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13	Crestline (VSS) 7/7	1.0	07'07'17	48	CPU_Vcore---ISL6262A	1.0	07'07'17
14	DDRII(SO-DIMM_0) 1/3	1.0	07'07'17	49	Others power plane	1.0	07'07'17
15	DDRII(SO-DIMM_1) 2/3	1.0	07'07'17	50	OVP protection	1.0	07'07'17
16	DDRII(Termination) 3/3	1.0	07'07'17	51	GMCH power	1.0	07'07'17
17	CRT	1.0	07'07'17	52	HOLE	1.0	07'07'17
18	LVDS	1.0	07'07'17	53	History (1)	1.0	07'07'17
19	ICH8-M(PCI/USB) 1/5	1.0	07'07'17	54	History (2)	1.0	07'07'17
20	ICH8-M(LPC,IDE,SATA)2/5	1.0	07'07'17	55	History (3)	1.0	07'07'17
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M720 Main Board

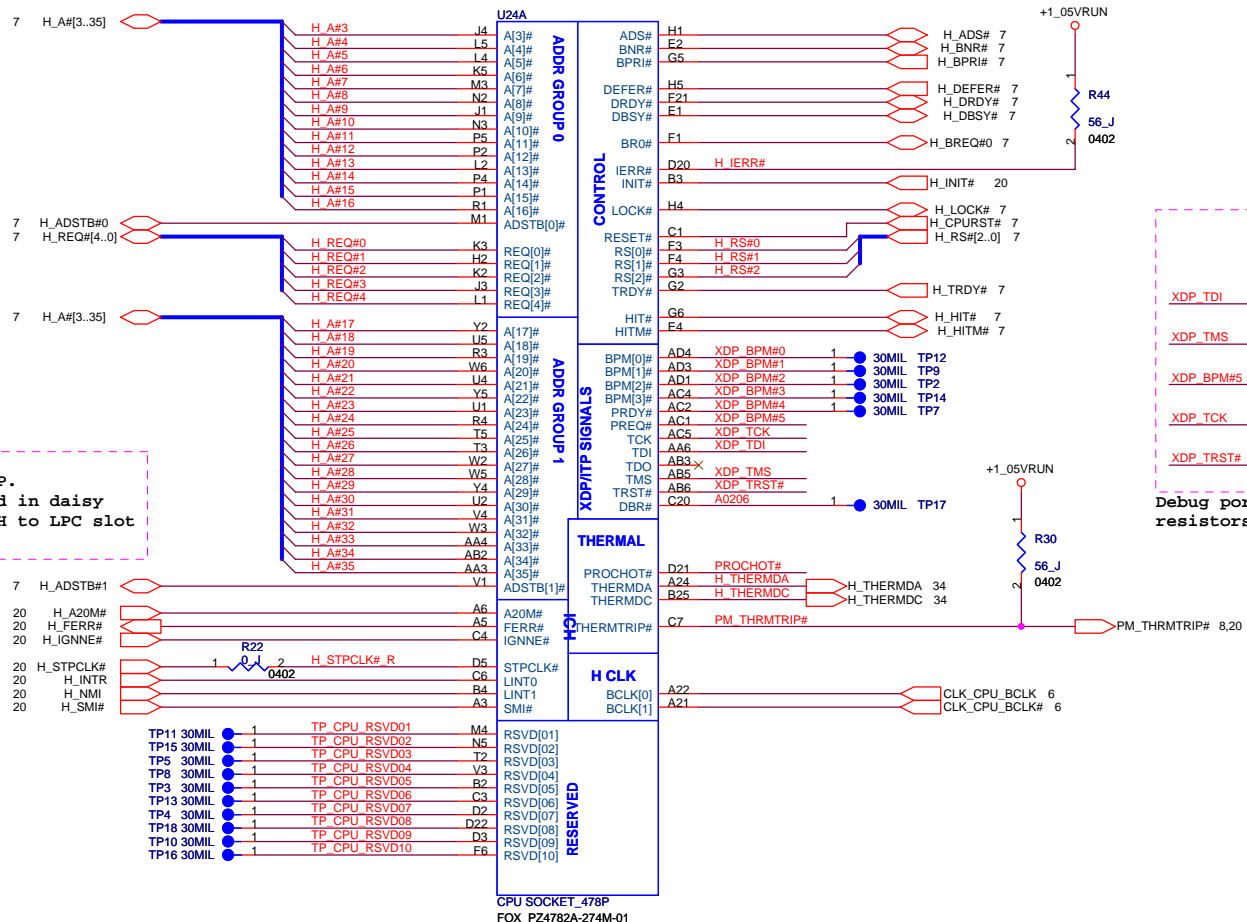
M/B P/N: 1P-0076102-6010 (FUBAI)
 1P-0076200-6010 (NANYA)
 1P-0076502-6010 (HANSTAR)
 1P-0076G00-6010 (TRIPOD)

P/B P/N: 1P-1076105-6010 (FUBAI)
 1P-1076200-6010 (NANYA)
 1P-1076505-6010 (HANSTAR)
 1P-1076G00-6010 (TRIPOD)

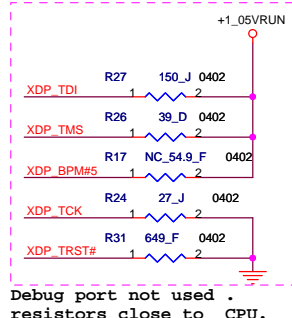
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 1P-1076201-6010 (NANYA)
 1P-1076506-6010 (HANSTAR)
 1P-1076G01-6010 (TRIPOD)

P. Leader	Check by	Design by

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Layout note:
no stub on H_STPCLK TP.
H_STPCLK# to be routed in daisy chain fashion from ICH to LPC slot and then to CPU.

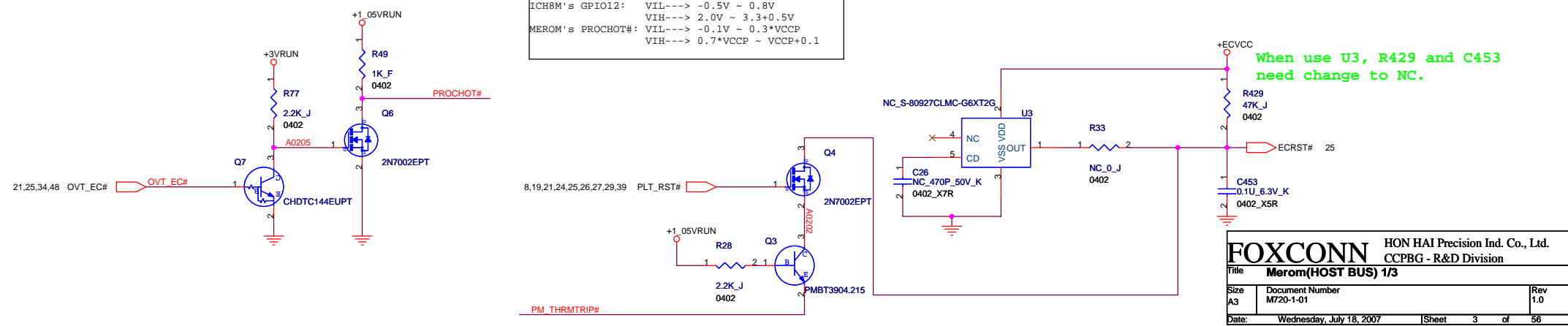


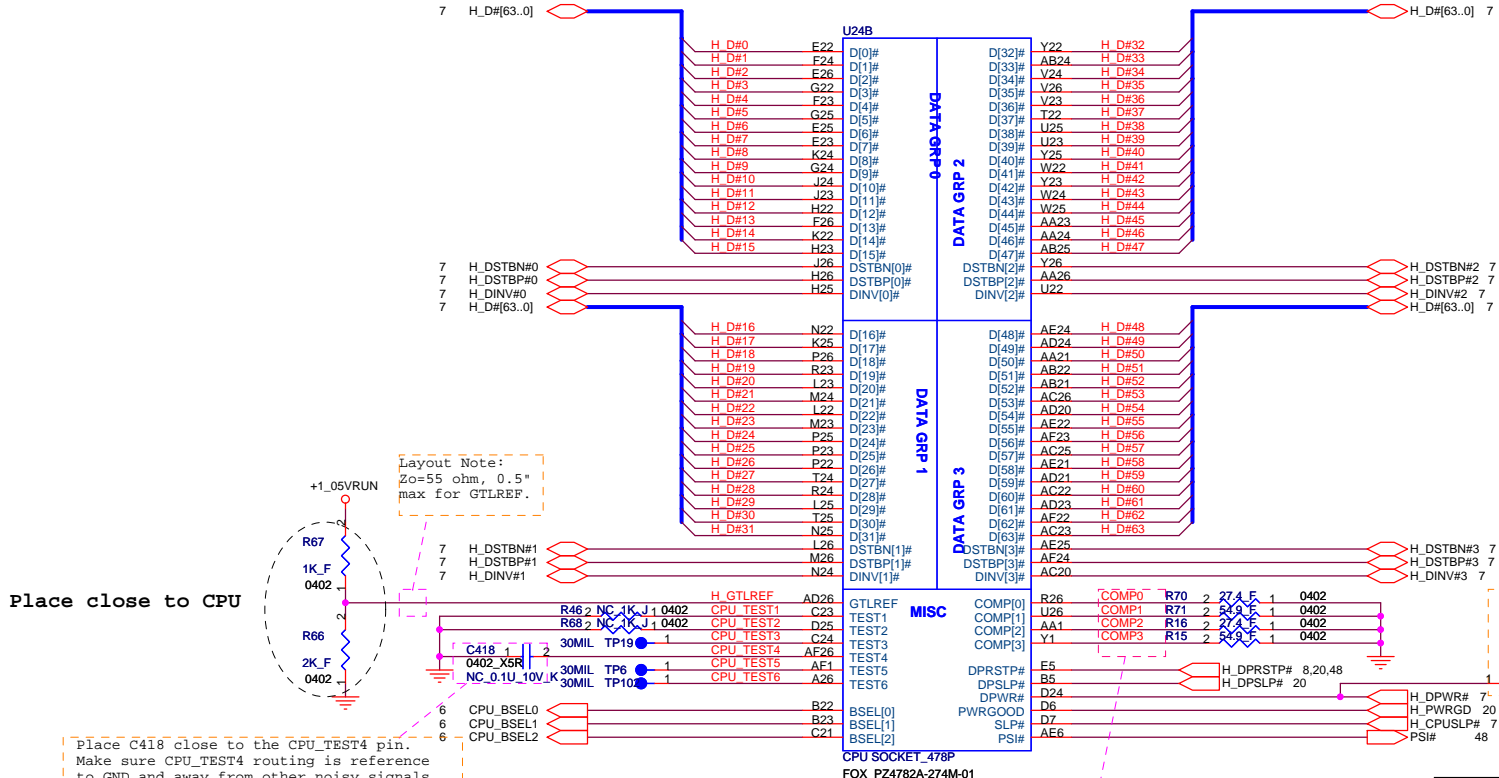
Debug port not used. resistors close to CPU.

PM_THRMTRIP# should connect to ICH8-M and GMCH without T-ing (No stub)

ICH8M's GPIO12: VIL----> -0.5V ~ 0.8V
VIH----> 2.0V ~ 3.3+0.5V
MEROM's PROCHOT#: VIL----> -0.1V ~ 0.3*VCCP
VIH----> 0.7*VCCP ~ VCCP+0.1

When use U3, R429 and C453 need change to NC.





Layout Note:
Zo=55 ohm, 0.5"
max for GTLREF.

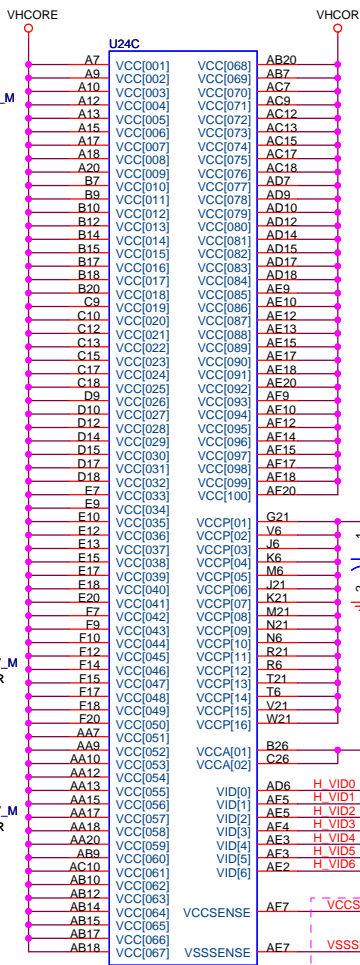
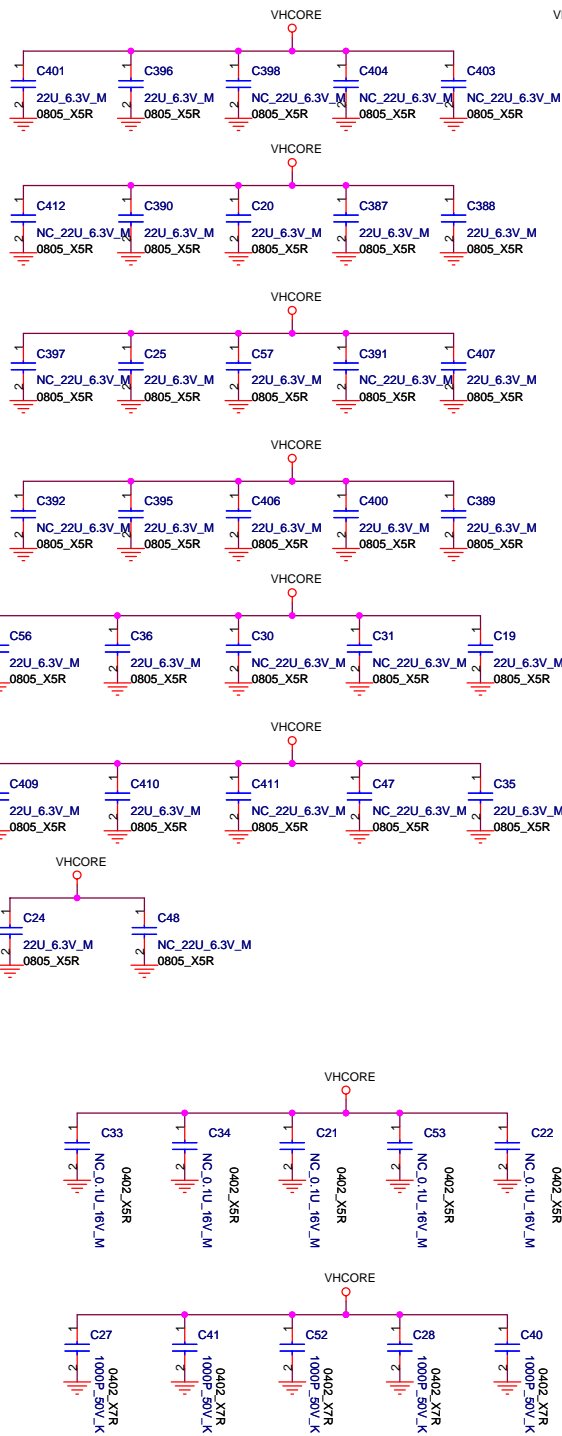
Place close to CPU

Place C418 close to the CPU_TEST4 pin.
Make sure CPU_TEST4 routing is reference
to GND and away from other noisy signals.

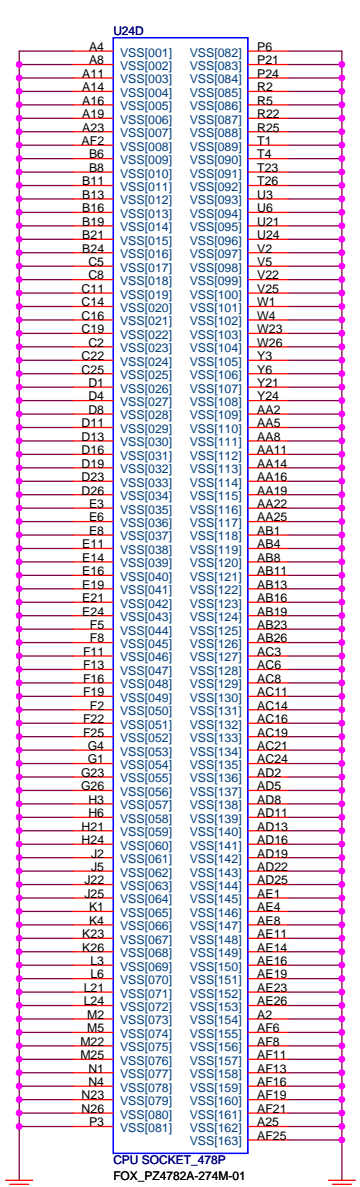
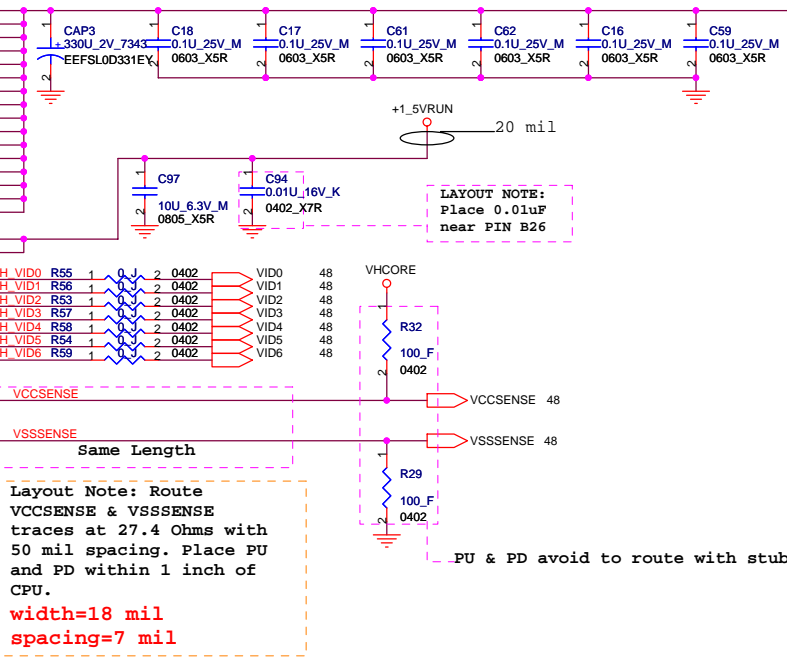
Layout Note:
Comp0,2 connect with Zo=27.4 ohm, make
trace length shorter then 0.5".
Comp1,3 connect with Zo=55 ohm, make
trace length shorter then 0.5".

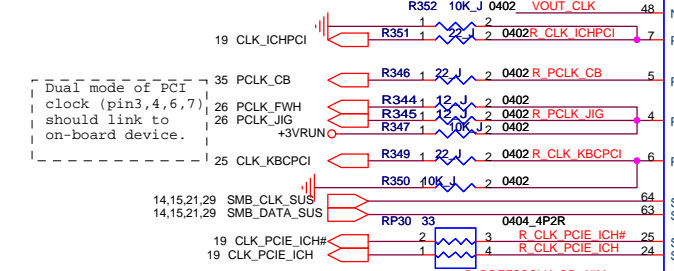
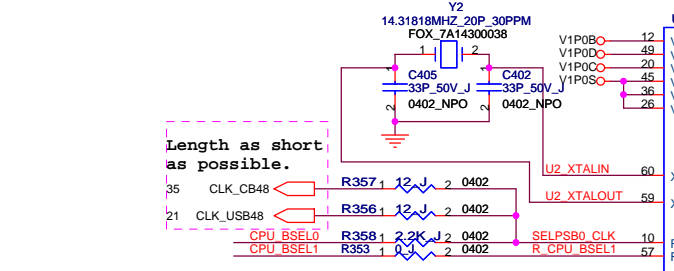
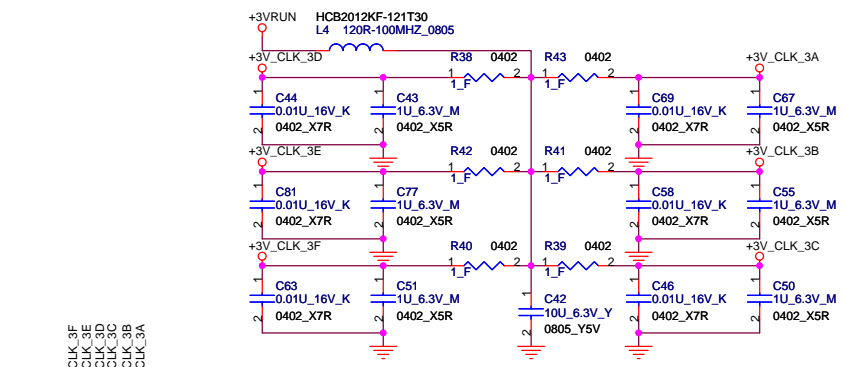
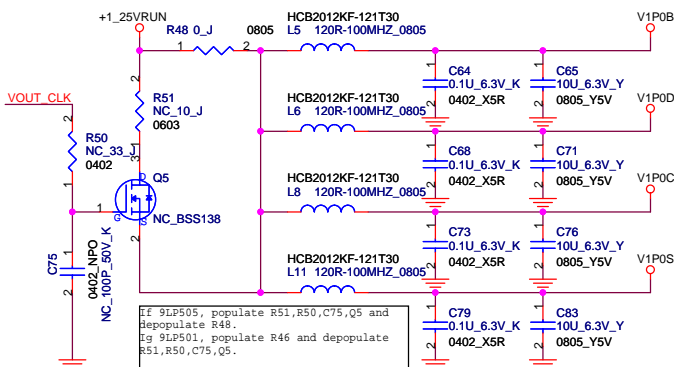
Layout:
Connect test
point with no
stub

IMVP6 (ISL6262ACRZ-T)
cpu PSI# <-> ISL6262ACRZ-T PSI#
ISL6262ACRZ-T: VIHmin=0.315V
VILmax=0.735V
(ref. IMVP-6 NO:18904)



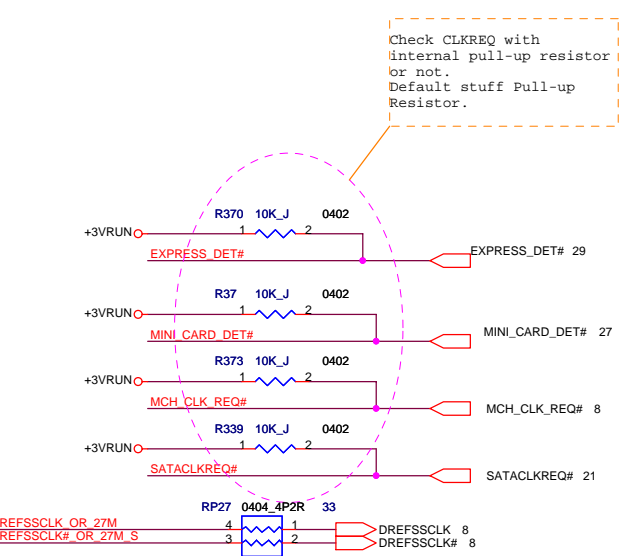
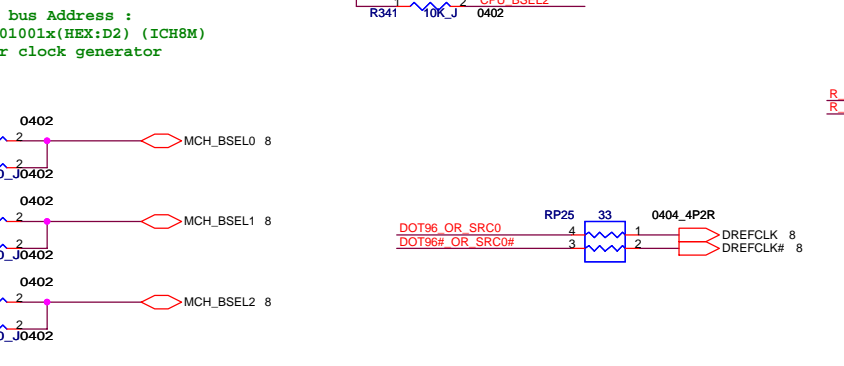
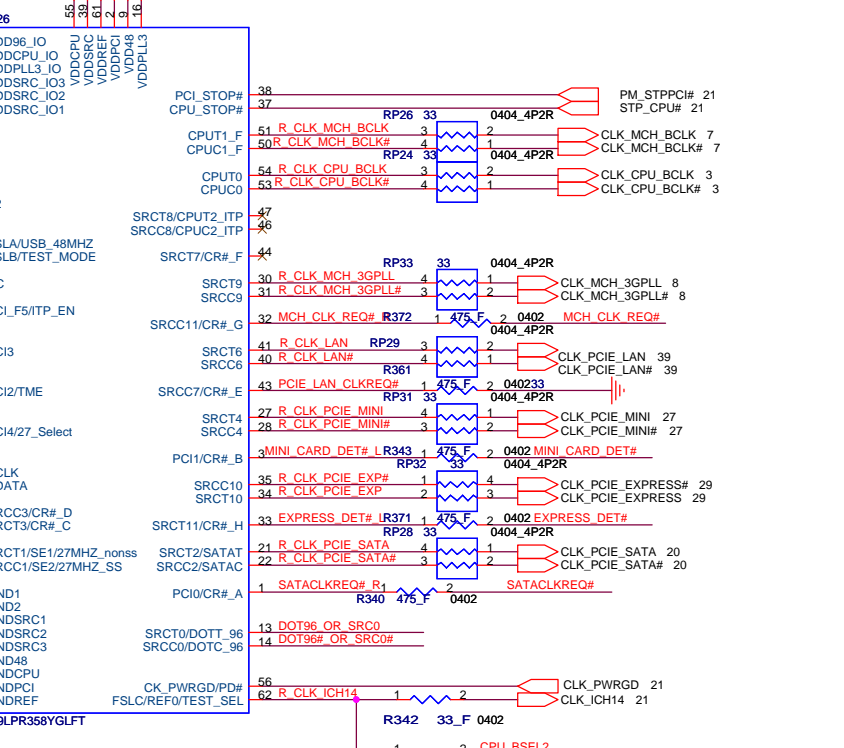
CPU_VCCA----->120mA
 CPU_VCCP----->2.5A
 CPU_VCC----->36A





close to clk gen (For EMI)

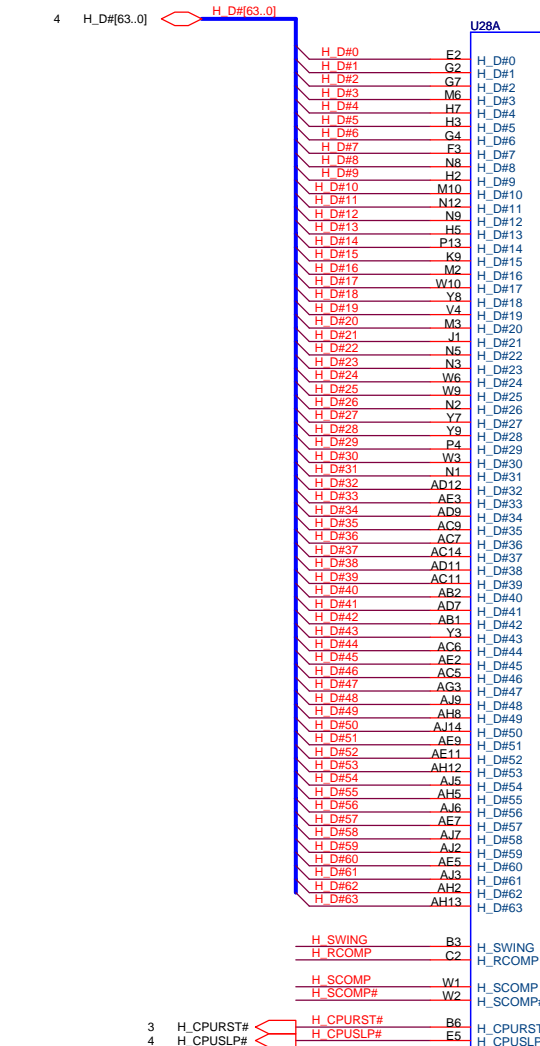
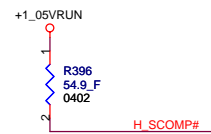
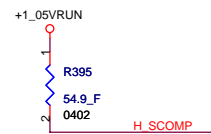
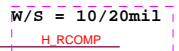
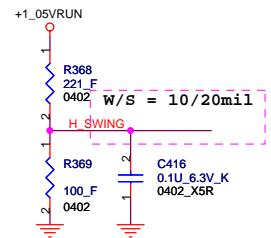
FSLC	FSLB	FSLA	CPU	SRC[7:0]	PCI
0	0	0	266.66	100	33
0	0	1	133.33	100	33
0	1	0	200	100	33
0	1	1	166.66	100	33
1	0	0	333.33	100	33
1	0	1	100	100	33
1	1	0	400	100	33



SM bus Address : 1101001x(HEX:D2) (ICH8M) For clock generator

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CLOCK_GEN	M720-1-01	1.0

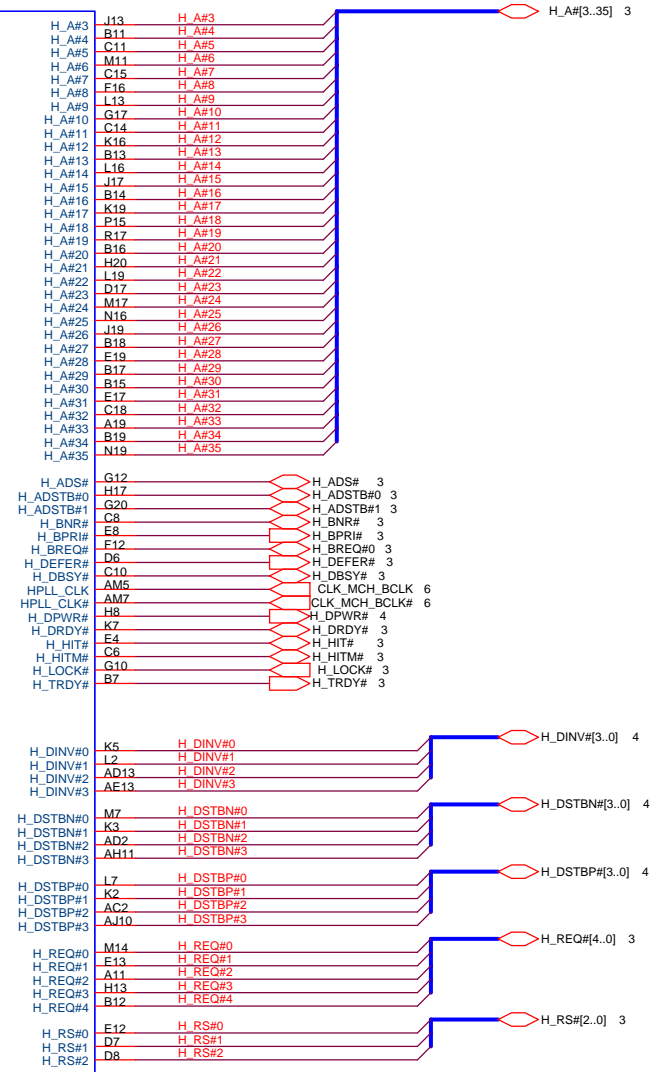
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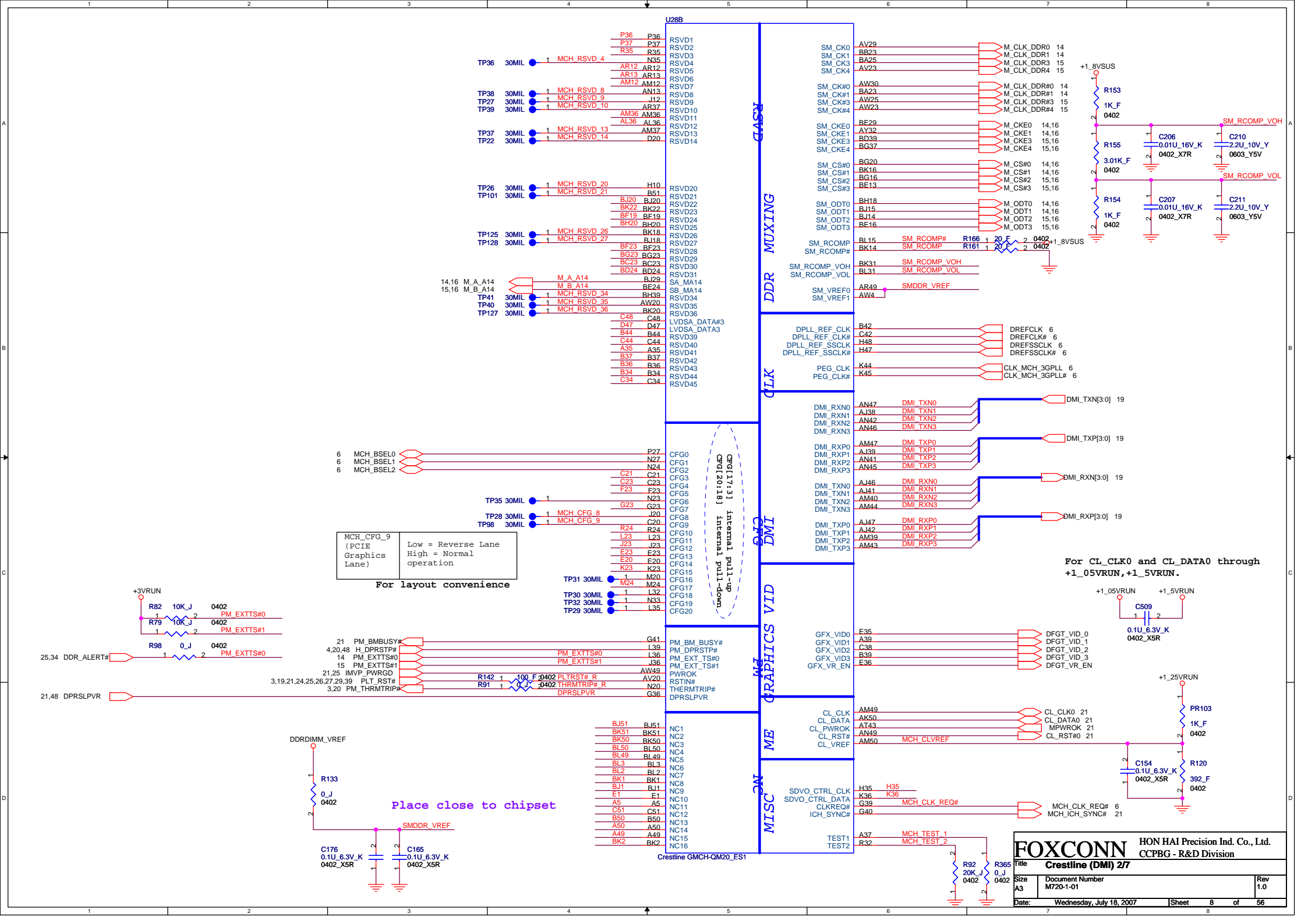


