

conga-TEVA2

COM.0 Type 6 Rev 3.0 Evaluation Baseboard

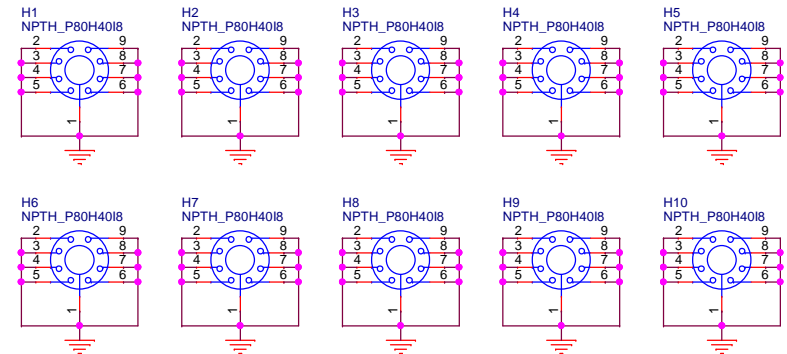
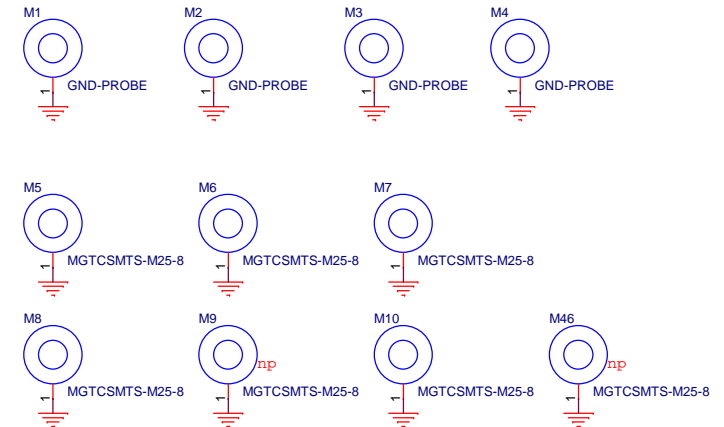
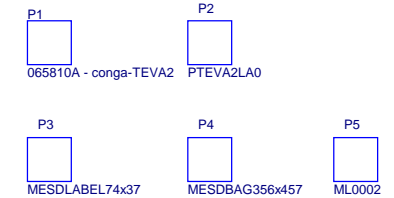
Rev. A.2

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Variants

Base

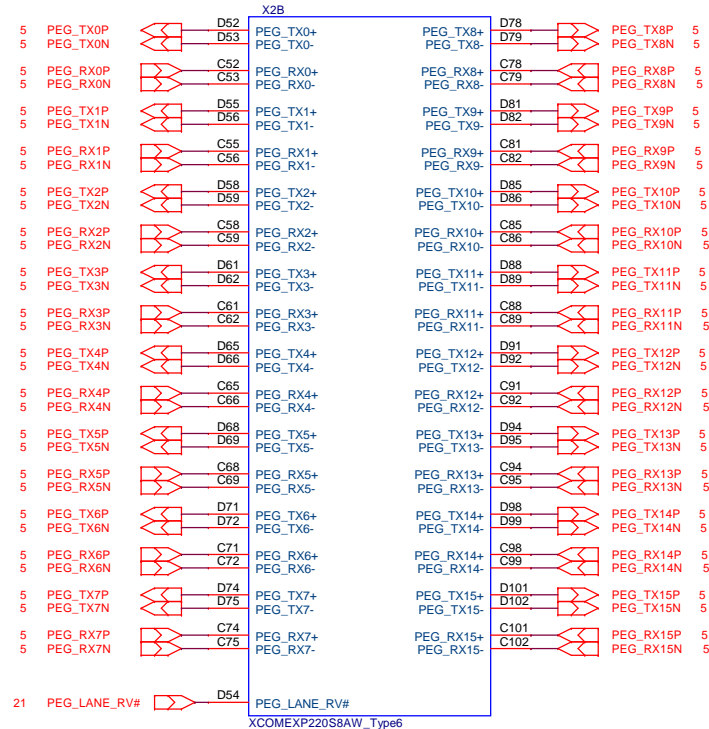


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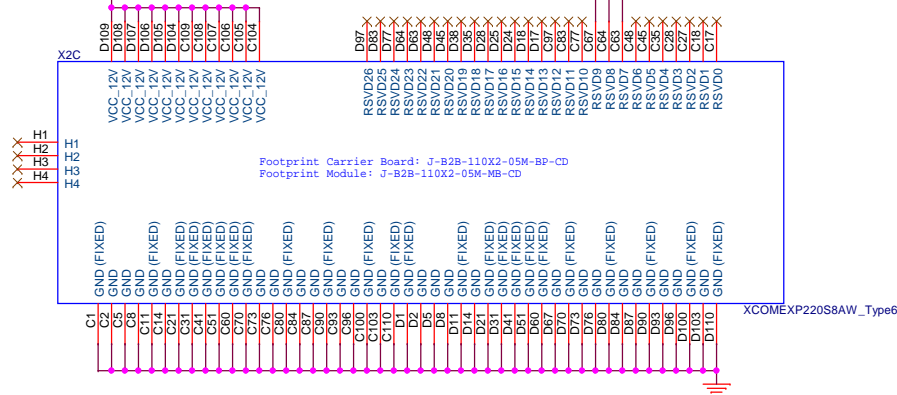


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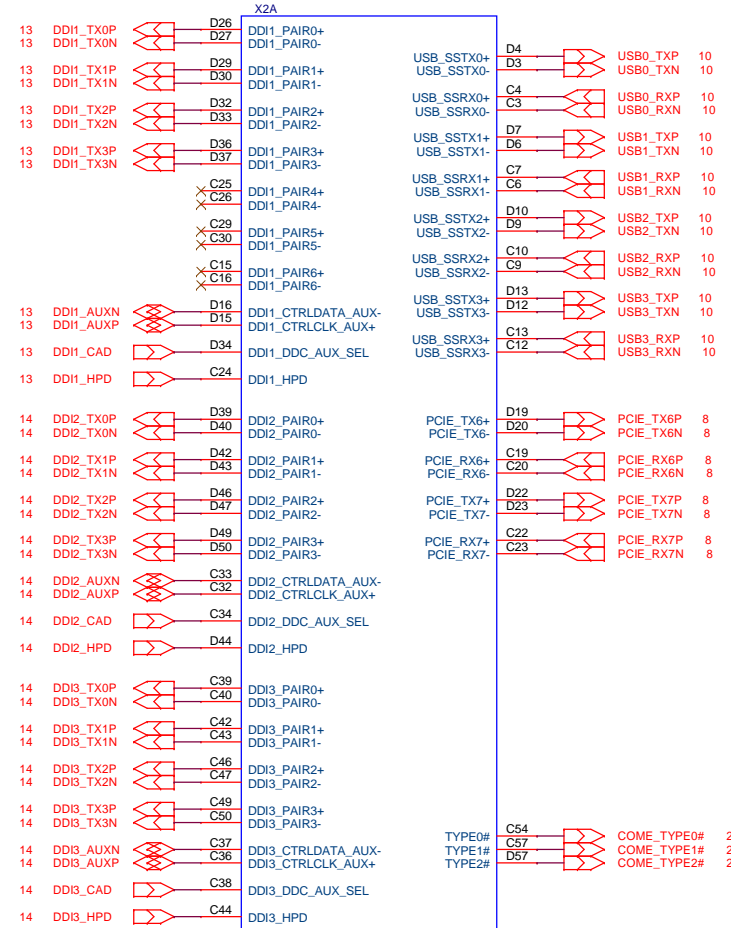
XCOMEXP220S8AW_Type6

+VIN6-21_COME




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Footprint Module: J-B2B-110X2-05M-MB-CD

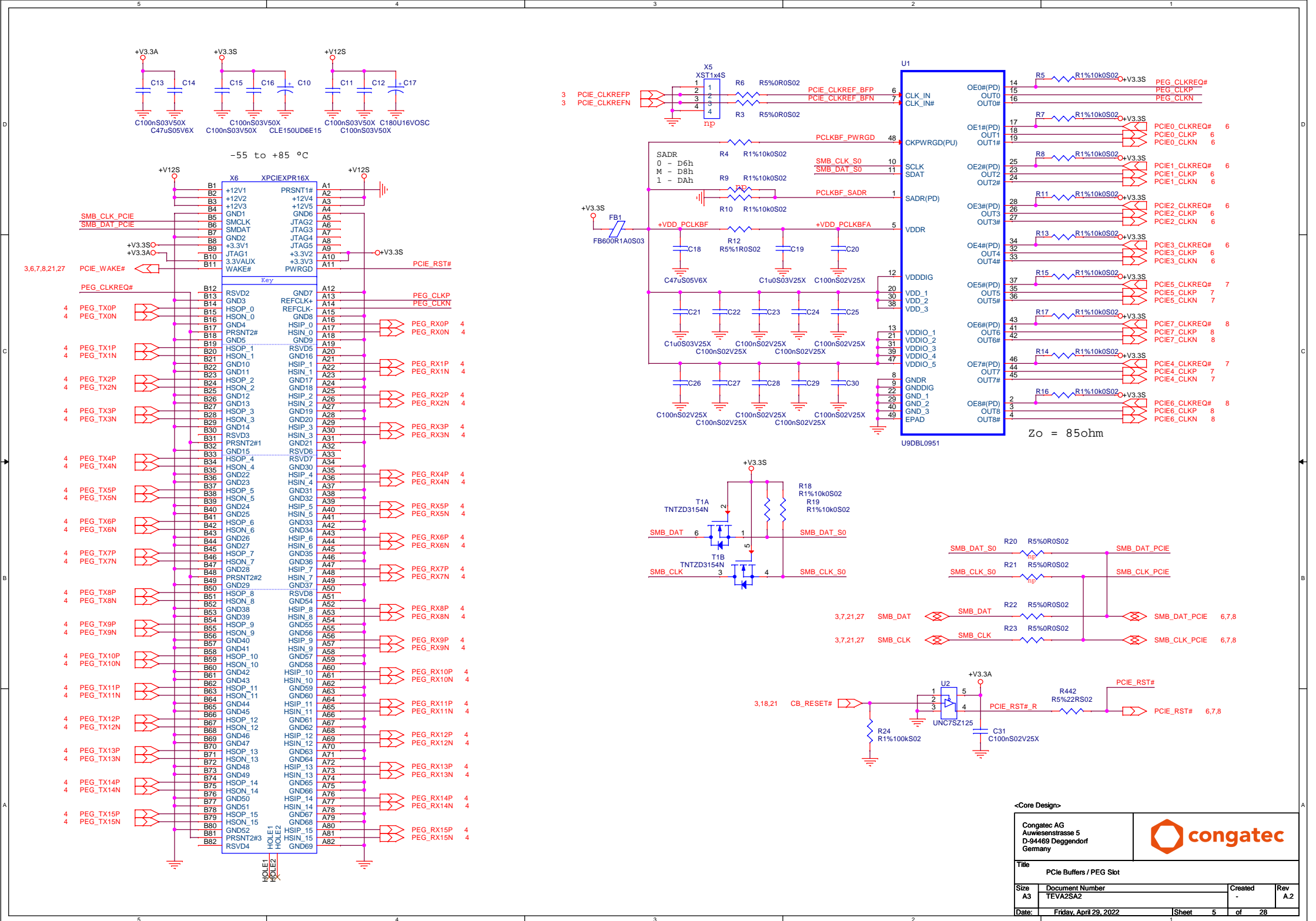
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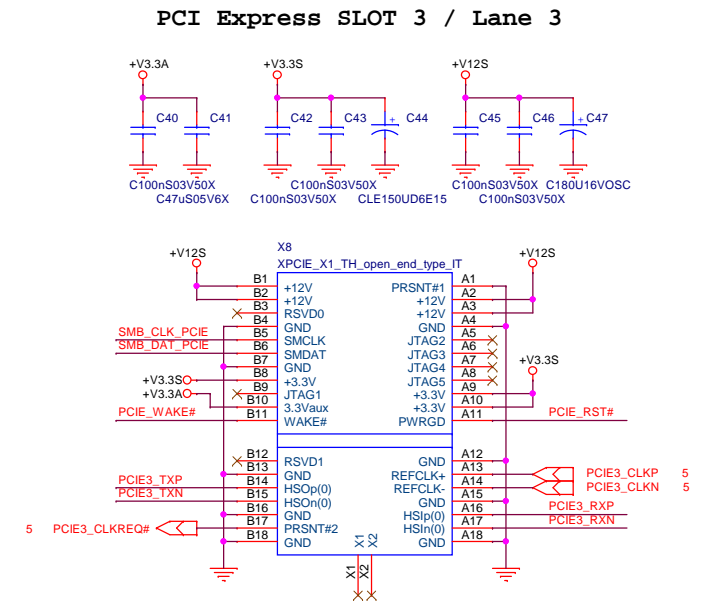
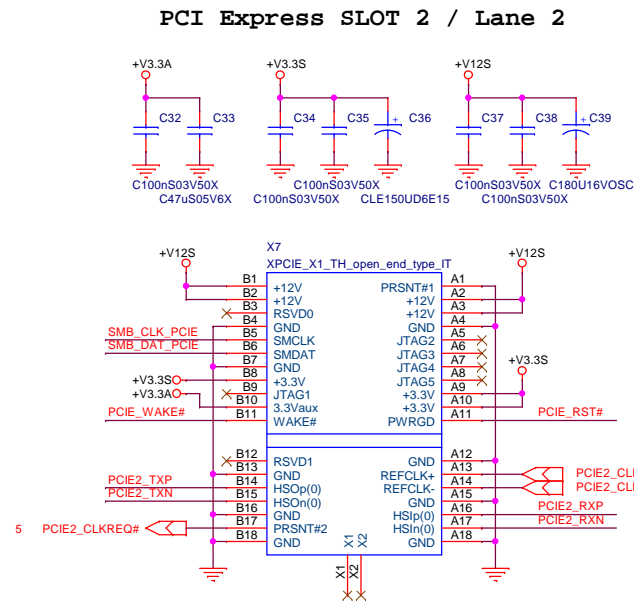
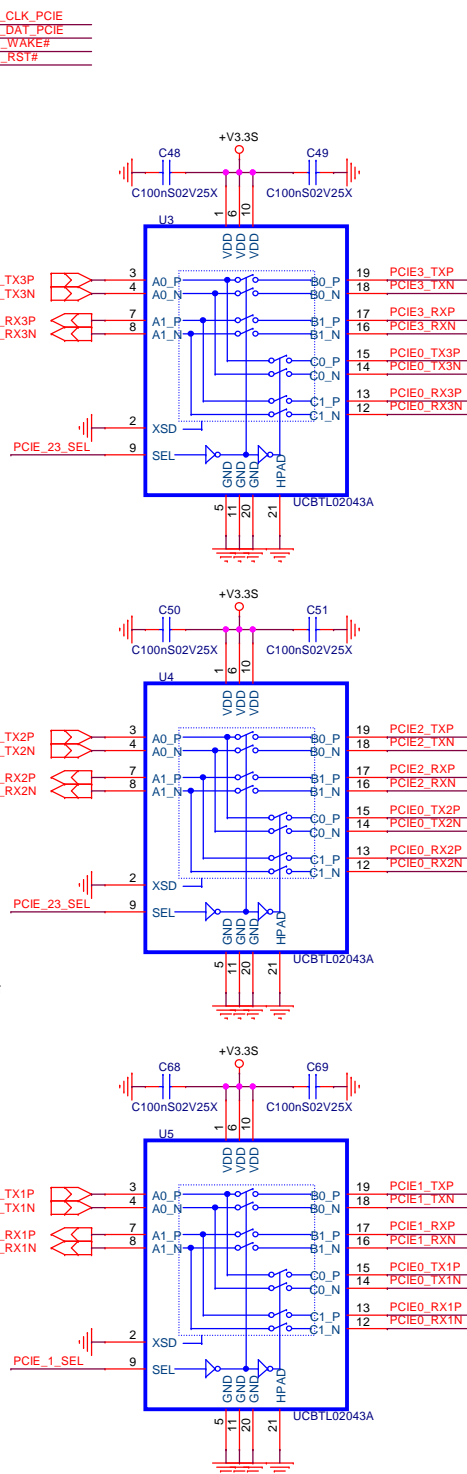


