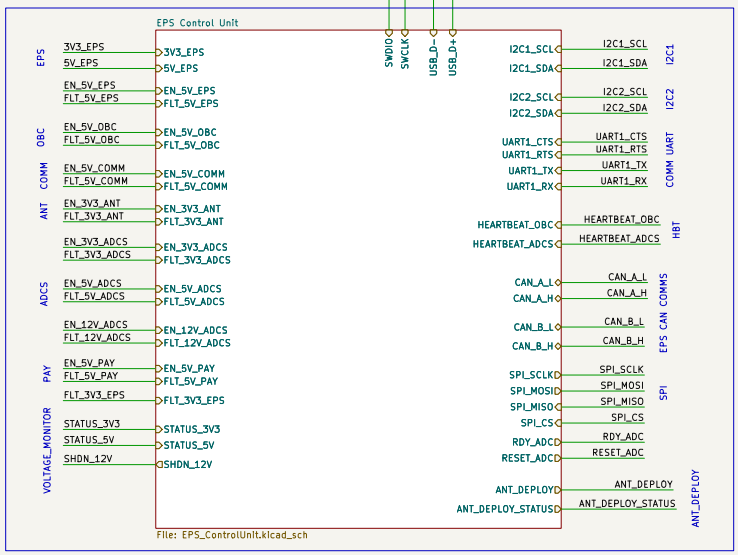
EPS POWER DISTRIBUTION BOARD

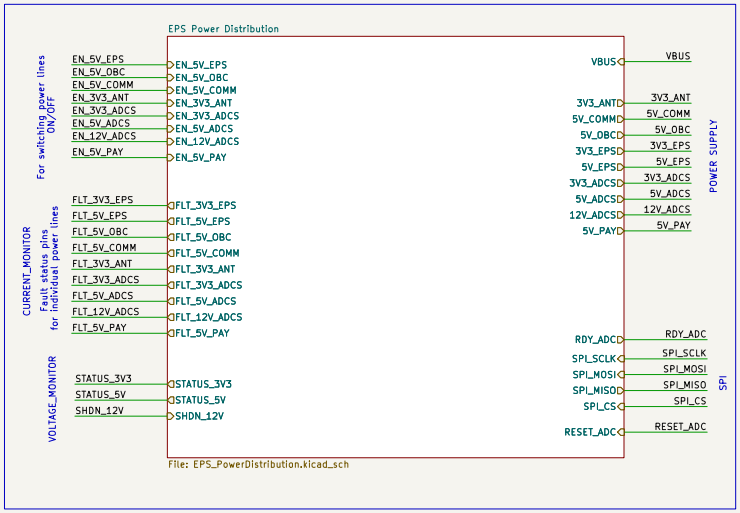
AMEYA MARAKARKANDY HARSHIL SINGLA

SEPT 2024

QAed BY:

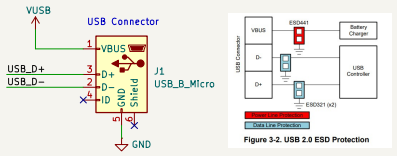
EPS CONTROL UNIT

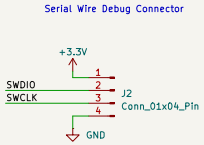




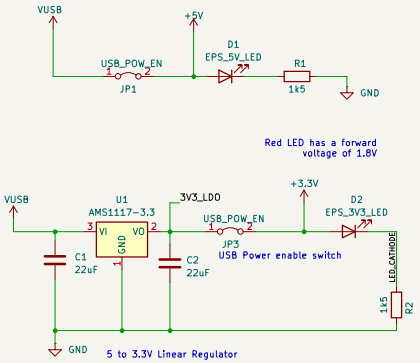
EPS POWER DISTRIBUTION AND REGULATION UNIT

