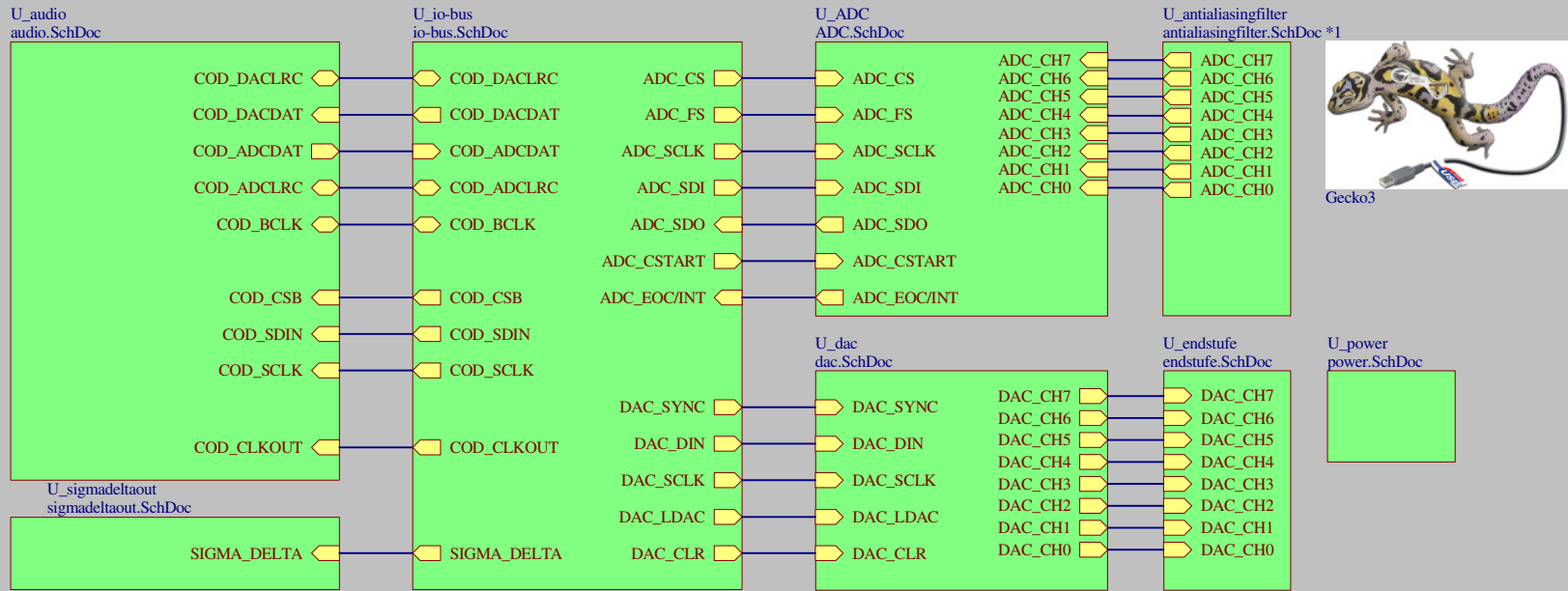
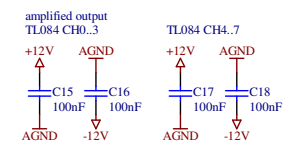
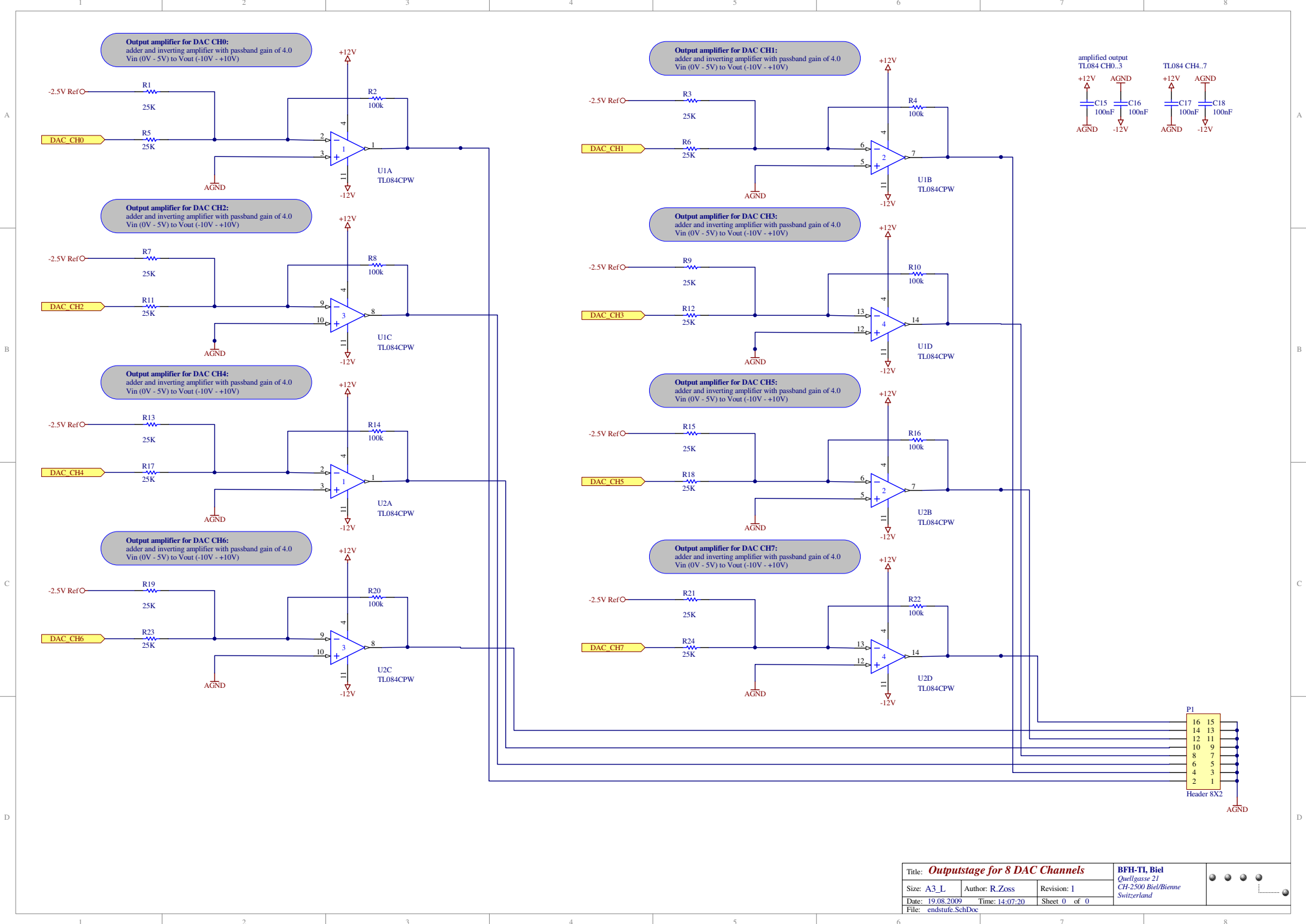


