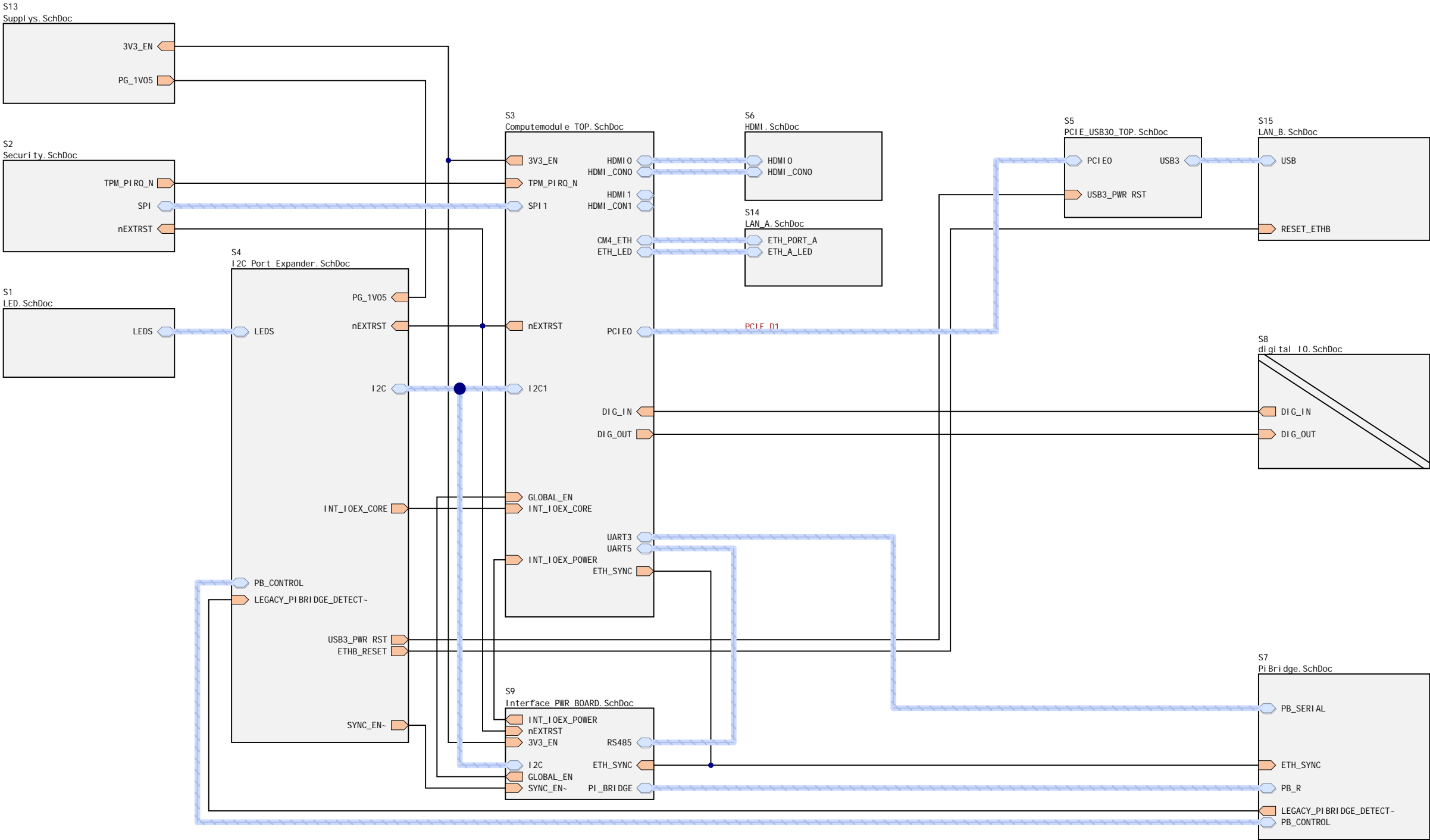


Connect4 Core



+ FID100 + FID101

DR100
ICT 2.5mm

DR101
ICT 2.5mm

LP0228R02

KUNBUS

industrial communication

DMC 5X5

PCBLabel
WOM UL 10x8

REVOLUTION PI

a KUNBUS brand

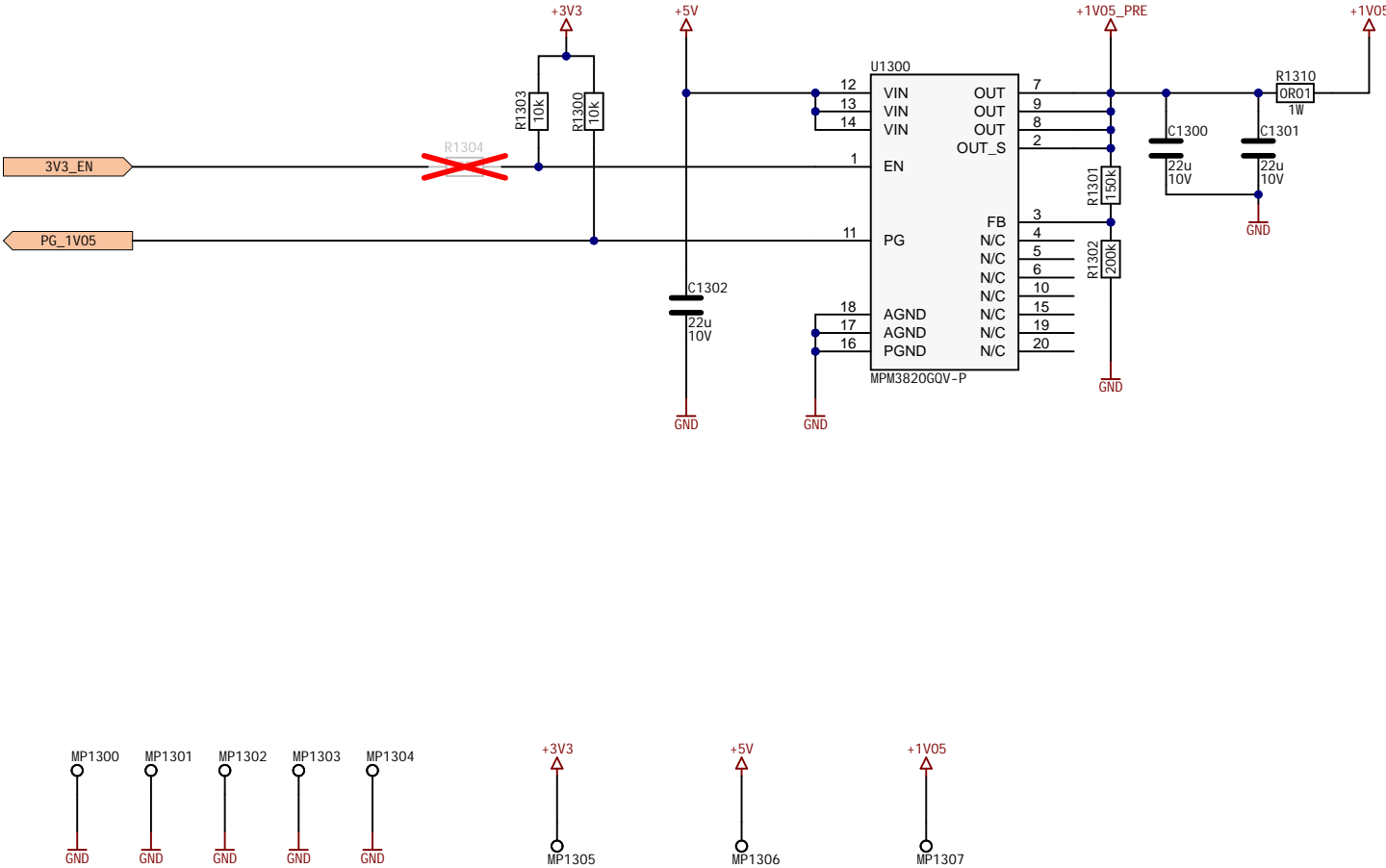
KUNBUS GmbH
Heerweg 15c
73770 Denkendorf

Project: RevPi Connect 4

Overview

LP: LP0228R02	BG: BG0263R02	
Author: VS/VM	Size: A3	Sheet 1 of 16
Date: 08.08.2023		

