MXNet **10**G NETWORK SWITCH
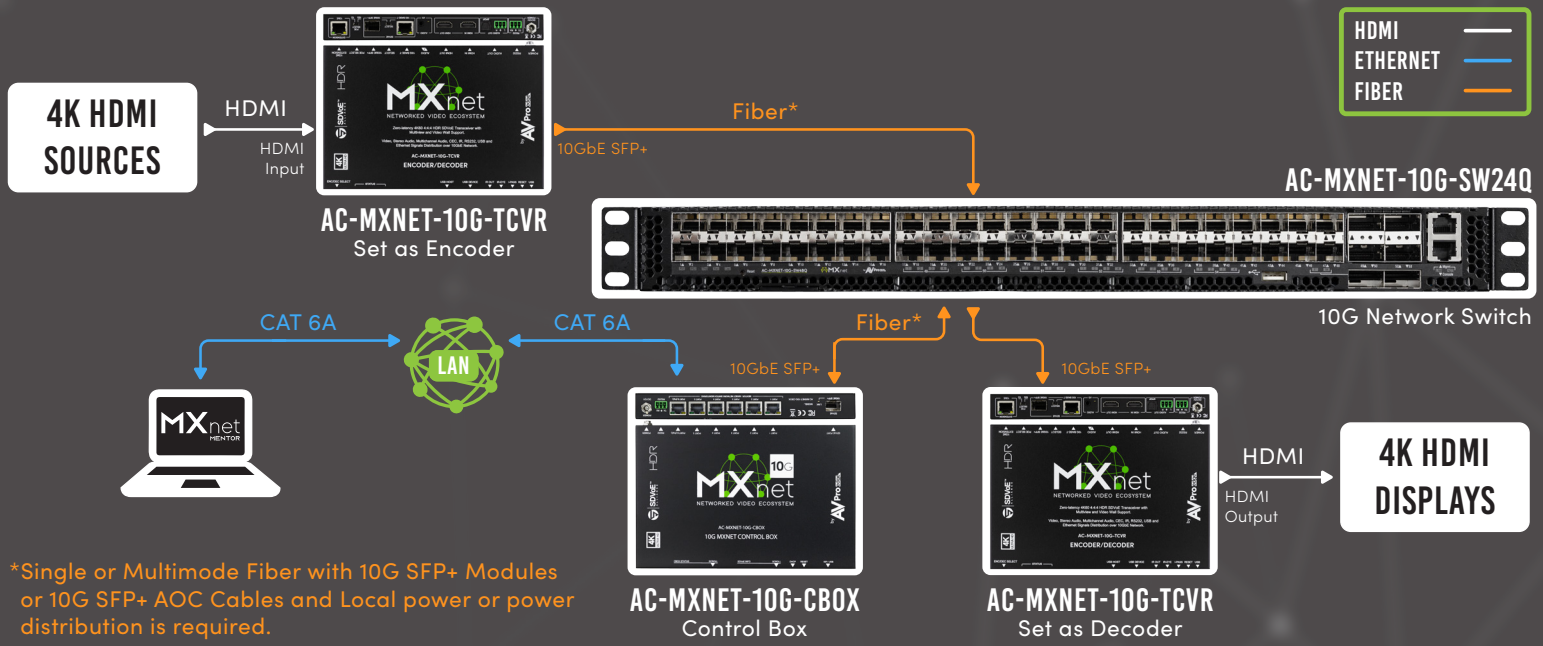
(AC-MXNET-10G-SW48Q)

The AC-MXNET-10G-SW48Q 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.

Onboard the AC-MXNET-10G-SW48Q are forty-eight, 1/10G SFP+ ports and six, 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 seventy-two, 10G SDVOE endpoints (using two X 40G QSFP+ breakout cables, not included) or eight hundred, 1G AV-over-IP endpoints.

4K HDMI SOURCES — HDMI → HDMI Input — AC-MXNET-10G-TCVR Set as Encoder — 10GbE SFP+ — Fiber* → AC-MXNET-10G-SW24Q 10G Network Switch

HDMI / ETHERNET / FIBER

CAT 6A → LAN ← CAT 6A — MXnet MENTOR

10GbE SFP+ — Fiber* — 10GbE SFP+

AC-MXNET-10G-CBOX Control Box — AC-MXNET-10G-TCVR Set as Decoder — HDMI → HDMI Output → 4K HDMI DISPLAYS

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

PRODUCT SPECIFICATIONS

PORTS:

Ethernet	(48) × SFP+ Ports: 10GbE/1GbE, 10GbE by default (6) × 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
SFP+ and Copper	10G SFP+ Copper up to 100 meters/330 Feet over CAT 6a
QSFP+	40G SFP+ AOC cable up to 3 meters

LED INDICATORS:

LED Indicators Usages	(6) × Groups of LED Indicators indicate QSFP+ to four 10G SFP+ Split
LED	(24)

HARDWARE:

Broadcom Switch Chip	BCM56864
CPU	Intel Atom® Processor C2538, 2M Cache, 2.40 GHz, 4 Cores
Memory	DDR3 8GB
Storage	mSATA SSD 16GB
Five System LED Indicators	Two Fans Indications and three for system
Reset Button	(1)

ENVIRONMENTAL:

Operating Temperature	0°C ~ 45°C
Storage Temperature	-40°C ~ 75°C
Operating Humidity	10%~90% noncondensing

PERFORMANCE:

Max SDVoE Endpoints	72
Switching Capacity	1440 Gbps
Throughput	1071 Mpps
MAC Address	96K
Routing Table	8k
ARP Table	208k

POWER:

Max Power Consumption	400W
Power Supply Unit	Power Input AC: 100~240V, 50~60 Hz Default with two redundant hot-swappable AC power supply
System Fans	1+4 Redundant Hot-swappable Fan Modules, Front-to-Back Airflow
Thermal dissipation	1,367.68 BTU/hr
Mounting:	Rack mount

DIMENSIONS:

Height x Width x Depth (Single Unit)	Millimeters: 44.45 x 444.5 x 508 Inches: 1.75 x 17.5 x 20
Height x Width x Depth (Packaged)	Millimeters: 146.05 x 603.25 x 673.1 Inches: 5.75 x 23.75 x 26.5
Weight (Unit)	19.8 lbs. (9 kg)
Weight (Packaged)	27.2 lbs. (12.3 kg)
Regulatory	CE/FCC
Product Warranty	10 Years

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

FEATURE SET

- **Designed by AVPro Edge** – Design of the AC-MXNET-10G-SW48Q 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 seventy-two decoder/endpoints

- **AVPro Edge Engineered Operating System** - AC-MXNET-10G-SW48Q 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, plus 4+1 redundant fan modules ensure cool, long-term operation.

- **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.

- **Works as a Single or Double Core Switch** – Suitable for small/medium Data Center or Small Campus application scenarios.