biamp.

Product	Function
Tesira SERVER-IO (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.
Tesira AMP-450P	4-channel PoE+ amplifier provides amplification in each boardroom.
Tesira TCM-1	AVB Beamtracking microphone provides extraordinary audio quality to the far end; allows people to move around freely by dynamically tracking them.
Tesira TCM-1A	AVB Beamtracking microphone that provides extraordinary far end audio and also provides amplification for ceiling loudspeakers in the small and medium conference rooms.
Tesira TCM-1EX	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-370-1806-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.

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, which reduces the number of cables that need to be pulled and helps you complete installations quickly.

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
- Patented interaction between Beamtracking and AEC algorithms
- TCM-1A model includes a 2-channel PoE+ amplifier
- They require 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 SERVER-IO FEATURES

- Scalable, centralized DSP with the ability to support AVB, CobraNet®, and Dante™ protocols in the same chassis
- Audio routing across the entire company network
- Individual acoustic echo cancellation and automatic gain control for each conference room and boardroom
- Provides a separate VoIP connection for each room

	Tesira (AVB/TSN)
	VoIP Network
	Network/Control
	Analog I/O

TESIRA AMP-450P

TESIRA AMP-450P

TESIRA TCM-1EX

TESIRA TCM-1EX

TESIRA TCM-1

TESIRA TCM-1

TESIRA TCM-1EX

TESIRA TCM-1EX

VoIP NETWORK

CISCO CATALYST 3850-48XS SWITCH

TESIRA SERVER-IO

TESIRA TCM-1A

TESIRA TCM-1EX

TESIRA TCM-1A

TESIRA TCM-1EX

TESIRA TCM-1A

TESIRA TCM-1A