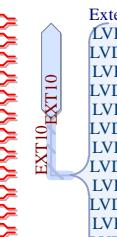
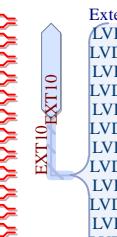
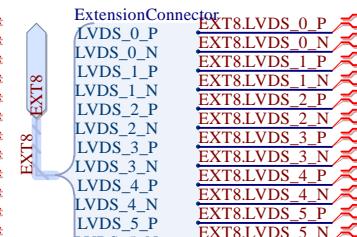
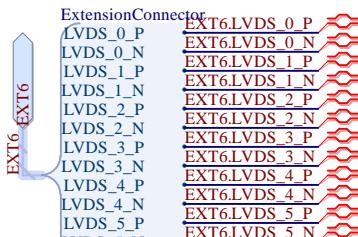
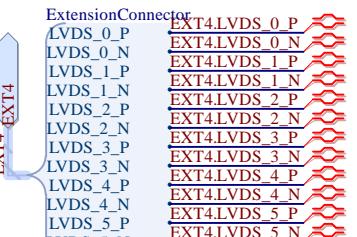
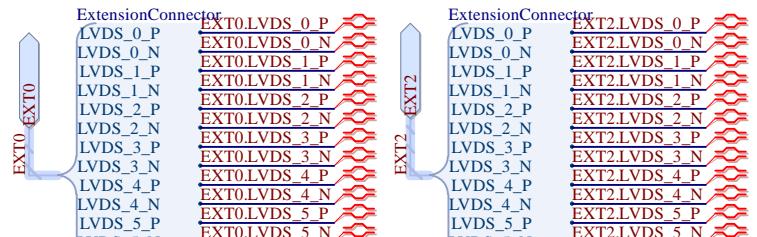
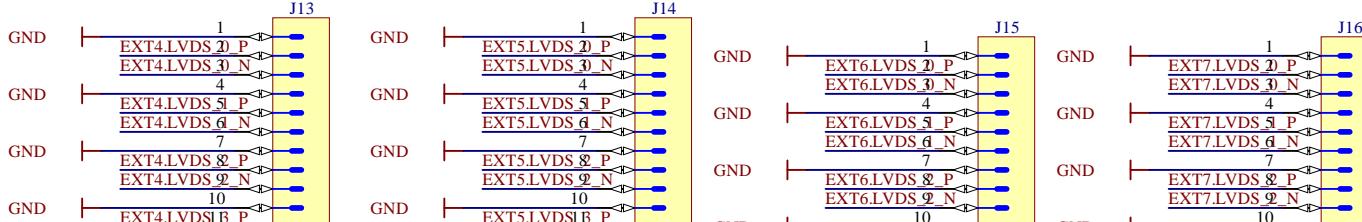
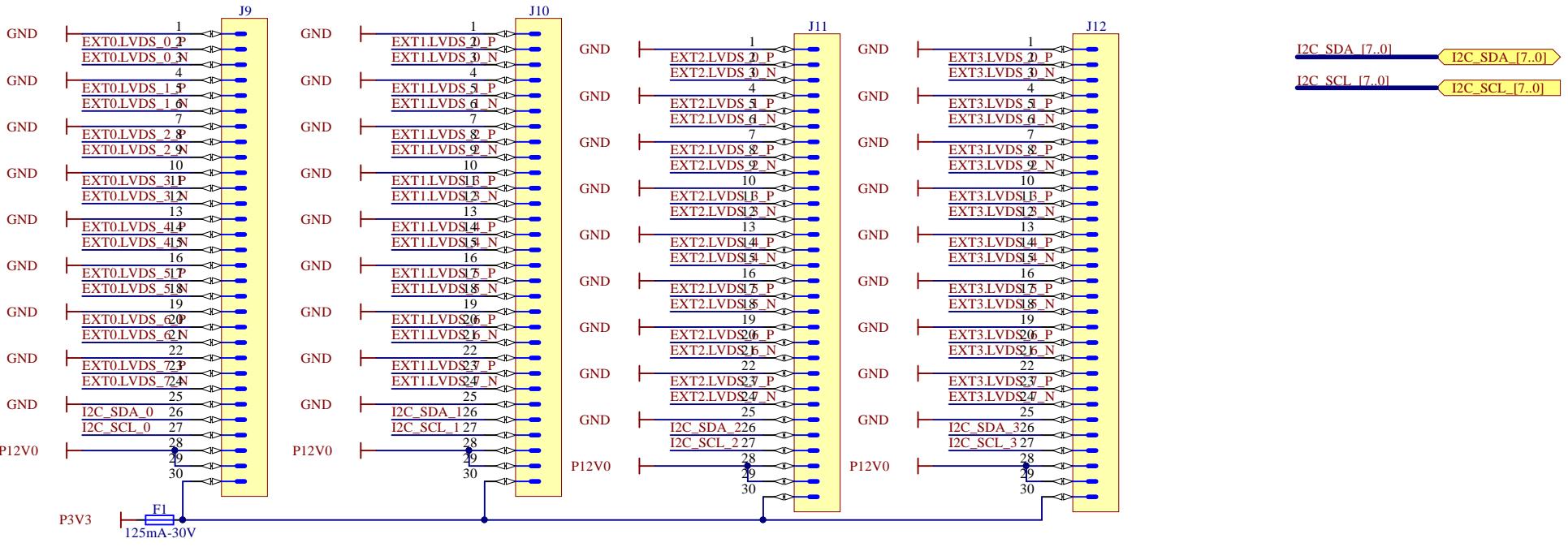


