

# System Requirements

## Mac OS:

- Computer: Thunderbolt-equipped Mac (iMac, Macbook Pro, Macbook Air, Mac Pro)
- Memory: 2 GB RAM minimum, 4 GB recommended
- OS: 10.9.3 or greater
- Connection: Any available Thunderbolt port on a Mac
- Power:



## Compatible Software:

- Any Mac Core Audio compatible application
- Recommended apps: Logic, Pro Tools, GarageBand, MainStage, Final Cut, Ableton Live, Digital Performer, Studio One, Cubase, and Nuendo

## In the box:

- Ensemble
- 3-pin IEC power cable
- Rubber feet
- Quick Start Guide
- Warranty Booklet

## Features:

- Thunderbolt 2 Mac audio interface
- Analog-to-digital conversion (ADC) for recording up to 24-bit/192kHz
- Proprietary Thunderbolt audio driver and ESS Sabre32 DAC offer full 32-bit playback
  - Groundbreaking low latency performance
  - Core Audio-optimized hardware engine frees your Mac CPU
- 2 high-resolution OLED displays show levels and settings
- Input select buttons and controller knob for convenient selection of parameters and settings
- 4 assignable buttons to control:
  - Talkback mic (built-in or external)
  - Output settings such as speaker set selection, mute, dim, sum to mono Complete input/output control with Apogee's Maestro software
- Works with Pro Tools, Logic, Ableton and any Core Audio compliant app on Mac
- Designed in California – Assembled in the U.S.A.

## Analog Inputs:

- 4 Combi mic/line/instrument inputs
  - 2 1/4" balanced analog inserts
- 4 XLR mic/line inputs
- 2 1/4" hi-z guitar/instrument inputs with Class-A JFET input stage

## Digital Inputs:

- Optical IN: Supports ADAT, SMUX & S/PDIF
  - ADAT: 16 channels 44.1-48 kHz on 2 Toslink connectors
  - SMUX: 8 channels 88.2-96 kHz on 2 Toslink connectors
  - S/PDIF: 4 channels, up to 96 kHz on 2 Toslink connectors
- Coax IN: 2 channels of S/PDIF, up to 192 kHz on 1 RCA connector
- Word clock input on BNC connector

## Built-in Microphone:

- Mono omnidirectional condenser capsule on front panel

## Mic Preamps:

- 8 Mic preamps
- Gain: Up to 75 dB and advanced stepped gain circuit design
- Selectable 48v phantom power, hi-pass filter, Soft Limit™ and polarity invert
- EIN: 129dB (un-weighted) @ 60dB, 150Ohm input
- Max input level: +20dBu
- Input impedance: 3K Ohm

## Hi-Z:

- Max input level 14 dBu
- Input impedance: >2MΩ

## Analog Outputs:

- 2 1/4" balanced monitor outputs
- 8 balanced outputs on 1 DSUB 25-pin connector
- 2 independent 1/4" stereo headphone outputs
- 2 1/4" dual-mode guitar/instrument outputs

## Digital Outputs:

- Optical OUT: Supports ADAT, SMUX & S/PDIF
  - ADAT: 16 channels 44.1-48 kHz on 2 Toslink connectors
  - SMUX: 8 channels 88.2-96 kHz on 2 Toslink connectors
  - S/PDIF: 4 channels, up to 96 kHz on 2 Toslink connectors
- Coax OUT: 2 channels of S/PDIF, up to 192 kHz on 1 RCA connector
- Word clock output on BNC connector

## A/D conversion:

- Max input level (+4dBu ref/Mic): +20dBu
- Max input level (-10dBV ref): +6dBV
- Input impedance: 5KOhm
- Freq resp 20 Hz -20Khz: > +/-0.2dB (@44.1Khz)
- Rel. THD + N: -110dB (@ 96Khz)
- Dyn. Range: 119dB (A-weighted)

## D/A conversion:

- Max output level (+4dBu ref): +20dBu
- Max output level (-10dBV ref): +6dBV
- Line output impedance: 90 Ohm
- Freq resp 20Hz -20 KHz: > +/- 0.05dB (@44.1Khz)
- Rel. THD+N : -114dB (@96Khz)
- Dyn Range: 123dB (A-weighted)
- Front panel Guitar Output: impedance balanced/max level 14 dBu
- Max output level headphones: 19dBu
- Rel THD + N into 600 Ohm: -109dB
- Dyn Range: 120dB (A-weighted)