

PlexusAV

P-AVN-4 IPMX Transceiver



OVERVIEW

The P-AVN-4 IPMX Transceiver is a versatile, high-performance AV-over-IP device capable of both encoding and decoding video. Built to support open standards like IPMX, the P-AVN-4 ensures seamless integration into existing and future AV networks. With robust video scaling, HDR support, and flexible network connectivity options, it delivers high-quality, low-latency video transmission across various AV applications, from digital signage to live production.

WHY CHOOSE THE P-AVN-4?

- IPMX-Based Open Standards: Built on IPMX protocols for future-proof AV-over-IP deployment.
- Flexible Video Support: Up to 4K60 with H.264/265 compression for low-latency, high-quality video.
- Multiple Network Ports: Three gigabit network ports, including an SFP option, allow for installation into fiber, ethernet and PoE network environments.
- Advanced Audio Integration: Support for Dante, AES67, and Linear PCM ensures professional-grade audio quality.
- Compact Form Factor: Small and easy to install, fits into any AV environment without compromise.
- Easy to use interface and advanced API: The P-AVN-4 user interface has been designed for quick deployment and ease-of-use. With its advanced API, the P-AVN-4 can be controlled and managed by the PlexusAV Visual Array or integrate into existing network management systems.

APPLICATIONS



EDUCATIONAL & CORPORATE AV

Perfect for large campuses, meeting rooms, and lecture halls requiring seamless AV distribution.



DIGITAL SIGNAGE

Distribute video across multiple screens in retail, transportation, or large venues.



E-SPORTS & LIVE PRODUCTION

Ensure smooth, low-latency video transmission for fast-paced events.



VIRTUAL MATRIX SWITCHING

Ideal for switching and distributing video content in real-time.



BROADCAST & PRODUCTION

Take advantage of H.264/H.265 common payloads over different protocols. Combined with SCG, video streams can be sent over the internet using SRT, or converted between other protocols like NDI®HX, RTSP, RTMP, and MPEG-TS.

KEY FEATURES

FLEXIBLE NETWORK CONNECTIVITY

- 1GB Ultra Low Latency: Lite compression without sacrificing quality to achieve near-instant transmission across an AV over IP network.
- Ethernet and Fiber: The P-AVN-4 comes standard with RJ45 and SFP ports for installation into any network infrastructure.
- PoE+ Support: Simplify your setup with Power over Ethernet for power delivery and network connectivity through a single cable.

VERSATILE INPUT/OUTPUT OPTIONS

- HDMI & USB-C: Connect a variety of video sources, including HDMI 2.1 with HDCP 2.3 and USB-C with DisplayPort, for seamless integration into any AV workflow.
- Analog & Digital Audio: Supports both professional grade balanced analog audio, Linear PCM, AES67, and Dante for ultimate flexibility in audio routing.
- HDR Support: Contrast and colors at their absolute best with HDR support.

MULTIPLE VIDEO CODEC SUPPORT FOR ANY APPLICATIONS

- JPEG-XS with FIP/TDC Profile: Perfect for applications requiring high-quality, low-latency video like live production, e-sports, and broadcast.
- MPEG-4 (H.264) and HEVC (H.265): Perfect for applications requiring lower bandwidth (<50Mbps) or site-to-site transmission when sending IPMX streams over the internet.

COMPACT DESIGN

- Small Form Factor: The P-AVN-4 form factor makes it flexible enough to mount behind a TV, in a control room environment or in our 14 unit rack-mount kit.





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P-AVN-4 IPMX Transceiver Specifications

ENCODER MODE INTERFACE SPECIFICATIONS

HDMI and USB Interfaces:

HDMI Input (1):	Type-A Female, HDMI 2.1/1.4b Content Protection – up to HDCP 2.3 Consumer Electronics Control (CEC) EDID Control - Auto, Presets or Manual
HDMI Loop Out (1):	Type-A Female, HDMI 2.1, 1.4b Content Protection – up to HDCP 2.3
USB-C (3):	Two USB 2.0 (Data, Front) One USB 3.0 (Video, DisplayPort Alt Mode, Rear)

DECODE MODE INTERFACE SPECIFICATIONS

HDMI and USB Interfaces:

HDMI Input (1):	Type-A Female, HDMI 2.1/1.4b Content Protection – up to HDCP 2.3
HDMI Output (1):	Type-A Female, HDMI 2.1, 1.4b Content Protection – up to HDCP 2.3
USB-C (3):	Two USB 2.0 (Data, Front) One USB 3.0 (Video, DisplayPort Alt Mode, Rear)

Network Interfaces

Ethernet 1:	RJ-45/PoE+ (100/1000 Auto-Negotiating)
Ethernet 2:	RJ-45 (100/1000 Auto-Negotiating)
Fiber:	SFP 1GB (100/1000 Auto-Negotiating)

