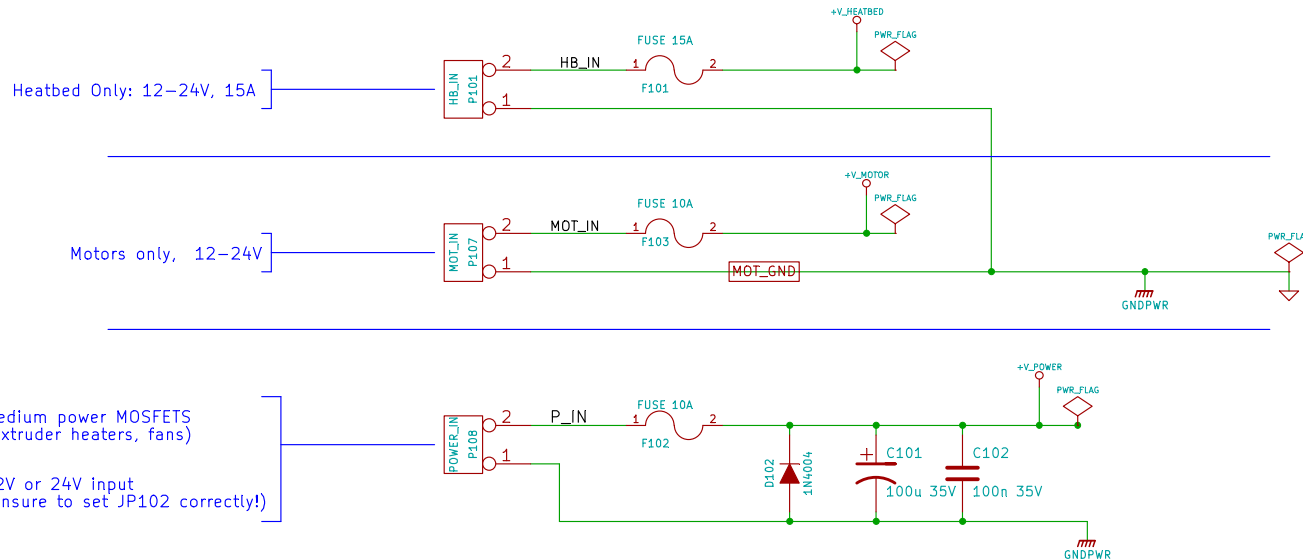
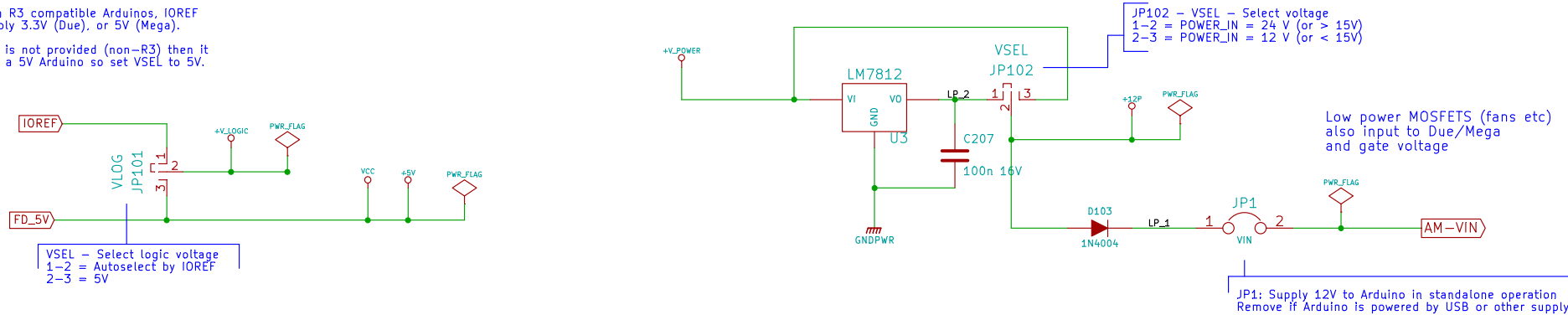


## Power



Note: On R3 compatible Arduinos, IOREF will supply 3.3V (Due), or 5V (Mega).

If IOREF is not provided (non-R3) then it must be a 5V Arduino so set VSEL to 5V.



