AVProedge presents

MX net
10G

NETWORKED VIDEO ECOSYSTEM

SDVoE™ ALLIANCE

HDMI®
HIGH-DEFINITION MULTIMEDIA INTERFACE

AVPro Edge is gearing up to change the game again. The next generation of MXNet is just around the corner. Get ready for a superior solution set designed for the high end commercial segment. MXNet 10G, AVPro Edge's premium AV over IP system, provides crystal clear uncompressed 4K video with versatile AV distribution applications support, including point-to-point signal extension, seamless HDMI matrix, 4K multiviewers, multi-window video walls, KVM, control signals routing from any input to any output through 10GbE network, like CEC, IR, RS232, USB 2.0 and Ethernet.

This ecosystem is an ultra-low latency HDMI 2.0 4K60 4:4:4 video, multi-channel audio and control signal distribution system over 10G Ethernet network based on SDVoE standard and SEMTECH ASIC technologies. The core features of MXNet haven't changed. We built this system on the same pillars of **stability** of the entire system, **interoperability** with any HDMI source, display, USB device, or control system, and **easy deployment** of the entire system.

KEY DIFFERENTIATORS:

- **10G PoE Switch:** AVPro Edge is launching our first 10G POE switch with the AC-MXNET-10G-SW12C. Integrators typically power SDVoE transceivers by using power adapters. AVPro Edge's solution only needs CAT6a cable for power and data – now, installers only have to run one cable for every video zone.

- **The Control Box:** Our dedicated controller puts the configuration of not only the AV over IP system but also the network switch in the hands of the integrator. The GUI allows you to control switch management with VLAN settings and one-click IGMP settings. You can manage scaling, EDID, video walls, and switching on the AV side. Troubleshooting has never been easier; figure out which switch port connects to which encoder or decoder with real-time bandwidth data.

- **Module Cards:** MXNet 10G features versatile functionality module cards, including the ICRON USB 2.0 (480Mbps) over IP card, allowing users to route taxing USB signals from one transceiver to another. Our AVDM audio downmixing card takes in 8+ channel bitstream audio, like Dolby Atmos or DTS-X, and downmixes them to a 2 Channel PCM signal ready for standard audio distribution applications.

- **Input Source Preview:** View all sources connected to your system through MXNet Mentors preview screens. Through a built-in SDVoE decoder module on the Control Box, MXNet 10G can decode all the input source streams so you can preview the input sources on the Mentor software or third-party control system through API.

- **SDVOE Transceiver:** The Encoder and decoder (transmitter/receiver) are built into the same chassis with a simple switch to select between the two. With 10GbE copper and fiber ports on each AC-MXNET-10G-TCVR, you have the flexibility to work with the cabling that fits best for your specific installation, fiber optics or copper category cable.

- **1G Ethernet Extension:** There is no need to utilize a valuable 10G port for the controller. With 1G ethernet extension, you can use this same AV over IP network system for your data. Now, you can hardwire TVs, computers or even connect a wireless access point on each remote transceiver.

the ecosystem

This iteration of MXNet features the same modular approach to allow for truly custom installations. Everything starts with the Transceiver and the Network Switch. Each Transceiver has a built in SFP+ port, and can be used with fiber optic or copper. They also include versatile module cards including ICRON USB 2.0 (480Mbps) over IP, and audio downmixing.

The AVPro Edge custom network switches are built for SFP+ adapter modules which allow for a flexible mix of fiber or copper runs. The switches will be available with 12, 24, or 48 ports. We will also be introducing our first 10G copper POE switches.

Then comes the Control Box which is the brain of your MXNet system, and runs MXNet Mentor. With unmatched featues like input source previewing, the Mentor software will help you set up the entire system easier and faster than you ever thought possible.

network switches

- **AC-MXNET-10G-SW24Q:** 24X 10G SFP+ Stackable Managed Switch with Two 40G QSFP+

  - Maximum SDVOE Endpoints: 32 (24+2×4) through splitting two QSFP+ to eight SFP+
  - Any combination between:
    - 31 SDVOE encoders and one SDVOE decoder
    - 24 SDVOE decoders and eight SDVOE encoders
- **AC-MXNET-10G-SW48Q:** 48X 10G SFP+ Stackable Managed Switch with Six 40G QSFP+

  - Maximum SDVOE Endpoints:72 (48+6×4) through splitting six QSFP+ to 24 SFP+
  - Any combination between:
    - 71 SDVOE encoders and one SDVOE decoder
    - 48 SDVOE decoders and 24 SDVOE encoders
- **AC-MXNET-10G-SW12C:** 12X 10G Copper (PoE) and Six 10G/25G SFP28