EXTERNAL CONNECTIONS

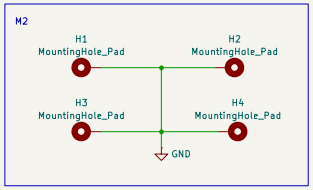




ALTERNATIVE POWER SUPPLY (USB)

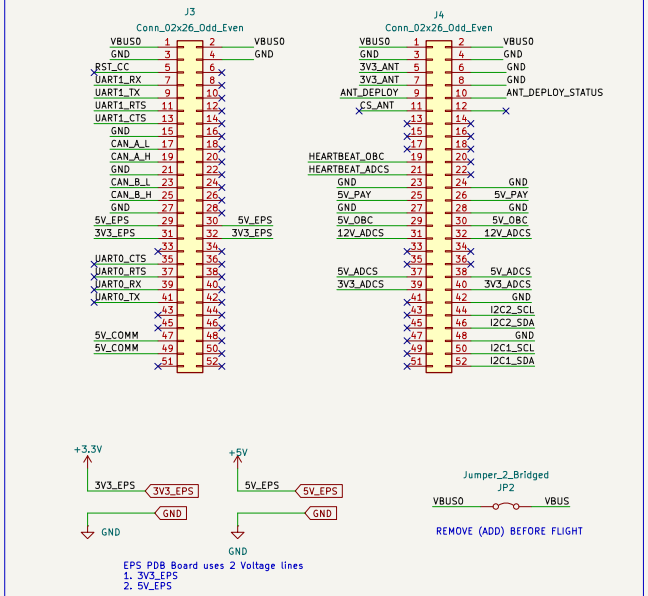


MOUNTING HOLES



CUBESAT PC104 BUS

Link to Electrical Pin Definitions Sheet



ALL PASSIVES ARE 0603 UNLESS SPECIFIED

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Sheet: /
File: EPS_PDB.kicad_sch

