Soundweb™
OMNI

# OMNI-VE-610

5K60 MWC/Dante AV-A Encoder

The BSS OMNI-VE-610 is an AV-over-IP encoder for distributing 5K60 video, audio, and control 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-610 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.

Along with high-performance networked AV distribution, the OMNI-VE-610 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.

The OMNI-VE-610 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 presentations, and open APIs for third-party control.

## FEATURE HIGHLIGHTS

- AV-over-IP encoder for 5K60 video, audio, and control over Gigabit Ethernet
- High-performance MWC codec delivers pristine-quality video with ultra-low latency
- HDMI input
- Dante AV-A enables interoperability with third-party networked AV decoders, plus system management from Dante Controller, Dante Domain Manager, and Dante Director
- Two-channel Dante audio output
- Video preview from the built-in web interface or a touch panel
- Supports custom image 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

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## GENERAL SPECIFICATIONS

| | |
|---|---|
| **VIDEO** | |
| **Digital Video Input** | 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, 4K, and 5K<br>*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 (5K60 is 4:2:0) |
| **HostPlay** | Single Image |
| **AUDIO** | |
| **Input Signal Types** | Embedded audio on HDMI |
| **Output Signal Types** | PCM or Dante |
| **HDMI Audio Channel** | 8ch |
| **Dante Audio Channel** | 2ch |
| **Dante Audio Sample Rate** | 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz |
| **LATENCY** | |
| **Latency** | <2 ms |
| **Video/Audio Switching Stream-to-Stream** | Near Seamless with recommended settings |
| **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** | HDCP, EDID management |
| **PORTS** | |
| **P0 PoE+** | 10/100/1000Base-T Ethernet Port<br>Provides network connection, network audio/video, and power |
| **RS232** | 3-pin terminal Phoenix connector<br>*See Manual |
| **HDMI IN** | Video Input |

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## GENERAL SPECIFICATIONS

| CONTROLS AND INDICATORS - FRONT | |
|---|---|
| **ID Button** | Flush pushbutton<br>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).<br>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 streaming video |
| **HDMI LED** | On (green) when the unit is communicating with a source |
| **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)<br>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<br>Currently the device relies on a 1-event, OSI Layer-1 negotiation for power.<br>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. 0.98 kg) |
| **Shipping Weight** | 2.67 lbs (Approx. 1.21 kg) |
| **Regulatory Compliance** | FCC, CE, KCC, UKCA, and UL (Including 2043) |
| **SKU** | BSS-VE610 |

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