

PCM-937-L

FPSC Featureset 24A.0

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Project: FPSC Featureset 24A.0		Department : F&E Author: Schwaer	
26.09.2025	PCB-No.: 1618.0	Revision : 001	Sheet 1 of 30

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Default I2C2 addresses	
STUSB4500QTR (U21)	0x28
M.2 Key-M (X54)	-
Expansion connector (X56)	-
User EEPROM (U57)	-

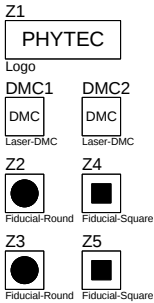
Default I2C3 addresses	
TUSB8042A (U21)	0x44
phyCAM-M CSI1 connector (X32)	-
LVDS 1 connector (X43)	-
mPCIe (X52)	-
PCA9533/01 (U55)	0x62

Default I2C4 addresses	
phyCAM-M CSI2 connector (X34)	-
MIPI-DSI connector (X39)	-
LVDS 2 connector (X50)	-
TCA6416ARTWR (U58)	0x20

Default I2C5 addresses	
P3T1750DPZ (U56)	0x4F

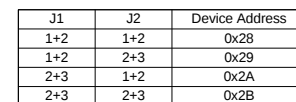
Default MDIO addresses	
ETH0 Carrier Board PHY	0x8
ETH0 Carrier Board PHY	0x1
ETH1 SOM on-board PHY	0x0

Notes:
Operating input power supply voltage: +15 V to +24 V DC
Operating temperature range: -40 °C to +85 °C unless noted otherwise
Parts with property 'nm' are not mounted on PCB



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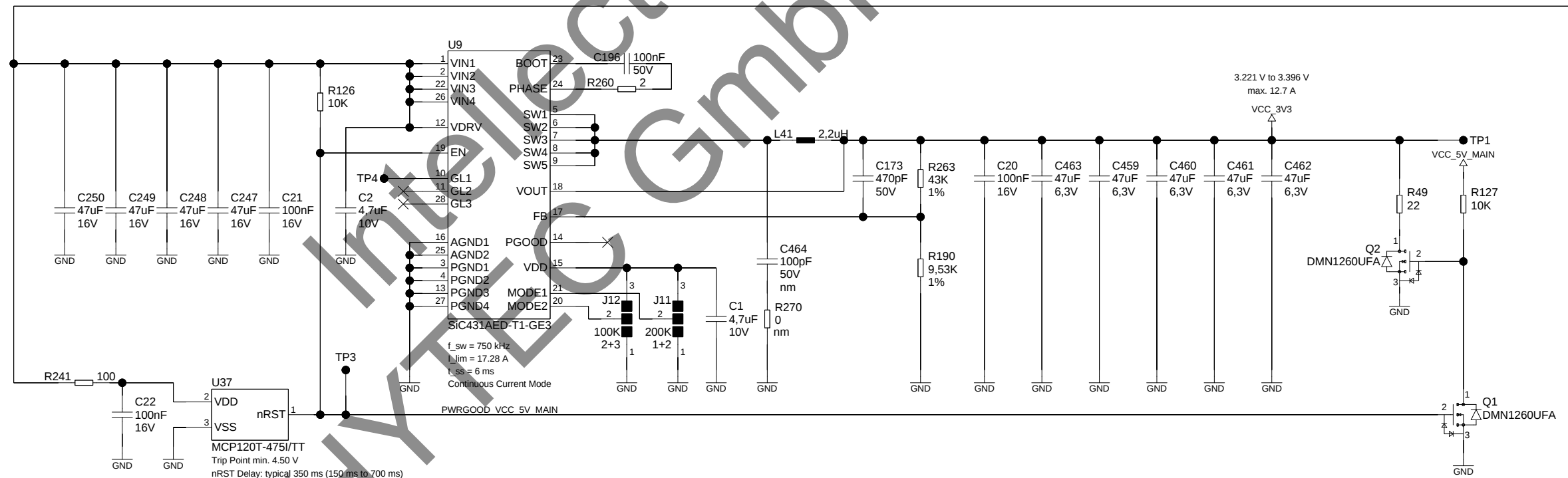


I2C2 addr. 0x28

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Department : F&E
Author: Schwaer

PH

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1

2

3

4

5

6

A

B

C

D

A

B

C

D

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1

2

3

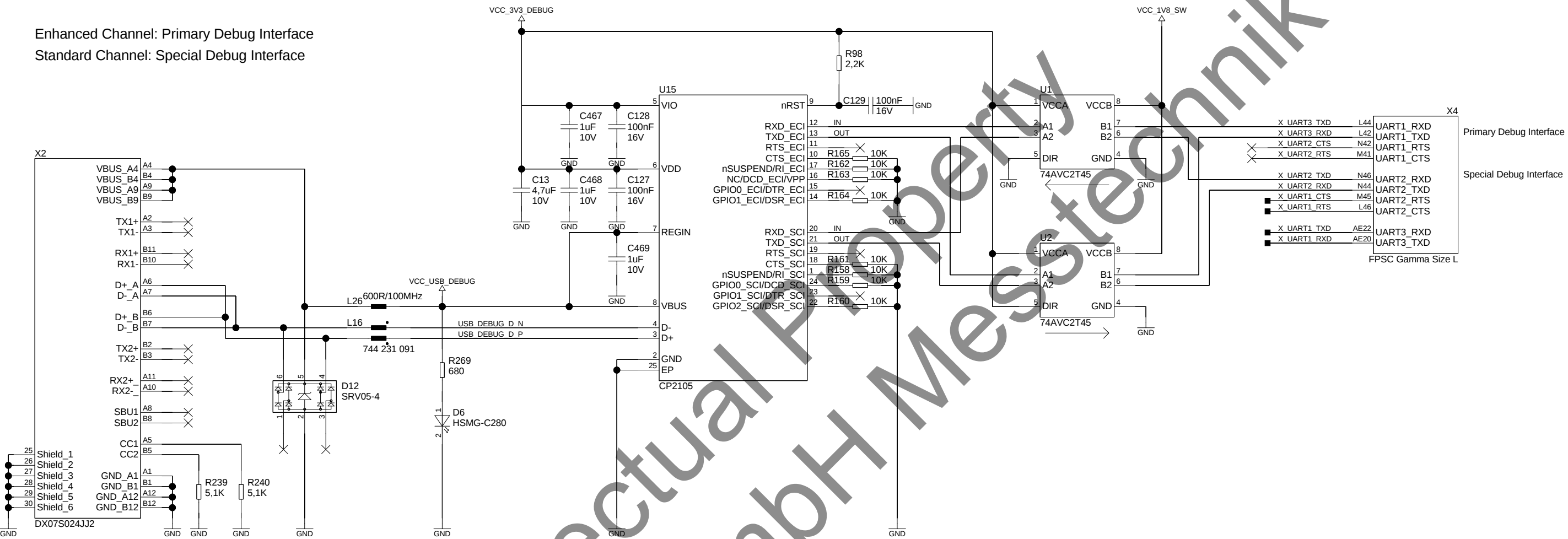
4

5

6

USB Debug

Enhanced Channel: Primary Debug Interface
Standard Channel: Special Debug Interface



