

# PlexusAV

## P-AVN-2 IPMX Transceiver



### OVERVIEW

The P-AVN-2 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-2 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-2?

- **IPMX-Based Open Standards:** Built on IPMX protocols for future-proof AV-over-IP deployment.
- **Flexible Video Support:** Up to 4K60 with H.264 and H.265 codec support for ultra-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:** 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-2 user interface has been designed for quick deployment and ease-of-use. With its advanced API, the P-AVN-2 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.



#### LIVE PRODUCTION

Ensure smooth, reduced-latency video transmission for on site applications.



#### VIRTUAL MATRIX SWITCHING

Ideal for easily switching and distributing video content over 1Gbps networks.



#### 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<sup>®</sup>HX, RTSP, RTMP, and MPEG-TS.

### KEY FEATURES

#### FLEXIBLE NETWORK CONNECTIVITY

- **1GB Ultra-Low Latency:** Experience high quality MPEG compression.
- **Ethernet and Fiber:** The P-AVN-2 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:** Seamlessly connect a variety of video sources, including HDMI 2.1 with HDCP 2.3 and USB-C with DisplayPort.
- **Analog & Digital Audio:** Supports professional grade balanced analog audio, Linear PCM, AES67, and optional Dante audio license at time of purchase for ultimate flexibility in audio routing.

#### MPEG-4 (H.264) AND HEVC (H.265) CODEC SUPPORT

- **Site-to-Site Transmission:** Perfect for applications requiring lower bandwidth consumption over the network infrastructure.

#### COMPACT DESIGN

- **Small Form Factor:** The P-AVN-2 form factor makes it flexible enough to mount behind a TV, in a control room environment or in our 1RU, 4RU, and wall-mount accessories.



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## P-AVN-2 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)

### DECODER 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 Consumer Electronics Control (CEC) EDID Control - Save EDID to file or EDID download
USB-C (3):	Two USB 2.0 (Data, Front)

#### Network Interfaces:

Ethernet 1:	RJ-45/PoE+ (100/1000 Auto-Negotiating)
Ethernet 2:	RJ-45 (100/1000 Auto-Negotiating)
Ethernet 3:	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: H.264 (MPEG-4), H.265 (HEVC)

#### Video Support (HDMI/USB-C Input):

3840x2160P @ 60, 50, 30, 25fps
2560x1600P @ 60*
2560x1440P @ 60*
2560x1080P @ 60*
1920x1200P @ 60*
1920x1080P @ 60, 50, 30, 25
1680 x 1050P @ 60*
1600 x 1200P @ 60*
1440 x 900P @ 60*
1280 x 1024P @ 60*
1024 x 768P @ 60*
1280x720P @ 60, 50
800 x 600P @ 60*
640 x 480P @ 60*

\* Supported in upcoming release. Subject to change.

#### Video Support (IPMX stream output):

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

Bitrates: 5-25 Mbps\*, user configurable

Dynamic Range: HDR10 Pass-through, SDR (Standard Dynamic Range)

#### 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.

#### Video Scaler Processing:

Videowall Processing: Up to 3x3, more templates available upon request.

#### Audio Support:

Audio Support:	Linear PCM, AES67, AAC-Main, and Pass-through
AAC Bitrate Range (Kbps):	96/112/128/160/192/224/256
Sampling Rate:	44.1, 48KHz
Volume Control:	+/- adjustment

#### Dante Audio Support (not included by default, requires license purchase):

Dante Controller detects P-AVN-2  
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, Unit-ID, and dark mode to disable RGB ring lights 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-2/4 1RU Rackmount Kit Frame

P-AVN-M-4RU-KIT: 14x P-AVN-2/4 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 1Gbps RJ45 copper transceiver

P-AVN-SFP-1G-FIBER-1310NM-SM: SFP Fiber 1Gbps Single Mode, 1310NM

P-AVN-SFP-1G-FIBER-850NM-MM: SFP Fiber 1Gbps Multimode, 850NM

### FUTURE FEATURES (PLANNED UPDATES)

IR input and output

Increased maximum bitrate range (available with next software release)

### WARRANTY

3-year warranty: The P-AVN-2 comes standard with a 3-year limited warranty.

For additional details reach out at <https://plexusav.com/contact-us/>

