H61H2-M2

Rev : 1.0

ECS CONFIDENTIAL

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REVISION HISTORY:

Rev	Date	Notes
V.A	2010/09/23	Change from H67H2-M3 1. Audio change to vt1705 2, Super IO change to IT8758E 3, VCORE PWM change to RT8859M 4, V_CPUVTT PWM change to RT8121 5, LAN change to AR8151-B & AR8152-B 6, Del PCI function 7, Del USB3.0 function 8, Del SATA 6G 9.Del Easy Charge Circuit of F_USB1
V.1.0	2010/12/03	1. PSON- Pull High 從5VSB改爲3VSB_IO 2, Del EC33 1000U-6.3DL-O 3, Change EC35 from (1000U-6.3DL) to (820U-2.5D6-OS) 4, Del EC24 100U-16DE-O 5, 更改DDR3 SOCKET 顏色爲兩根都灰色 6, 更改BATTERY SOCKET換成非架高料 7, 更改POWER CONN. 24pin 換成半透明STD料 8, 更改F_USB1改成和F_USB2爲相同的顏色 9,VT1705更改爲VT1705CE 10,SATA0GP、SATA1GP、SATA2GP、SATA3GP、SATA4GP、SATA5GP 增加Pull High & Low線路

NOTE:
Design by 428971_428971_Sugar_Bay_and_BromolowWS_PDG_Rev_0_8.pdf,
428880_428880_Cougar_Point_Desktop_Ballout_Mech_Package_Rev1p0.zip

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Title: Cover Page

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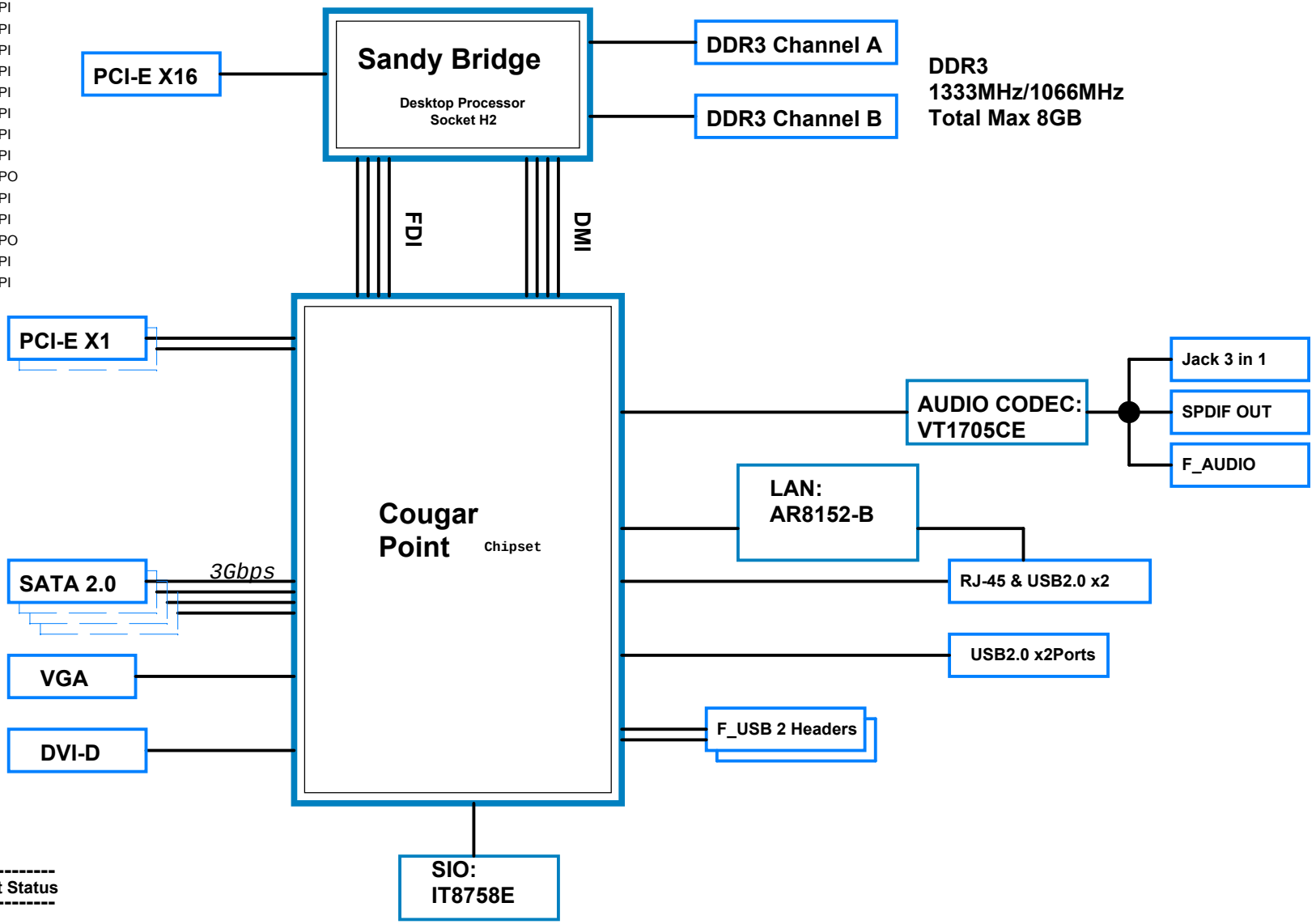
PCH-GPIO function

Pin Name	Power Well	Usage	Default Status
GPIO71	VCC3		GPI
GPIO22	VCC3		GPI
GPIO38	VCC3		GPI
GPIO39	VCC3		GPI
GPIO48	VCC3		GPI
GPIO21	VCC3		GPI
GPIO36	VCC3		GPI
GPIO37	VCC3		GPI
GPIO16	VCC3	Reserve for TPM	GPI
GPIO49	VCC3	Reserve for TPM	GPI
GPIO0	VCC3	F_AUDIO Detect	GPI
GPIO33	VCC3	ME Enable/Disable	GPO
GPIO34	VCC3	pull-up	GPI
GPIO13	3VSB	PME	GPI
GPIO24	3VSB	SKTOCC	GPO
GPIO57	3VSB	Board ID(CRB_0.7)	GPI
GPIO61	3VSB	TPM_LPCPD	GPI



SIO-GPIO function

Pin Name	Power Well	Usage	Default Status
GP16	VCC3	BEEP	
GP23		Power LED	
GP22		Power LED	
Pin Name		Usage	
Pin Name		Usage	
Pin Name		Usage	
Pin Name		Usage	

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Title: Block Diagram

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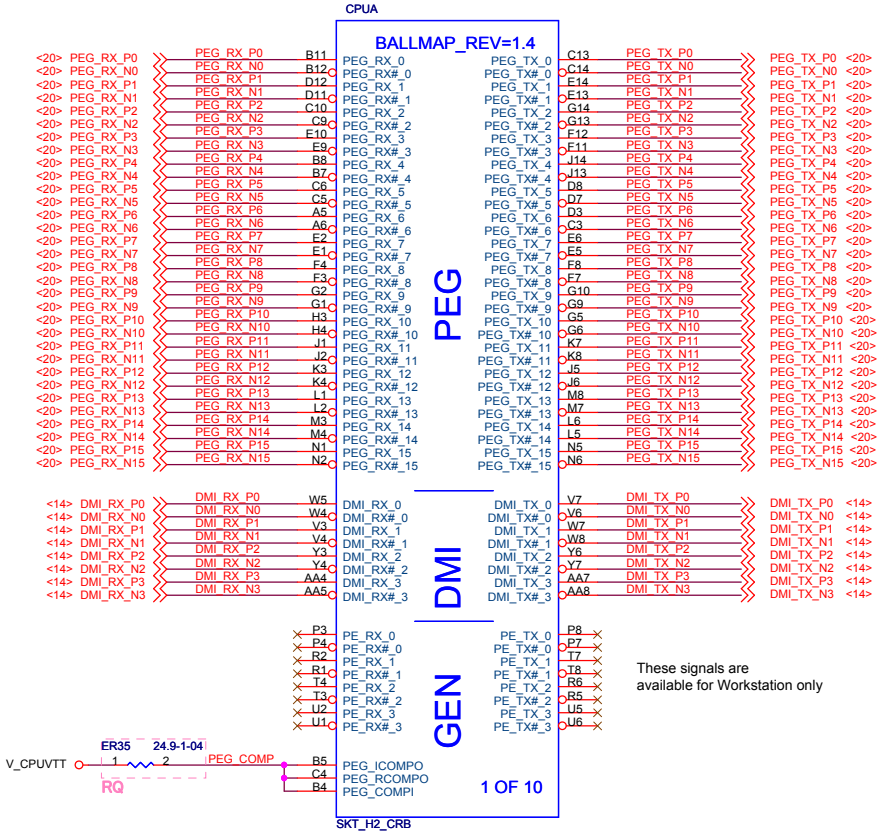
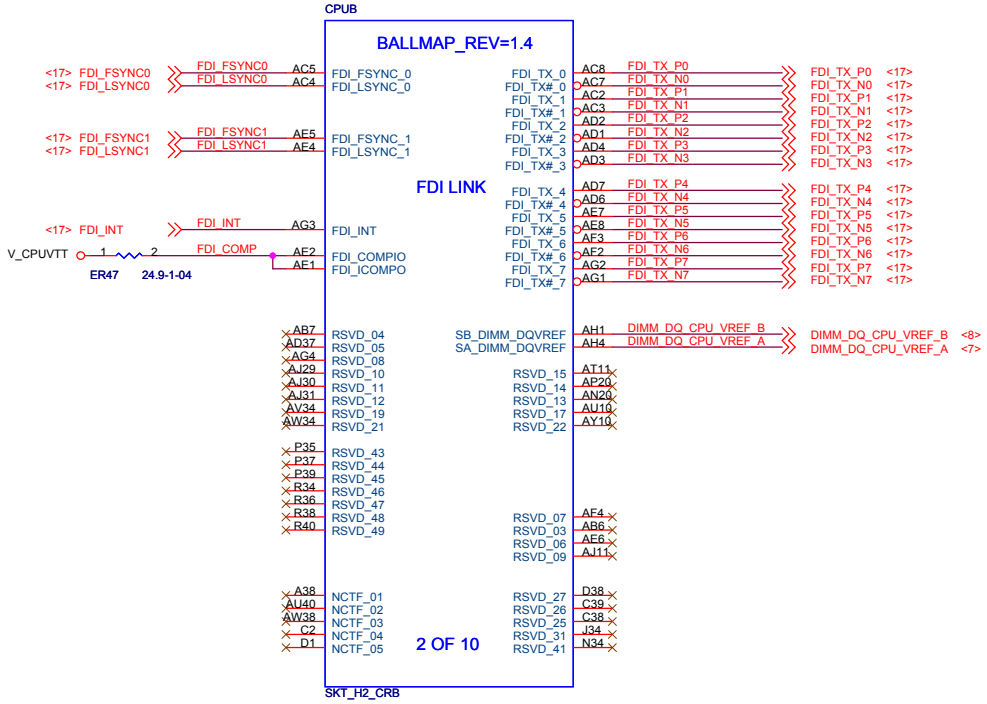
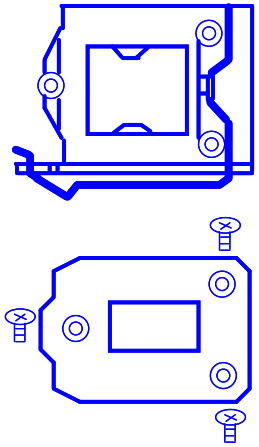




SHORT B4 & C4 TOGETHER, ROUTE AS A SINGLE 4MIL TRACE TO RQ.
1 ROUTE B5 TO RQ. 1 AS A SEPERATE 12MIL TRACE.

