# Xenon: Excel Beyond Expectations

Xenon brings many advanced new capabilities to the world of routing switchers, building on a new generation design that starts with a solid, multi–format router core. In today's broadcast environment, a router must be reliable, resilient and cost–effective. The Xenon excels in all of these areas while offering the flexibility of multi–format operation, and the ability to add Signal Processing Technology. Great care has been taken in designing Xenon to avoid single points of failure. Active assemblies are all hot–swappable from the front of the frame. Power, control, cooling and reference generation are available in redundant configurations.



# Features & Benefits

# Configuration

The Xenon allows any mix of formats within a frame in independent blocks of 32x inputs or outputs. Any of the supported formats, 3G/HD/SD/AES/analog can be expanded to fill an entire 128x128 frame. Additionally the Xenon supports optical routing from 3Mb/s to 3Gb/s in blocks of 32x inputs or outputs.

Xenon is housed in a 4RU frame, switching up to 64x sources to 64x destinations, or in an 8RU frame switching upward of 128x sources to 128x destinations. Additional input and output modules can be installed into the router at any time.

# Control

The Xenon router includes, as standard, an internal Frame Controller module which supports 4x Q–Link ports, 2x Ethernet ports and 2x Serial ports mounted on the rear of the router.

The Xenon has a number of control options:

Remote Control Panel: Any panel(s) from the entire range of Quartz remote control panels can be used with the Xenon router, connected via Q-Link.

External third party control: The Xenon router can be remotely controlled via an external third party control device — such as an automation system — when connected to the router's serial port.

# Expansion

The input and output stages of the Xenon can be expanded in steps of 32x at any time by adding additional I/O modules. The Xenon can not be expanded beyond its frame size.

## Power Supply

The power supplies for the Xenon are internal. The 4RU and 8RU frames can be fitted with an optional redundant power supply with separate AC power inlet and alarm output.

# Designed for Performance Ultra Wide Band Routing

By offering a format-independent data path, the Xenon supports signals from 3Mb/s all the way up to 3Gb/s including SD-SDI, HD-SDI, 3G-SDI, DVB-ASI, SMPTE ST 310–1 digital video formats as well as optical formats and other high data rate signals.

# Video

Xenon supports 3G, HD, SD and ASI video routing. It is available as 3G/HD/SD or HD/SD or SD only, offering cost savings for those who do not require 3G and or HD capability. For those applications requiring the signal to be reclocked, reclocking modules can be added in blocks of 8x outputs.

## Audio

The Xenon router is a fully featured Stereo Audio router, supporting AES and Analog Audio routing. Balanced or unbalanced AES on BNCs are supported in any mixture in blocks of 32x inputs or outputs. Analog audio I/O is converted and routed as digital so that analog sources can route to AES destinations and AES sources can route to analog destinations. Analog blocks are in groups of 32x stereo pairs. The Xenon can optionally support Mono routing for AES and Analog audio by adding the +SS option. Additionally, the Xenon also supports MADI I/O as an option on all audio I/O cards. On input cards this adds a MADI connector for MADI input. Note that these inputs are in addition to the analog or AES base I/O. On output cards a MADI output connector is added. This too offers MADI outputs in addition to the base I/O card.

# Signal and System Monitoring

Xenon supports SNMP signal monitoring and comprehensive system monitoring, including power supply voltages, interior temperatures and fan speeds. System status may also be monitored remotely by a network based remote connection over TCP/IP or a direct serial connection to a PC. User–configurable closing contacts are also provided for connection to an external alarm system.

# X–LINK

X–LINK outputs are an additional set of outputs from Evertz' standard router platforms. They are for the purpose of providing connectivity to monitoring devices. X–LINK outputs do not reduce the number of outputs on the router, X–LINK outputs are in addition to the standard video router outputs.

