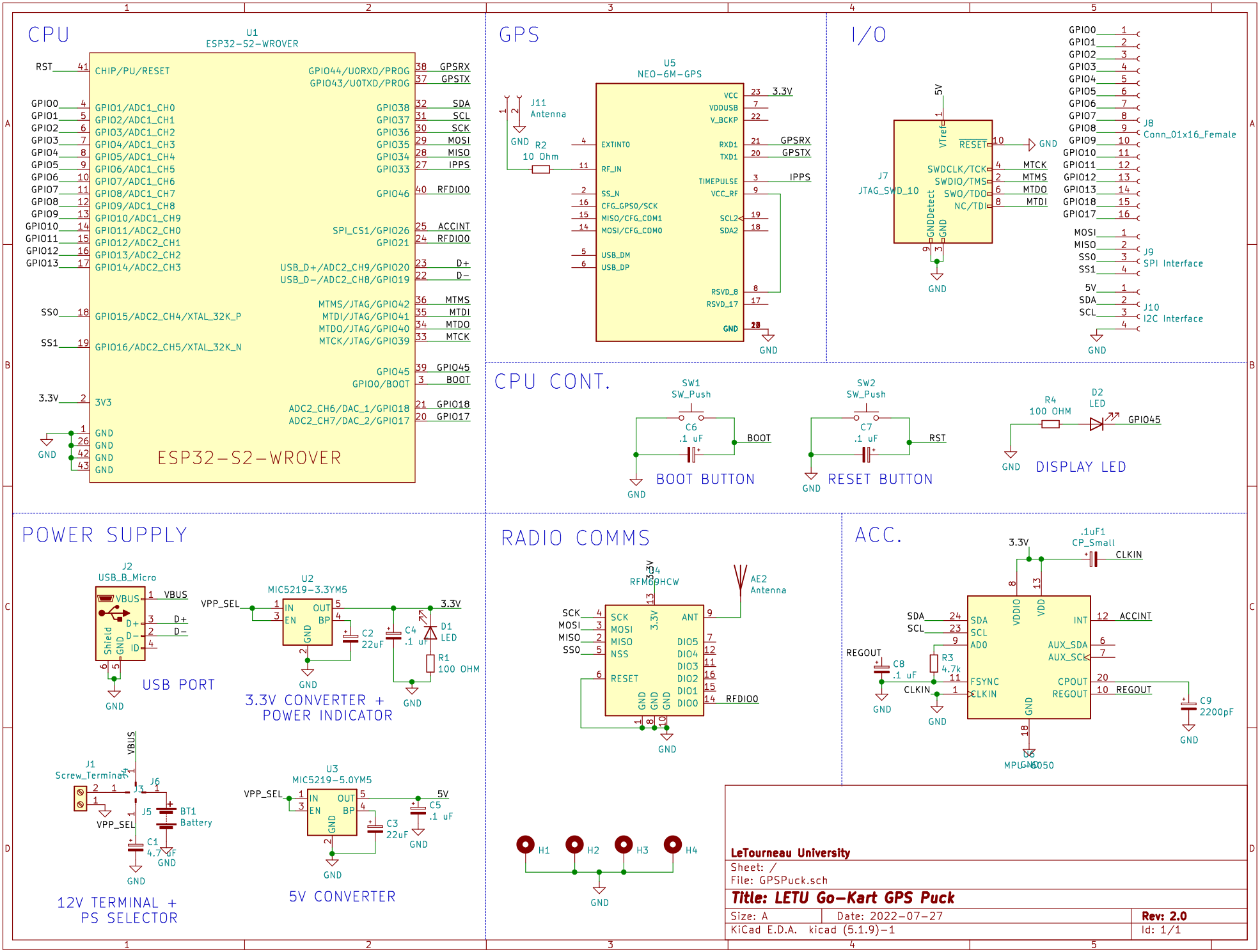
CPU
U1
ESP32-S2-WROVER
RST
GPIO0
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
GPIO13
SS0
SS1
3.3V
GND
CHIP/PU/RESET
GPIO1/ADC1_CH0
GPIO2/ADC1_CH1
GPIO3/ADC1_CH2
GPIO4/ADC1_CH3
GPIO5/ADC1_CH4
GPIO6/ADC1_CH5
GPIO7/ADC1_CH6
GPIO8/ADC1_CH7
GPIO9/ADC1_CH8
GPIO10/ADC1_CH9
GPIO11/ADC2_CH0
GPIO12/ADC2_CH1
GPIO13/ADC2_CH2
GPIO14/ADC2_CH3
GPIO15/ADC2_CH4/XTAL_32K_P
GPIO16/ADC2_CH5/XTAL_32K_N
3V3
GND
GND
GND
GND
GPIO44/U0RXD/PROG
GPIO43/U0TXD/PROG
GPIO38
GPIO37
GPIO36
GPIO35
GPIO34
GPIO33
GPIO46
SPI_CS1/GPIO26
GPIO21
USB_D+/ADC2_CH9/GPIO20
USB_D-/ADC2_CH8/GPIO19
MTMS/JTAG/GPIO42
MTDI/JTAG/GPIO41
MTDO/JTAG/GPIO40
MTCK/JTAG/GPIO39
GPIO45
GPIO0/BOOT
ADC2_CH6/DAC_1/GPIO18
ADC2_CH7/DAC_2/GPIO17
GPSRX
GPSTX
SDA
SCL
SCK
MOSI
MISO
IPPS
RFDIO0
ACCINT
RFDIO0
D+
D-
MTMS
MTDI
MTDO
MTCK
GPIO45
BOOT
GPIO18
GPIO17
ESP32-S2-WROVER
GPS
U5
NEO-6M-GPS
J11
Antenna
R2
10 Ohm
EXTINT0
RF_IN
SS_N
CFG_GPS0/SCK
MISO/CFG_COM1
MOSI/CFG_COM0
USB_DM
USB_DP
VCC
VDDUSB
V_BCKP
RXD1
TXD1
TIMEPULSE
VCC_RF
SCL2
SDA2
RSVD_8
RSVD_17
GND
3.3V
GPSRX
GPSTX
IPPS
I/O
5V
J7