CPU(104)
CPU_SUBASSY_STEEL



11-018-115021 CPU SMD SOCKET
SOCKET.CPU..LGA 1155P SMD.BLACK.PE115527-4041-01F.
LEAD-FREE.FOXCONN

20-800-004711 CPU SOCKET STEEL
SUBASSY.STEEL.LGA 1156P.W/
BACK PLATE.PT44A11-6401.LEAD-FREE(RoHS).FOXCONN

01D201-000060 PCH ES0

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Title	CPU - DMI/FDI/PEG	
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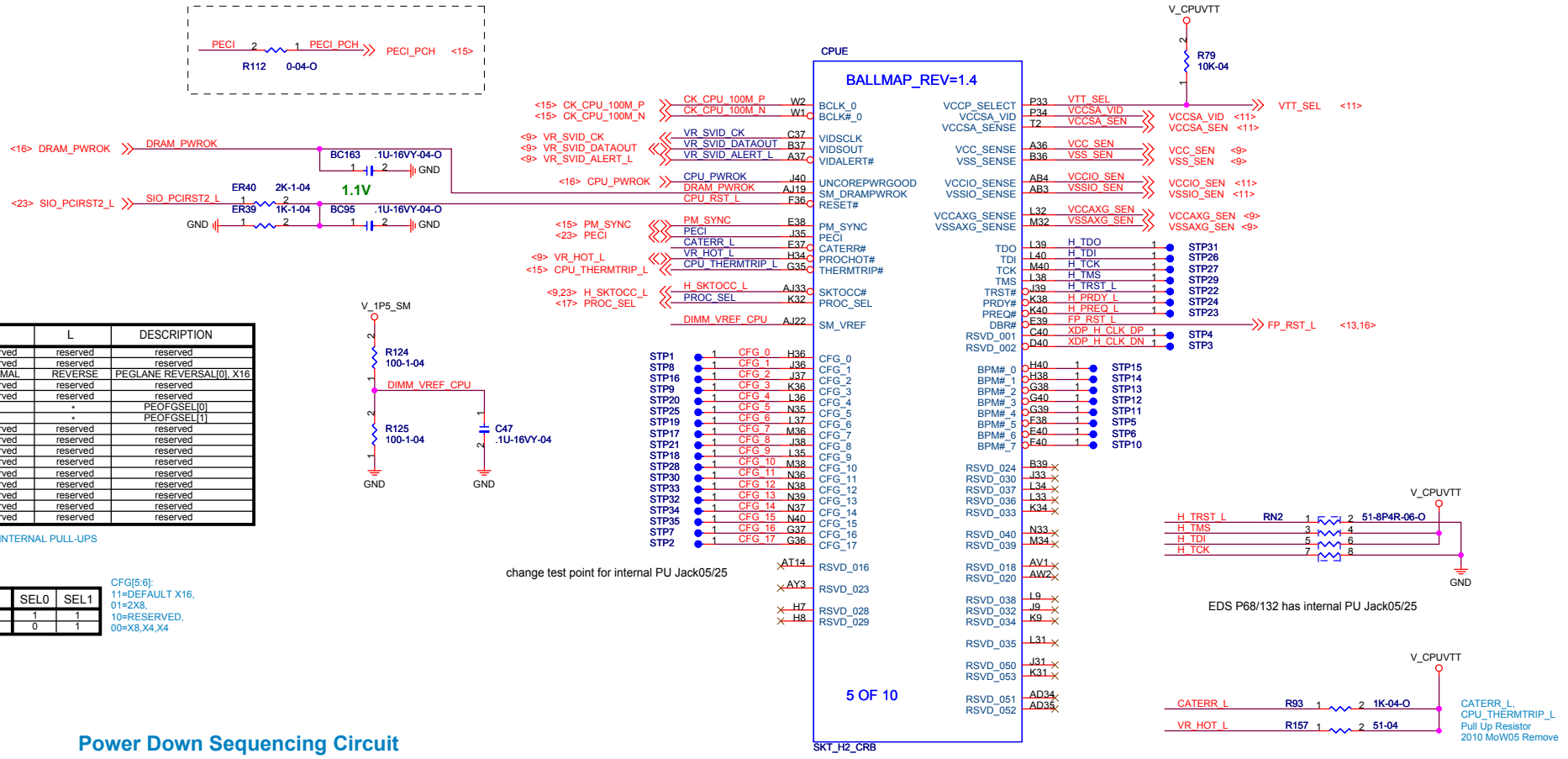


CFG	H	L	DESCRIPTION
0	reserved	reserved	reserved
1	reserved	reserved	reserved
2	NORMAL	REVERSE	PEGLANE REVERSAL[0], X16
3	reserved	reserved	reserved
4	reserved	reserved	reserved
5	*	*	PEOFGSEL[0]
6	*	*	PEOFGSEL[1]
7	reserved	reserved	reserved
8	reserved	reserved	reserved
9	reserved	reserved	reserved
10	reserved	reserved	reserved
11	reserved	reserved	reserved
12	reserved	reserved	reserved
13	reserved	reserved	reserved
14	reserved	reserved	reserved
15	reserved	reserved	reserved

CFG_[0..17] HAVE INTERNAL PULL-UPS

PCIE CONFIG	SEL0	SEL1
1 X 16	1	1
2 X 8	0	1

*

CFG[5:6]:
11=DEFAULT X16,
01=2X8,
10=RESERVED,
00=X8,X4,X4

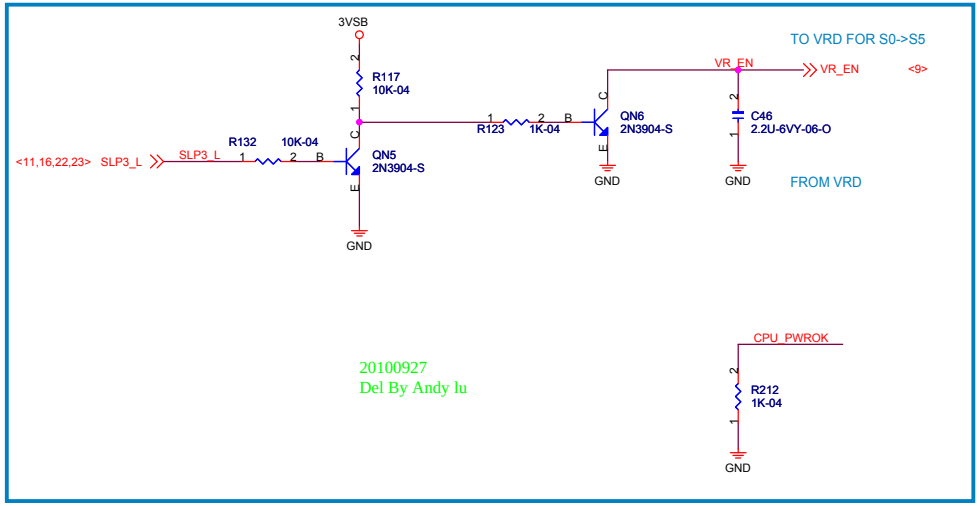
change test point for internal PU Jack05/25

EDS P68/132 has internal PU Jack05/25

CATERR_L,
CPU_THERMTRIP_L
Pull Up Resistor
2010 MoW05 Remove

DMI/FDI termination voltage:
DC coupled: TX/RX to VCC ISF sampled high
DC coupled: TX/RX TO VSS IF sampled low
AC COUPLED: TX set to VCC/2, RX set to VSS regardless of this strap

Power Down Sequencing Circuit



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Title	CPU - MISC	
Size: Custom	Document Number: H61H2-M2	Rev: 1.0
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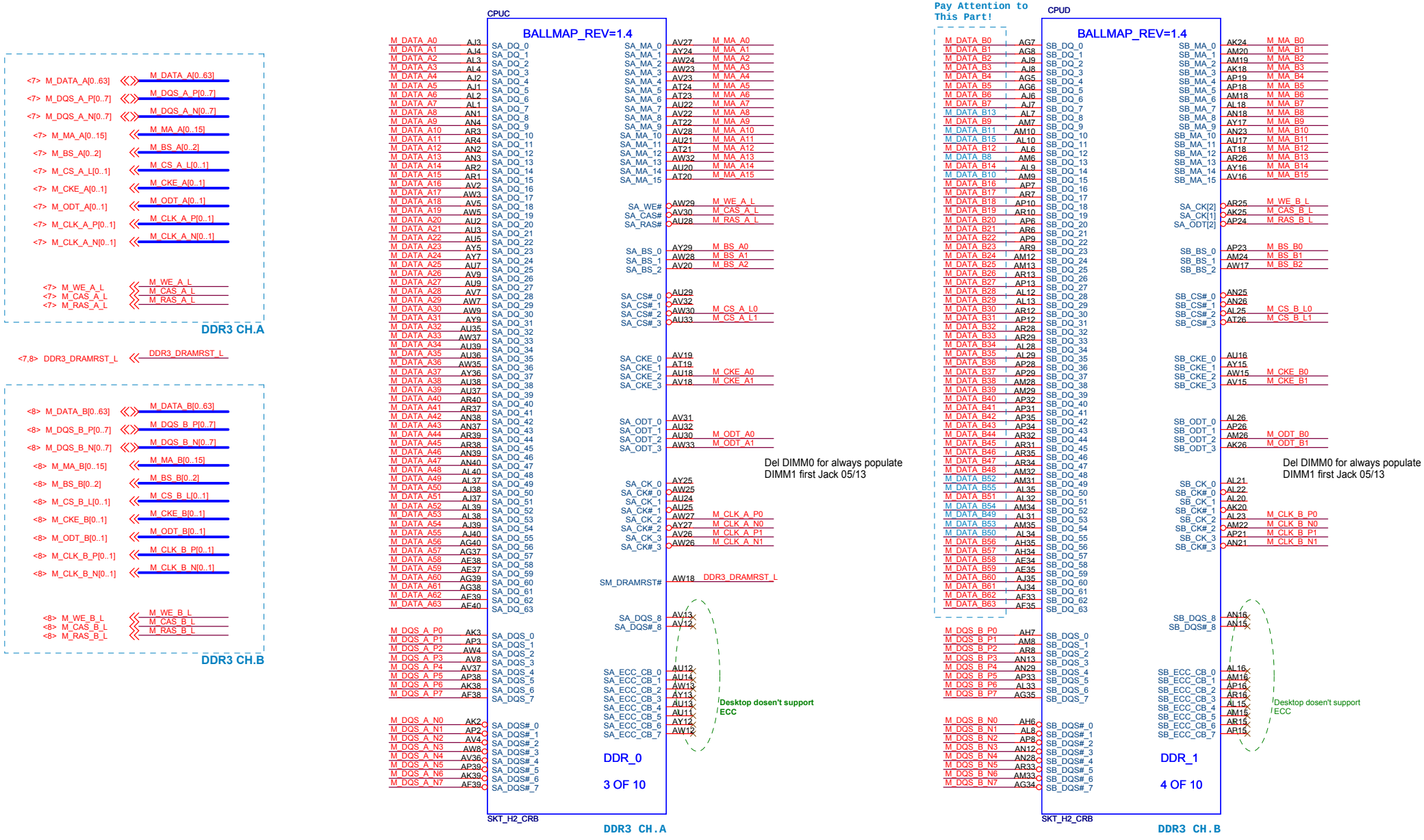

