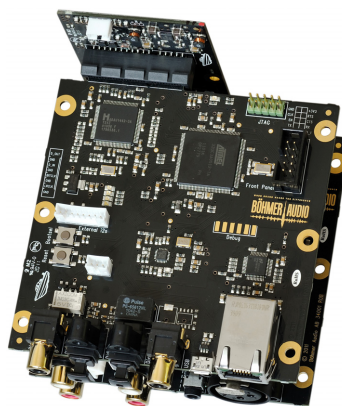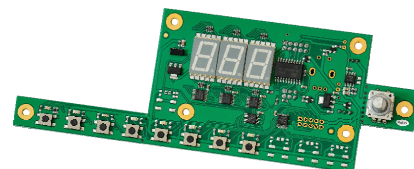*Probe and Sycon software*


*Hardware Kit*


*Front Panel board*


*Böhmer Audio Development Kit*

# Digital OEM-platform for hifi applications

Instantly bring your loudspeaker designs into the future with the complete and ready to use digital OEM-platform from Böhmer Audio.

Today you use building blocks provided by OEM suppliers like capacitors, resistors and coils in your passive speakers. Why not do the same when it comes to DSP technology; let Böhmer Audio supply the cutting edge DSP building blocks so you can concentrate on making the most of the new toolkit offered by Böhmer Audio.

The Böhmer Audio platform includes hardware modules with DSP, AD, DA and complementing software modules for a complete system solution. To facilitate development of new hifi products based on the platform, Böhmer Audio also provides a development kit.

The development kit includes a complete set of hardware modules and six channels of power amplification, 6x125W @ 4ohms. Furthermore it includes a complete set of software modules for acoustic performance analysis of loudspeakers, for setup and configuration of the platform functionality and tools for development and setup of the DSP audio processing.

When you are ready with platform configurations, you send a configuration file to Böhmer Audio. Böhmer Audio then delivers preprogrammed ready to use platforms for final assembly in your production.

The platform offers a truly high end audio solution that is right at home in an implementation in the most expensive loudspeaker systems albeit at a very reasonable cost that fits more modest mid- to high end system budgets.

- Make a quantum leap by shortening time to market and lowering development cost. Instantly introduce the latest digital DSP-technology by adding this ready-to-use platform directly into your product line.

- The platform is highly flexible allowing you to create products with your own unique look and feel.

- Combine the new extraordinary tools in the Böhmer Audio platform with your own cutting edge knowledge in speaker design and acoustics to create exceptional products.

- Create loudspeaker designs previously impossible without compromising on high quality sound. The Böhmer Audio platform removes some of the design constraints imposed by acoustics enabling designs that fits right into modern life style homes like never before.

- Easily integrate different signal sources such as streaming audio over Ethernet, computer audio over asynchronous USB, wireless audio, etc.

- Introduce a unique room correction solution (pat pend) with measurement hardware and compensation software. The psychoacoustic measurement method is capable of handling narrow- and wide dispersion as well as dipole speakers.

*All this is accomplished without you having to design any hardware nor write any complicated, time consuming and costly software, firmware or DSP code*

# OEM System Technical Specifications

| | |
|---|---|
| **System Overview** | Digital toolbox for loudspeaker manufacturers to ease the development process and to decrease the time-to-market. The system consists of specifically designed hardware and software modules |
| **Special Features** | The system includes several powerful and unique features:<br>• DSP-based loudspeaker correction<br>• Powerful room correction (pat pend)<br>• Built-in support for most modern signal sources , asynchronous USB audio, etc.<br>• Streaming music over Ethernet<br>• Powerful development toolbox and analysis software<br>• Extendable: add an extra DSP board, a high-end AD/DA board, or other types of connectors |
| **Software Modules** | The software consists of three main software modules plus one optional module:<br>• Probe — Professional level Acoustic Measurement software for speaker performance analysis<br>• Sycon — System configuration software for setup and configuration of the complete DSPspeaker/amplifier system including system appearance and functionality in UCI PC-Software<br>• UCI — An optional User Control Interface PC-software module. It includes functions such as the proprietary room correction and other audio compensation algorithms. |
| **Hardware Modules** | The hardware consists of three main modules plus one optional module:<br>• BA-DSP1 — Control and Digital Signal Processing<br>• BA-ADDA1 — Conversion to and from analog/digital<br>• BA-BP1 / 2 — Backplane for connection of the modules<br>• BA-FP1 — (optional) Front panel |
| **Digital Input** | • 1 x Asynchronous USB audio (44.1 – 96 ks)<br>• 1 x SPDIF (44.1 ks – 192 ks)<br>• 1 x TosLink (44.1 – 96 ks)<br>• 1 x i2s TDM2-16 (44.1 ks – 192 ks)<br>• Thermal monitor from power amplifier modules (5V = ok, 0V = fault)<br>• Over Current monitor from power amplifier modules (5V = ok, 0V = fault) |
| **Digital Output** | • 1 x SPDIF (96 ks, 192 ks)<br>• 1 x TosLink (96 ks)<br>• 1 x i2s TDM2-16 (96 ks, 192 ks)<br>• Enable to power amplifier modules (pull to 0V = disable, open/pulled up to 5V on amp module = enable) |
| **Analog Input** | • 1 x Stereo input pair 2 x RCA (5 dBV = 0 dBFS, 100 kOhm)<br>• 1 x Stereo input 3.5 mm plug (5 dBV = 0 dBFS, 100 kOhm)<br>• 1 x Stereo input pair on internal connector in parallel with 2 x RCA input (5 dBV = 0 dBFS, 100 kOhm)<br>• 1 x Stereo input pair on internal connector in parallel with 3.5 mm plug input (5 dBV = 0 dBFS, 100 kOhm)<br>• 1 x XLR Measurement microphone input (15V Phantom power) |
| **Analog Output** | • 8 channels on internal connectors (5 dBV = 0 dBFS, 33 Ohm)<br>• 2 channels on RCA optionally mounted on PCB in parallel with internal connector outputs (5 dBV = 0 dBFS, 33 Ohm) |
| **Power Input** | • BA-BP1: Positive Supply min 9 Vdc max 25 Vdc approx. 5 W,<br>   Negative Supply min -9 Vdc max -25 Vdc approx. 2 W<br>• BA-BP2: Positive Supply min 9 Vdc max 25 Vdc, 500mA @ 9V = 4.5 W, 220mA @ 25 = 5.5 W |
| **Warranty** | 12 months limited warranty |
| **Compliances** | CE Approval, FCC Class A subpart B |
| **Environment** | 10 – 40°C, 15 – 85% relative humidity, non-condensing |
| **Dimensions (WxDxH)** | System: 100 (w) x 122 (d) x 70 (h) mm |
| **Weight** | System: 166 g |