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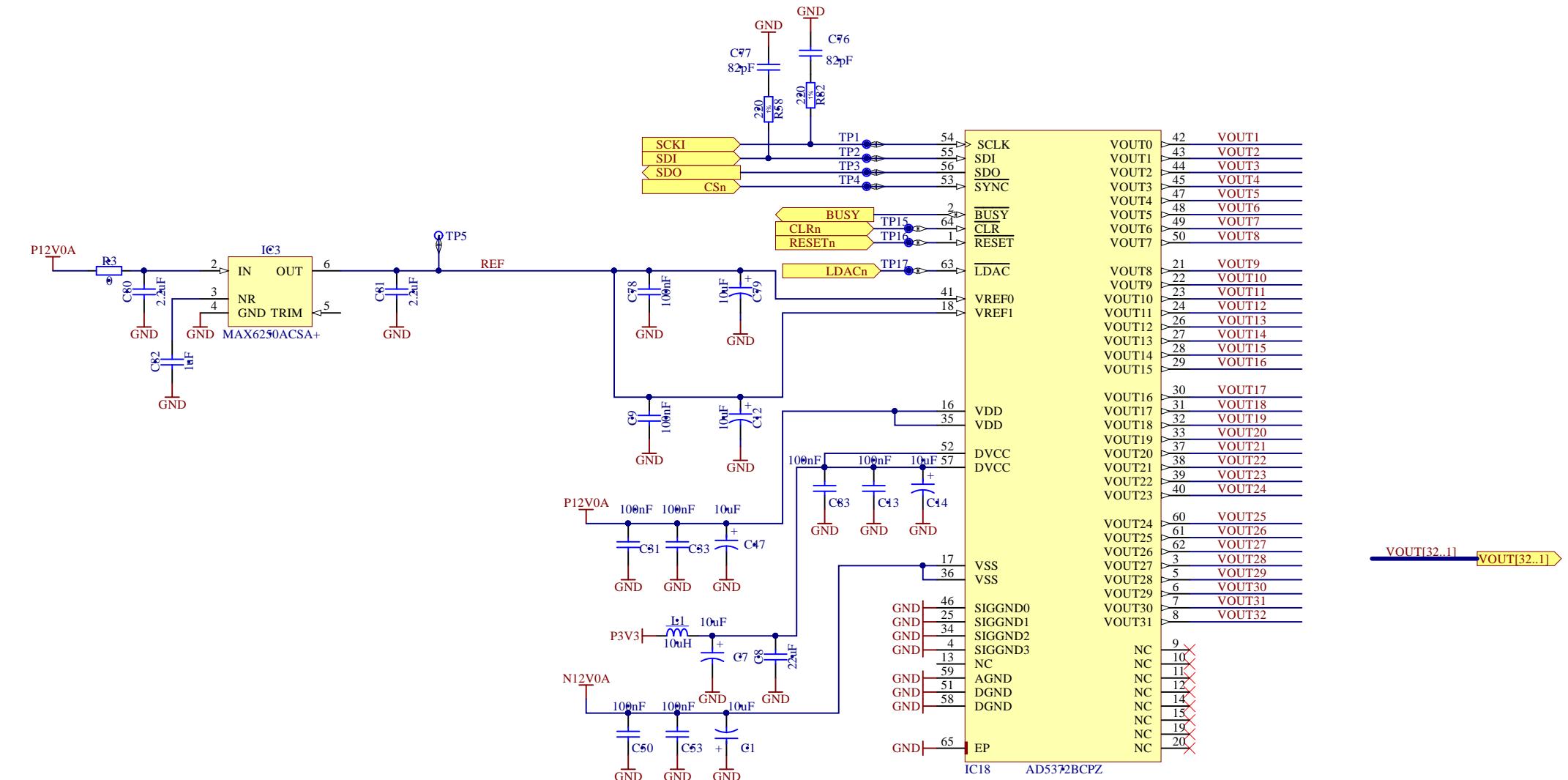
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Project/Equipment **Zotino**

Document



## DAC & reference

Designer	G.K.
Drawn by	G.K.
Drawn at	XX/XX/XXXX
Check by	-
Last Mod.	28.01.2018
File	DAC_32CH.SchDoc
Print Date	28.01.2018 21:03:27
Sheet	2 of 7
Size	A3
Rev	-

