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P. Leader	Check by	Design by

Project Code & Schematics Subject: M610 PVT Main Board

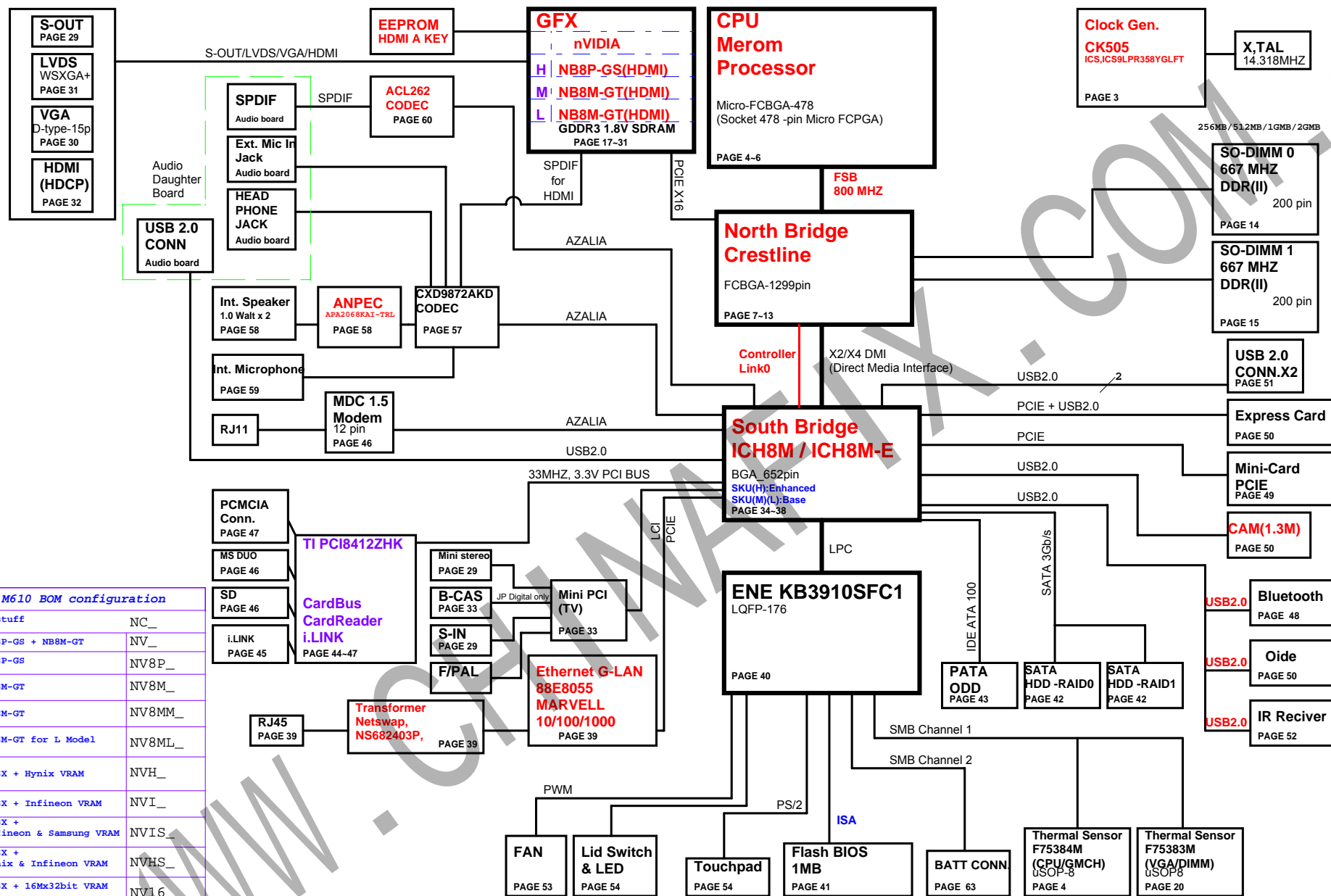
PCB P/N: 黃田 1P-0072100-8010

翰宇博德 1P-0072500-8010

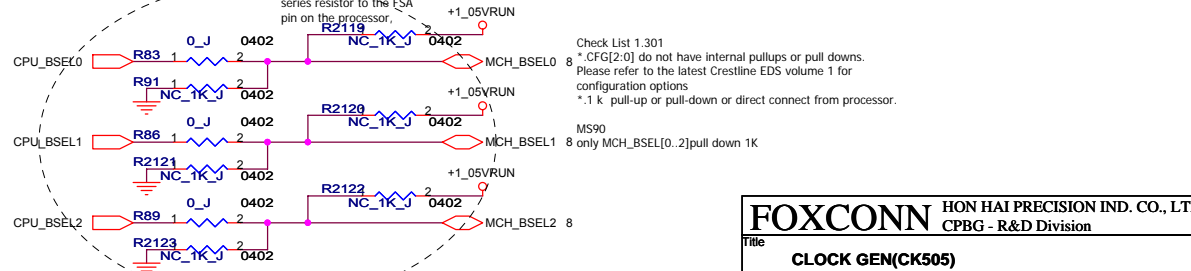
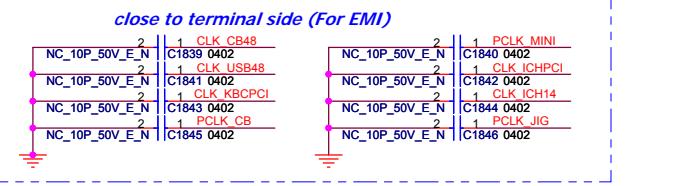
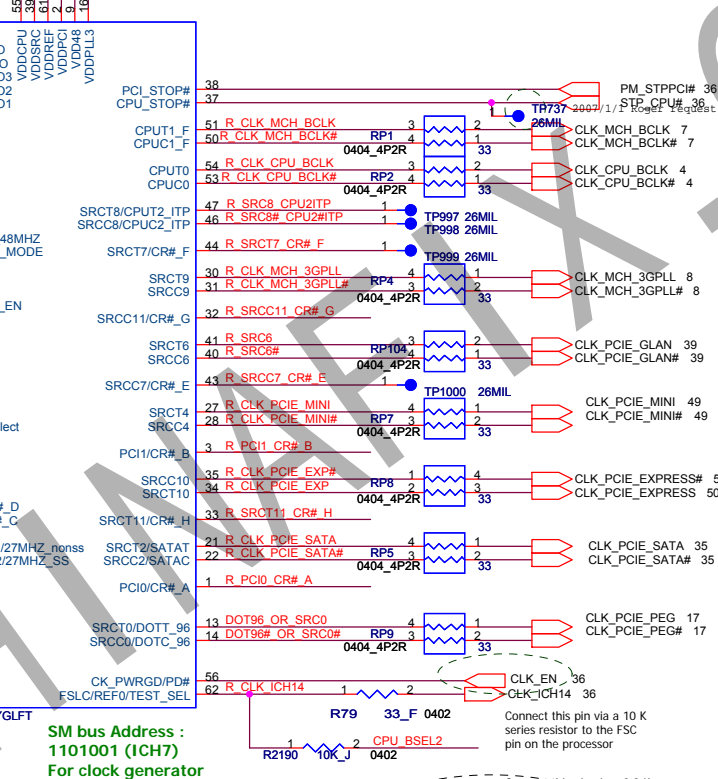
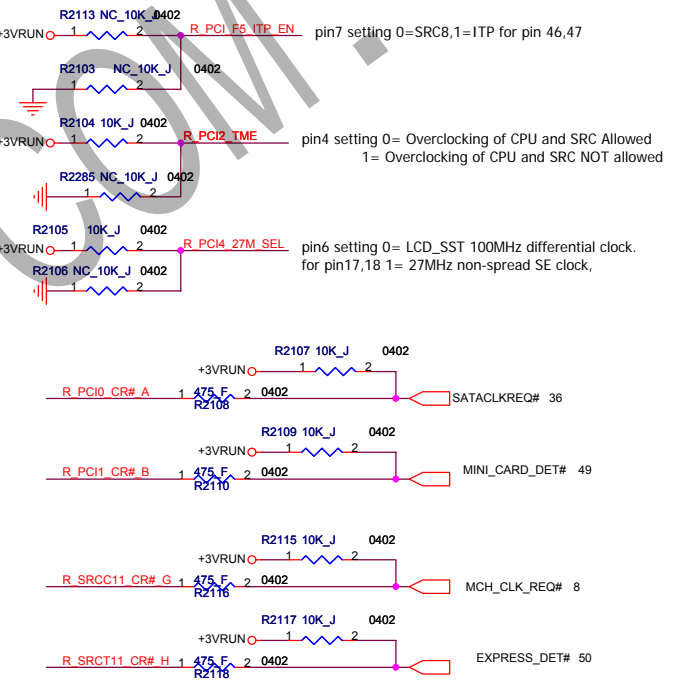
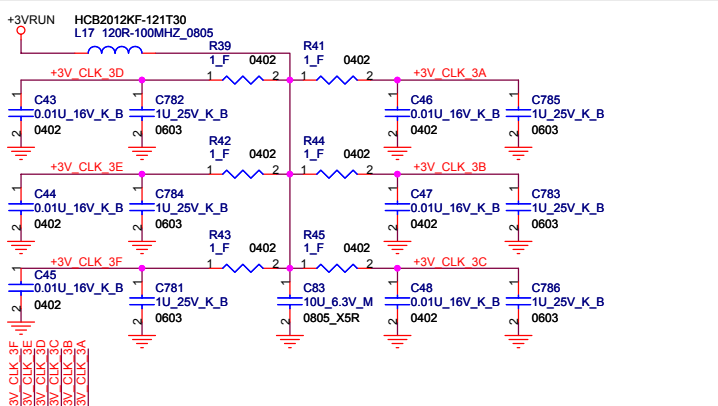
FOXCONN HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division		
Title Index Page		
Size A3	Document Number (M610-1-01) MainBoard (MBX-176) 2007.1.4	Rev 2.0
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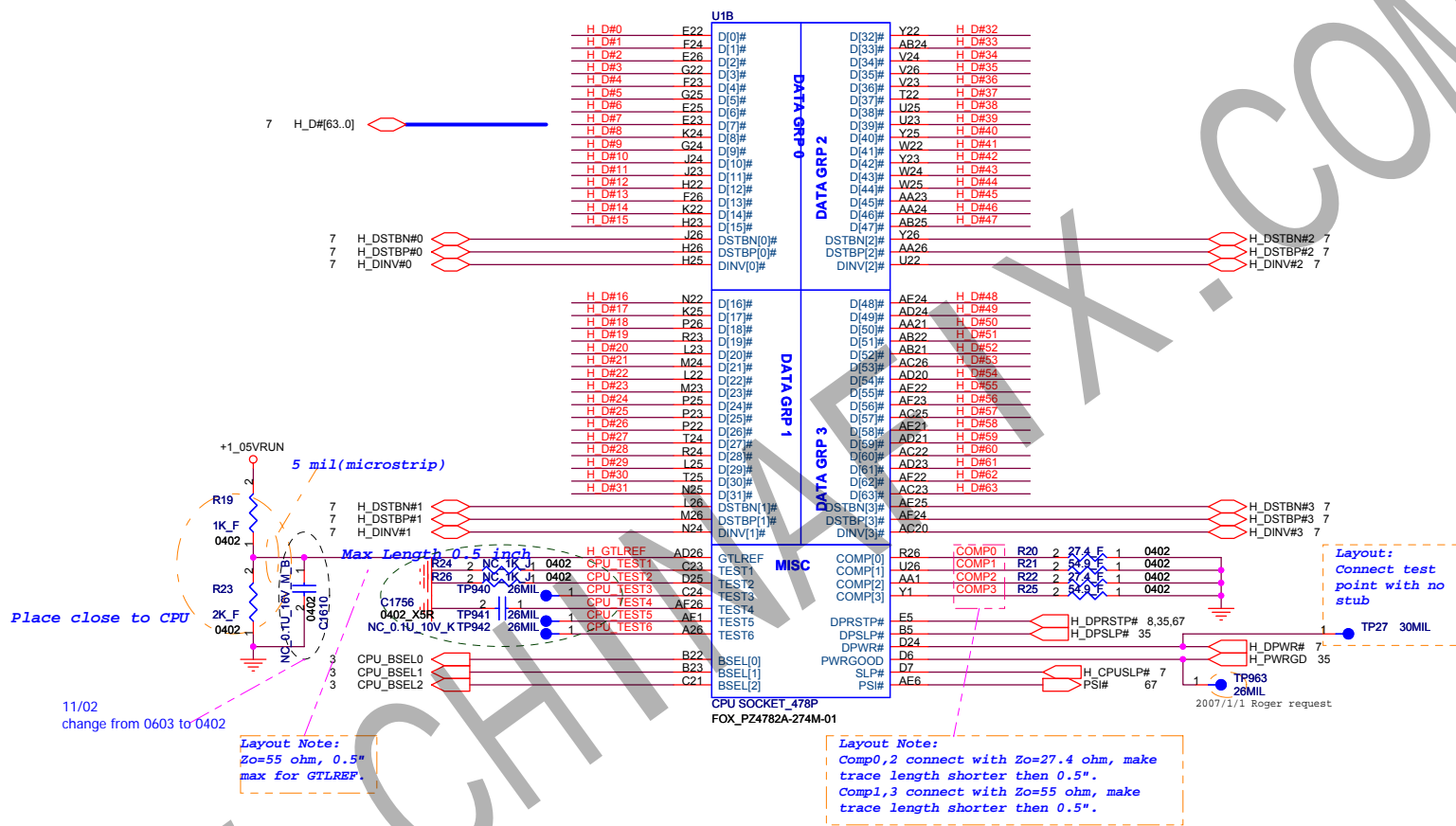
M610(Beagle Santa Rosa)Block Diagram

Red texts:
New modified

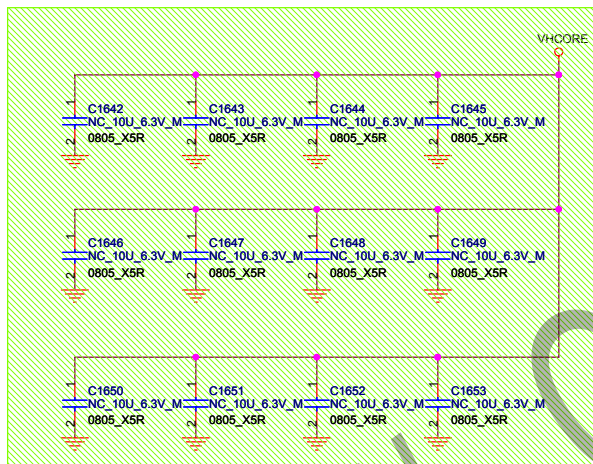
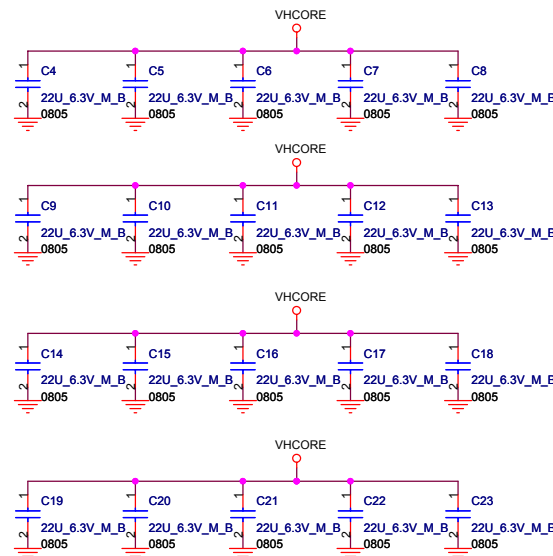


M610 BOM configuration	
unstuff	NC_
NB8P-GS + NB8M-GT	NV_
NB8P-GS	NV8P_
NB8M-GT	NV8M_
NB8M-GT	NV8MM_
NB8M-GT for L Model	NV8ML_
NB8X + Hynix VRAM	NVH_
NB8X + Infineon VRAM	NVI_
NB8X + Infineon & Samsung VRAM	NVIS_
NB8X + Hynix & Infineon VRAM	NVHS_
NB8X + 16Mx32bit VRAM	NV16_
NB8X + 8Mx32bit VRAM	NV8_
*JP Digital TV Tuner SKU unstuff	JDTVNC_
Mini PCI CONN,BT CONN, IR CONN,FeliCa CONN unstuff for L Model	LNC_

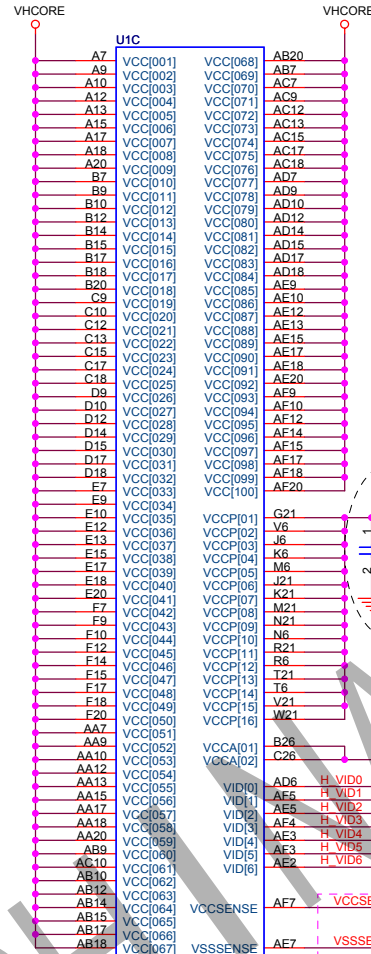




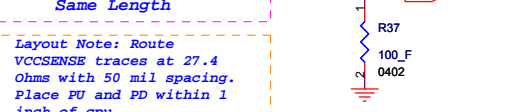
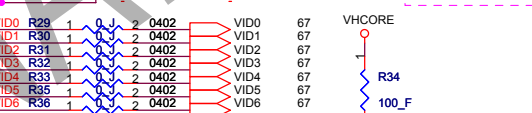
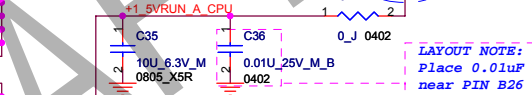
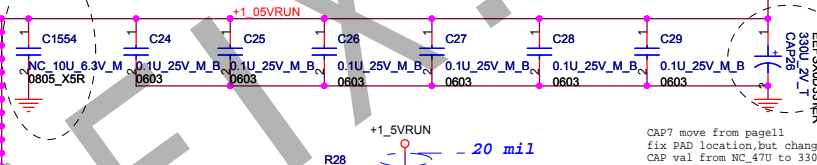
CPU_VCCA---->130mA
CPU_VCCP---->4.5A
CPU_VCC---->44A



Backup 10uF capacitors for 22uF shortage.



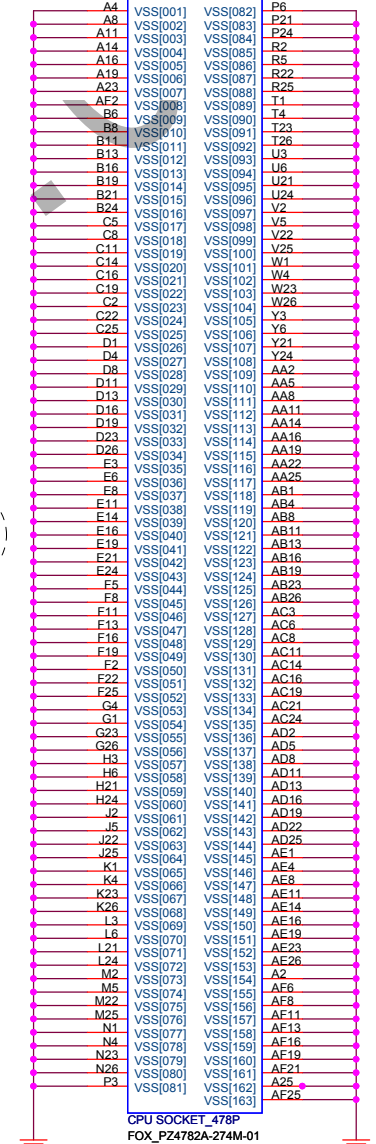
Beagle1=10U
CRB1.301=NO
2hWcR 1.201=NO
MS90 RV1=NO



(Design check 1.301) 2006.9.3
No Stuff 27.4 ± 1% pull-down to GND
near Intel MVP 6 controller for testing purposes.

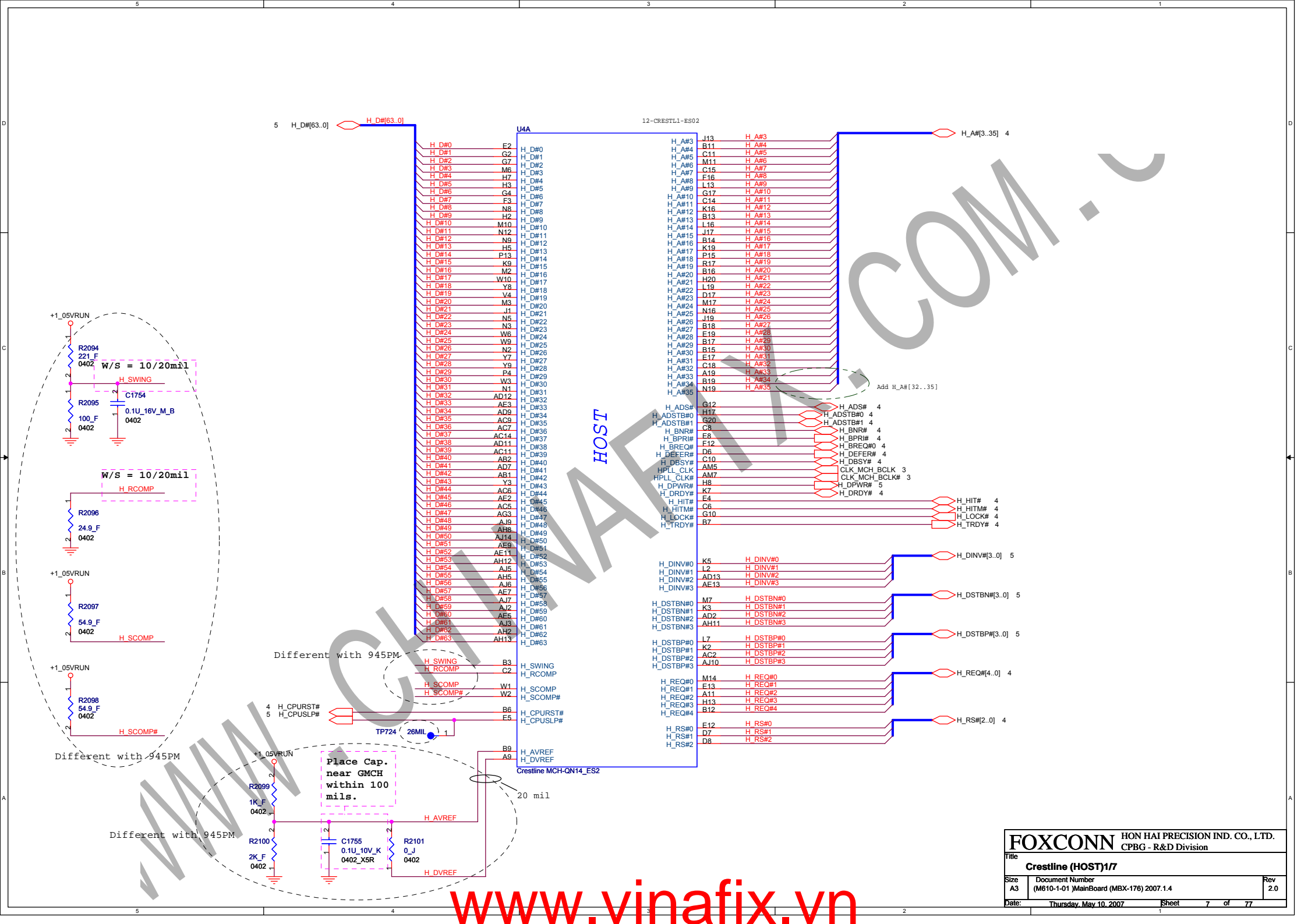
MS90 check

U1D



CPU SOCKET_478P
FOX_PZ4782A-274M-01

FOXCONN		HON HAI PRECISION IND. CO., LTD.	
Title		Merom(POWER/GND)	
Size	Document Number	Rev	
A3	(M610-1-01) MainBoard (MBX-176) 2007.1.4	2.0	
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CPBG - R&D Division		
Title		
Crestline (HOST)1/7		
Size	Document Number	Rev
A3	(M610-1-01) MainBoard (MBX-176) 2007.1.4	2.0
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CFG[2:0]
010 = FSB 800 MHz
011 = FSB 667 MHz

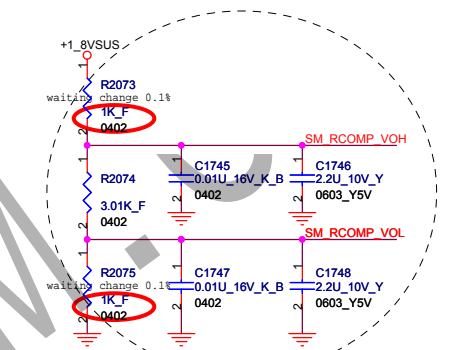
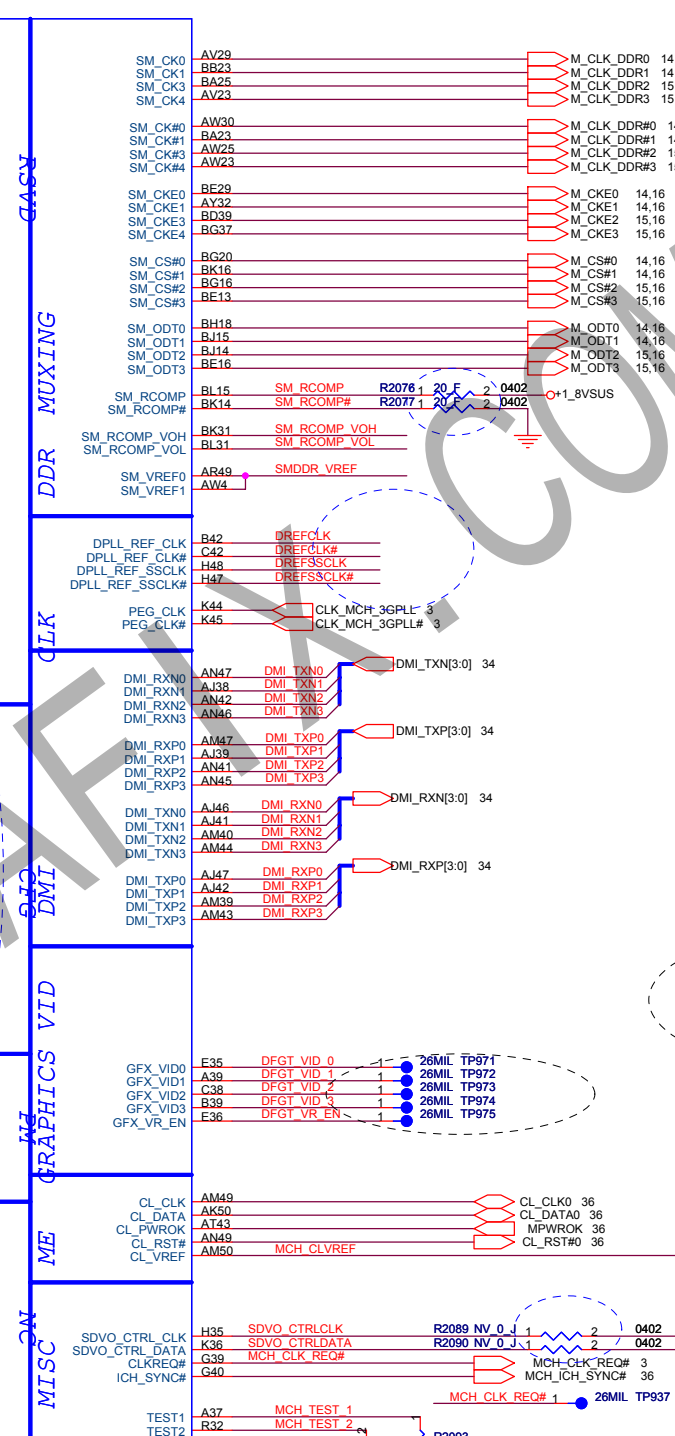
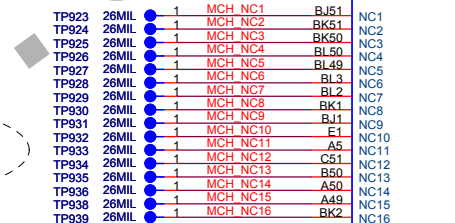
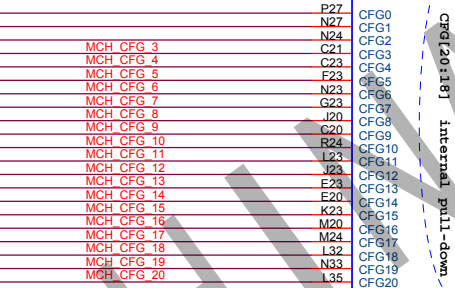
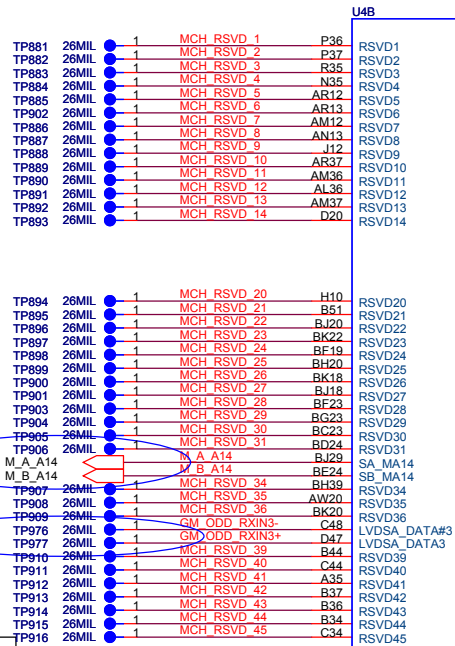
MCH_CFG_9
(PCIE
Graphics
Lane)
Low = Reverse Lane
operation
High = Normal
operation

