M11z Design

POWER

- AC/BATT CONNECTOR PG 44
- BATT CHARGER BQ24745 PG 45
- +5V_ALW +3.3V_ALW_17020 TPS51125 PG 46
- +V1.8S RT8015B PG 47
- +V1.5 TPS51218 +0.75V_DDR_VTT TPS51100 PG 48
- +V1.05S TPS51218 PG 49
- CPU CORE +CPU_VCORE MAX17028 PG 50
- VGA CORE +VGA_CORE TPS51218 PG 51

SUS/ RUN POWER SW

+V5 / +V5S / +V1.5S +3.3V_ALW / +V3.3A_PCH / +V3.3/ +V3.3S PG 42

CLK GEN RTM890N-632 PG 5

CPU xDP CONN PG 14

DDR3-SODIMM PG 15 — 800 MHz DDR3

DDR3-SODIMM PG 16 — 800 MHz DDR3

Dual Core CPU Intel Arrandale (17 ~ 18 W) (1288 BGA) 34 x 28 mm PG 6~13

PCIEx16 → **GPU ATI Park LP-S3** PG 26~30

- DDR3 → 1GB frame buffer 128M x 16 x 4 pcs DDR3 PG 31
- D-LVDS → LVDS → Panel PG 35
- D-HDMI → HDMI → HDMI Conn PG 36
- D-DP → DP → DP Conn PG 36

DMI X 4

Intel Ibex Peak M (1071 Pin PBGA) 27 x 25 mm PG 17~25

- USB/eSATA CONN PG 37 — PCI-E, USB2.0
- Powered USB 2.0 x2 PG 37 — USB2.0
- PCI-E, USB2.0 → WLAN Half MINI-CARD PG 40
- PCI-E, USB2.0 → WWAN MINI-CARD PG 40 → SIM Card CONN PG 40
- PCI-E → LAN + Cardreader RTL8401 PG 38 → Magnetic PG 38 → RJ45 PG 38
  - CardReader CONN PG 38
- HDA → AUDIO CODEC 92HD79B1A5NLGXTAX PG 39
  - Analog Mic PG 39
  - Audio Jack PG 39
  - Audio Jack PG 39
- DMIC, USB2.0 → WebCam+DMic (Option) PG 35
- SATAII → SATA - HDD PG 36
- FLASH Memory 4MB (8 Pin SO8W) PG 17

LPC → **SIO ITE8502E** PG 32

EC_SPI (Option)

SPI → FLASH Memory 256KB (8 Pin SO8W) PG 33

PS/2 → Keyboard PG 42, Touchpad PG 42

Daughter Boards

- LED BOARD PG 41
- POWER BUTTON BOARD PG 41

Touch pad Boards

THERMAL EMC1423-1-AIZL-TR PG 34

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Title: BLOCK DIAGRAM		
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4	POWER SEQUENCING	48	PWR - +V1.5 / +0.75VS
5	CLOCK GEN (RTM890N-632)	49	PWR - +V1.05S_TPS51218
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38	LAN/ Media_RTL8401		
39	AUDIO_92HD75B2X5NLGXYB		
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41	BT / KB / TP / LED / SW		
42	RUN POWER_SW		
43	PWRGD / RESET CIRCUIT		
44	PWR - DCIN_BAT		

Power States

Power Rail	Control Signal	S0	S3	S4	S5	G3	S4/ M-off	S5/ M-off
+RTC_CELL	RTC	V	V	V	V	V		
+PWR_SRC	N/A	V	V	V	V			
+15V_ALW	5V_ALW_ON	V	V	V	V			
+5V_ALW	+5V_EN1/5V_ALW_ON	V	V	V	V			
+V5_LDO	+PWR_SRC	V	V	V	V			
+V3.3A	+3.3V_EN2/5V_ALW_ON	V	V	V	V			
+V3.3A_PCH	3VA_PCH_ON	V	V	V	V			
+V5	SUS_ON#	V	V					
+USB_RIGHT_PWR	USB_EN0#	V	V					
+USB_LEFT_PWR	USB_EN1#	V	V					
+V3.3	SUS_ON#	V	V					
+V1.5	SUS_ON	V	V					
+V1.5_DDR	SUS_ON#	V	V					
+V5S	RUN_ON	V						
+V3.3S	RUN_ON#	V						
+LCDVCC	LCD_DIGON_GFX	V						
+V1.8S	RUN_ON	V						
+V1.5S_VGA	RUN_ON#	V						
+V1.5S	RUN_ON#	V						
+V1.05S_VTT	RUN_ON	V						
+V1.05S	RUN_ON	V						
+V1S_VGA	RUN_ON	V						
+CPU_VCORE	IMVP_VR_ON	V						
+VGA_CORE	RUN_ON	V						
+0.75V_DDR_VTT	RUN_ON	V						

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Title: **PAGE INDEX/ PWR STATUS**

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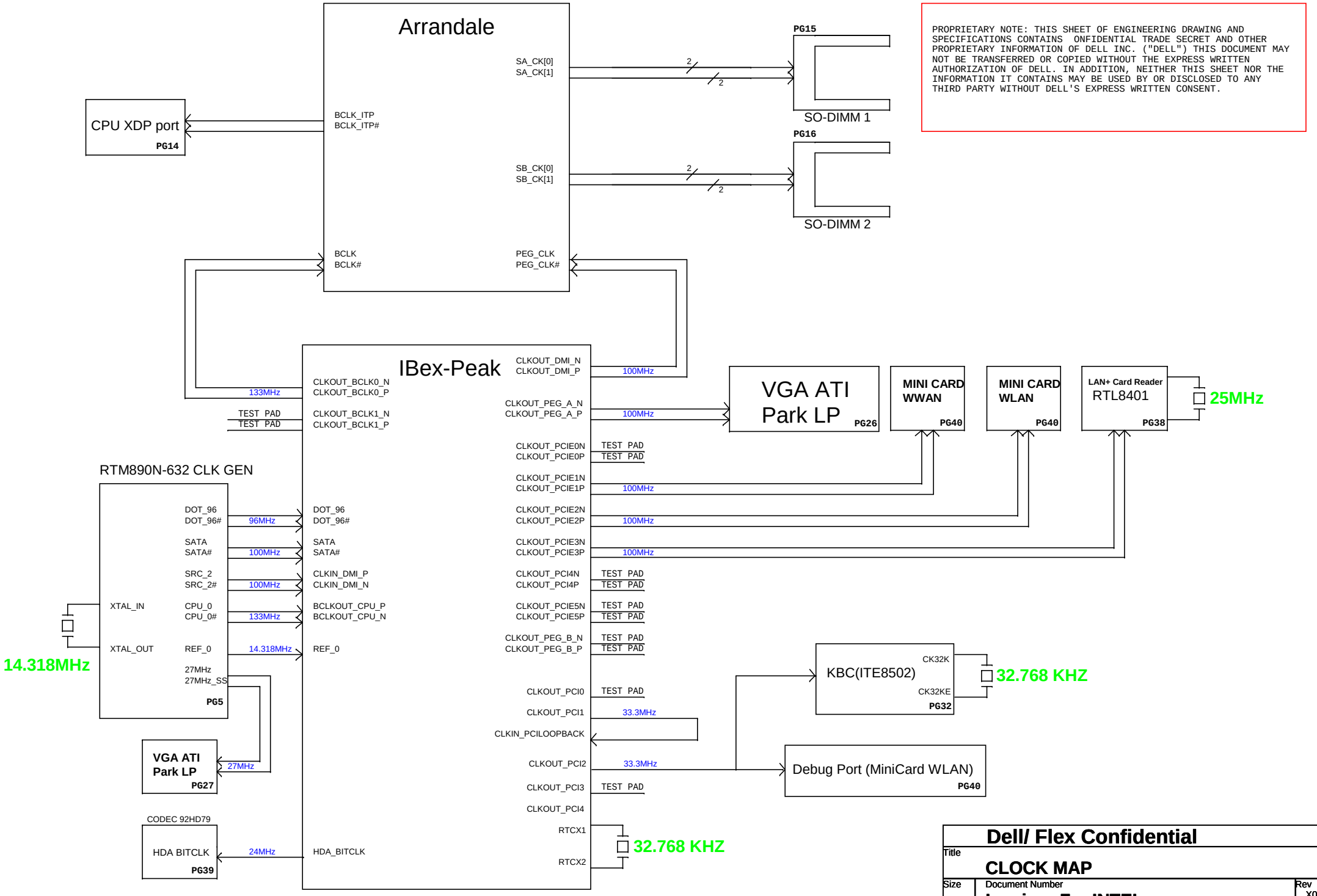

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Title: **CLOCK MAP**		
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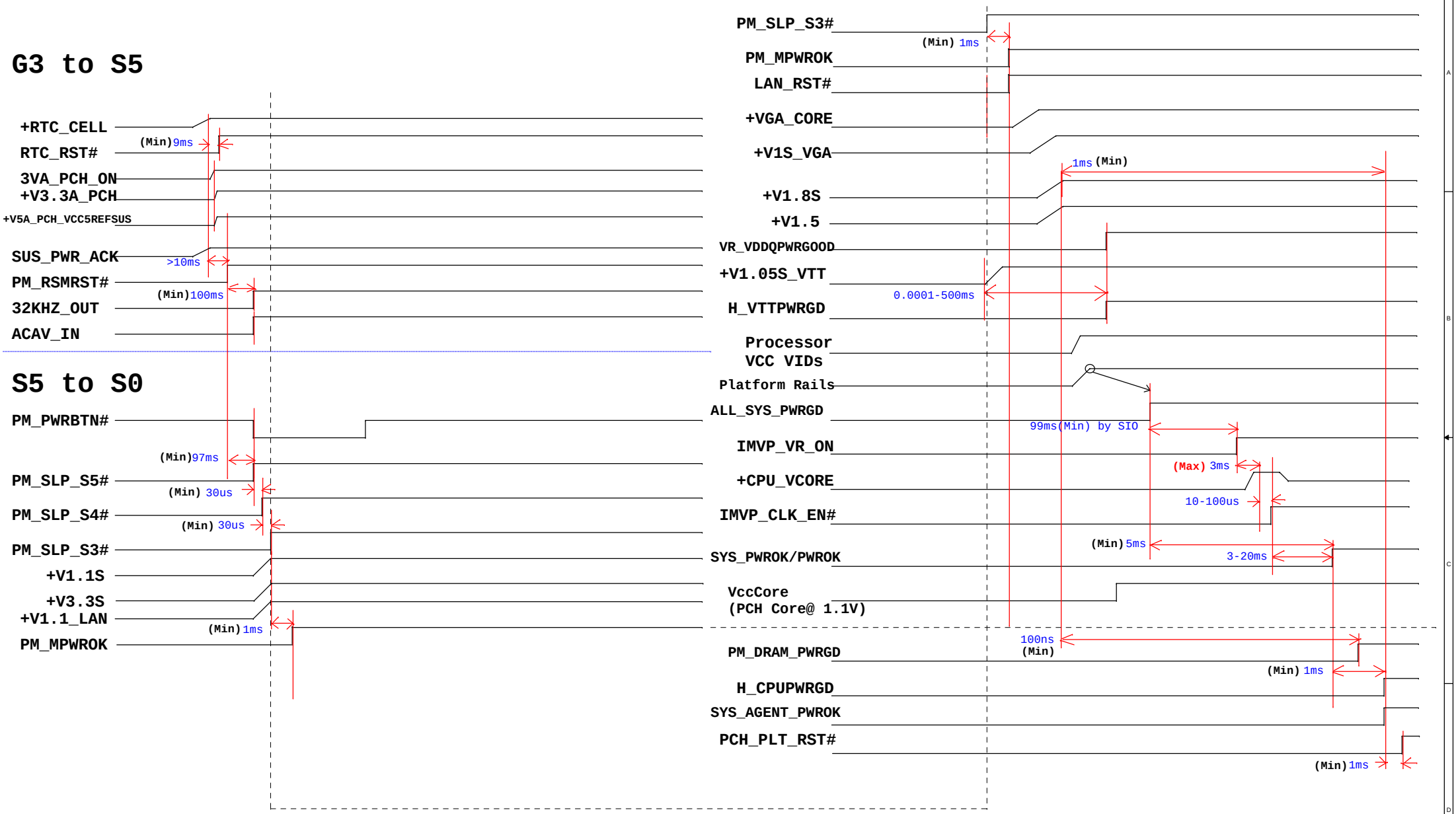

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Title	POWER SEQUENCING	
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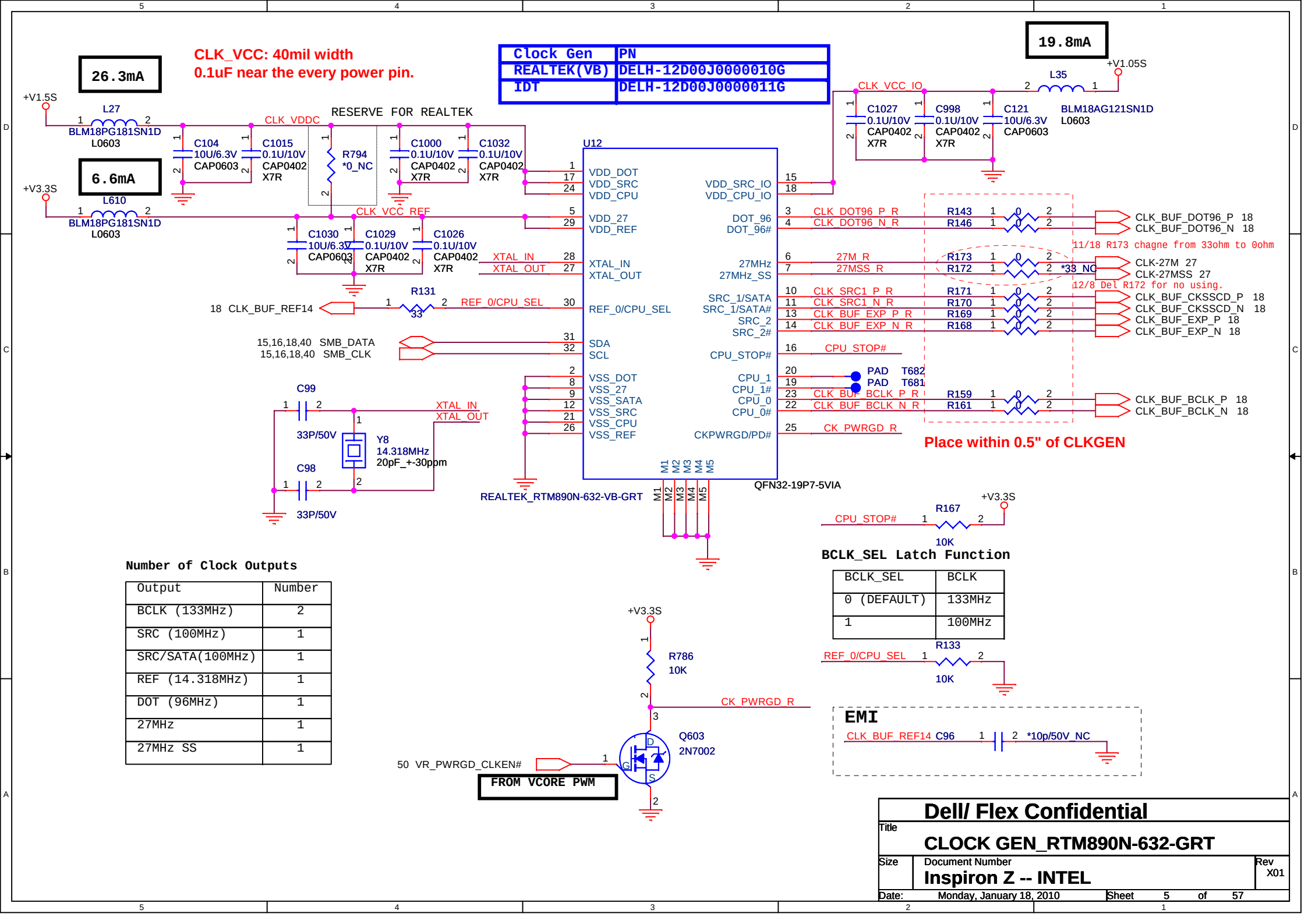

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Title	CLOCK GEN_RTM890N-632-GRT	
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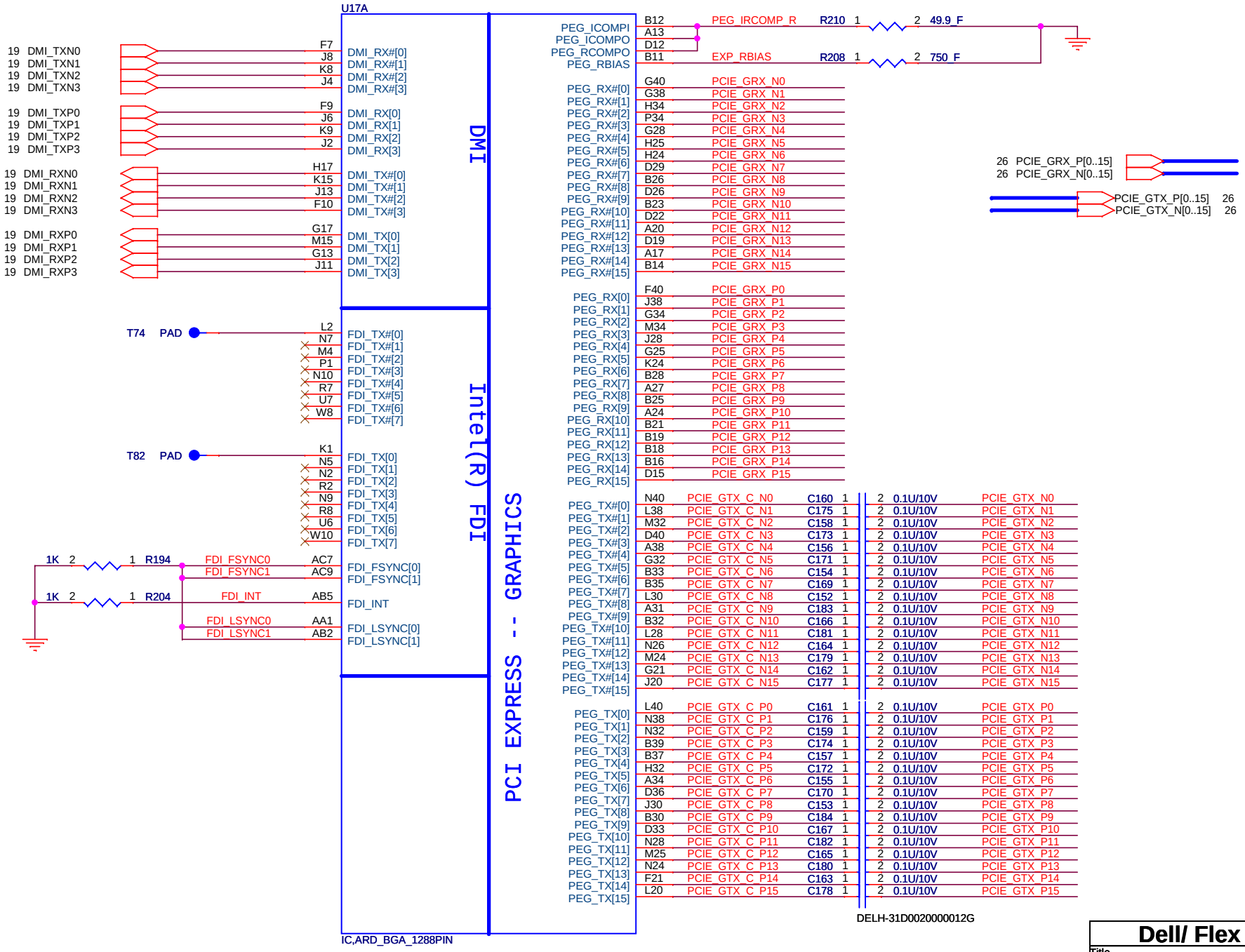
ARRANDALE PROCESSOR (DMI, PEG, FDI)



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Title	CPU_DMI/ PEG/ FDI	
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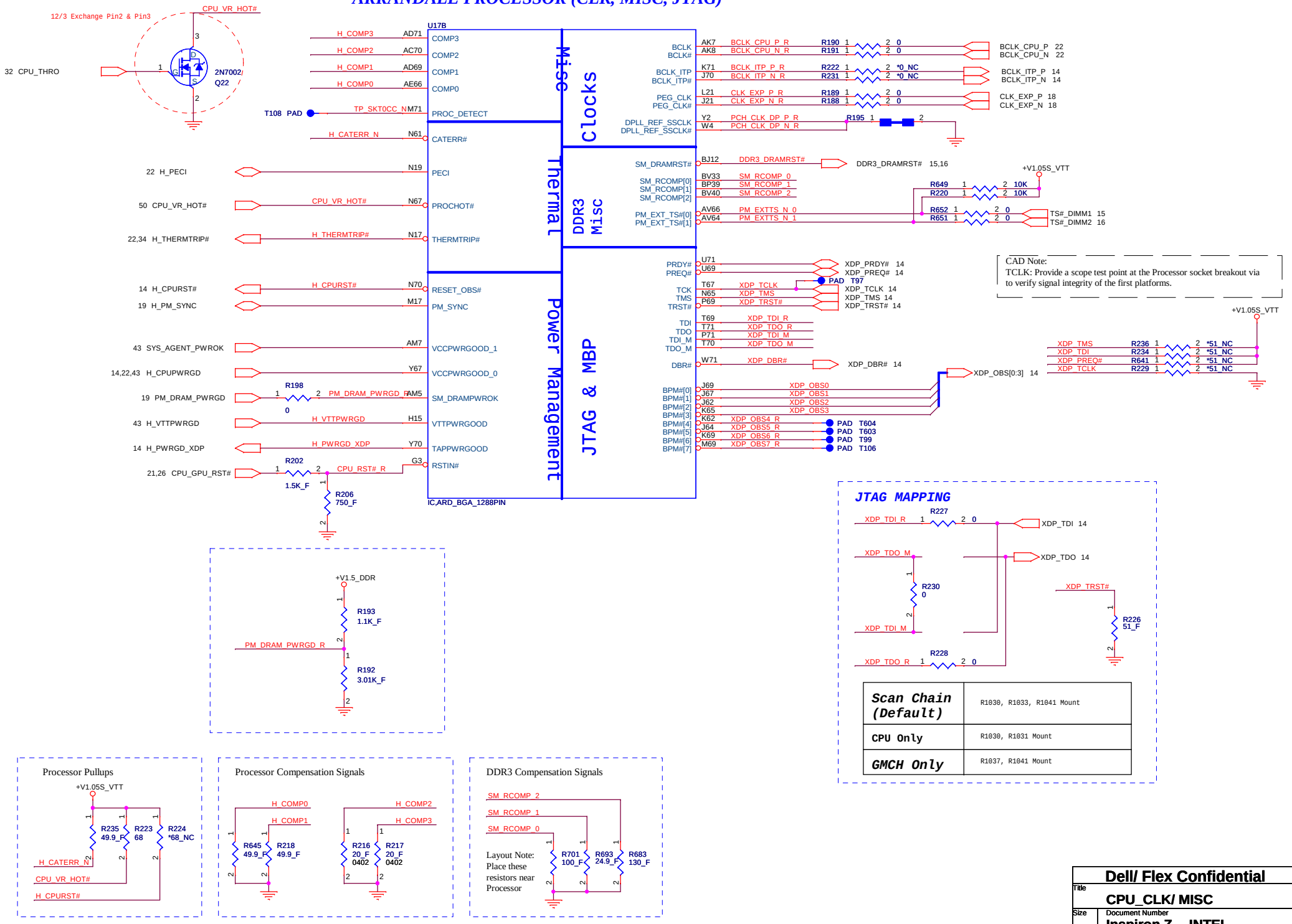
ARRANDALE PROCESSOR (CLK, MISC, JTAG)



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Title	CPU_CLK/ MISC	
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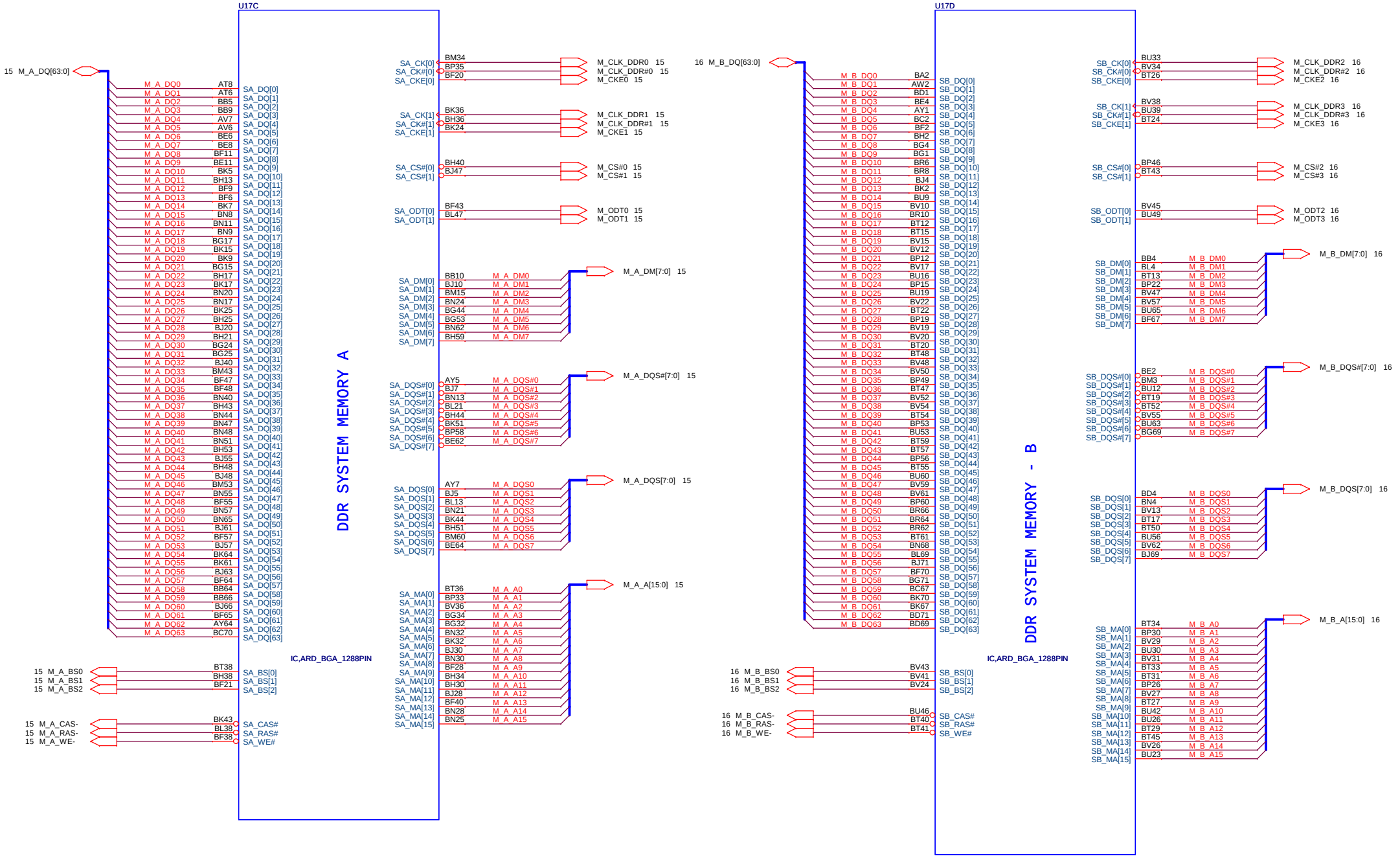
ARRANDALE PROCESSOR (DDR3)



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Title: **CPU_DDR3**			
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ARRANDALE PROCESSOR (POWER-VTT)

MAX 16A

Arrandale VTT=1.05V

+V1.05S_VTT

10K 2 1 R232 DPRSLPVR

U17F

T98 PAD PSI# F68 PSI#

50 VID0 A61 VID[0]
50 VID1 D61 VID[1]
50 VID2 D62 VID[2]
50 VID3 A62 VID[3]
50 VID4 B63 VID[4]
50 VID5 D64 VID[5]
50 VID6 D66 VID[6]

CPU VIDS

T76 PAD H_VTTVID1 AN1 VTT_SELECT[1]

50 DPRSLPVR DPRSLPVR F66 PROC_DPRSLPVR

VTT_SELECT
H_VTTVID1=LO,VTT=1.1V
H_VTTVID1=HI,VTT=1.05V(Default)

32,50 CPU_IMON A41 ISENSE

50 CPU_VCCSENSE R642 1 2 0 VCC_SENSE_R F64 VCC_SENSE
50 CPU_VSSSENSE R643 1 2 0 VSS_SENSE_R F63 VSS_SENSE

SENSE LINES

49 VTT_SENSE VTT_SENSE N13 VTT_SENSE

T605 PAD TP_VSS_SENSE_VTT R12 VSS_SENSE_VTT

1.1V RAIL POWER

MAX 1.35A

+V1.8S R211 1 2 0_0805 +V1.8PLL

W39 VCCPLL1
W37 VCCPLL2
U37 VCCPLL3
R39 VCCPLL4
R37 VCCPLL5

C237 22U/6.3V
C661 4.7U/6.3V_0603 CAP0603

EMI

1.8V

POWER

MAX 0.2A

+V1.5_DDR L44 2 1 BLM18AG121SN1D +1.5V_DDRQ_CK

BB14 VDDQ_CK[1]
BB12 VDDQ_CK[2]

C197 1U/6.3V

IC,ARD_BGA_1288PIN

+V1.05S_VTT

VTT0_11 AW14
VTT0_12 AW12
VTT0_13 AU60
VTT0_14 AU59
VTT0_15 AU12
VTT0_16 AR60
VTT0_17 AR59
VTT0_18 AR12
VTT0_19 AN60
VTT0_20 AN59
VTT0_21 AN35
VTT0_22 AN33
VTT0_23 AN17
VTT0_24 AN15
VTT0_25 AN14
VTT0_26 AN12
VTT0_27 AM10
VTT0_28 AL60
VTT0_29 AL59
VTT0_30 AL17
VTT0_31 AL15
VTT0_32 AL14
VTT0_33 AL12
VTT0_34 AK35
VTT0_35 AK33
VTT0_36 AF39
VTT0_37 AF37
VTT0_38 AF35
VTT0_39 AF33
VTT0_40 AF32
VTT0_41 AF30
VTT0_42 AD39
VTT0_1 BF60
VTT0_2 BF59
VTT0_3 BD60
VTT0_4 BD59
VTT0_5 BB60
VTT0_6 BB59
VTT0_7 AY60
VTT0_8 AW60
VTT0_9 AW35
VTT0_10 AW33
VTT0_43 AD37
VTT0_44 AD35
VTT0_45 AD33
VTT0_46 AD32
VTT0_47 AD30
VTT0_48 W35
VTT0_49 W33
VTT0_50 W32
VTT0_51 W30
VTT0_52 W28
VTT0_53 W26
VTT0_54 W24
VTT0_55 W23
VTT0_56 U35
VTT0_57 U33
VTT0_58 U32
VTT0_59 U30
VTT0_60 U28
VTT0_61 U26
VTT0_62 U24
VTT0_63 U23
VTT0_64 R35
VTT0_65 R33
VTT0_66 R32
VTT0_67 R30
VTT0_68 R28
VTT0_69 R26
VTT0_70 R24
VTT0_71 R23
VTT0_72 AY10
VTT0_73 AN9

3X 22uF

C666 22U/6.3V
C707 22U/6.3V
C708 22U/6.3V

4X 10uF

C709 10U/6.3V CAP0603
C675 10U/6.3V CAP0603
C684 10U/6.3V CAP0603
C737 10U/6.3V CAP0603

20X 1uF

C751 C779 C764 C770 C714 C784 C713 C763 C662 C690 — 1U/6.3V

C744 C719 C742 C691 C757 C741 C663 C739 C730 C677 — 1U/6.3V

PC601 *330u/2.5v/ESR9_NC

+V1.05S_VTT

+VTT_72 R199 1 2
+VTT_73 R200 1 2

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Title: **CPU POWER_CORE**		
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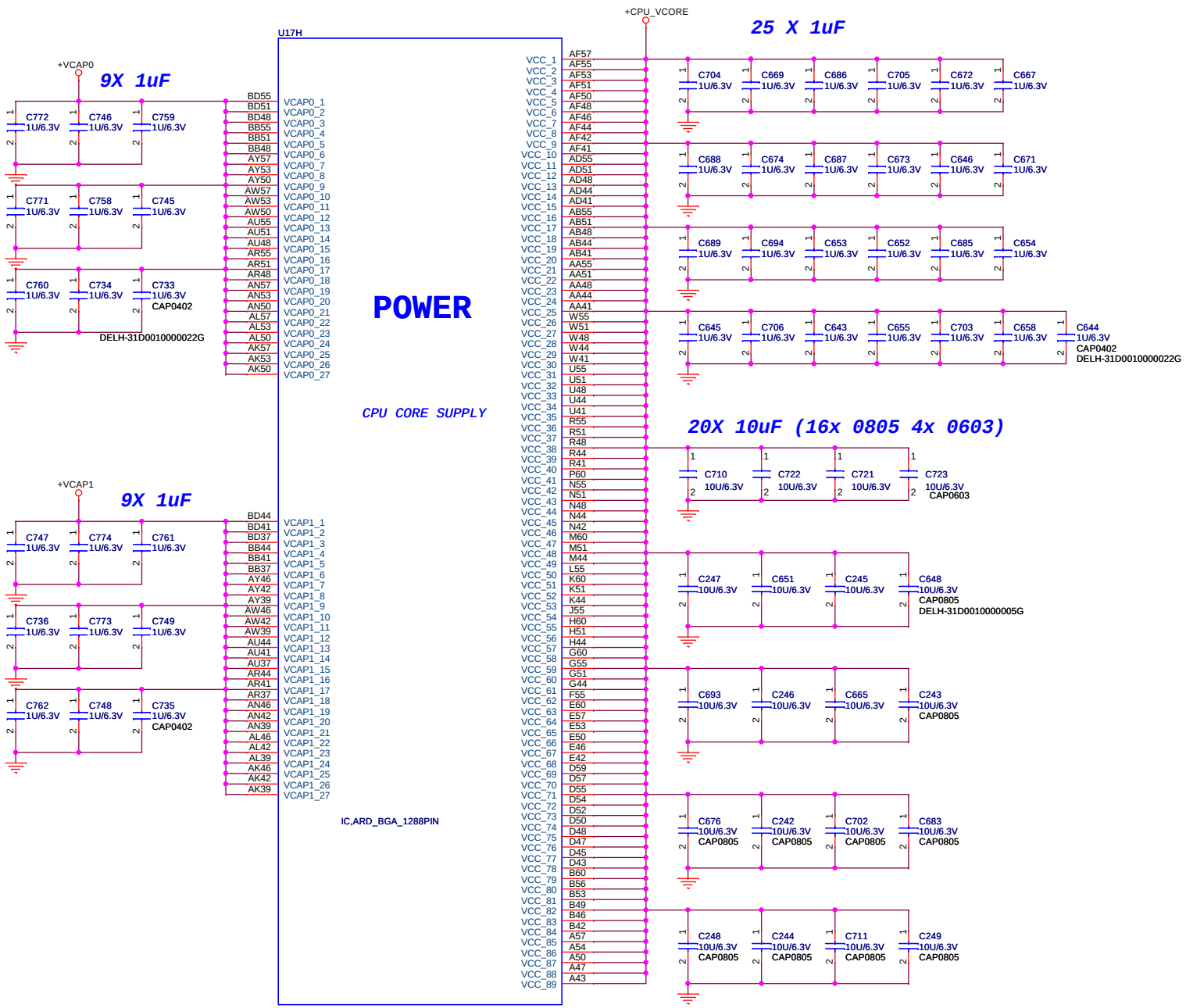
ARRANDALE PROCESSOR (POWER-CORE)

