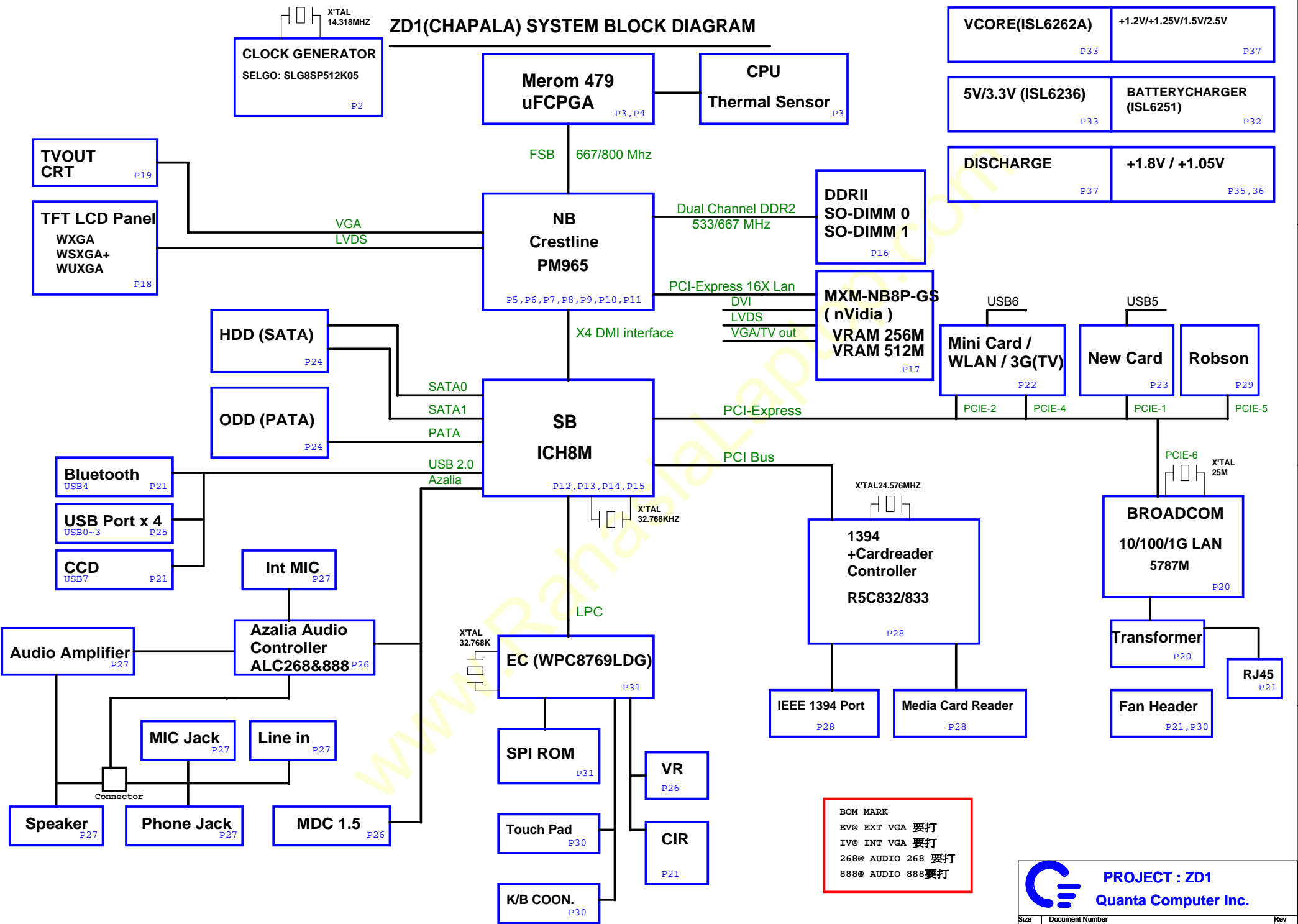


ZD1(CHAPALA) SYSTEM BLOCK DIAGRAM

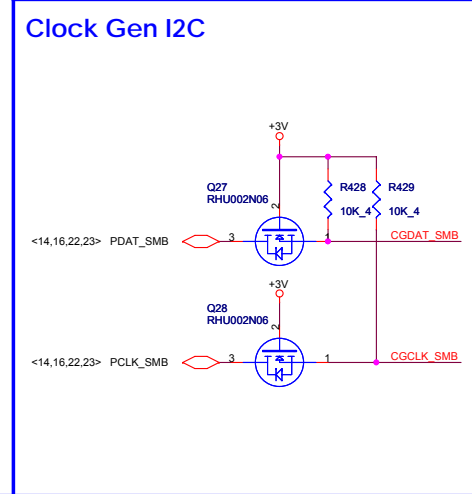
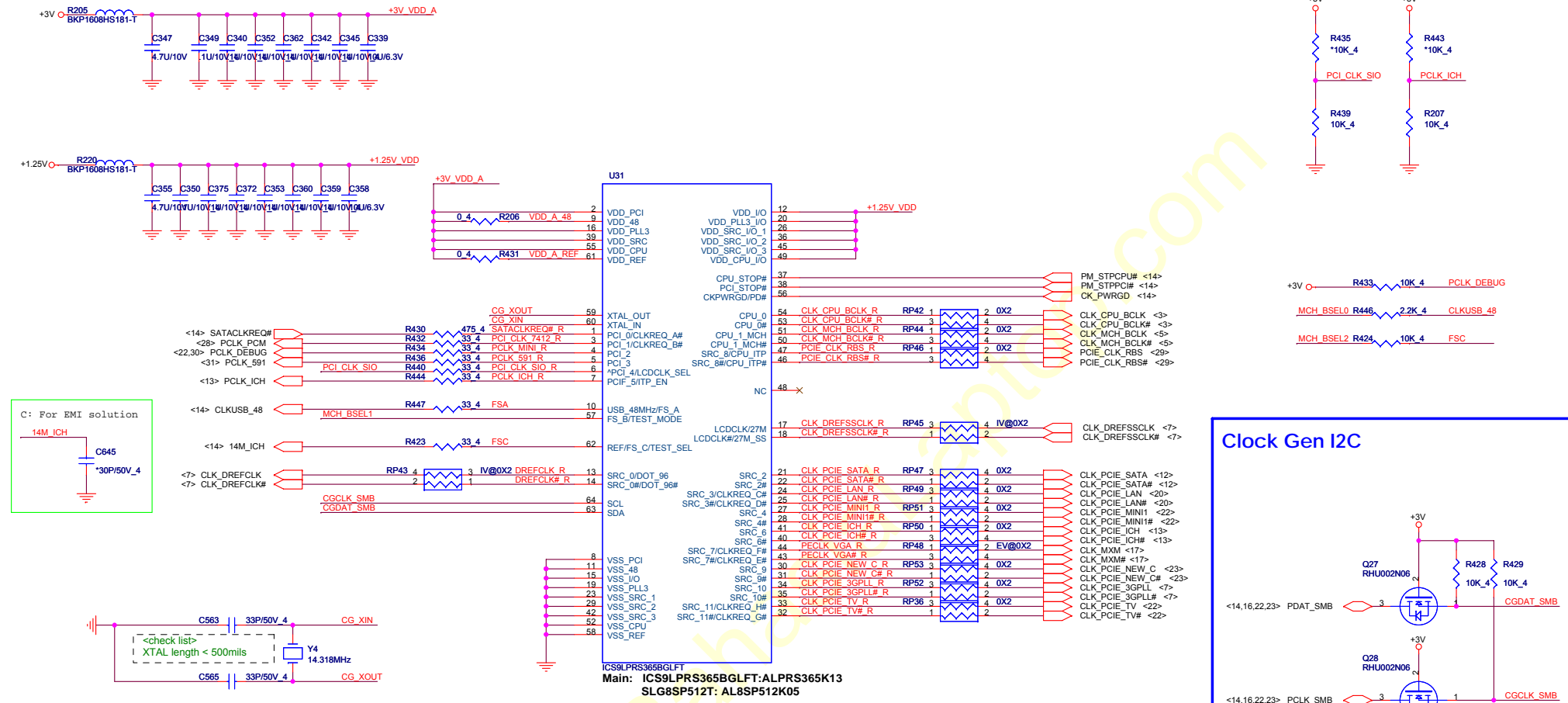


VCORE(ISL6262A) P33	+1.2V/+1.25V/1.5V/2.5V P37
5V/3.3V (ISL6236) P33	BATTERYCHARGER (ISL6251) P32
DISCHARGE P37	+1.8V / +1.05V P35, 36

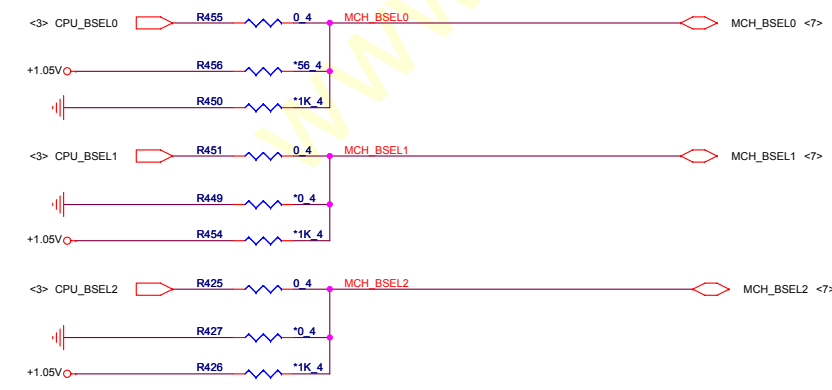
BOM MARK
 EV@ EXT VGA 要打
 IV@ INT VGA 要打
 268@ AUDIO 268 要打
 888@ AUDIO 888 要打

Clock Generator

Change list:
 B-test
 1.Change U31 P/N to ALPRS365K13 (ICS)



CPU Clock select



BSEL Frequency Select Table

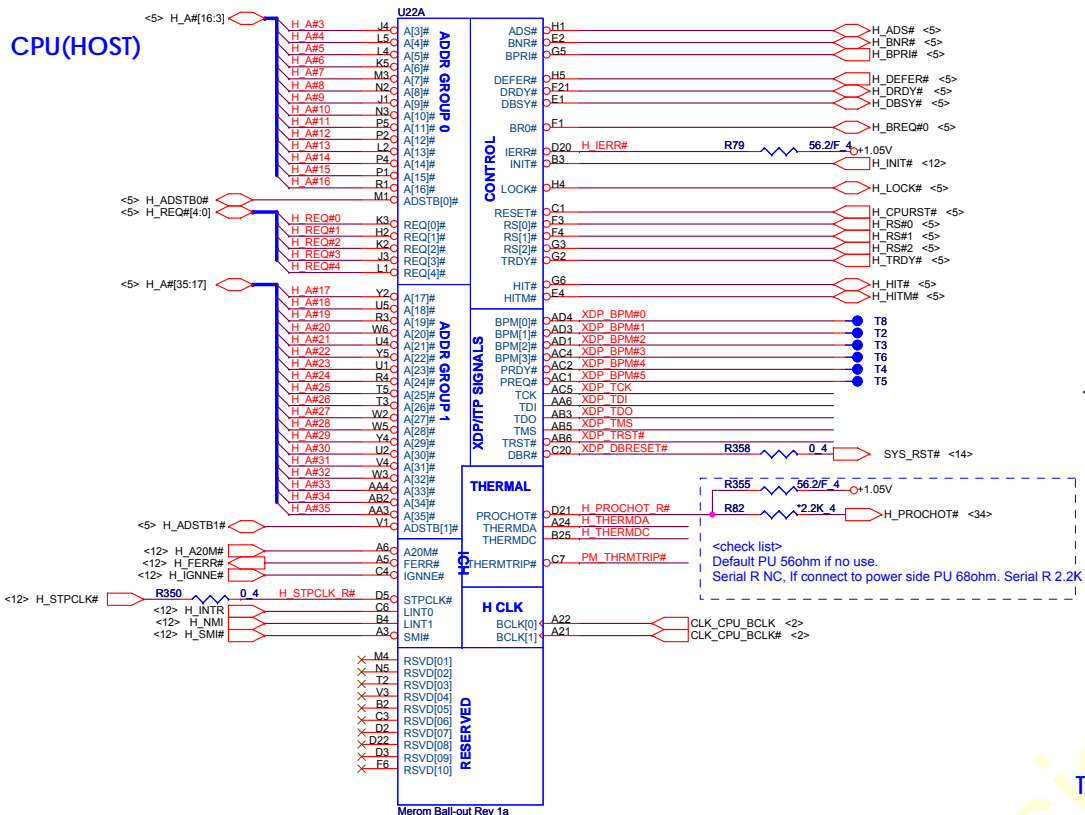
FSC	FSB	FSA	Frequency
0	0	0	266Mhz
0	0	1	1.33Mhz
0	1	1	1.66Mhz
0	1	0	2.00Mhz
1	1	0	4.00Mhz
1	1	1	Reserved
1	0	1	1.00Mhz
1	0	0	3.33Mhz

PROJECT : ZD1
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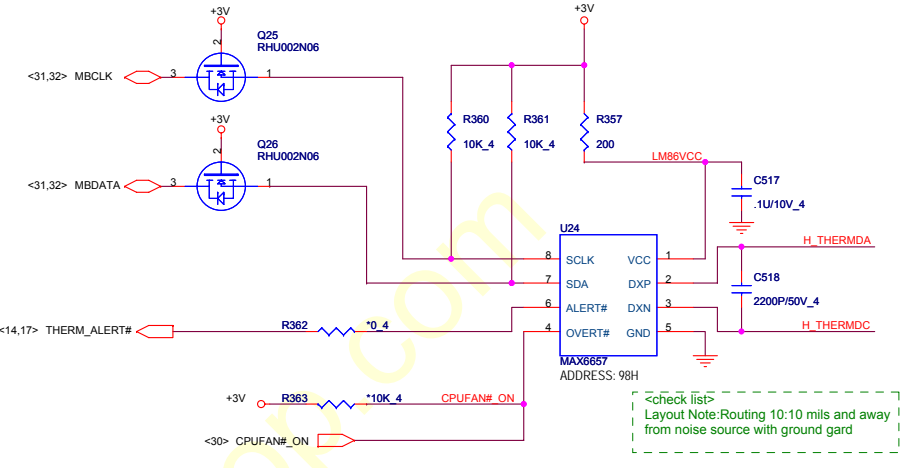
Size: Document Number: **CLOCK GENERATOR CK505 W/REGULATOR** Rev: E

Date: Monday, May 07, 2007 Sheet 2 of 38

CPU(HOST)

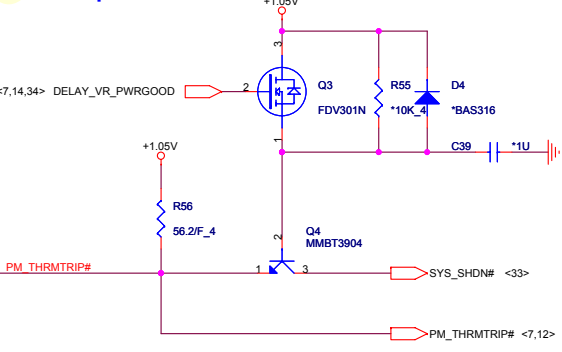


CPU Thermal monitor



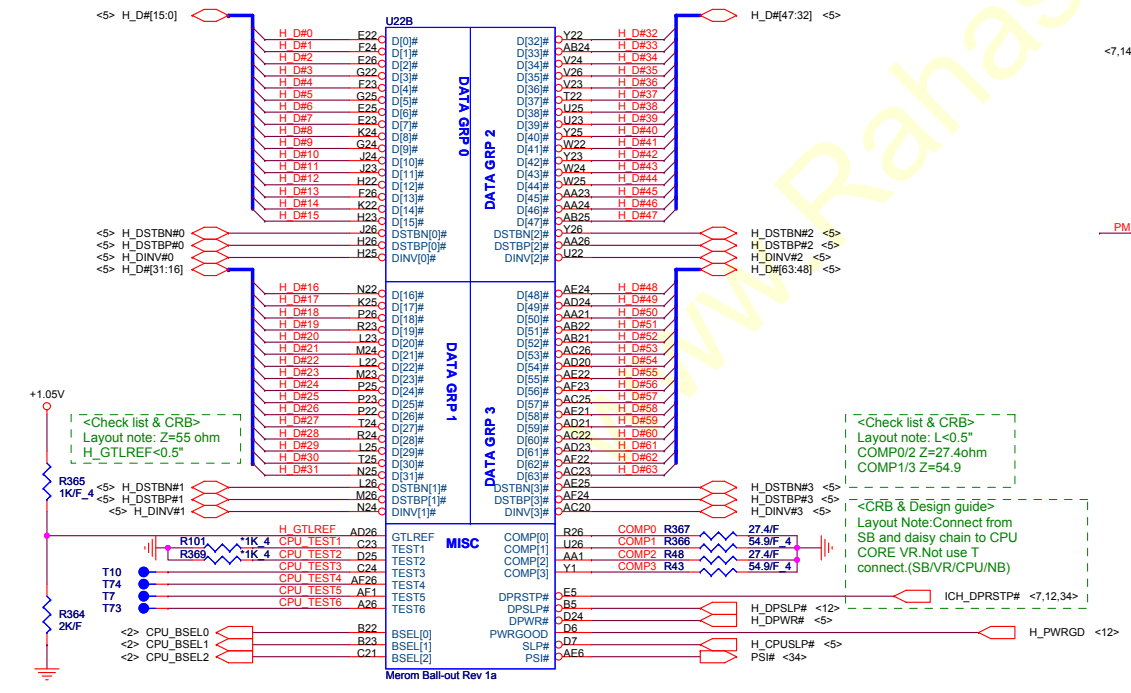
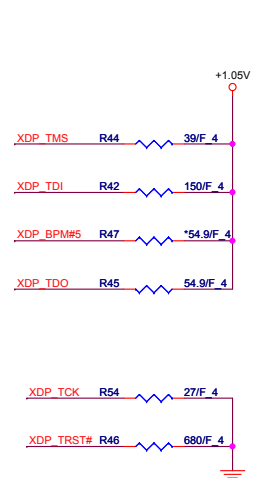
<check list>
Layout Note: Routing 10:10 mils and away from noise source with ground guard

Thermal Trip



<CRB & Design guide>
Layout Note: Thermal trip should connect to ICH8 & GMCH without T-ing (ZS1 default NC)

PU/PD (ITP700)



<Check list & CRB>
Layout note: Z=55 ohm
H_GTLREF<0.5"

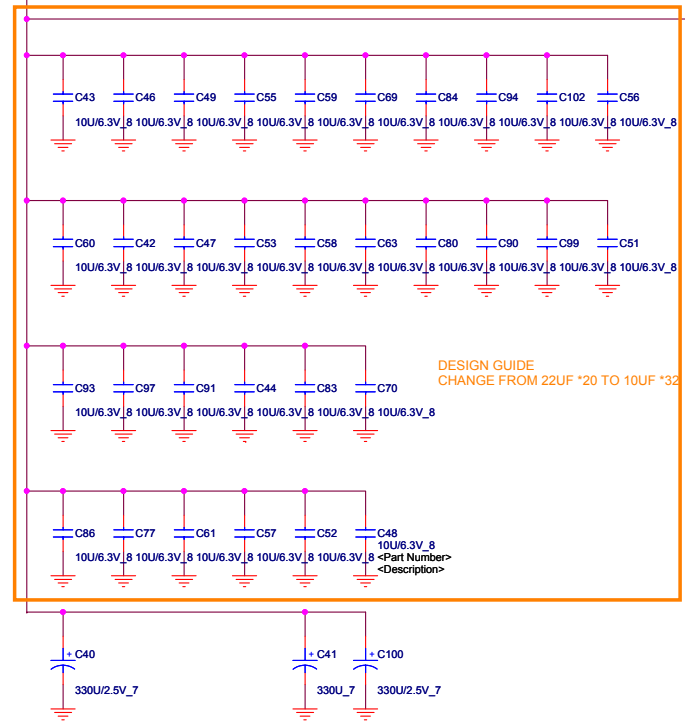
<Check list & CRB>
Layout note: L<0.5"
COMP0/2 Z=27.4ohm
COMP1/3 Z=54.9

<CRB & Design guide>
Layout Note: Connect from SB and daisy chain to CPU CORE VR. Not use T connect.(SB/VR/CPU/NB)

PROJECT : ZD1
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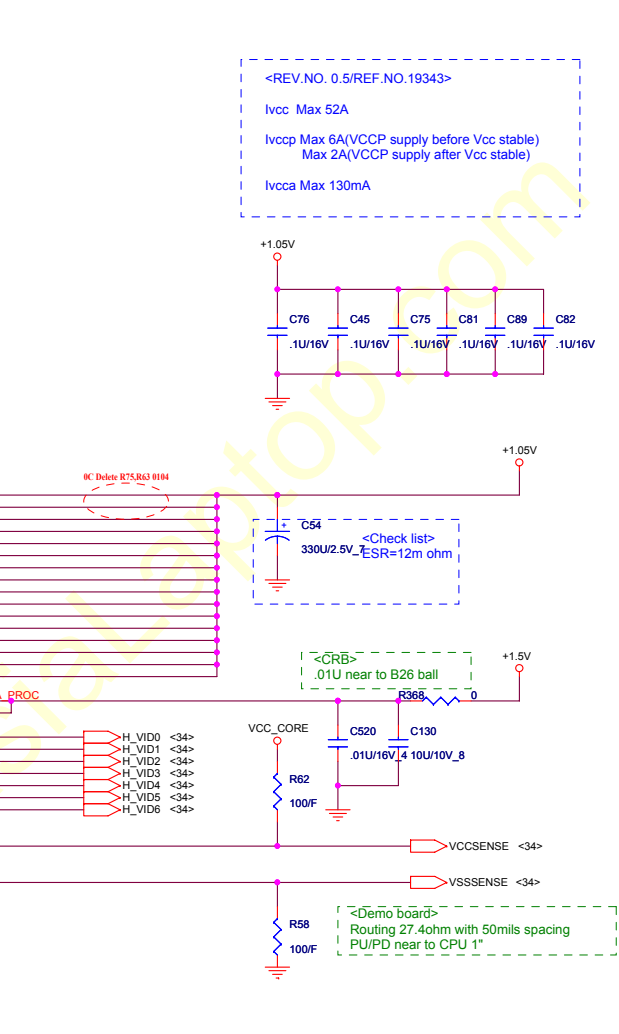
CPU(Power)

VCC_CORE

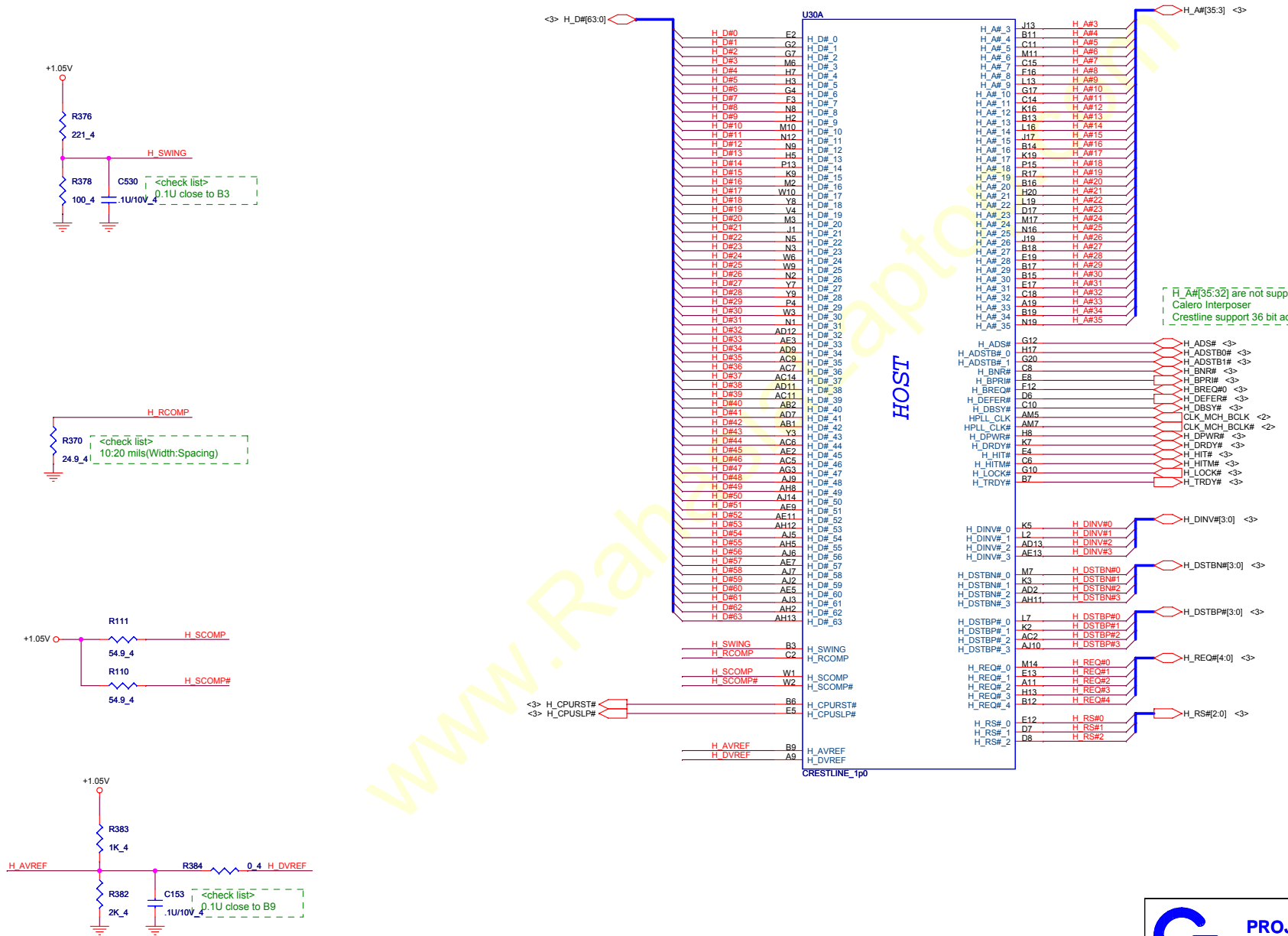


<Check list>
Option1:330U*6(ESR=1.5m ohm aggregate , ESL=0.8nH/6) and 22U*20(ESR=3mohm typ/20 , ESL=0.6nH/20)
Option2:330U*6(ESR=1.5m ohm aggregate , ESL=1.8nH/6) and 22U*32(ESR=3mohm typ/32 , ESL=0.6nH/32)

