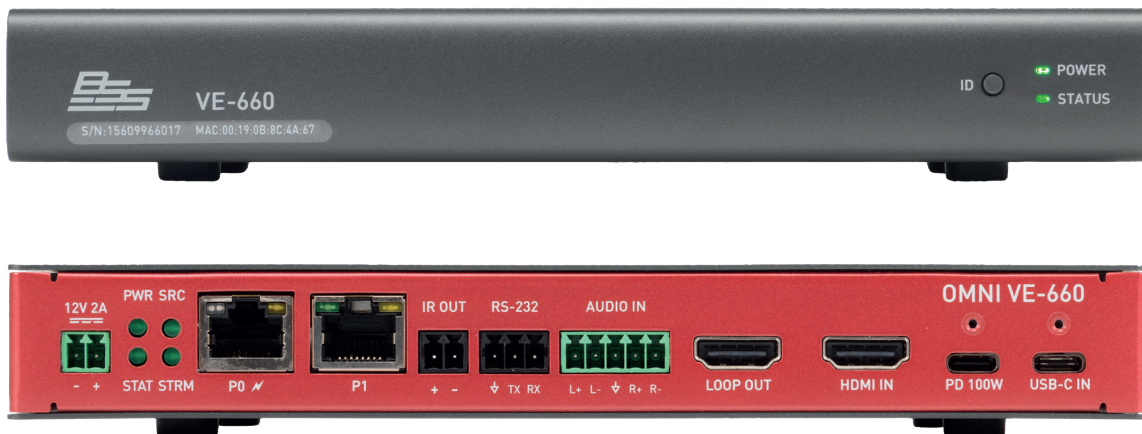


## OMNI-VE-660

4K60 MWC/Dante AV-A & 1080p H.26x Multi-Codec,  
Dual-Stream Encoder with USB Audio



The BSS OMNI-VE-660 is a feature-rich AV-over-IP encoder for distributing 4K60 4:4:4 video, audio, control, and USB 2.0 signals over Gigabit Ethernet, in environments ranging from classrooms and meeting rooms to courtrooms, hospitality venues, and large enterprise or government facilities.

At the core of the OMNI-VE-660 is the Motion Wavelet Compression (MWC) codec, engineered for pristine visual quality and ultra-low encode to decode latency with fast-motion video, high-detail graphics, and dynamic visual content. Additionally, the OMNI-VE-660 features simultaneous, standards-based 1080p H.264 or H.265 encoding, for bandwidth-efficient streaming over WANs or shared networks to third-party devices and platforms.

This AVoIP encoder includes USB-C and HDMI inputs with automatic switching and HDMI loop output. The USB-C interface supports DisplayPort Alt Mode for video input, USB data for the host PC, and up to 100 watts charging when a standard USB PD power supply is connected.

The OMNI-VE-660 features USB 2.0 routing and extension through Virtual Network USB 2.0 Hub technology. A host PC can communicate with USB devices located at up to four OMNI 600 decoders or OMNI 200 USB endpoints, supporting USB 2.0 data rates up to 480 Mbps. This capability allows host PCs to interface with cameras, conferencing bars, touch displays, HID peripherals, and other devices at remote locations across the network.

Along with high-performance networked AV distribution, the OMNI-VE-660 is Dante AV-A enabled for interoperability with third-party Dante AV-A decoders. Integrators can configure and manage OMNI 600 systems using Dante Controller, Dante Domain Manager, and Dante Director. In addition, this encoder supports two-channel Dante audio output, as well as conversion to USB audio (UAC) for the host PC.

The OMNI-VE-660 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.

## | FEATURE HIGHLIGHTS

- AV-over-IP encoder for 4K60 4:4:4 video, audio, control, and USB 2.0 over Gigabit Ethernet
- High-performance MWC codec delivers pristine-quality video with ultra-low latency
- Simultaneous, standards-based 1080p H.264 or H.265 encoding for bandwidth-efficient streaming
- USB-C and HDMI inputs with automatic switching and HDMI loop output
- USB-C interface supports DisplayPort Alt Mode for video input, USB data for host PC, and up to 100 watts charging when a standard USB PD power supply is connected
- Virtual Network USB 2.0 Hub for routing between a USB host and devices at up to four remote locations
- Two-channel Dante audio output with conversion to USB audio (UAC)
- Dante AV-A enables interoperability with third-party networked AV decoders, 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 600 system configuration and management
- HARMAN HControl and BSS Direct Control provide open APIs for third-party control integration
- UL2043 certification for plenum space installation