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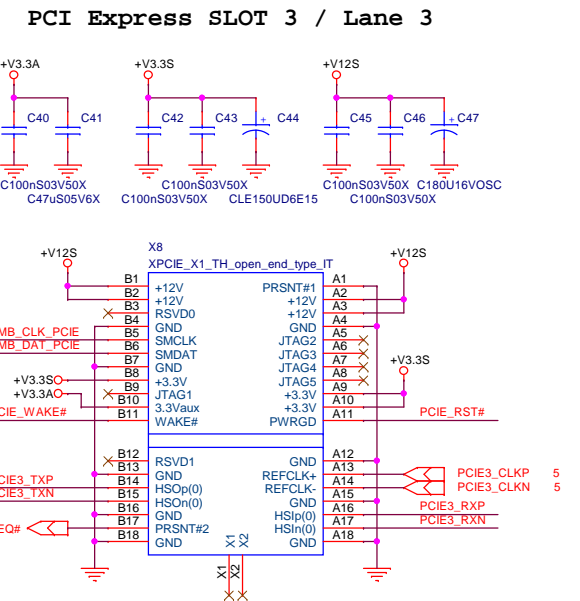
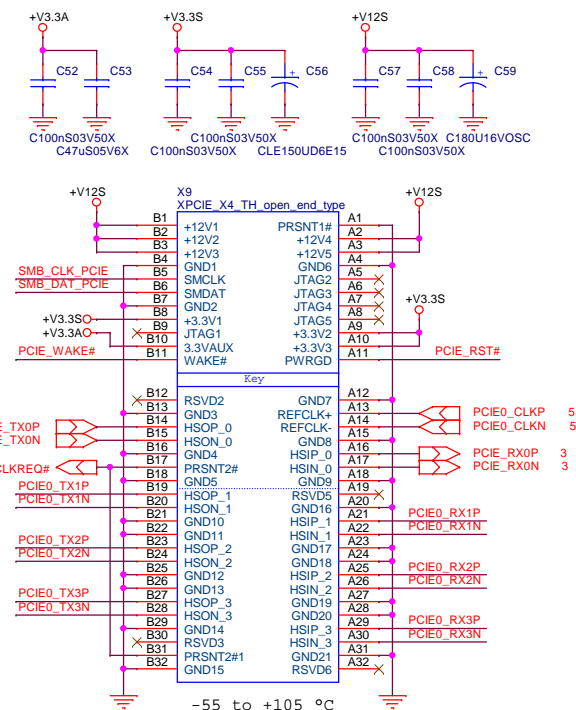
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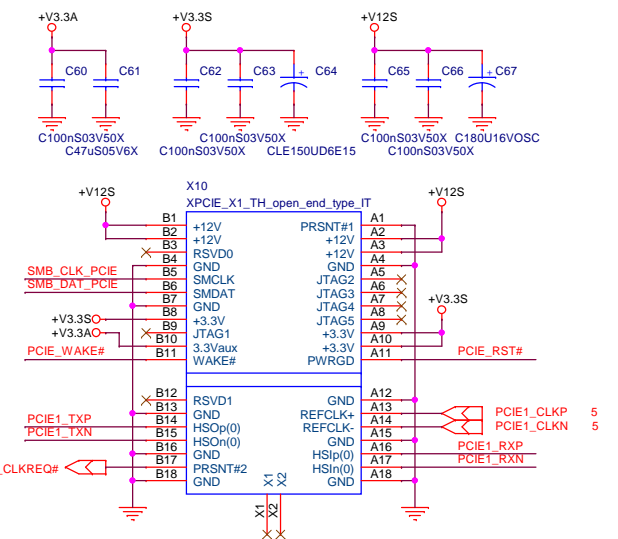




PCI Express SLOT 0 / Lane 0 or 0-1 or 0-3

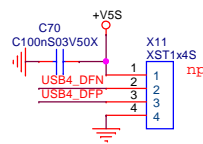
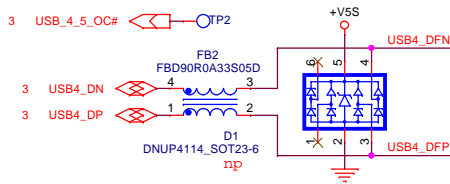


PCI Express SLOT 1 / Lane 1

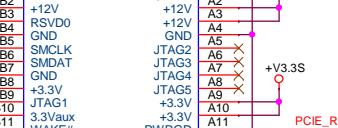
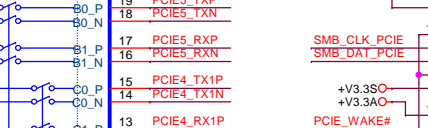
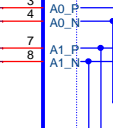
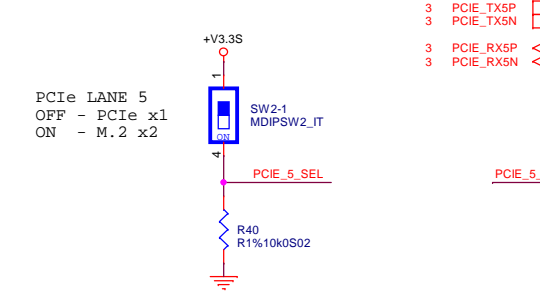
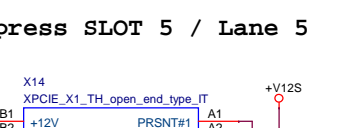
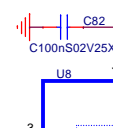
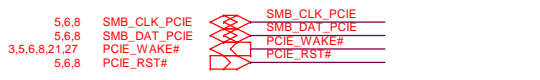
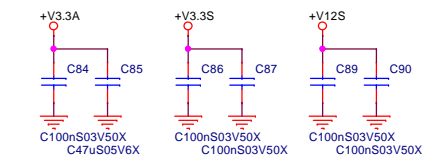
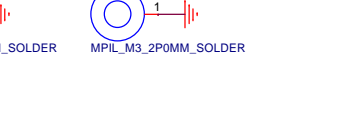
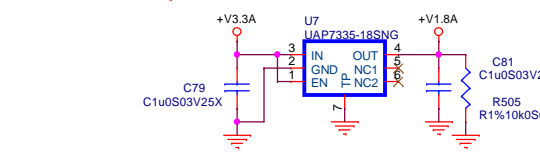
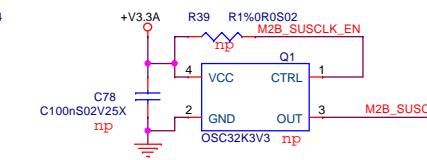
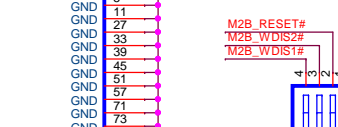
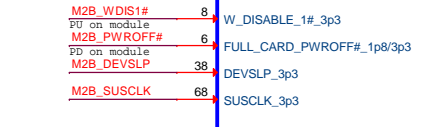
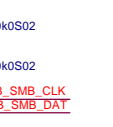
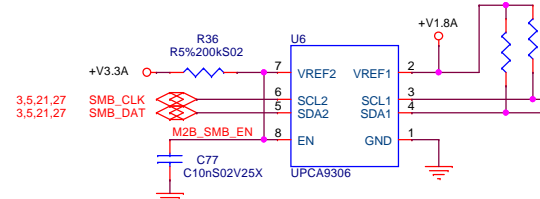
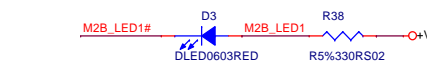
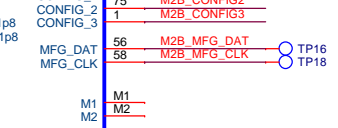
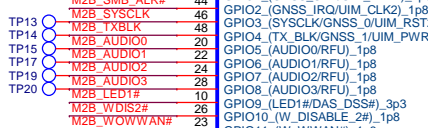
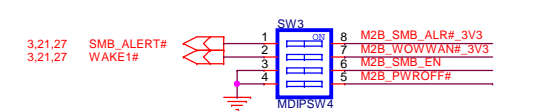
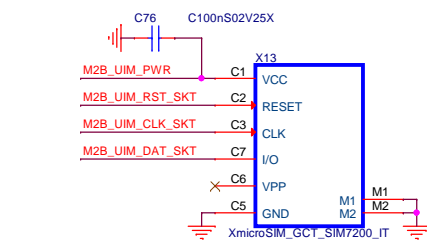
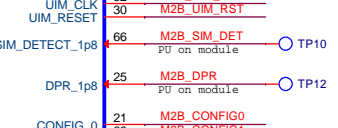
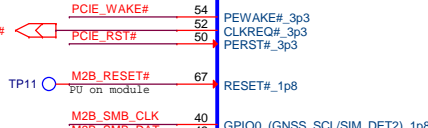
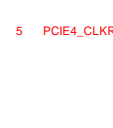
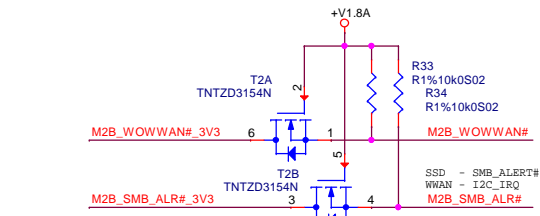
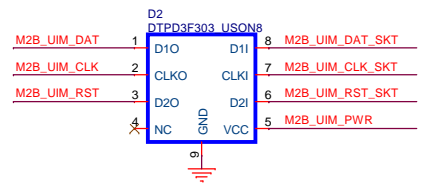
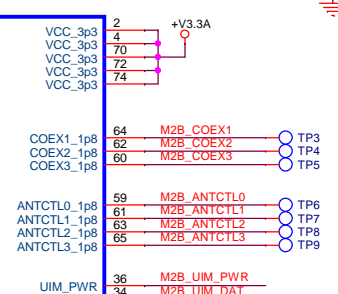
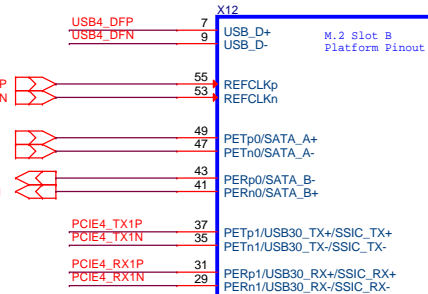
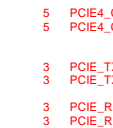
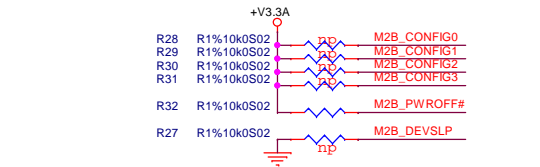
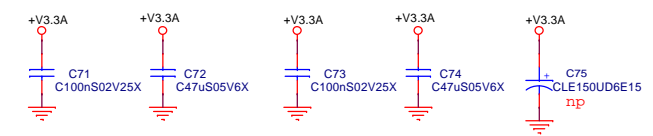


```
PCie LANE/SLOT0-3 config
SW1.1-1.2
OFF-OFF for x1 x1 x1 x1
OFF-ON  for x2 -- x1 x1
ON-ON   for x4 -- -- --
```