U28A

HOST

Crestline GMCH-QM20_ES1





- U28B
- RSVD1
- RSVD2
- RSVD3
- RSVD4
- RSVD5
- RSVD6
- RSVD7
- RSVD8
- RSVD9
- RSVD10
- RSVD11
- RSVD12
- RSVD13
- RSVD14
- RSVD20
- RSVD21
- RSVD22
- RSVD23
- RSVD24
- RSVD25
- RSVD26
- RSVD27
- RSVD28
- RSVD29
- RSVD30
- RSVD31
- RSVD32
- RSVD33
- RSVD34
- RSVD35
- RSVD36
- RSVD39
- RSVD40
- RSVD41
- RSVD42
- RSVD43
- RSVD44
- RSVD45
- LVDSA_DATA#3
- LVDSA_DATA3
- SA_MA14
- SB_MA14
- CFG0
- CFG1
- CFG2
- CFG3
- CFG4
- CFG5
- CFG6
- CFG7
- CFG8
- CFG9
- CFG10
- CFG11
- CFG12
- CFG13
- CFG14
- CFG15
- CFG16
- CFG17
- CFG18
- CFG19
- CFG20
- NC1
- NC2
- NC3
- NC4
- NC5
- NC6
- NC7
- NC8
- NC9
- NC10
- NC11
- NC12
- NC13
- NC14
- NC15
- NC16

RSVD
DDR MUXING
CLK
DMI
GRAPHICS VID
ME
MISC

CFG1[17:31] internal pull-up
CFG2[20:18] internal pull-down

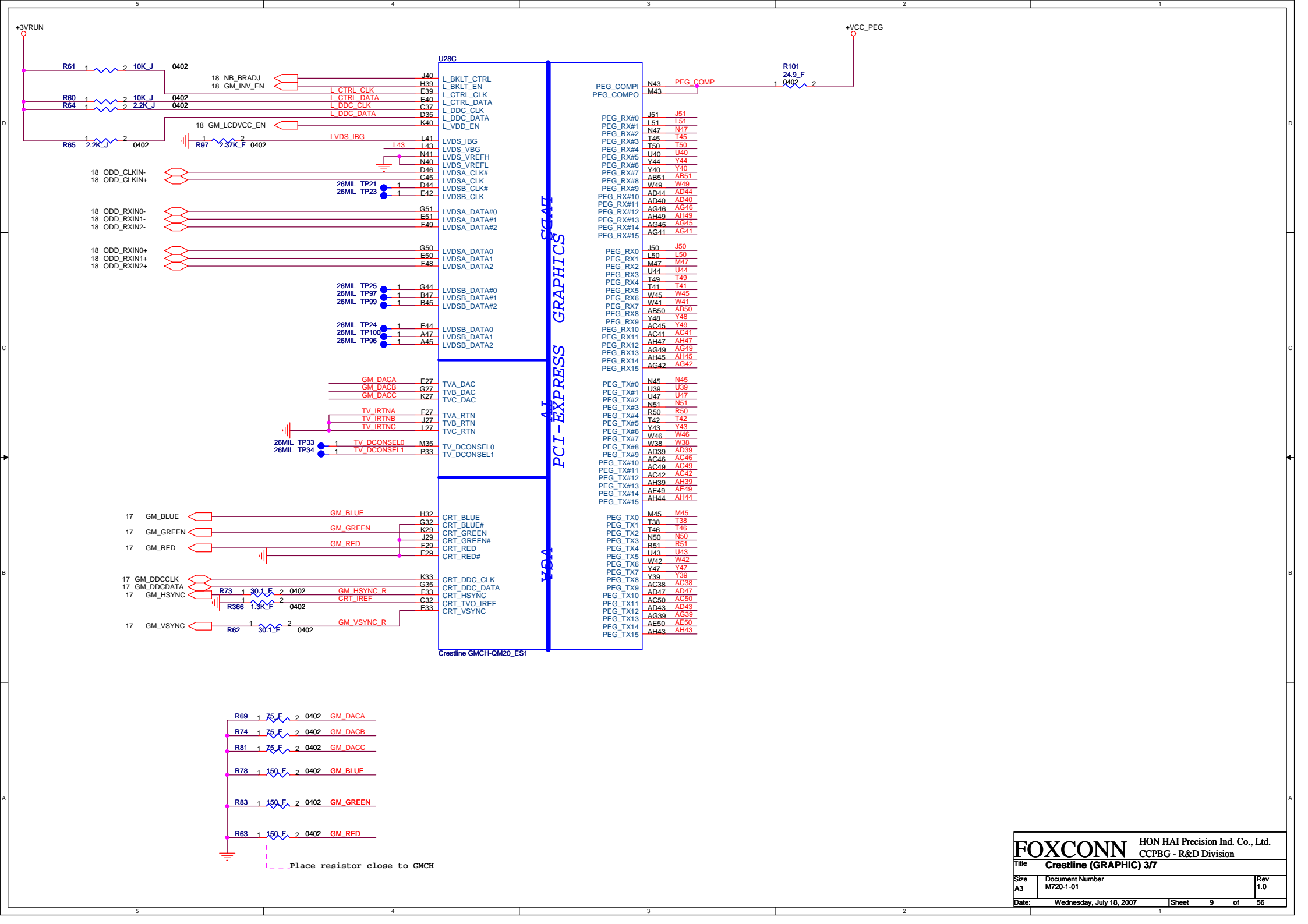
MCH_CFG_9
(PCIE Graphics Lane)
Low = Reverse Lane operation
High = Normal operation

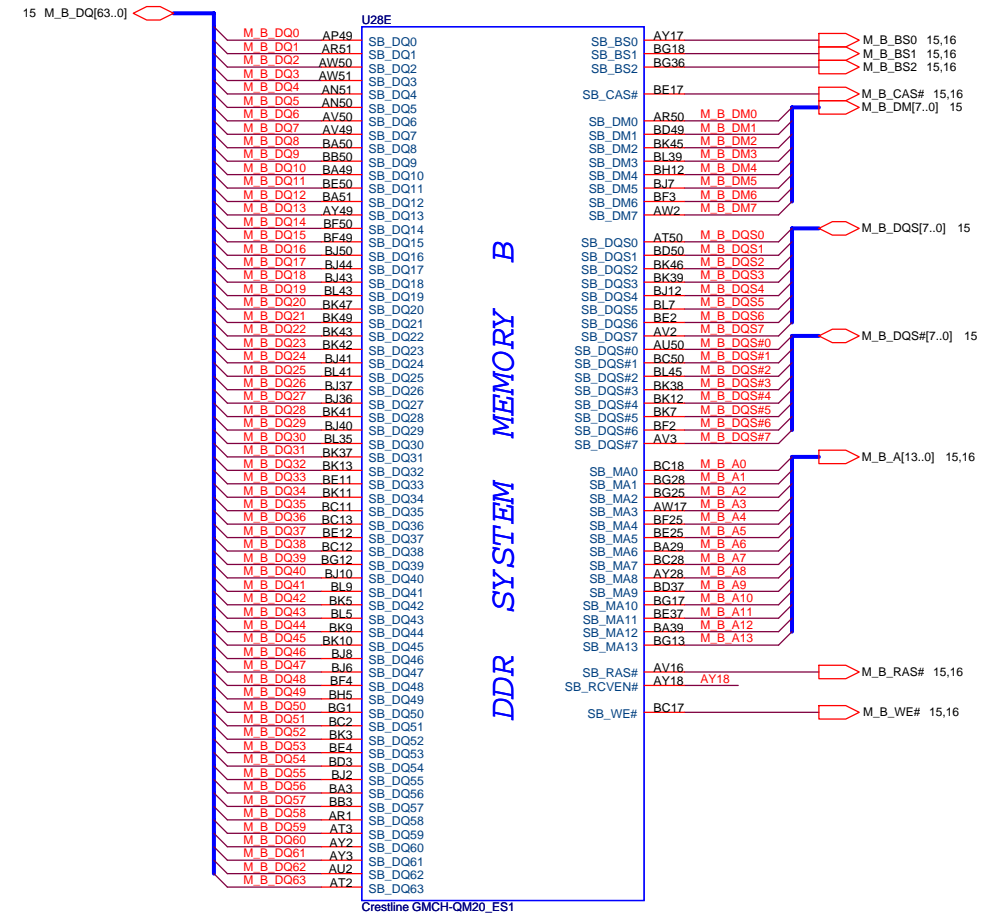
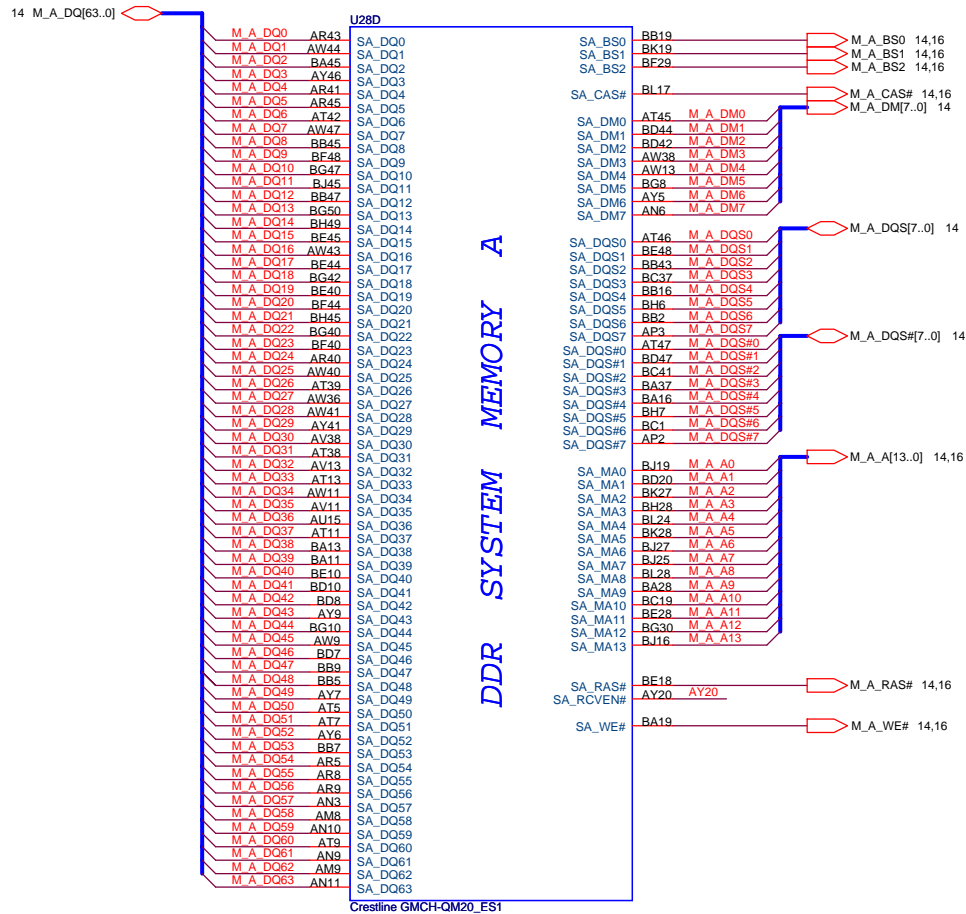
For layout convenience

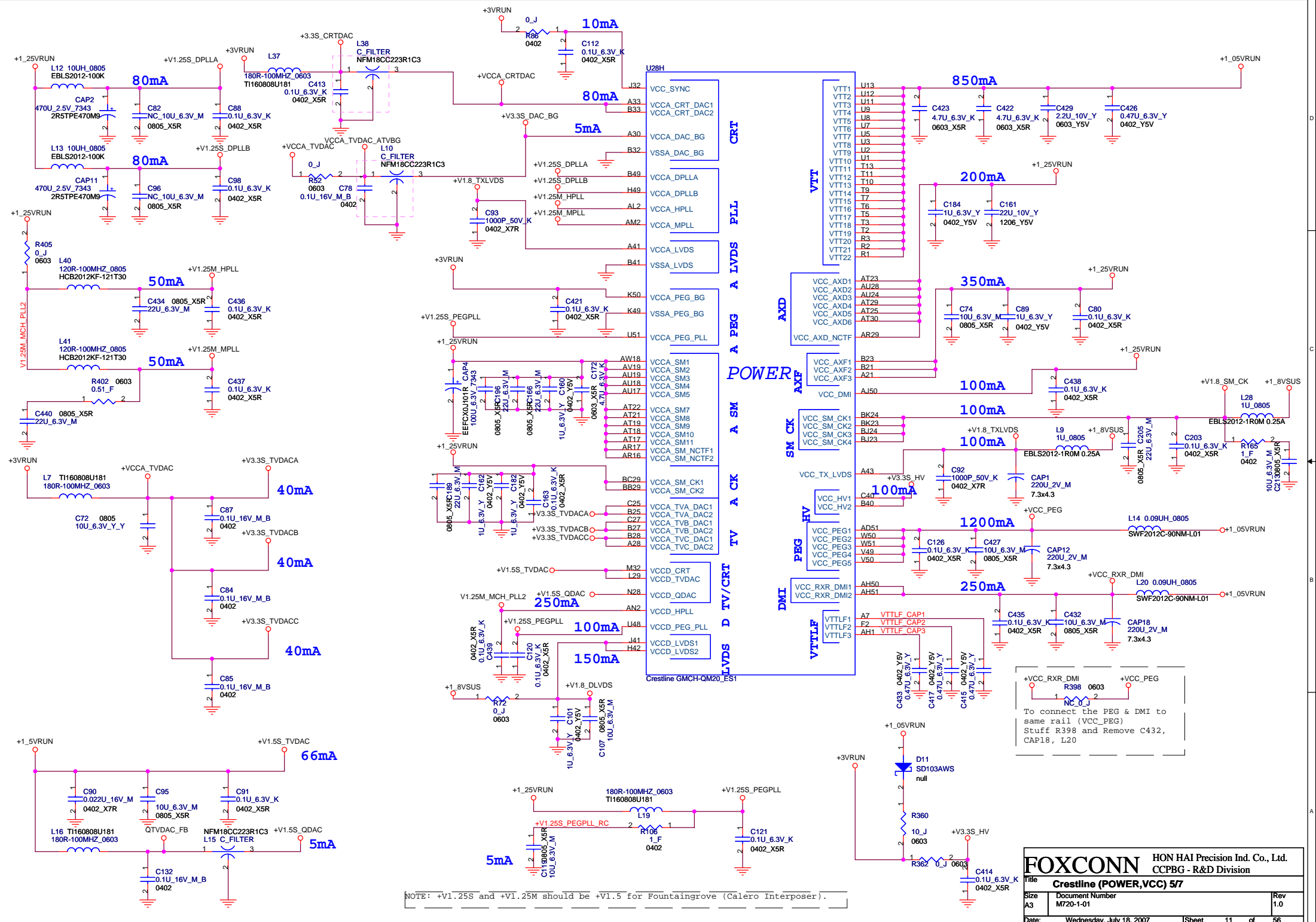
Place close to chipset

For CL_CLK0 and CL_DATA0 through +1_05VRUN, +1_5VRUN.

FOXCONN		HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
Title: Crestline (DMI) 2/7			
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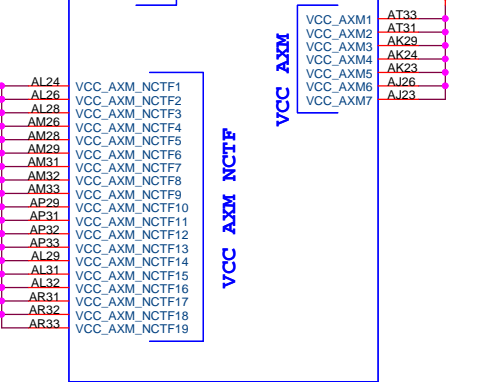
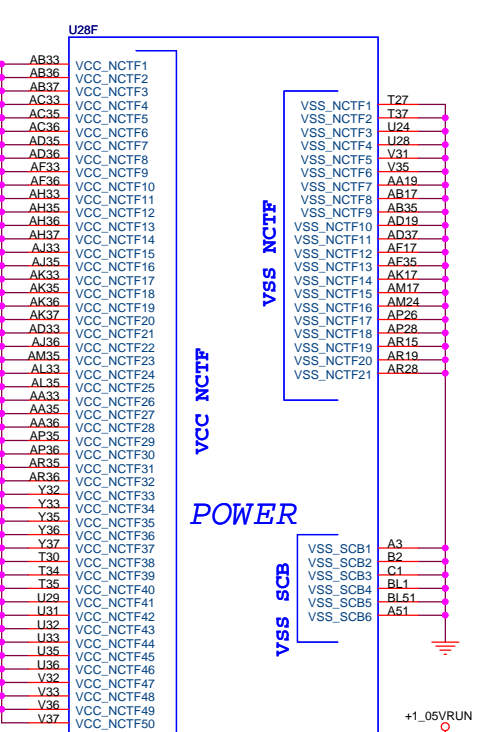
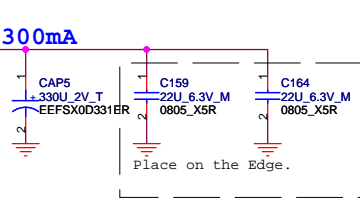
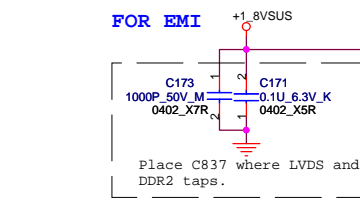
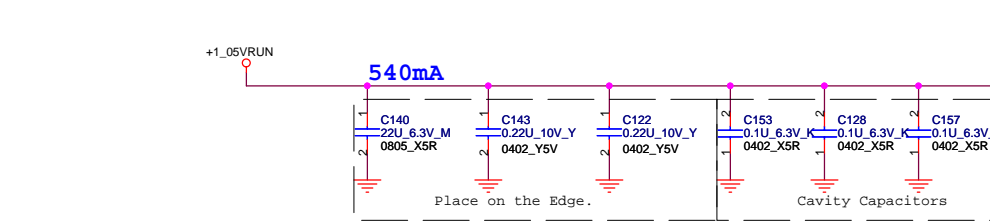
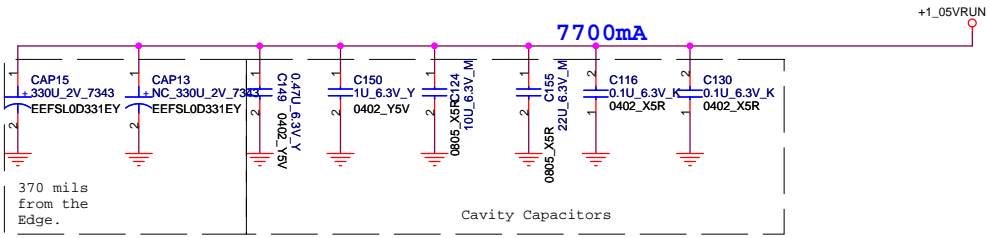
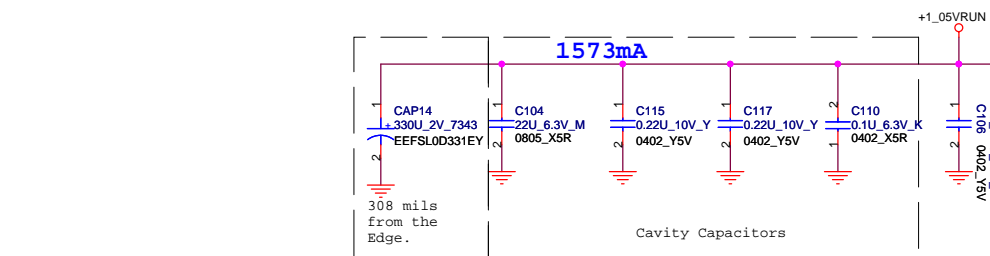
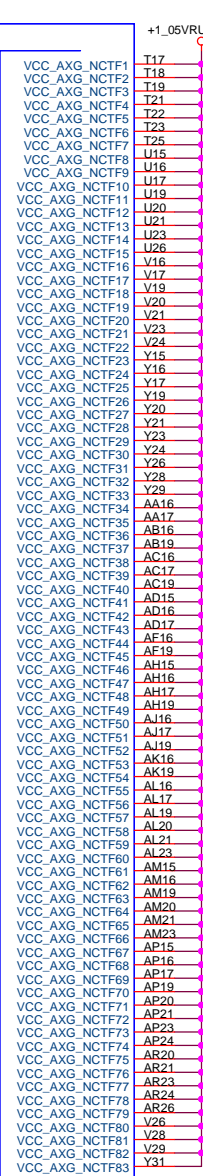
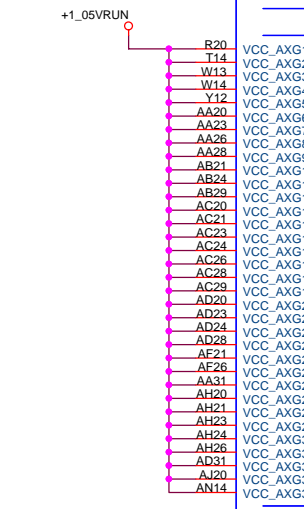
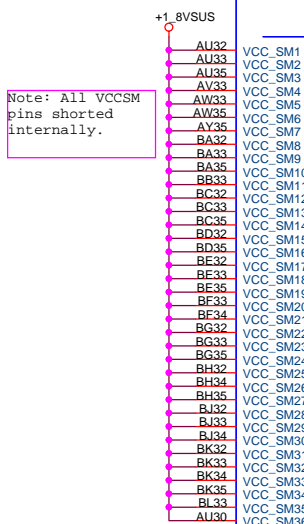
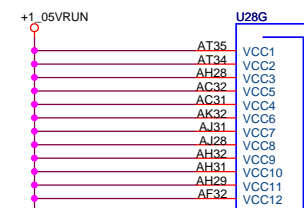






NOTE: +V1.25S and +V1.25M should be +V1.5 for Fountaingrove (Calero Interposer).

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Title Crestline (POWER,VCC) 57			
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CCPBG - R&D Division

Title: **Crestline (VCC CORE) 67**

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U28I				U28J			
A13	VSS1	VSS100	AW24	C46	VSS199	VSS287	W11
A15	VSS2	VSS101	AW29	C50	VSS200	VSS288	W39
A17	VSS3	VSS102	AW32	C7	VSS201	VSS289	W43
A24	VSS4	VSS103	AW5	D13	VSS202	VSS290	W47
AA21	VSS5	VSS104	AW7	D24	VSS203	VSS291	W5
AA24	VSS6	VSS105	AY10	D3	VSS204	VSS292	W7
AA29	VSS7	VSS106	AY24	D32	VSS205	VSS293	Y13
AB20	VSS8	VSS107	AY37	D39	VSS206	VSS294	Y41
AB23	VSS9	VSS108	AY42	D45	VSS207	VSS295	Y45
AB26	VSS10	VSS109	AY43	D49	VSS208	VSS296	Y49
AB28	VSS11	VSS110	AY45	E10	VSS209	VSS297	Y5
AB31	VSS12	VSS111	AY47	E16	VSS210	VSS298	Y5
AC10	VSS13	VSS112	AY50	E24	VSS211	VSS299	Y50
AC13	VSS14	VSS113	B10	E28	VSS212	VSS300	Y11
AC3	VSS15	VSS114	B20	E32	VSS213	VSS301	P29
AC39	VSS16	VSS115	B24	E47	VSS214	VSS302	T29
AC43	VSS17	VSS116	B29	F19	VSS215	VSS303	T31
AC47	VSS18	VSS117	B30	F36	VSS216	VSS304	T33
AD1	VSS19	VSS118	B35	F4	VSS217	VSS305	R28
AD21	VSS20	VSS119	B43	F40	VSS218		
AD26	VSS21	VSS120	B46	F50	VSS219		
AD29	VSS22	VSS121	B5	G1	VSS220		
AD3	VSS23	VSS122	B5	G13	VSS221	VSS306	AA32
AD41	VSS24	VSS123	B8	G16	VSS222	VSS307	AB32
AD45	VSS25	VSS124	BA1	G19	VSS223	VSS308	AD32
AD49	VSS26	VSS125	BA17	G24	VSS224	VSS309	AF28
AD5	VSS27	VSS126	BA18	G28	VSS225	VSS310	AT27
AD50	VSS28	VSS127	BA2	G29	VSS226	VSS311	AV25
AD8	VSS29	VSS128	BA24	G33	VSS227	VSS312	H50
AE10	VSS30	VSS129	BB12	G42	VSS228	VSS313	
AE14	VSS31	VSS130	BB25	G45	VSS229		
AE6	VSS32	VSS131	BB40	G48	VSS230		
AF20	VSS33	VSS132	BB44	G8	VSS231		
AF23	VSS34	VSS133	BB49	H24	VSS232		
AF24	VSS35	VSS134	BB8	H28	VSS233		
AF31	VSS36	VSS135	BC16	H4	VSS234		
AG2	VSS37	VSS136	BC24	H45	VSS235		
AG38	VSS38	VSS137	BC25	J11	VSS236		
AG43	VSS39	VSS138	BC36	J16	VSS237		
AG47	VSS40	VSS139	BC40	J2	VSS238		
AG50	VSS41	VSS140	BC51	J24	VSS239		
AH3	VSS42	VSS141	BD13	J28	VSS240		
AH40	VSS43	VSS142	BD2	J33	VSS241		
AH41	VSS44	VSS143	BD28	J35	VSS242		
AH7	VSS45	VSS144	BD45	J39	VSS243		
AH9	VSS46	VSS145	BD48	K12	VSS245		
AJ11	VSS47	VSS146	BD5	K47	VSS246		
AJ13	VSS48	VSS147	BE1	K8	VSS247		
AJ21	VSS49	VSS148	BE19	L1	VSS248		
AJ24	VSS50	VSS149	BE23	L17	VSS249		
AJ29	VSS51	VSS150	BE30	L20	VSS250		
AJ32	VSS52	VSS151	BE42	L24	VSS251		
AJ43	VSS53	VSS152	BE51	L28	VSS252		
AJ45	VSS54	VSS153	BE8	L3	VSS253		
AJ49	VSS55	VSS154	BF12	L33	VSS254		
AK20	VSS56	VSS155	BF16	L49	VSS255		
AK21	VSS57	VSS156	BF36	M28	VSS256		
AK26	VSS58	VSS157	BG19	M42	VSS257		
AK28	VSS59	VSS158	BG2	M46	VSS258		
AK31	VSS60	VSS159	BG24	M49	VSS259		
AK51	VSS61	VSS160	BG29	M5	VSS260		
AL1	VSS62	VSS161	BG39	M50	VSS261		
AM11	VSS63	VSS162	BG48	M9	VSS262		
AM13	VSS64	VSS163	BG5	N11	VSS263		
AM3	VSS65	VSS164	BG51	N14	VSS264		
AM4	VSS66	VSS165	BH17	N17	VSS265		
AM41	VSS67	VSS166	BH30	N29	VSS266		
AM45	VSS68	VSS167	BH44	N32	VSS267		
AN1	VSS69	VSS168	BH46	N36	VSS268		
AN38	VSS70	VSS169	BH8	N39	VSS269		
AN39	VSS71	VSS170	BH11	N44	VSS270		
AN53	VSS72	VSS171	BH13	N49	VSS271		
AN5	VSS73	VSS172	BJ38	N7	VSS272		
AN7	VSS74	VSS173	BJ4	N19	VSS273		
AP4	VSS75	VSS174	BJ42	P2	VSS274		
AP48	VSS76	VSS175	BJ46	P19	VSS275		
AP90	VSS77	VSS176	BK15	P23	VSS276		
AR11	VSS78	VSS177	BK17	P3	VSS277		
AR2	VSS79	VSS178	BK25	P50	VSS278		
AR39	VSS80	VSS179	BK29	R49	VSS279		
AR44	VSS81	VSS180	BK36	T39	VSS280		
AR47	VSS82	VSS181	BK40	T43	VSS281		
AR7	VSS83	VSS182	BK44	T47	VSS282		
AT10	VSS84	VSS183	BK6	U41	VSS283		
AT14	VSS85	VSS184	BK8	U45	VSS284		
AT41	VSS86	VSS185	BL11	U50	VSS285		
AT49	VSS87	VSS186	BL13	V2	VSS286		
AU1	VSS88	VSS187	BL19	V3			
AU23	VSS89	VSS188	BL22				
AU29	VSS90	VSS189	BL37				
AU3	VSS91	VSS190	BL47				
AU36	VSS92	VSS191	C12				
AU49	VSS93	VSS192	C16				
AU51	VSS94	VSS193	C19				
AV39	VSS95	VSS194	C28				
AV48	VSS96	VSS195	C29				
AW1	VSS97	VSS196	C33				
AW12	VSS98	VSS197	C38				
AW16	VSS99	VSS198	C41				

VSS

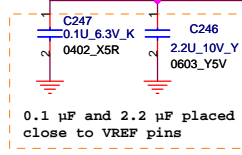
VSS

Crestline GMCH-QM20_ES1

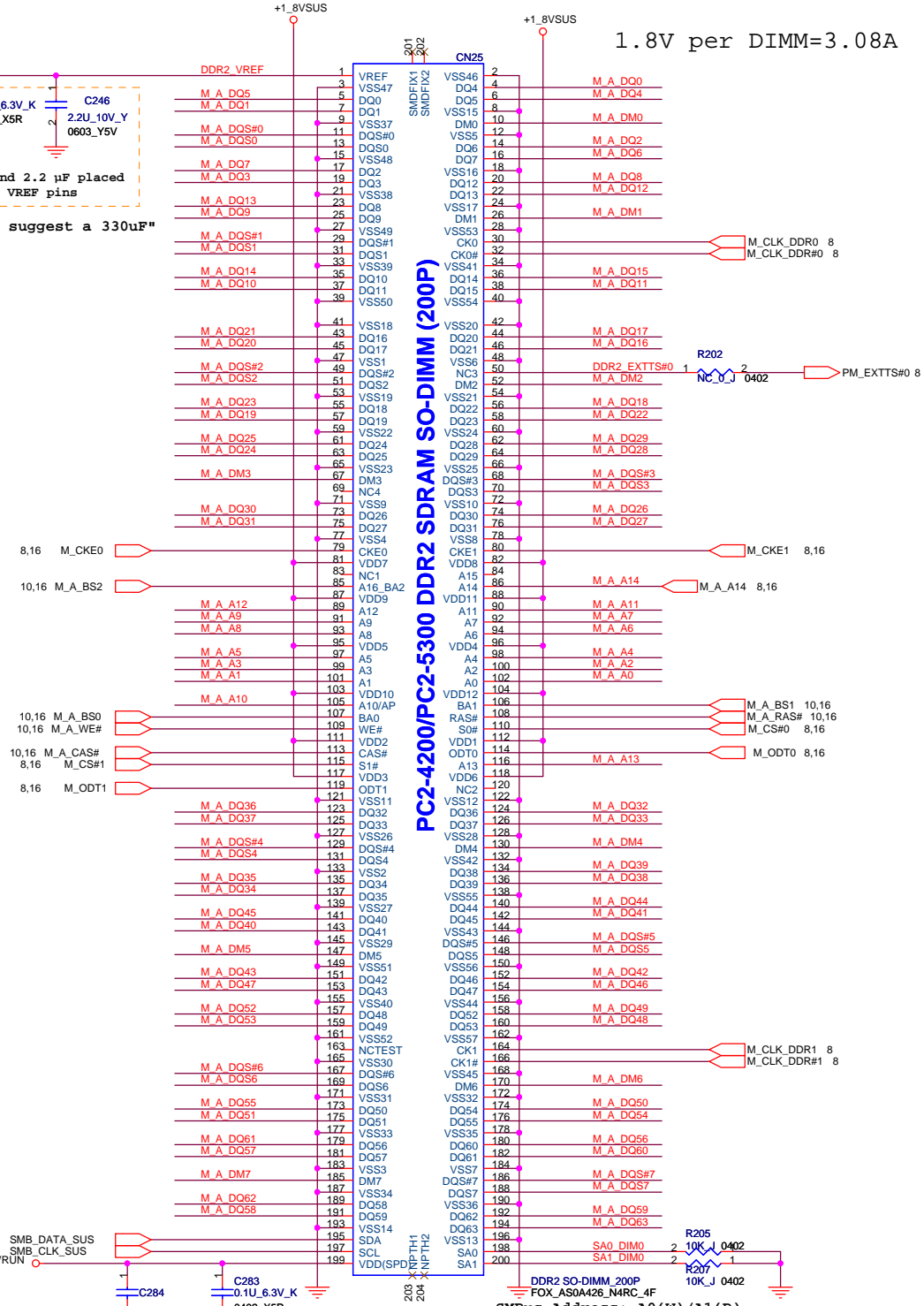
Crestline GMCH-QM20_ES1

FOXCONN		HON HAI Precision Ind. Co., Ltd.	
Crestline (VSS) 7/7		CCPBG - R&D Division	
Title			
Size	Document Number	Rev	
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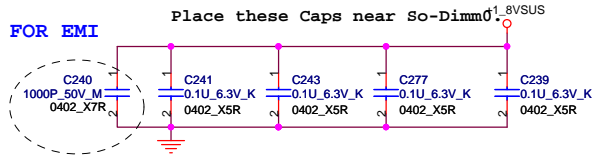
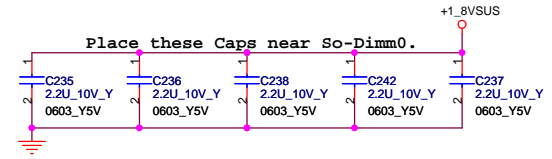
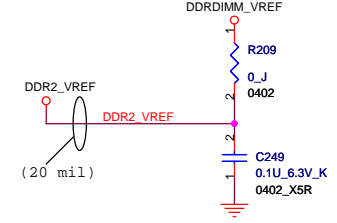
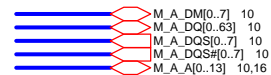
1.8V per DIMM=3.08A



