

# PlexusAV

## P-AVN-2E IPMX Encoder



### OVERVIEW

The P-AVN-2E IPMX Encoder is a versatile, high-performance AV-over-IP device capable of encoding HDMI or USB-C video signals. Built to support open standards like IPMX, the P-AVN-2E 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-2E IPMX ENCODER?

- 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: AAC-LC/Main, Linear PCM, and audio passthrough 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-2E user interface has been designed for quick deployment and ease-of-use. With its advanced API, the P-AVN-2E 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-2E 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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# PlexusAV

## P-AVN-2E IPMX Encoder Specifications



### REAR PANEL PORTS

#### 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 (2):	Type-A Female, HDMI 2.1, 1.4b Content Protection - Up to HDCP 2.3
USB-C (3):	Single USB 3.0 (Video, DisplayPort Alt Mode)

#### 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

#### 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:

### 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

Encoder 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

Bitrate Range:	5-60Mbps* (VBR and CBR)
Dynamic Range:	HDR10 Pass-Through* SDR (Standard Dynamic Range)

#### Color Formats:

IPMX Stream Output:	8/10-bit, YUV 4:2:0 / 4:2:2
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, PCM

### Video Output Formats:

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

HDMI IN/USB-C:	3840x2160P @ 60, 50, 30, 25fps 2560x1600P @ 60* 2560x1440P @ 60* 2560x1080P @ 60*
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\* Supported in upcoming release. Subject to change.

### 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: 11W

### 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-2E 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-2E comes standard with a 3-year limited warranty.

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

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