

## Creative's Industry-Standard 1373-Based Sound Card Delivers High Quality Digital Audio

The model CT5801 Sound Blaster® AudioPCI™ 128 for Hewlett-Packard, is an outstanding sound card solution that delivers excellent audio quality and features at an affordable price. The Sound Blaster AudioPCI 128 is driven by Creative's industry-standard ES1373 DSP engine, coupled with AC97 version 2.1 CODEC, providing the next generation of audio performance while maintaining full Sound Blaster 16 legacy compatibility.

### Audio - Primary Features

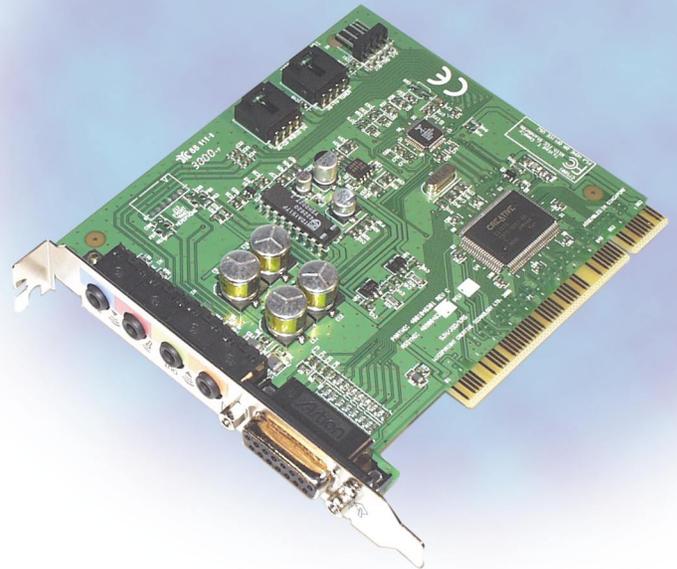
The Sound Blaster AudioPCI 128 is a complete digital audio recording and playback system, capable of 16-bit/48KHz fidelity. The Sound Blaster AudioPCI 128 delivers 128-voice polyphony for wavetable audio, real-time DSP effects including reverb, chorus and spatialization, plus real-time bass and treble equalization control. In addition, the Sound Blaster AudioPCI 128 supports 3D Positional Audio, Microsoft's DirectSound, DirectSound 3D, Environmental Audio Extensions (EAX) for DirectSound3D, and support for the Aureal A3D API, which allows applications written to the A3D API to run on the Sound Blaster AudioPCI 128. A stereo 2w/channel amplifier is also included.

### Compatibility

The Sound Blaster AudioPCI 128 is fully Plug and Play compliant for ease of use in either genuine DOS, DOS Box, Windows Millenium, Windows 95/98/98SE, Windows NT, and Windows 2000 applications, and is fully Sound Blaster 16 compatible in MS-DOS utilizing a patented method of Sound Blaster emulation developed by Creative. In addition, the AudioPCI 128 offers full General MIDI capability, and also supports Microsoft's PC98, PC99, and Multimedia PC Level II and III specifications.

### OEM Options

Optional features for OEM customers include S/PDIF digital output (including compressed AC-3 data), CDDA, custom speaker equalization and tone controls.



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- 128-Voice Multi-Timbral Wavetable Synthesis, General MIDI Compliant, 16 MIDI Channels
- 2MB, 4MB and 8MB Sample Sets
- Real-Time DSP and Effects Include Chorus, Reverb, Spatialization and Tone Controls
- Supports 3D Positional Audio, Creative's EAX, DirectSound/DirectSound 3D and Aureal A3D API
- Full Sound Blaster 16 Legacy Compatibility

# Model CT5801 OEM Datasheet for Hewlett-Packard

## Specifications

### Digitized Sounds

- Sound Blaster 16 compatible
- AC97 CODEC supporting stereo sampling 48kHz (Fixed); Multiple sample rate support
- Recording source: microphone, stereo line-in, CD-audio, video, modem, or multiple source recording
- PCI Bus Master for fast DMA
- Up to 128 simultaneous voice polyphony
- Full genuine DOS Game Compatibility
- 3 stereo inputs and 2 mono inputs can be mixed into the output stream
- Direct I/O space access of the control registers
- 100 Pin PQFP or TQFP
- External S/PDIF Connector
- Fully Compliant with PC99 Power Management specification

### Synthesized Music

- 128 Voice WaveTable Synthesizer

### Communications Interface

#### Telephone Answering Device (TAD) Interface

- Telephone Answering Device for modem connection. Allows a single microphone and stereo speaker set to be used for both voice modem and sound card audio applications (message recording and playback, speakerphone, etc.)

### Audio Mixer

- Output mixing of all audio sources: Digitized sounds, synthesized music, line-in, CD-audio, TV tuner, microphone.
- Input mixing sources: Synthesized music, microphone, Aux-in, CD audio.
- Multiple source recording and L/R channels may be swapped or mixed.
- 6 channel mixer for access to digitized sound, synthesized music, microphone, CD-audio, line-in
- Spatial audio control for digital audio and music synthesizer
- Reverb and chorus control for music synthesizer

### MIDI Interface

- MPU-401 UART

### Advanced Wave Table Synthesis

- Creative Advanced Synthesis Engine
- 128 voice polyphony and multi-timbral capability
- 128 GM wavetable instruments
- GS sound set + 10 drum kits in 4 & 8 MB sample sets
- 16 MIDI channels
- 128 MT-32 compatible instruments
- Digital effects engine for reverb, chorus and spatial-sound
- 2MB, 4MB, & 8MB sample sets

### Sampling Subsystem

- Host memory support
- Virtually unlimited variations of sound

### 3D Audio Technology

- Supports EAX
- Multi-algorithm Reverb and Chorus
- Supports Microsoft's DirectSound 3D
- Supports Aureal A3D API
- Improves sound clarity, spatial realism and sound effects, through the minimization of crosstalk
- Dynamically adjusts for monophonic or stereophonic input without user intervention

### Joystick Port

- Standard PC joystick port for 1 or 2 joysticks.

### SPDIF Interface

- 2-channel digital audio interface
- Output connector to a DAC receiver (i.e. digital speakers)

### Inputs and Outputs

- Stereo 2W/channel power amplifier
- Line In
- Line Out/SPDIF Out (SPDIF Out optional)
- Microphone In
- CD In
- TAD
- TV Tuner
- Joystick/MIDI

## Audio Performance

Frequency Response (+0/-3dB)	20 Hz to 20 kHz (Source: Line in) 30 Hz to 20 kHz (Source: Mic)	<i>Power Consumption (estimated)</i>	
Line-In Voltage Range	0 to 2 Vrms	+5 Volt Current Consumption	50 mA (Typ)
Line-Out voltage at 0dB	0 to 2 Vrms (10kohms load)	+12 Volt Current Consumption	75 mA (Typ)
		-12 Volt Current Consumption	35 mA (Typ)
		<i>Temperature range</i>	
<i>Reference signal 1KHz (measured with wide-band filter 22Hz-22kHz):</i>		Operation	10 to 50 degree C
Signal to Noise Ratio	> 90 dB Br A-wtg (Source: Line-in)	Non-operating	-40 to 125 degree C
THD+ N	0.01% (Source: Line-in) 70 dB Br A-wtg (Source:35dBu Mic-in)		
Microphone Input Range	0 to 100 mVrms		
Line-In Impedance	10 kohms		
CD Audio-In Impedance	10 kohms		
CD Audio-In Input Range	0 to 1 Vrms		

OEM Datasheet for HP - Revision 1.0, October 26, 2000

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All specifications are subject to change without prior notice.