# **Feature Summary**

- Multiple signal formats within a single frame
- Optional output reclocking in blocks of 8x outputs
- All outputs can switch in one TV frame
- Dual reference inputs
- Advanced audio features including Soft Switching
- Dolby–E<sup>™</sup> signal compatible
- Redundant internal controllers
- Q-Link, Ethernet and RS-485 control interfaces
- Deterministic switching
- SNMP and system monitoring
- · Powerful and intuitive WinSetup software
- CleanSwitch option (SPT Module)

# XE4-64x64, XE8-128x128 Xenon Multi–Format Routers

# Specifications

Configuration: Inputs and Outputs:

Standard Definition: SD Video Inputs: Signals Supported:

Signal Level: Impedance: Return Loss: 5-270 MHz: Cable Equalization:

SD Video Outputs:

Connectors:

Signal Level:

Impedance:

Return Loss:

DC Offset:

Connectors:

Signal Path:

Path Length:

Output Jitter:

Rise/Fall Times:

5-270 MHz:

75Ω terminating 15dB typical Belden 1694A, 250m BNC per IEC 61169-8 Annex A

Selectable in blocks of 32

SMPTE ST 259-1 1997,

ASI DVB standard

800mV p-p nominal

800mV p-p ±10% 75Ω terminating

15dB typical 0 ±0.5V BNC per IEC 61169-8 Annex A

< 0.4ns 12ns, typical 0.2 UI p-p with < 250 m input cable

# High Definition:

HD Video Inputs: Signals Supported: Signal Level Impedance: Return Loss: 5–1485MHz Cable Equalization:

Connectors:

# HD Video Outputs:

Signal Level: Impedance: Return Loss 5-1485MHz DC Offset: Connectors:

Signal Path:

Path Length: Output Jitter:

Rise/Fall Times:

< 0.4ns 12ns, typical

# Fiber Inputs/Outputs:

SFP1T13-2: Connector: Wavelengths: Output Power:	Dual optical SFP transmitter, up to 3Gb/s, 1310nm LC/PC 1310nm -2dBm ±1dBm
SFP1R-2:	Dual optical SFP receiver,

Connector:

# 15dB typical Belden 1694A, 90m 65m @ 2.97Gb/s BNC per IEC 61169-8 Annex A 800mV p-p $\pm 10\%$ 75 $\Omega$ terminating 15dB typical 0 ±0.5V

SMPTE ST 292-1, ST 424

800mV p-p nominal

75Ω terminating

BNC per IEC 61169-8 Annex A

0.2 UI p-p with < 95m input cable

up to 3Gb/s, 1310nm
LC/PC
1310nm
-2dBm ±1dBm
Dual optical SFP receiver,

LC/PC

Operating Wavelength: 1270nm to 1610nm Maximum Input Power: -1dBm -21dBm+/-1dBm Optical Sensitivity:

# Audio Inputs — AES: Balanced Version (D50):

32, 44,1, 48 and 96kHz Sample rates: AES3-1992 . Standard: Signal Level: 0.2-7V p-p Impedance:  $110\Omega \pm 20\%$  transformer coupled DC on Input: ±50V Connectors: D50 female carrying 16x signals

#### Unbalanced Version (BNC): Standard: SMPTE ST 276-1

Impedance: 75Ω Return Loss: 25dB, 0.1-6.0kHz BNC per IEC 61169-8 Annex A Connectors:

# Audio Outputs — AES:

Balanced Version (D50): 2-5V p-p Signal Level: 110Ω transformer coupled Impedance: DC Isolation ±50V Rise/Fall Time: 3 5-10ns D50 female carrying 16x signals Connectors:

#### Unbalanced Version (BNC): 1.0V p-p ±50% Signal Level: 75Ω Impedance: . Return Loss: 25dB, 0.1-6.0kHz Conforms to ANSI S4.40 – 1992 BNC per IEC 61169–8 Annex A Jitter:

Connectors: Analog to Digital Audio Conversion: Sampling Freq: Connectors: 48 or 96kHz 50-way "D" type female Freq Response: ± 0.05dB Input Impedance:  $12k\Omega$  minimum 0dBfs - 18dBu or 24dBu Signal Level: -113dB A-weighted Noise:

THD+N: > 95dB (typically >98dB) > 85dB @1kHz < -95dB Crosstalk 0.85ms @48kHz or 0.43ms @96kH I/O Delay:

# Digital to Analog Audio Conversion:

CMRR:

Noise:

THD+N

48 or 96kHz Sampling Freg: Connectors: 50-way "D" type female Freq Response: ± 0.06dB Output Impedance: 4000 Signal Level: 0dBfs -– 18dBu or 24dBu -115dB A-weighted > 95dB (typically >98dB) DC Offset: > ±30mV Crosstalk: < -95dB I/O Delay: 1.3ms @48kHz or 0.66ms @96kHz Dynamic Range: 24 hits

	Connectors: Freq Response: Output Impedance: Input Impedance: Signal Level: Noise: THD+N: DC Offset: Crosstalk: I/O Delay: Dynamic Range:	\$\overline{2}\$         \$\overline{2}\$           \$\overline{2}\$         \$\overline{2}\$         \$\overline{2}\$           \$\overline{2}\$         \$\overline\$         \$\overline{2}\$         \$\o
	Switching Referenc	e:
	Ref Inputs: SD: HD/SD: Signal Level: Impedance: Line Switching:	2x, BNC, analog 525 Tri–level analog 625 $1V p-p \pm 3dB$ $75\Omega$ terminating Lines 6/319 (625), Lines 10/273 (525) Line 7 (HD)
	Connectors:	BNC per IEC 61169-
	Electrical: Supply:	Auto-ranging 100-2 50/60Hz
	Power: 4RU: 8RU:	Typical 150VA, max Typical 300VA, max Not including the SP
	Backup:	Optional
Ιz	Physical: Height: 4RU: 8RU: Width: Depth: Weight 4RU: 8RU: Operating Temp: Ventilation:	7" (178mm) 14" (355mm) 19" (483mm) 17 3/4" (450mm) 16kg (35lbs) 31kg (68lbs) Spec. maintained to Operation to 40°C Fan cooled from the rear of the left hand a side of the router
	Control:	

Sampling Freq:

Q-Link: F–Link:

Serial RS-422/232: Ethernet, 10baseT:

# Compliance:

Safety: EMC:

# Analog Audio Performance: 48 or 96kHz nale 4dBu 8dB) .66ms @96kHz 5/625 or 525

-8 Annex A 240V AC 250VA 500VA T modules

> 30°C front to the and right hand

4x 750 video cable (max length 500m) 2x RJ-45 2x D9 female 2x RJ-45

CSA listed to 60065; complies with CE low voltage directive Complies with FCC Part 15, Class A CE EMC Directive

# Ordering Information

Reclocking option for 32x HD/SD outputs Option to synchronize audio inputs (required for mono audio operation)

