

Compal Confidential

PEW71_81_91 UMA <LA-6582P> M/B Schematics Document

Intel Arrandale Processor with DDRIII + Ibex Peak-M

2010-07-08

REV: 1.0

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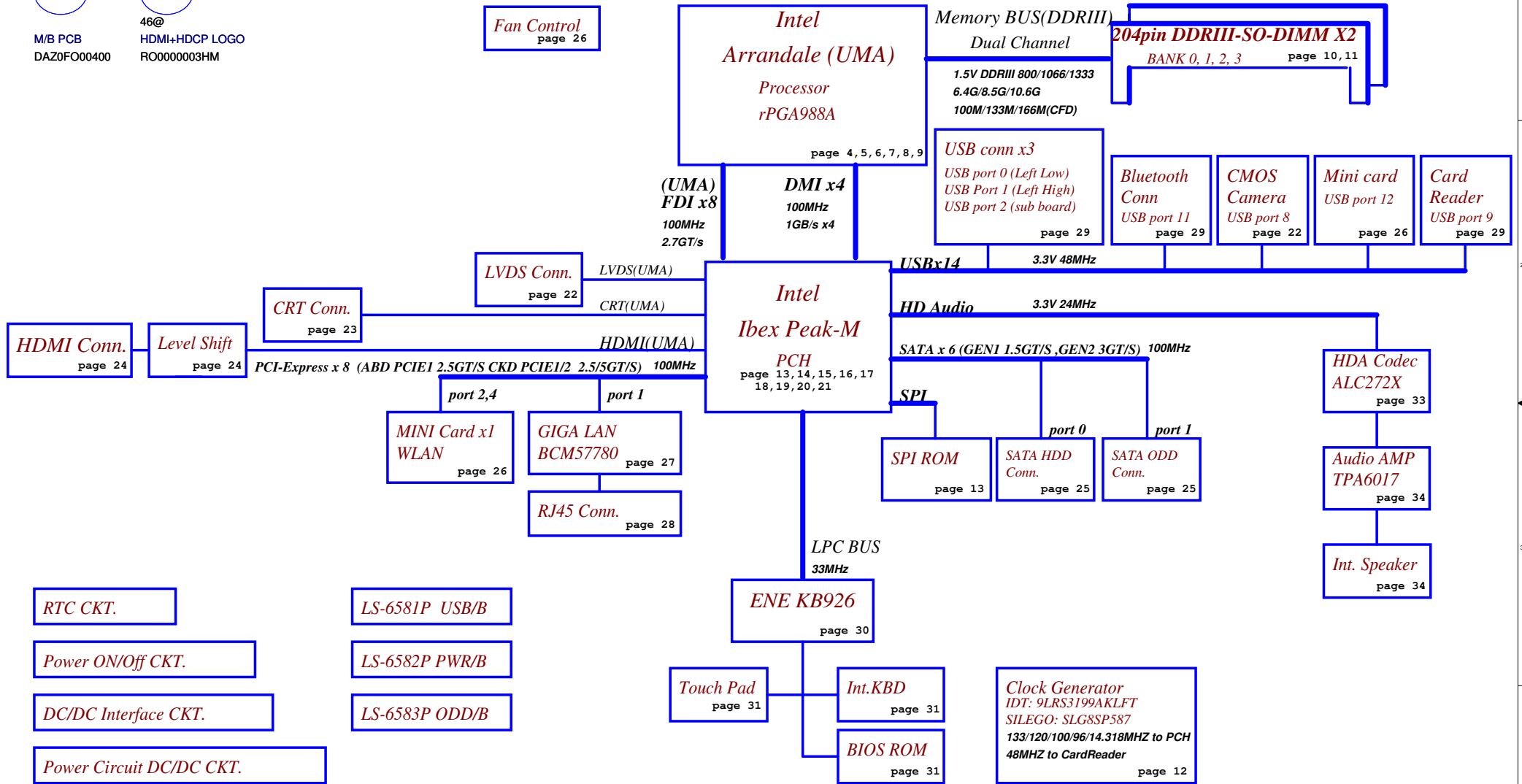
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Model Name PEW71_81_91 UMA

File Name : LA-6582P

ZZZ1
M/B PCB
DAZ0FO00400

ZZZ2
46@
HDMI+HDCP LOGO
RC0000003HM



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Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	N/A	N/A	N/A
B+	AC or battery power rail for power circuit.	N/A	N/A	N/A
+CPU_CORE	Core voltage for CPU	ON	ON	OFF
+0.75VS	0.75V switched power rail for DDR terminator	ON	OFF	OFF
+1.05VS	1.05V switched power rail for PCH	ON	OFF	OFF
+1.05VS_VTT	1.05V switched power rail (1.05 for AUB CPU)	ON	OFF	OFF
+1.5V	1.5V power rail for DDRIII	ON	ON	OFF
+1.5VS	1.5V switched power rail	ON	OFF	OFF
+1.8VS	1.8V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V_LAN	3.3V power rail for LAN	ON	ON	ON*
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+VSB	VSB always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON

Note : ON* means that this power plane is ON only with AC power available, otherwise it is OFF.

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts

EC SM Bus1 address

EC SM Bus2 address

Device	Address	Device	Address
Smart Battery	0001 011X b		

Ibex SM Bus address

Device	Address
Clock Generator (9LRS3199AKLFT, SLG8SP587)	1101 0010b
DDR DIMM0	1001 000Xb
DDR DIMM2	1001 010Xb

STATE	SIGNAL	SLP_S1#	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON		HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1 (Power On Suspend)		LOW	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)		LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)		LOW	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)		LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF

Project ID / Board ID Table for EC-AD channel

Vcc	3.3V +/- 5%					
Ra/Rc	100K +/- 5%					
	Rb / Rd	VAD_BID min	VAD_BID typ	VAD_BID max	Board ID	Project ID
0	0	0 V	0 V	0 V	0.1	Original NEW70/80/90/50/71/91
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V	0.2	PEW71/81/91 Audio Mono/Crystal
2	18K +/- 5%	0.436 V	0.503 V	0.538 V	0.3	
3	33K +/- 5%	0.712 V	0.819 V	0.875 V	1.0	
4	56K +/- 5%	1.036 V	1.185 V	1.264 V		
5	100K +/- 5%	1.453 V	1.650 V	1.759 V		
6	200K +/- 5%	1.935 V	2.200 V	2.341 V		PEW71/81/91 Audio Mono/SUSCLK
7	NC	2.500 V	3.300 V	3.300 V		NEW71/91 Optumis

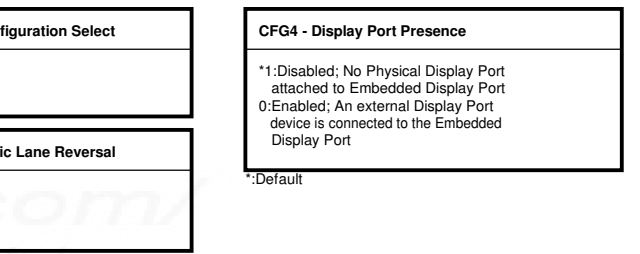
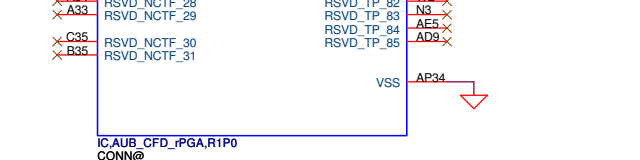
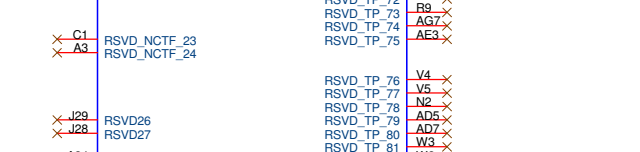
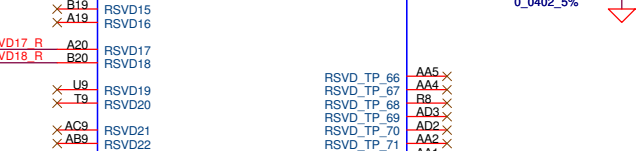
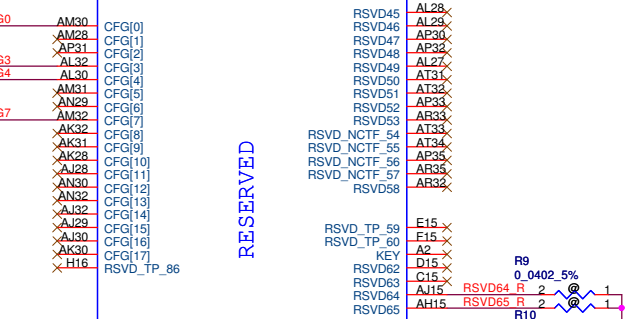
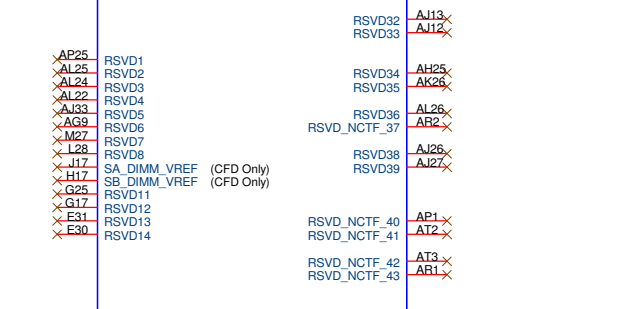
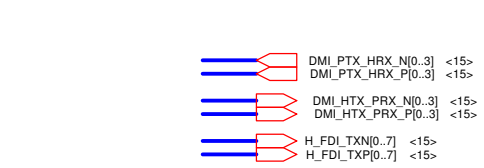
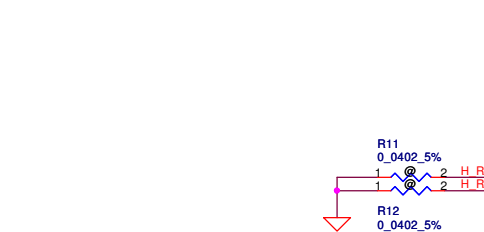
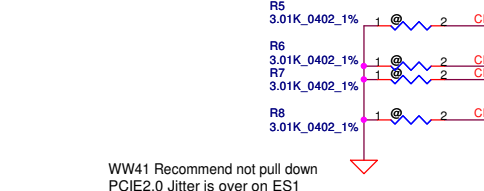
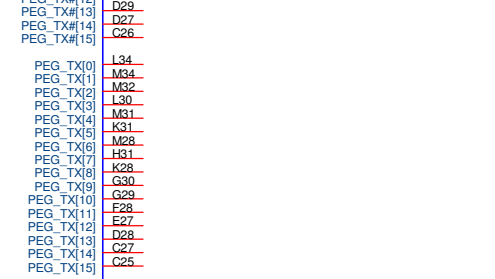
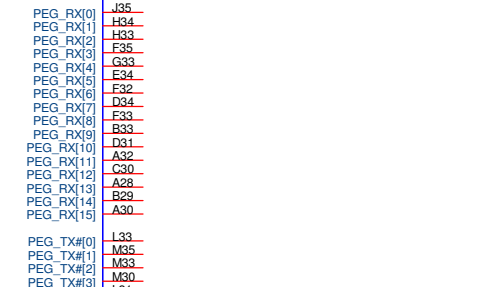
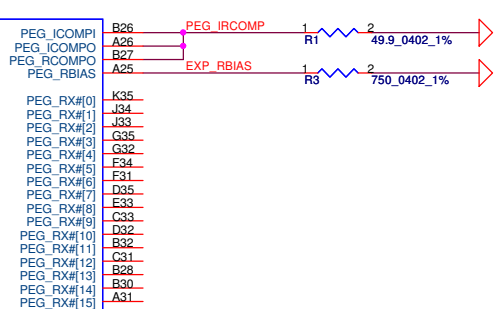
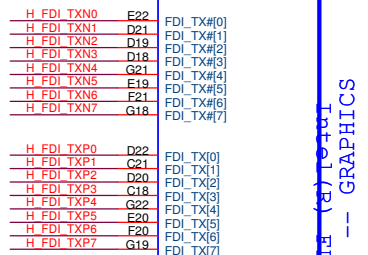
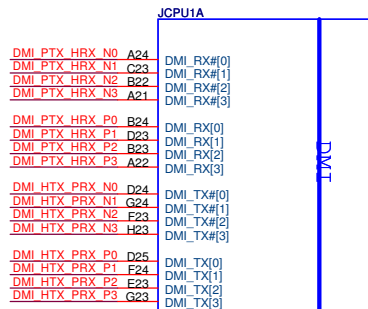
BTO Option Table

BTO Item	BOM Structure
HDMI	HDMI@

USB Port Table

USB 2.0	USB 1.1	Port	4 External USB Port	3 External USB Port
EHCI1	UHCI0	0	Ext1 Left Low USB	Ext1 Left Low USB
		1	Ext2 Left High USB	Ext2 Left High USB
		2	Ext3 Right USB	Ext3 Right USB
	UHCI1	3		
		4		
		5		
6				
EHCI2	UHCI3	7		
		8	Camera	Camera
	UHCI4	9	Card Reader	Card Reader
		10		
		11	Blue Tooth	Blue Tooth
		12	1st Min-Card	1st Min-Card
		13		

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eDP Signals Mapping

eDP Signal	PEG Singals	Lane Reversal
eDP_TX0	PEG HTX_C_GRX_P15	PEG HTX_C_GRX_P0
eDP_TX#0	PEG HTX_C_GRX_N15	PEG HTX_C_GRX_N0
eDP_TX1	PEG HTX_C_GRX_P14	PEG HTX_C_GRX_P1
eDP_TX#1	PEG HTX_C_GRX_N14	PEG HTX_C_GRX_N1
eDP_TX2	PEG HTX_C_GRX_P13	PEG HTX_C_GRX_P2
eDP_TX#2	PEG HTX_C_GRX_N13	PEG HTX_C_GRX_N2
eDP_TX3	PEG HTX_C_GRX_P12	PEG HTX_C_GRX_P3
eDP_TX#3	PEG HTX_C_GRX_N12	PEG HTX_C_GRX_N3
eDP_AUX	PEG GTX_C_HRX_P13	PEG GTX_C_HRX_P2
eDP_AUX#	PEG GTX_C_HRX_N13	PEG GTX_C_HRX_N2
eDP_HPD#	PEG GTX_C_HRX_P12	PEG GTX_C_HRX_P3

CFG0 - PCI-Express Configuration Select

*1:Single PEG
0: bifurcation enabled

CFG3 - PCI-Express Static Lane Reversal

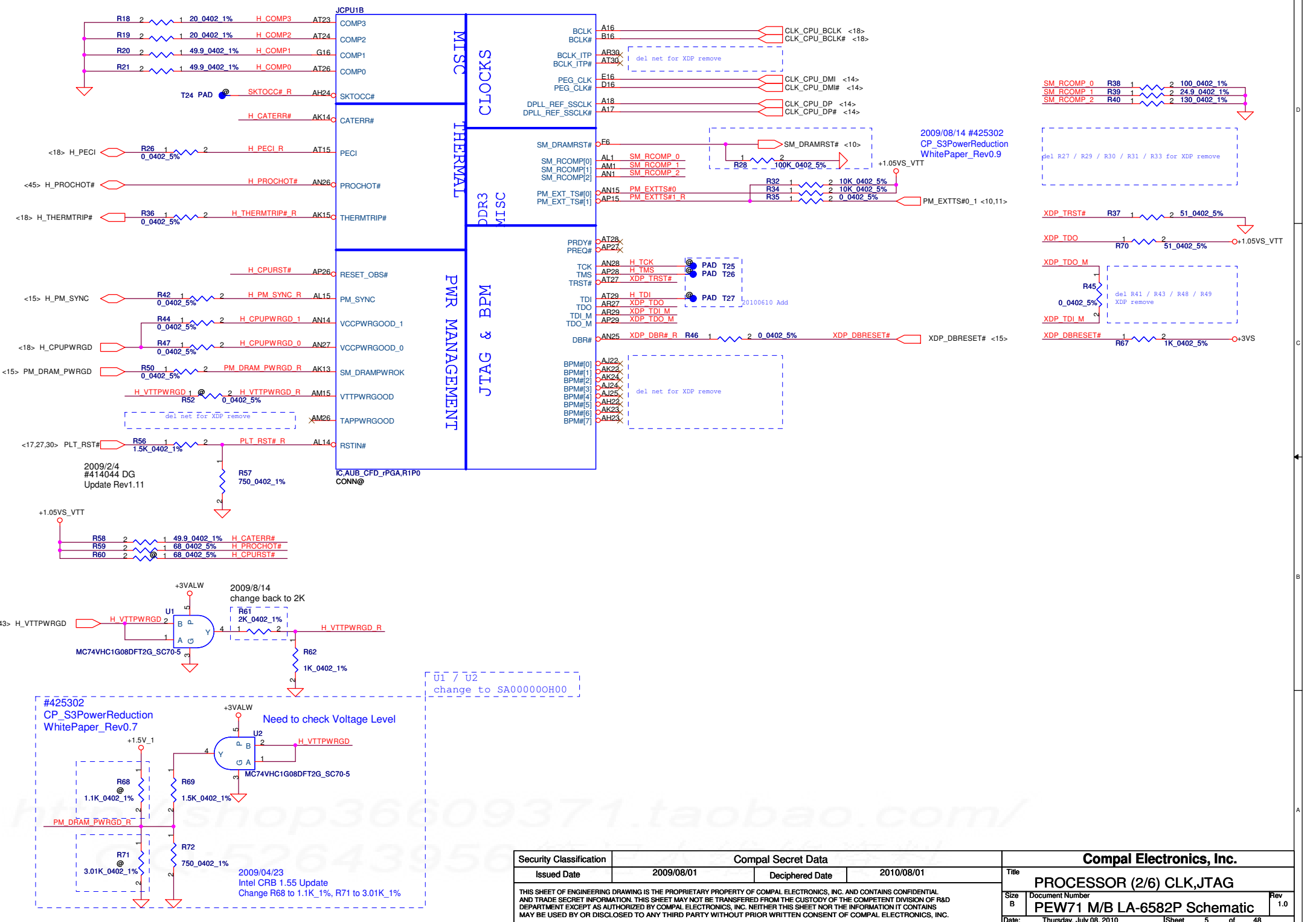
*1 :Normal Operation
0 :Lane Numbers Reversed
15 -> 0, 14 -> 1, ...

CFG4 - Display Port Presence

*1:Disabled; No Physical Display Port attached to Embedded Display Port
0:Enabled; An external Display Port device is connected to the Embedded Display Port

**:Default

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Title PROCESSOR (2/6) CLK,JTAG			
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<10> DDR_A_D[0..63]
 <10> DDR_A_DM[0..7]
 <10> DDR_A_DQS[0..7]
 <10> DDR_A_MA[0..15]

JCPU1C

DDR A D0 A10
 DDR A D1 C10
 DDR A D2 C7
 DDR A D3 A7
 DDR A D4 B10
 DDR A D5 D10
 DDR A D6 E10
 DDR A D7 A8
 DDR A D8 D8
 DDR A D9 F10
 DDR A D10 E2
 DDR A D11 SA_DQ[10]
 DDR A D12 E9
 DDR A D13 B7
 DDR A D14 E7
 DDR A D15 C6
 DDR A D16 H10
 DDR A D17 G8
 DDR A D18 K7
 DDR A D19 J8
 DDR A D20 G7
 DDR A D21 G10
 DDR A D22 J7
 DDR A D23 J10
 DDR A D24 L7
 DDR A D25 M6
 DDR A D26 M8
 DDR A D27 L9
 DDR A D28 L6
 DDR A D29 K8
 DDR A D30 N8
 DDR A D31 P9
 DDR A D32 AH5
 DDR A D33 AF5
 DDR A D34 AK6
 DDR A D35 AF6
 DDR A D36 AG5
 DDR A D37 AG5
 DDR A D38 AJ7
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 DDR A D40 AJ10
 DDR A D41 AJ9
 DDR A D42 AL10
 DDR A D43 AK12
 DDR A D44 AK8
 DDR A D45 AL7
 DDR A D46 AK11
 DDR A D47 AL8
 DDR A D48 AN8
 DDR A D49 AM10
 DDR A D50 AR11
 DDR A D51 AL11
 DDR A D52 AM9
 DDR A D53 AN9
 DDR A D54 AT11
 DDR A D55 AP12
 DDR A D56 AM12
 DDR A D57 AN12
 DDR A D58 AM13
 DDR A D59 AT14
 DDR A D60 AT12
 DDR A D61 AL13
 DDR A D62 AR14
 DDR A D63 AP14

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 AA7 DDR A_CLK0# <10>
 P7 DDR A_CKE0 <10>
 Y6 DDR A_CLK1 <10>
 Y5 DDR A_CLK1# <10>
 P6 DDR A_CKE1 <10>
 AE2 DDR A_CS0# <10>
 AE8 DDR A_CS1# <10>
 AD8 DDR A_ODT0 <10>
 AF9 DDR A_ODT1 <10>
 B9 DDR A DM0
 D7 DDR A DM1
 LH7 DDR A DM2
 M7 DDR A DM3
 AG6 DDR A DM4
 AM7 DDR A DM5
 AN10 DDR A DM6
 AN13 DDR A DM7
 C9 DDR A DQS#0
 E8 DDR A DQS#1
 J8 DDR A DQS#2
 NG DDR A DQS#3
 AH7 DDR A DQS#4
 AK9 DDR A DQS#5
 AP11 DDR A DQS#6
 AT13 DDR A DQS#7
 C8 DDR A DQS#0
 F9 DDR A DQS#1
 H9 DDR A DQS#2
 M9 DDR A DQS#3
 AH8 DDR A DQS#4
 AK10 DDR A DQS#5
 AN11 DDR A DQS#6
 AR13 DDR A DQS#7
 Y3 DDR A MA0
 W1 DDR A MA1
 AA8 DDR A MA2
 AA3 DDR A MA3
 V1 DDR A MA4
 AA9 DDR A MA5
 V8 DDR A MA6
 T1 DDR A MA7
 Y9 DDR A MA8
 U6 DDR A MA9
 AD4 DDR A MA10
 T2 DDR A MA11
 U3 DDR A MA12
 AG8 DDR A MA13
 T3 DDR A MA14
 V9 DDR A MA15

IC_AUB_CFD_rPGA,R1P0
 CONN@

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 <10> DDR_A_BS2

DDR A BS0 AC3
 DDR A BS1 AB2
 DDR A BS2 U7

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 SA_BS[2]

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 DDR A RAS# AB3C
 DDR A WE# AE9C

SA_CAS#
 SA_RAS#
 SA_WE#

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JCPU1D

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 DDR B D1 A5
 DDR B D2 C3
 DDR B D3 B3
 DDR B D4 E4
 DDR B D5 A6
 DDR B D6 C4
 DDR B D7 D4
 DDR B D8 D1
 DDR B D9 D2
 DDR B D10 F2
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 DDR B D26 M2
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 DDR B D28 K5
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 DDR B D30 M4
 DDR B D31 N5
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 DDR B D33 AG1
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 DDR B D56 AN7
 DDR B D57 AP6
 DDR B D58 AP8
 DDR B D59 AT9
 DDR B D60 AT7
 DDR B D61 AP9
 DDR B D62 AR10
 DDR B D63 AT10

DDR SYSTEM MEMORY - B

IC_AUB_CFD_rPGA,R1P0
 CONN@

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DDR B BS0 AB1
 DDR B BS1 W5
 DDR B BS2 R7

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 SB_BS[2]

