

THUNDER | CORE AUDIO INTERFACE

AX CENTER



1,112 input and output channels audio interface with:

- 2 channel microphone/instrument input
- Dual stereo headphone output
- Dual stereo monitor outputs
- 256 channel Thunderbolt 3 I/O
- 256 channel Dante I/O
- 64 channel MADI I/O
- 16 channel ADAT I/O
- 2 slots for optional multi-format DAD I/O cards
- 512x64 channel Pro|Mon summing and speaker EQ processing
- One slot for 128 channel Dual MADI or 256 Channel DADlink module with SFP I/O
- Sample rates supported from 44.1 to 384 kHz

DISTINGUISHED SOUND QUALITY RIGHT OUT OF THE BOX

AX Center was born to sit in a rack right next to you in the studio, in your portable rig – or maybe even on your desktop. It's the audio interface that dreams are made of, as it unites the legendary audio quality of pristine Digital Audio Denmark AD & DA conversion with the renowned transparency and musicality of our mic preamps.

It's all about capturing the source truthfully and get it into any DAW you may use exactly as it is – and to get your production out exactly as you intended, envisioned and simply heard it.

Easily accessible right in the front plate, you get two XLR/¼" jack combo inputs for connecting microphones and instruments. This is your right-out-of-the-box A/D conversion stage that is already coupled with the preamps that have only been available as part of our Analogue In expansion card until now. Also on the front, you get another D/A conversion stage via two high-performance headphones outputs – perfect for co-producing.

On the rear, you'll find one of two out-of-the-box D/A conversion stages, as you get two stereo outputs for connecting two sets of studio monitors on balanced jack connectors. We support that most studios – regardless of size – would like to have an alternative pair of studio speakers connected.

Optional Analogue Expansion

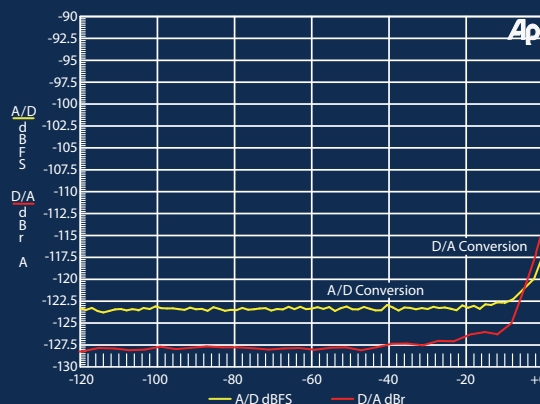
Staying within the analogue realm, you can add even more AD/DA converters to the table via the two available expansion slots. In this example, two Analogue In expansion cards with 8 channels each have been installed. These cards can be either balanced line signals or with preamp stages activated, which is available as a separate license that you can apply at any time in case you want to upgrade one or both cards according to your needs. Yes, that's correct – you can have up to 18 input channels with DAD preamps and A/D conversion in a single AX Center unit! In this configuration, AX Center would be the perfect center piece in smaller studios, or for super high-quality location multi-track recording in the field.



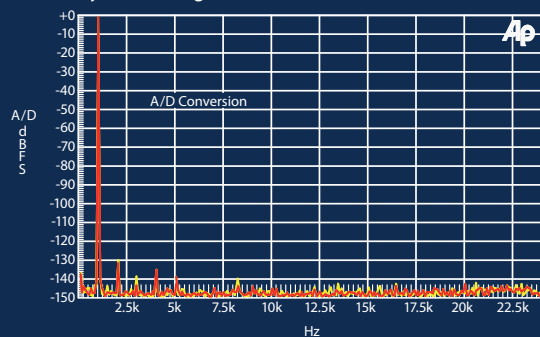
Optional Digital Expansion

You can also utilise one or both of the available expansion slots for our digital expansion cards, including Dante, AES, Dual MADI, and Dual SDI cards. For example, the AES card could deliver digital outputs for studio monitors with digital input options, or you could use it for inserting digital outboard gear without additional AD/DA conversion stages. Or you may want to add Dante channels with onboard SRC. Finally, you have two different ways to expand your MADI channel count, as you can both install our Dual MADI expansion card and/or use our SFP MADI module ports. The Dual MADI expansion card also provides the DADlink functionality for zero latency interconnection between multiple units.

