

An 8 channel PMC audio card with front and rear I/O for use in embedded computer applications based on the Cmedia CMI8768. This is a single-chip PCI audio controller with integrated codec, full duplex 8 channel DAC and 2 channel ADC, 96k/16bit playback and 48k/16bit recording support.

The Integrated SPDIF transmitter can deliver 5.1 Dolby® Digital/DTS®, or 6.1/7.1 Dolby® Digital Surround EX/DTS ES soundtracks and up-to-96kHz high-definition audio stream to an external receiver.

The audio interfaces via the PMC487 front panel consist of a line input, a microphone input, a front line output and a speaker output with an on-board stereo amplifier; all using 3.5mm stereo connectors.

Optionally the audio connections can be made via the rear I/O of the PMC487 using the PIM481-J (PMC I/O Module, with four 3.5mm stereo connectors) or the PIM481-DSUB (PMC I/O Module, with 15-pin DSUB connector). The PIM481-J and PIM481-DSUB are to be mounted on a rear transition module. Both the front and rear I/O of the PMC487 are compatible with the PMC481 audio card.

A special PIM with SPDIF interface is available for the PMC487. More PIM modules may become available in the future.

The PMC487 is available in temperature range -20 .. +70°C.

Driver support for the Cmedia CMI8768-series are included in commonly used operating systems, like Windows, Linux and VxWorks.

Features:

- > Single slot PMC (IEEE 1386.1-2001) with front I/O and rear I/O
- > PCI interface rev.2.2, 33MHz, 32-bit, supports 3.3V and 5V signalling
- > Optional PIM (VITA 36) for rear I/O connections
- > Cmedia CMI8768 8 channel PCI integrated sound chip
- > Four audio connections via front panel
- > Front or rear line out selectable by solder jumper to speaker output
- > Driver support available in commonly used operating systems

PCI bus compliancy

- * PMC specification IEEE Std 1386.1-2001
- * PCI specification 2.2 compliant
- * 5V and 3.3V signalling voltage (V/I/O) supported
- * 33MHz, 32-bit PCI databus
- * Uses 5V and 12V power supply

Audio chipset

- * Cmedia CMI8768
- * 8CH single sound chip with embedded codec
- * Full-duplex 8CH DAC/2CH ADC
- * Supports 96k/16bit playback and 48k/16bit recording
- * Signal-to-Noise Ratio (SNR) typical 100dB
- * Integrated S/PDIF transmitter supports 44.1kHz/48kHz/(96 kHz*) sample-rate, 16bit resolution
- * Built-in earphone buffer at front-out channel (32Ohm load)
- * DirectSound™ 3 HW acceleration compliant
- * ACPI compliant power down management
- * (*) only available in supported drivers

Audio interfaces

- * Line out front (stereo)
- * Speaker out (stereo 4-8 ohm) with on-board amplifier, selected by solder jumper
- * Line out rear (stereo) (only through rear I/O with appropriate PIM)
- * Line out surround (stereo) (only through rear I/O with appropriate PIM)
- * Line out center + bass (only through rear I/O with appropriate PIM)
- * Line in (stereo)
- * Aux in (stereo) (only through rear I/O with appropriate PIM)
- * Microphone in (mono) with phantom power supply
- * SPDIF in/out(only through rear I/O with appropriate PIM)
- * Speaker in (PC Beep) (only through rear I/O with appropriate PIM)

Speaker output amplifier

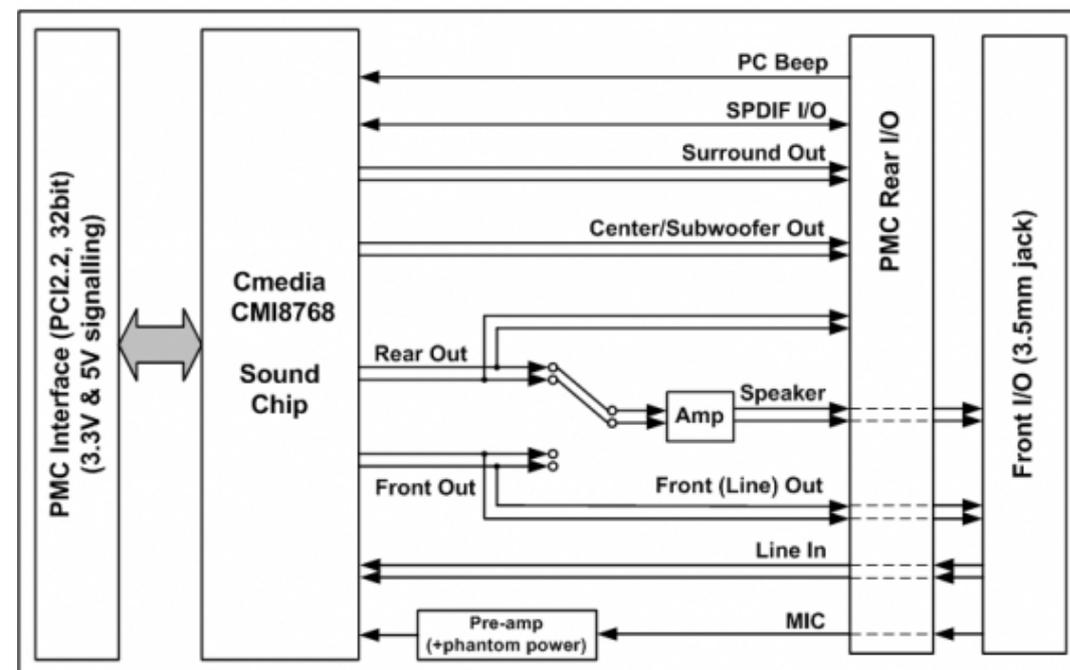
- * Efficient class-D operation
- * Output power:
 - * 2 W / channel @ 8 ohm load *
 - * 3.5 W / channel @ 4 ohm load *
- * Single-ended outputs
- * THD+N typical 0.04% (1 kHz, 5W)
- * SNR typical 92 dB *
- * First order high-pass output filter: 40Hz (-3dB) @ 8 ohm load
- * Thermal and short-circuit protection with auto recovery
- * (*) see manual for details and current limiting

Environmental

- * Operating temperature of components: -20 .. +70°C (extended).
- * Storage temperature: -40 to +85°C
- * Humidity: 10% to 90% relative humidity for operating and storage
- * RoHS compliant

Ordering information

- * **PMC487/T01** 8-channel high performance PMC audio card with front and rear I/O, extended operating temperature range -20 to +70°C
- * **PIM481-J/T01** PMC I/O Module with four 3.5mm audio jacks for rear I/O
- * **PIM481-DSUB/T01** PMC I/O Module with DSUB for rear I/O
- * **PIM487-SPDIF/T01** PMC I/O Module with SPDIF interface



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