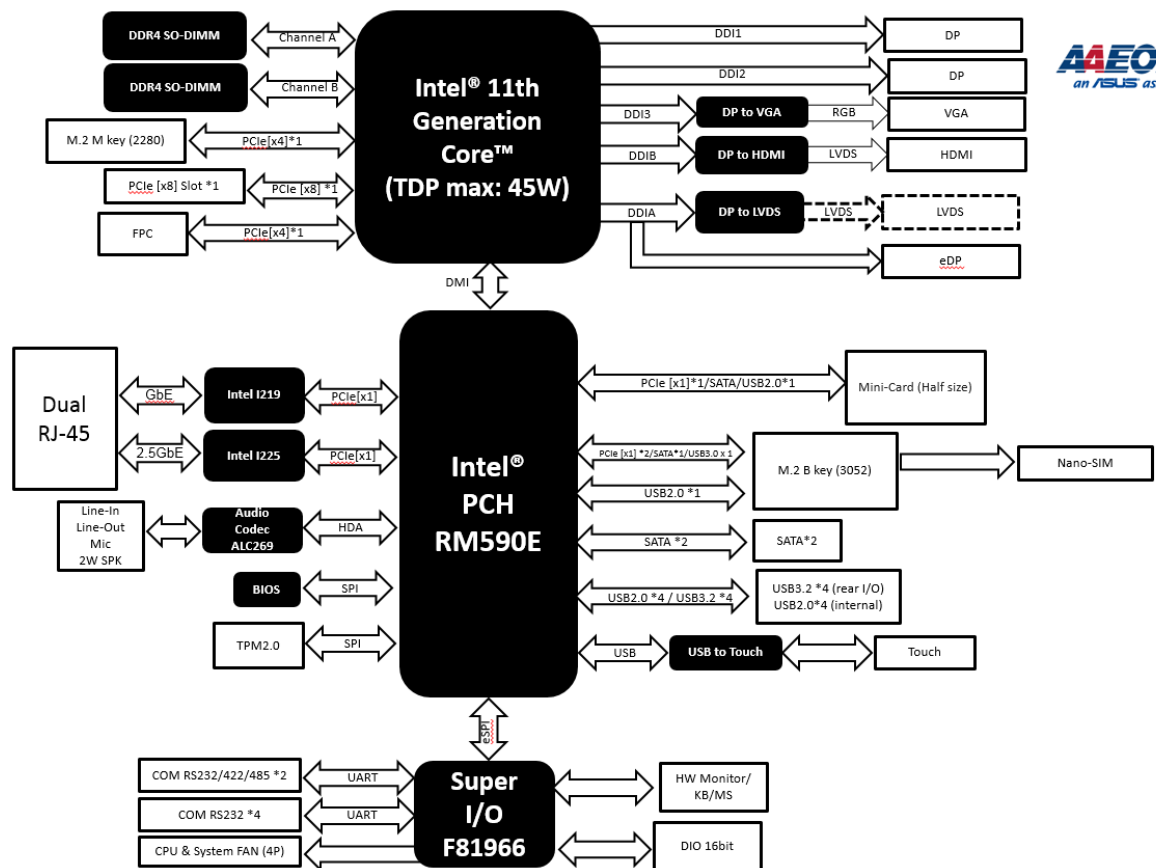


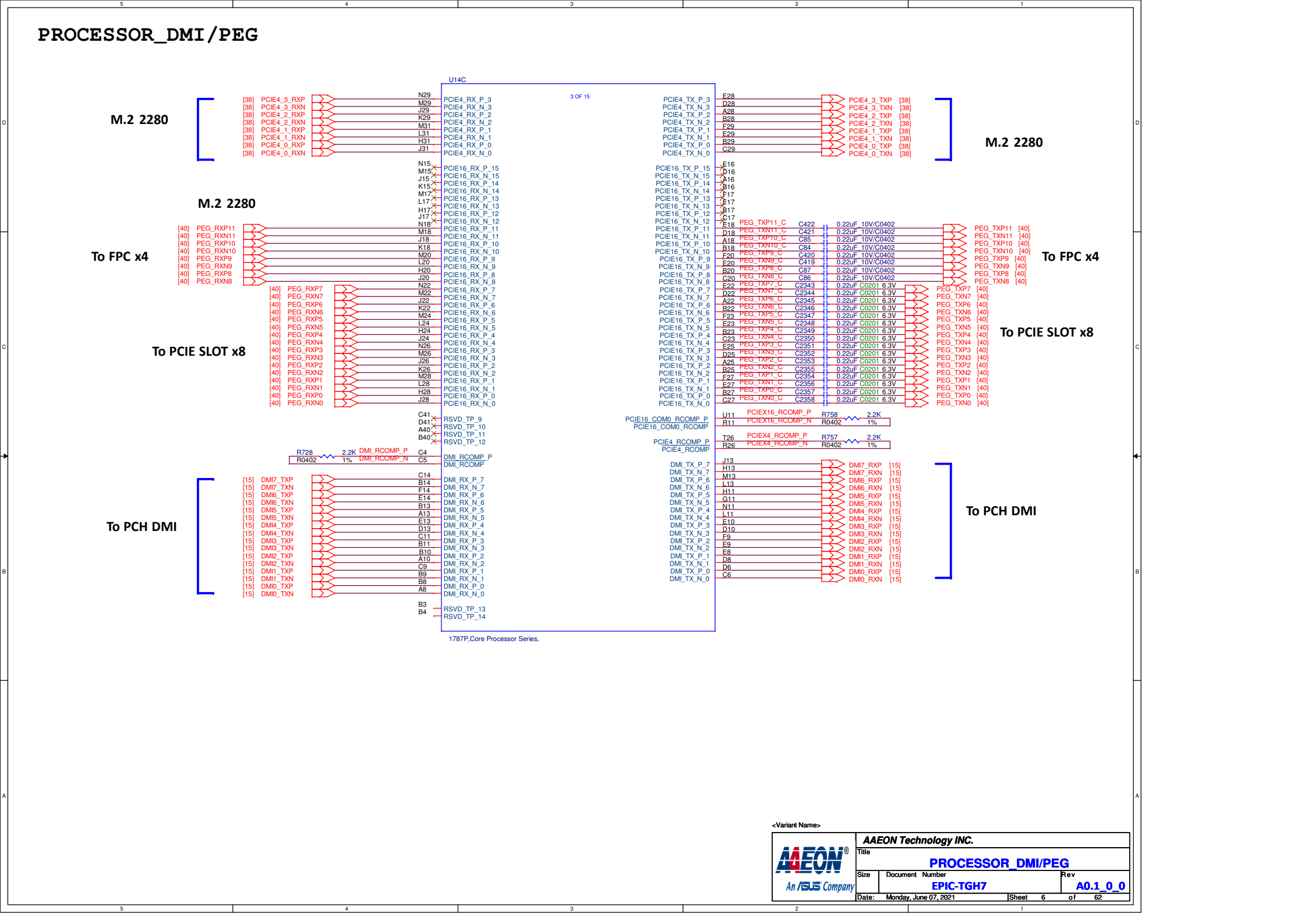
Project Name : EPIC-TGH7  
Project Number:  
Version: A0.1\_0\_0



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51	PWR IMVP9 Controller
52	PWR +VCCIN
53	PWR +VCCIN-1
54	PWR +VCCIN_AUX
55	PWR +VCCIN_AUX_PCH
56	PWR +VDDQ / +VTT / +V3P3SB
57	POWER STANDBY
58	PWR +VDDQ_VPP / +V1P8A
59	PWR +V1P2S HDMI
60	POWER INPUT,MISC
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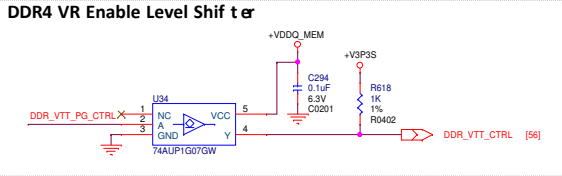
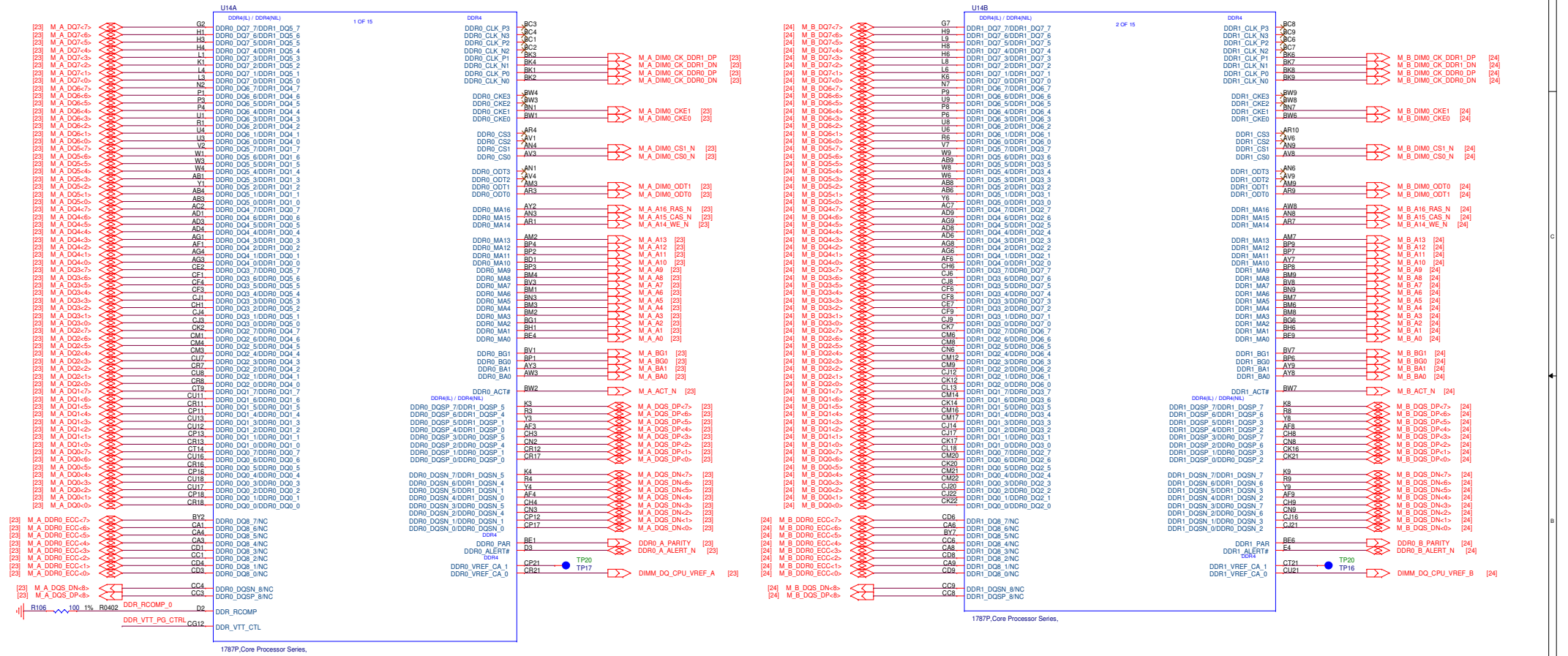
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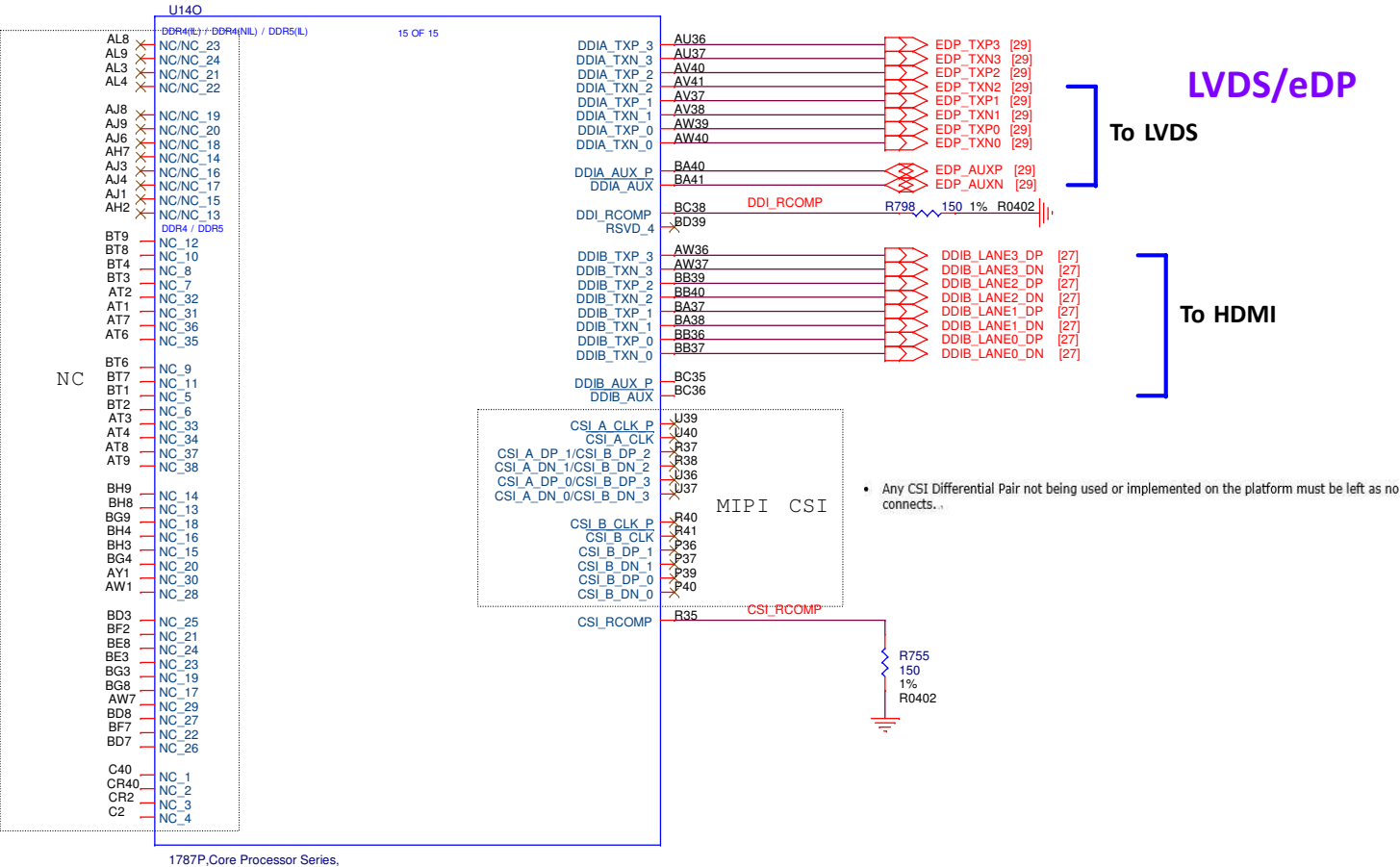
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AAEON Technology INC.			
Title			
PROCESSOR_DMI/PEG			
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PROCESSOR\_DDR4