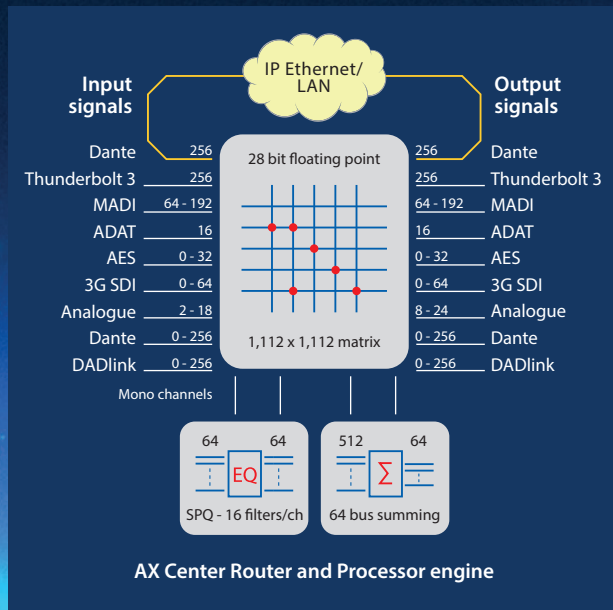
THD+Noise A/D and D/A conversion



Dynamic Range



- Dynamic range, ADC (A) > 125 dB
- THD+N, ADC (A) < -120 dB @ -3 dBFS
- Dynamic range, DAC (A) > 128 dB
- THD+N, DAC (A) < -115 dB @ -3 dBFS
- Crosstalk (A) < 120 dB
- Mic Equivalent noise (A) < -132 dB @ 100 Ohm
- Mic gain range -18 to +70 dB
- Mic gain step accuracy 0.25 dB
- Sample-rates 44.1 to 384 kHz, DSD128 (DoP)
- Clock Accuracy < 2 PPM via digital PLL



Control

The Thunder|Core audio interface is controlled via the DADman software. DADman can connect to the Thunder|Core interface either via Ethernet or via a communication channel in the Thunderbolt connection. More units can be daisy-chained via the Thunderbolt connection, and each unit will appear in DADman. Using control over Ethernet, the two RJ45 connectors act as a switch for connection to more units. The Dante/AES67 audio is also passed on the two RJ45 connectors.

Features

The basic I/O configuration for the AX Center audio interface is:

- 2 channel microphone or instrument input
- Dual stereo headphone output
- Dual stereo monitor outputs
- A/D, D/A and D/D Converter
- Sample rates from 44.1 to 384 kHz and DSD
- Up to 1,112 Input and Output channels
- Thunderbolt 3 I/O (256 channels at 48 & 96 kHz)
- Dante AoIP I/O (256 channels at 48 kHz, 128 channels at 96kHz)
- MADI I/O (64 channels at 48 kHz)
- ADAT I/O (16 channels) / SPDIF (2 channels)
- 512x64 channel Pro|Mon summing.
- Speaker 1024 filter EQ processing
- 32bit floating point processing
- 2 slots for optional DAD I/O expansion cards
- 1 slot for Dual MADI and DADlink module
- Avid Eucon enabled devices via DADman
- APPLE Intel and Silicon compatible software
- Control via Ethernet or Thunderbolt connection

Thunder|Core Technology

The DAD Thunder|Core technology provides a Thunderbolt 3 connection with near-zero latency and 32 bit floating point data format for interfacing between audio applications on macOS or Windows computers and the Thunder|Core audio hardware. The interface provides a fast Thunderbolt 3/PCIe connection and data transfer with 2 samples latency on the connection and a total of 9 samples in the digital interface, as total also includes EQ and summing processing within the unit. The channel capacity is up to 256 audio channels at 48 and 96 kHz, and the latency at 96kHz is 95 microseconds.

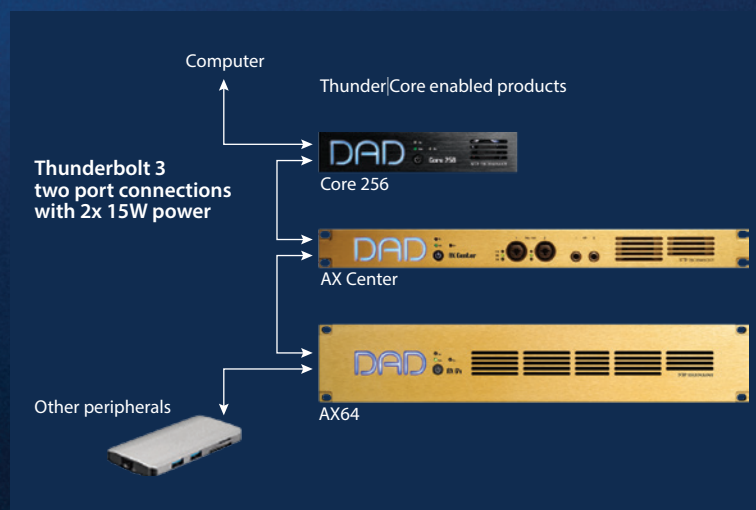
The total round trip latency with an audio software application will depend on the buffer size set for the application. With a buffer size of 32 samples, the latency is 670 microseconds at 96 kHz.

