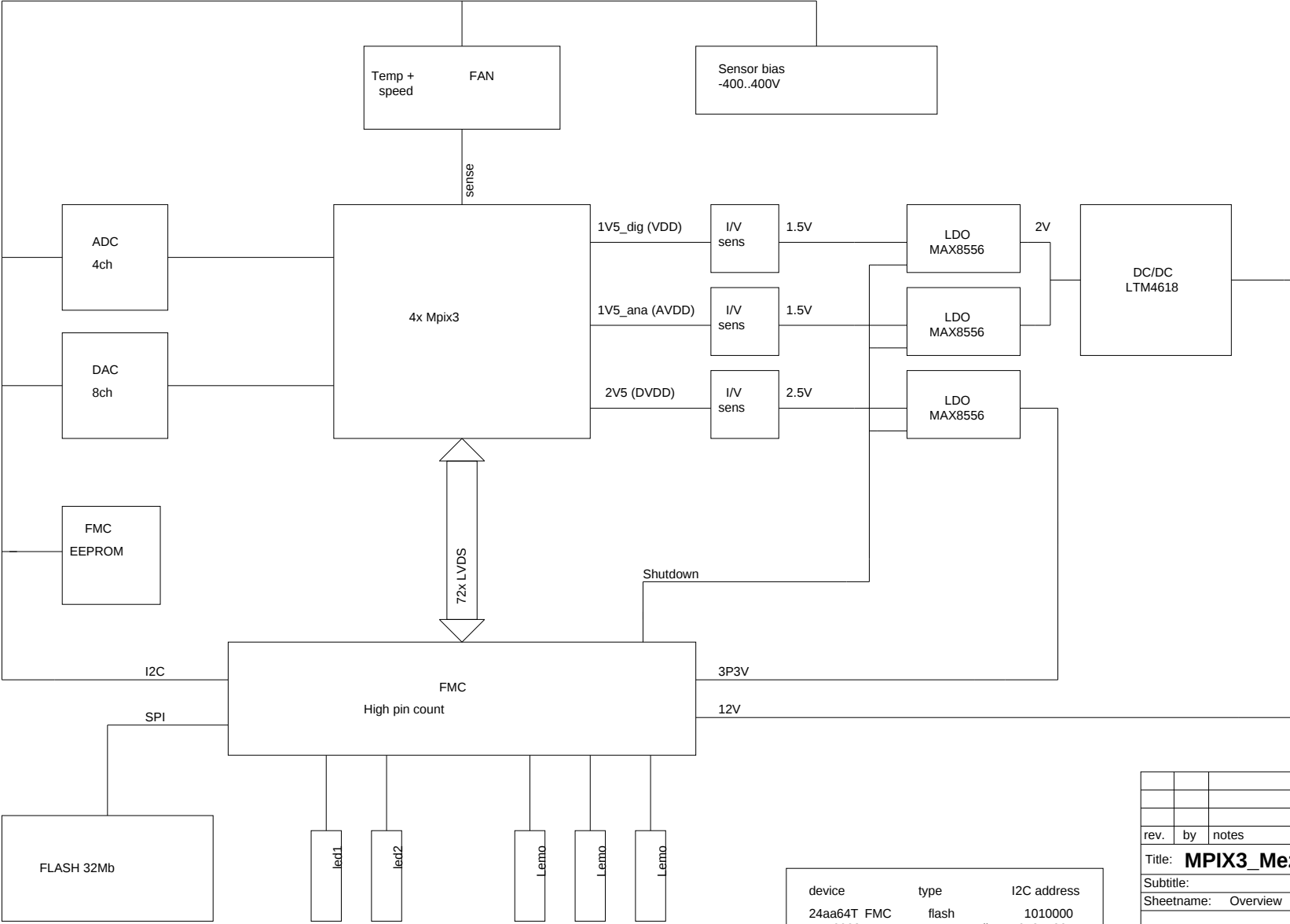
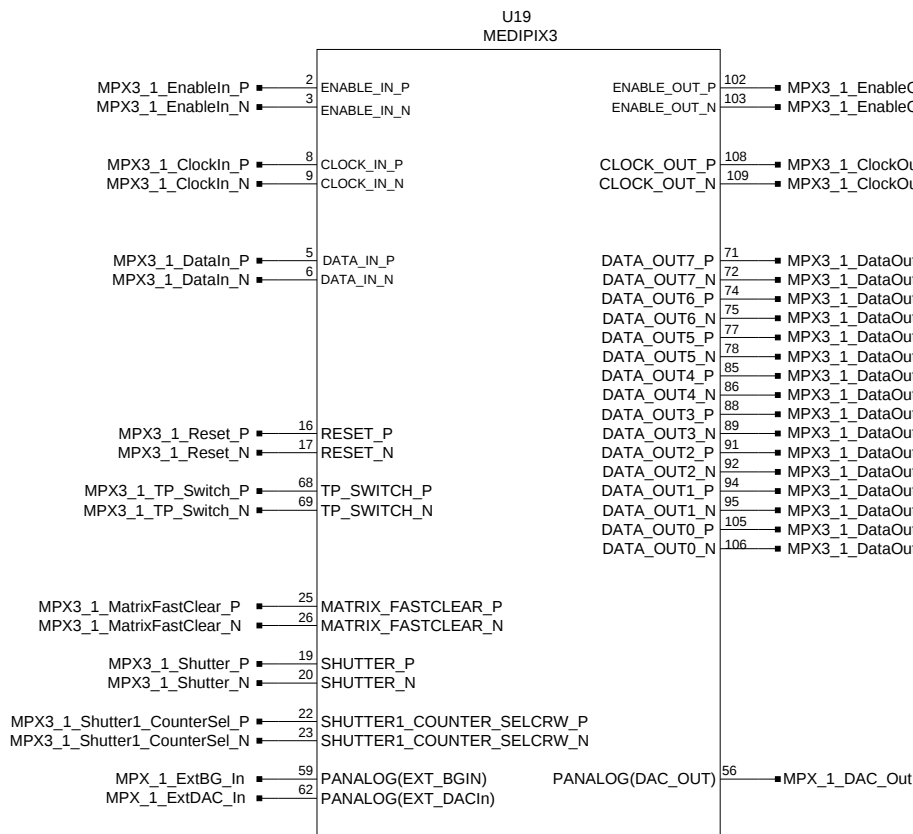