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Title: CPU - DDR3

Size: Custom | Document Number: H61H2-M2 | Rev: 1.0

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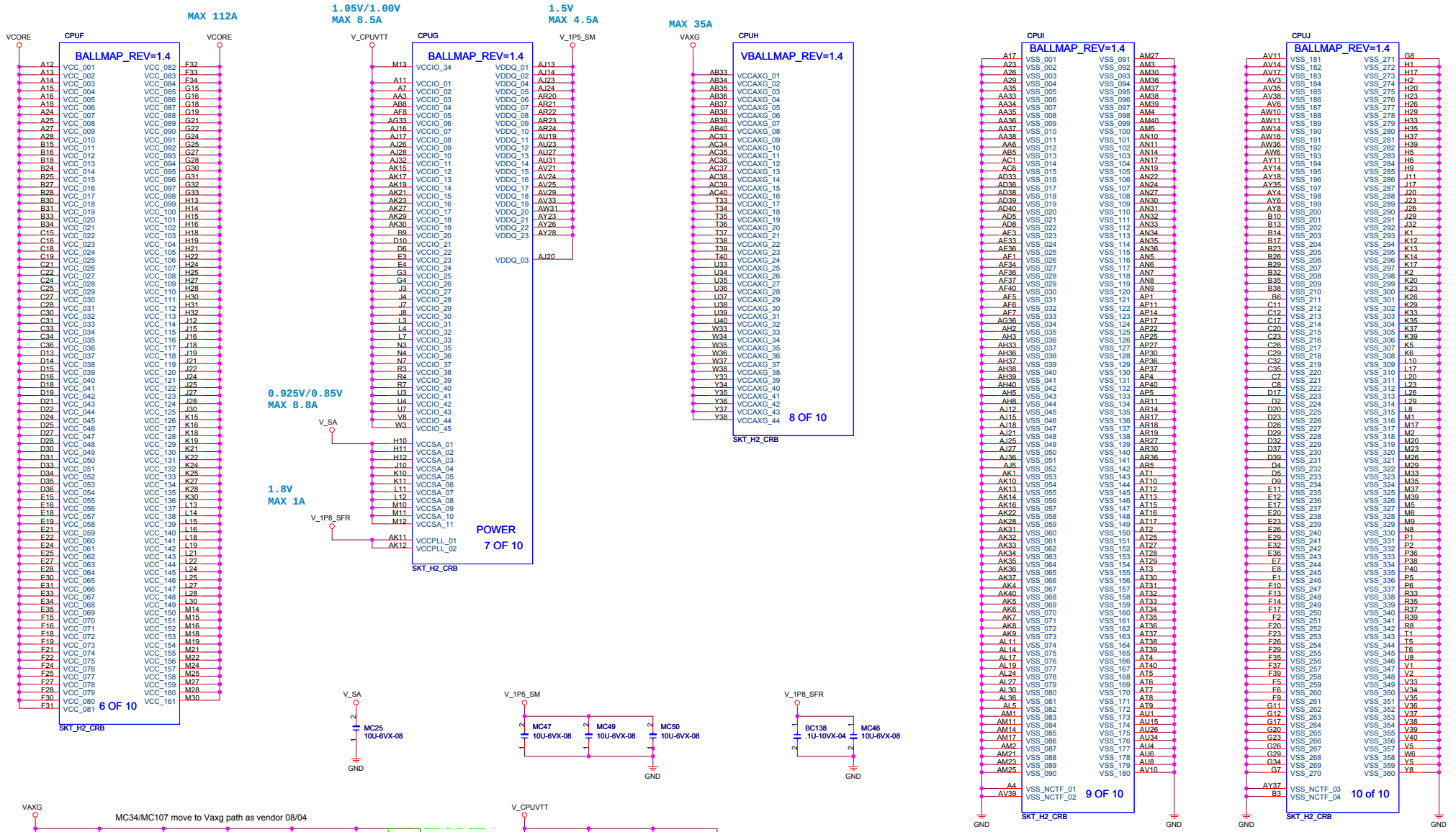

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Title: CPU - PWR

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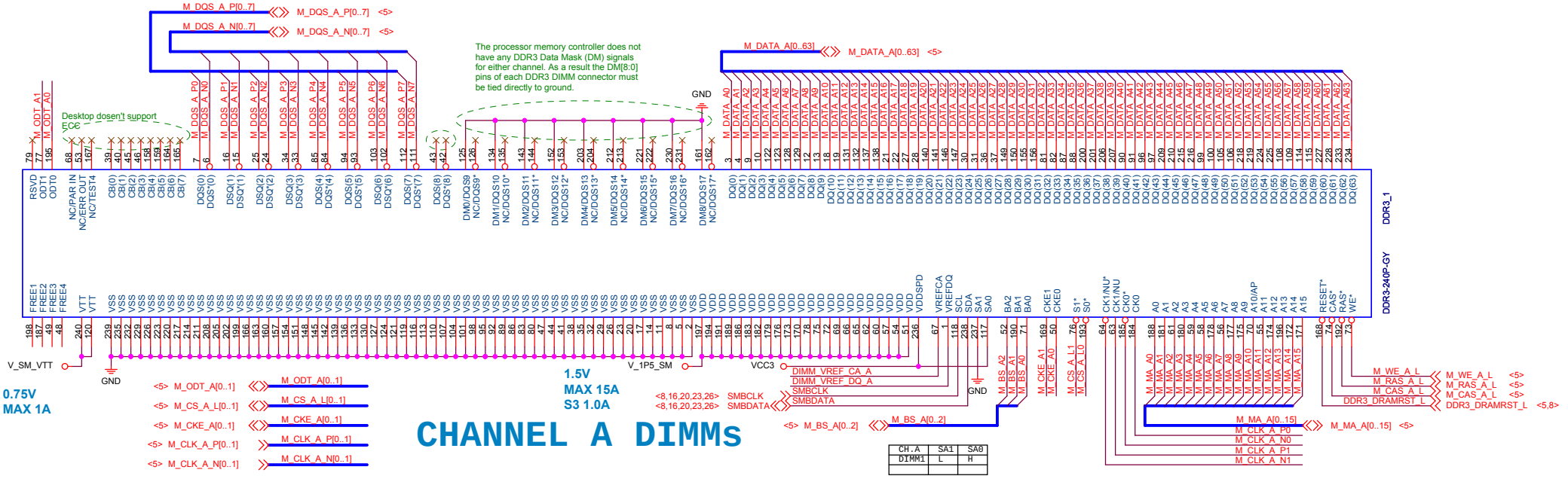
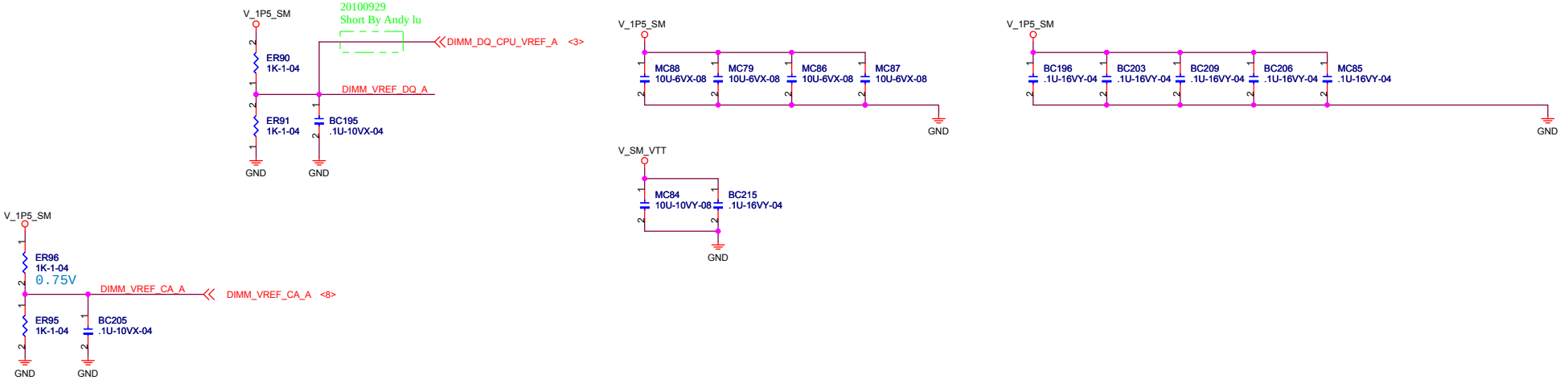


CHANNEL A DIMMs

CH.A	SA1	SA0
DIMM1	L	H



Del DIMM1 for always populate DIMM2 first Jack 05/13

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Title	DDR3 - CH_A_DIMM1	
Size: Custom	Document Number: H61H2-M2	Rev: 1.0
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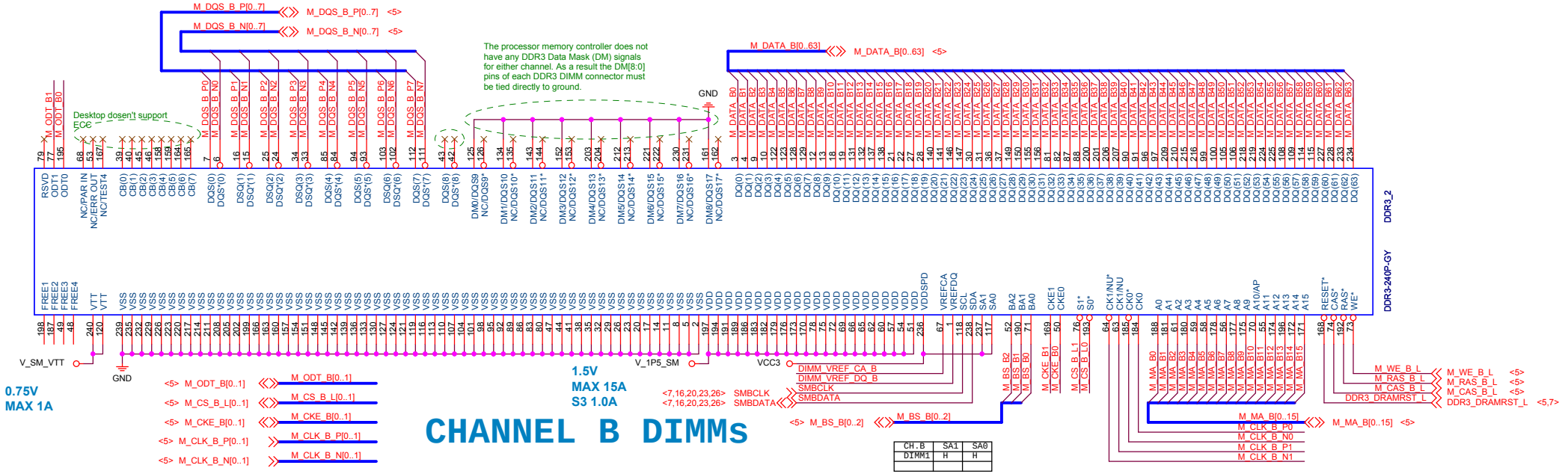

