

A

A

B

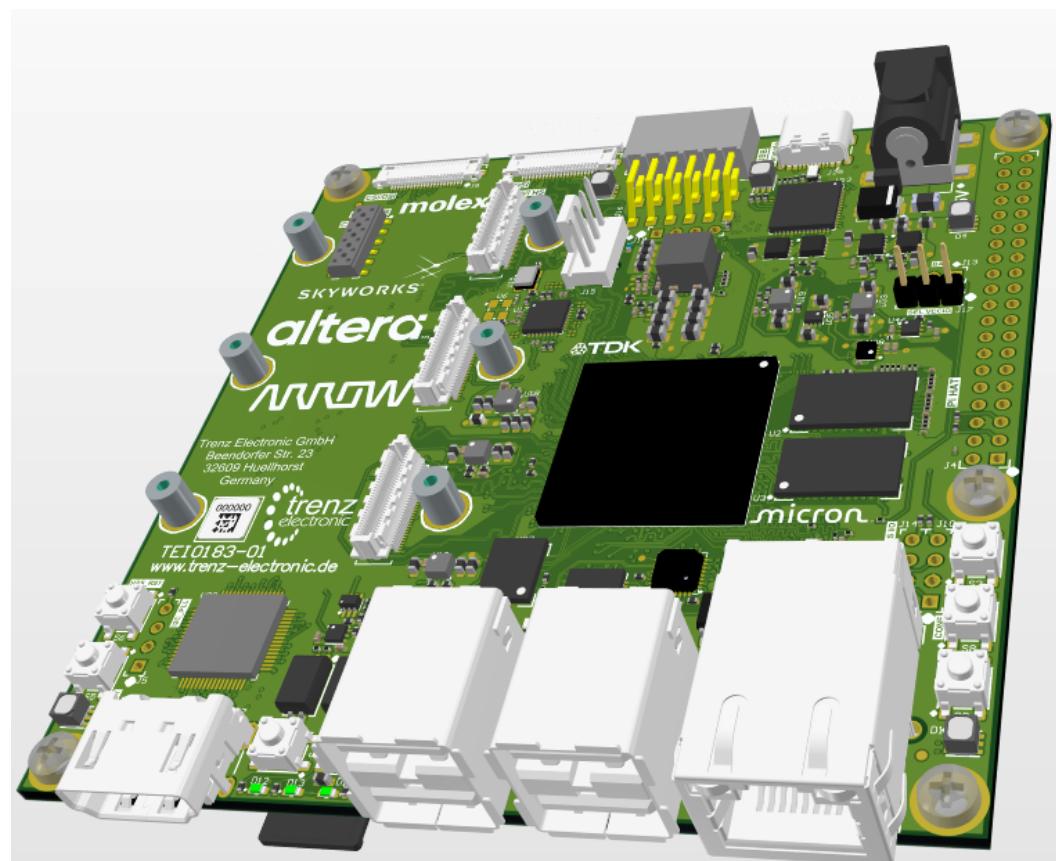
B

C

C

D

D



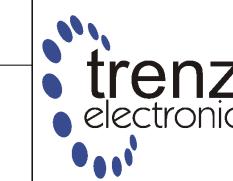
Regarding the usage of our schematics and alike documentation for Trenz module TEI0183.

Project is protected under copyright and we strongly and strictly prohibit the reverse engineering or recreation, even if the design is just adapted or modified.

TEI0183 is protected under such right and in case of plagiarism we will have to do anything necessary in order to protect our assets.

Schematics and other handouts serve for informational purposes only!

Drawn by	VT
Checked by	MT
Assembly variant	P001
Created by	VT
Modified by	VT
Modified at	2026-01-12



Title: TEI0183 - Legal Notices		
A4	Number: TEI0183 P001	Rev. 01
Date: 12.01.2026	Copyright: Trenz Electronic GmbH	Page 1 of 34
Filename: Legal Notices Modules.SchDoc		

REV	Description	
-01	Initial revision	VT

A

A

B

B

C

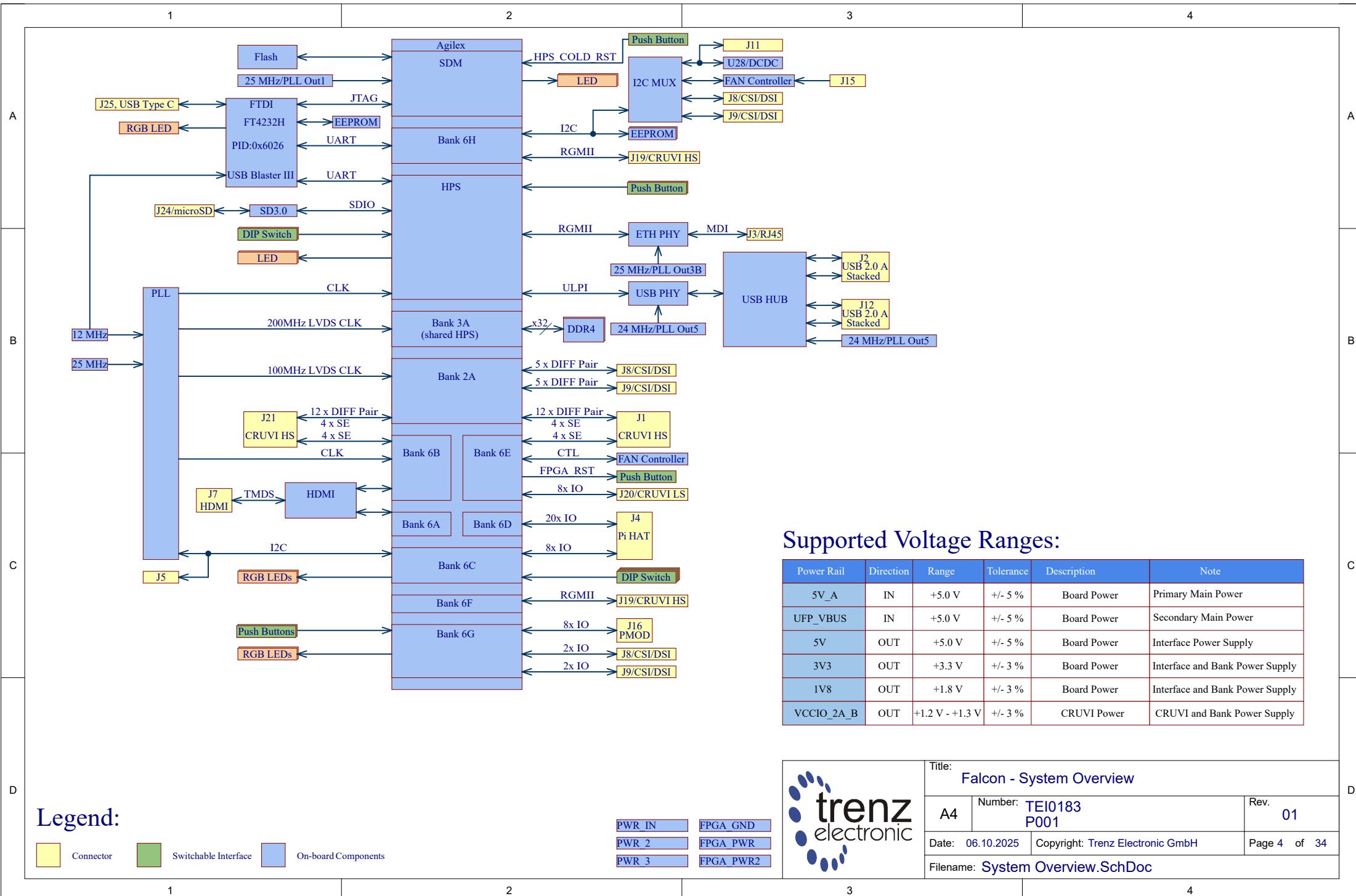
C

D

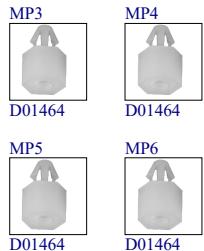
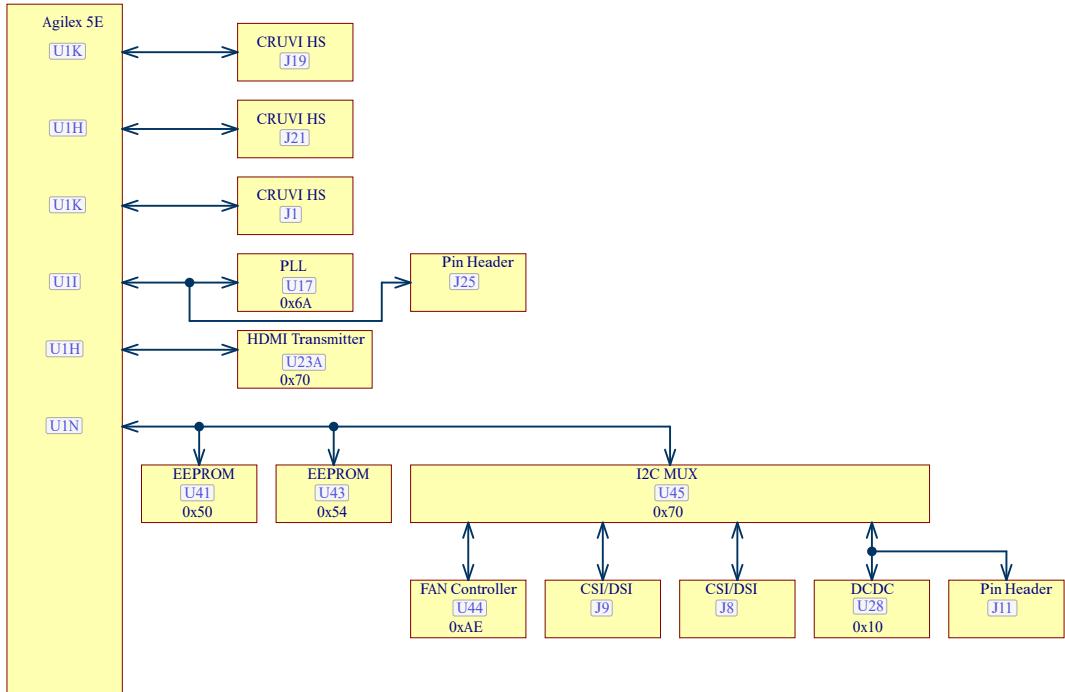
D



Title: Falcon - Revision Changes		
A4	Number: TEI0183 P001	Rev. 01
Date: 06.10.2025	Copyright: Trenz Electronic GmbH	Page 3 of 34
Filename: Revision Changes.SchDoc		



I2C Structure:



MECH2

TE Address Overlay

LOGO ADDRESS
LOGO1

TE Logo PRINT Layer

LOGO PRINT

CE

CE Logo on Top Overlay

CE-TOPOVERLAY
RoHS

RoHS Logo on Top Overlay

RoHS-TOPOVERLAY
WEEE

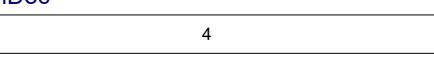
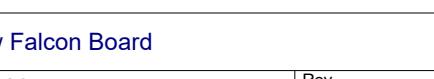
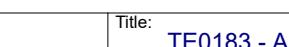
WEEE Logo on Top Overlay

WEEE-TOPOVERLAY

Serial1

Serial

Serialnumber 6,3 x 6,3mm



UKCA
UKCA Logo on Top Overlay

Design drawn by: VT

Checked by:

