

PlexusAV

P-AVN-2D IPMX Decoder



OVERVIEW

The P-AVN-2D IPMX Decoder is a versatile, high-performance AV-over-IP device capable of decoding IPMX signals into HDMI output. Built to support open standards like IPMX, the P-AVN-2D ensures seamless integration into existing and future AV networks. It delivers high-quality, low-latency video transmission using H.26x codecs to save bandwidth and overall project cost. The P-AVN-2E IPMX Encoder can also convert or extend different signals such as keyboard/mouse control over IP, analog audio encoding, and RS232 Serial over IP. Dante stereo audio support is available with optional license at time of purchase.

WHY CHOOSE THE P-AVN-2D IPMX DECODER?

- 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 low latency, high-quality video.
- Multiple Network Ports: Two gigabit network ports for installation into traditional 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-2D user interface has been designed for quick deployment and ease-of-use. With its advanced API, the P-AVN-2D can be controlled and managed by the PlexusAV Visual Array or integrate into existing network management systems using REST API.

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®HX, RTSP, RTMP, and MPEG-TS.

KEY FEATURES

FLEXIBLE NETWORK CONNECTIVITY

- 1GB Low-Latency: Experience high-quality MPEG compression.
- 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 Codec Support: Supports professional grade balanced analog audio, audio passthrough, Linear PCM, and both AAC-LC and AAC-Main audio encoding.

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-2D 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-2D IPMX Decoder Specifications



REAR PANEL PORTS

HDMI Output:	Content Protection - up to HDCP 2.3 Consumer Electronics Control (CEC) EDID Control - Auto, Presets or Manual Type-A Female, HDMI 2.1, 1.4b
Analog Audio Input Support:	
Connector:	5-Pin Phoenix
Channels:	Stereo Pair, Balanced or Unbalanced
Volume Adjust:	Slider in web-interface (+/- volume)
Pinouts:	Printed on chassis silk screen
Serial Communication:	
Connector:	5-Pin Phoenix
Protocol:	RS-232 "Serial"
Pinouts:	Printed on chassis silk screen
Network Interfaces:	
Ethernet 1:	RJ-45/PoE+ (100/1000 Auto-Negotiating)
Ethernet 2:	RJ-45 (100/1000 Auto-Negotiating)
Cable Type:	CAT6 or CAT6A shielded cable recommended

Power Port:

Power Specifications:	12V/3A DC
Polarity:	Center-Positive

FRONT PANEL PORTS

Infra-Red (IR) Ports:	
Audio Jack:	3.5mm (tip-ring-sleeve)
IR IN:	Receives IR signal from attached dongle/adapter
IR OUT:	Transmits IR signal out attached dongle/adapter
USB-C Ports:	
USB-C (1):	USB 2.0 - Keyboard/Mouse/UVC Webcam Extension
USB-C (2):	USB 2.0 - Keyboard/Mouse/UVC Webcam Extension
Power Delivery (1/2):	5W Max. (Not for charging laptop or video input)
ID Button:	
ID Push Button:	One-Click
ID Light:	When ID mode is on, LED is lit and HDMI output shows system information
Factory Reset:	Press and hold recessed button for 10 seconds

IPMX SUPPORT

Technical Standards:	
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 Bitrate Compressed Video

VIDEO SCALING

Video Scaling:	Upscale (up to 3840x2160)
Aspect Ratio Adjustment:	Maintain Aspect Ratio (no change) Stretch (fill screen)

AUDIO SUPPORT

Audio Signal Type:	Linear PCM, AAC-LC, AAC-Main, Pass-Through
AAC Bitrate Range:	96/112/128/160/192/224/256 Kbps
Sample Rate:	44.1/48 KHz

VIDEO AND AUDIO SPECIFICATIONS

Dynamic Range:	HDR10 Pass-Through* SDR (Standard Dynamic Range)
Color Formats:	
HDMI/USB-C Output:	8/10-bit, YUV 4:2:0 / 4:2:2
Color Gamut:	BT.2020, BT.709, BT.601
Codec Support:	
Video Codecs:	H.264 (MPEG-4), H.265 (HEVC)
Audio Codecs:	AAC-LC, AAC-Main

Video Output Formats:

HDMI Decoded Output Formats:

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

Video Input Formats:

IPMX Stream Formats: 3840x2160P @ 60, 50, 30, 25fps
1920x1080P @ 60, 50, 30, 25
1280x720P @ 60, 50

MANAGEMENT AND CONTROL

Web Interface:	Browser-based HTTPS Web-UI and Control
HTTPS API:	GraphQL, REST API*
NMOS Support:	IS-04, IS-05, BCP-003
LED Indicators:	(1) Power (2) Status (3) Stream (4) HDMI-IN (5) USB (6) HDCP

DIMENSIONS AND POWER

Size:	162mm x 143mm x 26mm (6.37" x 5.63" x 1.02")
Weight:	1.3 lbs (0.6kg)
PoE+:	IEEE 802.3at Type 2 Class 4 compliant
External:	12V DC/3A (optional, sold separately) See Power Accessories

Power Consumption (Operational Mode): 15W Typical

Power Consumption (Eco Mode) FW 1.4: 11.4W

ENVIRONMENTAL CONDITIONS

Operating Temperature: -10° 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 (normal operation)

DANTE AUDIO (OPTIONAL)

Dante Stereo License Option:	1x Input + 1x Output
Dante Features:	Dante Controller Detects P-AVN-2D Dante Stereo PCM Support 1x Dante Stereo IP Input 1x Dante Stereo IP Output

MOUNTING ACCESSORIES

P-AVN-M-1RU:	3x P-AVN-2E 1RU Rackmount Kit Frame
P-AVN-M-4RU -KIT:	14x P-AVN-2E 4RU Rackmount Kit Frame

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

FUTURE FEATURES (PLANNED UPDATES)

IR Input and Output

WARRANTY

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

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

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