# biamp.

# Tesira®

**Tesira Modular
Expander (EX-MOD)
OPERATION MANUAL**

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The Tesira® EX-MOD is a modular expander device that is designed for use with Tesira SERVER, SERVER-IO, and TesiraFORTÉ AVB devices. It can be configured with up to three 4-channel input and/or output expander cards for a maximum of 12 channels of I/O. The cards include EIC-4 (4 channels of mic/line level audio input), EEC-4 (4 channels of mic/line level audio input with AEC (acoustic echo cancellation)), EOC-4 (4 channels of mic/line level audio output) and EIOC-4 (2 input and 2 output of mic/line level audio). The EX-MOD expander communicates with the Tesira AVB network for audio networking, configuration, and control.
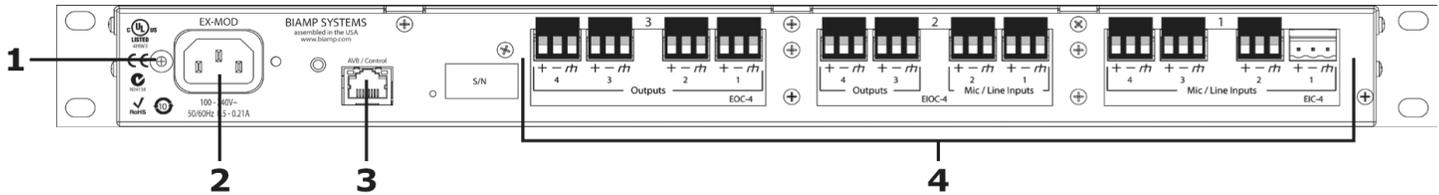
**Setup and Use**
The Tesira software provides an intuitive interface for setup and programming of the EX-MOD. The information supplied by this manual relates to physical connections and device setup. For more details on software setup, please consult the Tesira Help File.

**LED Status Indicators**
Four multi-color LEDs on the front panel of the device provide information about the status of the device and the greater Tesira system.
- Power – Reports power of the host device and Front Panel Display.
- Alarm – Reports abnormal conditions local to the host device.
- Activity – Reports the activity of host device within the greater system.
- Status – Reports the status of host device.

| LED | Off | Green | Yellow | Red |
|---|---|---|---|---|
| Power | Unit is not powered | Unit is powered | Not applicable | Not applicable |
| Alarm | No fault is active in the device | Not applicable | Minor fault is active in the device | Major fault is active in the device |
| Activity | Not applicable | The host device is an active part of an active system | Not applicable | The host device is part of an inactive system (Audio is stopped) or host device is not part of a system |
| Status | Not applicable | Device has received its configuration and is ready to participate in the system | Device is ready and waiting to receive a configuration | Device is not ready to receive its configuration |

## 1. Grounding pin

This pin is for grounding the chassis of the expander

## 2. AC Power inlet

## 3. AVB/Control Connection

Uses a standard RJ-45 connector with CAT-5, CAT-5e, CAT-6 or CAT-7 cabling.

This connection is for sending and receiving AVB audio signals as well as sending and receiving data between the expander device and the Tesira system. An expander will not operate if it is not on a network that includes a Server-Class Tesira device.

The maximum distance between any unit and an Ethernet switch is 328 feet (100 meters).

## 4. Audio Slots

These slots may be optionally factory loaded or field loaded with EX-MOD audio cards. The audio connection on the cards are electrically balanced and are configured for use with shielded-twisted-pair wiring. The wires are to be terminated in the three-pin removable connectors according to the wiring diagram shown on the unit. The wiring diagram is also displayed on the connectors themselves. The connectors may then be inserted into the mating connectors on the expander. In the illustration above, channel one on the card in Slot 1 is shown without the removable connector inserted (far right connector).

### EIC-4 Card

The Tesira EIC-4 is an expander card with four analog input channels for use with the Tesira EX-MOD device. The EIC-4 is one of three optional cards that can be mounted in Tesira EX-MOD. Each EIC-4 provides four channels of mic/line level audio input. The inputs are electrically balanced and provided on plug-in barrier strip connectors. Software control of each input includes gain with clip indicator, +48V phantom power, mute, level and signal invert.

### EEC-4 Card

The Tesira EEC-4 expander card is an optional card that can be installed in the Tesira EX-MOD. Each EEC-4 provides four channels of mic or line level audio input with AEC (Acoustic Echo Cancellation). The inputs are electrically balanced and provided on plug-in barrier strip connectors. Software control of each input includes gain with clip indicator, +48V phantom power, mute, level, and signal invert.

### EOC-4 Card

The Tesira EOC-4 is an expander card with four analog output channels for use with the Tesira EX-MOD device. The EOC-4 is one of three optional cards that can be mounted in Tesira EX-MOD. Each EOC-4 provides four channels of line level audio output. The outputs are electrically balanced and provided on plug-in barrier strip connectors. Software control of each output includes mute, level, signal invert and full-scale output reference.

### EIOC-4 Card

The Tesira EIOC-4 is an expander card with two input and two output channels for use with the Tesira EX-MOD device. The EIOC-4 is one of three optional cards that can be mounted in Tesira EX-MOD. Each EIOC-4 provides two channels of mic/line audio input and two channels of line level audio output. The inputs and outputs are electrically balanced and provided on plug-in barrier strip connectors. Software control of each input includes gain with clip indicator, +48V phantom power, mute, level and signal invert. Software control of each output includes mute, level, signal invert and full-scale output reference.