MAX 27A



Dell/ Flex Confidential		
Title: **CPU POWER_VTT**		
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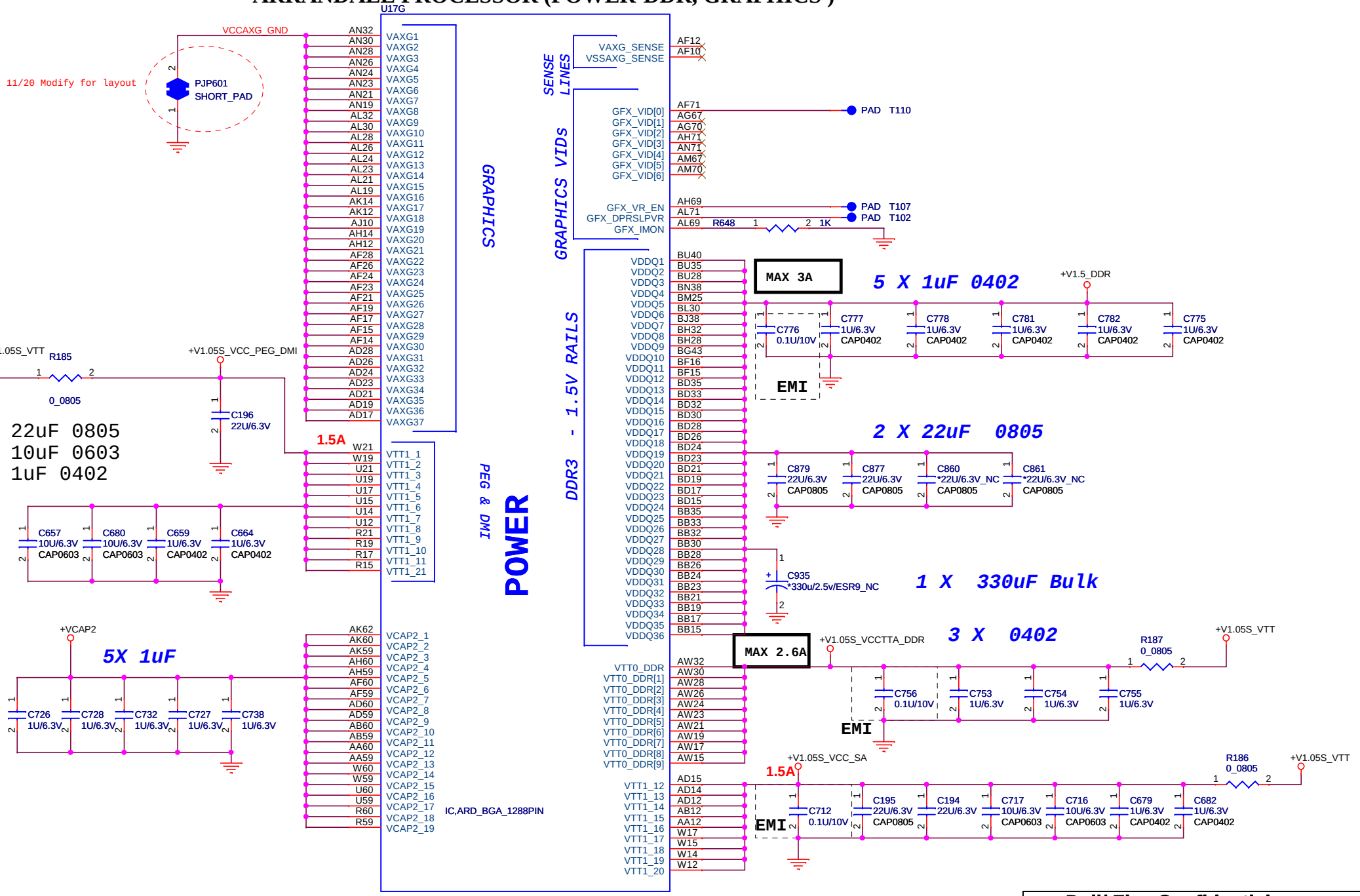
ARRANDALE PROCESSOR (POWER-DDR, GRAPHICS)



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Title: **CPU POWER_DDR**			
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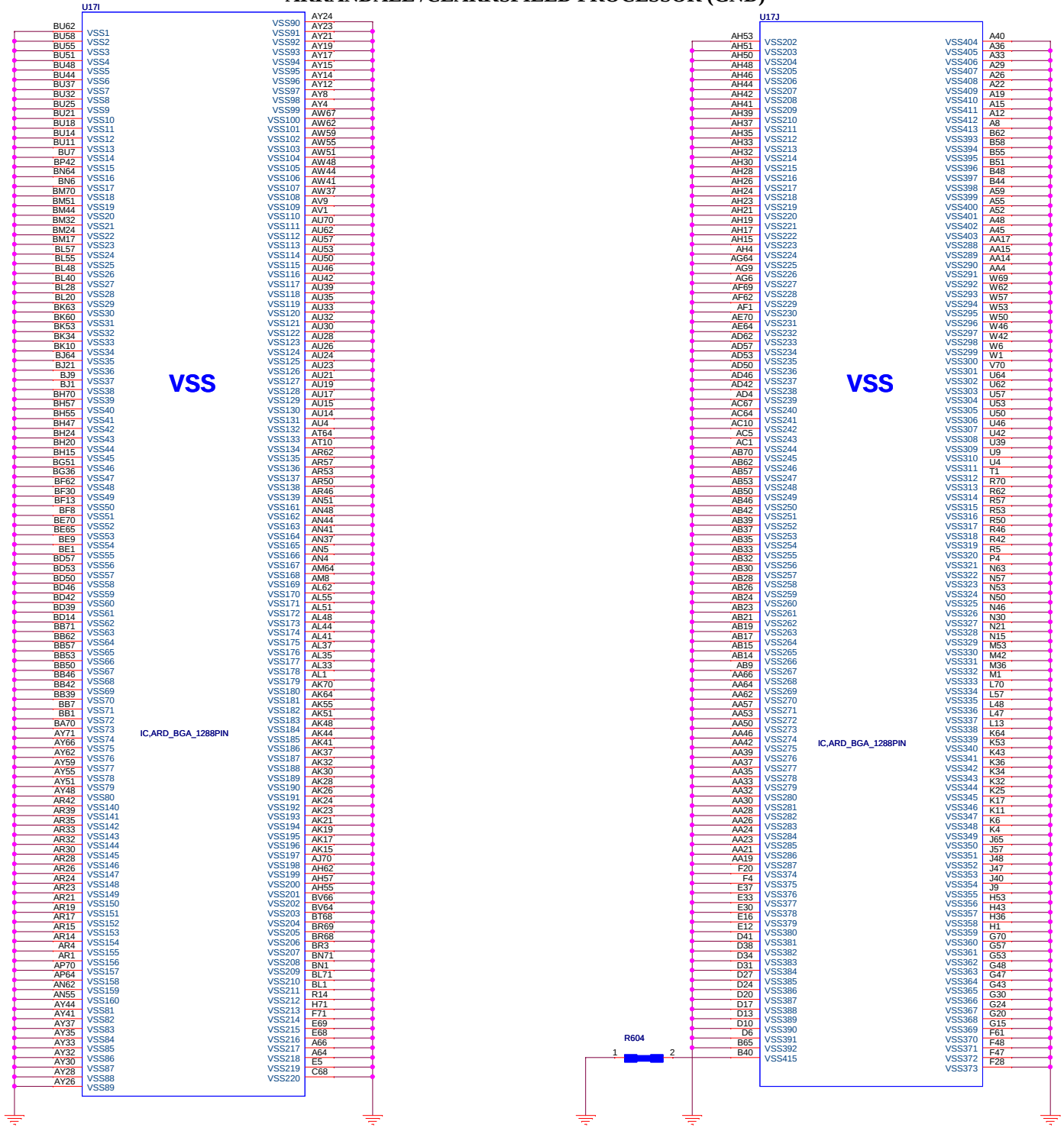
ARRANDALE /CLARKSFIELD PROCESSOR (GND)



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Title	CPU GND
Size	Document Number: Inspiron Z -- INTEL
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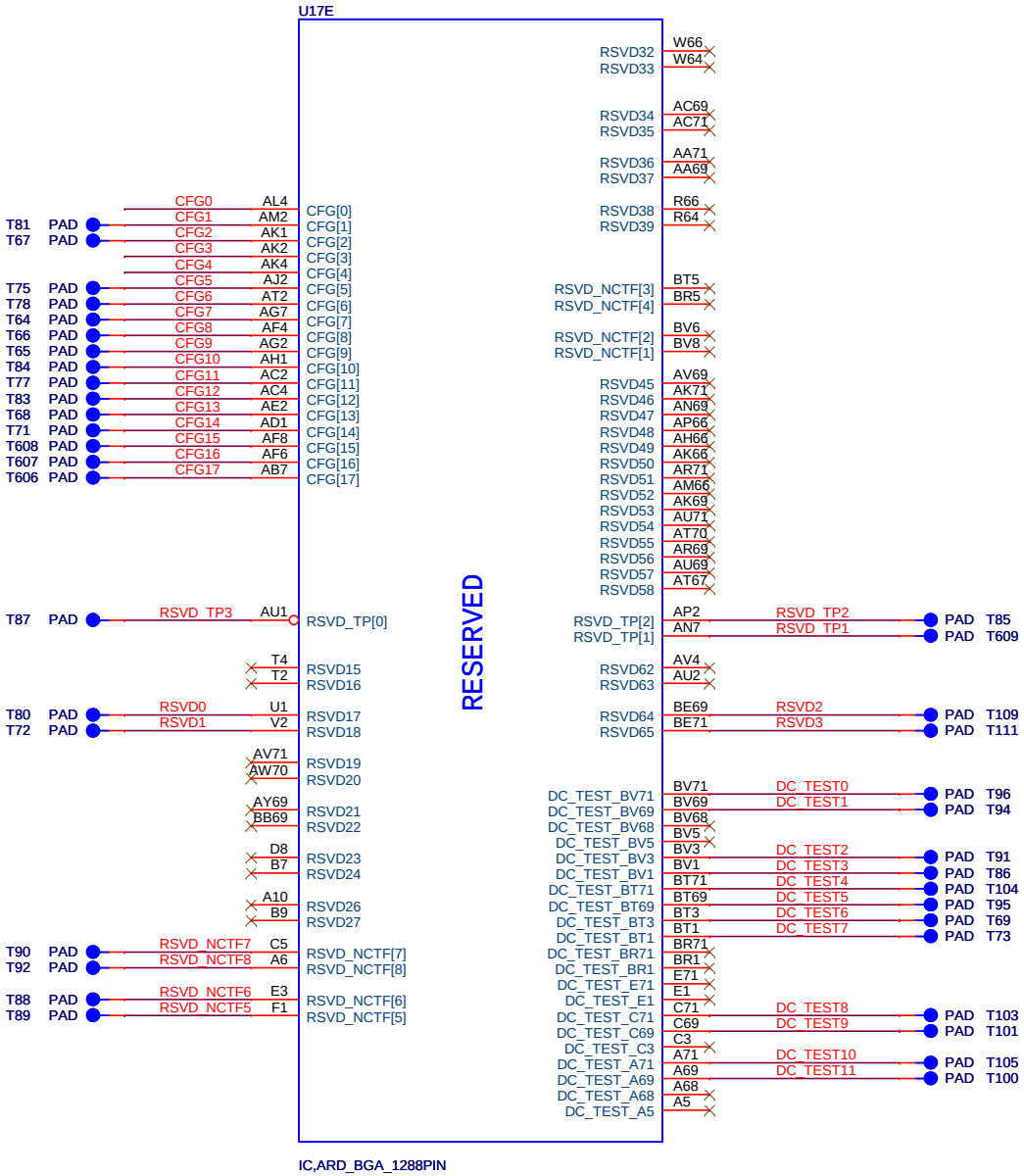
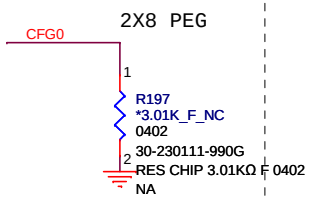
ARRANDALE /CLARKSFIELD PROCESSOR(RESERVED, CFG)



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

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Title: CPU_RSVD/ CFG		
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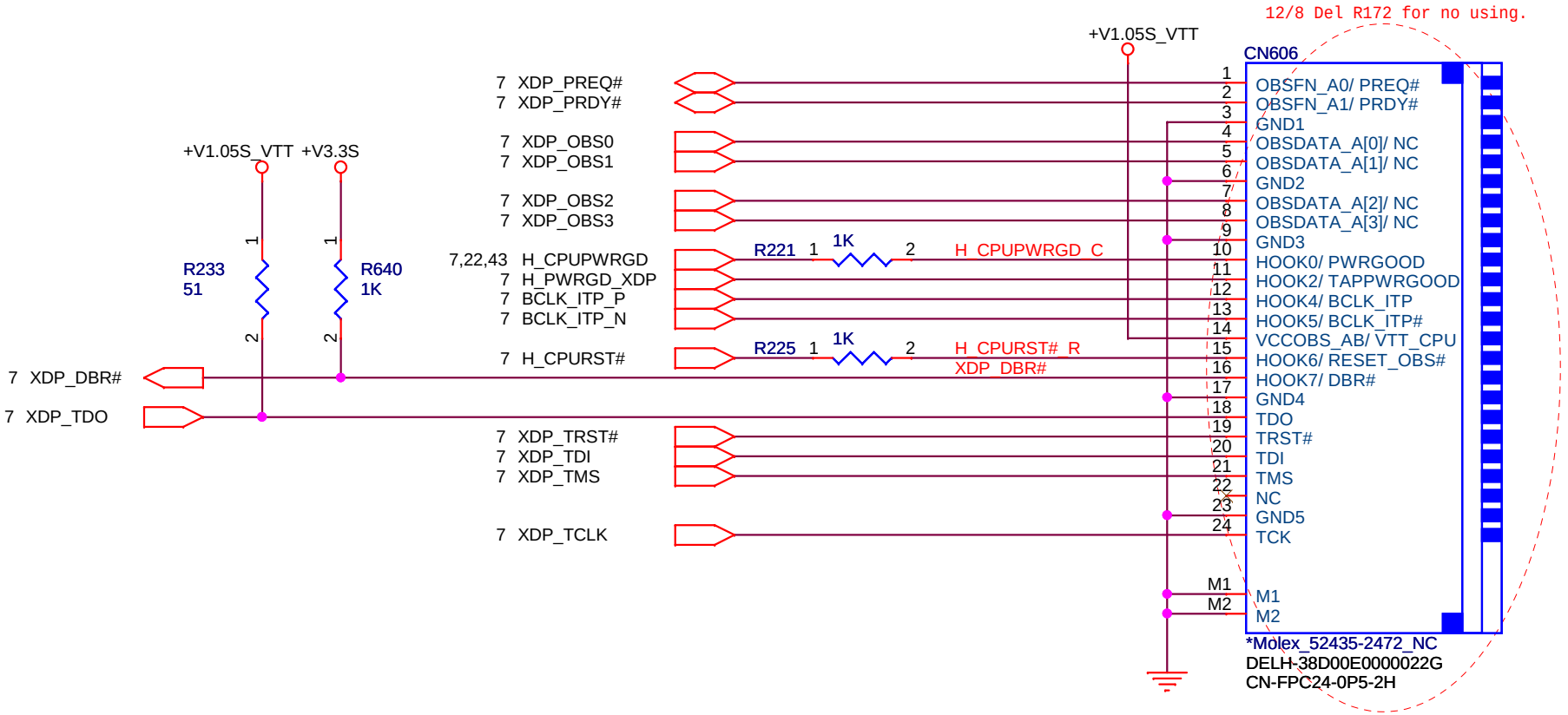

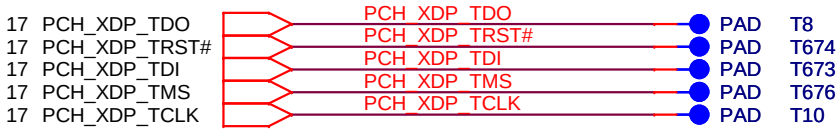

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Title: **XDP_PROCESSOR/ PCH**		
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CN3 DDR3-204P-4H

CN4 DDR3-204P-4H-RVS

M_A_DQ[63:0] 8

8 M_A_A[15:0]

8 M_A_BS[2:0]

8 M_CS#0
8 M_CS#1
8 M_CLK_DDR0
8 M_CLK_DDR#0
8 M_CLK_DDR1
8 M_CLK_DDR#1
8 M_CKE0
8 M_CKE1
8 M_A_CAS-
8 M_A_RAS-
8 M_A_WE-

5,16,18,40 SMB_CLK
5,16,18,40 SMB_DATA

8 M_ODT0
8 M_ODT1

8 M_A_DM[7:0]

8 M_A_DQS[7:0]
8 M_A_DQS#[7:0]

CN13A

M_A_A0	98	A0	DQ0	5	M_A_DQ0
M_A_A1	97	A1	DQ1	7	M_A_DQ1
M_A_A2	96	A2	DQ2	15	M_A_DQ2
M_A_A3	95	A3	DQ3	17	M_A_DQ3
M_A_A4	92	A4	DQ4	4	M_A_DQ4
M_A_A5	91	A5	DQ5	6	M_A_DQ5
M_A_A6	90	A6	DQ6	16	M_A_DQ6
M_A_A7	86	A7	DQ7	18	M_A_DQ7
M_A_A8	89	A8	DQ8	21	M_A_DQ8
M_A_A9	85	A9	DQ9	23	M_A_DQ9
M_A_A10	107	A10/AP	DQ10	33	M_A_DQ10
M_A_A11	84	A11	DQ11	35	M_A_DQ11
M_A_A12	83	A12	DQ12	22	M_A_DQ12
M_A_A13	119	A13	DQ13	24	M_A_DQ13
M_A_A14	80	A14	DQ14	34	M_A_DQ14
M_A_A15	78	A15	DQ15	36	M_A_DQ15
			DQ16	39	M_A_DQ16
M_A_BS0	109	BA0	DQ17	41	M_A_DQ17
M_A_BS1	108	BA1	DQ18	51	M_A_DQ18
M_A_BS2	79	BA2	DQ19	53	M_A_DQ19
	114	S0#	DQ20	40	M_A_DQ20
	121	S1#	DQ21	42	M_A_DQ21
M_CLK_DDR0	101	CK0	DQ22	50	M_A_DQ22
M_CLK_DDR#0	103	CK0#	DQ23	52	M_A_DQ23
M_CLK_DDR1	102	CK1	DQ24	57	M_A_DQ24
M_CLK_DDR#1	104	CK1#	DQ25	59	M_A_DQ25
	73	CKE0	DQ26	67	M_A_DQ26
	74	CKE1	DQ27	69	M_A_DQ27
	115	CAS#	DQ28	56	M_A_DQ28
	110	RAS#	DQ29	58	M_A_DQ29
	113	WE#	DQ30	68	M_A_DQ30
SA0_DIM0	197	SA0	DQ31	70	M_A_DQ31
SA1_DIM0	201	SA1	DQ32	129	M_A_DQ32
	202	SCL	DQ33	131	M_A_DQ33
	200	SDA	DQ34	141	M_A_DQ34
			DQ35	143	M_A_DQ35
	116	ODT0	DQ36	130	M_A_DQ36
	120	ODT1	DQ37	132	M_A_DQ37
			DQ38	140	M_A_DQ38
M_A_DM0	11	DM0	DQ39	142	M_A_DQ39
M_A_DM1	28	DM1	DQ40	147	M_A_DQ40
M_A_DM2	46	DM2	DQ41	149	M_A_DQ41
M_A_DM3	63	DM3	DQ42	157	M_A_DQ42
M_A_DM4	136	DM4	DQ43	159	M_A_DQ43
M_A_DM5	153	DM5	DQ44	146	M_A_DQ44
M_A_DM6	170	DM6	DQ45	148	M_A_DQ45
M_A_DM7	187	DM7	DQ46	158	M_A_DQ46
			DQ47	160	M_A_DQ47
M_A_DQS0	12	DQS0	DQ48	163	M_A_DQ48
M_A_DQS1	29	DQS1	DQ49	165	M_A_DQ49
M_A_DQS2	47	DQS2	DQ50	175	M_A_DQ50
M_A_DQS3	64	DQS3	DQ51	177	M_A_DQ51
M_A_DQS4	137	DQS4	DQ52	164	M_A_DQ52
M_A_DQS5	154	DQS5	DQ53	166	M_A_DQ53
M_A_DQS6	171	DQS6	DQ54	174	M_A_DQ54
M_A_DQS7	188	DQS7	DQ55	176	M_A_DQ55
M_A_DQS#0	10	DQS0#	DQ56	181	M_A_DQ56
M_A_DQS#1	27	DQS1#	DQ57	183	M_A_DQ57
M_A_DQS#2	45	DQS2#	DQ58	191	M_A_DQ58
M_A_DQS#3	62	DQS3#	DQ59	193	M_A_DQ59
M_A_DQS#4	135	DQS4#	DQ60	180	M_A_DQ60
M_A_DQS#5	152	DQS5#	DQ61	182	M_A_DQ61
M_A_DQS#6	169	DQS6#	DQ62	192	M_A_DQ62
M_A_DQS#7	186	DQS7#	DQ63	194	M_A_DQ63

LINKTEK_DDRSK-20401-TP4B_STD

DDR3-204P-4H

SA0_DIM0
SA1_DIM0

R791 10K
R790 10K

+0.75V_VTT_REF

R793 0

+V1.5_DDR

R787 *1K_F_NC
R792 *1K_F_NC

C997 2.2U/6.3V CAP0603
C993 0.1U/10V

+V3.3S

C992 2.2U/6.3V CAP0603
C981 0.1U/10V

PAD T683

7 TS#_DIMM1
7,16 DDR3_DRAMRST#

CN13B

	75	VDD1	VSS16	44	
	76	VDD2	VSS17	48	
	81	VDD3	VSS18	49	
	82	VDD4	VSS19	54	
	87	VDD5	VSS20	55	
	88	VDD6	VSS21	60	
	93	VDD7	VSS22	61	
	94	VDD8	VSS23	65	
	99	VDD9	VSS24	66	
	100	VDD10	VSS25	71	
	105	VDD11	VSS26	72	
	106	VDD12	VSS27	127	
	111	VDD13	VSS28	128	
	112	VDD14	VSS29	133	
	117	VDD15	VSS30	134	
	118	VDD16	VSS31	138	
	123	VDD17	VSS32	139	
	124	VDD18	VSS33	144	
			VSS34	145	
	199	VDDSPD	VSS35	150	
			VSS36	151	
	77	NC1	VSS37	155	
	122	NC2	VSS38	156	
	125	TEST	VSS39	161	
			VSS40	162	
	198	EVENT#	VSS41	167	
	30	RESET#	VSS42	168	
			VSS43	172	
			VSS44	173	
			VSS45	178	
	1	VREF-DQ	VSS46	179	
	126	VREF-CA	VSS47	184	
			VSS48	185	
	2	VSS1	VSS49	189	
	3	VSS2	VSS50	190	
	8	VSS3	VSS51	195	
	9	VSS4	VSS52	196	
	13	VSS5			
	14	VSS6			
	19	VSS7	VTT1	203	
	20	VSS8	VTT2	204	
	25	VSS9			
	26	VSS10			
	31	VSS11	GND1	m1	
	32	VSS12	GND2	m2	
	37	VSS13			
	38	VSS14			
	43	VSS15			

+0.75V_DDR_VTT

LINKTEK_DDRSK-20401-TP4B_STD

DDR3-204P-4H

SODIMM A DECOUPLING

+V1.5_DDR

C990 10U/6.3V CAP0805
C985 10U/6.3V CAP0805
C983 10U/6.3V CAP0805
C984 10U/6.3V CAP0805
C988 10U/6.3V CAP0805
C989 10U/6.3V CAP0805
C987 *10U/6.3V_NC CAP0805
C986 *10U/6.3V_NC CAP0805

C982 0.1UF/16V
C979 0.1UF/16V
C964 0.1UF/16V
C967 0.1UF/16V

Layout Note:
0.1uF Caps for CMD,CLK,CTRL return path
Place Caps on the same side as SO-DIMM
and close to VDD Pin (9/9).

+0.75V_DDR_VTT

C976 1U/10V CAP0603
C977 1U/10V CAP0603
C980 1U/10V CAP0603
C991 1U/10V CAP0603

Place these caps close
to Pin203 and 204.

SO-DIMM Address		
SA0_DIM0 = 0, SA1_DIM0 = 0	SPD	0xA0
	TS	0x30
SA0_DIM0 = 1, SA1_DIM0 = 0	SPD	0xA2
	TS	0x32

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Title: DDR3 SO-DIMM1_204P_STD

Size | Document Number: Inspiron Z -- INTEL | Rev: X01

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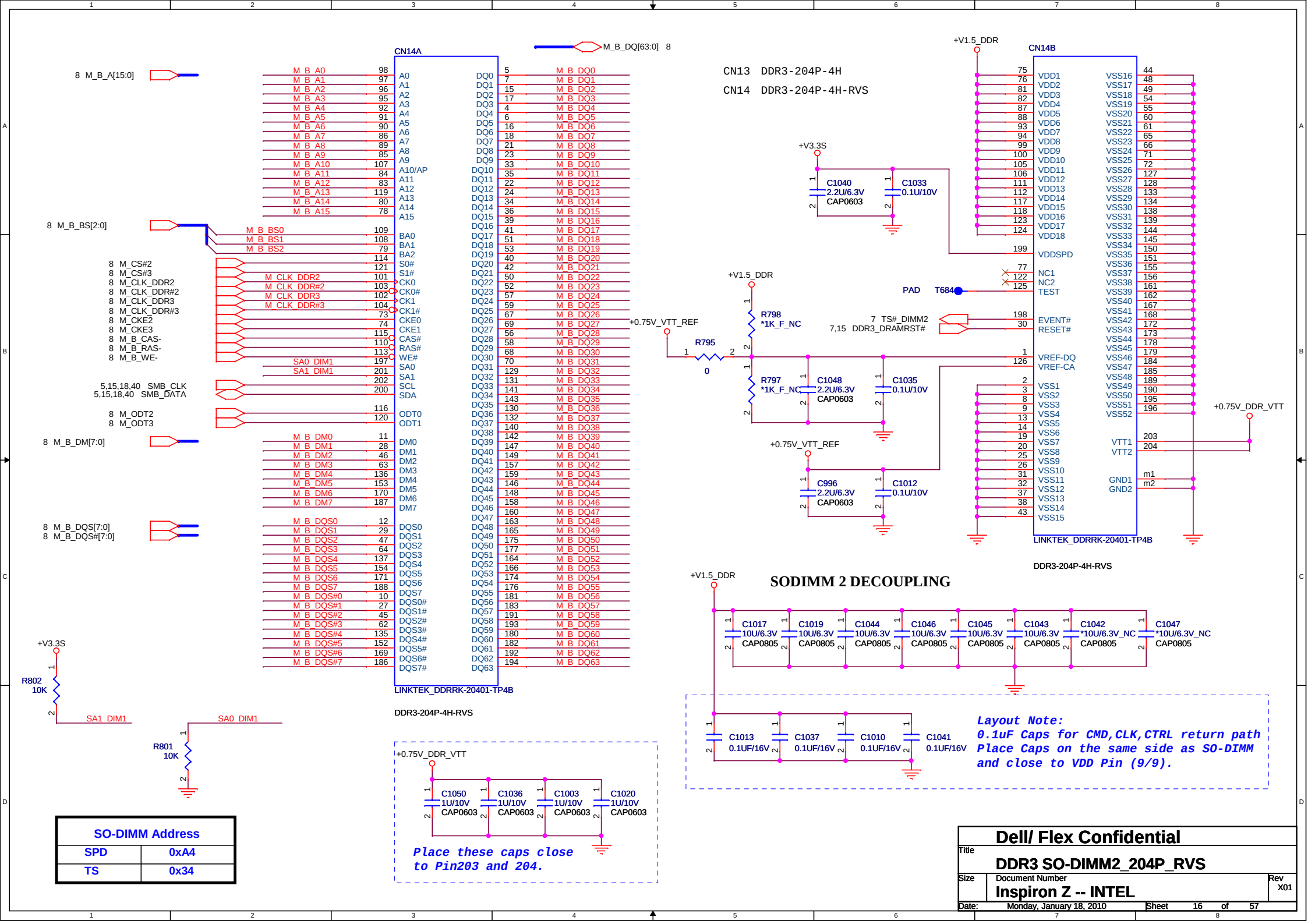
CN14A
CN13 DDR3-204P-4H
CN14 DDR3-204P-4H-RVS
M_B_DQ[63:0] 8
8 M_B_A[15:0]
8 M_B_BS[2:0]
8 M_CS#2
8 M_CS#3
8 M_CLK_DDR2
8 M_CLK_DDR#2
8 M_CLK_DDR3
8 M_CLK_DDR#3
8 M_CKE2
8 M_CKE3
8 M_B_CAS-
8 M_B_RAS-
8 M_B_WE-
8 M_ODT2
8 M_ODT3
8 M_B_DM[7:0]
8 M_B_DQS[7:0]
8 M_B_DQS#[7:0]
5,15,18,40 SMB_CLK
5,15,18,40 SMB_DATA
M_CLK_DDR2
M_CLK_DDR#2
M_CLK_DDR3
M_CLK_DDR#3
SA0_DIM1
SA1_DIM1
LINKTEK_DDRRK-20401-TP4B
DDR3-204P-4H-RVS
+0.75V_VTT_REF
R795 0
+V1.5_DDR
R798 *1K_F_NC
R797 *1K_F_NC
C1048 2.2U/6.3V CAP0603
C1035 0.1U/10V
+V3.3S
C1040 2.2U/6.3V CAP0603
C1033 0.1U/10V
PAD T684
7 TS#_DIMM2
7,15 DDR3_DRAMRST#
+0.75V_DDR_VTT
C996 2.2U/6.3V CAP0603
C1012 0.1U/10V
SODIMM 2 DECOUPLING
C1017 10U/6.3V CAP0805
C1019 10U/6.3V CAP0805
C1044 10U/6.3V CAP0805
C1046 10U/6.3V CAP0805
C1045 10U/6.3V CAP0805
C1043 10U/6.3V CAP0805
C1042 *10U/6.3V_NC CAP0805
C1047 *10U/6.3V_NC CAP0805
C1013 0.1UF/16V
C1037 0.1UF/16V
C1010 0.1UF/16V
C1041 0.1UF/16V
Layout Note:
0.1uF Caps for CMD,CLK,CTRL return path
Place Caps on the same side as SO-DIMM
and close to VDD Pin (9/9).
R802 10K
R801 10K
C1050 1U/10V CAP0603
C1036 1U/10V CAP0603
C1003 1U/10V CAP0603
C1020 1U/10V CAP0603
Place these caps close
to Pin203 and 204.
SO-DIMM Address
SPD 0xA4
TS 0x34
Dell/ Flex Confidential
Title
DDR3 SO-DIMM2_204P_RVS
Size
Document Number
Inspiron Z -- INTEL
Rev X01
Date: Monday, January 18, 2010
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IBEX PEAK-M (HDA,JTAG,SATA)

Internal Pull-Up and Pull-Down

	Mark
Pull-Up	P+
Pull-Down	P-

U10A

RTC: RTCX1 B13, RTCX2 D13, RTCRST# C14, SRTCRST# D17, INTRUDER# A16, INTVRMEN A14

LPC: FWH0 / LAD0 D33, FWH1 / LAD1 B33, FWH2 / LAD2 C32, FWH3 / LAD3 A32, FWH4 / LFRAME# C34, LDRQ0# A34, LDRQ1# / GPIO23 F34, SERIRQ AB9

IHDA: HDA_BCLK A30, HDA_SYNC D29, SPKR P1, HDA_RST# C30, HDA_SDIN0 G30, HDA_SDIN1 F30, HDA_SDIN2 E32, HDA_SDIN3 F32, HDA_SDO B29

SATA: HDA_DOCK_EN# / GPIO33 H32, HDA_DOCK_RST# / GPIO13 J30, SATA0RXN AK7, SATA0RXP AK6, SATA0TXN AK11, SATA0TXP AK9, SATA1RXN AH6, SATA1RXP AH5, SATA1TXN AH9, SATA1TXP AH8, SATA2RXN AF11, SATA2RXP AF9, SATA2TXN AF7, SATA2TXP AF6, SATA3RXN AH3, SATA3RXP AH1, SATA3TXN AF3, SATA3TXP AF1, SATA4RXN AD9, SATA4RXP AD8, SATA4TXN AD6, SATA4TXP AD5, SATA5RXN AD3, SATA5RXP AD1, SATA5TXN AB3, SATA5TXP AB1, SATAICOMPO AF16, SATAICOMPI AF15, SATALED# T3, SATA0GP / GPIO21 Y9, SATA1GP / GPIO19 V1

JTAG: JTAG_TCK M3, JTAG_TMS K3, JTAG_TDI K1, JTAG_TDO J2, JTAG_RST# J4

SPI: SPI_CLK BA2, SPI_CS0# AV3, SPI_CS1# AY3, SPI_MOSI AY1, SPI_MISO AV1

IbexPeak-M

C47 1 2 12P/50V

Y7 32.768KHz 12.5pF_+-10ppm

C46 1 2 12P/50V

R42 10M

RTC_X1 B13

RTC_X2 D13

+RTC_CELL

C43 1U/10V CAP0603

R33 1 2 20K

R742 1 2 20K

R741 1 2 1M

C926 1U/10V CAP0603

RTC_RST#

SRTC_RST#

SM_INTRUDER#

PCH_INTVRMEN

39 HDA_BITCLK — HDA_BITCLK R696 1 2 33 HDA_BIT_CLK A30

39 HDA_SYNC — R690 1 2 33 HDA_SYNC_C D29

39 SPKR — R58 1 2 0 PCH_HDA_SPKR P1

39 HDA_RESET# — R703 1 2 33 PCH_HDA_RST# C30

+RTC_CELL

R40 1 2 330K PCH_INTVRMEN

INTVRMEN- Integrated SUS 1.1V VRM Enable
High - Enable Internal VRs

39 HDA_SDATA_IN — G30 HDA_SDIN0

T651 PAD — NC_HDA_SDIN1 F30 HDA_SDIN1

T649 PAD — NC_HDA_SDIN2 E32 HDA_SDIN2

T646 PAD — NC_HDA_SDIN3 F32 HDA_SDIN3

39 HDA_SDATA_OUT — R686 1 2 33 PCH_HDA_SDO B29 HDA_SDO

GPIO33 internal PU
select secret mode

NC_HDA_DOCK_EN_N H32

NC_HDA_DOCK_RST_N J30

PCH_XDP_TCLK R51 1 2 51

Close PCH

14 PCH_XDP_TCLK — PCH_XDP_TCLK M3 JTAG_TCK

14 PCH_XDP_TMS — PCH_XDP_TMS K3 JTAG_TMS

14 PCH_XDP_TDI — PCH_XDP_TDI K1 JTAG_TDI

14 PCH_XDP_TDO — PCH_XDP_TDO J2 JTAG_TDO

14 PCH_XDP_TRST# — PCH_XDP_TRST# J4 JTAG_RST#

32 EC_HSPI_CLK — SPI_CLK R106 1 2 *0_NC BA2 SPI_CLK

32 EC_HSPI_CS — SPI_CS_N0 R108 1 2 *0_NC AV3 SPI_CS0#

T678 PAD — NC_SPI_CS_N1 AY3 SPI_CS1#

32 EC_HSPI_SI — SPI_SI R107 1 2 *0_NC AY1 SPI_MOSI

32 EC_HSPI_SO — SPI_SO R109 1 2 *33_NC AV1 SPI_MISO

P+ SATALED# T3 — SATA_ACT# 41 **TO LED BOARD**

SATA0GP / GPIO21 Y9 — NC_GPIO21 R767 1 2 8.2K_F +V3.3S

SATA1GP / GPIO19 V1 — NC_GPIO19 R75 1 2 8.2K_F +V3.3S

To HDD

SATA_RX0N 37, SATA_RX0P 37, SATA_TX0N 37, SATA_TX0P 37

SATA_TX0N_C C65 2 1 0.01U/16V SATA_TX0N

SATA_TX0P_C C62 2 1 0.01U/16V SATA_TX0P

To eSATA+USB

SATA_RX1N 37, SATA_RX1P 37, SATA_TX1N 37, SATA_TX1P 37

SATA_TX1N_C C995 2 1 0.01U/16V SATA_TX1N

SATA_TX1P_C C994 2 1 0.01U/16V SATA_TX1P

SATA_TX2P_C — PAD T663

NC_SATA_TXP3 — PAD T675

NC_SATA_TXP4 — PAD T667

NC_SATA_TXP5 — PAD T680

+V1.05S — R743 1 2 37.4_F

LPC_LAD0 32,40, LPC_LAD1 32,40, LPC_LAD2 32,40, LPC_LAD3 32,40

LPC_LFRAME# 32,40

LPC_DRQ#1 — PAD T645

LPC_DRQ#0 40

IRQ_SERIRQ 32,40

+V3.3S — R764 1 2 8.2K_F

32Mbit (4M Byte) SPI,Support iME

SPI within 1.5" No damping is ok.