Title: EPS Power Distribution Board

Size: A3 | Date: 2024-09-12 | Rev:
KiCad E.D.A. 8.0.5 | Id: 1/3

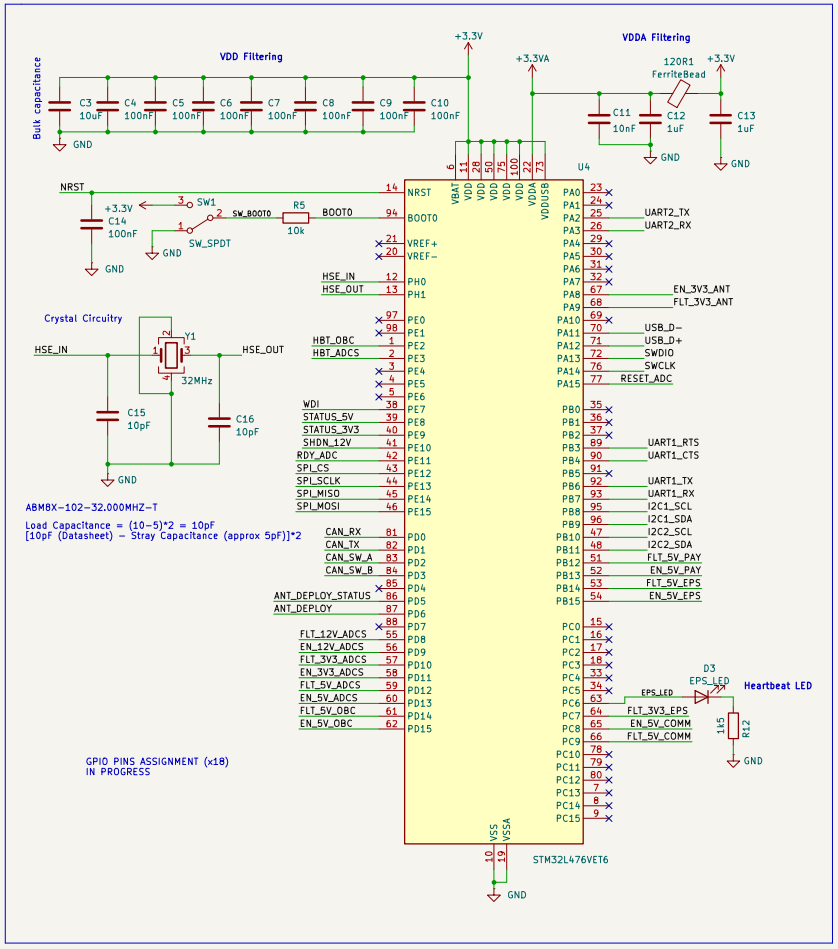
EPS CONTROL UNIT

AMEYA MARAKARKANDY

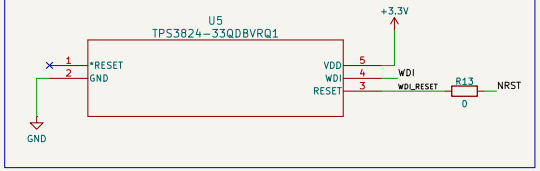
RESISTOR SIZING

MICROCONTROLLER CIRCUIT

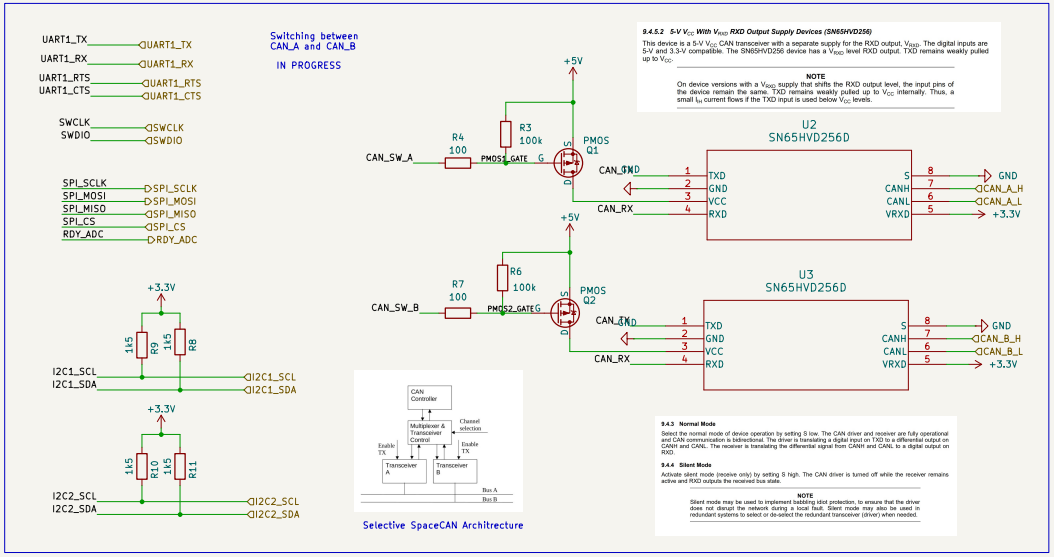
NOTE:
VBAT should be tied to
external battery or RTC
for now have connected with VDD



