

A

A

B

B

C

C

D

D

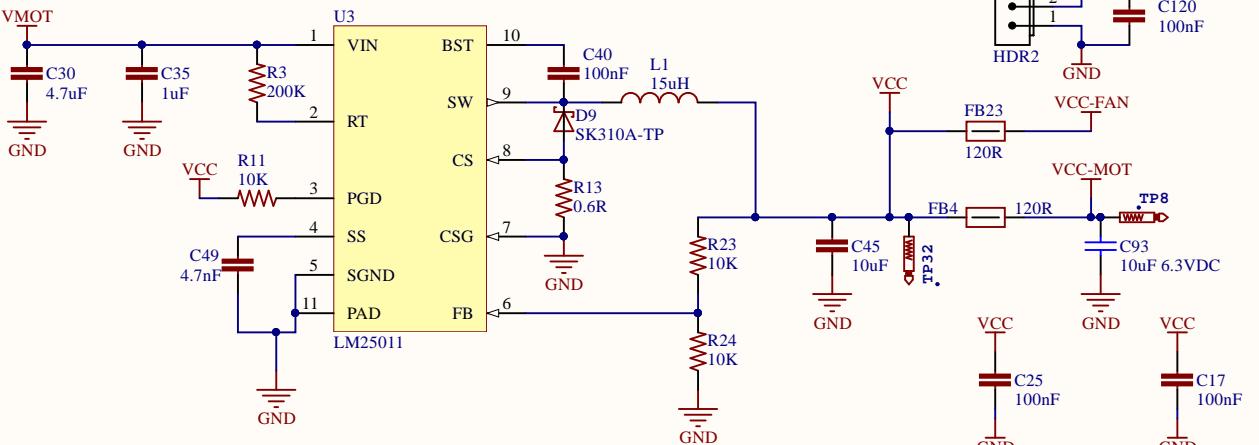
Einsy Breakout 0.0a
UltiMachine
9/18/2017

Notes:

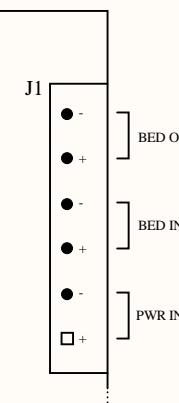
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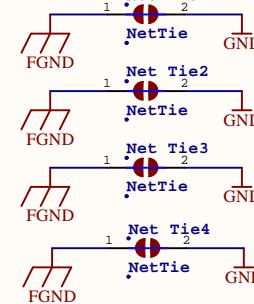
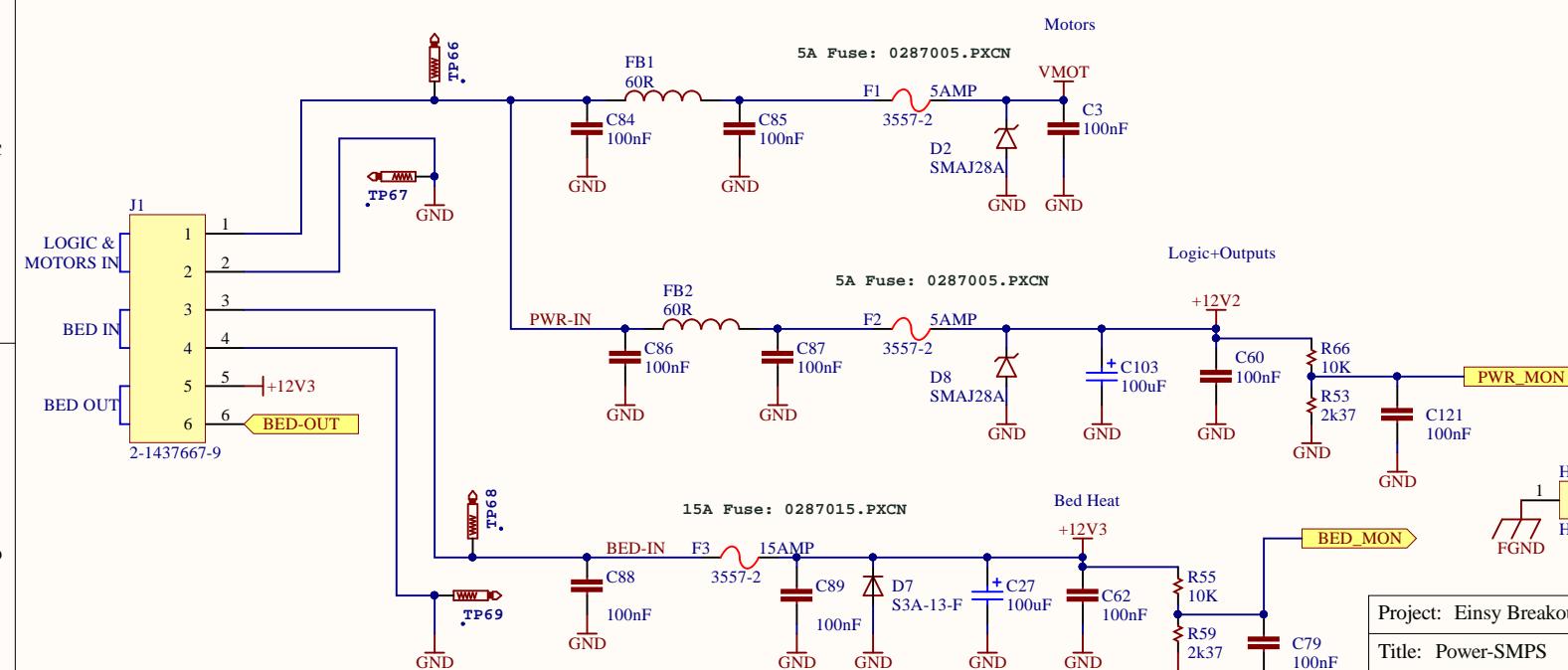
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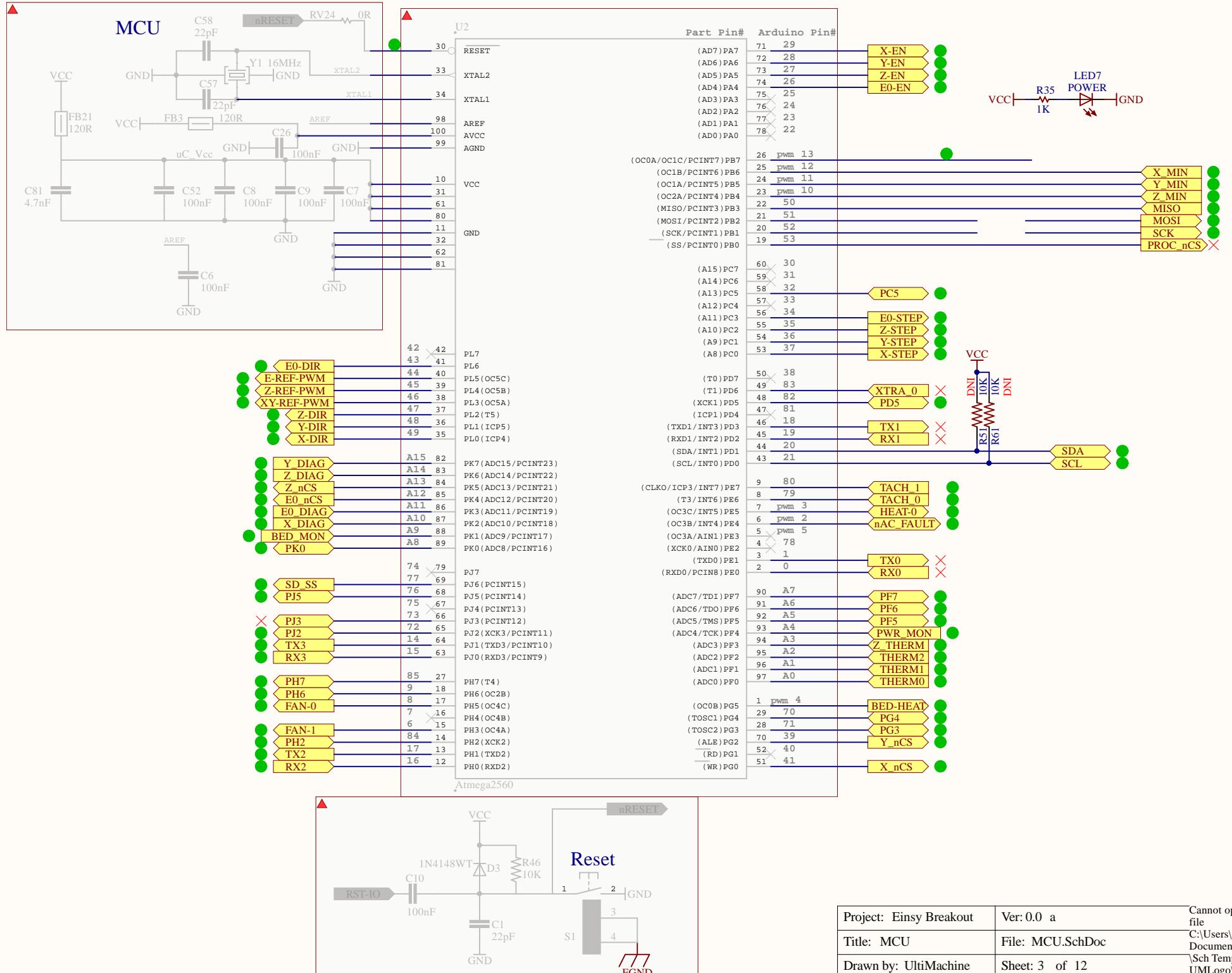
TOP BOARD EDGE



