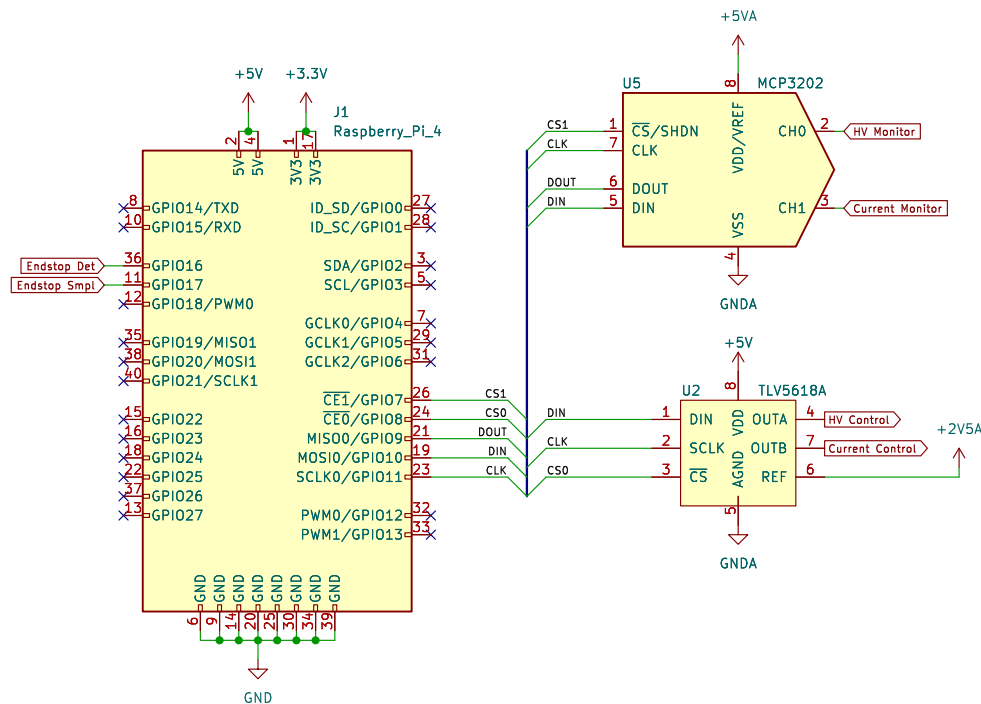


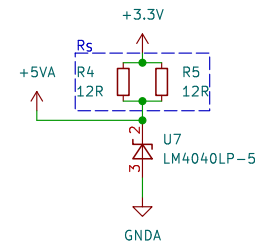
X-MAGIX Peripheral Circuitry

RPI 4 GPIO

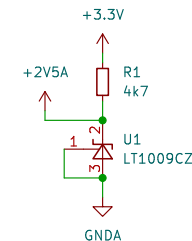


ADC 5V Ref

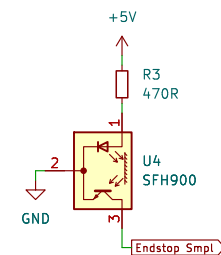
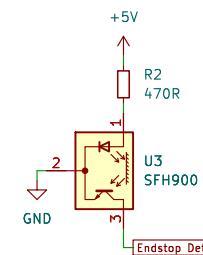
$$R_s = (V_s - V_R) / (I_L + I_q) \approx 6R$$



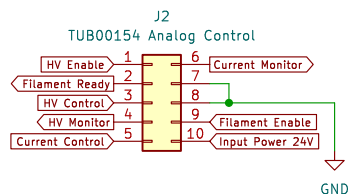
DAC 2.5V Ref



Endstops



X-Ray Source I/O



Pin	Function	I/O Value
1	HV Enable	0.0 or +5.0 Volts (Input Z = 10k)
2	Filament Ready	0.0 or +5.0 Volts (Output Z = 1k)
3	HV Control	2.667 to +4.667 Volts (Input Z = 100k)
4	HV Monitor	2.667 to +4.667 Volts (Output Z = 100k)
5	Current Control	0.04 to +1.2 Volts (Input Z = 100k)
6	Current Monitor	0.0 to +1.2 Volts (Output Z = 100k)
7	Filament Enable	0.0 or +5.0 Volts (Input Z = 10k)
8	Input Power	+24 Volts DC ± 5%
9	GND	
10	GND	

GNDing



!!WIP!!

by Dennis Hunter

Hochschule RheinMain

Sheet: /

File: raspberry.kicad_sch

Title: X-MAGIX Peripheral Circuitry

Size: A4

Date: 2023-09-06

KiCad E.D.A. kicad 7.0.6

Rev: 0

Id: 1/1