



**biamp.**

**Tesira<sup>®</sup>**

**EX-UBT AVB/USB EXPANDER  
OPERATION MANUAL**

SEPTEMBER 2018



The EX-UBT is an AVB/USB expander for use in Tesira® systems. It provides reliable digital audio I/O via USB in installations currently served by USB extenders where the USB connection distance exceeds the maximum allowable cable length of 5 meters. The EX-UBT may also be used in situations requiring multiple USB audio inputs, or to retrofit existing Tesira installations that do not currently provide USB audio capabilities, such as those using Tesira SERVER or SERVER-IO as their DSP. Powered by PoE, the EX-UBT also supports **Bluetooth®** wireless technology, which is configured through Tesira software. The EX-UBT uses Bluetooth wireless technology to provide a cable-free solution for several use cases, including but not limited to: teleconferencing using soft codecs or cell phone and supplying background music to a Tesira system. The EX-UBT is well suited for a variety of room types and sizes that require USB audio, such as conference rooms or multi-purpose spaces.

### Features

- Supports up to 8 channels of configurable USB audio
- Supports Bluetooth Wireless Technology
- LED indicators for power and wireless status
- Configurable via Tesira software
- PoE powered
- CE marked, UL listed and RoHS compliant
- Covered by Biamp Systems five-year warranty

### Setup and Use

The Tesira software provides an intuitive interface for setup and programming of the EX-UBT. 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.

The EX-UBT is compact and lightweight and may be easily mounted in a variety of locations for the convenience of end-users. The EX-UBT comes with two mounting holes to secure the unit with hardware if desired. The EX-UBT is supplied with a 4.5 ft (1.4 m) USB cable.

**IMPORTANT NOTE:** The EX-UBT is a Power Over Ethernet device which classifies as 802.3at Class 2 (7W). When connecting the EX-UBT directly to a TesiraFORTE or Tesira Server-IO AVB port, **the mid-span PoE injector must support 1 Gbps data link speed**. If the mid-span PoE injector does not support 1 Gbps, the EX-UBT power LED will illuminate steady yellow but the LED on the AVB RJ45 port will remain dark indicating no data activity.

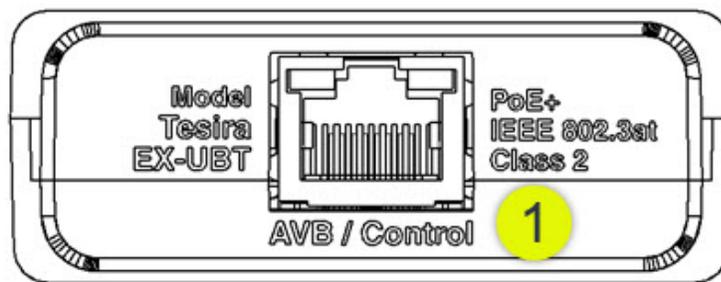


Figure 1 AVB/Control

#### 1. AVB/Control

Facilitates connection to the Tesira AVB network for audio and control and supports a standard RJ-45 connector.

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. The EX-UBT expander will only operate on a network that includes a Tesira DSP Audio device. The EX-UBT is powered by PoE+ (IEEE 802.3at Class 2, 7W).

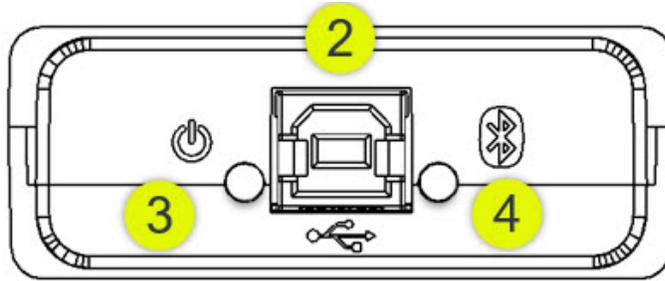


Figure 2 USB/Status LEDs

## 2. USB Type-B Connection

Facilitates connection to a 3<sup>rd</sup> party device that is USB Audio Class 1 compliant. Some USB function and setup (including driver installation) may be performed from a 3<sup>rd</sup> party device. See the Tesira help file for more information.

## 3. Power/Status LED

A multi-color LED provides information about the status of the device.

Status	LED Indicator
No power / Unit is unconfigured	Off
Device is powered but not ready to receive its configuration information	Red Solid
Ready to receive configuration or updating firmware	Yellow Solid
Configured and ready to participate in the system	Green Solid
Unit is in Select/Locate mode (triggered from the software)	Green Flashing
Unit has Major Alarm condition	Red Flashing
Unit has Minor Alarm condition	Yellow Flashing
Unit has both a Major and Minor Alarm condition	Red & Yellow Flashing

#### 4. Bluetooth Wireless Technology

The EX-UBT features Bluetooth wireless technology that allows 3rd party control of Tesira systems and can cache up to 32 paired devices. All setup is done in the Tesira software.