  - Maximum SDVOE Endpoints:18
  - Any combination between:
    - 17 SDVOE encoders and one SDVOE decoder
    - 1 SDVOE decoders and 17 SDVOE encoders
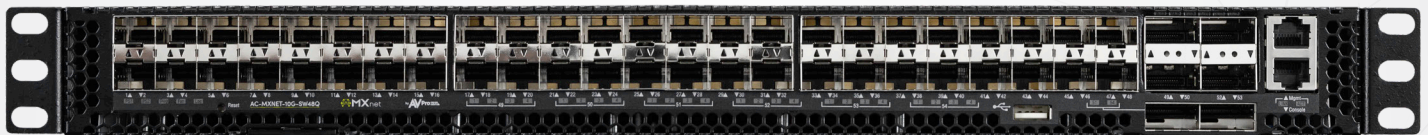
AC-MXNET-10G-SW48Q

the transceiver

- **AC-MXNET-10G-TCVR:** SDVoE 4k HDMI AV-over-IP PoE Transceiver
- **AC-MXNET-10G-M-AVDM:** Audio Downmixing Encoder Module
- **AC-MXNET-10G-M-USB:** USB2.0 Over-IP Module
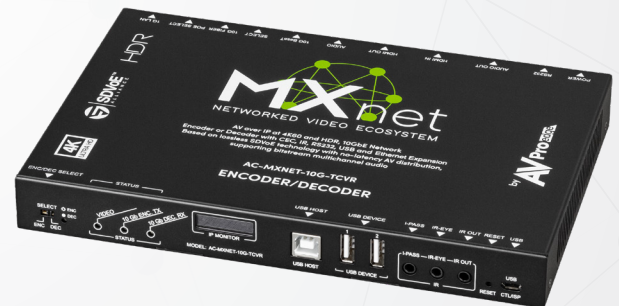
AC-MXNET-10G-TCVR

the control box

AC-MXNET-10G-CBOX: MXNet 10G Control Box is the brain of your MXNet system and runs our now unmatched MXNet Mentor setup, configuration, and testing software. The CBOX will help system integrators troubleshoot which network switch port connects to which encoder or decoder using our AVPro Edge exclusive switch management feature. This includes Real-time bandwidth data which shows the amount of multicast IP traffic each encoder generates. A new useful tool for SDVoE systems is our exclusive input source previewing on the Web GUI.

AC-MXNET-10G-CBOX

SFPs

SFP ports are 10G versions of a slot on a network switch or MXNet 10G Transceiver where small form-factor pluggable (SFP) transceivers are inserted.

- **AC-MXNET-SFPP-MM:** 10G SFP+ 850nm 300m LC MMF Transceiver Module
- **AC-MXNET-SFPP-SM:** 10G SFP+ 1310nm 10Km LC SMF Transceiver Module
- **AC-MXNET-SFPP-C30:** 10G SFP+ Copper RJ-45 30m Transceiver Module
- **AC-MXNET-SFPP-C80:** 10G SFP+ Copper RJ-45 80m Transceiver Module

DAC cables

DAC cables are high speed cables with Small Form Factor Pluggable (SFP) Transceivers on either end. They are used for stacking MXNet network switches.

- **AC-MXNET-40GDAC-05:** 0.5m (1.64ft) QSFP-H40G-CU50CM Compatible 40G QSFP+ Passive Direct Attach Copper Cable
- **AC-MXNET-40GDAC-10:** 1m (3.3ft) QSFP-H40G-CU1M Compatible 40G QSFP+ Passive Direct Attach Copper Cable
- **AC-MXNET-40GDAC-15:** 1.5m (5ft) QSFP-H40G-CU1.5M Compatible 40G QSFP+ Passive Direct Attach Copper Cable

breakout cables

QSFP breakout cables (also known as MTP to LC breakout cables, harness cables, or fanout cables) provide multiple connections for expanding the number of ports on the network switch.

- **AC-MXNET-40GBOC-05:** 0.5m (1.64ft) 40G QSFP+ to 4 x 10G SFP+ Passive Direct Attach Copper Breakout Cable
- **AC-MXNET-40GBOC-10:** 1m (3.3ft) 40G QSFP+ to 4 x 10G SFP+ Passive Direct Attach Copper Breakout Cable
- **AC-MXNET-40GBOC-15:** 1.5m (5ft) 40G QSFP+ to 4 x 10G SFP+ Passive Direct Attach Copper Breakout Cable

the PoE switch

This 24 port unmanaged PoE switch provides a power only (non-data) CAT cable connection for PoE-enabled IP devices like the MXNet 10G Transceiver.

- **AC-MXNET-POE-PSU24:** PoE Provider for MXNet End Points

The MXNet 10G Ecosystem is currently in production and will be shipping Summer 2022.