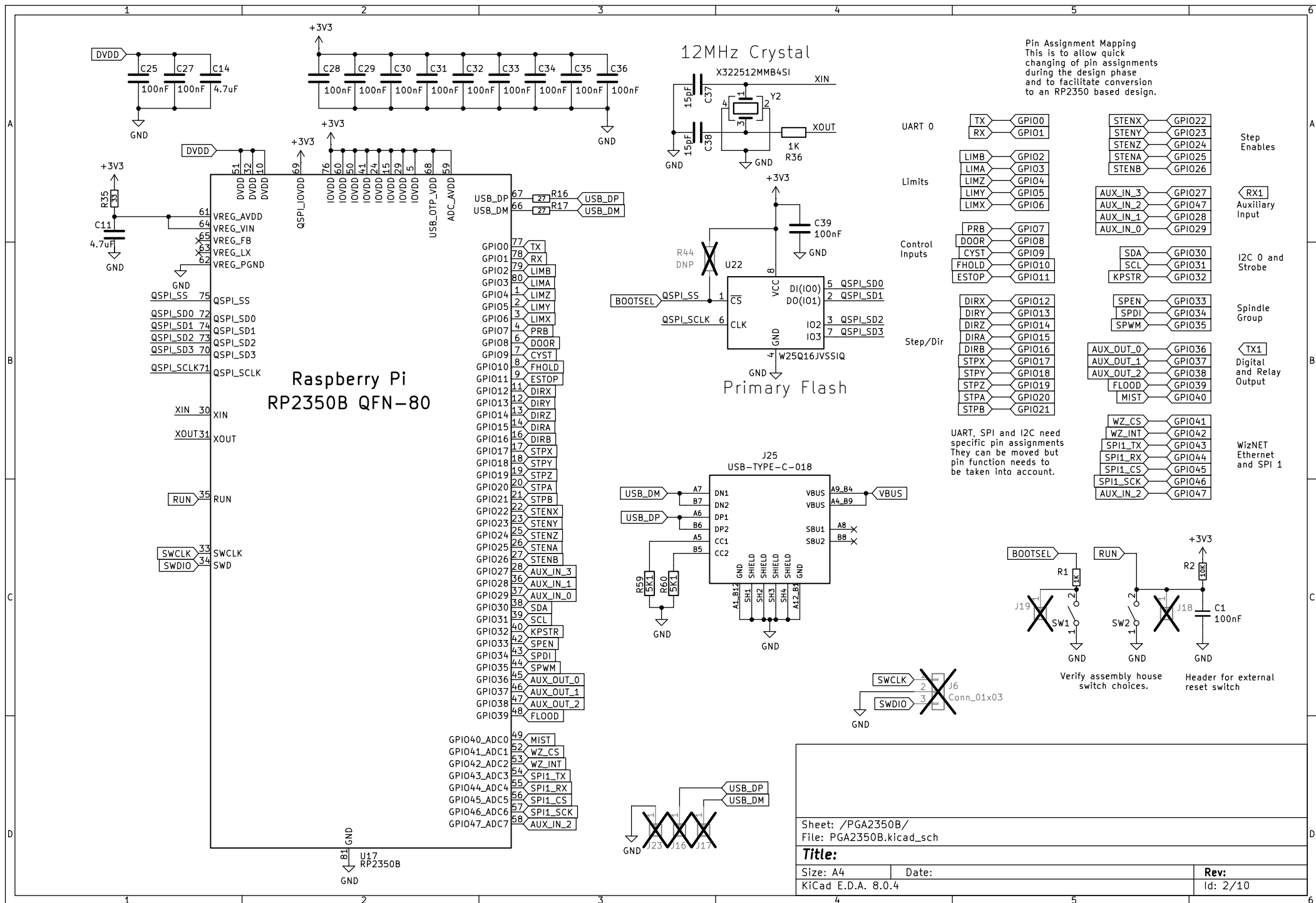
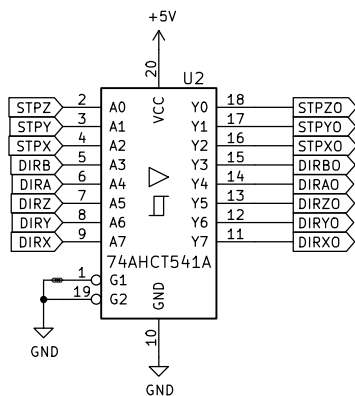
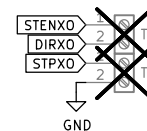
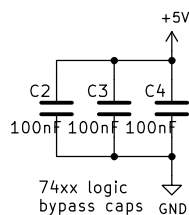
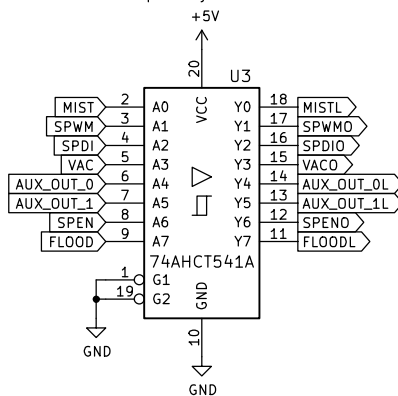
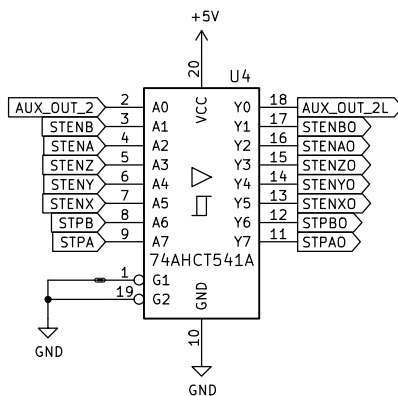