U22C		
A7	VCC[001]	VCC[068]
A8	VCC[002]	VCC[069]
A9	VCC[003]	VCC[070]
A10	VCC[004]	VCC[071]
A11	VCC[005]	VCC[072]
A12	VCC[006]	VCC[073]
A13	VCC[007]	VCC[074]
A14	VCC[008]	VCC[075]
A15	VCC[009]	VCC[076]
A16	VCC[010]	VCC[077]
A17	VCC[011]	VCC[078]
A18	VCC[012]	VCC[079]
A19	VCC[013]	VCC[080]
A20	VCC[014]	VCC[081]
B7	VCC[015]	VCC[082]
B8	VCC[016]	VCC[083]
B9	VCC[017]	VCC[084]
B10	VCC[018]	VCC[085]
B11	VCC[019]	VCC[086]
B12	VCC[020]	VCC[087]
B13	VCC[021]	VCC[088]
B14	VCC[022]	VCC[089]
B15	VCC[023]	VCC[090]
B16	VCC[024]	VCC[091]
B17	VCC[025]	VCC[092]
B18	VCC[026]	VCC[093]
C9	VCC[027]	VCC[094]
C10	VCC[028]	VCC[095]
C11	VCC[029]	VCC[096]
C12	VCC[030]	VCC[097]
C13	VCC[031]	VCC[098]
C14	VCC[032]	VCC[099]
C15	VCC[033]	VCC[100]
C16	VCC[034]	VCC[001]
C17	VCC[035]	VCC[002]
C18	VCC[036]	VCC[003]
C19	VCC[037]	VCC[004]
C20	VCC[038]	VCC[005]
C21	VCC[039]	VCC[006]
C22	VCC[040]	VCC[007]
C23	VCC[041]	VCC[008]
C24	VCC[042]	VCC[009]
C25	VCC[043]	VCC[010]
C26	VCC[044]	VCC[011]
C27	VCC[045]	VCC[012]
C28	VCC[046]	VCC[013]
C29	VCC[047]	VCC[014]
C30	VCC[048]	VCC[015]
C31	VCC[049]	VCC[016]
C32	VCC[050]	VCC[017]
C33	VCC[051]	VCC[018]
C34	VCC[052]	VCC[019]
C35	VCC[053]	VCC[020]
C36	VCC[054]	VCC[021]
C37	VCC[055]	VCC[022]
C38	VCC[056]	VCC[023]
C39	VCC[057]	VCC[024]
C40	VCC[058]	VCC[025]
C41	VCC[059]	VCC[026]
C42	VCC[060]	VCC[027]
C43	VCC[061]	VCC[028]
C44	VCC[062]	VCC[029]
C45	VCC[063]	VCC[030]
C46	VCC[064]	VCC[031]
C47	VCC[065]	VCC[032]
C48	VCC[066]	VCC[033]
C49	VCC[067]	VCC[034]
C50	VCC[068]	VCC[035]
C51	VCC[069]	VCC[036]
C52	VCC[070]	VCC[037]
C53	VCC[071]	VCC[038]
C54	VCC[072]	VCC[039]
C55	VCC[073]	VCC[040]
C56	VCC[074]	VCC[041]
C57	VCC[075]	VCC[042]
C58	VCC[076]	VCC[043]
C59	VCC[077]	VCC[044]
C60	VCC[078]	VCC[045]
C61	VCC[079]	VCC[046]
C62	VCC[080]	VCC[047]
C63	VCC[081]	VCC[048]
C64	VCC[082]	VCC[049]
C65	VCC[083]	VCC[050]
C66	VCC[084]	VCC[051]
C67	VCC[085]	VCC[052]
C68	VCC[086]	VCC[053]
C69	VCC[087]	VCC[054]
C70	VCC[088]	VCC[055]
C71	VCC[089]	VCC[056]
C72	VCC[090]	VCC[057]
C73	VCC[091]	VCC[058]
C74	VCC[092]	VCC[059]
C75	VCC[093]	VCC[060]
C76	VCC[094]	VCC[061]
C77	VCC[095]	VCC[062]
C78	VCC[096]	VCC[063]
C79	VCC[097]	VCC[064]
C80	VCC[098]	VCC[065]
C81	VCC[099]	VCC[066]
C82	VCC[100]	VCC[067]
C83	VCC[001]	VCC[068]
C84	VCC[002]	VCC[069]
C85	VCC[003]	VCC[070]
C86	VCC[004]	VCC[071]
C87	VCC[005]	VCC[072]
C88	VCC[006]	VCC[073]
C89	VCC[007]	VCC[074]
C90	VCC[008]	VCC[075]
C91	VCC[009]	VCC[076]
C92	VCC[010]	VCC[077]
C93	VCC[011]	VCC[078]
C94	VCC[012]	VCC[079]
C95	VCC[013]	VCC[080]
C96	VCC[014]	VCC[081]
C97	VCC[015]	VCC[082]
C98	VCC[016]	VCC[083]
C99	VCC[017]	VCC[084]
C100	VCC[018]	VCC[085]
C101	VCC[019]	VCC[086]
C102	VCC[020]	VCC[087]



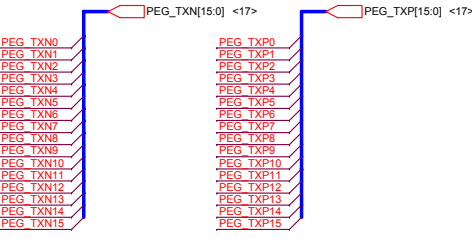
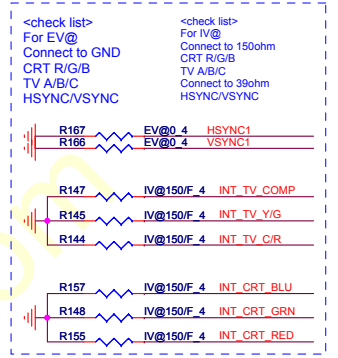
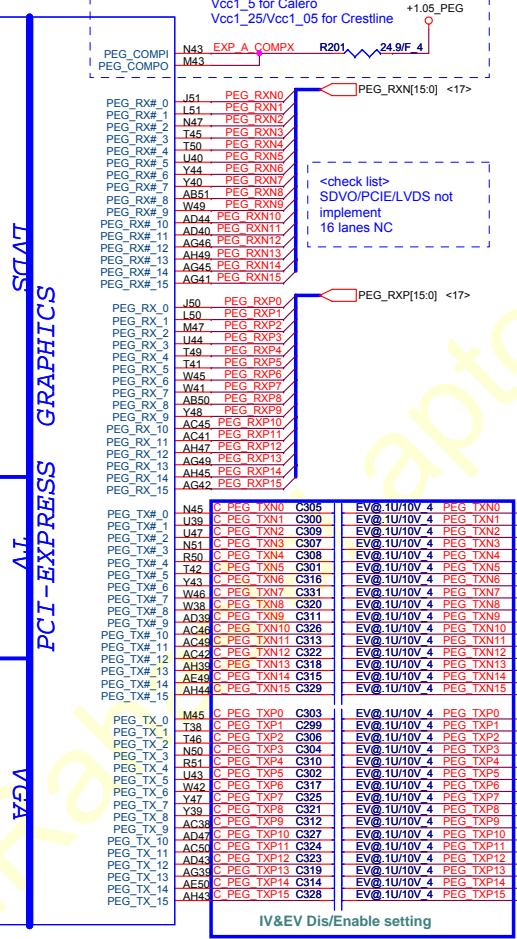
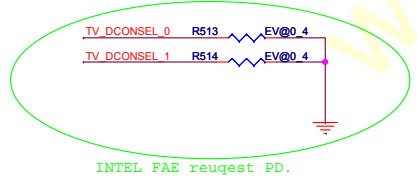
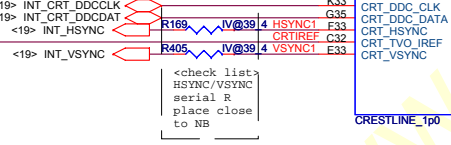
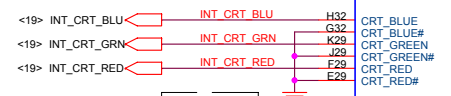
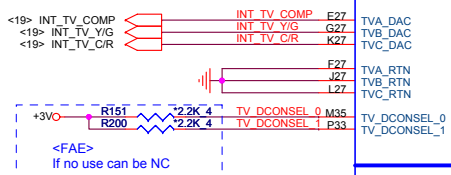
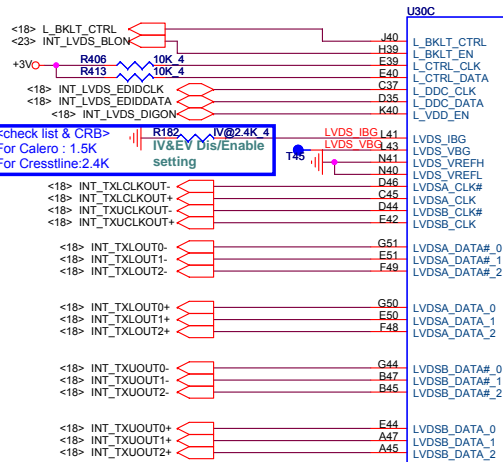
U22D		
A4	VSS[001]	VSS[082]
A5	VSS[002]	VSS[083]
A6	VSS[003]	VSS[084]
A7	VSS[004]	VSS[085]
A8	VSS[005]	VSS[086]
A9	VSS[006]	VSS[087]
A10	VSS[007]	VSS[088]
A11	VSS[008]	VSS[089]
A12	VSS[009]	VSS[090]
A13	VSS[010]	VSS[091]
A14	VSS[011]	VSS[092]
A15	VSS[012]	VSS[093]
A16	VSS[013]	VSS[094]
A17	VSS[014]	VSS[095]
A18	VSS[015]	VSS[096]
A19	VSS[016]	VSS[097]
A20	VSS[017]	VSS[098]
B1	VSS[018]	VSS[099]
B2	VSS[019]	VSS[100]
B3	VSS[020]	VSS[001]
B4	VSS[021]	VSS[002]
B5	VSS[022]	VSS[003]
B6	VSS[023]	VSS[004]
B7	VSS[024]	VSS[005]
B8	VSS[025]	VSS[006]
B9	VSS[026]	VSS[007]
B10	VSS[027]	VSS[008]
B11	VSS[028]	VSS[009]
B12	VSS[029]	VSS[010]
B13	VSS[030]	VSS[011]
B14	VSS[031]	VSS[012]
B15	VSS[032]	VSS[013]
B16	VSS[033]	VSS[014]
B17	VSS[034]	VSS[015]
B18	VSS[035]	VSS[016]
B19	VSS[036]	VSS[017]
B20	VSS[037]	VSS[018]
B21	VSS[038]	VSS[019]
B22	VSS[039]	VSS[020]
B23	VSS[040]	VSS[021]
B24	VSS[041]	VSS[022]
B25	VSS[042]	VSS[023]
B26	VSS[043]	VSS[024]
B27	VSS[044]	VSS[025]
B28	VSS[045]	VSS[026]
B29	VSS[046]	VSS[027]
B30	VSS[047]	VSS[028]
B31	VSS[048]	VSS[029]
B32	VSS[049]	VSS[030]
B33	VSS[050]	VSS[031]
B34	VSS[051]	VSS[032]
B35	VSS[052]	VSS[033]
B36	VSS[053]	VSS[034]
B37	VSS[054]	VSS[035]
B38	VSS[055]	VSS[036]
B39	VSS[056]	VSS[037]
B40	VSS[057]	VSS[038]
B41	VSS[058]	VSS[039]
B42	VSS[059]	VSS[040]
B43	VSS[060]	VSS[041]
B44	VSS[061]	VSS[042]
B45	VSS[062]	VSS[043]
B46	VSS[063]	VSS[044]
B47	VSS[064]	VSS[045]
B48	VSS[065]	VSS[046]
B49	VSS[066]	VSS[047]
B50	VSS[067]	VSS[048]
B51	VSS[068]	VSS[049]
B52	VSS[069]	VSS[050]
B53	VSS[070]	VSS[051]
B54	VSS[071]	VSS[052]
B55	VSS[072]	VSS[053]
B56	VSS[073]	VSS[054]
B57	VSS[074]	VSS[055]
B58	VSS[075]	VSS[056]
B59	VSS[076]	VSS[057]
B60	VSS[077]	VSS[058]
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B64	VSS[081]	VSS[062]
B65	VSS[082]	VSS[063]
B66	VSS[083]	VSS[064]
B67	VSS[084]	VSS[065]
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B69	VSS[086]	VSS[067]
B70	VSS[087]	VSS[068]
B71	VSS[088]	VSS[069]
B72	VSS[089]	VSS[070]
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B74	VSS[091]	VSS[072]
B75	VSS[092]	VSS[073]
B76	VSS[093]	VSS[074]
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B82	VSS[099]	VSS[080]
B83	VSS[100]	VSS[081]
B84	VSS[001]	VSS[082]
B85	VSS[002]	VSS[083]
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B87	VSS[004]	VSS[085]
B88	VSS[005]	VSS[086]
B89	VSS[006]	VSS[087]
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B91	VSS[008]	VSS[089]
B92	VSS[009]	VSS[090]
B93	VSS[010]	VSS[091]
B94	VSS[011]	VSS[092]
B95	VSS[012]	VSS[093]
B96	VSS[013]	VSS[094]
B97	VSS[014]	VSS[095]
B98	VSS[015]	VSS[096]
B99	VSS[016]	VSS[097]
B100	VSS[017]	VSS[098]
B101	VSS[018]	VSS[099]
B102	VSS[019]	VSS[100]



H_A#(35:32) are not supported in Calero Interposer
Crestline support 36 bit address

PROJECT : ZD1
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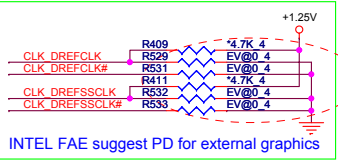
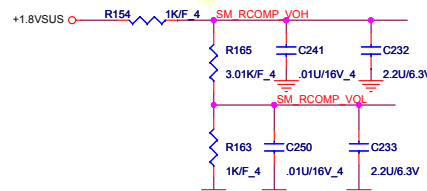
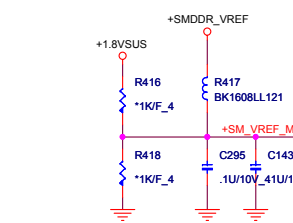
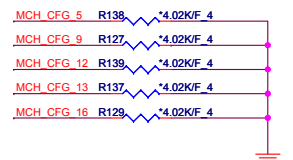
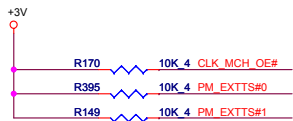
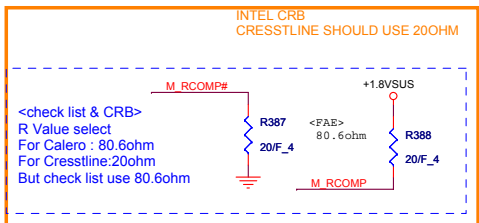
Size	Document Number	Rev
	GMCH HOST(1/7)	E
Date:	Monday, May 07, 2007	Sheet 5 of 38



Strapping table

All strap are sampled with respect to the leading edge of the GMCH power ok signal
 CFG[17:3] have internal pull-up
 CFG[18:19] have internal pull-down
 Any CFG signal strapping option not list below should be left NC pin

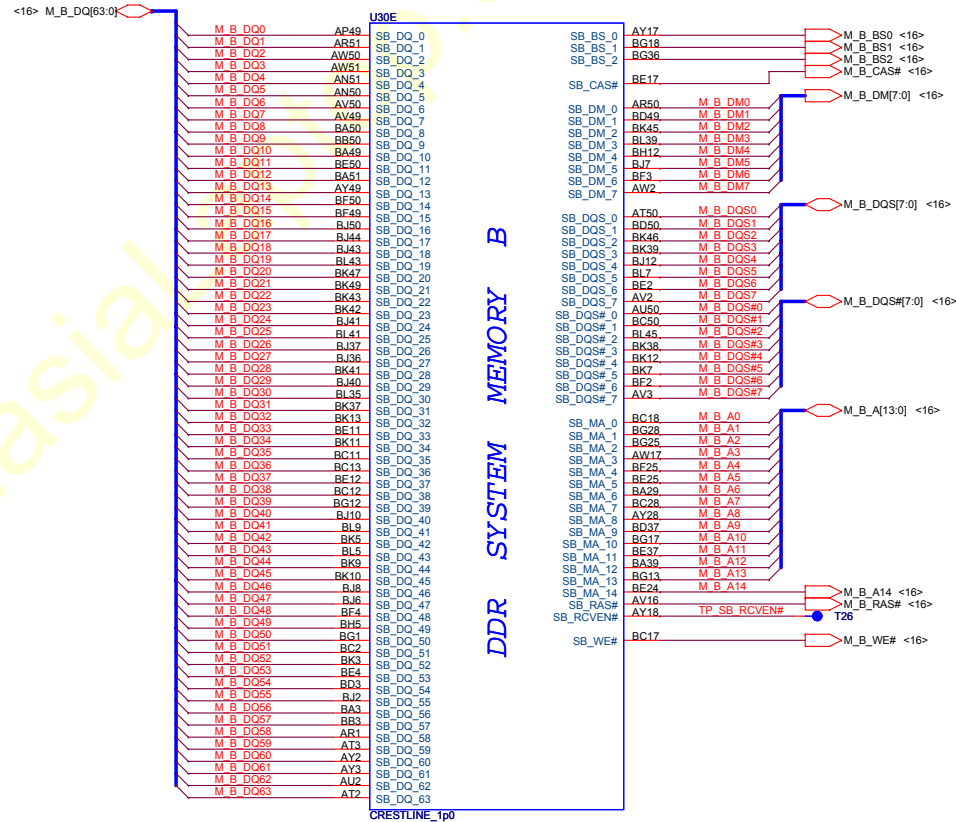
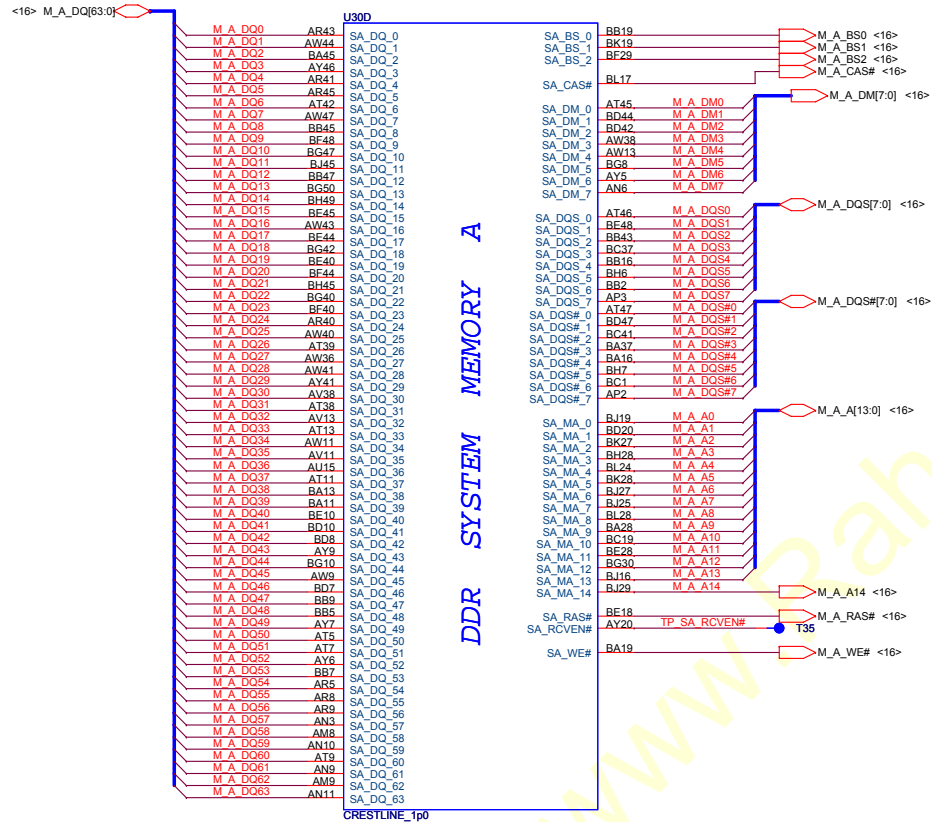
Pin Name	Strap Description	Configuration
CFG[2:0]	FSB Frequency Select	010 = FSB 800MHz 011 = FSB 667MHz
CEG[4:3]	Reserved	
CFG5	DMI X2 Select	0 = DMI X2 1 = DMI X4 (Default)
CFG6	Reserved	
CFG7	CPU Strap	0 = Mobile 1 = Reserved CPU (Default)
CFG8	Low Power PCI Express	0 = Normal mode 1 = Low Power mode
CFG9	PCI Express Graphics Lane Reversal	0 = Reserved Lanes 1 = Normal operation (Default)
CFG[11:10]	Reserved	
CFG[13:12]	XOR/ ALLZ/ Clock Un gating	00 = Clock gating disable 01 = ALL-Z Mode Enable 10 = XOR Mode Enable 11 = Normal C operation (Default)
CFG[15:14]	Reserved	
CFG16	FSB Dynamic ODT	0 = Dynamic ODT disable 1 = Dynamic ODT Enable (Default)
CFG[18:17]	Reserved	
CFG19	DMI Lane Reversal	0 = Normal operation 1 = Reverse Lanes (Default)
CFG20	SDVO/PCIe concurrent	0 = Only SDVO or PCIe x1 is operation (Default) 1 = SDVO and PCIe x1 are operating simultaneously via the PEG port
SDVO_CTRLDATA	SDVO Present	0 = No SDVO Card present (Default) 1 = SDVO Card Present



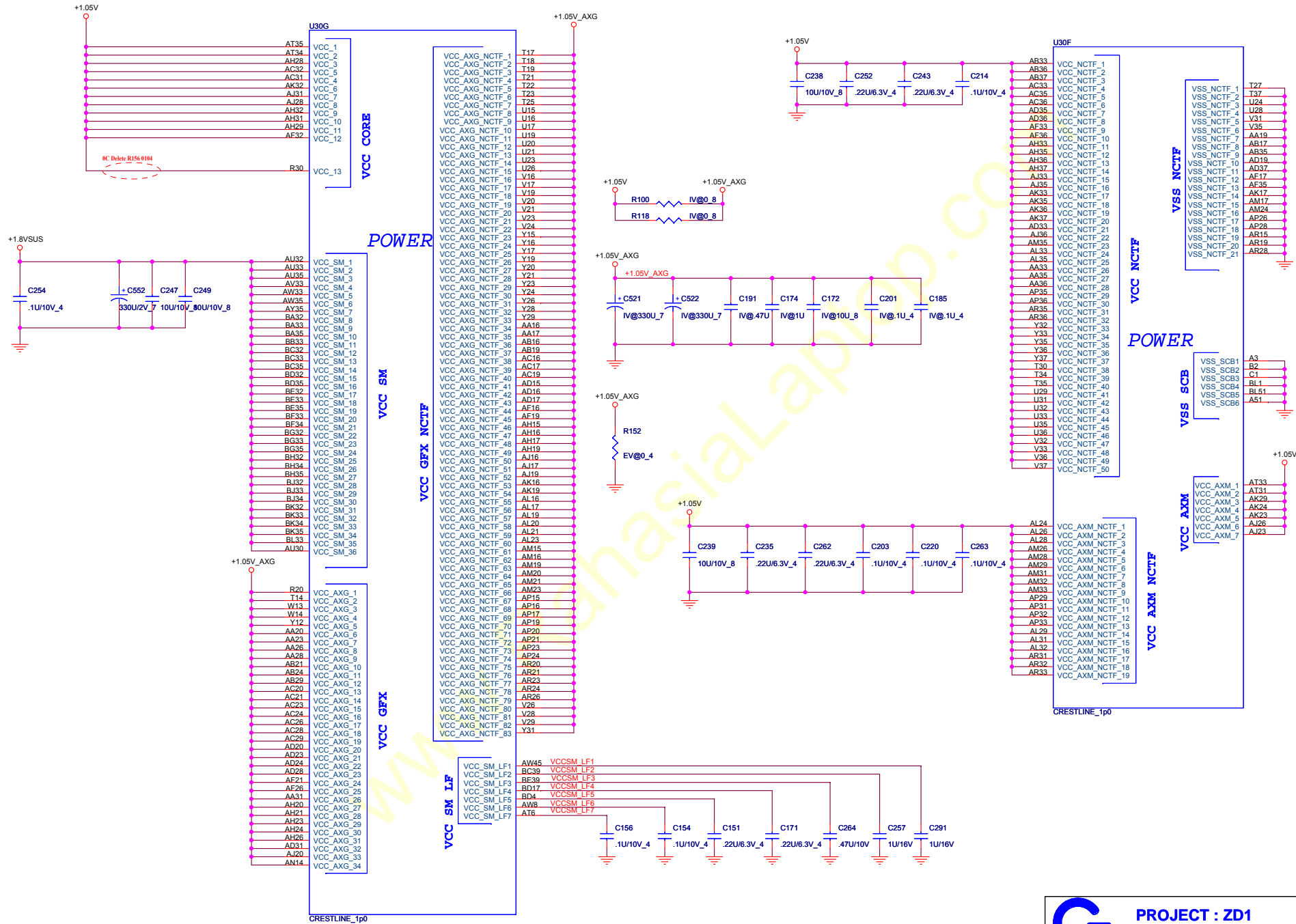
- × P36 RSV01
- × P37 RSV02
- × R35 RSV03
- × N35 RSV04
- × R12 RSV05
- × A12 RSV06
- × A13 RSV07
- × A14 RSV08
- × A15 RSV09
- × A16 RSV10
- × A17 RSV11
- × A18 RSV12
- × A19 RSV13
- × A20 RSV14
- × H10 RSV20
- × B51 RSV21
- × B20 RSV22
- × BK22 RSV23
- × BF19 RSV24
- × BK120 RSV25
- × BK18 RSV26
- × BF23 RSV27
- × BK23 RSV28
- × BK22 RSV29
- × BK24 RSV30
- × BK24 RSV31
- × H39 RSV32
- × W20 RSV33
- × BK20 RSV34
- × C48 RSV35
- × R44 RSV36
- × C44 RSV37
- × A35 RSV38
- × B37 RSV39
- × B37 RSV40
- × B34 RSV41
- × C34 RSV42
- × C34 RSV43
- P27 CFG_0
- N24 CFG_1
- C21 CFG_2
- C23 CFG_3
- F22 CFG_4
- N23 CFG_5
- G23 CFG_6
- J20 CFG_7
- R24 CFG_8
- L23 CFG_9
- J23 CFG_10
- E23 CFG_11
- E20 CFG_12
- K23 CFG_13
- M20 CFG_14
- M24 CFG_15
- L32 CFG_16
- N33 CFG_17
- L35 CFG_18
- L35 CFG_19
- L35 CFG_20
- G41 PM_BM_BUSY#
- L36 PM_DPRSTP#
- L36 PM_EXT_TS#_0
- L36 PM_EXT_TS#_1
- AV49 PWROK
- AV20 RSTIN#
- N20 THERMTRIP#
- C36 DPRSLPVR
- NC_1
- NC_2
- NC_3
- NC_4
- NC_5
- NC_6
- NC_7
- NC_8
- NC_9
- NC_10
- NC_11
- NC_12
- NC_13
- NC_14
- NC_15
- NC_16

