MCU

File: mcu.kicad_sch

key_switch

File: key_switch.kicad_sch

items

File: items.kicad_sch

USB-C Connector

VCC

TODO: Add fuse

J1
USB_C_Receptacle

PWR_FLAG

VBUS	A4	
CC1	A5	R1 5.1k
CC2	B5	R2 5.1k → GND
D−	A7	R3 22 D−
D−	B7	
D+	A6	R4 22 D+
D+	B6	
RX1−	B10	
RX1+	B11	
TX1−	A3	
TX1+	A2	
RX2−	A10	
RX2+	A11	
TX2−	B3	
TX2+	B2	
SBU1	A8	
SBU2	B8	

SHIELD GND
S1 A1

PWR_FLAG

GND

ATMEGA32U4

U1
ATMEGA32U4

Pin	Left		Right	Pin
1	PE6/AIN0	AVCC		44 → VCC
2	UVcc ← VCC	GND		43 → GND
3	D−	AREF		42
4	D+	PF0		41 ROW0
5	UGnd → GND	PF1		40 ROW1
6	UCap	C2 1u	PF4	39 ROW2
7	VBus ← VCC	PF5		38 ROW3
8	PB0/SS	PF6		37 ROW4
9	PB1/SCK SCLK	PF7		36 COL0
10	PB2/MOSI MOSI	GND		35 → GND
11	PB3/MISO MISO	VCC		34 → VCC
12	PB7/RTS	HWB/PE2		33 R7 10k → GND
13	RESET	PC7		32 COL1
14	VCC ← VCC	PC6		31 COL2
15	GND → GND	PB6		30 NCS
16	XTAL1	PB5		29 COL3
17	XTAL2	PB4		28 COL4
18	PD0/INT0 SCL	T0/PD7		27 COL5
19	PD1/INT1 SDA	T1/PD6		26 COL6
20	PD2/RXD1 DATA	ICP1/PD4		25 COL7
21	PD3/TXD1 LED	AVCC		24 → VCC
22	PD5/XCK1	GND		23 → GND

D1 R5 1k RED ← VCC

R6 10k ← VCC

SW1 SW_PUSH ← GND

D2 R8 1k GREEN ← VCC

Conds

VCC

C3	C4	C5	C6	C7
0.1u	0.1u	0.1u	0.1u	4.7u

GND

LED for Power

VCC

R9 1k D3 BLUE

GND

Crystal

X1
CSTNE16M0V530000R0

XTAL2 1   3 XTAL1

2

GND

TRRS Jack

J2
MJ-4PP-9

VCC

A	1
D	4
C	3
B	2 → DATA

GND

I2C Pull Up

R10 10k VCC
R11 10k VCC

SCL
SDA

Key Switches

COL0 COL1 COL2 COL3 COL4 COL5 COL6 COL7

SW_PUSH-kbd

SW8

ROW0
SW2 D4 SW3 D5 SW4 D6 SW5 D7 SW6 D8 SW7 D9 SW_PUSH-kbd D10

ROW1
SW9 D11 SW10 D12 SW11 D13 SW12 D14 SW13 D15 SW14 D16 SW15 D17 SW16 D18

ROW2
SW17 D19 SW18 D20 SW19 D21 SW20 D22 SW21 D23 SW22 D24 SW23 D25

ROW3
SW24 D26 SW25 D27 SW26 D28 SW27 D29 SW28 D30 SW29 D31 SW30 D32 SW31 D33

ROW4
SW32 D34 SW33 D35 SW34 D36 SW35 D37 SW36 D38 SW37 D39 SW38 D40

Sheet: /key_switch/
File: key_switch.kicad_sch
Title:
Size: A4   Date:
KiCad E.D.A. kicad (6.0.8)
Rev:
Id: 3/4

LEDs

D41 SK6812MINI D42 SK6812MINI D43 SK6812MINI D44 SK6812MINI D45 SK6812MINI D46 SK6812MINI D47 SK6812MINI

LED

D48 SK6812MINI D49 SK6812MINI D50 SK6812MINI D51 SK6812MINI D52 SK6812MINI D53 SK6812MINI D54 SK6812MINI D55 SK6812MINI

D56 SK6812MINI D57 SK6812MINI D58 SK6812MINI D59 SK6812MINI D60 SK6812MINI D61 SK6812MINI D62 SK6812MINI

D63 SK6812MINI D64 SK6812MINI D65 SK6812MINI D66 SK6812MINI D67 SK6812MINI D68 SK6812MINI D69 SK6812MINI D70 SK6812MINI

D71 SK6812MINI D72 SK6812MINI D73 SK6812MINI D74 SK6812MINI D75 SK6812MINI D76 SK6812MINI D77 SK6812MINI

Connectors

J3
OLED

GND 4 — GND
VCC 3 — VCC
SCL 2 — SCL
SDA 1 — SDA

J4
SPI

1 — MISO
2 — MOSI
3 — GND
4 — VCC
5 — GND
6 — NCS
7 — SCLK