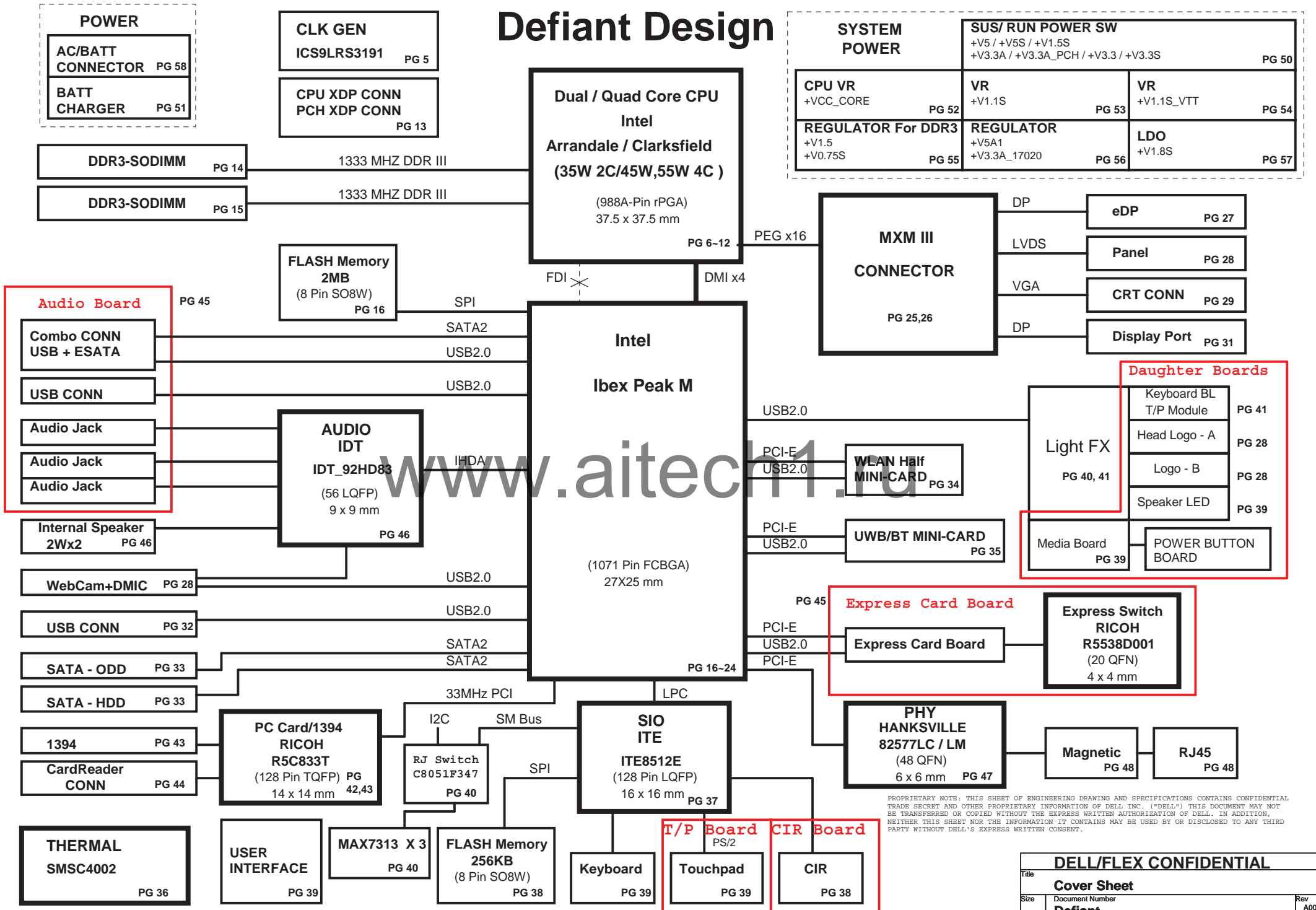


Defiant Design



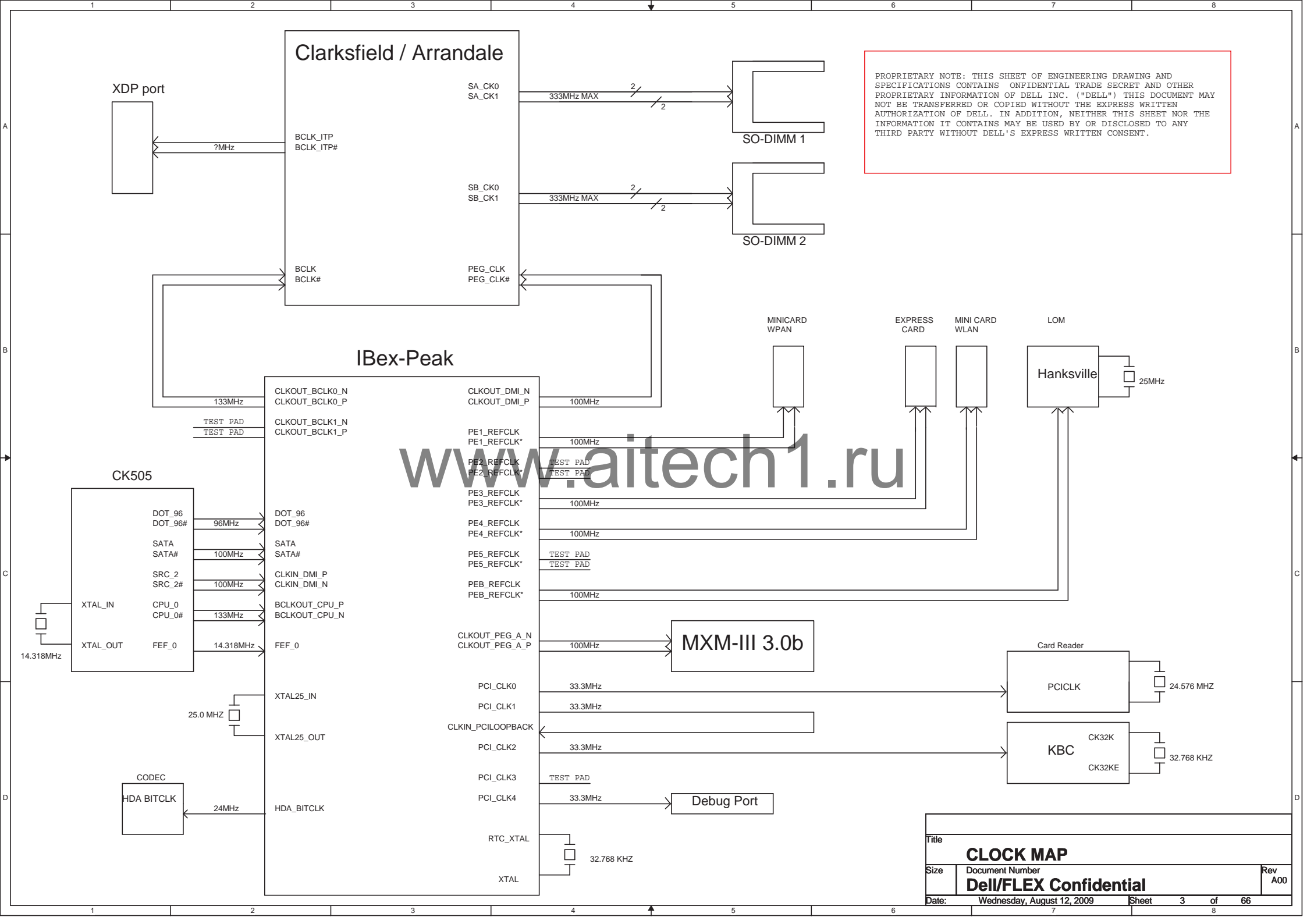
INDEX		INDEX	
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3	CLOCK MAP	45	Audio Board and Exp Board CONN
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5	CLOCK GEN (SLG8SP585)	47,48	PHY(HANKSVILLE),RJ45&Transform
6-12	CPU (Arrandale / Clarksfield)	49	System Reset Circuit
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14,15	DDRIII SO-DIMM(204P)	51	CHARGER (MAX8731)
16-24	PCH	52	CPU Core (MAX8786)
25,26	MXM CONN	53	+V1.1S (MAX8792)
27	eDP CONN	54	+V1.1S_VTT (MAX8792)
28	LCD Conn	55	DDR3 1.5V/0.75V (MAX8632)
29	CRT Conn	56	SYS 5V/3V(MAX17020)
30	MXM& PCH DDC/ AUX MUX	57	+V1.8S (RT9025-25PSP)
31	DP CONN	58	DCIN Bait
32	USB	59	PAD/ SCREW/ Moat Cap
33	HDD & CD ROM/ G-Sensor	60	Power Block Diagram
34	MINI-CARD (WLAN)	61	Reset Map
35	MINI-CARD (WPAN)	62	LED BOARD
36	FAN & THERMAL EMC4002	63	KBC Power Up Sequence
37	SIO (ITE8512)	64	SMBus Map_PCH
38	FLASH/ CIR	65	SMBus Map_ITE8512E
39	Keyboard, Daughtor Board conn & User Interface	66-67	HISTORY
40,41	LED Light FX		

Power States								
Power Rail	Control Signal	S0	S3	S4	S5	G3	S4/ M-off	S5/ M-off
+PWR_SRC	N/A	V	V	V	V			
+V0.75S	RUN_ON	V						
+V1.1S_VTT	+V1.1S_VTT_MXM1_PWRON	V						
+V1.1S	RUN_ON	V						
+V1.5S	RUN_ON	V						
+V1.5	SUS_ON	V	V					
+V1.8S	RUN_ON	V						
+V3.3A	3V_ALW_ON	V	V	V	V			
+V3.3M_LAN	PM_SLP_LAN#	V	define WOL	define WOL	define WOL			
+V3.3S	RUN_ON	V						
+V3.3	SUS_ON	V	V					
+V5A1	+5V_EN2	V	V	V	V			
+V5A2	+PWR_SRC	V	V	V	V			
+V5	SUS_ON	V	V					
+5V_HDD	N/A	V						
+5V_MOD	N/A	V						
+V5S	RUN_ON	V						
+GFX_PWR_SRC	RUN_ON	V						
+LCDVCC	ENVDD	V						
+V3.3A_RTC	RTC	V	V	V	V	V		
+VCC_CORE	IMVP_VR_ON	V						
+USB_RIGHT_PWR	USB_SIDE_EN#	V	define	define				
+USB_LEFT_PWR	USB_BACK_EN#	V	define					
+V15_A	N/A	V	V	V	V			
+V3.3A_17020	+3.3V_EN2	V	V	V	V			
+V1.0M_LAN	PM_SLP_LAN#	V	define WOL	define WOL	define WOL			

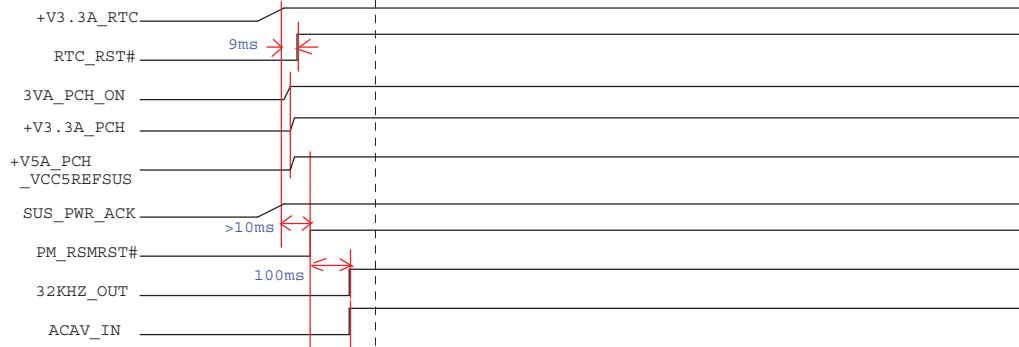
By Albert

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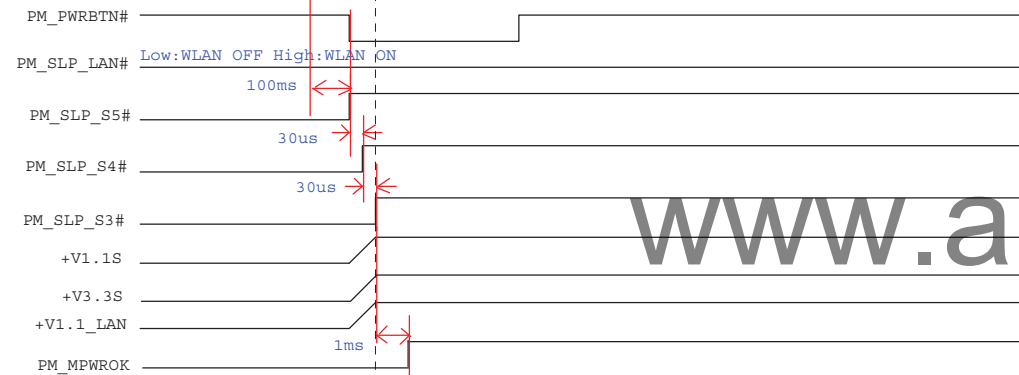
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FRONTPAGE			
Size	Document Number		Rev
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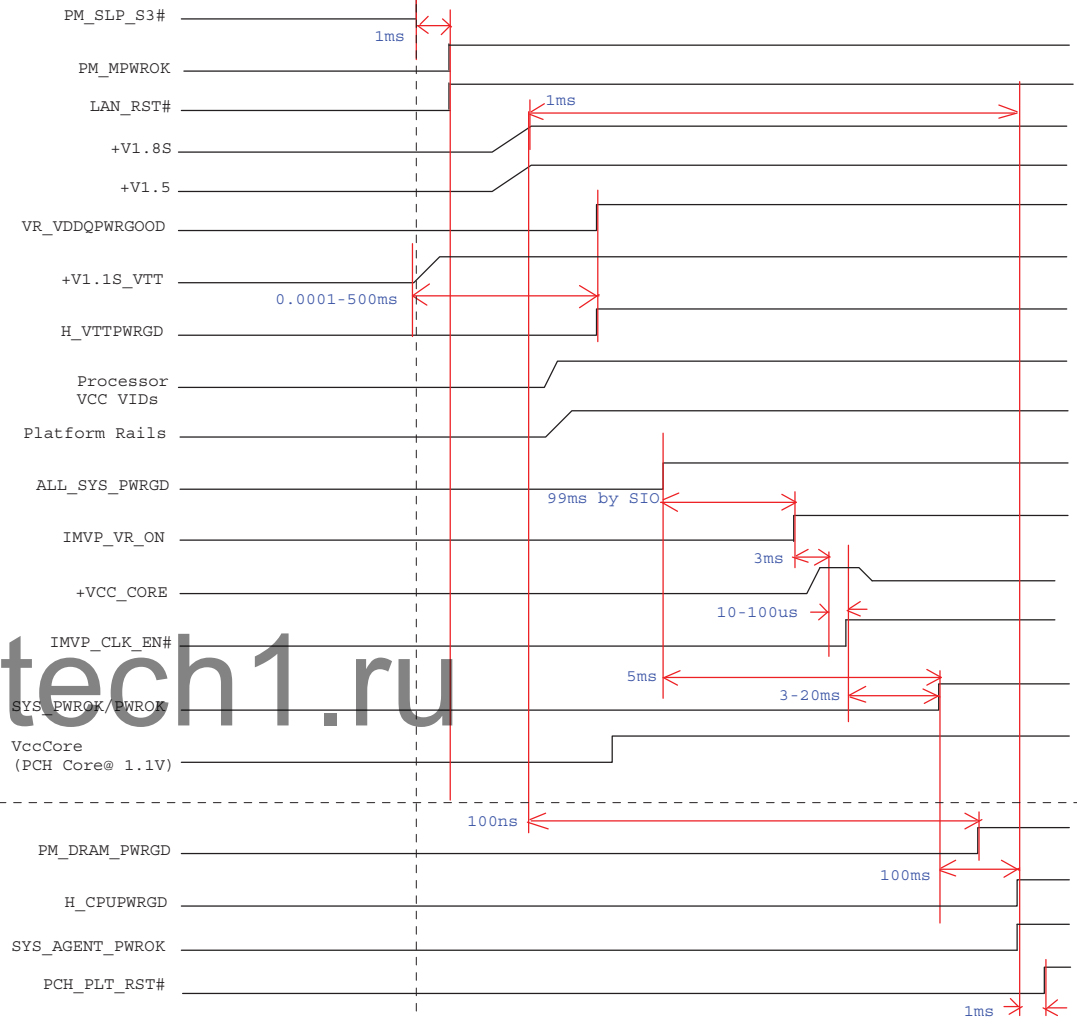
G3 to Sx



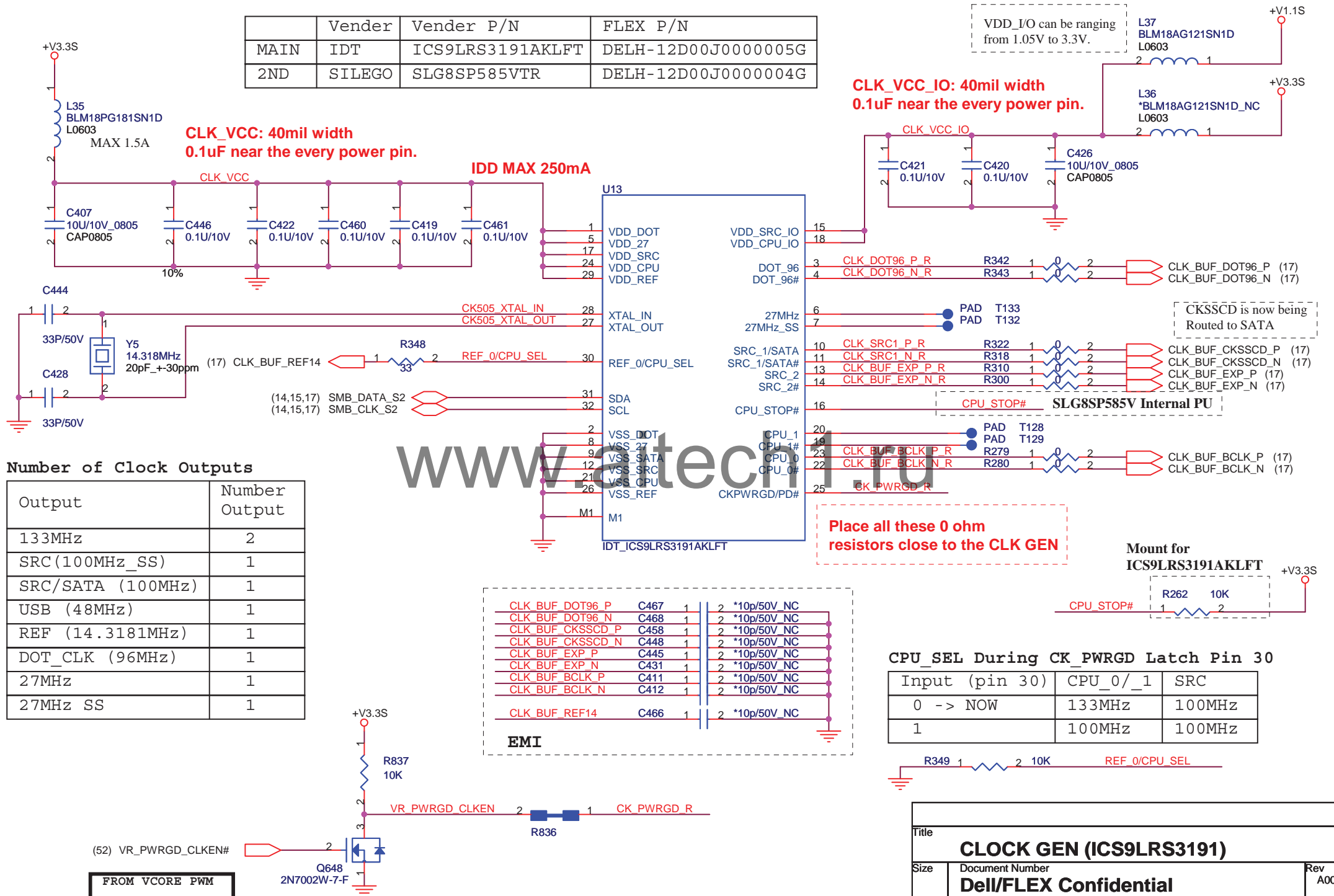
Sx to S0



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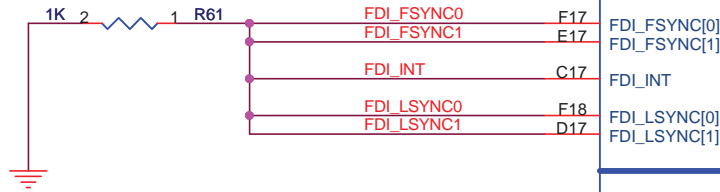
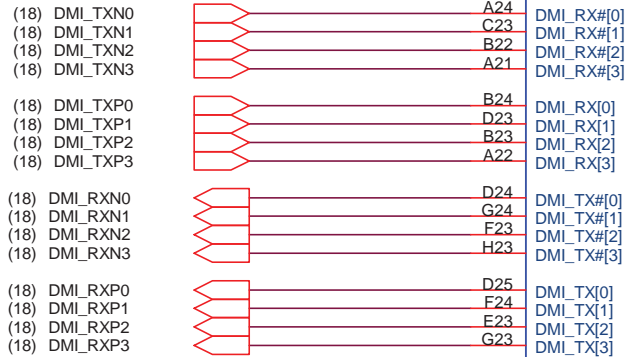
	Vender	Vender P/N	FLEX P/N
MAIN	IDT	ICS9LRS3191AKLFT	DELH-12D00J00000005G
2ND	SILEGO	SLG8SP585VTR	DELH-12D00J00000004G



Title		
CLOCK GEN (ICS9LRS3191)		
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ARRANDALE/CLARKSFIELD PROCESSOR (DMI,PEG,FDI)

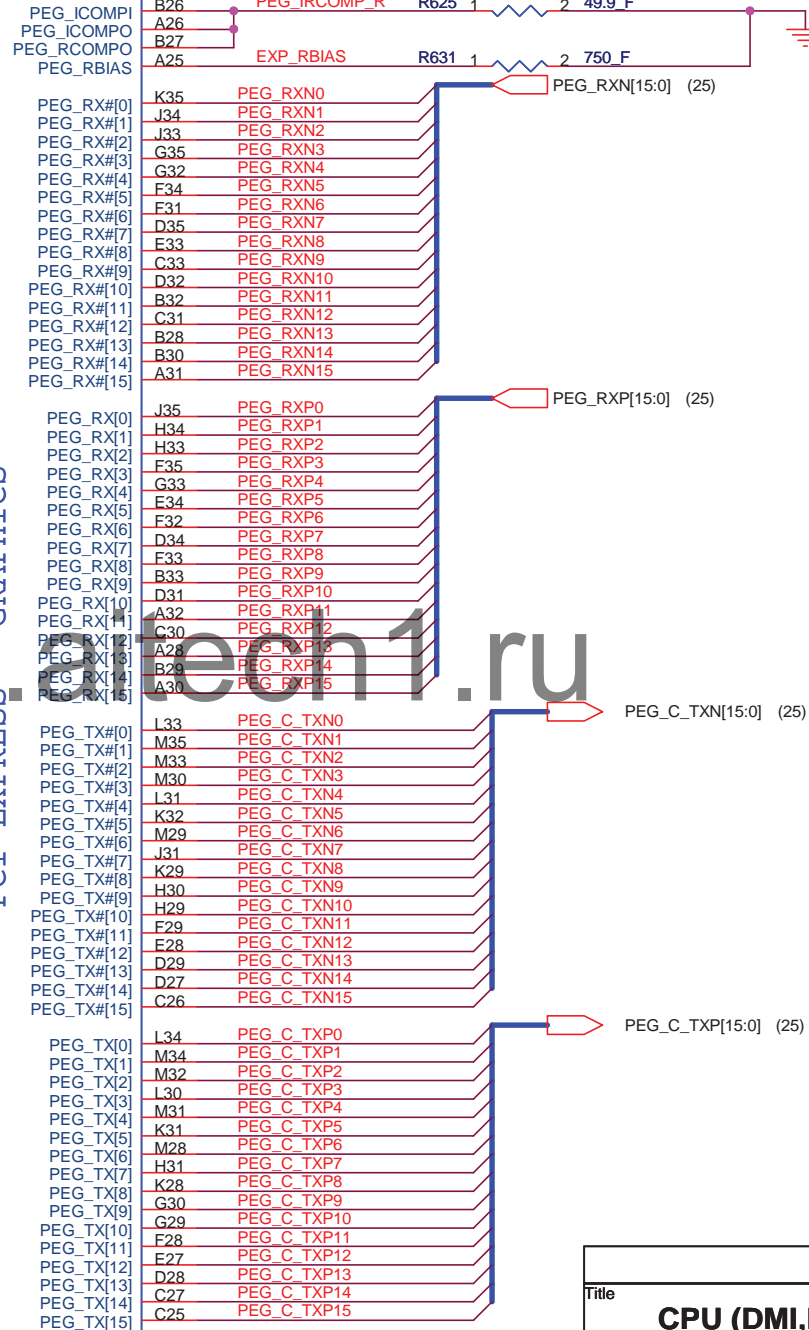
U600A



CPU Socket	FLEX P/N
FOXCONN	DELH-39D0120000003G
TYCO	DELH-39D0120000006G
Lotes	DELH-39D0120000007G

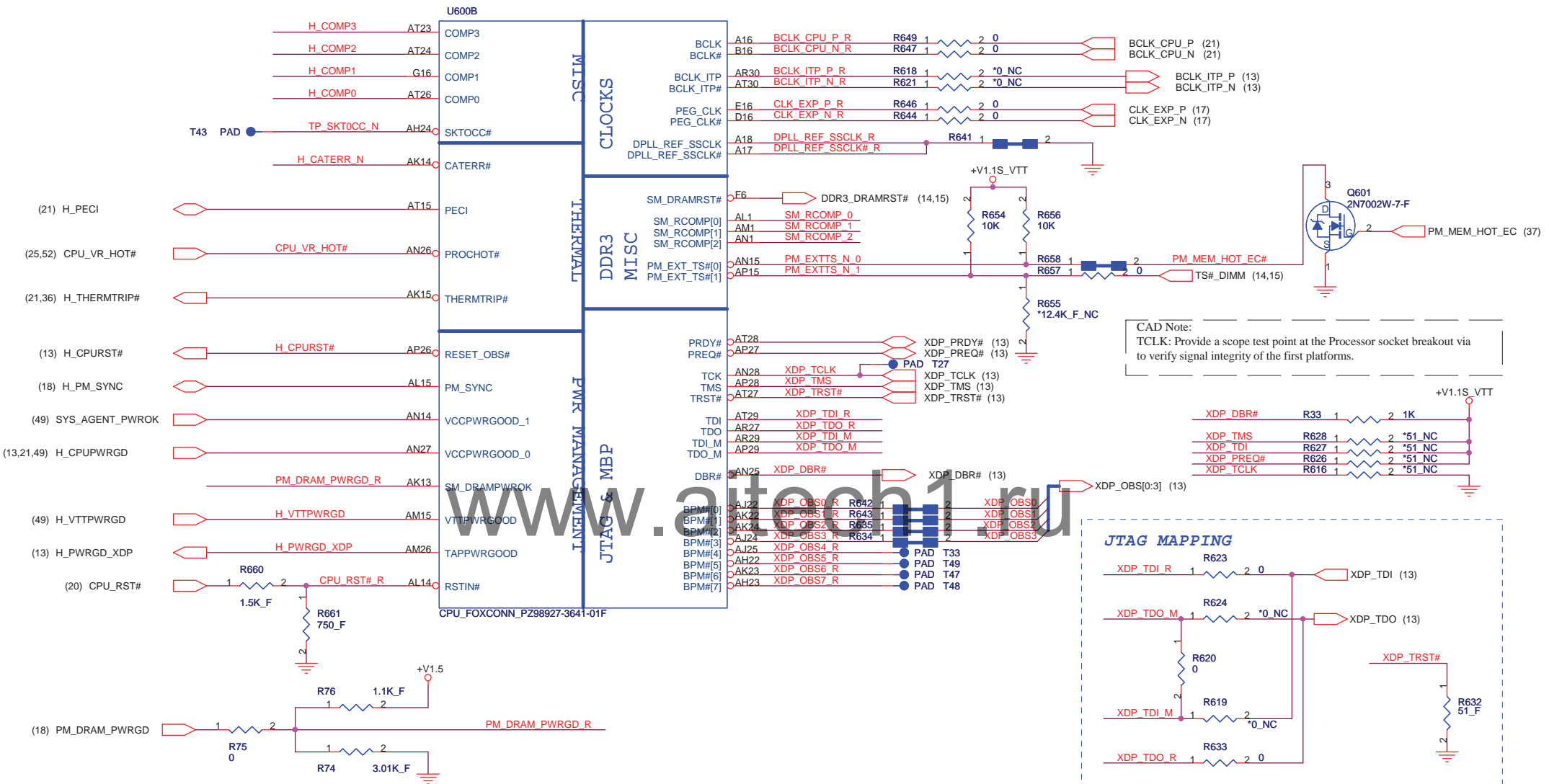
CLARKSFIELD CPU	FLEX P/N
45W 1G6 i7-720QM	DELH-11D00100000032G
45W 1G73 i7-820QM	DELH-11D00100000033G
55W 2G i7-920XM	DELH-11D00100000034G

CPU_FOXCONN_PZ98927-3641-01F



Title		
CPU (DMI,PEG,FDI) 1/7		
Size	Document Number	Rev
	Del/FLEX Confidential	A00
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	Sheet	6 of 66

ARRANDALE/CLARKSFIELD PROCESSOR (CLK,MISC,JTAG)



Processor Pullups

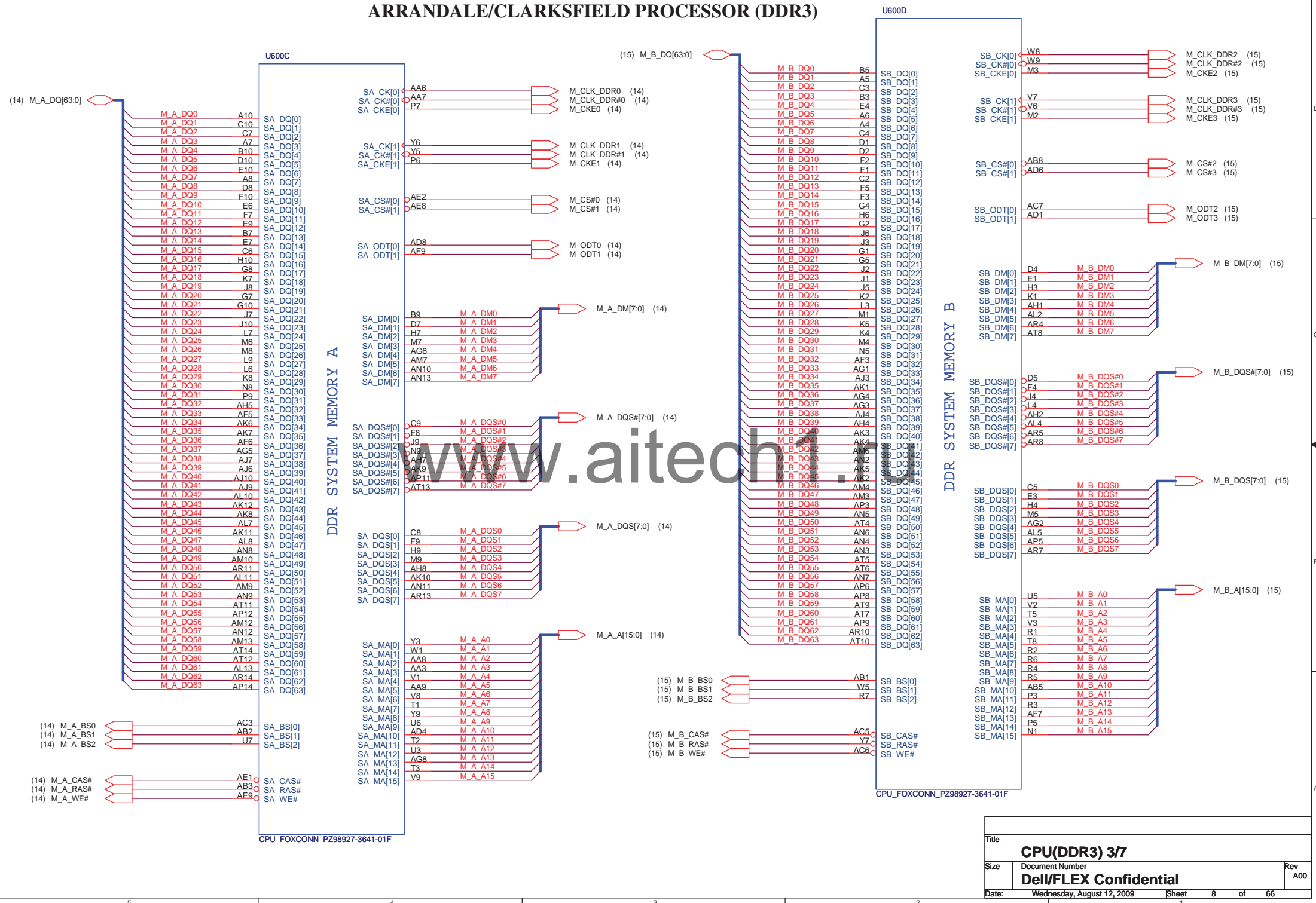
Processor Compensation Signals

DDR3 Compensation Signals

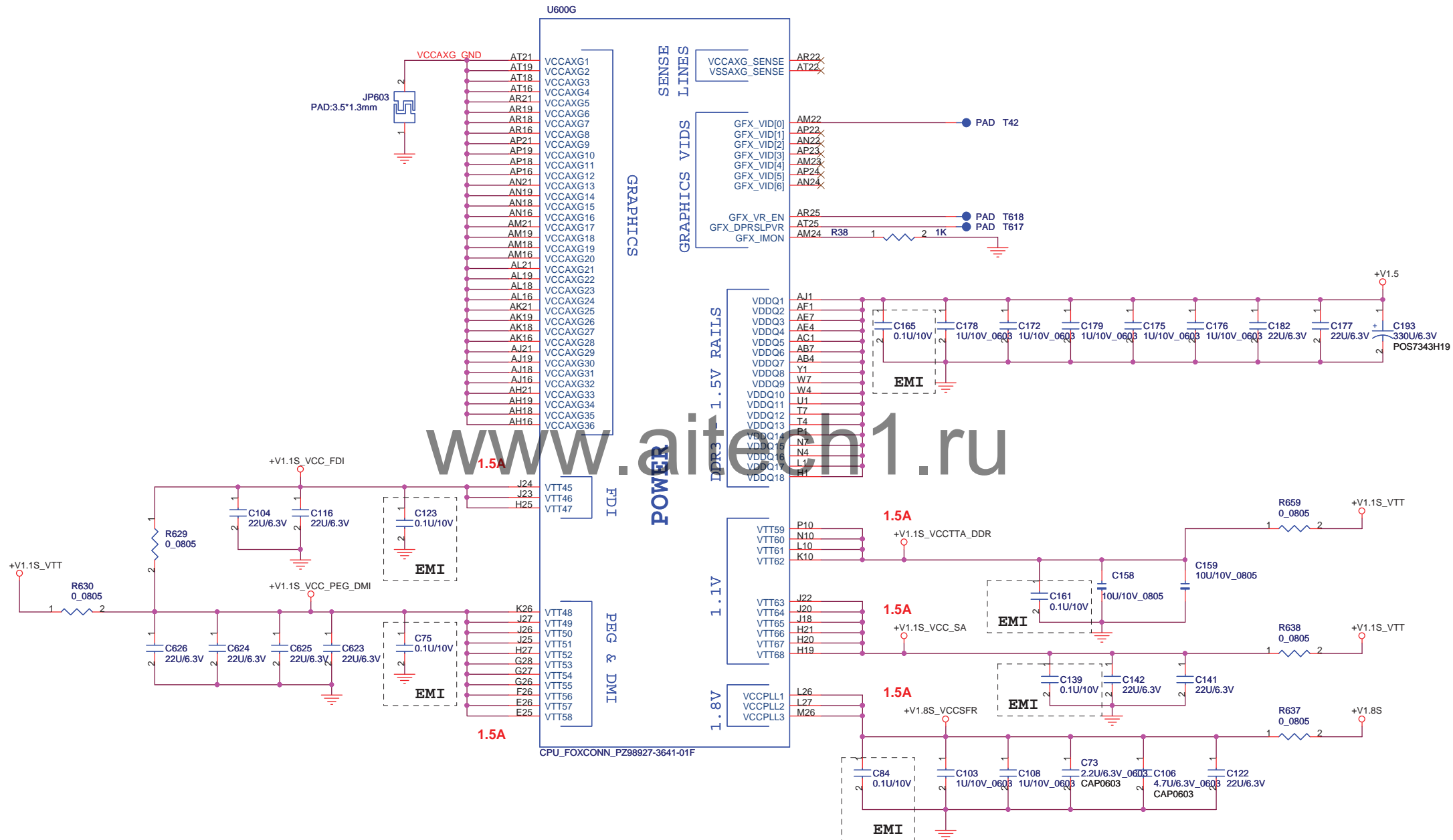
Scan Chain (Default)	
CPU Only	
GMCH Only	

