

em32 Eigenmike[®] Microphone Array

General Description

mh acoustics' em32 Eigenmike[®] spherical microphone array contains 32 professional electret microphones mounted on a rigid spherical baffle. The patented design decomposes the soundfield into spherical harmonics (HOA signals) of up to fourth order, thereby allowing a general beamformer that can efficiently form multiple simultaneous output beampatterns steered to any direction. The em32 is powered by the associated EMIB (Eigenmike[®] Interface Box) that connects the proprietary TDM digital streaming microphone data to a computer with a FireWire interface. mh acoustics' native EigenStudio[®] application (macOS or Windows) or EigenUnits[®] plugins process the microphone array output signals to form the spherical harmonic HOA basis signals and/or up to 30 desired output beampattern signals.



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Technical Data

Microphones capsules: 32 omnidirectional electrets with input referred noise of 15 dBA

Max SPL (<1% THD): 130 dB SPL

Spherical harmonics (HOA): up to 4th order via EigenUnits[®] plugins or EigenStudio[®] application

Selectable beampatterns: Omnidirectional, Hypercardioid, Supercardioid, Cardioid, Dipole (from 1st to 4th order with EigenUnits[®] plugins or EigenStudio[®] application)

Beam steering directions: All spherical angles

Microphone array diameter: 8.4 cm

Frequency response: 30 Hz - 20 kHz

Sampling rate: 44.1 kHz or 48 kHz

A/D resolution: 24 bits

Operating systems: Windows or macOS

Outputs: 32 raw digital microphone channels with ASIO or Core Audio. Software outputs: 1 to 30 channels (EigenStudio[®]) via ADAT and headphones

Clock Sync: External Word Clock or ADAT optical

Cable: Standard CAT5/CAT6 cable to external EMIB FireWire interface box. Maximum length 50 meters

Power consumption: em32 5 Watts, EMIB 7 Watts for a total of 12 Watts. External 24 Watts 12V DC supply

Options: Windscreen, 15" Retina MacBook Pro with 516GB SSD and 16 GB RAM with mh acoustics software included, 8 channel professional balanced line-out card, MADI output card

Weight: 0.5 kg (em32)