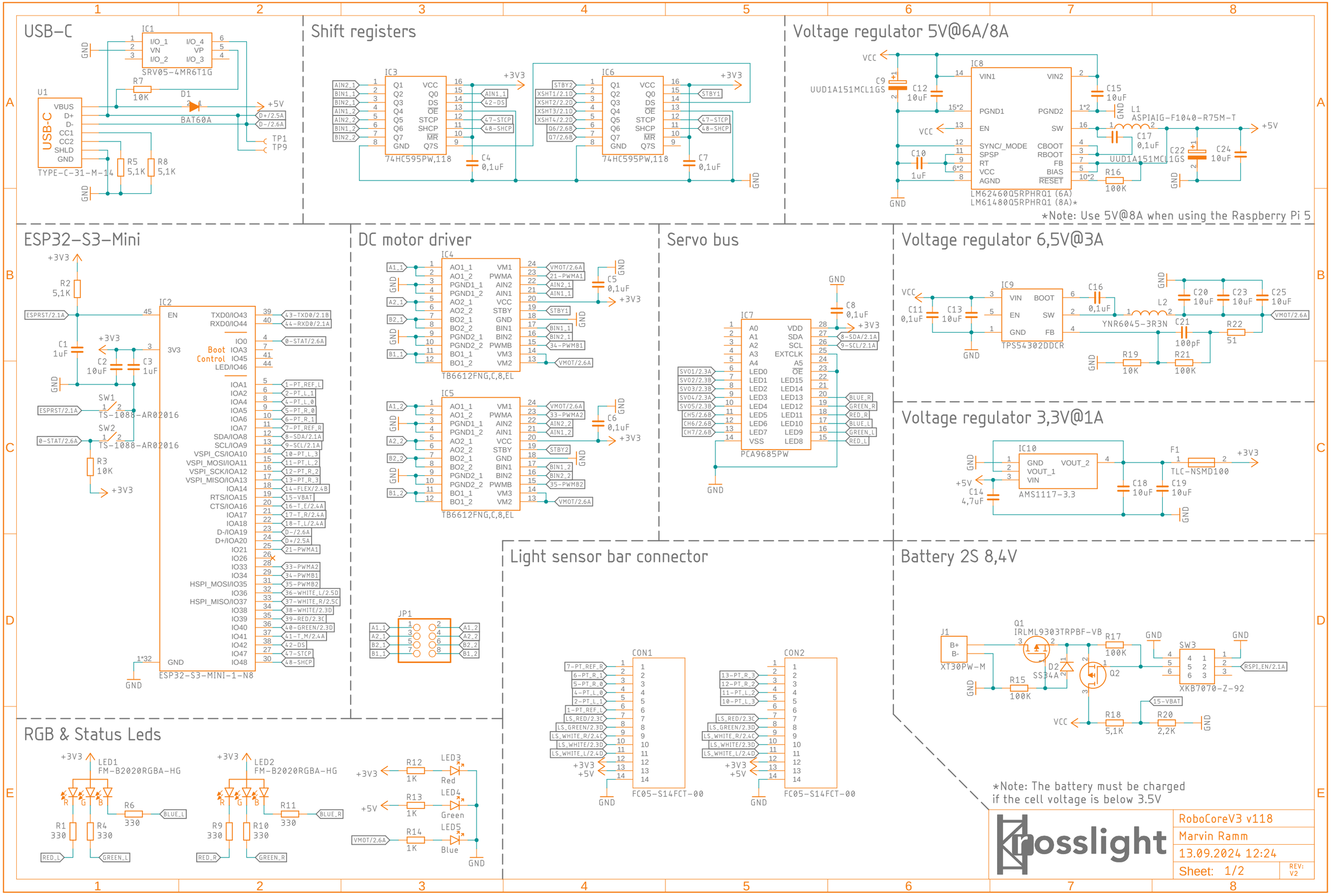
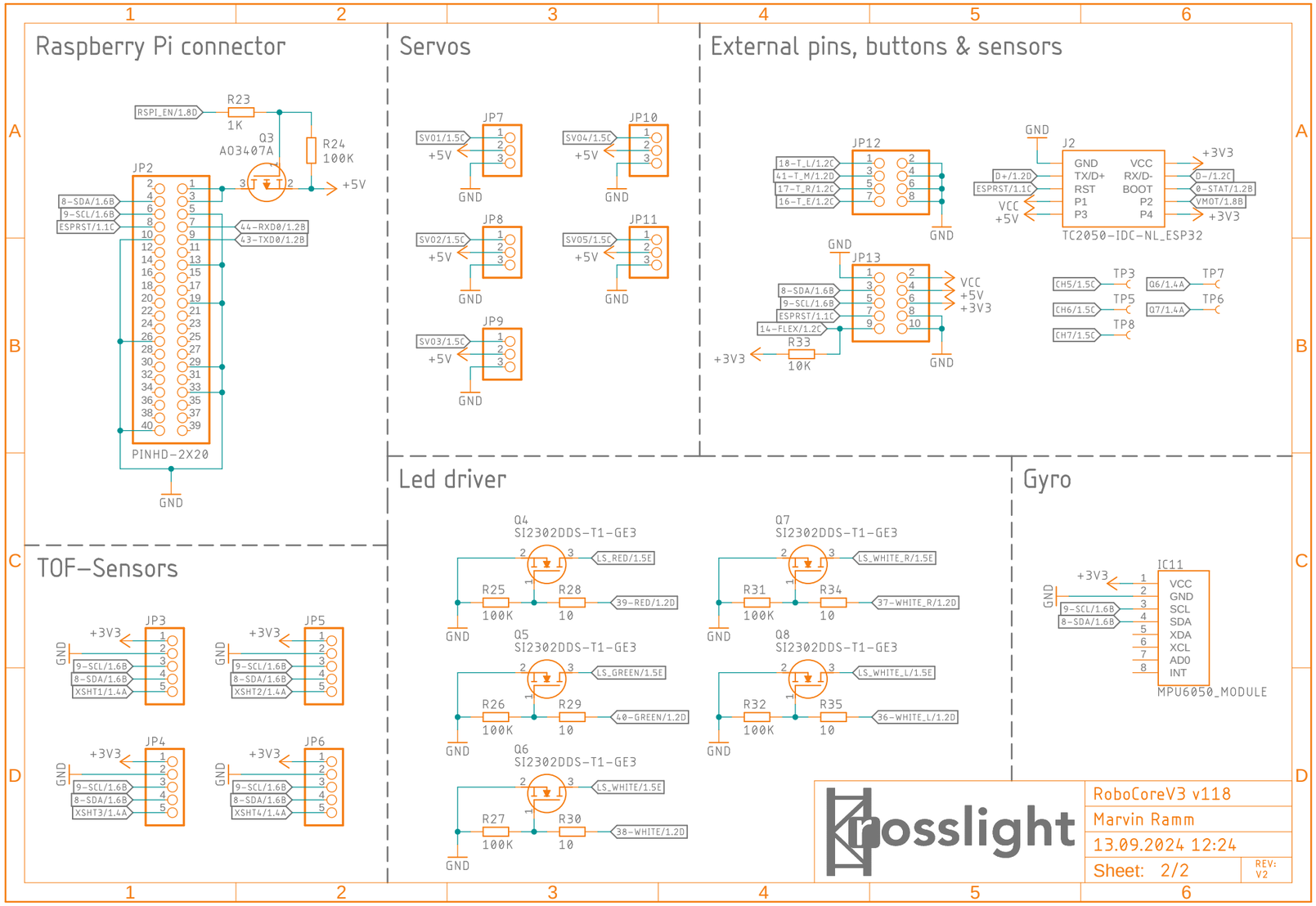

USB-C
IC1
SRV05-4MR6T1G
U1
TYPE-C-31-M-14
R7 10K
D1 BAT60A
R5 5,1K
R8 5,1K
TP1
TP9
Shift registers
IC3
IC6
74HC595PW,118
C4 0,1uF
C7 0,1uF
Voltage regulator 5V@6A/8A
IC8
C9 UUD1A151MCL1GS
C12 10uF
C15 10uF
L1 ASPIAIG-F1040-R75M-T
C17 0,1uF
C22 UUD1A151MCL1GS
C24 10uF
C10 1uF
R16 100K
LM62460Q5RPHRQ1 (6A)
LM61480Q5RPHRQ1 (8A)*
*Note: Use 5V@8A when using the Raspberry Pi 5
ESP32-S3-Mini
IC2
R2 5,1K
C1 1uF
C2 10uF
C3 1uF
SW1 TS-1088-AR02016
SW2 TS-1088-AR02016
R3 10K
ESP32-S3-MINI-1-N8
DC motor driver
IC4
IC5
TB6612FNG,C,8,EL
C5 0,1uF
C6 0,1uF
JP1
Servo bus
IC7
PCA9685PW
C8 0,1uF
Voltage regulator 6,5V@3A
IC9
TPS54302DDCR
C16 0,1uF
L2 YNR6045-3R3N
C20 10uF
C23 10uF
C25 10uF
C21 100pF
