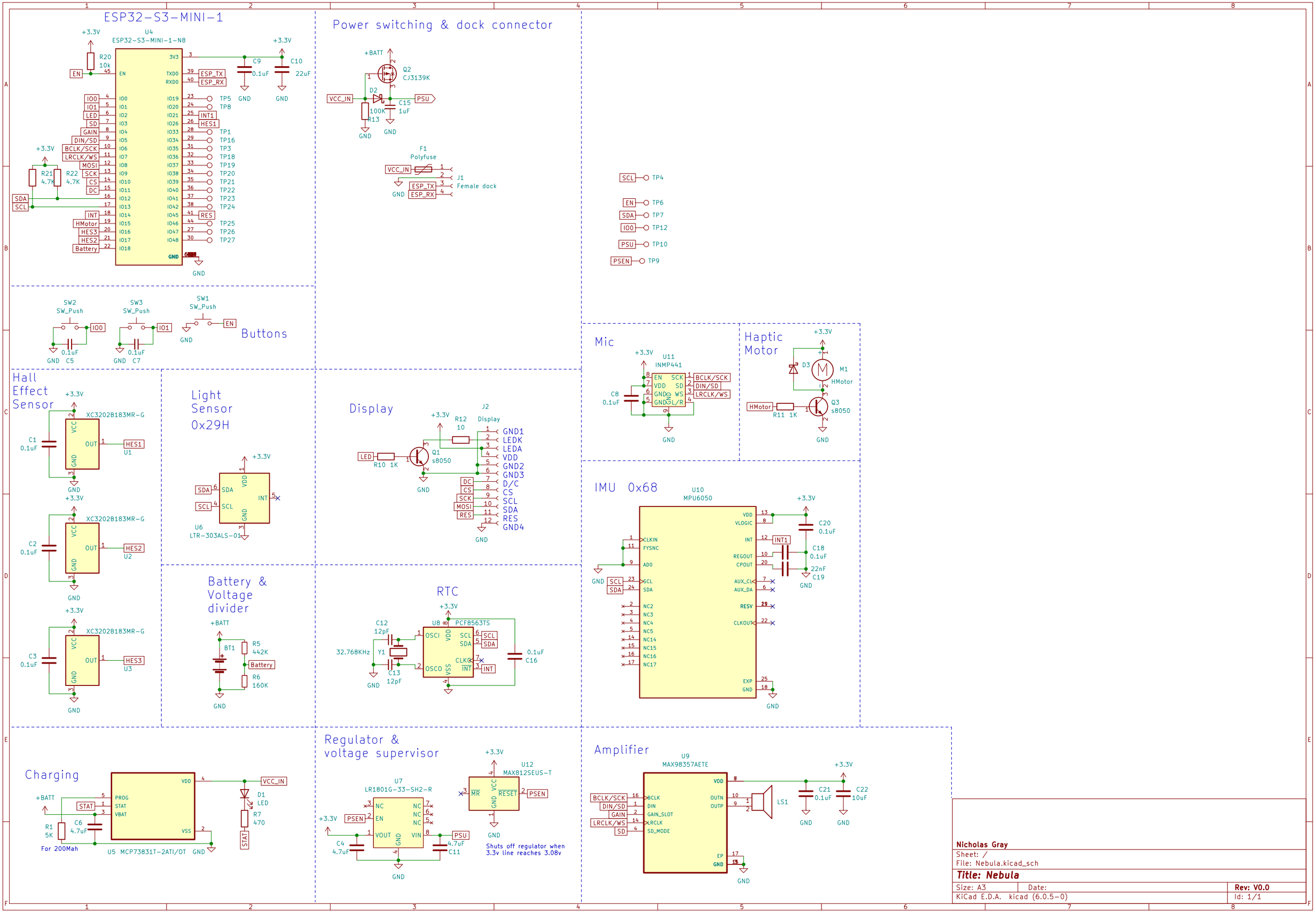
ESP32-S3-MINI-1
U4
ESP32-S3-MINI-1-N8
+3.3V
R20
10k
EN
3V3
TXD0
RXD0
ESP_TX
ESP_RX
C9
0.1uF
C10
22uF
GND
IO0
IO1
LED
SD
GAIN
DIN/SD
BCLK/SCK
LRCLK/WS
MOSI
SCK
CS
DC
SDA
SCL
INT
HMotor
HES3
HES2
Battery
INT1
HES1
RES
TP5
TP8
TP1
TP16
TP3
TP18
TP19
TP20
TP21
TP22
TP23
TP24
TP25
TP26
TP27
R21
4.7K
R22
4.7K
Power switching & dock connector
+BATT
Q2
CJ3139K
VCC_IN
D2
100K
R13
C15
1uF
PSU
F1
Polyfuse
J1
Female dock
SCL
TP4
EN
TP6
SDA
TP7
IO0
TP12
PSU
TP10
PSEN
TP9
SW2
SW_Push
SW3
SW_Push
SW1
SW_Push
0.1uF
C5
C7
Buttons
Hall Effect Sensor
XC3202B183MR-G
VCC
OUT
GND
C1
0.1uF
C2
0.1uF
C3
0.1uF
U1
U2
U3
Light Sensor 0x29H
U6
LTR-303ALS-01
VDD
INT
Battery & Voltage divider
BT1
R5
442K
R6
160K
Display
J2
Display
R12
10
R10 1K
Q1
s8050
GND1
LEDK
LEDA
VDD
GND2
GND3
D/C
CS
SCL
SDA
RES
GND4
RTC
U8
PCF8563TS
C12
12pF
C13
12pF
32.768KHz
Y1
OSCI
OSCO
CLKO
C16
Mic
U11
INMP441
C8
0.1uF
BCLK/SCK
DIN/SD
LRCLK/WS
Haptic Motor
D3
M1
HMotor
R11 1K
Q3
s8050
IMU 0x68
U10
MPU6050
VLOGIC
CLKIN
FYSNC
ADO
REGOUT
CPOUT
AUX_CL
AUX_DA
RESV
CLKOUT
EXP
C20
0.1uF
C18
0.1uF
22nF
C19
Charging
U5 MCP73831T-2ATI/OT
PROG
STAT
VBAT
VDD
VSS
R1
5K
C6
4.7uF
For 200Mah
D1
LED
R7
470
Regulator & voltage supervisor
U7
LR1801G-33-SH2-R
NC
EN
VOUT
VIN
C4
4.7uF
C11
4.7uF
U12
MAX812SEUS-T
MR
RESET
Shuts off regulator when 3.3v line reaches 3.08v
Amplifier
U9
MAX98357AETE
BCLK
DIN
GAIN_SLOT
LRCLK
SD_MODE
OUTN
OUTP
EP
LS1
C21
0.1uF
C22
10uF
Nicholas Gray
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Title: Nebula
Size: A3
Date:
Rev: V0.0
KiCad E.D.A. kicad (6.0.5-0)
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