PROCESSOR\_DDI/eDP



## PROCESSOR\_DDI2

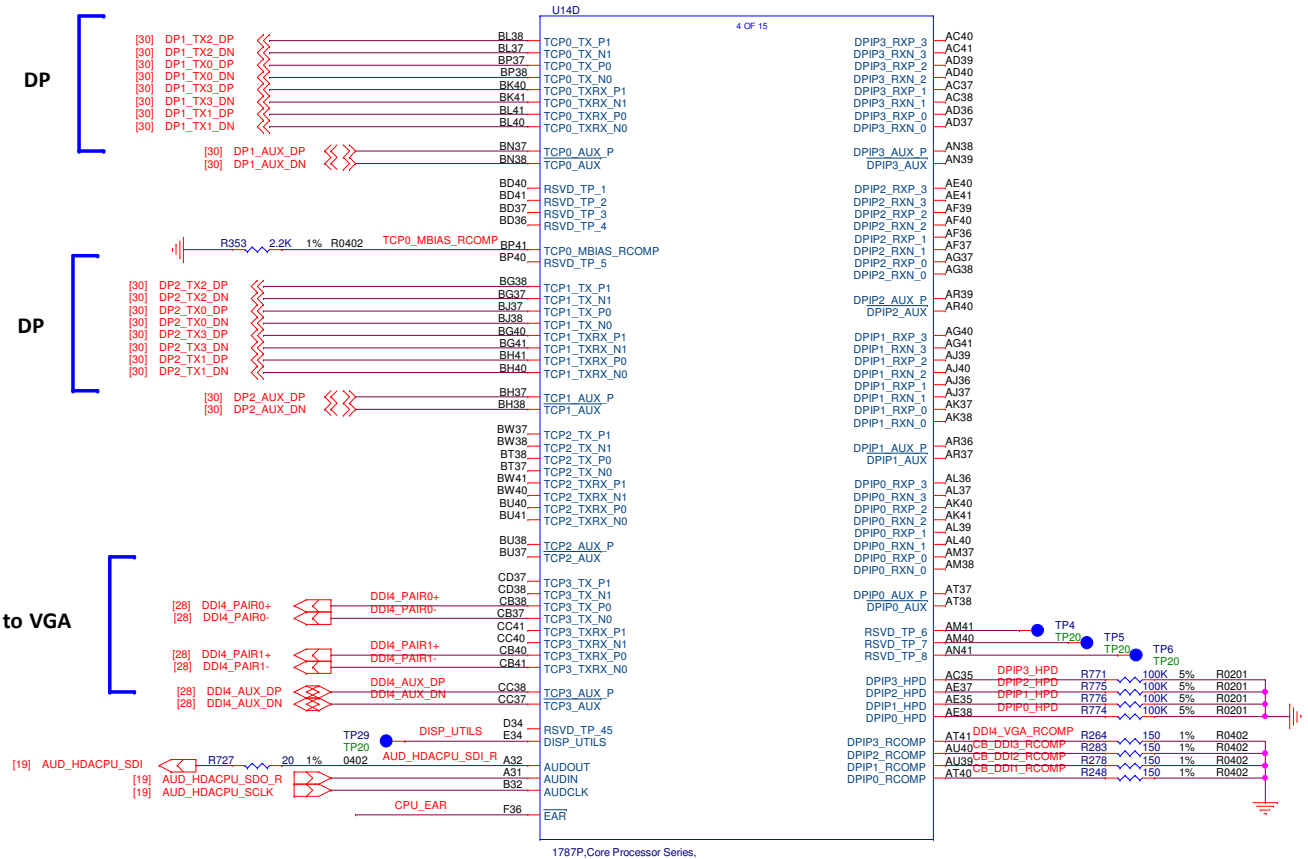
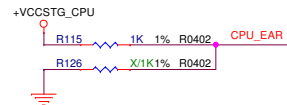
## TCP Port Signal Mapping For DisplayPort\*

Description	Signal Mapping	
	DDI	DP++
Main Link (Tx)	TCP_TX0	DP Lane_0
	TCP_TX1	DP Lane_2
	TCP_TXRX0	DP Lane_1
	TCP_TXRX1	DP Lane_3
Note: Apply to TCP ports only.		

## DDI Ports Availability

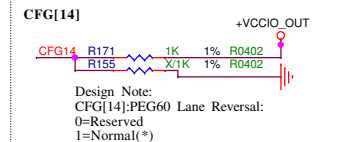
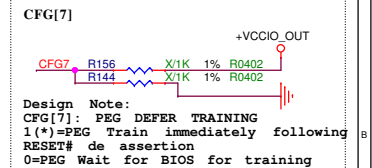
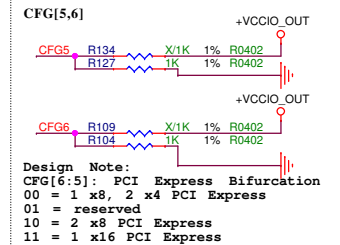
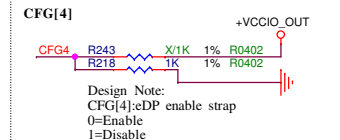
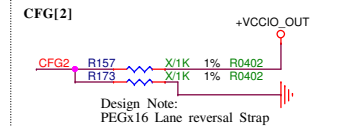
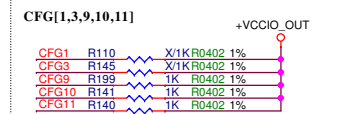
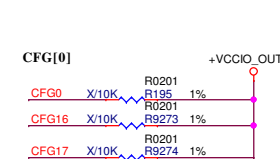
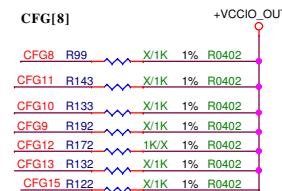
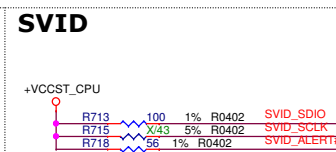
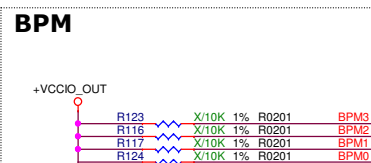
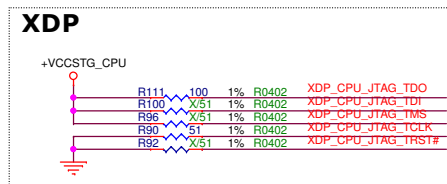
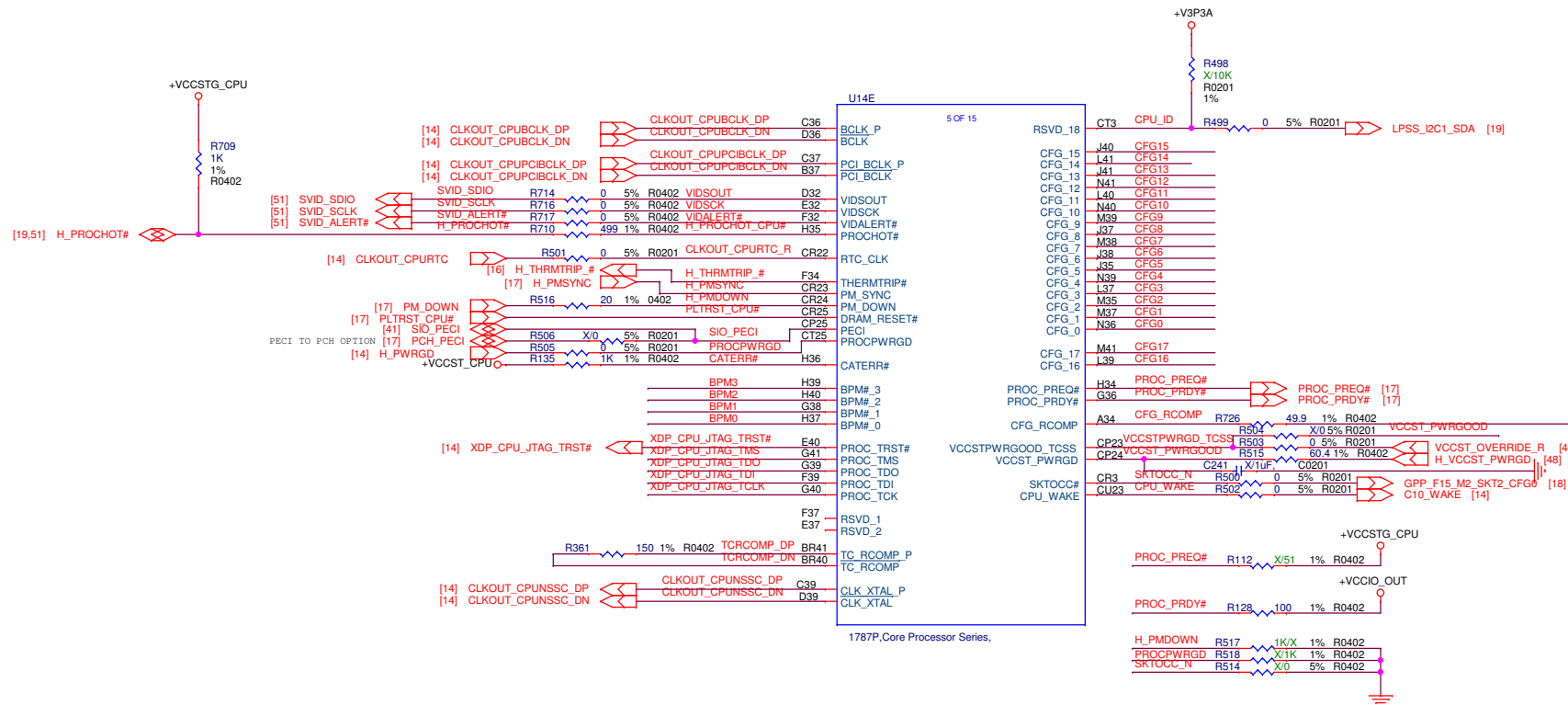
SKU	H Processor Line
DDI A	eDP*
DDI B	eDP*/DP*/HDMI*
TCP0	DP*/HDMI*
TCP1	DP*/HDMI*
TCP2	DP*/HDMI*
TCP3	DP*/HDMI*
DPIP 0	DP*
DPIP 1	DP*
DPIP 2	DP*
DPIP 3	DP*

<b>CPU_EAR</b>	Stall CPU reset sequence until de-asserted:
1 (*)	Normal Operation; No stall.
0	Stall

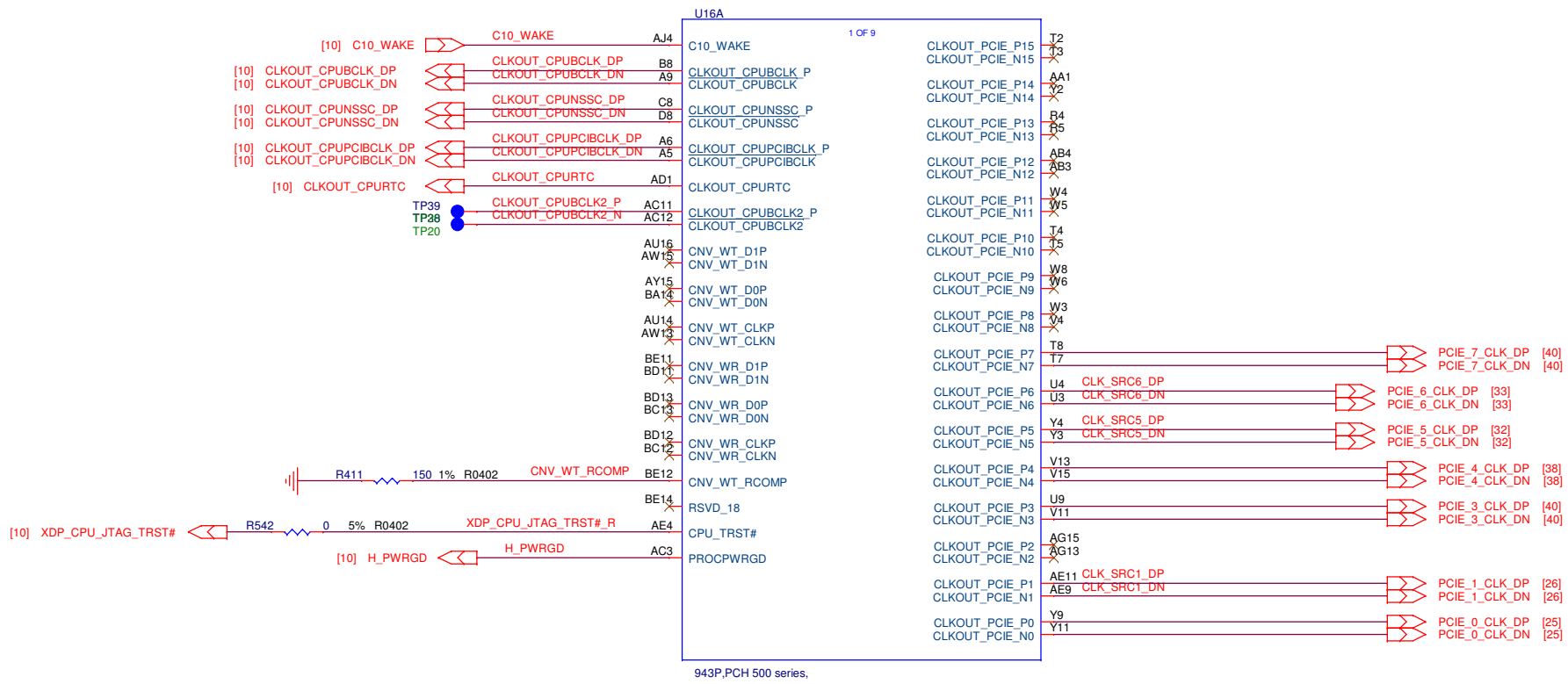


<Variant Name>

## PROCESSOR\_CLK/CFG/RSVD



PCH\_CLK



To PCIE X8  
mini card

To m.2 B


To m.2 M

To FPC

To LAN I225  
I219

Name	Type	SSC Capable	Description
CLKOUT_PCIE_P[15:0] CLKOUT_PCIE_N[15:0]	O	Yes	<b>PCI Express® Clock Output:</b> Serial Reference 100 MHz PCIe® specification compliant differential output clocks to PCIe® devices <ul style="list-style-type: none"><li>CLKOUT_PCIE_P/N [15:0] = Can be used for PCIe® Gen1/2/3 support</li><li>CLKOUT_PCIE_P/N [9, 7, 4, 3, 0] = Must be used for PCIe® Gen4 support</li></ul>

