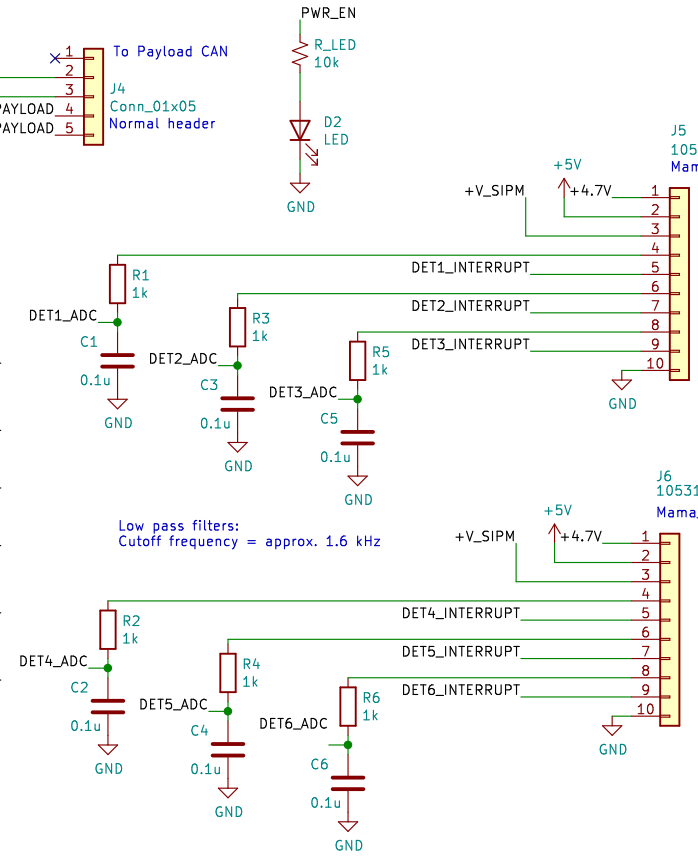
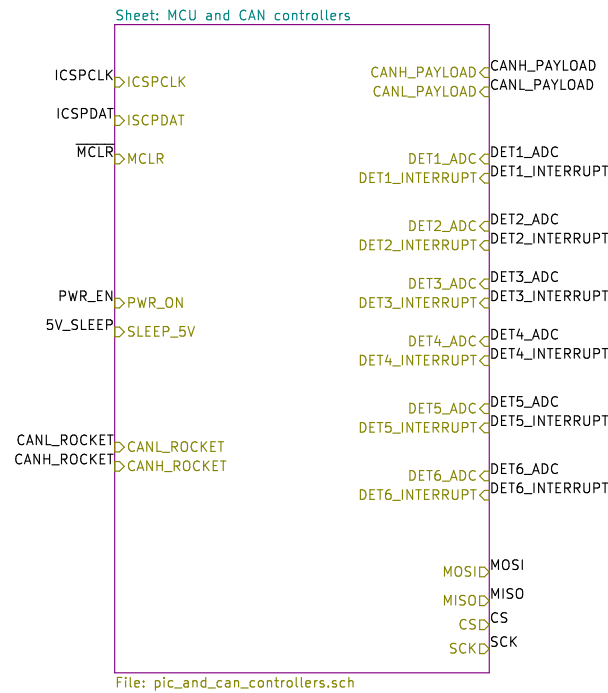
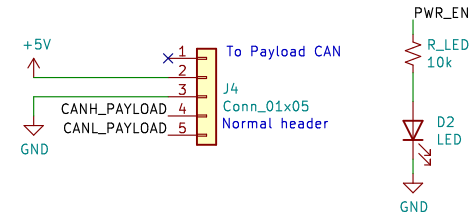
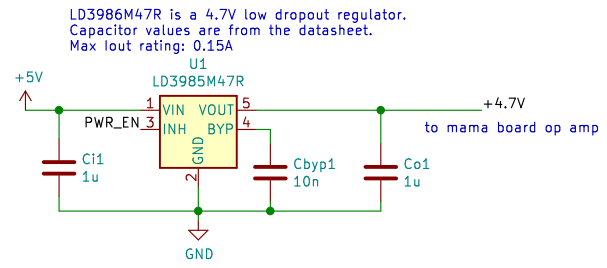
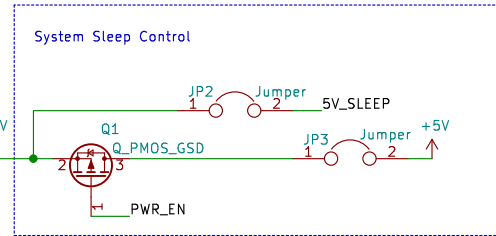
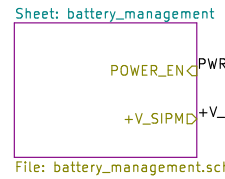