IPMX Support:

TR-10-1 – System Timing and Definitions
TR-10-3 – PCM Digital Audio
TR-10-5 – HDCP Key Exchange Protocol
TR-10-7 – Compressed Video
TR-10-8 – NMOS Requirements
TR-10-11 – Constant Bit-Rate Compressed Video

VIDEO AND AUDIO SPECIFICATIONS

Codecs:	JPEG XS, FIP/TDC (Flawless Image Profile), MPEG-4 (H.264), HEVC (H.265)
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Video Support (HDMI/USB-C Input):	3840x2160P @ 60, 50, 30, 25fps 2560x1600P @ 60* 2560x1440P @ 60* 2560x1080P @ 60* 1920x1200P @ 60* 1920x1080P @ 60, 50, 30, 25fps 1680 x 1050P @ 60* 1600 x 1200P @ 60* 1440 x 900P @ 60* 1280 x 1024P @ 60* 1024 x 768P @ 60* 1280x720P @ 60, 50fps 800 x 600P @ 60* 640 x 480P @ 60*
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* Supported in upcoming release. Subject to change.

Video Support (IPMX stream output):

3840x2160P @ 60, 50, 30, 25fps 1920x1080P @ 60, 50, 30, 25fps 1280x720P @ 60, 50fps

Bitrates: 5 – 800 Mbps*, user configurable

Dynamic Range: HDR10, SDR

Color Formats (IPMX stream output):

8/10 bit, YUV 4:2:0/4:2:2

Color Formats (HDMI/USB-C output):

8/10/12 bit, RGB 4:2:0/4:4:4

Color Gamut: BT.2020, BT.709, BT.601

Video Scaling:

Support on Encoder and Decoder mode.
Supports resolution upscaling, downscaling,
frame rate conversion, color mode conversion,
and aspect ratio adjustment.

Videowall Processing:

Up to 3x3, more templates available upon
request

Audio Support:

AAC Bitrate Range: 96/112/128/160/192/224/256 (Kbps)
Sampling Rate: 44.1, 48KHz
Volume Control: +/- adjustment

Dante Audio Support:

Dante Controller detects P-AVN-4
Dante Stereo PCM audio support
1x Dante Stereo IP input
1x Dante Stereo IP output

Analog Audio Support:

Connector: 5-pin Phoenix
Channels: Stereo Pair, Balanced or Unbalanced

MANAGEMENT AND CONTROL

Web Interface (Web UI): Built-in web interface for easy
configuration and control.

HTTPS API: Supports GraphQL for advanced integration.
NMOS Support: IS-04, IS-05, and BCP-003.
Dante Controller: (Dante Audio only)

RS232 Control: 5-pin Phoenix connector for integration with
existing control systems.

LED Indicators: Power, error, UUID, and dark mode to
disable indicators.

DIMENSIONS & POWER

Size: 162 mm x 143 mm x 26 mm (6.37" x 5.63" x 1.02")
Weight: 1.3 lbs (0.6 kg)

Power:

PoE+: IEEE 802.3at Type 2 Class 4 (25.5 W) compliant
External: 12V DC/3A (optional, sold separately).
See Power Accessories.

ENVIRONMENTAL CONDITIONS

Operating Temperature: -13° to 113° F (-25° to 45° C)

Storage Temperature: -40° to 113° F (-40° to 45° C)

Operating Humidity: Less than 95% (non-condensing)

Acoustic Noise: 33 dBA typical

MOUNTING ACCESSORIES

P-AVN-M-1RU: 3x P-AVN-4 1RU Rackmount Kit Frame
P-AVN-M-4RU-KIT: 14x P-AVN-4 4RU Rackmount Kit Frame
P-AVN-M-WAL: Table and Wall mounting bracket (set of 2)

POWER ACCESSORIES

P-AVN-PSU-TYPE-A-US – Type A power supply
P-AVN-PSU-TYPE-C-EU - Type C power supply
P-AVN-PSU-TYPE-G-UK - Type G power supply
P-AVN-PSU-TYPE-I-AUS - Type I power supply

SFP OPTIONS

P-AVN-SFP-1G-COPPER-RJ45-ETH – SFP Copper Module, 1Gbps Copper,
RJ45 transceiver
P-AVN-SFP-1G-FIBER-1310NM-SM – SFP Fiber Module, 1Gbps Single
Mode, 1310NM
P-AVN-SFP-1G-FIBER-850NM-MM – SFP Fiber Module, 1Gbps Multimode,
850NM

FUTURE FEATURES (PLANNED UPDATES)

IR input and output

WARRANTY

3-year warranty - The P-AVN-4 comes standard with a 3-year limited
warranty. For additional details reach out to PlexusAV at the link below.