Title		
CPU(CLK,MISC) 2/7		
Size	Document Number	Rev
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ARRANDALE/CLARKSFIELD PROCESSOR (DDR3)

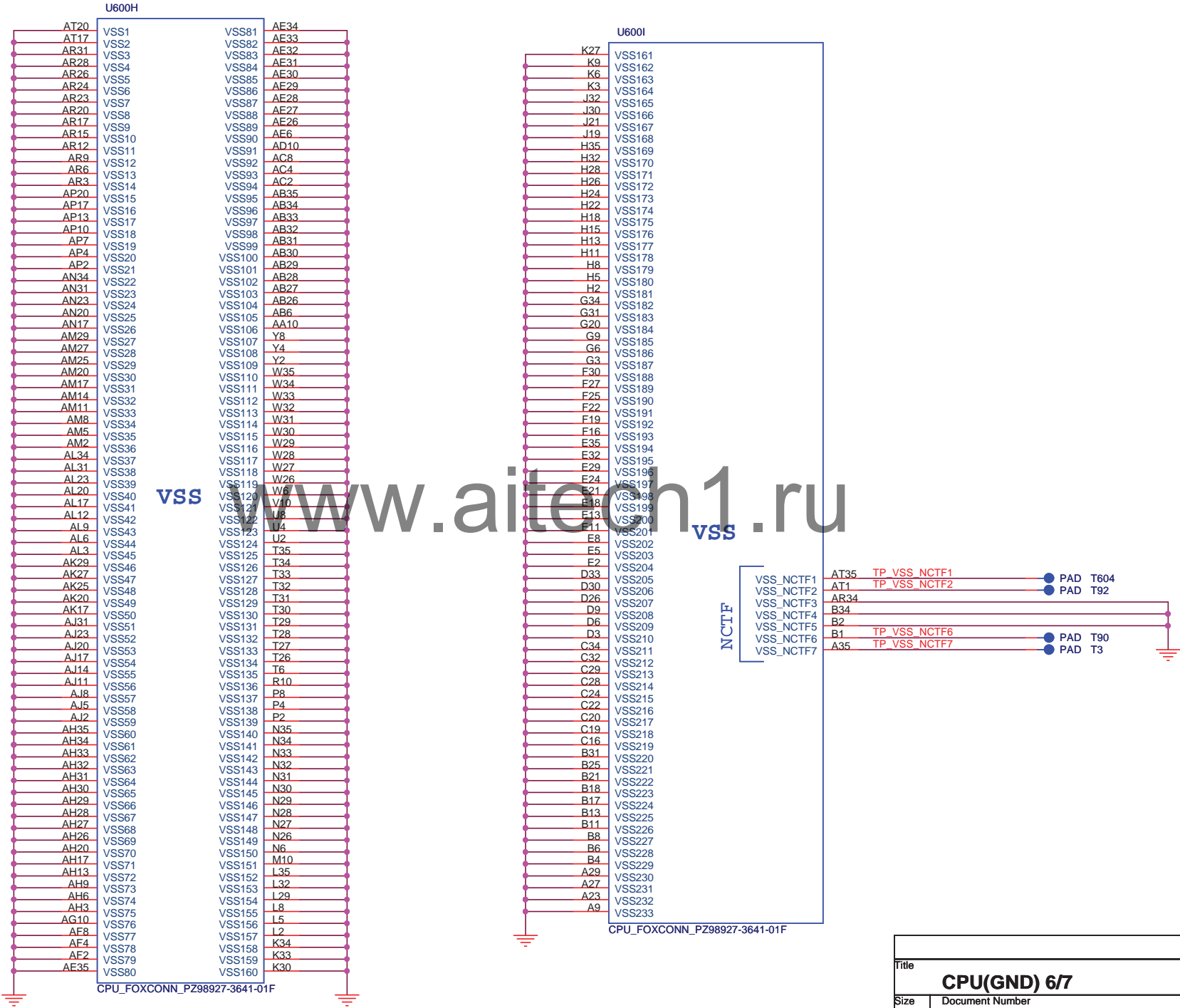


ARRANDALE/CLARKSFIELD PROCESSOR (GRAPHICS POWER)

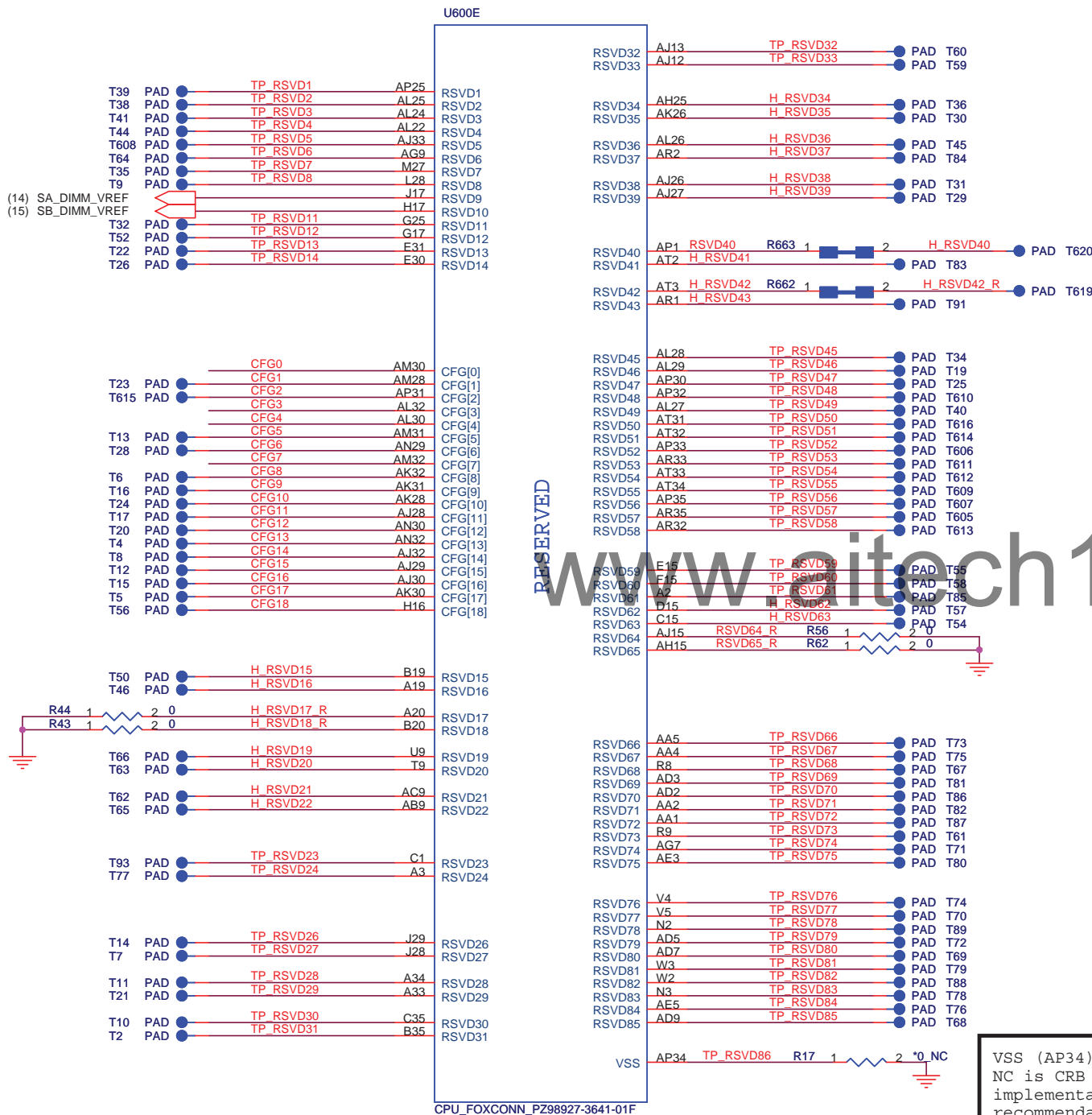


Title			
CPU(GRAPHICS PWR) 5/7			
Size	Document Number		Rev
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ARRANDALE/CLARKSFIELD PROCESSOR (GND)

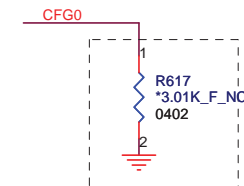


ARRANDALE/CLARKSFIELD PROCESSOR(RESERVED, CFG)

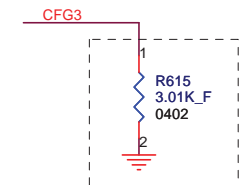


CFG Straps for PROCESSOR

PCI-Express Configuration Select	
CFG0	1:Single PEG(Default) 0:Bifurcation enabled



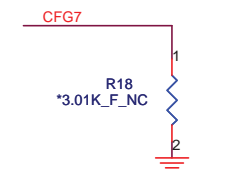
CFG3 - PCI-Express Static Lane Reversal	
CFG3	1 :Normal Operation(Default) 0 :Lane Numbers Reversed 15 > 0, 14 > 1, ...



CFG4 - Display Port Presence	
CFG4	1:Disabled; No Physical Display Port attached to Embedded Display Port (Default) 0:Enabled; An external Display Port device is connected to the Embedded Display Port

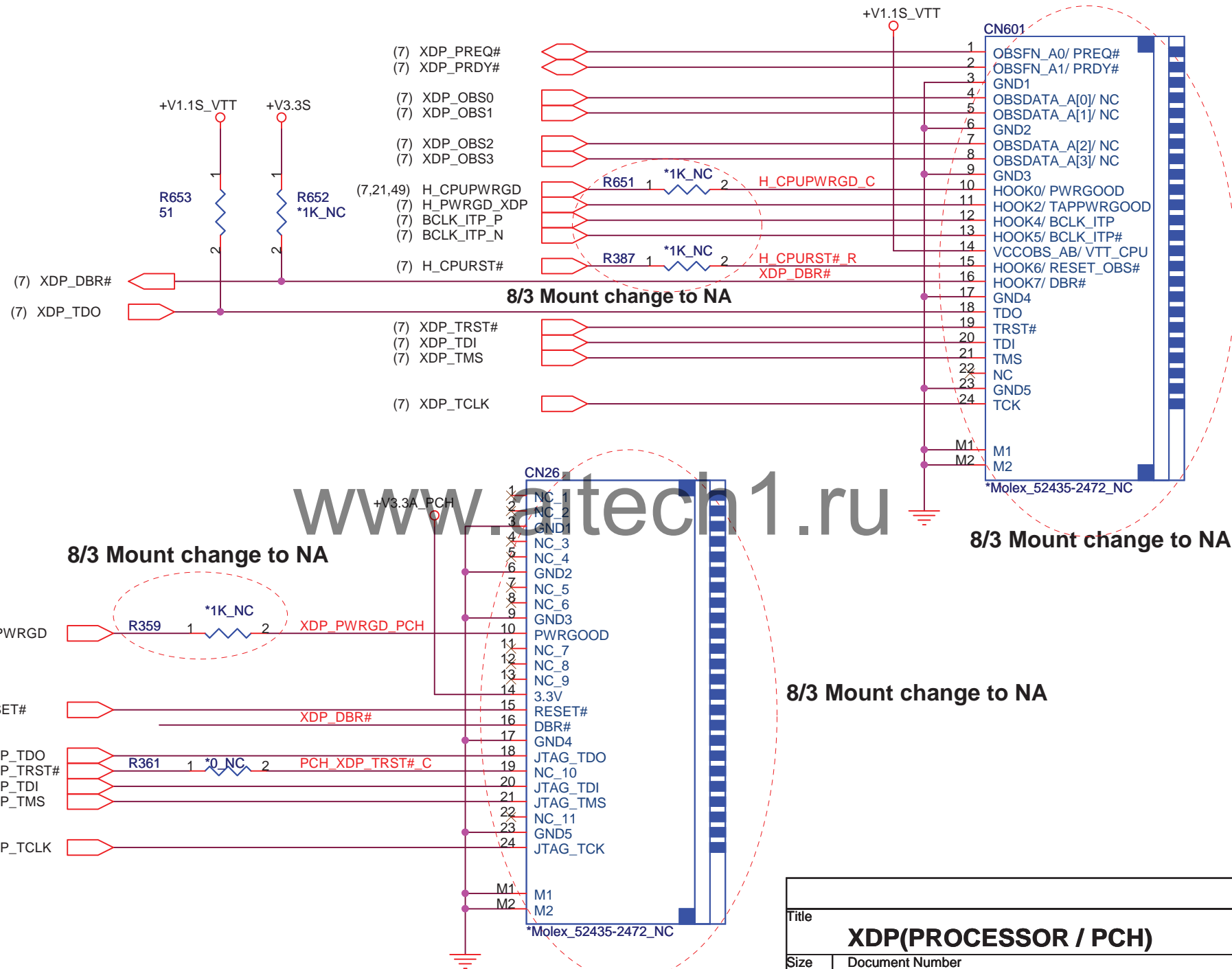


CFG7	Only temporary for early CFD samples (rPGA/BGA) [For details please refer to the WW33 MoW and sighting report].
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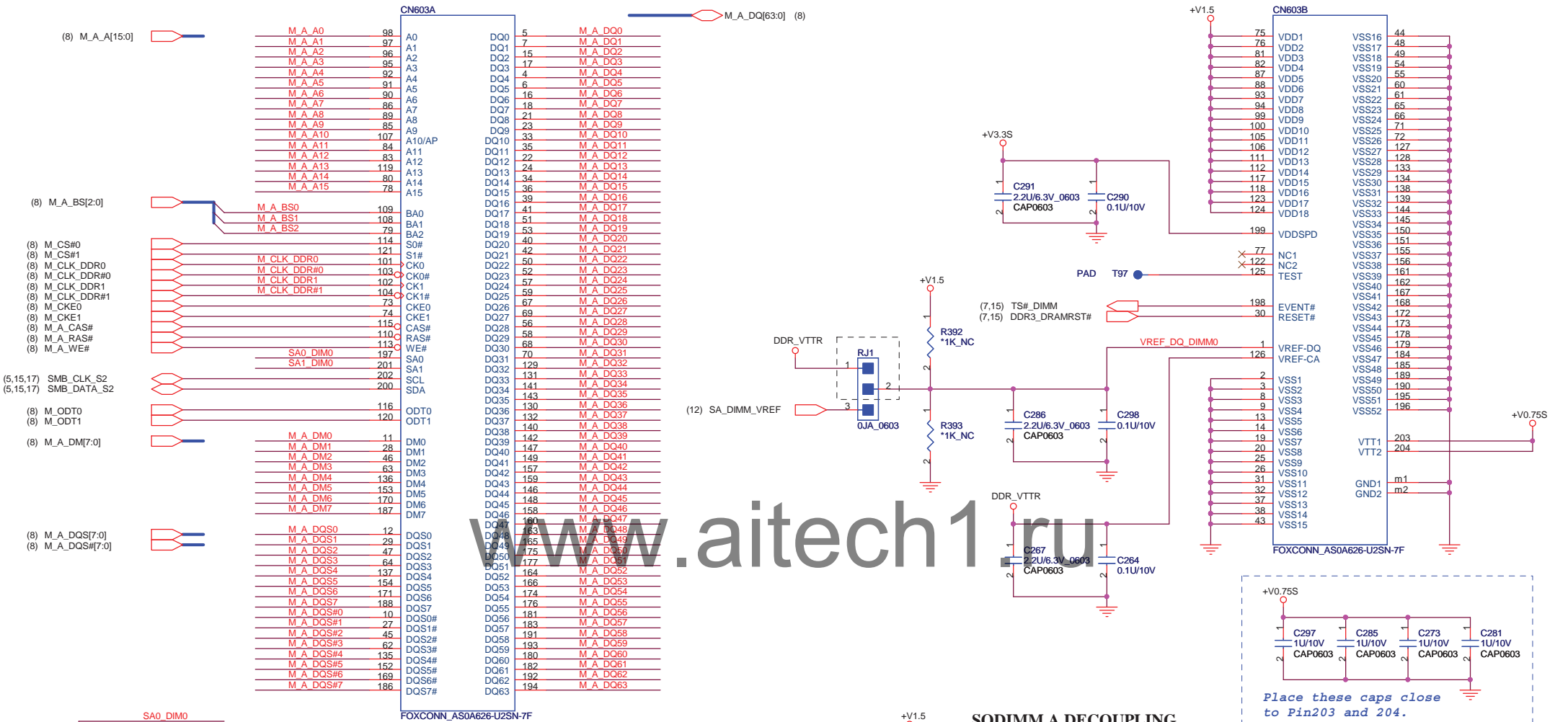


VSS (AP34) can be left NC is CRB implementation; EDS/DG recommendation to GND

Title		
CPU(RSVD,CFG) 7/7		
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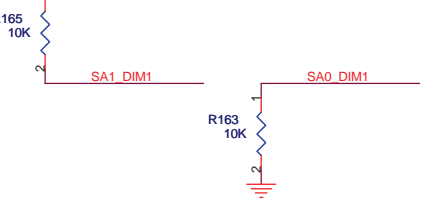
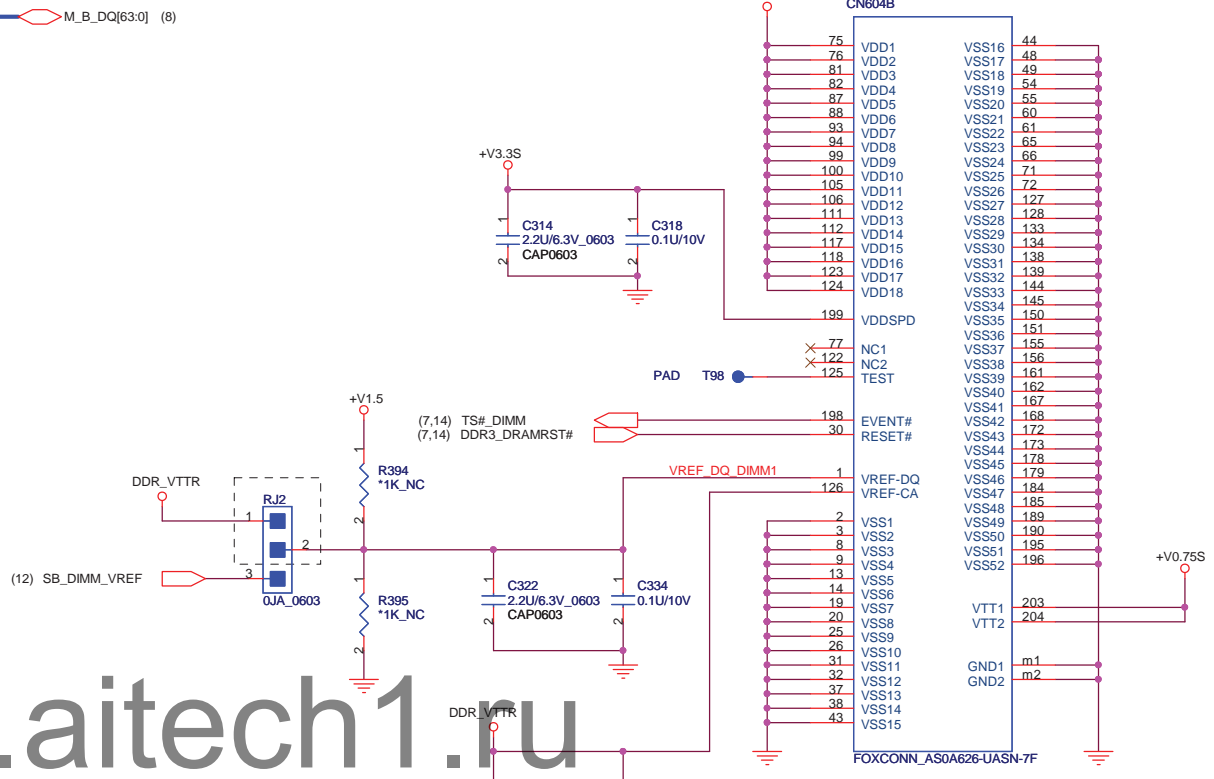
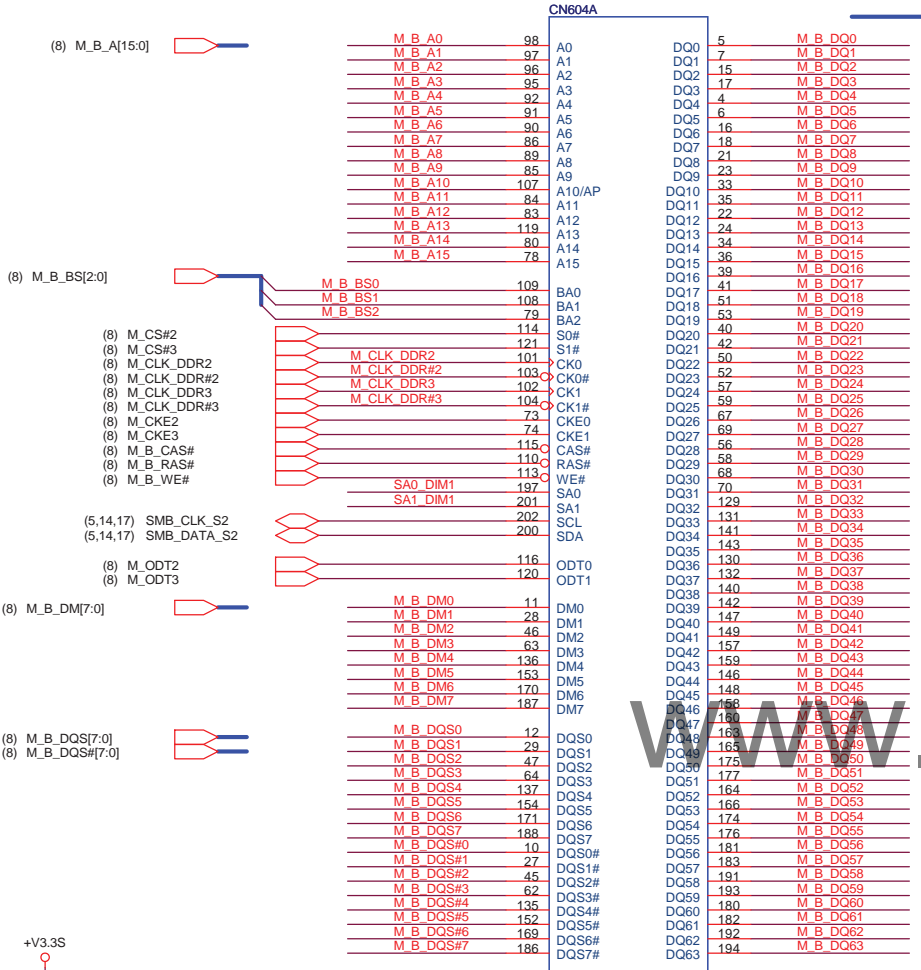
Title			
XDP(PROCESSOR / PCH)			
Size	Document Number		Rev
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SO-DIMM Address		
SA0_DIM0 = 0, SA1_DIM0 = 0	SPD	0xA0
	TS	0x30
SA0_DIM0 = 1, SA1_DIM0 = 0	SPD	0xA2
	TS	0x32

	Vender	FLEX P/N	DESCRIPTION
MAIN	FOXCONN	DELH-39D0370000009G	DDR3 SO-DIMM H:5.2mm AS0A626-U2SN-7F
2ND	TYCO	DELH-39D03700000011G	DDR3 SO-DIMM H:5.2mm 2-2013289-2

Title		
DDR3 SO-DIMM1(204P)		
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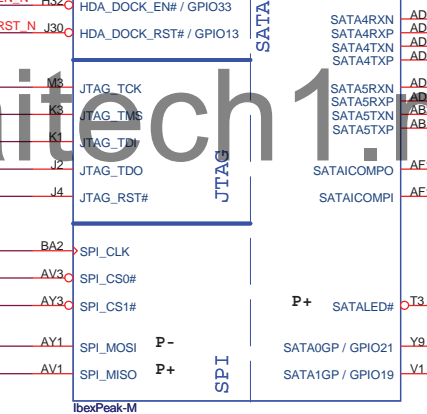
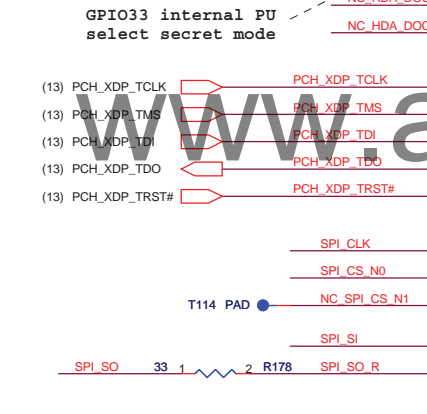
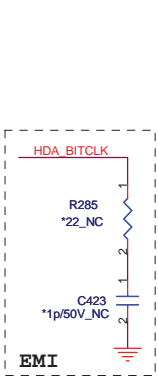
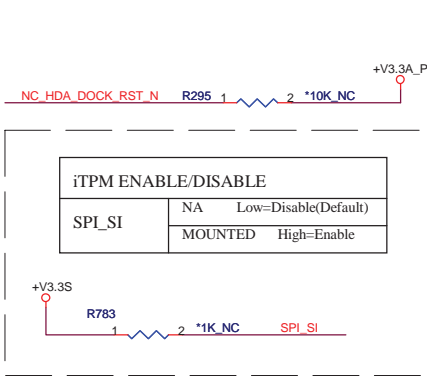
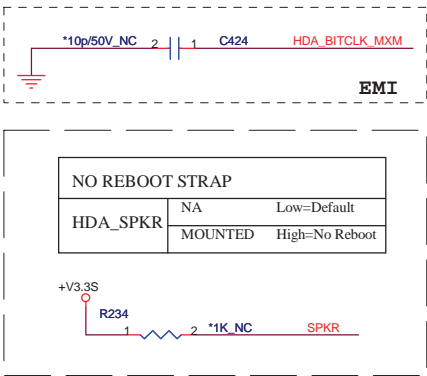
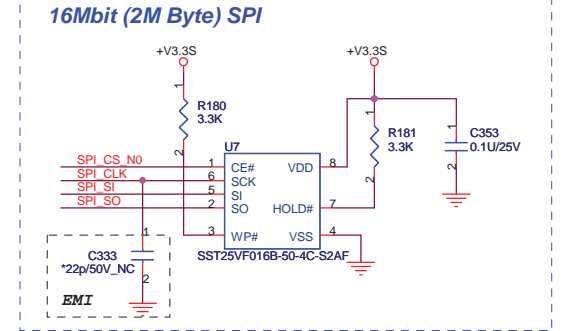
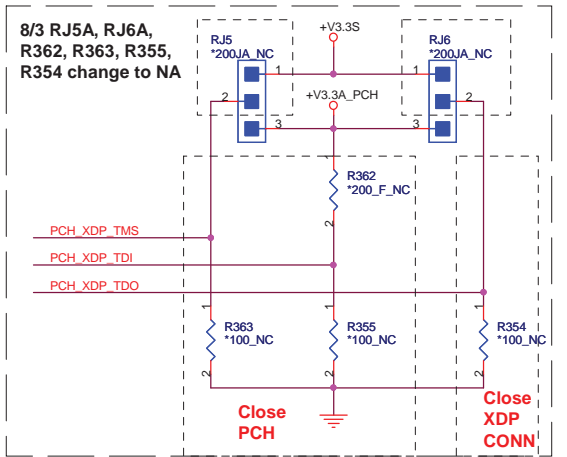
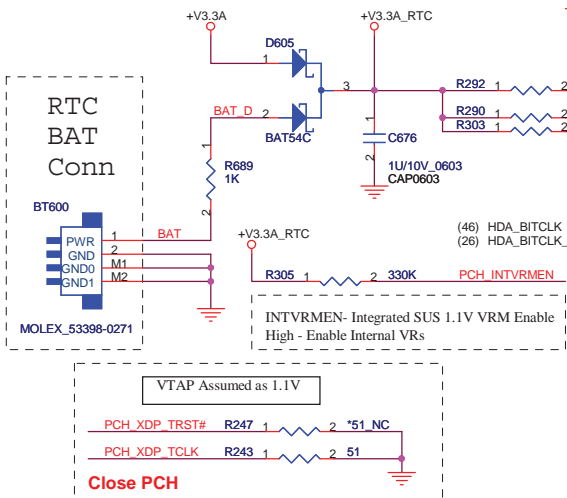


SO-DIMM Address	
SPD	0xA4
TS	0x34

	Vender	FLEX P/N	DESCRIPTION
MAIN	FOXCONN	DELH-39D0370000010G	DDR3 SO-DIMM H:9.2mm AS0A626-UASN-7F
2ND	TYCO	DELH-39D0370000012G	DDR3 SO-DIMM H:9.2mm 2-2013310-2

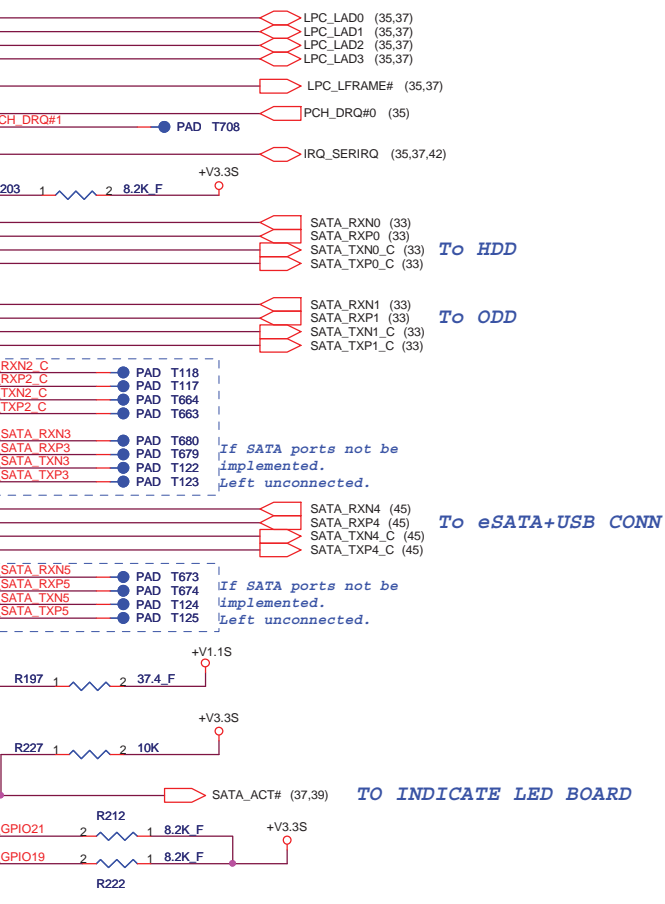
Title			
DDR3 SO-DIMM2(204P)			
Size	Document Number		Rev
Dell/FLEX Confidential			A00
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On-Die PLL Voltage Regulator Voltage Select		
High	set to 1.5V	
Low	set to 1.8V (Default)	



