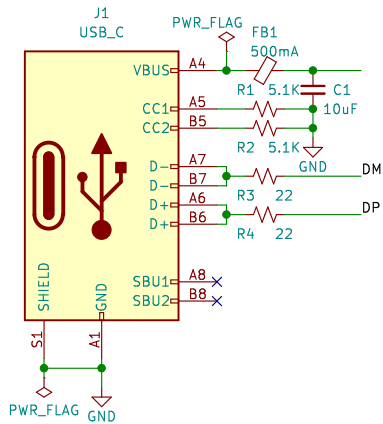
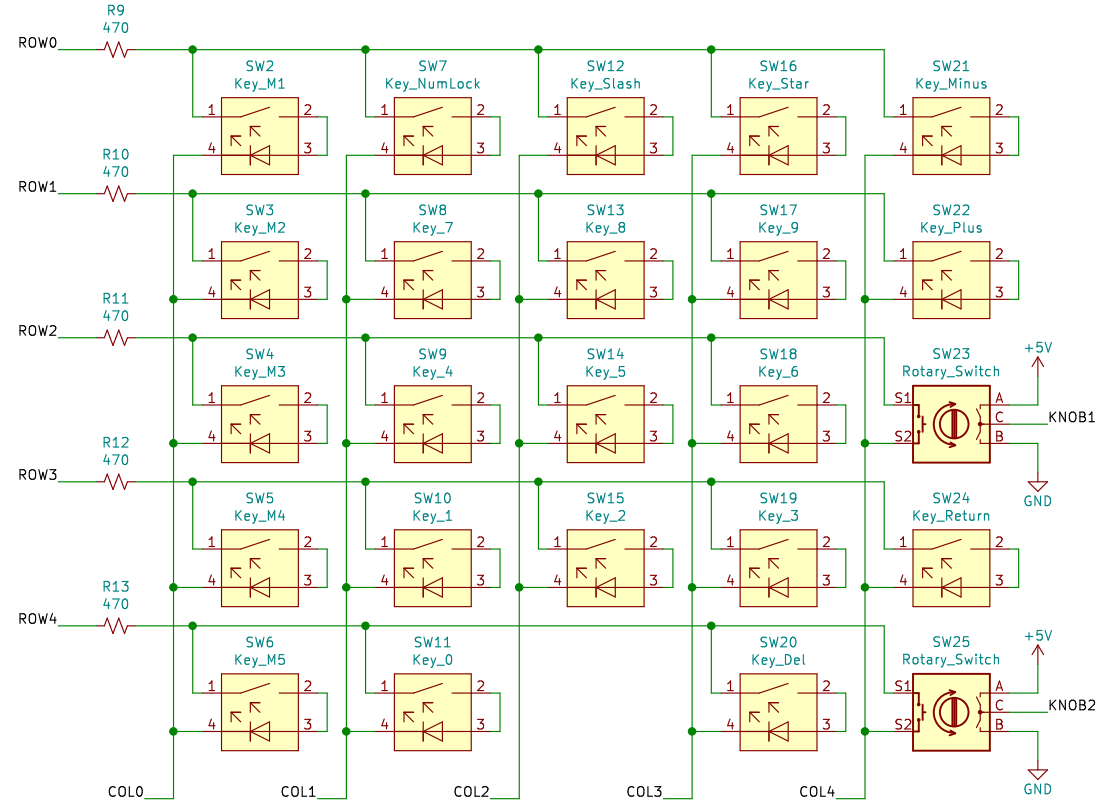
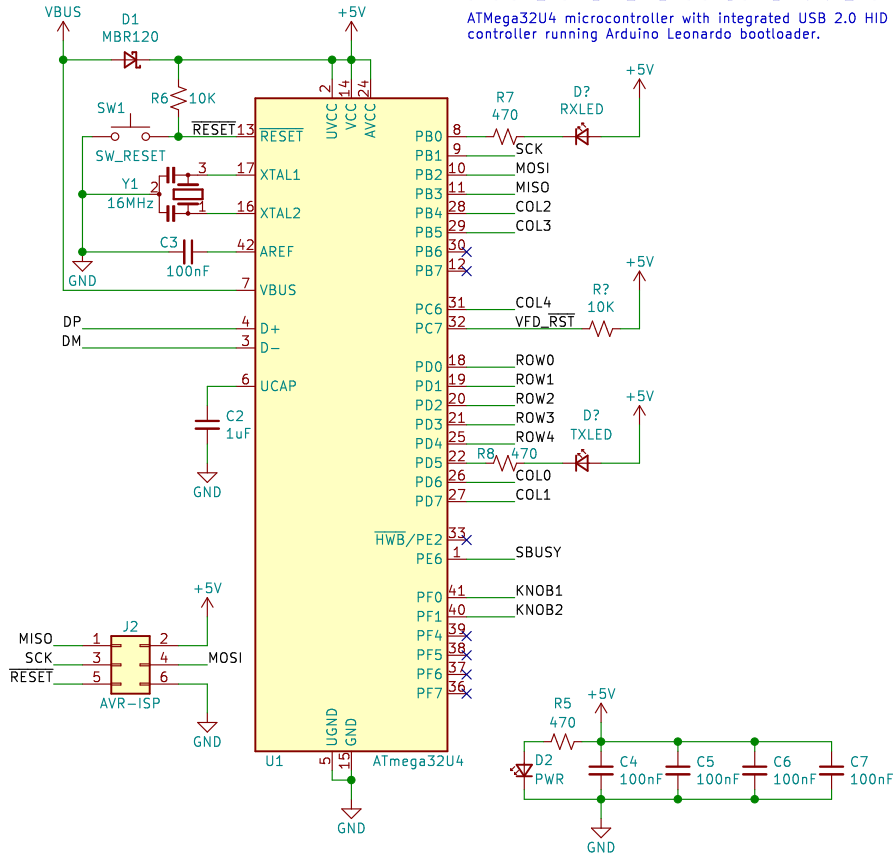


Microcontroller

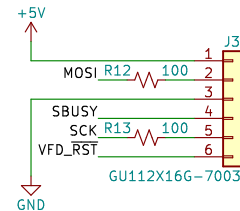
ATmega32U4 microcontroller with integrated USB 2.0 HID controller running Arduino Leonardo bootloader.



USB Type-C

USB Type-C connector providing 5V power and USB 2.0 connectivity

NOTE: CC pin resistors R1 and R2 MUST be +/-10%



VFD Display

A vacuum-fluorescent display which is controlled via SPI and can be used to display graphics and information such as PC volume, Num Lock, etc.

Key Matrix and Encoders

Keypad matrix for detecting keypresses using minimal I/O pins. Keys are Cherry MX switches with monochrome through-hole LEDs which light up when keys are pressed. LEDs must be installed or switches will not work. Regular diode may be used in place of LED. Keypad includes 17-key numpad and five macro keys, as well as two rotary encoder dials with integrated pushbuttons.



Milwaukee School of Engineering

Sheet: /
File: CE4100 Keypad.sch

Title: CE4100 Macro Keypad

Size: A4 Date: 2021-09-24

KiCad E.D.A. kicad (5.1.7)-1

Rev: 0.9

Id: 1/1