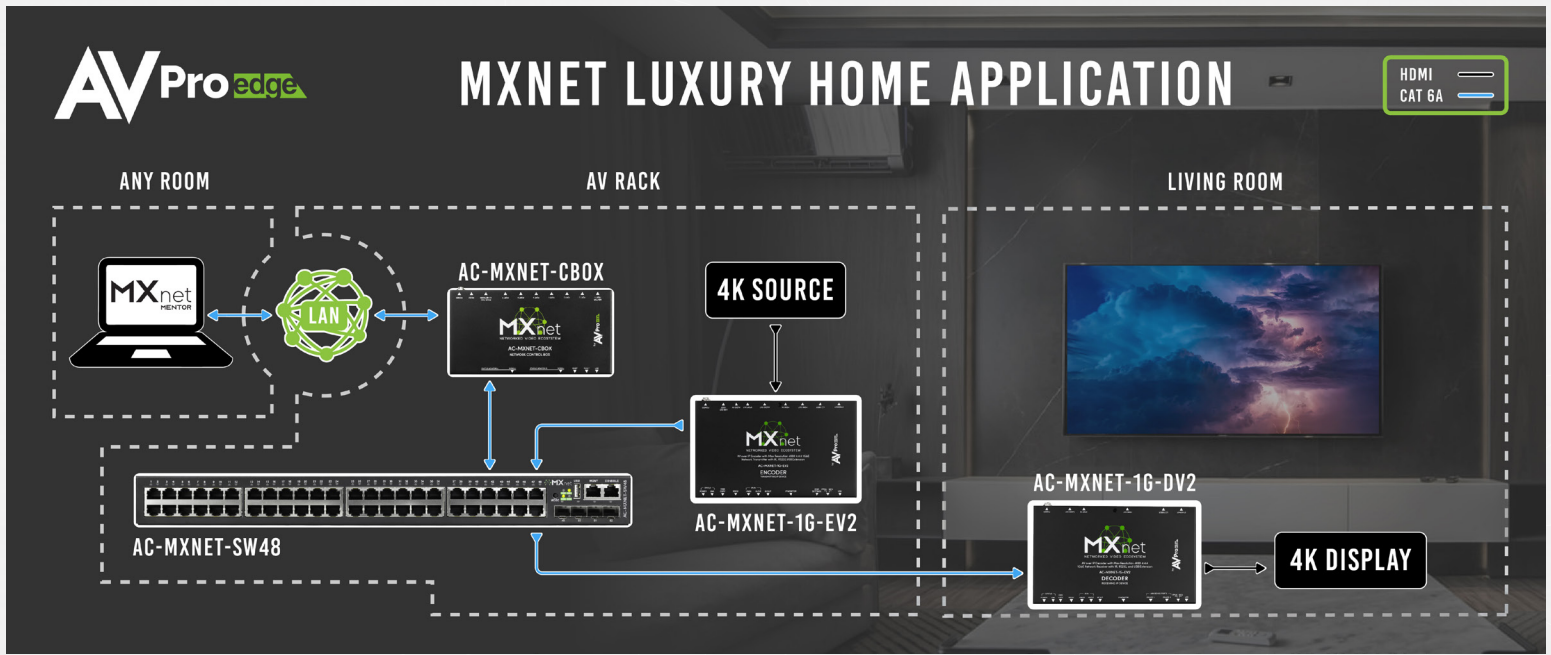# MXNet

NETWORKED VIDEO ECOSYSTEM

MXNet 1G Evolution II Encoder
(AC-MXNET-1G-EV2)

The AC-MXNET-1G-EV2 represents the next step forward on the evolutionary path of the MXNet Platform encompassing an industry-first, holistically integrated approach to AV over IP video distribution from a solo manufacturer. AVPro Edge's exclusive MXNet Platform offers the only proprietary, hyper-optimized AV over IP ecosystem of network-based encoders, decoders and managed switches guided from a centralized control unit by MXNet Mentor, our in-house engineered setup and system utilities management software solution.

AC-MXNET-1G-EV2, an Evolution II Encoding / Transmitting device, incorporates a newly designed AVPro Edge application-specific integrated circuit (ASIC) that introduces an improved software-based video encoding / decoding engine into the IC for enhanced video processing. Refinements to the IC include native support for 4K/60fps 4:4:4 signals (RGB and YCbCr @10- and 12-bit), plus extended audio capabilities to support high bitrate multi-channel formats, including Dolby Atmos and DTS:X for IMAX Enhanced soundtracks.

As a member of the AVPro Edge family of AV over IP products, an AC-MXNET-1G-EV2 is the gateway where a signal enters the MXNet Ecosystem, connected with category cable (AVPro Edge strongly encourages CAT-6a infrastructure for all MXNet system deployments however for MXNet 1G, Cat-5e will comfortably transport MXNet 1G data signals) or fiber optic cabling, to an MXNet switch or any compatible multicast-capable managed L3 network switch.