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Derived from RAMPS 1.4 [reprap.org/wiki/RAMPS1.4](http://reprap.org/wiki/RAMPS1.4)

File: Power.sch

Sheet: /Power/

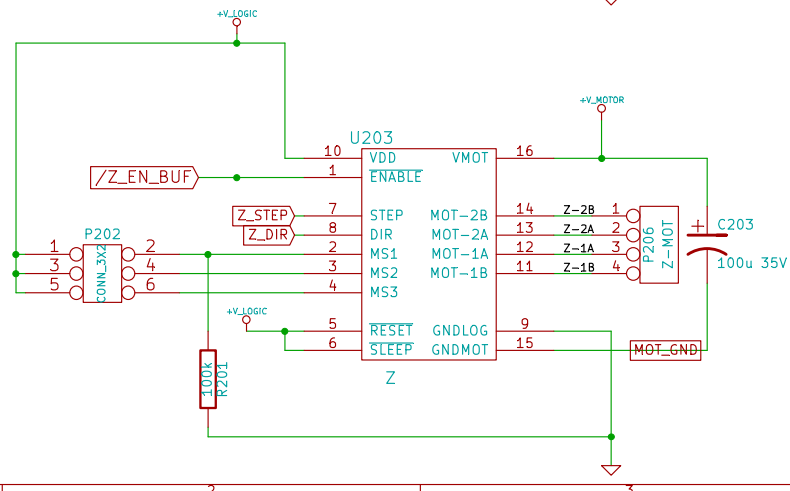
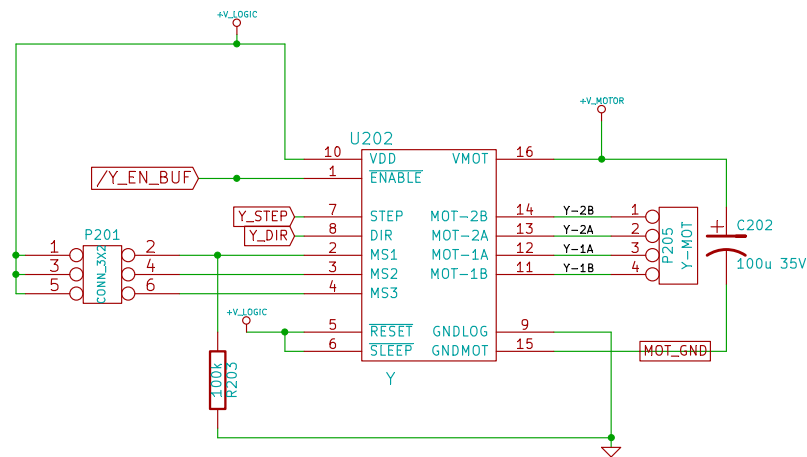
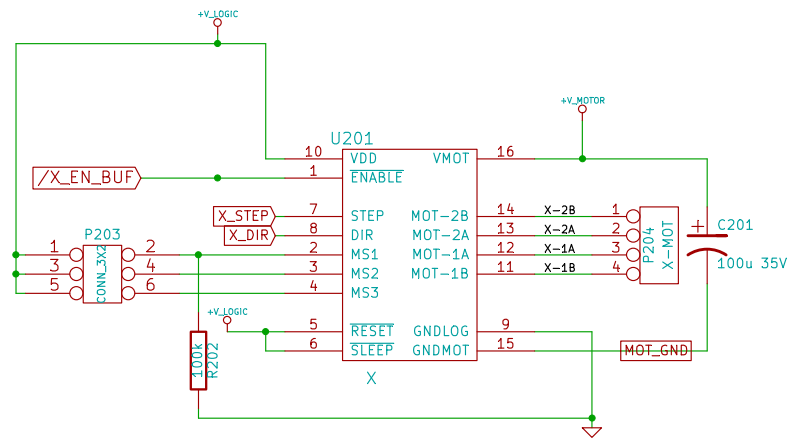
Title: RAMPS-FD (RAMPS for Arduino Due)