"Intel check list suggest a 330uF"

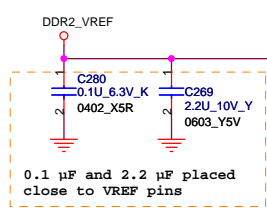


PC2-4200/PC2-5300 DDR2 SDRAM SO-DIMM (200P)

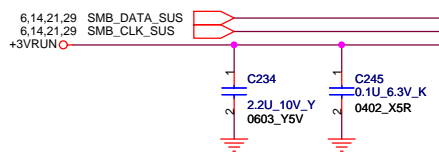
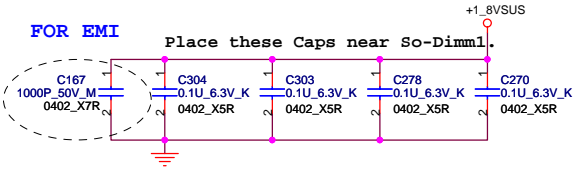
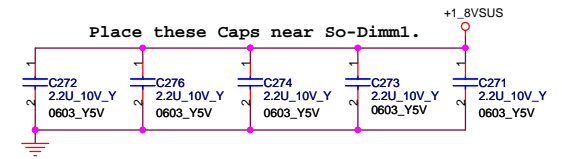
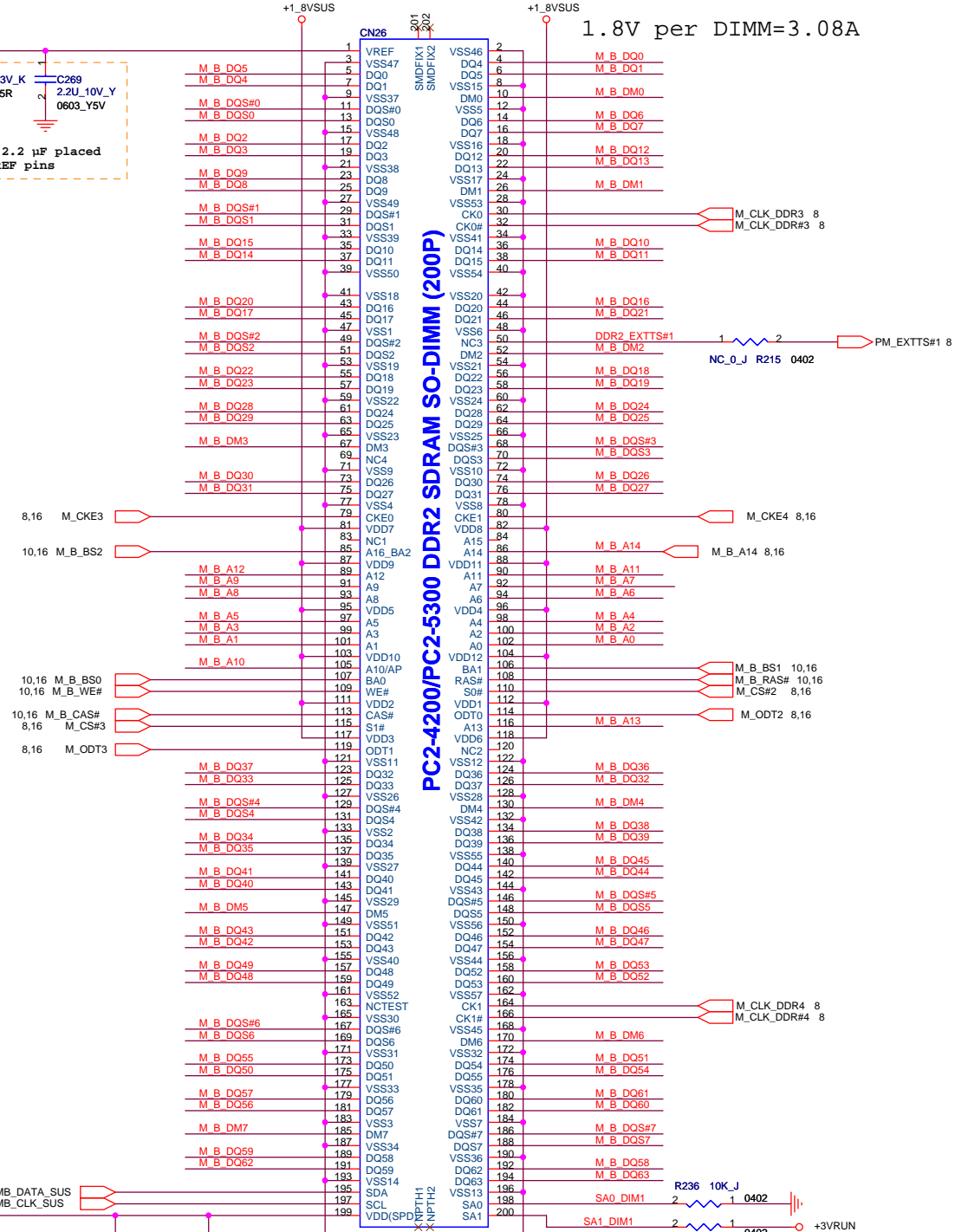
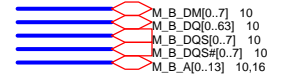


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 CCPBG - R&D Division

Title: DDR(I)SO-DIMM_0		
Size: A3	Document Number: M720-1-01	Rev: 1.0
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1.8V per DIMM=3.08A

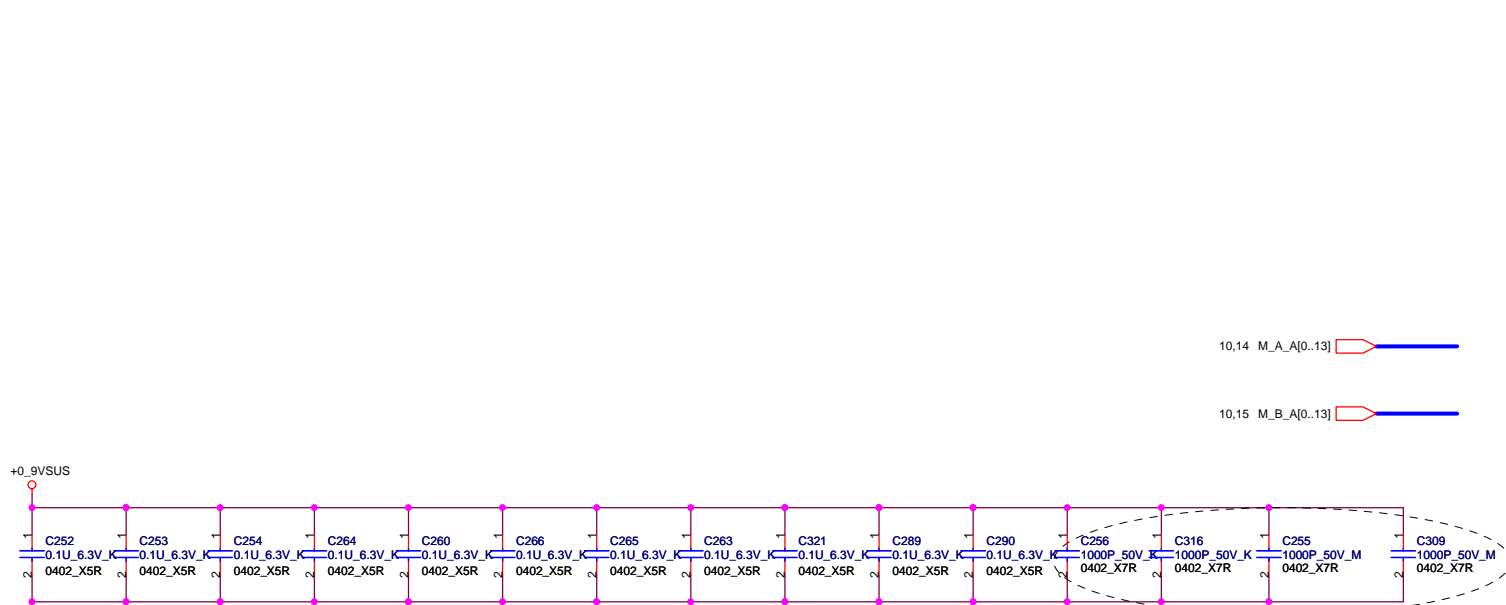


DIMM_1

SMBus Address: A4(W)/A5(R)

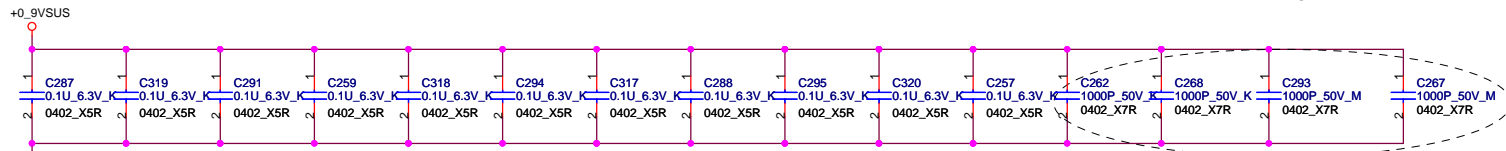
DIMM_1 is placed farther from the GMCH than DIMM_0

FOXCONN		HON HAI Precision Ind. Co., Ltd.	
		CCPBG - R&D Division	
Title: DDR(I)SO-DIMM_1			
Size: A3	Document Number: M720-1-01	Rev: 1.0	
Date: Wednesday, July 18, 2007	Sheet: 15	of 56	

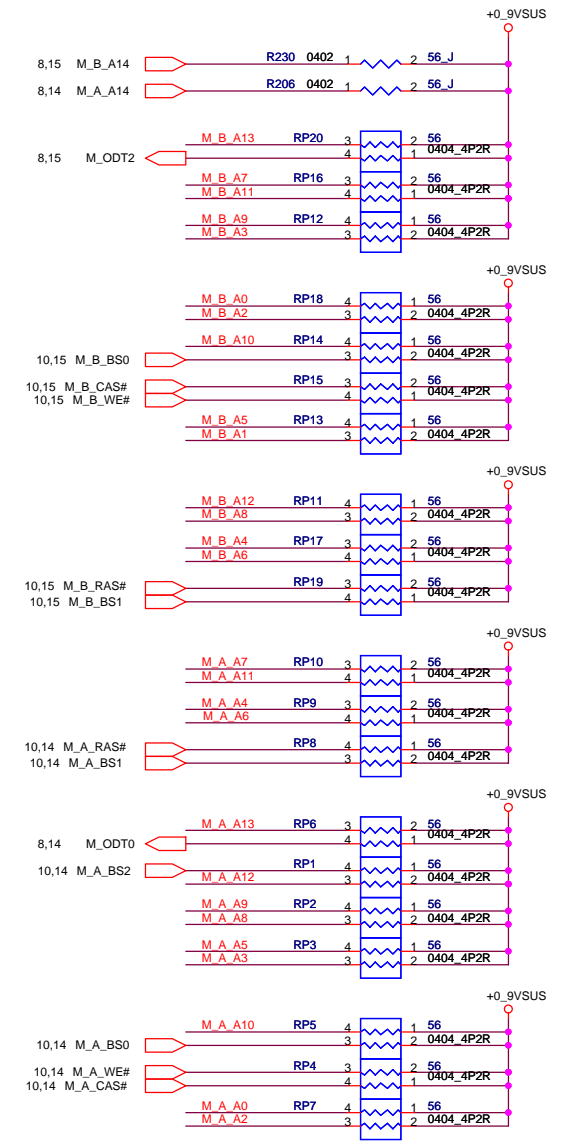
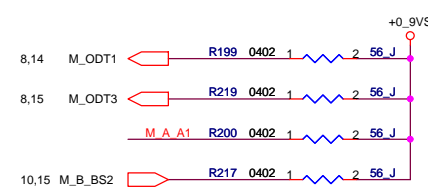
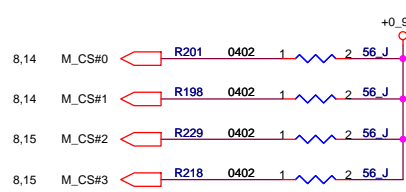
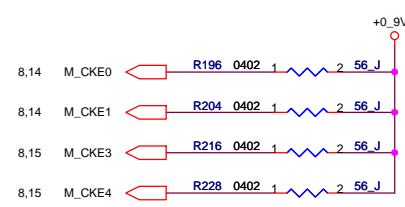


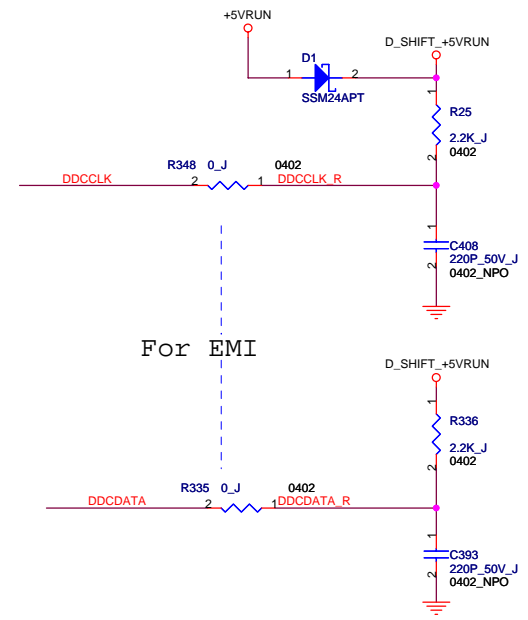
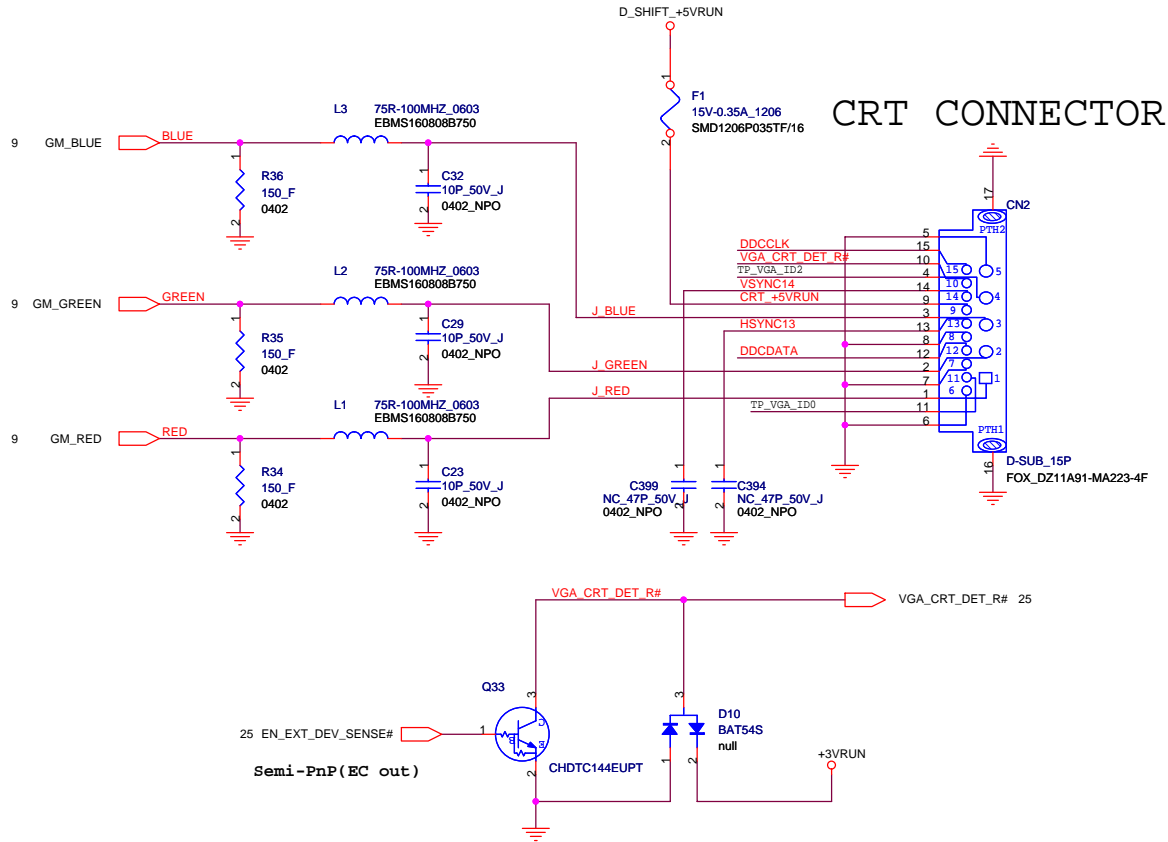
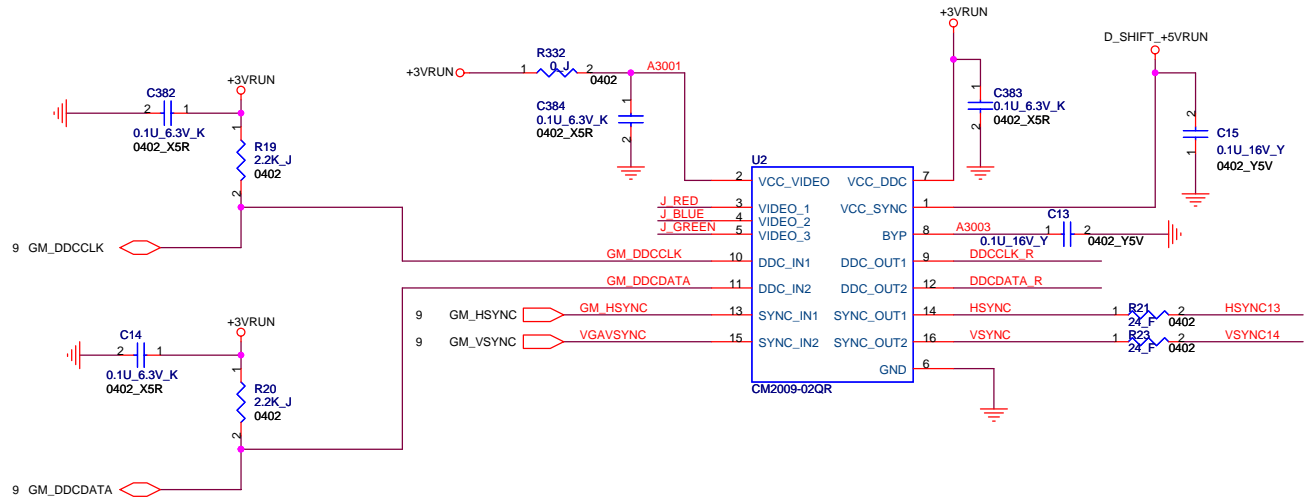
Layout note: Place 1 cap close to every 1 R-pack terminated to +0.9VSUS

For EMI

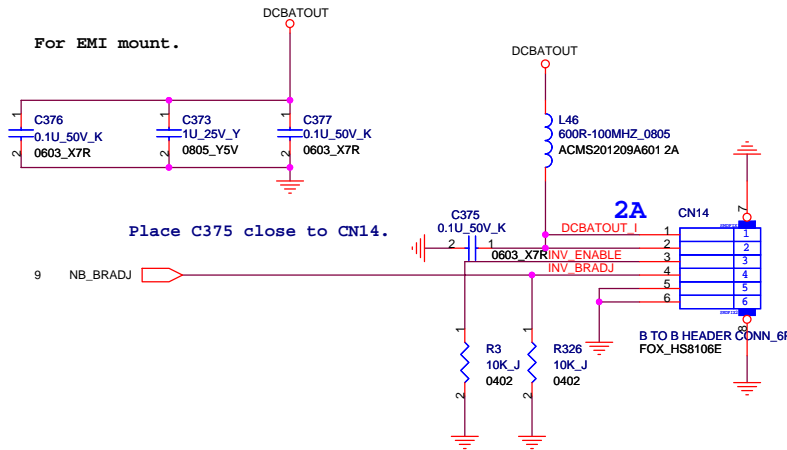
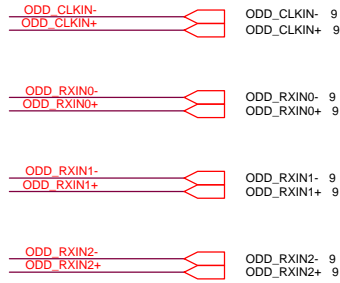


Layout note: Place 1 cap close to every 1 R-pack terminated to +0.9VSUS

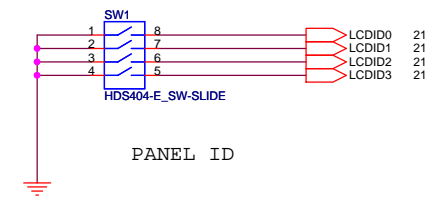
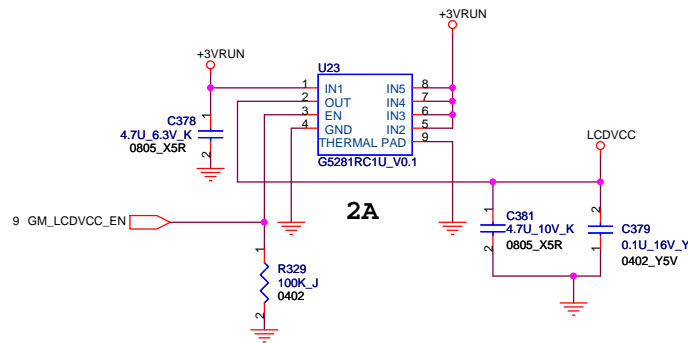
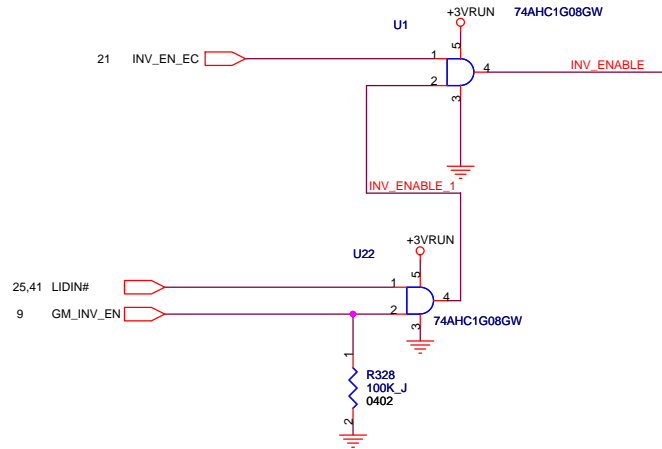
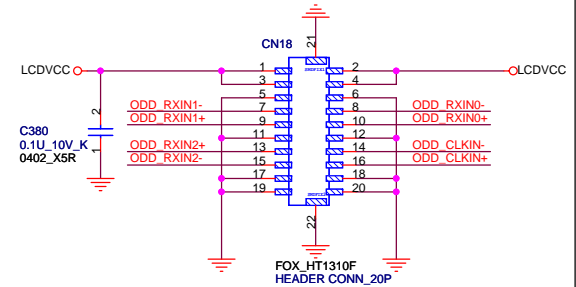




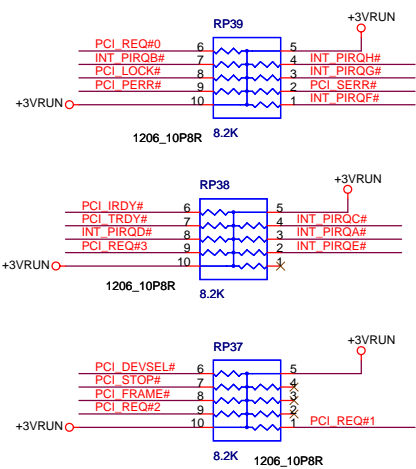
LVDS



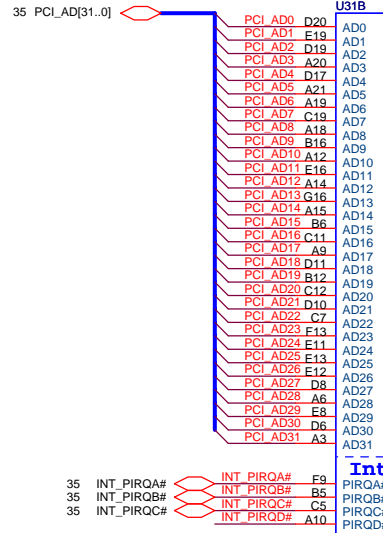
INVERTER CONN.



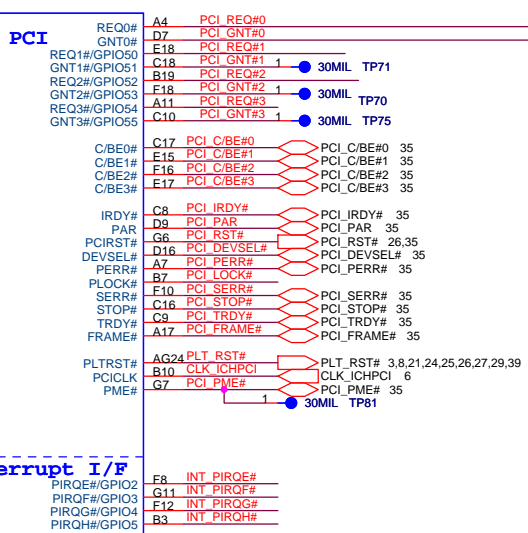
Type	WXGA	WXGA	WXGA
Size	15.4"W	15.4"W	15.4"W
Vendor	LPL	CPT	AUO
Device Name	LP154WX4	CLAA154WB05AN	B154EW02V7
Panel ID Check(3..0)	X001	X010	X001



PCI Pullups



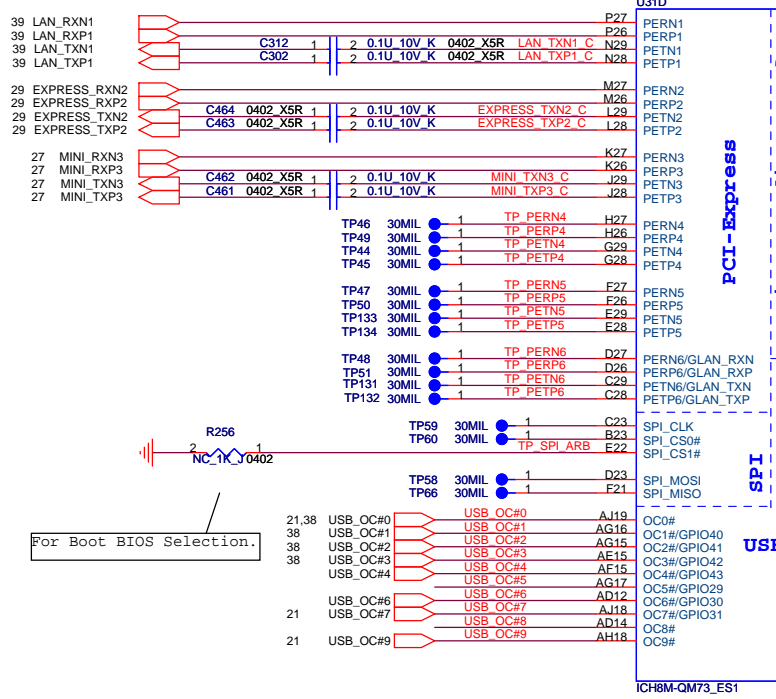
Interrupt I/F
ICH8M-QM73_ES1



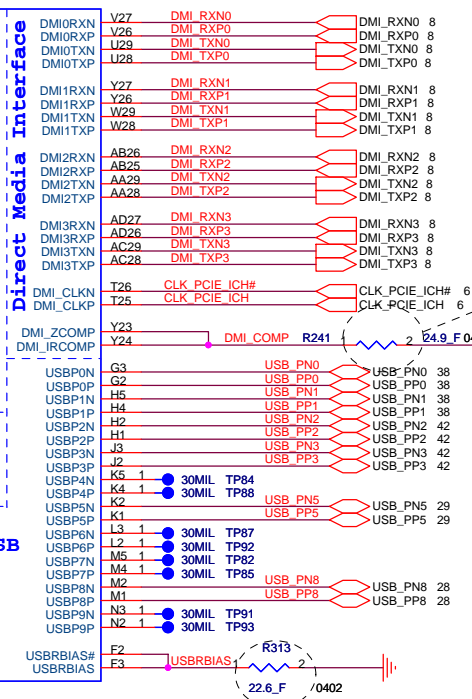
For Boot BIOS Selection.

