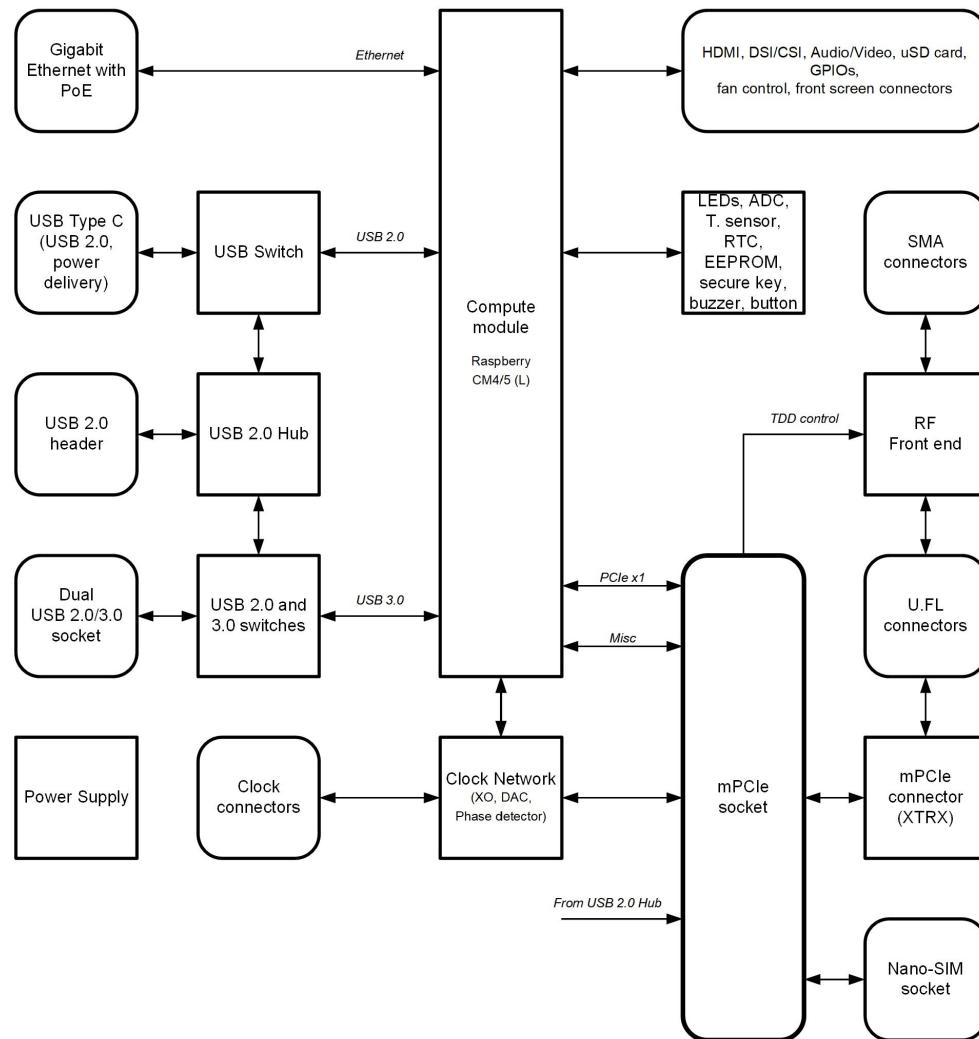
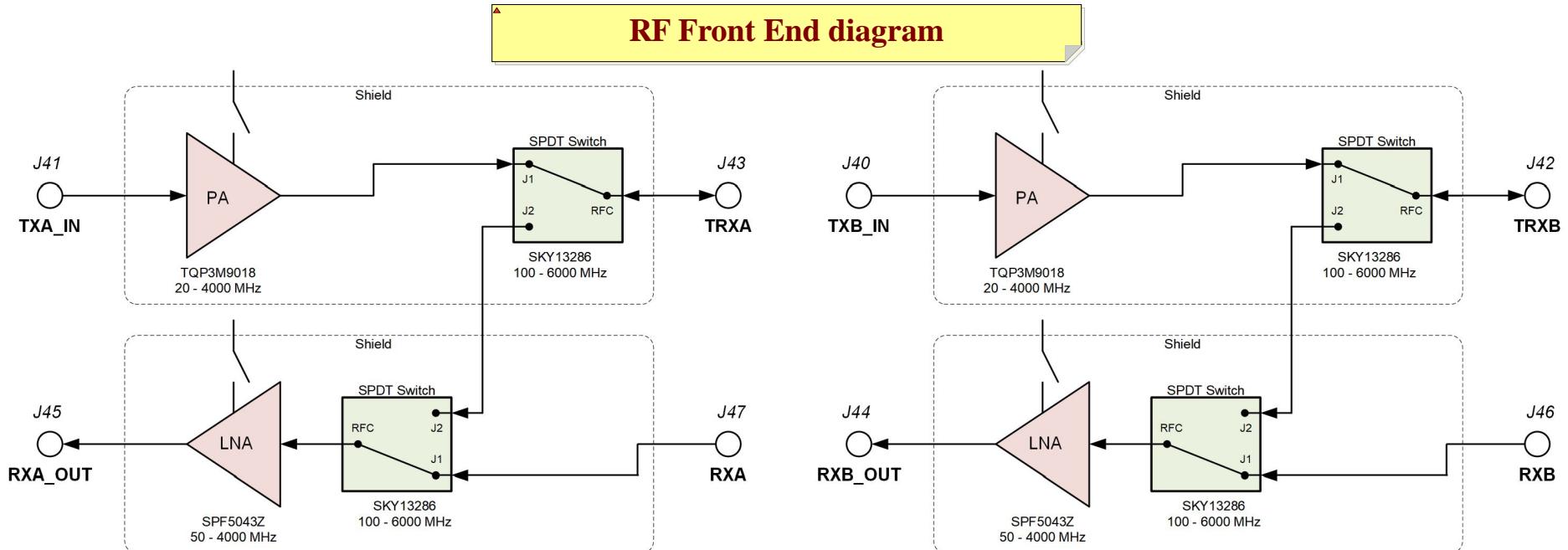
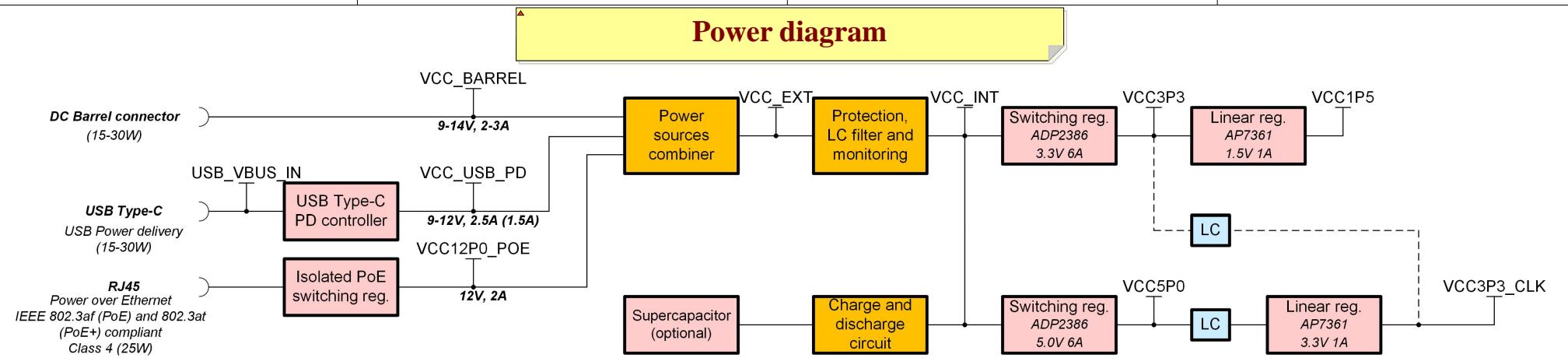


Block diagram



Project name: **LimePSB-RPCM_1v2.PrjPcb**

Title: Block diagram		<i>Lime Microsystems Surrey Tech Centre Guildford GU2 7YG Surrey United Kingdom</i>	 Lime microsystems
Size: A4	Revision: v1.2		
Date: 2024-04-18	Time: 15:46:00	Sheet 1 of 13	
File: 01_Block diag.SchDoc			