Size: A4 Date: 1 jan 2014

Rev: v1 Issue B

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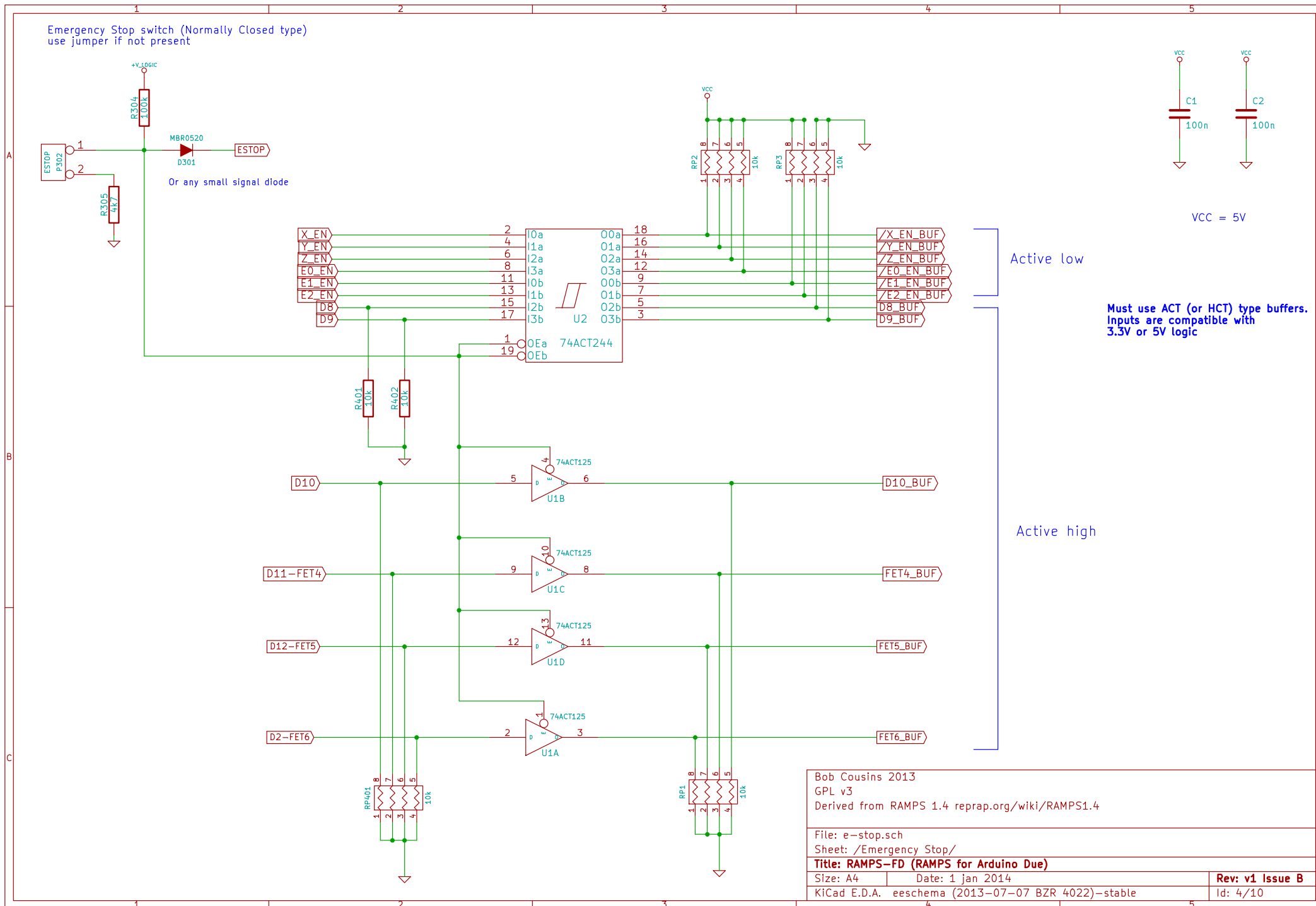
Id: 2/10

