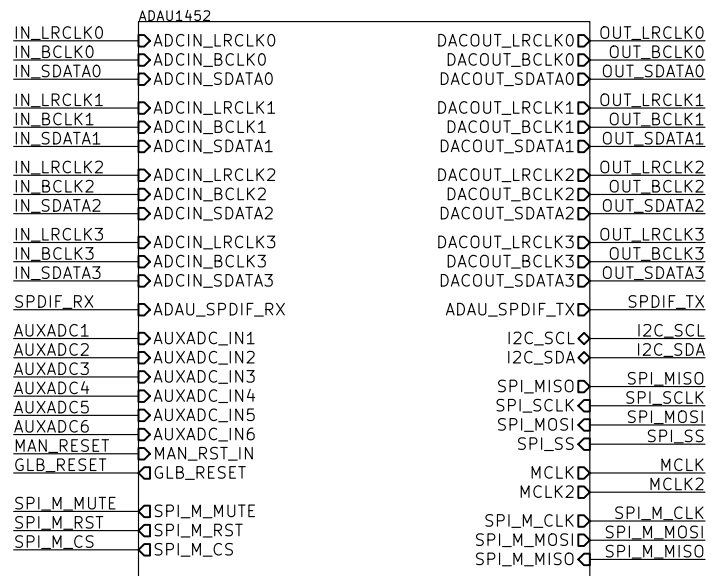
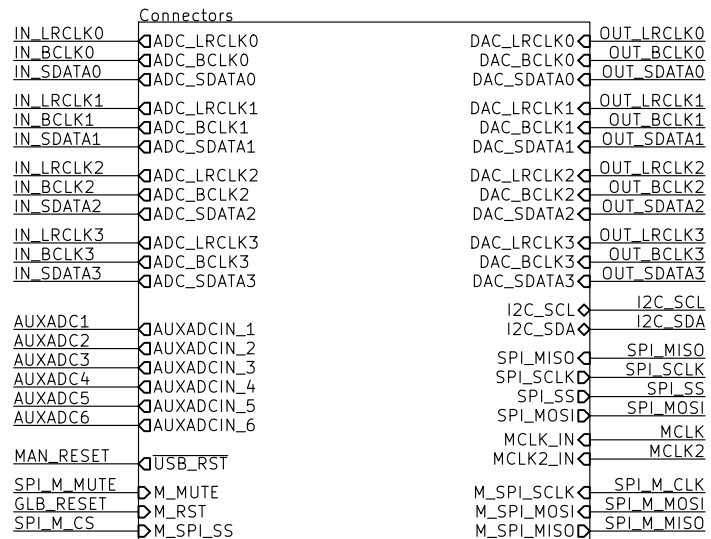


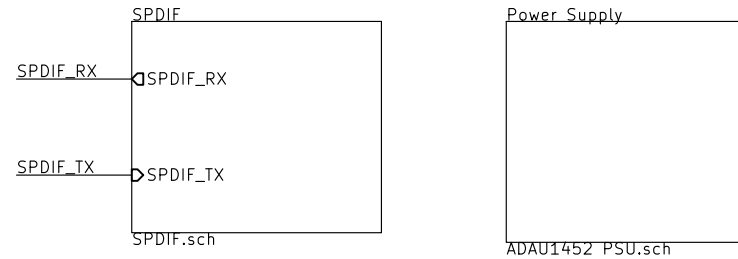
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ADAU145x DSP – ADAU1452, ADAU1451, ADAU1450 all supported
Revision 2.0



ADAU1452.sch



Connectors.sch



Notes:

All digital I/O is 3V3. Use outside this voltage can cause damage.

See bill of materials for detailed parts information.

Trace impedance on SPI/I2C, MCLK, and I2S is designed for approx 89ohm.
26AWG ribbon cable used with Ground-Signal-Ground is approx 89ohm.