Project name: **LimePSB-RPCM_1v2.PrbPcb**

Title: **Power + RF Front End diagram**

Size: **A4** Revision: **v1.2**

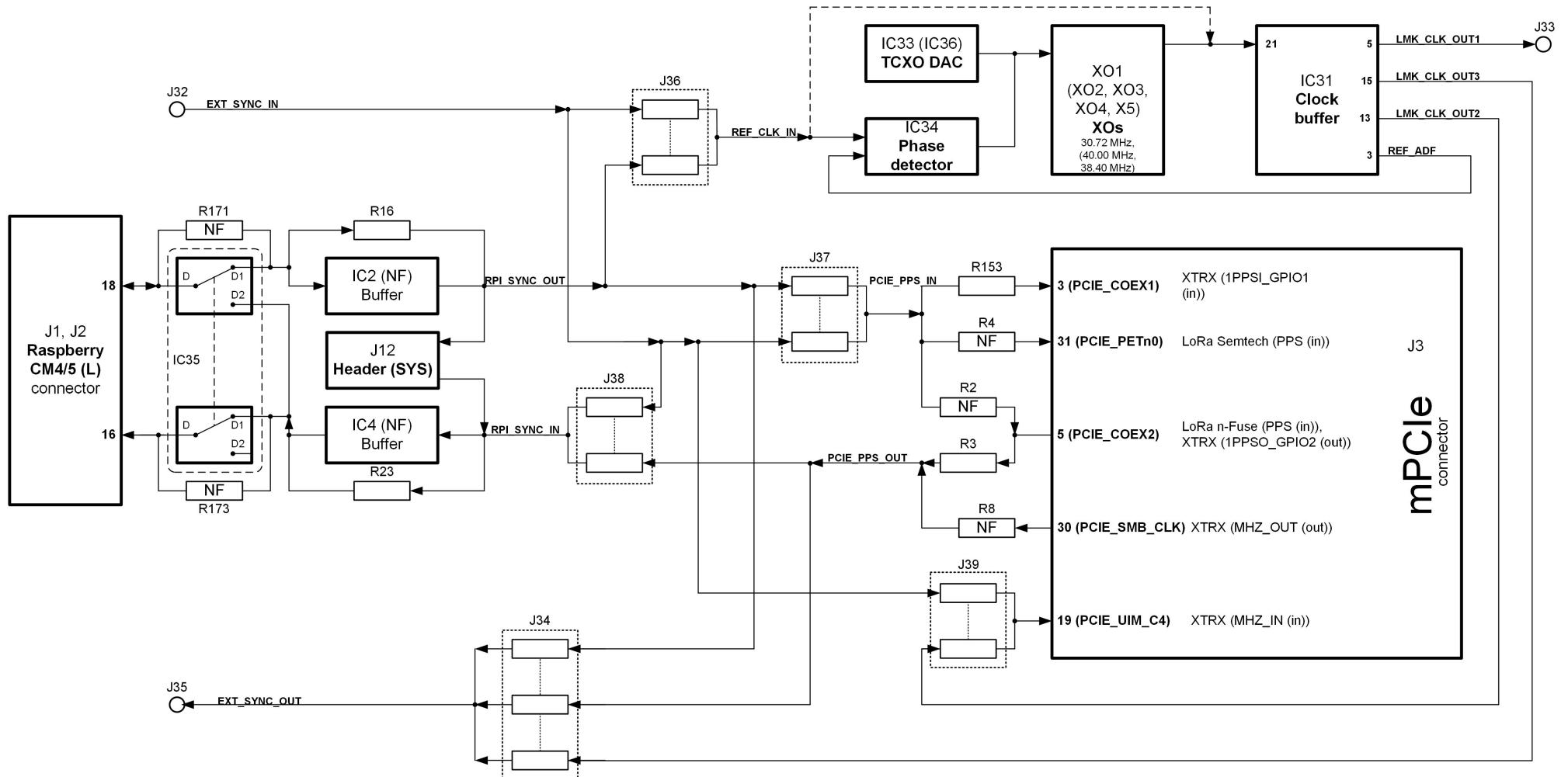
Date: **2024-04-18** Time: **15:46:02** Sheet **2** of **13**