Power Input

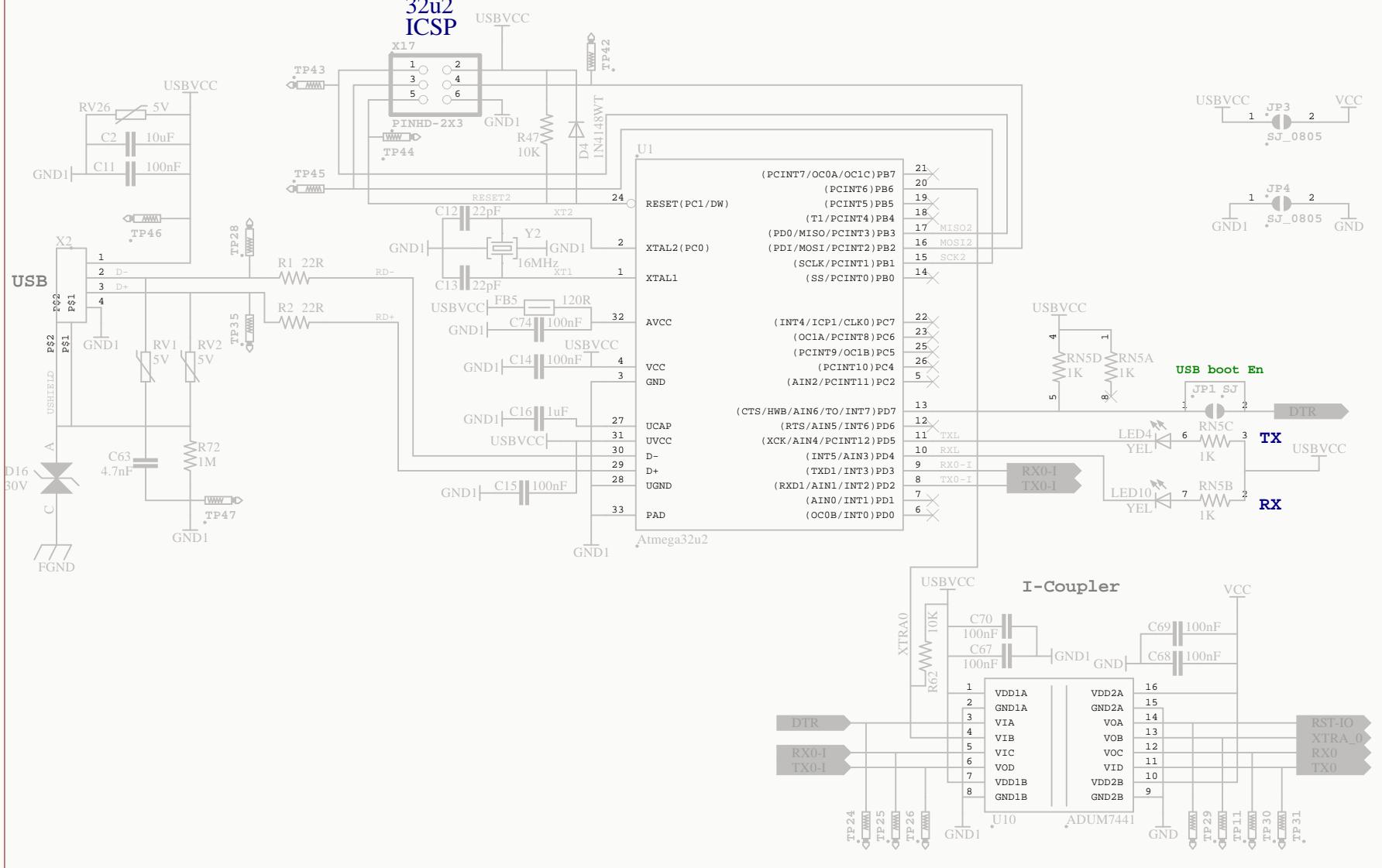


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Title: Power-SMPS	File: Power-SMPS.SchDoc	
Drawn by: UltiMachine	Sheet: 2 of 12	



Atmega 32u2 USB

USB to Serial



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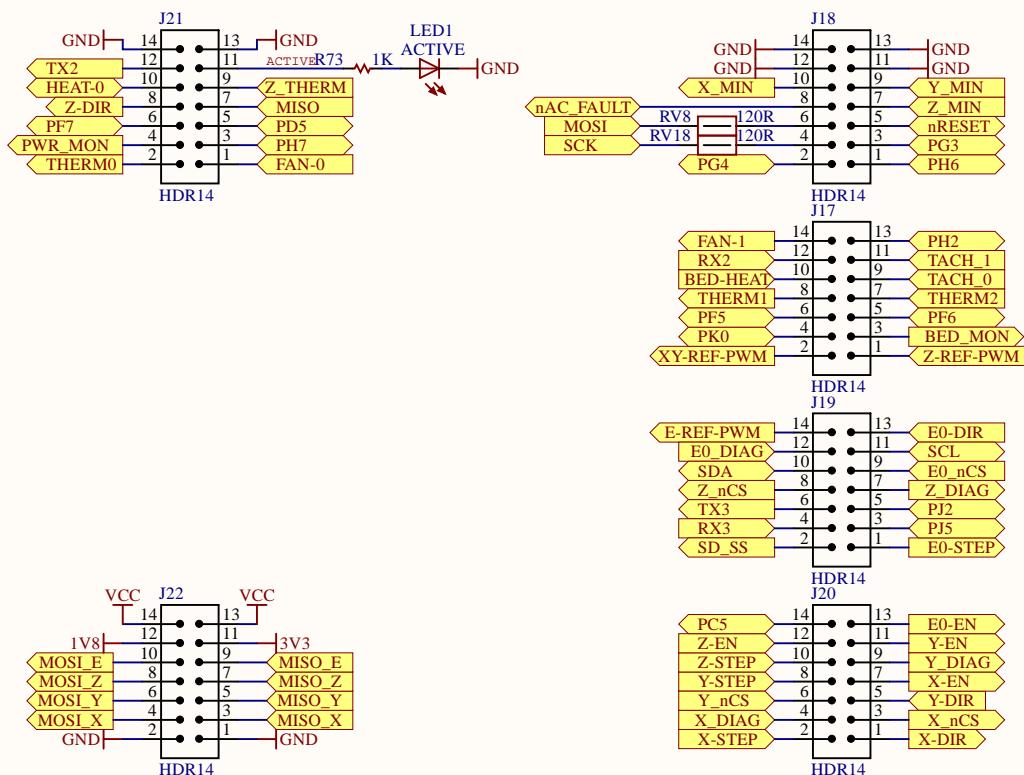
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A