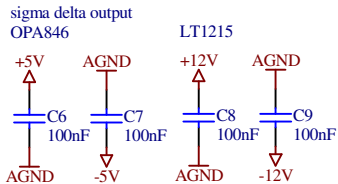
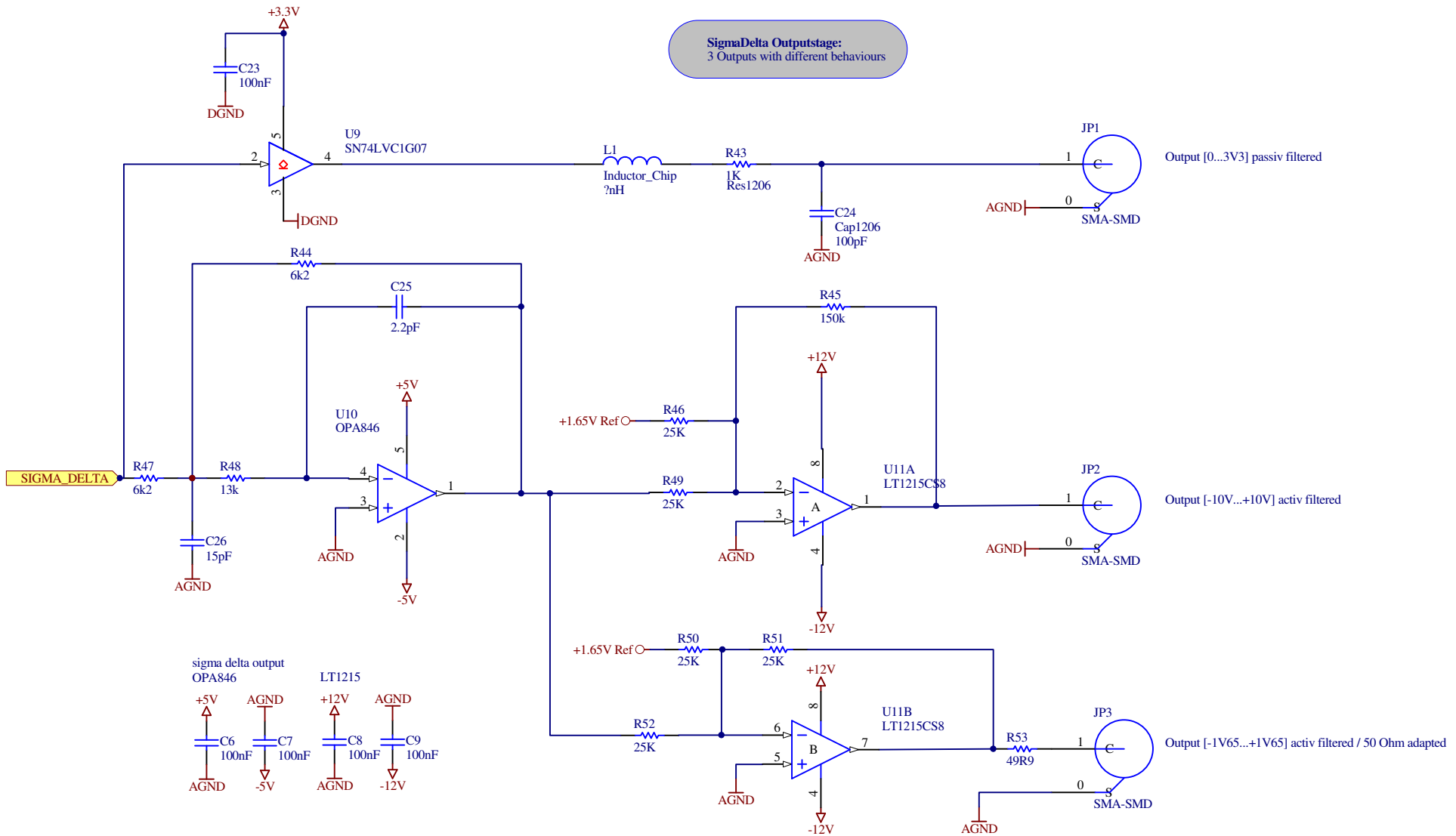
GECKO3analog



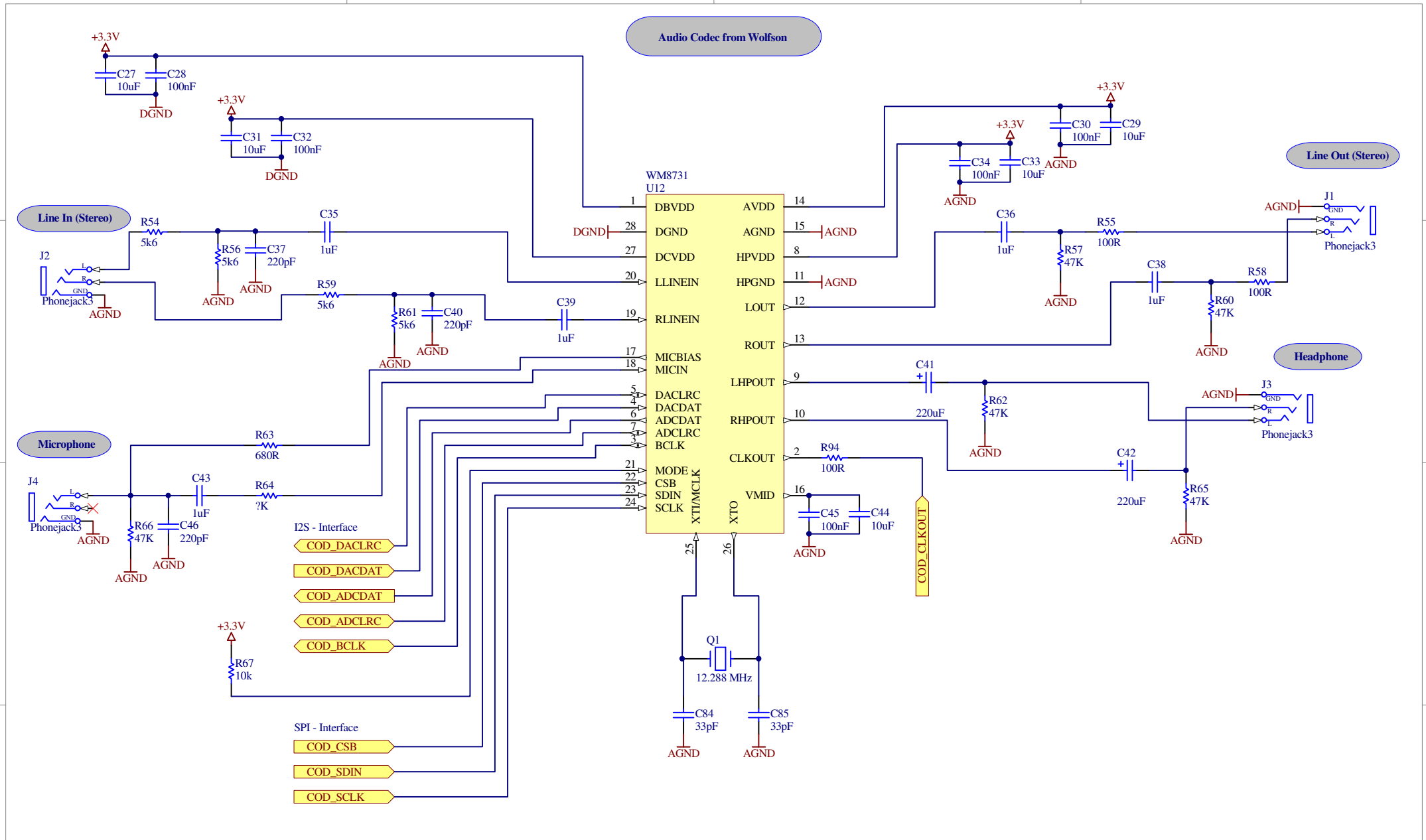
Title: Top schematic			*
Size: A4_L	Author: zor1	Revision: 1	*
Date: 19.08.2009	Time: 14:07:07	Sheet * of *	*
File: top.SchDoc			*



