

## Application Note

# Input/output extension of IX amplifiers and MXE Matrix Mix Engines with Auvitrان Dante panels

**IX amplifiers** and **MXE Matrix Mix Engines** are equipped with an **OMNEO Dante OCA network interface** for interfacing to **other systems**, using an **Ethernet network**.



Image 1: MXE rear view



Image 2: IX rear view (8 channel model shown)

The **network interface** (*OMNEO Dante OCA*) can be found on the **IX's** and **MXE's** rear panel.

- In case of the **MXE** matrices, it offers **three network ports** in total: **CONTROL**, **PRIMARY** and **SECONDARY**.
- In case of the **IX** amplifiers, it offers **two network ports** in total: **PRIMARY (PoE)** and **SECONDARY**.

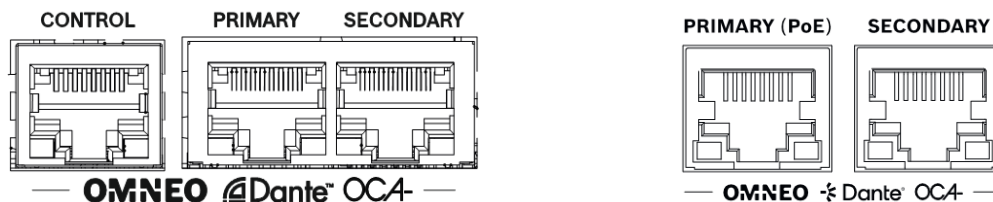


Image 3 and 4: MXE (left) and IX (right) OMNEO Dante OCA network interface detail view

## IX network interface

The **IX network interface** can be configured in **three different modes**:

- **Transparent:** both ports on the same internal VLAN
  - o For simple star or line network topologies
- **RSTP:** both ports on the same internal VLAN, RSTP protocol active
  - o For direct integration into ring or mesh network topologies running in RSTP mode
- **Glitch-Free:** PRIMARY (PoE) on one, SECONDARY on a separate internal VLAN
  - o For integration to OMNEO or Dante networks based on separate Primary and Secondary networks

The **PRIMARY (PoE)** port can be used to **power** the **IX's DSP** and **network interface** permanently **via PoE** to keep it up and running in case of a **mains fail**.

## MXE network interface

The **MXE network interface** can be configured in **three different modes**:

- **Transparent:** all three ports on the same internal VLAN
  - o For simple star or line network topologies
- **RSTP:** all three ports on the same internal VLAN, RSTP protocol active
  - o For direct integration into ring or mesh network topologies running in RSTP mode
- **Glitch-Free:** CONTROL and PRIMARY on the same, SECONDARY on a separate internal VLAN
  - o For integration to OMNEO or Dante networks based on separate Primary and Secondary networks

The **CONTROL** port offers a **built-in Dante multicast filter** and is thus optimized for control purposes, for example via **WiFi** using an **access point** connected directly to it.

## Requirements for using SONICUE with MXE and Dante

**MXE Matrix Mix Engine** with firmware version 1.0.2561 (or higher)

**SONICUE Sound System Software** 1.2.0 (or higher) installed on computer

## Requirements for using SONICUE with IX and Dante

**IX amplifier** with firmware version 1.0.0 (or higher)

**SONICUE Sound System Software** 1.5.0 (or higher) installed on computer

## Abstract

This application note gives an overview of Dante break-in and -out products available from Auvitrán. A selection of products has been tested with Dynacord MXE matrices and IX amplifiers.

For full detail on product specifications and configuration, please visit the manufacturer's website [www.auvitran.com](http://www.auvitran.com).

## 1. Auvitran AV-WALL series

*“The **AV-WALL-DT4i** and **AV-WALL-DT4o** are cost-effective **wall box** in an incredible **small size** of less than 45x45mm.”* (Auvitran website)

The individual models differ in the type and number of inputs and outputs.

All models have **built-in DSP** with a **Mixing** section.

