Soundweb™ OMNI

OMNI-VD-610

4K60 MWC/Dante AV-A Decoder

The BSS OMNI-VD-610 is an AV-over-IP decoder 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-VD-610 is the BSS 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.

Along with high-performance networked AV distribution, the OMNI-VD-610 is Dante AV-A enabled for interoperability with third-party Dante AV-A encoders. Integrators can configure and manage OMNI 600 systems using Dante Controller, Dante Domain Manager, and Dante Director. In addition, this decoder supports two-channel Dante audio input and output.

The OMNI-VD-610 is designed for modern professional AV installations, with essential integration features including PoE+ remote powering, a low-power standby mode, video stream preview, custom image presentations, open APIs for third-party control, 4K video scaling, and video wall processing.

FEATURE HIGHLIGHTS

- AV-over-IP decoder 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
- Dante AV-A enables interoperability with third-party networked AV encoders, plus system management from Dante Controller, Dante Domain Manager, and Dante Director
- Two-channel Dante audio input and output (2x2)
- Video preview from the built-in web interface or a touch panel
- Supports custom image presentations
- Enhance video presentations with 4K video scaling, seamless switching, and video wall processing
- 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
- UL2043 certification for plenum space installation

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GENERAL SPECIFICATIONS

VIDEO	
Digital Video Output	HDMI 2.0
Formats	Dante AV-A, HDMI 2.0, HDCP 2.3
HDR	HDR, HDR10, HDR10+
Output Resolutions Supported	480p, 720p, 1080p, 1200p, 1440p, 4K, and 5K *See Appendix in manual
Output Refresh Rates Supported	30, 50, and 60
Color Space	4:4:4, 4:2:2, RGB (5K60 is 4:2:0)
LocalPlay	Single Image
Video Wall Construction	Supported up to 16x16
AUDIO	
Input Signal Types	PCM or Dante
Output Signal Types	Embedded audio on HDMI or Dante
HDMI Audio Channel	8ch
Dante Audio Channel	2ch
Dante Audio Sample Rate	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
Audio Breakaway	Supported
LATENCY	
Latency	<2 ms Scaling adds one frame of latency
Video/Audio Switching Stream-to-Stream	Near Seamless with recommended settings
COMMUNICATIONS	
Ethernet	10/100/1000 Mbps, auto-negotiating, auto-sensing, full/half duplex, DHCP and Static IP
***Note**	Jumbo Frames Required
HDMI	HDCP, EDID management
PORTS	
P0 PoE+ (Female)	10/100/1000Base-T Ethernet Port Provides network connection, network audio/video, and power
RS232 (Female)	3-pin terminal Phoenix connector *See Manual
HDMI OUT (Female)	Video output

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CONTROLS AND INDICATORS - FRONT	
ID Button	Flush 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 via PoE+
STATUS LED	On (green) when there is software activity
STREAM LED	On (green) when the unit is receiving streaming video
HDMI LED	On (green) when the unit is communicating with a display
POWER SUPPLY	
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, 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	2.16 lbs (Approx. 0.97 kg)
Shipping Weight	2.67 lbs (Approx. 1.21 kg)
Regulatory Compliance	FCC, CE, KCC, UKCA, and UL (Including 2043)
SKU	BSS-VD610

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