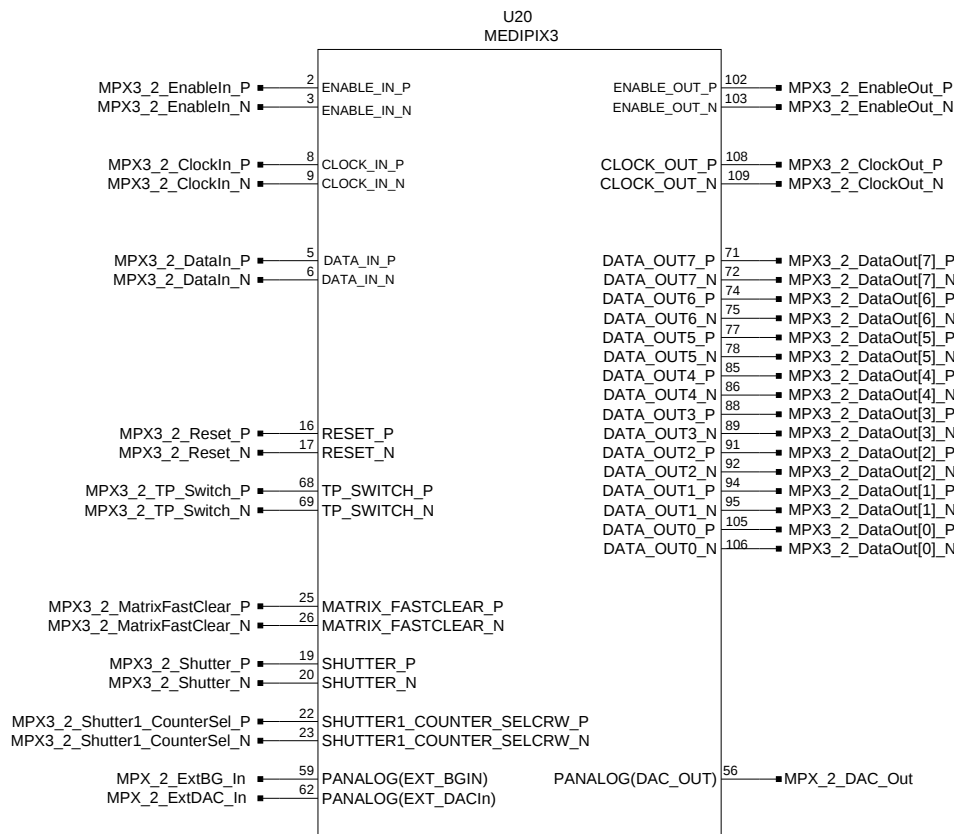
device	type	I2C address
24aa64T FMC	flash	1010000
max6663	Fan controller	0101100
ltc2636	dac	0010000
ltc2489_MPX	adc	0010100
ina219_AVDD	I/V sense	1000101
ina219_DVDD	I/V sense	1000000
ina219_VDD	I/V sense	1000000

rev.	by	notes
Title: MPIX3_Mezzanine_board		
Subtitle:		
Sheetname: Overview		
		Project No. ET40054.07.01.V1
		Designed by Bas van der Heijden
		Drawn by Bas van der Heijden
		Size 297 x 210mm
Sheet 1 of 8	A4	
Science Park 105 +31-(0)20-5922000	1098XG Amsterdam www.nikhef.nl	Date 25-10-2011_11:07
		Time