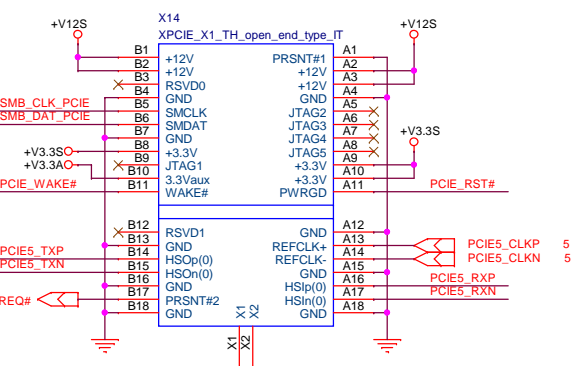
-55 to +105 °C




M.2 key B / Lane 4 (4-5) size 3042 / 2242 / 2260 / 2280



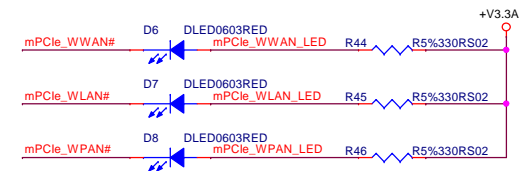
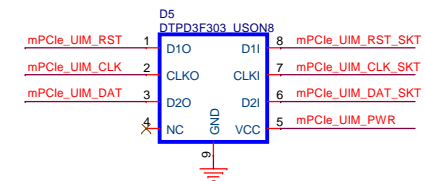
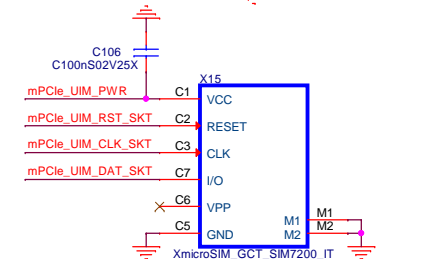
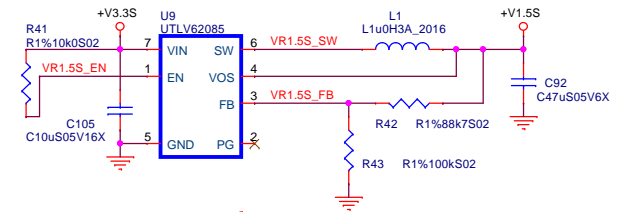
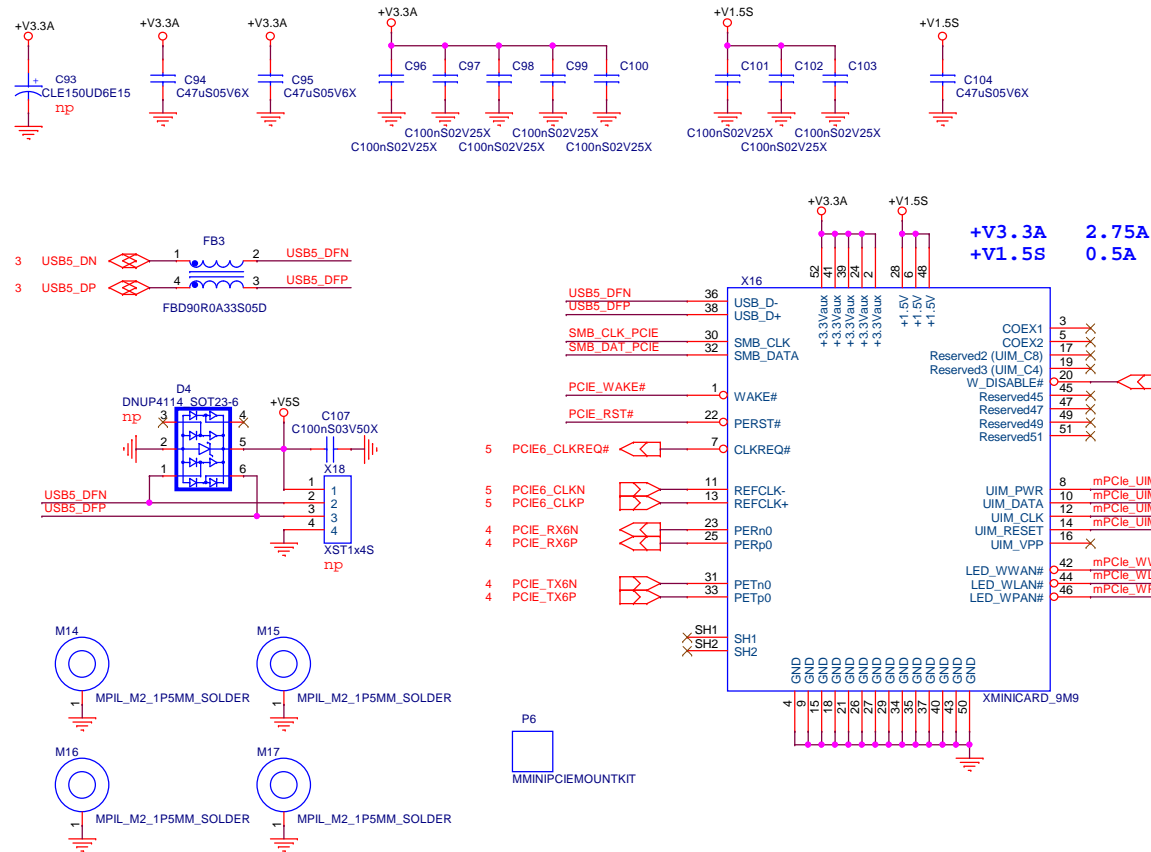
PCI Express SLOT 5 / Lane 5



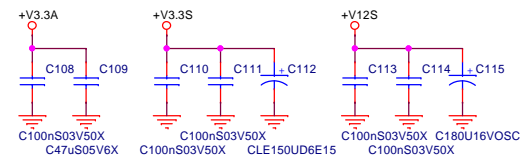
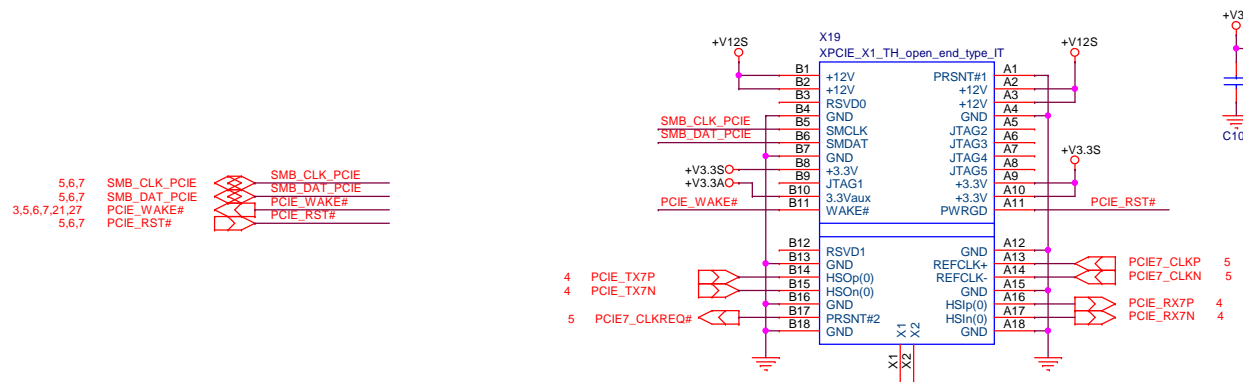
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M.2 key B (Lane 4-5) / PCI Express Slot 5			
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miniCARD (mPCIe) SOCKET / Lane 6



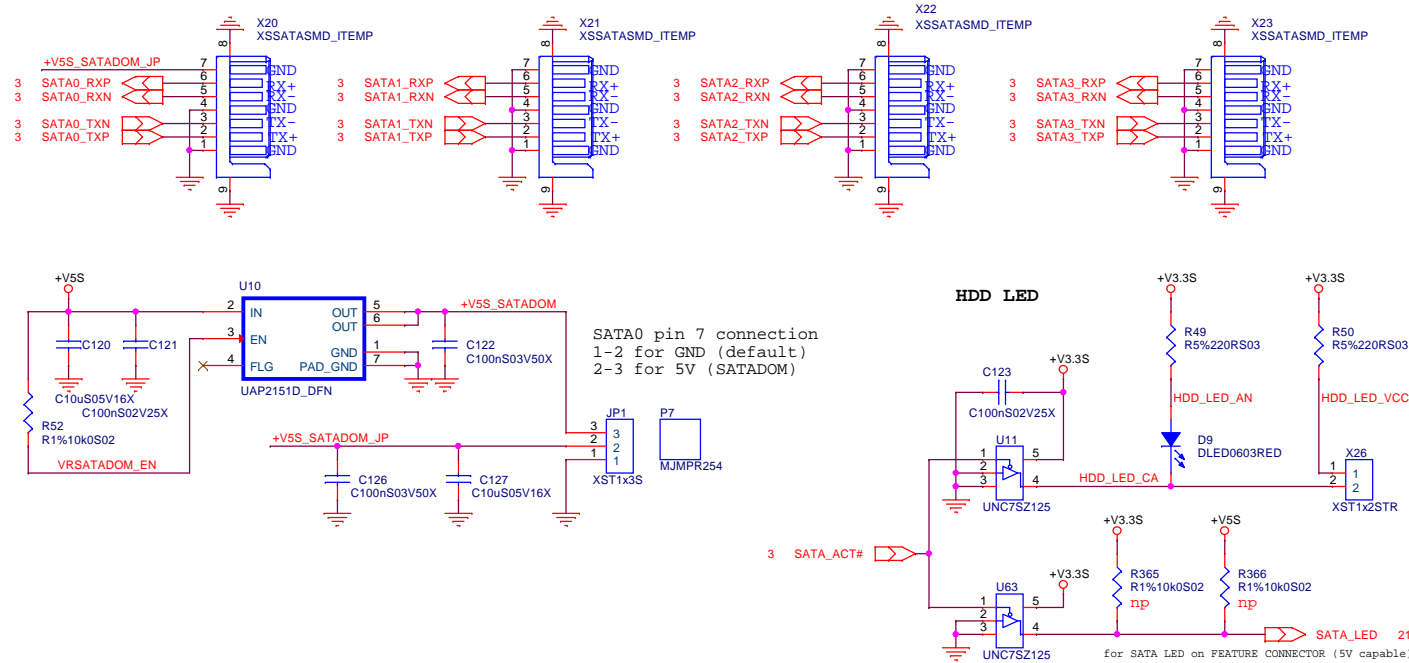
PCI Express SLOT 7 / Lane 7



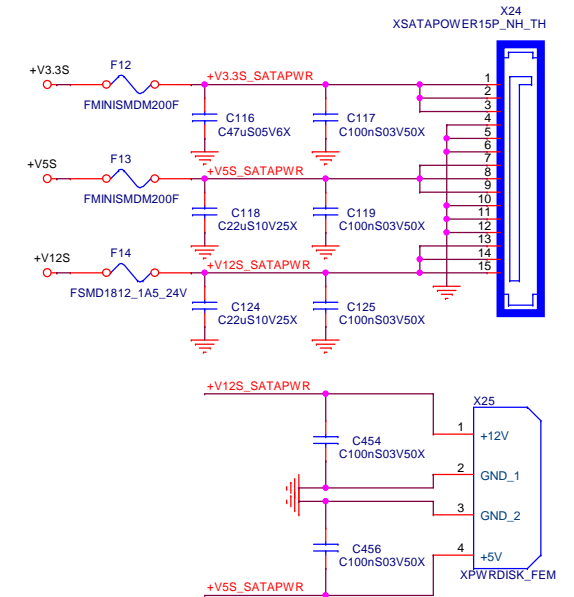
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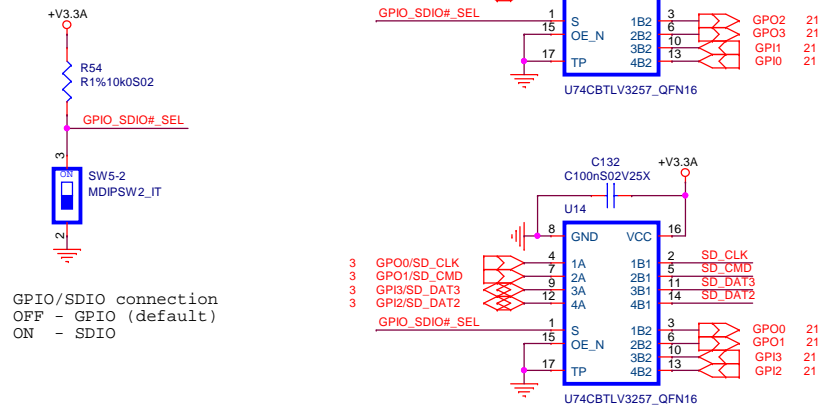
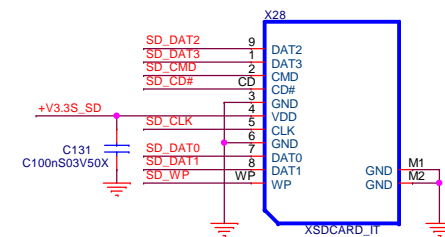
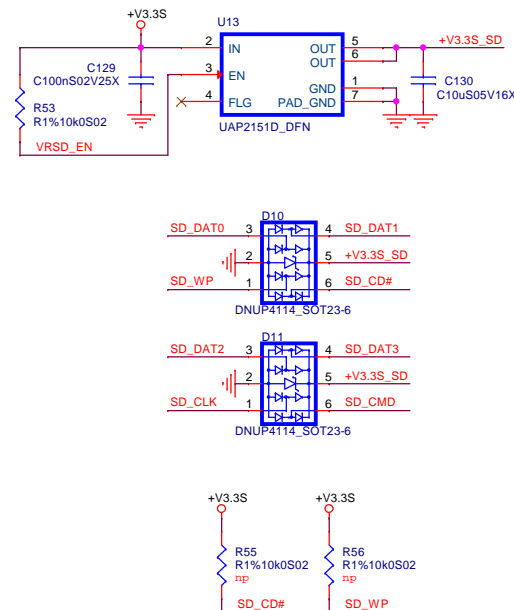
SATA



