



Koruza-CM

CONTENTS:

PAGE1 - CONTENTS

PAGE2 - POWER, MODULE, KORUZA CONNECTORS

PAGE3 - HUB, USB, ETHERNET

PAGE4 - SFP

Version Revision:

v0.3 - 30.03.2017.

DESIGN CONSIDERATIONS

DESIGN NOTE:
Example text for informational
design notes.

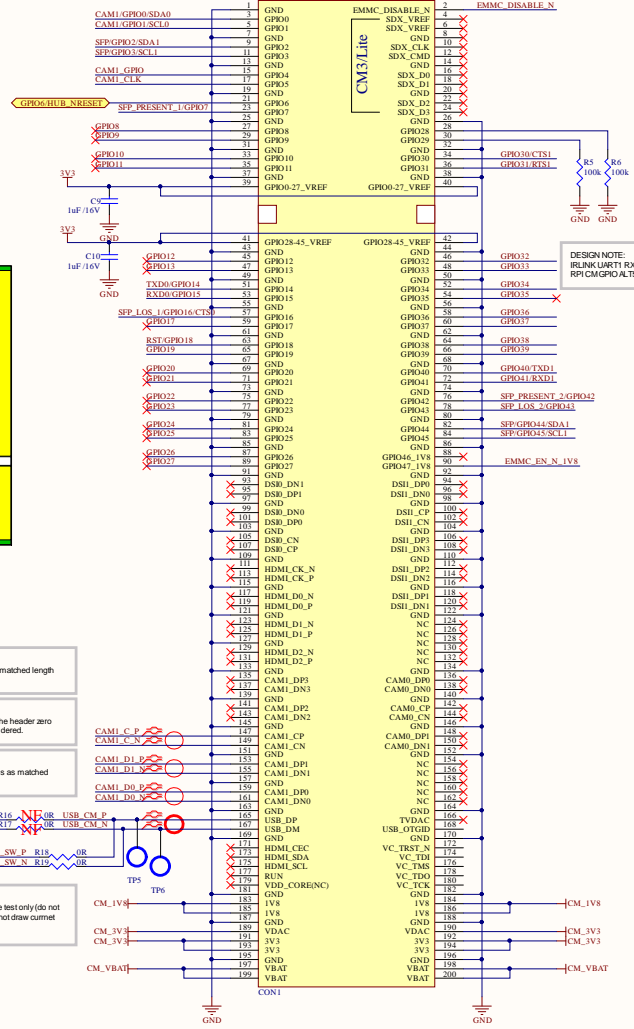
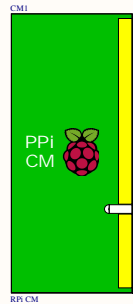
DESIGN NOTE:
Example text for critical
design notes.

LAYOUT NOTE:
Example text for critical
layout guidelines.

Koruza		www.koruza.net	
Title:		koruza-compute-module-board.PrjPcb	
Page Contents:		PAGE1 - CONTENTS.SchDoc	
Size:	DWG NO		Revision: v0.3
Date: *	Sheet 1 of 4		

KORUZA-CM

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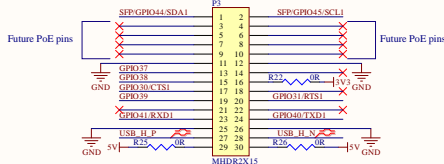
DESIGN NOTE:
Route red ringed signals as matched length 100R differential pair

DESIGN NOTE:
For USB to be connected to the header zero ohm resistors need to be soldered.

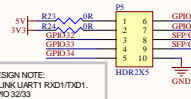
DESIGN NOTE:
Route red bold ringed signals as matched length 90R differential pair.

DESIGN NOTE:
VDD_CORE used for module test only (do not use in normal operation, do not draw current from this pin)

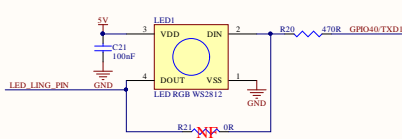
Koruzo GPIO connector



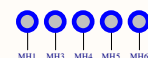
IR Link connector



RGB Status LED



Mounting holes



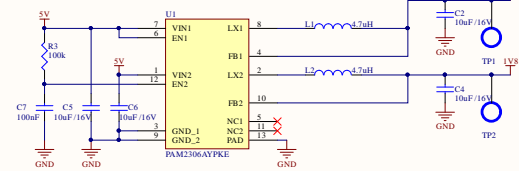
Fiducials



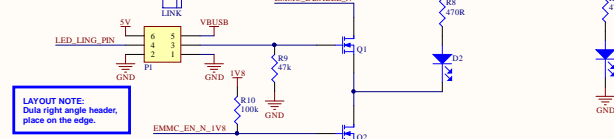
DESIGN NOTE:
If RGB LED is soldered, zero ohm resistor should not be fixed.

LAYOUT NOTE:
LED Ring connector need to be placed on the front edge of the board, to be easy accessible.

