

COMPAL CONFIDENTIAL

MODEL NAME : JAL21
PCB NO : LA-4042P (DAA00000T0L)
BOM P/N : 43153331L01

M09 Maybach DIS
uFCPGA Mobile Penryn
Intel Cantiga PM + ICH9M

2007-10-30
REV : 0.1

@ : Nopop Component

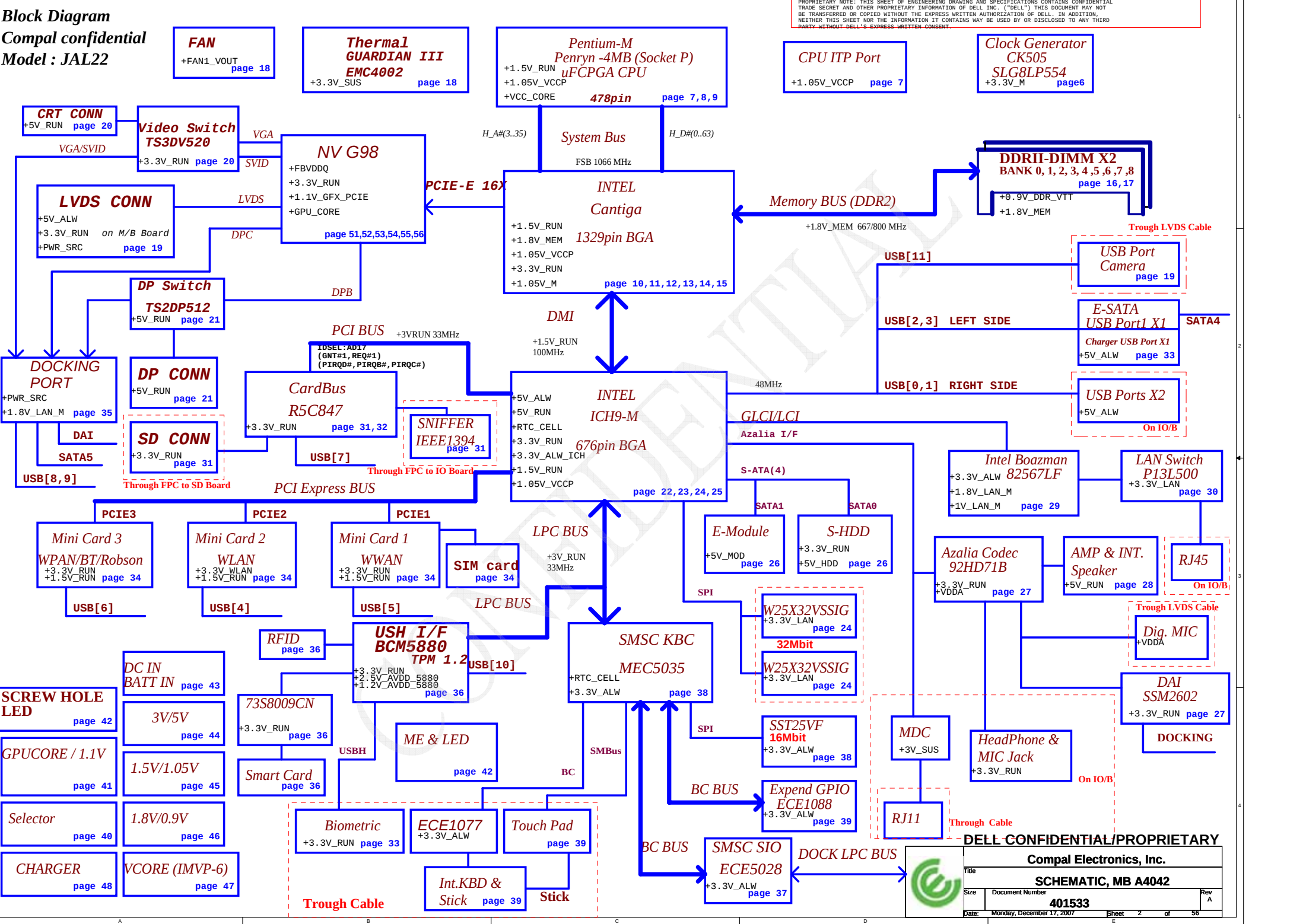
MB PCB	
Part Number	Description
DAA00000R0L	PCB 83P LA-4051P REV0 M/8

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Block Diagram
Compal confidential
Model : JAL22



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POWER STATES

Signal State	SLP S3#	SLP S4#	SLP S5#	S4 STATE#	SLP M#	ALWAYS PLANE	M PLANE	SUS PLANE	RUN PLANE	CLOCKS
S0 (Full ON) / M0	HIGH	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON	ON
S3 (Suspend to RAM) / M1	LOW	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	OFF	ON
S4 (Suspend to DISK) / M1	LOW	HIGH	HIGH	LOW	HIGH	ON	ON	ON	OFF	ON
S5 (SOFT OFF) / M1	LOW	HIGH	LOW	LOW	HIGH	ON	ON	ON	OFF	ON
S3 (Suspend to RAM) / M-OFF	LOW	HIGH	HIGH	HIGH	LOW	ON	OFF	ON	OFF	OFF
S4 (Suspend to DISK) / M-OFF	LOW	LOW	HIGH	LOW	LOW	ON	OFF	OFF	OFF	OFF
S5 (SOFT OFF) / M-OFF	LOW	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF	OFF

PM TABLE

State power plane	+15V_ALW +5V_ALW +3.3V_ALW_ICH +3.3V_RTC_LDO	+3.3V_SUS +1.8V_MEM	+5V_RUN +3.3V_RUN +2.5V_RUN +1.5V_RUN +0.9V_DDR_VTT +GPU_CORE +VCC_CORE +1.05V_VCCP +FBVDDQ +1.1V_GFX_PCIE	+3.3V_M +1.05V_M (M-OFF)	+3.3V_M +1.05V_M (M-OFF)
S0	ON	ON	ON	ON	ON
S3	ON	ON	OFF	ON	OFF
S5 S4/AC	ON	OFF	OFF	ON	OFF
S5 S4/AC don't exist	OFF	OFF	OFF	OFF	OFF

PCI TABLE

PCI DEVICE	IDSEL	REQ#/GNT#	PIRQ
R5C847	AD17	REQ#1 / GNT#1	PIRQ[B..D]

ICH9-M	USB PORT#	DESTINATION
	0	JUSB1 (Ext Right Side Top)
	1	JUSB1 (Ext Right Side Bottom)
	2	JESA1 (Ext Left Side Bottom)
	3	JESA1 (Ext Left Side TOP)
	4	WLAN
	5	WWAN
	6	WPAN
	7	Card Bus/Express card
	8	DOCKING
	9	DOCKING
	10	USH->BIO
	11	Camera

PCI EXPRESS	DESTINATION
Lane 1	MINI CARD-1 WWAN
Lane 2	MINI CARD-2 WLAN
Lane 3	MINI CARD-3 BT/UWB
Lane 4	EXPRESS CARD
Lane 5	None
Lane 6	10/100/1G LAN

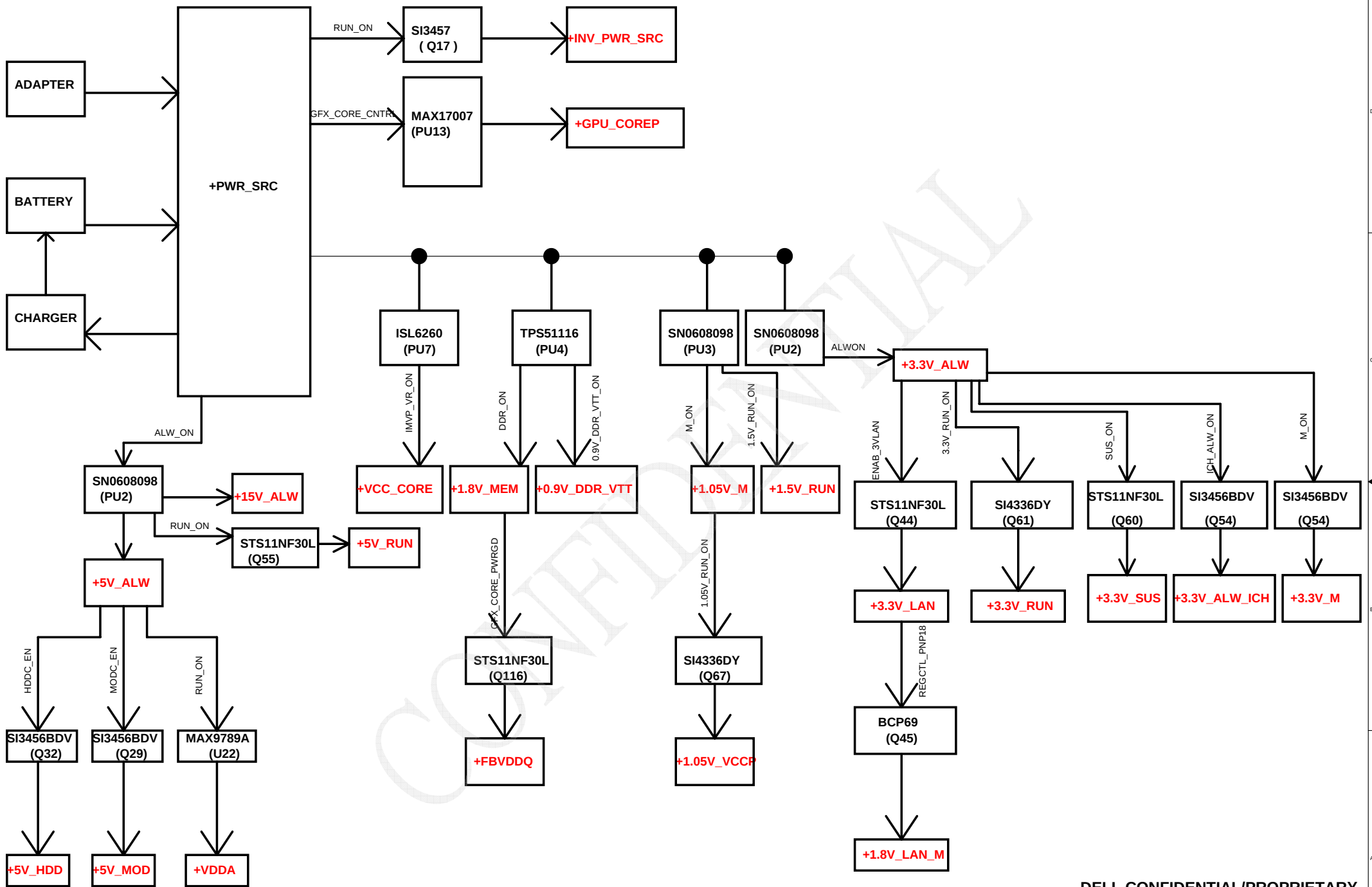
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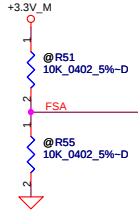
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FSC	FSB	FSA	CPU	SRC	PCI
CLKSEL2	CLKSEL1	CLKSEL0	MHZ	MHZ	MHZ
0	0	0	266	100	33.3
0	0	1	133	100	33.3
0	1	0	200	100	33.3
0	1	1	166	100	33.3
1	0	0	333	100	33.3
1	0	1	100	100	33.3
1	1	0	400	100	33.3



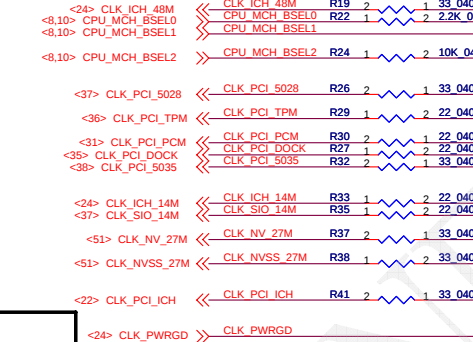
TME	PIN 32
0	overclocking enabled
1	overclocking disabled