 $V_{CC} = 5V0$ 

B

A

B

C

C

D

D

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Ver: 0.0 a

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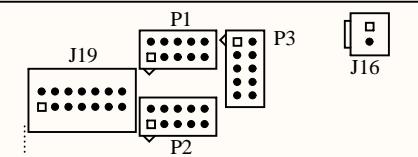
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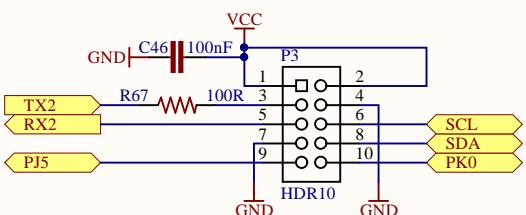
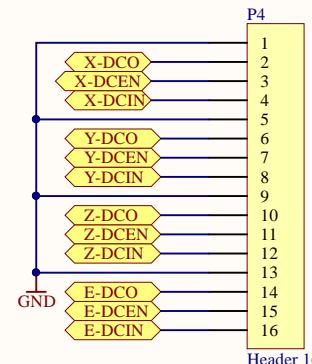
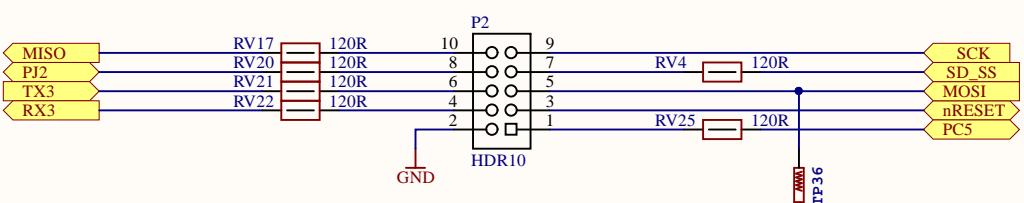
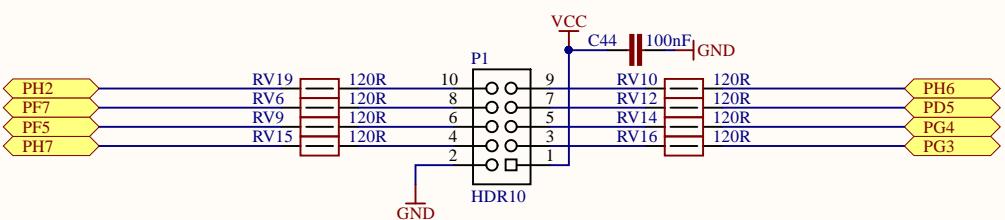
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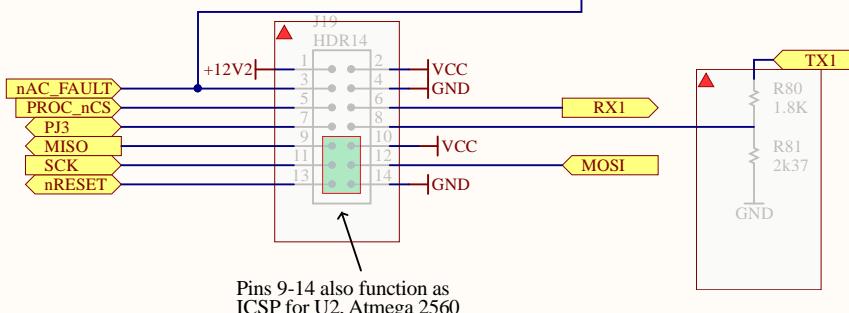
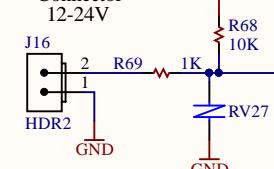


Connector Layout

Expansion Connectors



Power Fault Relay Connector 12-24V



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Ver: 0.0 a

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Sheet: 6 of 12

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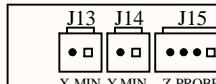
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TOP BOARD EDGE



X-MIN Y-MIN Z-PROBE

Connector Layout

A

A

3

E

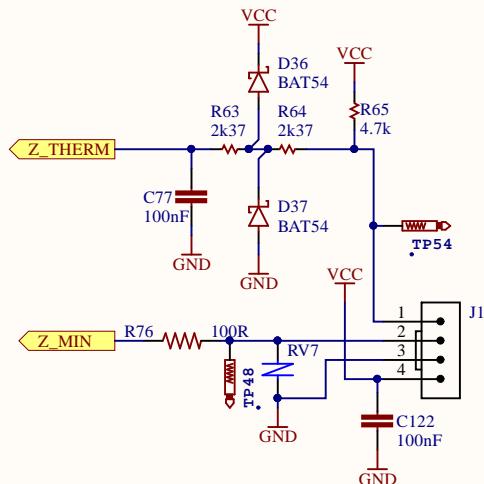
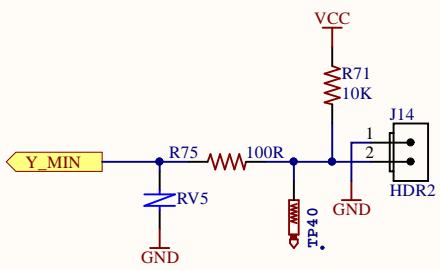
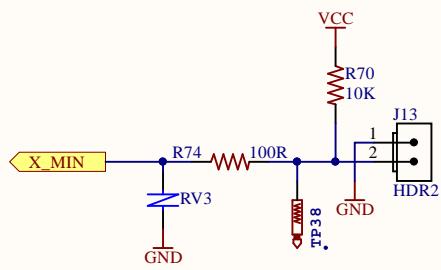
2

6

8

1

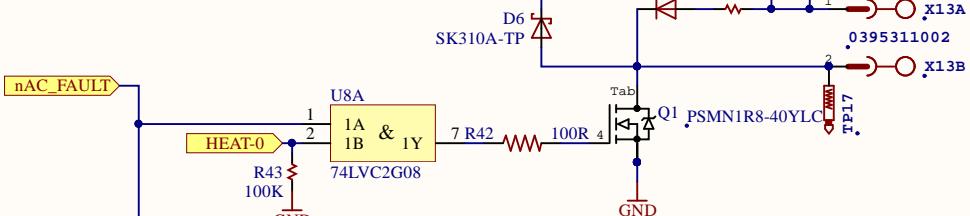
End Stops



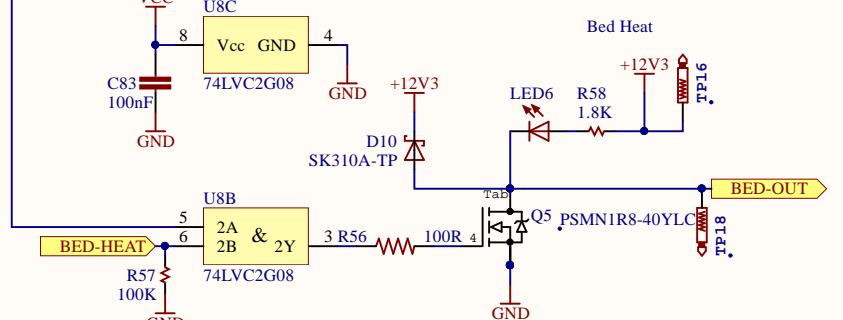
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Heater Outputs

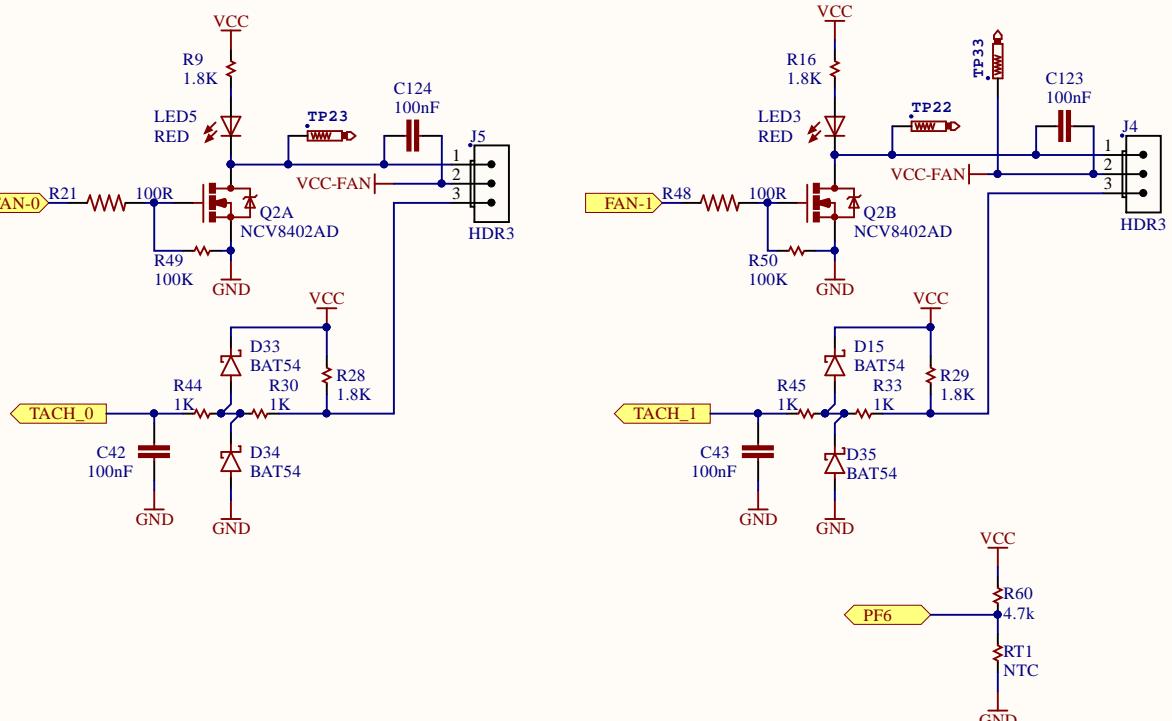
A



B

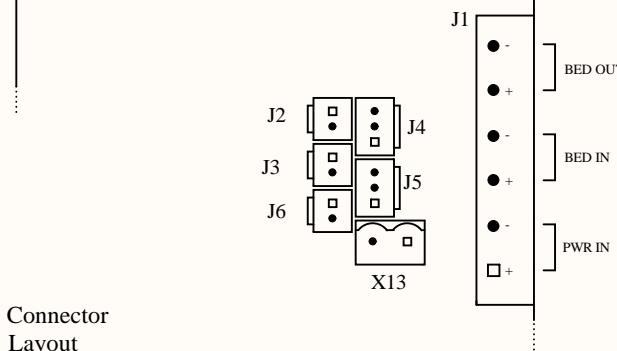


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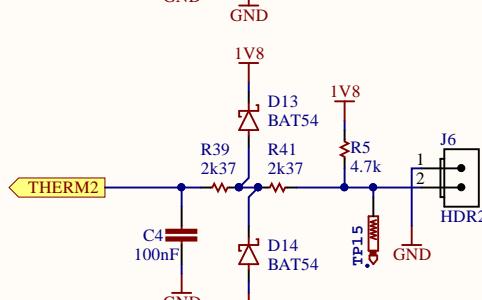
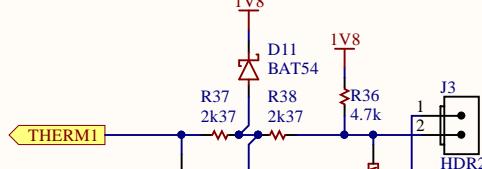
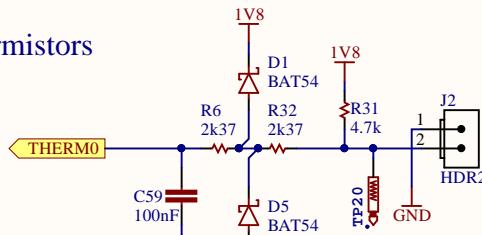
3