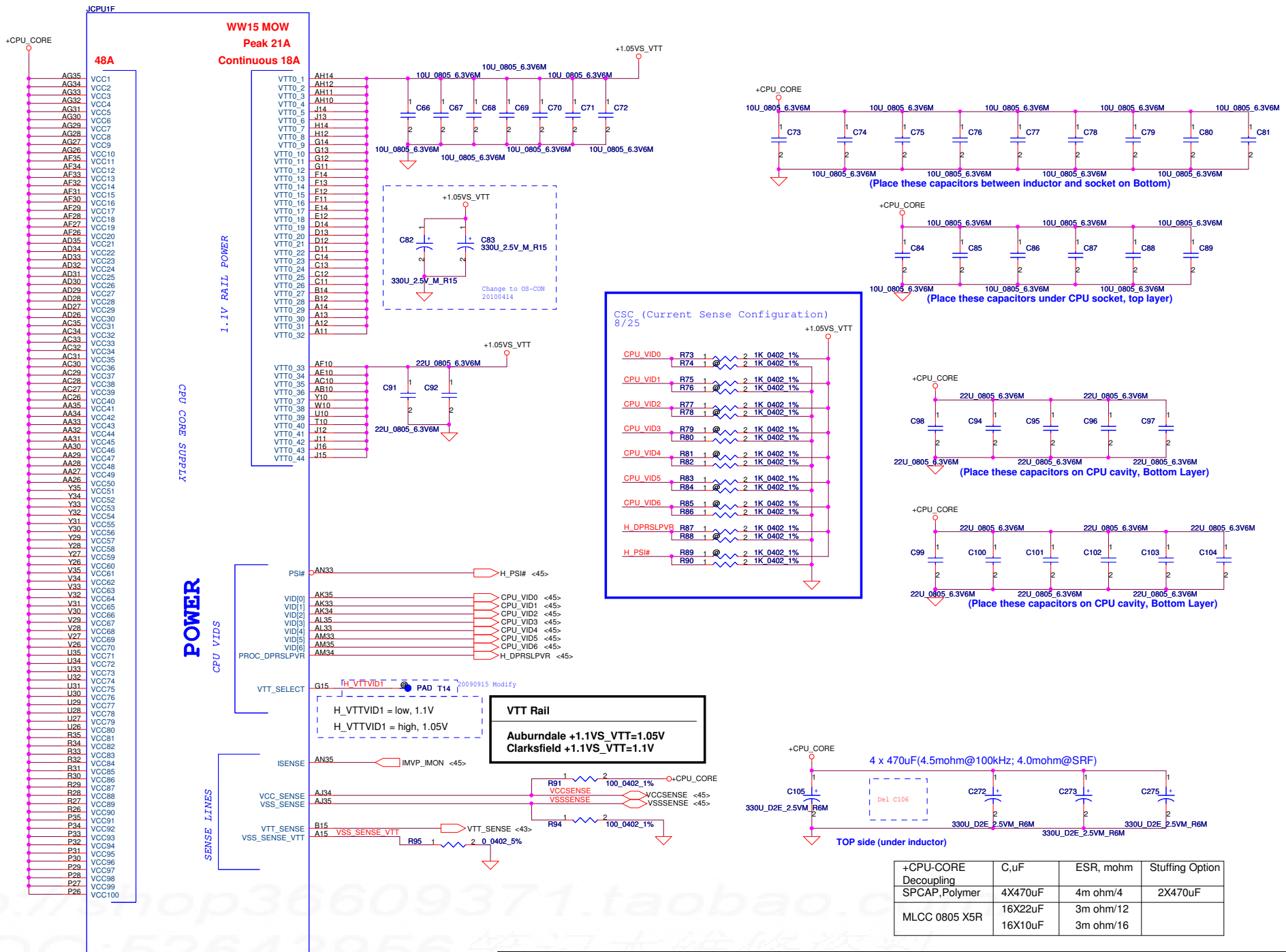
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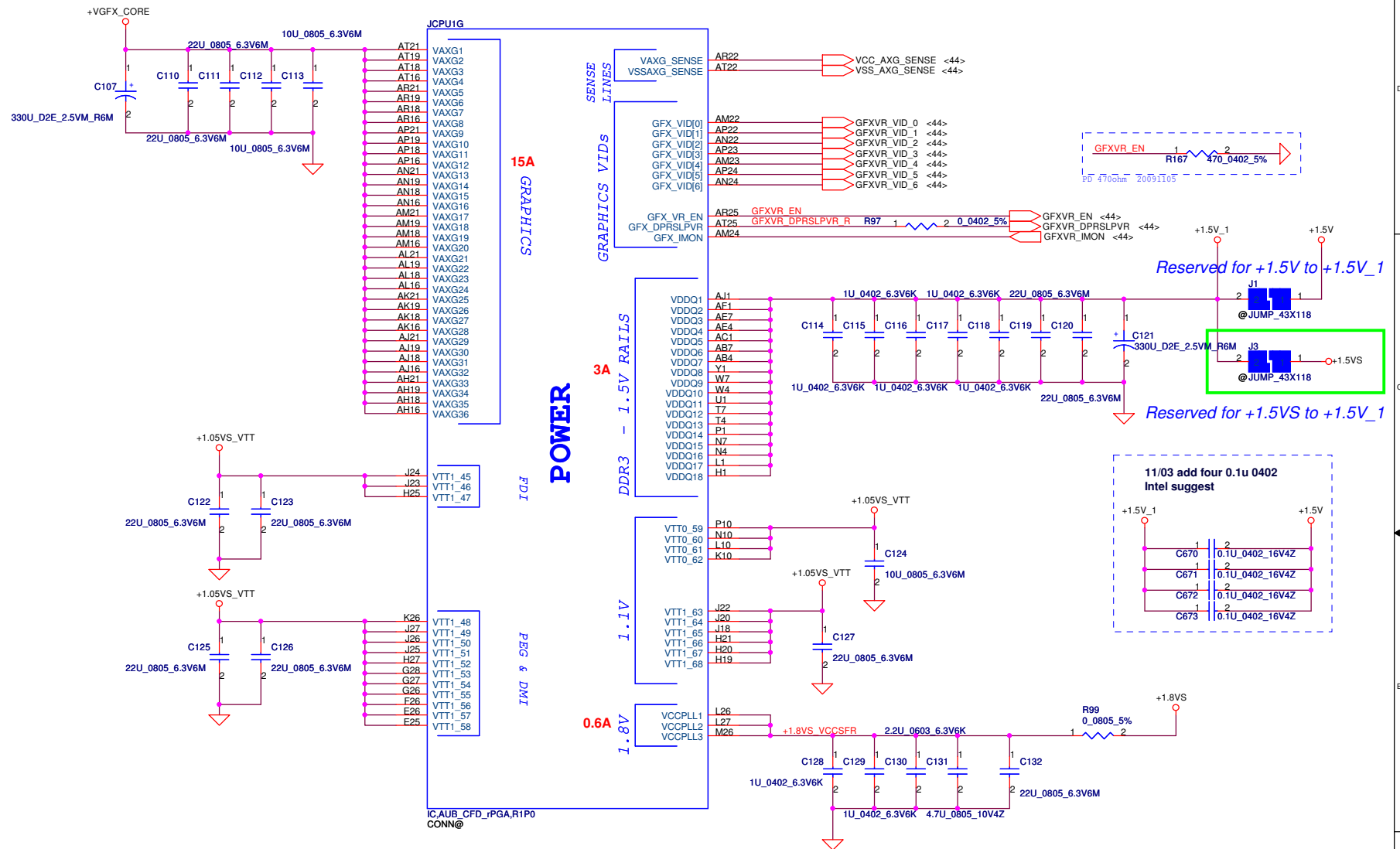
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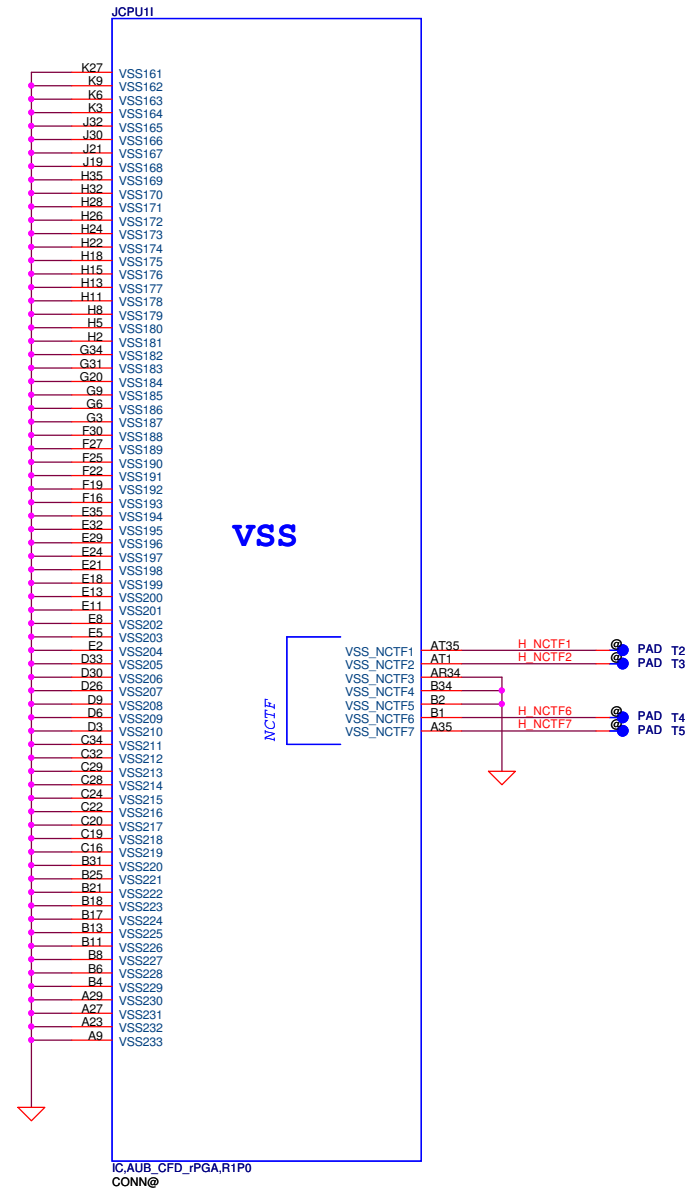
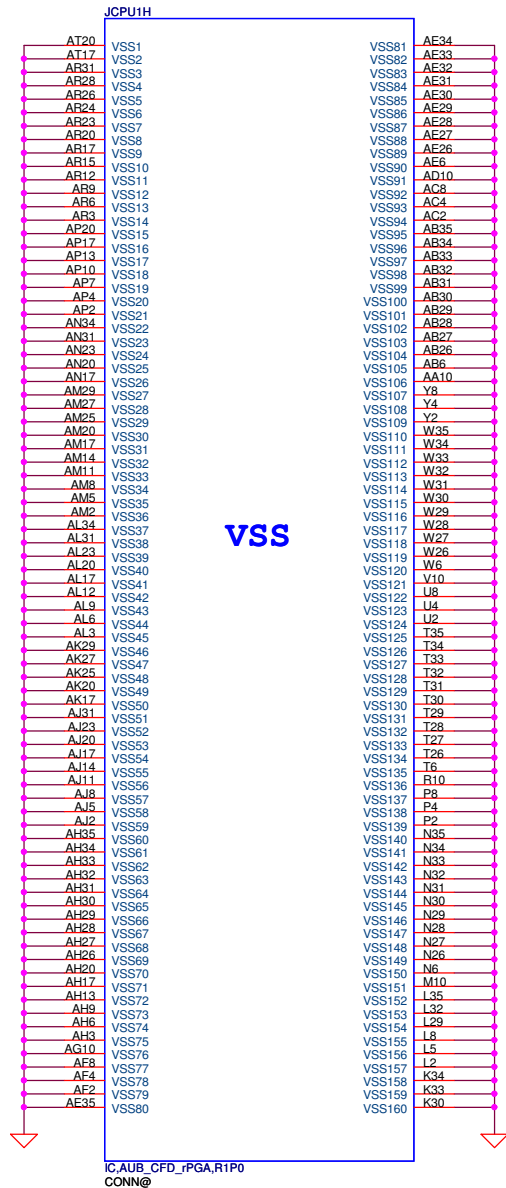
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 SB_CK#0[0] W9
 SB_CKE[0] M3
 SB_CK[1] V7
 SB_CK#1[1] V6
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 SB_CS#0[0] AB8
 SB_CS#1[1] AD6
 SB_ODT[0] AC7
 SB_ODT[1] AD1
 SB_DM[0] D4
 SB_DM[1] E1
 SB_DM[2] H3
 SB_DM[3] K1
 SB_DM[4] AH1
 SB_DM[5] AL2
 SB_DM[6] AR4
 SB_DM[7] AT8
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 SB_DQS#1[1] E4
 SB_DQS#2[2] L4
 SB_DQS#3[3] L4
 SB_DQS#4[4] AH2
 SB_DQS#5[5] AR5
 SB_DQS#6[6] AR8
 SB_DQS#7[7] AR8
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 SB_DQS[1] E3
 SB_DQS[2] H4
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 DDR_B_MA5
 DDR_B_MA6
 DDR_B_MA7
 DDR_B_MA8
 DDR_B_MA9
 DDR_B_MA10
 DDR_B_MA11
 DDR_B_MA12
 DDR_B_MA13
 DDR_B_MA14
 DDR_B_MA15

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Size	Document Number	Date		Rev	
B	PEW71 M/B LA-6582P Schematic	Thursday, July 08, 2010		1.0	
				Sheet	6 of 48

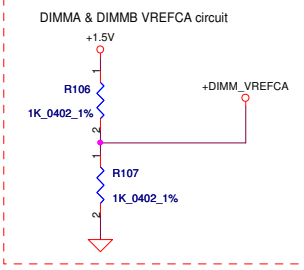
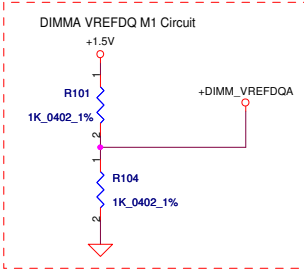




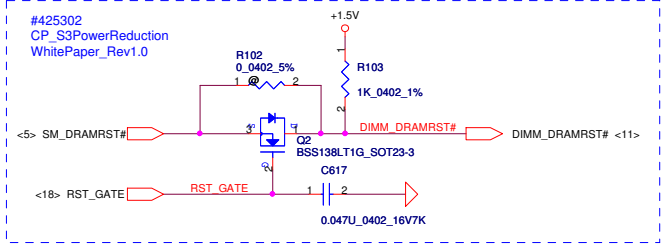
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
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Size	Document Number	Date		Rev	
Customer	PEW71 M/B LA-6582P Schematic	Thursday, July 08, 2010		1.0	
				Sheet 8 of 48	



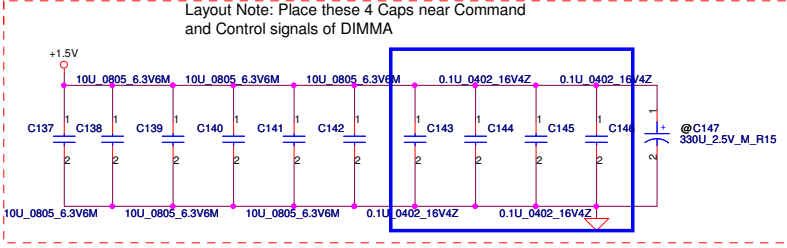
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Issued Date	2009/08/01	Deciphered Date	2010/08/01	Title	
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Size	Document Number	Rev		1.0	
Customer	PEW71 M/B LA-6582P Schematic	Date:		Thursday, July 08, 2010	
			Sheet	9	of 48



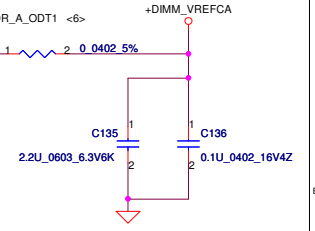
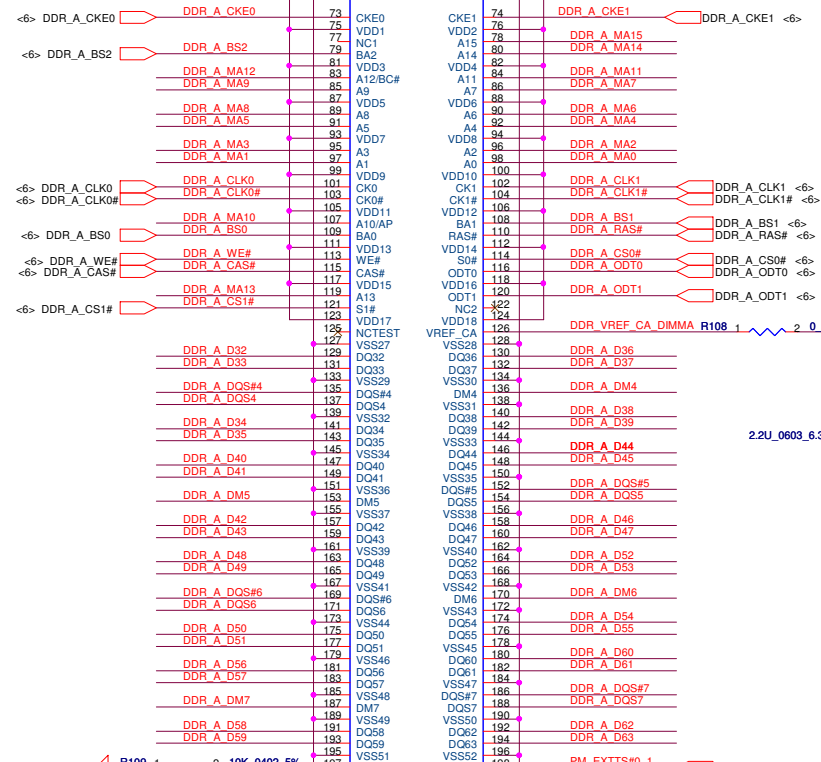
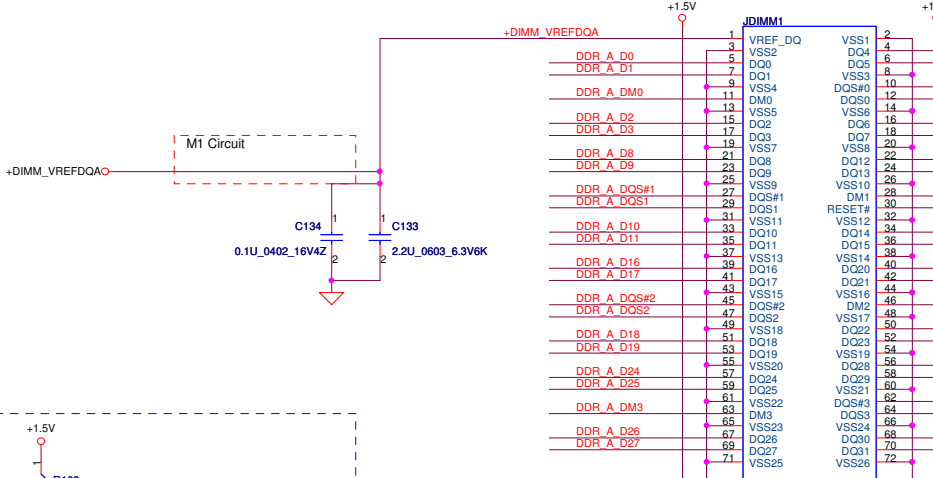
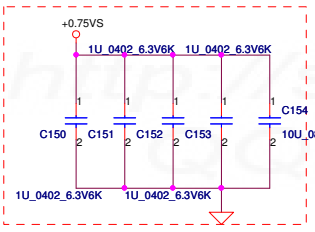
- <6> DDR_A_DQS#[0..7]
- <6> DDR_A_D[0..63]
- <6> DDR_A_DM[0..7]
- <6> DDR_A_DQS[0..7]
- <6> DDR_A_MA[0..15]



Layout Note:
Place near JDIMM1



Layout Note:
Place near JDIMM1.203 & JDIMM1.204



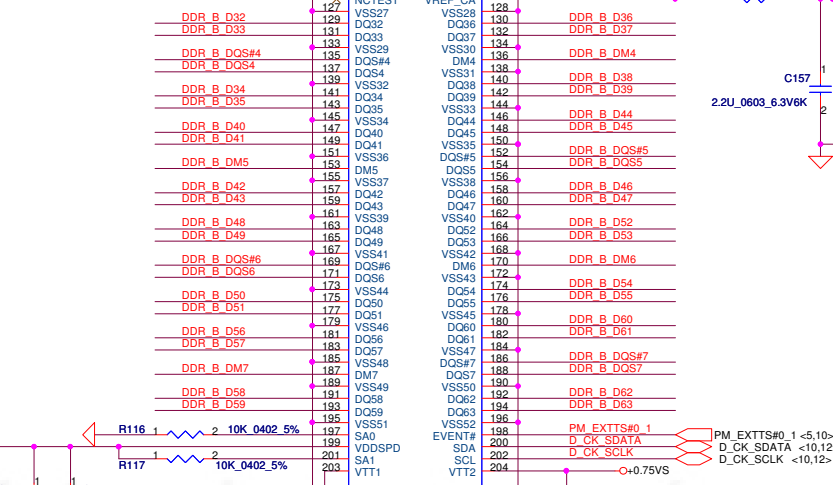
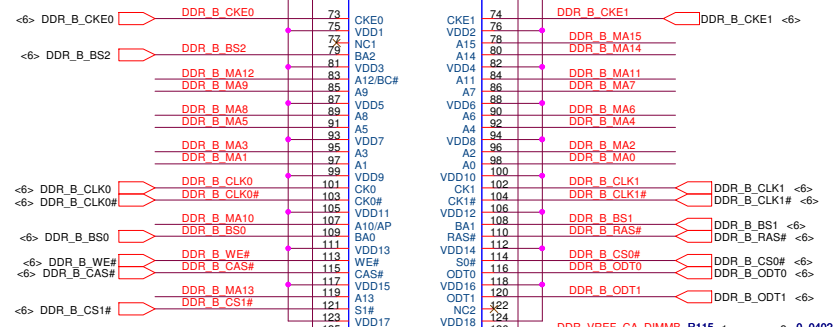
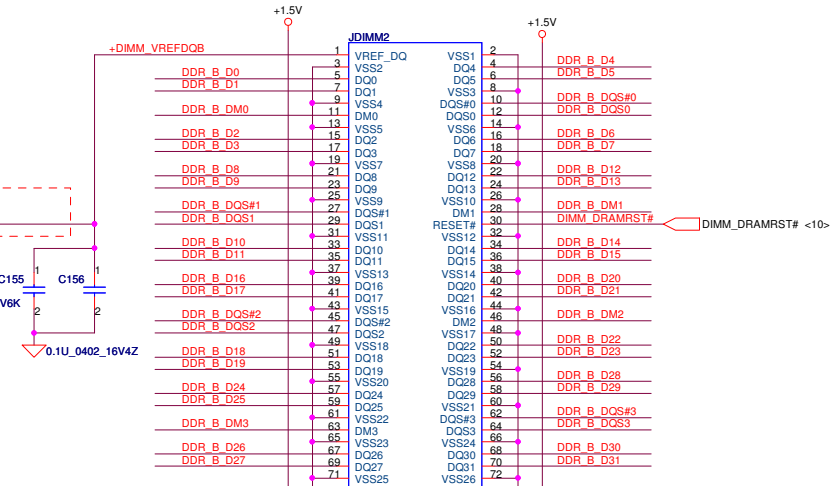
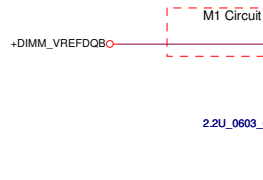
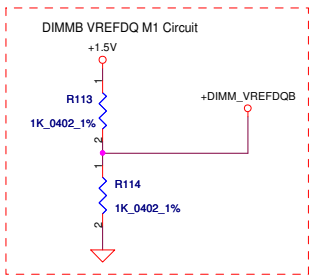
DDR3 SO-DIMM A Change to Reverse Type 8mm High

Compal Electronics, Inc.
DDRIII-SODIMM SLOT1

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Size	Document Number	Rev	File
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Date:	Thursday, July 08, 2010	Sheet	10 of 48

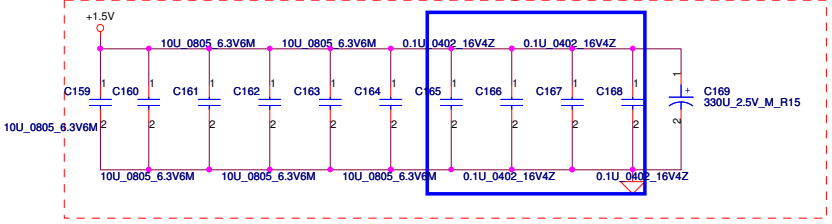
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- <6> DDR_B_D[0..63]
- <6> DDR_B_DM[0..7]
- <6> DDR_B_DQS#[0..7]
- <6> DDR_B_MA[0..15]

2008/9/8 #400755
 Calpella Clarkstead
 DDR3 SO-DIMM
 VREFDQ Platform
 Design Guide Change Details

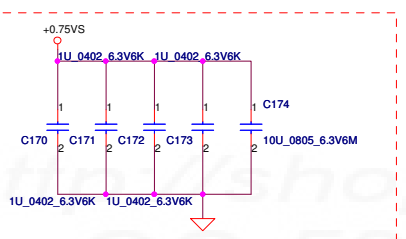


Layout Note:
Place near JDIMM2

Layout Note: Place these 4 Caps near Command and Control signals of DIMMB

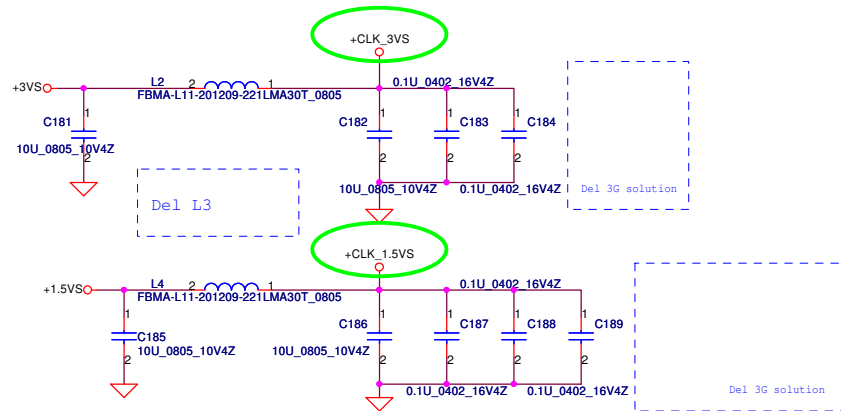
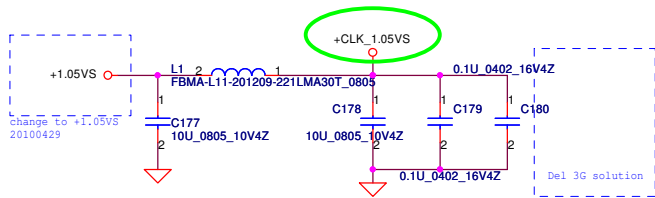


Layout Note:
Place near JDIMM2.203 & JDIMM2.204

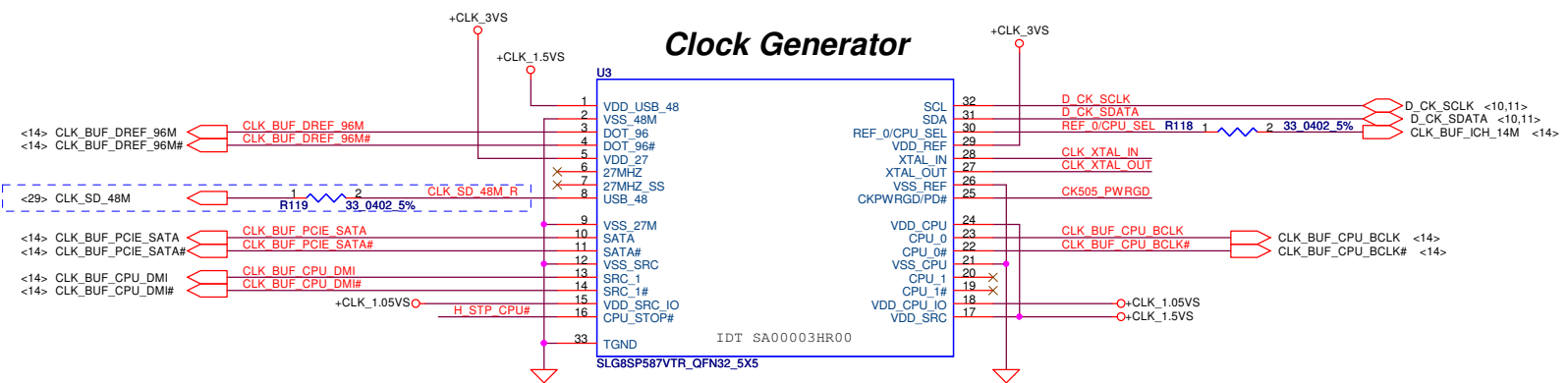


DDR3 SO-DIMM B
Reverse Type
4mm High

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<p>FOX_AS0A626-U4RN-7F CONN@</p>			<p>PM_EXTT#0_1 <5,10> D_CK_SDATA <10,12> D_CK_SCLK <10,12></p>	
<p>Security Classification</p>			<p>Document Number</p>	
<p>Issued Date</p>			<p>Thursday, July 08, 2010</p>	
<p>Deciphered Date</p>			<p>Sheet 11 of 48</p>	
<p>2010/08/01</p>			<p>Rev 1.0</p>	