For layout convenience

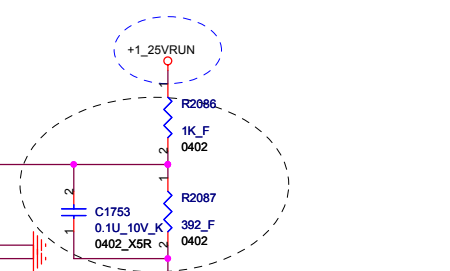
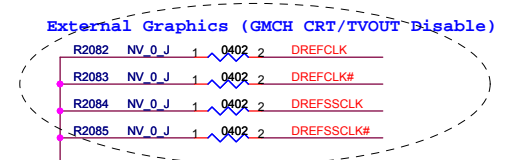
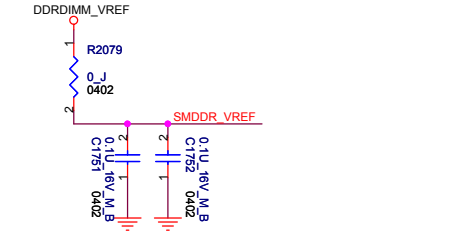
Wait to confirm with Page 13 / CRB

Design check 1.201
DDR2 Connect to PM_EXT1TS#0/1 pins
of GMCH, pull up with 10K to Vcc3.3

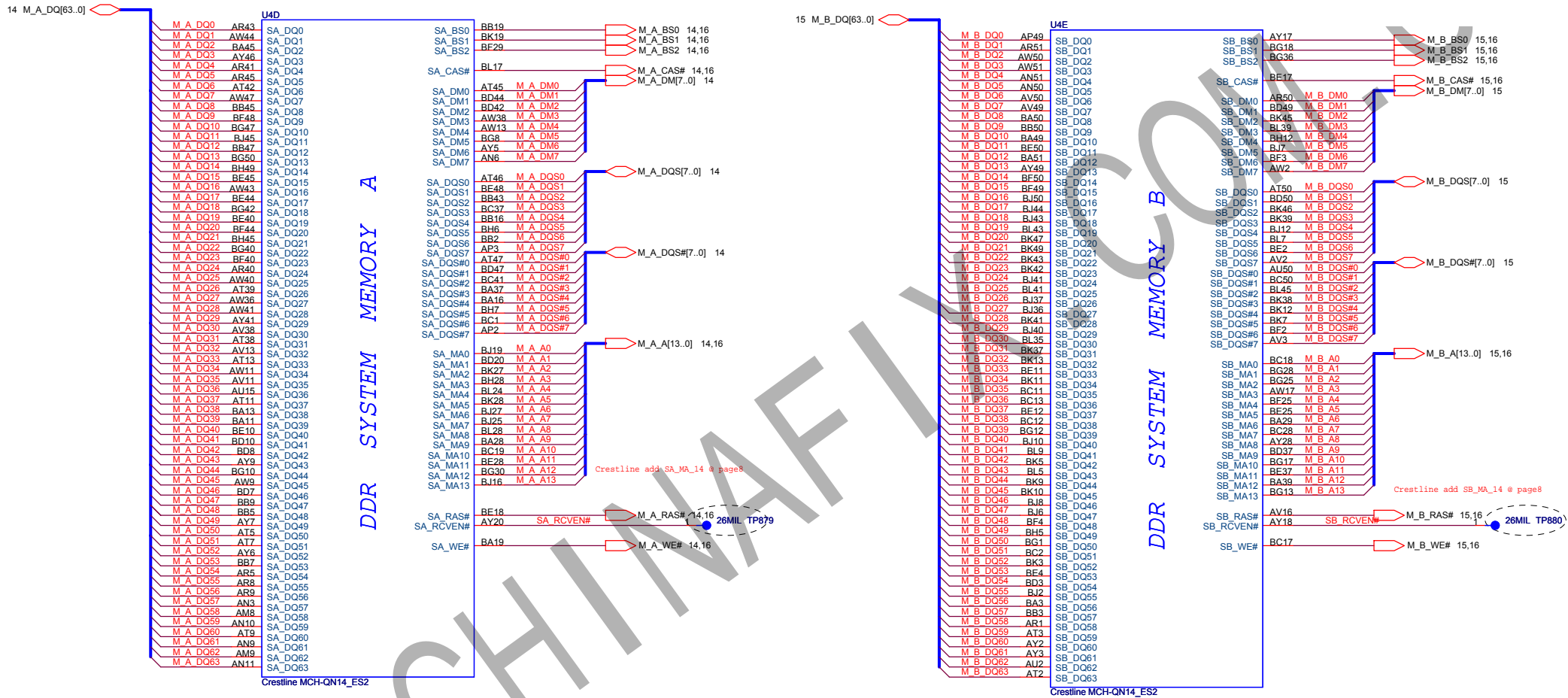
Form (U8)thermal sanser & (EC) 0402

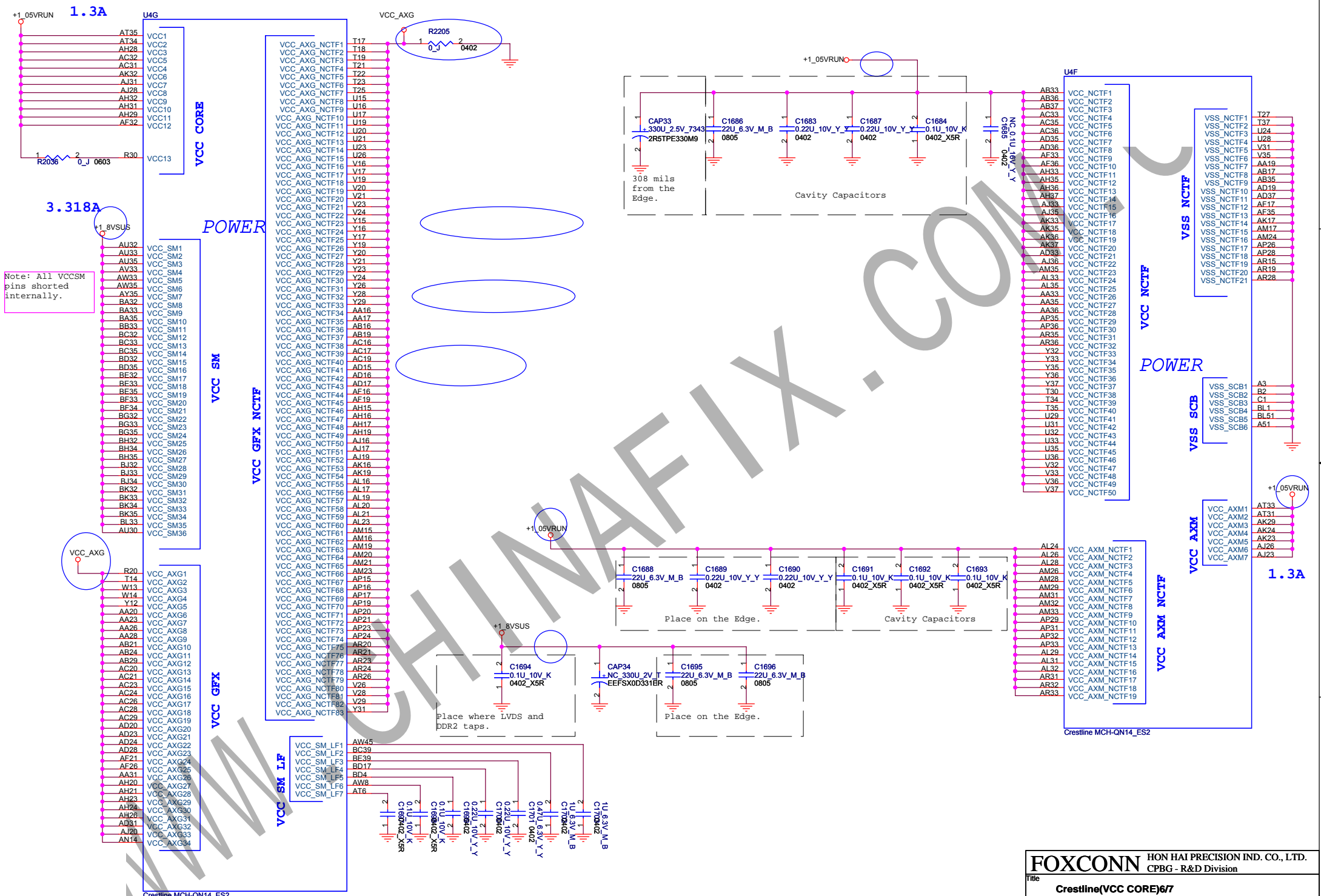


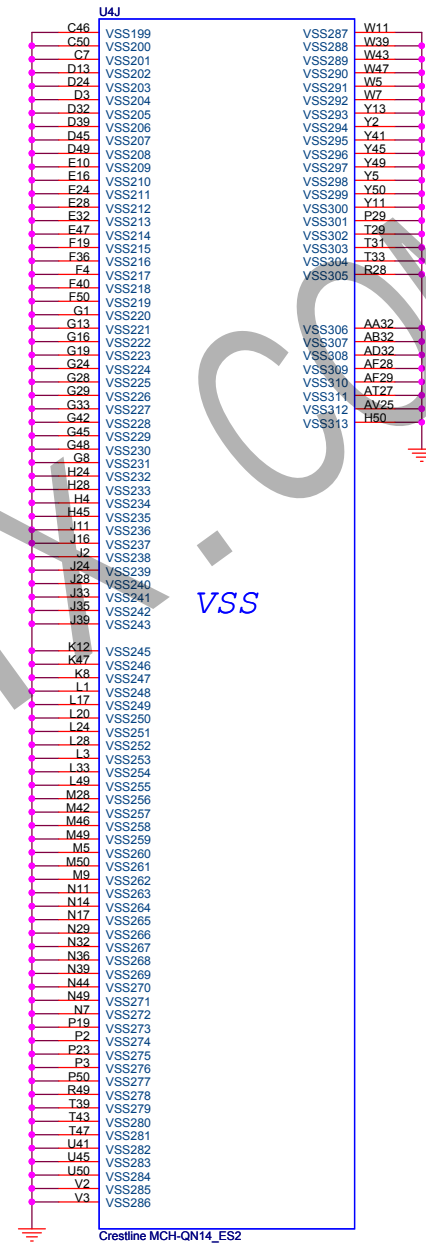
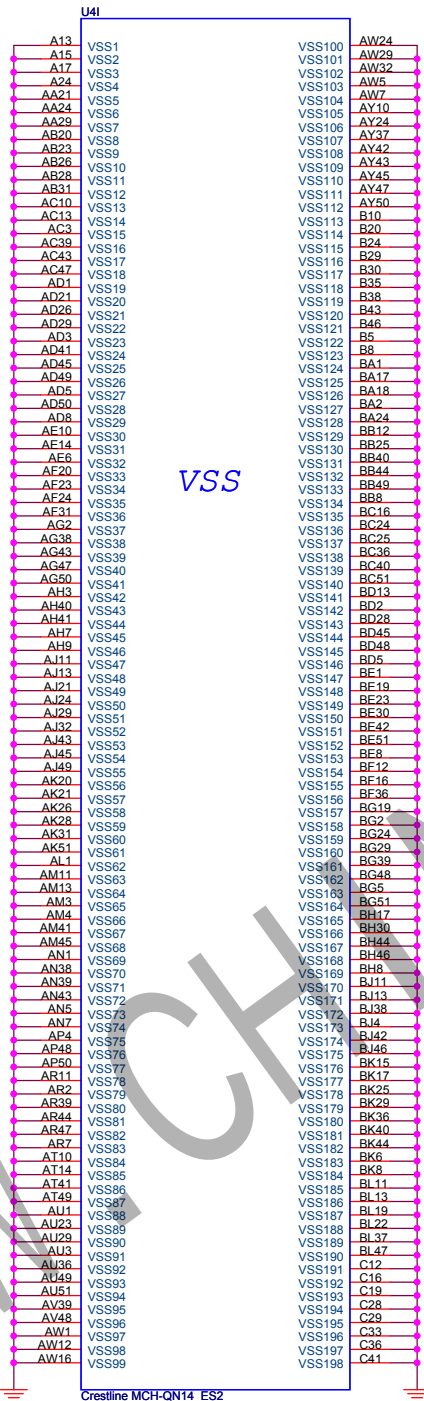
Note: If the voltage regulator for the system memory interface already supplies a VREF output and meets the voltage tolerance and current requirements for these pins, then a voltage divider would not be needed.

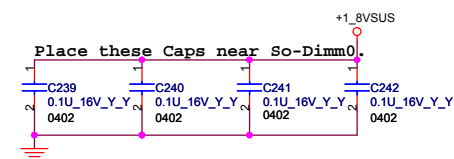
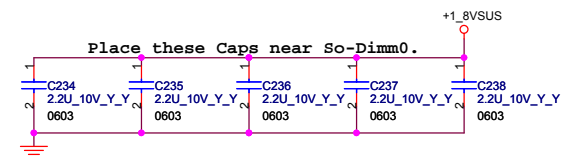
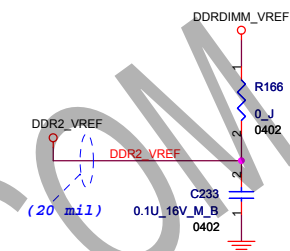
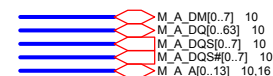


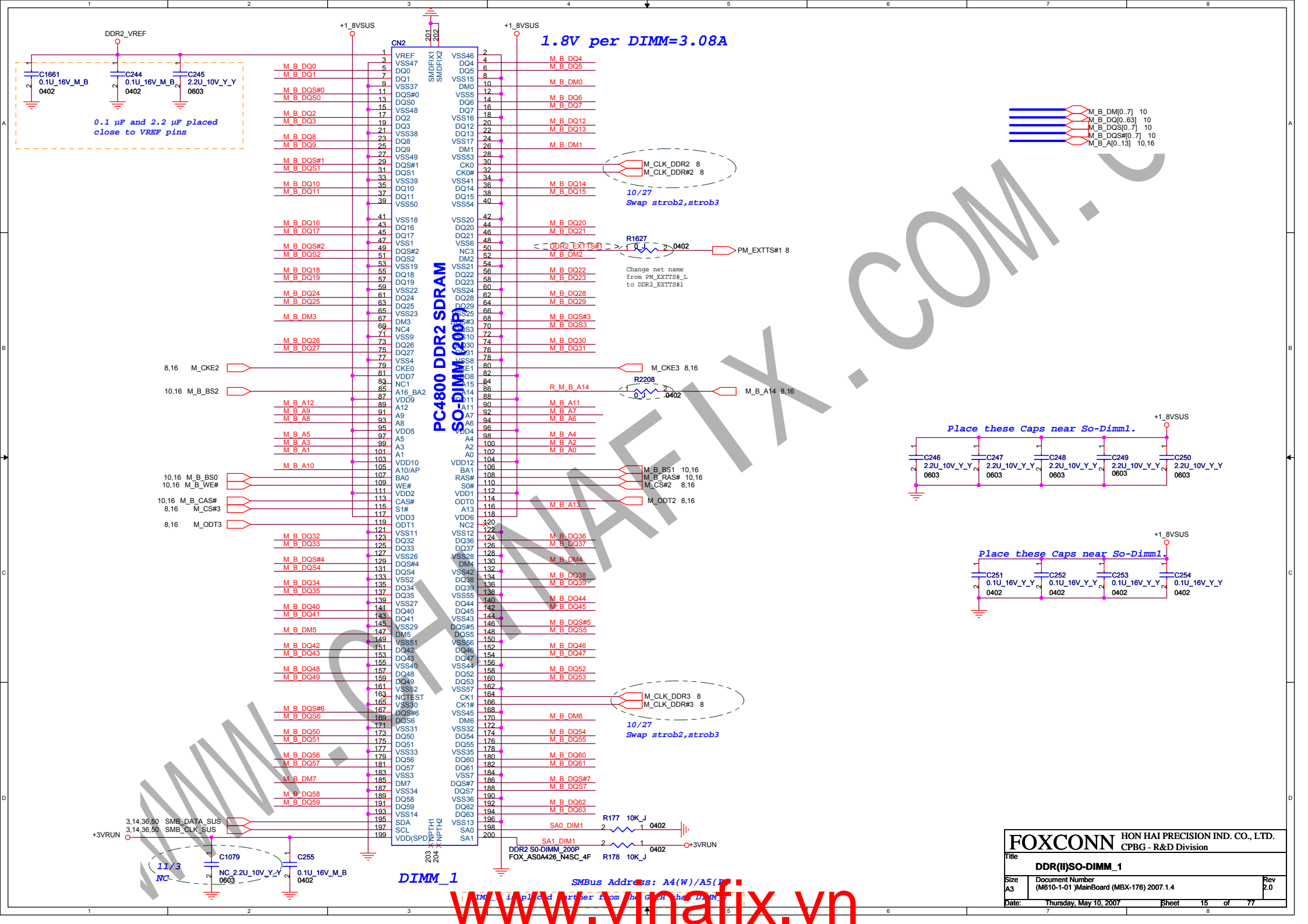
FOXCONN HON HAI PRECISION IND. CO., LTD.		
CPBG - R&D Division		
Title: Crestline (DMI)2/7		
Size: A3	Document Number: (M610-1-01) Mainboard (MBX-176) 2007.1.4	Rev: 2.0
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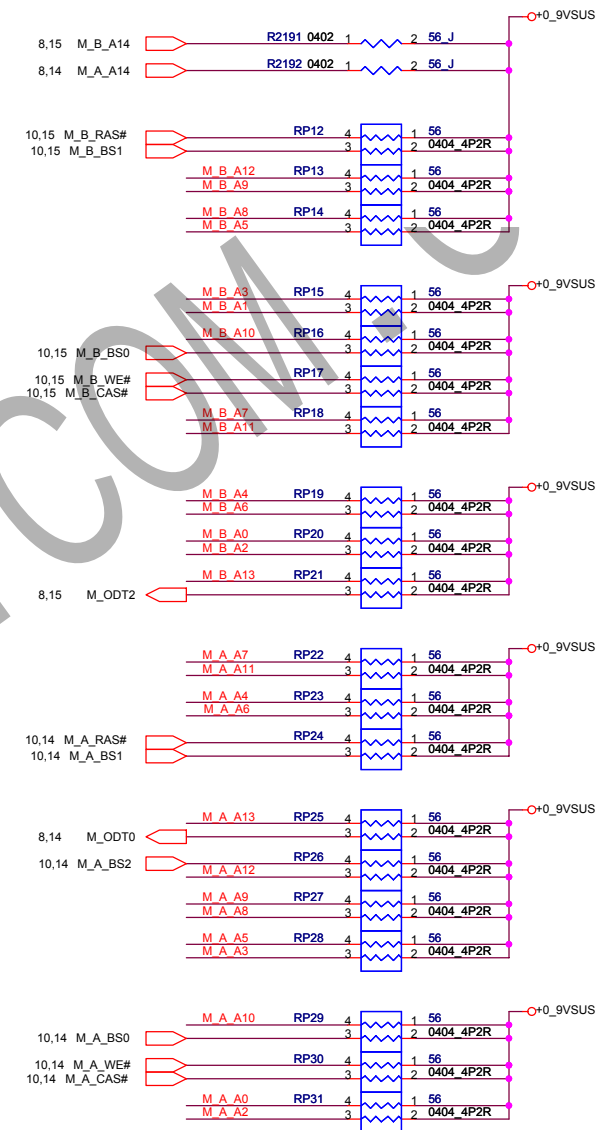
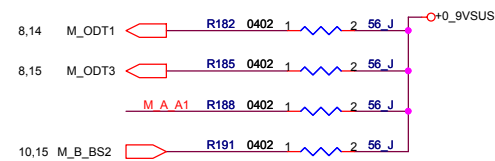
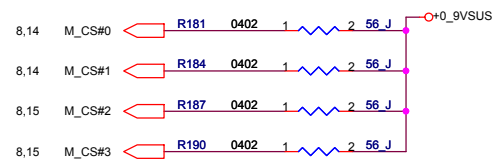
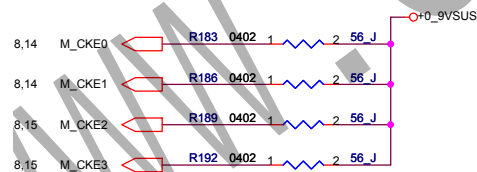
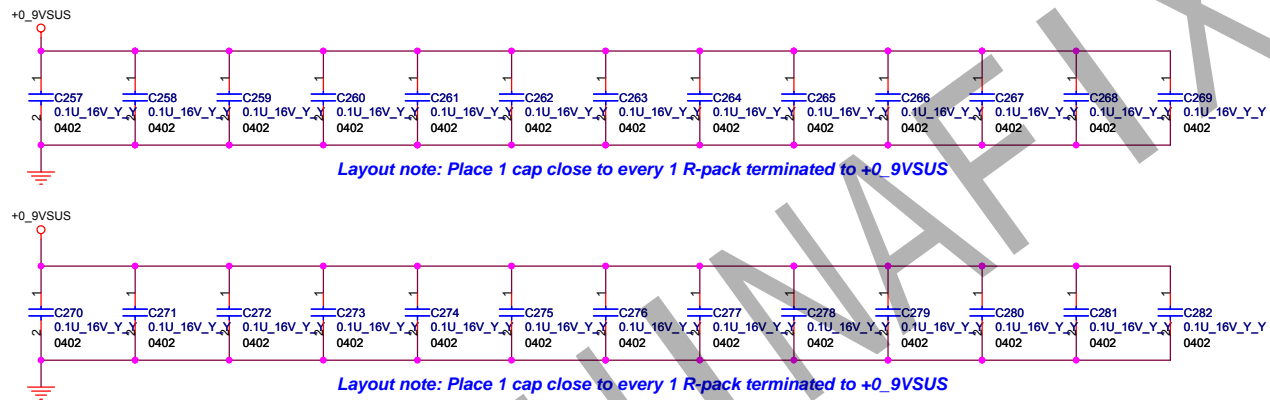














NB8X Strap for GDDR3-136ball

0001 16Mx32Infineon
0010 16Mx32Hynix
0011 16Mx32Samsung
0101 8Mx32Infineon
0110 8Mx32Hynix
0111 8Mx32Samsung

SUB_VENDOR
0 (USE SYSTEM BIOS)
1 (USE EXTERNAL ROM)

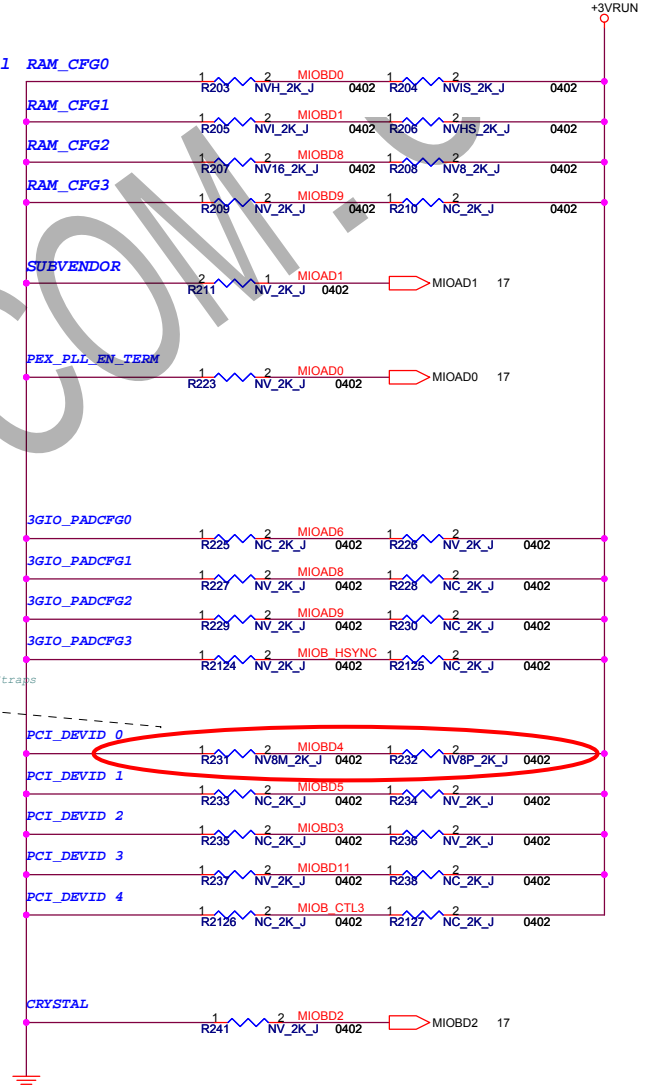
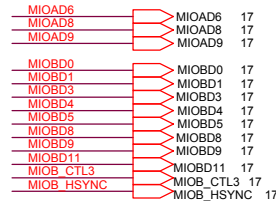
MIOAD0 is used to set
the PCI Express PLL
termination enable.
DEFAULT "0"

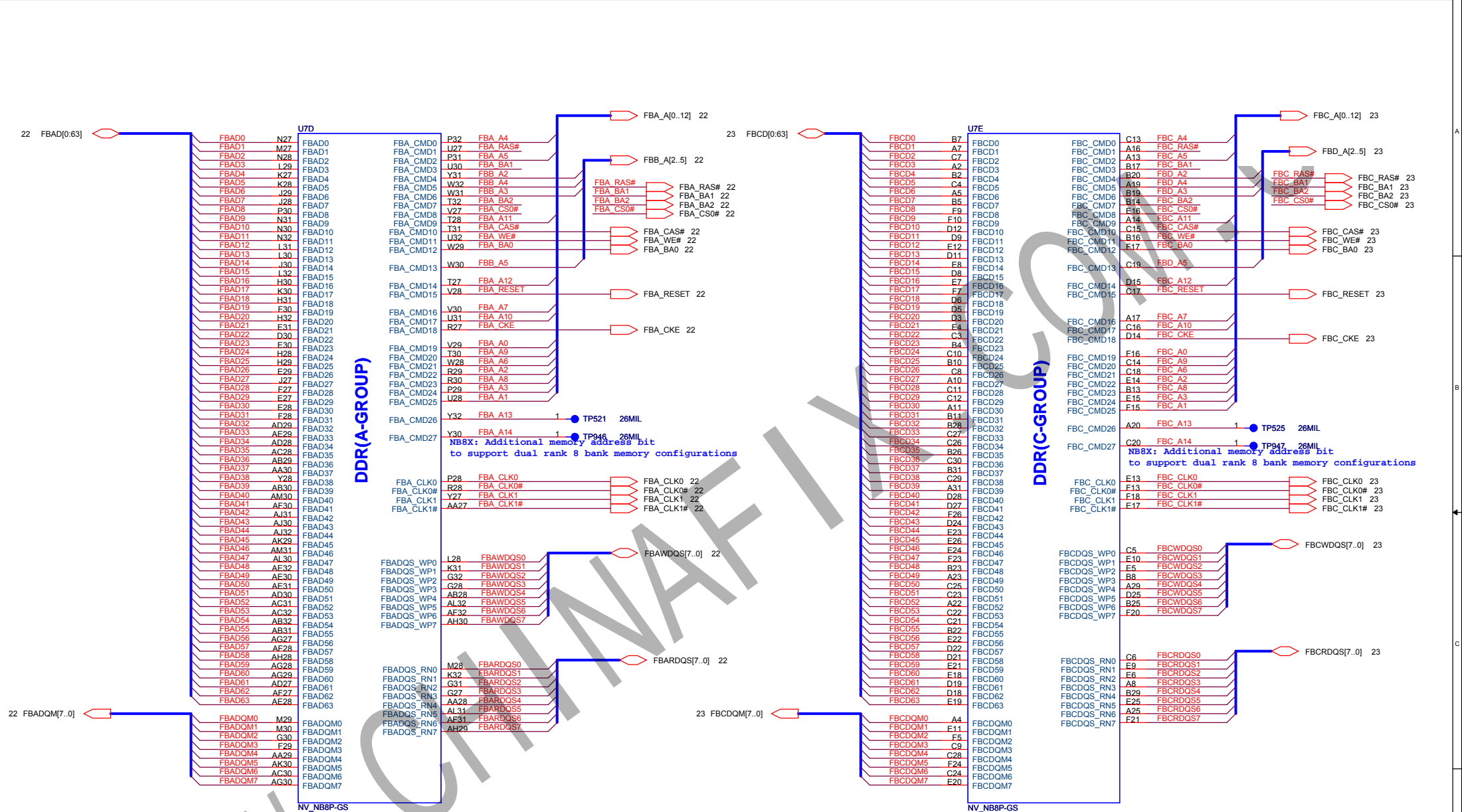
NB8X 3GIO_PADCFG[3:0]
0001

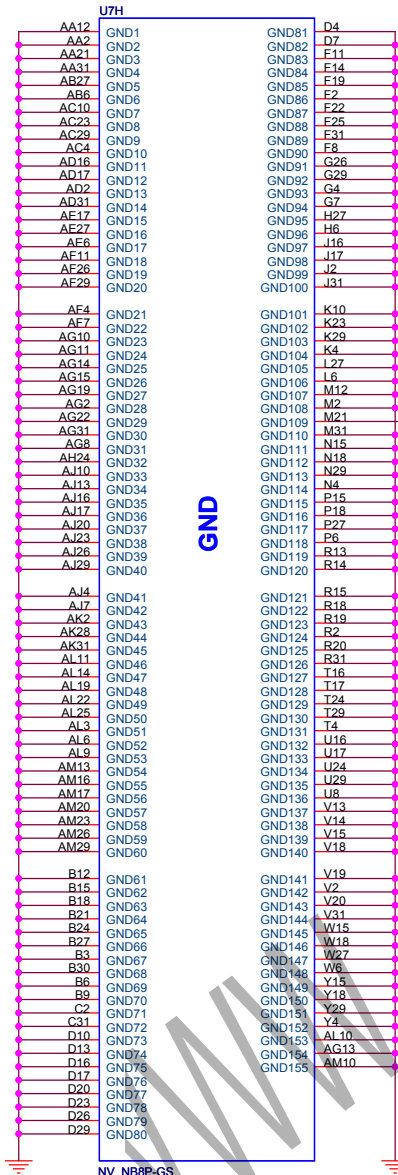
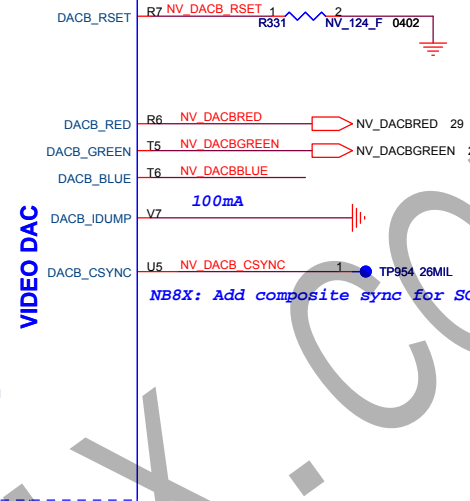
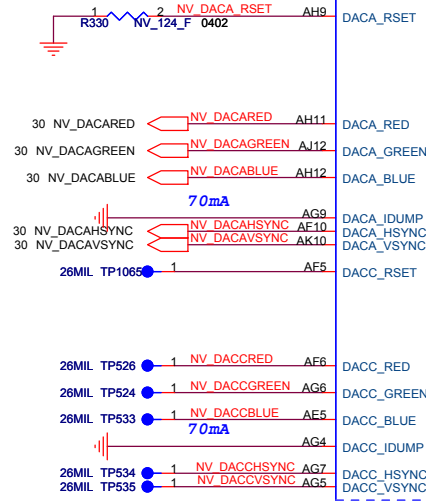
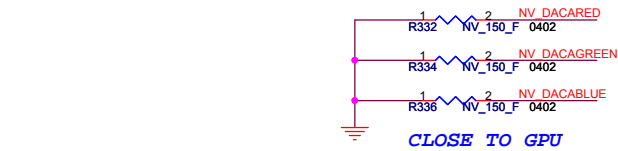
NB8M-GT Device ID setting mismatch between VBIOS and H/W Straps
Change R231 value from NC_ to NV8M_
Change R232 value from NV_ to NV8P_

