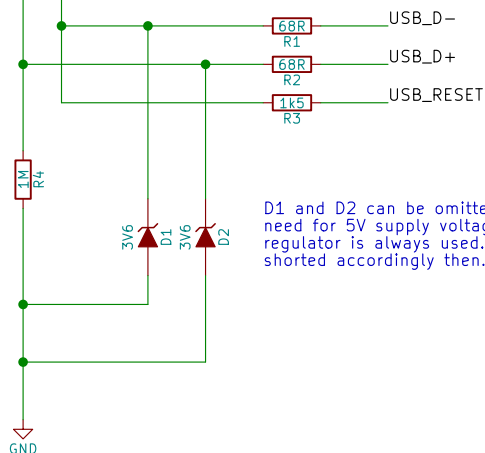
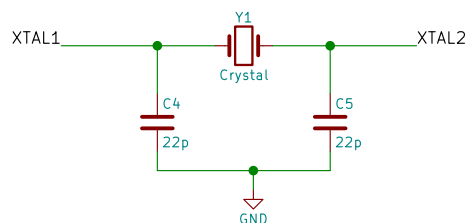


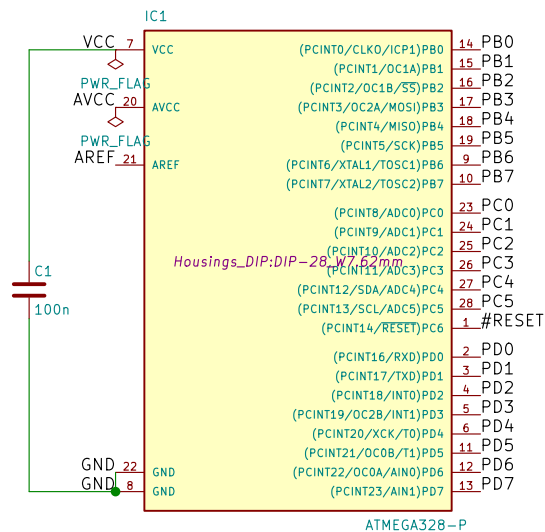
U1 and C3 can be omitted, and JP1 shorted, if there is no need for 3.3V supply voltage.



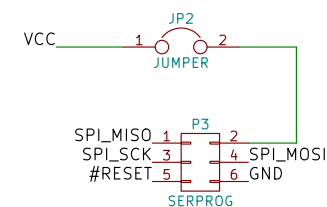
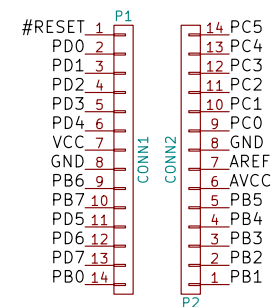
D1 and D2 can be omitted if there is no need for 5V supply voltage, and 3.3V regulator is always used. JP1 could be shorted accordingly then.



Crystal and capacitor values depend on supply voltage. If voltage regulator is omitted and whole system operates on 5V, crystal could be 16MHz. If 3.3V voltage regulator is used, 16MHz is out of the ATmega's spec and may or may not operate stable. With 3.3V supply voltage, 13.3MHz is the limit of safe operating space, so 12MHz or 12.8MHz might be the safest choice.



XTAL1 _____ PB6
XTAL2 _____ PB7
USB_D+ _____ PD2
USB_D- _____ PD3
USB_RESET _____ PD4
SPL_MISO _____ PB4
SPL_MOSI _____ PB3
SPL_SCK _____ PB5



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Title: RUDY – the Random USB Device

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