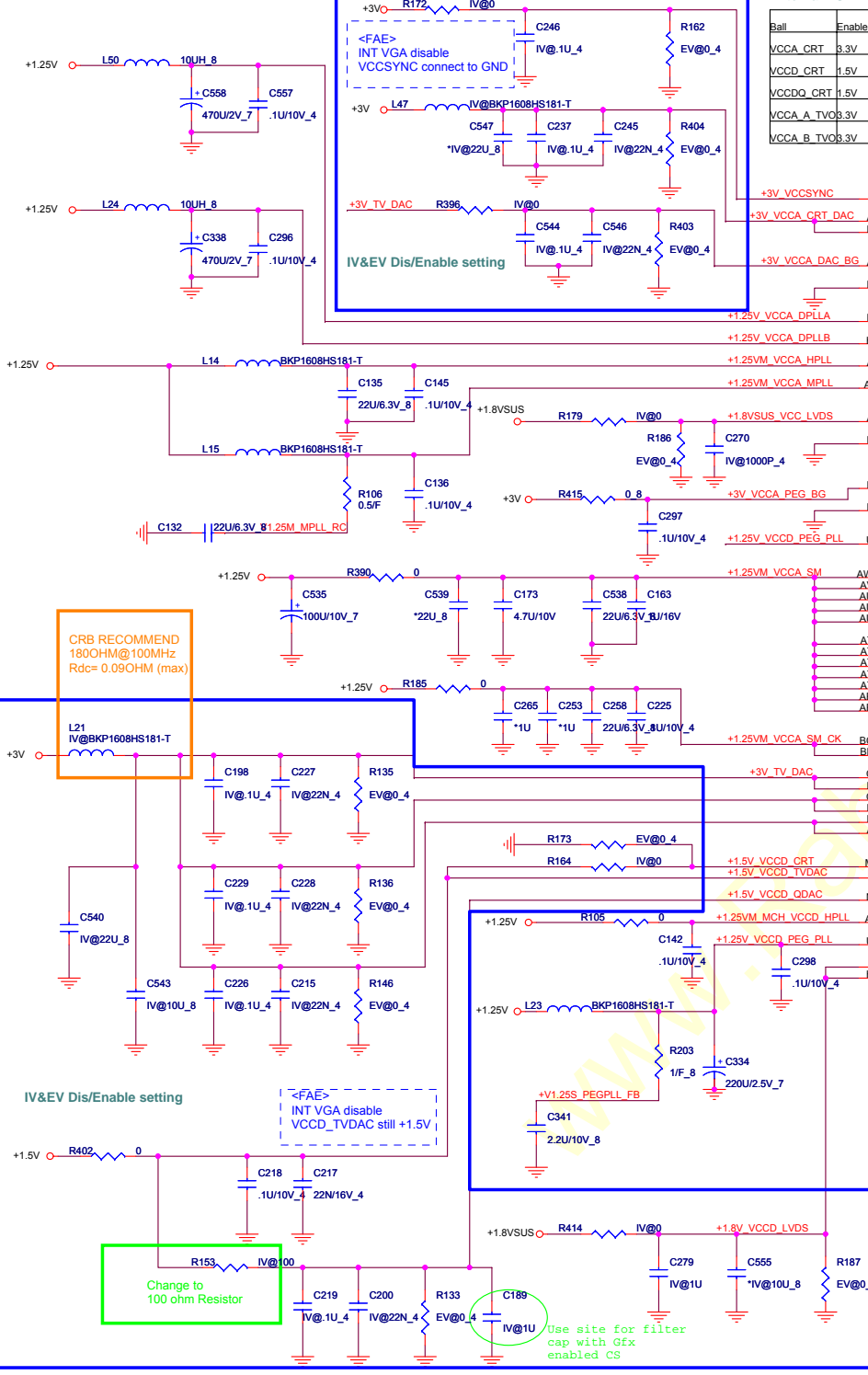
- SM_CLK_0 AV29 M_CLK0 <16>
- SM_CLK_1 BB23 M_CLK1 <16>
- SM_CLK_2 BA25 M_CLK2 <16>
- SM_CLK_3 AV23 M_CLK3 <16>
- SM_CLK#_0 AW30 M_CLK#0 <16>
- SM_CLK#_1 AW25 M_CLK#1 <16>
- SM_CLK#_2 AW23 M_CLK#2 <16>
- SM_CLK#_3 AW23 M_CLK#3 <16>
- SM_CKE_0 BE29 M_CKE0 <16>
- SM_CKE_1 AV32 M_CKE1 <16>
- SM_CKE_2 BD39 M_CKE2 <16>
- SM_CKE_3 BG37 M_CKE3 <16>
- SM_CS#_0 BG20 M_CS#0 <16>
- SM_CS#_1 BK16 M_CS#1 <16>
- SM_CS#_2 BG16 M_CS#2 <16>
- SM_CS#_3 BE13 M_CS#3 <16>
- SM_ODT_0 BH18 M_ODT0 <16>
- SM_ODT_1 BJ15 M_ODT1 <16>
- SM_ODT_2 BJ14 M_ODT2 <16>
- SM_ODT_3 BE16 M_ODT3 <16>
- SM_RCOMP BK15 M_RCOMP
- SM_RCOMP# BK14 M_RCOMP#
- SM_RCOMP_VO H BK31 SM_RCOMP_VO H
- SM_RCOMP_VOH BL31 SM_RCOMP_VOH
- SM_VREF_0 AR49 +SM_VREF_MCH
- SM_VREF_1 AW4
- DPLL_REF_CLK B42 CLK_DREFCLK <2>
- DPLL_REF_CLK# C42 CLK_DREFCLK# <2>
- DPLL_REF_SCLK H48 CLK_DREFSSCLK <2>
- DPLL_REF_SCLK# H47 CLK_DREFSSCLK# <2>
- PEG_CLK K44 CLK_PCIE_3GPLL <2>
- PEG_CLK# K45 CLK_PCIE_3GPLL# <2>
- DMI_RXN_0 AN47 DMI_TXN0
- DMI_RXN_1 A138 DMI_TXN1
- DMI_RXN_2 AN42 DMI_TXN2
- DMI_RXN_3 AN46 DMI_TXN3
- DMI_RXP_0 AM47 DMI_TXP0
- DMI_RXP_1 AN39 DMI_TXP1
- DMI_RXP_2 AN41 DMI_TXP2
- DMI_RXP_3 AN45 DMI_TXP3
- DMI_RXN_0 A46 DMI_RXN0
- DMI_RXN_1 A41 DMI_RXN1
- DMI_RXN_2 AM40 DMI_RXN2
- DMI_RXN_3 AM44 DMI_RXN3
- DMI_RXP_0 A47 DMI_RXP0
- DMI_RXP_1 A42 DMI_RXP1
- DMI_RXP_2 AM39 DMI_RXP2
- DMI_RXP_3 AM43 DMI_RXP3
- GFX_VID_0 E35 MCH GFX VID 0
- GFX_VID_1 A39 MCH GFX VID 1
- GFX_VID_2 C38 MCH GFX VID 2
- GFX_VID_3 B39 MCH GFX VID 3
- GFX_VREF_EN E36 R183 *0.4 SUSB# <14,31>
- CL_CLK AM49 CL_CLK0 <14>
- CL_DATA AK50 CL_DATA0 <14>
- CL_PWROK AT43 MPWROK <14,31>
- CL_RST# AM50 +1.25V CL_VREF <14>
- SDVO_CTRL_CLK H35
- SDVO_CTRL_DATA K36
- CLK_RST# G39 CLK_MCH_OE#
- ICH_SYNC# G40 MCH_ICH_SYNC# <14>
- TEST_1 A37 GMCH_TEST1 R178 *0.4
- TEST_2 R32 GMCH_TEST2 R168 *20K_4





NB(Power-1)





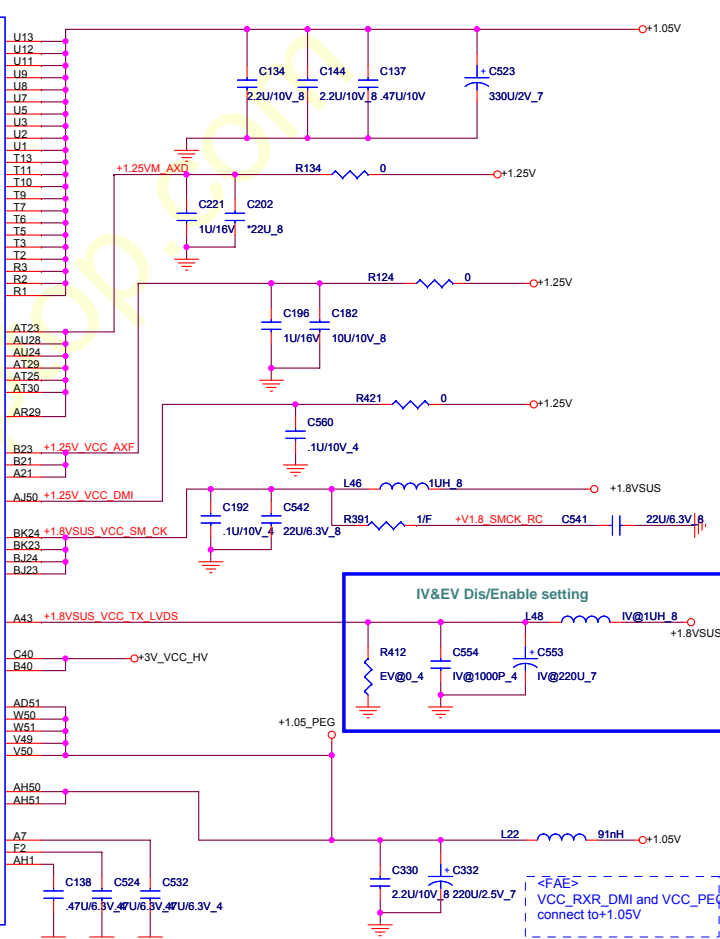
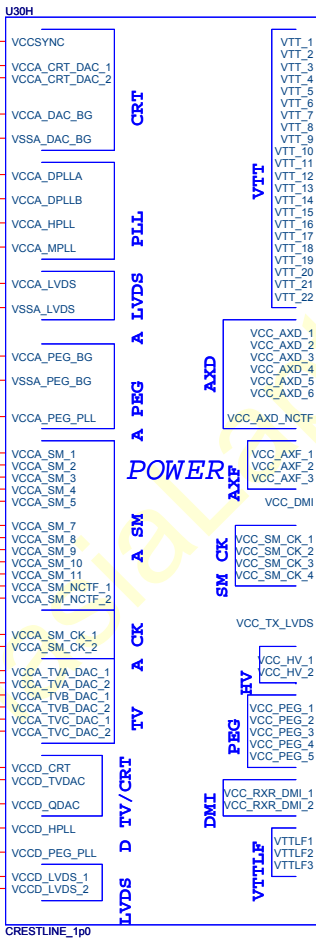
CRT/TV Disable/Enable guideline
External VGA with EV@part, Internal VGA with IV@ part

Ball	Enable	Disable	Ball	Enable	Disable
VCCA_CRT	3.3V	GND	VCCA_C_TVO	3.3V	GND
VCCD_CRT	1.5V	GND	VCCD_TVO	1.5V	1.5V
VCCDQ_CRT	1.5V	GND	VCCABG_DAC	3.3V	GND
VCCA_A_TV03.3V	GND	GND	VSSABG_DAC	GND	GND
VCCA_B_TV03.3V	GND	GND	VCC_SYNC	3.3V	GND

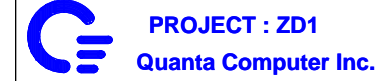
LVDS Disable/Enable guideline
External VGA with EV@part, Internal VGA with IV@ part

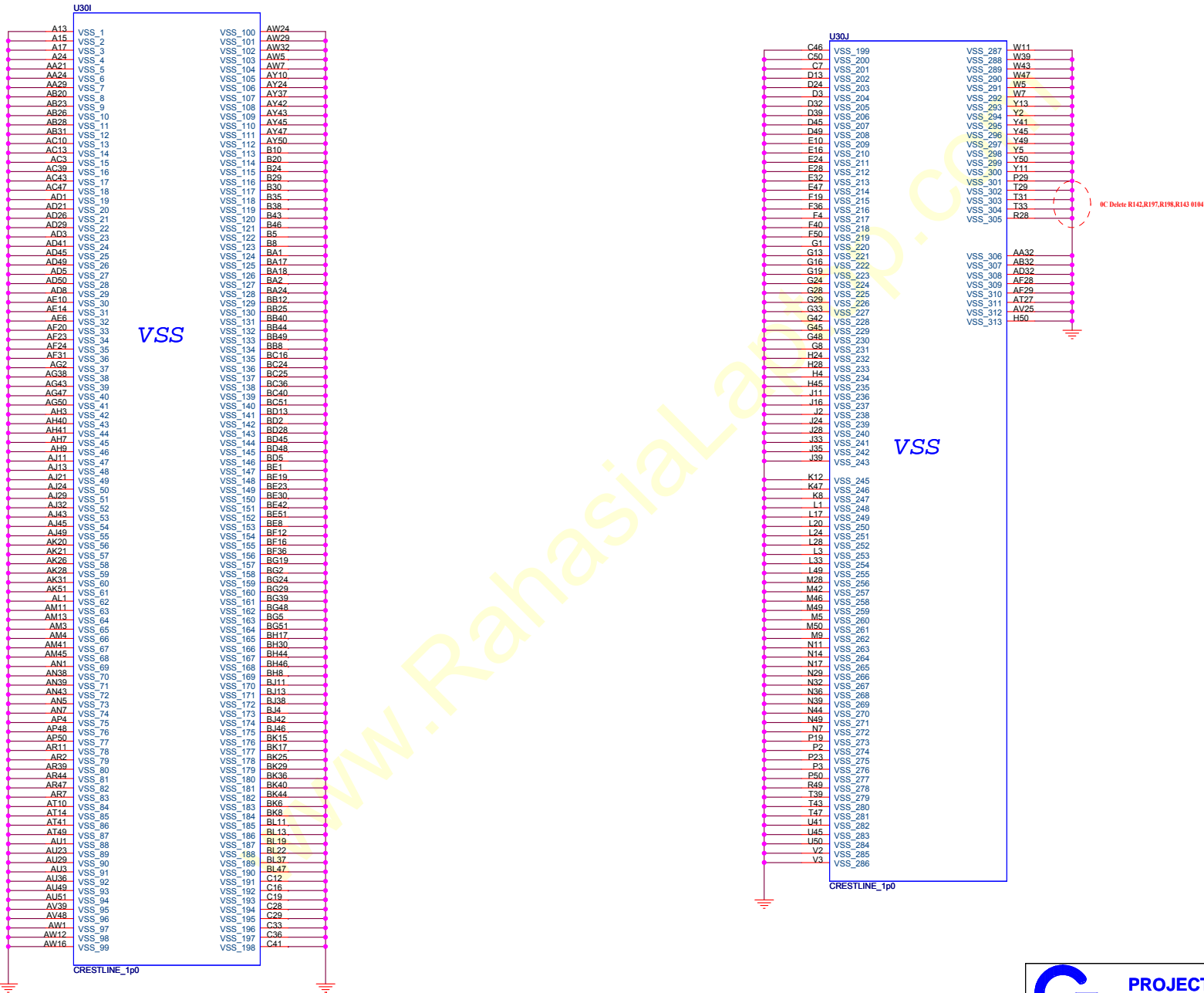
Signal	If SDVO Disable LVDS Disable	If SDVO enable LVDS Disable	If SDVO enable LVDS enable
VCCD_LVDS	GND	1.8V	1.8V
VCCA_LVDS	GND	GND	1.8V
VCCDQ_LVDS	GND	GND	1.8V

EXTERNAL INTERNAL

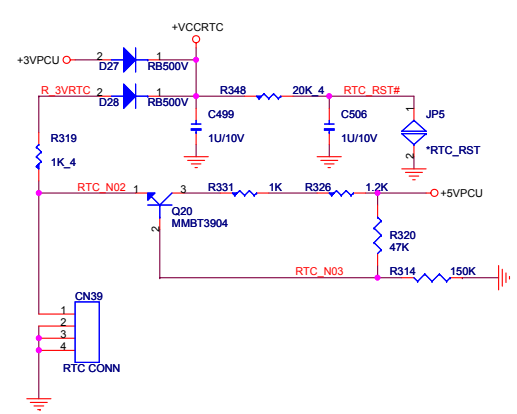


POWER





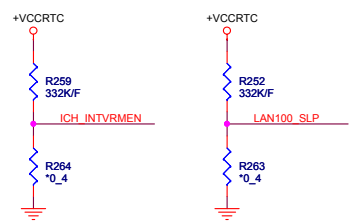
RTC



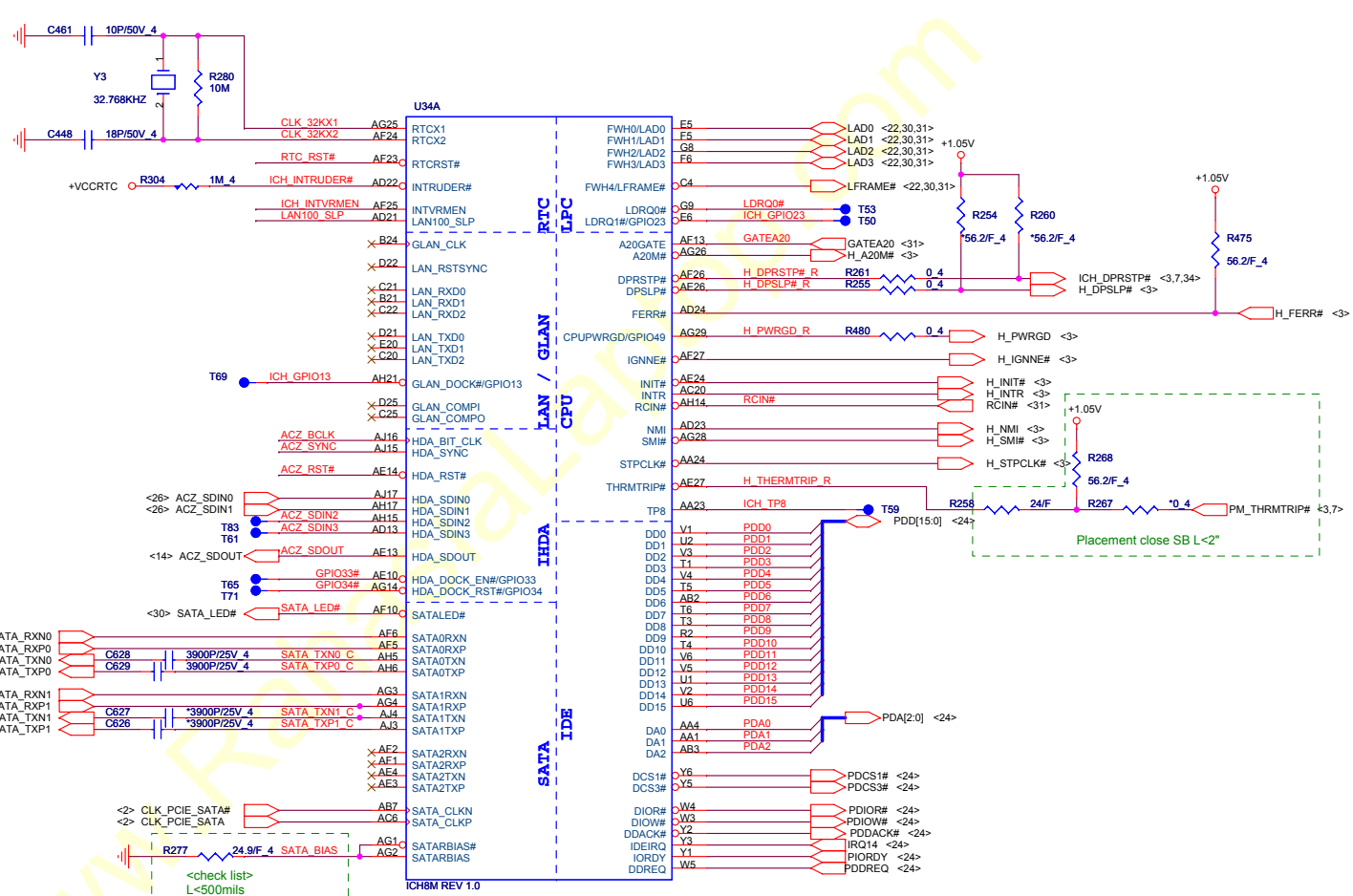
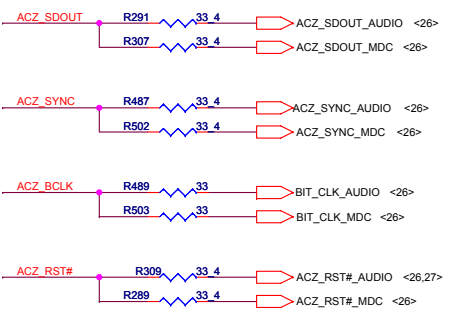
SB Strap

INTRVMEN	Low = Internal VR disable High = Internal VR enable(Default)
----------	---

LAN100_SLP	Low = Internal VR disable High = Internal VR enable(Default)
------------	---



HDA

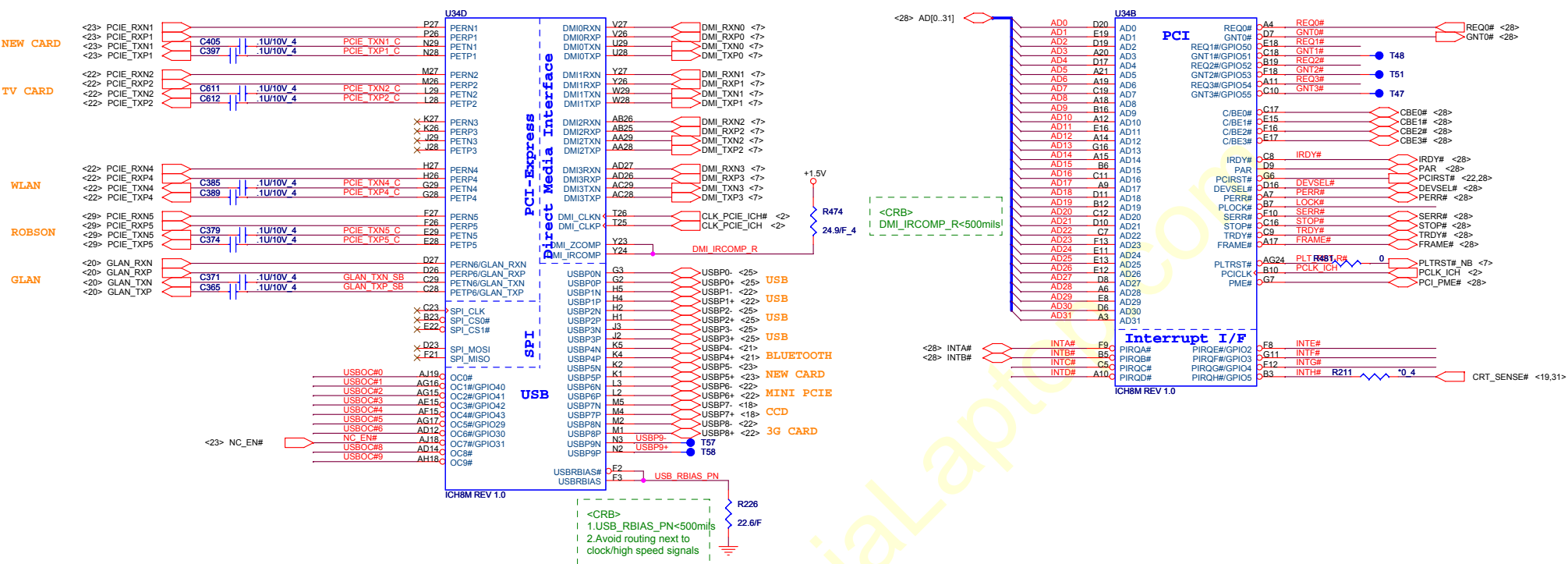


0810 UR FAE:
RCIN# DOESN'T NEED PU

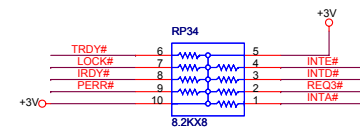
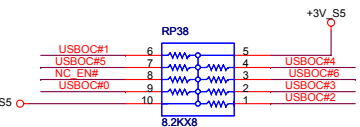
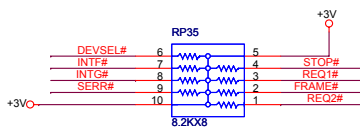
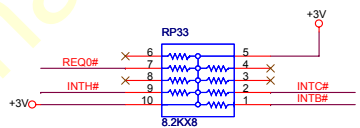
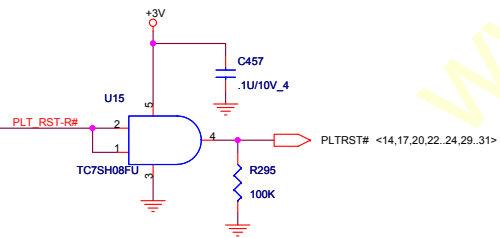
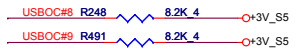
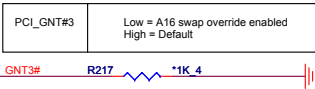
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SB-PCIE/USB/DMI

SB-PCI



A16 SWAP Override strap

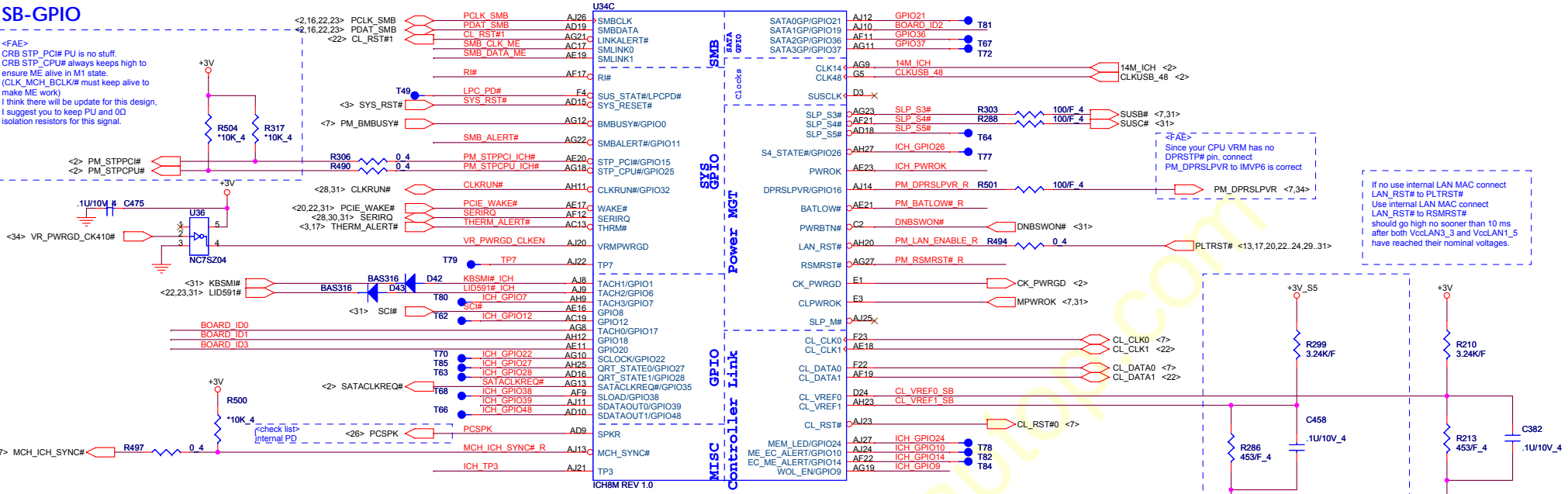


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SB-GPIO

<FAE>
 CRB STP_CPU# PU is no stuff.
 CRB STP_CPU# always keeps high to ensure ME alive in M1 state.
 (CLK_MCH_BCLK# must keep alive to make ME work)
 I think there will be update for this design.
 I suggest you to keep PU and 0Ω isolation resistors for this signal.