+V3.3S — R758 3.3K

+V3.3S — R789 3.3K

C1008 0.1U/25V

U604 SST25VF032B-66-4I-S2AF

SPI_CS_N0, SPI_CLK, SPI_SI, SPI_SO

C971 *22p/50V_NC

EMI

NO REBOOT STRAP		
HDA_SPKR	NA	Low=Default
	MOUNTED	High=No Reboot

+V3.3S — R57 1 2 *1K_NC SPKR

+V3.3A_PCH — NC_HDA_DOCK_RST_N R681 1 2 *10K_NC

iTPM ENABLE/DISABLE		
SPI_SI	NA	Low=Disable(Default)
	MOUNTED	High=Enable

+V3.3S — R788 1 2 *1K_NC SPI_SI

HDA_BITCLK — R38 *22_NC — C44 *10p/50V_NC

EMI

NC_HDA_DOCK_EN_N R679 1 2 *10K_NC

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

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Title: **PCH 1/9 - HDA/LPC/SATA**

Size | Document Number: **Inspiron Z -- INTEL** | Rev: X01

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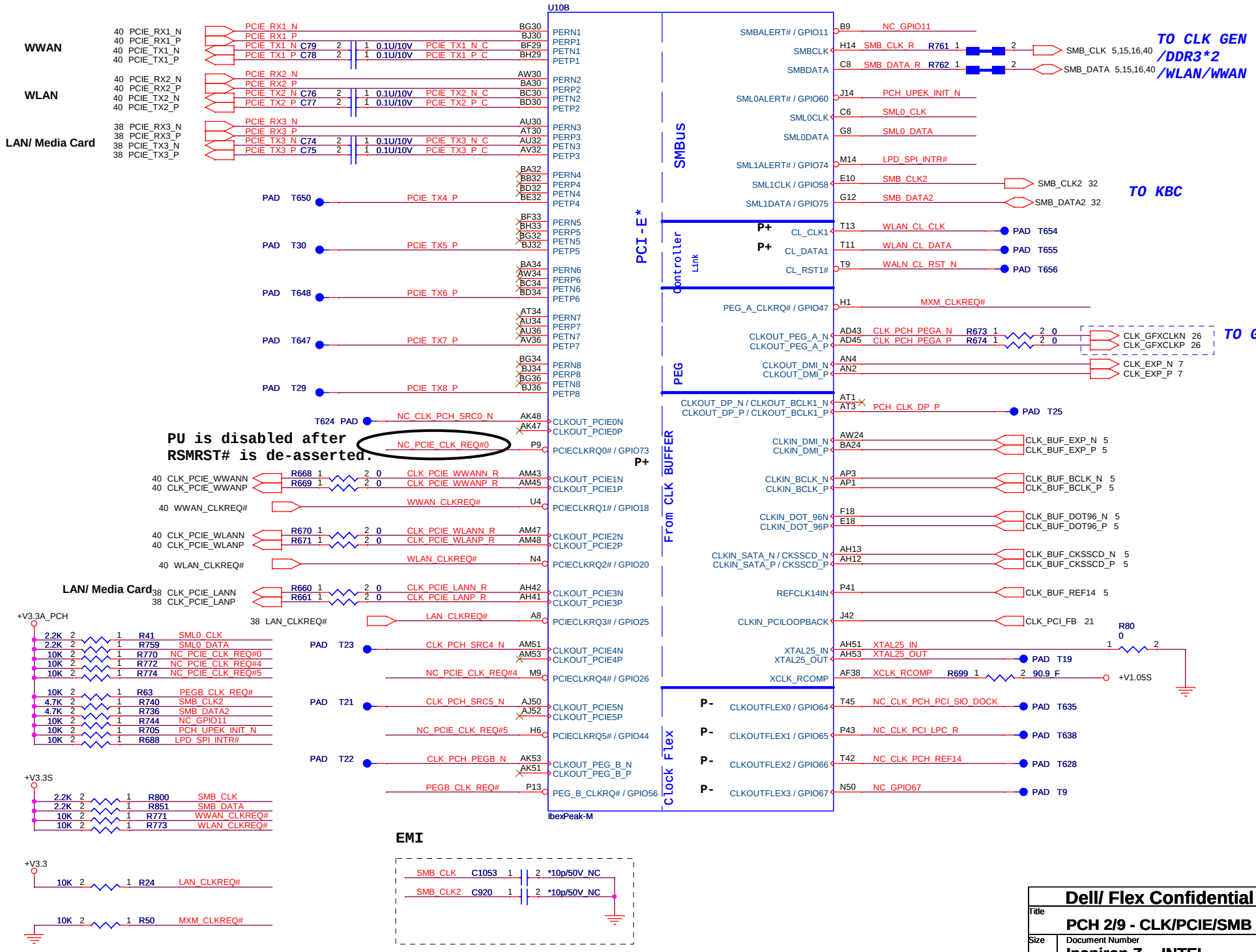
IBEX PEAK-M (PCI-E,SMBUS,CLK)



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Title	PCH 2/9 - CLK/PCIE/SMB	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
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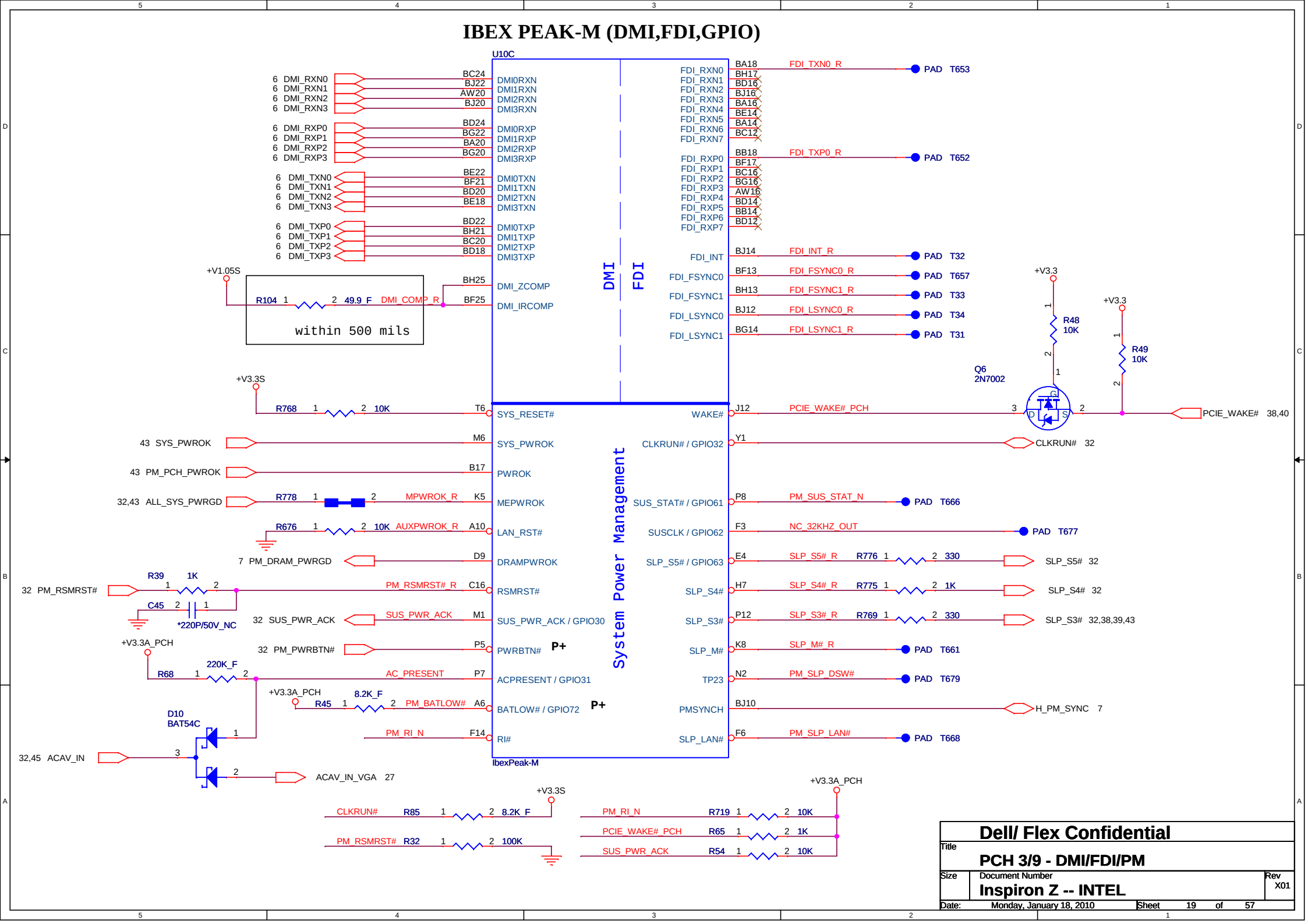
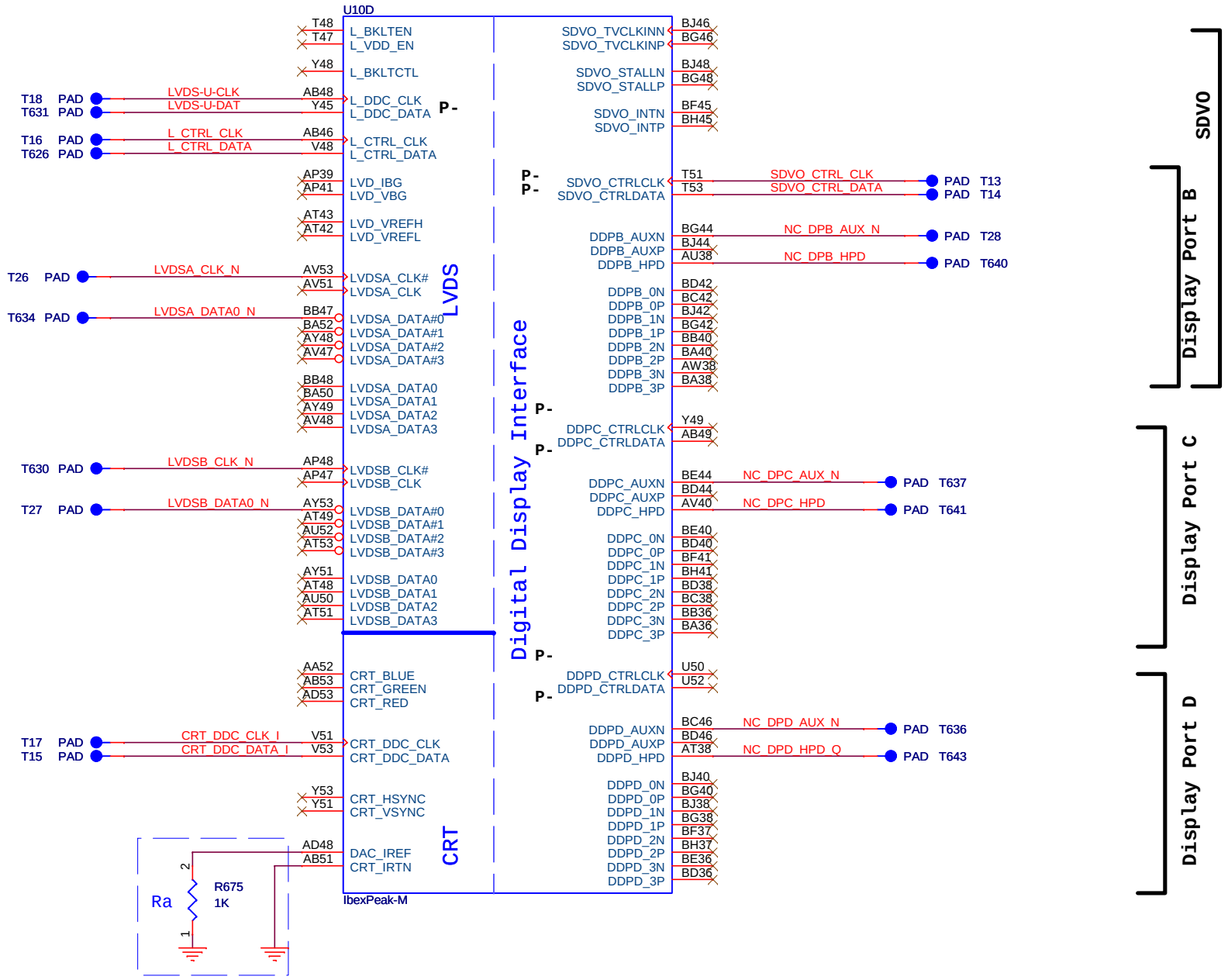
IBEX PEAK-M (DMI,FDI,GPIO)



Dell/ Flex Confidential		
Title: **PCH 3/9 - DMI/FDI/PM**		
Size	Document Number: **Inspiron Z -- INTEL**	Rev: X01
Date: Monday, January 18, 2010	Sheet 19 of 57	

IBEX PEAK-M (LVDS,DDI)



Internal VGA disable
keep Ra to GND and IRTN
keep connect to GND

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Title	PCH 4/9 - CRT/DP/LVDS	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
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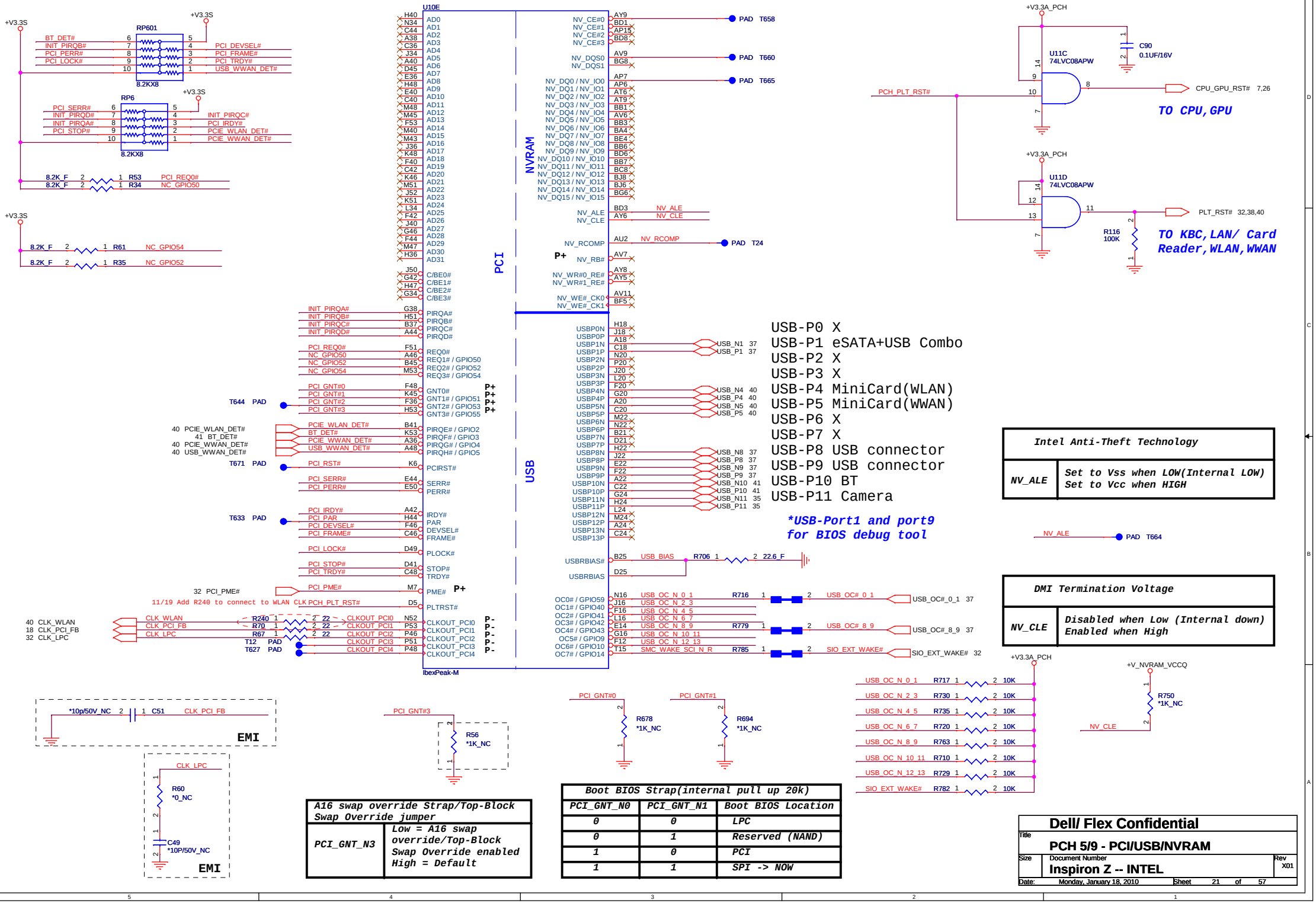
IBEX PEAK-M (PCI,USB,INTEL(R) TURBO MEMORY)



Intel Anti-Theft Technology	
NV_ALE	Set to Vss when LOW(Internal LOW) Set to Vcc when HIGH

DMI Termination Voltage	
NV_CLE	Disabled when Low (Internal down) Enabled when High

A16 swap override Strap/Top-Block Swap Override jumper	
PCI_GNT_N3	Low = A16 swap override/Top-Block Swap Override enabled High = Default

Boot BIOS Strap(internal pull up 20k)		
PCI_GNT_N0	PCI_GNT_N1	Boot BIOS Location
0	0	LPC
0	1	Reserved (NAND)
1	0	PCI
1	1	SPI -> NOW

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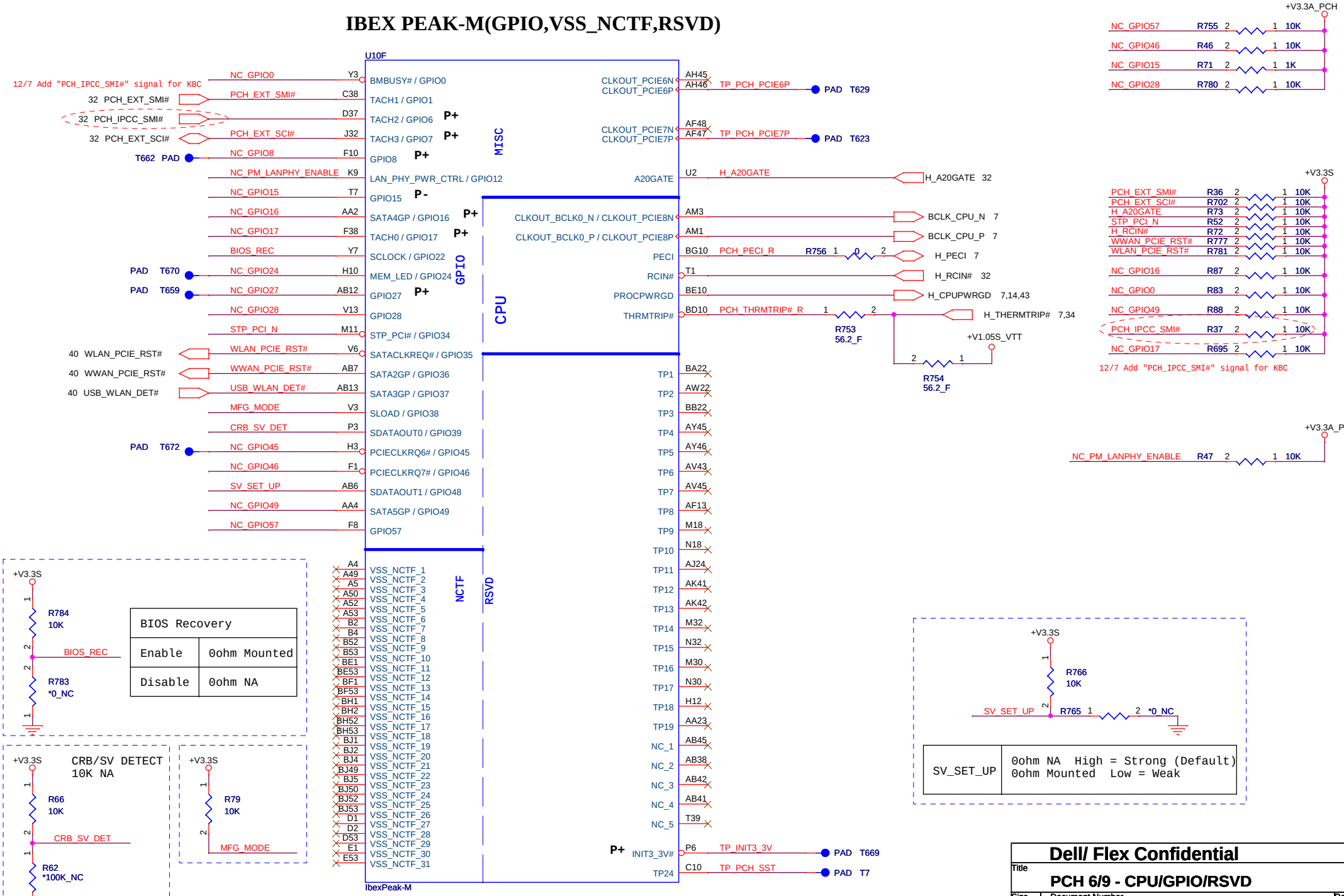
Title	PCH 5/9 - PCI/USB/NVRAM		
Size	Document Number: Inspiron Z -- INTEL		Rev: X01
Date: Monday, January 18, 2010	Sheet 21 of 57		

IBEX PEAK-M(GPIO,VSS_NCTF,RSVD)



Dell/ Flex Confidential

Title: PCH 6/9 - CPU/GPIO/RSVD		
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
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IBEX PEAK-M(POWER)

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

POWER

U10G — IbexPeak-M

VCC CORE

1432mA

+V1.05S

C904 10U/6.3V

C921 0.1UF/16V

AB24 AB26 AB28 AD26 AD28 AF26 AF28 AF30 AF31 AH26 AH28 AH30 AH31 AJ30 AJ31

VCCCORE[1] VCCCORE[2] VCCCORE[3] VCCCORE[4] VCCCORE[5] VCCCORE[6] VCCCORE[7] VCCCORE[8] VCCCORE[9] VCCCORE[10] VCCCORE[11] VCCCORE[12] VCCCORE[13] VCCCORE[14] VCCCORE[15]

CRT

VCCADAC[1] VCCADAC[2] VSSA_DAC[1] VSSA_DAC[2]

AE50 AE52 AF53 AF51

+V3.3S_CRT_VCCA_DAC

R81 0

+V3.3S

C55 0.1UF/16V

C54 1U/10V CAP0603

1.1mA

LVDS

40mA

+V1.1S_VCCAPLL_EXP

+V1.05S

AK24 VCCIO[24]

BJ24 VCCAPLLEXP

C80 *0.1UF/16V_NC

VCCALVDS VSSA_LVDS

AH38 AH39

+V3.3S_VCCA_LVD

R698 0402-SHORT

R687

VCCTX_LVDS[1] VCCTX_LVDS[2] VCCTX_LVDS[3] VCCTX_LVDS[4]

AP43 AP45 AT46 AT45

+V1.8S_VCCTX_LVD

0402-SHORT

HVCMOS

VCCIO Total 3062mA

AN20 AN22 AN23 AN24 AN26 AN28 BJ26 BJ28 AT26 AT28 AU26 AU28 AV26 AV28 AW26 AW28 BA26 BA28 BB26 BB28 BC26 BC28 BD26 BD28 BE26 BE28 BG26 BG28 BH27

VCCIO[25] VCCIO[26] VCCIO[27] VCCIO[28] VCCIO[29] VCCIO[30] VCCIO[31] VCCIO[32] VCCIO[33] VCCIO[34] VCCIO[35] VCCIO[36] VCCIO[37] VCCIO[38] VCCIO[39] VCCIO[40] VCCIO[41] VCCIO[42] VCCIO[43] VCCIO[44] VCCIO[45] VCCIO[46] VCCIO[47] VCCIO[48] VCCIO[49] VCCIO[50] VCCIO[51] VCCIO[52] VCCIO[53]

VCC3_3[2] VCC3_3[3] VCC3_3[4]

AB34 AB35 AD35

+V3.3S

C891 0.1UF/16V

VCC3_3 Total 357mA

+V1.05S

C902 10U/6.3V

C896 1U/6.3V

DMI

+V1.5S_1.8S

Internal VRM supply

VCCVRM[2]

AT24

61mA

VCCDMI[1] VCCDMI[2]

AT16 AU16

+V1.1S_VCC_DMI

R751 0

+V1.05S

C952 0.1UF/16V

Internal VRM supply
Refer to P16 PCH_INTVRMEN

156mA

PCI E*

+V1.5S

+V1.5S_1.8S

R731 *0_NC

+V1.8S

R732 0

11/18 Add R732 to +V1.8S to VCCVRM
R731 change to NA

+V3.3S

C890 0.1UF/16V

AN30 AN31 AN35

VCC3_3[1]

AT22

VCCVRM[1]

SPI

VCCPNAND[1] VCCPNAND[2] VCCPNAND[3] VCCPNAND[4] VCCPNAND[5] VCCPNAND[6] VCCPNAND[7] VCCPNAND[8] VCCPNAND[9]

AM16 AK16 AK20 AK19 AK15 AK13 AM12 AM13 AM15

+V_NVRAM_VCCQ

R749

+V1.8S

C956 0.1UF/16V

5.5mA

NAND

+V1.1S_VCCAPLL_FDI

BJ18 VCCFDIPLL

AM23 VCCIO[1]

C81 *0.1UF/16V_NC

+V1.05S

R738 0402-SHORT

+V1.1S VCCIO

37mA

FDI

VCCME3_3[1] VCCME3_3[2] VCCME3_3[3] VCCME3_3[4]