XC7A100T-2FGG484C

XC7A100T-2FGG484C

XC7A100T-2FGG484C





### Maximum power calculation

	P3V3	P2V5	P1V8	LDO P1V5	P1V2	P1V0
LED SFP1-3	27					
LED user1, power good, fpga done, 3V3 LED	12					
Any Frequency Clock Multiplier/						
Jitter Attenuator	Si5324	279				
Clock Fanout Buffer	ADCLK944B	138				
Clock Fanout Buffer	ADCLK948B	330				
Extensions, powered by Kasli (I2C power) x12	240					
DDR Termination Regulator	TPS51200	40				
SFP+ 6,25gb 3x	900					
Level-Shifting I2C Repeater	TCA9517 x4	20				
I2C Switch	TCA9548	80				
Level-Shifting Bus Transceiver	SN74AVC2T245 x9	216				
Temperature Sensor	MAX6642	5				
50 MHz Oscillator	636L3I050M00000	25				
FPGA memory	S25FL128SAGBHIA 100					
RAM x16, rev E	MT41K256M16					
Artix 7 FPGA	XC7A100T	698	542	274	167	1056
LDO 1V2		167				
1V8 buck	TLV62565		332			
<b>SUM [mA]</b>	2911	698	542	429	167	1056
<b>Current available [mA]</b>	3500	1100	1000	800	200	1400
<b>Voltage [V]</b>	3,3	2,5	1,8	1,5	1,2	1
<b>POWER [W]</b>	9,61	1,75	0,98	0,64	0,20	1,06
<b>Efficiency</b>	0,88	0,78	0,89	0,76	1	0,74
<b>POWER [W]</b>	10,92	2,24	1,10	0,85	0,20	1,43

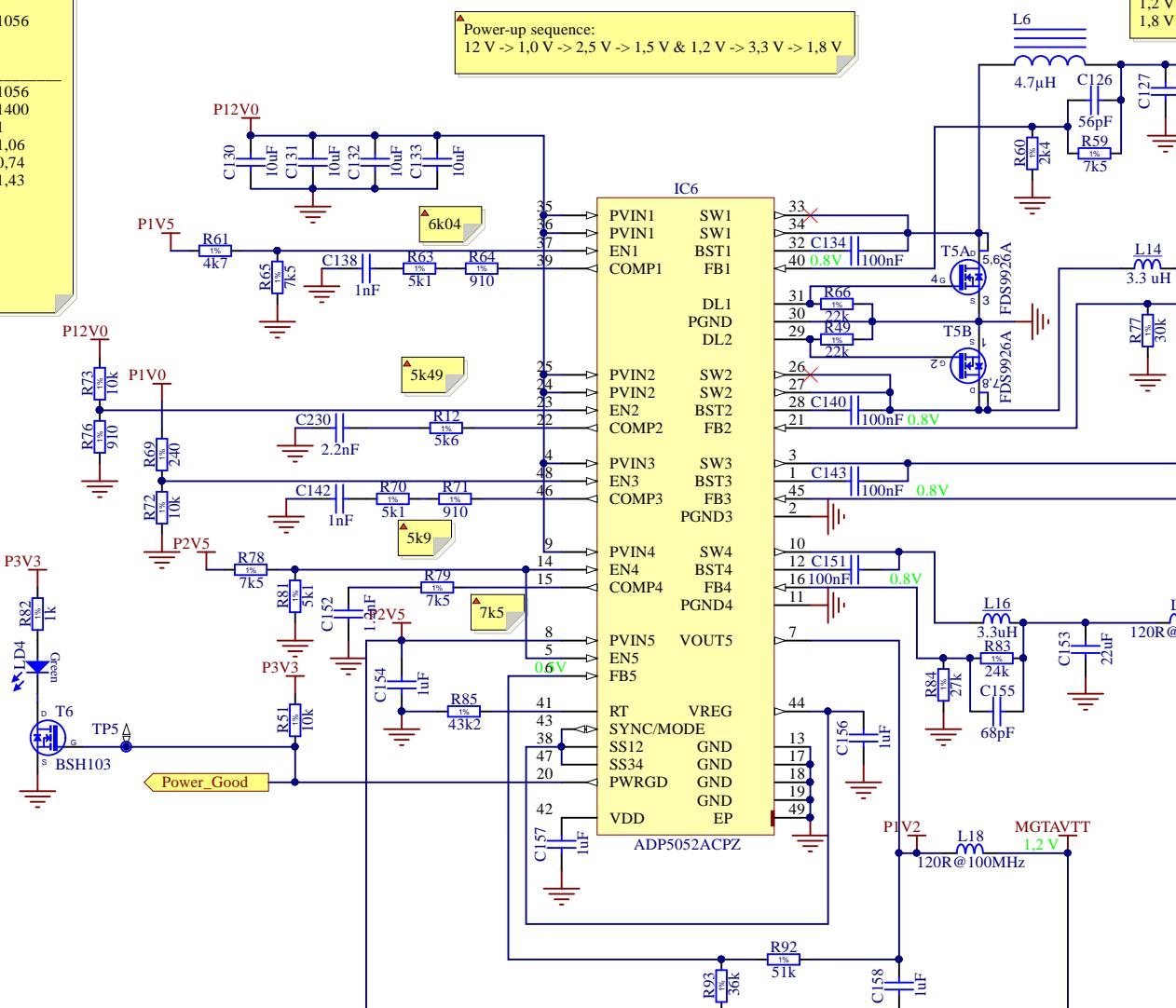
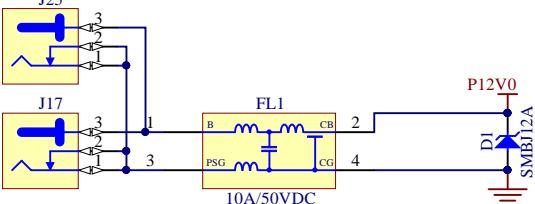
Total power: 16,82 W