NB8X PCI_DEVID[4:0]
NB8P-GS X0111 "X7"
NB8M-GT X0110 "X6"

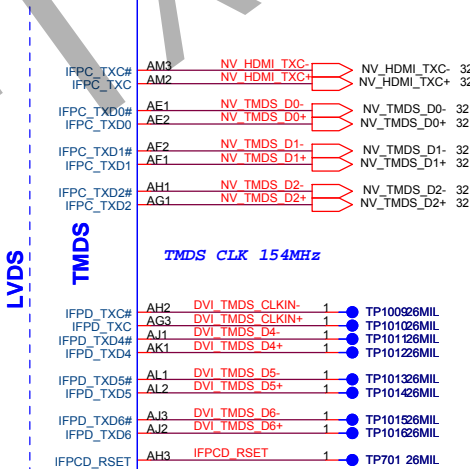
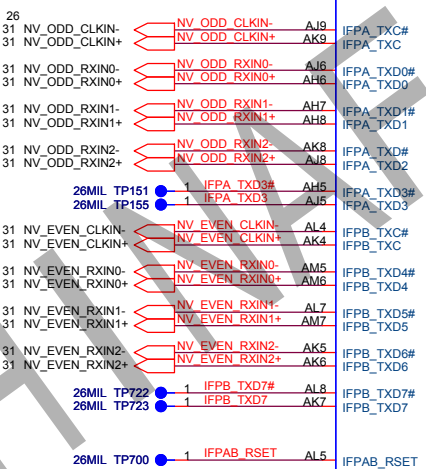
CRYSTAL(NB8X)
0 (27M Hz)
1 (Reserved)







GND SENSE



VIDEO DAC

TMDS

LVDS

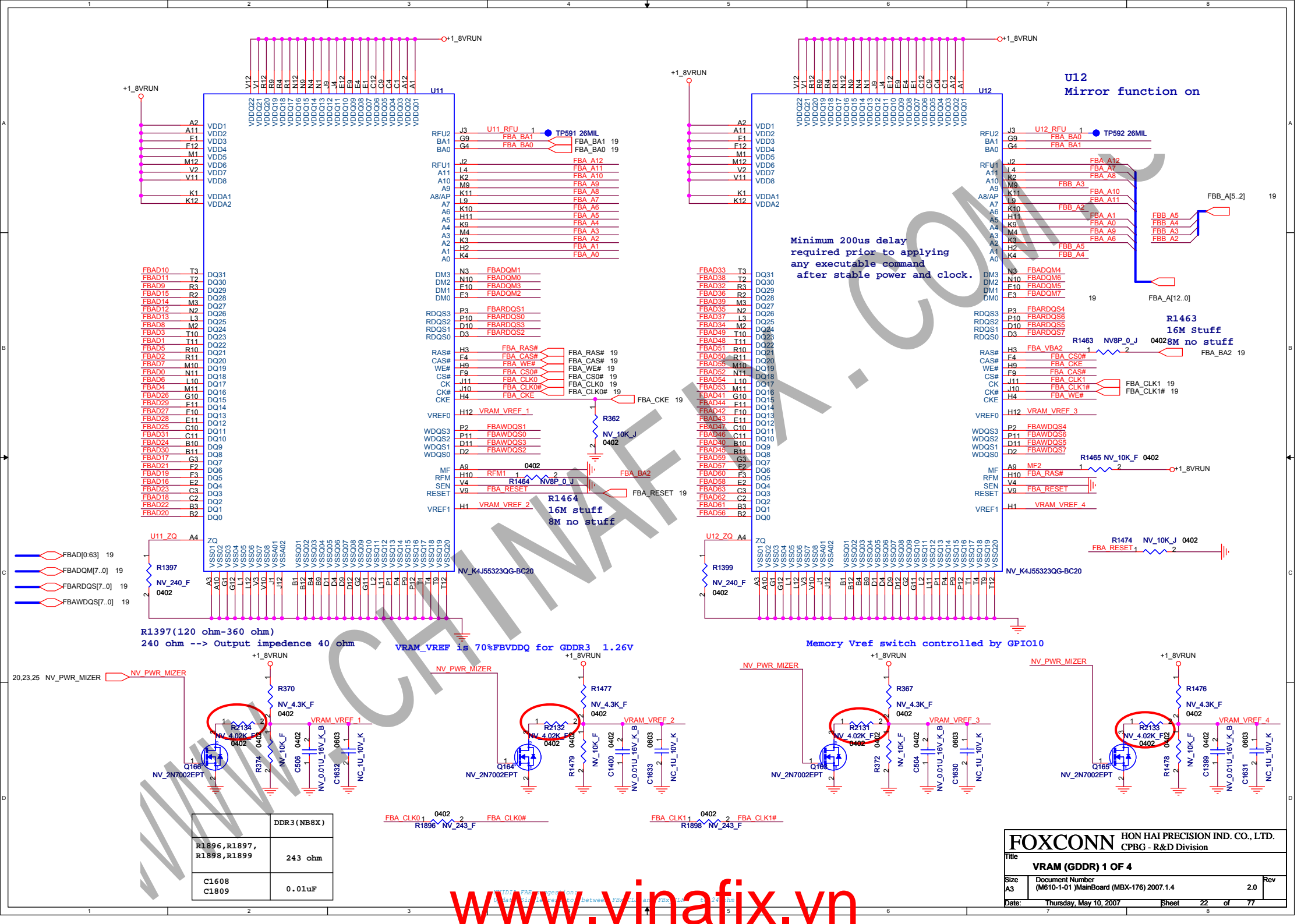
TMDS CLK 154MHz

10/6 Add test point for TMDS channel 2 cause by DVI on docking been cancelled

DACA	VGA-CRT	I2CA
DACA-RED	R	
DACA-GREEN	G	
DACA-BLUE	B	
DACA-HSYNC	HSYNC	
DACA-VSYNC	VSYNC	
	VGA-DDCCLK	SCL
	VGA-DDCDATA	SDA

DACB	S-VIDEO	COMPOSITE	D-CONNECTOR	I2OC
DACB-RED	C		PR	
DACB-GREEN	Y			
DACB-BLUE				
		COMPOSITE		
			LINE1	SCL
			LINE2	SDA
			LINE3	

DACC	DVI-I	I2CB
DACC-RED	R	
DACC-GREEN	G	
DACC-BLUE	B	
DACC-HSYNC	HSYNC	
DACC-VSYNC	VSYNC	
	DVI-DDCCLK	SCL
	DVI-DDCDATA	SDA



U12
Mirror function on

Minimum 200us delay
required prior to applying
any executable command
after stable power and clock.

R1463
16M Stuff
0402 8M no stuff

Memory Vref switch controlled by GPIO10

DDR3 (NB8X)	
R1896, R1897, R1898, R1899	243 ohm
C1608 C1809	0.01uF

FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title
VRAM (GDDR) 1 OF 4

Size A3 Document Number (M610-1-01) MainBoard (MBX-176) 2007.1.4 2.0 Rev

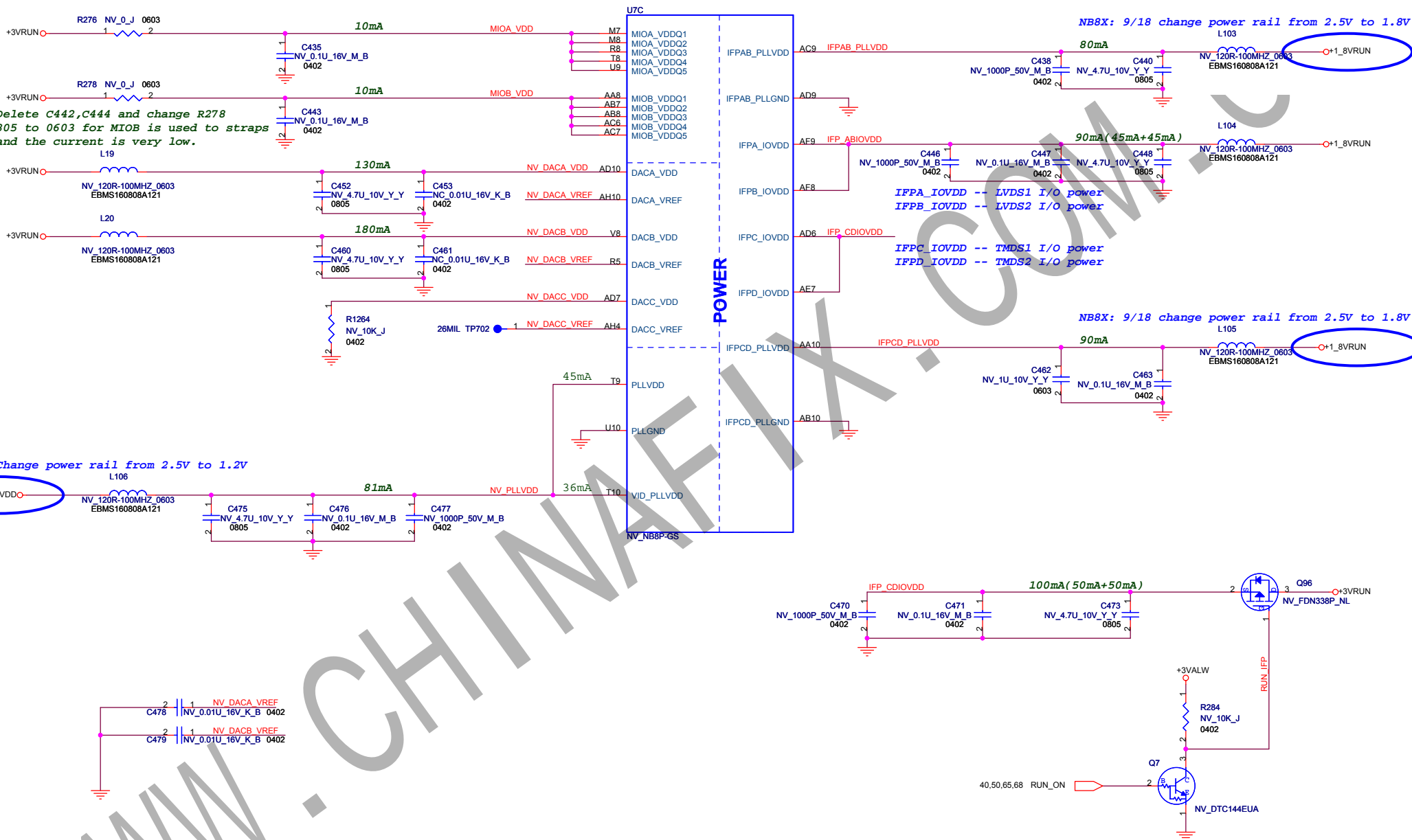
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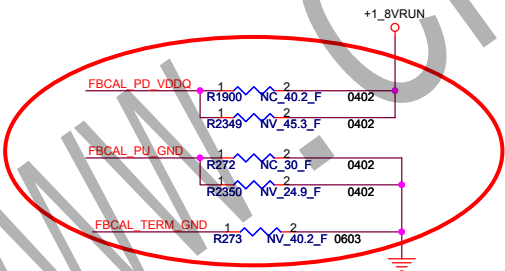
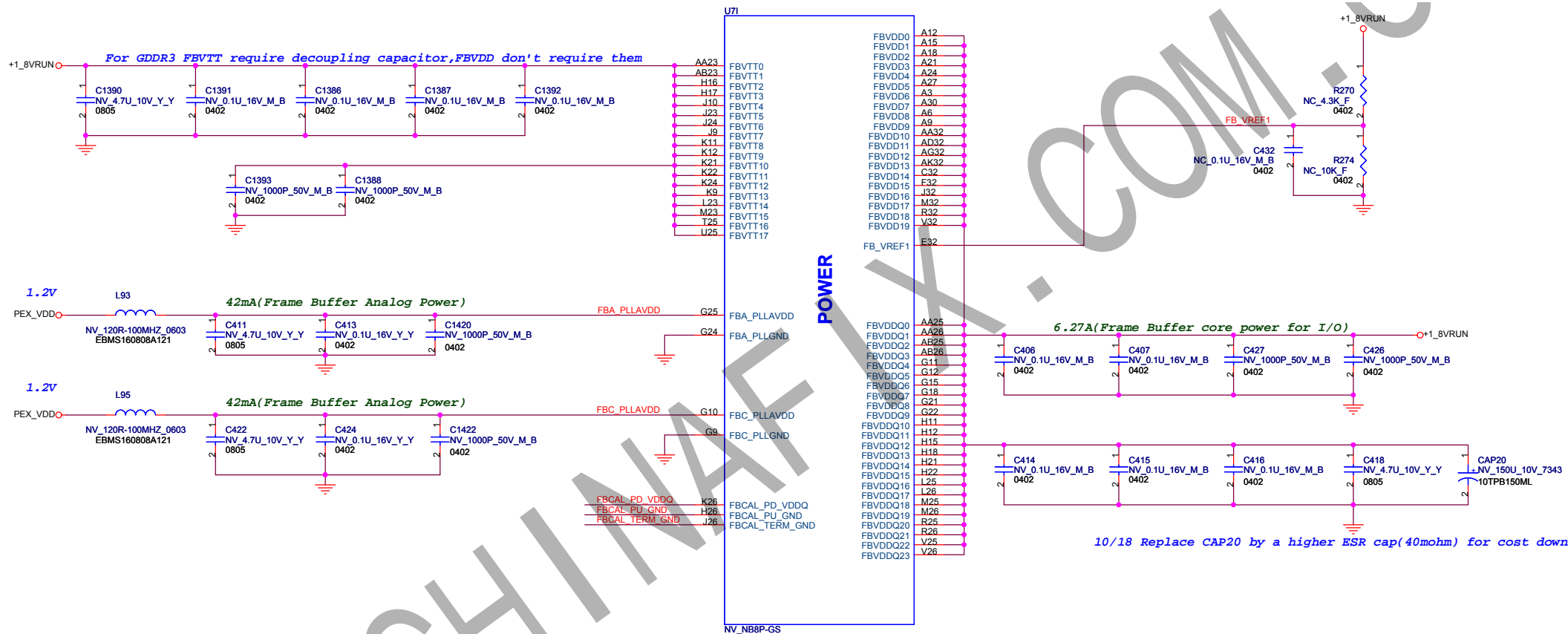
10/17 Delete C442,C444 and change R278 from 0805 to 0603 for MIOB is used to straps input and the current is very low.

NB8X: Change power rail from 2.5V to 1.2V

NB8X: 9/18 change power rail from 2.5V to 1.8V

NB8X: 9/18 change power rail from 2.5V to 1.8V

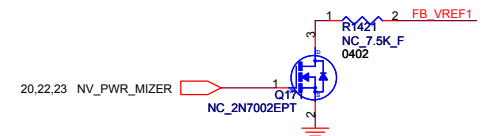




NVIDIA update NB8M VRAM termination value
 FBCAL_PD_VDDQ 45.3 Ω
 FBCAL_PU_GND 24.9 Ω
 FBCAL_TERM_GND 40.2 Ω

NVIDIA 07/1/5 update

	DDR3(NB8M-GT)	DDR3(NB8P-GS)
FBCAL_PD_VDDQ	45.3 ohm	45.3 ohm
FBCAL_PU_GND	24.9 ohm	24.9 ohm
FBCAL_TERM_GND	40.2 ohm	40.2 ohm



Memory Vref switch controlled by GPIO10

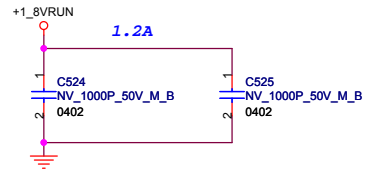
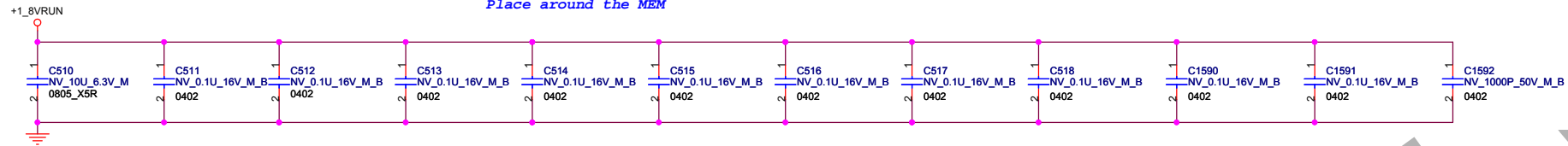
FOXCONN HON HAI PRECISION IND. CO., LTD.
 CPBG - R&D Division

Title VGA (POWER) 5 OF 8			
Size A3	Document Number (M610-1-01) MainBoard (MBX-176) 2007.1.4	2.0	Rev
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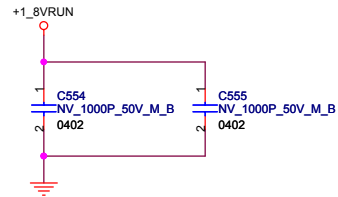
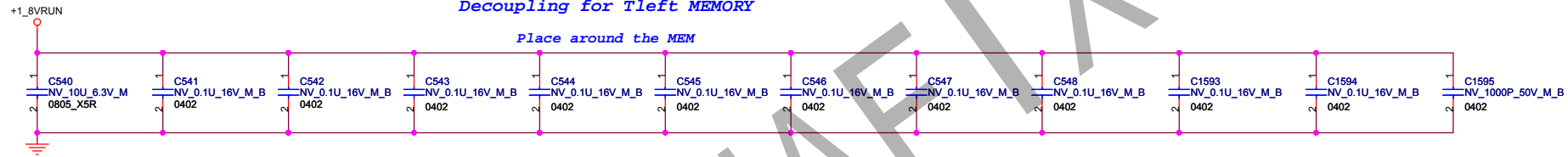
Decoupling for Tright MEMORY

Place around the MEM



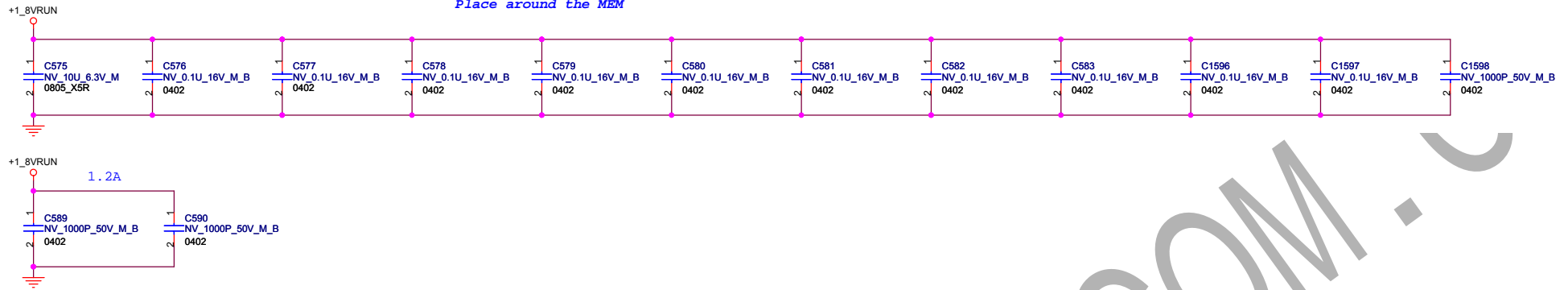
Decoupling for Tleft MEMORY

Place around the MEM



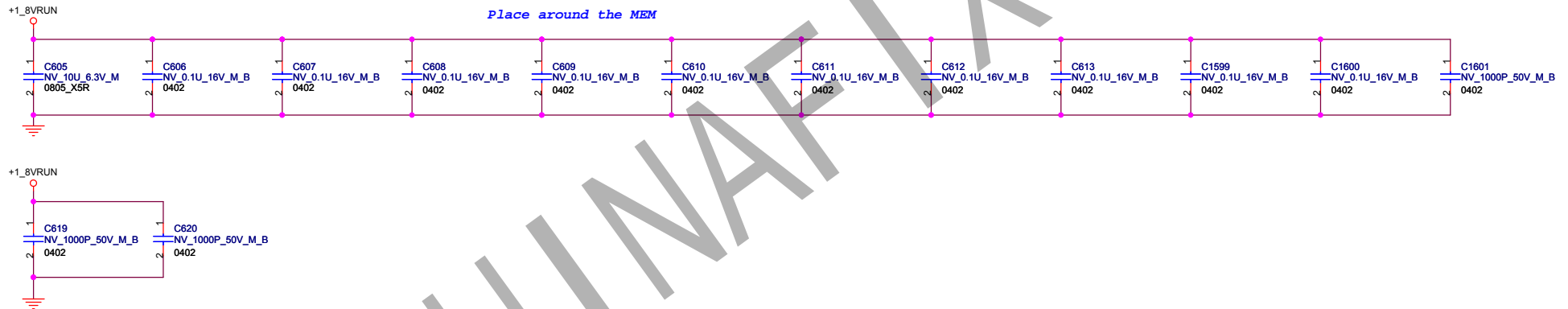
Decoupling for Bright MEMORY

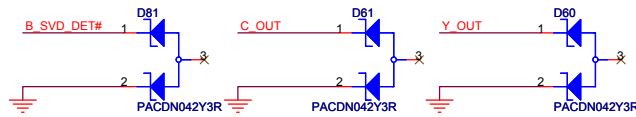
Place around the MEM



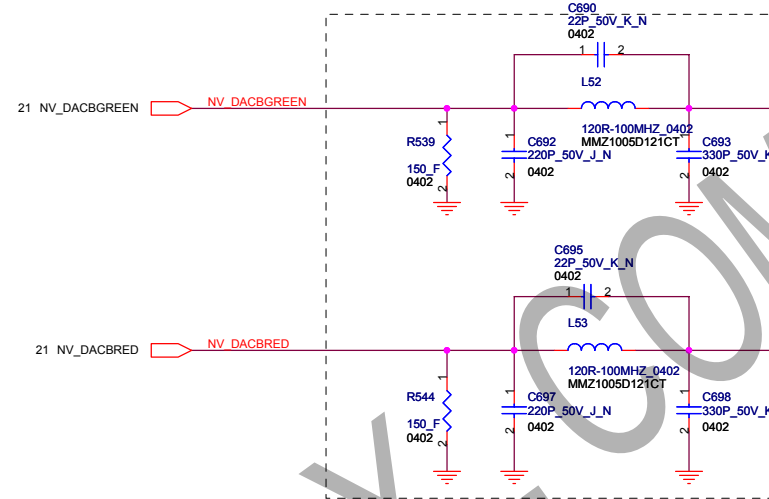
Decoupling for Bleft MEMORY

Place around the MEM

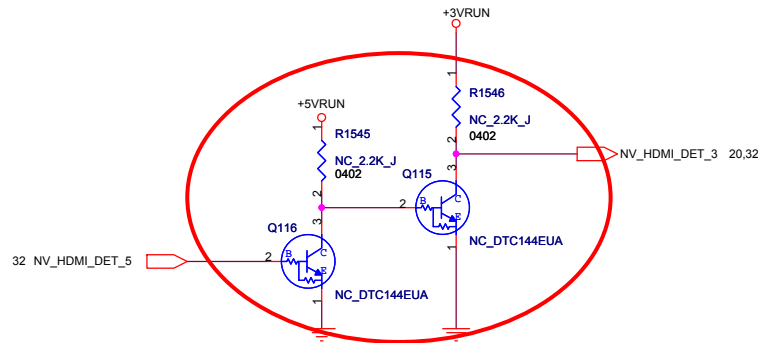
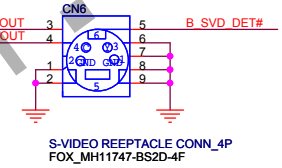




These component close to S-Video connector within 700 mil

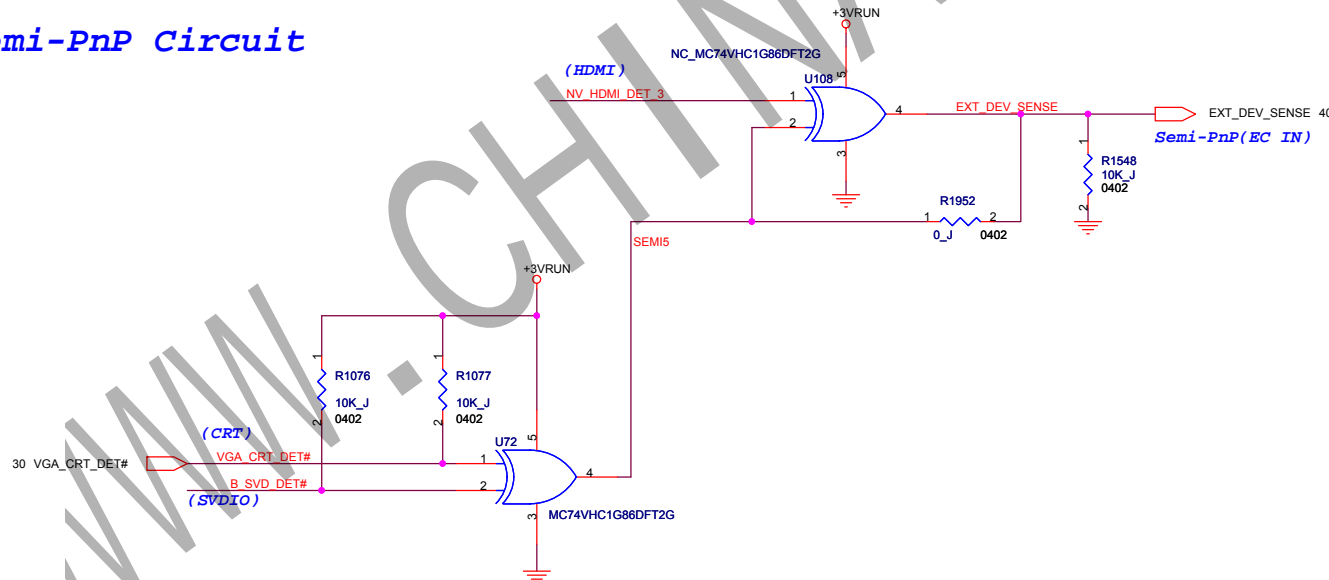


S-VIDEO CONNECTOR

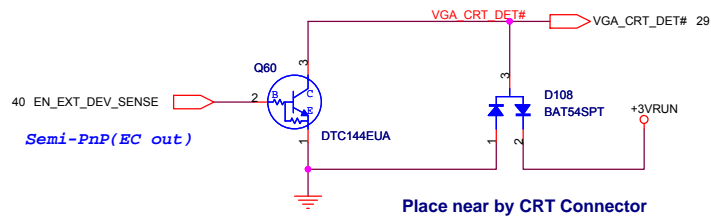


PS101 HPD has level shift function, so backup this circuit
Change Q115, Q116, R1545, R1546 to NC