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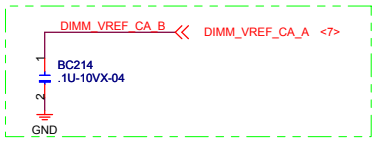
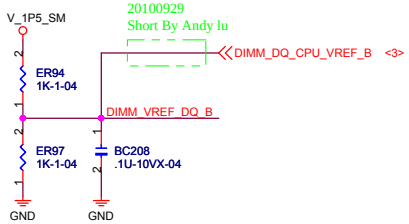
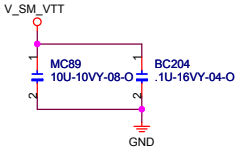
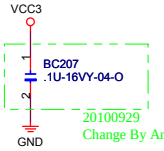
Change By Andy lu



20100929
Short By Andy lu







20100929
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Del DIMM3 for always populate DIMM4 first Jack 05/13

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Title: DDR3 - CH_B_DIMM3

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External Connection

VCC, VCORE, V_CPUVTT, 12V_4P, VCC3, VIN, 5VSB

<4> VR_EN
<4> VR_SVID_ALERT_L
<4> VR_SVID_DATAOUT
<4> VR_SVID_CK
<4> VR_HOT_L
<10> AU1_PWM[1..4]
<10> AU1_ISEN1P
<10> AU1_ISEN1N
<10> AU1_ISEN2P
<10> AU1_ISEN2N
<10> AU1_ISEN3P
<10> AU1_ISEN3N
<10> AU1_ISEN4P
<10> AU1_ISEN4N
<4> VCC_SEN
<4> VSS_SEN
<16> VR_READY
<10> AU1_PWMA
<10> AU1_ISENAP
<10> AU1_ISENAN
<4> VCCAXG_SEN
<4> VSSAXG_SEN
<4,23> H_SKTOCC_L

ALERT, VDIO, VCLK, AU1_VRHOT, AU1_PWM[1..4], AU1_ISEN1P, AU1_ISEN1N, AU1_ISEN2P, AU1_ISEN2N, AU1_ISEN3P, AU1_ISEN3N, AU1_ISEN4P, AU1_ISEN4N, VCC_SEN, VSS_SEN, VR_READY, AU1_PWMA, AU1_ISENAP, AU1_ISENAN, VCCAXG_SEN, VSSAXG_SEN, H_SKTOCC_N

5VSB, R168 4.7K-04, Q8 2N7002-S, Q9 2N7002-S, MC72 1U-10VY-06-O, AU1_VBOOTA, AU1_VBOOT, H_SKTOCC_N

+V_8859, RT6 NTC-10K-1-06, RT2 NTC-10K-1-06, R164 10K-04, R159 10K-04, BC164 .1U-10VX-04, ER69 536-1-04, BC162 .1U-10VX-04, ER68 536-1-04, ER62 249K-1-04, BC154 .1U-10VX-04, ER61 15.4K-1-04, VCC_SEN, BC163 5.6P-04, ER67 53.6K-1-04, V_CPUVTT, R151 0-04-O, R152 0-04, R173 100-04, BC172 .1U-16VY-04-O, VSSAXG_SEN, R126 100-04, BC134 .1U-16VY-04-O, VSS_SEN, R146 10-1-04, R155 10-1-04, R158 10-1-04

20101026
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AU1_TSEN, AU1_TSENA, AU1_IMON, AU1_IMONFB, AU1_IBIAS, AU1_OFS, AU1_DVIDA

PWM2

+V_8859, R161 51K-04, R165 51K-04, R170 51K-04, R172 274K-1-04, R137 300K-04, R185 200K-04, R162 33K-04, R166 33K-04, R72 40.2K-1-04, ER75 36K-1-04, R136 100K-04, R175 200K-04

AU1_VRHOT, AU1_VBOOT, AU1_VBOOTA, AU1_TMPMAX, AU1_ICCMAX, AU1_ICCMAXA, AU1_QRSET, AU1_QRSETA, AU1_IMONA, AU1_IMONFBA, AU1_RSET, AU1_COMP, AU1_FB, AU1_DVD

VRHOT, TSEN, TSENA, IMON, IMONFB, IBIAS, OFS, NC4/DVIDA, VCLK, VDIO, ALERT#, ADD, RGNDA, RGND

PWM1 AU1_PWM1, PWM2 AU1_PWM2, PWM3 AU1_PWM3, ISEN1P AU1_ISEN1P, ISEN1N AU1_ISEN1N, NC1/DVID AU1_DVID, ISEN2P AU1_ISEN2P, ISEN2N AU1_ISEN2N, NC2/SR_ADDF AU1_SR_ADDF, ISEN3P AU1_ISEN3P, ISEN3N AU1_ISEN3N, NC3/OFSA AU1_OFSA, ISEN4P AU1_ISEN4P, ISEN4N AU1_ISEN4N, PWM4 AU1_PWM4

BC130 .1U-10VX-04, BC131 .1U-10VX-04, BC129 .1U-10VX-04, BC132 .1U-10VX-04

GND

Sa

RT8859M

RT8859MGQWS

DVDA, COMPA, FBA, VRA_RDY, VR_RDY, VCC, OCSETA, OCSET, TONSETA, TONSET, ISENAN, ISENAP, PWMA, EN, PAD

AU1_COMPA, AU1_FBA, VRA_RDY, VR_READY, AU1_OCSETA, AU1_OCSET, AU1_TONSETA, AU1_TONSET, AU1_ISENAN, AU1_ISENAP, AU1_PWMA, VR_EN

Sb

AU1_DVIDA, ER58 0-04, MC61 33P-06-O
AU1_DVID, ER57 0-04, MC60 33P-06-O
AU1_OFSA, R181 100K-04-O, R182 0-04, BC179 .1U-10VX-04-O
AU1_SR_ADDF, R178 100K-04-O, R179 0-04, BC174 .1U-10VX-04-O
R133 100K-04-O
AU1_OFS, ER56 0-04, BC144 .1U-10VX-04-O

Sc

Roffset 1K 16 levels for FB mode trigger OVP Jack 08/10

VCORE, R127 100-04, BC140 .1U-16VY-04-O, VCC_SEN, BC133 .1U-16VY-04-O, VSS_SEN

RT3 NTC-10K-1-06, ER52 10K-1-04, ER54 13K-1-04, ER59 75K-1-04, ER55 76K-1-04, ER74 22K-1-04, ER80 665K-1-04, BC168 .1U-16VY-04-O, BC175 .1U-16VY-04

BC139 220P-04, R129 0-04, R131 0-04, BC143 33P-04, R154 8.2K-04, 12V_4P

R130 10-04-O, BC135 470P-04-O, reserve as Vendor 10/11

R153 1K-04, BC160 .1U-16VX-04

VAXG, R183 100-04, BC176 .1U-16VY-04-O, VCCAXG_SEN, BC171 .1U-16VY-04-O, VSSAXG_SEN

RT5 NTC-10K-1-06, ER87 13K-1-04, ER88 10K-1-04, ER81 118K-1-04, BC177 220P-04, R180 0-04, R174 0-04, BC170 47P-04

R184 10-04-O, BC180 470P-04-O, reserve as Vendor 10/11

VCC3, +V_8859, RT8 NTC-10K-1-06-O, ER78 9.09K-1-04, R177 0-04, ER79 6.2K-1-04

ER64 180K-1-04, BC156 1U-16VX-04, ER63 182K-1-04, R142 1-04, R140 1-04, BC155 .1U-16VX-04, 12V_4P, +V_8859, RT7 NTC-10K-1-06-O, ER73 12.1K-1-04, R169 0-04, ER71 5.6K-1-04

BC181 1U-10VX-04, R186 1K-04, V_CPUVTT

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VCC, R191 2.2-04, +V_8859, BC147 1U-16VX-06, BC186 .1U-10VX-04

	RT8859A	RT8859M
Sa	RT8859A	RT8859M
Sb	X	V
Sc	402-1-04	1K-1-04

change 1K for OV

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Title: DC/DC VCORE/VAXG RT8859M