AM8 AM9 AP11 AP9

+V3.3S_VCCME3_3

R760

+V3.3S

C963 0.1UF/16V

85mA

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Title	PCH 7/9 - POWER_1	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
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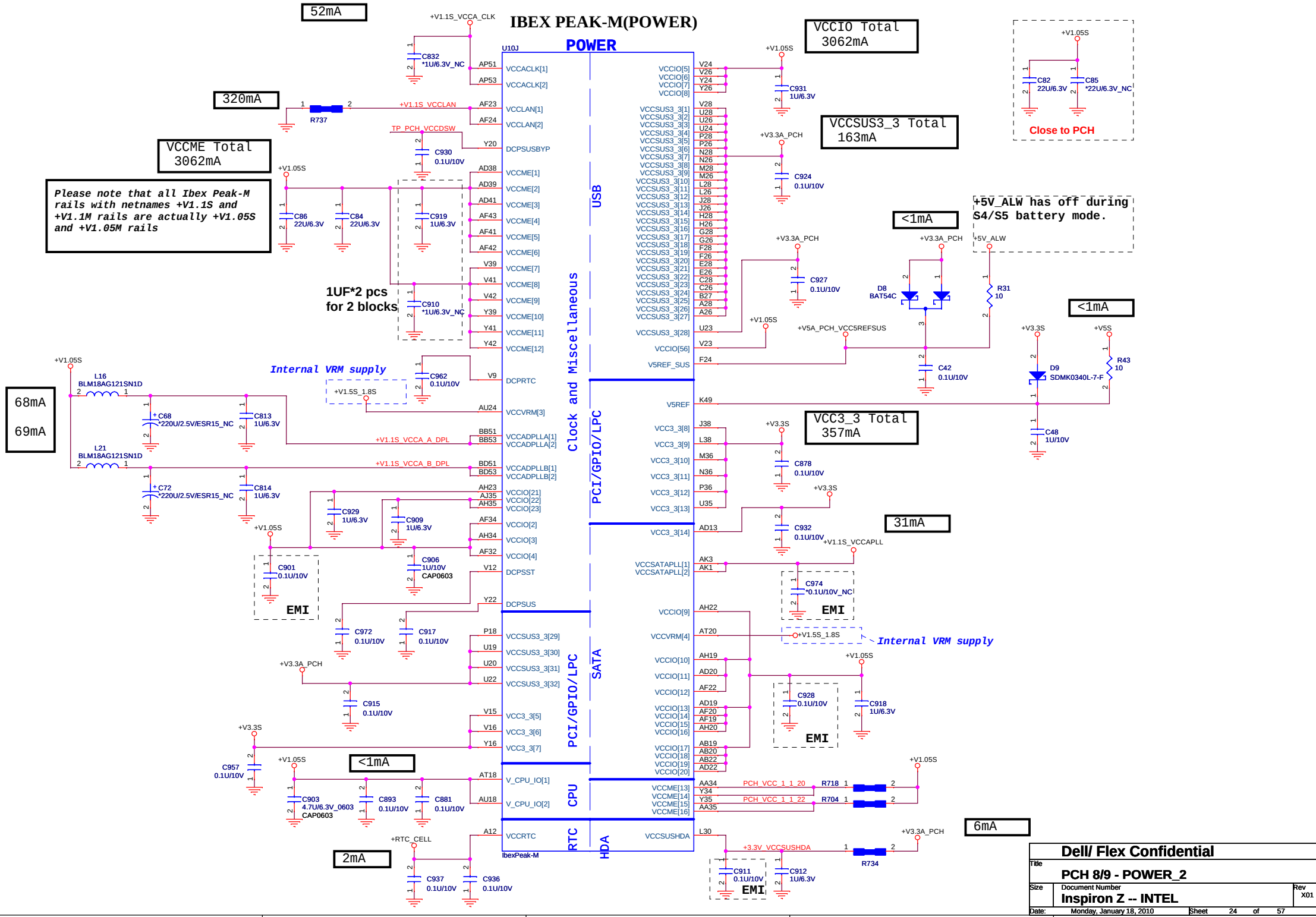
IBEX PEAK-M(POWER)
POWER
52mA
320mA
VCCME Total 3062mA
Please note that all Ibex Peak-M rails with netnames +V1.1S and +V1.1M rails are actually +V1.05S and +V1.05M rails
1UF*2 pcs for 2 blocks
Internal VRM supply
68mA
69mA
<1mA
2mA
6mA
31mA
VCCIO Total 3062mA
VCCSUS3_3 Total 163mA
VCC3_3 Total 357mA
+5V_ALW has off during S4/S5 battery mode.
Close to PCH
EMI
U10J
USB
Clock and Miscellaneous
PCI/GPIO/LPC
SATA
CPU
RTC
HDA
IbexPeak-M
Dell/ Flex Confidential
PCH 8/9 - POWER_2
Inspiron Z -- INTEL
Monday, January 18, 2010
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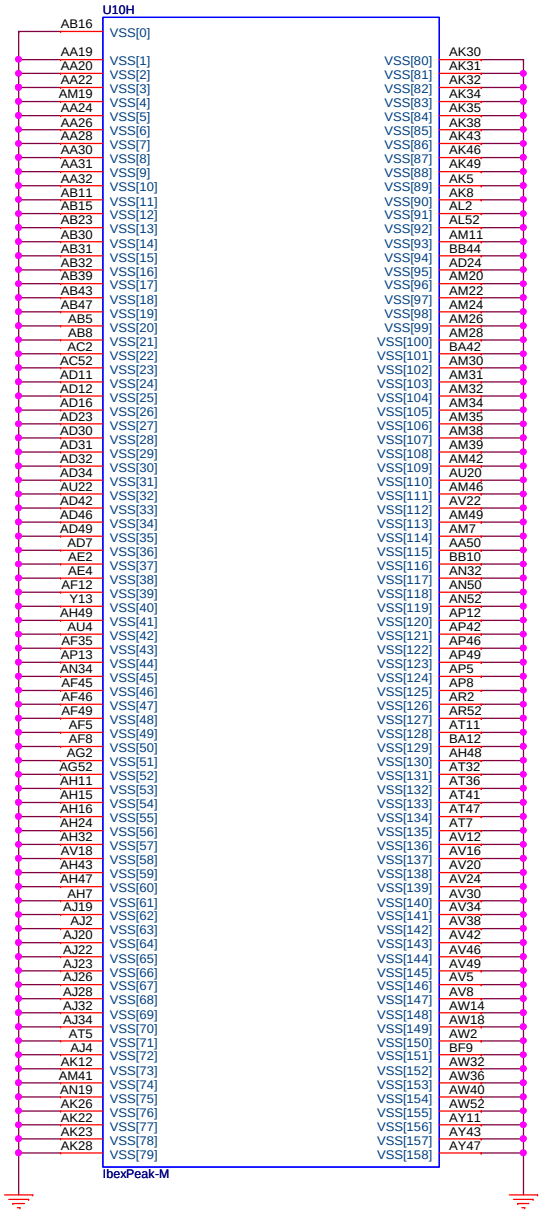
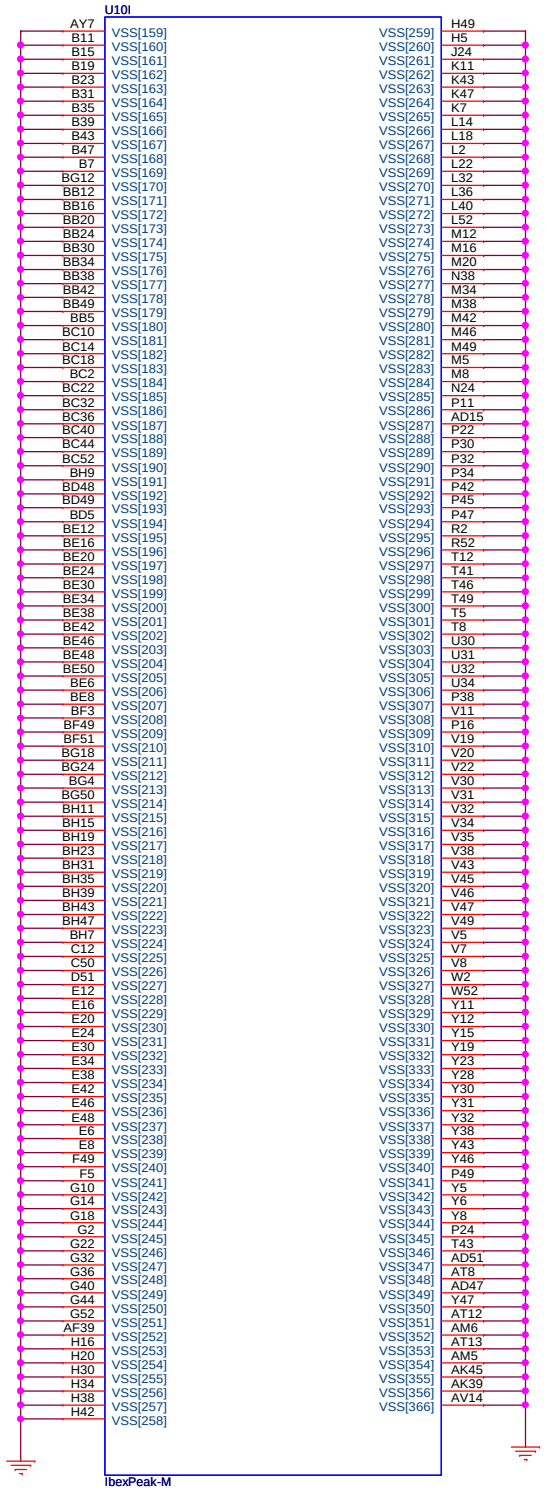
IBEX PEAK-M (GND)





Dell/ Flex Confidential

Title: **PCH 9/9 - GND**		
Size	Document Number: **Inspiron Z -- INTEL**	Rev: X01
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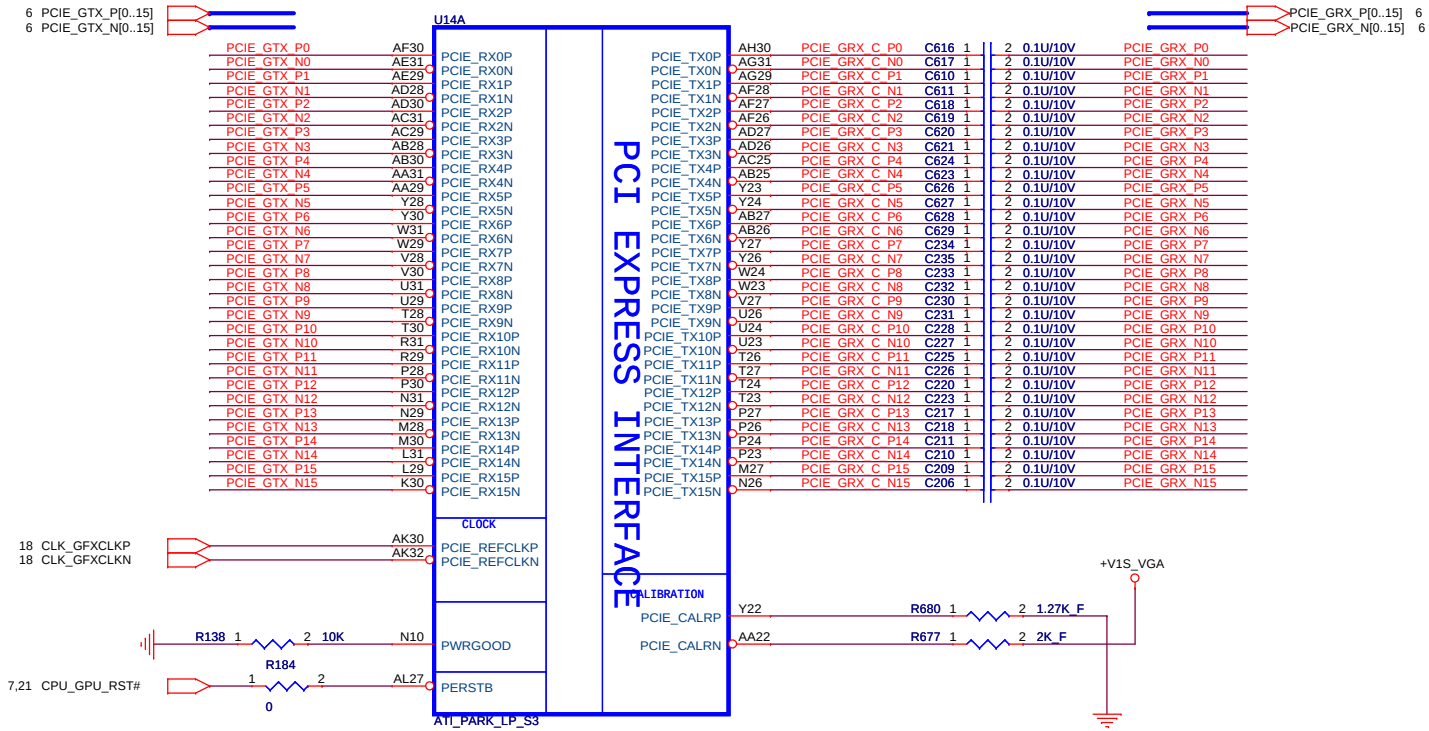

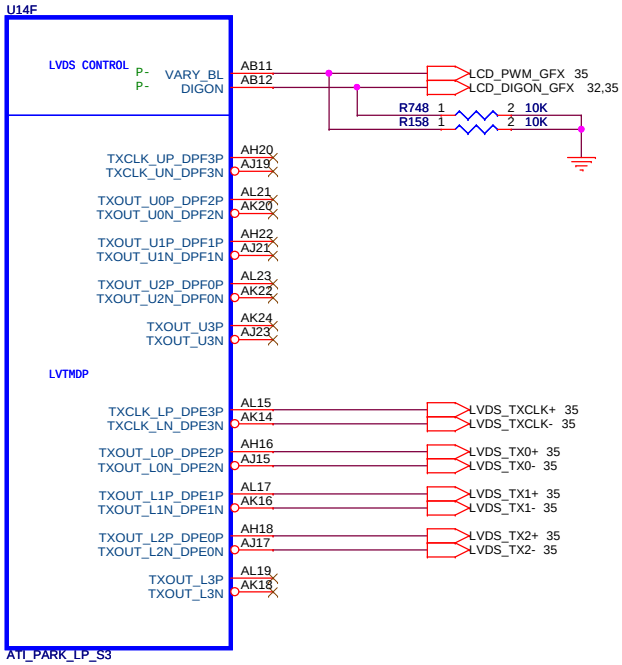

Madison H/W STRAPS

All Signal had internal pull-down

VIP_DEVICE_STRAP_EN

VIP Device Strap Enable
L: Ignore VIP Device Strap
H: Enable VIP Device Strap

27 CRT_V2SYNC — PAD T56

TX_PWRS_ENB

Transmitter Power Savings Enbale
L: 50% Tx output swing (DEFAULT)
H: Full Tx output swing

+V3.3S_VGA
27 VGA_GPIO0 — R139 1 2 *10K_NC

CONFIG[2, 1, 0]

If BIOS_ROM_EN = 1, then CONFIG[2:0] defines the ROM type.
If BIOS_ROM_EN = 0, then CONFIG[2:0] defines the primary memory aperture size.

+V3.3S_VGA
27 VGA_GPIO13 — R152 1 2 *10K_NC
27 VGA_GPIO12 — R153 1 2 *10K_NC
27 VGA_GPIO11 — R151 1 2 10K

AUD[1, 0]

LL: No audio function
LH: Audio for DP only
HL: Audio for DP& HDMI if dongle is detected
HH: Audio both for DP& HDMI (DEFAULT)

+V3.3S_VGA
27 CRT_HSYNC — R177 1 2 10K
27 CRT_VSYNC — R181 1 2 10K

VGA_DIS

VGA Disable
L: VGA Controller capacity Enabled
H: The device won'y be recognized as the system's VGA controller

27 VGA_GPIO9_ROMSI — PAD T51

TX_DEEMPH_EN

PCI Express Transmitter De-emphasis Enable
L: Tx de-emphasis disable (DEFAULT)
H: Tx de-emphasis enable

+V3.3S_VGA
27 VGA_GPIO1 — R141 1 2 *10K_NC

These two TX setting can only be used if the PCIe bus design meets "Low Loss Interconnect" requirements.

BIOS_ROM_EN

Enable external BIOS ROM device
L: Disable external BIOS ROM device (DEFAULT)
H: Enable external BIOS ROM device

27 GPIO_22_ROMCSB — 1 — PAD T49

BIF_GEN2_EN_A

L: PCIe device as 2.5GT/s capable (DEFAULT)
H: PCIe device as 5.0GT/s capable

+V3.3S_VGA
27 VGA_GPIO2 — R140 1 2 *10K_NC

RESERVED

HSYNC
GPIO_8_ROMSO
GPIO21_BB_EN
These Signal were Internal used only.

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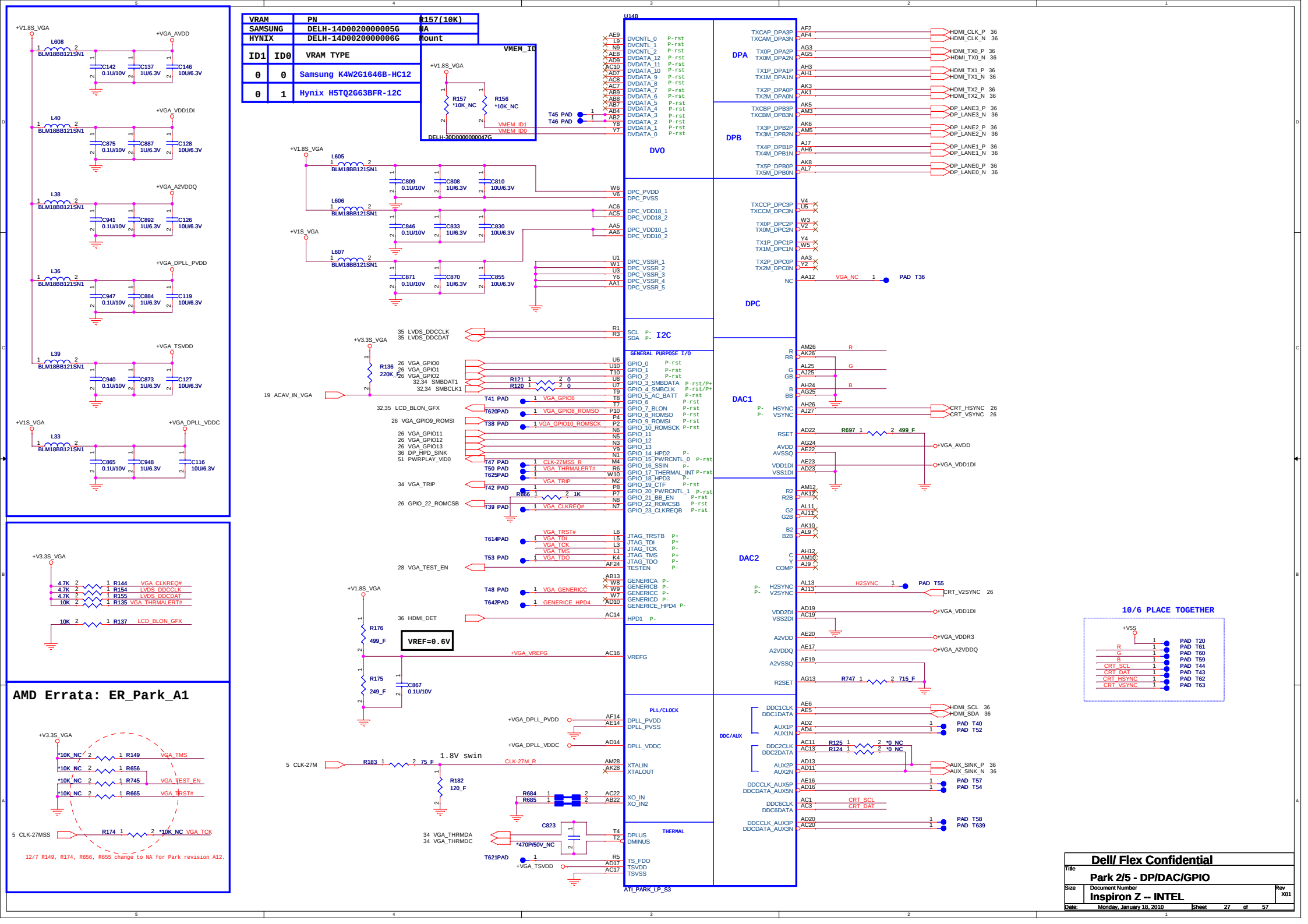
Title	Park 1/5 - PCIE/LVDS	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
Date: Monday, January 18, 2010	Sheet 26 of 57	


VRAM PN R157(10K)
SAMSUNG DELH-14D0020000005G NA
HYNIX DELH-14D0020000006G Mount
ID1 ID0 VRAM TYPE
0 0 Samsung K4W2G1646B-HC12
0 1 Hynix H5TQ2G63BFR-12C
VMEM_ID
DELH-30D0000000047G
U14B
DVO
DPA
DPB
DPC
DAC1
DAC2
I2C
GENERAL PURPOSE I/O
PLL/CLOCK
THERMAL
DDC/AUX
ATI_PARK_LP_S3
VREF=0.6V
1.8V swin
10/6 PLACE TOGETHER
AMD Errata: ER_Park_A1
12/7 R149, R174, R656, R655 change to NA for Park revision A12.
Dell/ Flex Confidential
Park 2/5 - DP/DAC/GPIO
Inspiron Z -- INTEL
Monday, January 18, 2010
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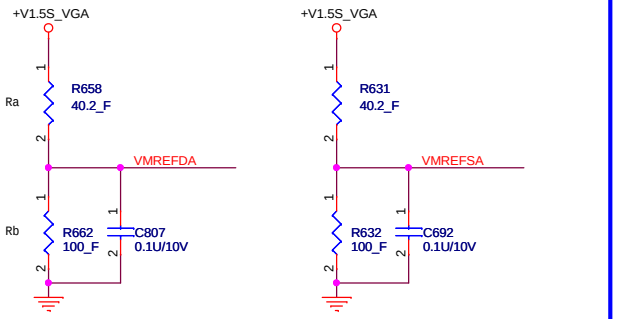
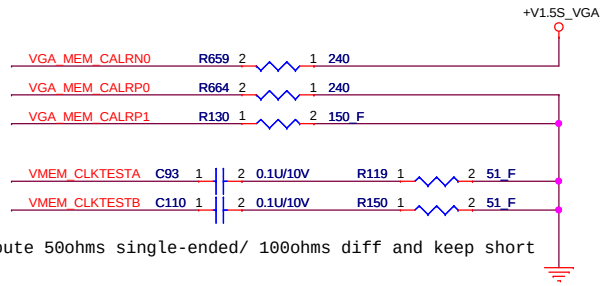
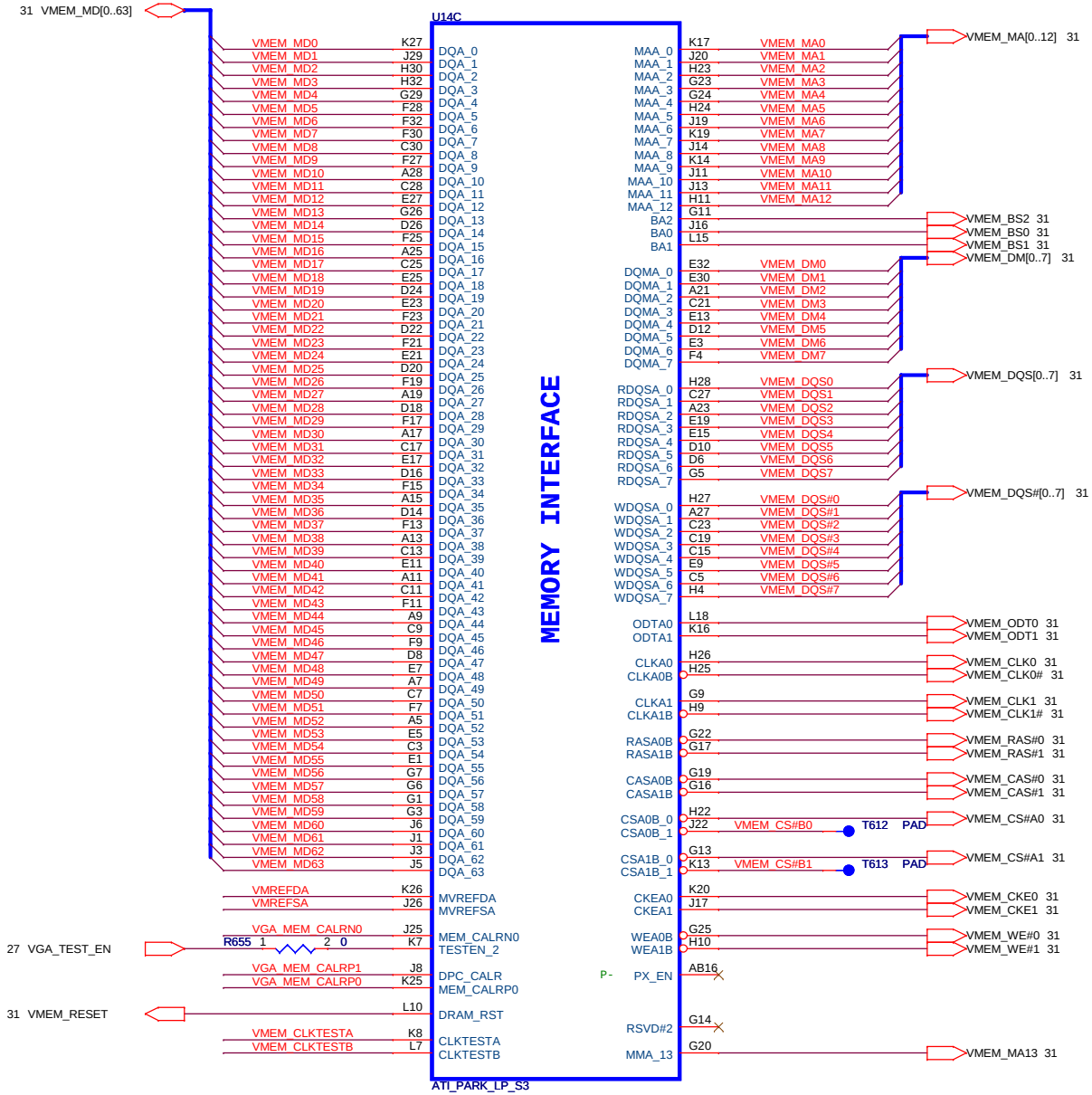
DIVIDER RESISTORS	DDR3/ GDDR3
MVREF TO 1.8V (Ra)	40.2R
MVREF TO GND (Rb)	100R

For DDR3: 0.7 * VDDR1





Route 50ohms single-ended/ 100ohms diff and keep short



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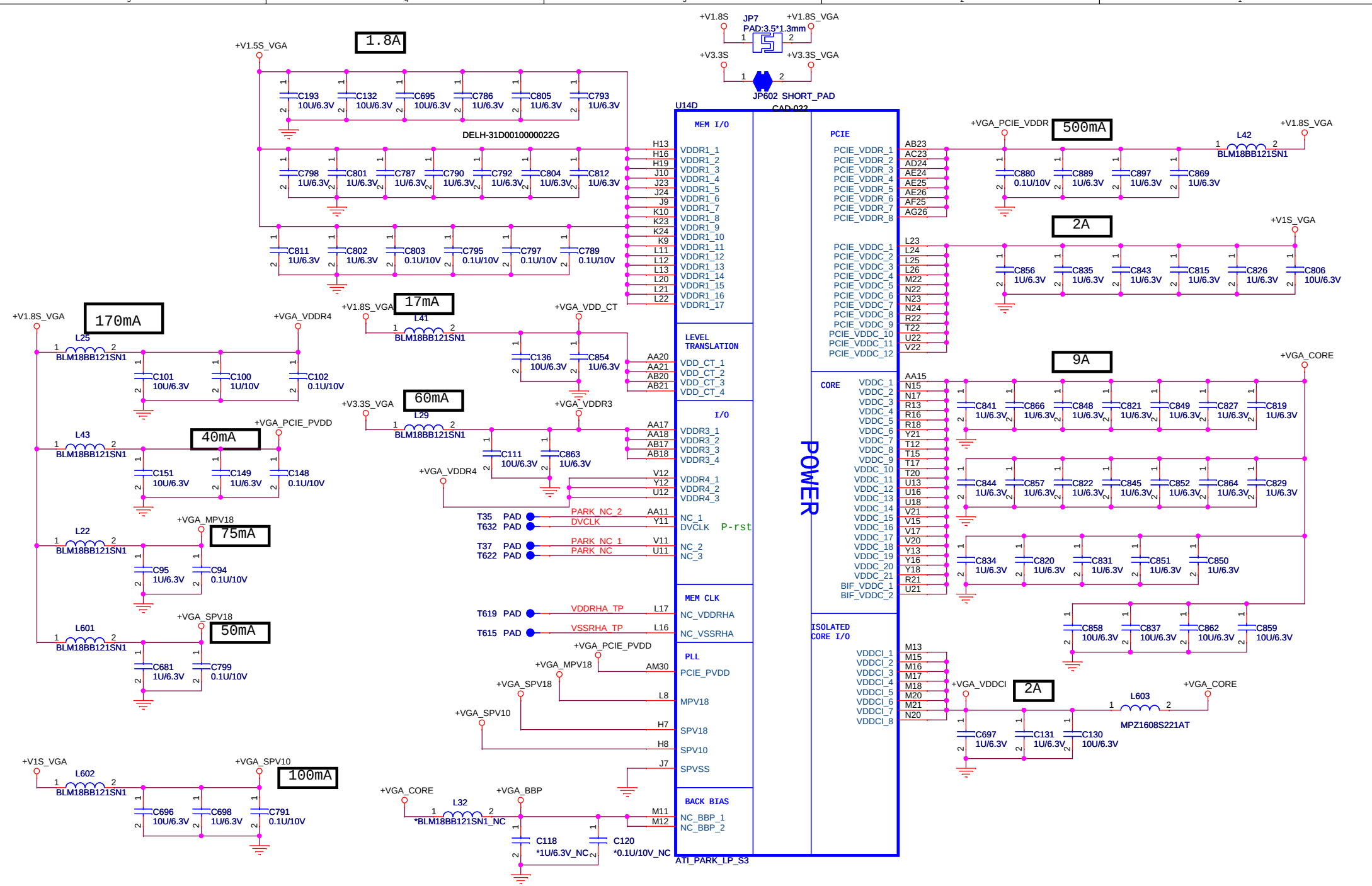
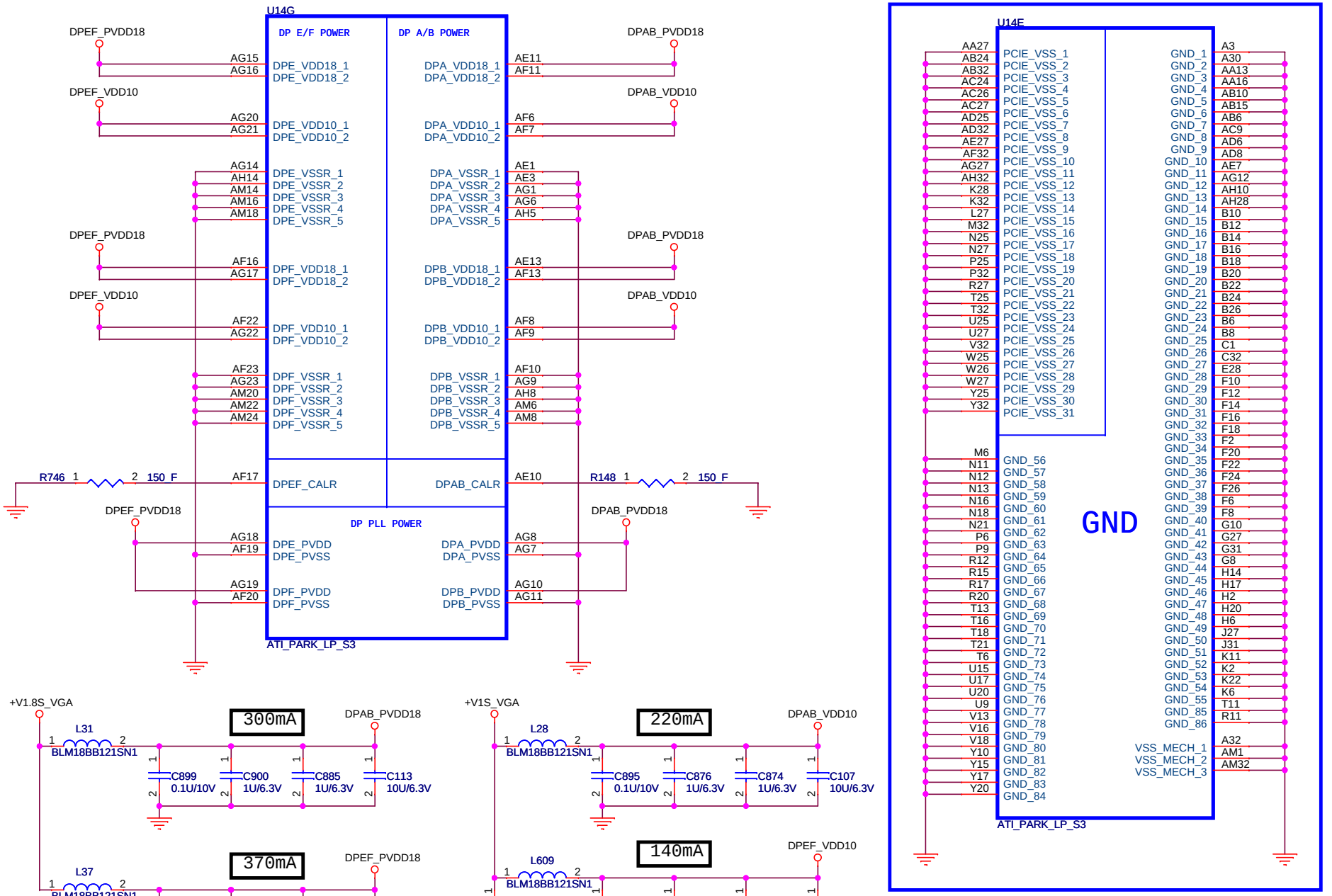
Title: **Park 3/5 - VRAM_ IF**		
Size	Document Number: **Inspiron Z -- INTEL**	Rev: X01
Date: Monday, January 18, 2010	Sheet 28 of 57	



Dell/ Flex Confidential			
Title: **Park 4/5 - PWR_IO**			
Size	Document Number: **Inspiron Z -- INTEL**		Rev: X01
Date: Monday, January 18, 2010		Sheet 29 of 57	



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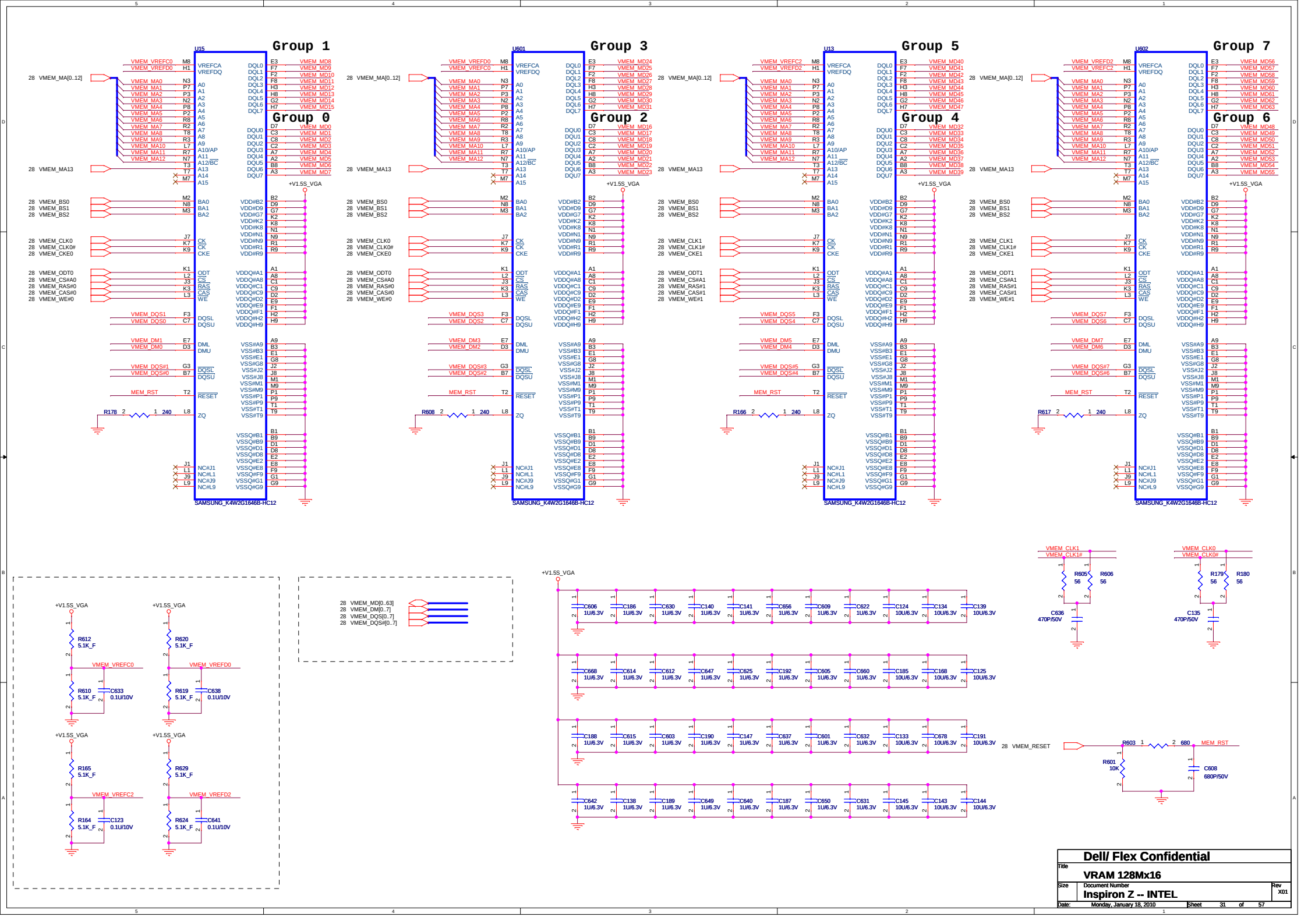
Title	Park 5/5 - PWR_DAC/GND	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
Date: Monday, January 18, 2010	Sheet 30 of 57	



Title: VRAM 128Mx16

Size | Document Number: Inspiron Z -- INTEL | Rev: X01

Date: Monday, January 18, 2010 | Sheet 31 of 57

KBC

41 KSO[0..16]
41 KSI[0..7]

45 ADAPT_TRIP_SET

U605

ITE8502E
LQFP-128L

KEYBOARD
KSO17/GPC5 KSO16 KSO15 KSO14 KSO13 KSO12/SLCT KSO11/ERR KSO10/PE KSO9/BUSY KSO8/ACK KSO7/PD7 KSO6/PD6 KSO5/PD5 KSO4/PD4 KSO3/PD3 KSO2/PD2 KSO1/PD1 KSO0/PD0
KSI7 KSI6 KSI5 KSI4 KSI3/SLIN KSI2/INIT KSI1/AFD KSI0/STB

ADC/DAC
ADC0/GPI0 ADC1/GPI1 ADC2/GPI2 ADC3/GPI3 ADC4/GPI4 ADC5/GPI5 ADC6/GPI6 ADC7/GPI7
DAC0/GPJ0 DAC1/GPJ1 DAC2/GPJ2 DAC3/GPJ3 DAC4/GPJ4 DAC5/GPJ5

LPC
LPCRST/WUI4/GPD2 LPCCLK LFRAME LAD0 LAD1 LAD2 LAD3 CLKRUN/WUI16/GPH0/ID0 SERIRQ ECSMI/GPD4 ECSCI/GPD3 GA20/GPB5 LPCPD/WUI6/GPE6 KBRST/GPB6 WRST PWUREQ/GPC7 L80HLAT/GPE0 L80LLAT/WUI7/GPE7

PWM
PWM0/GPA0 PWM1/GPA1 PWM2/GPA2 PWM3/GPA3 PWM4/GPA4 PWM5/GPA5 PWM6/GPA6 PWM7/GPA7
TACH0/GPD6 TACH1/GPD7
TMRI0/WUI2/GPC4 TMRI1/WUI3/GPC6

IR/UART
RXD/GPB0 TXD/GPB1 CRX0/GPC0 CTX0/GPB2 WUI17/GPH1/ID1 WUI18/GPH2/ID2

SMBUS
SMCLK0/GPB3 SMDAT0/GPB4 SMCLK1/GPC1 SMDAT1/GPC2 SMCLK2/WUI22/GPF6 SMDAT2/WUI23/GPF7

LPC/FWH FLASH
FLFRAME/GPG2/LF FLRST/GPG0/TM FLAD3/GPG6 FLAD2/SO FLAD1/SI FLAD0/SCE FLCLK

PS/2
PS2CLK0/GPF0 PS2DAT0/GPF1 PS2CLK1/GPF2 PS2DAT1/GPF3 PS2CLK2/WUI20/GPF4 PS2DAT2/WUI21/GPF5

EGPC
EGAD/GPE1 EGCS/GPE2 EGCLK/GPE3

HSPI
WUI19/GPH3/ID3 GPH4/ID4 GPH5/ID5 GPH6/ID6 GPG1/ID7

CK32K CK32KE

VSS1 VSS2 VSS3 VSS4 VSS5 VSS6 VSS7

AVCC AVSS

RI1/WUI0/GPD0 RI2/WUI1/GPD1 WUI5/GPE5
RING/PWRFAIL/LPCRST/GPB7
PWRSW/GPE4
GINT/GPD5

VBAT1 VCC
VSTBY1 VSTBY2 VSTBY3 VSTBY4 VSTBY5 VSTBY6

ITE_IT8502E/KX-L

+RTC_CELL
R834 0
+V3.3S
+3.3V_KBVCC
R823 *0_NC
C1083 0.1U/10V

R805
ALL_SYS_PWRGD 19,43
CPU_VMON 50
CPU_IMON 9,50
BID0
BID1
PID0
ADAPT_OC 45
SLP_S5# 19

IMVP_VR_ON delay 99ms from ALL_SYS_PWRGD input High.