R22 51
R19 10K
R21 100K
Voltage regulator 3,3V@1A
IC10
AMS1117-3.3
F1 TLC-NSMD100
C14 4,7uF
C18 10uF
C19 10uF
Light sensor bar connector
CON1
CON2
FC05-S14FCT-00
Battery 2S 8,4V
J1 XT30PW-M
Q1 IRLML9303TRPBF-VB
D2 SS34A
Q2
R17 100K
R15 100K
SW3 XKB7070-Z-92
R18 5,1K
R20 2,2K
*Note: The battery must be charged if the cell voltage is below 3.5V
RGB & Status Leds
LED1 FM-B2020RGBA-HG
LED2 FM-B2020RGBA-HG
R6 330
R11 330
R1 330
R4 330
R9 330
R10 330
R12 1K
R13 1K
R14 1K
LED3 Red
LED4 Green
LED5 Blue
rosslight
RoboCoreV3 v118
Marvin Ramm
13.09.2024 12:24
Sheet: 1/2
REV: V2


Raspberry Pi connector
RSPI_EN/1.8D
R23
1K
Q3
AO3407A
R24
100K
+5V
JP2
8-SDA/1.6B
9-SCL/1.6B
ESPRST/1.1C
44-RXD0/1.2B
43-TXD0/1.2B
PINHD-2X20
GND
Servos
JP7
SV01/1.5C
JP8
SV02/1.5C
JP9
SV03/1.5C
JP10
