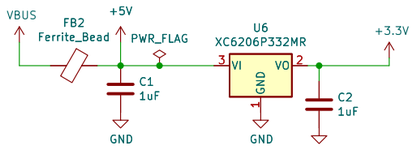
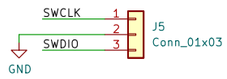
POWER SUPPLY



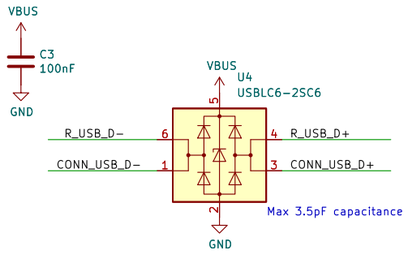
NOTE: in worst case scenario current consumption is up to 74mA (that is if QSPI is erasing while RP2040 is running at maximum frequency performing FFT calculations). The 3.3V regulator will be dissipating 124 mW of power, which is half of its maximum rating.

SWD DEBUGGING CONNECTOR

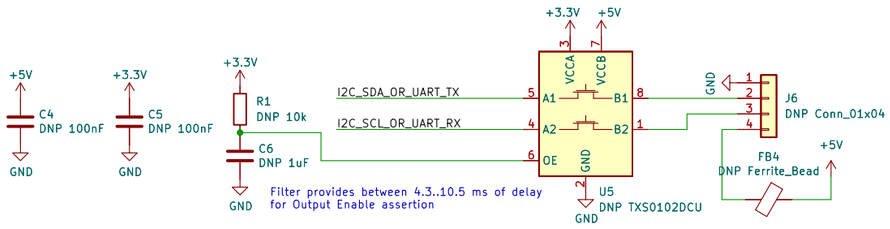


BOOTSEL SWITCH

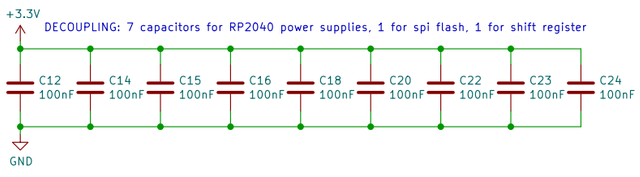
USB ESD PROTECTION



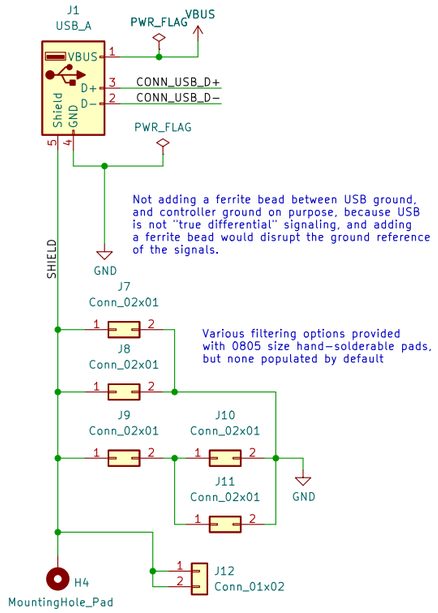
EXPANSION HEADER WITH 5V IO



DECOUPLING

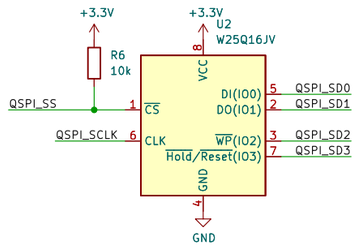


USB PORT AREA



EXPANSION HEADER WITH 3.3V IO

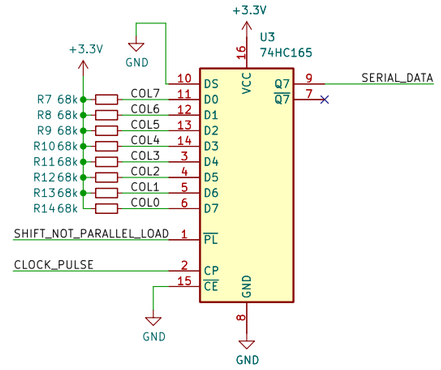
QSPI FLASH – For MCU boot



Mounting Holes

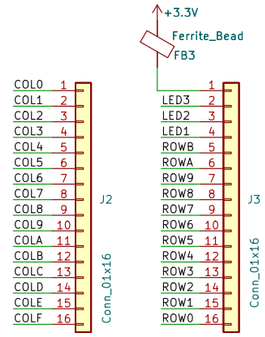
H5 MountingHole
