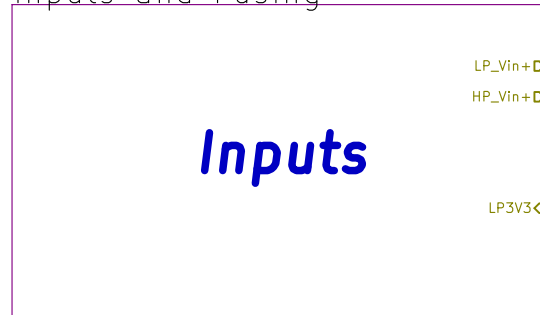
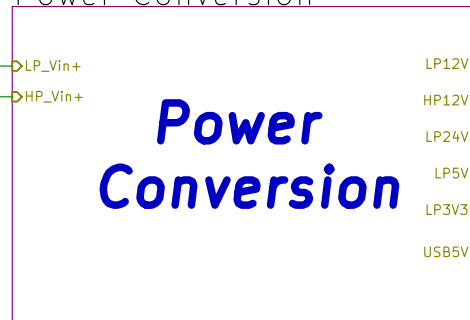


Inputs and Fusing



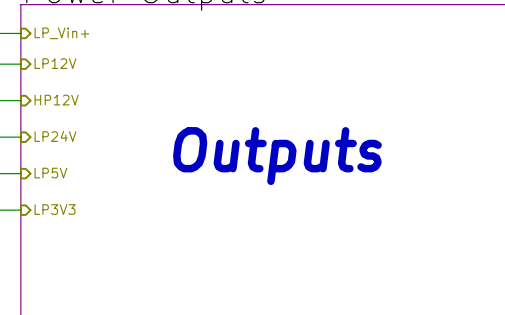
Inputs and Fusing.sch

Power Conversion



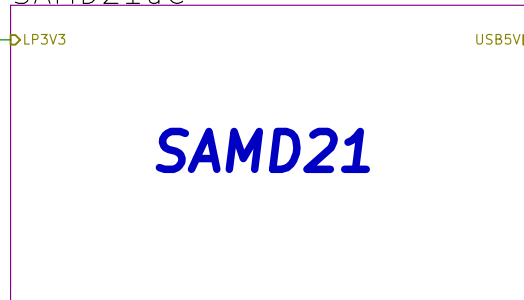
Power Conversion.sch

Power Outputs



Power Outputs.sch

SAMD21uC

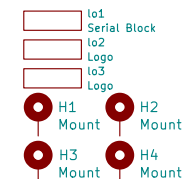


SAMD21uC.sch

Wiznet Ethernet



Wiznet Ethernet.sch



Paradigm Hyperloop

Sheet: /

File: LVDC Distribution.sch

Title: LVDC Power Distribution Board

Size: A4

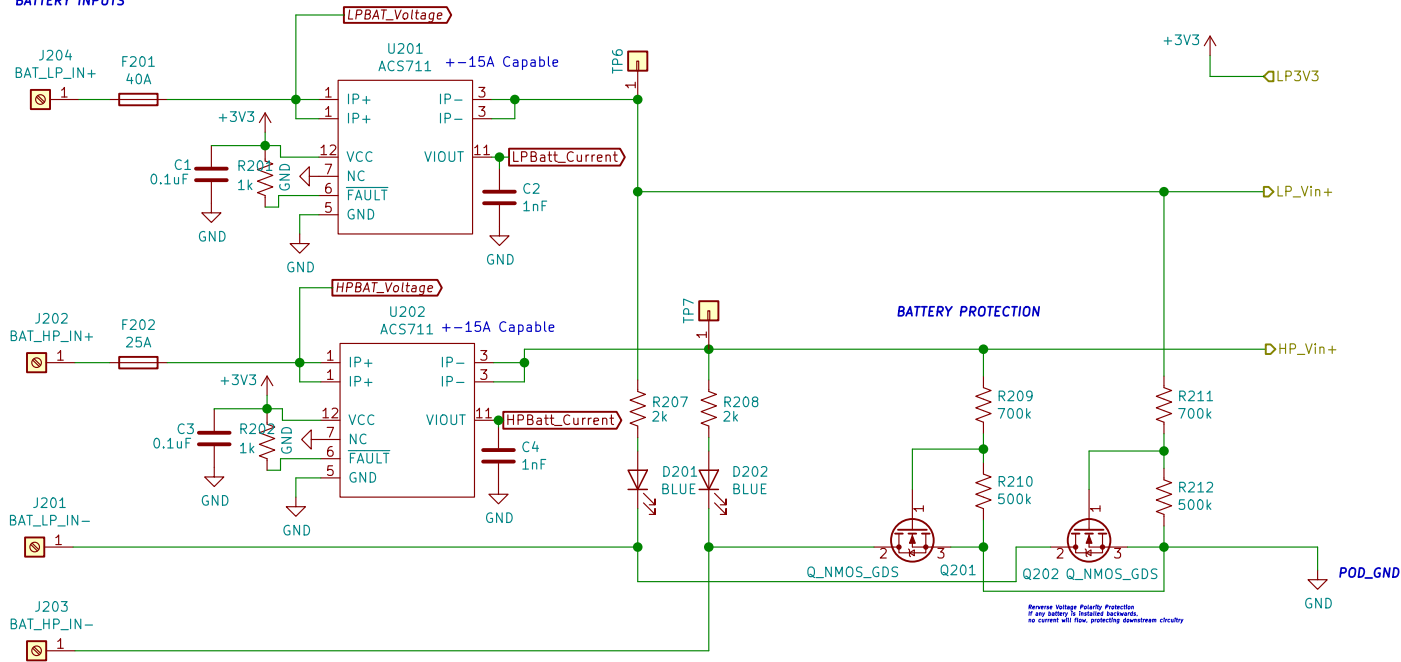
Date: Mark Belbin -- Fall 2018

Rev:

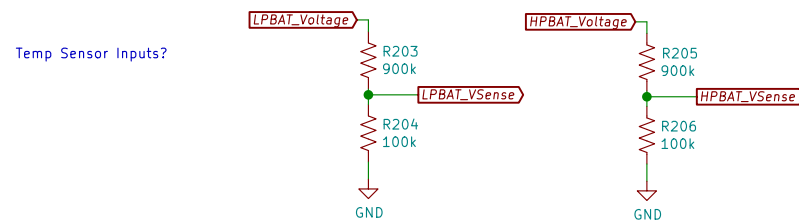
KiCad E.D.A. kicad (5.0.2)-1

Id: 1/11

BATTERY INPUTS



Battery Voltage Sense (30V --> 3V)