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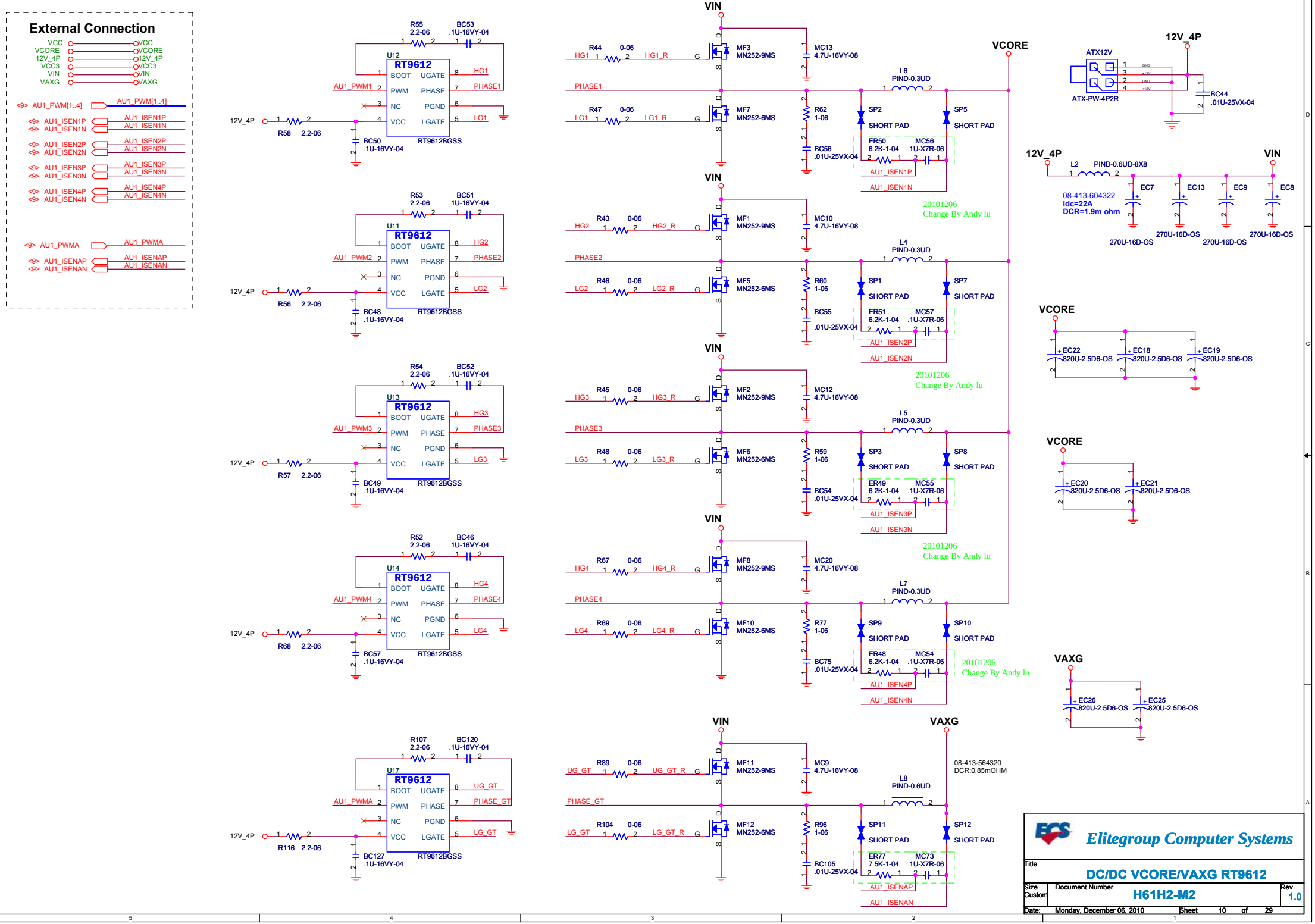
External Connection
VCC
VCORE
12V_4P
VCC3
VIN
VAXG
AU1_PWM[1..4]
AU1_ISEN1P
AU1_ISEN1N
AU1_ISEN2P
AU1_ISEN2N
AU1_ISEN3P
AU1_ISEN3N
AU1_ISEN4P
AU1_ISEN4N
AU1_PWMA
AU1_ISENAP
AU1_ISENAN
R55 2.2-06
BC53 .1U-16VY-04
U12
RT9612
BOOT UGATE HG1
PWM PHASE PHASE1
NC PGND
VCC LGATE LG1
RT9612BGSS
R58 2.2-06
BC50 .1U-16VY-04
R53 2.2-06
BC51 .1U-16VY-04
U11
HG2
PHASE2
LG2
R56 2.2-06
BC48 .1U-16VY-04
R54 2.2-06
BC52 .1U-16VY-04
U13
HG3
PHASE3
LG3
R57 2.2-06
BC49 .1U-16VY-04
R52 2.2-06
BC46 .1U-16VY-04
U14
HG4
PHASE4
LG4
R68 2.2-06
BC57 .1U-16VY-04
R107 2.2-06
BC120 .1U-16VY-04
U17
UG_GT
PHASE_GT
LG_GT
R116 2.2-06
BC127 .1U-16VY-04
VIN
MF3 MN252-9MS
MF7 MN252-6MS
MC13 4.7U-16VY-08
L6 PIND-0.3UD
R62 1-06
BC56 .01U-25VX-04
SP2 SHORT PAD
SP5 SHORT PAD
ER50 6.2K-1-04
MC56 .1U-X7R-06
VCORE
MF1 MN252-9MS
MF5 MN252-6MS
MC10 4.7U-16VY-08
L4 PIND-0.3UD
R60 1-06
BC55 .01U-25VX-04
SP1 SHORT PAD
SP7 SHORT PAD
ER51 6.2K-1-04
MC57 .1U-X7R-06
MF2 MN252-9MS
MF6 MN252-6MS
MC12 4.7U-16VY-08
L5 PIND-0.3UD
R59 1-06
BC54 .01U-25VX-04
SP3 SHORT PAD
SP8 SHORT PAD
ER49 6.2K-1-04
MC55 .1U-X7R-06
MF8 MN252-9MS
MF10 MN252-6MS
MC20 4.7U-16VY-08
L7 PIND-0.3UD
R77 1-06
BC75 .01U-25VX-04
SP9 SHORT PAD
SP10 SHORT PAD
ER48 6.2K-1-04
MC54 .1U-X7R-06
20101206
Change By Andy lu
VAXG
MF11 MN252-9MS
MF12 MN252-6MS
MC9 4.7U-16VY-08
L8 PIND-0.6UD
R96 1-06
BC105 .01U-25VX-04
SP11 SHORT PAD
SP12 SHORT PAD
ER77 7.5K-1-04
MC73 .1U-X7R-06
08-413-564320
DCR:0.85mOHM
ATX12V
ATX-PW-4P2R
12V_4P
BC44 .01U-25VX-04
L2 PIND-0.6UD-8X8
08-413-604322
Idc=22A
DCR=1.9m ohm
EC7
EC13
EC9
EC8
270U-16D-OS
EC22
EC18
EC19
EC20
EC21
EC26
EC25
820U-2.5D6-OS
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DC/DC VCORE/VAXG RT9612
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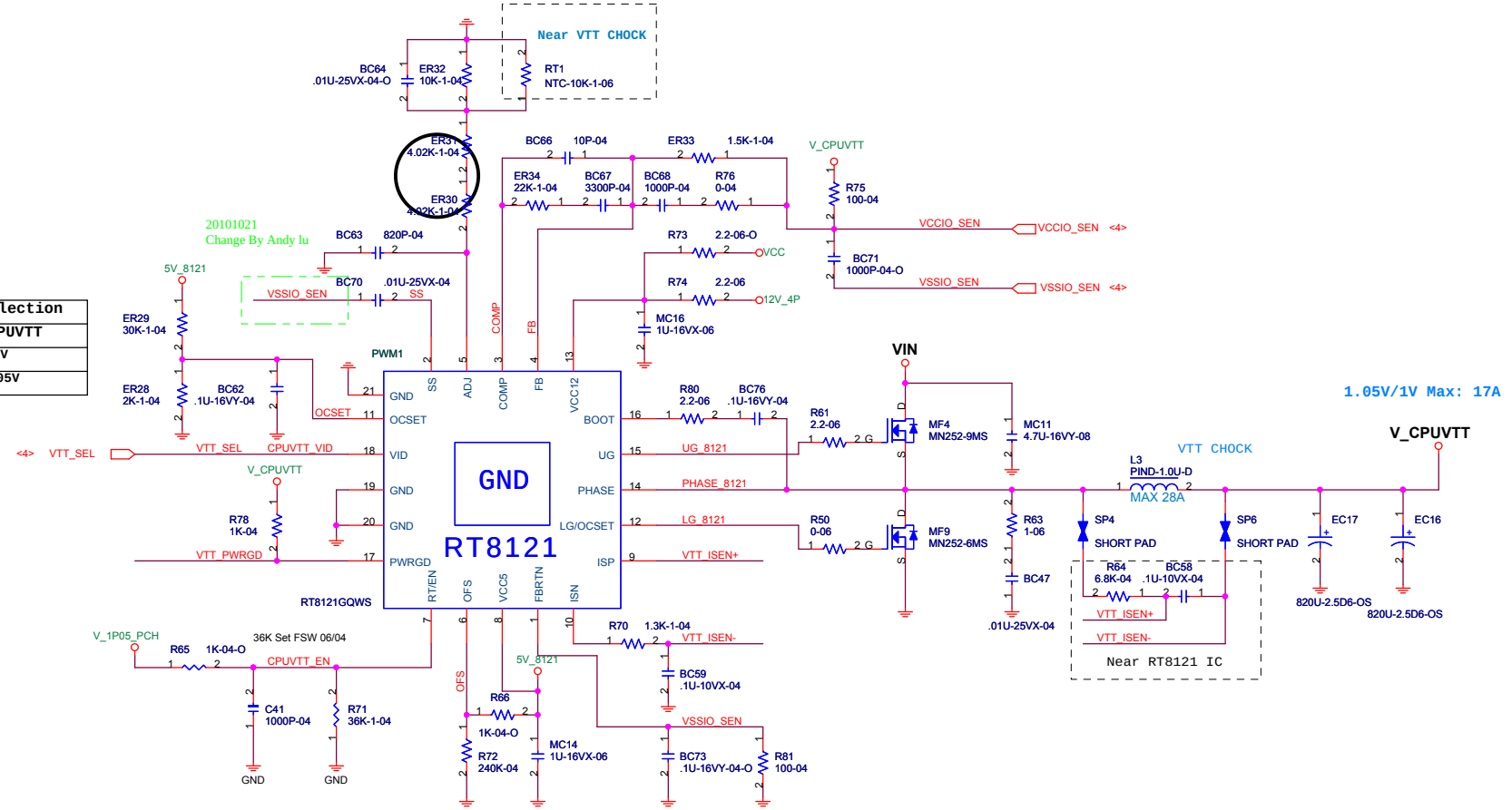
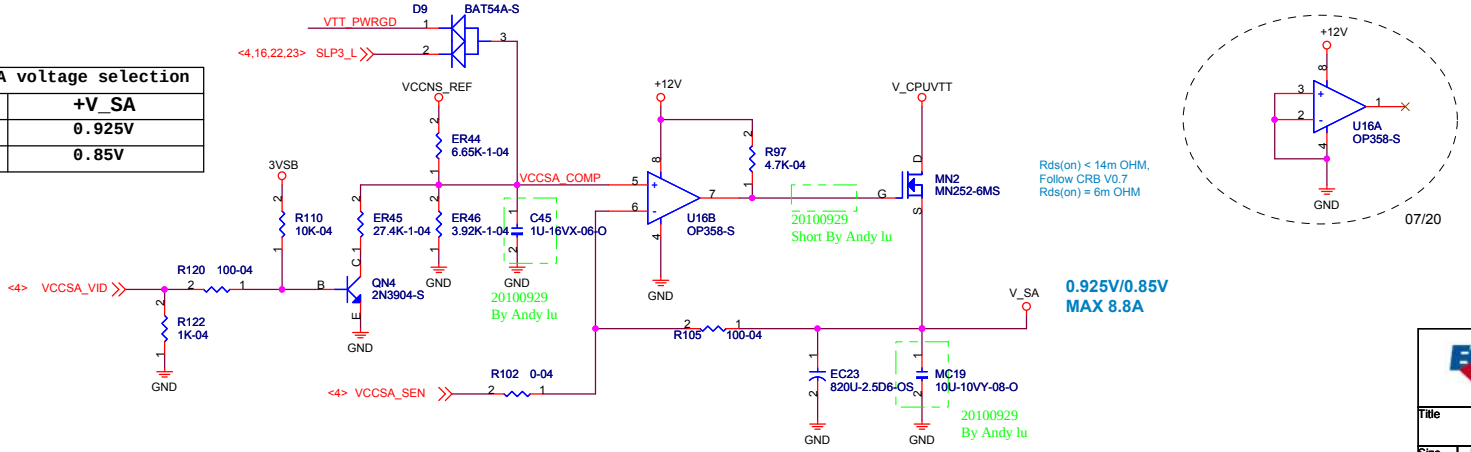
External Connection

