# HW-OMNI-E4111-WP
# Specification Sheet
**Networked AV Encoder Wall Plate**


## Description

The HW-OMNI-E4111-WP is a networked AV encoder for HDMI sources up to 4K/60 UHD and HDR, plus embedded audio. It features a US two-gang wall plate form factor with interchangeable black and white wall plates and faceplates, enabling discreet installation on a wall, in furniture, or in a floor box. Powered by the VCx™ codec, it delivers 4K/60 UHD with artifact-free presentation and ultra-low latency, with dual encoding engines for simultaneous 4K and 1080p streams. Powered exclusively by PoE, the HW-OMNI-E4111-WP requires no local AC outlet. Compatible with any HW-OMNI decoder.

## Applications

### BYOD Meeting Rooms

- Provide a discreet, wall-mounted HDMI connection point for laptop users to share content over the network without visible cables or rack equipment.

### Huddle Spaces & Collaboration Rooms

- Enable AV over IP source input in any room using a standard US 2-gang opening, powered entirely from the network switch.

### Education & Lecture Halls

- Install at presenter podiums or AV connection points where an aesthetically clean, low-profile encoder is required.

### Enterprise AV Distribution

- Distribute encoded HDMI sources across campus networks to any connected HW-OMNI decoder from a convenient wall-mounted location.

## Key Features

- 4K/60 UHD encode with VCx™ codec — artifact-free image quality and ultra-low latency (<1 frame).
- HDR support: HDR10, HLG, and Dolby® Vision™ at 60 Hz.
- US two-gang wall plate form factor — interchangeable black and white plates and faceplates included.
- Dual encoding engines with independent scalers for simultaneous 4K and 1080p streams.
- HDCP 2.2 compliant; AES-128 encrypted stream delivery.
- PoE (IEEE 802.3af) powered exclusively — no local AC power required.
- IEEE 802.1x network authentication; HTTPS, SSH, Telnet, WebSocket/TLS management.
- AES67-compatible audio; simultaneous OmniStream and AES67 streaming.
- NDAA Section 889 and TAA compliant.

## Specifications

| Video | |
|---|---|
| Signal | HDMI |
| Copy Protection | HDCP 2.2 |
| UHD/HD/SD Resolutions | 4K/60/50/30/25/24 Hz; 1080p; 1080i; 720p; 576p/i; 480p/i |
| VESA Resolutions | 2560×1600, 1920×1200, 1920×1080 (and others) @ 60 Hz |
| Color Space | YUV, RGB |
| Encoding Density | Dual encoding engine with independent scalers |
| Compression Format | VCx |
| Video Quality Mode | User-selectable: PC Application or Video mode |
| Chroma Subsampling | 4:4:4, 4:2:2, 4:2:0 |
| Color Depth | 8-bit, 10-bit, 12-bit |
| HDR Formats | HDR10, HLG, Dolby® Vision™ |
| Max Bit Rate | Configurable up to 900 Mbps |
| Scaler — Encoder 1 | Up and down, 3840×2160 max |
| Scaler — Encoder 2 | Up and down, 1920×1080 max |
| Latency | <0.5 frame (e.g. < 8ms @ 1080p/60); <1.5 frames in Fast Switching mode |
| Thumbnail | 1 per HDMI input; 320×180px JPG; 2-second update |
| **Audio** | |
| Pass-Through Formats | LPCM 2.0/5.1/7.1; Dolby® Digital, TrueHD, Atmos®; DTS®, DTS-HD |
| Down-Mixing | Multichannel LPCM to 2-channel LPCM |
| Sample Rate | 32 kHz – 192 kHz |
| Bit Depth | Up to 24-bit |
| AES67 | Supported; simultaneous OmniStream and AES67 streaming; up to LPCM 7.1 |
| **Network & Protocols** | |
| Video Streaming | RTP |

| | |
|---|---|
| Audio Streaming | RTP (up to 7.1 ch); AES67 |
| Addressing | DHCP, Static |
| Encryption | AES-128 |
| QoS | RFC 2475 |
| Discovery | Multicast DNS, LLDP, SAP |
| Management | HTTPS, SSH, Telnet, WebSocket with TLS |
| Authentication | IEEE 802.1x: PEAP/MSCHAPv2 or EAP-TLS |
| IP Multicast | IGMPv2 and IGMPv3 |
| **Connections** | |
| HDMI Input | 1 × Type A, 19-pin, female, locking |
| Ethernet | 1 × RJ45, 10/100/1000 Mbps |
| **Power** | |
| PoE | IEEE 802.3af (only power source — no external supply option) |
| Consumption | Up to 12 W (40.9 BTU/h) |
| **Mechanical** | |
| Form Factor | US 2-gang wall plate |
| Dimensions (H × W × D) | 4.19" × 3.46" × 1.72" (106.5mm × 88mm × 43.65mm) |
| Weight | 0.46 lbs (0.21 kg) |
| Included Accessories | Black and white wall plates and faceplates |
| **Environmental** | |
| Operating Temperature | 14°F to 122°F (-10°C to +50°C) |
| Storage Temperature | -14°F to 140°F (-10°C to +60°C) |
| Humidity | 20% to 95% RH, non-condensing |
| **Regulatory** | |
| Certifications | CE, FCC, CB, RoHS |
| NDAA Section 889 | Compliant |
| TAA | Compliant |
| Warranty | See hallresearch.com/warranty |