Inputs and Fusing

Sheet: /Inputs and Fusing/
File: Inputs and Fusing.sch

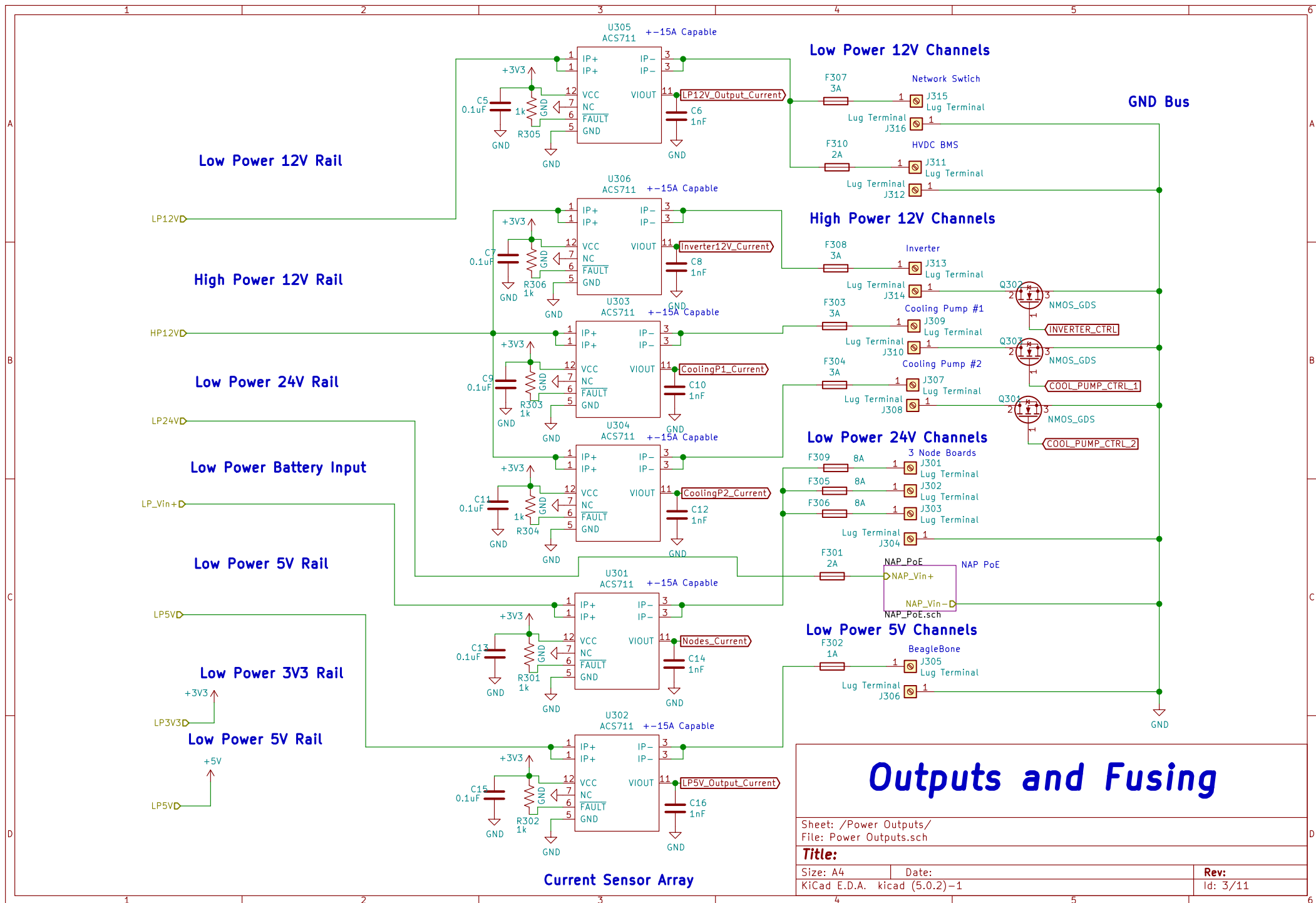
