- Sync In Impedance: 2.2 kOhms
- Sync In/Out Polarity: Active High or Low (output follows input polarity)
- Sync Out Signal Levels: Low = 0 V, High = +5 V (unterminated)
- Audio In/Out Signal Type: Stereo, Balanced or Unbalanced In / Unbalanced Out
- Audio In/Out Signal Level (Max): +8 dBu
- Audio In Impedance: 18 kOhms
- Audio Output Impedance: < 5 O
- Audio Frequency Response: < ± 0.3 dB, 20 Hz to 20 kHz
- Audio THD+N: < 0.04 %, 1 kHz, -10 dBu to +4 dBu
- Audio Crosstalk: < -95 dB (1 kHz, Vin = +4 dBu)
- Audio SNR: > 85 dB, 20 Hz to 20 kHz Vin=+8 dBu
- Audio Out Volume Adj. Range: Mute to +6 dB (user adjustable at CatPro Receiver)
- RGBHV Input Connector: Female HD-15
- Stereo Audio Input Connector: 5T
- RGBHV + Stereo Out Connector: Female RJ-45
- Compatible Cable Types: Category Cable 5, 5e, 6, 6e, UTP, and STP*.
  *All measurements were taken using Cat5e Cable

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Video Board List (cont.)

CATPRO RGBHV + STEREO RECEIVERS
(Compatible CatPro Receivers)

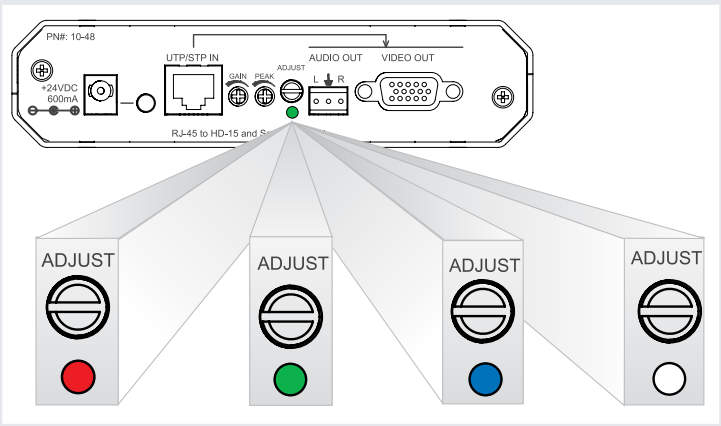
DESCRIPTION	FG#	MODEL
CatPro RGBHV+Stereo Receiver	FG1010-48-01	AVB-RX-CATPRO-HD15-ST

HELPFUL HINT

Make precise gain, peak and skew adjustments in seconds. Each receiver features a simple dial, and LED indicator for simple skew adjustments. A push of the dial and the LED illuminates with the color activated for adjustment (red, green, or blue). And, white indicates stereo audio volume control. Gain and peak adjustments are also simple via external potentiometers.

A CLOSER LOOK

Shown here: CatPro RGBHV + Stereo Receiver



SPECIFICATIONS

CATPRO RGBHV + STEREO RECEIVER

- Signal Types: RGBHV + Stereo Audio
- Maximum Resolution: 1600x1200(4:3) and 1920x1080p(16:9) @ 60 Hz up to 1000 feet
- RGB Out: At 1000 feet
- RGB Out Signal Level Range: +0.75 V to -0.3 V Typ (terminated, user adjustable with gain and peak)
- RGB Out Impedance: 75 Ohms
- RGB SNR Out: >50 dB
- RGB Out Skew Adjustment: 0 to 62 ns, in 2 ns increments on RGB channels (user adjustable)
- Sync Out Signal Levels: Low = 0 V, High = +5 V (unterminated)
- Sync Out Polarity: Active High or Low (follows input polarity)
- Audio Out: At 1000 feet
- Audio Out Signal Type: Stereo, Unbalanced
- Audio Out Signal Levels (Max): +8 dBu
- Audio Out Volume Control Range: Mute to +6 dB (user adjustable)
- Audio Out Frequency Response: <±0.2 dB, 20 Hz to 20 kHz
- Audio Out THD+N: <0.04 %, 1 kHz, -10 dBu to +4 dBu
- Audio Out SNR: >105 dB, 20 Hz to 20 kHz Vin=+4 dBu
- Audio Output Impedance: <5 Ohms
- RGBHV + Stereo Input Connector 1 Female RJ-45
- RGBHV Out Connector: 1 Female HD-15
- Stereo Audio Output Connector: 1 Pluggable 3.5mm Terminal Block

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Enclosures

All Optima enclosures include a standard RS-232 control port, support AutoPatch's simple BCS serial control protocol, ship with free APControl Software and are compatible with all leading 3rd party control systems.

To customize an Optima Matrix Switcher simply mix and match from the available boards, add up the total slots those boards fill, and purchase enclosure(s) to accommodate that total. For systems comprised of 2 or more linked enclosures, AutoPatch will provide a link cable or hub at no additional charge.

Since each board has its own input and output connectors, the physical signal path must be routed from inputs on the board to outputs on the same board. For multiple component signals, such as RGBHV, boards can then be combined in logical groups via software configuration (as shown in the RGBHV example below).

RACK UNITS	FG#	MODEL	SLOTS
2	FG1046-13	AVS-OP-ENC-BP-2U	4
3	FG1046-10	AVS-OP-ENC-BP-3U	6

Control Panels

Listed here are front panel control options and our APWeb Expansion Board which provides a TCP/IP control interface. Only one panel is needed when multiple enclosures are linked together to work as one system.

For more information on the capabilities of these control options as well as additional remote options please visit amx.com.

**Currently the APWeb Expansion Board is available in the 3 RU enclosure only. It is also available as a stand alone external module.

2 RU MODELS

DESCRIPTION	FG#	MODEL
8x8 CP-15	FG1046-261	AVS-OP-0808-CP15-2U
16x16 CP-15	FG1046-258	AVS-OP-1616-CP15-2U
16x24 CP-15	FG1046-255	AVS-OP-1624-CP15-2U
20x20 CP-15	FG1046-249	AVS-OP-2020-CP15-2U
24x16 CP-15	FG1046-252	AVS-OP-2416-CP15-2U
36x4 CP-15	FG1046-216	AVS-OP-3604-CP15-2U

3 RU MODELS

DESCRIPTION	FG#	MODEL
8x8 CP-15	FG1046-240	AVS-OP-0808-CP15-3U
16x16 CP-15	FG1046-237	AVS-OP-1616-CP15-3U
16x24 CP-15	FG1046-234	AVS-OP-1624-CP15-3U
20x20 CP-15	FG1046-216	AVS-OP-2020-CP15-3U
24x16 CP-15	FG1046-231	AVS-OP-2416-CP15-3U
36x4 CP-15	FG1046-210	AVS-OP-3604-CP15-3U
CP-20A	FG1046-213	AVS-OP-CP20A-3U
APWEB**	FG1046-313	AVS-OP-TCPIP-3U

SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption (Typ):
  150 Watts, fully loaded enclosure (3 RU)
  110 Watts, fully loaded enclosure (2 RU)
- BTU/hr (Max): 887
- BTU/hr (Typ):
  512 BTU/hr, fully loaded enclosure (3 RU)
  375 BTU/hr, fully loaded enclosure (2 RU)
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Storage Temperature: -22° to 158° F (-30° to 70° C)
- Humidity: 0 to 90% non-condensing
- Note: Specifications are subject to change

DIMENSIONS

5 3/16" (3 RU)/ 3 1/2" (2 RU) x 19" x 12" (13.2/8.9 cm x 48.3 cm x 30.5 cm)

DIMENSIONS WITH WITHOUT RACK EARS

5 3/16" (3 RU)/ 3 1/2" (2 RU)" x 17 3/8" x 12" (13.2/8.9 cm x 44.2 cm x 30.5 cm)

WEIGHT

- Appx. 12 lbs (5.44 kg) per loaded enclosure (3RU)
- Appx. 10 lbs (4.54 kg) per loaded enclosure (2RU)

MTBF

92,000 hours

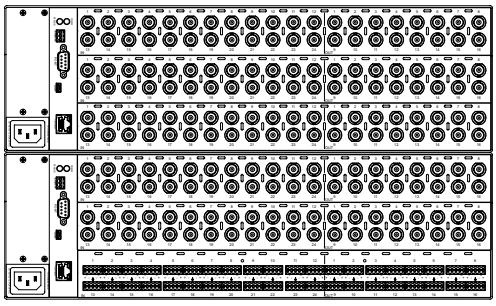
CERTIFICATIONS

CE, FCC Class A, UL, cUL, RoHS/WEEE compliant

A CLOSER LOOK

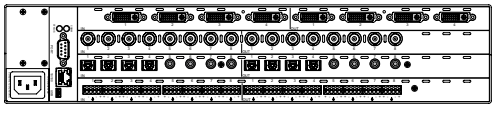
Shown here: An example RGBHV + stereo configuration using Optima 3RU enclosures and a sample multiple format configuration using an Optima 2 RU enclosure

Optima 3 RU - Example Configuration (using two, 3 RU enclosures)



24x16Wideband(R)
24x16Wideband(G)
24x16Wideband(B)
24x16 Sync (H)
24x16 Sync (V)
24x16 Stereo Audio

Optima 2 RU - Example Configuration



4x4 DVI
8x8 SD-SDI
8x8 TosLink®, S/PDIF
8x8 Stereo

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WIN BIG WITH CUSTOM CONFIGURATIONS

Modular Matrix Switchers

Modular systems not only allow for multiple signal types in various input / output ranges; the enclosure is part of the matrix switching system. This allows you to select input and output boards individually – you won't be forced into an I/O range that doesn't fit. For example, you can purchase a fully loaded 256x256 switcher today, or you can purchase a 16x256 and add inputs as the facility expands.

		VIDEO SIGNALS							AUDIO			CONTROL				FEATURES								
MODULA (32x32)	4x4 to 32x32 in increments of 4	X	X			X	X		X		X	X	+		+	50,300	X	X	X	X	+	+	+	
MODULA (60x4, 4x60)	4x60 to 16x48 or 48x16 to 60x4 in increments of 4	X	X				X		X		X	X	+		+	50,300	X	X	X	X	+	+	+	
MODULA SERIES4	4x4 to 32x32 in increments of 4	X	X						X		X	X	+		+	50,300	X	X	X	X	X	+	+	
MODULA CATPRO	4x4 to 32x32 in increments of 4		X				X		X			X	+		+	n/a	n/a	X	X	X		+	+	
EPICA DGX 16	4x4 up to 16x16	X	X		X			X		X		X	X	X		digital								X
EPICA DGX 32	4x4 up to 32x32	X	X		X			X		X		X	X	X	X	digital								X
EPICA DGX 144	16x16 up to 144x144	X	X		X			X		X		X				digital								X
EPICA DG	16x16 to 144x144 in increments of 16		X		X	X		X				X			+	digital	n/a			X				X
EPICA	16x16 to 256x256	X	X						X		X	X			+	50,300	X	X	X	X	+	+	+	X
	I/O RANGE	Composite, S-Video, Y/c, 3 Component	RGBHV	HDMI	DVI	SD-SDI, HD-SDI	Integrated Twisted Pair Distribution Options	Integrated Fiber Distribution Options	Stereo Audio	Enhanced Audio	AES 75 o[1] ,S/PDIF[1]	Standard RS-232, BCS Serial Control Protocol	Front Panel Control	Integrated NetLinx Control Port	APWeb TCP/IP Control	Video Bandwidth	Ultra-Flat Response (±3 dB)	Breakaway	Macros/Presets	Levels (programmable/Virtual Matrices)	Vertical Interval Switching	Digital Input Gain Control (Audio)	Digital Output Volume Control (Audio)	Redundant Power Supply

\+ Optional
1 - Indicates digital audio can be passed using standard video boards.

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Large (systems are typically from 3 RU to 18 RU; inputs from 4 to 60; outputs from 4 to 60) ..... **607 – 608**
Very Large (systems are typically from 16 RU to 125 RU; inputs from 16 to 256; outputs from 16 to 256) ..... **609 – 611**
Very Large with Integrated Fiber Technology (systems are typically 16 RU; inputs from 16 to 144; outputs from 16 to 144) ..... **612 – 630**

MATRIX SWITCHERS

FIXED

PRE-ENGINEERED

MIX-AND-MATCH

MODULAR

Modula Customizable Matrix Switchers

Multiple Analog and Digital Signal Types in Various I/O ranges. Modular and Field-Expandable.

CALL FOR CUSTOM QUOTE

OVERVIEW

Modula Matrix Switchers are fully customizable and available in multiple enclosure types to meet the signal management needs of any mid to large size audiovisual installation. The Modula Series is designed for flexibility; input / output boards simply slide into place as needed to increase matrix size. This can be done at the time of purchase, or later in the field.