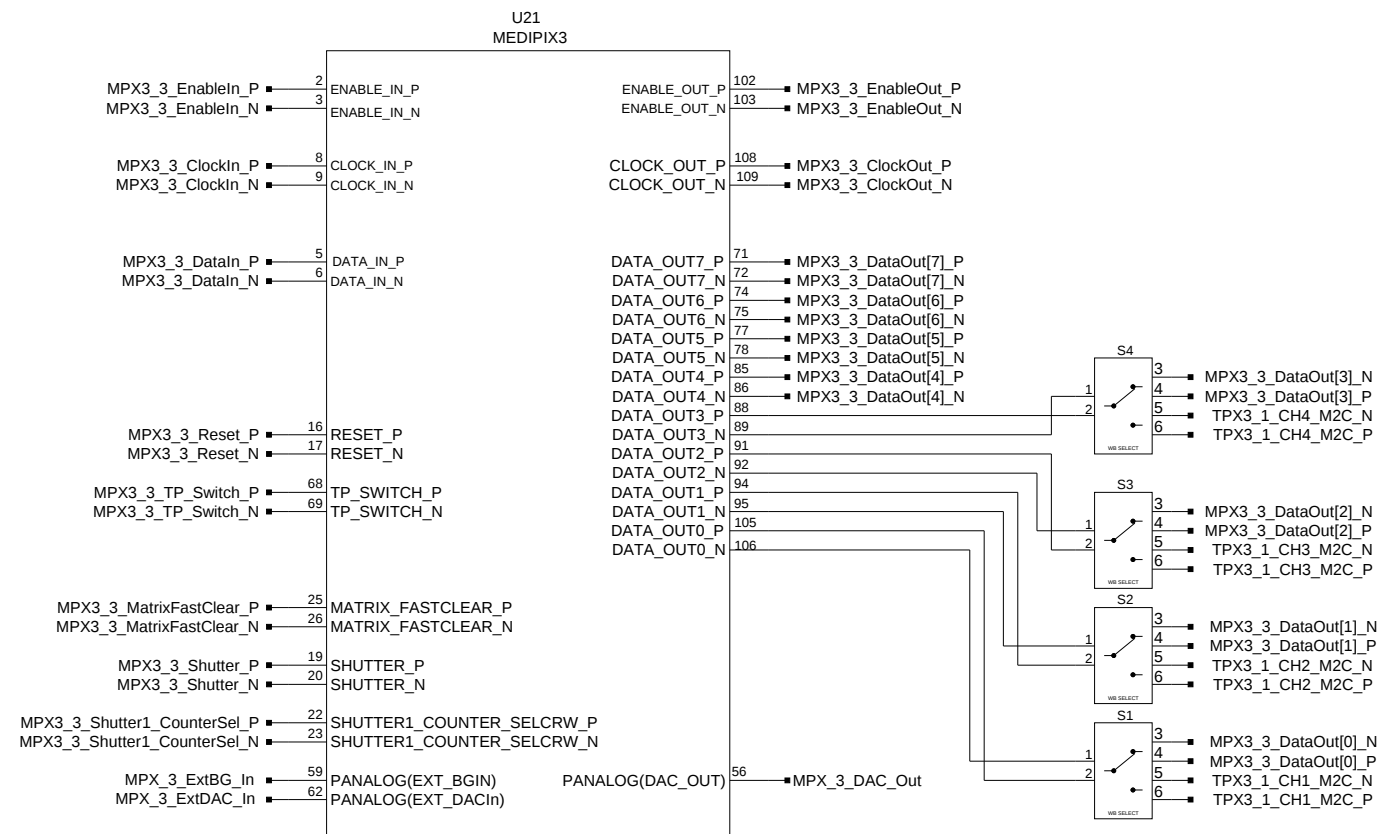
MPIX 1



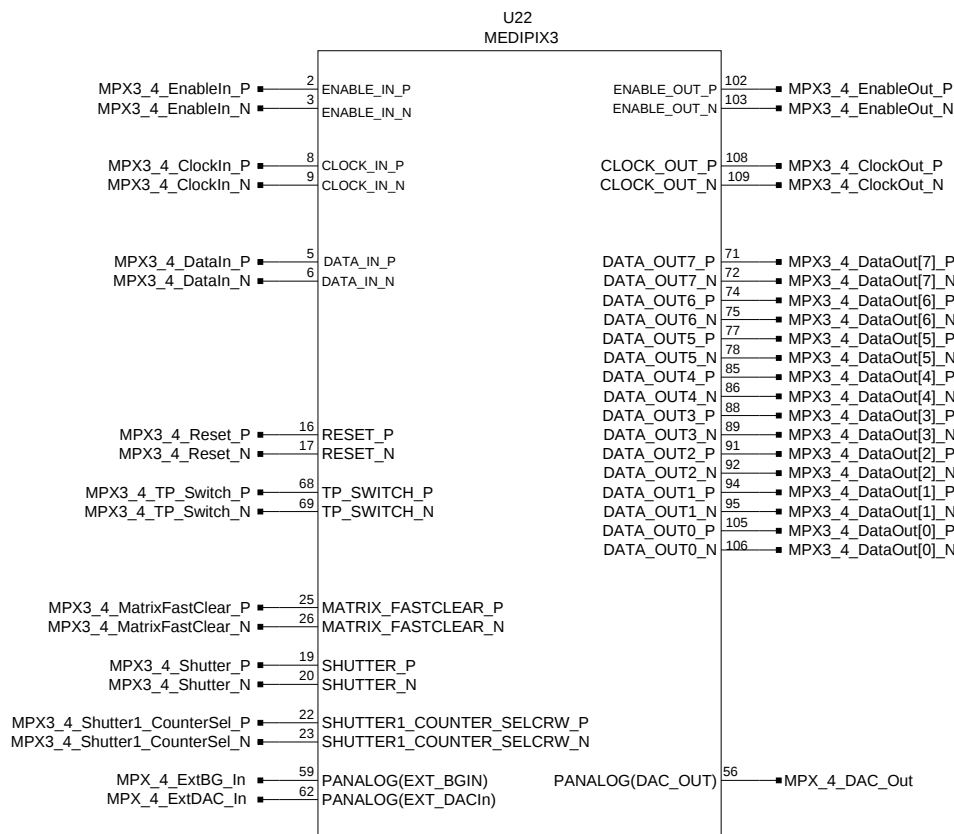
MPIX 2



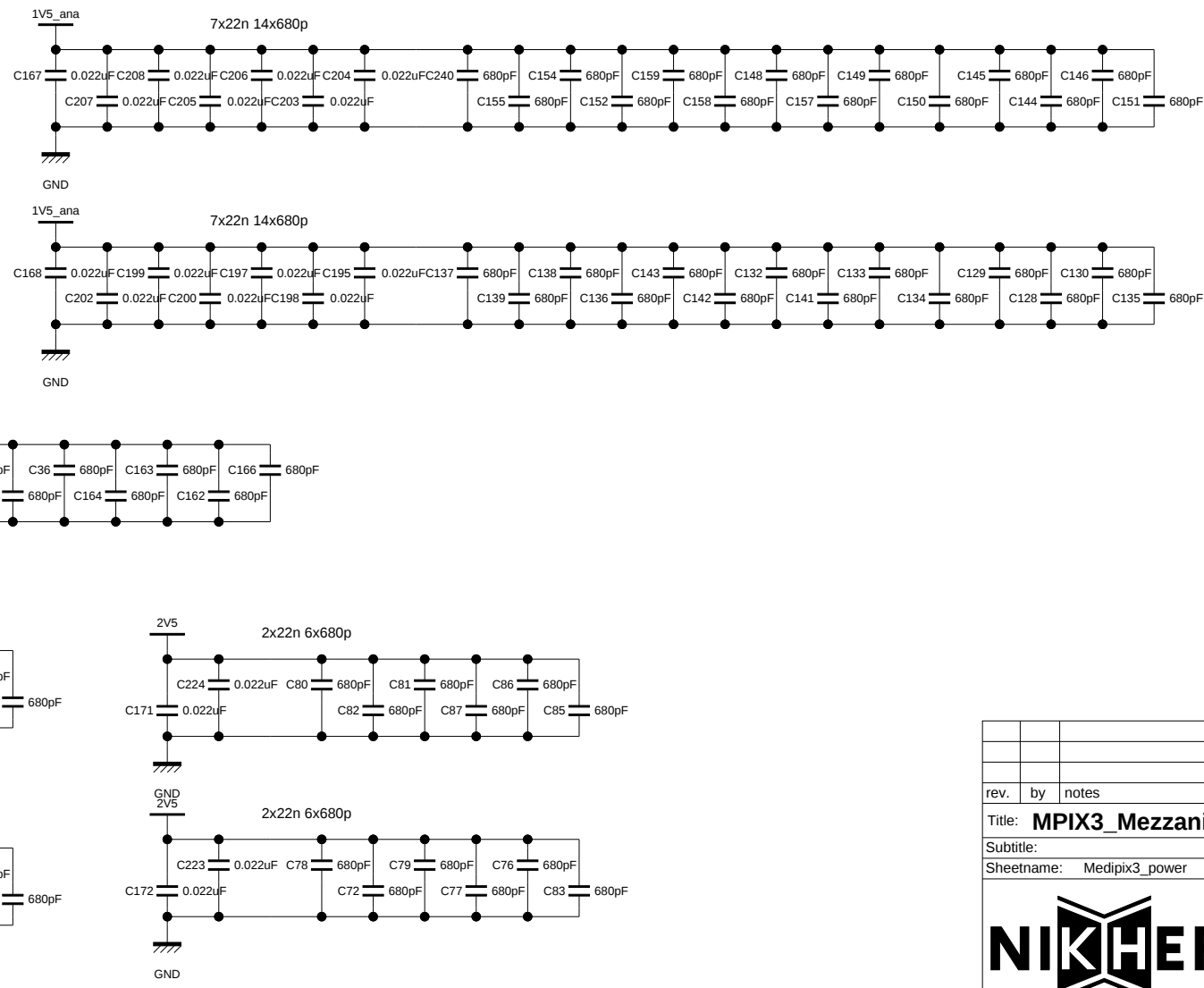
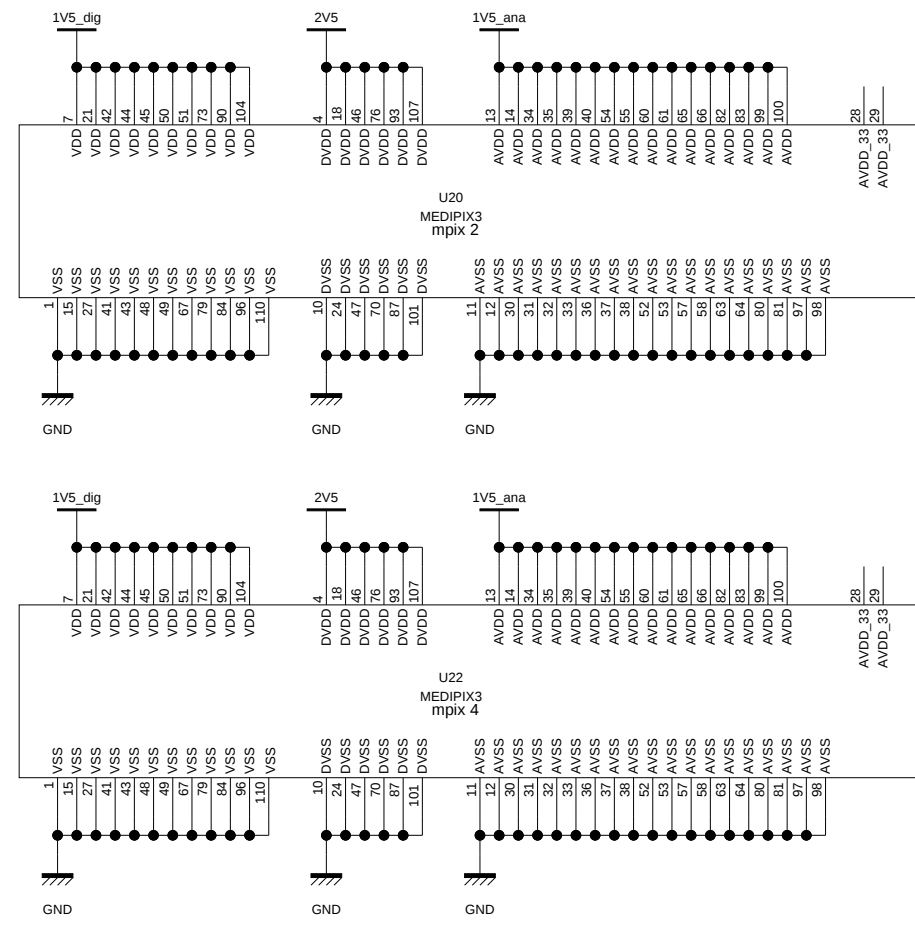
MPIX 3