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Sheet: /

File: DSP-ADAU1452.sch

Title: ADAU145x DSP – ADAU1452, ADAU1451, ADAU1450 supported

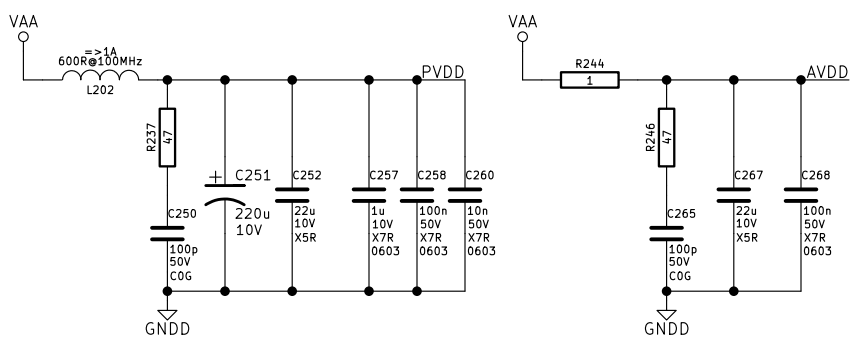
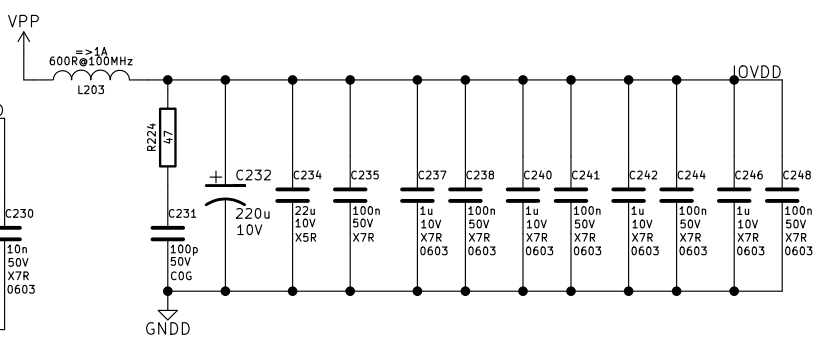
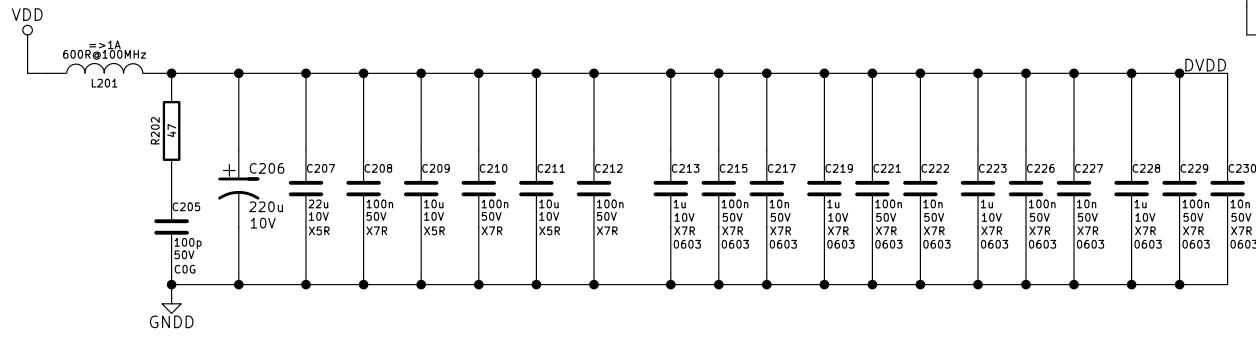
Size: A4 Date: 2016-05-25

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Rev: 2.0

Id: 1/5

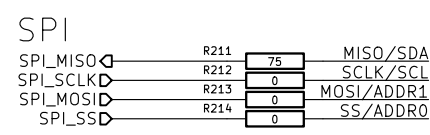
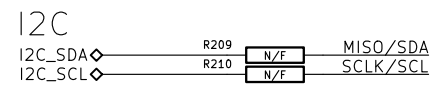
ADAU1452 (ADAU1451/ADAU1450)