JTAG_SWD_10
VTref
RESET
SWDCLK/TCK
SWDIO/TMS
SWO/TDO
NC/TDI
GNDDetect
GND
MTCK
MTMS
MTDO
MTDI
J8
Conn_01x16_Female
GPIO0
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
GPIO13
GPIO18
GPIO17
J9
SPI Interface
MOSI
MISO
SS0
SS1
J10
I2C Interface
5V
SDA
SCL
CPU CONT.
SW1
SW_Push
C6
.1 uF
BOOT
BOOT BUTTON
SW2
SW_Push
C7
.1 uF
RST
RESET BUTTON
R4
100 OHM
D2
LED
GPIO45
DISPLAY LED
POWER SUPPLY
J2
USB_B_Micro
VBUS
D+
D-
ID
Shield
USB PORT
U2
MIC5219-3.3YM5
VPP_SEL
IN
EN
OUT
BP
C2
22uF
C4
.1 uF
D1
LED
R1
100 OHM
3.3V CONVERTER +
POWER INDICATOR
J1
Screw_Terminal
J3
J6
J5
BT1
Battery
C1
4.7 uF
12V TERMINAL +
PS SELECTOR
U3
MIC5219-5.0YM5
C3
22uF
C5
.1 uF
5V CONVERTER
RADIO COMMS
RFM69HCW
SCK
MOSI
MISO
NSS
RESET
ANT
DIO5
DIO4
DIO3
DIO2
DIO1
DIO0
RFDIO0
AE2
Antenna
H1
H2
H3
H4
ACC.
.1uF1
CP_Small
CLKIN
SDA
SCL
AD0
FSYNC
CLKIN
VDDIO
VDD
INT
AUX_SDA
AUX_SCL
CPOUT
REGOUT
ACCINT
REGOUT
C8
.1 uF
R3
4.7k
C9
2200pF
MPU-6050
LeTourneau University
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Size: A
Date: 2022-07-27
Rev: 2.0
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