PowerModule

Conn to Power
J1
Conn_01x02_Male
12VBAT
GND
J2
Conn_01x02_Female
12VBAT
GND

主電源スイッチ
S-S
主電源スイッチ
SW_SPDT
SW5
GND

5V生成
D7
1N5819WS
VCC
U1
LF50_TO220
VDD
+5V
R17
10k
C3
10uF
C4
1uF
R20
10k
GND

5V出力
Q5
SSM3J332R
J4
Conn_01x02_Male
+5V
Q4
S8050
Q6
S8050
R18
10k
R19
10k
GND

Capacitor
VDD
VCC
+5V
+3.3V
C13 C11 C12 C14 C15 C16 C17 C18 C19
470uF 470uF 470uF 470uF 470uF 470uF 470uF 470uF 470uF
GND GND GND GND

保護回路＋スイッチ
Q1
TJ60S04M3L
Q3
TJ60S04M3L
VDD VCC
12VBAT
R7
10k
C1
1uF
R8
100M
R11
33k
MA11DEB045
D1
1N5819WS
SW Measure
Q2
BSS138
主電源スイッチ
R12
10k
GND

3.3V生成
D8
1N5819WS
+5V
U2
AZ1084CD-3.3
VDD
+3.3V
C5
1uF
C6
1uF
R21
10k
R22
10k
GND

インジケータLED
+5V
1k
R33
Green
D11
+3.3V
1k
R36
Green
D14

TestPoint
+3.3V
TestPoint TestPoint GND
TP4 TP5

RS485a
MAX3485
Q16
S8050
U6
MAX3485
C26
0.1uF
R43
7.5k
R52
2.2k
JP4
Jumper_2_Open
R57
120
R53
2.2k
R46
20k
+3.3V
RS485aTX
RS485aRX
RS485a_A
RS485a_B
GND

Conn
J9
Conn_01x04_Male
RS485a_A
RS485a_B
GND
J10
Conn_01x04_Male
RS485a_A
RS485a_B

RS485b
MAX3485
Q15
S8050
U5
MAX3485
C25
0.1uF
R42
7.5k
R50
2.2k
JP3
Jumper_2_Open
R56
120
R51
2.2k
R45
20k
+3.3V
MainRX2_RS485bTX
MainTX2_RS485bRX
RS485b_A
RS485b_B
GND

Conn
J7
Conn_01x04_Male
RS485b_A
RS485b_B
GND
J8
Conn_01x04_Male
RS485b_A
RS485b_B

書き込み
STlink
J3
Conn_01x10_Male
TCK
SWO
TMS
NRST
GND
STlinkTX
STlinkRX
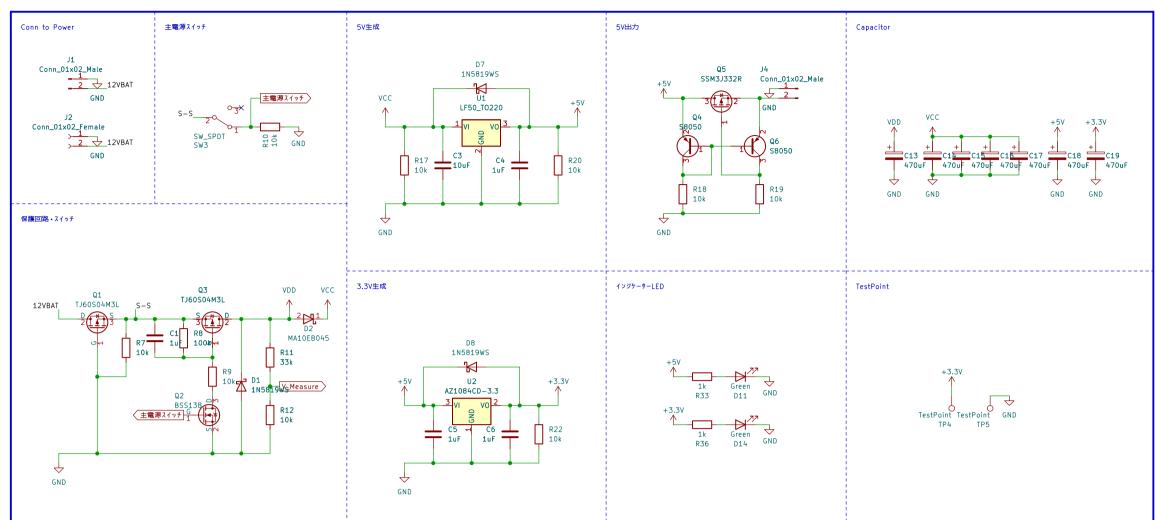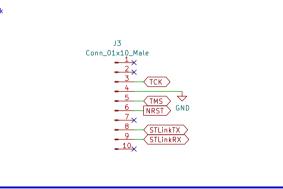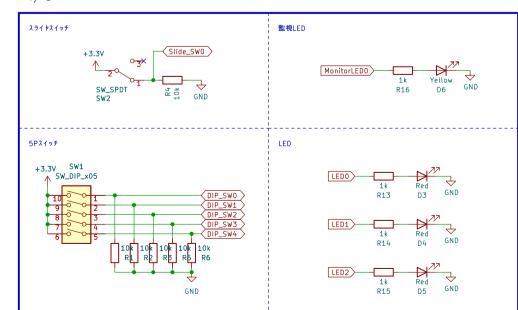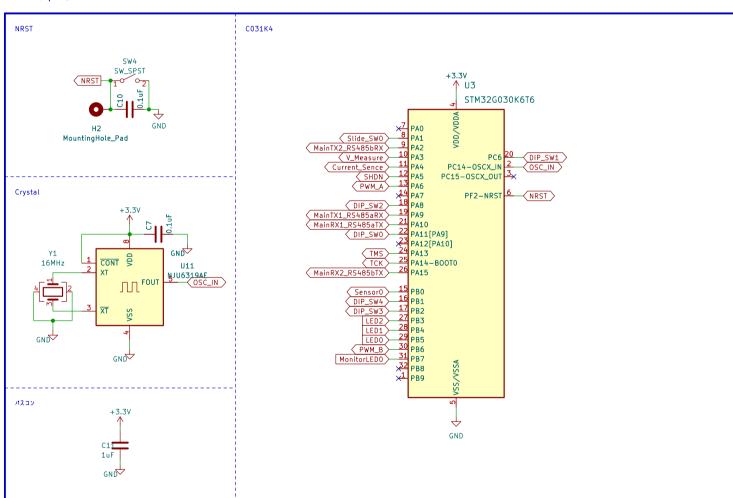
Jumper
RS485aTX
MainRX1_RS485aTX
STlinkTX
JP1
SolderJumper_3_Bridged12
RS485aRX
MainTX1_RS485aRX
STlinkRX
JP2
SolderJumper_3_Bridged12