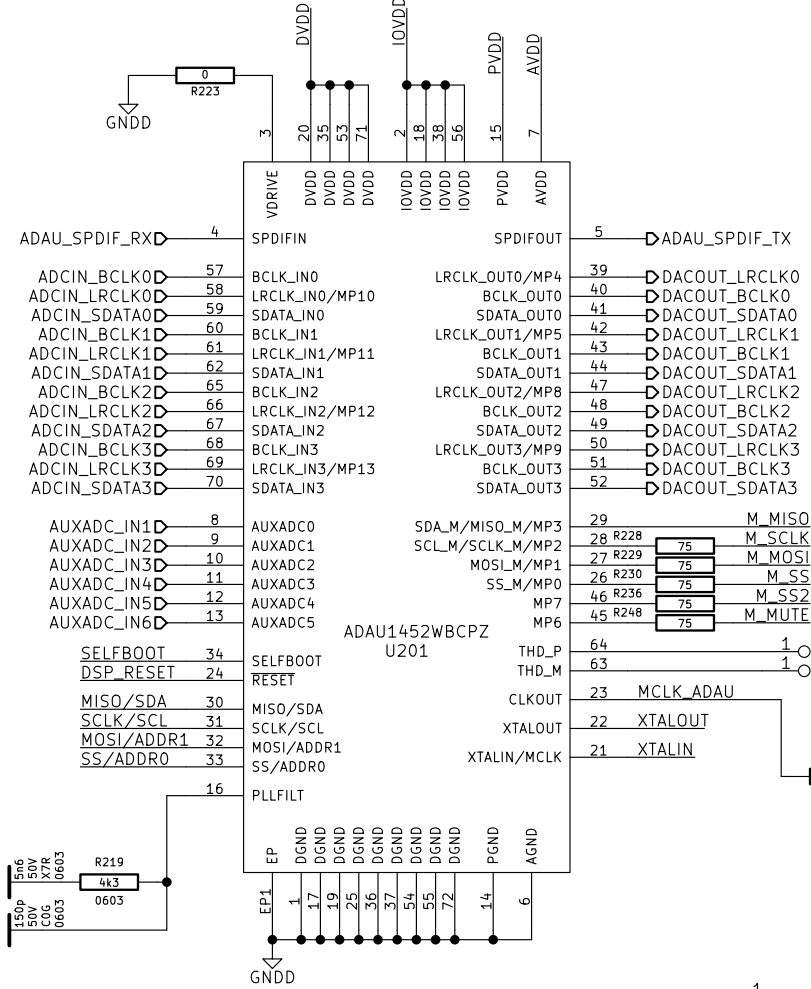
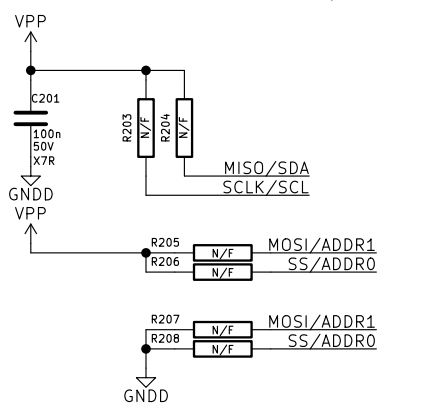
U201 can be either ADAU1452, ADAU1451, or ADAU1450.
SPDIF is not support on the ADAU1450.

Slave control port

Used for external control and programming.
Fitting R209/R210 and removing R211-R214
enables I2C. This will disable the slave SPI
port P511.