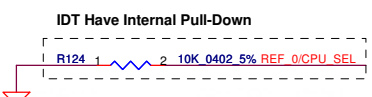
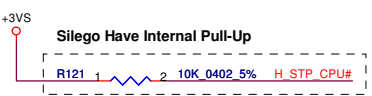


Clock Generator

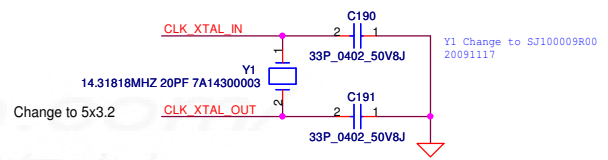
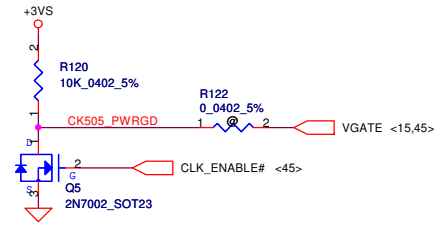
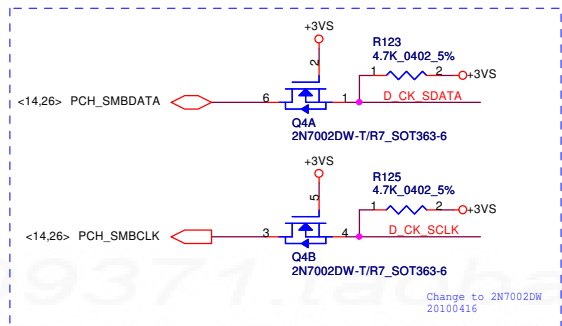


IDT: 9LRS3199AKLFT, SA00003P00
 SILEGO: SLG8SP587V(WF), SA00002XY10
 Low Power:
 IDT: 9LVS3199AKLFT, SA00003HR00
 Realtek: RTM890N-631-GRT, SA00003HQ00

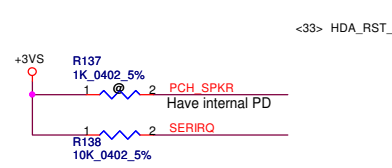
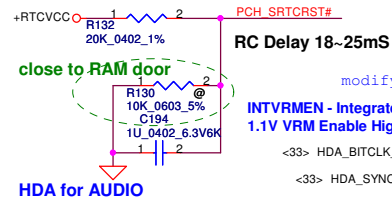
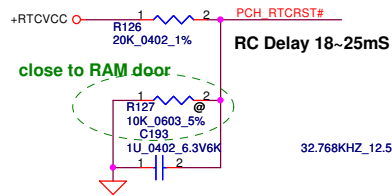
For Cardreader



PIN 30	CPU_0	CPU_1
0 (Default)	133MHz	133MHz
1	100MHz	100MHz

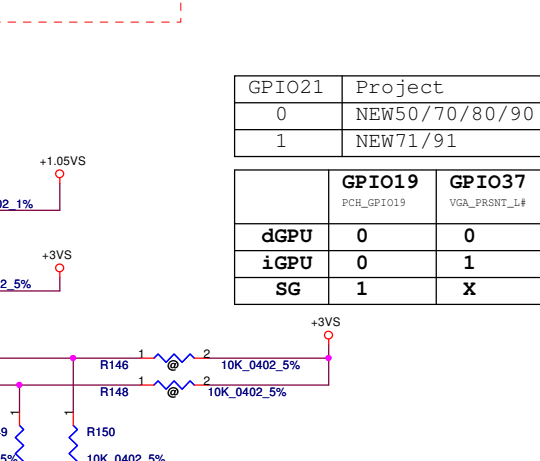
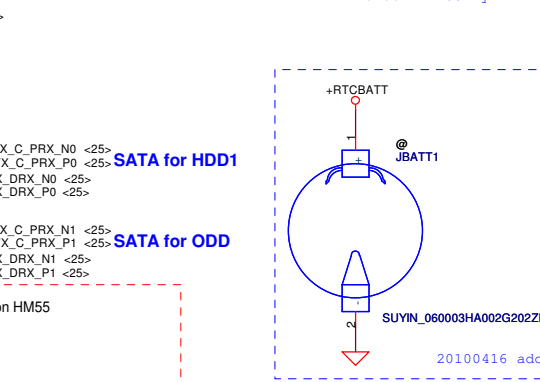
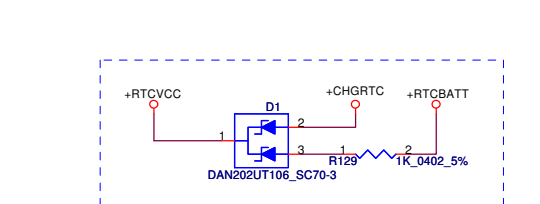
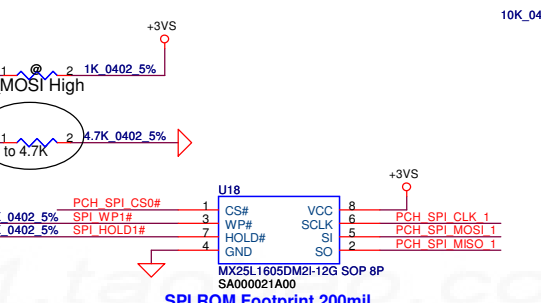
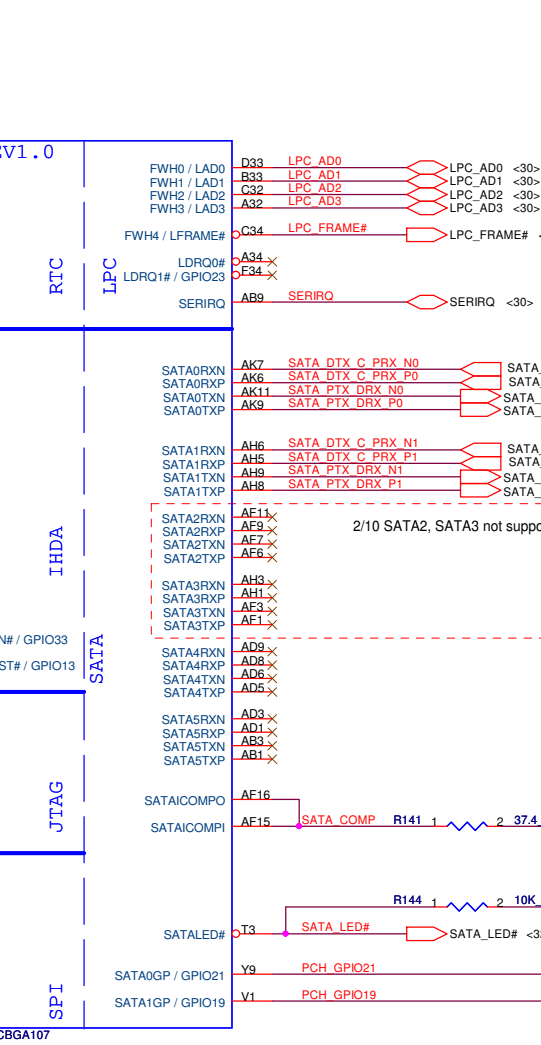
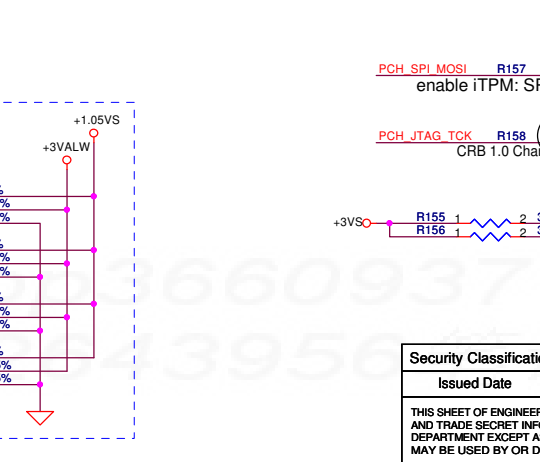
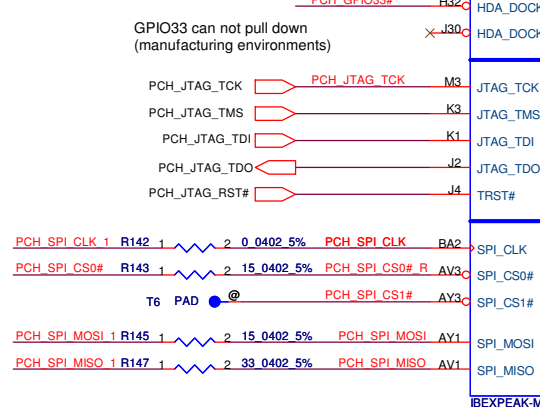
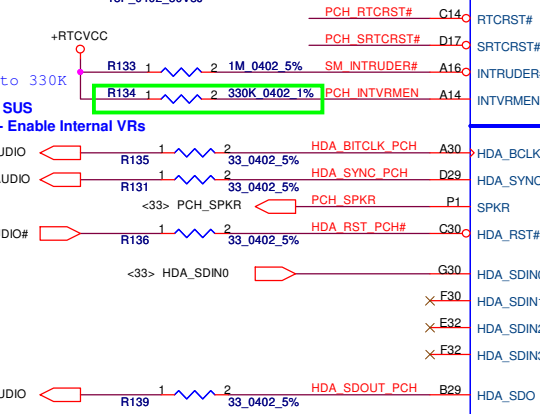
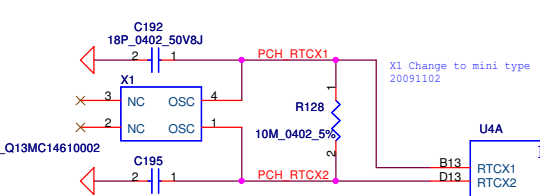


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	PEW71 M/B LA-6582P Schematic			1.0	
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If GPIO33 pull down, ME will not working. For factory update ME, pull down resistor pull under door.

GPIO33 has a weak internal pull-up
NOTE: Asserting the GPIO33 low on the rising edge of PWROK will also halt Intel Management Engine after chipset bringup and disable runtime Intel Management Engine features. This is a debug mode and must not be asserted after manufacturing/ debug.



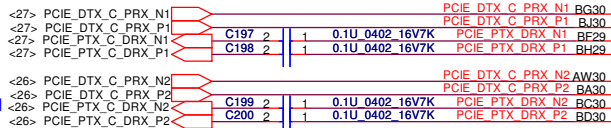
GPIO21	Project	
0	NEW50/70/80/90	
1	NEW71/91	

	GPIO19	GPIO37
	PCH_GPIO19	VGA_PRSNT_L#
dGPU	0	0
iGPU	0	1
SG	1	X

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Size	Document Number	Customer		Rev	
	PEW71	M/B LA-6582P Schematic		1.0	
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For PCIE LAN

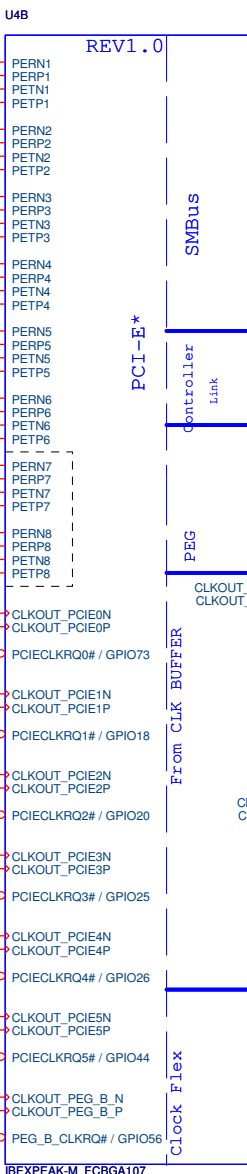
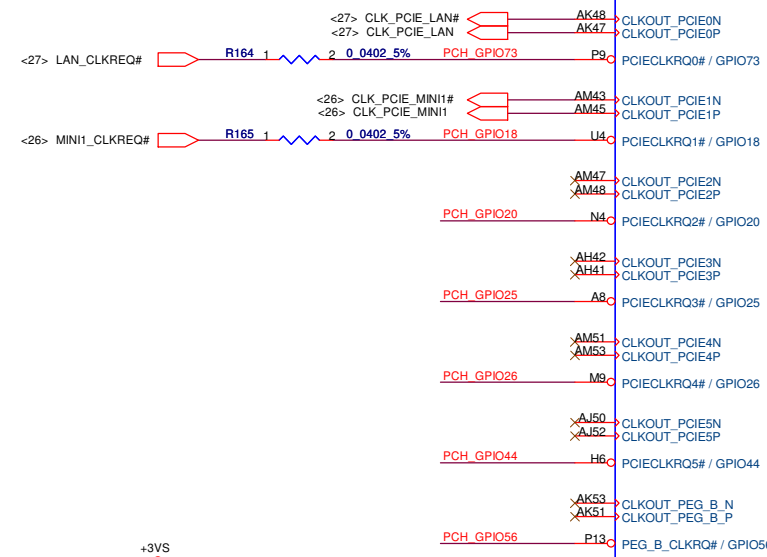
For Wireless LAN



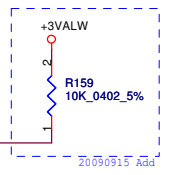
2/10 PCIE7, PCIE8 not support on HM55

For PCIE LAN

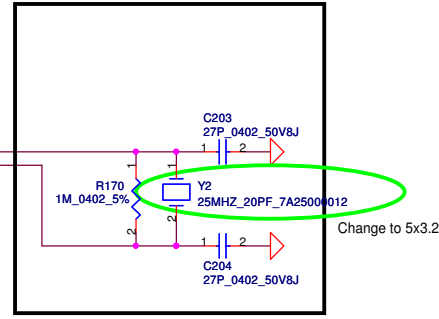
For Wireless LAN



1. Connect Directly EXPRESS CARD, MINI1, MINI2
2. Level Shift1, Pull-Up to +3VS CLOCK GEN, DIMM1, DIMM2
3. Level Shift2, Pull-Up to +3VS LAN
4. Level Shift3, Pull-Up to +3VS CPU & PCH XDP



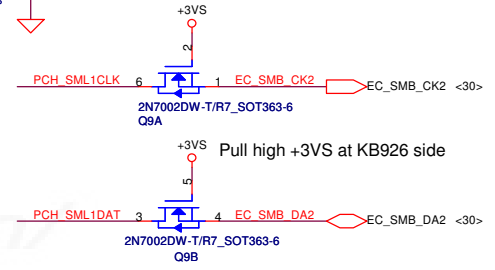
6/9 MOW23 Request add 25MHz crystal supporting Integrated Graphics



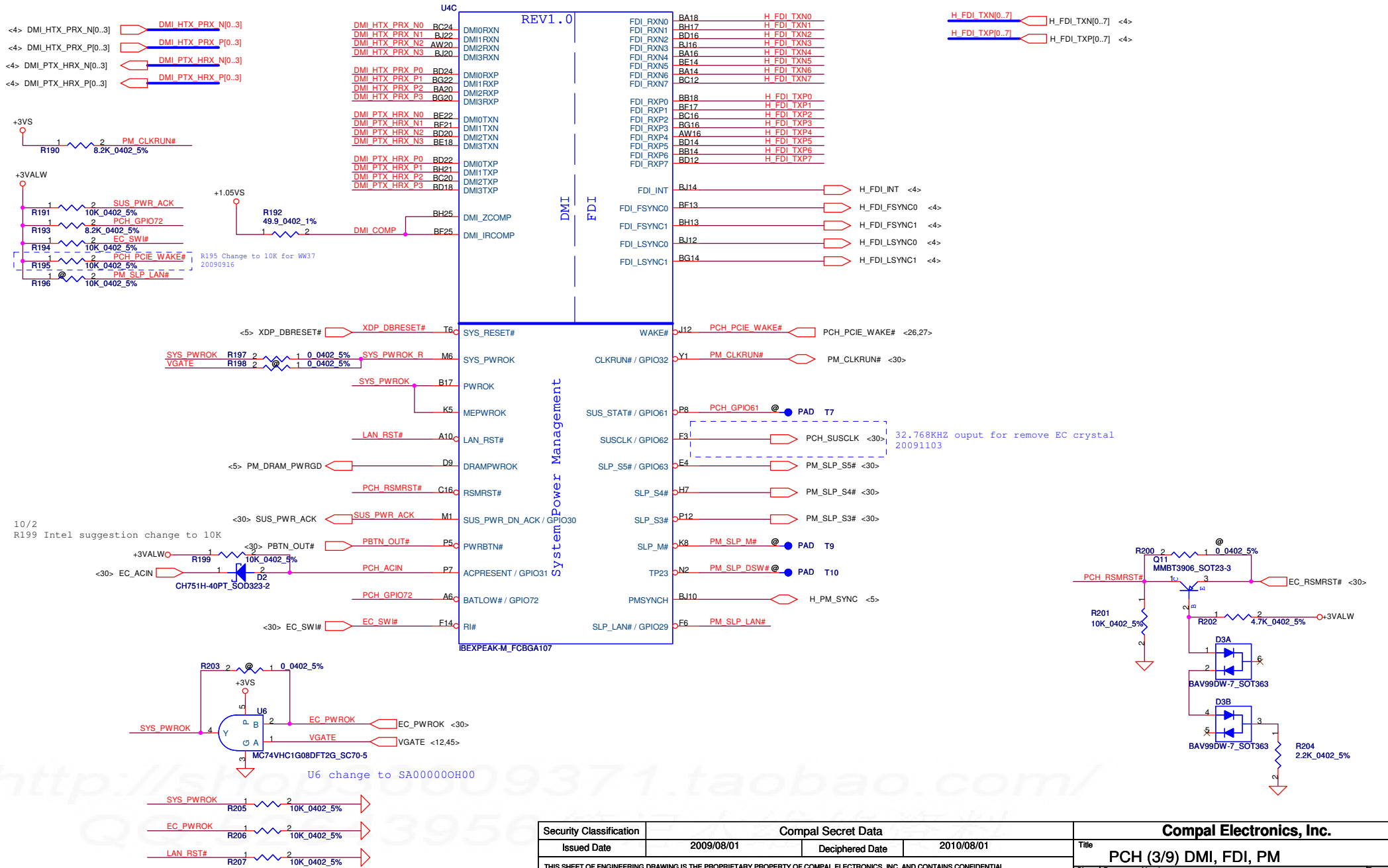
Change to 5x3.2

0602 GPIO65 no use PULL HIGH:PVT PULL DOWN:DVT

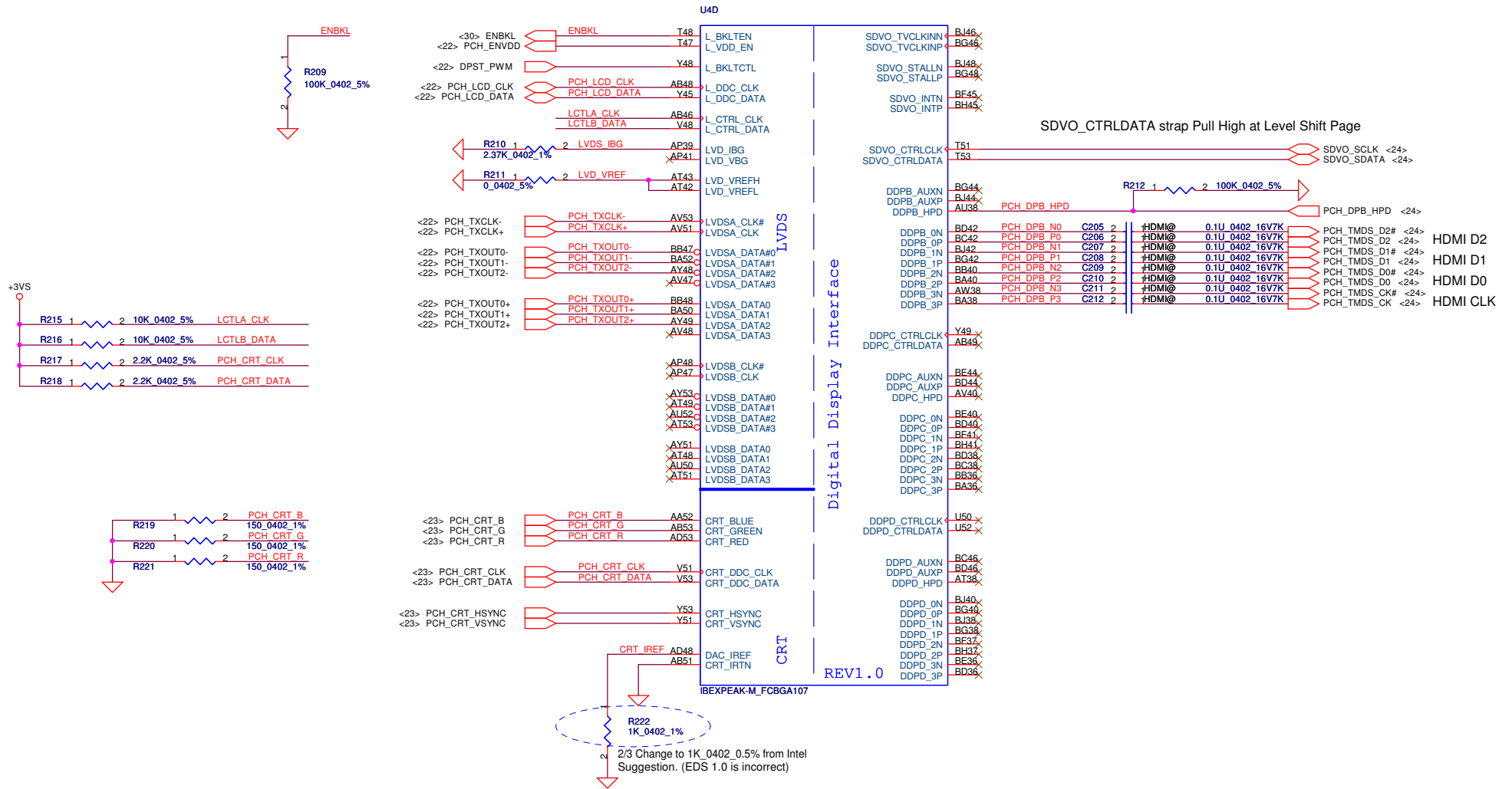
GPIO66 6L/8L SATA register spare	
GPIO66	0 6L *
	1 8L



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				Customer	PEW71 M/B LA-6582P Schematic
				Date	Thursday, July 08, 2010
				Sheet	14 of 48
				Rev	1.0

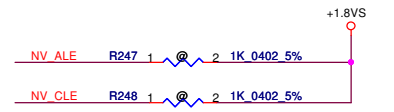
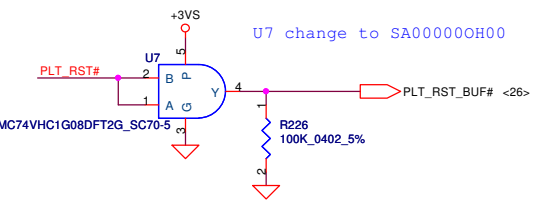
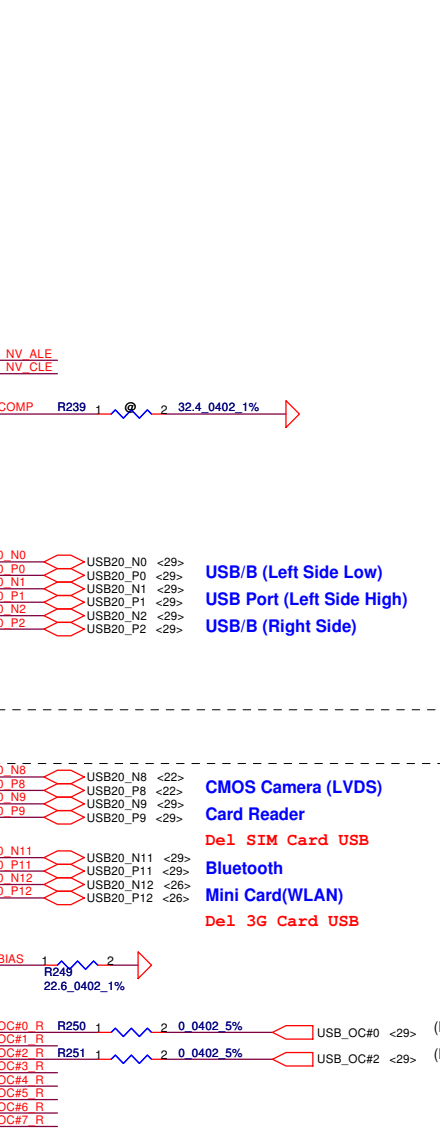
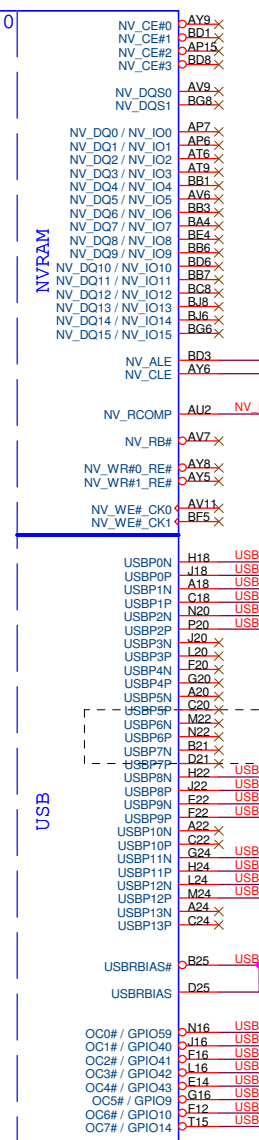
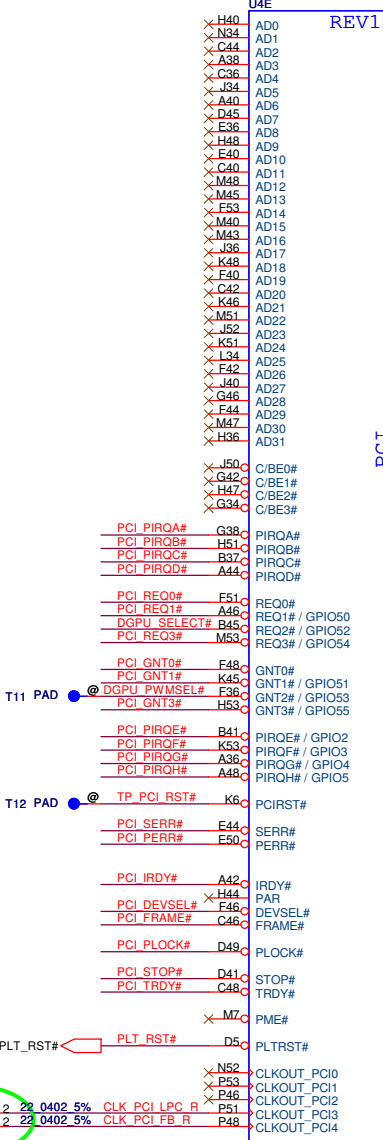
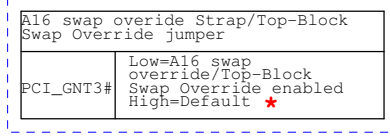
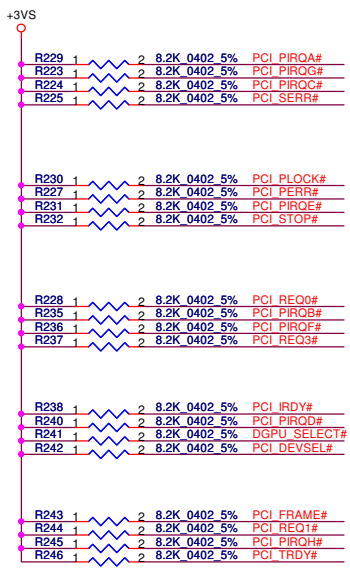