IBEX PEAK-M (HDA,JTAG,SATA)

Internal Pull-Up and Pull-Down	
Pull-Up	Mark
Pull-Up	P+
Pull-Down	P-



Flash Descriptor Security	
High	Flash Descriptor will be in effect (default)
Low	Descriptor Security will be overridden

Title	PCH(LPC,RTC,HDA,SATA)1/9		
Size	Document Number		Rev A00
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IBEX PEAK-M (PCI-E,SMBUS,CLK)

PCI-E* x1	Usage
Lane 1	UWB
Lane2	WWAN ->DEL
Lane 3	EXPRESS CARD -AUDIO BOARD
Lane 4	WLAN
Lane 5	NC
Lane 6	PHY
Lane 7	NC
Lane 8	NC

(35) PCIE_UWB_RX_N1
(35) PCIE_UWB_RX_P1
(35) PCIE_UWB_C_TX_N1
(35) PCIE_UWB_C_TX_P1

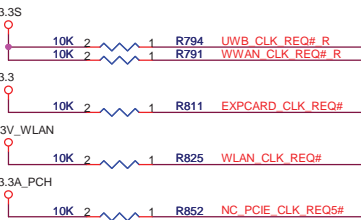
(45) PCIE_EXPCARD_RX_N3
(45) PCIE_EXPCARD_RX_P3
(45) PCIE_EXPCARD_C_TX_N3
(45) PCIE_EXPCARD_C_TX_P3

(34) PCIE_WLAN_RX_N4
(34) PCIE_WLAN_RX_P4
(34) PCIE_WLAN_C_TX_N4
(34) PCIE_WLAN_C_TX_P4

(47) PCIE_LAN_RX_N6
(47) PCIE_LAN_RX_P6
(47) PCIE_LAN_TX_N6
(47) PCIE_LAN_TX_P6

not
implemented

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(35) CLK_PCIE_UWB#
(35) CLK_PCIE_UWB

(35) UWB_CLK_REQ#

(45) CLK_PCIE_EXPCARD#
(45) CLK_PCIE_EXPCARD

(45) EXPCARD_CLK_REQ#

(34) CLK_PCIE_WLAN#
(34) CLK_PCIE_WLAN

(34) WLAN_CLK_REQ#

(47) CLK_PCIE_LAN#
(47) CLK_PCIE_LAN

(47) LAN_CLK_REQ#

SMBUS HUB

U14

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EN1
EN2
EN3
EN4
VSS

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

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EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

SCL1
SDA1

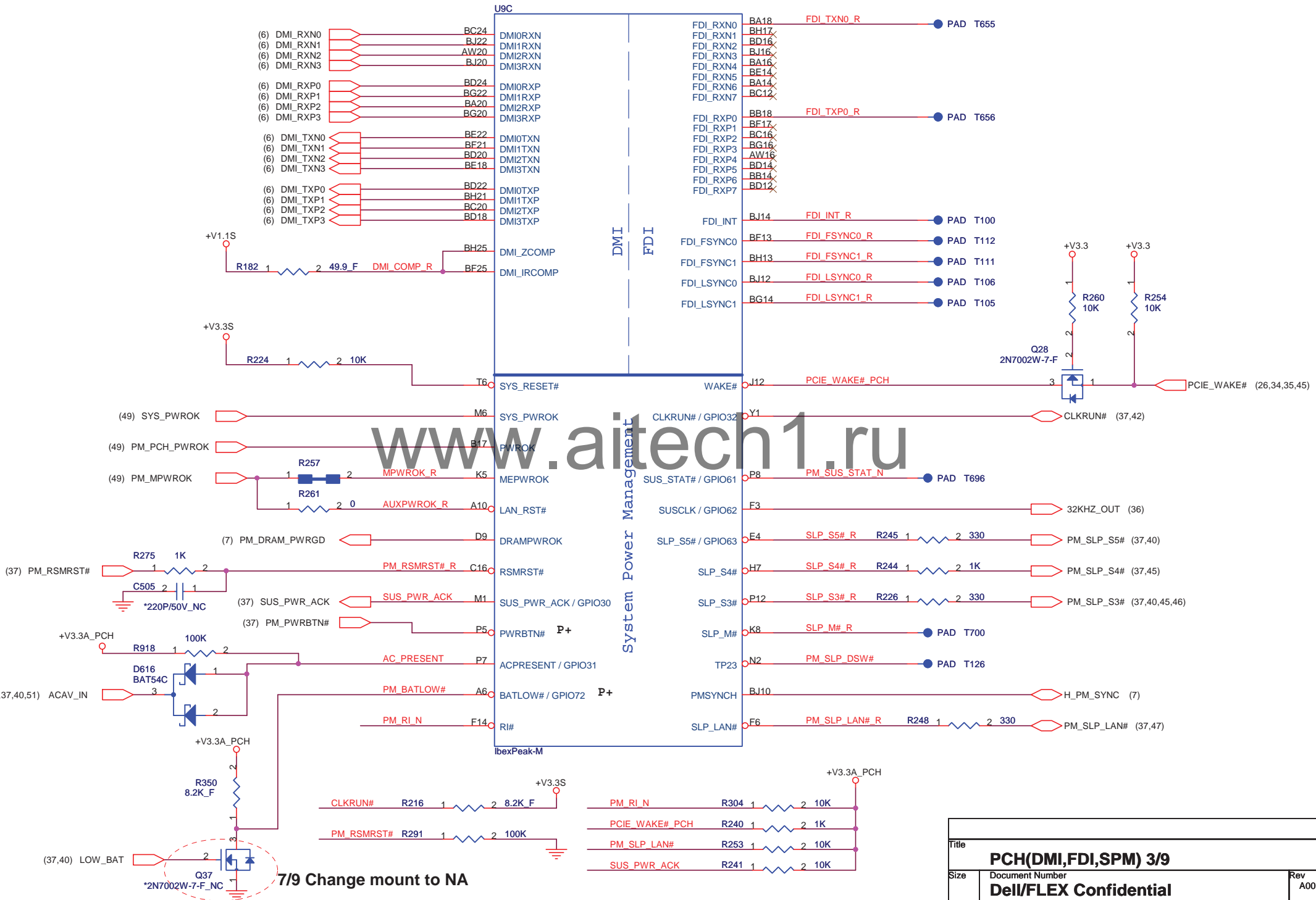
SCL2
SDA2

SCL3
SDA3

SCL4
SDA4

EXPSC1
EXPSC2
EXPSCA1
EXPSCA2

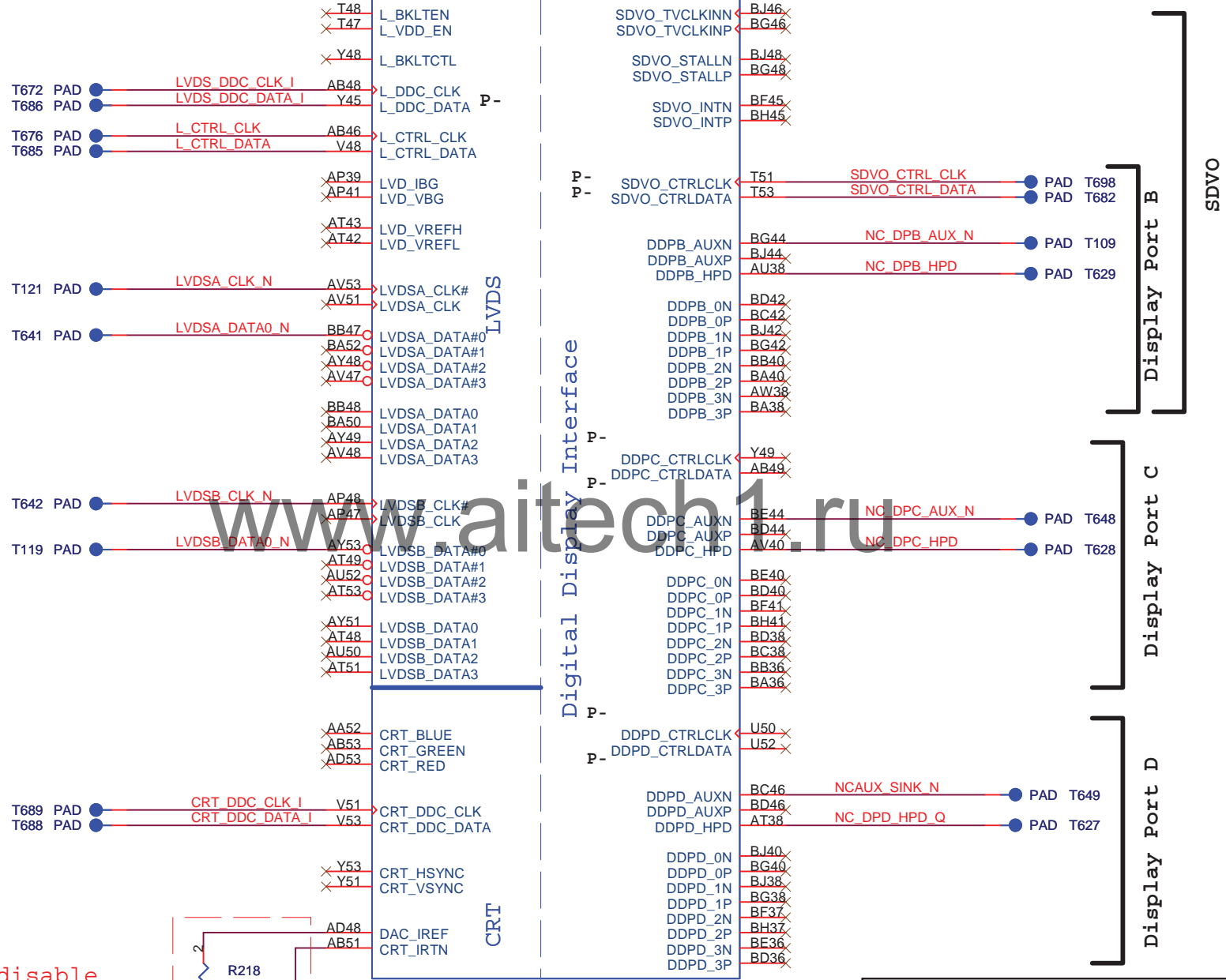
IBEX PEAK-M (DMI,FDI,GPIO)



Title			
PCH(DMI,FDI,SPM) 3/9			
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			Rev A00

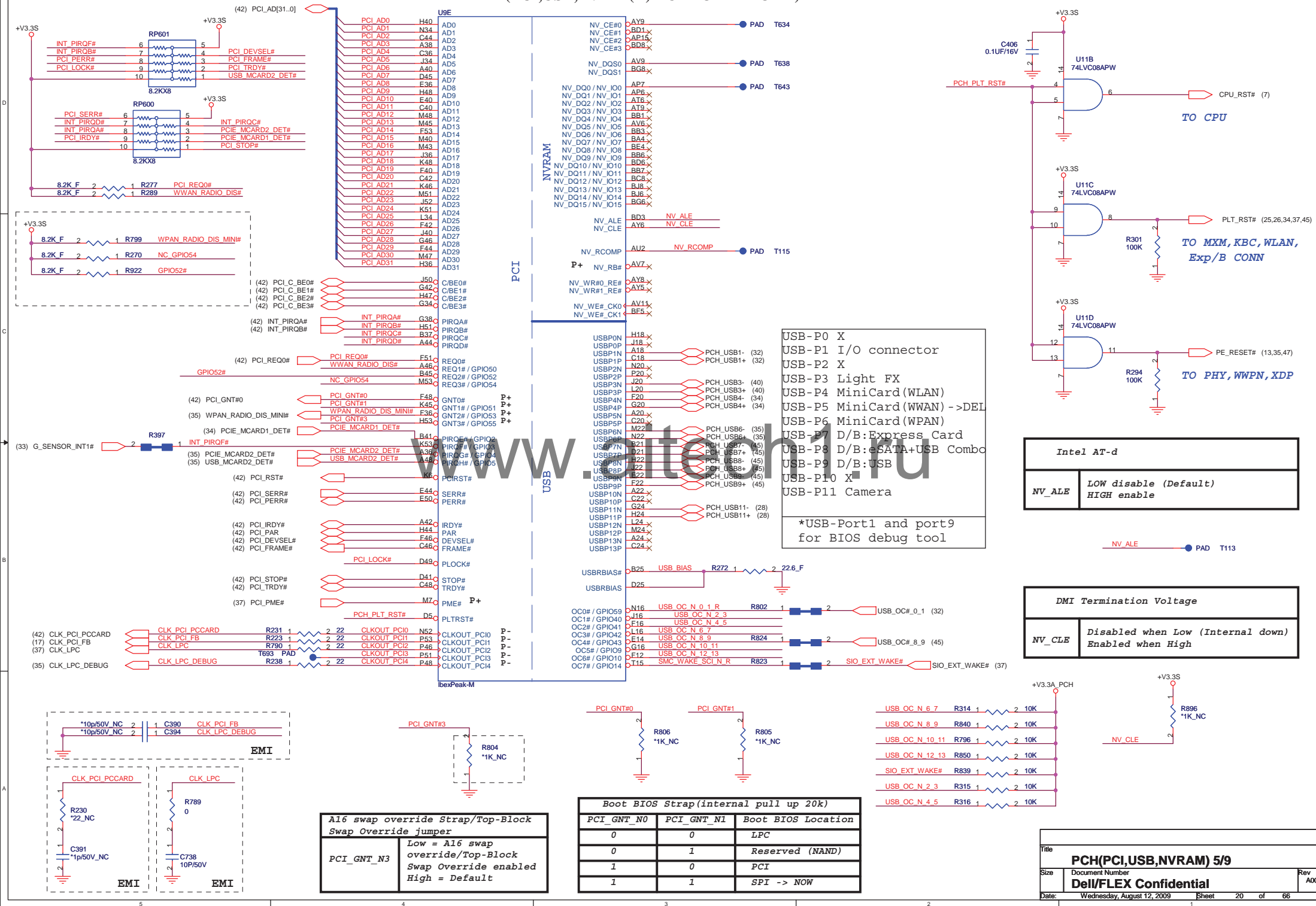
IBEX PEAK-M (LVDS,DDI)

U9D



Title		
PCH(CRT,LVDS,DDI) 4/9		
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IBEX PEAK-M (PCI,USB,INTEL(R) TURBO MEMORY)



IBEX PEAK-M(POWER)

POWER

USB

Clock and Miscellaneous

PCI/GPIO/LPC

SATA

PCI/GPIO/LPC

CPU

RTC

HDA

VCCIO Total
3062mA

VCCSUS3_3 Total
163mA

VCC3_3 Total
357mA

31mA

6mA

VCCME Total
3062mA

Please note that all Ibex Peak-M rails with netnames +V1.1S and +V1.1M rails are actually +V1.05S and +V1.05M rails

1UF*2 pcs for 2 blocks

Internal VRM supply

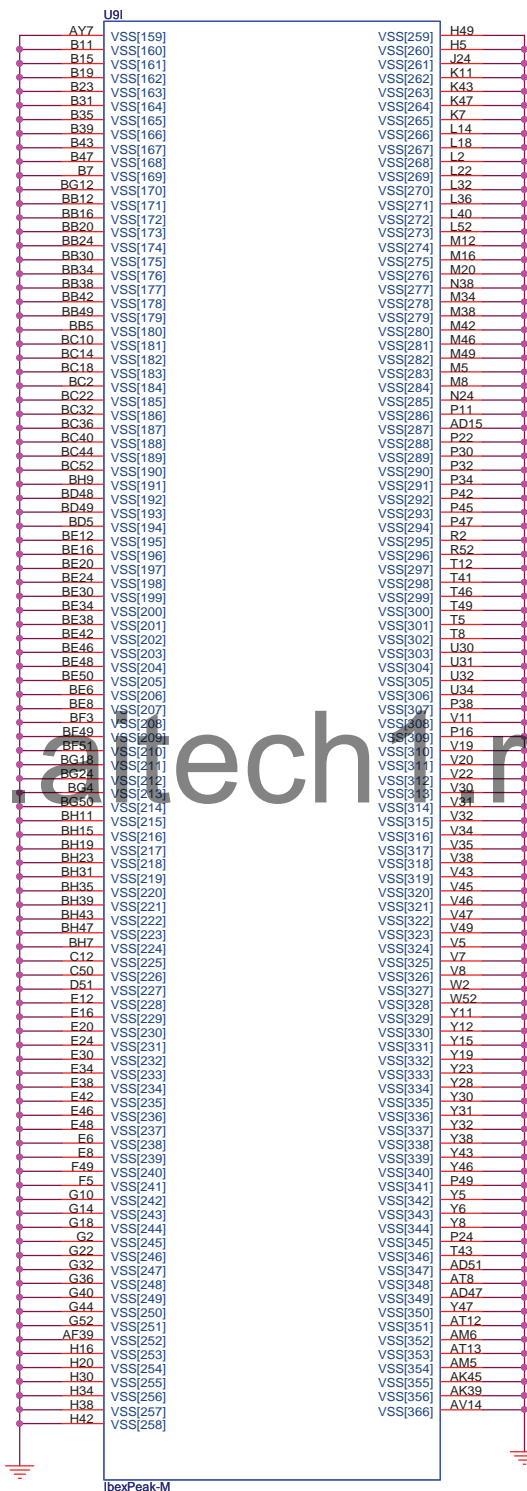
Internal VRM supply

+V5A1 has off during S4/S5 battery mode.

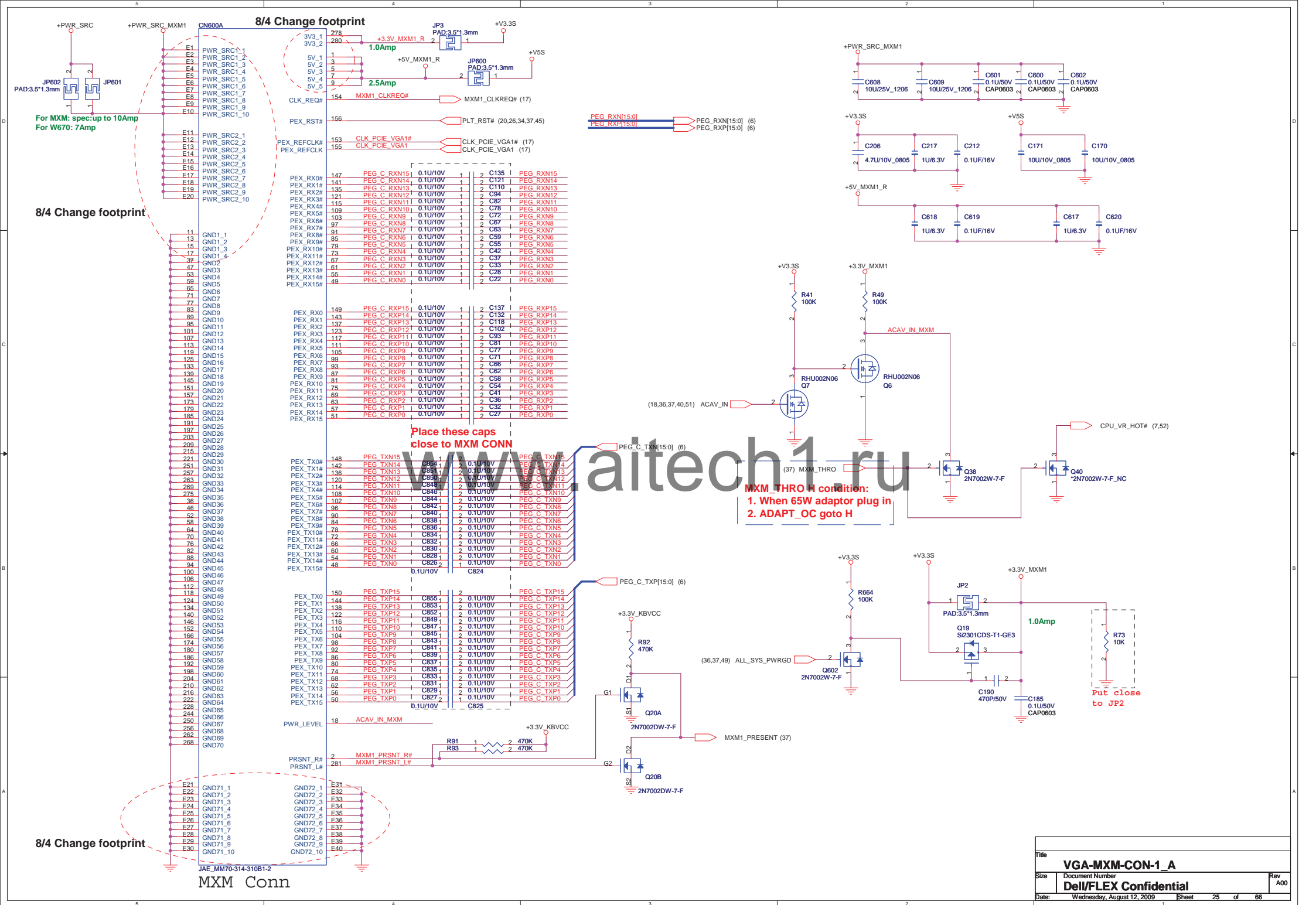
Close to PCH

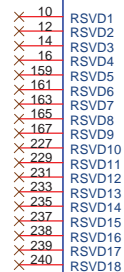
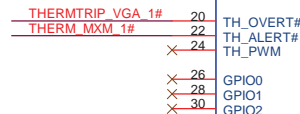
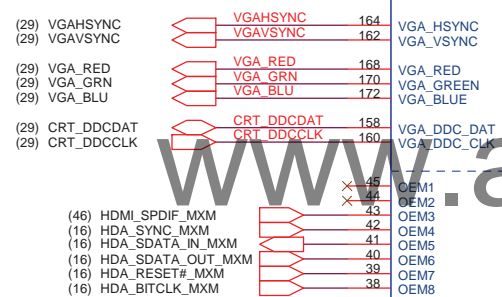
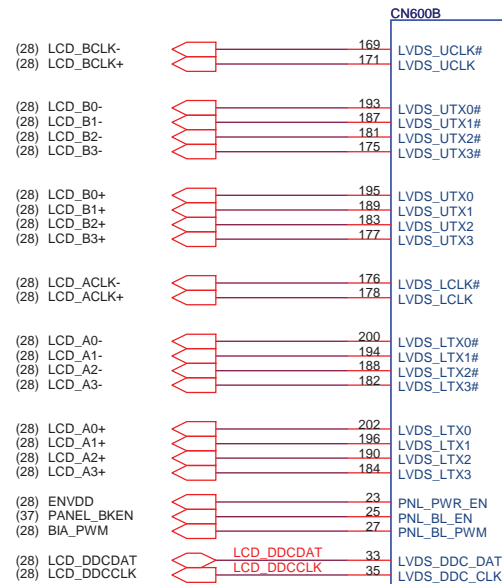
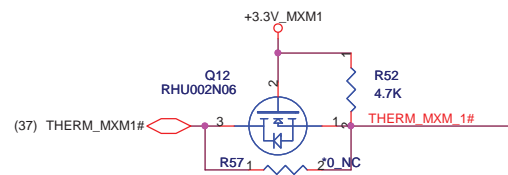
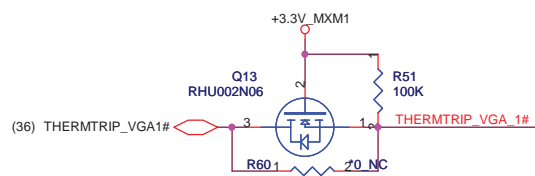
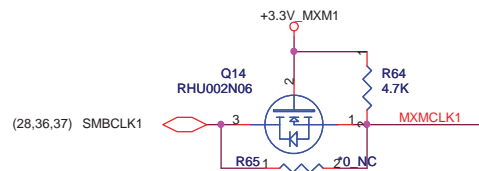
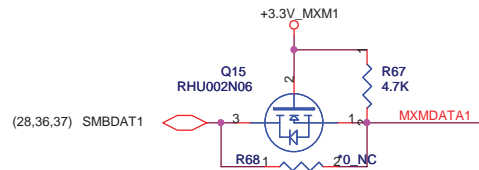
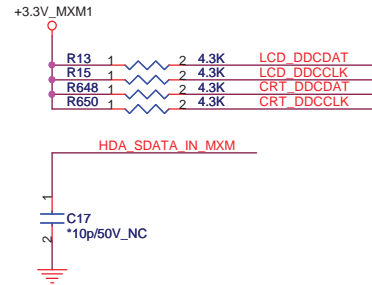
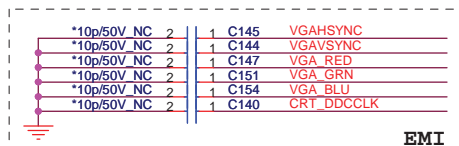
Title			PCH(POWER2) 8/9		
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			Dell/FLEX Confidential		
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U9H		
AB16	VSS[0]	
AA19	VSS[1]	VSS[80]
AA20	VSS[2]	VSS[81]
AA22	VSS[3]	VSS[82]
AM19	VSS[4]	VSS[83]
AA24	VSS[5]	VSS[84]
AA26	VSS[6]	VSS[85]
AA28	VSS[7]	VSS[86]
AA30	VSS[8]	VSS[87]
AA31	VSS[9]	VSS[88]
AA32	VSS[10]	VSS[89]
AB11	VSS[11]	VSS[90]
AB15	VSS[12]	VSS[91]
AB23	VSS[13]	VSS[92]
AB30	VSS[14]	VSS[93]
AB31	VSS[15]	VSS[94]
AB32	VSS[16]	VSS[95]
AB39	VSS[17]	VSS[96]
AB43	VSS[18]	VSS[97]
AB47	VSS[19]	VSS[98]
AB5	VSS[20]	VSS[99]
AB8	VSS[21]	VSS[100]
AC2	VSS[22]	VSS[101]
AC32	VSS[23]	VSS[102]
AD11	VSS[24]	VSS[103]
AD12	VSS[25]	VSS[104]
AD16	VSS[26]	VSS[105]
AD23	VSS[27]	VSS[106]
AD30	VSS[28]	VSS[107]
AD31	VSS[29]	VSS[108]
AD32	VSS[30]	VSS[109]
AD34	VSS[31]	VSS[110]
AD42	VSS[32]	VSS[111]
AD46	VSS[33]	VSS[112]
AD49	VSS[34]	VSS[113]
AD7	VSS[35]	VSS[114]
AE2	VSS[36]	VSS[115]
AE4	VSS[37]	VSS[116]
AE4	VSS[38]	VSS[117]
AF12	VSS[39]	VSS[118]
Y13	VSS[40]	VSS[119]
HA40	VSS[41]	VSS[120]
AU4	VSS[42]	VSS[121]
AF35	VSS[43]	VSS[122]
AP13	VSS[44]	VSS[123]
AN34	VSS[45]	VSS[124]
AF45	VSS[46]	VSS[125]
AF46	VSS[47]	VSS[126]
AF49	VSS[48]	VSS[127]
AF5	VSS[49]	VSS[128]
AF8	VSS[50]	VSS[129]
AG2	VSS[51]	VSS[130]
AG52	VSS[52]	VSS[131]
HI11	VSS[53]	VSS[132]
HI15	VSS[54]	VSS[133]
HI16	VSS[55]	VSS[134]
HA24	VSS[56]	VSS[135]
AI32	VSS[57]	VSS[136]
AV18	VSS[58]	VSS[137]
HA43	VSS[59]	VSS[138]
HA47	VSS[60]	VSS[139]
AH7	VSS[61]	VSS[140]
AI19	VSS[62]	VSS[141]
AJ2	VSS[63]	VSS[142]
AJ20	VSS[64]	VSS[143]
AJ22	VSS[65]	VSS[144]
AJ23	VSS[66]	VSS[145]
AJ26	VSS[67]	VSS[146]
AJ28	VSS[68]	VSS[147]
AJ32	VSS[69]	VSS[148]
AJ34	VSS[70]	VSS[149]
AT5	VSS[71]	VSS[150]
AJ4	VSS[72]	VSS[151]
AK12	VSS[73]	VSS[152]
AM41	VSS[74]	VSS[153]
AN19	VSS[75]	VSS[154]
AK26	VSS[76]	VSS[155]
AK22	VSS[77]	VSS[156]
AK23	VSS[78]	VSS[157]
AK28	VSS[79]	VSS[158]
		AK30
		AK31
		AK32
		AK34
		AK35
		AK38
		AK43
		AK46
		AK49
		AK5
		AK8
		AL2
		AL52
		AM11
		BB44
		AD24
		AM20
		AM22
		AM24
		AM26
		BA42
		AM30
		AM31
		AM32
		AM34
		AM35
		AM38
		AM39
		AM42
		AU20
		AM46
		AV22
		AM49
		AM7
		AA50
		BB10
		AN32
		AN50
		AN52
		AP12
		AP42
		AP46
		AP49
		AP5



Title			
PCH(GND) 9/9			
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JAE_MM70-314-310B1-2

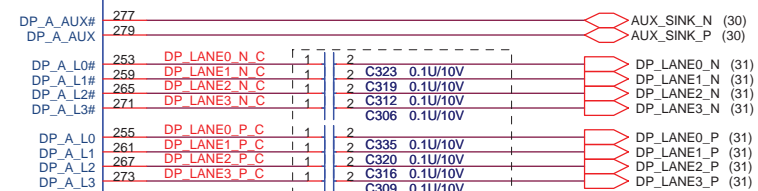
MXM Conn

DP-A

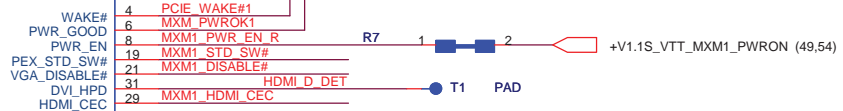
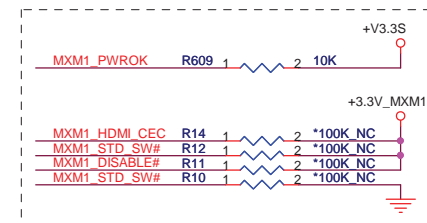
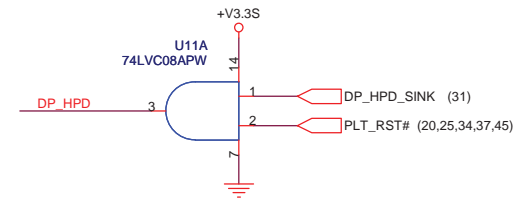
DP-B

DP-C

DP-D



Close DP CONN CN10



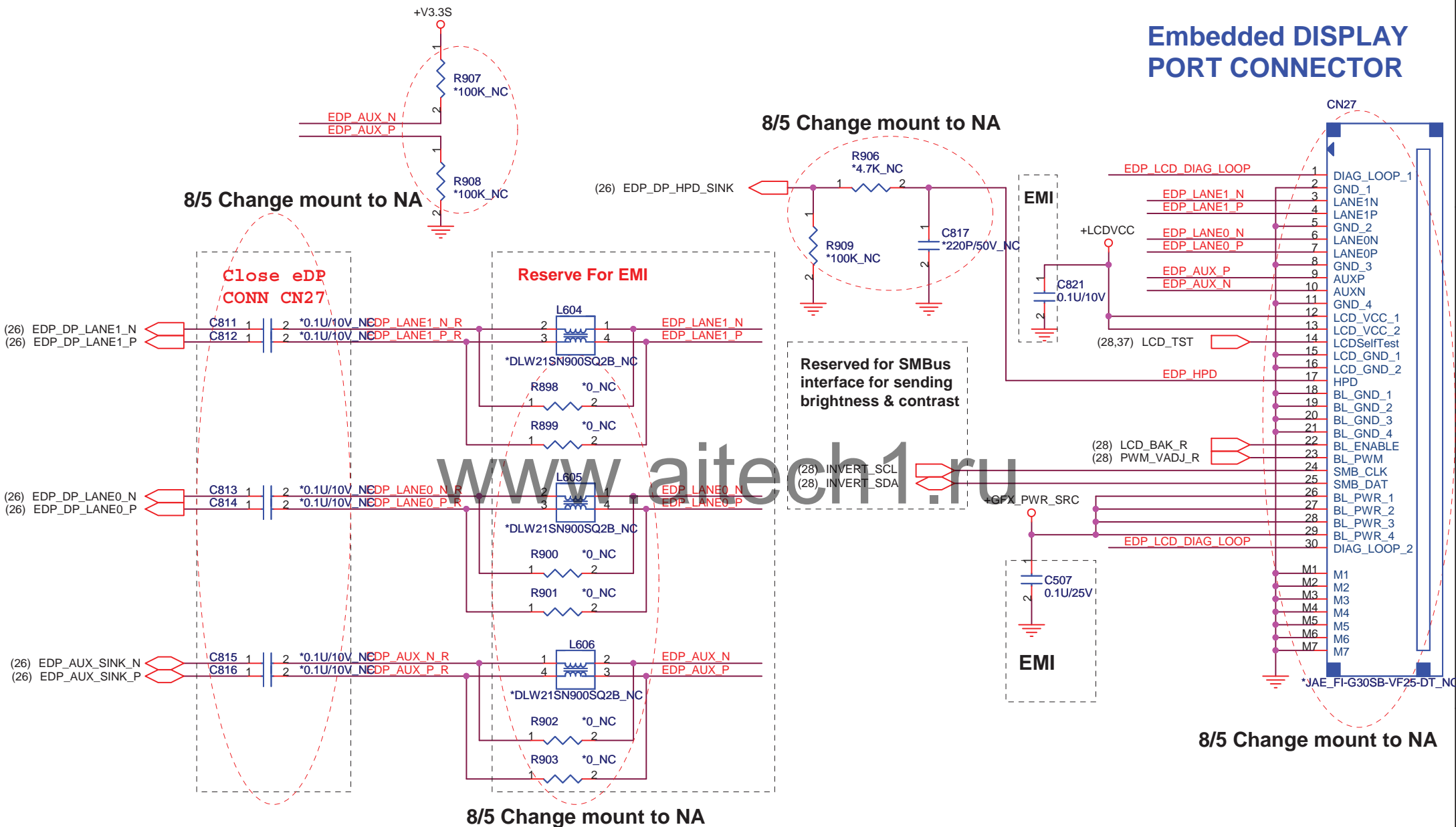
Title		
VGA-MXM-CON-1_B		
Size	Document Number	Rev
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Embedded DISPLAY PORT CONNECTOR

