



# Koruza-CM

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## Version Revision:

- v0.2 - 09.03.2017.
- v0.3 - 30.03.2017.
- v0.3.1 - 05.05.2017.

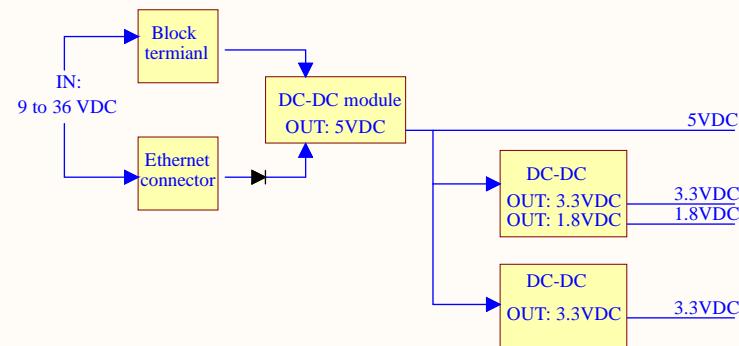
## DESIGN CONSIDERATIONS

**DESIGN NOTE:**  
Example text for informational design notes.

**DESIGN NOTE:**  
Example text for critical design notes.

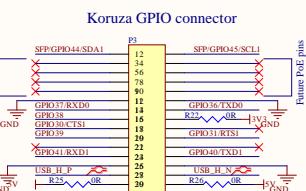
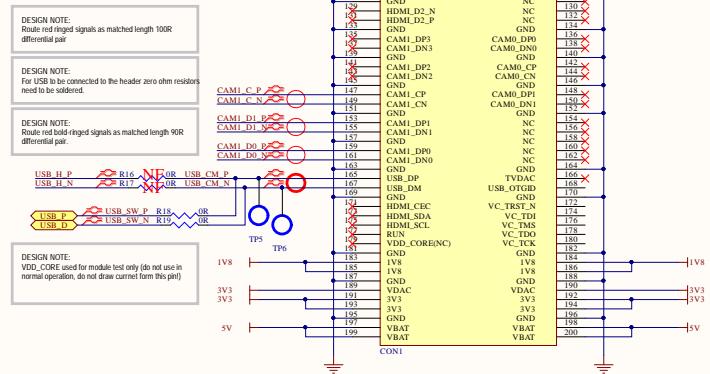
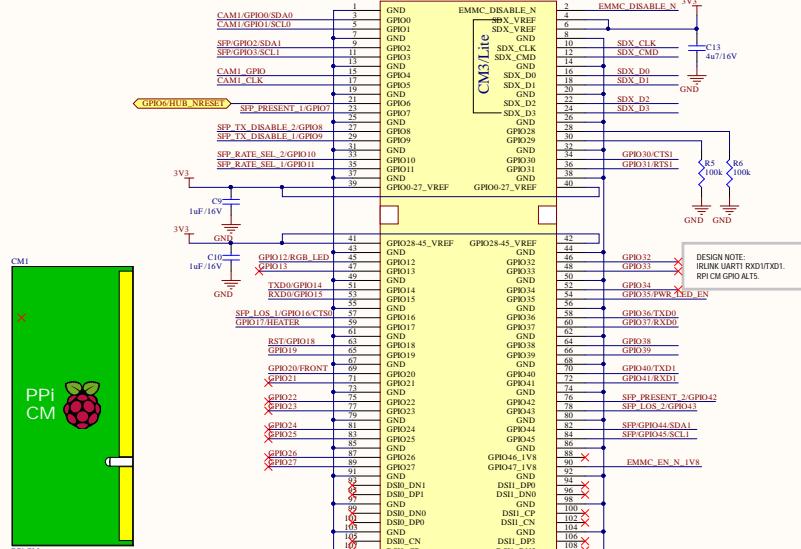
**LAYOUT NOTE:**  
Example text for critical layout guidelines.