A multi-color LED provides information about the status of the Bluetooth connection:

Status	LED Indicator
Bluetooth disabled, unit is in Select/Locate mode, or the unit is updating firmware.	Off
Bluetooth discoverable	Blue flashing
Bluetooth connected	Blue solid
Bluetooth module fault detected (error during initialization or when communicating with the Bluetooth module)	Red solid

Bluetooth pairing may also be made via pre-configured Near Field Communication (NFC) tags. NFC tags allow users with NFC capable/enabled devices to quickly pair with the EX-UBT by tapping the device on the tag. Instructions for enabling the NFC function will vary by device, but at the time of publication, Apple® devices do not support NFC compatibility with non-Apple products.



Figure 3 NFC Tag

The EX-UBT comes with two NFC tags that may be placed wherever is convenient for users.

## 5. Wiring

Connections to the Tesira network are made with CAT5e cabling or better. For USB connections to a 3<sup>rd</sup> party device, a USB type B cable is required.

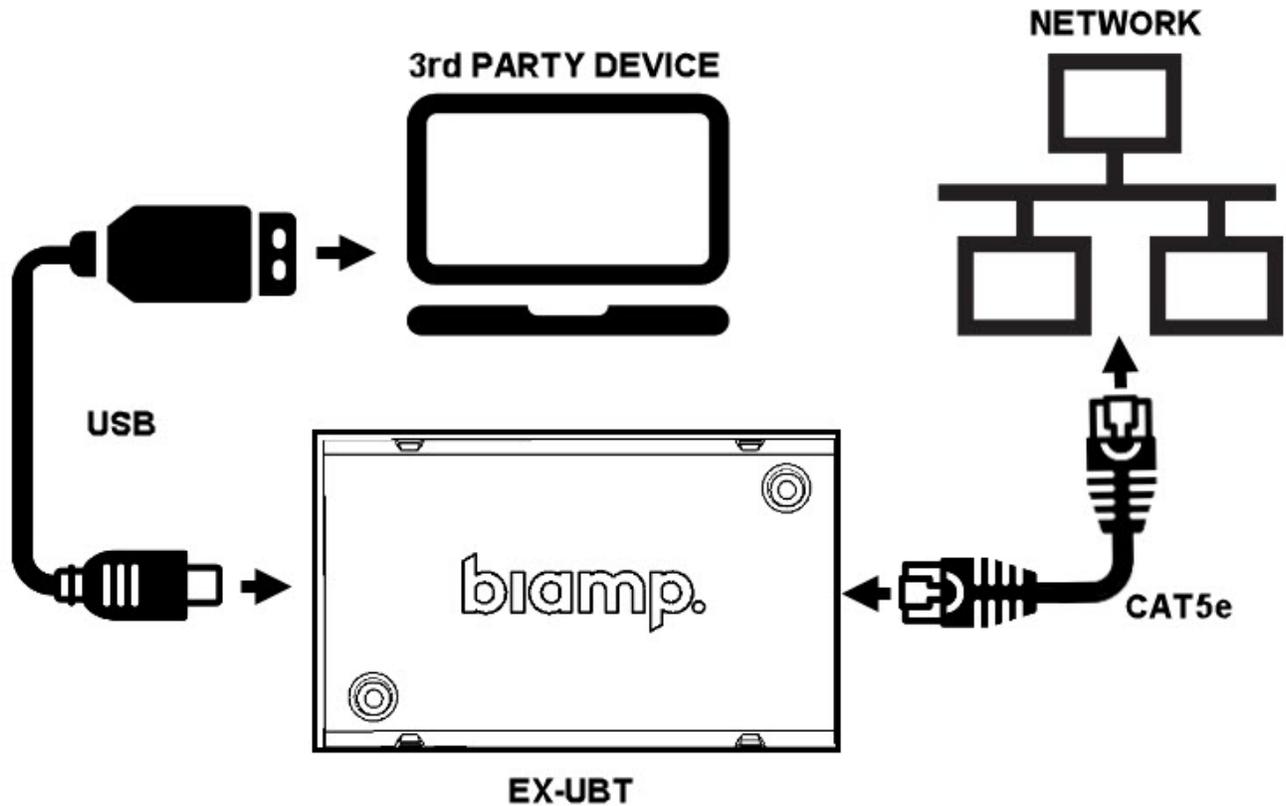


Figure 4 EX-UBT Wiring Diagram

*The Tesira EX-UBT does not connect with Telecom Network Voltage (TNV) circuitry and is considered a Network Environment Zero device*

### Mounting & Installation

#### General Mounting and Installation Notes

- The maximum distance between the Tesira DSP audio device and the EX-UBT is 330 feet (100 meters).
- The USB cable supplied with the EX-UBT is 4.5 ft (1.4 m) long.
- The EX-UBT is suitable for mounting in any location which is convenient for a user. Note that dense material such as metal and concrete may interfere with Bluetooth connectivity.