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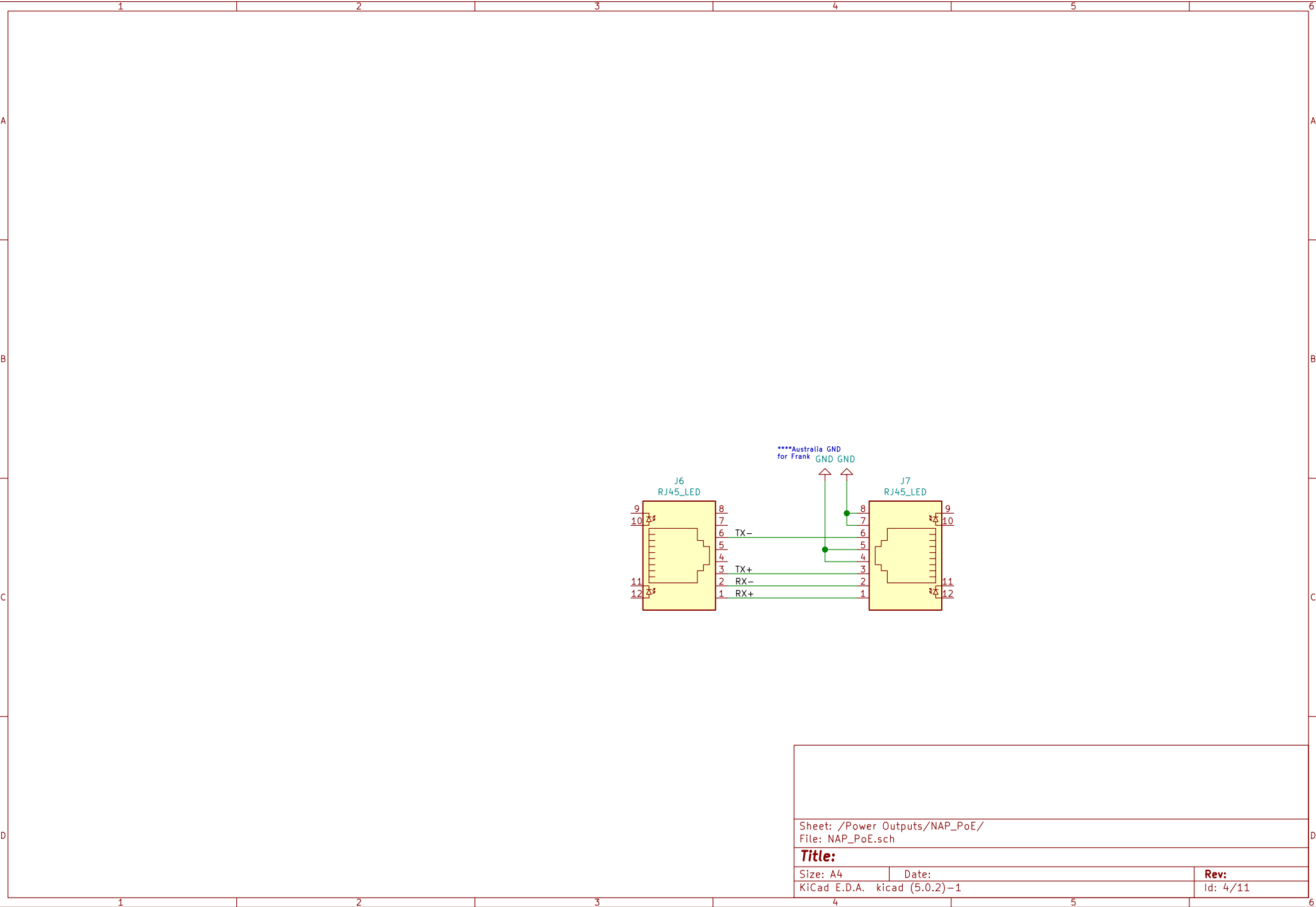
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Date:

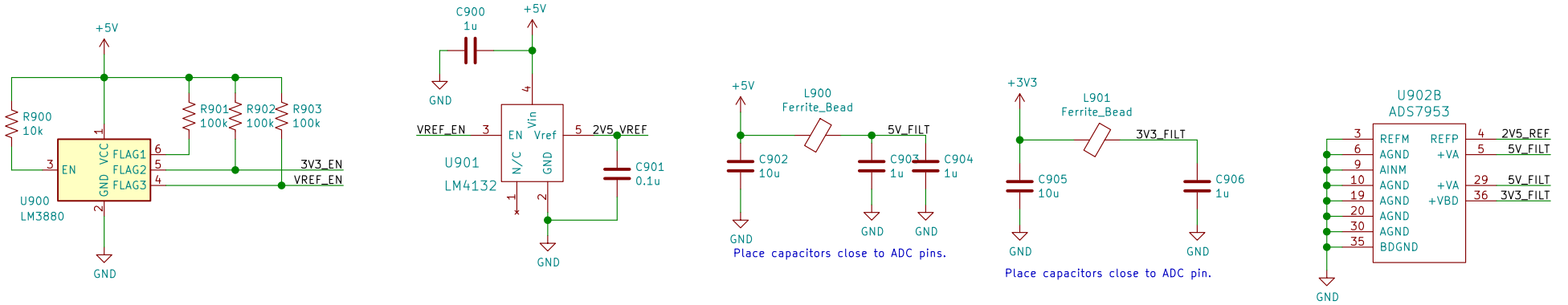
Rev:

Id: 2/11

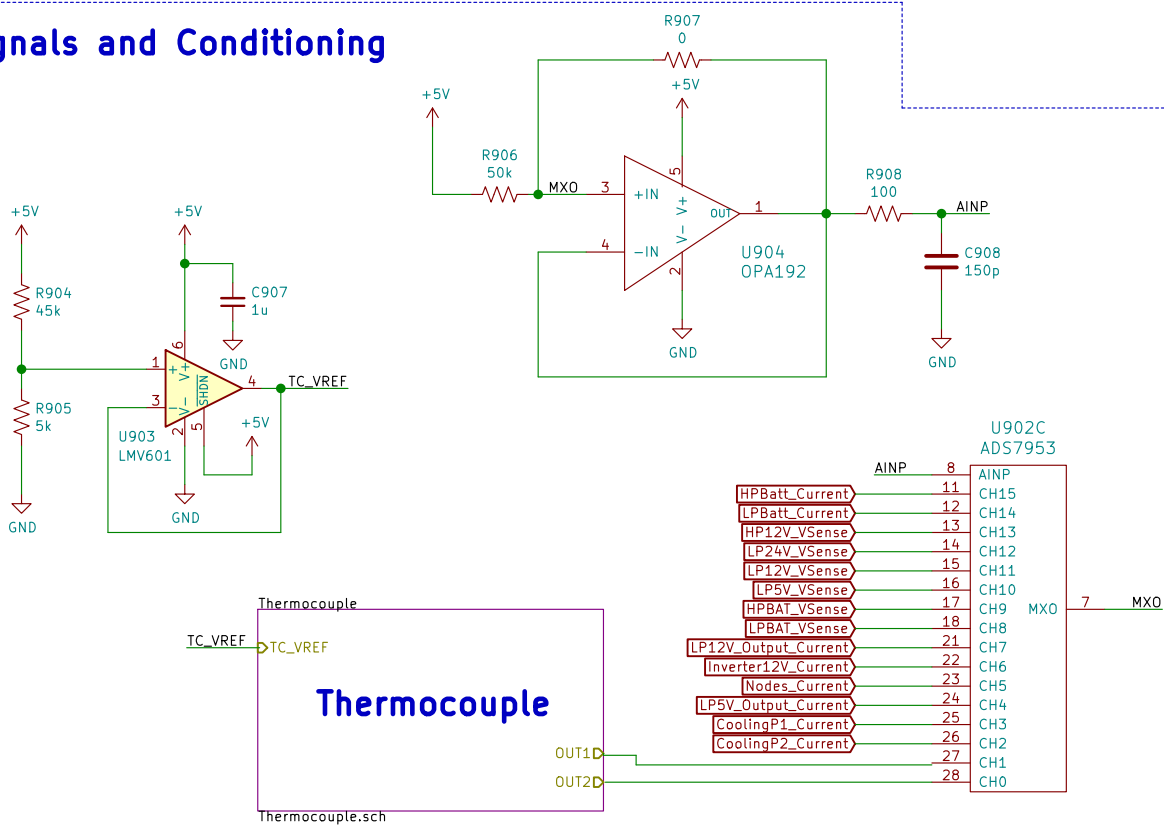




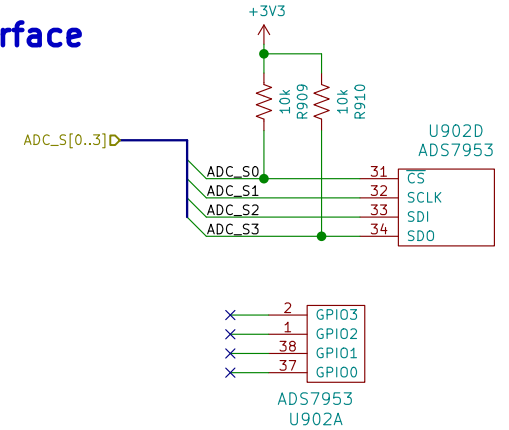
ADC Power – Rails and Sequencing



Signals and Conditioning



MCU Interface



Sheet: /SAM D21uC/ADC_Sensors/
File: Sensors.sch

Title:

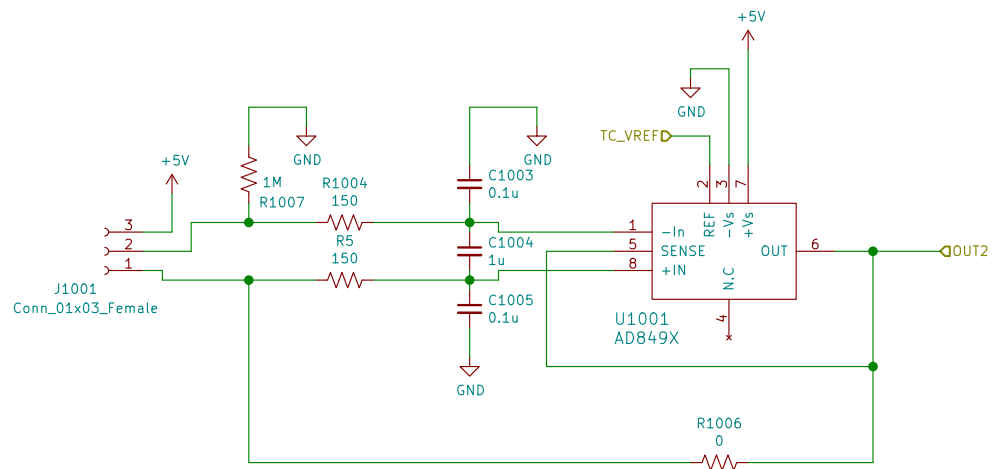
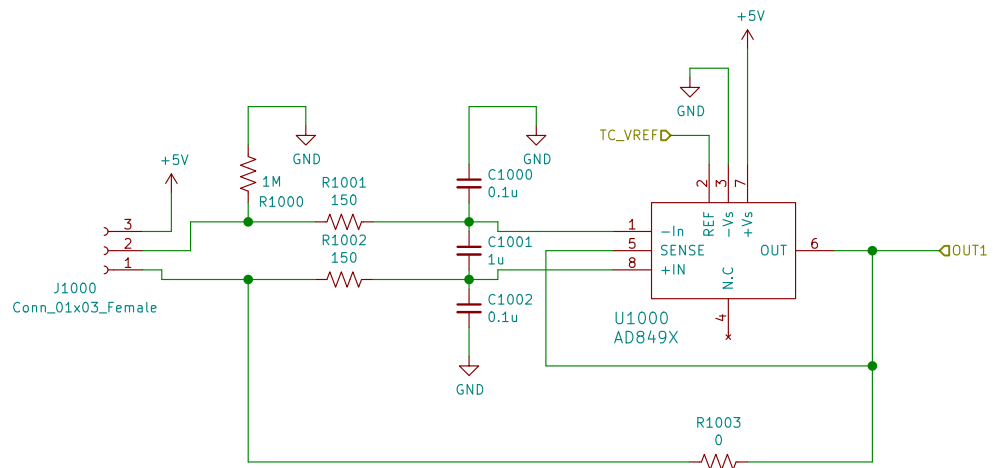
Size: A4

Date:

KiCad E.D.A.	kicad (5.0.2)-1
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Rev:

Id: 6/11



Sheet: /SAM21uC/ADC_Sensors/Thermocouple/
File: Thermocouple.sch

Title:

Size: A4

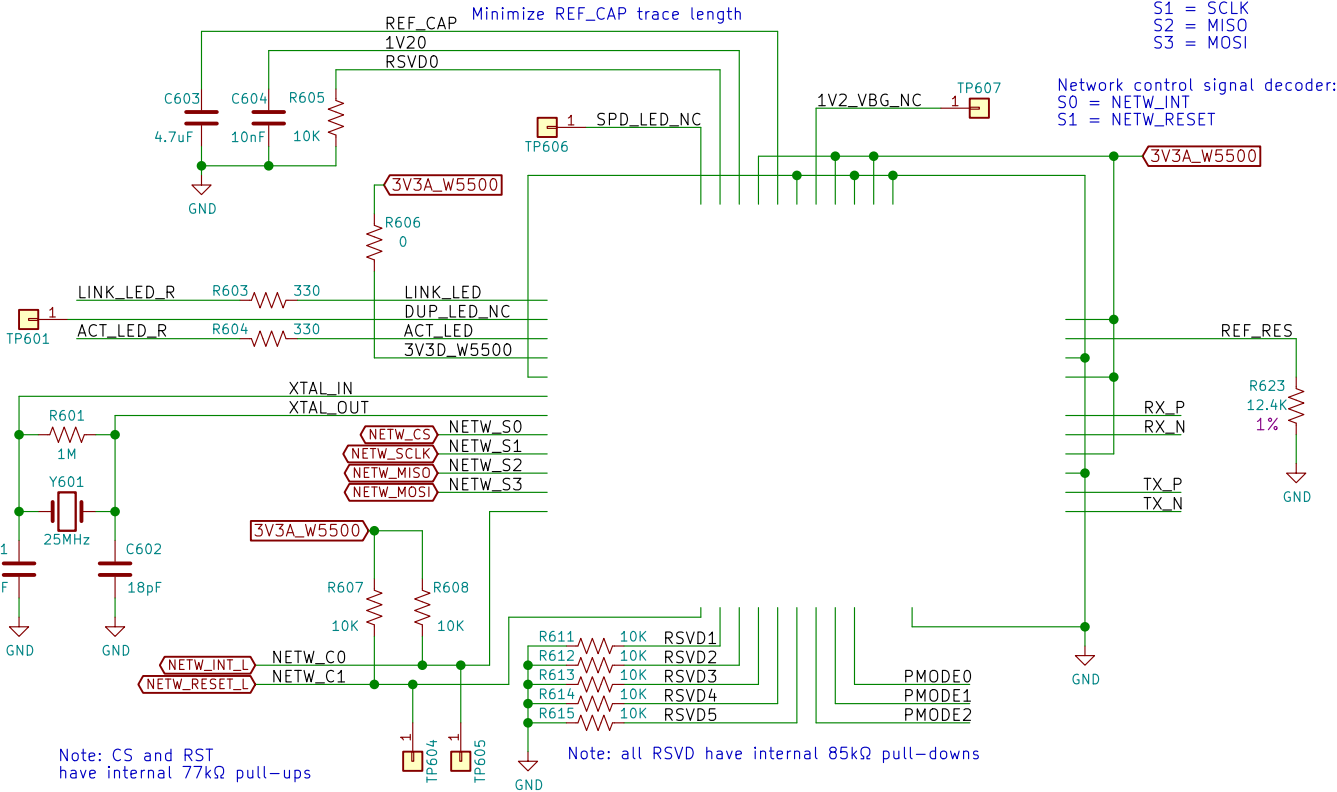
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KiCad E.D.A. kicad (5.0.2)-1

