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em64 Eigenmike® Spatial Microphone

General Description

mh acoustics' em64 Eigenmike® spatial microphone contains 64 professional-grade electret microphone capsules mounted on a rigid spherical baffle. All electronics are contained inside the sphere. The em64 is powered by a standard Power-over-Ethernet (PoE) ethernet cable and uses Audinate's Dante digital audio protocol over standard ethernet networks. For critical recording applications, the em64 has primary and secondary ethernet ports for network redundancy.

mh acoustics' native EigenStudio® application or EigenUnits® plugins process the microphone output signals to form up to 6th-order spherical harmonic (HOA) basis signals and/or up to any number of desired beampattern output signals. General beamformer outputs are efficiently computed and can be steered to any desired direction in 3D space.

em64 Eigenmike® spatial microphone

Technical Data

Hardware

Microphone capsules : 64 omnidirectional electret capsules

Equivalent Input Noise per channel: < 22dBA

Max SPL (<1% THD): 135 dBA

Frequency response: 20 Hz - 20 kHz

HOA Spatial Aliasing cutoff frequency: > 12 kHz

Analog gain control: 15 dB Pad, 0-30 dB PGA

Sampling rate: 48 kHz

A/D resolution: 24 bits

Clock Sync: Internal or External Word Clock via Dante, IEEE 1588 Precision Time Protocol (*PTP*).

Cable: Standard CAT5E/CAT6 cable; 100m max.

Power: Power over Ethernet (PoE); 10 Watts

Communication protocol: Audinate's Dante

Number of simultaneous em64 units: 8 (Gb ethernet)

Size: 8.4 cm diameter; overall height including shaft 28.0 cm

Weight: 0.5 kg

EigenStudio® application

Access to em64 microphone programmable gain amplifier (PGA)

Spherical harmonics (HOA): selectable up to 6-th order, can be rotated

Selectable beampatterns: Omni, Hypercardioid, Supercardioid, MaxRE, Cardioid, Dipole (from 1st to 6th order)

Beam steering directions: All spherical angles

Outputs: 64 microphone channels, 1st though 6th-order HOA signals, up to 32 beamformer outputs

Supported Operating Systems: Windows, macOS

EigenUnits® plugins

Control Plugin: access to analog gain control

Encoder Plugin: higher order Ambisonics encoder (6th order)

Supported Operating Systems: Windows, macOS

Options

Windscreen, PoE Switch, Dante Headphone Amp, mounting hardware