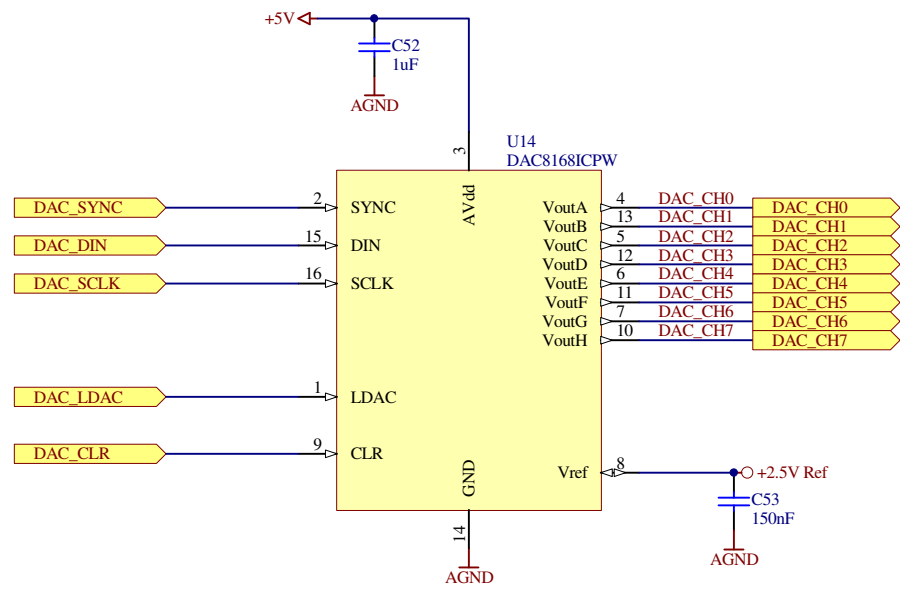
SigmaDelta Outputstage:
3 Outputs with different behaviours



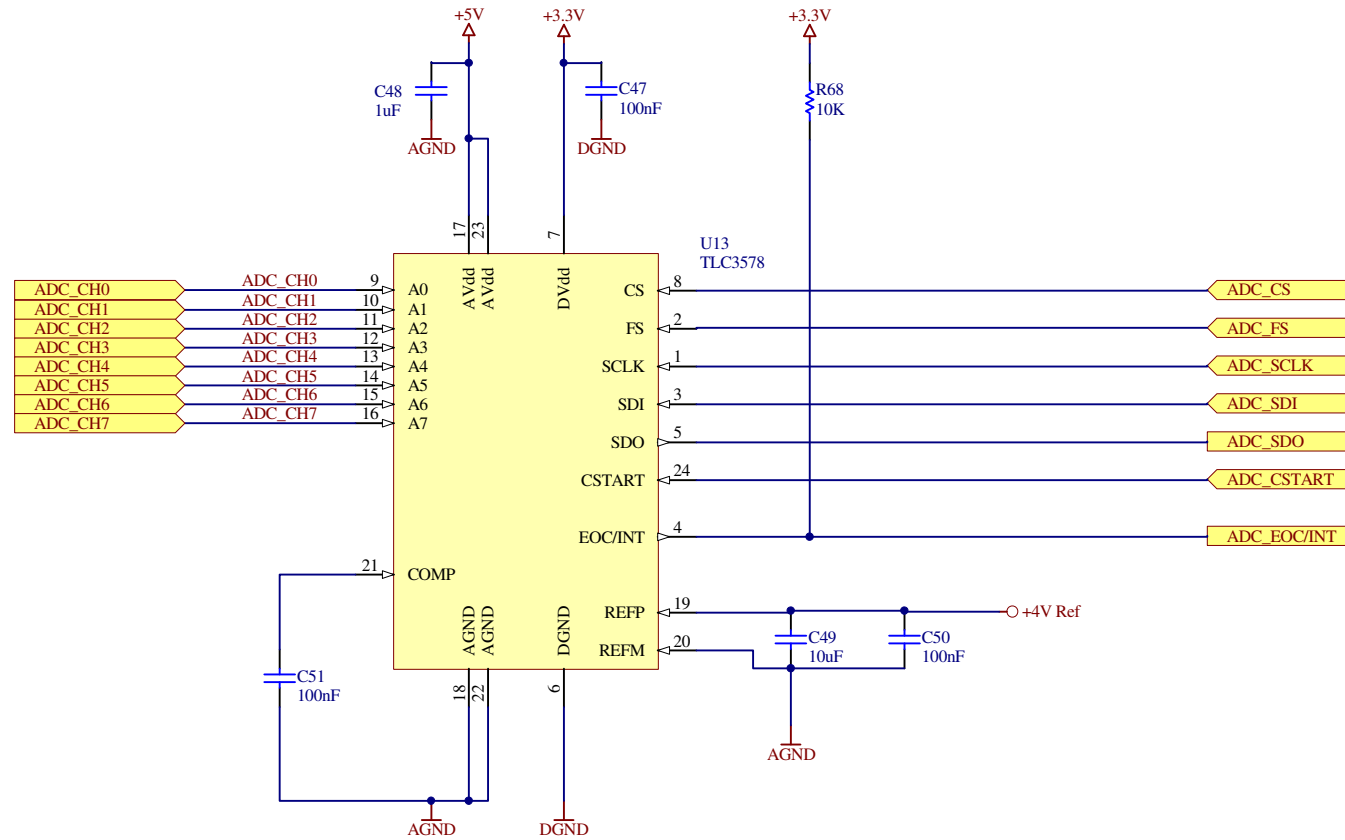
Title: SigmaDelta Outputstage			BFH-TI, Biel Quellgasse 21 CH-2500 Biel/Bienne Switzerland	
Size: A4_L	Author: R.Zoss	Revision: 1		
Date: 19.08.2009	Time: 14:07:35	Sheet 0 of 0		
File: sigmadeltaout.SchDoc				