## POWER DIAGRAM



KORUZA-CM

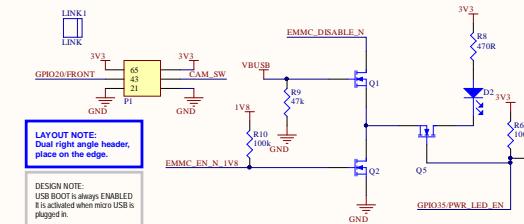
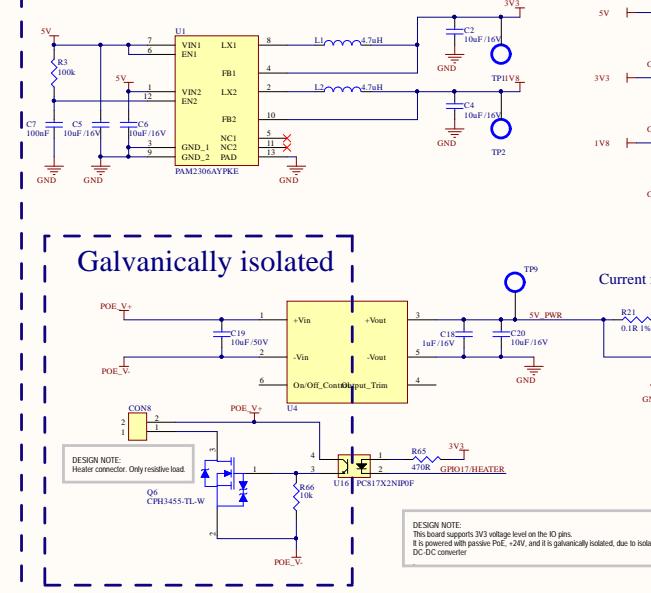
[www.koruza.net](http://www.koruza.net)



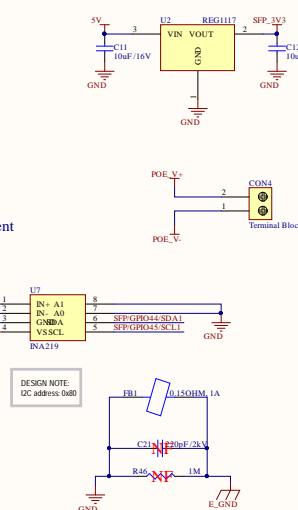
Koruza GPIO connector - GPIO Pins Alternative Function Assignment

	Pull	ALT0	ALT1	ALT2	ALT3	ALT4	ALT5
GPIO30	Low	<reserved>	SD3	PCM_DIN	C101		C101
GPIO31	Low	<reserved>	SD2	PCM_DOUT	RTS0		RTS1
GPIO36	High	SPD1_CE0_N	SD6		TXD0	<reserved>	
GPIO37	Low	SPD1_MISO	SD1		RXD0	<reserved>	
GPIO38	Low	SPD1_MOSI	SD2		RTS0	<reserved>	
GPIO39	Low	SPD1_SCLK	SD3		CTS0	<reserved>	
GPIO40	Low	PWM0	SD4			<reserved>	SPD2_MISO
GPIO41	Low	PWM1	SD5			<reserved>	SPD2_MOSI
GPIO44	-	GCLK1	SDAO	SDA1		<reserved>	SPD2_CE1_N
GPIO45	-	PWM1	SD0	SCL1		<reserved>	SPD2_C2_N

