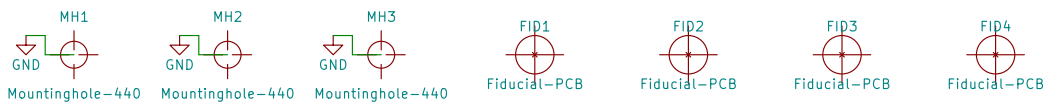


Monerologo-mid

Monero



MCU decoupling capacitors, place next to VBAT, VDD1-4, and VDDA

WARNING! Danger of internal 1.2V GND short. Adequately long glitch intervals will destroy the MCU.

Dual solder jumper bridges selectively, allowing for either STM32F (VCAP) or STM32L (VSS) population.

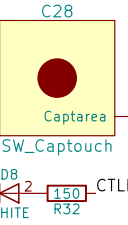
DNP in case of STM32L!

WARNING: SMT oscillator circuit diverges from original TH1 design

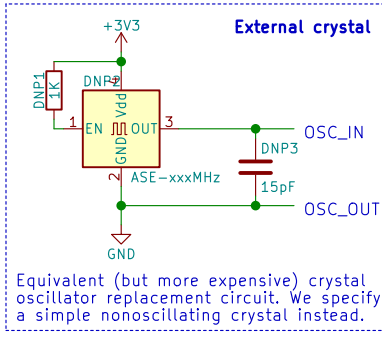
NOTE: According to STM AN2867 section 3.3 CL Load Capacitance, $CL = (C1+C2) / (C1+C2) + Cstray$...or $C1, C2 = 2 \times CL - 2 \times Cstray$. So our 10pF CL requires 12pF C1/C2.

Fast pins 12, 13, and 15 are reserved for advanced CPA.

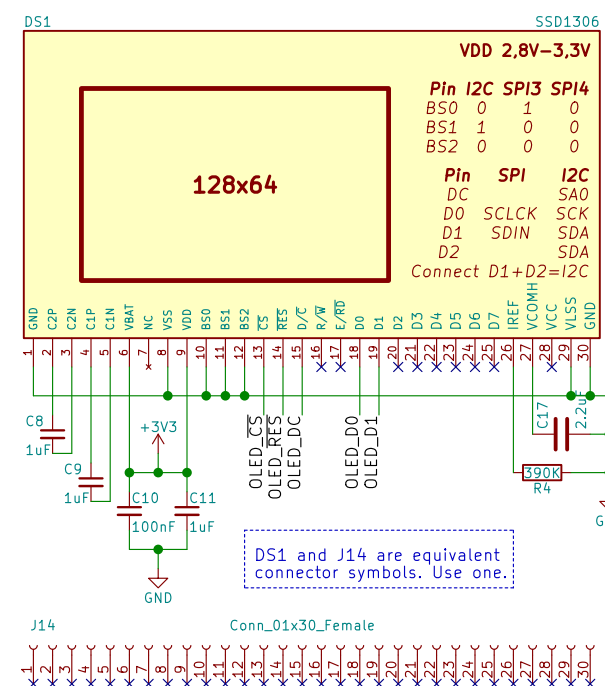
Capacitive touch sensor (SPST-NO.)



External crystal

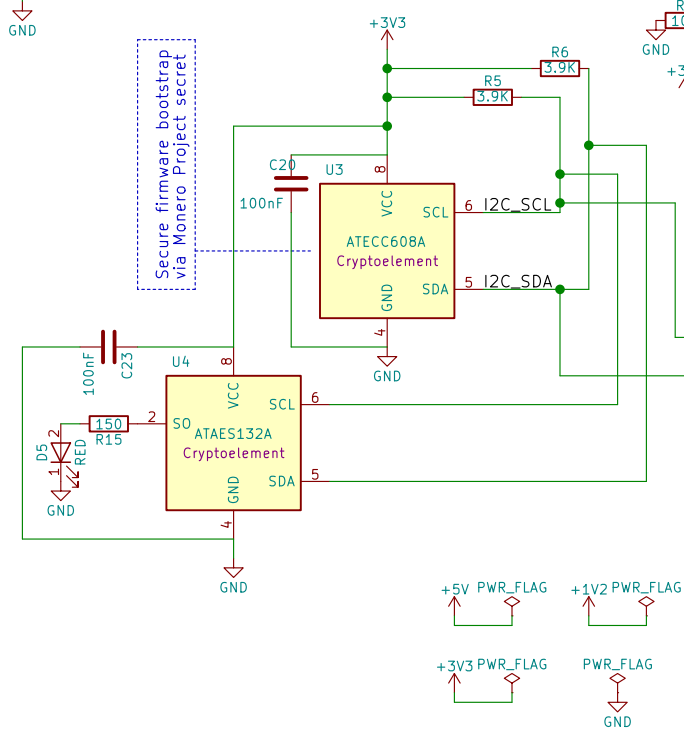


Lacks a charging circuit.



DS1 and J14 are equivalent connector symbols. Use one.

Secure firmware bootstrap via Monero Project secret



Warning, untested prototype!
Pending quality assurance testing
Fulfilling the developer edition role
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Sheet: /
File: breakneck.sch
Title: Breakneck Hardware Wallet
Size: A3 Date: 2018-01-10
KiCad E.D.A. kicad 4.0.6+dfsg1-1

Rev: 0.7.1
Id: 1/1