ITP_EN	PIN 37
0	Pin 5/6 as SRC_10
1	Pin 5/6 as CPU_ITP

FCTSEL1	PIN43	PIN44	PIN47	PIN48
0=UMA	DOT96T	DOT96C	96/100M_T	96/100M_C
1=DIS	27M_out	27M SSout	SRCT0	SRCC0

0=UMA
1=Disc. GRFX down

Place crystal within 500 mils of CK505

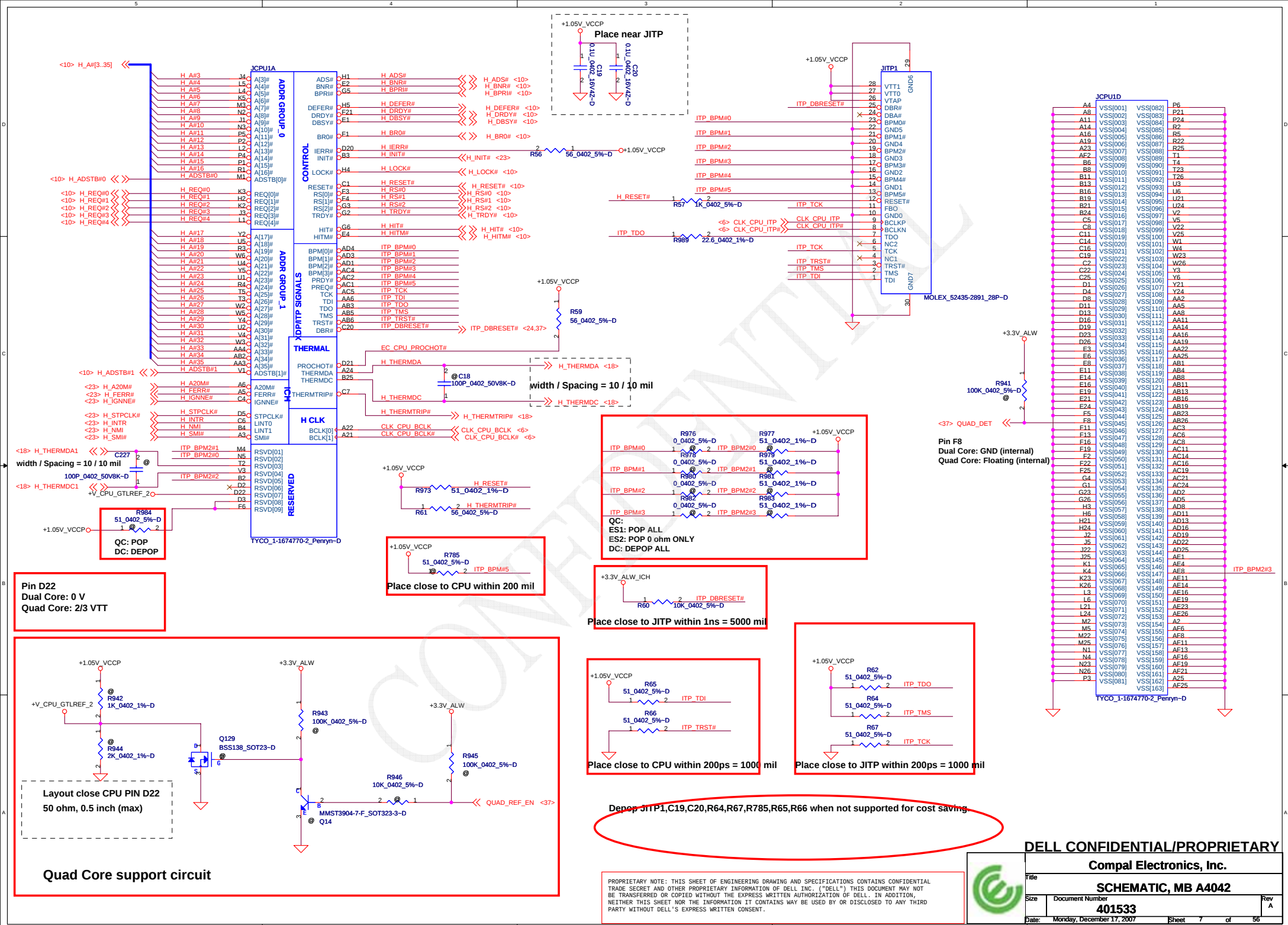


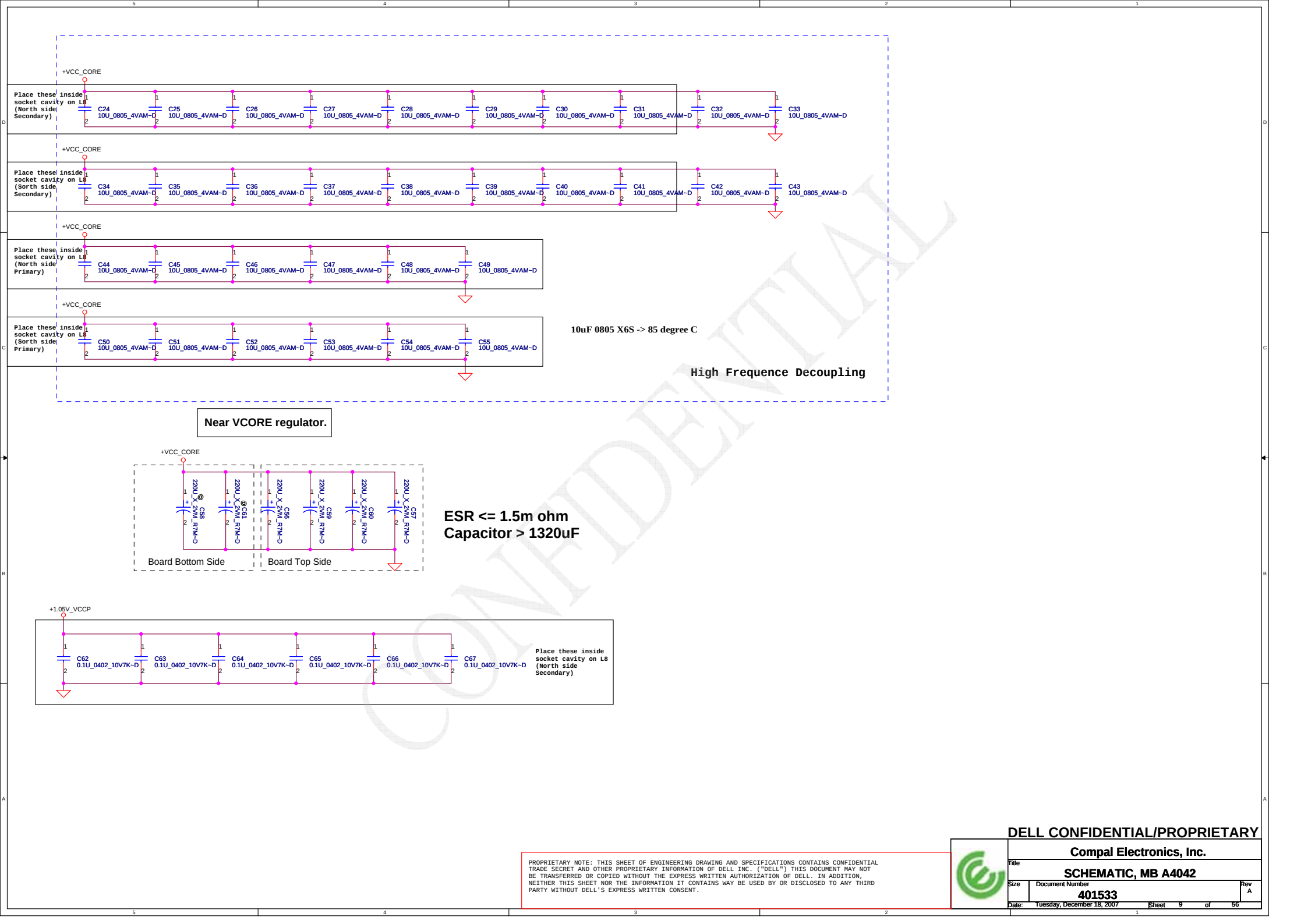
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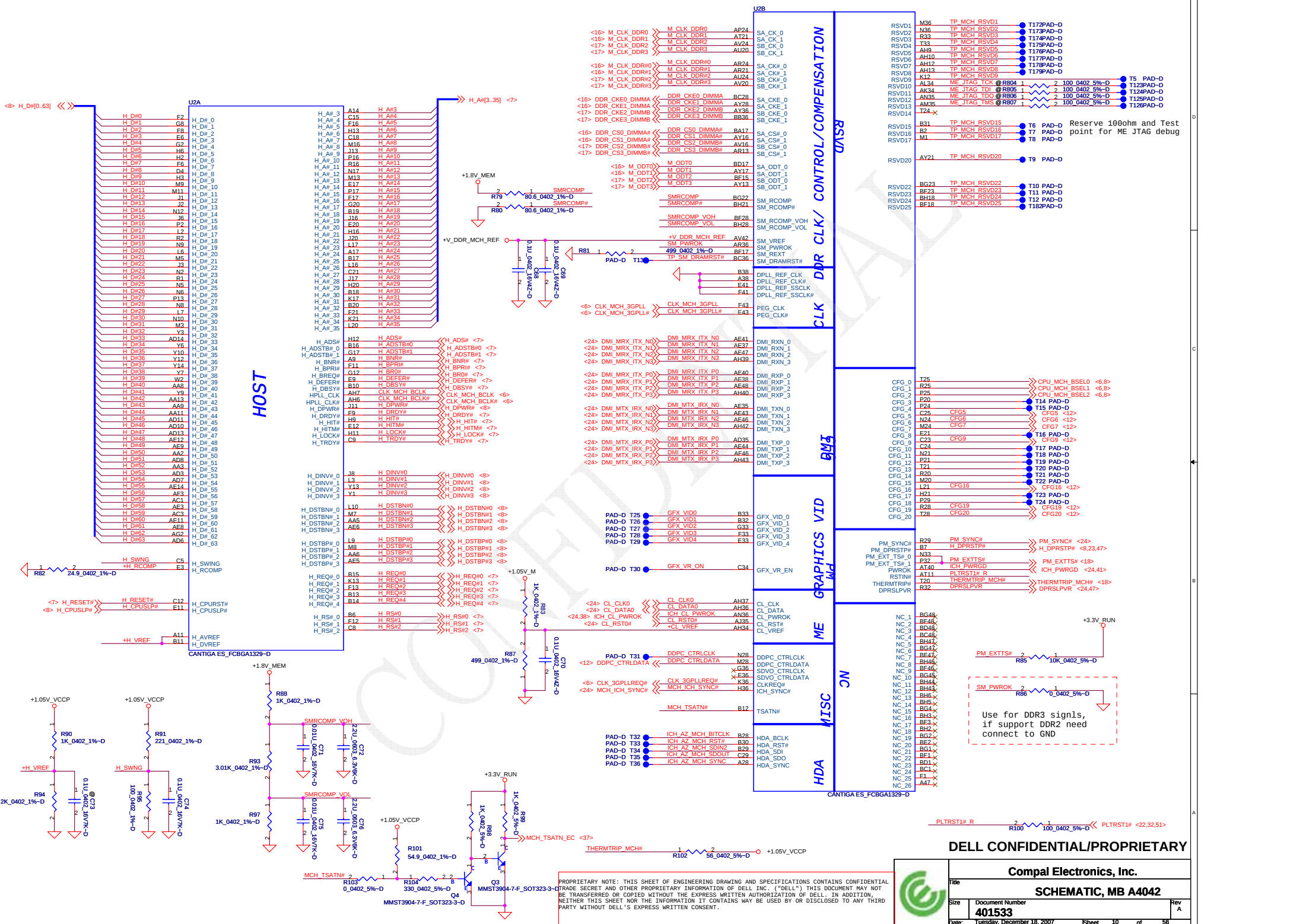


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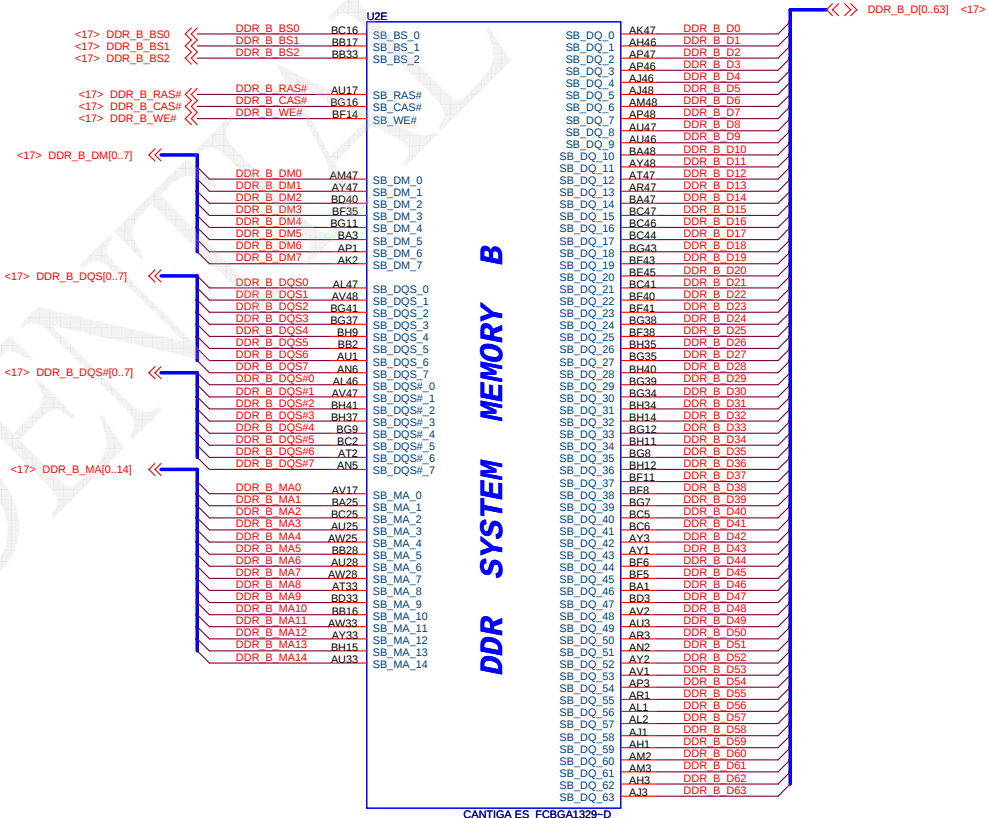
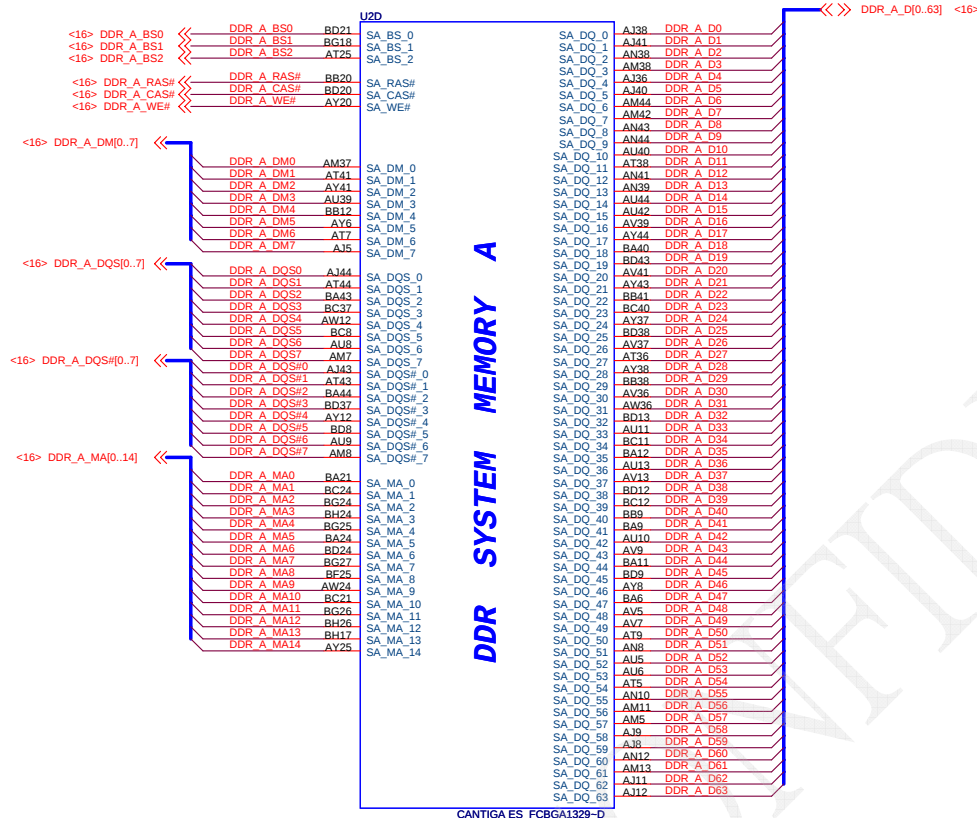




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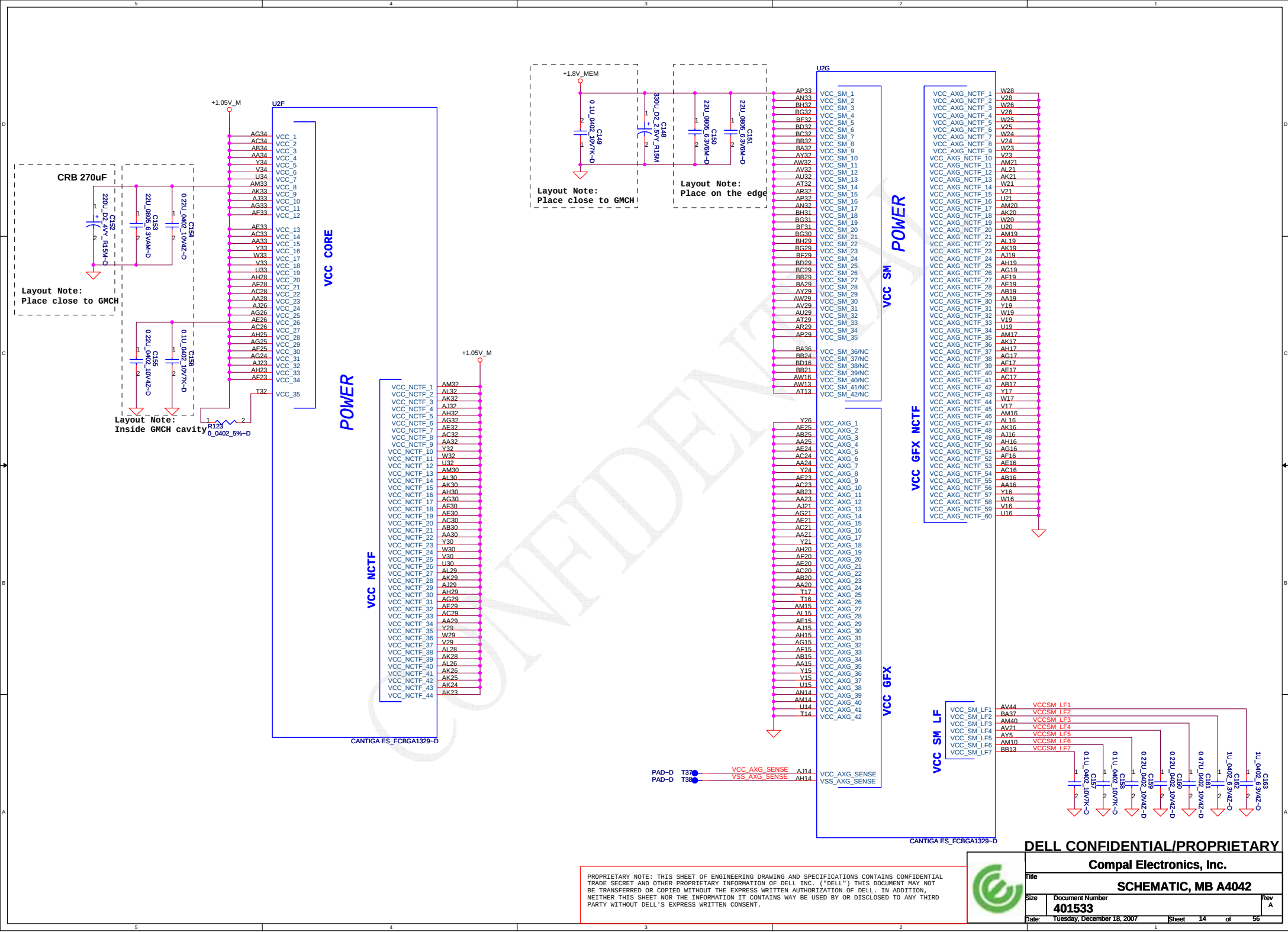
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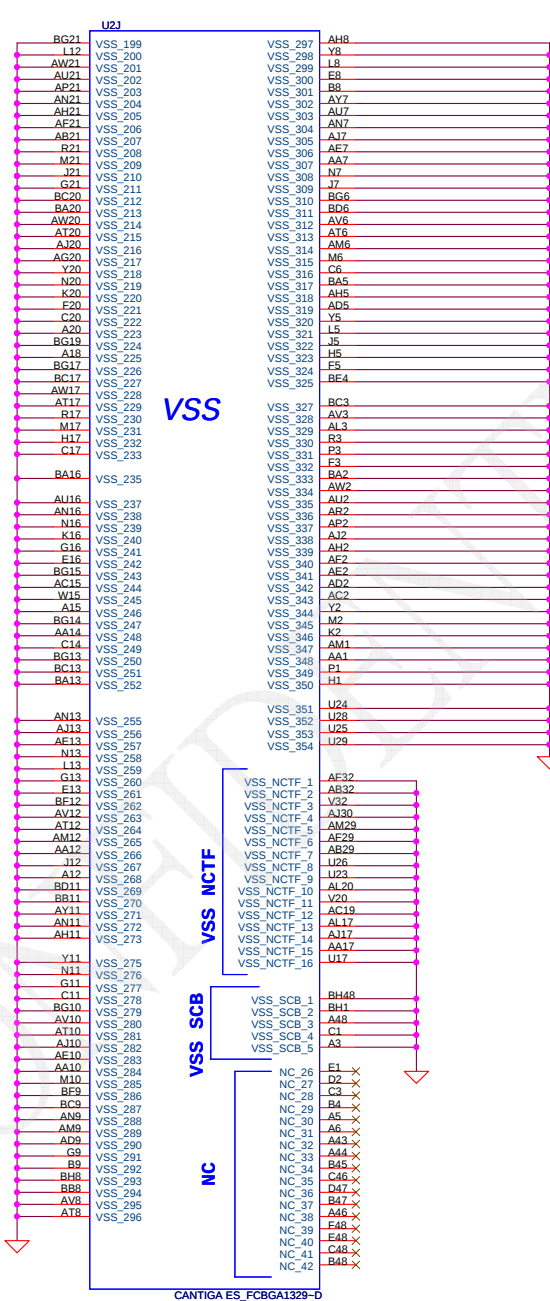
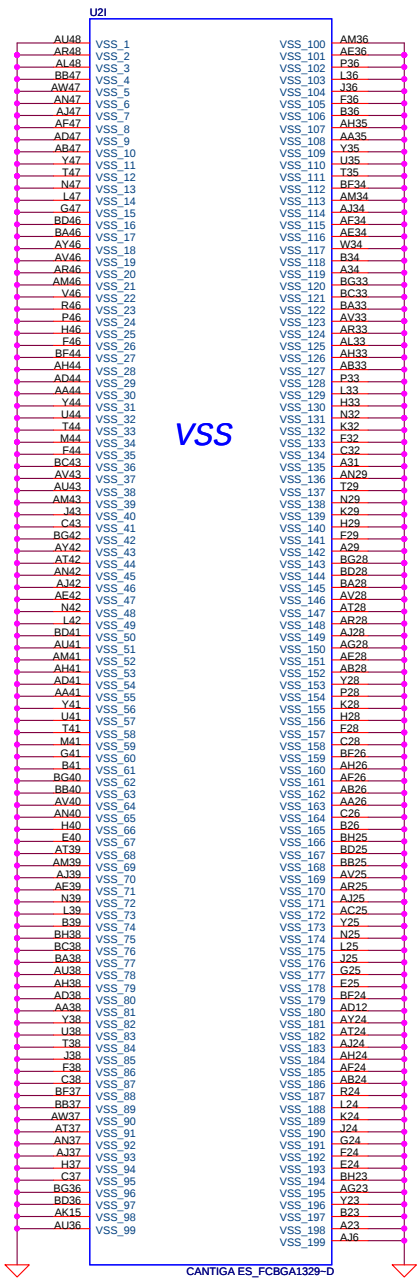