Core Audio Thunder|Core audio driver

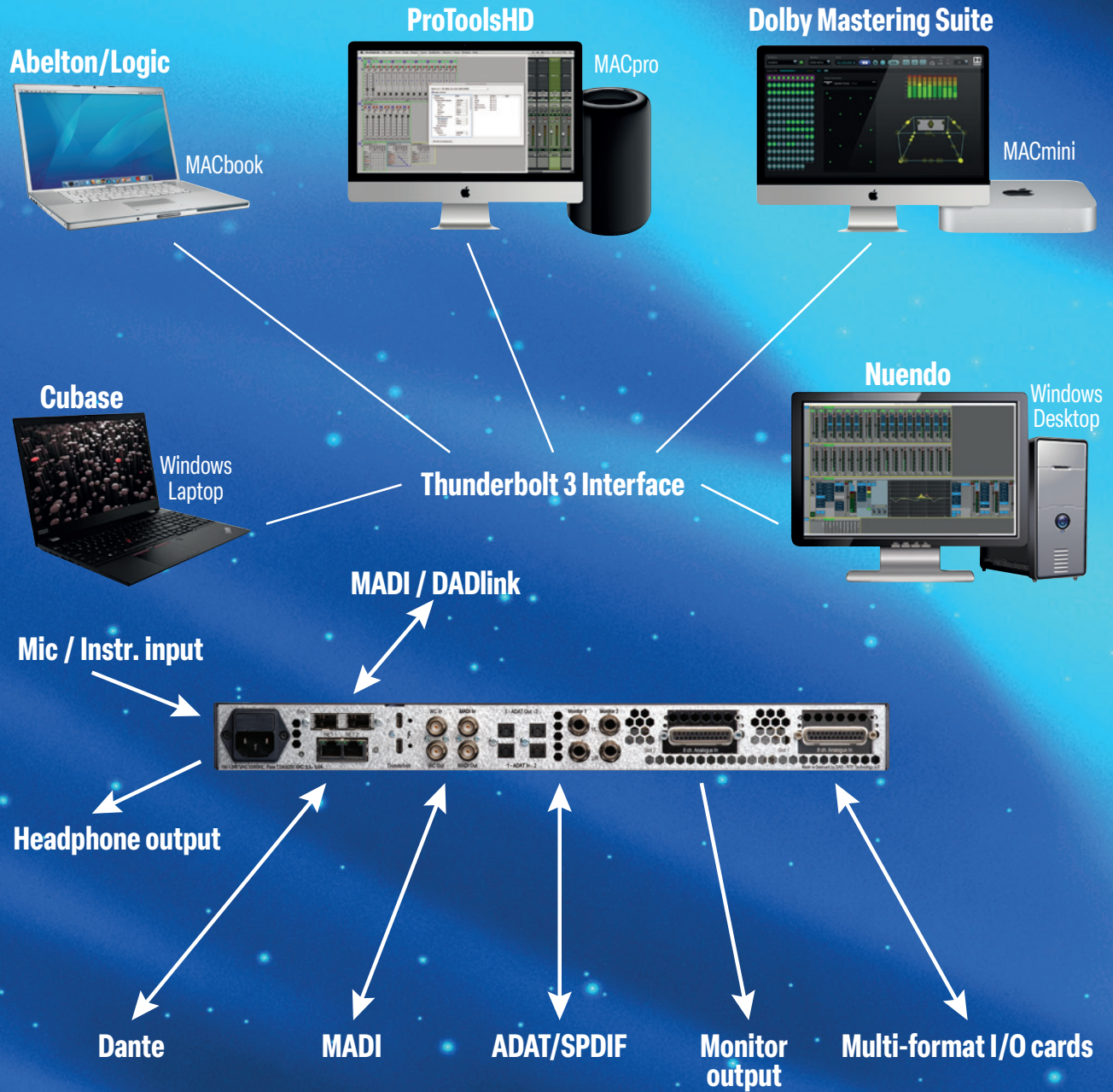
Compatible with Apple Intel and Silicon (M1) Big-Sur forward. Core Audio Aggregates for more Applications I/O Control connection for DADman.

ASIO Thunder|Core Driver

Compatible with Windows 10 forward. One Application can connect to the driver Control connection for DADman.



MULTI-FORMAT I/O



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