Suppl i es



KUNBUS GmbH
Heerweg 15c
73770 Denkendorf

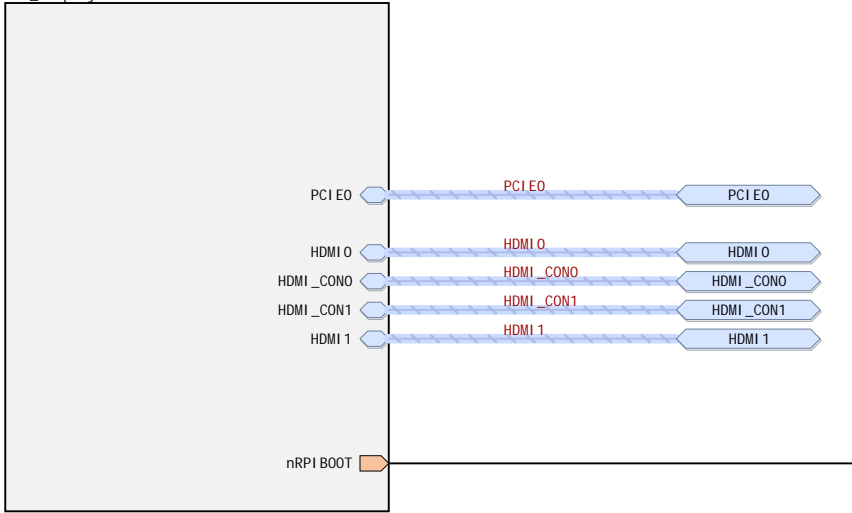
Project: RevPi Connect 4

Suppl i es

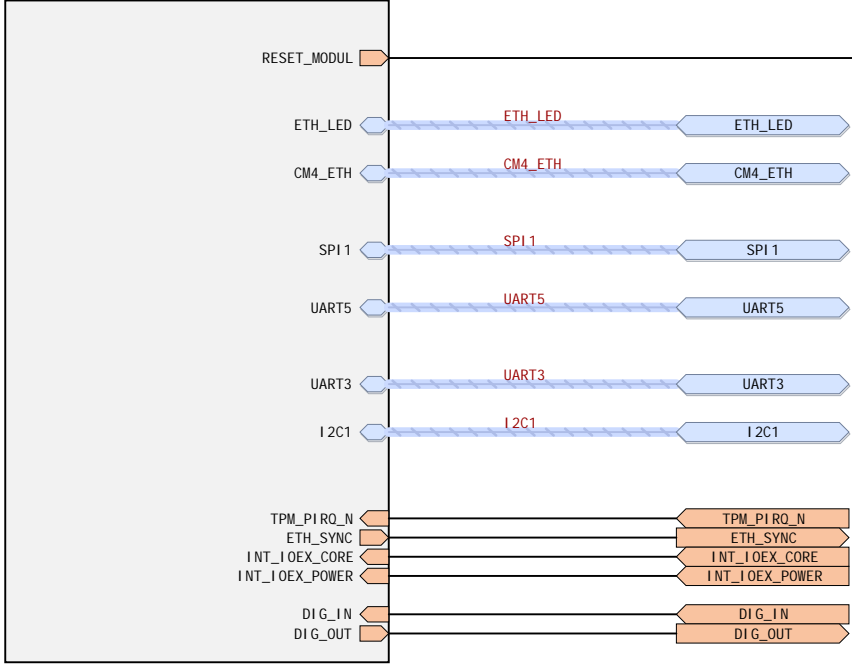
LP: LP0228R02	BG: BG0263R02	
Author: VS/VM	Size: A3	Sheet 2 of 16
Date : 08.08.2023		

Computemodule 4

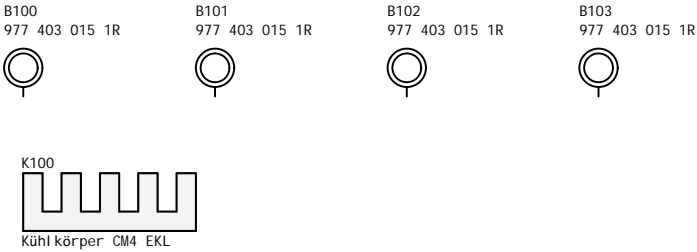
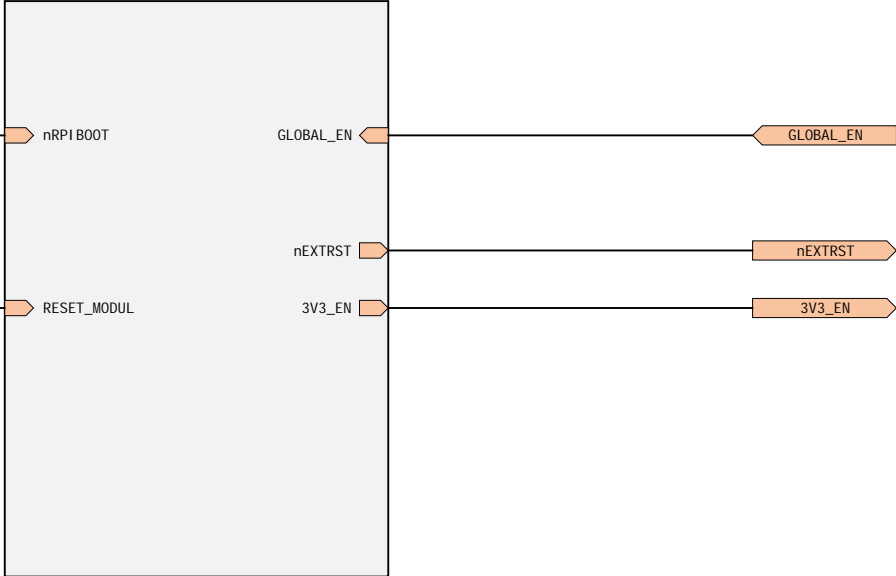
S31
CM4_Display.SchDoc