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Size	Document Number	Customer		Rev	
	PEW71	M/B LA-6582P Schematic		1.0	
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Size	Document Number	Date		Rev	1.0
Customer	PEW71 M/B LA-6582P Schematic	Thursday, July 08, 2010		Sheet	16 of 48



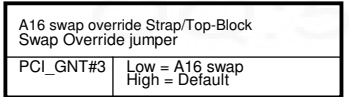
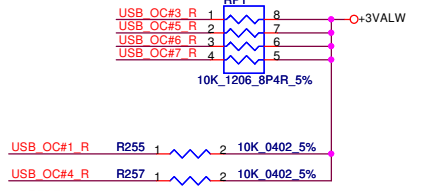
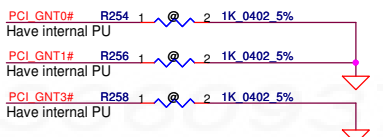
Intel Anti-Theft Technology	
NV_ALE	High=Enabled Low=Disables(floating) *
DMI Termination Voltage	
NV_CLE	Set to Vcc when HIGH Set to Vss when LOW

NV_ALE
Enable Intel Anti-Theft Technology : 8.2K PU to +3VS
Disable Intel Anti-Theft Technology : floating(internal PD)
NV_CLE
DMI termination voltage.
weak internal PU, don't PD

2008/1/6 2009MOW01 change to 22 ohm

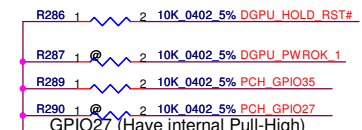
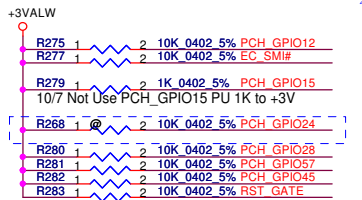
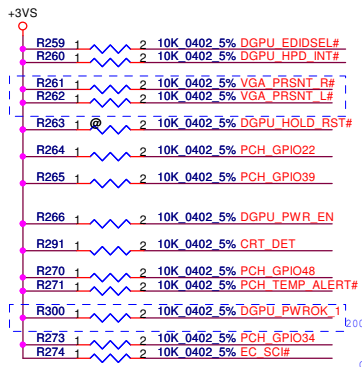
OC[0..3] use for EHCI 1
OC[4..7] use for EHCI 2

Boot BIOS Strap		
PCI_GNT#0	PCI_GNT#1	Boot BIOS Location
0	0	LPC
0	1	Reserved (NAND)
1	0	PCI
1	1	SPI



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Compal Electronics, Inc.			
Title PCH (5/9) PCI, USB, VRAM			
Size	Document Number	Rev	
Customer	PEW71 M/B LA-6582P Schematic	1.0	
Date:	Thursday, July 08, 2010	Sheet	17 of 48



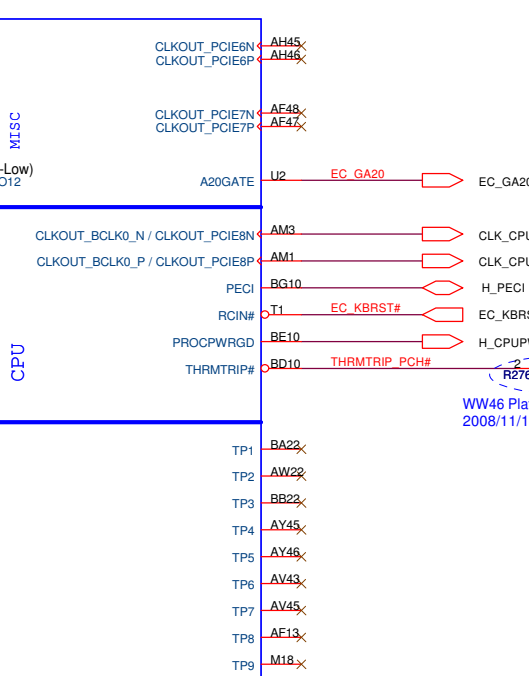
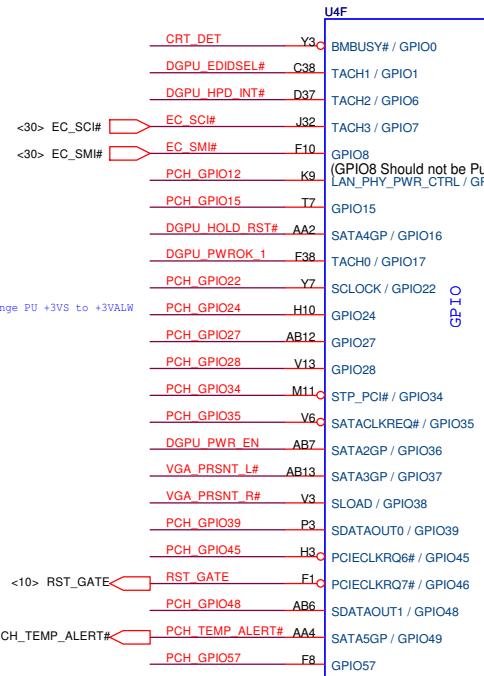
GPIO27 (Have internal Pull-High)
 High: VCCVRM VR Enable
 Low: VCCVRM VR Disable

	GPIO19	GPIO37
	PCH_GPIO19	VGA_PRSNT_L#
dGPU	0	0
iGPU	0	1
SG	1	0

GPIO27
 On-Die PLL Voltage Regulator
 This signal has a weak internal pull up
 * H : On-Die voltage regulator enable
 L : On-Die PLL Voltage Regulator disable

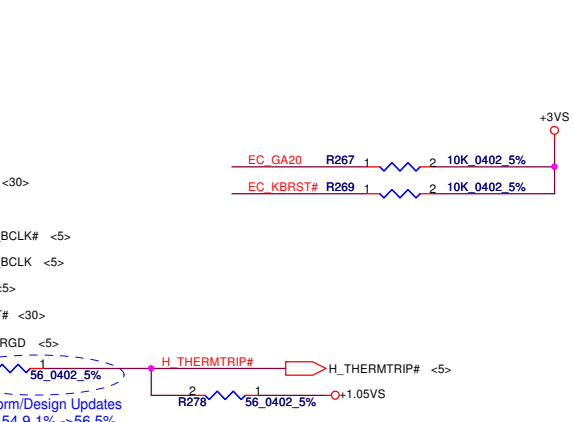
GPIO8
 This signal has a weak internal pull up
 can't Pull low

GPIO15
 Intel ME Crypto Transport Layer Security (TLS) chiper suite with no confidentiality
 *
 Intel ME Crypto Transport Layer Security (TLS) chiper suite with confidentiality
 It have weak internal PU 20K

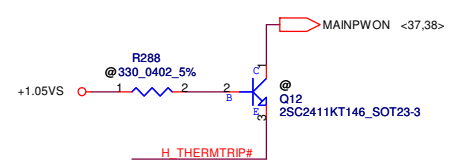


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IBEXPEAK-M_FCBGA107

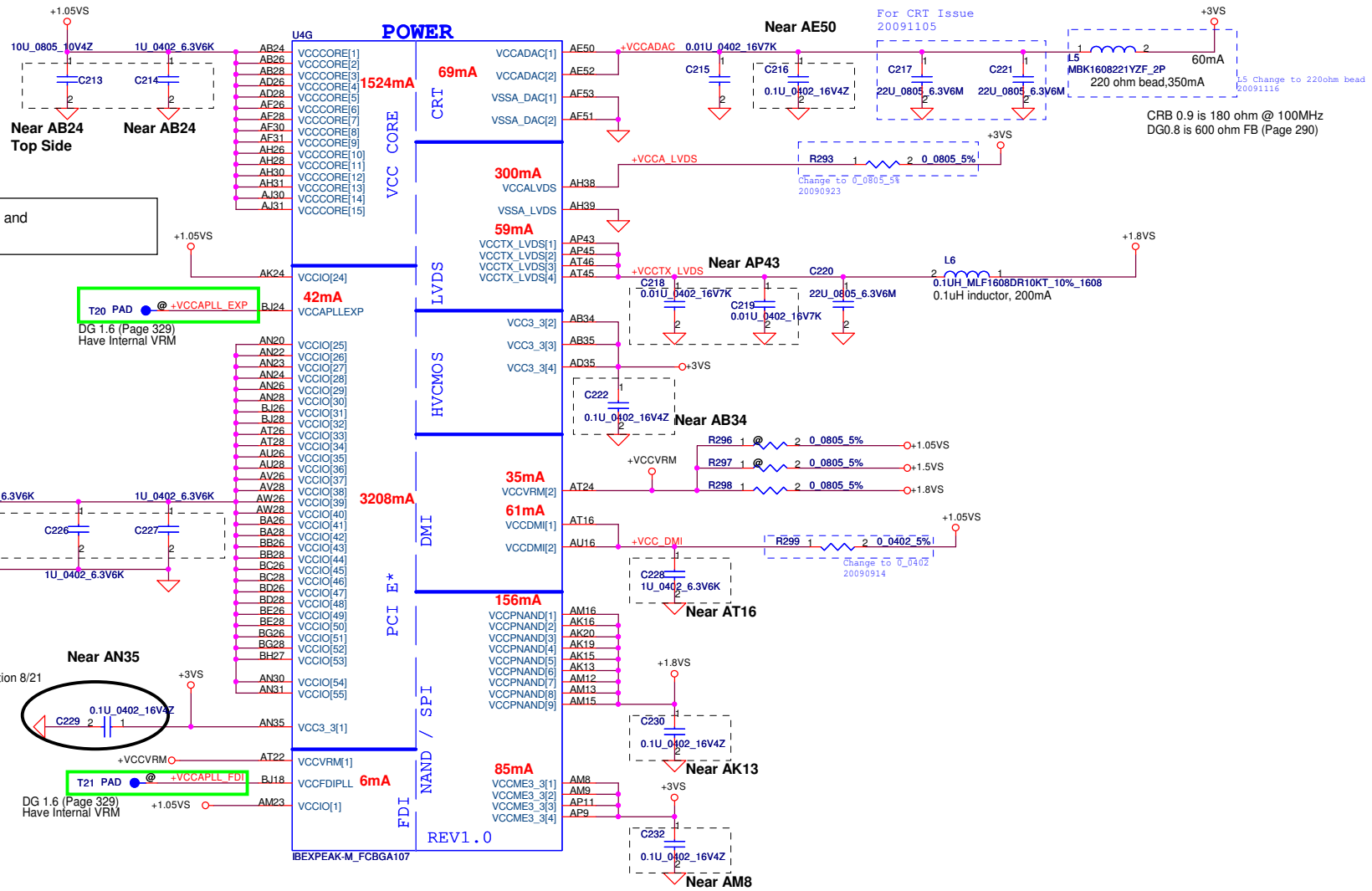


WW46 Platform/Design Updates
 2008/11/17 54.9 1% ->56 5%



INIT3_3V
 This signal has weak internal PU, can't pull low

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Size	Document Number	Date		Rev	
Customer	PEW71 M/B LA-6582P Schematic	Thursday, July 08, 2010		1.0	
				Sheet 18 of 48	



Intel suggest follow CRB 8/21

All Ibox Peak-M Power rails with netnames +1.1VS and +1.1V rails are actually +1.05VS and +1.05V rails

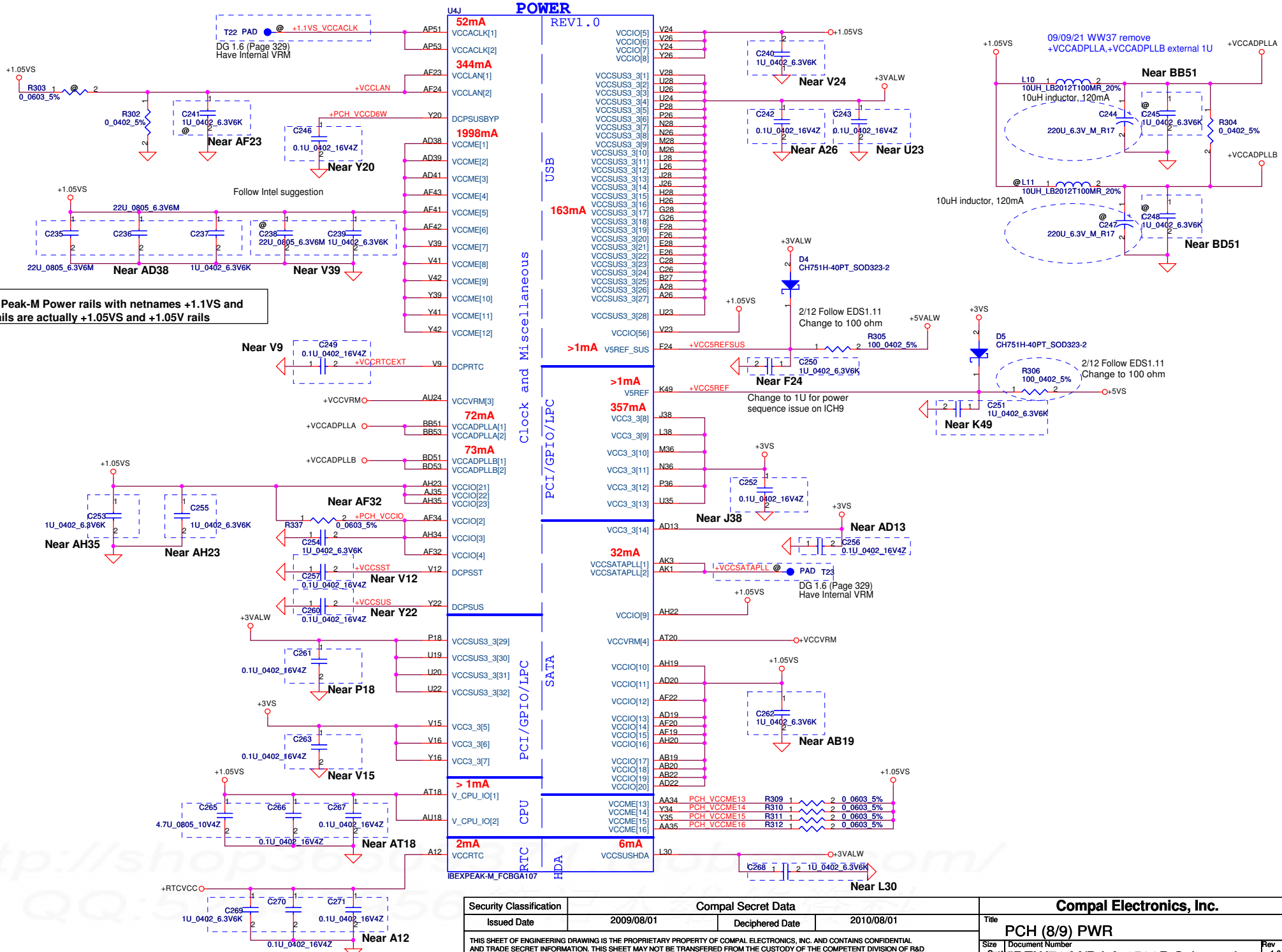
T20 PAD @ +VCCAPLL EXP
 DG 1.6 (Page 329)
 Have Internal VRM

Follow Intel suggestion 8/21

T21 PAD @ +VCCAPLL FDI
 DG 1.6 (Page 329)
 Have Internal VRM

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 QQ:52643956

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Size	Document Number	Customer		Rev	
	PEW71 M/B LA-6582P Schematic			1.0	
Date:	Thursday, July 08, 2010	Sheet	19	of 48	



All Ihex Peak-M Power rails with netnames +1.1VS and +1.1V rails are actually +1.05VS and +1.05V rails

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Date:	Thursday, July 08, 2010	Sheet	20	of	48

U4I	VSS	H49
AY7	VSS159	H5
B11	VSS160	H5
B15	VSS161	J24
B19	VSS162	K11
B23	VSS163	K43
B31	VSS164	K47
B35	VSS165	K47
B39	VSS165	L14
B43	VSS166	L18
B47	VSS167	L2
B51	VSS168	L2
B7	VSS169	L22
BG12	VSS170	L32
BB12	VSS171	L36
BB16	VSS172	L40
BB20	VSS172	L52
BB24	VSS173	M12
BB28	VSS174	M16
BB30	VSS175	M16
BB34	VSS176	M20
BB38	VSS177	M38
BB42	VSS178	M38
BB49	VSS178	M38
BB5	VSS179	M42
BC10	VSS180	M46
BC14	VSS181	M49
BC18	VSS182	M5
BC2	VSS183	M8
BC22	VSS184	N24
BC32	VSS185	P11
BC36	VSS186	P22
BC40	VSS187	P22
BC44	VSS188	P30
BC52	VSS189	P32
BH9	VSS190	P34
BD48	VSS191	P42
BD49	VSS192	P45
BD5	VSS193	P47
BE12	VSS194	R2
BE16	VSS195	R52
BE20	VSS196	T12
BE24	VSS197	T41
BE30	VSS198	T46
BE34	VSS199	T49
BE38	VSS200	T5
BE42	VSS201	T8
BE46	VSS202	T30
BE48	VSS203	U30
BE50	VSS204	U31
BE6	VSS205	U32
BE8	VSS206	U34
BF3	VSS207	P38
BF49	VSS208	V11
BF51	VSS209	P16
BG18	VSS210	AF8
BG24	VSS211	V20
BG4	VSS212	V22
BG50	VSS213	V30
BH11	VSS214	AH15
BH15	VSS215	V32
BH19	VSS216	V34
BH23	VSS217	AH32
BH31	VSS218	V38
BH35	VSS219	AV18
BH39	VSS220	H43
BH43	VSS221	H47
BH47	VSS222	V45
BH7	VSS223	AH7
C12	VSS224	AJ19
C50	VSS225	AJ2
D51	VSS226	V5
E12	VSS227	AJ22
E16	VSS228	V7
E20	VSS229	V8
E24	VSS230	W2
E30	VSS231	W52
E34	VSS232	Y11
E38	VSS233	Y12
E42	VSS234	Y15
E46	VSS235	AT5
E49	VSS236	A4
E6	VSS237	Y23
E8	VSS238	Y28
F49	VSS239	Y28
F5	VSS240	Y31
G10	VSS241	Y32
G14	VSS242	Y38
G2	VSS243	Y43
G22	VSS244	Y46
G32	VSS245	P49
G36	VSS246	V5
G40	VSS247	V6
G44	VSS248	V8
G52	VSS249	P24
AF39	VSS250	T43
H16	VSS251	AD51
H20	VSS252	AT8
H30	VSS253	AD47
H34	VSS254	Y47
H38	VSS255	AT12
H42	VSS256	AM6
	VSS257	AT13
	VSS258	AM5
		AK45
		AK39
		AV14

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U4H	VSS	AK30
AB16	VSS0	AK30
AA19	VSS1	AK31
AA20	VSS2	AK32
AA22	VSS3	AK34
AA19	VSS4	AK35
AA24	VSS5	AK38
AA26	VSS6	AK43
AA28	VSS7	AK46
AA30	VSS8	AK49
AA31	VSS9	AK5
AA32	VSS10	AK6
AB11	VSS11	AK8
AB15	VSS12	AL2
AB23	VSS13	AL52
AB30	VSS14	AM11
AB31	VSS15	BB44
AB32	VSS16	AD24
AB38	VSS17	AM20
AB43	VSS18	AM22
AB47	VSS19	AM24
AB5	VSS20	AM26
AB8	VSS21	AM28
AC2	VSS22	BA42
AC52	VSS23	AM30
AD11	VSS24	AM31
AD12	VSS25	AM32
AD16	VSS26	AM34
AD23	VSS27	AM35
AD30	VSS28	AM38
AD31	VSS29	AM39
AD32	VSS30	AM42
AD34	VSS31	AM46
AD42	VSS32	AV22
AD44	VSS33	AM49
AD46	VSS34	AM7
AD49	VSS35	AA50
AD7	VSS36	BB10
AE2	VSS37	AN32
AE4	VSS38	AN50
AE12	VSS39	AN52
Y13	VSS40	AP12
AH49	VSS41	AP22
AU4	VSS42	AP42
AF35	VSS43	AP46
AF13	VSS44	AP49
AF45	VSS45	AP5
AF46	VSS46	AP8
AF49	VSS47	AR2
AF5	VSS48	AR52
AF8	VSS49	AT11
AF9	VSS50	BA12
AG2	VSS51	AH48
AG52	VSS52	AT32
AH11	VSS53	AT36
AH15	VSS54	AT41
AH16	VSS55	AT47
AH24	VSS56	AT7
AH32	VSS57	AV12
AV18	VSS58	AV16
H43	VSS59	AV20
H47	VSS60	AV24
AJ32	VSS61	AV30
AJ2	VSS62	AV34
AJ20	VSS63	AV38
AJ22	VSS64	AV42
AJ23	VSS65	AV46
AJ26	VSS66	AV49
AJ28	VSS67	AV5
AJ32	VSS68	AV8
Y11	VSS69	AW14
AJ34	VSS70	AW18
AT5	VSS71	AW2
A4	VSS72	BF9
AK12	VSS73	AW32
AM41	VSS74	AW36
AN19	VSS75	AW40
AK26	VSS76	AW52
AK22	VSS77	AY11
AK23	VSS78	AY43
AK28	VSS79	AY47
	VSS158	

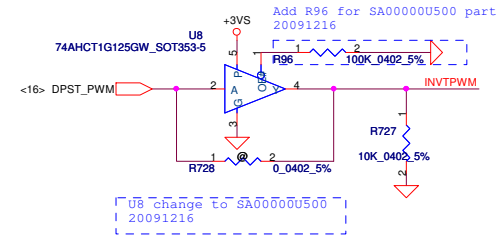
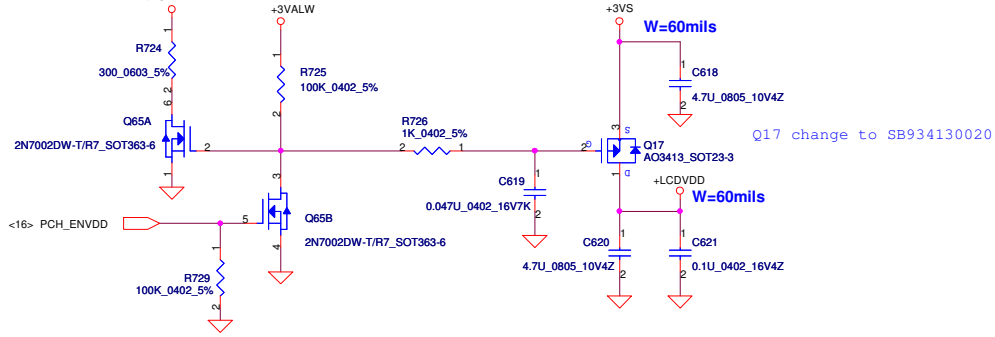
REV1.0

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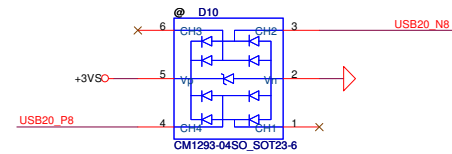
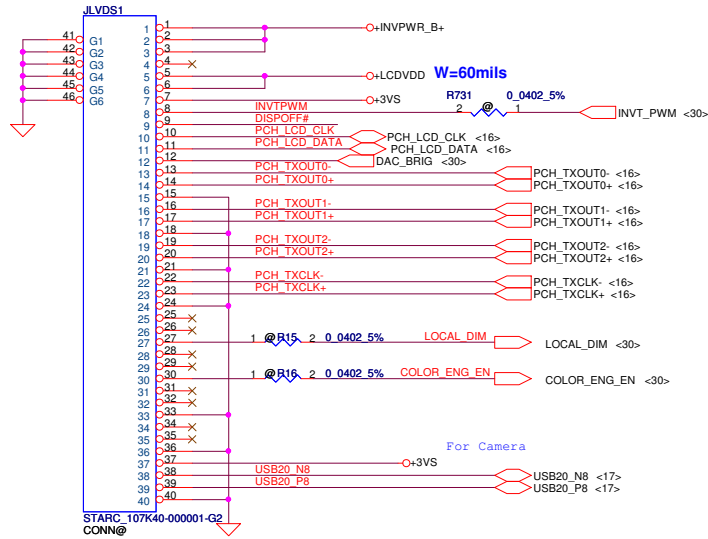
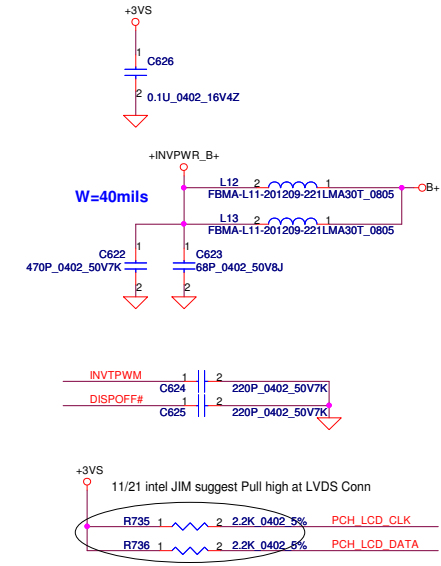
Del PCH XDP

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Size	Document Number	Date		Rev	1.0
Customer	PEW71 M/B LA-6582P Schematic	Thursday, July 08, 2010		Sheet	21 of 48

LCD POWER CIRCUIT



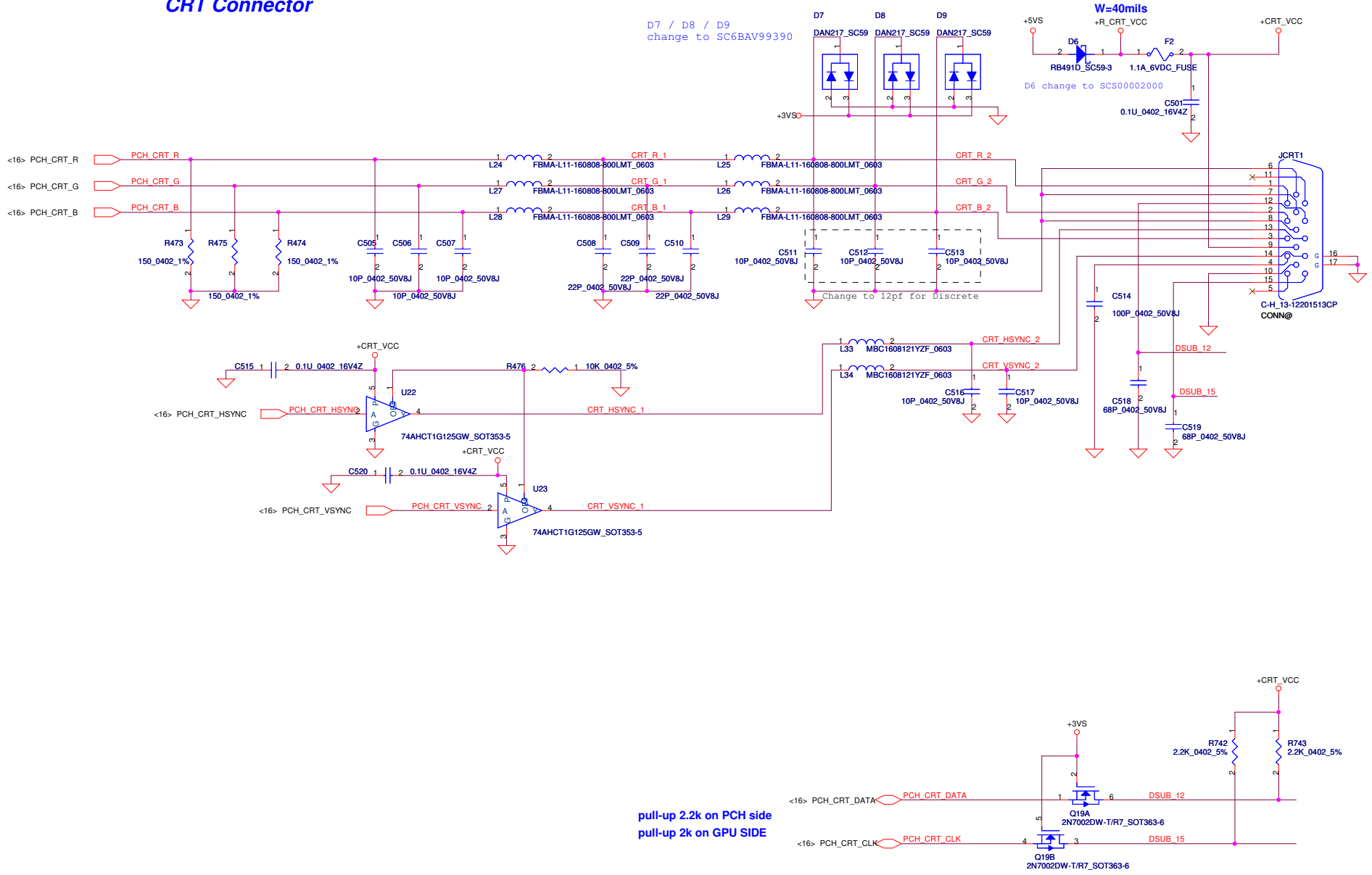
LED PANEL Conn.