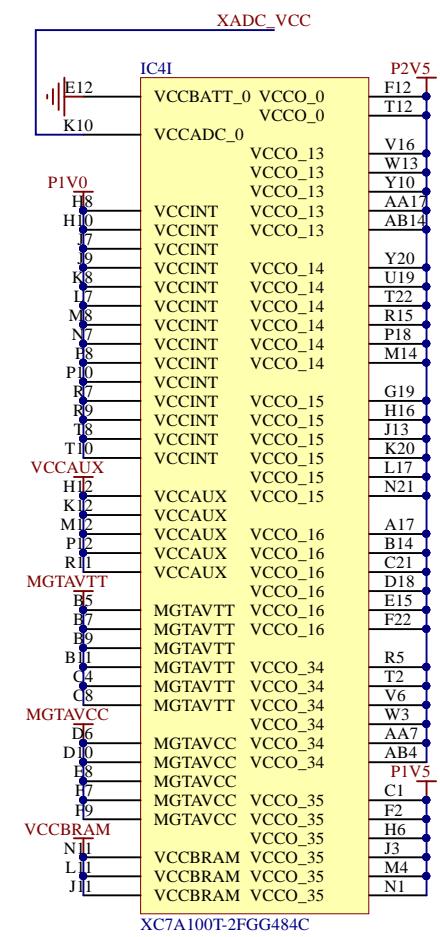
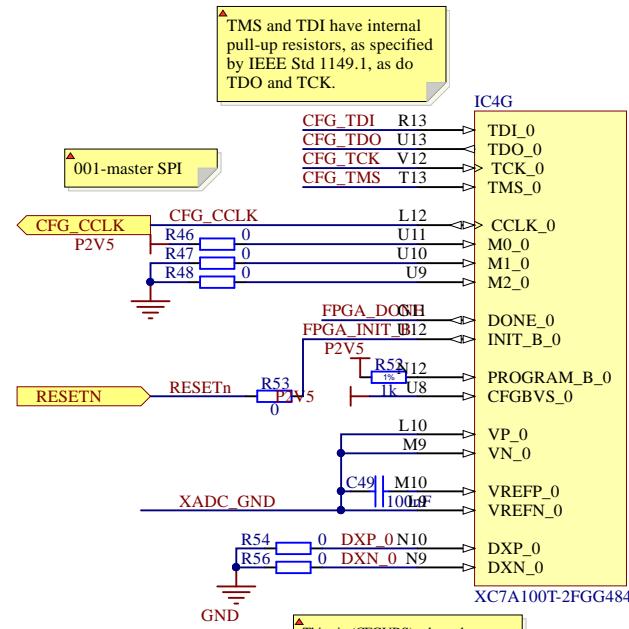
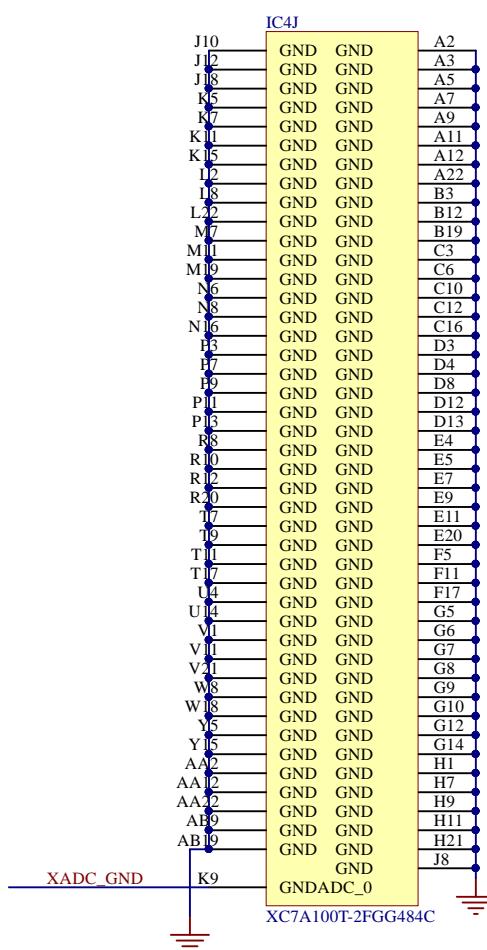
Total P12V0 current: 1,29 A

