



## Product Information

### CH1-SOUND • *CompactPCI*® Six Channel Audio Accelerator

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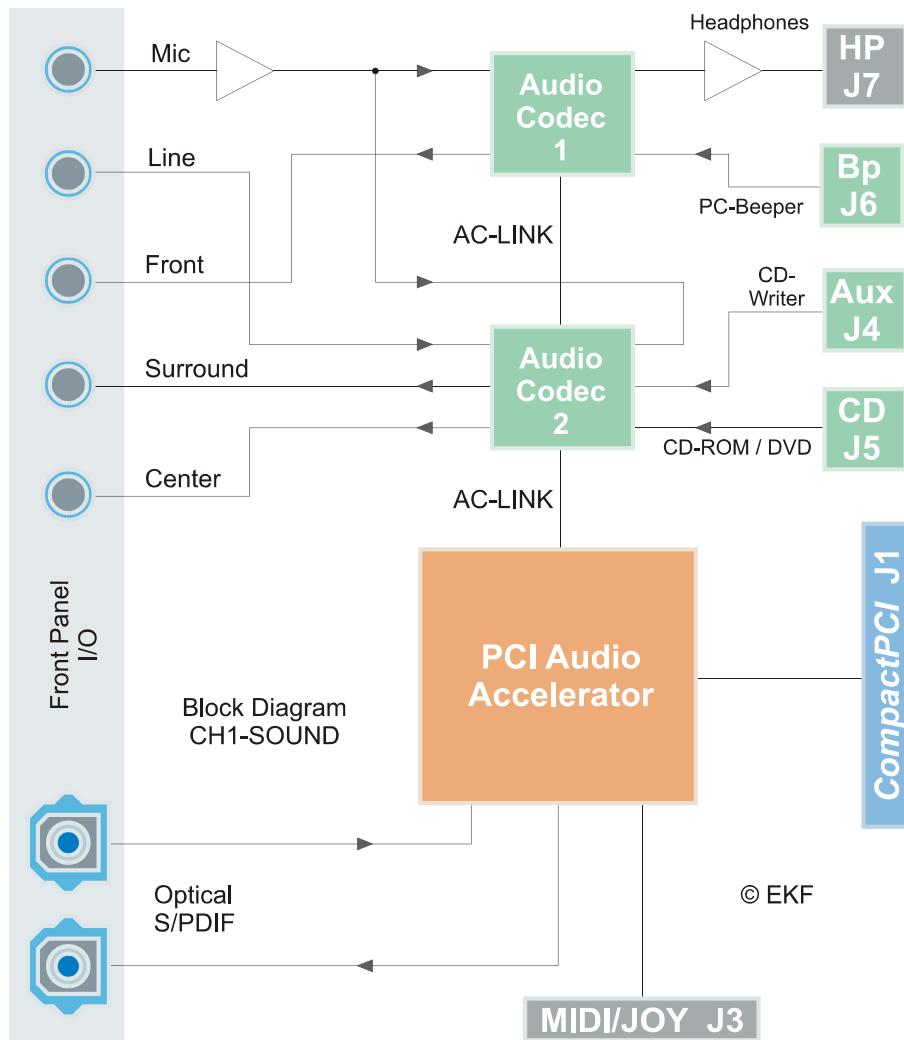
The CH1-SOUND is a high performance audio accelerator add-in card for *CompactPCI*® systems. The 3U board exceeds the Microsoft® PC 99 audio performance specifications and complies with the Intel® AC' 97 spec.

The CH1-SOUND provides a complete suite of analog and digital I/O connections. The board contains three stereo outputs for front L/R, surround L/R and center/low frequency speakers. The optical S/PDIF interface is compatible with consumer devices such as stereo receivers and MiniDisc recorders.

The sound card features a 420MIPs high speed DSP audio processor, and two audio codecs. The codecs include stereo 20-bit DACs and stereo 18-bit ADCs, allowing for recording, mixing and playback of voice and music at the highest quality level.

The CH1-SOUND is a perfect solution to industrial range CPCI systems with need for high performance audio I/O, e.g. passenger information systems or computer telephony applications.





### Features

- 420MIPs DSP architecture
- Hardware acceleration for Microsoft DirectSound® and DirectSound3D® positional audio
- Sensaura™ 3-D, 2 or 4 channel audio
- EAX™ enhanced environmental audio
- Unlimited-voice wavetable synthesis
- Acoustic echo cancellation, acceleration for Netmeeting™
- 10 Band graphic equalization
- S/PDIF Digital input and output support for PCM and AC3 encoded 5.1 channel formats
- PC 98/99 and AC '97 compliant