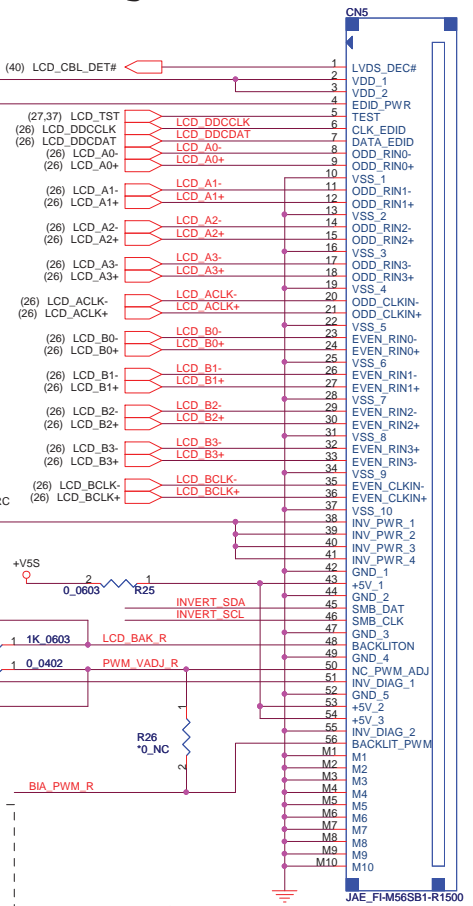
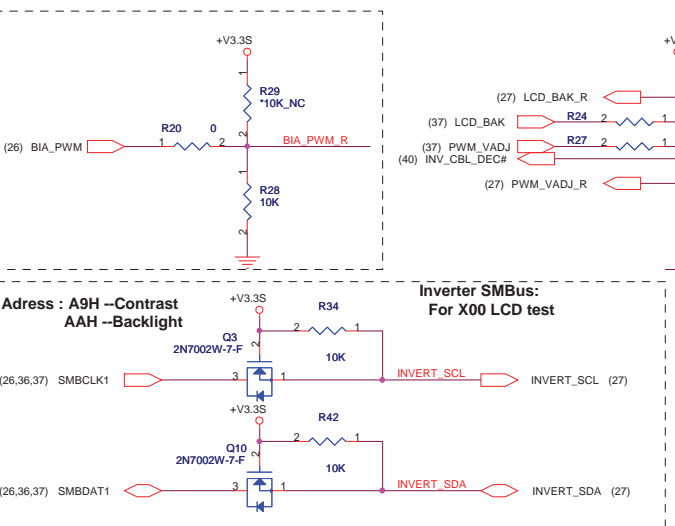
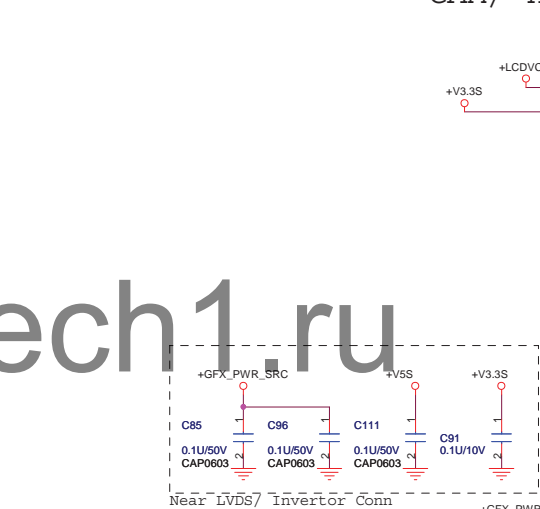
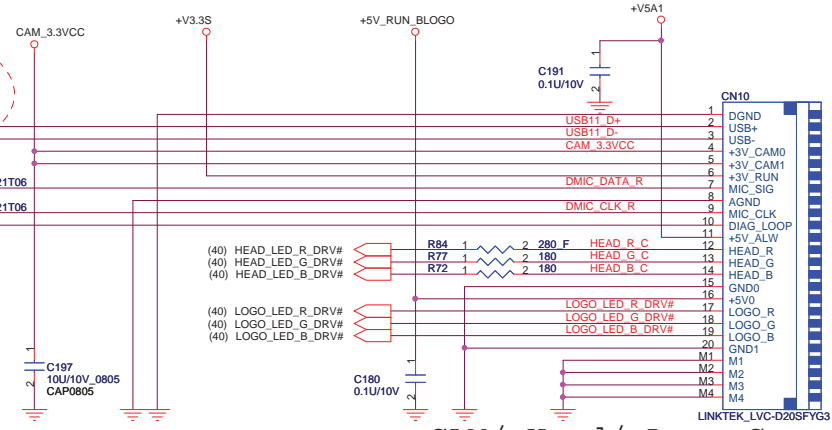
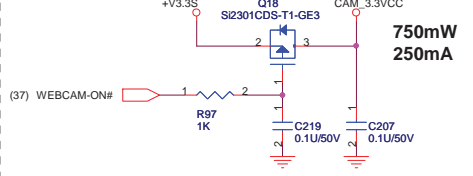
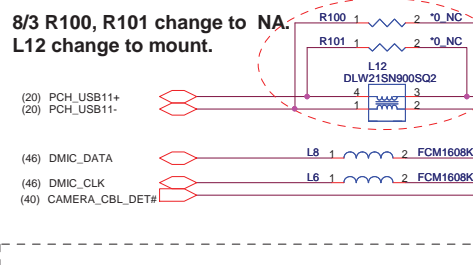
8/5 Change mount to NA

8/5 Change mount to NA

8/5 Change mount to NA



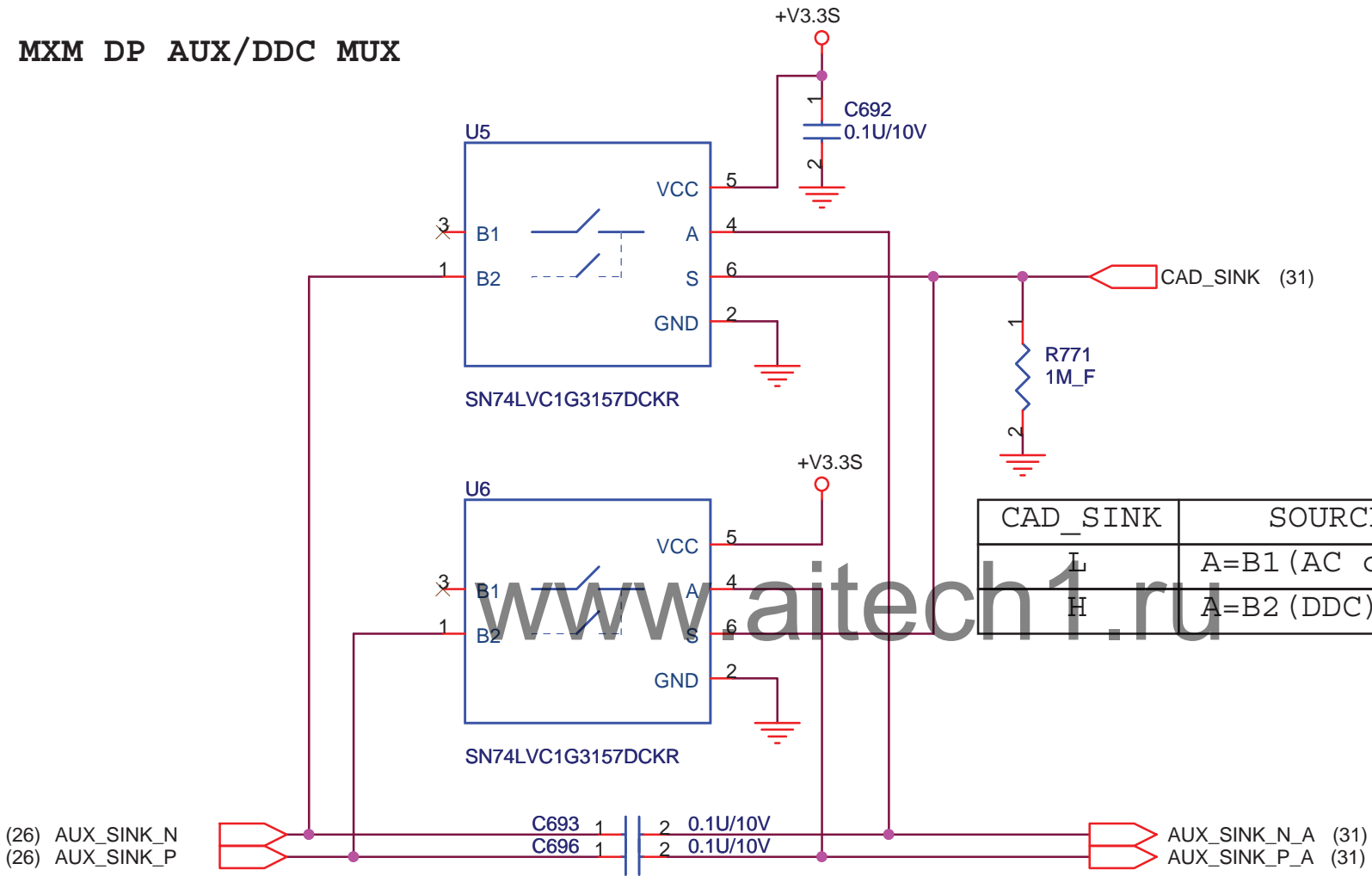
Title		
LVDS SELECTION_Blank		
Size	Document Number	Rev
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LVDS/ Invertor Conn

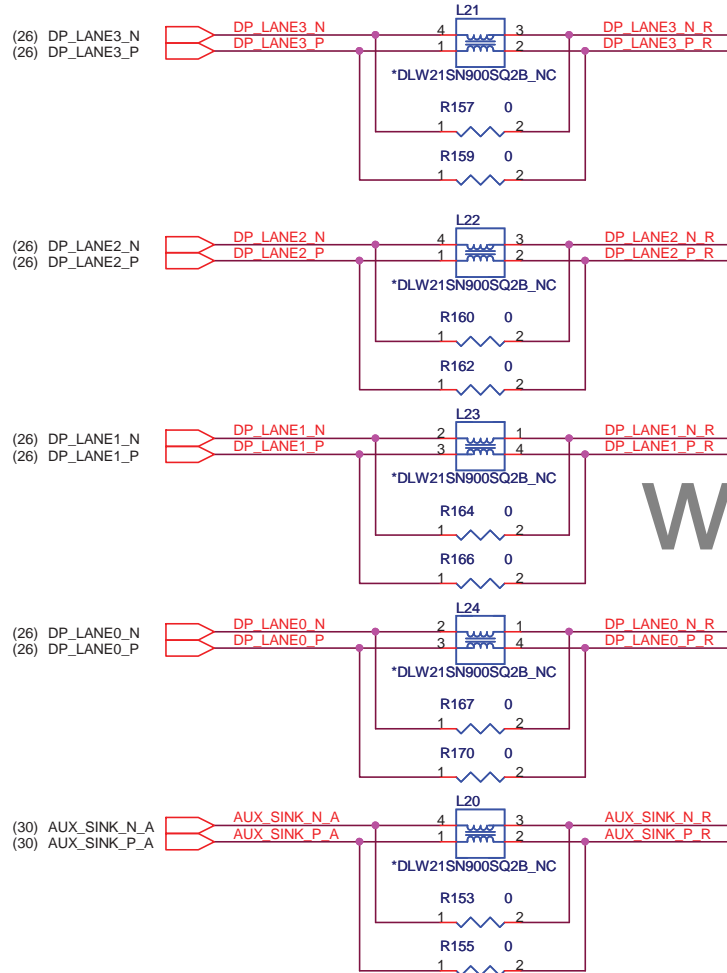
Title				
LCD CONN				
Size	Document Number			Rev
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MXM DP AUX/DDC MUX

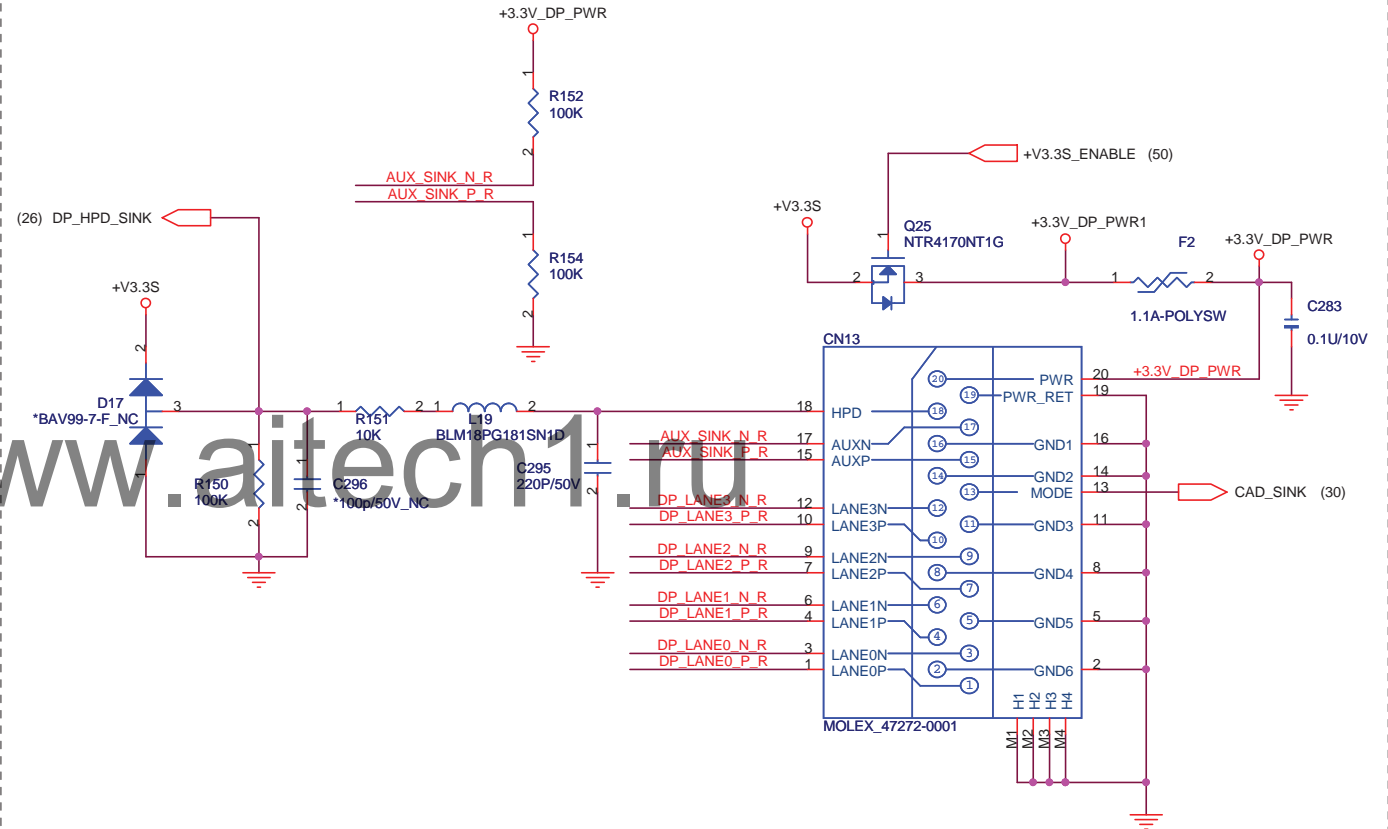


CAD_SINK	SOURCE	Function
L	A=B1 (AC couple)	DP Path
H	A=B2 (DDC)	HDMI Path

Reserve For EMI



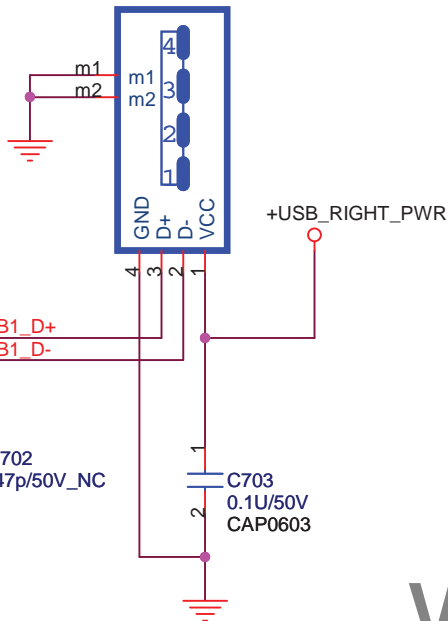
DISPLAY PORT CONNECTOR



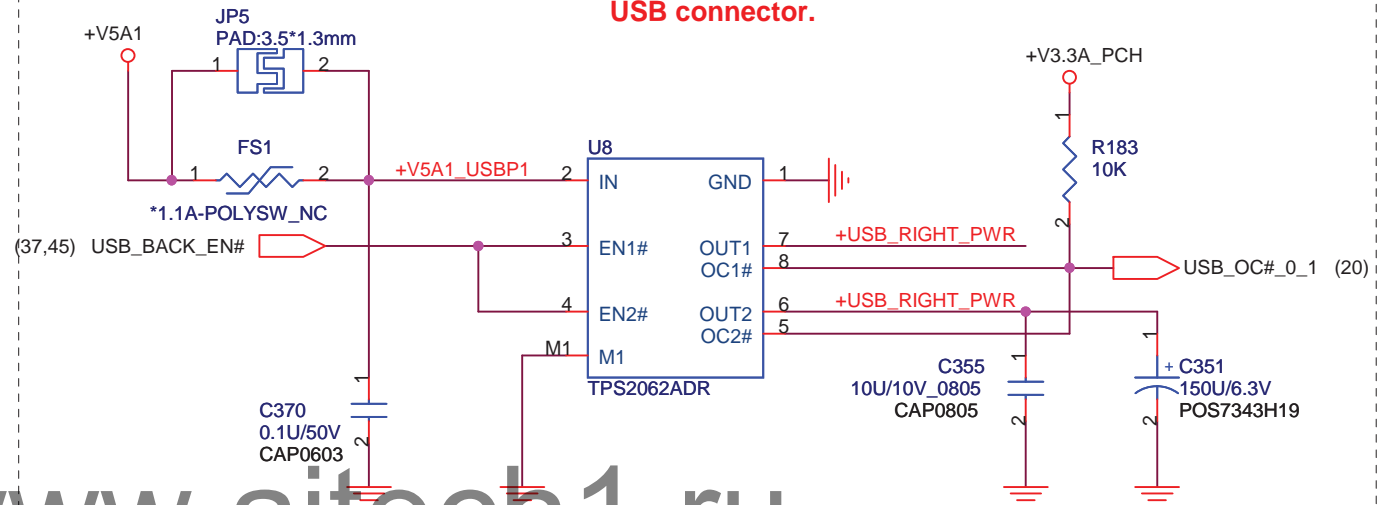
Title			DP CONN		
Size	Document Number				Rev
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USB CONN

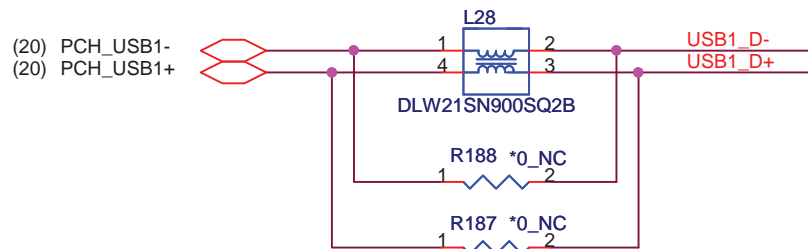
CN15
FOXCONN_UB9112C-CA201-9F



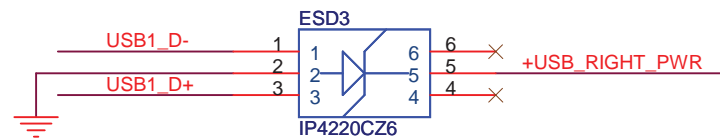
USB POWER SW



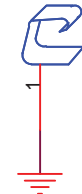
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Place ESD diodes as close as USB connector.

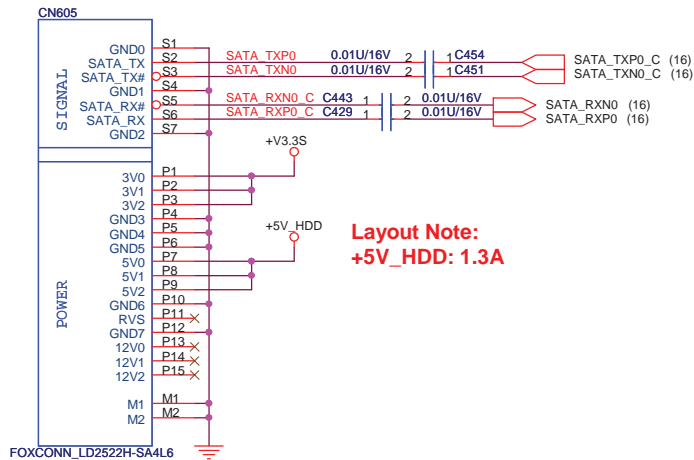


EMI604
*SGB10-42055_NC

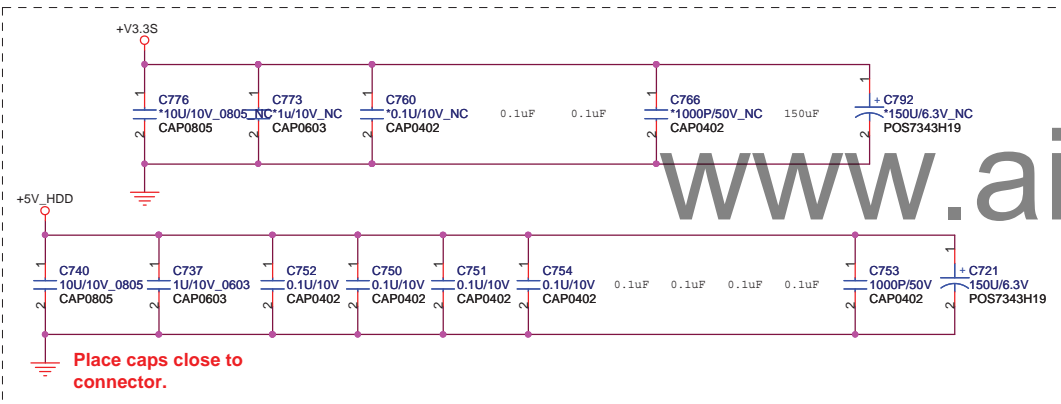


EMI

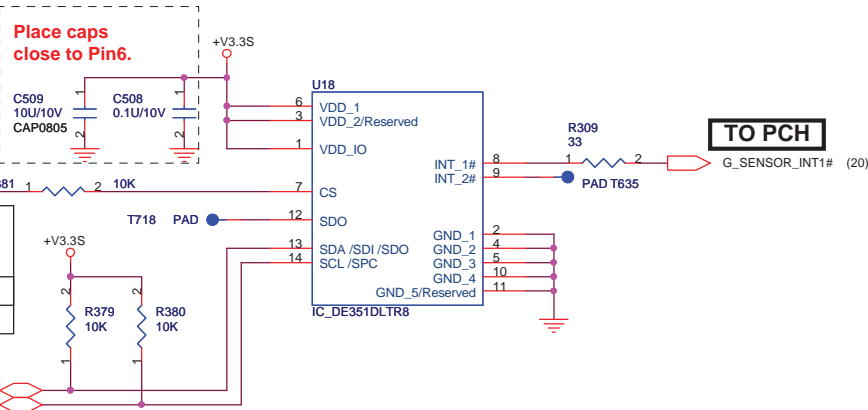
Title			
USB			
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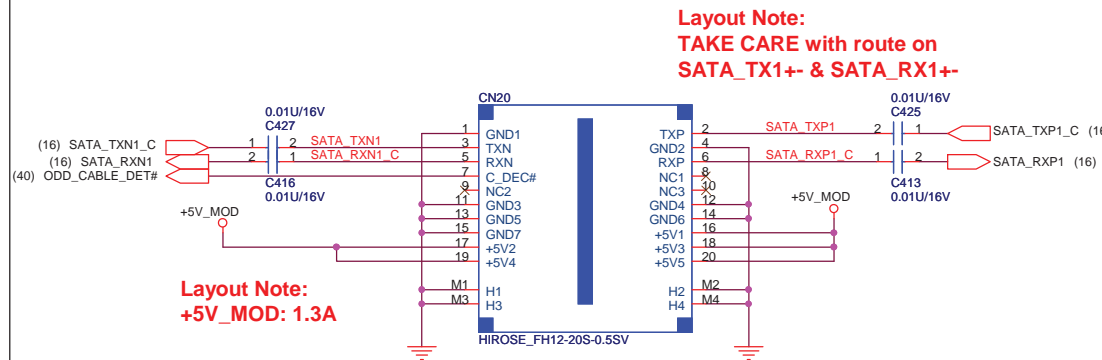
HDD Conn



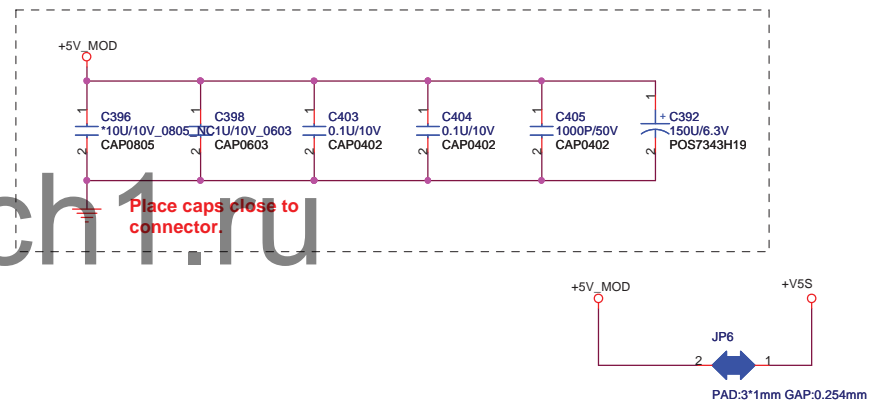
G-Sensor



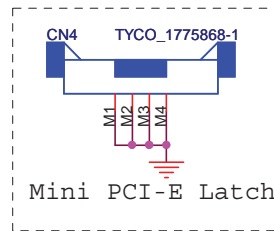
CS (Pin 7)	Interface
H	I2C BUS
L	SPI BUS



ODD Conn

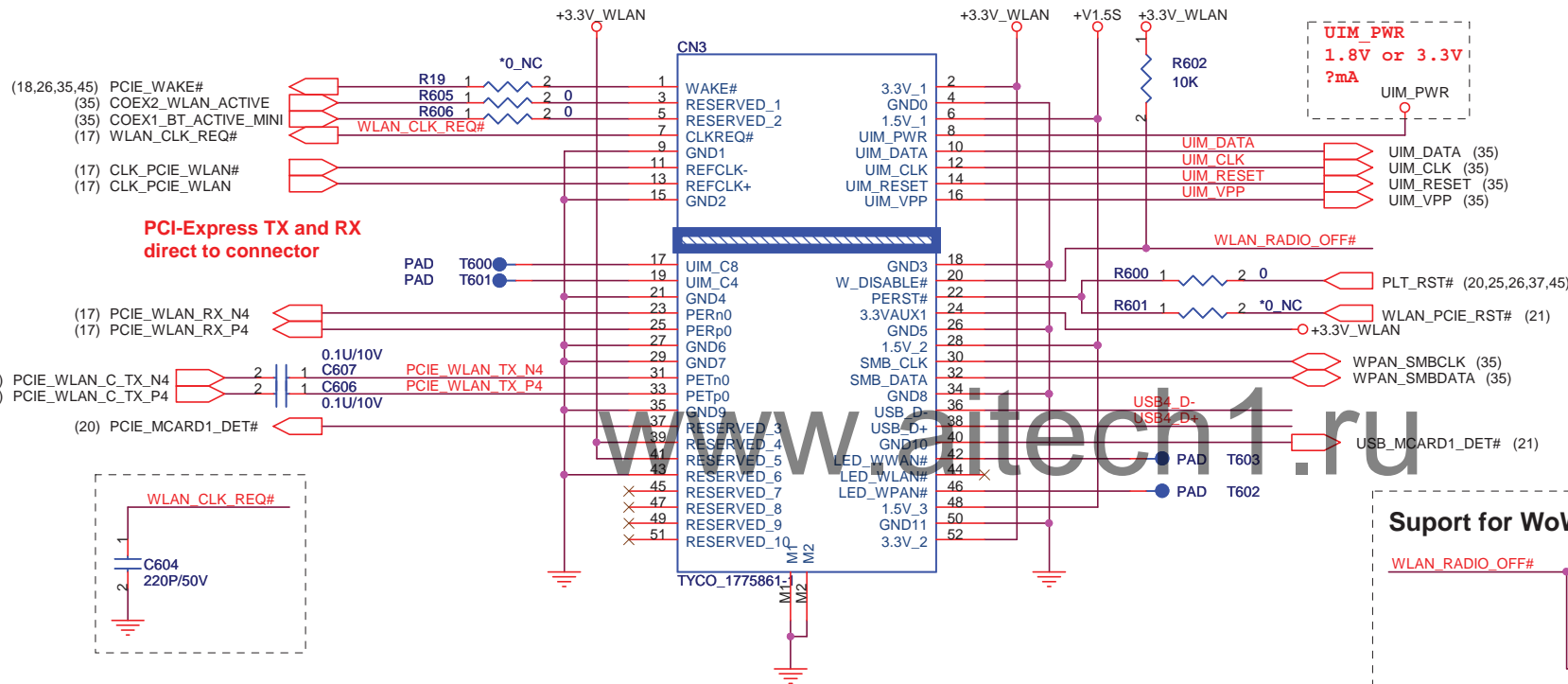
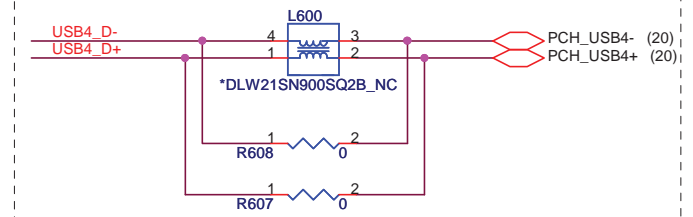


