ZyPer4K-XSE

Uncompressed 4K Encoder/Decoder

The ZyPer4K-XSE platform allows for the distribution and switching of high definition uncompressed video, audio, and control using ZyPer4K-XSE encoder and decoder endpoints and off-the-shelf 10Gb Ethernet switches (both fiber and copper).
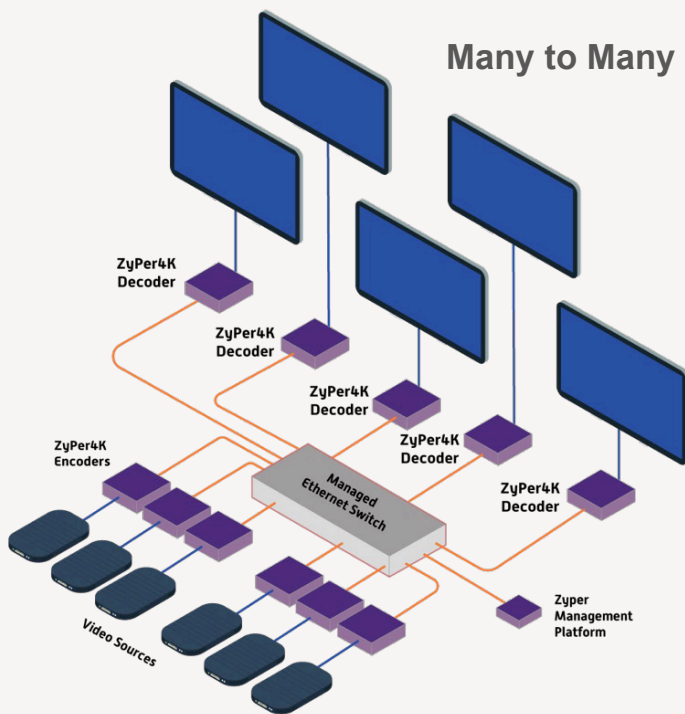
Highlights

- Uncompressed near-zero latency UltraHD (4K/60) video, audio, and control

- Fanless aluminum chassis with rubberized edges – silent and resilient in AV control spaces

- USB 2.0 option for remote connection webcams and other devices

- Lossless transport of 7.1 audio signals including all encoded formats and uncompressed linear PCM

- 1GbE utility network port on all encoders and decoders

- Display control (IP, RS232 and CEC)

- USB-C with DisplayPort Alt-Mode and optional 60W charging feature

- HDMI 2.0 (full 4K 4:4:4 60Hz support)

- HDCP 2.3 compliant

- Supports HDR10, HDR10+, USB HID, and 10Gb PoE+

- ZMP (ZyPer Management Platform) control software (Available in NUC, 1RU Rack Server or VMware format)

- ZMP GUI allows simple setup and control of unlimited ZyPer4K-XSE endpoints.

- 128-bit AES encryption

- Video wall and multiview support

- Optional Integrated Dante Transmitter/ Receiver (Supports AES67)

- **Regulatory Certifications:**
- EN 60945:2002 (Clauses 9 & 10)
- IEC 62368-1:2020
- EN 55032:2015 + A1:2020 + A11:2020
- EN 55035:2017 + A11:2020
- IEC 61000-3-2:2019 + A1:2021
- EN 61000-3-3:2013 + A1:2019 + A2:2021
- AS/NZS CISPR 32:2015 + A1:2020
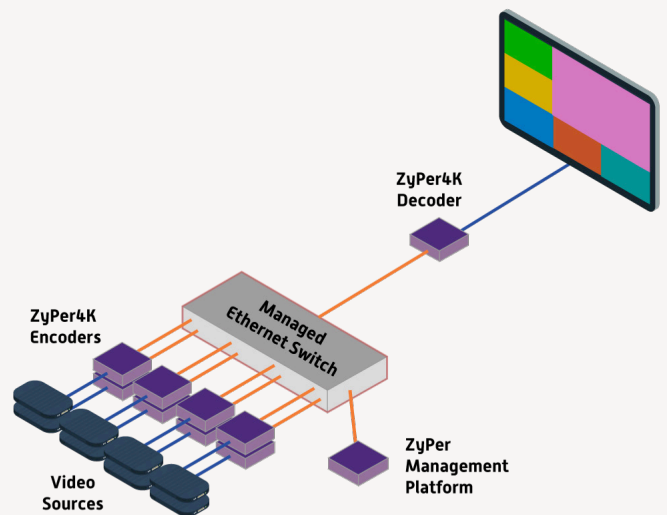- FCC Part 15 Subpart B, Class B

Uncompressed 4K

ZyPer4K-XSE delivers perfect pixel for pixel reproduction of uncompressed 720p HD, 1080p FHD, Ultra HD, and 4K resolution content directly over a standard 10Gb Ethernet network. ZyPer4K-XSE eliminates the need to have a separate AV network or proprietary matrix switcher for video and other AV content.

