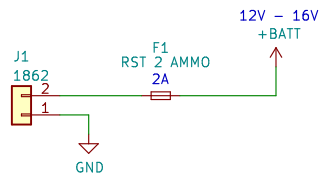


Battery Connector

4 LiPO Cells
in series

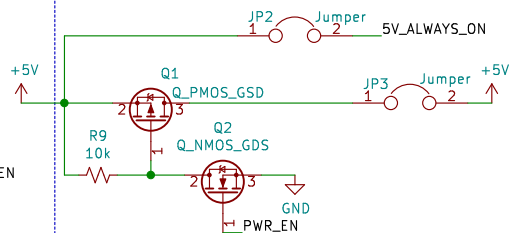


Sheet: battery_management

POWER_EN

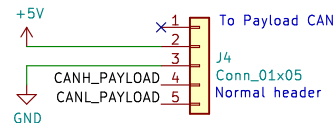
File: battery_management.sch

System Sleep Control



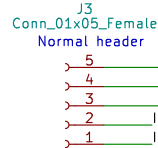
PWR_EN
R_LED1
10k

D2 LED
Debugging LED

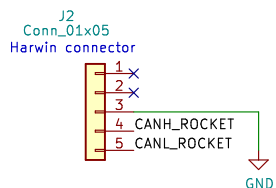


To Payload CAN
J4
Conn_01x05
Normal header

Connector for programming



To Rocket CAN bus



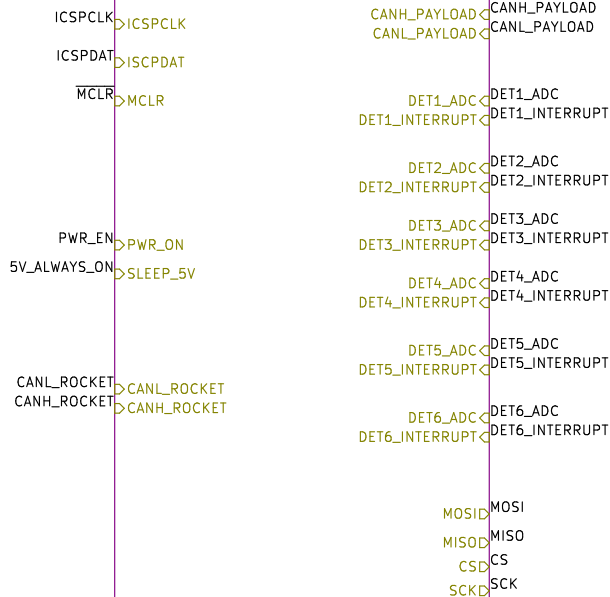
Sheet: Logger board

MOSI qMOSI
MISO qMISO
CS qCS
SCK qSCK

File: SDcard.sch

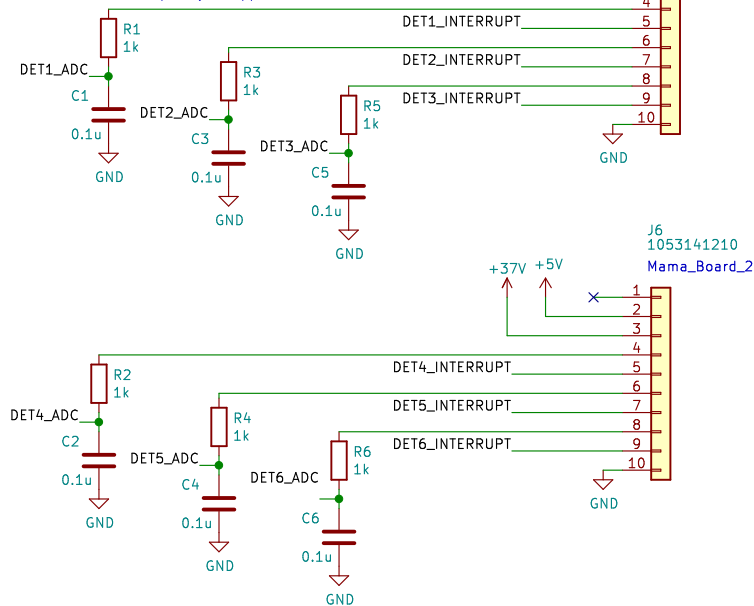
Not all pins support peripheral output,
which is required for MOSI, SCK,
and CANTX. RP20 and RP35-43 are
the ones that support peripheral output