USB Hub

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A

B

C

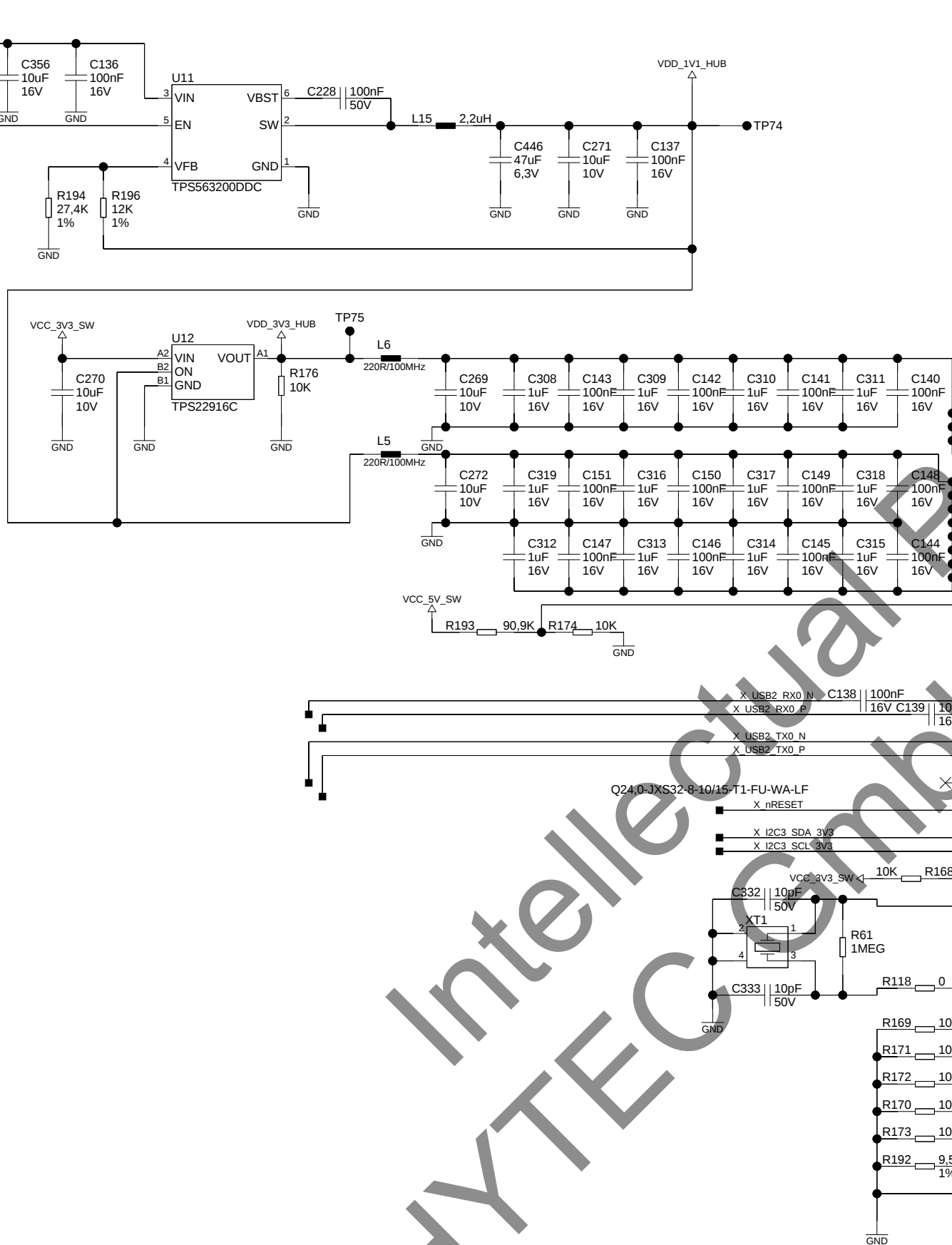
D

A

B

C

D

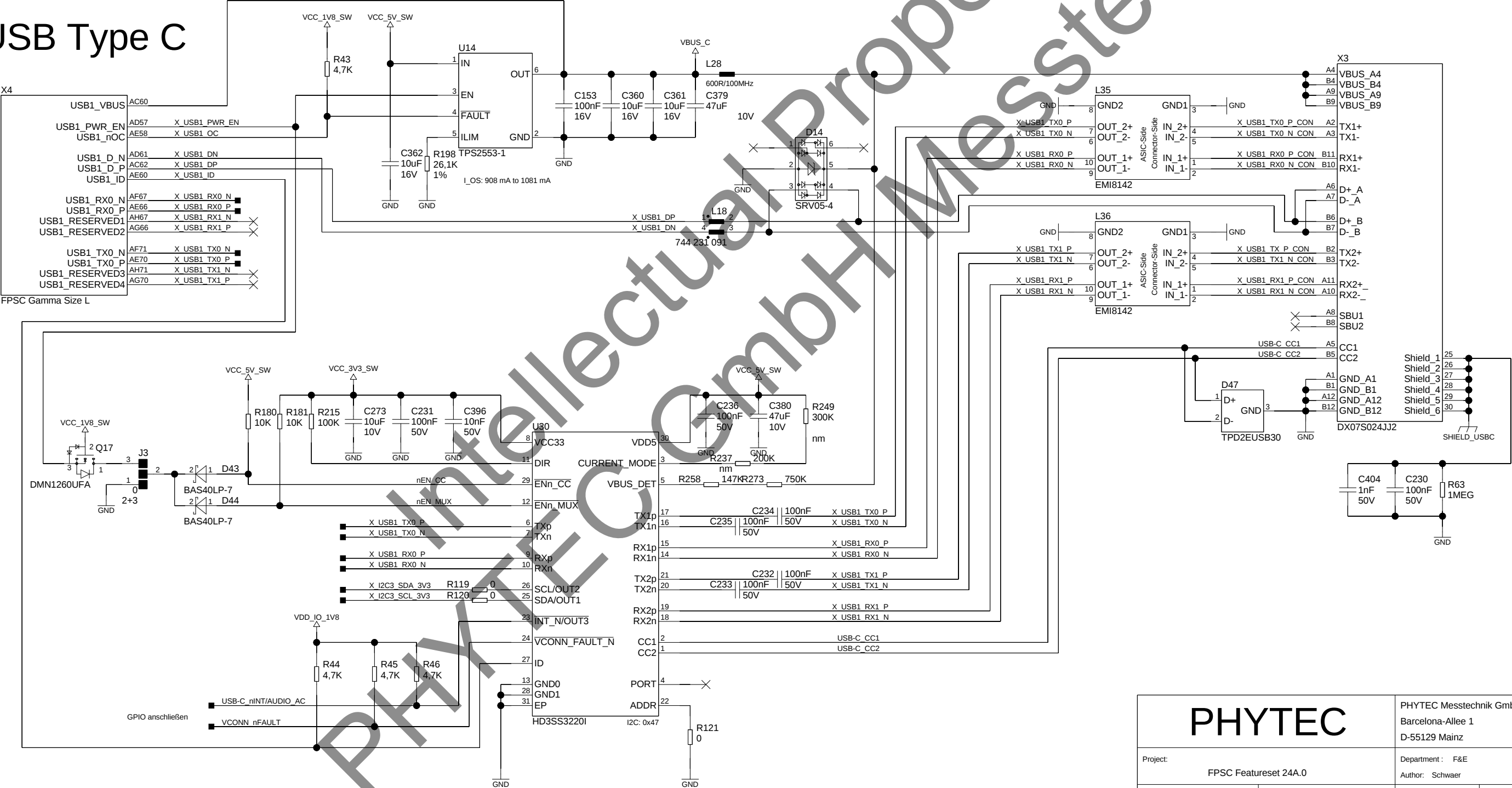


USB-HUB signal assignment

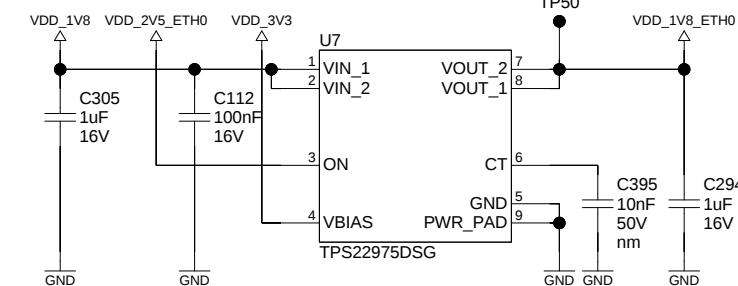
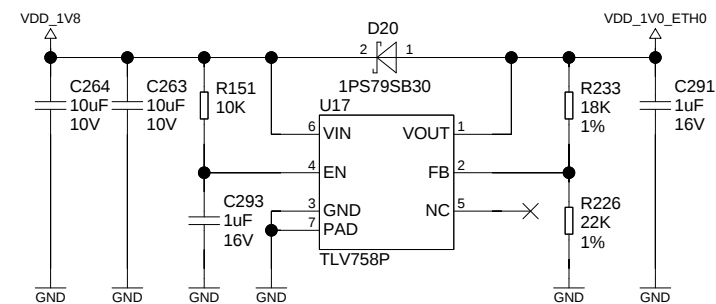
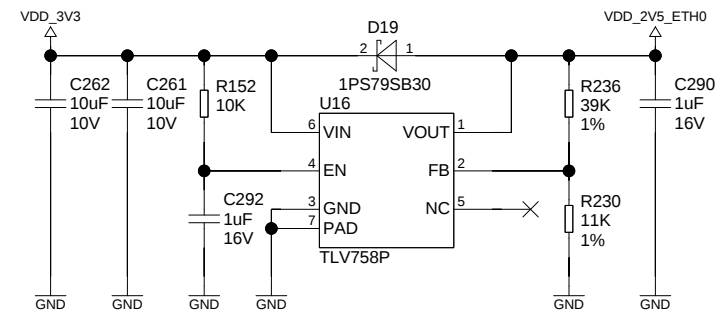
Signal	Function
USB_HUB_1	mPCIe
USB_HUB_2	AV-Connector
USB_HUB_3	USB Type-A
USB_HUB_4	LVDS1-Connector

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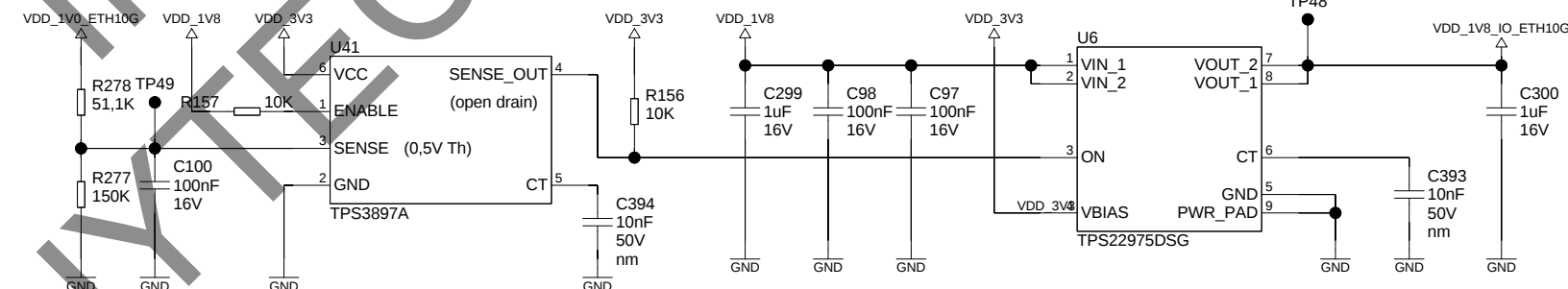
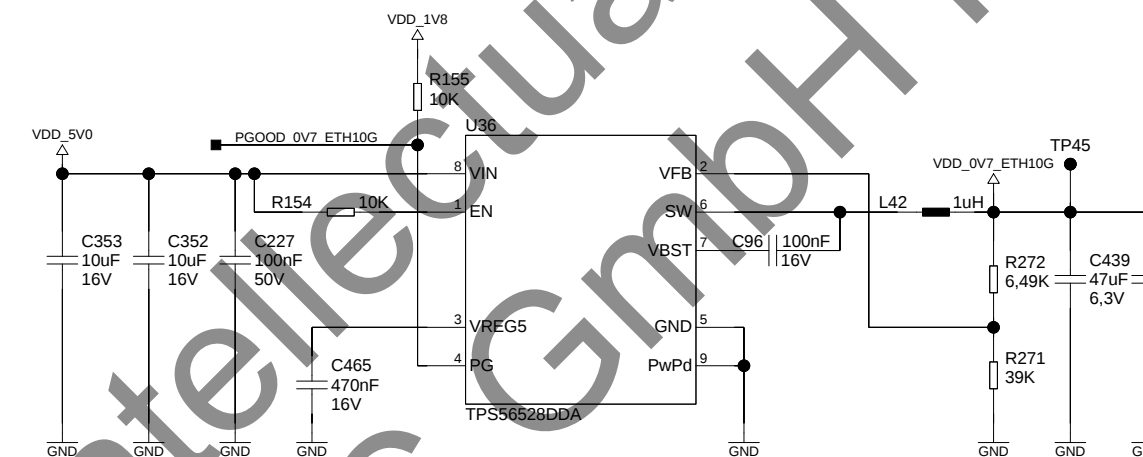
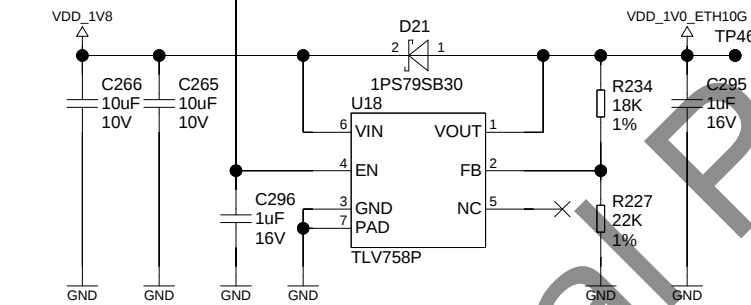
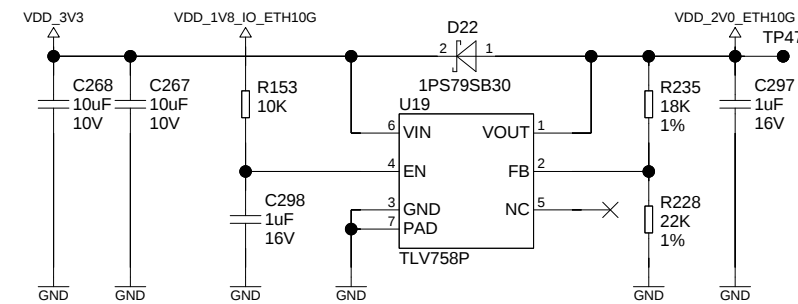
USB Type C



Gigabit ETH0

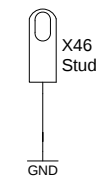
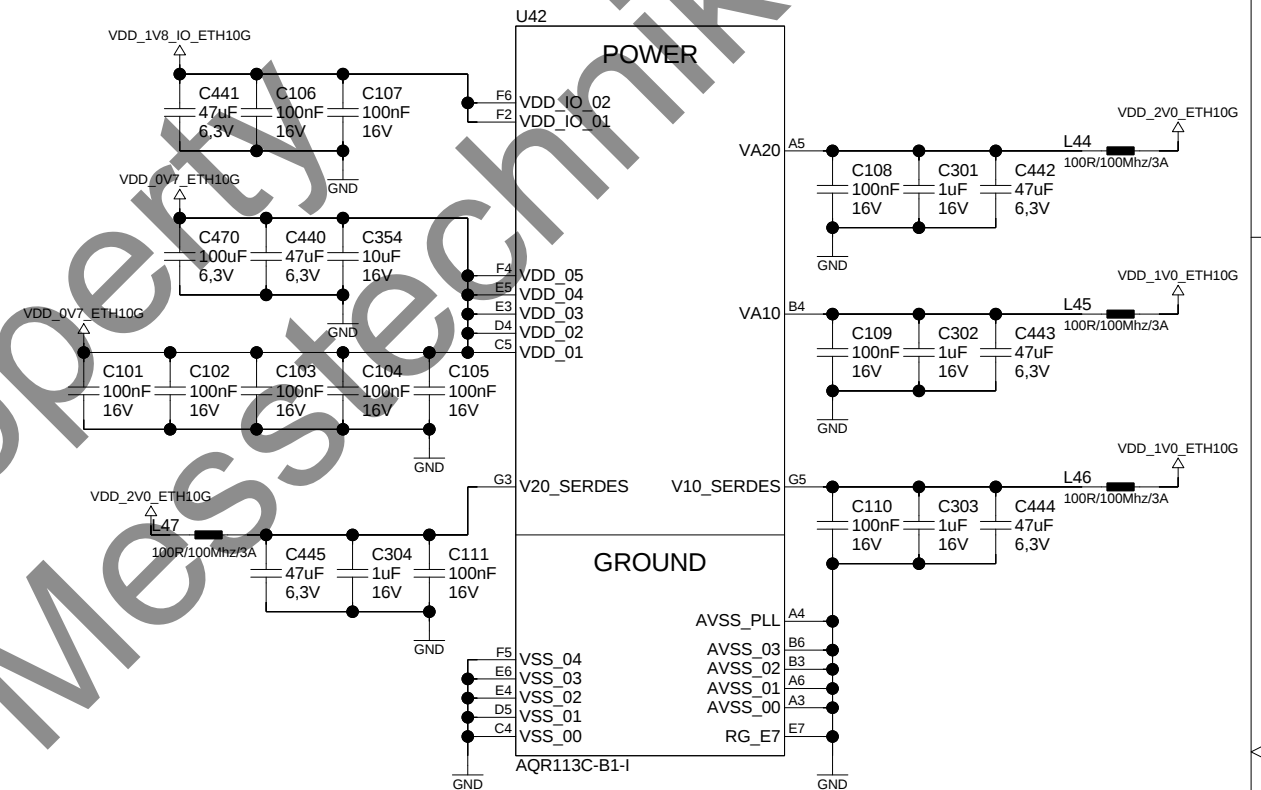


Power on sequence:
0V7 -> 1V0 -> IO -> 2V0



VDD 1V0 ETH10G threshold: 746 mV

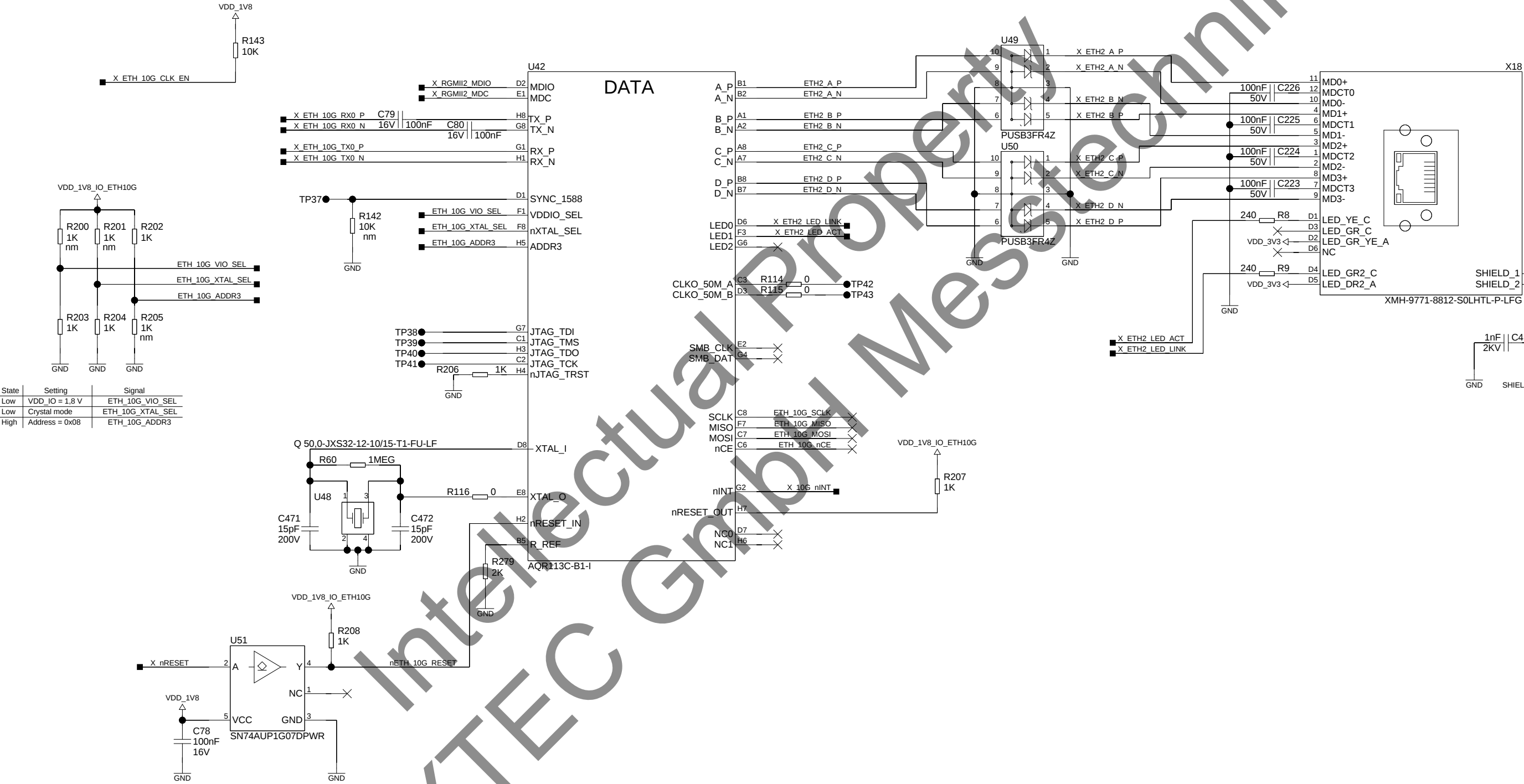
ETH No part of this presentation may be reproduced without written permission