Title: Audio CEDEC - WM8731			BFH-TI, Biel Quellgasse 21 CH-2500 Biel/Bienne Switzerland	
Size: A4_L	Author: R.Zoss	Revision: 1		
Date: 19.08.2009	Time: 14:07:48	Sheet 0 of 0		
File: audio.SchDoc				



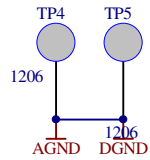
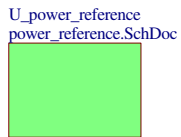
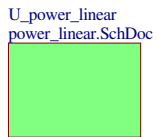
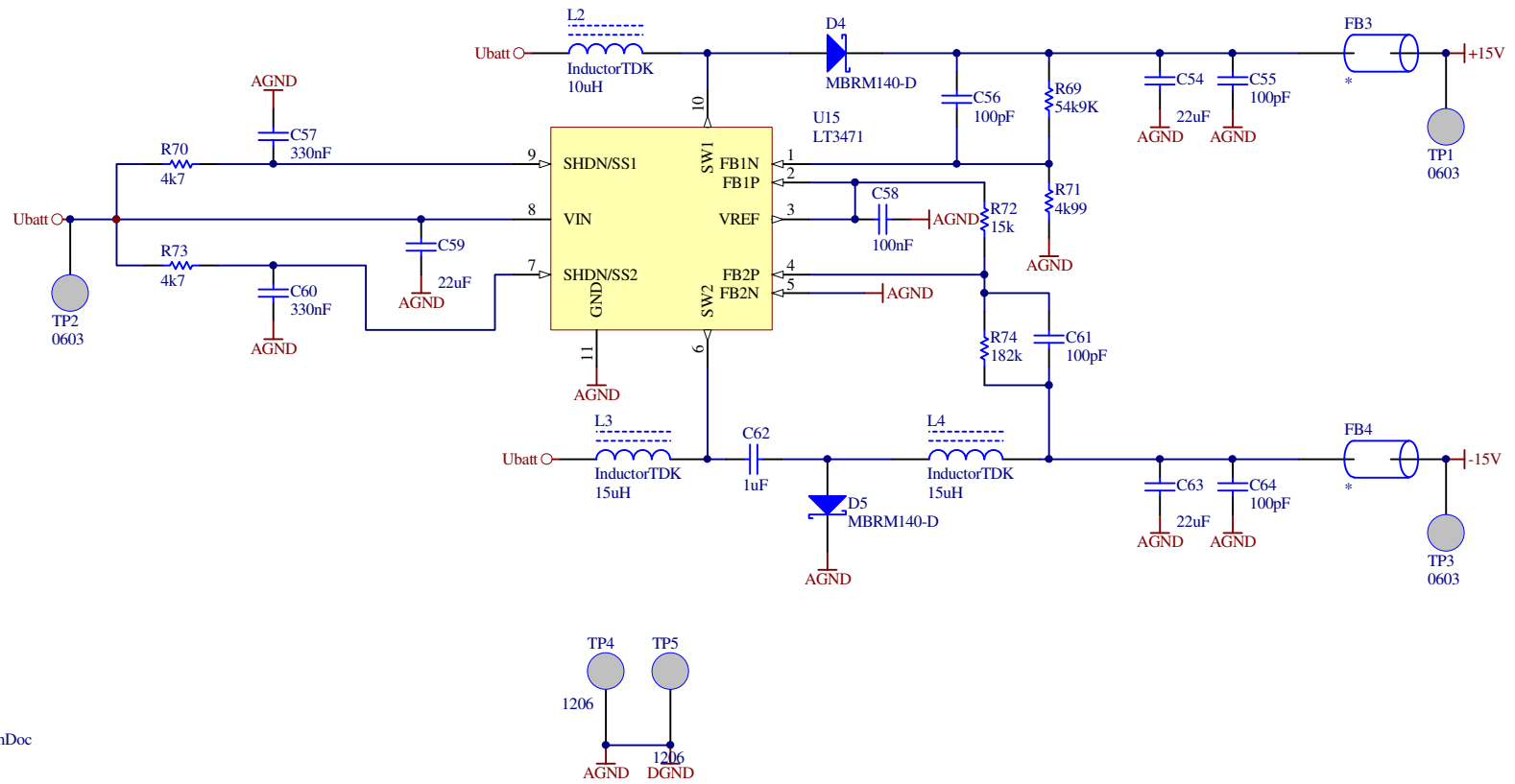
Title: DAC - DAC8168			BFH-TI, Biel Quellgasse 21 CH-2500 Biel/Bienne Switzerland	
Size: A4_L	Author: R.Zoss	Revision: 1		
Date: 19.08.2009	Time: 14:07:57	Sheet 0 of 0		
File: dac.SchDoc				



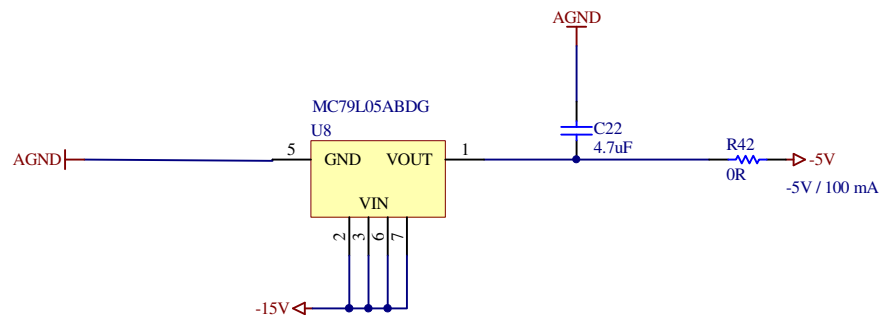
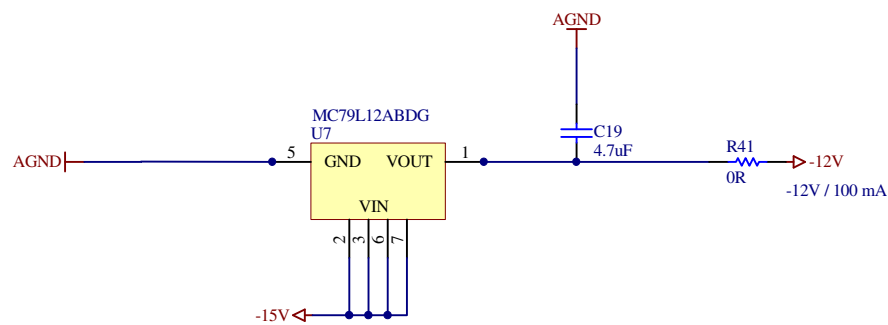
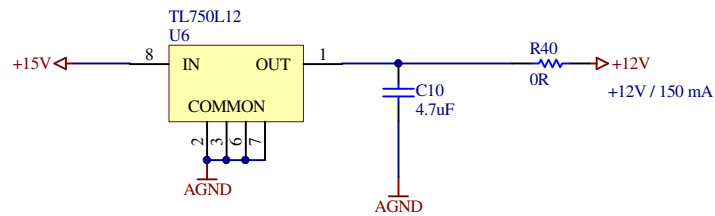
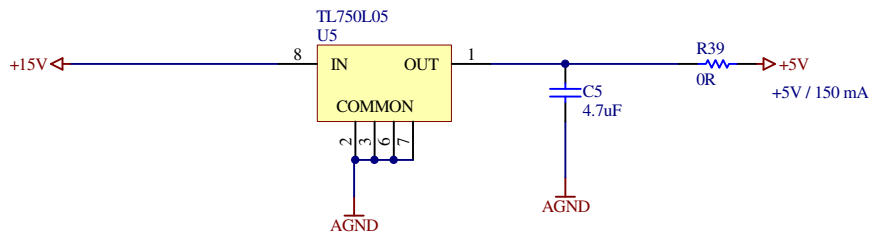
Title: ADC - TLC3578			BFH-TI, Biel Quellgasse 21 CH-2500 Biel/Bienne Switzerland
Size: A4_L	Author: R.Zoss	Revision: 1	
Date: 19.08.2009	Time: 14:08:07	Sheet 0 of 0	
File: ADC.SchDoc			