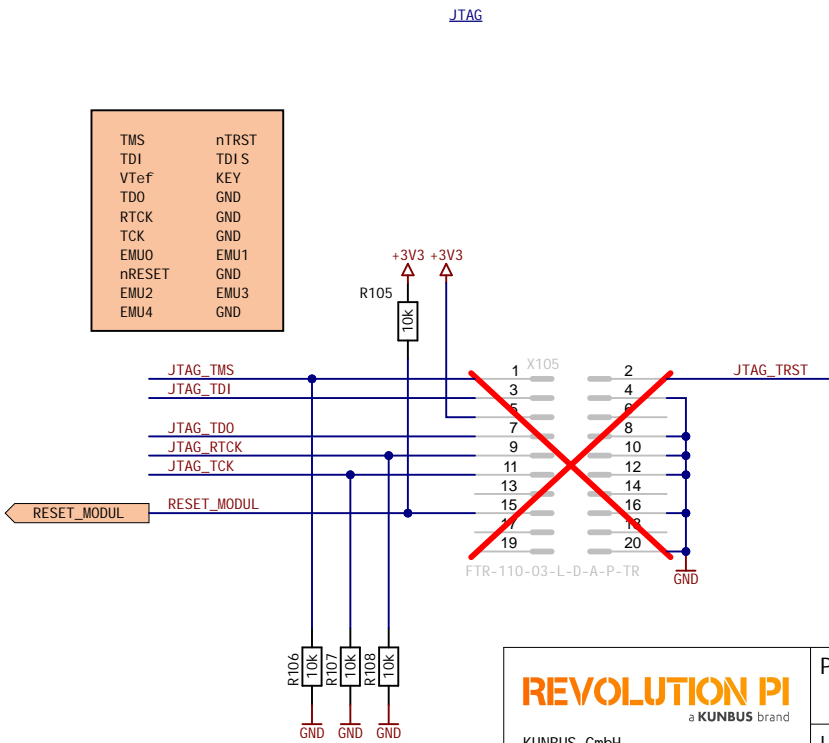
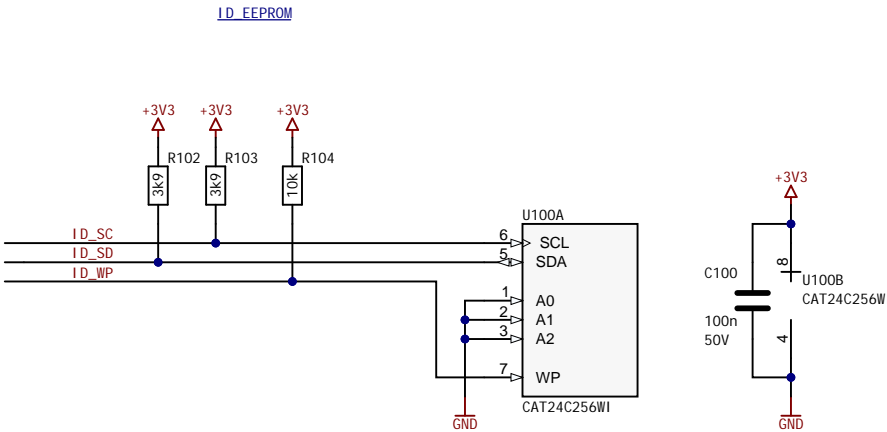
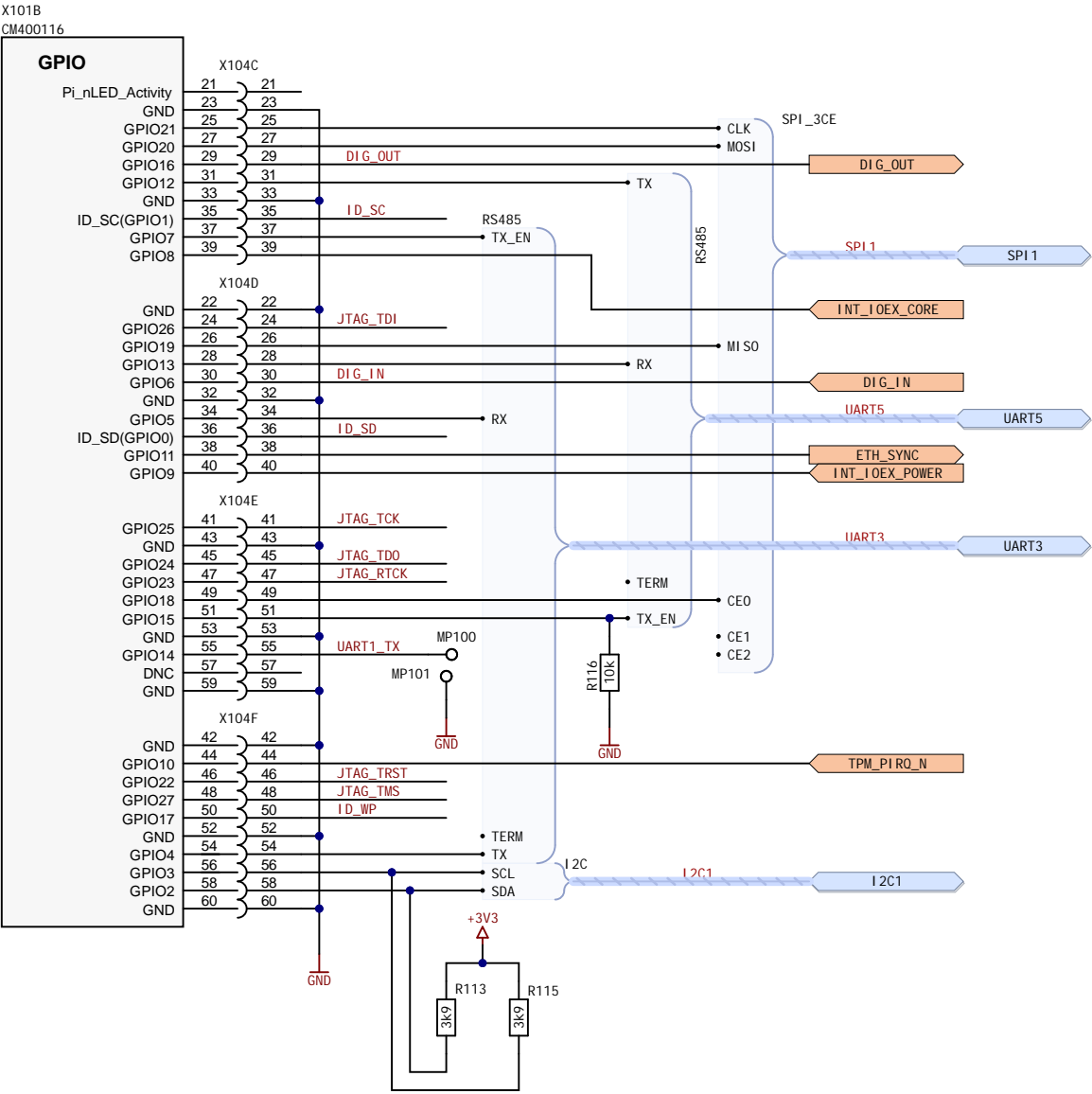
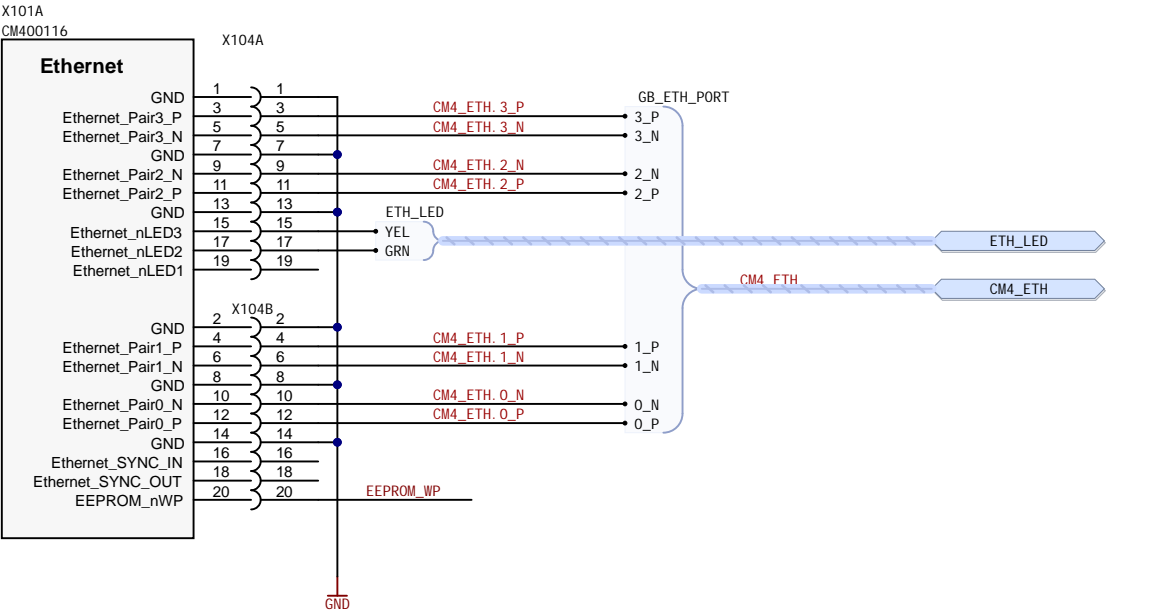
S32
CM4_GPIO.SchDoc