Assembly variant: P001

Created by: VT

Modified by: VT

Modified at: 2026-01-12



Title: TE0183 - Arrow Falcon Board

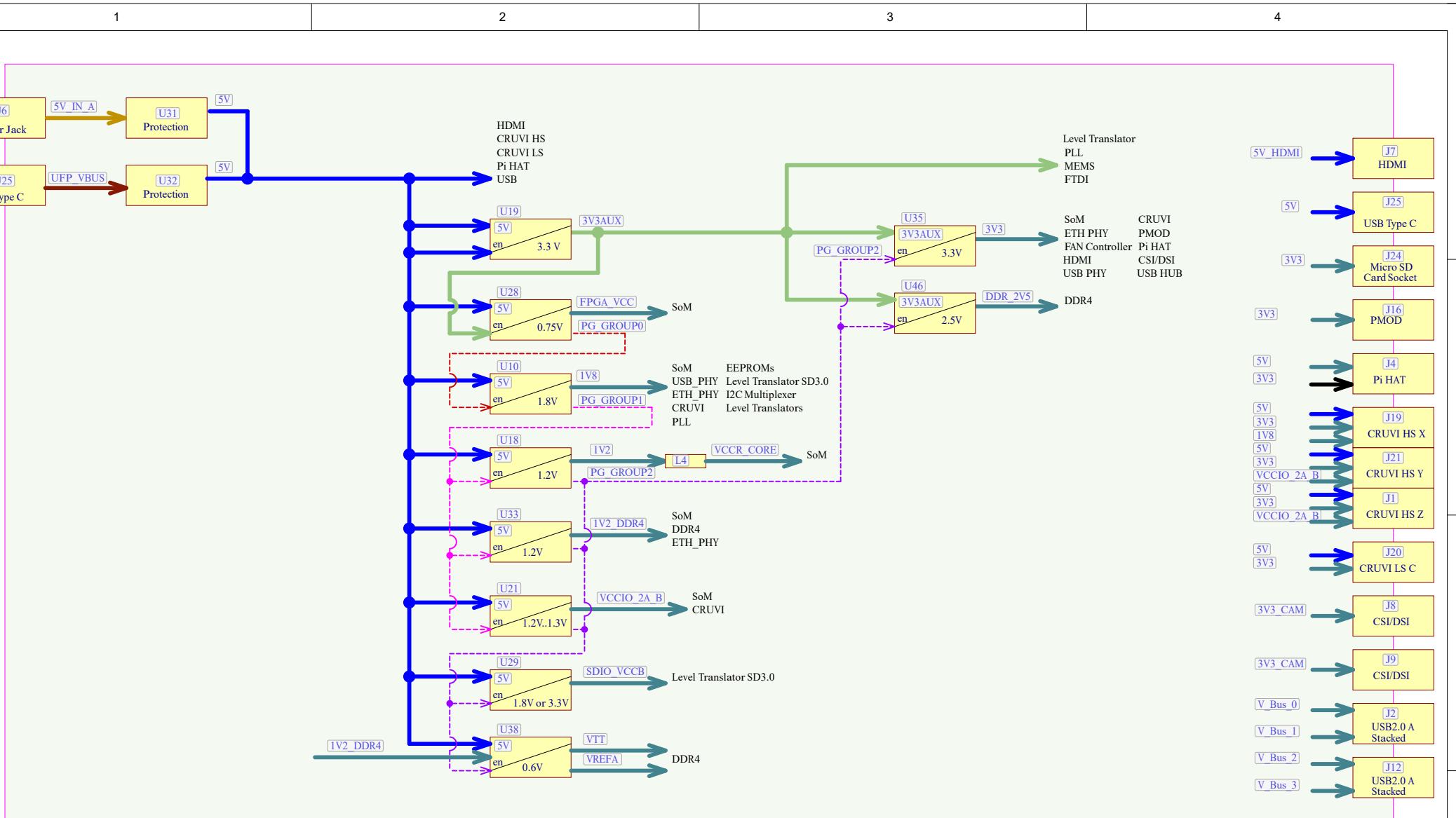
A4 Number: TEI0183
P001

Rev. 01

Date: 30.10.2025 Copyright: Trenz Electronic GmbH

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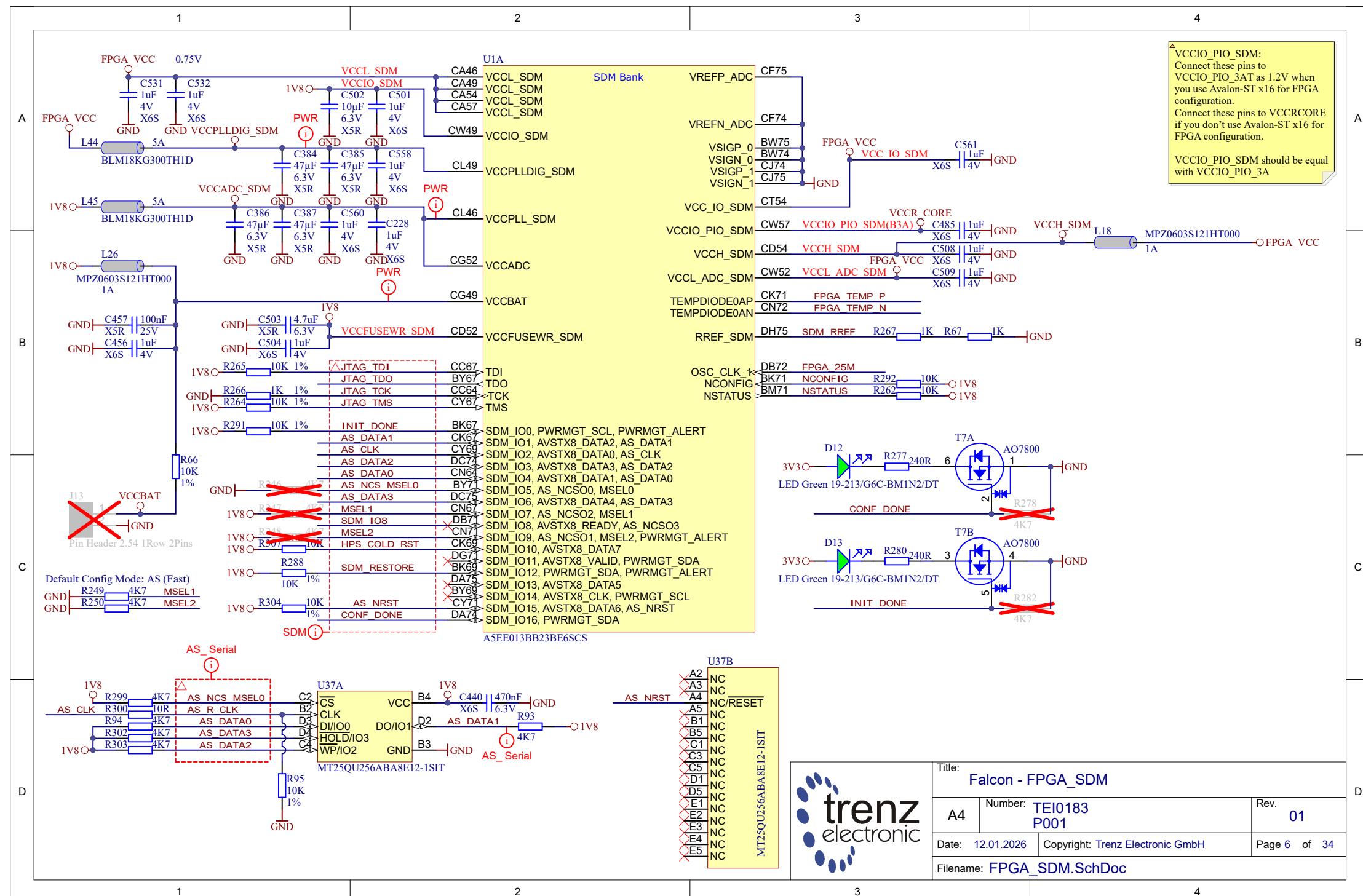
Filename: TEI0183.SchDoc

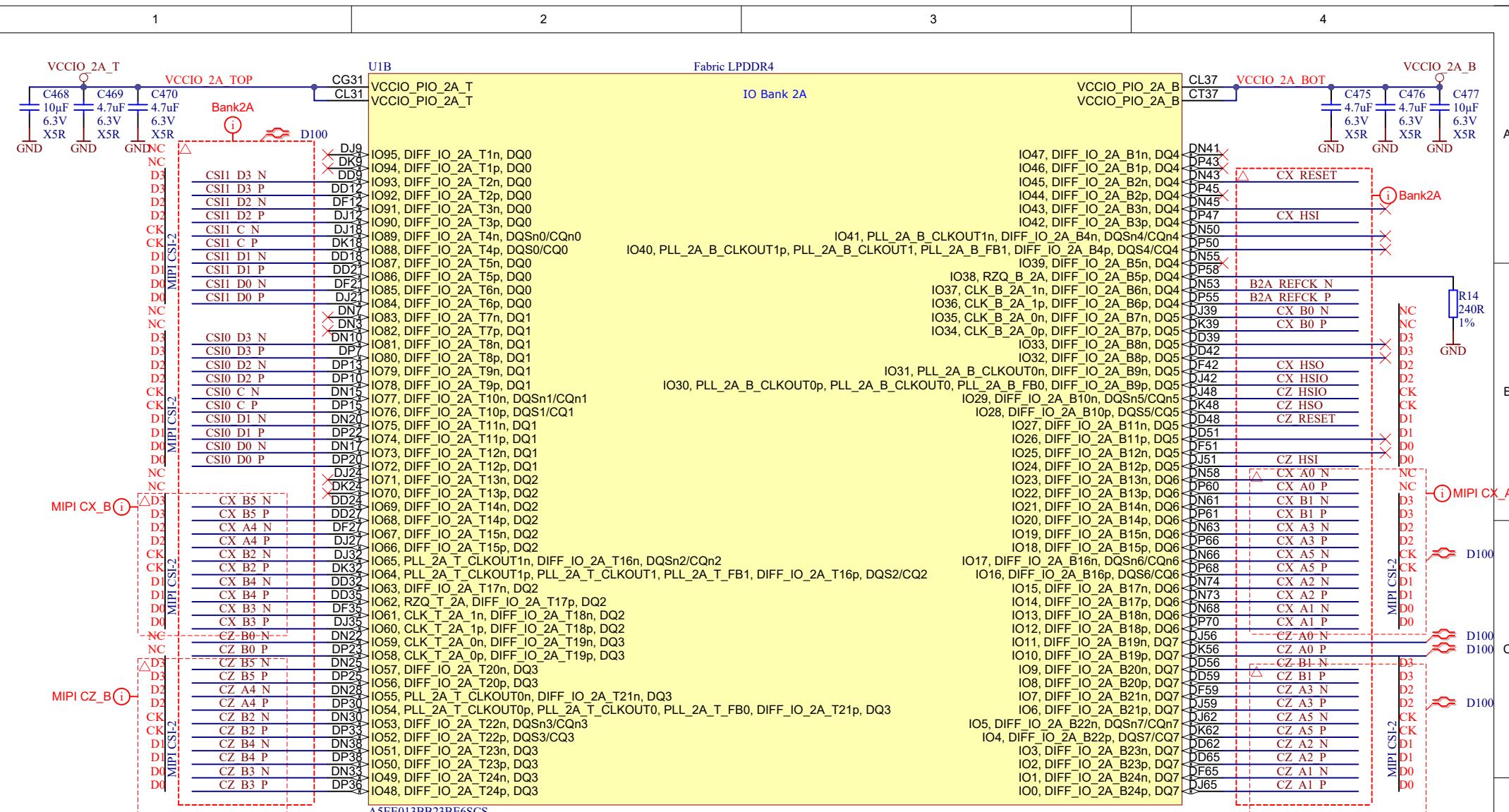


Title: **Power Diagram**
A4 Number: **TEI0183 P001** Rev. **01**

Date: **06.10.2025** Copyright: **Trenz Electronic GmbH** Page **5** of **34**

Filename: **Power_Diagram.SchDoc**





4 Pin Header 2.54 1Row 3Pin

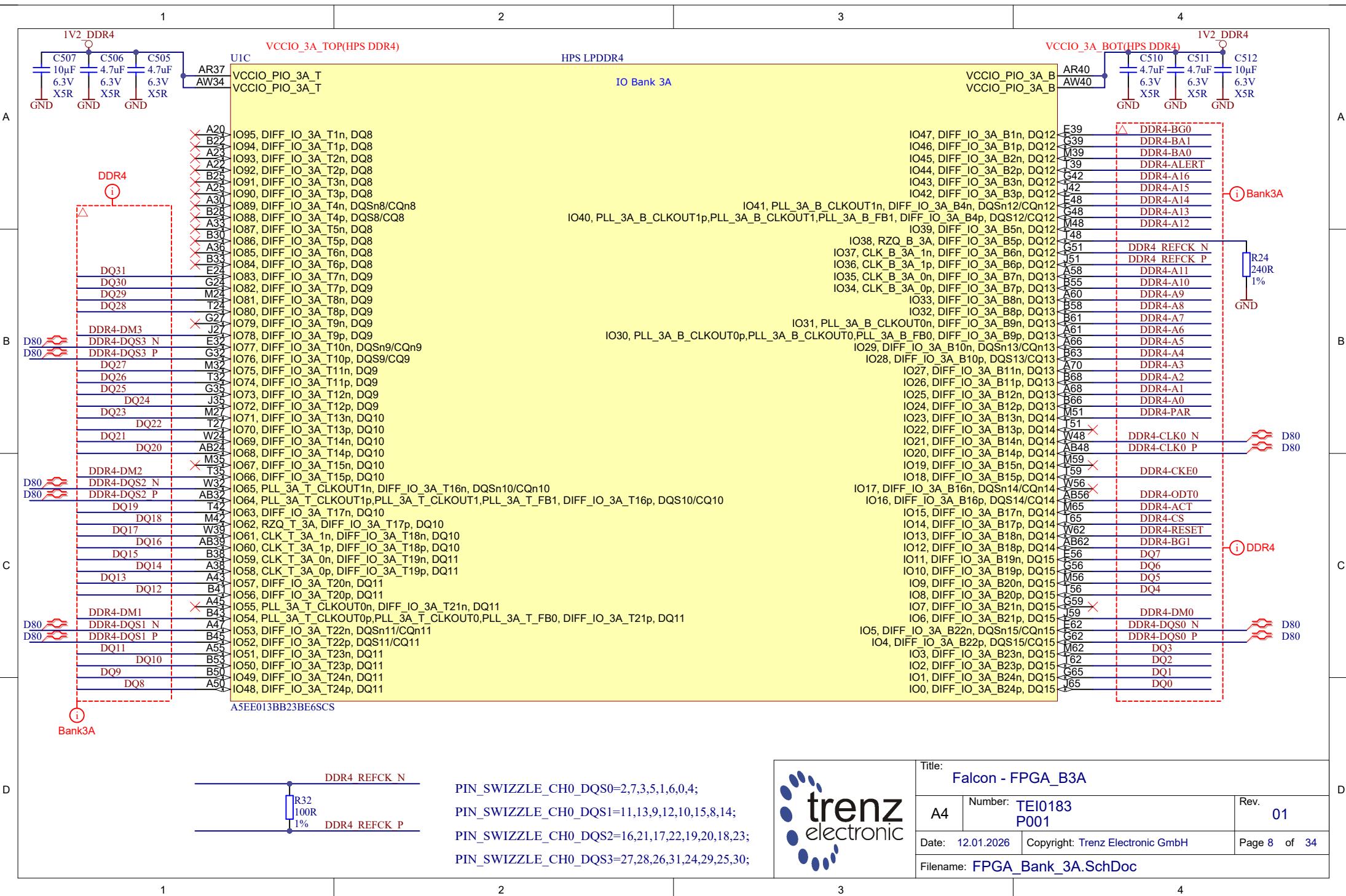
Position	Value
1-2	1.2V (default)
2-3	1.1V 1.3V

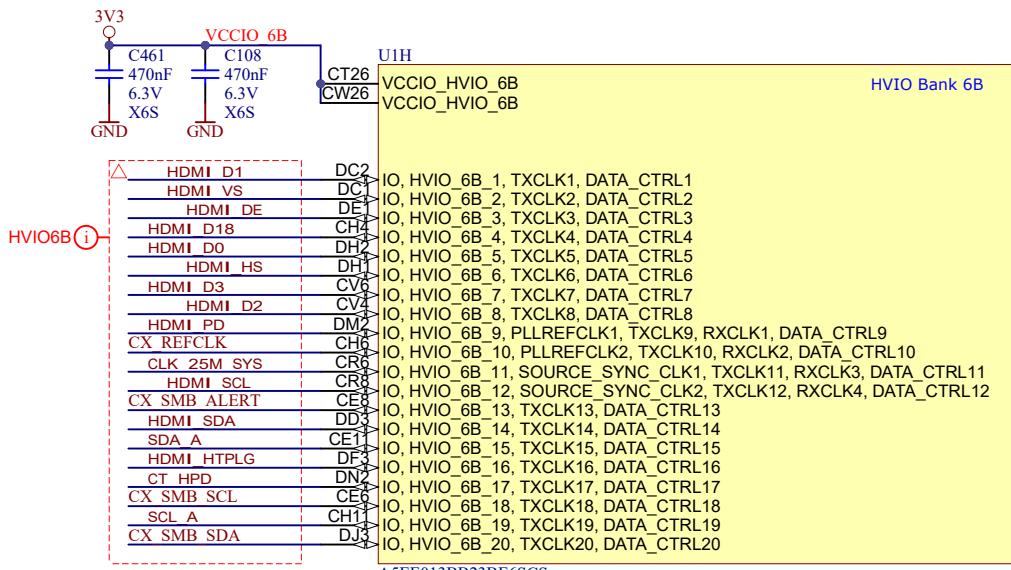
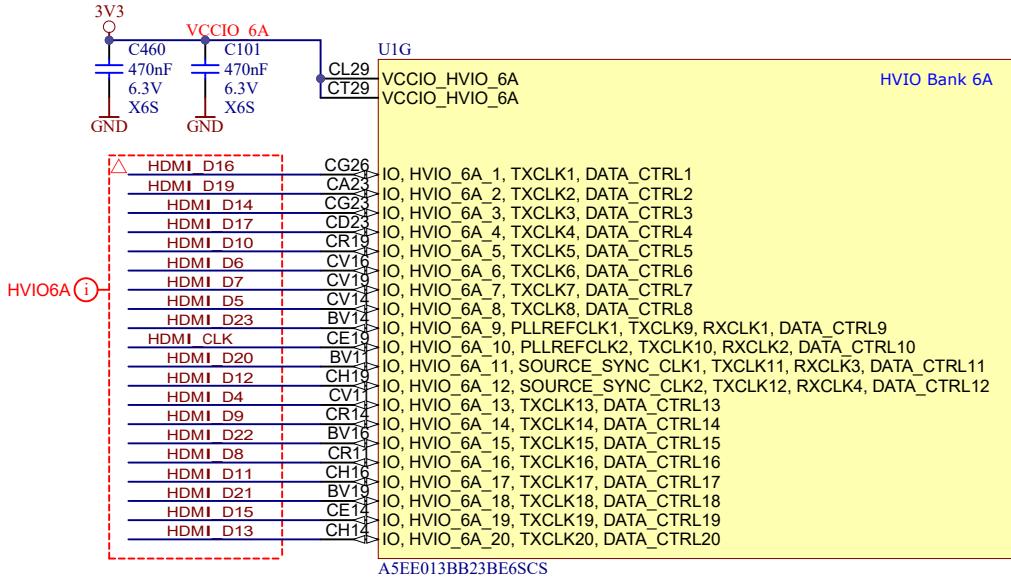
B2A REFCK P