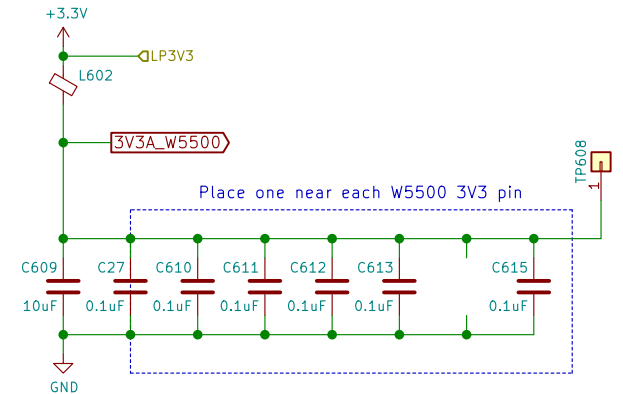
Rev:

Id: 7/11

W5500 Ethernet Controller

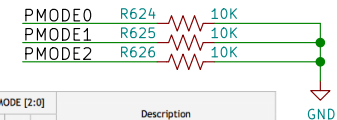


Power Supply Capacitors



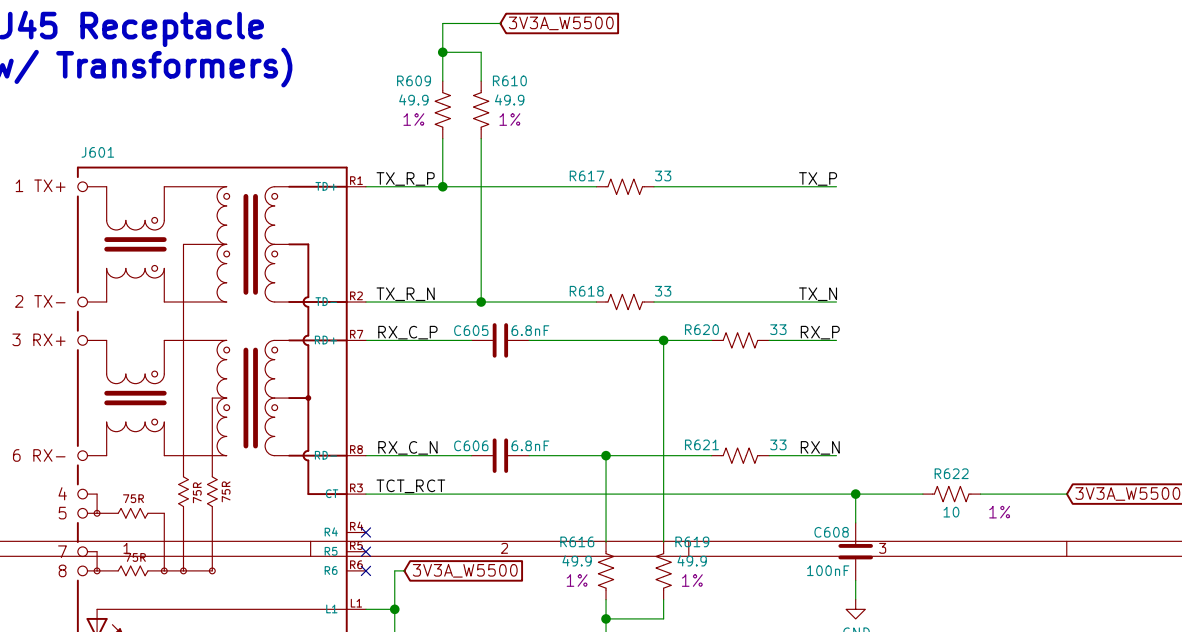
Network Mode Selection

Default: all pulled up to 3V3
(Note all have internal 77kΩ pull-ups)