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ARTIQ

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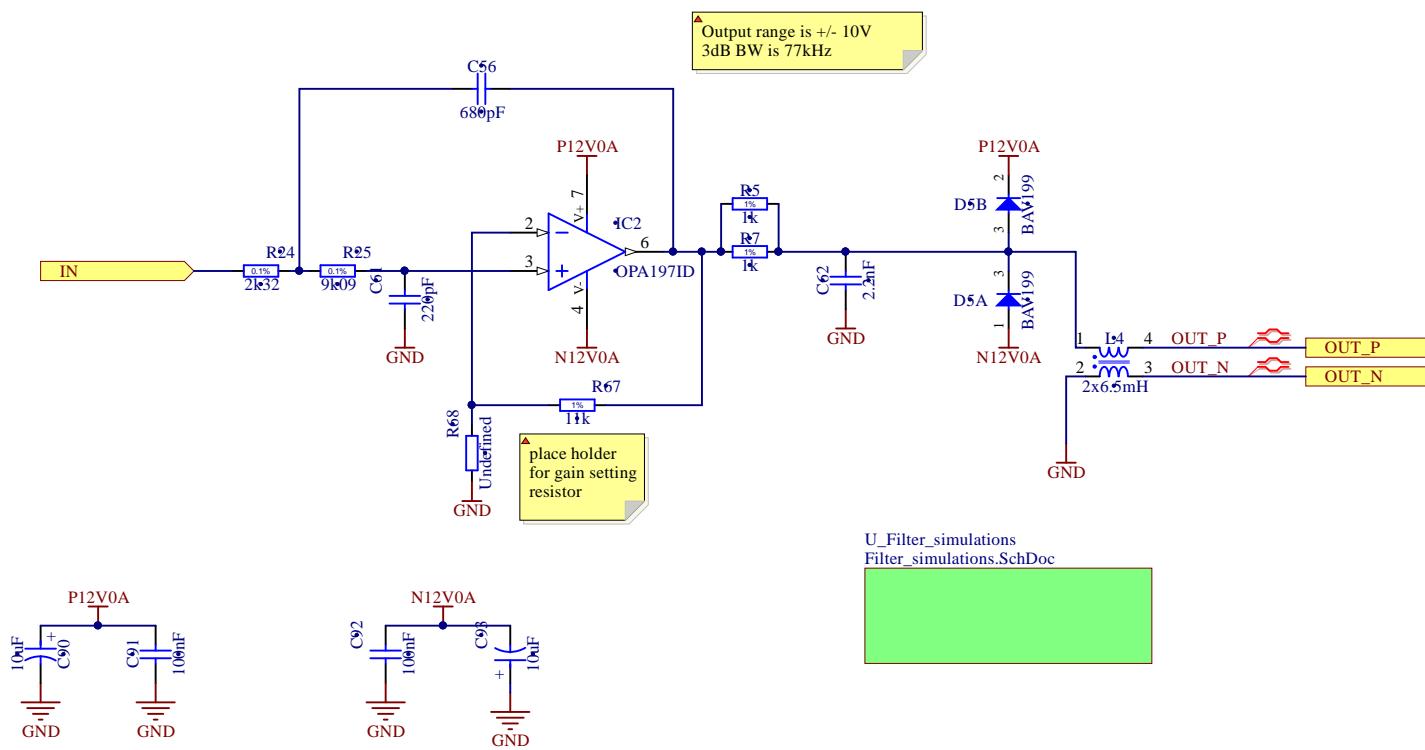
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Project/Equipment Zotino