Disk Drive Power



SD CARD



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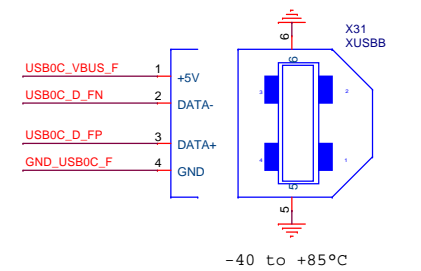
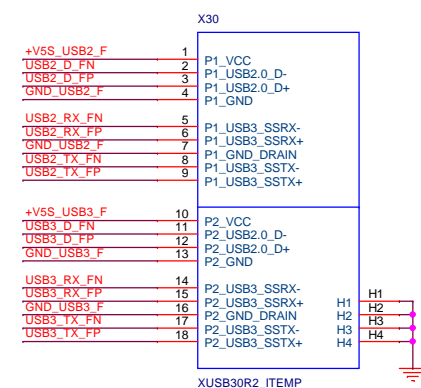
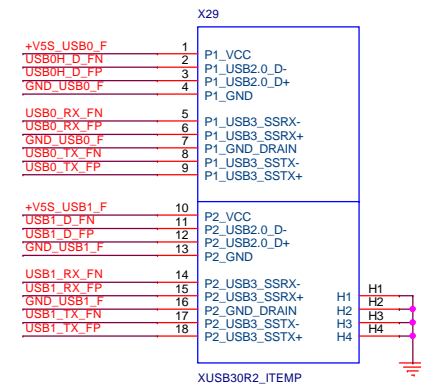
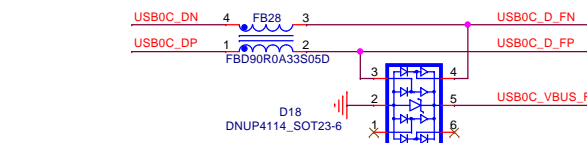
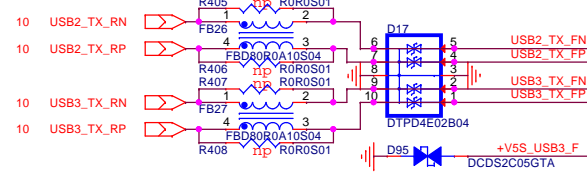
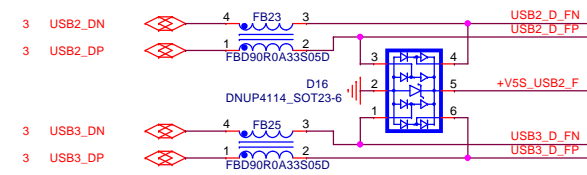
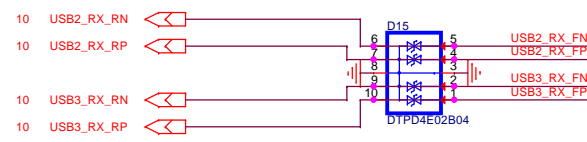
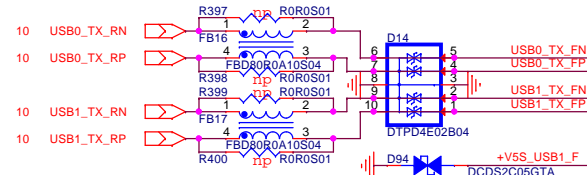
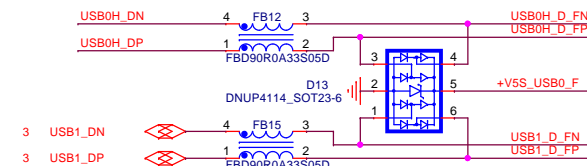
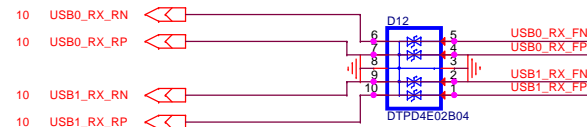
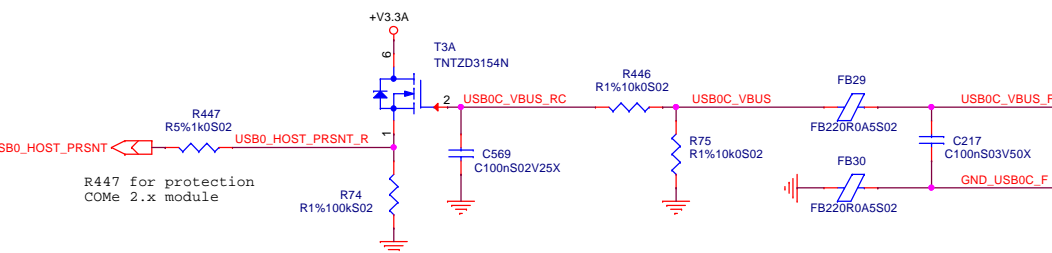
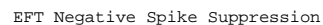



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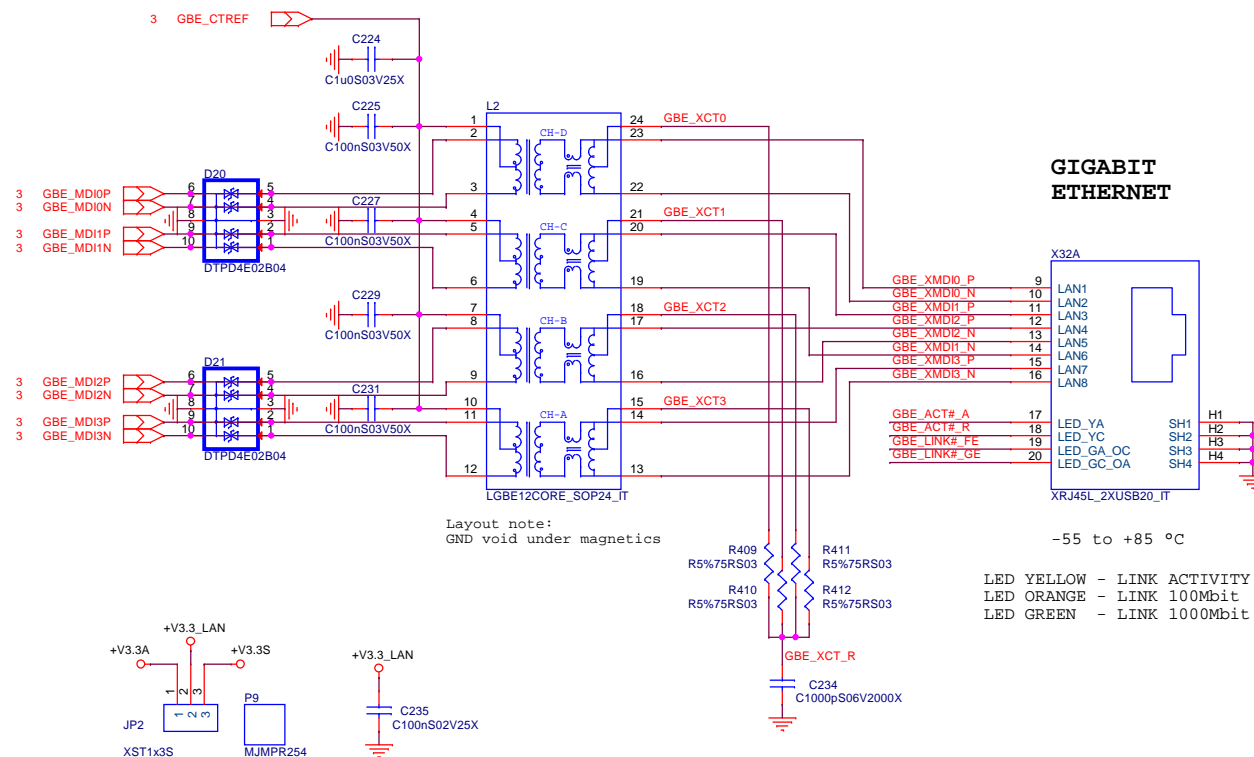
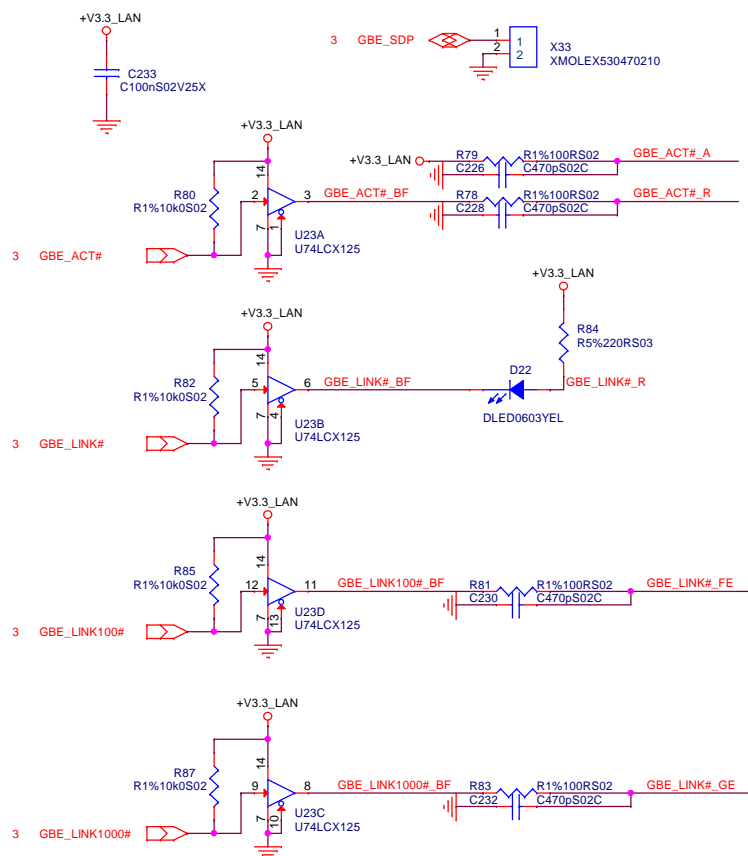
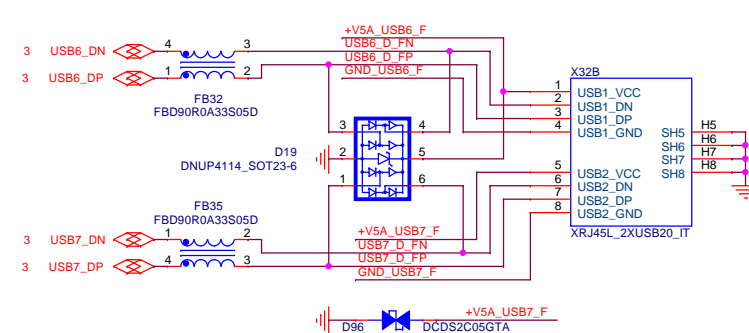
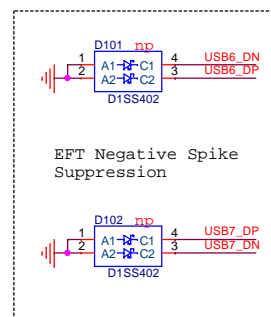
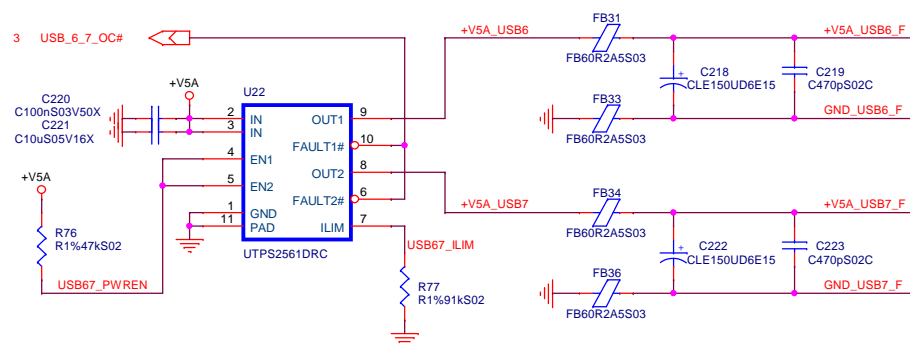


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USB 3.1G2 REDRIVES			
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USB 6 + 7



```
set jumper 1-2 if LAN Controller is powered from standby voltage (default)
set jumper 2-3 if LAN Controller is powered from S0 voltage
```