VCC → VCC
3VSB → 3VSB
5VSB → 5VSB
V_1P05_PCH → V_1P05_PCH
V_CPUVTT → V_CPUVTT

VCCIO voltage selection	
VTT_SEL	V_CPUVTT
low	1V
high	1.05V



VCCSA voltage selection	
VID	+V_SA
0	0.925V
* 1	0.85V



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Title	DC/DC V_CPUVTT RT8121 / VCCSA	
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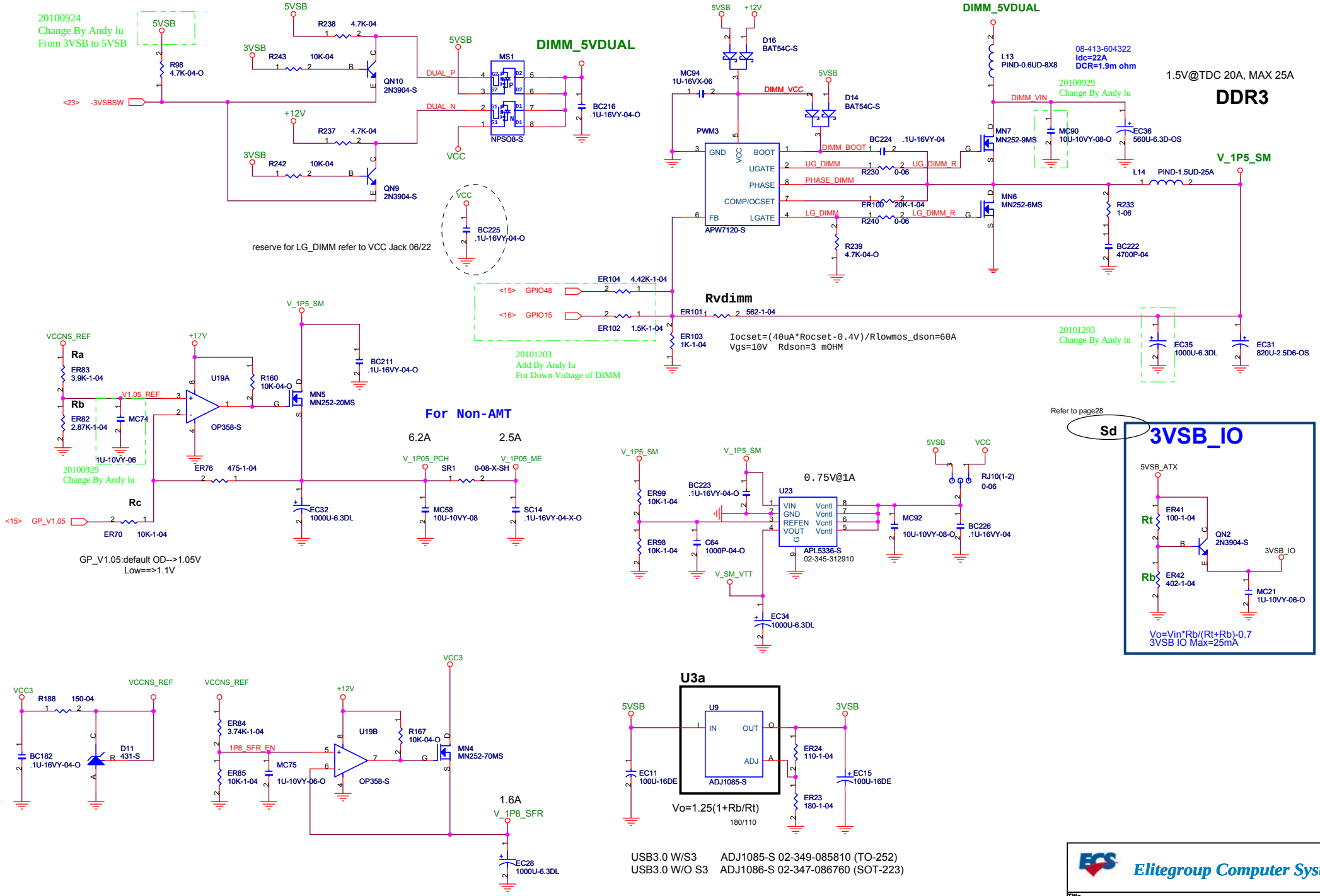
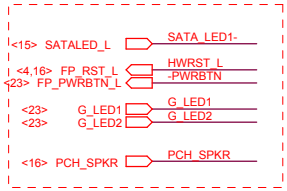
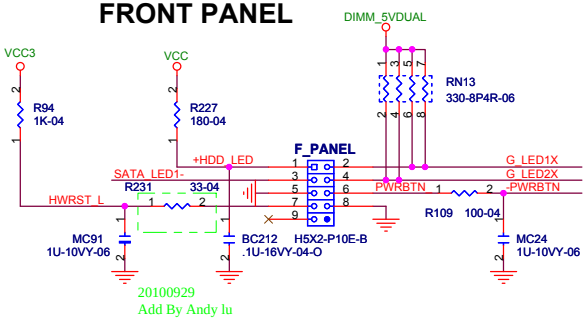

20100924
Change By Andy lu
From 3VSB to 5VSB
5VSB
R98
4.7K-04-O
<23> -3VSBSW
3VSB
R243 10K-04
R238 4.7K-04
QN10
2N3904-S
+12V
R237 4.7K-04
R242 10K-04
QN9
2N3904-S
DUAL_P
DUAL_N
MS1
NPSO8-S
VCC
BC216
.1U-16VY-04-O
DIMM_5VDUAL
reserve for LG_DIMM refer to VCC Jack 06/22
BC225
.1U-16VY-04-O
D16
BAT54C-S
D14
BAT54C-S
MC94
1U-16VX-06
DIMM_VCC
PWM3
GND
VCC
BOOT
UGATE
PHASE
COMP/OCSET
FB
LGATE
APW7120-S
DIMM_BOOT
UG_DIMM
PHASE_DIMM
LG_DIMM
BC224 .1U-16VY-04
R230 0-06
ER100 20K-1-04
R240 0-06
R239
4.7K-04-O
UG_DIMM_R
LG_DIMM_R
MN7
MN252-9MS
MN6
MN252-6MS
L13
PIND-0.6UD-8X8
08-413-604322
Idc=22A
DCR=1.9m ohm
DIMM_VIN
MC90
10U-10VY-08-O
EC36
560U-6.3D-OS
1.5V@TDC 20A, MAX 25A
DDR3
V_1P5_SM
L14 PIND-1.5UD-25A
R233
1-06
BC222
4700P-04
20101203
Change By Andy lu
EC35
1000U-6.3DL
EC31
820U-2.5D6-OS
ER104 4.42K-1-04
<15> GPIO48
<16> GPIO15
Rvdimm
ER101 562-1-04
ER102 1.5K-1-04
ER103
1K-1-04
Iocset=(40uA*Rocset-0.4V)/Rlowmos_dson=60A
Vgs=10V Rdson=3 mOHM
20101203
Add By Andy lu
For Down Voltage of DIMM
VCCNS_REF
Ra
ER83
3.9K-1-04
Rb
ER82
2.87K-1-04
V1.05_REF
MC74
1U-10VY-06
U19A
OP358-S
R160
10K-04-O
MN5
MN252-20MS
BC211
.1U-16VY-04-O
For Non-AMT
6.2A
2.5A
V_1P05_PCH
V_1P05_ME
SR1
0-08-X-SH
ER76 475-1-04
EC32
1000U-6.3DL
MC58
10U-10VY-08
SC14
.1U-16VY-04-X-O
20100929
Change By Andy lu
Rc
<15> GP_V1.05
ER70 10K-1-04
GP_V1.05:default OD-->1.05V
Low==>1.1V
V_SM_VTT
ER99
10K-1-04
ER98
10K-1-04
BC223
.1U-16VY-04-O
C64
1000P-04-O
U23
VIN
GND
REFEN
VOUT
Vcntl
APL5336-S
02-345-312910
0.75V@1A
MC92
10U-10VY-08-O
BC226
.1U-16VY-04
RJ10(1-2)
0-06
EC34
1000U-6.3DL
Refer to page28
Sd
3VSB_IO
5VSB_ATX
Rt
ER41
100-1-04
Rb
ER42
402-1-04
QN2
2N3904-S
3VSB_IO
MC21
1U-10VY-06-O
Vo=Vin*Rb/(Rt+Rb)-0.7
3VSB IO Max=25mA
VCC3
R188 150-04
BC182
.1U-16VY-04-O
D11
431-S
ER84
3.74K-1-04
1P8_SFR_EN
ER85
10K-1-04
MC75
1U-10VY-06-O
U19B
OP358-S
R167
10K-04-O
MN4
MN252-70MS
1.6A
V_1P8_SFR
EC28
1000U-6.3DL
U3a
U9
IN
OUT
ADJ
ADJ1085-S
EC11
100U-16DE
ER24
110-1-04
ER23
180-1-04
EC15
100U-16DE
Vo=1.25(1+Rb/Rt)
180/110
USB3.0 W/S3 ADJ1085-S 02-349-085810 (TO-252)
USB3.0 W/O S3 ADJ1086-S 02-347-086760 (SOT-223)
Elitegroup Computer Systems
Title
DC/DC VDIMM/DDR_VTT/5VDUAL
Size
Custom
Document Number
H61H2-M2
Rev
1.0
Date: Tuesday, December 14, 2010
Sheet 12 of 29

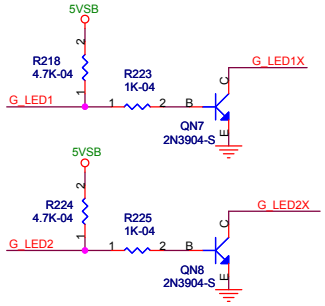
FRONT PANEL

External Connection



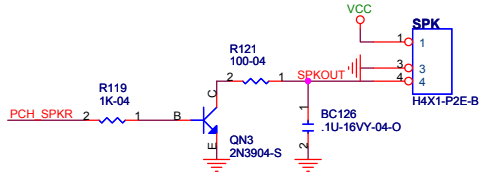


20100929
Add By Andy lu



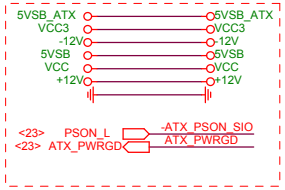
	S0	S1	S3	S4	S5
G_LED1	L	B	B	L	L
G_LED2	H	H	L	L	L
	G	GB	YB	OFF	OFF