TOP BOARD EDGE



Connector
Layout

Thermistors



Project: Einsy Breakout

Title: Heaters

Drawn by: UltiMachine

Ver: 0.0 a

File: Heaters.SchDoc

Sheet: 8 of 12

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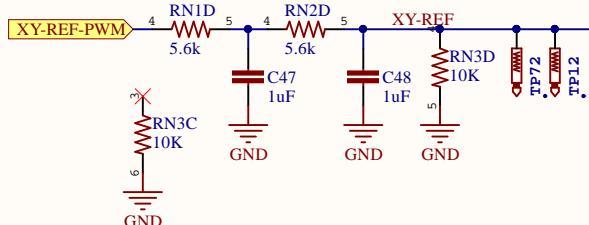
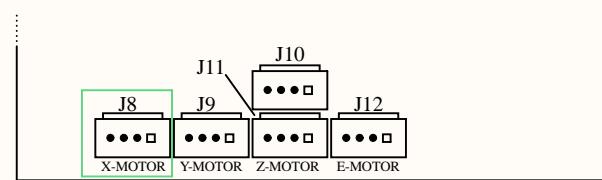
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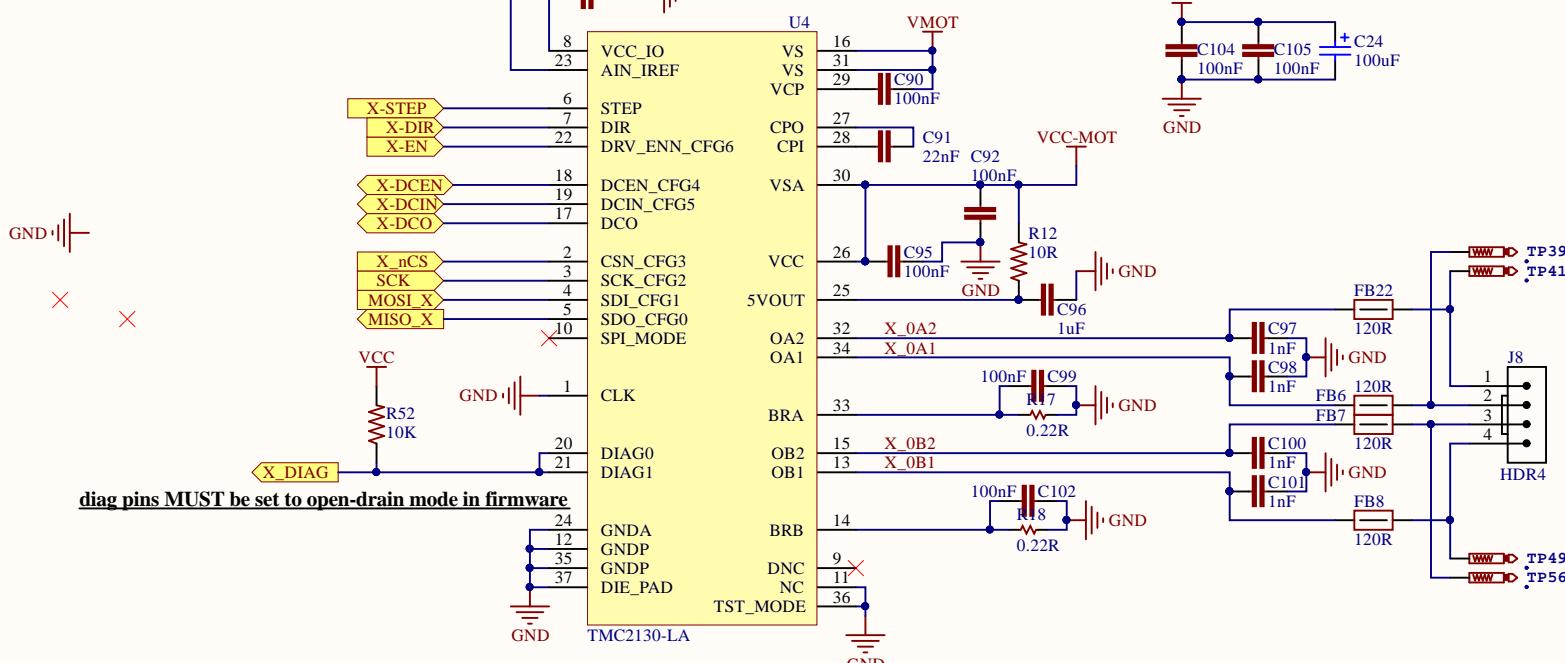
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Connector
Layout



Motor X

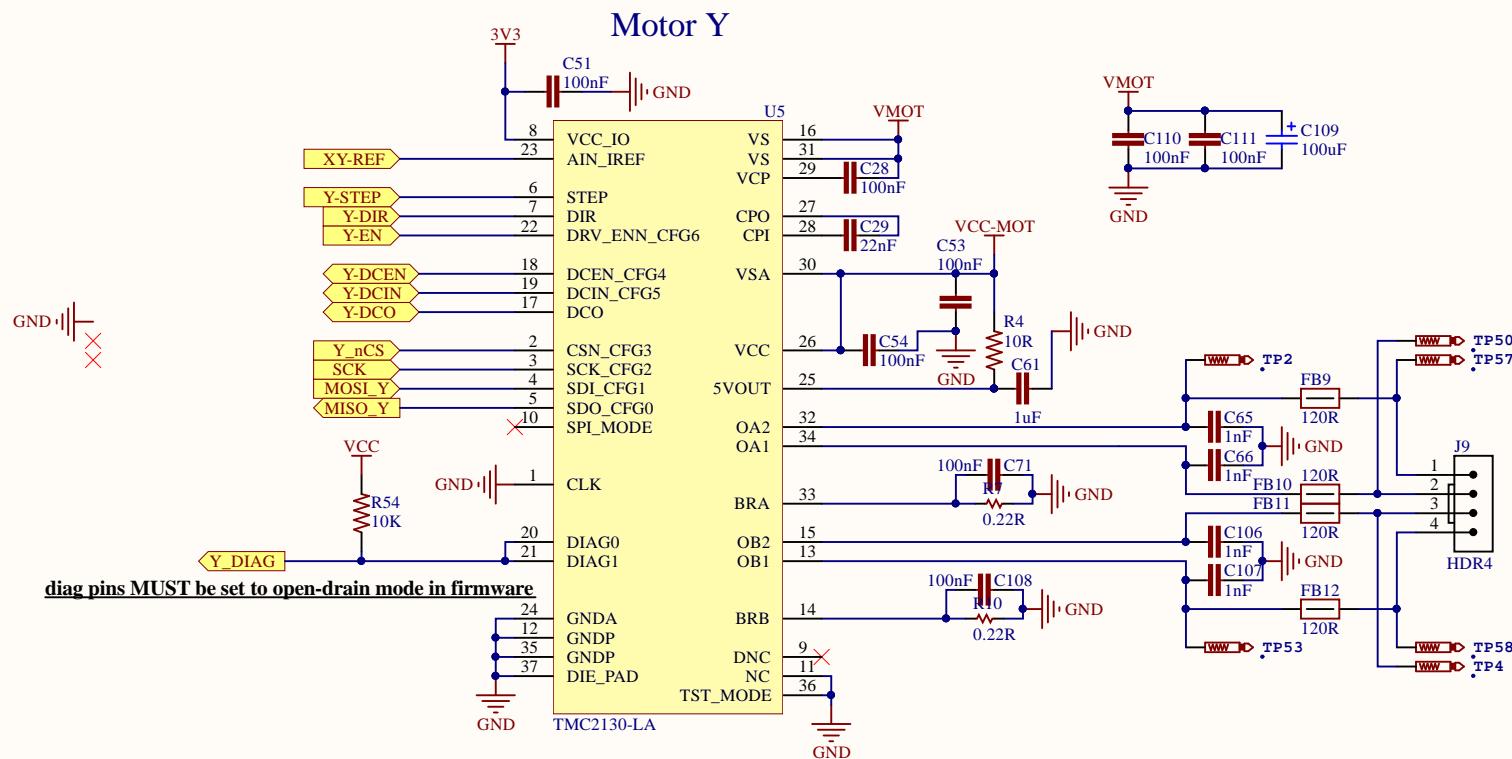
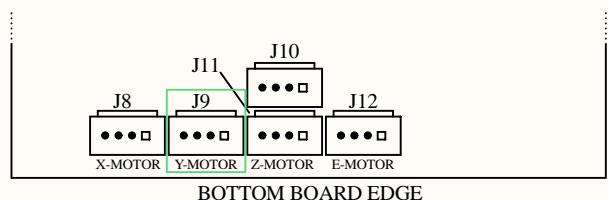