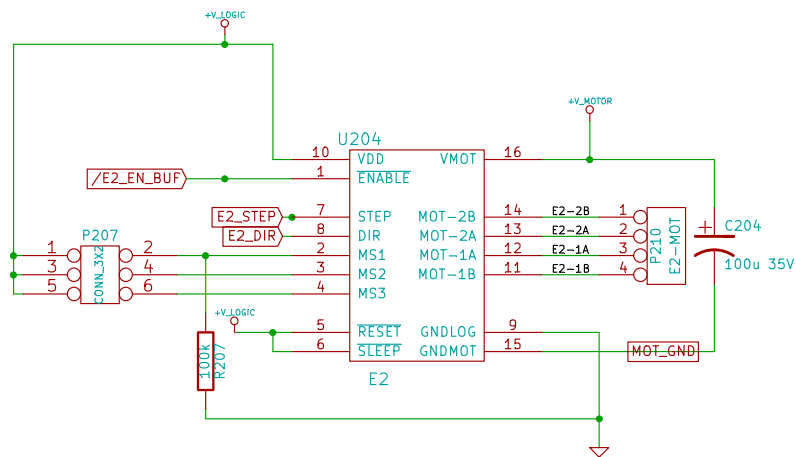
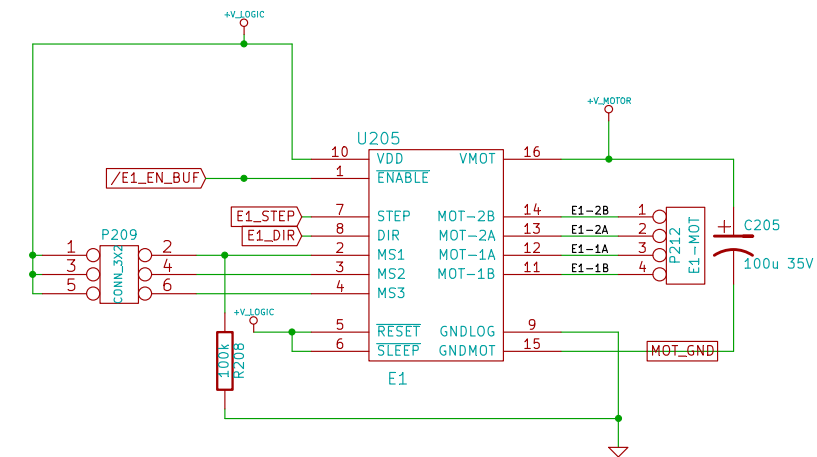
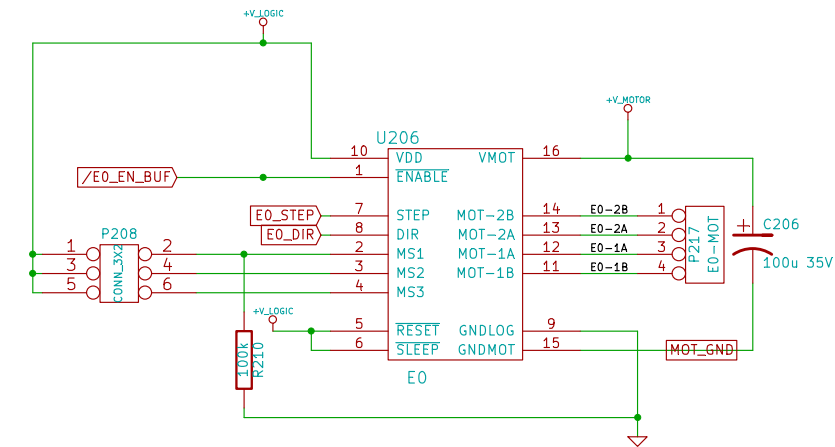


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 Derived from RAMPS 1.4 [reprap.org/wiki/RAMPS1.4](http://reprap.org/wiki/RAMPS1.4)

File: steppers.sch  
 Sheet: /Stepper Drivers/  
**Title: RAMPS-FD (RAMPS for Arduino Due)**

Size: A4	Date: 1 jan 2014	Rev: v1 Issue B
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 Derived from RAMPS 1.4 [reprap.org/wiki/RAMPS1.4](http://reprap.org/wiki/RAMPS1.4)

File: steppers2.sch  
 Sheet: /Stepper Drivers 2/  
**Title: RAMPS-FD (RAMPS for Arduino Due)**

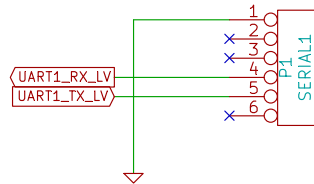
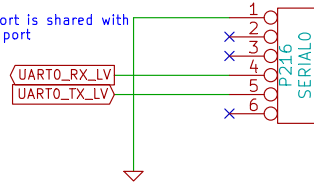
Size: A4	Date: 1 jan 2014	Rev: v1 Issue B
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NB: On Arduino Due: IOs on this page are not 5V tolerant. Do not exceed 3.3V.

