



ART::HUB 1

SMALL SPACES, BIG IMPACT

Overview

Experience the power of precision and flexibility with ART::Hub 1, the insignia hardware of the ART::Compact Line. Designed specifically for smaller spaces and applications, ART::Hub 1 offers a streamlined solution that delivers big impact. Whether enhancing room acoustics or creating immersive soundscapes, ART::Hub 1 adapts effortlessly to meet the needs of compact projects, ensuring exceptional audio quality in every setting.

Compact Power for Precision Audio

With a sleek 1RU server design and robust Dante I/O capabilities, the ART::Hub 1 provides seamless integration for small-scale audio installations. Able to host the ART::Acoustics Compact and ART::Immersive Compact software modules, this turnkey solution delivers active acoustic enhancement and immersive audio for smaller venues with precision. Featuring automatic system calibration and intuitive controls, the ART::Hub 1 ensures every sound is heard with clarity and detail.

KEY BENEFITS

- Tailored for smaller spaces
- Works with existing audio systems
- Use with any loudspeaker brand
- A turnkey solution with all necessary functions included
- Automatic system calibration simplifies setup and operation

SPECIFICATIONS

Product Name	ART::Hub 1
Active Acoustics Inputs	Up to 16
Immersive Audio Inputs	Up to 32 dynamic, 16 static
Simultaneous Active Acoustics & Immersive Audio	Yes
Loudspeaker Outputs	Up to 32
Active Acoustics Processing	Compact
Immersive Audio Processing	Compact
Sample Rate	48 kHz (with current version), soon available in 96kHz
Server Grade Hardware	Medical Grade 24h Operation
Redundant Power	1x 100-240 VAC 400 W (80+)
Warranty	2 years
Dimensions	44 mm x 482 mm x 430 mm (1U x 19" x 16.93")

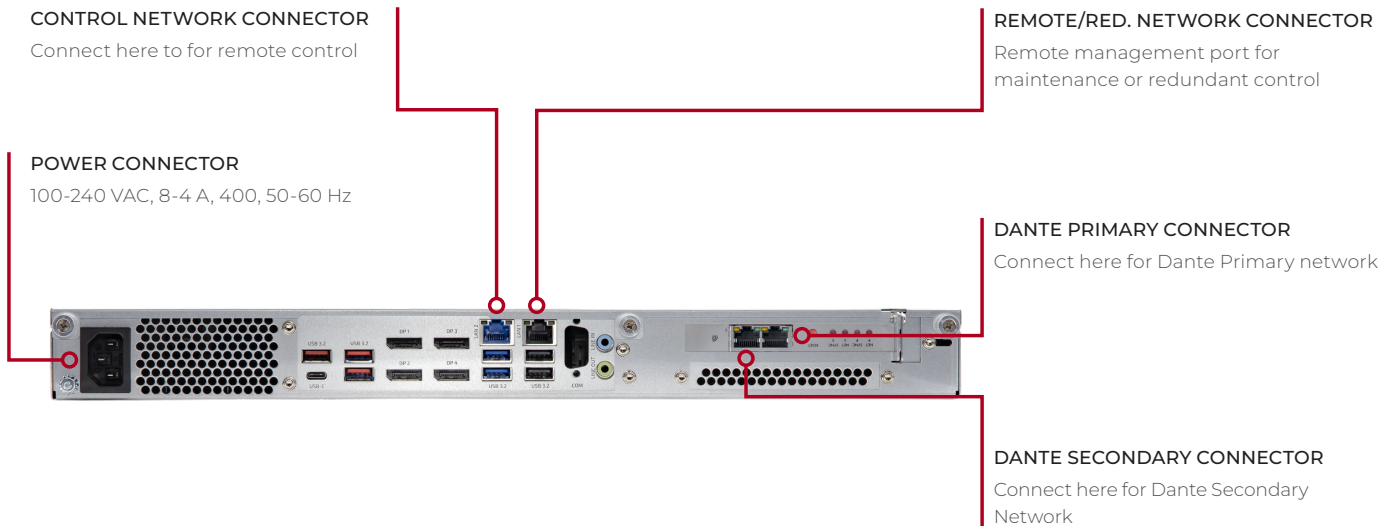
WHERE SOUND MEETS ART

AMADEUS::ART

A comprehensive ecosystem of software, hardware, services and content, for a range of applications from immersive audio experiences to advanced room acoustics.