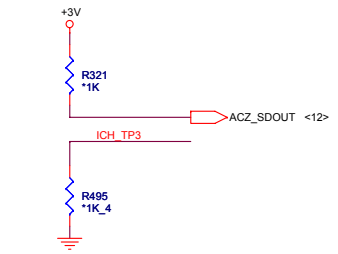
<FAE>
 Since your CPU VRM has no DPRSTP# pin, connect PM_DPRSLPVR to IMVP6 is correct

If no use internal LAN MAC connect LAN_RST# to PLTRST#
 Use internal LAN MAC connect LAN_RST# to RSMRST# should go high no sooner than 10 ms after both VccLAN3_3 and VccLAN1_5 have reached their nominal voltages.

Controller Link 1 VREF for IAMT support only

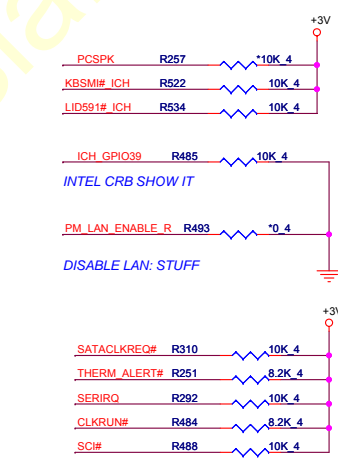
XOR Chain Entrance Strap

ICH_RSVD0	HDA_SDOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal operation(Default)
1	1	Set PCIe port config bit 1

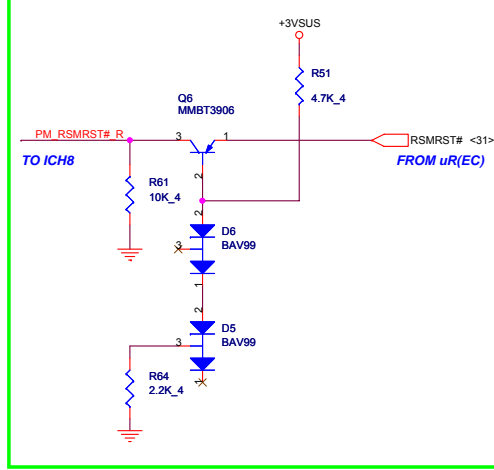


No Reboot strap

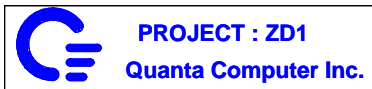
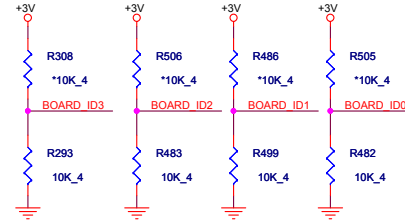
HDA_SPKR	Low = Default High = No Reboot
----------	-----------------------------------

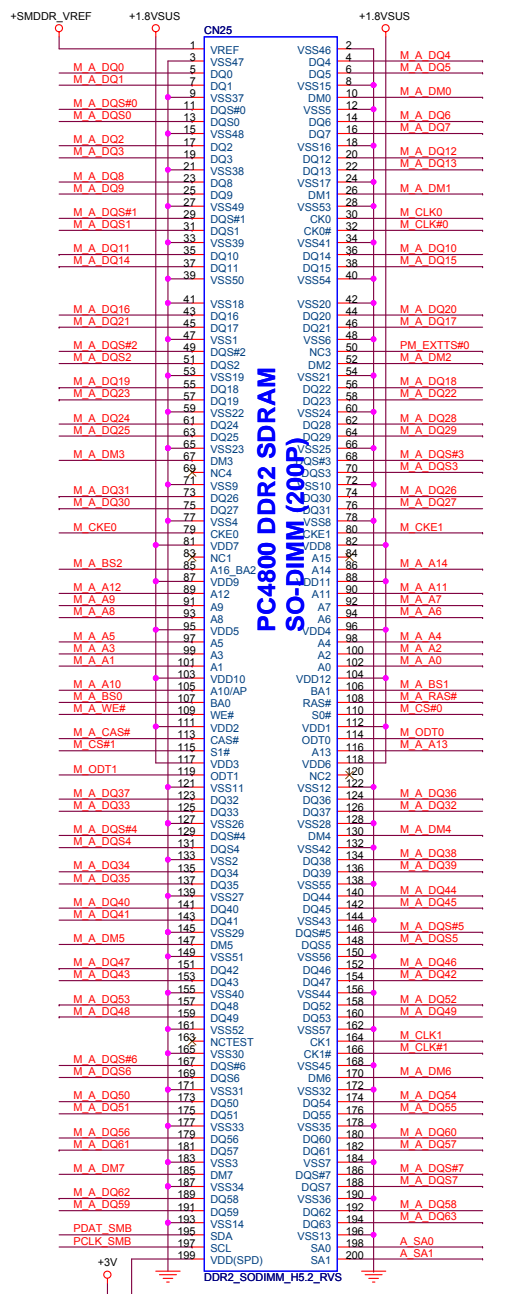


INTEL FAE (08/17)
 Add RSMRST# isolation (important!!! See ww22 Santa Rosa MoW)

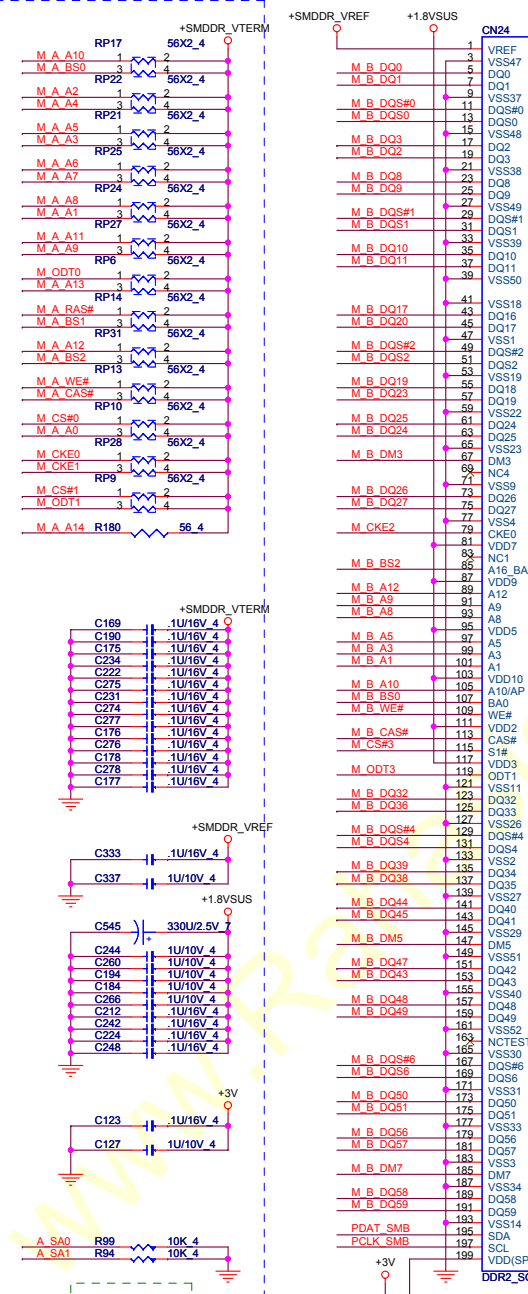


Board ID	ID3	ID2	ID1	ID0
	0	0	0	0
	0	0	0	1
	0	0	1	0
	0	0	1	1
	0	1	0	0

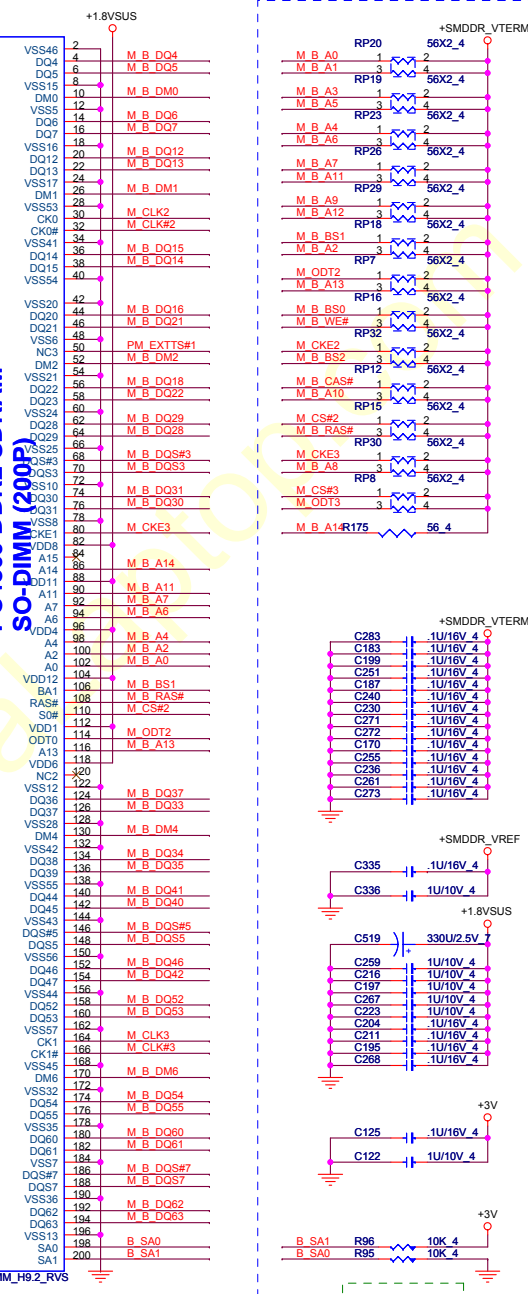




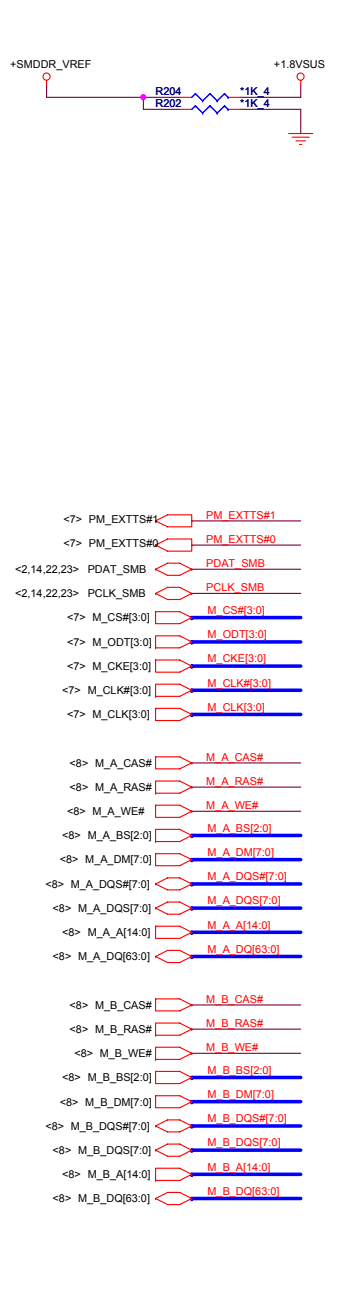
SO-DIMM0 SMbus address A0



SO-DIMM1 SMbus address A2



SO-DIMM2 SMbus address A2

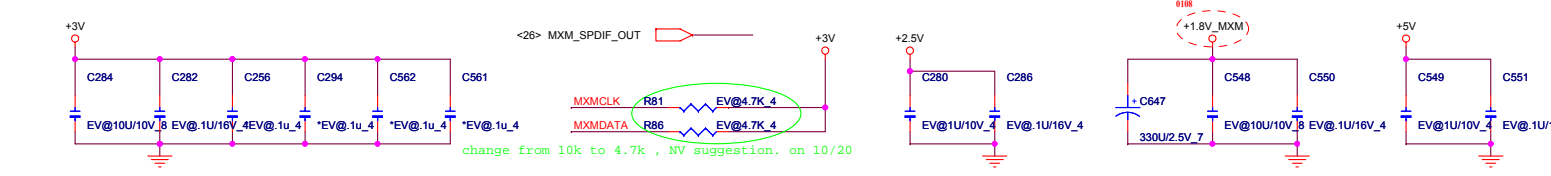
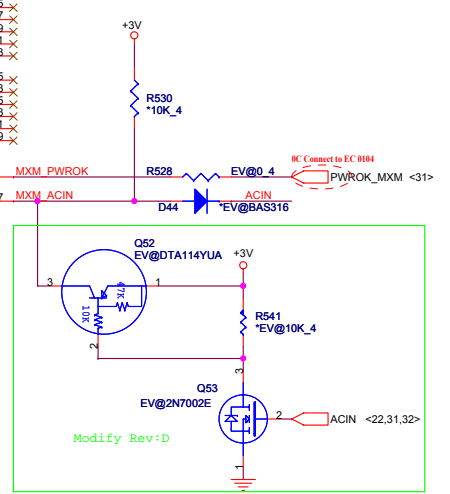
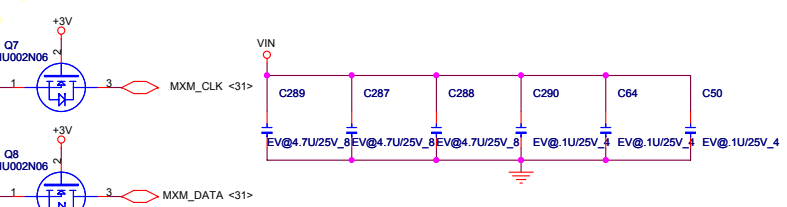
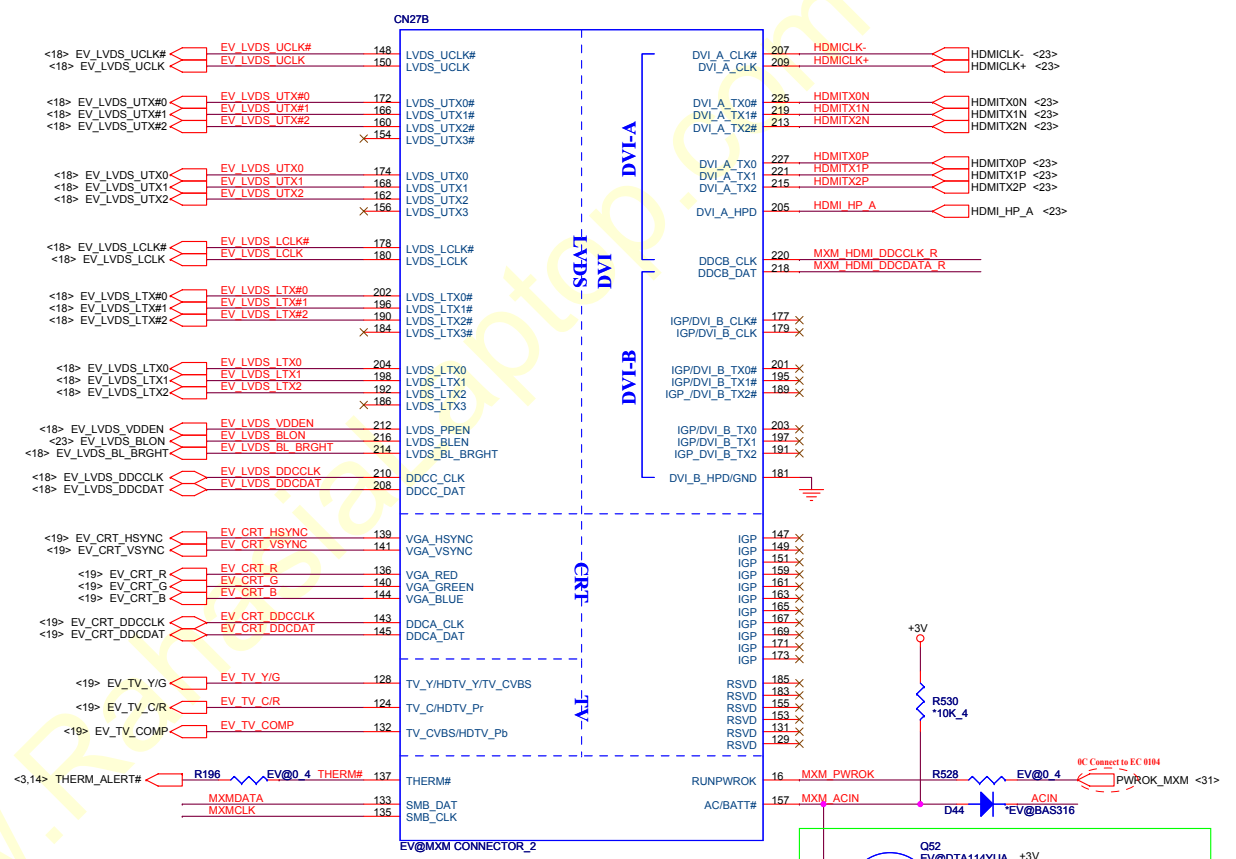
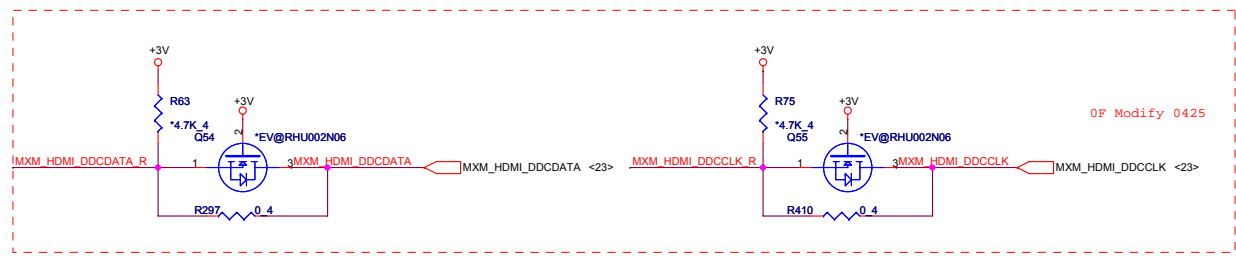
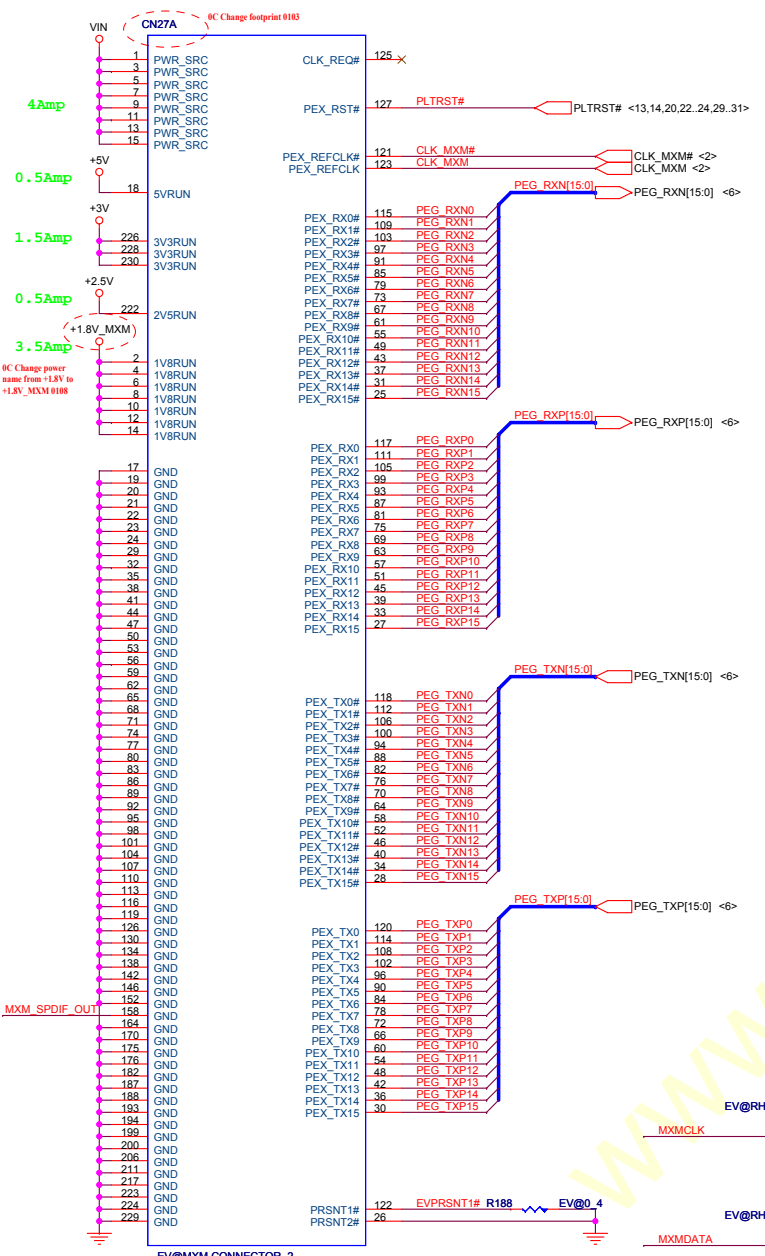


SO-DIMM3 SMbus address A2

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Size Document Number
DDR11 SO-DIMM

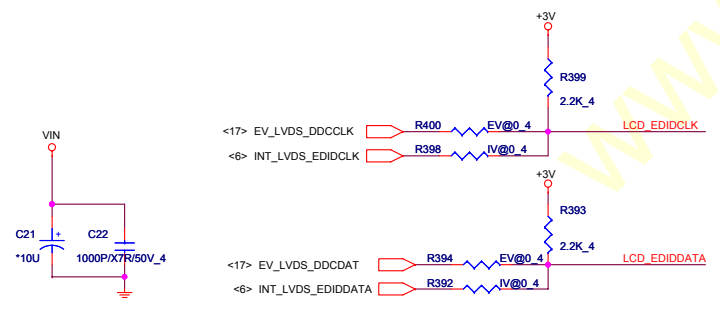
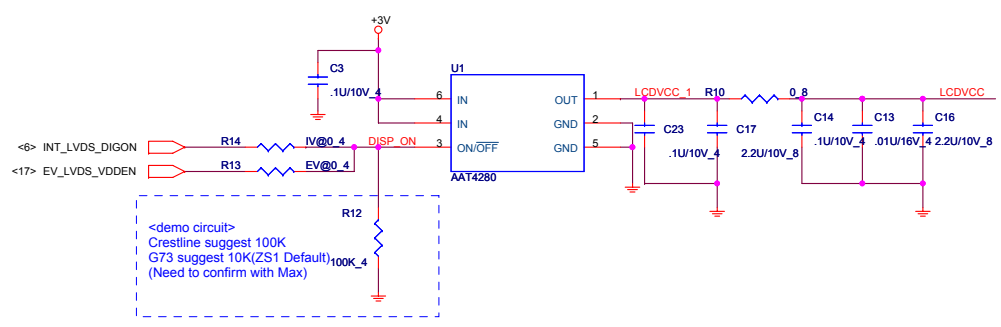
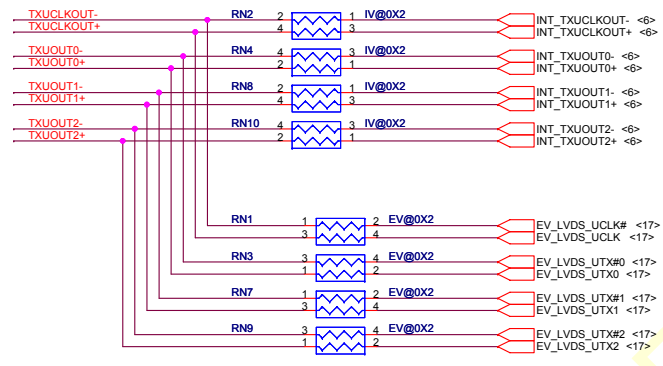
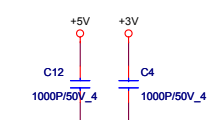
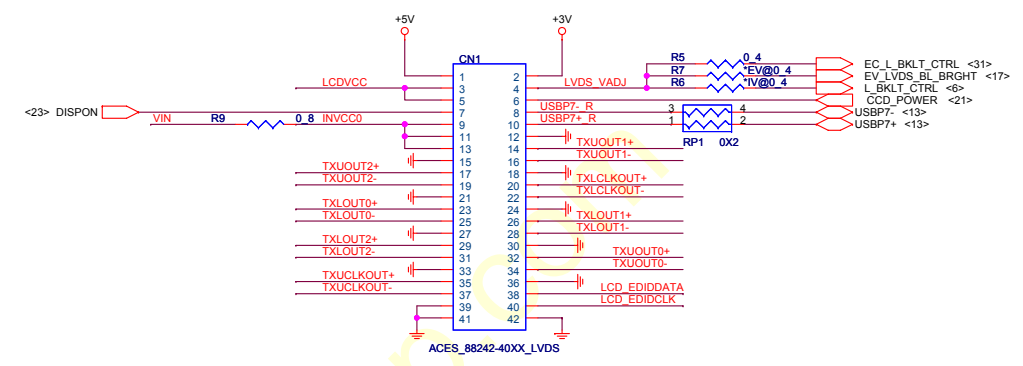
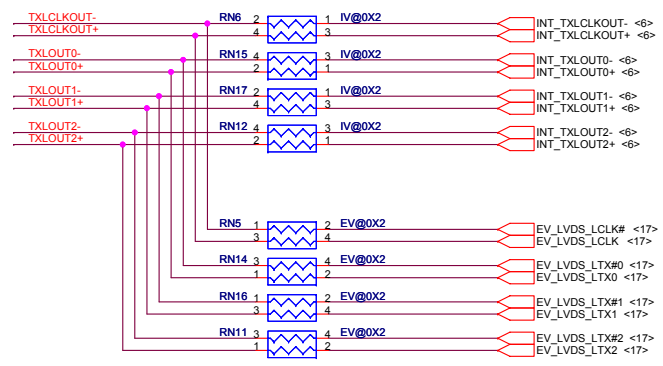
Date: Monday, May 07, 2007 Sheet 16 of 38



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Quanta Computer Inc.