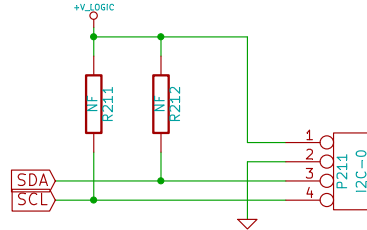
#### Serial

Note: this serial port is shared with USB programming port

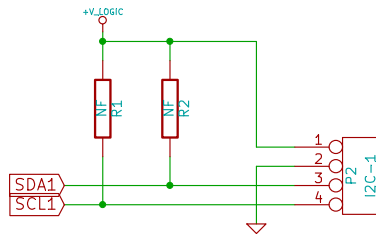
UART-TTL



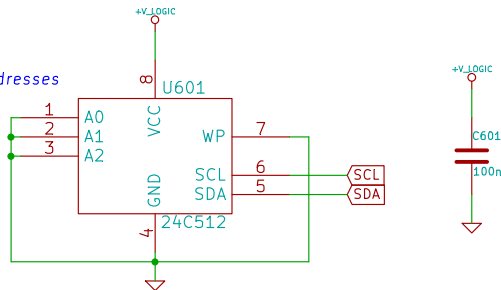
#### I2C



1k5 Pull ups on Due  
Must not have external pullups to 5V if IOREF = 3.3V



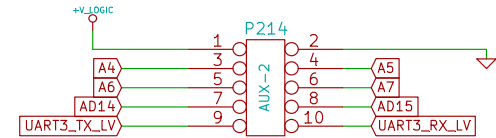
Might want to allow other addresses



EEPROM

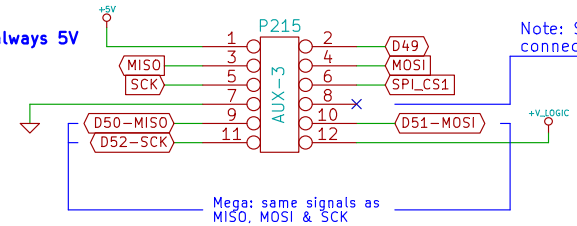
#### Aux connectors

##### Aux2



##### Aux3 - SPI

NB This pin is always 5V

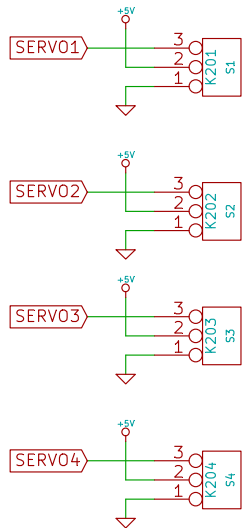
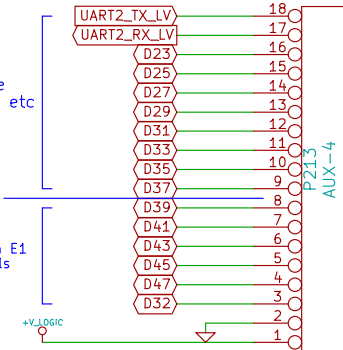


Mega: same signals as MISO, MOSI & SCK

##### Aux4 - general IO

These are free for LCD panel etc

These are shared with E1 and E2 stepper signals



Servos

Need buffered outputs?

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Derived from RAMPS 1.4 [reprap.org/wiki/RAMPS1.4](http://reprap.org/wiki/RAMPS1.4)

File: con\_misc.sch  
Sheet: /Misc Connectors/  
**Title: RAMPS-FD (RAMPS for Arduino Due)**

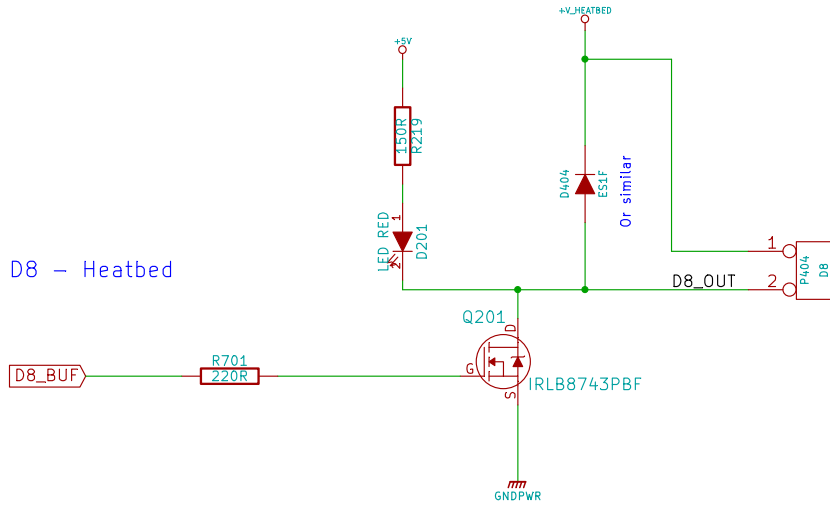
Size: A4 Date: 1 jan 2014  
KiCad E.D.A. eschema (2013-07-07 BZR 4022)-stable

