129.3 github.com /enph253–2025–team5/ robot–motherboard–pcb ROBOT vs.o.o MOTHERBOARD Designed by George Sleen

BOARD CHARACTERISTICS

1.6000 mm Copper Layer Count: Board Thickness:

Board overall dimensions: 129.2860 mm x 78.7400 mm

Min track/spacing: 0.1000 mm / 0.1000 mm Min hole diameter: 0.3000 mm

Copper Finish: None Impedance Control: No Castellated pads: Plated Board Edge: No No

Edge card connectors: No

Layer Name	Туре	Material	Thickness (mm)	Color	Epsilon R	Loss Tangent
F.Silkscreen	Top Silk Screen	Not specified	0 mm	Not specified	1	0
F.Paste	Top Solder Paste		0 mm		1	0
F.Mask	Top Solder Mask	Not specified	0.01 mm	Not specified	3.3	0
F.Cu	copper		0.035 mm		1	0
Dielectric	core	FR4	1.51 mm	Not specified	4.5	0.02
B.Cu	copper		0.035 mm		1	0
B.Mask	Bottom Solder Mask	Not specified	0.01 mm	Not specified	3.3	0
B.Paste	Bottom Solder Paste		0 mm		1	0
B.Silkscreen	Bottom Silk Screen	Not specified	0 mm	Not specified	1	0

			i
			ı
George Sleen			
Team 5			.
Sheet: File: robot-moth	nerboard.kicad_pcb		D
Title: Robot	Motherboard		ı
Size: A4	Date: 2025-07-04	Rev: v3.0.0	
KiCad E.D.A. 9.0	.2	ld: 1/4	.

129.3 82.4 62.4

BOARD CHARACTERISTICS

Copper Layer Count: 2 Board Thickness: 1.6000 mm

Board overall dimensions: 129.2860 mm x 78.7400 mm

Min track/spacing: 0.1000 mm / 0.1000 mm Min hole diameter: 0.3000 mm

Copper Finish: None Impedance Control: No Castellated pads: No Plated Board Edge: No

Edge card connectors: No

Layer Name	Туре	Material	Thickness (mm)	Color	Epsilon R	Loss Tangent
F.Silkscreen	Top Silk Screen	Not specified	0 mm	Not specified	1	0
F.Paste	Top Solder Paste		0 mm		1	0
F.Mask	Top Solder Mask	Not specified	0.01 mm	Not specified	3.3	0
F.Cu	copper		0.035 mm		1	0
Dielectric	core	FR4	1.51 mm	Not specified	4.5	0.02
B.Cu	copper		0.035 mm		1	0
B.Mask	Bottom Solder Mask	Not specified	0.01 mm	Not specified	3.3	0
B.Paste	Bottom Solder Paste		0 mm		1	0
B.Silkscreen	Bottom Silk Screen	Not specified	0 mm	Not specified	1	0

George Sleen	
Team 5	
Sheet:	
File: robot-motherboard.kicad_pcb	D

Title: Robot		
Size: A4	Date: 2025-07-04	Rev: v3.0.0
KiCad E.D.A. 9.0	2	ld: 2/4

3 4

129.3 82.4 3V3 OUT GND WingO_S 3V3 SDA SCL GND 12C0 I2C1 Pull-ups 470R 10K 4k7 4k7 4k7 4k7 (Optional) VOUT-User.Input G1 SSD1306_OLED -INO -N1 GND 12 2 RX0 TX0 C3

BOARD CHARACTERISTICS

Copper Layer Count: 2 Board Thickness: 1.6000 mm

Board overall dimensions: 129.2860 mm x 78.7400 mm

Min track/spacing: 0.1000 mm / 0.1000 mm Min hole diameter: 0.3000 mm

Copper Finish:NoneImpedance Control:NoCastellated pads:NoPlated Board Edge:No

Edge card connectors: No

Layer Name	Туре	Material	Thickness (mm)	Color	Epsilon R	Loss Tangent
F.Silkscreen	Top Silk Screen	Not specified	0 mm	Not specified	1	0
F.Paste	Top Solder Paste		0 mm		1	0
F.Mask	Top Solder Mask	Not specified	0.01 mm	Not specified	3.3	0
F.Cu	copper		0.035 mm		1	0
Dielectric	core	FR4	1.51 mm	Not specified	4.5	0.02
B.Cu	copper		0.035 mm		1	0
B.Mask	Bottom Solder Mask	Not specified	0.01 mm	Not specified	3.3	0
B.Paste	Bottom Solder Paste		0 mm		1	0
B.Silkscreen	Bottom Silk Screen	Not specified	0 mm	Not specified	1	0

George Sleer	n	
Team 5		
Sheet:		
File: robot-	motherboard.kicad_pcb	
Title: Rob	oot Motherboard	
Siza. M/I	Date: 2025_07_04	Pev: v3.0.0

mee. Nobot			
Size: A4	Date: 2025-07-04		Rev: v3.0.0
KiCad E.D.A. 9.0	.2		ld: 3/4
		E	

129.3 82.4 J14 000 M3_PTH 100nF (C5) L00nF 100nF 100nF 100nF 100nF C10 100nF 00000

BOARD CHARACTERISTICS

1.6000 mm Copper Layer Count: Board Thickness:

Board overall dimensions: 129.2860 mm x 78.7400 mm

Min track/spacing: 0.1000 mm / 0.1000 mm Min hole diameter: 0.3000 mm

Copper Finish: Impedance Control: No None Castellated pads: Plated Board Edge: No No

Edge card connectors: No

Layer Name	Туре	Material	Thickness (mm)	Color	Epsilon R	Loss Tangent
F.Silkscreen	Top Silk Screen	Not specified	0 mm	Not specified	1	0
F.Paste	Top Solder Paste		0 mm		1	0
F.Mask	Top Solder Mask	Not specified	0.01 mm	Not specified	3.3	0
F.Cu	copper		0.035 mm		1	0
Dielectric	core	FR4	1.51 mm	Not specified	4.5	0.02
B.Cu	copper		0.035 mm		1	0
B.Mask	Bottom Solder Mask	Not specified	0.01 mm	Not specified	3.3	0
B.Paste	Bottom Solder Paste		0 mm		1	0
B.Silkscreen	Bottom Silk Screen	Not specified	0 mm	Not specified	1	0

George Sleen Team 5 Sheet:

File: robot-motherboard.kicad_pcb Title. Debet Metherheard

Title: Robot Motherboard					
Size: A4	Date: 2025-07-04	Rev: v3.0.0			
KiCad E.D.A. 9.0	.2	ld: 4/4			