Strap for Boot-BIOS

LC(Default)	GNT#0	SPI_CS1#
PCI	HI	LOW
SPI	LOW	HI

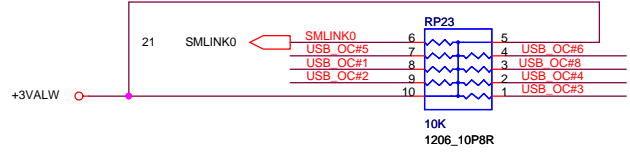


PCI-Express



Place within 500 mils of ICH

Place within 500 mils of ICH and don't routing next to high speed signals

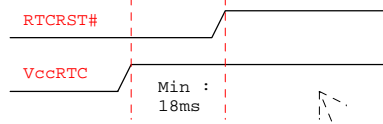


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CCPBG - R&D Division

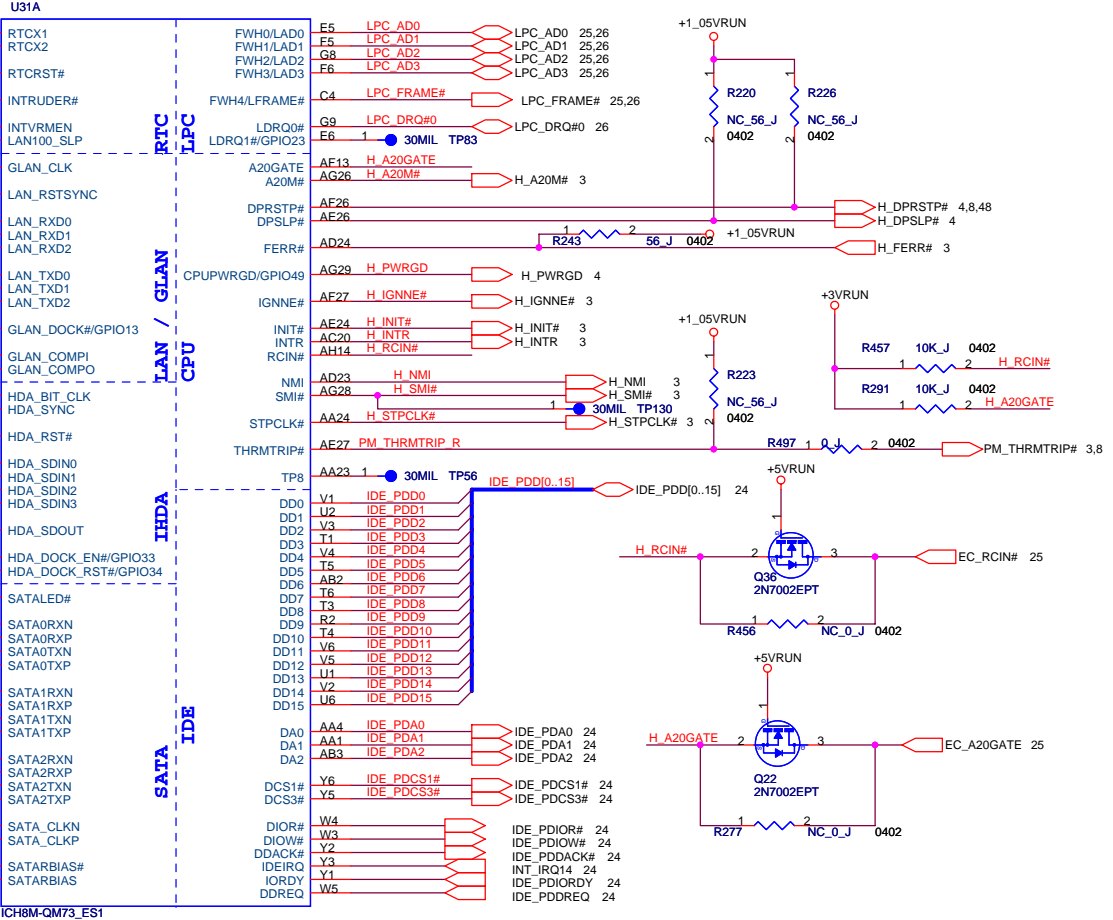
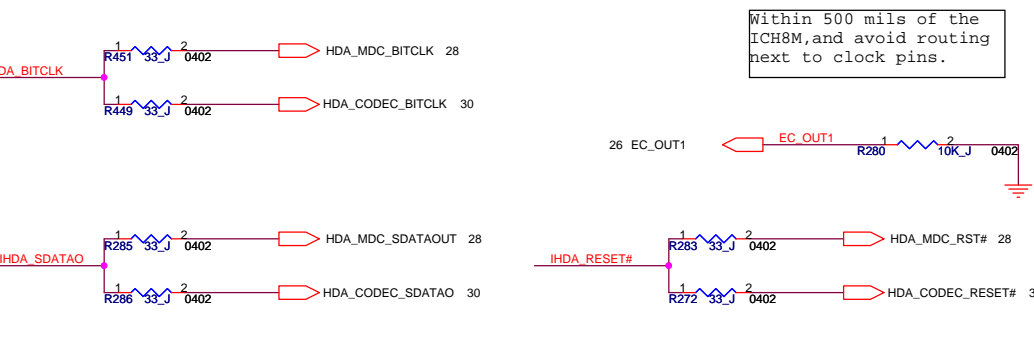
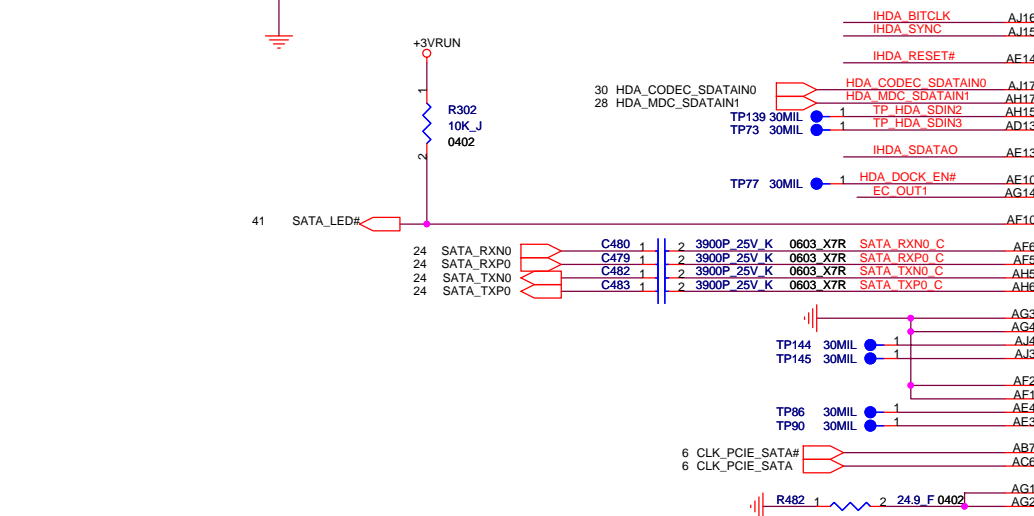
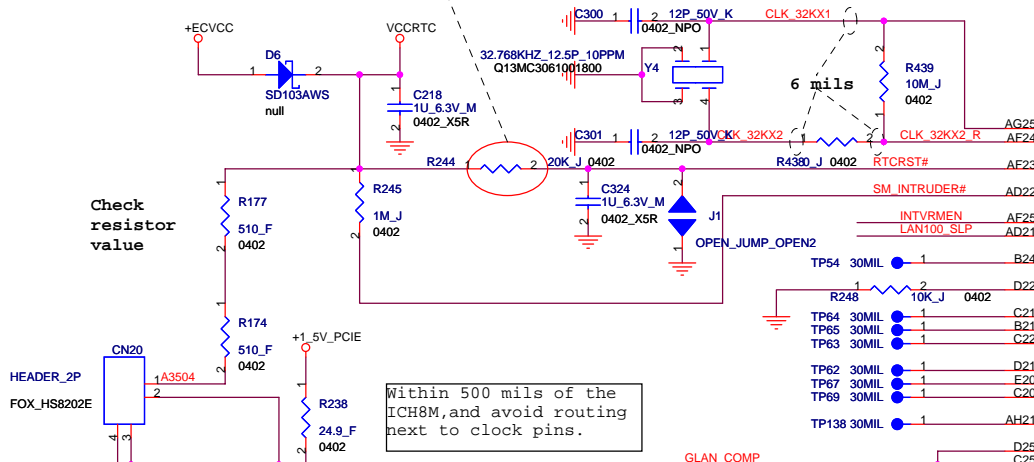
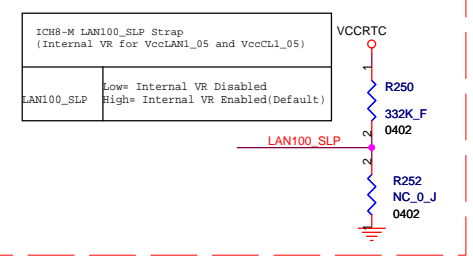
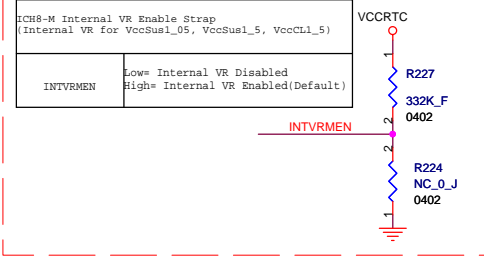
Title: **ICH8-M(PCI/DMI/USB/PCIE) 1/5**

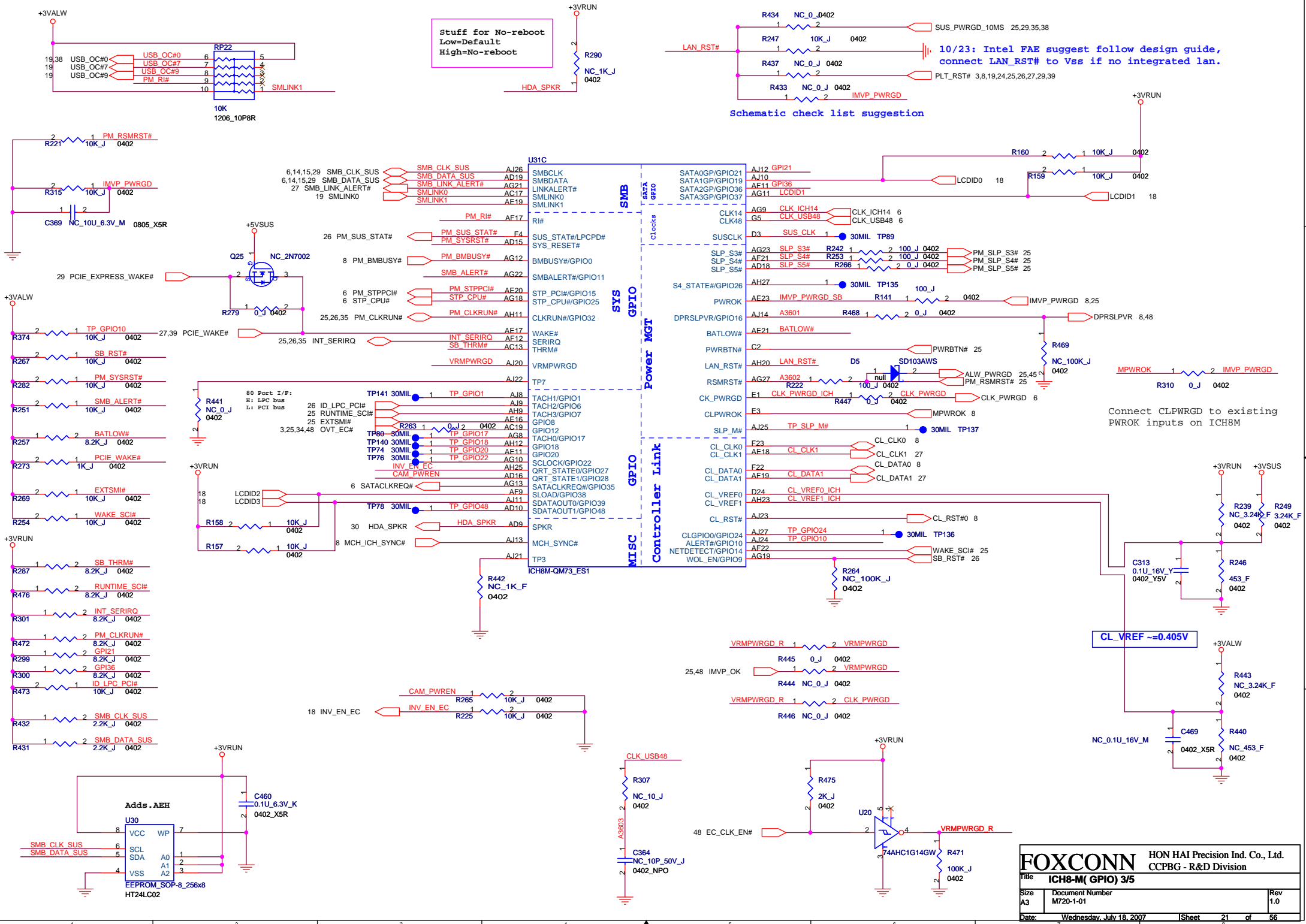
Size A3	Document Number M720-1-01	Rev 1.0
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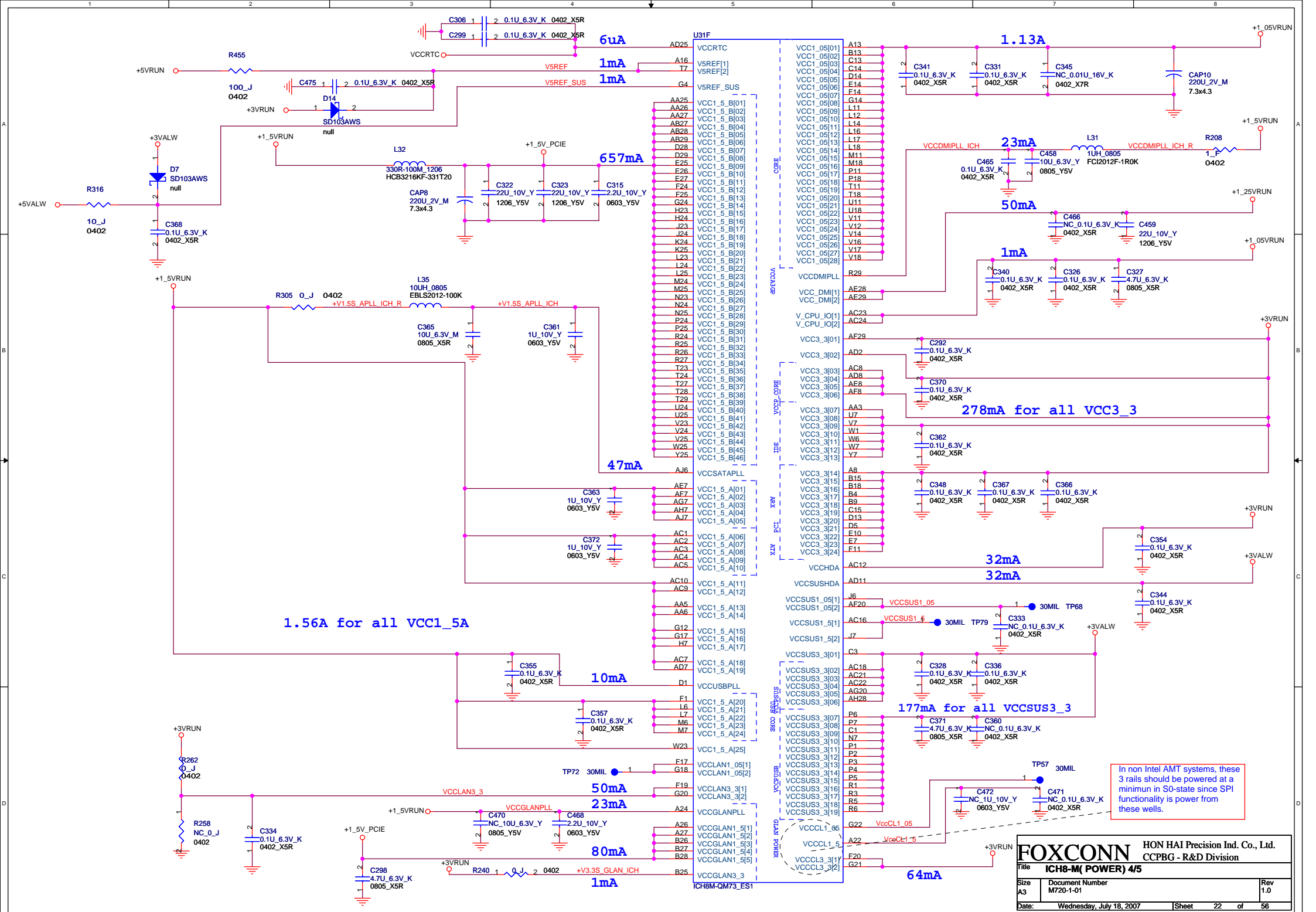
Date: Wednesday, July 18, 2007 | Sheet 19 of 56



The traces inside this block should be wider. No digital signals routed under XTAL







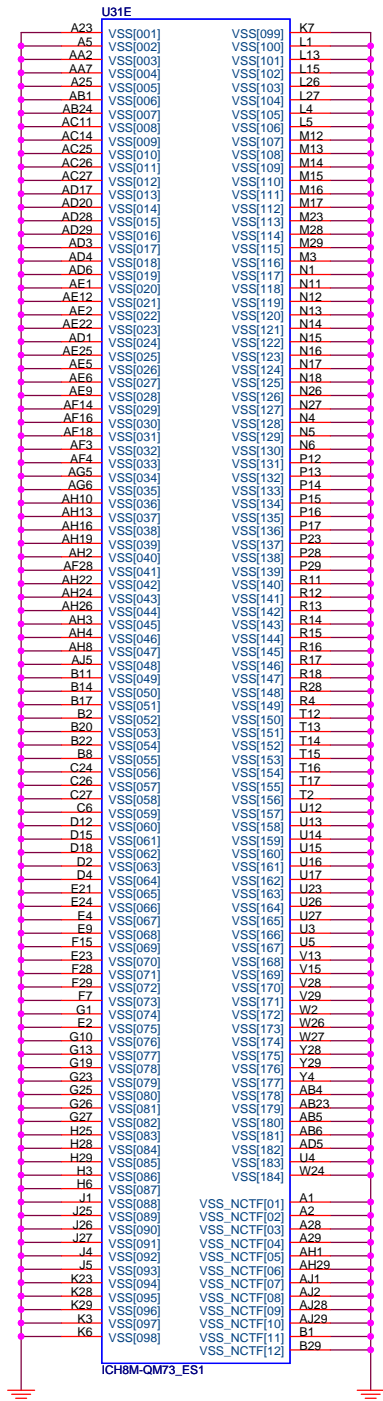
In non Intel AMT systems, these 3 rails should be powered at a minimum in S0-state since SPI functionality is power from these wells.

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 CCPBG - R&D Division

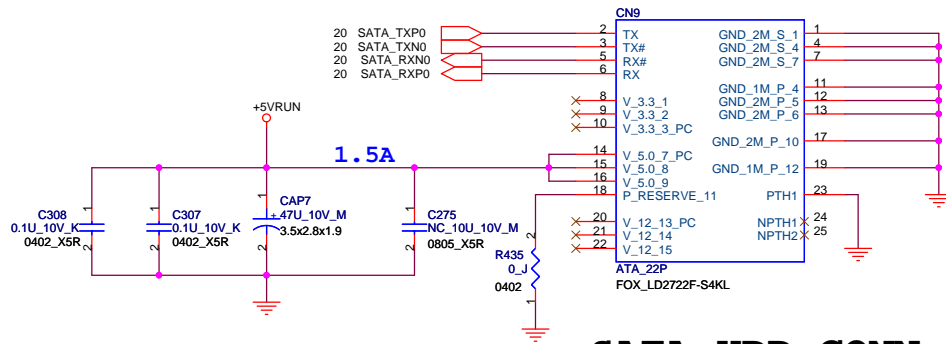
Title: **ICH8-M(POWER) 4/5**

A3	Document Number	Rev 1.0
M720-1-01		

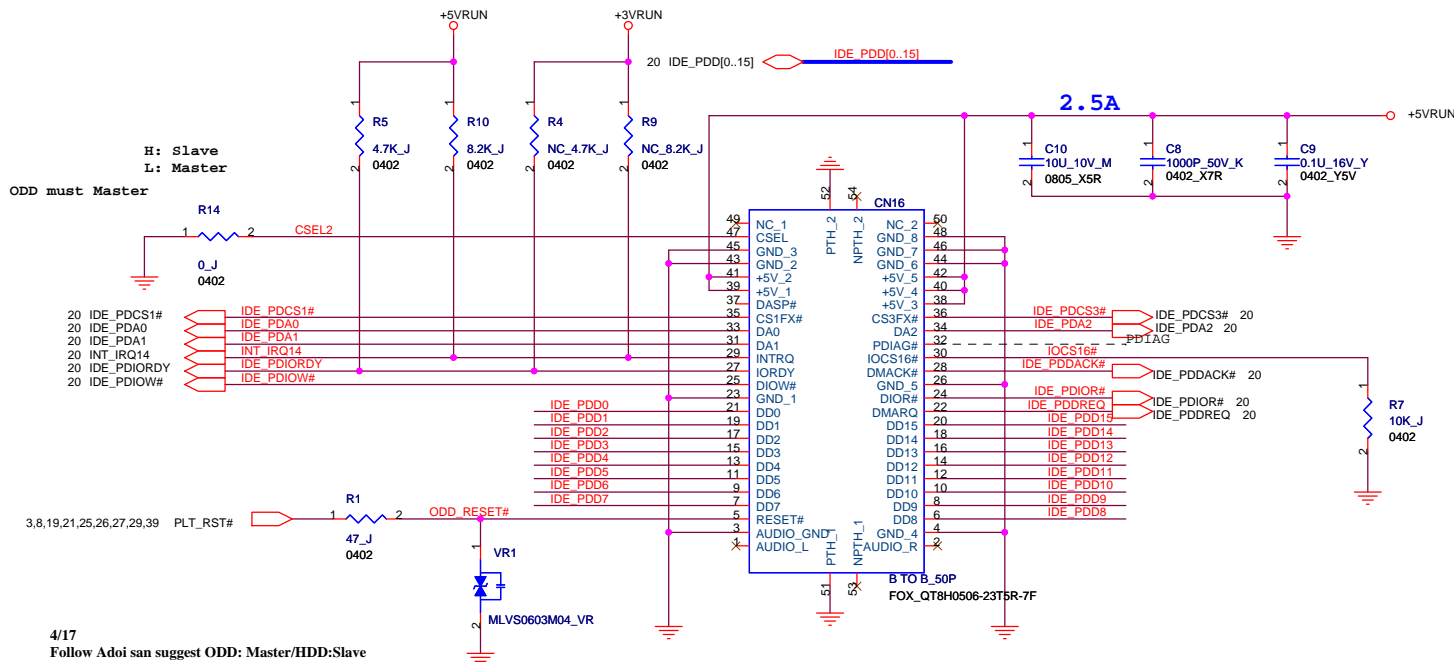
Date: Wednesday, July 18, 2007 Sheet 22 of 56



FOXCONN		HON HAI Precision Ind. Co., Ltd.	
Title ICH8-M(GND) 5/5		CCPBG - R&D Division	
Size A3	Document Number M720-1-01	Rev 1.0	
Date:	Wednesday, July 18, 2007	Sheet	23 of 56



SATA HDD CONN

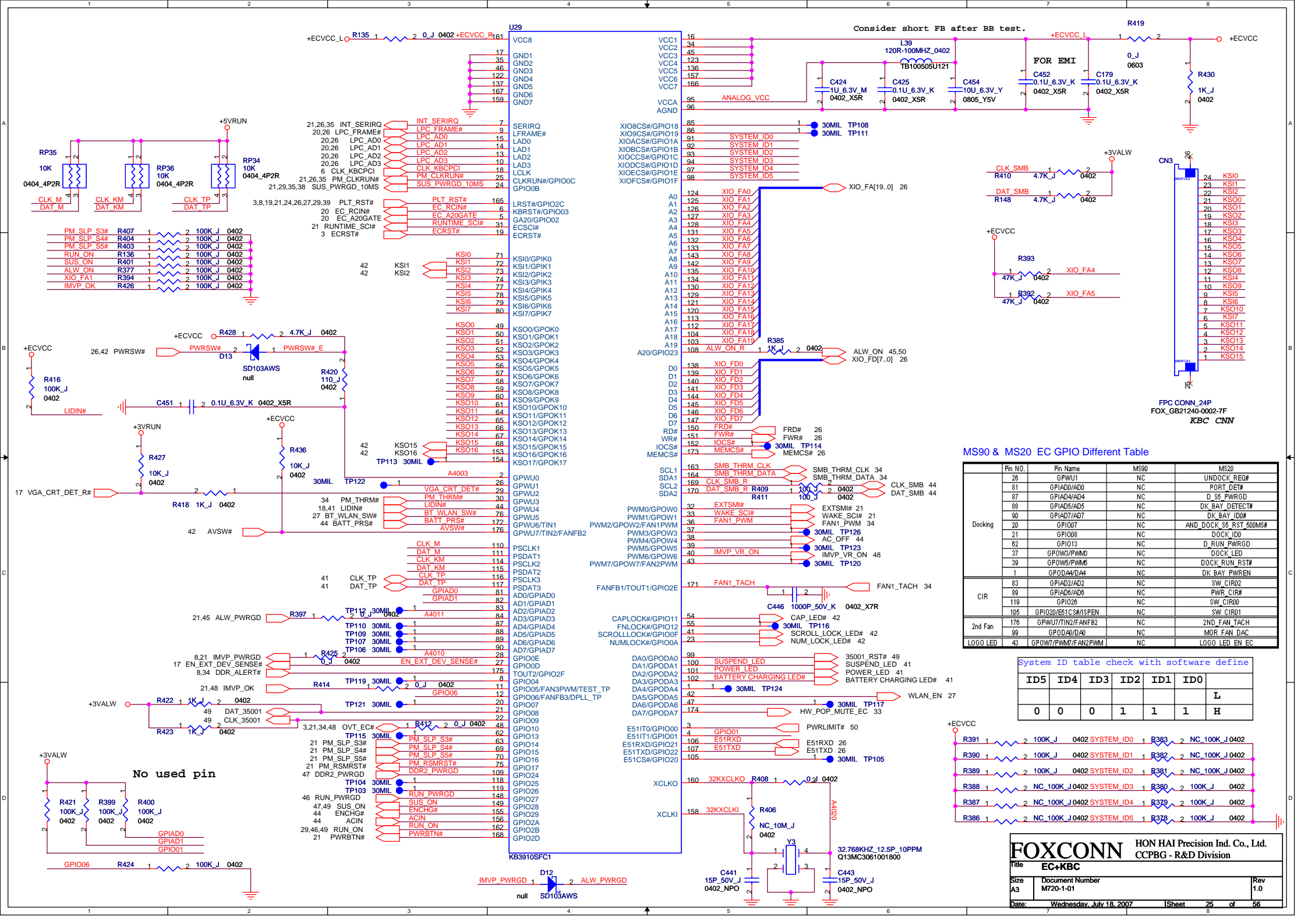


For ESD.

CD-ROM CONN

4/17
Follow Adoi san suggest ODD: Master/HDD:Slave

FOXCONN HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division		
Title SATA HDD/CD-ROM		
Size A3	Document Number M720-1-01	Rev 1.0
Date: Wednesday, July 18, 2007	Sheet 24	of 56



Consider short FB after BB test.

MS90 & MS20 EC GPIO Different Table

	Pin NO.	Pin Name	MS90	MS20
Docking	26	GPWU1	NC	UNDOCK_REQ#
	81	GPIOA0/AD0	NC	PORT_DET#
	87	GPIOA4/AD4	NC	D_85_PWRGD
	88	GPIOA6/AD6	NC	DK_BAY_DETECT#
	90	GPIOA7/AD7	NC	DK_BAY_ID#
	20	GPIO07	NC	AND_DOCK_S5_RST_600MS#
	21	GPIO08	NC	DOCK_LED
	62	GPIO13	NC	D_RUN_PWRGD
	37	GPIO03/PWM3	NC	DOCK_LED
	39	GPIO05/PWM5	NC	DOCK_LED
CIR	1	GPIOA4/AD4	NC	DK_BAY_PWREN
	83	GPIOA2/AD2	NC	SW_CIR02
	89	GPIOA6/AD6	NC	PWR_CIR0
2nd Fan	119	GPIO26	NC	SW_CIR00
	105	GPIO20/EXTCS#/MSPEN	NC	SW_CIR01
LOGO_LED	43	GPIOW7/PWM7/FAN2/PWM	NC	LOGO_LED_EN_EC

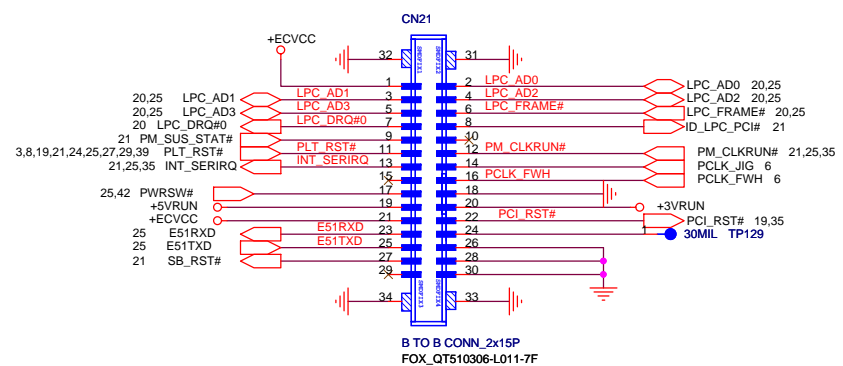
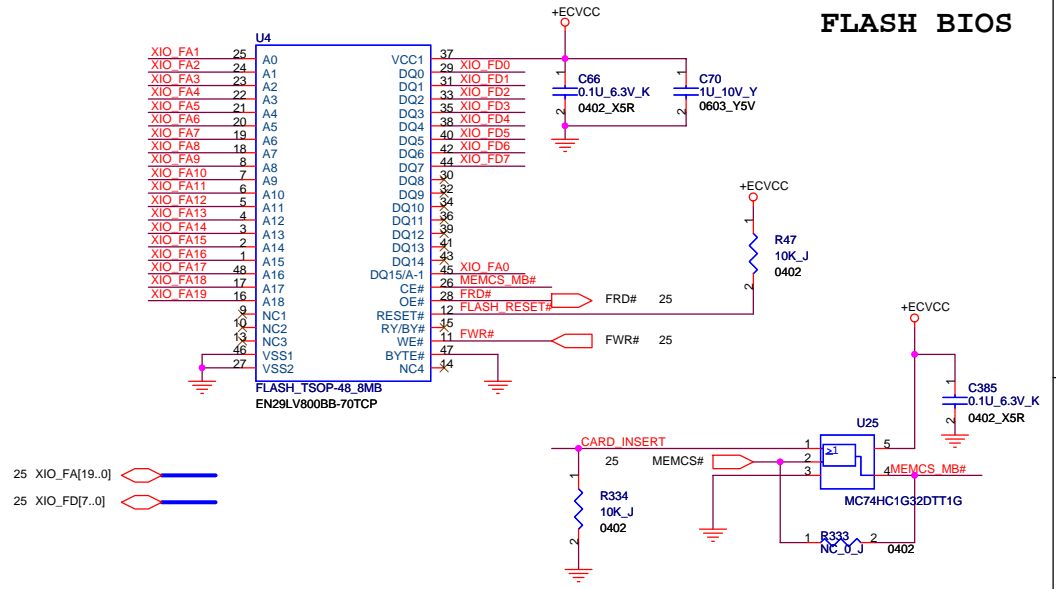
System ID table check with software define

ID5	ID4	ID3	ID2	ID1	ID0	
0	0	0	1	1	1	L

FOXCONN HON HAI Precision Ind. Co., Ltd.
CCPBG - R&D Division

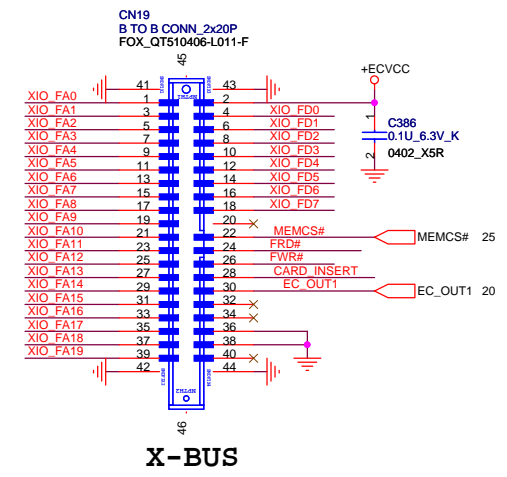
Title: EC-KBC		Rev: 1.0
Size: A3	Document Number: M720-1-01	
Date: Wednesday, July 18, 2007	Sheet: 25	of: 56

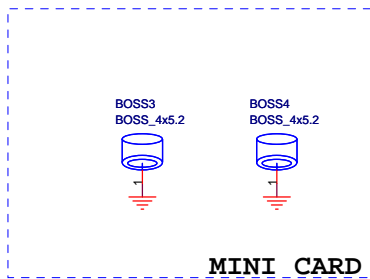
FLASH BIOS



JIG-120

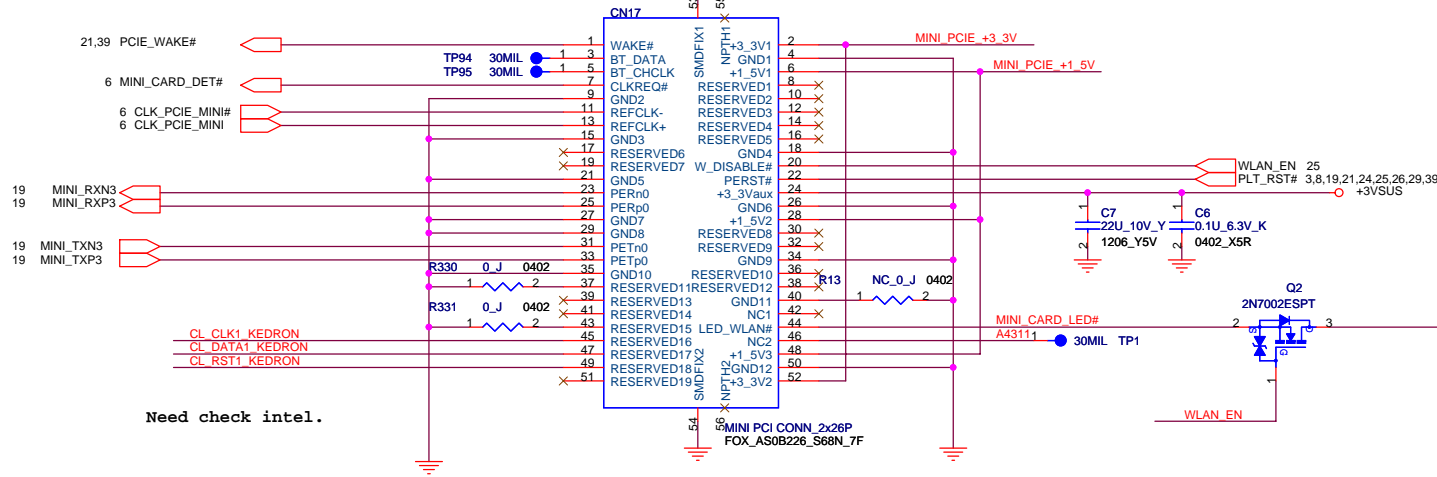
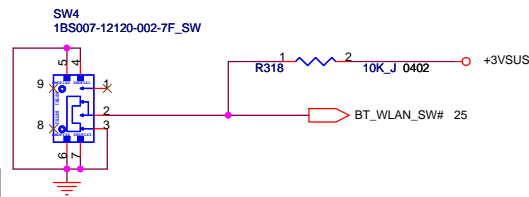
Pin 18 of JIG-120 is useless in debug board, so we let pin 18 NC.





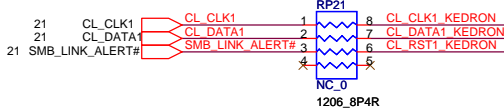
MINI CARD

SW2 PIN8,9 : NPTH



Need check intel.