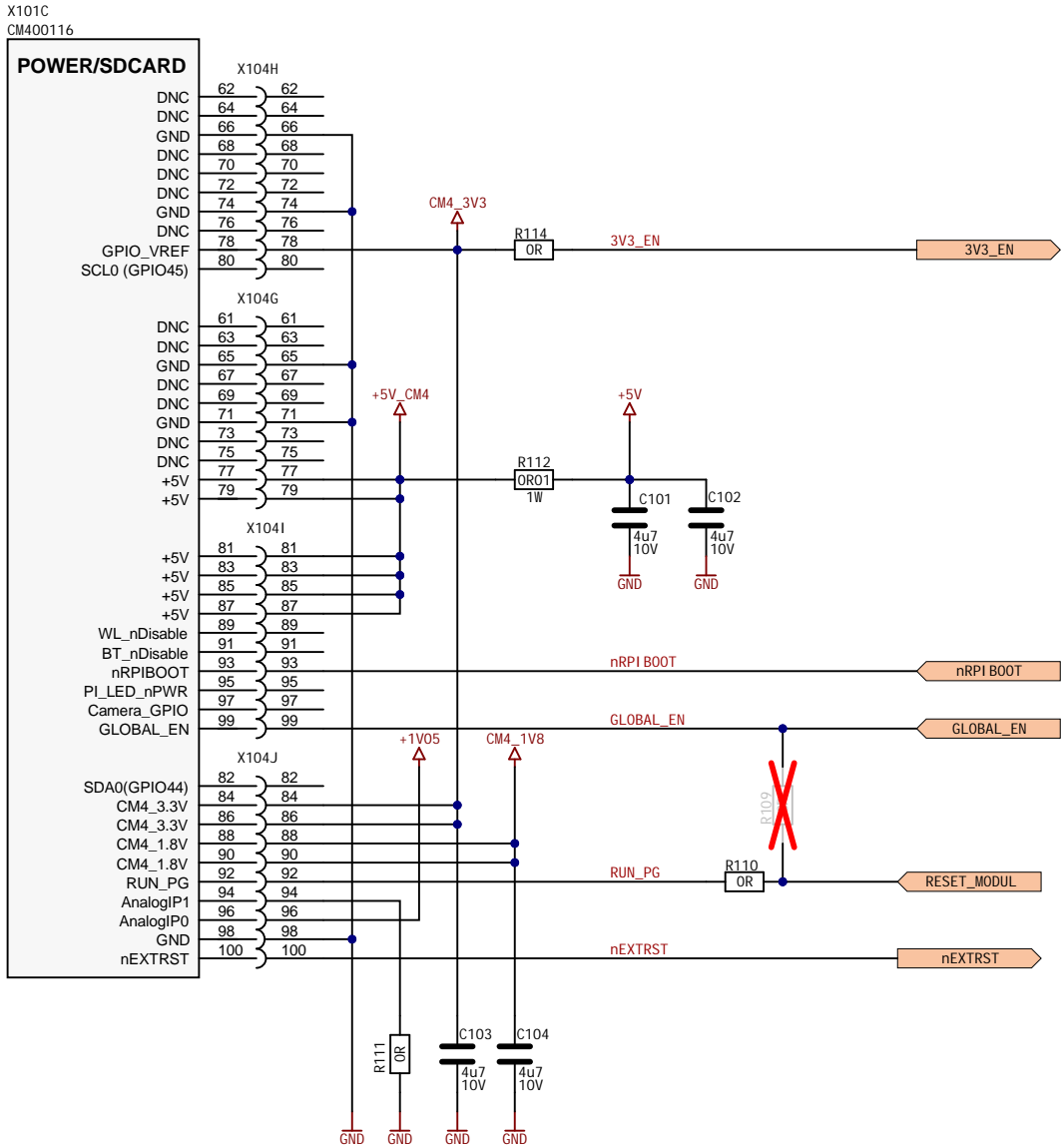
S33
CM4_Power.SchDoc



CM4 GPIO



CM4 Power



REVOLUTION PI
a KUNBUS brand

KUNBUS GmbH
Heerweg 15c
73770 Denkendorf

Project: RevPi Connect 4

CM4 Power

LP: LP0228R02

BG: BG0263R02

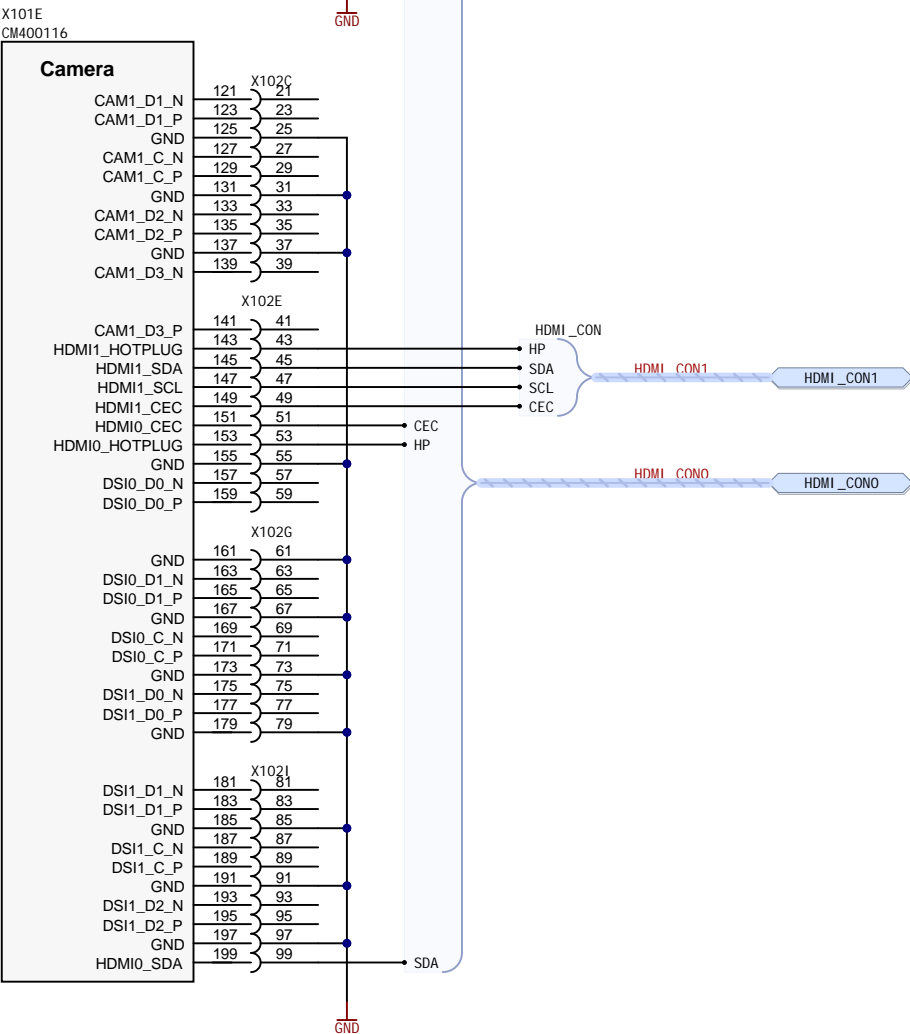
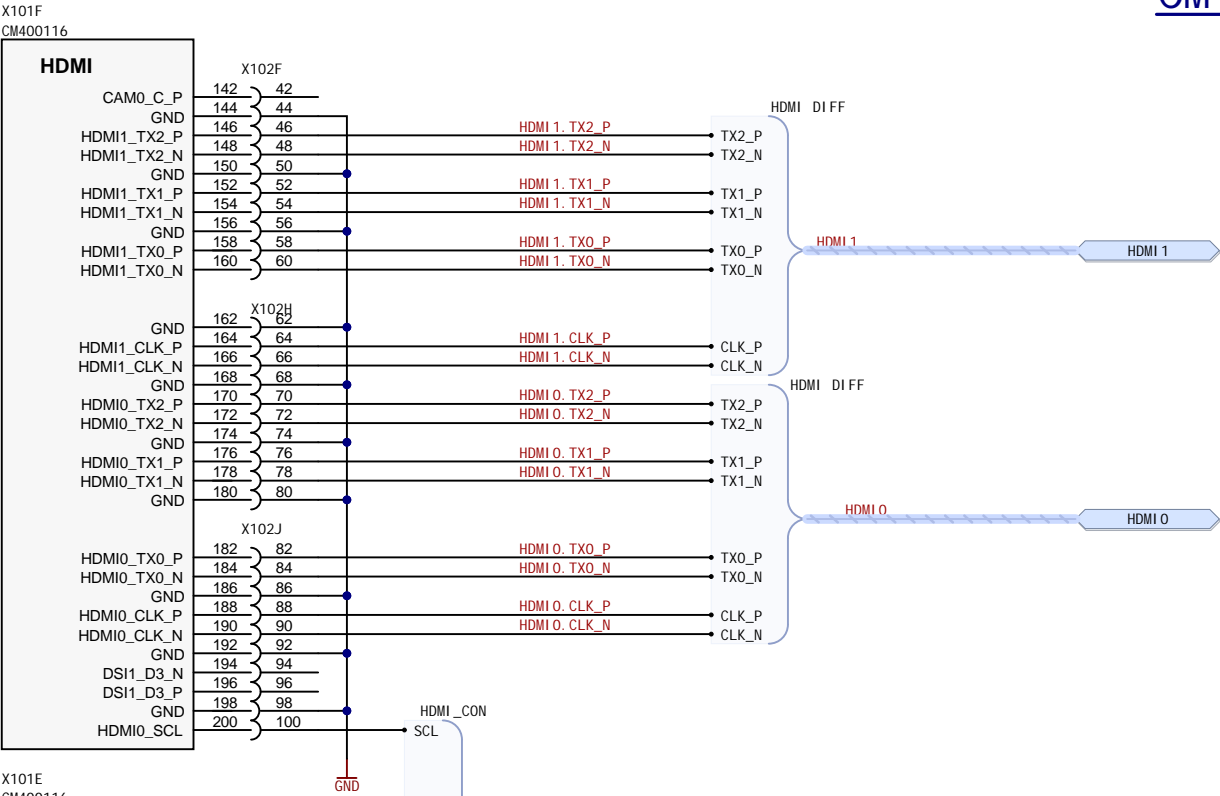
Author: VS/VM