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:

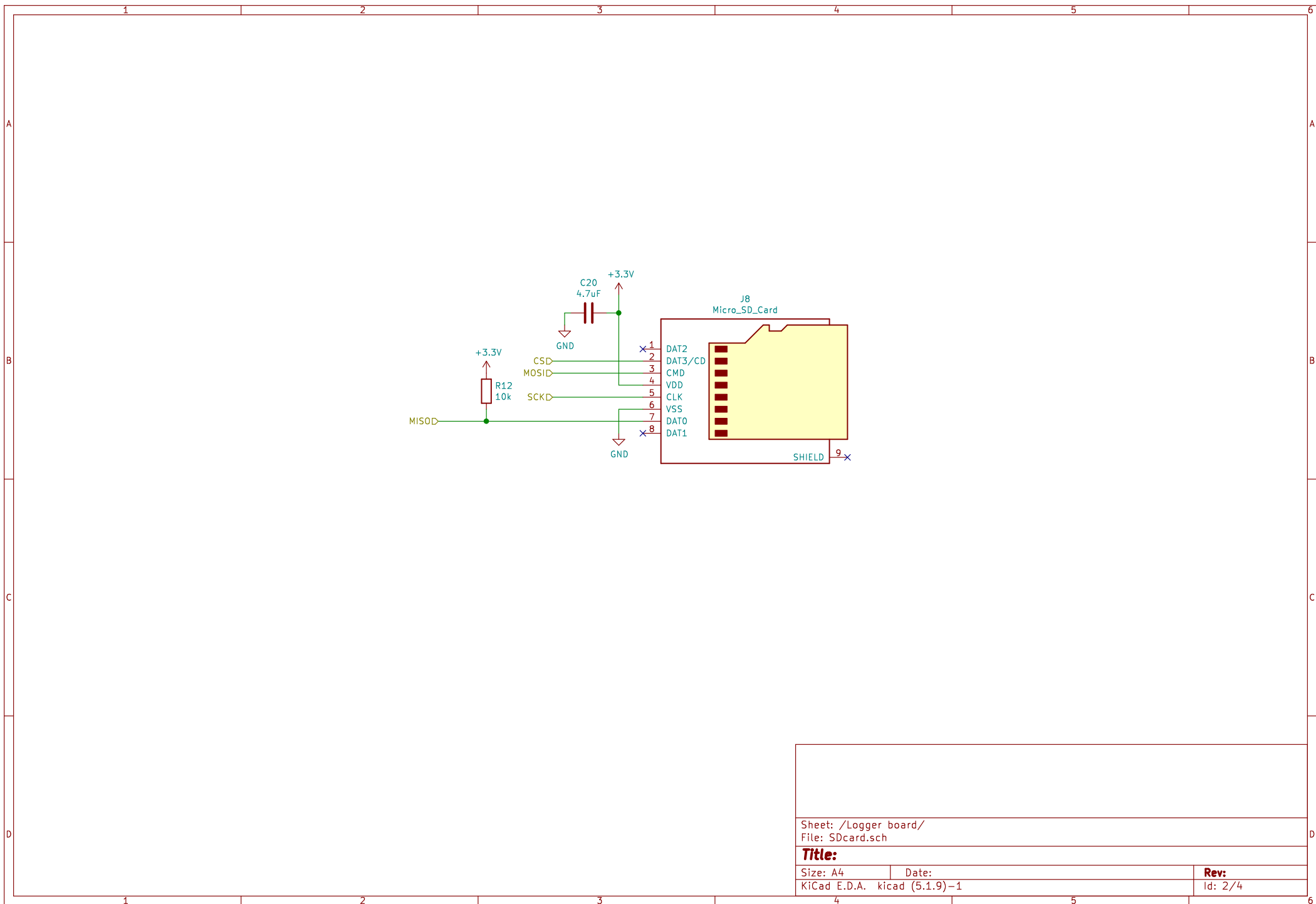
Size: A4

Date:

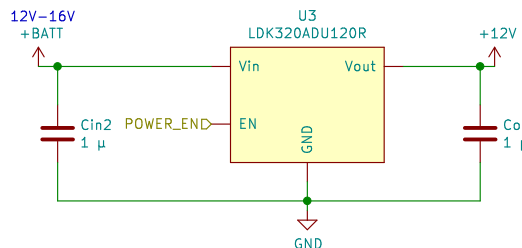
KiCad E.D.A. kicad (5.1.9)-1

Rev:

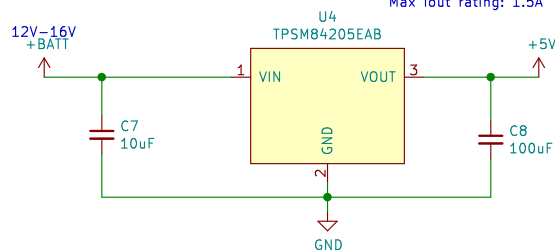
Id: 1/4



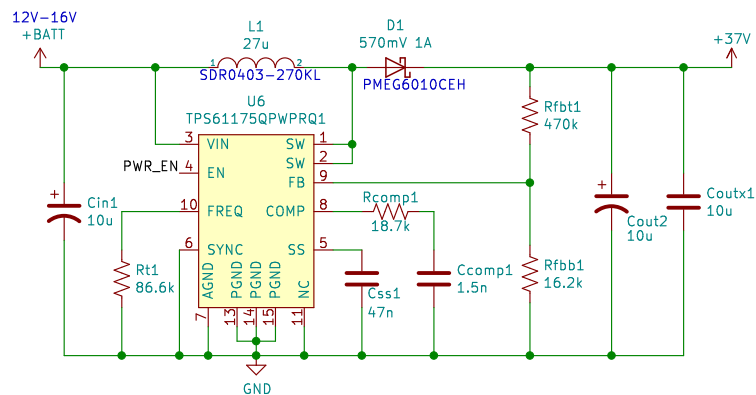
1uF capacitors as per datasheet directly (no calculations)
 LDK320ADU120R is a 12V fixed-voltage regulator.
 Max lout rating: 0.2A
 DNP – Do not place



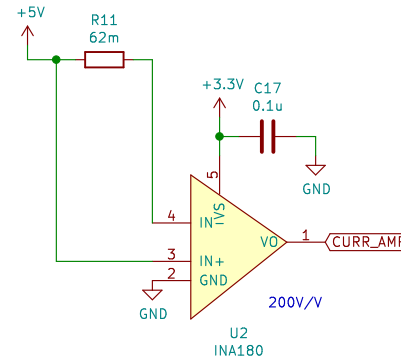
10uF and 100uF capacitors as per datasheet directly (no calculations)
 TPSM84205 is a 5V fixed-voltage regulator.
 Max lout rating: 1.5A



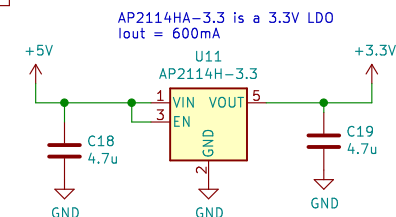
TPS61175 is a boost converter.
 Max lout rating: 3A
 Values are taken from WEBENCH power designer
<https://webench.ti.com/appinfo/webench/scripts/SDP.cgi?ID=72ECE7EF0AA4EE07>
 PDF version:
<https://drive.google.com/file/d/1ktwurg3BjmDxpc3J00zTu8lIix18m34/view?usp=sharing>



$62\text{mR} \cdot I \cdot 200\text{V/V} = 3.3\text{V}$
 $I_{\text{max}} = 266\text{mA}$



Logger Board Power Supplies



Sheet: /battery_management/
 File: battery_management.sch

Title:

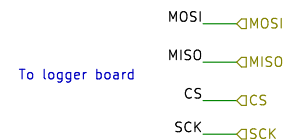
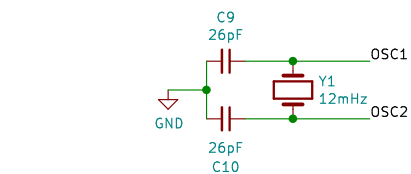
Size: A4

Date:

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

Rev:

Id: 3/4



Rev:
Id: 4/4