Size: Document Number: **MXM** Rev: E

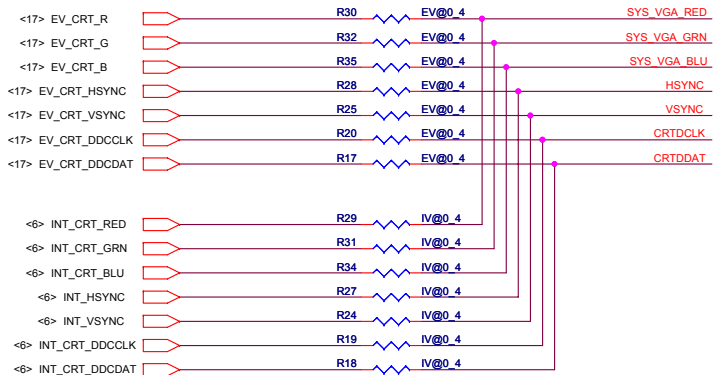
Date: Monday, May 07, 2007 Sheet 17 of 38



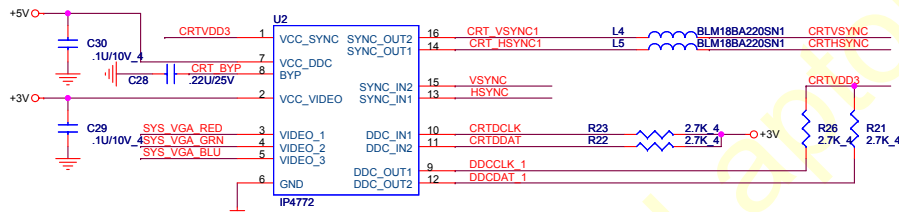
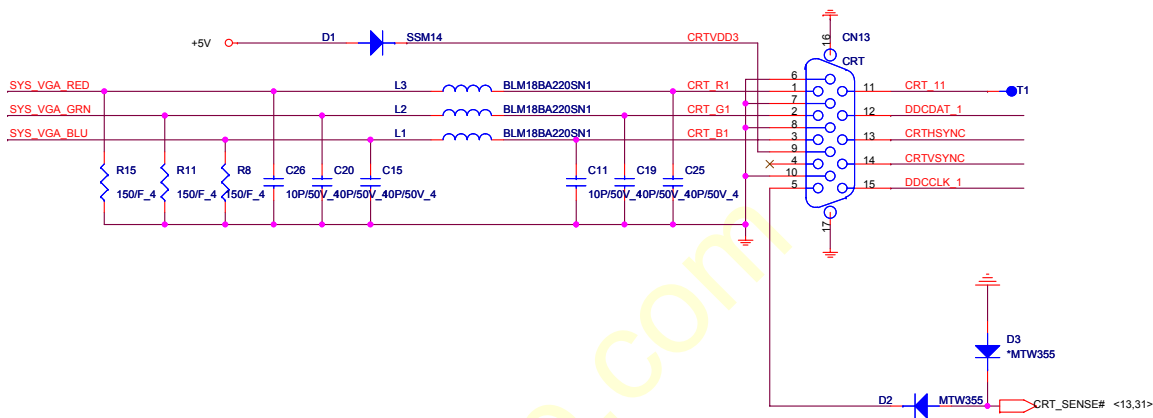
PROJECT : ZD1
Quanta Computer Inc.

Size	Document Number	Rev
	LVDS	E
Date:	Monday, May 07, 2007	Sheet 18 of 38

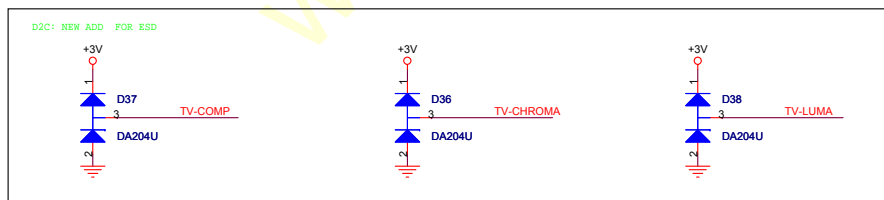
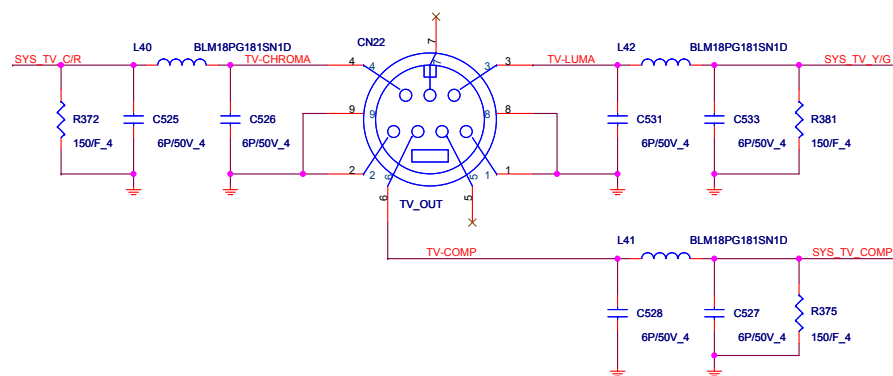
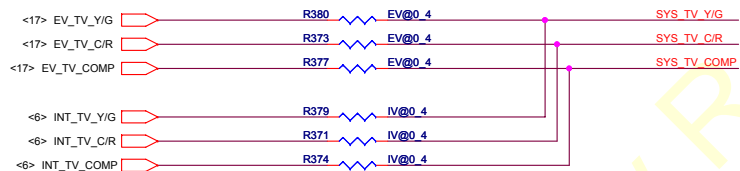
CRT Select

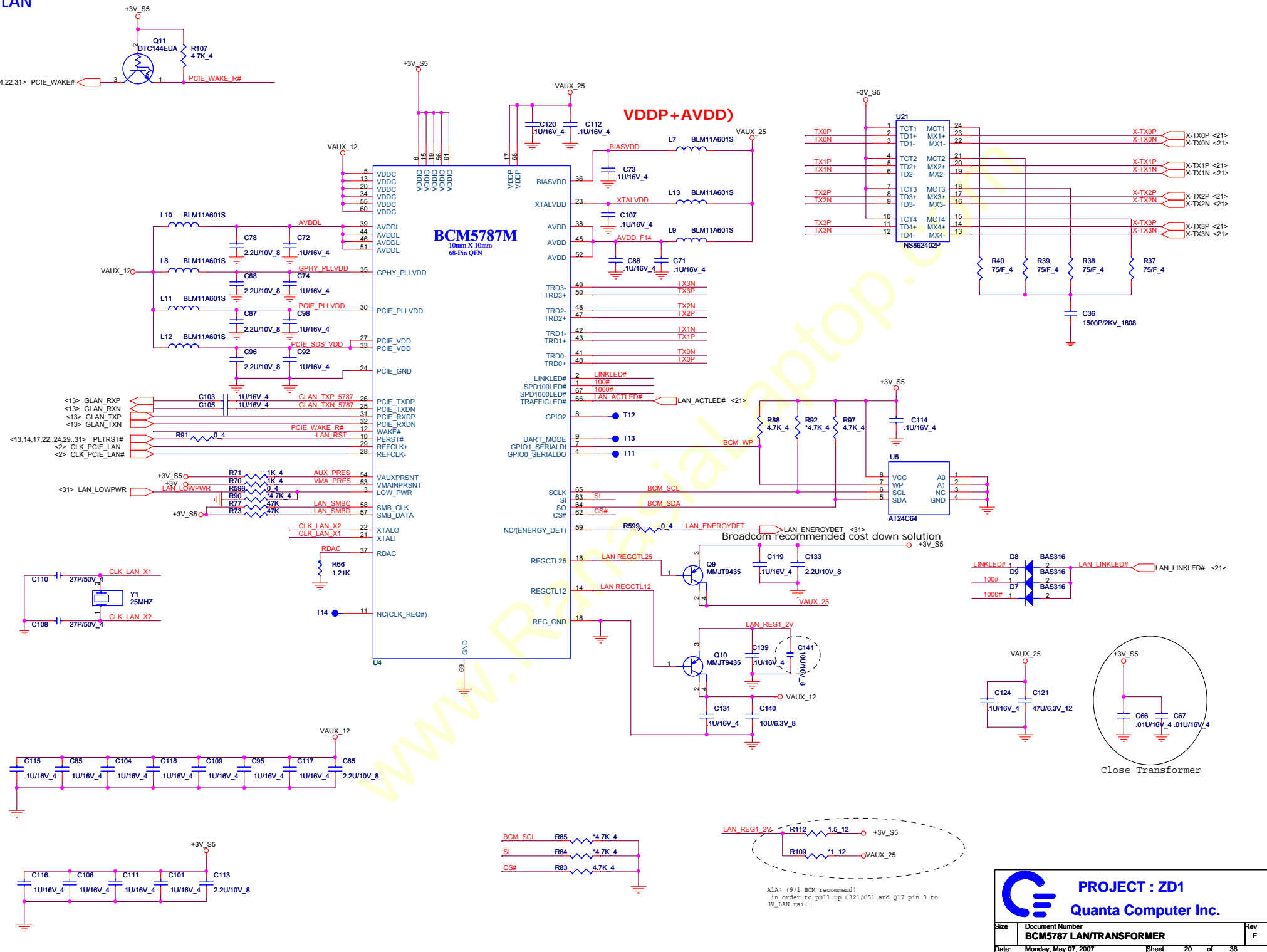


CRT CONNECTOR AND ESD



TV Out (SVHS) MiniDIN 7-pin



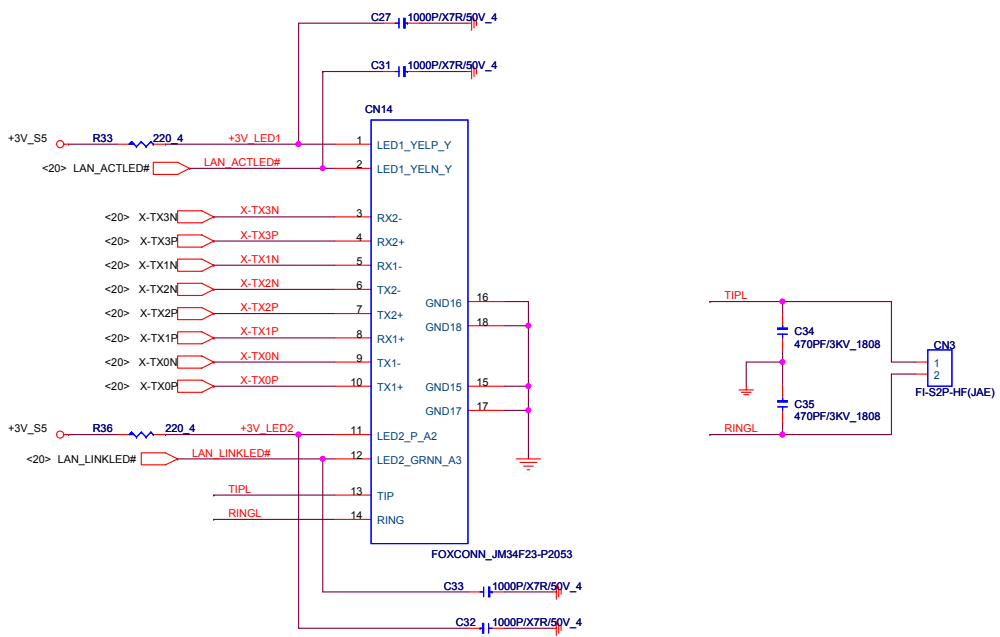


A1A: (9/1 BCM recommend)
in order to pull up C321/C51 and Q1 pin 3 to 3V_LAN rail.

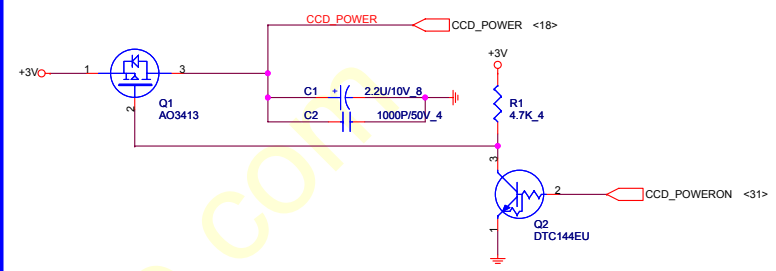
PROJECT : ZD1
Quanta Computer Inc.

Size	Document Number	Rev
	BCM5787 LAN/TRANSFORMER	E
Date:	Monday, May 07, 2007	Sheet 20 of 38

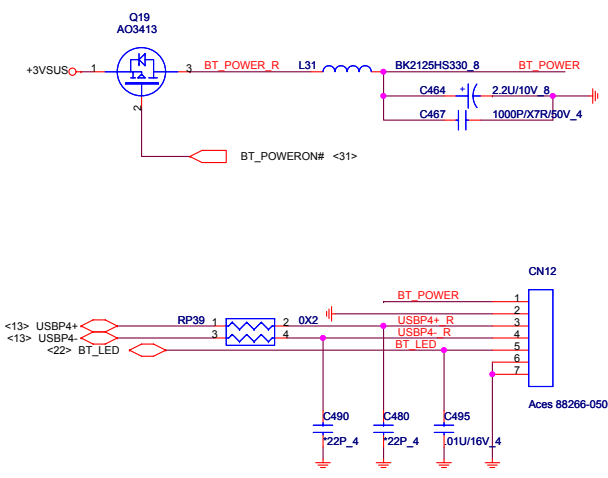
RJ45-11



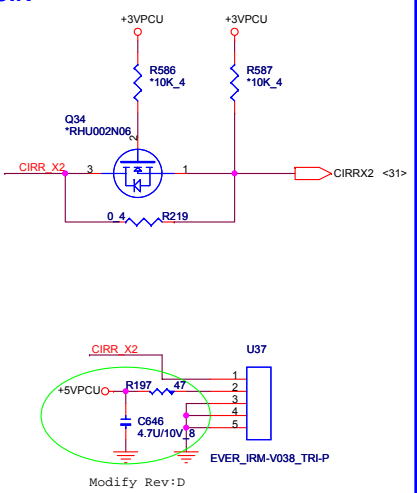
CAMERA MODULE CONNECTOR



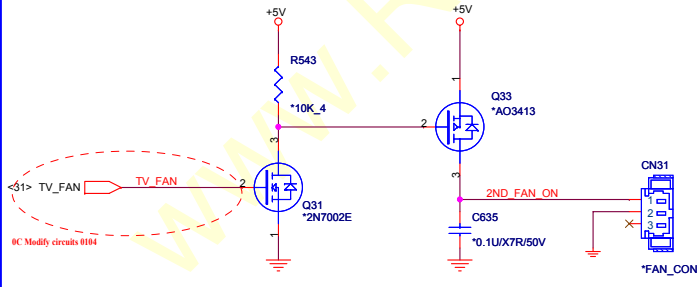
BLUETOOTH MODULE CONNECTOR



CIR



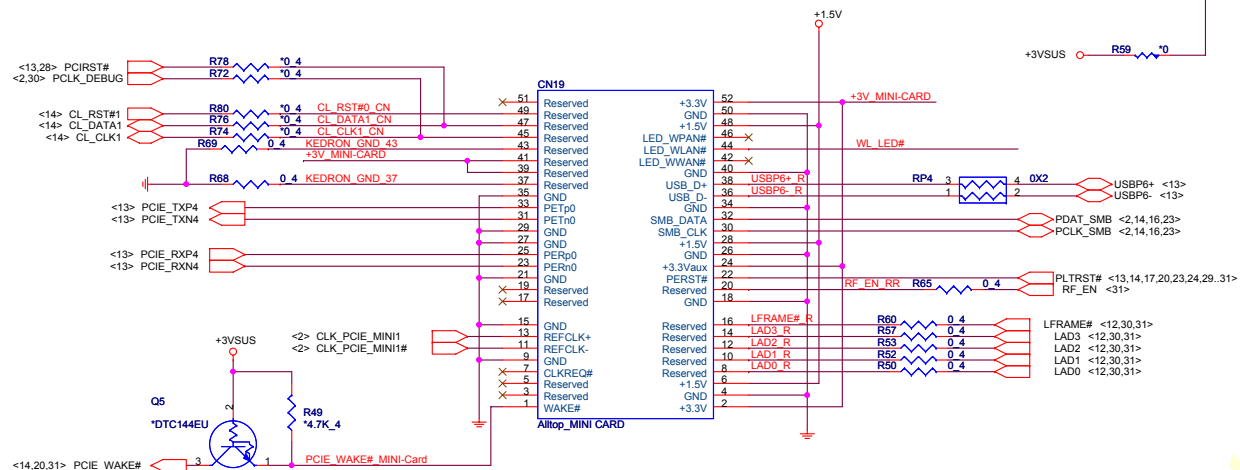
2nd FAN



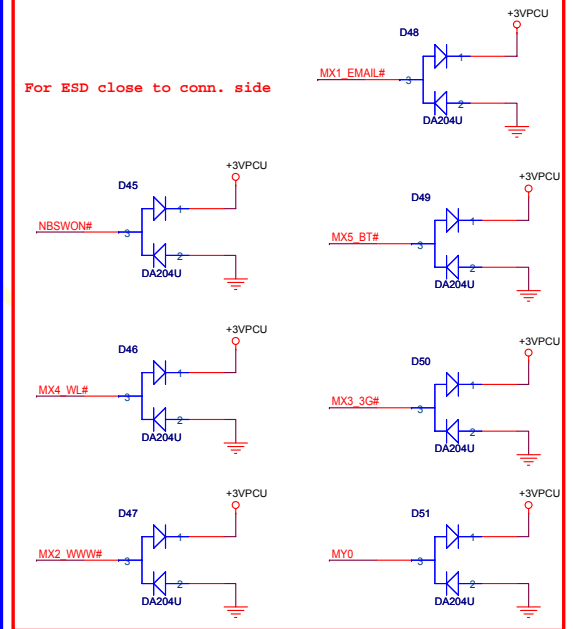
PROJECT : ZD1
Quanta Computer Inc.

Size	Document Number	Rev
	BT/CCD/RJ45-11/CIR/2nd FAN	E
Date:	Monday, May 07, 2007	Sheet 21 of 38

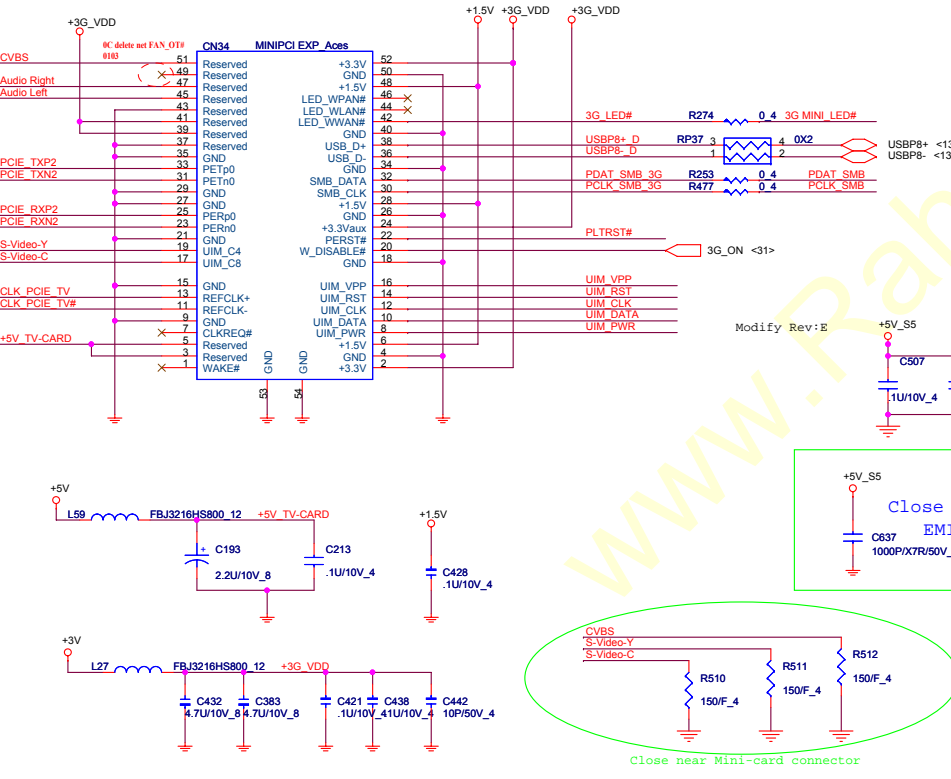
MINI-Card



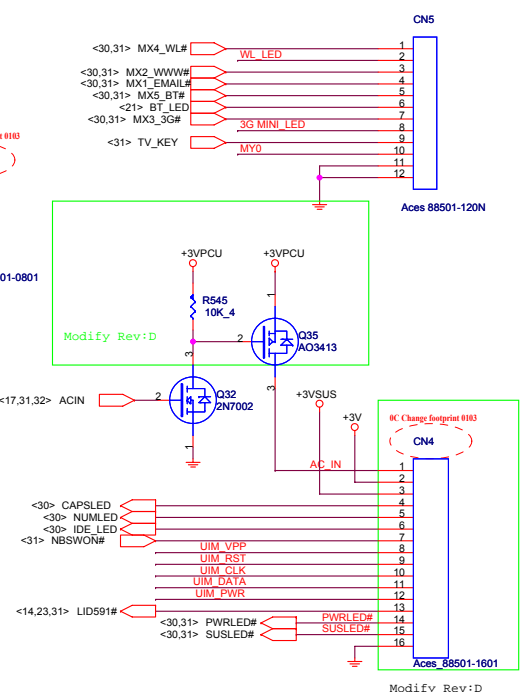
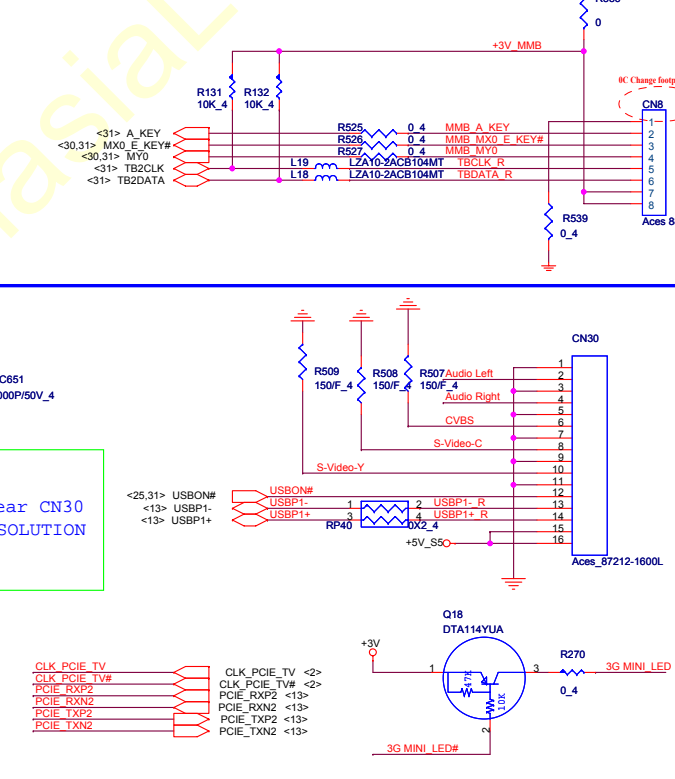
For ESD close to conn. side



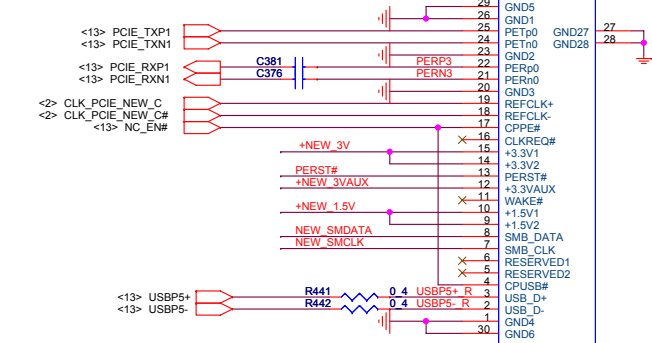
3G/TV MINI CARD



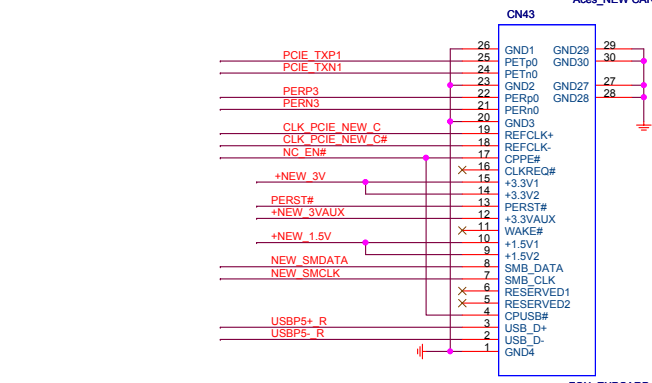
Media Key



New card

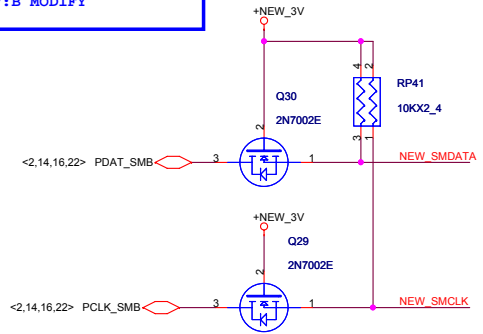
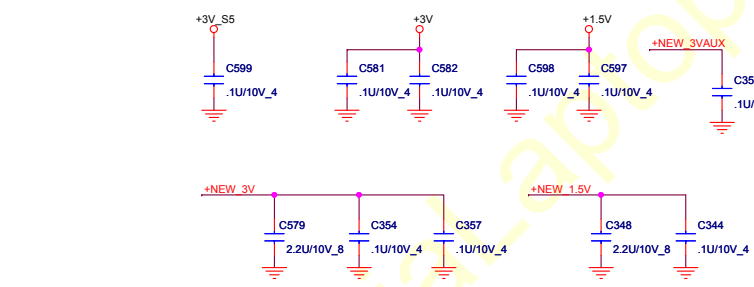
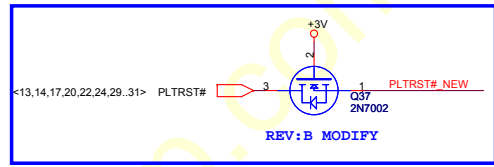
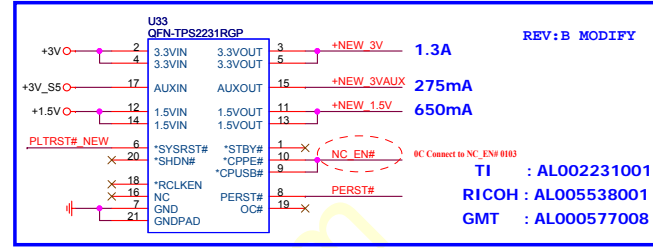


