+5V
LED_DAT1
GND
D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D16 D17 D18 D19 D20 D21 D22 D23 D24 D25 D26 D27
WS2812C
+5V
GND
D28 D29 D30 D31 D32 D33 D34 D35 D36 D37 D38 D39 D40 D41 D42 D43 D44 D45 D46 D47 D48
WS2812C
+5V
LED_DAT2
GND
D49 D50 D51 D52 D53 D54 D55 D56 D57 D58 D59 D60 D61 D62 D63 D64 D65 D66 D67 D68 D69
WS2812C

LEFT master: 69 LEDs: two independent open data strings, D1–D48 outer clockwise (D13 apex).
D49–D68 inner loop: D69 centre last. J1.1=LED_DAT1 (48): J1.5=LED_DAT2 (21).

+5V
+3.3V
U2
XC6206P332MR-G
VI
VO
GND
C2
1uF
C1
1uF
GND

+3.3V
C5
100nF
GND
U1
AW96105DNR
SCL
SDA
VCC
GND
INT_N
CS4 TOUCH_SIDE_A T1
CS3 TOUCH_TOP T3
CS2
CS1
CS0 TOUCH_SIDE_B T2
GND

LED_DAT1
GND
GND
LED_DAT2
SCL
SDA
+5V
J1
FH34SRJ-10S-0.5SH
MP
GND

U2: XC6206P332MR-G: C2 local 1uF input, C1 shared 1uF output reservoir, C5 local 100nF AW bypass.
C1/C2: 0402 CL05A105KA5NQNC, 25V X5R; verify effective capacitance under bias.
AW93205: T1=CS4/pin9; T3=CS3/pin8; T2=CS0/pin7. CS1/CS2 spare; INT_N unused.

J1: FH34SRJ-10S-0.5SH, 10 x 0.5mm dual-contact FFC; manual rear assembly.
1 LED_DAT1; 2–4 GND; 5 LED_DAT2; 6 SCL; 7 SDA; 8–10 +5V; MP GND.
0.3mm mating FFC; verify actual cable continuity before power.

C7–C22 outer; C23/C27–C32 inner; C33 centre: 100nF groups. C24–C26: distributed 1uF.

C55: fitted 10uF entry bulk capacitor; C56 retired.

+5V
GND
C7 100nF
C8 100nF
C10 100nF
C11 100nF
C12 100nF
C13 100nF
C14 100nF
C15 100nF
C16 100nF
C17 100nF
C18 100nF
C19 100nF
C20 100nF
C21 100nF
C22 100nF
C23 100nF
C24 1uF
C25 1uF
C26 1uF
C55 10uF

Prototype shared decoupling: verify rail transients, reset/data integrity and effective capacitance at 5V.
PlacementAnchor / LEDGroup fields map shared capacitors to the approved fit; keep local return paths short.

C27–C32: inner-loop groups; C33: centre-only local 100nF.

+5V
GND
C27 100nF
C28 100nF
C29 100nF
C30 100nF
C31 100nF
C32 100nF
C33 100nF

PWR_FLAG GND
PWR_FLAG +5V

neggl.es

Sheet: espurr-ears	
File: espurr-ears.kicad_sch	
Title: espurr v2 ear	
Size: A3	Date: 2026-10-14
KiCad E.D.A. 10.0.4	Rev: 1
	Id: 1/1