

Technical Specifications of the Sound Blaster AWE64 series

Model Numbers:

CT4380
CT4381
CT4500
CT4501
CT4502
CT4520
CT4390 (AWE 64 Gold)
CT4540 (AWE 64 Gold)

The Sound Blaster AWE64 (and AWE64 Gold) card is a 16-bit ISA audio board. This Plug and Play card comes equipped with an EMU8000 AWE Synthesizer chip, and the WaveSynth/WaveGuide software. It provides options to upgrade with a Creative Memory upgrade module.

The Sound Blaster AWE64 family of cards include the following models:

Hardware Specifications

Wave-Table Synthesis

E-mu Systems EMU8000 wave-table synthesizer
Digital Effects engine for reverb, chorus, flange, and delay
32-voice polyphony and multi-timbral capability
128 GM & Gs compatible instruments and 10 drum kits
16 MIDI channels
1MB ROM of built-in sound samples
Creative WaveSynth / WG

Physical modeling WaveGuide technology and WaveSynth software based music synthesis for highly expressive and natural sounding music reproductions

Adds additional 32 voice polyphony and multi-timbral capability

Advanced Audio Technology

SoundFont downloadable samples allow new sounds and musical instruments to be added to the card

E-mu 3D Positional Audio positions sound in a 360 degree environment, providing an immersive audio experience with supported applications

Creative 3D Stereo Enhancement Technology expands the spaciousness of the sounds in a traditional two speaker system

Hardware acceleration of Microsoft DirectSound games and applications

Memory Subsystem

AWE64 cards: 512k onboard RAM supports SoundFont banks and E-mu 3D Positional Audio

AWE64 Gold cards: 4MB onboard RAM supports SoundFont banks and E-mu 3D Positional Audio

Expandable up to 24MB of RAM with memory upgrade module (sold separately)

CD-Quality, 16-Bit Stereo Digital Audio

8 and 16-bit, mono and stereo recording and playback

User-selectable sample rates from the 5kHz to 44.1kHz

Full-Duplex support enables simultaneous record and playback for Internet communications software

General Specifications

Environment Temperature: (non-operating) -40C to 70C, (operating) 10C to 50C

Relative Humidity: (non-operating) 30% to 95%, (operating) 30% to 80%

Frequency Response: 15Hz - 50KHz (+0/-1 dB)
Signal to Noise Ratio: 90 db
Input: 2Vrms (maximum)
Output: 2Vrms (maximum)
THD+N: 0.005%
S/PDIF Output (AWE64 Gold): 20Bit, 120dB Dynamic Range
Hardware Settings

Note: all settings are software selectable via Plug and Play.

Interrupt (IRQ): 2, 5, 7, 10
8-bit DMA Channel: 0, 1, 3
16-bit DMA Channel: 5, 6, 7
Joystick I/O Address: 200 Hex
Audio I/O Address: 220, 240, 260, 280 Hex
MPU-401 I/O Address: 300, 330 Hex
FM Synthesizer I/O Address: 388 Hex
Wave Synthesizer I/O Address: 6x0, Ax0, Ex0 Hex
Connectors

Line-In: Yes
Mic-In: Yes
Line-Out: Yes
Amplified Speaker-Out: YES (WE 64 Onl)
PC Speaker-In: No
SPDIF-Out: Yes (WE 64 Gold Onl)
Game/Joystick Port: Yes
CD-ROM Audio-In (Sound Blaster Audio Socket): Yes
CD-ROM Audio-In (MPC2 Socket): Yes
CSP Chip Socket: No
Wave Blaster Daughter Board Connector: No
External CD-ROM: Not Applicable
Modem Feature Connector: Yes
Minimum System Requirement

486/DX class proceesor running at 33MHz or faster
8MB system RAM
DOS® 5.0, Windows® 3.1, or Windows NT®
Open, half-length 16-bit ISA slot
Passive speakers or headphones (Gold series requires amplifide speakers)
CD-ROM drive required for software installation on some versions of retail packaging
Requirements for Maximum Functionality

Intel Pentium® or AMD K5® series processor running at 90MHz or faster
16MB system RAM
Windows® 9x
Open, half-length 16-bit ISA slot
Self-powered speakers or stand alone amplifier
Dynamic or electric microphone
CD-ROM drive required for software installation on some versions of retail packaging