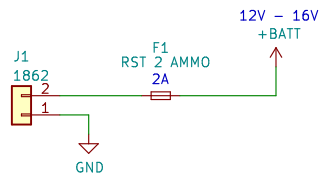
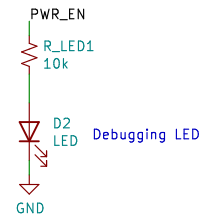
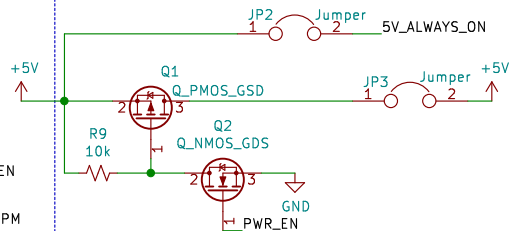


Battery Connector

4 LiPO Cells
in series



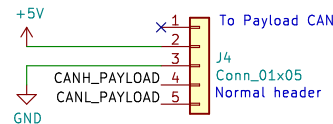
System Sleep Control



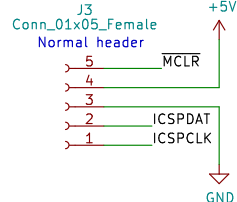
Sheet: battery_management

POWER_EN
+V_SIPMD +V_SIPM

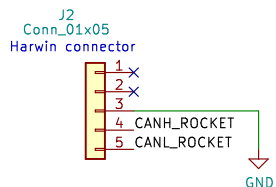
File: battery_management.sch



Connector for programming



To Rocket CAN bus



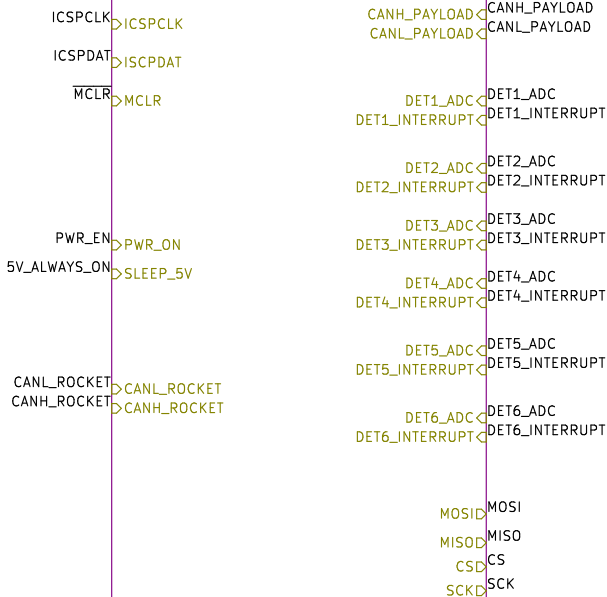
Sheet: Logger board

MOSI qMOSI
MISO qMISO
CS qCS
SCK qSCK

File: SDcard.sch

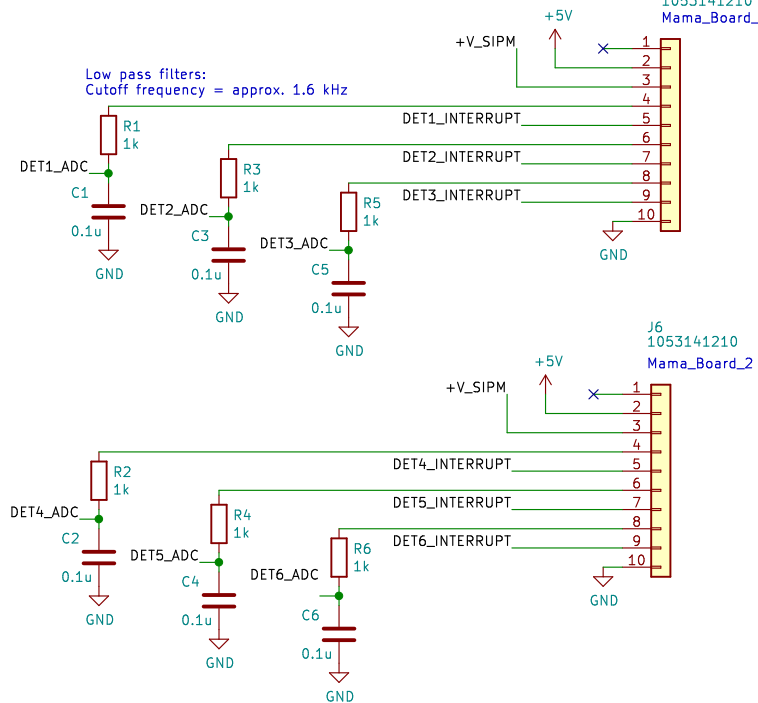
Not all pins support peripheral output,
which is required for MOSI, SCK,
and CANTX. RP20 and RP35-43 are
the ones that support peripheral output