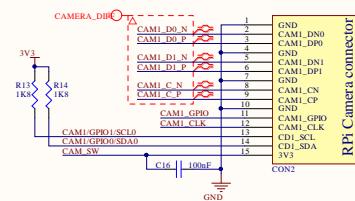
## System power



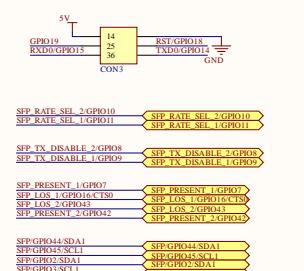
SFP Power suppl



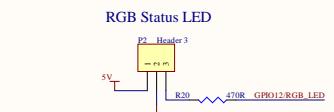
Koruza Camera connect



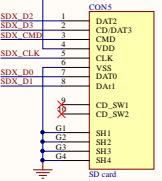
Koruza move driver connector



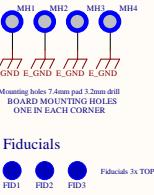
### Micro SD card socket



4u7/16V GND



## Mounting holes

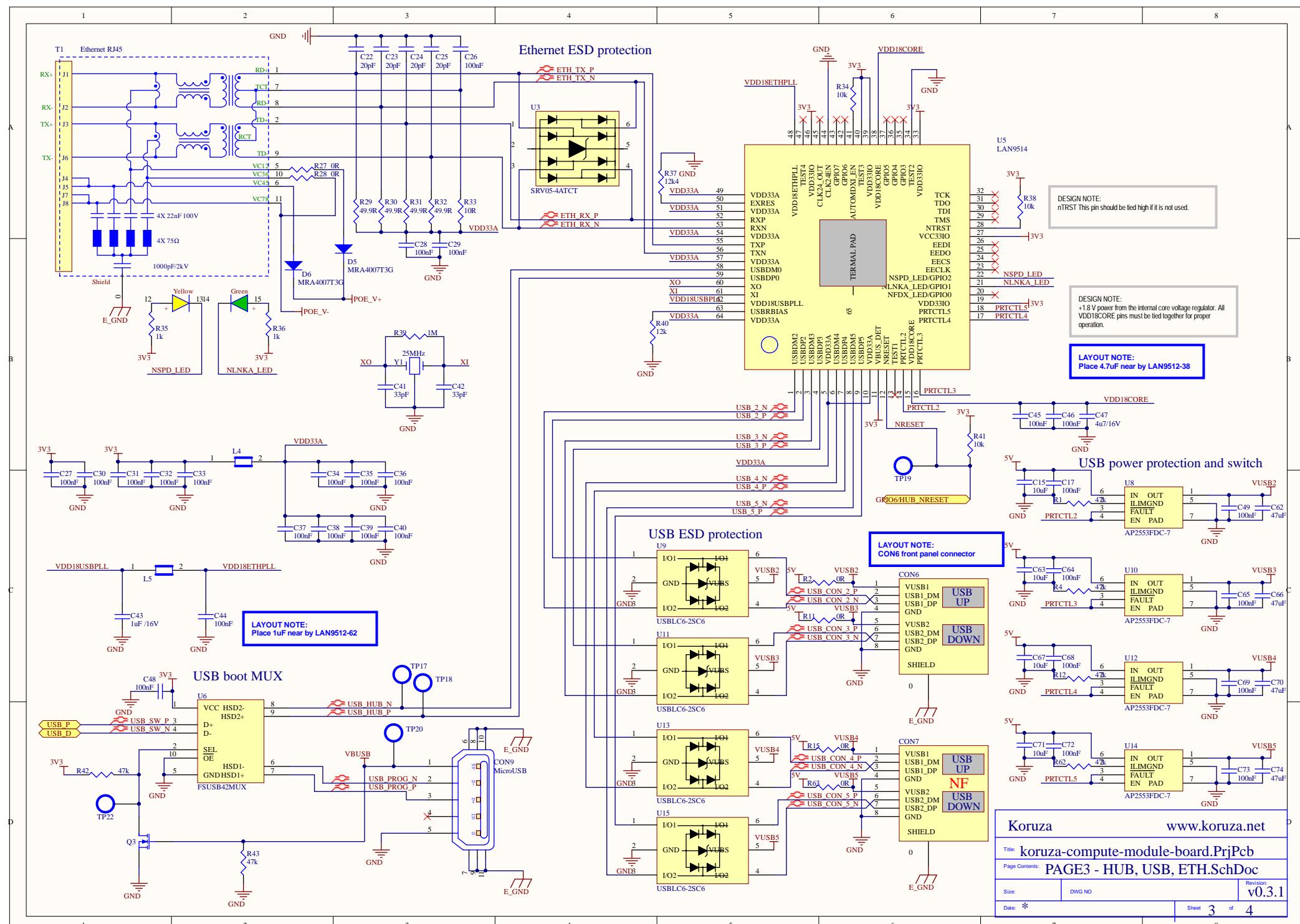


### Fiducials



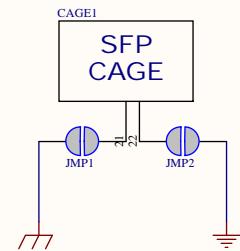
K<sub>2</sub>CO<sub>3</sub>

Title: koruza-compute-module-board.PrjPcb  
Page Content: PAGE2 - PWR\_MODULE.SchDoc