*Aces_NEW CARD

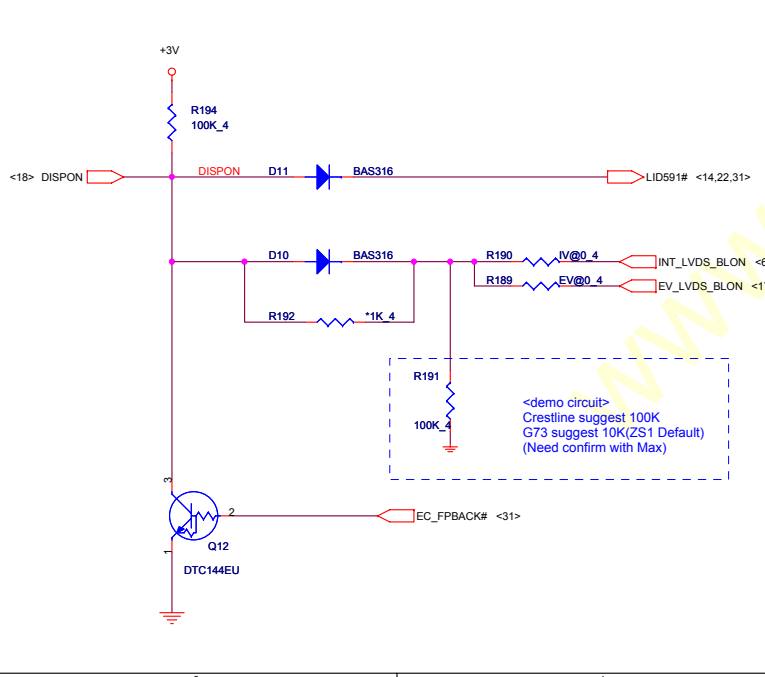


FOX_EXPCARD

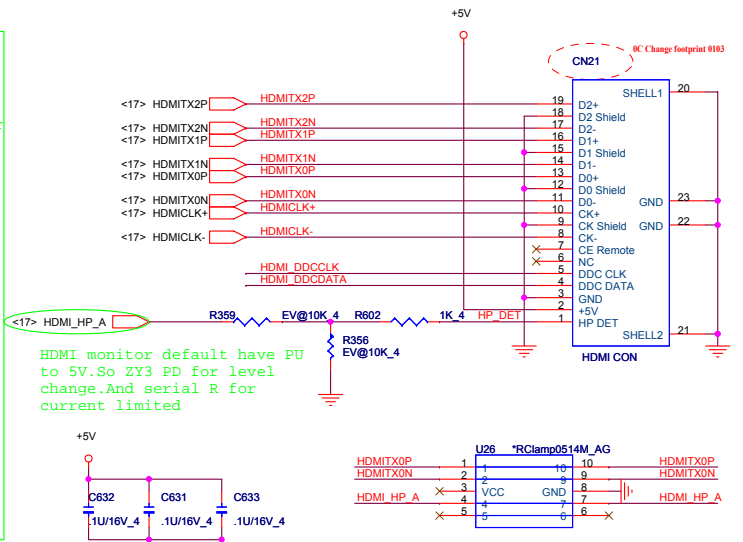
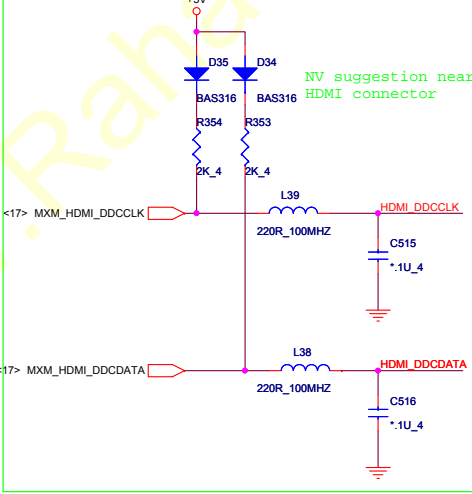
NEW CARD'S POWER SWITCH



LID SWITCH



HDMI

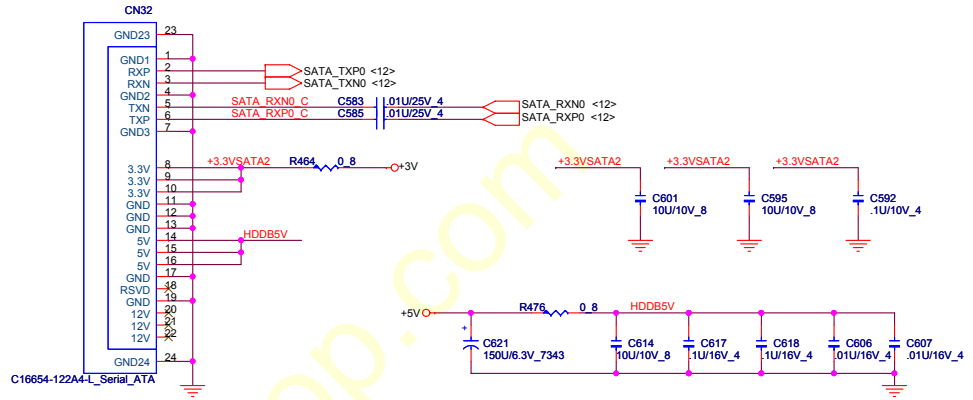


HDMITX2P	1	10	HDMITX2P	HDMICLK+	1	10	HDMICLK+
HDMITX2N	2	9	HDMITX2N	HDMICLK-	2	9	HDMICLK-
HDMITX1P	3	8	HDMITX1P	HDMI DDCCLK	3	8	HDMI DDCCLK
HDMITX1N	4	7	HDMITX1N	HDMI DDCDATA	4	7	HDMI DDCDATA
HDMITX1P	5	6	HDMITX1P		5	6	

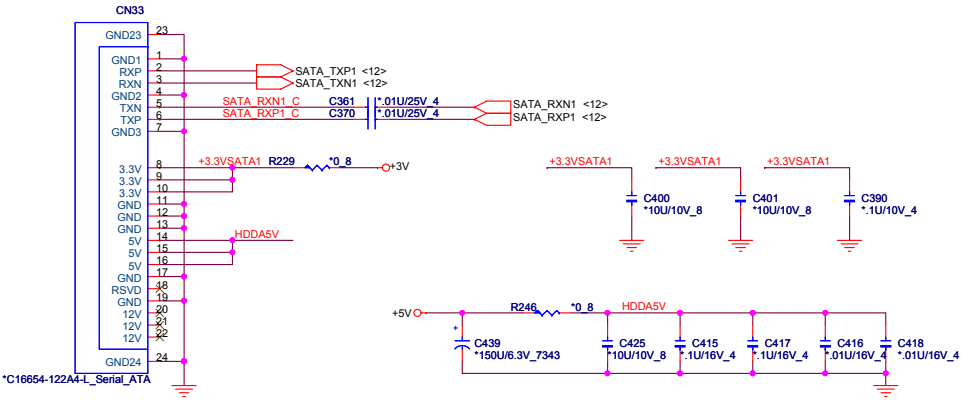
PROJECT : ZD1
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SATA HDD2

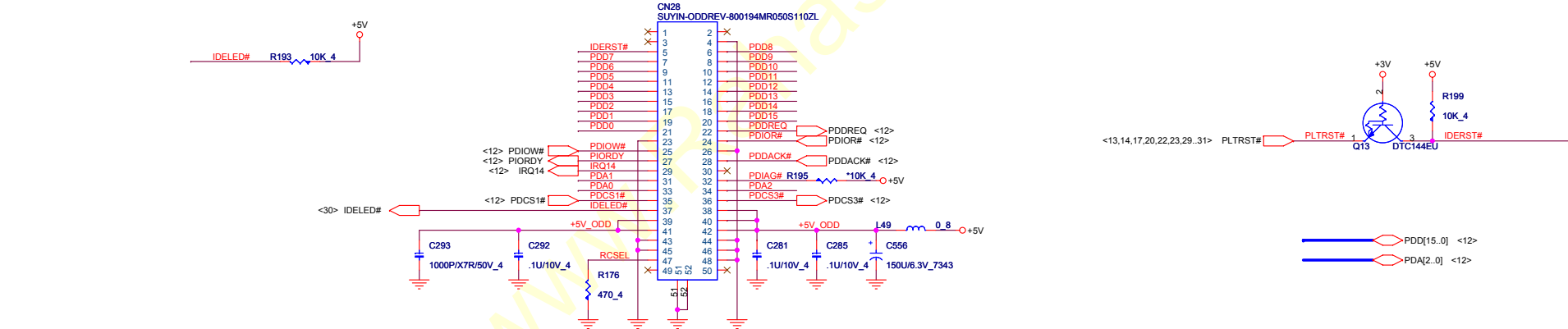
Main



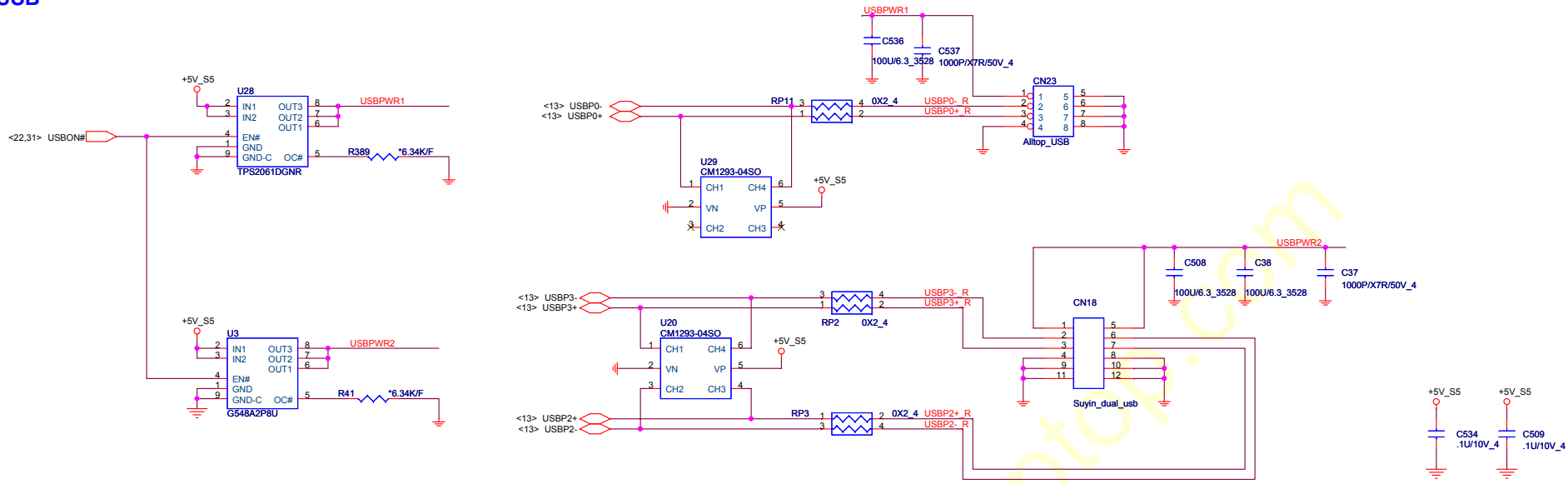
SATA HDD1



ODD (PATA)

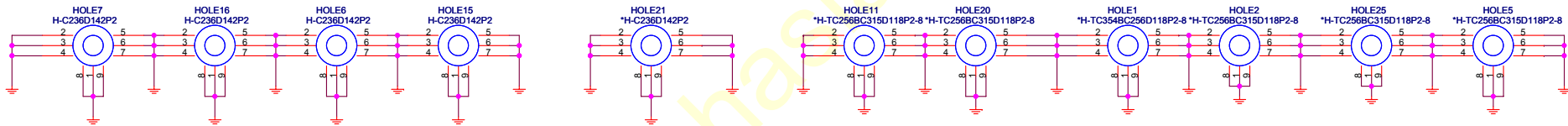


USB

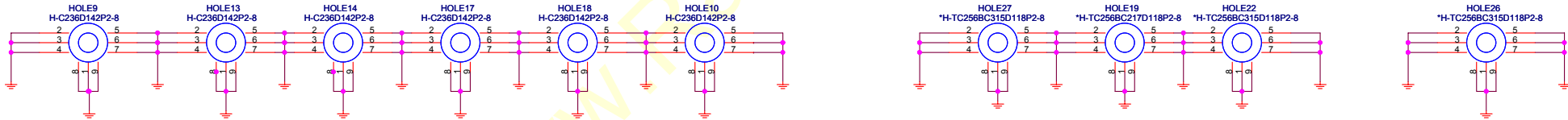


HOLES

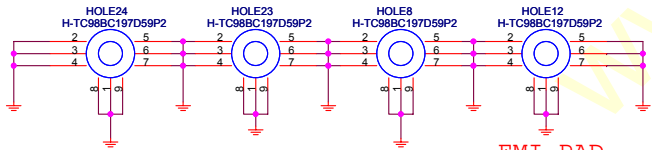
CPU NUT



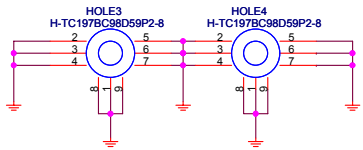
MXM NUT



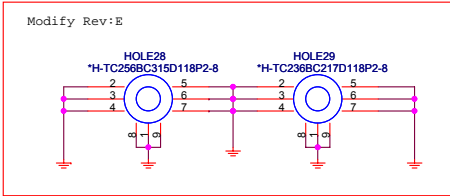
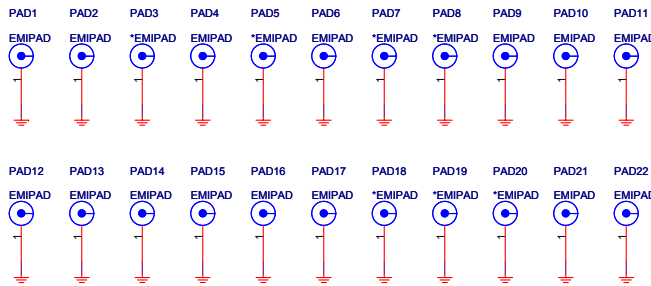
MINI CARD NUT



MDC NUT



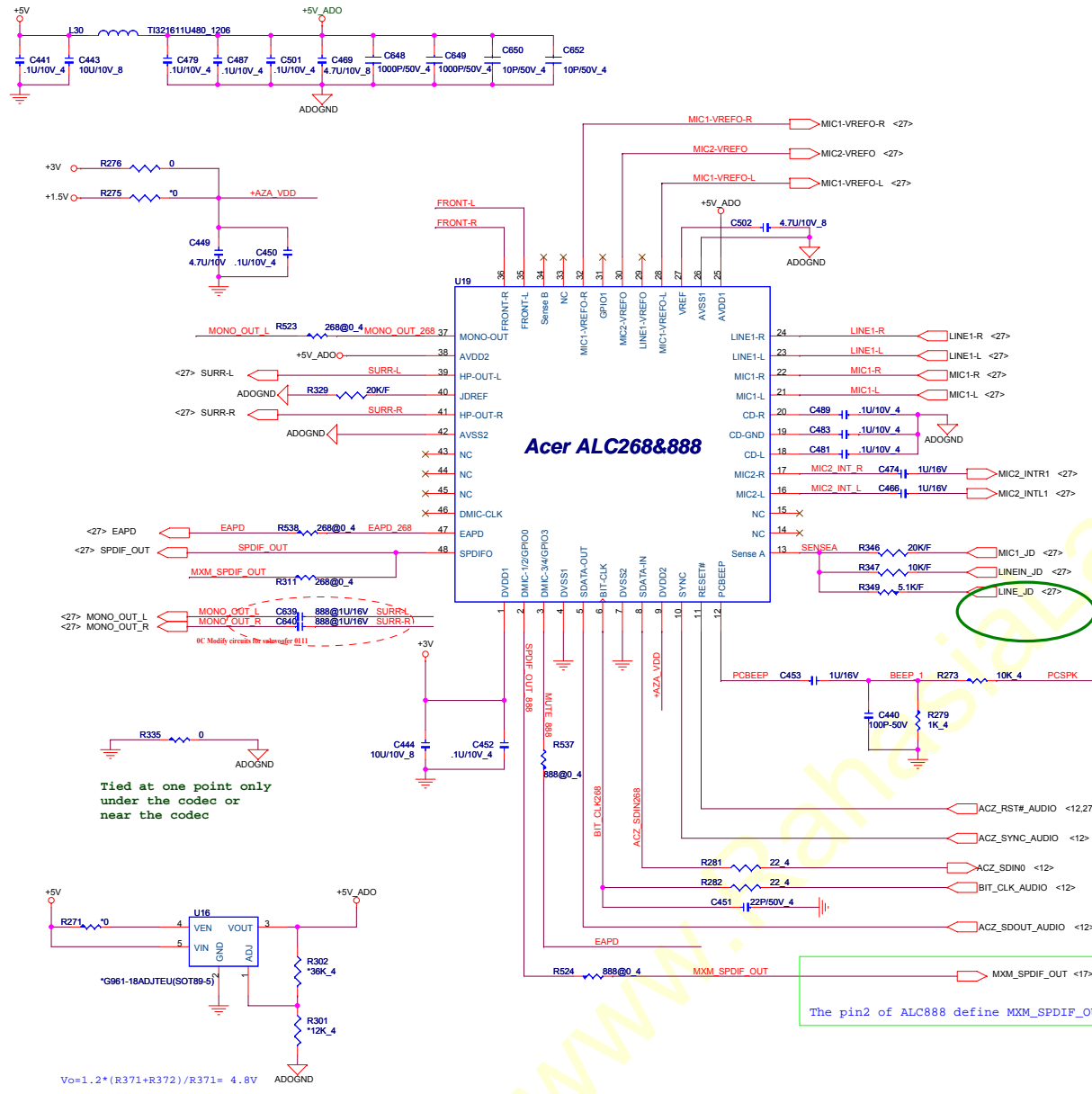
Footprint error: PAD15 , PAD4 ,PAD16: emipad97x87



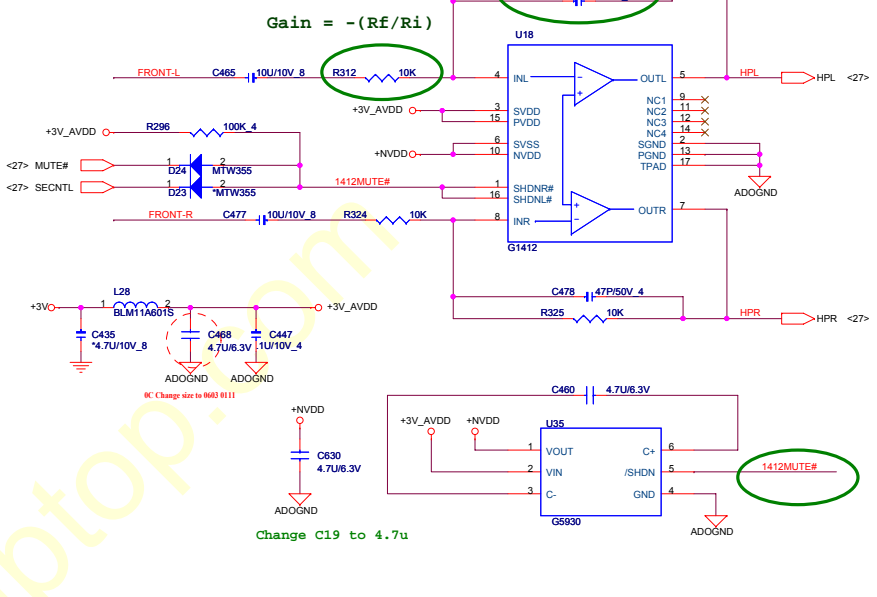
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Quanta Computer Inc.

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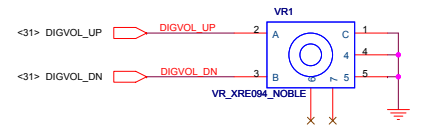
CODEC (ALC268)



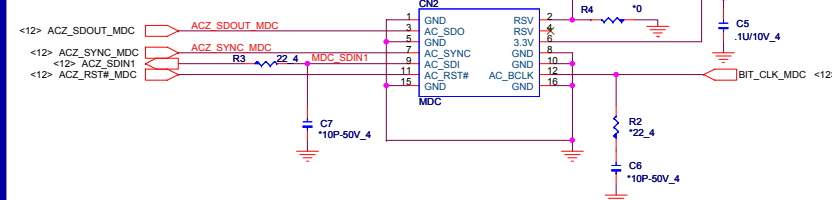
LINE OUT Amplifier



VR



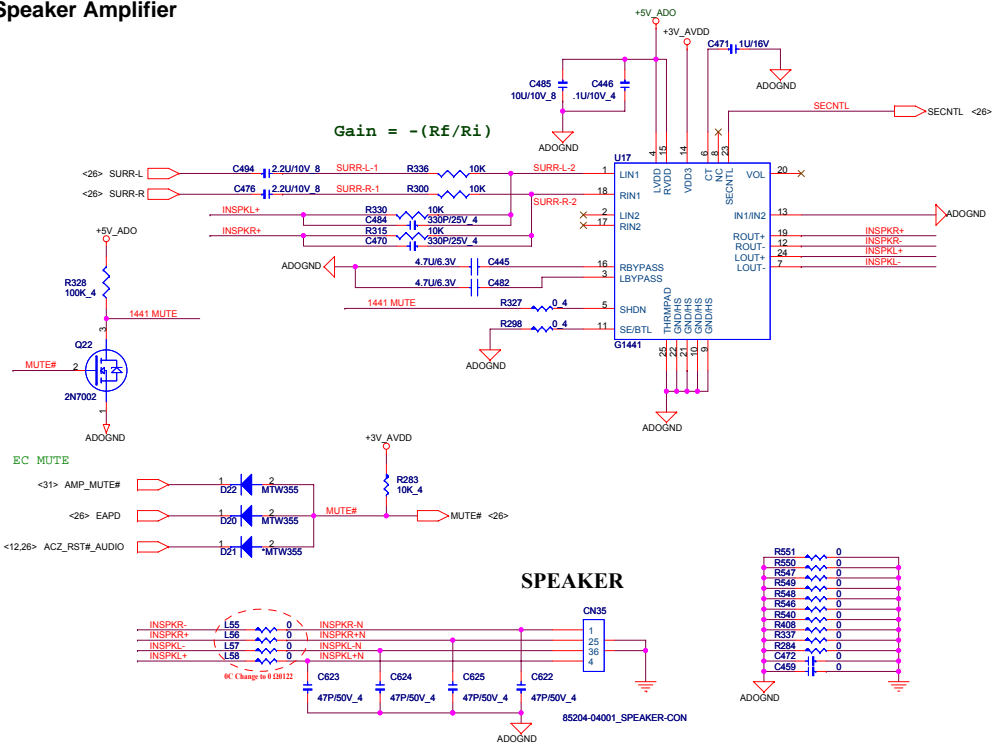
MDC



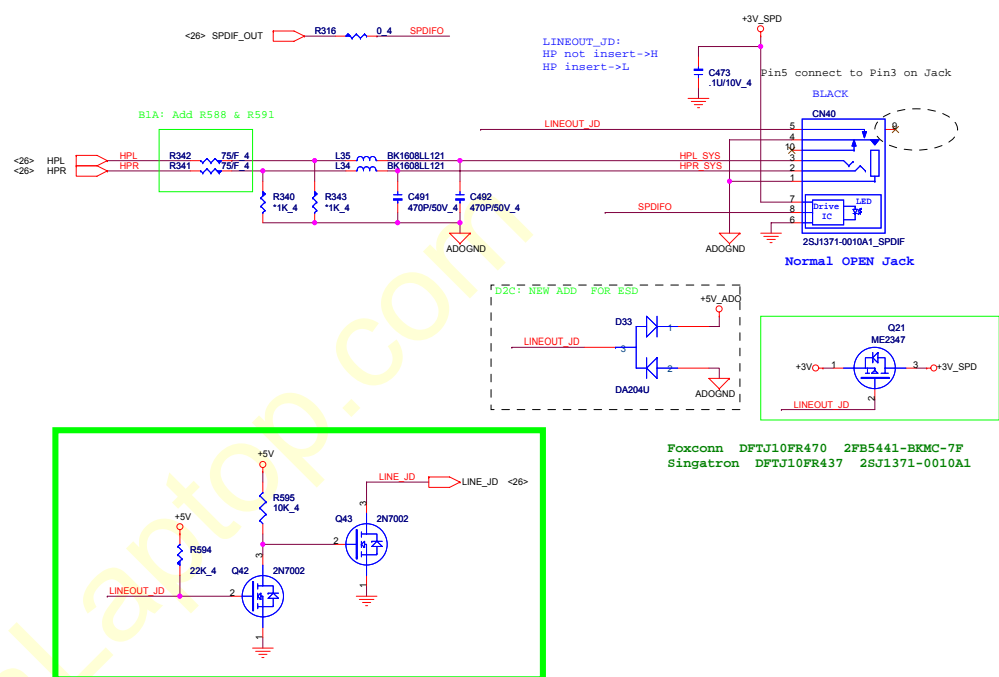
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	REALTEK ALC268&888/MDC/VR	E
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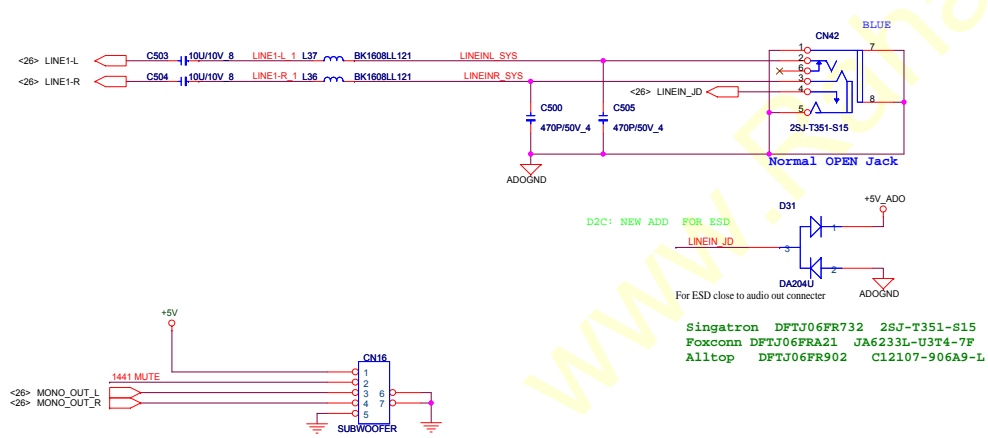
Speaker Amplifier



