XE4-64x64, XE8-128x128

Xenon Multi-Format Routers

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. Xenon excels in all of these areas while offering the flexibility of multiformat operation, and the ability to add Signal Processing Technology.

Great care has been taken in the design of 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
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 audio, can be expanded to fill an entire 128x128 frame.

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 in to the router at anytime.

Control
The Xenon router includes, as standard, an internal Frame Controller module which supports four Q-Link ports, two F-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.

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 8 outputs.

Audio
Xenon supports both AES and Analog Audio routing. Balanced AES or unbalanced AES on BNCs or analog audio are supported in any mixture in blocks of 32 inputs or outputs.

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.

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 signal compatible
- Redundant internal controllers
- No controllers needed for slave frames
- Q-Link, F-Link, Ethernet and RS485 control interfaces
- Deterministic switching
- SNMP and system monitoring
- Powerful and intuitive WinSetup Software

Specifications

Configuration:
Inputs: Selectable in blocks of 32
Outputs: Selectable in blocks of 32

Standard Definition:
SD Video Inputs:
Signals supported: SMPTE 259M 1997, ASI DVB standard
Signal Level: 800mV p-p nominal
Impedance: 75Ω terminating
Return Loss:
5 - 270MHz 15dB typical
Cable equalization: Belden 8281
BBC PSF1/2: 250m min
BBC PSF1/3: 150m min
Connectors: BNC

SD Video Outputs:
Signal Level: 800mV p-p ±10%
Impedance: 75Ω terminating
Return Loss:
5 - 270MHz 15dB typical
DC Offset: 0 ±0.5V
Connectors: BNC

Signal Path:
Rise/fall times: < 0.4ns
Path Length: 12ns, typical
Output jitter: 0.2 UI p-p with < 250m input cable

High Definition:
HD Video Inputs:
Signals supported: SMPTE 292M
Signal Level: 800mV p-p nominal
Impedance: 75Ω terminating
Return Loss:
5 - 1485MHz 15dB typical
Cable equalization: Belden 1694A, 90m
Connectors: BNC

HD Video Outputs:
Signal Level: 800mV p-p ±10%
Impedance: 75Ω terminating
Return Loss:
5 - 1485MHz 15dB typical
DC Offset: 0 ±0.5V
Connectors: BNC

Signal Path:
Rise/fall times: < 0.4ns
Path Length: 12ns, typical
Output jitter: 0.2 UI p-p with < 95m input cable

Audio Inputs - AES:
Balanced version (D50)
Sample rates: 32kHz, 44.1kHz, 48kHz, and 96kHz
Standard: AES3-1992
Signal level: 0.2-7V p-p
Impedance: 110Ω ±20%
Transformer coupled
DC on input: ±50V
Connectors: D50 female carrying 16 signals

Unbalanced Version (BNC):
Standard: SMPTE 276M
Impedance: 75Ω
Return loss: 25dB, 0.1-6.0kHz
Connectors: BNC per IEC 60169-8 Amendment 2

Audio Outputs - AES:
Balanced version (D50)
Signal level: 2-5V p-p
Impedance: 110Ω Transformer coupled
DC isolation: ±50V
Rise/fall time: 3.5-10ns
Connectors: D50 female carrying 16 signals

Unbalanced version (BNC):
Signal level: 1.0V p-p ±50%
Impedance: 75Ω
Return loss: 25dB, 0.1-6.0kHz
Jitter: Conforms to ANSI S4.40 - 1992
Connectors: BNC per IEC 60169-8 Amendment 2

Switching Reference:
Reference inputs (SD):
2x, BNC, analog 525/625
Reference inputs (HD/SD):
Tri level analog 625 or 525
Signal level: 1V p-p ±3dB
Impedance: 75Ω terminating
Line switching: Lines 3/319 (625)
Lines 10/273 (525)
Line 7 (HD)
Connectors: BNC

Electrical:
Supply: Auto ranging 100 to 240V AC 50/60Hz
Power:
8RU: Typical 300VA
Max 500VA
4RU: Typical 150VA
Max 250VA
Not including the SPT modules
Backup: Optional

Physical:
Height:
4RU: 7" (178mm)
8RU: 14" (355mm)
Width: 19" (483mm)
Depth: 17 3/4" (450mm)
Weight:
4RU: 16kg
8RU: 31kg
Operating Temp.: Spec. maintained to 30°C
Operation to 40°C
Ventilation: Fan cooled from the front to the rear of the left hand and right hand side of the router

Control:
Q-Link: 4x75Ω video cable (max length 500m)
F-Link: 2xRJ45
Serial RS422/232: 2xD9 female
Ethernet, 10baseT: 2xRJ45

Compliance:
Safety: Compliant with CSAC22.2 No 60065-03 IEC 60065
Complies with CE low voltage directive 93/68/EEC
EMC: Complies with FCC Part 15, Class A CE EMC Directive 89/336/EEC

Ordering Information

XE4 Up To 64x64 Base Systems

XE4-3232SX	Xenon 4RU 32x32 SDI Router
XE4-3232HX	Xenon 4RU 32x32 HD/SD Router
XE4-3232-3G	Xenon 4RU 32x32 3G/HD/SD Router
XE4-3232AESB	Xenon 4RU 32x32 Digital Audio Router (Balanced)
XE4-3232AESU	Xenon 4RU 32x32 Digital Audio Router (Unbalanced)
XE4-3232-AA	Xenon 4RU 32x32 Analog Audio Router

XE8 Up To 128X128 Base Systems

XE8-3232SX	Xenon 8RU 32x32 SDI Router
XE8-3232HX	Xenon 8RU 32x32 HD/SD Router
XE8-3232-3G	Xenon 8RU 32x32 3G/HD/SD Router
XE8-3232AESB	Xenon 8RU 32x32 Digital Audio Router (Balanced)
XE8-3232AESU	Xenon 8RU 32x32 Digital Audio Router (Unbalanced)
XE8-3232-AA	Xenon 8RU 32x32 Analog Audio Router

Ordering Options

+2PS	Redundant Power Supply (1 required for 4RU Frame), (2 required for 8RU Frame)
+FU	Redundant Controller Module
+REF	Redundant Reference module (Can only be fitted on frames with 64 or more, outputs)
+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
+SS	Synchronous AES Audio
+SRC	Sample Rate Converters for AES audio

Accessories:

XE-IP32SX	32 Standard Definition inputs
XE-IP32HX	32 HD/SD inputs
XE-IP32-3G	32 3G/HD/SD inputs
XE-IP32-AA	32 Analog Audio inputs
XE-IP32-AESB	32 AES Balanced inputs
XE-IP32-AESU	32 AES Unbalanced inputs
XE-OP32-AA	32 Analog Audio outputs
XE-OP32HSX	32 HD/SD outputs
XE-OP32SX	32 Standard Definition inputs
XE-OP32-3G	32 3G/HD/SD outputs
XE-OP32-AESB	32 AES Balanced outputs
XE-OP32-AESU	32 AES Unbalanced ouputs