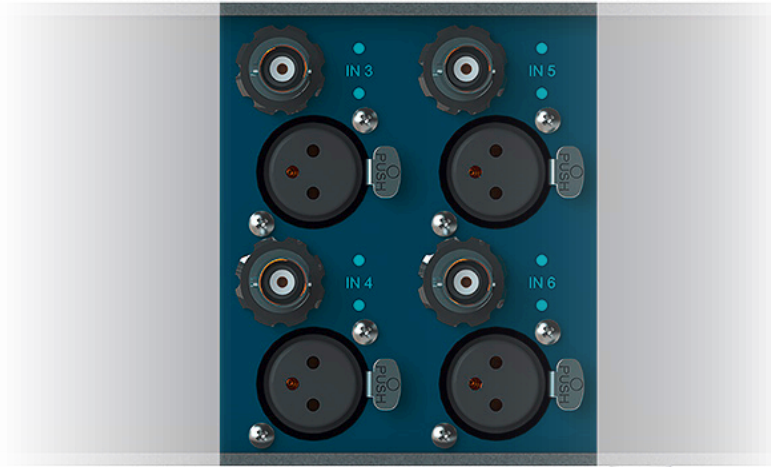


coreIN-A2 (Code 7760) Analog input board

Overview

coreIN-A2 is an extension board for labCORE. Equipped with coreIN-A2, labCORE becomes a high-performance audio analyzer. It provides two high-precision low-noise analog input channels. Each input receives the signal either through a XLR or a BNC socket. Signal paths for AC and DC are separated for individual conditioning and handling. Furthermore, the board supplies phantom power (XLR) and ICP power (BNC). Signal routing and other settings are executed via the control software.

labCORE provides slots for two coreIN-A2 boards.



Front panel of labCORE with two coreIN-A2 boards

Description

coreIN-A2 extends labCORE with high-precision and low-noise analog inputs. It has a typical residual THD+N of -115 dB, which makes it the ideal choice for high-performance audio analyzing. The light and compact design of labCORE as well as its versatility and quiet operation underline the benefit of coreIN-A2.

Each input has two relay-switched connectors, a female XLR and a female BNC socket. The control software enables the user to switch between the balanced (XLR) and unbalanced (BNC) input. LEDs indicate the currently active socket and its input level. labCORE has two slots at the front panel for coreIN-A2 boards.

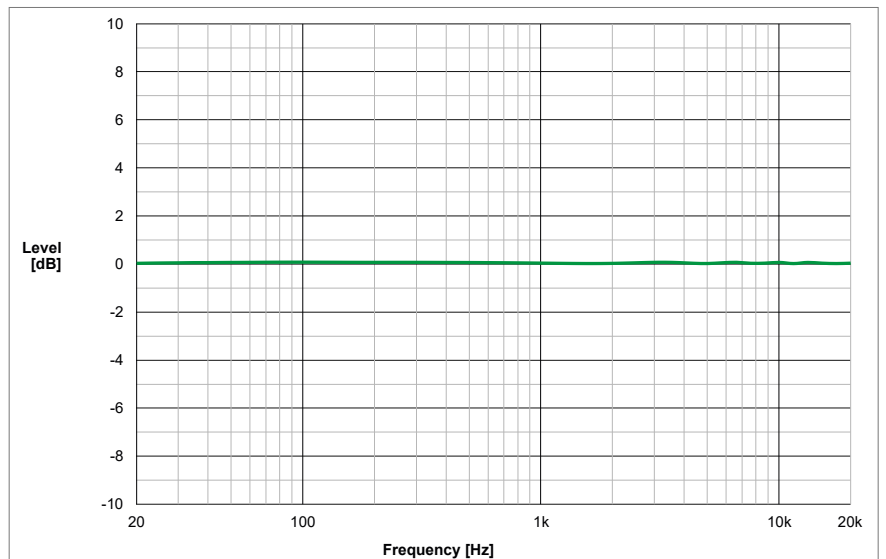
The sophisticated signal processing of the board guarantees the highest possible signal quality. Separated paths for AC and DC process each type of signal appropriately before A/D conversion.

Applications

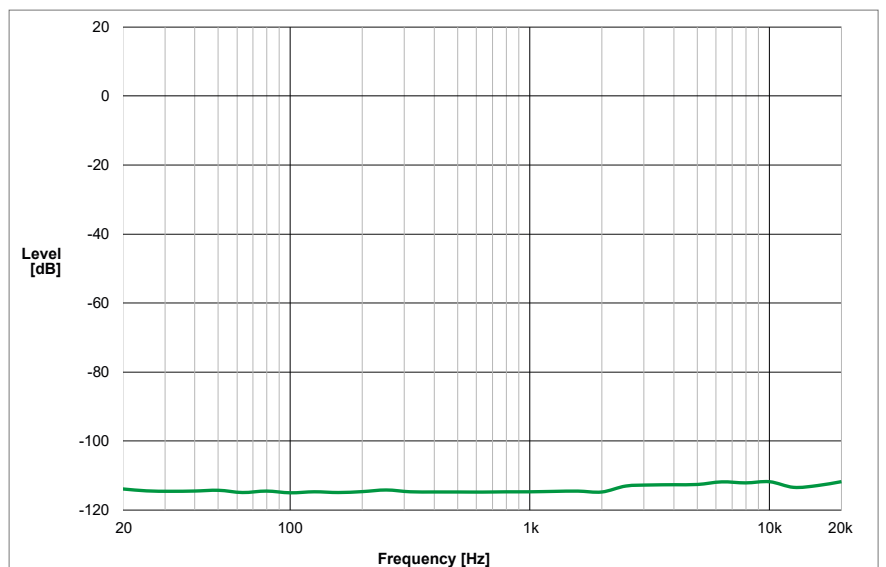
High-performance audio analyzing of various broadband input signals such as speech, music or noise.

Key features

- Signal processing and A/D conversion directly on the board for highest possible signal quality
- Auto impedance balancing (bootstrapping)
- Differential inputs (for XLR and BNC)
- Less ground coupling noise by active ground sensing
- Separated signal paths for AC and DC



Typical frequency response



Typical total harmonic distortion plus noise (THD+N)

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

Delivery

- **coreIN-A2 (Code 7760)**, Analog input board
 - **Initial equipping:** HEAD acoustics installs coreIN-A2 to labCORE during production
 - **Retrofitting:** Send in labCORE to HEAD acoustics for installation

Technical data coreIN-A2	
Channels	2
Connection	BNC (unbalanced) XLR (balanced)
Input range	-48 V ... +48 V
Input impedance	600 Ω (\pm 0.1 %), 200 k Ω
Input range settings	-54 dBV ... +24 dBV (in 6 dBV steps)
Phantom power supply (XLR)	48 V
ICP power supply	max. 23 V, 4 mA
Level accuracy	\pm 0.1 dB (1 kHz)
Flatness	\pm 0.05 dB (48 kHz sampling, 20 Hz – 20 kHz), \pm 0.07 dB (96 kHz sampling, 20 Hz – 40 kHz), \pm 0.09 dB (192 kHz sampling, 20 Hz – 80 kHz)
S/N	115 dB (2.3 V _{RMS} , 20 Hz – 20 kHz) 118 dB(A) (2.3 V _{RMS} , 20 Hz – 20 kHz)
THD+N	< -112 dB (2.3 V _{RMS} , 1 kHz)
Crosstalk	< -126 dB
Digital resolution	32 Bit
Sampling rates	48 kHz, 96 kHz, 192 kHz
Typical power consumption	6.7 Watts