Title	HDD & CD ROM		
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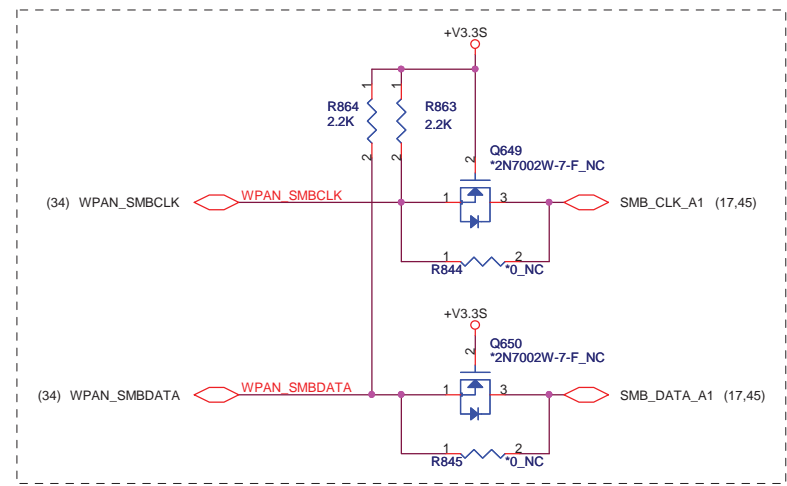
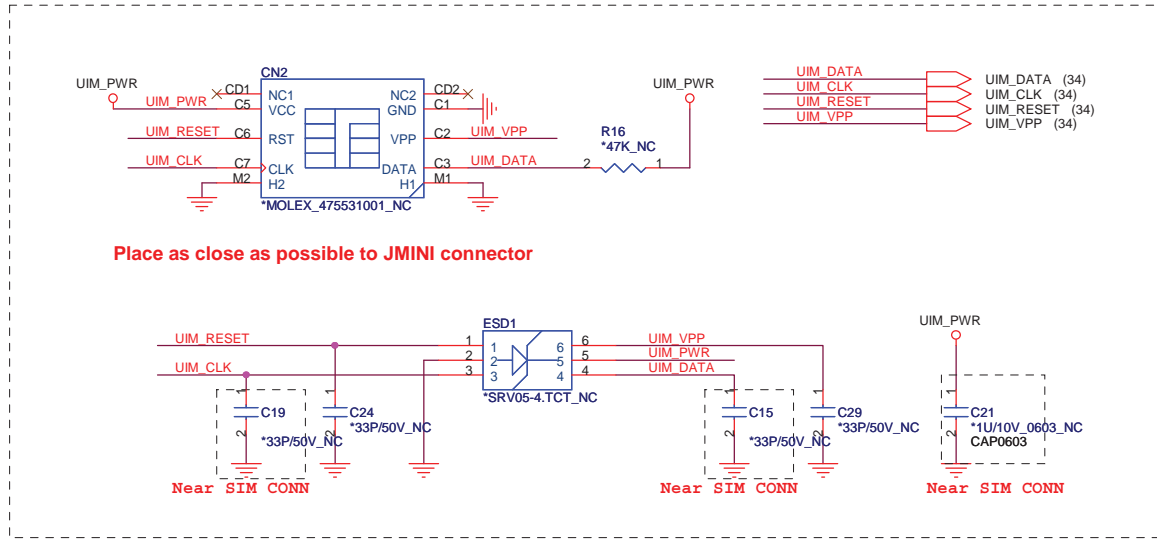
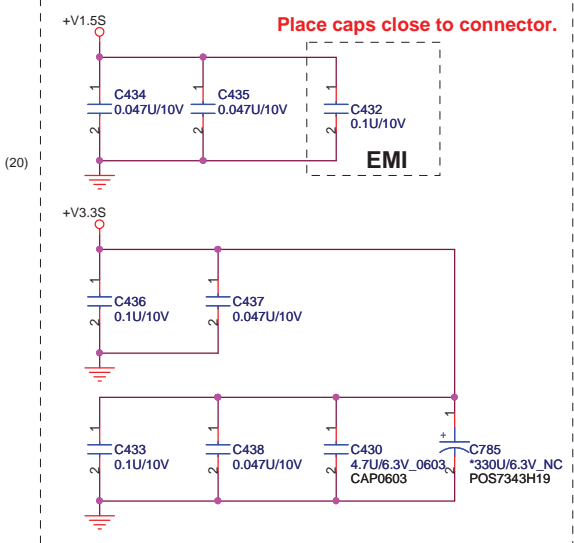
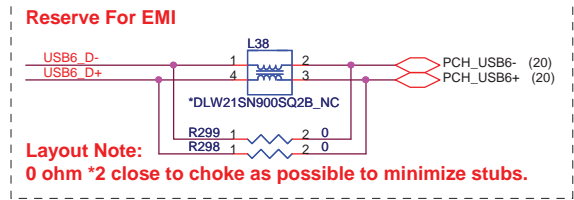
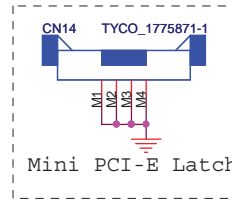
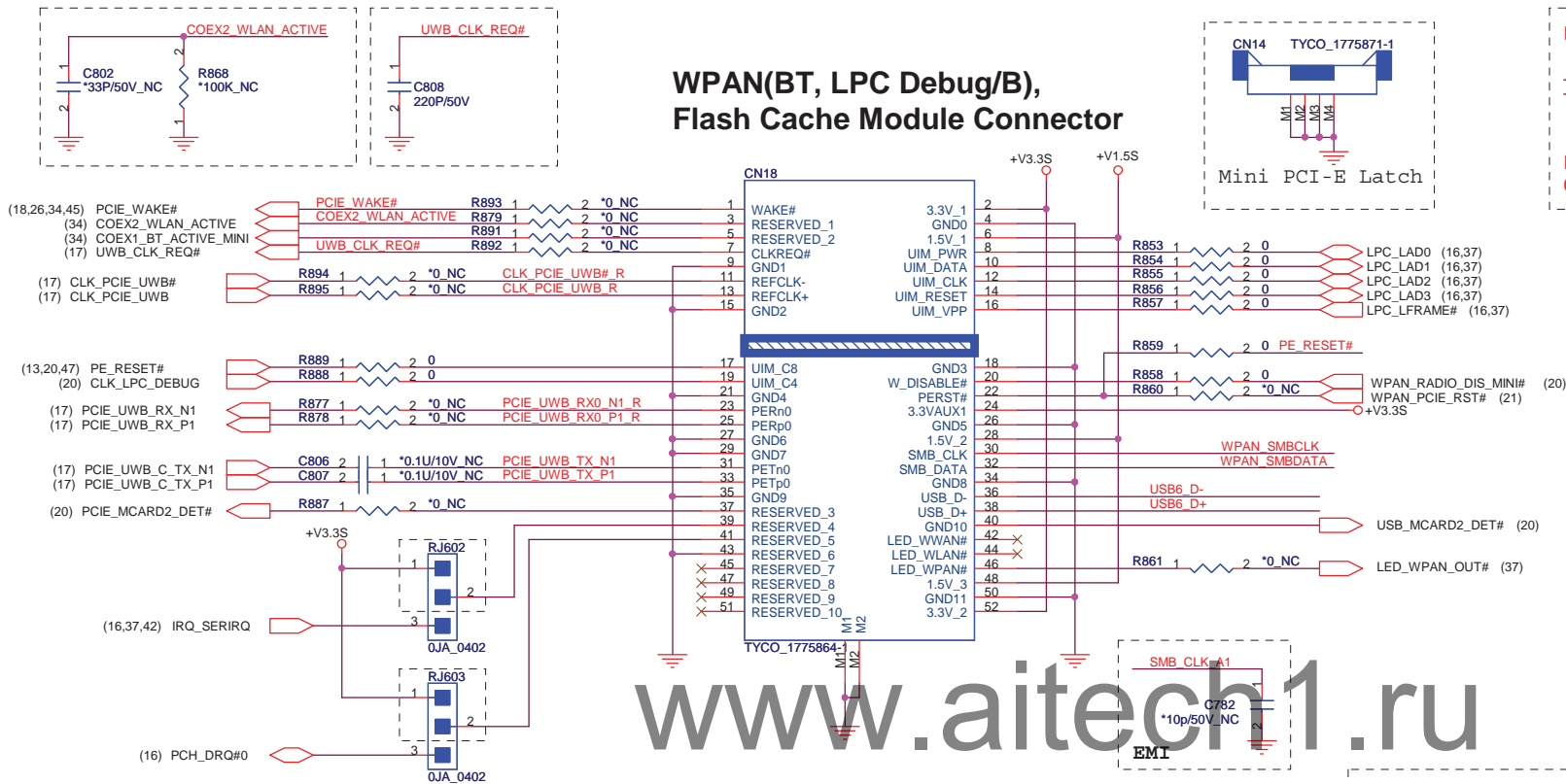
MiniCard WLAN Connector

Reserved PAD for EMI

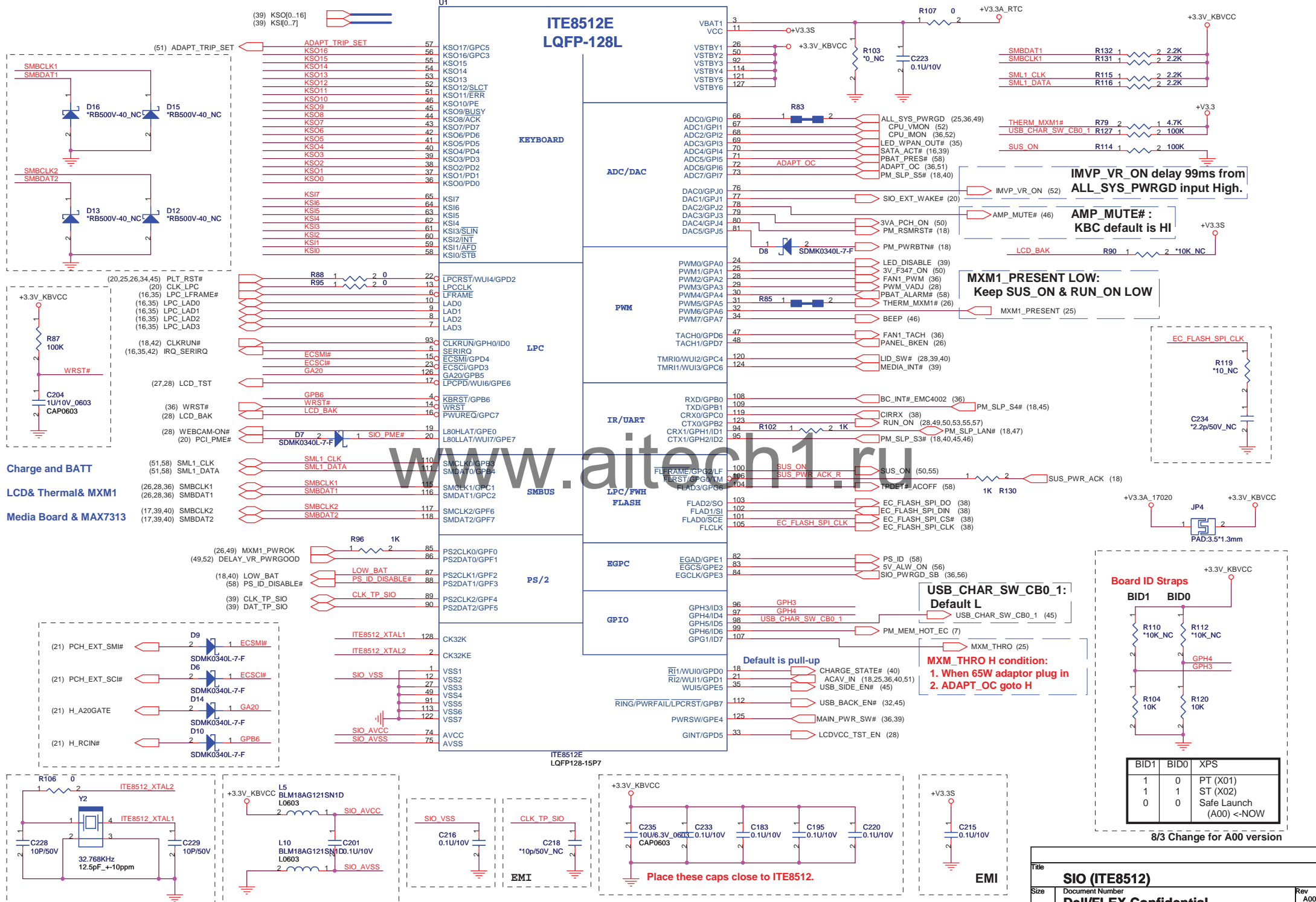


Title		
MINI-CARD (WLAN)		
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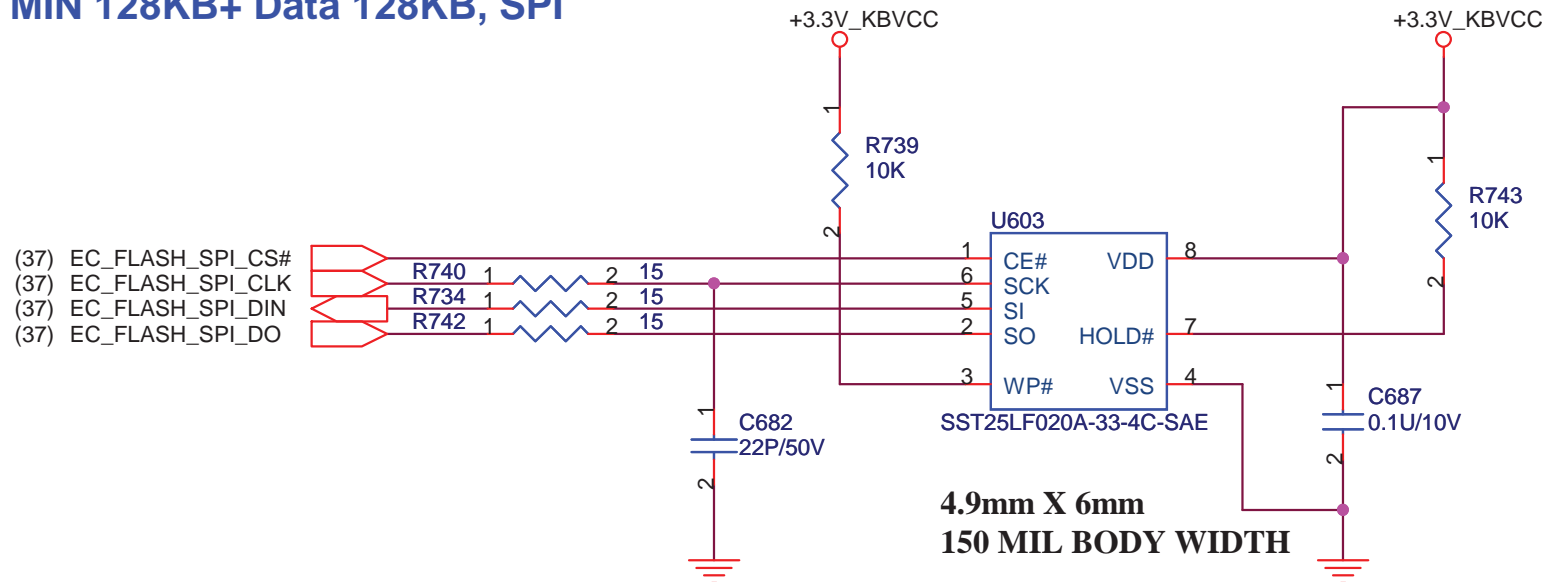
WPAN(BT, LPC Debug/B), Flash Cache Module Connector



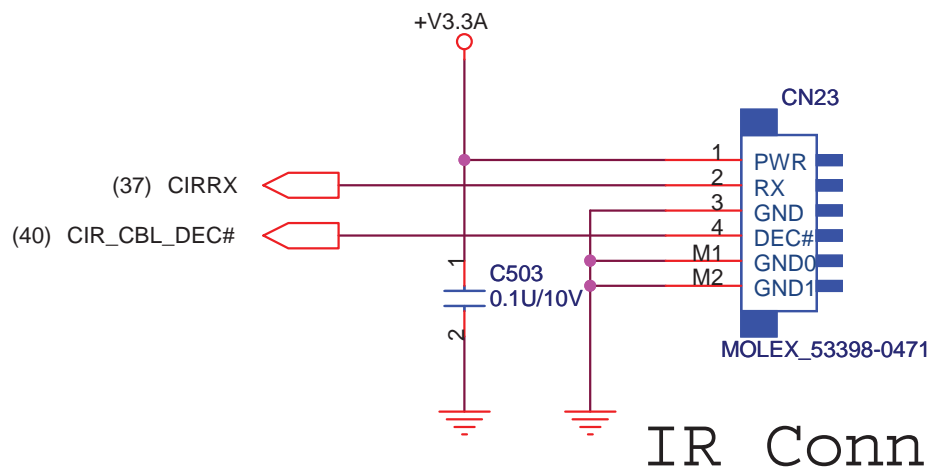
Title			
MINI-CARD (WPAN,WWAN)			
Size	Document Number		Rev
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MIN 128KB+ Data 128KB, SPI

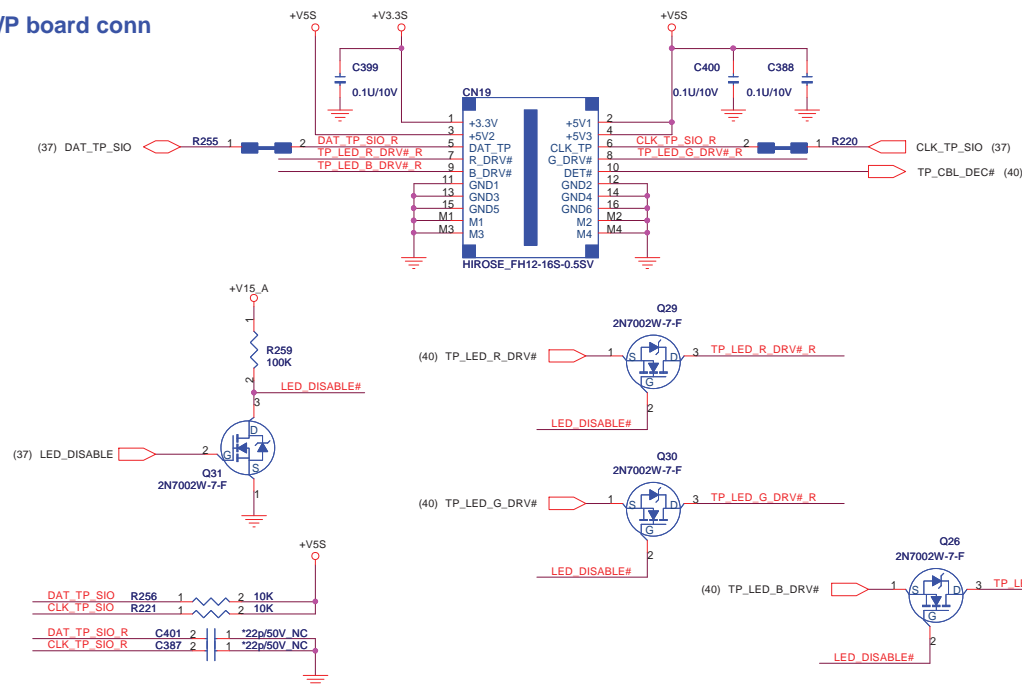


to Consumer IR



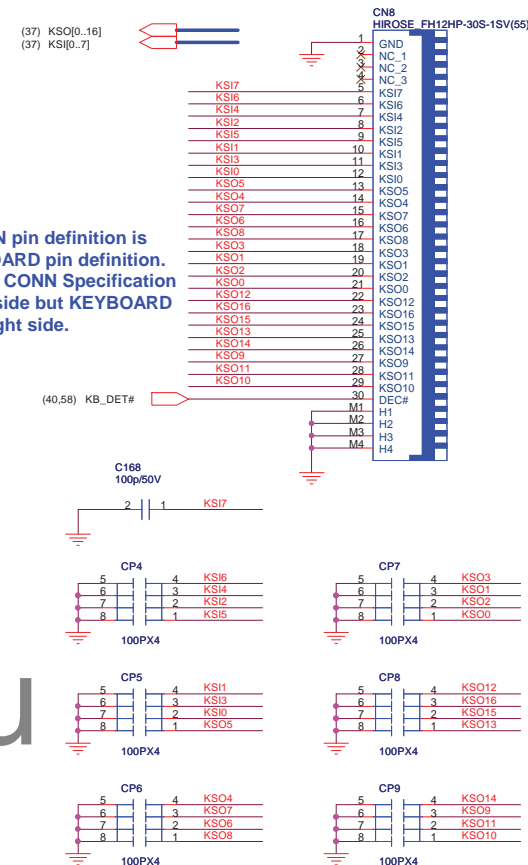
Title		
FLASH/ CIR		
Size	Document Number	Rev
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T/P board conn

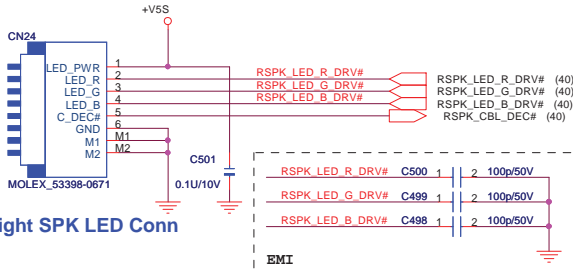


KEYBOARD CONN pin definition is reverse of KEYBOARD pin definition. This is cause that CONN Specification order pin1 in left side but KEYBOARD cable pin1 is in right side.

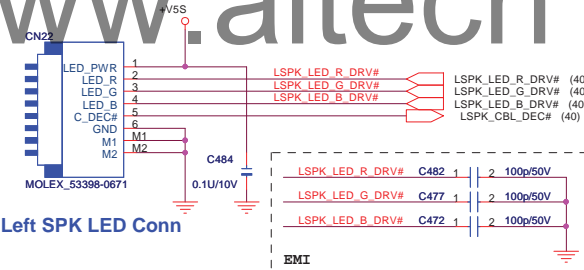
KEYBOARD CONNECTOR



Right SPK LED Conn

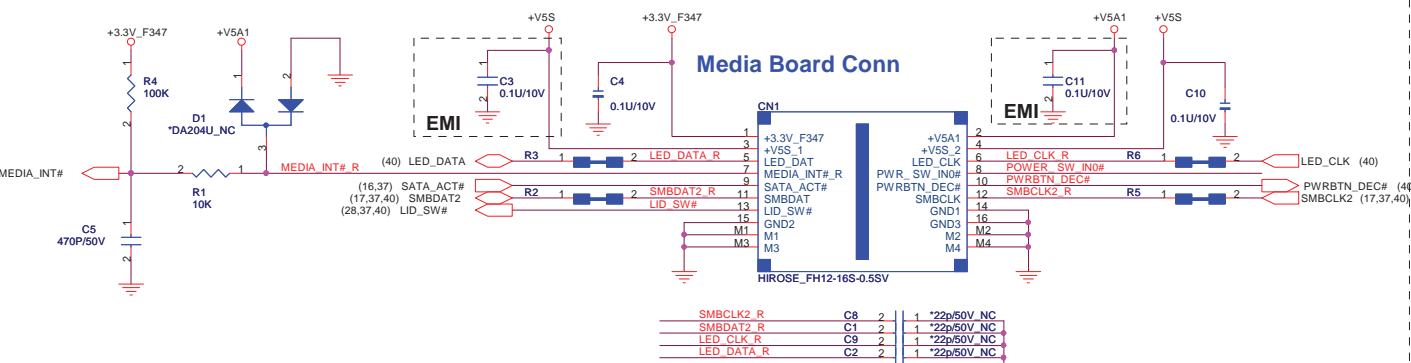


Left SPK LED Conn

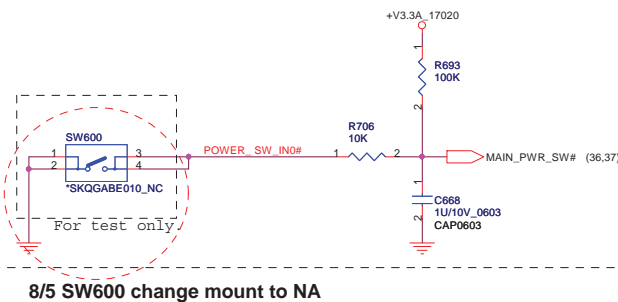


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Media Board Conn

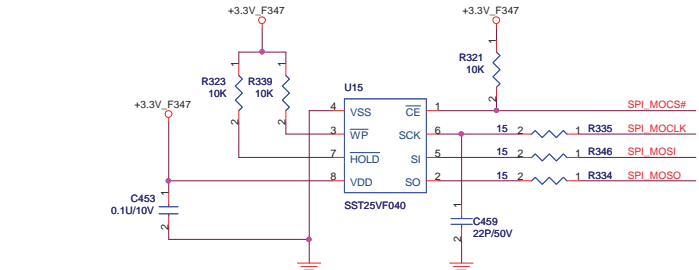
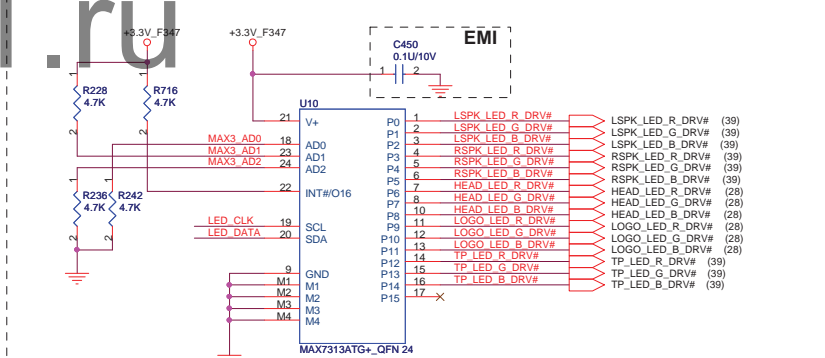
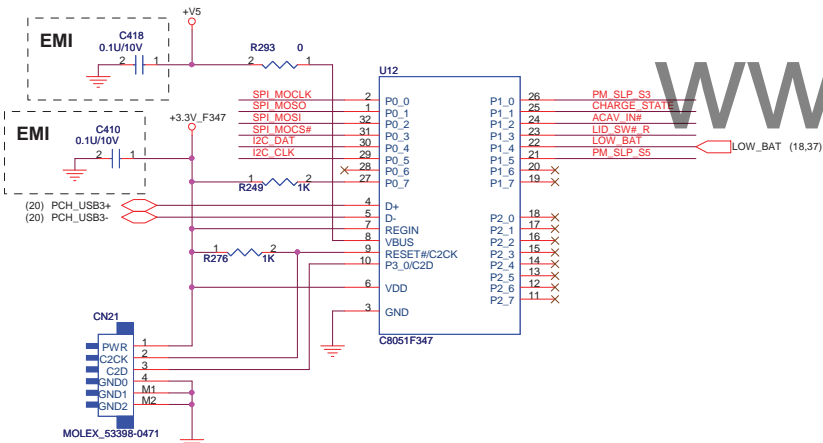
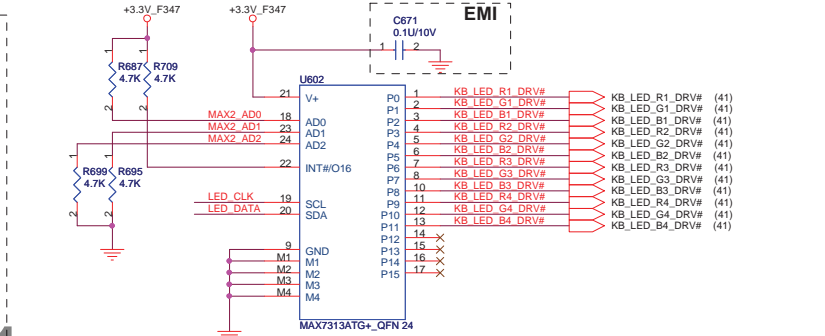
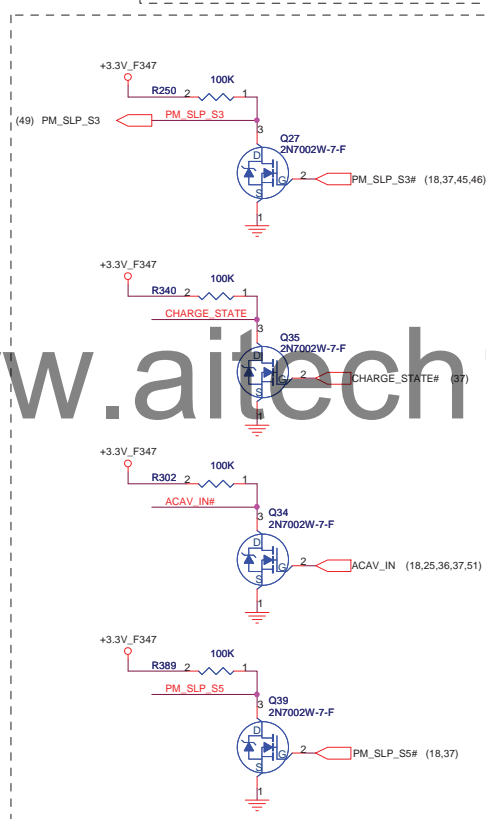
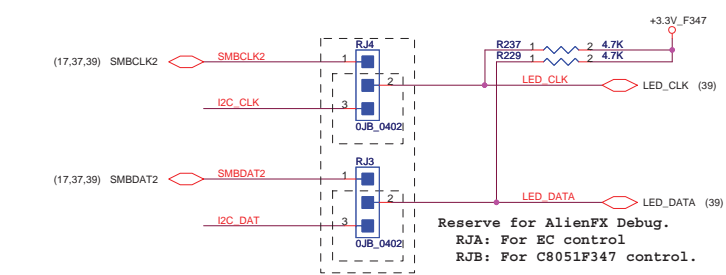
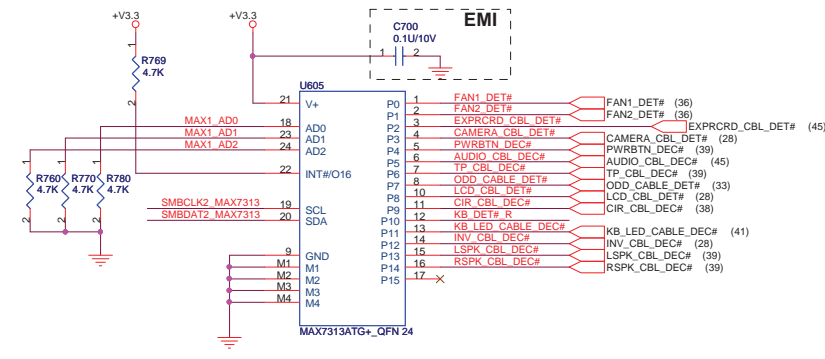
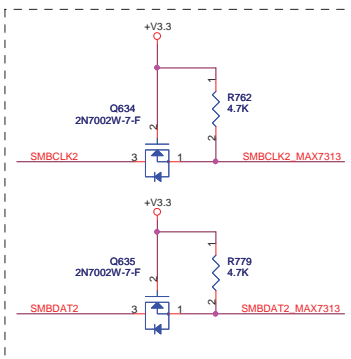
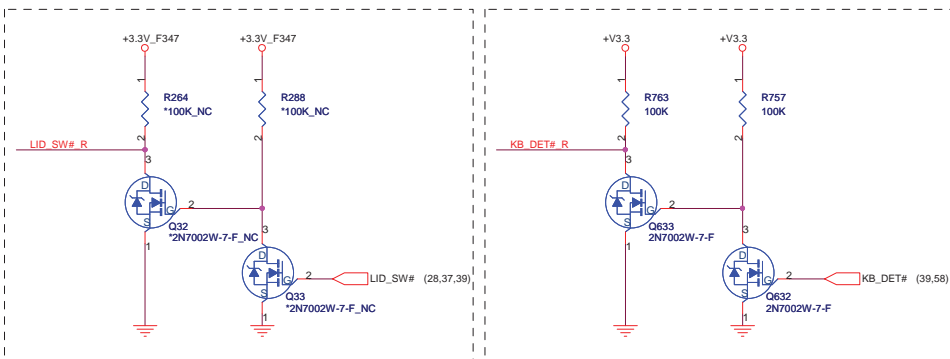


Power Button



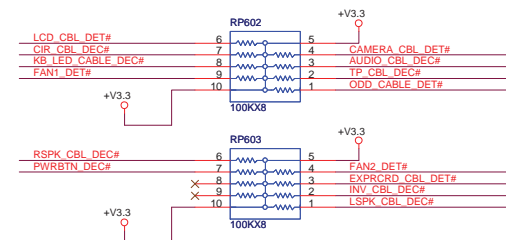
8/5 SW600 change mount to NA

Title			KB/ DAUGHTER BOARD CONN		
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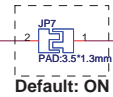
300mA