Title: Falcon - FPGA_B2A

A4	Number: TEI0183 P001
Date:	12.01.2026 Copyright: Trenz Electronic GmbH
Filename:	FPGA_Bank_2A.SchDoc





Title: Falcon - FPGA_B6A_B6B

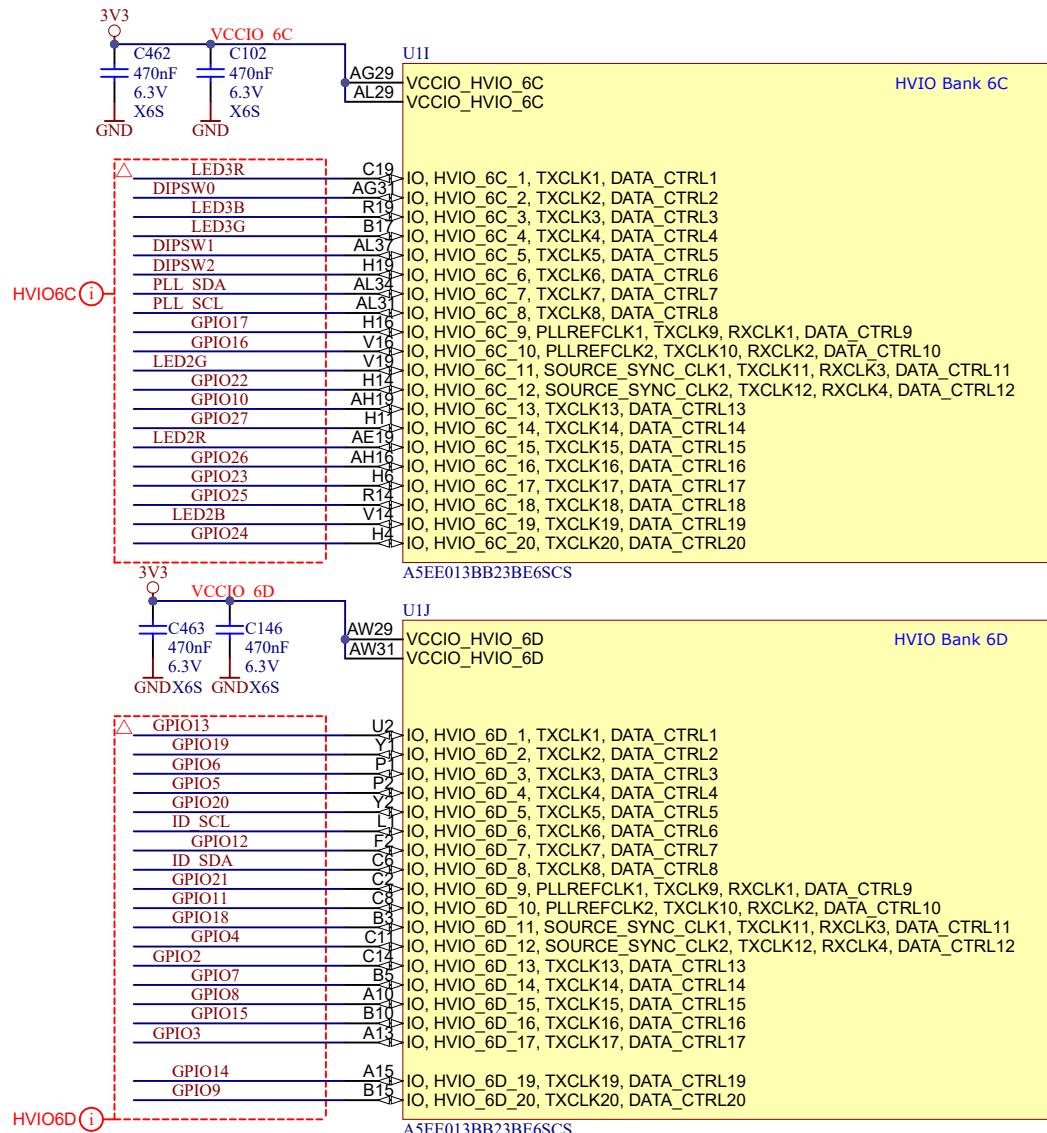
A4 Number: TEI0183 P001

Rev. 01

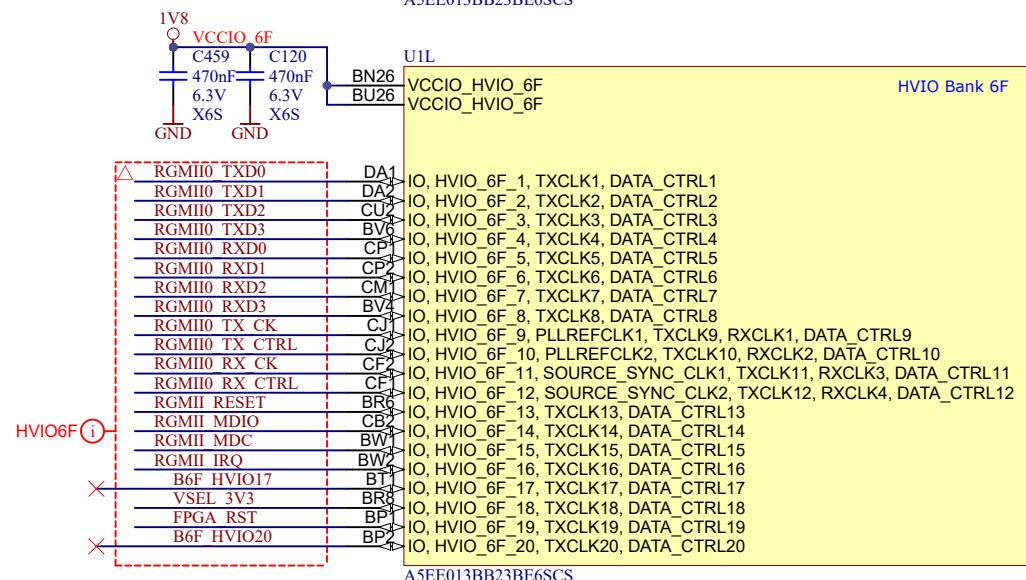
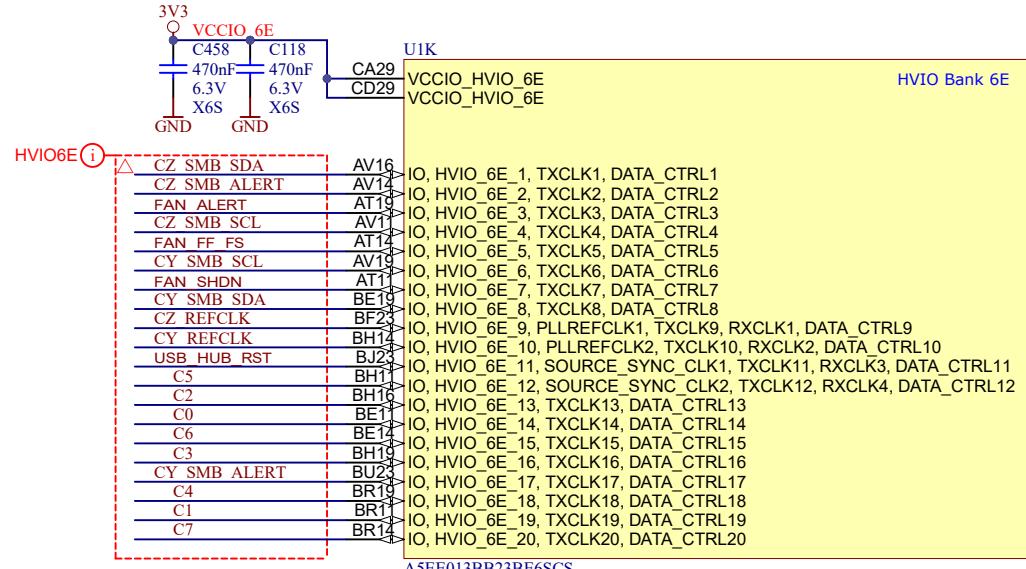
Date: 12.01.2026 Copyright: Trenz Electronic GmbH

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Filename: FPGA_Bank_HVIO_6A_6B.SchDoc



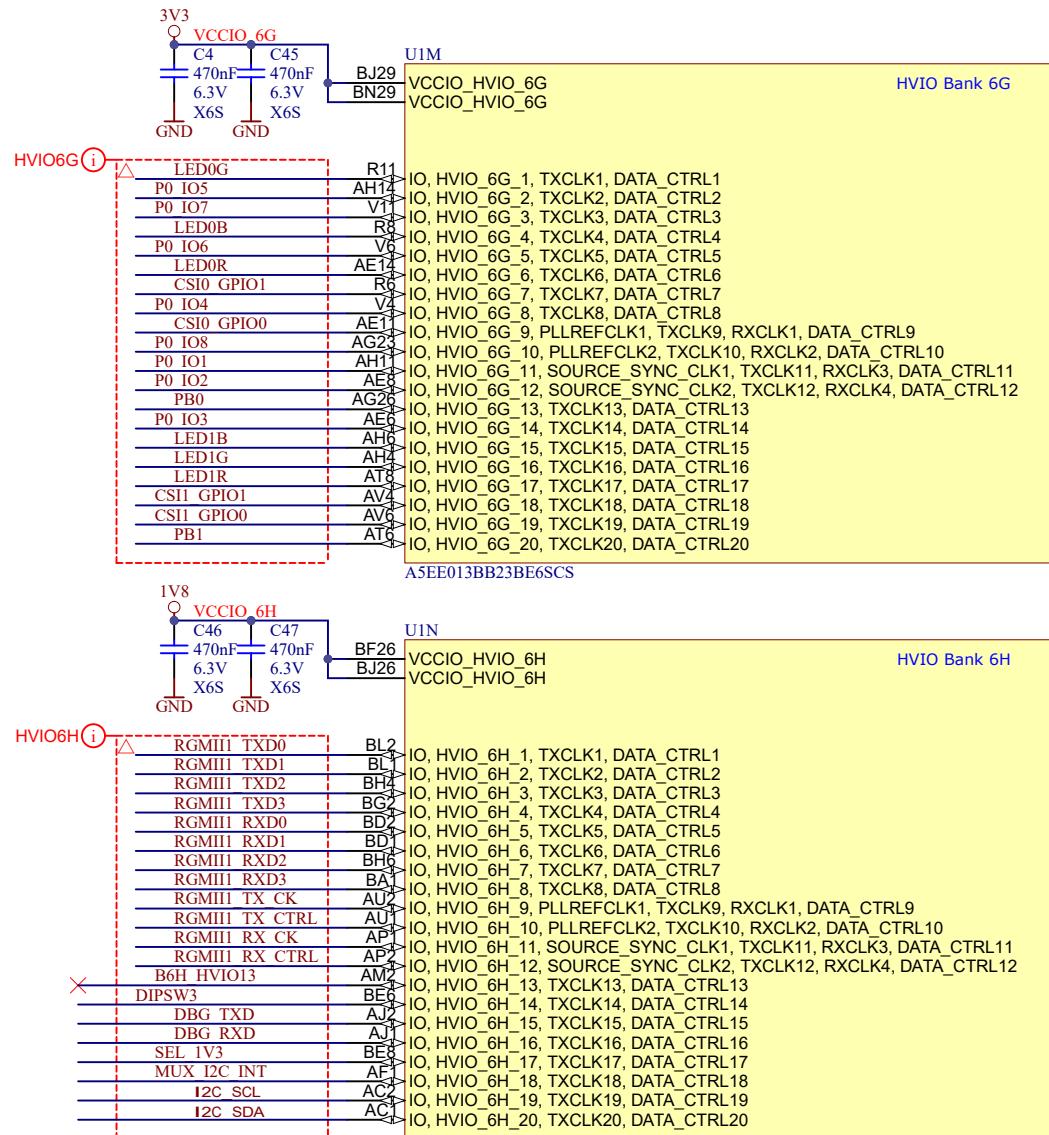
Title:	Falcon - FPGA_B6C_B6D		
A4	Number: TEI0183 P001	Rev.	01
Date: 12.01.2026	Copyright: Trenz Electronic GmbH	Page 10	of 34
Filename: FPGA_Bank_HVIO_6C_6D.SchDoc			



Title: Falcon - FPGA_B6E_B6F
A4 Number: TEI0183 P001

Rev. 01

Date: 12.01.2026 Copyright: Trenz Electronic GmbH
Filename: FPGA_Bank_HVIO_6E_6F.SchDoc