Maximum P12V0 current: 5 A

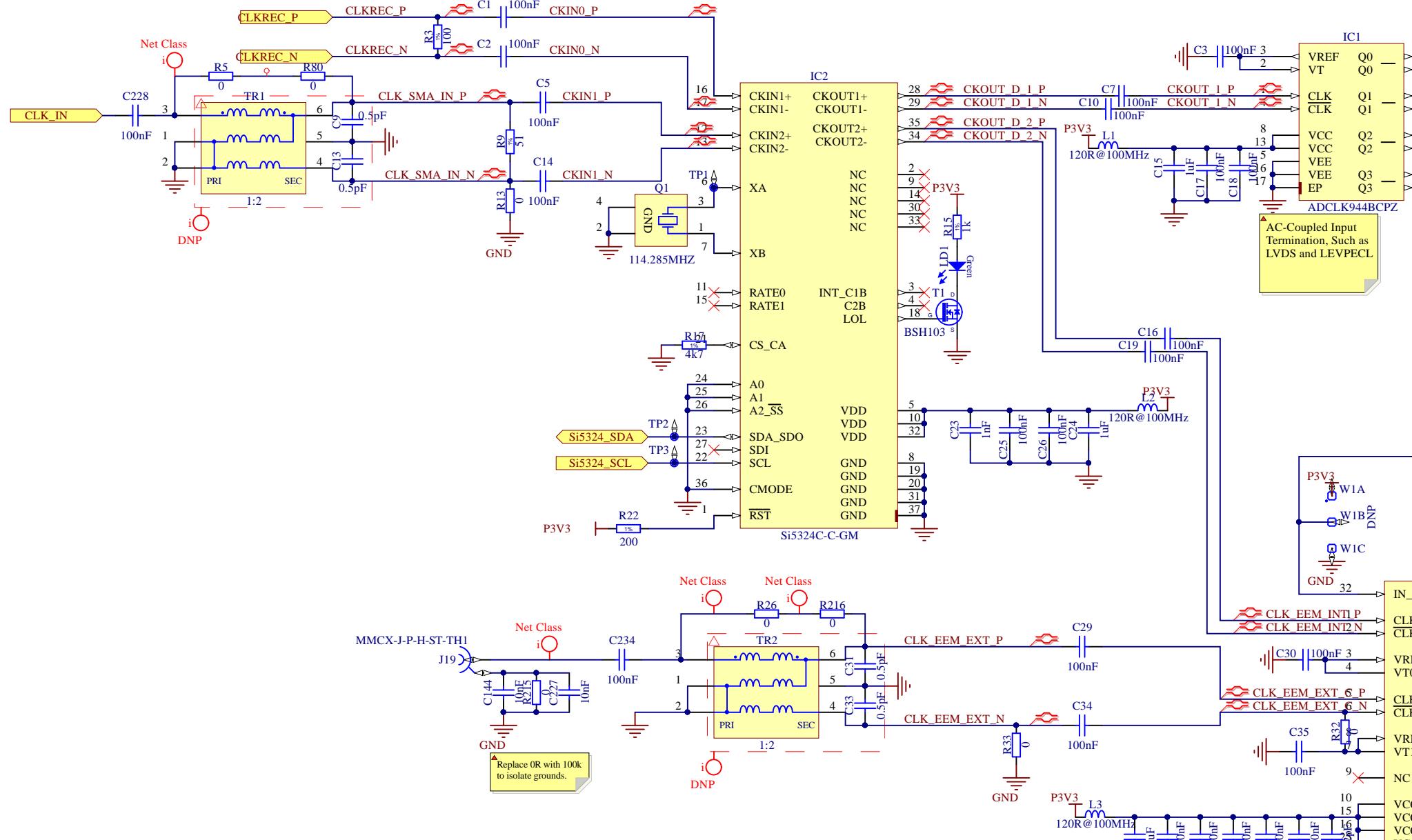
P12V0 current left for EEMs: 3,71 A

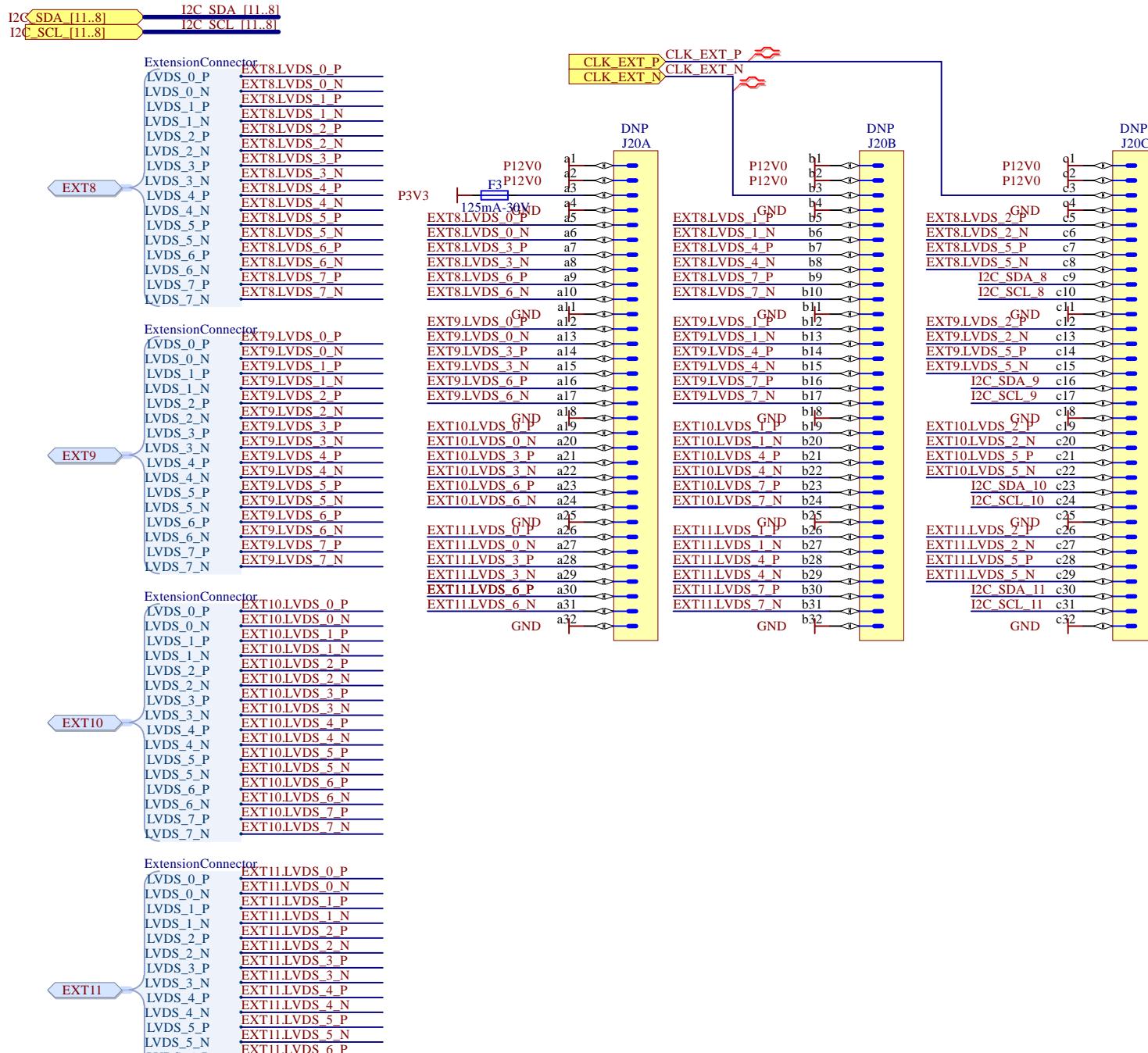
Maximum P12V0 EEM current via ribbon cable: 1 A

