



CM6646_Demo Board

User Manual_v106

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Revision Notes

Revision	Date	Description
v100	2021/02/05	First formal release.
v101	2021/08/30	Change PCB v101.
v105	2023/01/05	Change PCB v105.
v106	2024/06/18	Change PCB v106.

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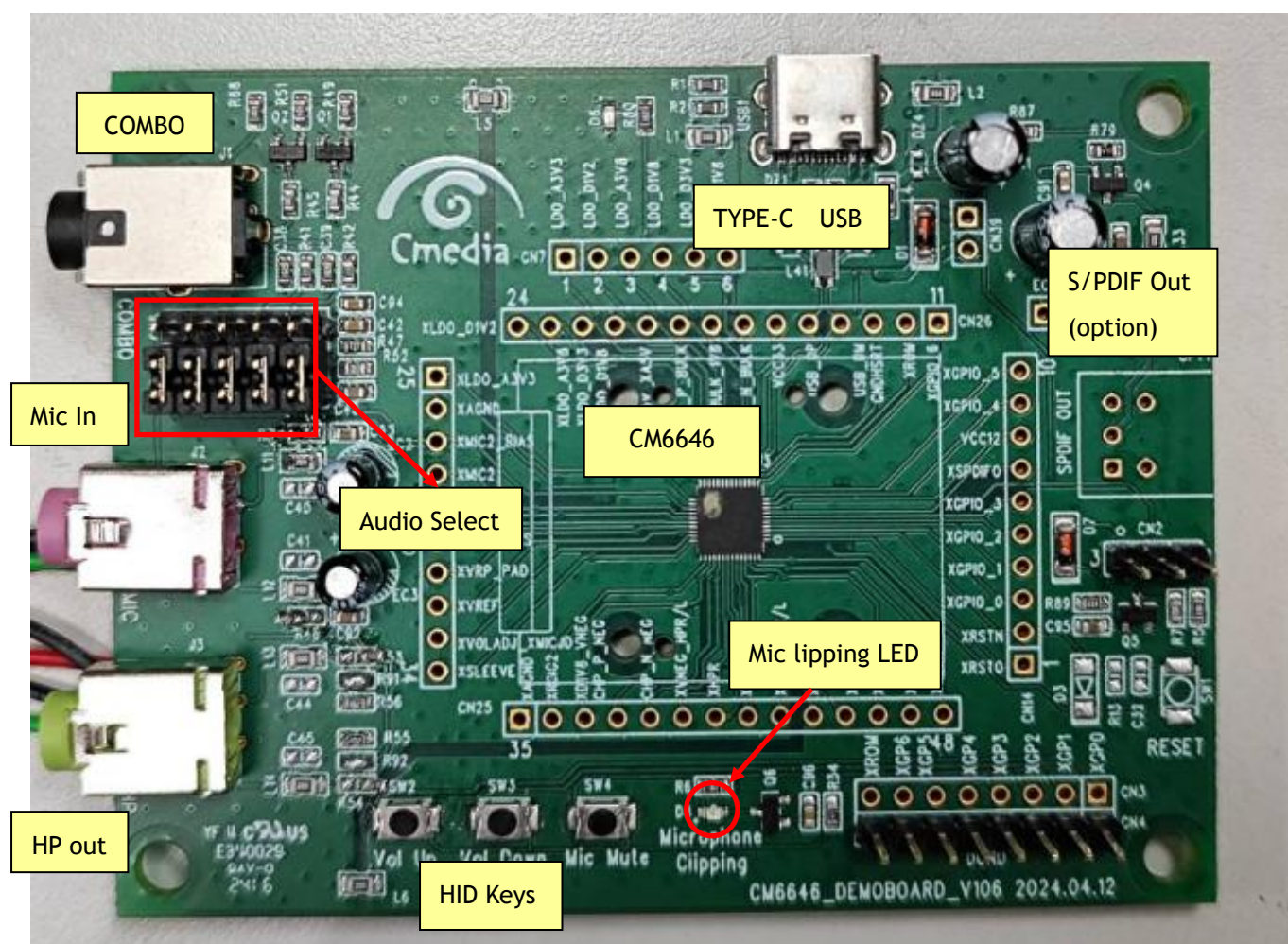
SECTION 1 OVERVIEW

1.1 Introduction

The Demo Board is Cmedia CM6646 is a USB2.0 high-speed / full speed audio controller that can support latest USB Audio Device Class Definition V3.0 and high-definition audio (up to 192 KHz/ 32bit) Playback / Recording capability. CM6646 has an embedded High Quality / Low Power 2-channel DAC and 2-channel ADC for Headphone / Headset applications. There is a 8051 MCU inside to support flexibility and functionality with downloadable code via internal serial flash.

1.2 Demo Board Contents

The CM6646 USB Audio controller evaluation board has several hardware features. With each feature's description in figure , the feature's location can be clearly identified.