Title: Falcon - FPGA_B6G_B6H

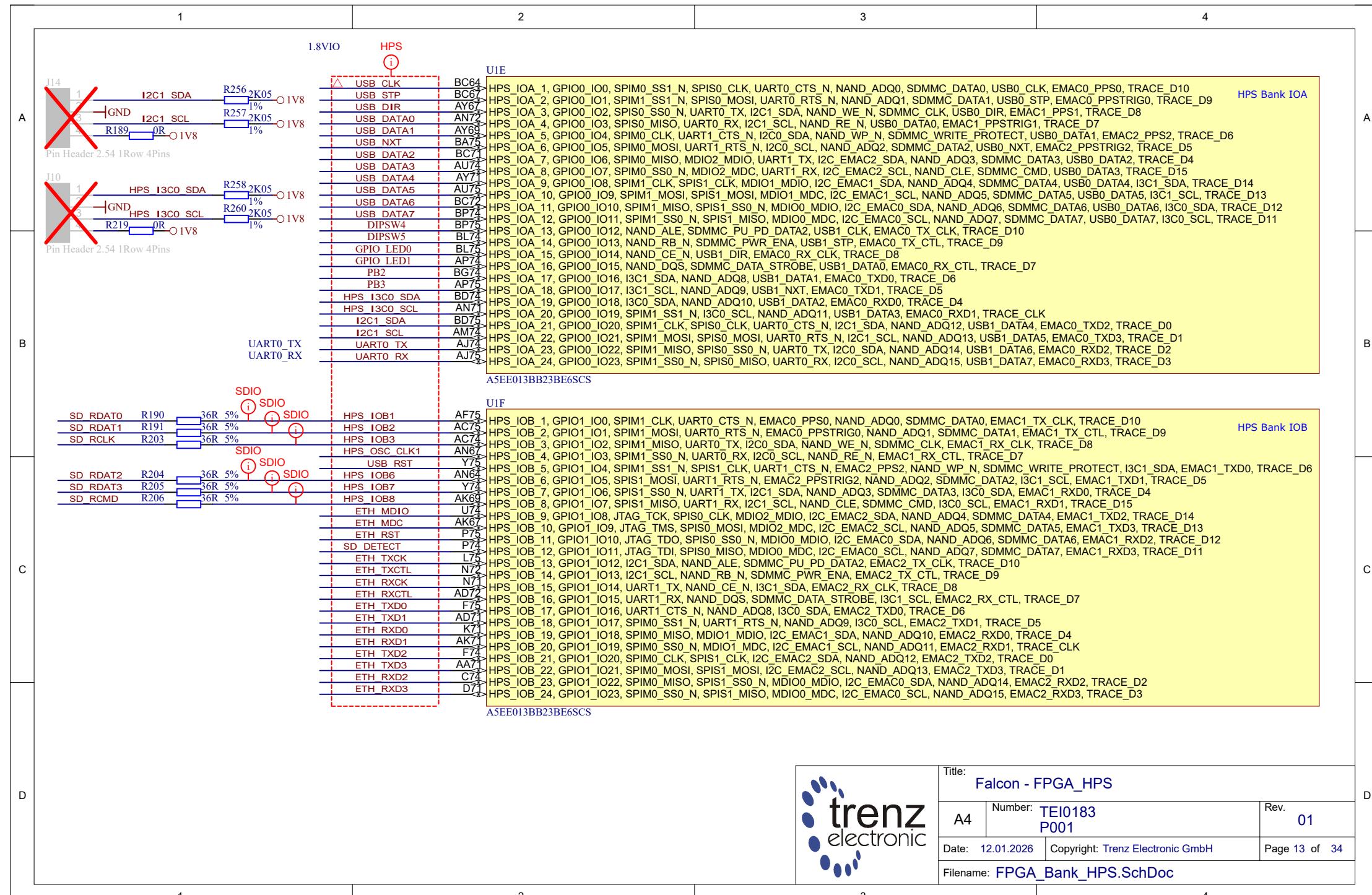
A4 Number: TEI0183
P001

Rev. 01

Date: 12.01.2026 Copyright: Trenz Electronic GmbH

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Filename: FPGA_Bank_HVIO_6G_6H.SchDoc



A

A

B

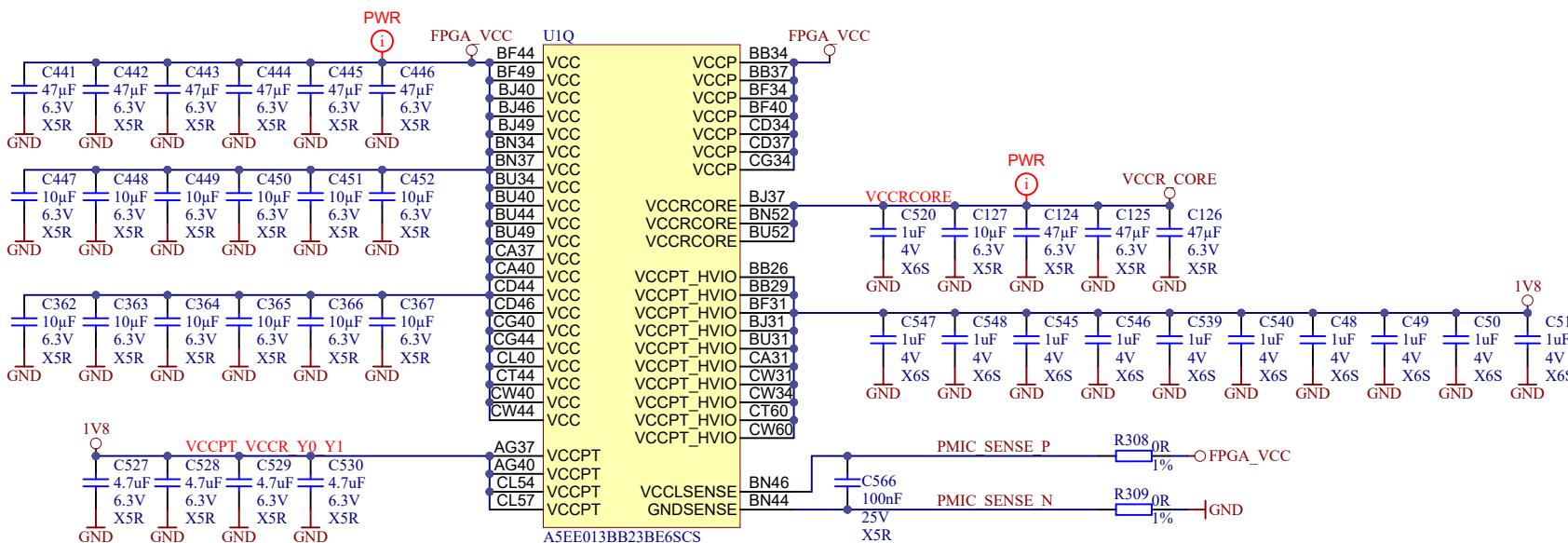
B

C

C

D

D



Title: Falcon - FPGA_PWR_1		
A4	Number: TEI0183 P001	Rev. 01
Date: 12.01.2026	Copyright: Trenz Electronic GmbH	Page 14 of 34
Filename: FPGA_PWR.SchDoc		

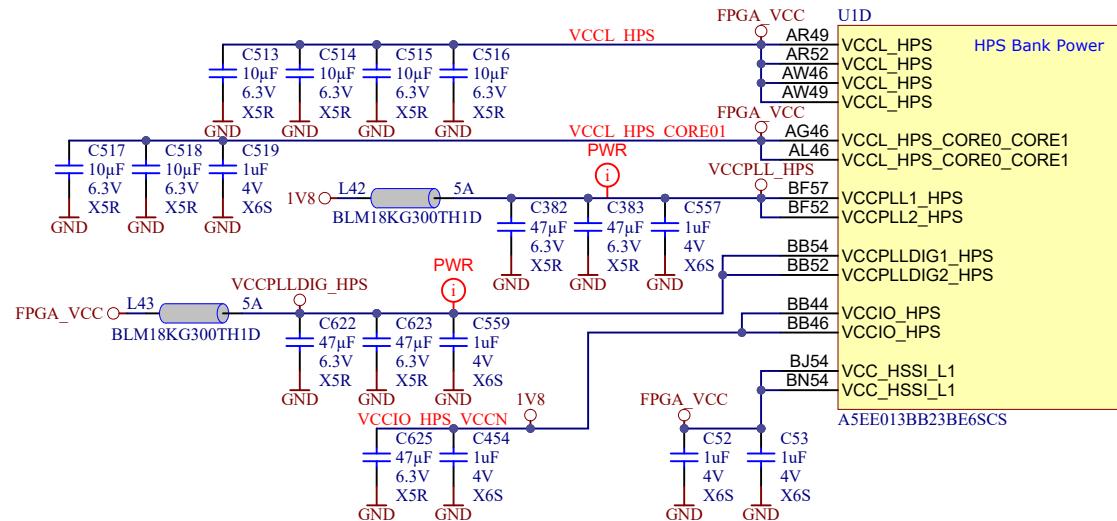
A

1

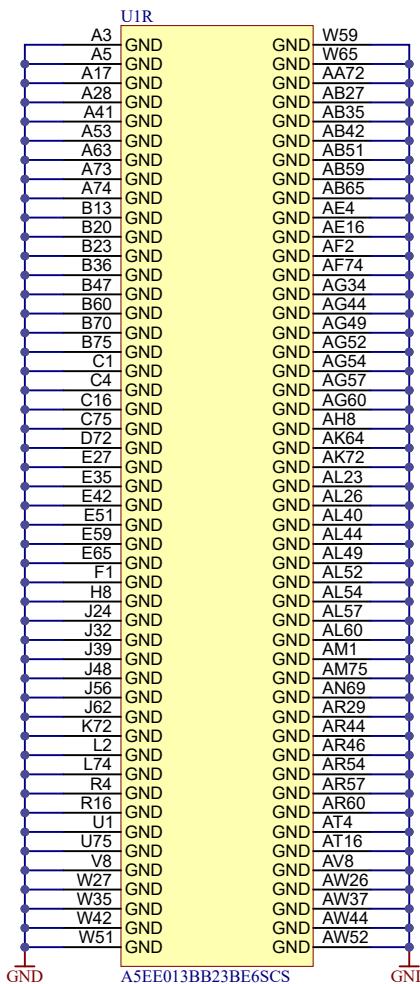
B

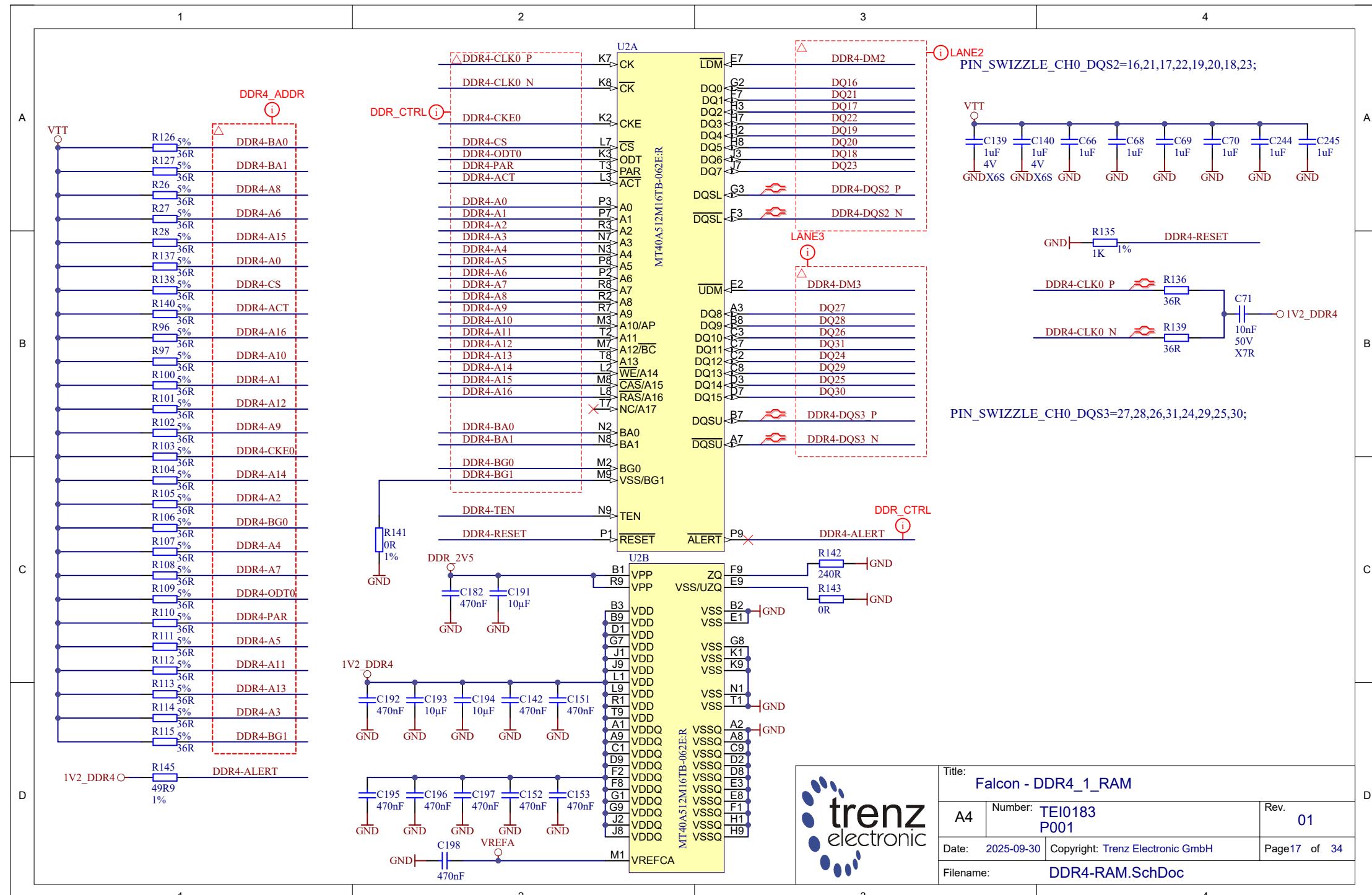
C

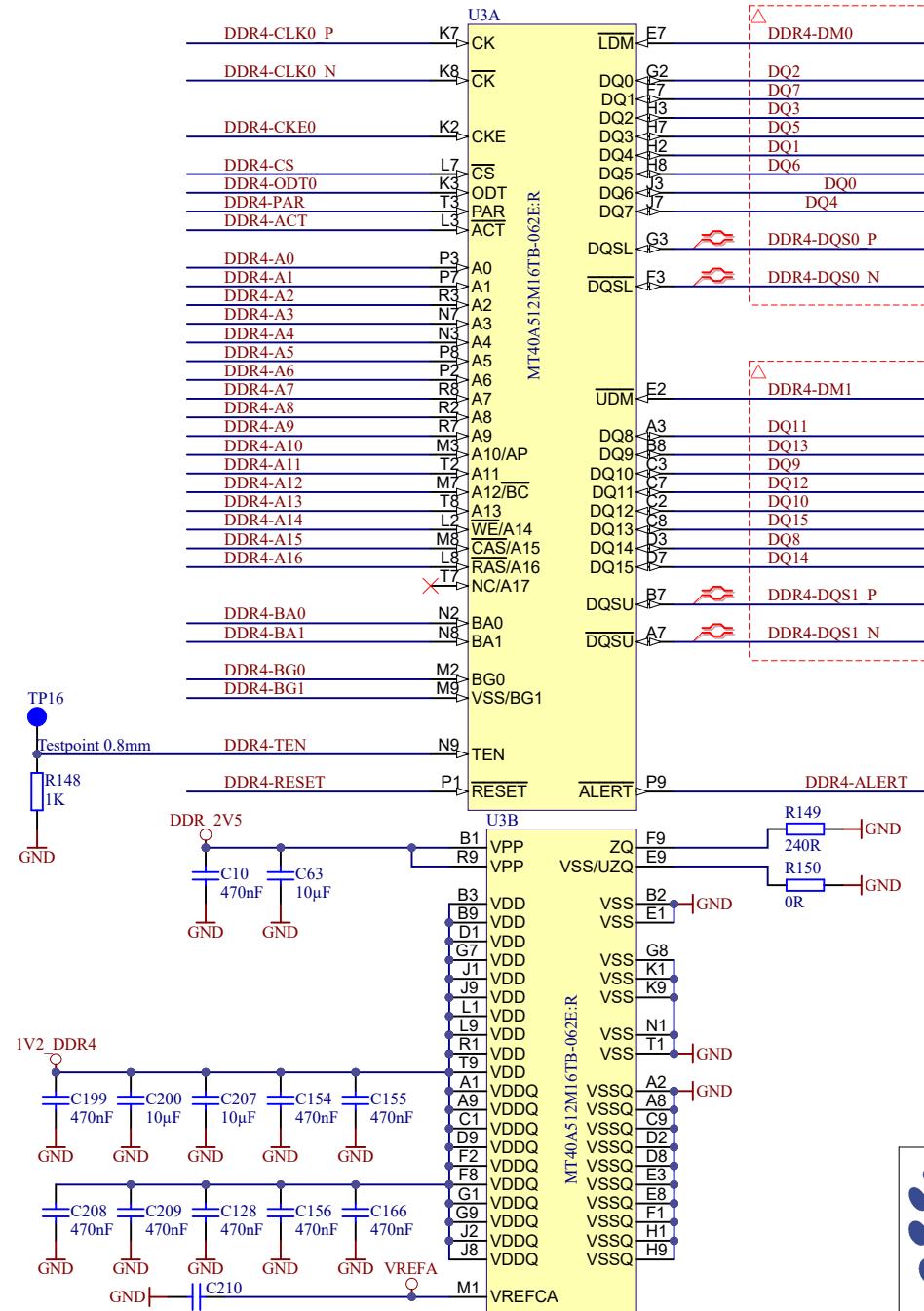
1



Title: Falcon - FPGA_PWR_2		
A4	Number: TEI0183 P001	Rev. 01
Date: 12.01.2026	Copyright: Trenz Electronic GmbH	Page 15 of 34
Filename: FPGA_PWR2.SchDoc		