Date : 08.08.2023

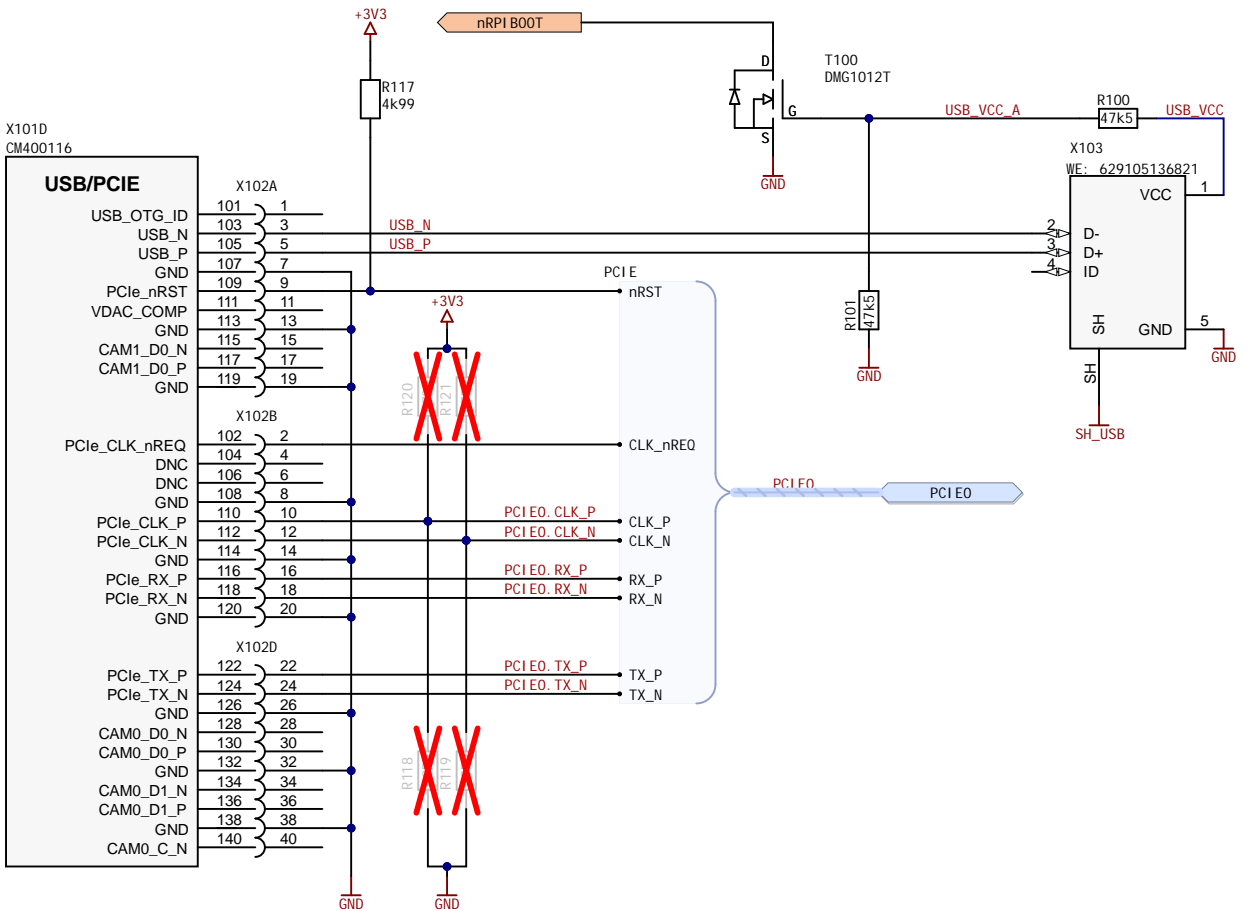
Size: A3

Sheet 5 of 16

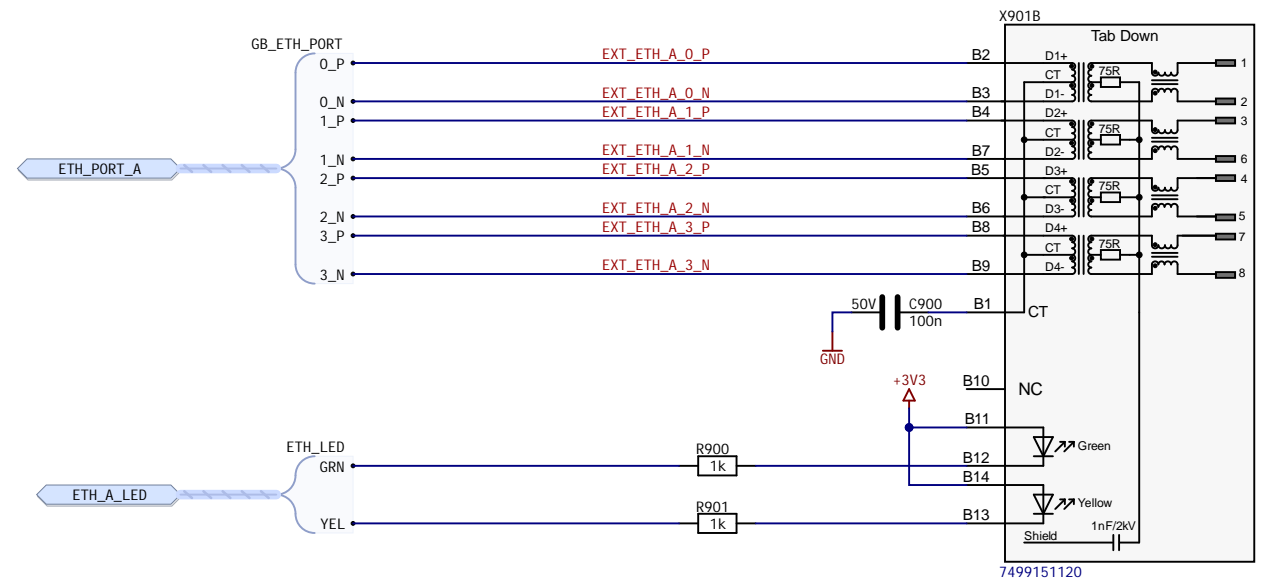
CM4 Vi deo



CM4_μUSB



LAN A



REVOLUTION PI
a KUNBUS brand

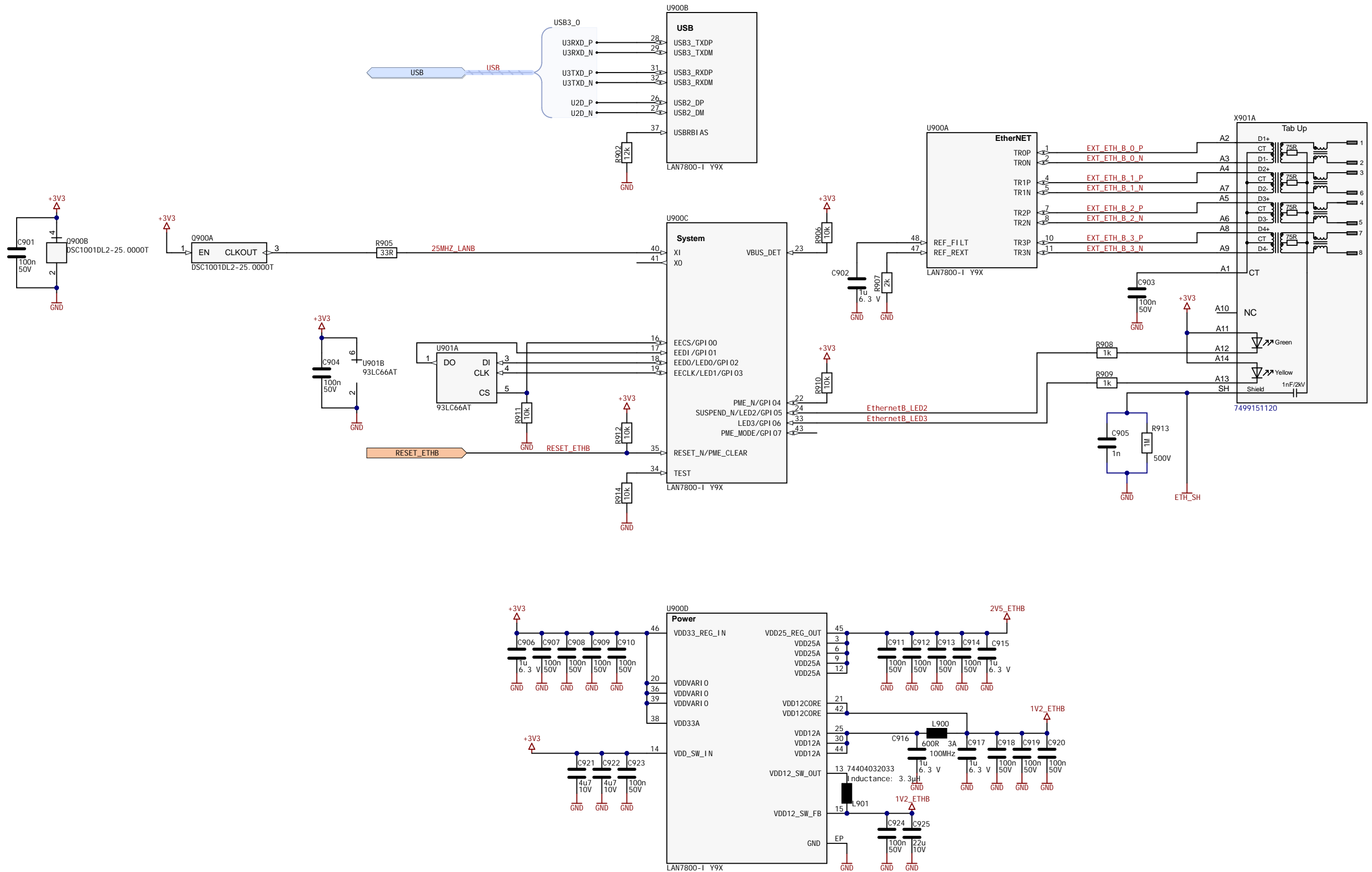
KUNBUS GmbH
Heerweg 15c
73770 Denkendorf