Sheet: MCU and CAN controllers



File: pic_and_can_controllers.sch

Low pass filters:
Cutoff frequency = approx. 1.6 kHz



Sheet: /
File: payload2020_base_board.sch

Title:

Size: A4

Date:

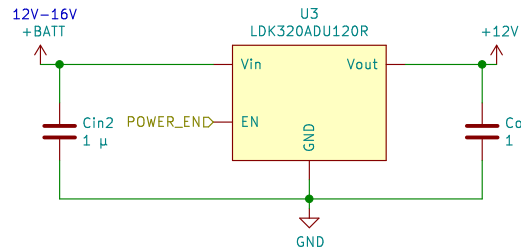
KiCad E.D.A. kicad (5.1.9)-1

Rev:

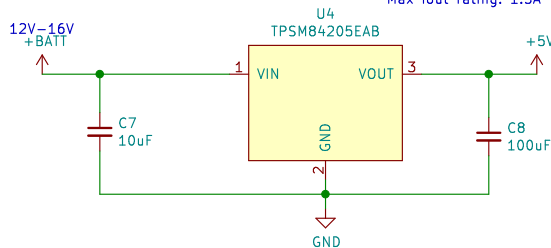
Id: 1/4



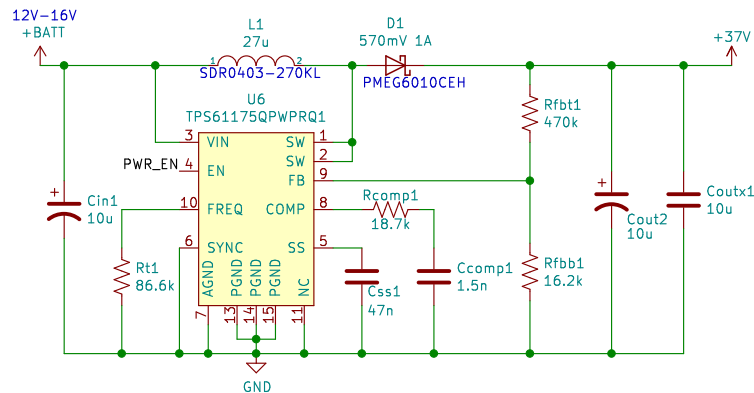
1uF capacitors as per datasheet directly (no calculations)
LDK320ADU120R is a 12V fixed-voltage regulator.
Max lout rating: 0.2A
DNP – Do not place



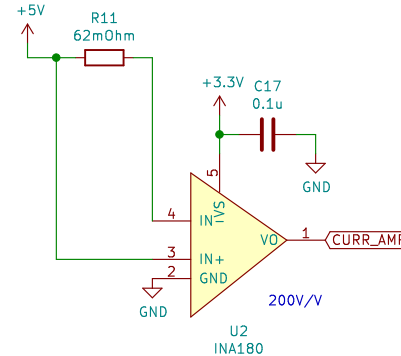
10uF and 100uF capacitors as per datasheet directly (no calculations)
TPSM84205 is a 5V fixed-voltage regulator.
Max lout rating: 1.5A



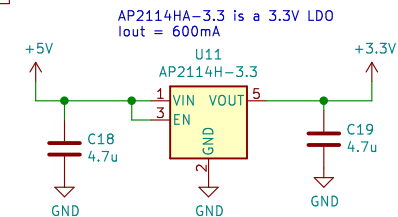
TPS61175 is a boost converter.
Max lout rating: 3A
Values are taken from WEBENCH power designer
<https://webench.ti.com/appinfo/webench/scripts/SDP.cgi?ID=72ECE7EF0AA4EE07>
PDF version:
<https://drive.google.com/file/d/1ktwurg3BjmdXpc3J00zTu8lIix18m34/view?usp=sharing>



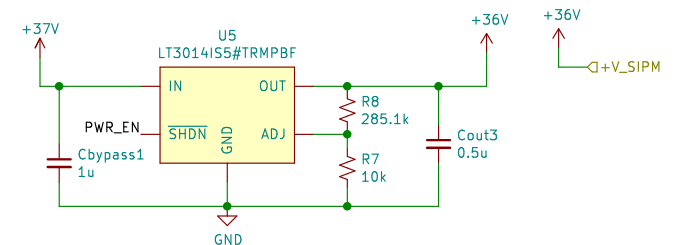
$62mR * I * 200v/v = 3.3V$
 $I_{max} = 266mA$



Logger Board Power Supplies



LT3014IS5#TRMPBF is a low dropout regulator.
 $V_o = 1.22(1+R8/R7)$
 $I_{out} = 0.02A$



Sheet: /battery_management/
File: battery_management.sch

Title:

Size: A4

Date:

KiCad E.D.A. kicad (5.1.9)-1

Rev:

Id: 3/4