Dual Channel DCDC Converter:
 +15V / 200 mA
 -15V / 100 mA



Title: Dual Channel DCDC Converter			BFH-TI, Biel Quellgasse 21 CH-2500 Biel/Bienne Switzerland
Size: A4_L	Author: R.Zoss	Revision: 1	
Date: 19.08.2009	Time: 14:08:30	Sheet 0 of 0	
File: power.SchDoc			



Title: **Linear voltage regulators**

BFH-TI, Biel

Size: A4_L

Author: R.Zoss

Revision: 1

Quellgasse 21
CH-2500 Biel/Bienne
Switzerland

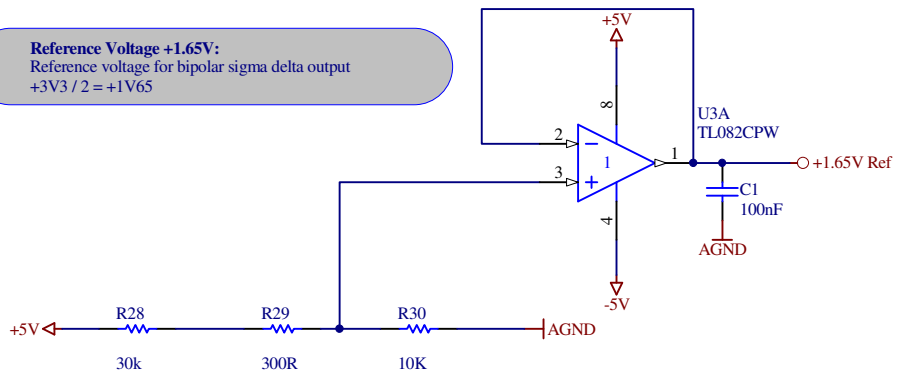
Date: 19.08.2009 Time: 14:08:39

Sheet 0 of 0

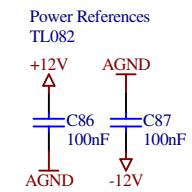
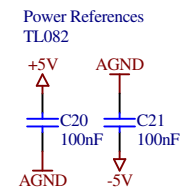
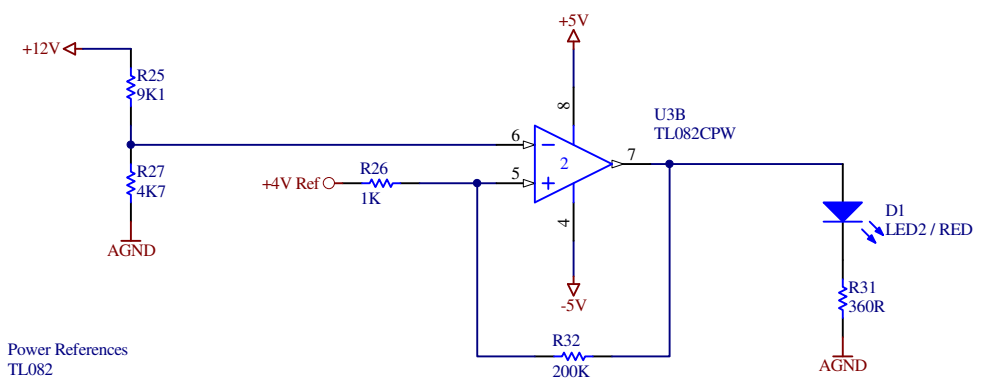
File: power_linear.SchDoc



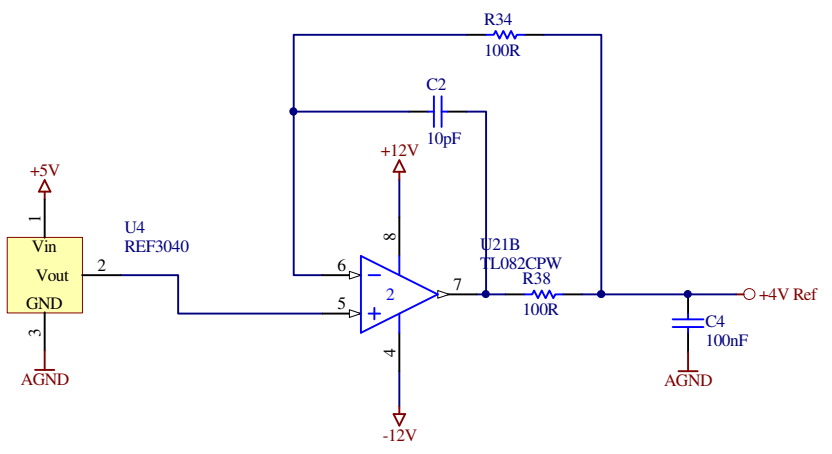
Reference Voltage +1.65V:
Reference voltage for bipolar sigma delta output
 $+3V3 / 2 = +1V65$