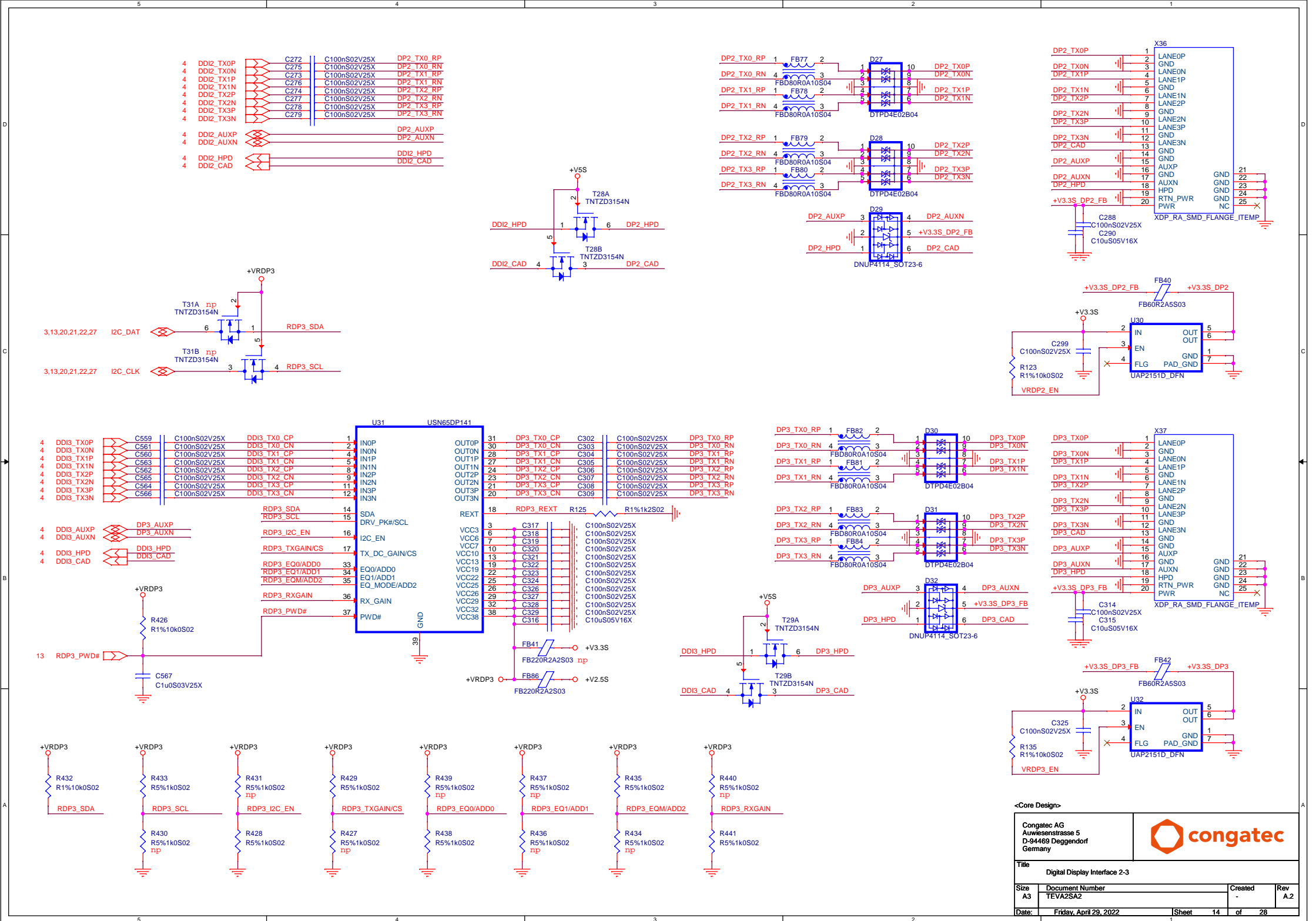
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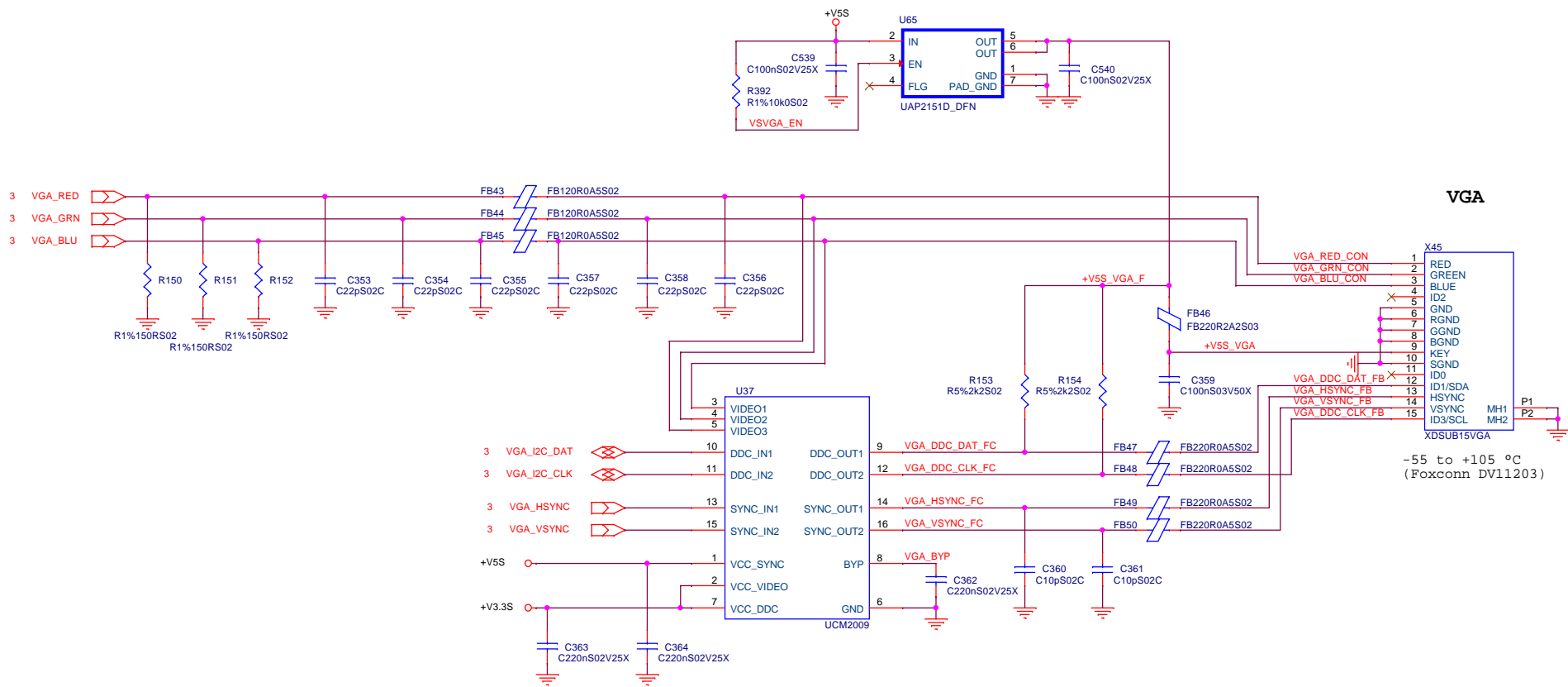
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Title	USB 2.0 / Gigabit Ethernet
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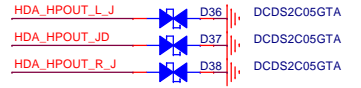
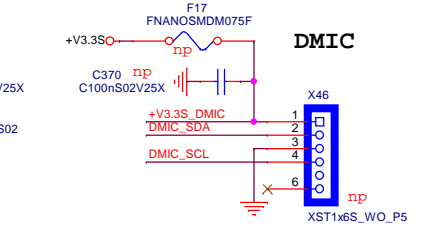
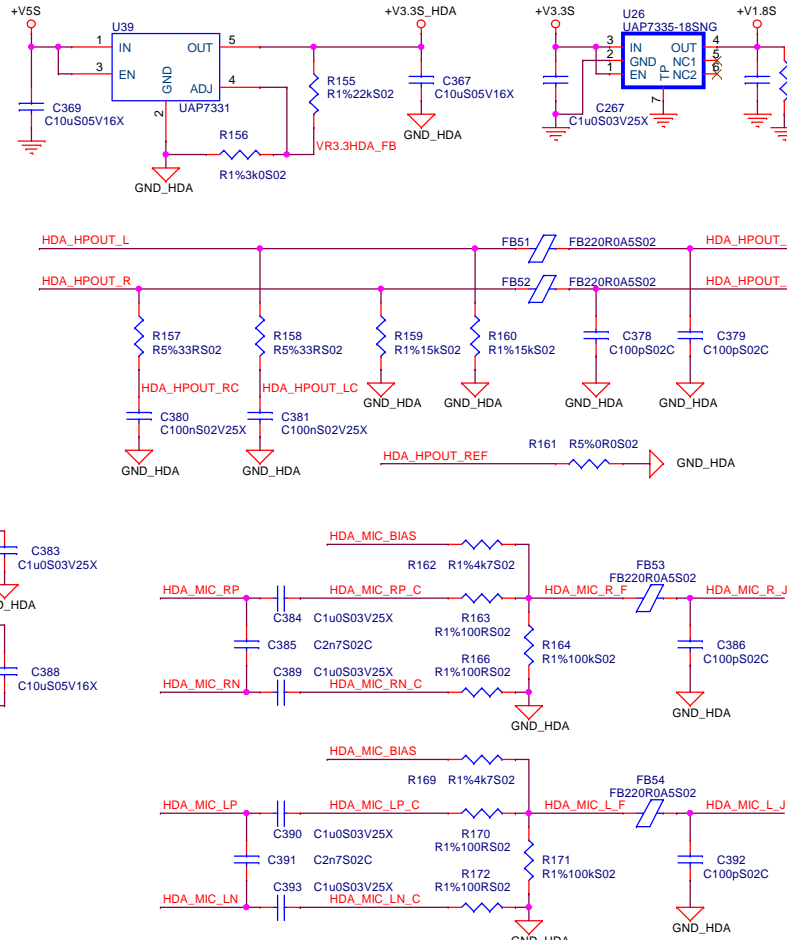
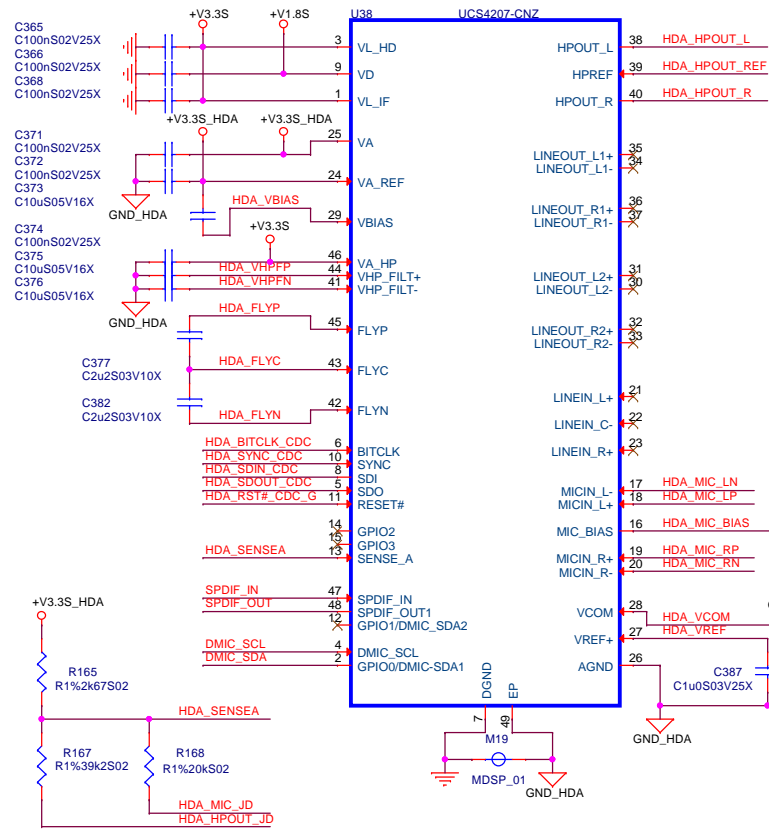


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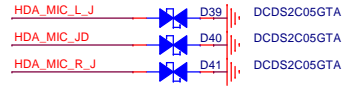
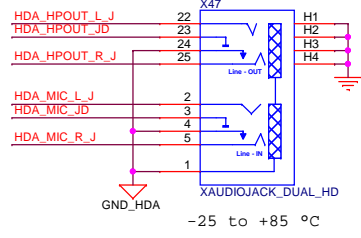
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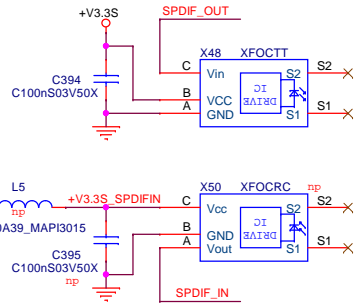
Title VGA			
Size A3	Document Number TEVA2SA2	Created -	Rev A.2
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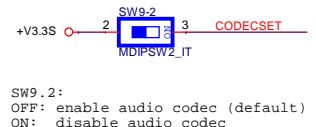
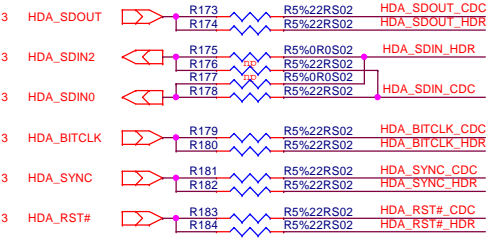
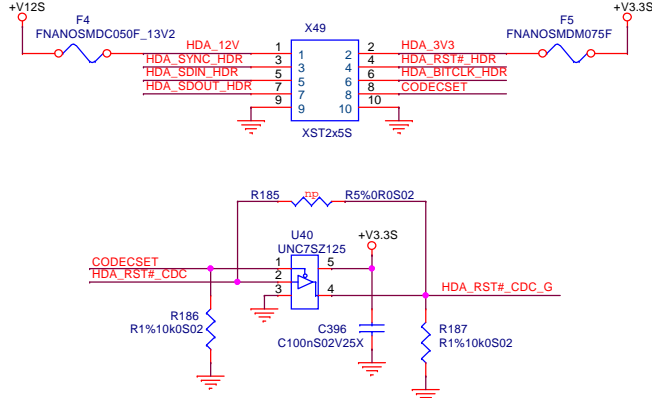
AUDIO JACKS