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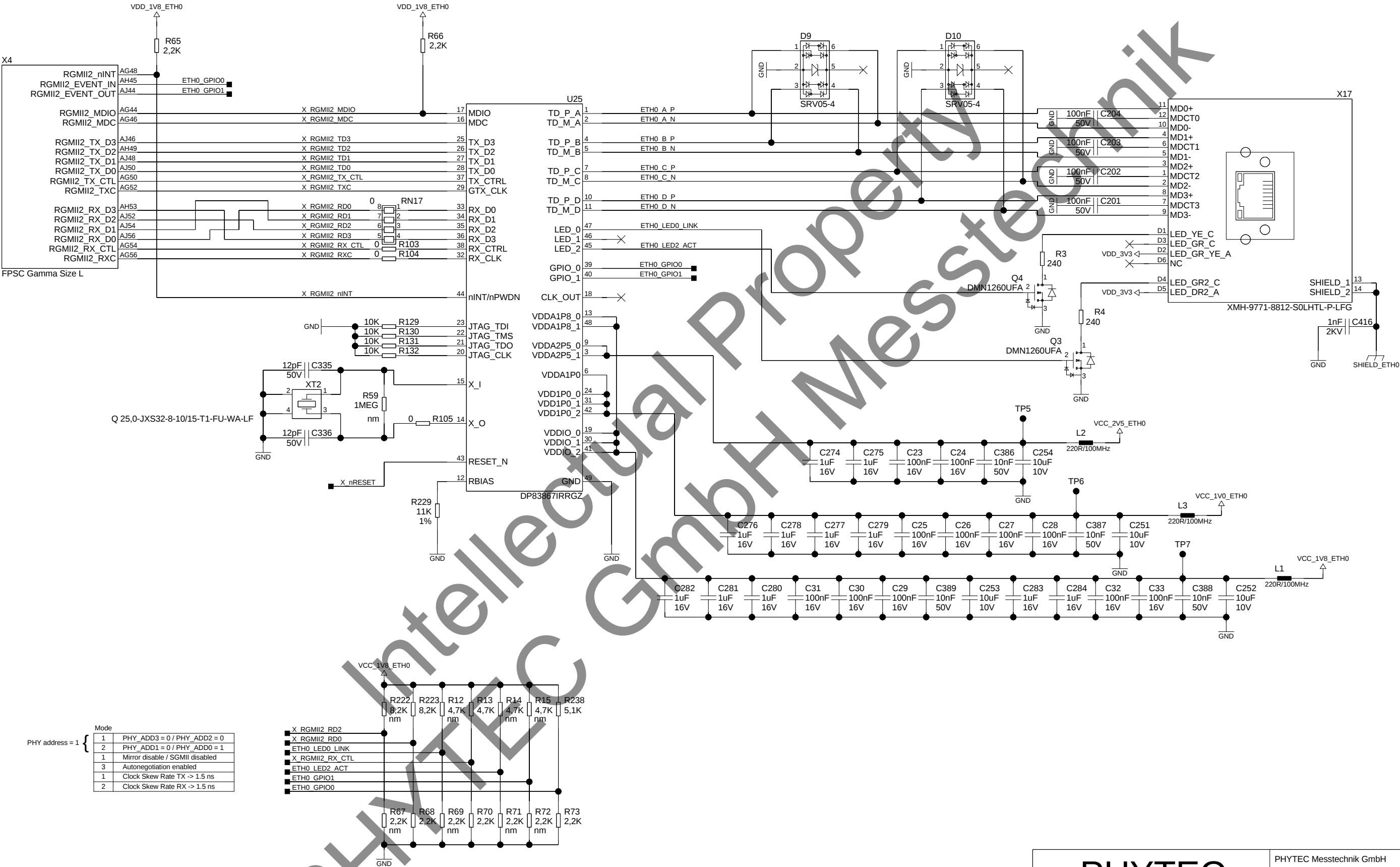
Ethernet 10G

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Ethernet0

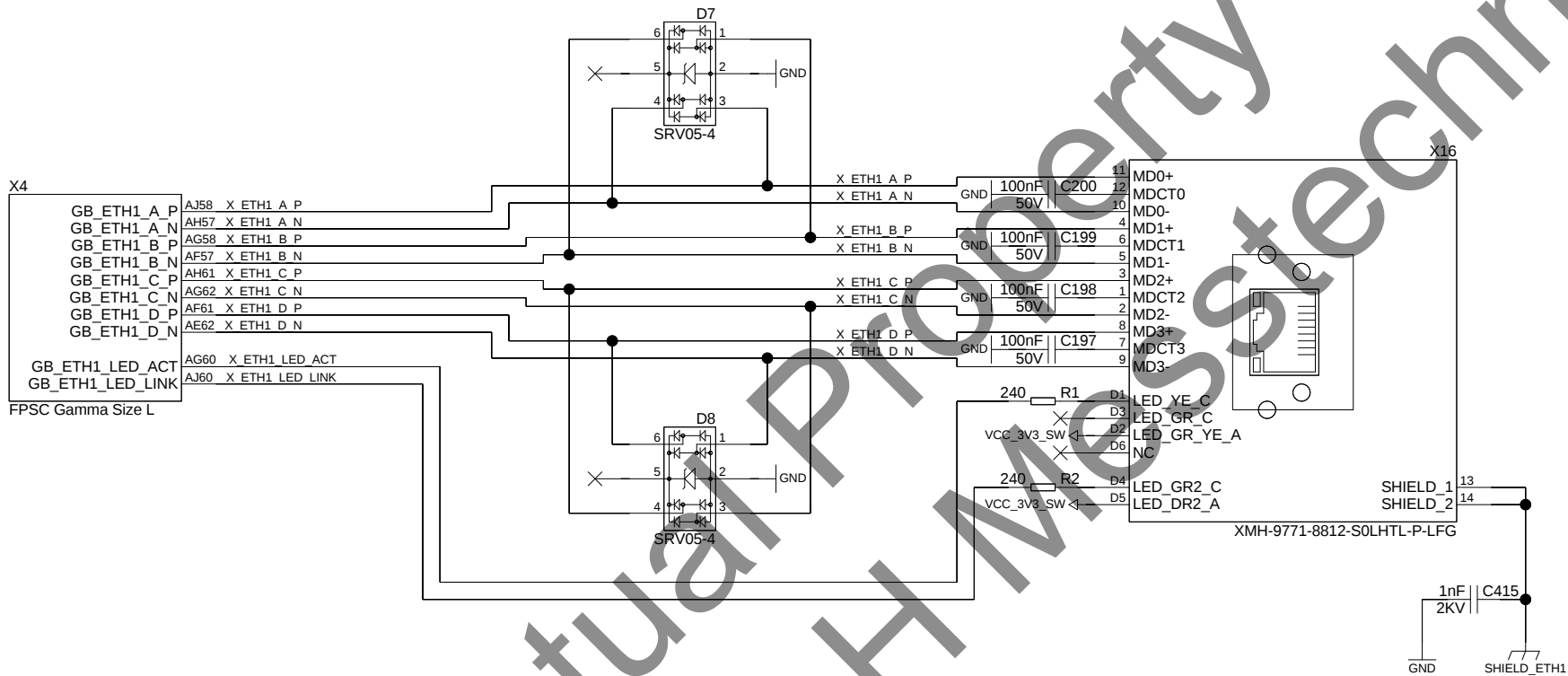
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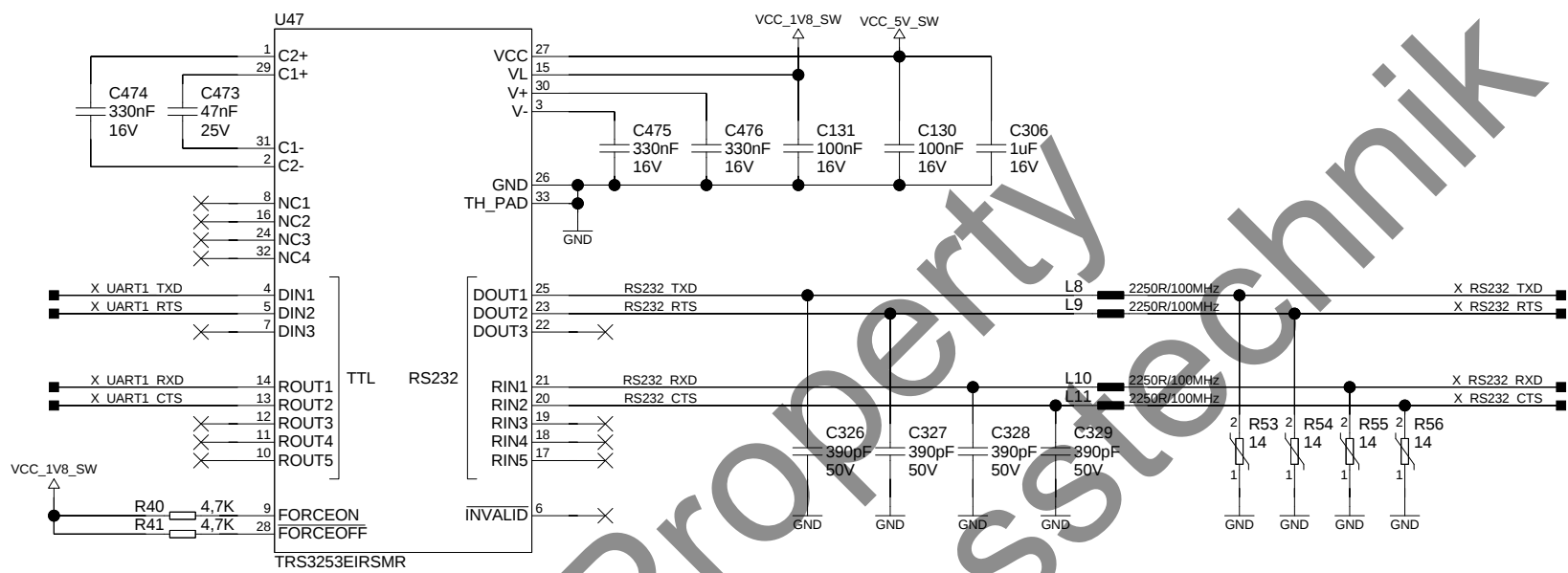
Ethernet1

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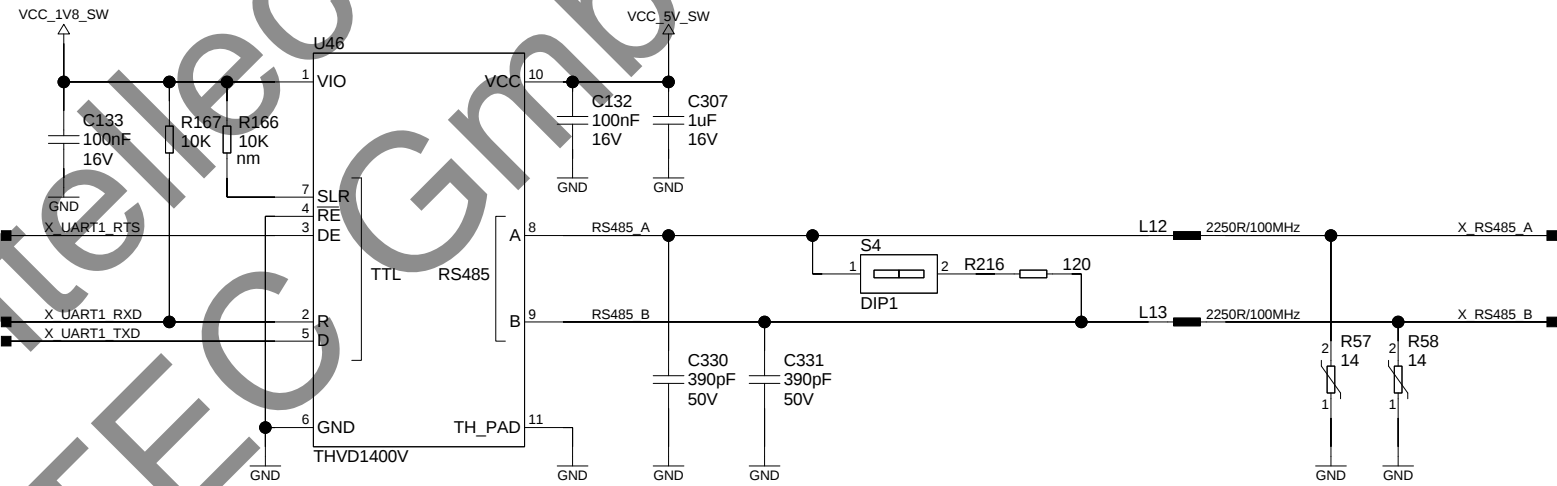


