High Integrated USB Audio Controller

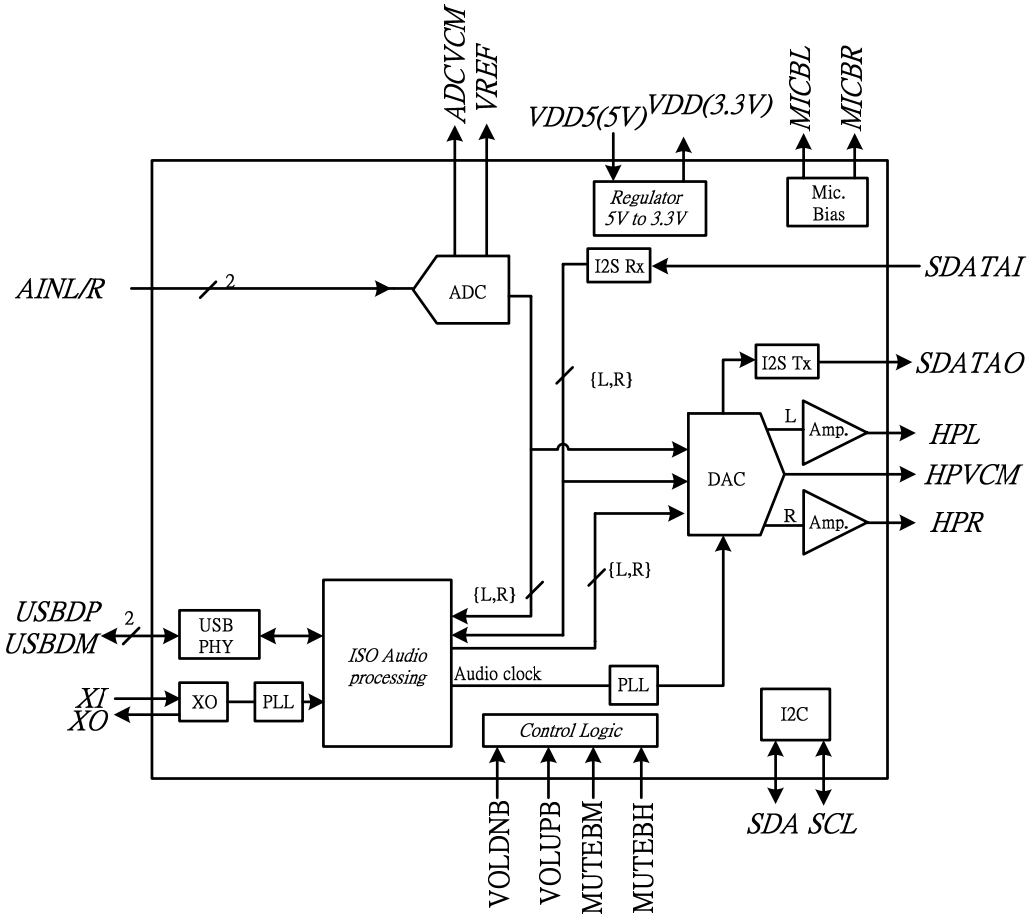
Features

- Compliant with USB Specification v1.1, and USB 2.0 full speed
- Embedded headphone driver
- Embedded stereo dual ADC input
- Microphone Boost
- Support 16~24-bit I^2S input and I^2S output interface of master mode
- Sampling frequencies(Fs)：44.1kHz for music playing back and recording
- Support both bus-powered and self-powered operation
- OS supports for Win Me/2000/XP/Vista and MacOS
- Support volume/mute control with external button
- LED indicator for operation status of USB operation, recording mute and speaker/headphone mute pins
- Built-in 5V to 3.3V regulator for internal device operation
- Anti-pop design
- 48-pin LQFP 7x7 mm (Pb free)

