

Arduino ProMicro: 18 pins available  
 -> 9 x 9 = 81  
 -> 8 x 10 = 80  
 -> 10 x 8 = 80  
 -> 11 x 7 = 77  
 2 of these are shared as I2C sda and scl

Instead of ProMicro we might use Teensy 3.2  
 - to have more pins, faster microcontroller  
 - i2c PSU controller  
 - ps2 or i2c touchpad to send via USB

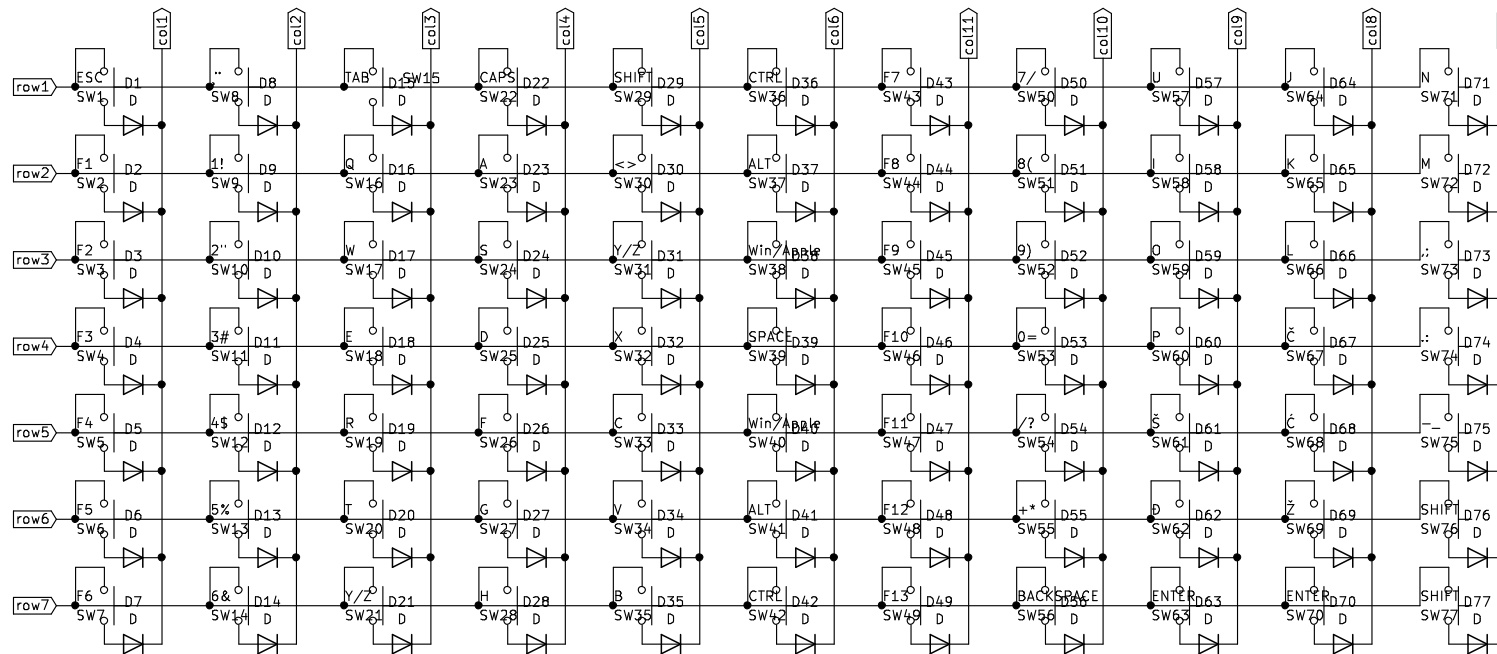
Synaptics touchpad module dimensions:  
 - Synaptics 920-000686-01 Touchpad Module TM278 for Fsc Esprimo = 39 x 66 mm

Microcontroller as shared I2C psu and touchpad USB controller:  
 Have sending pins on I2C bus and additional control pins:  
 - sending can be stopped and I2C data transferred without keys interference

Dimensions defined by display 13.3 inch:  
 W x H = 290 x 180 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.

Board type	Definition	Sensor Resolution (DPmm / X x Y)	Sensor Size (mm / X x Y)
134	Standard TouchPad	85 x 94	47.1 x 32.3
156	Mini module	91 x 124	44.0 x 24.5
180	Super module	57 x 58	70.2 x 52.4
220	Ultra-thin module	85 x 94	47.1 x 32.3
221	Ultra-thin module, connector reversed	85 x 94	47.1 x 32.3
230	Wide pad module	73 x 96	54.8 x 31.7
240	Stamp pad module	187 x 170	21.4 x 17.9
140	SubMini module	122 x 167	32.8 x 18.2
301	Advanced Technology Pad	-	-



Balthazar Computer Keyboard  
 ProMicro as driver version  
 7 x 11 matrix = 77 keys

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 File: atmelKeyboard.sch

**Title:** Balthazar Computer Keyboard

Size: A4 Date: 3/2020

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

**Rev:**  
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