Sample rate converters for AES audio

XE4 up to 64x64 Ba	se Systems:	Accessories:	
XE4-3232SX	Xenon 4RU 32x32 SD router	XE4-X-FRAME	Xenon 4RU router chassis
XE4-3232SX+F	Xenon 4RU 32x32 SD router (fiber capable — no modules)	XE8-X-FRAME	Xenon 8RU router chassis
XE4-3232SX+XLINK	Xenon 4RU 32x32 SD router with 3x X–LINK outputs	XE–IP32HX	32x HD/SD inputs
XE4-3232HX	Xenon 4RU 32x32 HD/SD router	XE-IP32HX+F	32x HD/SD inputs (fiber capable)
XE4-3232HX+F	Xenon 4RU 32x32 HD/SD router (fiber capable — no modules)	XE–IP32–3G	32x 3G/HD/SD inputs
	Xenon 4RU 32x32 HD/SD router with 3x X–LINK outputs	XE-IP32-3G-F1	32x 3G/HD/SD inputs (fiber capable)
XE4-3232-3G	Xenon 4RU 32x32 3G/HD/SD router	XE–IP32–AESB	32x AES balanced inputs
XE4-3232-3G+F	Xenon 4RU 32x32 3G/HD/SD router (fiber capable — no modules)	XE-IP32-AESB-M	
XE4-3232-3G+XLIN			32x AES balanced inputs plus 2x MADI outputs
	Xenon 4RU 32x32 3G/HD/SD router with 3x X–LINK outputs		via mini–BNC (DIN)
XE4-3232-AESB	Xenon 4RU 32x32 digital audio router (balanced)	XE-IP32-AESU	32x AES unbalanced inputs
XE4-3232-AESB+N		XE-IP32-AESU-M	
	Xenon 4RU 32x32 digital audio router (balanced)		32x AES unbalanced inputs plus 2x MADI outputs
	with MADI expansion		via mini–BNC (DIN)
XE4-3232-AESU	Xenon 4RU 32x32 digital audio router (unbalanced)	XE-IP32-AA	32x Analog inputs
XE4-3232-AESU+N			I 32x Analog inputs plus 2x MADI outputs via mini-BNC (DIN)
	Xenon 4RU 32x32 digital audio router (unbalanced)	XE-OP32HX	32x HD/SD outputs
	with MADI expansion	XE-OP32HX+F	32x HD/SD outputs (fiber capable)
XE4-3232-AA	Xenon 4RU 32x32 analog audio router	XE-OP32HX-XLINK	32x HD/SD outputs via mini–BNC (DIN) plus 3x X–LINK outputs
XE4-3232-AA+MAD	I Xenon 4RU 32x32 analog audio router with MADI expansion		(only 1x card can fit in the 4RU frame and only 2x can fit in 8RU)
		XE-OP32-3G	32x 3G/HD/SD outputs
XE8 up to 128x128 E		XE-OP32-3G+F	32x 3G/HD/SD outputs (fiber capable)
	When ordering a Xenon 8RU base system, use the same part	XE-OP32-3G-XLIN	
	numbers as the 4RU base systems but substitute XE4 with XE8.		32x 3G/HD/SD outputs via mini–BNC (DIN) plus 3x X–LINK
	All 8RU base systems ship in 32x32 configurations.		outputs (only 1x card can fit in the 4RU frame and only 2x can
Deservations in the	la a france, can and and ant account in a similar	XE-SPT-AVP-H	fit in the 8RU frame)
	le a frame, non-redundant power supplies, a single	XE-SPI-AVP-H	HD/SD line synchronizer and audio soft switch module
controller module an	d a single reference module.	XE-SPT-AVP-3G	with video and audio processing functions 3G line synchronizer and audio soft switch module
		XE-SPI-AVP-3G	with video and audio processing functions
		XE-OP32-AESB	32x AES balanced outputs
Ordering Options:		XE-OP32-AESB-N	
+2PS	Redundant power supply	AE-OF32-AE3D-W	32x AES balanced outputs plus 2x MADI inputs
+FU	(1x required for 4RU frame, 2x required for 8RU) Redundant controller module		via mini–BNC (DIN)
+FU +REF		XE-OP32-AESU	32x AES unbalanced outputs
TREF	Redundant reference module (only fitted on frames	XE-OP32-AESU-N	
	with 64x or more outputs)	AL-01 32-AL30-W	32x AES unbalanced outputs plus 2x MADI inputs
+R8	Reclocking option for 8x HD/SD outputs		via mini–BNC (DIN)
+R16 +R24	Reclocking option for 16x HD/SD outputs	XE-OP32-AA	32x analog outputs
	Reclocking option for 24x HD/SD outputs		I 32x analog outputs plus 2x MADI inputs via mini–BNC (DIN)
+R32	Reclocking option for 32x HD/SD outputs	AL-OF 32-AA-WAD	a oznanalog outputs plus znivikor inputs via mini-bivo (DIN)

Fiber Optic Modules: SFP3T13-2 Dual optical 3G/HD/SD–SDI SFP transmitter, 1310 nm SFP3R-2 Dual optical 3G/HD/SD–SDI SFP receiver



+SS

+SRC



# Xenon: Excel Beyond Expectations

The Xenon brings many advanced new capabilities to the world of routing switchers, building on a new generation design that starts with a solid, multi-format router core. In today's broadcast environment, a router must be reliable, resilient and cost effective. The Xenon excels in all of these areas while offering the flexibility of multi-format operation, and the ability to add Signal Processing Technology.