Network Topology Examples

Many to Many

Multiview
(Up to 19 Sources)

Unlimited Scalability

With no limitation on the number of endpoints; you can grow your system as future needs arrise.

Change sources and content instantly without programming

IP based architecture enables you to instantly switch from one source to another without any loss of frames - even at 4K resolutions.

USB 2.0 and KVM Control

ZyPer4K-XSE with USB support enables remote access to game controllers, cameras, keyboards, mice and other devices (KVM) that offer flexibility in securing or accessing equipment such as game consoles that may be stored in remote locations.

Application Examples

Support for full 4K resolutions, UltraWide 21:9 ratio and 32:9 ratio (Double wide) Displays.

Multiview feature allows user to watch multiple sources at the same time.

ZyPer4K-XSE MODELS

ZyPer4K-XSE ENCODERS

Standard Copper Encoder (PoE+)
Z4KC2XS-E

Standard Fiber Encoder
Z4KF2XS-E
(SFP+ Module sold separately)

Copper Encoder with Dante and USB 2.0 (PoE+)
Z4KC2XS-EAU

Fiber Encoder with Dante and USB 2.0
Z4KF2XS-EAU
(SFP+ Module sold separately)

ZyPer4K-XSE DECODERS

Standard Copper Decoder (PoE+)
Z4KC2XS-D

Standard Fiber Decoder
Z4KF2XS-D
(SFP+ Module sold separately)

Copper Decoder with Dante and USB 2.0 (PoE+)
Z4KC2XS-DAU

Fiber Decoder with Dante and USB 2.0
Z4KF2XS-DAU
(SFP+ Module sold separately)

COPPER (PoE+)

10G
NETWORK INTERFACE

FIBER

ZyPer4K-XSE Encoder	Information	Connector
Video	HDMI 2.0 with HDCP pass-through	HDMI 2.0 type A and USB type C
Audio (Digital)	Encoded audio formats and LPCM up to 8 channels	HDMI 2.0 type A and USB type C
Audio (Analog)	Balanced Stereo (In or Out)	5-pin phoenix
USB	USB HID or full USB 2.0 (Optional)	USB Type C
Ethernet	10 Gb for Video/Audio/Control with 1 Gb Utility	10 Gb RJ45 (PoE+) or SFP+ port 1 Gb RJ45 port
ZyPer4K-XSE Decoder	**Information**	**Connector**
Video	HDMI 2.0 with HDCP pass-through.	HDMI 2.0 type A
Audio (Digital)	Encoded audio formats and LPCM up to 8 channels	HDMI 2.0 type A
Audio (Analog)	Balanced Stereo (Output)	5-pin phoenix
RS-232	Full Duplex up to 115.2 kbps	3-pin phoenix
USB	USB HID or full USB 2.0 (Optional)	2 USB Type A
Ethernet	10 Gb for Video/Audio/Control with 1 Gb Utility	10 Gb RJ45 (PoE+) or SFP+ port 1 Gb RJ45 port
Dante Transmitter/Receiver (Optional)	2 channel Dante Audio over IP (Supports AES67)	NA
Other Specifications	**ZyPer4K-XSE Encoder/Decoder**	
Formats	• VGA: 640x480 (4:3) • SVGA: 800x600 (4:3) • XGA: 1024x768 (4:3) • SXGA: 1280x1024 (5:4) • SXGA+: 1440x1080 (4:3) • WXGA: 1366x768 (16:9) • QXGA: 2048x1536 (4:3) • HDTV: 1280x720 (16:9) • FHD: 1920x1080p/i (16:9) • UXGA: 1600x1200 (4:3) • UHD: 3840x2160 (16:9) • 4K: 4096x2160 (17:9) • UWQHD: 3440x1440 (21:9) • DFHD: 3840x1080 (32:9) Custom resolutions are supported at pixel clock rates up to 600 MHz	
Video Other	Color depth: 24 bit, 30 bit, 36 bit, 48 bit	
Video Wall and Multiview	Video Wall up to 15x15. Multiview up to 19 sources.	
Signal transmission distance	Cat6a: 328 ft (100 m) or 30km fiber optic line	
Copy Protection/Security	HDCP 2.3, AES-128 Encryption, 802.1X compatible	
Power input	12 VDC, 2A (AC adapter included) Power supply not needed when using PoE+	
Power (Standard encoder/decoder)	Approximately 13 watts	
Dimensions (L x W x H) / Weight	7.8 in (199mm) x 5.4 in (136mm) x 1.9 in (48mm), 35.3 oz (1000 g)	
Temperature	Operating temperature: 32° F to 104° F <0° C to +40° C> Storage temperature: -4° F to +176° F <-20° C to +80° C>	
Humidity	Operating/ Storage: 20% to 90% (Non-Condensing)	