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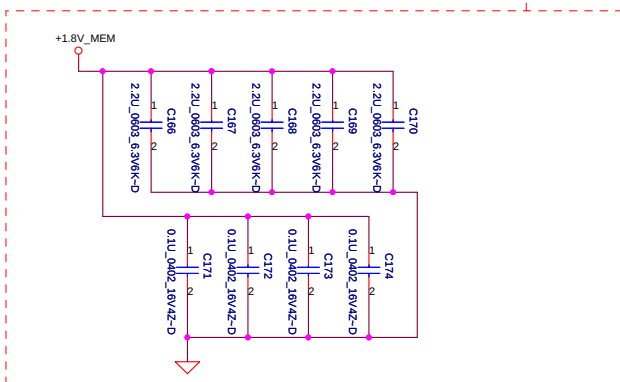
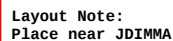
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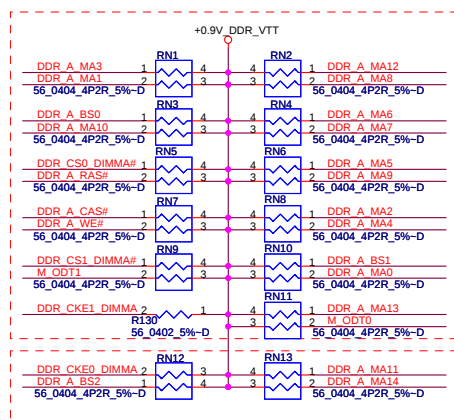
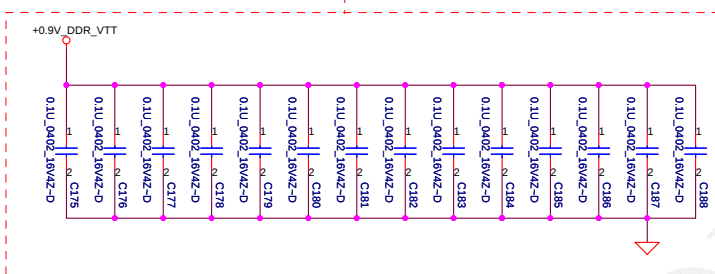
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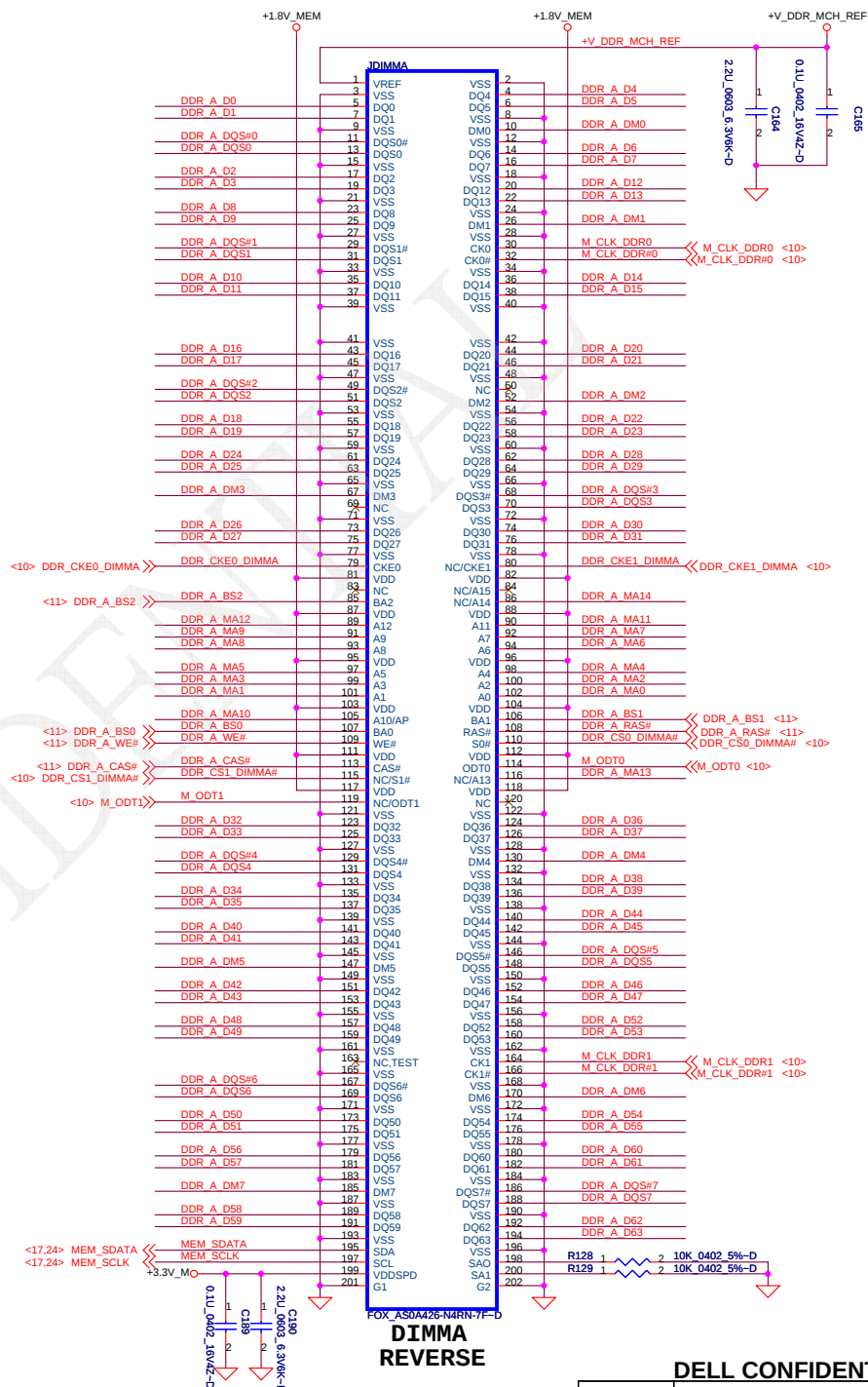


Layout Note:
Place one cap close to every 2 pullup
resistors terminated to +0.9V DDR VTT



Layout Note:
Place these resistor
closely JDIMMA,all
trace length<750 mil

Layout Note:
Place these resistor
closely JDIMMA, all
trace length
Max=1.3"



DIMMA
REVERSE

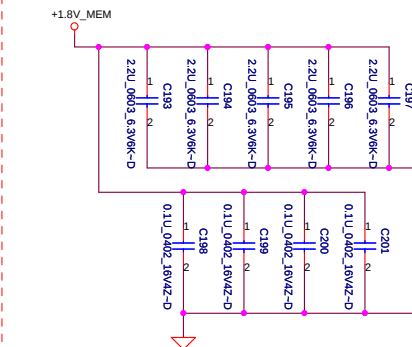
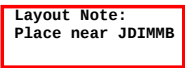
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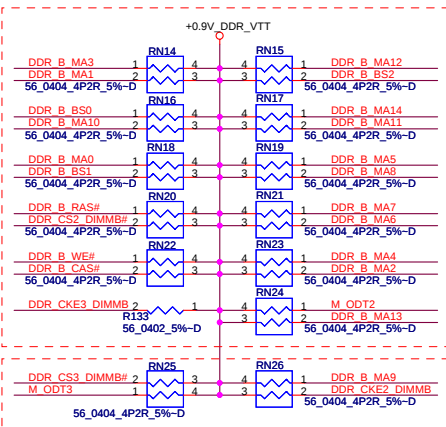
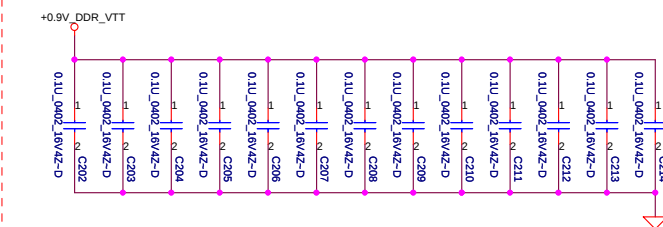
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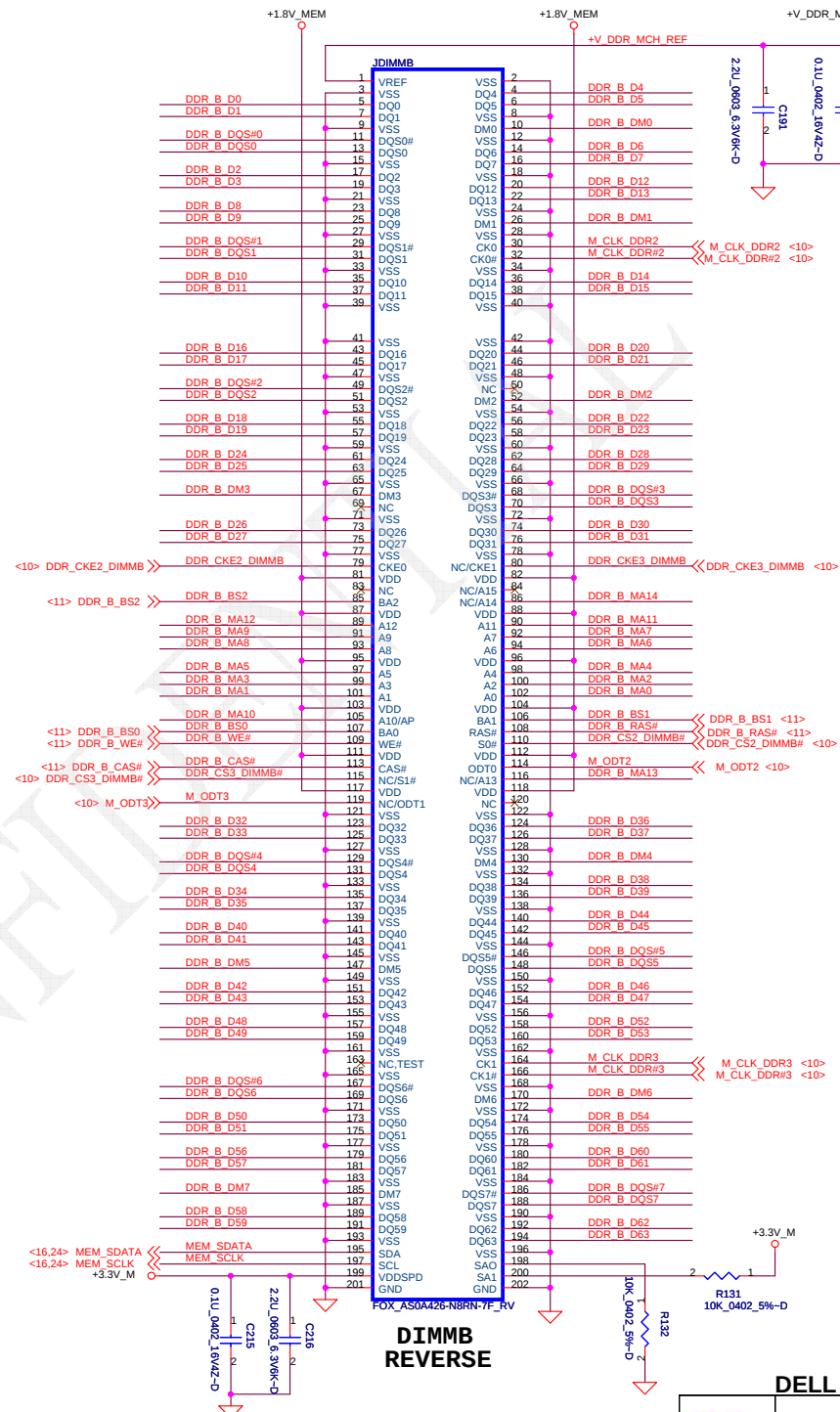


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Layout Note:
Place these resistor
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Max=1.3"

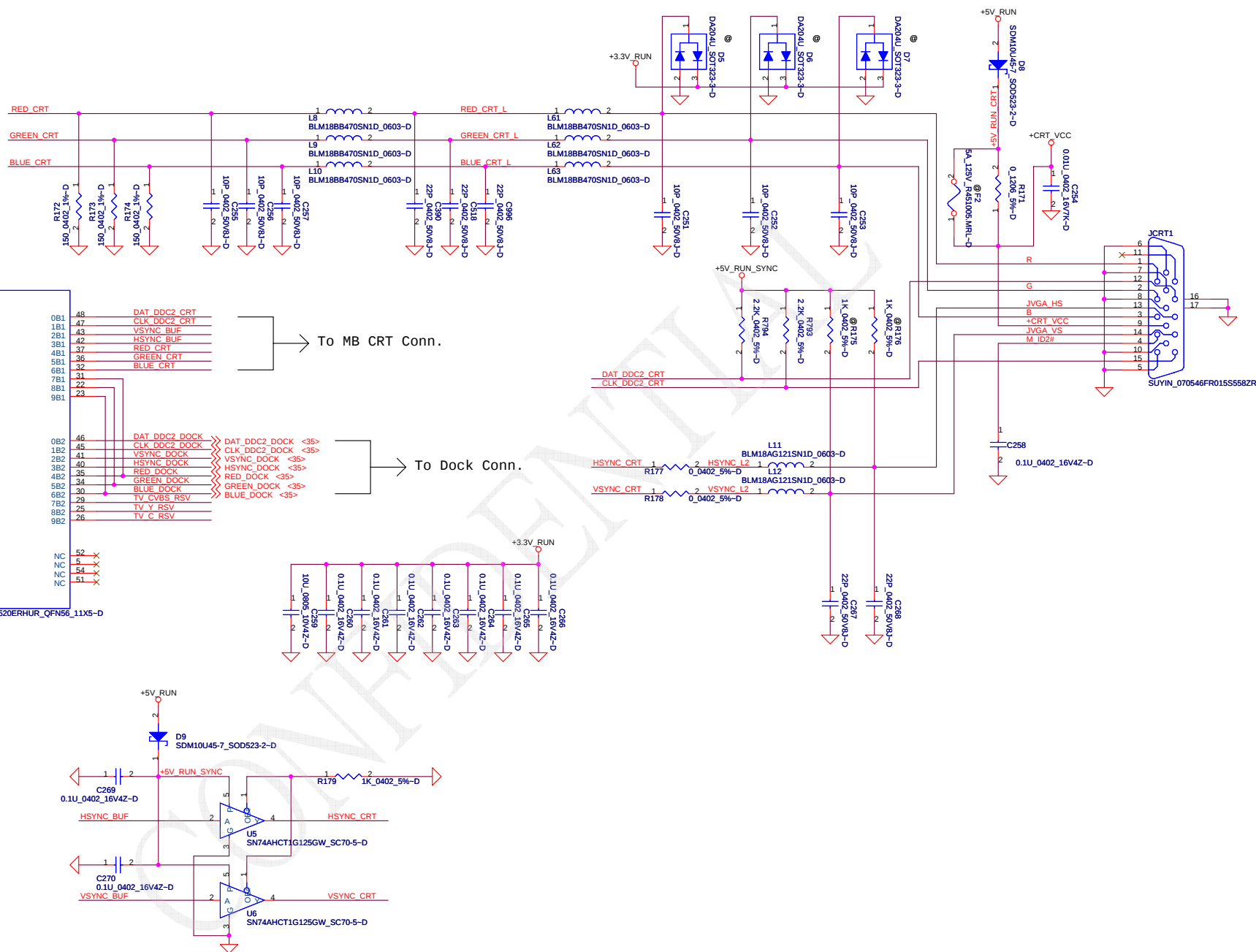
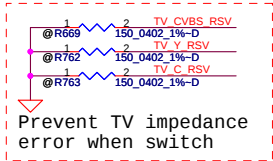


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SEL	CRT	TV
0	MB	LIO
1	APR/SPR	NA



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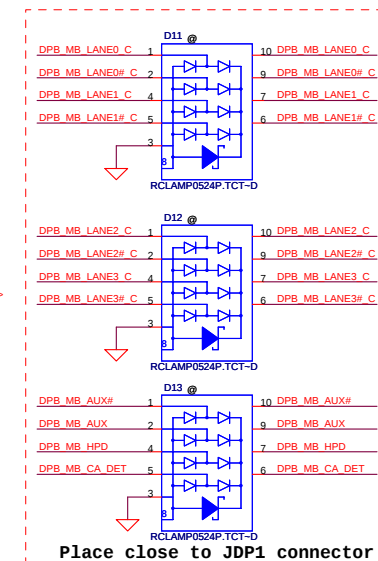
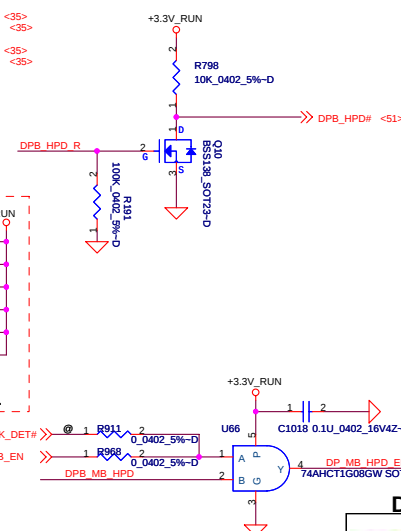
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[illegible]