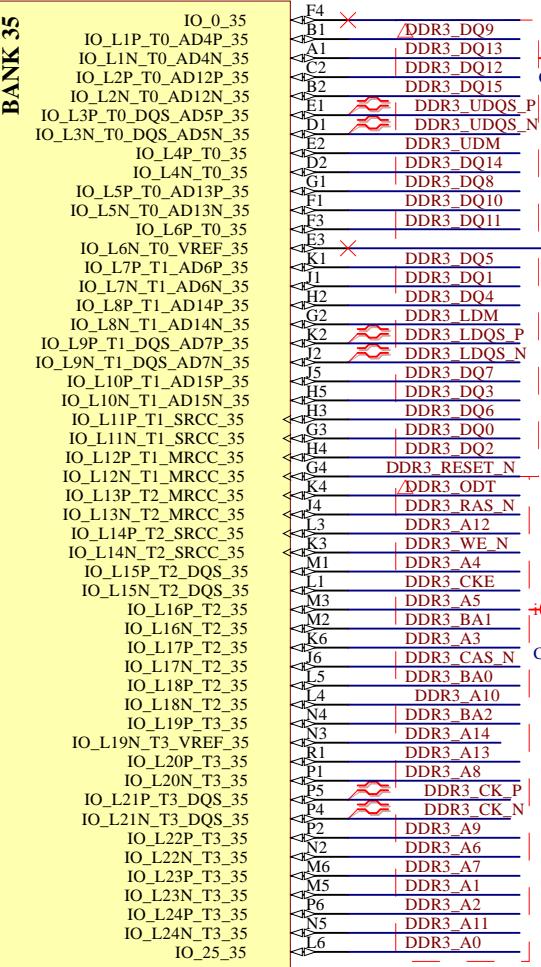




120R@100MHz      120pF      150pF      150pF      100pF      XADC\_VCC

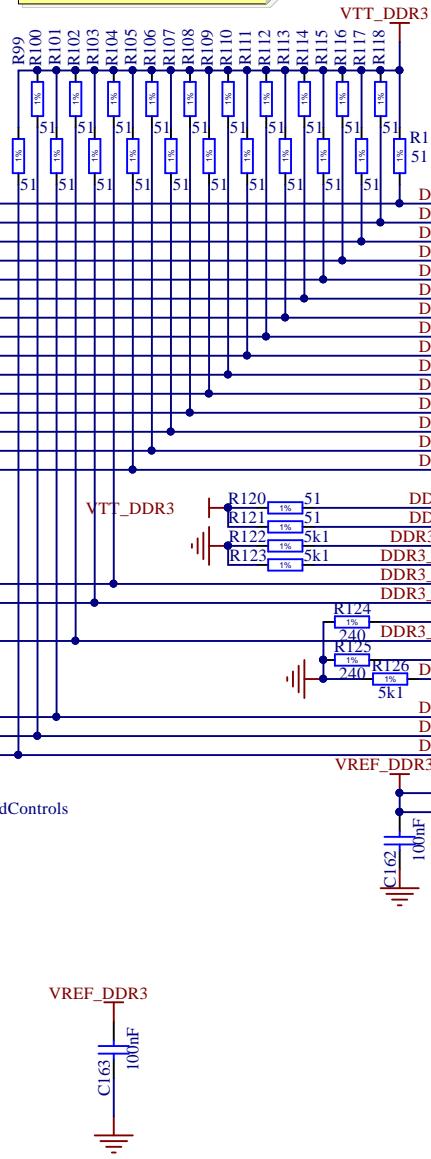
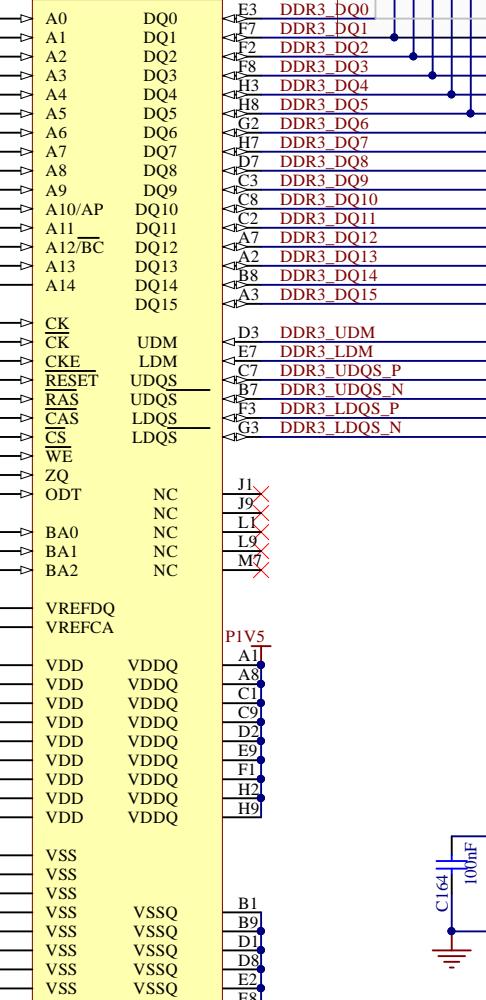


