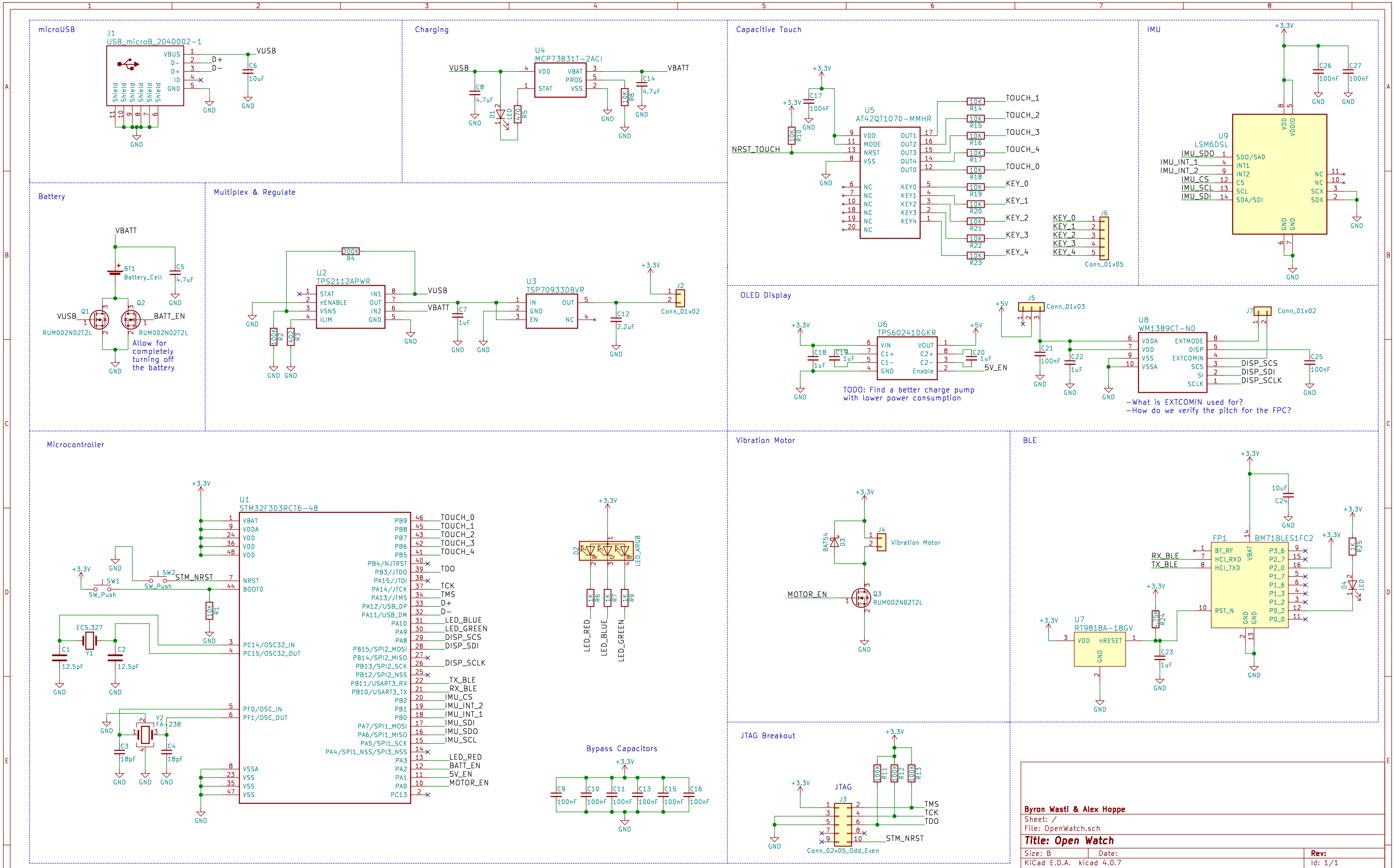
microUSB
J1
USB_microB_2040002-1
VUSB
D+
D−
C6
10uF
GND
Charging
U4
MCP73831T-2ACI
VDD
STAT
VBAT
PROG
VSS
C8
4.7uF
D1
LED
470
R5
10K
R8
C14
4.7uF
Battery
VBATT
BT1
Battery_Cell
C5
4.7uF
Q1
Q2
VUSB
BATT_EN
RUM002N02T2L
Allow for completely turning off the battery
Multiplex & Regulate
200K
R4
U2
TPS2112APWR
STAT
nENABLE
VSNS
ILIM
IN1
OUT
IN2
GND
100K
R2
402
R3
C7
1uF
U3
TSP70933DBVR
IN
GND
EN
OUT
NC
C12
2.2uF
J2
Conn_01x02
Capacitive Touch
U5
AT42QT1070-MMHR
VDD
MODE
NRST
VSS
OUT1
OUT2
OUT3
OUT4
OUT0
KEY0
KEY1
KEY2
KEY3
KEY4
NRST_TOUCH
C17
100nF
10K
R10
TOUCH_1
TOUCH_2
TOUCH_3
TOUCH_4
TOUCH_0
KEY_0
KEY_1
KEY_2
KEY_3
KEY_4
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
J6
Conn_01x05
IMU
U9
LSM6DSL
VDD
VDDIO
SDO/SA0
INT1
INT2
CS
SCL
SDA/SDI
SCX
SDX
IMU_SDO
IMU_INT_1
IMU_INT_2
IMU_CS
IMU_SCL
IMU_SDI
C26
100nF
C27
100nF
OLED Display
U6
TPS60241DGKR
VIN
C1+
C1−
GND
VOUT
C2+
C2−
Enable
C18
1uF
C19
1uF
C20
1uF
5V_EN
TODO: Find a better charge pump with lower power consumption
J5
Conn_01x03
U8
WM1389CT-ND
VDDA
VDD
VSS
VSSA
EXTMODE
DISP
EXTCOMIN
SCS
SI
SCLK
DISP_SCS
DISP_SDI
DISP_SCLK
C21
100nF
C22
1uF
C25
100nF
J7
Conn_01x02
−What is EXTCOMIN used for?
−How do we verify the pitch for the FPC?