<Variant Name>



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An ASUS Company

**AAEON Technology INC.**

Title: **PCH\_CLK**

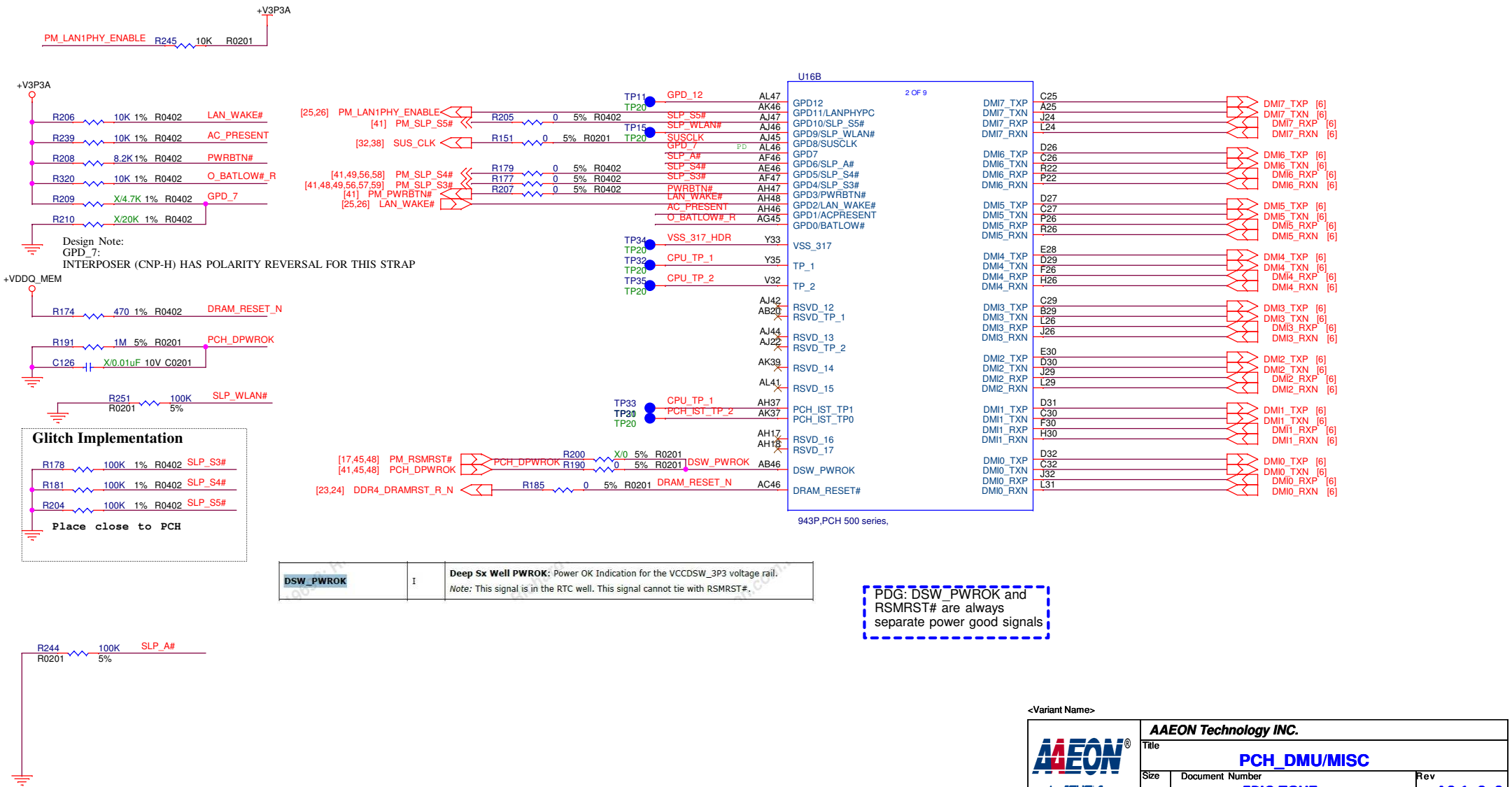
Size	Document Number	Rev
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PCH 3\_DMI/MISC



DSW_PWROK	I	Deep Sx Well PWROK: Power OK Indication for the VCCDSW_3P3 voltage rail.
		Note: This signal is in the RTC well. This signal cannot tie with RSMRST#.

PDG: DSW\_PWROK and RSMRST# are always separate power good signals



## Glitch Implementation



- Touch
- M.2 E KEY
- M.2 B KEY
- USB2.0x4
- USB2.0x4
- USB2.0x4
- USB2.0x4

+V3P3A

R321 4.7K 1% R0402 SPI0\_SI\_R



+V3P3A  
R184 100K 1% R0402 SPI0\_IO2\_R



+V3P3A

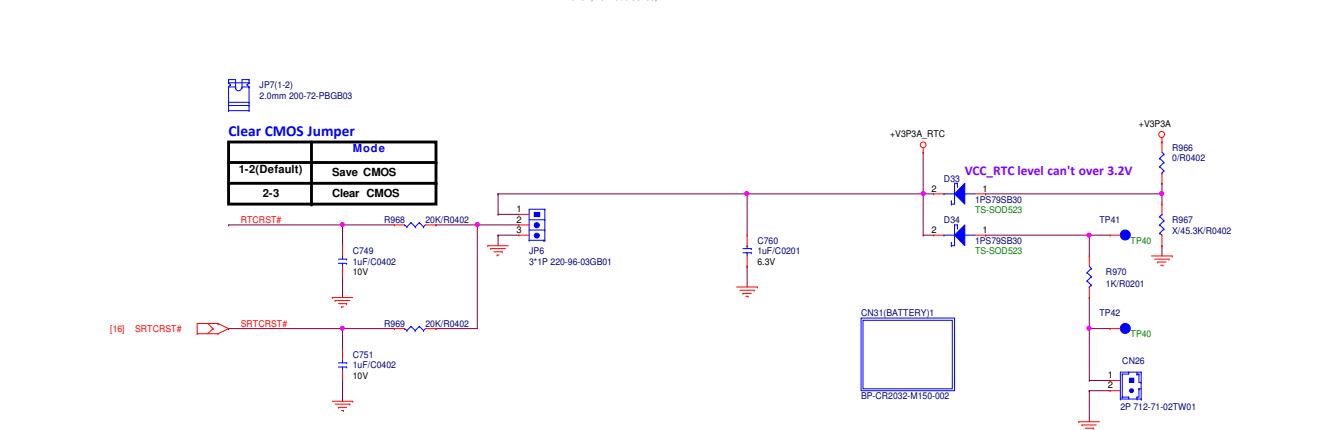
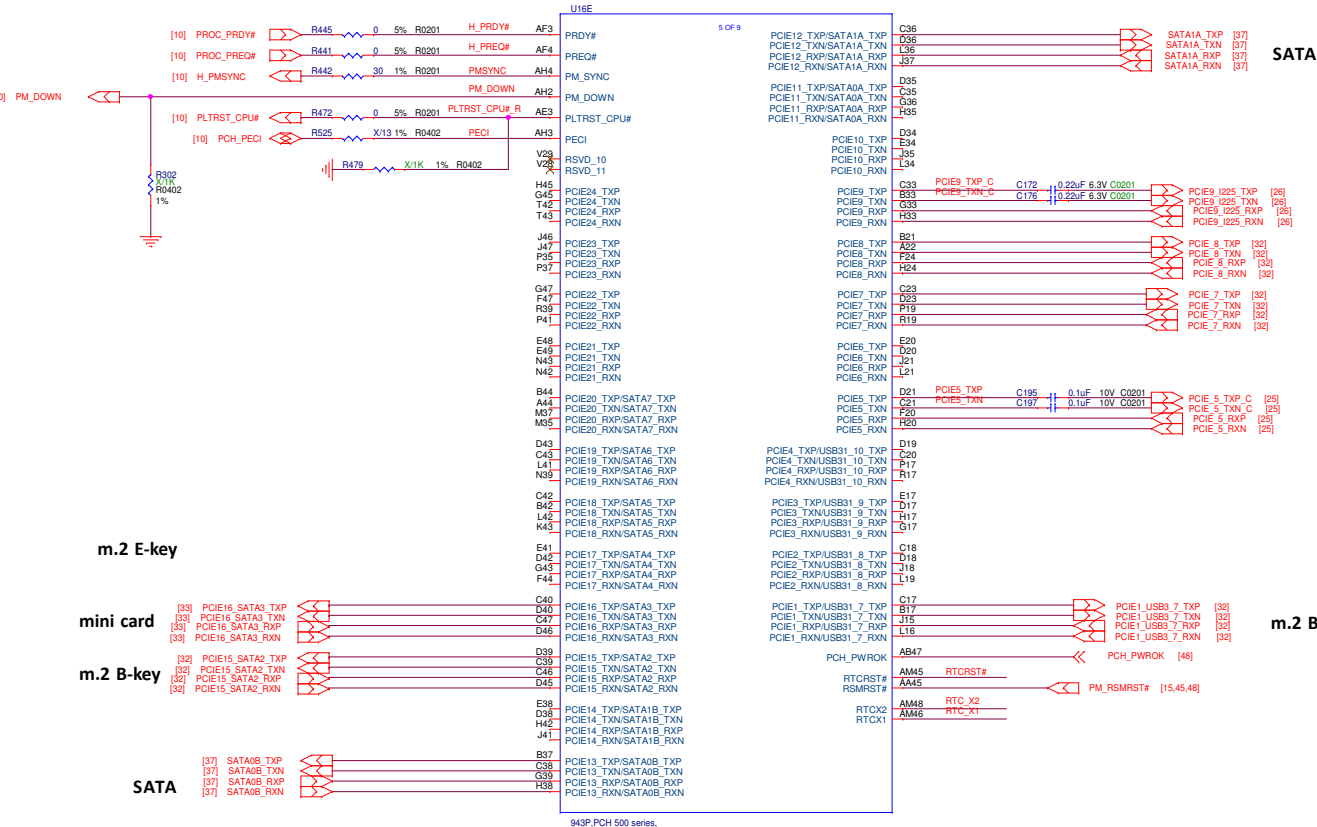
R233 100K 1% R0402 SPI0\_IO3\_R



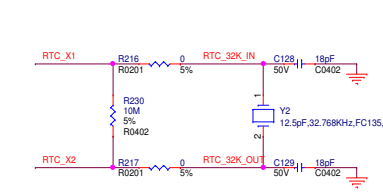
XTAL38P4M\_IN R808 0 5



PCH 4\_PCIE/SATA/RTC



XTAL-32.768KHz

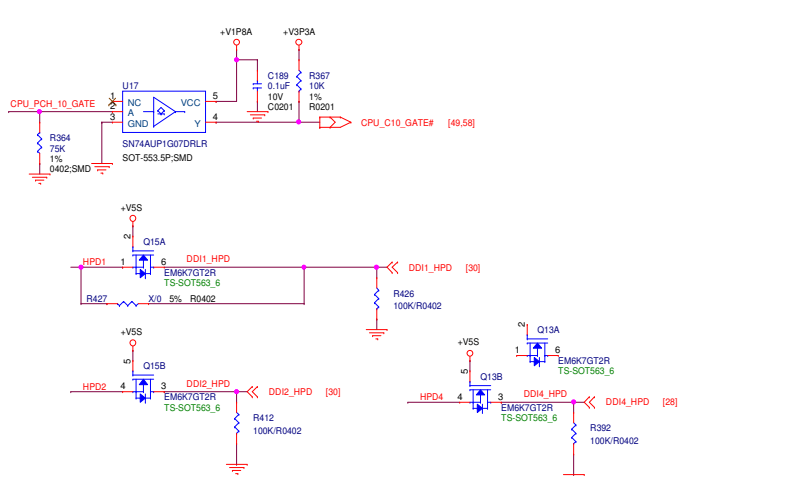
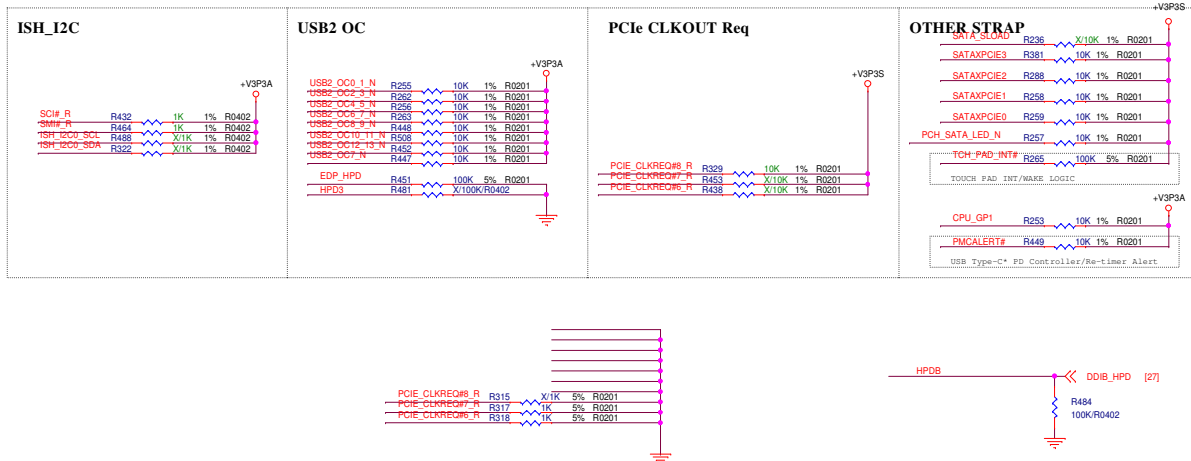
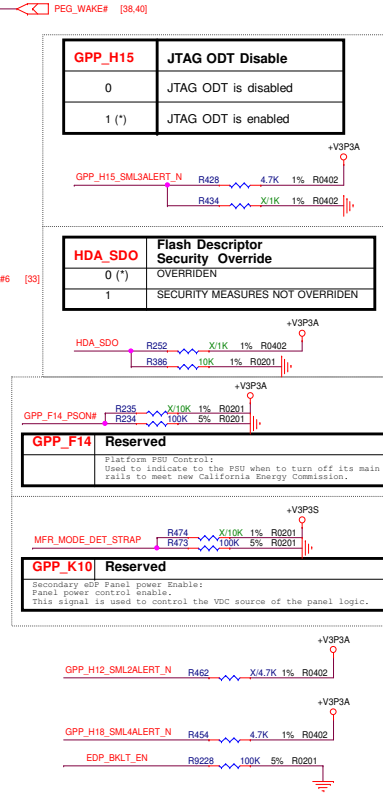


### Glitch Implementation

Diagram illustrating the Glitch Implementation connections:

Signal	Resistor	Value	Percentage	Target Pin
HDA_BIT_CLK_R	R290	X100K	5%	R0201
HDA_RST#_R	R287	X100K	5%	R0201
I2S1_SFRM	R266	X100K	5%	R0201
SNDW2_CLK	R388	X100K	5%	R0201

Place close to PCH



PCH 6\_UART/GPIO/eSPI/JTAG/SMB

SMBALERT#	TLS confidentiality
0	TLS CONFIDENTIALITY DISABLE
1 (*)	TLS CONFIDENTIALITY ENABLE

SML0ALERT#	ESPI
0 (*)	Enable eSPI
1	Disable eSPI

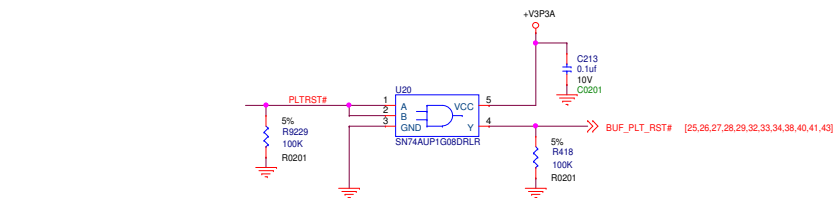
SML1ALERT#	CPUNSSC CLOCK FREQ
0 (*)	38.4MHZ CLOCK FROM DIRECT CRYSTAL
1	19.2MHZ CLOCK FROM DIVIDER

GSPI1_MOSI	BOOT BIOS STRAP
0 (*)	SPI SELECTED
1	eSPI SELECTED FOR SYSTEM FLASH

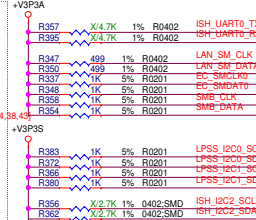
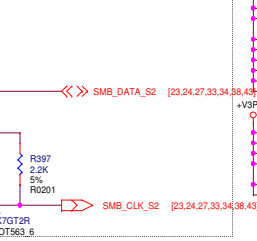
GSPI0_MOSI	No Reboot
0 (*)	REBOOT ENABLED
1	NO REBOOT

SPKR	Top Swap Override
0 (*)	Disabled
1	Enable

Glitch Implementation



SMBus Level Shift

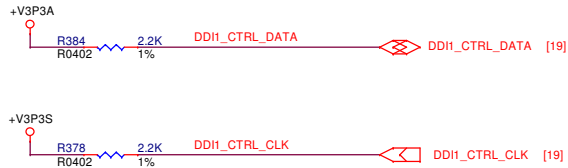


DBG_PMODE	Reserved
This strap should sample high. There should NOT be any on-board device driving it to opposite direction during strap sampling.	