IMVP_VR_ON 50
SIO_EXT_WAKE# 21
AMP_MUTE# 39
3VA_PCH_ON 42
PM_RSMRST# 19
PM_PWRBTN# 19

AMP_MUTE# : KBC default is HI

D607 SDMK0340L-7-F

POWERLED need breathe when S3

PWR_LED 41
LCD_DBC_EN 35
FAN_PWM 34
LCD_PWM_EC 35
WWAN_RF_ON 40
LCD_CBL_DET# 35
BEEP 39
FAN_TACH 34
LCD_BLON_GFX 27,35
LID_SW# 41
PBAT_PRES# 44

+V3.3A
+3.3V_KBVCC
JP11
SHORT_PAD

WLAN_RF_ON 40
SLP_S4# 19
CHARGE_EN 45
RUN_ON 42,47,48,49,51
LCD_DIGON_EC 35
SLP_S3# 19,38,39,43
SUS_ON 42,48
SUS_PWR_ACK 19

12/7 Add "PCH_IPCC_SMI#" signal for KBC

"Required" for with or without M3 support.

EC_FLASH_SPI_DO 33
EC_FLASH_SPI_DIN 33
EC_FLASH_SPI_CS# 33
EC_FLASH_SPI_CLK 33

PS_ID 44
5V_ALW_ON 46
SIO_PWRGD_SB 46

HSPI
EC_HSPI_CS 17
EC_HSPI_CLK 17
EC_HSPI_SO 17
EC_HSPI_SI 17
CPU_THRO 7

12/7 Change signal "LOW_BAT_LED" to U605 Pin35 to solve the Low power LED will flsh when AC-in.

THRM_ALERT# 34
ACAV_IN 19,45
LOW_BAT_LED 41
USB_EN# 37
MAIN_PWR_SW# 41
LCDVCC_TST_EN 35

LCD_CBL_DET# R804 100K
SMBDAT0 R831 4.7K
SMBCLK0 R828 4.7K
KB_DET# R814 100K
LCD_BLON_EC R812 *10K_NC
SMBDAT1 R830 4.7K
SMBCLK1 R829 4.7K
SUS_ON R825 100K

EC_FLASH_SPI_CLK R826 *10_NC C1082 *2.2p/50V_NC

IPCC_SMI# R879 33 D614 *SDMK0340L-7-F_NC PCH_IPCC_SMI# 22

21,38,40 PLT_RST# R811 0 R819 0
21 CLK_LPC
17,40 LPC_LFRAME#
17,40 LPC_LAD0
17,40 LPC_LAD1
17,40 LPC_LAD2
17,40 LPC_LAD3
19 CLKRUN#
17,40 IRQ_SERIRQ
35 LCD_TST
34 WRST#
35 LCD_BLON_EC
41 CHG_LED#
21 PCI_PME#

+3.3V_KBVCC R815 100K C1069 1U/10V CAP0603 WRST#

ECSMI# ECSCI# GA20 GPB6 WRST# LCD_BLON_EC SIO_PME#

Charge and BAT 44,45 SMBCLK0 SMBDAT0
GFX & Thermal 27,34 SMBCLK1 SMBDAT1
PCH 18 SMB_CLK2 SMB_DATA2

SMBCLK0 SMBDAT0 SMBCLK1 SMBDAT1 SMB_CLK2 SMB_DATA2

12/7 Reserve for test

PCH_EXT_SMI# R875 *33_NC ECSMI#
PCH_EXT_SCI# R876 *33_NC ECSCI#
H_A20GATE R877 *33_NC GA20
H_RCIN# R878 *33_NC GPB6

T687 PAD
CAM_PWR_ON# R813 1K
26,35 LCD_DIGON_GFX
41 BT_RF_ON
41 KB_DET#
41 CLK_TP_SIO
41 DAT_TP_SIO

KB_DET#

22 PCH_EXT_SMI# D608 ECSMI#
22 PCH_EXT_SCI# D604 ECSCI#
22 H_A20GATE D612 GA20
22 H_RCIN# D609 GPB6
SDMK0340L-7-F

ITE8512_XTAL1 ITE8512_XTAL2 SIO_VSS SIO_AVCC SIO_AVSS

32.768KHz Clock
R824 0 ITE8512_XTAL2
Y9 32.768KHz 12.5pF +-10ppm
C1084 10P/50V
C1088 10P/50V
ITE8512_XTAL1

+3.3V_KBVCC
L611 BLM18AG121SN1D SIO_AVCC
L0603 C1062 0.1U/10V
L612 BLM18AG121SN1D SIO_AVSS
L0603

SIO_VSS C1079 0.1U/10V

BT_RF_ON C1068 *33P/50V_NC

+3.3V_KBVCC
C1072 10U/6.3V CAP0603
C1087 0.1U/10V
C1071 0.1U/10V
C1051 0.1U/10V
C1077 0.1U/10V
Place these caps close to ITE8502.

Platform ID Straps
PID1 PID0
R807 10K R810 10K

PID1	PID0	XPS
0	0	Intel+ dGPU
0	1	Intel+ iGPU
1	0	AMD+ dGPU
1	1	AMD+ iGPU

Board ID Straps
+3.3V_KBVCC
12/4 Change BID to 01 for PT stage
1/13 Change BID to 10 for ST stage
R808 10K R806 *10K_NC
R809 *10K_NC R803 10K
BID0 BID1

BID1	BID0	XPS
0	0	SSI (X00)
0	1	PT (X01)
1	0	ST (X02)
1	1	MP (A00)

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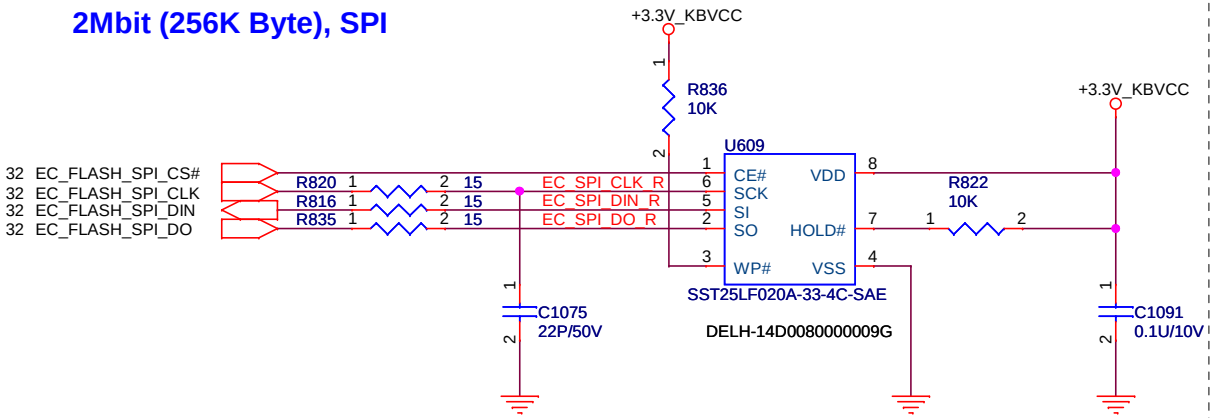
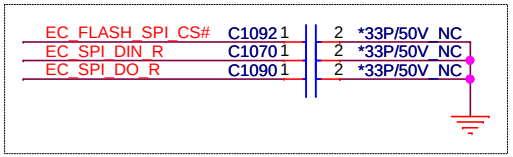
Title	KBC - ITE8502E	
Size	Document Number: Inspiron Z -- INTEL	Rev X01
Date: Monday, January 18, 2010	Sheet 32 of 57	

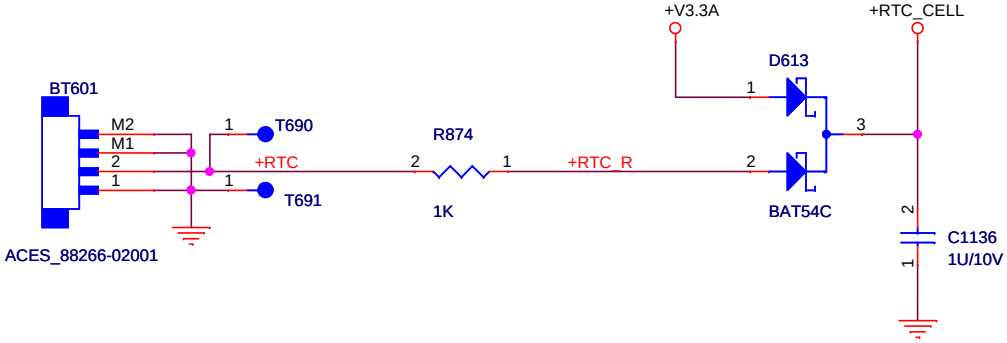
2Mbit (256K Byte), SPI



RFI

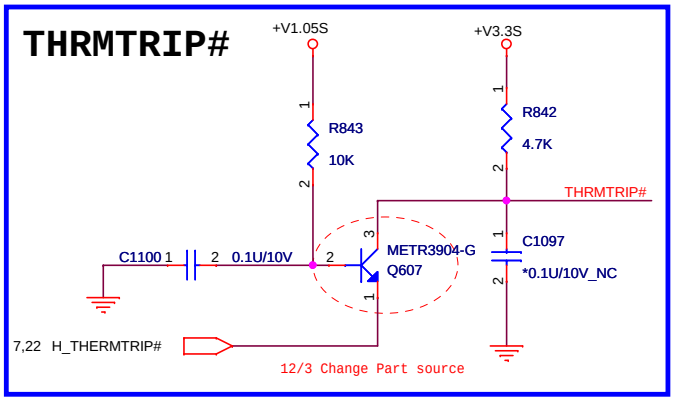


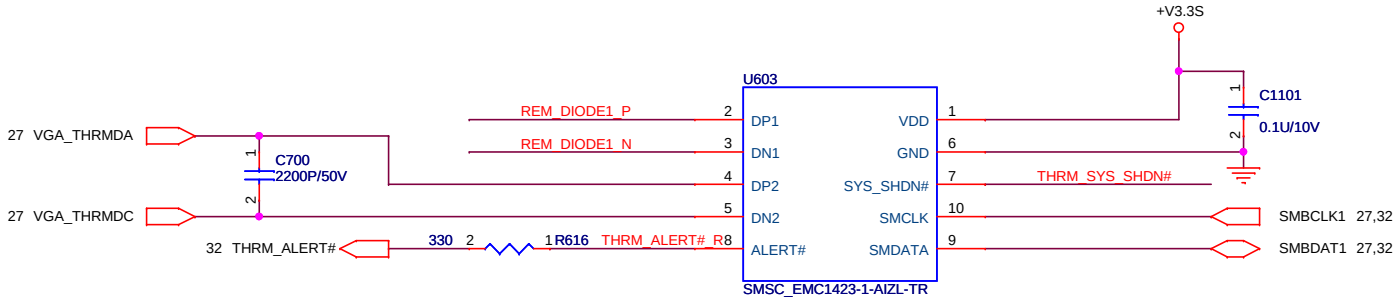
RTC BATTERY



Dell/ Flex Confidential

Title: RTC BAT/ EC_ROM		
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
Date: Monday, January 18, 2010	Sheet 33 of 57	





SM bus Address: 100_1100b

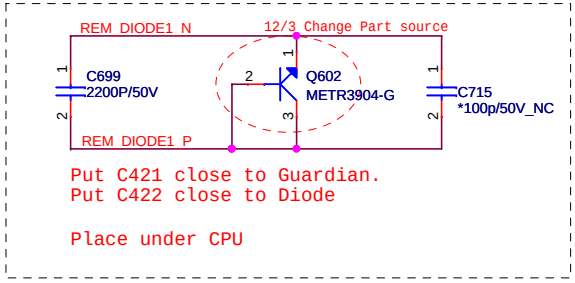
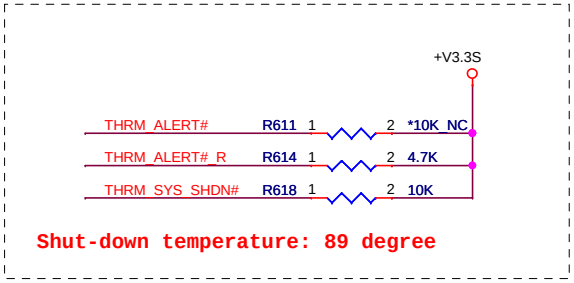
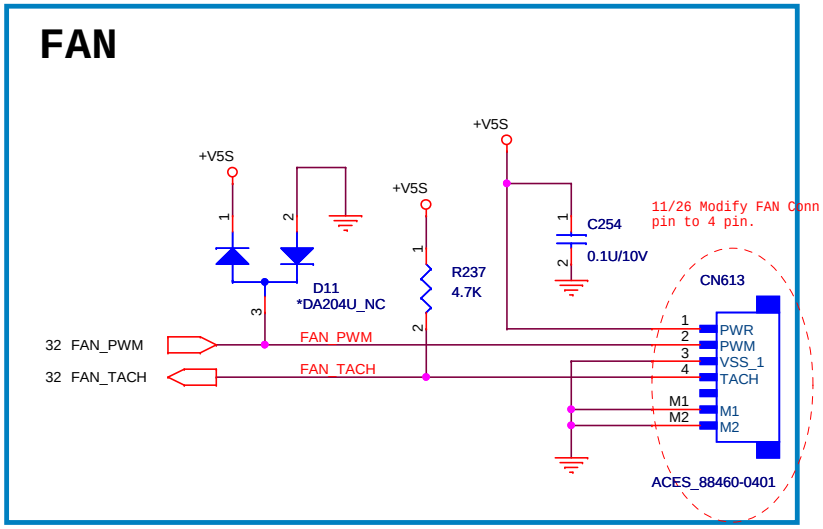
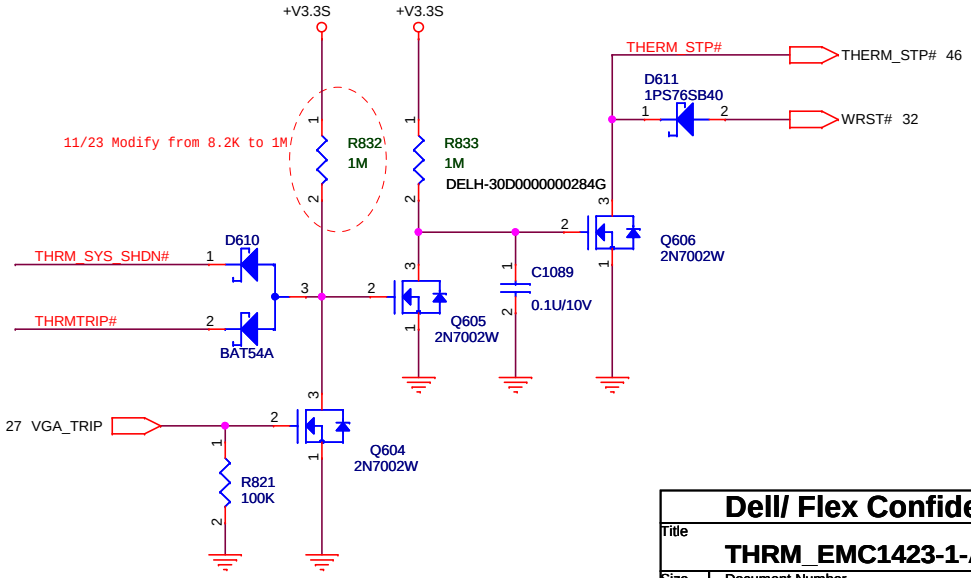


Table 5.2 $\overline{\text{SYS\_SHDN}}$ Threshold Temperature

$\overline{\text{SYS\_SHD}}$ PULL-UP / $\overline{\text{ALERT}}$ PULL-UP	4.7K OHM ±10%	6.8K OHM ±10%	10K OHM ±10%	15K OHM ±10%	22K OHM ±10%	33K OHM ±10%
4.7K OHM ±10%	77°C	83°C	89°C	95°C	101°C	107°C
6.8K OHM ±10%	78°C	84°C	90°C	96°C	102°C	108°C
10K OHM ±10%	79°C	85°C	91°C	97°C	103°C	109°C
15K OHM ±10%	80°C	86°C	92°C	98°C	104°C	110°C
22K OHM ±10%	81°C	87°C	93°C	99°C	105°C	111°C
33K OHM ±10%	82°C	88°C	94°C	100°C	106°C	112°C







Dell/ Flex Confidential		
Title: THRM_EMC1423-1-AIZL		
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
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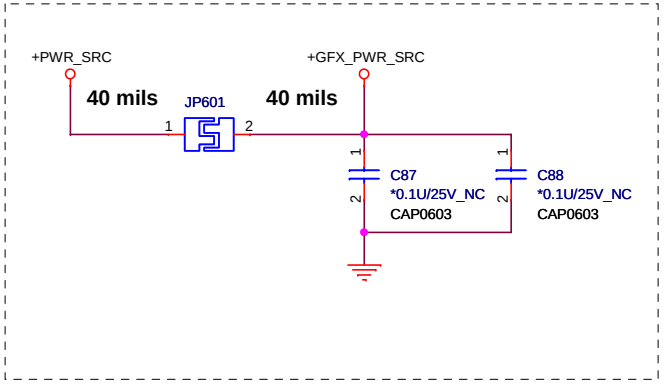
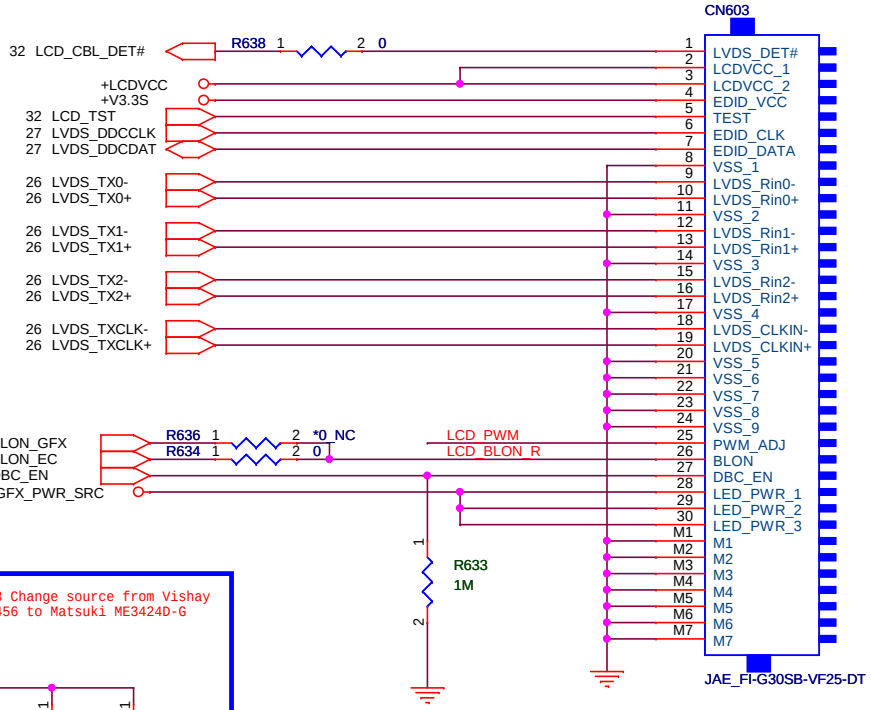
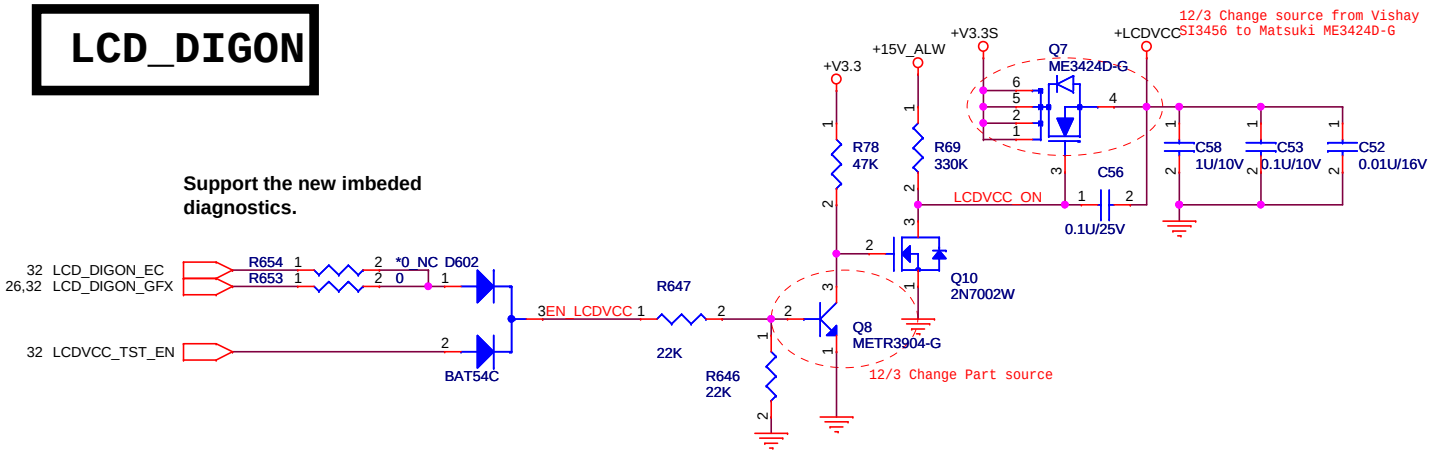
LVDS

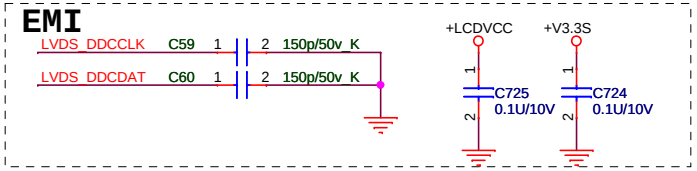




LCD_DIGON

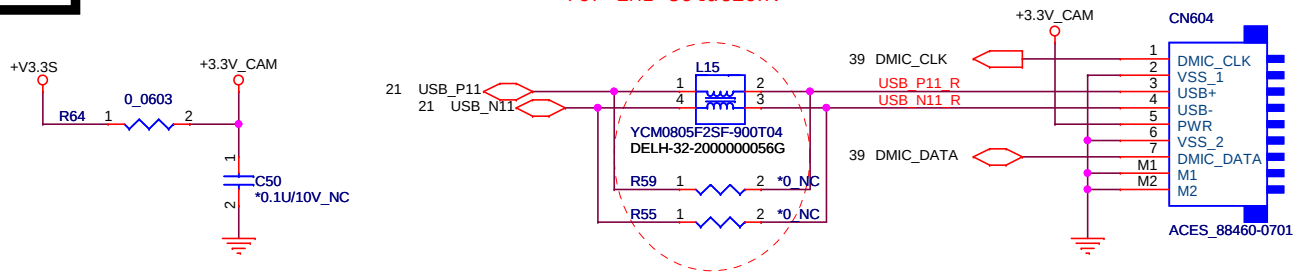
Support the new imbeded diagnostics.



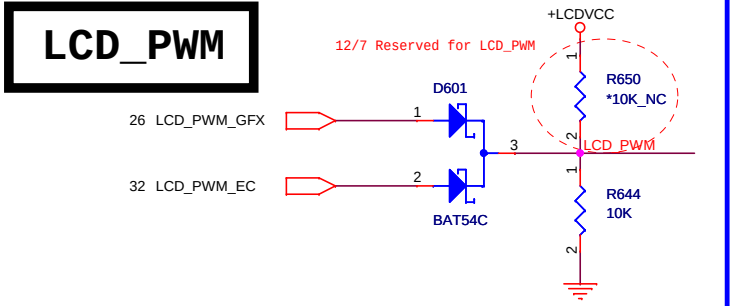


WEBCAM

12/3 Mount L15, & NA R59, R55 for EMI solution.



LCD_PWM



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Title	LVDS / WEBCAM	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
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Reserve For EMI

12/3 Mount L17, L18, L19, L20 & NA R90, R93, R96, R98, R100, R102, R105, R111 for EMI solution.

27 HDMI_CLK_P — C67 0.1U/10V — HDMI_CLK_P_CL — L18 — HDMI_CLK_P_C
27 HDMI_CLK_N — C69 0.1U/10V — HDMI_CLK_N_CL — HDMI_CLK_N_C
HDMI0805F2SF-900T04
R96 *0_NC, R98 *0_NC
DELH-32-4000000206G

27 HDMI_TX0_P — C64 0.1U/10V — HDMI_TX0_P_CL — L17 — HDMI_TX0_P_C
27 HDMI_TX0_N — C66 0.1U/10V — HDMI_TX0_N_CL — HDMI_TX0_N_C
HDMI0805F2SF-900T04
R90 *0_NC, R93 *0_NC

27 HDMI_TX1_P — C70 0.1U/10V — HDMI_TX1_P_CL — L19 — HDMI_TX1_P_C
27 HDMI_TX1_N — C71 0.1U/10V — HDMI_TX1_N_CL — HDMI_TX1_N_C
HDMI0805F2SF-900T04
R100 *0_NC, R102 *0_NC

27 HDMI_TX2_P — C73 0.1U/10V — HDMI_TX2_P_CL — L20 — HDMI_TX2_P_C
27 HDMI_TX2_N — C83 0.1U/10V — HDMI_TX2_N_CL — HDMI_TX2_N_C
HDMI0805F2SF-900T04
R105 *0_NC, R111 *0_NC

HDMI_CLK_P_CL — R95 499_F
HDMI_CLK_N_CL — R97 499_F
HDMI_TX0_P_CL — R89 499_F
HDMI_TX0_N_CL — R92 499_F
HDMI_TX1_P_CL — R99 499_F
HDMI_TX1_N_CL — R101 499_F
HDMI_TX2_P_CL — R103 499_F
HDMI_TX2_N_CL — R110 499_F

+V5S — Q11 2N7002 — R82 *100K_NC

12/8 Del R172 for no using.

27 HDMI_DET

HDMI CONNECTOR

CN10
HDMI_TX2_P_C — D2+
HDMI_TX2_N_C — D2_Shield
HDMI_TX1_P_C — D2-
D1+
HDMI_TX1_N_C — D1_Shield
HDMI_TX0_P_C — D1-
D0+
HDMI_TX0_N_C — D0_Shield
HDMI_CLK_P_C — D0-
CK+
HDMI_CLK_N_C — CK_Shield
HDMI_CEC — CK-
CE_Remote
NC
HDMI_SCL_R — DDC_CLK
HDMI_SDA_R — DDC_DATA
GND
+5V
HP_DET
M1 M2 M3 M4
Singatron_2HE1503-001111
DELH-38-00F0000013G

27 HDMI_SCL
27 HDMI_SDA
+V3.3S — R84 10K, R74 10K
+V5S — R86 2.2K, R76 2.2K
Q9 2N7002W
Q13 2N7002W
12/3 Change from BSS138 to 2N7002.

T601 PAD
T602 PAD

+V5S — F601 1.1A-POLYSW — HDMI_PWR

+V3.3S — Q12 METR3904-G — R91 200K_F — R77 10K — R94 *200K_F_NC
12/3 Change Part source

C63 180p/50V
C639 0.1U/10V
1/11 Modify MFG PN to 2HE1503-001111

1/11 Change from 33pF to 18pF
EMI
HDMI_SCL_R — C571 18p/50V
HDMI_SDA_R — C611 18p/50V
DELH-31D0000000005G

Reserve For EMI

27 DP_LANE3_N — C105 0.1U/10V — L26 — DP_LANE3_N_R
27 DP_LANE3_P — C106 0.1U/10V — DP_LANE3_P_R
*DLW21SN900SQ2B_NC
R142 0, R145 0

27 DP_LANE2_N — C103 0.1U/10V — L24 — DP_LANE2_N_R
27 DP_LANE2_P — C97 0.1U/10V — DP_LANE2_P_R
*DLW21SN900SQ2B_NC
R134 0, R132 0

27 DP_LANE1_N — C109 0.1U/10V — L30 — DP_LANE1_N_R
27 DP_LANE1_P — C112 0.1U/10V — DP_LANE1_P_R
*DLW21SN900SQ2B_NC
R147 0, R160 0

27 DP_LANE0_N — C117 0.1U/10V — L34 — DP_LANE0_N_R
27 DP_LANE0_P — C115 0.1U/10V — DP_LANE0_P_R
*DLW21SN900SQ2B_NC
R163 0, R162 0

+V3.3S — R628 200K_F — DP_HPD_SINK_R
27 DP_HPD_SINK — Q601 METR3904-G — R630 10K — R626 *200K_F_NC
12/3 Change Part source

DISPLAY PORT CONNECTOR

+V3.3S — F6 1.1A-POLYSW — +3.3V_DP_PWR
C89 0.1U/10V

CN11
FOXCONN_3V112M3-RH3JD7-7H
GND5 — PWR — +3.3V_DP_PWR
DP_LANE2_N_R — LANE2N — AUXN — AUX_SINK_N_R
DP_LANE2_P_R — LANE2P — AUXP — AUX_SINK_P_R
GND3 — GND4
DP_LANE1_N_R — LANE1N — LANE3N — DP_LANE3_N_R
DP_LANE1_P_R — LANE1P — LANE3P — DP_LANE3_P_R
GND1 — GND2
DP_LANE0_N_R — LANE0N — CFG2 — R625 4.7M — DELH-30-147041-990G
DP_LANE0_P_R — LANE0P — CFG1 — DP_CAD_SINK
GND0 — HPD — DP_HPD_SINK_R
M1 M2 M3 M4
R623 1M
DELH-38D0110000005G

1/11 Modify MFG PN to 3V112M3-RH3JD7-7H

DP <==> HDMI

27 AUX_SINK_N
27 AUX_SINK_P
12/3 Change from BSS138 to 2N7002.

*2N7002_NC Q17 — *2N7002_NC Q15
Q16 *2N7002_NC — *2N7002_NC Q14

+15V_ALW — R126 *100K_NC — Q18 *2N7002W_NC
+V5S — R127 *100K_NC — Q19 *2N7002W_NC
DP_CAD_SINK — DP_CAD_SINK

DP_DDC_EN

R122 0, R128 0
C91 0.1U/10V, C92 0.1U/10V
L23 *DLW21SN900SQ2B_NC
AUX_SINK_N_R — R129 100K
AUX_SINK_P_R — R123 100K
+3.3V_DP_PWR

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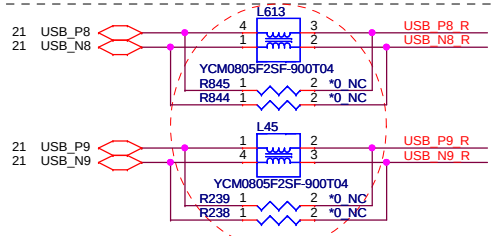
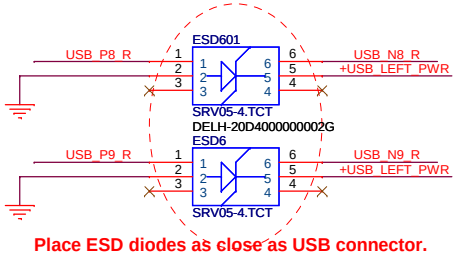
Title	HDMI / DP	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
Date: Monday, January 18, 2010	Sheet 36 of 57	

USB Jack x 2

12/3 Mount L45, L613, & NA R238, R239, R844, R845 for EMI solution.