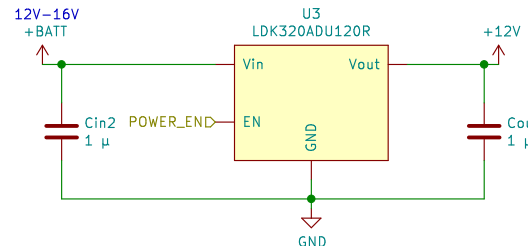
Not all pins support peripheral output, which is required for MOSI, SCK, and CANTX. RP20 and RP35-43 are the ones that support peripheral output.



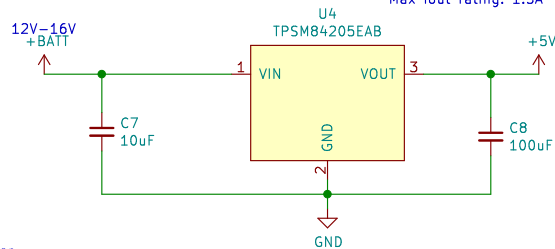
Sheet: /		
File: payload2020_base_board.sch		
<b>Title:</b>		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad (5.1.9)-1		Id: 1/4



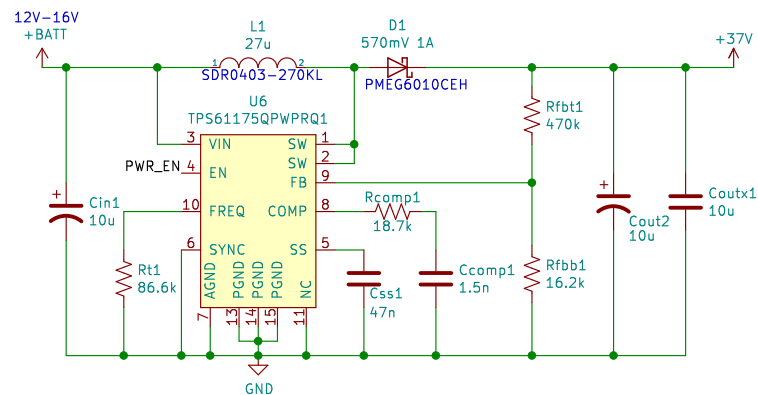
1uF capacitors as per datasheet directly (no calculations)  
 LDK320ADU120R is a 12V fixed-voltage regulator.  
 Max lout rating: 0.2A  
 DNP – Do not place



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

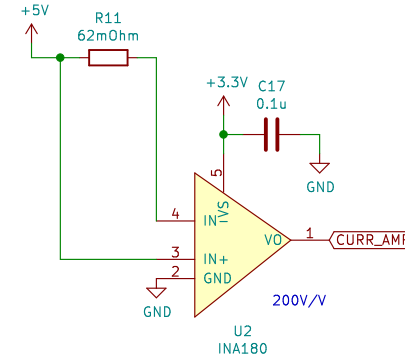


TPS61175 is a boost converter.  
 Max lout rating: 3A  
 Values are taken from WEBENCH power designer  
<https://webench.ti.com/appinfo/webench/scripts/SDP.cgi?ID=72ECE7EF0AA4EE07>  
 PDF version:  
<https://drive.google.com/file/d/1ktwurg3BjmdXpc3J00zTu8lIix18m34/view?usp=sharing>



