

JACKALOPE - CNR/ACR multi-channel upgrade card

SCOPE: Jackalope provides an upgrade to 4/6 channels on CNR or ACR equipped motherboards. Stuffing options allow for 2/4 channel operation for motherboards without onboard audio.

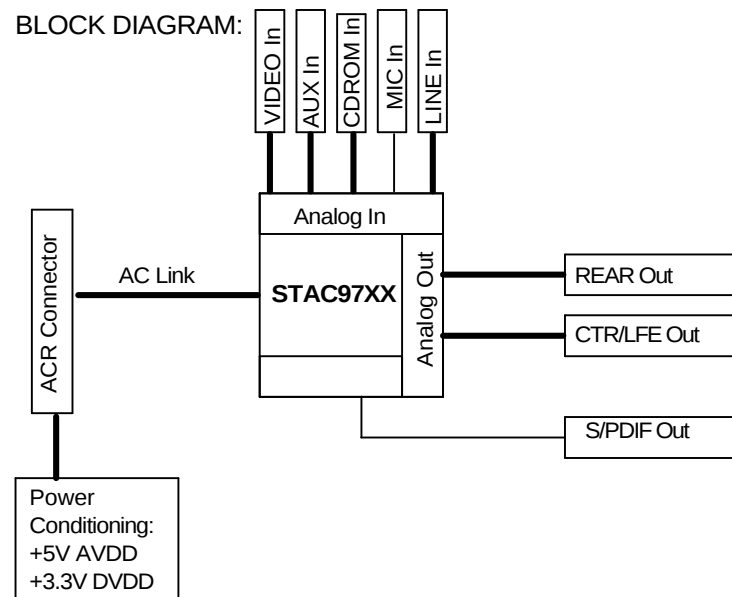
UNIQUE COMPONENTS:

- 1) STAC9756 Audio Codec with 48-TQFP, 9.0mm tip-to-tip, package.
- 2) 24.576 MHz crystal in Epson MA-306 package, use dual MA-306/CA-301 layout.
- 3) LT1121 in SOT-223.
- 4) CUI SJ-3535 stereo connector.
- 5) Radial lead capacitors PCB footprints are listed in PackageDiameter/LeadSpacing/LeadDiameter form.
- 6) 0.33uF cap, Panasonic F/Y5V 16V 0.85mm tall 805 series, or B/Y5P 16V 0.85mm tall 1206 series. Substitution of +1uF EIA3216 cap is acceptable.
- 7) EIA prefix footprint surface mount components (EIA abcd) have dimensions of a.b mm by c.d mm.
- 8) SMT prefix footprint surface mount components (SMT wxyz) have dimensions of 0.wx inches by 0.yz inches.
- 9) Sharp GP1FE500TK "Optical Mini-Jack" optical connector

REVISION HISTORY:

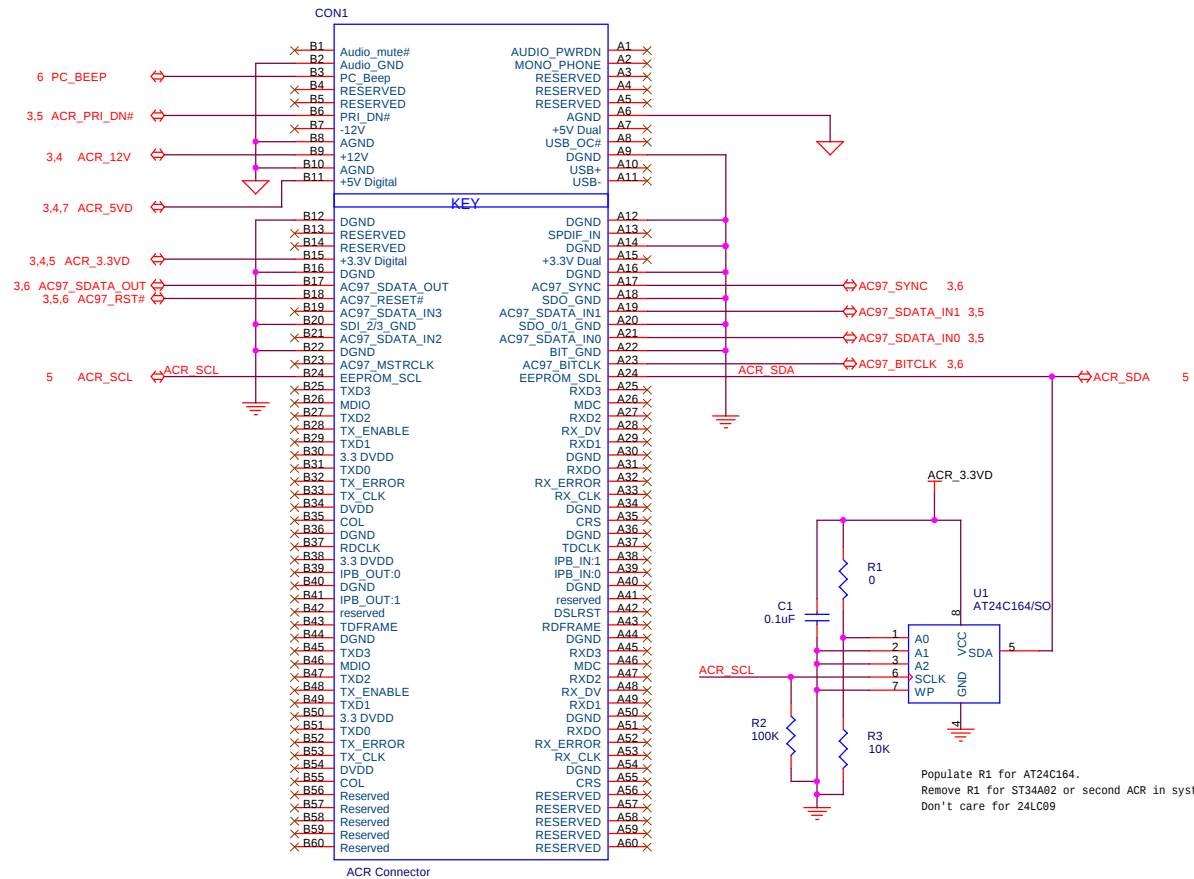
- 1) 04/12/01 - Original release.
- 2) 06/27/01 - Changed C27,C28 from 10 to 220uF; Changed C22, C24 from 220 to 3.3uF; analog to digital ground connection on codec page; pull up/down on SPDIF output; changed +5VD_ACRC to ACR_5VD (Analog I/O)

BLOCK DIAGRAM:



		SigmaTel, Inc. 3815 Capital of Texas Hwy Suite 300 Austin, TX 78704 tel: (512)381-3700 fax: (512)744-1700	
Title Overview			
Size A	STEBV-AC-ACRCNR0601		Rev B
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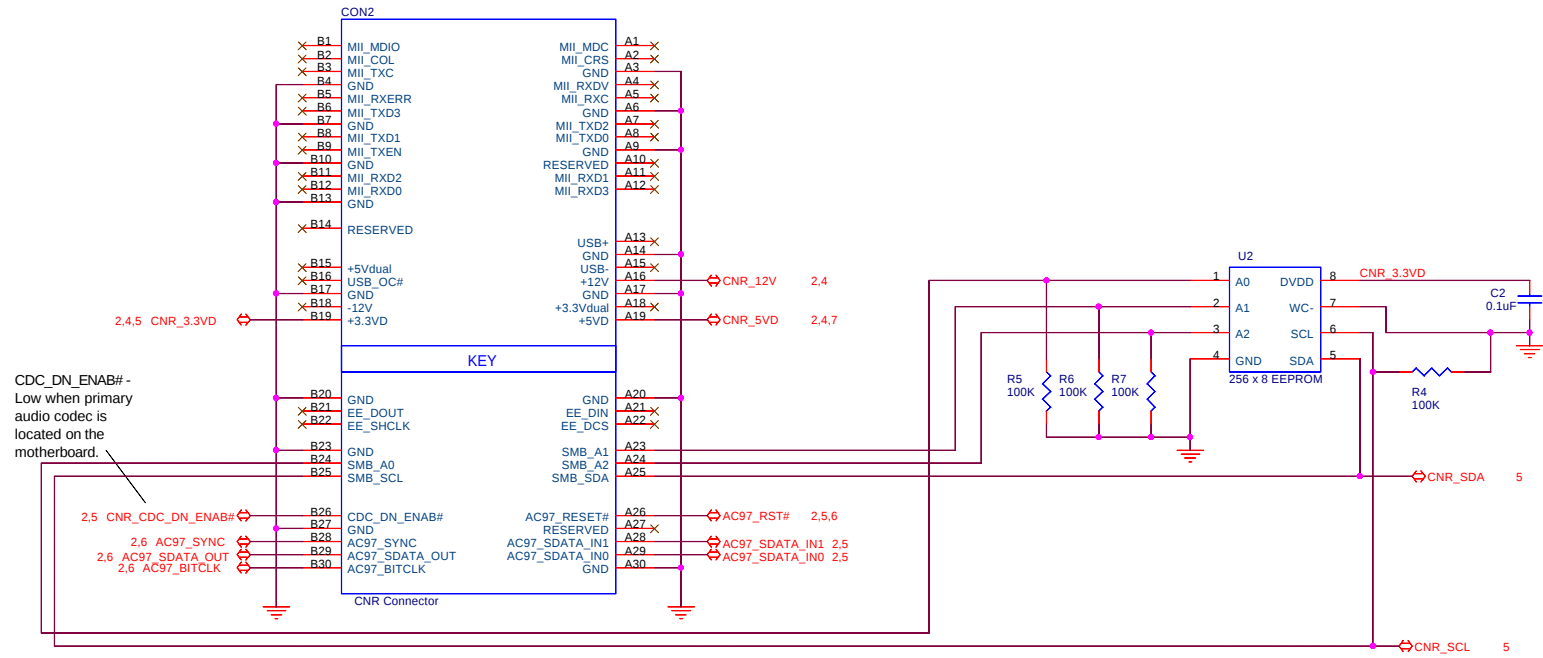
Advanced Communications Riser Connector



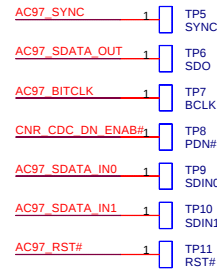
This design is the property of SigmaTel Inc. It is offered on an "as is" basis, and carries no implied warranty.

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Communication and Networking Riser Connector

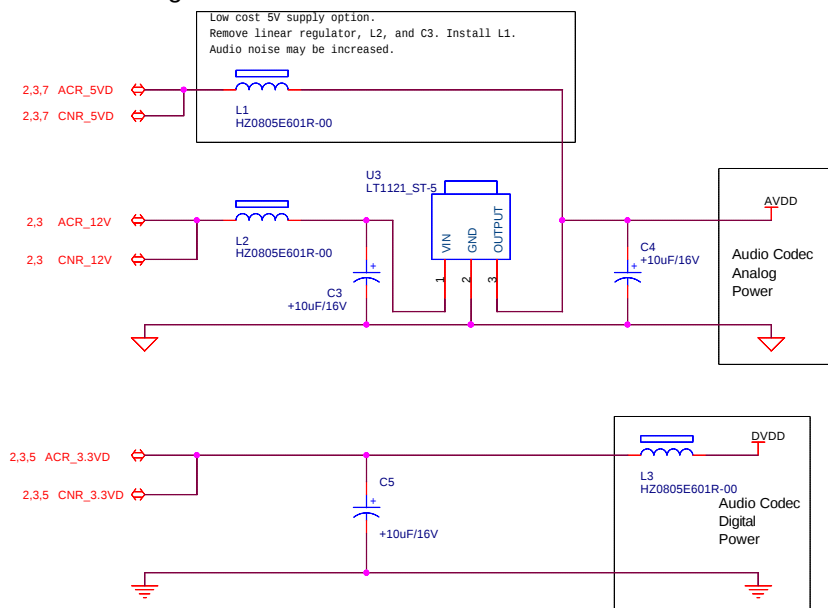


For additional information on the CNR specification, please goto: <http://developer.intel.com/technology/CNR/>