MPIX 4

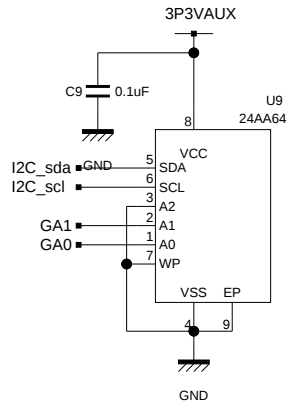


rev.	by	notes
Title: MPIX3_Mezzanine_board		
Subtitle:		
Sheetname: Medipix3_signal		
		Project No. ET40054.07.01.V1
		Designed by Bas van der Heijden
		Drawn by Bas van der Heijden
		Size 420 x 297mm
		Sheet 2 of 8 A3
Science Park 105 +31-(0)20-5922000	1098XG Amsterdam www.nikhef.nl	Date 27-10-2011_15:01
		Time

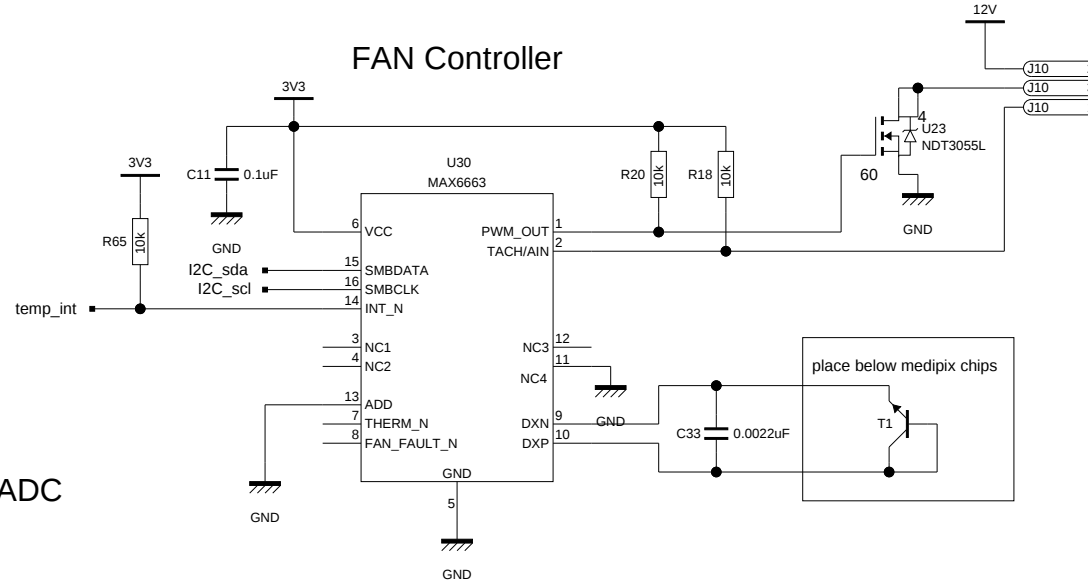


rev.	by	notes			
Title: MPIX3_Mezzanine_board					
Subtitle:					
Sheetname: Medipix3_power					
 The logo consists of the word "NIKHEF" in a bold, black, sans-serif font. The letters are contained within a stylized frame that resembles an open book or a pair of wings, with the top and bottom edges converging towards the center.			Project No. ET40054.07.01.V1		
			Designed by Bas van der Heijden		
			Drawn by Bas van der Heijden		
			Size 420 x 297mm		
			Sheet 3 of 8 A3		
Science Park 105 +31-(0)20-5922000		1098DX Amsterdam www.nikhef.nl		Date 03-11-2011_14:43	Time