Document

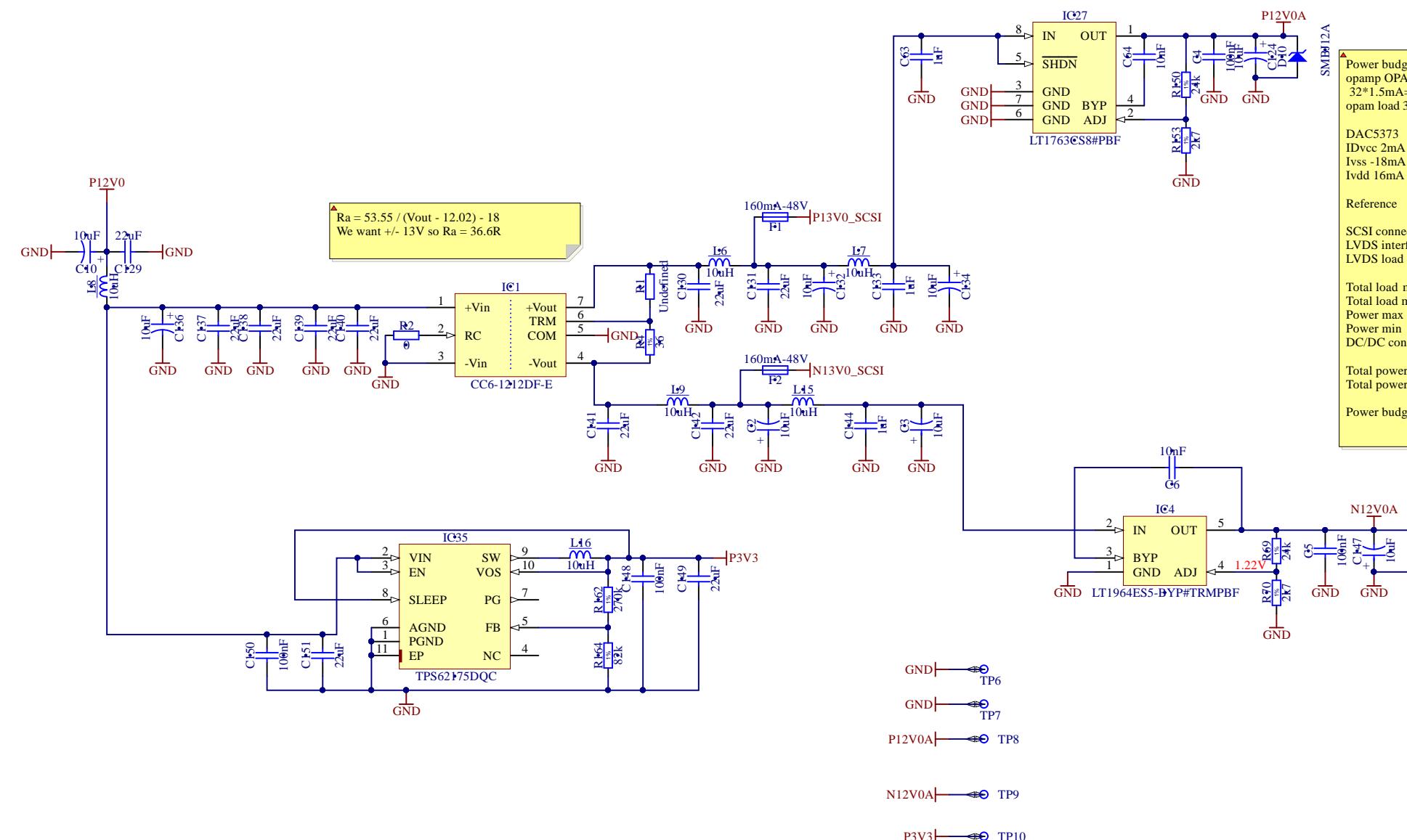


## Output filter

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ARTIQ

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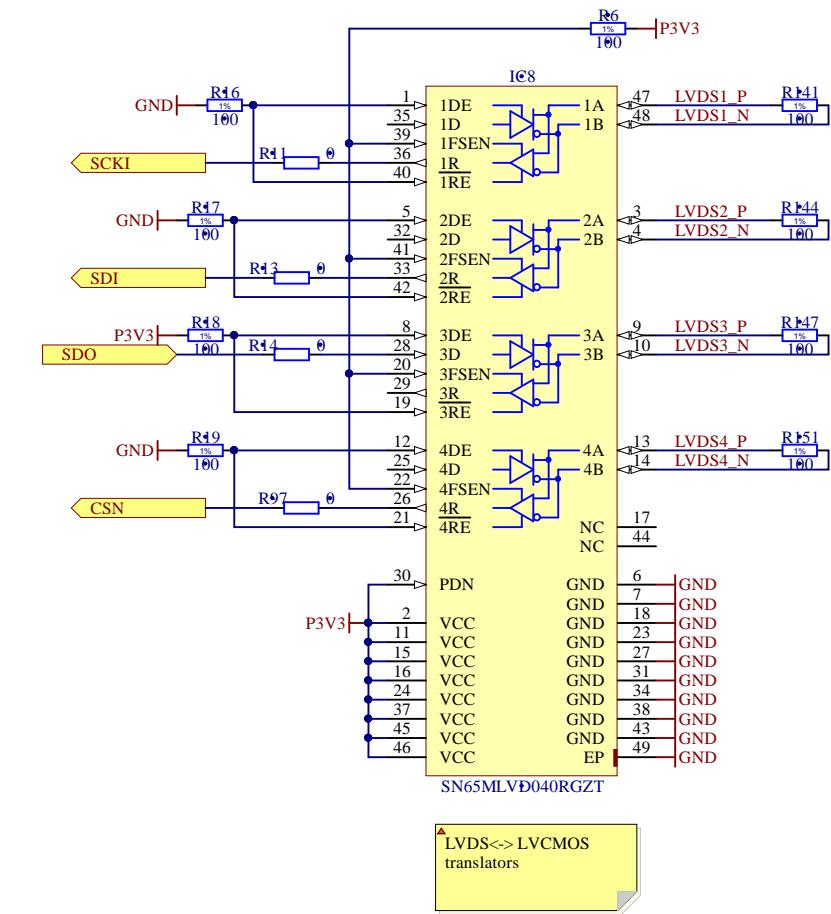


Power budget:	+13V rail	-13V rail	3.3V
opamp OPA197: 32*1.5mA=48mA	48mA	48mA	
opamp load 32*0.5mA	16mA	16mA	
DAC5373 IDVcc 2mA 3.3V	+13V	-13V	2mA
Ivss -18mA -12V	48mA	48mA	
Ivdd 16mA 12V	16mA	16mA	
Reference	3mA		
SCSI connector	100mA	100mA	330mA
LVDS interface 2x			96mA
LVDS load 4x24mA			
Total load max	183mA	182mA	428mA
Total load min	64mA	63mA	250mA
Power max	2.3W	2.3W	1.4W
Power min	0.83	0.83	0.8
DC/DC converter losses	max: 0.92W; min: 0.32		
Total power max (SCSI 2x 100mA + 0.5mA per out amp + 4 active LVDS outputs)	7.7W = 0.58A@12V		
Total power min (just supply current, 2 active LVDS)	3.02W = 0.25A@12V		
Power budget does not include TEC driver			

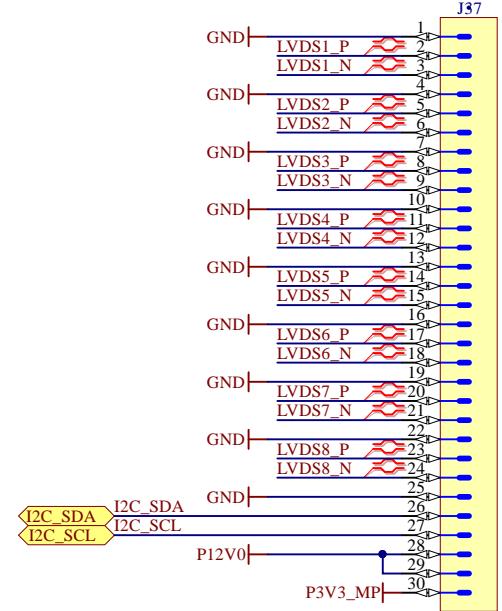
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Project/Equipment **Zotino**  
 Document **Zotino**  
**Power supply v1.1**  
 Designer G.K.  
 Drawn by G.K.  
 Check by -  
 Last Mod. -  
 File [Supply\\_DAC.SchDoc](#)  
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 Warsaw University of Technology ISE  
 Nowowiejska 15/19  
**ARTIQ**  
 Size A3 Rev -

