



SYSTEM DESIGN GUIDE

AUDITORIUM

Tesira®, Modena®, and Community®

Auditoriums have been in use for over 2500 years. Originating in ancient Greece, the performance space was circular and situated on a flattened terrace at the foot of a hill, the slope of which produced a natural “theatron” (“seeing place”). Today, auditoriums can be found in entertainment venues, community halls, and theaters, and may be used for rehearsals, concerts, performing arts productions, public meetings, lectures, and more.

Each use case brings a discrete set of requirements, which makes designing the AV system equal parts science and art. Flexibility is critical. For instance, live performances can involve a significant number of wireless microphones but no need for lip sync, while lectures involve only a small number of inputs but may have a significant need for tightly integrated lip sync. Other aspects that increase design complexity may include sound reverberation and decay, mixed building materials and their impact on sound absorption/reflection, and temperature gradients.

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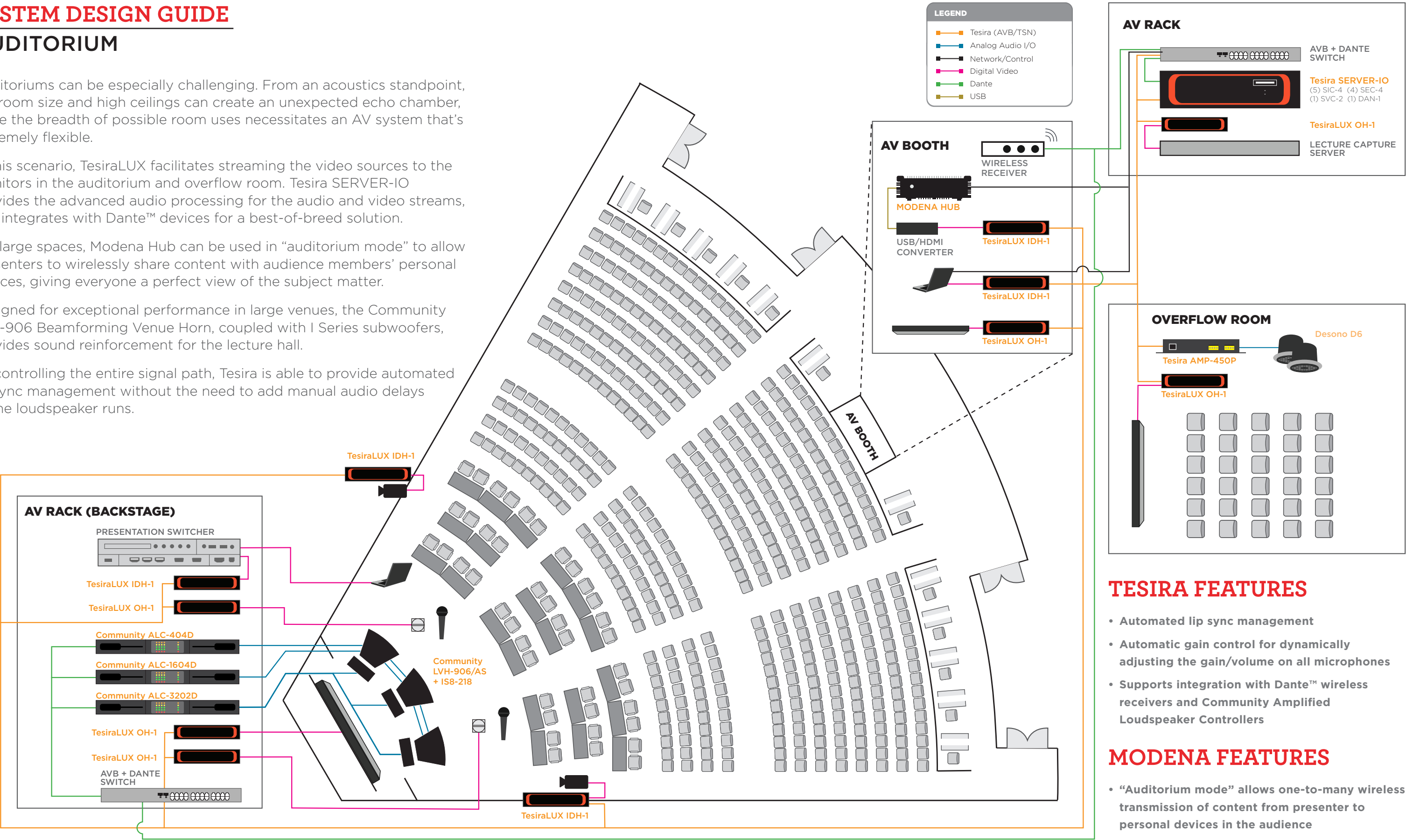
Auditoriums can be especially challenging. From an acoustics standpoint, the room size and high ceilings can create an unexpected echo chamber, while the breadth of possible room uses necessitates an AV system that’s extremely flexible.

In this scenario, TesiraLUX facilitates streaming the video sources to the monitors in the auditorium and overflow room. Tesira SERVER-IO provides the advanced audio processing for the audio and video streams, and integrates with Dante™ devices for a best-of-breed solution.

For large spaces, Modena Hub can be used in “auditorium mode” to allow presenters to wirelessly share content with audience members’ personal devices, giving everyone a perfect view of the subject matter.

Designed for exceptional performance in large venues, the Community LVH-906 Beamforming Venue Horn, coupled with I Series subwoofers, provides sound reinforcement for the lecture hall.

By controlling the entire signal path, Tesira is able to provide automated lip sync management without the need to add manual audio delays to the loudspeaker runs.



TESIRA FEATURES

- Automated lip sync management
- Automatic gain control for dynamically adjusting the gain/volume on all microphones
- Supports integration with Dante™ wireless receivers and Community Amplified Loudspeaker Controllers

MODENA FEATURES

- “Auditorium mode” allows one-to-many wireless transmission of content from presenter to personal devices in the audience

EQUIPMENT LIST

Product	Function
Tesira SERVER-IO (3) DSP-2 cards (5) SIC-4 cards (4) SEC-4 cards (1) SVC-2 card (1) DAN-1 card	Handles all audio processing and routing for the auditorium and overflow room. Provides a Dante interface to the wireless microphone receiver, and Community ALCs. The SVC-2 card provides a VoIP interface for broadcasting the audio to remote participants.
TesiraLUX IDH-1	Acts as an AVB talker. Processes video signals from cameras, laptops, and media players.
TesiraLUX OH-1	Acts as an AVB listener. Outputs networked video to displays.
Tesira AMP-450P	Provides PoE-based amplification to ceiling loudspeakers in the overflow room.
Modena Hub	Allows presenters to wirelessly transmit content to up to 150 personal devices in the audience.
Desono D6	Provides high performance sound reinforcement in the overflow room.
Community LVH-906/AS	Provides the highest output, widest bandwidth, and most consistent coverage of any large format point source loudspeaker on the market.
Community IS8-218	Subwoofers that are mounted horizontally behind each LVH-906 for full low frequency support.
Community ALC-404D	Provides amplification to the LVH-906 in the auditorium (1 required for each LVH-906).
Community ALC-1604D	Provides amplification to the LVH-906 in the auditorium (1 required for each LVH-906).
Community ALC-3202D	Provides amplification to the subwoofers in the auditorium.

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