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 QQ:52643956

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Issued Date	2009/5/12	Deciphered Date	2010/04/15	LVDS Connector	
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				Customer	PEW71 M/B LA-6582P Schematic
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				Rev	1.0

CRT Connector



D7 / D8 / D9
change to SC6BAV99390

W=40mils

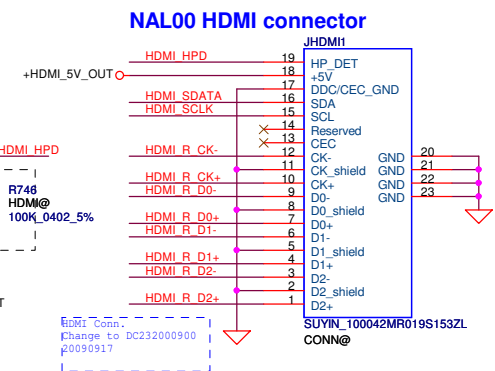
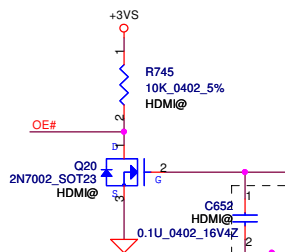
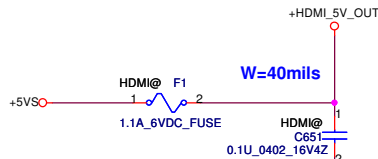
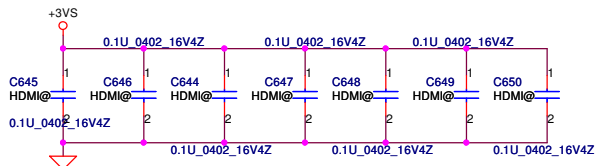
+5VS
+R_CRT_VCC
+CRT_VCC
D6
RB491D_SC59-3
1.1A_6VDC_FUSE
D6 change to SCS00002000
C501
0.1U_0402_16V4Z

Change to 12pf for Discrete

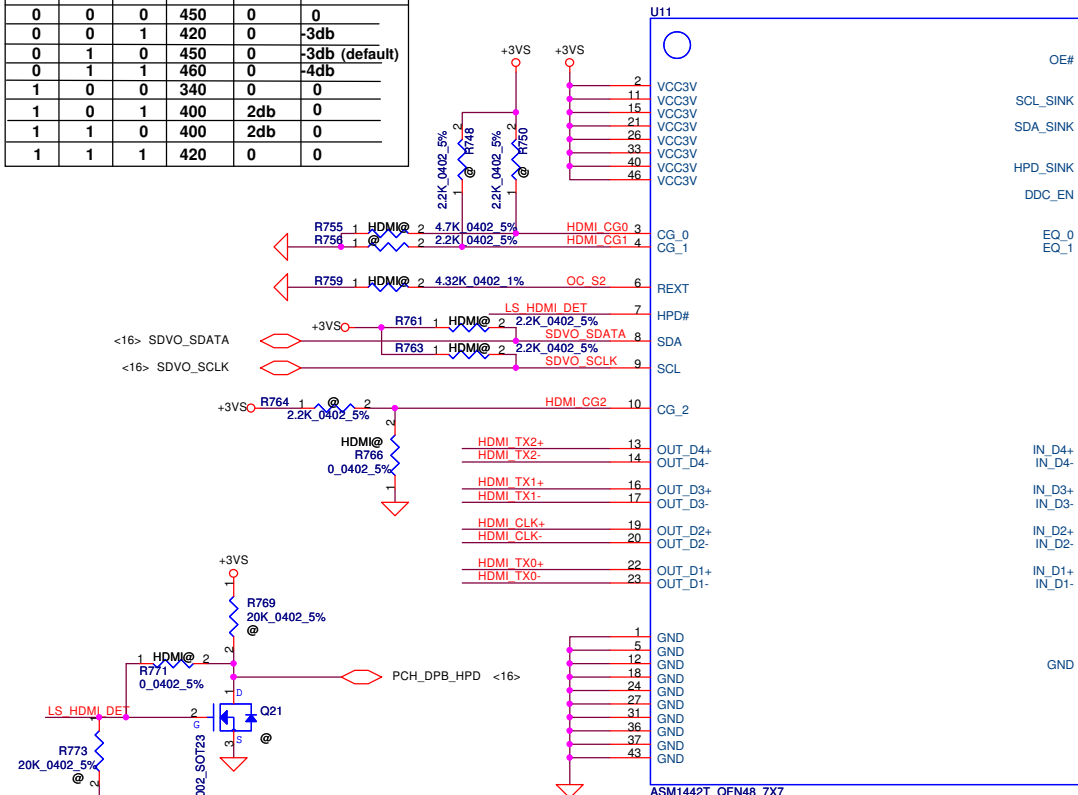
pull-up 2.2k on PCH side
pull-up 2k on GPU SIDE

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QQ:52643956

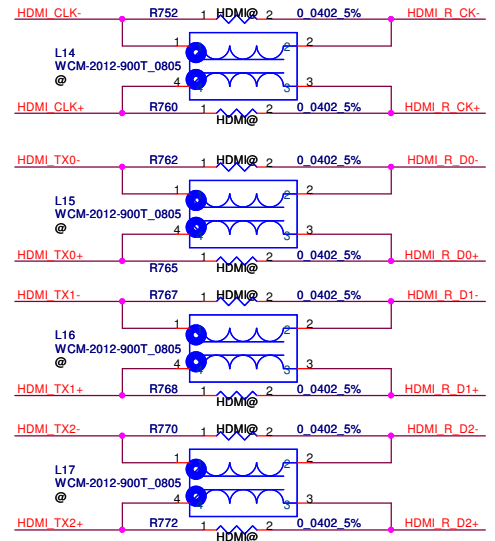
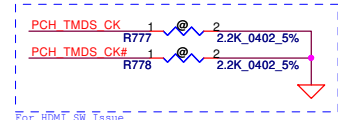
Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2009/5/12	Deciphered Date	2010/04/15	Title		
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Size B	Document Number	Date		Thursday, July 08, 2010	Sheet	23 of 48
	PEW71 M/B LA-6582P Schematic	Rev	1.0			



CG0	CG1	CG2	Swing	Pre-amp	Slew-rate
0	0	0	450	0	0
0	0	1	420	0	-3db
0	1	0	450	0	-3db (default)
0	1	1	460	0	-4db
1	0	0	340	0	0
1	0	1	400	2db	0
1	1	0	400	2db	0
1	1	1	420	0	0



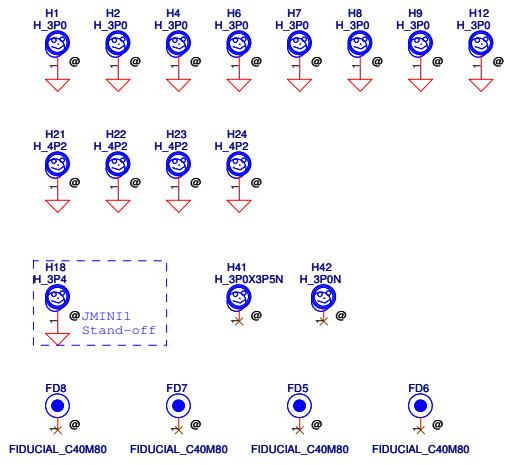
EQ0	EQ1	Equalization
0	0	12dB
0	1	9dB
1	0	6dB
1	1	3dB (default)



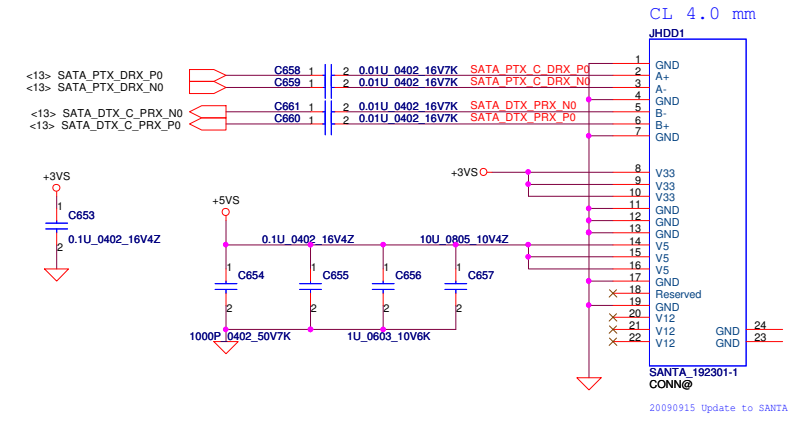
Change to TI P/N: SA00003DS00
20100608

http://shop36609371.taobao.com/
QQ:52649956

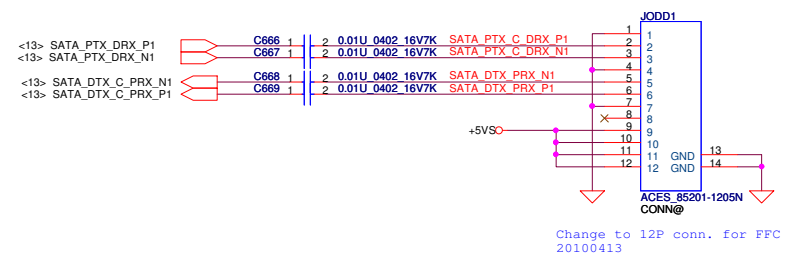
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Issued Date	2009/4/15	Deciphered Date	2010/04/15	Title	
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Size	Document Number	PEW71 M/B LA-6582P Schematic		Rev	1.0
Date:	Thursday, July 08, 2010	Sheet	24	of	48



SATA HDD1 Conn.



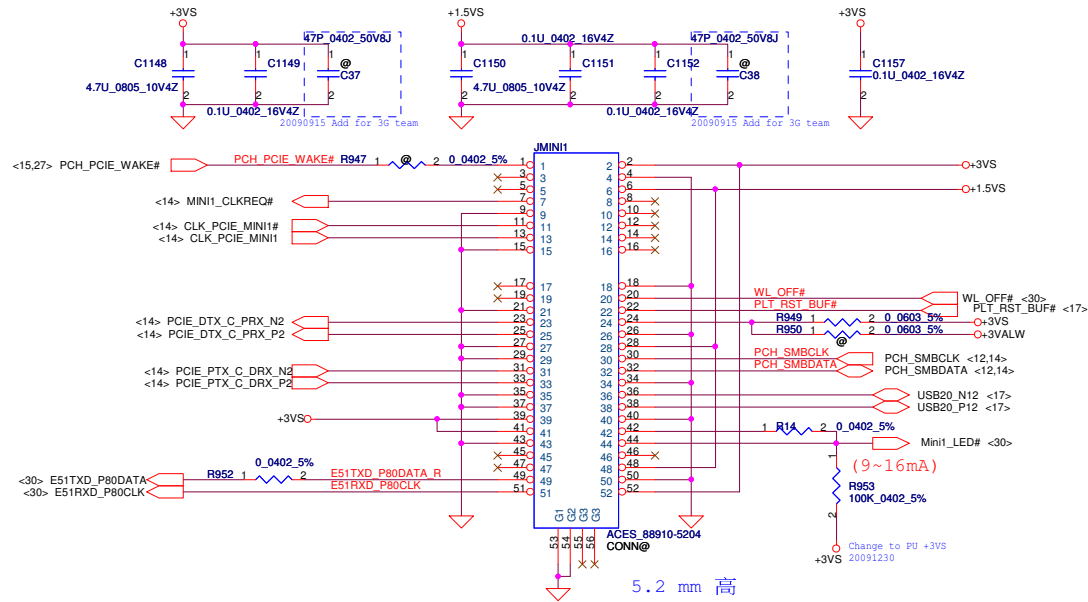
SATA ODD FFC Conn.



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Issued Date	2009/5/12	Deciphered Date	2010/04/15	Title HDD & ODD & Screw Hole	
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				Date Thursday, July 08, 2010	Rev 1.0
				Sheet 25	of 48

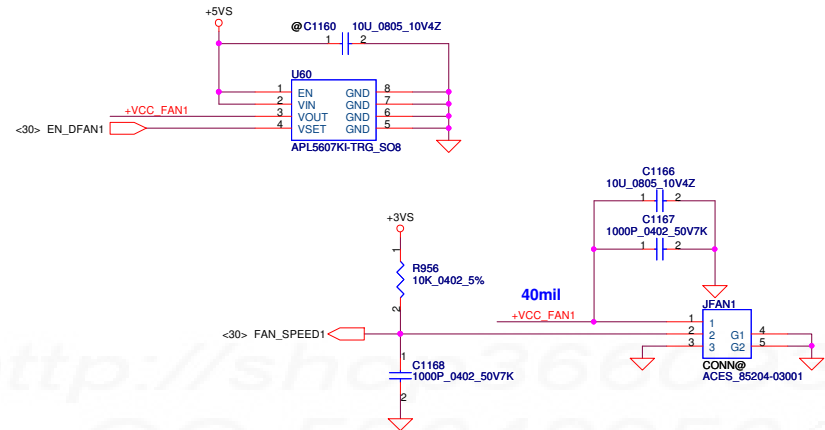
For Wireless LAN



Del 3G / GPS Module Connect

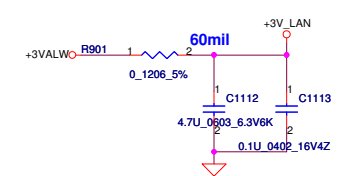
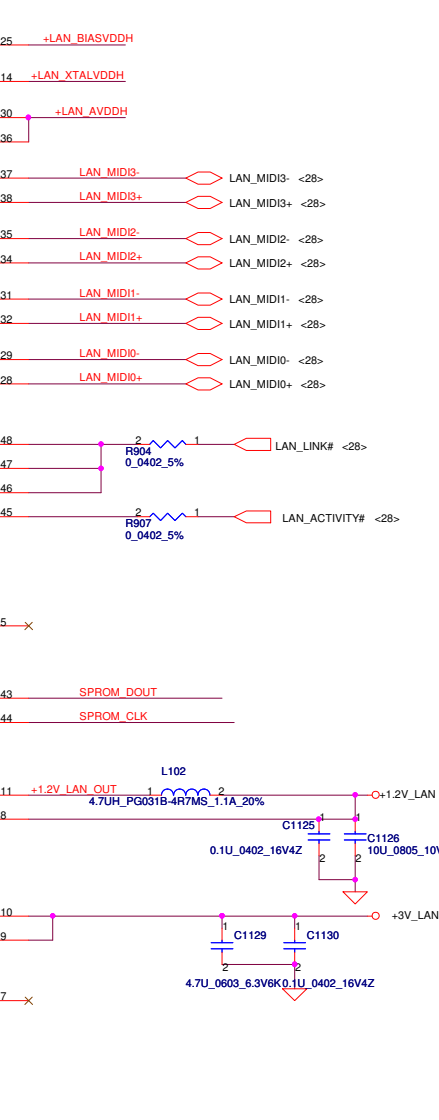
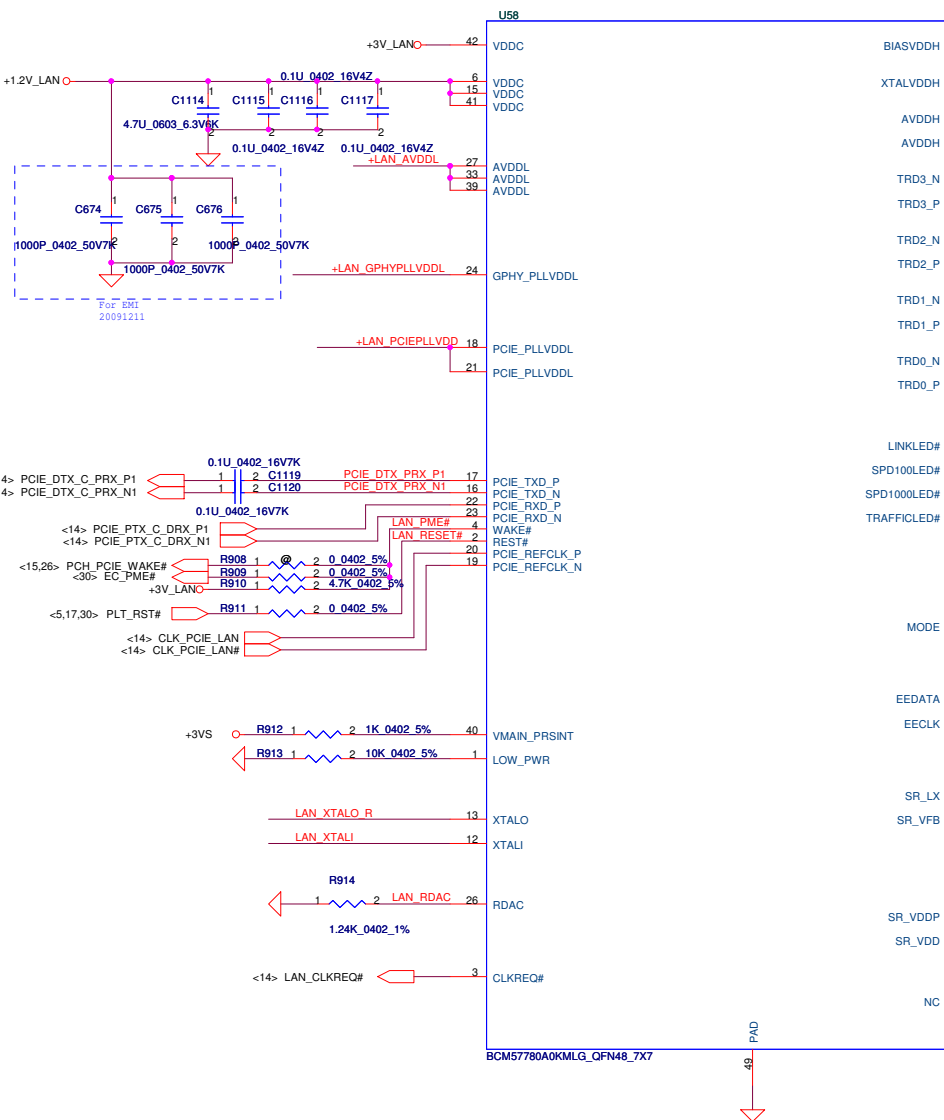
Mini Card Power Rating			
Power	Primary Power (mA)		Auxiliary Power (mA)
	Peak	Normal	Normal
+3VS	1000	750	
+3V	330	250	250 (wake enable)
+1.5VS	500	375	5 (Not wake enable)

FAN1 Conn

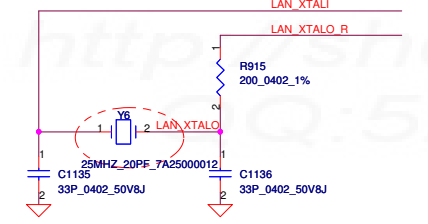
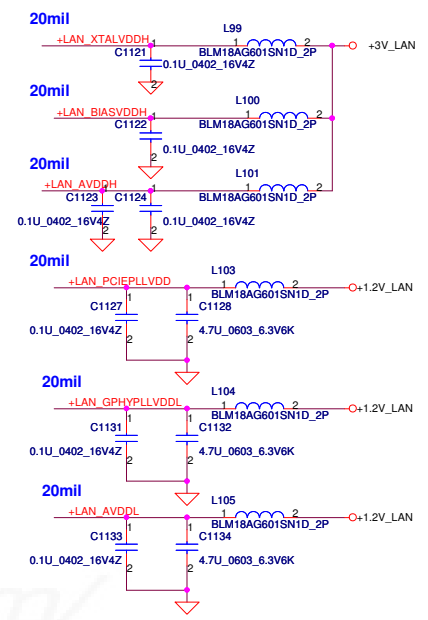
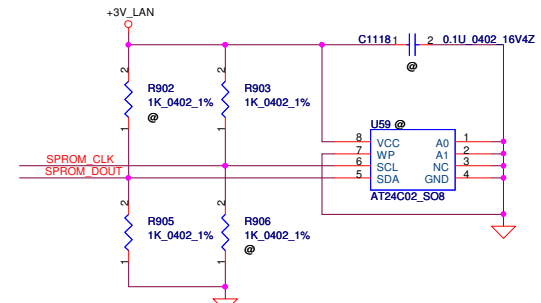


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Issued Date	2009/5/12	Deciphered Date	2007/12/25	Title		
				MINI CARD (WLAN & 3G)/FAN		
Size	Document Number			Rev		
B	PEW71 M/B LA-6582P Schematic			1.0		
Date:	Thursday, July 08, 2010	Sheet	26	of	48	

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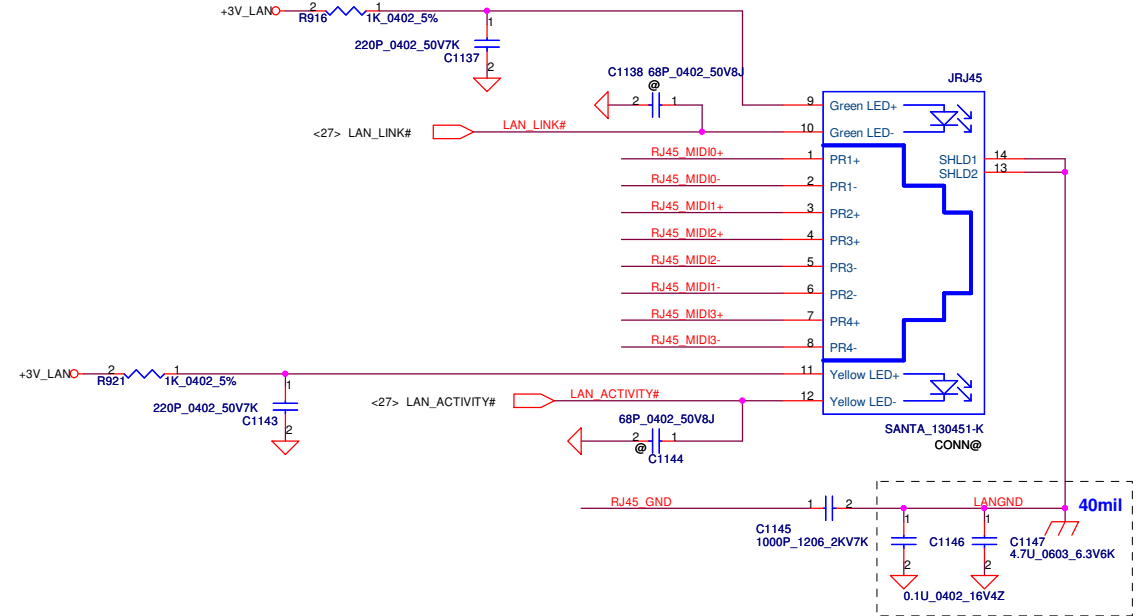
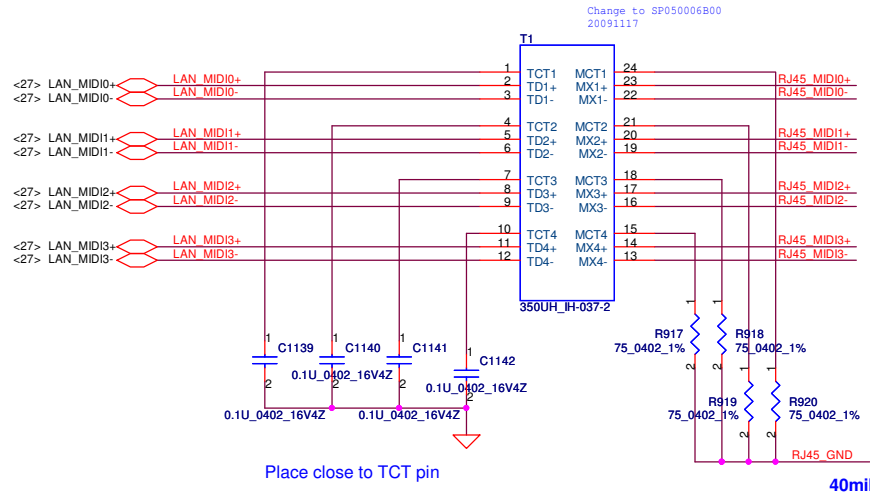


