

E-WP-BT • Wallplate Encoder w/Bluetooth®

Powerful AV Encoding in a convenient, Wallplate form-factor

Overview

Visionary's PoE 4K UHD over IP cinema quality, ultra-low latency [~1 frame - visually lossless], encoders and decoders bypass the constraints of traditional switch matrix distribution systems by continuing to harness the flexibility and scalability of converged IP networks.

With the growing demand for 4K UHD video, professional AV designers and IT directors – in an increasingly converged AV/IT environment – have been using Visionary's products as an alternative to conventional distribution systems.

Visionary's PacketAV® AV over IP products can be deployed on any industry standard IP network.



They can be used on existing enterprise IP networks or a physically separate parallel network [private network] to offload traffic, using the same network protocols, methods, and devices but without intermingling of video traffic with data or voice; with equal ease of installation.

Features

One Gigabit LAN Port for 4K UHD Video and Control

- A single Ethernet port for AV over IP and POE Power Input

Bluetooth® Audio Connectivity

- Bluetooth® 5.0 for extended range, faster data throughput, and more reliable connections
- Supports both A2DP profile for media streaming and Hands Free Profile (HFP) for bi-directional smartphone bridging
- Connect easily and share audio from your Mac, Laptop, Tablet, Mobile, and Other Bluetooth® enabled devices

Dynamically Optimized (Adaptive) bit-rate compression CODEC w/ built-in AI

- Visionary's highly efficient video compression codec is a modified full frame encoding that dynamically optimizes for fine lines (computer generated graphics) or motion video by using sophisticated AI to analyze the input source content. Actively matching the level of compression to a scene by leveraging periods of low motion video content reduces the stream's size and enhances performance - enabling, without compromising image quality, Visually Lossless transmission of computer generated graphics or full-motion video sources.
- Adjustable Video Bitrate: (50 – 200 Mbps or Auto [800Mbps max])

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Features cont.

LLDP Support

- Link Layer Discovery Protocol (LLDP) is a protocol used by network devices for advertising their identity, capabilities, and neighbors on a local area network based on IEEE 802 technology
- Allows for dynamic control of endpoints based on automatic discovery of physical location

QoS Support

- Quality of Service (QoS) is an advanced feature that prioritizes network traffic resulting in performance improvement for critical network traffic

Control

- Vision Lite Control Software
- 3rd Party Control Drivers [Crestron, QSC, Symetrix, RTI, etc.]
- *API providing access to the full range of features on the encoders and decoders offered to qualified System Integrators

Balanced Audio Line Output on Rear Panel

- A rear-panel euro terminal block provides a stereo balanced audio output de-embedded from HDMI.

This output can feed a variety of local devices to provide a specific line level output to users, or it may be used to directly feed an audio power amplifier in the associated audio zone.

HDMI 2.0 and HDCP 2.2 Compliant

Enterprise Level Security –AES Encryption, 802.1x, HTTPS, SSH

Enterprise applications demand a secure Network AV solution

- AES Stream Encryption - The Advanced Encryption Standard, or AES, is a worldwide standard and was adopted as the standard encryption algorithm by the U.S. government for encrypting classified information
- HTTPS Secure API - Using secure SSL/TLS communications HTTPS provides integrity that a client is communicating with the real API and receiving back authentic data. It also ensures privacy for applications and users using the API
- 802.1x Authentication for Network access control - 802.1X provides a secure authentication mechanism for any device trying to access a network
- SSH Network Protocol - SSH is a network protocol used to remotely access and manage a device through command line communications. The key difference between Telnet (used by other AV over IP manufacturers) and SSH is that SSH uses encryption, which means that all data transmitted over a network is secure

Independent Routing

- Independently route all signals with the ability to separately matrix video & audio

Seamless Fast Switching

- Tearing free, no black screen, no frame lock

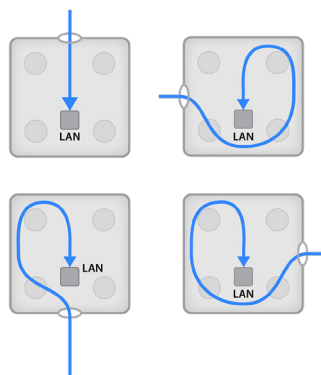
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Benefits

