

Product	Function
<b>Tesira SERVER-IO</b> (1) AVB-1 card, (6) SVC-2 cards, (3) SEC-4 cards	Handles digital signal processing and routing for all of the boardrooms and conference rooms. Also provides connection to the corporate VoIP system.
<b>Tesira AMP-450P</b>	4-channel PoE+ amplifier provides amplification in each boardroom.
<b>Tesira EX-UBT</b>	AVB/USB adapter provides remote USB audio capabilities, while Bluetooth® technology allows users to transition a phone call from a mobile device to the conference room system.
<b>Tesira TCM-1</b>	AVB Beamtracking microphone provides extraordinary audio quality to the far end; allows people to move around freely by dynamically tracking them.
<b>Tesira TCM-1A</b>	AVB Beamtracking microphone that provides extraordinary far end audio and also provides amplification for ceiling loudspeakers in the small and medium conference rooms.
<b>Tesira TCM-1EX</b>	Expansion AVB Beamtracking microphone intended to be daisy-chained as a second and third microphone in conjunction with a TCM-1 or TCM-1A.

TESDG-370-1807-EN-R1



# SYSTEM DESIGN GUIDE

## CENTRALIZED DSP WITH BEAMTRACKING™ MICS

Tesira®

In the past, centralized DSP has not been viewed as a cost-effective solution given the number of AEC channels that were necessary. Because Beamforming arrays typically require that each lobe has its own channel of AEC, channel count could add up quickly.

To provide a better experience for end users and integrators alike, the Tesira TCM Beamtracking™ microphones have a unique, patented interaction between the AEC and tracking algorithms. The real-time adaptation of each algorithm relative to the other provides superior echo reduction performance, but also reduces per-channel AEC cost since each TCM microphone only requires one channel of AEC per pendant.

In this Corporate scenario, a single Tesira SERVER-IO provides the digital signal processing and routing for six meeting rooms of varying sizes, and also provides each room with a separate VoIP connection.

# SYSTEM DESIGN GUIDE

## CENTRALIZED DSP WITH BEAMTRACKING MICS

The TCM microphones provide exceptional audio quality to the far end while simultaneously achieving consistent room coverage. They let people act naturally in the room — stand up, sit down, face the whiteboard, or walk around the table — without negatively impacting the far-end audio quality. Unlike traditional mics, Beamtracking mics track people as they move, and don't force them to stay where the lobes are aimed.

Up to three TCM microphones can be daisy-chained together, reducing the number of cables that need to be pulled and helping you complete installations quickly.

The EX-UBT expander allows you to extend USB audio reliably throughout your entire facility. The EX-UBT also supports Bluetooth® wireless technology, allowing users to continue a mobile phone call while transitioning into a conference room.

All Tesira devices can be configured and managed via the Tesira software. The centralized Tesira SERVER-IO handles each room's DSP and VoIP functionality, supporting clear and intelligible conference calls to locations across town or across the globe.

### TESIRA TCM FEATURES

- Provides extraordinary audio quality to the far end
- Beamtracking technology actively tracks and intelligently mixes conversations
- TCM-1A model includes a 2-channel PoE+ amplifier
- Requires very little setup; there's no mic tuning or lobe aiming involved

### TESIRA AMP-450P FEATURES

- PoE+ powered; Burst mode to handle peak signals
- Software-selectable power versus channel count
- Includes internal limiter function
- Suitable for use in air handling spaces

### TESIRA EX-UBT FEATURES

- Supports up to 8 channels of configurable USB audio
- Excellent for scenarios requiring multiple USB audio inputs
- Supports Bluetooth wireless technology

### TESIRA SERVER-IO FEATURES

- Scalable, centralized DSP with the ability to support AVB, CobraNet®, and Dante™ protocols in the same chassis
- Individual AEC and AGC for each conference room and boardroom
- Provides a separate VoIP connection for each room