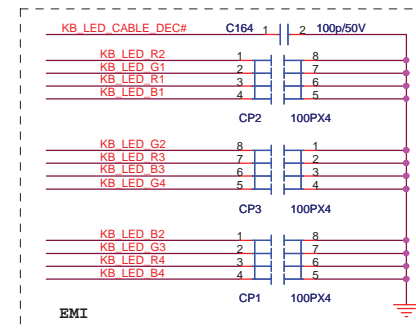
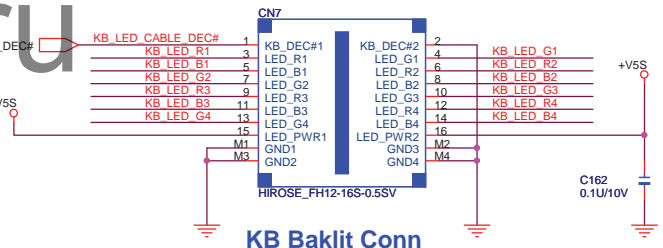
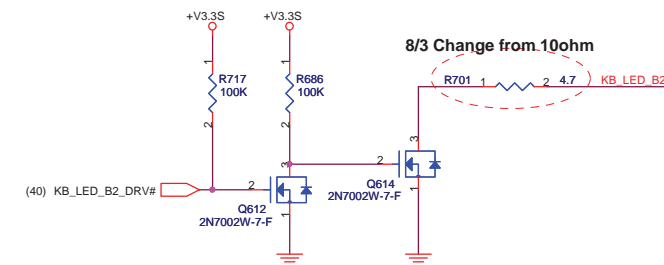
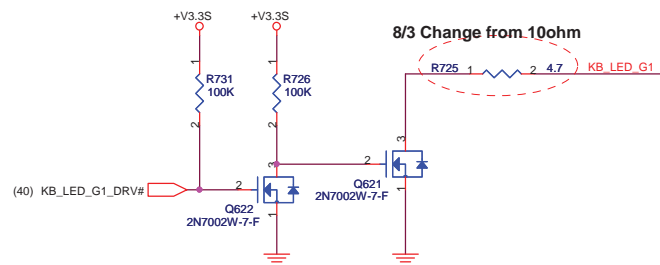
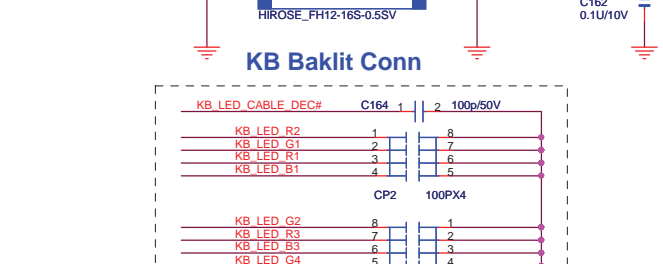
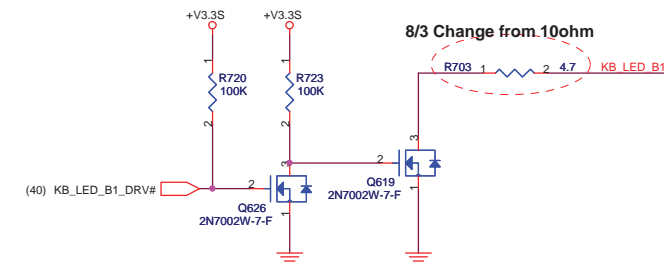
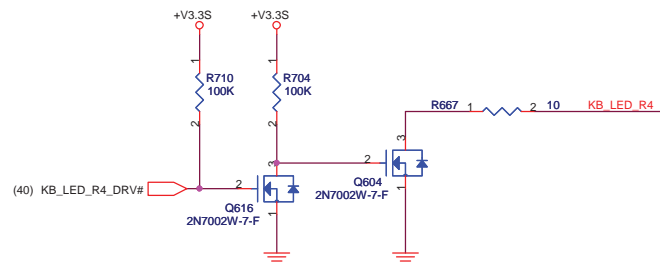
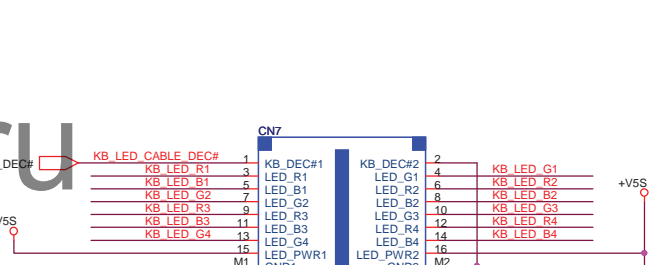
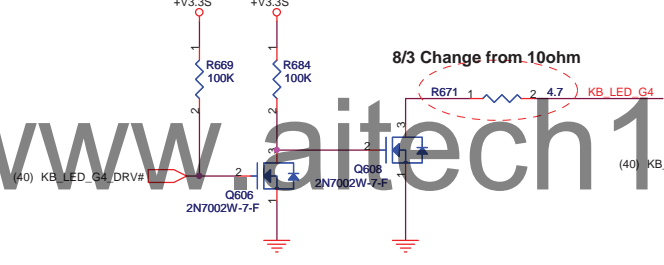
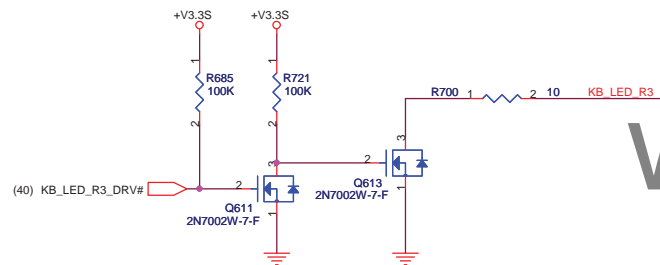
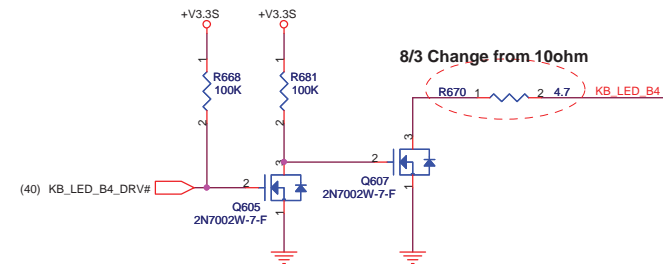
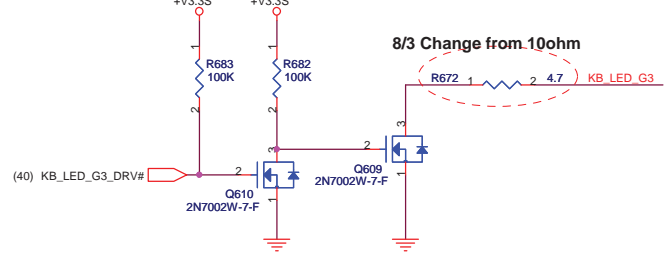
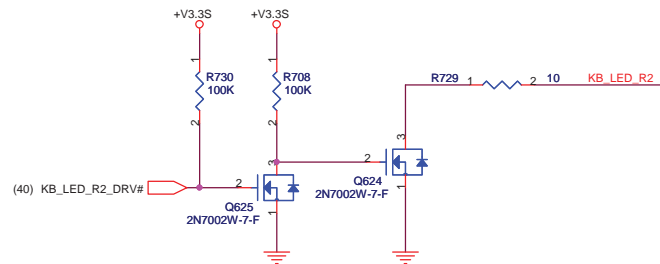
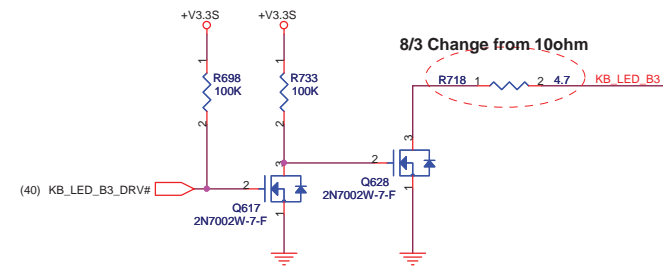
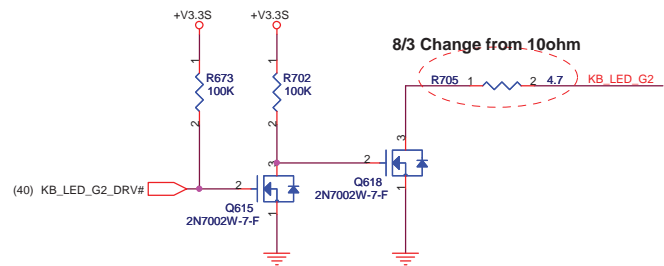
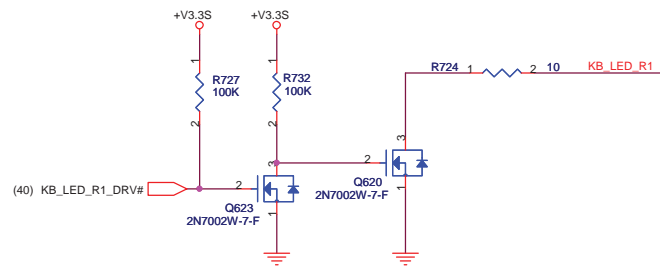
	S0	S3	S4	S5
AC In	ON	ON	ON	ON
BAT only	ON	ON	Off	Off



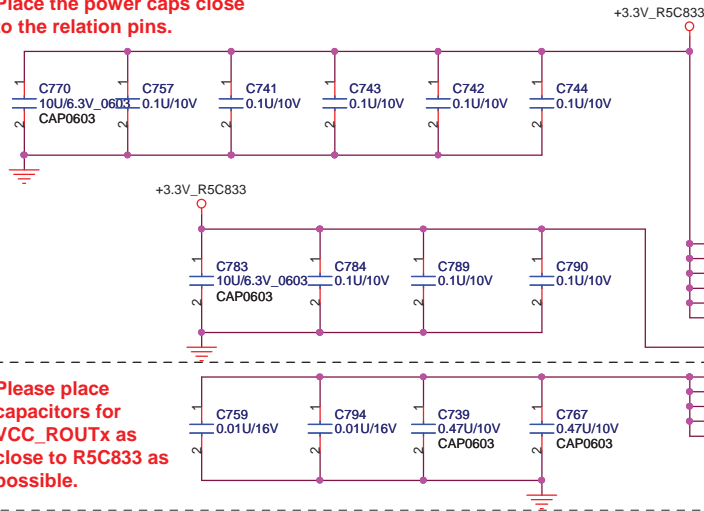
Reference	AD2	AD1	AD0	MAX7313 #
U41	0	0	0	Cable Detect#
U43	0	0	1	KB LED
U45	0	1	0	SPK& Head& Logo& T/P LED
---	0	1	1	LED Board
---	1	0	0	Media Board
---	1	0	1	Media Board

DEVICE	SMBUS ADDRESS
MAXIM - LED	0100 000b
MAXIM - GPIO	0100 001b
I2C EEPROM (U40)	1010 000b

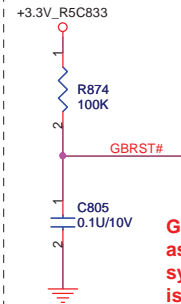




Place the power caps close to the relation pins.



Please place capacitors for VCC_ROUTx as close to R5C833 as possible.



GBRST# should be asserted only when system power supply is on.

Checklist
300~900ohm

- (20) PCI_PAR
- (20) PCI_C_BE3#
- (20) PCI_C_BE2#
- (20) PCI_C_BE1#
- (20) PCI_C_BE0#
- (20) PCI_REQ0#
- (20) PCI_GNT#0
- (20) PCI_FRAME#
- (20) PCI_IRDY#
- (20) PCI_TRDY#
- (20) PCI_DEVSEL#
- (20) PCI_STOP#
- (20) PCI_PERR#
- (20) PCI_SERR#

- (20) PCI_RST#
- (20) CLK_PCI_PCCARD
- (18,37) CLKRUN#

PCI_AD23

R792 1 2 330

GBRST#

R808 1 2 0

T713 PAD

70

117

- PCI_AD31 125
- PCI_AD30 126
- PCI_AD29 127
- PCI_AD28 1
- PCI_AD27 2
- PCI_AD26 3
- PCI_AD25 5
- PCI_AD24 6
- PCI_AD23 9
- PCI_AD22 11
- PCI_AD21 12
- PCI_AD20 14
- PCI_AD19 15
- PCI_AD18 17
- PCI_AD17 18
- PCI_AD16 19
- PCI_AD15 36
- PCI_AD14 37
- PCI_AD13 38
- PCI_AD12 39
- PCI_AD11 40
- PCI_AD10 42
- PCI_AD9 43
- PCI_AD8 44
- PCI_AD7 46
- PCI_AD6 47
- PCI_AD5 48
- PCI_AD4 49
- PCI_AD3 50
- PCI_AD2 51
- PCI_AD1 52
- PCI_AD0 53
- PAR 33
- C/BE3# 7
- C/BE2# 21
- C/BE1# 35
- C/BE0# 45
- IDSEL 8
- REQ# 124
- GNT# 123
- FRAME# 23
- IRDY# 24
- TRDY# 25
- DEVSEL# 26
- STOP# 29
- PERR# 30
- SERR# 31
- GBRST# 71
- PCIRST# 119
- PCICLK 121
- PME# 70
- CLKRUN# 117

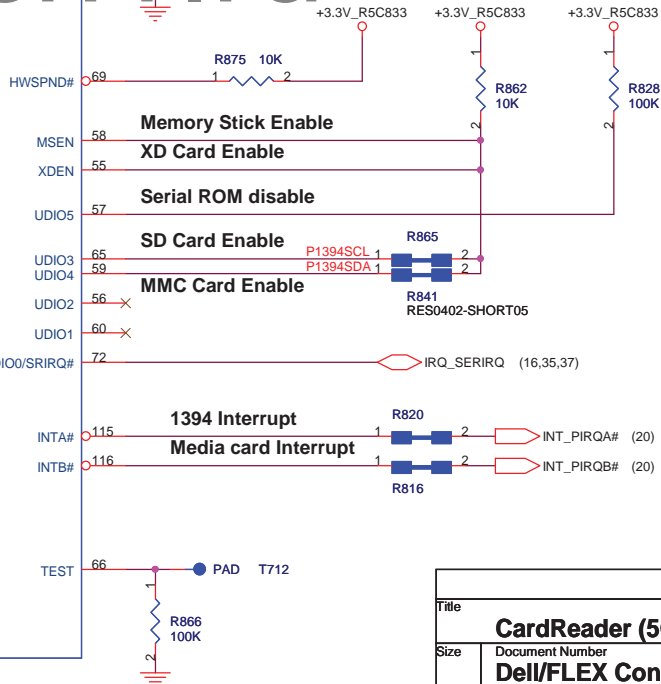
U609B

- VCC_PC1
- VCC_PC2
- VCC_PC3
- VCC_PC4
- VCC_PC5
- VCC_PC6
- VCC_RIN
- VCC_ROUT1
- VCC_ROUT2
- VCC_ROUT3
- VCC_ROUT4
- VCC_ROUT5

PCI / OTHER

- VCC_3V
- VCC_MD
- GND1
- GND2
- GND3
- GND4
- GND5
- GND6
- GND7
- GND8
- GND9
- GND10
- AGND1
- AGND2
- AGND3
- AGND4
- AGND5

- HWSPND#
- MSEN
- XDEN
- UDIO5
- UDIO3
- UDIO4
- UDIO2
- UDIO1
- UDIO0/SRIRQ#
- INTA#
- INTB#
- TEST



Memory Stick Enable

XD Card Enable

Serial ROM disable

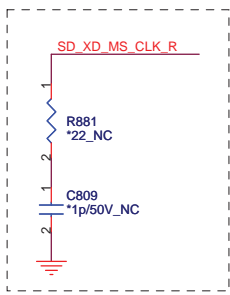
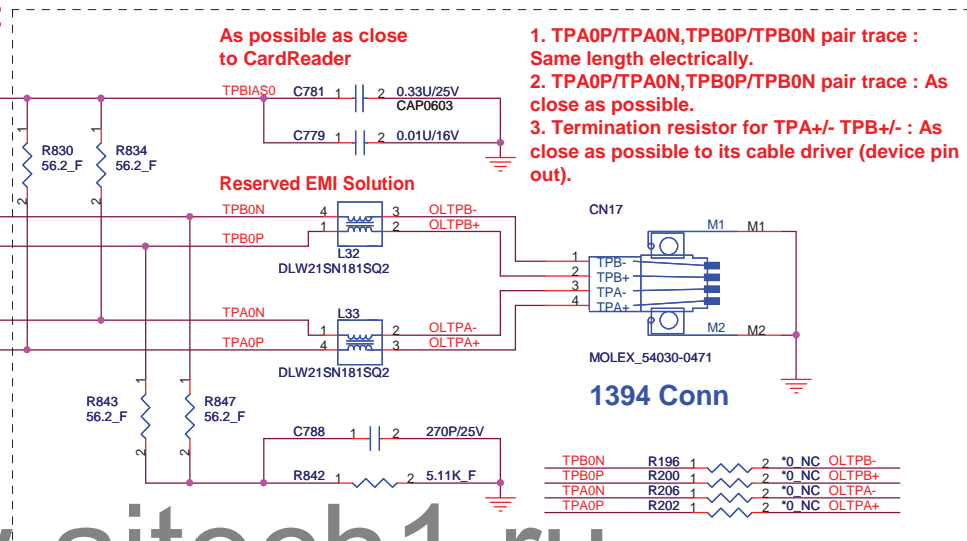
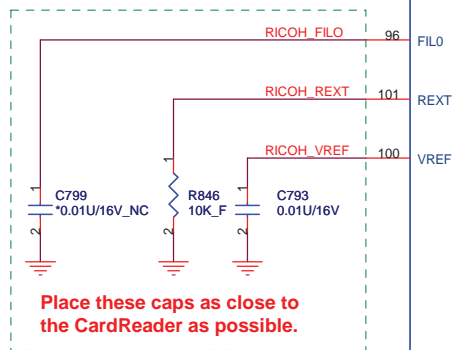
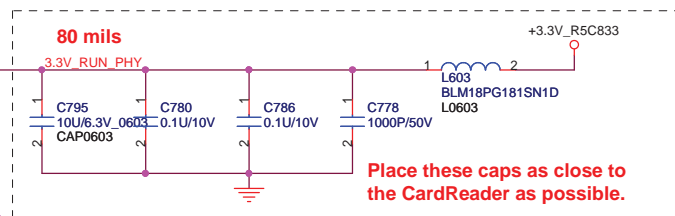
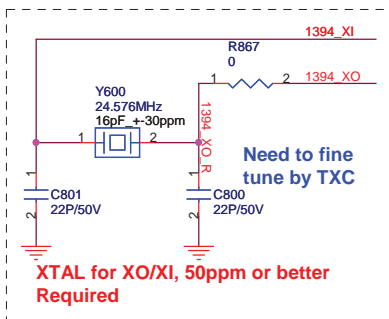
SD Card Enable

MMC Card Enable

1394 Interrupt

Media card Interrupt

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CardReader (5C833)		
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AVCC_PHY1
AVCC_PHY2
AVCC_PHY3
AVCC_PHY4

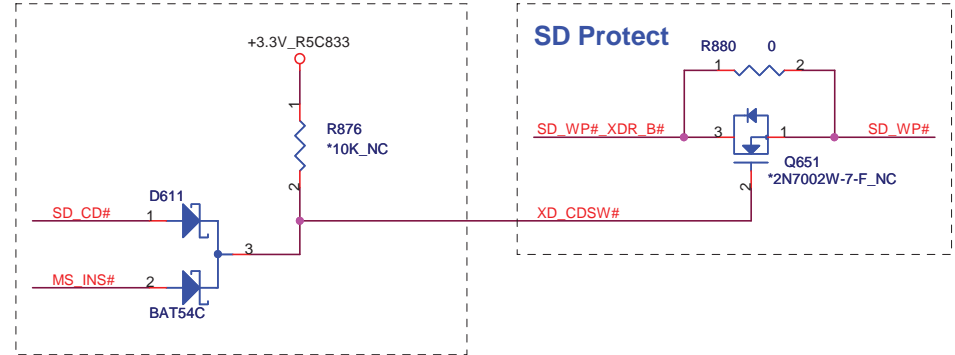
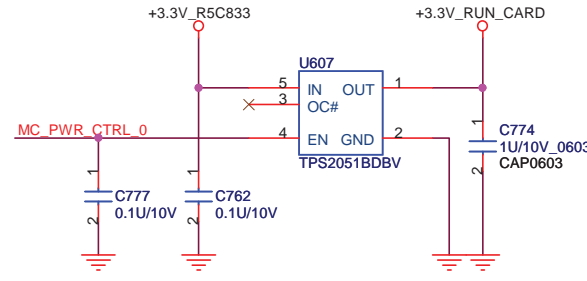
TPBIAS0
TPBN0
TPBP0
TPA0N
TPA0P

MDIO17
MDIO16
MDIO15
MDIO14
MDIO13
MDIO12
MDIO11
MDIO10
MDIO05
MDIO08
MDIO19
MDIO18
MDIO02
MDIO03
MDIO00
MDIO01
MDIO09
MDIO04
MDIO06
MDIO07

(44) XD_WP#
(44) MC_PWR_CTRL_0
(44) SD_WP#_XDR_B#
(44) XD_CE#
(44) MS_INS#
(44) SD_CD#
(44) SD_CD#
(44) SD_XD_MS_DATA1
(44) SD_XD_MS_DATA0
(44) XD_ALE
(44) XD_CLE
(44) XD_MMS_DATA7
(44) SD_XD_MS_CMD
(44) XD_MMS_DATA5
(44) SD_XD_MS_DATA3
(44) XD_MMS_DATA4
(44) XD_MMS_DATA6
(44) SD_XD_MS_DATA2
(44) SD_XD_MS_CLK_R

Layout Note:

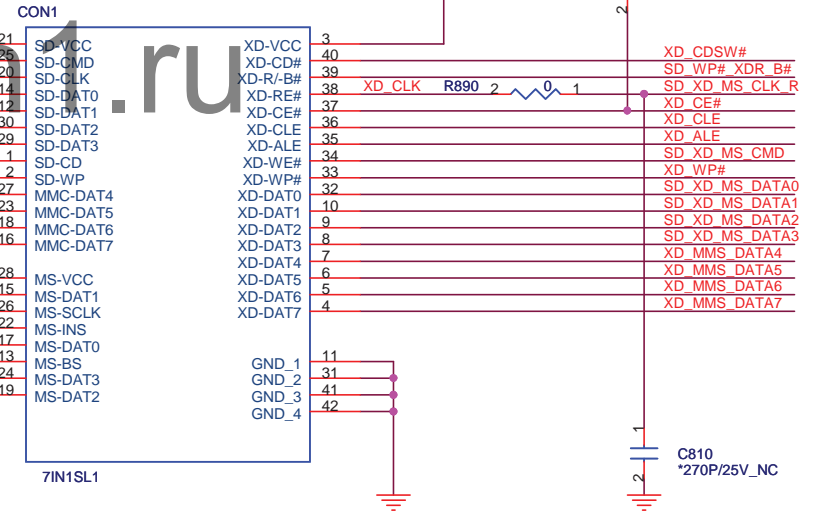
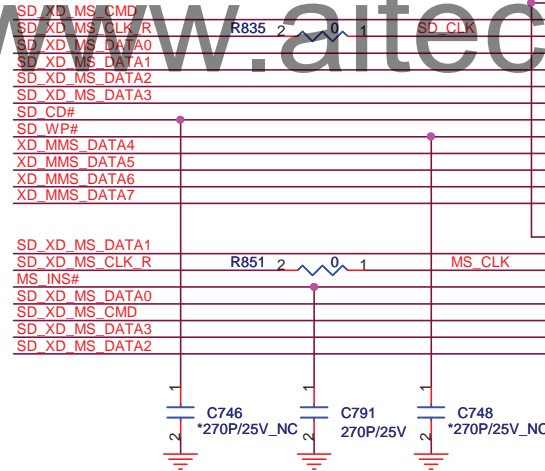
- 1). The distance between Media Card Power Switch and Media Socket should be less than 2-inches.
- 2). The trace width for +3.3V_RUN_CARD should be 40MIL at least.
- 3). The GND trace for Media Card Socket should be 40MIL at least.



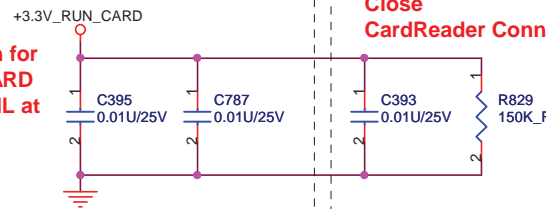
2.2uF cap is no more than 250mils away from the power pin and a have a min trace width of 40mils.

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(43) XD_WP#	XD_WP#
(43) MC_PWR_CTRL_0	MC_PWR_CTRL_0
(43) SD_WP#_XDR_B#	SD_WP#_XDR_B#
(43) XD_CE#	XD_CE#
(43) MS_INS#	MS_INS#
(43) SD_CD#	SD_CD#
(43) SD_XD_MS_DATA1	SD_XD_MS_DATA1
(43) SD_XD_MS_DATA0	SD_XD_MS_DATA0
(43) XD_ALE	XD_ALE
(43) XD_CLE	XD_CLE
(43) XD_MMS_DATA7	XD_MMS_DATA7
(43) SD_XD_MS_CMD	SD_XD_MS_CMD
(43) XD_MMS_DATA5	XD_MMS_DATA5
(43) SD_XD_MS_DATA3	SD_XD_MS_DATA3
(43) XD_MMS_DATA4	XD_MMS_DATA4
(43) XD_MMS_DATA6	XD_MMS_DATA6
(43) SD_XD_MS_DATA2	SD_XD_MS_DATA2
(43) SD_XD_MS_CLK_R	SD_XD_MS_CLK_R



The trace width for +3.3V_RUN_CARD should be 40MIL at least.

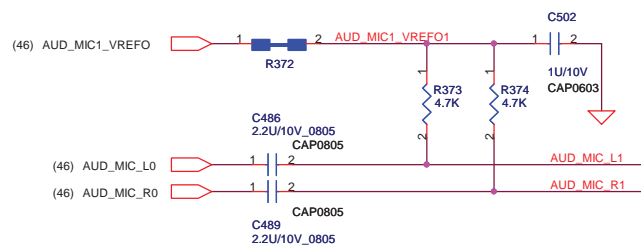
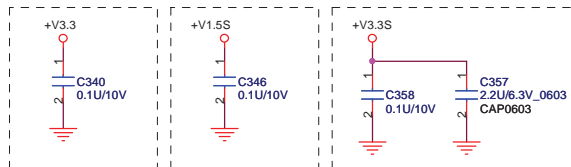
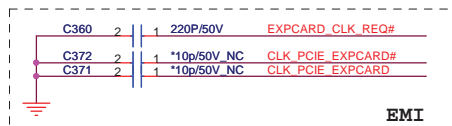
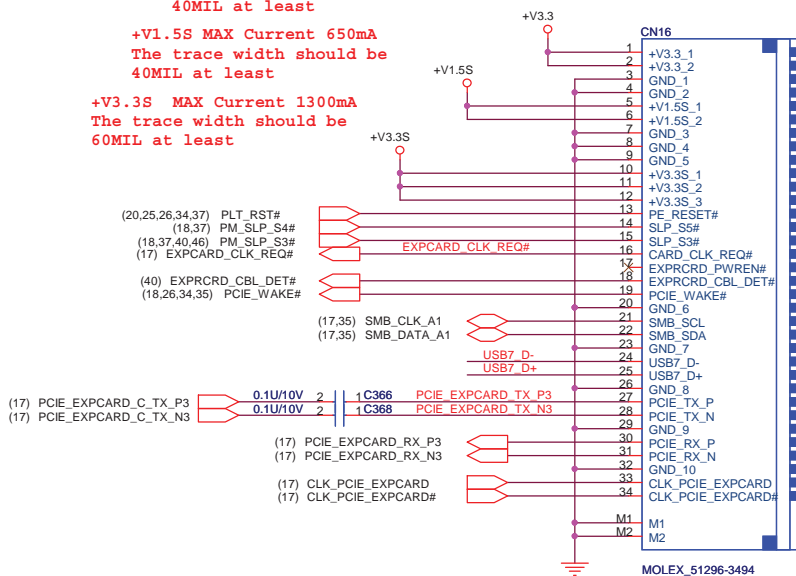


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CardReader CONN		
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+V3.3 MAX Current 275mA
The trace width should be
40MIL at least

+V1.5S MAX Current 650mA
The trace width should be
40MIL at least

+V3.3S MAX Current 1300mA
The trace width should be
60MIL at least



(20) PCH_USB7+
(20) PCH_USB7-

L29

4 3
1 2

*DLW21SN900SQ2B_NC

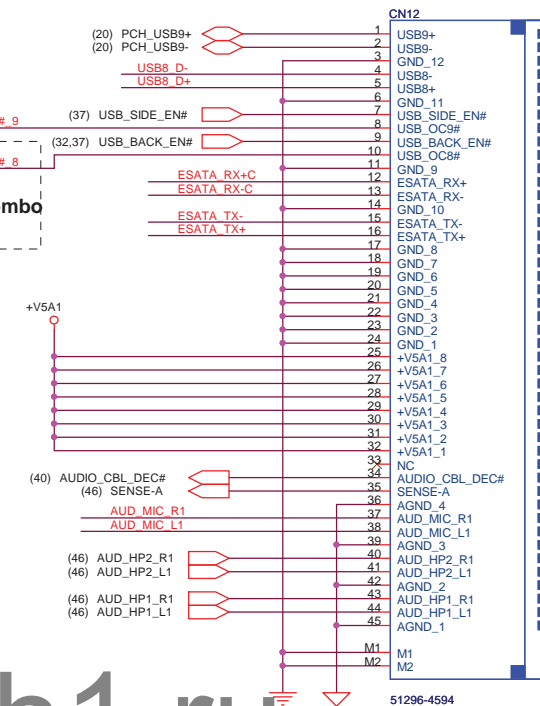
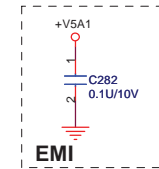
R190 0
1 2

R189 0
1 2

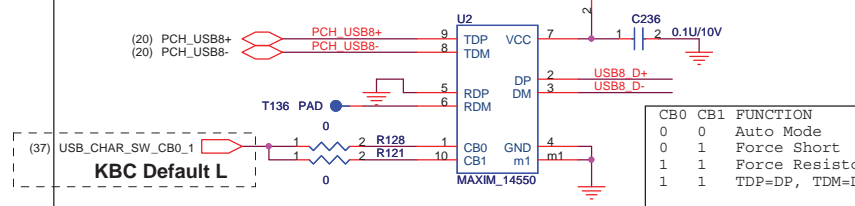
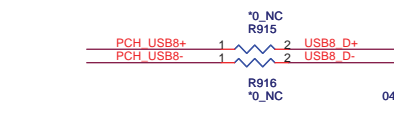
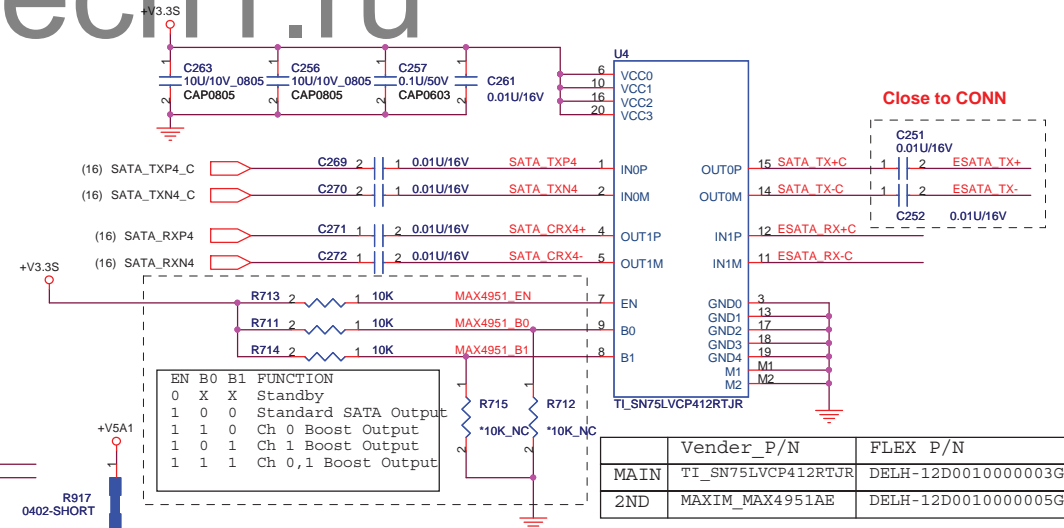
USB7 D+
USB7 D-

(20) USB_OC#_8_9

For USB+ESATA Combo power switch



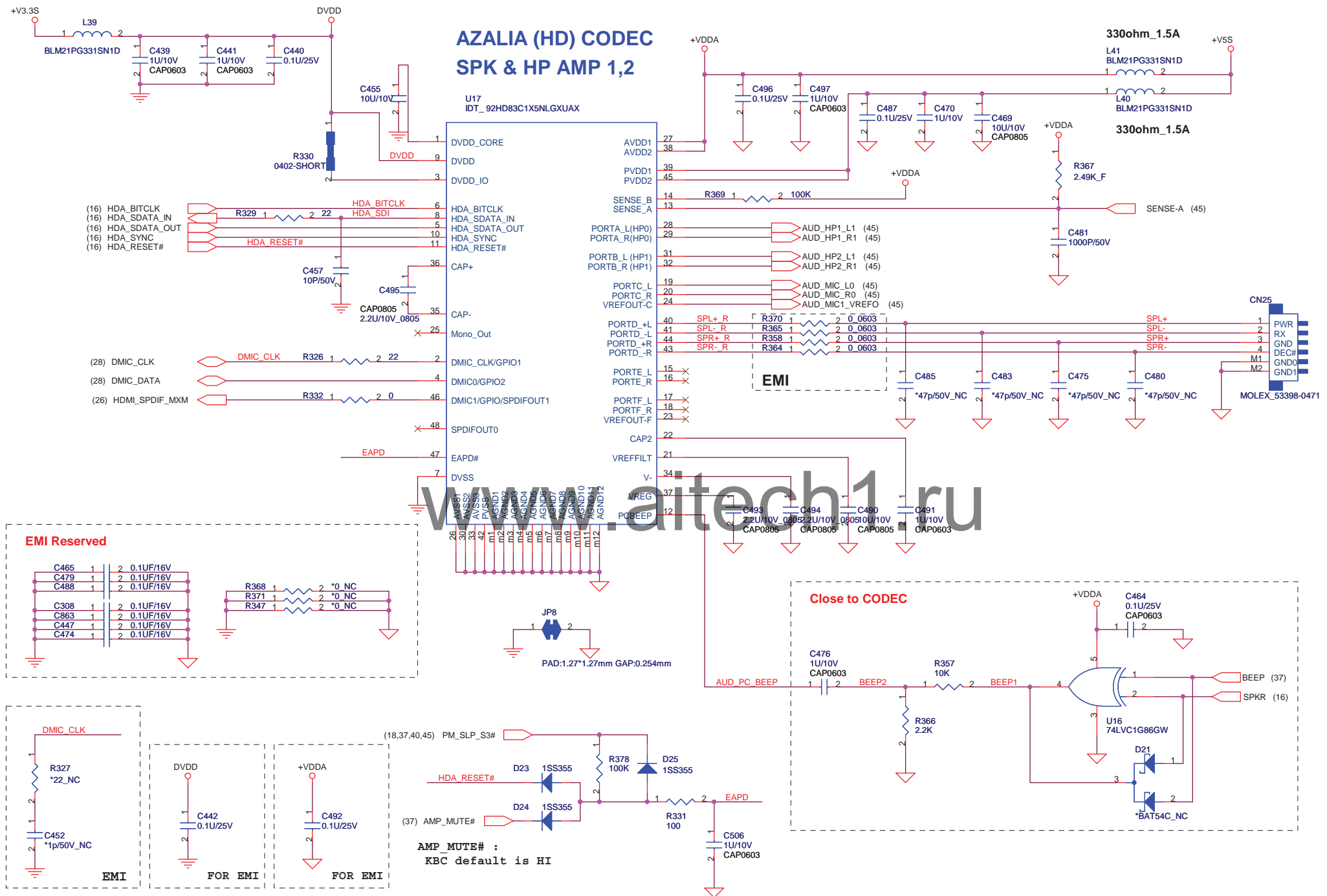
For eSATA/USB CONN



	Vender_P/N	FLEX P/N
MAIN	TI_SN75LVCP412RTJR	DELH-12D0010000003G
2ND	MAXIM_MAX4951AE	DELH-12D0010000005G

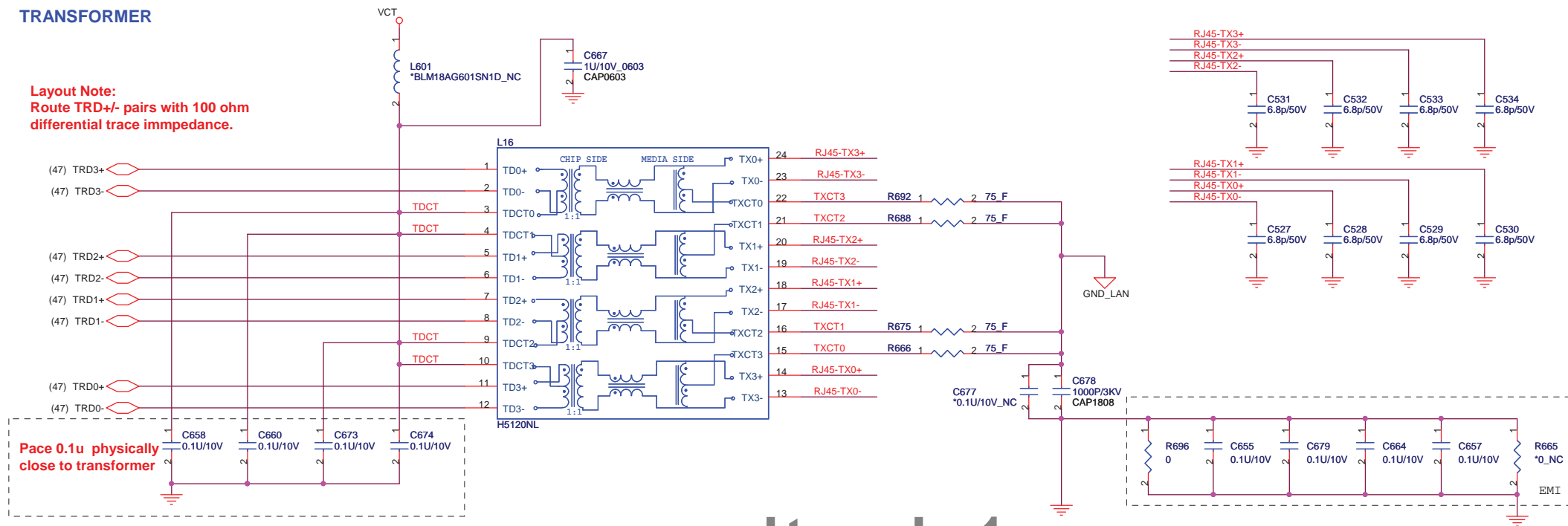
Title			
Audio/B Exp/B CONN			
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AZALIA (HD) CODEC SPK & HP AMP 1,2