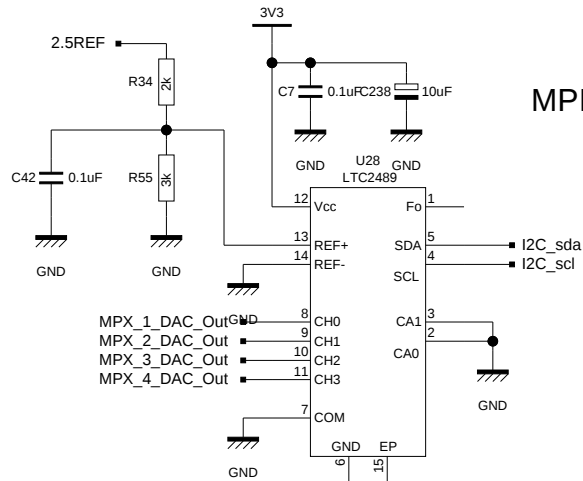
FMC EEPROM



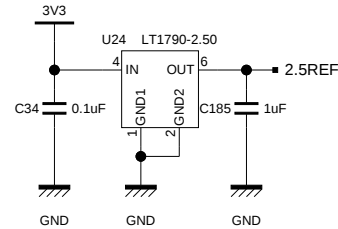
FAN Controller



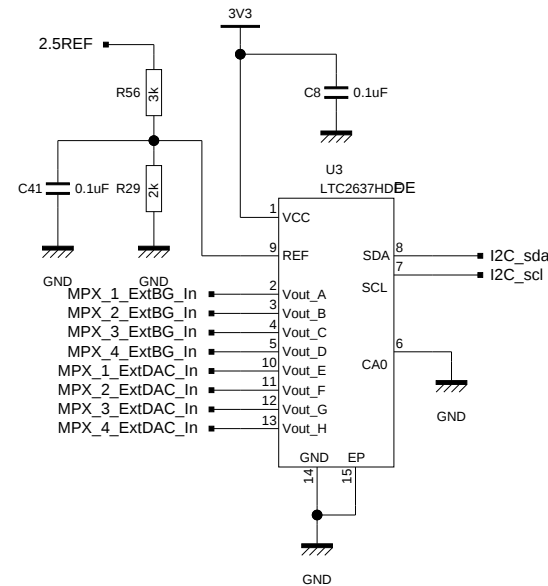
MPIX_ADC



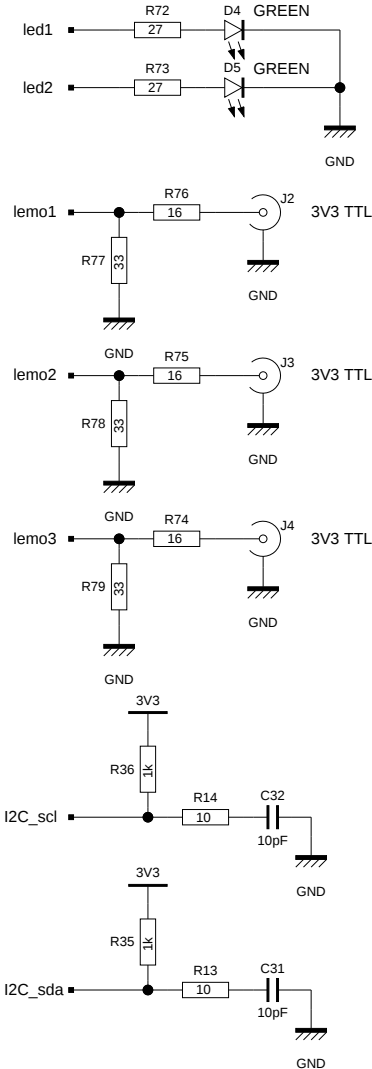
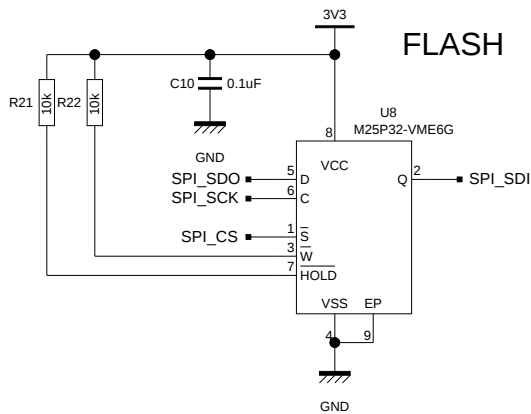
2V5_REF