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Power Conditioning

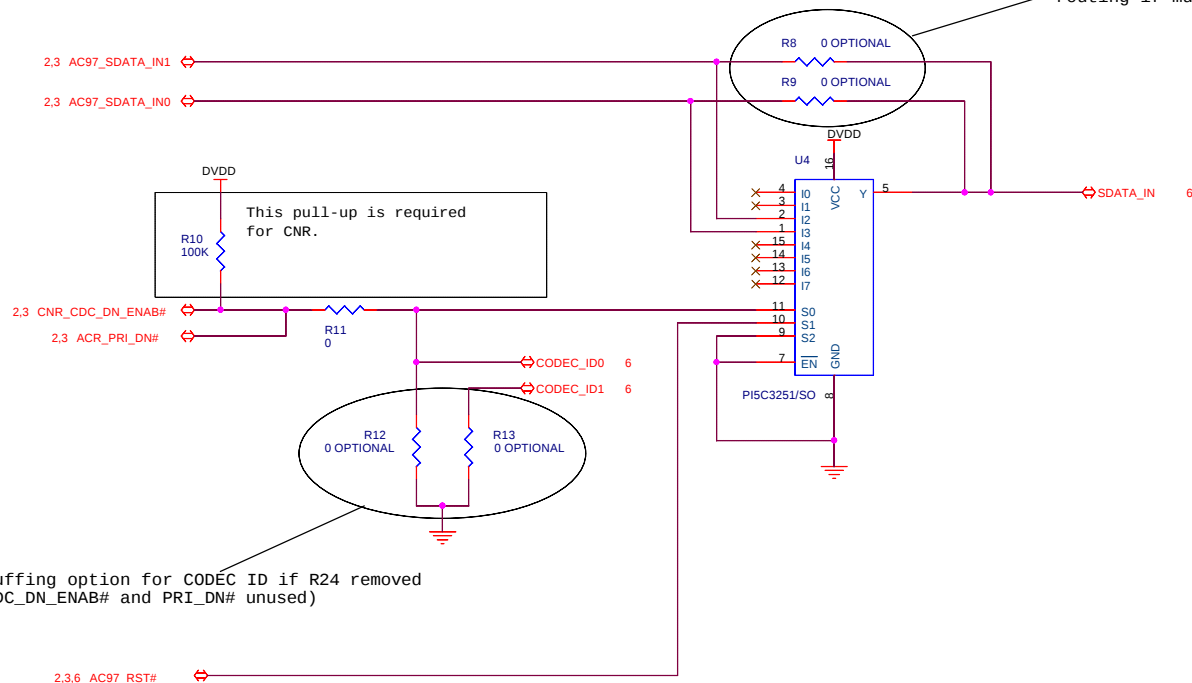


Codec digital powered from +3.3Vmain since audio
codecs are not required to retain their register states
locally during suspend modes.

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This circuit will switch the codec on the riser from primary to secondary if a codec is present on the motherboard.

Stuffing option for SDATA_IN routing if mux is not used.

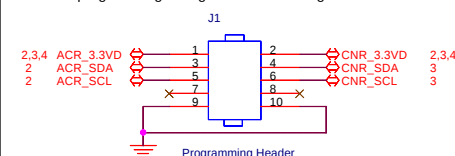


Stuffing option for CODEC ID if R24 removed (CDC_DN_ENAB# and PRI_DN# unused)

