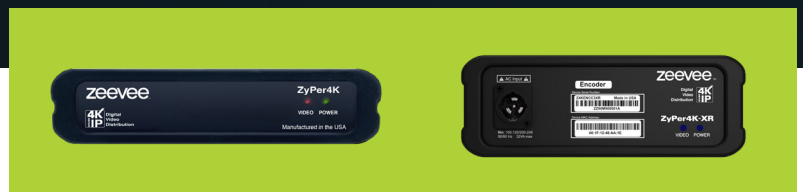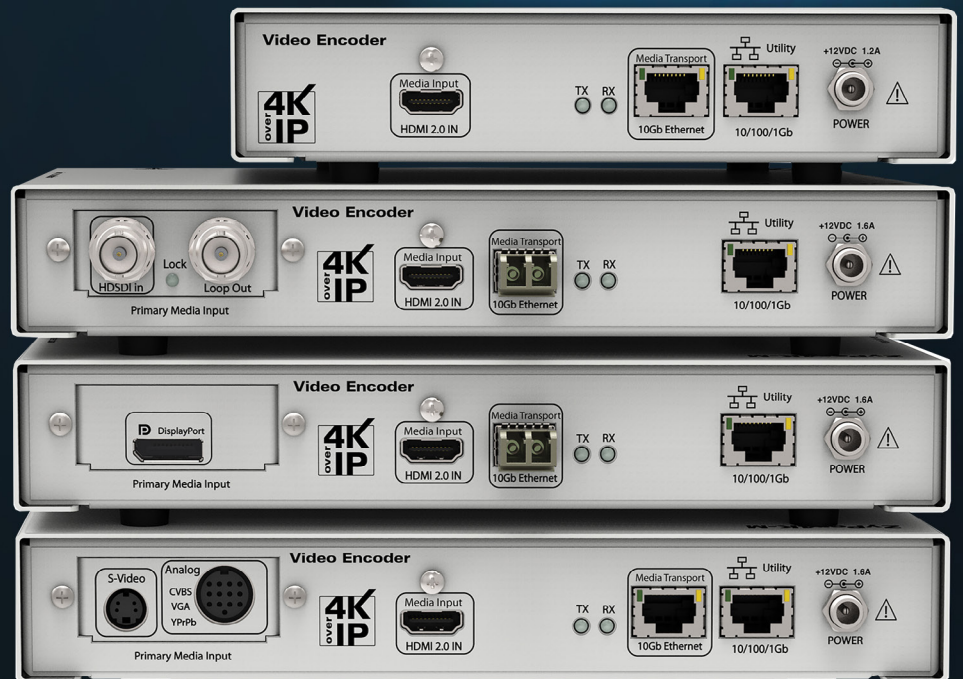# ZyPer4K

Uncompressed 4K Encoder/Decoder

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


Highlights

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

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

- 1GbE utility network port on all encoders and decoders

- Source and display control (Infrared and RS232)

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

- HDCP 2.2 compliant

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

- Aluminum chassis with rubberized rim (XS and XR units)

- Fan-less thermal management (XS and XR units)

- ZMP (ZyPer Management Platform) with software

- GUI allows simple set up and control of ZyPer4K.

- 128-bit AES encryption

- Video wall and multiview support

- Decoder with Integrated Dante Transmitter (Supports AES67)

- Quad HDMI Input Encoder for Netgear M4300-96X switch

Uncompressed 4K

ZyPer4K delivers perfect pixel for pixel reproduction of uncompressed 720p, 1080p HD, Ultra HD, and 4K resolution content directly over a standard 10Gb Ethernet network. ZyPer4K eliminates the need to have a separate AV network or proprietary matrix switcher for video and other AV content.
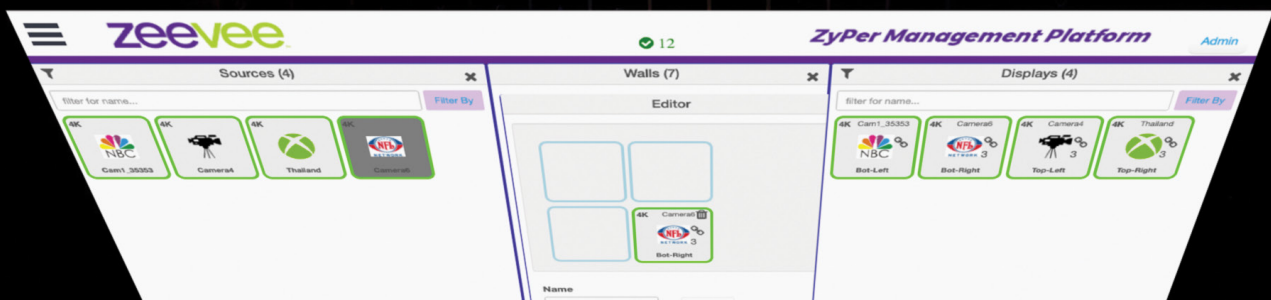
Change sources and content instantly without programming

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 with USB support enables remote access to cameras, keyboards, mice and other devices (KVM) that offer flexibility in securing or accessing equipment such as digital media players that may be stored in remote locations.