Standard Modula 32x32 3RU enclosures can accommodate up to 32 inputs and 32 outputs in a wide variety of signal styles including stereo audio, mono audio, HD-SDI, SD-SDI, RGBHV, component video (including RGBS, RGsB, RGB, YUV, Y/Pb/Pr and HDTV), Y/c, S-Video and composite video. We also have systems with integrated video transmission over twisted pair. Various signal styles can be combined in a single enclosure or enclosures can easily link together under a single control view for larger systems (for example a 32x32 composite video + stereo audio system would have 2 enclosures – one for the video and one for the audio).

Modula Series4, Modula 32x32 4RU enclosures, are designed to route RGBHV with HD-15 connections, this saves a tremendous amount of rack space as only a single HD-15 connector is used for a given RGBHV input or output – rather than 5 BNC connections.

We even have skewed enclosures to help with installations that have very uneven input / output requirements such as 16 x 48 or 52 x 12.

The video frequency response in the Modula series is a tight ±3 dB, unlike other manufacturers who specify only -3 dB to allow for the use of excessive peaking, damaging the signal, to record a wider bandwidth. Virtual matrix programming levels allow multiple enclosures to be treated as a single system, or single enclosures to be treated as multiple independent routers. And, every system can be controlled using a variety of methods including local control panel, standard RS-232/422 control port, and optional remote and TCP/IP control (TCP/IP is via our external APWeb module)

COMMON APPLICATION

With so many enclosure styles to choose from, Modula Customizable Matrix Switchers can be used anyplace multiple audio and video sources need to be routed to multiple destinations without restriction. These systems are a proven cornerstone in thousands of installations worldwide including command and control, sports bars, theaters, auditoriums, arenas, digital signage, cruise ships and much more.

FEATURES

- Save money and rack space by consolidating all your signal requirements in a single matrix switching system with custom configuration
- Select from a variety of analog audio boards, some with options for digital input gain and output volume control
- Analog audio connections support balanced and unbalanced audio
- Audio breakaway to route audio-follow-video, video or audio alone
- Virtual Matrix Technology allows endless possible breakaway and "signal-follow-signal" user defined scenarios
- Superior video crosstalk specifications ensure signal isolation and security
- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario (RGB)
- PureSync™ Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display

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- Conforms to HD-SDI SMPTE standards including SMPTE-259M, SMPTE-292M, SMPTE-344M, and SMPTE-372M
- Conforms to SD-SDI SMPTE standards including SMPTE-259M, and SMPTE-344M
- HD-SDI systems / boards can also route SD-SDI
- HD-SDI boards pass embedded audio, metadata or any additional ancillary data included in the video stream
- HD-SDI boards support CDR (Clock Data Recovery)
- SD-SDI boards support CDR (Clock Data Recovery)
- SD-SDI boards provide cable equalization up to 350m
- HD-SDI boards provide cable equalization up to 140m
- Integrated CatPro Technology to receive, route and transmit RGBHV and stereo over twisted pair
- 2 Standard RS-232 control ports
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Choice of front mounted control or blank front panel
- Free upgrade to a lifetime warranty available
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls

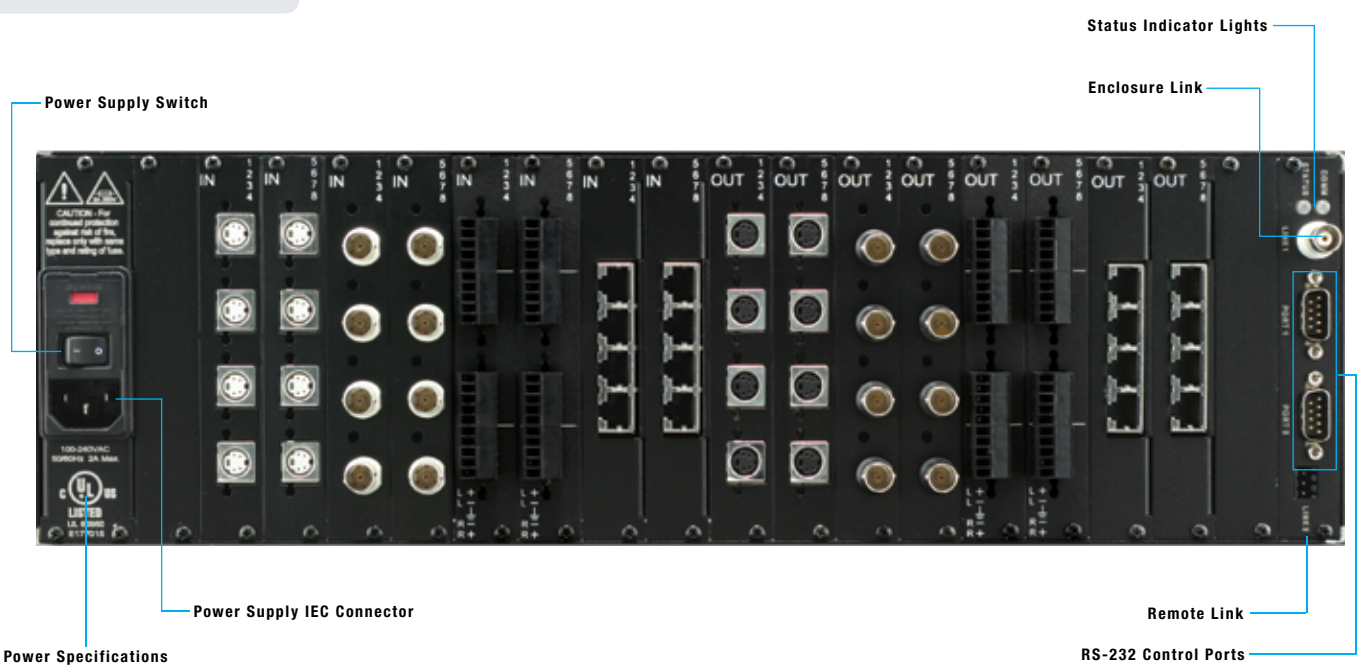
BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
The Modula is available in skewed enclosures that provide an extremely cost-effective solution for installations with very uneven I/O requirements such as 4x60, 8x56, and 12x52.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

PureSync™
PureSync Technology guarantees the quickest possible rise time of the sync signal's leading edge, eliminating the possibility of video loss at the display.

A CLOSER LOOK



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 260 Watts
- Power Consumption 4 RU (Typ): 105 Watts, fully loaded enclosure
- Power Consumption 3 RU (Typ): 100 Watts, fully loaded enclosure
- BTU/hr (Max): 887
- BTU/hr 4 RU (Typ): 358, fully loaded enclosure
- BTU/hr 3 RU (Typ): 341, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

- 4 RU: 7.0" x 19" x 17" (17.8 cm x 48.3 cm x 43.2 cm)
- 3 RU: 5 5/16" x 19" x 17" (13.4 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 4 RU: 7.0" x 17 3/8" x 17" (17.8 cm x 44.2 cm x 43.2 cm)
- 3 RU: 5 5/16" x 17 3/8" x 17" (13.4 cm x 44.2 cm x 43.2 cm)

WEIGHT

- 4 RU: Appx. 22-24 lbs (9.98-10.88 kg) per loaded enclosure
- 3 RU: Appx. 22 lbs (9.98 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

HD-SDI VIDEO (BNC)

- HD-SDI : Conforms to SMPTE-259M, SMPTE-292M, SMPTE-344M
- Input Level (Max): 0.8 Vpp 10%
- Input Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp 10%
- Output Impedance: 75 Ohms
- Timing Jitter: <0.2 UI @ 1.485 Gbps
- Alignment Jitter: <0.1 UI @ 1.485 Gbps
- Bit Rate: 143 Mbps, 177 Mbps*, 270 Mbps, 360 Mbps, 540 Mbps*, 1.485 Gbps (*Data not available for 177 & 540 Mbps bit rate)
- Data Type: 8 bit or 10 bit
- Auto Cable Equalization: Up to 140m of Belden 1694A or equivalent @ 1.485 Gbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC

SD-SDI VIDEO (BNC)

- SD-SDI : Conforms to SMPTE-259M, SMPTE-344M
- Input Level (Max): 0.8 Vpp 10%
- Input Impedance: 75 Ohms
- Output Level (Max): 0.8 Vpp 10%
- Output Impedance: 75 Ohms
- Timing Jitter: <0.1 UI @ 360 Mbps
- Alignment Jitter: <0.1 UI @ 360 Mbps
- Rise and Fall Time: 600 ps, ±100 ps
- Bit Rate: 143 Mbps, 177 Mbps*, 270 Mbps, 360 Mbps, 540 Mbps* (*Data not available for 177 & 540 Mbps bit rate)
- Data Type: 8 bit or 10 bit
- Auto Cable Equalization: Up to 350m of Belden 8281 or equivalent @ 270 Mbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC

WIDEBAND VIDEO (BNC)

- Input Level (Max): ±1.75 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±1.75 Volts
- Output Impedance: 75 Ohm
- Frequency Response: 300 MHz or better (±3 dB), 200 MHz or better (±1.5 dB), 60 MHz or better (±1 dB)
- Crosstalk: <-60 dB (f = 5 MHz), <-30 dB (f = 150 MHz)
- Signal to Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Sync Input/Output Level: TTL
- Connector: BNC

SYNC (BNC)

- Input Level: 0 V to +5 V
- Output Level: 0 V to +5 V
- Sync Polarity: Output follows Input
- Connectors: BNC

WIDEBAND VIDEO (HD-15)

- Input Level (max): ±1.5 Volts
- Input Impedance: 75 Ohms
- Frequency Response: 300 MHz or better (±3 dB)
- Crosstalk: <-50 dB (f = 5 MHz), <-30 dB (f = 150 MHz)
- Signal to Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Sync Input / Output Level: TTL
- Connections: HD-15

STANDARD VIDEO (S-VIDEO, Y/C, COMPOSITE)

- Input Level; S-Video (Max): ±2 Volts
- Input Level; Y/c, Composite (Max): ±2 Volts
- Input Impedance: 75 Ohms
- Output Level, S-Video (Max) ±2 Volts
- Output Level; Y/c, Composite (Max): ±2.5 Volts
- Output Impedance: 75 Ohms
- Frequency Response: 50 MHz or better (±3 dB), 20 MHz or better (±1 dB)
- Crosstalk: <-50 dB (f = 5 MHz)
- Differential Gain: <0.2% or better (f = 3.58 MHz)
- Differential Phase: <0.2° or better (f = 3.58 MHz)
- Signal to Noise Ratio: >65 dB (Vin = 0.7 V, 100 IRE)
- Connector Options: S-Video (4-pin Mini-DIN), BNC

STEREO AUDIO WITH DVC

- Input Level (Max): +22 dBu, balanced
- Input Impedance: 18 kOhms
- Output Level (Max): +22 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <± 0.1 dB (20 Hz to 20 kHz)
- THD + Noise: <0.05% (1 kHz) Vin = -10 to +20 dBu)
- Crosstalk: <-92 dB (1 kHz, Vin = +20 dBu)
- Signal to Noise Ratio: >100 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Input Gain Adj. Range
  - ±10 dB, via serial/control panel. Total of input gain plus output gain cannot exceed +10 dB.
- Output Volume Adj. Range: +10 dB to -70 dB (muted), via serial/control panel
- Connectors: 5T

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Stereo | RGBHV
Audio • Video

Modula CatPro Customizable Matrix Switcher

RGBHV (HD-15) and Stereo, Phoenix-style to CatPro (RJ-45)

CALL FOR CUSTOM QUOTE

OVERVIEW

The Modula CatPro Series was designed to receive, route, and transmit uncompressed RGBHV + stereo over twisted pair without worrying about exact cable measurements or readjusting gain, peak, and skew when routing signal paths of various lengths. Once your system is set up, there is no need to readjust when switching between sources and devices that have different distance runs. Our intuitive CatPro Software Wizard allows for simple adjustment of gain, peak and skew on every input received via RJ-45 connections from our CatPro Transmitter. This brings all signals back to a distance of zero -- ready to be sent to any destination device without the hassle of readjustment. Pair the Modula CatPro with the AutoPatch CatPro Transmitter/Receiver boxes for the ultimate flexibility when combining local and/ or long distance source devices with local and/or long distance destination devices.

COMMON APPLICATION

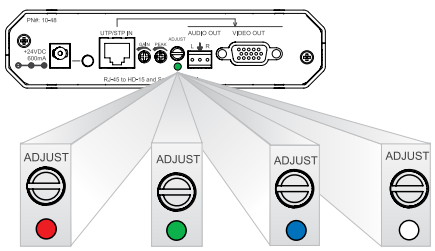
Perfect for a number of commercial applications including schools, universities, hospitals and presentation facilities that need to receive, route and transmit uncompressed RGBHV + stereo signals over twisted pair with distances of up to 1,000 feet.