File: **02_Power_RFFE_diag.SchDoc**

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Surrey
United Kingdom



Clock diagram



Project name: **LimePSB-RPCM_Iv2.Prb**

Title: **Clock diagram**

Size: **A4**

Revision: **v1.2**

Date: **2024-04-18**

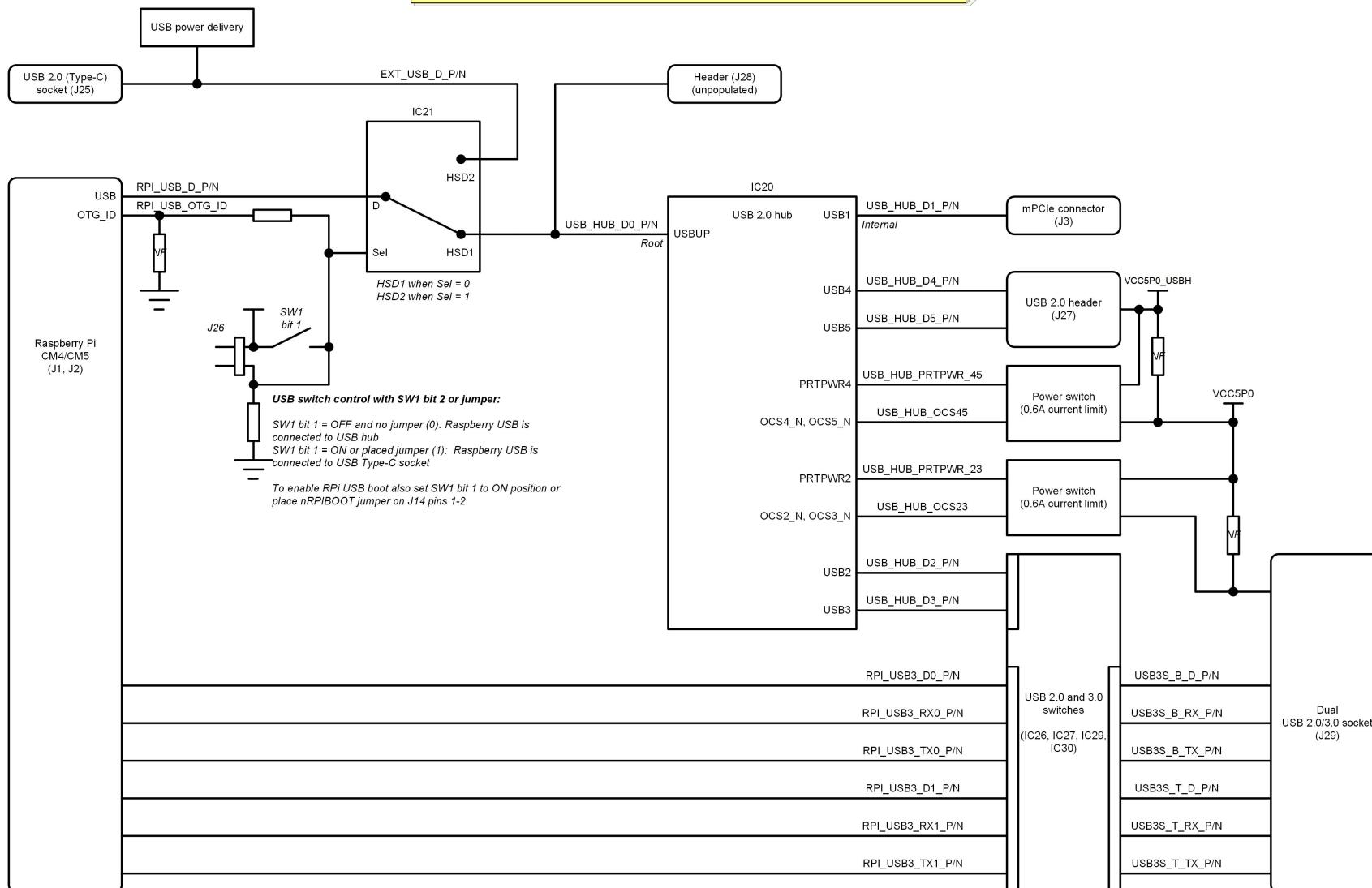
Time: **15:46:04**

Sheet3 of 13

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Surrey
United Kingdom



USB diagram



Project name: **LimePSB-RPCM_Iv2.PrjPcb**

Title: **USB diagram**

Size: **A4** Revision: **v1.2**

Date: **2024-04-18** Time: **15:46:07** Sheet **4** of **13**

File: **04_USB_diag.SchDoc**

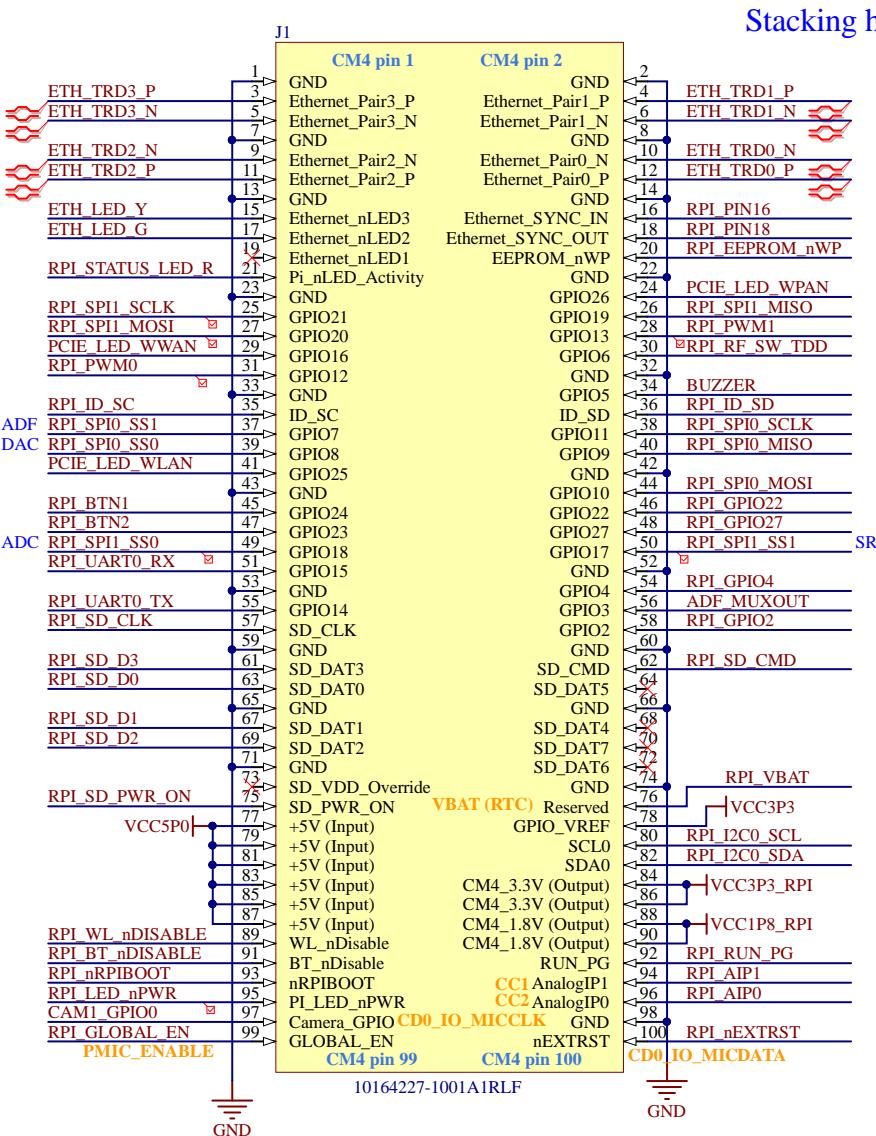
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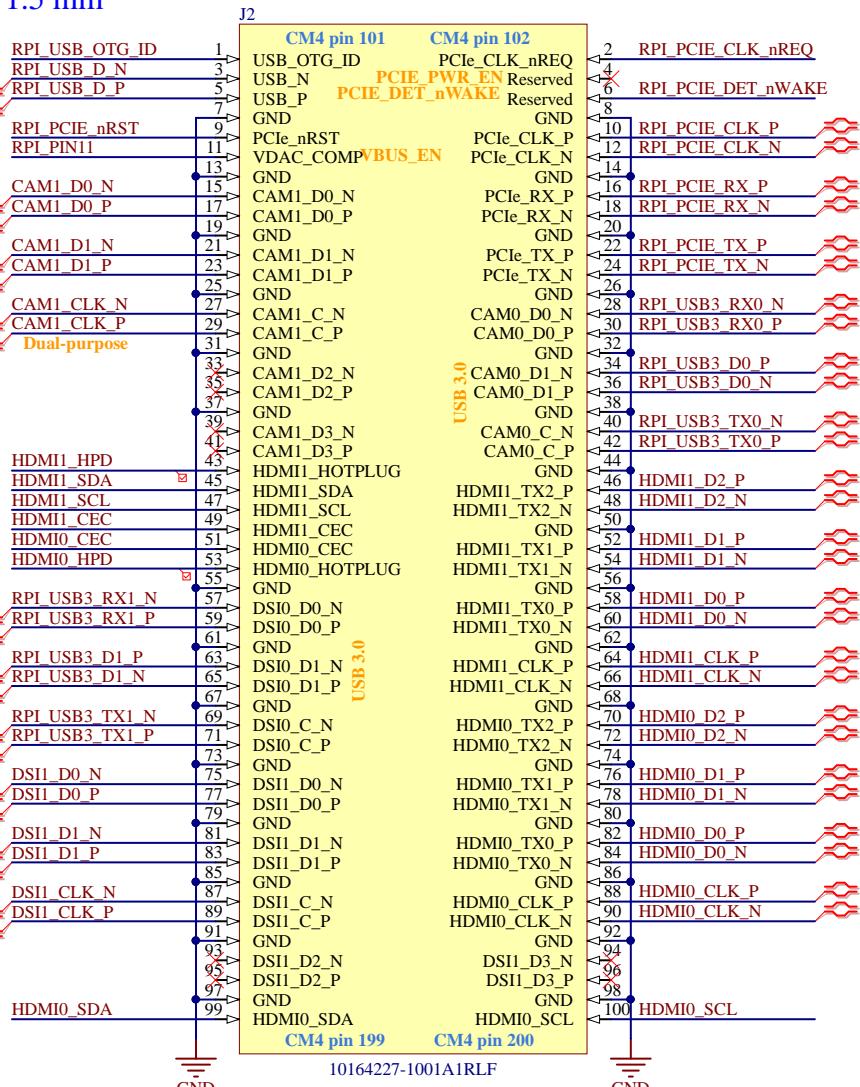
NF elements on sheet: R1, R2, R4, R6, C6, C7, C8, R8, R9, R10, R11, J5, J6
Number of NF elements on sheet: 13

Raspberry Pi CM4/5(L) and mPCIe

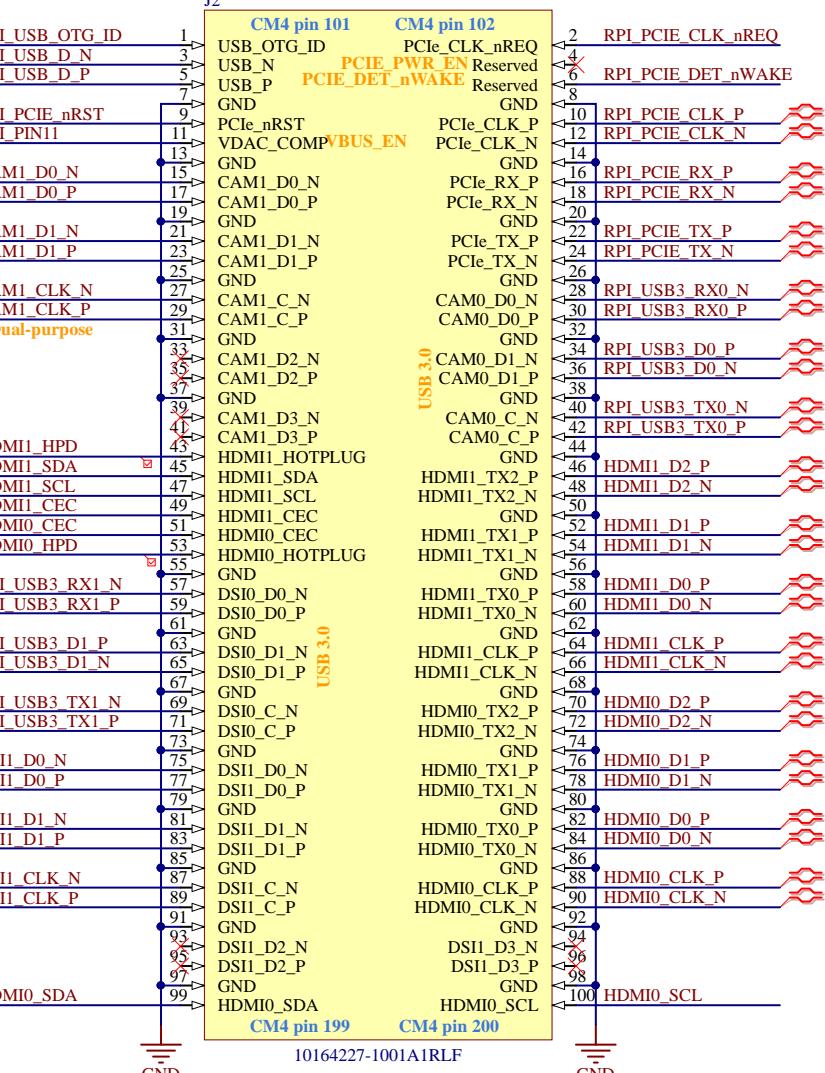
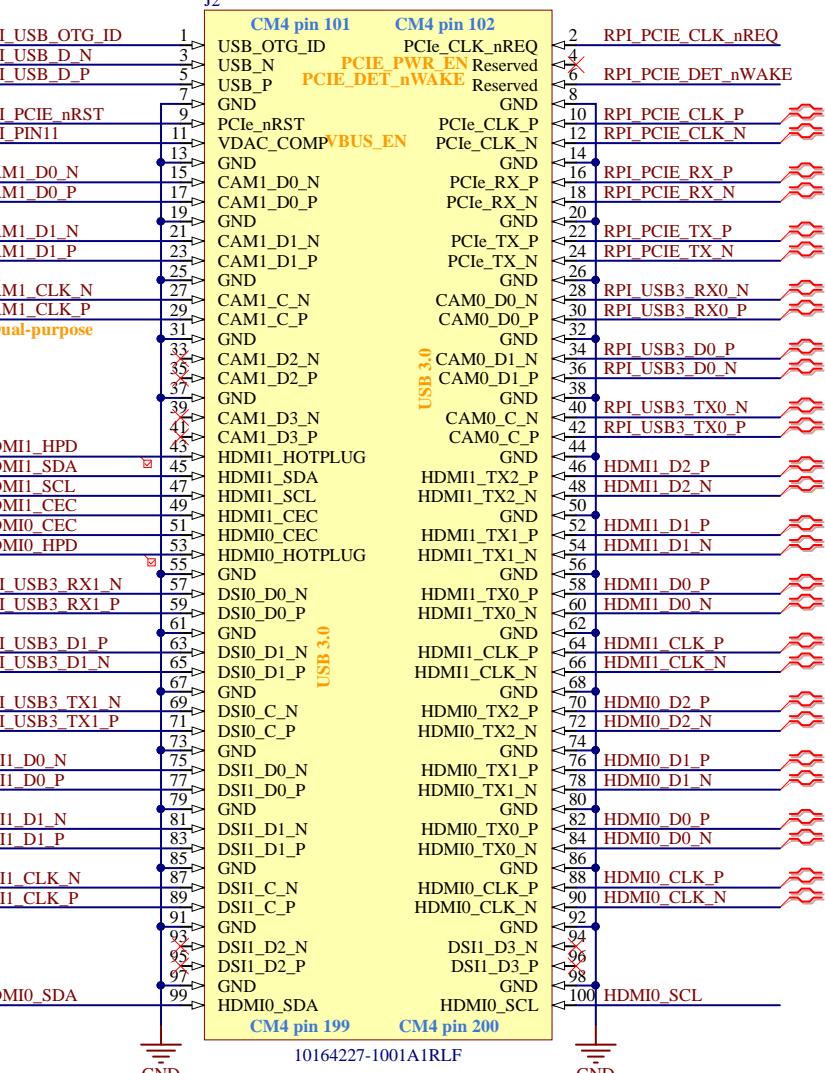
Board to Board connector for Raspberry Pi CM4/5(L)