MXNET LUXURY HOME APPLICATION

PRODUCT SPECIFICATIONS

Video Input / Ingestion:	
Signal Type	DVI 1.0, HDMI 2.0b
Video Resolution	720P@50/60Hz; 1080P@50/60Hz; 4K@50/60HZ 4:4:4*; 4K@30HZ 4:4:4; 4K@60HZ 4:2:0; 4K@24HZ 4:2:0/4:2:2 [Ultrawide Support]
HDR Format	HDR 10, HLG, Dolby Vision @30Hz
CHroma Subsampling	4:4:4, 4:2:2, 4:2:0
Bit Depth per Color	1080P (16Bit), 4k (10, 12 Bit)
Visually Lossless	4096x2160P@60Hz (8 BIT) 4:4:4 or RGB; 3840x2160P@60HZ (12BIT) 4:2:2 DOLBY VISION; 3840x 2160P@60HZ (10BIT) 4:2:2 HDR10/HLG; 1920x1080P@60HZ (12BIT)

Audio:	
Audio Format (end to end)	PCM 2, 5.1, 7.1 Channel, Dolby Digital 5.1 Channel, Dolby Digital Plus, DTS 5.1 Channel, DTS–ES, DTS–HD High Resolution, DTS-HD Master Audio, Dolby Atmos
Audio Format (HDMI Loopout)	Same as End to End
Embedded Audio	Stereo Analog Audio
De-Embedded Audio	Stereo Analog Audio

Ports:	
Ethernet	(1) × female RJ-45, PoE
SFP	(1) × SFP Slot
HDMI	(2) × HDMI Type A 19-pin, female, one HDMI input, one HDMI loop out
Audio	(1) × 5 Pin Terminal Block, Balanced L/R Audio out (1) × 3.5 mm mini stereo jack, Audio in
IR	(3) × 3.5mm mini-stereo jack, one IR–Pass, one IR–EYE, one IR-out
RS232	(1) × 5 Pin Terminal Block
USB	(1) × USB 2.0 Type–B for USB extension & KVM (1) × USB Micro Type–B for MXNET service

Distance:	
Ethernet	100 Meters/ 330 Feet over CAT5e and above
SFP and Fiber	1000BASE-SX SFP Transceiver Module (MMF, 850nm, 550m, LC, DOM)
	1000BASE-LX/LH SFP 1310nm 10km Transceiver Module

Environmental:	
Operating Temperature	23 to 125°F (–5 to 51°C)
Storage Temperature	–4 to 140°F (–20 to 60°C)
Operating Humidity	5–90% RH (No Condensation)

Power:	
Max Power Consumption	6.5W (AVDM 9.5W)
PoE (Power over Ethernet)	IEEE 802.3af (15.4W)
Power Supply Unit	Input: AC 120–240V–50/60Hz 0.8A Output: DC 12V 2A

Dimensions:	
Mounting	Rack and Furniture mount support
Dimensions (Unit Only Width/Depth/Height)	mm: 200 X 120 x 20 inch: 7.87 X 4.74 X 0.79
Dimensions (Packaged Width/Depth/Height)	mm: 310 X 180 x 54 inch: 12.2 X 7.09 X 2.13
Weight (Unit)	1.2 LBS/0.55 KG
Weight (Packaged)	1.7 LBS/0.77 KG
Regulatory	CE/FCC/UL
Product Warranty	10 Years

Specifications subject to change without notice. Mass & dimensions are approximate. *4K60 4:4:4/4k60 4:2:2 Uses ICT Compression

FEATURE SET

- HDMI 2.0
- 18Gbps Bandwidth Support
- HDCP 2.3 (and all earlier versions supported)
- Evolution II ASIC with improved encoding engine
- With "lossy" signals, JPEG 2000 optimizes compression efficiency
- Proprietary MXNet Mentor interface for bandwidth management, real–time status feedback, live diagnostics plus EDID copy and configuration
- Encodes native 4K/60fps 4:4:4 RGB or YCbCr with dynamic metadata support
- High Bitrate multi-channel support for Dolby Atmos and DTS:X
- Downstream decoders now support ARC and eArc
- Genlock frame-syncing ensures video walls are free from image-tearing
- Near-zero latency, visually imperceptible
- Configure control signal routing for RS-232, IR or USB via MXNet Mentor
- USB/KVM support with USB 2.0 Type-B female Host connection
- Improved USB 2.0 video processing for resolutions up to 1920x1080p @ 30Hz
- Built-in OLED data window provides localized device information at a glance
- Backed by AVPro Edge's 10-year, no-hassle warranty