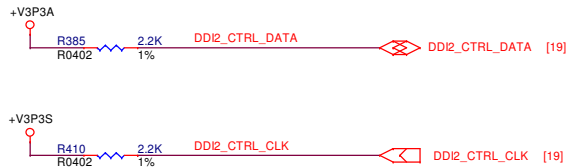
VRALERT#	Reserved
VR Alert: ICC Max. throttling indicator from the PCH voltage regulators. VRALERT# pin allows the VR to force PCH throttling to prevent an over current shutdown. PMC based on the VRALERT# and messages from the processor. The messages from the processor allows the processor to constrain the PCH to a particular power budget.	

PCH 7\_OTHER STRAP

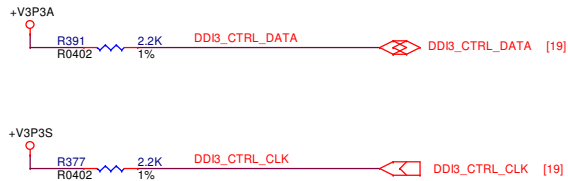
TBT_LSX0	TBT LSX #0 PINS VCCIO CONFIGURATION
0	1.8V
1 (*)	3.3V



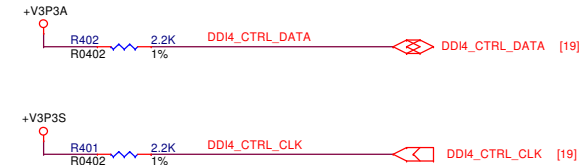
TBT_LSX1	TBT LSX #0 PINS VCCIO CONFIGURATION
0	1.8V
1 (*)	3.3V



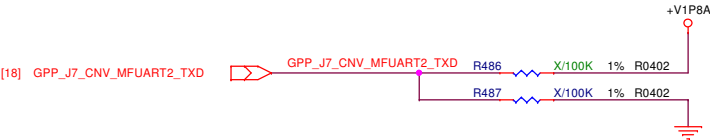
TBT_LSX2	TBT LSX #0 PINS VCCIO CONFIGURATION
0	1.8V
1 (*)	3.3V



TBT_LSX3	TBT LSX #0 PINS VCCIO CONFIGURATION
0	1.8V
1 (*)	3.3V



GPP_J7	Reserved
	For CNVi and discrete connectivity : Optional WLAN/Bluetooth* WWAN co-existence signal (Output)



GPP_J4	CNVI STRAP
0	CNVI ENABLE
1 (*)	CNVI DISABLE




GPP_J2	XTAL SELECT
0 (*)	38.4/19.2MHZ
1	24MHZ



GPP_F10	Reserved
	SGPIO Reference Clock: The SATA controller uses rising edges of this clock to transmit serial data, and the target uses the falling edge of this clock to latch data. The SClOCK frequency supported is 32 kHz. If SGPIO interface is not used, this signal can be used as GPP_F10.



<Variant Name>



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OTHER STRAP

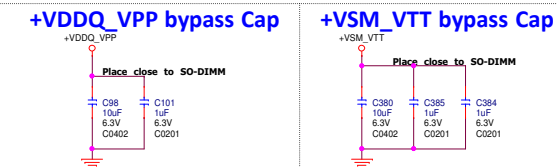
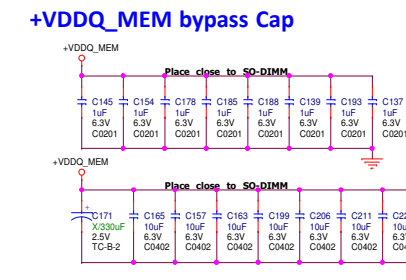
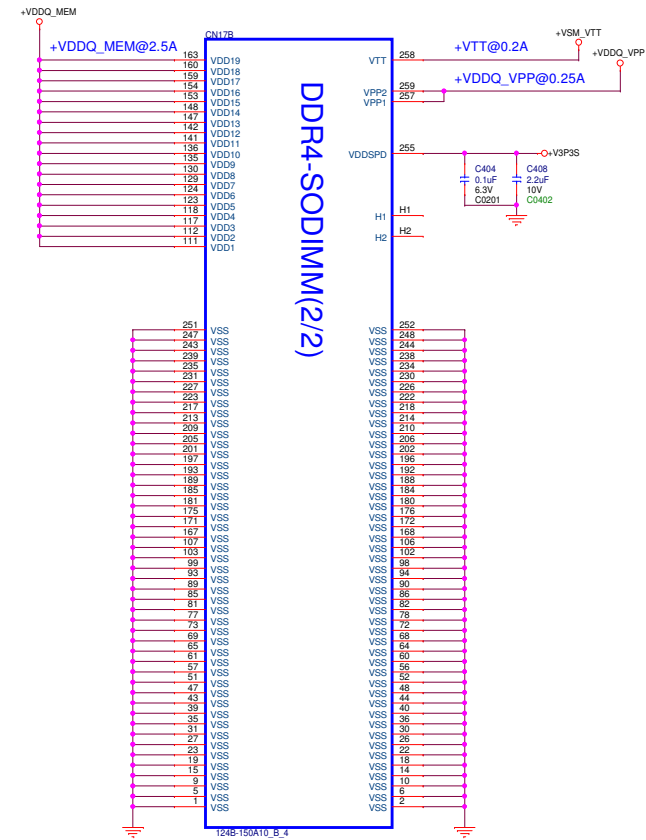
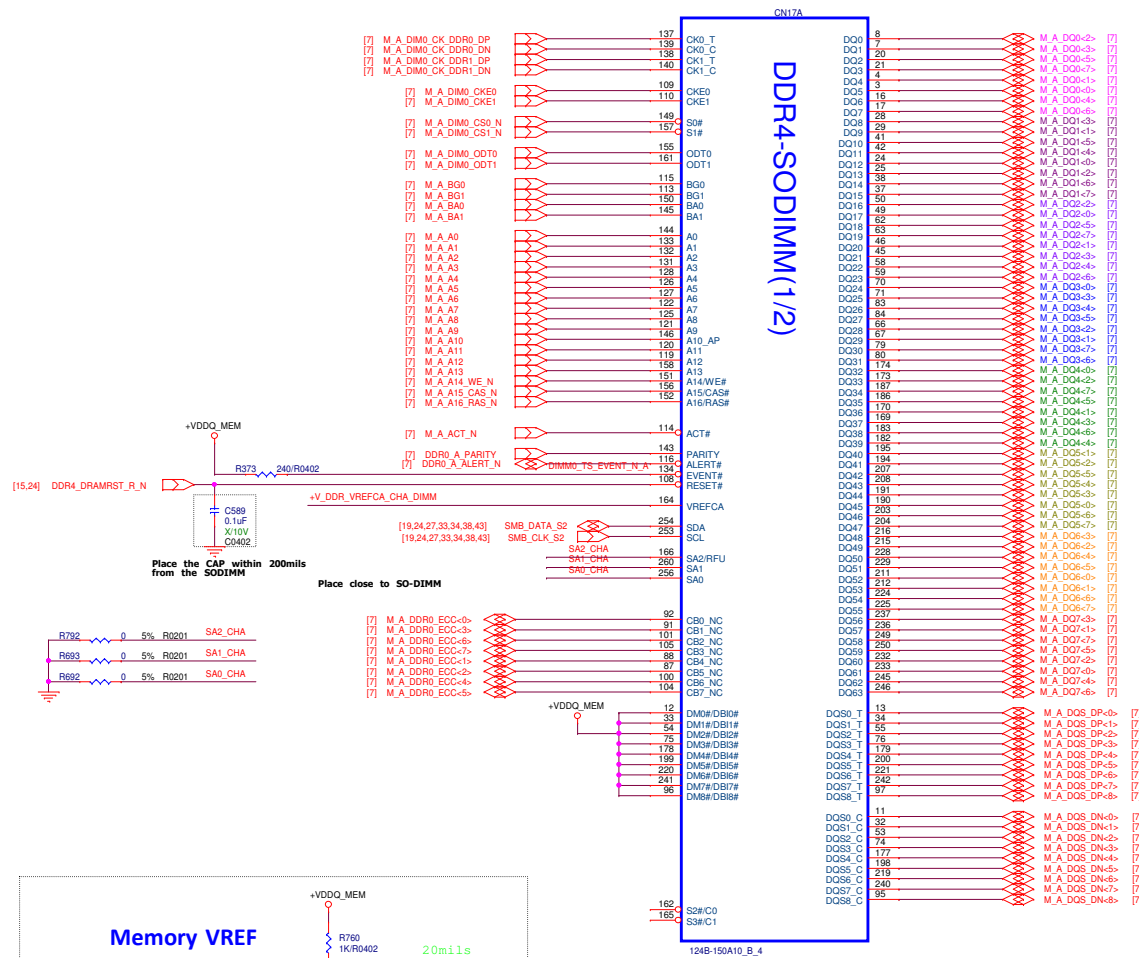
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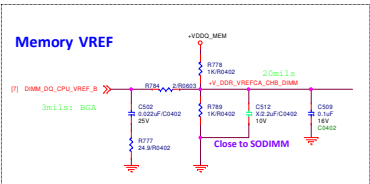
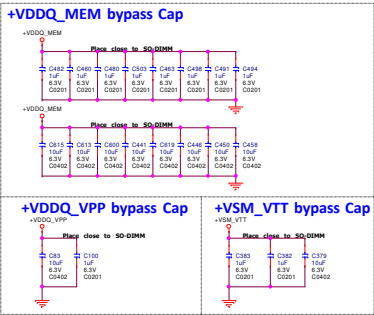
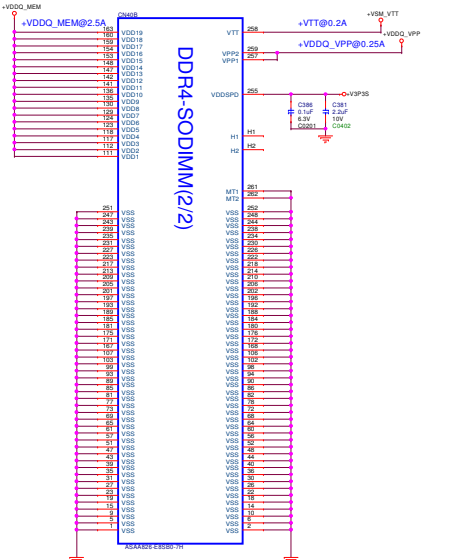
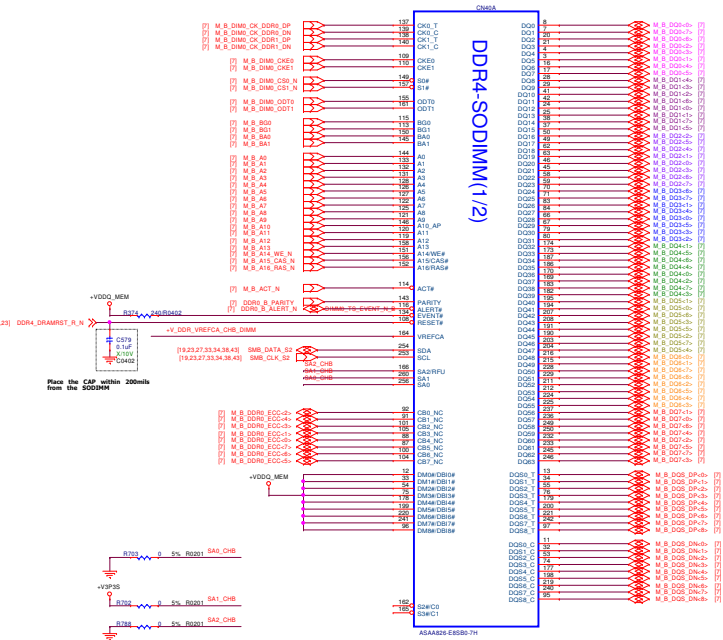
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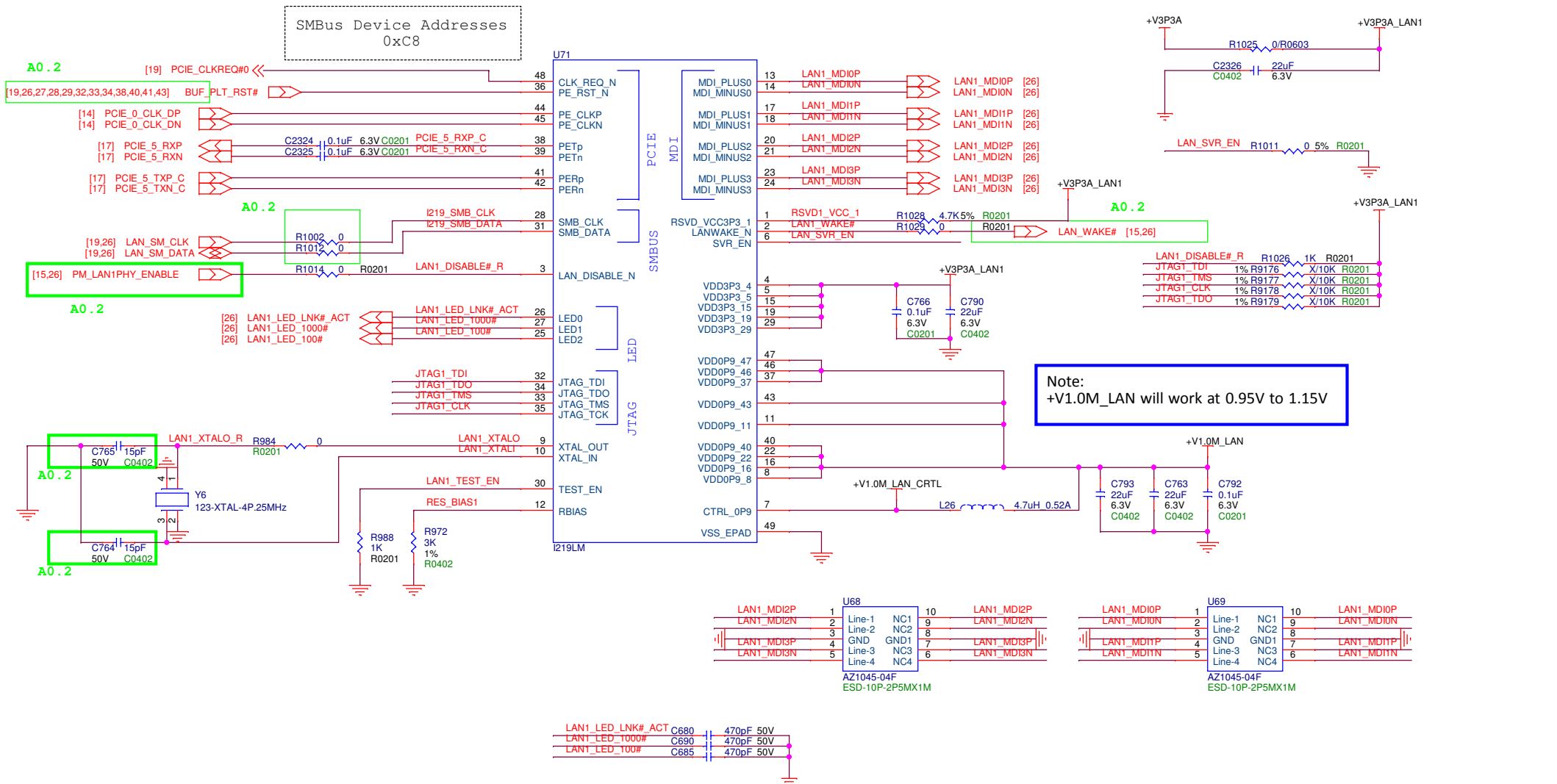
DDR4-SODIMM\_A




