

Solid State System - SSS1623 Usound Controller

USB Headset Controller

Overview

The **SSS1623** is a highly integrated single chip USB audio controller with GPIO and MCU bus for function extension. **SSS1623** features 16bits ADC, 16bits DAC, class AB earphone driver, microphone booster, embedded regulator, and is compliant with USB audio class V1.0, which make **SSS1623** especially suitable for USB headset application. **SSS1623** also integrates I2S and MCU interface, which provide more flexibility to connect to external codec or DSP for more function extension. Features can be programmed through external EEPROM, and vendor can customize its own USB VID/PID and serial number as well.

Moreover, **SSS1623** can bundle 3S USB Audio software with 3S 3D EQ functions, which supports 10 band Equalizer, 3D effect, and Environment sound effects, and makes **SSS1623** a audio enhanced PC multi-media headset system.

Features

- Single chip USB audio controller with GPIO and MCU bus for function extension
- External EEPROM interface for USB VID, PID, product string, and serial number
- GPIO and MCU interface access via HID
- Compliant with USB specification v2.0 full speed operation
- Compliant with USB audio device class specification v1.0
- Single 12MHz crystal input with on-chip PLL and embedded USB transceiver
- Embedded 16 bits ADC for microphone input
- Embedded 16 bit DAC and 15 mW (32 ohm) class AB earphone driver
- Peripherals:
 - Two-wire serial bus to access external MCU with HID
 - Embedded I2S (master mode) & SPI interface for external 24 bit CODEC
- UI / USB HID for volume up, volume down, and mute while playback
- 48KHz sampling rate for both playback and recording in headset application
- 8KHz, 11.025KHz, 22.05KHz, 32KHz, 44.1KHz, and 48KHz sampling rate in recording only mode
- +20dB microphone boost is declared as AGC for default USB audio driver control
- 3S 3D EQ sound software
 - 10 band EQ / Environment effects / 3D effect
- Embedded 5V to 3.3V and 3.3V to 1.8V regulators for single 5V operation
- Embedded digital mixer
- LQFP48, LQFP64, COB



Highlights

- USB Headset Controller
- External EEPROM I/F
- 16 bit DAC
- 16 bit ADC
- Class AB Ear AMP
- Mono microphone input
- USB Audio Class v1.0
- USB HID:
 - Volume up/down
 - Mute
- Peripherals
 - Two-wire serial bus
 - SPI
- Win 2000 / Win XP / Vista / Win7 and Mac OS/Linux ready
- 3S 3D EQ sound software
- Single 5V power supply
- Single 12Mhz crystal

