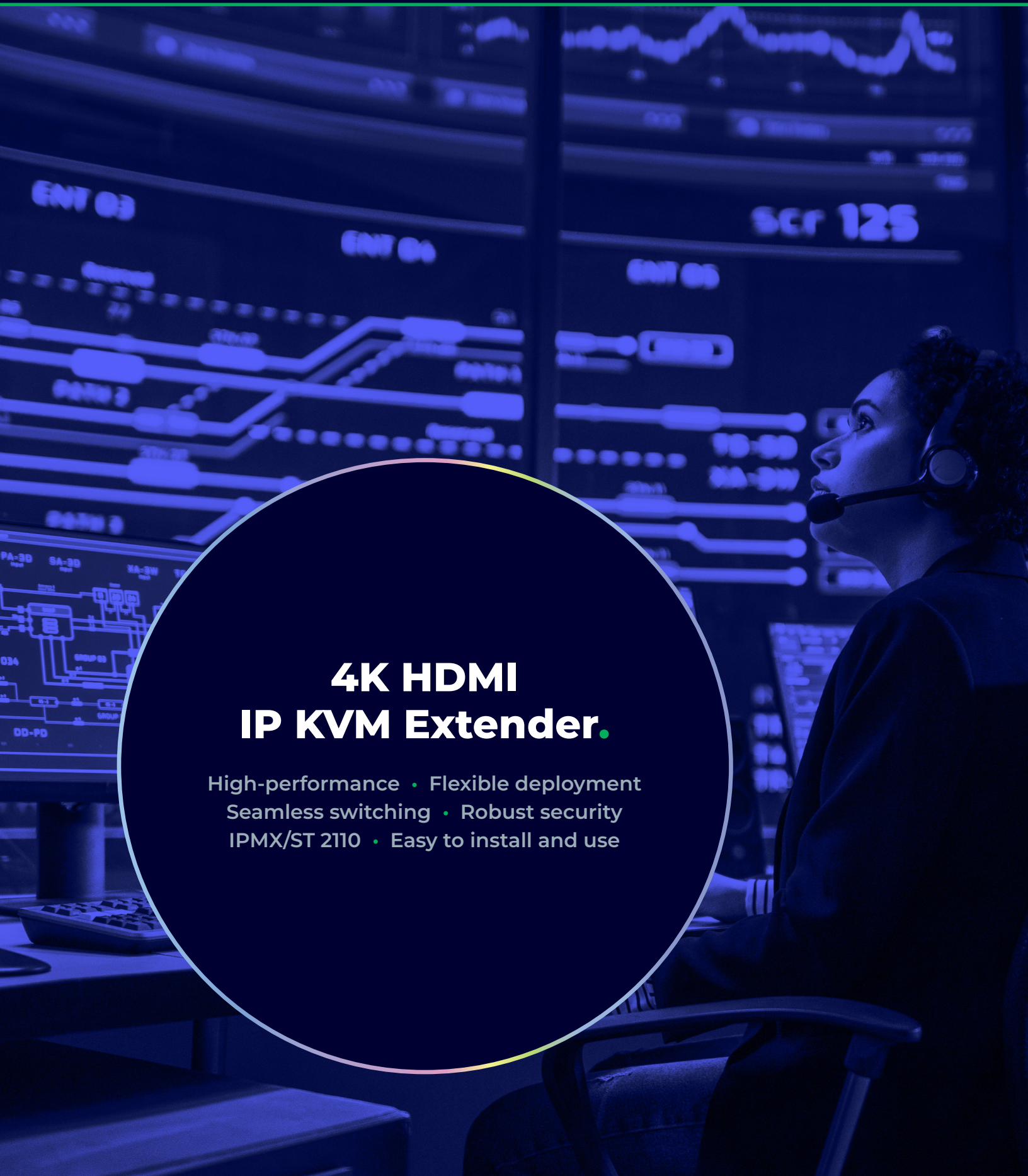
Matrox® **Avio 2 IP KVM**



4K HDMI IP KVM Extender.

High-performance • Flexible deployment
Seamless switching • Robust security
IPMX/ST 2110 • Easy to install and use

Leverage open standards with Matrox Avio 2.