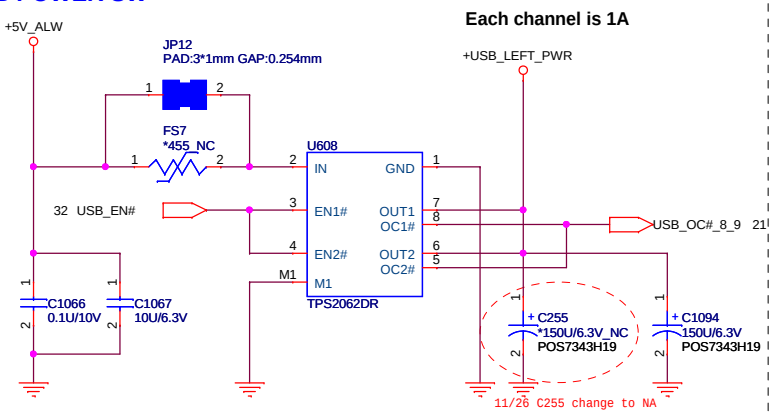
Platforms should put in PADS for the USB chokes if they have the room.
Chokes should be NOPOP.



Place ESD diodes as close as USB connector.

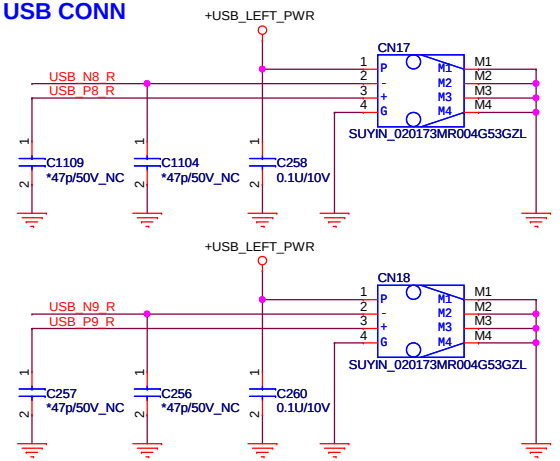
USB POWER SW

Each channel is 1A



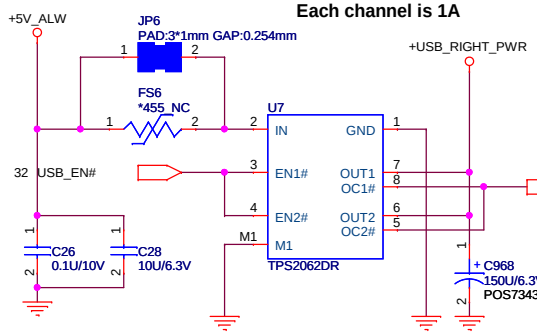
Place one 150uF cap by each USB connector.

USB CONN



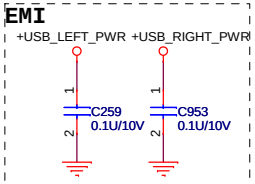
USB POWER SW

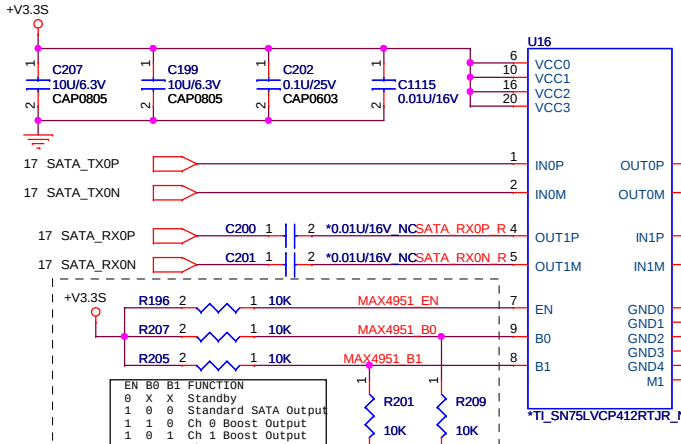
Each channel is 1A



Place one 150uF cap by each USB connector.

EMI



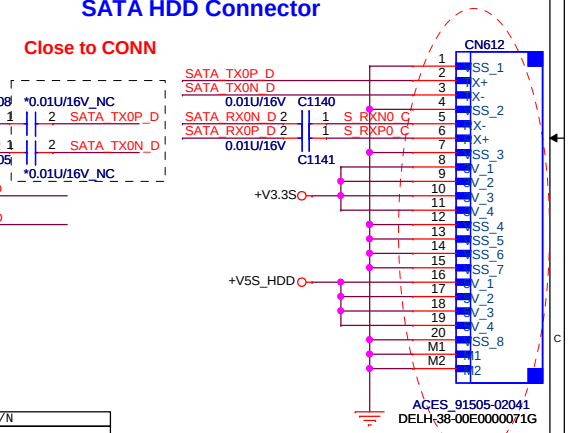


EN	B0	B1	FUNCTION
0	X	X	Standby
1	0	0	Standard SATA Output
1	1	0	Ch 0 Boost Output
1	0	1	Ch 1 Boost Output
1	1	1	Ch 0,1 Boost Output

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

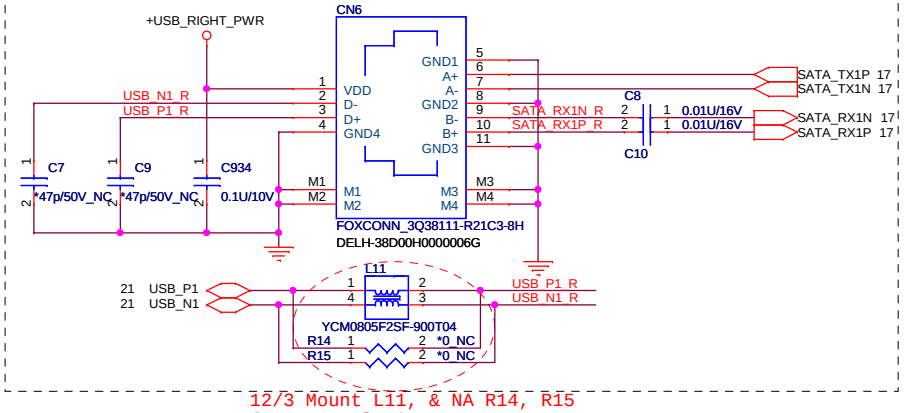
SATA HDD Connector

Close to CONN



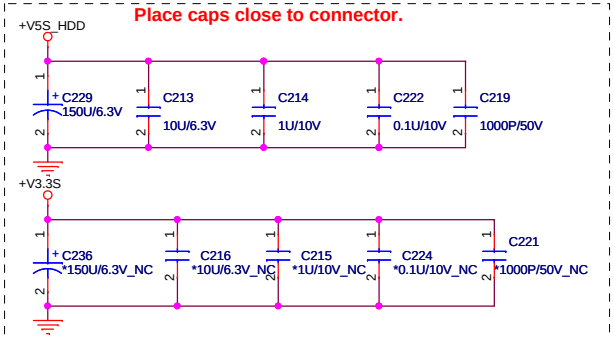
1/11 Modify MFG PN to 91505-02041

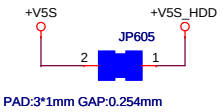
ESATA/B CONN

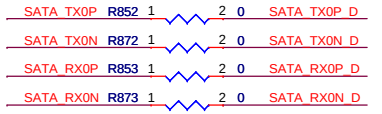


12/3 Mount L11, & NA R14, R15 for EMI solution.

Place caps close to connector.







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Title	HDD / USB / eSATA	
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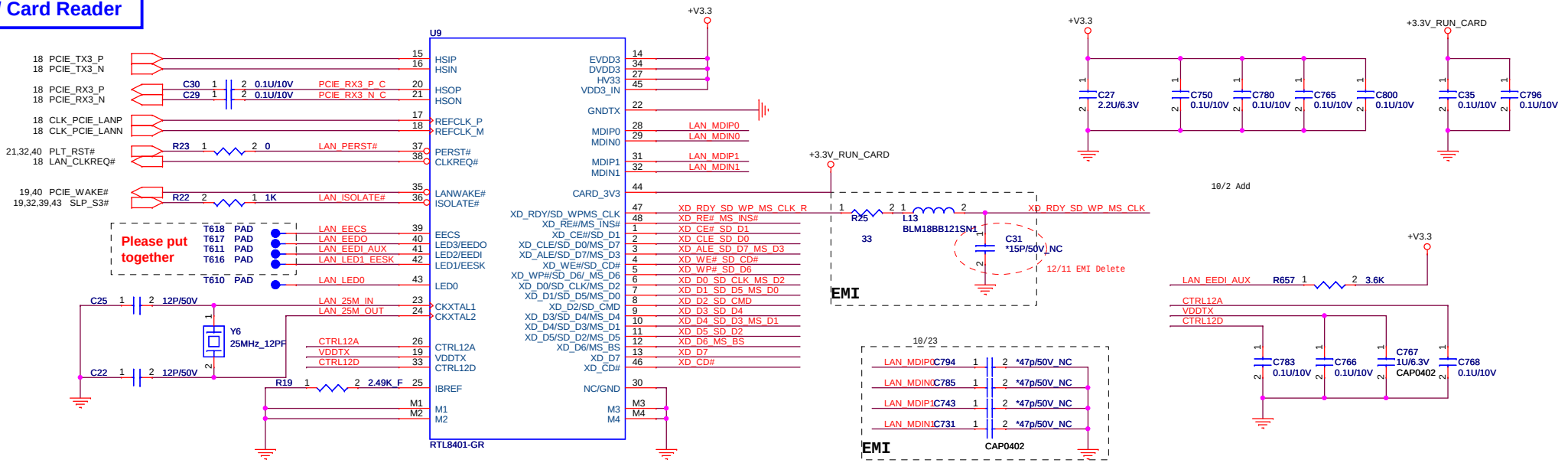
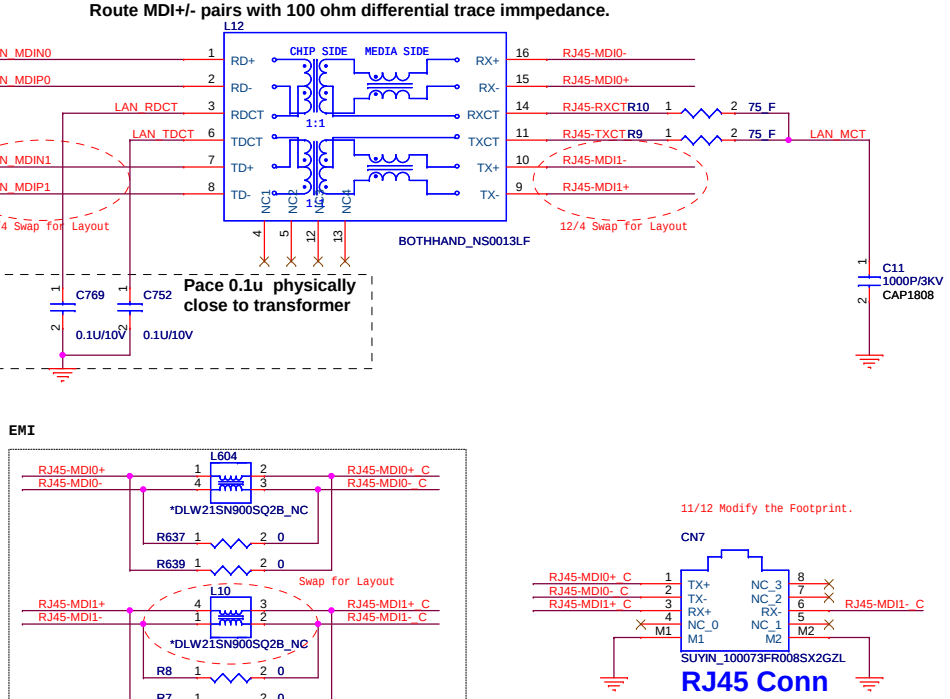
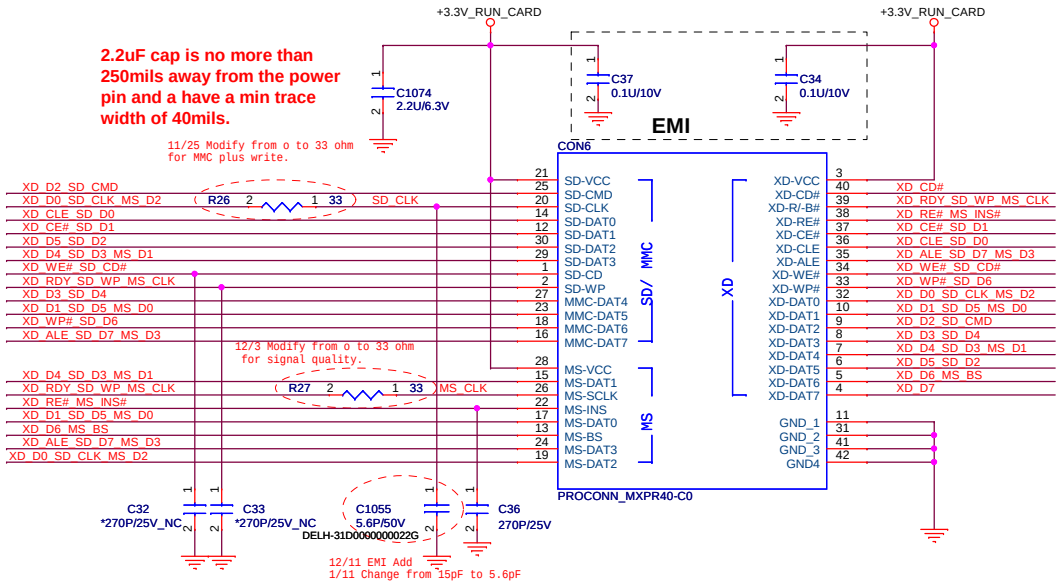
LAN/ Card Reader



TRANSFORMER



Card Reader Conn



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Title	LAN/ Media_RTL8401	
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AZALIA (HD) CODEC
SPK & HP AMP

U8 92HD79B1A5NLGXTAX

+V3.3S
+VDDA
+V5S
330ohm_1.5A
330ohm_1.5A

R708 0_0805
A_DVDD
C908 1U/10V CAP0603
C907 0.1U/25V
C24 10U/6.3V
C933 0.1U/25V
C12 1U/10V CAP0603
C20 0.1U/25V
C958 1U/10V
C925 10U/6.3V CAP0805
R709 0_0805
R752 0_0805

HDA Bus Use 1.5VS NA
HDA Bus Use 3.3VS MOUNTED

CN605 ACES_88266-02001

17 HDA_BITCLK
17 HDA_SDATA_IN
17 HDA_SDATA_OUT
17 HDA_SYNC
17 HDA_RESET#
R21 33
HDA_BITCLK
HDA_SDI
HDA_RESET#

DVDD_CORE
DVDD_IO
DVDD
HDA_BITCLK
HDA_SDI
HDA_SDO
HDA_SYNC
HDA_RST#

AUD_MIC_L0 C13 2.2U/6.3V
AUD_MIC_R0 C14 2.2U/6.3V
AUD_MIC1_VREFO1
PORTA_L (HP0)
PORTA_R (HP0)
VREFOUT-A

INT_MIC
R20 2.2K
C21 1U/10V CAP0603
PORTC_L
PORTC_R
VREFOUT-C

35 DMIC_CLK
35 DMIC_DATA
R739 33
DMIC_CLK/GPIO1
DMIC0/GPIO2
DMIC1/GPIO/SPDIFOUT1
SPDIFOUT0

Analog MIC connect please close to CODEC

C18 1U/10V CAP0603
C16 2.2U/6.3V
CAP+
CAP-
EAPD

19,32,38,43 SLP_S3#
AMP_MUTE# : KBC default set HI
32 AMP_MUTE#
D7 BAT54A
R757 100K
R18 100
SHDN#
C923 1U/10V CAP0603

11/16 Modify for PCBeep

DVSS
AVSS1 AVSS2 AVSS3 PVSS4 AGND1 AGND2 AGND3 AGND4 AGND5 AGND6 AGND7 AGND8 AGND9 AGND10 AGND11 AGND12

JP604 SHORT_PAD

Jumper Trace width >= 80mil

AVDD1 AVDD2
PVDD1 PVDD2
SENSE_B SENSE_A
Mono_Out
PORTE_L PORTE_R
PORTF_L PORTF_R
PORTD_R+ PORTD_R- PORTD_L+ PORTD_L-
PORTB_L (HP1) PORTB_R (HP1)
CAP2 VREFFILT V- VREG
PCBEEP

R16 2.49K_F
R17 2.49K_F
SENSE-A
C886 1000P/50V

Speaker=8ohm/1W
Driver Gain setting is 01111 = 9.18dB

11/16 Modify for PCBeep
PCBEEP

EMI
SPR+_O R215 0_0603
SPR-_O R214 0_0603
SPL+_O R213 0_0603
SPL-_O R212 0_0603
AUD_HP1_L0
AUD_HP1_R0

C241 220P/50V
C240 220P/50V
C239 220P/50V
C238 220P/50V
12/7 EMI Add.

CN610 ACES_88266-04001
SPR+ SPR- SPL+ SPL-
SPK_R+ SPK_R- SPK_L+ SPK_L-

C959 4.7U/6.3V_0603
C914 10U/6.3V
C17 10U/6.3V
C15 1U/10V

Close to CODEC

C6 *0.1U/25V_NC CAP0603
U6 *74LVC1G86GW_NC
C23 1U/10V CAP0603
PCBEEP
BEEP1
BEEP 32
SPKR 17
R242 10K
12/8 Add for PC BEEP

R13 22K
R692 22K
11/19 Delete D6 and modify R13 & R692 to 22K for PCBEEP

C19
AUD_MIC1_VREFO1
R12 4.7K
R11 4.7K
1U/10V CAP0603

AUD_MIC_L0
AUD_MIC_R0
BLM18AG121SN1D L7
BLM18AG121SN1D L6
AUD_MIC_L1
AUD_MIC_R1
SENSE-A
R667 39.2K1%
C825 220P/50V
C816 220P/50V
CN8 SINGATRON_2SJ1012-030111
JACK 2 (MIC)

EMI Reserved
C955 0.1UF/16V
C916 0.1UF/16V
C922
C905
C961
CAP CERA CHIP 16V 100nF Z Y5V 0402 <MOUNTED>

R707 56_F_0603
R682 56_F_0603
AUD_HP1_L0
AUD_HP1_R0
AUD_HP1_L1
AUD_HP1_R1
BLM18AG121SN1D L8
BLM18AG121SN1D L9
AUD_HP1_L2
AUD_HP1_R2
SENSE-A
R6 20K_F
C888 0.01U/16V
C847 0.01U/16V
CN9 SINGATRON_2SJ1012-030111
JACK 1 (HP)

12/9 R682, R707 change from 33ohm to 56ohm.

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Title	AUDIO	
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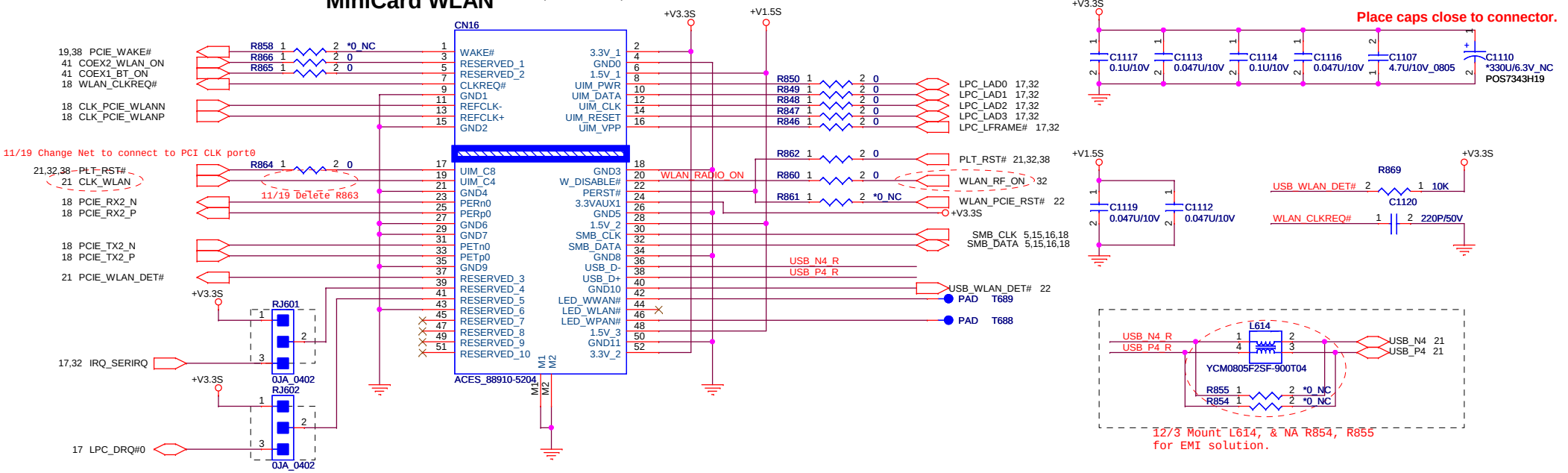
MiniCard WLAN

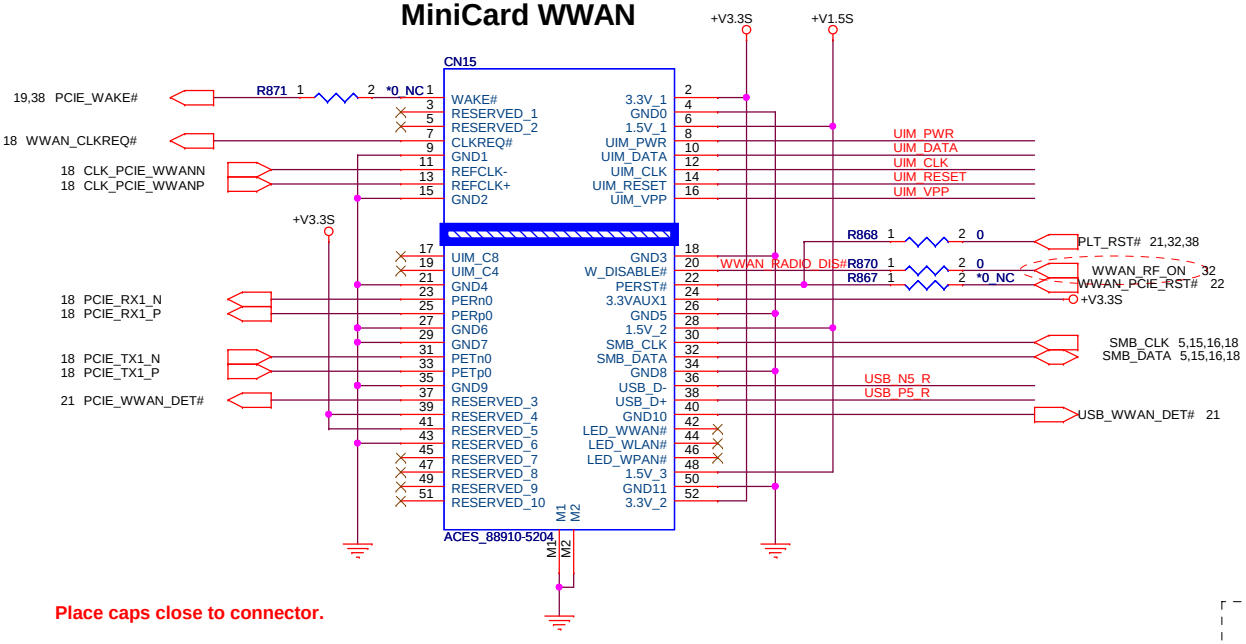
0929 update footprint

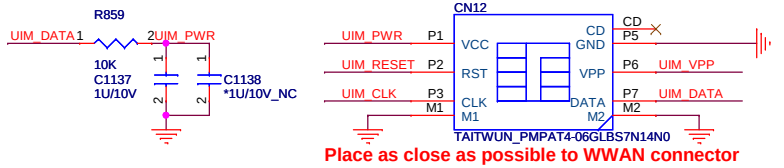


Place caps close to connector.

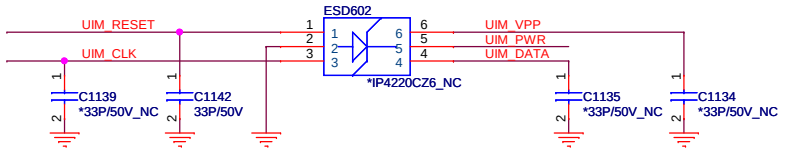
12/3 Mount L614, & NA R854, R855 for EMI solution.

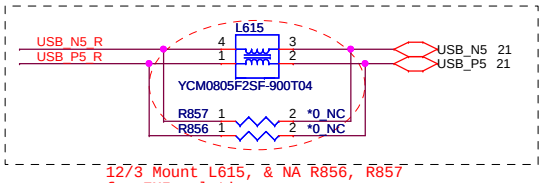
MiniCard WWAN





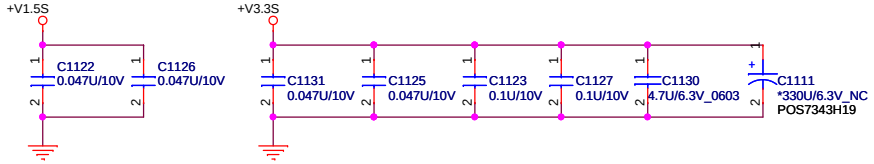
Place as close as possible to WWAN connector

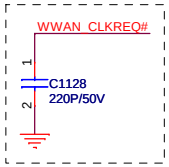




12/3 Mount L615, & NA R856, R857 for EMI solution.

Place caps close to connector.





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Title	WLAN / WWAN	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
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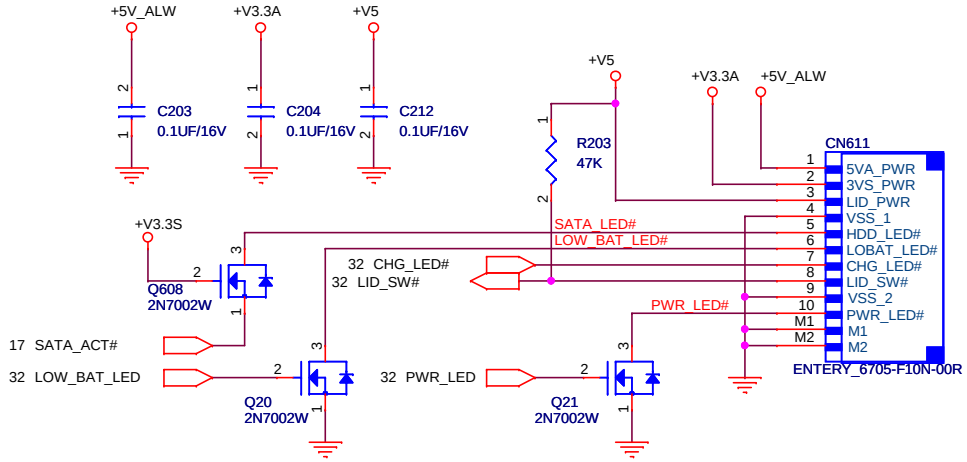
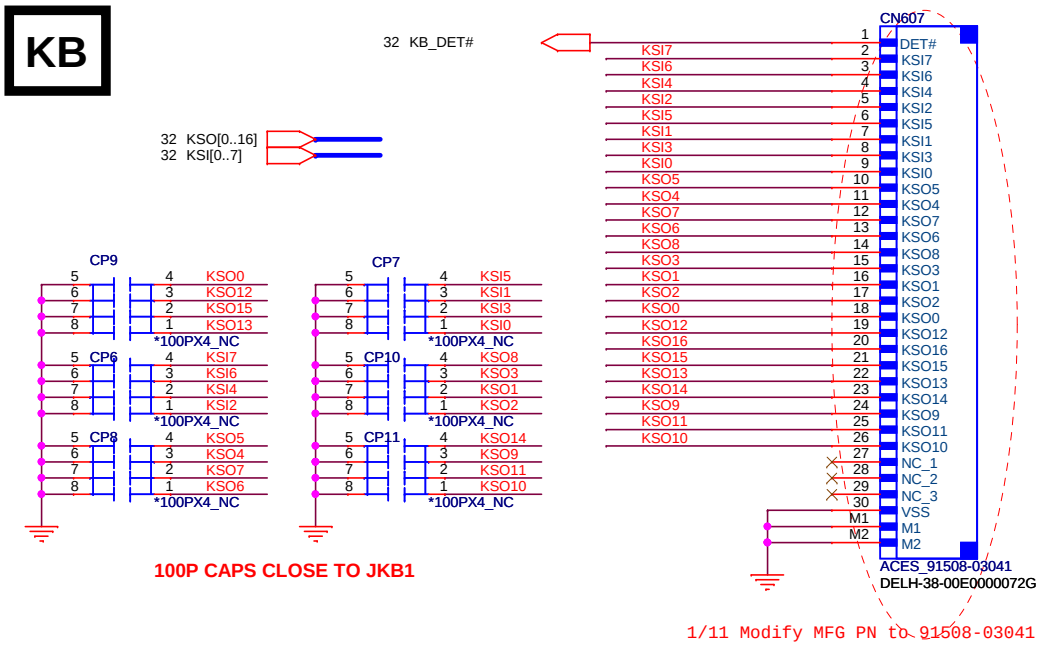
Indicator Board

Hal Sensor | PWR LED | CHG LED | HDD LED

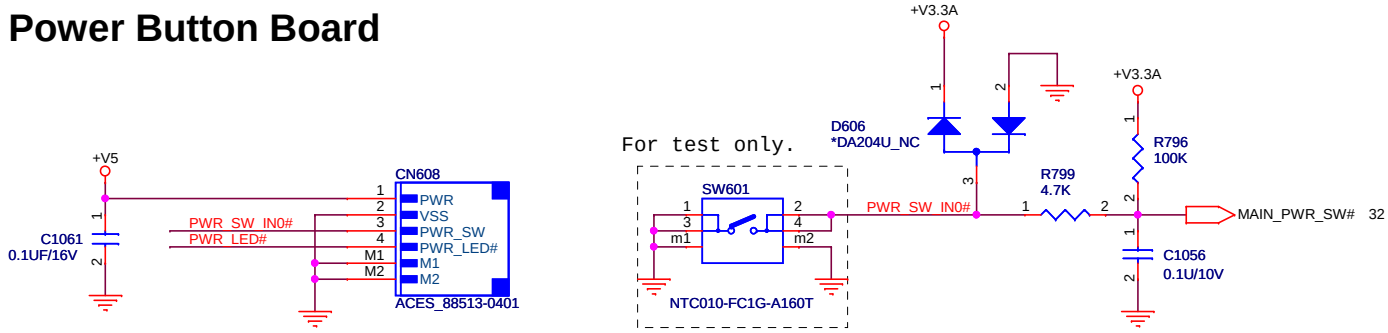
Indicator/ Hall sensor Boad



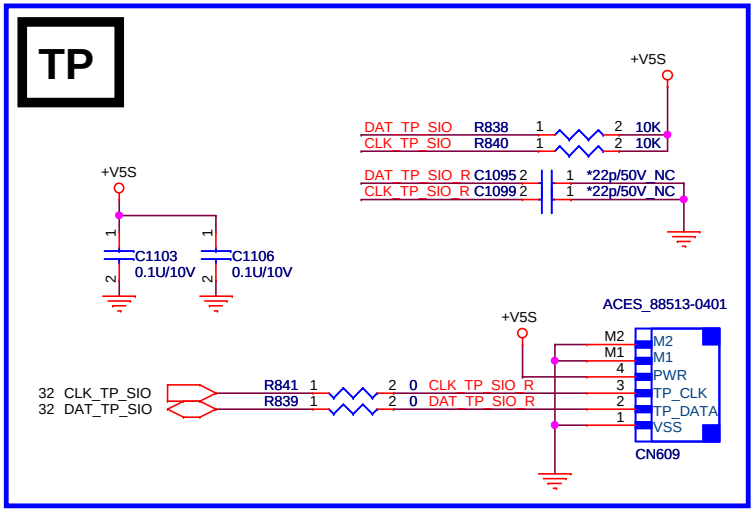
KB



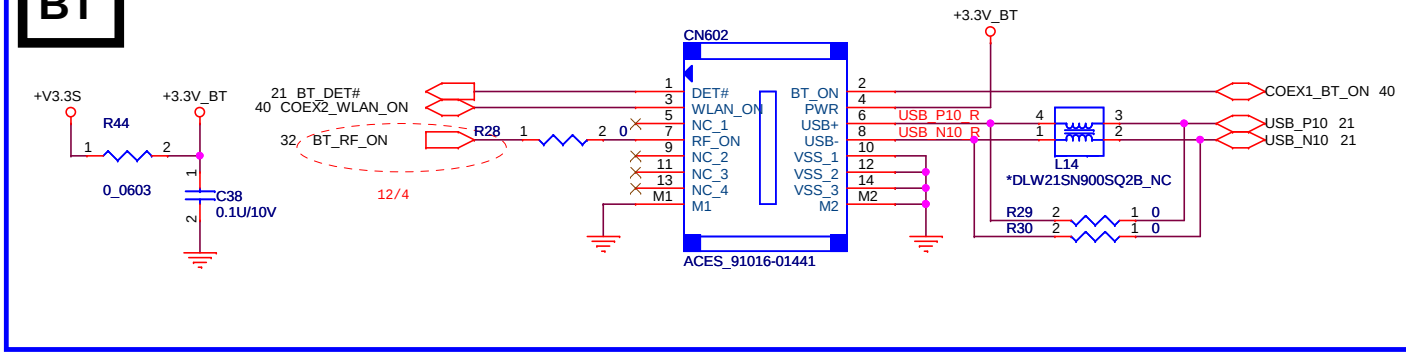
Power Button Board



TP



BT



Dell/ Flex Confidential		
Title: BT / KB / TP / LED / SW		
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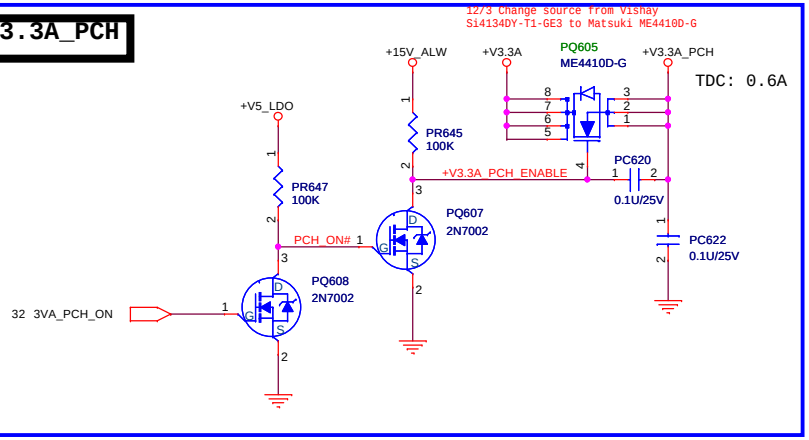
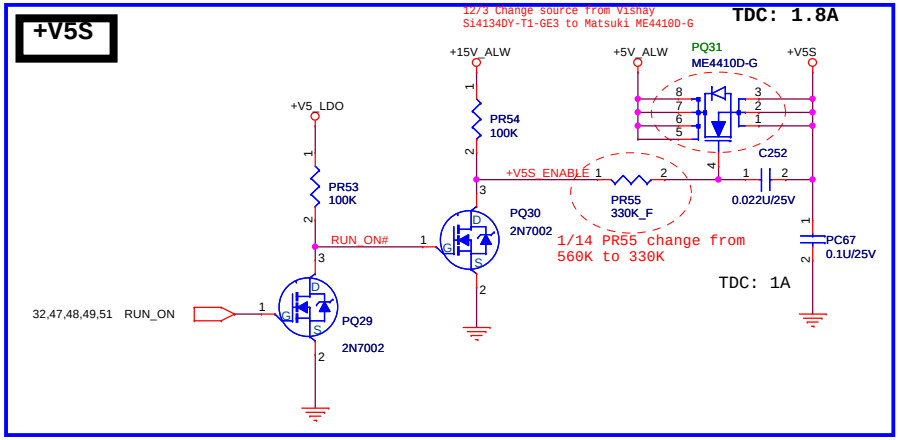
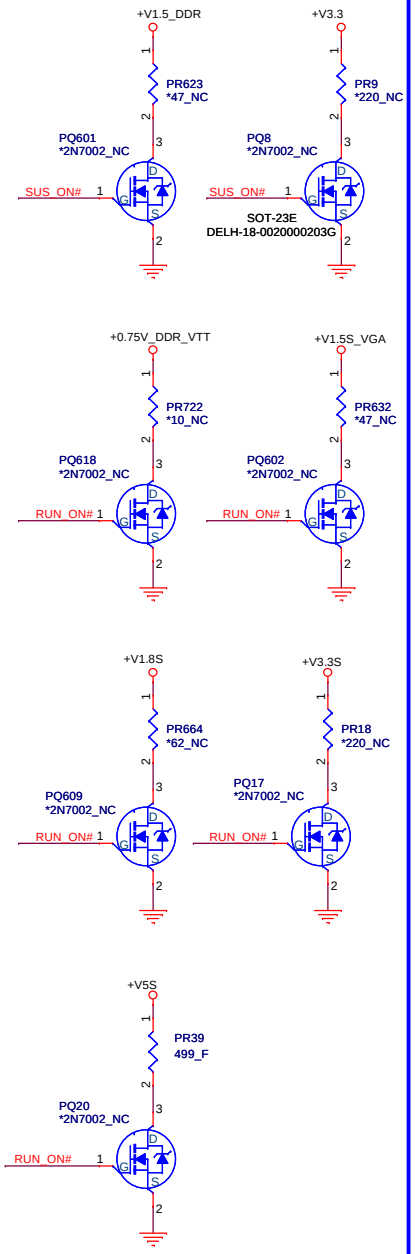
+V3.3A_PCH