The EX-UBT is designed with two through-holes to accommodate hard-mounting to a surface (such as under a conference table) if desired. The device is compact and lightweight allowing for numerous mounting options.

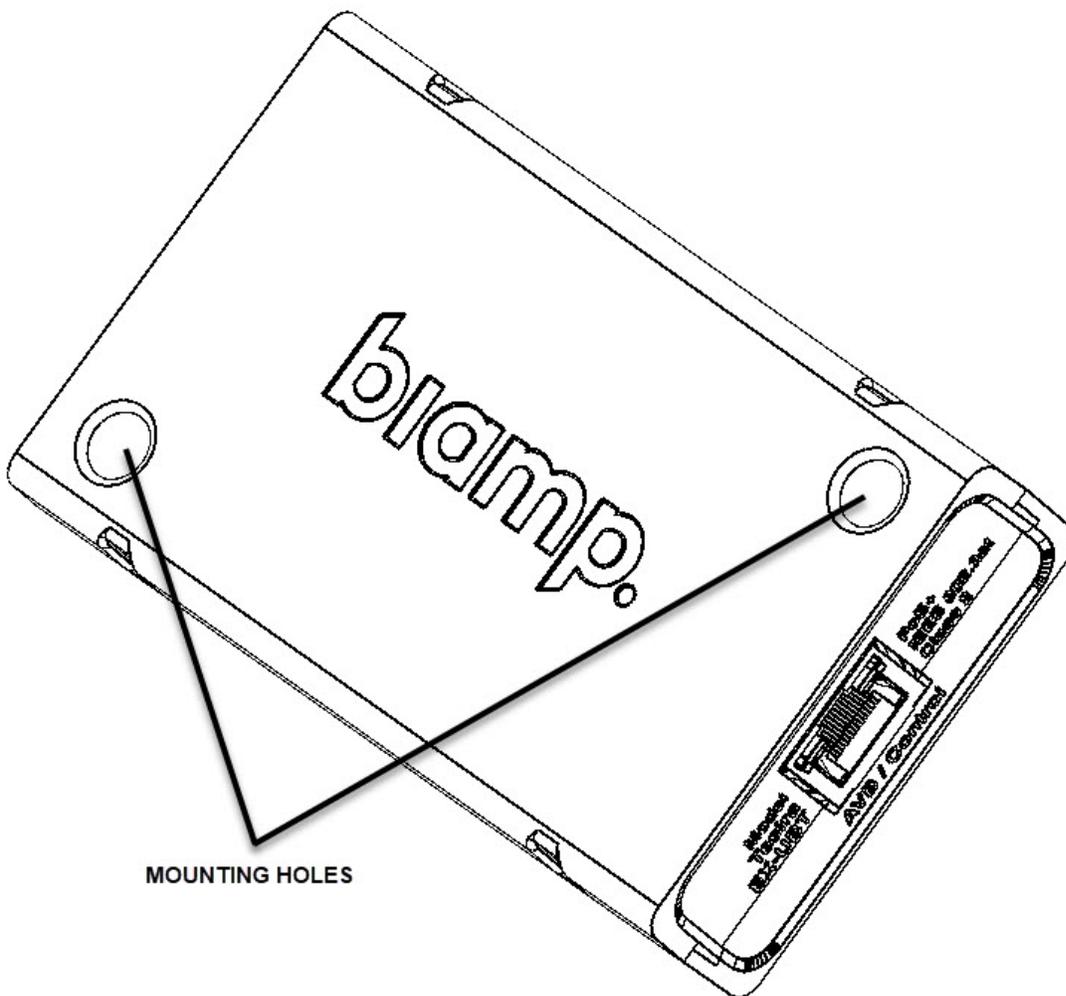


Figure 5 EX-UBT Hardware Mounting

**FCC Part 15 –**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) this device must accept any interference received, including interference that may cause undesired operation.

The following applies to products with a telephone interface:

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the rear of this equipment is information that contains a product identifier in the format US:6RMEQ##TXXXX. If requested, this number must be provided to the telephone company.

This equipment is designed for modular connection with Jack Universal Service Order Codes RJ-14C, RJ-14W. A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA.

**CAUTION:** To reduce the risk of fire, use only No. 26 AWG or larger (e.g., 24 AWG) UL Listed or CSA Certified Telecommunication Line Cord.

The Ringer Equivalence Number (REN) is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:6RMEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

This equipment is not user serviceable. If trouble is experienced with this equipment, for repair or warranty information, please contact Biamp Systems, LLC, phone number 503.641.7287. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your facility has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.