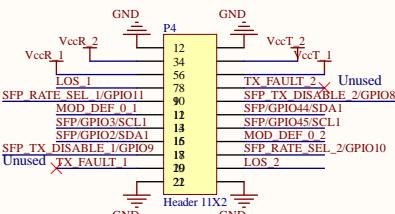


# Rigid to Flex PCB connection

SFP Cage Rigid to flex connector



Koruza SFP rigid to flex GPIO connector

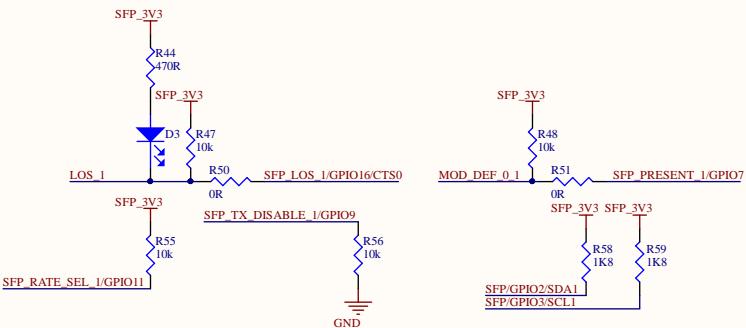


SFP\_PRESENT\_1/GPIO7  
SFP\_LOS\_1/GPIO16/CTS0  
SFP\_LOS\_2/GPIO43  
SFP\_PRESENT\_2/GPIO42  
SFP\_PRESENT\_1/GPIO7  
SFP\_LOS\_1/GPIO16/CTS0  
SFP\_LOS\_2/GPIO43  
SFP\_PRESENT\_2/GPIO42

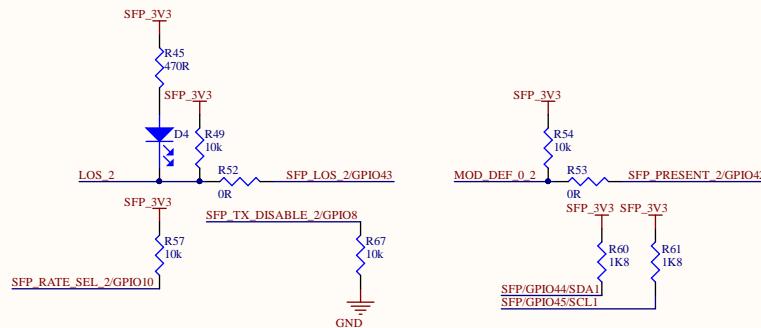
SFP\_GPIO44/SDA1  
SFP\_GPIO45/SCL1  
SFP\_GPIO2/SDA1  
SFP\_GPIO3/SCL1  
SFP\_TX\_DISABLE\_2/GPIO8  
SFP\_TX\_DISABLE\_1/GPIO9