	SPROM_CLK (EECLK)	SPROM_DOUT (EEDATA)
On chip	1	0
AT24C02	1	1



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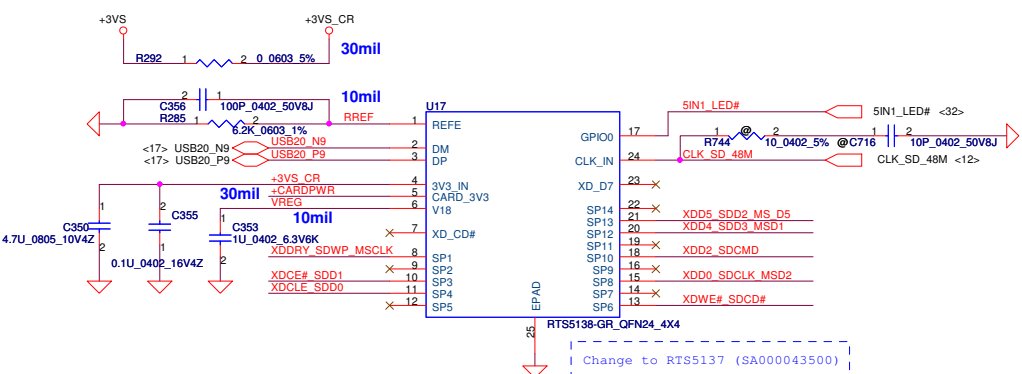
LAN Connector



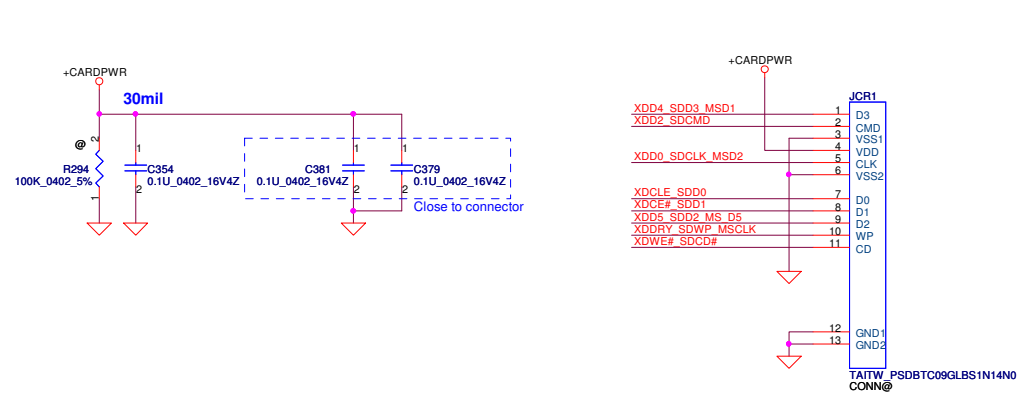
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Size	Document Number	Date		Rev	1.0
Customer	PEW71 M/B LA-6582P Schematic	Thursday, July 08, 2010		Sheet	28 of 48

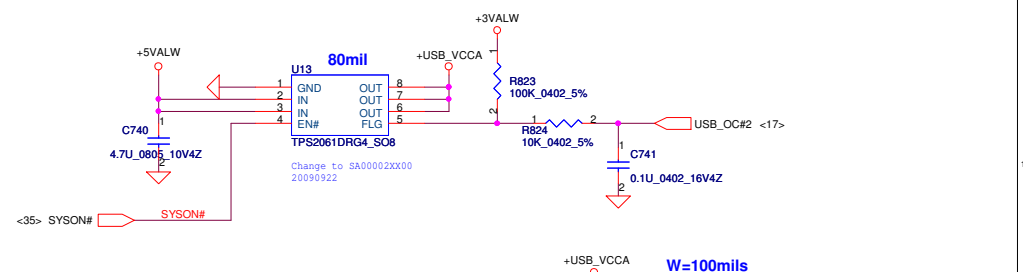
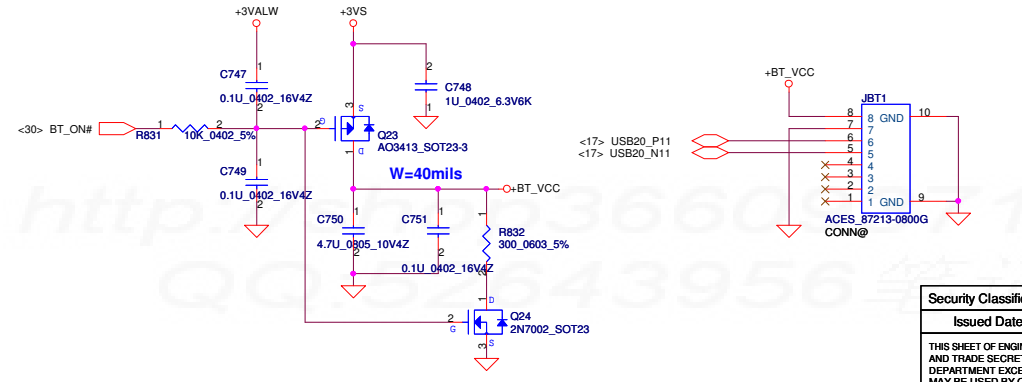
Card Reader RTS5138 / RTS5137
(only SD+MMC function)



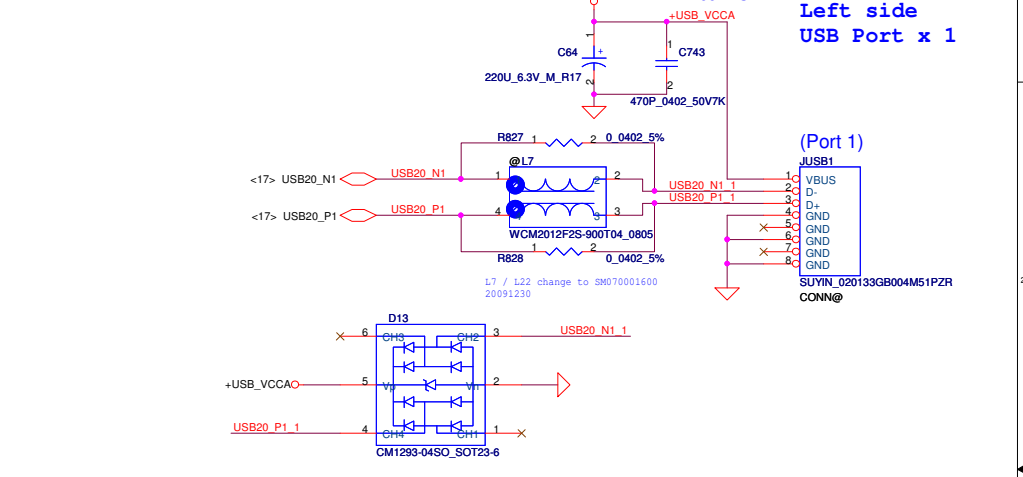
Card Reader Connector



Bluetooth Conn.

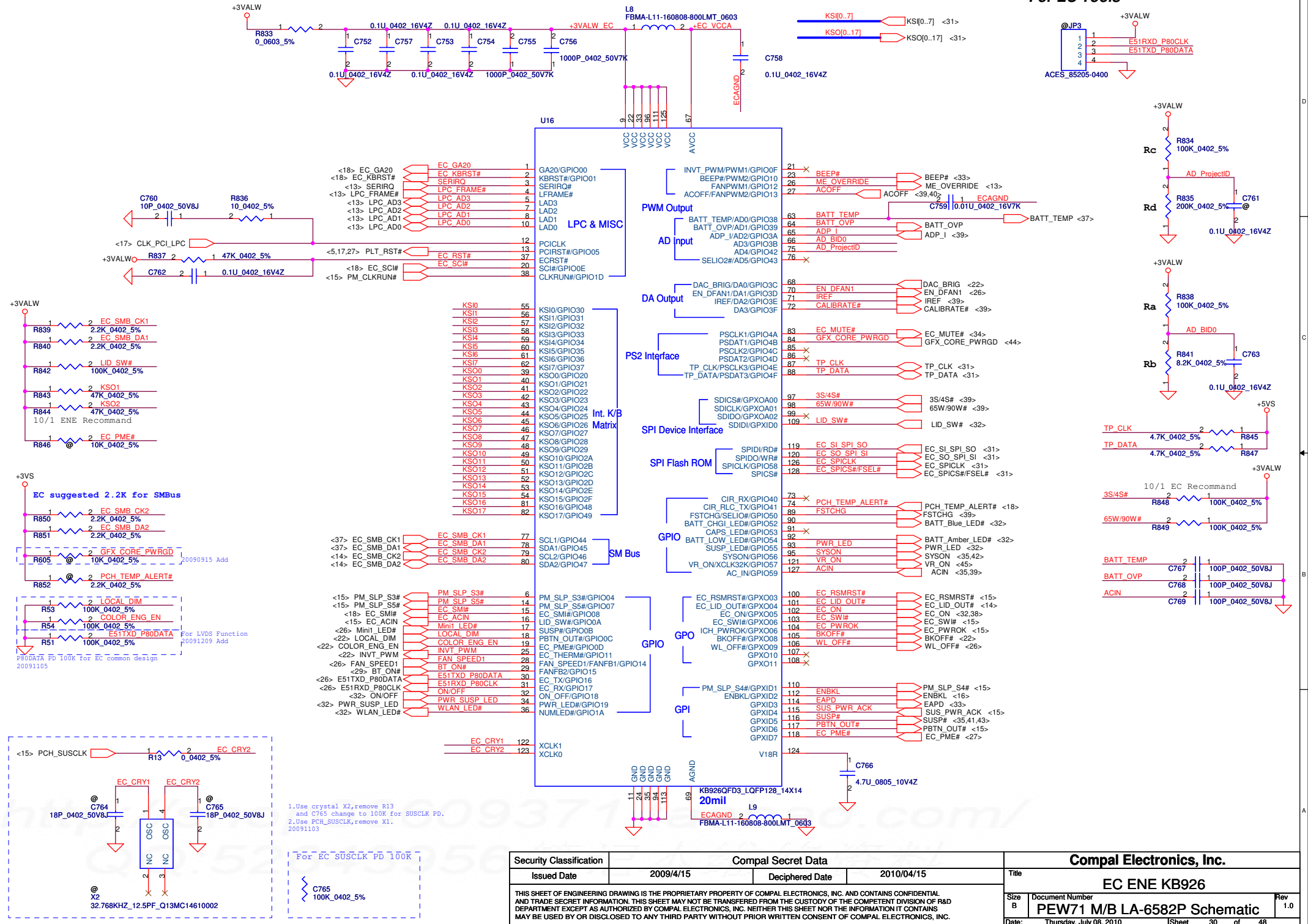


Left side USB Port x 1



USB/B Conn. (Port 0,2)

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				USB & Card reader& BT Connector	
				Size B	
				PEW71 M/B LA-6582P Schematic	
				Date: Thursday, July 08, 2010	
				Rev 1.0	
				E:\Sheet 29 of 48	

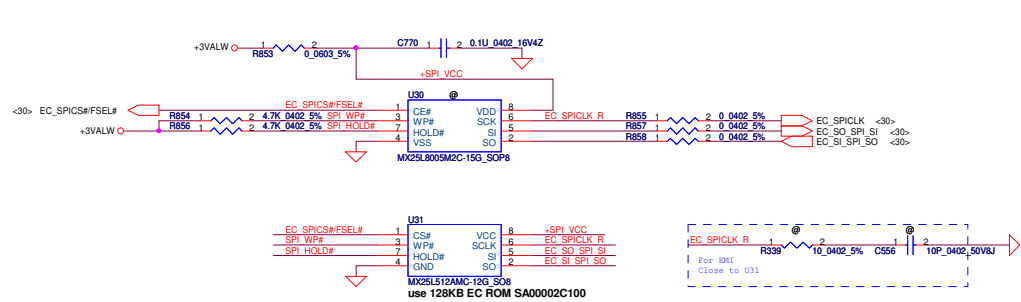
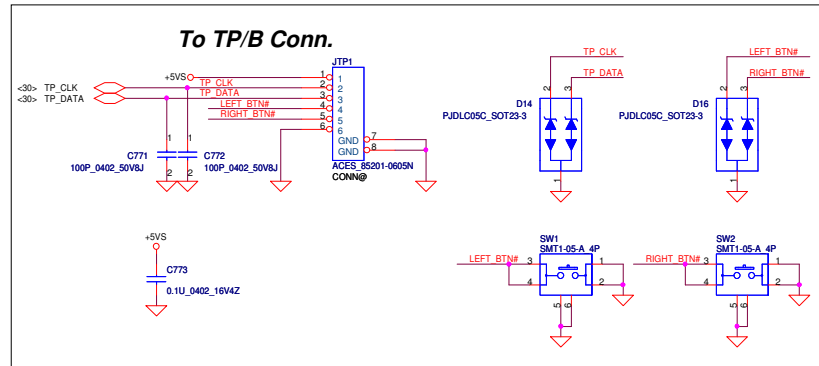
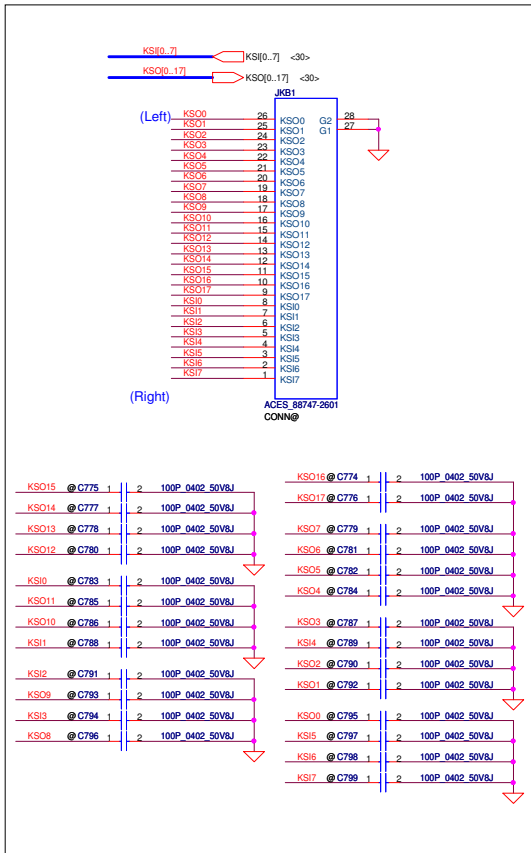


1. Use crystal X2, remove R13 and C765 change to 100K for SUSCLK PD.
 2. Use PCH_SUSCLK, remove X1.
 20091103

For EC SUSCLK PD 100K

C765
100K_0402_5%

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Size B	Document Number	Date		Sheet	Rev
	PEW71 M/B LA-6582P Schematic	Thursday, July 08, 2010		30	1.0



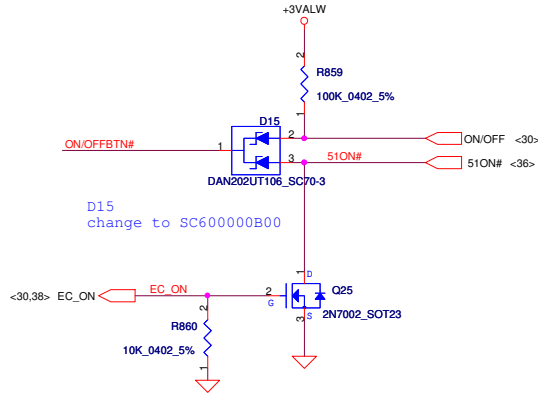
ENE suggestion SPI Frequency over 66MHz
 SST: 50MHz
 MXIC: 70MHz
 ST: 40MHz

To BTN/B Conn.

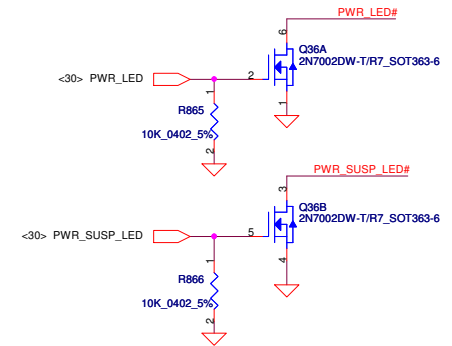
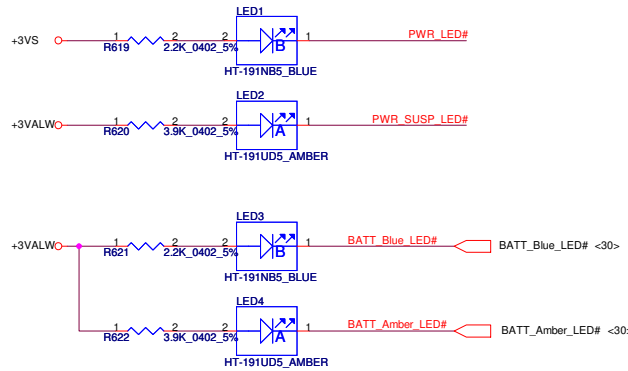
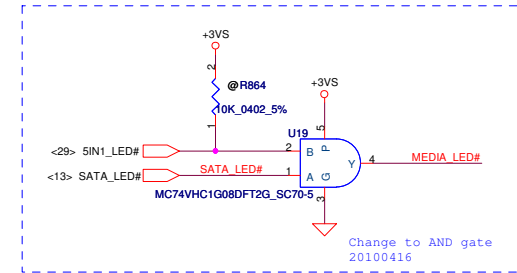
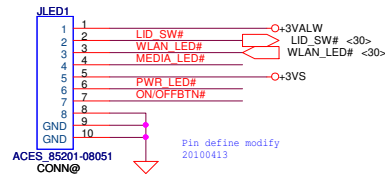
	KSO0	KSO3
KSI1	WL_BTN#	Program_BTN#
KSI2	T/P lock_BTN#	
KSI3	Back up_BTN#	Volum up_BTN#
KSI4	BT_BTN#	Volum down_BTN#
KSI5	Power save_BTN#	

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Power Button

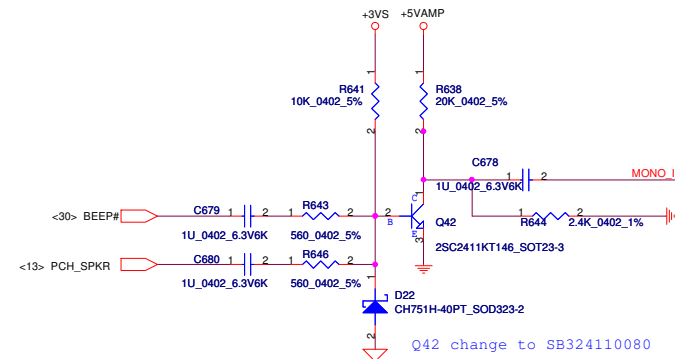
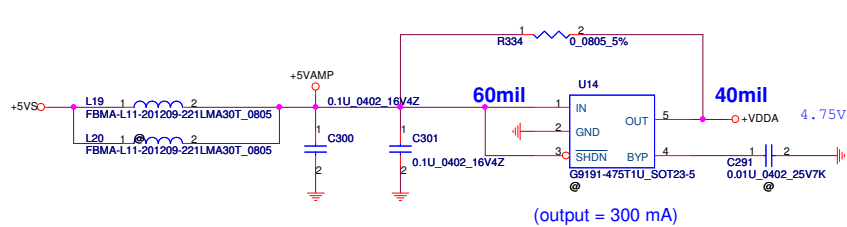


LED/B LEFT

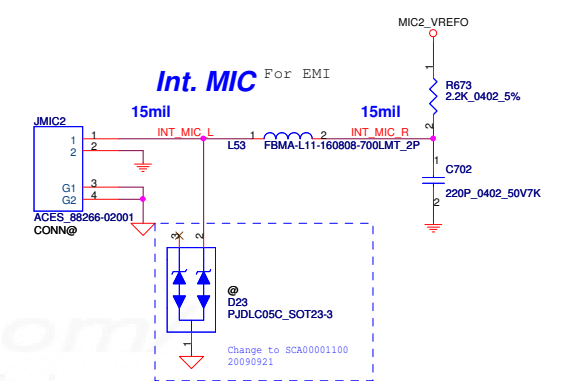
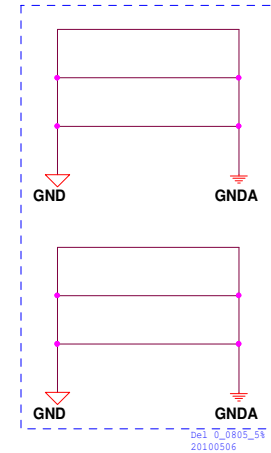
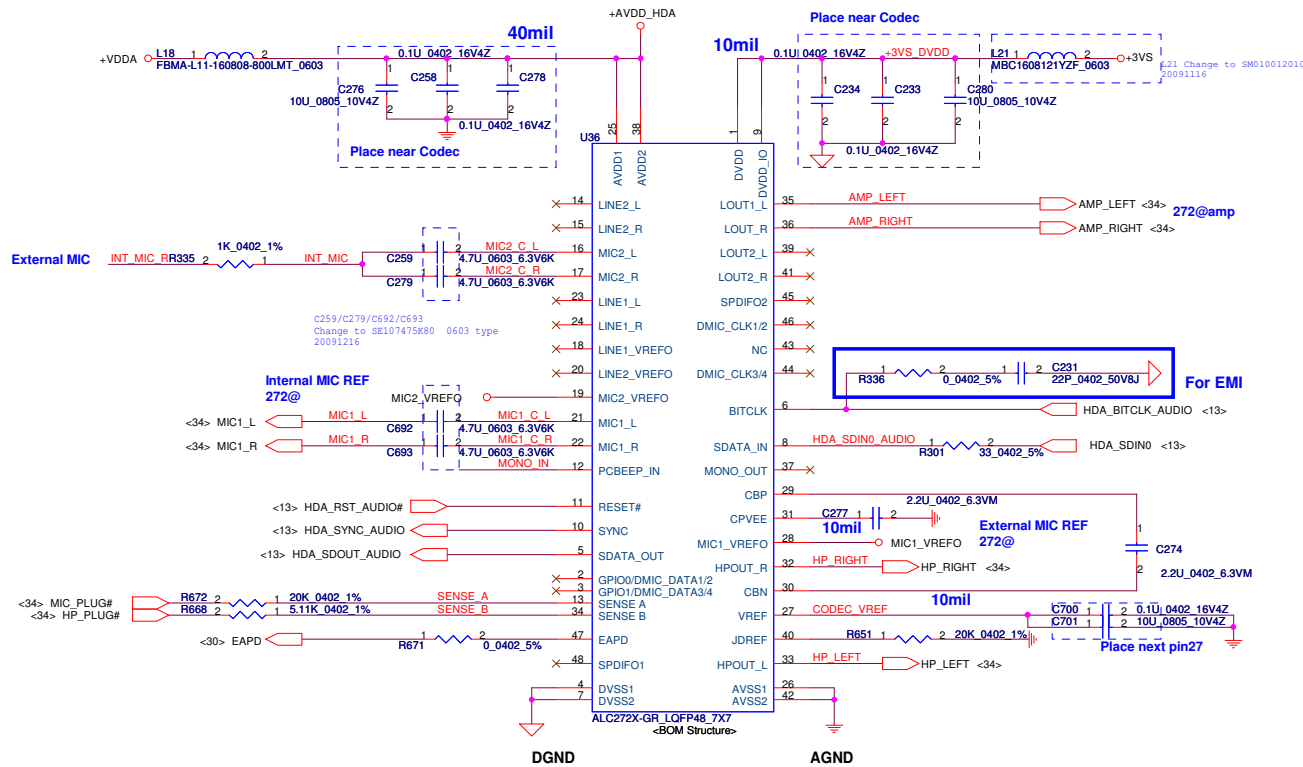


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				PEW71 M/B LA-6582P Schematic	
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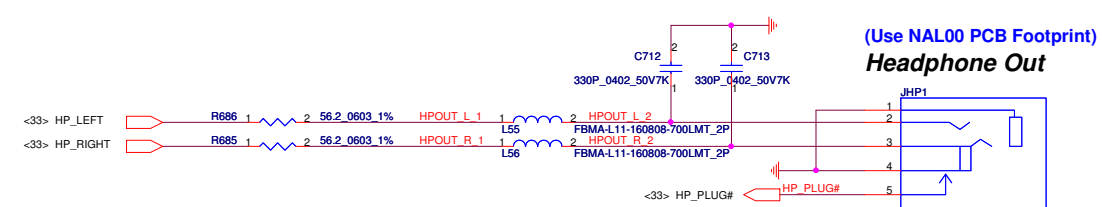
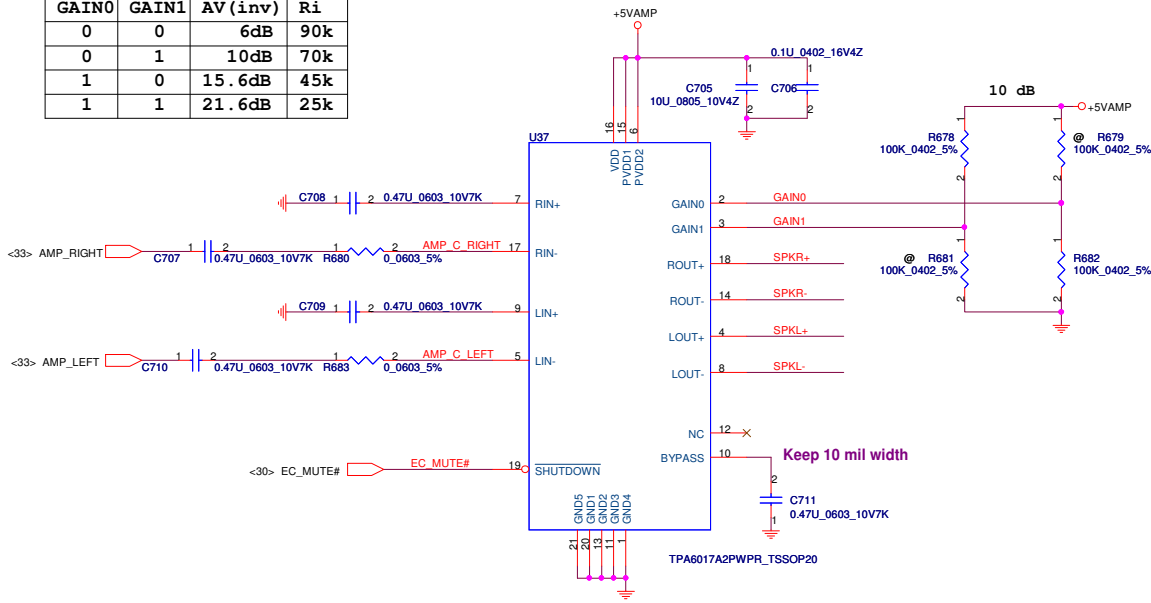
HD Audio Codec