AV-WALL models support a variety of sample rates. With **IX** amplifiers and **MXE** matrices use **48** or **96 kHz sample rate** at **24 Bit resolution**.

### 1.1. AV-WALL DT2i-B

*“The **AV-WALL-DT2i-B** is a compact and cost-effective **BlueTooth to Dante** audio network interface wall plate. It has an internal **stereo BlueTooth input** linked to **2 Dante channels** and level adjustment can be carried out remotely by 1dB step. The AV-WALL-DT2i is **PoE**, therefore you only need one Cat5e/6 cable to connect the power, control and transmission.”* (Auvitran website)



Image 5: AV-WALL DT2i-B

### 1.2. AV-WALL BT-EXT (not shown)

The **AV-WALL-BT-EXT** is an add on hardware feature that **adds Bluetooth audio** connectivity to the **DT4i** collection. *“With the AVS Monitor software, controlling and setting parameters is easily accessible and has different levels of functionality.”* (Auvitran website)

### 1.3. AV-WALL DT4i

*“The **AV-WALL-DT4i** is a compact and cost-effective **Dante Mic/Line** audio network interface wall plate. It has an **internal mixer** feature which allows up to 4 lines of audio line mixing to 4 Dante channels. The AV-WALL-DT4i allows for **Mic pre-amplification** adjustments can be carried out either remotely or locally and can be adjusted by 1dB step. The AV-WALL-DT4i is **PoE**, therefore you only need one Cat5e/6 cable to connect the power, control and transmission.” (Auvitrان website)*



Image 6: AV-WALL DT4i

### 1.4. AV-WALL DT4i-LE

*“The **AV-WALL-DT4i-LE** has the same technical features as the DT4i without the rotation push button for local access and control.” (Auvitrان website)*



Image 7: AV-WALL DT4i-LE

### 1.5. AV-WALL DT4o-B

*“The **AV-WALL-DT4o-B** is a single-gang wall mounted **Dante**” to analog line “and **Bluetooth output** audio interface. The compact design provides a flexible and easy to use installation solution. It is PoE enabled so you only require one Cat5e/6 cable to connect the power, control and transmission.” (Auvitrان website)*



Image 8: AV-WALL DT4o-B

### 1.6. AV-WALL DT4o-LE

*“The **AV-WALL-DT4o-LE** has a **stereo minijack output** to replace the Bluetooth output without OLED screen or rotation button. With a dedicated software and control page (AVS Monitor) monitoring, controlling and setting parameters is easily accessible and has different levels of functionality (standard and advanced).” (Auvitrان website)*



Image 9: AV-WALL DT4o-LE

## 2. Auvitrán AVDT-BOB

*“The **AVDT-BOB** is a compact **Dante break out box** with **embedded Digital Signal Processing**.”* (Auvitrán website)

The individual models differ in the type and number of inputs and outputs and the availability of GPIOs.

All models have **built-in DSP** with **Input Processing, Mixing** and **Output Processing** sections.

All models offer a **web-interface** that can be displayed in **SONICUE’s Web-View** control.

**AVDT-BOB** models support 44.1 and 48 kHz sample rates. With **IX** amplifiers and **MXE** matrices use **48 kHz sample rate** at **24 Bit resolution**.