PIN_SWIZZLE_CH0_DQS0=2,7,3,5,1,6,0,4;

PIN SWIZZLE CH0 DQS1=11,13,9,12,10,15,8,14;



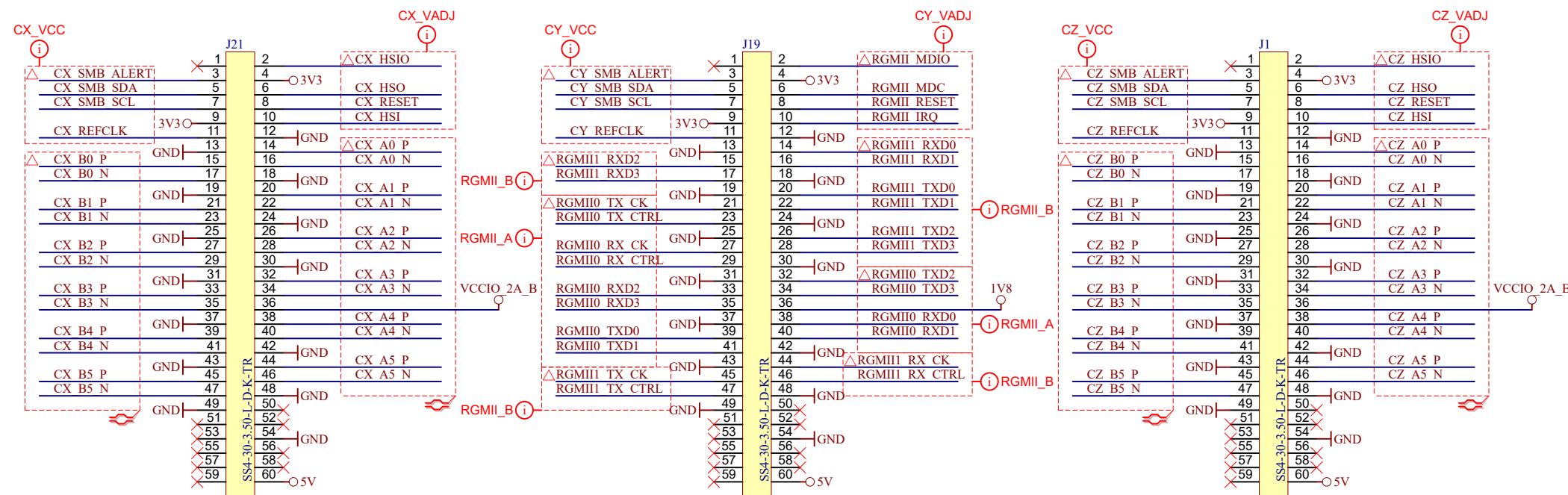
Title: Falcon - DDR4_2_RAM		
A4	Number: TEI0183 P001	Rev. 01
Date:	2025-09-30	Copyright: Trenz Electronic GmbH
Filename:	DDR4-RAM_2.SchDoc	

1

2

3

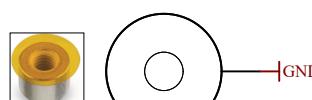
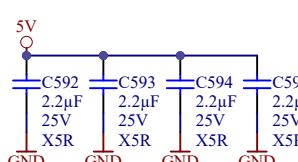
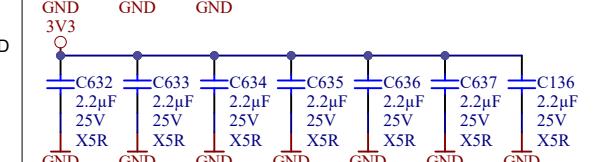
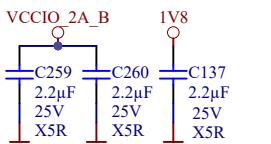
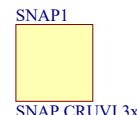
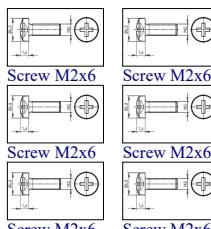
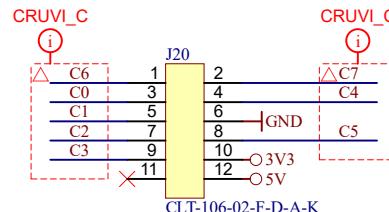
4



CRUVI (CX) HS VCCIO_2A_B is variable 1.2V or 1.3V

CRUVI (CY) HS is fixed 1.8V(2x RGMII)

CRUVI (CZ) HS VCCIO_2A_B is variable 1.2V or 1.3V



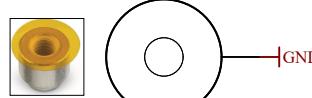
Steel Spacer M2 5mm SMD



Steel Spacer M2 5mm SMD



Steel Spacer M2 5mm SMD



Steel Spacer M2 5mm SMD



Steel Spacer M2 5mm SMD



Steel Spacer M2 5mm SMD



Title: Falcon - CRUVI

A4 Number: TEI0183
P001

Rev. 01

Date: 03.11.2025 Copyright: Trenz Electronic GmbH

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Filename: CRUVI.SchDoc

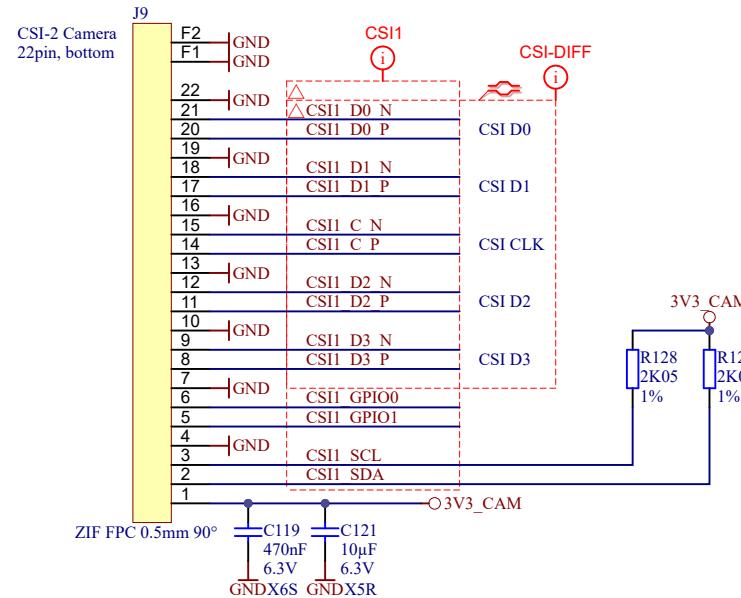
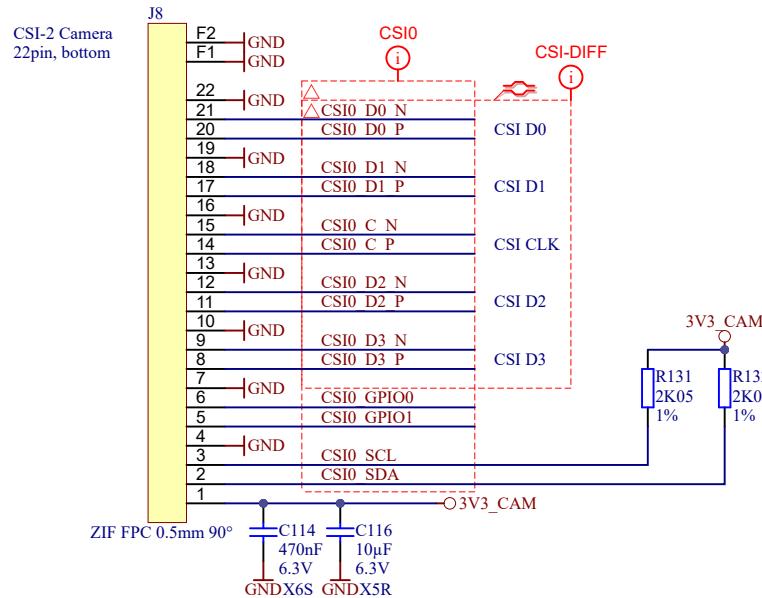
1

2

3

4

A



3V3_CAM → L11
BLM15PX121SN1D
2A

B

A

B

C

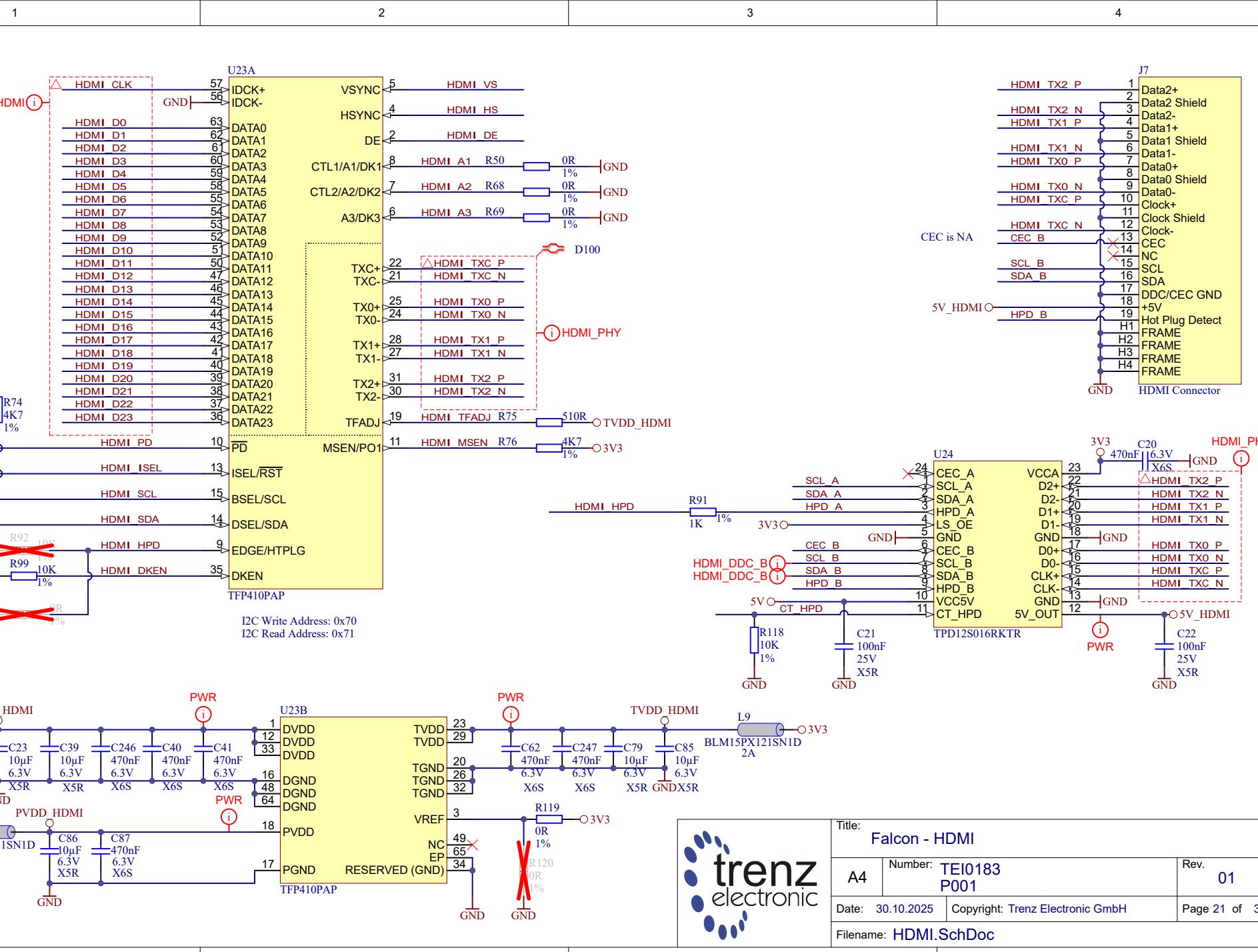
C

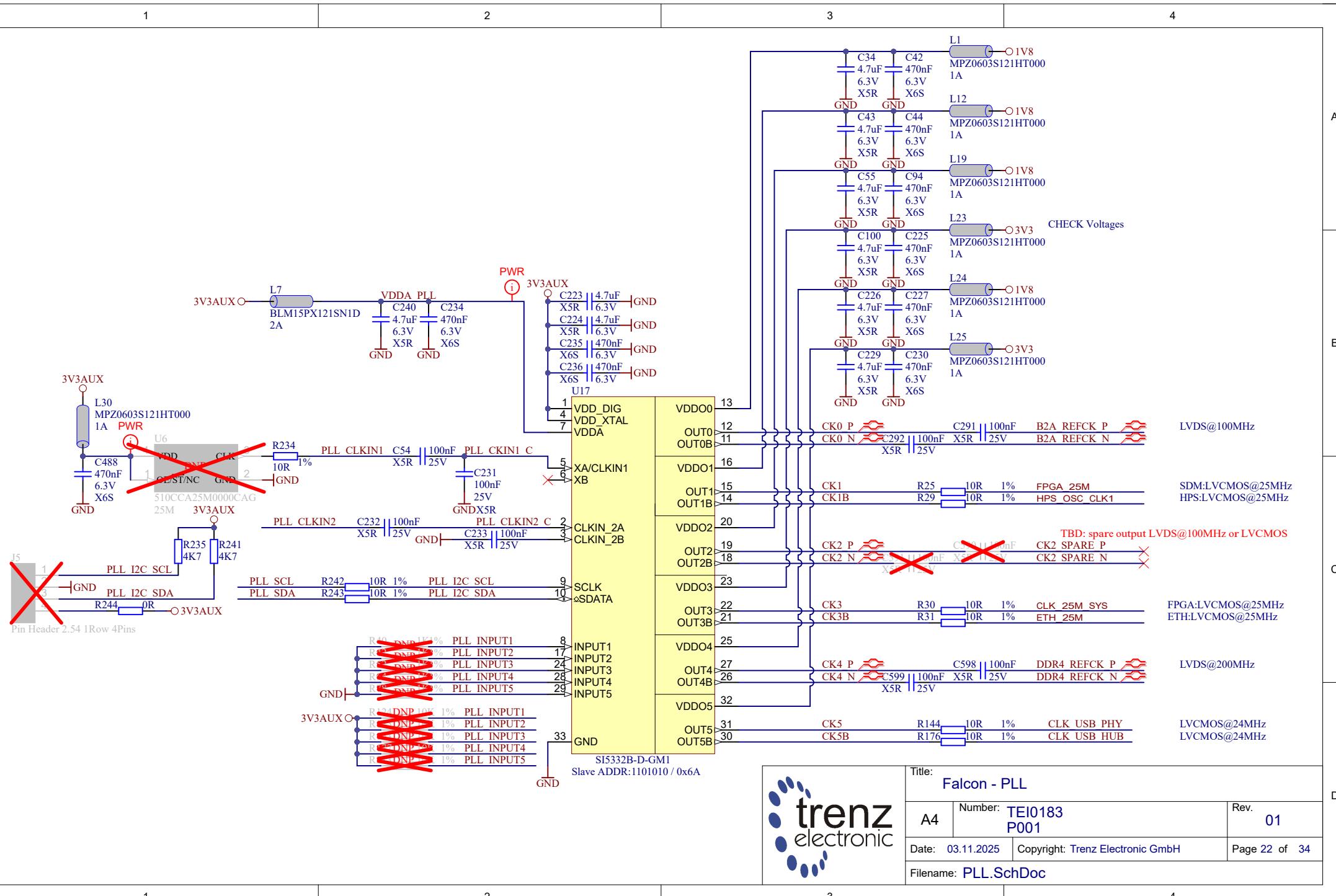
D

D



Title: Falcon - MIPI CSI/DSI		
A4	Number: TEI0183 P001	Rev. 01
Date: 30.10.2025	Copyright: Trenz Electronic GmbH	Page 20 of 34
Filename: CAM_0_1.SchDoc		