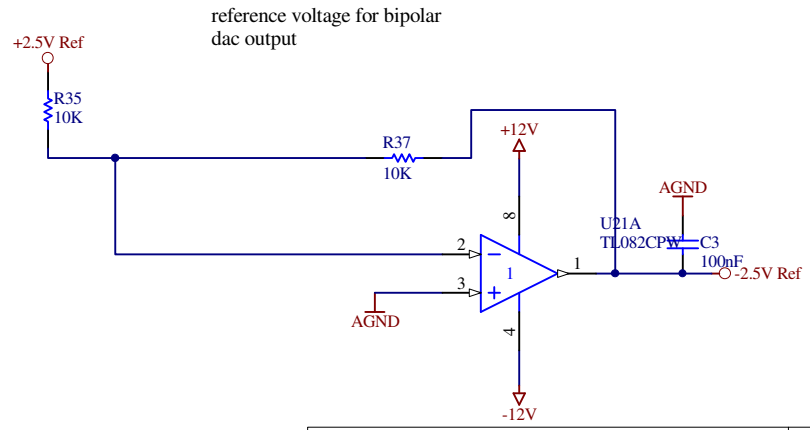
Voltage Drop Detection Circuit:
(inverting schmitt trigger with adapted shift level)



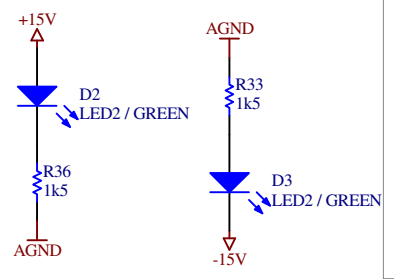
Reference Voltage +4V:
Reference voltage for ADC



Reference Voltage -2.5V:
Reference voltage for bipolar DAC output
Generated out of the +2V5 reference of the DAC

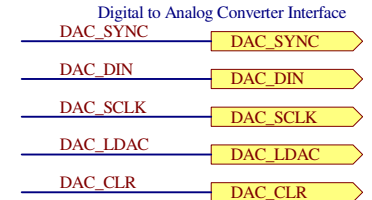
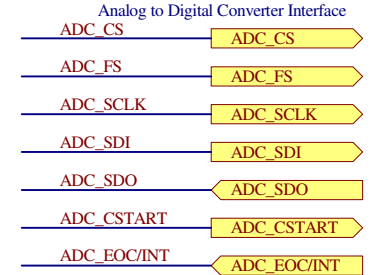
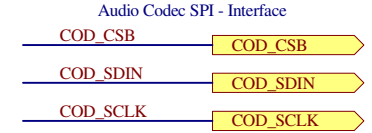
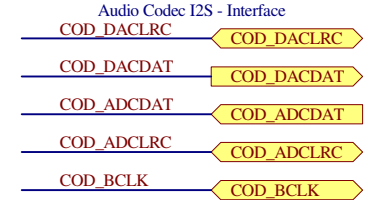
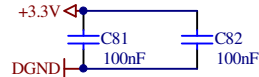
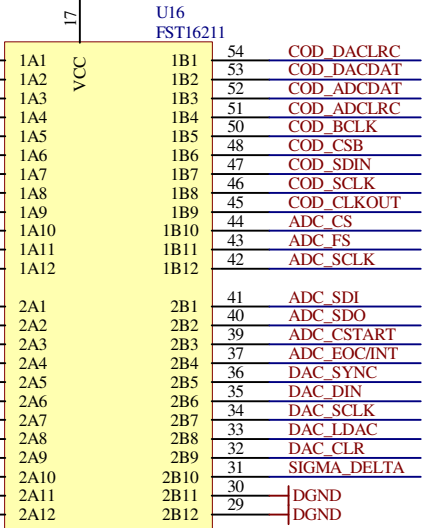
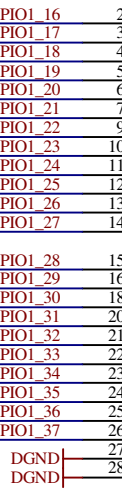
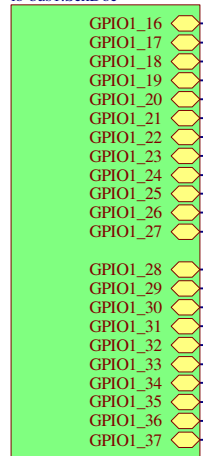


Power LED for +/-15V
I = 10 mA



Title: Voltage references and drop detection			BFH-TI, Biel Quellgasse 21 CH-2500 Biel/Bienne Switzerland
Size: A4_L	Author: R.Zoss	Revision: 1	
Date: 19.08.2009	Time: 14:08:48	Sheet 0 of 0	
File: power_reference.SchDoc			

U_io-bus1
io-bus1.SchDoc

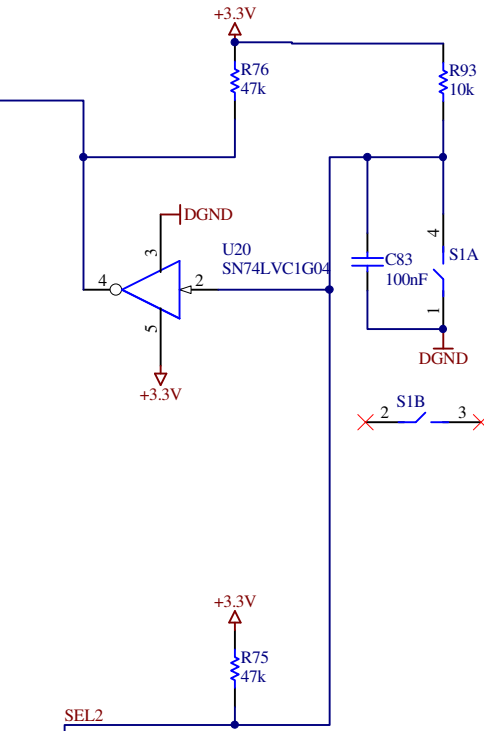
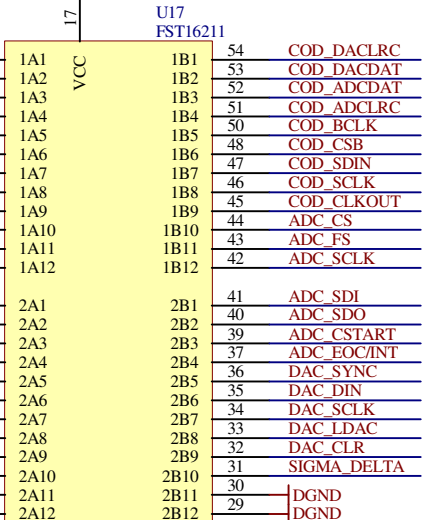
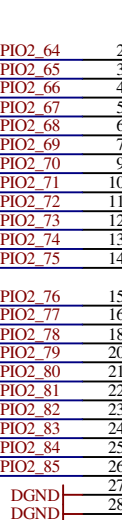
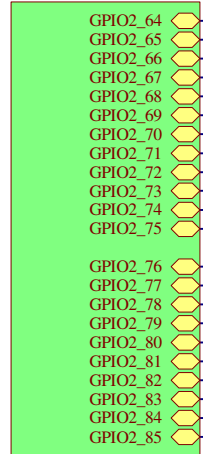