Project: RevPi Connect 4

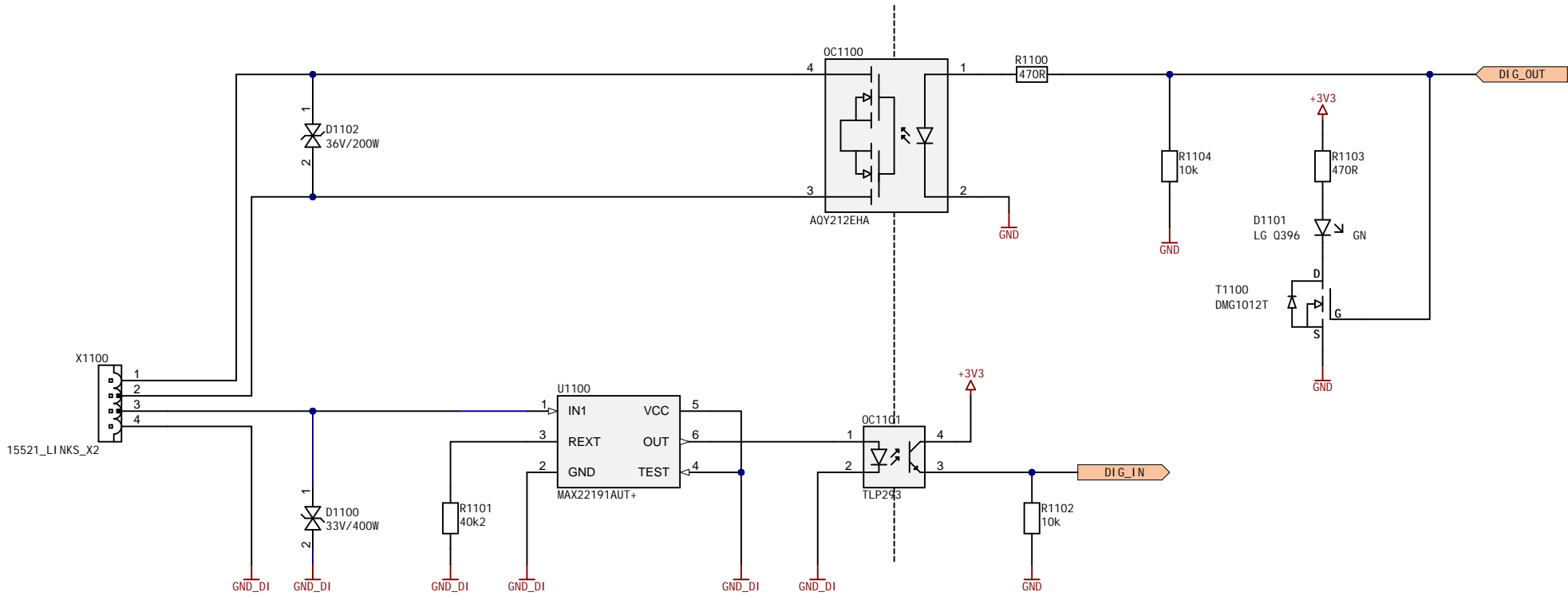
LAN A

LP: LP0228R02	BG: BG0263R02	
Author: VS/VM	Size: A3	Sheet 8 of 16
Date : 08.08.2023		