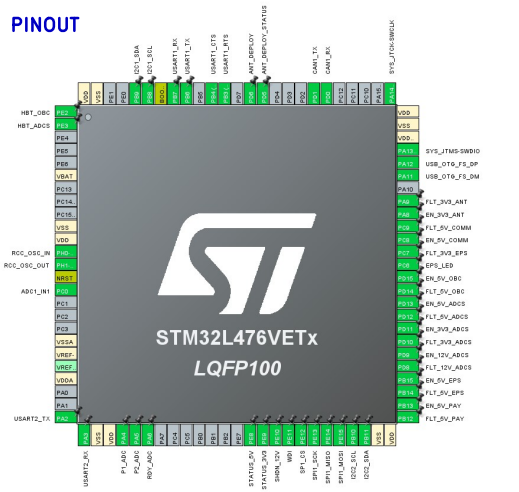
WATCHDOG TIMER



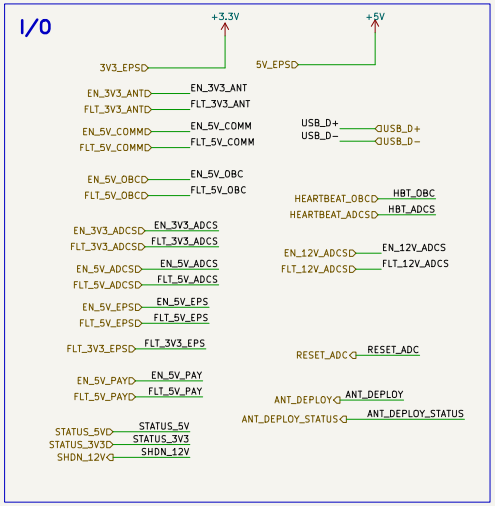
COMMUNICATION INTERFACES



PINOUT



I/O



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Sheet: /EPS Control Unit/
File: EPS_ControlUnit.kicad_sch

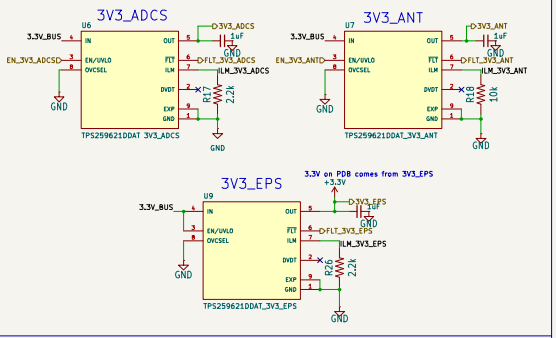
Title: EPS Control Unit

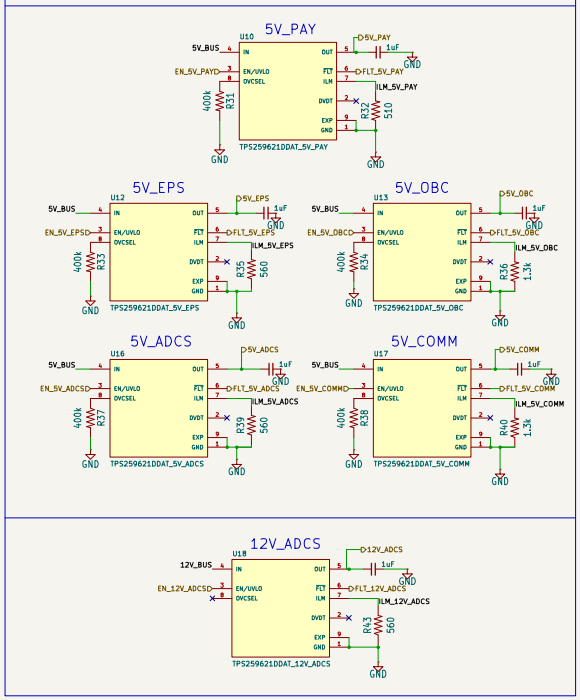
Size: A3	Date: 2024-09-08	Rev: v1.0
KiCad E.D.A. 8.0.5		Id: 2/3