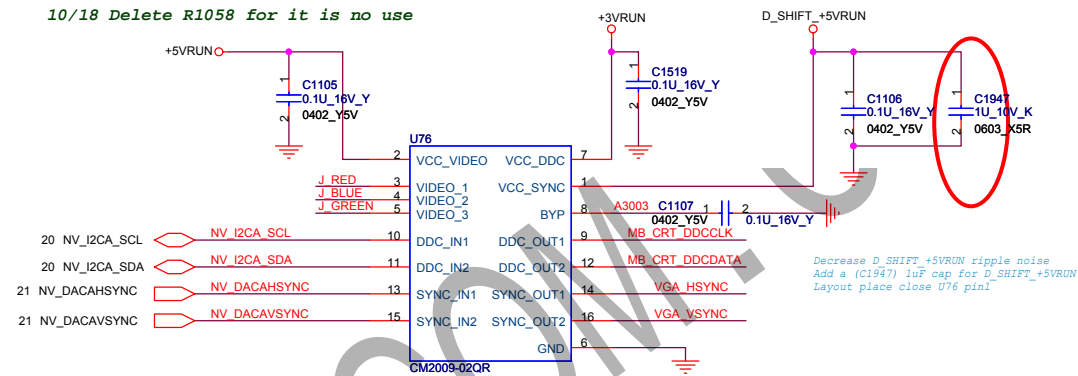
Semi-PnP Circuit



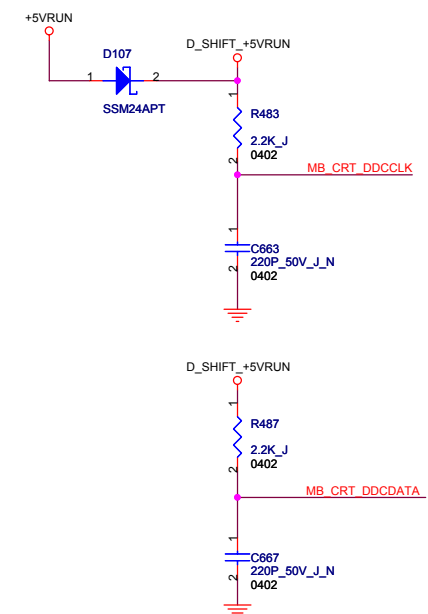
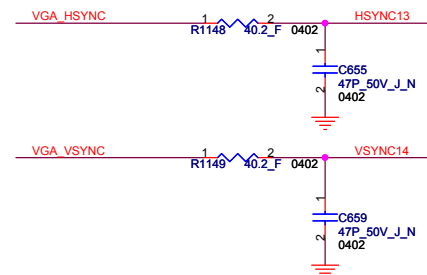
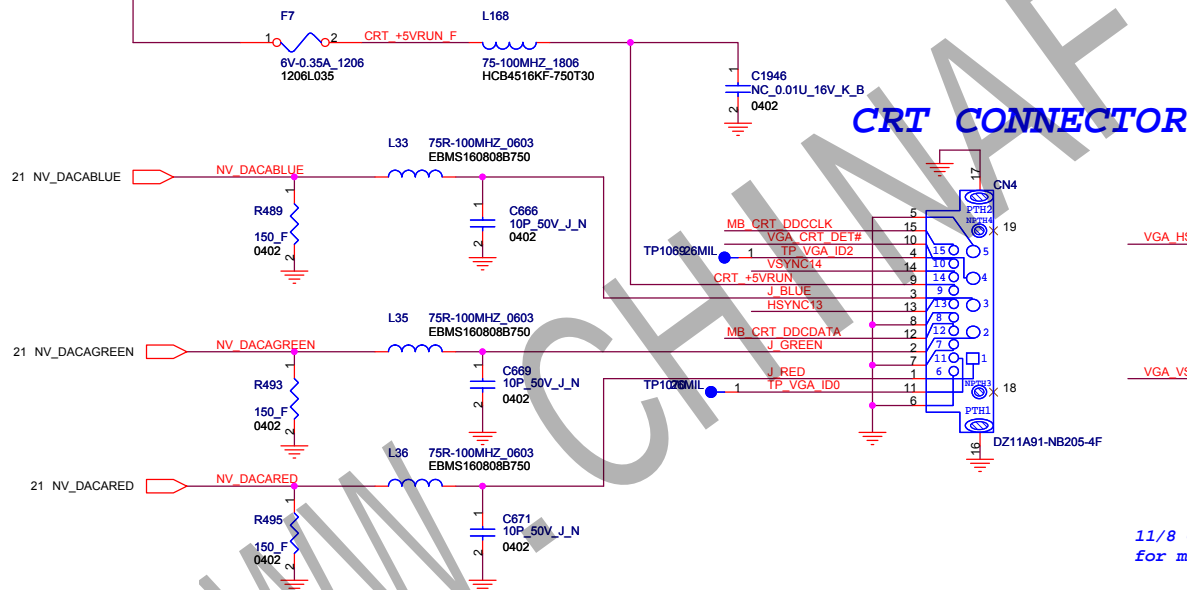
FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title			
S-VIDEO/Semi-PnP			
Size	Document Number		Rev
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10/18 Delete R1058 for it is no use



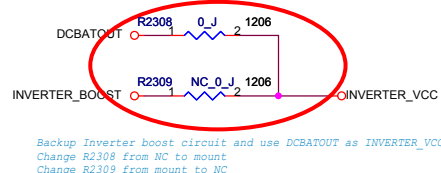
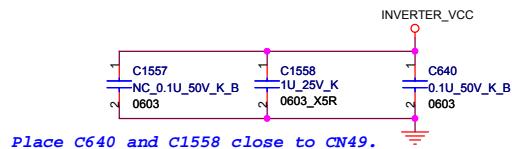
11/9 MOR side suggest to support old CRT, so add F7, L168 and C1946



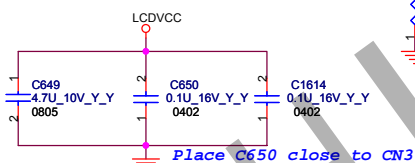
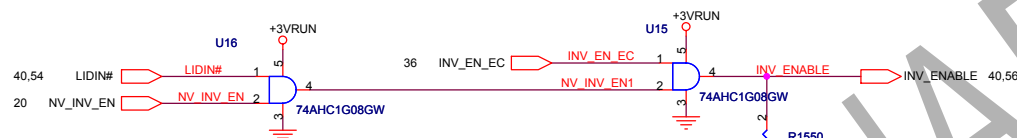
FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title			
CRT			
Size	Document Number		Rev
A3	(M610-1-01)MainBoard (MBX-176) 2007.1.4		2.0
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LVDS CONNECTOR

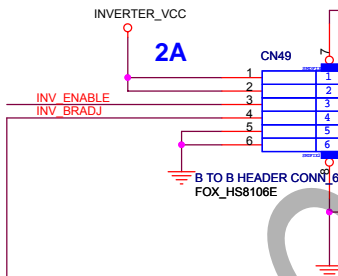
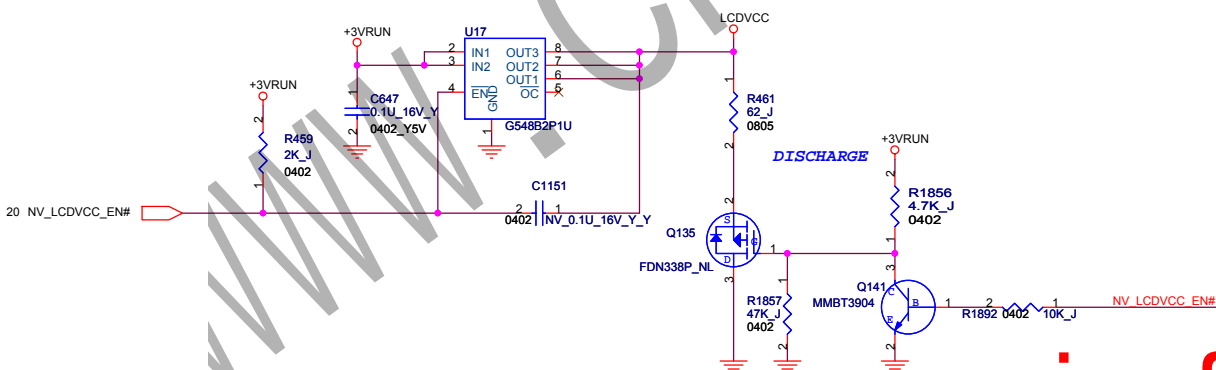
INVERTER CONNECTOR



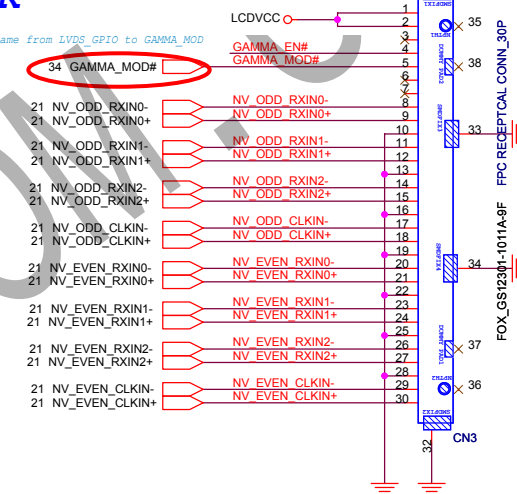
U106,U15,U16 can use ON (MC74VHC1G08DFT2G)
H.H. PN:14-MC74VHC-1G04



Current limit is from 1.1A to 2.1A.



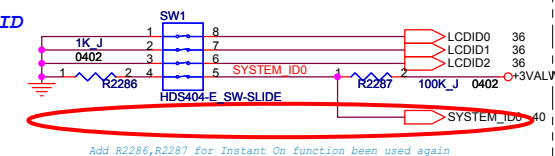
Change net name from LVDS_GPIO to GAMMA_MOD



Use H/W selection to enable GAMMA function.
Change R1937,R1938 from 4.7K to 0ohm

H: GAMMA Disable
L: GAMMA Enable

PANEL ID



Type	WXGA+	WXGA+	WUXGA	WUXGA
Size	17" wide	17" wide	17" wide	17" wide
Vender	LG.PHILIPS	LG.PHILIPS	SHARP	SHARP
Device Name	LPI71WP74-TLA	LPI71WP74-TLA	LQ170M11LA4G	LQ170M11LA4G
Panel ID Check[2..0]	010	001	100	101

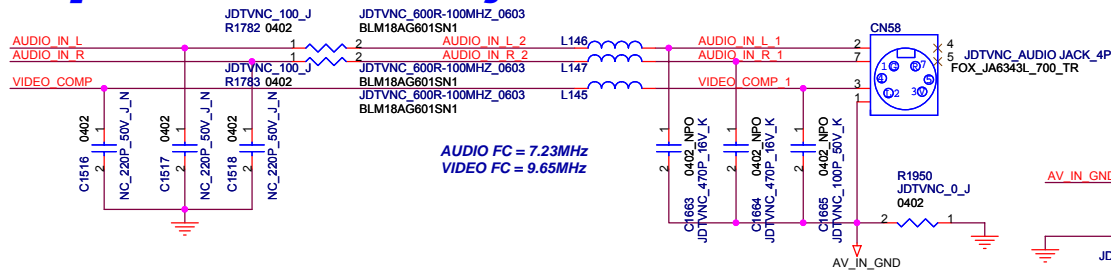
FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

Title
LVDS

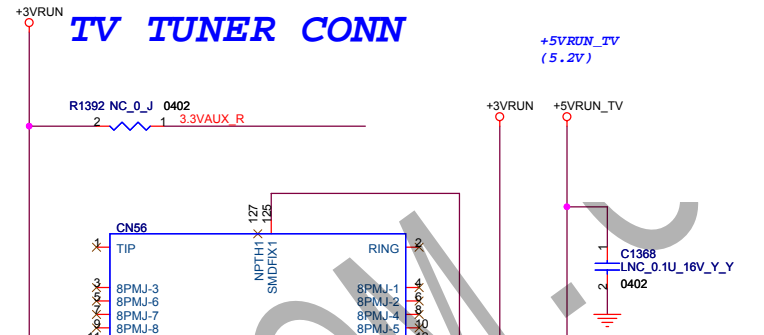
Size A3 Document Number (M610-1-01)MainBoard (MBX-176) 2007.1.4 2.0 Rev

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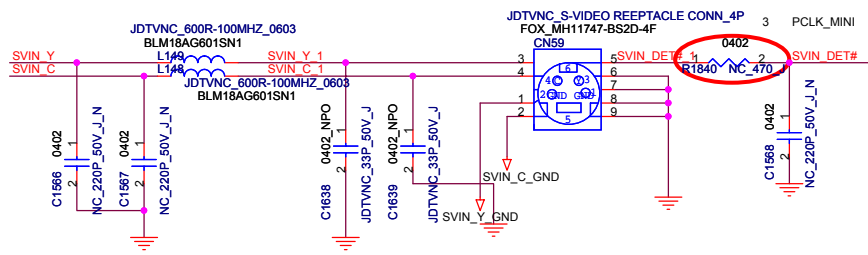
Special mini stereo jack



TV TUNER CONN

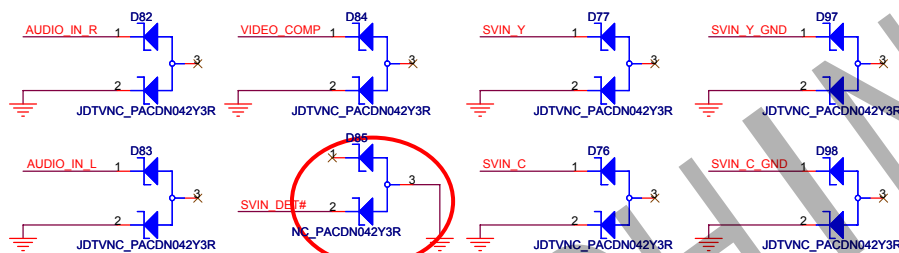


S-VIDEO IN



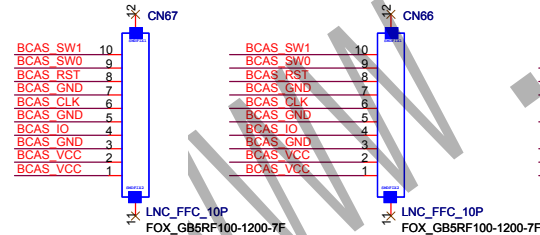
TV-TUNER not support CLKRUN

TV tuner "SVIN_DET#" signal no use.
Change R1840,D85 to NC

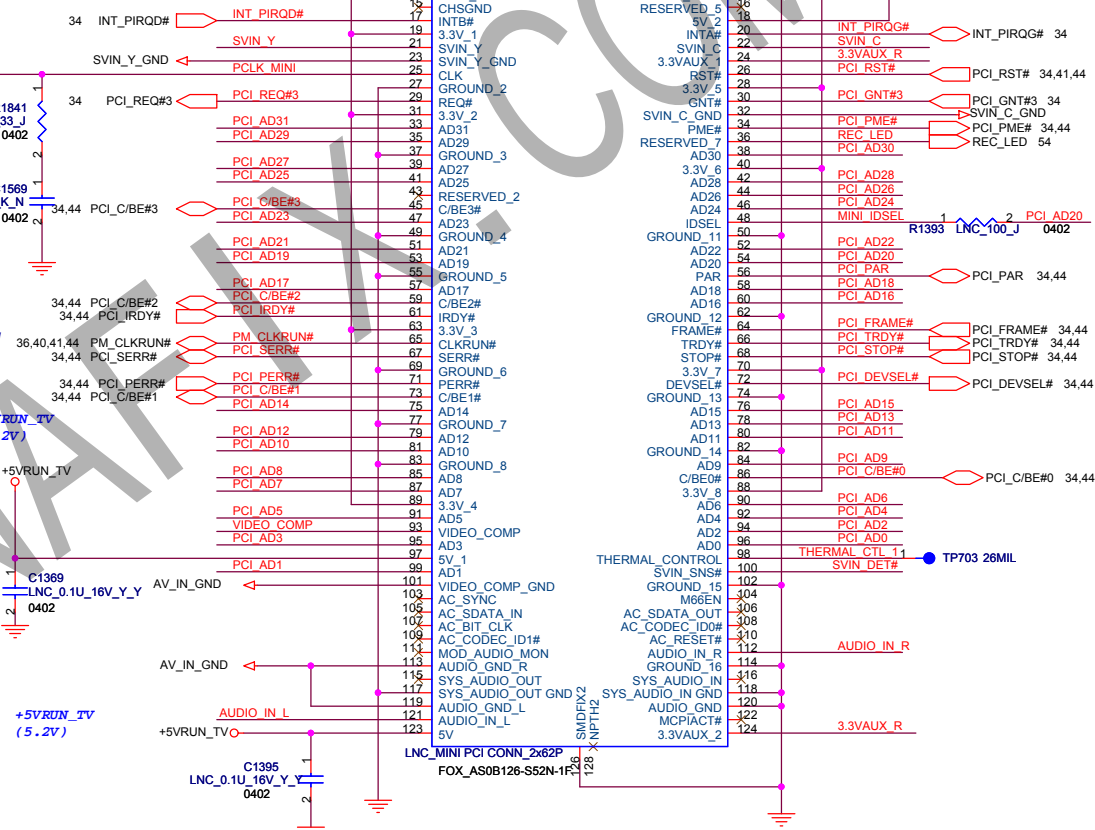
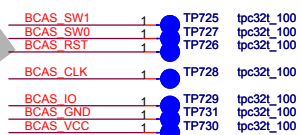


B-CAS connector (Close to TV Tuner)

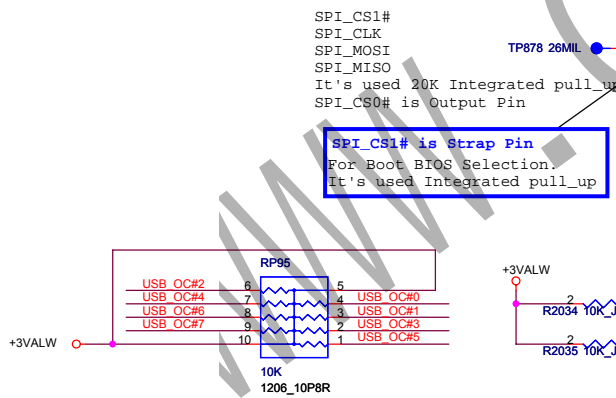
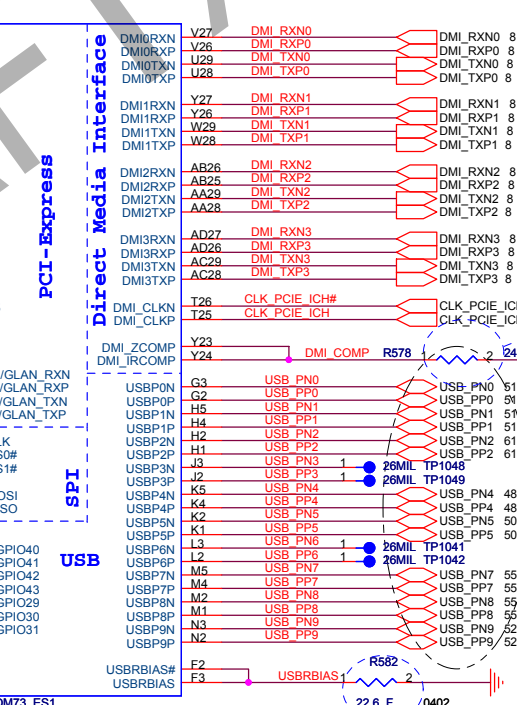
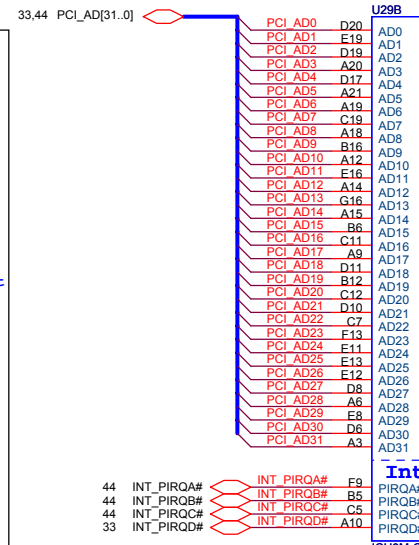
FFC CONNECT TO TV TUNER BOARD (FOR JP DIAGITAL)

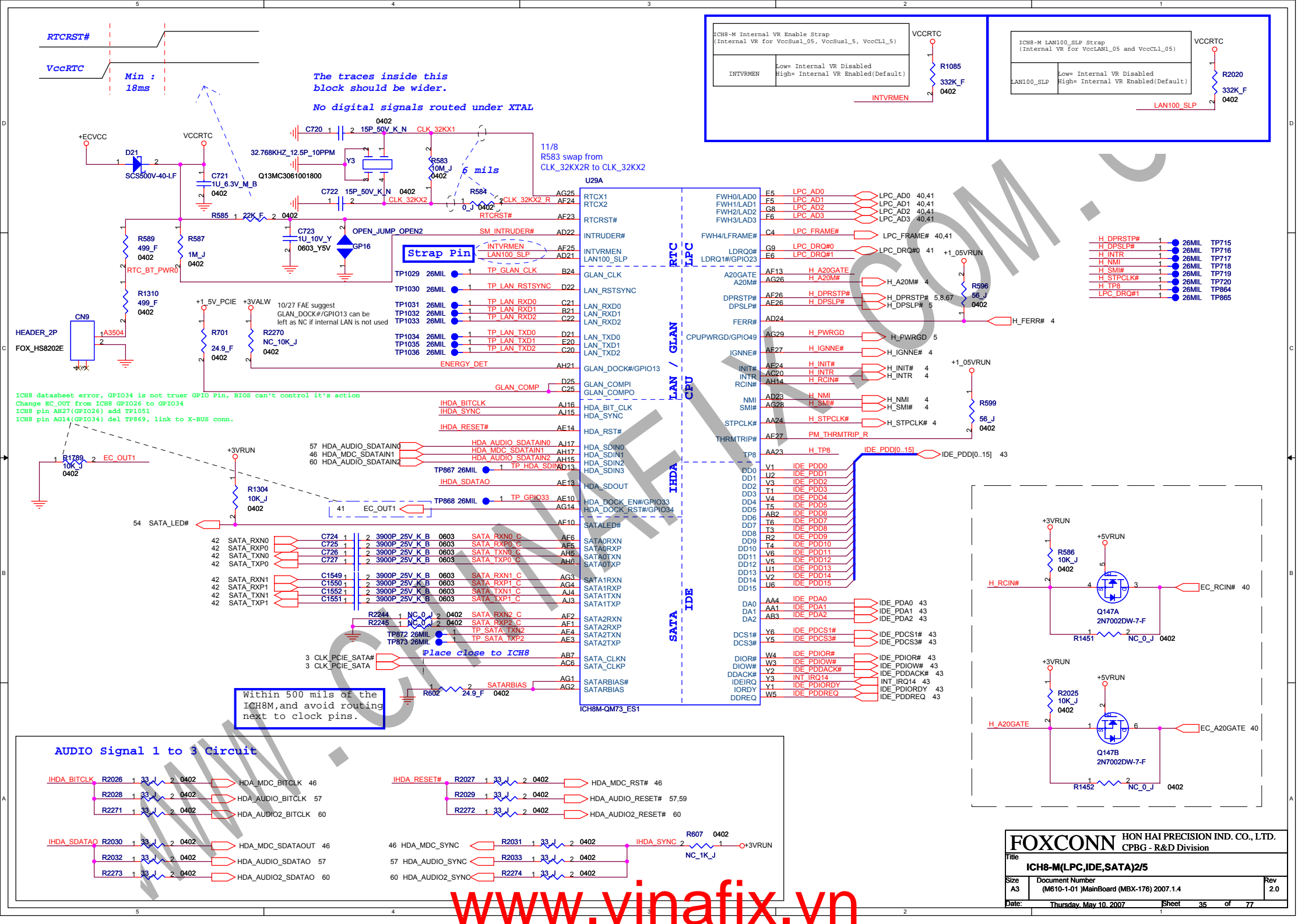


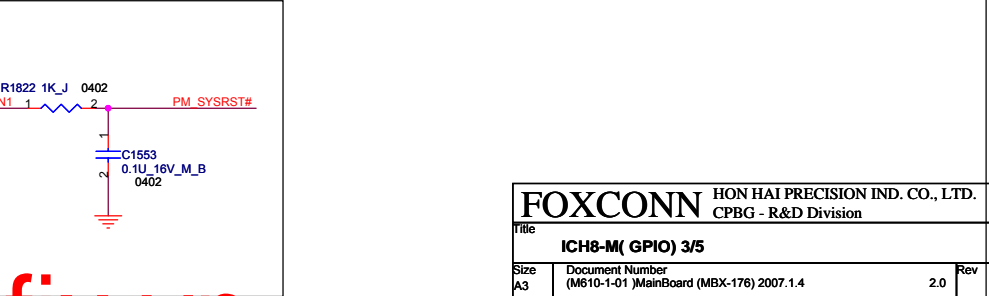
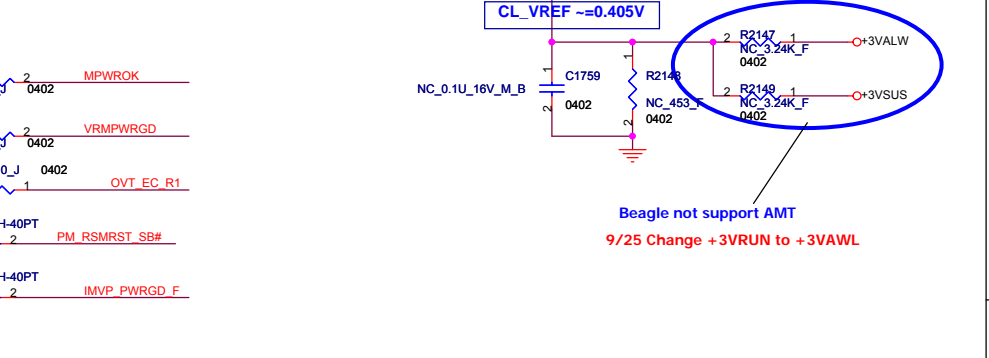
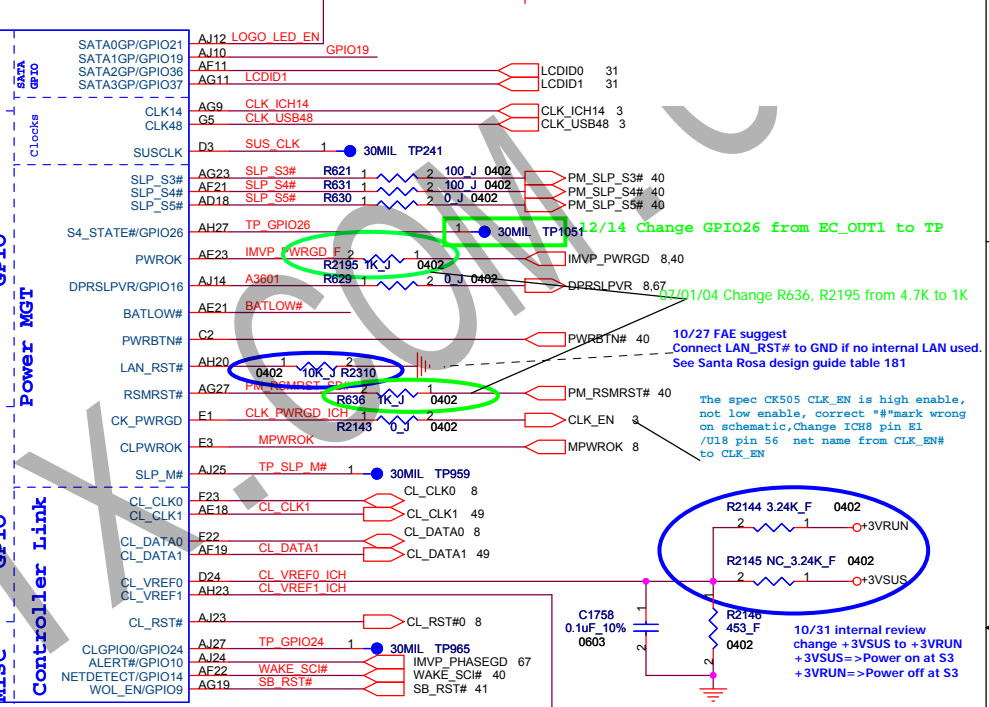
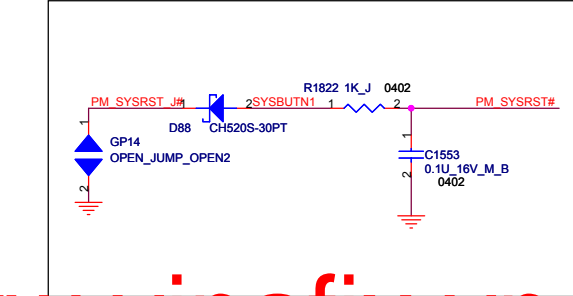
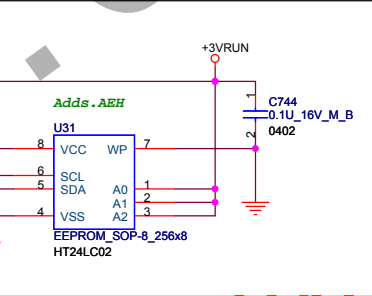
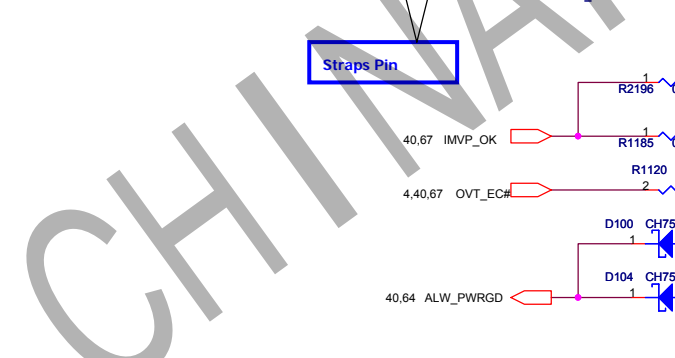
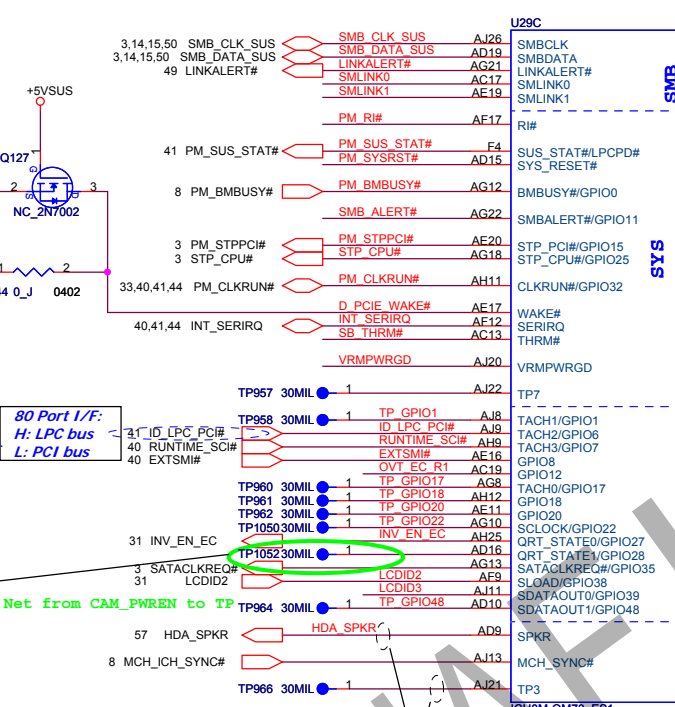
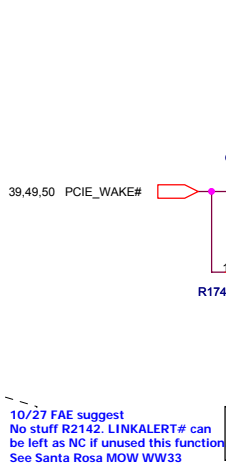
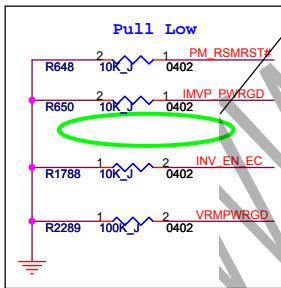
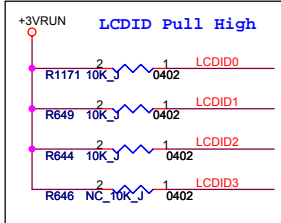
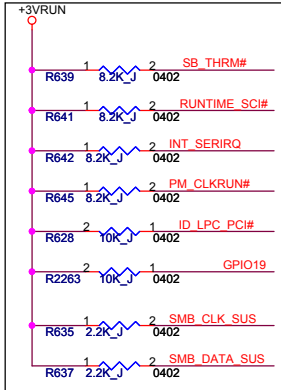
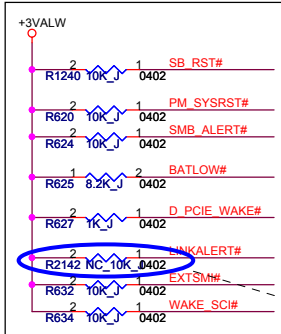
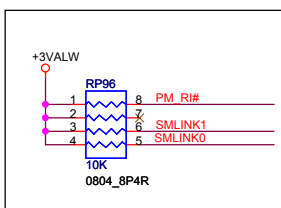
BFT Test Pad