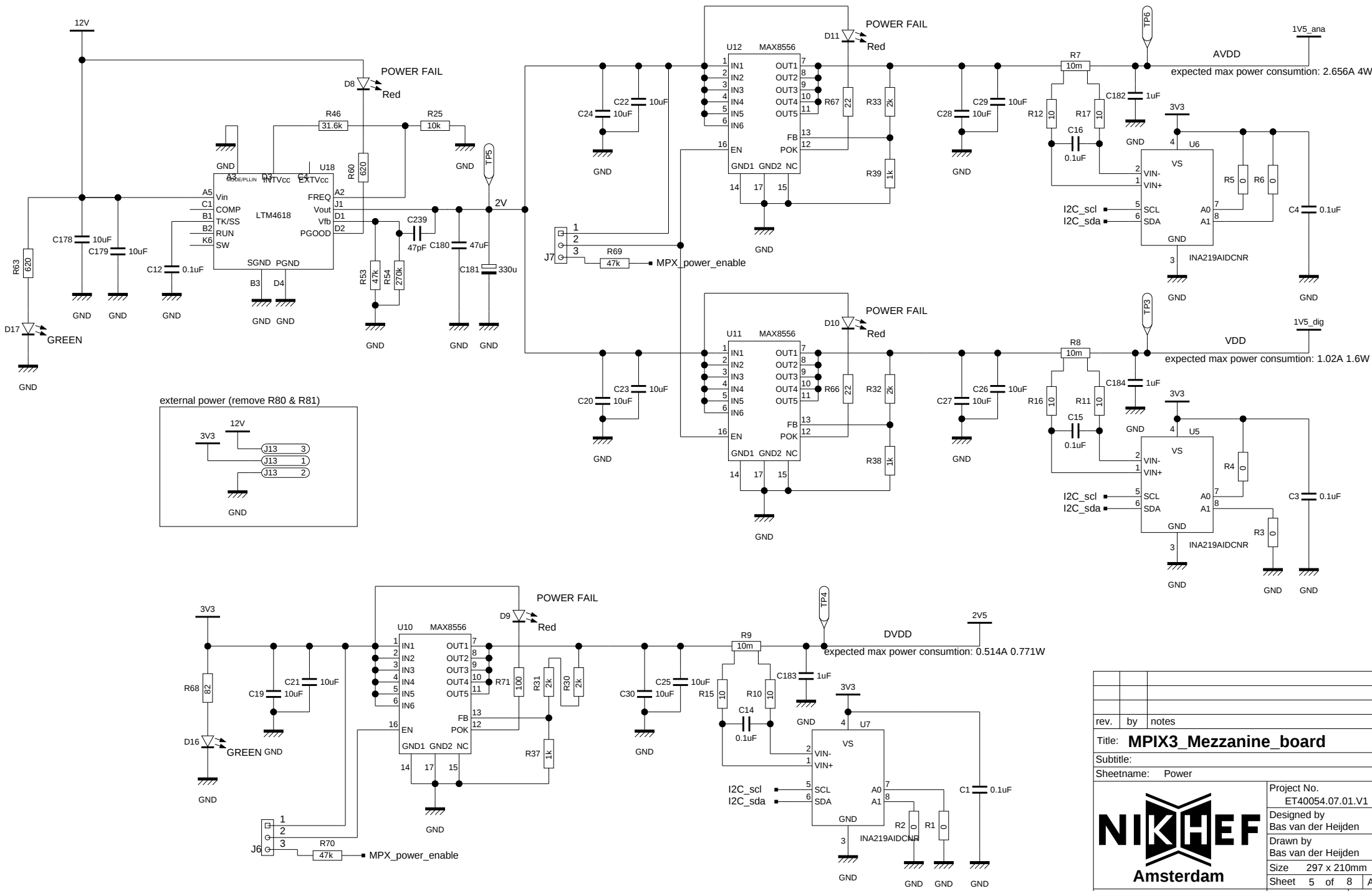
MPIX_DAC



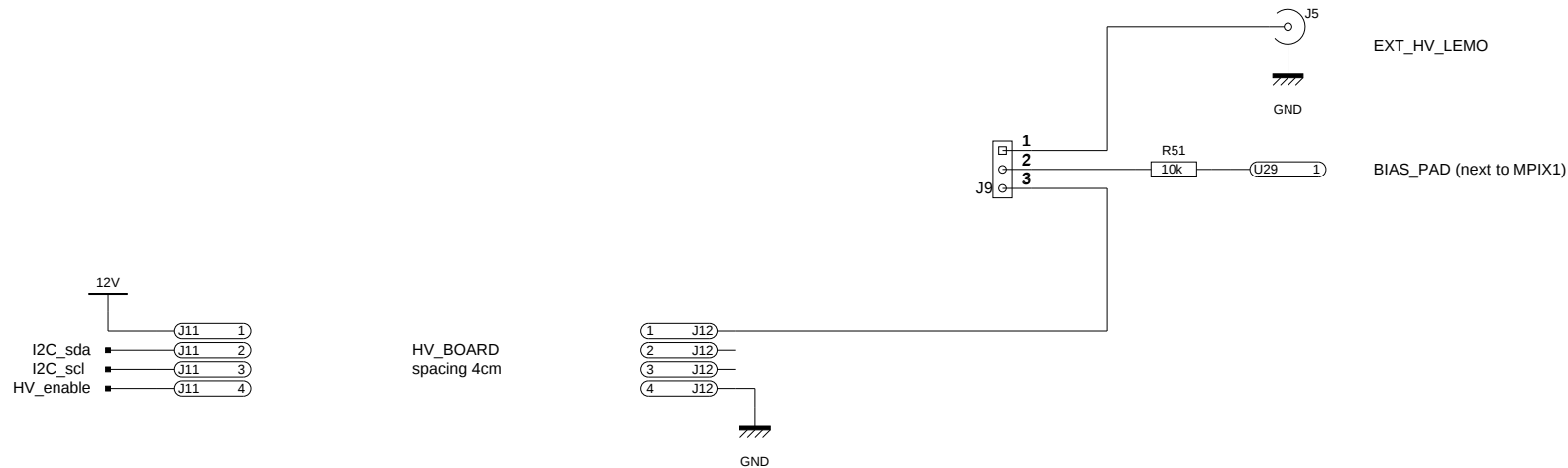
FLASH



rev.	by	notes
Title: MPIX3_Mezzanine_board		
Subtitle:		
Sheetname: Peripheral		
		Project No. ET40054.07.01.V1
		Designed by Bas van der Heijden
		Drawn by Bas van der Heijden
		Size 297 x 210mm
Science Park 105 1098XG Amsterdam		Date 25-10-2011_11:07
+31-(0)20-5922000 www.nikhef.nl		Time



rev.	by	notes
Title: MPiX3_Mezzanine_board		
Subtitle:		
Sheetname: Power		
		Project No. ET40054.07.01.V1
		Designed by Bas van der Heijden
		Drawn by Bas van der Heijden
		Size 297 x 210mm
Science Park 105 +31-(0)20-5922000	1098XG Amsterdam www.nikhef.nl	Date 25-10-2011_11:07
		Time



rev.	by	notes
Title: MPIX3_Mezzanine_board		
Subtitle:		
Sheetname: HV		
		Project No. ET40054.07.01.V1
		Designed by Bas van der Heijden
		Drawn by Bas van der Heijden
		Size 297 x 210mm
		Sheet 6 of 8 A4
Science Park 105 1098XG Amsterdam +31-(0)20-5922000 www.nikhef.nl		Date 25-10-2011_11:08
		Time

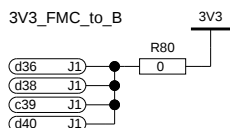
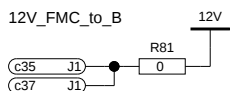


e21 J1 → MPX3_1_EnableIn_P
e22 J1 → MPX3_1_EnableIn_N
k25 J1 → MPX3_1_ClockIn_P
k26 J1 → MPX3_1_ClockIn_N
e24 J1 → MPX3_1_DataIn_P
e25 J1 → MPX3_1_DataIn_N
e27 J1 → MPX3_1_Shutter_P
e28 J1 → MPX3_1_Shutter_N
e30 J1 → MPX3_1_Shutter1_CounterSel_P
e31 J1 → MPX3_1_Shutter1_CounterSel_N
e33 J1 → MPX3_1_Reset_P
e34 J1 → MPX3_1_Reset_N
f22 J1 → MPX3_1_MatrixFastClear_P
f23 J1 → MPX3_1_MatrixFastClear_N
e18 J1 → MPX3_1_TP_Switch_P
e19 J1 → MPX3_1_TP_Switch_N
f25 J1 → MPX3_1_EnableOut_P
f26 J1 → MPX3_1_EnableOut_N
k28 J1 → MPX3_1_ClockOut_P
k29 J1 → MPX3_1_ClockOut_N
f28 J1 → MPX3_1_DataOut[0]_P
f29 J1 → MPX3_1_DataOut[0]_N
f31 J1 → MPX3_1_DataOut[1]_P
f32 J1 → MPX3_1_DataOut[1]_N
f34 J1 → MPX3_1_DataOut[2]_P
f35 J1 → MPX3_1_DataOut[2]_N
f24 J1 → MPX3_1_DataOut[3]_P
f25 J1 → MPX3_1_DataOut[3]_N
f27 J1 → MPX3_1_DataOut[4]_P
f28 J1 → MPX3_1_DataOut[4]_N
f30 J1 → MPX3_1_DataOut[5]_P
f31 J1 → MPX3_1_DataOut[5]_N
f33 J1 → MPX3_1_DataOut[6]_P
f34 J1 → MPX3_1_DataOut[6]_N
f36 J1 → MPX3_1_DataOut[7]_P
f37 J1 → MPX3_1_DataOut[7]_N

