

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 multi-format 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, 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 HD, SD and ASI video routing. It is available as HD/SD or SD only, offering cost savings for those who do not require HD capability. The signal path through Xenon is so clean that reclocking is not normally required. For those applications requiring it, reclocking modules can be added in blocks of 8 outputs.

Audio

Balanced AES or unbalanced AES on BNCs are supported in any mixture in blocks of 32 inputs or outputs.

Signal and System Monitoring

Xenon supports full signal monitoring of both inputs and outputs. It also incorporates comprehensive system monitoring, including power supply voltages, interior temperatures and fan speeds. Monitored data is available through SNMP for facility-wide monitoring systems. 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
- System monitoring with SNMP support
- Powerful and intuitive WinSetup Software

Specifications

| | | | | | |
|-----------------------------|------------------------------------|----------------------------------|-----------------------------------|--------------------|--|
| Configuration: | | Audio Inputs - AES: | | Electrical: | |
| Inputs: | Selectable in blocks of 32 | Sample rates: | 32kHz, 44.1kHz, 48kHz, and 96kHz | Supply: | Auto ranging 100 to 240V AC 50/60Hz |
| Outputs: | Selectable in blocks of 32 | Balanced version (D50) | | Power: | |
| Standard Definition: | | Standard: | AES3-1992 | 8RU: | Typical 300VA |
| SD Video Inputs: | | Signal level: | 0.2-7V p-p | | Max 500VA |
| Signals supported: | SMPTE 259M 1997, ASI DVB standard | Impedance: | 110Ω ±20% | 4RU: | Typical 150VA |
| Signal Level: | 800mV p-p nominal | Transformer coupled | | | Max 250VA |
| Impedance: | 75Ω terminating | DC on input: | ±50V | | Not including the SPT modules |
| Return Loss, 5 - 270MHz: | | Connectors: | D50 female carrying 16 signals | Backup: | Optional |
| | 15dB typical | Unbalanced Version (BNC): | | Physical: | |
| Cable equalization: | Belden 8281 | Standard: | SMPTE 276M | Height: | |
| BBC PSF1/2: | 250m min | Impedance: | 75Ω | 4RU: | 7" (178mm) |
| BBC PSF1/3: | 150m min | Return loss: | 25dB, 0.1-6.0kHz | 8RU: | 14" (355mm) |
| Connectors: | BNC | Connectors: | BNC per IEC 60169-8 Amendment 2 | Width: | 19" (483mm) |
| SD Video Outputs: | | Audio Outputs - AES: | | Depth: | 17 3/4" (450mm) |
| Signal Level: | 800mV p-p ±10% | Balanced version (D50) | | Weight: | |
| Impedance: | 75Ω terminating | Signal level: | 2-5V p-p | 4RU: | 16kg |
| Return Loss, 5 - 270MHz: | | Impedance: | 110Ω Transformer coupled | 8RU: | 31kg |
| | 15dB typical | DC isolation: | ±50V | Operating Temp.: | Spec. maintained to 30°C |
| DC Offset: | 0 ±0.5V | Rise/fall time: | 3.5-10ns | | Operation to 40°C |
| Connectors: | BNC | Connectors: | D50 female carrying 16 signals | Ventilation: | Fan cooled from the front to the rear of the left hand and right hand side of the router |
| Signal Path: | | Unbalanced version (BNC): | | Control: | |
| Rise/fall times: | < 0.4ns | Signal level: | 1.0V p-p ±50% | Q-Link: | 4x75Ω video cable (max length 500m) |
| Path Length: | 12ns, typical | Impedance: | 75Ω | F-Link: | 2xRJ45 |
| Output jitter: | 0.2 UI p-p with < 250m input cable | Return loss: | 25dB, 0.1-6.0kHz | Serial RS422/232: | 2xD9 female |
| High Definition: | | Jitter: | Conforms to ANSI S4.40 - 1992 | Ethernet, 10baseT: | 2xRJ45 |
| HD Video Inputs: | | Connectors: | BNC per IEC 60169-8 Amendment 2 | Compliance: | |
| Signals supported: | SMPTE 292M | Signal Path: | | Safety: | Compliant with CSAC22.2 No 60065-03 |
| Signal Level: | 800mV p-p nominal | Rise/fall times: | < 0.4ns | | IEC 60065 |
| Impedance: | 75Ω terminating | Path Length: | 12ns, typical | | Complies with CE low voltage directive |
| Return Loss, 5 - 1485MHz: | | Output jitter: | 0.2 UI p-p with < 95m input cable | | 93/68/EEC |
| | 15dB typical | Switching Reference: | | EMC: | Complies with FCC Part 15, Class A |
| Cable equalization: | Belden 1694A, 90m | Reference inputs (SD): | | | CE EMC Directive 89/336/EEC |
| Connectors: | BNC | | 2x, BNC, analog 525/625 | | |
| HD Video Outputs: | | Reference inputs (HD/SD): | | | |
| Signal Level: | 800mV p-p ±10% | | Tri level analog 625 or 525 | | |
| Impedance: | 75Ω terminating | Signal level: | 1V p-p ±3dB | | |
| Return Loss, 5 - 1485MHz: | | Impedance: | 75Ω terminating | | |
| | 15dB typical | Line switching: | Lines 3/319 (625) | | |
| DC Offset: | 0 ±0.5V | | Lines 10/273 (525) | | |
| Connectors: | BNC | | Line 7 (HD) | | |
| | | Connectors: | BNC | | |

Ordering Information

XE4 Up To 64x64 Base Systems

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|--------------|---|
| XE4-3232S | Xenon 4RU 32x32 SDI Router |
| XE4-3232H | Xenon 4RU 32x32 HD/SD Router |
| XE4-3232AESB | Xenon 4RU 32x32 Digital Audio Router (Balanced) |
| XE4-3232AESU | Xenon 4RU 32x32 Digital Audio Router (Unbalanced) |

XE8 Up To 128x128 Base Systems

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|--------------|---|
| XE8-3232S | Xenon 8RU 32x32 SDI Router |
| XE8-3232H | Xenon 8RU 32x32 HD/SD Router |
| XE8-3232AESB | Xenon 8RU 32x32 Digital Audio Router (Balanced) |
| XE8-3232AESU | Xenon 8RU 32x32 Digital Audio Router (Unbalanced) |

Ordering Options

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|------|--|
| +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:

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|--------------|-------------------------------|
| XE-IP32S | 32 Standard Definition inputs |
| XE-IP32H | 32 HD/SD inputs |
| XE-OP32HS | 32 HD/SD outputs |
| XE-OP32S | 32 Standard Definition inputs |
| XE-IP32-AESB | 32 AES Balanced inputs |
| XE-IP32-AESU | 32 AES Unbalanced inputs |
| XE-OP32-AESB | 32 AES Balanced outputs |
| XE-OP32-AESU | 32 AES Unbalanced outputs |