

OMNI-VE-630-WP

4K60 MWC/Dante AV-A Encoder Wallplate with
USB Audio (US/UK/EU)



The BSS OMNI-VE-630-WP is an AV-over-IP encoder wallplate for distributing 4K60 4:4:4 video, audio, 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-630-WP 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.

This AVoIP encoder includes USB-C and HDMI inputs with automatic switching. The USB-C interface supports DisplayPort Alt Mode for video input, and USB data for the host PC.

The OMNI-VE-630-WP 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-630-WP 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-630-WP 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. It is available in two models: OMNI-VE-630-WP (US Version) and OMNI-VE-630-WP-EK (EU/UK Version). Each model includes black and white faceplate inserts and wallplate covers.

| FEATURE HIGHLIGHTS

- AV-over-IP encoder for 4K60 4:4:4 video, audio, and USB 2.0 over Gigabit Ethernet
- Available in US and EU/UK wallplate versions, each with interchangeable black and white faceplate inserts and wallplate covers
- High-performance MWC codec delivers pristine-quality video with ultra-low latency
- USB-C and HDMI inputs with automatic switching
- USB-C interface supports DisplayPort Alt Mode for video input, and USB data for host PC
- 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 integration

| GENERAL SPECIFICATIONS

VIDEO	
Digital Video Input	HDMI 2.0, USB-C USB-C Cable must support standard Thunderbolt 4
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
AUDIO	
Input Signal Types	Embedded audio on HDMI or USB-C and Analog Stereo (Unbalanced)
Output Signal Types	PCM 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
USB 2.0	
USB Data	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.

| GENERAL SPECIFICATIONS

LATENCY	
Latency	<2 ms Scaling adds one frame of latency
Video/Audio Switching Stream-to-Stream	Near Seamless with recommended settings
USB Switching Stream-to-Stream	Dependent upon the Host Computer and Device *Can take several seconds to negotiate
BANDWIDTH	
Bandwidth	Up to 700 Mbps content dependent
COMMUNICATIONS	
Ethernet	10/100/1000 Mbps, auto-negotiating, auto-sensing, full/half duplex, DHCP, and Static IP
*Note	Jumbo Frames Required
HDMI or USB-C	HDCP, EDID management
PORTS	
P0 PoE+ (Female)	10/100/1000Base-T Ethernet Port Provides network connection, network audio/video, and power
AUDIO IN (Female)	3.5 mm connector
HDMI IN (Female)	Video Input
USB-C (Female)	Video Input or USB 2.0
CONTROLS AND INDICATORS - FRONT	
RESET Button	Recessed pushbutton Press to initiate a 'warm restart' causing the processor to restart. A reset does NOT affect the current settings.
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
HDCP LED	On (amber) when HDCP is detected
LINK/ACT	Ethernet activity and status LED
DISPLAY VIDEO LED	On (green) when there is a connection to a valid USB-C source
HDMI VIDEO LED	On (green) when there is a connection to a valid HDMI source
AUDIO LED	On (green) when the analog audio setting is enabled
POWER SUPPLY	

GENERAL SPECIFICATIONS

Power over Ethernet (PoE+)	<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
1	Face Insert alignment tool
1	Low-voltage trim ring back box (US Model Only)
1	White Three-Gang cover plate
1	Black Three-Gang cover plate
1 Set (3 Pieces)	White (PMMA) Face Insert with adhesive backing
1 Set (3 Pieces)	Black (PMMA) Face Insert with adhesive backing
6 (6-32 x 1½")	Silver screws, for mounting the OMNI-VE-630-WP to low-voltage ring (US Model Only)
6 (6-32 x ½")	White screws, for mounting the White cover plate to OMNI-VE-630-WP
6 (6-32 x ½")	Black screws, for mounting the Black cover plate to OMNI-VE-630-WP
*Note	See Manual for Assembly Instructions
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 (LWH)	<p>OMNI-VE-630-WP: 5.2" x 2.3" x 4.2" (132.08 mm x 58.42 mm x 106.68 mm)</p> <p>OMNI-VE-630-WP-EK: 8.3" x 2" x 2.8" (210.82 mm x 50.8 mm x 71.12 mm)</p>
Product Weight	<p>OMNI-VE-630-WP: 0.92 lbs (0.42 kg)</p> <p>OMNI-VE-630-WP-EK: 0.77 lbs (0.35 kg)</p>
Shipping Weight	<p>OMNI-VE-630-WP: 1.58 lbs (0.72 kg)</p> <p>OMNI-VE-630-WP-EK: 1.32 lbs (0.60 kg)</p>
Regulatory Compliance	FCC, CE, KCC, UKCA, and UL
SKU (US)	BSS-VE630WP
SKU (UK/EU)	BSS-VE630WP-EK

