

PlexusAV

P-AVN-4D IPMX Decoder



OVERVIEW

The P-AVN-4D IPMX Decoder is a versatile, high-performance AV-over-IP device that receives IPMX streams and outputs them over HDMI. Built to support open standards like IPMX, the P-AVN-4D integrates cleanly into existing networked AV designs and stays ready for future system expansion. With support for JPEG XS up to 4K60, along with HDR and built-in video scaling, it delivers high-quality, ultra low-latency video into a wide range of ProAV and live production workflows. Beyond video, the P-AVN-4D also brings audio and control onto the same network, with USB, serial, and balanced audio connectivity for a single, installation-ready endpoint.

WHY CHOOSE THE P-AVN-4D IPMX DECODER?

- **IPMX-Based Open Standards:** Built on IPMX protocols for future-proof AV-over-IP deployment.
- **Flexible Video Support:** Up to 4K60 with JPEG XS compression for ultra low-latency, high-quality video.
- **Multiple Network Ports:** Two gigabit network ports, including dual RJ45, for use across copper, and PoE+ network environments.
- **Advanced Audio Integration:** Support for Dante, AES67, and Linear PCM provides professional-grade audio routing.
- **Compact Form Factor:** Small, installation-ready design that fits cleanly behind displays, under tables, or into rackmount kits.
- **Easy-to-use Interface and Advanced API:** The P-AVN-4D user interface is designed for quick deployment and simple configuration. With its advanced API, the P-AVN-4D can be controlled and managed by PlexusAV Visual Array or integrated into existing network management and control systems.

APPLICATIONS



EDUCATIONAL & CORPORATE AV

Perfect for campuses, meeting rooms, training spaces, and lecture halls that need reliable, scalable AV distribution.



DIGITAL SIGNAGE

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



LIVE PRODUCTION

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



VIRTUAL MATRIX SWITCHING

Ideal for routing and distributing high-quality video across standard 1Gbps networks with IPMX-ready switching and ultra low-latency performance.



BROADCAST & PRODUCTION

Take advantage of JPEG XS payloads across common transport protocols.

KEY FEATURES

FLEXIBLE NETWORK CONNECTIVITY

- **1Gbps Ultra Low-Latency:** Experience high-quality JPEG-XS decoding.
- **PoE+ Support:** Power and network connectivity through a single cable for streamlined installation.
- **Ethernet Ports:** PoE+ and dual RJ45 for seamless workflows.

VERSATILE OUTPUT OPTIONS

- **HDMI:** Seamlessly connect to modern displays with HDMI 2.1 and HDCP 2.3.
- **Analog & Digital Audio Codec Support:** Supports professional grade balanced analog audio, audio passthrough, and Linear PCM.

CODEC SUPPORT

- **JPEG-XS:** Ultra low-latency decoding for real-time workflows and IPMX applications.
- **JPEG-XS with FIP/TDC Profile:** Perfect for applications requiring high-quality, low-latency video like live production, e-sports, and broadcast.

COMPACT DESIGN

- **Small Form Factor:** The P-AVN-4D 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.



P-AVN-4D 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

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, Pass-Through
Sample Rate:	32/44.1/48/96/192/384 kHz

VIDEO AND AUDIO SPECIFICATIONS

Dynamic Range:	HDR10 Pass-Through SDR (Standard Dynamic Range)
----------------	--

Color Formats:

IPMX JPEG-XS Stream: 8/10-bit, RGB/YUV 4:4:4

HDMI Output: 8-bit, RGB/YUV 4:4:4
8/10-bit, YUV 4:2:0
12-bit, YUV 4:2:2

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

Codec Support:

Video Codecs: JPEG-XS
Audio Codecs: PCM

IPMX Stream Output:

Auto: Follow Input

HDMI Output Formats:
3840x2160P @ 60, 50, 30, 25fps
1920x1080P @ 60, 50, 30, 25fps
1280x720P @ 60, 50fps

Video Input Formats:

IPMX Stream Formats: 4096x2160P @ 60, 59.94, 50, 30, 29.97, 25fps
3840x2160P @ 60, 59.94, 50, 30, 29.97, 25fps
1920x1080P @ 60, 59.94, 50, 30, 29.97, 25fps
1280x720P @ 60, 59.94, 50, 30, 29.97, 25fps
720x576P @ 60, 59.94, 50, 30, 29.97, 25fps
2560x1600P @ 60fps
2560x1440P @ 60fps
2560x1080P @ 60fps
2160x1440P @ 60fps
1920x1200P @ 60fps
1680x1050P @ 60fps
1600x1200P @ 60fps
1440x900P @ 60fps
1280x1024P @ 60fps
1024x768P @ 60fps
800x600P @ 60fps
640x480P @ 60fps

MANAGEMENT AND CONTROL

Web Interface:	Browser-based HTTPS Web-UI and Control
HTTPS API:	REST API, GraphQL
NMOS Support:	IS-04, IS-05, IS-11* BCP-003
LED Indicators:	(1) Power (2) Status (3) Stream (4) HDMI (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: 11.9W

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 (normal operation)

DANTE AUDIO (OPTIONAL)

Dante Stereo License Option:	1x Input + 1x Output
Dante Features:	Dante Controller Detects P-AVN-4D Dante Stereo PCM Support 1x Dante Stereo IP Input 1x Dante Stereo IP Output

MOUNTING ACCESSORIES

P-AVN-M-1RU:	3x P-AVN-4D 1RU Rackmount Kit Frame
P-AVN-M-4RU -KIT:	14x P-AVN-4D 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)

(*) indicates a future feature option.

WARRANTY

3-year warranty: The P-AVN-4D comes standard with a 3-year limited warranty.

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