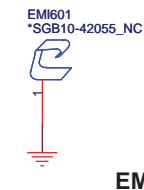
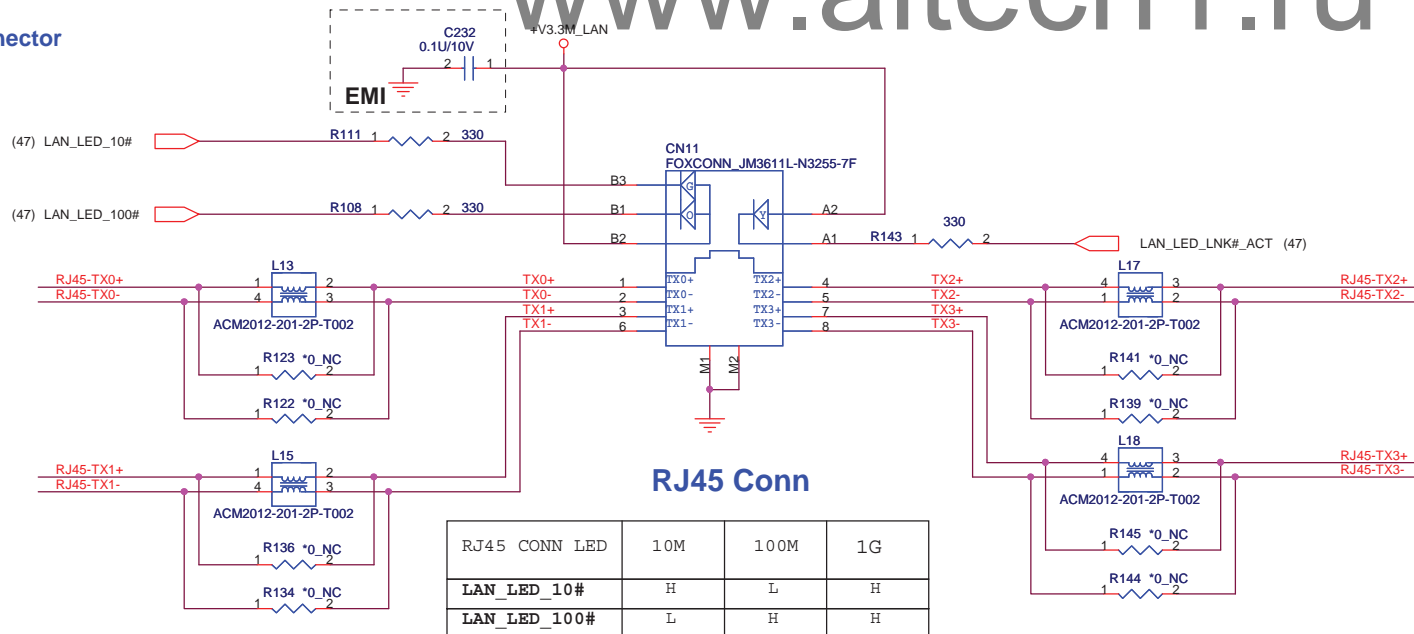


TRANSFORMER

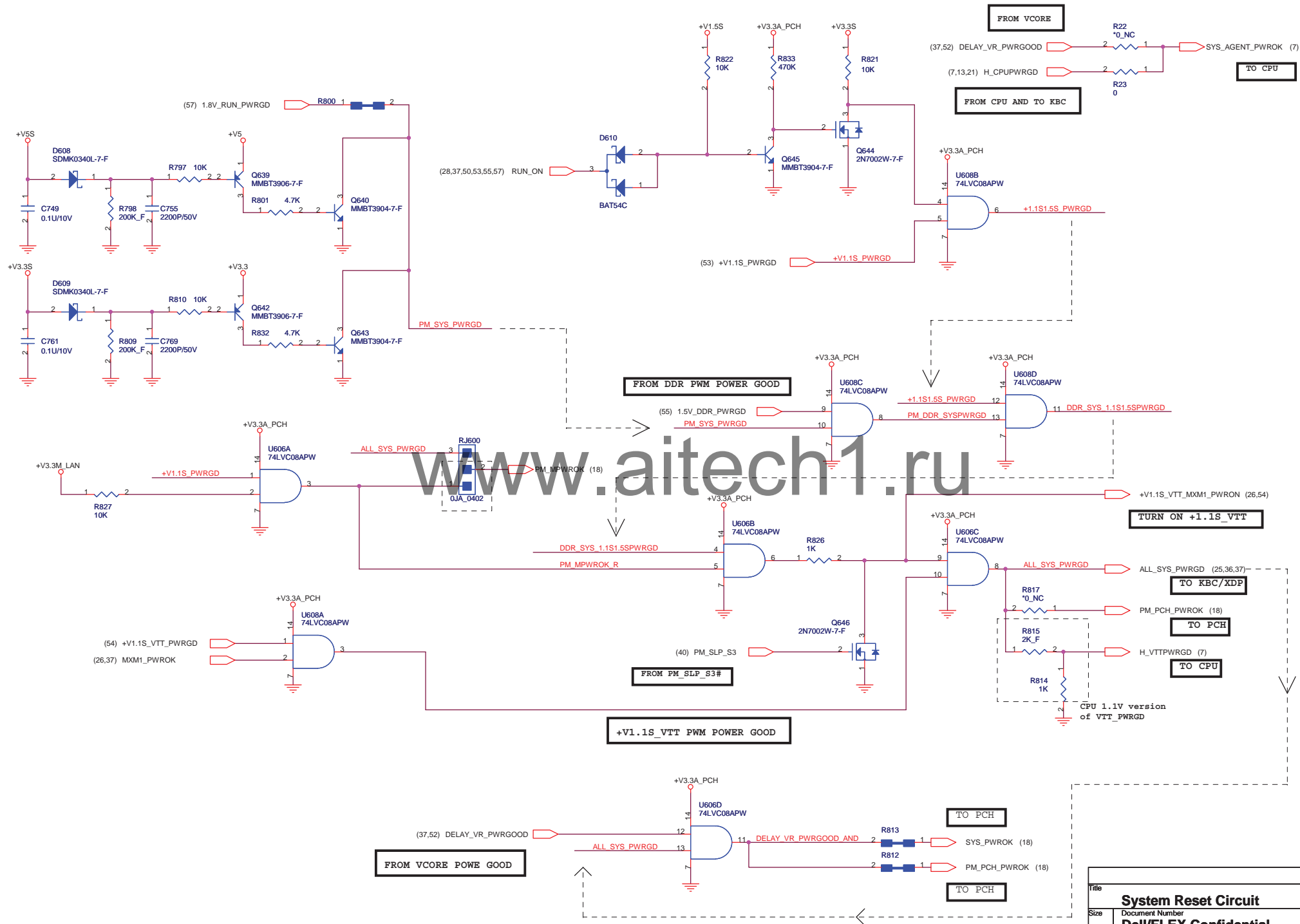
Layout Note:
Route TRD+/- pairs with 100 ohm differential trace impedance.

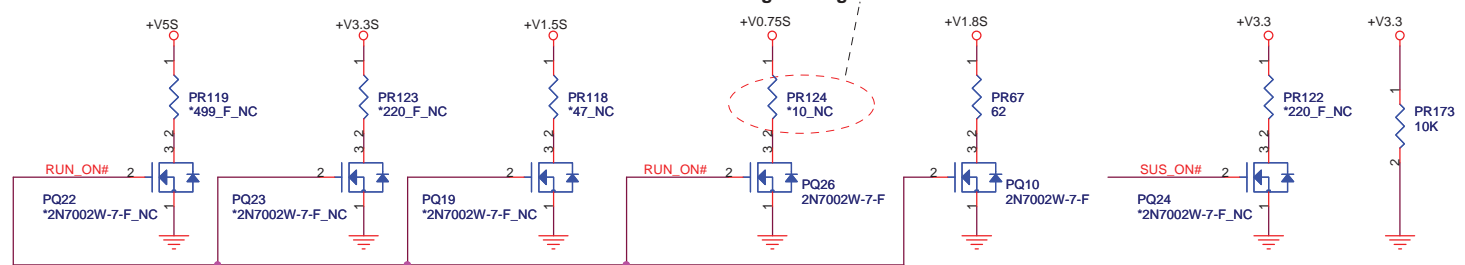
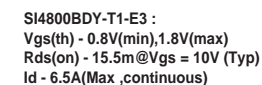
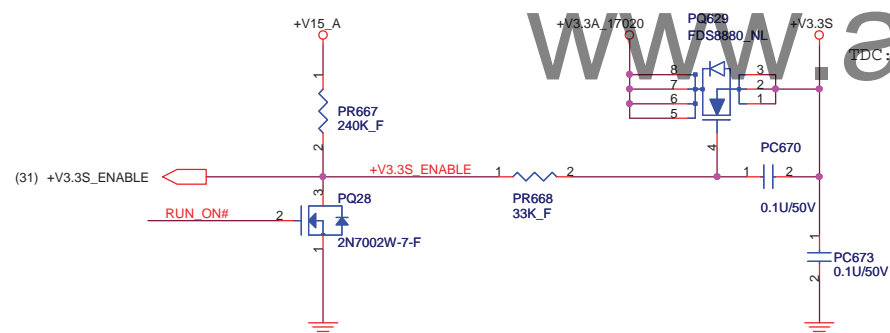
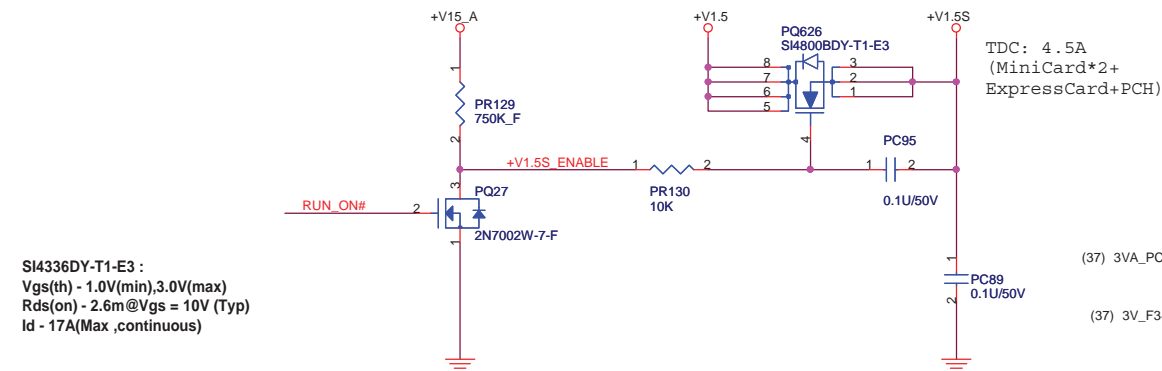
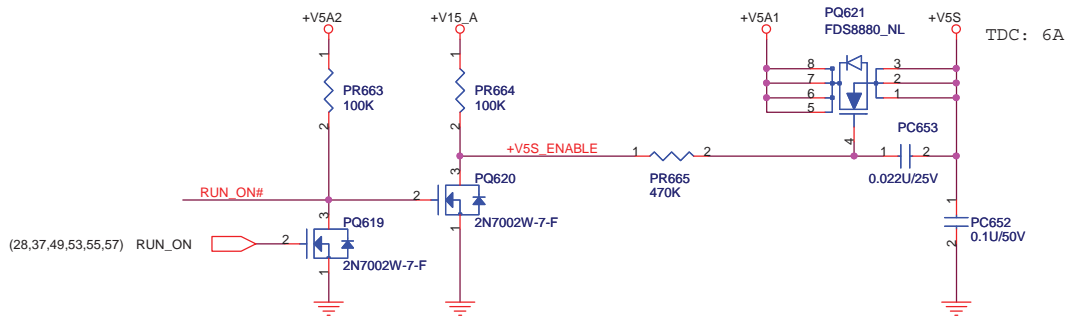


RJ-45 Connector

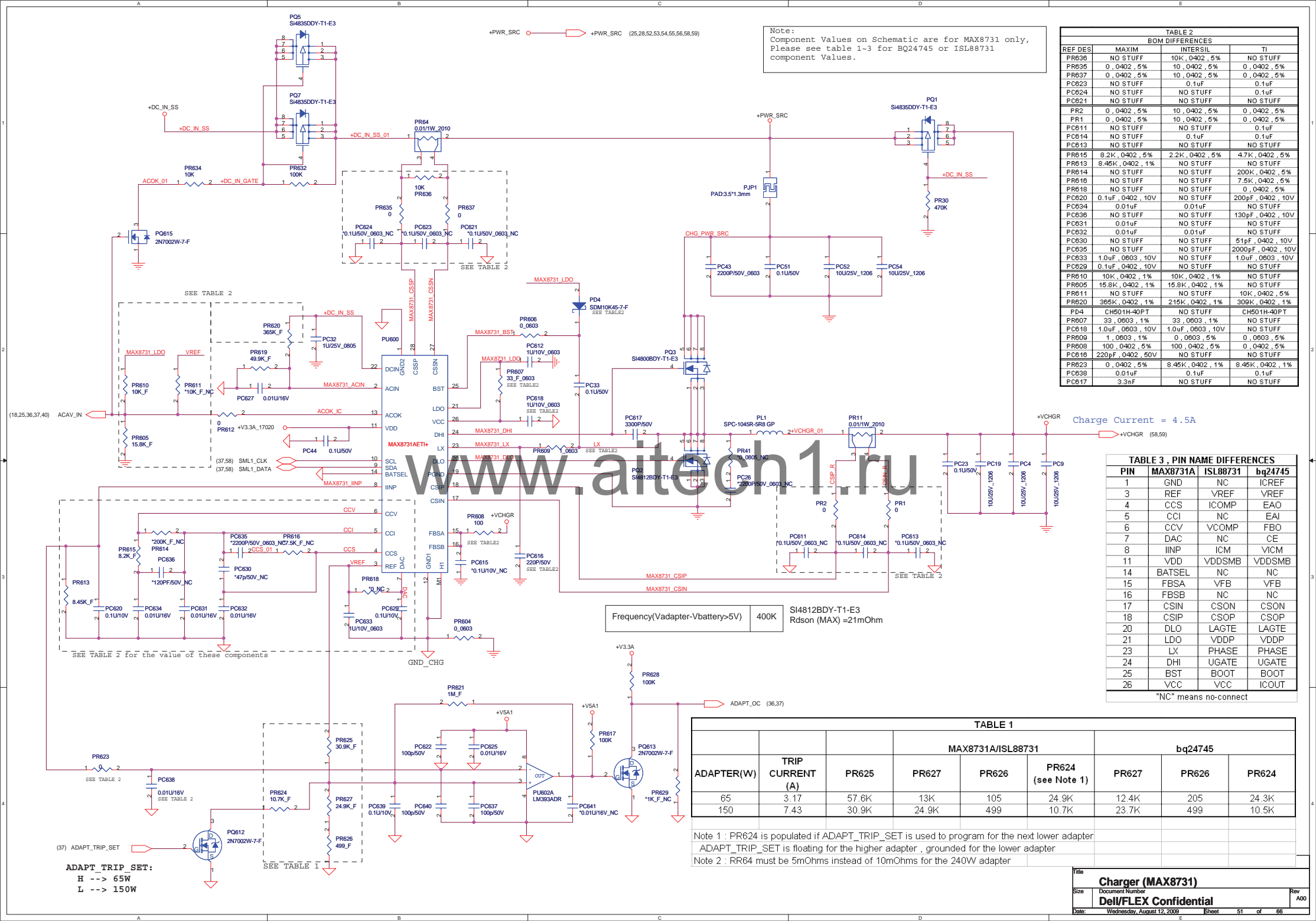


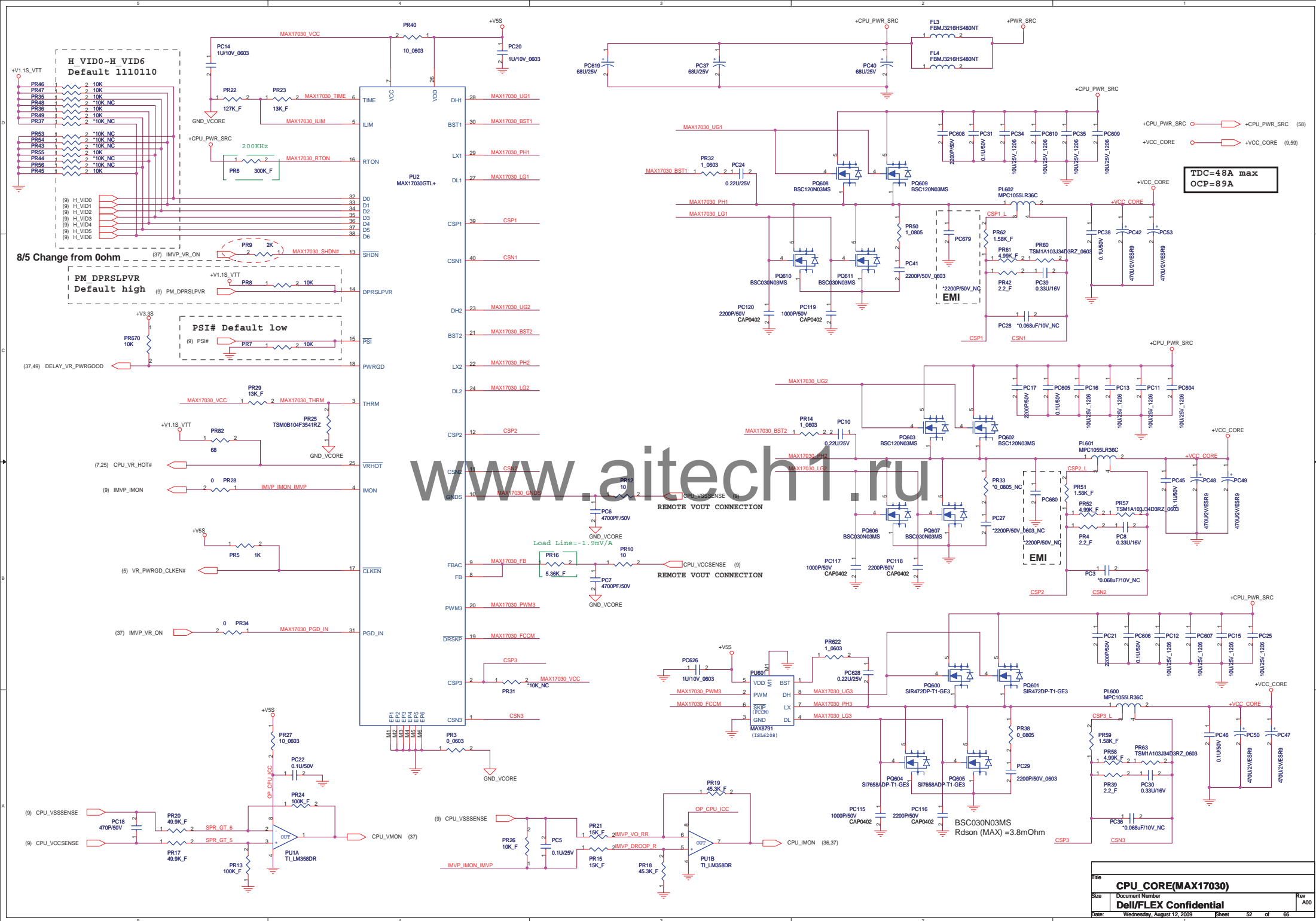
Title			
RJ-45/TRANSFORM			
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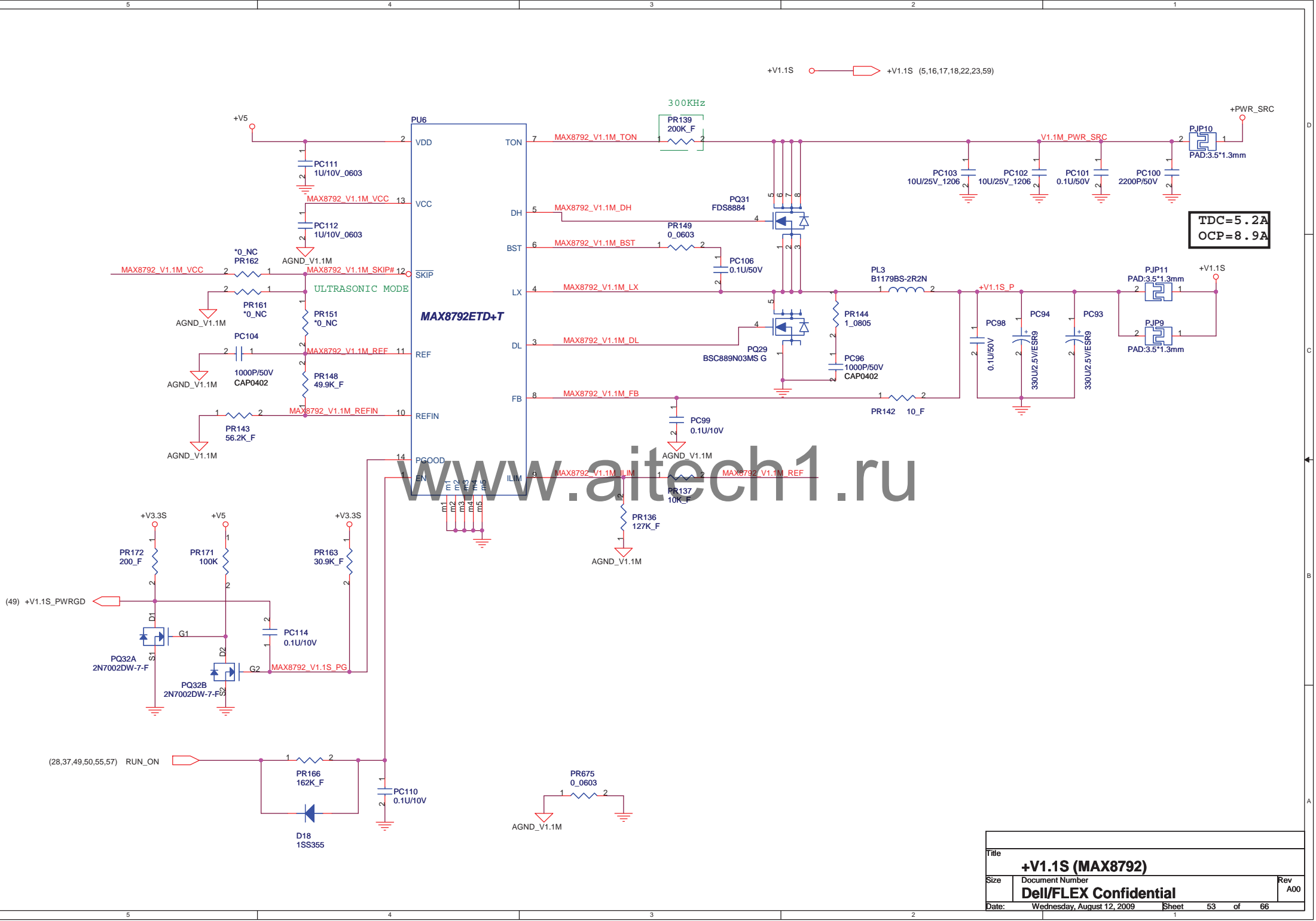




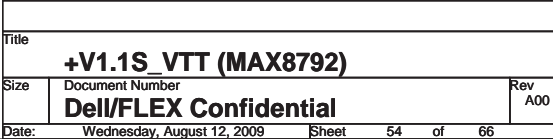
Title			
SUS/ RUN POWER SW			
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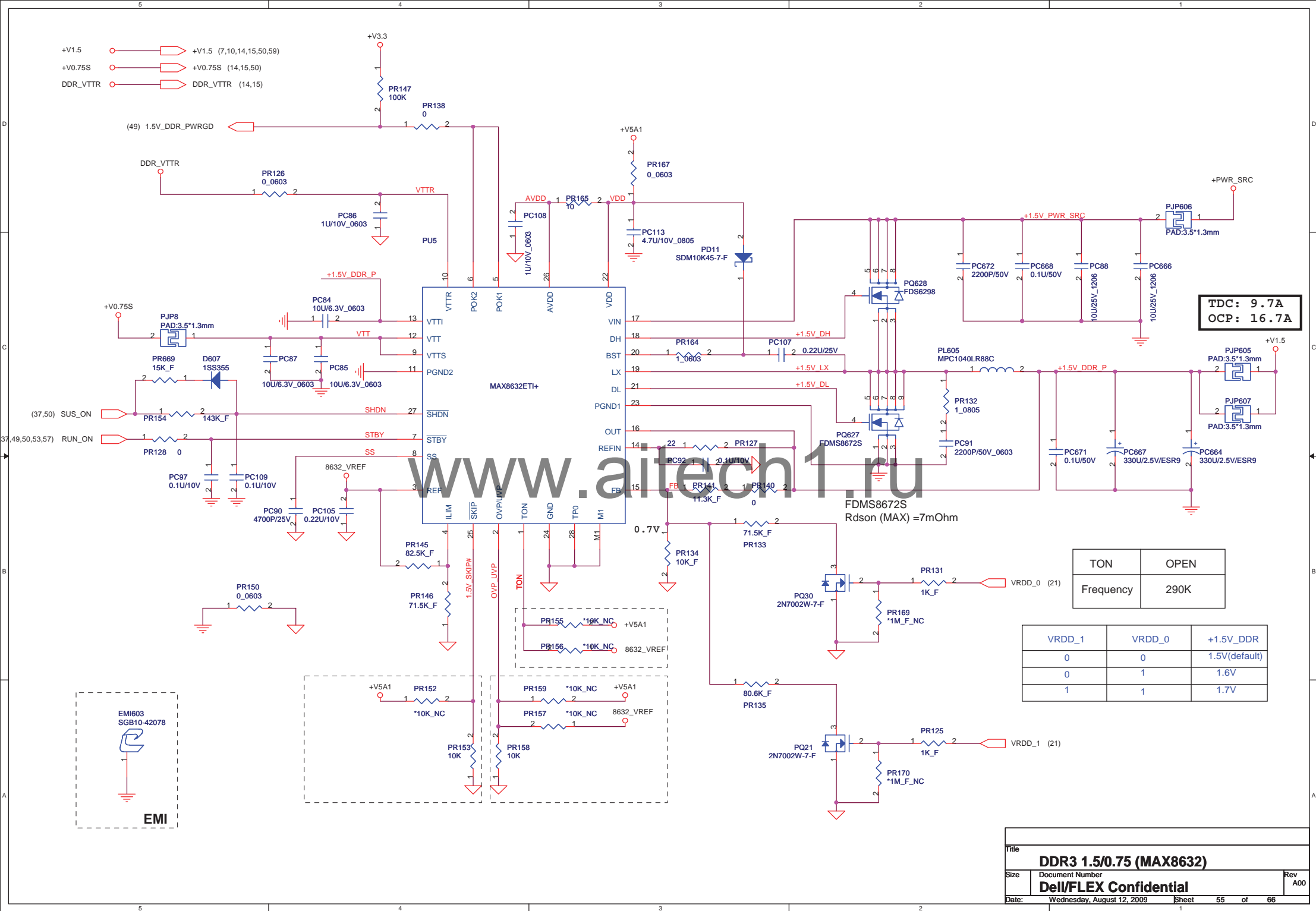


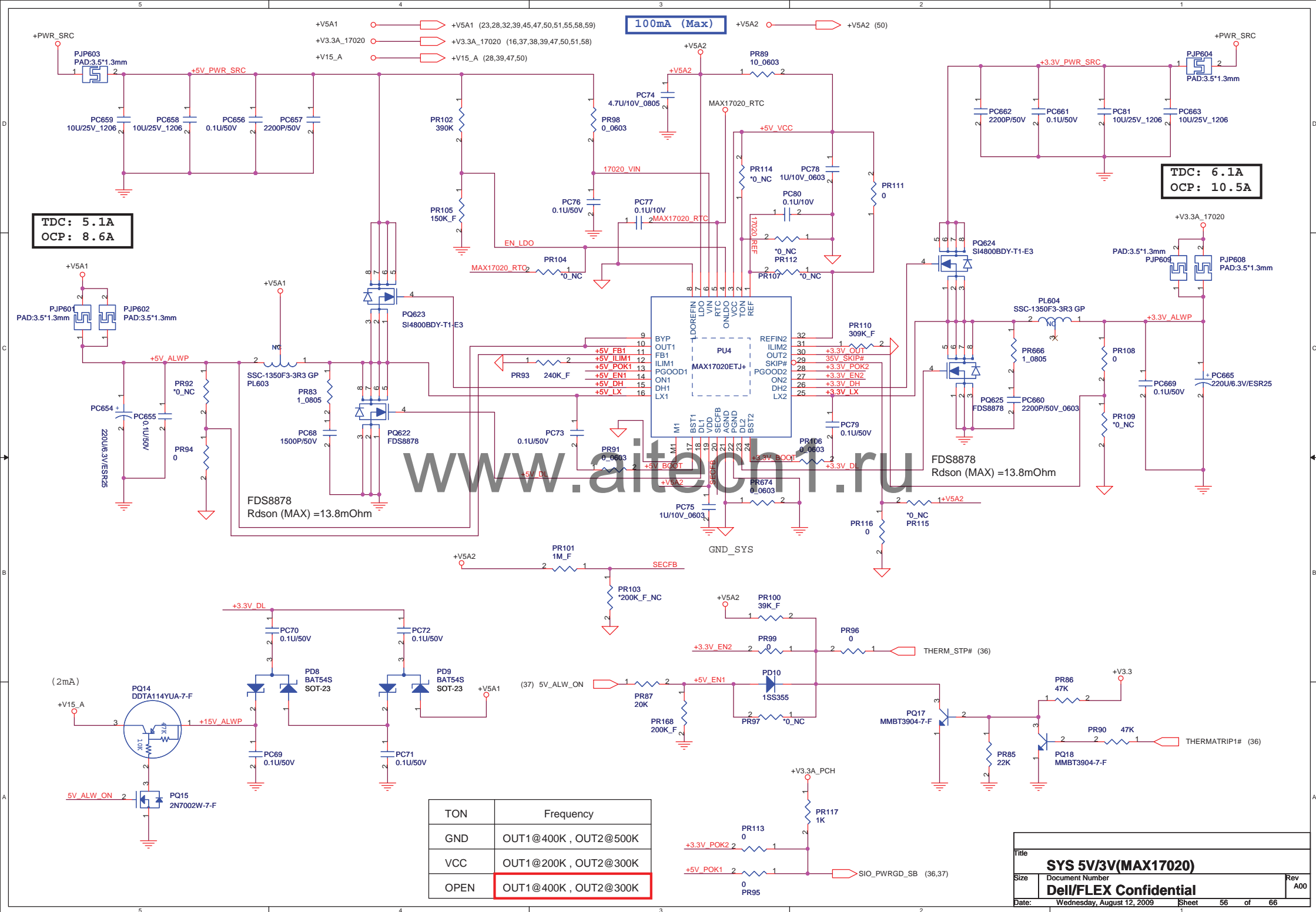


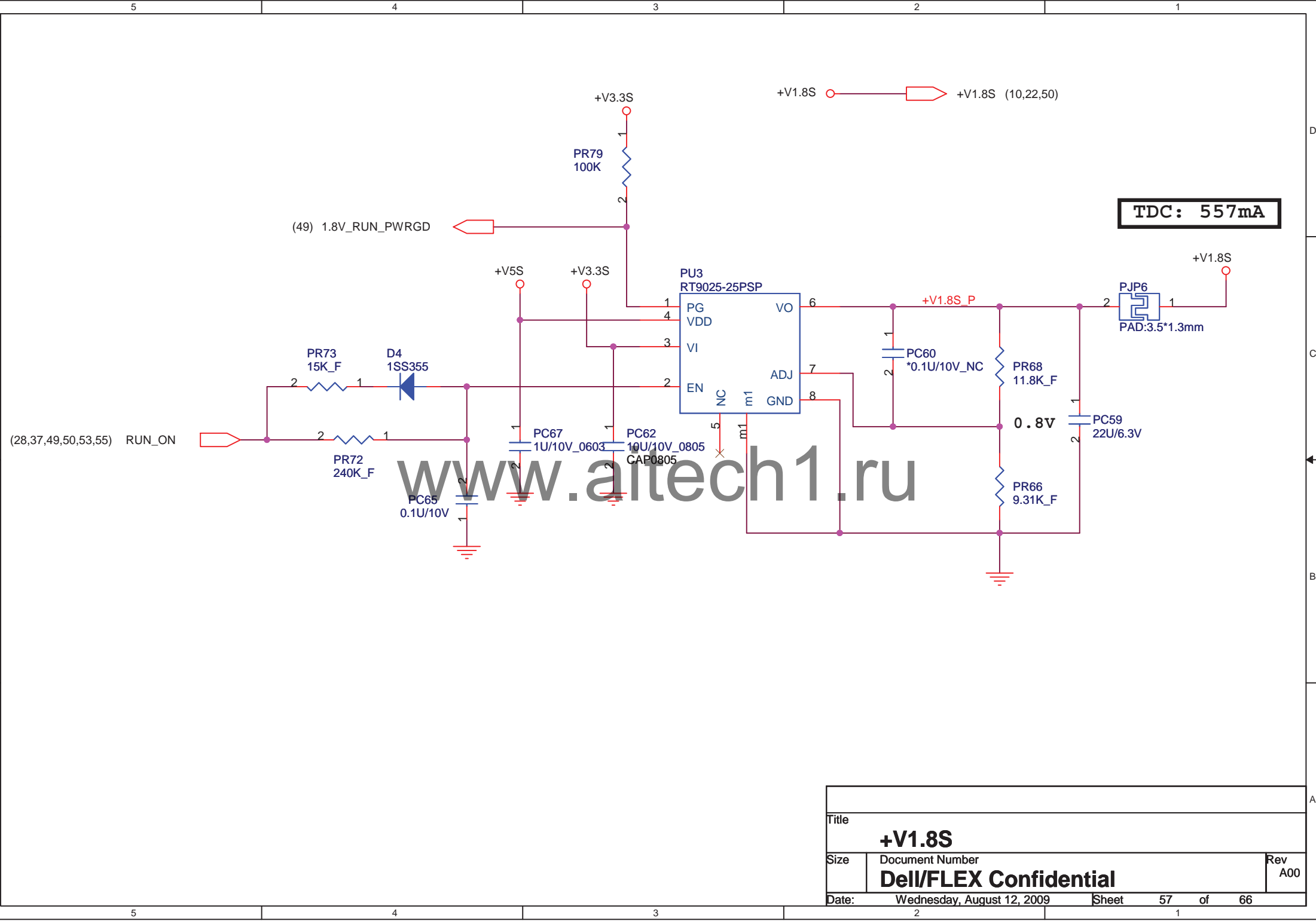


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+V1.1S (MAX8792)		
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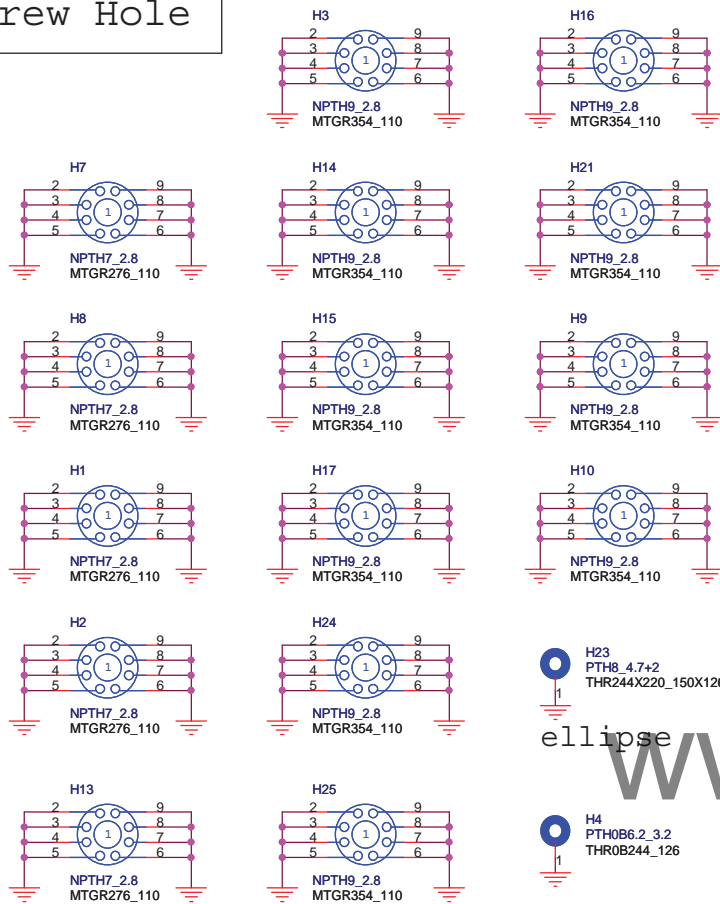