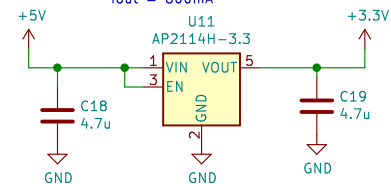
$$62\text{mR} * I * 200\text{V/V} = 3.3\text{V}$$

$$I_{\text{max}} = 266\text{mA}$$

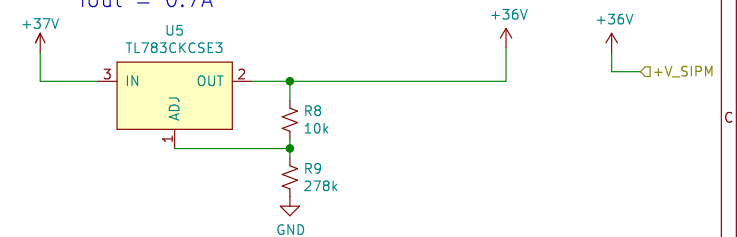


Logger Board Power Supplies

AP2114HA-3.3 is a 3.3V LDO  
 lout = 600mA



TL783CKCSE3 is a low dropout regulator.  
 $V_o = 1.25(1+R2/R1)$   
 lout = 0.7A



Sheet: /battery\_management/  
 File: battery\_management.sch

**Title:**

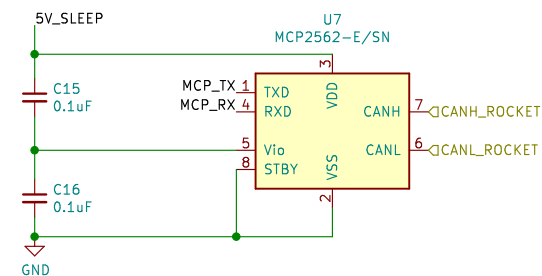
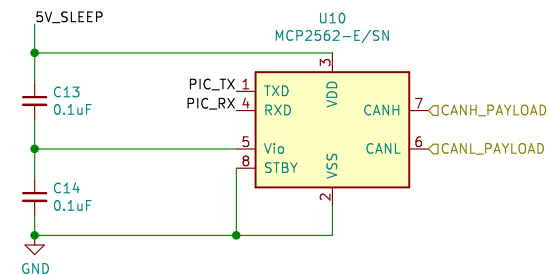
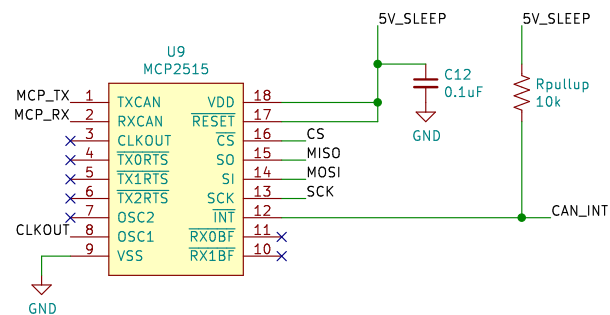
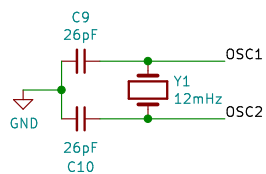
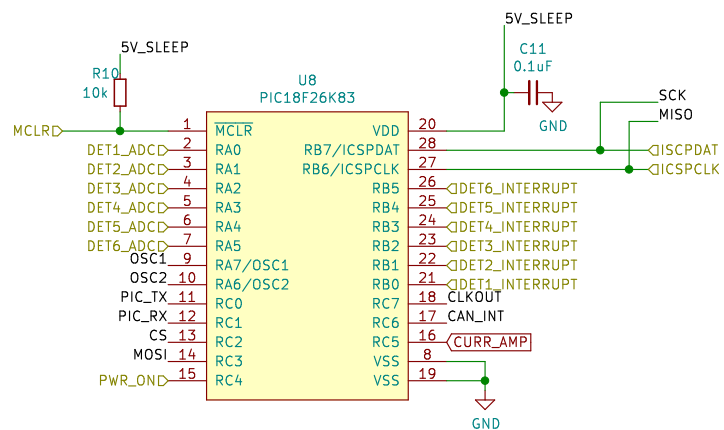
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**Rev:**

Id: 3/4



MOSI — MOSI

MISO — MISO

CS — CS

SCK — SCK

To logger board

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File: pic\_and\_can\_controllers.sch

**Title:**

Size: A4

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