SFP\_TX\_DISABLE\_2/GPIO8  
SFP\_TX\_DISABLE\_1/GPIO9  
SFP\_RATE\_SEL\_2/GPIO10  
SFP\_RATE\_SEL\_1/GPIO11

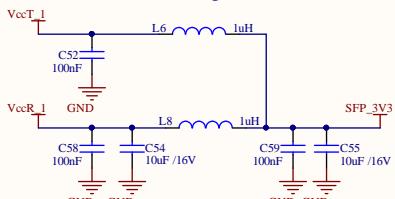
SFP1 GPIO config



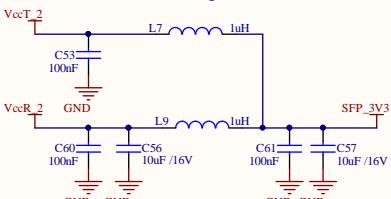
SFP2 GPIO config



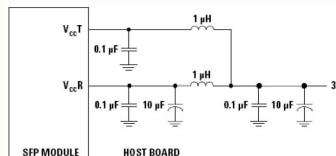
SFP1 Power filtering network



SFP2 Power filtering network



**DESIGN NOTE:**  
Note: Inductors with DC resistance of less than 1Ω should be used in order to maintain the required voltage at the SFP input pin 3.3V. When the recommended supply filtering circuit is used, hot plugging of the SFP transceiver module will result in an inrush current of no more than 30 mA greater than the steady state value.



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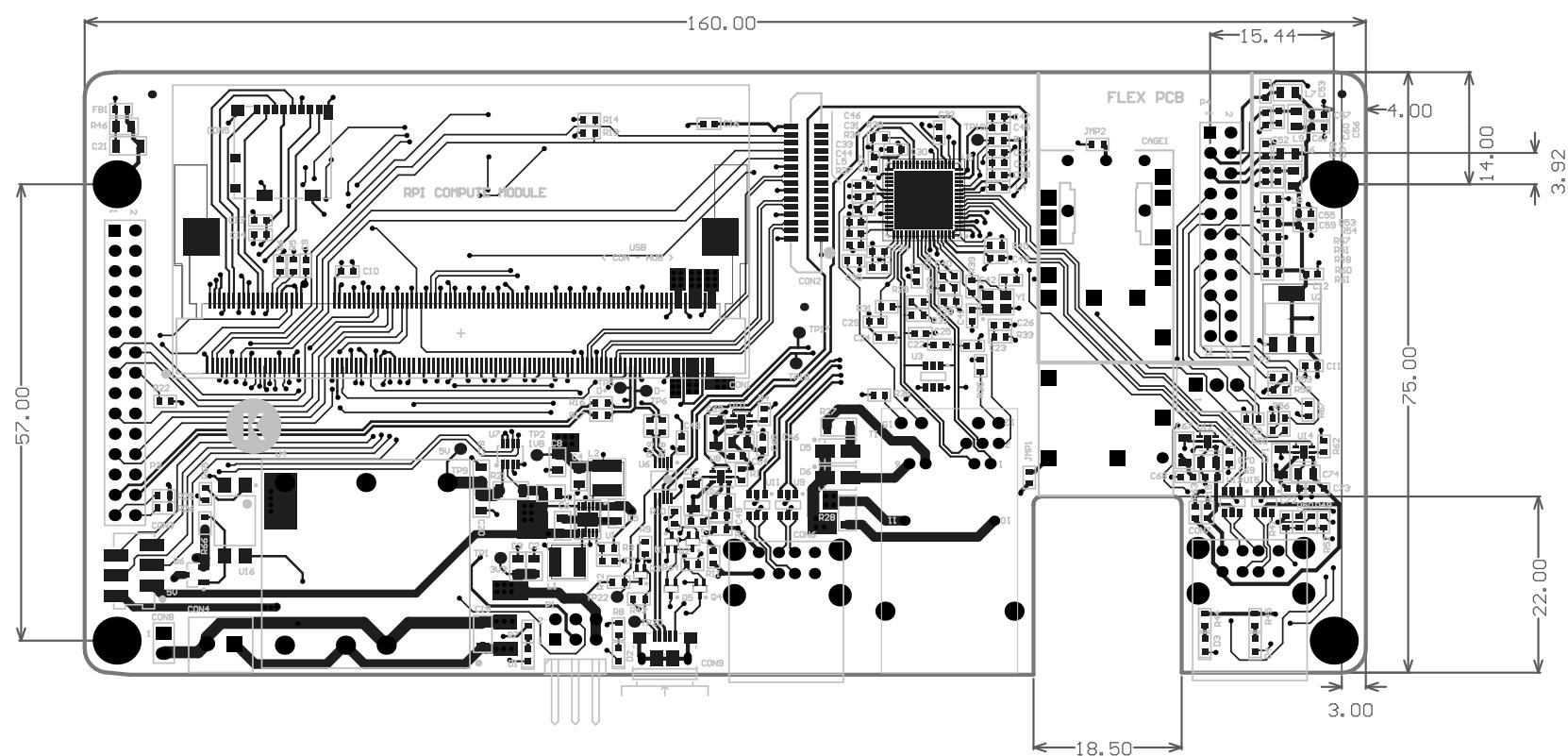
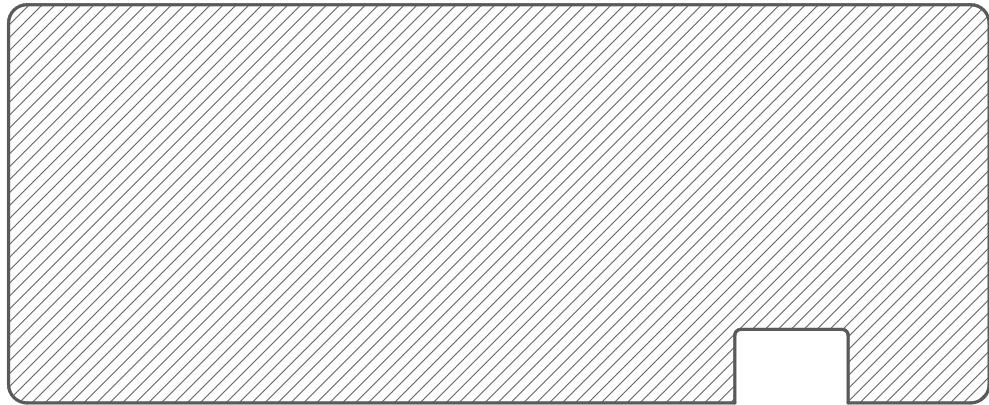
Title: koruza-compute-module-board.PrjPcb