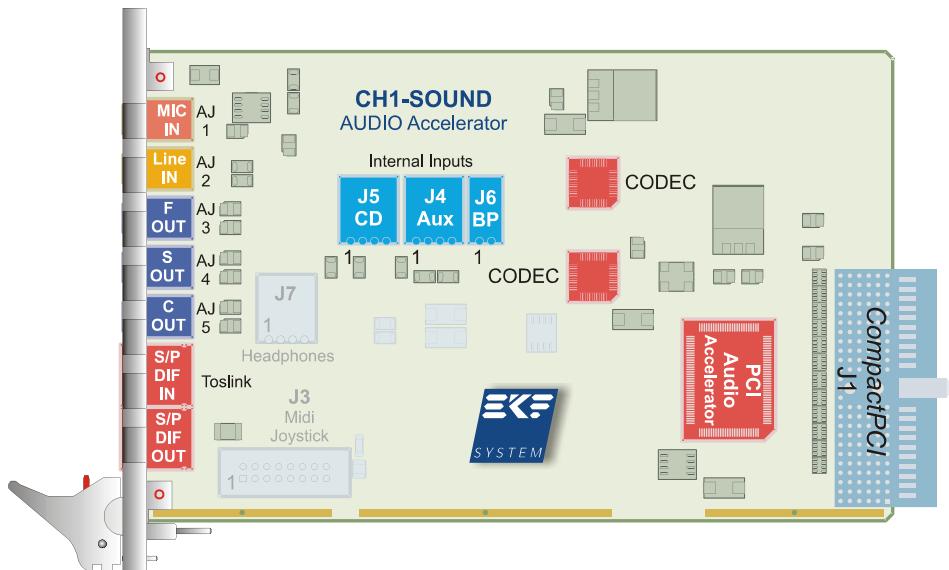
EKF offers drivers for Linux from kernel 2.2.17 off, and Windows 95/98/ME, NT4 and Windows 2000 (all available by download). The CH1-SOUND is also compatible to existing legacy software.

For 6U CPCI systems, a mechanical kit is available that expands the CH1-SOUND front panel to the 6U height (CR9-ADAPT).



Technical Specifications		
Board	Dimensions	3U Eurocard (100x160mm <sup>2</sup> ), front panel width 20.3mm (4HP), mechanics constructed with respect to EMC requirements, ejector lever
AUDIO	Audio Processor	PCI Audio Controller, 420 MIPS DSP processor architecture, hardware acceleration for Microsoft DirectSound® and DirectSound3D® positional audio, Sensaura™ 3-D, 2 or 4 channel audio, EAX™ enhanced environmental audio, unlimited-voice wavetable synthesis, acoustic echo cancellation, acceleration for Netmeeting™, 10 Band graphic equalization, S/PDIF digital input and output support for PCM and AC3 encoded 5.1 channel formats, dual AC '97 codec interface, DirectInput™ joystick interface and MPU-401 MIDI I/O, PC 98/99 and AC '97 compliant, legacy support
	Audio Codecs	Primary and secondary AC '97 codecs, controlled via AC Link by the audio accelerator, 20-bit Stereo DACs, 18-bit Stereo ADCs, pseudo differential CD input, exceed PC 99 and AC '97 specifications
	Front Panel Stereo Audio Jacks 3.5mm	<ol style="list-style-type: none"> <li>1. Mic input, phantom power 2V as required by PC 99 on the middle contact, suitable for Electret microphones (Mono), low noise amplifier 18dB on-board (input voltage 0.125V<sub>rms</sub>)</li> <li>2. Line input, 2V<sub>rms</sub> max., Stereo</li> <li>3. Line output speakers L/R, 1V<sub>rms</sub></li> <li>4. Line output Surround speakers L/R, 1V<sub>rms</sub></li> <li>5. Line output Center/LFE speakers, 1V<sub>rms</sub></li> </ol>
	Front Panel Connectors Digital Audio	<ol style="list-style-type: none"> <li>1. S/PDIF input, optical digital audio interface, Toslink receiver, 22-48kHz data sampling rate</li> <li>2. S/PDIF output, optical digital audio interface, Toslink transmitter, data sampling rate 48kHz</li> </ol>
	On-Board Connectors	<ol style="list-style-type: none"> <li>1. CD Stereo input, 4-position Molex shrouded header J5, pseudo differential input 1V<sub>rms</sub></li> <li>2. Auxiliary Stereo input (AUX), 4-position Molex shrouded header J4, 1V<sub>rms</sub></li> <li>3. PC Beeper input (BP), 2-position Molex shrouded header J6, Mono</li> <li>4. Optional Midi/Joystick interface, 16-position shrouded header J3 (by default not stuffed)</li> <li>5. Optional Stereo headphones output, 32..600 Ohm, 1.25V<sub>rms</sub> @ 150 Ohm, short circuit proof, Stereo, 4-position Molex shrouded header J7 (components by default not stuffed; as an option, the headphones output can be wired to the front panel audio jack AJ2, replacing the Line In function)</li> </ol>
CompactPCI® Bus	Connector J1	32-Bit, 33MHz, DMA bus master (133MB/s) 3.3V or 5V interface
Power Requirements	Connector J1	+5V ±5% 0.5A max. +3.3V ±0.3V 0.2A max. +Vio (5V/3.3V) ±0.3V 0.1A max. +12V ±5% 0.1A max.
Temperature Humidity	Commercial Version	Operating temperature 0-70°C Humidity 5-90% non condensing
Drivers	Download	Windows 95/98/ME, NT4, Windows 2000 Linux 2.2.17-19, 2.2.4x, Redhat 7.0, Redhat 7.1

*subject to change w/o notice*



CH1-SOUND \* Component Assembly Drawing

### Ordering Information

Alias	Ordering No.	Short Description
SOUND	CH1-1-SOUND	3U <i>CompactPCI</i> 6-channel high performance audio controller, complete suite of analog I/O connections, AC3 5.1, dual AC '97 Codec, digital optical S/PDIF input/output
SOUND	CH1-4-SOUND	Similar to CH1-1-SOUND, functionally limited to analog Stereo speaker output, microphone input, Stereo line input
	CR9-1-ADAPT	Mechanical kit, expands front panel to 6U
	580.40.01001.01	TosLink fiber optic cable 1m, 2 x TosLink ODT connectors, suitable for S/PDIF ports

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