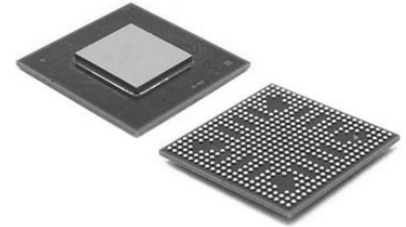



PCM Audio Codec 2ADC / 2DAC Ch 49-Pin WCSP T/R



Images are for reference only

[Inquiry](#)

Manufacturer:	Cirrus Logic, Inc
Package/Case:	WCSP-49
Product Type:	Communication & Networking ICs
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active

General Description

The WM8962/62B are low power, high performance stereo codecs featuring an integrated charge pump to provide a ground referenced output which removes the need for DC blocking capacitors on the headphone outputs and incorporates a dual-mode charge pump architecture to optimize efficiency and power consumption during playback. A DC Servo is used to reduce DC ground offsets and to improve power consumption and minimizes pops and clicks. Stereo Class D speaker drivers provide 2W per channel into 4Ω BTL loads, with a 5V supply. Low leakage, excellent PSRR and pop/click suppression mechanisms also allow direct battery connection to the speaker supply. Flexible speaker boost settings allow speaker output power to be maximized while minimizing other analog supply currents. Control sequences for audio path setup can be pre-loaded and executed by an integrated sequencer to reduce software driver development and eliminate pops and clicks via Cirrus Logic's SilentSwitch™ technology. Flexible input configuration: four stereo inputs or eight mono inputs on Left or Right ADC, with a complete analog (four single-ended stereo inputs) and digital microphone interface. A programmable audio enhancement DSP is included with multiple preset algorithms. Virtual surround sound widens the stereo speaker audio image, HD Bass enhances low frequencies, and ReTune™ flattens the frequency response of the speaker or microphone path. A configurable DSP includes additional functions such as 3D widening for recording, a 5-band parametric EQ and Dynamic Range Controller.

Key Features

DAC SNR 98 dB ('A' weighted), THD -84 dB at 48 kHz, 1.8V

ADC SNR 94 dB ('A' weighted), THD -85 dB at 48 kHz, 1.8V

Stereo class D speaker driver

1W per channel into 8Ω BTL speakers

2W mono (for improved THD)

Flexible internal switching clock

Cirrus Logic 'class W' ultra-low power headphone driver

Up to 31mW per channel output power at 1% THD+N into 16Ω at 1.8V

Ground referenced

Low offset ($\pm 1.2\text{mV}$)

Pop and click suppression

Control sequencer for pop-minimized power-up/down

Single register write for default start-up sequence

Microphone interface

Single-ended four stereo analog input

Integrated low noise MICBIAS

Digital microphone interface

Programmable ALC / limiter and noise gate

Programmable audio enhancement DSP with presets

Virtual surround sound

HD bass

ReTune™

Fixed audio processing DSP

3D stereo widening

5-band parametric EQ

Dynamic range controller

Beep generator

Two integrated PLLs enable clocking of full audio system

Low power consumption

7.7mW headphone playback

8.3mW analog record mode

Low supply voltages

analog 1.7V to 2.0V (speaker supply up to 5.5V)

Charge pump 1.7V to 2.0V

MIC bias amp supply 1.7V to 3.6V

Digital 1.62V to 2.0V

Two-wire I²C and 3- or 4-wire SPI serial control interface

Standard sample rates from 8 kHz to 96 kHz

W-CSP, 3.6x3.9mm 49-pin

Recommended For You

WM8974CGEFL/RV

Cirrus Logic, Inc
QFN24

WM8731CLSEFL

Cirrus Logic, Inc
QFN28

WM8994ECS/R

Cirrus Logic, Inc
WCSP-72

WM8944BECS/R

Cirrus Logic, Inc
WLCSP-25

WM8776SEFT/V

Cirrus Logic, Inc
LQFP48

WM8993ECS/RV

Cirrus Logic, Inc
BGA48

WM8770SIFT/V

Cirrus Logic, Inc
TQFP64

WM8915ECS/R

Cirrus Logic, Inc
WCSP

WM8772SEDS/RV

Cirrus Logic, Inc
SSOP28

WM8980CGEFL/RV

Cirrus Logic, Inc
BGA

WM8778SEDS/V

Cirrus Logic, Inc
28-SSOP

WM8998ECS/R

Cirrus Logic, Inc
WLCSP117

WM8946ECS/R

Cirrus Logic, Inc
BGA

WM8904ECS/R

Cirrus Logic, Inc
WCSP-36

WM9713CLGEFL/V

Cirrus Logic, Inc
QFN-48