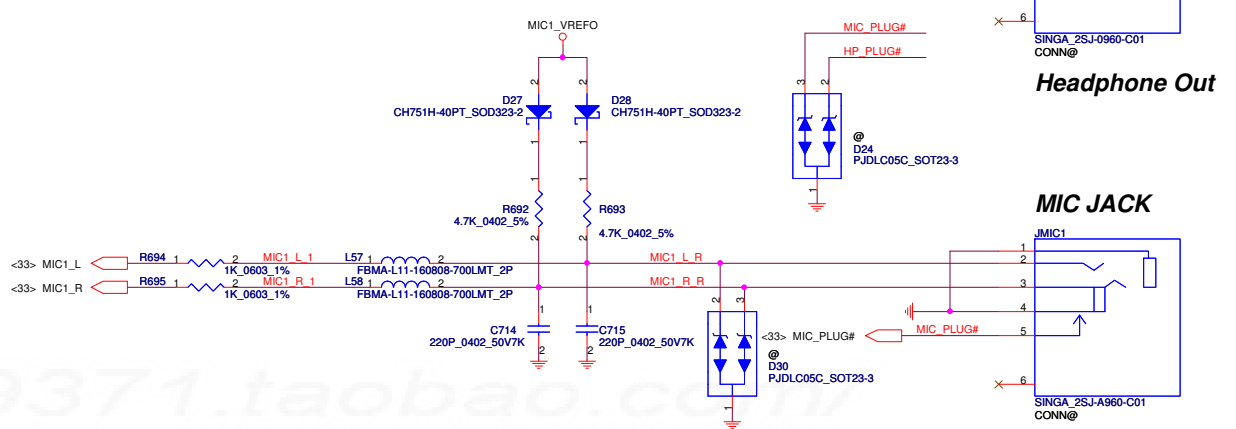
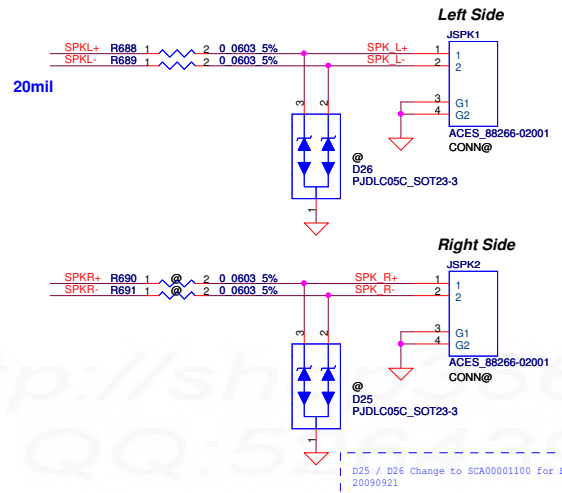
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GAIN0	GAIN1	AV (inv)	Ri
0	0	6dB	90k
0	1	10dB	70k
1	0	15.6dB	45k
1	1	21.6dB	25k

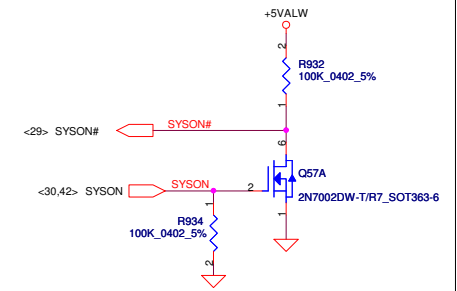
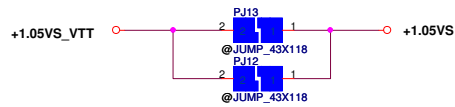
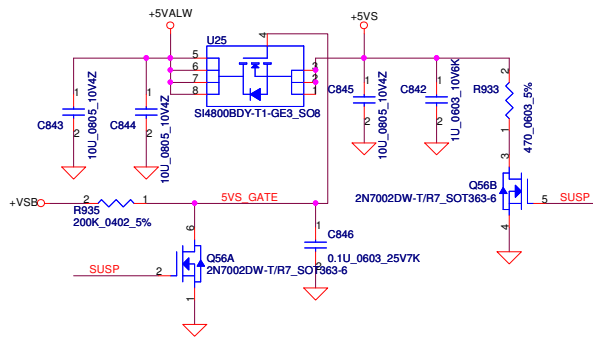


Int. Speaker Conn.

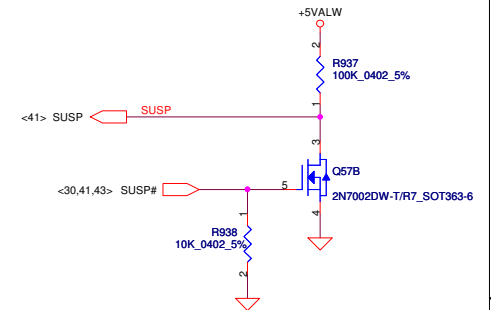
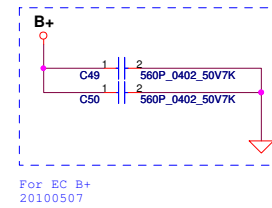
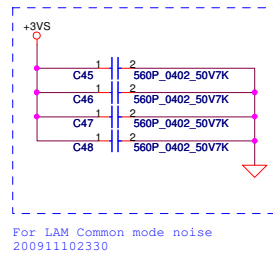
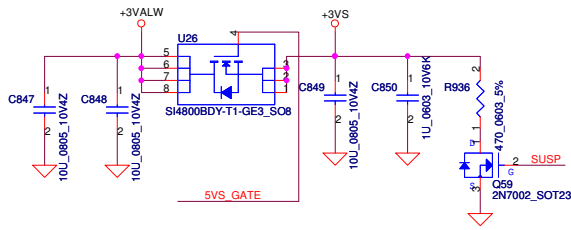


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						Customer	PEW71 M/B LA-6582P Schematic	1.0
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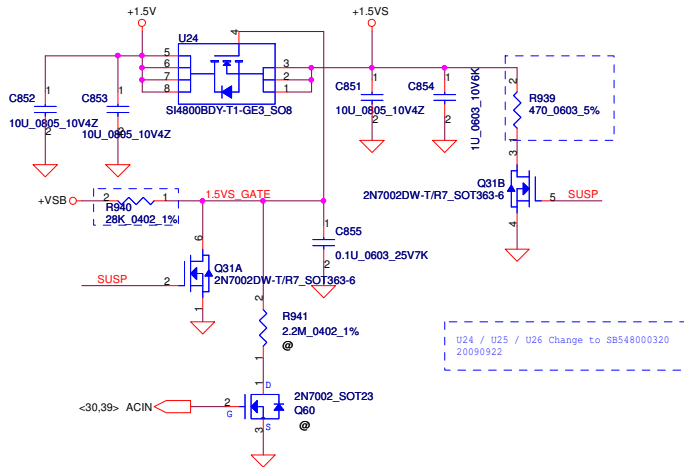
+5VALW TO +5VS



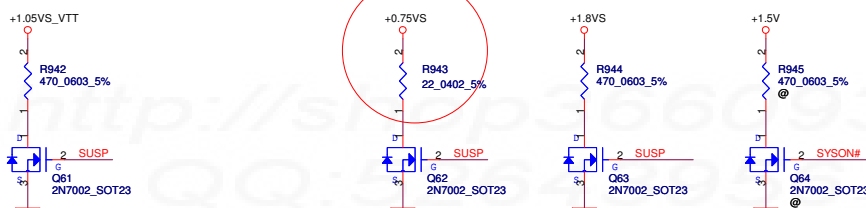
+3VALW TO +3VS



+1.5V to +1.5VS

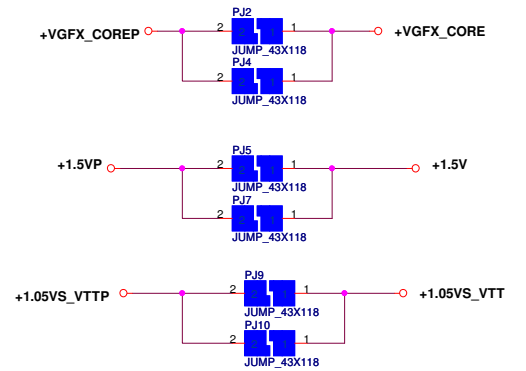
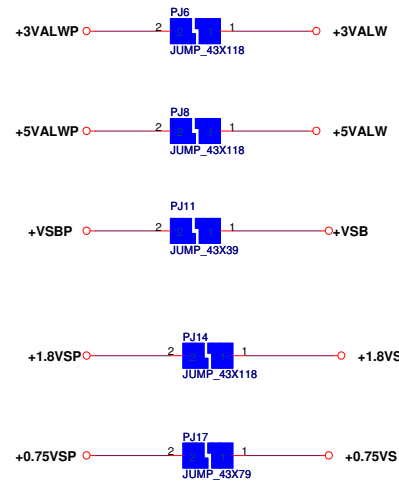
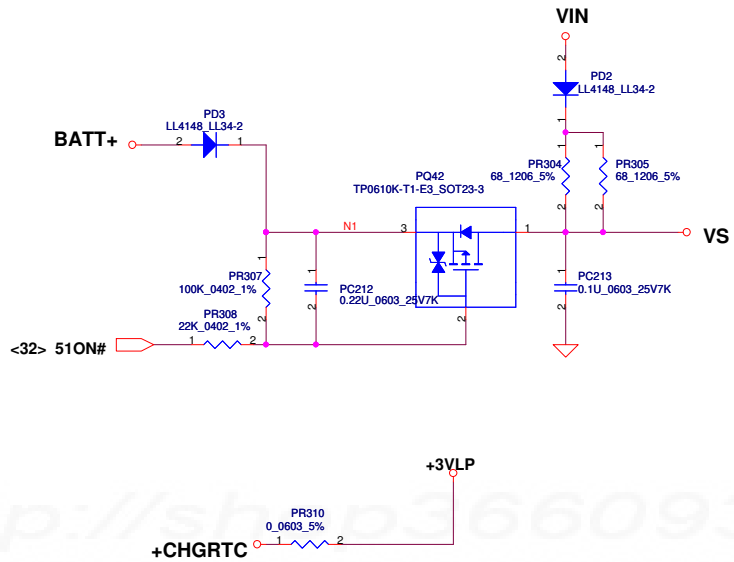
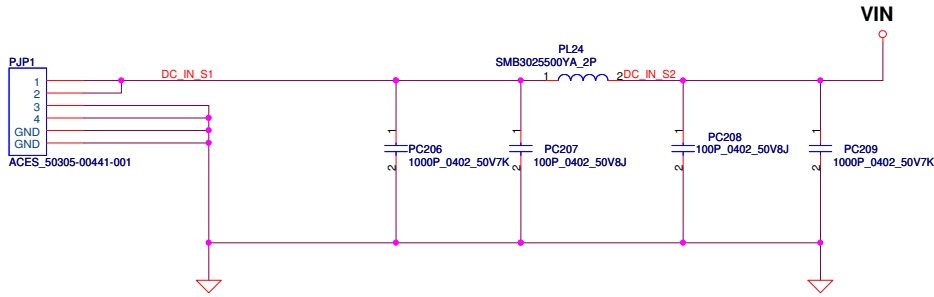


U24 / U25 / U26 Change to SB548000320 20090922



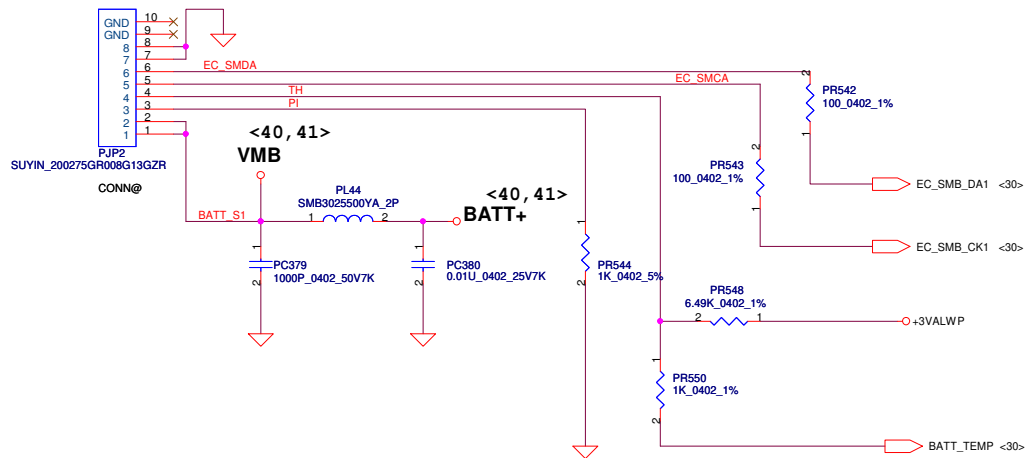
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				DC Interface	
Size B	Document Number	Date: Thursday, July 08, 2010		Rev 1.0	
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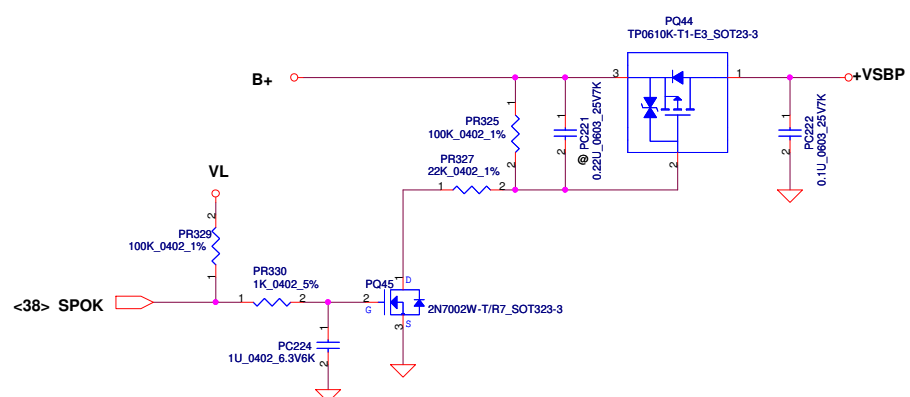
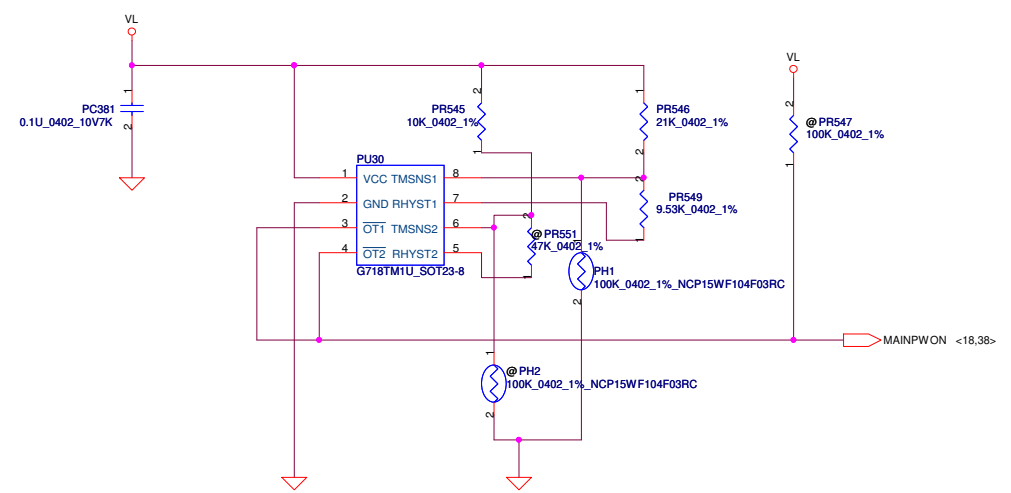


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Size	Document Number	Rev		Date	
Custom	PEW71 M/B LA-6582P Schematic	1.0		Thursday, July 08, 2010	
				Sheet	36 of 48



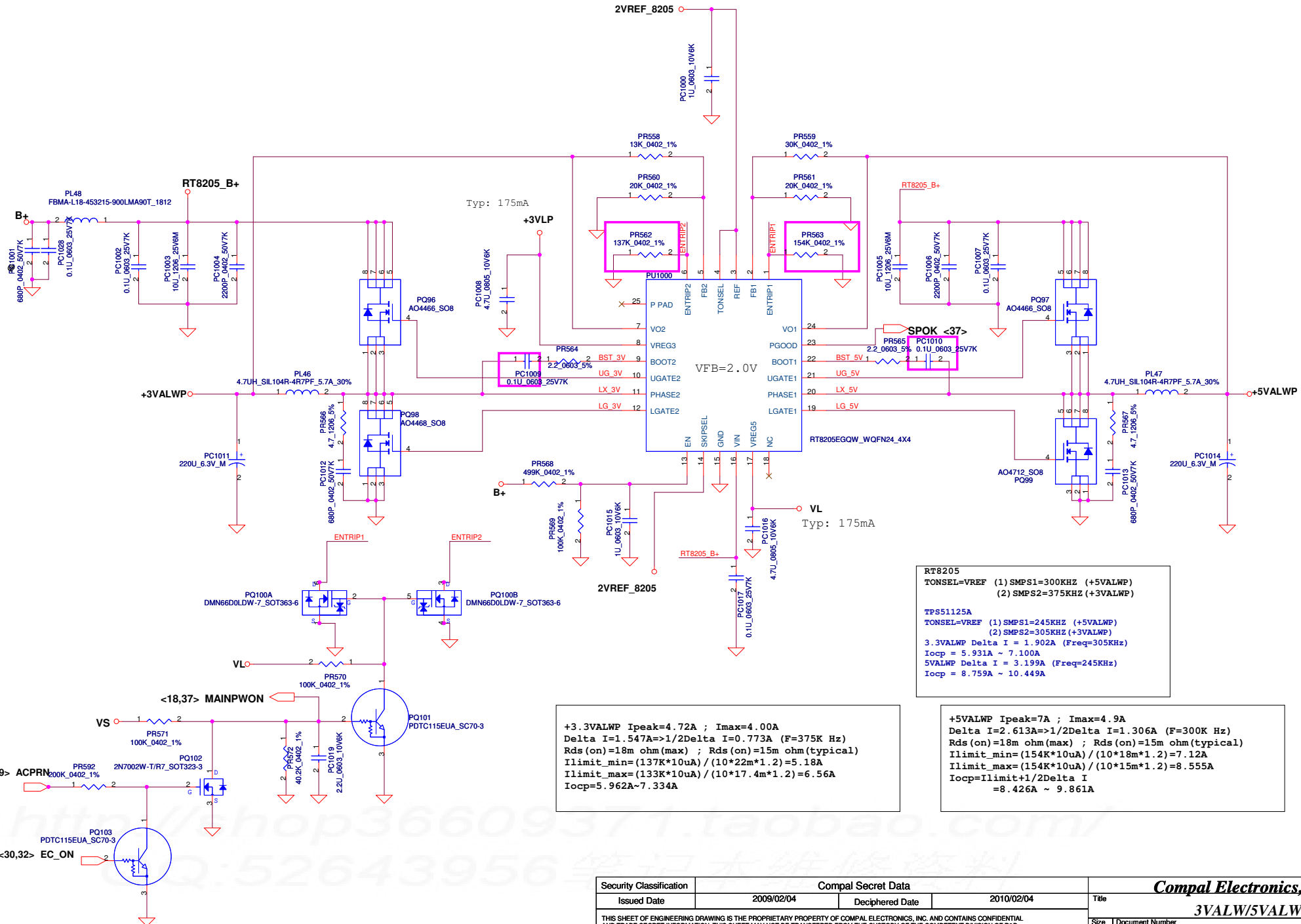
PH1 under CPU botten side :
 CPU thermal protection at 92 degree C
 Recovery at 56 degree C



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Size	Document Number			Rev	
Custom	PEW71 M/B LA-6582P Schematic			1.0	
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Note:
 Use TPS51125 IC can remove RTC refernece LDO
 Use TPS51427 IC must keep RTC refernece LDO



Typ: 175mA

VFB=2.0V

Typ: 175mA

RT8205
 TONSEL=VREF (1) SMPS1=300KHZ (+5VALWP)
 (2) SMPS2=375KHZ (+3VALWP)

TPS51125A
 TONSEL=VREF (1) SMPS1=245KHZ (+5VALWP)
 (2) SMPS2=305KHZ (+3VALWP)
 3.3VALWP Delta I = 1.902A (Freq=305KHz)
 Iocp = 5.931A ~ 7.100A
 5VALWP Delta I = 3.199A (Freq=245KHz)
 Iocp = 8.759A ~ 10.449A

+3.3VALWP Ipeak=4.72A ; Imax=4.00A
 Delta I=1.547A=>1/2Delta I=0.773A (F=375K Hz)
 Rds(on)=18m ohm(max) ; Rds(on)=15m ohm(typical)
 Ilimit_min=(137K*10uA)/(10*22m*1.2)=5.18A
 Ilimit_max=(133K*10uA)/(10*17.4m*1.2)=6.56A
 Iocp=5.962A~7.334A

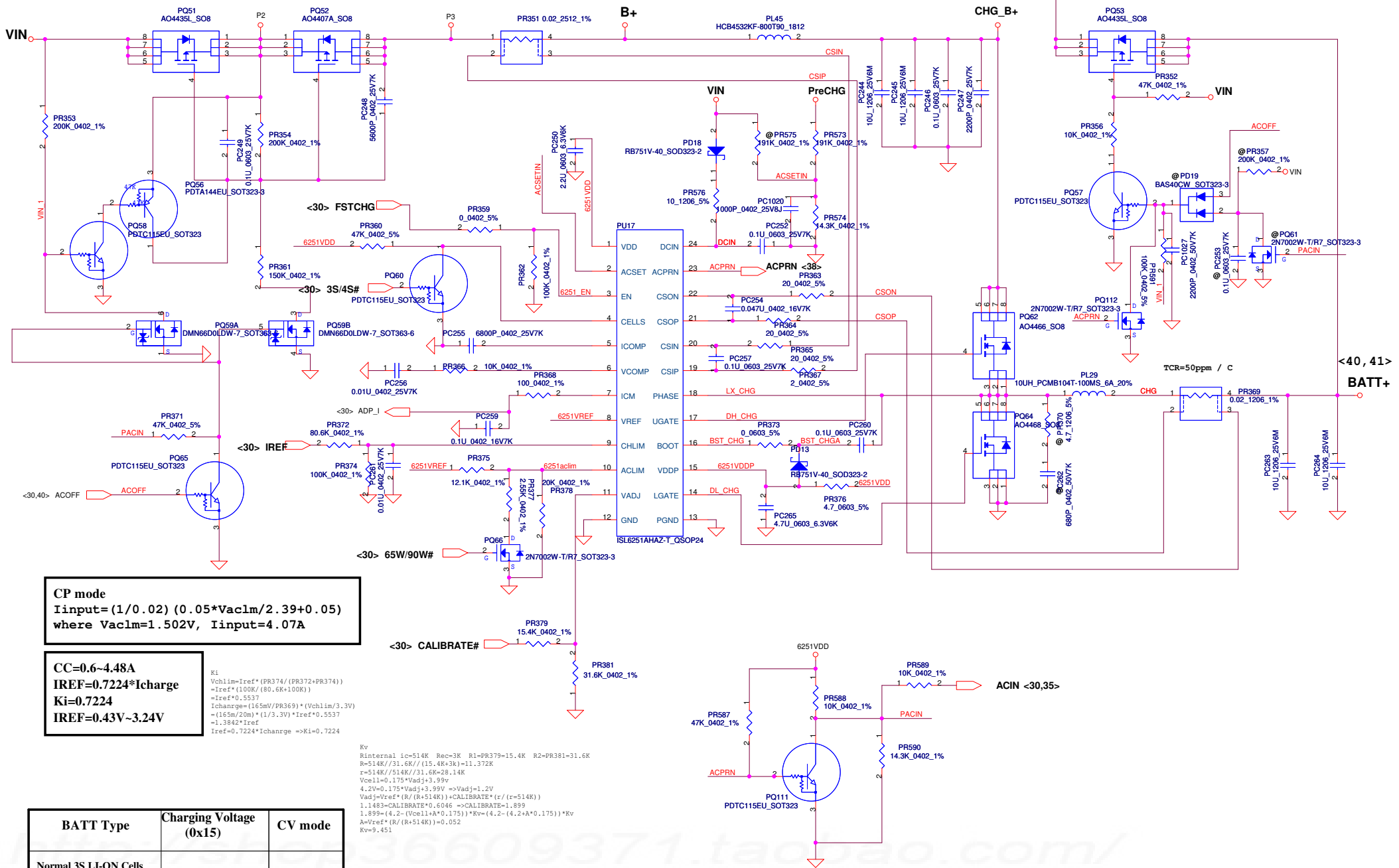
+5VALWP Ipeak=7A ; Imax=4.9A
 Delta I=2.613A=>1/2Delta I=1.306A (F=300K Hz)
 Rds(on)=18m ohm(max) ; Rds(on)=15m ohm(typical)
 Ilimit_min=(154K*10uA)/(10*18m*1.2)=7.12A
 Ilimit_max=(154K*10uA)/(10*15m*1.2)=8.555A
 Iocp=Ilimit+1/2Delta I
 =8.426A ~ 9.861A

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Iada=0~4.74A (90W/19V=4.736A)
 Iada=0~3.42A (90W/19V=3.421A)

ADP_I = 19.9*Iadapter*Rsense

CP = 85%*Iada ; CP = 4.07A
 CP = 85%*Iada ; CP = 2.91A



CP mode
 $I_{input} = (1/0.02) (0.05 * V_{ac1m} / 2.39 + 0.05)$
 where $V_{ac1m} = 1.502V$, $I_{input} = 4.07A$