I/O
スライドスイッチ
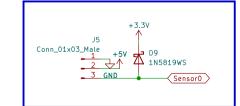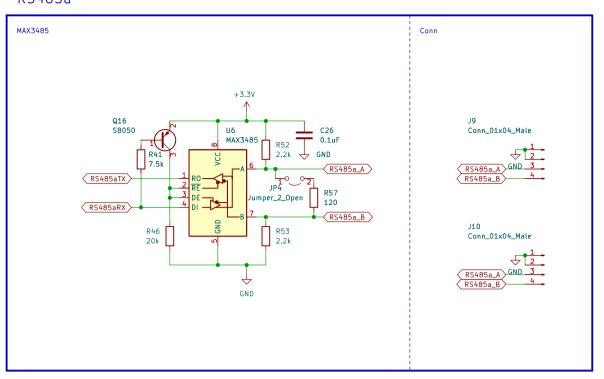+3.3V
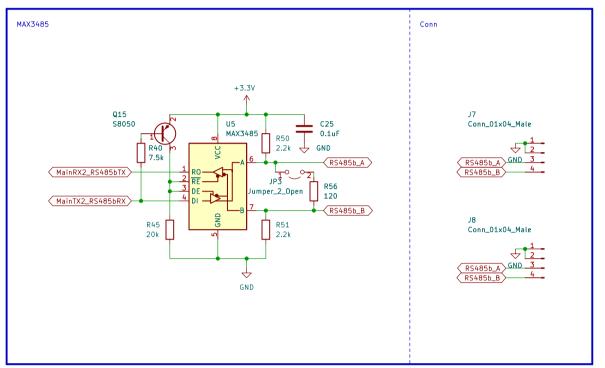Slide_SW0
SW_SPDT
SW2
GND

点灯LED
MonitorLED0
1k
R16
Yellow
D6
GND

5Pスイッチ
+3.3V
SW1
SW_DIP_x05
DIP_SW1
DIP_SW2
DIP_SW3
DIP_SW4
DIP_SW5
R6
GND

LED
LED0
1k
R13
Red
D3
LED1
1k
R14
Red
D4
LED2
1k
R15
Red
D5

マイコン
NRST
SW4
SW_SPDT
NRST
C
GND

Crystal
+3.3V
Y1
16MHz
U11
NJU6355AE
OSC_IN
GND

COB1kA
+3.3V
U3
STM32G030K6T6
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PA8
PA9
PA10
PA11[PA9]
PA12[PA10]
PA13
PA14-BOOT0
PA15
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PB8
PB9
VSS/VSSA
GND
Slide_SW0
MainTX2_RS485bRX
Current_Sence
PWM_A
DIP_SW2
MainTX1_RS485aRX
MainRX1_RS485aTX
DIP_SW3
TMS
TCK
MainRX2_RS485bTX
SensorID
DIP_SW4
DIP_SW5
LED0
LED1
LED2
PWM_B
MonitorLED0
PC6
PC15-OSCK_IN
PC15-OSCK_OUT
SHDN
PF2-NRST
DIP_SW1
OSC_IN
NRST

バッファ
+3.3V
C
GND

Conn to sensor
J5
Conn_01x03_Male
+3.3V
+5V
GND
D9
1N5819WS
SensorID

Hブリッジ
CurrentSensor
VDD
VCC
C22
+3.3V
R42
R47
U4
LT6106
D15
1N5819WS
Current_Sence
20mR
Vdrive
GND

Conn to Motor
J6
Conn_01x02_Female
Motor_A
Motor_B

Snubber
Motor_B
R67
MPR
D18
Red
C31
1uF
D19
Red
Motor_A

ハーフブリッジA
+3.3V +5V
C23
0.1uF
VCC
D16
DSS204DFL
Q17
BSS138
R58
U7
TLP2361
U9
IR2302
Q19
TPH3R70APL
D20
DSS204DFL
SHDN
Vdrive
Motor_A
Q20
TPH3R70APL
D21
DSS204DFL
GND GND
Vdrive
C20
10uF
GND

ハーフブリッジB
+3.3V +5V
C24
0.1uF
VCC
D17
DSS204DFL
Q18
BSS138
R60
U8
TLP2361
U10
IR2302
Q21
TPH3R70APL
D22
DSS204DFL
SHDN
Vdrive
Motor_B
Q22
TPH3R70APL
D23
DSS204DFL
GND GND
Vdrive
C21
10uF
GND