	1	2	3	4	5	6
A	<div>PGA2350B</div> <div></div> <div>File: PGA2350B.kicad_sch Stepper Output</div> <div></div> <div>File: StepperOutput.kicad_sch Spindle</div> <div></div> <div>File: Spindle.kicad_sch DigitalIO and Relays</div> <div></div> <div>File: DigitalIO and Relays.kicad_sch Servo_error</div> <div></div> <div>File: servo_error.kicad_sch</div>	<div>Ethernet</div> <div></div> <div>File: Ethernet.kicad_sch Misc IO</div> <div></div> <div>File: MiscIO.kicad_sch Limit and Control inputs</div> <div></div> <div>File: LimitandControlInputs.kicad_sch Power</div> <div></div> <div>File: power.kicad_sch</div>				
B						
C						
D						<div></div> <div>Sheet: / File: PGA2350.kicad_sch</div> <div><div>Title:</div><div>Size: A4</div><div>Date:</div><div>KiCad E.D.A. 8.0.4</div></div> <div><div>Rev:</div><div>Id: 1/10</div></div>
	1	2	3	4	5	6

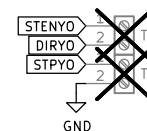




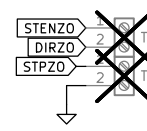
Digital output section. 3.3V inputs, 5V outputs. Use of AHCT logic allows this. Drive capability of 8mA.



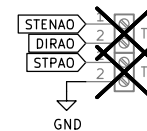
X Axis driver interface.



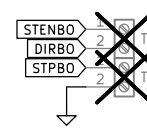
Y Axis driver interface.



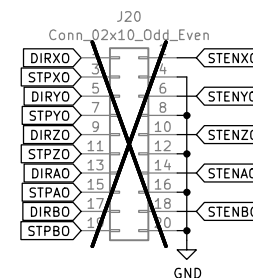
Z Axis driver interface.



A Axis driver interface.



B Axis driver interface.



Sheet: /Stepper Output/
File: StepperOutput.kicad_sch

Title:

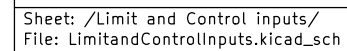
Size: A4

Date:

KiCad E.D.A. 8.0.4

Rev:

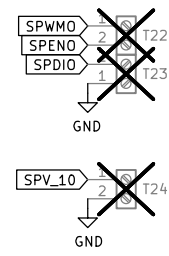
Id: 5/10



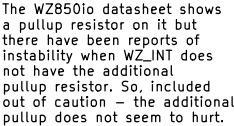
Size: A4	
KiCad E.D.A. 8.0.4	

4

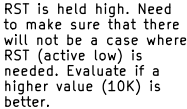
Id: 6/10

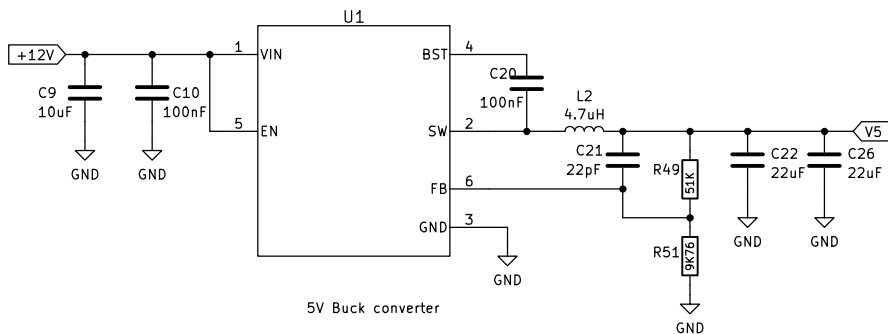


V1.51 addition:
Use second channel in unity gain mode to drive an LED to show spindle activity. Useful for debugging spindle problems.

