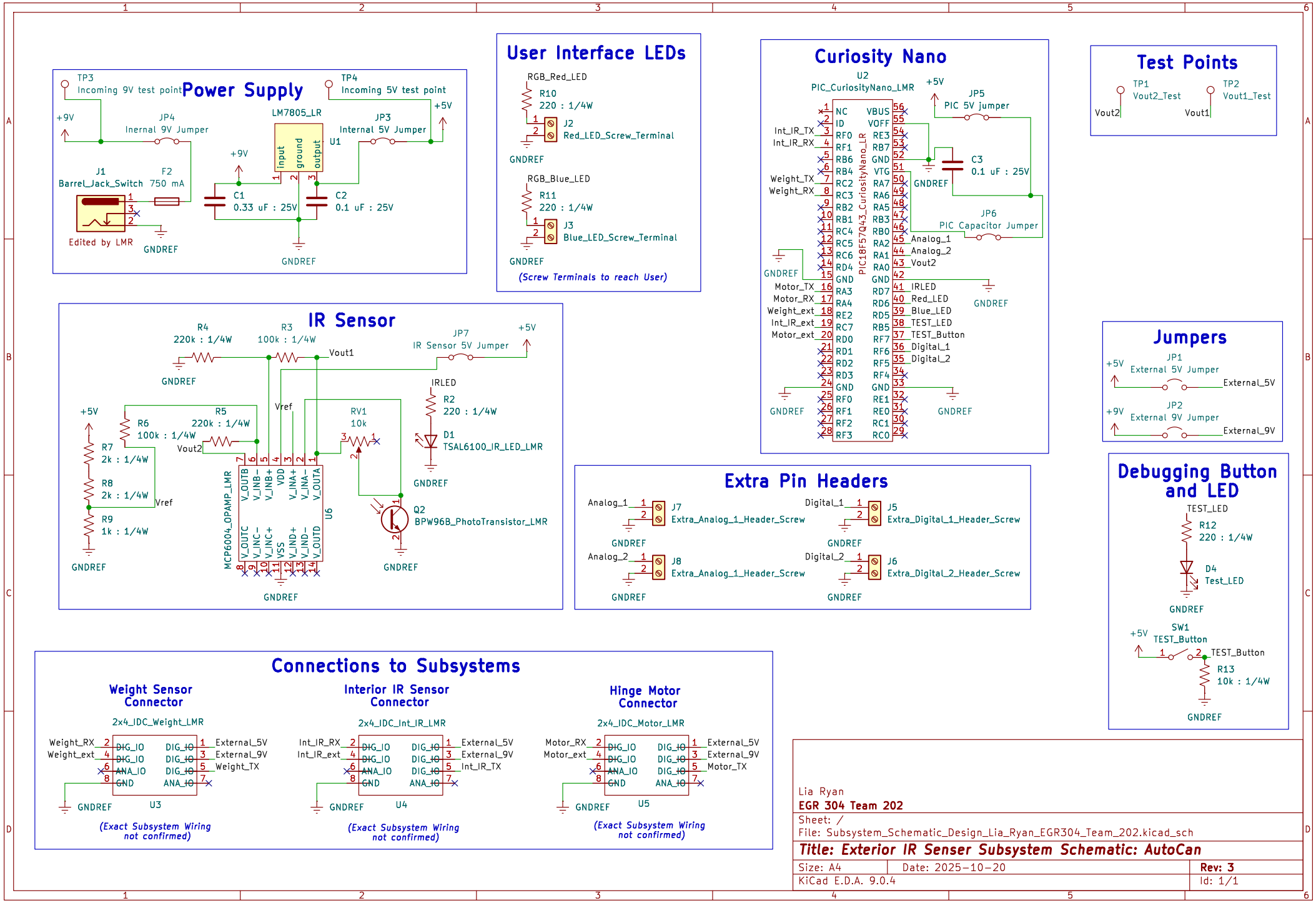
Power Supply
TP3
Incoming 9V test point
TP4
Incoming 5V test point
+9V
JP4
Inernal 9V Jumper
LM7805_LR
JP3
Internal 5V Jumper
+5V
U1
input
ground
output
J1
Barrel_Jack_Switch
F2
750 mA
C1
0.33 uF : 25V
C2
0.1 uF : 25V
Edited by LMR
GNDREF
User Interface LEDs
RGB_Red_LED
R10
220 : 1/4W
J2
Red_LED_Screw_Terminal
RGB_Blue_LED
R11
220 : 1/4W
J3
Blue_LED_Screw_Terminal
(Screw Terminals to reach User)
Curiosity Nano
U2
PIC_CuriosityNano_LMR
PIC18F57Q43_CuriosityNano_LR
JP5
PIC 5V jumper
C3
0.1 uF : 25V
JP6
PIC Capacitor Jumper
Int_IR_TX
Int_IR_RX
Weight_TX
Weight_RX
Motor_TX
Motor_RX
Weight_ext
Int_IR_ext
Motor_ext
Analog_1
Analog_2
Vout2
IRLED
Red_LED
Blue_LED
TEST_LED
TEST_Button
Digital_1
Digital_2
Test Points
TP1
Vout2_Test
TP2
Vout1_Test
Vout2
Vout1
IR Sensor
R4
220k : 1/4W
R3
100k : 1/4W
JP7
IR Sensor 5V Jumper
Vout1
R5
220k : 1/4W
R6
100k : 1/4W
R7
2k : 1/4W
R8
2k : 1/4W
R9
1k : 1/4W
Vref
RV1
10k
R2
220 : 1/4W
D1
TSAL6100_IR_LED_LMR
Q2
BPW96B_PhotoTransistor_LMR
MCP6004_OPAMP_LMR
U6
V_OUTB
V_INB−
V_INB+
VDD
V_INA+
V_INA−
V_OUTA
V_OUTC
V_INC−
V_INC+
VSS
V_IND+
V_IND−
V_OUTD
Jumpers
JP1
External 5V Jumper
External_5V
JP2
External 9V Jumper
External_9V
Extra Pin Headers
J7
Extra_Analog_1_Header_Screw
J8
Extra_Analog_1_Header_Screw
J5
Extra_Digital_1_Header_Screw
J6
Extra_Digital_2_Header_Screw
Debugging Button and LED
R12
220 : 1/4W
D4
Test_LED
SW1
TEST_Button
R13
10k : 1/4W
Connections to Subsystems
Weight Sensor Connector
2x4_IDC_Weight_LMR
Weight_RX
Weight_ext
External_5V
External_9V
Weight_TX
U3
Interior IR Sensor Connector
2x4_IDC_Int_IR_LMR
Int_IR_RX
Int_IR_ext
Int_IR_TX
U4
Hinge Motor Connector
2x4_IDC_Motor_LMR
Motor_RX
Motor_ext
Motor_TX
U5
(Exact Subsystem Wiring not confirmed)
Lia Ryan
EGR 304 Team 202
Sheet: /
File: Subsystem_Schematic_Design_Lia_Ryan_EGR304_Team_202.kicad_sch
Title: Exterior IR Senser Subsystem Schematic: AutoCan
Size: A4
Date: 2025-10-20
Rev: 3
KiCad E.D.A. 9.0.4
Id: 1/1