Stacking height 1.5 mm



Stacking height 1.5 mm

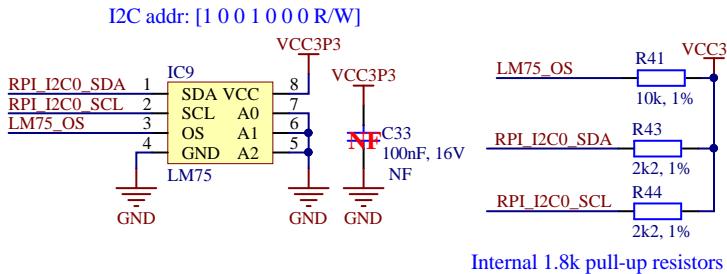


NF elements on sheet: C33, R45, R49, C34, C35, J18, R50, R51, R40, J19, J20, R52, IC11, IC13, R73, R75, R77, R82, R84, R85, R86, R96, IC18, R78, BATT

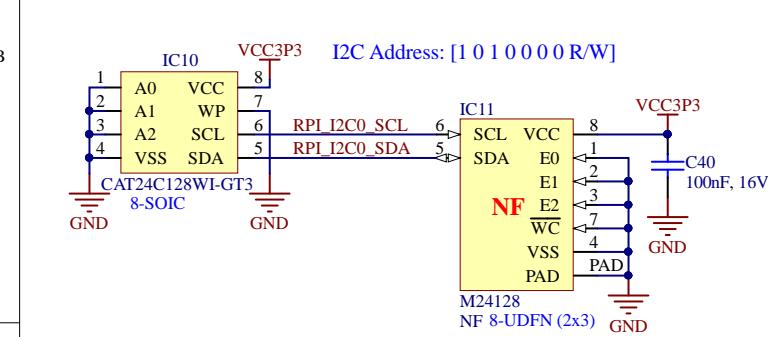
Number of NF elements on sheet: 25

Misc 2

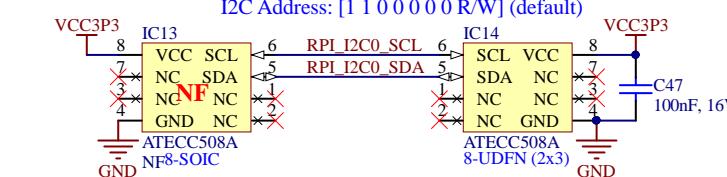
I2C Temperature sensor



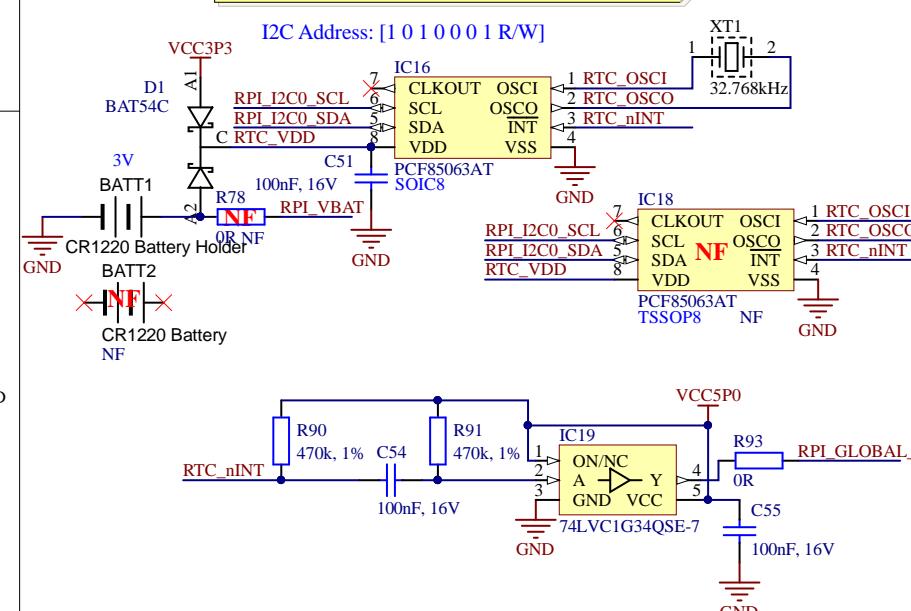
I2C EEPROM



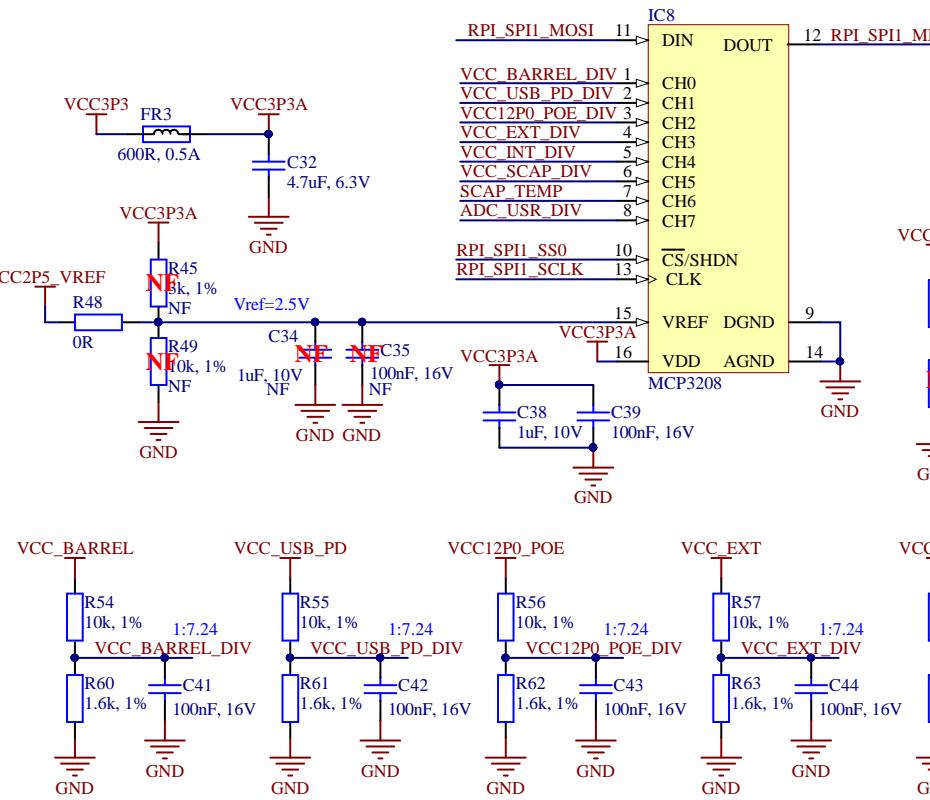
I2C secure key storage



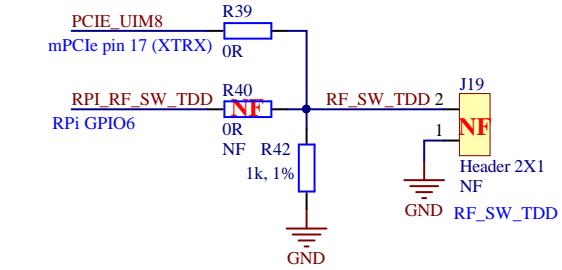
I2C RTC



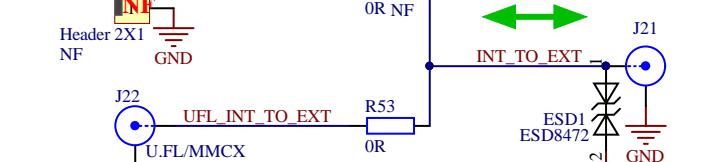
ADC