SW for eDOCK side

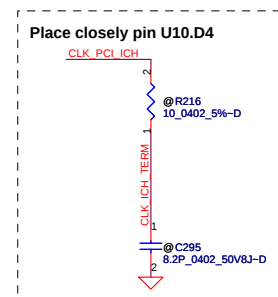
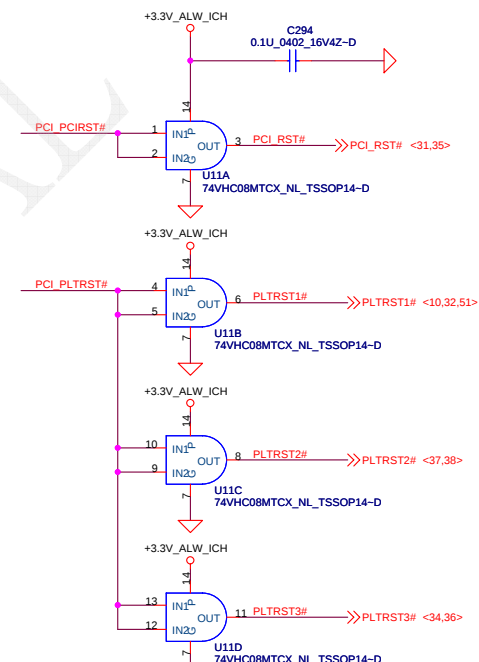
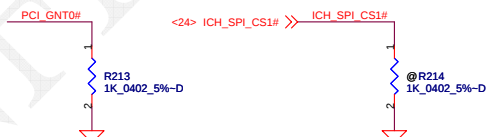
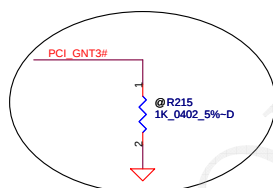
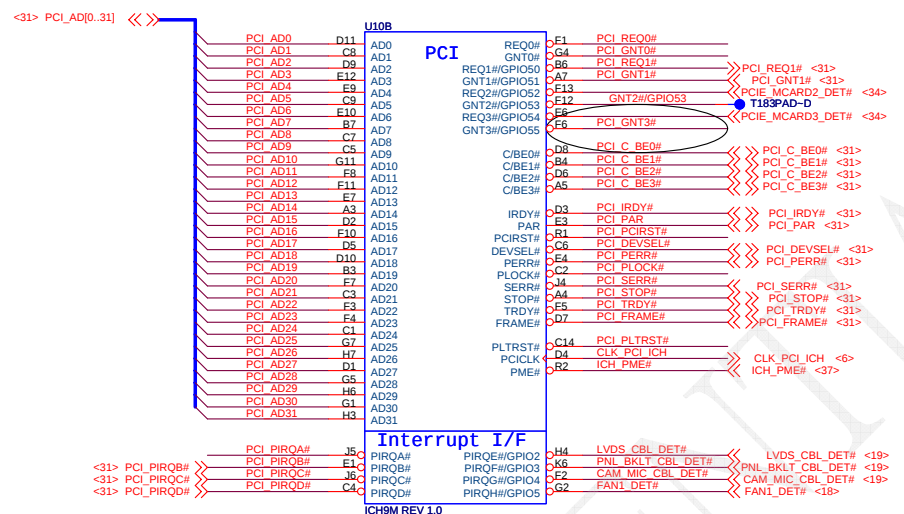
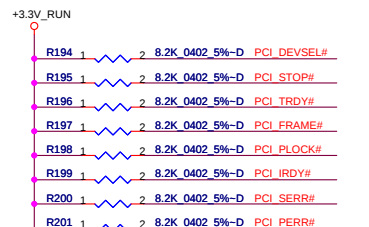
The schematic diagram illustrates the SW for eDOCK side. It features a +3.3V_RUN supply connected to a network of resistors (R865, R92, R967, R764, R821, R182, R183) and capacitors (C272, C274, C276). The circuit includes two transistors, Q20A and Q20B, and a logic inverter U7. The signals shown are DPC_DOCK_AUX, DVI_C_CLK_DDC, DPC_DOCK_AUX_SW, DPC_DOCK_AUX#SW, DVI_C_DAT_DDC, DPC_CA_DET, and DPC_CA_DET. The diagram shows the internal connections between these components and signals.

[illegible]

Pin30	Level	State	Description
LP	Hi	Normal Mode	Standard operational mode for device
	Low	Low power Mode	Device is forced into a low power mode causing the output s to go to a high-Z state, all other inputs are ignore

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A16 away override strap.

Boot BIOS Strap

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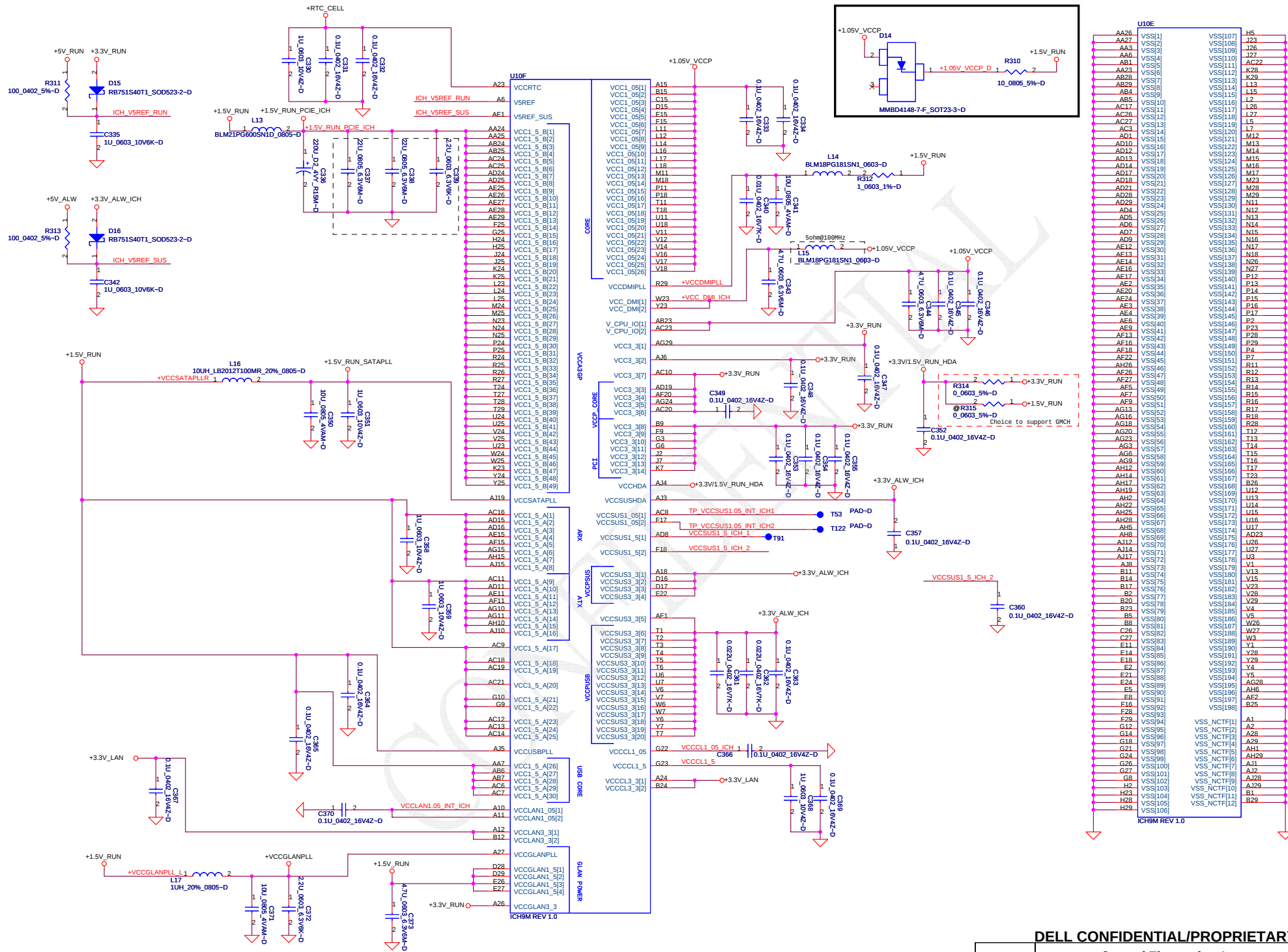


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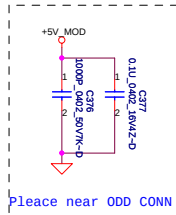


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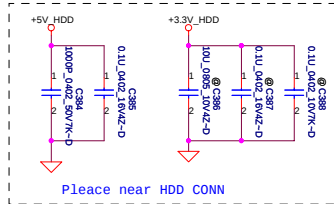
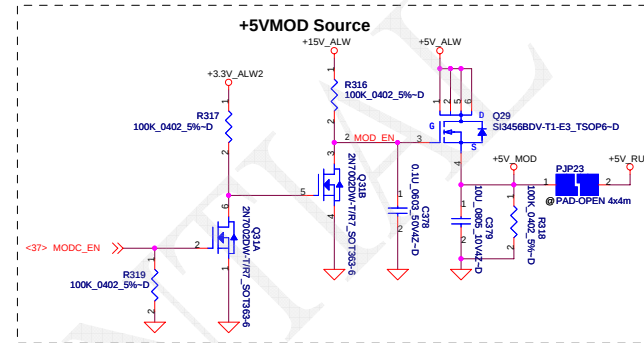
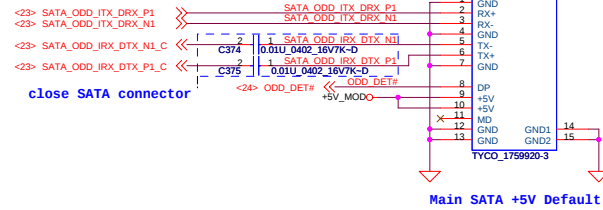
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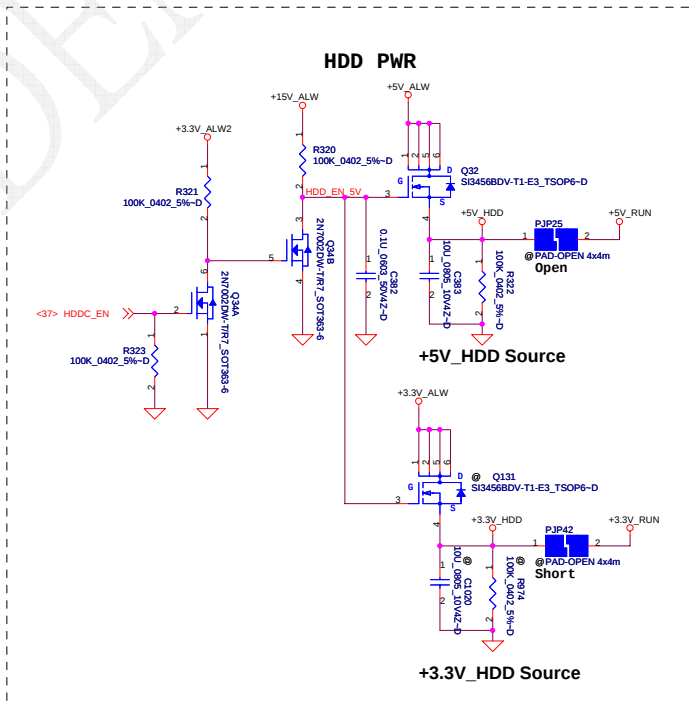
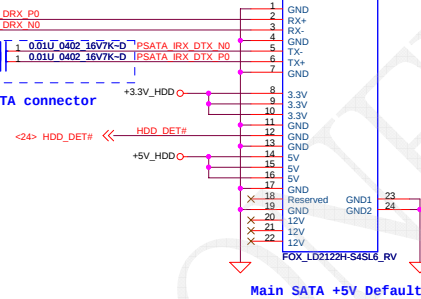
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For ODD