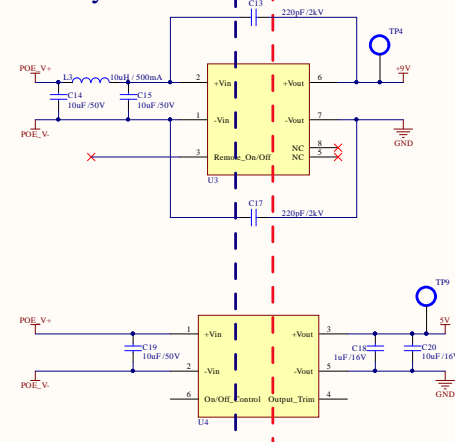
Power



DESIGN NOTE:
Jumper position:
3-2 = USB BOOT ENABLED
2-1 = USB BOOT DISABLED

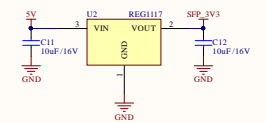


Galvanically isolated

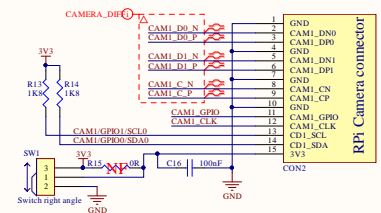


DESIGN NOTE:
This board supports 3V3 voltage level on the IO pins.
It is powered with passive PoE, <24V, and it is galvanically isolated, due to two isolated DC-DC converters.

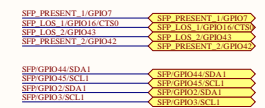
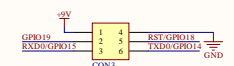
SFP Power supply



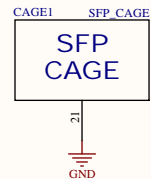
Koruzo Camera connector



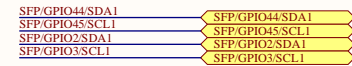
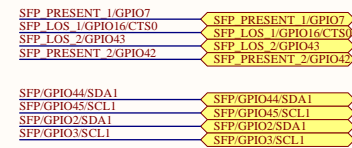
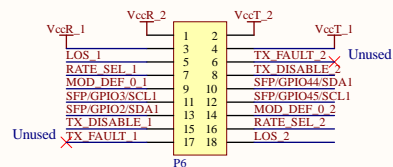
Koruzo move driver connector



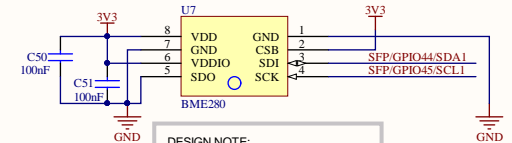
Rigid to Flex PCB connection



Koruzo SFP rigid to flex GPIO connector

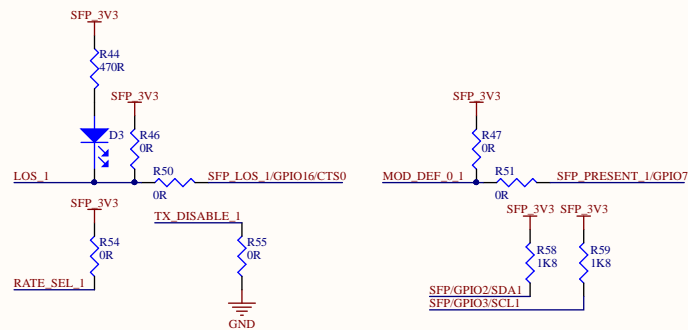


Environment sensor
Temperature, humidity, pressure

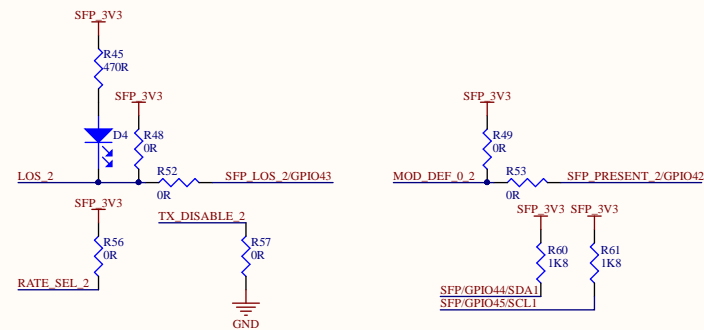


DESIGN NOTE:
I2C address bit 0 GND: '0'; VDDIO: '1'.
BME280 I2C address: 1110110 (0x76)

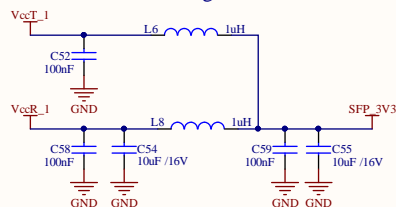
SFP1 GPIO config



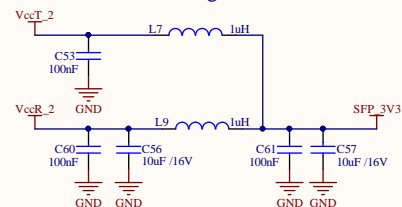
SFP2 GPIO config



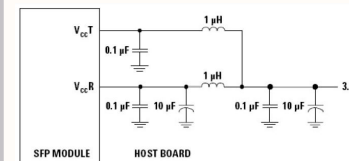
SFP1 Power filtering network



SFP2 Power filtering network



DESIGN NOTE:
Note: Inductors with DC resistance of less than 1 Ω should be used in order to maintain the required voltage at the SFP input pin at 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
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Date: * Sheet 4 of 4