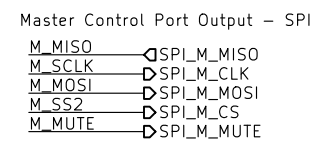
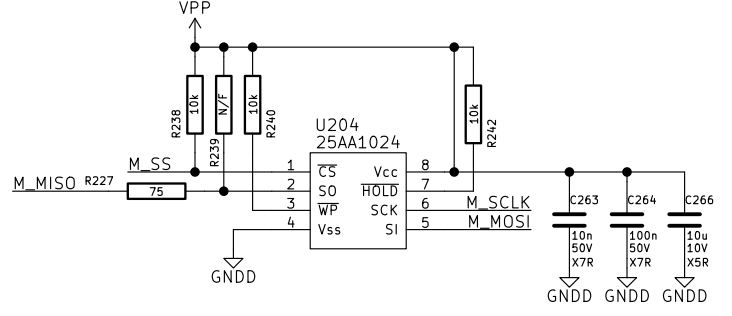


Slave I2C Pull-ups and Address

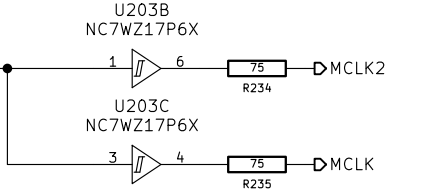


SPI EEPROM

Connects to master serial port
Fit an EEPROM such as the 24AA1024 to allow selfboot operation

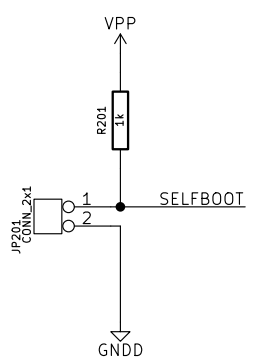


Audio Master Clock Output
Buffer can be Schmitt Input or not
NC7WZ17P6X or NC7WZ16P6X or similar parts



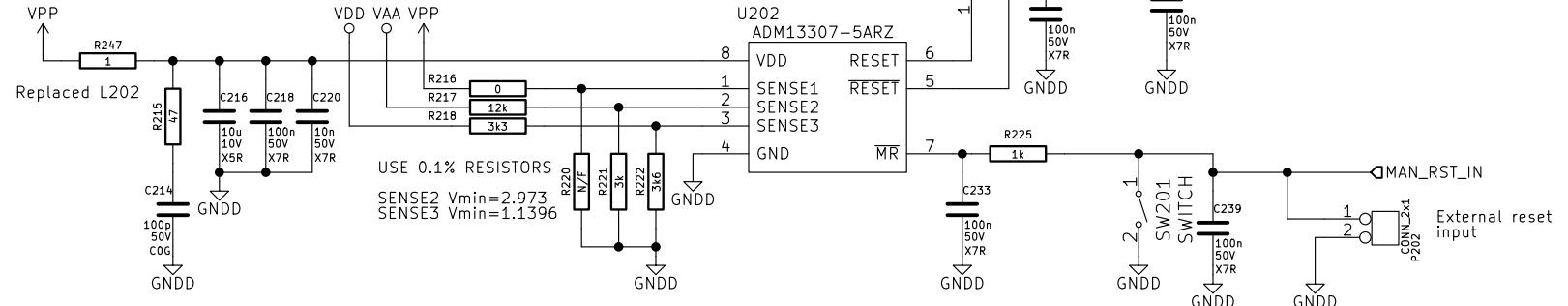
Selfboot Jumper

Leave P201 open for selfboot.
Short P201 to disable self boot and program the EEPROM.
Short to use I2C/SPI external control instead of selfboot.



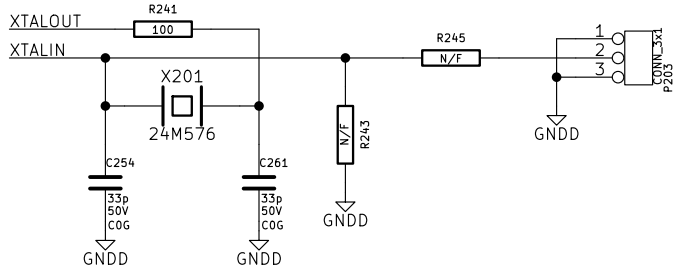
Voltage Monitor Reset

Generate a global reset based on voltage rails.
Use ADM13307-5ARZ only! (Sense1=3v3, Sense2/3=Adj).
Supports external reset signal.