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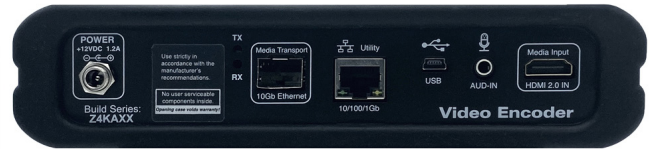## ZyPer4K – XR AND XS ENCODERS

HDMI
ZyPer4K–XR

HDMI
ZyPer4K–XR

HDMI
ZyPer4K–XS

HDMI
ZyPer4K–XS

ZyPer4K – XR AND XS DECODERS

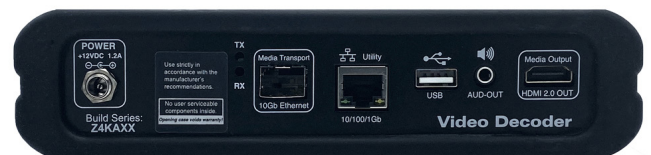HDMI
ZyPer4K–XR

HDMI
ZyPer4K–XR

HDMI
ZyPer4K–XS

HDMI
ZyPer4K–XS

COPPER   **NETWORK INTERFACE**   **FIBER**

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Intelligent AV Distribution

ZyPer4K ENCODERS
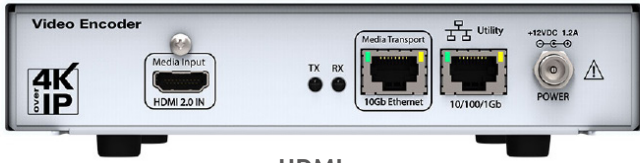
HDMI

HDMI

DUAL HDMI WITH LOOPUT

DUAL HDMI WITH LOOPUT

HD-SDI

HD-SDI

DISPLAYPORT

DISPLAYPORT

ANALOG

ANALOG

COPPER   **NETWORK INTERFACE**   **FIBER**

ZyPer4K MODELS & OPTIONS

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ZyPer4K DECODERS
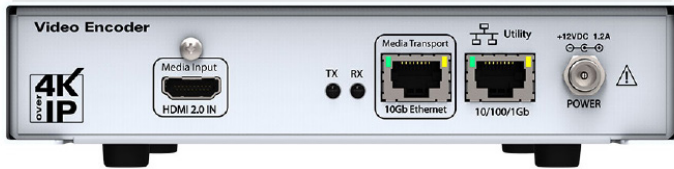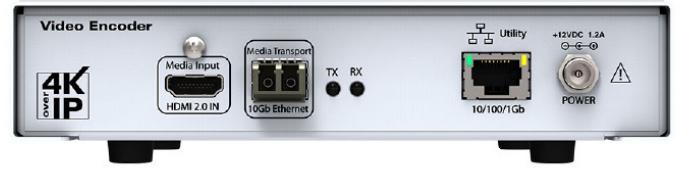
HDMI

HDMI

HDMI FANLESS

HDMI FANLESS

DISPLAYPORT

DISPLAYPORT

HDMI OUTPUT INTEGRATED DANTE TRANSMITTER

HDMI OUTPUT INTEGRATED DANTE TRANSMITTER

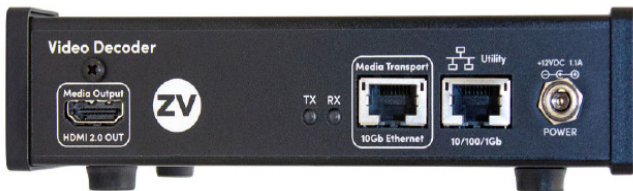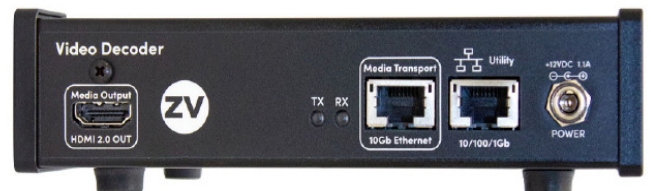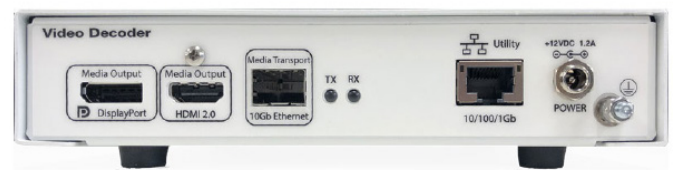COPPER   NETWORK INTERFACE   FIBER