CC=0.6~4.48A
 $I_{REF} = 0.7224 * I_{charge}$
 $K_i = 0.7224$
 $I_{REF} = 0.43V \sim 3.24V$

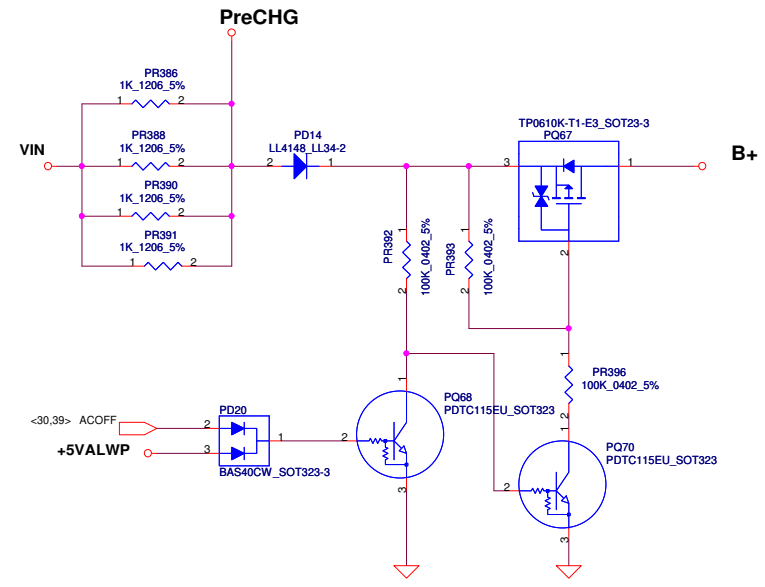
K_i
 $V_{ch1m} = I_{ref} * (PR374 / (PR372 + PR374))$
 $= I_{ref} * (100K / (80.6K + 100K))$
 $= I_{ref} * 0.5537$
 $I_{charge} = (165mV / PR369) * (V_{ch1m} / 3.3V)$
 $= (165m / 20m) * (1/3.3V) * I_{ref} * 0.5537$
 $= 1.3842 * I_{ref}$
 $I_{ref} = 0.7224 * I_{charge} \Rightarrow K_i = 0.7224$

K_v
 $R_{internal} = 514K$, $R_{ec} = 3K$, $R_1 = PR379 = 15.4K$, $R_2 = PR381 = 31.6K$
 $R = 514K // 31.6K // (15.4K + 3K) = 11.372K$
 $r = 514K // 514K // 31.6K = 28.14K$
 $V_{ce1} = 0.175 * V_{adj} + 3.99V$
 $4.2V = 0.175 * V_{adj} + 3.99V \Rightarrow V_{adj} = 1.2V$
 $V_{adj} = V_{ref} * (R / (R + 514K)) + CALIBRATE * (r / (r + 514K))$
 $1.1483 = CALIBRATE * 0.6046 \Rightarrow CALIBRATE = 1.899$
 $1.899 = (4.2 - (V_{ce1} * 0.175)) * R_v = (4.2 - (4.2 * 0.175)) * R_v$
 $A = V_{ref} * (R / (R + 514K)) = 0.052$
 $R_v = 9.451$

BATT Type	Charging Voltage (0x15)	CV mode
Normal 3S LI-ON Cells	12600mV	12.60V

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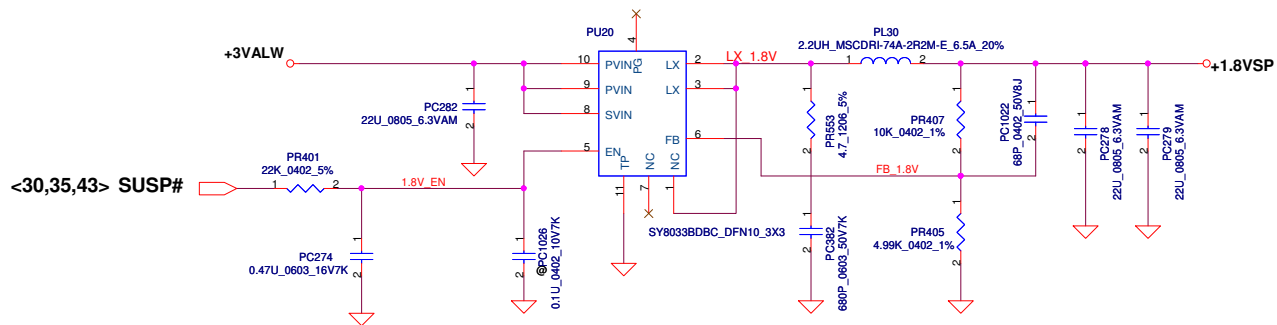
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CHARGER			
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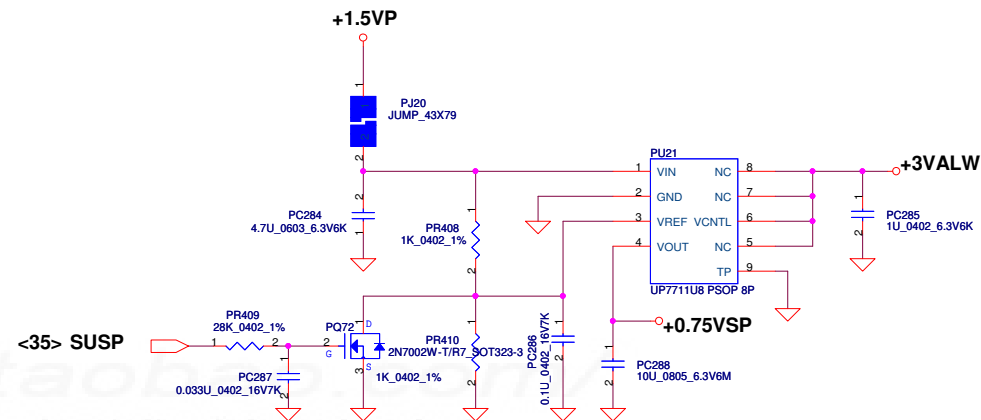
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FB=0.6V
 Note: Iload(max)=3.5A



<30,35,43> SUSP#



<35> SUSP

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				48
				Rev
				1.0

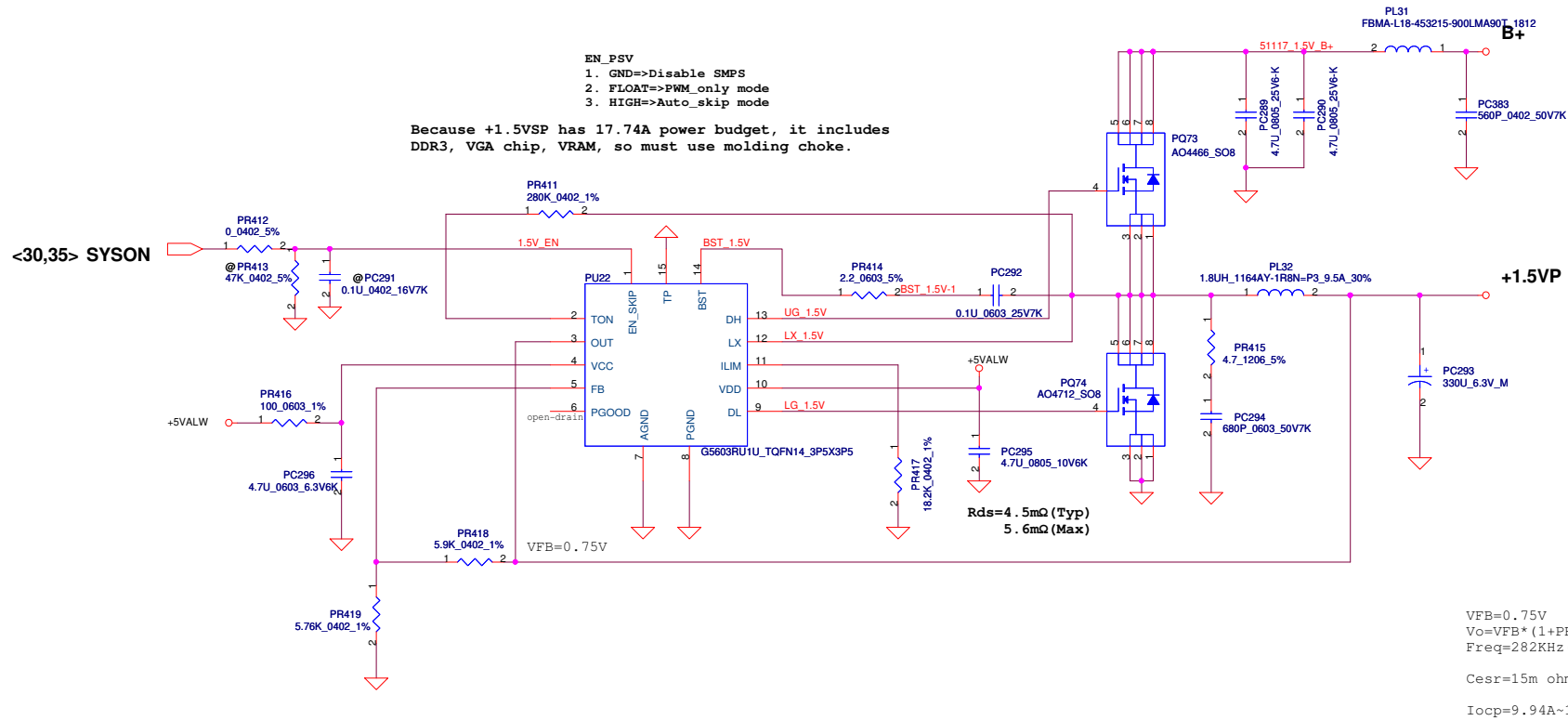
+1.8VSP/+0.75VSP

PEW71 M/B LA-6582P Schematic

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- EN_PSV
 1. GND=>Disable SMPS
 2. FLOAT=>PWM_only mode
 3. HIGH=>Auto_skip mode

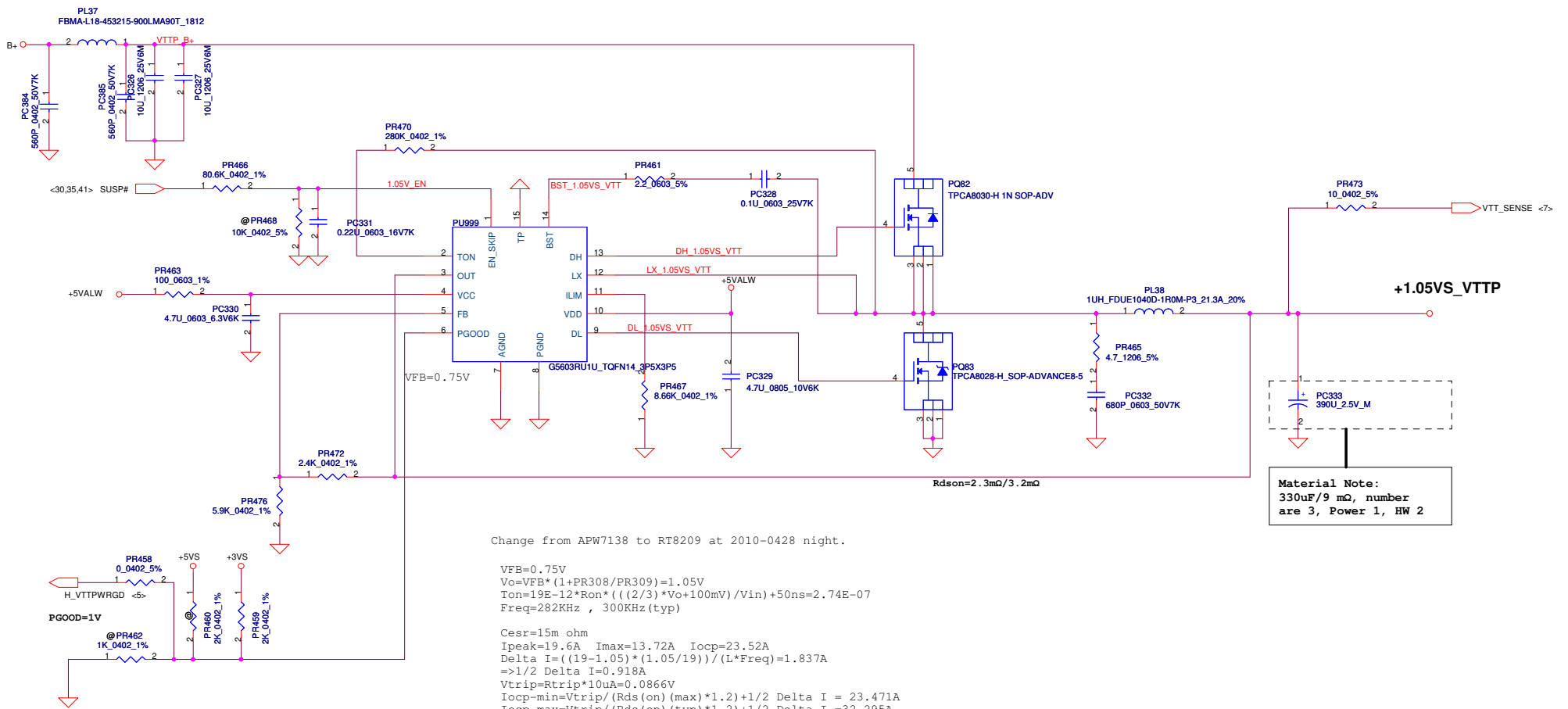
Because +1.5VSP has 17.74A power budget, it includes DDR3, VGA chip, VRAM, so must use molding choke.



$V_{FB}=0.75V$
 $V_o=V_{FB} \cdot (1+PR418/PR419)=1.52V$
 Freq=282KHz (min) , 300KHz (typ)
 C_{esr}=15m ohm
 I_{ocp}=9.94A~13A

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Size	Document Number	Rev		1.0	
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Material Note:
 330uF/9 mQ, number
 are 3, Power 1, HW 2

Change from APW7138 to RT8209 at 2010-0428 night.

VFB=0.75V
 $V_o = VFB * (1 + PR308 / PR309) = 1.05V$
 $Ton = 19E-12 * Ron * (((2/3) * V_o + 100mV) / Vin) + 50ns = 2.74E-07$
 $Freq = 282KHz, 300KHz (typ)$

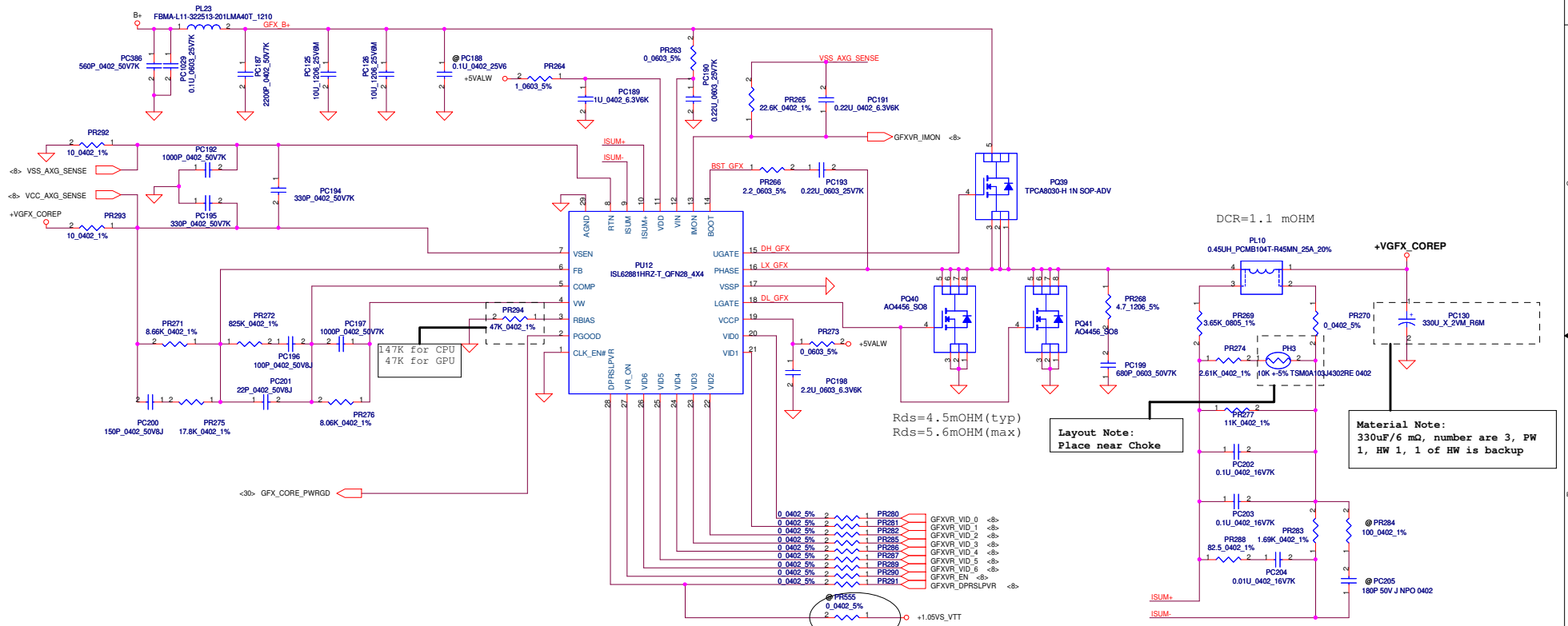
Cesr=15m ohm
 $I_{peak} = 19.6A$ $I_{max} = 13.72A$ $I_{ocp} = 23.52A$
 $\Delta I = ((19 - 1.05) * (1.05 / 19)) / (L * Freq) = 1.837A$
 $\Rightarrow 1/2 \Delta I = 0.918A$
 $V_{trip} = R_{trip} * 10uA = 0.0866V$
 $I_{ocp-min} = V_{trip} / (R_{ds(on)}(max) * 1.2) + 1/2 \Delta I = 23.471A$
 $I_{ocp-max} = V_{trip} / (R_{ds(on)}(typ) * 1.2) + 1/2 \Delta I = 32.295A$
 $I_{ocp} = 22.4A \sim 30.8A$

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Intel Aburndale CPU(Integrate Graphics) Ipeak=22A Imax=15A
 OCP calculation : Assume DCR=1.1m ohm
 $G1=Rn/(Rn+Rsum)=0.617$
 where $Rn=PR277 // (PR274+PH3)=5.875k\ ohm$
 $Rsum=PR269=3.65k\ ohm$
 $LL=2*Rdroop*G1*DCR/Ri=6.96m\ V/A$
 where $Rdroop=PR271=8.66k\ ohm, Ri=PR283=1.69k\ ohm$
 $Iocp=OCP\ Threshold*Rdroop/LL=24.89A$



2009-1214 common circuit modify.

Layout Note:
Place near Choke

Material Note:
330uF/6 mΩ, number are 3, PW 1, HW 1, 1 of HW is backup

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Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
1					Change PR353 from SD034470280 to SD034200380.		
2	Pre-Charge circiut update.	Pre-Charge circiut disable in EVT, now modify and enable it.	0.1	39	Change PR371 from SD034220280 to SD034470280. Change PR587 from SD034100380 to SD034470280. Change PR590 from SD034200280 to SD034143280. Change PR591 from SD028470280 to SD028100380.	2010/06/08	to PVT
3					Add PC1027 SE074222K80(S CER CAP 2200P 0402 50V7K) Change PQ111 from SB000006800 to SB301150200		
4	Pre-Charge circiut update.	Pre-Charge circiut disable in EVT, now modify and enable it.	0.1	38	Add PQ102 and PQ103 SB301150200. Add PR592 SD034200380.	2010/06/08	to PVT
5	Pre-Charge circiut update.	Pre-Charge circiut disable in EVT, now modify and enable it.	0.1	40	Change PR386 from SD011000080 to SD011100180. Add PR388, PR390, PR391 SD011100180. Add PD14 SC100001Y80 LL4148_LL34-2	2010/06/08	to PVT
6	EMI fail, add 3/5V snubber and Boost Resister to silve it.	EMI request to solve EMI issue.			Add PR566 and PR567 SD001470B80 S RES 4.7 1206 5%		
7			0.1	38	Add PC1012 and PC1013 SE074681K80 S CER CAP 680P 0402 50V7K	2010/06/08	to PVT
8	EMI fail, add 1.5V snubber.	EMI request to solve EMI issue.	0.1	42	Change PR564 and PR565 from SD013000080 to SD013220B80 Add PR415 SD001470B80 4.7 1206 5%. Add PC294 SE025681K80 S CER CAP 680P 50V K X7R 0603 Add PR465 SD001470B80 4.7 1206 5%.	2010/06/08	to PVT
9	EMI fail, add 1.05V snubber. and Boost Resister.	EMI request to solve EMI issue.	0.1	43	Add PC332 SE025681K80 S CER CAP 680P 50V K X7R 0603	2010/06/08	to PVT
10					Change PR461 from SD013000080 to SD013220B80 Add PR268 SD001470B80 4.7 1206 5%.		
11	EMI fail, add GFX_CORE snubber.	EMI request to solve EMI issue.	0.1	44	Add PC199 SE025681K80 S CER CAP 680P 50V K X7R 0603	2010/06/08	to PVT
12	HW power sequence modify.	HW request.	0.1	43	Change PR466 from SD034576280 S RES 1/16W 57.6K +-1% 0402 to SD034806280 S RES 80.6K 0402 1%) Change PC331 from SE076104K80 S CER CAP .1U 16V K X7R to SE00000R700 S CER CAP 0.22U 16V K X7R 0402	2010/06/08	to PVT
13					Change PC331 from SE076104K80 S CER CAP .1U 16V K X7R to SE00000R700 S CER CAP 0.22U 16V K X7R 0402		
14	BOM unique.	BOM unique.	0.1	38	Chnage PQ101 from SB301150000 to SB301150200.	2010/06/08	to PVT
15	EMI request.	EMI request.	0.1	38	Add PC1028 SE042104K80 S CER CAP .1U 25V K X7R 0603	2010/06/08	to PVT
16	EMI request.	EMI request.	0.1	44	Add PC1029 SE042104K80 S CER CAP .1U 25V K X7R 0603	2010/06/08	to PVT
17	Sourcer request to change a common part.	Sourcer request.	0.1	38	Change PC1019 from SE00000GC00 S CER CAP 2.2U 10V K X7R 0603 to SE000003H00 S CER CAP 2.2UF 10V K X5R 0603	2010/06/08	to PVT
18	Per sourcer request.	Sourcer request to change PC331 from SE00000R700 to SE026224K80 for common part.	0.1	43	change PC331 from SE00000R700 to SE026224K80	2010/06/08	to PVT
19	CPU transient issue.	Need modify PC362 to 330P due to transient fail.	0.1	45	Change PC362 from SE074561K80 S CER CAP 560P 50V K X7R 0402 to SE074331K80 S CER CAP 330P 50V K X7R 0402	2010/06/08	to PVT
20	Per sourcer request.	Per sourcer request.	0.1	43 44	Chnage PQ39/PQ82 from SB000008L80 to SB00000HL00.	2010/06/08	to PVT
21	Cost down.	Cost down 3VALWP and Charger Low Side MOS.	0.1	38 39	Change PQ98 from SB00000AJ00 to SB000009580(A04468). Change PQ64 from SB00000CG00 to SB000009580(A04468).	2010/06/08	to PVT
22	Cost down.	Cost down +1.5VP Low side MOS and choke.	0.1	42	Chnage PQ74 from SB000009F80 to SB00000AJ00(A04712). Chnage PL32 from SH000009U00 to SH000009680.	2010/06/08	to PVT
23	Cost down.	re-caculate 1.5VP OCP.	0.1	42	Change PR417 from SD034110280 to SD034182280.	2010/06/08	to PVT

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

Item	Fixed Issue	Reason for change	Rev.	PG#	Modify List	Date	Phase
24	Cost down.	re-caculate +3VALWP OCP.	0.1	38	Change PR562 from SD034107380 to SD034137380.	2010/06/08	to PVT
25							
26							
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Version change list (P.I.R. List)

Item	Phase	PAGE	DATE	Modifycatio list	Purpose
1	EVT		04 / 08 04 / 16	N/A Modify RTC SCH Change LAN to AR8152 Update Power SCH	
			04 / 21	Update AND Gate symbol - U1 / U2 / U6 / U7 / U19 Update Power MOS symbol - U24 / U25 / U26 C196 change to 1U for INTEL disign CLK GEN del C35 / C36 / C30 / C31 / C32 / C33 / C34 / L3 (for 36@ and @ function) Q4+Q6 change to 2N7002DW Update U8 symbol Add DMIC function Modify USB define.	
			04 / 26 04 / 27 04 / 29	Update Power SCH Add R17 for DMIC power Update Power SCH Change LAN to GIGA&10/100 co-lay Del R307 (LVDS conn.) Change +1.05VS VTT to +1.05VS (CLK GEN) Change C842 / C850 / C854 / C656 to SE080105K80 1U_0603_10V6K Change R940 to 28K (S3 Power sequence)	
			04 / 29 05 / 03	SW 1 bin define (LAN) Change R907 (0.0603) to 0.1206 5% Remove C40 / C41 / C42 / C43 / C44 Change FAN Conn. Update Power SCH	
			05 / 03	Update Power SCH	
			05 / 06	Change LAN to BCM57780 GIGA Del R637 / R639 / R640 / R645 / R647 / R648 (AUDIO) Del DMIC	
			05 / 07	Update Power SCH Update Power SCH Add C49 / C50 (EC B+)	
			05 / 10 05 / 11	Update Power SCH C764 / C765 change to 18P 0402_50V8J (EC) Reserve D13 / D24 / D30 (SS)	
			05 / 12 05 / 13	U17 change to RTS5137 (SA000043500) Card reader Update Power SCH	
			06 / 01	Unpop L11 / C247 & Pop R304 for cost down Unpop C764 / X2 & Pop R13 & C765 Change to 100K for EC remove Crystal Pop R834 & R835 change to 200K for Project ID	
			06 / 02	Unpop D24 / D30 Unpop R690 / R691 Pop C49 / C50 For HDMI Unpop R753 / R757 , Add R754 / R758 to 0 ohm. Change R759 to 3.9K. Change R755 to 4.7K ohm , Unpop R748. Unpop R778.	
			06 / 03 06 / 04	R833 / R292 0.0805 change to 0.0603. C190 / C191 & C1135 / C1136 change to 33P 0402 50V8J for Vender test report Unpop C774~C799 for EMI cost down.	
			06 / 10	Update Power SCH Add T25 / T26 / T27	
			07 / 07 07 / 08	Update Power SCH Change R759 to 4.32K_1% SB00000J280	

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