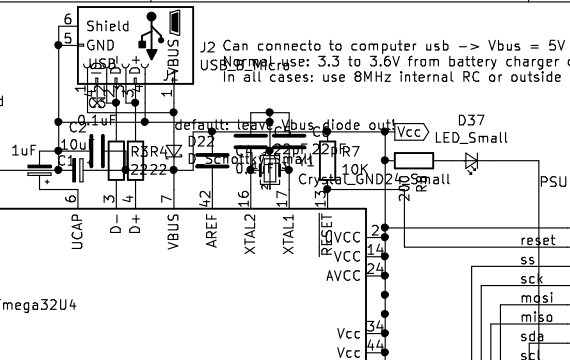


Atmega 32U4 - use pro micro bootloader
Atmega 32U4 RC - bootloader onboard with internal RC oscillator
redefine some pins in arduino.h

HWB - Port E, Bit 2

HWB allows to execute the bootloader section after reset when tied to ground during external reset pulse.

The HWB mode of this pin is active only when the HWBE fuse is enabled. During normal operation (excluded Reset), this pin acts as a general purpose I/O.



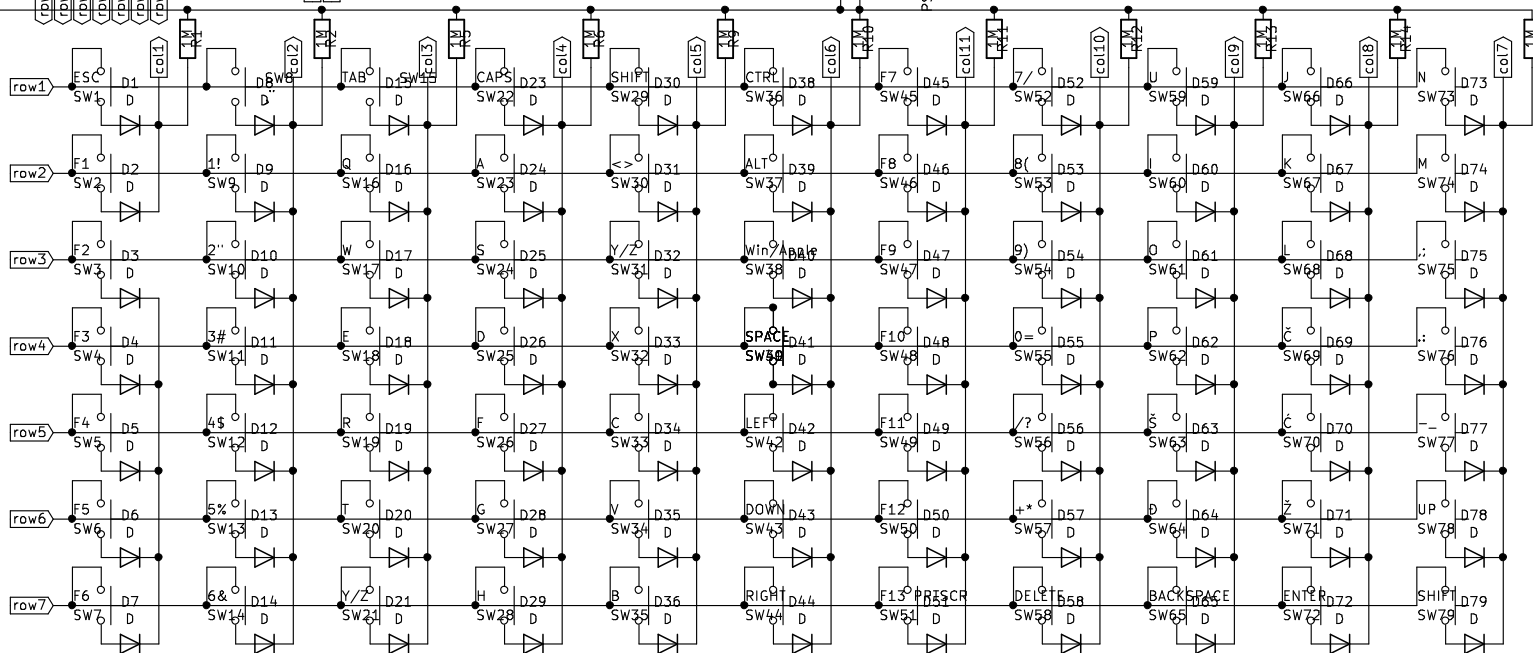
Pro micro bootloader pin definitions
PB0: SS or RX LED = 17
PB1: SCK = 15
PB2: MOSI = 16
PB3: MISO = 14
PB7: nc
PC7: nc
PD5: TX LED = 30
PD6: nc
PF0, PF1: nc

LCD: 195 x 305 mm
A4: 210 x 297 mm

use PSU_I2C bus as SPI programming port
(gnd, sck, mosi, miso, cc, reset, vcc)

Synptics touchpad module dimensions:
Synaptics TM278 = 39 x 66 mm
Synaptics TM42PDF1351 = 45 x 65 mm

row7: = 7
row6: A0 = 18
row5: A1 = 19
row4: A2 = 20
row3: A3 = 21
row2: A4 = 22
row1: A5 = 23



Arduino ProMicro: 18 pins available
9 x 9 = 81, 8 x 10 = 80, -> 11 x 7 = 77
2 of these are shared as I2C sda and scl - for PSU
2 are shared as int, otg - for PSU
2 are ps2 touchpad pins: D7/INT6 and D8(->PCINT4) or D6

Microcontroller acts as I2C psu and touchpad controller:
- keys matrix stopped to listen to I2C bus

Dimensions defined by display 1920 x 1080 = 1.78
B133XW04 outer dimensions: 307.6 x 183.1 x 5.07 mm
13.3 inch -> 16:9 -> W x H = 295 x 166 mm <- OK
12.5 inch -> 16:9 -> W x H = 277 x 156 mm
d = 374.44 mm => 13.7inch
- available for touchpad = 47mm

The regular distance between two keys on a mechanical keyboard equals 0.75 inch (19.05 mm). This value is defined as 1U.

This keyboard has 5 different keycap sizes:
1U, 1.25U, 1.5U, 1.75U and 2.25U.

Balthazar Computer Keyboard
Atmel 32U4 driver version
7 x 11 matrix = 77 keys

Sheet: /

File: BalthazarKeyboard2.sch

Title: Balthazar Computer Keyboard

Size: A4 Date: 3/2020

KiCad E.D.A. kicad (5.1.5)-3

Rev:

Id: 1/1