FEATURES

- Integrated CatPro Technology to receive, route and transmit RGBHV and stereo over twisted pair
- Transmit high-resolution RGBHV / 1600x1200 (4:3) and 1920x1080 (16:9) @ 60 Hz up to 1000 feet over twisted pair
- CatPro Wizard provides a quick and easy software application for gain, peak and skew adjustments on each CatPro (RJ-45) RX board
- Intuitive gain, peak and skew adjustments at the touch of a button at each destination via CatPro RX
- 2 Standard RS-232 control ports
- Free upgrade to a lifetime warranty available
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command
- Global presets allow quick recall of a comprehensive snapshot of all switches

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

HELPFUL HINT
Make precise gain, peak and skew adjustments in seconds. Each receiver features a simple dial and LED indicator for simple skew adjustments. A push of the dial and the LED illuminates with the color activated for adjustment (red, green, or blue). And, white indicates stereo audio volume control. Gain and peak adjustments are also simple via external potentiometers.



Shown here:
CatPro RGBHV + Stereo Receiver

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

CatPro
Integrated CatPro Technology brings professional audiovisual quality and twisted pair together by transmitting RGBHV at resolutions up to 1600x1200, providing intuitive digital gain, peak and skew adjustments at every receipt point within the system (up to 62 ns in 2 ns increments), while including true left / right stereo audio on the same cable.

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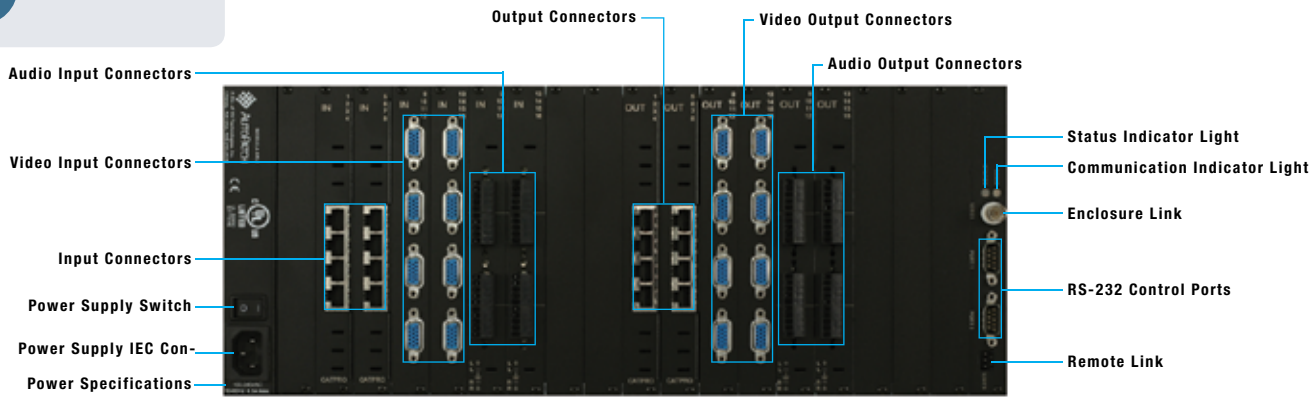
A CLOSER LOOK



SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC 50-60 Hz
- Power Consumption (Max): 520 Watts
- Power Consumption (Typ): 255 Watts, fully loaded enclosure
- BTU/hr (Max): 1774
- BTU/hr (Typ): 870, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS (WITH RACK EARS)

7" x 19" x 17" (17.8 cm x 48.3 cm x 43.2 cm)

DIMENSIONS (WITHOUT RACK EARS)

- 7" x 17 3/8" x 17" (17.8 cm x 44.2 cm x 43.2 cm)
- RU: 4

WEIGHT

Appx 22-24 lbs (9.98-10.88 kg) per loaded enclosure

MTBF

88,000 hours

CERTIFICATIONS

CE, UL, cUL, RoHS/WEEE compliant

CATPRO RGBHV + STEREO (RJ-45)

- Signal Types: RGBHV + stereo audio. All specs are defined for use in conjunction with a CatPro Transmitter and Receiver
- Maximum Resolution: 1600x1200 (4:3) and 1920x1080p (16:9) @ 60 Hz up to 1000 ft. Overall transmission distance including input and output cannot exceed 1000 ft. from source to destination.
- RGB In Signal Level Range (Max): +0.75 V to -0.3 V Typ (terminated, user adjustable with gain and peak using CatPro Wizard)
- RGB Out Signal Level Range (Max): +0.75 V to -0.3 V Typ (terminated, user adjustable with gain and peak using CatPro Receiver)
- RGB In Skew Adjustment: 0 to 62 nS, in 2 nS increments on RGB channels (user adjustable using CatPro Wizard)
- RGB Out Skew Adjustment: 0 to 62 nS, in 2 nS increments on RGB channels (user adjustable using CatPro Receiver)
- RGB In/Out Impedance: 75 Ohms
- RGB SNR: >50 dB
- RGB Crosstalk: <-50 (f=5 MHz), <-35 (f=30 MHz)
- Sync In Impedance: 510 Ohms
- Sync In/Out Polarity: Active High or Low (output follows input polarity)
- Sync Out Signal Levels: Low = 0 V, High = +5 V (unterminated)
- Audio In/Out Signal Type: Stereo, Unbalanced
- Audio In/Out Signal Level (Max): +8 dBu
- Audio In Impedance: 2 kOhms
- Audio Output Impedance: <5 Ohms
- Audio Frequency Response: <± 0.2 dB, 20 Hz to 20 kHz
- Audio THD+N: <0.04 %, 1 kHz, -10 dBu to +4 dBu
- Audio Crosstalk: <-98 dB (1 kHz, Vin = +4 dBu)
- Audio SNR: >83 dB, 20 Hz to 20 kHz Vin = +4 dBu
- Audio Out Volume Adj. Range: +6 dB to Mute (user adjustable at CatPro Receiver)
- RGBHV + Stereo In/Out Connector: Female RJ-45
- Compatible Cable Types: Category Cable 5, 5e, 6, 6e, and STP*
  *All measurements were taken using Cat5e Cable

CATPRO RGBHV (HD-15)

- Input/Output Level (Max): +0.75 V to -0.3 V
- I/O Impedance: 75 Ohms
- Maximum Resolution: 1600x1200(4:3) and 1920x1080p(16:9) @ 60 Hz up to 1000 ft (Cat5)
- Crosstalk: <-50 (f = 5 MHz), <-35 (f = 30 MHz), <-30 (f = 150 MHz)
- Signal to Noise Ratio: > 60 dB (Vin = 0.7 V, 100 IRE)
- Sync I/O Level: TTL
- Compatibility: These boards can be used to break into and out of the CatPro RGBHV + Stereo boards
- Connectors: HD-15

CATPRO STEREO AUDIO (PHOENIX-STYLE)

- Input Level (Max): +8 dBu, balanced
- Input Impedance: 18 k Ohms
- Output Level (Max): +8 dBu, balanced
- Output Impedance: 50 Ohms
- Frequency Response: <±0.25 dB (20 Hz to 20 kHz)
- THD + Noise: <0.06% (1 kHz, -10 dBu to +4 dBu)
- Crosstalk: <-95 dB (1 kHz, Vin = +4 dBu)
- Signal to Noise Ratio: >80 dB (20 Hz to 20 kHz, Vin= +4 dBu)
- Input Gain Adj. Range: +6 dB to -6 dB, via potentiometer
- Output Volume Adj. Range: +10 dB to -70 dB (muted), via software / control panel
- Connectors: 5T
- Compatibility: These boards can be used to break into and out of the CatPro RGBHV + Stereo boards

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Epica DGX 16
Customizable Matrix Switcher

The Best of Fiber
Matrix Switching – Just Got Smaller!

CALL FOR CUSTOM QUOTE

OVERVIEW

When the demands of high-resolution video clarity, long distances and maximum security need to be met without compromise THINK FIBER. The Epica DGX 16 is a customizable, fiber optic matrix switcher with integrated signal conversion, and when used in conjunction with our compatible DGX Fiber Transmitters and Receivers the system also provides transport of uncompressed video, embedded audio and one-way control along with video scaling – making it the easy to specify, easy to install, easy to use solution.

Start with any combination of high-resolution video sources (3 component, RGBHV and DVI), add DGX HD-15 and DGX DVI Fiber Transmitters to send uncompressed pure video up to 3,000 feet to the Epica DGX 16 Matrix Switcher, route those signals to any output, then transmit those signals another 3,000 feet to our DGX HD-15 or DGX DVI Fiber Receiver featuring SmartScale video scaling. With the powerful combination of video conversion, scaling and high speed 4.95 Gbps digital switching the system delivers perfect video every time – regardless of signal style. Plug and GO. It's that easy. And, since fiber uses light to send data, rather than electric signals, it is perfect for electronically sensitive environments as it is not susceptible to non-intrusive physical wire tapping.

Our exclusive DGX Technology integrated into every product in the DGX family transcodes signals to a common digital platform so analog and digital live in harmony; in other words, the system offers simple analog-to-digital and digital-to-analog signal conversion whether it is needed at the source, the switch or the destination. Designed with flexibility, the compact 4RU enclosure is expandable from 4x4 to 16x16 by increments of 4 inputs and/or outputs with the choice of DGX SC Optical input and output boards, and DGX DVI input and output boards. Like all Epica DGX switchers, the DGX 16 features several integrator friendly tools designed to simplify setup and reduce installation issues including hot-swappable I/O boards, real-time system monitoring, and fully redundant, hot-swappable power supplies with redundant power feeds. When paired with the DGX Fiber Transmitters and Receivers the Epica DGX 16 can also pass embedded audio and control sent from the TX through the matrix switcher to the RX. The DGX Fiber Receivers (both HD-15 and DVI) feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video resolution and adjusts the video parameters to match the displays native format. SmartScale Technology ensures every display operates at its preferred resolution and eliminates the incompatibilities that can arise in matrix switching systems when the output resolution of the source is not supported by some or all of the displays in the system.

COMMON APPLICATION

The Epica DGX 16 is the ideal solution for government agencies, command-and-control environments, universities, hospitals, casinos, retail environments or any facility that demands the highest quality video be shared between rooms or even buildings.

FEATURES

- Compatible DGX Fiber Receivers feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video to the best resolution and video parameters for that display without manual setup
- DGX Technology offers simple analog-to-digital and digital-to-analog signal conversion whether it is needed at the source, the switch or the destination
- Designed for use with single strand multimode fiber; the most common, easily terminated and installed fiber cable solution

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- Use in conjunction with our new DGX Fiber Transmitters and Receivers to send video, audio and one-way control over a single fiber cable up to 6,000 feet -- 3,000 feet to the matrix switcher and 3,000 feet after the matrix switcher
- Supports matrix switching of embedded digital or analog audio and one-way control when used in conjunction with any DGX Fiber TX / RX pair running through the Epica DGX 16 SC Fiber Input and Output Boards
- High speed 4.95 Gbps digital switching ensures perfect pixel for pixel video at resolutions up to 1920 x 1200 @ 60 Hz, video uncompressed and uncompromised
- Pre-loaded with the most common EDID settings on each of the matrix switcher's input connectors to emulate the display's response when queried, which ensures transmission of the video from the source device
- Custom EDID settings can be loaded on each input with the use of the included EDID Programmer
- Provides additional power on every DVI output commonly used to power external DVI extenders
- Standard RS-232 control port
- Standard USB (mini-B) port can be used as a virtual Com port for serial communication with a PC
- Supports AutoPatch's simple BCS serial control protocol
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Native NetLinx Integrated Port provides direct connection to any NetLinx Master as well as offering a tunneling access point for our simple BCS commands
- Rack mounting ears included
- Fully redundant power supplies with independent power paths for maximum reliability
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

DEALER BENEFITS

- SmartScale™ Technology - The Epica DGX Receivers automatically scale the video output to match the display's preferred resolution
- Easily Convert Between Analog and Digital Signals - DGX Technology offers simple signal conversion between analog and digital signals whether it is needed at the source, the switch or the destination
- Field Serviceable and Upgradable - Easily add or replace I/O boards at any time after deployment - the system automatically recognizes the new configuration and activates the boards

CUSTOMER BENEFITS

- Securely Transport AV Signals – As a fiber based product, its inherent features protect information from security threats while delivering audio and visual data as it was intended
- Perfect Reproduction of the Source Image – The DGX provides high speed digital switching supporting 4.95 Gbps, which ensures perfect pixel for pixel reproduction of original source image for all video resolutions up to 1920x1200
- Cost Effective Fiber Transportation Solution – The Epica DGX Fiber Matrix Switchers utilize single strand multimode fiber, the industry favorite for ease of use and termination

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

WATCH THE VIDEO
See the DGX in action by watching the video profile online at: www.amx.com/assets/videos/DGX.mp4.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

DGX
The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV and DVI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.