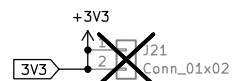


Yes, it is confusing – just make sure the module has a W5500 on it.

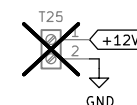
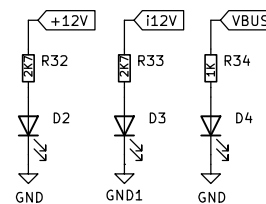
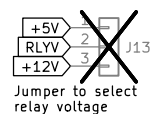
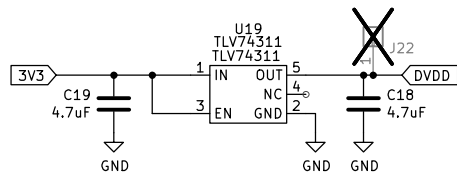
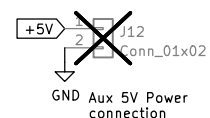
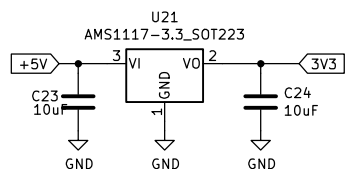




5V bypass to allow USB VBUS +5V for testing and current monitoring. Remove for production PCB? Convert to solder jumper?



3V3 bypass to allow external 3.3V for testing. Also, allows for current draw monitoring. Remove for production PCB and connect to +3V3.



Upper board 12V Input

Sheet: /Power/
File: power.kicad_sch

Title:

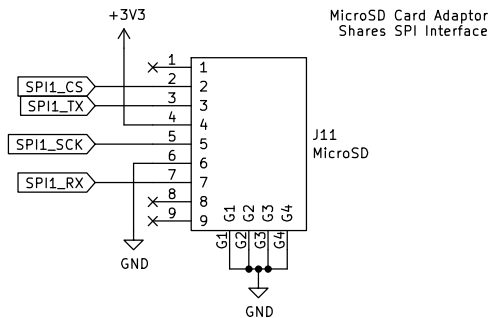
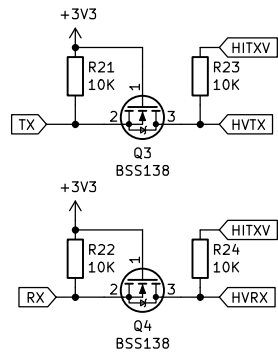
Size: A4

Date:

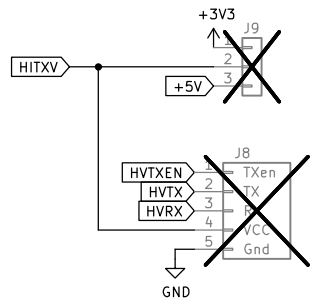
KiCad E.D.A. 8.0.4

Rev:

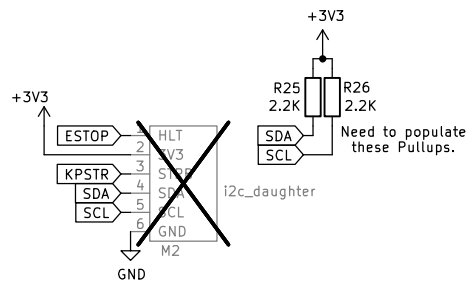
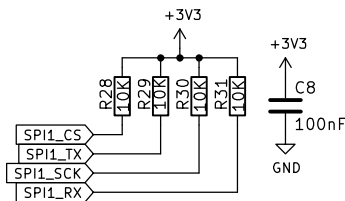
Id: 9/10



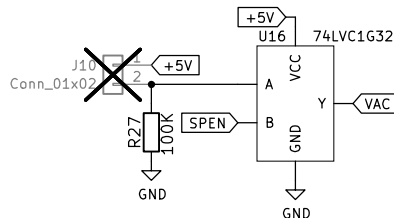
✗ H1
✗ H2
✗ H3
✗ H4



UART 0 support. Adds standard mounting holes.



I2C Daughter card header. Adds standard mounting holes.