Page Contents: PAGE4 - SFP.SchDoc

Size: DWG NO Revision: v0.3.1

Date: \* Sheet 4 of 4

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.010mm	3.5	
3	Component Side	Copper	0.040mm		
4	Dielectric 1	FR-4	0.240mm	4.6	
5	Ground Plane	Copper	0.035mm		
6	Dielectric 3	R-17255M	0.400mm	4.6	
7	Power Plane	Copper	0.035mm		
8	Dielectric 4		0.254mm	4.2	
9	Solder Side	Copper	0.040mm		
10	Bottom Solder	Solder Resist	0.010mm	3.5	
11	Bottom Overlay				



Layer	Name	Material	Thickness	Cost/Unit	Board Layer Stack
1	Top Overlay				
2	Top Sojde	Solder Resist	0.010mm	3.5€	
3	Coupler Side	Copper	0.040mm		
4	Detectric 1	FR-4	0.240mm	4.0€	
5	Ground Plane	Copper	0.035mm		
6	Detectric 3	FR-1Z55M	0.400mm	4.0€	
7	Power Plane	Copper	0.255mm	4.5€	
8	Detectric 4	Copper	0.040mm		
9	Sojde Side	Copper	0.040mm		
10	Bottom Sojde	Solder Resist	0.010mm	3.5€	
11	Bottom Overlay				