## DDR4-SODIMM\_B



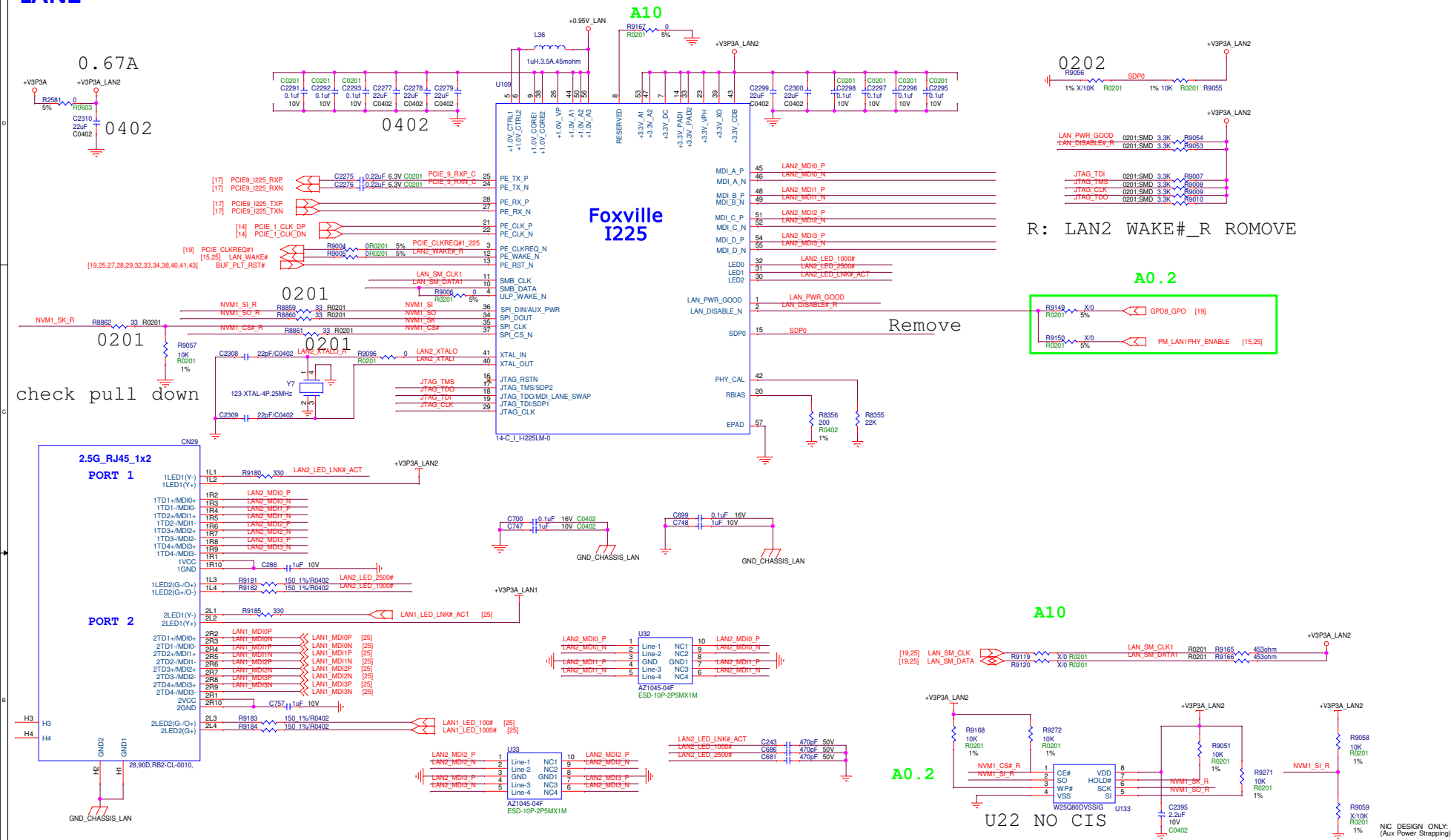




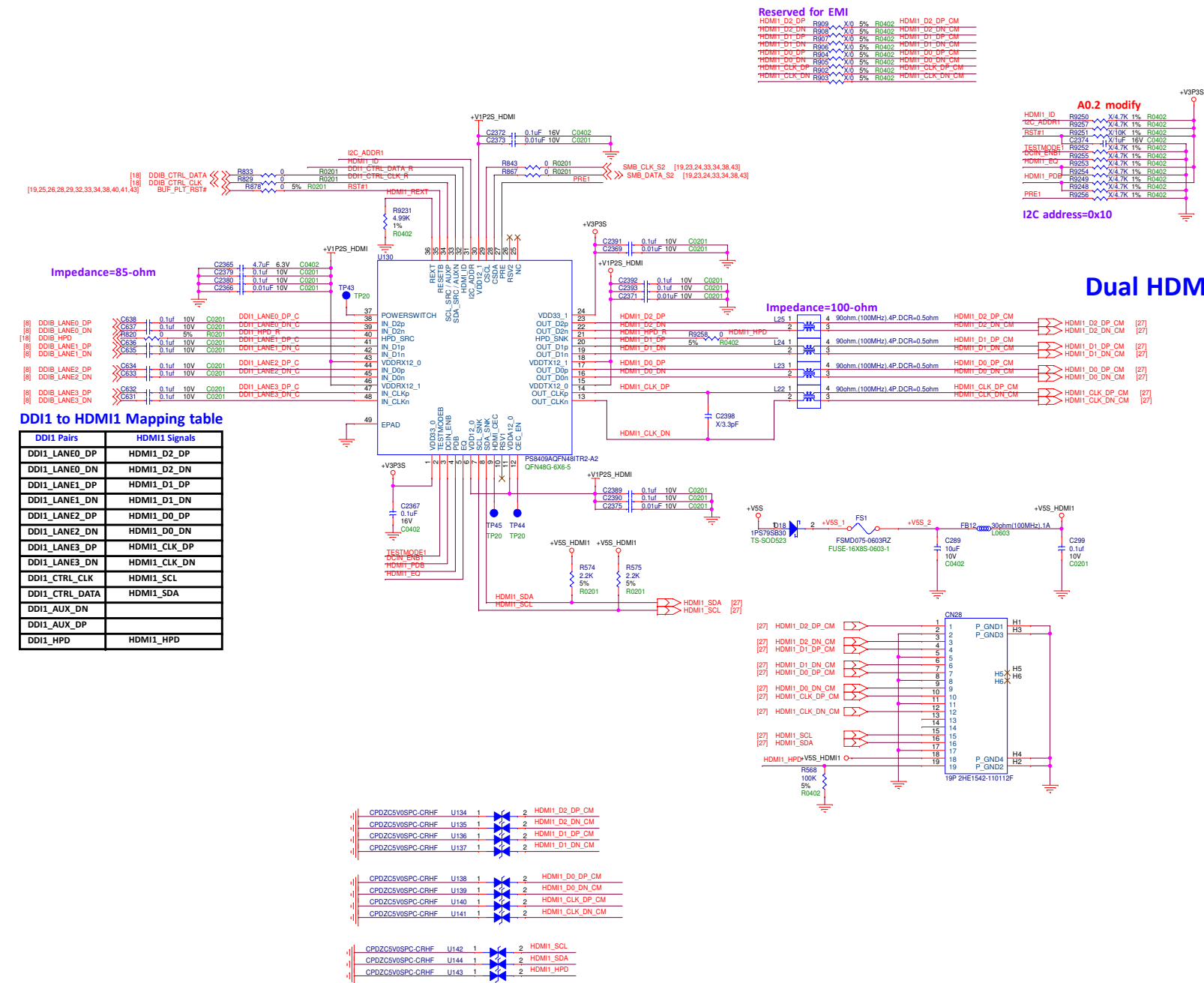
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Size	Document Number	Rev	
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## LAN2

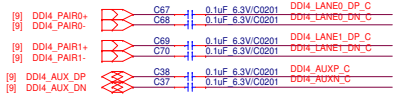


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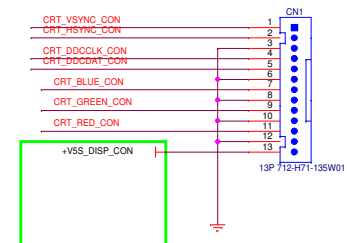
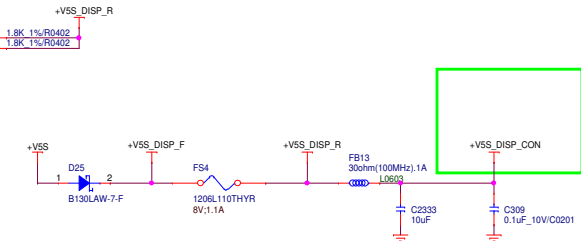
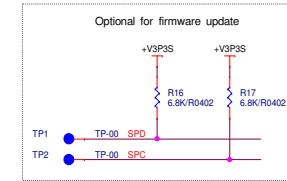
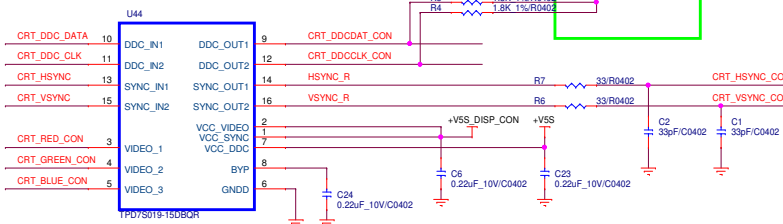
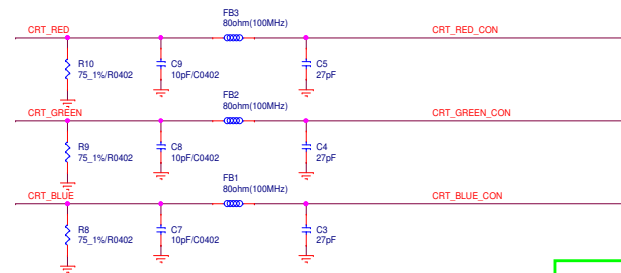
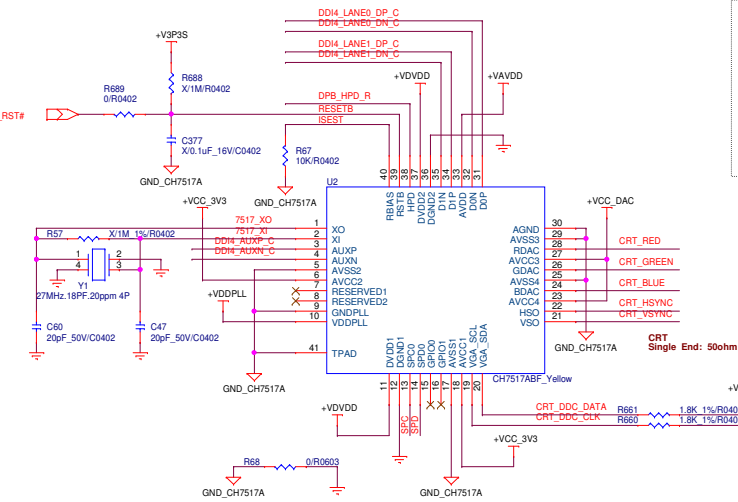
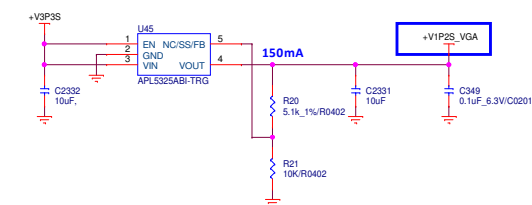
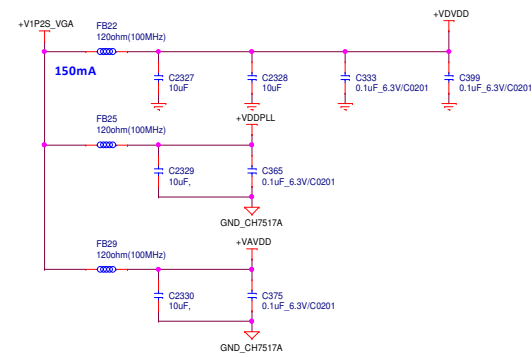
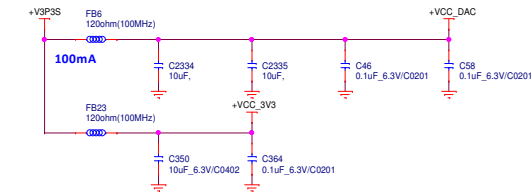
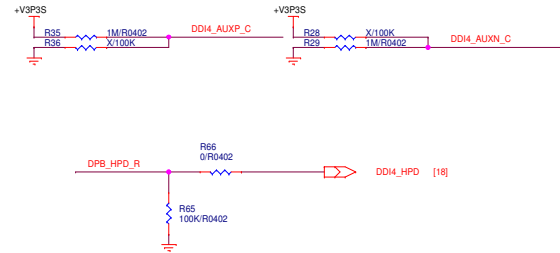