Connectet to Byte 5 or Byte 18

Connectet to Byte 6 or Byte 19

Connectet to Byte 7 or Byte 20

U_io-bus2
io-bus2.SchDoc

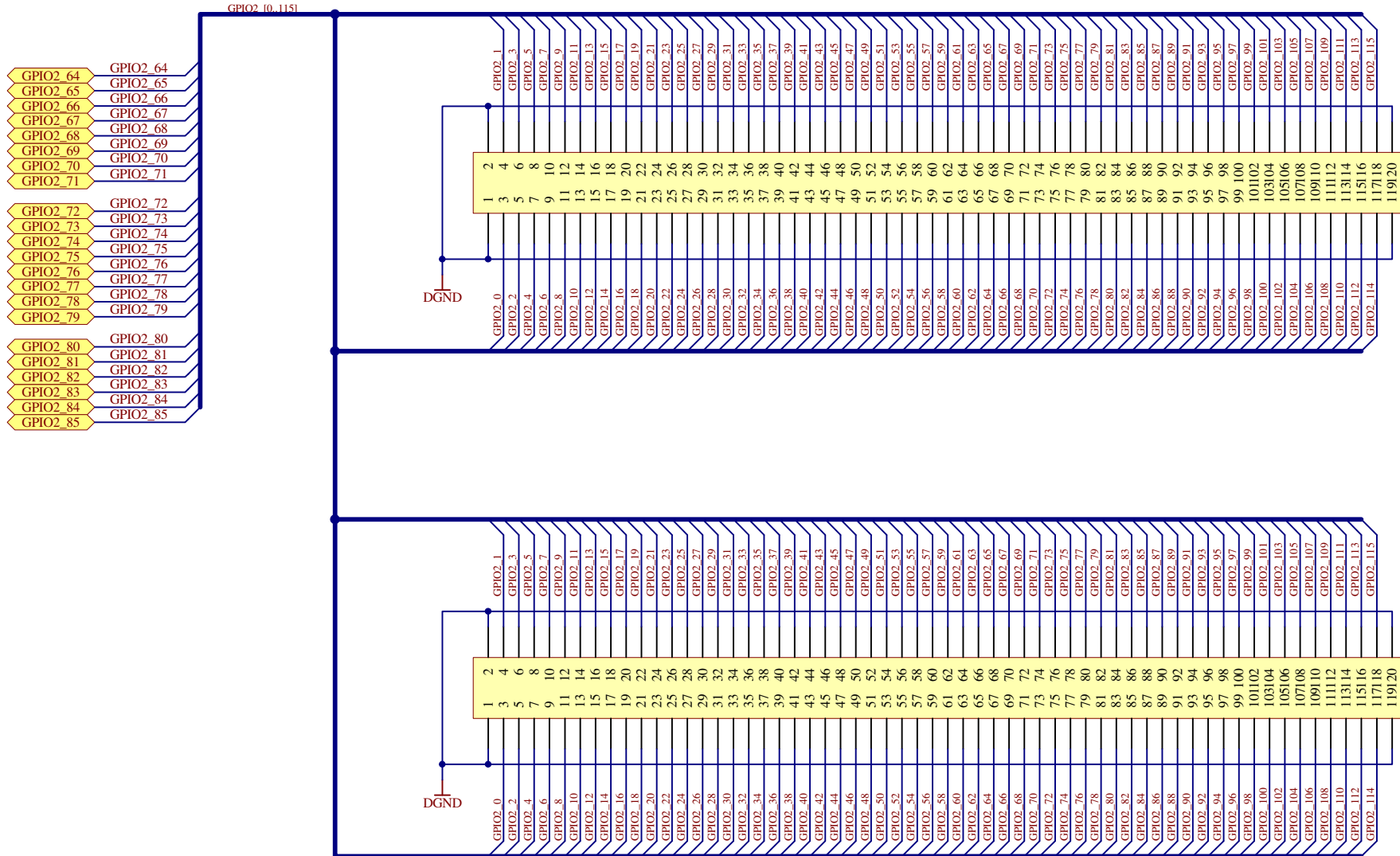


Title: **IO-BUS connection to the board**

Size: A4_L	Author: R.Zoss	Revision: 1
Date: 19.08.2009	Time: 14:08:55	Sheet 0 of 0
File: io-bus.SchDoc		