Great care has been taken in the design of the Xenon to avoid single points of failure. Active assemblies are all hot-swappable from the front of the frame. Power, control, cooling and reference generation are available in redundant configurations.



# Features & Benefits

# Configuration

The Xenon allows any mix of formats within a frame in independent blocks of 32 inputs or outputs. Any of the supported formats, 3G/HD/SD/AES/Analog can be expanded to fill an entire 128 x 128 frame. Additionally the Xenon supports optical routing from 3Mb/s to 3Gb/s in blocks of 32 inputs or outputs.

The Xenon is housed in a 4RU frame, switching up to 64 sources to 64 destinations, or in an 8RU frame switching up to 128 sources to 128 destinations. Additional input and output modules can be installed into the router at anytime.

## Control

The Xenon router includes, as standard, an internal Frame Controller module which supports four Q-Link ports, two Ethernet ports and two Serial ports mounted on the rear of the router.

# The Xenon has a number of control options, they are:

Remote Control Panel: Any panel(s) from the entire range of Quartz remote control panels can be used with the Xenon router connected via Q-Link.

External third party control: The Xenon router can be remotely controlled via an external third party control device, such as an automation system, when connected to the router's serial port.

# Expansion

The input and output stages of the Xenon can be expanded in steps of 32 at any time by adding additional I/O modules. The Xenon can not be expanded beyond its frame size.

## Power Supply

The power supplies for the Xenon are internal. The 4RU & 8RU frame can be fitted with an optional redundant power supply with separate AC power inlet & alarm output.

# Designed for Performance Ultra Wide Band Routing

By offering a format independent data path, the Xenon supports signals from 3Mb/s all the way up to 3Gb/s including SD-SDI, HD-SDI, 3G-SDI, DVB-ASI, SMPTE ST 310-1 digital video formats as well as optical formats and other high data rate signals.

# Video

Xenon supports 3G, HD, SD and ASI video routing. It is available as 3G/HD/SD or HD/SD or SD only, offering cost savings for those who do not require 3G and or HD capability. For those applications requiring the signal to be reclocked, reclocking modules can be added in blocks of eight outputs.

# Audio

The Xenon router is a fully featured Stereo Audio router. Xenon supports AES and Analog Audio routing. Balanced AES or unbalanced AES on BNCs are supported in any mixture in blocks of 32 inputs or outputs. The Xenon also supports analog routing. Analog audio I/O is converted and routed as digital so that analog sources can route to AES destinations and AES sources can route to analog destinations. Analog blocks are in groups of 32 stereo pairs. The Xenon can optionally support Mono routing for AES and Analog audio by adding the +SS option. Additionally, the xenon also supports MADI I/O as an option on all audio i/o cards. On input cards this ADDS a MADI connector for MADI input. Note that these inputs are IN ADDITION TO the analog or AES base I/O. On output cards a MADI output connector is ADDED. This too offers MADI outputs IN ADDITION to the base I/O card.

# Signal and System Monitoring

Xenon supports SNMP signal monitoring and comprehensive system monitoring, including power supply voltages, interior temperatures and fan speeds. System status may also be monitored remotely by a network based remote connection over TCP/ IP or a direct serial connection to a PC. User-configurable closing contacts are also provided for connection to an external alarm system.

# X-LINK

X-LINK outputs are an additional set of outputs from Evertz<sup>®</sup> standard router platforms. They are for the purpose of providing connectivity to monitoring devices. X-LINK outputs do not reduce the number of outputs on the router, X-LINK outputs are in addition to the standard video router outputs.