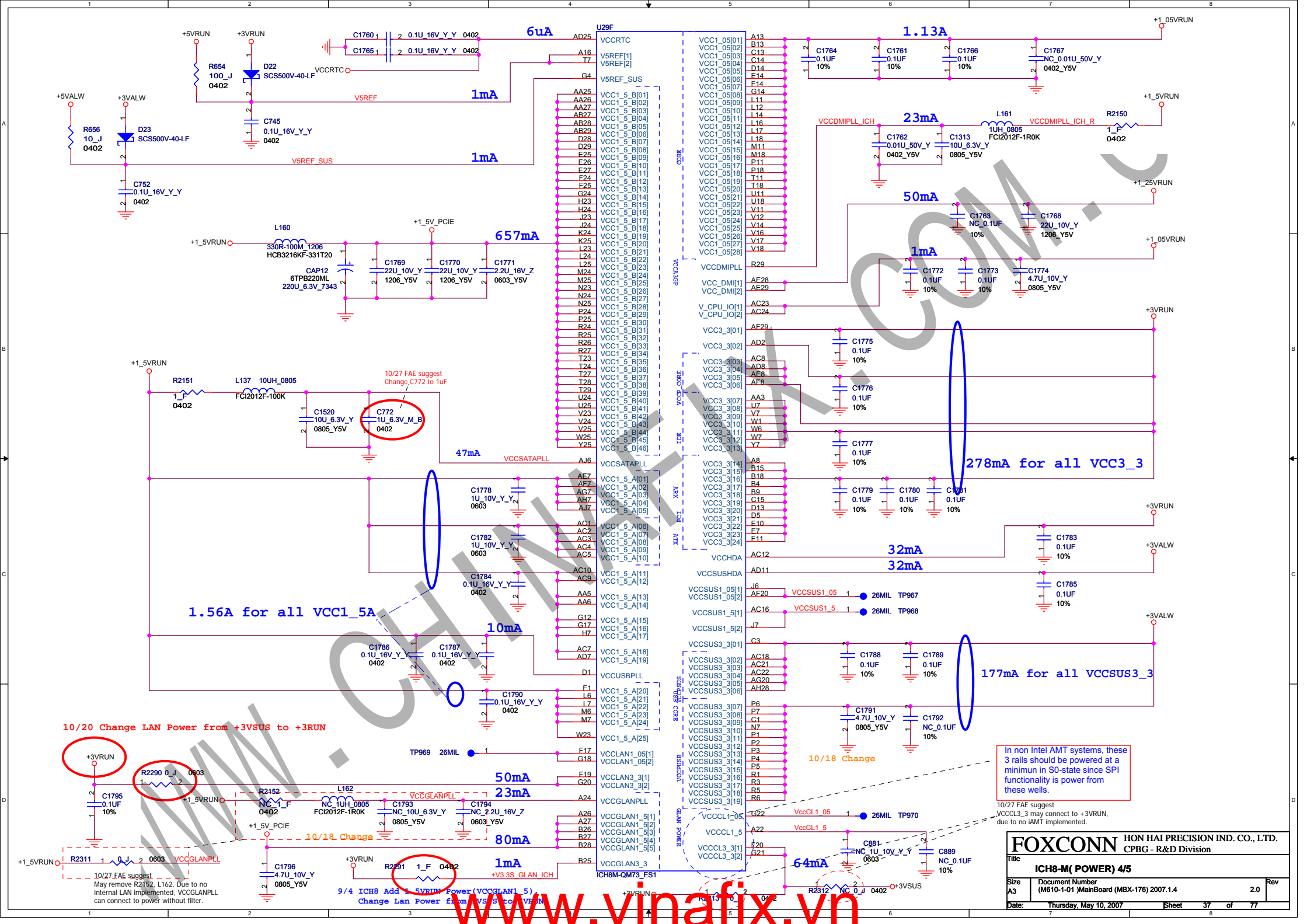
FOXCONN HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division		
Title: MINI-PCI CONN.		
Size: 43	Document Number: (M610-1-01) MainBoard (MBX-176) 2007.1.4	Rev: 2.0
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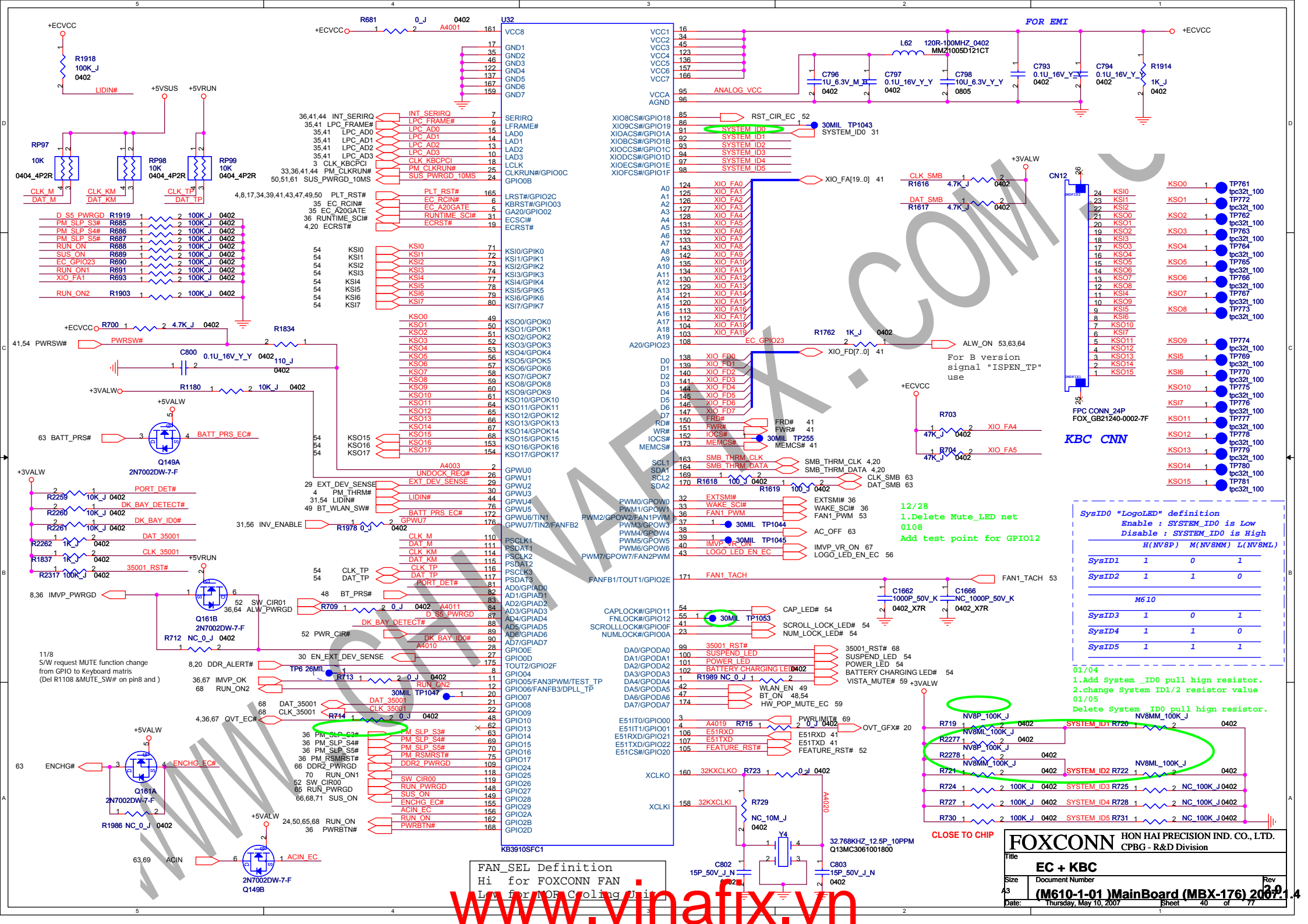
FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title ICH8-M (GPIO) 3/5			
Size A3	Document Number (M610-1-01) MainBoard (MBX-176) 2007.1.4	2.0	Rev
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U29E		
A23	VSS[001]	VSS[099] K7
A5	VSS[002]	VSS[100] L1
AA2	VSS[003]	VSS[101] L13
AA7	VSS[004]	VSS[102] L15
AA25	VSS[005]	VSS[103] L26
AB1	VSS[006]	VSS[104] L27
AB24	VSS[007]	VSS[105] L4
AC11	VSS[008]	VSS[106] L5
AC14	VSS[009]	VSS[107] M12
AC25	VSS[010]	VSS[108] M13
AC26	VSS[011]	VSS[109] M14
AC27	VSS[012]	VSS[110] M15
AD17	VSS[013]	VSS[111] M16
AD20	VSS[014]	VSS[112] M17
AD28	VSS[015]	VSS[113] M23
AD29	VSS[016]	VSS[114] M28
AD3	VSS[017]	VSS[115] M29
AD4	VSS[018]	VSS[116] M3
AD6	VSS[019]	VSS[117] N1
AE1	VSS[020]	VSS[118] N11
AE12	VSS[021]	VSS[119] N12
AE2	VSS[022]	VSS[120] N13
AE22	VSS[023]	VSS[121] N14
AD1	VSS[024]	VSS[122] N15
AE25	VSS[025]	VSS[123] N16
AE5	VSS[026]	VSS[124] N17
AE6	VSS[027]	VSS[125] N18
AE9	VSS[028]	VSS[126] N26
AF14	VSS[029]	VSS[127] N27
AF16	VSS[030]	VSS[128] N4
AF18	VSS[031]	VSS[129] N5
AF3	VSS[032]	VSS[130] N6
AF4	VSS[033]	VSS[131] P12
AG5	VSS[034]	VSS[132] P13
AG6	VSS[035]	VSS[133] P14
AH10	VSS[036]	VSS[134] P15
AH13	VSS[037]	VSS[135] P16
AH16	VSS[038]	VSS[136] P17
AH19	VSS[039]	VSS[137] P23
AH2	VSS[040]	VSS[138] P28
AF28	VSS[041]	VSS[139] P29
AH22	VSS[042]	VSS[140] R11
AH24	VSS[043]	VSS[141] R12
AH26	VSS[044]	VSS[142] R13
AH3	VSS[045]	VSS[143] R14
AH4	VSS[046]	VSS[144] R15
AH8	VSS[047]	VSS[145] R16
AJ5	VSS[048]	VSS[146] R17
B11	VSS[049]	VSS[147] R18
B14	VSS[050]	VSS[148] R28
B17	VSS[051]	VSS[149] R4
B2	VSS[052]	VSS[150] T12
B20	VSS[053]	VSS[151] T13
B22	VSS[054]	VSS[152] T14
B8	VSS[055]	VSS[153] T15
C24	VSS[056]	VSS[154] T16
C26	VSS[057]	VSS[155] T17
C27	VSS[058]	VSS[156] T2
C6	VSS[059]	VSS[157] U12
D12	VSS[060]	VSS[158] U13
D15	VSS[061]	VSS[159] U14
D18	VSS[062]	VSS[160] U15
D2	VSS[063]	VSS[161] U16
D4	VSS[064]	VSS[162] U17
E21	VSS[065]	VSS[163] U23
E24	VSS[066]	VSS[164] U26
E4	VSS[067]	VSS[165] U27
E9	VSS[068]	VSS[166] U3
F15	VSS[069]	VSS[167] U5
E23	VSS[070]	VSS[168] V13
F28	VSS[071]	VSS[169] V15
F29	VSS[072]	VSS[170] V28
F7	VSS[073]	VSS[171] V29
G1	VSS[074]	VSS[172] W2
F2	VSS[075]	VSS[173] W26
G10	VSS[076]	VSS[174] W27
G13	VSS[077]	VSS[175] W28
G19	VSS[078]	VSS[176] W29
G23	VSS[079]	VSS[177] Y4
G25	VSS[080]	VSS[178] AB4
G26	VSS[081]	VSS[179] AB23
G27	VSS[082]	VSS[180] AB5
H25	VSS[083]	VSS[181] AB6
H28	VSS[084]	VSS[182] AD5
H29	VSS[085]	VSS[183] U4
H3	VSS[086]	VSS[184] W24
H6	VSS[087]	
J1	VSS[088]	VSS_NCTF[01] A1
J25	VSS[089]	VSS_NCTF[02] A2
J26	VSS[090]	VSS_NCTF[03] A28
J27	VSS[091]	VSS_NCTF[04] A29
J4	VSS[092]	VSS_NCTF[05] AH1
J5	VSS[093]	VSS_NCTF[06] AH29
K23	VSS[094]	VSS_NCTF[07] AJ1
K28	VSS[095]	VSS_NCTF[08] AJ2
K29	VSS[096]	VSS_NCTF[09] AJ28
K3	VSS[097]	VSS_NCTF[10] AJ29
K6	VSS[098]	VSS_NCTF[11] B1
		VSS_NCTF[12] B29

ICH8M-QM73_ES1

FOXCONN HON HAI PRECISION IND. CO., LTD. CPBG - R&D Division		
Title		
ICH8-M(GND) 5/5		
Sheet 38	Document Number (M610-1-01)MainBoard (MBX-176) 2007.1.4	Rev 2.0
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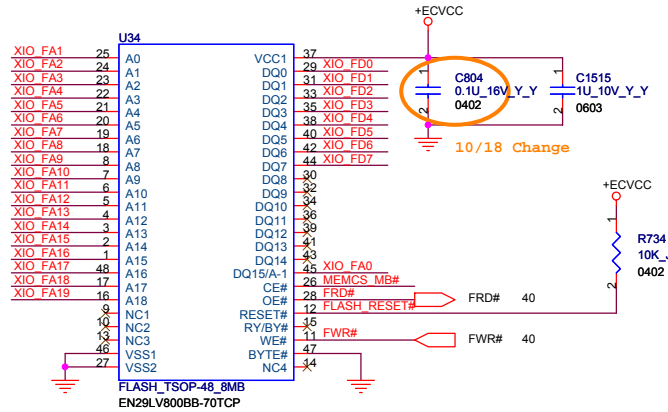


SysID0 "LogoLED" definition			
Enable : SYSTEM_ID0 is Low			
Disable : SYSTEM_ID0 is High			
	H(NV8P)	M(NV8MM)	L(NV8ML)
SysID1	1	0	1
SysID2	1	1	0
M610			
SysID3	1	0	1
SysID4	1	1	0
SysID5	1	1	1

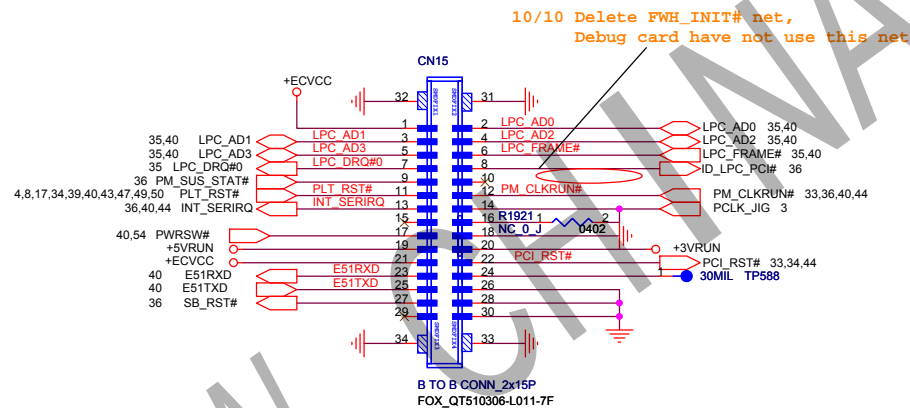
- 01/04
- 1. Add System_ID0 pull high resistor.
- 2. change System ID1/2 resistor value
- 01/05
- Delete System_ID0 pull high resistor.

FLASH BIOS

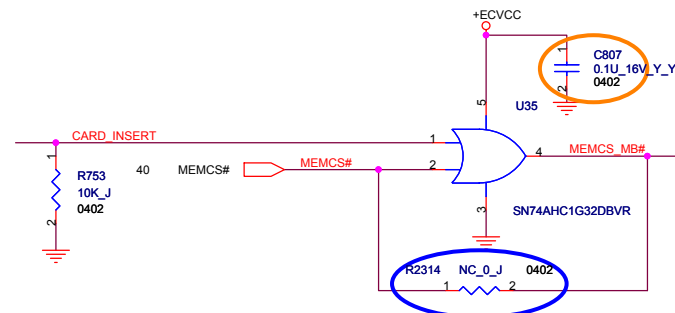
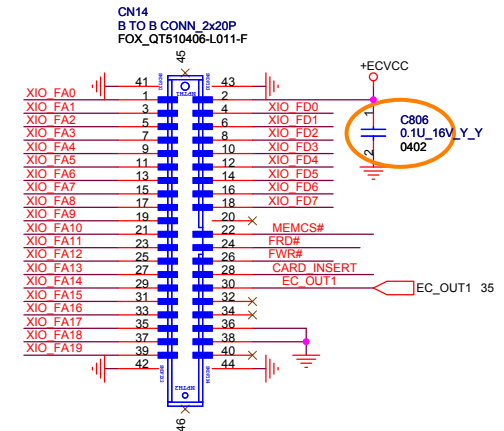
40 XIO_FA[19..0]
40 XIO_FD[7..0]



JIG-120

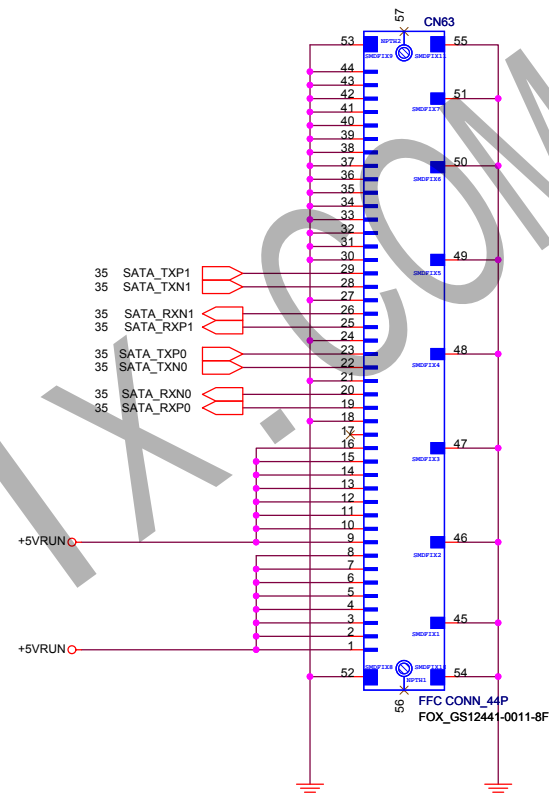
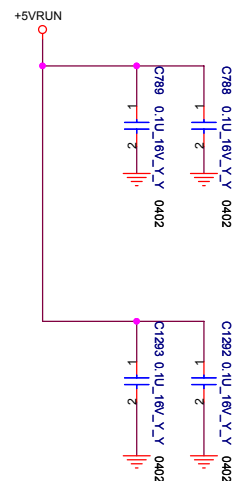


X-BUS

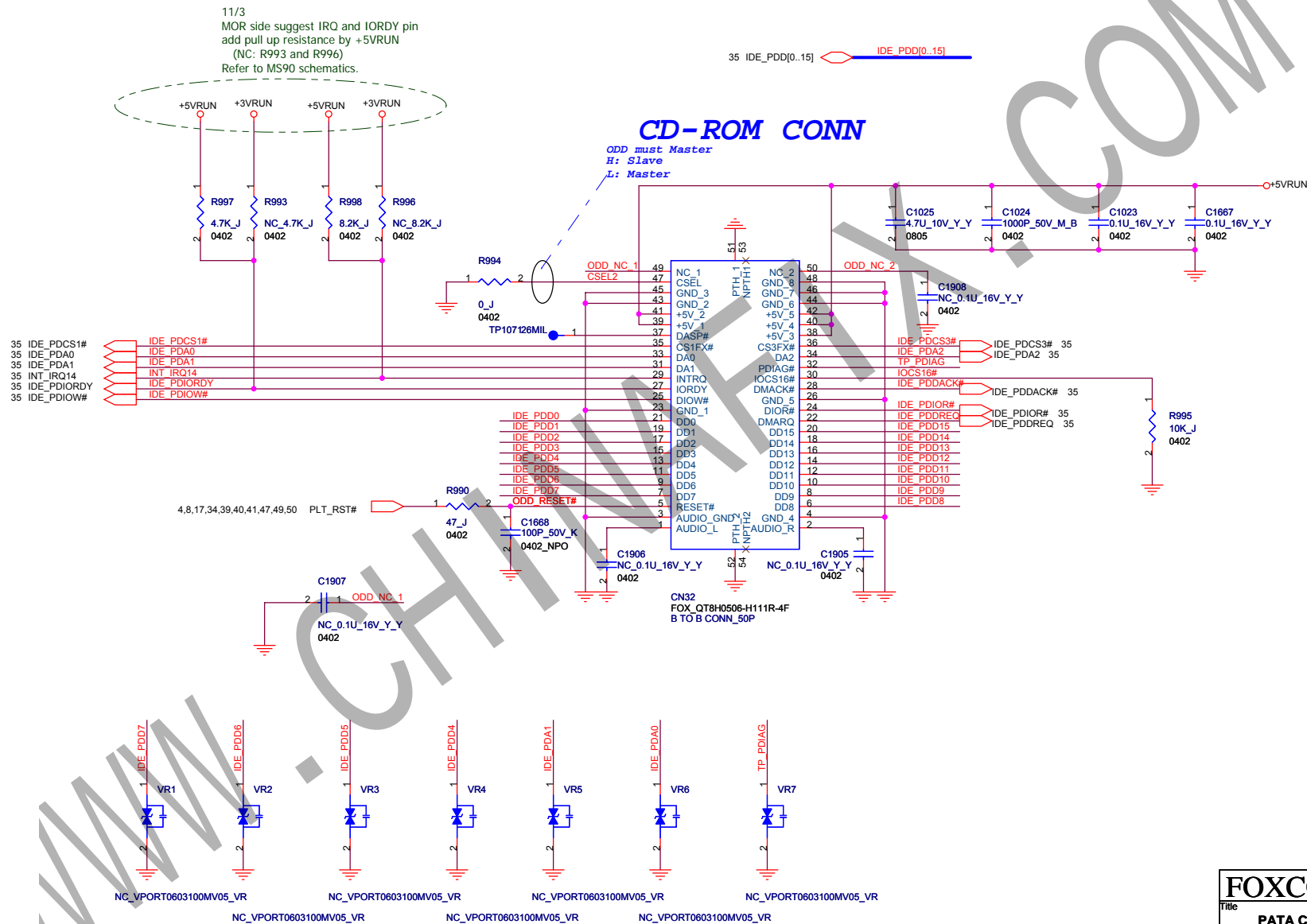


10/31
At M610 MP don't use X-BUS
CN14, U35, R753, C807 need NC
R2314 need stuff

FOXCONN HON HAI PRECISION IND. CO., LTD.		
CPBG - R&D Division		
Title		
Flash ROM + Jig-120 + XBUS		
Size	Document Number	Rev
43	(M610-1-01) MainBoard (MBX-176) 2007.1.4	2
Date:	Thursday, May 10, 2007	Sheet 41 of 77



FOXCONN		HON HAI PRECISION IND. CO., LTD.	
		CPBG - R&D Division	
Title			
SATA HDD RAID			
Size	Document Number		Rev
A3	(M610-1-01)MainBoard (MBX-176) 2007.1.4	2.0	
Date:	Thursday, May 10, 2007	Sheet	42 of 77