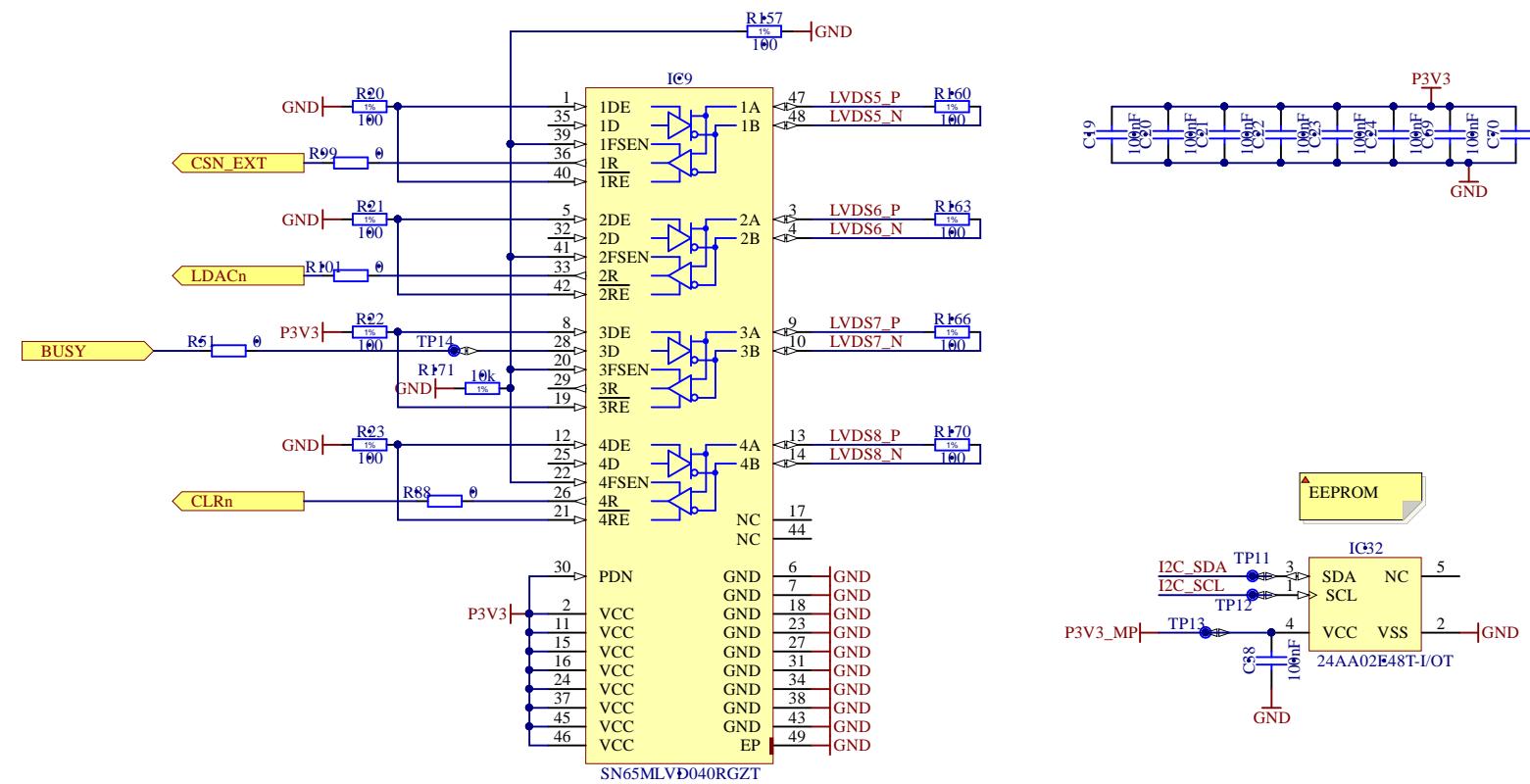
A



EEM connector: IO are LVDS, I2C is 3V3 LVC MOS, P3V3\_MP up to 20mA, P12V up to 1A.