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Epica DGX 16 Configuration Guide

Easily customize an Epica DGX 16 by selecting any combination of available input and output boards (as space allows).The Epica DGX 16 enclosure has space for 4 input boards and 4 outputs boards. Each board has 4 connections. Backplane architecture in the DGX 16 enclosure provides a physical path for all routing connections – meaning any input can be routed to any or all outputs in any combination without limitations; even if you add boards later in the field. Start as small as 4x4 and install more boards as the requirements of the installation grow. Need even more room? No problem, the Epica DGX 16 boards can also be moved into an Epica DGX 32 enclosure allowing for a total of 8 input boards and 8 output boards.

EPICA DGX 16 ENCLOSURE

FG#	MODEL	DESCRIPTION
FG1057-16	AVS-EPDGX16-ENC	Epica DGX 16 Matrix Switcher Enclosure, 4RU compatible with all Epica DGX 16/32 Matrix Switcher input and output boards for a maximum configuration of 16x16

EPICA DGX 16/32 INPUT BOARDS

FG#	MODEL	DESCRIPTION
FG1056-500	AVS-EPDGX32-OI-SC	4 SC Fiber Connection Epica DGX 16/32 Input Board receives fiber inputs from DGX DVI and DGX HD-15 Fiber Transmitters
FG1056-520	AVS-EPDGX32-VI-DVI	4 Connection DVI with DVI Epica DGX 16/32 Input Board

EPICA DGX 16/32 OUTPUT BOARDS

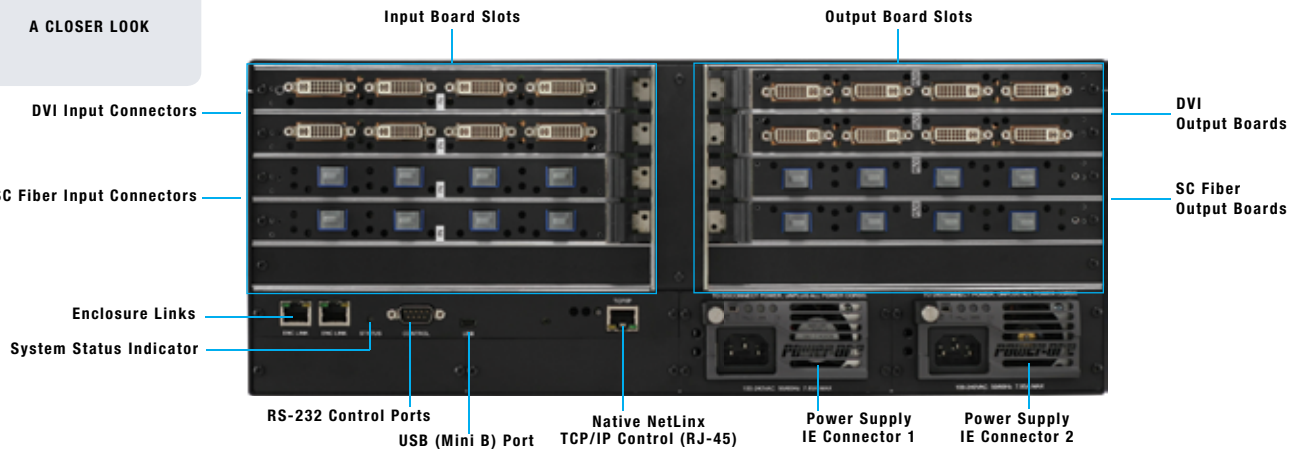
FG#	MODEL	DESCRIPTION
FG1056-510	AVS-EPDGX32-OO-SC	4 SC Fiber Connection Epica DGX 16/32 Output Board, sends fiber outputs to DGX DVI and DGX HD-15 Fiber Receivers
FG1056-530	AVS-EPDGX32-VO-DVI	4 Connection DVI with DVI Epica DGX 16/32 Output Board

DGX TRANSMITTERS AND RECEIVERS

Use SC Fiber Input and Output Boards with the DGX Fiber Transmitters and Receivers

FG#	MODEL	DESCRIPTION
FG1010-210-01	AVB-TX-DGX-DVI-SC FIBER	DGX DVI Fiber Transmitter featuring Digital Generation Technology
FG1010-410-01	AVB-RX-DGX-SC FIBER-DVI	DGX DVI Fiber Receiver with SmartScale and Digital Generation Technology
FG1010-200-01	AVB-TX-DGX-HD15-SC FIBER	DGX HD-15 Fiber Transmitter featuring Digital Generation Technology
FG1010-400-01	AVB-RX-DGX-SC FIBER-HD15	DGX HD-15 Fiber Receiver with SmartScale and Digital Generation Technology

A CLOSER LOOK



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 785 Watts
- Power Consumption (Typ): 210 Watts, fully loaded enclosure
- BTU/hr (Max): 2679
- BTU/hr (Typ): 717, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Storage Temperature: -22° to 158° F (-40° to 70° C)
- Humidity: 0 to 90% non-condensing
- Note: Specifications are subject to change

DIMENSIONS

6 13/16" x 19" x 15" (17.4 cm x 48.3 cm x 38 cm)

DIMENSIONS WITH EXTRACTORS

- 6 13/16" x 19" x 16" (17.4 cm x 48.3 cm x 40.6 cm)
- RU: 4

WEIGHT

Appx. 34 lbs (15.4 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 40 lbs (18.1 kg) per loaded enclosure

MTBF

170,000 hours

CERTIFICATIONS

CE, FCC Class A, UL, cUL, RoHS/WEEE compliant

SC FIBER

- Compatible AutoPatch Fiber Modules: DGX DVI TX/RX, DGX HD-15 TX/RX , Epica DGX 16, Epica DGX 32, Epica DGX 144
- Signal Types over Fiber: Video, Audio, Serial Data (Video signal must be present to pass Audio and Serial Data)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support:
  - 1080i 60, 59.94, 50 (fields per second)
  - 578i 100, 50 (fields per second)
  - 480i 60 (fields per second)

480i and 578i are only available when being transmitted from a DGX HD-15 Tx as a YPbPr signal)

- Audio Support: Analog Stereo or S/PDIF (S/PDIF up to 96 kHz Sample Rate, 96 kHz audio only available when source video resolution is 800x600 @ 60 Hz(40 MHz pixel clock) or greater, otherwise 48 kHz max)
- Serial Data Support: Unidirectional RS-232, up to 115.2 k Baud
- Fiber Cable Type: Multimode Simplex (with SC termination) 50/125 µm (preferred) or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft In / Out with 50 um cable (3000 ft cable requires 50/125 µm OM2 class low loss fiber cable)
  - Up to 1500 ft In / Out with 62.5 um
- Fiber Connector: SC Optical
- Safety Certifications: Class 1 Laser Product (Class 3R Laser Product when fiber is disconnected from the unit) IEC 60825-1, 2001 (fiber output board)
- Power Output of Laser Radiation (max): 4.08 mW (Fiber Output Board)
- Optical Budget:
  - 9.75 dBm (typ) between DGX Tx and input board
  - 9.75 dBm (typ) between Output board and DGX Rx
  - Optical Modulation Amplitude (OMA) Output: -6.25 dBm (Typ)
  - Optical Modulation Amplitude (OMA) Input Sensitivity: -16 dBm (Typ)
- Fiber Input Board Propagation Delay: 1 us
- Fiber Output Board Propagation Delay: 2 us

DVI

- Signal Type: DVI-D Input (Single Link)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- DDC/EDID Support:
  - EDID provided by Epica DGX 16
  - EDID is user re-programmable
- HDCP Support: No
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Equalization: Up to 50 ft
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Re-clocking: Yes
- Output +5 V DDC Pin: 250 mA
- Output Rise Time / Fall Time:
  - 80 ps min - 200 ps Max (20% - 80%)
  - 0.13 UI min - 0.33 UI Max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 1 us
- DVI Output Board Propagation Delay: 2 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

EDID

- Standard Timing Identification:
  - ID 1: 1920x1200 @ 60 Hz (This is the preferred timing identified in the EDID)
  - ID 2: 1920x1080 @ 60 Hz
  - ID 3: 1680x1050 @ 60 Hz
  - ID 4: 1600x1200 @ 60 Hz
  - ID 5: 1280x800 @ 60 Hz
  - ID 6: 1280x720 @ 60 Hz
  - ID 7: 1280x1024 @ 60 Hz
  - ID 8: 640x480 @ 120 Hz
- Established Timing:
  - 640x480 @60 Hz, 72 Hz, 75 Hz
  - 800x600 @56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024x768 @60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280x1024 @75 Hz

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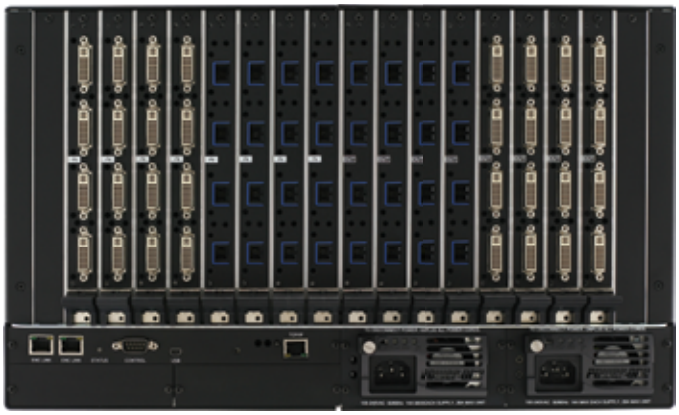
Epica DGX 32 Customizable Matrix Switcher

Mid-size Single Strand Multimode Fiber Matrix Switching has Never Been Easier

CALL FOR CUSTOM QUOTE



OVERVIEW

When the demands of high-resolution video clarity, long distances and maximum security need to be met without compromise THINK FIBER. The Epica DGX 32 is a customizable, fiber optic matrix switcher with integrated signal conversion, and when used in conjunction with our compatible DGX Fiber Transmitters and Receivers the system also provides transport of uncompressed video, embedded audio and one-way control along with video scaling – making it the easy to specify, easy to install, easy to use solution.

Start with any combination of high-resolution video sources (3 component, RGBHV and DVI), add DGX HD-15 and DGX DVI Fiber Transmitters to send uncompressed pure video up to 3,000 feet to the Epica DGX 32 Matrix Switcher, route those signals to any output, then transmit those signals another 3,000 feet to our DGX HD-15 or DGX DVI Fiber Receiver featuring SmartScale™ video scaling. With the powerful combination of video conversion, scaling and high speed 4.95 Gbps digital switching the system delivers perfect video every time – regardless of signal style. Plug and GO. It's that easy. And, since fiber uses light to send data, rather than electric signals, it is perfect for electronically sensitive environments as it is not susceptible to non-intrusive physical wire tapping.

COMMON APPLICATION

The Epica DGX 32 is the ideal solution for government agencies, command-and-control environments, universities, hospitals, casinos, retail environments or any facility that demands the highest quality video be shared between rooms or even buildings.

FEATURES

- Compatible DGX Fiber Receivers feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video to the best resolution and video parameters for that display without manual setup
- DGX Technology offers simple analog-to-digital and digital-to-analog signal conversion whether it is needed at the source, the switch or the destination
- Designed for use with single strand multimode fiber; the most common, easily terminated and installed fiber cable solution
- Use in conjunction with our new DGX Fiber Transmitters and Receivers to send video, audio and one-way control over a single fiber cable up to 6,000 feet -- 3,000 feet to the matrix switcher and 3,000 feet after the matrix switcher. In fact, all DGX products re-clock the signal so that it is ready to be sent another 3,000 feet thus very large distributed video systems that incorporate more than a single DGX Matrix Switcher have the potential to send video for miles
- Supports matrix switching of embedded digital or analog audio and one-way control when used in conjunction with any DGX Fiber TX / RX pair running through the Epica DGX 32 SC Fiber Input and Output Boards
- High speed 4.95 Gbps digital switching ensures perfect pixel for pixel video at resolutions up to 1920x1200 @ 60 Hz, uncompressed and uncompromised
- Pre-loaded with the most common EDID settings on each of the matrix switcher's input connectors to emulate the display's response when queried, which ensures transmission of the video from the source device
- Custom EDID settings can be loaded on each input with the use of the included EDID Programmer
- Provides additional power on every DVI output commonly used to power external DVI extenders
- Standard RS-232 control port
- Standard USB (mini-B) port can be used as a virtual Com port for

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(continued) serial communication with a PC
- Supports AutoPatch's simple BCS serial control protocol
- Native NetLinx Integrated Port provides direct connection to any NetLinx Master as well as offering a tunneling access point for our simple BCS commands
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Free upgrade to a lifetime warranty available
- Fully redundant power supplies with independent power paths for maximum reliability
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

DEALER BENEFITS

- SmartScale™ Technology - The Epica DGX Receivers automatically scale the video output to match the display's preferred resolution
- Easily Convert Between Analog and Digital Signals - DGX Technology offers simple signal conversion between analog and digital signals whether it is needed at the source, the switch or the destination
- Field Serviceable and Upgradable - Easily add or replace I/O boards at any time after deployment - the system automatically recognizes the new configuration and activates the boards

CUSTOMER BENEFITS

- Securely Transport AV Signals – As a fiber based product, its inherent features protect information from security threats while delivering audio and visual data as it was intended
- Perfect Reproduction of the Source Image – The DGX provides high speed digital switching supporting 4.95 Gbps, which ensures perfect pixel for pixel reproduction of original source image for all video resolutions up to 1920x1200
- Cost Effective Fiber Transportation Solution – The Epica DGX Fiber Matrix Switchers utilize single strand multimode fiber, the industry favorite for ease of use and termination

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DGX
The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV and DVI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.

