



electronics-lab from ideas to boards

electronics-lab - Projects | Embedded News | Online Community | e-Shop

Open Source Hardware Electronics Projects

electronics-lab.com /projects









# **Stereo Audio Processor for Home TV Audio**



#### **AUDIO**

# Stereo Audio Processor for Home TV Audio



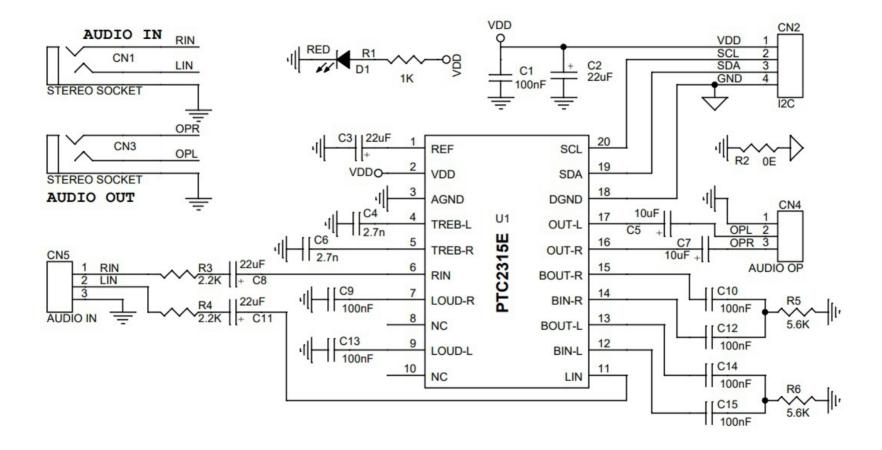
This PT2315E IC-based audio processor is designed for versatile applications and includes master volume control with low-frequency loudness compensation, speaker output attenuator, and tone control. It is a good solution for home audio signal processing. Due to the high-reliability requirement from the audio business, the PT2315E improves both audio performances and input surge current capability and these cause the PT2315E to be the best solution for the cost-effective audio systems.

#### **FEATURES**

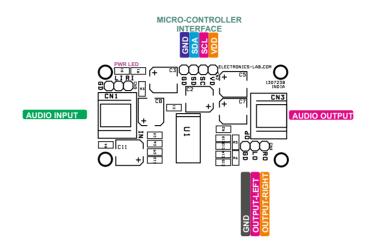
- Power Supply 5V DC (Range 4V to 10V)
- Master volume from 0 dB to -78.75dB in 1.25dB/step
- Speaker attenuator for balance, range from 0dB to -38.75dB in 1.25dB/step
- Each channel output can be muted individually.
- Low frequency loudness compensation
- All Controls using I2C Interface
- Bass and Treble control, range from -14dB to +14dB in 2dB/step
- Low harmonic distortion, low noise
- PCB Dimensions 51.12 X 27.78MM
- 4 X 2.5MM Mounting Holes



## **Schematic**



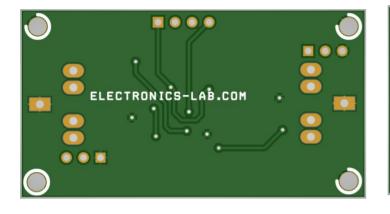
### **Connections**

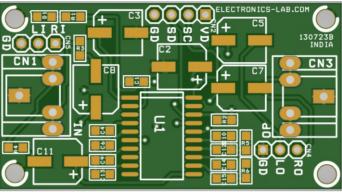


#### **Connections and Other Details**

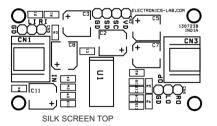
- CN1: 3.5MM Stereo EP Female Socket Audio Input
- CN2: Pin 1 = VDD, Pin 2 SCL, Pin 3 = SDA, Pin 4 = GND (I2C)
- CN3: 3.5MM Stereo EP Female Socket Audio Input
- CN4: Optional Audio Output Header Connector Pin1 = GND, Pin 2 = Audio Output Left Chnl, Pin 3 = Audio Output Right Chnl
- CN5: Optional Audio Output Header Connector Pin1 = Audio Input Right Chnl, Pin 2 = Audio Input Left Chnl, Pin 3 = GND
- D1: Power LED

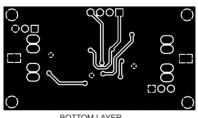
# **PCB**



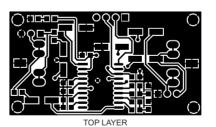








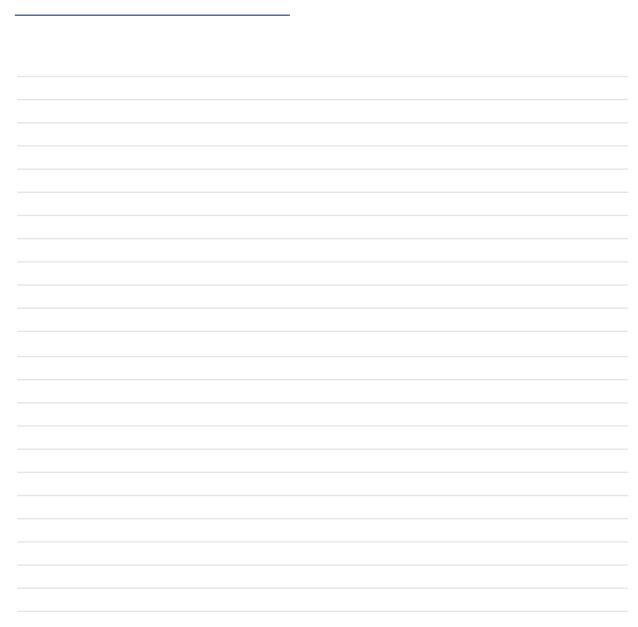




# **Parts List**

вом						
NO.	QNTY.	REF	DESC.	MANUFACTURER	<b>SUPPLIER</b>	SUPPLIER PART NO
1	2	CN1,CN3	3.5MM STEREO EP FEMALE SOCKET	CUI AUDIO	DIGIKEY	CP1-3525N-ND
2	1	CN2	4 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5317-ND
3	1	CN4	3 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5316-ND
4	1	CN5	3 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5316-ND
5	7	C1,C9,C10,C12,C13,C14,C15	100nF/50V CERAMIC SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
6	4	C2,C3,C8,C11	22uF/16V-50V SMD ELECTROLYTIC	NICHICON	DIGIKEY	493-10060-1-ND
7	2	C4,C6	2.7n/50V CERAMIC SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
8	2	C5,C7	10uF/16V-50V SMD ELECTROLYTIC	PANASONIC	DIGIKEY	PCE3947CT-ND
9	1	D1	LED SMD SIZE 0805	LITE ON INC	DIGIKEY	160-1427-1-ND
10	1	R1	1K 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
11	1	R2	0E SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
12	2	R3,R4	2.2K 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
13	2	R5,R6	5.6K 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
14	1	U1	PTC2315E SOP20	PRINCETON TECH	EBAY	ALIEXPRESS/EBAY

## **Notes**





# **APP**

### **Android App**

DOWNLOAD



Android App launched in 2017 and has 100k+downloads - rated with 4.5 stars.

**SCAN QR CODE** 





from ideas to boards











