Soundweb™
OMNI

OMNI-VE-330

4K60 H.26x/Dante AV-H & 1080p H.26x Dual-Stream Encoder with USB Audio and Video

The BSS OMNI-VE-330 is an AV-over-IP encoder for streaming 4K60 4:4:4 video with H.264 or H.265 compression, along with audio and control. Optimized for bandwidth-efficient AV distribution over WANs (wide-area networks) or shared networks, the OMNI-VE-330 is ideal for applications such as live presentations, digital signage, media playback, camera feeds, and content distribution in classrooms, meeting spaces, convention centers, retail environments, and hospitality venues.

A key capability of the OMNI-VE-330 encoder is simultaneous secondary H.26x streaming. While the primary stream delivers 4K60 video, the encoder can also generate a 1080p H.264 or H.265 stream for distribution to third-party platforms and devices. This standards-based stream supports browsers, mobile devices, recording platforms, and online streaming services, making it ideal for hybrid learning, livestreaming, and remote collaboration scenarios.

The OMNI-VE-330 also features powerful USB video and audio integration over USB-C. AV streams can be recorded directly to external USB storage up to 2 TB, with the option to schedule transfer of recordings to a network storage location. Additionally, Dante audio and H.26x streams can be converted into USB audio (UAC) and USB video (UVC), enabling a host PC to access network AV streams directly for recording, conferencing, or livestreaming applications.

Along with high-performance networked AV streaming, the OMNI-VE-330 is Dante AV-H enabled for interoperability with third-party Dante AV-H decoders for video streaming up to 4K60 4:2:0. Integrators can configure and manage OMNI 300 systems using Dante Controller, Dante Domain Manager, and Dante Director, while Dante Studio allows video streams to be monitored or brought directly into conferencing, production, recording, or livestreaming workflows.

The OMNI-VE-330 is designed for modern professional AV installations, with essential integration features including PoE+ remote powering, a low-power standby mode, video source preview, custom image and slideshow presentations, and open APIs for third-party control.

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FEATURE HIGHLIGHTS

- High-performance 4K60 4:4:4 H.264 or H.265 streaming, plus audio and control
- Secondary, standards-based 1080p H.264 or H.265 streaming
- Two HDMI inputs with automatic switching and HDMI loop output
- USB video and audio over USB-C for recording streams or interfacing with a host PC
- Independent H.26x stream decoding and conversion to USB video (UVC)
- Two-channel Dante audio input and output (2x2) with conversion to USB audio (UAC)
- Dante AV-H enables third-party networked AV interoperability, plus system management from Dante Controller, Dante Domain Manager, and Dante Director
- Video preview from the built-in web interface or a touch panel
- Supports custom image and slideshow presentations
- PoE+ powered with low-power (standby) mode to conserve energy
- Enterprise-grade network security and standards including IEEE 802.1x, HTTPS, TLS, AES-256 encryption, LDAP, VLAN tagging, and QoS
- AVX Suite for OMNI 300 system configuration and management
- HARMAN HControl and BSS Direct Control provide open APIs for third-party control integration

GENERAL SPECIFICATIONS

BSS VIDEO	
Digital Video Input	HDMI 2.0 x2
Digital Video Output	UVC, HDMI 2.0, Record (Non-HDCP)
Formats	Dante AV-H, HDMI 2.0, HDCP 2.3
Input Resolutions Supported	480p, 720p, 1080p, 1200p, 1440p, and 4K *See Appendix in manual
Interlaced Input Resolutions	1080i
Input Refresh Rates Supported	30, 50, and 60
Color Space	4:4:4, 4:2:2, RGB
HostPlay	8 playlists
H.264/H.265 VIDEO	
Video Streaming Resolutions Supported	720p, 1080p, and 4K *See Appendix in manual
Video Refresh Rates Supported	30 and 60 Hz
H.26x Profiles	Baseline (BP), Main (MP), High (HiP)
Bitrate Range	500 kbps to 32 Mbps
Rate Control	CBR *CBR has a tolerance of +/-10%
Video Streaming Protocols	RTP, RTSP, RTMP, RTMPS, UDP, Dante AV-H, and HTTP-Live