Deprecated Test Points	
X_0A1	TP75
X_0A2	TP73
X_0B1	TP1
X_0B2	TP74

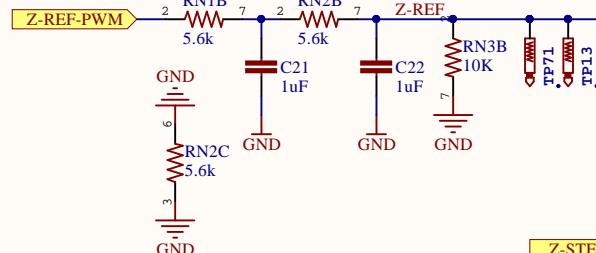
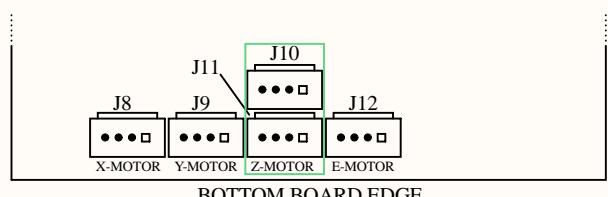
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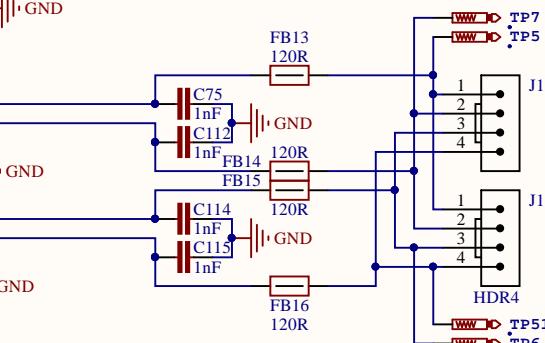
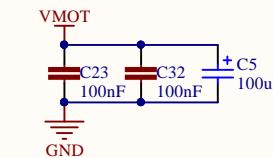
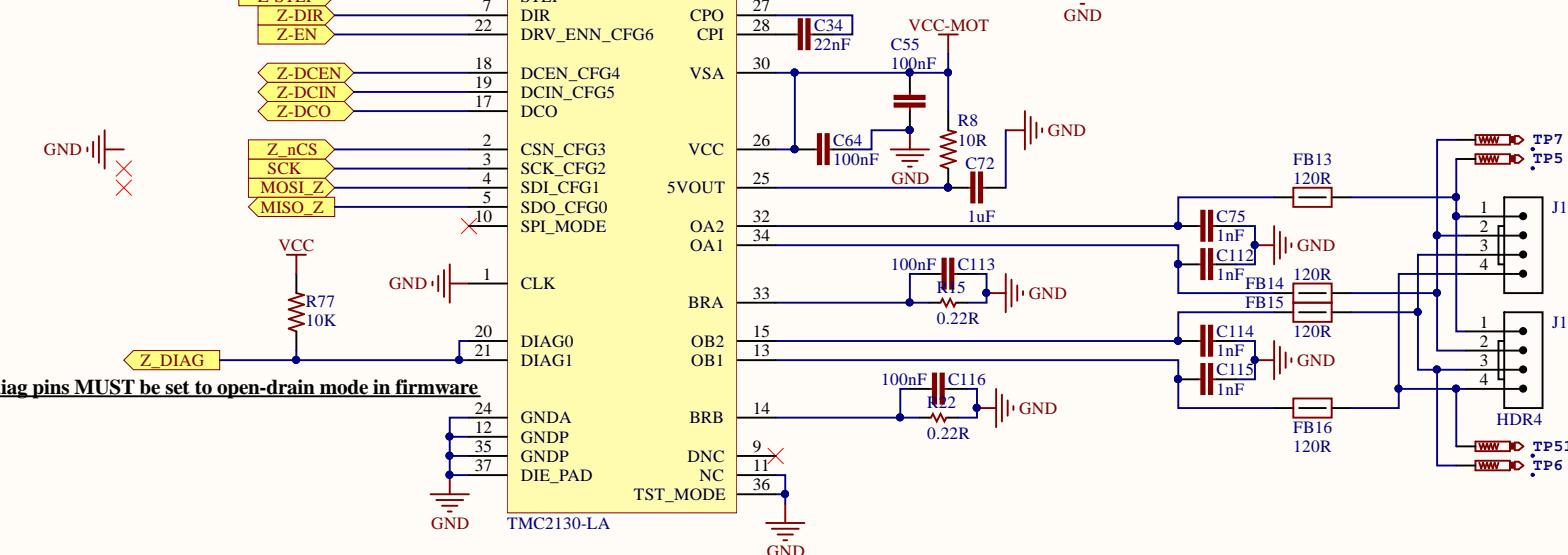
Connector
Layout



Connector
Layout

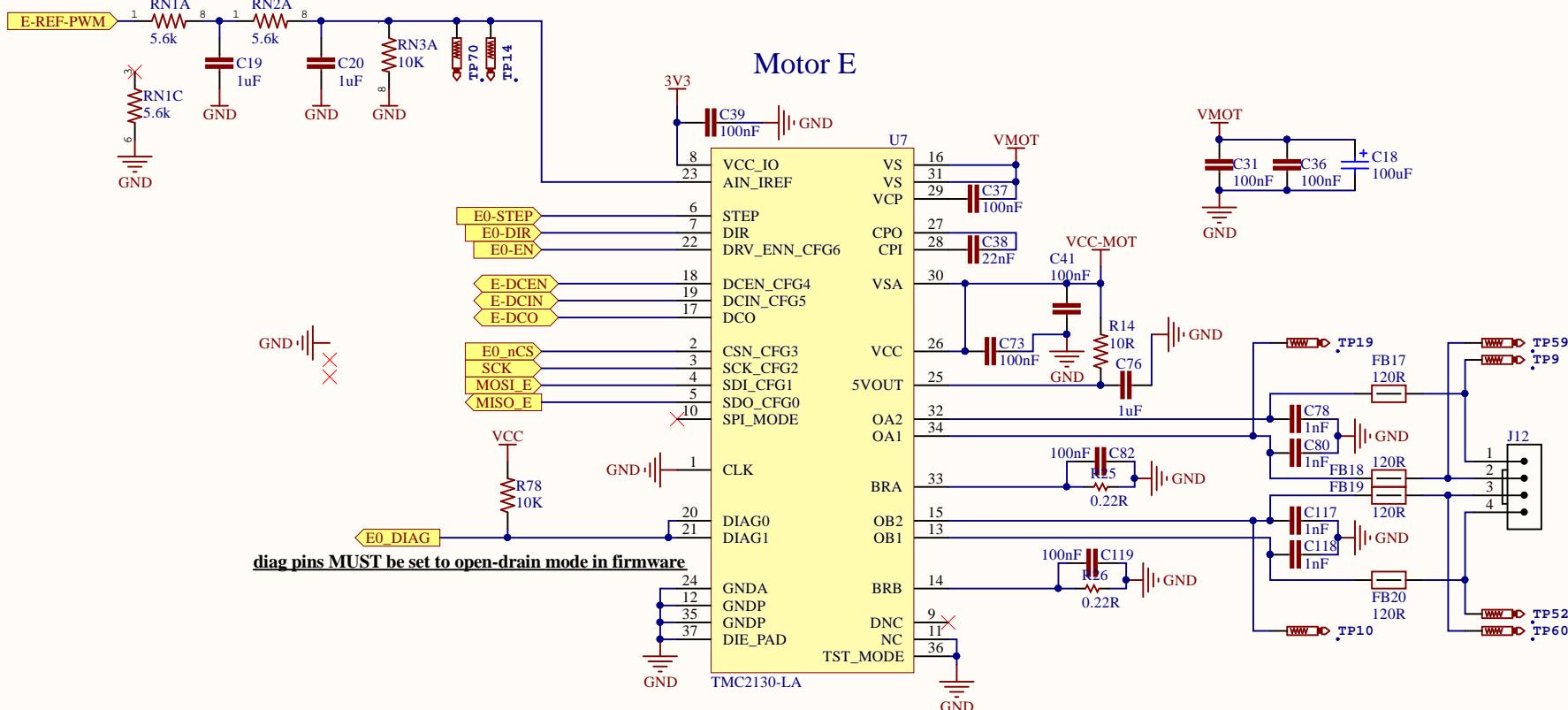
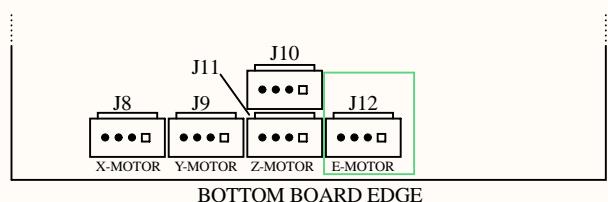