+V5S

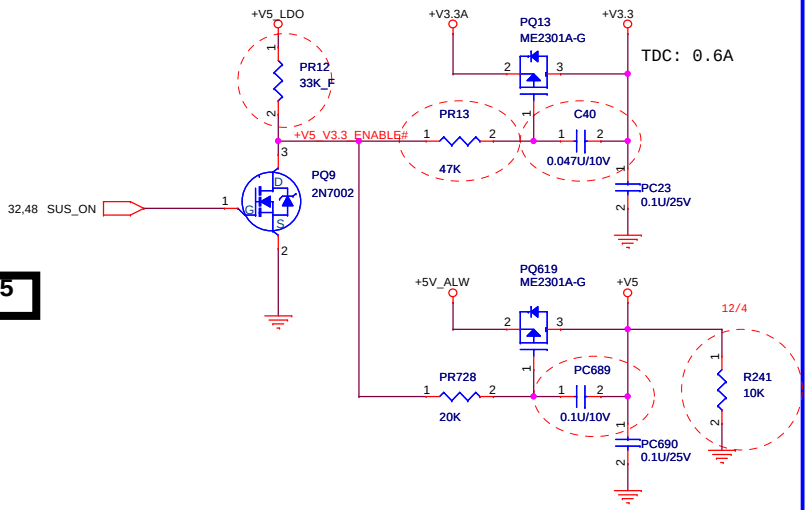


Reserve discharge path

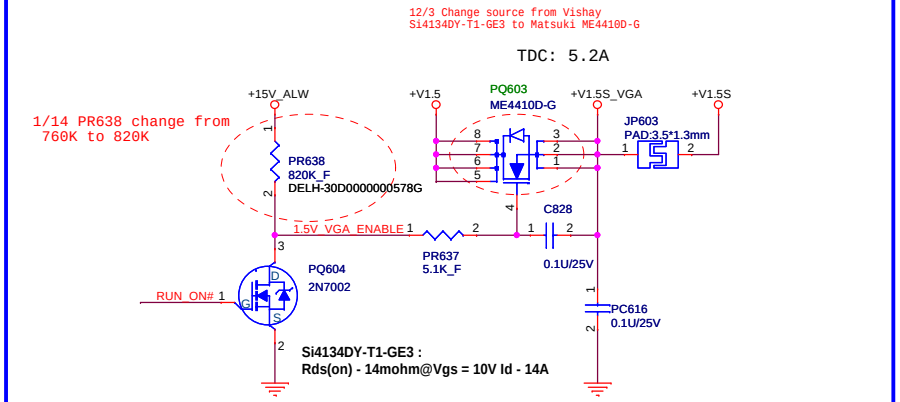


+V3.3

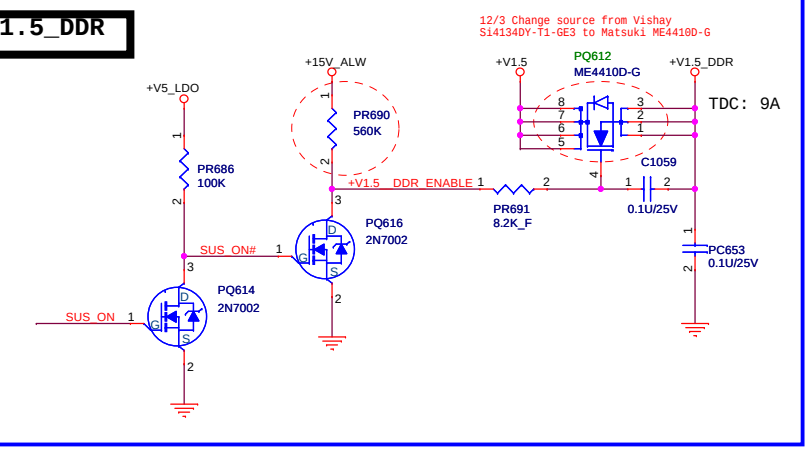
+V5



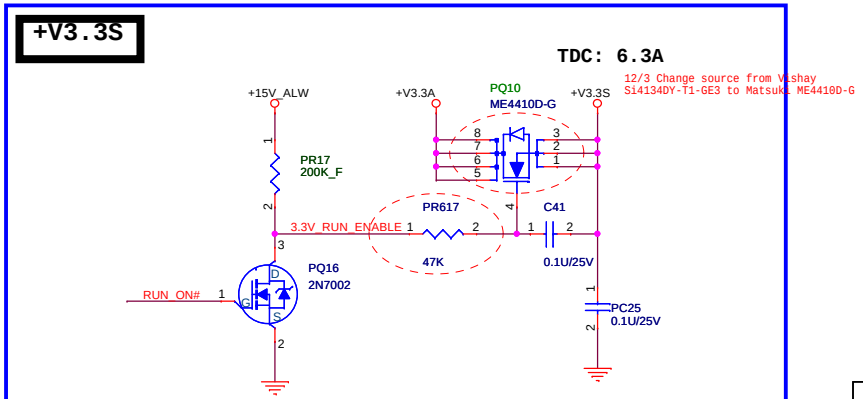
+V1.5S



+V1.5_DDR



+V3.3S



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Title	RUN POWER SW	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
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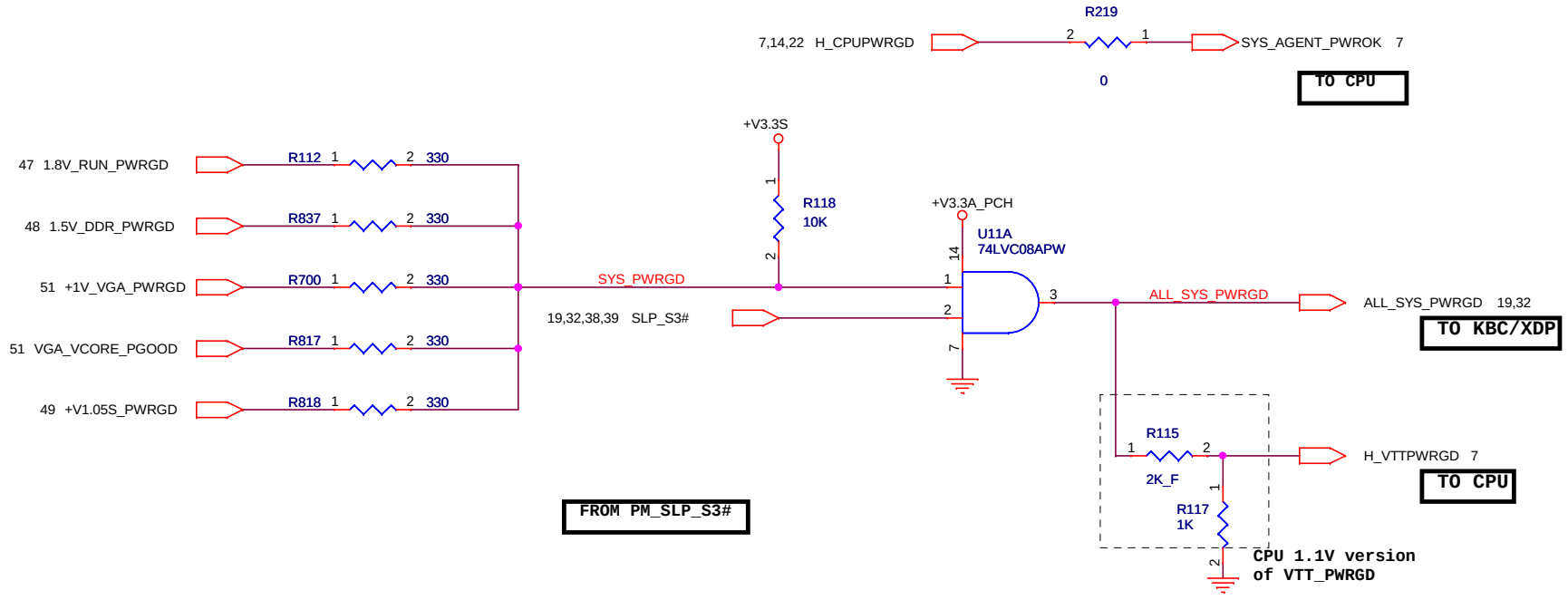

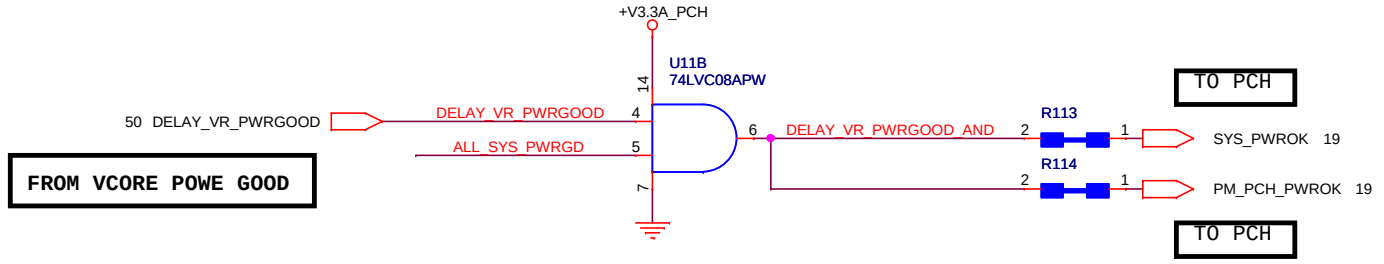

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Title: **System Reset Circuit**

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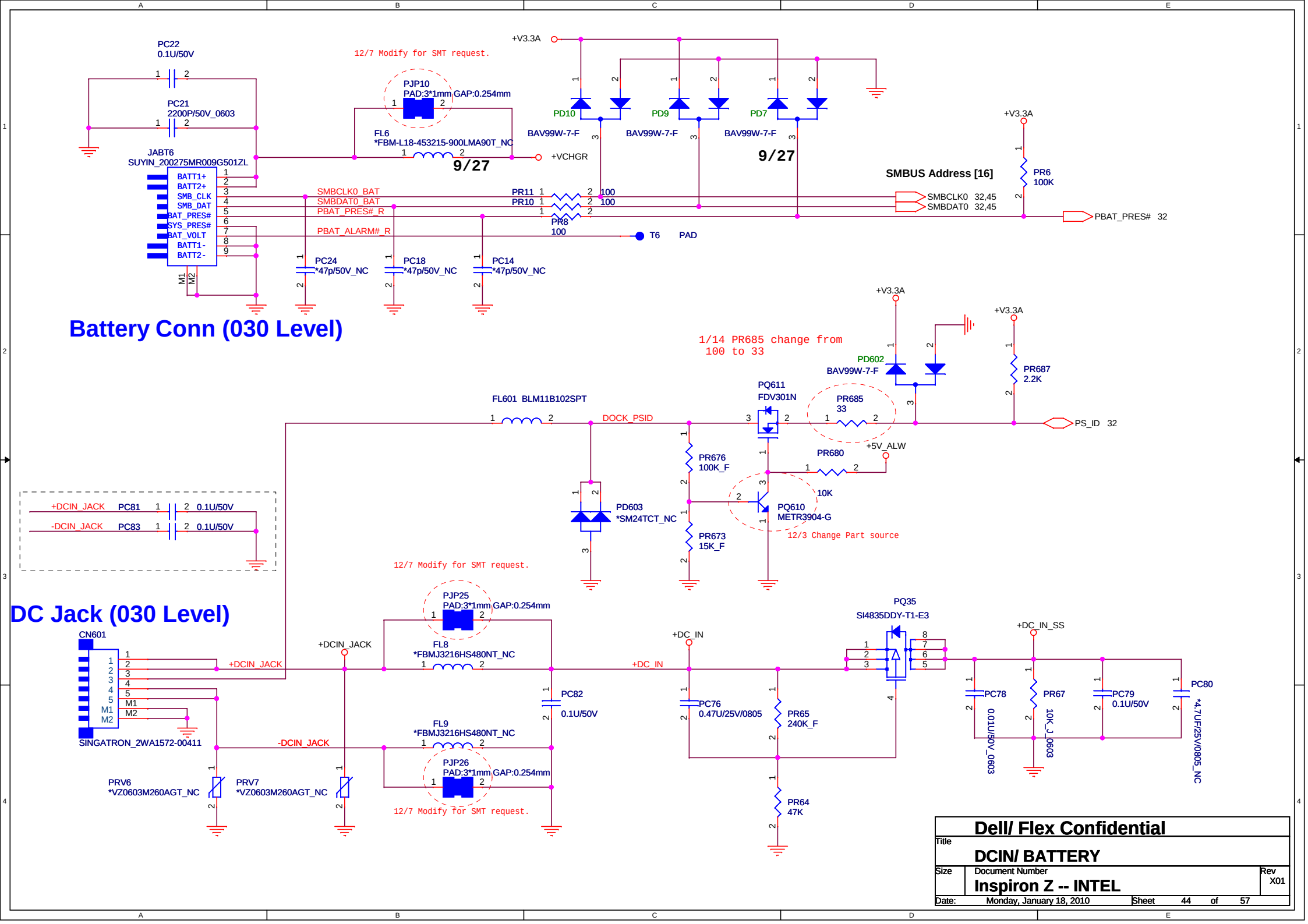
Battery Conn (030 Level)
DC Jack (030 Level)
PC22
0.1U/50V
PC21
2200P/50V_0603
JABT6
SUYIN_200275MR009G501ZL
BATT1+
BATT2+
SMB_CLK
SMB_DAT
BAT_PRES#
SYS_PRES#
BAT_VOLT
BATT1-
BATT2-
M1
M2
12/7 Modify for SMT request.
PJP10
PAD:3*1mm GAP:0.254mm
FL6
*FBM-L18-453215-900LMA90T_NC
9/27
+VCHGR
+V3.3A
PD10
PD9
PD7
BAV99W-7-F
SMBUS Address [16]
PR6
100K
SMBCLK0_BAT
SMBDAT0_BAT
PBAT_PRES#_R
PBAT_ALARM#_R
PR11
PR10
PR8
100
SMBCLK0 32,45
SMBDAT0 32,45
PBAT_PRES# 32
T6
PAD
PC24
*47p/50V_NC
PC18
*47p/50V_NC
PC14
*47p/50V_NC
1/14 PR685 change from
100 to 33
PD602
BAV99W-7-F
PR687
2.2K
PS_ID 32
FL601 BLM11B102SPT
DOCK_PSID
PQ611
FDV301N
PR685
33
+5V_ALW
PR680
10K
PR676
100K_F
PR673
15K_F
PD603
*SM24TCT_NC
PQ610
METR3904-G
12/3 Change Part source
+DCIN_JACK
PC81
0.1U/50V
-DCIN_JACK
PC83
0.1U/50V
12/7 Modify for SMT request.
PJP25
PAD:3*1mm GAP:0.254mm
FL8
*FBMJ3216HS480NT_NC
PJP26
PAD:3*1mm GAP:0.254mm
FL9
*FBMJ3216HS480NT_NC
12/7 Modify for SMT request.
CN601
SINGATRON_2WA1572-00411
PRV6
*VZ0603M260AGT_NC
PRV7
*VZ0603M260AGT_NC
PC82
0.1U/50V
+DC_IN
PC76
0.47U/25V/0805
PR65
240K_F
PR64
47K
PQ35
SI4835DDY-T1-E3
+DC_IN_SS
PC78
0.01U/50V_0603
PR67
10K_J_0603
PC79
0.1U/50V
PC80
*4.7UF/25V/0805_NC
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Title
DCIN/ BATTERY
Size
Document Number
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X01
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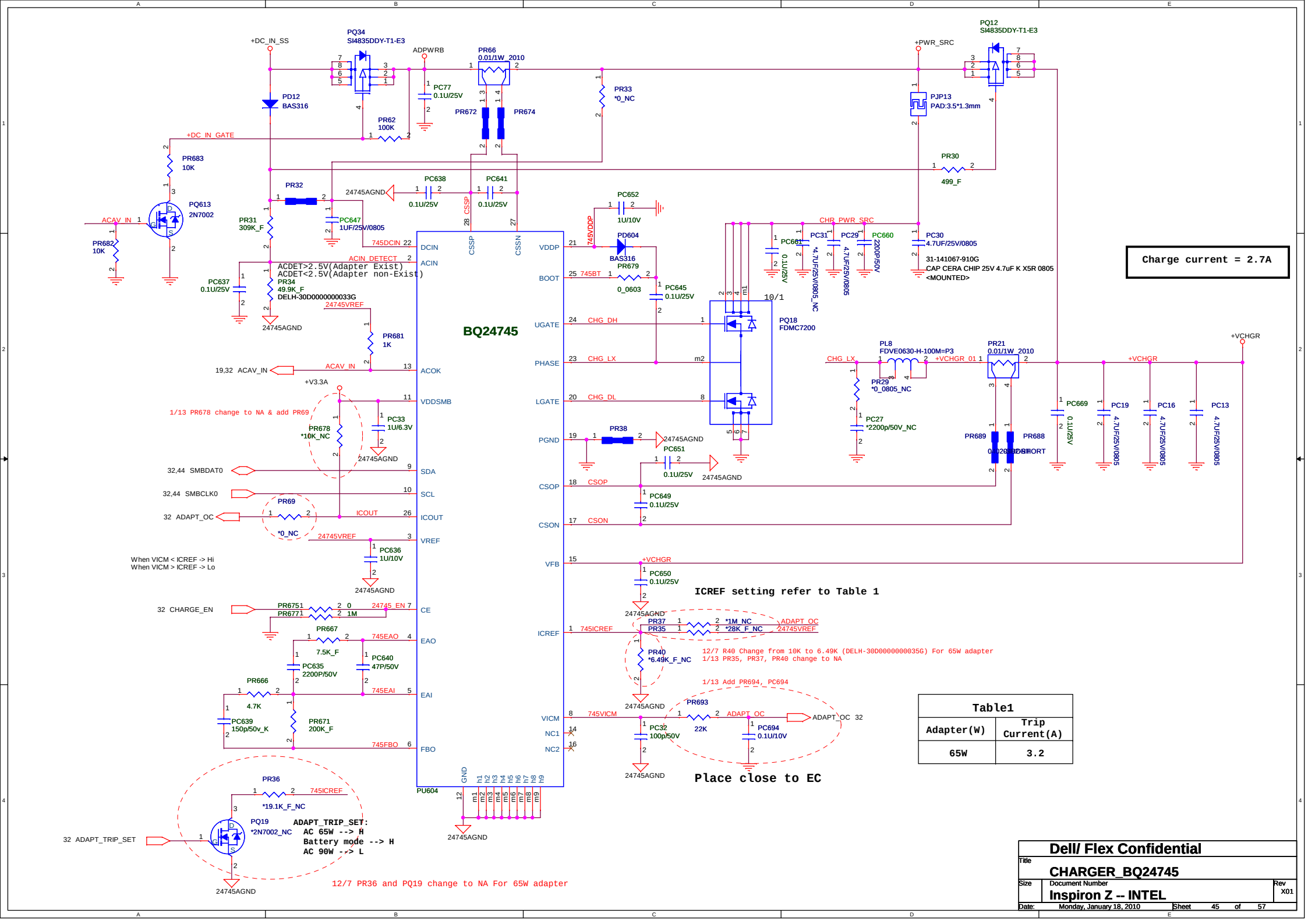
BQ24745
Charge current = 2.7A
ACDET>2.5V(Adapter Exist)
ACDET<2.5V(Adapter non-Exist)
ICREF setting refer to Table 1
Place close to EC
When VICM < ICREF -> Hi
When VICM > ICREF -> Lo
1/13 PR678 change to NA & add PR69
12/7 R40 Change from 10K to 6.49K (DELH-30D0000000035G) For 65W adapter
1/13 PR35, PR37, PR40 change to NA
1/13 Add PR694, PC694
ADAPT_TRIP_SET:
AC 65W --> H
Battery mode --> H
AC 90W --> L
12/7 PR36 and PQ19 change to NA For 65W adapter
Table1
Adapter(W) | Trip Current(A)
65W | 3.2
Dell/ Flex Confidential
CHARGER_BQ24745
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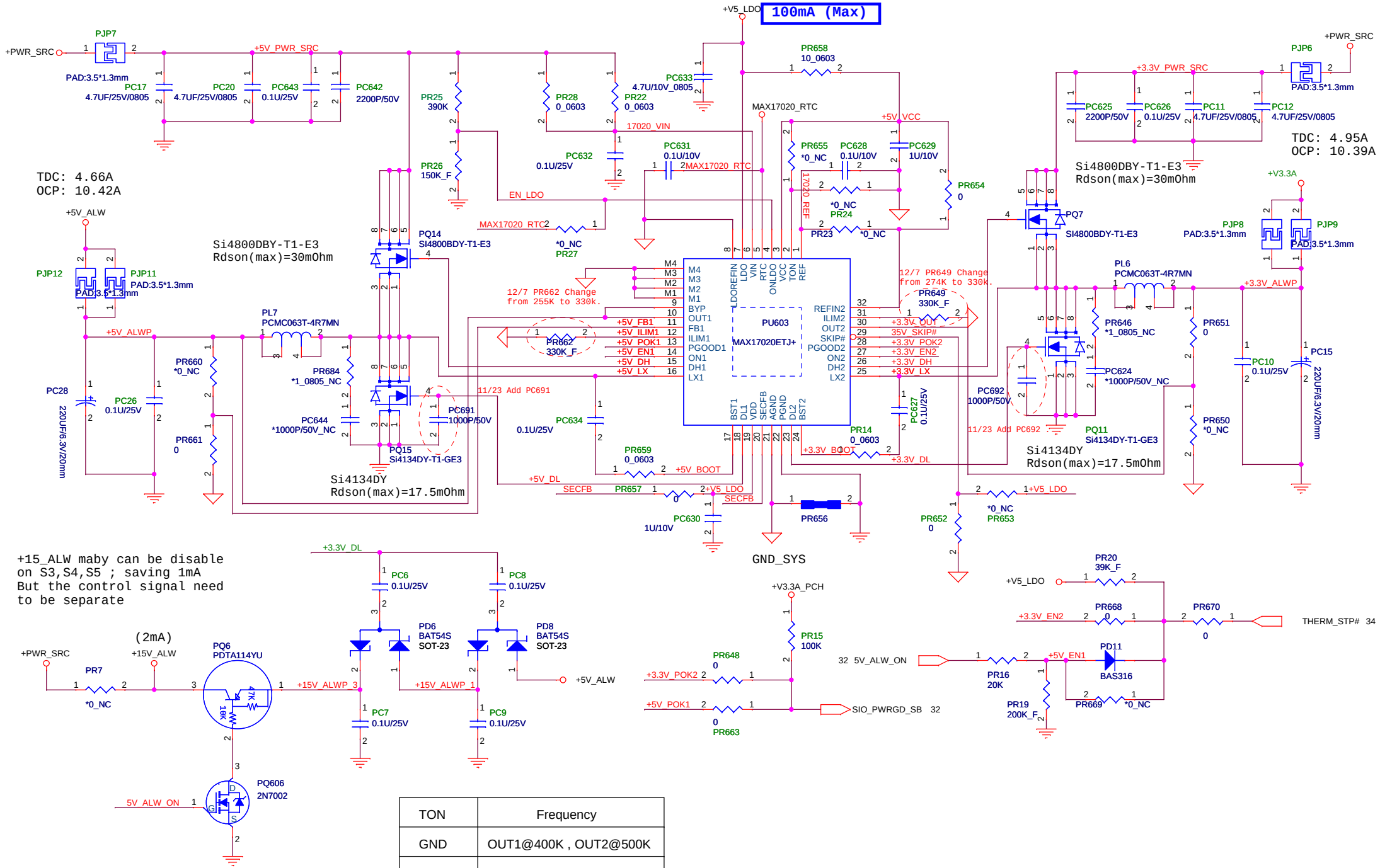

TON	Frequency
GND	OUT1@400K , OUT2@500K
VCC	OUT1@200K , OUT2@300K
OPEN	OUT1@400K , OUT2@300K

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Title: SYS 5V/3V(MAX17020)		
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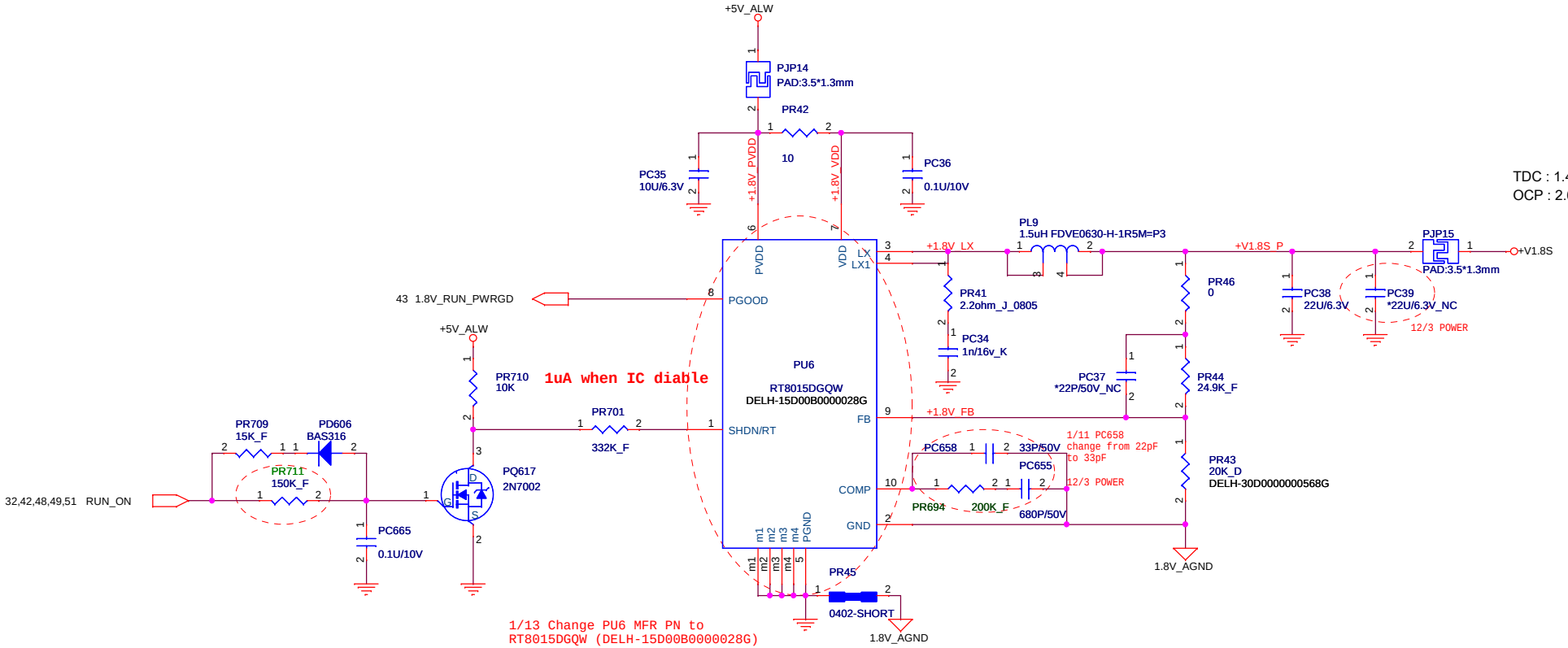
+V1.8S



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Title	+V1.8S_RT8015B	
Size	Document Number: Inspiron Z -- INTEL	Rev: X01
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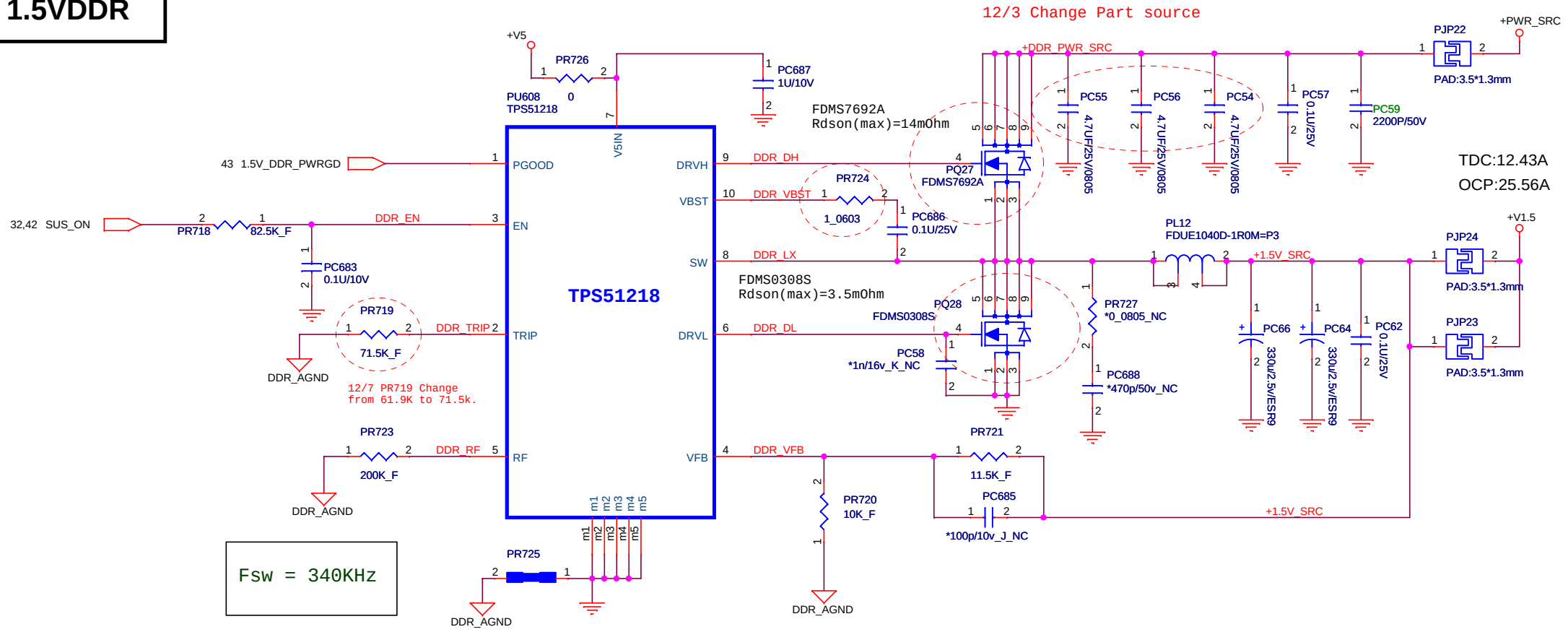
1.5VDDR



0.75VS

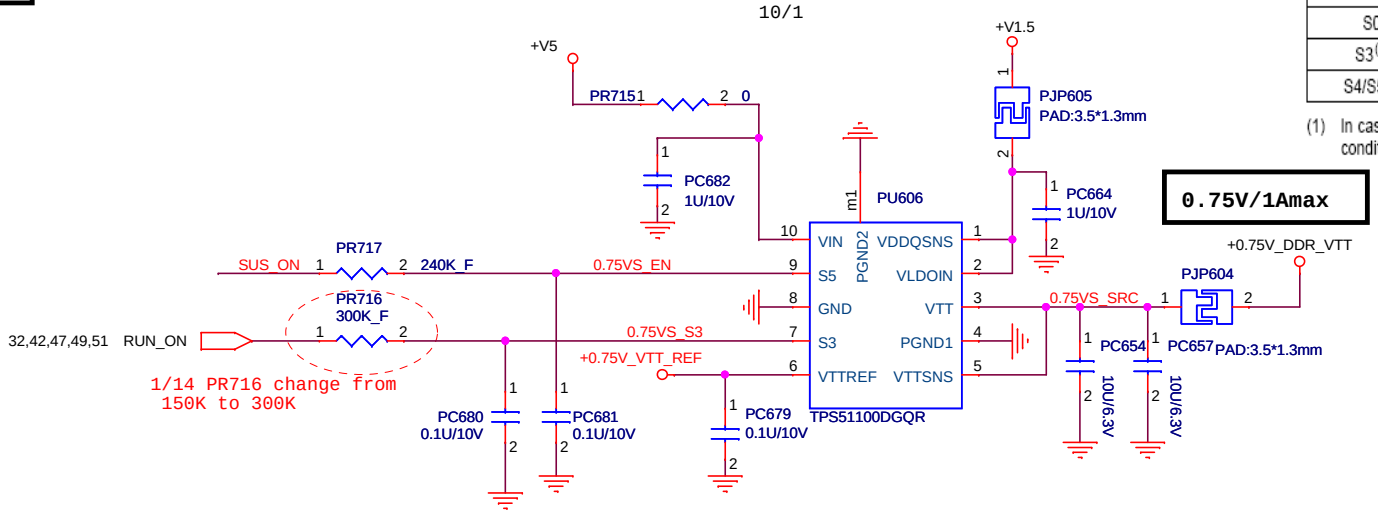


Table 1. S3 and S5 Control Tabl

STATE	S3	S5	VTTREF	VTT
S0	H	H	1	1
S3(1)	L	H	1	0 (high-Z)
S4/S5(1)	L	L	0 (discharge)	0 (discharge)

(1) In case S3 is forced to H and S5 to L, VTTREF is discharged and VTT is at High-Z state. This condition is NOT recommended.