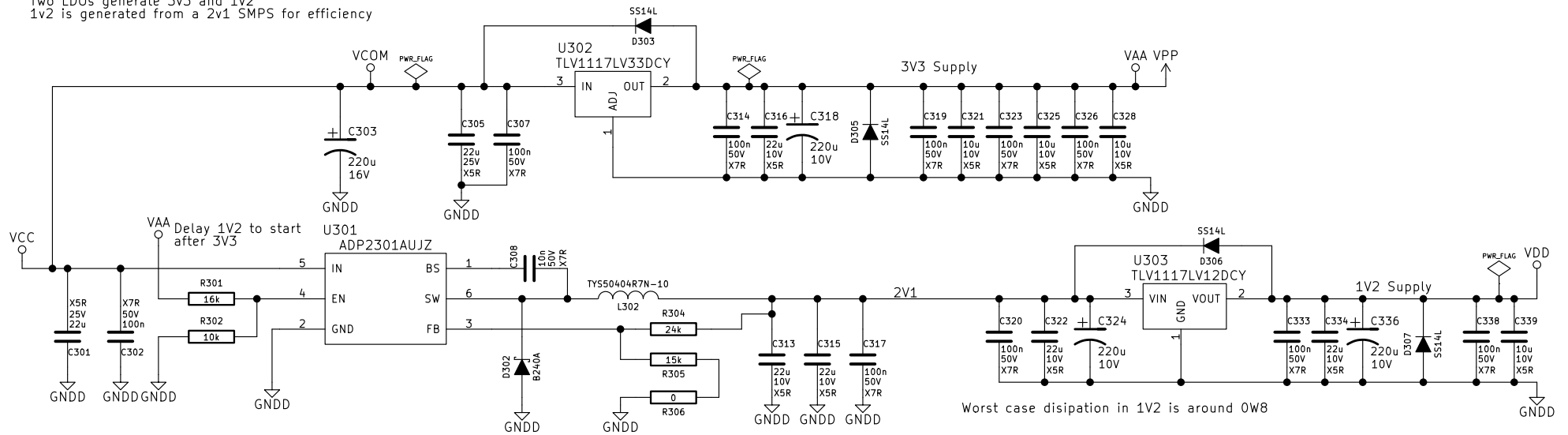
Master Clock - Two Options

Standard Crystal External Clock

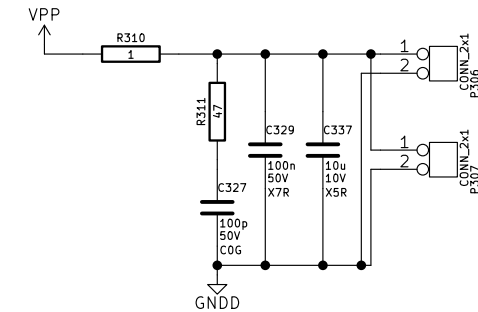


Power Supply

Two LDOs generate 3v3 and 1v2
1v2 is generated from a 2v1 SMPS for efficiency

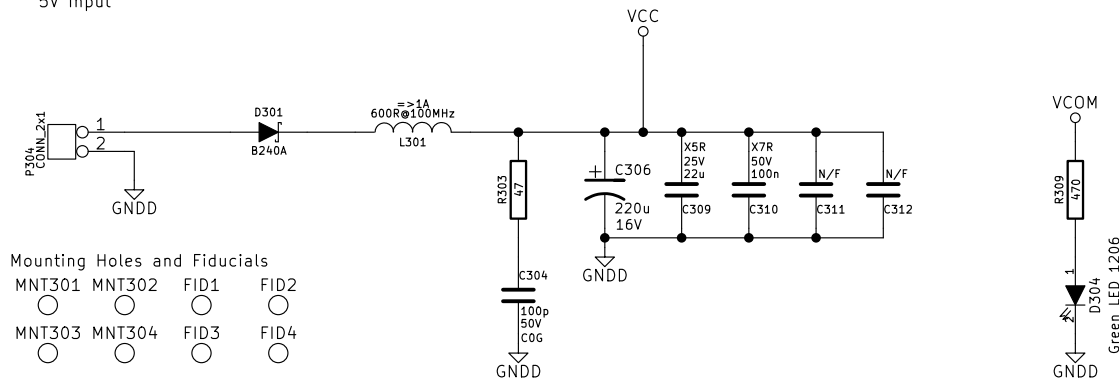


External 3V3 connections.
Do not overload these!
Recommend 100mA max.