C



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D

Project/Equipment		Zotino		
Document			Designer	G.K.
			Drawn by	G.K.
			Check by	XX/XX/XXXX
			Last Mod.	-
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			Print Date	28.01.2018 21:03:27
			Sheet	7 of 7
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ARTIQ

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LVDS & I2C interfaces

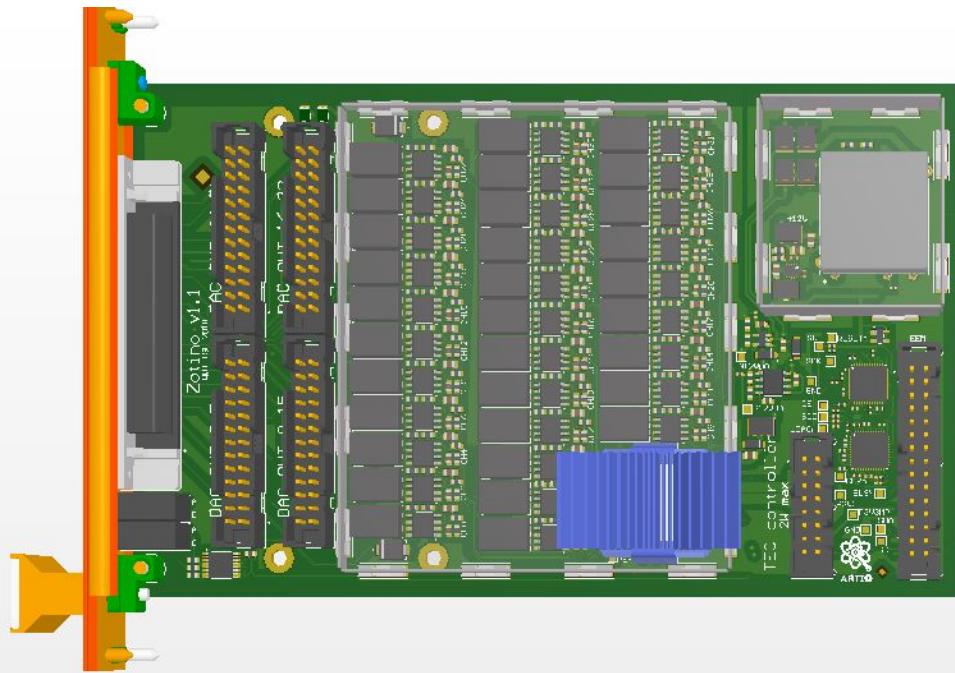
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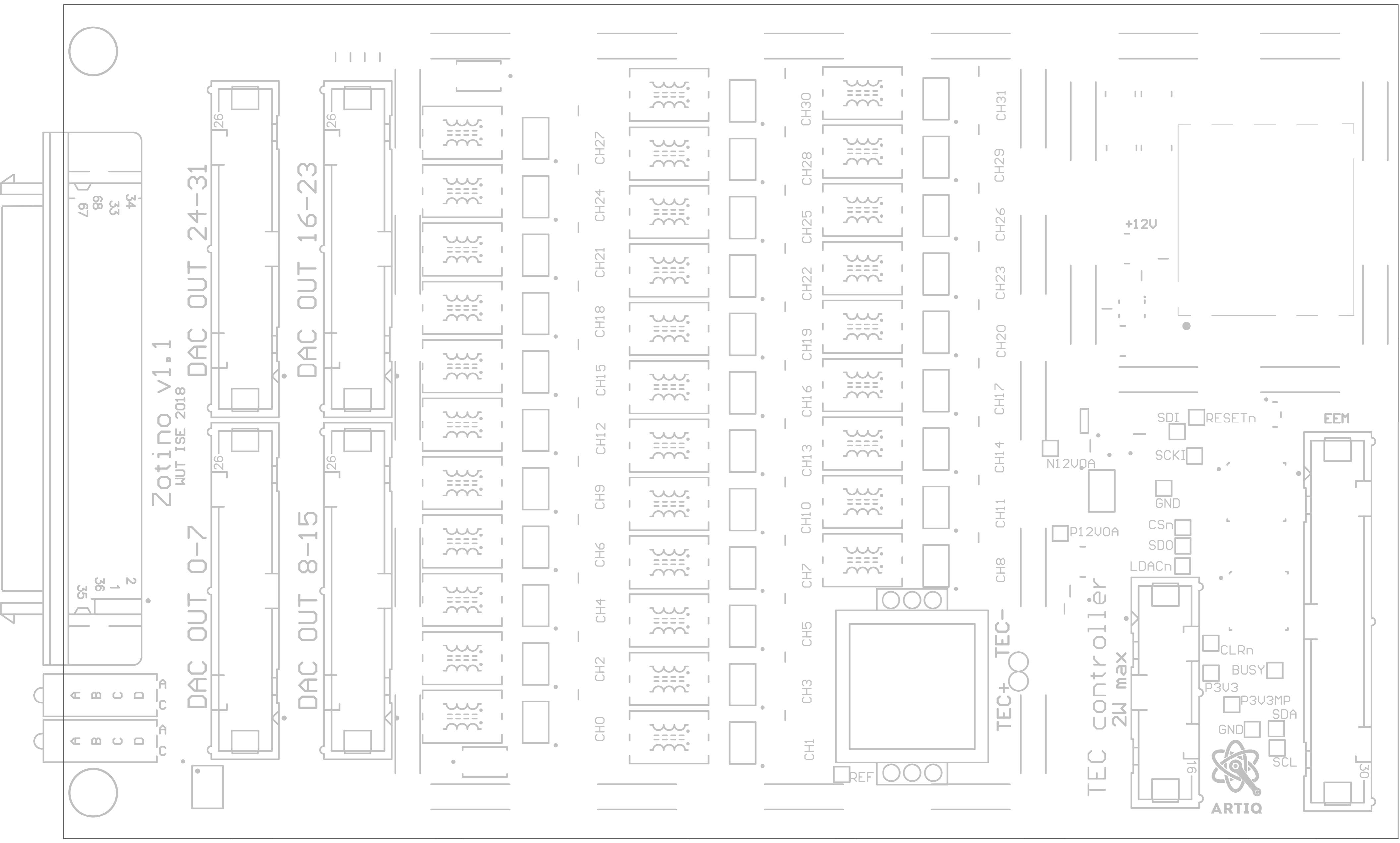
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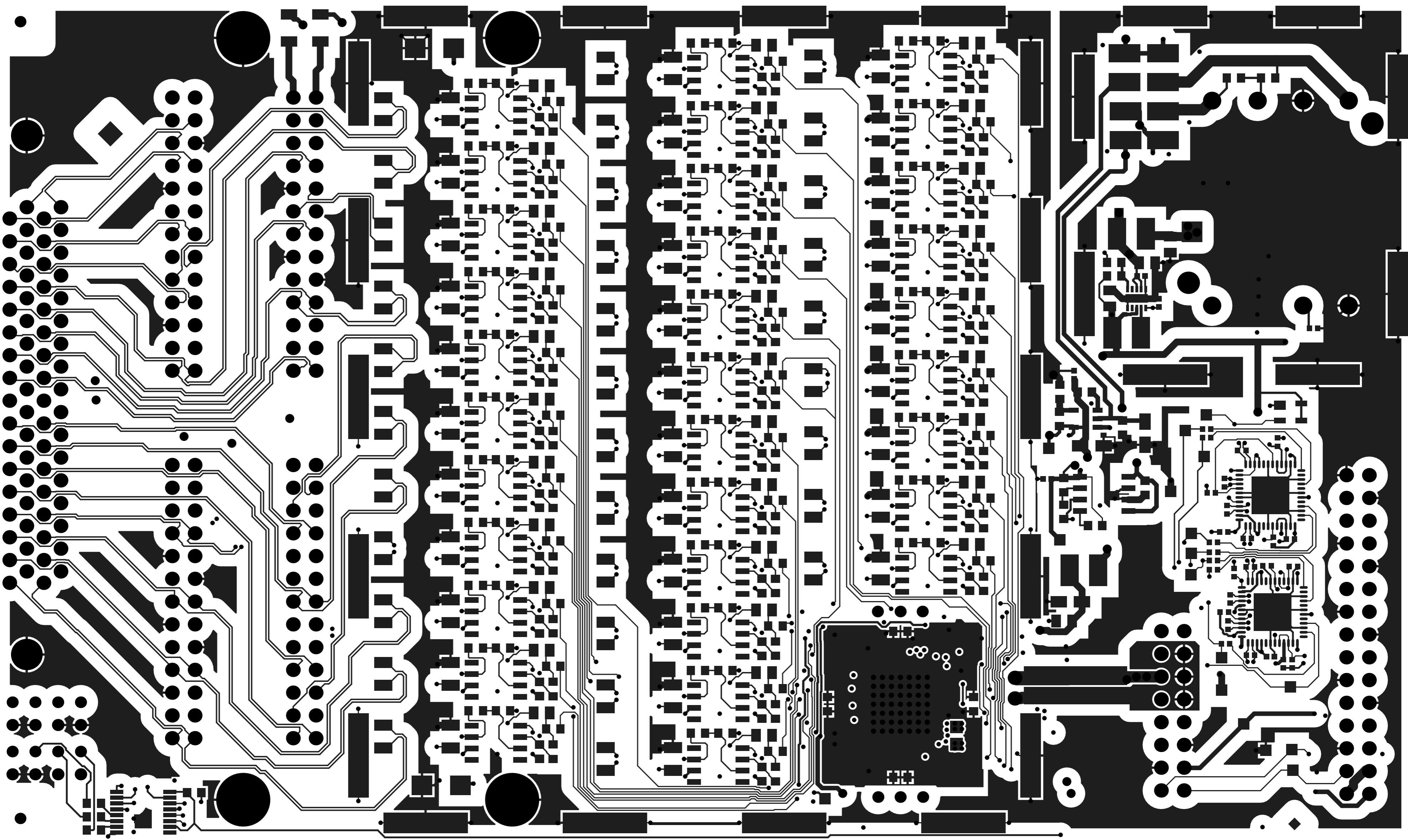