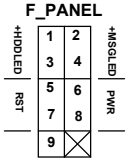
B:Blinking

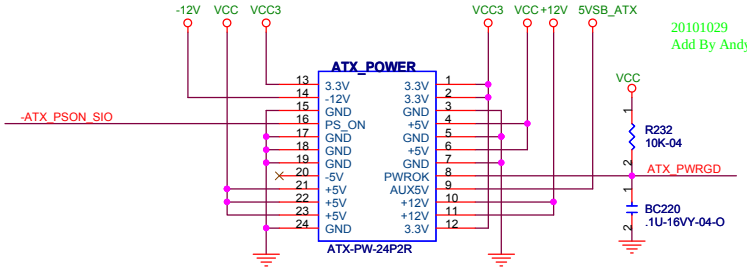


POWER CONNECTOR

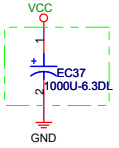
External Connection

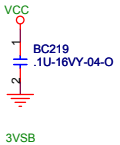




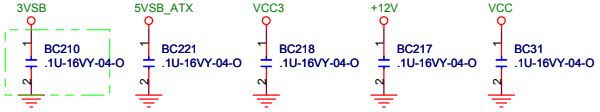


20101029
Add By Andy lu





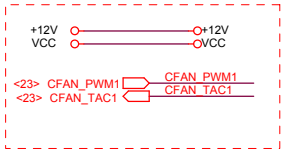
20100929
Change By Andy lu

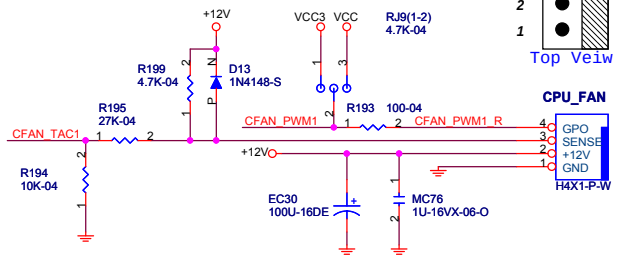


For EMI.

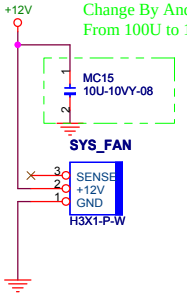
FAN

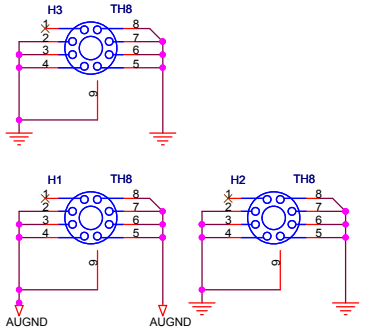
External Connection



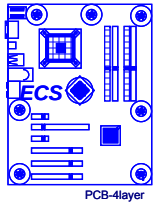


20100927
Change By Andy lu
From 100U to 10U



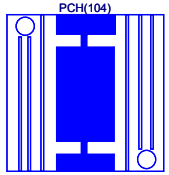


PCB



PCB-4layer

PCH(104)



20-120-011476

5series PN:20-120-010851

CLR_CMOS(1-2)

JP-R

BT(104)

CR2032

SMD 64M

Y1(wire)

JP-WI-P6.25

PCB STACK: L1:TOP
L2:PWR
L3:GND
L4:BOTTOM

Elitegroup Computer Systems

Title: Front Panel,FAN,PowerConn,GND,104

Size: Custom | Document Number: H61H2-M2 | Rev: 1.0

Date: Thursday, December 09, 2010 | Sheet 13 of 29

For H61:USB Port 6/7/12/13 is disabled....From 440377 file

PCHA

<15> PCI_33M_FB
STP40
STP39
20100910
Add By Andy lu
For Test Point

DEVSEL_L BH9
PCI_33M_FB BD15
PCILPCAID_RST_L AV14
IRDY_L BF11
PCH_PME_L AV15
SERR_L BR6
STOP_L BC12
PLOCK_L BA17
TRDY_L BC8
PERR_L BM3
FRAME_L BC11

TP1
TP3
TP2
07/21

GNT0_L BA15
GNT1_L AV8
GNT2_L BU12
GNT3_L BE2

REQ0_L BG5
REQ1_L BT5
REQ2_L BK8
REQ3_L AV11

20100910
Del By Andy lu
For PCI Slots

PCHINTA_L BK10
PCHINTB_L BJ5
PCHINTC_L BM15
PCHINTD_L BP5
PCHINTE_L BN9
PCHINTF_L AV9
PCHINTG_L BT15
PCHINTH_L BR4

PAR BH8
DEVSEL# BH9
CLKIN_PCILOOPBACK BD15
PCIRST# AV14
IRDY# BF11
PME# AV15
SERR# BR6
STOP# BC12
PLOCK# BA17
TRDY# BC8
PERR# BM3
FRAME# BC11

GNT0# BA15
GNT1#_GPIO51 AV8
GNT2#_GPIO53 BU12
GNT3#_GPIO55 BE2

REQ0# BG5
REQ1#_GPIO50 BT5
REQ2#_GPIO52 BK8
REQ3#_GPIO54 AV11

PIRQA# BK10
PIRQB# BJ5
PIRQC# BM15
PIRQD# BP5
PIRQE#_GPIO2 BN9
PIRQF#_GPIO3 AV9
PIRQG#_GPIO4 BT15
PIRQH#_GPIO5 BR4

AD0 BF15
AD1 BF17
AD2 BT7
AD3 BT13
AD4 BG12
AD5 BN11
AD6 BJ12
AD7 BU9
AD8 BR12
AD9 BJ3
AD10 BR9
AD11 BJ10
AD12 BM8
AD13 BF3
AD14 BN2
AD15 BF4
AD16 BF6
AD17 BG15
AD18 BC6
AD19 BT11
AD20 BA14
AD21 BL2
AD22 BC4
AD23 BL4
AD24 BC2
AD25 BM13
AD26 BA9
AD27 BF9
AD28 BA8
AD29 BF8
AD30 AV17
AD31 BK12

C_BE0# BN4
C_BE1# BP7
C_BE2# BG2
C_BE3# BP13

1 OF 12

U1CPT

PCHB

<3> DMI_TX_N0 D33
<3> DMI_TX_P0 B33
<3> DMI_RX_N0 J36
<3> DMI_RX_P0 H36
<3> DMI_TX_N1 A36
<3> DMI_TX_P1 B35
<3> DMI_RX_N1 P38
<3> DMI_RX_P1 R38
<3> DMI_TX_N2 B37
<3> DMI_TX_P2 C36
<3> DMI_RX_N2 H38
<3> DMI_RX_P2 J38
<3> DMI_TX_N3 E37
<3> DMI_TX_P3 F38
<3> DMI_RX_N3 M41
<3> DMI_RX_P3 P41

V_1P05_PCH
R192 49.9-1-04
DMI_COMP E31

CKG_DMI_N P33
CKG_DMI_P R33

DMI0RXN
DMI0RXP
DMI0TXN
DMI0TXP
DMI1RXN
DMI1RXP
DMI1TXN
DMI1TXP
DMI2RXN
DMI2RXP
DMI2TXN
DMI2TXP
DMI3RXN
DMI3RXP
DMI3TXN
DMI3TXP
DMI_IRCOMP
DMI_ZCOMP
CLKIN_DMI_N
CLKIN_DMI_P

PCIEx1_A
<20> PEX1A_RX_N1
<20> PEX1A_RX_P1
<20> PEX1A_TX_N1
<20> PEX1A_TX_P1
PEX1A_RX_N1 J20
PEX1A_RX_P1 L20
PEX1A_TX_N1 F25
PEX1A_TX_P1 F23

PCI bridge
20100910
Del By Andy lu
For PCI Bridge

USB3.0
20100921
Del By Andy lu
For USB3.0

20100909
Add By Andy lu

PCIEx1_B
<20> PEX1B_RX_N4
<20> PEX1B_RX_P4
<20> PEX1B_TX_N4
<20> PEX1B_TX_P4
PEX1B_RX_N4 P17
PEX1B_RX_P4 M17
PEX1B_TX_N4 F18
PEX1B_TX_P4 E17

LAN
<26> LAN_RX_N6
<26> LAN_RX_P6
<26> LAN_TX_N6
<26> LAN_TX_P6
LAN_RX_N6 N15
LAN_RX_P6 M15
LAN_TX_N6 BC149 2 .1U-10VX-04
LAN_TX_P6 BC148 2 .1U-10VX-04
B17
C16

PERN1 J20
PERP1 L20
PETN1 F25
PETP1 F23
PERN2 P20
PERP2 R20
PETN2 C22
PETP2 A22
PERN3 H17
PERP3 J17
PETN3 F21
PETP3 B21
PERN4 P17
PERP4 M17
PETN4 F18
PETP4 E17
PERN5 N15
PERP5 M15
PETN5 B17
PETP5 C16
PERN6 J15
PERP6 L15
PETN6 A16
PETP6 B15
PERN7 J12
PERP7 H12
PETN7 F15
PETP7 F13
PERN8 H10
PERP8 J10
PETN8 B13
PETP8 D13

For H61:PCIE 7/8 is disable....From intel Jasmine

2 OF 12

U1CPT

USBP0N BF36
USBP0P BD36
USBP1N BC33
USBP1P BA33
USBP2N BM33
USBP2P BM35
USBP3N BT33
USBP3P BU32
USBP4N BR32
USBP4P BT31
USBP5N BN29
USBP5P BM30
USBP6N BK33
USBP6P BJ33
USBP7N BF31
USBP7P BD31
USBP8N BN27
USBP8P BR29
USBP9N BR26
USBP9P BT27
USBP10N BK25
USBP10P BJ25
USBP11N BJ31
USBP11P BK31
USBP12N BF27
USBP12P BD27
USBP13N BJ27
USBP13P BK27

USB_N0 <22>
USB_P0 <22>
USB_N1 <22>
USB_P1 <22>
USB_N2 <22>
USB_P2 <22>
USB_N3 <22>
USB_P3 <22>
USB_N4 <22>
USB_P4 <22>
USB_N5 <22>
USB_P5 <22>

F_USB2
F_USB1
USBx2

20100921
Changed By Andy lu
For USB

USB_N10 <26>
USB_P10 <26>
USB_N11 <26>
USB_P11 <26>

USBLAN

3VSB
R203 10K-04

OC0#_GPIO59 BM43
OC1#_GPIO40 BD41
OC2#_GPIO41 BG41
OC3#_GPIO42 BK43
OC4#_GPIO43 BP43
OC5#_GPIO9 BJ41
OC6#_GPIO10 BT45
OC7#_GPIO14 BM45

USB_OC_L0
USB_OC_L1
USB_OC_L2
USB_OC_L3
USB_OC_L4
USB_OC_L5
USB_OC_L6
USB_OC_L7

07/21

USBRBIAS# BP25
USBRBIAS BM25
ER86 22.6-1-04
GND

CLKIN_DOT_96N BD38
CLKIN_DOT_96P BF38
CKG_DOT96_N
CKG_DOT96_P
GND

DMI2RBIAS A32
ER89 750-1-04
GND

VCC3

RN4 8.2K-8P4R-06
SERR_L
REQ1_L
REQ2_L
PERR_L

RN3 8.2K-8P4R-06
IRDY_L
STOP_L
FRAME_L
REQ3_L

RN5 8.2K-8P4R-06
PLOCK_L
REQ0_L
TRDY_L
DEVSEL_L

RN6 8.2K-8P4R-06
PCHINTH_L
PCHINTF_L
PCHINTE_L
PCHINTG_L

RN7 8.2K-8P4R-06
PCHINTA_L
PCHINTC_L
PCHINTD_L
PCHINTB_L

R143 1K-04-O
GNT0_L
GND

GPIO19:
Boot Device Select Strap.