ZyPer4K FAMILY FEATURES

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Intelligent AV Distribution

ZyPer4K Encoder	Information	Connector
Video	HDMI 2.0 with HDCP pass-through (Optional: 3G-SDI, DP, Analog)	HDMI 2.0 type A, with optional 3G-SDI, Display Port 1.3 or Analog
Audio (Digital)	Encoded audio formats and LPCM up to 8 channels	HDMI 2.0 type A, with optional 3G-SDI, Display Port 1.3 or Analog
Audio (Analog)	Unbalanced 2-Channel Stereo (In or Out)	3.5mm stereo mini jack
IR	Input/Output ports	3.5mm mini jacks
RS-232	Full Duplex up to 115.2 kbps	9-pin D-sub
USB (Optional)	Single USB 2.0	USB Type B
Ethernet	10 Gb for Video/Audio/Control with 1 Gb Utility	10 Gb RJ45 or SFP+ port 1 Gb RJ45 port

ZyPer4K Decoder	Information	Connector
Video	HDMI 2.0 with HDCP pass-through. Widescreen format selection (Crop, stretch or box)	HDMI 2.0 type A with optional DisplayPort
Audio (Digital)	Multi-channel linear PCM up to 8 channels (7:1)	HDMI 2.0 type A
Audio (Analog)	Unbalanced Stereo (Output)	3.5mm stereo mini jack
IR	Input/Output ports	3.5mm mini jacks
RS-232	Full Duplex up to 115.2 kbps	9-pin D-sub
USB (Optional)	Single USB 2.0	2 USB Type A
Ethernet	10 Gb for Video/Audio/Control with 1 Gb Utility	10 Gb RJ45 or SFP+ port 1 Gb RJ45 port
Dante Transmitter (Optional)	2 channel Dante Audio over IP (Supports AES67)	NA

Note: ZyPer4K Decoder with Dante Transmitter does not have Analog Audio output port. Also does not have 1Gb Utility port.

Other Specifications	ZyPer4K Encoder/Decoder
Formats	Supports all major VESA resolutions and variations including full HDMI 2.0 support: • VGA: 640x480 (4:3) • SXGA: 1280x1024 (5:4) • 1080p/i: 1920x1080 (16:9) • SVGA: 800x600 (4:3) • WXGA: 1366x768 (16:9) • QXGA: 2048x1536 (4:3) • XGA: 1024x768 (4:3) • SXGA+: 1440x1080 (4:3) • Ultra HD: 3840x2160 (16:9) • HDTV: 1280x720 (16:9) • UXGA: 1600x1200 (4:3) • 4K: 4096x2160 (17:9) 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 2.2, AES-128 Encryption, 802.1X compatible
Power input (locking connector)	12 VDC 2A (Worldwide AC adapter is supplied)
Power (Standard encoder/decoder) Power (Quad HDMI encoder)	Approximately 15 watts Approximately 25 watts
Dimensions (L x W x H) / Weight Dimensions, Long box version Dimensions, Quad HDMI Encoder	6.9 in (176mm) x 5.7 in (145mm) x 1.5 in (37mm), 31.0 oz (880 g) 9 in (229mm) x 5.7 in (145mm) x 1.5 in (37mm), 37.7 oz (1070 g) 8.3 in (210mm) x 2.6 in (67mm) x 1.5 in (37mm), 14.3 oz (405 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)

ZyPer4K FAMILY FEATURES

ZyPer4K-XS Encoder	Information
Video	HDMI 2.0 with HDCP pass-through
Audio (Digital)	Encoded audio formats and linear PCM up to 8 channels
Audio (Analog)	Unbalanced Stereo (Input or Output)
USB	Single USB 2.0 (USB Mini-B connector)
Ethernet	10 Gb for Video/Audio/Control with 1 Gb Utility

ZyPer4K-XS Decoder	Information
Video	HDMI 2.0 with HDCP pass-through
Audio (Digital)	Encoded audio formats and linear PCM up to 8 channels
Audio (Analog)	Unbalanced Stereo (Output)
USB	Single USB 2.0 (USB - A connector)
Ethernet	10 Gb for Video/Audio/Control with 1 Gb Utility

