

## D5000 • Decoder

Distribute 4K60 4:4:4 Video and Audio over Gigabit Ethernet

### Overview

Visionary Solutions proudly presents the D5000 AV over IP decoder, delivering the performance and reliability of Visionary's 5-Series platform in a streamlined, cost-optimized design. Building on our cinema-quality, ultra-low latency (sub-frame visually lossless) 4K UHD over IP solutions, the D5000 provides essential decoding performance - including native AES67 audio support - in a compact form factor that balances functionality and value.

Recognizing that many projects deploy more decoders than encoders, the D5000 offers a cost-effective, value-engineered approach that maintains Visionary's uncompromising quality for large-scale projects with essential decoding needs.

Designed for simplicity and scalability, the D5000 bypasses the limitations of traditional switch matrix systems by harnessing the flexibility and power of modern IP networks. Professional AV designers and IT directors choose Visionary's 5-Series endpoints as a cutting-edge alternative to conventional distribution.



The D5000 decoder can be deployed on any industry-standard IP network, offering seamless integration with existing enterprise networks or dedicated AV infrastructures. This flexibility allows efficient installation and ensures optimal performance and long-term network stability.

Upgrade your AV installations with Visionary's new D5000 decoder—the next evolution in cost-effective, 4K60-capable AV over IP distribution.

### Features

#### Gigabit LAN Port for 4K UHD 4:4:4 Video, Control, and Powered Device (PD)

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

#### Independent Routing

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

#### Native AES67 Audio Support

- Seamlessly integrates with AES67 audio networks, enabling high-quality, low-latency audio transmission over IP. Ensures full interoperability with other AES67-compliant devices for professional audio applications.

#### 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])

## D5000 • Decoder

### Features cont.

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

##### Enterprise applications demand a secure Network

- 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.
- 802.1x Authentication for Network access control -
- SSH Network Protocol - SSH is a network protocol used to remotely access and manage a device through command line communications.

#### Auto Video Scaler

- No need to worry about configuring the source resolution
- 4K in/1080P out, 1080P in/4K out

#### 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.

#### Built in Video Wall Functions

- A Single platform to support distributed displays and Video Walls; without expensive video wall processors
- Enhanced Video Wall functionality – supports video rotation 180/270 degrees
- Easily create video walls using normal commodity displays
- Built-in video wall processor that allows you to build up to a 16x16 video wall

#### Dynamic OSD text overlay capabilities

- The ability to overlay dynamic or fixed text on screen enables displaying of alerts, announcements, special instructions, clocks / timers, schedules, and other messaging

#### 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

#### 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

#### Control

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

#### QoS Support

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

## D5000 • Decoder

### Features cont.

#### 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.

#### Seamless Fast Switching

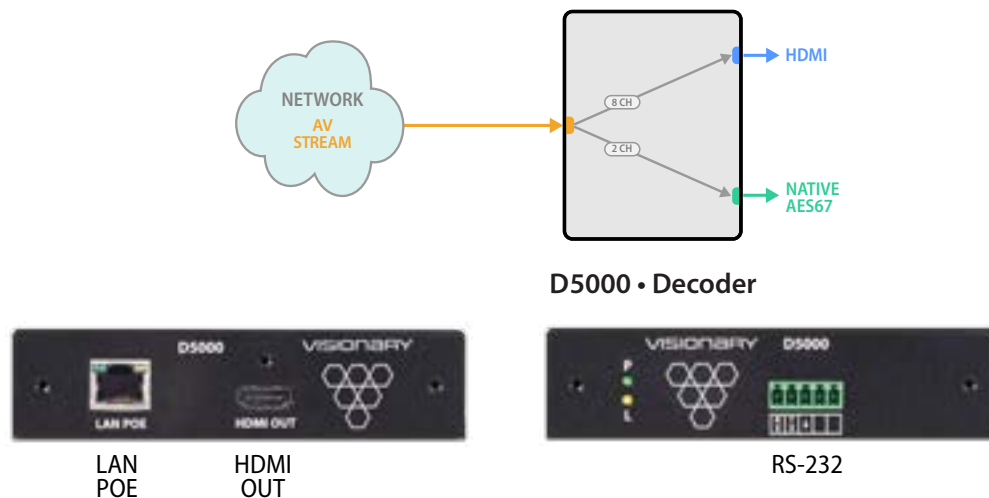
- Tearing free, no black screen, no frame lock