EPS DISTRIBUTION & REGULATION UNIT

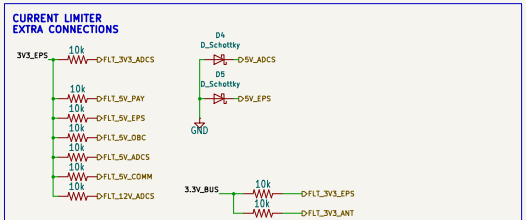
HARSHIL SINGLA

CURRENT LIMITER

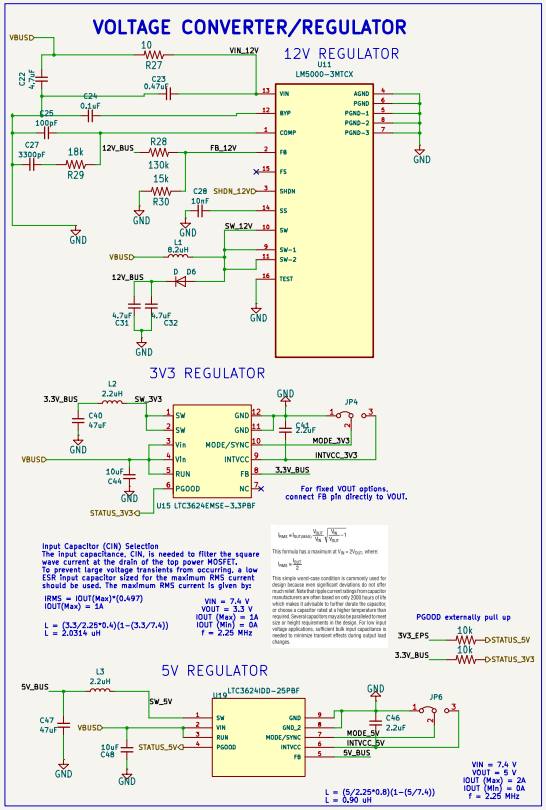




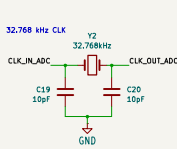
CURRENT LIMITER EXTRA CONNECTIONS



VOLTAGE CONVERTER/REGULATOR



CLOCK



REFERENCE VOLTAGE

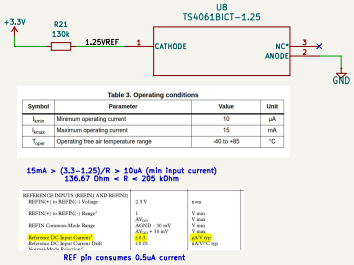


Table 3. Operating conditions

Symbol	Parameter	Value	Unit
I_{KMIN}	Minimum operating current	10	µA
I_{KMAX}	Maximum operating current	15	mA
T_{oper}	Operating free air temperature range	-40 to +85	°C

ADC (TELEMETRY)

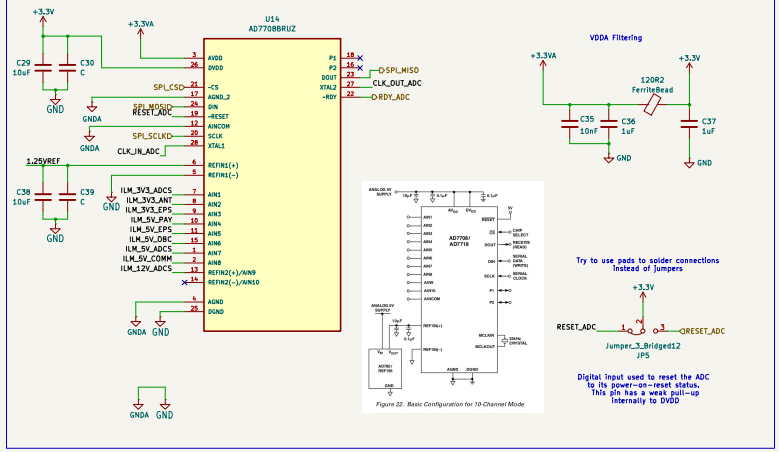


Figure 22. Basic Configuration for 10-Channel Mode

Author: Harshil Singla
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Sheet: /EPS Power Distribution/
File: EPS_PowerDistribution.kicad_sch

Title: EPS Distribution and Regulation Unit

Size: User	Date: 2024-09-05	Rev:
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