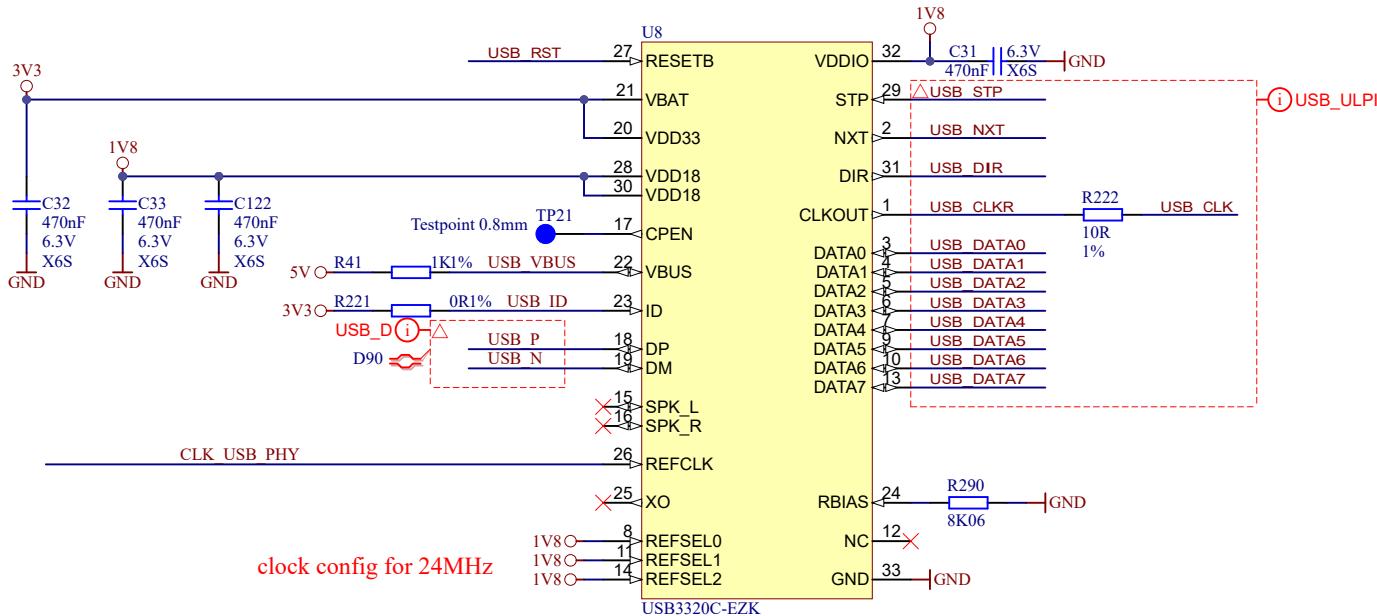




A

A

VBAT, VDD33, and VDD18 can be applied in any order.
 The VDD18 supply must be turned on and stable before
 the VDDIO supply is applied. This does not apply in
 cases where the VDD18 and VDDIO are tied together.



B

B

clock config for 24MHz

C

C

D

D



Title: Falcon - USB2.0 PHY	
A4	Number: TEI0183 P001
Date: 30.10.2025	Copyright: Trenz Electronic GmbH
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Filename: USB-PHY.SchDoc

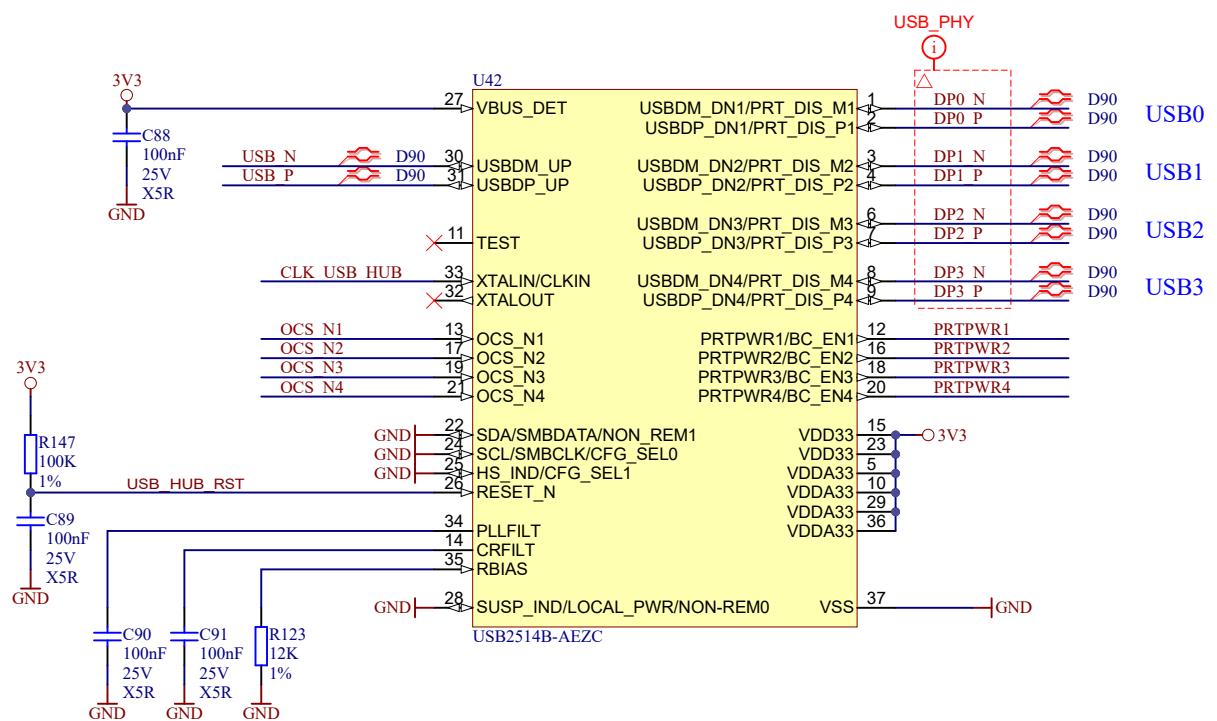
1

2

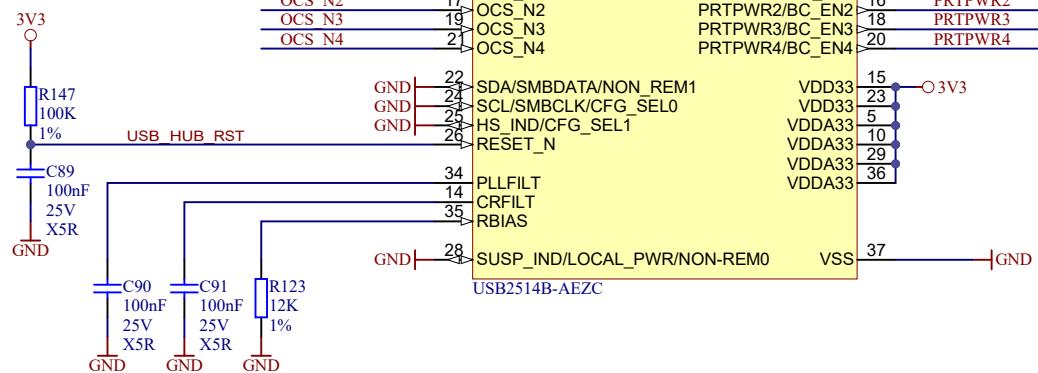
3

4

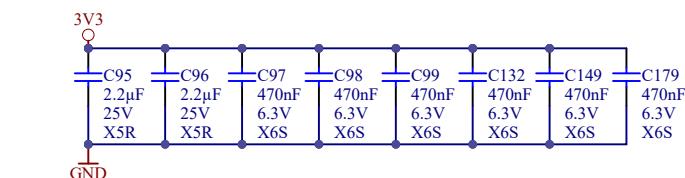
A



B



C



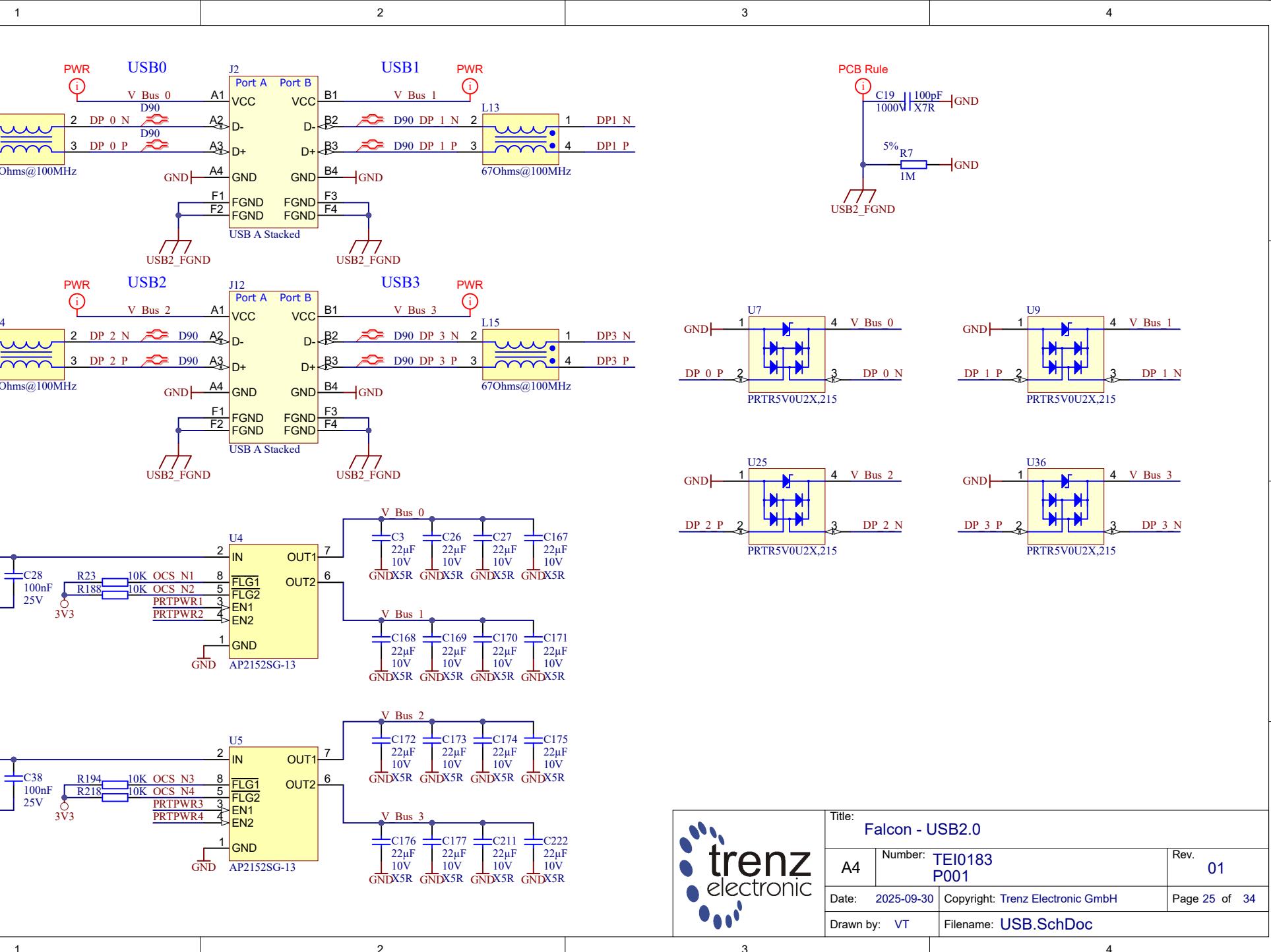
Title: Falcon - USB2.0 HUB		
A4	Number: TEI0183 P001	Rev. 01
Date: 2025-09-30	Copyright: Trenz Electronic GmbH	Page 24 of 34
Drawn by: VT	Filename: USB-HUB.SchDoc	