Power Input

5V Input



Mounting Holes and Fiducials

MNT301	MNT302	FID1	FID2
MNT303	MNT304	FID3	FID4

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Sheet: /Power Supply/

File: ADAU1452 PSU.sch

Title: ADAU145x DSP – ADAU1452, ADAU1451, ADAU1450 supported

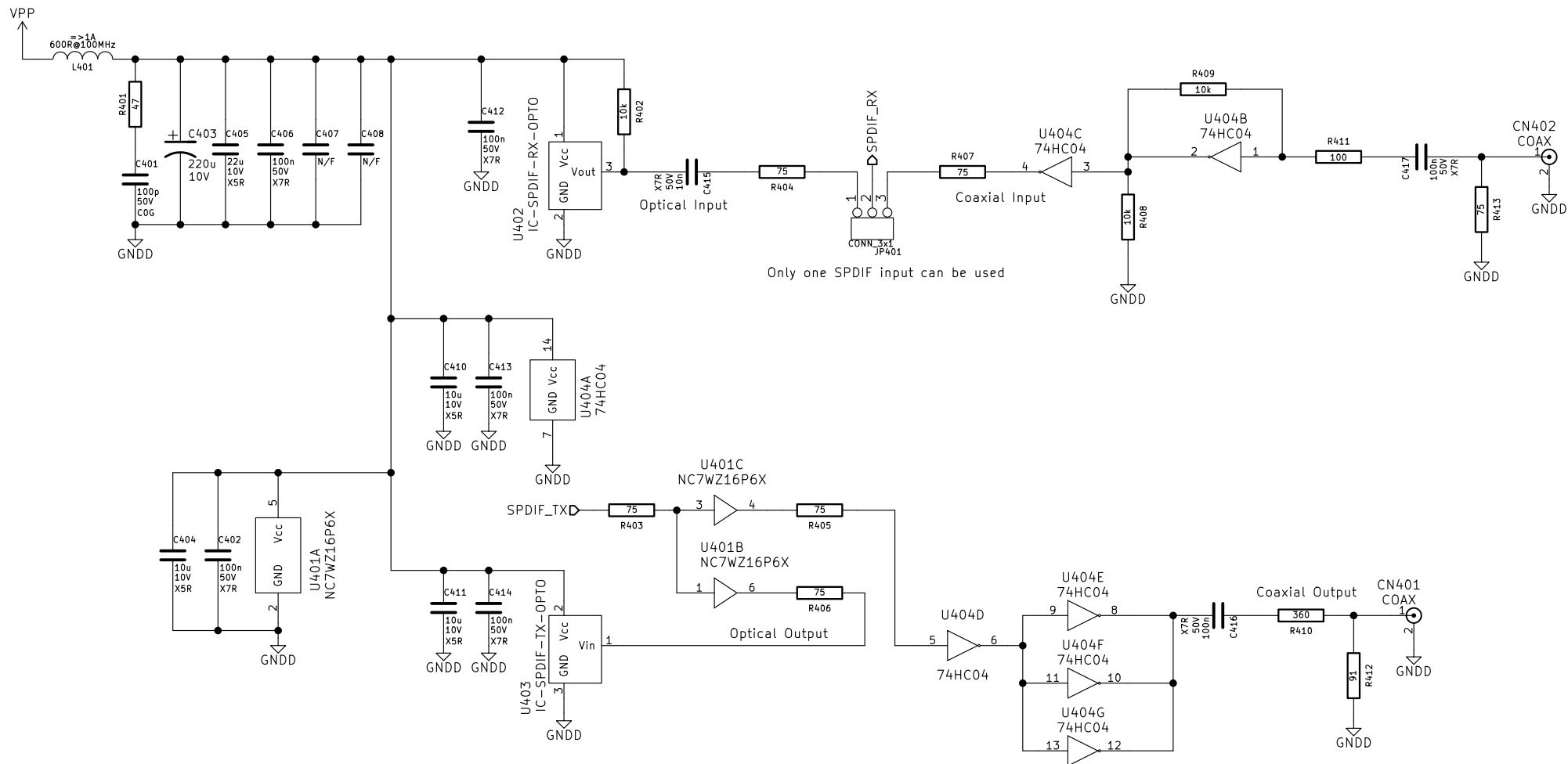
Size: A4 Date: 2016-05-25

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SPDIF Inputs and Outputs – Optical and Coaxial



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Sheet: /SPDIF/

File: SPDIF.sch