- A single Gigabit LAN Port for PoE Power, 4K UHD Video, and Control
- Secure Network Isolation - VLAN Tagging separates AV traffic on the corporate network
- Easy installation in a wall, floor, or lectern
- Mounts into standard Decora style wallplates
- Easy Control Integration
- Ultra-low Latency [~1 frame - visually lossless]
- Low bitrates
- No fiber or 10 Gigabit switch required
- Low-Cost network switches are used
- Scalable / Unlimited Distribution
- Any number and combination of inputs/outputs [in increments of one]
- Standard network cabling [CAT5e/6]
- Utilize existing network resources
- Rapid deployment
- Single network for AV and IT
- Reduced operating costs

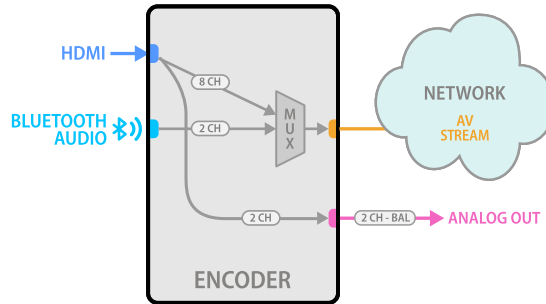
Fits conveniently into a 2-gang US or UK back box with no modification

- Low Heat / Power: Natural convection via vent openings on front, sides, and top
- 45 Degree Ethernet connector allows easy access from any side of electrical boxes while providing bend radius relief for category cable.



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Audio Workflow



Specifications

Encoding/Decoding	
Video Codec	JPEG2000 based visually lossless video compression algorithm
Audio Codec	LPCM up to 8 Channels
Bit Rates	50 to 800 Mbps
Latency	Ultra-low Latency (visually lossless video) 17ms @ 1080p60 & 4K60 4:2:0 33ms @ 4K30 4:4:4
Streaming Protocols	IP, UDP, TCP, ICMP, IGMP
Copy Protection	HDCP 2.2, AES-128 Encryption
Video	
Maximum Resolutions	High Dynamic Range (HDR) 4K60 4:2:0 HDR 8 bit 4K30 4:4:4 HDR 8 bit 1080p60 4:4:4 HDR 12 bit 1080p30 4:4:4 HDR 12 bit
Input Signal Types (Encoder)	1x HDMI capable of receiving source input video formats up to 4K60 4:2:0
Audio	
Input Signal Types	HDMI Audio and Bluetooth® Stereo Audio • 1 digital input de-embedded from HDMI • 1 Bluetooth® Stereo Audio input (A2DP)
Output Signal Types	HDMI Digital Audio (NLPCM pass-through), Analog Stereo Audio • 1 digital audio output via HDMI • 1 analog stereo audio output (balanced)
Digital Formats	Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS®, DTS-ES, DTS 96/24, DTS-HD High Res, DTS-HD Master Audio, DTS:X, LPCM up to 8 channels.
Analog Formats	Stereo 2-channel
Analog-To-Digital Conversion	24-bit 48 kHz
Digital-To-Analog Conversion	24-bit 48 kHz
Analog Output Volume Adjustment	-80 to +20 dB

Communication & Control of External Devices	
Bluetooth® Profiles	A2DP - Stereo Audio is streamed from a Bluetooth® device and embedded into the AV (HDMI) stream HFP (Hands Free Profile) - bi-directional pairing to a cell phone for call bridging
Bluetooth® Pairing Button	Blue LED: Pairing Status
Bluetooth® Range	10m (30ft) minimum. Typical Range is 14 - 23m (46 - 75ft)
HDMI	HDCP 2.2, EDID
Connectors	
LAN	8-pin RJ-45 connector, female; 100BASE-TX / 1000BASE-T Ethernet port / PD port POE (IEEE 802.3af)
HDMI INPUT	(1) HDMI Type A connector, female; HDMI digital video/audio input
5 pin Euroblock 3.81mm pitch connector	Analog Stereo Output (balanced)
Power	
Power Consumption	12 W typical
Environmental	
Cooling	Convection / no fan (no moving parts)
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	25 BTU/hr
Acoustic Noise	0 dBA
Form Factor	
Dimensions	Height: 4.07 in. (103.4 mm) Width: 3.61 in. (91.8 mm) Depth: 2 in. (50.6 mm)
Weight	1.0 lb (0.45 kg)
Compliance	
	CE, FCC, C-tick, RoHS, WEEE

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Dimensions • (in mm)