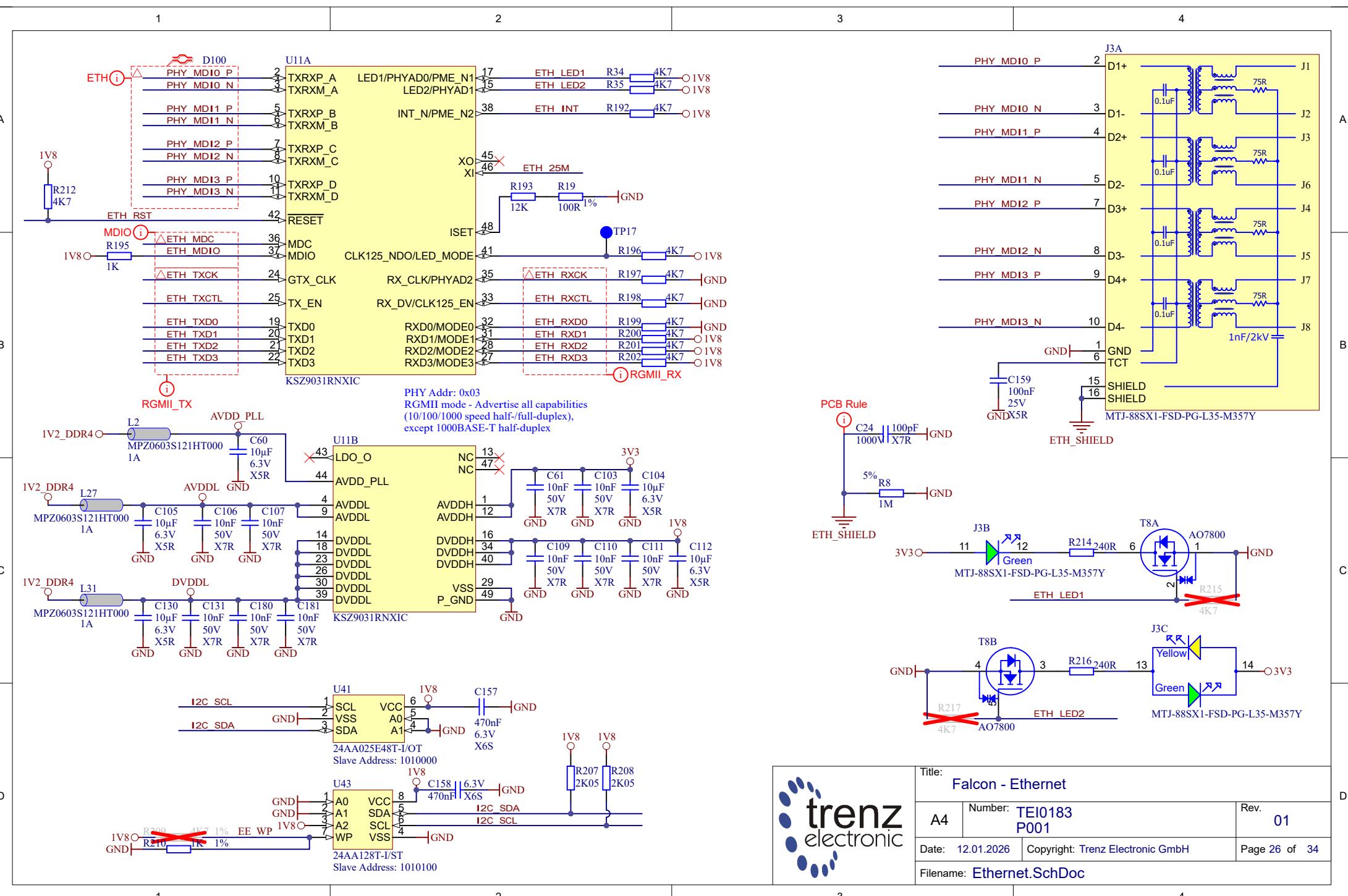
1

2

3

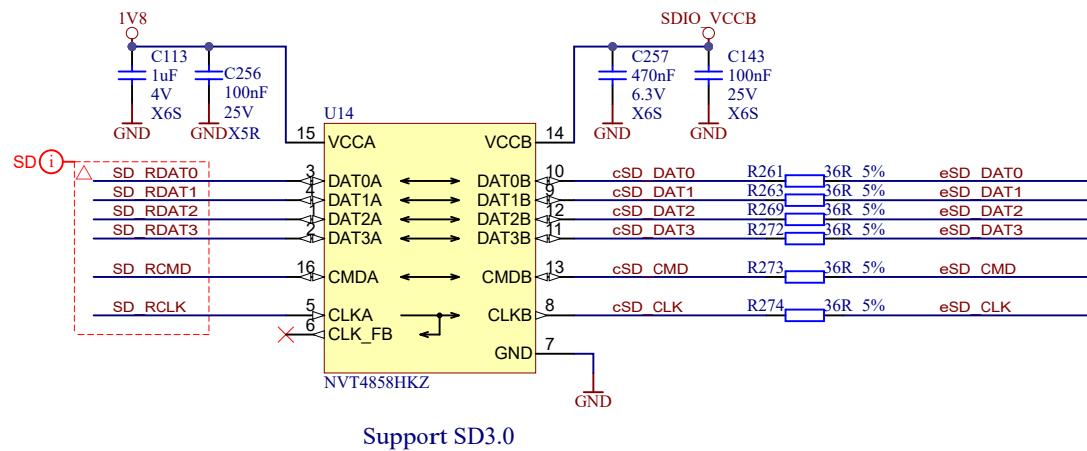
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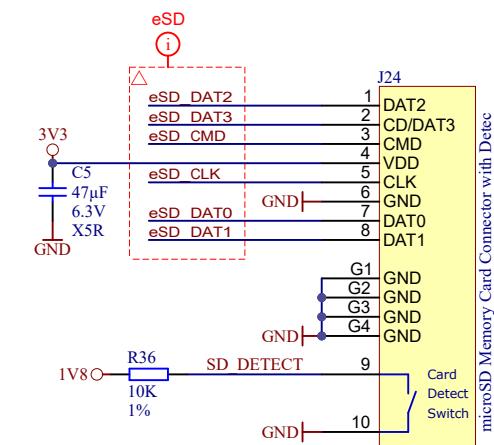
A

A



B

B

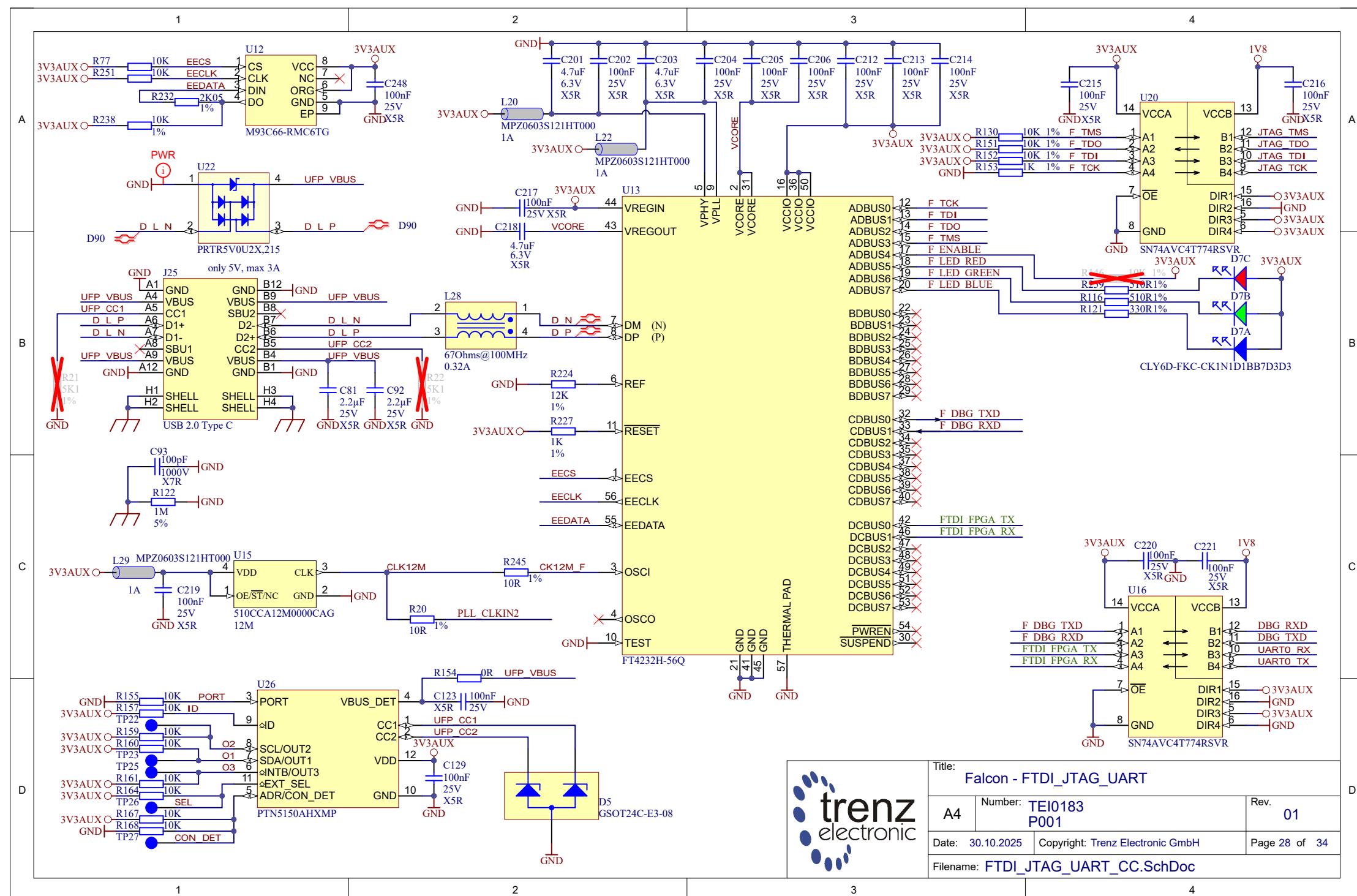


C

C



Title: Falcon - Micro SD Card		
A4	Number: TEI0183 P001	Rev. 01
Date: 30.10.2025	Copyright: Trenz Electronic GmbH	Page 27 of 34
Filename: SD.schdoc		

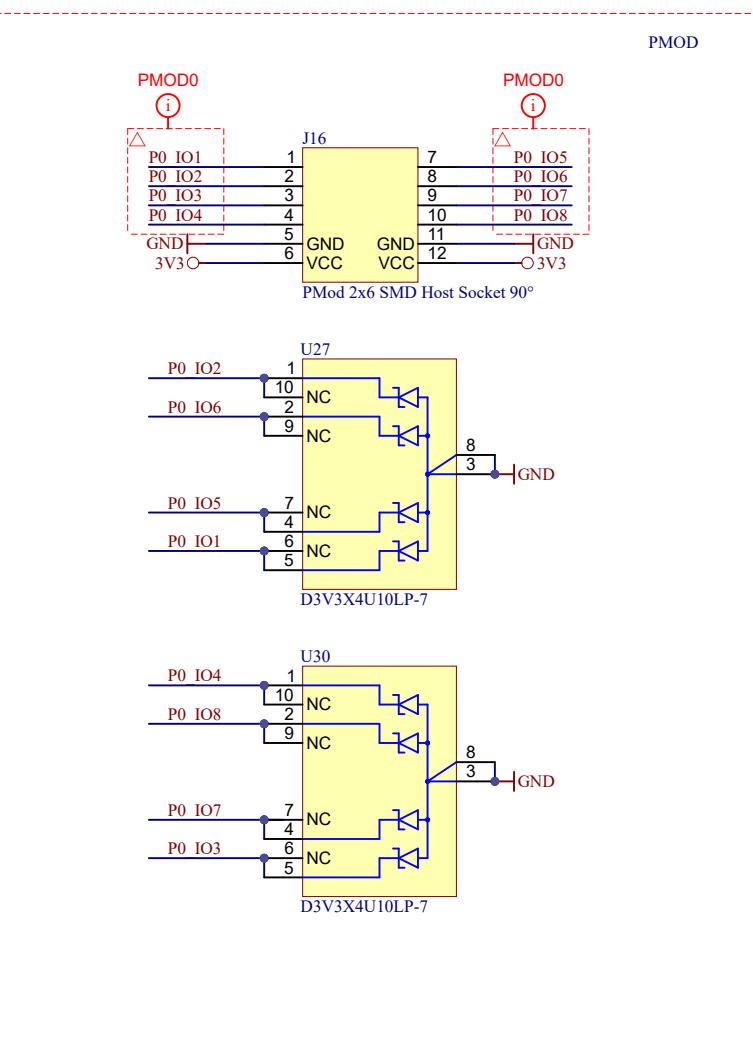
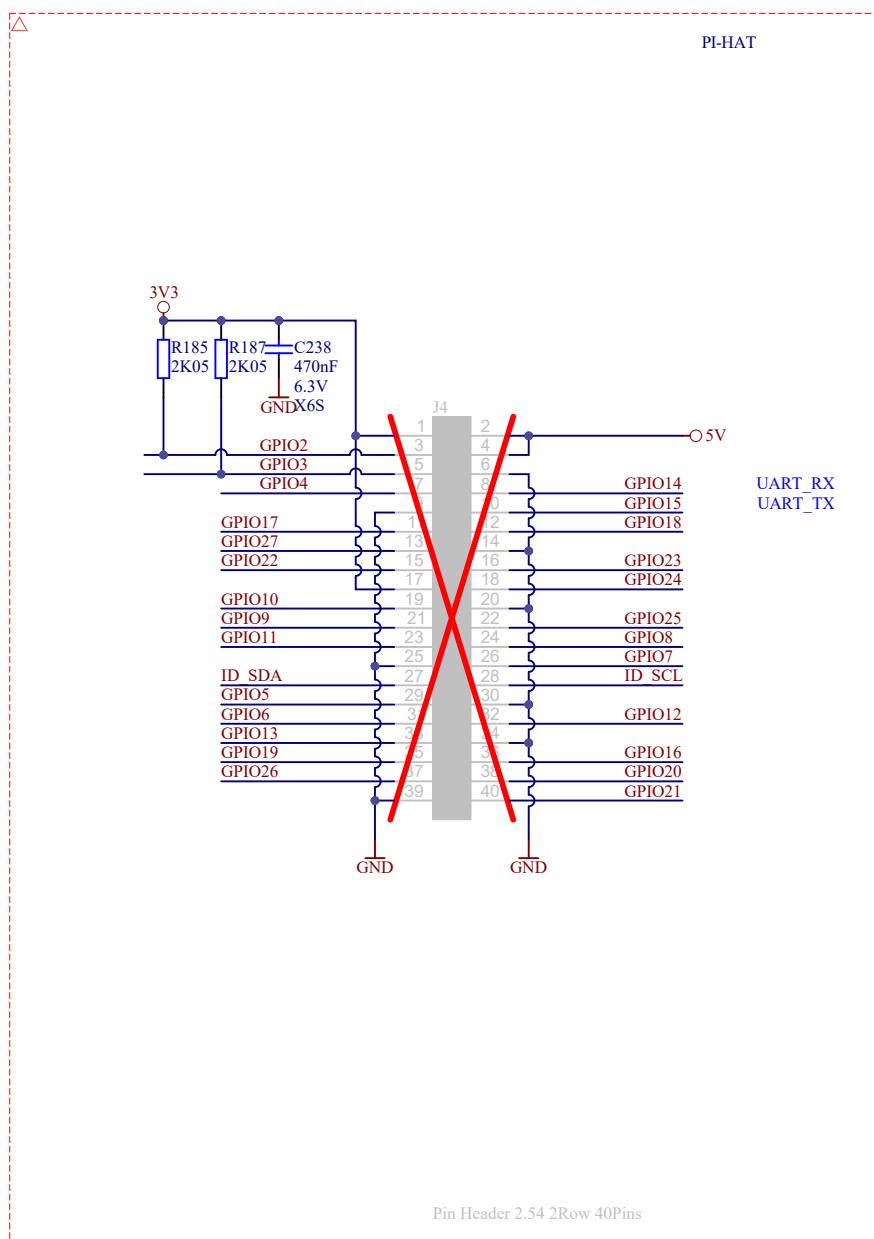