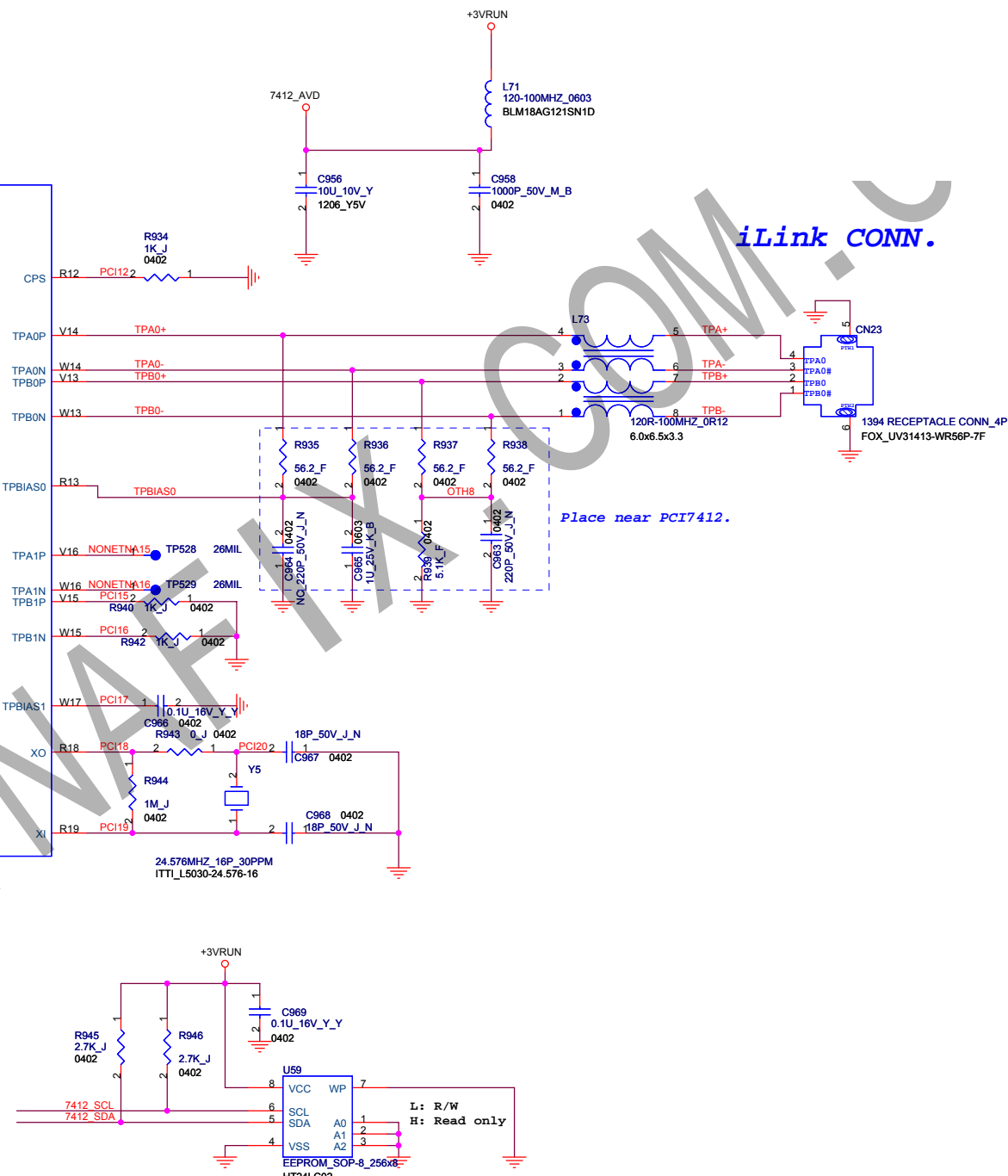


This capacitor must be placed to IC pin

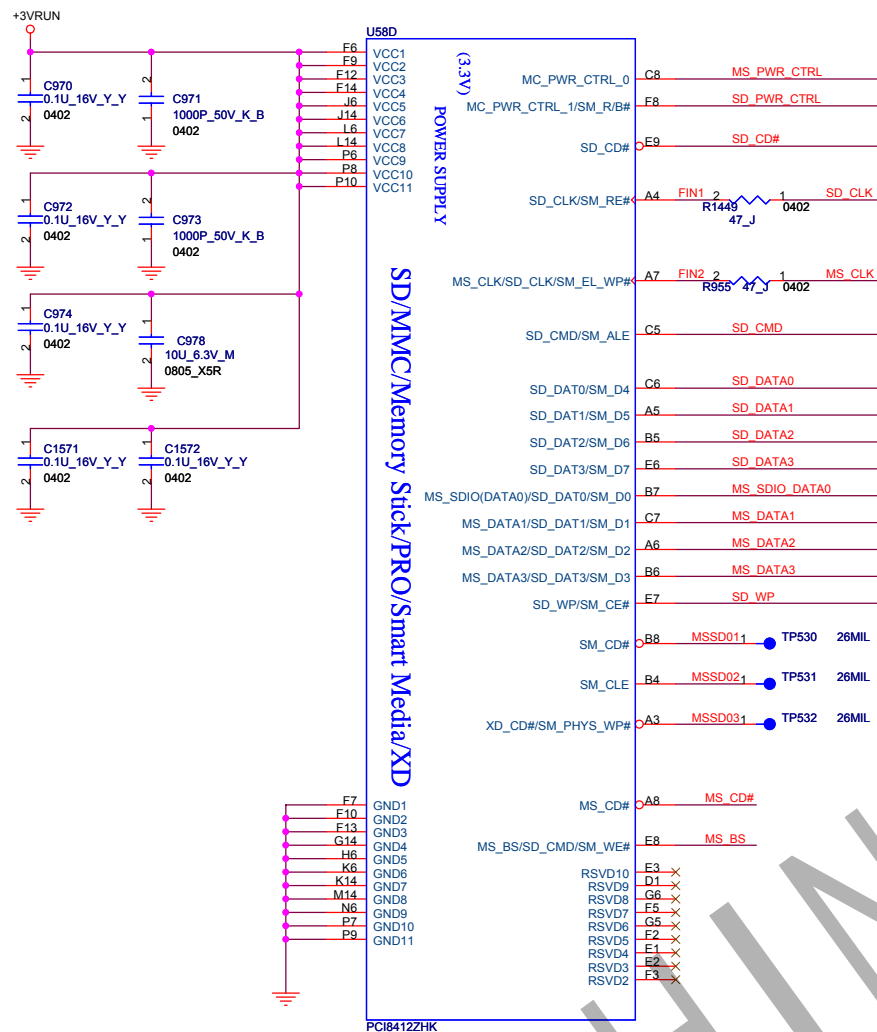
IEEE 1394a

Place near PCI7412.

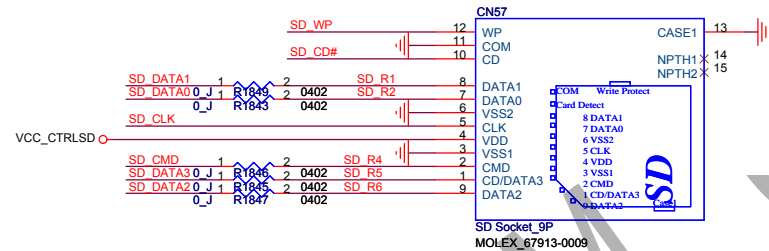
iLink CONN.



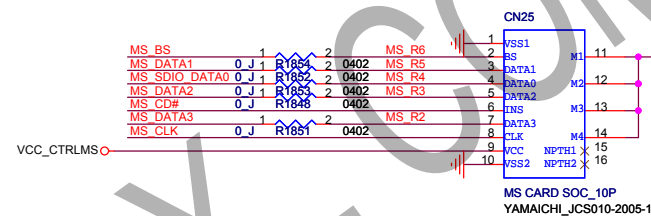
FOXCONN HON HAI PRECISION IND. CO., LTD.	
CPBG - R&D Division	
Title	
PCI (iLink)	
Size	Document Number
A3	(M610-1-01) MainBoard (MBX-176) 2007.1.4
Date:	Thursday, May 10, 2007
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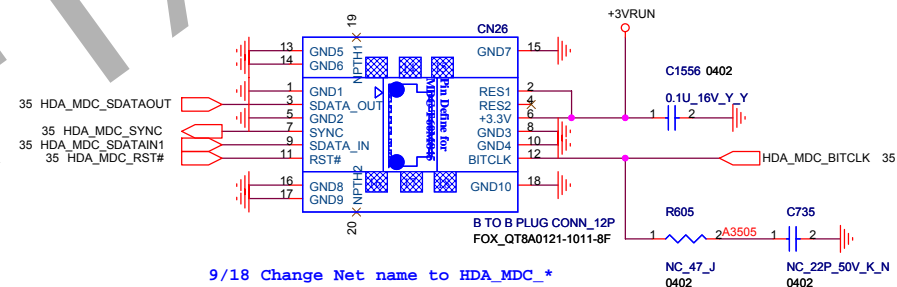
SD CONN.



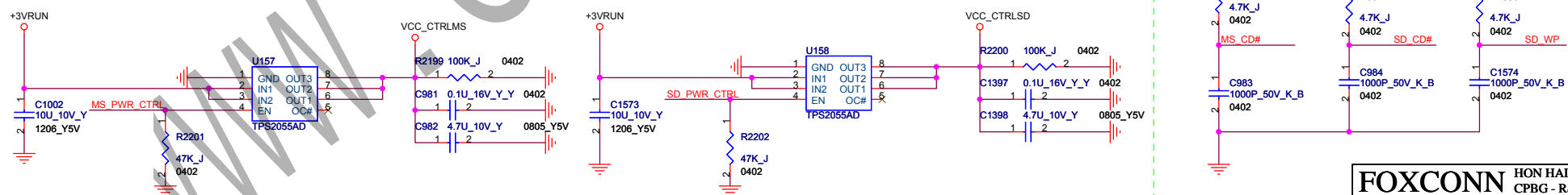
MS STD/DUO CONN.



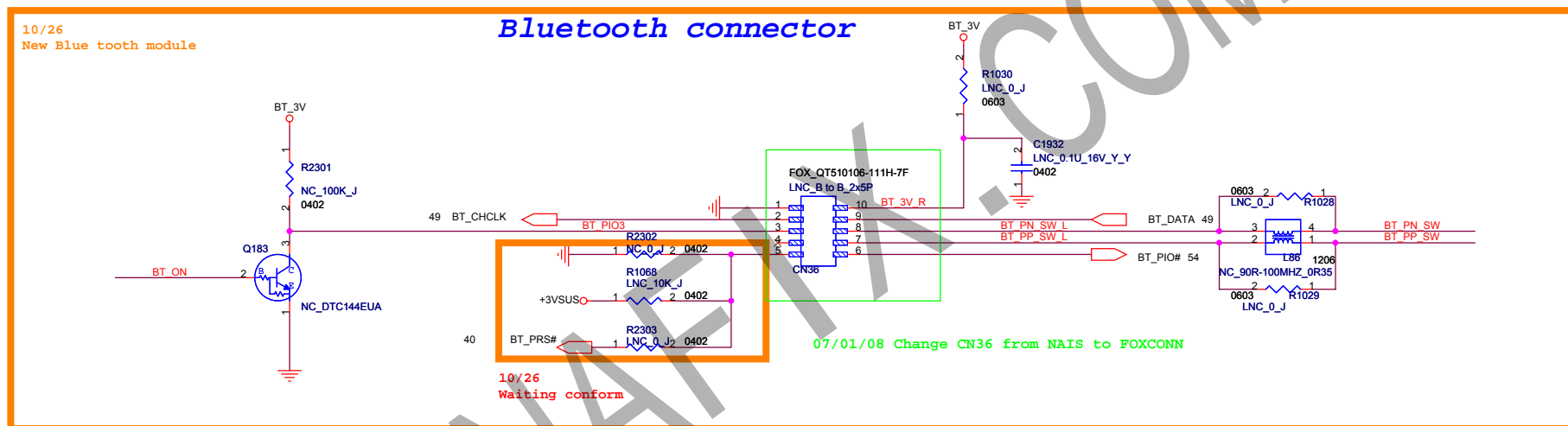
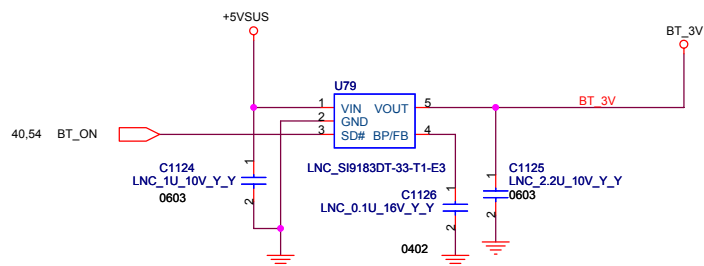
MDC CONN.



02/12/07 PVT Change MS Power switch to TPS2055



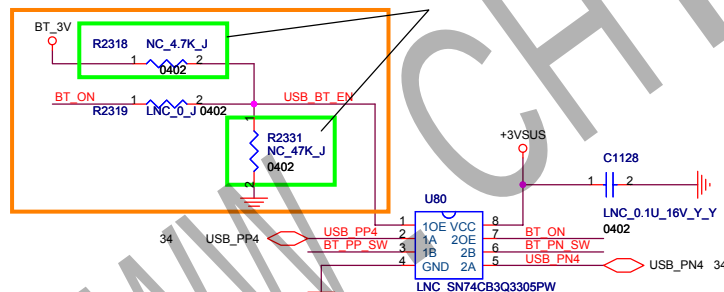
FOXCONN		HON HAI PRECISION IND. CO., LTD.	
Title		CPBG - R&D Division	
PCI (MS-DUO/MDC)			
Size	Document Number		Rev
A3	(M610-1-01)MainBoard (MBX-176) 2007.1.4	2.0	
Date:	Thursday, May 10, 2007	Sheet	46 of 77



11/04 Change U80 Enable from BT_ON to BT_3V
 U79 LDO Ton Max is 1000us
 U80 BUS Switch Ton Max is 5ns

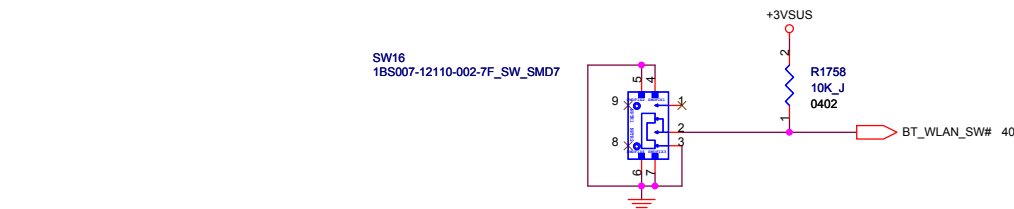
12/27 Change Bluetooth circuit Value to LNC_* for M610 DVT I SKU

12/14 Change R2318 from 1K to 4.7K, Add one 47K pull up resistance

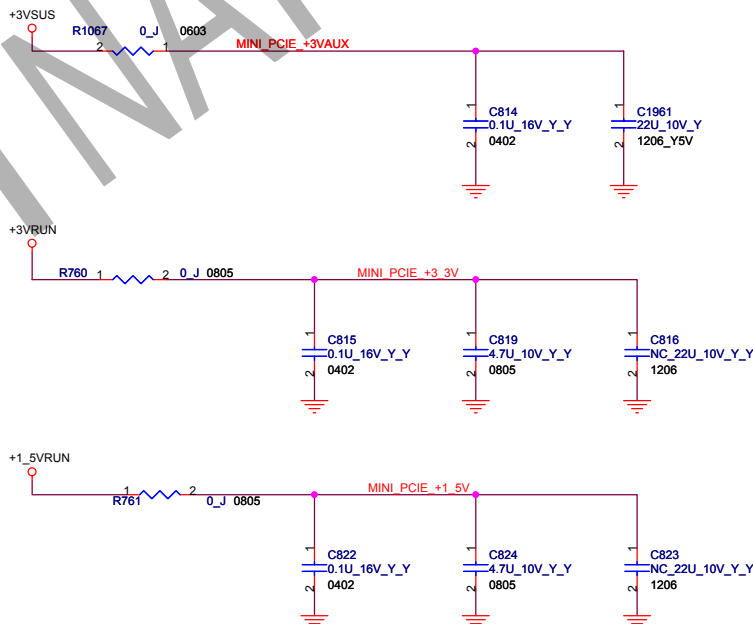
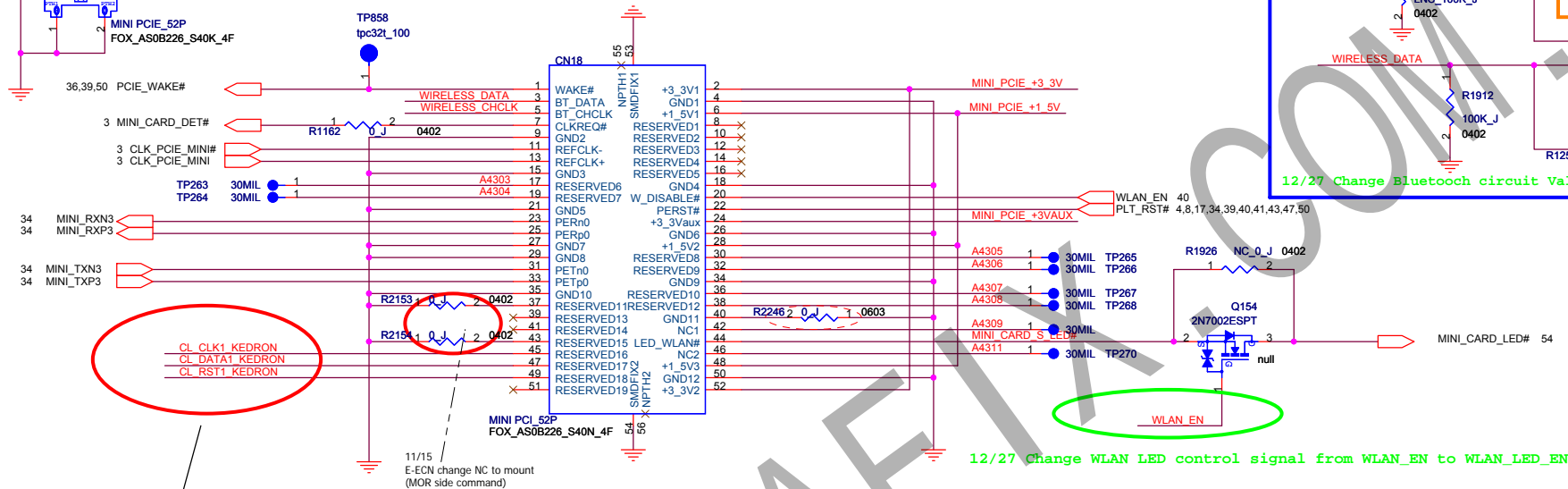


To solve U80 enable pin (net name USB_BT_EN) floating during U79 (BT_3V from LDO) BT_ON disable,
 Add Pull low 47K(R2331) at net USB_BT_EN, Change R2318 from 10K to 1K.

FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title			
FAN/Bluetooth			
Size	Document Number		Rev
A3	(M610-1-01) MainBoard (MBX-176) 2007.1.4		2.0
Date:	Thursday, May 10, 2007	Sheet	48 of 77

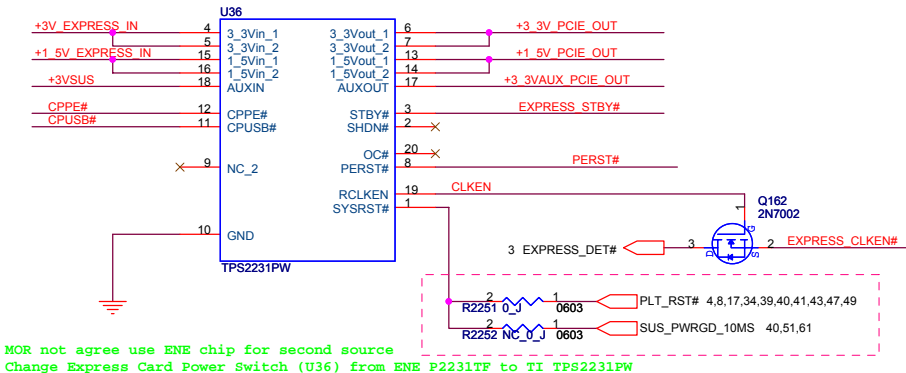


Mini-PCIE Card connector



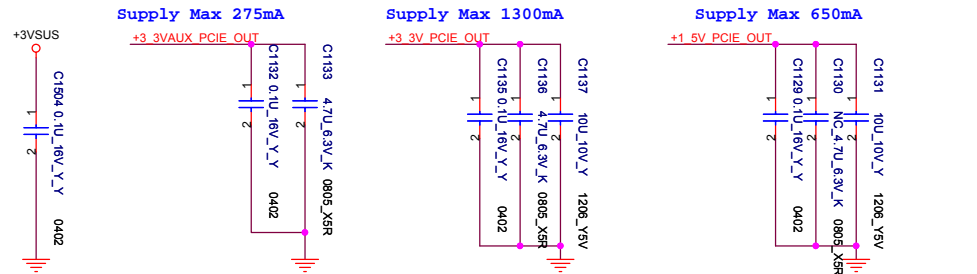
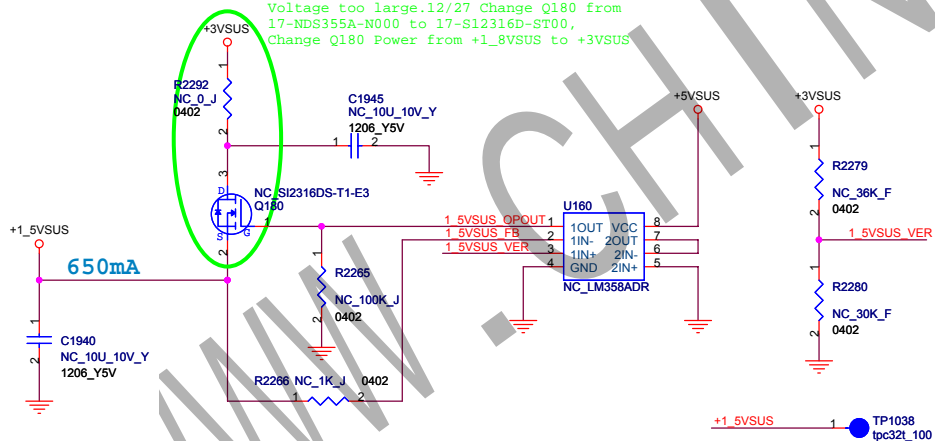
FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title Mini-PCIE Card			
Size A3	Document Number (M610-1-01) MainBoard (MBX-176) 2007.1.4	2.0	Rev
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VOLTAGE INPUTS ⁽¹⁾						LOGIC INPUTS			VOLTAGE OUTPUTS ⁽²⁾			MODE ⁽³⁾
AUXIN	3.3VIN	1.5VIN	STBY	STBY	CP	AUXOUT	3.3VOUT	1.5VOUT	3.3VOUT	1.5VOUT	1.5VOUT	
Off	x	x	x	x	x	Off	Off	Off	Off	Off	Off	OFF
On	x	x	0	x	x	GND	GND	GND	GND	GND	GND	Shutdown
On	x	x	1	x	1	GND	GND	GND	GND	GND	GND	No Card
On	On	On	1	0	0	On	Off	Off	Off	Off	Off	Standby
On	On	On	1	1	0	On	On	On	On	On	On	Card Inserted

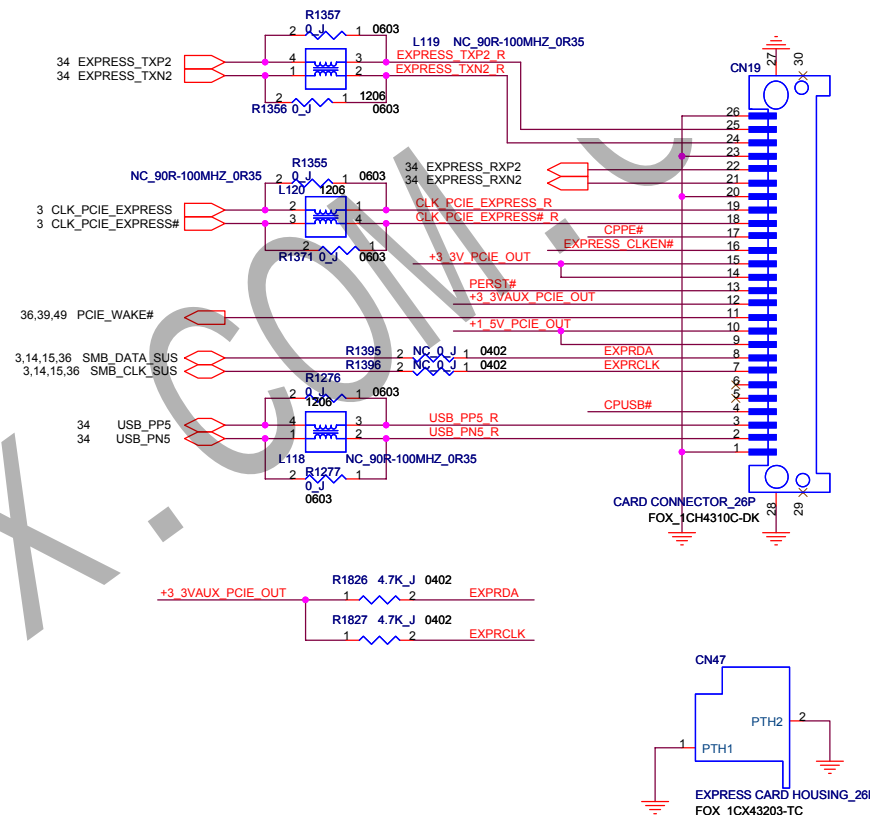


Constant-voltage +1_5VSUS

12/29 Load current test fial, 1.8V transfer 1.5V drop
Voltage too large.12/27 Change Q180 from
17-NDS355A-N000 to 17-S12316D-ST00,
Change Q180 Power from +1_8VSUS to +3VSUS

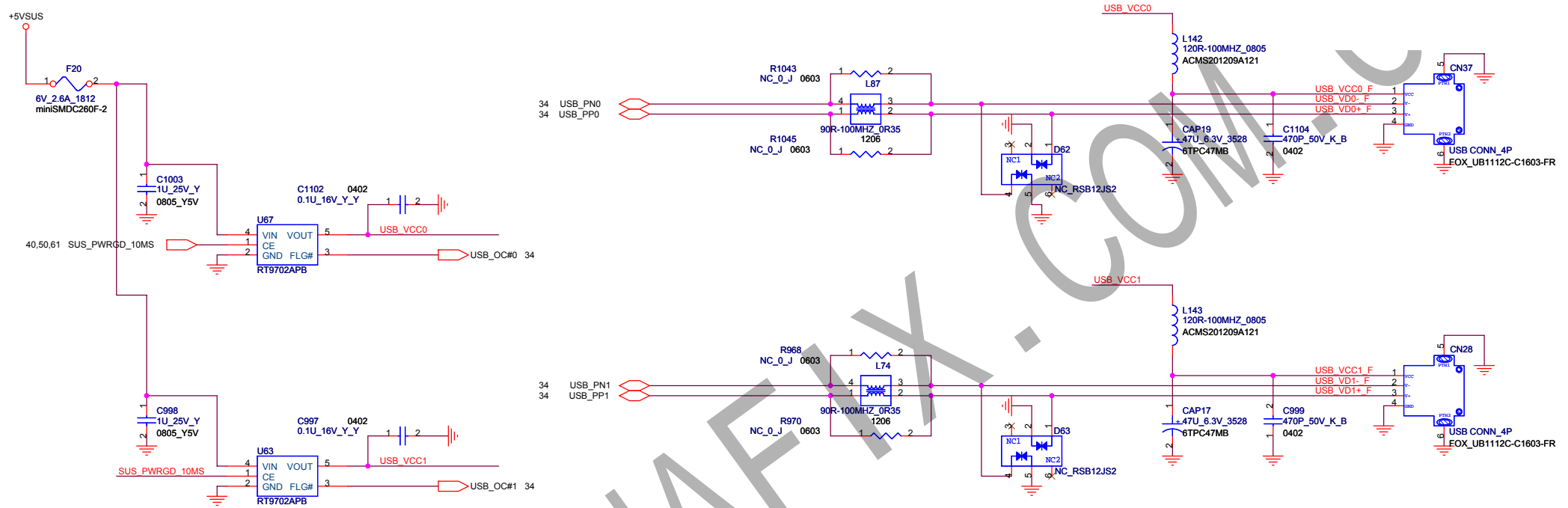


EXPRESS Card



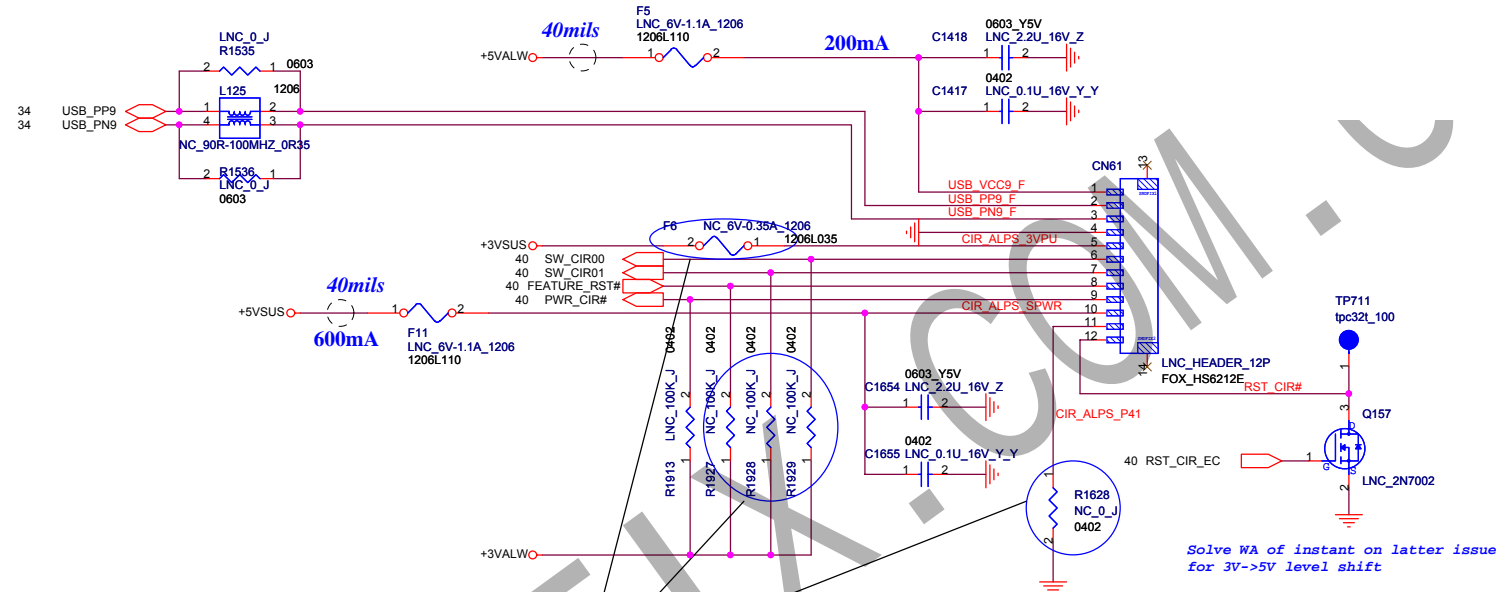
FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
EXPRESS CARD			
Size	Document Number	Rev	
A3	(M610-1-01) MainBoard (MBX-176) 2007.1.4	2.0	
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USB connector #2



FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title			
USB2.0/DOCKING CONN.			
Size	Document Number	Rev	
A3	(M610-1-01) MainBoard (MBX-176) 2007.1.4	2.0	
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IR Receiver connector



Button		SW1	SW0
VAIO button	Kick Instant On	L	L
Green button	Kick Windows	L	H
Shortcut button	Kick Windows	H	L
Standby button	Kick Windows	H	H

Num	Signal Name	I/O	Comment	Difference from ALPS.
1	+5VALW	VCC		<-
2	USB+	I/O		<-
3	USB-	I/O		<-
4	GND	GND		<-
5	+3VSUS	-	Not for use. Because SMK's IC use internal pull up resistor for D-.	ALPS's IC use this signal as a pull up plane of D- for low speed detection.
6	SW0	O	Use for detecting of the remote button. 3.3V CMOS output.	3.3V open drain output.
7	SW1	O	Use for detecting of the remote button. 3.3V CMOS output.	3.3V open drain output.
8	Feature_RST#	I	Software reset signal. (3.3V internal pull up resistor.)	Use for detecting of the remote button. 3.3V open drain output.
9	PWR#	O	Power on request signal. Open drain output.	<-
10	SPWR	I	Power OK signal. 5V input.	<-
11	EN	-	Not for use.	Low: Disable instant on feature Open or High: Enable instant on feature (3.3V internal pull up resistor.)
12	Hard_RST#	I	Hardware reset.	<-

9/26 FOR NEW SMK IR module compatiy
1.Change stuff to NC:F6,R1927,R1928,R1929,
2.EC Page GPIO20(105),GPIAD2(83) pin swape

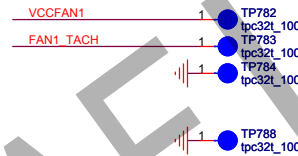
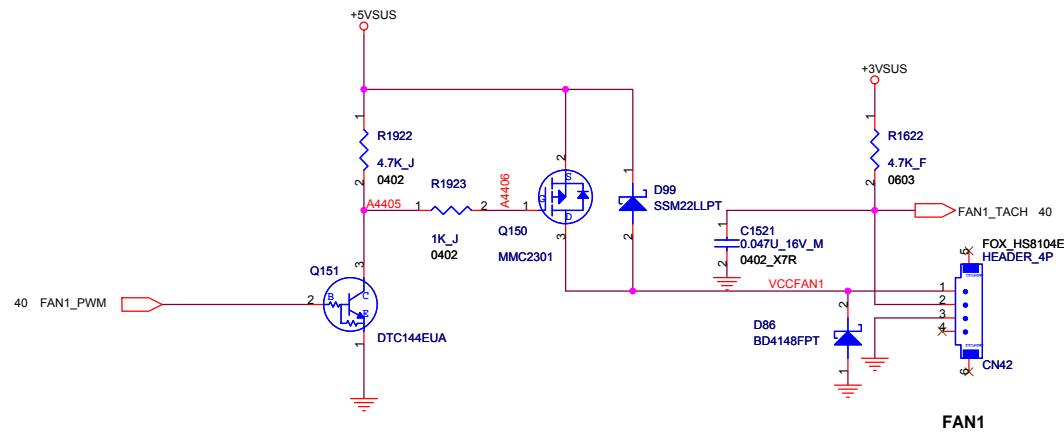
12/27 Change CIR circuit Value to LNC_* for M610 DVT L SKU

At Only USB Internal CIR, it's USB Power

USB_VCC9_F	1	TP847
USB_PP9_F	1	TP848
USB_PN9_F	1	TP849
	1	TP850
CIR_ALPS_3VPU	1	TP851
SW_CIR00	1	TP852
SW_CIR01	1	TP853
FEATURE_RST#	1	TP854
PWR_CIR#	1	TP855
CIR_ALPS_SPWR	1	TP856
	1	TP857

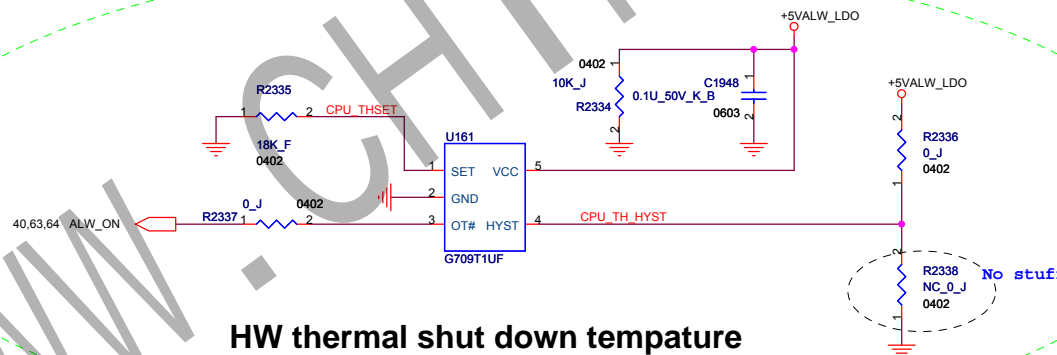
FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title: LED/LID SW#Touch PAD			
Size A3	Document Number (M610-1-01) MainBoard (MBX-176) 2007.1.4	2.0	Rev
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FAN circuit



HW THERMAL PROTECTION

07/01/09 Change HW THERMAL PROTECTION circuit to stuff

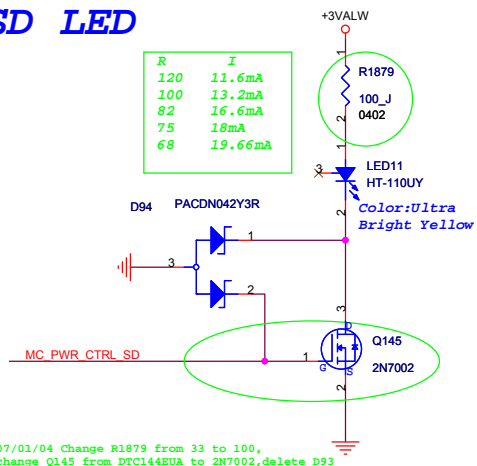


HW thermal shut down temperature setting 95 degree . Put Near CPU .

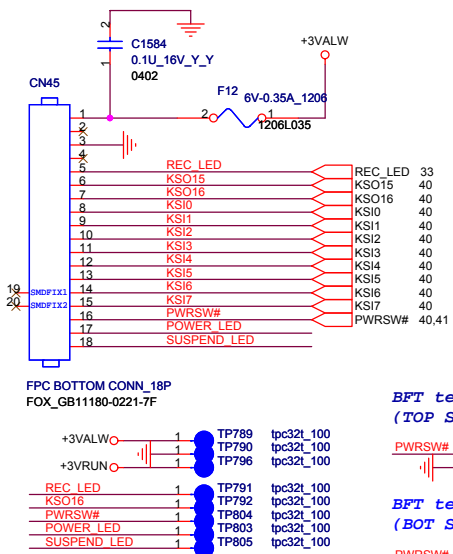
Base on MOR side request to add HW thermal protection circuit

FOXCONN		HON HAI PRECISION IND. CO., LTD.	
Title		CPBG - R&D Division	
Size		Document Number	
43		(M610-1-01) MainBoard (MBX-176) 2007	
Date:		Thursday, May 10, 2007	
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Rev		4.0	

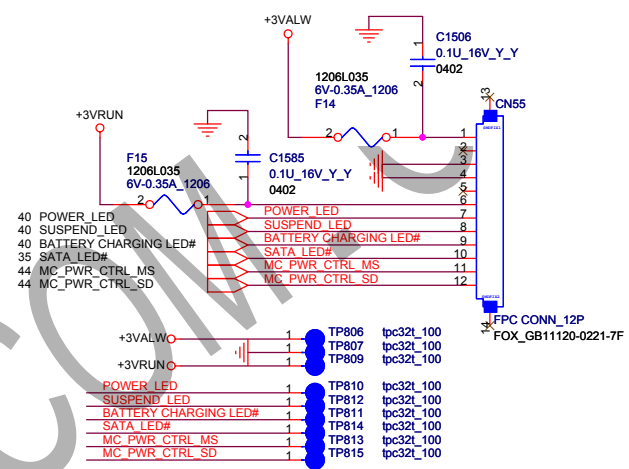
SD LED



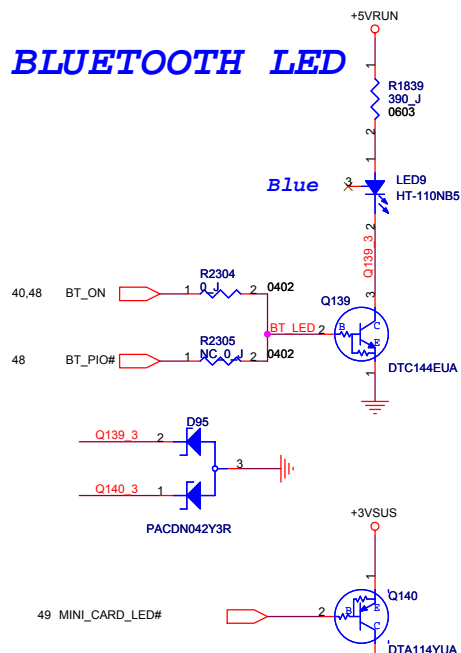
To Power Button Board Connector



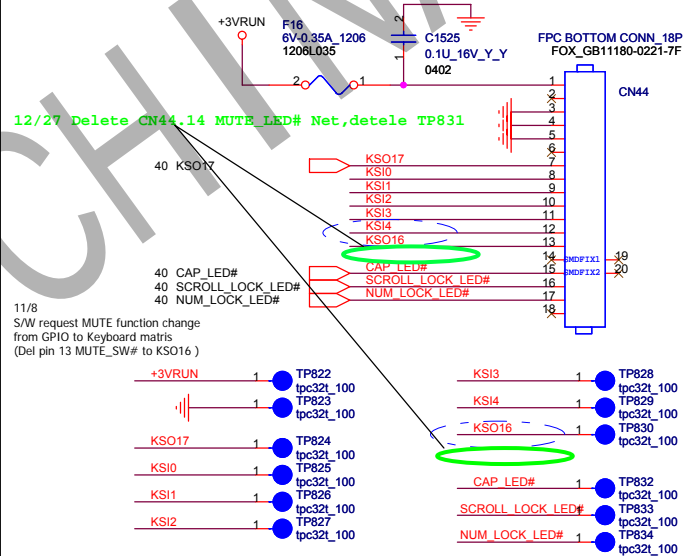
To LED Board Connector



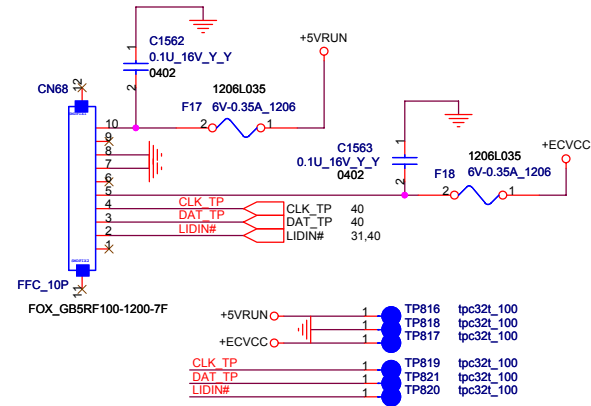
BLUETOOTH LED



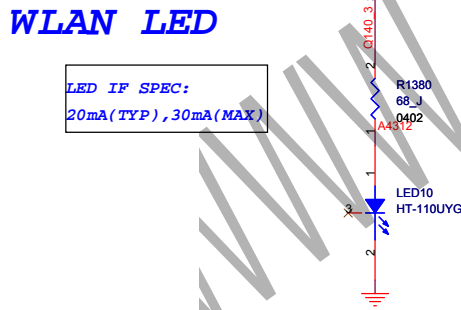
To AV Function Board Connector



To Touch Pad Board Connector



WLAN LED



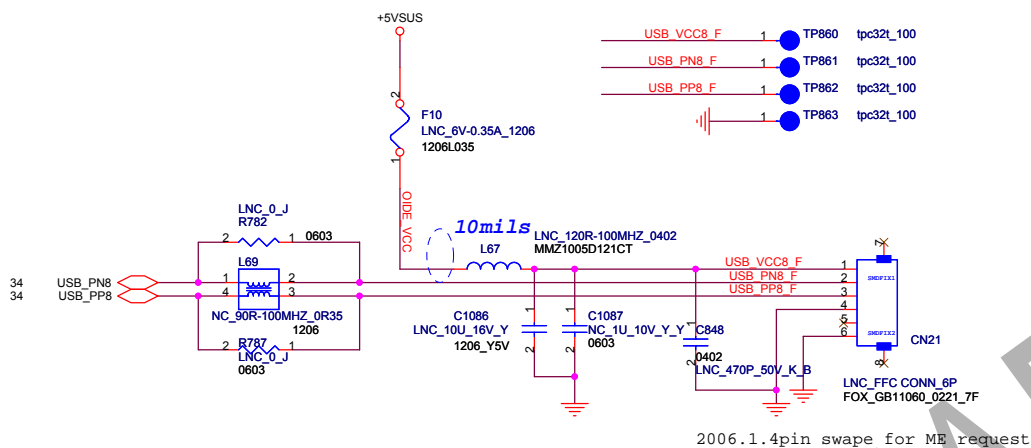
FOXCONN HON HAI PRECISION IND. CO., LTD.
CPBG - R&D Division

POWER BD + HOT KEY BD + TP&LED BD + LOGO LED

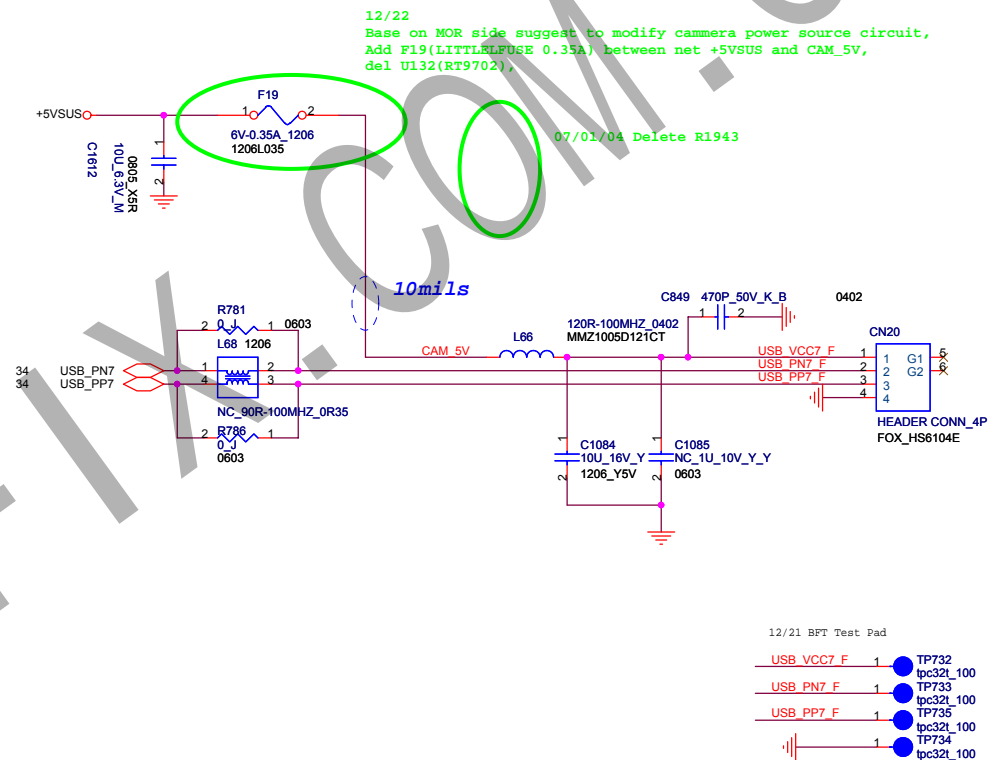
Size Document Number
43 (M610-1-01) MainBoard (MBX-176) 2006-2-14

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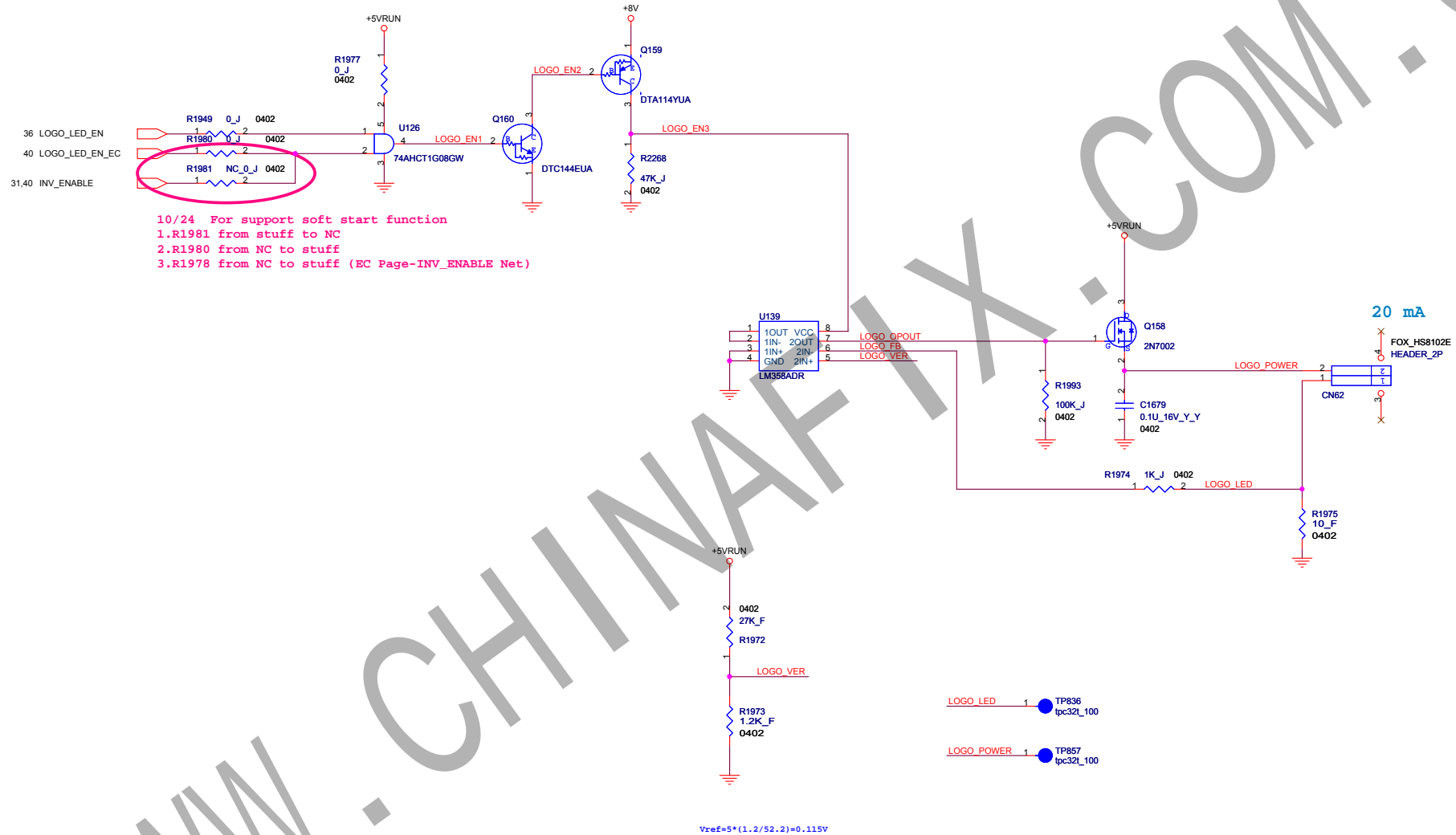
OIDE Connector



CAMERA Connector



Constant-Current SONY LOGO LED

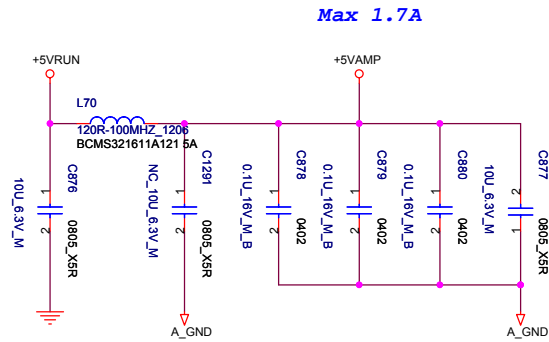


0920
Add 2PCS CAP39,CAP40 100_6.3V_M
Delet CAP24,CAP25

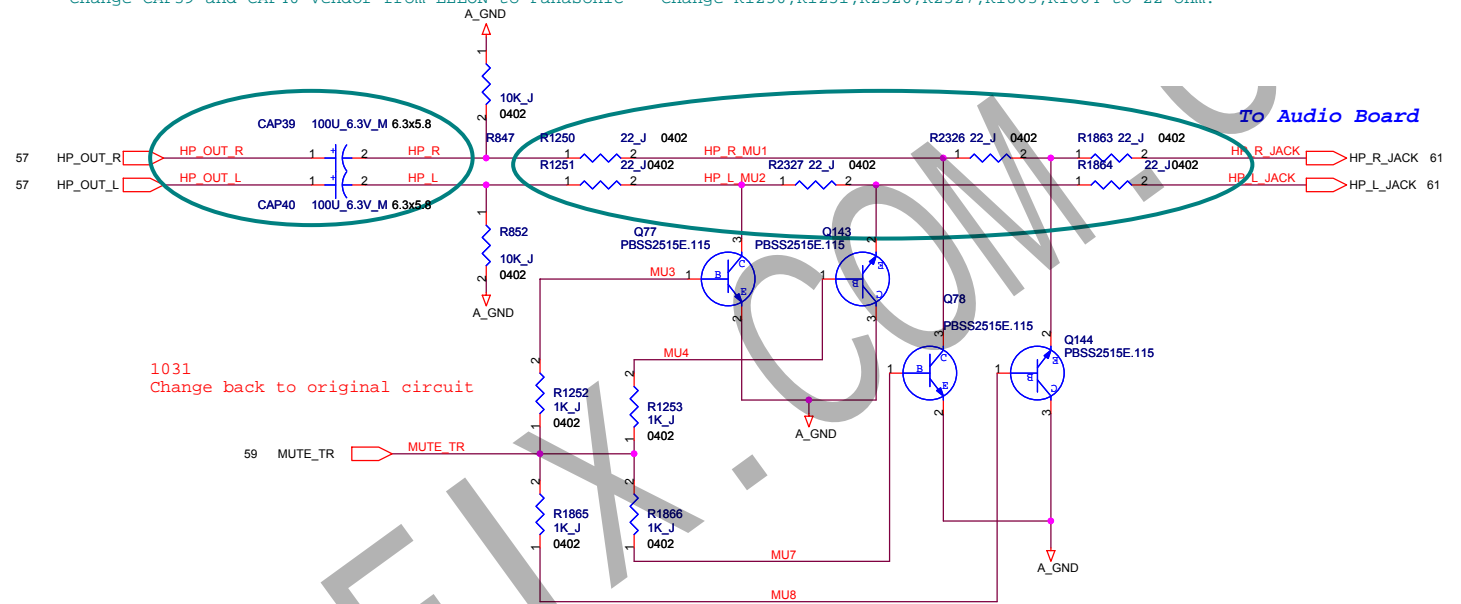
1103
Change CAP39 and CAP40 Vendor from NIPPON CHEMI-CON to LELON

1228
Change CAP39 and CAP40 Vendor from LELON to Panasonic

1229
Change R1250,R1251,R2326,R2327,R1863,R1864 to 22 ohm.



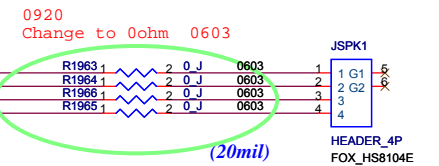
Max 1.7A



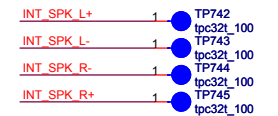
To Audio Board

1031
Change back to original circuit

INTERNAL SPEAKER



BFT Test Pad



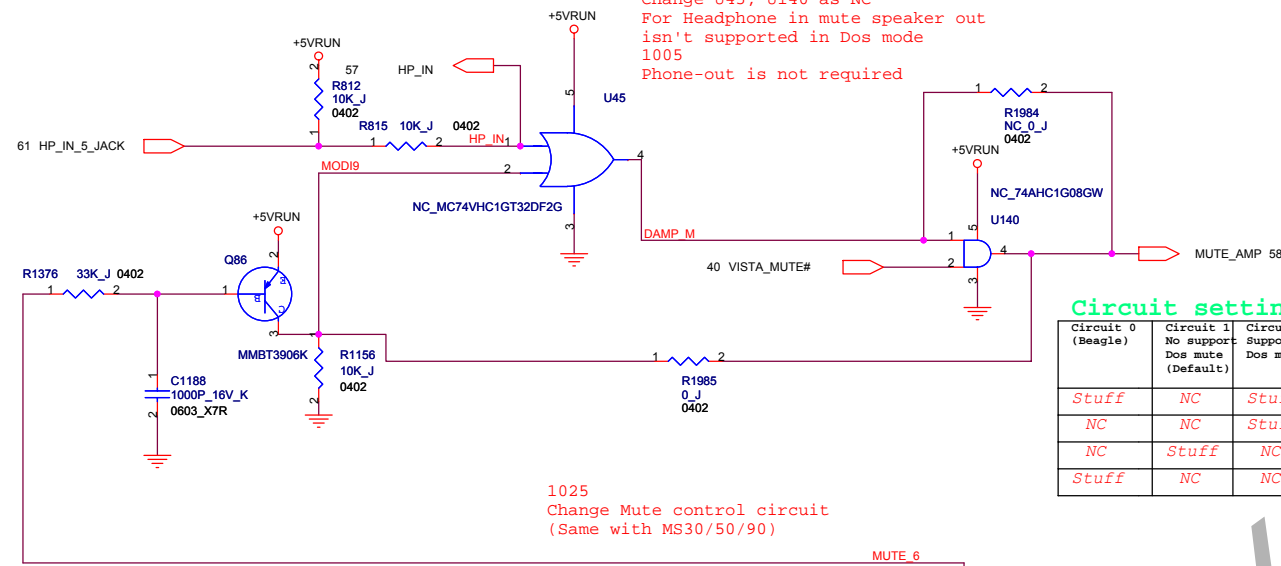
Gain setting table

Gain	R2216	Voltage
8dB	9.1K	0.77V
10dB	7.68K	0.65V
12dB	6.2K	0.54V
14dB	4.7K	0.43V
16dB	3.3K	0.31V

SPEAKER AMP

1209
Change gain setting to 14dB ,R2216 from 3.3K to 4.7K.
When play -3dB sine wave file ,the power is 1.2W.

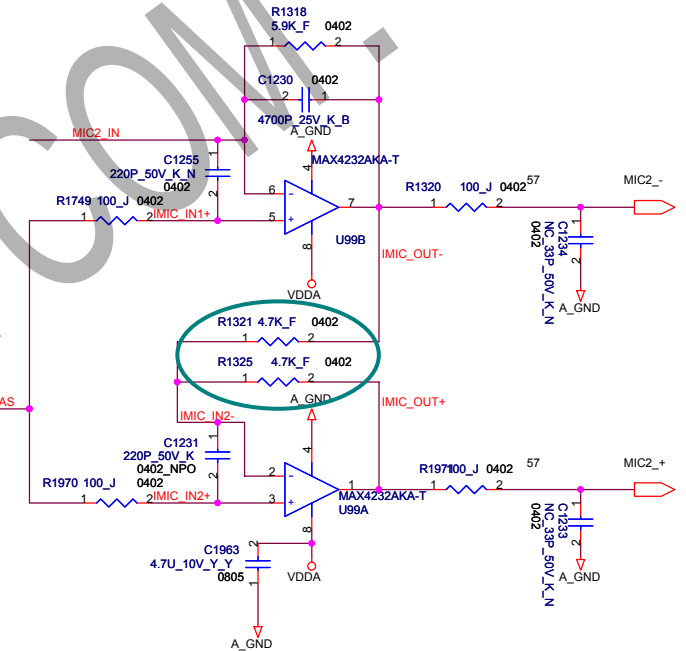
1004
Change U45, U140 as NC
For Headphone in mute speaker out
isn't supported in Dos mode
1005
Phone-out is not required



Circuit setting table

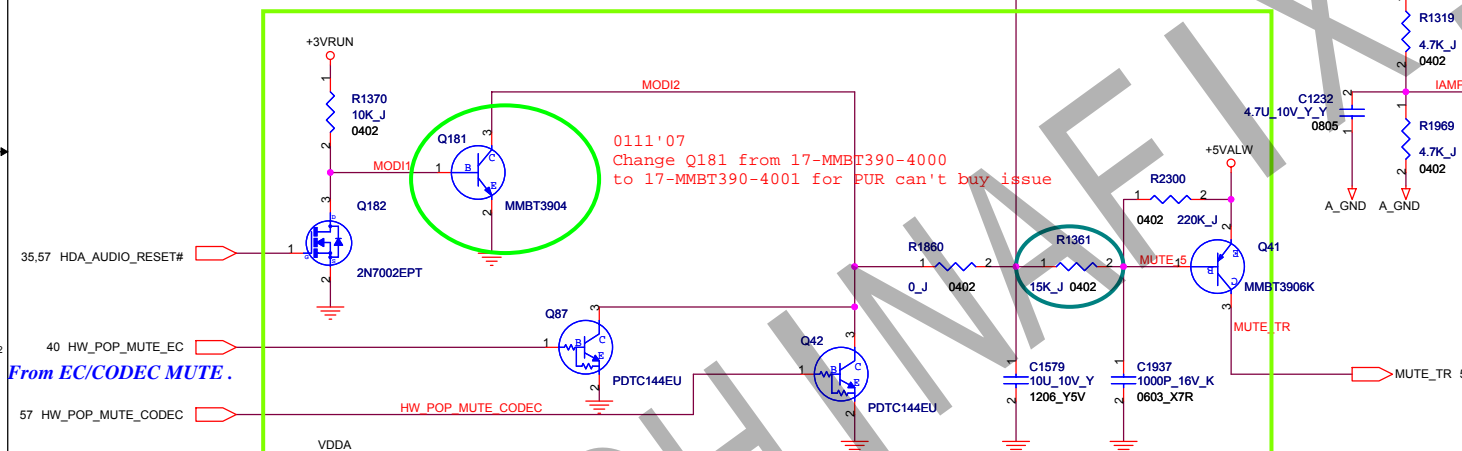
Circuit 0 (Beagle)	Circuit 1 No support Dos mute (Default)	Circuit 2 Support Dos mute	component
Stuff	NC	Stuff	U45
NC	NC	Stuff	U140
NC	Stuff	NC	R1985
Stuff	NC	NC	R1984