Rev: v1 Issue B  
Id: 6/10

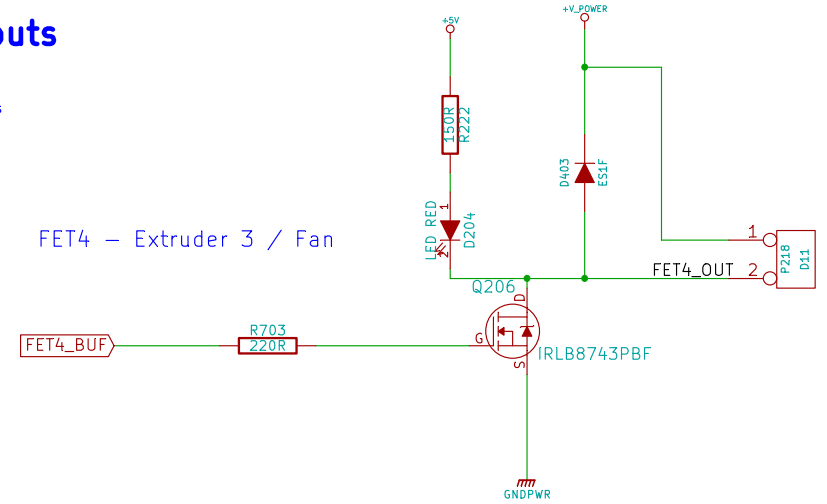
# MOSFET Outputs

Non-inverting drivers

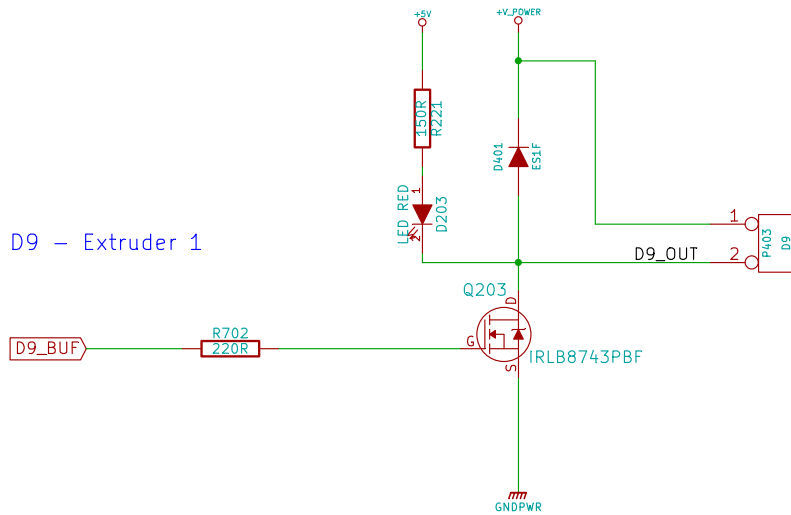
D8 – Heatbed



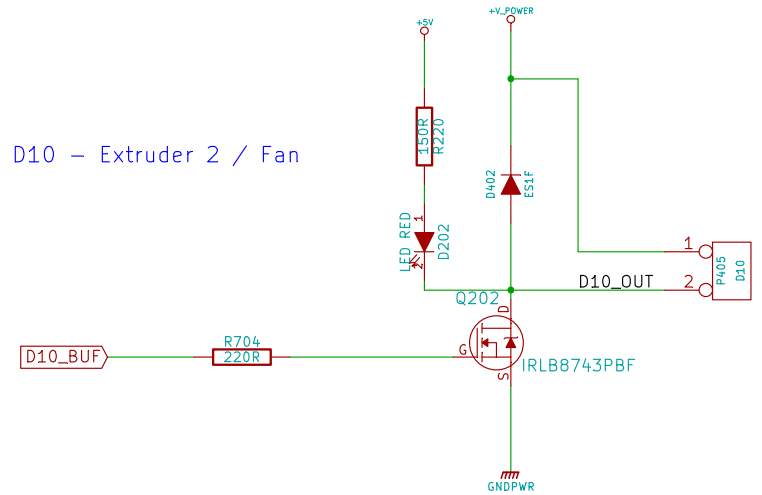
FET4 – Extruder 3 / Fan



D9 – Extruder 1



D10 – Extruder 2 / Fan



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Derived from RAMPS 1.4 [reprap.org/wiki/RAMPS1.4](http://reprap.org/wiki/RAMPS1.4)

