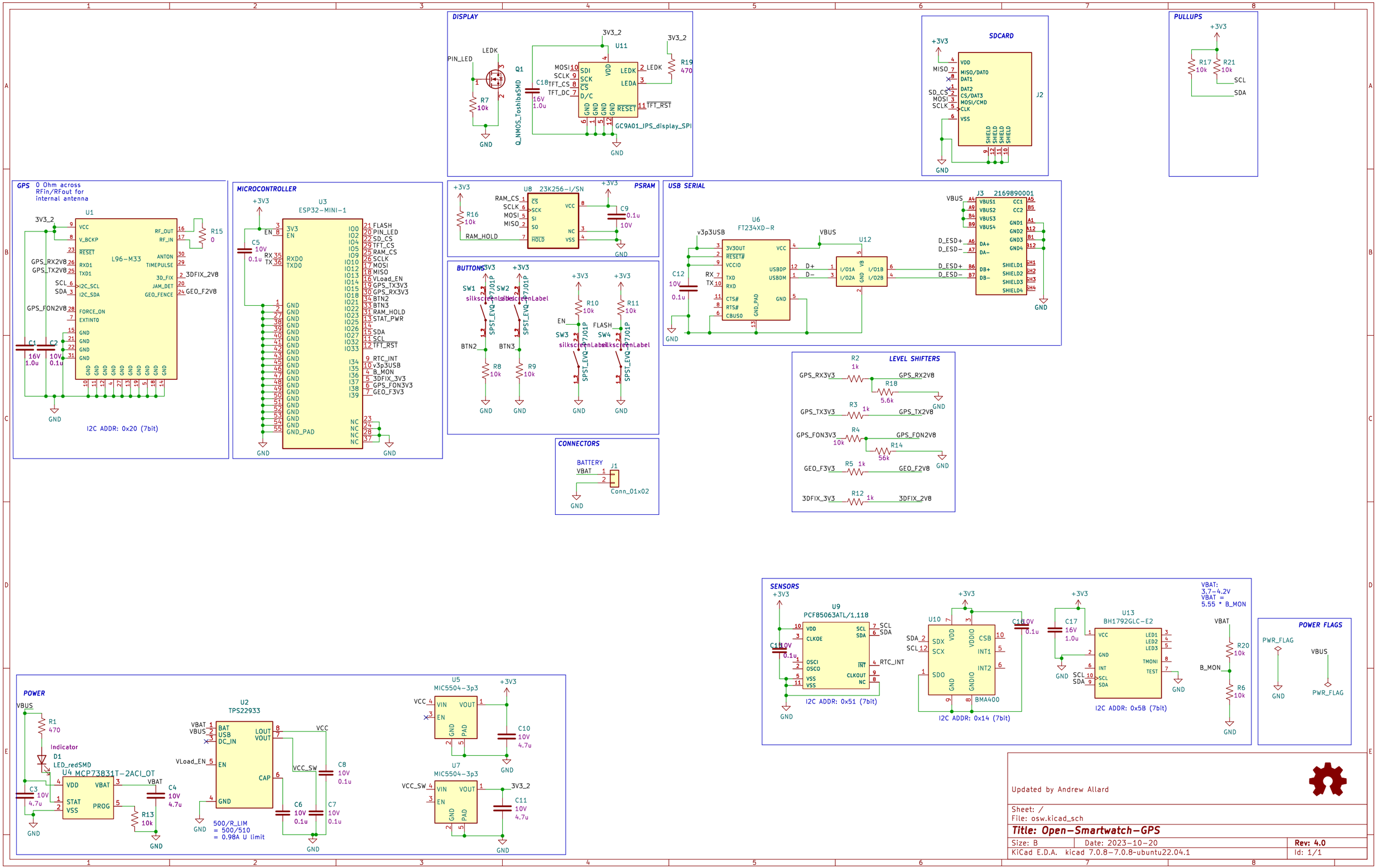
DISPLAY
PIN_LED
LEDK
Q1
Q_NMOS_ToshibaSMD
R7 10k
GND
C18 16V 1.0u
3V3_2
U11
MOSI
SCLK
TFT_CS
TFT_DC
SDI
SCK
CS
D/C
VDD
LEDK
LEDA
RESET
TFT_RST
GC9A01_IPS_display_SPI
R19 470
SDCARD
+3V3
MISO
SD_CS
MOSI
SCLK
VDD
MISO/DAT0
DAT1
DAT2
CS/DAT3
MOSI/CMD
CLK
VSS
SHIELD
J2
PULLUPS
R17 10k
R21 10k
SCL
SDA
GPS
0 Ohm across RFin/RFout for internal antenna
U1
L96-M33
VCC
V_BCKP
RESET
RXD1
TXD1
I2C_SCL
I2C_SDA
FORCE_ON
EXTINT0
RF_OUT
RF_IN
ANTON
TIMEPULSE
3D_FIX
JAM_DET
GEO_FENCE
GPS_RX2V8
GPS_TX2V8
GPS_FON2V8
3DFIX_2V8
GEO_F2V8
R15 0
C1 16V 1.0u
C2 10V 0.1u
I2C ADDR: 0x20 (7bit)
MICROCONTROLLER
U3
ESP32-MINI-1
C5 10V 0.1u
RXD0
TXD0
FLASH
PIN_LED
SD_CS
TFT_CS
RAM_CS
SCLK
MOSI
MISO
VLoad_EN
GPS_TX3V3
GPS_RX3V3
BTN2
BTN3
RAM_HOLD
STAT_PWR
SDA
SCL
TFT_RST
RTC_INT
v3p3USB
B_MON
3DFIX_3V3
GPS_FON3V3
GEO_F3V3
GND_PAD
PSRAM
U8 23K256-I/SN
CS
SCK
SI
SO
HOLD
VCC
NC
VSS
R16 10k
C9 0.1u 10V
BUTTONS
SW1
SW2
SW3
SW4
SPST_EVQ7J01P
silkscreenLabel
R8 10k
R9 10k
R10 10k
R11 10k
USB SERIAL
U6
FT234XD-R
v3p3USB
3V3OUT
RESET#
VCCIO
TXD
RXD
CTS#
RTS#
CBUS0
USBDP
USBDM
C12 10V 0.1u
U12
I/O1A
I/O2A
I/O1B
I/O2B
J3 2169890001
VBUS