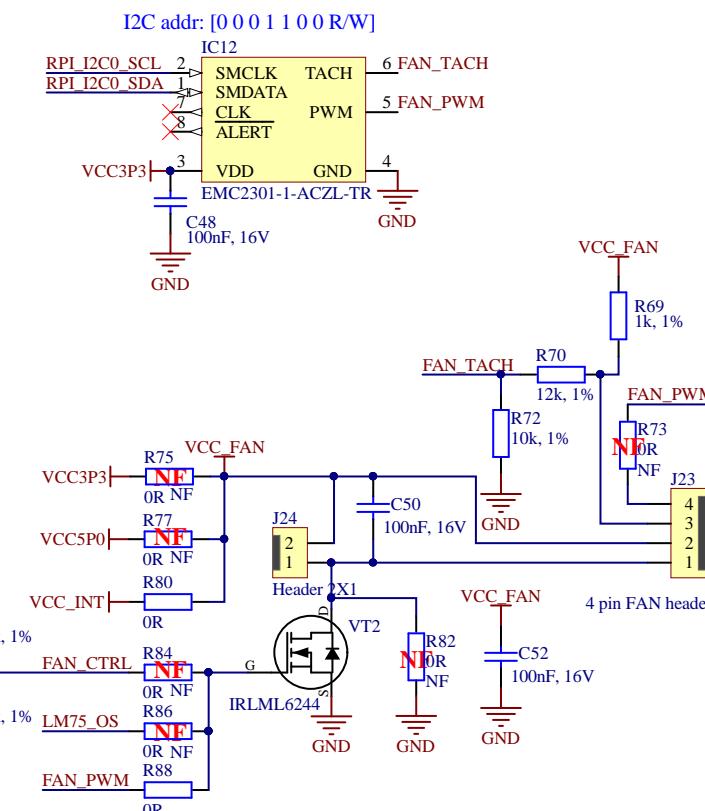
RFFE TDD control



Int to ext



FAN control



Project name: **LimePSB-RPCM 1v2.PrjPcb**

Title: *Misc 2*

Size: A3

Date: 2024-04-18

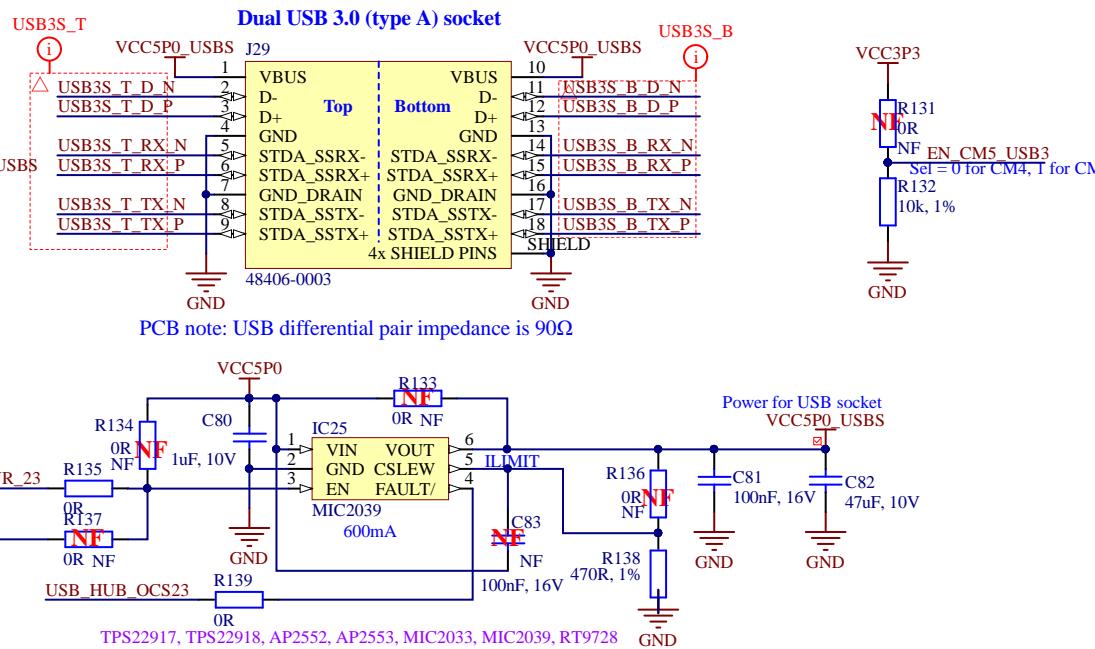
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Surrey
United Kingdom*



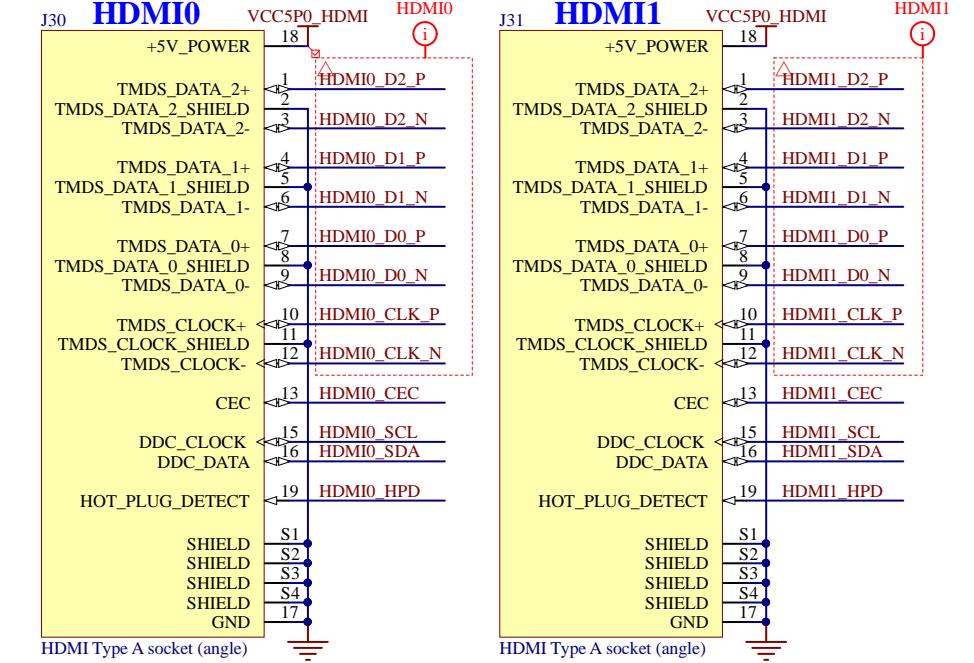
NF elements on sheet: R131, R133, R134, R136, R137, C83, R140, R142, C88
Number of NF elements on sheet: 9

USB and HDMI sockets

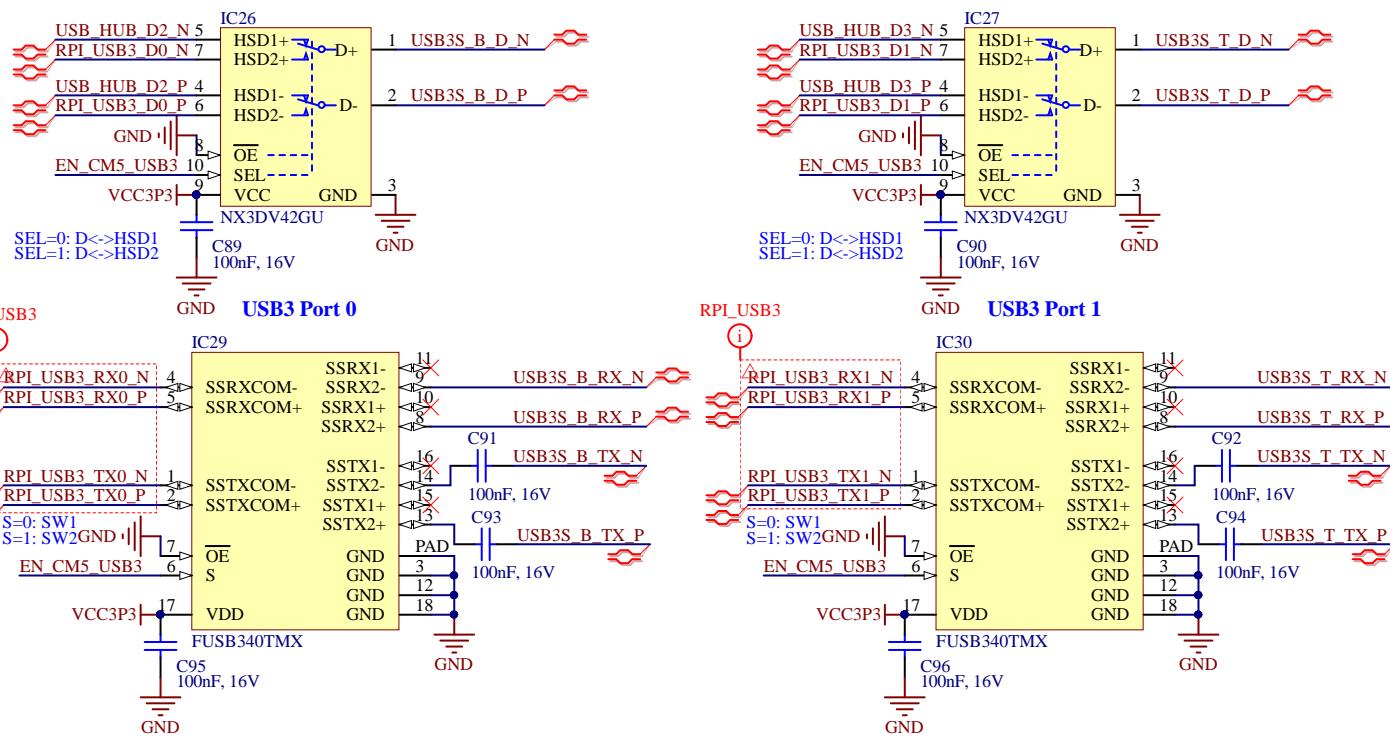
Dual USB 3.0 (type A) socket



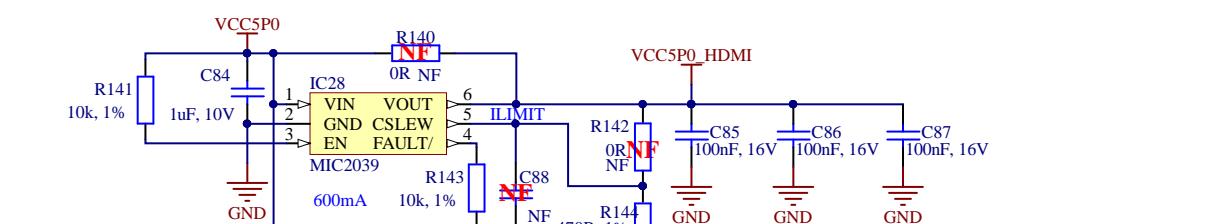
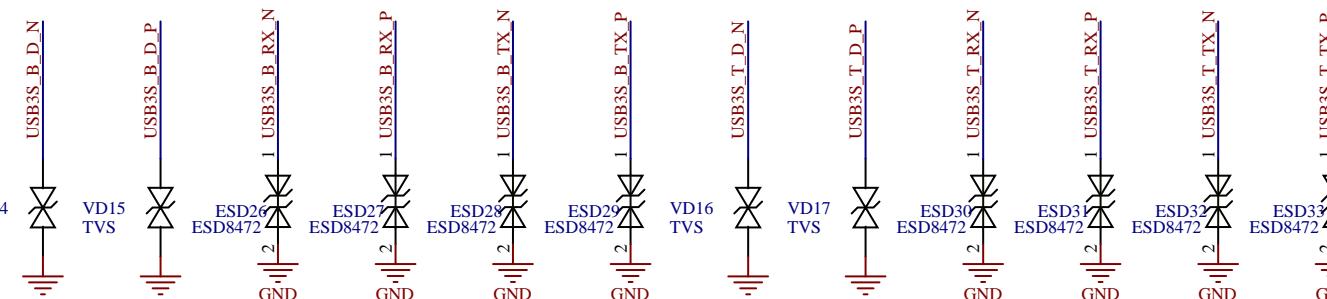
HDMI sockets