Mini Card.
WLAN



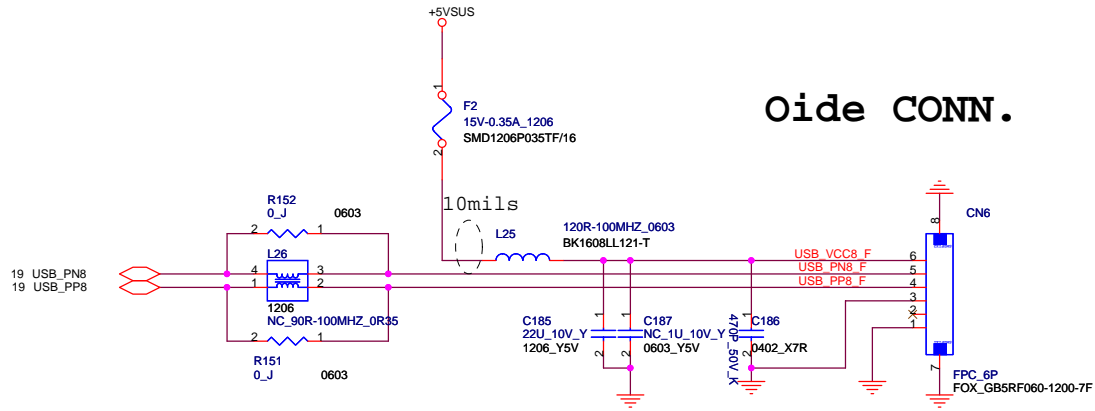
+1_5V=>0.5A
+3_3VAux=>0.33A
+3_3V=>1A

LED IF SPEC:
20mA (TYP) , 30mA (MAX)

Green

WLAN LED.

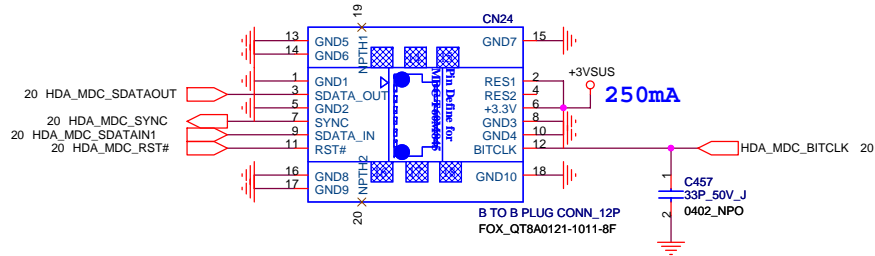
Oide CONN.



BOM Notice: OIDE_

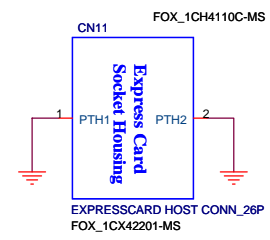
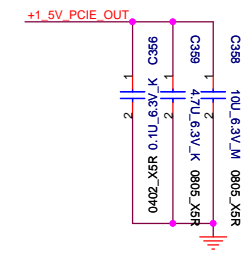
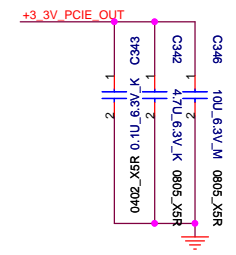
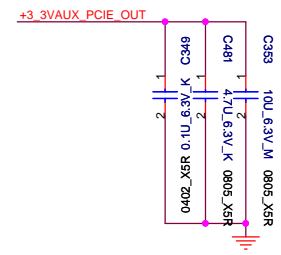
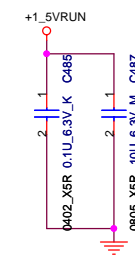
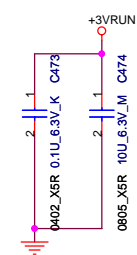
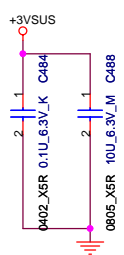
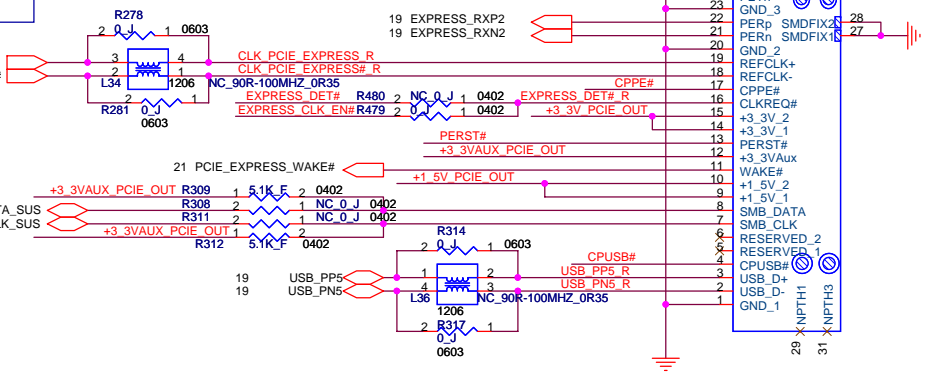
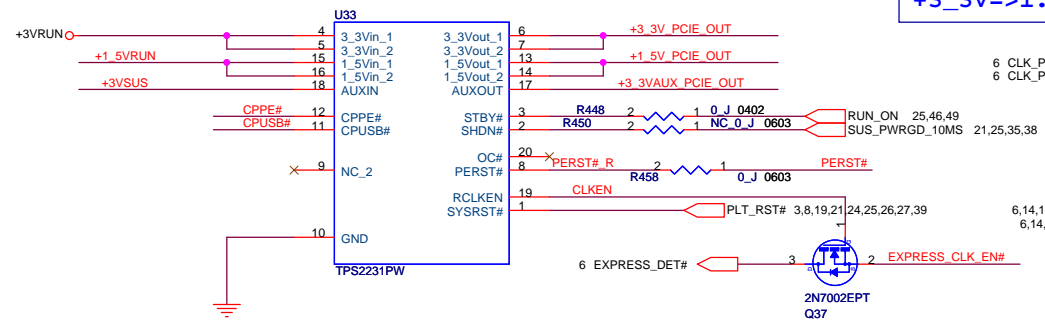
W/ Oide SKU	R151,R152,L25,C185,C186,F2,CN6	stuff
W/O Oide SKU	R151,R152,L25,C185,C186,F2,CN6	no stuff

MDC CONN.

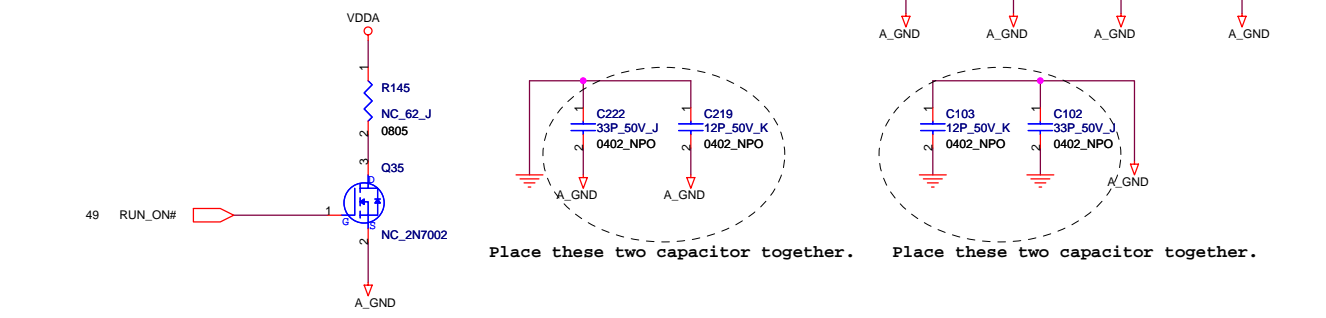
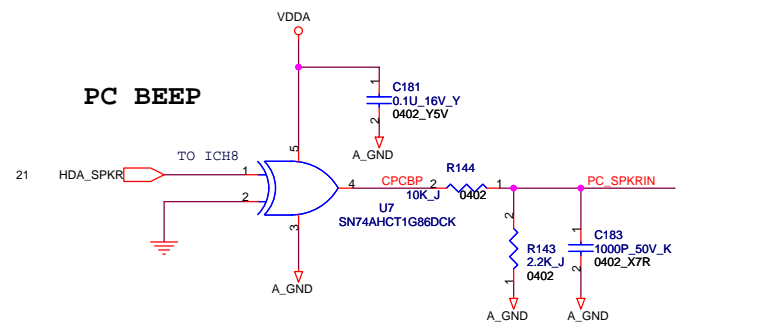
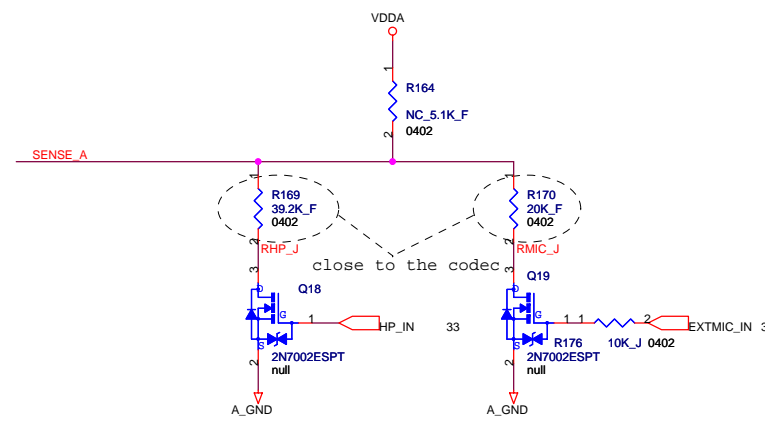
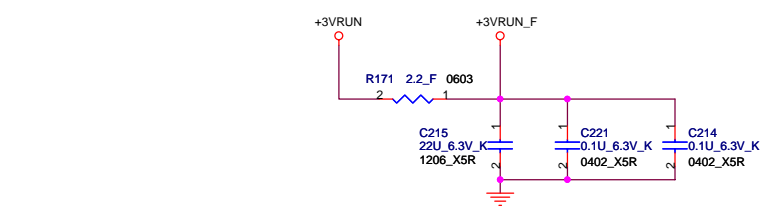
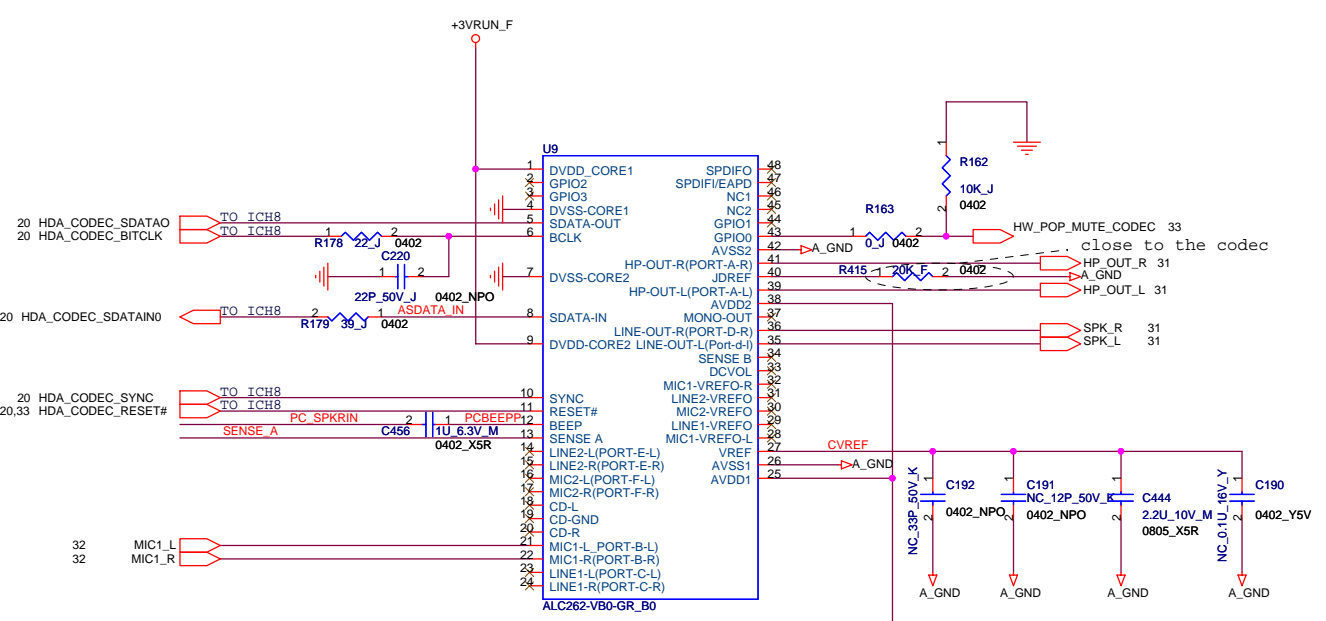


Express Card Slot.

+1_5V=>0.65A
+3_3VAux=>0.275A
+3_3V=>1.3A

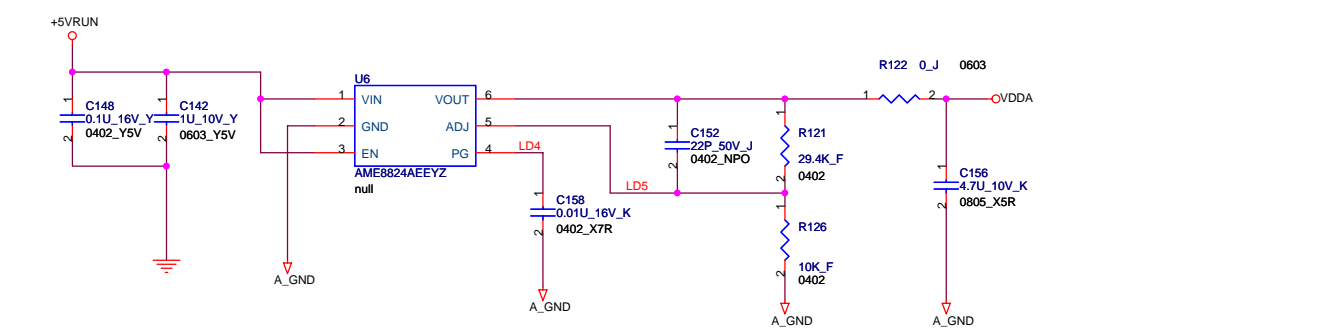


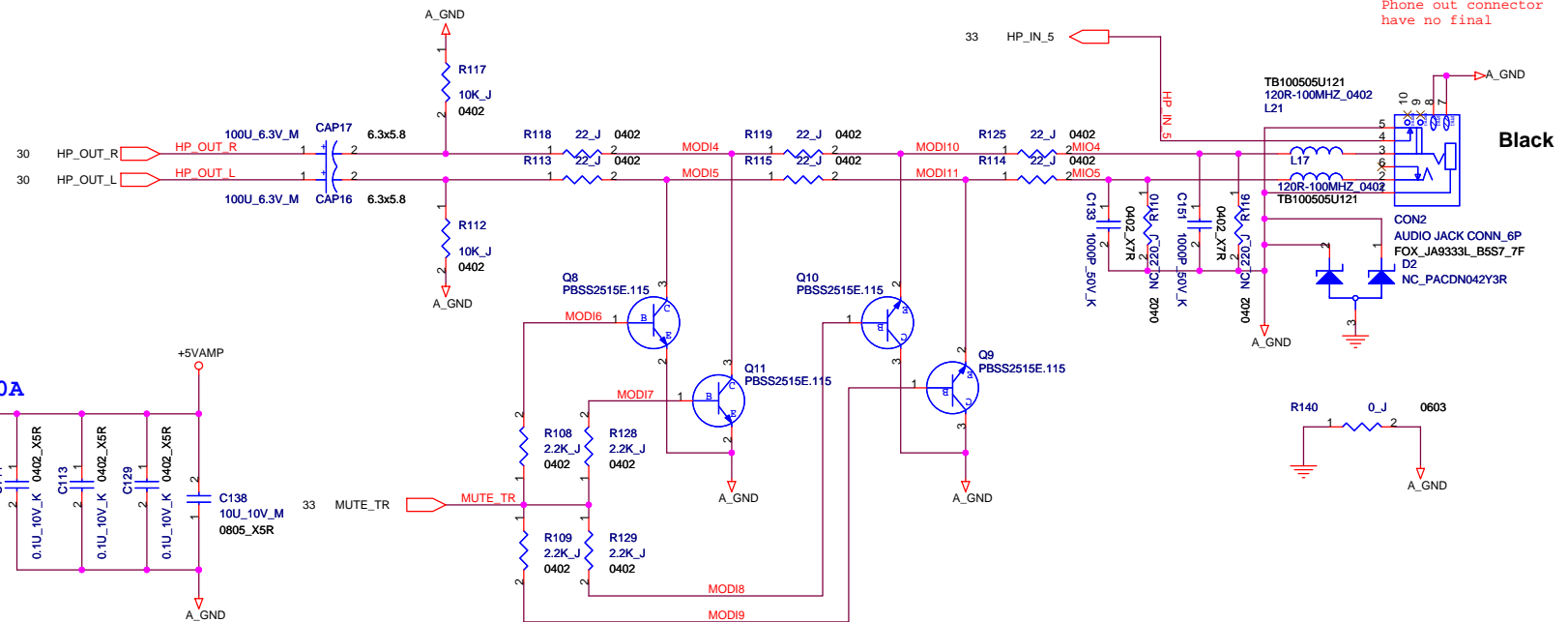
Express Card Housing.



Place these two capacitor together. Place these two capacitor together.

AUDIO POWER(Change to 4.75V/200mA)

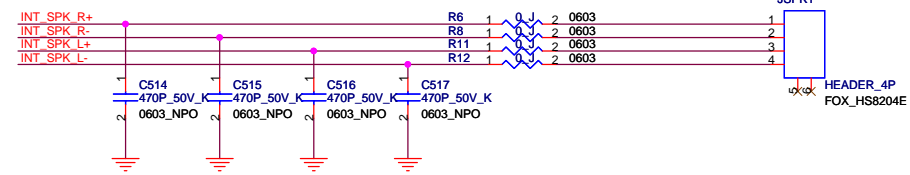




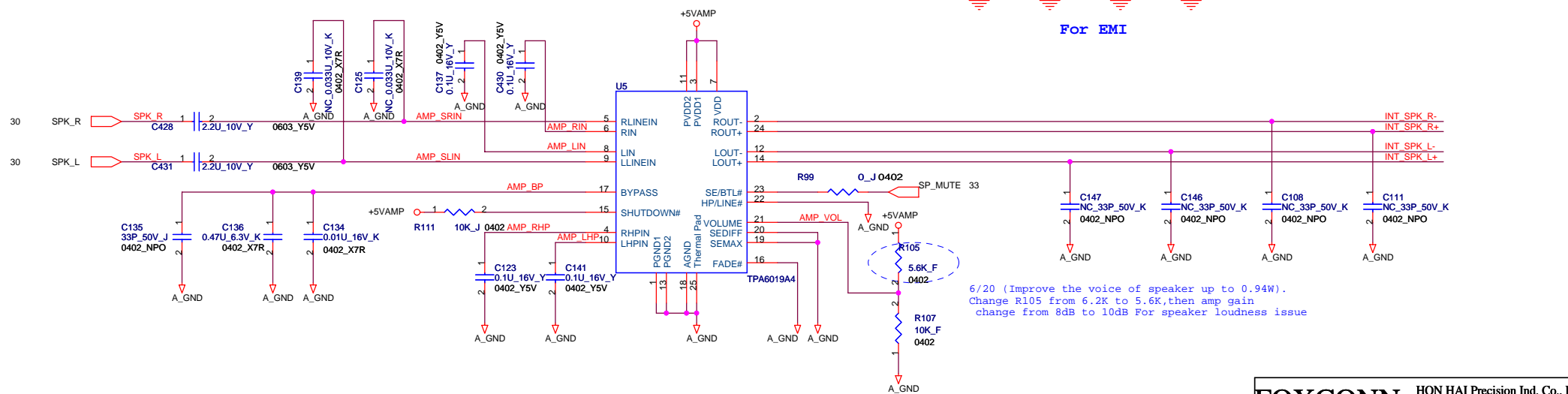
Phone out connector
have no final

Black

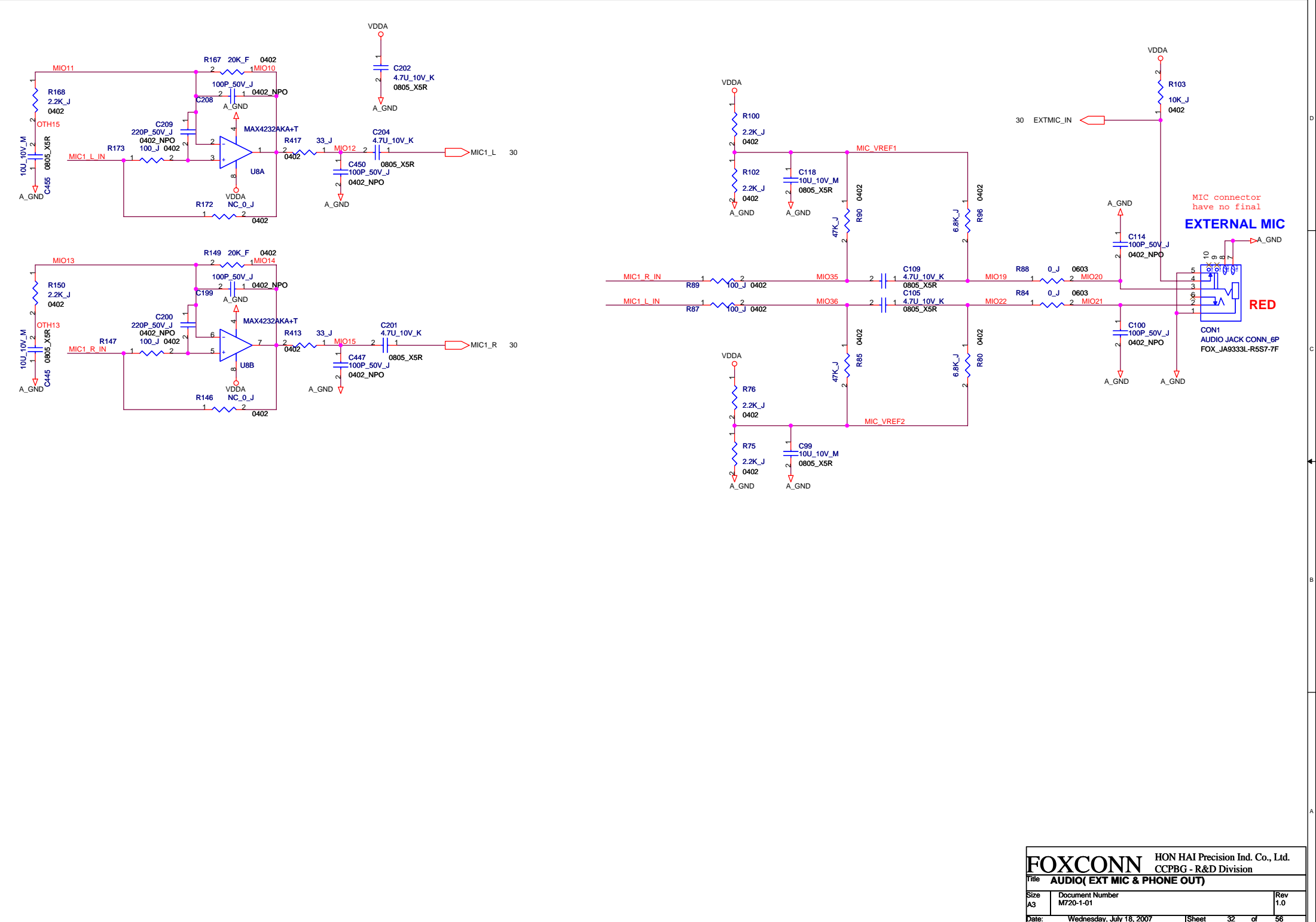
INTERNAL SPEAKER

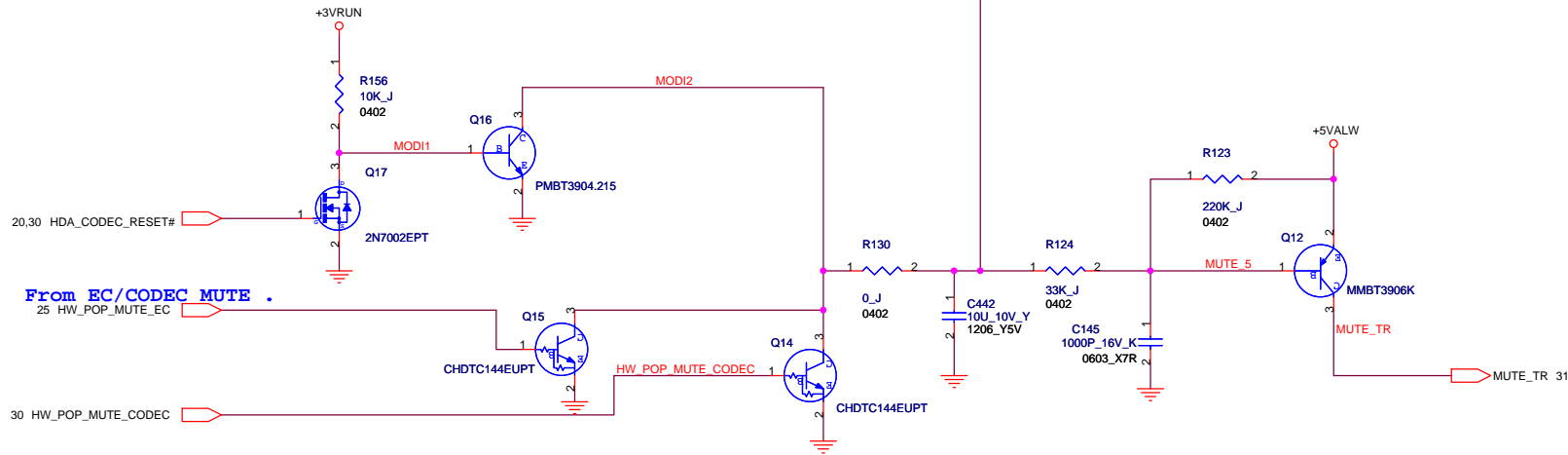
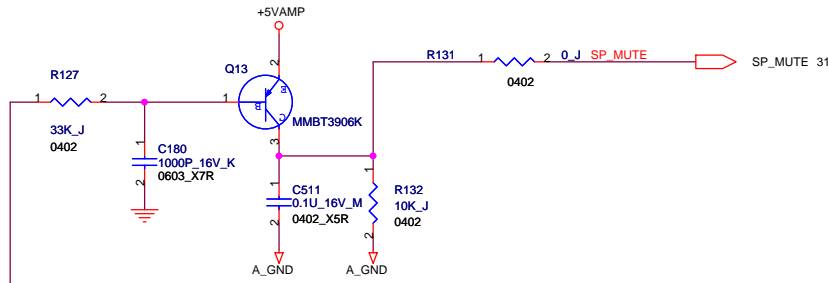
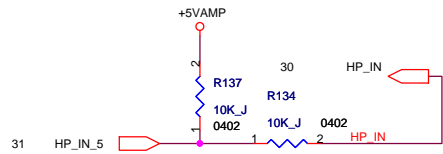


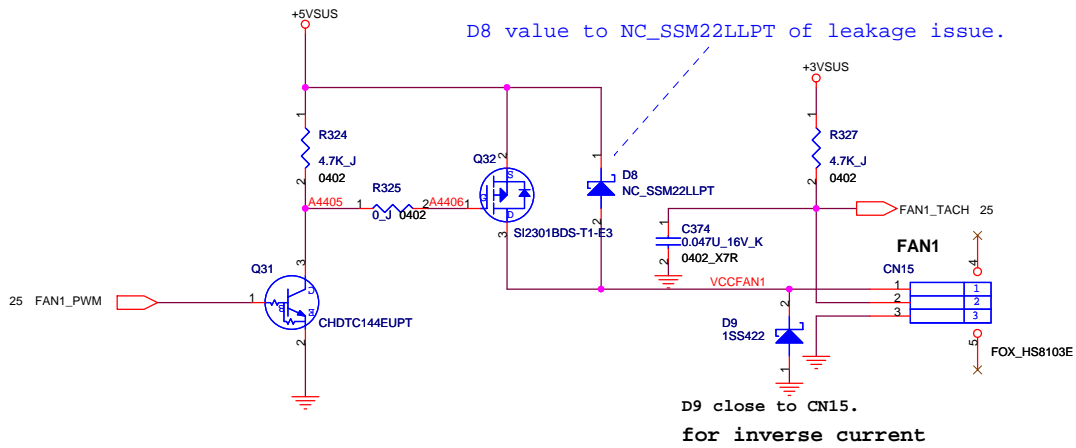
For EMI



6/20 (Improve the voice of speaker up to 0.94W).
Change R105 from 6.2K to 5.6K, then amp gain
change from 8dB to 10dB For speaker loudness issue

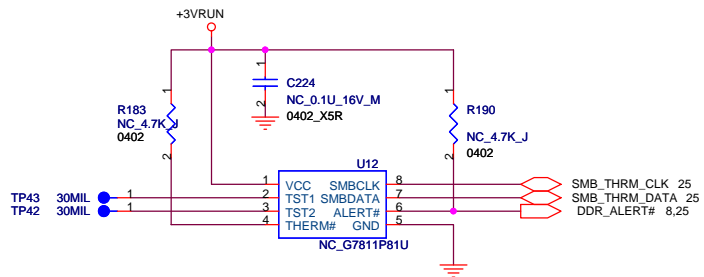






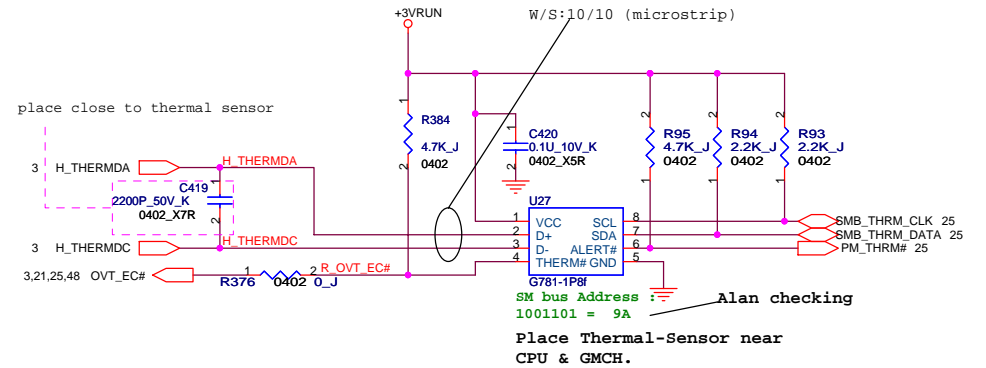
FAN

Memory Thermal-Sensor

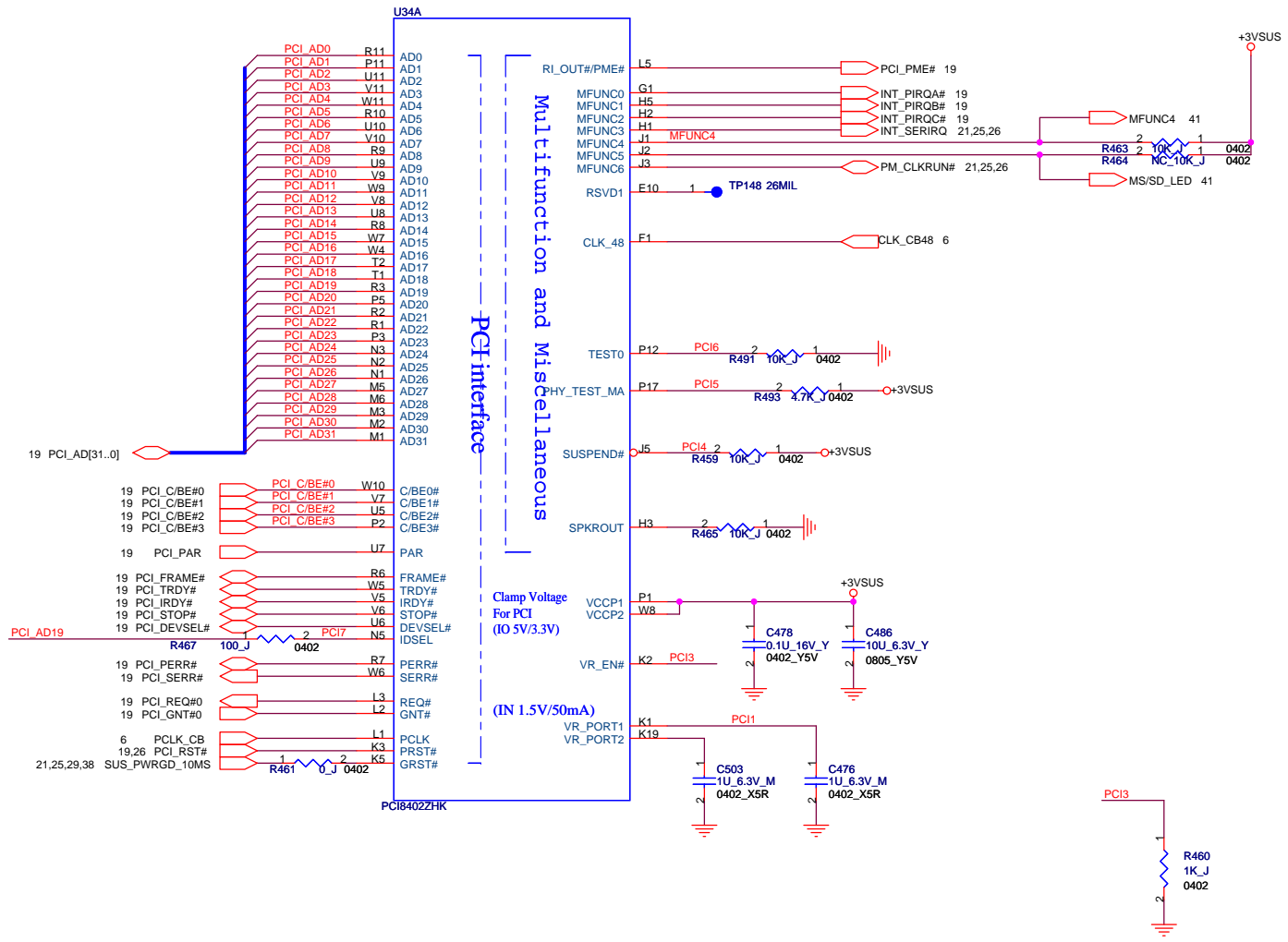


Close to CN25

CPU Thermal-Sensor



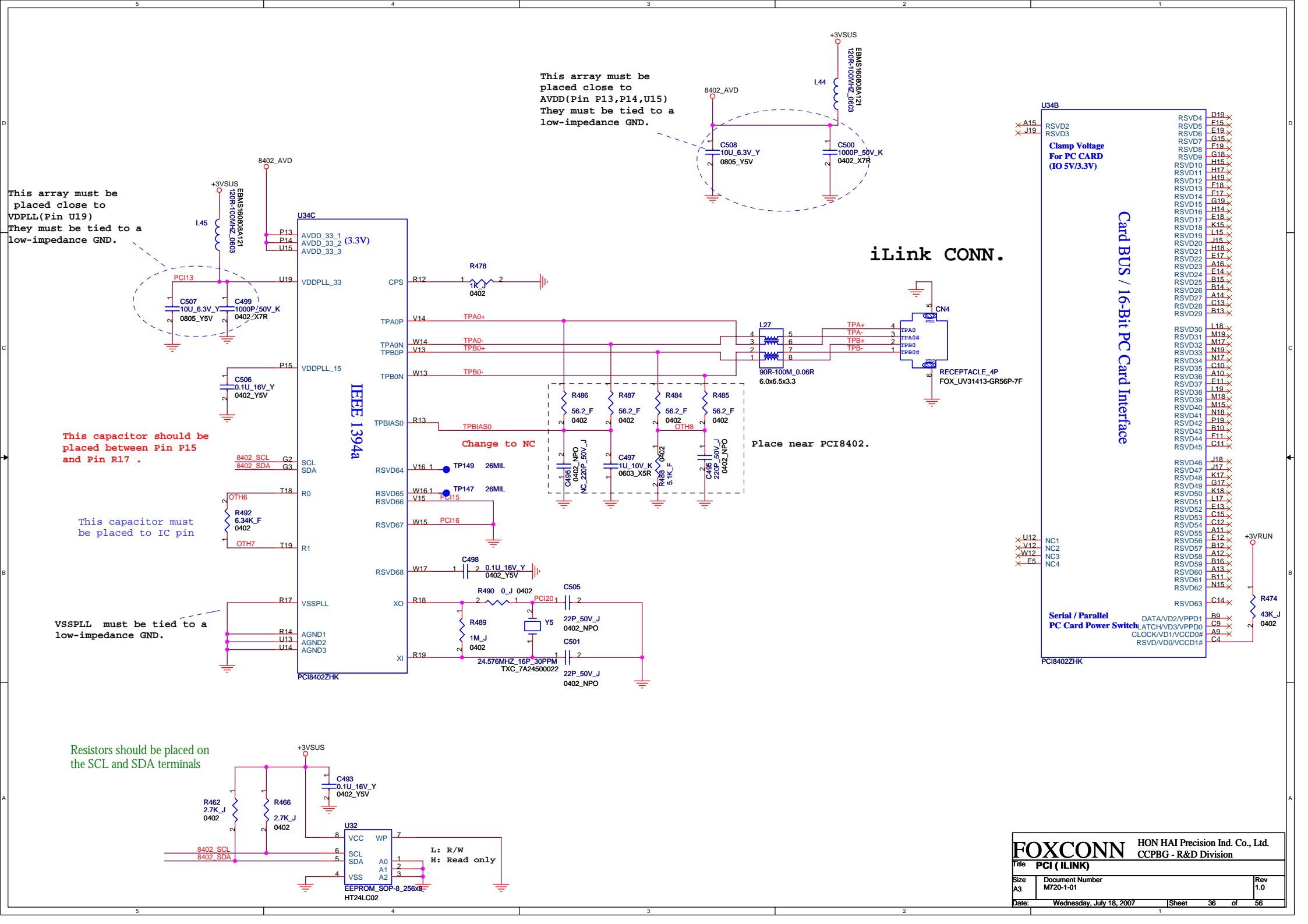
Close to U24



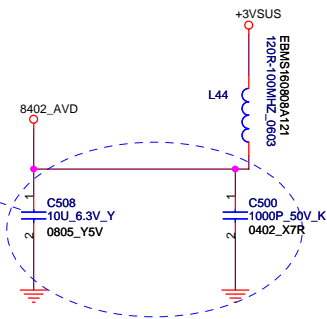
PCI interface
Multifunction and Miscellaneous