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+V1.8S			
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Screw Hole

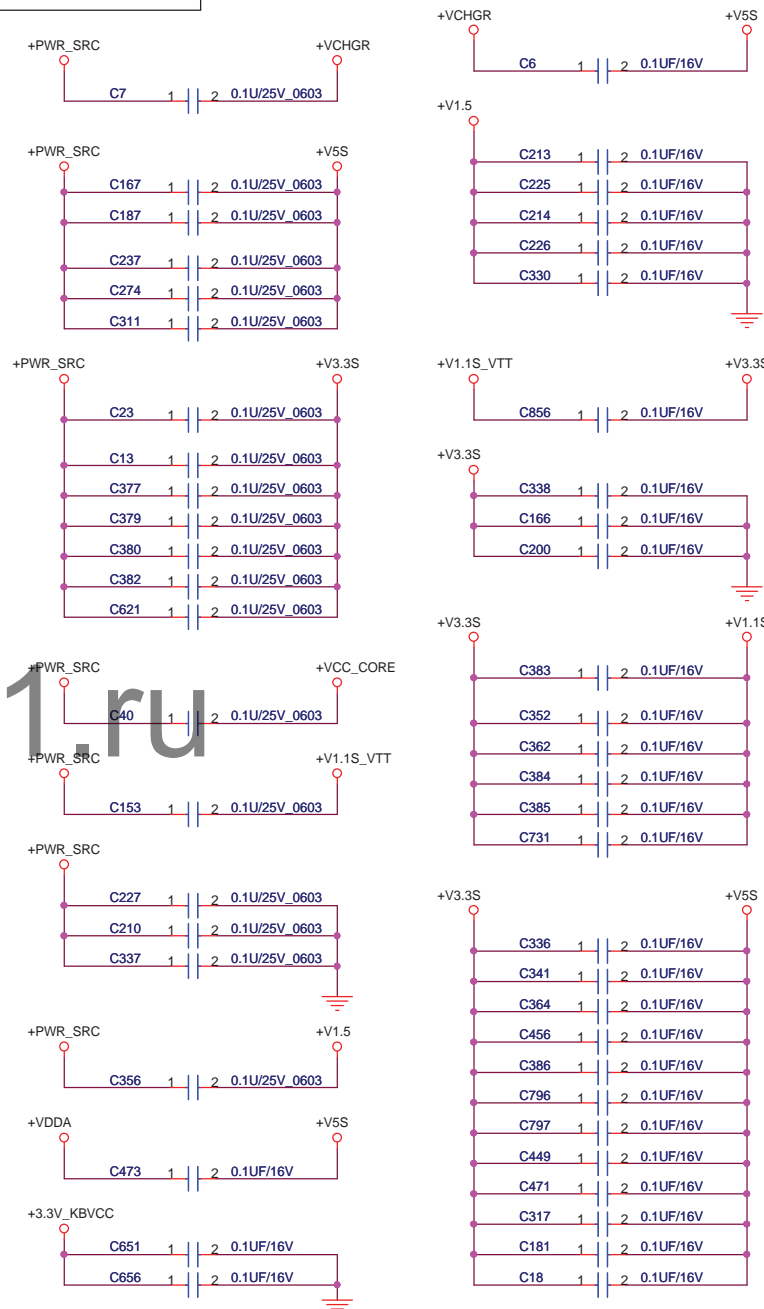


CPU SUPPORT

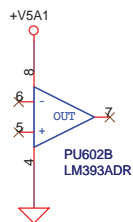
PCH SUPPORT

HDD CONN BACK SCREW

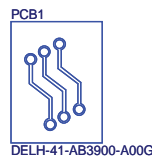
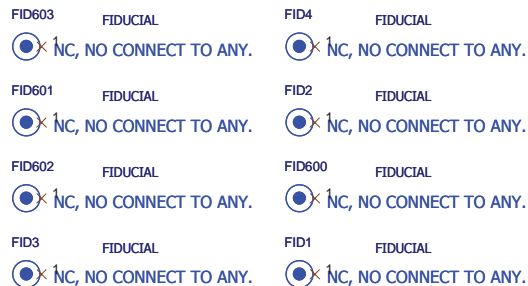
Moat Cap

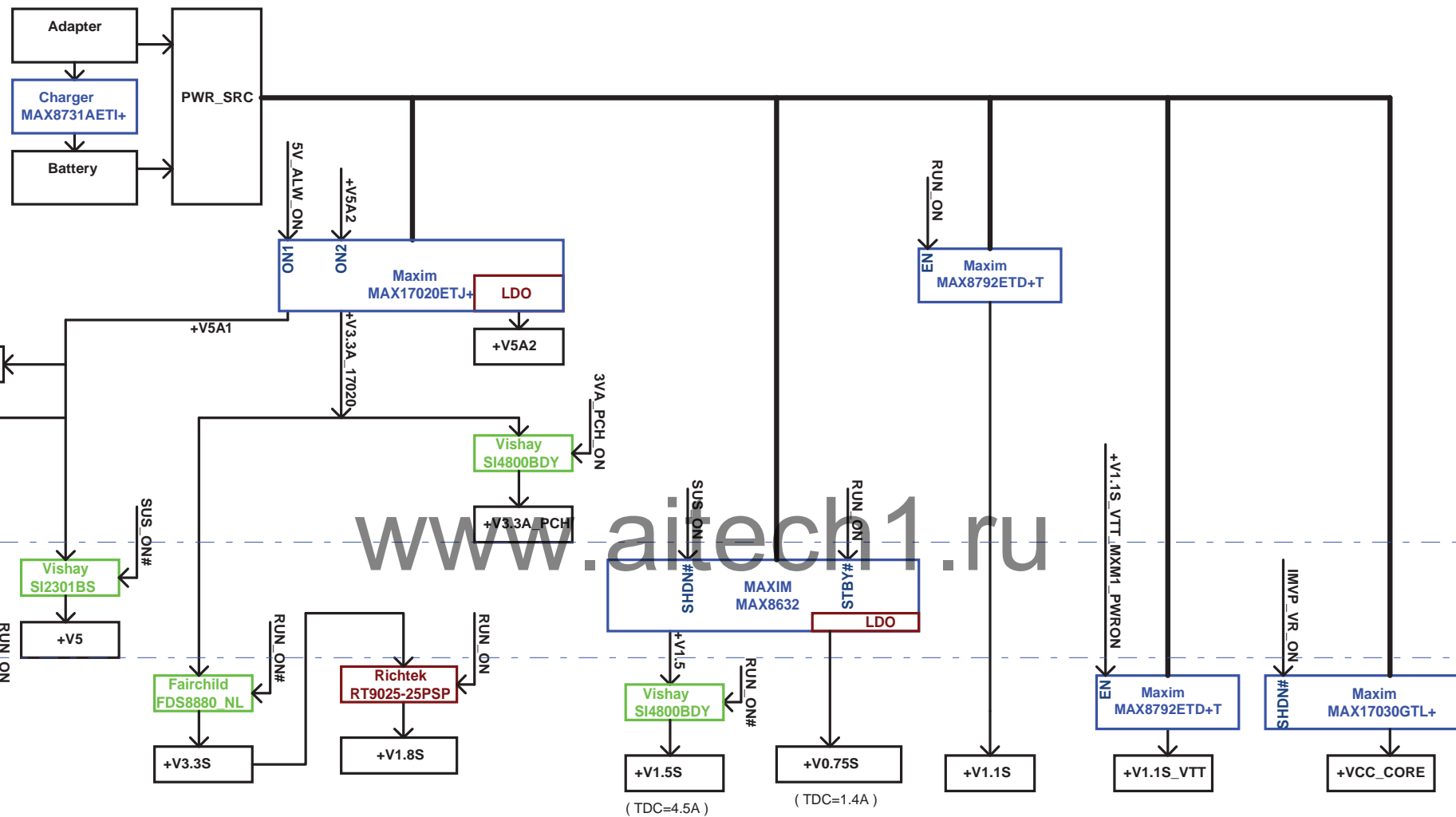


Unused Gate



FID

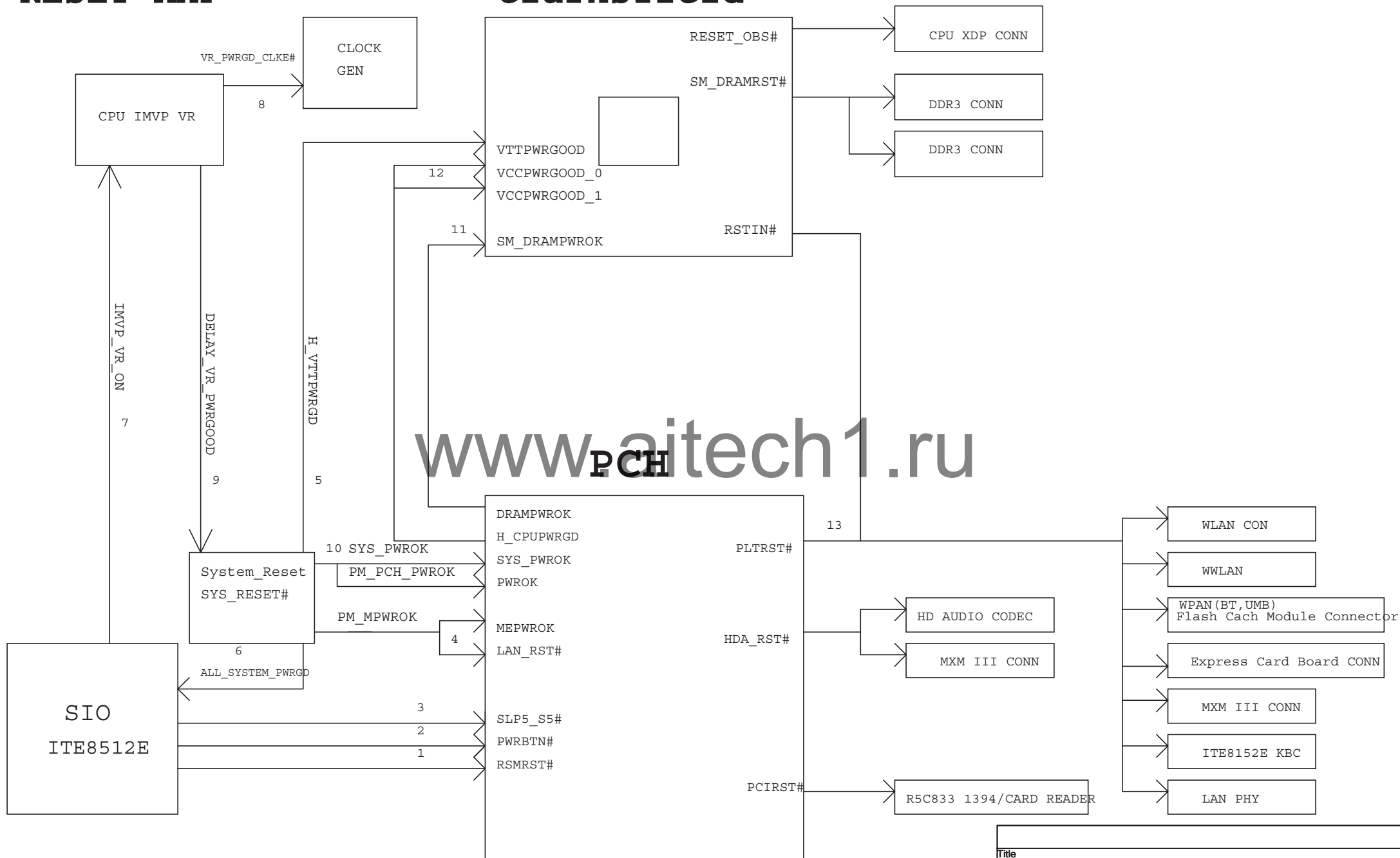




Power Rail	+V5A1	+V5A2	+V15_A	+V3.3A_17020	+V1.8S	+V1.5	+V0.75S	+V1.1S	+V1.1S_VTT	+VCC_CORE
TDC (Thermal Design Current)	5.1A	100mA	2mA	6.1A	557mA	9.7A	1.4A	5.2A	15A	65A
OCF (Over Current Protect)	8.6A	260mA		10.5A	2A	16.7A	5A	8.9A	25.32A	89A

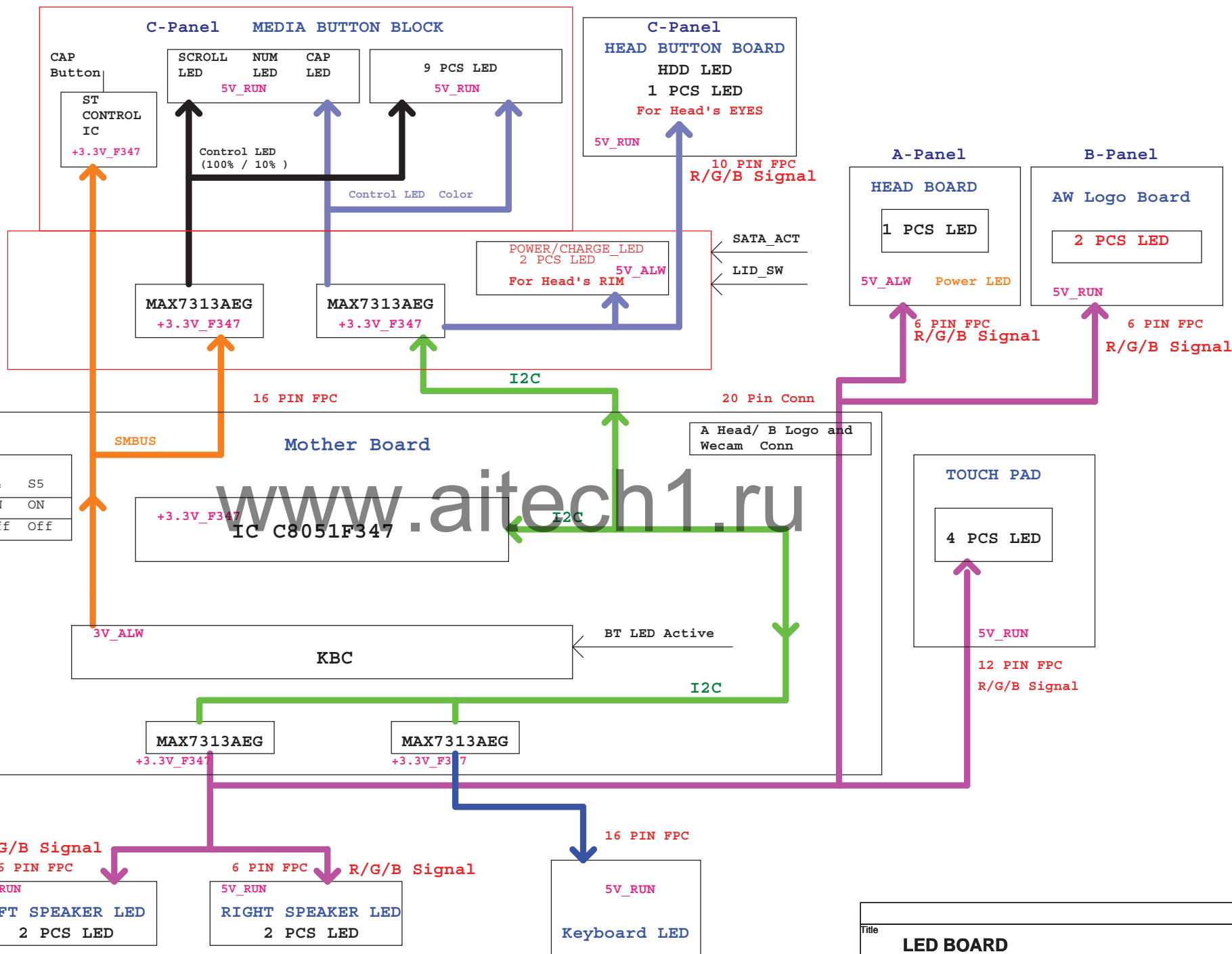
RESET MAP

Clarksfield



Title		
RESET MAP		
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Media button board
 1. Play/Pause
 2. Stop
 3. Skip Back
 4. Skip Forward
 5. Vol_DWN
 6. Vol_UP
 7. Wireless On/Off
 8. AW Command
 9. Stealth Mode
 Total: 9 LED

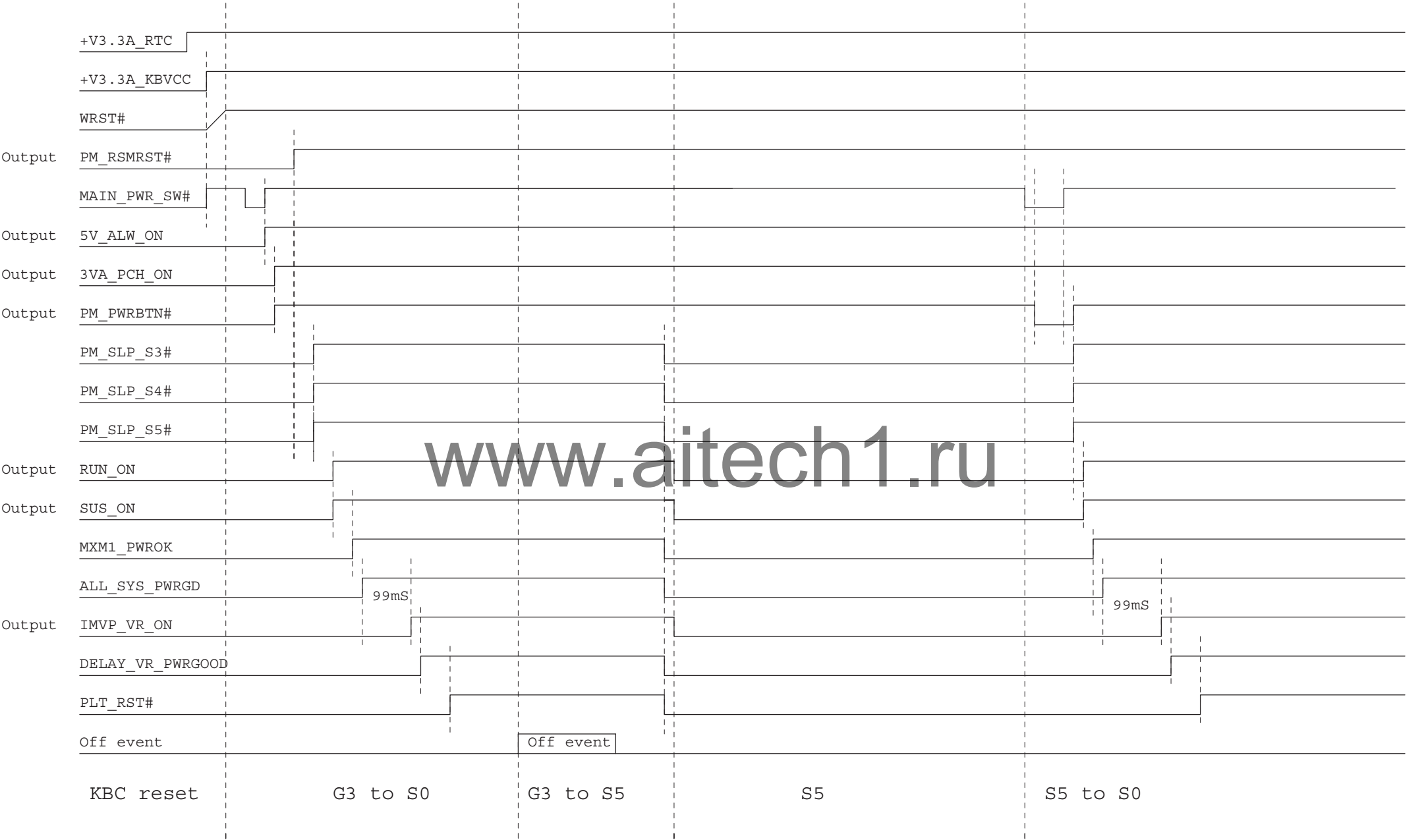


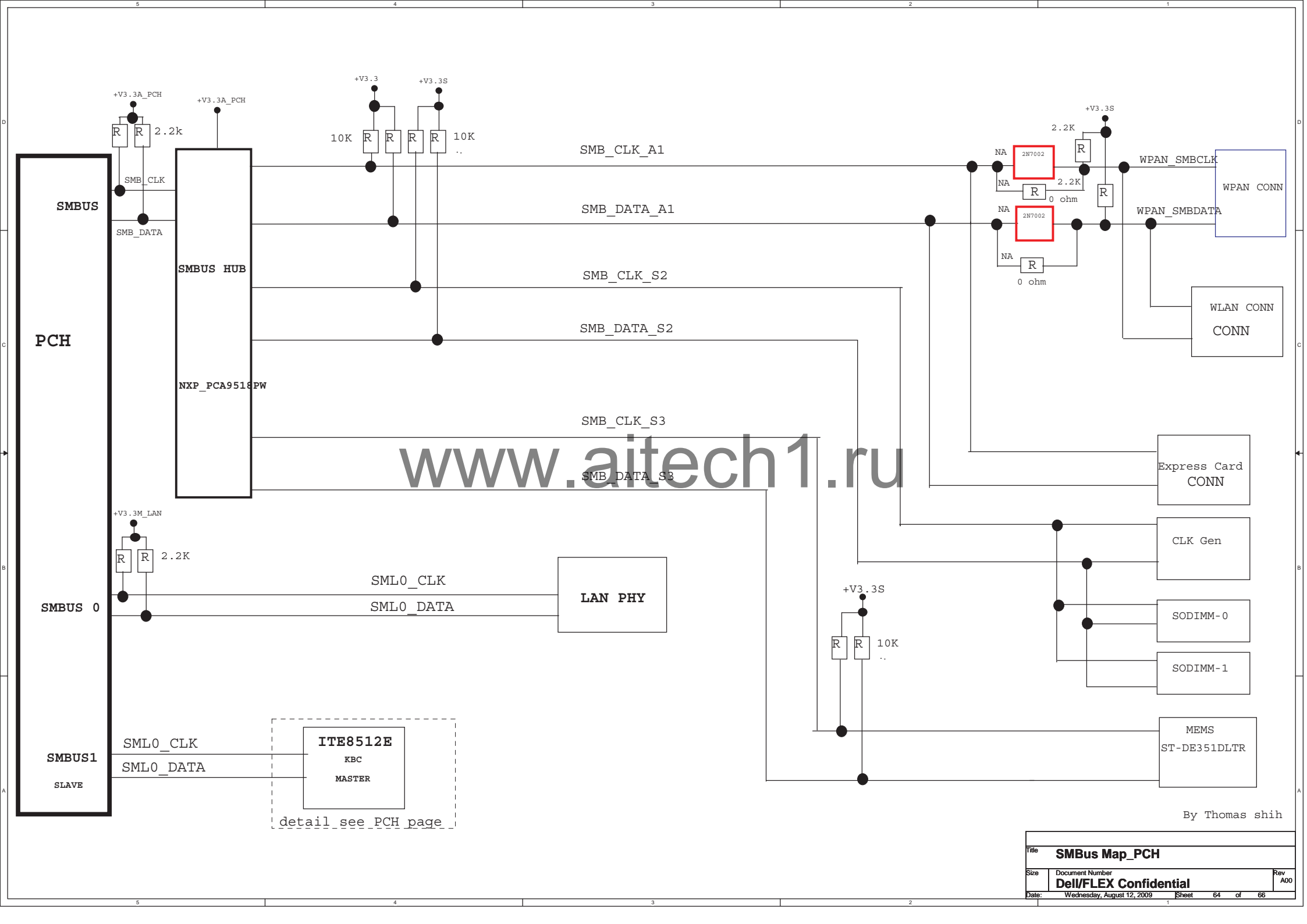
+3.3V_F347 behavior

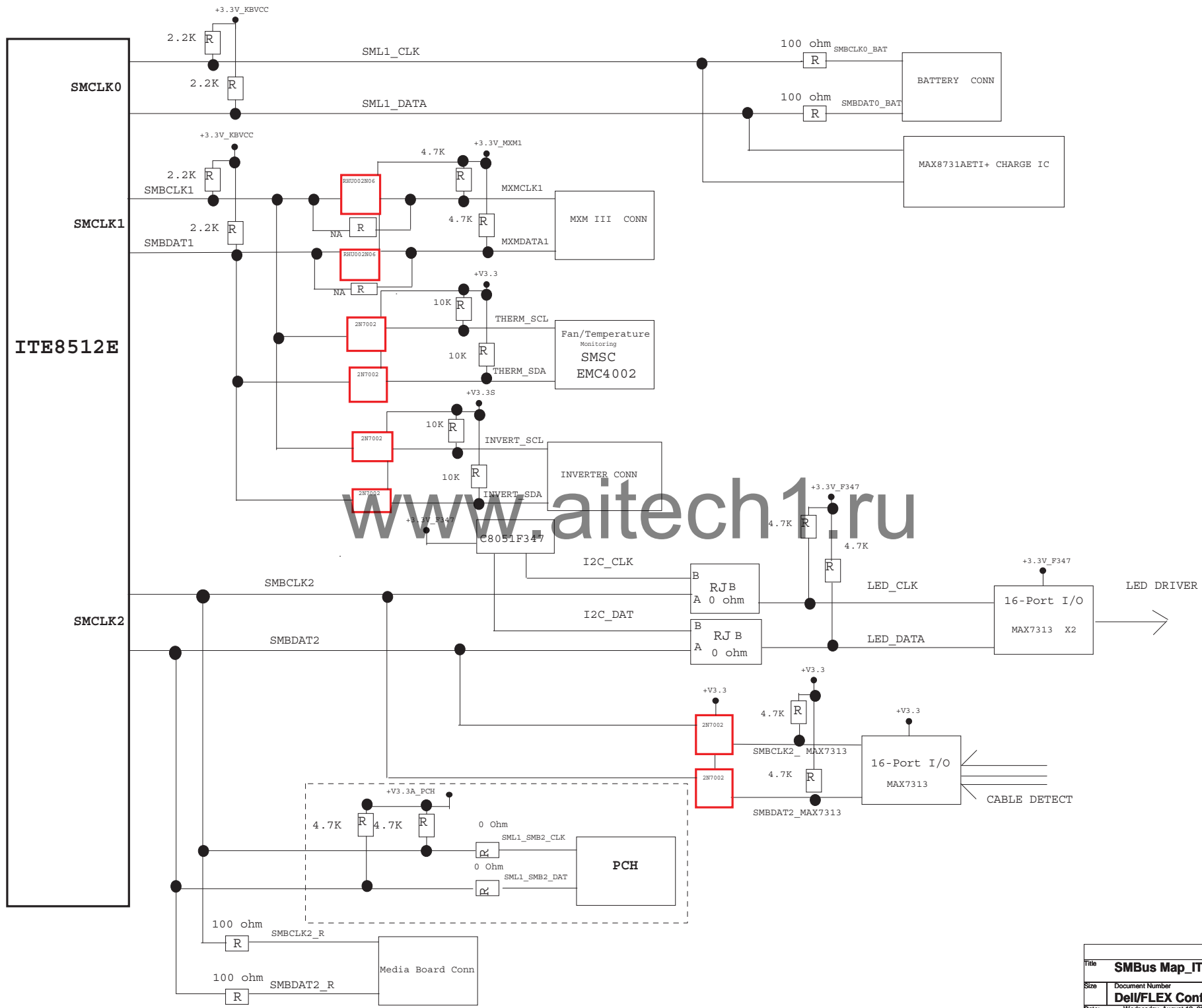
	State			
	S0	S3	S4	S5
AC In	ON	ON	ON	ON
BAT only	ON	ON	Off	Off

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KBC Powre Up Sequence







Version change list (P.I.R. List)

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EE change

Item	Fixed Issue	Reason for Change	Rev	PG#	Modify List	B Ver#	Phase
1	CPU thermal shutdown change to 93C	6/23 PWA X120 was changed	A00	36	R752 change from 953_F to 1.33k_F ohm	A00	Safe Launch
2	FOR LOW_BAT & cost down	7/9 PWA X220 was changed	A00	18	Q37 change from mount to NA	A00	Safe Launch
3	Board ID Straps	Change for A00 version	A00	37	Change R104, R120 mount; R110, R112 NA	A00	Safe Launch
4	K/B LED grey	Increase K/B LED brightness	A00	41	R725, R701, R703, R671, R672, R705, R670, R718 change from 10 ohm to 4.7 ohm	A00	Safe Launch
5	+V0.75S leakage saving	+V0.75S leakage saving	A00	50	PR124 mount change to NA	A00	Safe Launch
6	Intel confirm to remove	Intel confirm to remove	A00	16	RJ5A, RJ6A, R362, R363, R355, R354 mount change to NA	A00	Safe Launch
7	Remove XDP function	Remove XDP function	A00	13	CN601, CN26, R651, R387, R359 Mount change to NA	A00	Safe Launch
8	Change MXM CONN footprint	Change MXM CONN footprint	A00	25	Change MXM CONN footprint and library	A00	Safe Launch
9	Remove on board power button	Only for test	A00	39	Mount change to NA: SW600.	A00	Safe Launch
10	Remove eDP function	Remove eDP function	A00	27	Mount change to NA: CN27, C817, R906, R907, R908, R909, R898, R899, R900, R901, R902, R903, C811, C812, C813, C814, C815, C816.	A00	Safe Launch
11	Change for factory without CPU test	Change for factory without CPU test	A00	52	PR9 change from 10ohm to 2Kohm	A00	Safe Launch

EMI change POWER change

1	For +V1.1S_VTT feedback	For +V1.1S_VTT feedback	A00	54	PR647 NA change to mount	A00	Safe Launch
1	For USB 480Mhz over limit issue	For USB 480Mhz over limit issue	A00	28	R100, R101 change to NA. L12 change to mount.	A00	Safe Launch
2	CRT RGB Signal quality and EMI	CRT RGB Signal quality and EMI	A00	29	L4, L7, L11 change from 75ohm_BLM18BB750SN1D to 80ohm_MMZ1608D800BT. C209, C202, C194 change from 18pF to 12pF. C192, C198, C208 change from 18pF to 33pF.	A00	Safe Launch

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