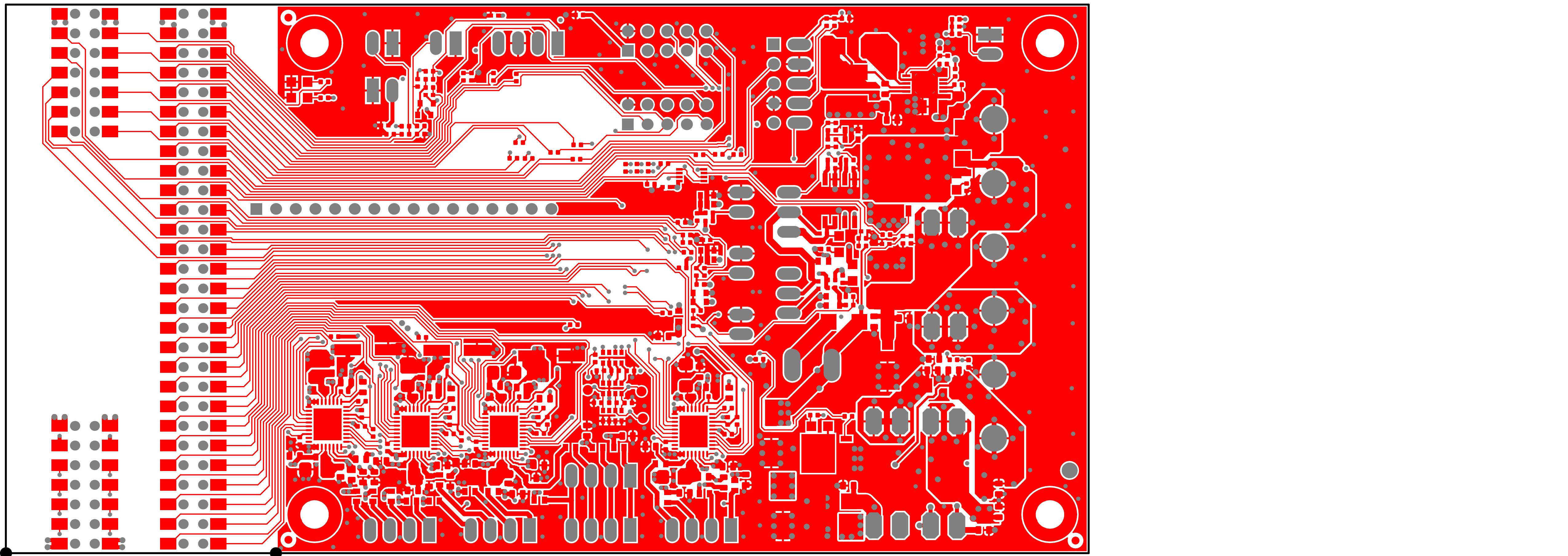
Motor Z

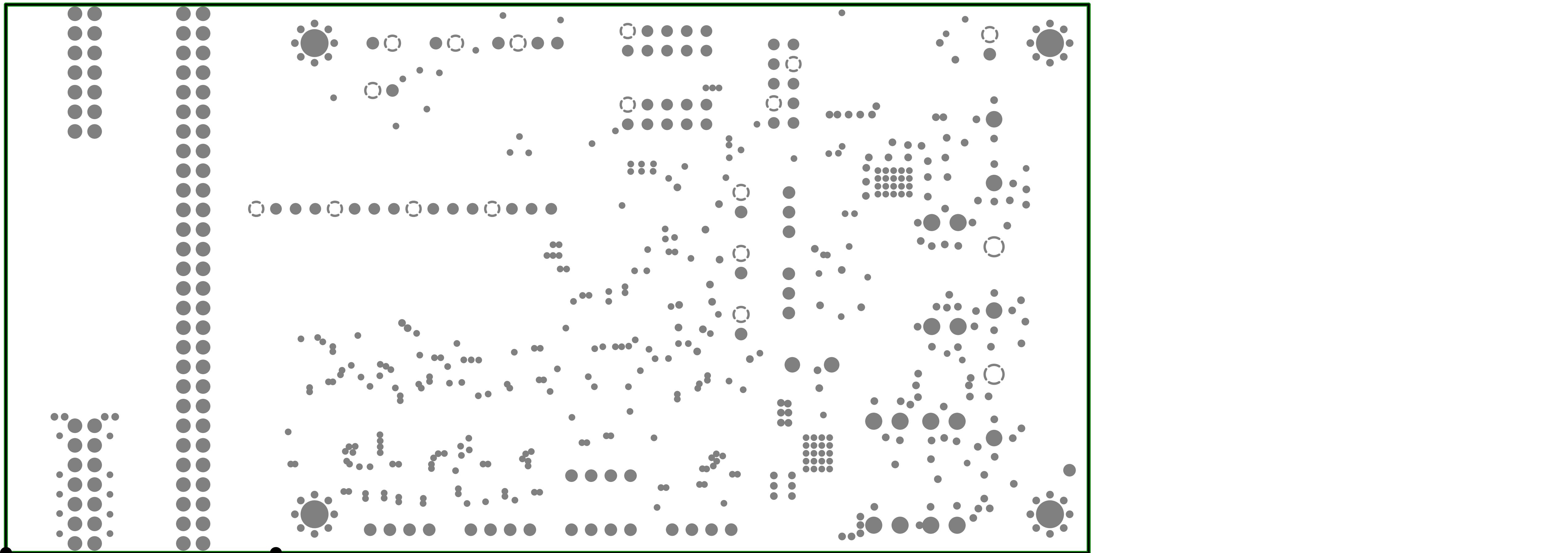


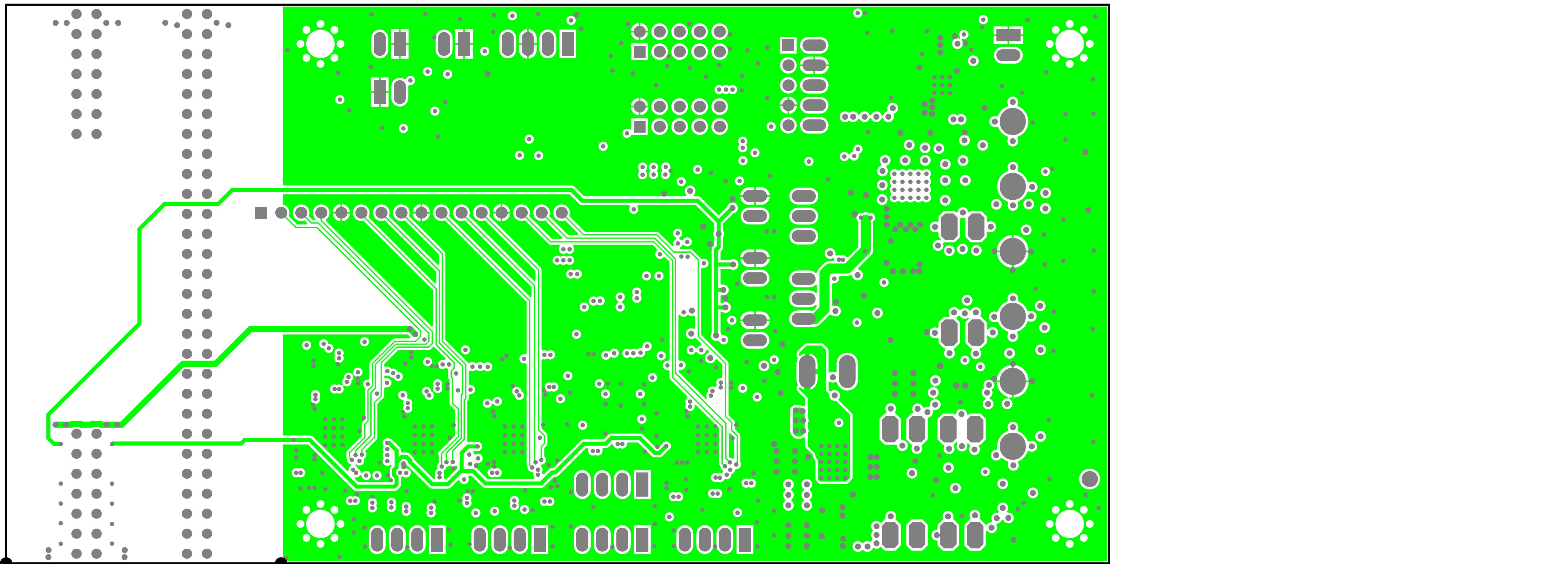
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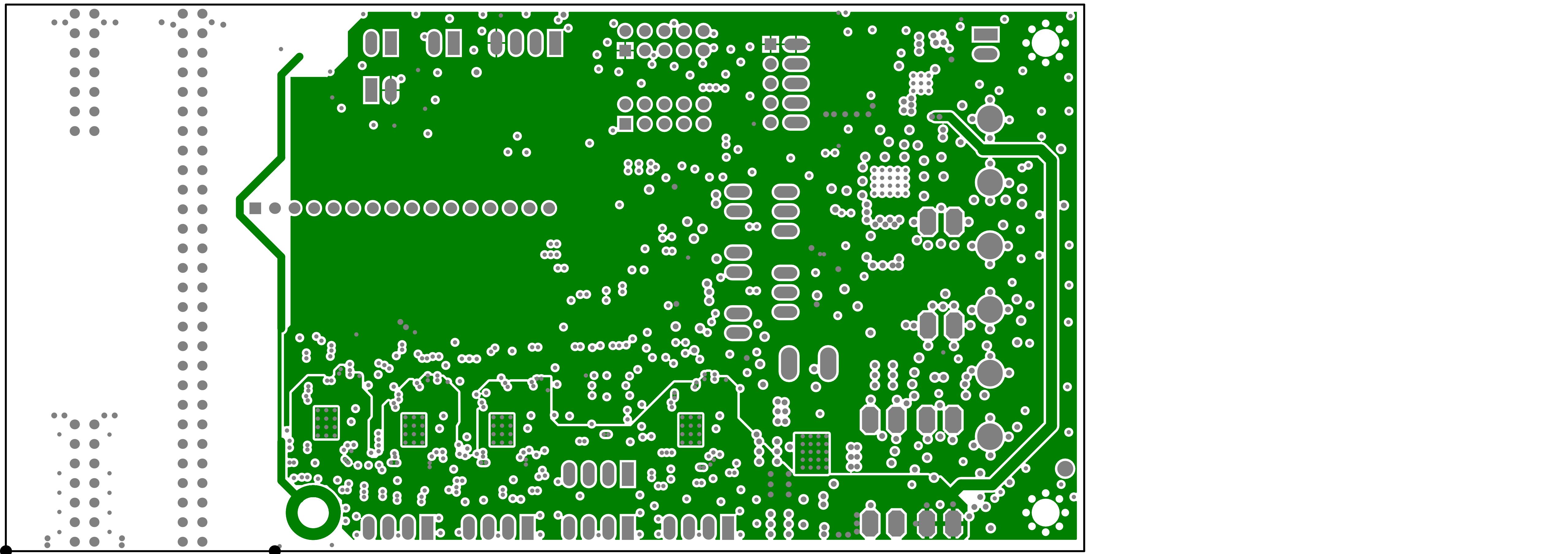
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Layout