BFH-TI, Biel
Quellgasse 21
CH-2500 Biel/Bienne
Switzerland





JP4
fh-120p-9mm
AMP-FH-120-RECEPTABLE-H9-H13
top

JP5
fh-120p-5mm
AMP-FH-120-Plug
bottom

Title: **IO-BUS 2**

Size: A4_L

Author: R.Zoss

Revision: 1

Date: 19.08.2009

Time: 14:09:03

Sheet 0 of 0

File: io-bus2.SchDoc

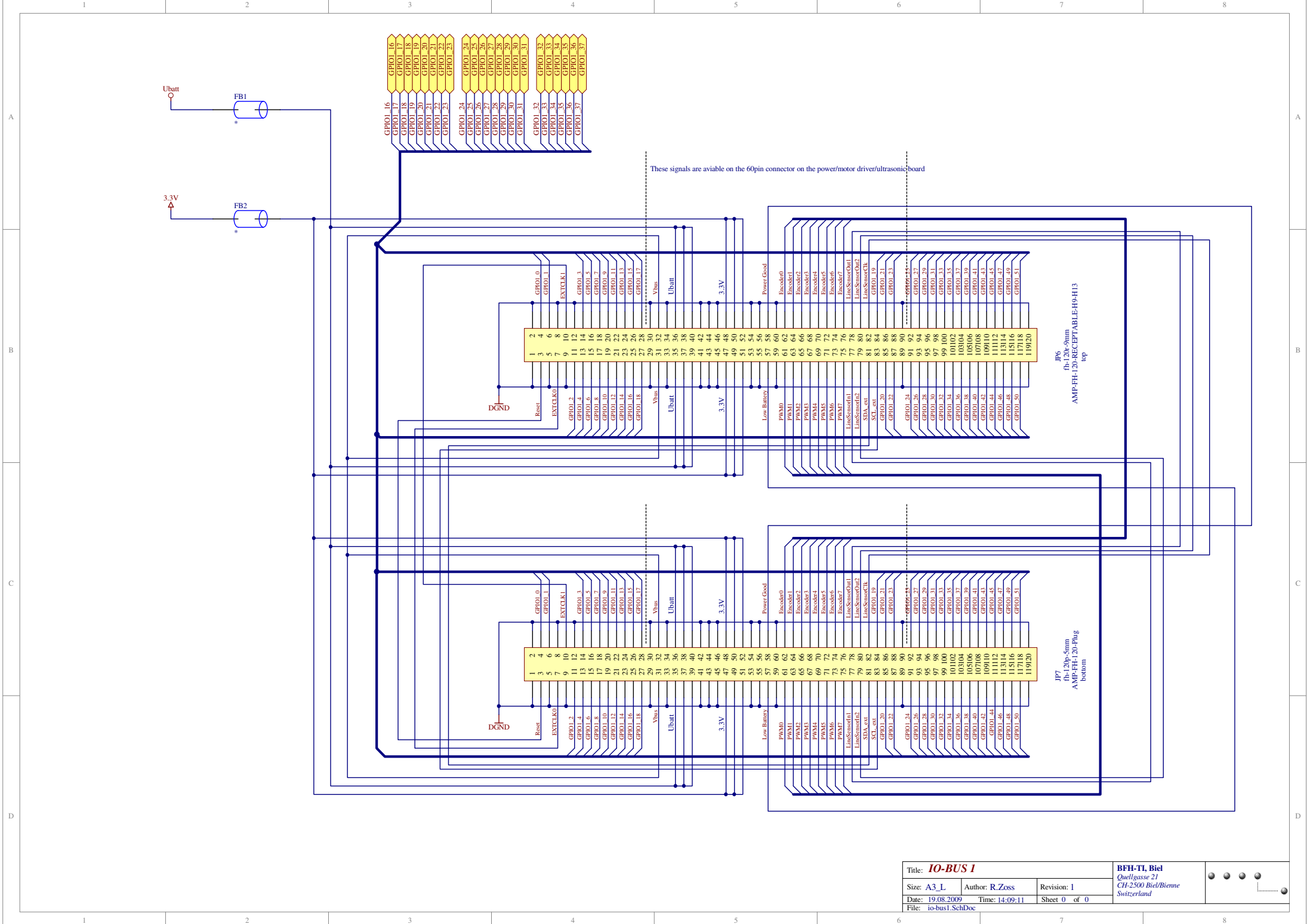
BFH-TI, Biel

Quellgasse 21

CH-2500 Biel/Bienne

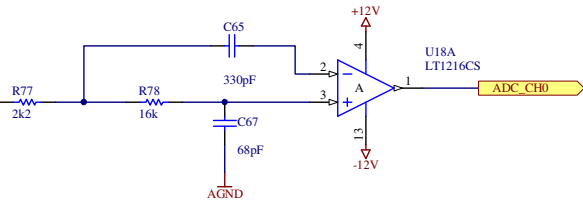
Switzerland



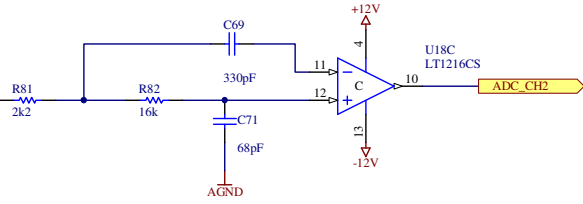


These signals are available on the 60pin connector on the power/motor driver/ultrasonic board

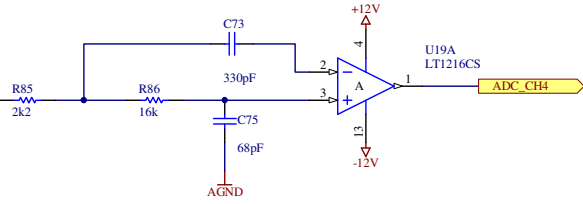
Antialiasing filter for ADC CH0:
Sallen-Key, 2-Pole Low-Pass Butterworth: 180kHz
Cutoff, Passband Gain of 1.0



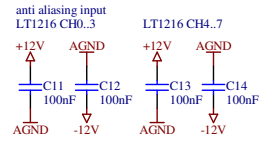
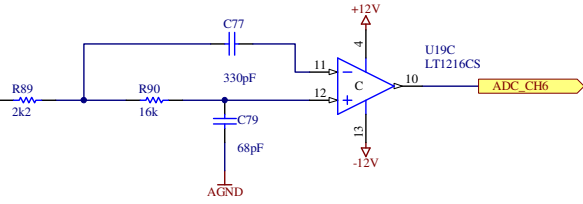
Antialiasing filter for ADC CH2:
Sallen-Key, 2-Pole Low-Pass Butterworth: 180kHz
Cutoff, Passband Gain of 1.0



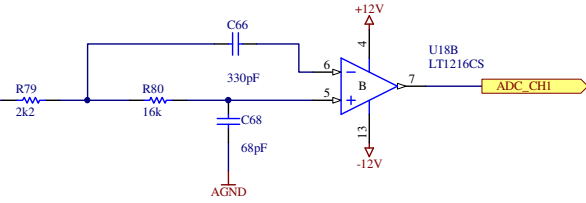
Antialiasing filter for ADC CH4:
Sallen-Key, 2-Pole Low-Pass Butterworth: 180kHz
Cutoff, Passband Gain of 1.0



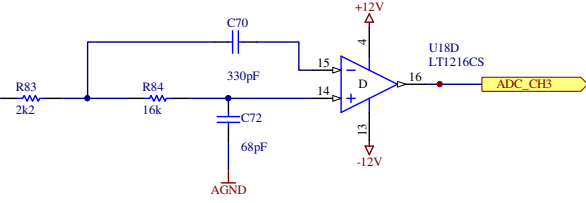
Antialiasing filter for ADC CH6:
Sallen-Key, 2-Pole Low-Pass Butterworth: 180kHz
Cutoff, Passband Gain of 1.0



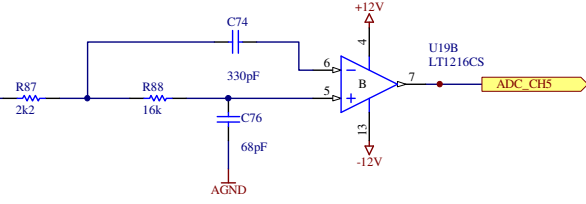
Antialiasing filter for ADC CH1:
Sallen-Key, 2-Pole Low-Pass Butterworth: 180kHz
Cutoff, Passband Gain of 1.0



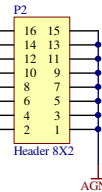
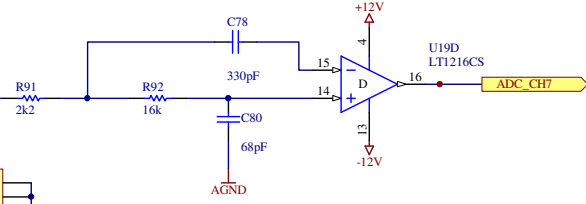
Antialiasing filter for ADC CH3:
Sallen-Key, 2-Pole Low-Pass Butterworth: 180kHz
Cutoff, Passband Gain of 1.0



Antialiasing filter for ADC CH5:
Sallen-Key, 2-Pole Low-Pass Butterworth: 180kHz
Cutoff, Passband Gain of 1.0



Antialiasing filter for ADC CH7:
Sallen-Key, 2-Pole Low-Pass Butterworth: 180kHz
Cutoff, Passband Gain of 1.0



Title: Antialiasing Filter for 8 ADC Channels		BFH-TL Biel	
Size: A3_L	Author: R.Zoss	Revision: 1	Quellgasse 21
Date: 19.08.2009	Time: 14:09:21	Sheet 0 of 0	CH-2500 Biel/Bienne
File: antialiasingfilter.SchDoc		Switzerland	