The award-winning Matrox Avio N2150 IP KVM extender ensures secure, real-time performance for mission-critical applications that need remote access to computing equipment, delivering unparalleled image quality and support for up to 4K resolution. By leveraging open standards like IPMX, SMPTE 2110, and NMOS, Avio 2 future-proofs your KVM System over IP installation with a scalable, flexible, and easy-to-use solution. Designed for seamless integration with evolving networked infrastructures, Avio 2 is ideal for control rooms, medical applications, broadcast studios, media production, and live events.

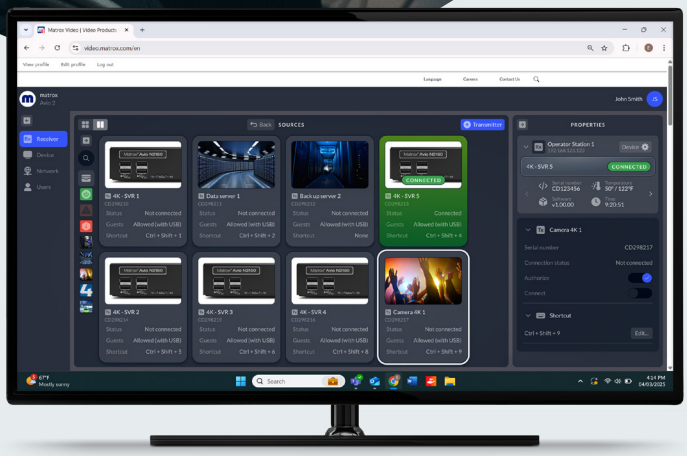
High-performance video
Achieve multiple performance levels with the same appliance. Deliver uncompressed 4Kp60 4:4:4 video with zero latency over dual 10GbE, making it ideal for high-performance applications. Avio 2 also enables real-time, visually lossless video over 1GbE or 10GbE networks using Pro AV or optional JPEG XS codec. Users can switch instantly between multiple source systems for uninterrupted workflows.

Flexible deployment
Designed for flexible deployment, a single Avio 2 appliance can be configured as either a Transmitter or Receiver. The device offers multiple connectivity options, including fiber or copper (1G or 10Gb SFPs), and an optional RJ45 control port with PoE+ for added flexibility. Avio 2 ensures network redundancy with SMPTE ST 2022-7 for reliable operation and supports various configurations, including one-to-one, many-to-one, one-to-many, and many-to-many setups.

Seamless switching
Seamlessly and instantly switch between multiple sources for efficient workflow management. Benefit from a modern on-screen display (OSD) to simplify source selection, while programmable hotkeys enable fast switching between Avio 2 Transmitters.

Robust security
Avio 2 provides robust security measures to protect your data, including AES 128-bit encryption for audio, video, and USB signals. Device access can be managed through local credentials or Microsoft Active Directory®, while HTTPS and digital certificate support ensure secure communication.

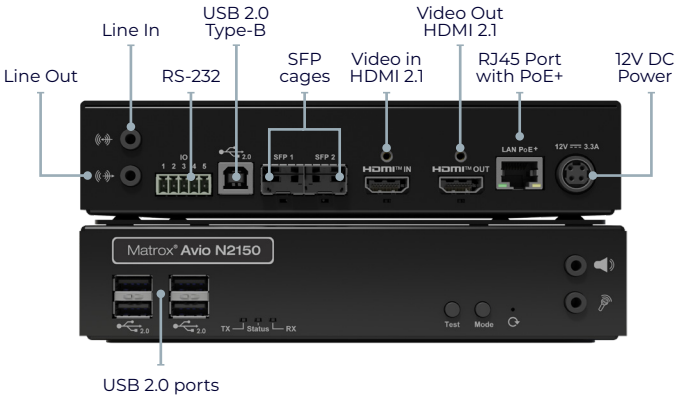
IPMX/ST 2110
With full IPMX/ST 2110 compatibility, Avio 2 integrates with other IPMX/ST 2110 devices and equipment, optimizing workflows and reducing installation complexity. NMOS open APIs simplify device discovery and connection management, while a standards-based IP KVM approach ensures future-proof installations.