For HDD

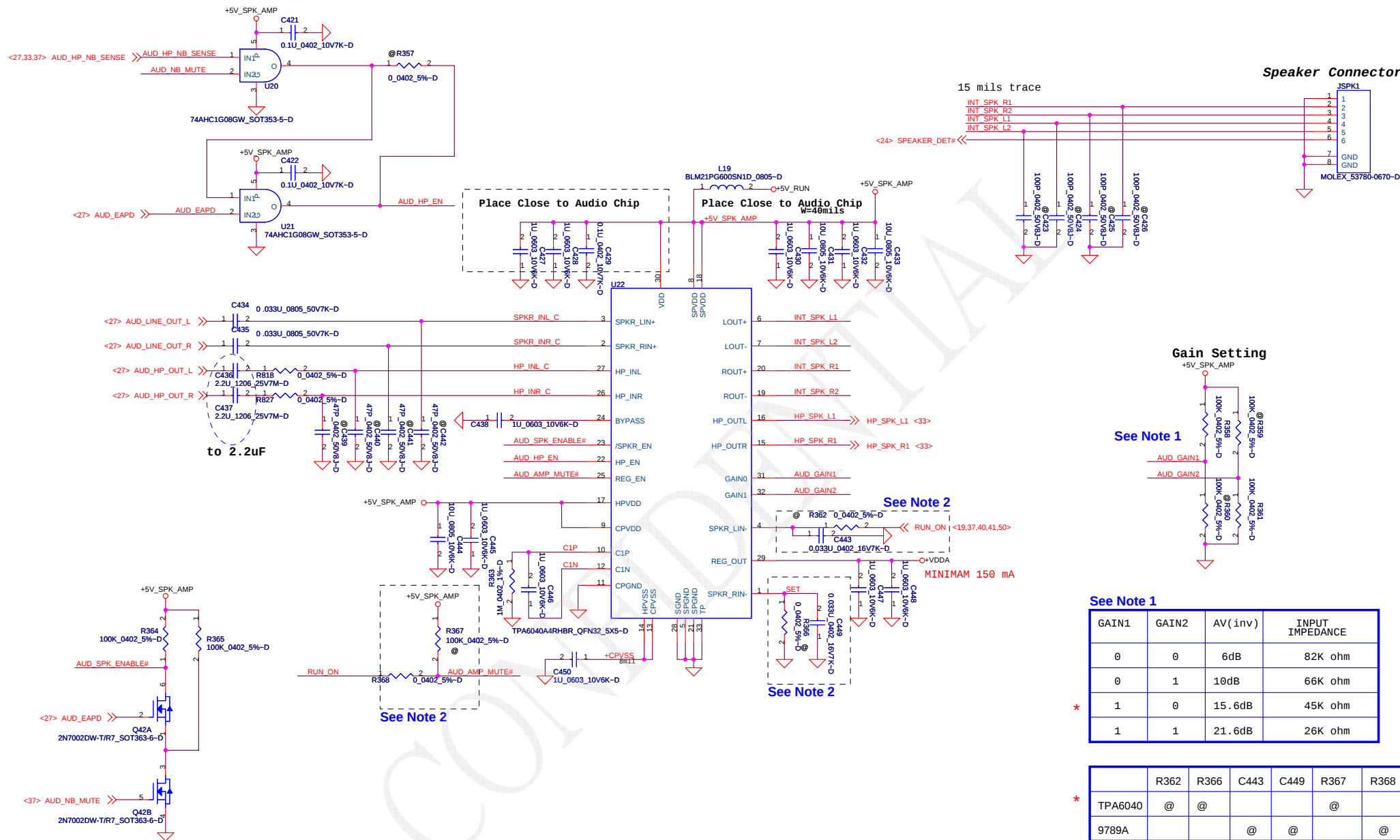


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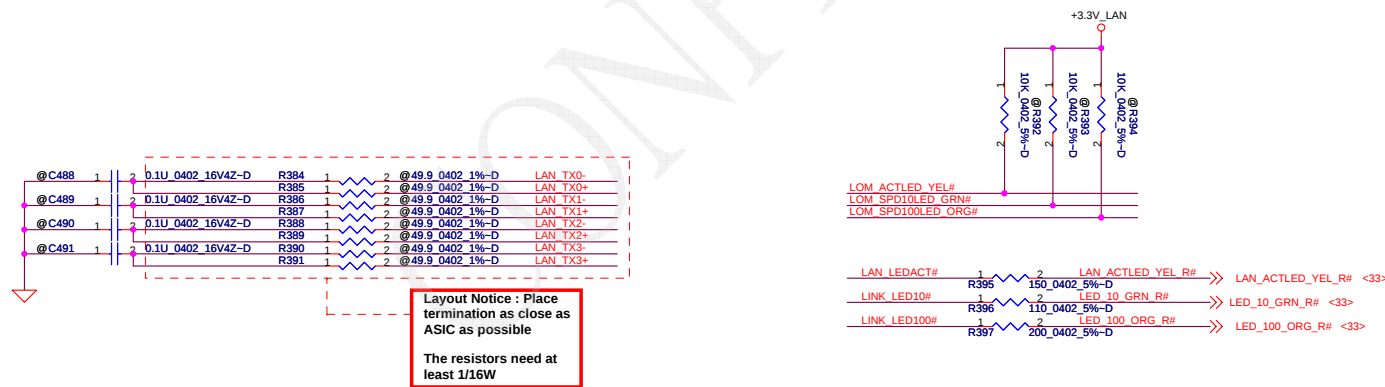
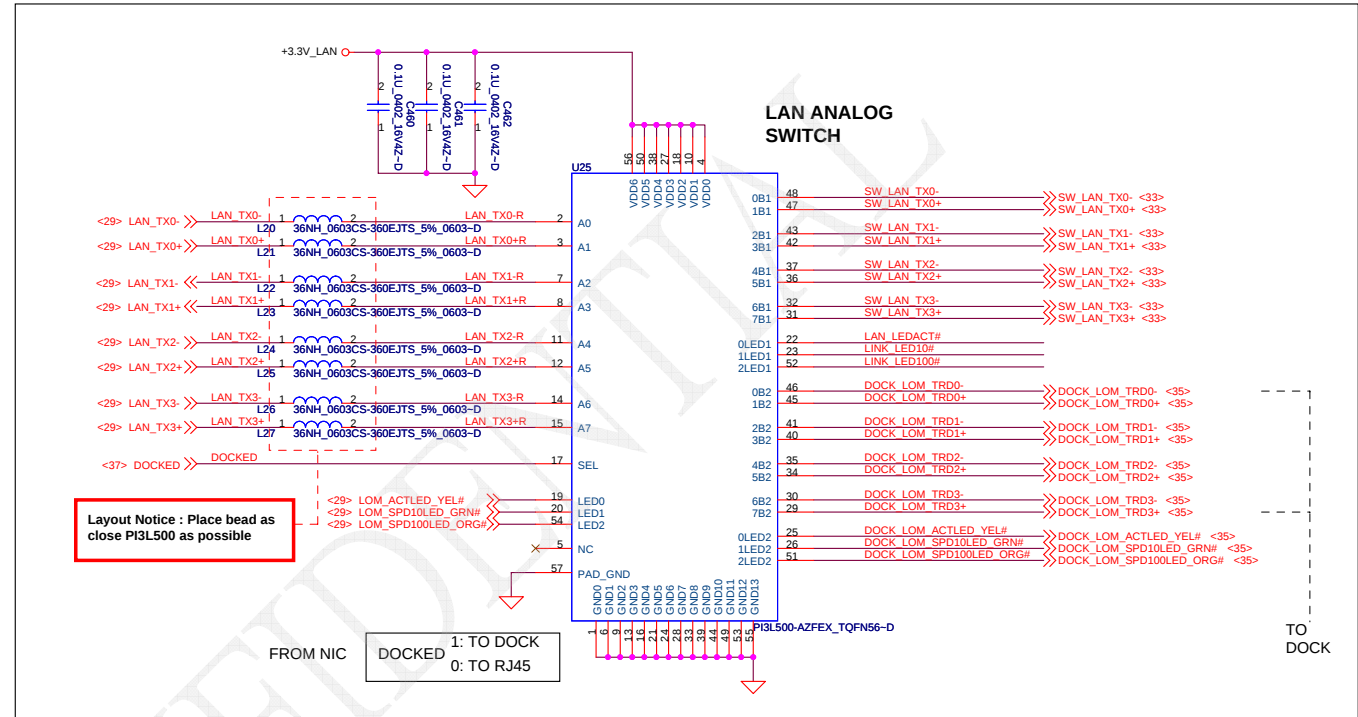
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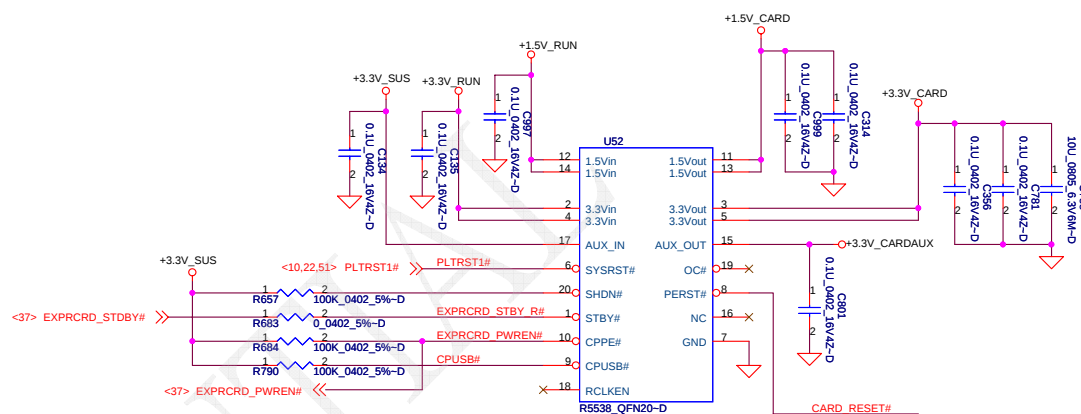
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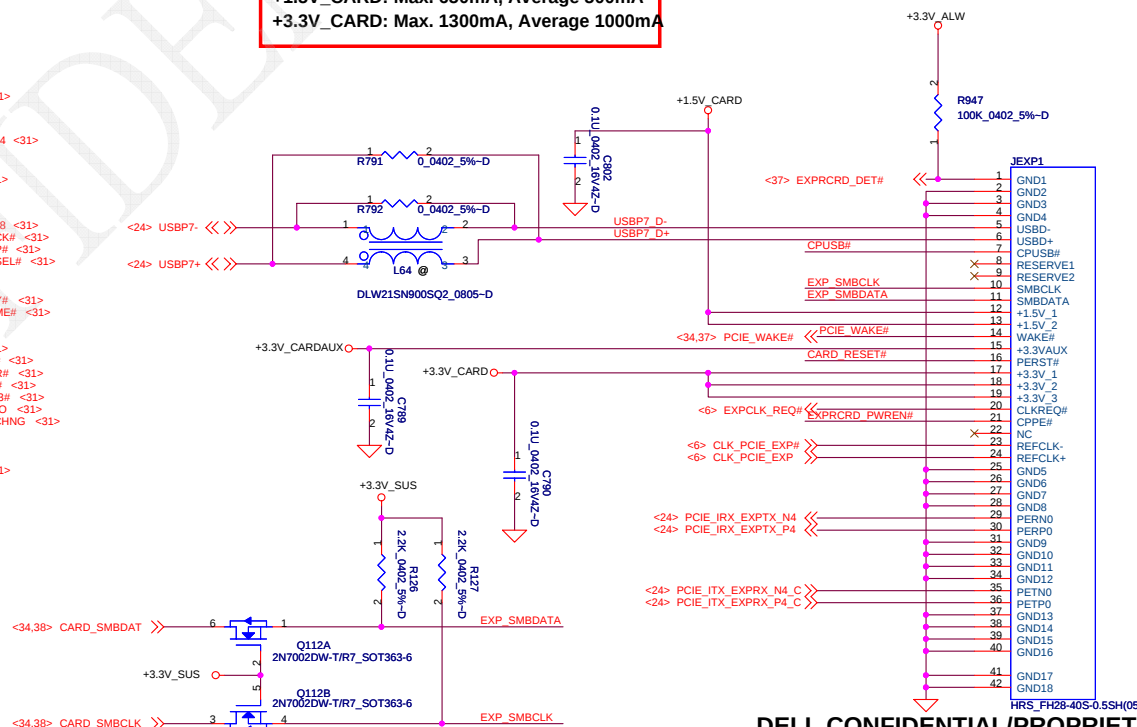
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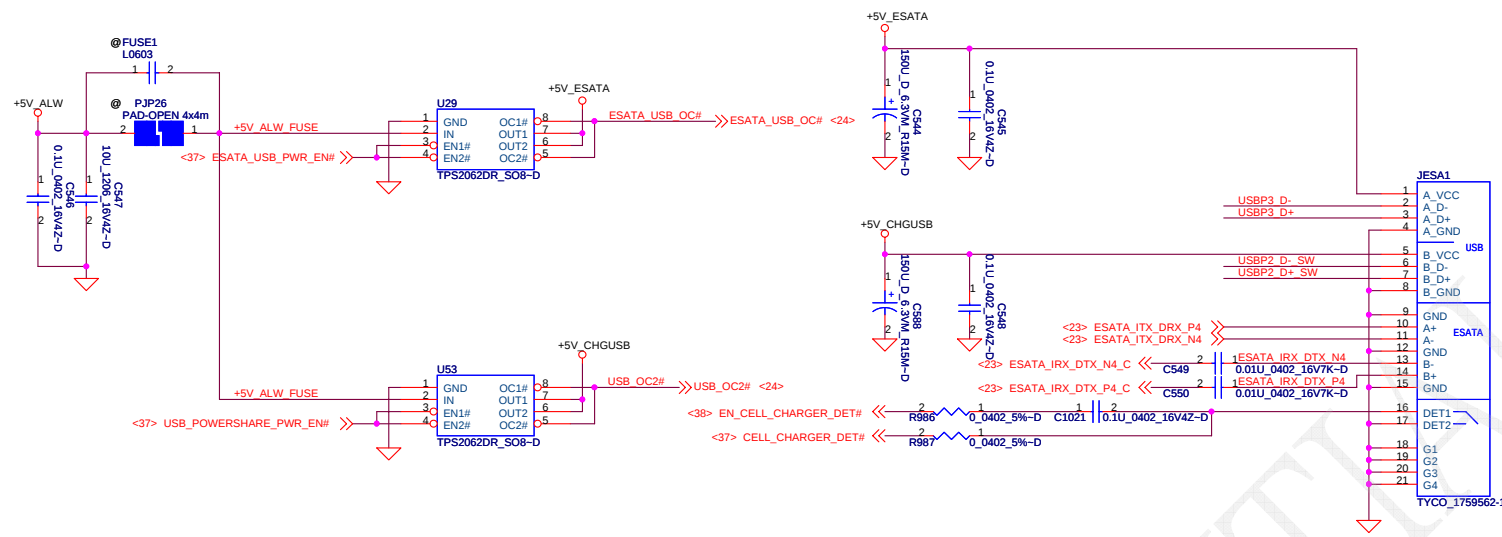
+1.5V_CARD: Max. 650mA, Average 500mA
+3.3V_CARD: Max. 1300mA, Average 1000mA



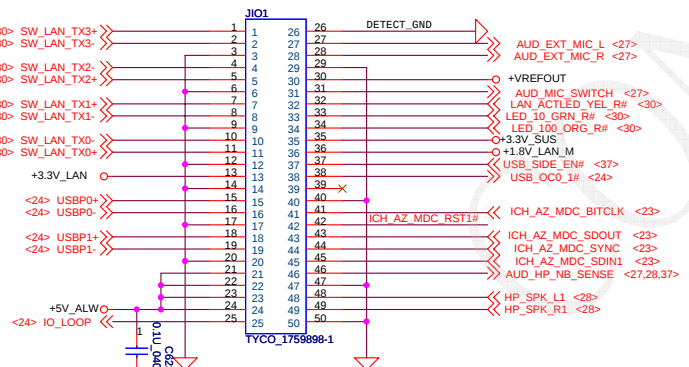
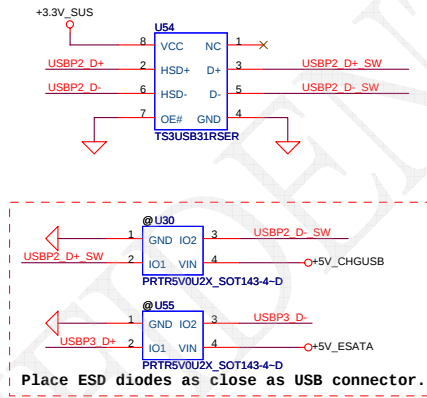
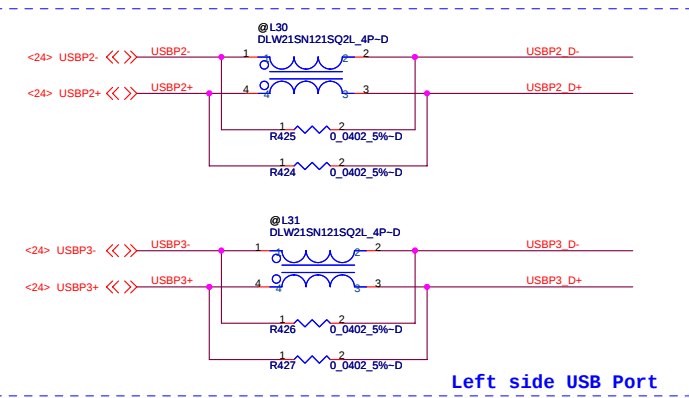
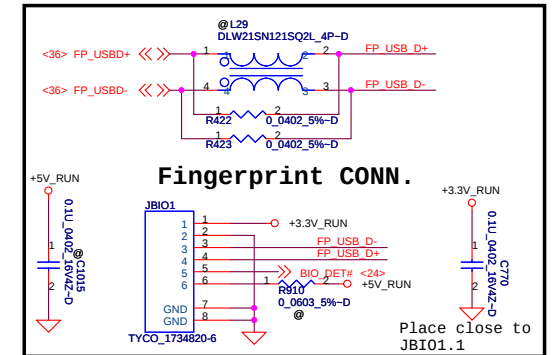
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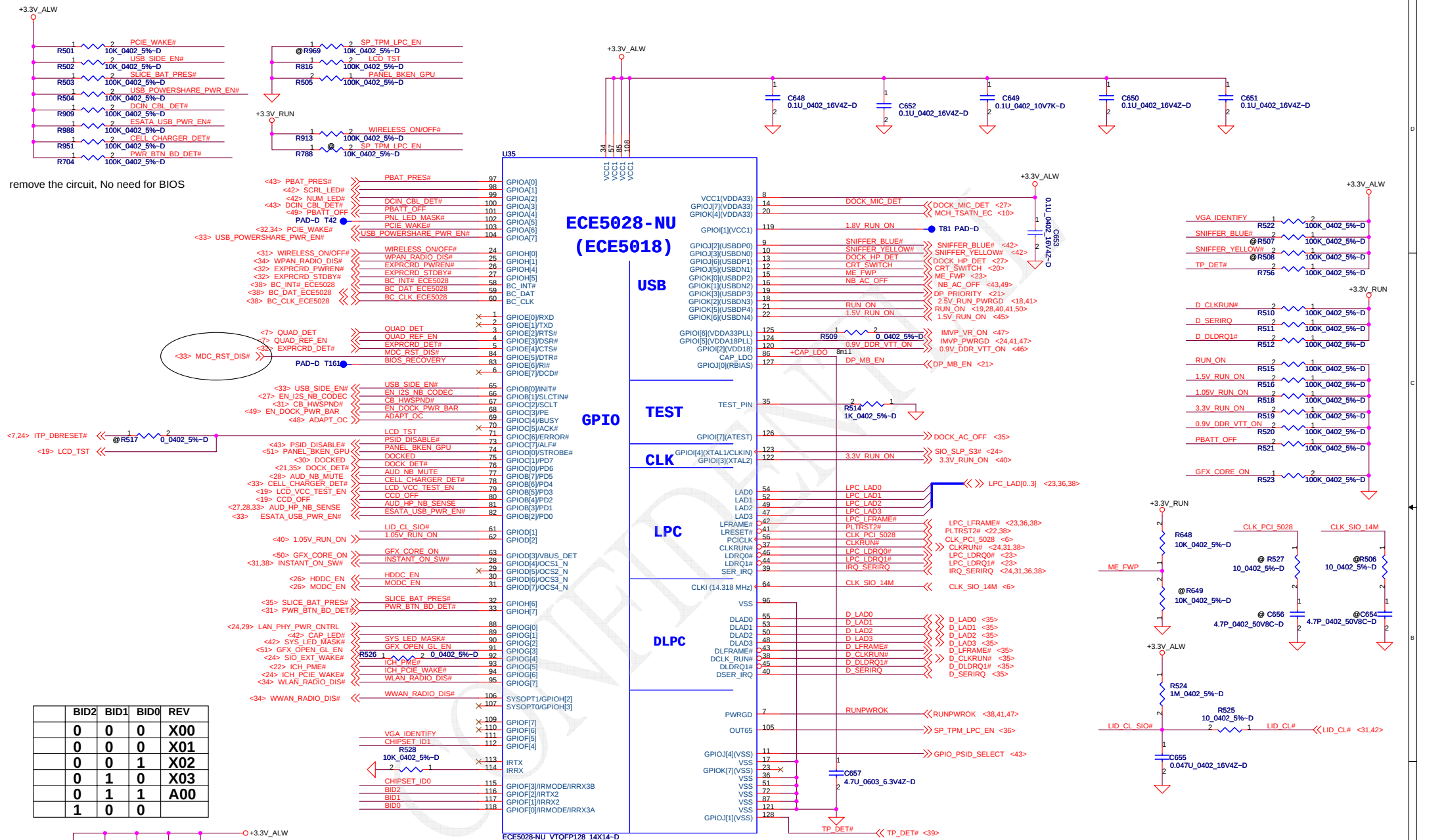


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USB PORT#	DESTINATION
0	JUSB1 (Ext Right Side Top)
1	JUSB1 (Ext Right Side Bottom)
2	JESA1 (Ext Left Side Bottom)
3	JESA1 (Ext Left Side TOP)
4	WLAN
5	WWAN
6	WPAN
7	Express card
8	DOCKING
9	DOCKING
10	USH->BIO
11	Camera