S/PDIF




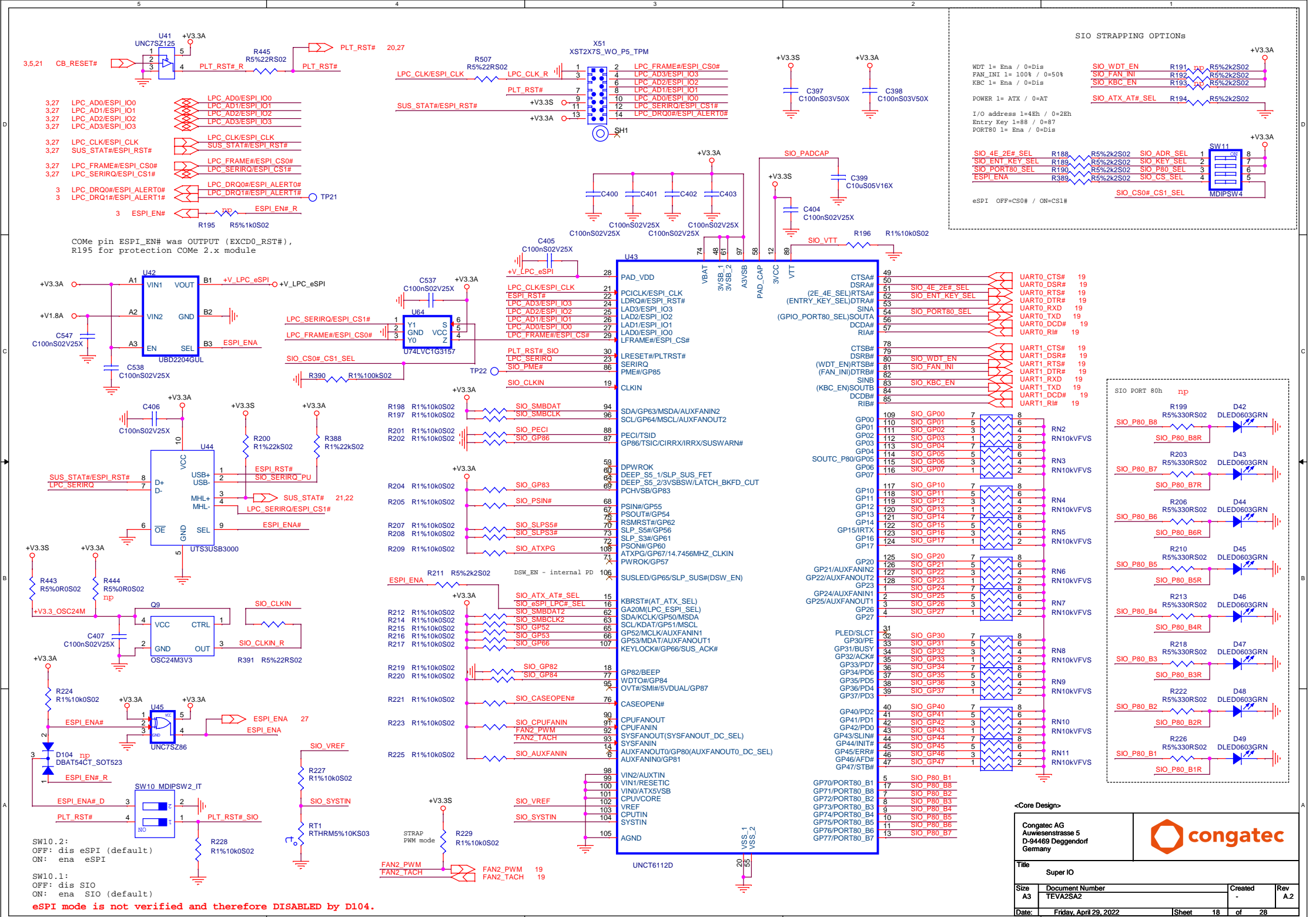
debug and HDA adapter

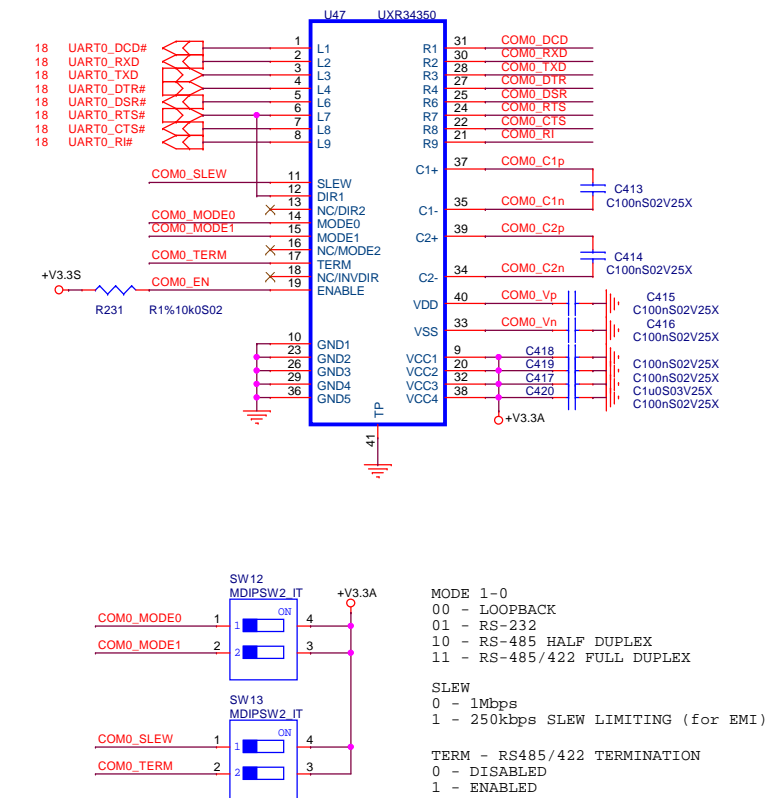


SW9.2:
OFF: enable audio codec (default)
ON: disable audio codec

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Title			
HD Audio			
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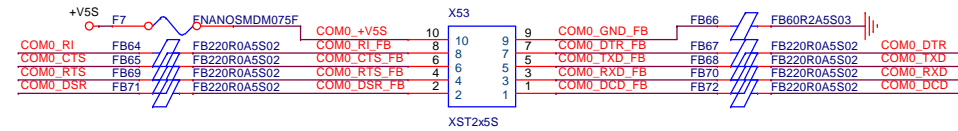




The diagram shows the XST2xS5 module with the following connections:

- Pin 10 (Left):** +V5S
- Pin 9 (Left):** FB55
- Pin 8 (Left):** FB57
- Pin 7 (Left):** FB60
- Pin 6 (Left):** FB62
- Pin 10 (Right):** COM1_RI_FB
- Pin 9 (Right):** COM1_CTS_FB
- Pin 8 (Right):** COM1_RTS_FB
- Pin 7 (Right):** COM1_DSR_FB
- Pin 6 (Right):** COM1_GND_FB
- Pin 5 (Right):** COM1_DTR_FB
- Pin 4 (Right):** COM1_TXD_FB
- Pin 3 (Right):** COM1_RXD_FB
- Pin 2 (Right):** COM1_DCD_FB
- Pin 1 (Right):** FB58
- Pin 9 (Left):** FB220R0A5S02
- Pin 8 (Left):** FB220R0A5S02
- Pin 7 (Left):** FB220R0A5S02
- Pin 6 (Left):** FB220R0A5S02
- Pin 5 (Left):** FB220R0A5S02
- Pin 4 (Left):** FB220R0A5S02
- Pin 3 (Left):** FB220R0A5S02
- Pin 2 (Left):** FB220R0A5S02
- Pin 1 (Left):** FB220R0A5S02
- Pin 9 (Right):** FB220R0A5S02
- Pin 8 (Right):** FB220R0A5S02
- Pin 7 (Right):** FB220R0A5S02
- Pin 6 (Right):** FB220R0A5S02
- Pin 5 (Right):** FB220R0A5S02
- Pin 4 (Right):** FB220R0A5S02
- Pin 3 (Right):** FB220R0A5S02
- Pin 2 (Right):** FB220R0A5S02
- Pin 1 (Right):** FB220R0A5S02

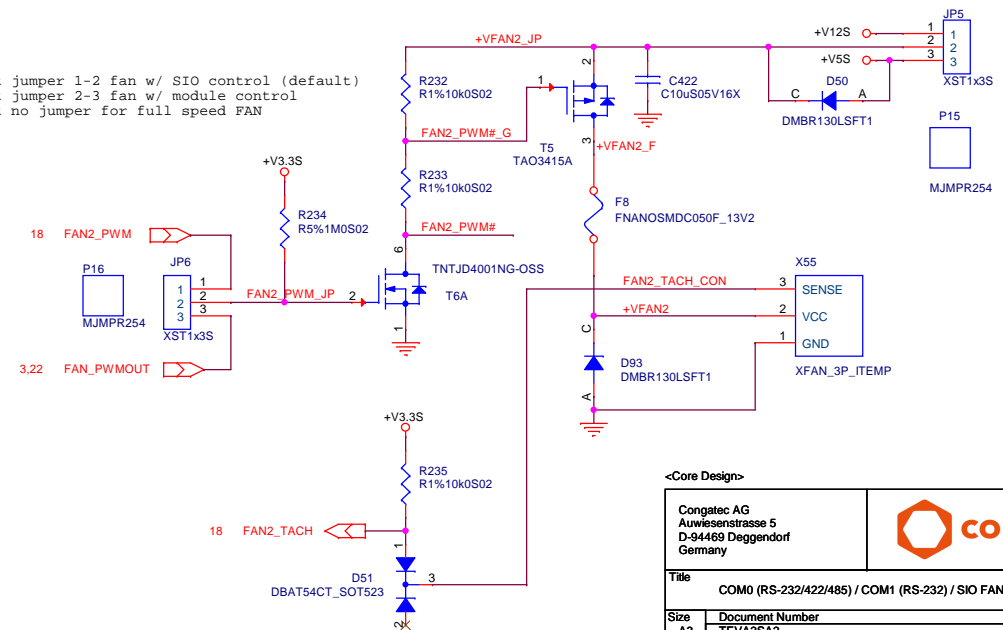
DB9pin	RS-232	RS-422	RS-485
1	DCD	TX-	DATA-
2	RXD	TX+	DATA+
3	TXD	RX+	
4	DTR	RX-	
5	GND	GND	GND
6	DSR		
7	RTS		
8	CTS		
9	RI		



COM0 (RS-232/422/485)

```
set jumper 1-2 fan w/ SIO control (default)
set jumper 2-3 fan w/ module control
set no jumper for full speed FAN
```

```
set jumper 1-2 for 12V fan (default)
set jumper 2-3 for 5V fan
```



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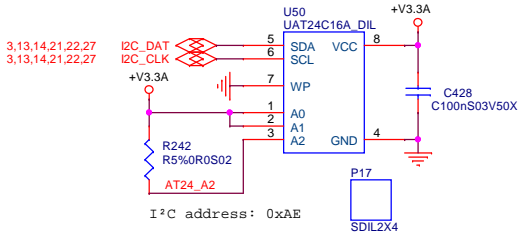


Title	COM0 (RS-232/422/485) / COM1 (RS-232) / SIO FAN
-------	---

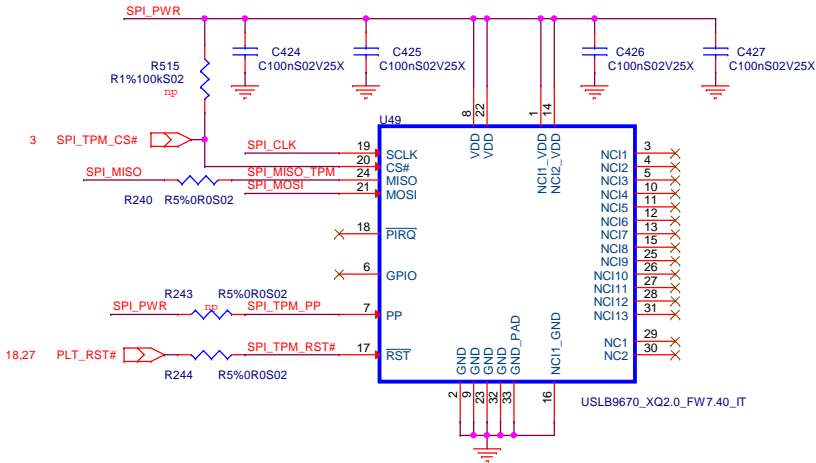
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	TEVA2SA2		
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	Ref to Images Above	SPI Descriptor	Carrier SPI_CS# Pin	Chipset SPI_CS0# Destination	Chipset SPI_CS1# Destination	Carrier ESPI_CS0# Pin	Chipset ESPI_CS0# Destination	BBS	Boot Bus	BIOS DIS0#	BIOS DIS1#	ESPI_EN#
1	A	Module	SPI1	Module	Carrier	-	Carrier	-	SPI	0	0	1
1	B	Carrier	SPI0	Carrier	Module	-	Module	-	SPI	0	1	0
1	-	-	High	-	-	-	-	-	-	0	1	0
1	A	Module	High	Module	Module	-	Module	-	SPI	0	1	1
0	C	Module	SPI1	Module	Carrier	-	Carrier	-	SPI	0	0	0
0	D	Carrier	SPI0	Carrier	Module	-	Module	-	SPI	0	0	1
0	E	Module	SPI0	Module	-	Module	-	1	eSPI	0	1	0
0	F	Carrier	SPI0	Carrier	-	Carrier	Chipset ESPI_CS0#	1	eSPI	1	1	1

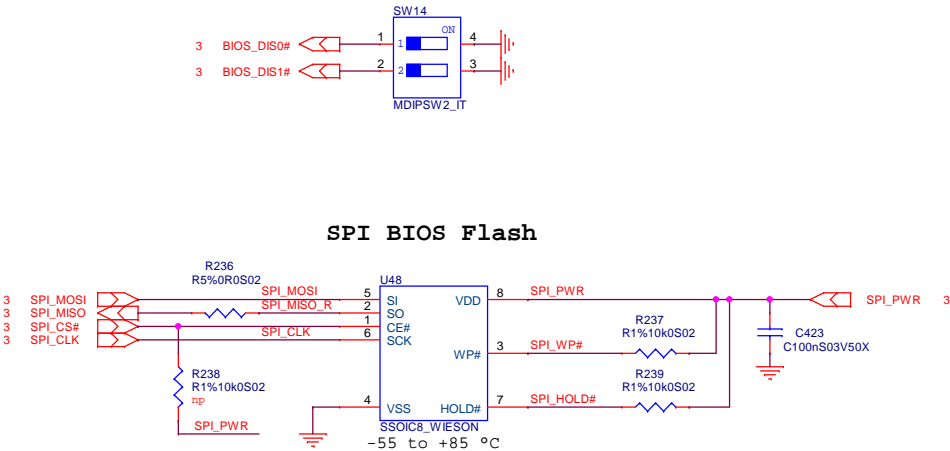
I²C EEPROM



SPI TPM (NP by DEFAULT)