PMODE [2:0]			Description
2	1	0	
0	0	0	10BT Half-duplex, Auto-negotiation disabled
0	0	1	10BT Full-duplex, Auto-negotiation disabled
0	1	0	100BT Half-duplex, Auto-negotiation disabled
0	1	1	100BT Full-duplex, Auto-negotiation disabled
1	0	0	100BT Half-duplex, Auto-negotiation enabled
1	0	1	Not used
1	1	0	Not used
1	1	1	All capable, Auto-negotiation enabled

RJ45 Receptacle (w/ Transformers)



WIZNET

Sheet: /Wiznet Ethernet/
File: Wiznet Ethernet.sch

Title:

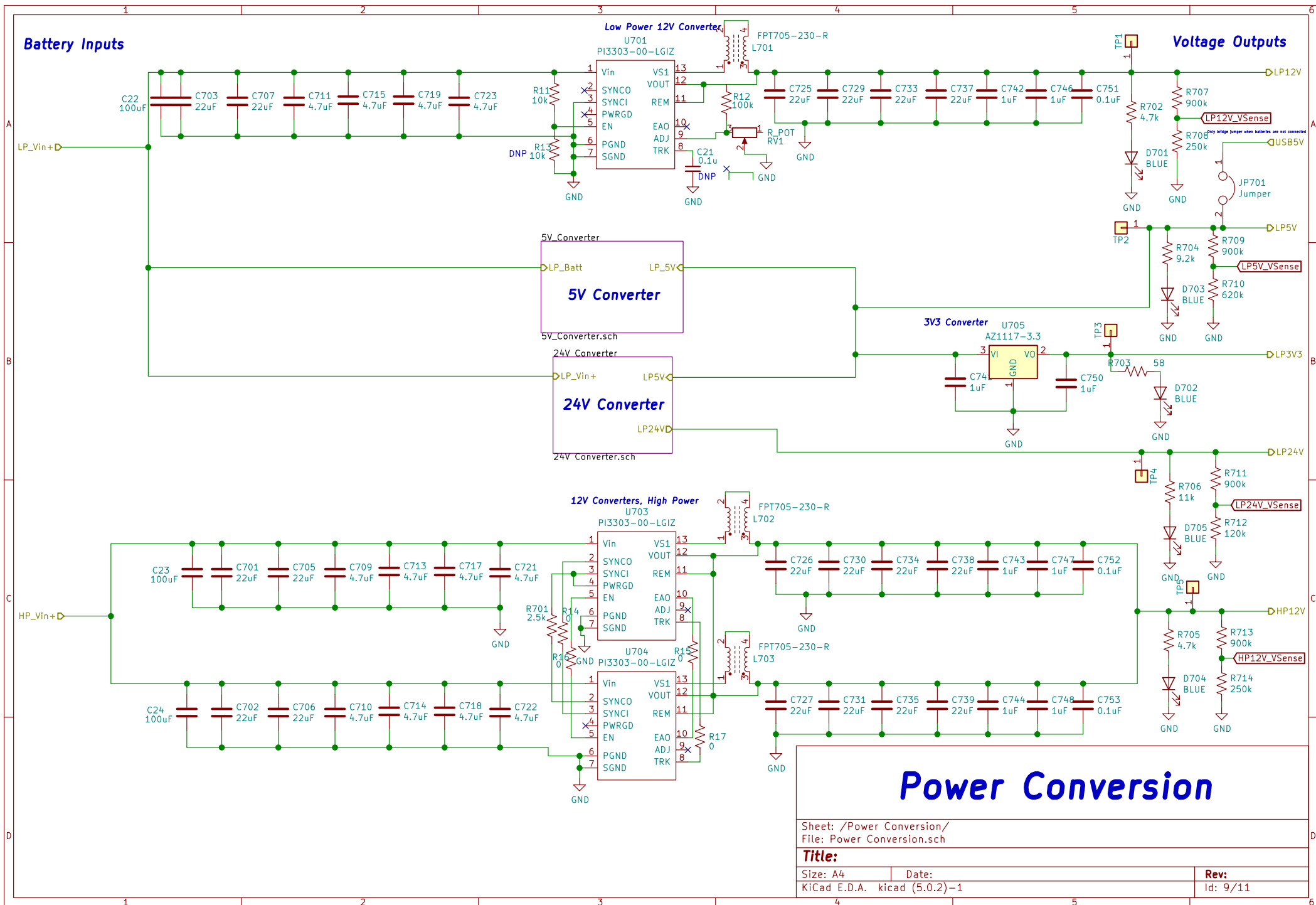
Size: A4

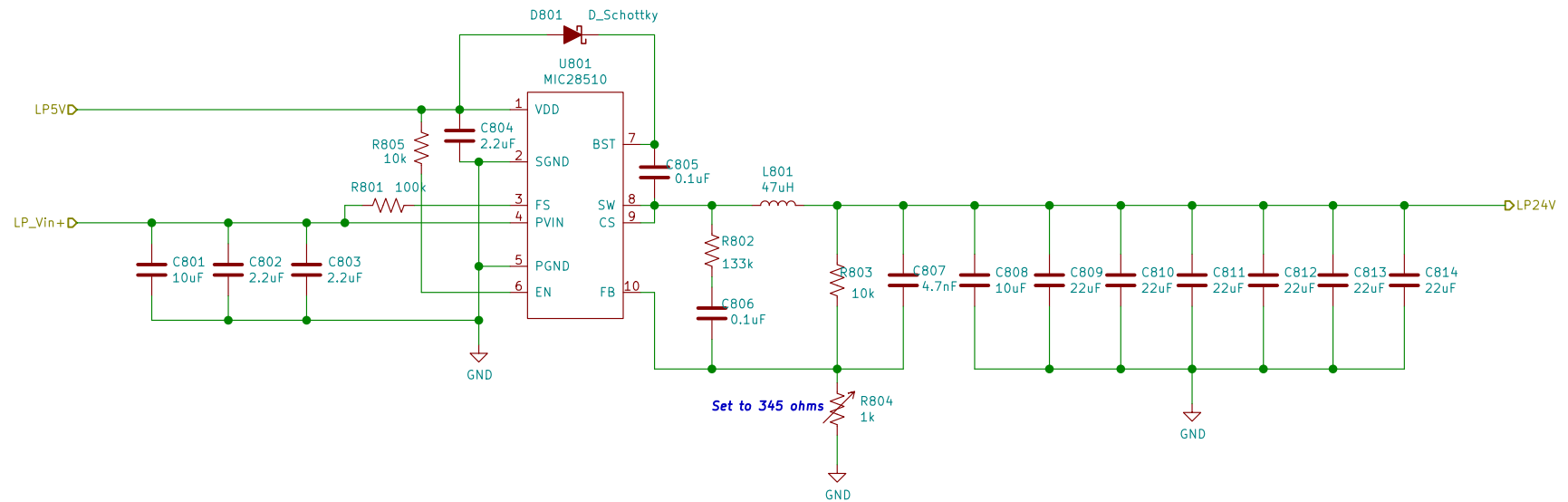
Date:

KiCad E.D.A. kicad (5.0.2)-1

Rev:

Id: 8/11





24V Converter

Sheet: /Power Conversion/24V Converter/
File: 24V Converter.sch

Title:

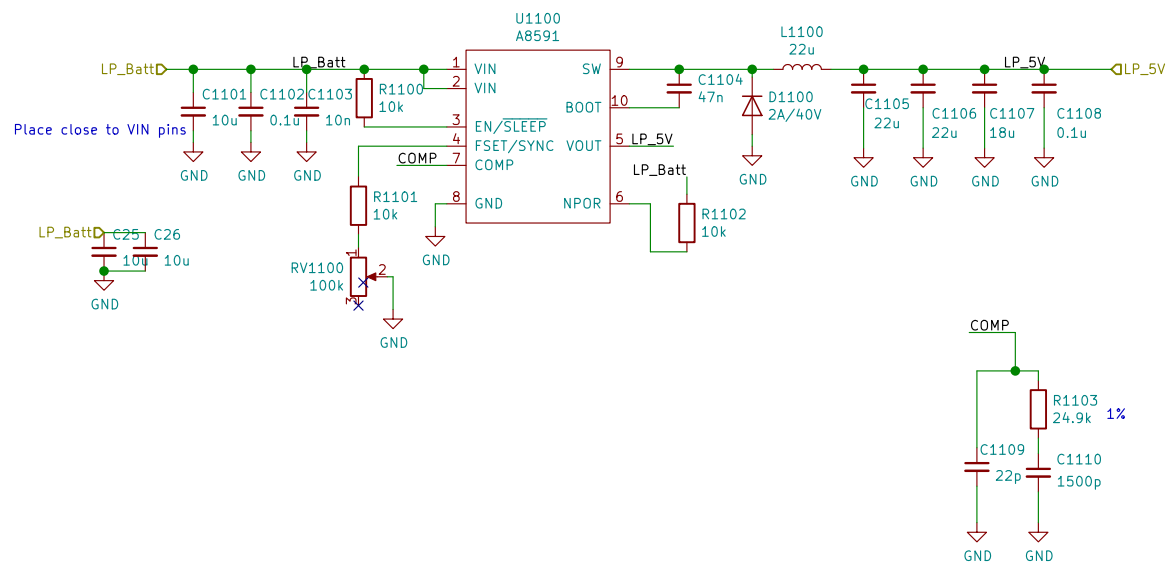
Size: A4

Date:

KiCad E.D.A. kicad (5.0.2)-1

Rev:

Id: 10/11



Sheet: /Power Conversion/5V_Converter/
File: 5V_Converter.sch

Title:

Size: A4

Date:

KiCad E.D.A. kicad (5.0.2)-1

Rev:

Id: 11/11