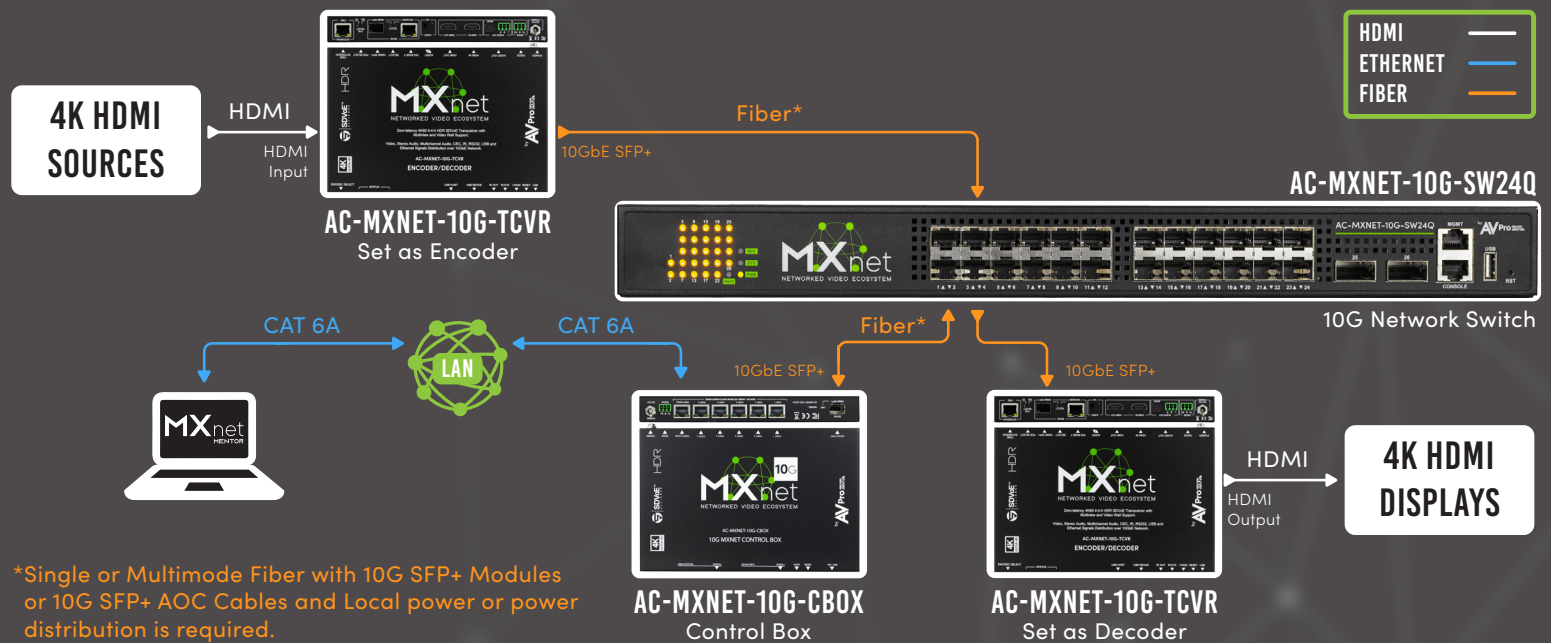# MXNet 10G NETWORK SWITCH
(AC-MXNET-10G-SW24Q)

The AC-MXNET-10G-SW24Q is an AVPro Edge designed, fixed-port and stackable managed switch for high-density 10G communication plus seamless integration with the MXNET 10G ecosystem, representing 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 10G platform offers the only proprietary, hyper-optimized SDVoE ecosystem of network-based managed switches, encoders and decoders guided from a centralized control unit via MXNet Mentor, our in-house engineered setup and system utilities management software solution. AVPro Edge is the first manufacturer of encoders and decoders to also manufacture Plug-and-Play, preconfigured network switches for all AV-over-IP applications. Switch management, including VLAN, real-time bandwidth appropriation plus POE power is configurable through Mentor, along with comprehensive system diagnostics to quickly identify and illustrate port connections. Mentor also provides detailed multicast information.

Onboard the AC-MXNET-10G-SW24Q are twenty-four, 1/10G SFP+ ports and two, 40G QSFP+ uplink ports. Virtual Switch Framework (VF) virtualizes multiple AC-MXNET-10G-SW24Q switches from the same layer into one logical device, providing high availability and scalability. The AVPro Edge-developed Intelligent AV multicast processing engine enables a single AC-MXNET-10G-SW24Q switch to easily support thirty-two, 10G SDVOE endpoints (using two X 40G QSFP+ breakout cables, not included) or three hundred and eighty-four, 1G AV-over-IP endpoints.