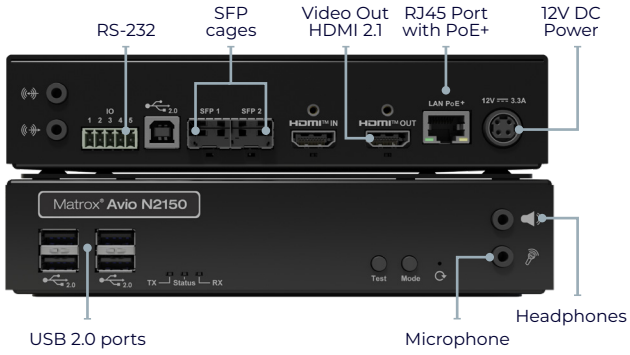
WebUI Interface

OSD Interface

Appliance overview



Transmitter mode (back/front view)



Receiver mode (back/front view)

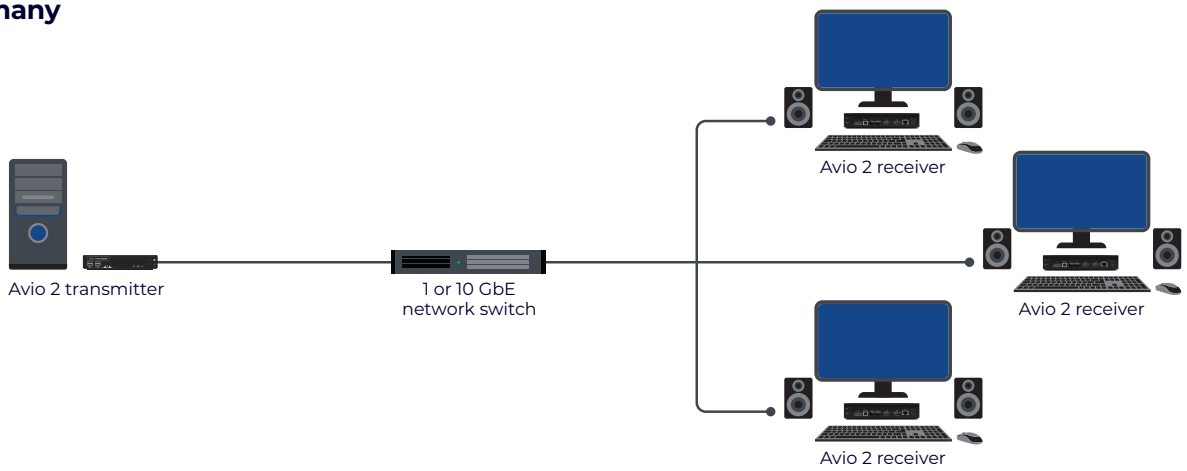
Easy to use with comprehensive tools for integration.

- Configure and setup devices through the easy-to-use Web UI.
  - Customize stream properties with clear EDID management, variable bandwidth levels, and USB device authorization.
  - Authorize devices to connect and organize them in groups.
  - Select keyboard shortcuts for even faster switching.
  - Maintain security certificates, encryption keys and licenses all in one place.
  - Enjoy sophisticated user management with Microsoft Active Directory® integration.
  - Enable NMOS for device discovery, and PTP time settings.
- Streamline firmware updates across multiple devices with Matrox Unified Utility updater tool.
- Customize workflows or build bespoke solutions using the Avio 2's REST API support.
- OEMs can take advantage of Avio 2's white-label options to provide tailored branding opportunities.