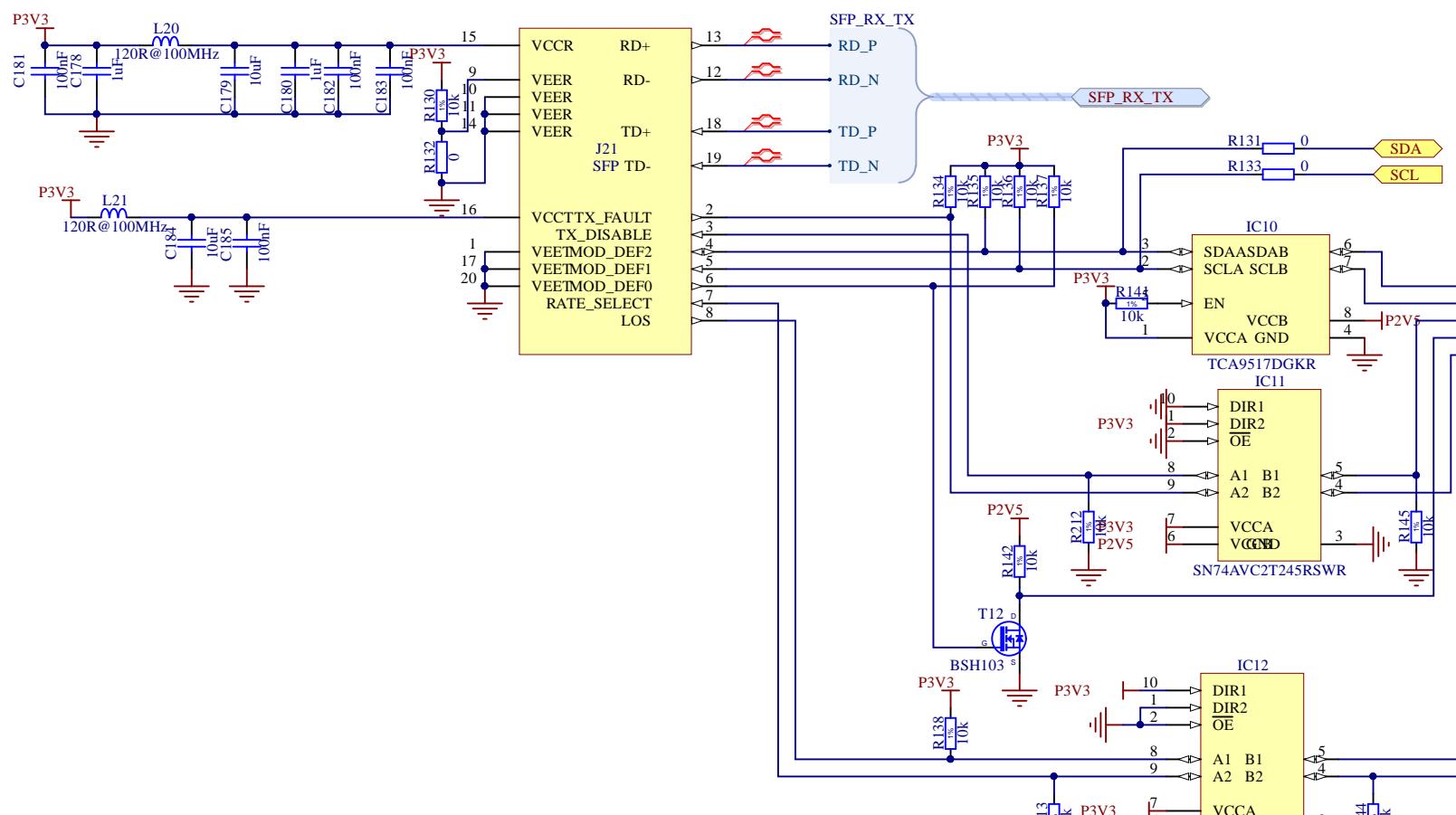


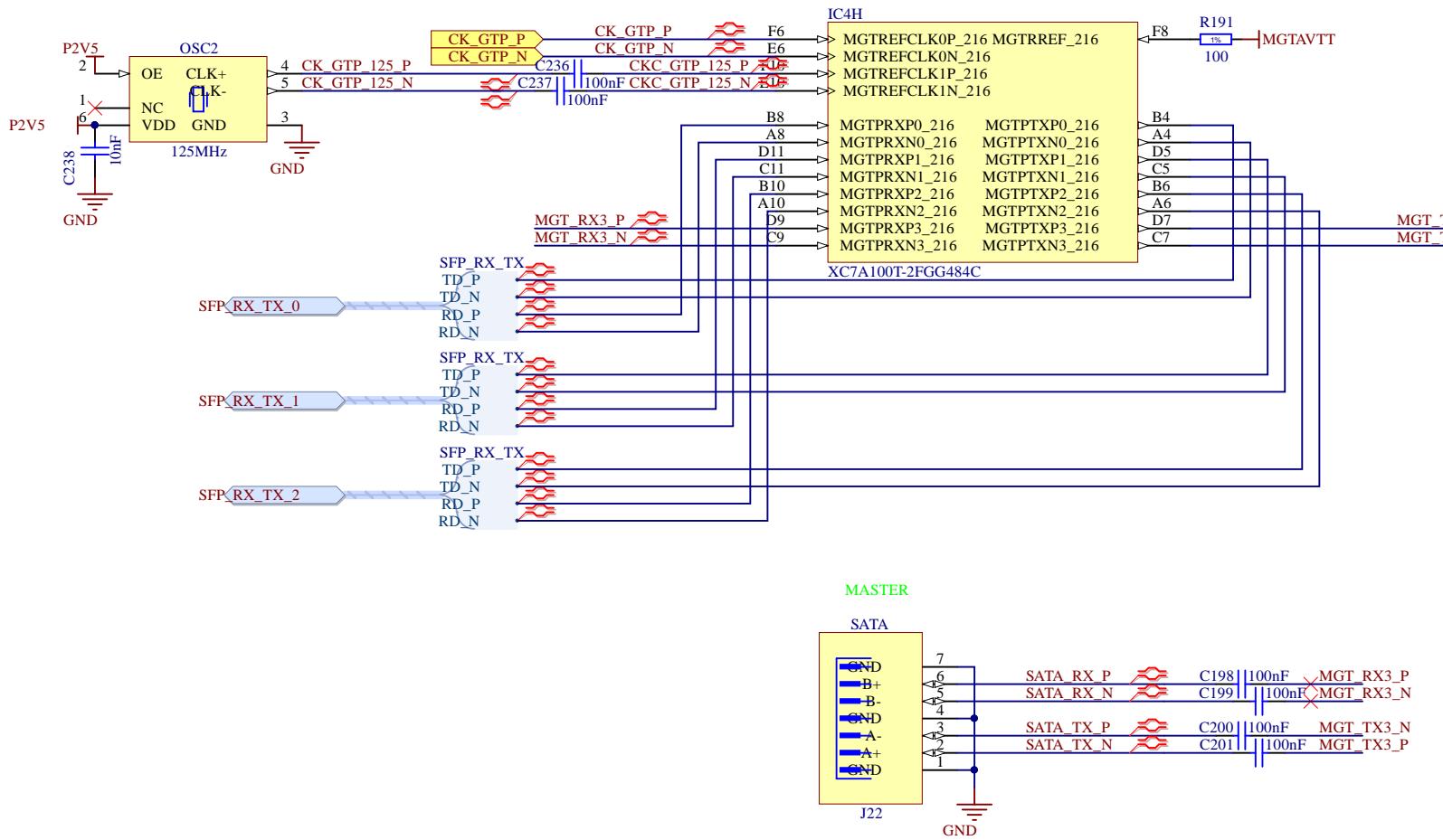
**IC4F**

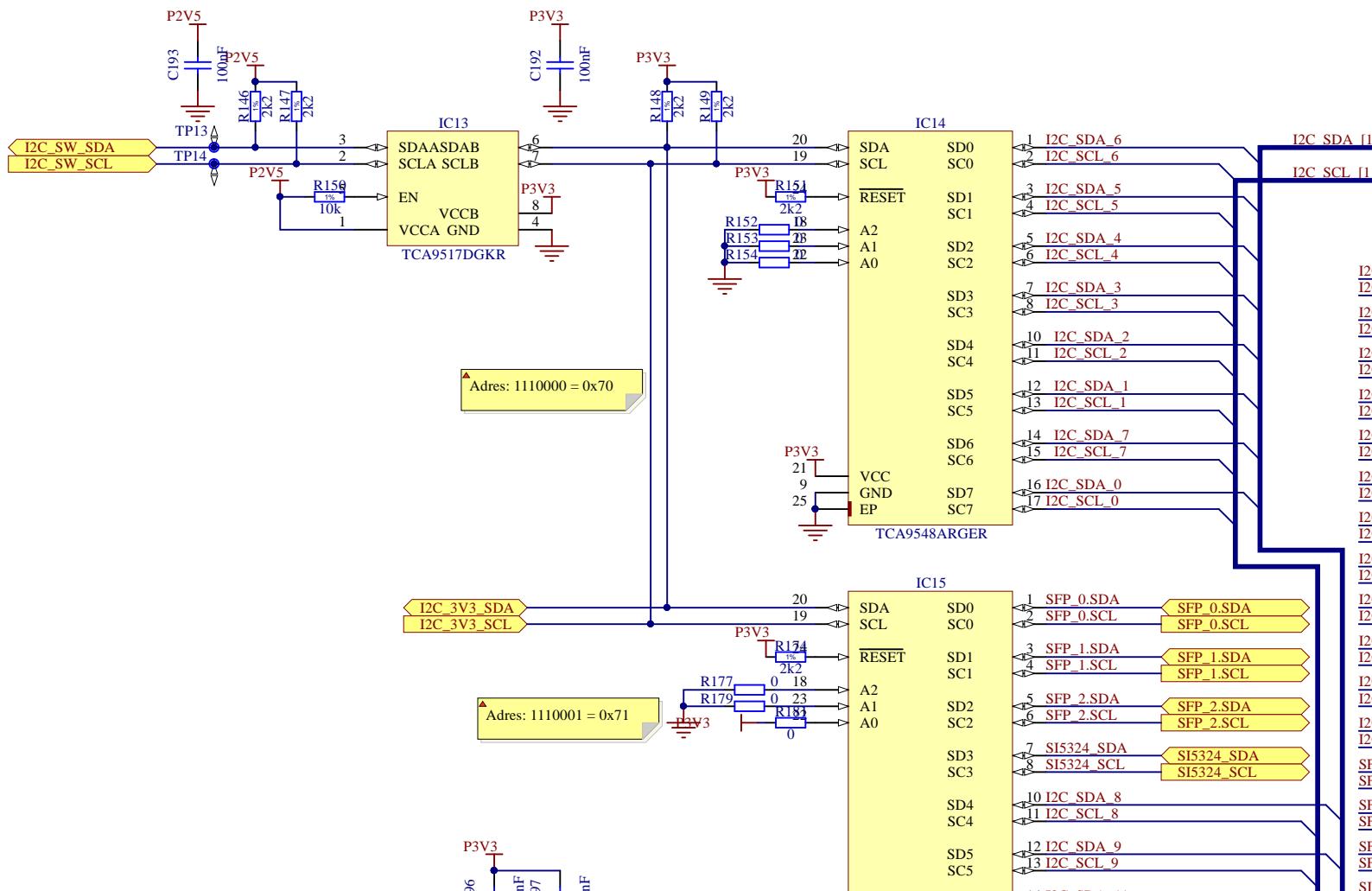