Independent Control for Dust Extractor. A switch attached to the pin header can turn on the DE separately from the spindle.

Sheet: /Misc IO/
File: MiscIO.kicad_sch

Title:

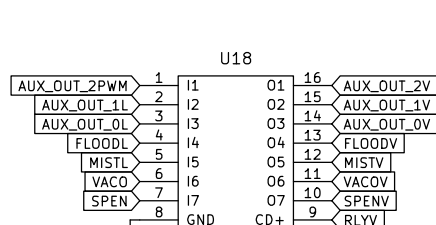
Size: A4

Date:

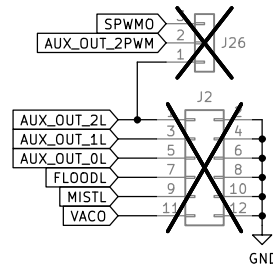
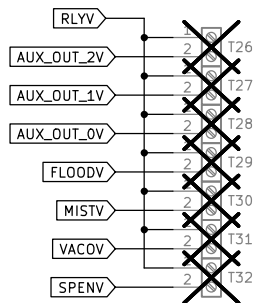
Rev:

KiCad E.D.A. 8.0.4

Id: 9/10

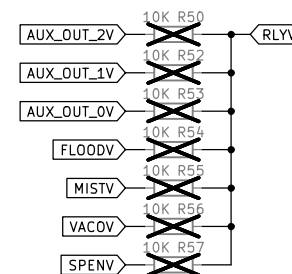


Relay Driver. Currently using ULN2003. Looking at using TBD620003 MOSFET Driver.

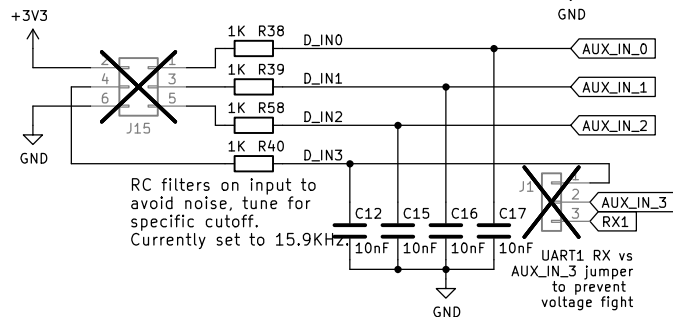
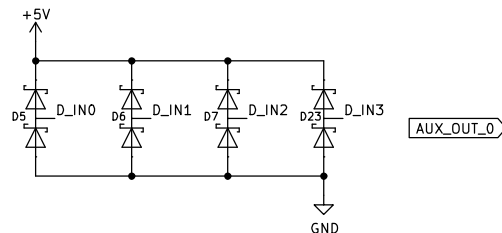


Jumper for Aux_Out_2 to be selected between spindle PWM and digital output. Allows driving 12V PWM loads (like lasers).

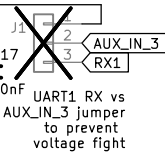
All these outputs have HC level drive capability. limited to 6mA.



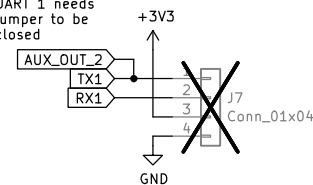
Digital input group. 3 inputs are 5V tolerant, diode protected with schmitt triggers. RC Low Pass noise filters.



RC filters on input to avoid noise, tune for specific cutoff. Currently set to 15.9KHz.



Support for UART 1 needs jumper to be closed



Sheet: /DigitalIO and Relays/
File: DigitalIO and Relays.kicad_sch

Title:

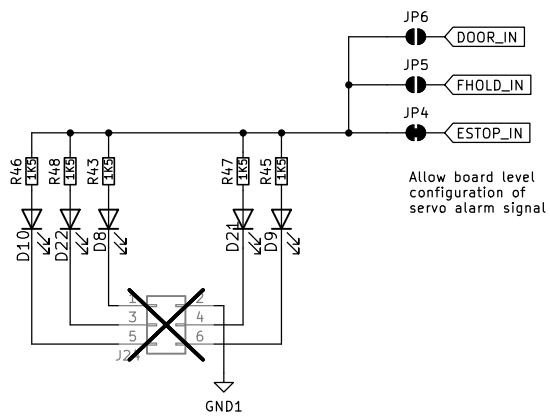
Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.4

Id: 10/10



Sheet: /Servo_error/
File: servo_error.kicad_sch

Title:

Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.4

Id: 10/10