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RS 232



RS 485 - Half Duplex

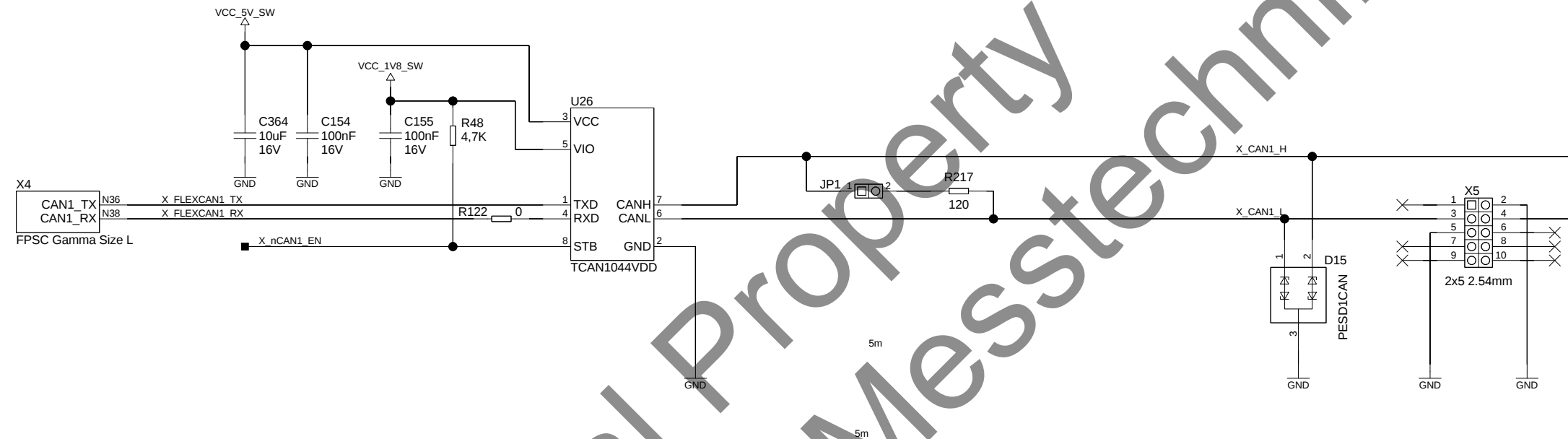


SLR high = slow speed (500 kbps)

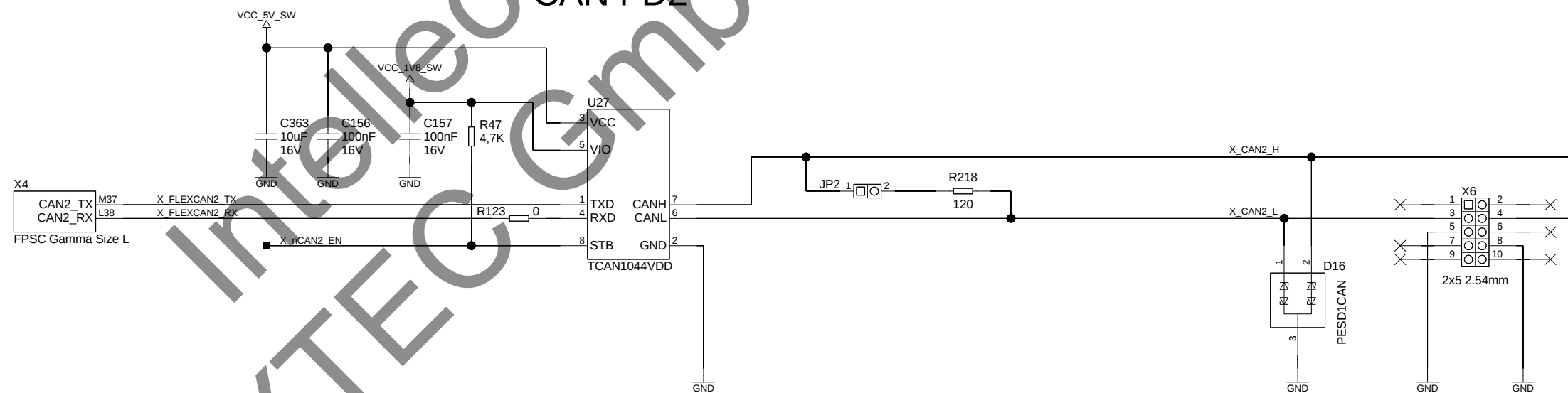
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CAN FD1/2

CAN FD1



CAN FD2



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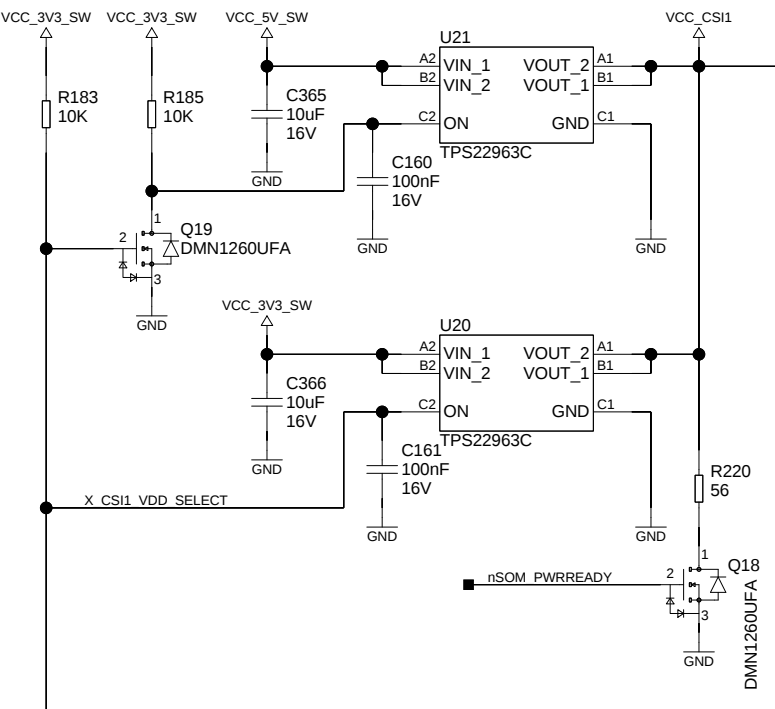
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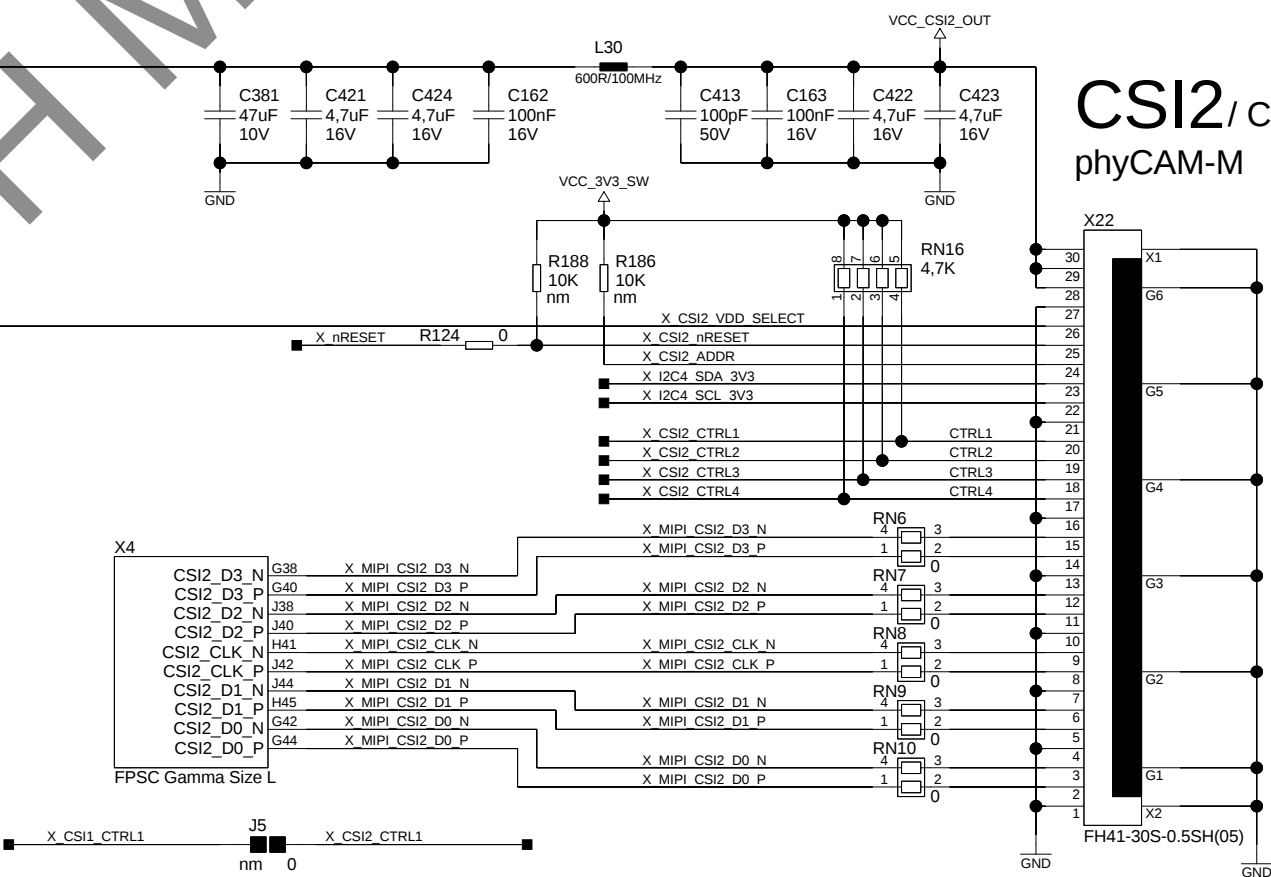
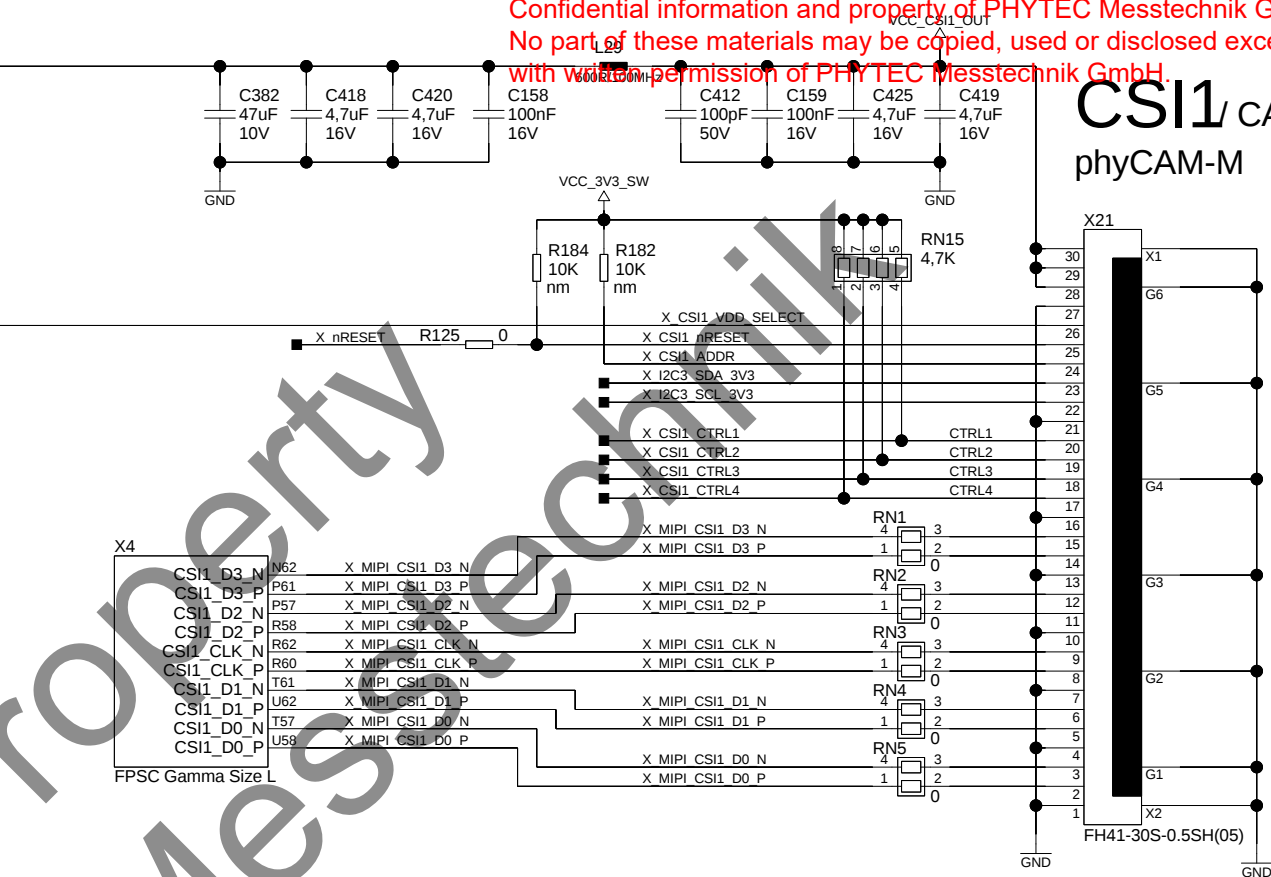
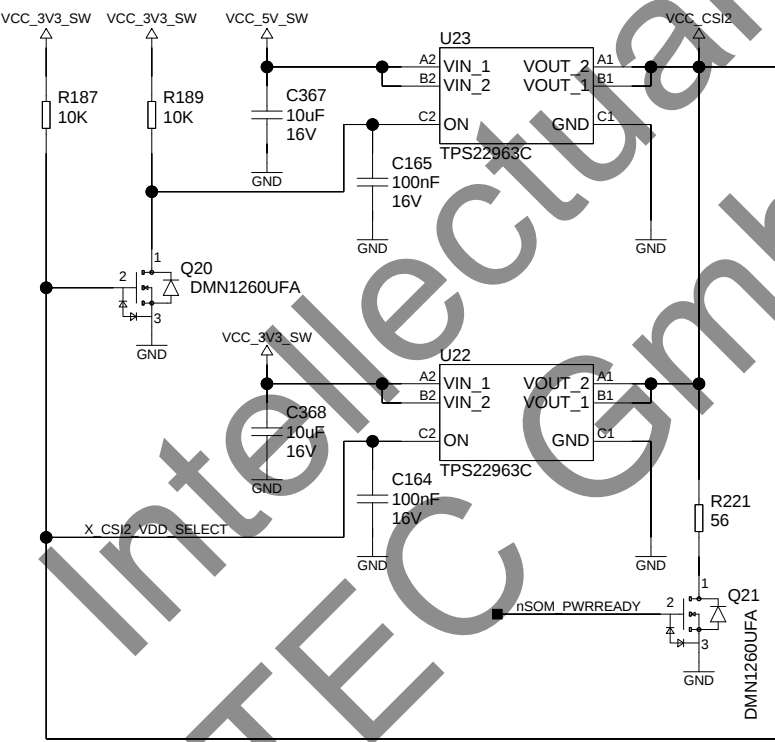
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phyCAM-M