# Feature Summary

- Multiple signal formats within a single frame
- Optional output reclocking in blocks of 8 outputs
- All outputs can switch in one TV frame
  Dual reference inputs
- Advanced audio features including Soft Switching
- Dolby-E<sup>™</sup> signal compatible
- Redundant internal controllers
- · Q-Link, Ethernet and RS-485 control interfaces
- Deterministic switching
- SNMP and system monitoring
- · Powerful and intuitive WinSetup Software
- Clean switch option (SPT Module)



# XE4-64x64, XE8-128x128 Xenon Multi-Format Routers

# Specifications

Selectable in blocks of 32

Selectable in blocks of 32

standard

800mV p-p nominal

15dB typical Belden 1694A, 250m

800mV p-p ±10%

750 terminating

15dB typical

< 0.4ns 12ns, typical

800mV p-p nominal

Belden 1694A, 90m

800mV p-p ±10%

75Ω terminating

15dB typical

0 + 0.5 v

75Ω terminating

15dB typical

0 ±0.5V

75Ω terminating

SMPTE ST 259-1 1997, ASI DVB

BNC per IEC 61169-8 Annex A

BNC per IEC 61169-8 Annex A

0.2 UI p-p with < 250m input cable

SMPTE ST 292-1, SMPTE ST 424

65m @ 2.97Gb/s BNC per IEC 61169-8 Annex A

Configuration: Inputs: Outputs:

Standard Definition: SD Video Inputs: Signals supported:

Signal Level: Impedance: Return Loss: 5 - 270MHz:

Cable equalization: Connectors:

SD Video Outputs:

Signal Level: Impedance: Return Loss: 5 - 270MHz: DC Offset:

Connectors

Signal Path: Rise/fall times: Path Length: Output jitter:

High Definition:

HD Video Inputs: Signals supported: Signal Level: Impedance: Return Loss: 5 - 1485MHz

Cable equalization: Connectors

HD Video Outputs: Signal Level: Impedance: Return Loss 5 - 1485MHz: DC Offset:

Connectors Signal Path:

Rise/fall times: Path Length: Output iitter:

Fiber Inputs/Outputs: SFP1T13-2:

Connector: Wavelengths Output Power SFP1R-2:

Connector:

3Gb/s, 1310nm LC/PC 1310nm -2dBm +1dBm Dual Optical SFP Receiver, Up to 3Gb/s LC/PC Operating Wavelength: 1270nm to 1610nm Maximum Input Power: -1dBm Optical Sensitivity: -21dBr -21dBm+/-1dBm

Audio Inputs - AES: Balanced version (D50): , 32kHz, 44,1kHz, 48kHz, and 96kHz Sample rates: Standard: AES3-1992 Signal level: 0.2-7V p-p Impedance: 110Ω ±20% Transformer coupled ±50V DC on input: D50 female carrying 16 signals Connectors Unbalanced Version (BNC): SMPTE ST 276-1 Standard: Impedance: 75Ω 25dB, 0.1-6.0kHz Return loss: BNC per IEC 61169-8 Annex A Connectors Audio Outputs - AES: Balanced version (D50) 2-5V p-p 110Ω Transformer coupled Signal level: Impedance: DC isolation: +50V Rise/fall time: 3.5-10ns Connectors D50 female carrying 16 signals Unbalanced version (BNC): Signal level: Impedance: 1.0V p-p ±50% 75Ω 25dB, 0.1-6.0kHz . Return loss: Conforms to ANSI S4.40 - 1992 Jitter: Connectors BNC per IEC 61169-8 Annex A Analog to Digital Audio Conversion: Sampling Freq: 48kHz or 96kHz 50 way "D" type female ± 0.05dB Connectors: Freq Response: Input Impedance 12kΩ minimum 0dBfs - 18dBu or 24dBu Signal Level: Noise: THD+N: -113dB A-weighted > 95dB (typically >98dB) > 85dB @1kHz CMRR: Crosstalk < -95dB I/O Delay: 0.85ms @48kHz or 0.43ms @96kHz Digital to Analog Audio Conversion: Sampling Freq: 48kHz or 96kHz Connectors: 50 way "D" type female ± 0.06dB Freq Response:

400Ω 0dBfs - 18dBu or 24dBu -115dB A-weighted > 95dB (typically >98dB) > ±30mV < -95dB I/O Delay: Dynamic Range: 1.3ms @48kHz or 0.66ms @96kHz 24 bits