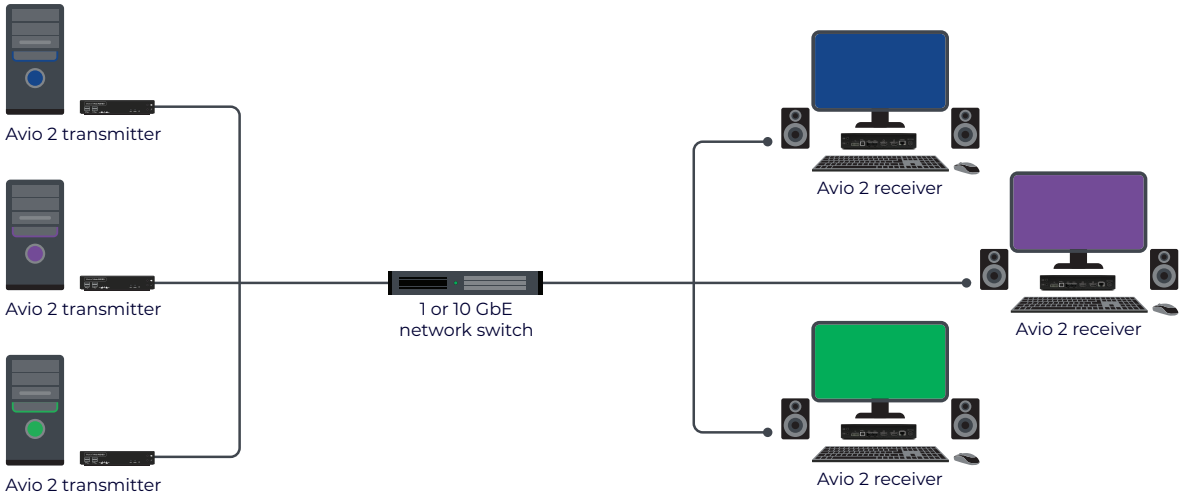
Flexible, collaborative workflows made easy.

Avio 2 offers the flexibility to easily accommodate collaborative workflows. Whether multiple users need to share a single computer in parallel or a single user requires access to multiple systems from one location, Avio 2 makes visualizing and controlling your KVMA streams intuitive. Using standard network switches and minimal hardware, Avio 2 delivers a streamlined, efficient solution for any setup.