Title: ADAU145x DSP – ADAU1452, ADAU1451, ADAU1450 supported

Size: A4 Date: 2016-05-25

Rev: 2.0

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Id: 4/5

125 Inputs

TP504 1

P504 1 2 3 4 5 6 7 8 9

CONN_02X05

GNDD

TP511 1

TP512 1

R504 N/F

R508 N/F

R512 N/F

R516 N/F

R529 0

R530 0

R531 0

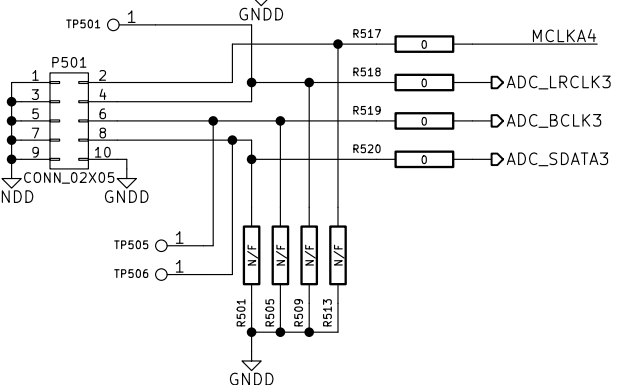
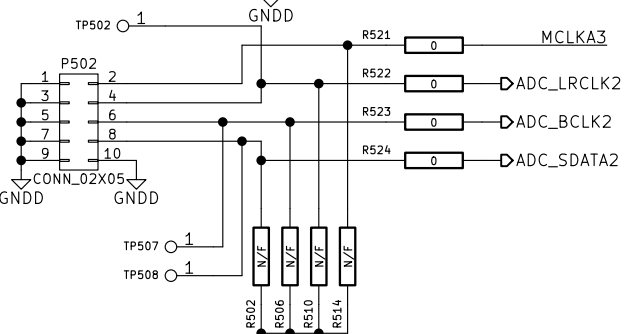
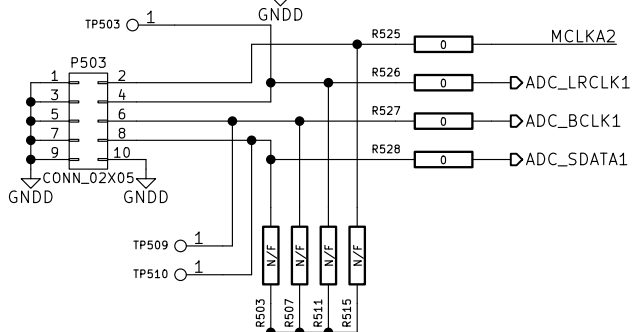
R532 0

MCLKA1

ADC_LRLCKO

ADC_BCLKO

ADC_SDATAO

[illegible]

Pin connection diagram for P506:

- I2C_SCL to SL_SCL (Pin 1)
- I2C_SDA to SL_SDA (Pin 3)
- SPI_MISO to SL_MISO (Pin 5)
- SPI_SCLK to SL_SCLK (Pin 7)
- SPI_SS to SL_SS (Pin 9)
- Pin 2: X
- Pin 3: X
- Pin 6: I2C_RST
- Pin 7: SL_MOSI
- Pin 8: R541 (0) to USB_RST
- Pin 9: SL_SS
- Pin 10: GND
- CONN_02X05

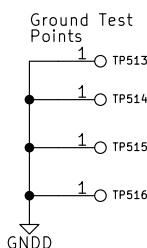
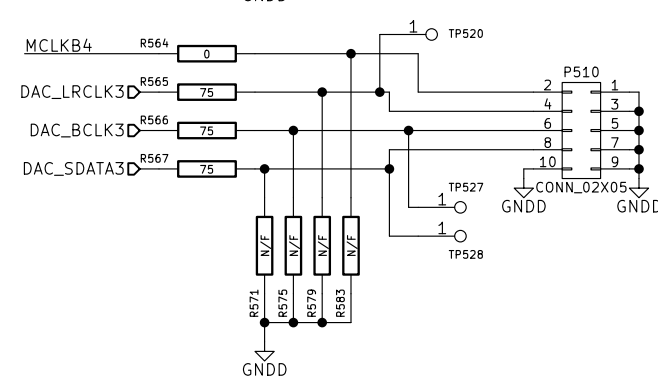
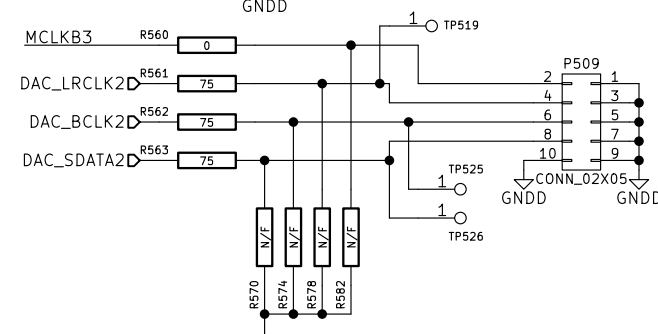
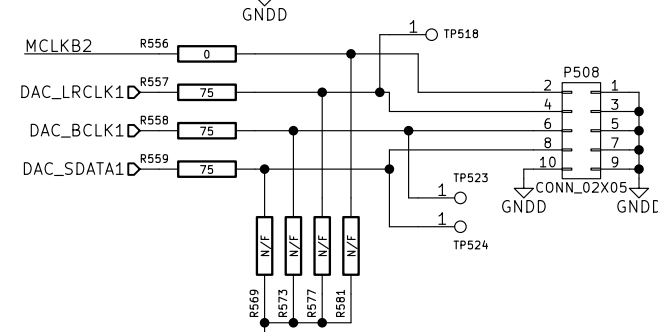
Pin connection diagram for P511:

Signal	Pin
SL_MISO	2
SL_SCLK	4
SL_MOSI	6
SL_SS	8
GPIO	10
I2C_RST	12

Additional connections: Pin 1 is connected to GND. Pins 3, 5, 7, 9, and 11 are connected to a common GND point.

Figure 10 shows the pin connections for the P507 module. The connections are as follows:

- MCLKB1 (R552) connects to TP517 (pin 1).
- DAC_LRCLK0 (R553) connects to pin 2.
- DAC_BCLK0 (R554) connects to pin 4.
- DAC_SDAT0A0 (R555) connects to pin 6.
- TP521 (pin 1) connects to the module.
- TP522 (pin 1) connects to the module.
- GND (pin 10) connects to the module.



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Sheet: /Connectors/ File: Connectors.sch		
Title: ADAU145x DSP – ADAU1452, ADAU1451, ADAU1450 supported		
Size: A3	Date: 2016-05-25	Rev: 2.0
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