# CRT

DDI Interface  
Differential Pair: 85ohm



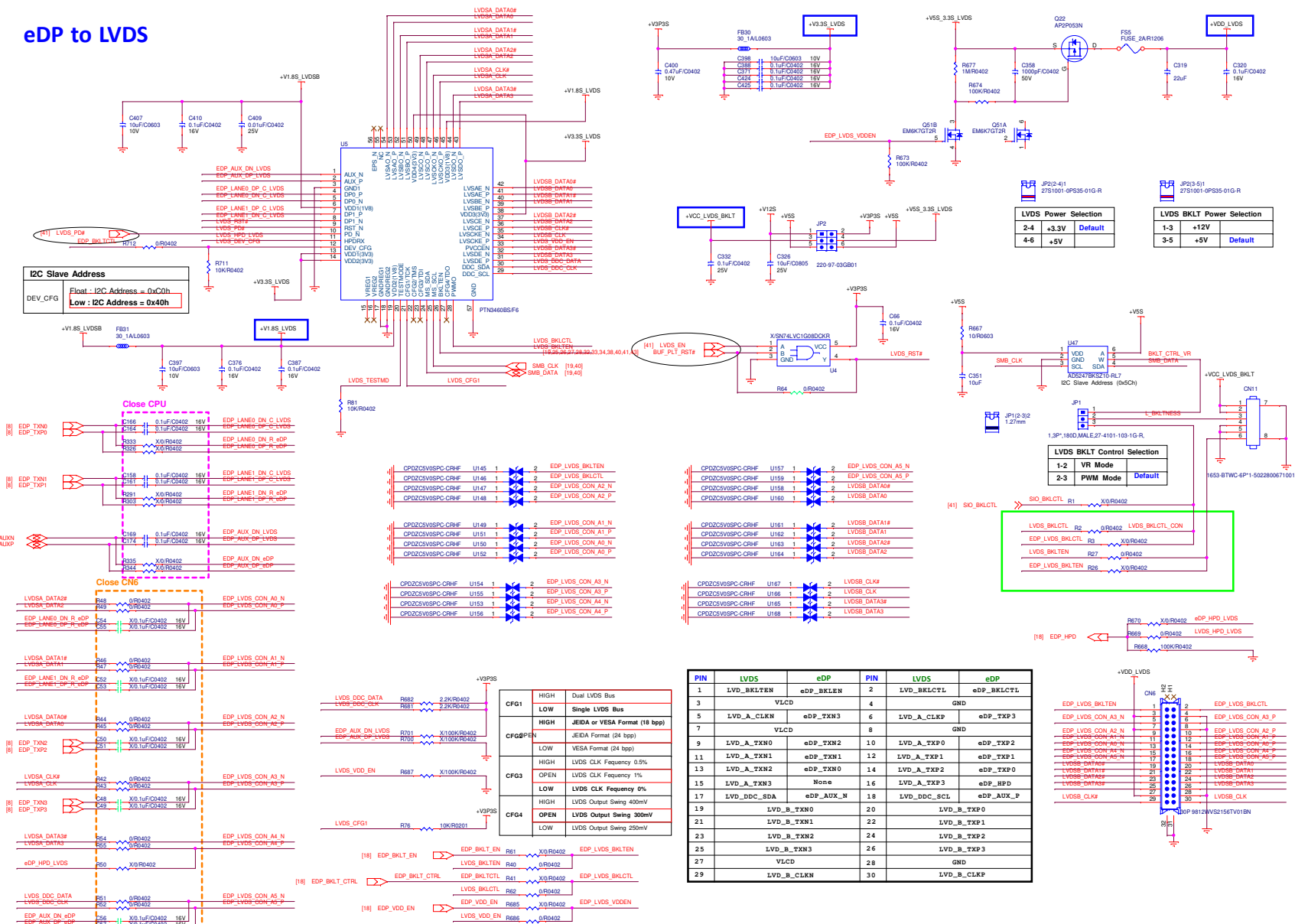
[19,25,26,27,29,32,33,34,38,40,41,43] BUF\_PLT\_RST#



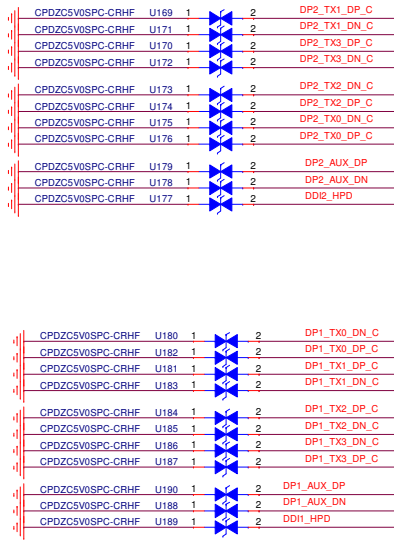
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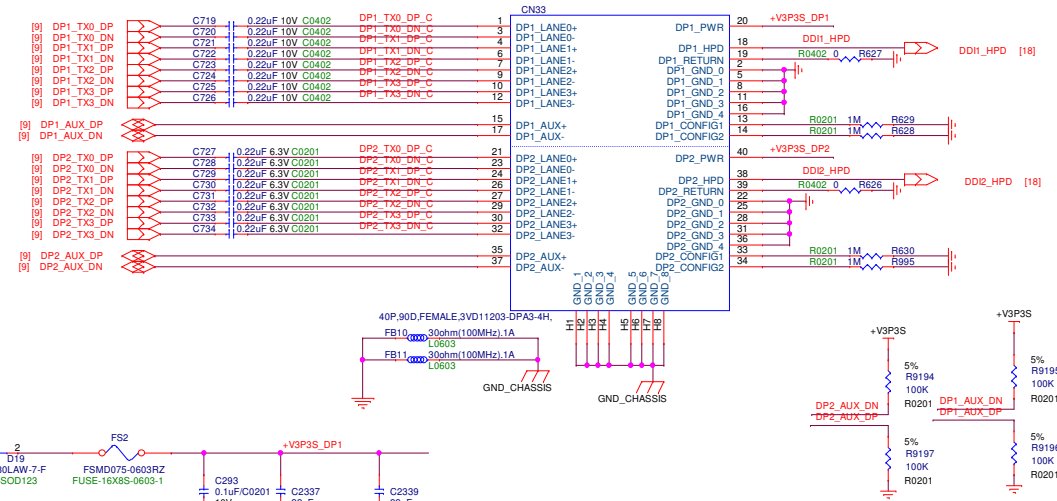
## eDP to LVDS



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# Display Port 1



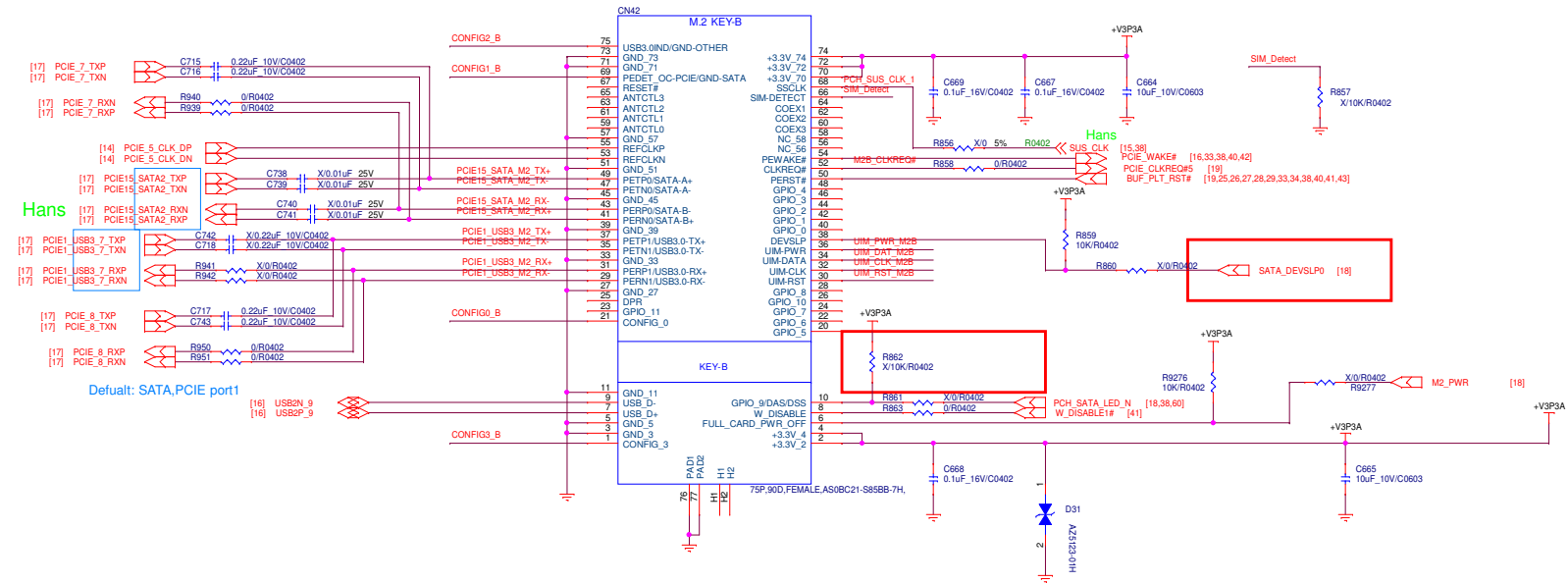
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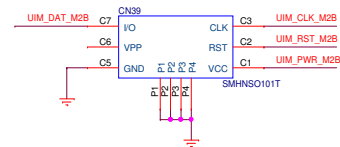
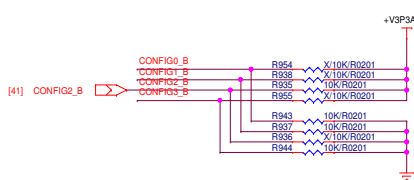
REMOVE



**M.2 Key B(3052 need colay 3042)**



CONFIG	0	1	2	3	Type	Port Config
	0	0	0	0	SSD - SATA	N/A
	0	1	0	0	SSD - PCIE	N/A
	0	0	1	0	WWAN - PCIe	0
	0	1	1	0	WWAN - PCIe	1
	0	0	0	1	WWAN - USB 3.0	0
	0	1	0	1	WWAN - USB 3.0	1
	0	0	1	1	WWAN - USB 3.0	2
	0	1	1	1	WWAN - USB 3.0	3



