



## Amadeus Core – Data sheet

<b>Product</b>	
Available models	Amadeus Core 128 Amadeus Core 32
<b>Hardware</b>	
Terminals	DANTE Primary/Secondary; 2x Network Control (Ethernet RJ45); Option: MADI Optical In/Out
Power supply	100-240Vac/ 8-4 A/ 700W/ 50-60Hz
Power supply (redundant)	100-240Vac/ 8-4 A/ 700W/ 50-60Hz
Installation	19" Rack mounting; 4 RU; Box Dimensions 520mm (H) x 205mm (W) x 509mm (D)
Net Weight	15 kg
Server Grade Hardware Components	yes
CPU based	yes
<b>Audio Specifications</b>	
I/O Channels (Dante or MADI)	Core 128: 128 In / 128 Out; Core 32: 32 In / 32 Out;
I/O Configuration	Core 128: 64 Immersive Audio Inputs (Option), 64 Microphone Inputs, 128 Loudspeaker Outputs; Core 32: 16 3D Audio Inputs (Option), 16 Microphone Inputs, 32 Loudspeaker Outputs;
Sample Rate	48 kHz
Bitrate	I/O: 24bit, Signal Processing 32bit floating point
Synchronisation	DANTE input; Option: MADI
<b>Internal Processing Specifications</b>	
Input Stage	Parametric equalizers, level, dynamic processing, delays, input grouping, mute/solo, feedback suppression for extreme acoustical settings (e.g.: cathedral like acoustics)
Optional: Immersive Audio Inputs	No input processing
Acoustic module	<ul style="list-style-type: none"> <li>✓ Natural sound: Every room is unique with its natural, acoustic signature. Each Amadeus Core is individually tailored for the room by a unique, internal 3D model.</li> <li>✓ Hybrid system: A regenerative approach for natural reverberation enhancement; In-Line approach for increase of loudness indoors or generation of the acoustics outdoors</li> </ul>

	<ul style="list-style-type: none"> <li>✓ Signal Processing: Double Matrix Approach and additional decorrelated algorithmic reverb based on neutral FDNs independent for each channel (Feedback Delay Networks)</li> <li>✓ Room shaping: Control of sound energy distribution within the room</li> <li>✓ Time shaping: Early reflections based on a 3D Model of the room providing the correct acoustical geometry; room size can be increased or single walls or the ceiling can be moved based on a geometry-dependent scaling</li> <li>✓ Spectral shaping: The spectral balance can be shaped on a master level and for individual or a group of microphones and loudspeakers, but also for different parts of the reflection pattern</li> <li>✓ Reverb shaping: Acoustical parameters can be shaped nearly independently through fine-tuning of the regenerative part and the use of the algorithmic reverb which is fed by the time-correct delays</li> <li>✓ Density shaping: Double or sparse matrix approach to increase or decrease density of reflections</li> </ul>
Option: Immersive Audio Module	<ul style="list-style-type: none"> <li>✓ Immersive Audio using state-of-the-art 3-Dimensional WFS and Amplitude panning,</li> <li>✓ Control through the Amadeus 3D-Pan Plugin running on all major DAWs</li> <li>✓ Control by external devices using OSC</li> <li>✓ Active Acoustics and Immersive Audio run in parallel</li> <li>✓ WFS provides sweet spot independent sound source localization for every audience seat</li> <li>✓ Delay interpolation keeps movements sounding smooth and clean</li> <li>✓ Increase or decrease width or blur by focussing sound on a single speaker or include all speakers</li> <li>✓ Virtual Surround Sound: place fixed virtual sources to simulate 7.1, 9.1.4 or Dolby Atmos loudspeaker layouts</li> <li>✓ Recording and Playback of soundscapes</li> <li>✓ Bass Management</li> </ul>
Output Stage	Parametric equalizers, level, delays, output grouping, mute/solo (e.g.: cathedral like acoustics), speaker mute/solo, speaker test oscillator
GUI	<ul style="list-style-type: none"> <li>✓ Easy to use Graphic User Interface for quick control of presets, main parameters, individual microphone and loudspeaker channels and group control</li> <li>✓ Simplified web-based control interface for the client with preset selection and meter control, 2D representation of the venue</li> <li>✓ External control for media controllers through OSC (AMX, Crestron, Max/MSP etc.)</li> </ul>

<b>General</b>	
Warranty	2 years



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Technical information contained in this document is subject to change without prior notice. Should you need further clarification or information, please contact us.