#### HDMI 2.0 and HDCP 2.2, 2.3 Compliant

### Benefits

- A single Gigabit LAN Port for PoE Power, 4K60 4:4:4: Video, Audio, and Control
- Easy Control Integration
- Simplified, cost-optimized design for large-scale deployments
- Low bitrates
- No fiber or 10 Gigabit switch required
- Low-Cost network switches are used
- Scalable / Unlimited Distribution
- Utilize existing network resources
- Compact form factor ideal for space-constrained environments
- Standard network cabling [CAT5e/6]
- Rapid deployment
- Single network for AV and IT
- Reduced operating costs
- Ultra-low Latency [Sub-frame ~2ms visually lossless]

### Audio Workflow



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### Specifications

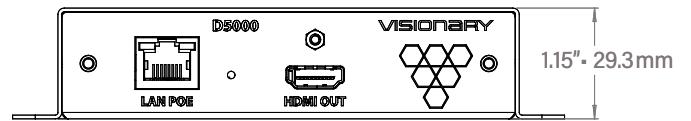
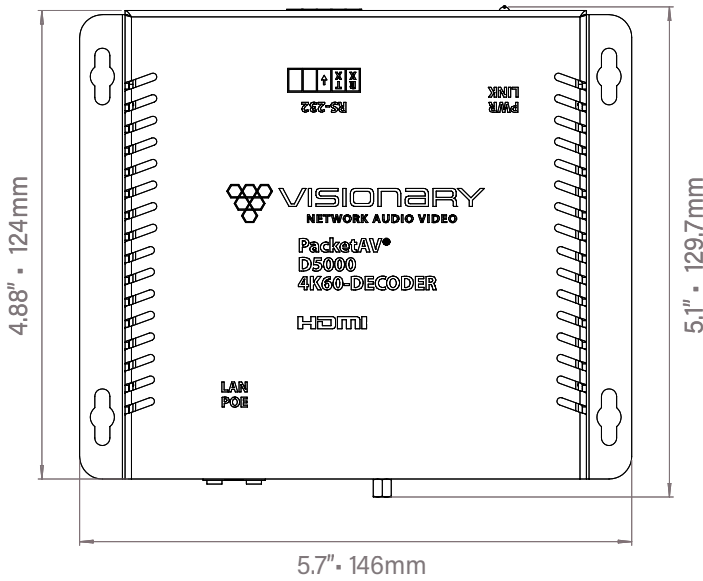
Encoding/Decoding	
Video Codec	JPEG2000 based visually lossless video compression algorithm
Audio Codec	LPCM, AES67
Bit Rates	50 to 800 Mbps
Latency	Ultra-Low Latency Sub-Frame (visually lossless video) ~2ms @ 1080p60 & 4K60 4:4:4 ~4ms @ 1080p30 & 4K30
Streaming Protocols	IP, UDP, TCP, ICMP, IGMP
Copy 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
Output Signal Types	Decoder: 1x HDMI capable of scaling and outputting video formats up to 4K60 4:4:4
Scaler	Supports a wide range of resolutions and rates, up to 4K in/1080P out, 1080P in/4K out, image rotation, and video wall up to 16x16 Integrated scaling helps optimize image quality and switching performance
Audio	
Output Signal Types	HDMI Digital Audio (NLPCM pass-through), Native AES67 Network Audio • 1 Digital audio output via HDMI • 1 Native AES67 digital audio output (up to 2 channels)
Digital Formats	Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby True HD, Dolby Atmos, DTS®, DTS-ES, DTS96/24, DTS-HD High Res, DTS-HD Master Audio, DTS:X, LPCM up to 8 channels.
Analog-To-Digital Conversion	24-bit 48 kHz
Native AES67	24-bit 48kHz

Communication & Control of External Devices	
Ethernet	Network connectivity for control and AV traffic
Serial / RS-232	Bi-directional device control and monitoring
HDMI	HDCP 2.2, 2.3, CEC
Connectors	
LAN	8-pin RJ-45 connector, female; 100BASE-TX / 1000BASE-T Ethernet port / PD port POE (IEEE 802.3af or 802.3at)
HDMI Output	HDMI Type A connector, female
8 pin Euroblock 3.81mm pitch connector	RS-232 port
Power	
Power Consumption	7.5 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	25.6 BTU/hr
Acoustic Noise	0 dBA
Form Factor	
Dimensions	Height: 1.15 in. (29.3 mm) Width: 5.75 in. (146 mm) Depth: 5.10 in. (129.7 mm)
Weight	1.0 lb (0.45 kg)
Compliance	
	CE, FCC, C-tick, RoHS, WEEE, TAA

**D5000 • Decoder**

**Dimensions**

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Top



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