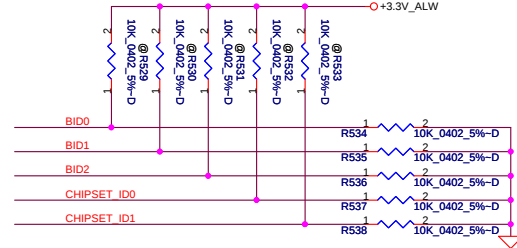




remove the circuit, No need for BIOS

<7,24> ITP_DBRESET# << @R517 0_0402_5%-D >>
<19> LCD_TST << @R517 0_0402_5%-D >>

BID2	BID1	BID0	REV
0	0	0	X00
0	0	0	X01
0	0	1	X02
0	1	0	X03
0	1	1	A00
1	0	0	



CHIPSET_ID1	CHIPSET_ID0	
0	0	Roush-I Foose-I
0	1	Roush-A
1	0	SmFF
1	1	Nike

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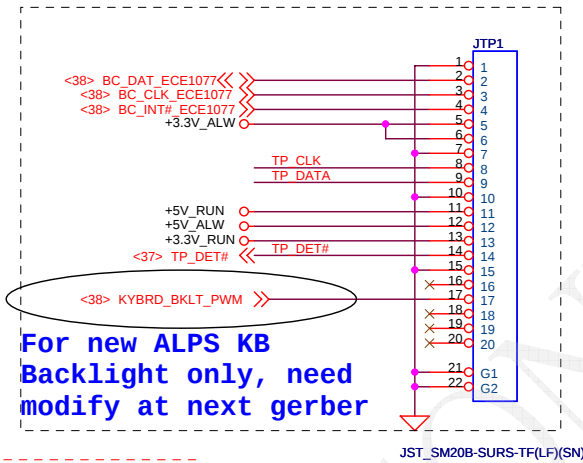
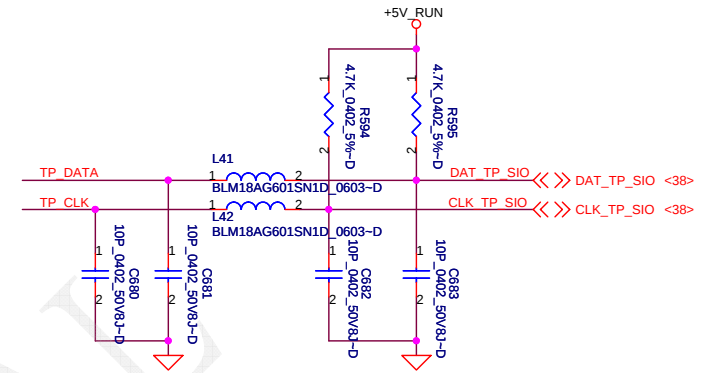
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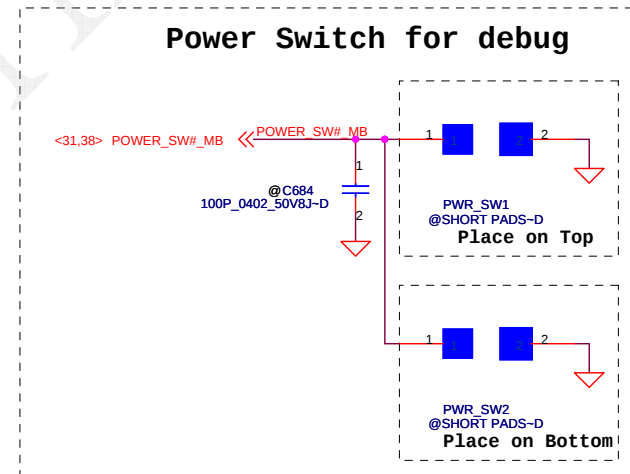
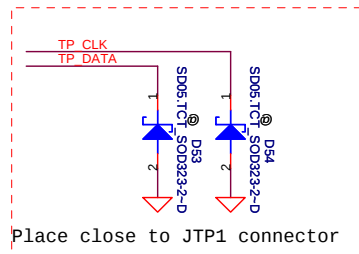
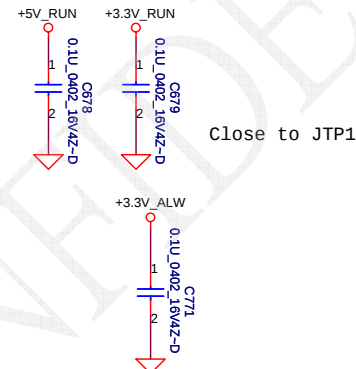
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For new ALPS KB
Backlight only, need
modify at next gerber



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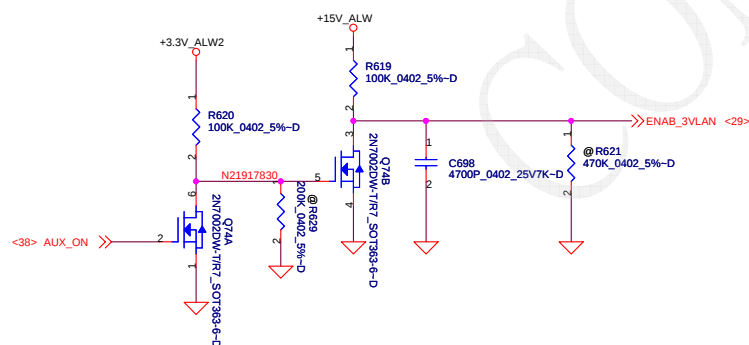
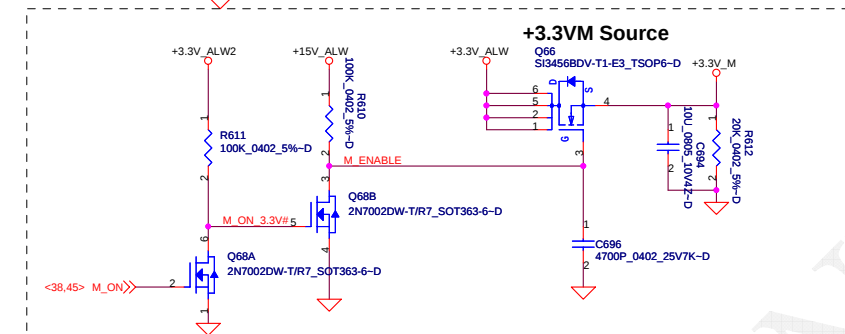
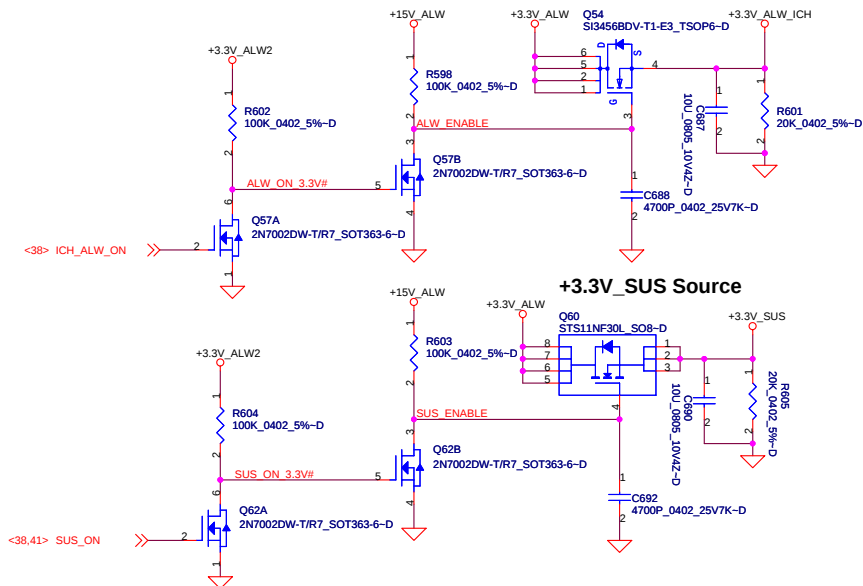


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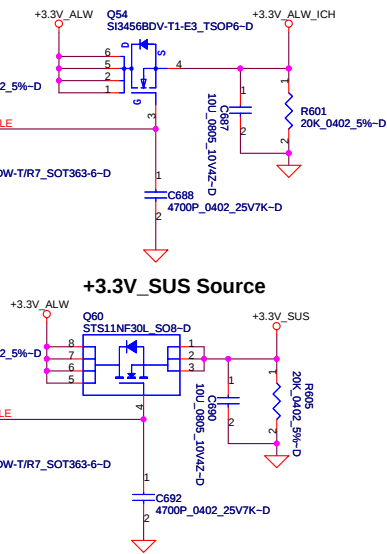
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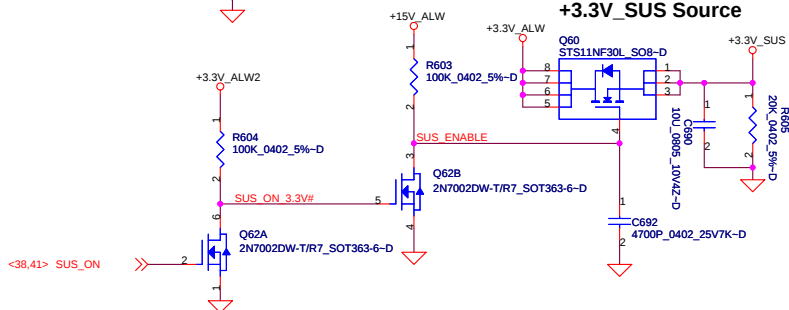
DC/DC Interface



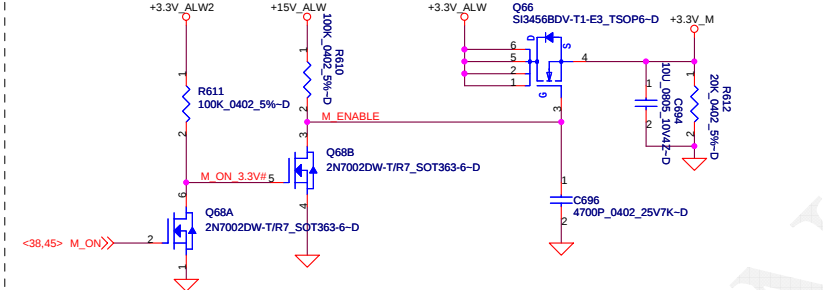
+3.3V_ALW_ICH Source



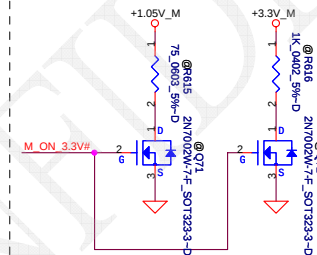
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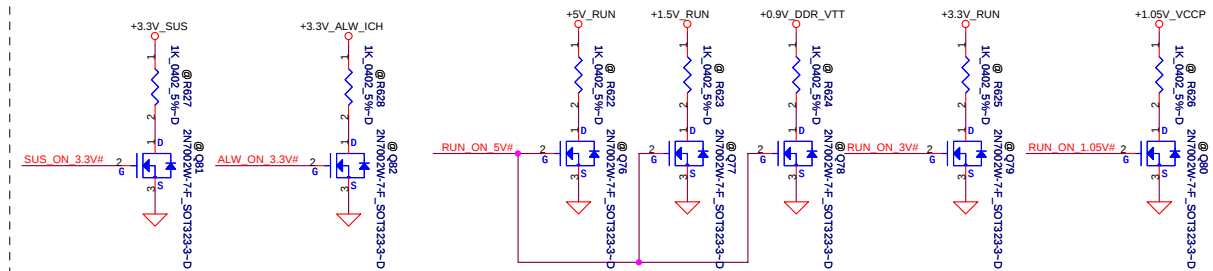
+3.3VM Source



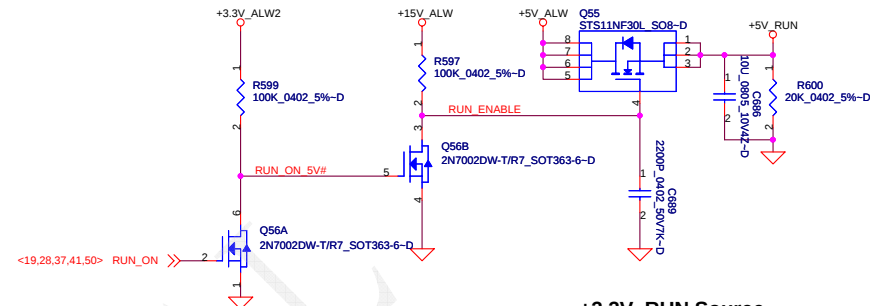
Discharge Circuit



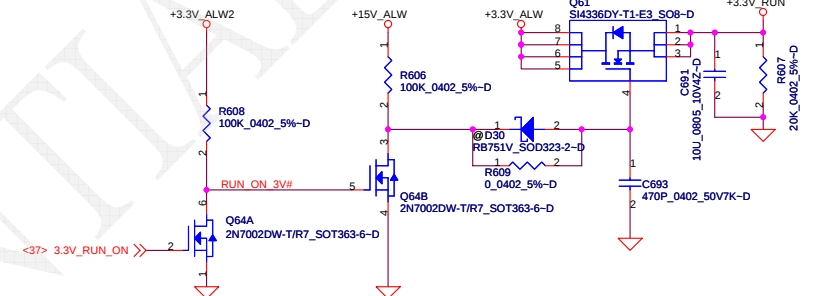
Discharge Circuit



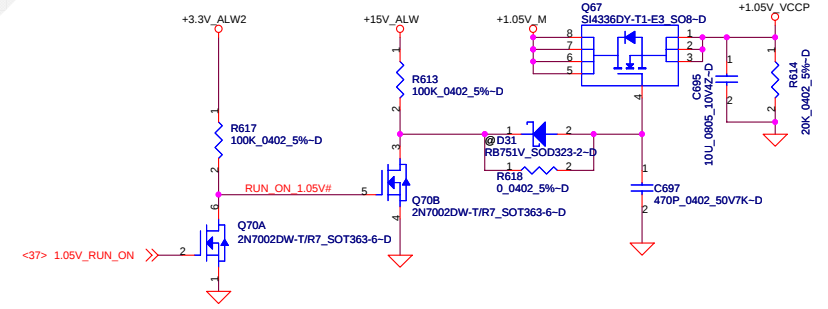
+5V_{RUN} Source



+3.3V_RUN Source



+1.05V_VCCP Source



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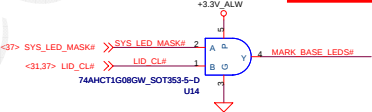
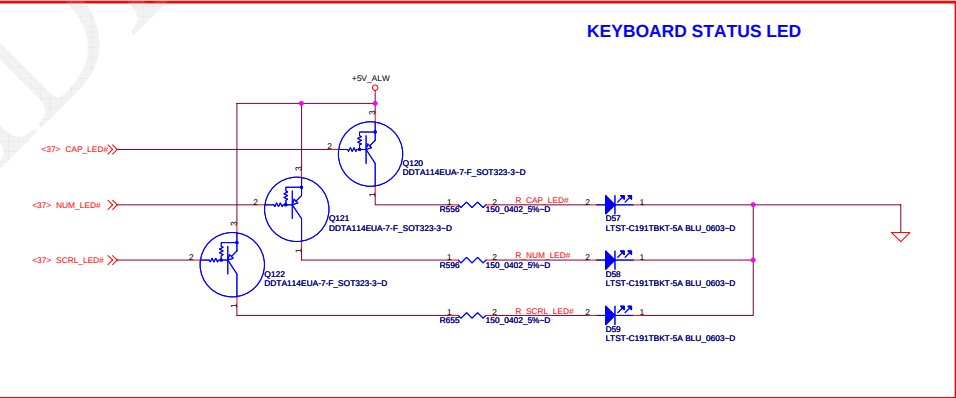
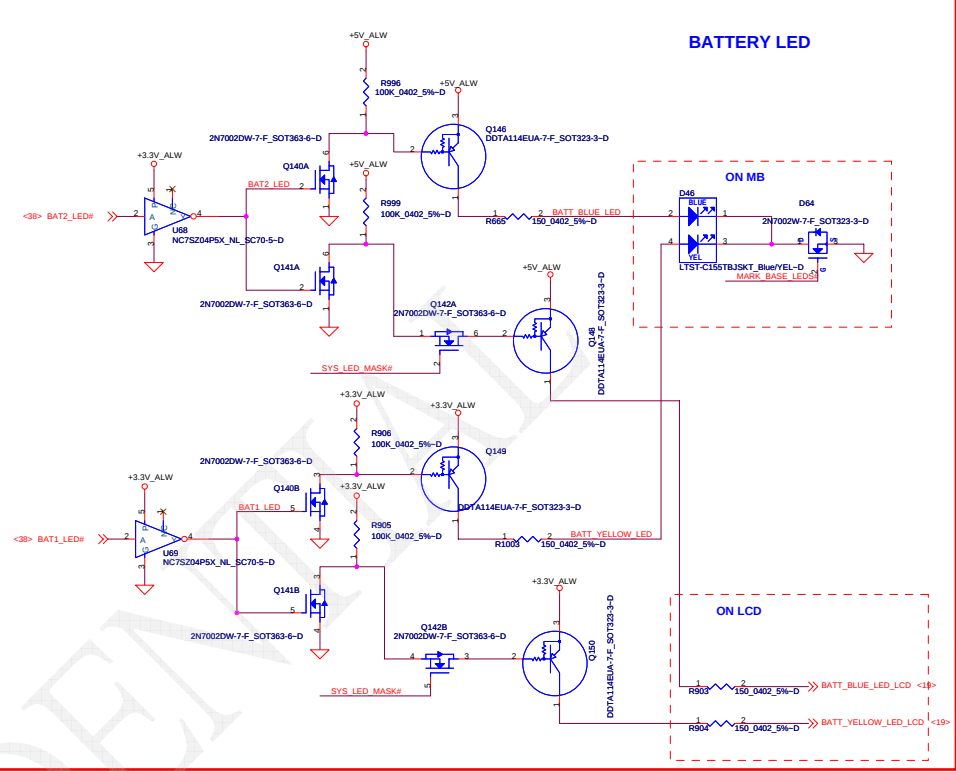
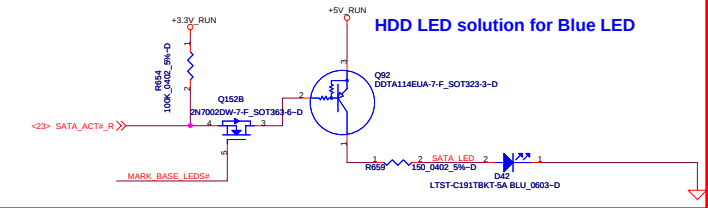
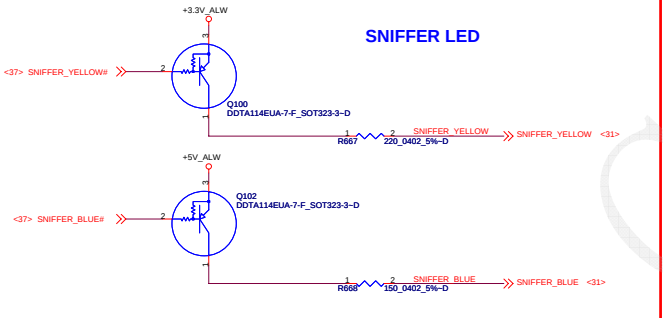
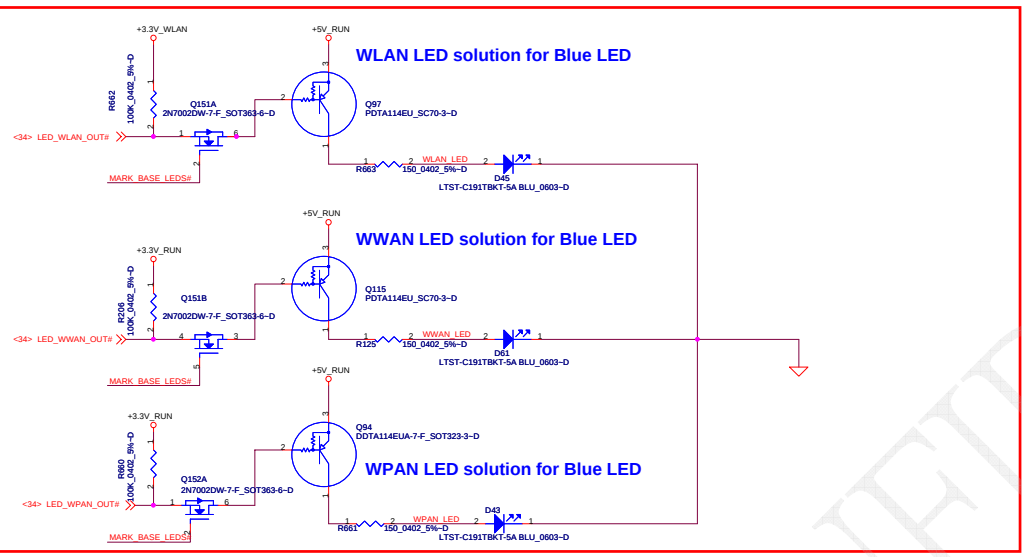
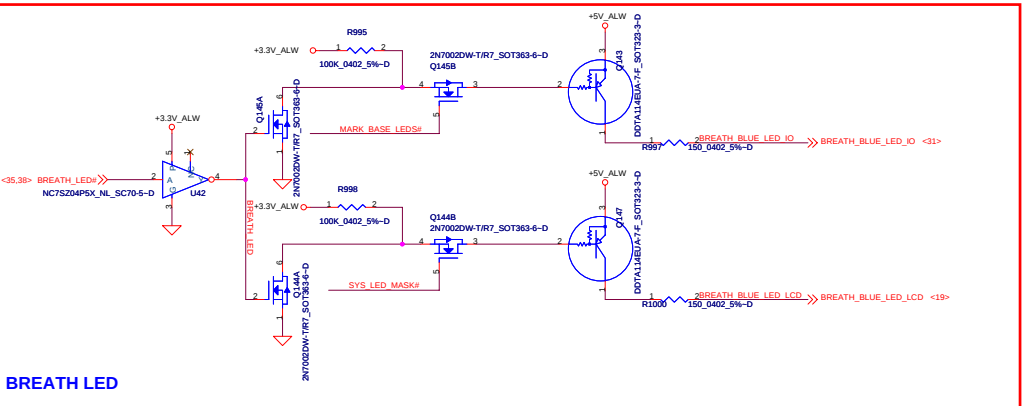
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BIOS GPIO Table for LED Control