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Epica DGX 32 Configuration Guide

Easily customize an Epica DGX 32 by selecting any combination of available input and output boards (as space allows).The Epica DGX 32 enclosure has space for 8 input boards and 8 outputs boards. Each board has 4 connections. Backplane architecture in the DGX 32 enclosure provides a physical path for all routing connections – meaning any input can be routed to any or all outputs in any combination without limitations; even if you add boards later in the field. Start as small as 4x4 and install more boards as the requirements of the installation grow. Need even more room? No problem, the Epica DGX 32 boards can also be moved into an Epica DGX 16 enclosure allowing for a total of 4 input boards and 4 output boards.

EPICA DGX 32 ENCLOSURE

FG#	MODEL	DESCRIPTION
FG1056-32	AVS-EPDGX32-ENC	Epica DGX 32 Matrix Switcher Enclosure, 4RU compatible with all Epica DGX 16/32 Matrix Switcher input and output boards for a maximum configuration of 32x32

EPICA DGX 16/32 INPUT BOARDS

FG#	MODEL	DESCRIPTION
FG1056-500	AVS-EPDGX32-OI-SC	4 SC Fiber Connection Epica DGX 16/32 Input Board receives fiber inputs from DGX DVI and DGX HD-15 Fiber Transmitters
FG1056-520	AVS-EPDGX32-VI-DVI	4 Connection DVI with DVI Epica DGX 16/32 Input Board

EPICA DGX 16/32 OUTPUT BOARDS

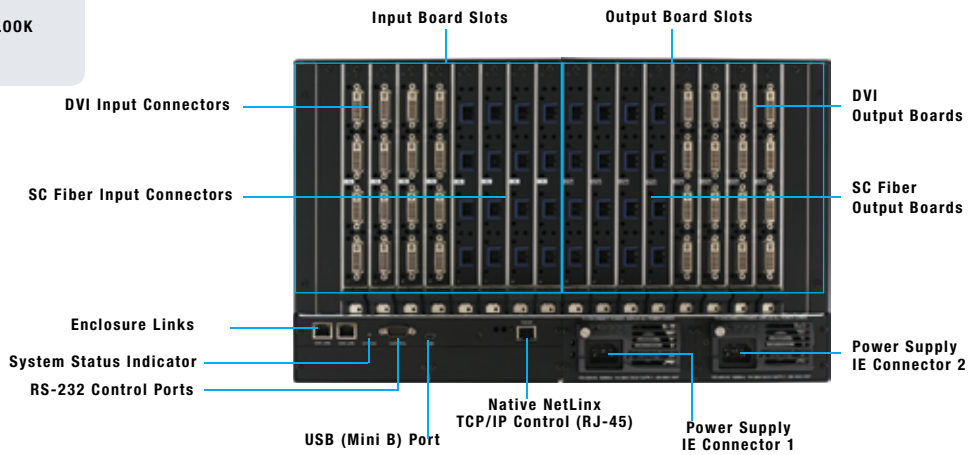
FG#	MODEL	DESCRIPTION
FG1056-510	AVS-EPDGX32-OO-SC	4 SC Fiber Connection Epica DGX 16/32 Output Board, sends fiber outputs to DGX DVI and DGX HD-15 Fiber Receivers
FG1056-530	AVS-EPDGX32-VO-DVI	4 Connection DVI with DVI Epica DGX 16/32 Output Board

DGX TRANSMITTERS AND RECEIVERS

Use SC Fiber Input and Output Boards with the DGX Fiber Transmitters and Receivers

FG#	MODEL	DESCRIPTION
FG1010-210-01	AVB-TX-DGX-DVI-SC FIBER	DGX DVI Fiber Transmitter featuring Digital Generation Technology
FG1010-410-01	AVB-RX-DGX-SC FIBER-DVI	DGX DVI Fiber Receiver with SmartScale and Digital Generation Technology
FG1010-200-01	AVB-TX-DGX-HD15-SC FIBER	DGX HD-15 Fiber Transmitter featuring Digital Generation Technology
FG1010-400-01	AVB-RX-DGX-SC FIBER-HD15	DGX HD-15 Fiber Receiver with SmartScale and Digital Generation Technology

A CLOSER LOOK



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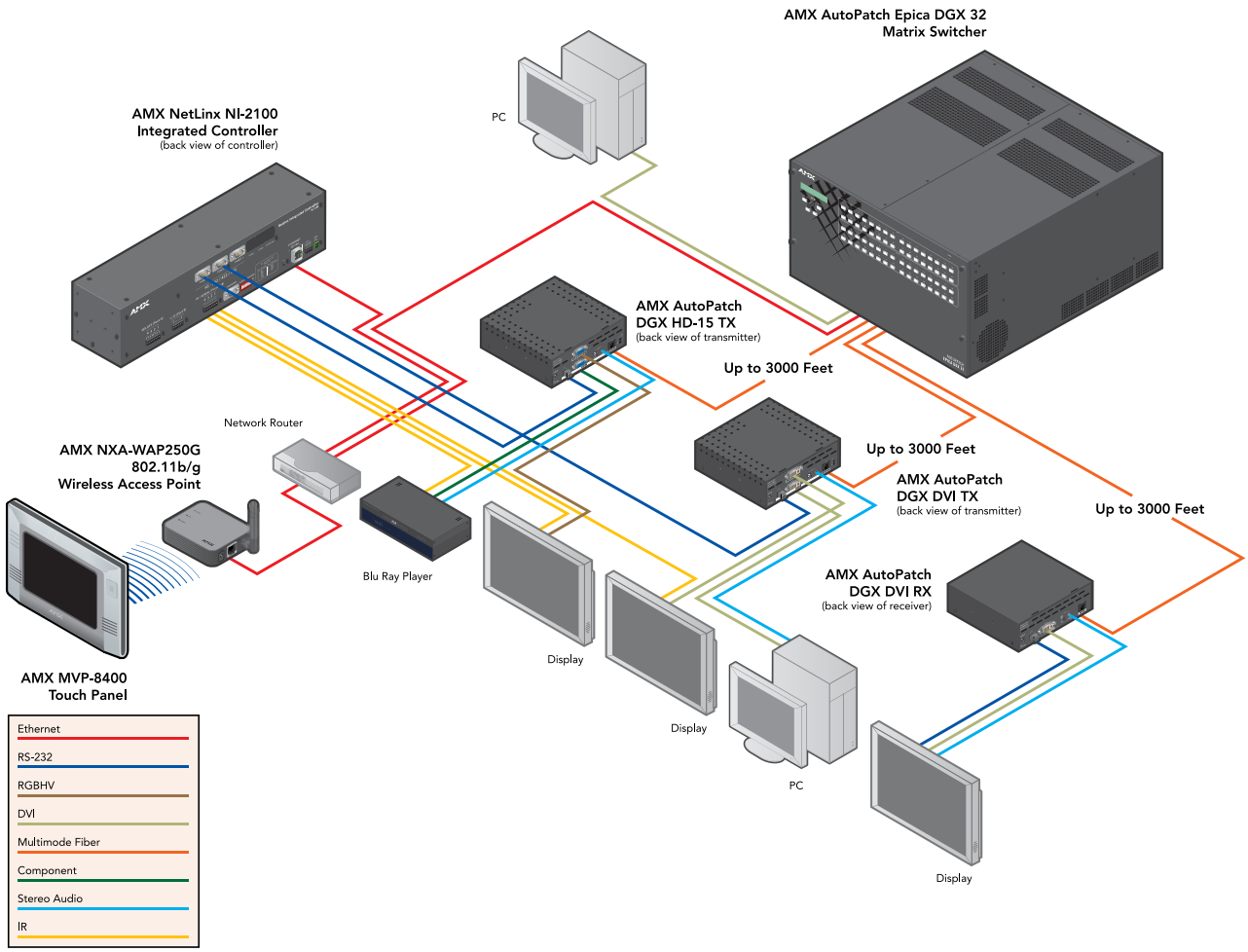

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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 785 Watts
- Power Consumption (Typ): 445 Watts, fully loaded enclosure
- BTU/hr (Max): 2679
- BTU/hr (Typ): 1518, fully loaded enclosure
- Operational Temperature: 32° to 113° F (0° to 45° C)
- Storage Temperature: -22° to 158° F (-40° to 70° C)
- Humidity: 0 to 90% non-condensing
- Note: Specifications are subject to change

DIMENSIONS

10 7/16" x 19" x 20 1/16" (26.5 cm x 48.3 cm x 51 cm)

DIMENSIONS WITH EXTRACTORS

- 10 7/16" x 19" x 21 1/16" (26.5 cm x 48.3 cm x 53.5 cm)
- RU: 6

WEIGHT

Appx. 60 lbs (27.2 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 70 lbs (31.8 kg) per loaded enclosure

MTBF

102,000 hours

CERTIFICATIONS

CE, FCC Class A, UL, cUL, RoHS/WEEE compliant

SC FIBER

- Compatible AutoPatch Fiber Modules: DGX DVI TX/RX, DGX HD-15 TX/RX , Epica DGX 16 Epica DGX 32, Epica DGX 144
- Signal Types over Fiber: Video, Audio, Serial Data (Video signal must be present to pass Audio and Serial Data)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Audio Support: Analog Stereo or S/PDIF (S/PDIF up to 96 kHz Sample Rate, 96 kHz audio only available when source video resolution is 800x600 @ 60 Hz(40 MHz pixel clock) or greater, otherwise 48 kHz max)
- Serial Data Support: Unidirectional RS-232, up to 115.2 k Baud
- Fiber Cable Type: Multimode Simplex (with SC termination) 50/125 µm (preferred) or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft In / Out with 50 um cable (3000 ft cable requires 50/125 µm OM2 class low loss fiber cable)
  - Up to 1500 ft In / Out with 62.5um
- Fiber Connector: SC Optical

DIGITAL VIDEO (DVI)

- Signal Type: DVI-D (Single Link)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (max): 4.95 Gbps
- Pixel Clock (max): 165 MHz
- DDC/EDID Support: EDID provided by Epica DGX 32
- EDID is user re-programmable
- HDCP Support: No
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Cable Equalization: Up to 50 ft.
- Output Nominal Voltage: 1.0 Vpp Differential
- Output Reclocking: Yes
- Output +5 V DDC Pin: 250 mA
- Output Rise Time / Fall Time:
  - 80 ps min - 200 ps max (20% - 80%)
  - 0.13 UI min - 0.33 UI max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 1 us
- DVI Output Board Propagation Delay: 2 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

EDID

- Standard Timing Identification:
  - ID 1: 1920x1200 @ 60 Hz (This is the preferred timing identified in the EDID)
  - ID 2: 1920x1080 @ 60 Hz
  - ID 3: 1680x1050 @ 60 Hz
  - ID 4: 1600x1200 @ 60 Hz
  - ID 5: 1280x800 @ 60 Hz
  - ID 6: 1280x720 @ 60 Hz
  - ID 7: 1280x1024 @ 60 Hz
  - ID 8: 640x480 @ 120 Hz

- Established Timing:
  - 640x480 @ 60 Hz, 72 Hz, 75 Hz
  - 800x600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024x768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280x1024 @ 75 Hz

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Epica DGX 144 Customizable Matrix Switcher

Large-scale Single Strand Multimode Fiber Matrix Switching has Never Been Easier

CALL FOR CUSTOM QUOTE

OVERVIEW

The Epica DGX 144 is a modular fiber optic matrix switcher designed to transport uncompressed video, embedded audio and one-way control up to 3000 feet away over single strand multimode fiber. With its exclusive DGX Technology, the system offers simple signal conversion between analog and digital signals and vice versa whether it is needed at the source, the switch or the destination. Supporting 4.95 Gbps, the DGX ensures perfect pixel for pixel reproduction for all video resolutions up to 1920x1200. Designed with flexibility, the compact 16 RU enclosure is expandable from 16x16 to 144x144 by increments of 16 and supports DGX Fiber, DVI and HD-15 input boards and DGX Fiber, and our DVI output boards. It features several integrator friendly tools designed to simplify setup and reduce installation issues including hot-swappable I/O boards, real-time system monitoring, and fully redundant, hot-swappable power supplies with redundant power feeds.

