

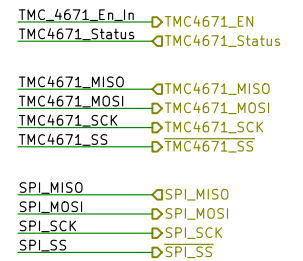
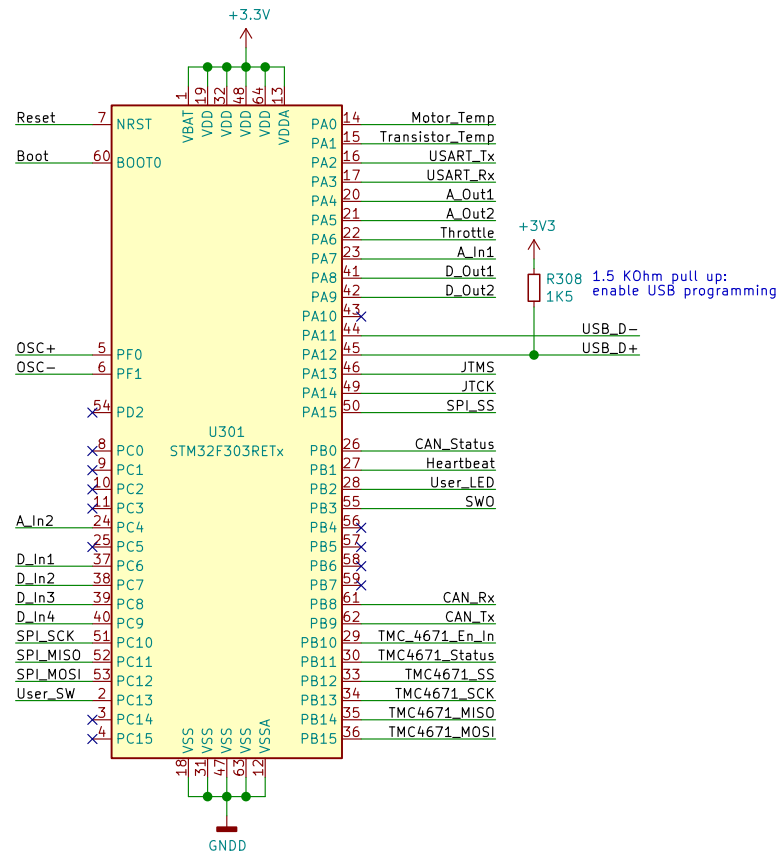
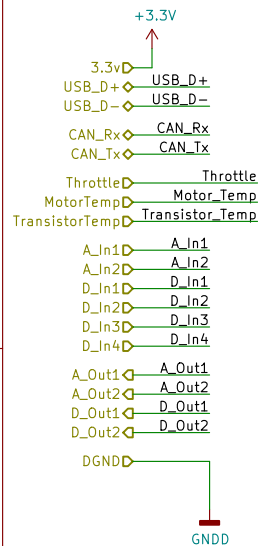
This sheet contains input/output protection and conditioning circuitry.
Note that the stm32 USB lines pass through this sheet
without modification.

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Supermileage Motor Controller
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Sheet: /IO Protection/
File: IO.sch

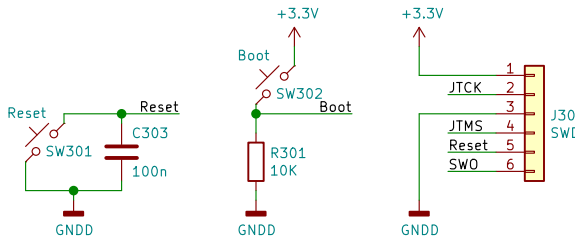
Title: *Input Protection and Filtering*

Size: USLedger	Date: 2018-11-28
KiCad E.D.A. kicad (5.0.0)	

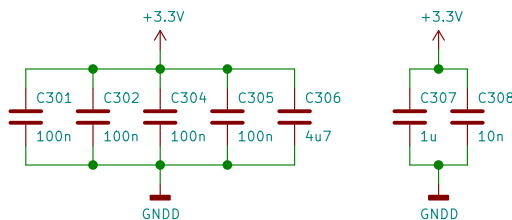
Rev: 1.0
Id: 2/4



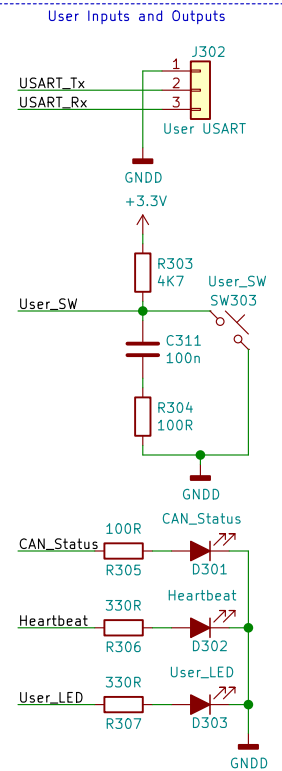
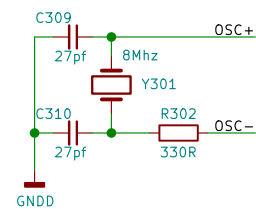
Reset and Boot switches for programming the microcontroller with the USB bootloader. SWD connector for in system debugging of the microcontroller.



Bypass Capacitors, one for each Vdd pin, and a 4.7uf cap for good measure. Also two bypass capacitors (1uf and 10nf) for the ADC and DAC.



Crystal Oscillator with 18pf load capacitor rating. Assumed stray capacitance of 5pf. See: <https://www.allaboutcircuits.com/technical-articles/choosing-the-right-oscillator-for-your-microcontroller/>



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Sheet: /STM32/
File: microcontroller.sch

Title: STM32 Microcontroller

Size: USLetter Date: 2018-11-17
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Rev: 1.0
Id: 3/4