SECTION 2 GETTING STARTED

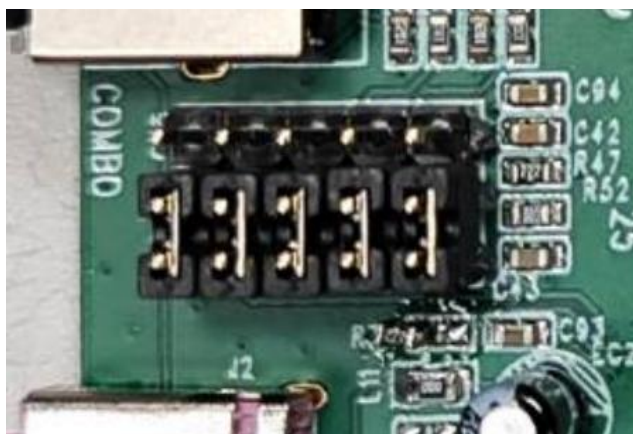
2.1 Board as USB Audio Device

Connect to the host by plugging the USB cable with a Micro connector .



Type-C USB connector

2.2 Playback and Record



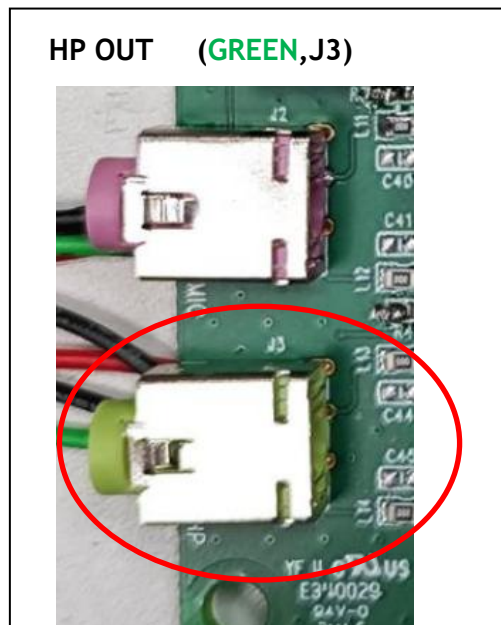
Audio Select **down** I/O are general jack(J2,J3)



Audio Select **up** I/O are combo jack(J1)

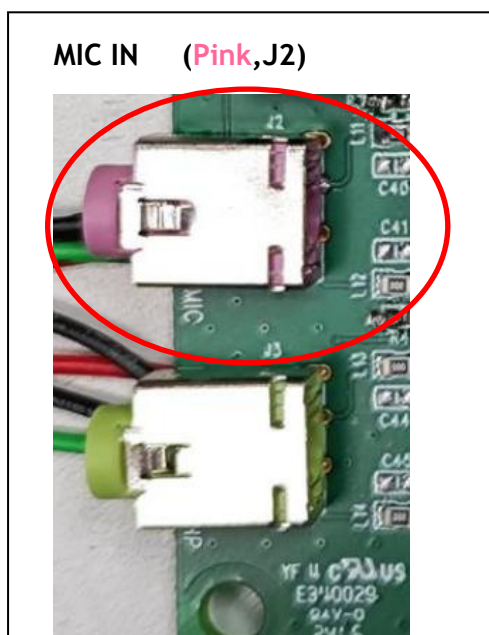
2.2.1 Playback Functions

CM6646 playback output Green jack.

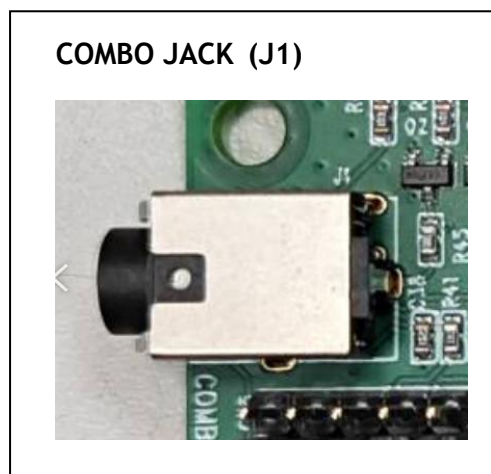


2.2.2 Recording Functions

CM6646 Recording input Pink jack.

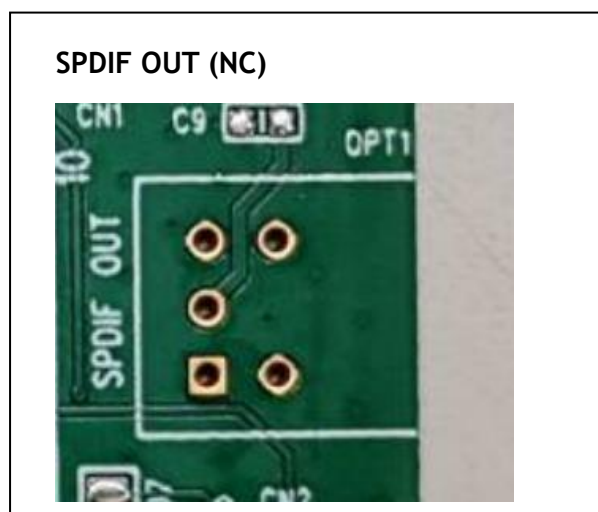


2.2.3 COMBO JACK Functions



2.2.4 S/PDIF Functions

CM6646 SPDIF OUT(option)



2.3 Demo Board with Peripheral Control

2.3.1 HID Buttons and LED



Symbol	Description
SW2	Volume Up
SW3	Volume Down
SW4	Microphone Mute
D8 LED	Micphone Clipping
All the button functions can be replaced by Firmware	

2.3.3 CM6646 all Pin Header

