



labCORE with installed coreBUS and optional hardware board coreIN-Mic4. Cutout areas, LEDs and labeling indicate the prepared positions for further boards.

Description

In basic configuration, labCORE already provides numerous high quality analog and digital inputs and outputs. If a measurement scenario requires more interfaces, extra functionality or highest possible precision of measured and produced signals, labCORE can be equipped with up to ten additional hardware extension boards. For this, labCORE must be outfitted with the I/O bus mainboard coreBUS as an internal hardware interface. coreBUS distributes audio signals between the boards, controls their signal transmission, distributes the Word-Clock and manages their power supply.

By combining one or more of the following hardware extension boards, labCORE allows to cover virtually all measurement scenarios:

- **coreOUT-Amp2**
 - 2 x amplifier output
- **coreIN-Mic4**
 - 4 x high precision microphone input
- **coreOUT-A2**
 - 2 x high precision analog output
- **coreIN-A2**
 - 2 x high precision analog input

Further hardware extension boards are currently in development or already planned for the future.

labCORE has predefined standard positions for extension boards. Slot 1 and 2 at the front are prepared for coreOUT-A2 boards, slot 3 and 4 for coreIN-A2 boards. Slot 5 is primed for the coreIN-Mic4 board. The labeling and status LEDs on the front of labCORE are preset according to this equipment.

The backside of labCORE allows to add up to another three coreIN-Mic4 boards in the slots 6, 7 and 8. Slot 9 and 10 are reserved for coreOUT-Amp2. These two slots are equipped with extra on-board power lines to accommodate the naturally higher demand for current of coreOUT-Amp2 boards.

Due to this flexibility, labCORE can - respecting physical limitations - be equipped as demanded by the use-case. The table below lists all possible options, the next page shows a sample configuration of labCORE with extension boards.

Key Features

- I/O bus mainboard mandatory for optional hardware extension boards*
- Offers slots for up to 10 extension boards in various combinations
- Handles all signal transmission, communication between boards and supplies them with power

DATA SHEET

coreBUS (Code 7710) labCORE I/O bus mainboard

Overview

The optional coreBUS I/O bus mainboard acts as the internal interface between labCORE and its optional hardware boards. The board distributes audio and communication signals between the hardware boards and manages their power supply.

coreBUS provides slots for up to ten boards in numerous configuration variants. It is required for the use of any labCORE hardware extension board*.

Applications

- Adding optional hardware extension boards to labCORE for additional inputs/outputs/functionality

General Requirements

Hardware

- **labCORE (Code 7700)**, Modular Multi-channel Hardware Platform

Delivery

- **coreBUS (Code 7710)**, labCORE I/O bus mainboard
 - **Initial equipping:** coreBUS is installed to labCORE during production
 - **Retrofitting:** labCORE must be sent to HEAD acoustics for installation

* Except the hardware extensions coreIP-AMR and coreBT.

Extension board options for labCORE with coreBUS

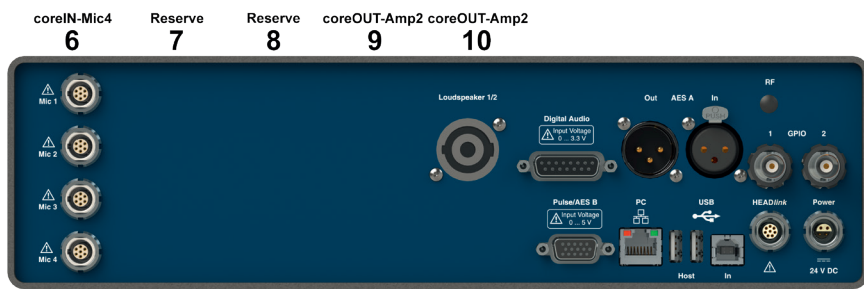
| | | Front slots | | | | | Rear slots | | | | |
|--------|--------------|-------------|---|---|---|---|------------|---|---|---|----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Boards | coreOUT-Amp2 | | | | | | | | | • | • |
| | coreIN-Mic4 | | | | | • | • | • | • | | |
| | coreOUT-A2 | • | • | | | | | | | | |
| | coreIN-A2 | | | • | • | | | | | | |

Sample configuration (front)



- **Slot 1: coreOUT-A2**
– 2 x high precision analog output
- **Slot 2: coreOUT-A2**
– 2 x high precision analog output
- **Slot 3: coreIN-A2**
– 2 x high precision analog input
- **Slot 4: coreIN-A2**
– 2 x high precision analog input
- **Slot 5: coreIN-Mic4**
– 4 x high precision microphone input

Sample configuration (back)



- **Slot 6: coreIN-Mic4**
– 4 x high precision microphone input
- **Slot 7: -**
– Reserve slot for coreIN-Mic4
- **Slot 8: -**
– Reserve slot for coreIN-Mic4
- **Slot 9: coreOUT-Amp2**
– 2 x amplifier output
- **Slot 10: coreOUT-Amp2**
– 2 x amplifier output