When paired with the DGX Fiber Transmitters and Receivers the system can also pass audio and control sent from the TX through the matrix switcher to the RX. The DGX Fiber Receivers (both HD-15 and DVI) feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video resolution and adjusts the video parameters to match the displays native format. SmartScale Technology ensures every display operates at its preferred resolution and eliminates the incompatibilities that can arise in matrix switching systems when the output resolution of the source is not supported by some or all of the displays in the system.

COMMON APPLICATIONS

The Epica DGX 144 can route and transmit pure high resolution analog and digital video up to 3,000 feet making it the perfect solution government agencies, command-and-control environments, universities, hospitals, casinos, retail environments or any facility that demands the highest quality video be shared between rooms or even buildings.

FEATURES

- Compatible DGX Fiber Receivers feature SmartScale™ Technology which automatically responds to the display's declared EDID information and scales the video to the best resolution and video parameters for that display without manual setup
- DGX Technology offers simple signal conversion between analog and digital signals whether it is needed at the source, the switch or the destination
- Designed for use with single strand multimode fiber; the most common, easily terminated and installed fiber cable solution
- Use in conjunction with our DGX Fiber Transmitters and Receivers to send video, audio and one-way control over a single fiber cable up to 6,000 feet – 3,000 feet to the matrix switcher and 3,000 feet after the matrix switcher
- Supports matrix switching of embedded digital or analog audio and one-way control when used in conjunction with any DGX Fiber TX / RX pair running through the Epica DGX 144 SC Fiber Input and Output Boards
- Supports analog video resolutions and DVI resolutions up to 1920x1200 @ 60 Hz
- True uncompressed DVI digital matrix switching ensures the purity of the digital image is never compromised
- Pre-loaded with the most common EDID settings on each of the matrix switcher's input connectors to emulate the display's response when queried, which ensures transmission of the video from the source device
- Custom EDID settings can be loaded on each input with the use of the included EDID Programmer
- Standard RS-232 control port
- Standard USB (mini-B) port can be used as a virtual Com port for serial communication with a PC
- Supports AutoPatch's simple BCS serial control protocol
- Standard Integrated TCP/IP APWeb control
- Includes intuitive front mounted control panel featuring LED backlit LCD and blue light buttons, allowing quick and easy access to execute many commands including status, change, disconnect, local presets, global presets, front panel lock and unlock, and more
- Ships with free AutoPatch matrix switcher configuration software

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- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Free upgrade to a lifetime warranty available
- Fully redundant power supplies with independent power paths for maximum reliability
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches

BULLSEYE TARGET PRODUCT
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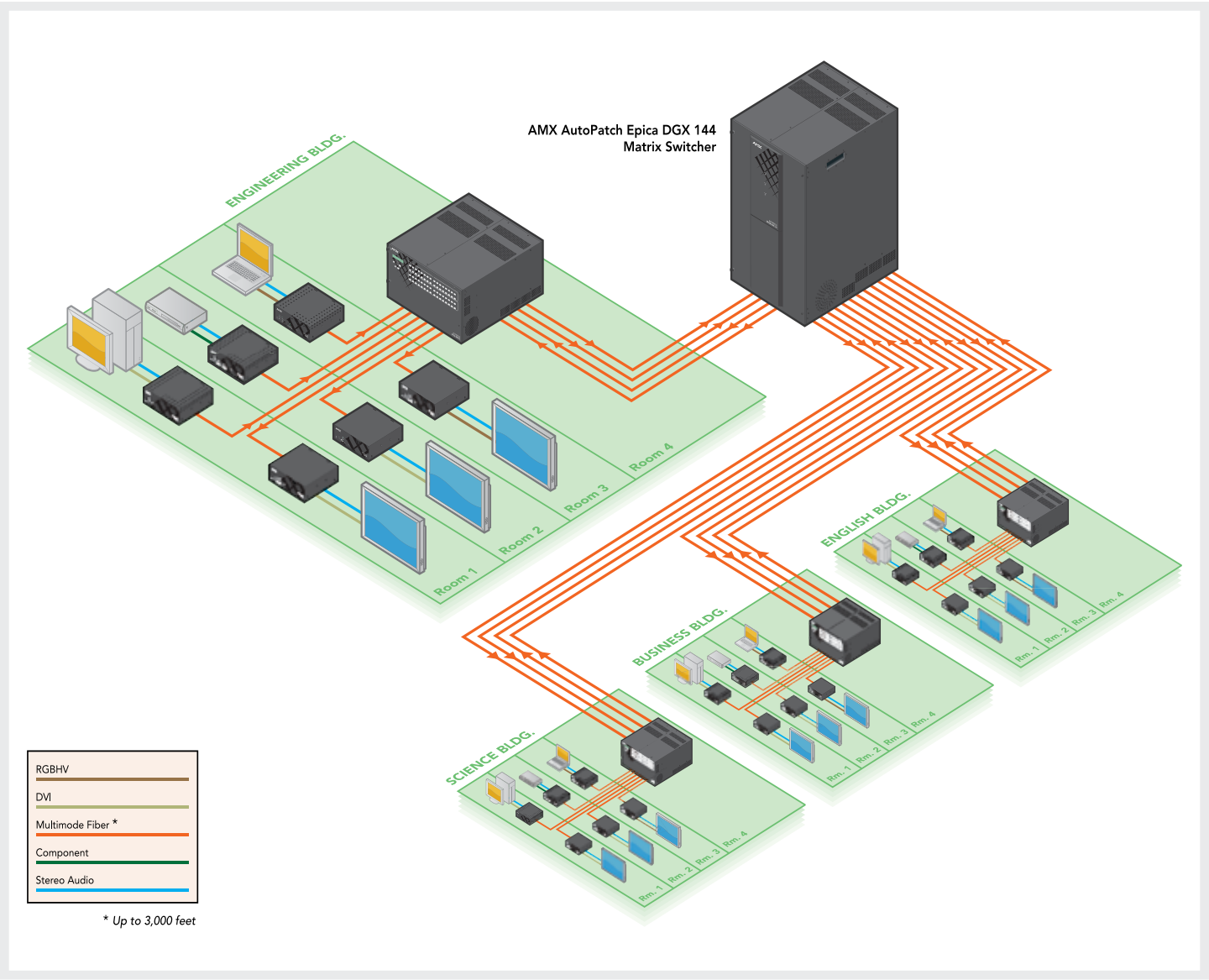
TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

DGX
The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV and DVI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.



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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 1563 Watts
- Power Consumption (Typ): 850 Watts, fully loaded enclosure
- BTU/hr (Max): 5333
- BTU/hr (Typ): 2900, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS

28" x 19" x 20 1/16" (71 cm x 48.3 cm x 51 cm)

DIMENSIONS (WITH EXTRACTORS)

- 28" x 19" x 21 1/8" (71 cm x 48.3 cm x 53.5 cm)
- RU: 16

WEIGHT

Appx. 160 lbs (72.6 kg) per loaded enclosure

SHIPPING WEIGHT

Appx. 205 lbs (93 kg) per loaded enclosure

CERTIFICATIONS

•CE, FCC Class A, UL, cUL, RoHS/WEEE compliant

SC FIBER

- Compatible AutoPatch Fiber Modules: DGX DVI TX/RX, DGX HD-15 TX/RX , Epica DGX 32, Epica DGX 144
- Signal Types over Fiber: Video, Audio, Serial Data (Video signal must be present to pass Audio and Serial Data)
- Resolution Support: 640x480@60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)*
  - 480i 60 (fields per second)*

*480i and 576i are only available when being transmitted from a DGX HD-15 Tx as a YPbPr signal

- Audio Support: Analog Stereo or S/PDIF (S/PDIF up to 96 kHz Sample Rate, 96 kHz audio only available when source video resolution is 800x600 @ 60 Hz(40 MHz pixel clock) or greater, otherwise 48 kHz Max)
- Serial Data Support: Unidirectional RS-232, up to 115.2 k Baud
- Fiber Cable Type: Multimode Simplex (with SC termination) 50/125 µm (pre ferred) or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft In / Out with 50 um cable (3000 ft cable requires 50/125 µm OM2 class low loss fiber cable) Up to 1500 ft In / Out with 62.5 um
  - Up to 1500 ft In / Out with 62.5 um
- Fiber Connector: SC Optical
- Safety Certifications: Class 1 Laser Product (Class 3R Laser Product when fiber is disconnected from the unit) IEC 60825-1, 2001 (Fiber Output Board)
- Power Output of Laser Radiation (Max): 4.08 mW (Fiber Output Board)
- Optical Budget
  - 9.75 dBm (typ) between DGX Tx and Input board
  - 9.75 dBm (typ) between Output board and DGX Rx
  - Optical Modulation Amplitude (OMA) Output: -6.25 dBm (typ)
  - Optical Modulation Amplitude (OMA) Input Sensitivity: -16.0 dBm (typ)
- Compatibility Note: Not compatible with third party optical distribution amplifiers or multi-mode to single-mode converters.

DIGITAL VIDEO-DVI

- Signal Type: DVI-D Input (Single Link)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Specification Compliant: DVI 1.0, single link DVI-D
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (Max): 4.95 Gbps
- Pixel Clock (Max): 165 MHz
- DDC/EDID Support:
  - EDID provided by Epica DGX 144
  - EDID is user re-programmable
- HDCP Support: No
- Input Voltage (Nominal): 1.0 Vpp Differential
- Input Cable Equalization: Up to 50 ft
- Output Voltage (Nominal): 1.0 Vpp Differential
- Output Reclocking: Yes
- Output +5 V DDC Pin: 50 mA
- Output Rise Time / Fall Time
  - 80 ps min - 200 ps max (20% - 80%)
  - 0.13 UI min - 0.33 UI max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 2 us
- DVI Output Board Propagation Delay: 3 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

RGBHV (HD-15)

- Signal Type: RGBHV Input
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Pixel Clock (Max): 165 MHz
- DDC/EDID Support:
  - EDID provided by Epica DGX 144
  - EDID is user re-programmable
- RGB In Signal Level Range: 0 - 700 mVpp (0 - 750 mVpp max)
- RGB Input Impedance: 75 Ohms
- HV Sync Input Signal Range: 0 to +5 V
- HV Sync Input Impedance: 510 Ohms
- HV Sync Input Trigger Voltage: +1.25 V
- Input Connector: HD-15

EDID (DVI AND RGBHV)

- Standard Timing Identification:
  - ID 1: 1920x1200 @ 60 Hz (This is the preferred timing identified in the EDID)
  - ID 2: 1920x1080 @ 60 Hz
  - ID 3: 1680x1050 @ 60 Hz
  - ID 4: 1600x1200 @ 60 Hz
  - ID 5: 1280x800 @ 60 Hz
  - ID 6: 1280x720 @ 60 Hz
  - ID 7: 1280x1024 @ 60 Hz
  - ID 8: 640x480 @ 120 Hz

- Established Timing:
  - 720x400 @ 70 Hz, 88 Hz
  - 640x480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz
  - 800x600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 832x624 @ 75 Hz (RGBHV Only)
  - 1024x768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280x1024 @ 75 Hz
  - 1152x870 @ 75 Hz

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Epica DG

Custom Modular Matrix Switcher with Integrated Fiber Transmission RGBHV, DVI, SD-SDI, HD-SDI

CALL FOR CUSTOM QUOTE

OVERVIEW

The Epica DG (Digital Generation) is designed to break all the rules of signal routing. Its exclusive digital platform converts between video formats allowing for any input to be routed out to any output simultaneously regardless of format. This negates the need for external video conversion boxes, simplifying system design and installation for integrators and reduces the overall cost of the system for users.

With options for RGBHV (HD-15), DVI, SD-SDI and HD-SDI it is the perfect solution for high-resolution video distribution. Optional fiber transmission modules and output boards can extend the reach of perfect video – at the highest resolutions – over 3,000 feet.

So whether the installation requires large scale, high-performance signal routing, or requires large growth capability the Epica DG is the ideal solution. Contact our trained sales staff today for a custom quote. Select between RGBHV (HD-15) input and output boards, DVI input and output boards, HD-SDI input and output boards and MTP Fiber input and output boards. There are 16 connections per board, and each enclosure holds 9 input boards and 9 output boards for a Maximum matrix of 144x144.

Equipped with advanced diagnostics, the Epica DG ensures verification of power on each board, signal on each input and output, temperature detection for multiple points in the enclosure, and detection of overall power draw.

The Epica DG comes standard with RS-232 control port, supports AutoPatch's simple BCS serial control protocol and ships with free APControl software.

COMMON APPLICATION

The Epica DG is ideal for any system that includes large scale high-resolution video distribution, RGBHV / DVI / HD-SDI signal conversion, and the added security and distance of fiber transmission including digital signage, stadiums and arenas, large retail environments and mission critical secure government facilities.

