

U4  
PY32F003F1xPx

Pin	Signal	Component
19	PA0	column_end
20	PA1	R_Sens_LED
1	PA2	R_Sens_B
2	PA3	R_Sens_Z
3	PA4	R_Sens_A
4	PA5	motor_IN_A
5	PA6	motor_IN_B
7	GND	
9	VCC	
10	WD	
11	WC	
12	PA12	P85
13	PA13	TX Bottom
14	PA14	RX Top
15	PF4-B00T0	
16	PF0-OSC_IN	Debug Pin 2
17	PF1-OSC_OUT	Debug Pin 1
18	PF2-RST	RST

Power Supply: +5V, C1 (100nF), GND

SWD Connections: RST, SWC, SWD, GND

J3 Conn\_01x05

U5  
L9110S

+12V

2 VCC IN\_A 6 Motor\_IN\_A  
3 VCC IN\_B 7 Motor\_IN\_B

5 GND OUT\_A 1  
8 GND OUT\_B 4

GND

C2 100nF

M1  
GA12-N20 12V 60rpm

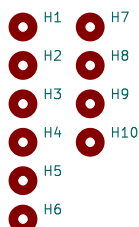
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The diagram shows a 4-channel IR receiver module. It consists of four ITR8307 IR receiver ICs (U1, U2, U3, U4) and one AP2302B decoder IC (Q1). Each receiver IC has a 20K pull-up resistor (R1, R2, R3, R4) to +5V. The outputs of the receiver ICs are connected to the inputs of the decoder IC. The decoder IC has a 100R pull-up resistor (R5) to +5V and a 20K pull-down resistor (R6) to GND. The decoder IC output is connected to the IR Sens LED. The module is powered by +5V and GND.

$$R = [V_s - (3 \times V_f)] / I_f = 20 \text{ Ohm}$$

Pinout diagram for the J4 connector (Conn\_01x09):

Signal	Pin
GND	1
RX Top	2
TX Bottom	3
Data Return Path	4
Debug Pin 1	5
Debug Pin 2	6
Motor_IN_A	7
Motor_IN_B	8
IR Sens LED	9



Designer: Toon Van Eyck  
Repo: [github.com/ToonVanEyck/OpenFlap](https://github.com/ToonVanEyck/OpenFlap)  
Commit: v0.0.0-unstable-136-gc981a45-dirty  
**OpenFlap**  
Sheet: /  
File: side\_panel.kicad\_sch

**Title: Side Panel**

Size: A4	Date: 2025-03-09
KiCad E.D.A. 8.0.6	

Rev: 5.0.2  
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