SOFTWARE | HARDWARE | SERVICES | CONTENT

- Hardware based on your processing and connectivity requirements
- Add software modules for active acoustics and immersive audio
- Combine our expertise where needed from design/tuning/ongoing maintenance
- Use our growing selection of content for immersive audio applications



PROCESSING ELEMENTS

Input stage

MICROPHONE INPUTS:

- UDP metering
- 8-band parametric equalizers, dynamic processing, level & delay adjustment
- Vector shaping for active acoustics
- **Amadeus Autotune** for automatic input tuning
- Relative input grouping for all parameters
- Copy/paste for all parameters
- Proprietary feedback control for extreme acoustical settings (e.g., cathedral-like acoustics)

IMMERSIVE AUDIO INPUTS:

- OSC Control for position, size and algorithm
- Proprietary Plugin for all DAW for source control
- Integration for Q-Sys, Q-lab, Grapes and a number of mixing consoles

Acoustic Module

GEOMETRIC VECTOR ENGINE:

- **Room-Specific Acoustic Modeling:** Creates a unique 3D acoustic signature based on the venue's inherent passive characteristics
- **Hybrid Regenerative System:** Enhances natural reverberation seamlessly

MULTICHANNEL GEOMETRIC REVERB ENGINE:

- **High-Resolution Reverb:** up to 32-channel decorrelated algorithmic reverb using neutral Feedback Delay Networks (FDNs)
- **Passive Room Integration:** Merges reverb output with the room's natural acoustics for a smooth blend
- **Compact Parameter Control:** Tuning of time structure, density, envelope, shape, and spectral parameters for precise acoustic design

ROOM SHAPING:

- **Energy Distribution Control:** Independently manage sound energy from various source positions to optimize projection, whether from the stage or specific areas

TIME SHAPING:

- **Targeted Reflections:** Enhance volume and reflections precisely where needed
- **Adjustable Room Dimensions:** Scale room size geometrically

SPECTRAL SHAPING:

- **Customizable Spectral Balance:** Individually adjust tonal characteristics for the vector matrix and late reverb layers

VOICE LIFT:

- **Optimized Voice Distribution:** Advanced algorithms ensure clear and even vocal projection across the space

COMPACT ENGINE:

- **Four Acoustic Presets:** Small Room, Medium Room, Large Room and Cathedral, to cater for most acoustic situations
- **Seamless Show Integration:** Synchronize with show control systems via OSC (Open Sound Control)

Immersive Audio Module

SOUND LOCALIZATION:

- **Amadeus Amplitude Panning:** Delivers zero delay amplitude panning for immersive spatial audio

DYNAMIC MOVEMENTS:

- **Customizable Focus:** Adjust sound width and blur by targeting individual or multiple speakers for tailored audio projection

PROCESSING ELEMENTS

VIRTUAL SURROUND SOUND:

- **Immersive Layout Simulation:** Supports virtual setups including 5.1, 7.1.4 or other configurations, delivering cinematic-quality soundscapes

ENHANCED 3D BASS MANAGEMENT:

- Optimize low-frequency performance for clarity and impact, time-aligned and auto-managed depending on the source position

Output Stage

- UDP metering
- 8-band parametric equalizers, level & delay adjustment
- Vector size for active acoustics
- Relative output grouping for all parameters
- Copy/paste for all parameters
- Speaker test engine with internal oscillator

GUI

- Simplified web-based control for preset selection, meter control, and 2D venue representation

Control and Integration

- Integration for Q-Sys, Q-lab, Grapes and a number of mixing consoles and media control systems
- OSC Control for position, size and algorithm
- Proprietary Plugin for all DAW for source control