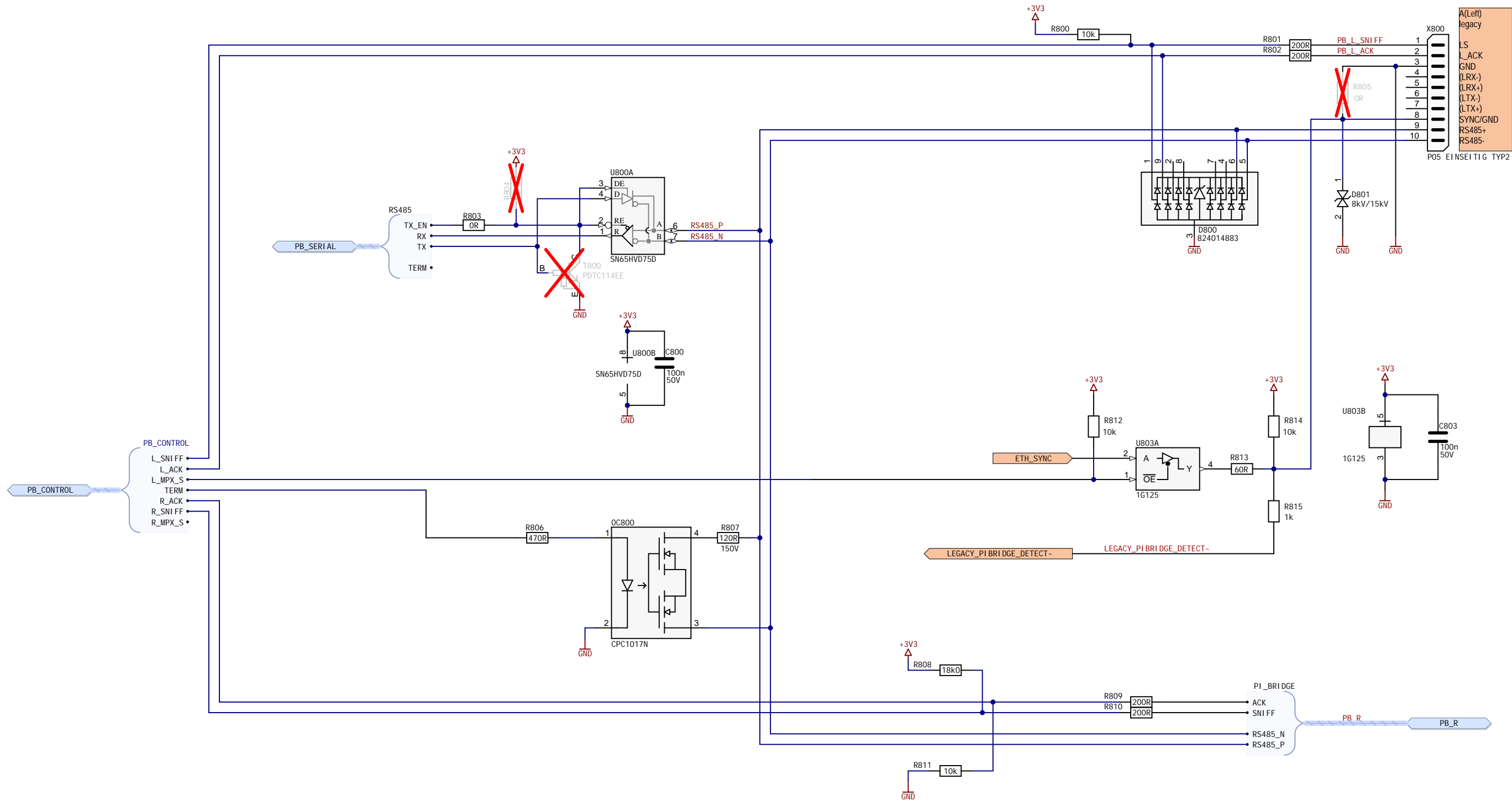
USB3 LAN B



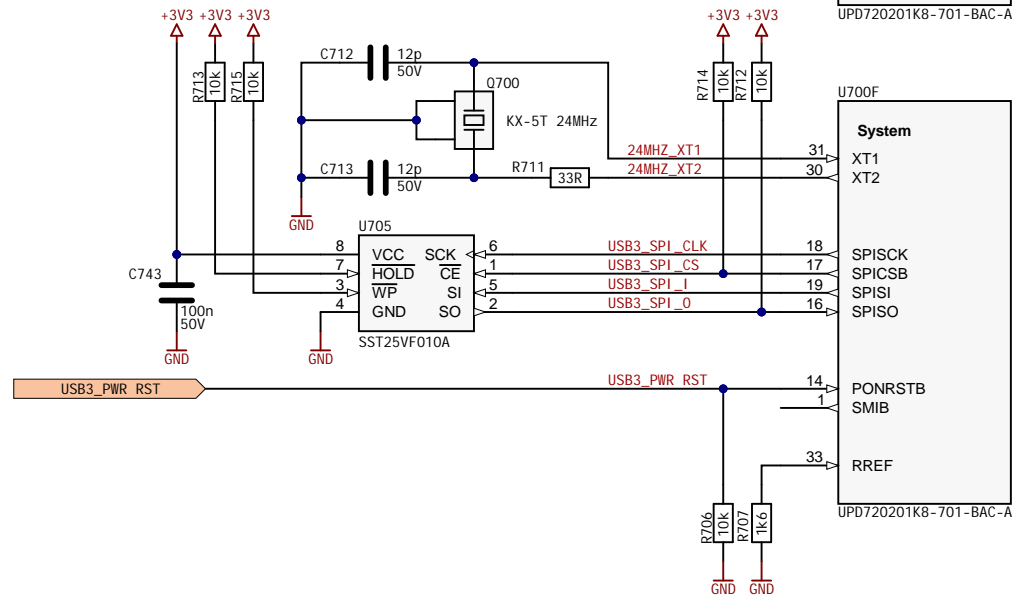
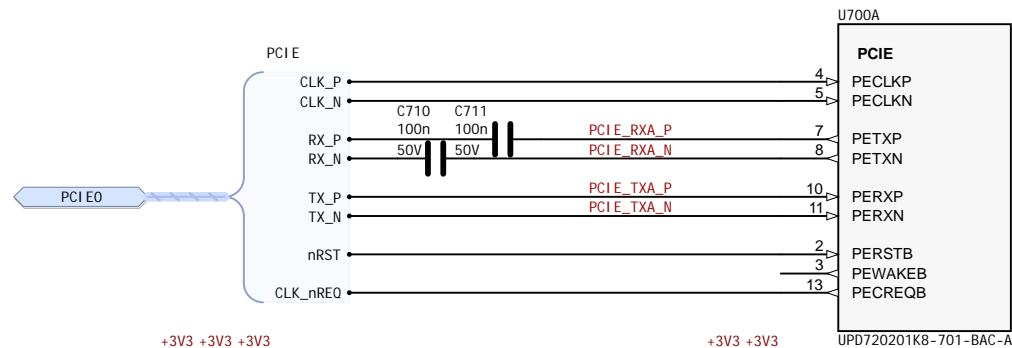
Digital I/O



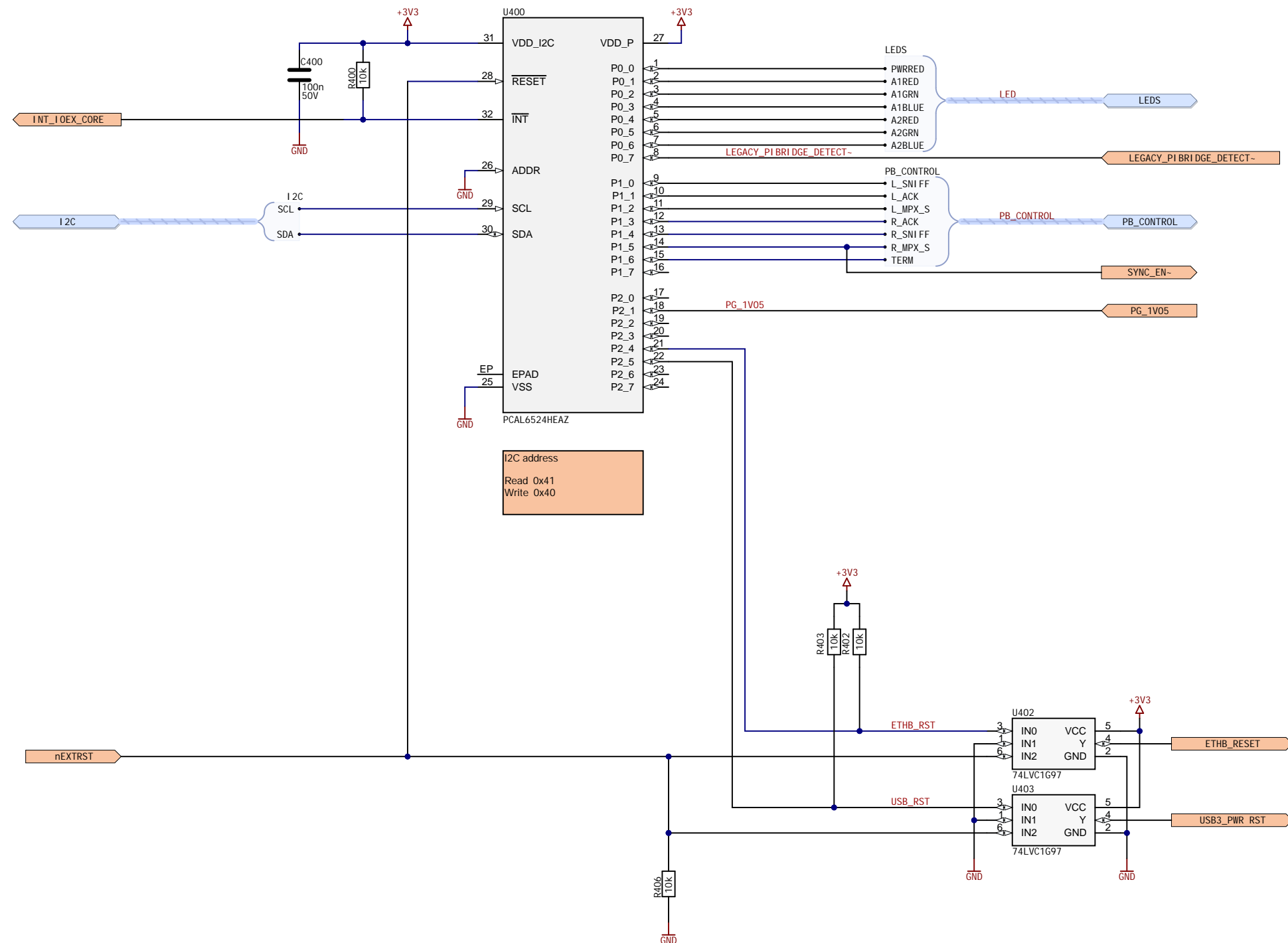
Pi Bri dge



PCIe USB3 Host Controller



I²C Port Expander



REVOLUTION PI
a KUNBUS brand

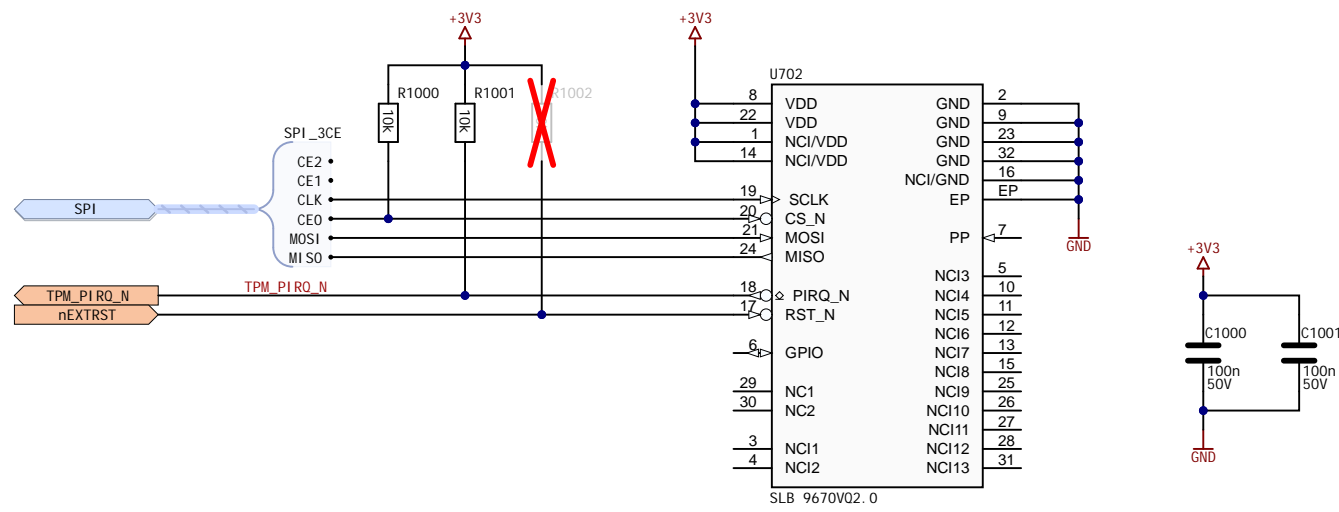
KUNBUS GmbH
Heerweg 15c
73770 Denkendorf