	SYS_LED_MASK#	LID_CL#
MARK ALL LED (SNIFFER FUNCTION)	Low	X
MARK BASE MB LEDs (Lid Closed)	High	Low
Do Not Mark LEDs (Lid Opened)	High	High

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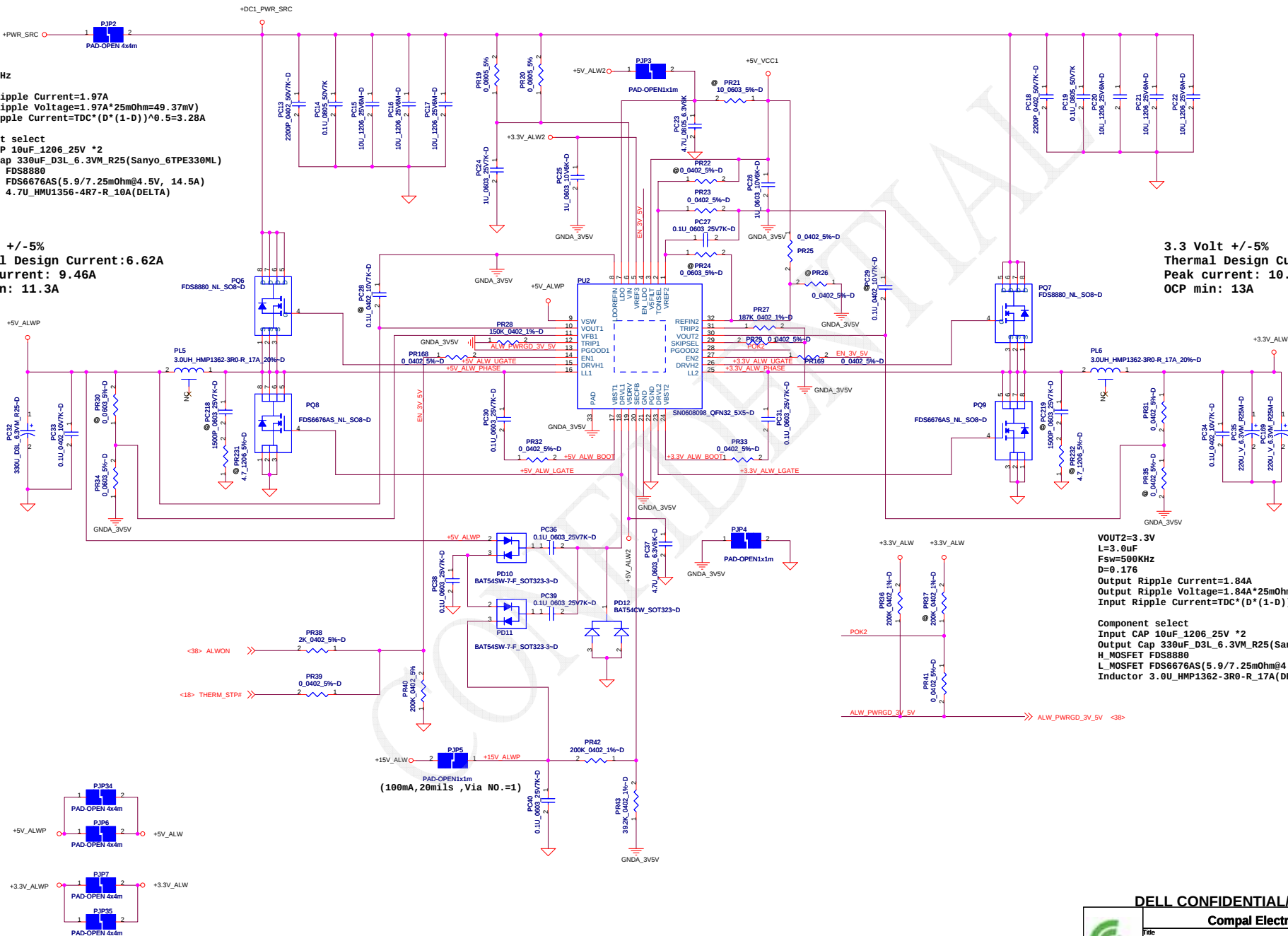
+3.3V_ALWP/ +5V_ALWP/ +5V_ALW2 / +15V_ALWP

VOUT1=5V
L=4.7uF
Fsw=400KHz
D=0.265
Output Ripple Current=1.97A
Output Ripple Voltage=1.97A*25mOhm=49.37mV
Input Ripple Current=TDC*(D*(1-D))^0.5=3.28A

Component select
Input CAP 10uF 1206 25V *2
Output Cap 330uF_D3L 6.3VM_R25(Sanyo_6TPE330ML)
H_MOSFET FDS8880
L_MOSFET FDS6676AS(5.9/7.25mOhm@4.5V, 14.5A)
Inductor 4.7U_HMU1356-4R7-R_10A(DELTA)

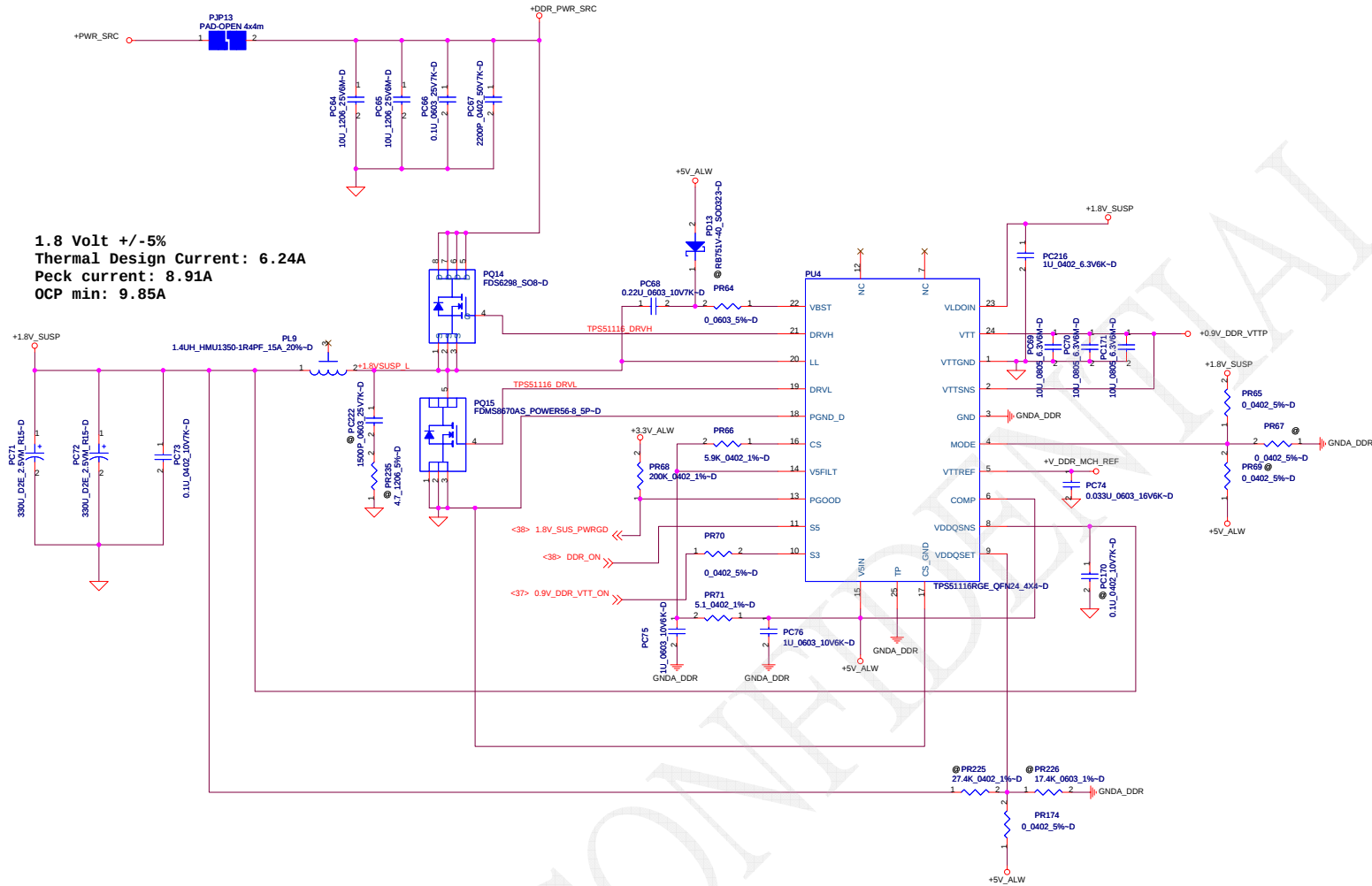
5 Volt +/-5%
Thermal Design Current:6.62A
Peck current: 9.46A
OCP min: 11.3A