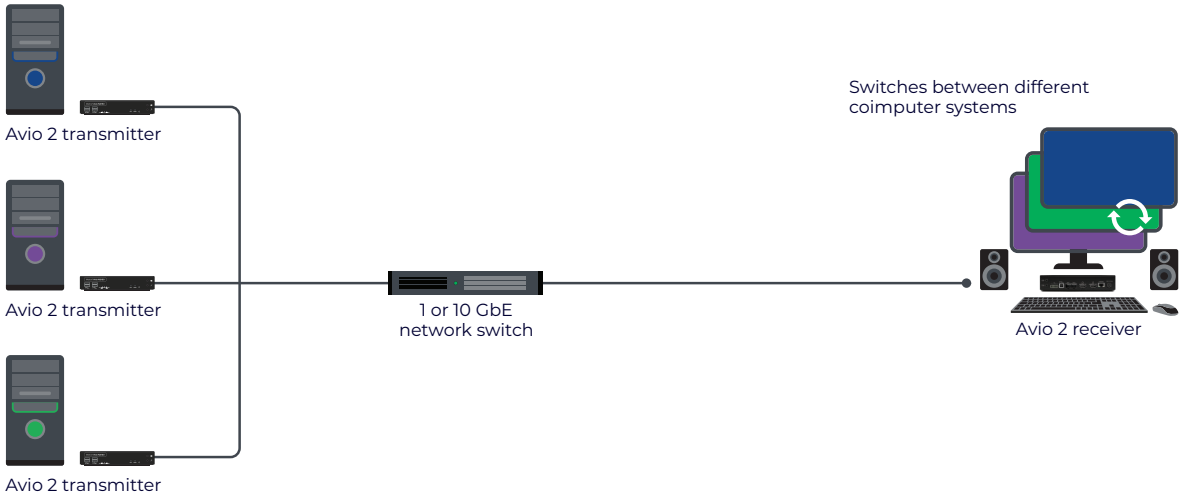
One-to-many



Many-to-many

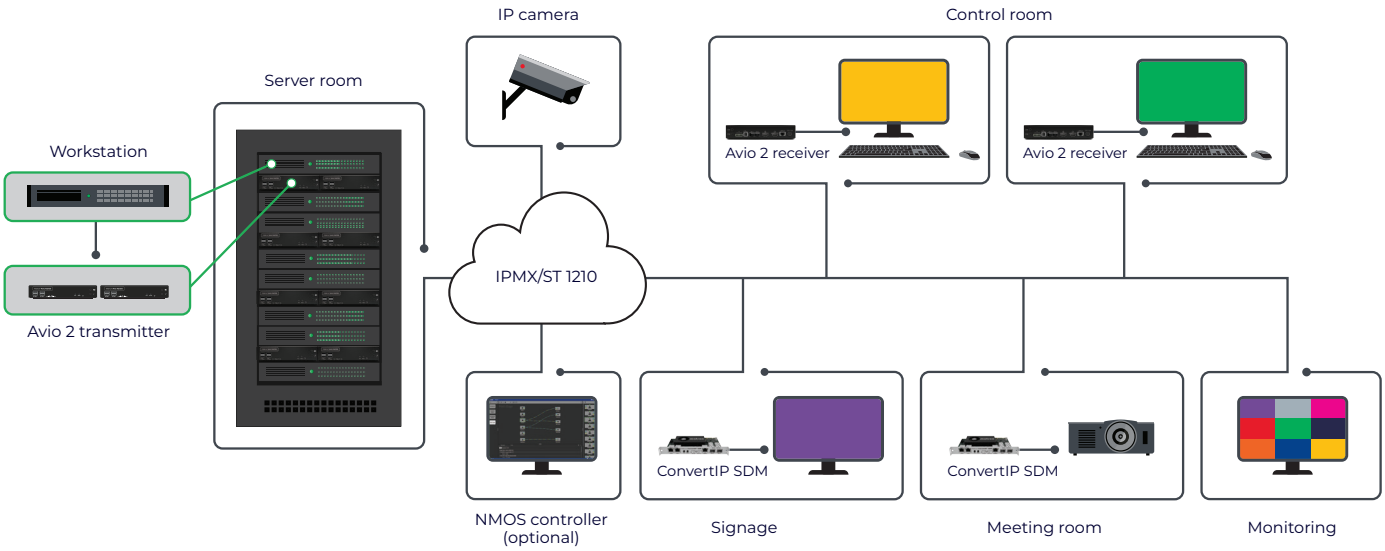


Many-to-one



What is IPMX?

IPMX (Internet Protocol Media Experience) is an open standard designed to enable seamless interoperability between AV-over-IP devices and IP KVMs. Built on established protocols like SMPTE ST 2110 (ST 2110), IPMX enhances workflows by ensuring compatibility across a wide range of devices and applications.



Markets and applications.

- Control rooms
- Live events
- Broadcast & post-production
- Medical

Technical specifications

Product	Avio N2150
Part number	• **AV2-N2150** • **AV2-N2150Y** (TAA Compliant)
Form factor	• Appliance (1U ½R)
Connectors	
Video input connector	• **Transmitter mode:** - HDMI • **Receiver mode:** - N/A
Video output connector	• **Transmitter mode:** - HDMI zero-latency local pass through • **Receiver mode:** - HDMI
Audio input/output	• **Transmitter mode:** - Line in 3.5 mm, line out 3.5 mm[1] • **Receiver mode:** - Line out 3.5 mm, mic in 3.5 mm[1], headphone out 3.5 mm
Network connectors	• 1x RJ45 LAN control port (1GbE) • 2x SFP cages for media and/or control (1GbE or 10GbE)
USB port	• **Transmitter mode:** - 2x USB2.0 Type A for local keyboard and mouse - 1x USB2.0 Type B for host system connection • **Receiver mode:** - 4x USB2.0 Type A
5-pin Phoenix connector	• RS232[1]
Performance	
Max video resolution	• 3840x2160@60Hz 4:4:4 • 4096x2160@60Hz 4:4:4 All standard desktop GPU resolutions are supported.
Color space and bit depth	• RGB 4:4:4 8-bit, YUV 4:4:4, YUV 4:2:2, YUV 4:2:0 • 8-bit, 10-bit • SDR, HDR
USB support	• High Speed USB 2.0: Keyboard, mouse, touchscreens, pen tablets, joysticks, and other USB HID devices, smart card/CAC readers, USB 2.0 (full speed) speakers/sound bars, USB headsets[1]
Audio support	• Digital embedded audio (HDMI) • Stereo analog audio – 2 channels
Network speed	• 1GbE or 10GbE
Maximum distance (point-to-point)	• **Copper SFP:** - 1GbE RJ45 Cat5e, Cat6 – 100 m (328 ft) • **Fiber SFP:** - OM1(62.5/125µm) multi-mode – 275 m (902 ft.) - OM2, OM3, OM4 (50/125µm) multi-mode – 500 m (1804 ft.) - OS1, OS2 (9/125µm) single-mode – 10 km (6.20 mi) • **Fiber SFP+:** - OM1 (62.5/125µm) multi-mode – 33 m (108 ft.) - OM2m, OM3, OM4 multi-mode – 300 m (984 ft.) - OS1, OS2 (9/125µm) single-mode – 10 km (6.20 mi)
On-screen-display (OSD)	• Available on the RX side
Encoding formats	
Video[3]	• Matrox ProAV • ISO/IEC JPEG XS (optional upgrade) Designed and optimized for 1 Gbps. Can support lower video bandwidth (<100 Mbps) or scale up for maximum quality (≥2Gbps).
Audio	• Uncompressed PCM (~1 Mbps/ch)