e6 J1 → MPX3_2_EnableIn_P
e7 J1 → MPX3_2_EnableIn_N
e2 J1 → MPX3_2_ClockIn_P
e3 J1 → MPX3_2_ClockIn_N
e9 J1 → MPX3_2_DataIn_P
e10 J1 → MPX3_2_DataIn_N
e12 J1 → MPX3_2_Shutter_P
e13 J1 → MPX3_2_Shutter_N
e15 J1 → MPX3_2_Shutter1_CounterSel_P
e16 J1 → MPX3_2_Shutter1_CounterSel_N
f7 J1 → MPX3_2_Reset_P
f8 J1 → MPX3_2_Reset_N
f10 J1 → MPX3_2_MatrixFastClear_P
f11 J1 → MPX3_2_MatrixFastClear_N
f19 J1 → MPX3_2_TP_Switch_P
f20 J1 → MPX3_2_TP_Switch_N
f13 J1 → MPX3_2_EnableOut_P
f14 J1 → MPX3_2_EnableOut_N
f4 J1 → MPX3_2_ClockOut_P
f5 J1 → MPX3_2_ClockOut_N
f16 J1 → MPX3_2_DataOut[0]_P
f17 J1 → MPX3_2_DataOut[0]_N
f6 J1 → MPX3_2_DataOut[1]_P
f7 J1 → MPX3_2_DataOut[1]_N
f9 J1 → MPX3_2_DataOut[2]_P
f10 J1 → MPX3_2_DataOut[2]_N
f12 J1 → MPX3_2_DataOut[3]_P
f13 J1 → MPX3_2_DataOut[3]_N
f15 J1 → MPX3_2_DataOut[4]_P
f16 J1 → MPX3_2_DataOut[4]_N
k7 J1 → MPX3_2_DataOut[5]_P
k8 J1 → MPX3_2_DataOut[5]_N
k10 J1 → MPX3_2_DataOut[6]_P
k11 J1 → MPX3_2_DataOut[6]_N
k13 J1 → MPX3_2_DataOut[7]_P
k14 J1 → MPX3_2_DataOut[7]_N

c10 J1 → MPX3_3_EnableIn_P
c11 J1 → MPX3_3_EnableIn_N
d8 J1 → MPX3_3_ClockIn_P
d9 J1 → MPX3_3_ClockIn_N
c14 J1 → MPX3_3_DataIn_P
c15 J1 → MPX3_3_DataIn_N
c18 J1 → MPX3_3_Shutter_P
c19 J1 → MPX3_3_Shutter_N
d11 J1 → MPX3_3_Shutter1_CounterSel_P
d12 J1 → MPX3_3_Shutter1_CounterSel_N
d14 J1 → MPX3_3_Reset_P
d15 J1 → MPX3_3_Reset_N
d17 J1 → MPX3_3_MatrixFastClear_P
d18 J1 → MPX3_3_MatrixFastClear_N
f18 J1 → MPX3_3_TP_Switch_P
f19 J1 → MPX3_3_TP_Switch_N
g9 J1 → MPX3_3_EnableOut_P
g10 J1 → MPX3_3_EnableOut_N
g6 J1 → MPX3_3_ClockOut_P
g7 J1 → MPX3_3_ClockOut_N
g12 J1 → MPX3_3_DataOut[0]_P
g13 J1 → MPX3_3_DataOut[0]_N
g15 J1 → MPX3_3_DataOut[1]_P
g16 J1 → MPX3_3_DataOut[1]_N
g18 J1 → MPX3_3_DataOut[2]_P
g19 J1 → MPX3_3_DataOut[2]_N
h7 J1 → MPX3_3_DataOut[3]_P
h8 J1 → MPX3_3_DataOut[3]_N
h10 J1 → MPX3_3_DataOut[4]_P
h11 J1 → MPX3_3_DataOut[4]_N
h13 J1 → MPX3_3_DataOut[5]_P
h14 J1 → MPX3_3_DataOut[5]_N
h16 J1 → MPX3_3_DataOut[6]_P
h17 J1 → MPX3_3_DataOut[6]_N
h19 J1 → MPX3_3_DataOut[7]_P
h20 J1 → MPX3_3_DataOut[7]_N

c26 J1 → MPX3_4_EnableIn_P
c27 J1 → MPX3_4_EnableIn_N
c22 J1 → MPX3_4_ClockIn_P
c23 J1 → MPX3_4_ClockIn_N
d23 J1 → MPX3_4_DataIn_P
d24 J1 → MPX3_4_DataIn_N
d26 J1 → MPX3_4_Shutter_P
d27 J1 → MPX3_4_Shutter_N
g21 J1 → MPX3_4_Shutter1_CounterSel_P
g22 J1 → MPX3_4_Shutter1_CounterSel_N
g24 J1 → MPX3_4_Reset_P
g25 J1 → MPX3_4_Reset_N
g27 J1 → MPX3_4_MatrixFastClear_P
g28 J1 → MPX3_4_MatrixFastClear_N
f21 J1 → MPX3_4_TP_Switch_P
f22 J1 → MPX3_4_TP_Switch_N
g30 J1 → MPX3_4_EnableOut_P
g31 J1 → MPX3_4_EnableOut_N
d20 J1 → MPX3_4_ClockOut_P
d21 J1 → MPX3_4_ClockOut_N
g33 J1 → MPX3_4_DataOut[0]_P
g34 J1 → MPX3_4_DataOut[0]_N
g36 J1 → MPX3_4_DataOut[1]_P
g37 J1 → MPX3_4_DataOut[1]_N
h22 J1 → MPX3_4_DataOut[2]_P
h23 J1 → MPX3_4_DataOut[2]_N
h25 J1 → MPX3_4_DataOut[3]_P
h26 J1 → MPX3_4_DataOut[3]_N
h28 J1 → MPX3_4_DataOut[4]_P
h29 J1 → MPX3_4_DataOut[4]_N
h31 J1 → MPX3_4_DataOut[5]_P
h32 J1 → MPX3_4_DataOut[5]_N
h34 J1 → MPX3_4_DataOut[6]_P
h35 J1 → MPX3_4_DataOut[6]_N
h37 J1 → MPX3_4_DataOut[7]_P
h38 J1 → MPX3_4_DataOut[7]_N