## | GENERAL SPECIFICATIONS

MWC VIDEO	
Digital Video Input	HDMI 2.0, USB-C USB-C Cable must support standard Thunderbolt 4
Digital Video Output	HDMI 2.0
Formats	Dante AV-A, HDMI 2.0, HDCP 2.3
HDR	HDR, HDR10, HDR10+
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	
<b>DOES NOT SUPPORT HDCP</b>	
Video Streaming Resolutions Supported	720p or 1080p *See Appendix in manual
Video Refresh Rates Supported	30 and 60
H.26x Profiles	Baseline (BP), Main (MP), High (HiP)
Bitrate Range	500 kbps to 50 Mbps
Rate Control	CBR *CBR has a tolerance of +/-10%
Video Streaming Protocols Supported	RTP, RTSP, RTMP, RTMPS, UDP

## | GENERAL SPECIFICATIONS

AUDIO	
<b>Input Signal Types</b>	Embedded audio on HDMI or USB-C and Analog Stereo (Unbalanced)
<b>Output Signal Types</b>	PCM or Dante
<b>HDMI Audio Channels</b>	8ch
<b>Analog Audio Channels</b>	2ch
<b>Dante Audio Channels</b>	2ch
<b>Dante Audio Sample Rate</b>	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
USB 2.0	
<b>USB Data</b>	Connect a Host Computer to either the USB-B or USB-C connector. Route any combination of up to four of the following: OMNI-UD-210, OMNI-UD-210-WP, OMNI-VD-630-WP, OMNI-VD-660, and AMX SVSI N2600 decoders.
LATENCY	
<b>Latency</b>	<2 ms Scaling adds one frame of latency
<b>Video/Audio Switching Stream-to-Stream</b>	Near Seamless with recommended settings
<b>USB Switching Stream-to-Stream</b>	Dependent upon the Host Computer and Device *Can take several seconds to negotiate
BANDWIDTH	
<b>Bandwidth</b>	Up to 700 Mbps content dependent
COMMUNICATIONS	
<b>Ethernet</b>	10/100/1000 Mbps, auto-negotiating, auto-sensing, full/half duplex, DHCP, and Static IP
<b>*Note</b>	Jumbo Frames Required
<b>HDMI or USB-C</b>	HDCP, EDID management
PORTS	
<b>+12V 2A (Female)</b>	2-pin terminal Phoenix connector
<b>P0 PoE+ (Female)</b>	10/100/1000Base-T Ethernet Port Provides network connection, network audio/video/USB, and power
<b>P1 (Female)</b>	10/100/1000Base-T Ethernet Port *See Manual for different configurations
<b>IR OUT (Female)</b>	2-pin terminal Phoenix connector *IR Emitter (Not Included)
<b>RS232 (Female)</b>	3-pin terminal Phoenix connector
<b>AUDIO IN (Female)</b>	5-pin terminal Phoenix connector
<b>LOOP OUT (Female)</b>	HDMI video output (pass-through from chosen routed input)
<b>HDMI IN (Female)</b>	Video Input
<b>USB-C PD (Female)</b>	Support up to 100W USB-C Power Input. *(USB-C Power Supply sold separately)
<b>USB-C IN (Female)</b>	Video Input or USB 2.0

## GENERAL SPECIFICATIONS

CONTROLS AND INDICATORS - FRONT	
<b>ID Button</b>	<p>Recessed pushbutton</p> <p>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).</p> <p>Holding the button between 7 and 20 seconds and releasing will cause the device to enable the On-Screen Display (OSD).</p> <p>Holding the button for 30 seconds and releasing will cause the device to return to factory configuration.</p>
<b>POWER LED</b>	On (green) when operating power is supplied
<b>STATUS LED</b>	On (green) when there is software activity
<b>STREAM LED</b>	On (green) when the unit is sending video
<b>SRC LED</b>	On (green) when the unit is connected to a valid video source
POWER SUPPLY	
<b>Power Supply, External, Optional</b>	<p>2.0 Amp @ 12 Volts DC; 100-240 Volts AC power supply</p> <p>*Not Included</p>
<b>Power over Ethernet (PoE+)</b>	<p>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)</p> <p>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</p> <p>Currently the device relies on a 1-event, Type 2, OSI Layer-1 negotiation for power.</p> <p>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.</p>
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	
<b>Temperature</b>	32° to 104°F (0° to 40°C)
<b>Humidity</b>	10% to 90% RH (non-condensing)
<b>Heat Dissipation</b>	85 BTU/hr
GENERAL	
<b>Product Dimensions (HWD)</b>	1 <sup>1</sup> / <sub>8</sub> " x 7 <sup>7</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " (26.6 mm x 200 mm x 172 mm)
<b>Product Weight</b>	2.56 lbs (Approx. 1.16 kg)
<b>Shipping Weight</b>	3.17 lbs (Approx. 1.44 kg)
<b>Regulatory Compliance</b>	FCC, CE, KCC, UKCA, and UL (Including 2043)
<b>SKU</b>	BSS-VE660