File: con\_outputs.sch  
Sheet: /Mosfet Outputs/  
**Title: RAMPS-FD (RAMPS for Arduino Due)**

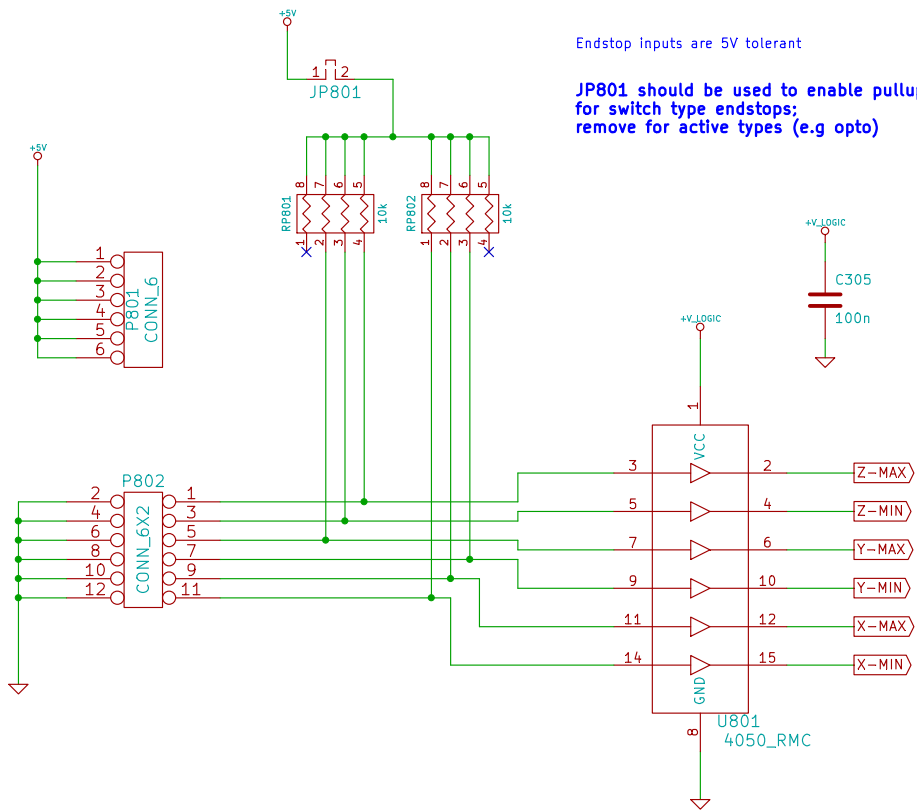
Size: A4 Date: 1 jan 2014  
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Id: 7/10

## Endstops

Endstop Inputs are 5V tolerant

JP801 should be used to enable pullups  
for switch type endstops;  
remove for active types (e.g. opto)



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Derived from RAMPS 1.4 [reprap.org/wiki/RAMPS1.4](http://reprap.org/wiki/RAMPS1.4)