Project: RevPi Connect 4

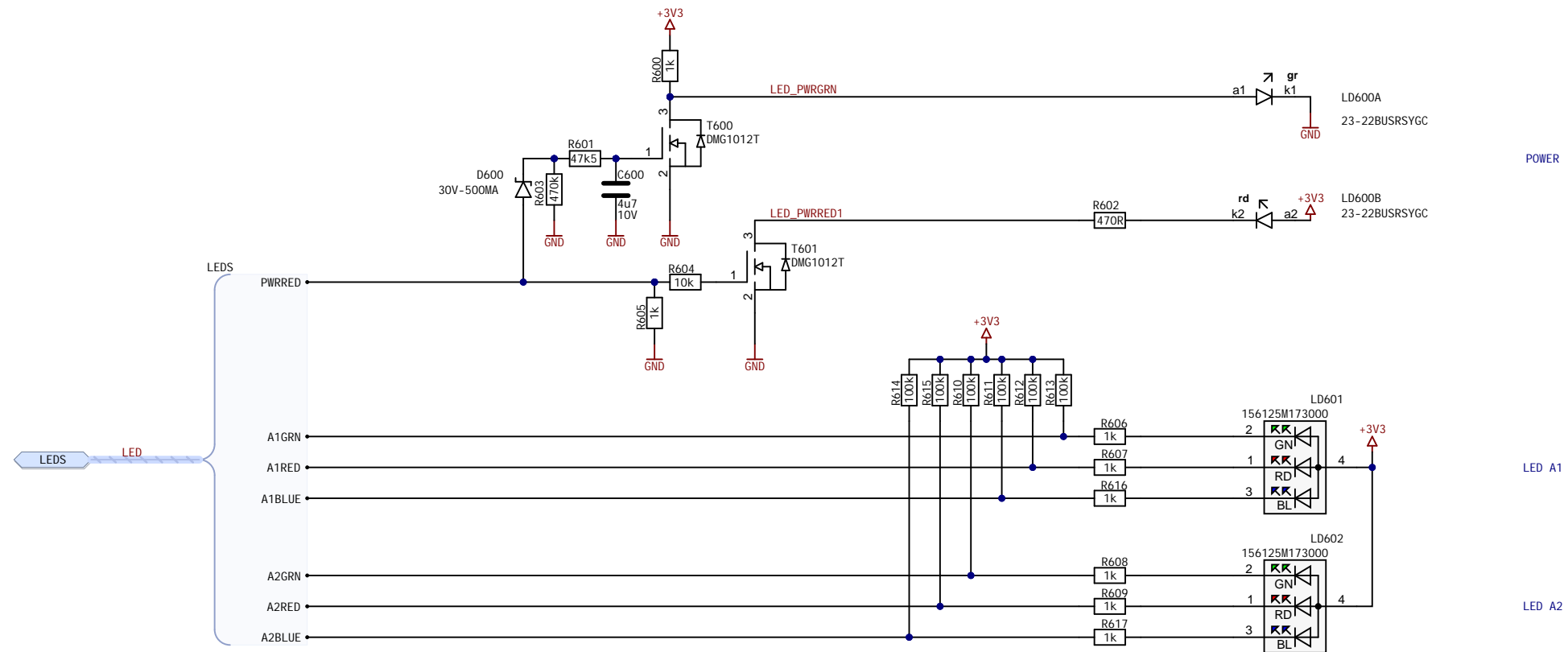
I²C Port Expander

LP: LP0228R02	BG: BG0263R02	
Author: VS/VM		Size: A3
Date : 08.08.2023		Sheet 13 of 16

TPM



LEDs



Green Power LED function:

When system is switched on capacity draws gate of green LED to GND. Thus FET is off and LED_PWgrn is high and green LED is on.

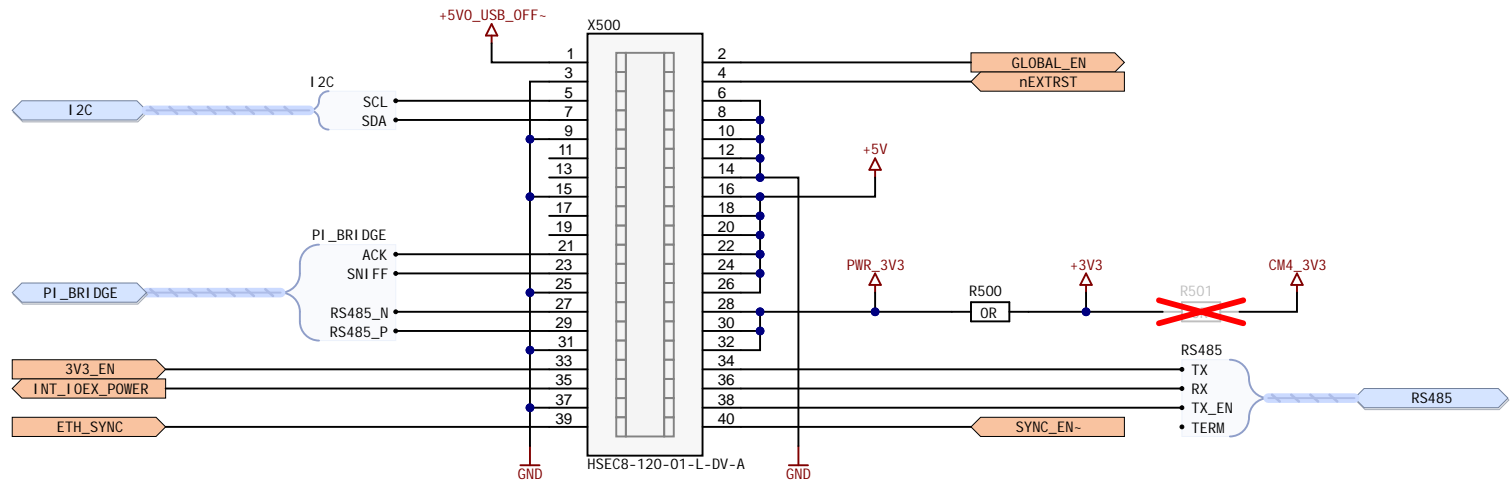
During startup LED_PWRRED is high impedance pulled up by Broadcom and pulled down by 1k. Thus FET is off and LED_PWgrn is high and green LED is on.

After booting Broadcom changes LED_PWred to output low. Thus FET is off and LED_PWgrn is high and green LED is on.

On severe error Broadcom sets LED_PWred to output high. After charging Capacitor to 1.5 V FET will turn on (max. 1 s delay). Thus LED_PWgrn is low and green LED is off. This mode pulls $2 \times 3.3V/1k = 6.6 \text{ mA}$ current.

On fault condition Braodcom sets LED_PWred to 1Hz high / low oscillation. After charging Capacitor to 1.5 V (during high phase) FET will turn on. Discharge during low phase of LED_PWred is much slower and capacitor is not discharged. Thus LED_PWgrn keeps low and green LED stays off. LED turns on again when LED_PWred is low for more than 3 seconds.

Interface to Power Board



REVOLUTION PI
a KUNBUS brand

KUNBUS GmbH
Heerweg 15c
73770 Denkendorf

Project: RevPi Connect 4
Interface Power Board

LP: LP0228R02	BG: BG0263R02	
Author: VS/VM	Size: A3	Sheet 16 of 16
Date : 08.08.2023		