

DuetE5-WP-BT • Duet Wallplate Encoder w/Bluetooth®

4K60 4:4:4 & Dante® / AES67 Encoding
in a convenient, Wallplate form-factor

Overview

Introducing the next-generation DuetE5-WP-BT 4K60 4:4:4 Wallplate AV over IP Encoder from Visionary Solutions. Building on the widely adopted PacketAV® Duet Wallplate Encoder, which brought true convergence of Dante®/AES67 and Video over IP in a convenient wallplate form-factor, the DuetE5-WP-BT raises the bar with enhanced features and powerful capabilities.

The DuetE5-WP-BT delivers stunning 4K60 4:4:4 video with accurate color reproduction and smooth motion handling, ensuring exceptional performance in various AV applications. The next-generation wallplate encoder continues to support Dante®/AES67 audio, providing seamless integration with professional audio systems and networks.

The DuetE5-WP-BT features built-in bi-directional Bluetooth® wireless audio connectivity, enabling effortless streaming of audio from Bluetooth®-enabled devices and expanding the range of supported audio sources. The wallplate encoder can be easily mounted in a wall, tabletop, lectern, or floor box using a standard 2-gang US or UK back box, simplifying installation and offering a sleek, unobtrusive design. The DuetE5-WP-BT connects to power (standard POE) and Ethernet using only a single category cable, streamlining deployment and reducing cable clutter.



Visionary Solutions' PackeTV® and PacketAV® products can be deployed on any industry-standard IP network, allowing use on existing enterprise IP networks or a physically separate parallel network (private network) to offload traffic without intermingling of video traffic with data or voice.

Experience the future of networked AV with the DuetE5-WP-BT 4K60 4:4:4 Wallplate AV over IP Encoder with Bluetooth® from Visionary Solutions. With its powerful capabilities and advanced features, the DuetE5-WP-BT is the ideal choice for professionals seeking a versatile, high-quality, and easy-to-install AV over IP solution.

Features

4K60 4:4:4 Video Support

- Experience ultra-high-definition video with 4K resolution at 60 frames per second and full 4:4:4 color sampling for unparalleled image quality, suitable for professional applications where every detail matters.

Mass Configuration

- Auto Discover all endpoints on the network, export to .CSV file (all configurable parameters included), make changes offline, upload .CSV file through embedded web page of encoder/decoder and push configuration to the network
- No external software required – mass configuration capabilities built into the endpoint embedded webpage UI

One Gigabit LAN Port for 4K60 4:4:4 Video, Dante®/AES67, and Control

- A single Ethernet port for Video over IP and Dante®/AES67 audio embedding and de-embedding, with VLAN tagging capability to separate Audio & Video network traffic as needed

Full Motion MJPEG Substream

- Maximize bandwidth efficiency and enhance video quality with a full motion MJPEG substream, delivering smooth, high-quality video feeds for preview or monitoring purposes without impacting the primary 4K60 4:4:4 video stream.

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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

Independent Routing

- Independently route all signals with the ability to separately matrix video & Bluetooth audio (including Dante®/AES67)

Bluetooth® Audio Connectivity

- Bluetooth® 5.0 for extended range, faster data throughput, and more reliable connections
- Bluetooth® Audio bridge for Dante®
- 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

Intuitive Single Button Bluetooth® Pairing with LED Status Indication

- Simple one button pairing/connect process, multiple pairing modes - Manual (default), Auto and Private
- Pairing button can be disabled for restricted use applications with third-party control systems
- LED "off" mode

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])

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

Seamless Fast Switching

- Tearing free, no black screen, no frame lock

HDMI 2.0 and HDCP 2.2, 2.3 Compliant

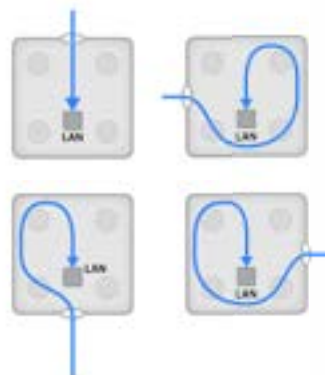
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Benefits

- A single Gigabit LAN Port for PoE Power, 4K60 4:4:4 Video, Dante®/AES67, and Control
- Effortlessly play audio from your Bluetooth® enabled devices
- Bi-directional smartphone connectivity via Bluetooth® for web conference soft-codec AV integration
- Eliminates need for separate AV Bluetooth® bridging hardware
- 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
- Ultra-low Latency [Sub-frame ~2ms visually lossless]
- Easy Control Integration
- 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

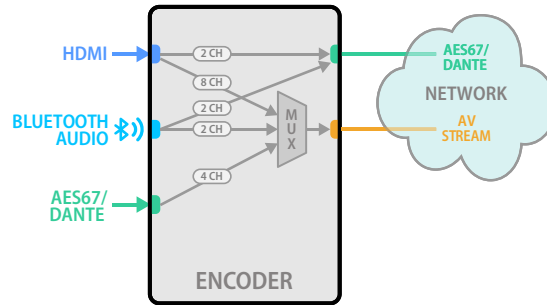
Fits conveniently into a 2-gang US or UK back box with no modification

- 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, Dante®/ AES67
Bit Rates	50 to 800 Mbps
Latency	Ultra-Low Latency Sub-Frame (visually lossless video) ~2ms @ 1080p60 & 4K60 4:4:4 ~4ms @ 1080p30 & 4K30
Streaming Protocols	IP, UDP, TCP, ICMP, IGMP
Copy Protection	HDCP 2.2, 2.3, AES-256 Encryption
Video	
Maximum Resolutions	High Dynamic Range (HDR) 4K60 4:4:4 HDR 8 bit 4K30 4:4:4 HDR 12 bit 1080p60 4:4:4 HDR 12 bit 1080p30 4:4:4 HDR 12 bit Supports HDR10, HDR10+, HLG, Dolby Vision
Input Signal Types (Encoder)	1x HDMI capable of receiving source input video formats up to 4K60 4:4:4
Audio	
Input Signal Types	HDMI Audio, Bluetooth® Stereo Audio, Dante®/AES67 Network Audio (up to 4 channels) • 1 digital input de-embedded from HDMI • 1 Bluetooth® Stereo Audio input (A2DP) • 1 Dante®/AES67 digital audio input (up to 4 channels)
Output Signal Types	HDMI Digital Audio (NLPCM pass-through), Dante®/AES67 Network Audio • 1 digital audio output via HDMI • 1 Dante®/AES67 digital audio input (up to 4 channels)
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
Dante®/AES67	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 and/or simultaneously onto the Dante® network
	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, 2.3 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
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: 2.25 in. (57.2 mm)
Weight	1.0 lb (0.45 kg)
Compliance	
	CE, FCC, C-tick, RoHS, WEEE

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Dimensions • (in mm)