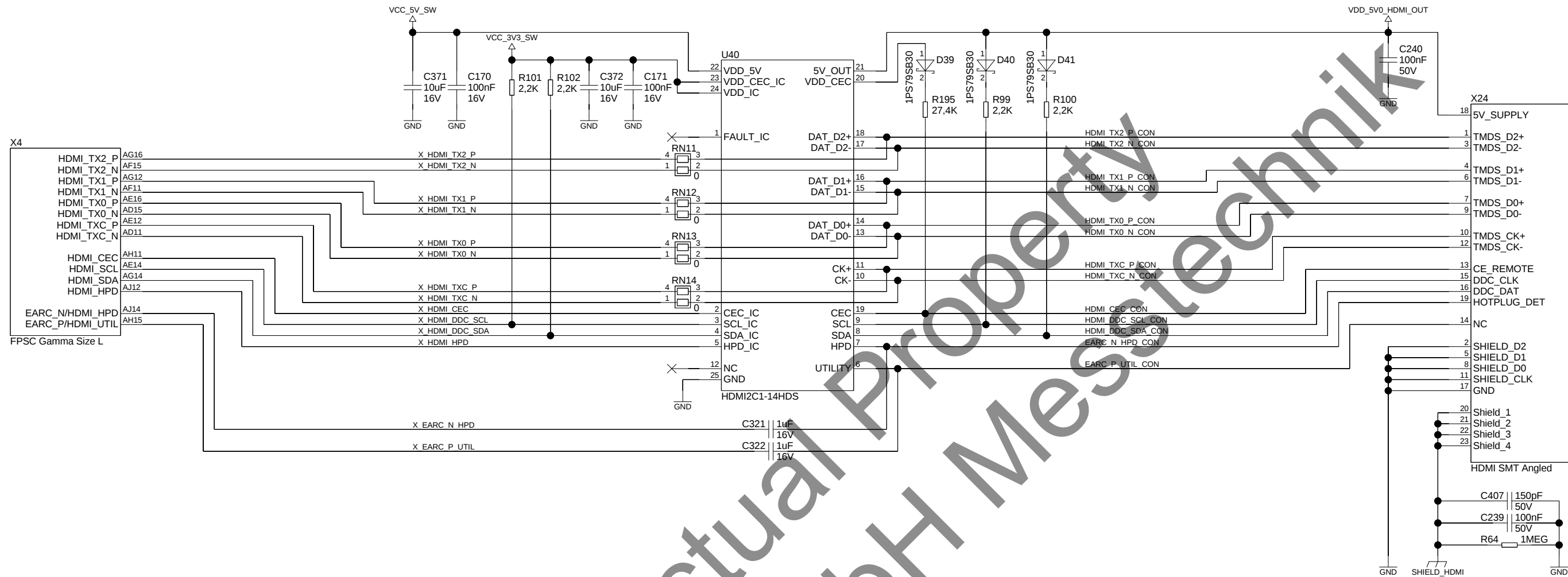
VDD_SELECT	VDD_CSI
0	5 V
1	3.3 V



Mount J37 for synchronized trigger of CSI1 und CSI2

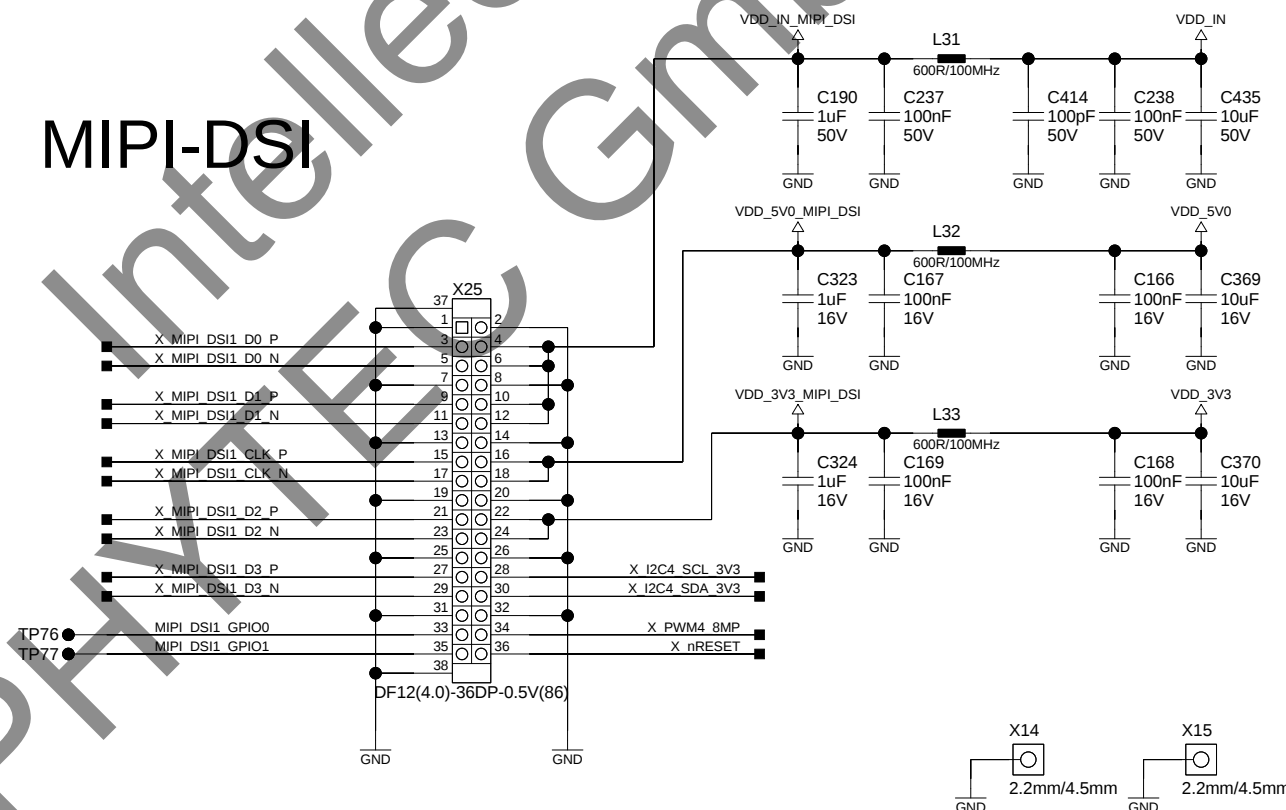
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HDMI



MIPI-DSI

X4			
DSI1_CLK_N	AN46	X MIPI DSI1 CLK N	
DSI1_CLK_P	AN48	X MIPI DSI1 CLK P	
DSI1_D0_N	AL48	X MIPI DSI1 D0 N	
DSI1_D0_P	AL50	X MIPI DSI1 D0 P	
DSI1_D1_N	AM49	X MIPI DSI1 D1 N	
DSI1_D1_P	AN50	X MIPI DSI1 D1 P	
DSI1_D2_N	AM44	X MIPI DSI1 D2 N	
DSI1_D2_P	AM45	X MIPI DSI1 D2 P	
DSI1_D3_N	AL44	X MIPI DSI1 D3 N	
DSI1_D3_P	AL46	X MIPI DSI1 D3 P	



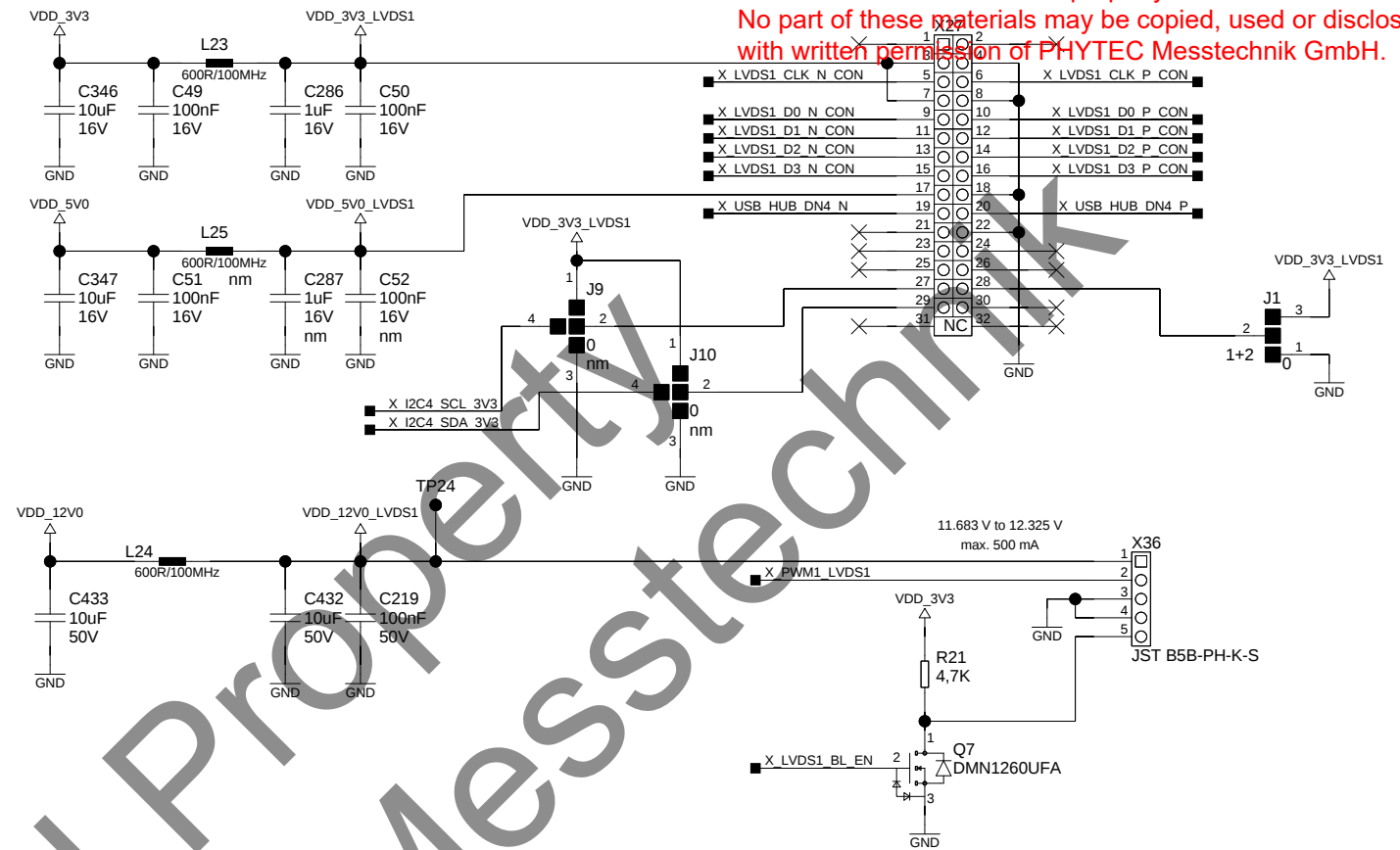
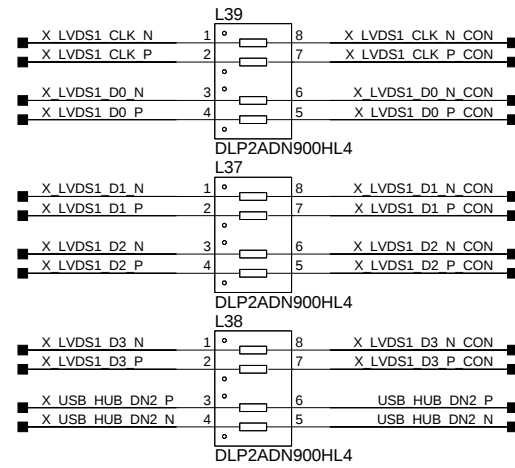
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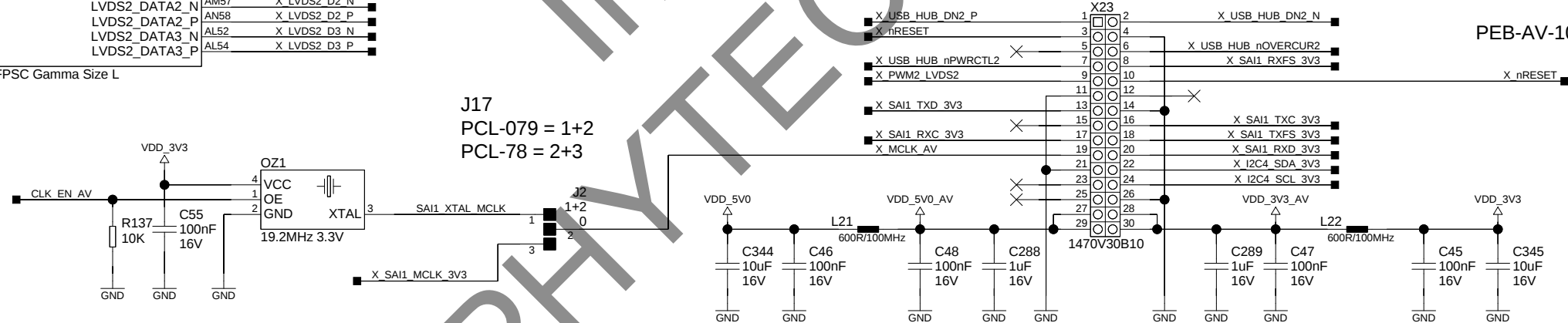
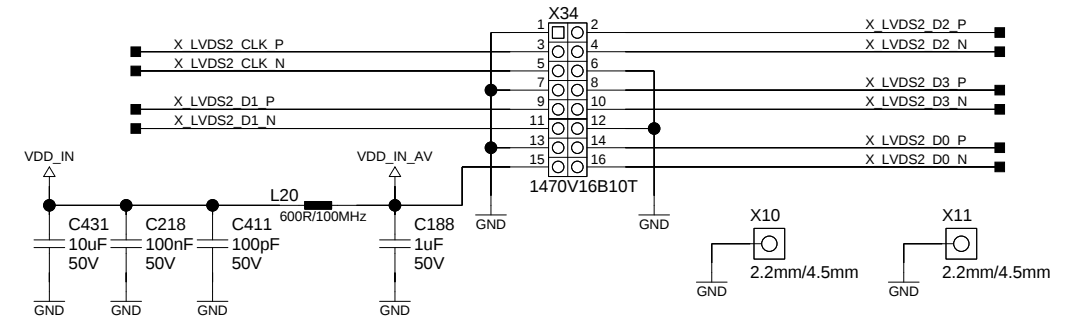
LVDS1_CLK_N	N52	X	LVDS1_CLK_N	■
LVDS1_CLK_P	N50	X	LVDS1_CLK_P	■
LVDS1_DATA0_N	L52	X	LVDS1_D0_N	■
LVDS1_DATA0_P	L50	X	LVDS1_D0_P	■
LVDS1_DATA1_N	L54	X	LVDS1_D1_N	■
LVDS1_DATA1_P	M53	X	LVDS1_D1_P	■
LVDS1_DATA2_N	N56	X	LVDS1_D2_N	■
LVDS1_DATA2_P	N54	X	LVDS1_D2_P	■
LVDS1_DATA3_N	M57	X	LVDS1_D3_N	■
LVDS1_DATA3_P	L56	X	LVDS1_D3_P	■

