USB

J1
USB_B_Mini

+5V   +5V

U1
USBLC6-2SC6

VBUS 1
D+ 3   USB_CONN_D+
D- 2   USB_CONN_D-
ID 4
Shield 6
GND 5

C1
100n

USB_D+
USB_D-

GND   GND   GND

Voltage Regulator

+5V   U2   +3.3V
MCP1700-3302E

VI 2   VO 3
GND 1

C2   C3
1u   1u

GND

Debug Interface

J2
PIN H 5P   +3.3V
SWD

5
4   RESET
3   SWDIO
2   SWCLK
1

C4
100n

GND

OLED Display

J3
PIN S 4P   +3.3V
OLED

1
2
3   I2C_SCL
4   I2C_SDA

GND

Microcontroller

+3.3V

C5   C6   C7   C8
10u   100n   100n   100n

GND

VDD VDDA VDDIO2
1   5   17

NRST 4   RESET
PF0 2
PF1 3

KEY10 14   PB0
KEY11 15   PB1
KEY12 26   PB3
KEY13 27   PB4
KEY14 28   PB5
KEY15 29   PB6
KEY16 30   PB7
31   PB8

PA0 6   KEY1
PA1 7   KEY2
PA2 8   KEY3
PA3 9   KEY4
PA4 10   KEY5
PA5 11   KEY6
PA6 12   KEY7
PA7 13   KEY8
PA8 18   KEY9
PA9 19   I2C_SCL
PA10 20 I2C_SDA
PA11 21 USB_D-
PA12 22 USB_D+
PA13 23 SWDIO
PA14 24 SWCLK
PA15 25 LED

JP1
BOOT

+3.3V

R1
10k

GND

VSS VSSA
16 32

U3
STM32F042K4T6 or STM32F042K6T6

GND

Switches

SW1   SW9
Gateron KS-3   Gateron KS-3
KEY1   KEY9

SW2   SW10
Gateron KS-3   Gateron KS-3
KEY2   KEY10

SW3   SW11
Gateron KS-3   Gateron KS-3
KEY3   KEY11

SW4   SW12
Gateron KS-3   Gateron KS-3
KEY4   KEY12

SW5   SW13
Gateron KS-3   Gateron KS-3
KEY5   KEY13

SW6   SW14
Gateron KS-3   Gateron KS-3
KEY6   KEY14

SW7   SW15
Gateron KS-3   Gateron KS-3
KEY7   KEY15

SW8   SW16
Gateron KS-3   Gateron KS-3
KEY8   KEY16

GND

LED

D1
R2   LED Green 3mm
10k

LED   GND

H1
MountingHole_Pad
H2
MountingHole_Pad
H3
MountingHole_Pad
H4
MountingHole_Pad
H5
MountingHole_Pad

H6
MountingHole_Pad
H7
MountingHole_Pad
H8
MountingHole_Pad
H9
MountingHole_Pad
H10
MountingHole_Pad

GND

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