AC97_RESET#	CODEC DOWN#	AC97_SDATA_IN0	AC97_SDATA_IN1
0	X	Hi-Z	Hi-Z
1	0	Hi-Z	SDATA_IN
1	1	SDATA_IN	Hi-Z

Note: CODEC DOWN# represents ACR_PRI_DN# or CNR_CDC_DN_ENAB#

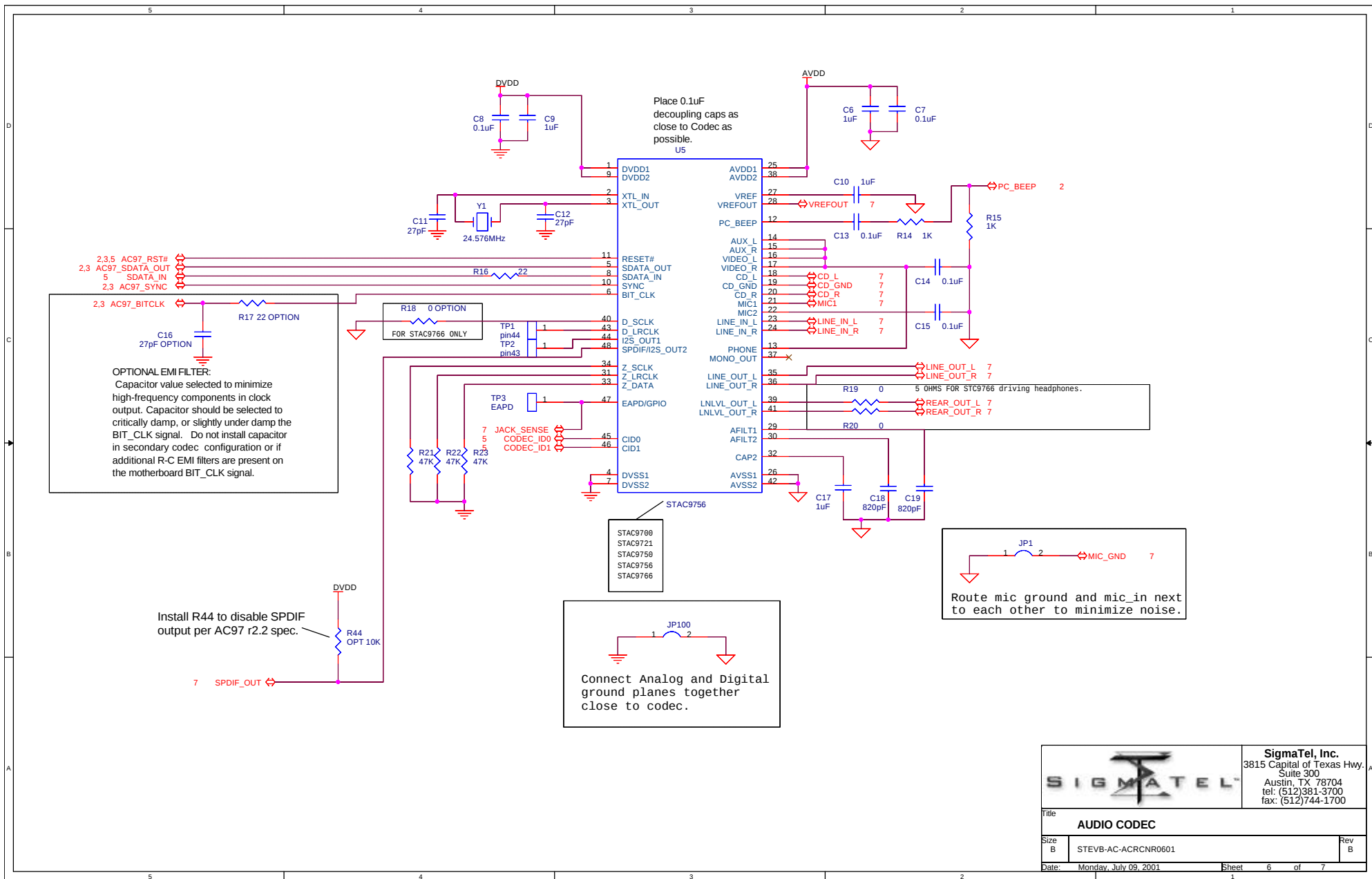
Programming header is a row of pads on back of board to allow EEPROM programming during bed of nails testing



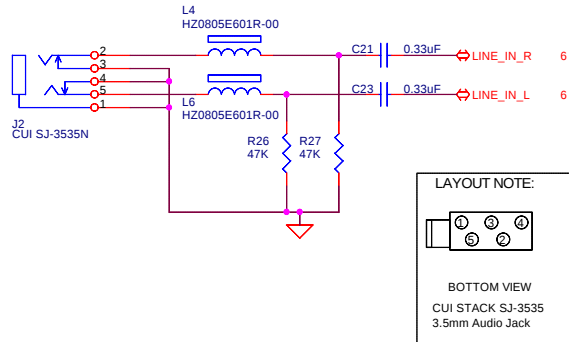


SigmaTel, Inc.
3815 Capital of Texas Hwy.
Suite 300
Austin, TX 78704
tel: (512)381-3700
fax: (512)744-1700