SPI BIOS Flash

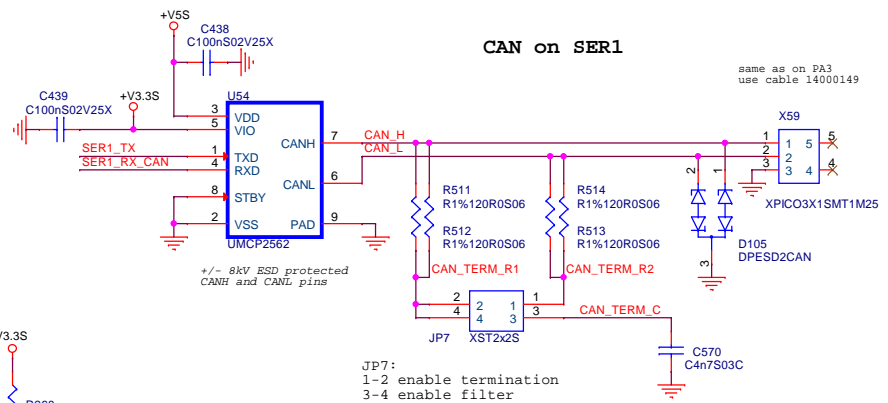
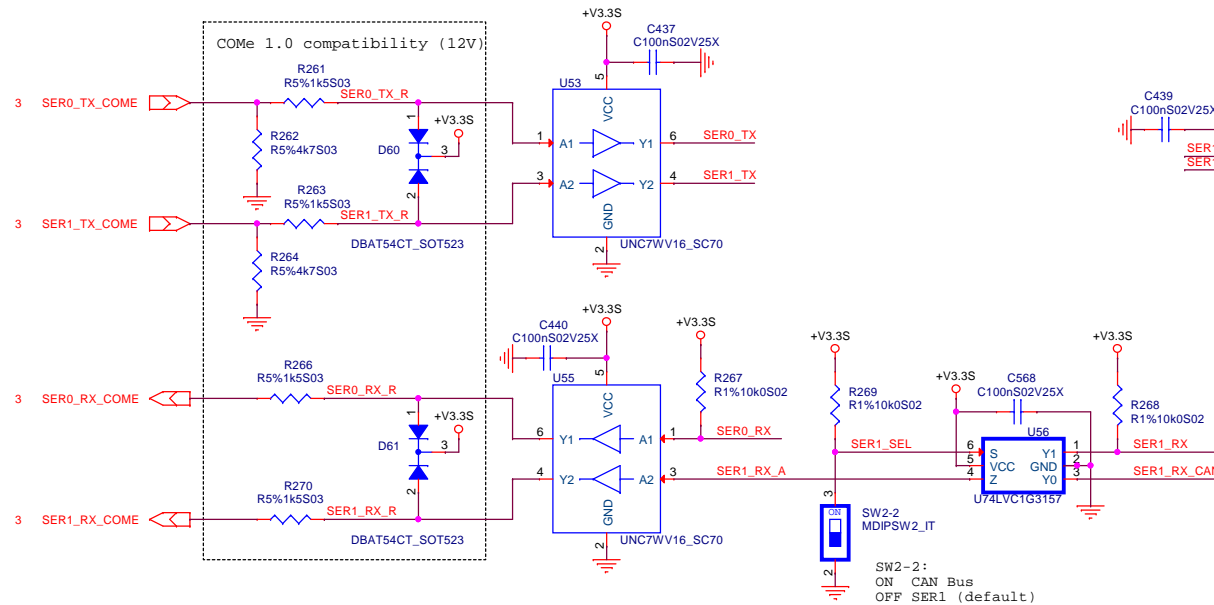
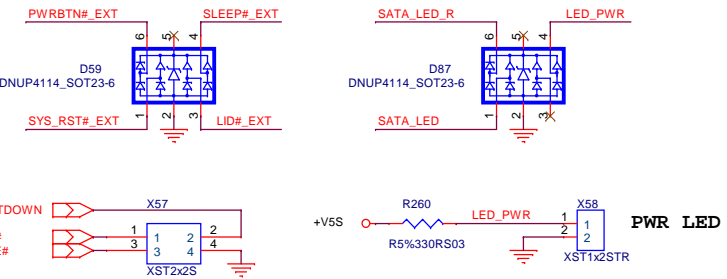
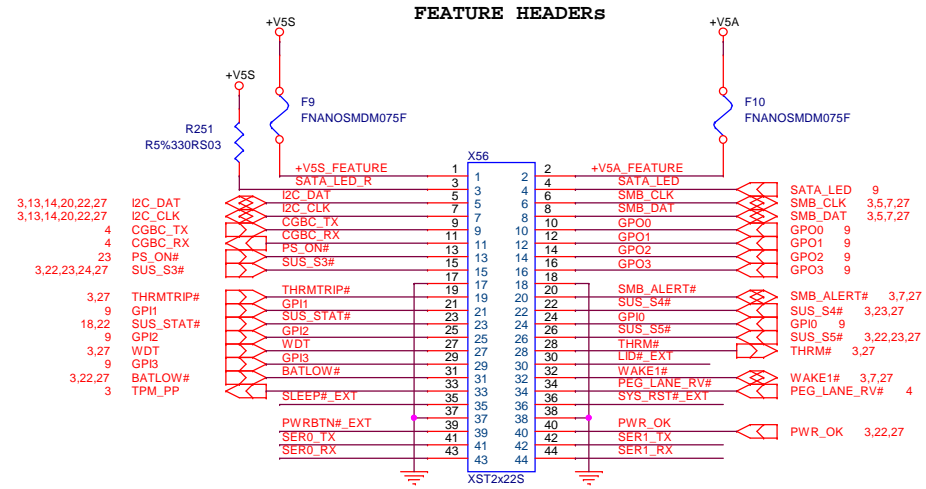
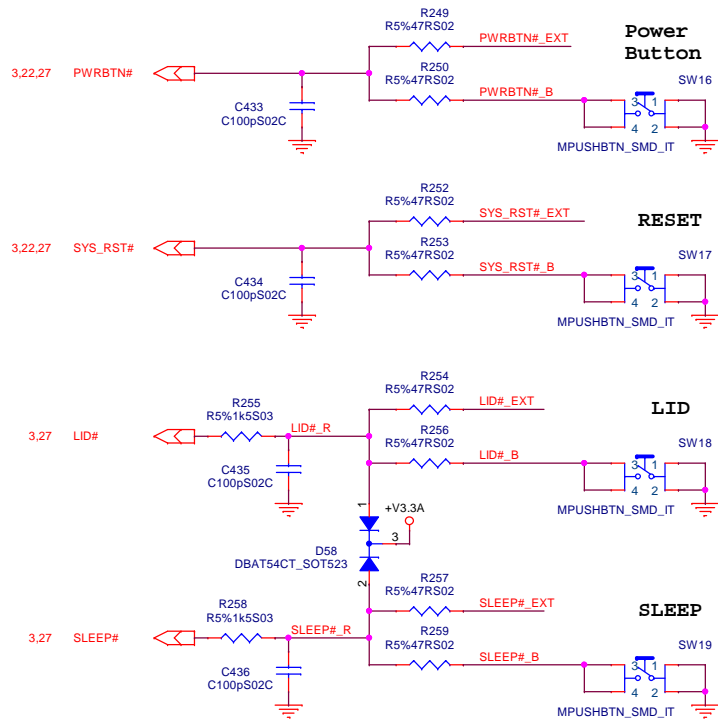


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Title SPI / TPM / I2C			
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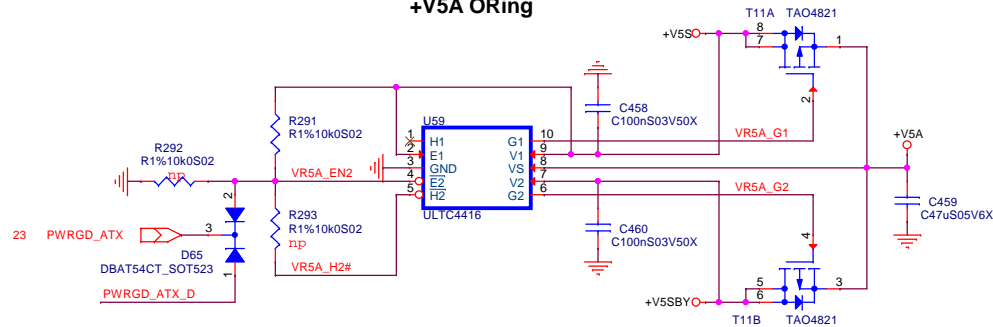


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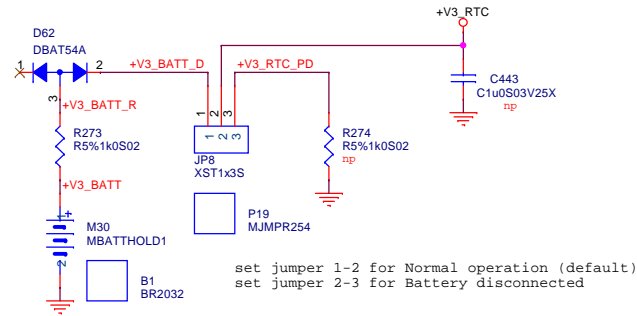


Feature Connectors / CAN Bus / Buttons			
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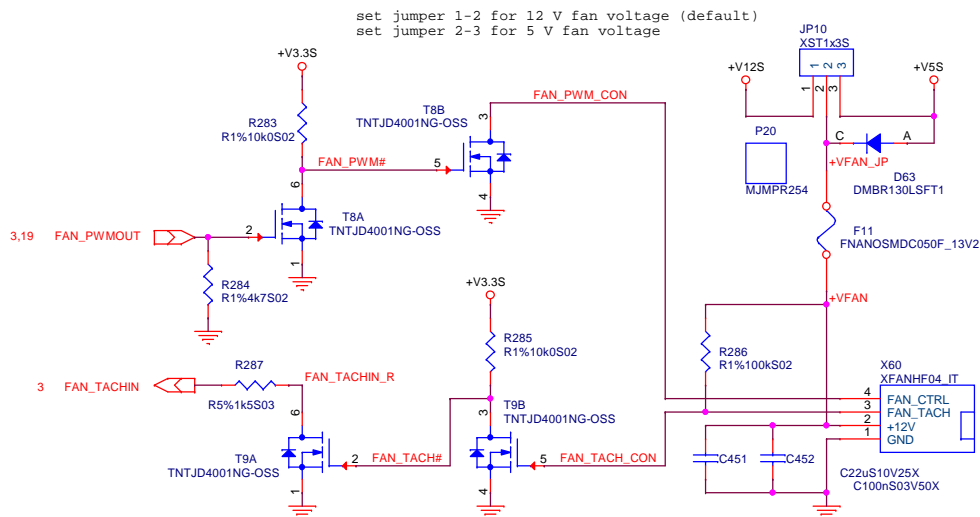
+V5A ORing



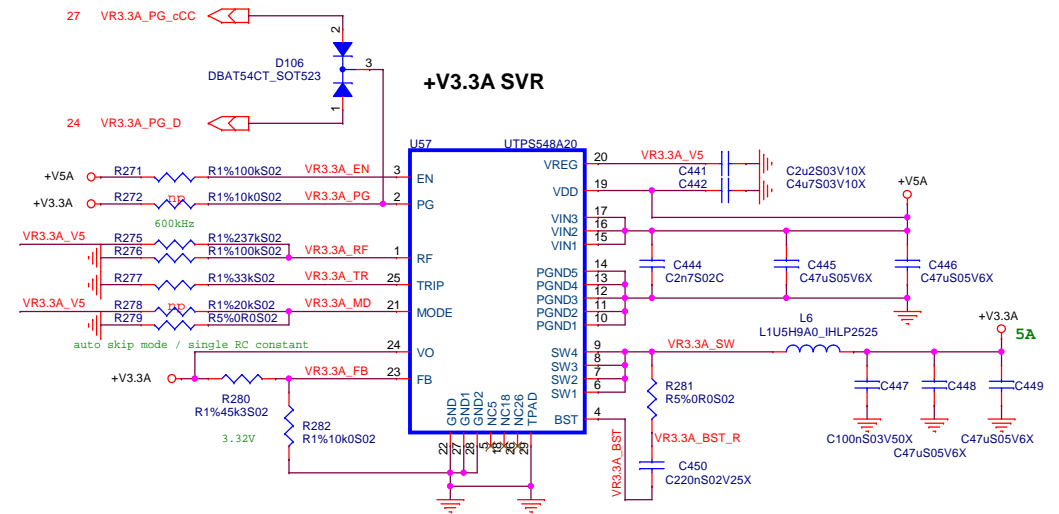
RTC / CMOS Battery



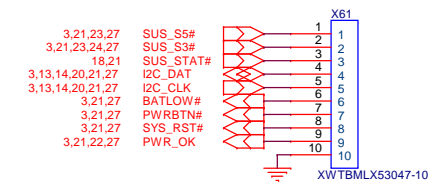
FAN Control



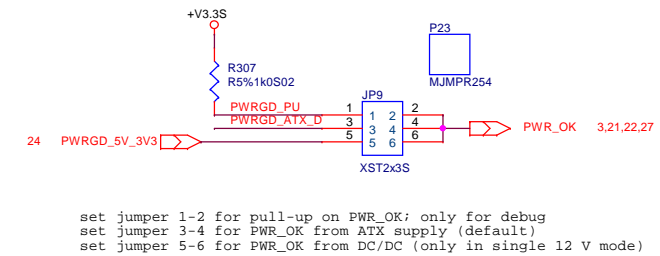
+V3.3A SVR




Smart Battery Module Support



COME PWR_OK



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Title RTC BATTERY / FAN			
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3.21.22.24.27 SUS_S3#

4 COME_TYPE0#

4 COME_TYPE1#

3 COME_TYPE10#

4 COME_TYPE2#

R508 R5%1M0S02

SUS_S3#

DBAT54A

R290 R1%10k0S02

PS_ON

D66 DBAT54A

+V5SBY

R288 R1%4k7S02

R289 R1%100kS02

T12A

TNTJD4001NG-OSS

PS_ON#

SW21-1 MDIPSW2_IT

COME_TYPE2#_D

COME_PRSN#T#

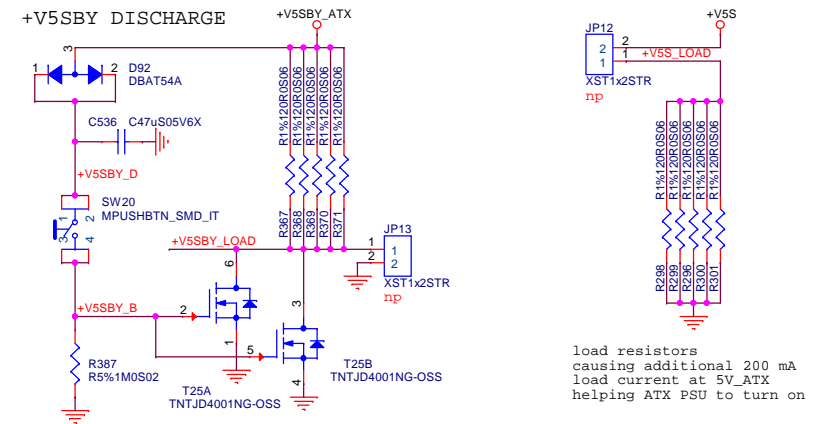
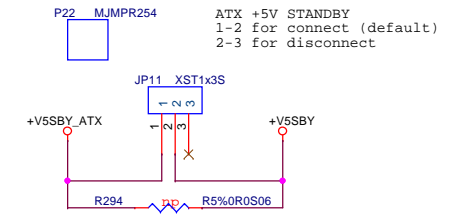
D67 DBAT54CT_S0T523