FEATURES

- Lifetime Warranty
- Combines signal conversion with fiber optic routing and transmission
- Advanced system self-diagnostics
- Standard redundant (hot-swappable) power supply
- Groupings
- RS-232 control port
- Simple AutoPatch BCS Serial Control Protocol
- Ships with free APControl software
- APWeb compatible (TCP/IP control)

HELPFUL HINT - Cable Management

The Epica DG is equipped with cable management bars designed to provide a robust tie-down for complete cable management.

TRAINING AVAILABLE

For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

DG

The exclusive digital platform delivered by our Digital Generation Technology allows multiple high-resolution signal styles including RGBHV, DVI, SD-SDI and HD-SDI to be converted freely internal to the matrix switcher to numerous outputs with various styles. In addition, Digital Generation fiber boards integrate the ability to receive and transmit signals directly via MTP fiber connections.

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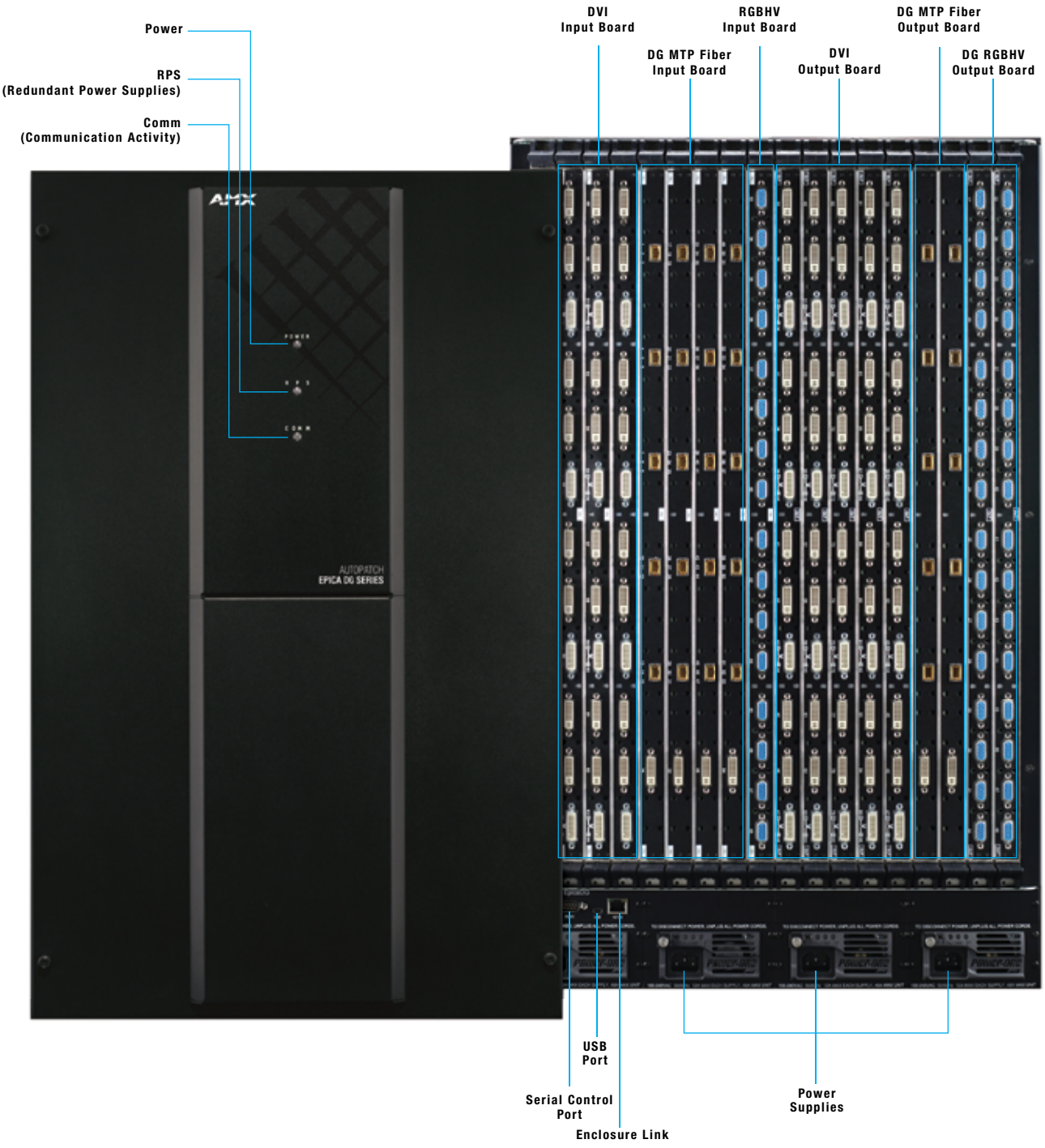
A CLOSER LOOK



(Not shown in photo: Communication Status Indicator and System Status Indicator are located to the left of the Serial Port.)

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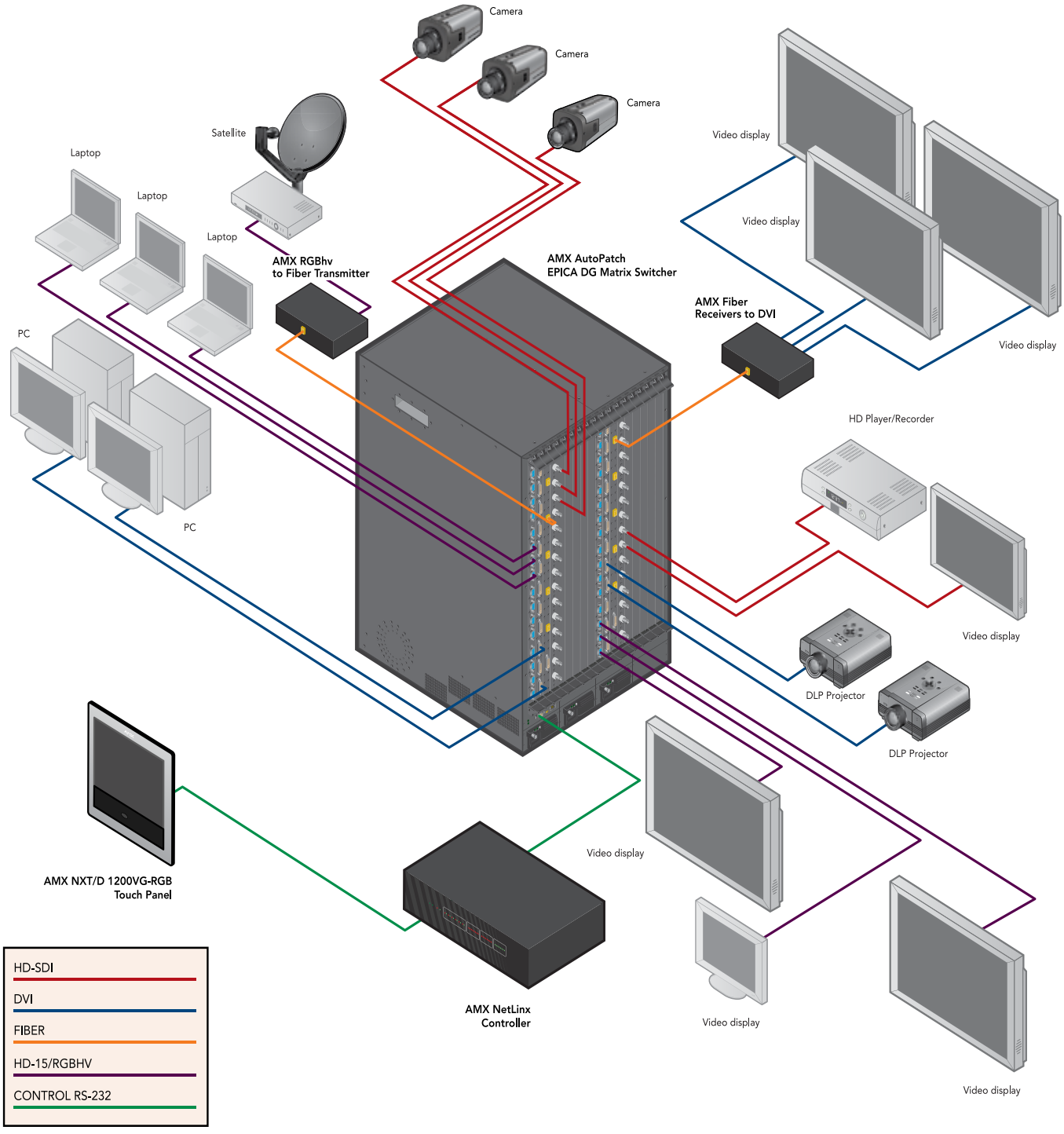

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SPECIFICATIONS

GENERAL

- AC Power: 100-240 VAC single phase, 50-60 Hz
- Power Consumption (Max): 2000 Watts
- Power Consumption (Typ): 850 Watts, fully loaded enclosure
- BTU/HR (Max): 6824
- BTU/HR (Typ): 2900, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

DIMENSIONS

28" x 19" x 20 1/16" (71.1 cm x 48.3 cm x 51 cm)

DIMENSIONS (HWD) WITH MOUNTING EARS

- 28" x 19" x 21 1/16" (71.1 cm x 48.3 cm x 53.5 cm)
- RU: 16

WEIGHT

Appx. 160 lbs per loaded enclosure (72.6 kg)

CERTIFICATIONS

- CE, FCC Class A, UL, cUL, RoHS/WEEE compliant

DIGITAL VIDEO (DVI)

- Signal Type: DVI-D Input (Single Link)
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Interlaced Resolution Support
  - 1080i 60, 59.94, 50 (fields per second)
  - 576i 100, 50 (fields per second)
  - 480i 60 (fields per second)
- Data Rate (max): 4.95 Gbps
- Pixel Clock (max): 165 MHz
- DDC/EDID Support:
  - EDID provided by Epica DG
  - EDID is user re-programmable
- HDCP Support: No
- Input Voltage (nominal): 1.0 Vpp Differential
- Input Cable Equalization: Up to 50 ft
- Output Voltage (Nominal): 1.0 Vpp Differential
- Output Reclocking: Yes
- Output +5 V DDC Pin: 50 mA
- Output Rise Time / Fall Time:
  - 80 ps min - 200 ps max (20% - 80%)
  - 0.13 UI min - 0.33 UI max (@ 1.65 Gbps, 20% - 80%)
- DVI Input Board Propagation Delay: 2 us
- DVI Output Board Propagation Delay: 3 us
- Connector: DVI-I (DVI-D Single Link is the supported signal type)

EDID DVI

- Standard Timing Identification:
  - ID 1: 1920x1200 @ 60 Hz (This is the preferred timing identified in the EDID)
  - ID 2: 1920x1080 @ 60 Hz
  - ID 3: 1680x1050 @ 60 Hz
  - ID 4: 1600x1200 @ 60 Hz
  - ID 5: 1280x800 @ 60 Hz
  - ID 6: 1280x720 @ 60 Hz
  - ID 7: 1280x1024 @ 60 Hz
  - ID 8: 640x480 @ 120 Hz
- Established Timing:
  - 720 x 400 @ 70 Hz, 88 Hz
  - 640 x 480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz
  - 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz
  - 1024 x 768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz
  - 1280 x 1024 @ 75 Hz
  - 1152 x 870 @ 75 Hz

RGBHV (HD-15)

- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- DDC/EDID Support
  - EDID Resolutions provided by the Epica DG, EDID is user re-programmable
  - 1920x1200*, 1920x1080, 1680x1050, 1600x1200, 1280x1024, 1280x768, 1280x720, 1152x864, 1024x768, 800x600, 640x480
- RGB In / Out Signal Level Range: 0-750 mVpp
- RGB Input / Output Impedance: 75 Ohms
- RGB Input Coupling: AC
- RGB Output Coupling: DC
- Sync Input / Output Signal Range: 0-5 V
- Sync Input Impedance: 510 Ohms
- Sync Output Impedance: 50 Ohms
- RGBHV Connector: HD-15

* This is the preferred timing identified in the EDID

MTP FIBER

- Compatible AutoPatch Fiber Modules:
  - RGBHV - MTP Fiber, DVI - MTP Fiber
  - Other AMX AutoPatch MTP Fiber products
- Resolution Support: 640x480 @ 60 Hz up to 1920x1200 @ 60 Hz
- Fiber Cable: 12 Fiber Multimode MTP 50/125 µm or 62.5/125 µm
- Fiber Cable Length:
  - Up to 3000 ft In / Out (3000 ft cable requires low loss, controlled skew fiber cable)
- Fiber Cable Termination: Female MTP
- Fiber Connector (on AutoPatch I/O board): Male MTP (Guide pins define it as male)

DIGITAL VIDEO (SD-SDI & HD-SDI)

- Standard: SMPTE 259M-C (SD-SDI), SMPTE 292M (HD-SDI)
- Bit Rates: 270 Mbps, 1.485 Gbps
- Data Type :8 bit or 10 bit
- Input/Output Level (max): 0.8 Vpp, ±10%
- Input/Output Impedance: 75 Ohms
- Jitter: <0.2 UI
- Rise and Fall Time: <750 ps, ±100 ps (20%-80%)
- Rise and fall overshoot: <10%
- Auto Cable Equalization:
  - Up to 400m of Belden 1694A or equivalent @ 270 Mbps
  - Up to 280m of Belden 8281 or equivalent @ 270 Mbps
  - Up to 200m of Belden 1694A or equivalent @ 1.485 Gbps
  - Up to 100m of Belden 8281 or equivalent @ 1.485 Gbps
- Auto Data Rate Lock: Yes
- CDR (Reclocking): Yes
- Connectors: BNC
- Resolutions Supported SMPTE 259M-C:
  - 480i (525) @ 59.94 Hz, 576i (625) @ 50 Hz
- Resolutions Supported SMPTE 292M:
  - 720p @ 60 Hz, 59.94 Hz, 50 Hz, 30 Hz, 29.97 Hz, 25 Hz, 24 Hz, 23.98 Hz
  - 1080i @ 60 Hz, 59.94 Hz, 50 Hz
  - 1080p @ 30 Hz, 29.97 Hz, 25 Hz, 24 Hz, 23.98 Hz
  - 1080PsF @ 24 Hz, 23.98 Hz

Note 1: The passing of ancillary data, including audio, is not supported.

