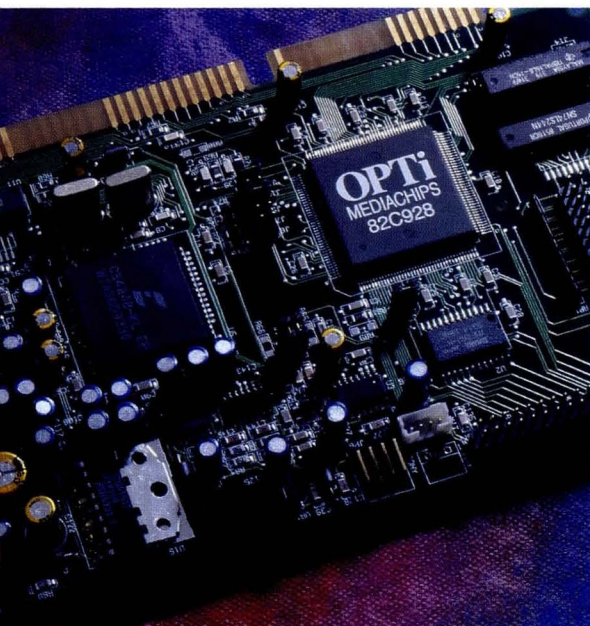


# SOUND



## .....16 Bit Single Chip Sound Controller.....

**T**he OPTi 82C928 (MAD16) is an integrated single chip, high performance, audio solution for educational/ entertainment sound, business audio and multimedia applications. It is designed to provide all of the digital functions and interfaces for the Sound Blaster Pro™ and Window Sound System™ compatible sound board.

The MAD16 includes the functions of AT Bus interface, Sound Blaster Pro compatible Digital Audio Processor, MIDI interface, Windows Sound System compatible interface, FM synthesizer interface, CODEC/Mixer interface, Game Port interface and interfaces to three different types of CD-ROMs (Sony, Mitsumi and Panasonic).

All DMA and interrupt selections are software programmable. The MAD16 provides enough driving capabilities for all of the interfaces and thus eliminates the need for external buffering. There is also a power-down mode for power-conscious system designs.

### Features/Benefits

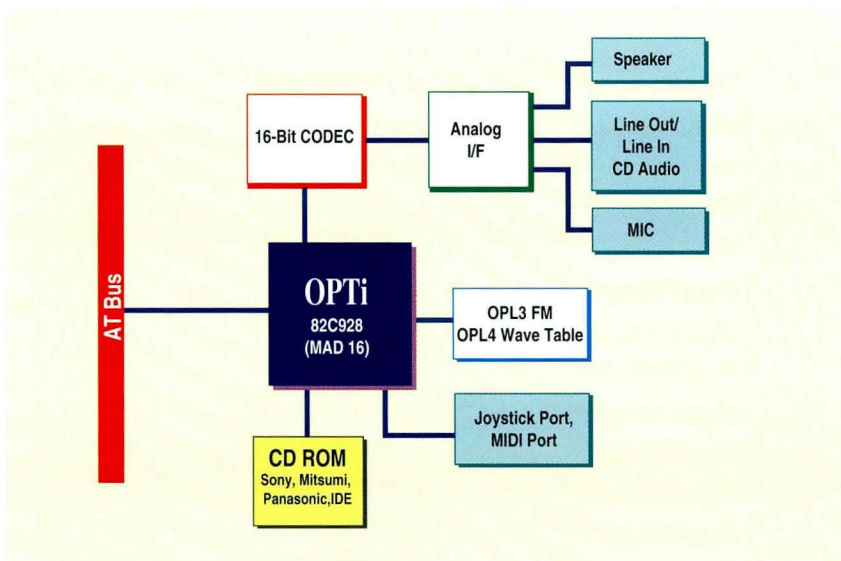
- Integrated sound controller compatible with: Sound Blaster Pro, Ad Lib and Microsoft Windows Sound System.
- 8 or 16-Bit sound data.
  - Sound Blaster 8/16-bit audio up to 48 KHz stereo.
  - Windows 8/16-bit audio up to 48 KHz stereo.
- Sample rates up to 48 KHz stereo.
- Integrated MIDI UART with 64-Byte FIFO.
- Built-in sound blaster-compatible digital audio processor.
- OPL4 Interface for wave table synthesis.
- Software programmable AT interface for: I/O address, IRQ, and DRQ.
- Software programmable CD-ROM interface for: Sony CDU31A, Mitsumi, and Panasonic.
- Software enable/disable of the game port.
- Supports 7 DMA and 6 interrupts.
- 24mA Drivers for direct AT bus interface.
- 16mA Drivers for direct CD-ROM interface.
- Software-controlled powerdown mode.
- 1.0µ CMOS technology.
- 160-pin PQFP.
- Position as mainstream low cost 16-bit audio.
- 2-in-1 for entertainment and business audio.
- Wave table synthesis upgradeable.
- Unique architecture design.
- Cover major CD-ROM drive interface.
- Total production solution:
  - Test and configuration program.
  - Windows device driver.
  - Diagnostics software.
  - Manufacturing kit.
- Bundled software (option): Asystem - sound impression; Midisoft - recording session.





Vital Statistics	82C928
BOM	50
Digital Audio	16
Max Sampling Rate	48
Wave Table Option	Yes(Adapter)
FM Synthesis	20 (OPL3)
CD-ROM Interface	Yes (Sony, Mitsumi, Panasonic)
Software Programmable	Yes
Compatibility:	
Sound Blaster	Yes
Sound Blaster Pro	Yes
WSS (Windows)	Yes
WSS (DOS)	Yes
Bundle Software	Sound Impression Recording Session

**OPTi 82C928:**  
The audio solution for computers that need to be heard.



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*A Multimedia Division of OPTi*

**OPTi**

OPTi, Inc.  
2525 Walsh Avenue  
Santa Clara, CA 95051, U.S.A.  
Tel: (408) 980-8178  
Fax: (408) 980-8860  
24-hour Bulletin Board: (408) 980-9774