Clamp Voltage
For PCI
(IO 5V/3.3V)

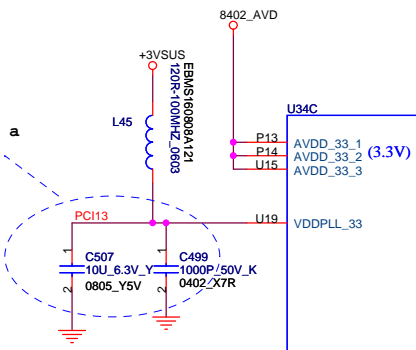
(IN 1.5V/50mA)



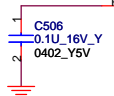
This array must be placed close to AVDD (Pin P13, P14, U15) They must be tied to a low-impedance GND.



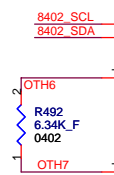
This array must be placed close to VDDPLL (Pin U19) They must be tied to a low-impedance GND.



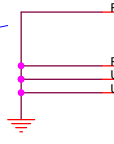
This capacitor should be placed between Pin P15 and Pin R17 .



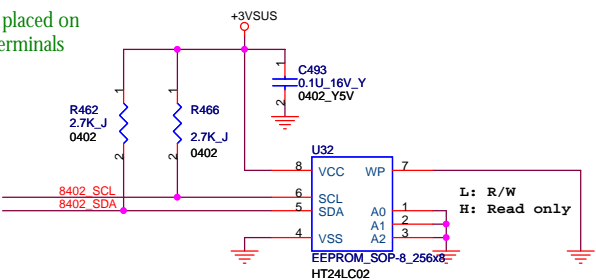
This capacitor must be placed to IC pin



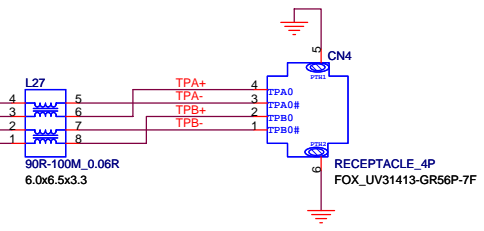
VSSPLL must be tied to a low-impedance GND.



Resistors should be placed on the SCL and SDA terminals

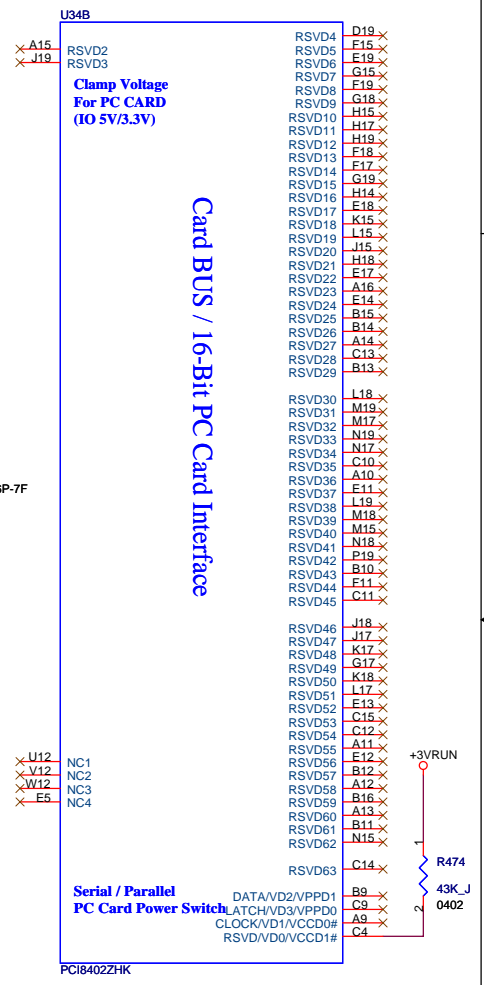


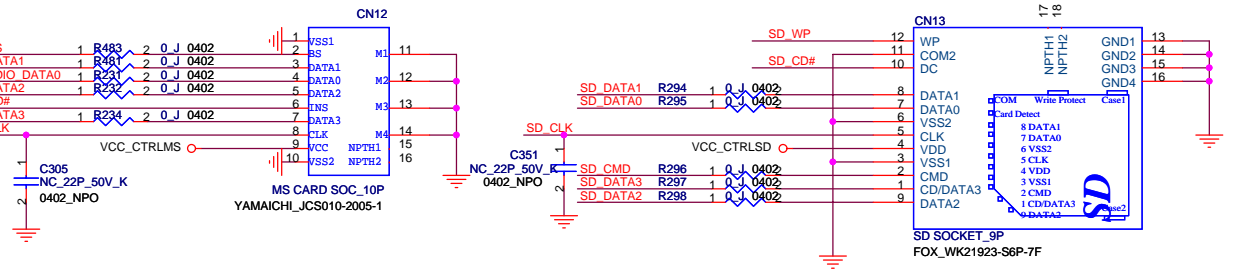
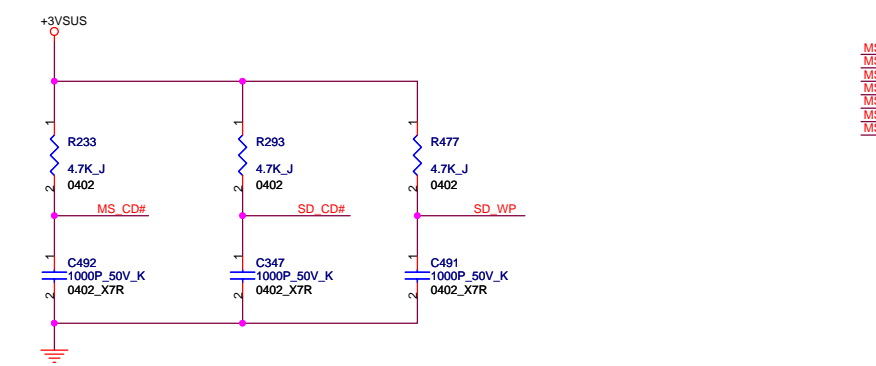
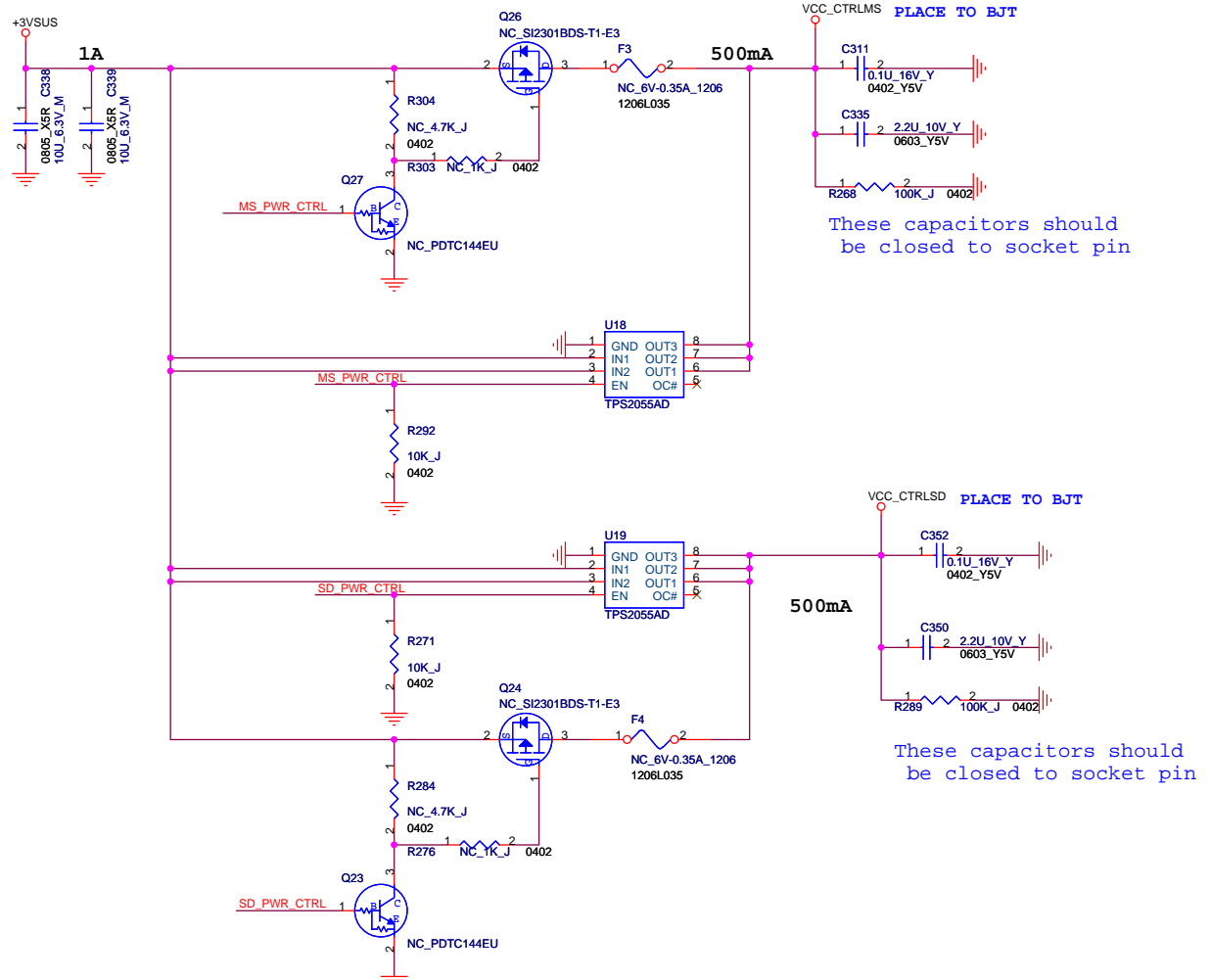
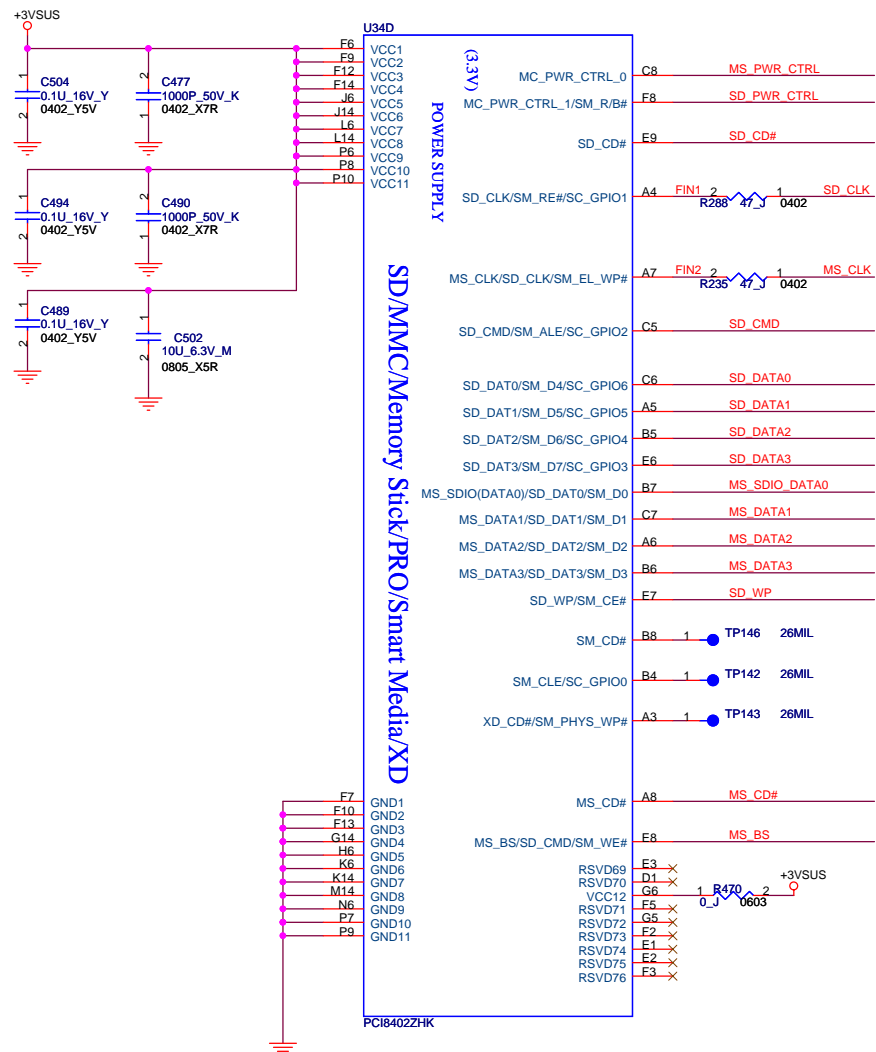
iLink CONN.



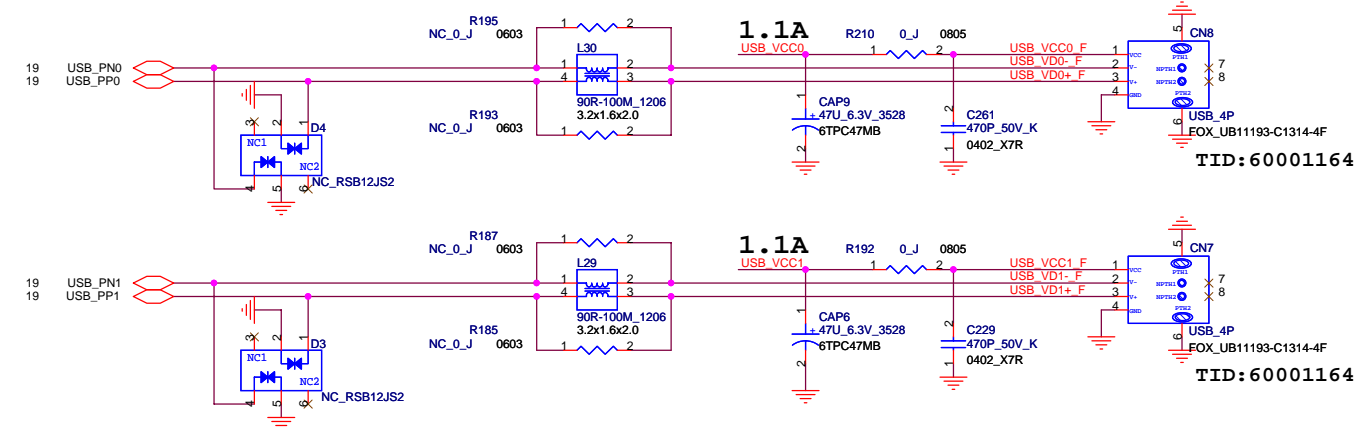
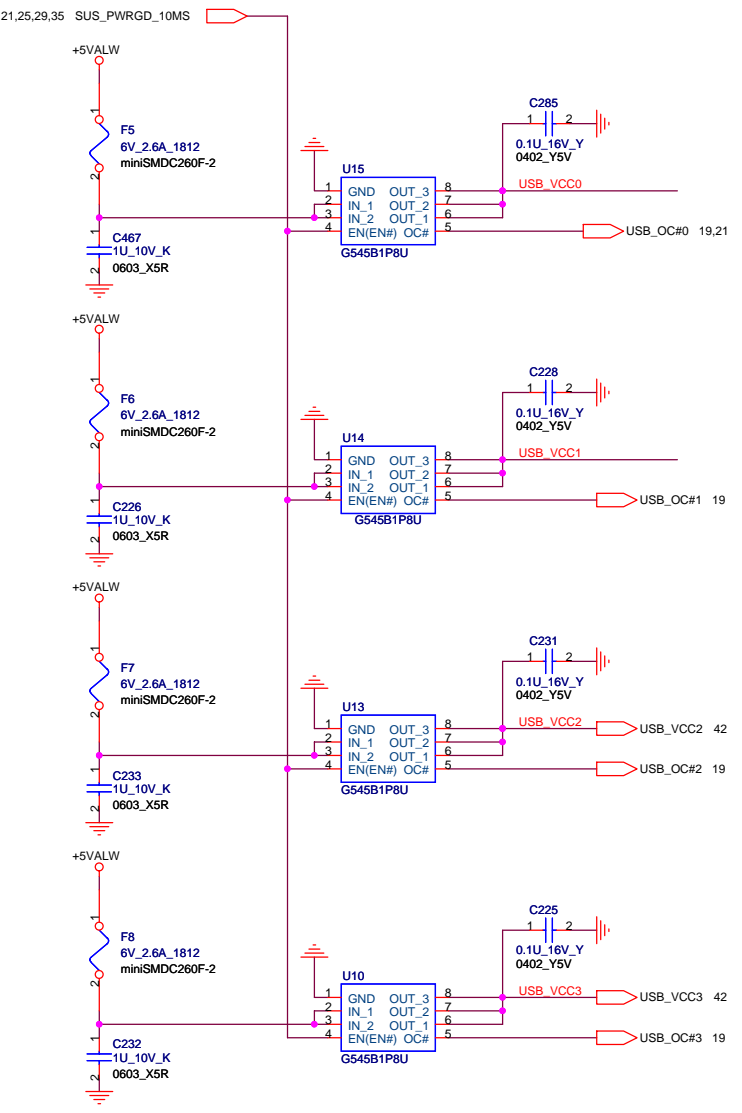
Place near PCI8402.

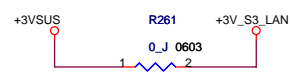
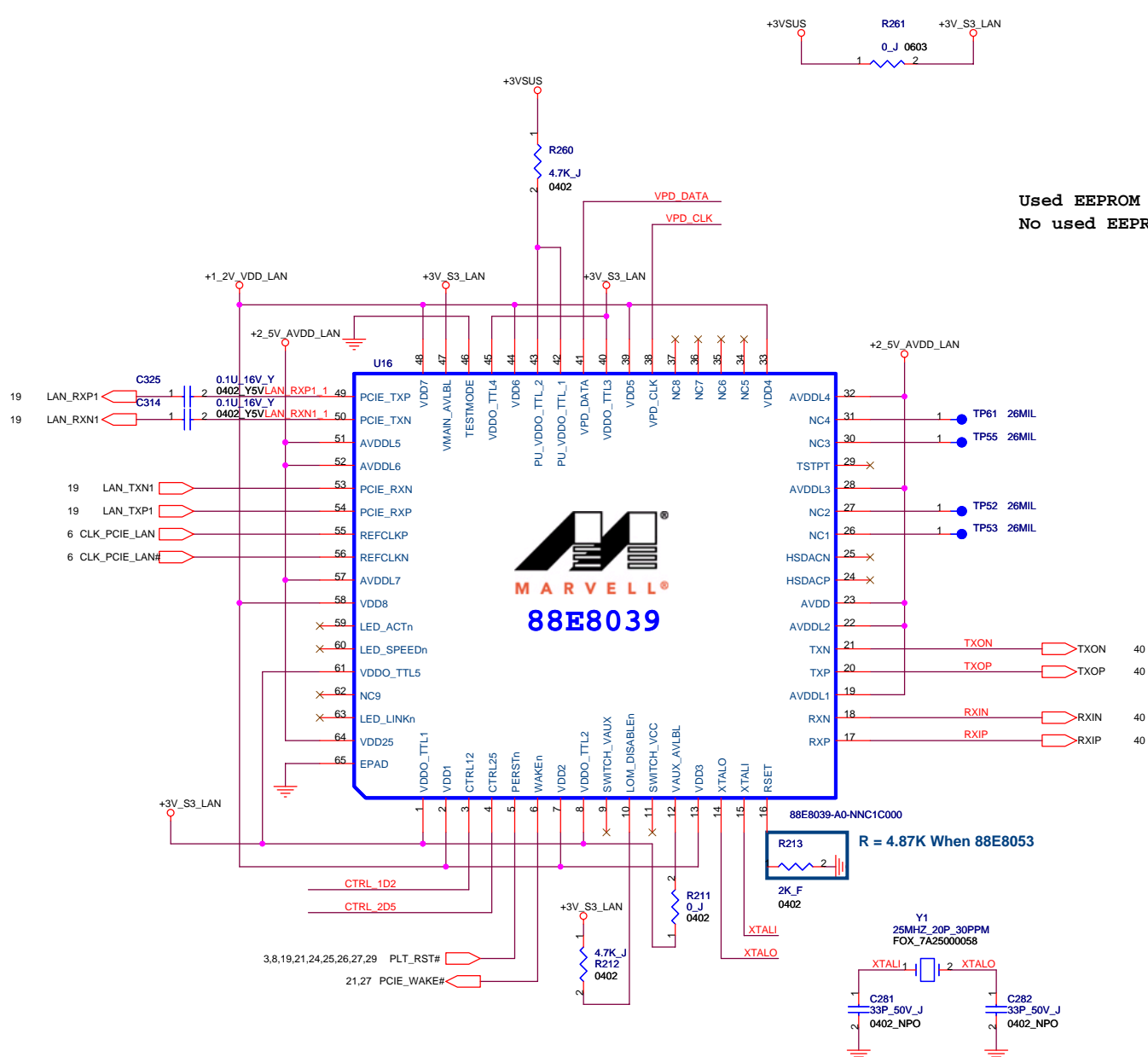
Card BUS / 16-Bit PC Card Interface



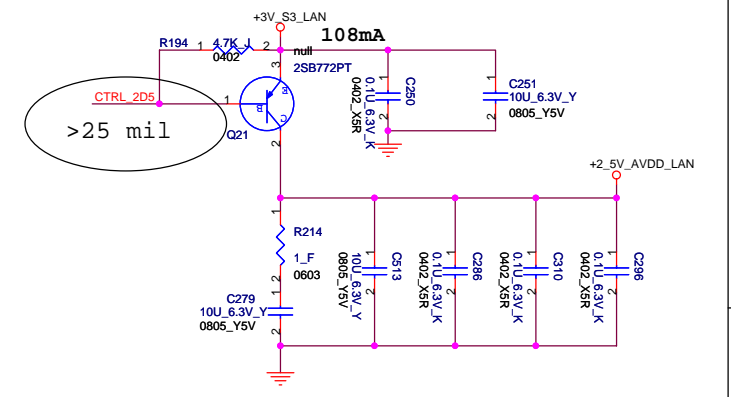
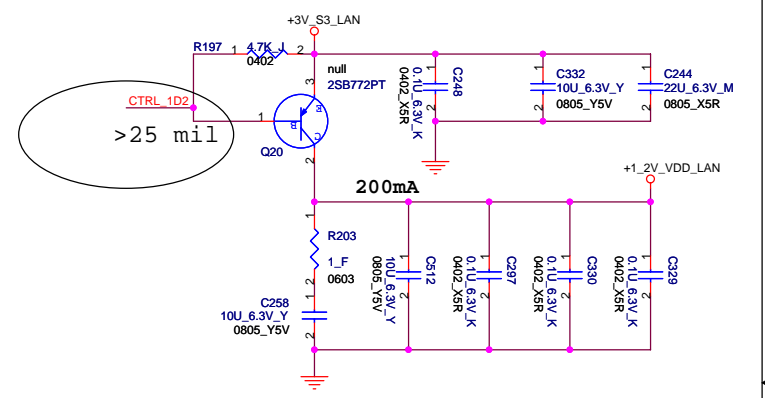
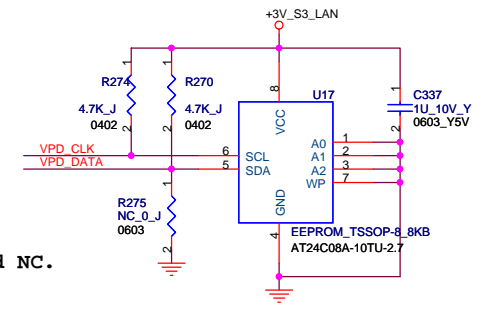


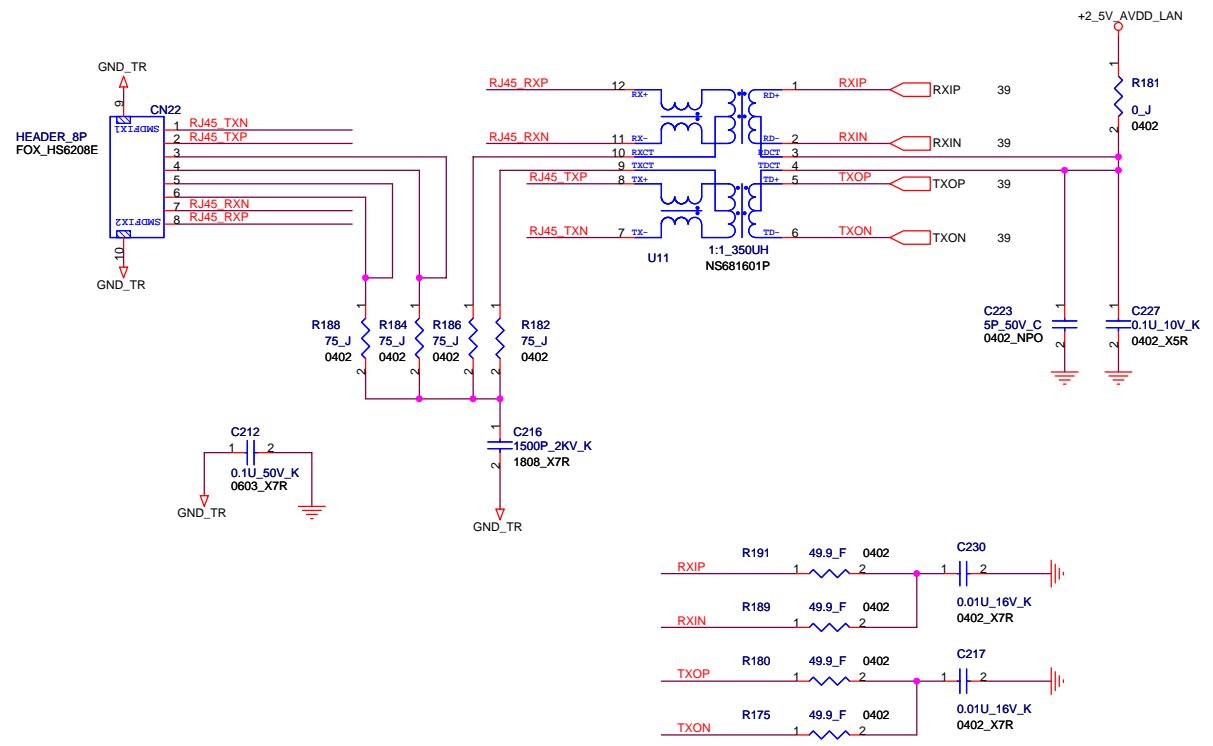
USB CONN.





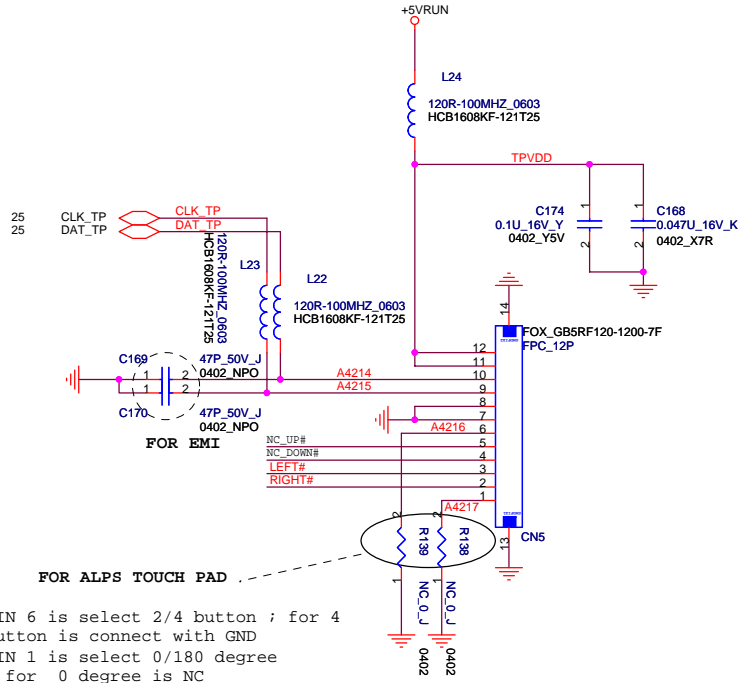
Used EEPROM R275 need NC.
No used EEPROM R270/U17/C337 need NC.