Microcontroller
U1
STM32F303RCT6-48
VBAT
VDDA
VDD
NRST
BOOT0
PC14/OSC32_IN
PC15/OSC32_OUT
PF0/OSC_IN
PF1/OSC_OUT
VSSA
VSS
PB9
PB8
PB7
PB6
PB5
PB4/NJTRST
PB3/JTDO
PA15/JTDI
PA14/JTCK
PA13/JTMS
PA12/USB_DP
PA11/USB_DM
PA10
PA9
PA8
PB15/SPI2_MOSI
PB14/SPI2_MISO
PB13/SPI2_SCK
PB12/SPI2_NSS
PB11/USART3_RX
PB10/USART3_TX
PB2
PB1
PB0
PA7/SPI1_MOSI
PA6/SPI1_MISO
PA5/SPI1_SCK
PA4/SPI1_NSS/SPI3_NSS
PA3
PA2
PA1
PA0
PC13
TOUCH_0
TOUCH_1
TOUCH_2
TOUCH_3
TOUCH_4
TDO
TCK
TMS
D+
D−
LED_BLUE
LED_GREEN
DISP_SCS
DISP_SDI
DISP_SCLK
TX_BLE
RX_BLE
IMU_CS
IMU_INT_2
IMU_INT_1
IMU_SDI
IMU_SDO
IMU_SCL
LED_RED
BATT_EN
5V_EN
MOTOR_EN
SW1
SW2
SW_Push
STM_NRST
R1
10K
ECS.327
Y1
C1
12.5pF
C2
12.5pF
Y2
FA-238
C3
18pF
C4
18pF
D2
LED_ARGB
R6
R7
R9
1K
LED_RED
LED_BLUE
LED_GREEN
Bypass Capacitors
C9
C10
C11
C13
C15
C16
100nF
Vibration Motor
BAT54
D3
J4
Vibration Motor
MOTOR_EN
Q3
RUM002N02T2L
BLE
10uF
C24
FP1
BM71BLES1FC2
BT_RF
HCI_RXD
HCI_TXD
VBAT
RST_N
P3_6
P2_7
P2_0
P1_7
P1_6
P1_3
P1_2
P0_2
P0_0
RX_BLE
TX_BLE
R25
1K
D4
LED
U7
RT9818A-18GV
VDD
nRESET
R24
4.75K
C23
1uF
JTAG Breakout
JTAG
J3
Conn_02x05_Odd_Even
R11
100K
R12
100K
R13
100K
TMS
TCK
TDO
STM_NRST
Byron Wasti & Alex Hoppe
Sheet: /
File: OpenWatch.sch
Title: Open Watch
Size: B
Date:
Rev:
KiCad E.D.A. kicad 4.0.7
Id: 1/1