*Single or Multimode Fiber with 10G SFP+ Modules or 10G SFP+ AOC Cables and Local power or power distribution is required.

MXNet 10G by AVPro Edge
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PRODUCT SPECIFICATIONS

PORTS:	
Ethernet	(24) × SFP+ Ports: 10GbE/1GbE, 10GbE by default (2) × QSFP+ Ports: 40GbE by default, support 1× QSFP+ to 4× 10G SFP+ Split (1) × 10/100/1000BASE-T Management Port (MGMT)
HDMI	N/A
Audio	N/A
IR	N/A
RS232	(1) × RJ45 console port (Out-of-Band)
USB	(1) × USB 2.0 Type-A for MXNet Service and storage

DISTANCE	
Ethernet	100 Meters/330 Feet over CAT 6a
SFP+ and Fiber	10G SFP+ AOC cable up to 3 meters 10G SFP+ Multimode transceiver over Multimode fiber up to 550 meters 10G SFP+ Single mode transceiver over Single mode fiber up to 20 Kilometers 10G SFP+ Single mode transceiver over Single mode fiber up to 20 Kilometers
SFP+ and Copper	10G SFP+ Copper up to 100 meters/330 Feet over CAT 6a
QSFP+	40G SFP+ AOC cable up to 3 meters

ENVIRONMENTAL:	
Operating Temperature	0°C ~ 50°C
Storage Temperature	-40°C ~ 70°C
Operating Humidity	10%~90% noncondensing

PERFORMANCE:	
Max SDVoE Endpoints	32
Switching Capacity	640Gbps
Forwarding Rate	480Mpps
MAC ADDRESS	32K
Jumbo Frame	12K
ACL Table	3K (ingress) + 1K (egress)
Queues per port	8
VLAN TABLE	4K

Power:	
Max Power Consumption	70W
Thermal dissipation	239.34 BTU/hr
Power Supply Unit	AC: 100~240VAC, 50~60Hz DC: Input 36V-72V Default with two power supply units, one DC and one AC
Mounting	Rack mount

DIMENSIONS:	
Height x Width x Depth (Single Unit)	Millimeters: 42.9 x 439.7 x 320.7 Inches: 1.68 x 17.3 x 12.6
Height x Width x Depth (Packaged)	Millimeters: 114.3 x 482.6 x 533.4 Inches: 4.5 x 19 x 21
Weight (Unit)	9.2 lbs. (4.2 kg)
Weight (Packaged)	12.2 lbs. (5.5 kg)
Regulatory	CE/FCC
Product Warranty	10 Years

Specifications subject to change without notice. Mass & dimensions are approximate

KEY BENEFITS

Designed by AVPro Edge – Design of the AC-MXNET-10G-SW24Q is focused on plug & play ease within the MXNet 10G ecosystem. MXNet Mentor enables seamless setup, management, and system topology diagnostics. Virtual Switching Framework (VSF) provides scalability and high availability.

Port Configuration - Provides forty-eight each, 1/10G SFP+ Ports, plus six each, 40G QSFP+ Ports.

Port Expansion Capability - Four additional MXNet SDVOE transceivers may be connected through each 40G QSFP+ breakout cable (cables not included), for a total of thirty-two decoder/endpoints

AVPro Edge Engineered Operating System - AC-MXNET-10G-SW24Q incorporates a proprietary AVPro Edge operating system, honing speed and performance for MXNet 10G functions. All internal switch modules are optimized for more demanding audio/video signals and the speed required to maintain image fidelity plus control signal accuracy. AVPro Edge re-engineered the Internet Group Management Protocol (IGMP) for the fastest maximum data multicast throughput with the onboard Intelligent AV Multicast Processor (iAMP). Security is also enhanced.

Fast Switching with Near-Zero Latency - Source-to-source switching to endpoints is virtually instantaneous if scaling is not required (100µs frame latency, or 1/150th of a frame). With scaling in use, switching speed is between one to two frames, or about 17-34 milliseconds, considered visually imperceptible.

High Reliability - Carrier-Grade Hardware provides 99.999% uptime availability, crucial for applications such as public safety monitoring or medical-related installations.

Fail Safe Construction - Dual internal power supplies provide redundant fallback in the unlikely event one should fail.

AV over IP Ready - Pre-configured for out-of-the-box, plug and play installation.

Class-Leading Performance - MXNet switches are the highest performing switches in the AVoIP market segment.