SV04/1.5C
JP11
SV05/1.5C
External pins, buttons & sensors
JP12
18-T_L/1.2C
41-T_M/1.2D
17-T_R/1.2C
16-T_E/1.2C
J2
GND
TX/D+
RST
P1
P3
VCC
RX/D-
BOOT
P2
P4
D+/1.2D
ESPRST/1.1C
D-/1.2C
0-STAT/1.2B
VMOT/1.8B
+3V3
TC2050-IDC-NL_ESP32
JP13
8-SDA/1.6B
9-SCL/1.6B
ESPRST/1.1C
14-FLEX/1.2C
R33
10K
CH5/1.5C
CH6/1.5C
CH7/1.5C
Q6/1.4A
Q7/1.4A
TP3
TP5
TP8
TP7
TP6
TOF-Sensors
JP3
JP4
JP5
JP6
XSHT1/1.4A
XSHT2/1.4A
XSHT3/1.4A
XSHT4/1.4A
Led driver
Q4
SI2302DDS-T1-GE3
LS_RED/1.5E
R25
R28
39-RED/1.2D
Q5
LS_GREEN/1.5E
R26
R29
40-GREEN/1.2D
Q6
LS_WHITE/1.5E
R27
R30
38-WHITE/1.2D
Q7
LS_WHITE_R/1.5E
R31
R34
37-WHITE_R/1.2D
Q8
LS_WHITE_L/1.5E
R32
R35
36-WHITE_L/1.2D
100K
10
Gyro
IC11
VCC
GND
SCL
SDA
XDA
XCL
AD0
INT
MPU6050_MODULE
RoboCoreV3 v118
Marvin Ramm
13.09.2024 12:24
Sheet: 2/2
REV: V2