XC7A100T-2FGG484C

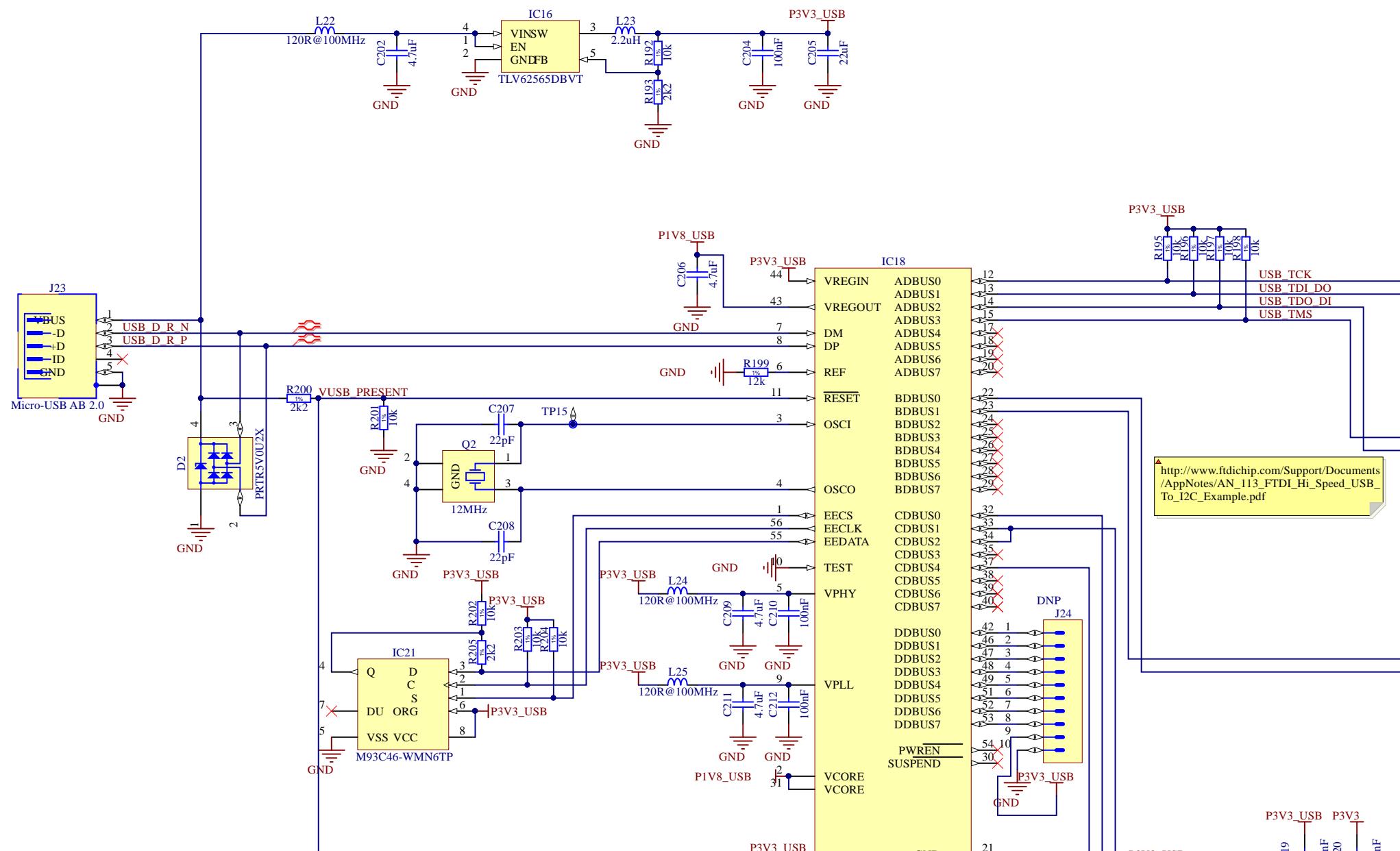
Termination resistors must be placed close to DDR3 memory.