### 2.1. AVDT-BOB AEG6-IO

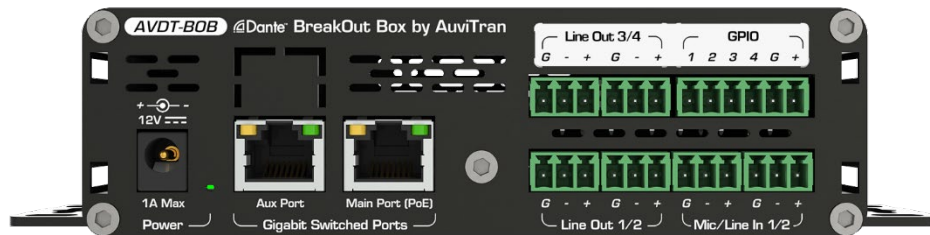


Image 10: AVDT-BOB AEG6-IO

### Inputs, outputs and GPIOs

**AVDT-BOB-AEG6io** 2xRJ45 (1xPOE) and **2x Mic/Line Inputs + 4x Line Outputs + 4x GPIO** on Euroblock

### 2.2. AVDT-BOB – Other available models

**AVDT-BOB-AE4io** 2xRJ45 (1xPOE) and **2x Mic/Line Inputs + 2x Line Outputs** on Euroblock

**AVDT-BOB-AE8io** 2xRJ45 (1xPOE) and **4x Mic/Line Inputs + 4x Line Outputs** on Euroblock

**AVDT-BOB-ADE8io** 2xRJ45 (1xPOE) and **2x Mic/Line Inputs + 2x Line Outputs + 4x GPIO + 1x stereo AES3 Input + 1x stereo AES3 Output** on Euroblock

**AVDT-BOB-AS8io** 1x Neutrik EtherCon (PoE) + 2xSFP cages and **4x Mic/Line Inputs + 4x Line Outputs** on DSub

**AVDT-BOB-ADX8io** 1x Neutrik EtherCon (PoE) + 2xSFP cages and **1x stereo AES3 Input + 1x stereo AES3 Output + 4x GPIO** on DSub on rear side and **2x Mic/Line Inputs + 2x Line Outputs** on XLR3 on front side

### 2.3. SONICUE Web-View Control

SONICUE's **Panel Designer** catalog offers a **Web-View** control that is intended to display a **website** or **web-UI** (web user interface), for example of a **3<sup>rd</sup> party** product such as **Auvitrans AVDT-BOB**.

