



**C-Media**

The Best PC Audio Solutions

**USB Audio**



# Product Brief

Version 1.0

**CM6206**

High Integrated USB Audio I/O Controller

[WWW.CMEDIA.COM](http://WWW.CMEDIA.COM)



# C-Media

The Best PC Audio Solutions

CM6206

# Product Brief

Version 1.0



## Description

CM6207 is a highly integrated single chip USB audio solution. All essential analog modules are embedded in CM6207, including 8CH DAC and earphone buffer, 2CH ADC, microphone booster, PLL, regulator, and USB transceiver. It is very suitable for high end USB external audiobox, USB multi-channel headphone or USB audio interface multi-channel speaker set application. Many features are programmable with external EEPROM and MCU interface. In addition, MCU/EEPROM/GPIO control can easily via HID software interface. Better yet, CM6207 support stereo MIC, phone jack sense, S/PDIF I/O and 48/44.1 KHz sampling rate. Moreover, unique patent driver can support world first SPEAKER SHIFTER, full HRTF 3D, EAX2.0, Karaoke and Dolby AC-3 real-time encoder function.

## FEATURES

- USB spec. 2.0 full speed compliant
- USB audio device class spec. 1.0 and USB HID class spec. 1.1 compliant
- IEC60958 spec. compliant (consumer format S/PDIF input and output with loop-back support)
- SCMS (Serial Copy Management System) compliant
- Dolby® digital audio streaming via S/PDIF out
- USB remote wake-up support
- 8 channel DAC output with
  - 16 bit resolution
  - 3.1 Vpp (1.1 Vrms) biased at 2.25V output swing
  - Volume control and mute function
  - Earphone buffer
  - 2X interpolator for digital playback data to improve quality
- 2 channel ADC input with
  - 16 bit resolution
  - 3.2 Vpp (or 4.0 Vpp programmed by vendor driver) biased at 2.25V input swing
  - Volume control and mute function



# C-Media

The Best PC Audio Solutions

CM6206

## Product Brief

Version 1.0



## FEATURES

- Additional headphone output with selectable source and phone jack sense
- Stereo MIC support with boost capability
- Recording source select from S/PDIF, MIC, Line-in and summation of MIC, Line-in and front channel
- MIC, Line-in monitor from front channel (all channels optional) with volume control and mute function
- Master volume control by default; per-channel volume control by C-Media driver
- Playback with soft-mute function
- Support 48 / 44.1 KHz sampling rate for both playback and recording
- MCU support with two-wire serial interface
- Serial EEPROM support for customized VID/PID
- MCU / EEPROM / GPIO control via HID software interface
- Volume up / volume down / playback mute HID button
- LED indicator pins: operation / recording mute / SCMS protection
- C-Media value added software (multi-channel positional 3D sound, AC-3 encoder, etc.)
- Embedded USB transceiver and power on reset circuit
- Microsoft Vista Premium Level Compliant
- Single 12MHz crystal input with embedded PLL
- Single 5V power supply with embedded 5V to 3.3V regulator
- Industry standard LQFP-48 package
- C-Media value added patent software driver
  - Xear 3D sound
  - Earphone Plus
  - SPEAKER SHIFTER
  - Environment sound effects
  - Room Size Mode
  - Graphic Equalizer
  - Karaoke Function
  - Dolby Digital Real-Time Content Encoder (Optional)



## BLOCK DIAGRAM