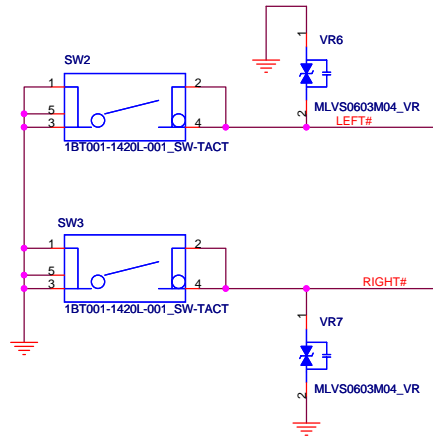


FOXCONN		HON HAI Precision Ind. Co., Ltd.	
Title		LAN Transformer	
Size	Document Number	Rev	
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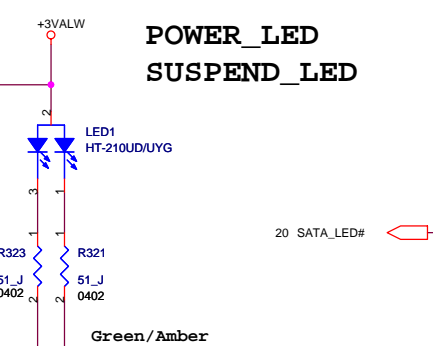
Touch Pad CONN.



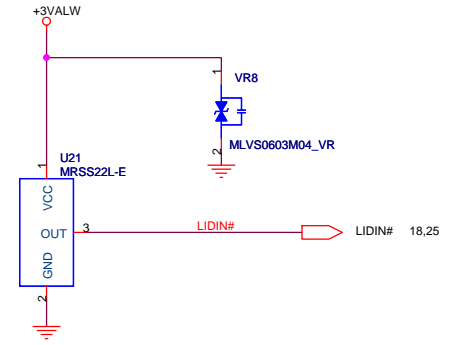
TP_LEFT Button



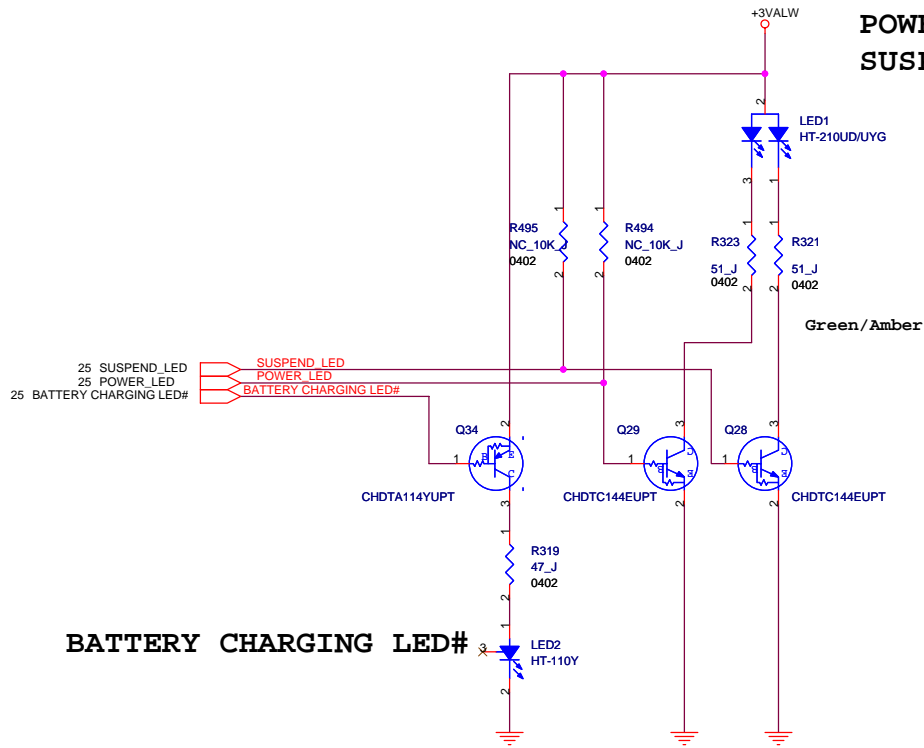
TP_Right Button



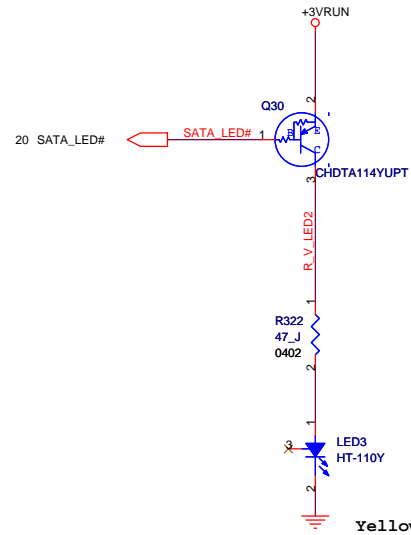
LID Switch



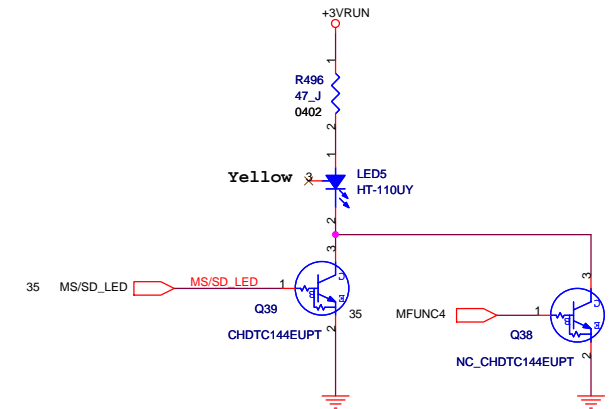
POWER_LED SUSPEND_LED



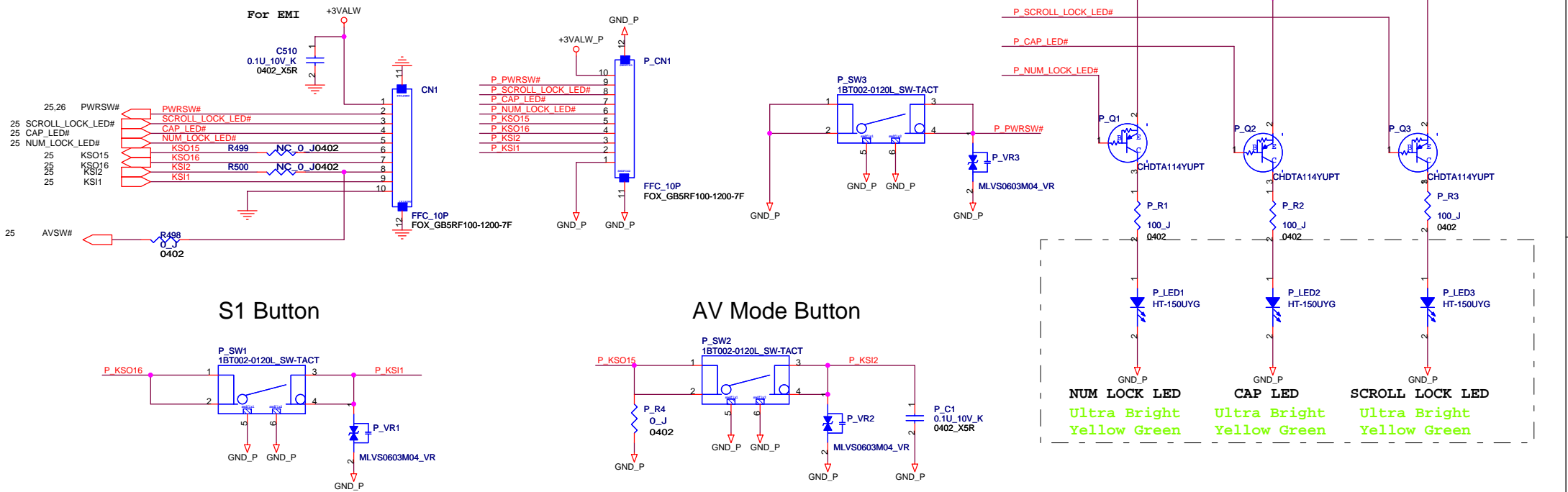
SATA_LED#



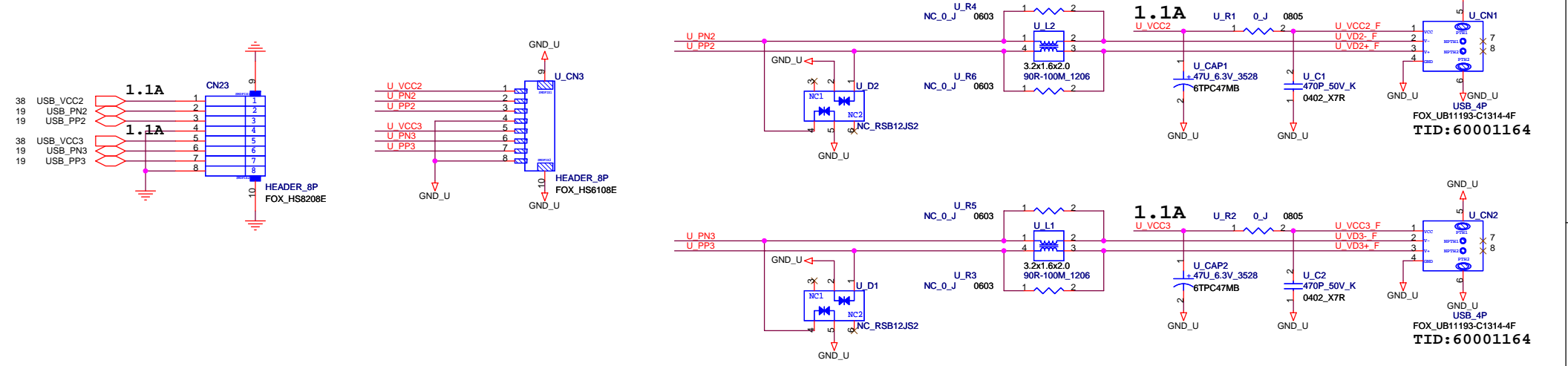
MS/SD LED

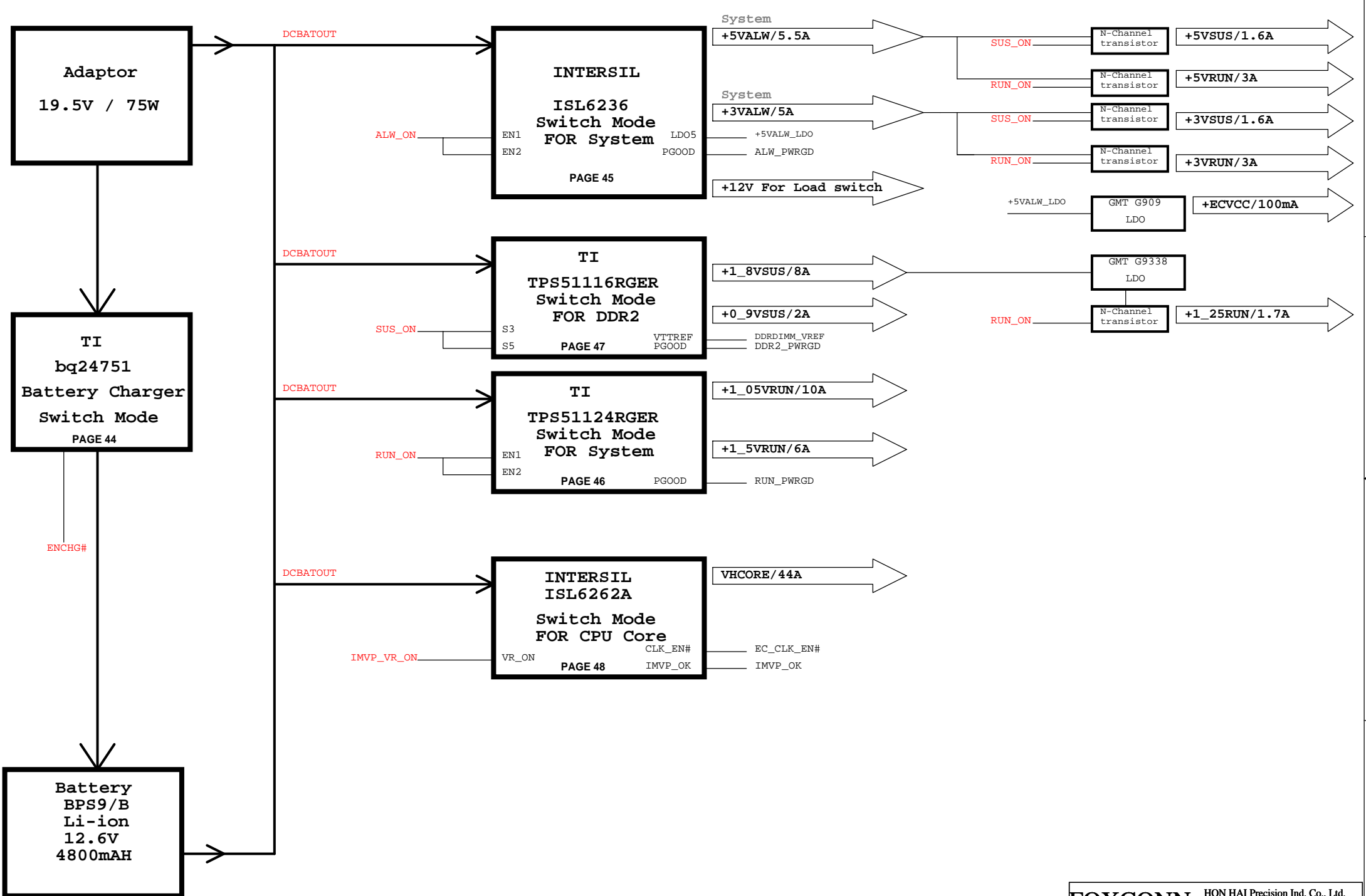


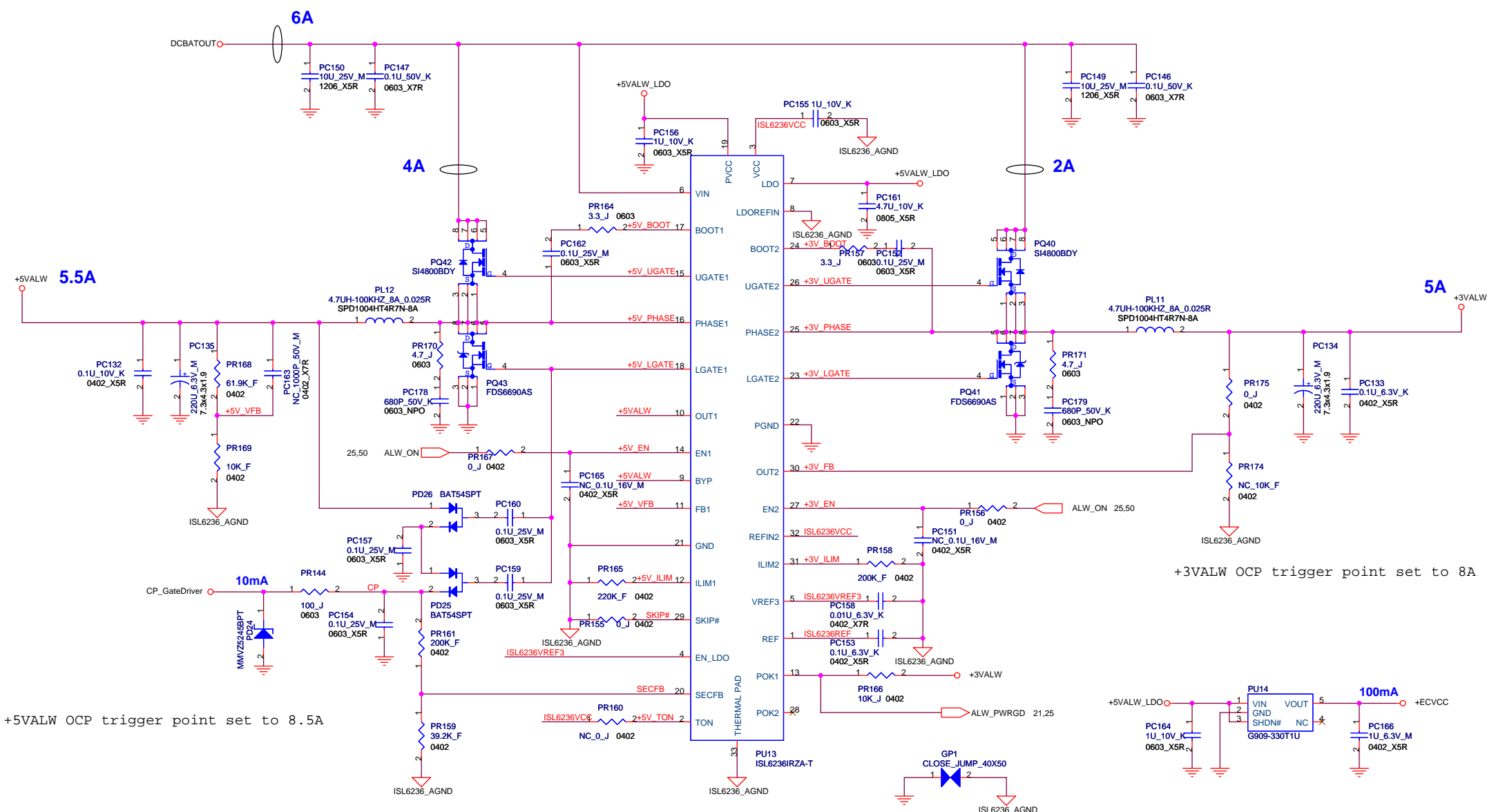
Power Button Board



USB Board







+5VALW OCP trigger point set to 8.5A

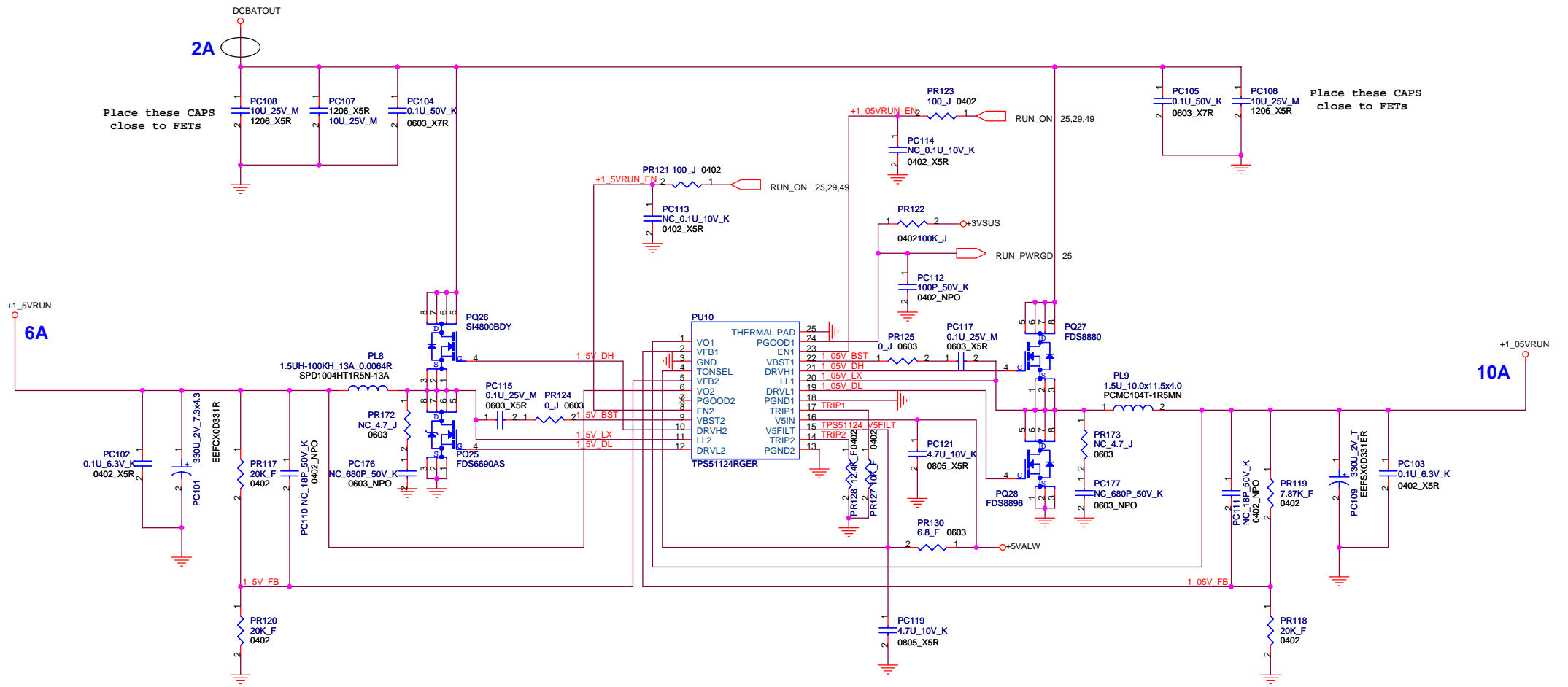
+3VALW OCP trigger point set to 8A

TON	Operating Frequency (+5VALW/+3VALW)
VCC	200KHz/300KHz
REF (OPEN)	400KHz/300KHz
GND	400KHz/500KHz

SKIP#	Operating Mode
GND	Pulse-Skipping
REF	Ultrasonic-Skip
VCC	PWM

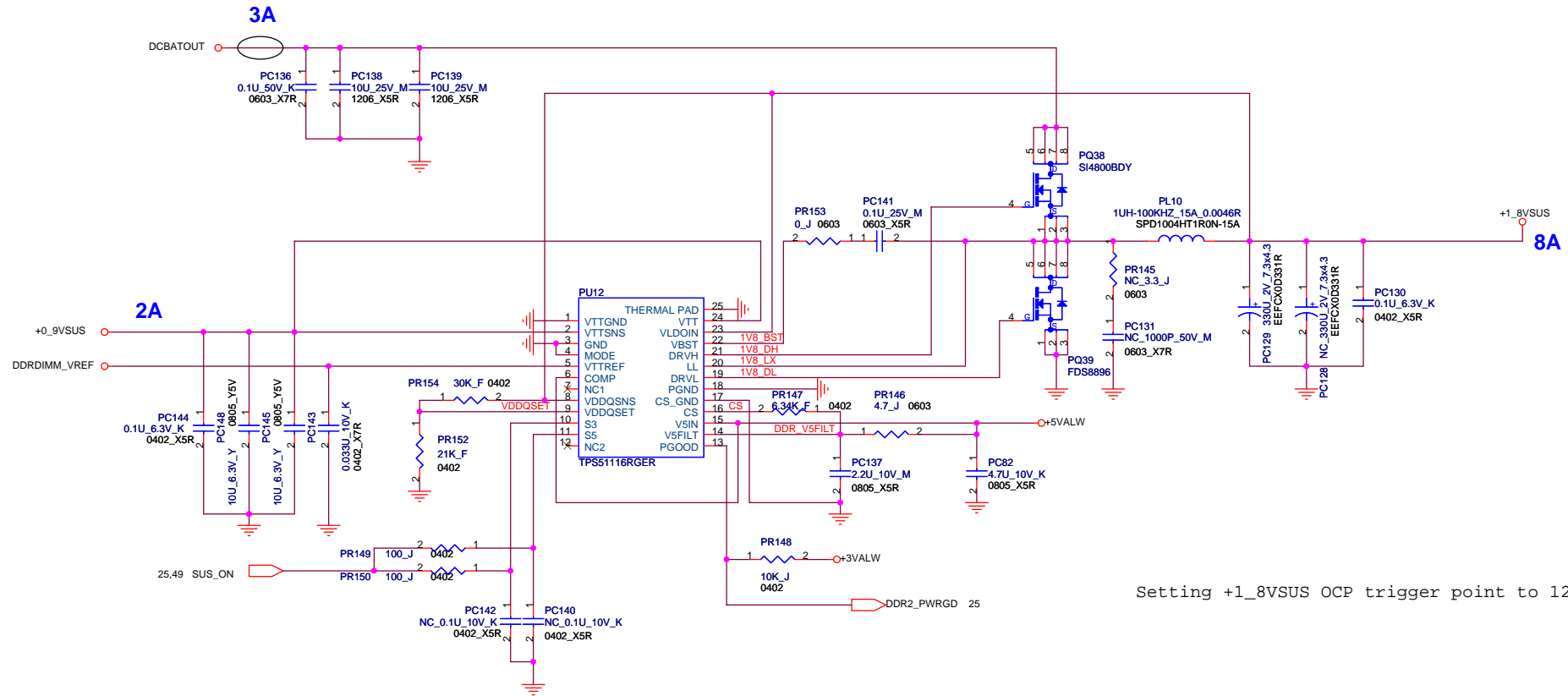
$$L = V_{OUT} (V_{IN} - V_{OUT}) / (V_{IN} * f * L_{IR} * I_{LOAD} (MAX))$$

$$R_{ocp} = (I_{ocp} - I_{ripple} / 2) * (10 * R_{ds} (on)) / 5u$$



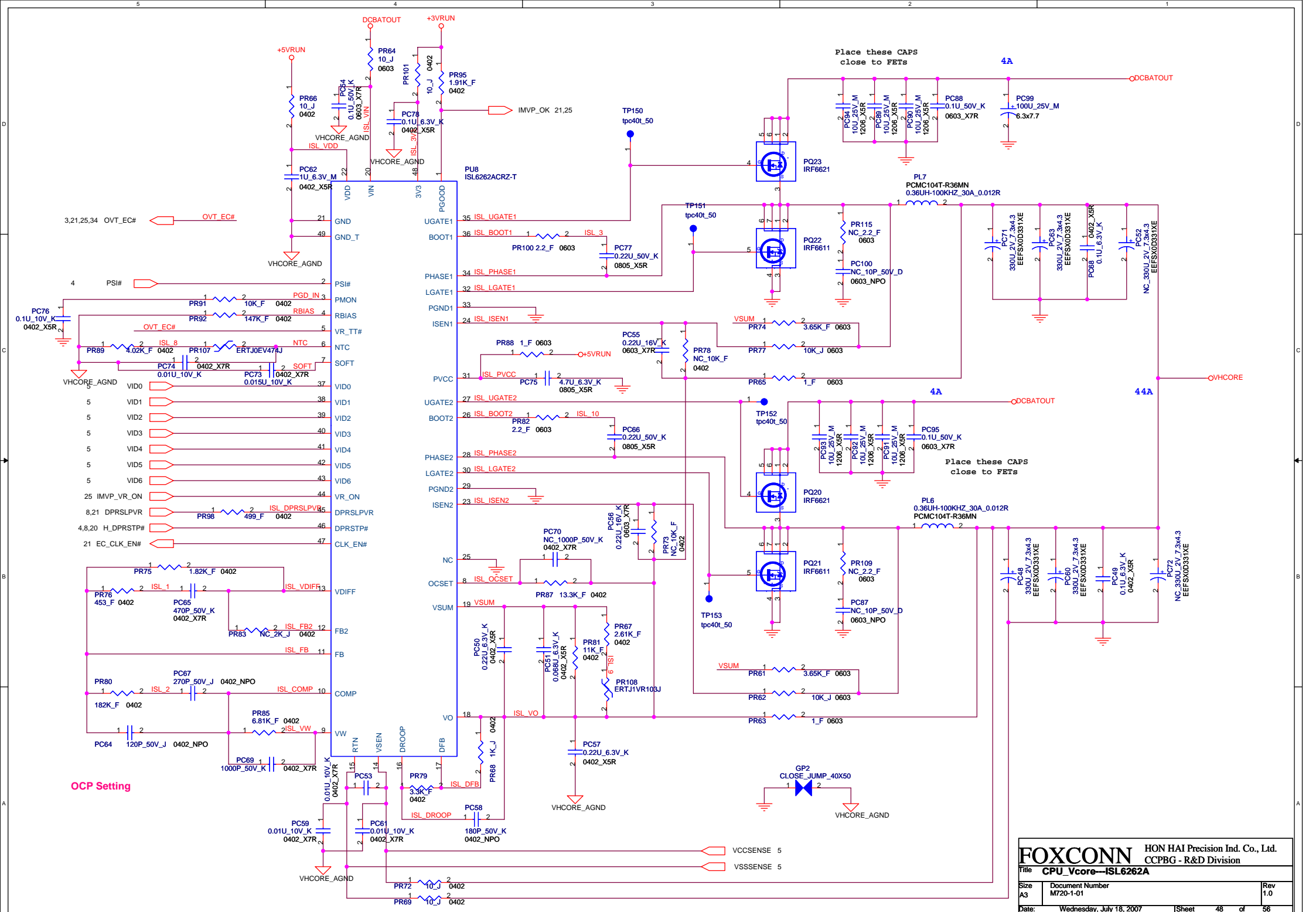
Setting +1_5VRUN OCP trigger point to 10.6A

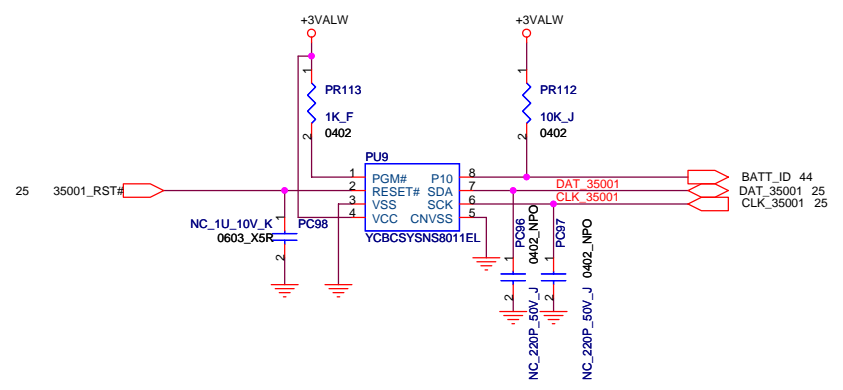
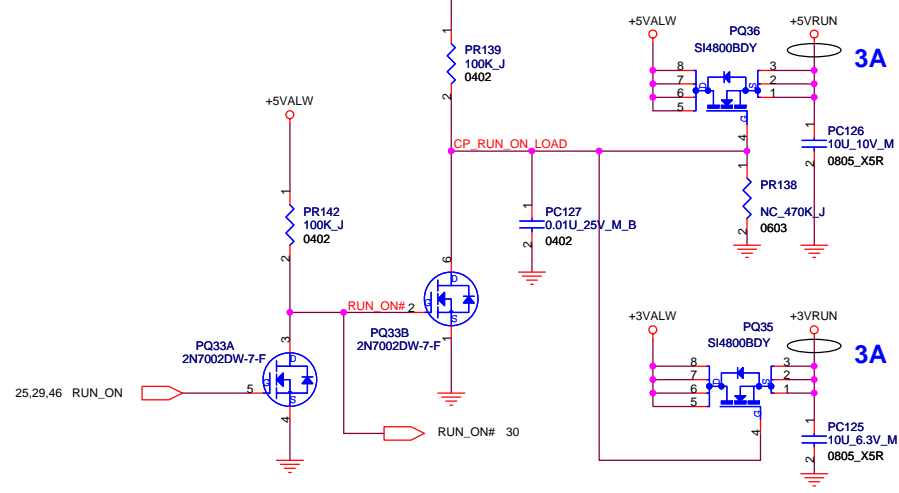
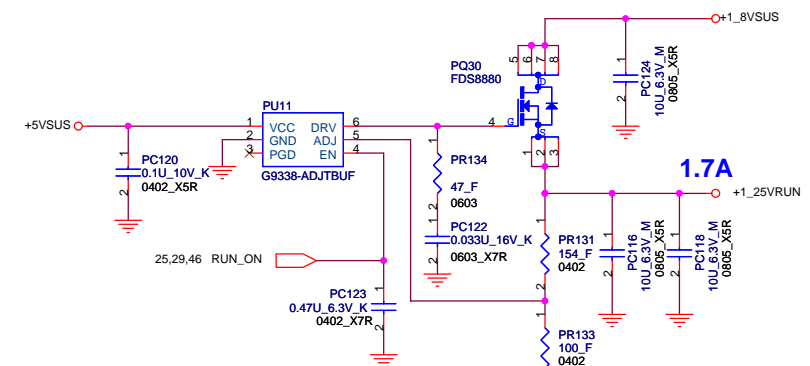
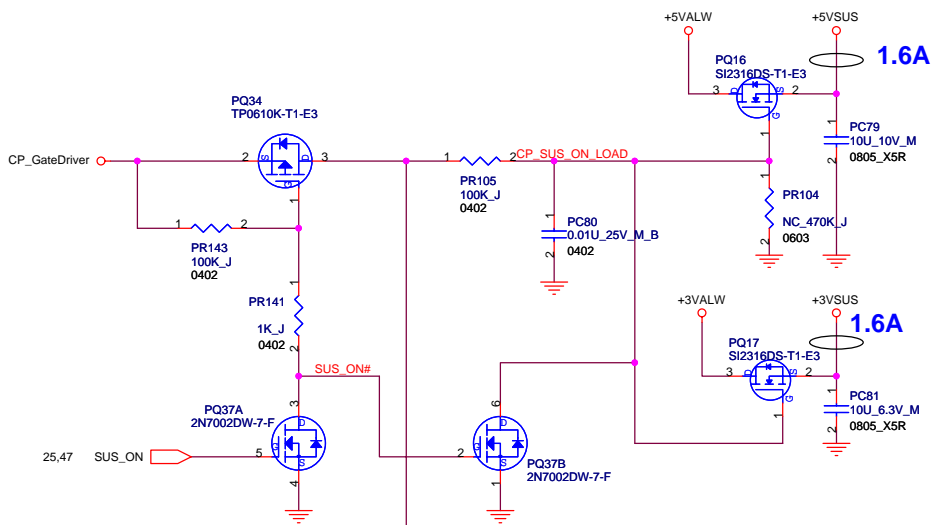
Setting +1_05VRUN OCP trigger point to 14.2A