File: con\_inputs.sch  
Sheet: /Endstop Inputs/

**Title: RAMPS-FD (RAMPS for Arduino Due)**

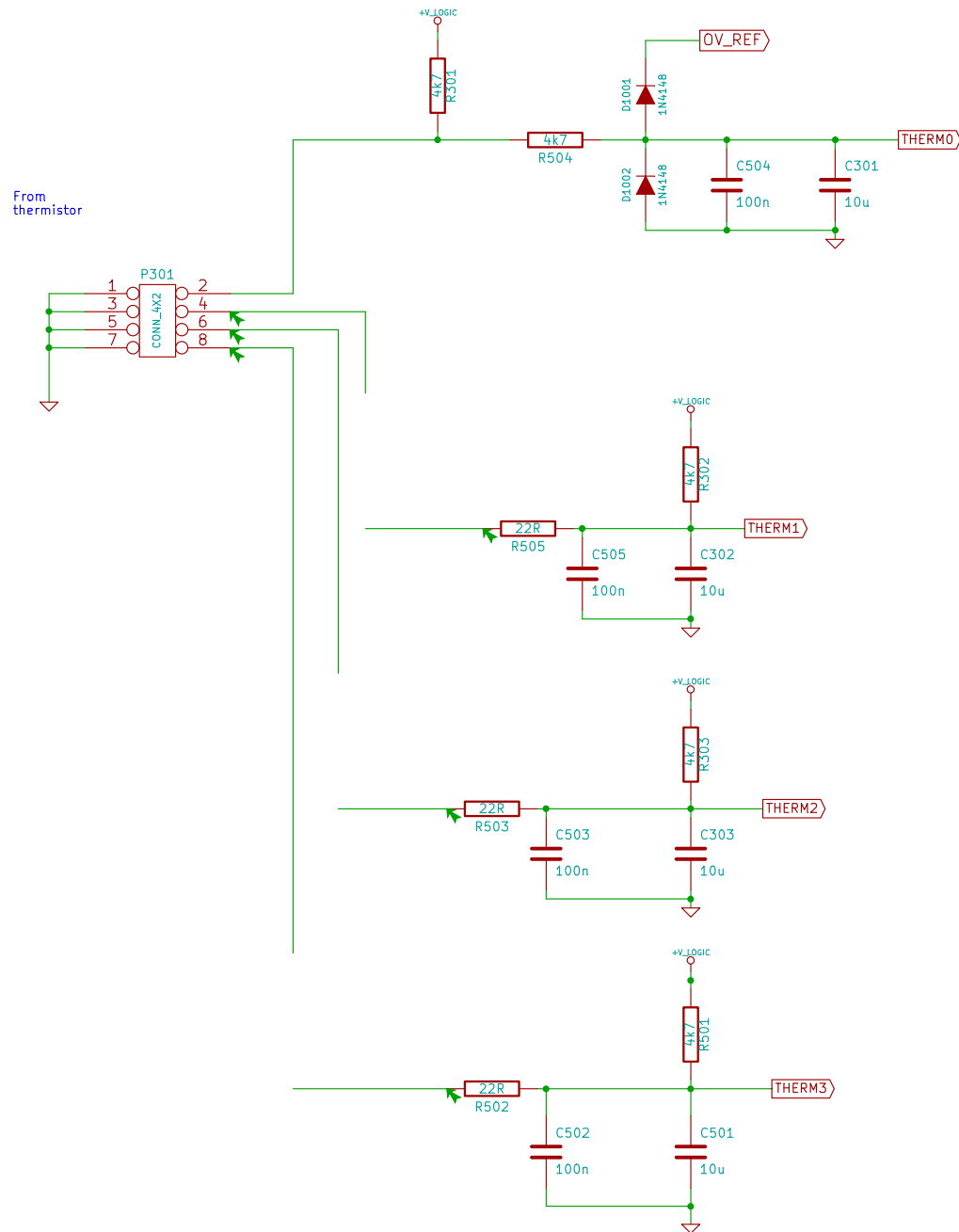
Size: A4 Date: 1 jan 2014  
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable

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Id: 8/10

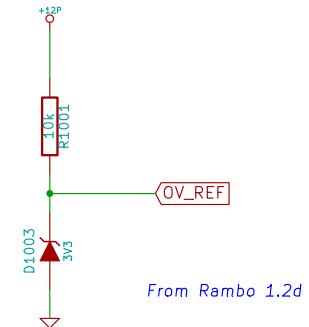




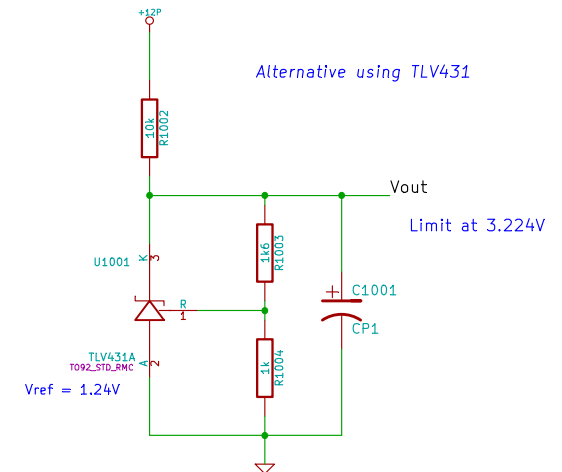
## Thermistor Inputs



To CPU



From Rambo 1.2d



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Derived from RAMPS 1.4 [reprap.org/wiki/RAMPS1.4](http://reprap.org/wiki/RAMPS1.4)

File: thermistor\_inputs.sch  
Sheet: /Thermistor inputs/  
**Title: RAMPS-FD (RAMPS for Arduino Due)**

Size: A4	Date: 1 jan 2014	Rev: v1 Issue B
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 10/10