VBUS1
VBUS2
VBUS3
VBUS4
DA+
DA-
DB+
DB-
CC1
CC2
GND1
GND2
GND3
GND4
SHIELD1
SHIELD2
SHIELD3
SHIELD4
D_ESD+
D_ESD-
LEVEL SHIFTERS
GPS_RX3V3
GPS_RX2V8
R2 1k
R18 5.6k
GPS_TX3V3
GPS_TX2V8
R3 1k
GPS_FON3V3
GPS_FON2V8
R4 10k
R14 56k
GEO_F3V3
GEO_F2V8
R5 1k
3DFIX_3V3
3DFIX_2V8
R12 1k
CONNECTORS
BATTERY
VBAT
J1
Conn_01x02
POWER
VBUS
R1 470
Indicator
D1 LED_redSMD
U4 MCP73831T-2ACI_OT
VDD
STAT
VSS
VBAT
PROG
C3 10V 4.7u
C4 10V 4.7u
R13 10k
U2 TPS22933
BAT
USB
DC_IN
EN
GND
LOUT
VOUT
CAP
VCC
VCC_SW
C6 10V 0.1u
C7 10V 0.1u
C8 10V 0.1u
500/R_LIM
= 500/510
= 0.98A U limit
U5 MIC5504-3p3
VIN
EN
GND
PAD
C10 10V 4.7u
U7 MIC5504-3p3
3V3_2
C11 10V 4.7u
SENSORS
U9
PCF85063ATL/1,118
VDD
CLKOE
OSCI
OSCO
VSS
SCL
SDA
INT
CLKOUT
NC
RTC_INT
C13 0.1u
I2C ADDR: 0x51 (7bit)
U10
SDX
SCX
SDO
VDDIO
CSB
INT1
INT2
GNDIO
BMA400
C16 0.1u
I2C ADDR: 0x14 (7bit)
U13
BH1792GLC-E2
LED1
LED2
LED3
TMONI
TEST
C17 16V 1.0u
I2C ADDR: 0x5B (7bit)
VBAT:
3.7-4.2V
VBAT =
5.55 * B_MON
R20 10k
R6 10k
POWER FLAGS
PWR_FLAG
Updated by Andrew Allard
Sheet: /
File: osw.kicad_sch
Title: Open-Smartwatch-GPS
Size: B
Date: 2023-10-20
Rev: 4.0
KiCad E.D.A. kicad 7.0.8-7.0.8~ubuntu22.04.1
Id: 1/1