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Title	+V1.5 / +0.75VS	
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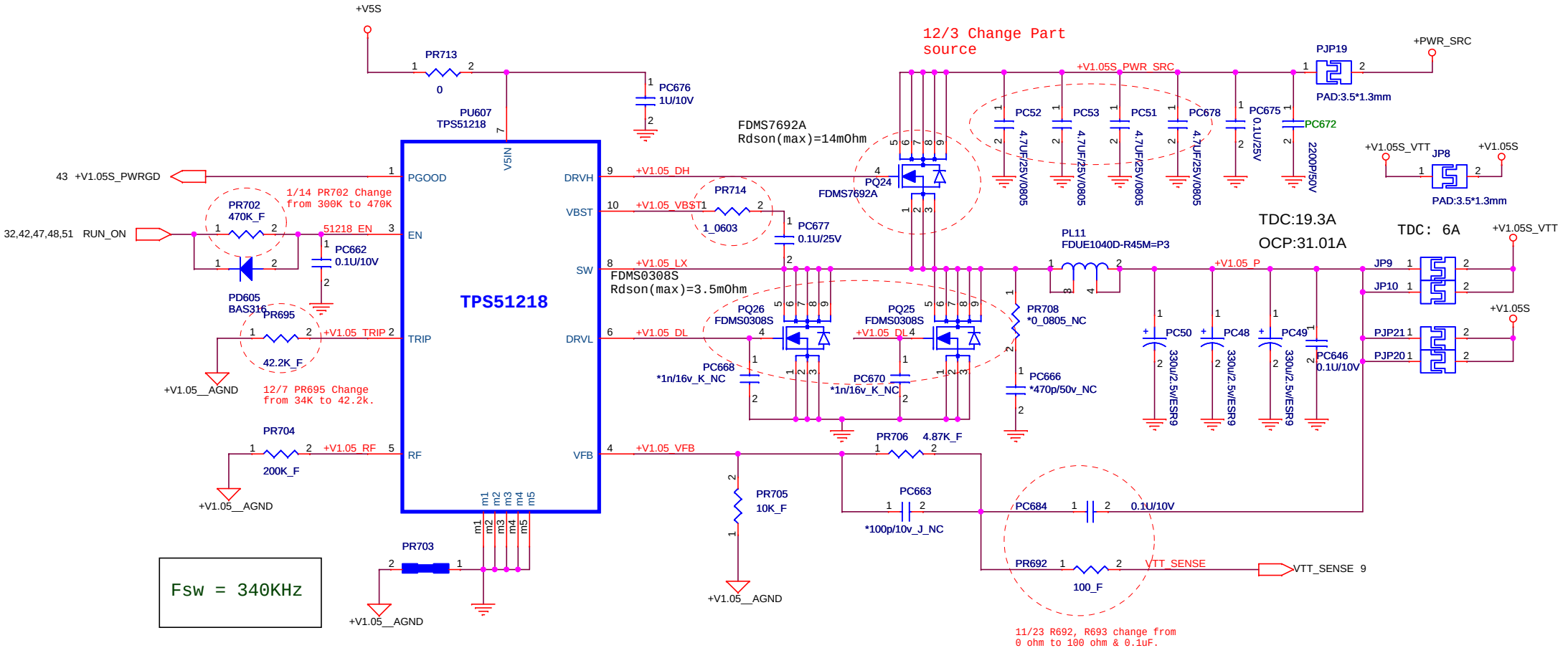

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Title: **+V1.05S_TPS51218**		
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VID INPUTS

Default VID[6:0]= [0010111]

Fsw = 297KHz

MAX17028

PU601

TDC=16.2A
OCP=33.75

SiR474DP
Rdson(max)=12m0hm

SiR464DP
Rdson(max)=3.8m0hm

12/3 Change Part source

VMON circuit

*PR988, PR991, PC776 close to chip

CURRENT LIMIT=(2V x R30 / R29 + R30) x 1 / 10 x Rsense

LOAD LINE=??mV/A=R38 x RSENSE x 0.6mS

IMON Setting
415701_415701_PRD_HLL_CRB_UG_Rev1.1.pdf Table 18

Processor	IccMax	IMON Resistor	VID [5:3]
ULV	27A	20 K ohm	010

Locate Near Pin m1 of MAX17028

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Title	CPU CORE_MAX17028
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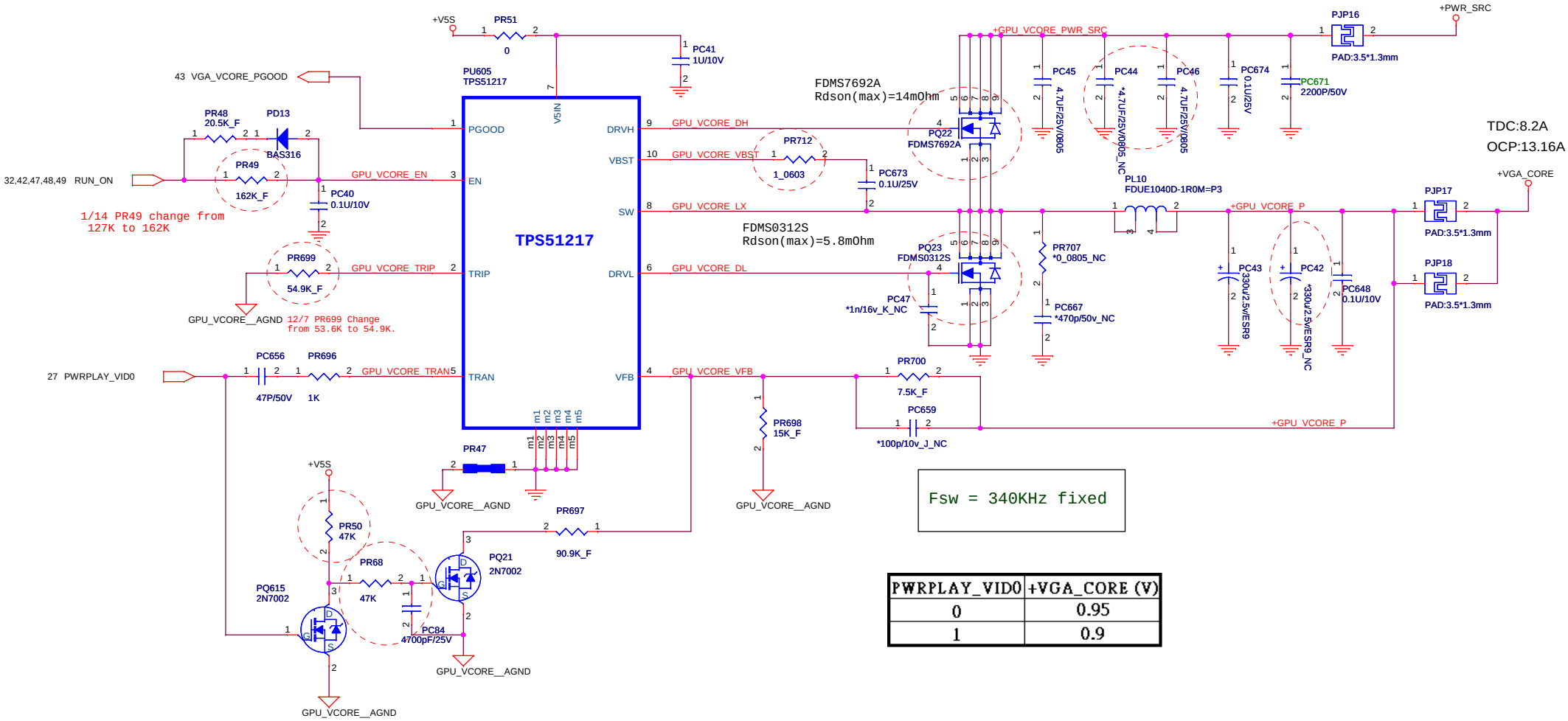
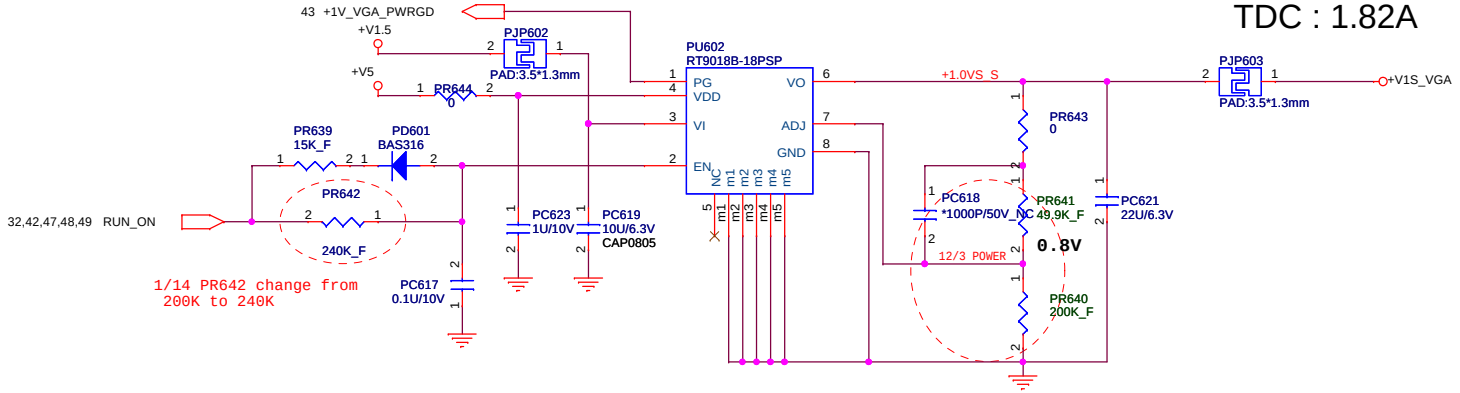


PWRPLAY_VID0	+VGA_CORE (V)
0	0.95
1	0.9

Discrete Only

TDC : 1.82A



Title	+VGA_CORE/+V1S_VGA
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Screw Hole

H618 10/10/6 THR394_236
H613 10/10/6 THR394_236
H614 10/10/6 THR394_236
H606 0/6/4.7 THR236_185
H611 9/8/6 THR236_185
H609 0/6/4.7 THR236_185
H605 0/6/4.7 THR236_185
H612 0/6/4.7 THR236_185
H608 0/6/4.7 THR236_185
H615 0/6/4.7 THR236_185
H616 9/8/6 THR236_185
11/19 Change Footprint to THR236_185
H619 0/7/4.6 THR0B276_181
H623 0/7/4.6 THR0B276_181
H620 0/7/4.6 THR0B276_181
H602 7/8/2.8 THR276B315_110
H622 0/7/4.6 THR0B276_181
H603 0/6/4.7 THR354B315_236
H610 0/7/4.6 THR0B276_181
H624 8/7/2.8 THR315B276_110
H625 8/7/2.8 THR315B276_110
H617 0/7/4.6 THR0B276_181
H607 0/6/4.7 THR276B0_181
11/19 Change Footprint to THR0B276_181

H626 NPTH8/7/2.8 MTGR315B276_110
H629 NPTH7/8/2.8 MTGR276B315_110
H604 NPTH8/7/2.8 MTGR276B315_110
H628 NPTH8/7/2.8 MTGR276B315_110
H601 NPTH0/6/4.7 MTGR354B315_236
H621 NPTH8/7/2.8 MTGR315B276_110
H627 NPTH8/7/2.8 MTGR315B276_110

Moat Cap

+5V_ALW
C1096 C250 C1132 C1080 C970 C1073 C740 0.1U/10V
+5V_ALW +V3.3S
C39 C718 0.1U/10V
+V3.3S
C701 C729 0.1U/10V
+V3.3S +V1.05S
C868 C960 0.1U/10V
+V3.3S +VGA_CORE
C818 0.1U/10V
+V3.3S +V1.5S_VGA
C114 0.1U/10V
+V1.05S +VGA_CORE
C129 0.1U/10V
+V1.05S +V1.05S_VTT
C969 0.1U/10V
+V1.5S_VGA
C602 0.1U/10V
+V1.5S_VGA +V1.05S_VTT
C635 0.1U/10V
+VGA_CORE +V1.05S_VTT
C150 0.1U/10V
+VGA_CORE
C824 0.1U/10V
+V1.05S_VTT
C817 C938 C788 C198 0.1U/10V
+V1.05S_VTT +CPU_VCORE
C720 0.1U/10V
+V1.5
C853 0.1U/10V

+CPU_VCORE
0.1U/25V C251
+CPU_PWR_SRC
C634 C840 C913 0.1U/25V CAP0402
ADPWRB
C978 C253 0.1U/25V
+PWR_SRC +5V_ALW
C1081 C1108 C1063 C975 C1078 0.1U/25V CAP0402
+PWR_SRC
C1064 C1102 C1049 C1052 C1057 C1025 0.1U/25V CAP0402 CAP0402
+PWR_SRC +V1.5
C1065 0.1U/25V
+PWR_SRC +V1.05S
C1054 C973 C108 0.1U/25V CAP0402 CAP0603 DELH-31D0010000007G
+PWR_SRC +V3.3S
C1005 0.1U/25V
+CPU_PWR_SRC +DCIN_JACK
C1006 C1007 0.1U/25V CAP0402 DELH-31D0010000007G
12/7 EMI Add.

FID

FID601 NC, NO CONNECT TO ANY.
FID8 NC, NO CONNECT TO ANY.
FID9 NC, NO CONNECT TO ANY.
FID7 NC, NO CONNECT TO ANY.
FID6 NC, NO CONNECT TO ANY.
FID603 NC, NO CONNECT TO ANY.
FID604 NC, NO CONNECT TO ANY.
FID602 NC, NO CONNECT TO ANY.

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Title: **SCREW / PAD**

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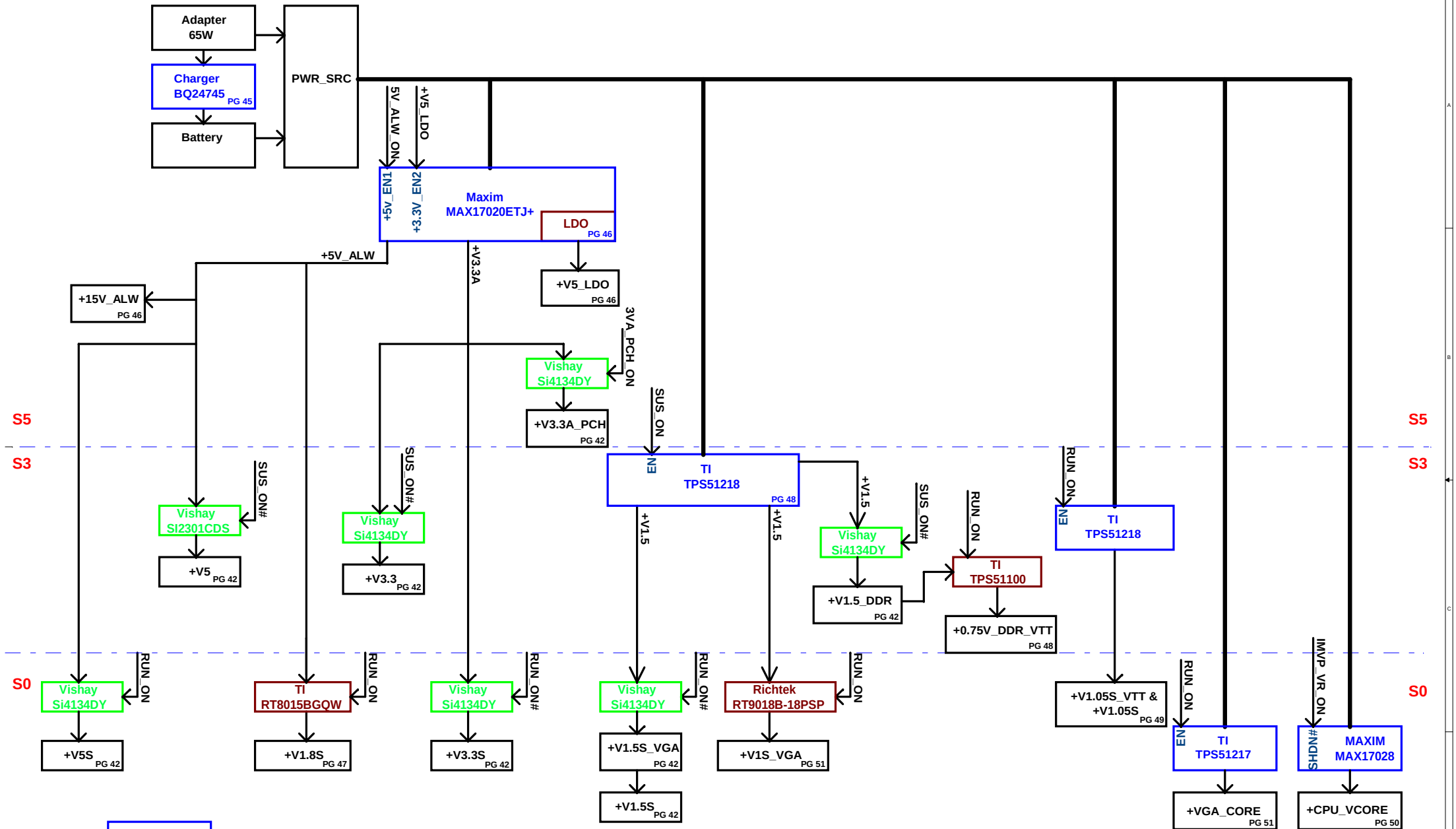

Power Rail	+5V_ALW	+V5_LDO	+15V_ALW	+V3.3A	+V1.8S	+V1.5	+0.75V_DDR_VTT	+V1.05S	+VGA_CORE	+CPU_VCORE	+V1S_VGA
TDC (Thermal Design Current)	4.66A	100mA	2mA	4.95A	1.47A	12.43A	0.7A	19.3A	11.2A	16.2A	1.82A
OCP (Over Current Protect)	8.33A	260mA		8.83A	2.63A	22.19A	6A	25.89A	20A	33.75	4.5A

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Title: Power Block Diagram

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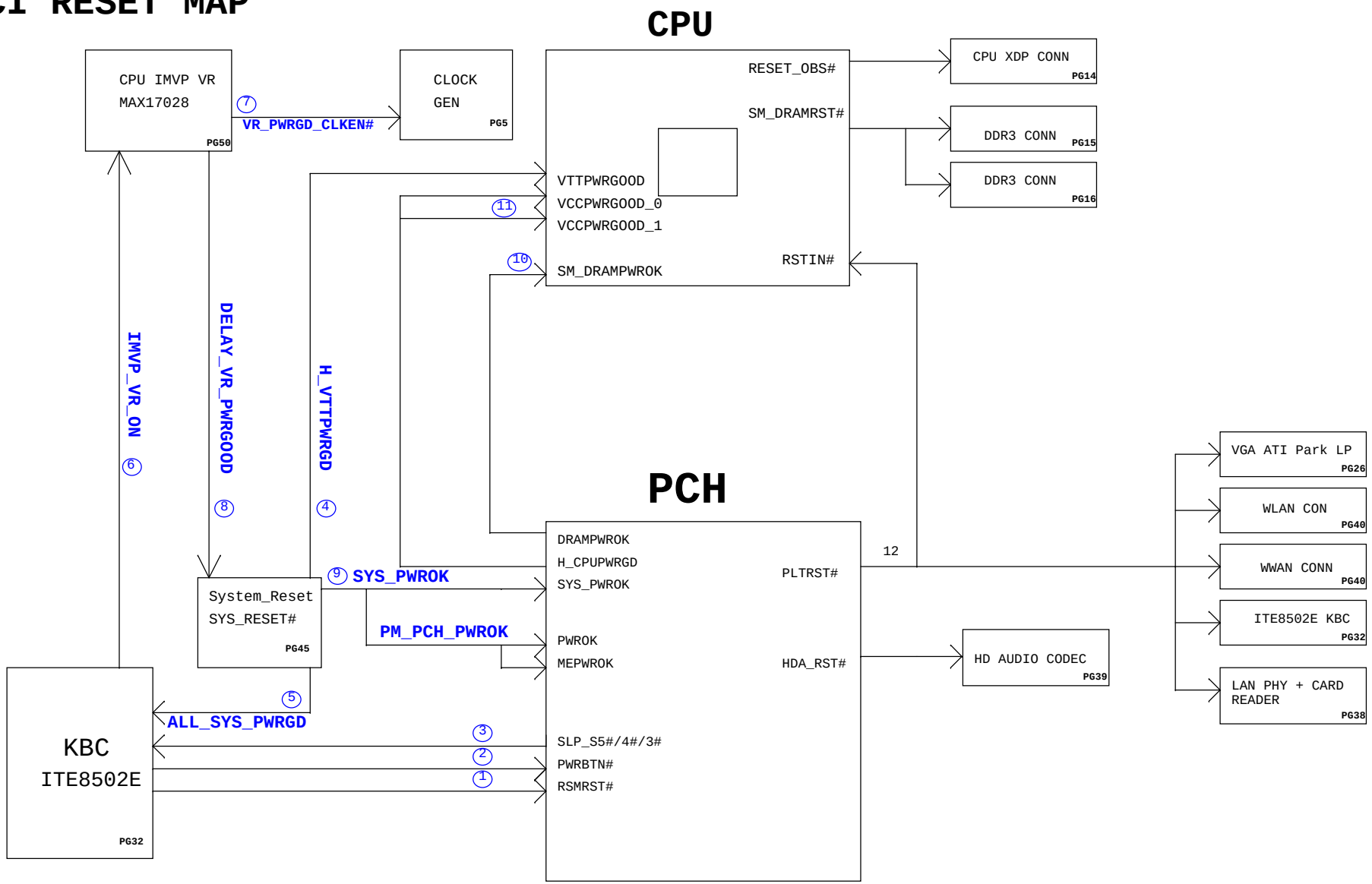
PCI RESET MAP



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Title: PCI RESET MAP		
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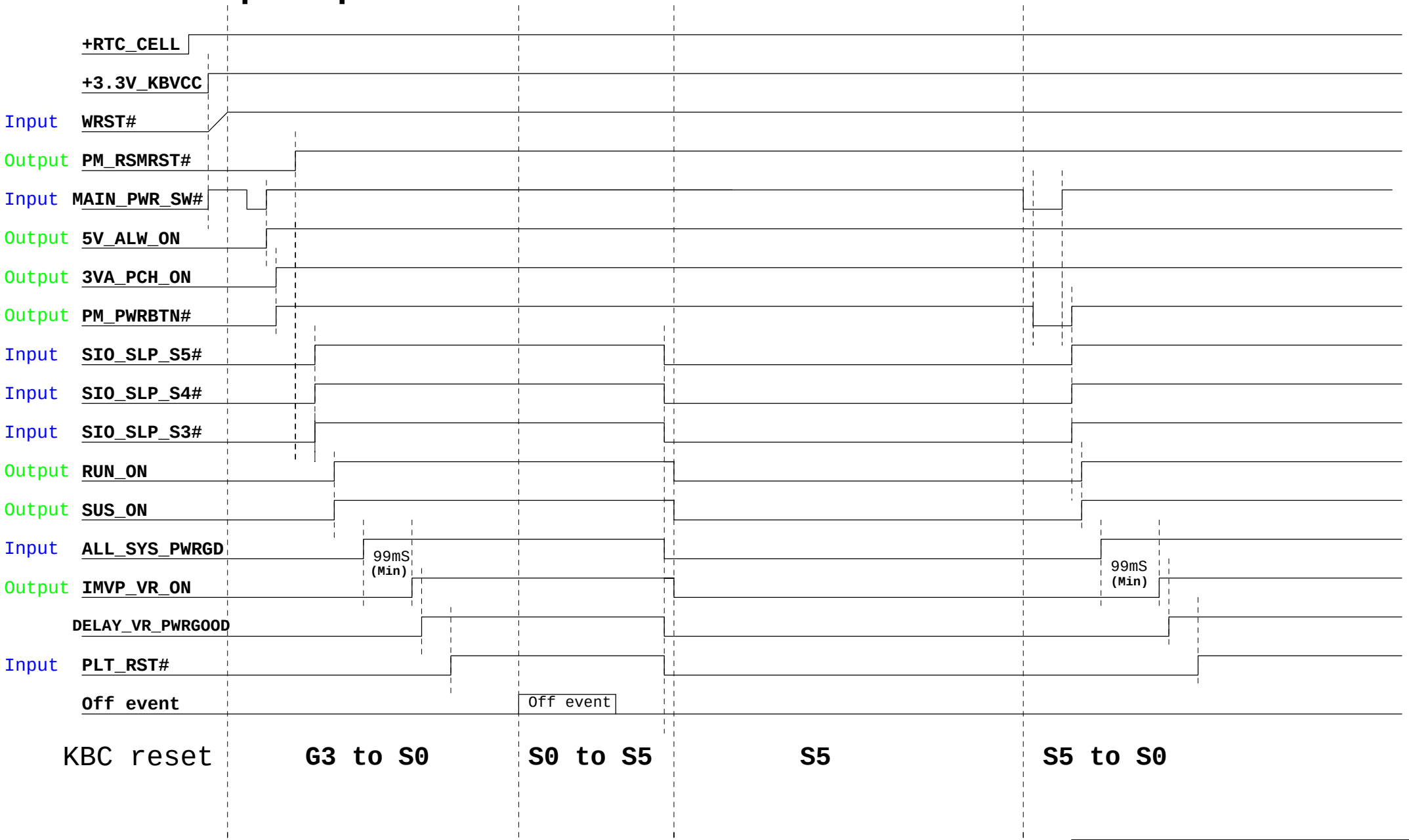
KBC Powre Up Sequence



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Title: KBC Power Up Sequence		
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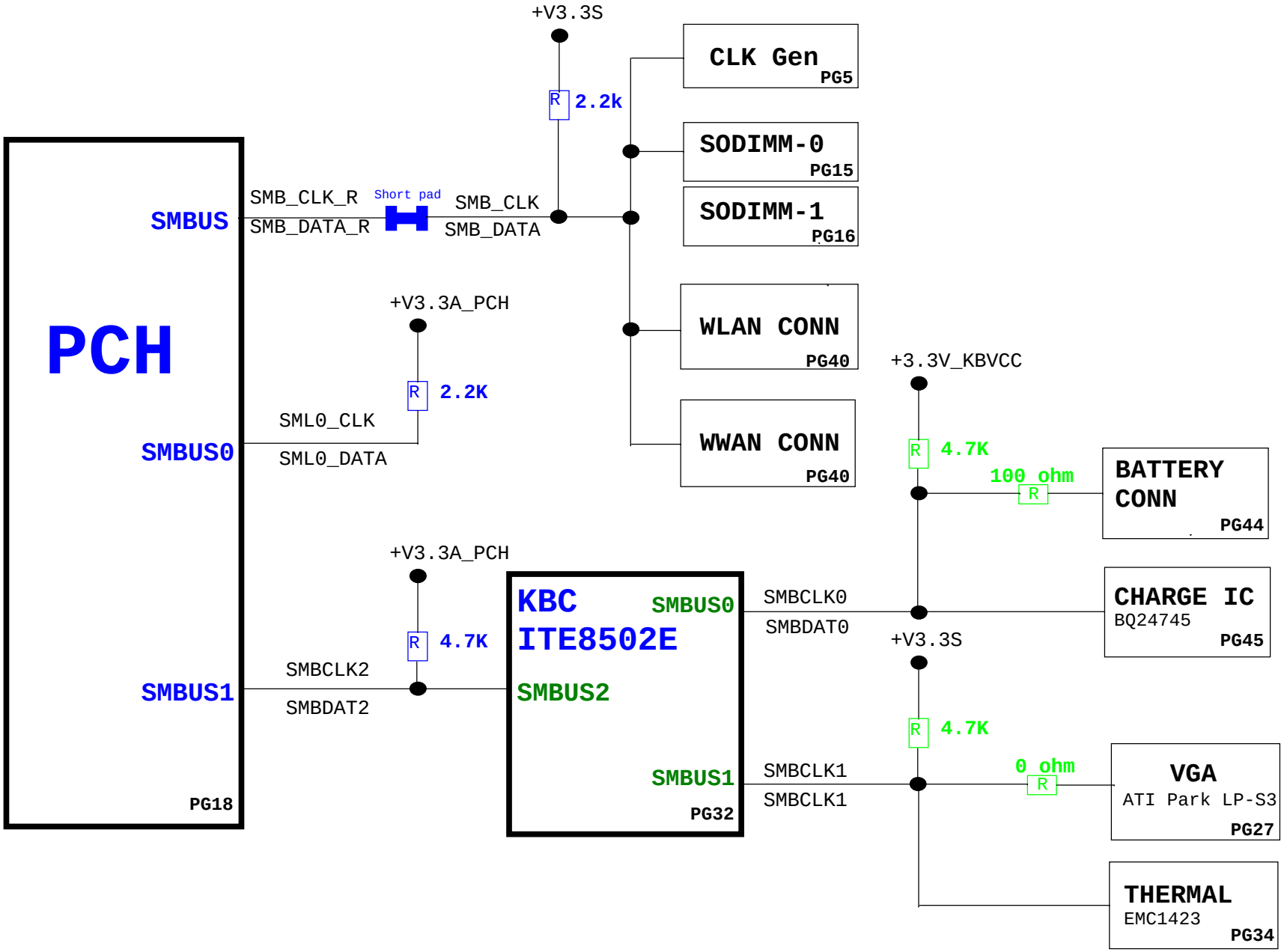

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Title	SMBus Map	
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EE change

Item	Fixed Issue	Reason for Change	Rev	PG#	Modify List
1	MMC Plus Can't Read	MMC Plus Can't Read	X01	38	C1055 change from 15pF to 5.6pF (DELH-31D0000000022G)
2	Update Conn MFR PN	Update Conn MFR PN	X01	36 37, 41	CN10 (HDMI) Change to DELH-38-00F0000013G, CN11 (mDP) Change to DELH-38D0110000005G CN612 (HDD) Change to DELH-38-00E0000071G, CN607 (KB) Change to DELH-38-00E0000072G
3	Update Chipset MFR PN	Update Chipset MFR PN	X01	7, 17	U17 CPU 1.2G (SLBMM) Change to DELH-11D00100000046G, U10 HM57 (SLGZR) Change to DELH-10D00100000012G
4	For HDMI SMBus Signal Quality	For HDMI SMBus Signal Quality	X01	36	C57, C67 Change from 33pF to 18pF DELH-31D00000000005G
5	Power Sequence	Power Sequence	X01	42	PR49 Change to 162K, PR55 Change to 330K, PR638 Change to 820K, PR642 Change to 240K, PR702 Change to 470K, PR716 Change to 300K.
6	Board ID Upgrade	Board ID Upgrade	X01	32	BID change from 01 to 10 for ST stage

POWER change

Item	Fixed Issue	Reason for Change	Rev	PG#	Modify List
1	Change Adapter OC control employment	Change Adapter OC control employment	X01	45	PR35, PR37, PR40, PR678 Change to NA. Add PR693 22K (DELH-30D0000000105G), Add PC694 0.1uF/10V(DELH-31D0020000012G), PR69 0ohm (NA) (DELH-30D0000000036G)
2	Improve 1.8V phase gain margin	Improve 1.8V phase gain margin	X01	47	PC658 change from 22pF to 33pF/50V(DELH-31D00000000009G)
3	PS_ID	DELL Suggestion	X01	44	PR685 Change from 100ohm to 33ohm.
4	VIMON RC Time Adjustment	From 196uS to 337uS	X01	50	PC609 change to 33nF/16V/X7R(DELH-31D0020000049G)
5	VIMON voltage precision	Vimon = 1V at load = 27A	X01	50	PR612 change to 7.15K_F_0402(DELH-30D0000000334G)
6	Improve load line precision	Improve load line precision	X01	50	PR614 change to 5.1K_F_0402(DELH-30D00000000061G)
7	Adjust the transeint response	Adjust the transeint response	X01	50	PC613 change to 1000pF/50V(DELH-31D00200000037G) and mounted
8	Update IC MFR PN	Update IC MFR PN	X01	47	Change PU6 MFR PN to RT8015DGQW (DELH-15D00B0000028G)

EMI change

Item	Fixed Issue	Reason for Change	Rev	PG#	Modify List