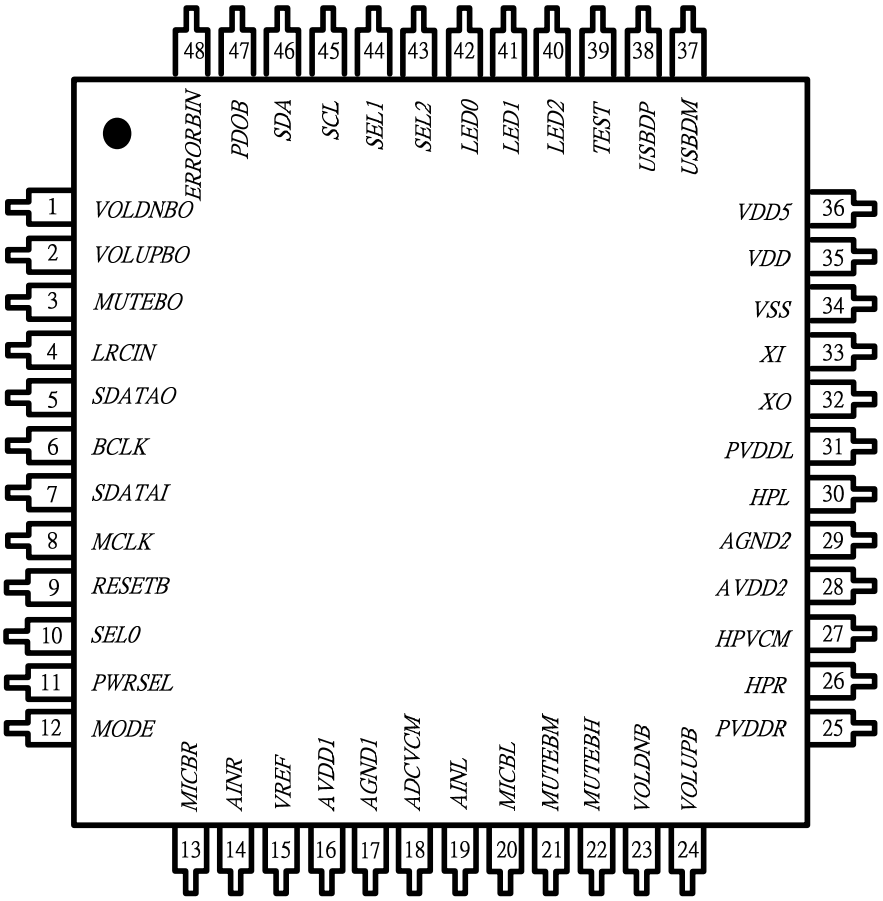
Description

AD62552A is a single chip integrated headphone driver, DAC, ADC and microphone booster. AD62552A can drive up to 70mW @16Ω. The device also has a master mode I^2S input port and output port. The I^2S input port allows other external audio sources to be recorded by host and mixed to headphone. The I^2S output port allows other high performance audio device (i.e. AD82550A/AD8256A/AD8356A) to be controlled by AD62552A.

Functional Block Diagram



Pin Assignment



Pin Description

Pin	Name	Type	Description	Characteristics
1	VOLDNBO	O	To AD82550A volume down	
2	VOLUPBO	O	To AD82550A volume up	
3	MUTEBO	O	To AD82550A mute	
4	LRCIN	O	I^2S's L/R clock output (Fs)	
5	SDATAO	O	I^2S's Serial audio output	
6	BCLK	O	I^2S's BCLK output (64xFs)	
7	SDATAI	I	Serial audio data input	Schmitt trigger TTL input buffer
8	MCLK	O	Master clock (256xFs)	
9	RESETB	I	System reset signal, low active	Schmitt trigger TTL input buffer
10	SEL0	I	Control selection 0 (0:AD82550A; 1:AD8356A)	Schmitt trigger TTL input buffer
11	PWRSEL	I	Self or bus power source selection	Schmitt trigger TTL input buffer
12	MODE	I	Headset or speaker mode selection	Schmitt trigger TTL input buffer
13	MICBR	O	Microphone right channel voltage supply	