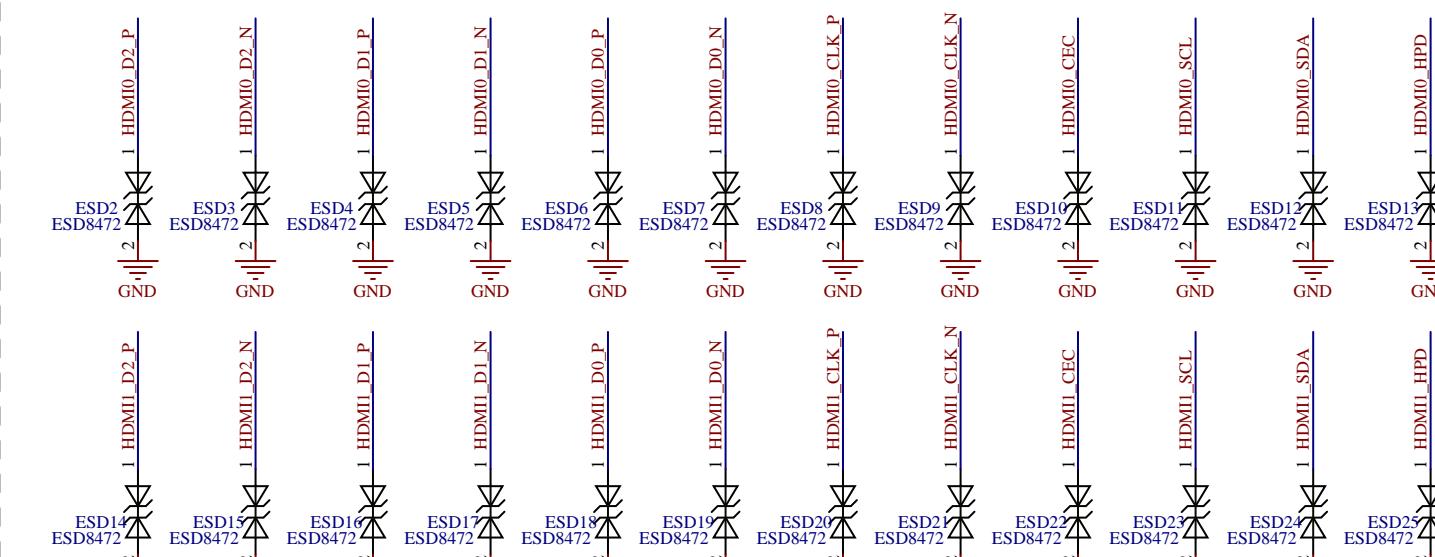
USB 2.0 and 3.0 switches



ESD protection



ESD protection for CM5



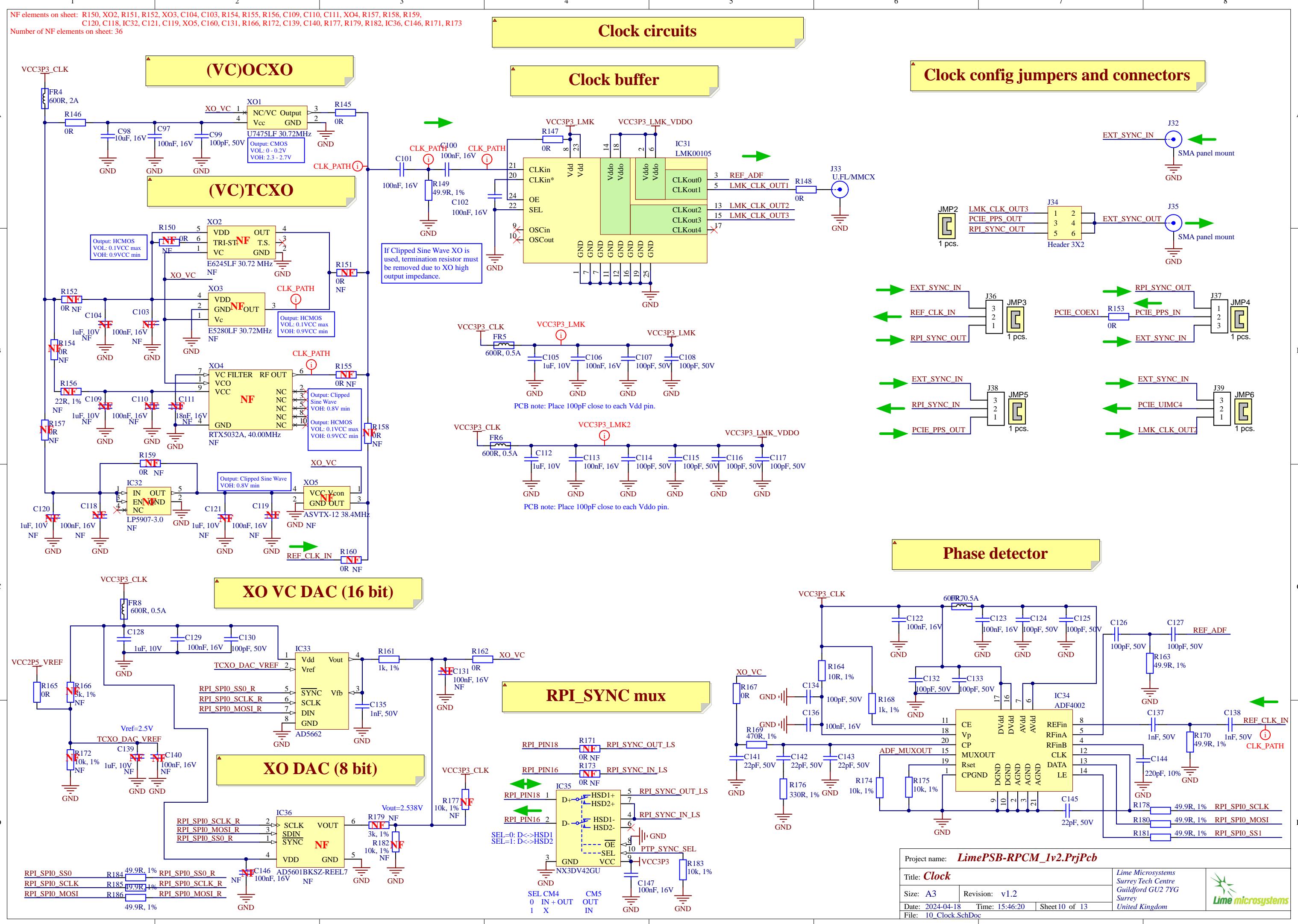
Project name: LimePSB-RPCM_Iv2.PrcPcb

Title: USB and HDMI sockets

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United Kingdom

Size: A3 Revision: v1.2
Date: 2024-04-18 Time: 15:46:18 Sheet 9 of 13
File: 09_USB_HDMI.SchDoc