3.3 Volt +/-5%
Thermal Design Current: 7.39A
Peak current: 10.56A
OCP min: 13A

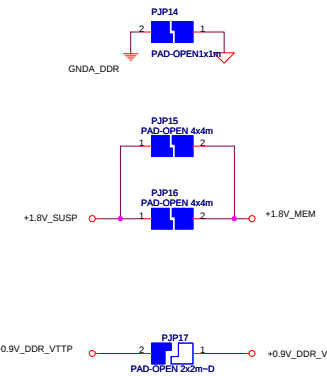


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DDR2 Termination



Design current 0.7A for +0.9V_DDR_VTTP
Peak current 1A for +0.9V_DDR_VTTP

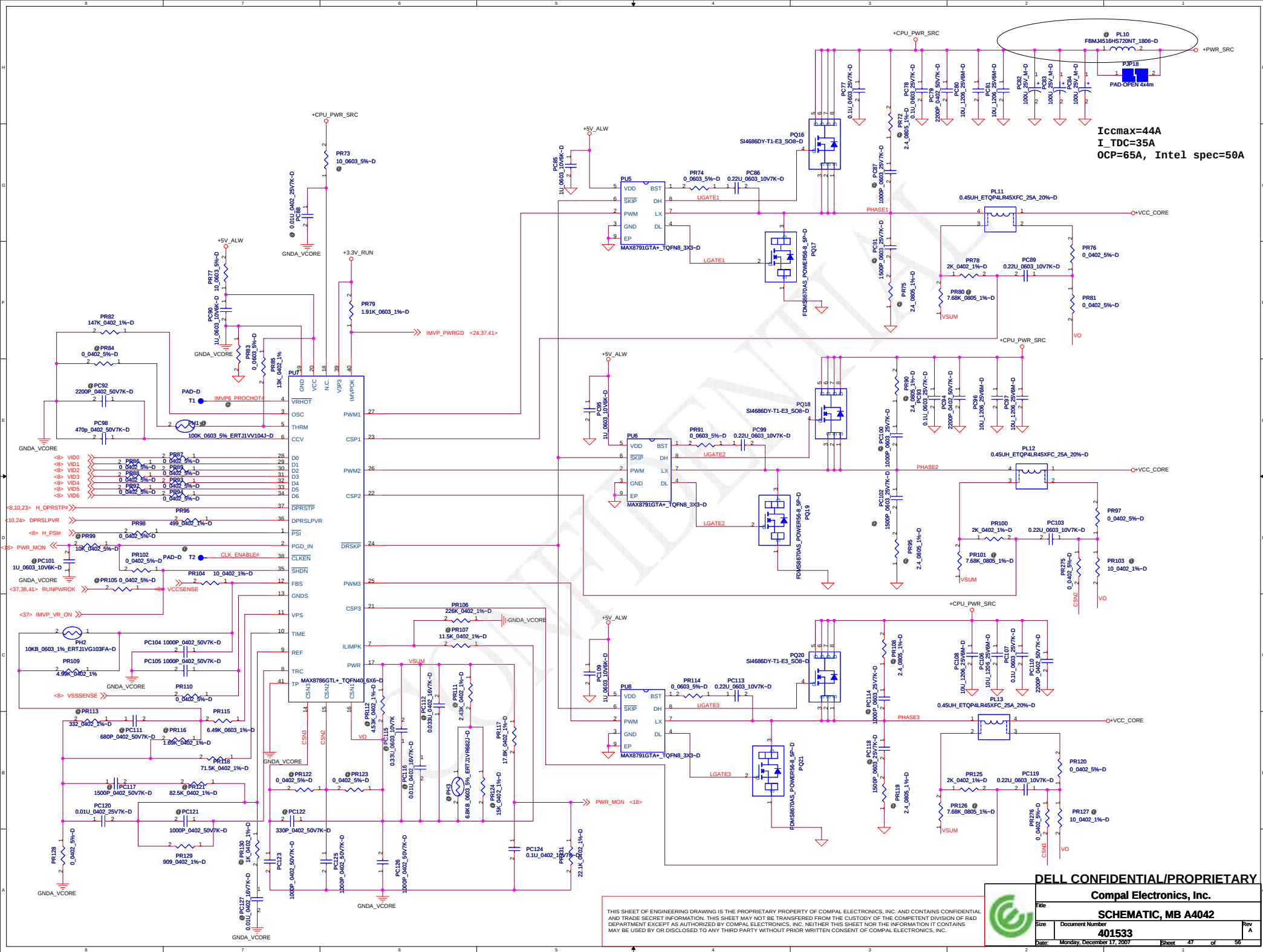


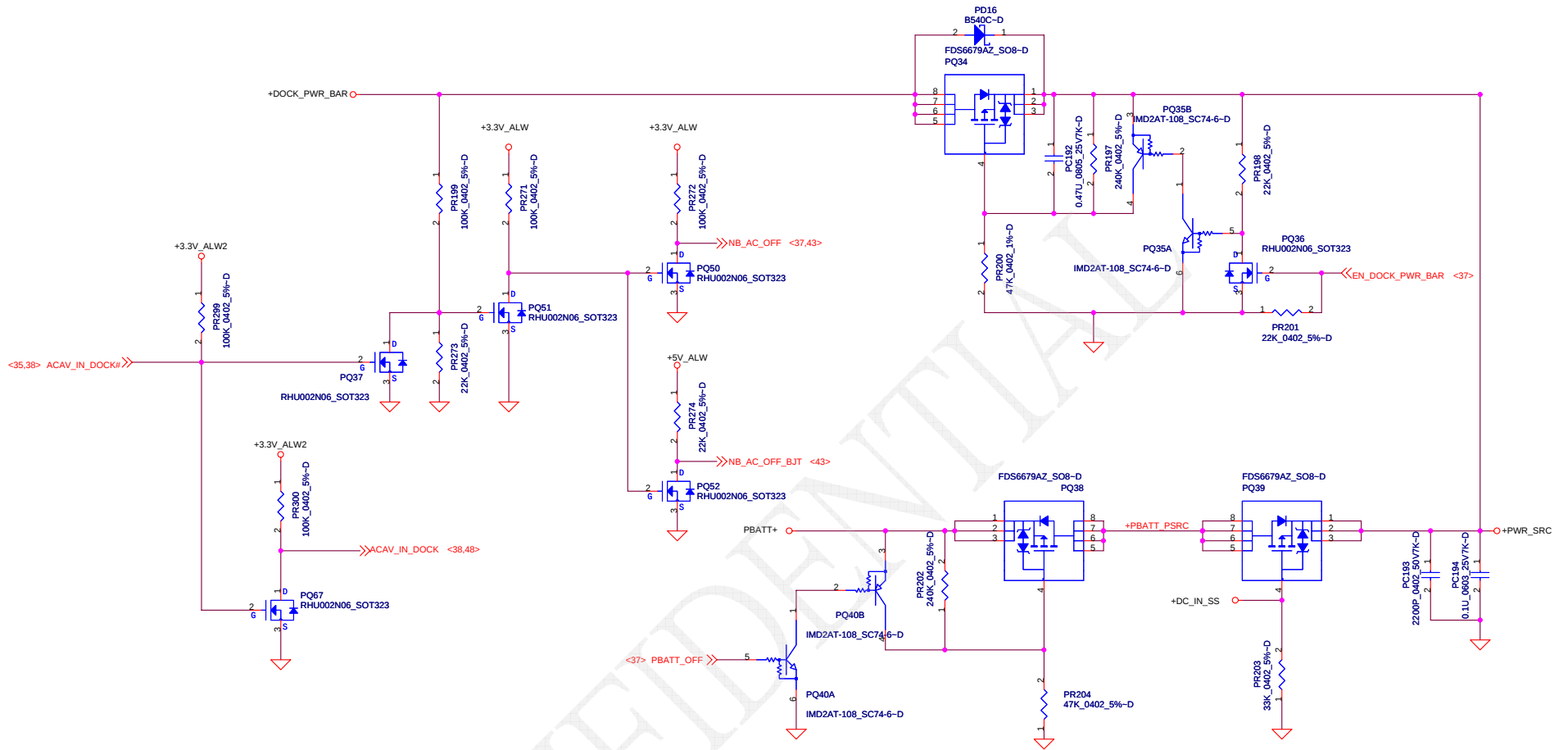
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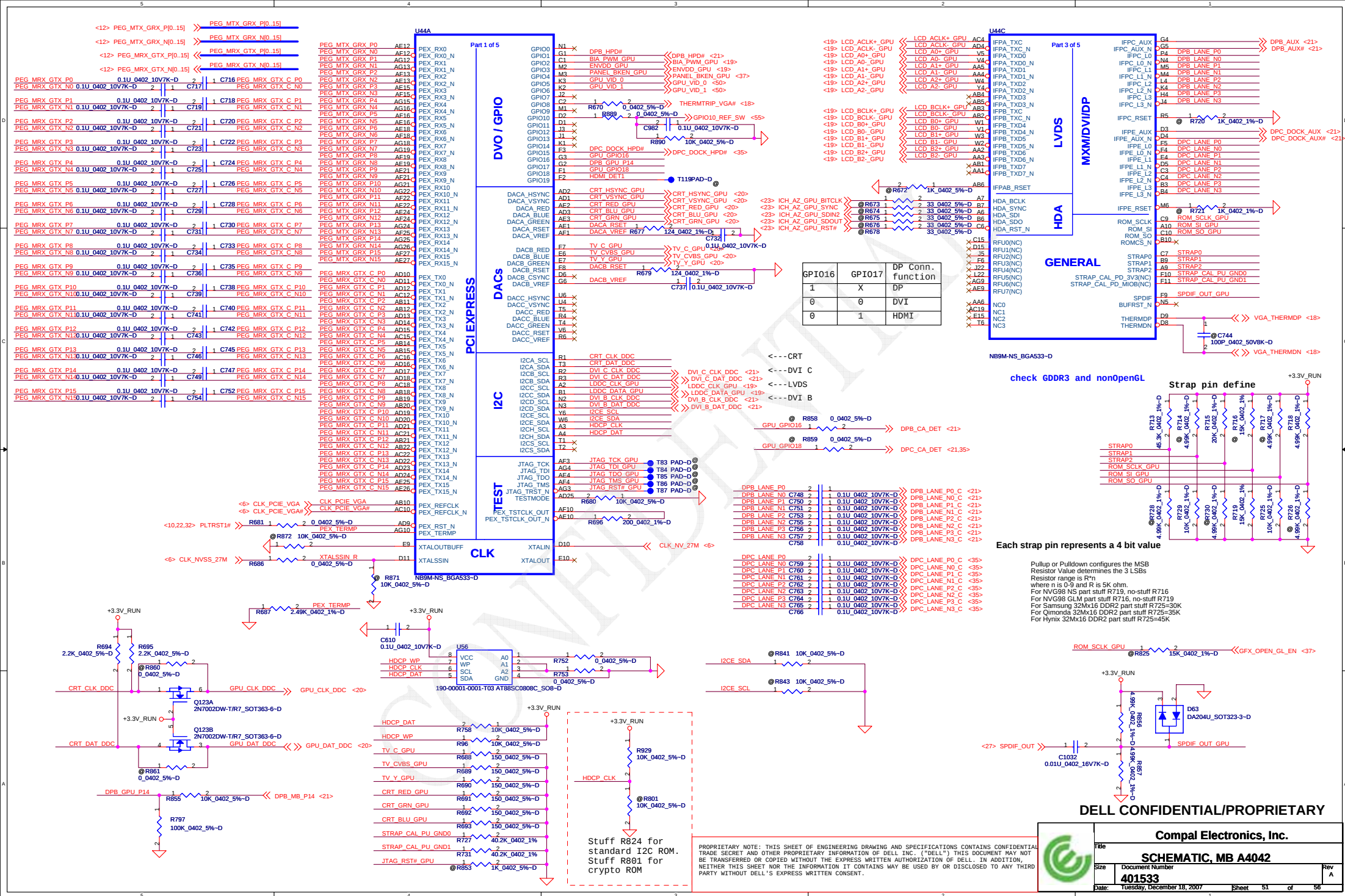
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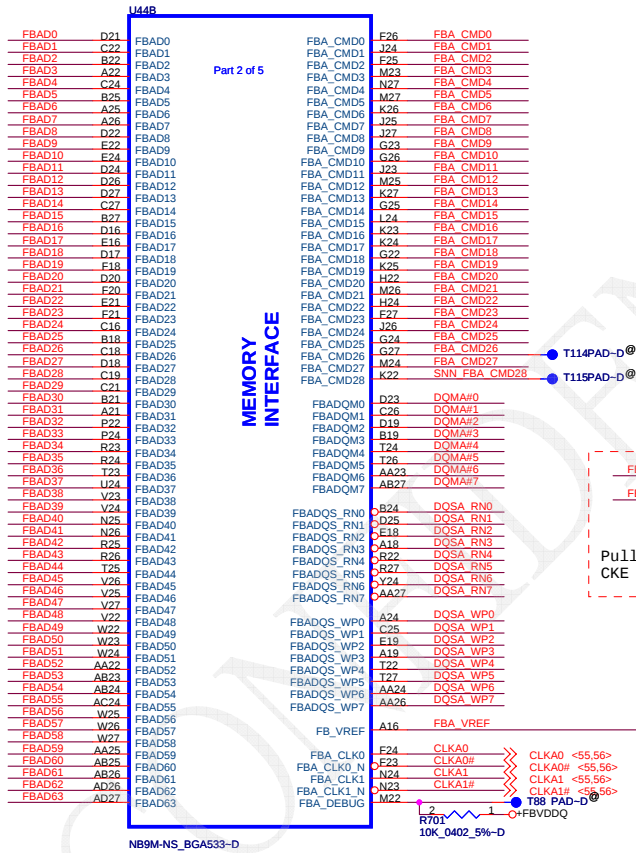
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FBAD[0:63] << >> FBAD[0:63] <55,56>
DQMA#[0:7] <>> DQMA#[0:7] <55,56>
DQSA_WP[0:7] << >> DQSA_WP[0:7] <55,56>
DQSA_RN[0:7] << >> DQSA_RN[0:7] <55,56>
FBA_CMD[0..27] <>> FBA_CMD[0..27] <55,56>

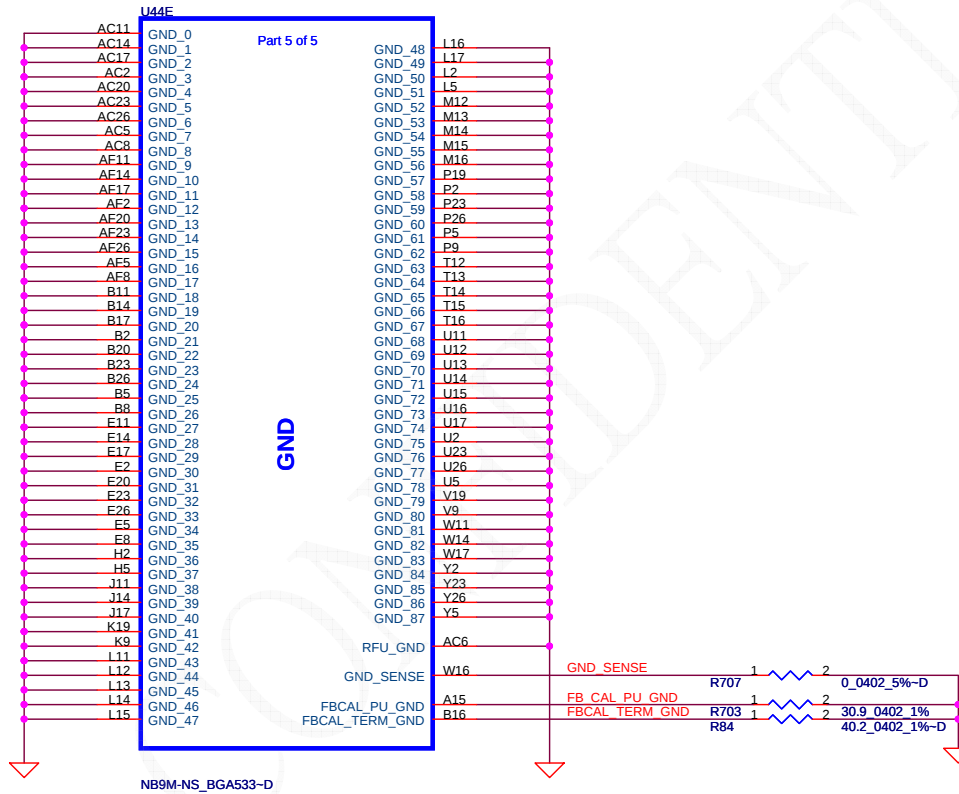


	0..31	32..63
FBA_CMD0	A4	
FBA_CMD1	RAS#	RAS#
FBA_CMD2	A5	
FBA_CMD3	BA1	BA1
FBA_CMD4		A2
FBA_CMD5		A4
FBA_CMD6		A3
FBA_CMD7	CS1#	CS1#
FBA_CMD8	CS0#	CS0#
FBA_CMD9	A11	A11
FBA_CMD10	CAS#	CAS#
FBA_CMD11	WE#	WE#
FBA_CMD12	BA0	BA0
FBA_CMD13		A5
FBA_CMD14	A12	A12
FBA_CMD15	RST/ODT	RST/ODT
FBA_CMD16	A7	A7
FBA_CMD17	A10	A10
FBA_CMD18	CKE	CKE
FBA_CMD19	A0	A0
FBA_CMD20	A9	A9
FBA_CMD21	A6	A6
FBA_CMD22	A2	
FBA_CMD23	A8	A8
FBA_CMD24	A3	
FBA_CMD25	A1	A1
FBA_CMD26	A13	A13
FBA_CMD27	BA2	BA2
FBA_CMD28	RFU0	RFU0
FBA_CMD29	RFU1	RFU1
FBA_CMD30	RFU2	RFU2

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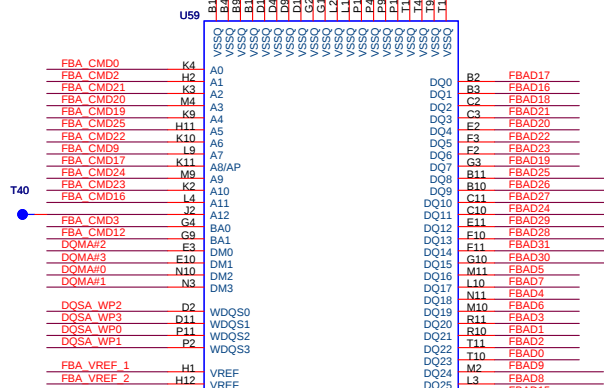
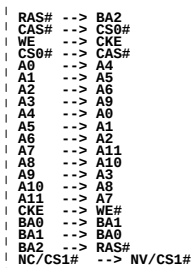
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32Mx32 GDDR3

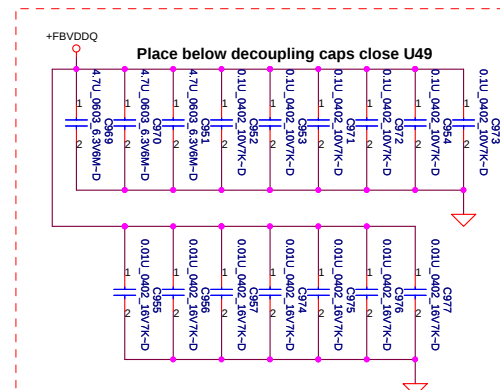
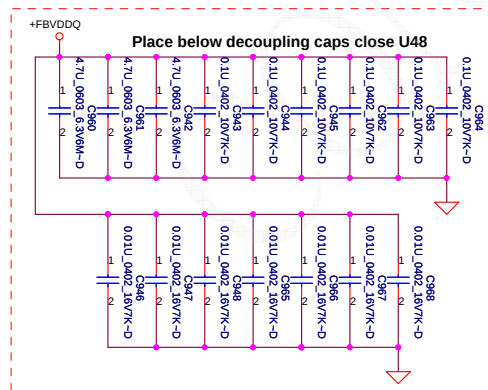
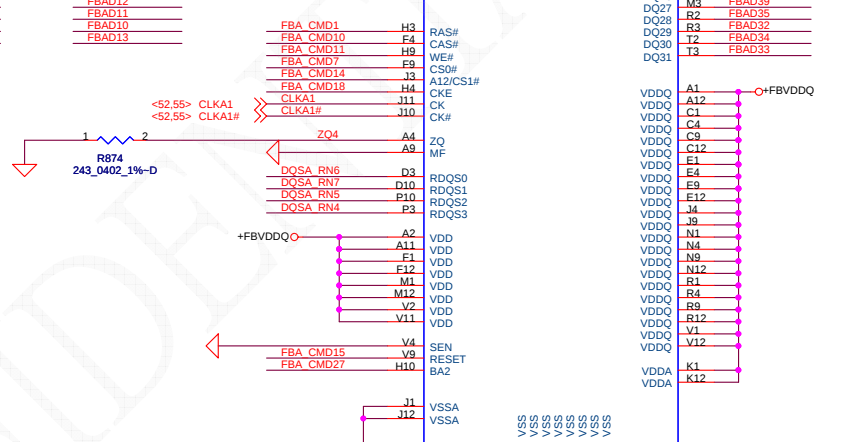
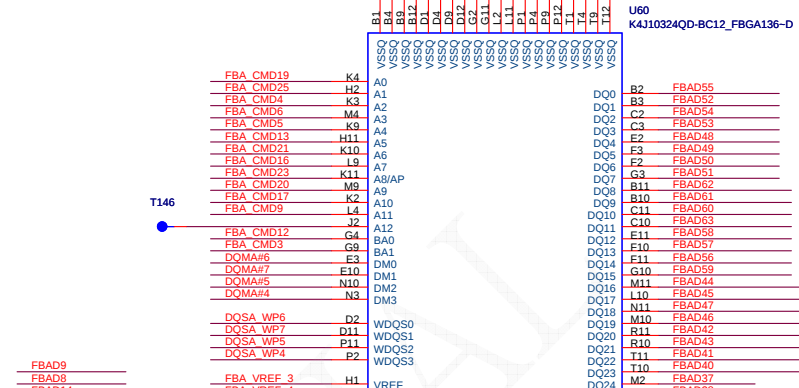
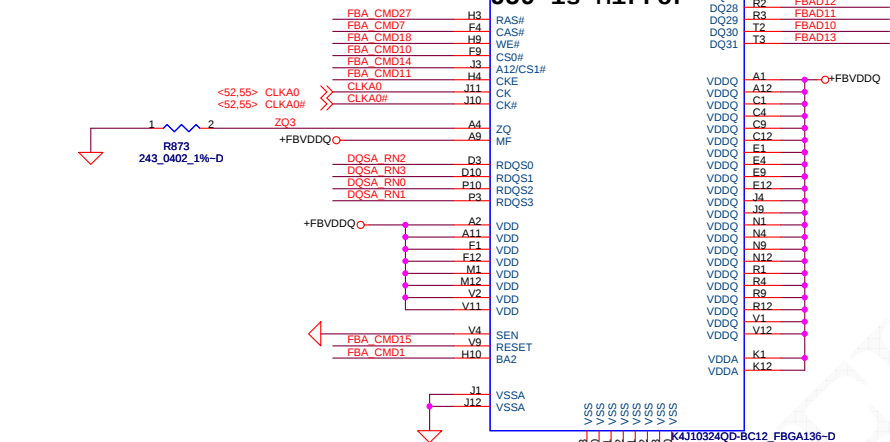


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32Mx32 GDDR3



U59 is Mirror



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