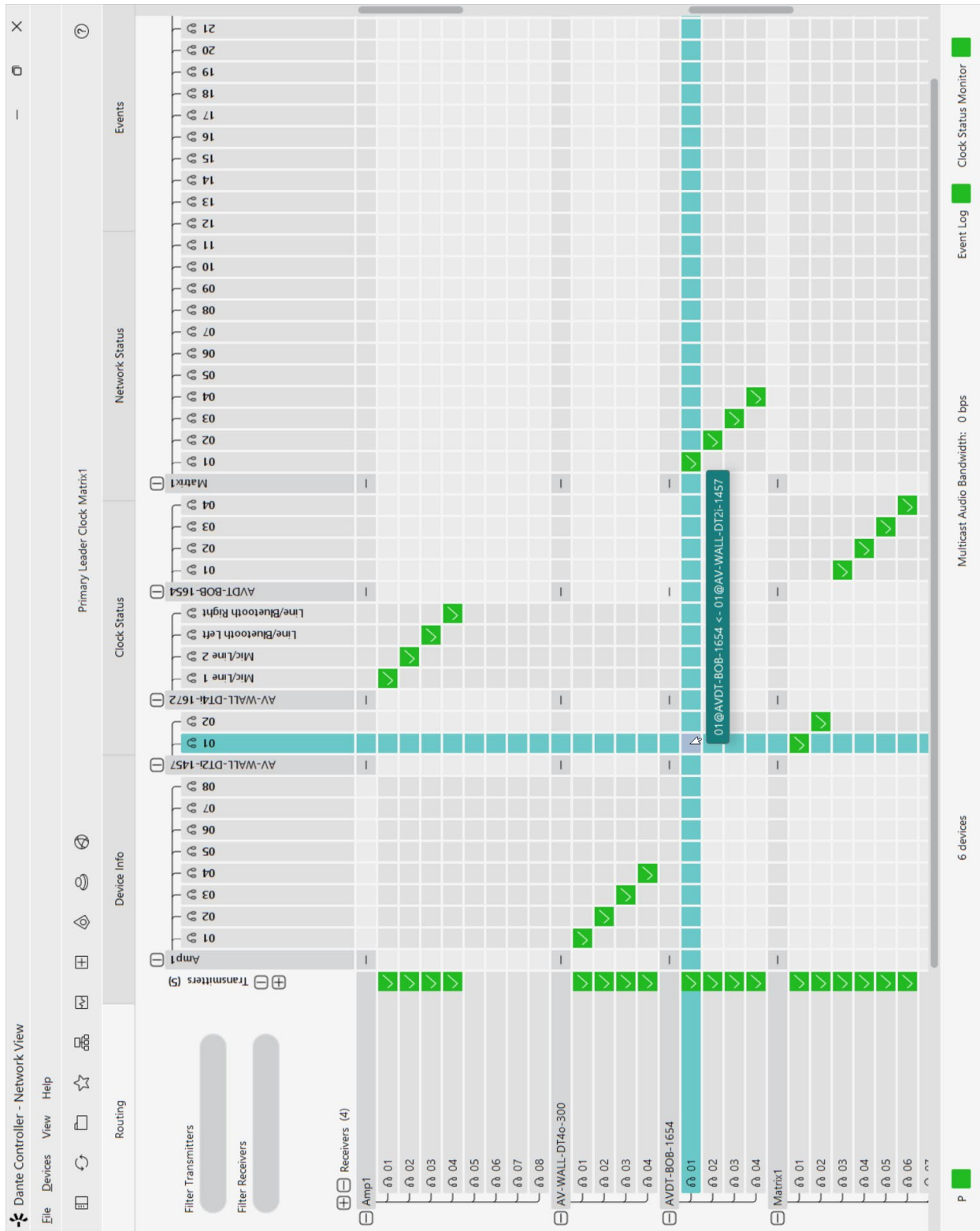


**Image 11:** SONICUE panel created with PanelDesigner displaying the web-UI of an Auvitrans AVDT-BOB

**Important:** the web-interface is only available for Auvitrans AVDT-BOB, not for AV-WALL!



### 3. Dante Controller with Dynacord MXE and IX and Auvitran AV-WALL and AVDT-BOB



**Image 12:** Dante Controller with Dynacord MXE and IX and Auvitran AV-WALL-DT2i, -DT4i, -DT4o and AVDT-BOB



### 3.1. Dante Controller > Device Config for AV-WALL (use 48 or 96 kHz 24 Bit)

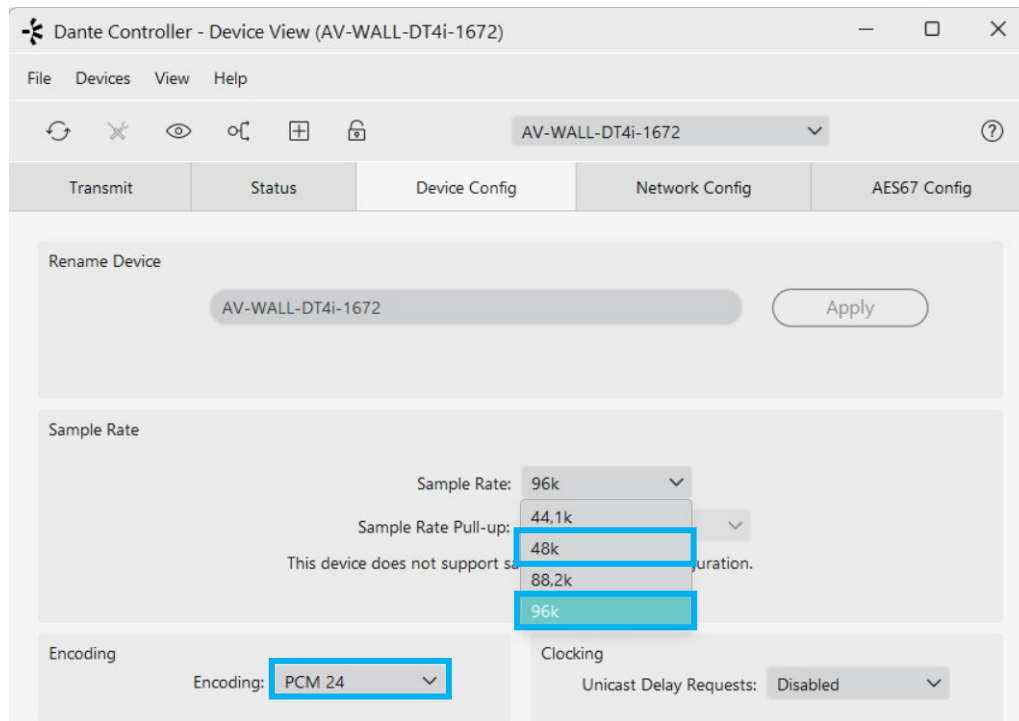


Image 13: Dante Controller > Device Config for AV-WALL