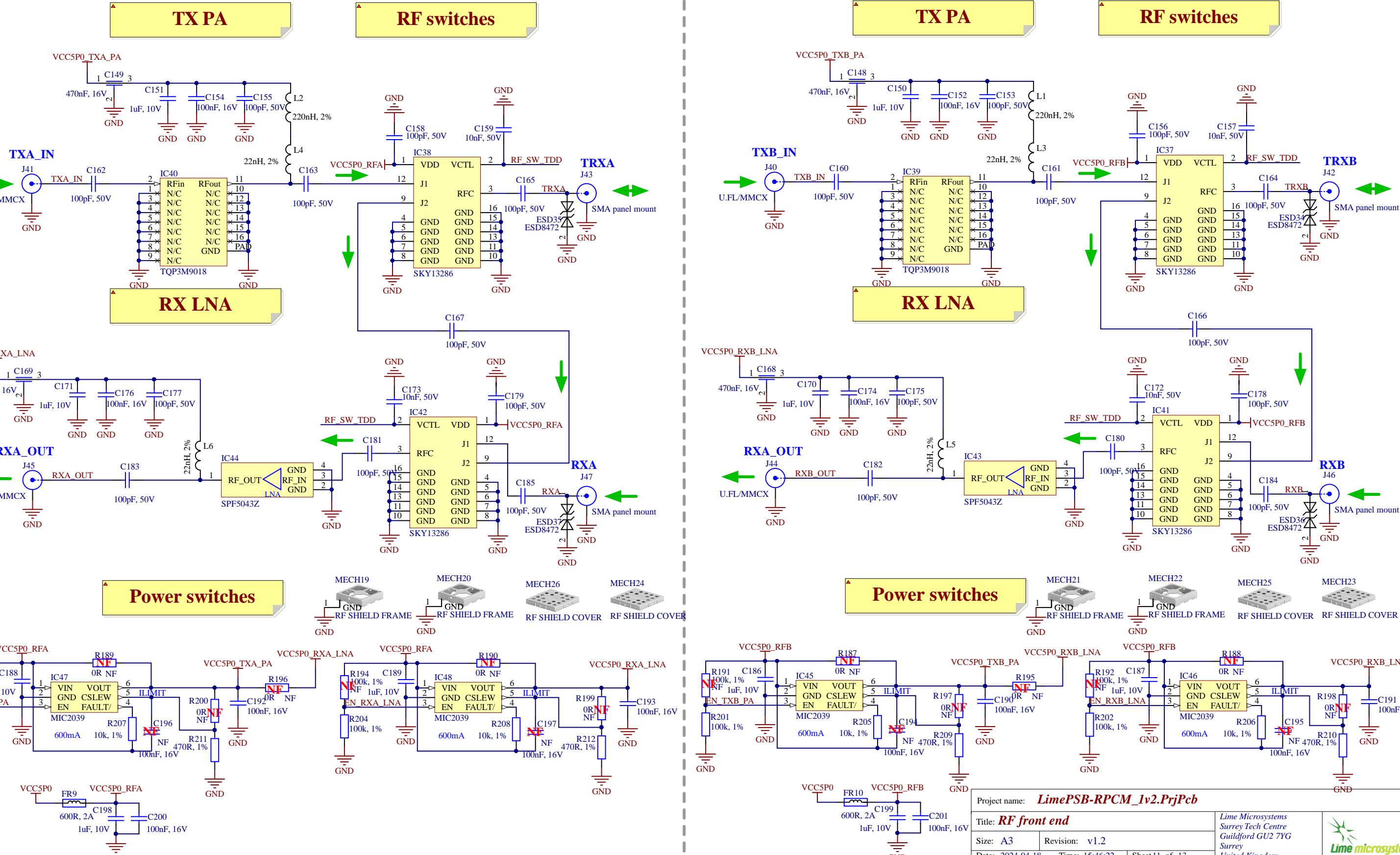
NF elements on sheet: R189, R193, R196, R200, C196, R190, R194, R199, C197, R187, R191, R195, R197, C194, R188, R192, R198, C195
Number of NF elements on sheet: 18

RF front end

Channel A

All RF switches are controlled together

Channel B

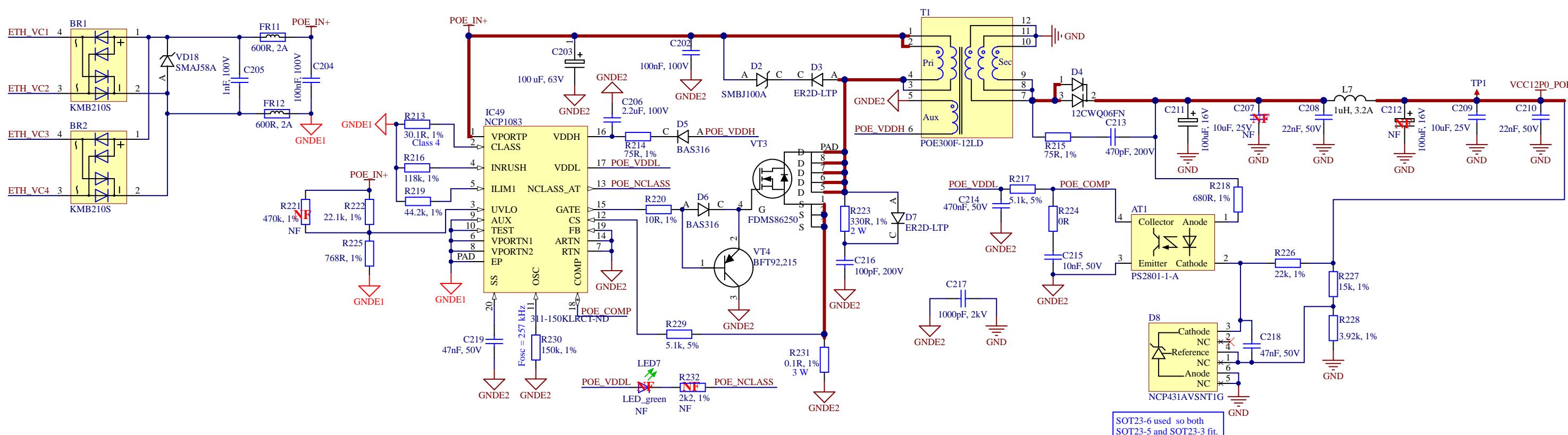


NF elements on sheet: C207, C212, R221, LED7, R232, R249, R247, LED8, R246, R245

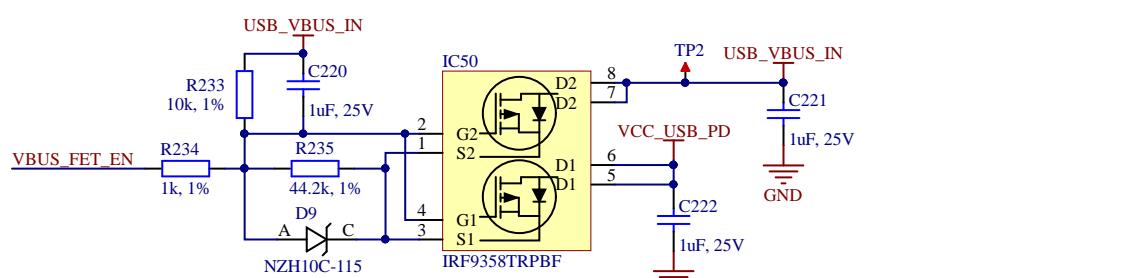
Number of NF elements on sheet: 10

Power over Ethernet

802.3at (PoE+) compliant Class 4 (25W max)

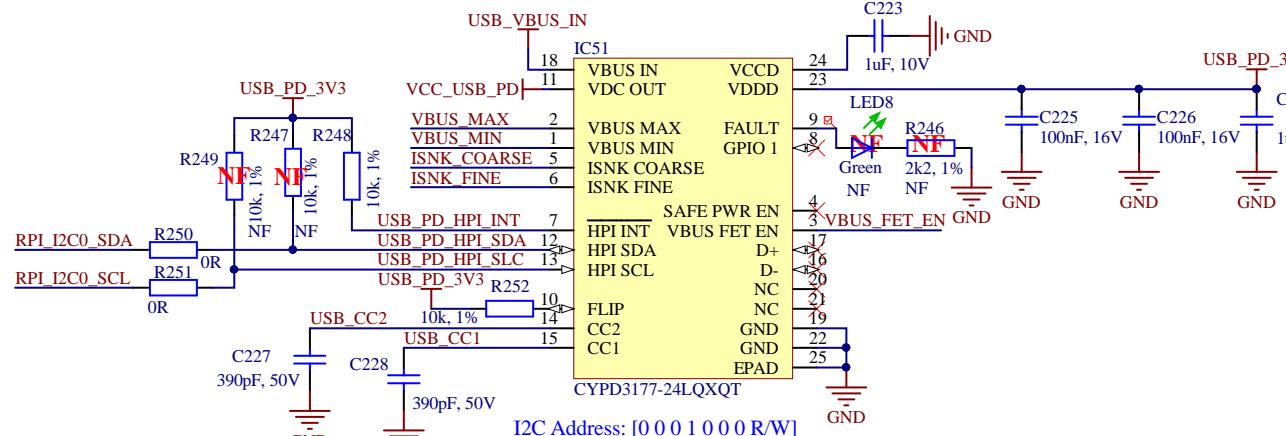
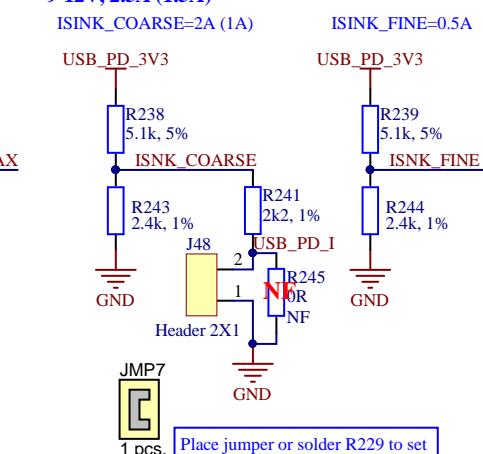


USB Power delivery



Resistor dividers for selecting VBUS Voltage and Current

9-12V, 2.5A (1.5A)