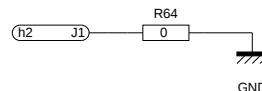


d1 J1 → Powergood_Carrier
f1 J1 → powergood_mezzanine
k37 J1 → temp_int
k38 J1 → MPX_power_enable
k23 J1 → HV_enable
c30 J1 → I2C_scl
c31 J1 → I2C_sda

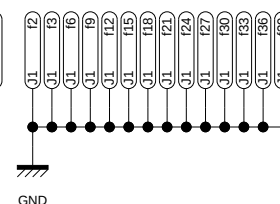
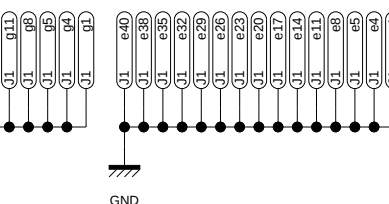
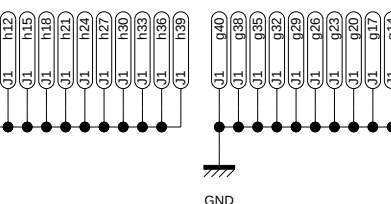
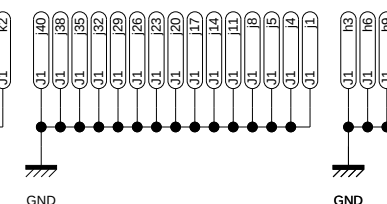
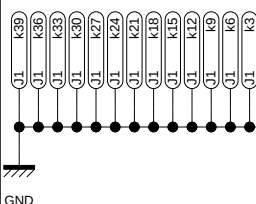
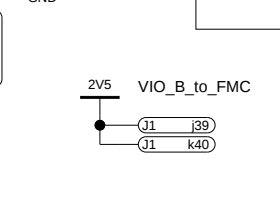
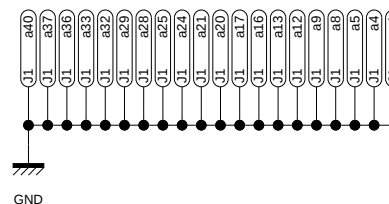
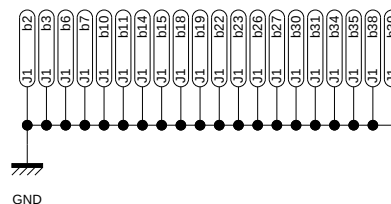
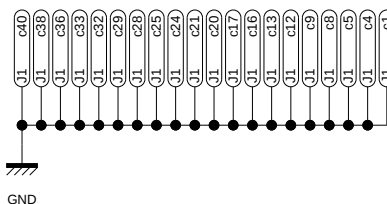
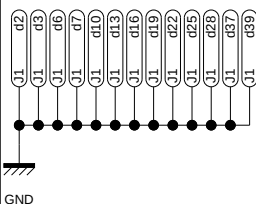
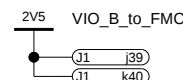
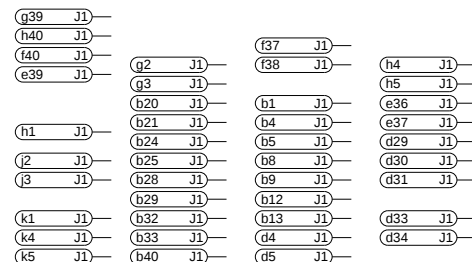
k16 J1 → lemo1
k17 J1 → lemo2
k19 J1 → lemo3
k20 J1 → led1
k22 J1 → led2

d32 J1 → 3P3VAUX
c34 J1 → GA0
d35 J1 → GA1

k31 J1 → SPI_SDO
k32 J1 → SPI_SDI
k34 J1 → SPI_SCK
k35 J1 → SPI_CS



NC



rev.	by	notes
Title: MPIX3_Mezzanine_board		
Subtitle:		
Sheetname: FMC		
		Project No. ET40054.07.01.V1
		Designed by Bas van der Heijden
		Drawn by Bas van der Heijden
		Size 297 x 210mm
Science Park 105 +31-(0)20-5922000	1098XG Amsterdam www.nikhef.nl	Date 25-10-2011_11:08
Sheet 7 of 8		A4
		Time

FMC TimePix3 gigabit tranceiver signals

c6	J1	TPX3_1_CH1_M2C_P	
c7	J1	TPX3_1_CH1_M2C_N	
c2	J1	TPX3_1_CH1_C2M_P	N/C
c3	J1	TPX3_1_CH1_C2M_N	N/C
a2	J1	TPX3_1_CH2_M2C_P	
a3	J1	TPX3_1_CH2_M2C_N	
a22	J1	TPX3_1_CH2_C2M_P	N/C
a23	J1	TPX3_1_CH2_C2M_N	N/C
a6	J1	TPX3_1_CH3_M2C_P	
a7	J1	TPX3_1_CH3_M2C_N	
a26	J1	TPX3_1_CH3_C2M_P	N/C
a27	J1	TPX3_1_CH3_C2M_N	N/C
a10	J1	TPX3_1_CH4_M2C_P	
a11	J1	TPX3_1_CH4_M2C_N	
a30	J1	TPX3_1_CH4_C2M_P	N/C
a31	J1	TPX3_1_CH4_C2M_N	N/C
a14	J1	TPX3_2_CH1_M2C_P	N/C
a15	J1	TPX3_2_CH1_M2C_N	N/C
a34	J1	TPX3_2_CH1_C2M_P	N/C
a35	J1	TPX3_2_CH1_C2M_N	N/C
a18	J1	TPX3_3_CH1_M2C_P	N/C
a19	J1	TPX3_3_CH1_M2C_N	N/C
a38	J1	TPX3_3_CH1_C2M_P	N/C
a39	J1	TPX3_3_CH1_C2M_N	N/C
b16	J1	TPX3_4_CH1_M2C_P	N/C
b17	J1	TPX3_4_CH1_M2C_N	N/C
b36	J1	TPX3_4_CH1_C2M_P	N/C
b37	J1	TPX3_4_CH1_C2M_N	N/C

FMC Rule 5.34: The DP[0..9]_M2C are driven from the IO mezzanine module to the carrier card.
FMC Rule 5.36: The DP[0..9]_C2M are driven from the carrier card to the IO mezzanine module.

rev.	by	notes
Title: MPIX3_Mezzanine_board		
Subtitle:		
Sheetname: TIMEPIX3		
		Project No. ET40054.07.01.V1
		Designed by Bas van der Heijden
		Drawn by Bas van der Heijden
		Size 297 x 210mm
		Sheet 8 of 8 A4
Science Park 105 1098XG Amsterdam +31-(0)20-5922000 www.nikhef.nl		Date 27-10-2011_14:43
		Time