Note 2: SMPTE 259M-C or 292M compliant timing must be provided by the source video equipment when performing signal format conversion from DVI or RGBHV to SDI.

Note 3: When utilizing signal format conversion to SDI in an Epica DG System, DVI is the preferred source signal type.

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Epica Customizable Matrix Switchers

Scaleable up to a Full 256x256 per Signal Type

CALL FOR CUSTOM QUOTE

OVERVIEW

AutoPatch's Epica Series is the perfect solution for large scale, high-performance signal routing, or for smaller scale routing that requires large growth capability. The Epica-128 and Epica-256 are modular, allowing system designers to start as small as 16 inputs/outputs, and scale the system up to a full 256x256 per signal type. The Epica Series is a dependable high performance solution for mission critical applications. Each system includes an integrated self-diagnostic suite and standard dual-redundant power supplies.

COMMON APPLICATION

Perfect for large scale commercial applications that require customized high-performance signal routing such as financial institutions, broadcast facilities, universities, presentation facilities and other applications.

FEATURES

- Save money and rack space by consolidating all your signal requirements in a single matrix switching system with custom configuration
- Ultra-flat video bandpass curve measured at a tight ±3 dB
- 300 MHz bandwidth, fully-loaded worst case scenario
- PureSync™ Technology guarantees the quickest possible rise time of the sync signals leading edge, eliminating the possibility of video loss at the display
- Digital volume control on each output (optional)
- Audio input gain on each input via external potentiometers
- Audio connections support balanced and unbalanced audio
- Analog audio connections support balanced and unbalanced audio
- Virtual Matrix Technology allows endless possible breakaway and "signal-follow-signal" user defined scenarios
- Superior video crosstalk specifications ensure signal isolation and security
- Digital input gain (optional)
- Standard RS-232 control port
- Supports AutoPatch's simple BCS serial control protocol
- Optional TCP/IP control via external APWeb module
- Ships with free AutoPatch matrix switcher configuration software
- Ships with free APControl to provide easy single-user PC control of the matrix switcher
- Rack mounting ears included
- Free upgrade to a lifetime warranty available
- Fully redundant power supplies
- Linkable enclosures to accommodate several signal types / enclosures under one control view
- Local presets allow quick recall of a pre-programmed set of switches with a single command; multiple presets can exist within a system at the same time
- Global presets allow quick recall of a comprehensive snapshot of all switches and digital volume controls
- The Epica Series is available in two enclosure sizes: Epica-256 (25 RU) and the Epica-128 (16 RU)
- Choose input and output boards in increments of 16 up to 256x256 per signal type. Combine multiple signal types in various I/O sizes in the same enclosure (as space allows) or in the same system via linking enclosures

BULLSEYE TARGET PRODUCT
This is a Target Product as defined in the U.S. BullsEye Partnership Program. Participating AMX Dealers can be rewarded for purchasing Target Products as a % of their total annual net revenue.

TRAINING AVAILABLE
For important installation, configuration and programming techniques, AMX University training is available. Just visit www.amx.com/training

READ MORE ABOUT IT
We invite you to discover the amazing possibilities in large-scale, high performance signal routing that the Epica Matrix Switcher offers by reading the white paper: "Knowing the -3 dB Point is Not Enough: The Importance of Bandwidth in Video Applications" available for viewing at: www.amx.com/assets/whitePapers/AutoPatch.ImportanceOfBandwidth.pdf

US SALES AND SUPPORT **800.222.0193** • INTERNATIONAL SALES AND SUPPORT **+1.469.624.7400** • **www.amx.com**

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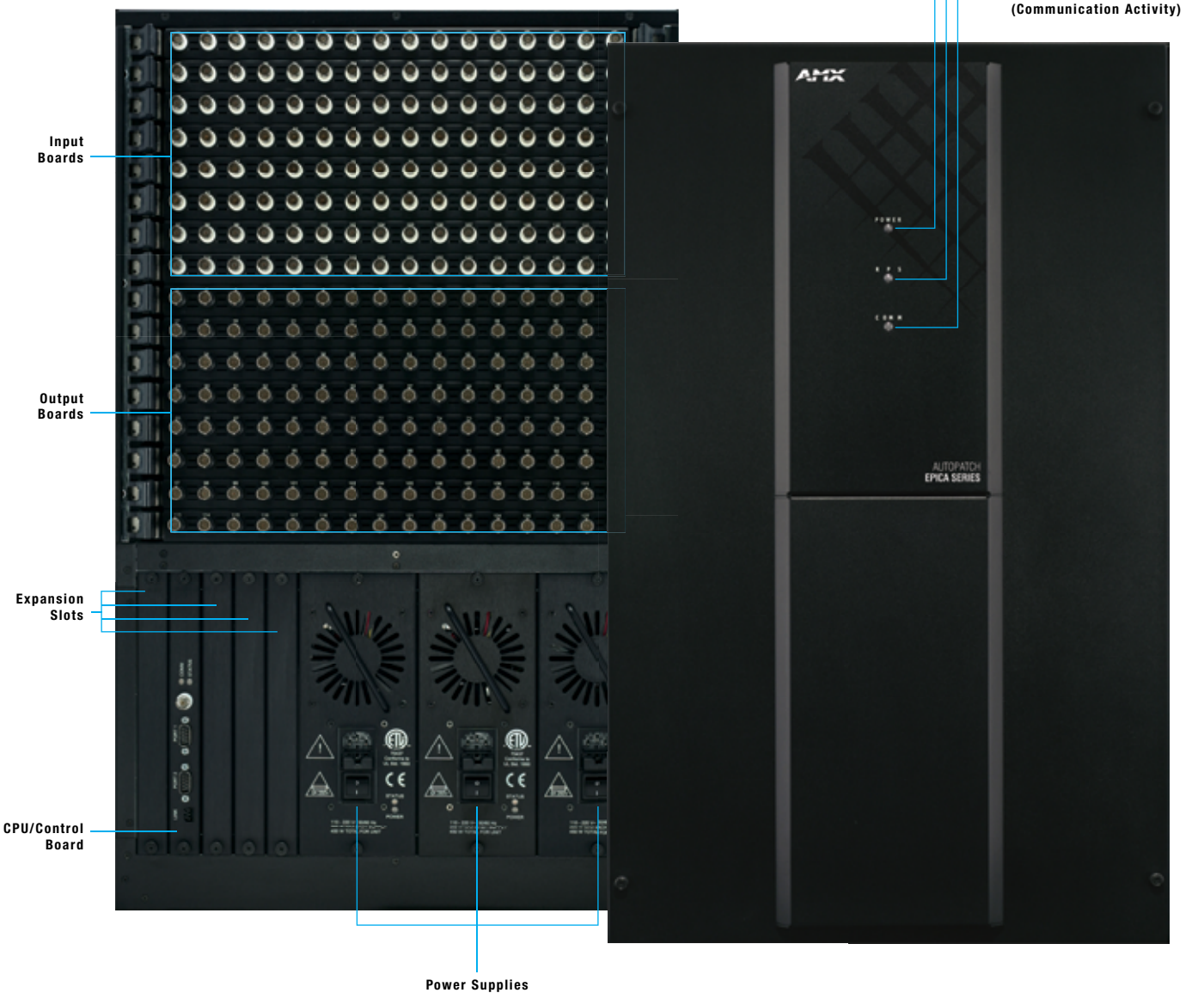
A CLOSER LOOK



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SPECIFICATIONS

GENERAL

- AC Power: 110 - 220 VAC single phase, 50-60 Hz
- Power Consumption (Max): 600 Watts
- Power Consumption (Typ): 470 Watts, fully loaded enclosure
- Operational Temperature: 32° to 110° F (0° to 43° C)
- Humidity: 0 to 90% non-condensing

128 ENCLOSURE DIMENSIONS

- Enclosure Dimensions (With Mounting Ears): 28" x 19" x 25" (71.1 cm x 48.3 cm x 63.5 cm)
- Enclosure Dimensions (Without Mounting Ears): 28" x 17 1/2" x 25" (71.3 cm x 44.5 cm x 63.5 cm)
- RU: 16

256 ENCLOSURE DIMENSIONS

- 256 Enclosure Dimensions (With Mounting Ears): 43 3/4" x 19" x 25" (113.2 cm x 48.3 cm x 63.5 cm)
- 256 Enclosure Dimensions (Without Mounting Ears): 43 3/4" x 17 1/2" x 25" (113.2 cm x 44.5 cm x 63.5 cm)
- 256 Enclosure RU: 25

WEIGHT

- 128 Enclosure Weight: Appx. 140 lbs per loaded enclosure (63.5 kg)
- 256 Enclosure Weight: Appx. 170 lbs per loaded enclosure (77.1 kg)

I/O RANGE

16x16 through 256x256 (Increments of 16 inputs and/or outputs)

SIGNAL TYPES

- Composite, S-Video, Y/c
- HDTV, Y/Pb/Pr, YUV
- RGB, RGsB, RGBS, RGBHV
- Mono audio, Stereo audio
- S/PDIF, AES 75 Ohm

Note: S/PDIF and AES 75 Ohm routed over standard video boards.

CERTIFICATIONS

CE, ETL/cETL, RoHS/WEEE compliant

STANDARD AUDIO

- Input Level (Max):
  - +26 dBu, balanced, no volume control
  - +22 dBu, balanced, with volume control
- Input Impedance: 18 kOhms
- Output Level (Max):
  - +26 dBu, balanced, no volume control
  - +22 dBu, balanced, with volume control
- Output Impedance: 50 Ohms
- Frequency Response: <±0.1 dB (20 Hz to 20 kHz)
- THD + Noise:
  - <0.03% (20 Hz to 20 kHz, Vin = -6 dBu to +26 dBu, no volume control)
  - <0.02% (20 Hz to 20 kHz, Vin = 0 to +26 dBu), no volume control)
  - <0.03% (20 Hz to 20 kHz, Vin = -10 dBu to +22 dBu, with volume control)
- Signal To Noise Ratio: >110 dB (20 Hz to 20 kHz, Vin = +20 dBu)
- Crosstalk: <-95 dB (1 kHz, Vin = +20 dBu)
- Output Gain Adj. Range: +6 dB to -6 dB, via potentiometer
- Input Gain Adj. Range: +10 dB to -70 dB (mute), via serial
- Output Volume Adj. Range: +10 dB to -70 dB (mute), via serial
- Connectors: 3T

STANDARD VIDEO

- Input Level (Max): ±5 Volts
- Input Impedance: 75 Ohms
- Output Level (Max): ±5 Volts
- Output Impedance: 75 Ohms
- Frequency Response: 10 MHz or better (±3 dB)
- Crosstalk: <-50 dB (f = 5 MHz)
- Differential Gain: <0.3% or better (f = 3.58 MHz)
- Differential Phase: <0.3° or better (f = 3.58 MHz)
- Signal To Noise Ratio: >60 dB (Vin = 0.7 V, 100 IRE)
- Connectors: BNC

WIDEBAND VIDEO

- Input Level (Max): ±1 Volt
- Input Impedance: 75 Ohms
- Output Level (Max): ±1 Volt
- Output Impedance: 75 Ohms
- Frequency Response: 300 MHz or better (±3 dB)
- Crosstalk:
  - <-60 dB (f = 5 MHz)
  - <-30 dB (f = 150 MHz)
- Connectors: BNC

SYNC

- Input Level (Max): +5.5 Volts
- Input Impedance: 22 kOhms
- Output Level (Max): +5.5 Volts
- Output Impedance: 75 Ohms
- In/Out Polarity: Active High or Low (output follows input polarity)
- Output Signal Level: Unity Gain
- Connectors: BNC

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