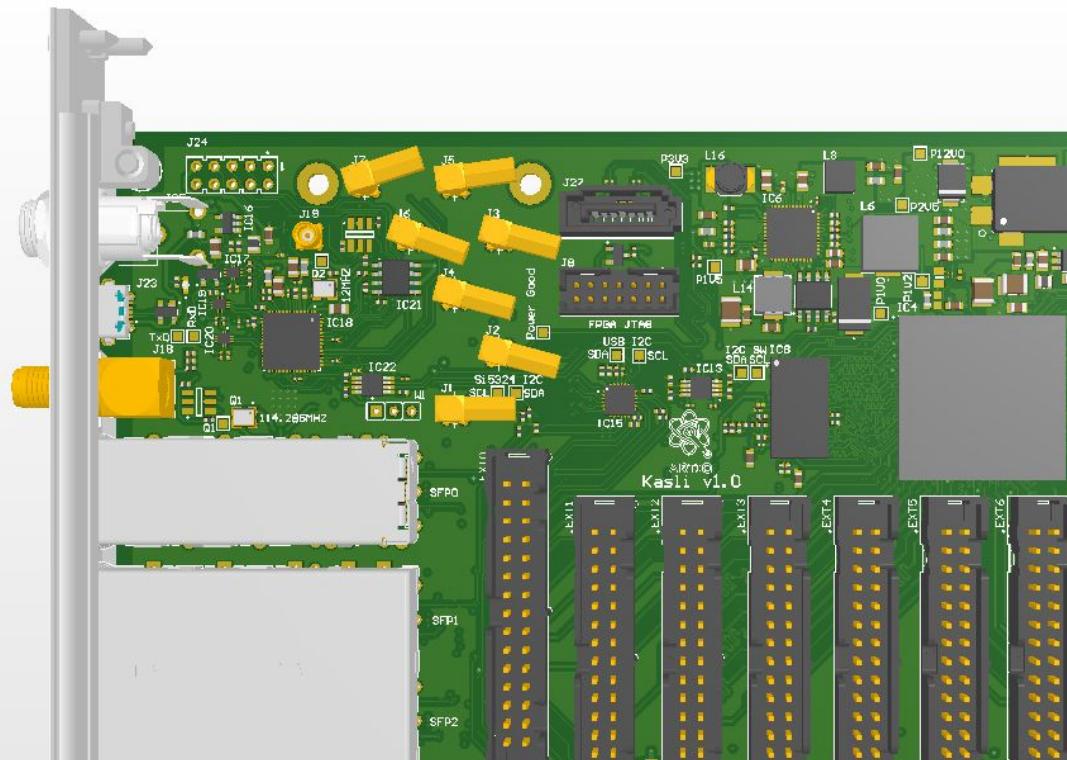
**IC8**







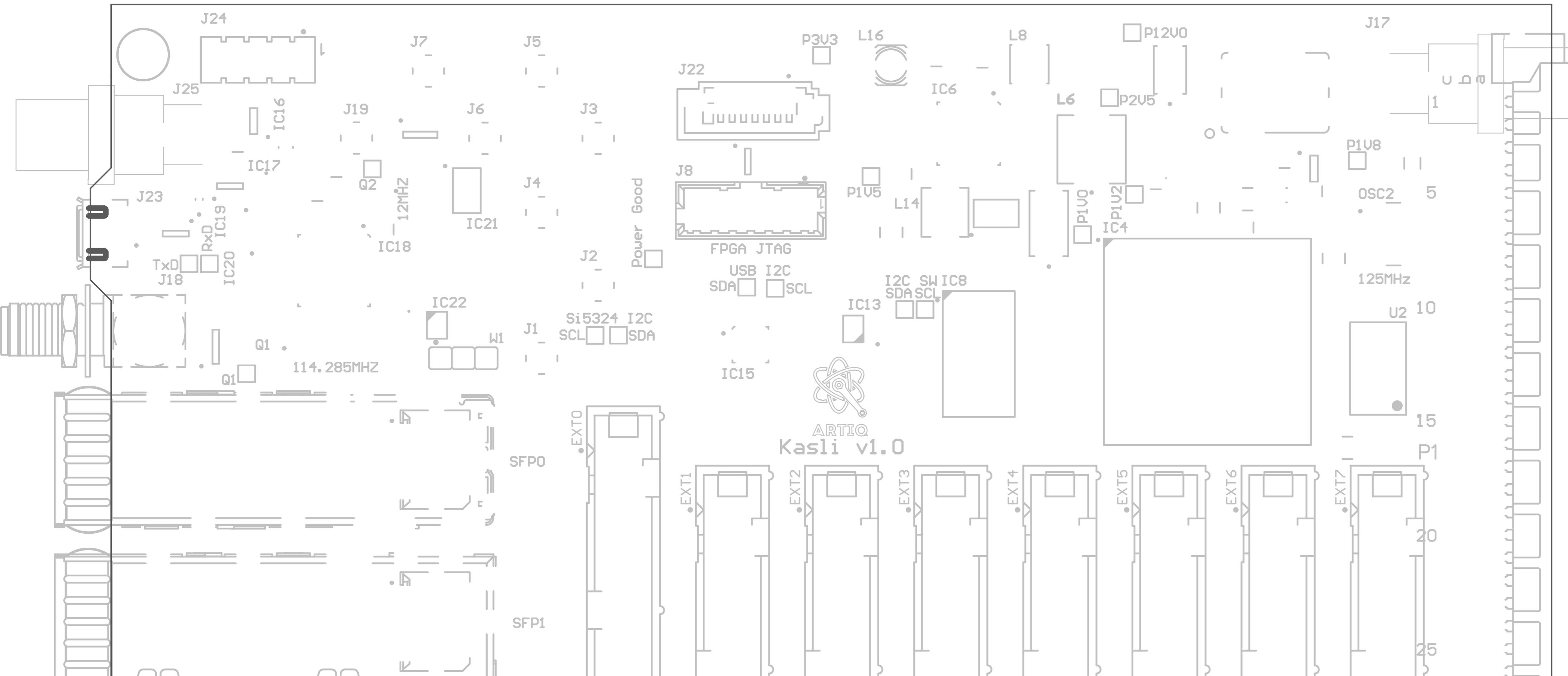




DSC1  
50MHz

IC9

IC14



Layer	Name
1	TopOval
2	TopSoc
3	TopLayer
4	Dielectric
5	MidLayer
6	Dielectric
7	MidLayer
8	Dielectric
9	Signal
10	Dielectric
11	Interconnect
12	Dielectric
13	Bottom
14	Bottom
15	Bottom