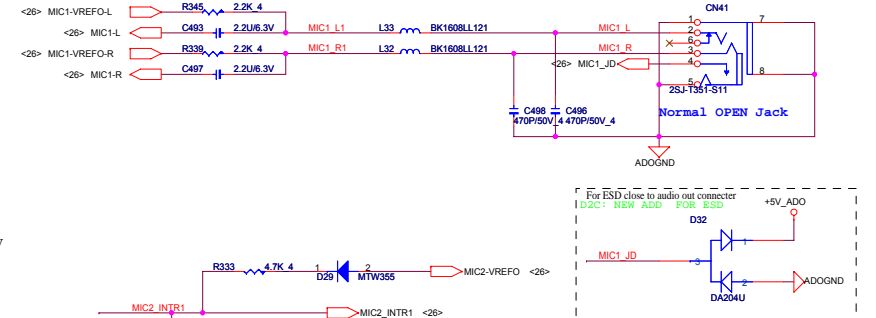
SYSTEM LINE OUT/SPDIF



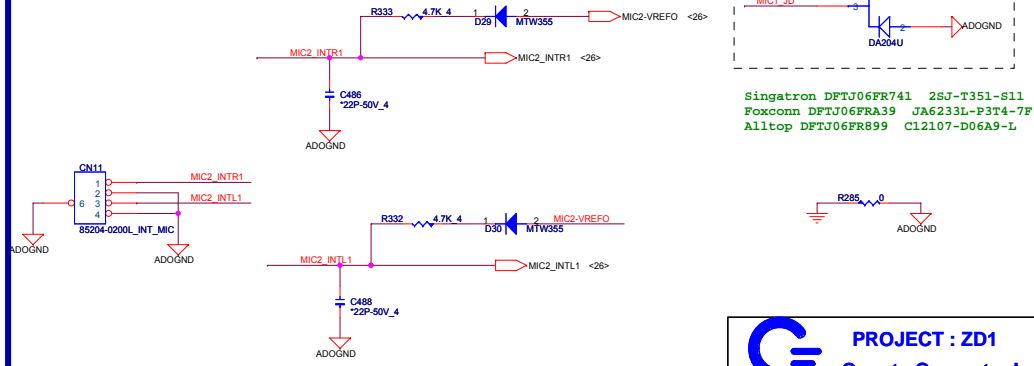
SYSTEM LINE IN/SUBWOOFER

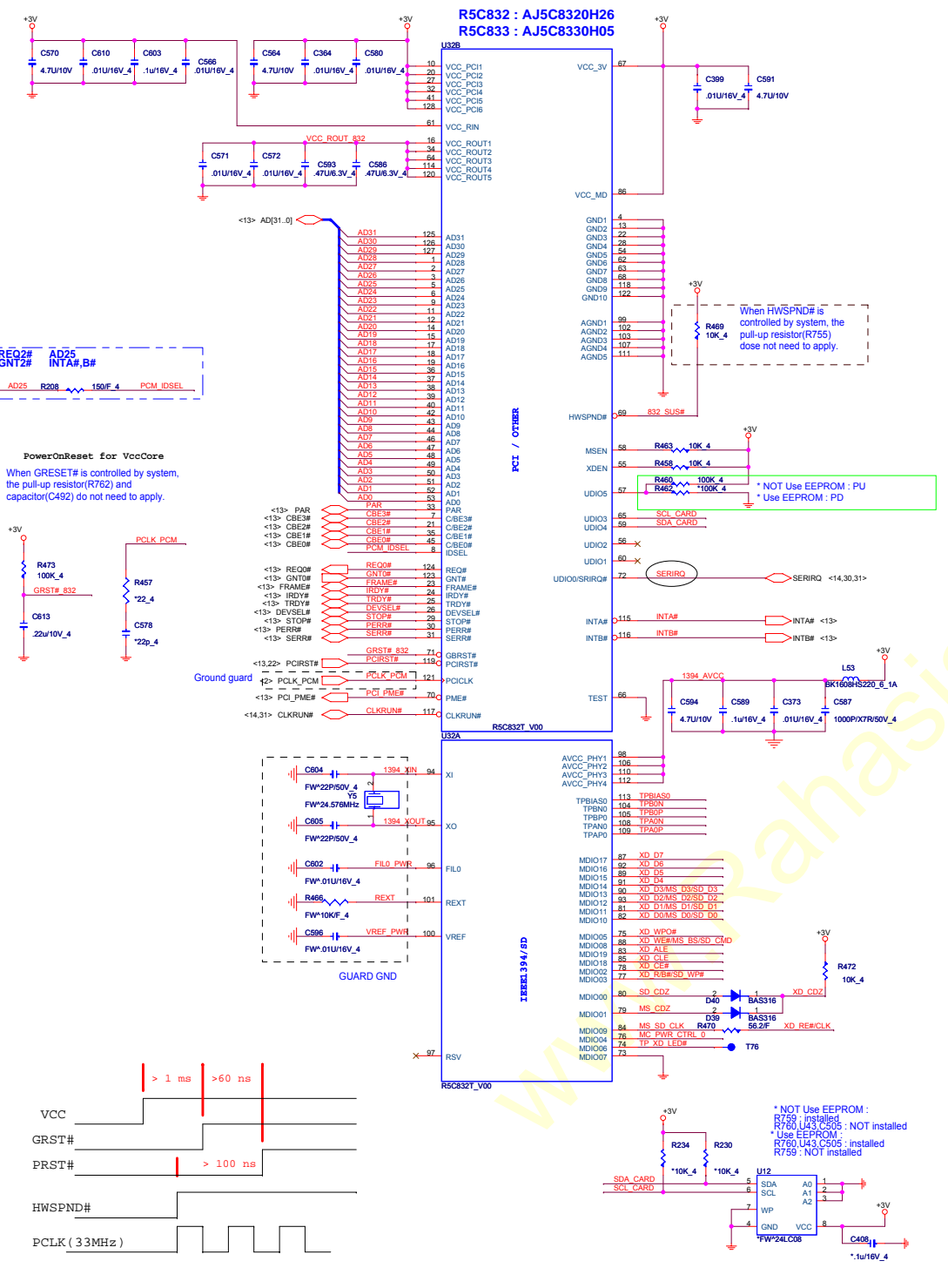


MIC

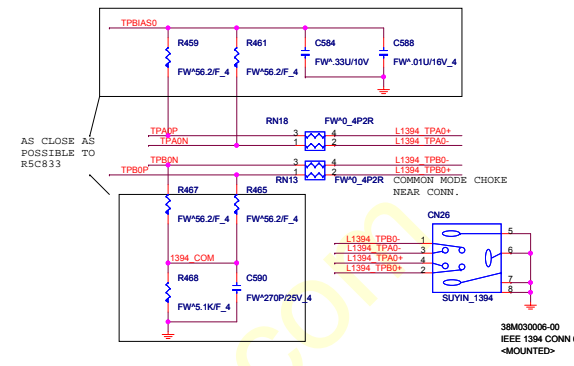


INT MIC array

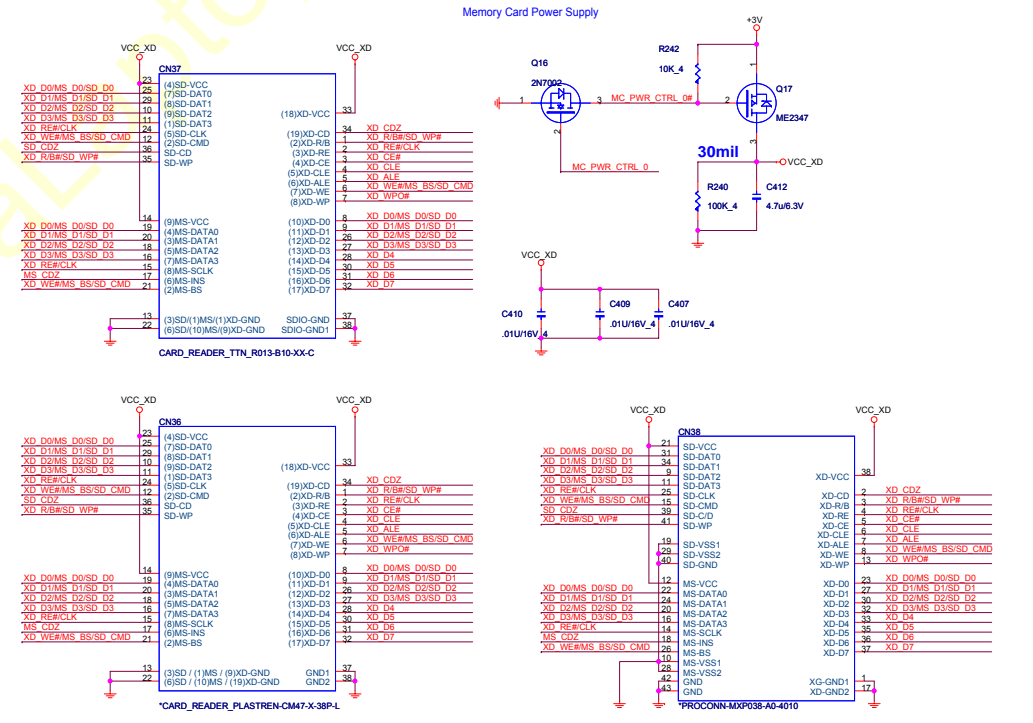




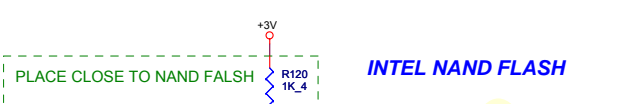
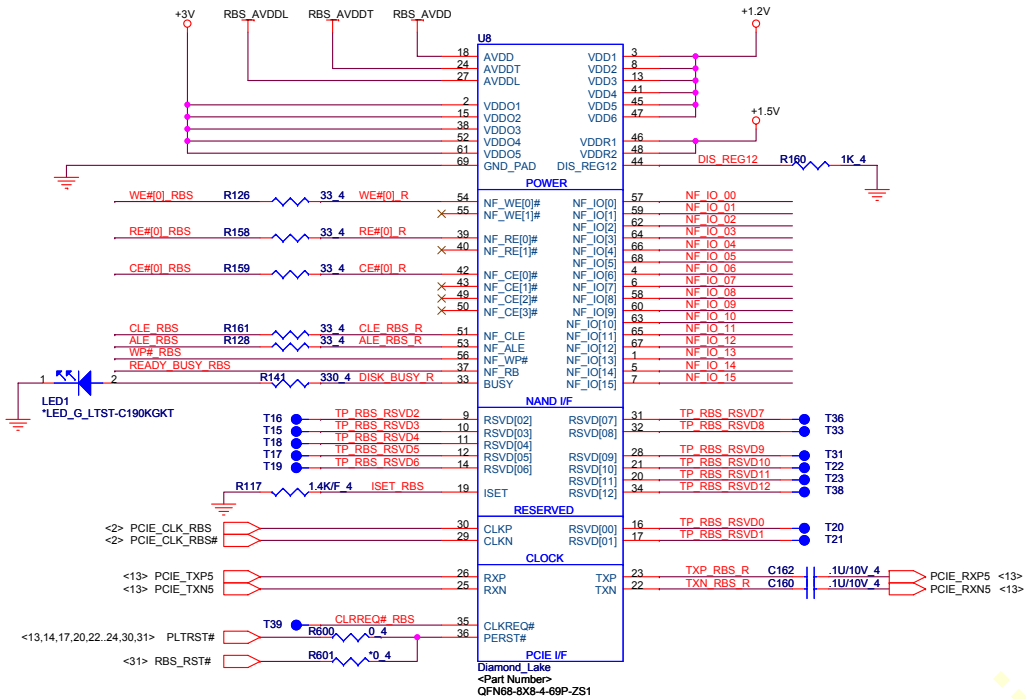
1394



5 IN 1 CARD READER



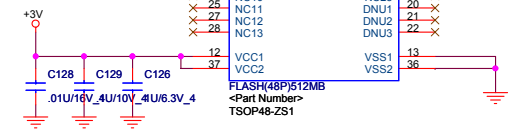
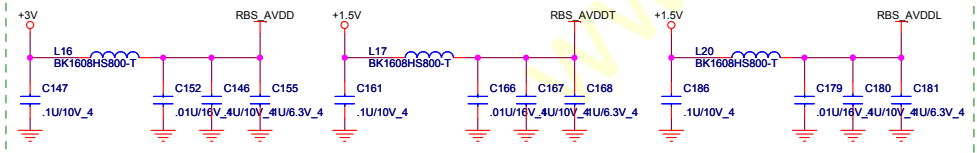
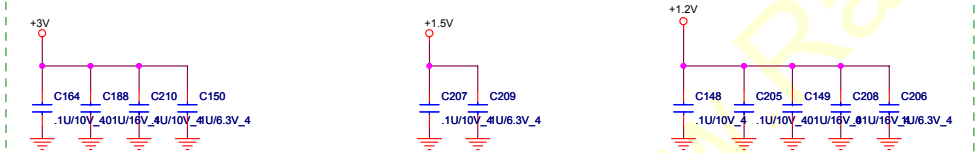
DIAMOND-LAKE ASIC



PLACEMENT NOTE:
PLACE TERMINATION RESISTORS AT 10% TO 25% DISTANCE FROM NAND FLASH.

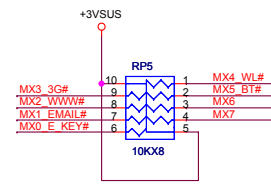
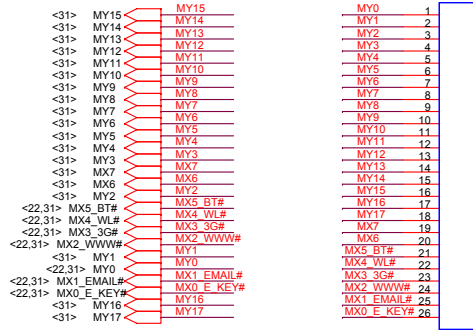
PLACE AS CLOSE AS POSSIBLE TO DIAMOND-LAKE ASIC.

STUFF: INDICATES A 2KB VIRTUAL PAGE => 256MB
DESTUFF: INDICATES A 4KB VIRTUAL PAGE => 512MB & 1024MB



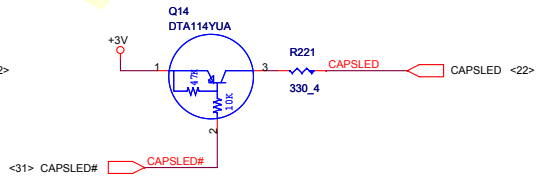
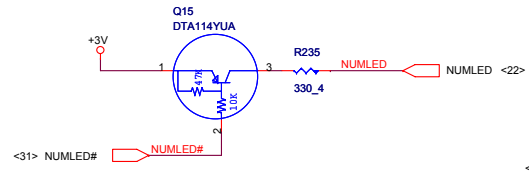
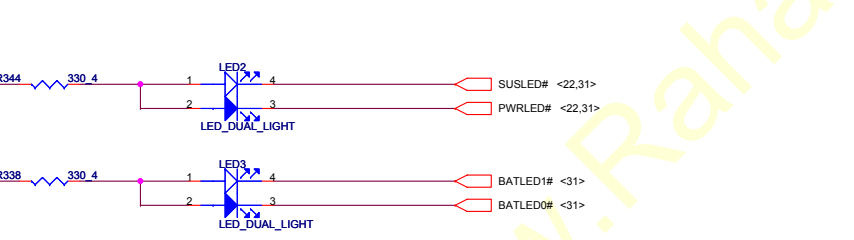
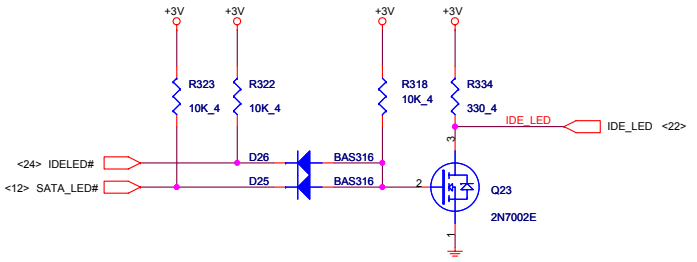
LAYOUT NOTE:
ANY VIA ADDED BENEATH THE NAND FLASH NEEDS TO HAVE A SOLDERMASK ON IT.

INT K/B

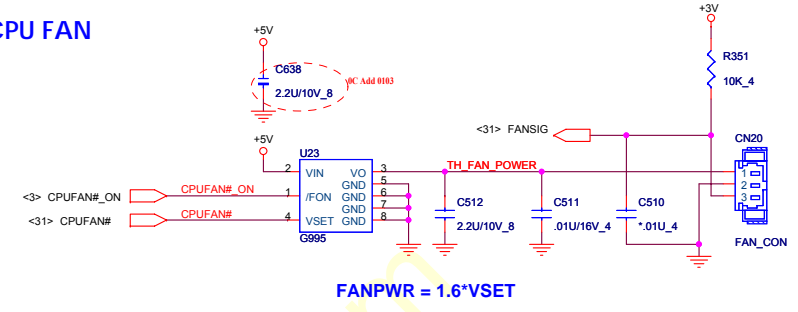


Acex 88502-2641

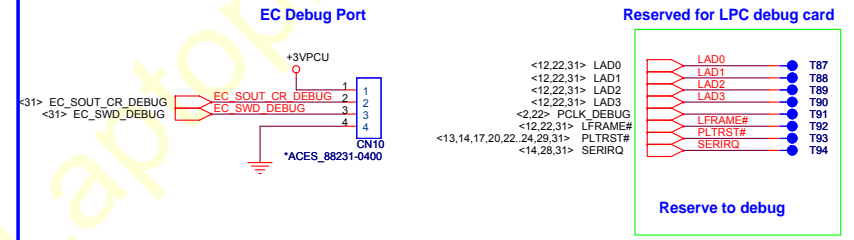
LED



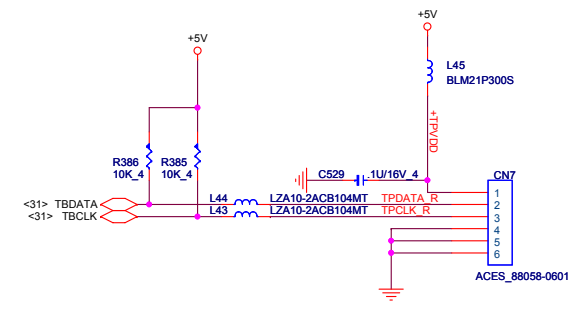
CPU FAN



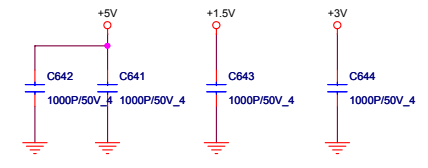
DEBUG PORT



T/P



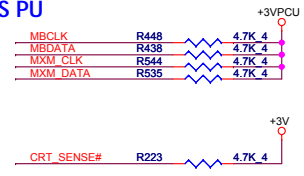
EMI solution



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Size Document Number
FAN,LED,KB,DEBUG PORT,TP
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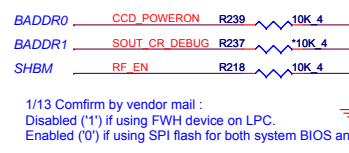
SM BUS PU



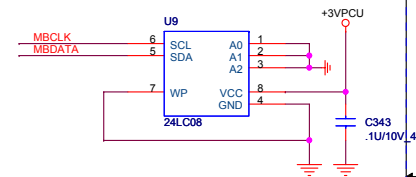
I/O ADDRESS SETTING

I/O Address	
BADDR1-0	Data
0 0	XOR TREE TEST MODE
0 1	CORE DEFINED
1 0	2Eh 2Fh
1 1	164Eh 164Fh

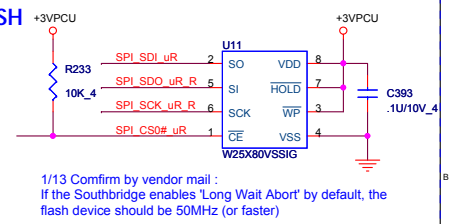
SHBM=0: Enable shared memory with host BIOS



ACER ID



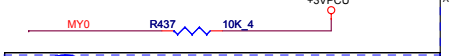
SPI FLASH



BUTTON ON KEYBOARD MATRIX

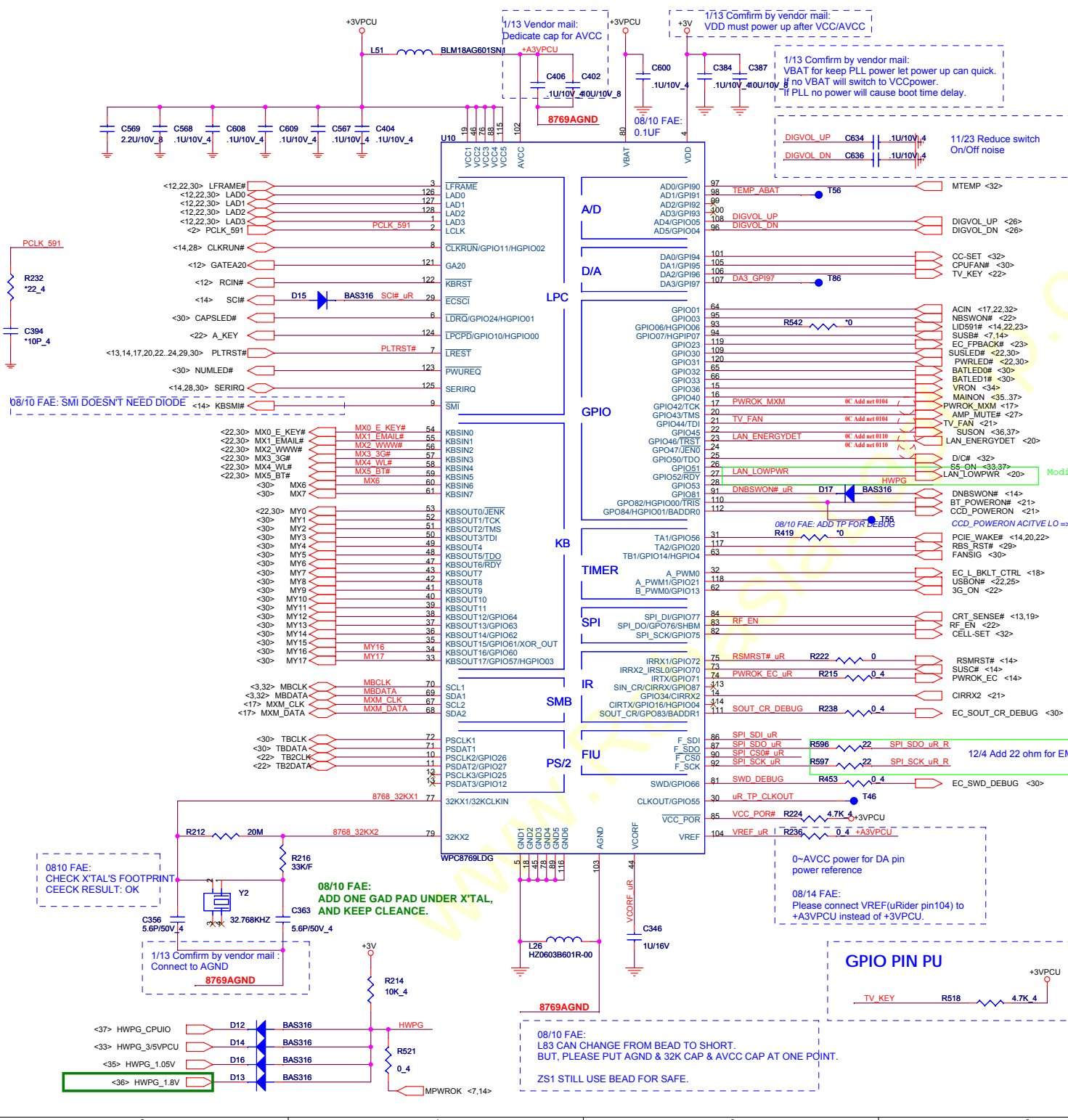


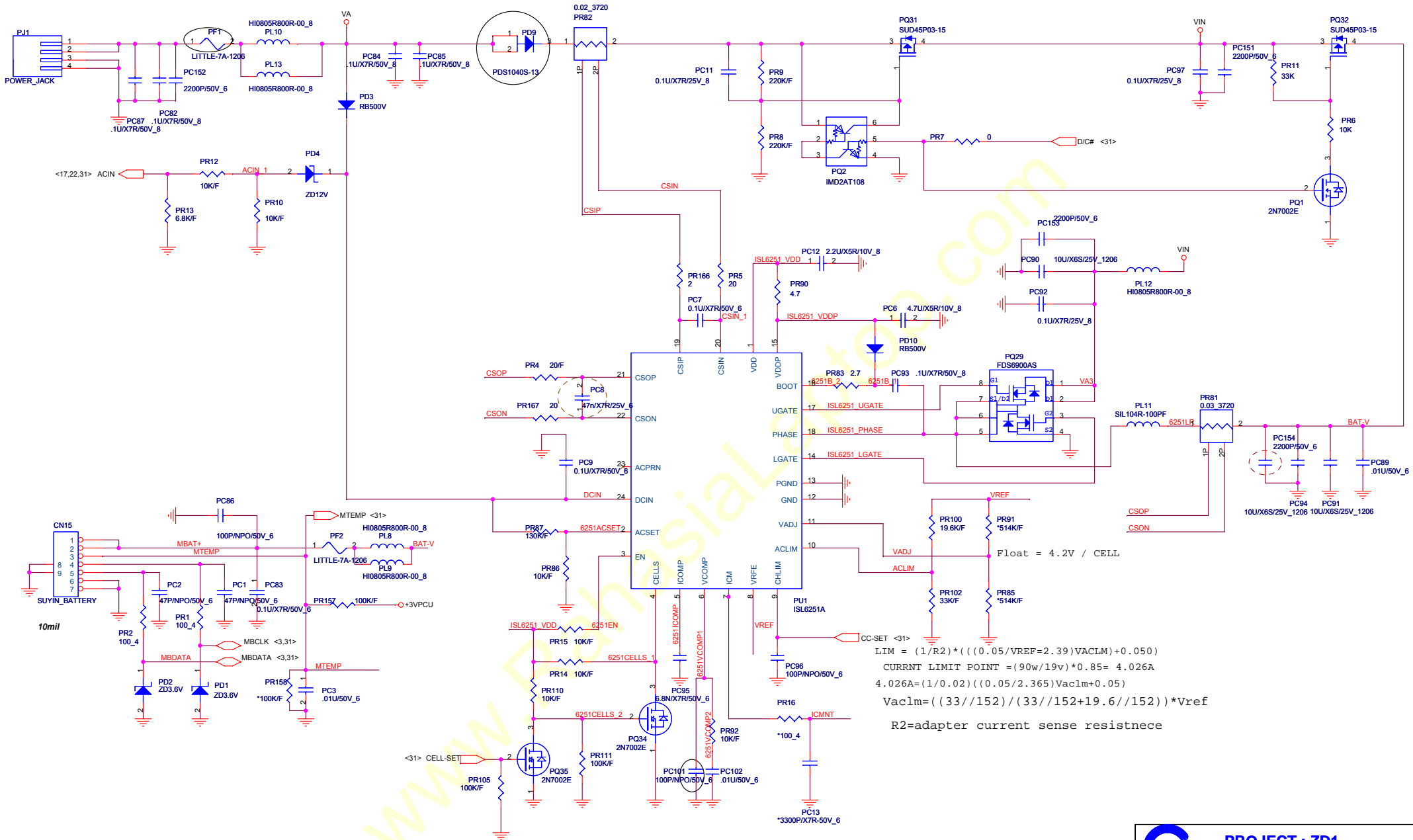
INTERNAL KEYBOARD STRIP SET



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$$LIM = (1/R2) * (((0.05/VREF=2.39) * VACLIM) + 0.05)$$