SC Gamma Size L



X4			
	LVDS2_CLK_N	AN54	X LVDS2_CLK_N
	LVDS2_CLK_P	AN56	X LVDS2_CLK_P
	LVDS2_DATA0_N	AN60	X LVDS2_D0_N
	LVDS2_DATA0_P	AM61	X LVDS2_D0_P
	LVDS2_DATA1_N	AL56	X LVDS2_D1_N
	LVDS2_DATA1_P	AL58	X LVDS2_D1_P
	LVDS2_DATA2_N	AM57	X LVDS2_D2_N
	LVDS2_DATA2_P	AN58	X LVDS2_D2_P
	LVDS2_DATA3_N	AL52	X LVDS2_D3_N
	LVDS2_DATA3_P	AL54	X LVDS2_D3_P

FPSC Gamma Size L



PEB-AV-10 codec reset

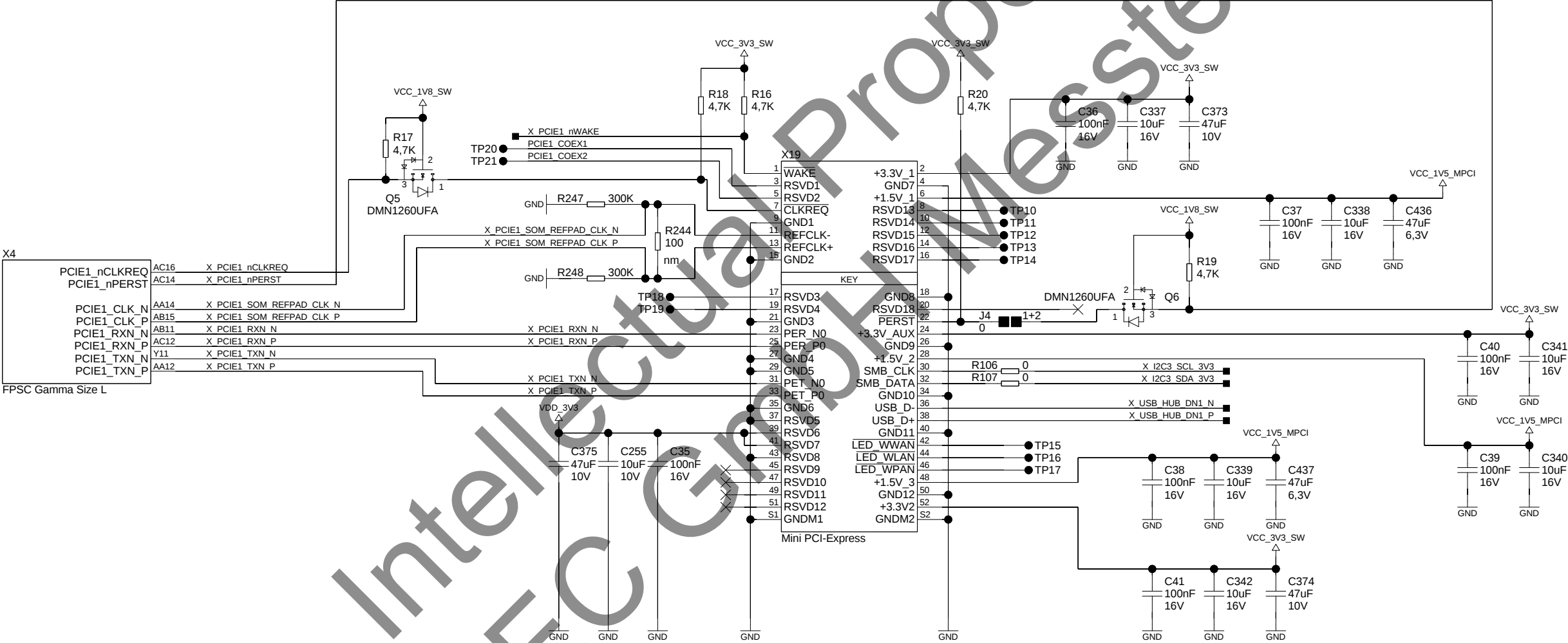
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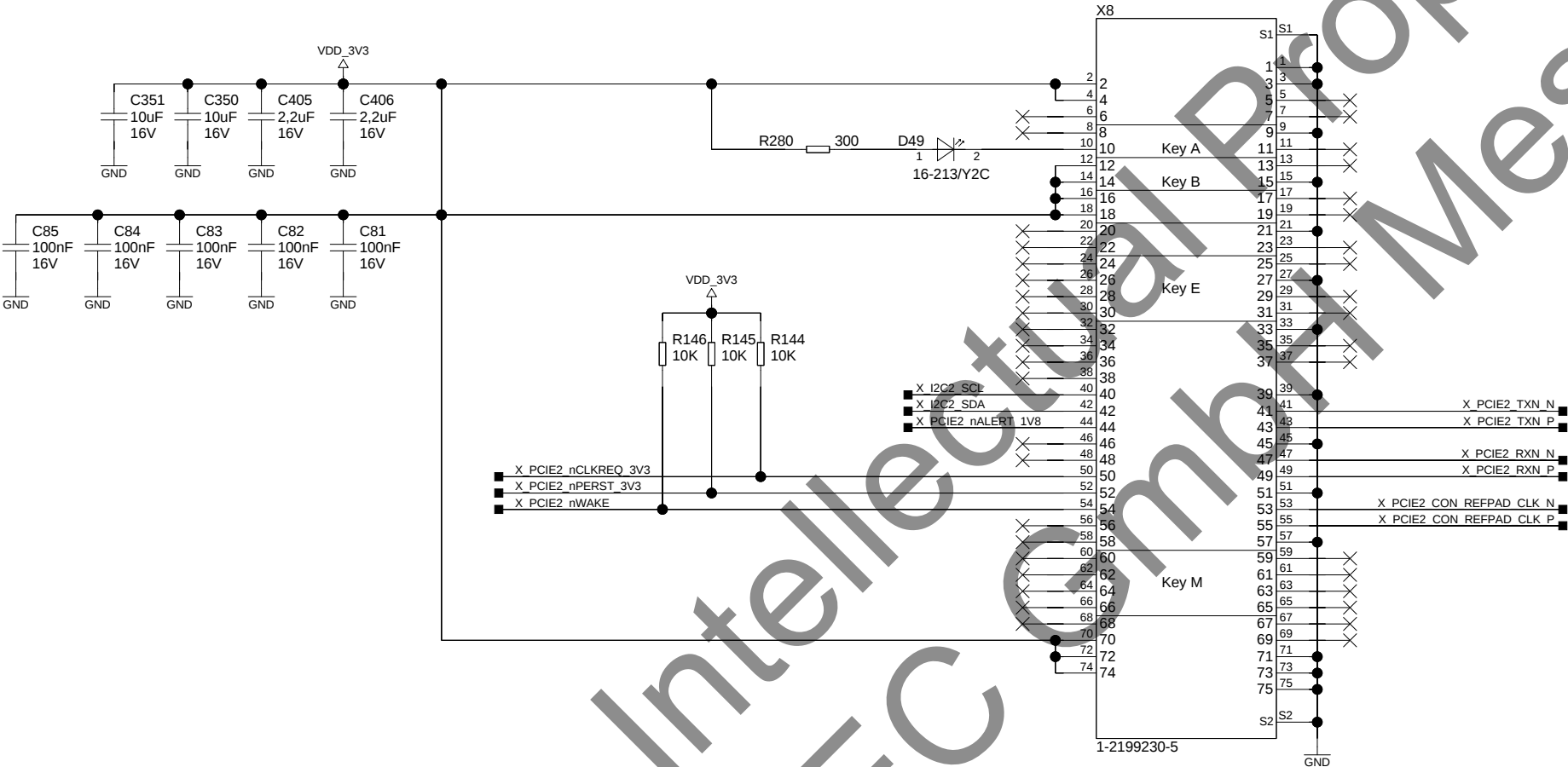
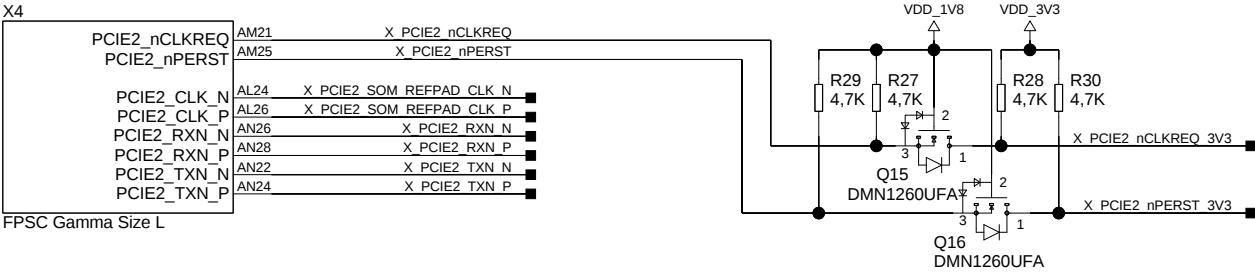
Mini PCIe

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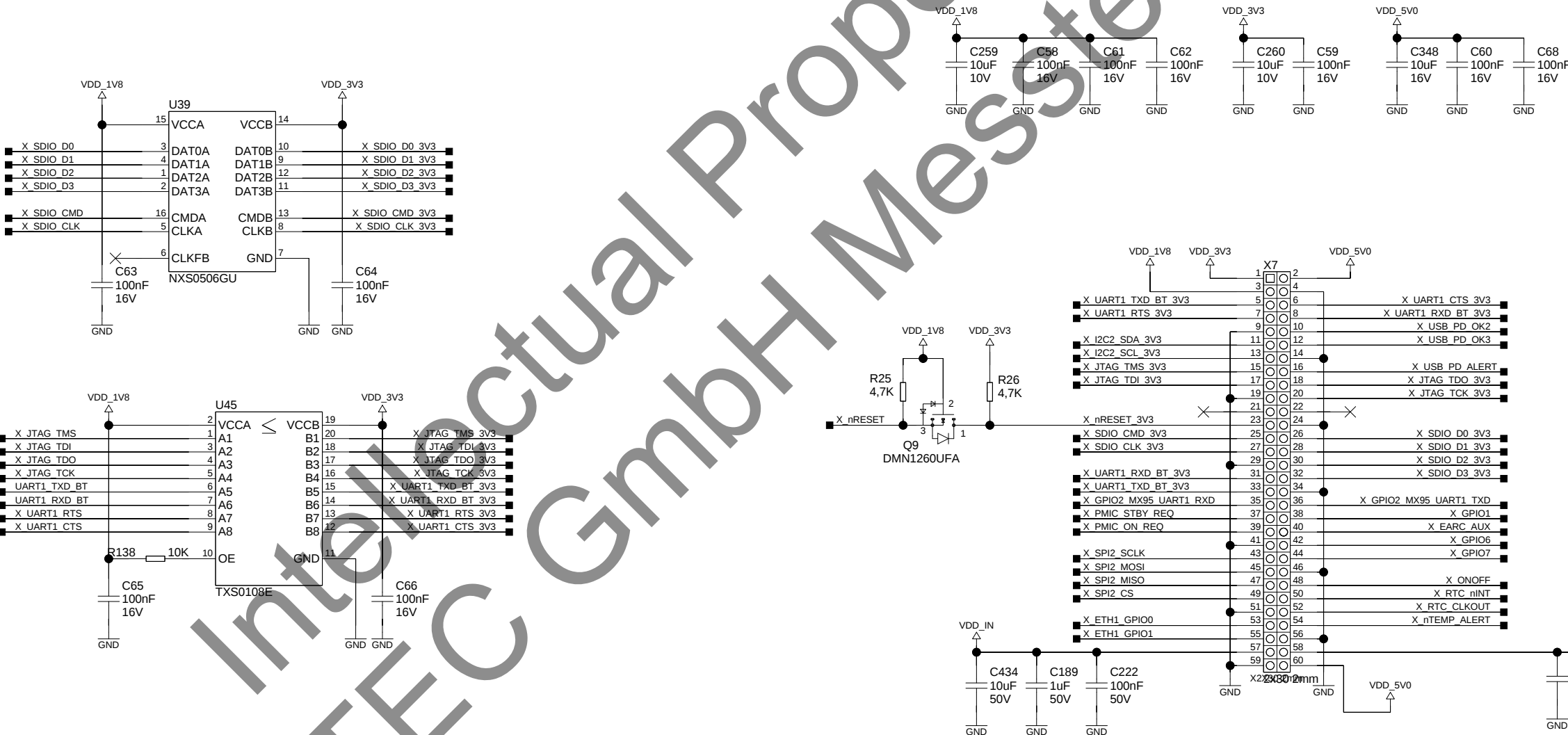
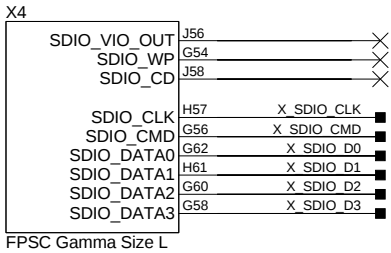
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M.2 Key M