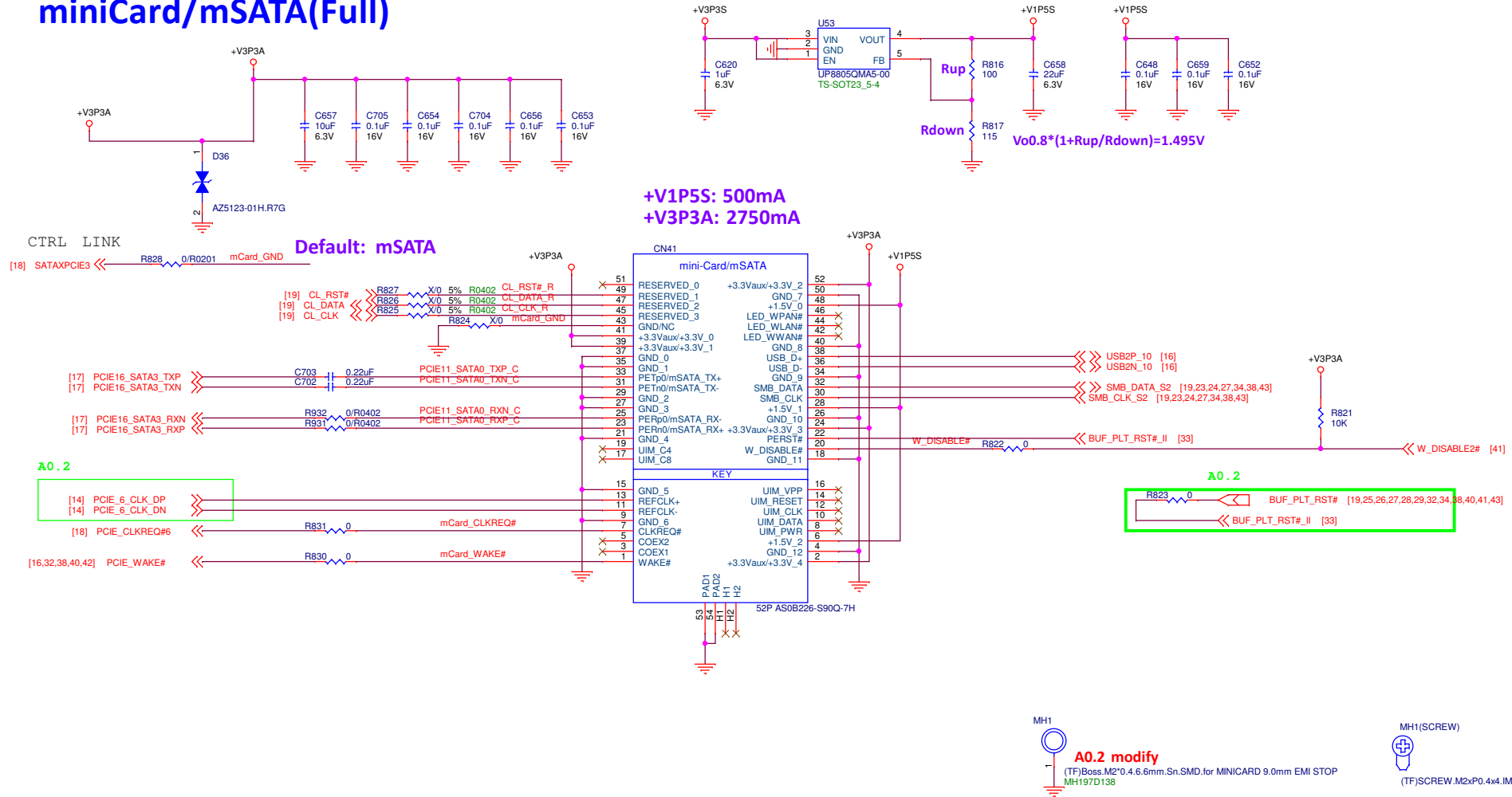
M2

NGFF 8.5mm  
MH256D150\_NSB


M2(BOSS)1

(TF)Screw M3.0\*5.4.00mm.IMS.Black.Nylok

## miniCard/mSATA(Full)

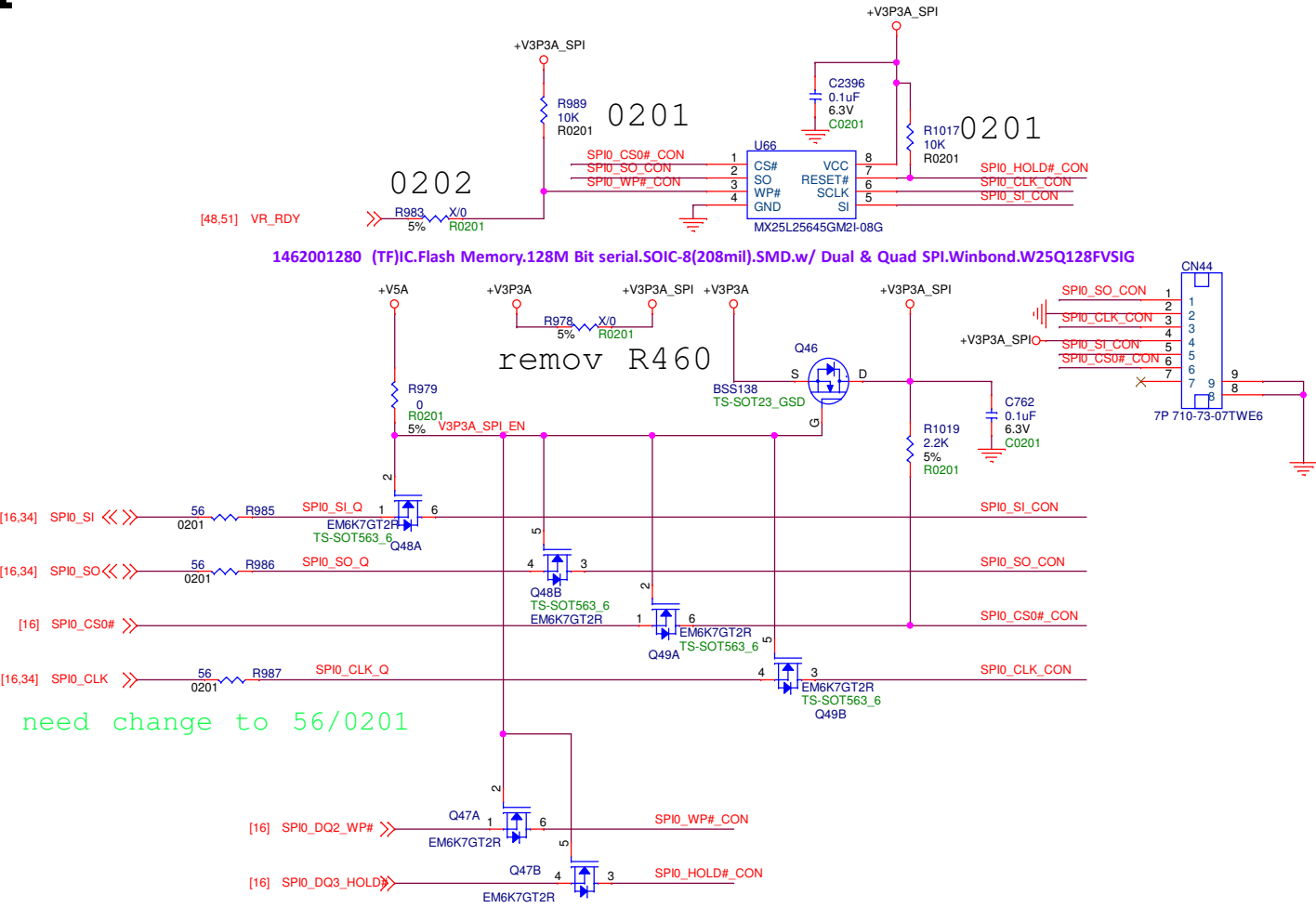


**<Variant Name>**

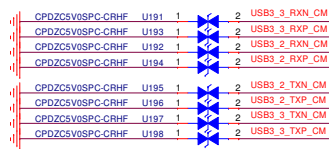
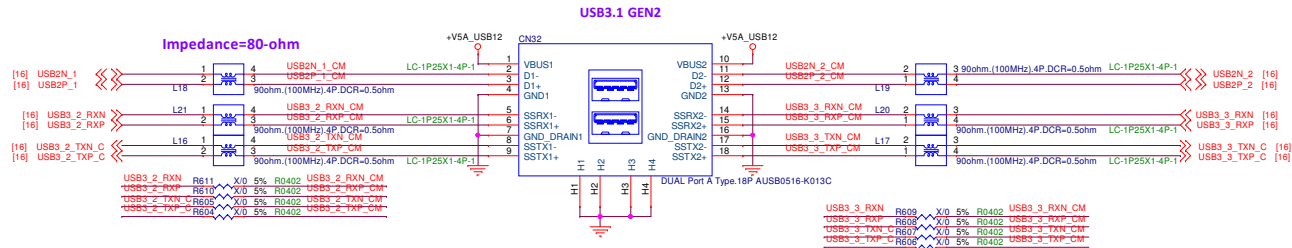
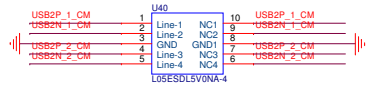
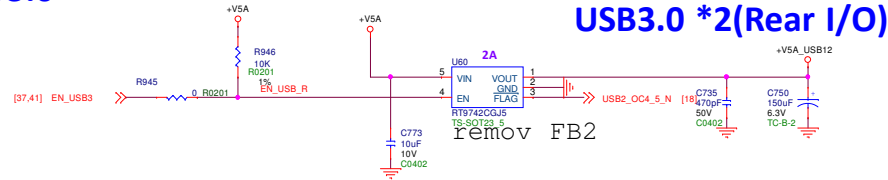
 An ASUS Company	<b>AEEON Technology INC.</b>			
	Title			
	<b>Mini card &amp; msata</b>			
	Size	Document Number		Rev
		<b>EPIC-TGH7</b>		<b>A0.1_0_0</b>
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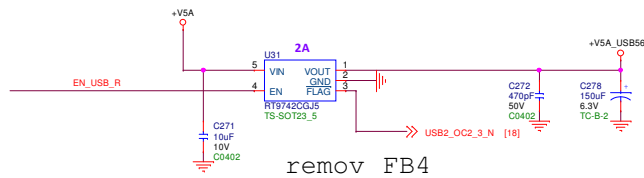
SPI



## USB3.0

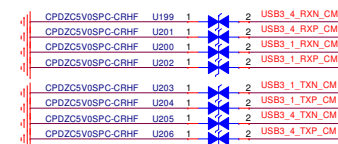
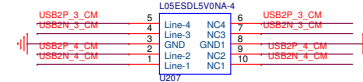
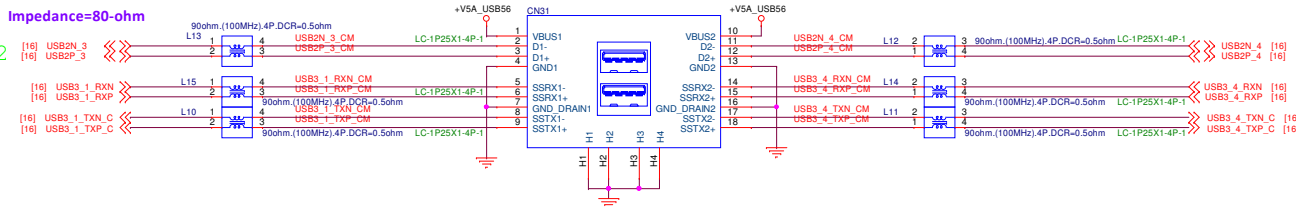
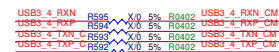
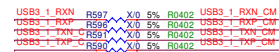


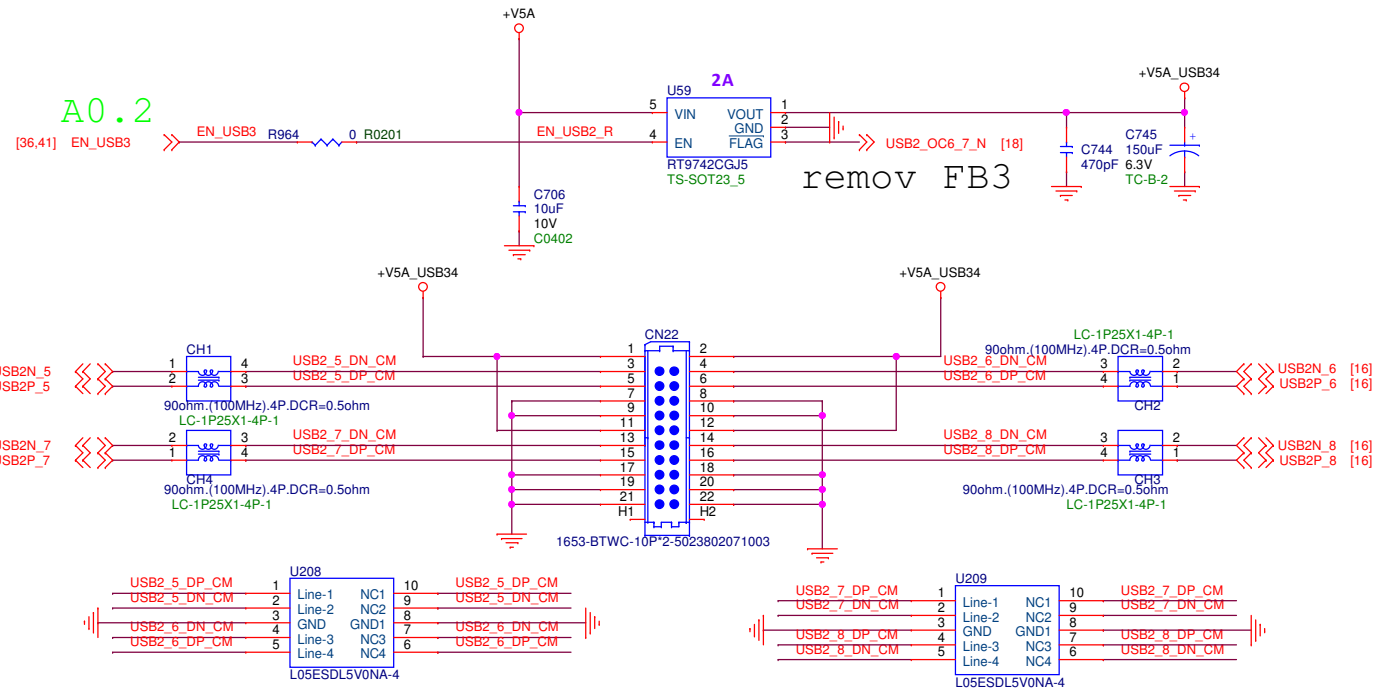
## USB3.0



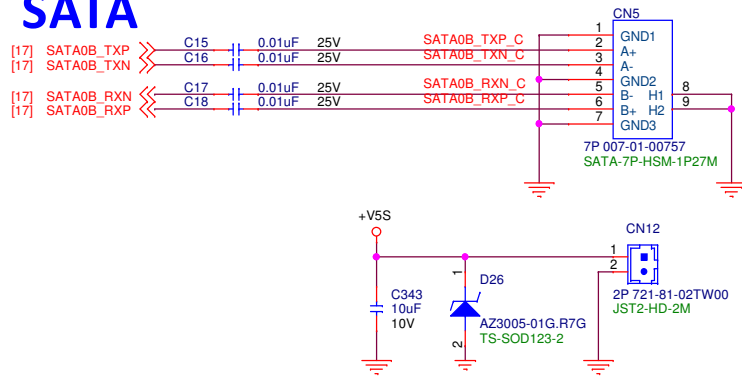
USB3.1 GEN2

**USB3.0 \*2(Rear I/O)**

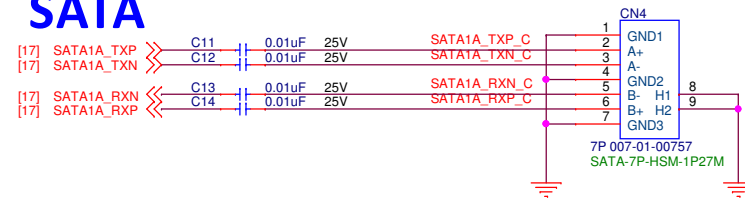




## SATA

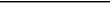


## SATA

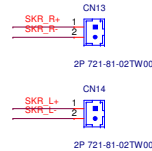
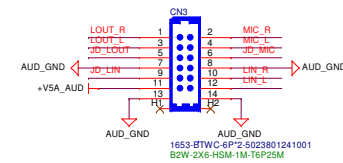


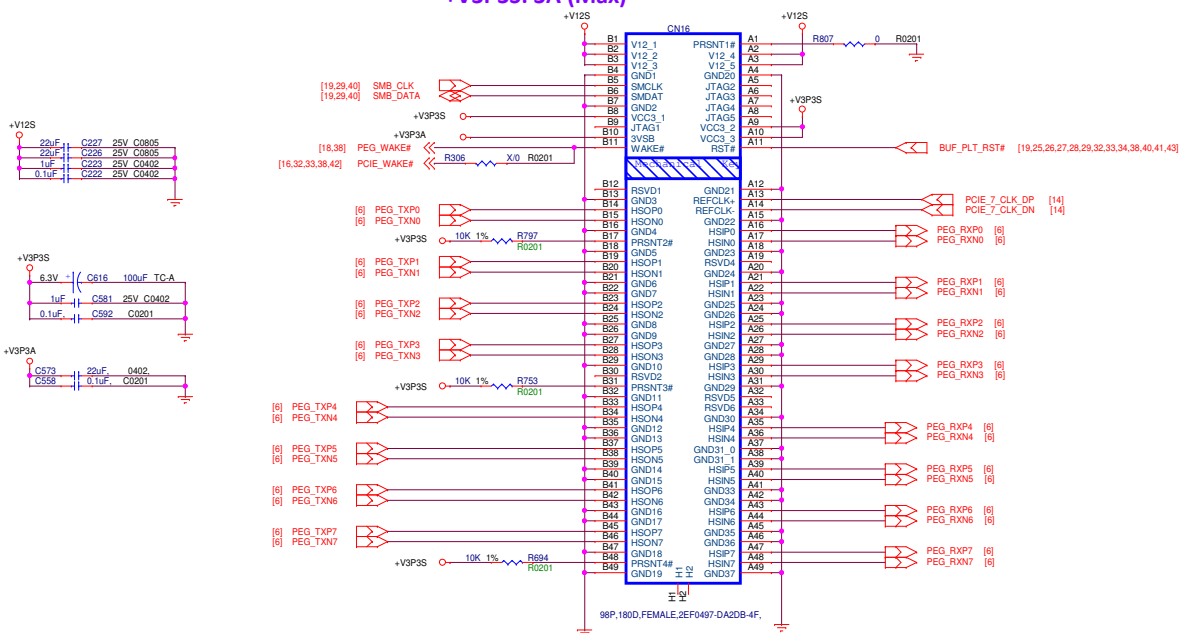
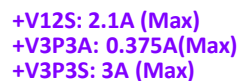
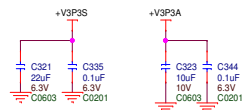
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AAEON Technology INC.			
Title			
USB2.0 X 4/SATA X 2			
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	<b>Title</b>			
	<b>M.2 M key2</b>			
<b>Size</b>	<b>Document</b>	<b>Number</b>	<b>Rev</b>	
		<b>EPIC-TGH7</b>	<b>A0.1_0_0</b>	
<b>Date:</b> Monday, June 07, 2021		<b>Sheet</b>	<b>38</b>	<b>of 62</b>