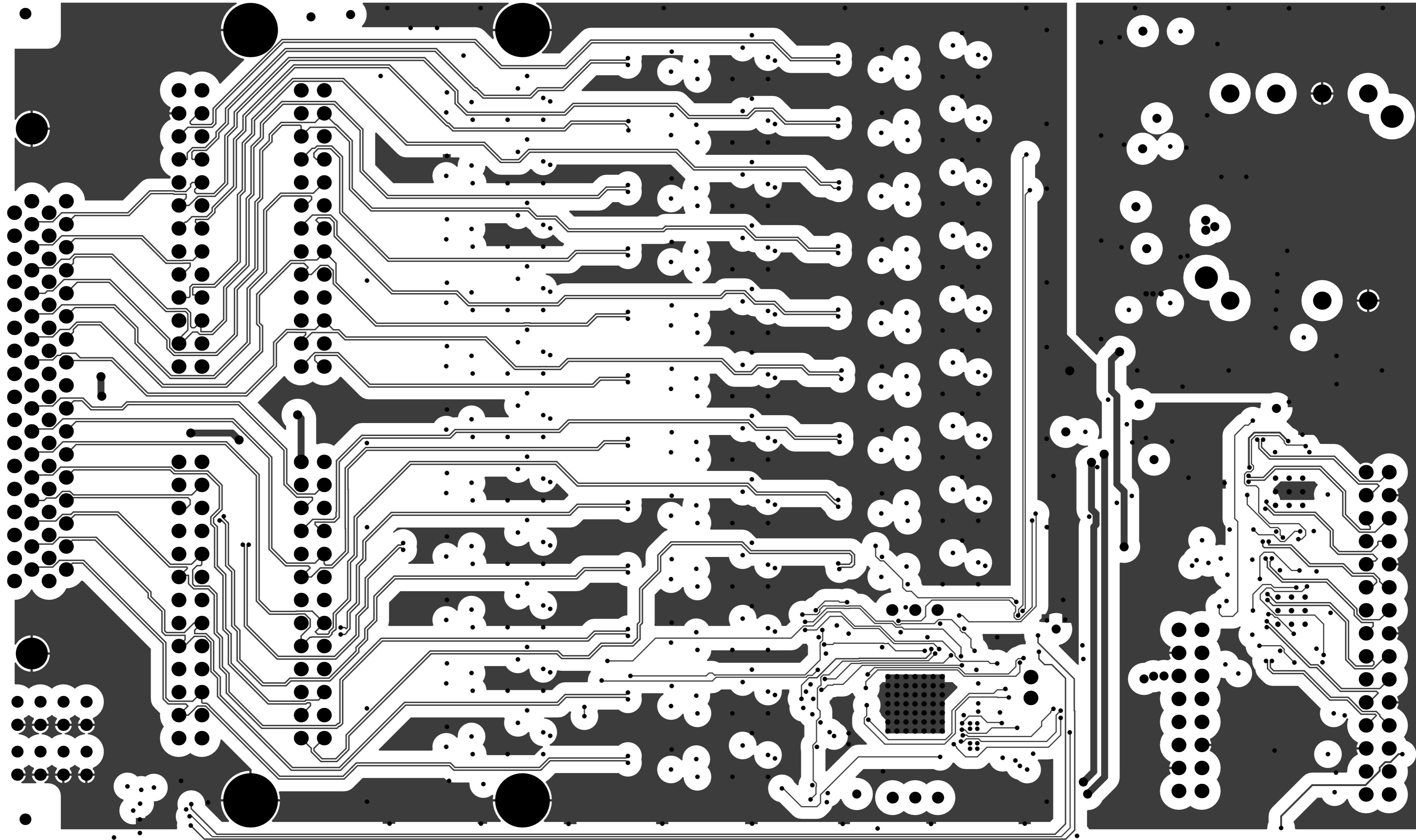


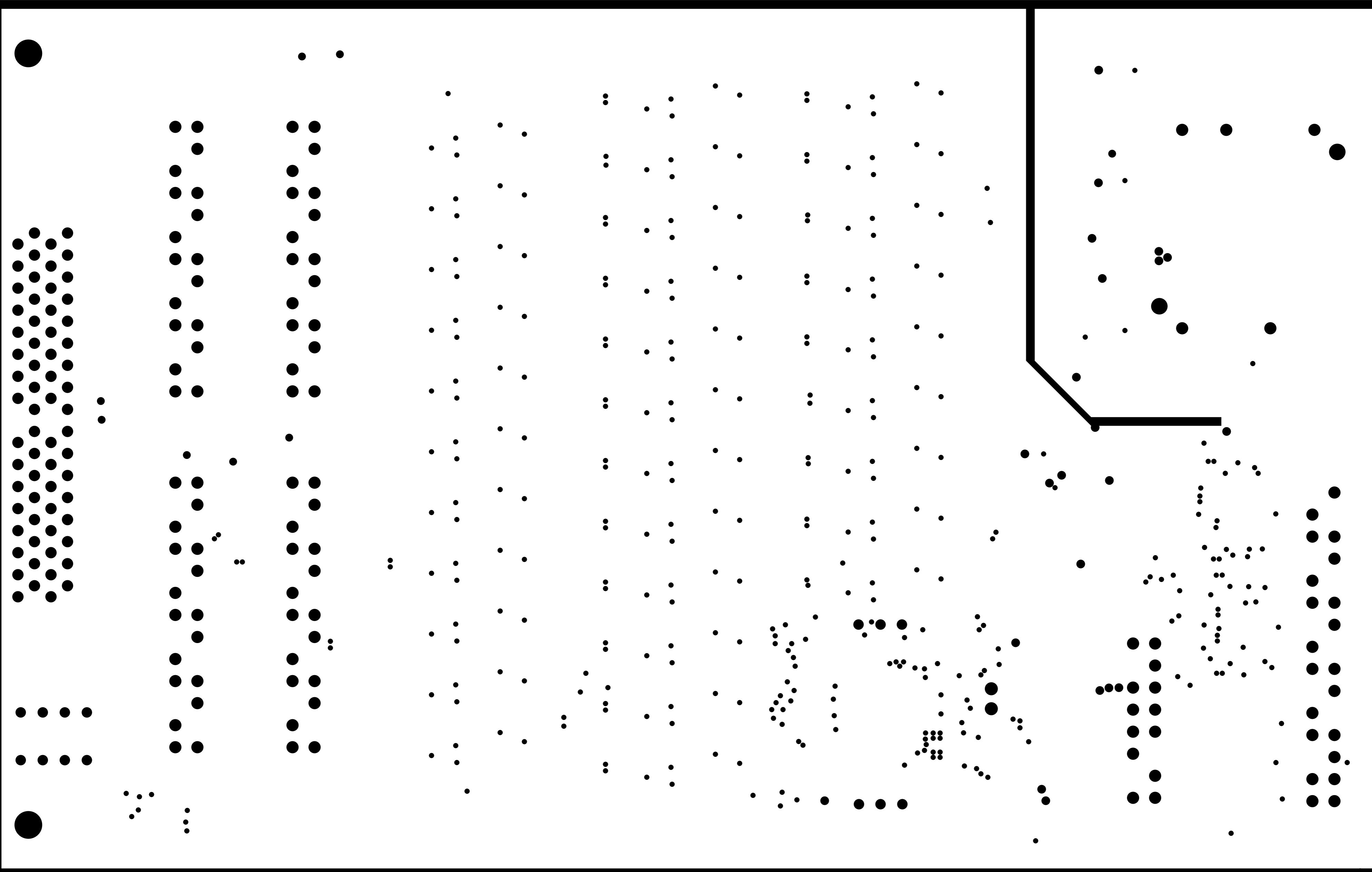
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