ZyPer4K-XS	ZyPer4K-XS
Formats	Supports all major VESA resolutions and variations including full HDMI 2.0 support: • VGA: 640x480 (4:3) • XGA: 1024x768 (4:3) • SXGA: 1280x1024 (5:4) • SXGA+: 1440x1080 (4:3) • 1080p/i: 1920x1080 (16:9) • Ultra HD: 3840x2160 (16:9 • SVGA: 800x600 (4:3) • HDTV: 1280x720 (16:9) • WXGA: 1366x768 (16:9) • UXGA: 1600x1200 (4:3) • QXGA: 2048x1536 (4:3) • 4K: 4096x2160 (17:9) 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 with up to 19 sources.
Signal transmission distance	Cat6a: 100m	multimode fiber optic line: 300m	single mode fiber optic line: 10km
Copy Protection/Security	HDCP 2.2, AES-128 Encryption, 802.1X compatible
Power input (locking connector)	12V DC
Power	Approximately 15 watts
Dimensions (L x W x H) / Weight	8.7 in(220mm) x 7.8 in(199mm) x 2.8 in(71mm), 74.0 oz(2100 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)

ZyPer4K FAMILY FEATURES

ZyPer4K-XR Encoder	Information	Connector
Video	HHDMI 2.0 with HDCP pass-through	Switchcraft EHHDMI2 "HDMI 2.0 type A"
Audio (Digital)	Multi-channel linear PCM up to 8 channels (7:1)	Switchcraft EHHDMI2 "HDMI 2.0 type A"
Audio (Analog)	Unbalanced Stereo (Input or Output)	Switchcraft D3F-XLR "3-pin XLR"
USB	Single USB 2.0	Switchcraft EHUSBBAX "USB Type B"
Ethernet	10 Gb for Video/Audio/Control with 1 Gb Utility	10 Gb Neutrik NE8FDX-P6 "RJ45" with PoE support or Neutrik NO2-4FDW-1-A "fiber" connector 1 Gb Neutrik NE8FDX-P6 "RJ45" port
Mounting	Mounting hole for standard truss clamps	M10 hole on each side of unit

ZyPer4K-XR Decoder	Information	Connector
Video	HDMI 2.0 with HDCP pass-through	Switchcraft EHHDMI2 "HDMI 2.0 type A"
Audio (Digital)	Multi-channel linear PCM up to 8 channels (7:1)	Switchcraft EHHDMI2 "HDMI 2.0 type A"
Audio (Analog)	Unbalanced Stereo (Output)	Switchcraft D3F-XLR "3-pin XLR"
USB	Single USB 2.0	Switchcraft EHUSBABX "USB Type A"
Ethernet	10 Gb for Video/Audio/Control with 1 Gb Utility	10 Gb Neutrik NE8FDX-P6 "RJ45" with PoE support or Neutrik NO2-4FDW-1-A "fiber" connector 1 Gb Neutrik NE8FDX-P6 "RJ45" port
Mounting	Mounting hole for standard truss clamps	M10 hole on one side of unit

Other Specifications	ZyPer4K-XR	
Formats	Supports all major VESA resolutions and variations including full HDMI 2.0 support: • VGA: 640x480 (4:3) • SXGA: 1280x1024 (5:4) • 1080p/i: 1920x1080 (16:9) • SVGA: 800x600 (4:3) • WXGA: 1366x768 (16:9) • QXGA: 2048x1536 (4:3)	• XGA: 1024x768 (4:3) • SXGA+: 1440x1080 (4:3) • Ultra HD: 3840x2160 (16:9 • HDTV: 1280x720 (16:9) • UXGA: 1600x1200 (4:3) • 4K: 4096x2160 (17:9)
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: 100m	multimode fiber optic line: 300m	
Copy Protection/Security	HDCP 2.2, AES-128 Encryption, 802.1X compatible	
Power input (locking connector)	120/240 VAC (Neutrik NAC3MPX connector)	
Power	Approximately 9 watts	
Dimensions (L x W x H) / Weight	8.7 in (220mm) x 7.8 in (199mm) x 2.8 in (71mm), 74.0 oz (2100 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)	
Warranty	3 years	

About ZeeVee

ZeeVee is a global pioneer and leader in the development and deployment of AV distribution systems for industrial, commercial and residential applications. As the only manufacturer that can deliver multimedia content over fiber, CATx and coax, ZeeVee has transformed the digital video industry with its award-winning HD to Ultra-HD/4K solutions for the pro AV and IT marketplace. The company offers a variety of innovative, cost-effective and easy to install AVoIP and RF distribution platforms. ZeeVee's technologies and products are installed in thousands of facilities worldwide where there is a need to transport HD/UHD content from multiple sources to multiple displays over long distances. ZeeVee is a founding member of the SDVoE Alliance and a Global Presence Alliance Technology Partner.

For information visit **www.zeevee.com**