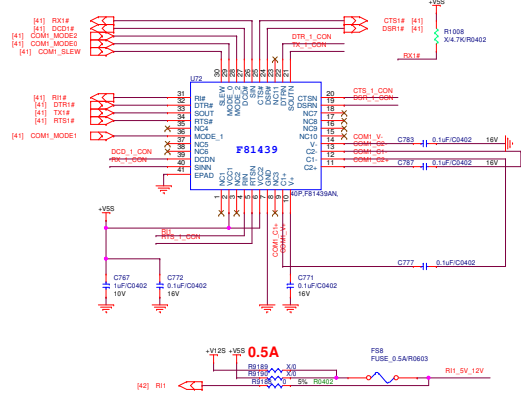




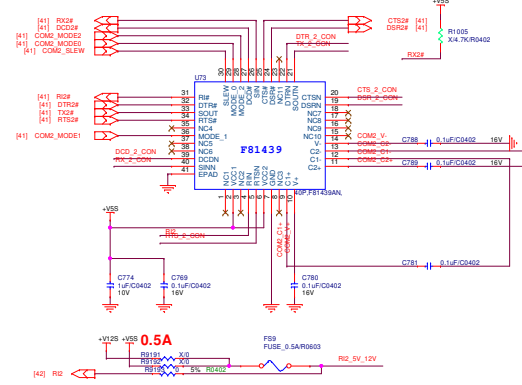
# COM1

## COM2

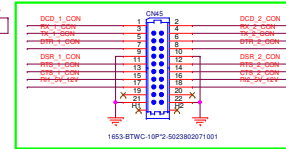
**COM1-RS232/RS422/RS485**



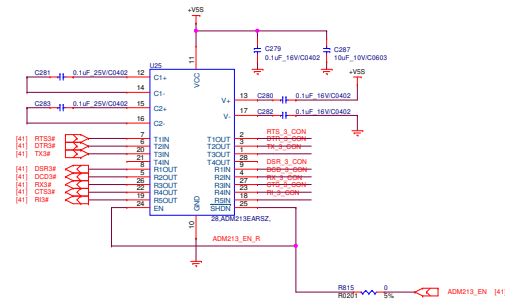
**COM2-RS232/RS422/RS485**



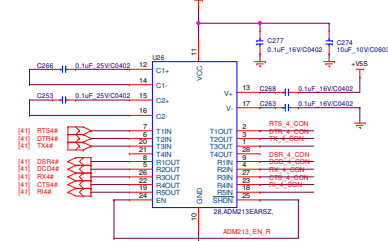
1-2	+12V	
3-4	Ring	Default
5-6	+5V	



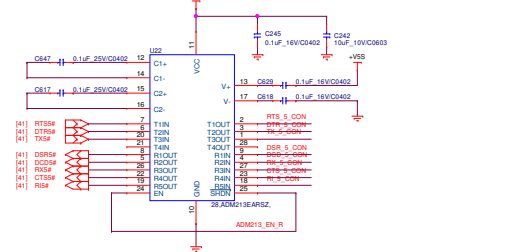
## COM3



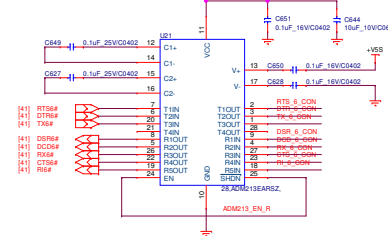
## COM4



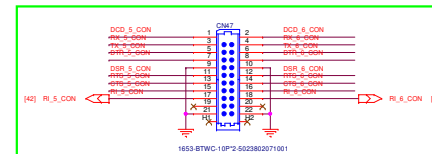
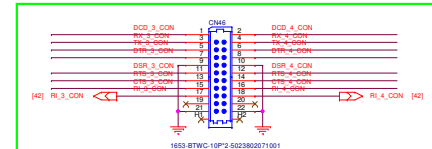
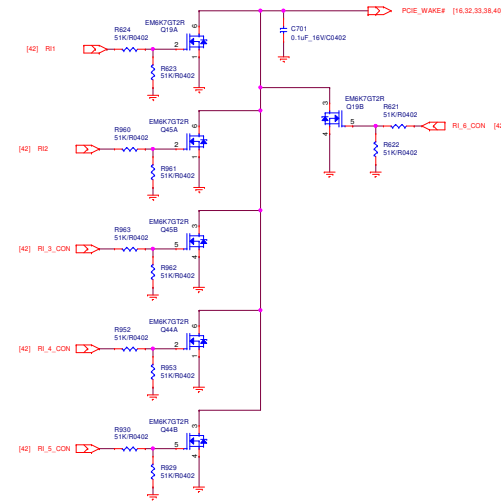
## COM5



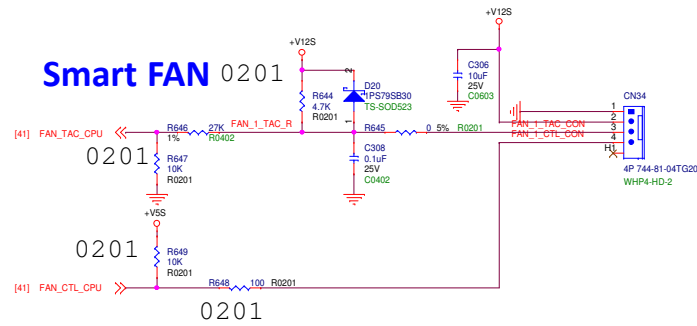
## COM6



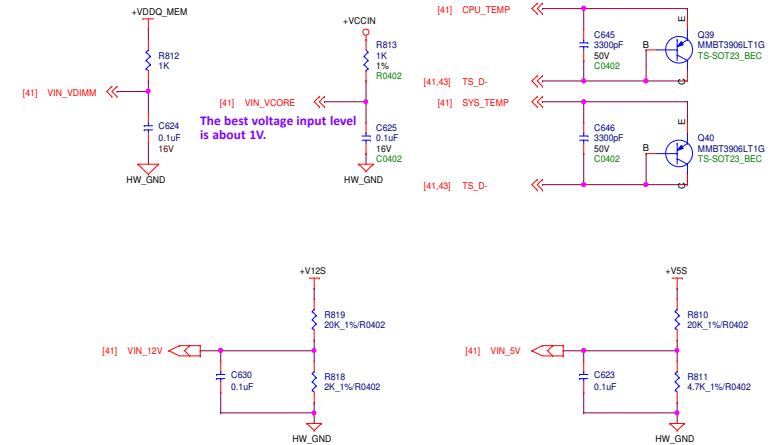
## Wake On Modem



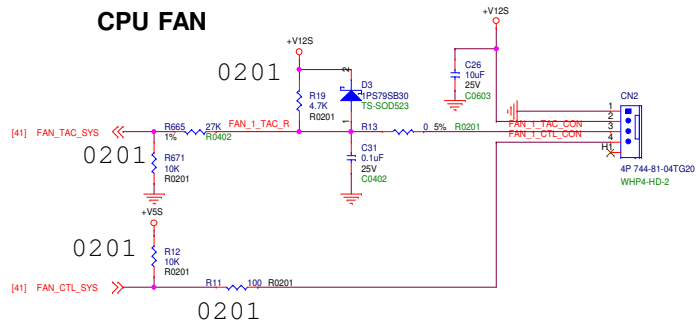
## Smart FAN 0201



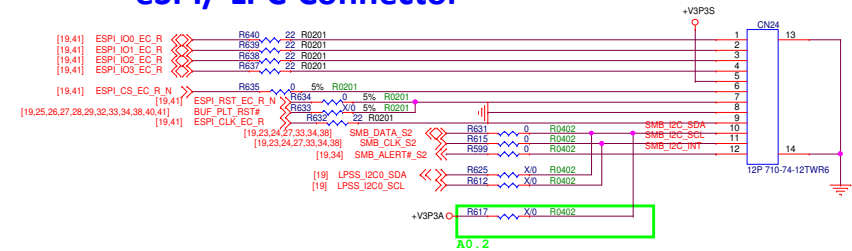
## Voltage Monitor(Vcore, Vmem)



## CPU FAN



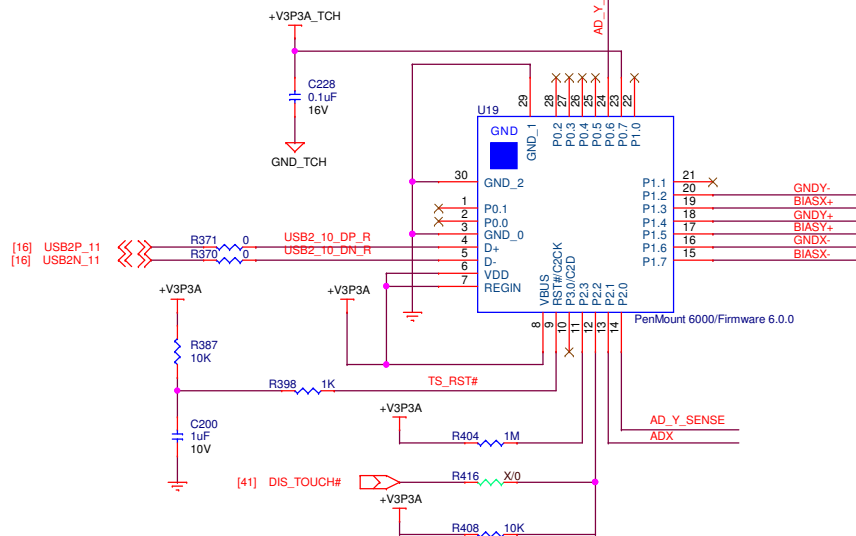
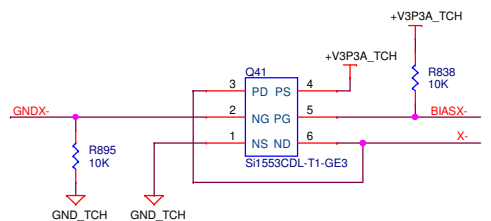
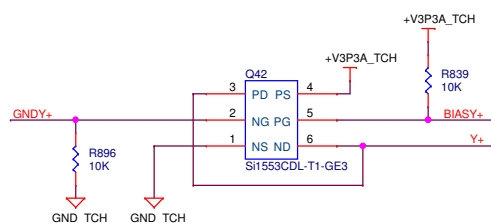
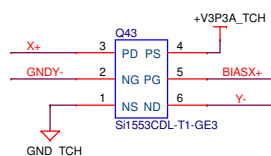
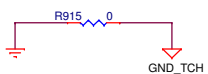
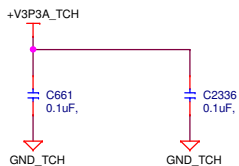
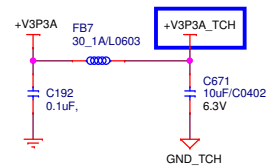
## eSPI/ LPC Connector



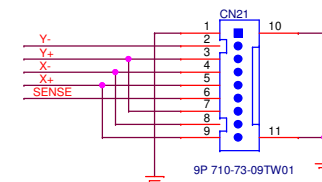
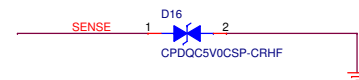
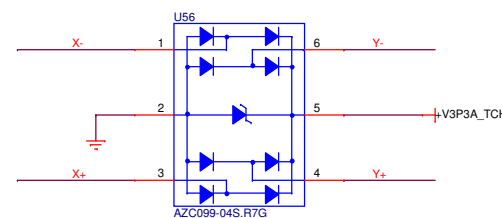
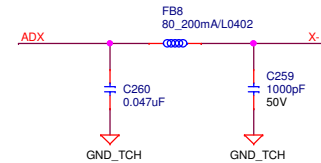
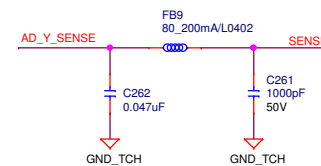
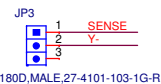
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AAEON Technology INC.			
Title		FAN/HW monitor/eSPI/LPC	
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4,5,8 Wire Selection		
1-2	4,8 wire	Default
2-3	5 wire	



CN	Touch Screen Lines		
	8-Wire	4-Wire	5-Wire
PIN9	Right Sense	N/A	N/A
PIN8	Left Sense	N/A	N/A
PIN7	Bottom Sense	N/A	N/A
PIN6	TOP Sense	N/A	Sense(S)
PIN5	Right Excite	Right	LR(X)
PIN4	Left Excite	Left	LL(L)
PIN3	Bottom Excite	Bottom	UR(H)
PIN2	Top Excite	Top	UL(Y)
PIN1	GND	GND	GND

<Variant Name>

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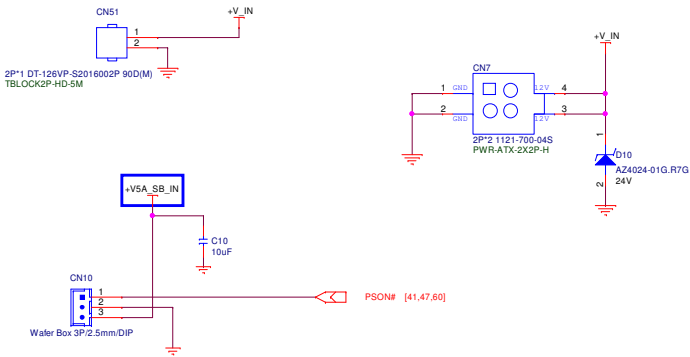
**AAEON Technology INC.**

Title: **Touch**

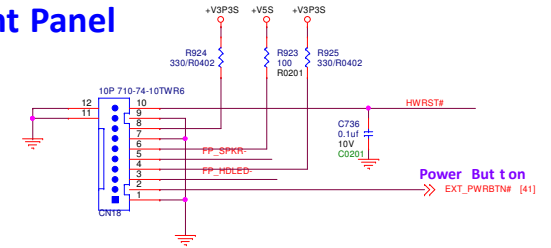
Size: Document Number: **EPIC-TGH7** Rev: **A0.1\_0\_0**

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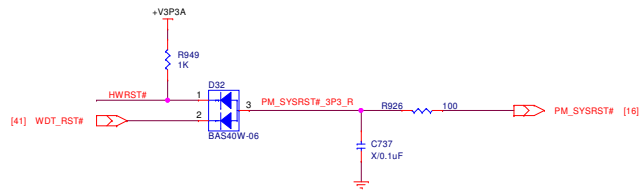
## Power Input +9V~+36V



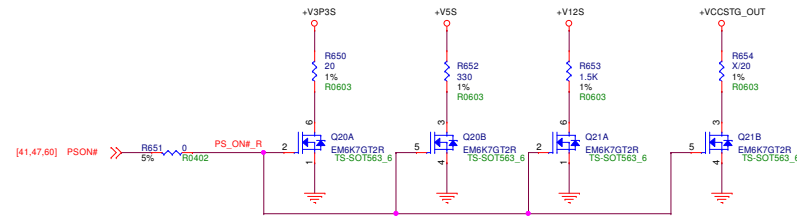
## Front Panel



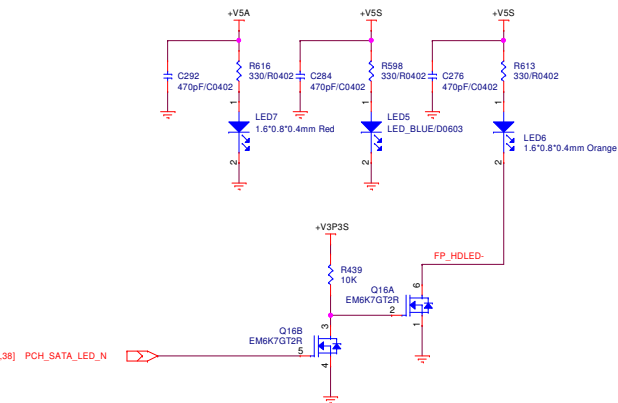
## Reset Circuit



## Discharge Circuit



## LED



## Speaker