Expansion Connector

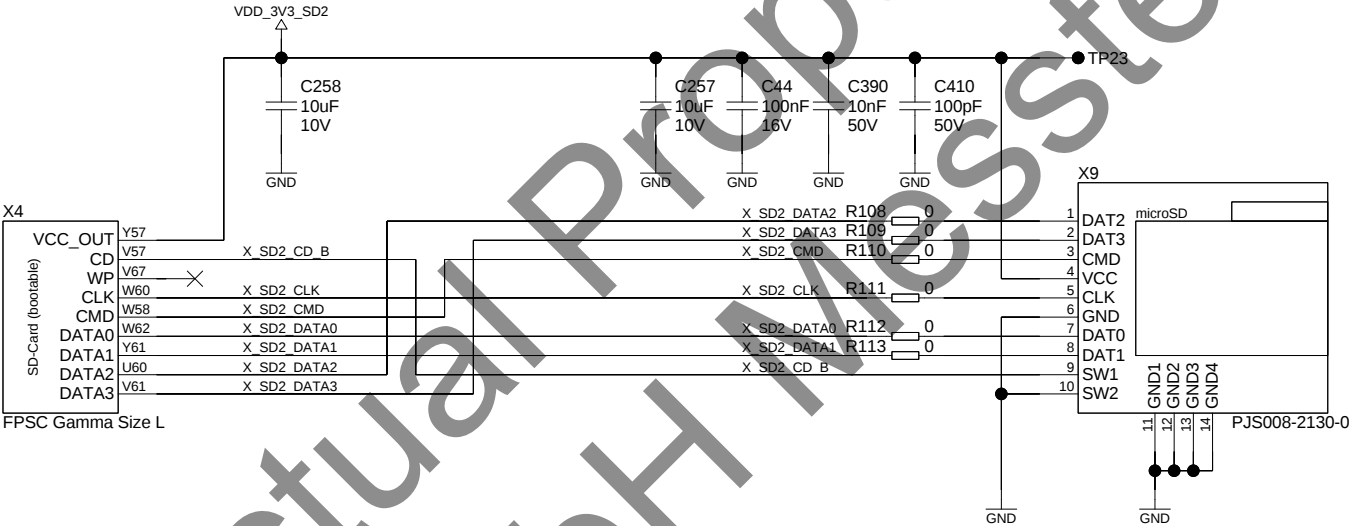
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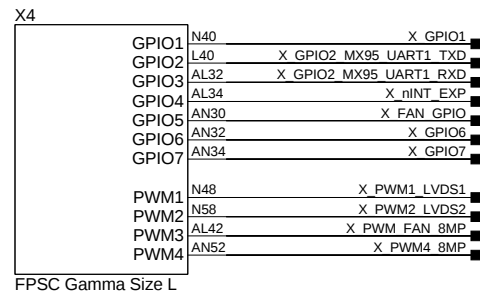
μSD-Card

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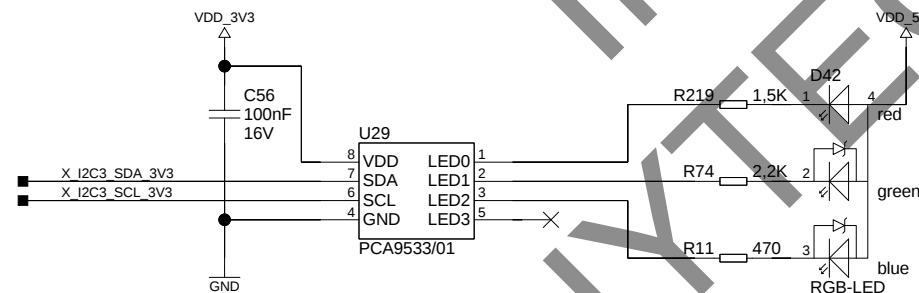
GPIO/PWM



FPSC Pin BD6 is PCL-078 exclusive

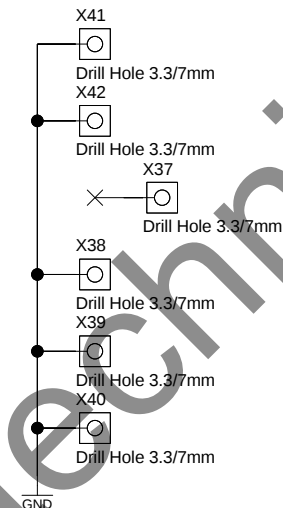
FPSC Pin BD16 is PCL-078 exclusive
FPSC Pin BF16 is PCL-078 exclusive

RGB LED

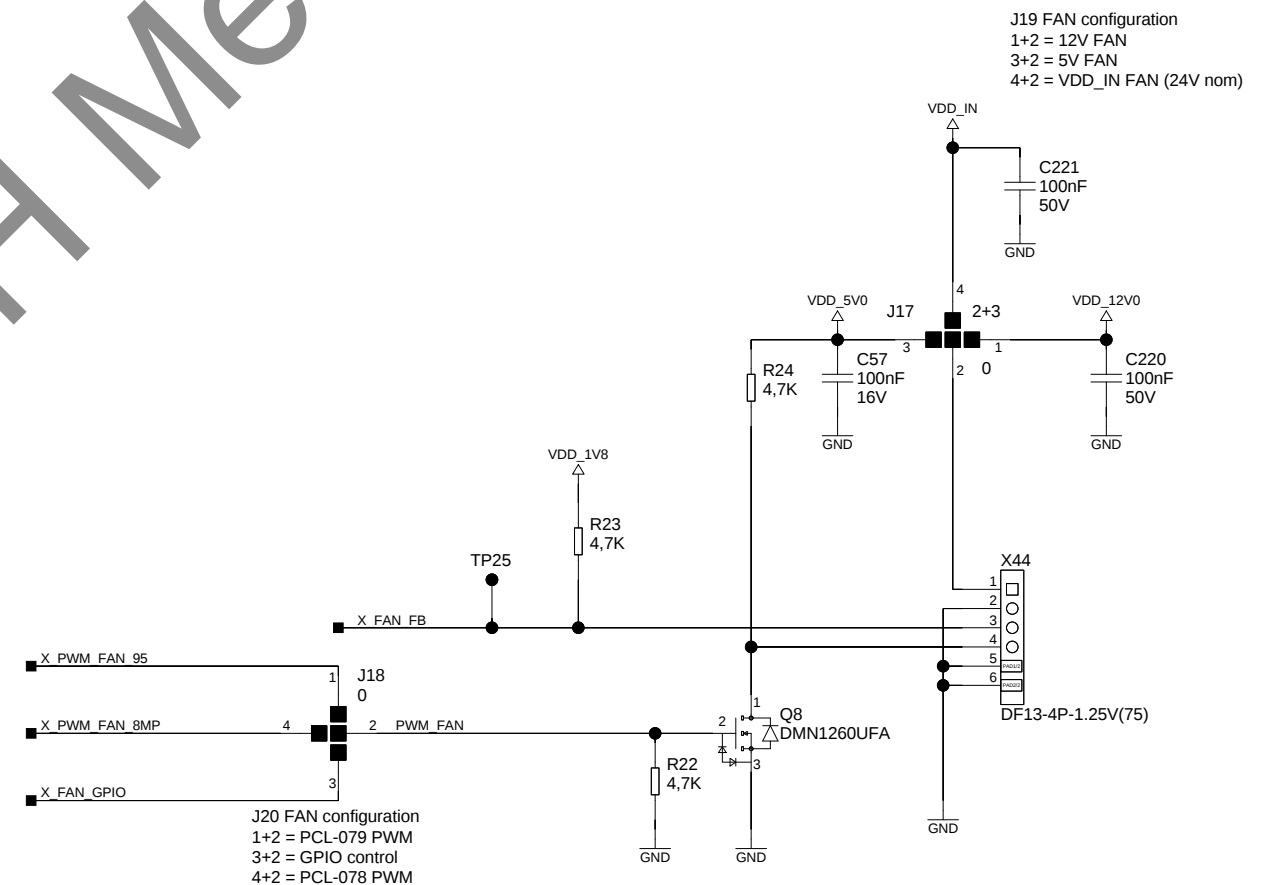


I2C Addr: 0x62

Mounting holes



Fan Connector



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Department : F&E
Author: Schwaer

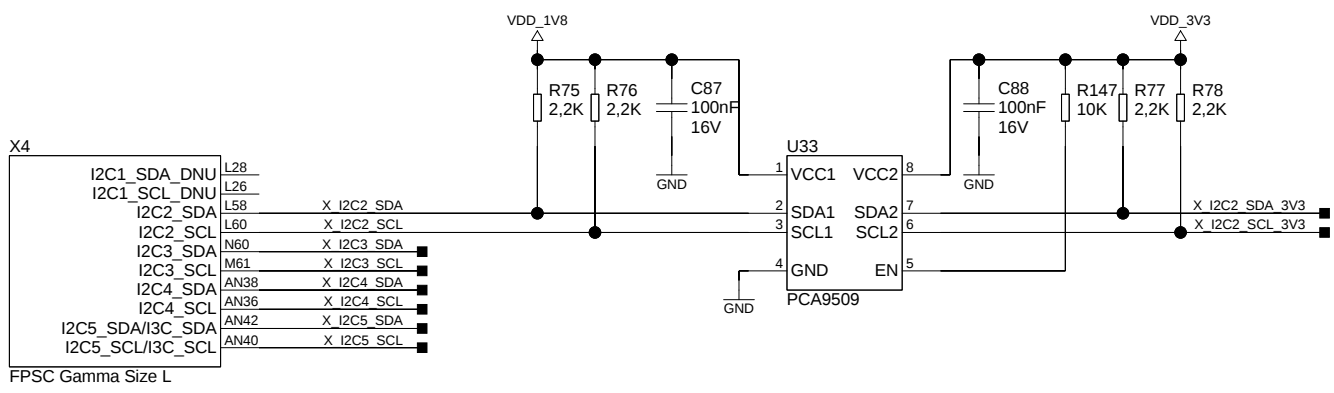
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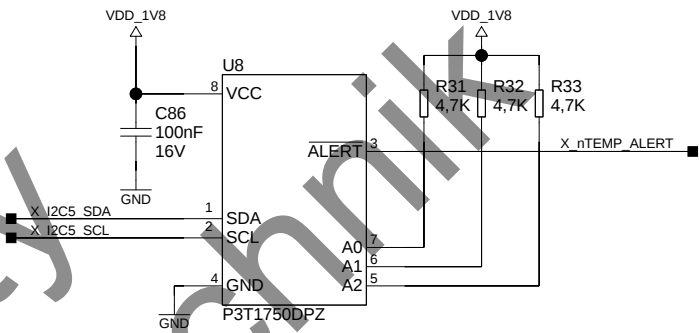
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I2C / I3C

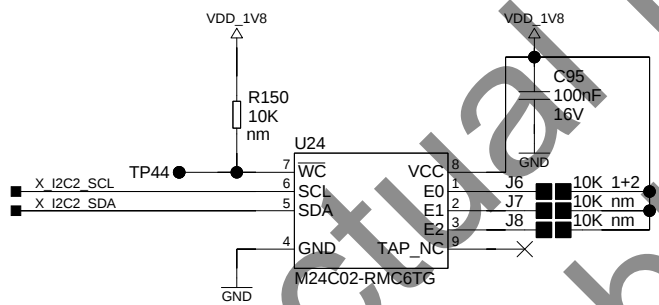


Temperature sensor



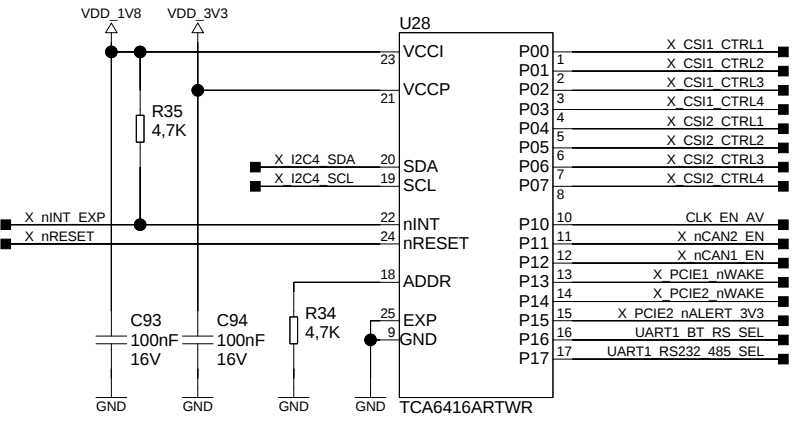
I2C5 I2C addr. 0x4F
I2C5 provisional I3C ID 0x9E