$$CURRENT\ LIMIT\ POINT = (90w/19v) * 0.85 = 4.026A$$

$$4.026A = (1/0.02) * ((0.05/2.365) * VACLIM + 0.05)$$

$$VACLIM = ((33//152) / ((33//152) + 19.6//152)) * VREF$$

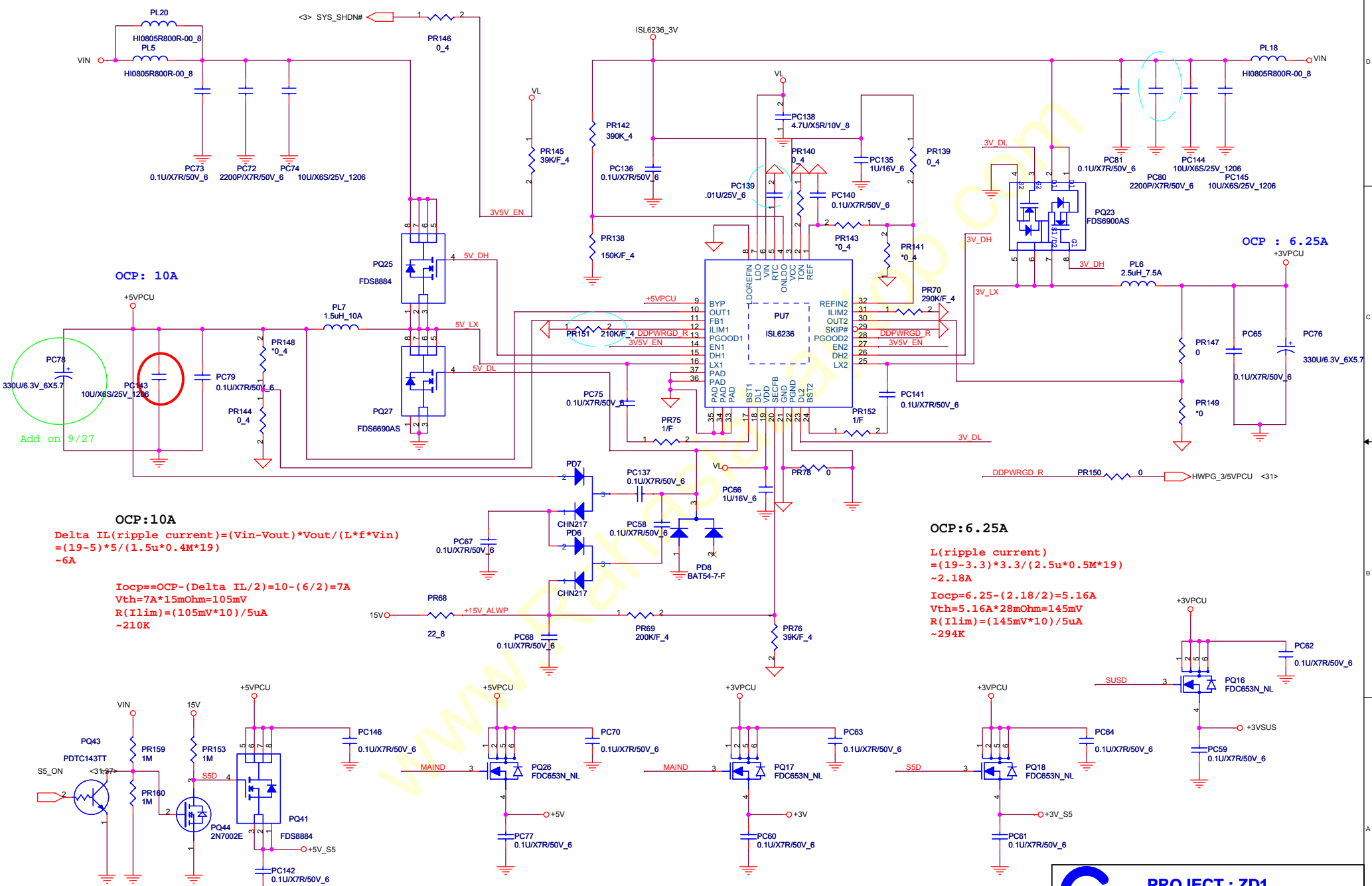
R2=adapter current sense resistnece

CELL-SET = Hi -----> Cells = VDD ----->4S
 CELL-SET = Low -----> Cells = GND ----->3S

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MAIND <36,37>
 SUSD <37>



OCP: 10A

OCP: 10A

Delta IL(ripple current)=(Vin-Vout)*Vout/(L*f*Vin)
 =(19-5)*5/(1.5u*0.4M*19)
 ~6A

Iocp=OCP-(Delta IL/2)=10-(6/2)=7A
 Vth=7A*15mOhm=105mV
 R(ILim)=(105mV*10)/5uA
 ~210K

OCP: 6.25A

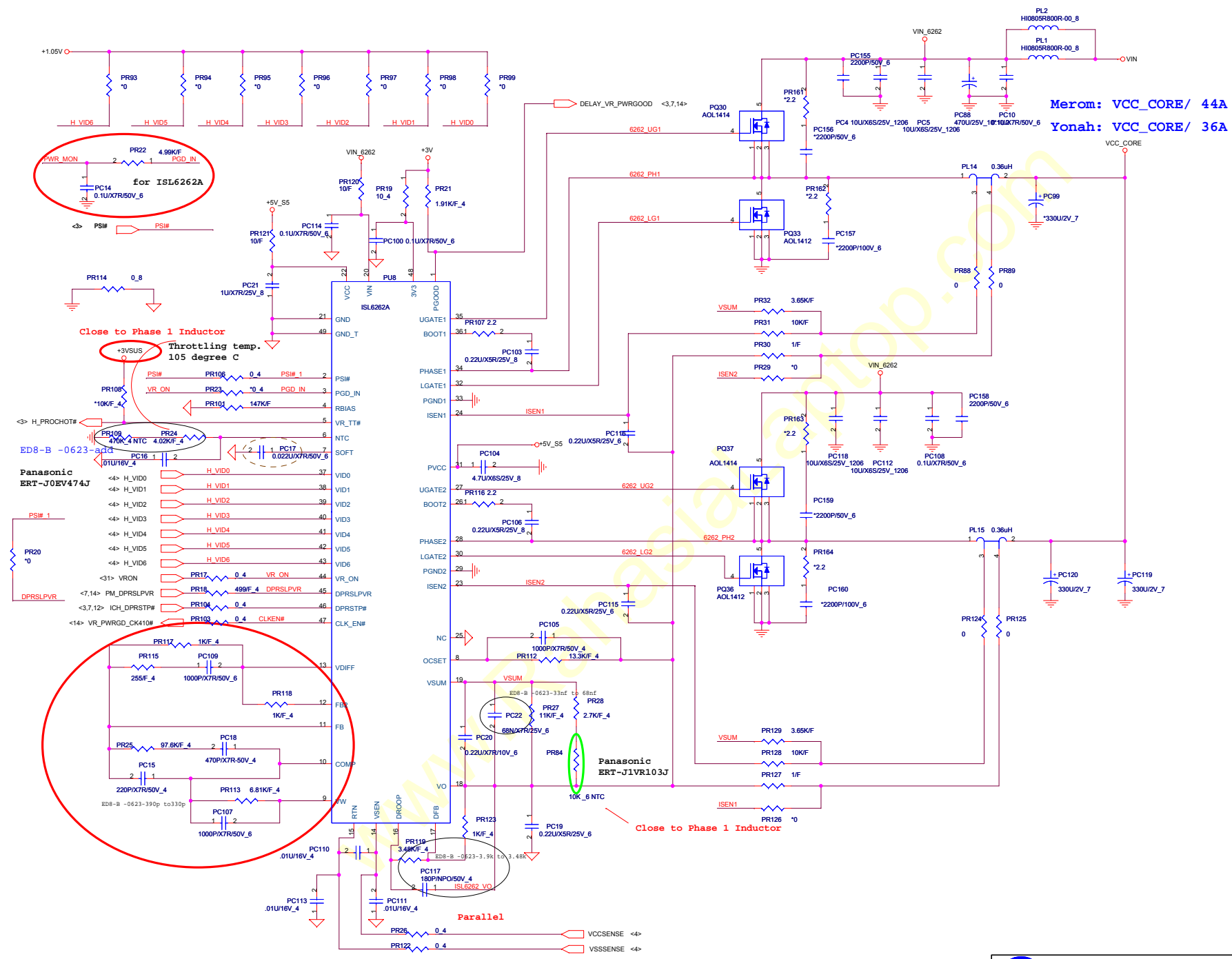
L(ripple current)
 =(19-3.3)*3.3/(2.5u*0.5M*19)
 ~2.18A

Iocp=6.25-(2.18/2)=5.16A
 Vth=5.16A*28mOhm=145mV
 R(ILim)=(145mV*10)/5uA
 ~294K

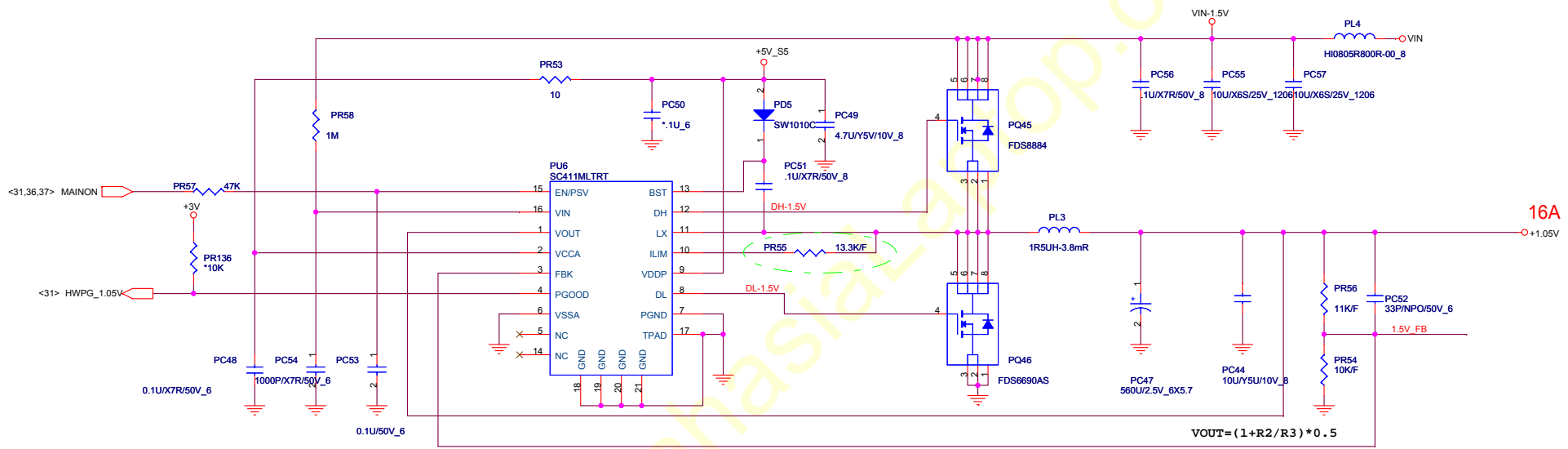
modify 0103 2007

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Quanta Computer Inc.

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Custom	ISL6251 CHARGER	B
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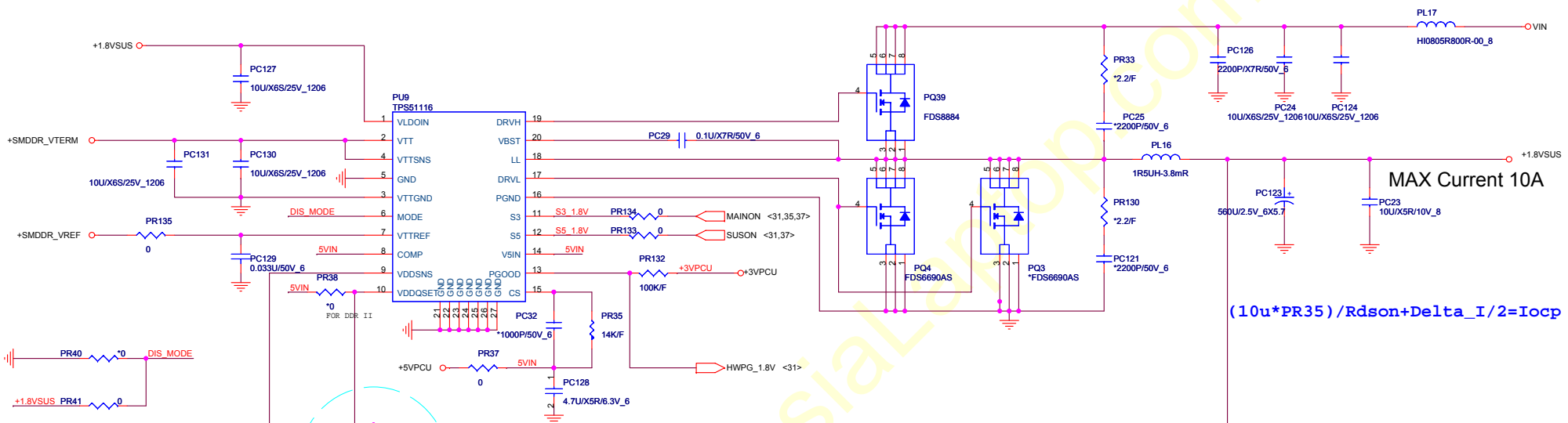


Merom: VCC_CORE/ 44A
 Yonah: VCC_CORE/ 36A



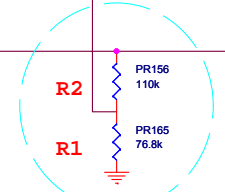
$R_{dson} * I_{ocp} = PR55 * 10u$ $R_{dson} = 15m \text{ ohm}$

$V_{OUT} = (1 + R2/R3) * 0.5$



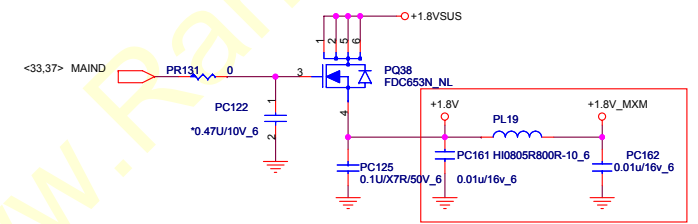
MAX Current 10A

$(10u * PR35) / R_{dson} + \Delta I / 2 = I_{ocp}$



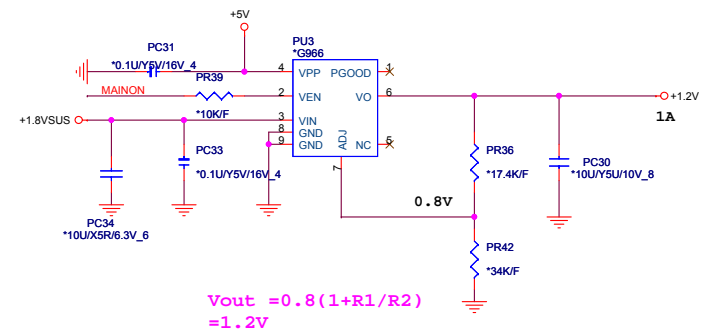
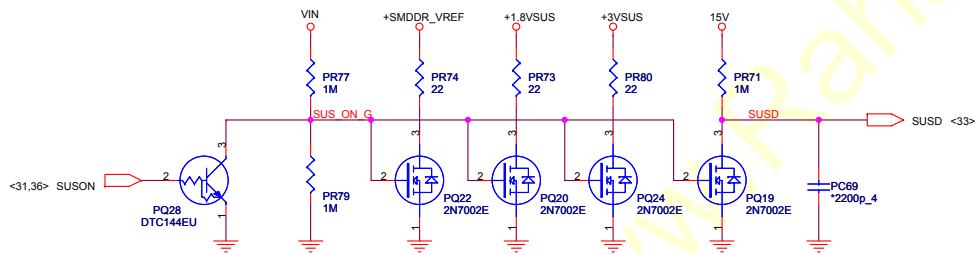
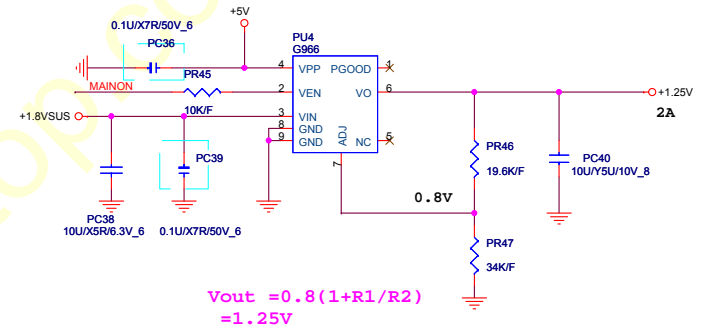
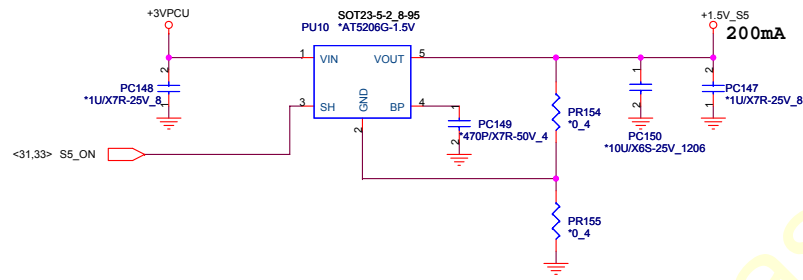
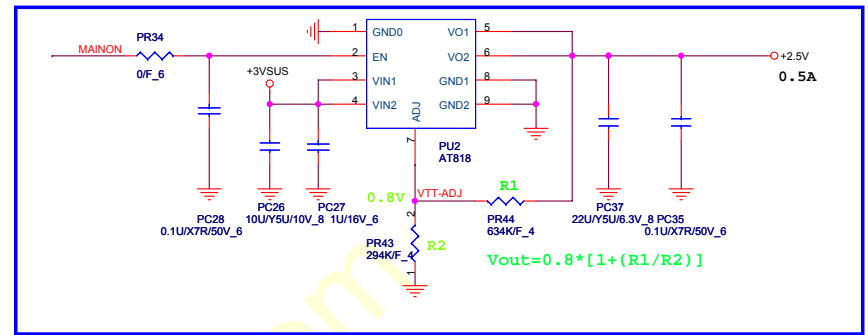
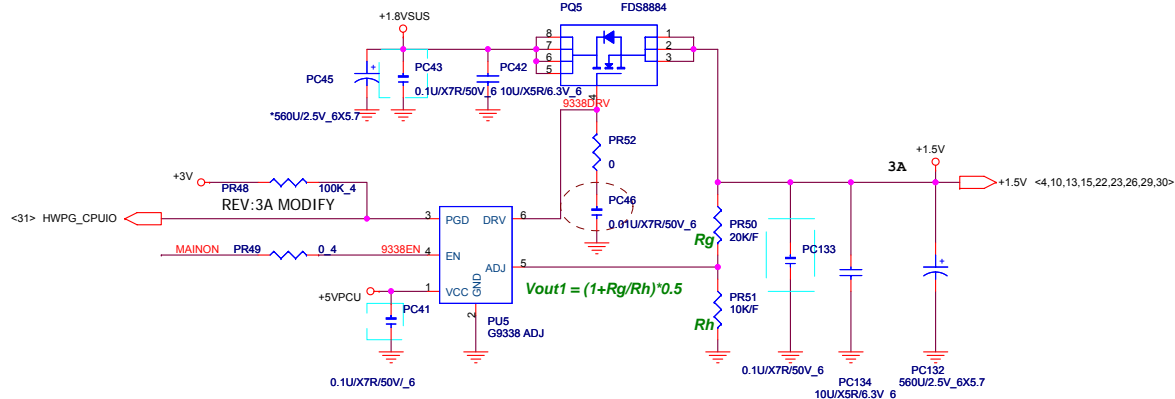
$R1 = (100 * V_{out} - R2) / K$

if tune V_{out} PR38 un-mount, PR156 PR165 mount

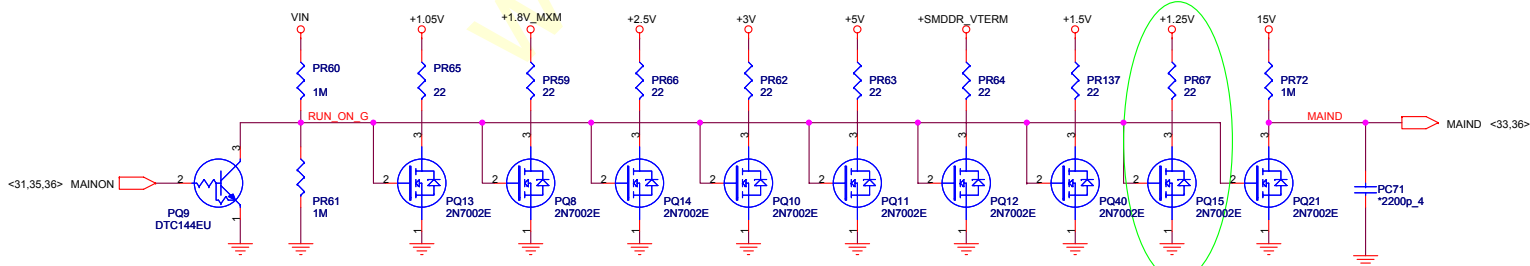


MAX Current 3.5A


PC161, PL19 & PC162 near CN27



Add by power on 10/19



Model	REV	CHANGE LIST	MODEL	ZY3		
				FROM	To	
ZD1 MB	1A	FIRST RELEASED: E200610-3793 (PCB: DA0ZD1MB6A0)	X	1A		
	2A	<p>Page10 : Depop R153 & pop L23 for system can not boot</p> <p>Page14 : U36 package didn't math footprint, change P/N.</p> <p>Page26 : Remove R275, install R276; remove R4, install R16; Change R245, R247 power source from +1.5V_S5/+1.5V to +3V_S5/+3V , Follow customer request modem change support to +3VSUS.</p> <p>Page22 : MMB(CN8) PIN define error.</p> <p>Page22 : TV card change support to +1.5V.</p> <p>Page18 : Install R5, depop R7,: Follow customer request use EC to control backlight ON/OFF function.</p> <p>Page14 : GPIO10: Reserve PU, 10K +> It is GPO and OD; GPIO14: Reserve PD, 10K => It is GPI as AC present and active high;</p> <p>Page6 : TV_DCONSEL[0:1], UMA =>NC, External VGA tie to GND.</p> <p>Page31 : 2nd FAN change design</p> <p>Page23 : New card power SW (location: U33) change same as Z01</p> <p>Page31 : add 2 capacity 0.1uF(C634,C636) in DIGVOL_UP / DIGVOL_DN pins</p> <p>Page26 : Co-layout ALC268 and 888S</p> <p>Page28 : SD card can not be detected , U32(ES2) sample will fix this issue.</p> <p>Page28 : MMC card can not be detected , U32(ES2) sample will fix this issue.</p> <p>Page14 : The CLPWROK pin of ICH8 connect with HWFG signal</p> <p>Page22 : change CN7 pin definition for T/P no function.</p> <p>Page24 : change CN8 pin definition MMB no function.</p> <p>Page14 : The signal of KBSMI#_ICH add diode , and it PU to +3V_S5 The signal of LID591#_ICH add diode , and it PU to +3V_S5 for ICH8 electric leakage issue.</p> <p>Page26 : Change subwoofer from 4pin to 5pin connector.</p>	X	1A		
			1A	2A		
			1A	2A		
			1A	2A		
			1A	2A		
			1A	2A		
			1A	2A		
			1A	2A		
			1A	2A		
1A			2A			
2B	<p>Page 2 : Add C645 for EMI solution</p> <p>Page31 : Follow customer request 2nd FAN is controlled by EC</p> <p>Page19 : Floating CN13.16 & CN13.17 ,CN14.15 & CN14.16 for ESD test</p> <p>Page07 : DPLL_REF_CLK, DPLL_REF_CLK#, DPLL_REF_SSCLK and DPLL_REF_SSCLK#. To GND</p> <p>Page36 : Add PI filter to reduce the power ripple of +1.8V.</p> <p>Page16 : Modify SMBus address A2 , The signal of B_SAL need to PU and B_SA0 need to PD</p> <p>Page26 : add 2 capacity 1uF(C639,C640) for subwoofer</p> <p>Page30 : add capacity 2.2uF(C638)</p>	1A	2A			
		1A	2A			
		1A	2A			
		1A	2A			
		1A	2A			
		1A	2A			
		2A	2B			
		2A	2B			
		2A	2B			
		2A	2B			
2C	<p>Page17 : Adding (Q52 & R541 & Q53) extra circuitry to prevent power leakage from system into MXM</p> <p>Page21 : Change power of CIR from +3VPCU and +5VPCU.</p> <p>Page31 : AEC pin24 is multi function pin, when EC power up, pin17 will change to JTAG/TCK function not GPIO. So,need to change from pin24 (GPIO47) to pin27 (GPIO52).</p> <p>Page22: Power/B connector add two LED control signal and change to 16 pin from 14-pin for meet ACER LED spec .</p> <p>Page22: Q35 change to AO3413 form DTAL14 for increase LED driving power.</p> <p>Page23: BL_ON pull up resistor from 10kohm to 100Kohm(R194).+3V pull up will cause power on leakage on BL_ON signal due to our VGA have 10kohm pull low.</p>	2A	2B			
		2A	2B			
		2A	2B			
		2B	3A			
		2B	3A			
		2B	3A			
		2B	3A			
		2B	3A			
		2B	3A			
		2B	3A			
2D	<p>Page19 : Connect CRT of CN13.16 & 17 to GND for ESD</p> <p>Page17 : Add capacity 330uF(C647) & Remove R541</p> <p>Page22 & 25: Combine USB/B (CN17) and TV/B(CN30) connector, Connector change to 16 pin. and +5_S5 from 1pin to 2pin.</p> <p>Page25 : Connect HOLE 28 & 29 to GND for ESD</p> <p>Page32-37 : Update power circuit</p> <p>Page37 : Remove 1.2V circuit</p> <p>Page26 : Add 1000pF and 10pF total 4 PCS Location: C648 , C649, C650, C652 (between +5V_ADOand AGND).</p> <p>Page22 : CN8.8 remove +5V & R540 & connect to +3V (K)</p> <p>Page27 : Modify and ADD. AGND bridge (R337,R284,C459 and C472 = 0 Ohm).</p> <p>Page34 : Remove PR161L, PR163, PC156, PC159</p> <p>Page22 : Add D45~D51 for ESD</p> <p>Page28 : Change CN36.37 & 38 ,CN37.37 & 38 ,CN38.42 & 43 from ADOGND and GND.</p>					
3A	<p>Page32 : PD9 Change footprint</p> <p>Page25 : Add EMI Spring</p> <p>Page27 : Add GND & AGND bridge (R546,R540,R408)</p> <p>Page22 : Modify pin define (TV/B(CN30) connector)</p>					
F	<p>Page23 & 17 : HDMI circuits modify: Add level-shifter for MXM_HDMI_DDCCLK and MXM_HDMI_DDCDATA.(Location: Q54 ,Q55 , R75, R63, R297, R410 & R602) .</p>					

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