> 95dB (typically >98dB) > ±30mV < -95dB I/O Delay: Dynamic Range: 1.3ms @48kHz or 0.66ms @96kHz 24 bits Switching Reference: 1V p-p ±3dB Signal level: Line switching: (525)

48kHz or 96kHz

12kΩ minimum

± 0.08dB

4000

50 way "D" type female

0dBfs = 18dBu or 24dBu -110dB A-weighted

Analog Audio Performance:

Sampling Freq:

Freq Response

Output Impedance:

Input Impedance:

Connectors:

Signal level:

Noise:

THD+N:

DC Offset:

Crosstalk:

Ref inputs:

HD/SD

Impedance:

Connectors:

Electrical:

Supply:

Power

4RH

8RU:

Backup:

Physical:

4RU:

8RU:

Width:

Depth:

Weight

4RU:

8RU:

Ventilation:

Operating Temp:

Height:

SD

2x, BNC, analog 525/625 Tri-level analog 625 or 525 75Ω terminating Lines 6/319 (625), Lines 10/273 Line 7 (HD)

BNC per IEC 61169-8 Annex A

Auto ranging 100 to 240V AC 50/60Hz

Typical 150VA, Max 250VA Typical 300VA, Max 500VA Not including the SPT modules Optional

7" (178mm) 14" (355mm) 19" (483mm)

17 3/4" (450mm)

16kg (35lbs) 31kg (68lbs) Spec. maintained to 30°C Operation to 40°C Fan cooled from the front to the rear of the left hand and right hand side of the router

4x75Ω video cable (max length 500m) 2xR 145 2xD9 female 2xRJ45

CSA listed to 60065 Complies with CE low voltage directive Complies with FCC Part 15, Class A CE EMC Directive



Output Impedance: Signal Level: Noise: THD+N. DC Offset: Crosstalk:

# Control: Q-Link: E-Link

Serial RS-422/232: Ethernet, 10baseT:

Compliance: Safety:

EMC:

< 0.4ns 12ns, typical 0.2 UI p-p with < 95m input cable

Dual Optical SFP Transmitter, Up to

BNC per IEC 61169-8 Annex A

# XE4-64x64, XE8-128x128

Xenon Multi-Format Routers

+SS

+SRC

Accessories XE4-X-FRAME XE8-X-FRAME

XE-IP32SX

XE-IP32SX+F XE-IP32HX

XE-IP32HX+F XE-IP32-3G

XE-IP32-3G-F1 XE-IP32-AESB

Option to synchronize audio inputs.

Xenon 4RU Router Chassis Xenon 8RU Router Chassis

32 SD inputs (fiber capable) 32 HD/SD inputs 32 HD/SD inputs (fiber capable)

 XE-IP32-3G-F1
 32 3G/HD/SD inputs (fiber capable)

 XE-IP32-AESB
 32 AES Balanced inputs

 XE-IP32-AESB-MADI
 32 AES Balanced inputs, plus 2 MADI outputs via mini-BNC (DIN)

32 SD inputs

32 3G/HD/SD inputs

Note: This option is required for mono audio operation. Sample Rate Converters for AES audio