Network	
Network standard	· Control Port: 1000 Base-T Ethernet · Auto-detect · Half/full duplex · Media port: 1Gbe, 10GbE
Supported protocols	· IPMX · SMPTE ST 2110 (-10, -20, -21, -22, -30, -31, and -40) · SMPTE ST 2059-2, 2059-1 · SMPTE ST 2022-7
Routing scheme	· Multicast · Unicast
IP addressing	· IPv4 · IPv6[1] · DHCP (default) and static IP
Link redundancy	· ST 2022-7
Link aggregation	· Available for uncompressed 4Kp60 (link redundancy is disabled in this mode)
Command and control	· HTTPS over TCP
Discover, registration and control	· NMOS discovery and control according to standards IS-04 and IS-05 (optional) · mDNS discovery
Physical	
Product dimensions	· 7.3" (W) x 7.126" (L) x 1.545" (H)
Unit weight	· 820 g
Power supply unit	· External 40W PSU with lockable PSU connector (optional, sold separately)
PoE+	· PoE+ IEEE 802.3at
Cooling	· Fanless
Security	
HTTPS digital certificates	· Yes
AES encryption	· AES-128 for audio, video and USB
User management	· Local and Microsoft® Active Directory® support for groups and domains
User roles	· Admin, user
Accessories (sold separately)	
	· Rackmount kit: (Part #: RMK-19TR-A) · Mounting bracket: (Part #: RMK-6BRKT-A) · Power supply unit: (Part #: EPS40WKIT-NA, EPS40WKIT-EU, EPS40WKIT-UK, EPS40WKIT-AU, EPS40W-10PK2) · NRG redundant power supply unit: (Part #: NRG-5-1DB or NRG-5-2DB) · KMLync Switch: (Part #: KMLYNC-4Y-NA, KMLYNC-4Y-EU, KMLYNC-4Y-UK, KMLYNC-4Y-AU)
Optional software	
	· JPEG XS codec license: (Part #: AV2-JXS-UPG)
Environmental conditions	
Operating conditions	· Temperature: 0 to 45 degrees Celsius · Altitude: 650 hPa (3,580 m) to 1,013 hPa (0 m) · Humidity: 20% to 80% non-condensing
Storage conditions	· Temperature: -40 to 70 degrees Celsius · Altitude: 192 hPa (12,000 m) to 1,020 hPa (-50 m) · Humidity: 5% to 95% non-condensing
General	
EMC/EMI device class	· Class A
EMC/EMI compliance	· CE (EU), FCC (USA), ICES-003 (Canada), KC (Korea), RCM (Aus/NZ)
Environmental compliance	· China RoHS, EU RoHS, REACH
Warranty	· Three-year limited warranty with free online or telephone support. Extended warranty available. For more information, contact Matrox Video.

1. Available in a future software update.
2. Part #EPS40W-10PK does not include IEC-C14 power cord. These cables must be sourced locally.
3. Bitrates will vary according to resolution, framerate and codec option.
4. Follows HDMI 2.0b timing specifications.

Contact Matrox Video
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