

coreIN-Mic4 (Code 7730)

Microphone input board

Overview

coreIN-Mic4 is an extension board for labCORE. It contains four microphone inputs. Each input connects via a 7-pin LEMO socket to the microphone. The board provides supply voltage as well as polarization voltage for connected microphones. Furthermore, it supports TEDS for data exchange with microphones.

labCORE supports up to four coreIN-Mic4 boards (1 x front, 3 x back).



Rear panel of labCORE with three installed coreIN-Mic4 boards

Description

coreIN-Mic4 extends labCORE with four high-precision and low-noise microphone inputs. labCORE has one slot at the front panel and maximum three slots at the rear panel for coreIN-Mic4 boards.

Each 7-pin LEMO supplies voltages of ± 60 volts and $+120$ volts. Furthermore, coreIN-Mic4 provides 200 volts polarization voltage for externally polarized microphones. The board supports TEDS to exchange information on voltage and calibration values with the connected microphone.

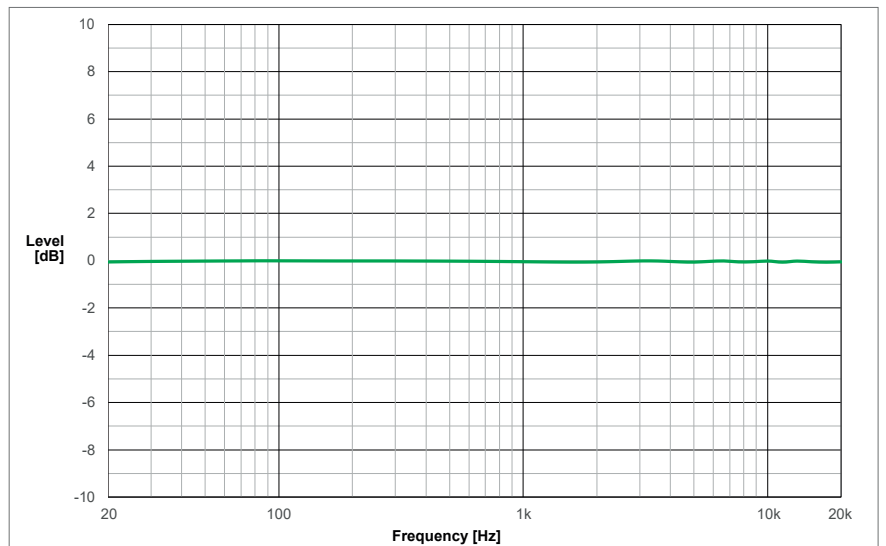
When coreIN-Mic4 is installed at the front panel of labCORE, LEDs next to each input socket indicate the input level by changing their color. The LCD display of labCORE indicates the input levels of rear mounted boards.

Key Features

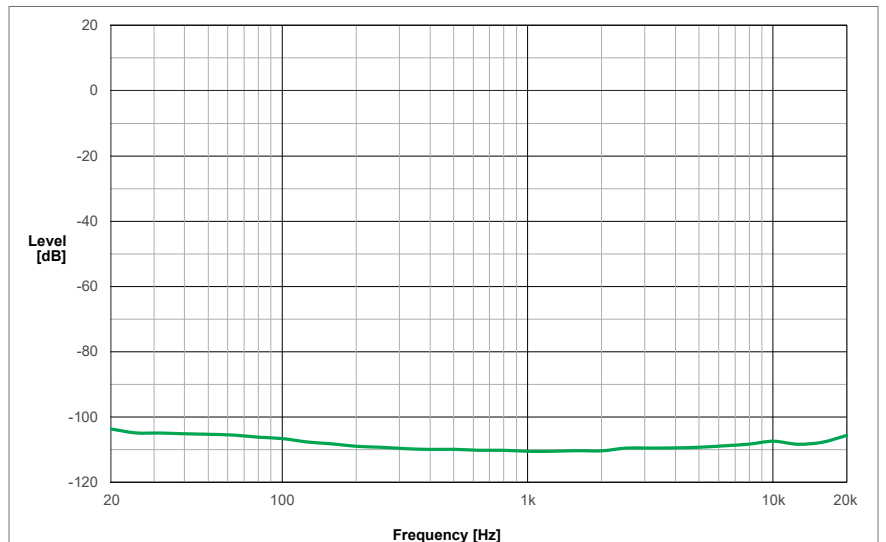
- Popular 7-pin LEMO socket connection
- 200 volts polarization voltage for each input
- ± 60 or $+120$ volts supply voltage at each input
- TEDS support

Applications

- Input for ear microphones of an artificial head
- Input for measurement microphones



Typical frequency response



Typical total harmonic distortion plus noise (THD+N)



Front panel of labCORE with coreIN-Mic4

General requirements

Hardware

- **labCORE (Code 7700)**, Modular multi-channel hardware platform
- **coreBUS (Code 7710)**, labCORE I/O bus mainboard

Software

At least one of the listed software applications is required.

- **ACQUA (Code 6810)**, ACQUA Standard: Basic Analysis Software, full-license Version
- **RC-labCORE (Code 6984)**, Remote configuration software for labCORE
- **VoCAS (Code 6985)**, Voice Control Analysis System (only control settings for utilization of VoCAS)

Delivery Items

- **coreIN-Mic4 (Code 7730)**, Microphone input board
 - **Initial equipping:** HEAD acoustics installs coreIN-Mic4 to labCORE during production
 - **Retrofitting:** Send in labCORE to HEAD acoustics for installation

Technical Data coreIN-Mic4	
Channels	4
Connection	7-pin LEMO
Input range	-60 V ... +120 V
Input impedance	100 k Ω
Input range settings	-54 dBV ... +24 dBV (in 6dBV steps)
Polarization voltage	200 V (± 0.1 %), max. 80 μ A
Microphone supply	± 60 V or +120 V, max. 4 mA
TEDS	IEEE 1451.4 Class 1 MMI, shared return wire
Level accuracy	± 0.1 dB (1 kHz)
Flatness	± 0.05 dB (48 kHz sampling, 20 Hz – 20 kHz), ± 0.07 dB (96 kHz sampling, 20 Hz – 40 kHz), ± 0.09 dB (192 kHz sampling, 20 Hz – 80 kHz)
S/N	112 dB (3.0 V _{RMS} , 20 Hz – 20 kHz)
THD+N	< -108 dB (3.0 V _{RMS} , 1 kHz)
Crosstalk	< -126 dB
Digital resolution	32 Bit
Sampling rates	48 kHz, 96 kHz, 192 kHz
Typical power consumption	4.8 watts