EEPROM



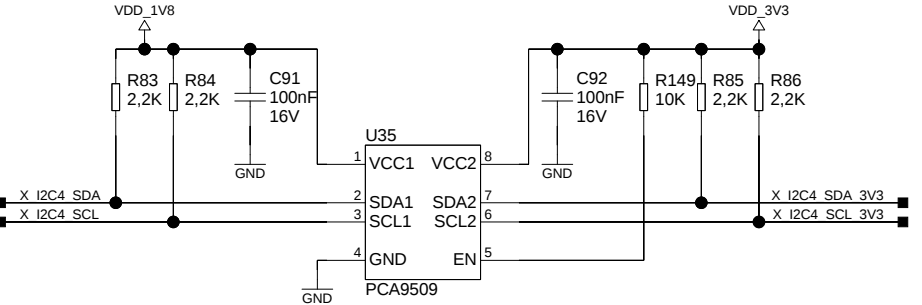
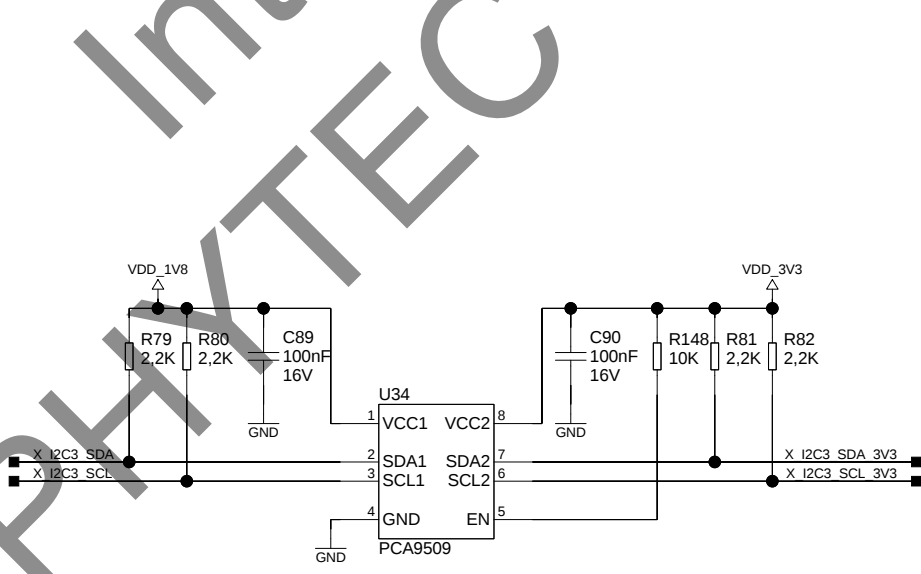
I2C2 addr. 0x51

I2C GPIO expander



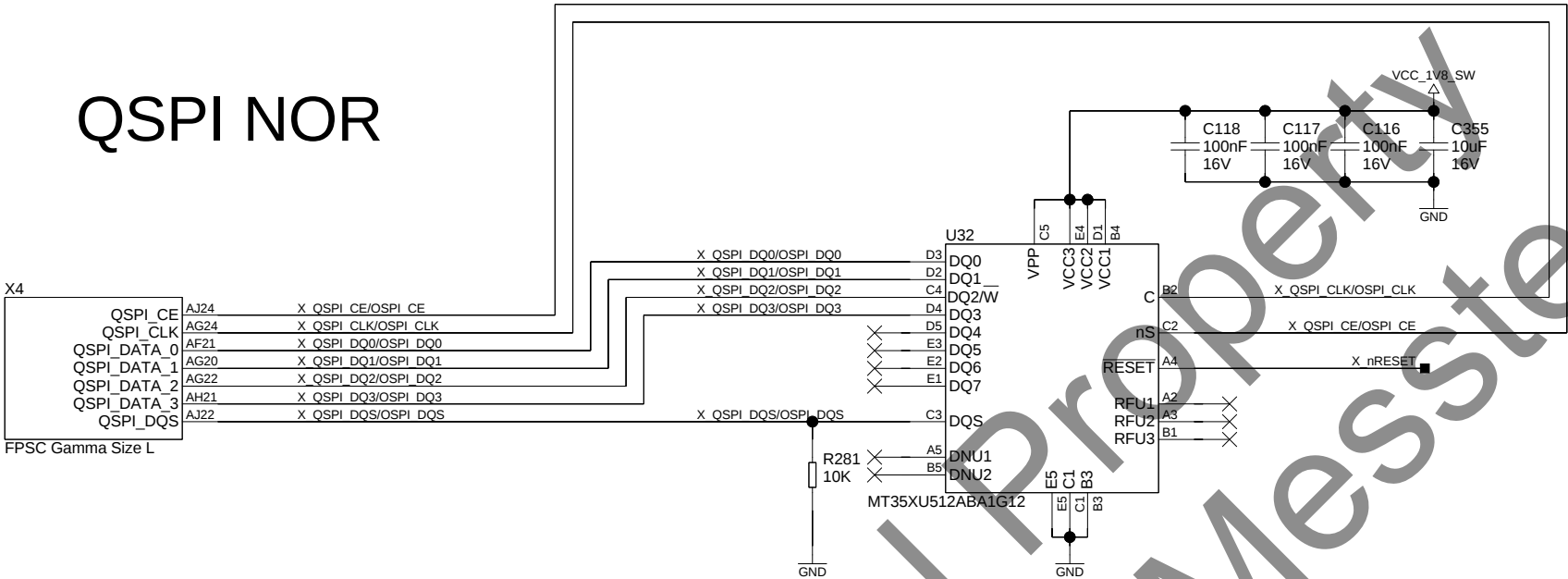
I2C4 addr. 0x20

I2C level translation



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QSPI NOR



1

2

3

4

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A

A

B

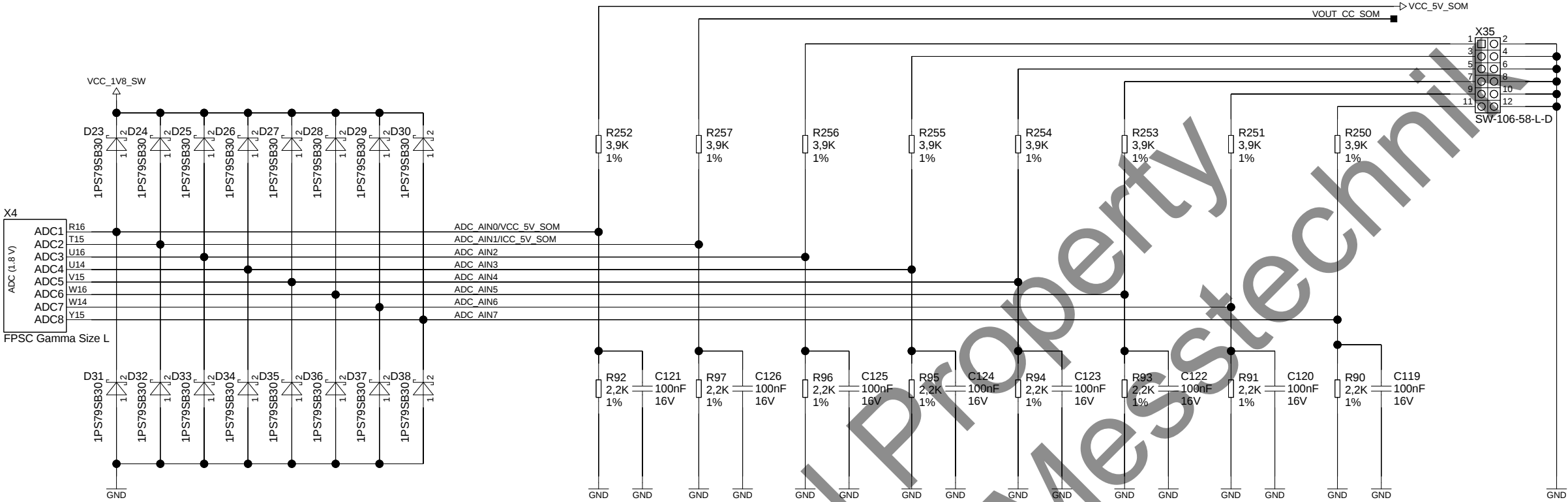
B

C

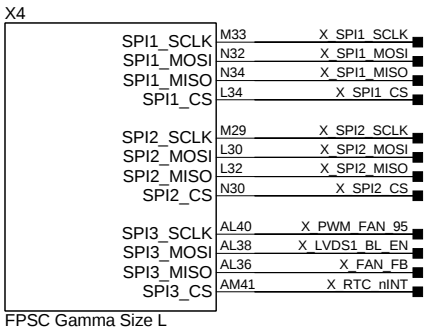
C

D

D



SPI



PHYTEC

PHYTEC Messtechnik GmbH
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Project:
FPSC Featureset 24A.0

Department : F&E
Author: Schwaer

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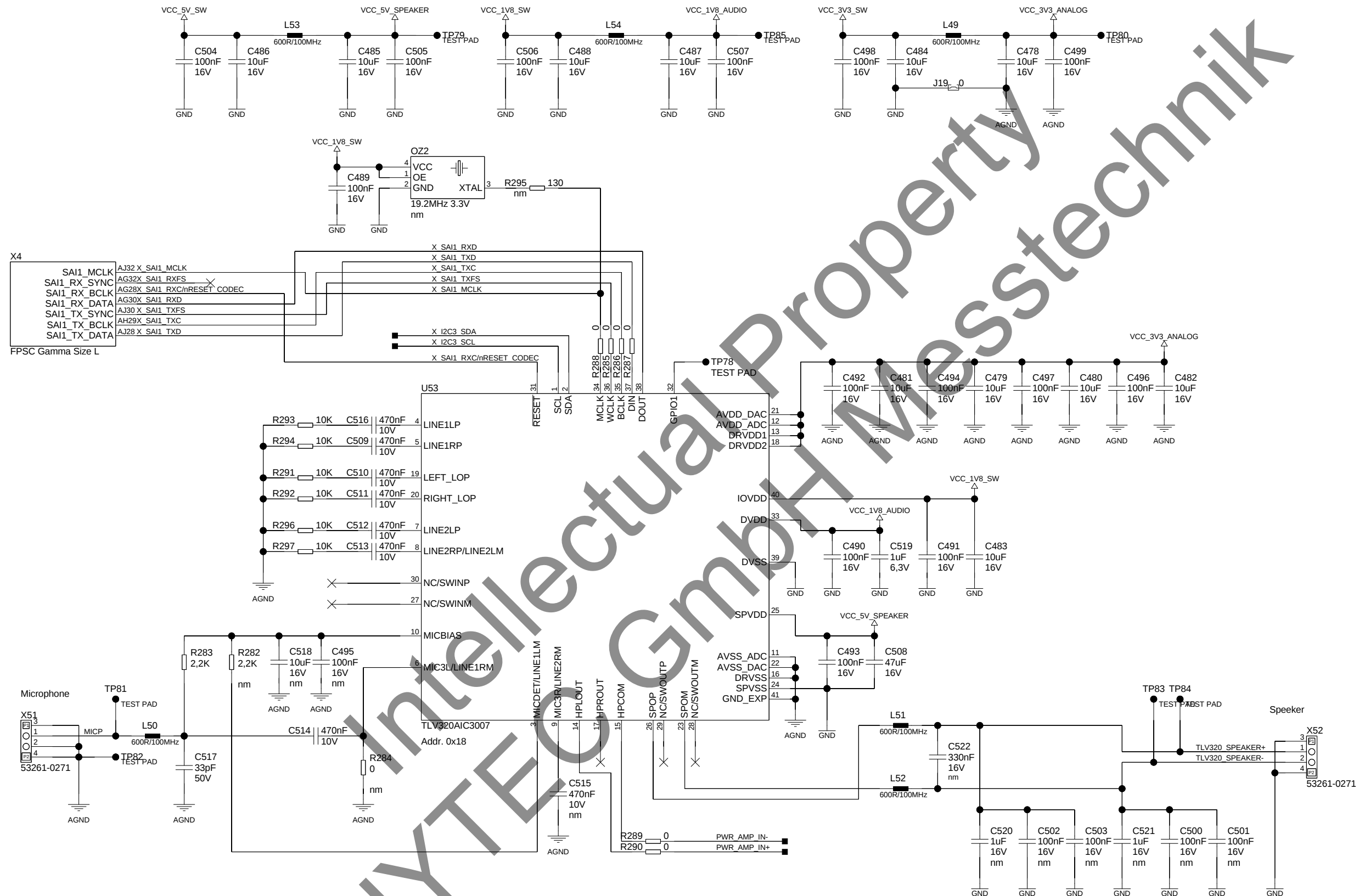
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Audio Codec

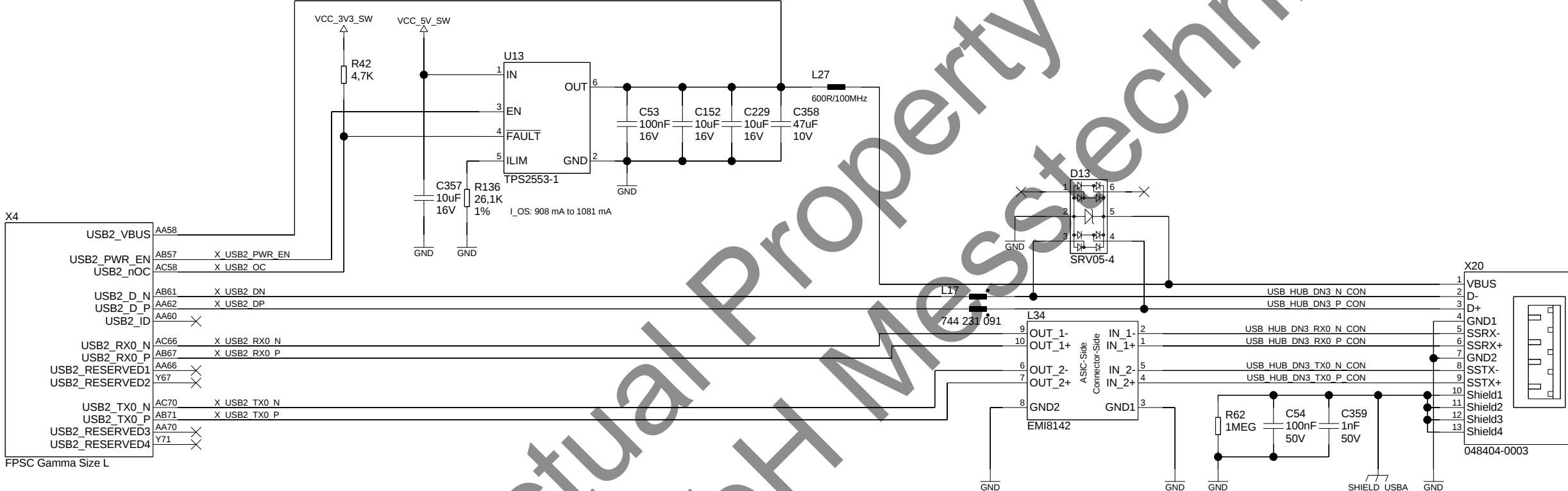
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USB Type A 3.0

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