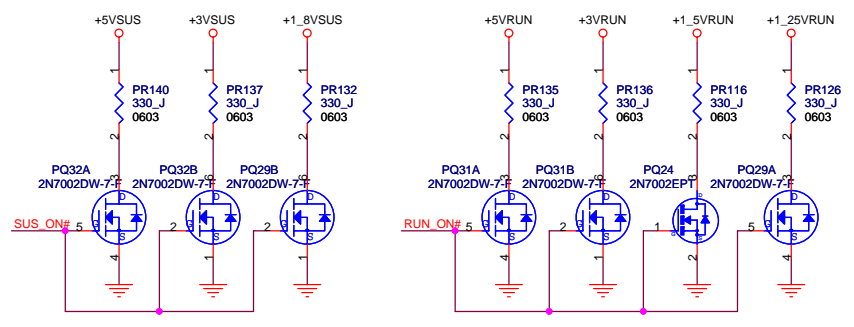
Setting +1_8VSUS OCP trigger point to 12A

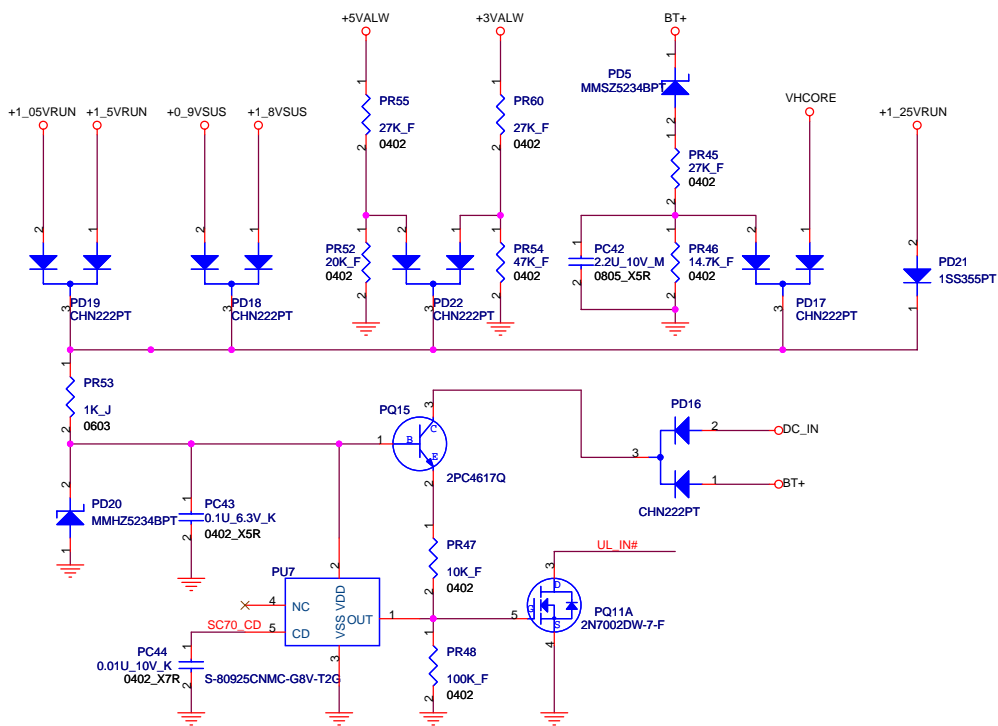
FOXCONN			HON HAI Precision Ind. Co., Ltd.		
			CCPBG - R&D Division		
Title DDR2 Power(+1_8V/+0_9V)					
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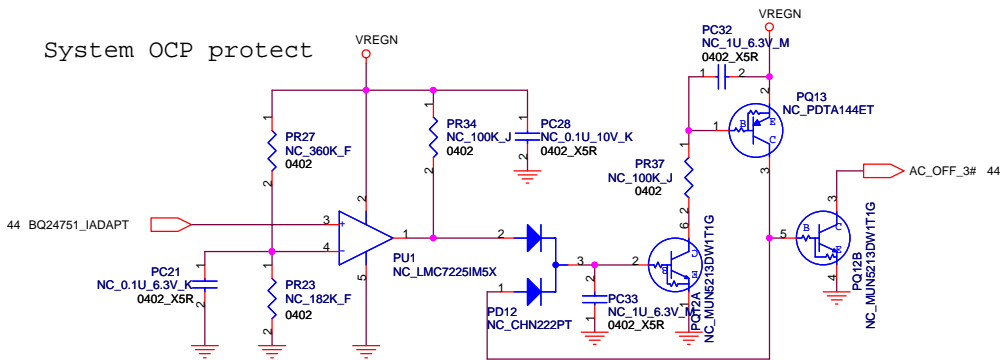


Discharge circuit for power-off

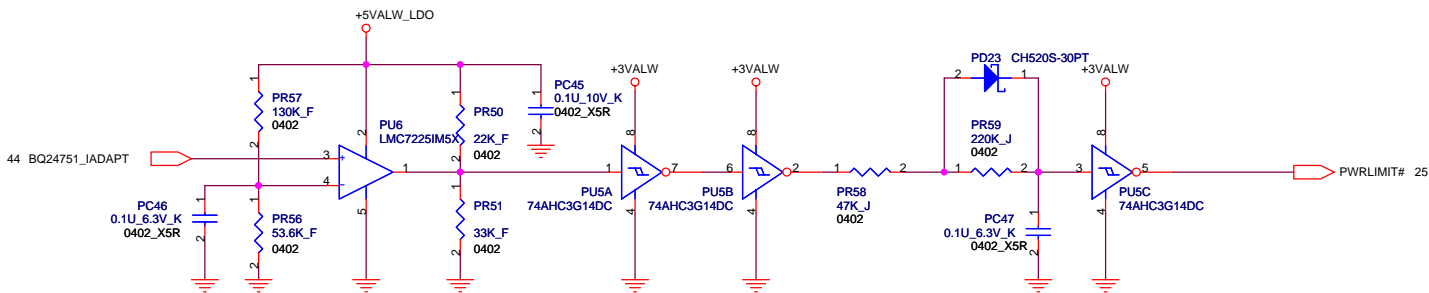




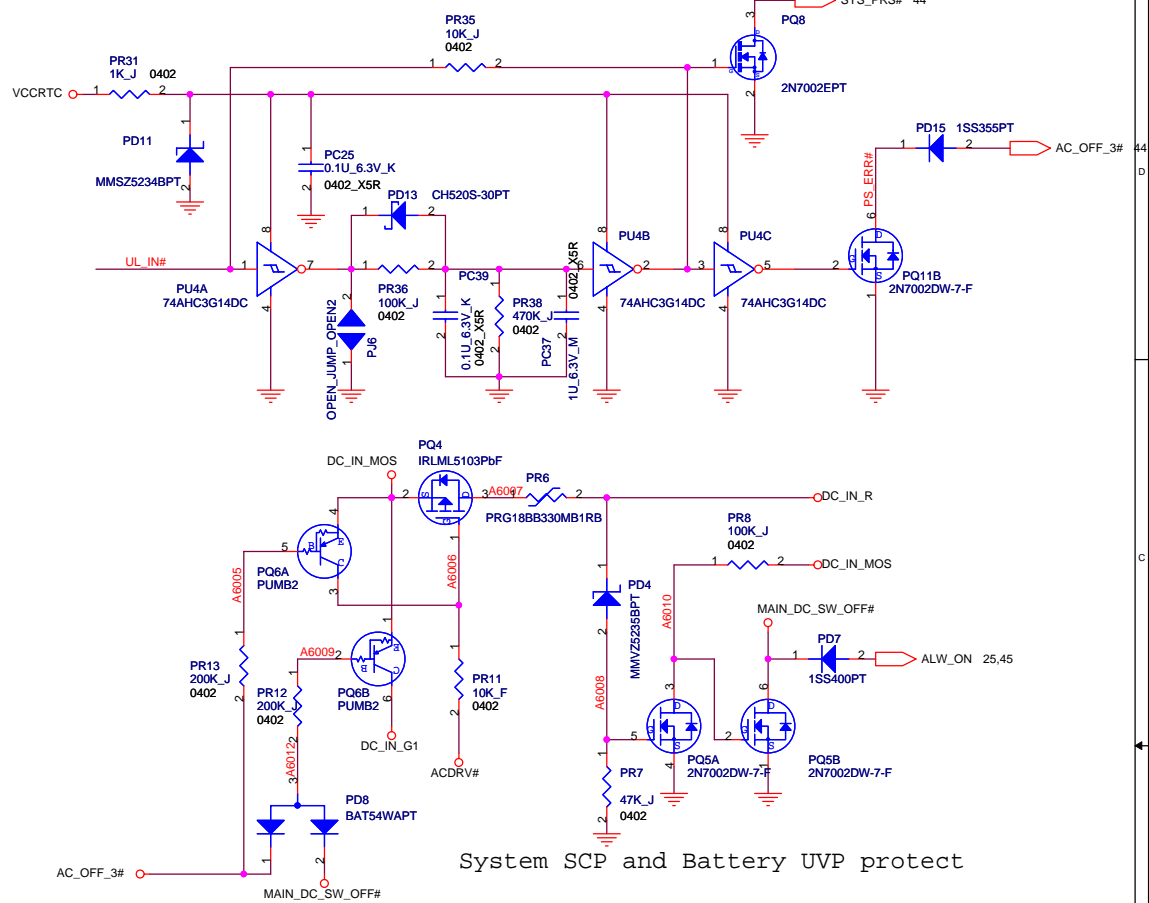
System OCP protect



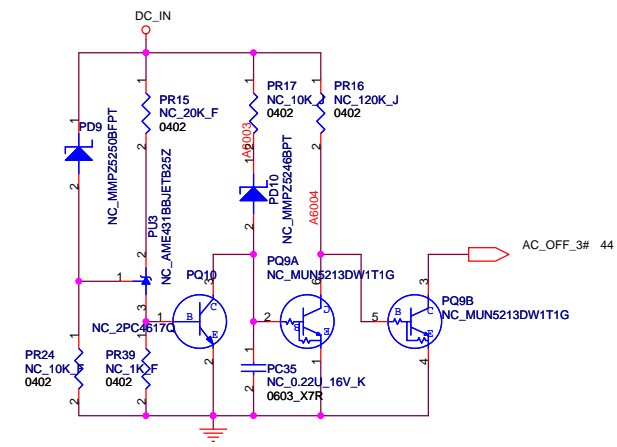
Setting System OCP trigger point to 4.2A



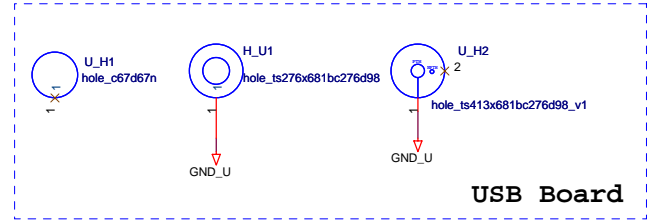
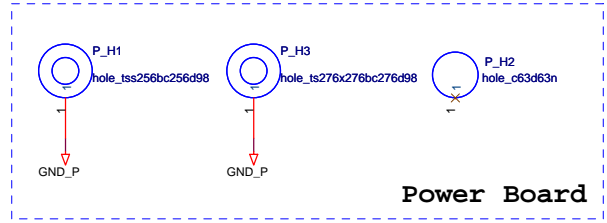
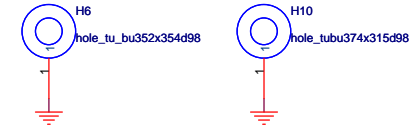
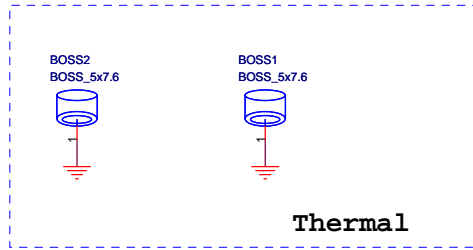
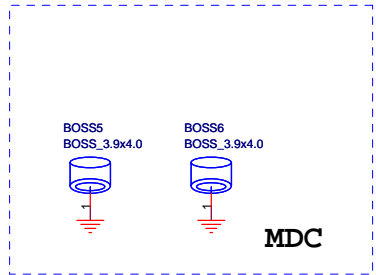
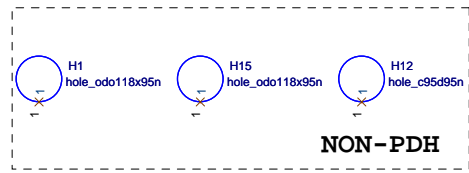
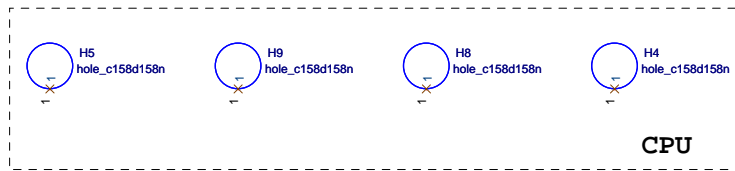
Setting PWRLIMIT# trigger point to 3.64A



System SCP and Battery UVP protect



DC_IN OVP and UVP protect



M720 EVT

(2007/02/14)

P.27 Change Q104 for DTC144 to 2N7002,delete R2217
P.38 Change U64,U65,U66,U69 from G5250 to G545

(2007/02/26)

P.41 Add Q158 for MS/SD LED.

(2007/02/27)

P.49 Add PC147 and PC149 0.01uF_25V 0402 for soft start circuit.
P.50 Add DC_IN OVP, DC_IN UVP, System_OCP and System_SCP protection circuit.
P.50 Change PR270 from 33K_F 0402 to 53.6K_F 0402 for Setting PWRLIMIT# trigger point to 3.64A

(2007/02/28)

Delete GMCH power
P.12 Delete PJ13 for +VGF_X_CORE power change to +1_05VVRUN.
P.20 Delete TP263,add R1790 pull down for LAN_RST function on intel ICH8M request.
P.49 Delete PR243~PR245,PQ8 for GMCH power IC delete.
P.50 PD21 from CHN222PT change to 1SS355PT for GMCH power IC delete.

(2007/03/05)

P.50 Change DC_IN OVP, DC_IN UVP, System_OCP and System_SCP protection circuit to no mount.

(2007/03/06)

For layout request swap L69,L75,L80,LVDS signal.
P.44 Change PF1.
P.48 Change PU8 pin25 from VHCORE_AGND to GND for layout convenient

(2007/03/07)

For layout request swap U_L1,U_L2 signal.

(2007/03/08)

Update LED tepe for ID.
P.25 Update system ID table.
P.42 Add S1/S2 function,Change CN22,P_CN1 to 10pin.
P.44 Add PR7 10K_F 0402 and PC38 0.1uF_50V 0603 X7R for DC_IN soft start circuit.
P.46 Change PL11 from MPO104-1R5 to PCMC104T-1R5MN
P.49 Add PR220 1K_J 0603 for soft start circuit.
P.50 Mount System SCP circuit.

(2007/03/12)

Battery/LVDS/RJ45/USB board connector,change new type,Touch pad/Wlan switch change new type.
P.44 Change PC20 from 0.01U_25V 0402 to 0.01U_50V 0603.
P.44 Change PR10 from 40.2K_F 0402 to 226K_F 0402 for setting charger current to 1.5A.
P.44 Change PR13 from 24.9K_F 0402 to 44.2K_F 0402 for setting constant power to 3.47A.
P.46 Change +1_05VVRUN power rating to 10A.
P.48 Add PR361, PR362, PR363 and PR364 0_J 0603 for testing.
P.51 Update Screw pad size.

(2007/03/13)

P.11 Add L98,C1089,L22,R678,C155,L89,L21,C168,Change +V1.5S_CRT to +V1.5S_TV DAC,Change +VCC_DMI to +VCC_RXR_DMI.
P.17 Delete R1145,R1146,Change F6 to 1206L035,R1148,R1149 to 24ohm,D7 to SSM24APT.
P.18 Delete R457,R1272,ODD_RXIN3-,ODD_RXIN3+ signal.

(2007/03/14)

P.9 Add R124,R125,R126
P.11 Delete R149
P.18 Delete R461

(2007/03/15)

P.11 Delete L92,L94,L96,L97
P.18 Delete R1268,R2225.
P.27 Delete CN39
P.52 Update Power /USB board screw pad.Change H28,H29 to Boss5,Boss6,Delete H3,H4,H6,H7,H10,H19~H22,Add Boss3.Boss4 for Mini-PCI-E

(2007/03/16)

P.17 Change D7 to SSM24APT
P.18 Update LVDS connector pin define.
P.44 Delete close jump GP1 and change PU3 bq24751_AGND to GND for layout convenient

(2007/03/19)

SWAP RP9,RP10,RP12,RP13,RP17,RP20,RP22,RP23,RP25,RP30 for layout.
CON1/CON2 pin7,pin8 connector to D_GND
P.51 Update Power /USB board screw pad GND.

(2007/03/20)

P.27 Change Q104 to 2N7002ESPT,Add R2225.
P.44 Change PR2 from NC_4.7_J 0805 to 1_J 0805.
Change PC24 from NC_4.7U_25V 0805 to 10U_25V 1206
Add PC39 10U_25V 1206
Change PC6 from 0.1U_50V to no mount
Change PC8 from 10U_25V_K to no mount
Delete PC2 and PC3 10U_25V
Above change are for damping input inrush voltage from TI application note.
P.44 Change PC29 from 10U_25V_K to no mount for TI application note.
P.45 Add PR139 0_J 0402 for testing
P.46 Delete GP3 Close_Jump for TI application note.
P.47 Delete GP4 Close_Jump for TI application note.
P.49 Change PQ70 from 2N7002EPT to 2N7002DW-7-F
Change PR220 from 1K_J 0603 to 100K_J 0402
These change are for load switch slow ON and fast OFF.
P.51 Update H18,P_H1,P_H2,U_H2,U_H3,Add P_H3

(2007/03/21)

P.19 SWAP RP92~RP94 for Layout.
P.24 Update ODD/HDD connector.

(2007/03/22)

P.16 SWAP RP21 for Layout.
P.31 SWAP JSPK1 for Layout.

FOXCONN		HON HAI Precision Ind. Co., Ltd. CCPBG - R&D Division	
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(2007/03/23)

P.8 Delete R1929,R1930.
 P.9 Change R124~R127 to 75ohm.
 P.25 Delete R2029,Add TP322.
 P.27 Delete R2225.
 P.30 Delete C1840.Change SNESE_A to SENSE_A.
 P.31 Change R2153,R2154,R2156,R2157 to 2.2Kohm.HP_IN_DET to SP_MUTE.
 P.32 Change C1811,C1819 to 100P,C1814,C1824,C1810 tp 4.7uF/10V.
 P.33 Delete R2185,U146,U147,Change HP_IN_DET to SP_MUTE.
 P.48 Delete PJ7 for layout convenient.
 P.42 Change netname of U_D1.2 and U_D2.2 from GND to GND_U.
 P.51 Delete U_H1.1 net for U_H1 is N-PTH.

(2007/03/26)

Add C1858~C1860 for EMI request.
 P.46 Change PC67 to mount for +1_05VRUN 10A loading.

(2007/03/27)

Add C1861~C1864_NC for EMI request.
 P.41 Change LED12 to HT-110Y for MOR request.

(2007/03/28)

Rename location.
 P.8 U8 nc pin add net for repair. Add C509 for CL_CLK0 and CL_DATA0 through +1_05VRUN,+1_5VRUN.
 P.9 U8 nc pin add net for repair.
 P.42 Add C510 for EMI request.

(2007/03/29)

P.29 Change Q37,R479 to mount,R480 to NC.

DVT**(2007/04/11)**

P.25 Add KSI015/KSI2 for AV mode function.
 P.42 Update CN1,P_CN1 pin define for AV mode functin,Mirror P_CN1 for M/E easy a'ssy.

(2007/04/12)

P.34 Mirror U12 SMBUS_CLK and SMBUS_DATA signal.
 P.44 ACGOOD# pull high voltage change from BQ24751_VREF to +5VALW_LDO for charger LED abnormal issue.
 P.44 PR32 0 ohm change to PD27 CH520S-30PT Schottky Diode for PU2 OVP issue.

(2007/04/20)

P.20 Add PM_THRMTRIP# signal and R497 connect to N.B and CPU.
 P.41 Change LED5 to HT-110UY for MS/SD LED brightness issue.

(2007/04/24)

P.19/39 Change Express LAN interface to port5 for S/W issue.
 P.44 Delete PL4 BCMS451616A600 8A
 P.44 Change PL2 from BCMS451616A600 8A to SMH 100805-4T for EMI request

(2007/04/30)

P.22 Delete R436,L43,NC C470 for Intel D.G.(2.0).

(2007/05/08)

P.41 Change SW2/SW3 botton switch for MOR request.

(2007/05/10)

P.27 Change SW4 WLAN switch.

(2007/05/11)

P.20 Change C300/C301 to 12pF.
 P.39 Change C281/C282 to 33pF.

(2007/05/15)

P.16 Mount C255,C267,C293,C309 for EMI.
 P.18 Mount C376 for EMI.
 P.44 Add PC167~PC175 for EMI.
 P.45 Change PR157,PR164 to 3.3ohm,Add PC178,PC179(680pF), PR170,PR171(4.7ohm) to mount for EMI.
 P.46 Add PC176,PC177(680pF),PR172,PR173 no mount for EMI.
 P.48 Change PC88,PC95 to mount for EMI.

(2007/05/17)

P.44 PC84 change from NC to mount for reducing charger ripple/noise.
 P.44 PC23 change from 0.47U_16V_M 20% to 0.47U_16V_K 10% for Purchase difficult.
 P.45 Add PR174 NC_10K_F 0402 and PR175 0_J 0402 for reserving +3VALW output adjustable.
 P.49 Change PQ30 from VISHAY SI4800BDY to FAIRCHILD FDS8880 for more safety power rating.

(2007/05/18)

P.30 Change C444 from 10uF to 2.2uF,add C511 for Audio POP issue.
 P.20 Change R223 to no mount.

(2007/05/21)

P.44 Delete PC6, PC7 and PC12 for layout space.
 P.44 Delete PR10, PC19, PC20
 Change PC3 from 10uF_25V_1206 to 22uF_35V EC CAP
 Change PC38 from 1uF_25V_0603 to 4.7uF_25V_0805
 Add PR176 10_J_0805
 These change are for DC_IN damping circuit.
 P.44 Change PU2 pin28 net-name from DC_IN_MOS to PVCC
 P.44 Change PR2 from 0.02_F_1206 to 0.02_F_2512 for more safety power rating.

(2007/05/22)

P.19 Back PCI-E from port5 to port1.

(2007/05/24)

P.38 Add F5~F8 for MOR request.
 P.44 Change PL2 from SMH 100805-4T to 860R-100MHZ_0.045R for purchase difficult.
 P.50 Change PU1 and PQ13 supply voltage from +5VALW_LDO to VREGN for application modification.
 P.51 Change BOSS1 and BOSS2 for Thermal request.

(2007/05/25)

P.34 Change U12,R183,R190,C224 to no mount for DDR ththermal disable..

(2007/05/26)

P.25 Add R436 for AV mode botton function.
 P.41 Add R498~R500 P_R4,P_C1 for AV mode botton function.

(2007/05/28)

P.25 Change GPWU1 to GPWU7 for AV botton.

(2007/05/29)

P.30 Change R171 to 22ohm,C215 to 22uf.
 P.33 Change C201,C202,C204 to X5R.

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PVT

(2007/06/25)

- P.24 Change CAP7 to mount, and C275 to no mount for HDD noise issue.
- P.28 Update OIDE pin define foe A'SSY issue.
- P.39 Add C512,C513 for LAN noise issue
- P.51 Update H17 screw hole pad.

(2007/06/27)

- P.44 Change PR2 vendor from YAGEO to CYNTEC for purchase difficult.
- P.44 Change PC24 from 120pF 10% to 120pF 5% for purchase difficult.
- P.44 Delete PR25, PR41 and PR42 0ohm for application note.
- P.45 Delete PR162 and PR163 0ohm for application note.
- P.45 Delete PJ4 and PJ5 for application note.
- P.46 Delete PR129 0ohm for application note.
- P.46 Delete PJ1 and PJ2 for application note.
- P.47 Delete PR151 0ohm for application note.
- P.47 Delete PJ3 for application note.
- P.48 Change PC67 from 270pF 10% to 270pF 5% for purchase difficult.
- P.48 Delete PR70, PR71, PR84, PR86, PR90, PR93, PR94, PR96, PR97, PR99 and PR102 0ohm for application note.
- P.48 Add TP150, TP151, TP152 and TP153 test pin for application note.
- P.49 Delete PR110, PR111 and PR114 0ohm for application note.
- P.50 Delete PR20 and PR49 0ohm for application note.
- P.51 Update H14 screw hole pad.

(2007/06/29)

- P.45 Change PU13 pin9,10 net name to +5VALW.

(2007/07/02)

- P.27 Change LED4 to HT-110YG for LED issue.
- P.41 Change R321,R323 to 51ohm,LED2,LED3 to HT-110Y for LED issue.

(2007/07/03)

- P.38 Change F5~F8 to 2.6A poly-switch for USB loading and noise issue.
- P.42 Change CN23 to HS-8208E.

(2007/07/04)

- P.44 Change PC3 from mount to dummy for application note.
- P.44 Change PC38 from 4.7uF_25V 0805 to 1uF_25V 0603 for application note.
- P.44 Remove PR176 10_J for application note.
- P.44 Add PR177, PR178 1_J 1206 and PC180, PC181 4.7uF_25V 0805 for DC_IN RC snubber circuit.

(2007/07/09)

- P.11 Change L9,L28 to 250mA for component spec. issue.
- P.44 Change PR177, PR178 from 1_J 1206 to 1_J 1210 for power rating safety.

(2007/07/12)

- P.18 Add L46 for EMI issue.
- P.31 Add C514~C517 for EMI issue.

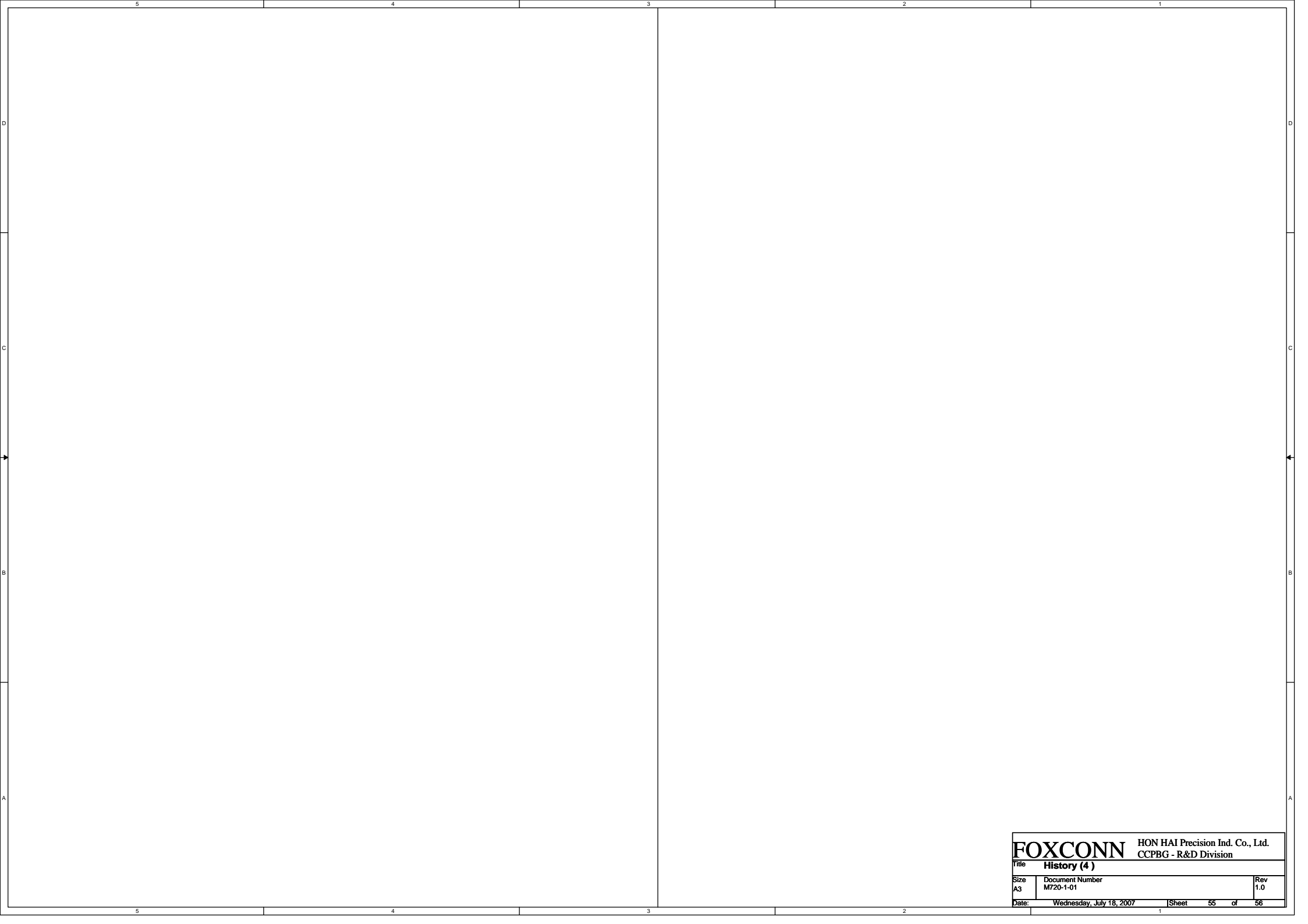
(2007/07/16)

- P.32 Change C455,C445 to 10uF,R167,R149 to 20 Kohm for MIC. THD+N issue.

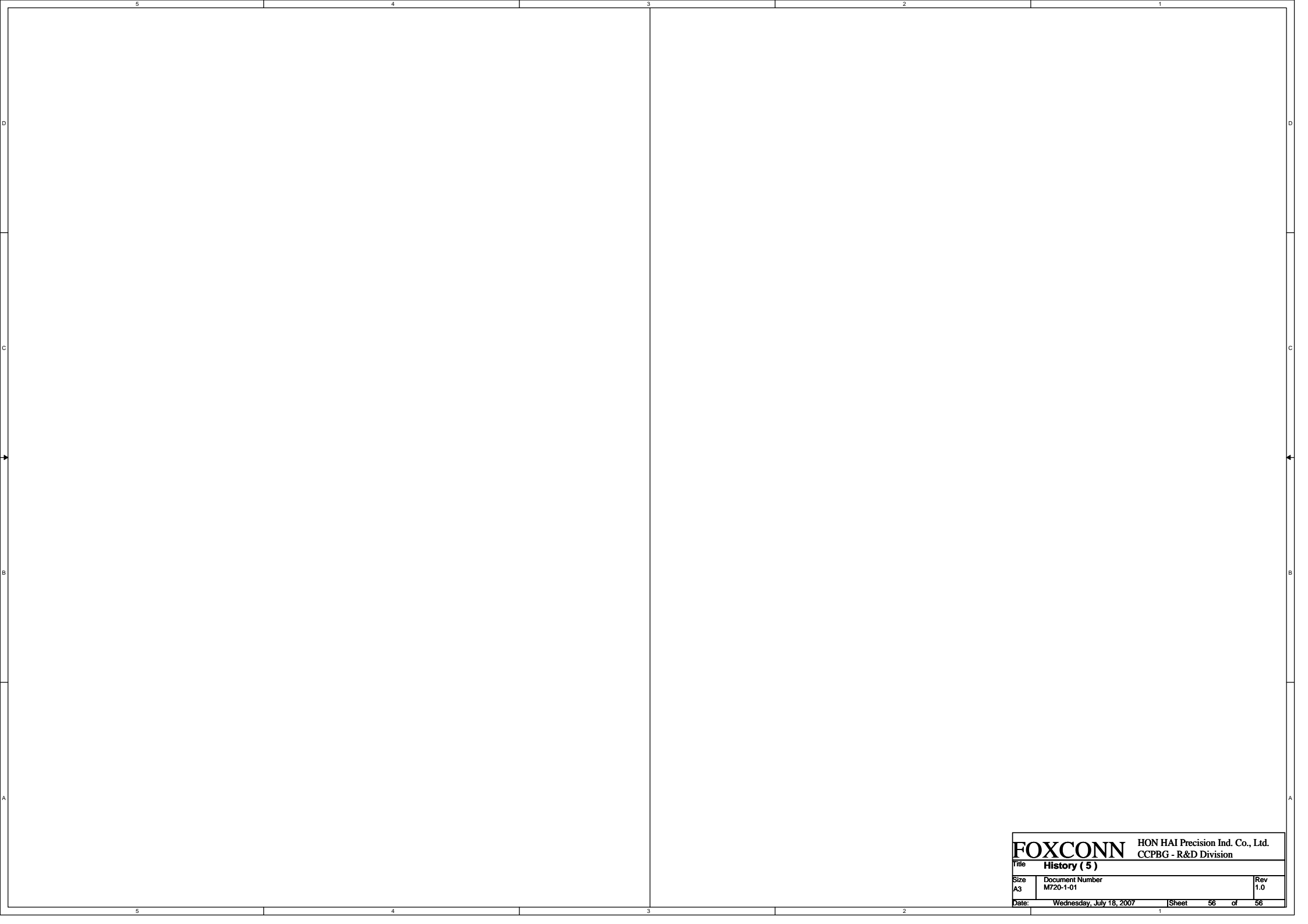
(2007/07/17)

- P.27 Change LED4 to HT-110UYG for MOR request.
- P.45 Change PR177,PR178 to 1/3W for PUR issue.

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