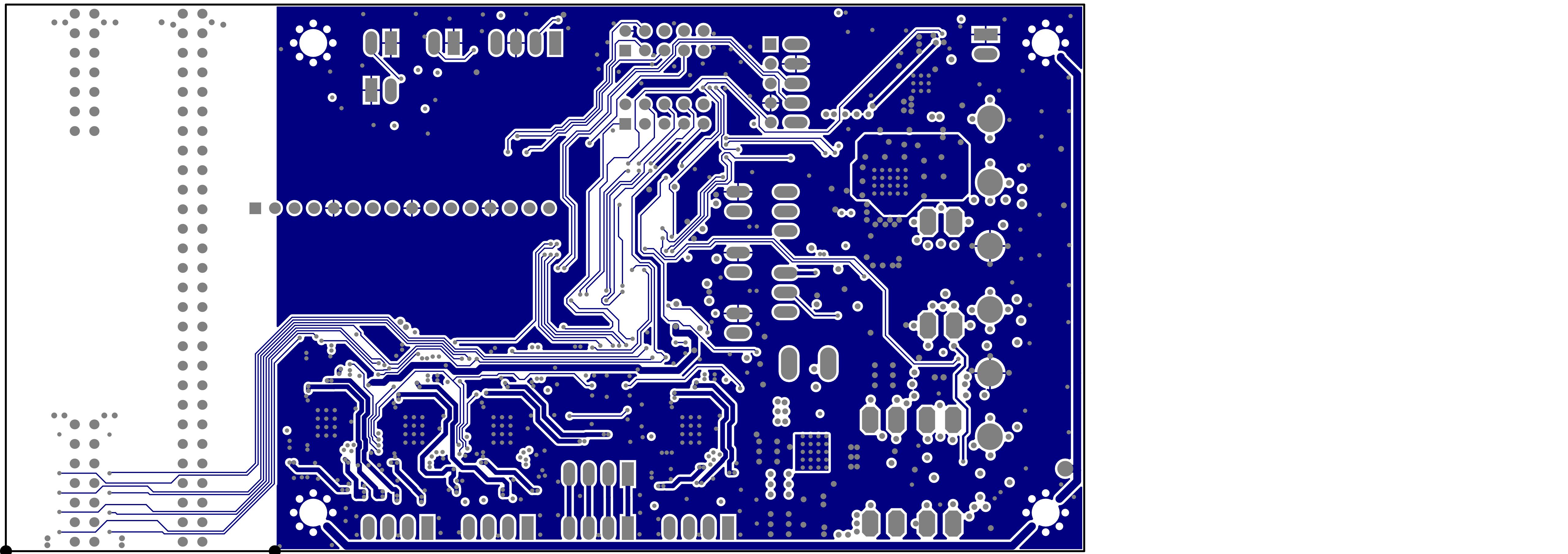


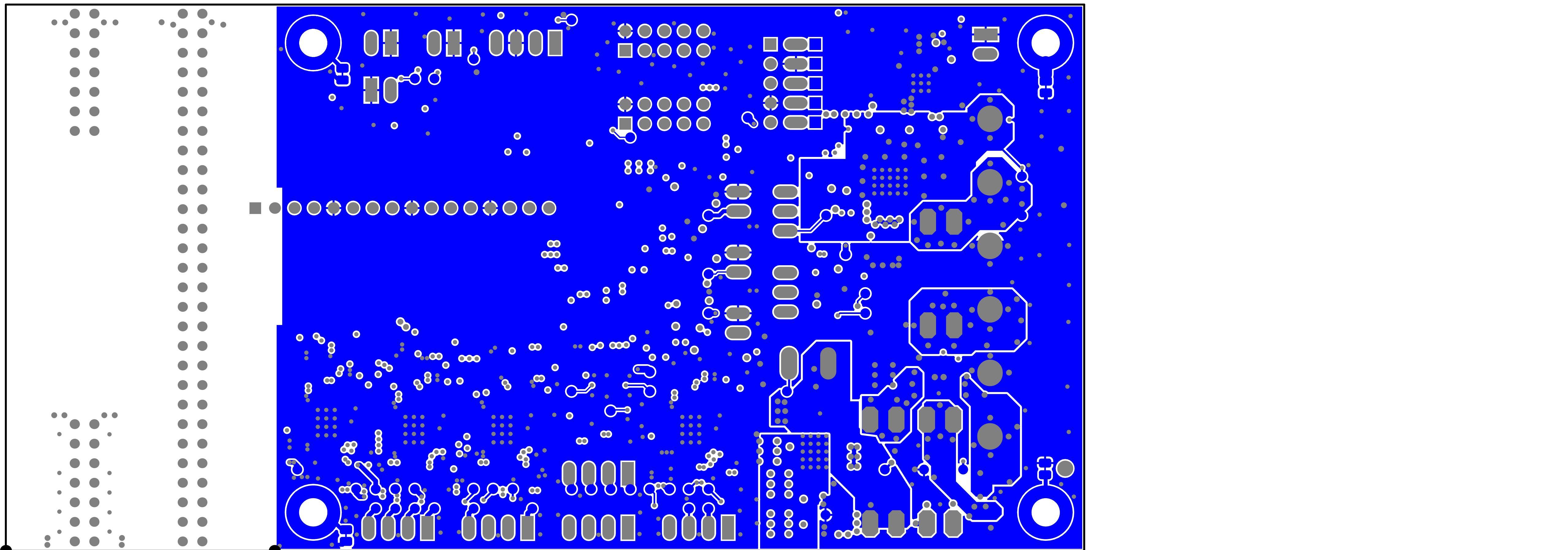


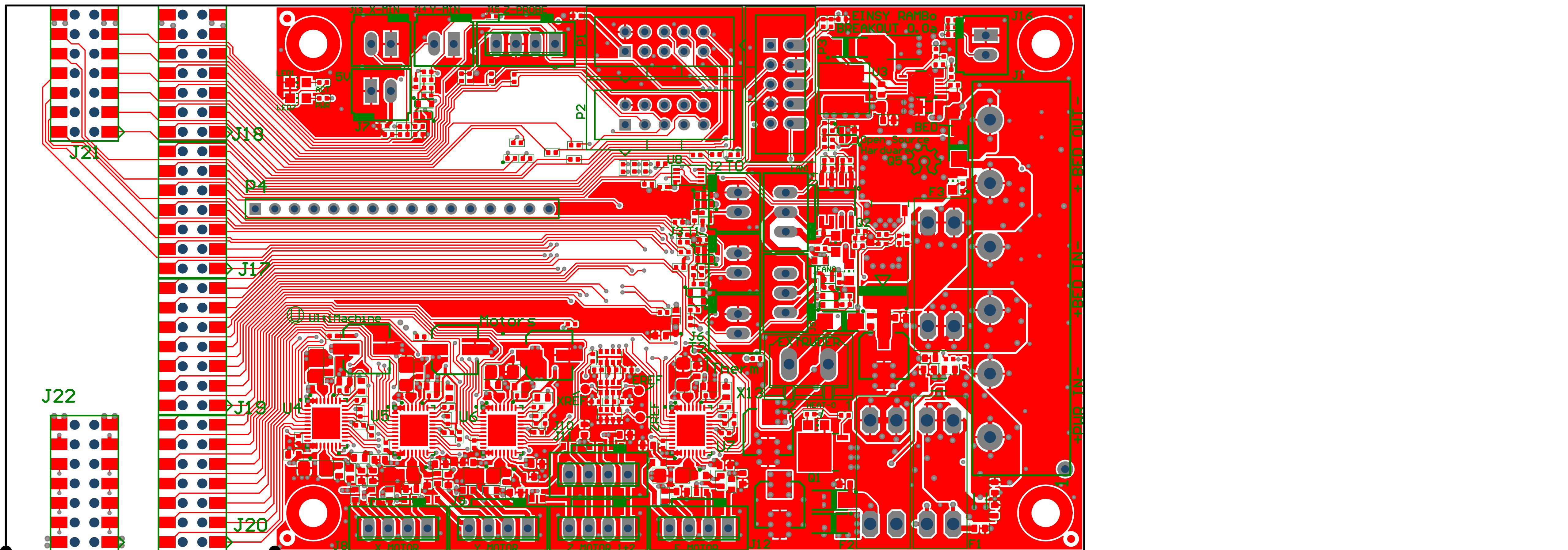


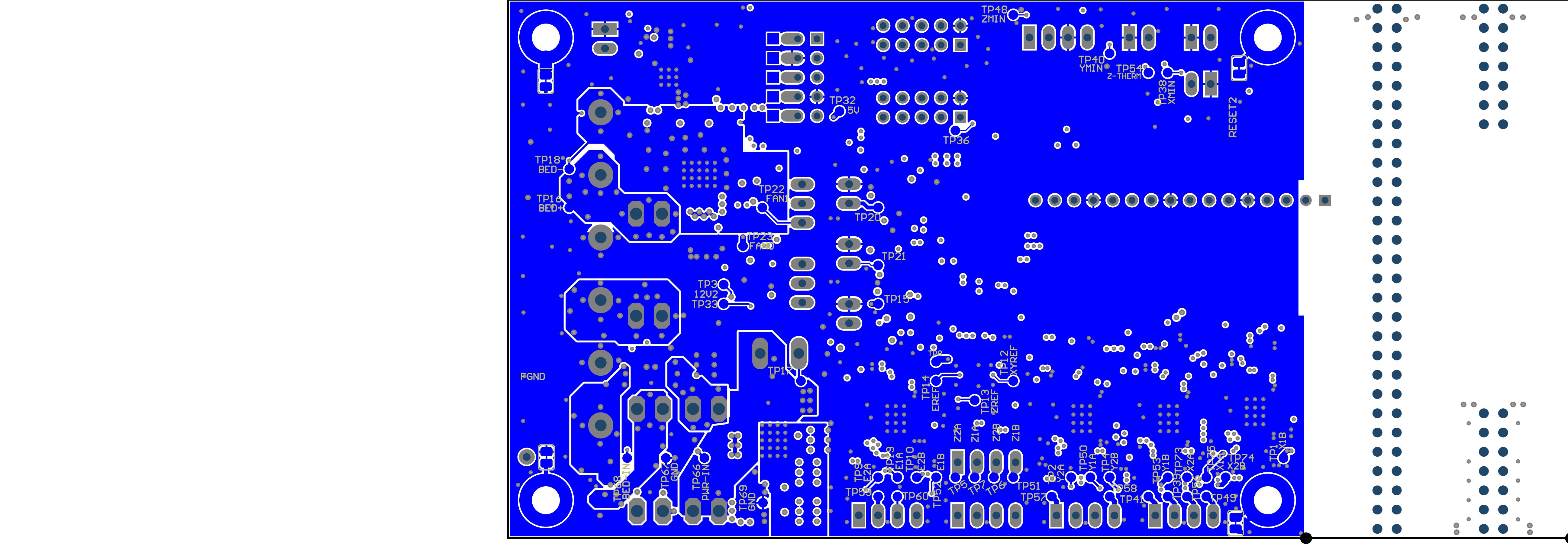


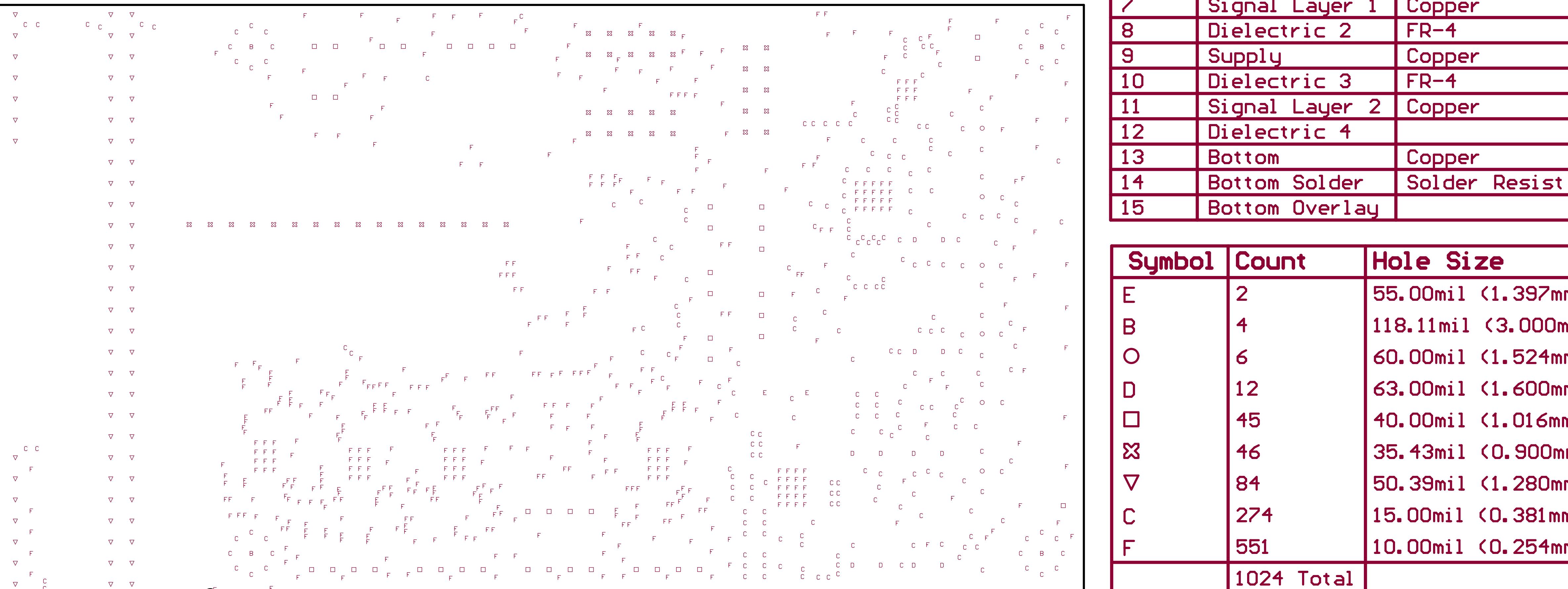












Thickness	Constant	Board Layer Stack
.47mil	3.5	
.80mil		
.32mil	4.2	
.20mil		
.77mil	4.2	
.20mil		
.128mil	4.2	
.20mil		
.75mil	4.2	
.20mil		
.32mil	4.2	
.80mil		
.47mil	3.5	

Plated	Hole Type	Drill Layer Pair	Via/Pad	Pad Shape	Template	Description	Hole Tolerance (+)	Hole Tolerance (-)
PTH	Round	Top - Bottom	Pad	Rounded	r419_210h140r100			
NPTH	Round	Top - Bottom	Pad	Rounded	c0hn300m-1p-1			
PTH	Round	Top - Bottom	Pad	Rounded	r345_330h152r100			
PTH	Round	Top - Bottom	Pad	Octagonal	r338_211h160c50			
PTH	Round	Top - Bottom	Pad	(Mixed)	(Mixed)			
PTH	Round	Top - Bottom	Pad	(Mixed)	(Mixed)			
NPTH	Round	Top - Bottom	Pad	Rounded	c128hn128			
PTH	Round	Top - Bottom	(Mixed)	Rounded	(Mixed)			
PTH	Round	Top - Bottom	Via	Rounded	(Mixed)			