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AUDIO	
Input Signal Types	Embedded audio on HDMI, UAC, Dante, and Analog Stereo (Unbalanced)
Output Signal Types	PCM, UAC, or Dante
HDMI Audio Channels	8ch
Analog Audio Channels	2ch
Dante Audio Channels	2ch
Dante Audio Sample Rate	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
Audio Breakaway	Supported
LATENCY	
Latency	<100 ms *Depending on streaming protocol
Video/Audio Switching Stream-to-Stream	<20 ms *Depending on streaming protocol
COMMUNICATIONS	
Ethernet	10/100/1000 Mbps, auto-negotiating, auto-sensing, full/half duplex, DHCP, and Static IP
HDMI	HDCP, EDID management
PORTS	
+12V 2A (Female)	2-pin terminal Phoenix connector
P0 PoE+ (Female)	10/100/1000Base-T Ethernet Port Provides network connection, network audio/video/USB, and power
P1 (Female)	10/100/1000Base-T Ethernet Port *See Manual for different configurations
IR OUT (Female)	2-pin terminal Phoenix connector *IR Emitter (Not Included)
RS232 (Female)	3-pin terminal Phoenix connector
AUDIO IN (Female)	5-pin terminal Phoenix connector
LOOP OUT (Female)	Video output (pass-through from chosen routed input)
HDMI IN 1 (Female)	Video Input
HDMI IN 2 (Female)	Video Input
USB-C (Female)	OTG Port Video Recording - Support up to a 2 TB external hard drive for recording non-HDCP content. UVC/UAC - Support for USB video and audio device class. Supports 1 ch of Video and 2x2 ch of Dante audio. *Recording and UVC/UAC cannot be used at the same time.

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CONTROLS AND INDICATORS - FRONT	
ID Button	Recessed pushbutton Press less than 4 seconds to send a network notification to identify the unit (the notification causes a pop-up dialog in AVX NAV Router to appear). Holding the button between 7 and 20 seconds and releasing will cause the device to enable the On-Screen Display (OSD). Holding the button for 30 seconds and releasing will cause the device to return to factory configuration.
POWER LED	On (green) when operating power is supplied
STATUS LED	On (green) when there is software activity
STREAM LED	On (green) when the unit is sending video
HDMI LED	On (green) when the unit is connected to a valid video source
POWER SUPPLY	
Power Supply, External, Optional	2.0 Amp @ 12 Volts DC; 100-240 Volts AC power supply *Not Included
Power over Ethernet (PoE+)	Can be powered via a PoE+ switch or other equipment with a PoE+ source. Conforms to IEEE 802.3at Class 4 (802.3at Type 2) NOTE: For the unit to receive Power over Ethernet (PoE+), it must be connected to a switch or other equipment that has a PoE+ PSE (Power Sourcing Equipment) port Currently the device relies on a 1-event, Type 2, OSI Layer-1 negotiation for power. WARNING: Do not run wiring connected to a PoE+ PSE port outside of the building where the PSE resides. It is for intra-building use only.
INCLUDED ACCESSORIES	
Qty.	**Description**
2	Painted L-Brackets
4 (M3 x 7 mm) Panhead Philips Screw	#1 Philips Tip, used to attach L-Brackets to the device
ENVIRONMENTAL	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	85 BTU/hr
GENERAL	
Product Dimensions (HWD)	1⅛" x 7⅞" x 5" (26.6 mm x 200 mm x 127 mm)
Product Weight	1.41 lbs. (Approx. 0.45 kg)
Shipping Weight	2.78 lbs. (Approx. 1 kg)
Regulatory Compliance	FCC, CE, KCC, UKCA, and UL (Including 2043)
SKU	BSS-VE330

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