### 3.2. Dante Controller > Device Config for AVDT-BOB (use 48 kHz 24 Bit)

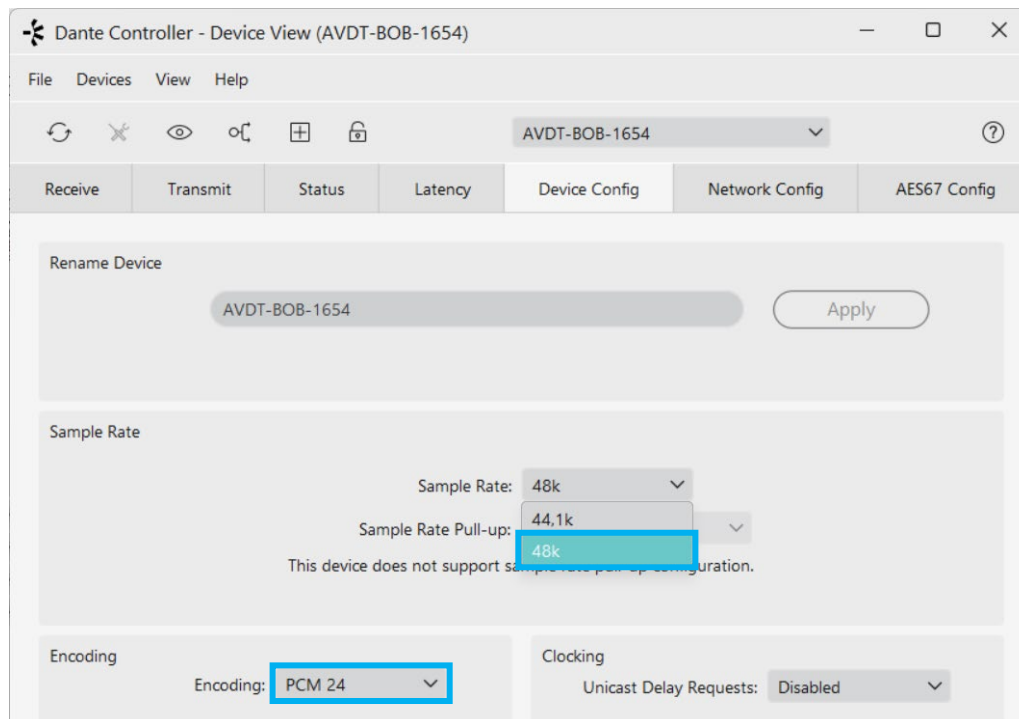


Image 14: Dante Controller > Device Config for AVDT-BOB

**Third party product disclaimer:**

Dynacord does not take responsibility for the warranty, quality or availability of Auvitran products. The Auvitran products contained within this document were tested successfully at the time of publication. However, Dynacord cannot guarantee the compatibility with future models or variations of Auvitran products, as these may not be compatible. Please refer to the Auvitran website for product specific information.