Title CODEC Disable circuits		
Size B	STEBB-AC-ACRCNR0601	Rev A
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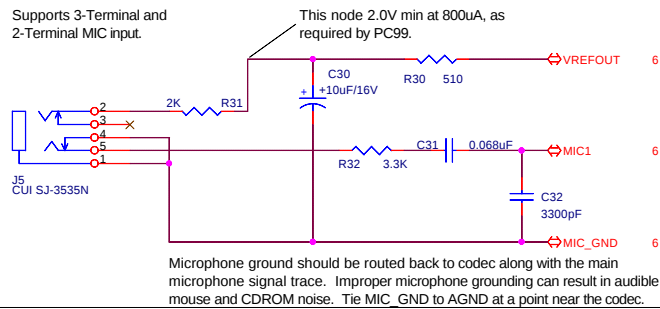


LINE-IN Circuit

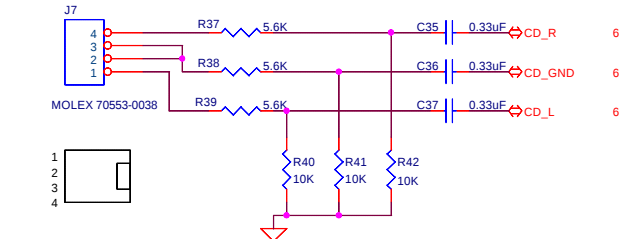


Microphone Input Circuit

Supports 3-Terminal and 2-Terminal MIC input.



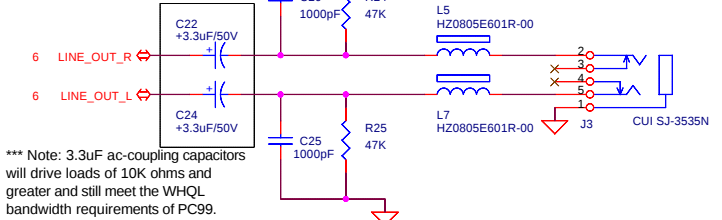
CDROM Circuit with 4.5dB Attenuation



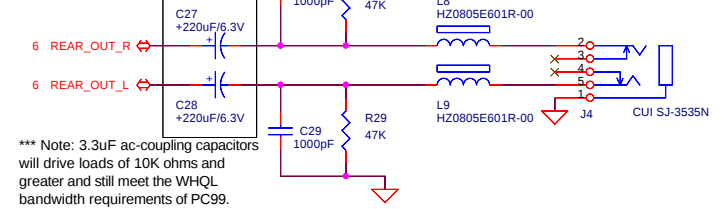
Note: Attenuation of the CDROM input is often useful since many CDROMs output signals larger than 1Vrms. If 0.0dB attenuation is desired, R13, R14, and R15 should be changed to 0.0R, and R16, R17, and R18 should not be installed.

CDROM Attenuation	4.5dB	0dB
R18,R19,R20	5.6K	0
R23,R24,R25	10K	DNS

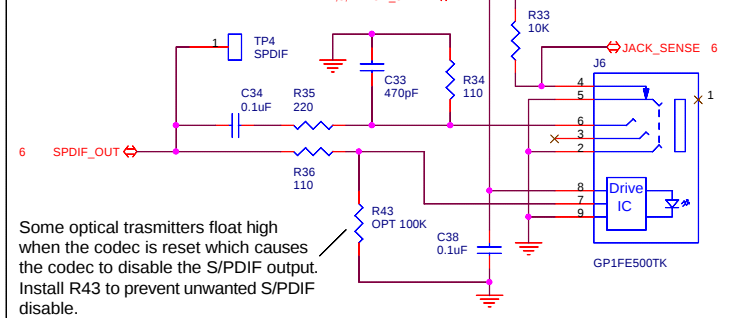
FRONT CHANNEL



REAR CHANNEL (Headphone)



S/PDIF SERIAL OUTPUT



		SigmaTel, Inc. 3815 Capital of Texas Hwy. Suite 300 Austin, TX 78704 tel: (512)381-3700 fax: (512)744-1700
		Title Analog I/O
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