H6 MountingHole
H7 AroundUsbPortMountingHole
H8 AroundUsbPortMountingHole

INPUT EXPANDER SHIFT REGISTER

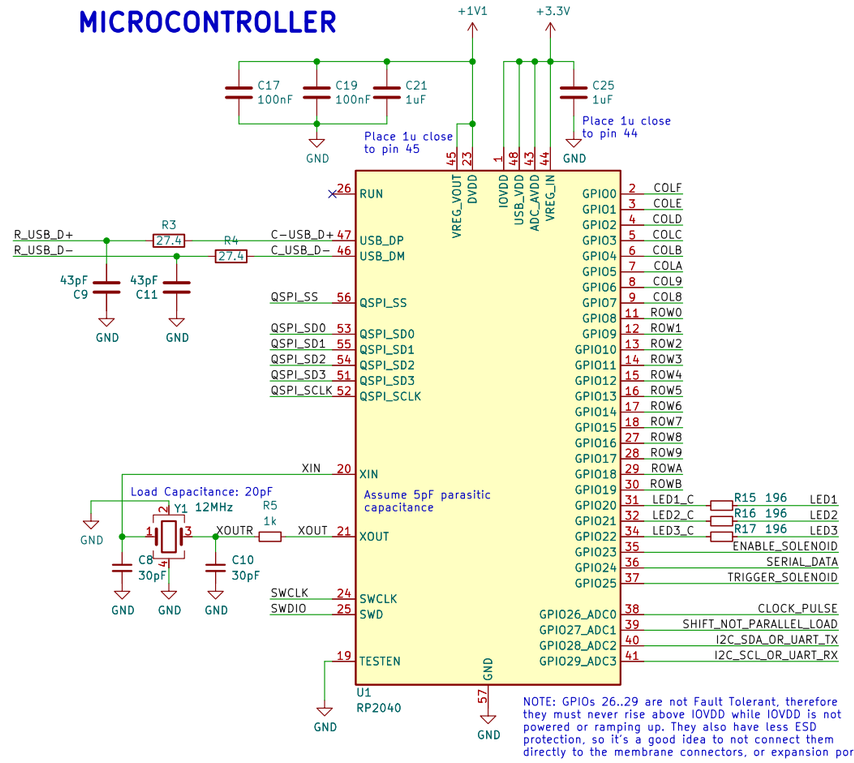


NOTE about QMK firmware:
We are going to operate in DIODE_DIRECTION=COL2ROW mode.
That means we are pinging rows, and sampling columns.

FLAT FLEX CONNECTORS



MICROCONTROLLER



NOTE: GPIOs 26..29 are not Fault Tolerant, therefore they must never rise above IOVDD while IOVDD is not powered or ramping up. They also have less ESD protection, so it's a good idea to not connect them directly to the membrane connectors, or expansion ports.

Tooling Holes for JLCPCB SMD assembly

H1 SMTAssemblyMountingHole
H2 SMTAssemblyMountingHole
H3 SMTAssemblyMountingHole

RP2040 BASED CONTROLLER FOR MINI M

Sheet: /
File: controller.kicad_sch

Title:

Size: A3	Date:	**Rev:**
KiCad E.D.A. kicad 6.0.10+dfsg-2+b1		Id: 1/1