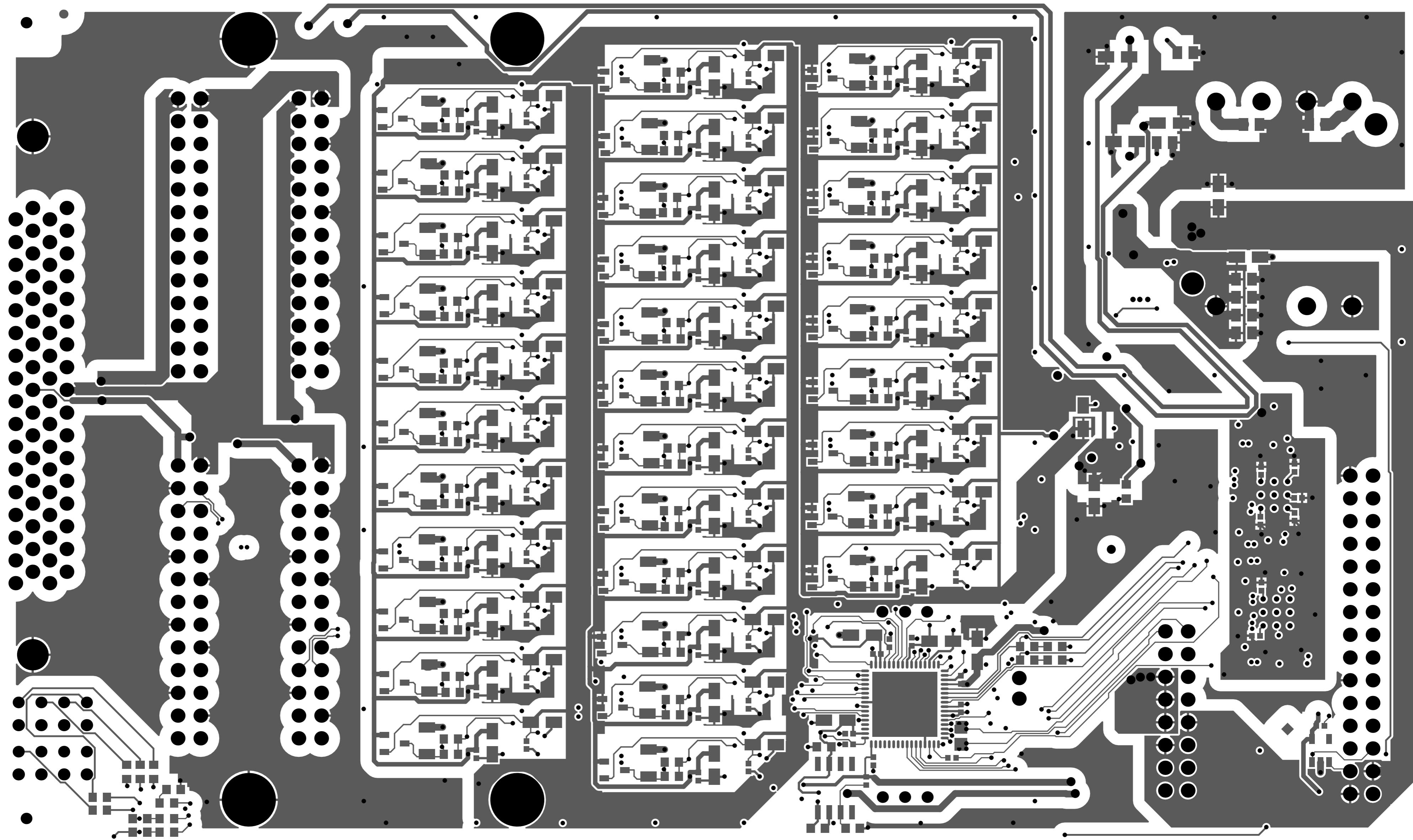
Zotino v1.1











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