1025
Change Mute control circuit
(Same with MS30/50/90)



1227
Change R1321 and R1325 from 4.7k_J to 4.7K_F
for MOR Side Command.

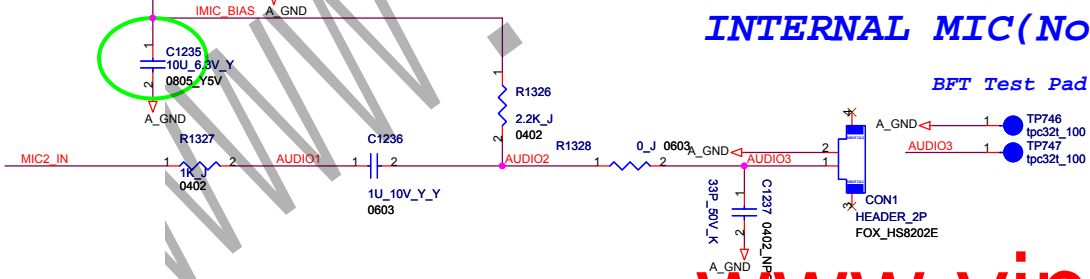
1005
Del phone-out mute circuit
for phone-out is not required



0111'07
Change Q181 from 17-MMBT390-4000
to 17-MMBT390-4001 for PUR can't buy issue

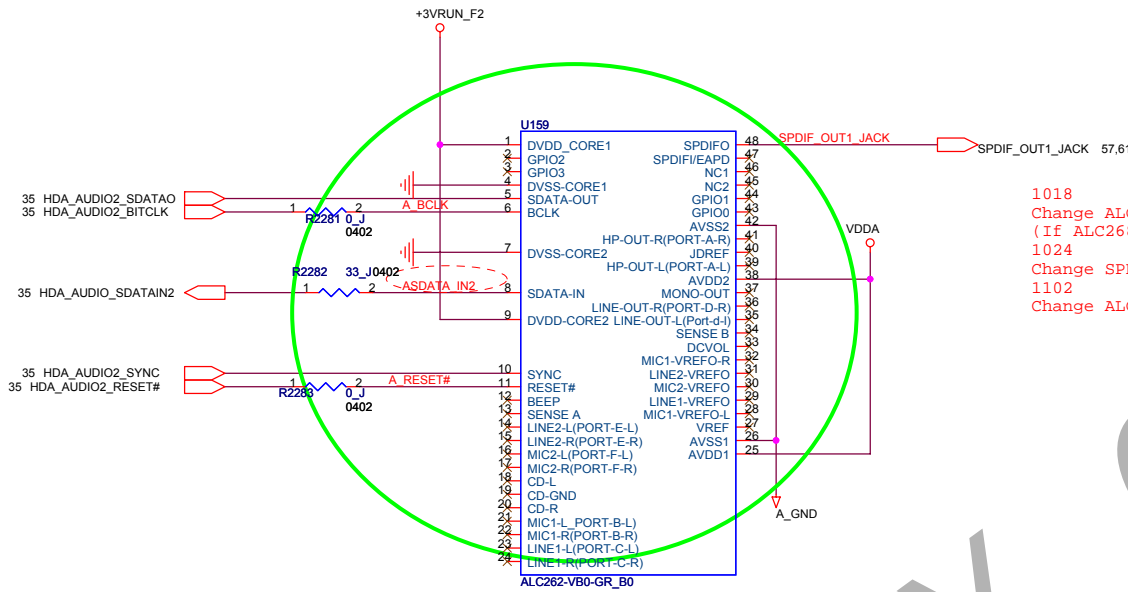
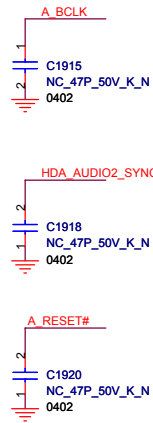
0104
Change R1361 From 33k to 22k For improve Mute_TR signal quality well.

INTERNAL MIC(Non)



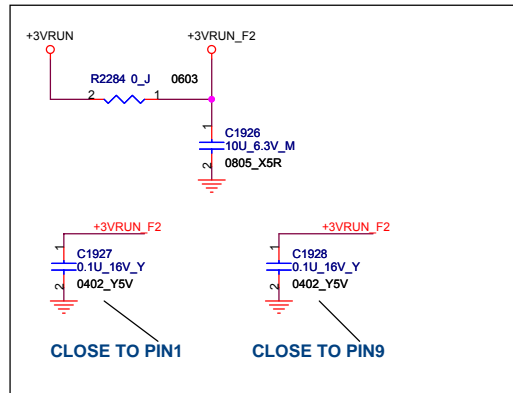
www.vinafix.vn

Anti-Glitch

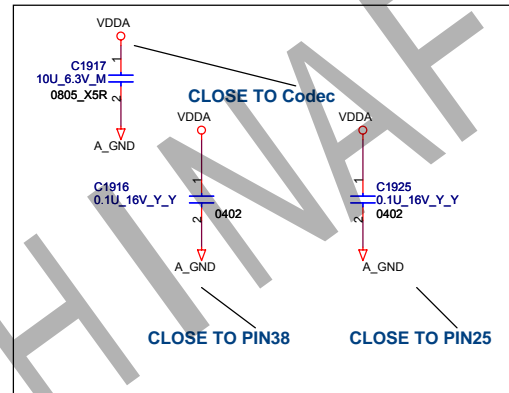


1018
Change ALC262 to ALC268.
(If ALC268 sample schedule delay, change to ALC262)
1024
Change SPDIF of Second codec to MB optical out
1102
Change ALC268 to ACL262

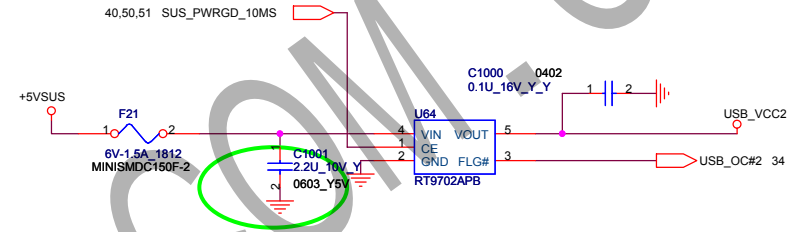
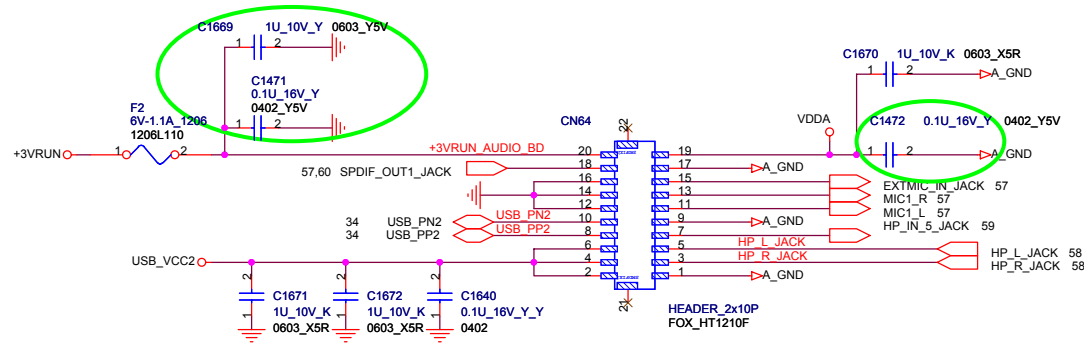
Decoupling Caps, place close to power pin.



Decoupling Caps, place close to power pin.

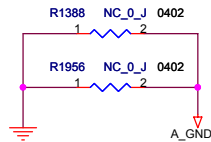


Audio Board connector

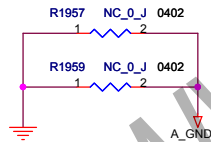


Backup two jumper resistors for bridge between GND and A_GND

Close screw hole H3

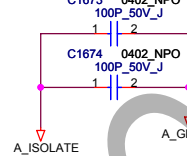


Close screw hole H5

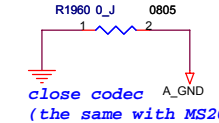
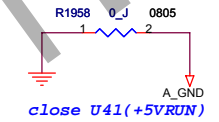
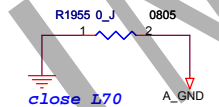


Isolate screw hole H4, and add EMI/ESD solution

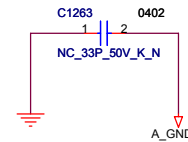
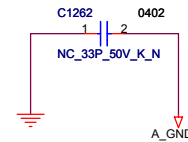
EMI



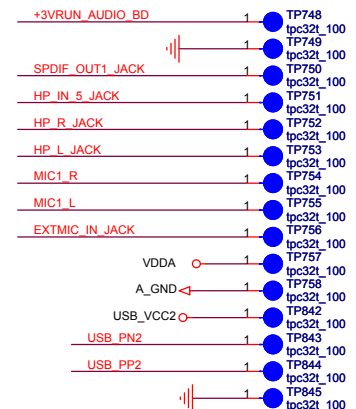
Add jumper resistor for Return patch



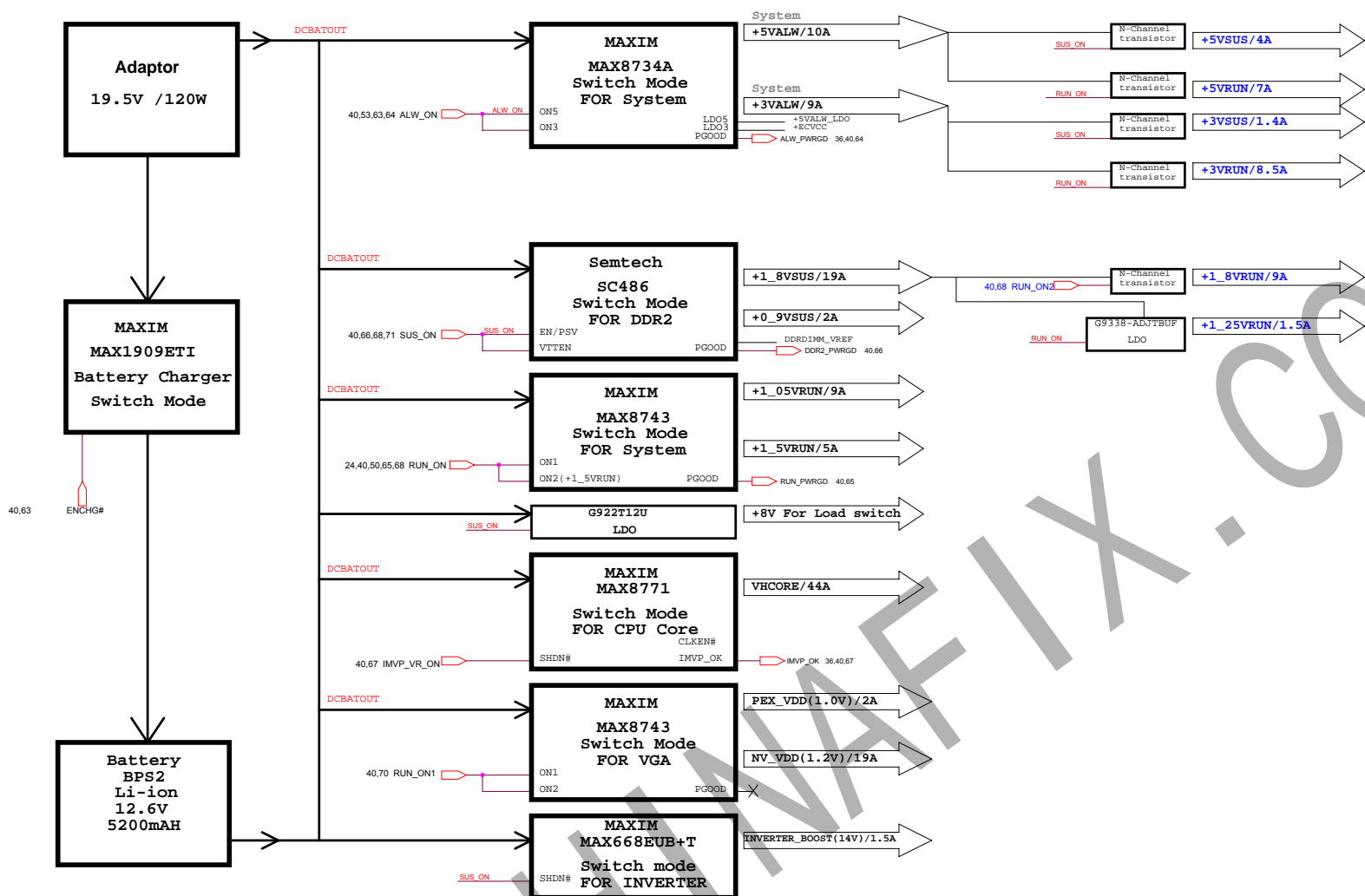
Original EMI back up solution to continue with MS20(bridge between GND and A_GND)

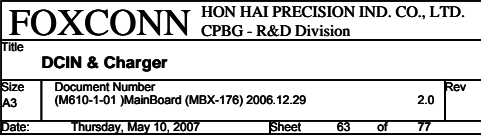


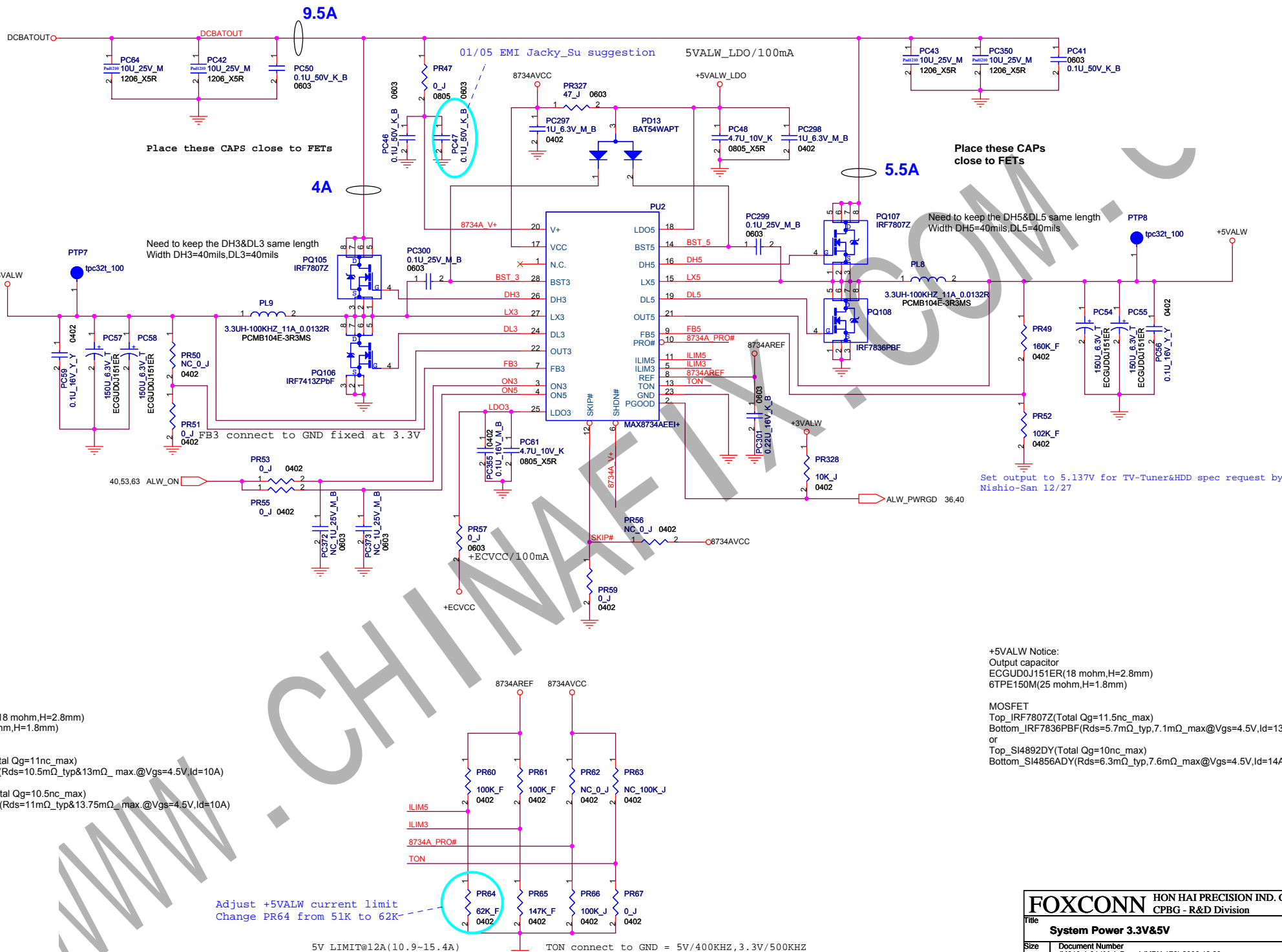
BFT Test Pad



FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title			
Audio Board conn			
Size	Document Number		Rev
A3	(M610-1-01) MainBoard (MBX-176) 2007.1.4		2.0
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+3VALW Notice:
Output capacitor
ECGUD0J151ER(18 mohm,H=2.8mm)
6TPE150M(25 mohm,H=1.8mm)

MOSFET
Top_IRF7807Z(Total Qg=11nc_max)
Bottom_IRF7413Z(Rds=10.5mΩ_typ&13mΩ_max@Vgs=4.5V,Id=10A)
or
Top_SI4892DY(Total Qg=10.5nc_max)
Bottom_SI4392DY(Rds=11mΩ_typ&13.75mΩ_max@Vgs=4.5V,Id=10A)

Adjust +5VALW current limit
Change PR64 from 51K to 62K

5V LIMIT@12A(10.9~15.4A)
3V LIMIT@11A(9.2~12.3A)

TON connect to GND = 5V/400KHZ,3.3V/500KHZ

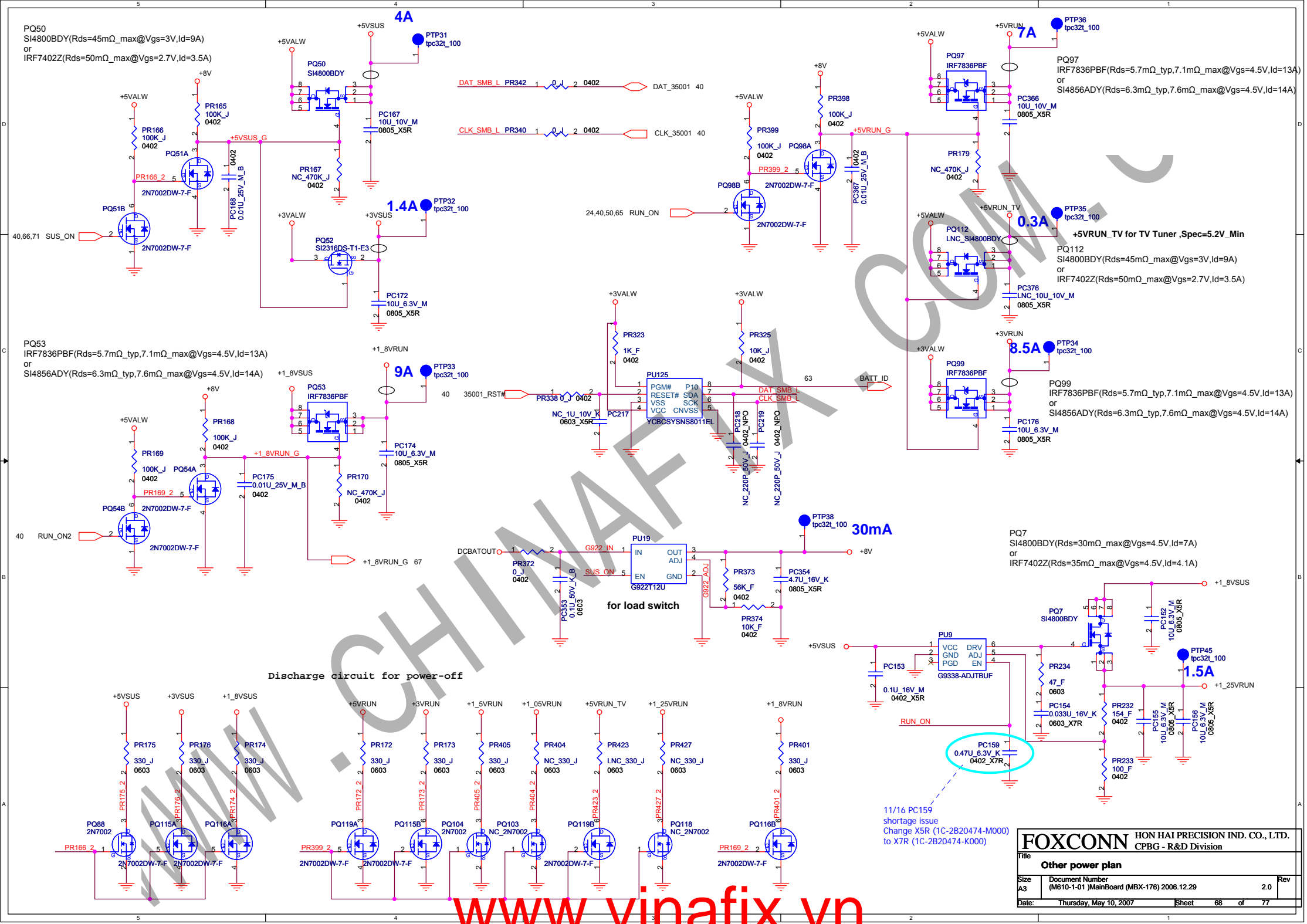
+5VALW Notice:
Output capacitor
ECGUD0J151ER(18 mohm,H=2.8mm)
6TPE150M(25 mohm,H=1.8mm)

MOSFET
Top_IRF7807Z(Total Qg=11.5nc_max)
Bottom_IRF7836PBF(Rds=5.7mΩ_typ,7.1mΩ_max@Vgs=4.5V,Id=13A)
or
Top_SI4892DY(Total Qg=10nc_max)
Bottom_SI4856ADY(Rds=6.3mΩ_typ,7.6mΩ_max@Vgs=4.5V,Id=14A)

FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title System Power 3.3V&5V			
Size A3	Document Number (M610-1-01) MainBoard (MBX-176) 2006.12.29	2.0	Rev
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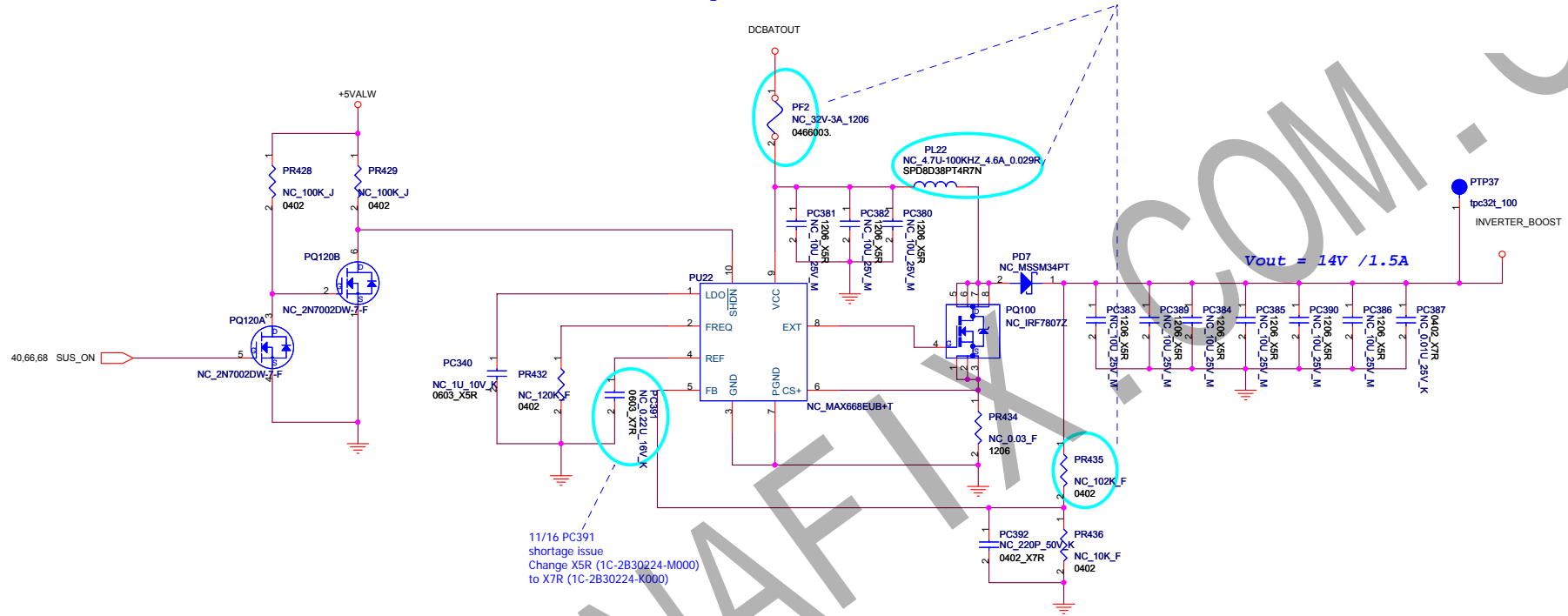
www.vinafix.vn

PQ50
SI4800BDY(Rds=45mΩ_max@Vgs=3V,Id=9A)
or
IRF7402Z(Rds=50mΩ_max@Vgs=2.7V,Id=3.5A)



FOXCONN		HON HAI PRECISION IND. CO., LTD.	
Title		CPBG - R&D Division	
Other power plan			
Size A3	Document Number (M610-1-01) MainBoard (MBX-176) 2006.12.29	2.0	Rev
Date:	Thursday, May 10, 2007	Sheet	68 of 77

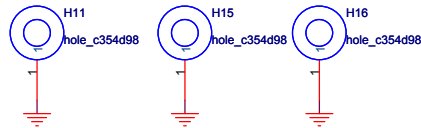
Boost circuit design change.
 Add PF2 (32V-3A_1206) fuse for boost circuit,
 Change PL22 from 8UH-100KHZ_2.5A_0.07R to 4.7U-100KHZ_4.6A_0.029R.
 Change PR435 from 95.3K to 102K



FOXCONN HON HAI PRECISION IND. CO., LTD.			
CPBG - R&D Division			
Title STEP_UP			
Size	Document Number	Rev	
Custom	(M610-1-01) MainBoard (MBX-176) 2006.12.29	2.0	
Date:	Thursday, May 10, 2007	Sheet	71 of 77

HOLE

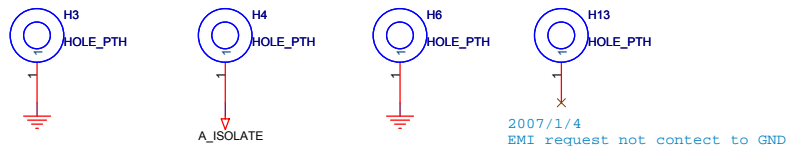
Type 1



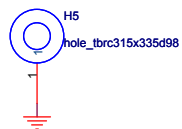
Type 2

Type 3

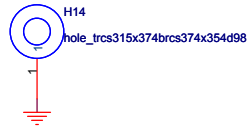
Type 4



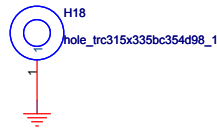
Type 5



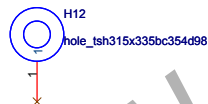
Type 6



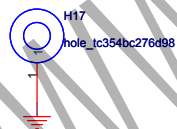
Type 7



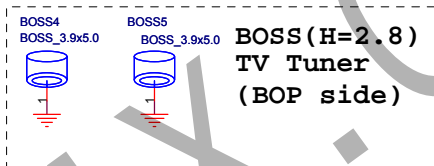
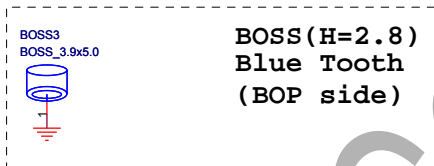
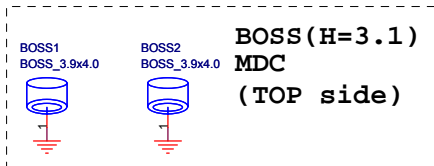
Type 8



Type 9



Type CPU



Type NPTH Guide (spherical)HOLD



Type NPTH Guide (oval-shaped)HOLD