# V/

# Ordering Information

XE4 Up To 64x64 Bas	e Systems	XE-IP32-AESU	32 AES Unbalanced inputs
XE4-3232SX	Xenon 4RU 32x32 SD Router	XE-IP32-AESU-MADI	32 AES Unbalanced inputs, plus 2 MADI outputs via mini-BNC (DIN)
XE4-3232SX+F	Xenon 4RU 32x32 SD Router (fiber capable - no modules)		
XE4-3232SX+XLINK	Xenon 4RU 32x32 SD Router with 3 X-LINK outputs	XE-IP32-AA	32 Analog inputs
XE4-3232HX	Xenon 4RU 32x32 HD/SD Router	XE-IP32-AA-MADI	32 Analog inputs, plus 2 MADI outputs via mini-BNC (DIN)
XE4-3232HX+F	Xenon 4RU 32x32 HD/SD Router (fiber capable - no modules)		
XE4-3232HX+XLINK	Xenon 4RU 32x32 HD/SD Router with 3 X-LINK outputs	XE-OP32HX	32 HD/SD outputs
XE4-3232-3G	Xenon 4RU 32x32 3G/HD/SD Router	XE-OP32HX+F	32 HD/SD outputs (fiber capable)
XE4-3232-3G+F	Xenon 4RU 32x32 3G/HD/SD Router (fiber capable - no modules)	XE-OP32HX-XLINK	32 HD/SD outputs via mini-BNC (DIN), plus 3 X-LINK outputs (only
XE4-3232-3G+XLINK	Xenon 4RU 32x32 3G/HD/SD Router with 3 X-LINK outputs		1 card can be fitted in the 4RU frame and only 2 cards can be fitted
XE4-3232-AESB	Xenon 4RU 32x32 Digital Audio Router (Balanced)		in the 8RU frame)
XE4-3232-AESB+MA		XE-OP32SX	32 SD outputs
	Xenon 4RU 32x32 Digital Audio Router (Balanced) with MADI	XE-OP32SX+F	32 SD outputs (fiber capable)
	Expansion	XE-OP32SX-XLINK	32 SD outputs via mini-BNC (DIN), plus 3 X-LINK outputs (only 1
XE4-3232-AESU	Xenon 4RU 32x32 Digital Audio Router (Unbalanced)		card can be fitted in the 4RU frame and only 2 cards can be fitted in
XE4-3232-AESU+MA			the 8RU frame)
	Xenon 4RU 32x32 Digital Audio Router (Unbalanced) with MADI	XE-OP32-3G	32 3G/HD/SD outputs
	Expansion	XE-OP32-3G+F	32 3G/HD/SD outputs (fiber capable)
XE4-3232-AA	Xenon 4RU 32x32 Analog Audio Router	XE-OP32-3G-XLINK	32 3G/HD/SD outputs via mini-BNC (DIN), plus 3 X-LINK outputs
XE4-3232-AA+MADI	Xenon 4RU 32x32 Analog Audio Router with MADI Expansion		(only 1 card can be fitted in the 4RU frame and only 2 cards can be
			fitted in the 8RU frame)
XE8 Up To 128X128 E		XE-SPT-AVP-H	HD/SD Line Synchronizer and Audio SoftSwitch module with video
	When ordering a Xenon 8RU base system, use the same part		and audio processing functions
	numbers as the 4RU base systems but substitute XE4 with XE8. All	XE-SPT-AVP-3G	3G Line Synchronizer and Audio SoftSwitch module with video and
	8RU base systems ship in 32x32 configurations.		audio processing functions
		XE-OP32-AESB	32 AES Balanced outputs
Base systems include	a frame, non-redundant power supplies, a single controller module		32 AES Balanced outputs, plus 2 MADI inputs via mini-BNC (DIN)
and a single reference	module.	XE-OP32-AESU	32 AES Unbalanced outputs
			32 AES Unbalanced outputs, plus 2 MADI inputs via mini-BNC (DIN)
Ordering Options		XE-OP32-AA	32 Analog outputs
+2PS	Redundant Power Supply (1 required for 4RU Frame), (2 required	XE-OP32-AA-MADI	32 Analog outputs, plus 2 MADI inputs via mini-BNC (DIN)
	for 8RU Frame)		
+FU	Redundant Controller Module	Fiber Optic Modules	
+REF	Redundant Reference module (Can only be fitted on frames with 64	SFP3T13-2	Dual optical 3G/HD/SD-SDI SFP Transmitter, 1310 nm
	or more, outputs)	SFP3R-2	Dual optical 3G/HD/SD-SDI SFP Receiver
+R8	Reclocking option for 8 HD/SD outputs		
+R16	Reclocking option for 16 HD/SD outputs		
+R24	Reclocking option for 24 HD/SD outputs		
+R32	Reclocking option for 32 HD/SD outputs		
	Option to pynahraniza audio inputa		