1

2

3

4



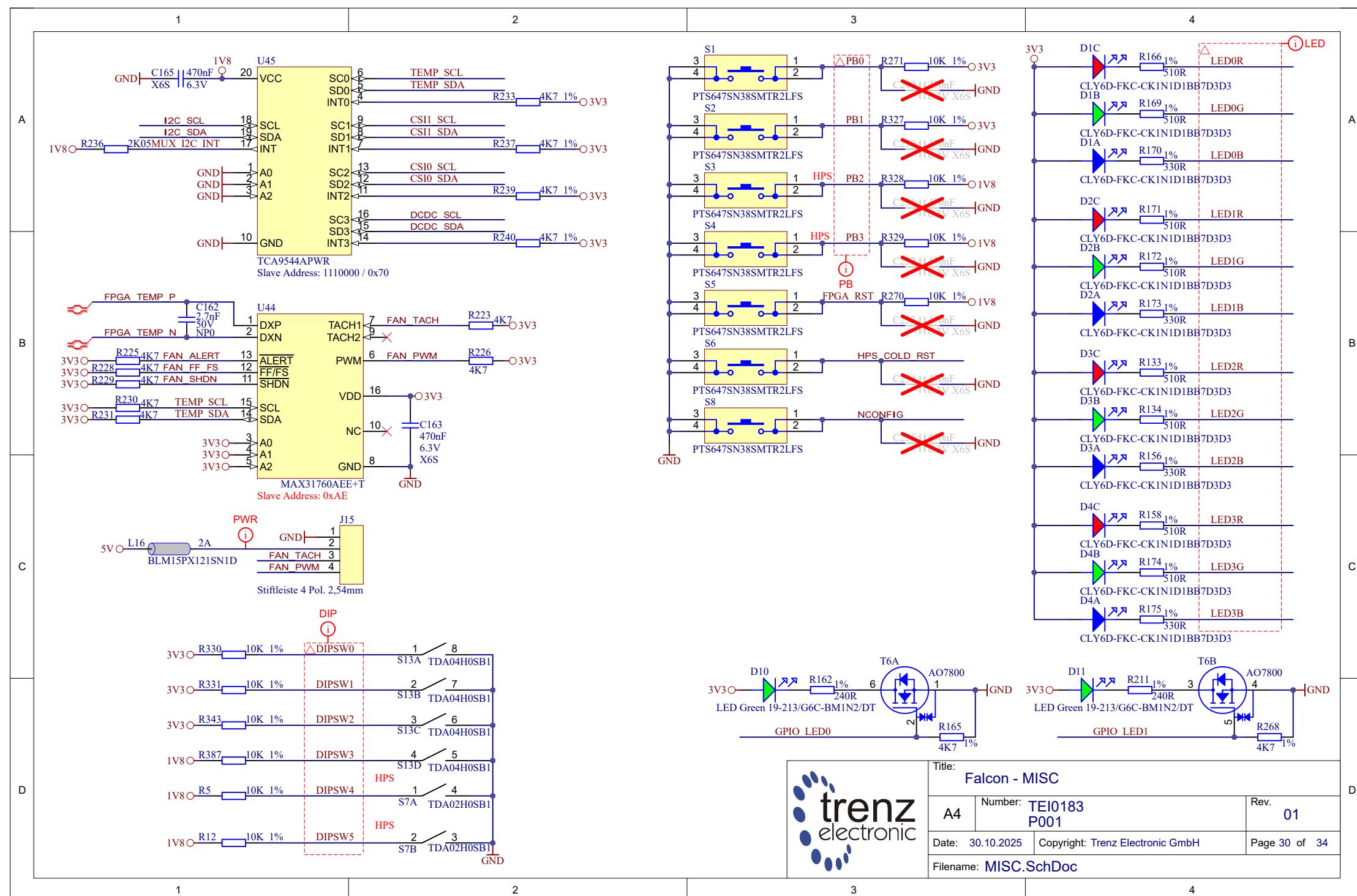
Title:		Falcon - Pi HAT
A4	Number:	TEI0183 P001
Date:	2025-09-30	Copyright: Trenz Electronic GmbH
Filename:	Pi-HAT_PMOD-.SchDoc	

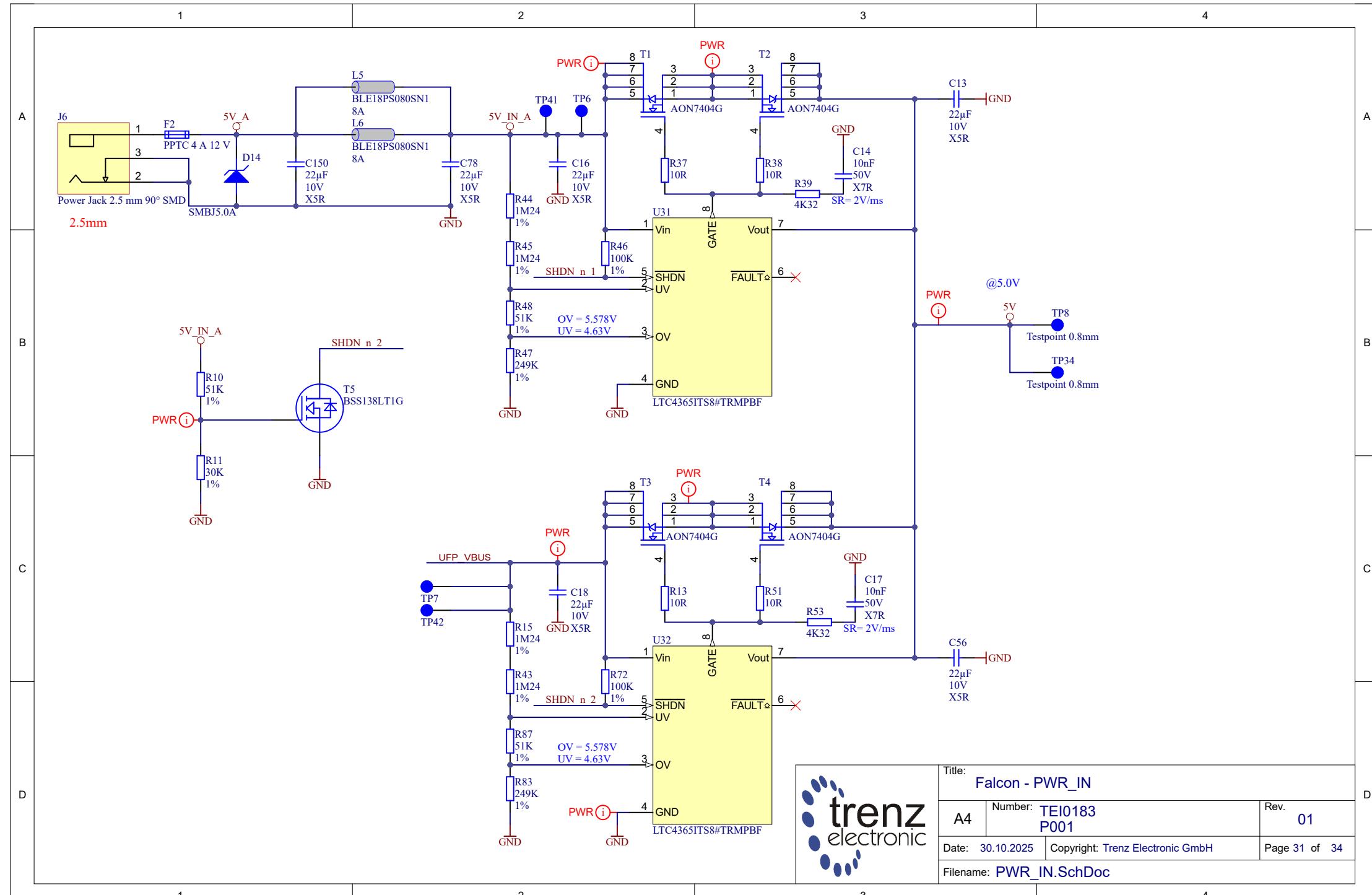
1

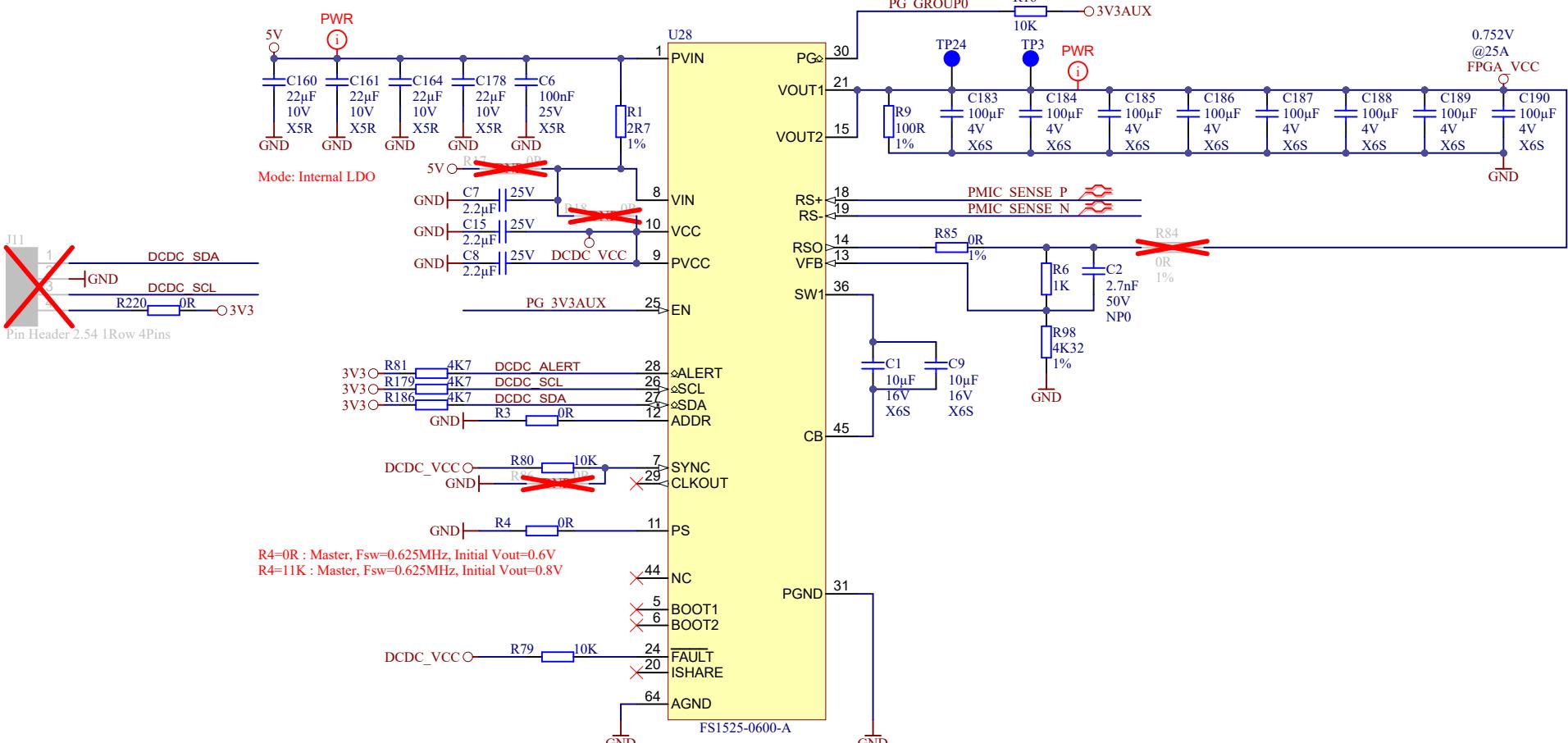
2

3

4



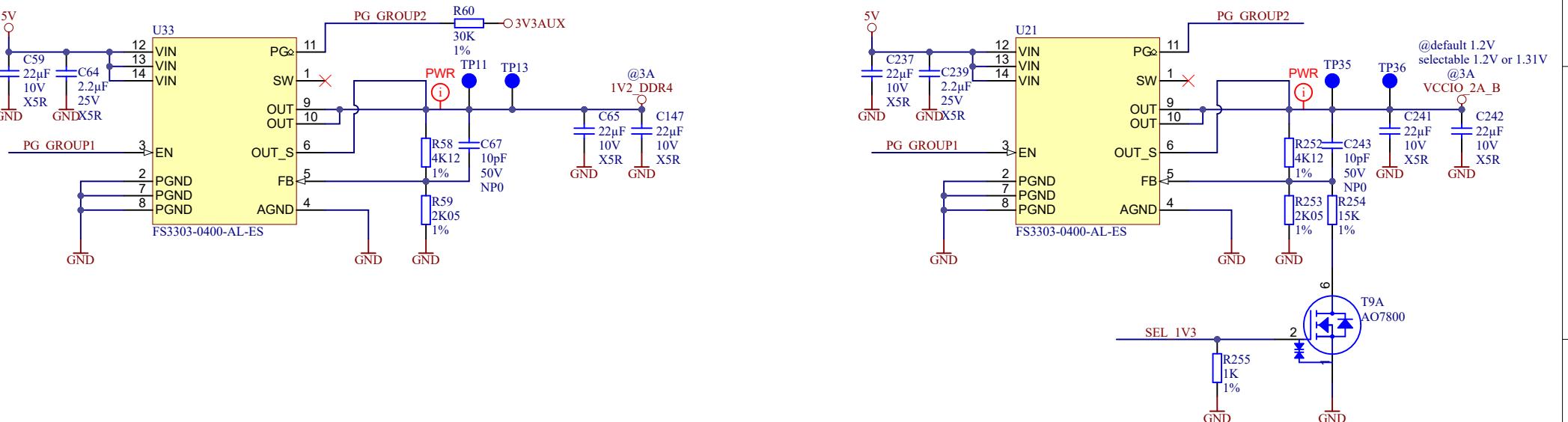
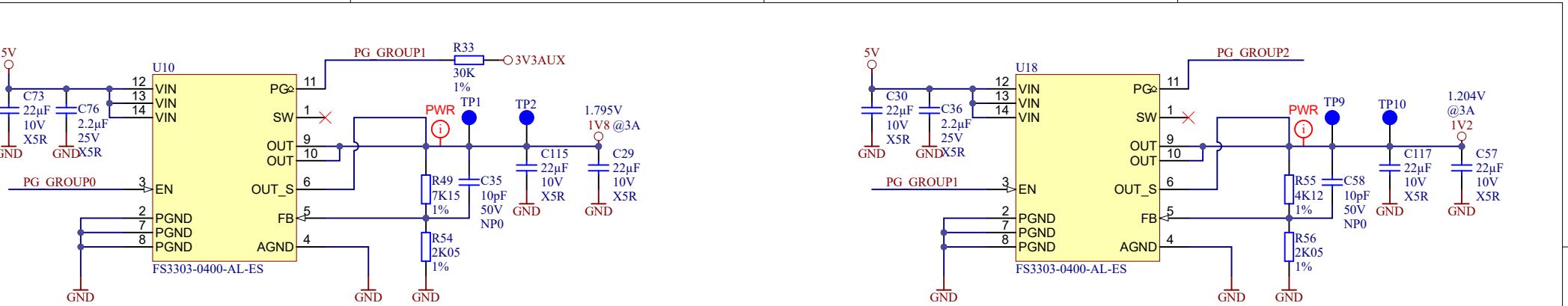




Device Address: 0x10
Soft-start Time: 3ms



Title: Falcon - PWR_1		
A4	Number: TEI0183 P001	Rev. 01
Date: 12.01.2026	Copyright: Trenz Electronic GmbH	Page 32 of 34
Filename: PWR_1.SchDoc		



Title: English PWP 3

A4 Number: TEI0183
P001

Date:

PWR-2-SchDra

Rev.

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