Project name: LimePSB-RPCM_Iv2.PrcPcb

Title: PoE and USB PD

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Surrey
United Kingdom

Size: A3

Revision: v1.2

Date: 2024-04-18 Time: 15:46:25 Sheet 12 of 13

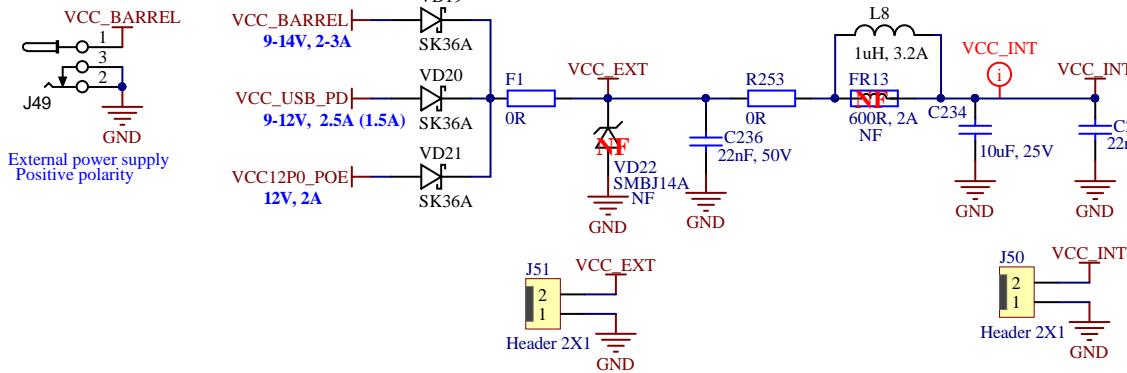
File: 12_PoE_USB.Prc.SchDoc



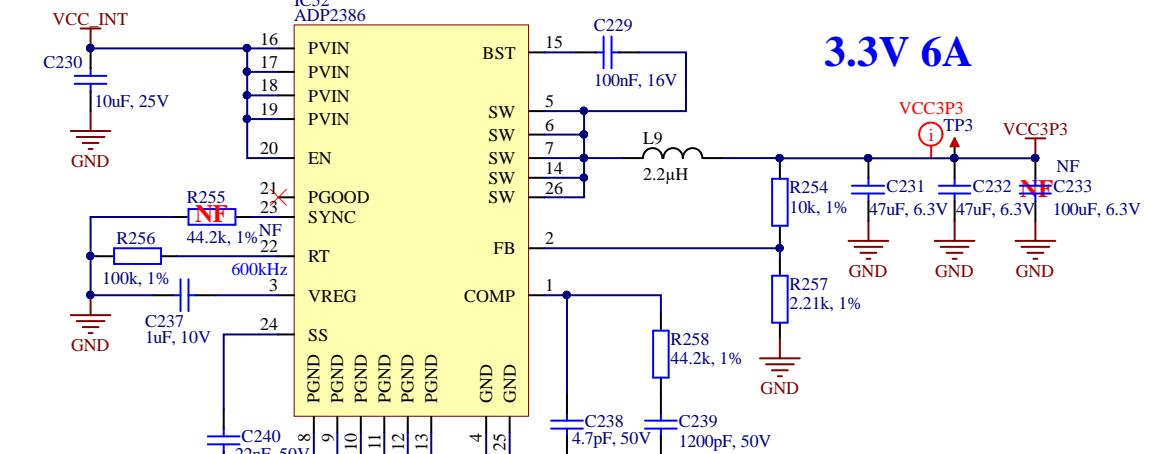
NF elements on sheet: VD22, FR13, R255, C233, R261, J53, R260, C244, C245, FR15, C253, C250, R269
Number of NF elements on sheet: 13
Total number of NF elements on all sheets: 161

Board power circuits

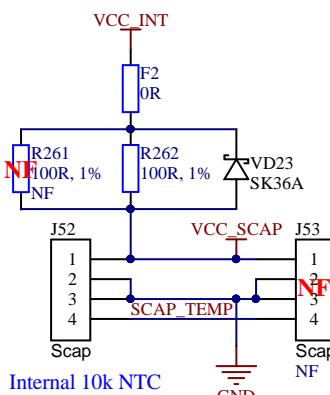
Power input



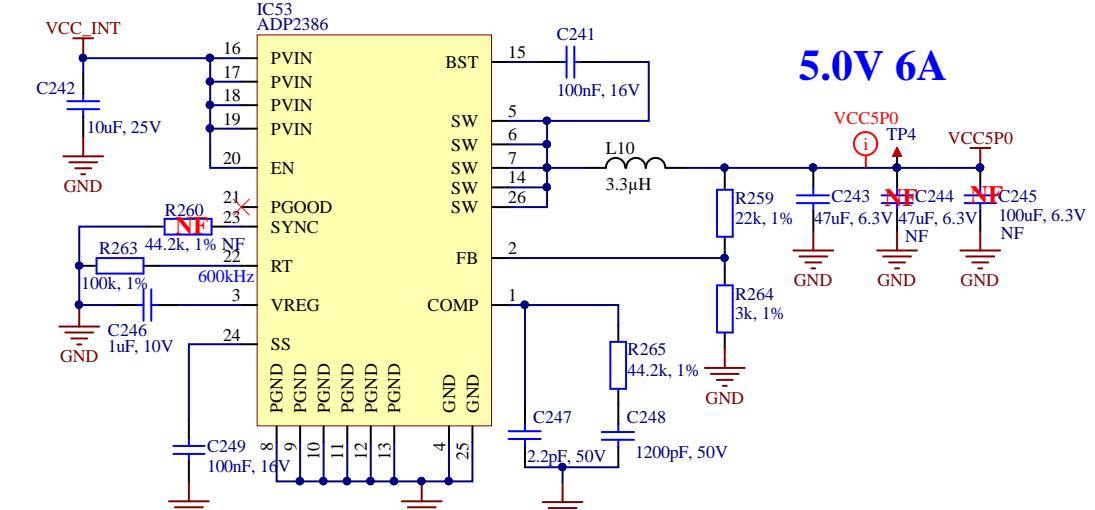
Switching regulators



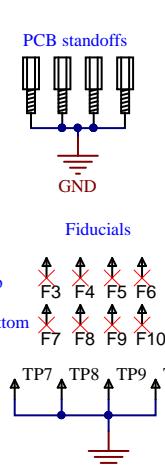
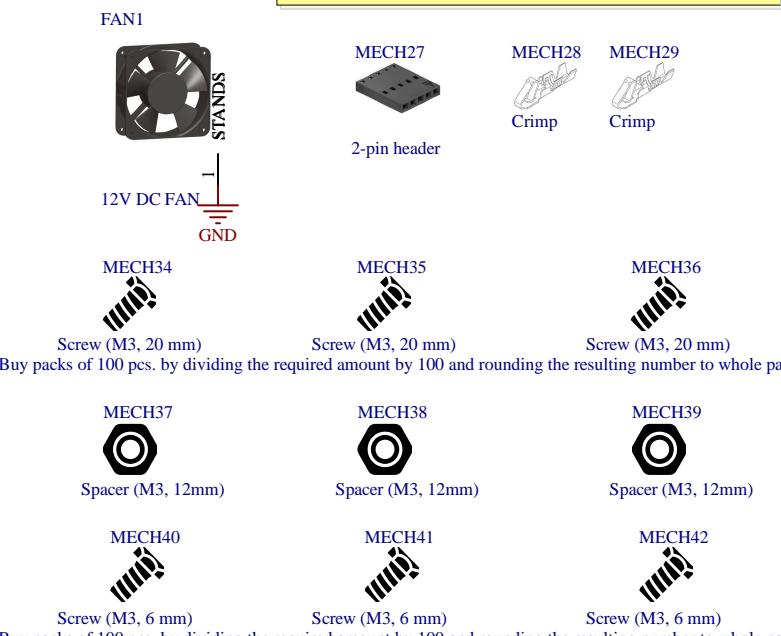
Supercapacitor



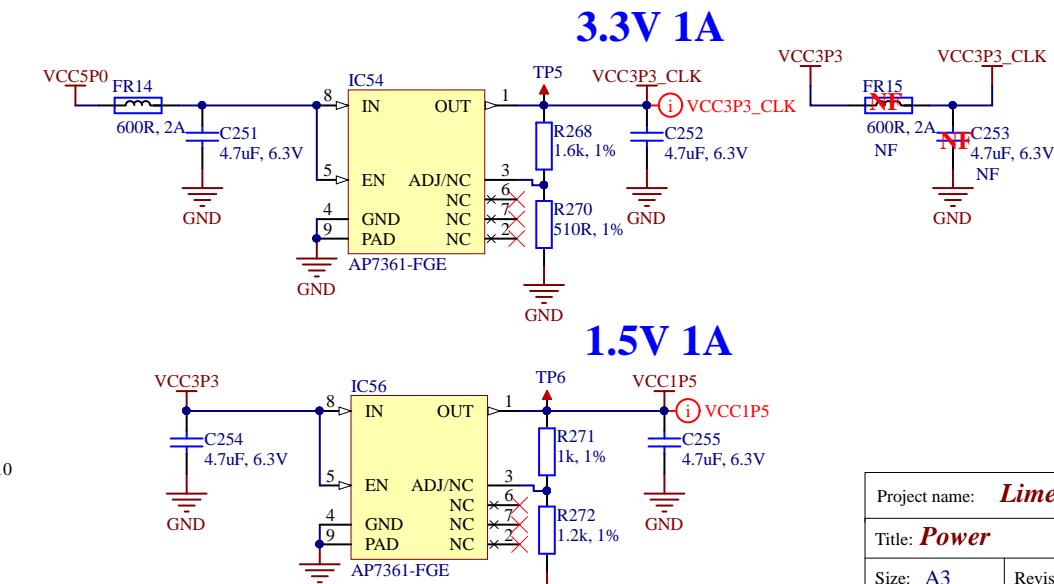
5.0V 6A



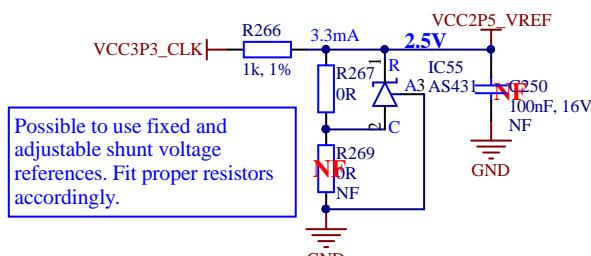
Misc for FAN



Linear regulators



Voltage reference (2.5V)



Alternative reference source for XO DAC and ADC

Project name: LimePSB-RPCM_Iv2.PrcPcb

Title: Power

Size: A3

Revision: v1.2

Date: 2024-04-18

Time: 15:46:27

Sheet 13 of 13

File: 13_Power.SchDoc