X62

XM0LEX530470210

COME T6 Module Present#

SW21.1 - ATX PSU mode
OFF for ATX mode (default)
ON for AT mode

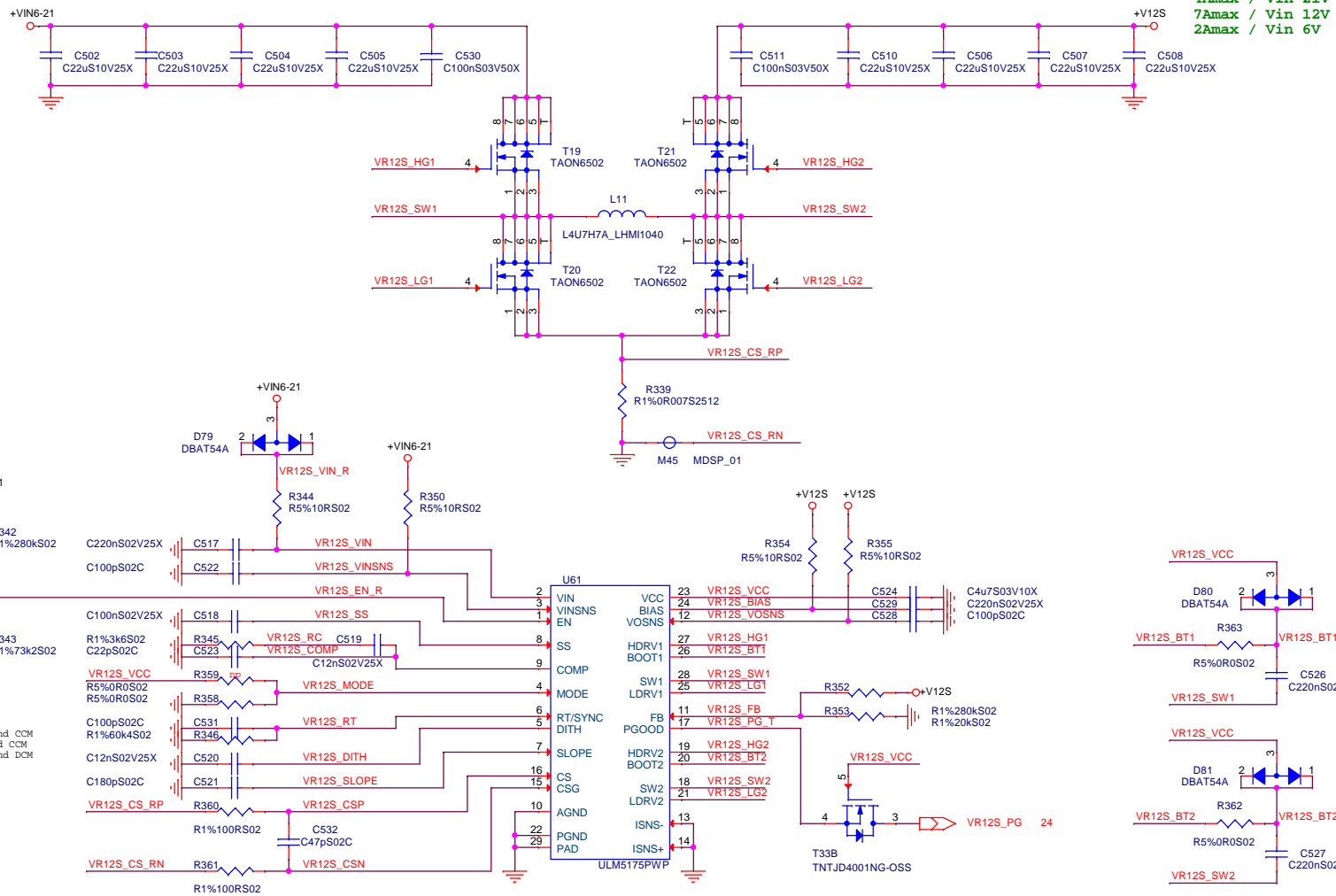
[illegible]

load resistors
causing additional 200 mA
load current at 5V_ATX
helping ATX PSU to turn on

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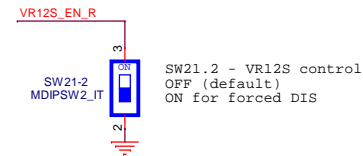
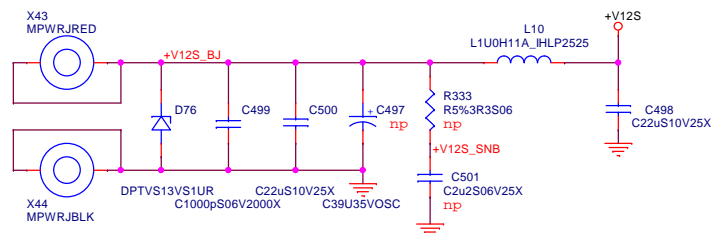


Title		ATX Power / Power LEDs	
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Power In Banana Jacks 12V

NP by default



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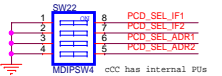
Title			
AT POWER +V12S			
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[illegible][illegible]

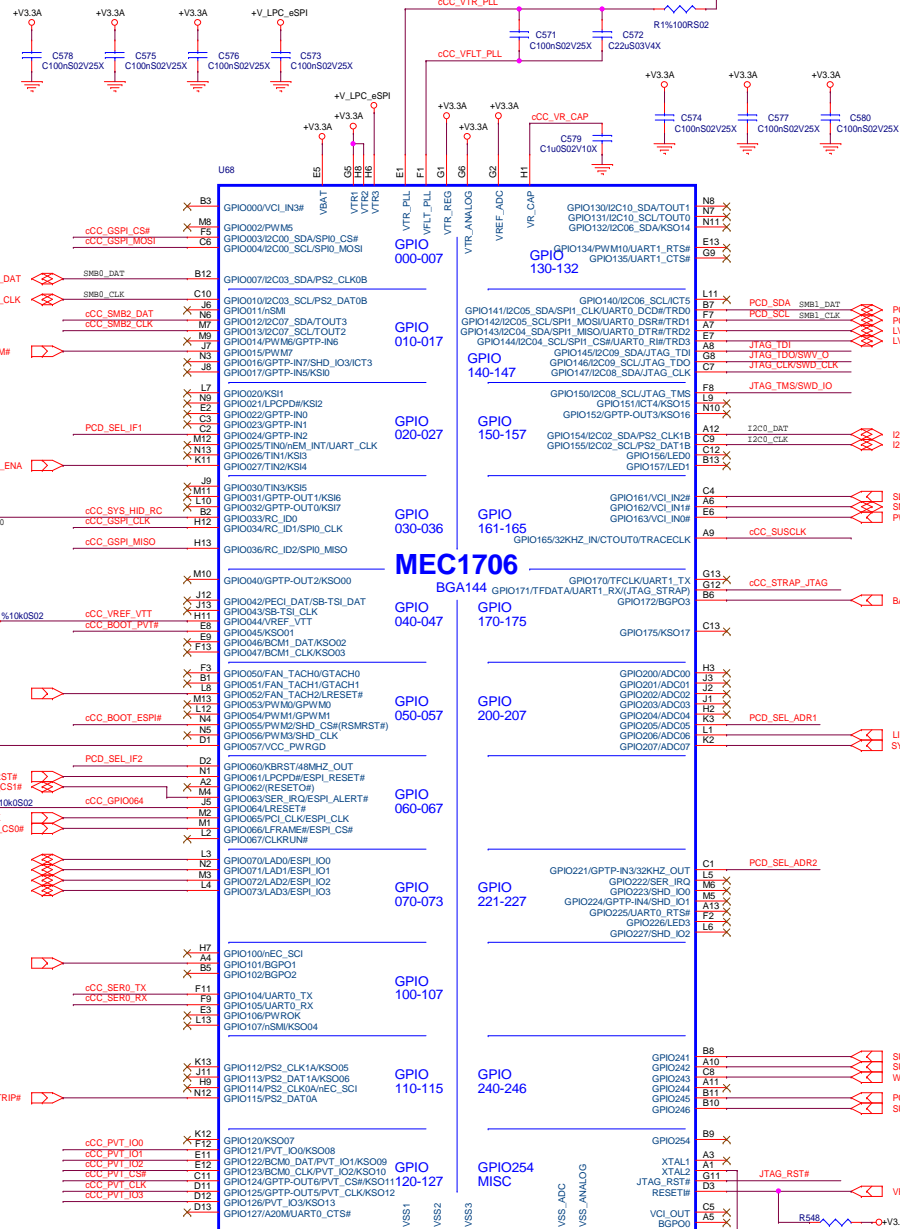
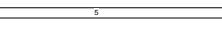
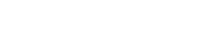
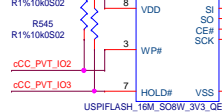
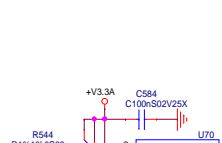
Title			
POST BEEPER / POST CODE DISPLAY			
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SW22.1-2 - PCD INTERFACE
 OFF-OFF - OFF
 ON-OFF - LPC
 OFF-ON - I2C
 ON-ON - SMB

SW22.3-4 - PCD ADDRESS
 OFF-OFF - 80/81h : 0xE0
 ON-OFF - 80/84h : 0xE2
 OFF-ON - RSVD : 0xE4
 ON-ON - RSVD : 0xE6



MDIPSW4 cCC has internal PDS



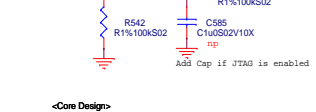
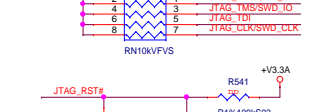
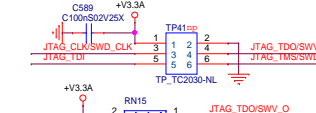
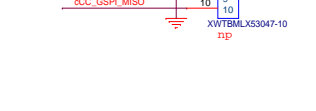
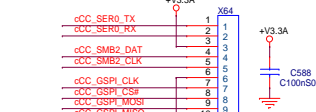
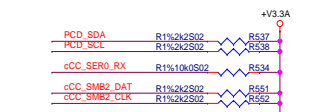
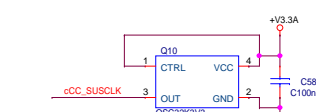
Private SPI Selection		
GPIO45/	0	Use Private SPI Pins for Boot
SMB_CS#	1	GPIO1055 select between shared and eSPI



Shared SPI vs. eSPI Selection		
GPIO1055/	0	Use eSPI Channel for Boot
SMB_CS#	1	Use the Shared SPI pins for Boot



JTAG Boundary Scan		
GPIO117/	0	JTAG TAP Controller used for debug
TFTDATA/	1	JTAG TAP Controller used for Boundary Scan



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Title			
congatec Carrier Controller MEC1705			
Size			
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Revision History

Rev. X.0	14.12.2017	KDA	all	design created
Rev. X.1	16.04.2018	KDA	7	added 10k 0603 parallel to C81 (+V1.8A issue with leakage)
			10	changed R105, R106 to 10k (I2C strong PUs issue)
			13-14	removed T30, T31, T32 (I2C strong PUs issue)
			15,20	added note to BOM that P12, P17 (DIL8 socket) should be assembled on position U35, U50
			18	removed R195 (SIO eSPI issue with COMe 2.x); eSPI support is removed in this revision.
			20	updated M25 - Beeper (Arena Item issue)
			21	removed U56 and added connection between pads 1 and 4 (SER1 issue, CAN works as loopback)
			22	changed B1 (RTC battery) to iTemp type; changed R277 to 33k (+V3.3A Ioc = 9A); changed X60 FAN connector to type compatible with 3pin FAN
Rev. A.0	28.05.2018	KDA	7	added R505 10k (+V1.8A issue with leakage)
			9	changed X28 SDcard connector to iTemp type
			10	changed /added USB3.1 redrivers; added TP's to USB3.1 pairs
			11	removed FB/R from all USB RX pairs; added R446-7, C459 (USB HOST detect filter)
			12	updated signal name GBE_LINK#_R
			13-14	changed T30/T31 gate voltage
			15	added R506
			17	added U26 (+V1.8S LDO)
			18	added D104 to eSPI_EN# signal for isolate module and carrier; added R507 serial termination to LPC_CLK
			19	changed C422 to 10uF
			20	changed R246-7 to 22k (I2C_5V PUs)
			21	changed U56 (SER1 mux); updated CAN termination,; added CAN filter option
			23	added R508 (PD to SLP_S3# for prevent floating w/o module)
			24	added R509/R510 option for +V3.3S enable (+V3.3S should starts after +V3.3A in AT mode)
			26-27	added congatec Carrier Controller MEC1705 used as POSTcode decoder
Rev. A.1	18.02.2019	KDA	10	removed R450, R454, R465, R469, R480, R484, R495, R499;
				added R451, R455, R456, R466, R470, R471, R481, R485, R486, R496, R500, R501 - 1k (adjusted USB3.1 redrivers)
			11	changed R70, R72 to 36K (USB overcurrent 1.55A)
			13	removed R98, R421; added R95, R420 - 1k (adjusted DP redriver)
Rev. A.2	29.04.2022	KDA	14	removed R427, R440; added R429, R441 - 1k (adjusted DP redriver)
			27	changed U68 to MEC1706

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Title			
History			
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