GNT0_L:
No More Information in EDS V0.7

GNT1_L:
Boot Device Select Strap.

GNT2_L:
ESI Strap (Server Only),
DON'T Pull Low in Desktop.

GNT3_L:
Top-Block Swap Override Mode,
When Sampled Low.

20100929
Change By Andy lu

Stuff for
Integrated Clock Mode

RN14 10K-8P4R-04
CKG_DMI_N
CKG_DMI_P
CKG_DOT96_N
CKG_DOT96_P
GND

Stuff for
Integrated Clock Mode

GNT[0..3]#
GPIO19
have been internal pull high to +VCC3

Boot Device Select:

BOOT DEVICE	GNT1_L	GPIO19
LPC	0	0
PCI	1	0
* SPI	1	1

Elitegroup Computer Systems

Title: PCH - DMI/PCI/PE/USB

Size: Custom
Document Number: H61H2-M2
Rev: 1.0

Date: Monday, December 06, 2010
Sheet 14 of 29

For H61:SATA port2/3 is disable....From 440377 file

ONLY SATA PORT0 & PORT1 SUPPORT SATA3.0, ALSO SUPPORT SATA2.0, SATA1.0.

20100923 Add By Andy lu For LPC Debug

20100929 Short By Andy lu

PDG 0.7 33 Ω ± 5% for Single-End (except PCI Clocks)

Layout Note: PCI Clock Max 15000MILS

PCHH

U1CPT

8 of 12

CPU

LAN

PCIEx1_B

PCIEx1_A

PCIEx16

20100921 Del By Andy lu For USB3.0

20100910 Del By Andy lu For PCI Bridge

20100909 Add By Andy lu

MOBILE ONLY, NOT FOR DESKTOP.

Jack 08/10

20101203 Add By Andy lu For Down Voltage of DIMM

STITCHING CAPS.

PCHC

3 OF 12

20100916 Change By Andy lu From Ports 2,3 to Ports0,1

Detect USB3.0 control IC

Default GPI set to Pull Up:

Reserve for BOM Detect.

GPIO36_TCM_PST_L, GPIO37_TCM: TCM Header In Eanble TCM, Disable TPM.

GPIO16, GPIO49: Reserve for TPM.

Stuff for Integrated Clock Mode

CKa

Clock Mode	CLK GEN. IDT CV184 Circuit.	CKa
Integrated Clock Mode	X	V
Buffer Through Mode	V	X

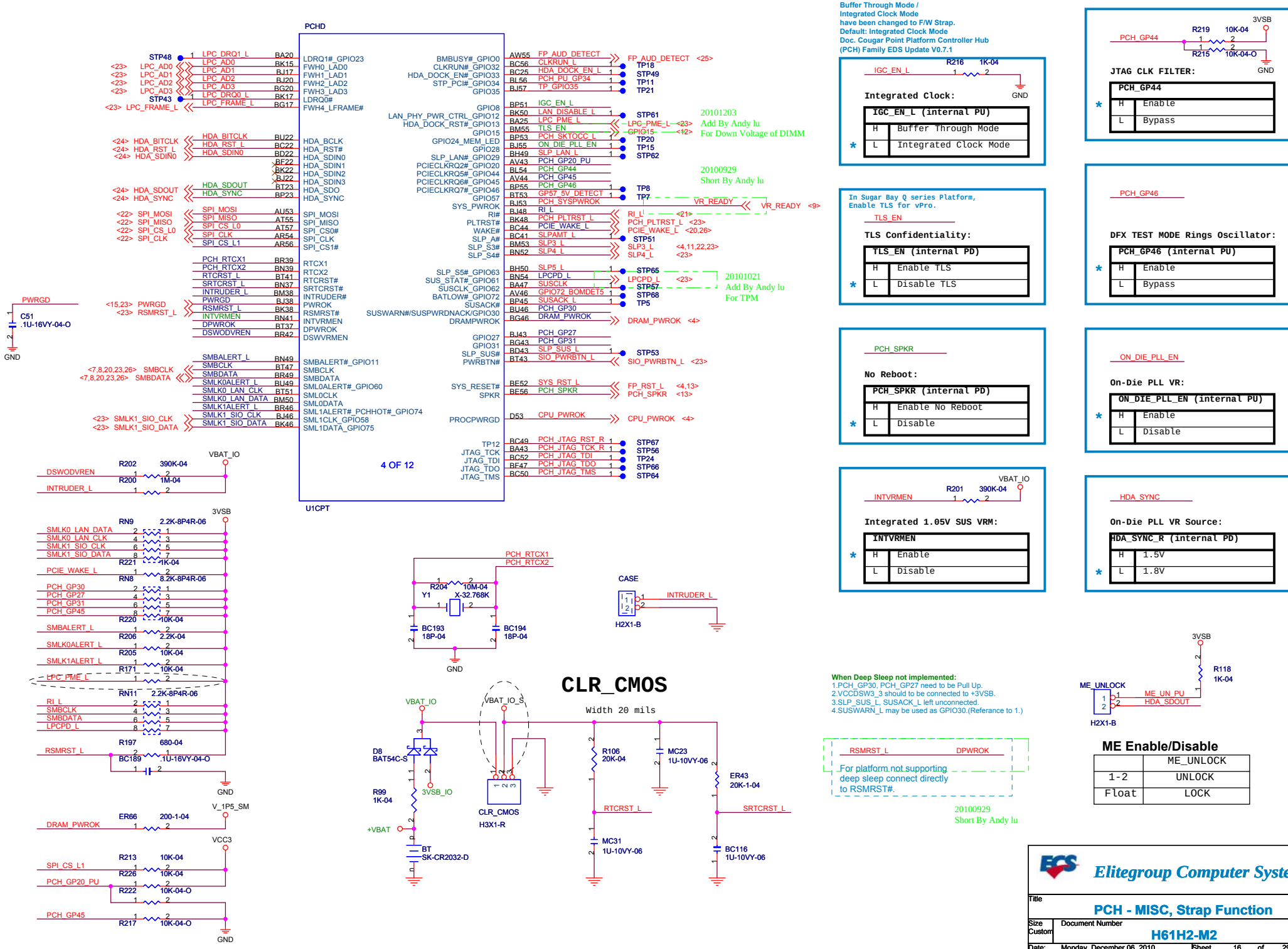
20101203 Add By Andy lu

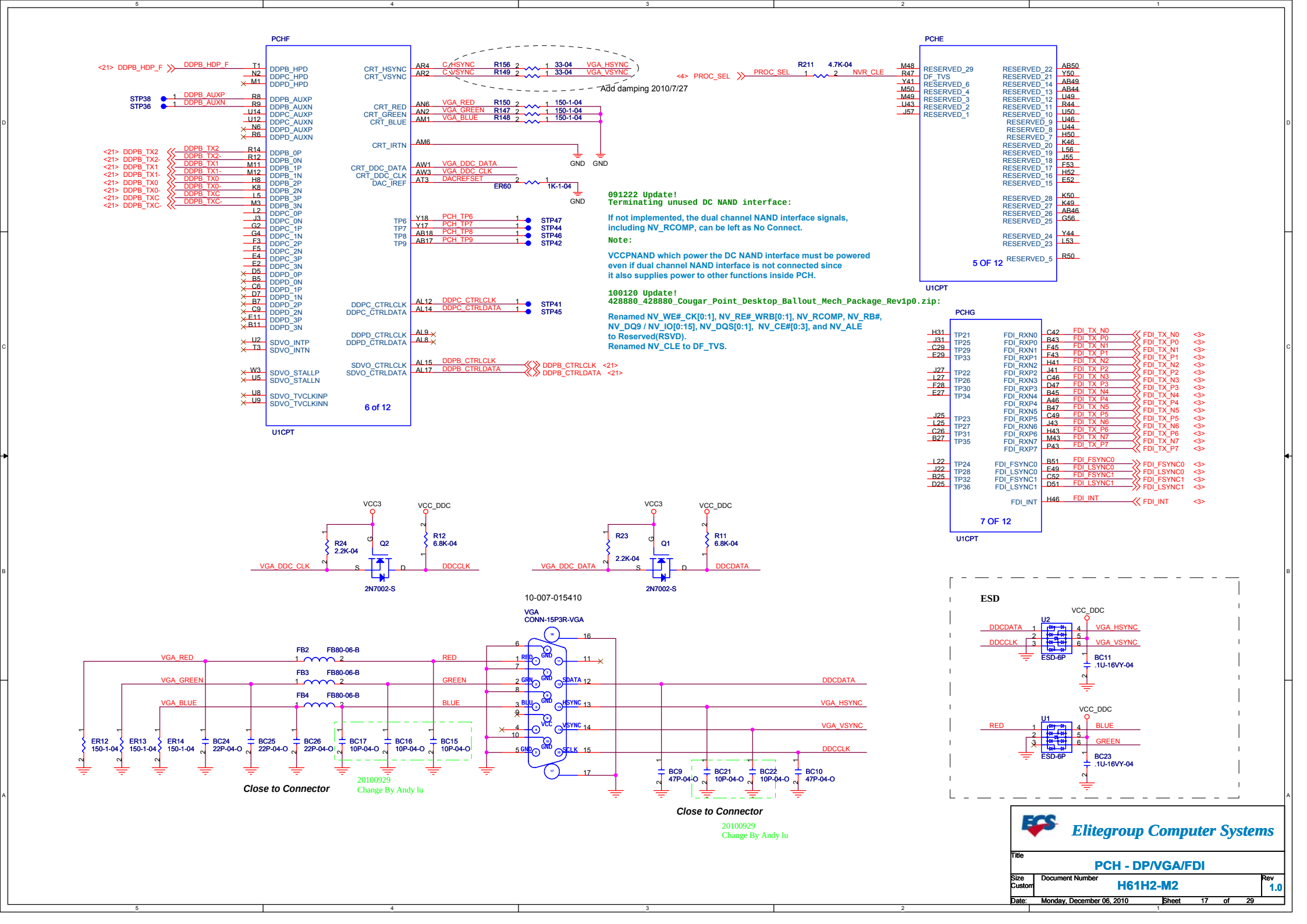
Elitegroup Computer Systems

Title: PCH - SATA / CLK

Size: Custom | Document Number: H61H2-M2 | Rev: 1.0

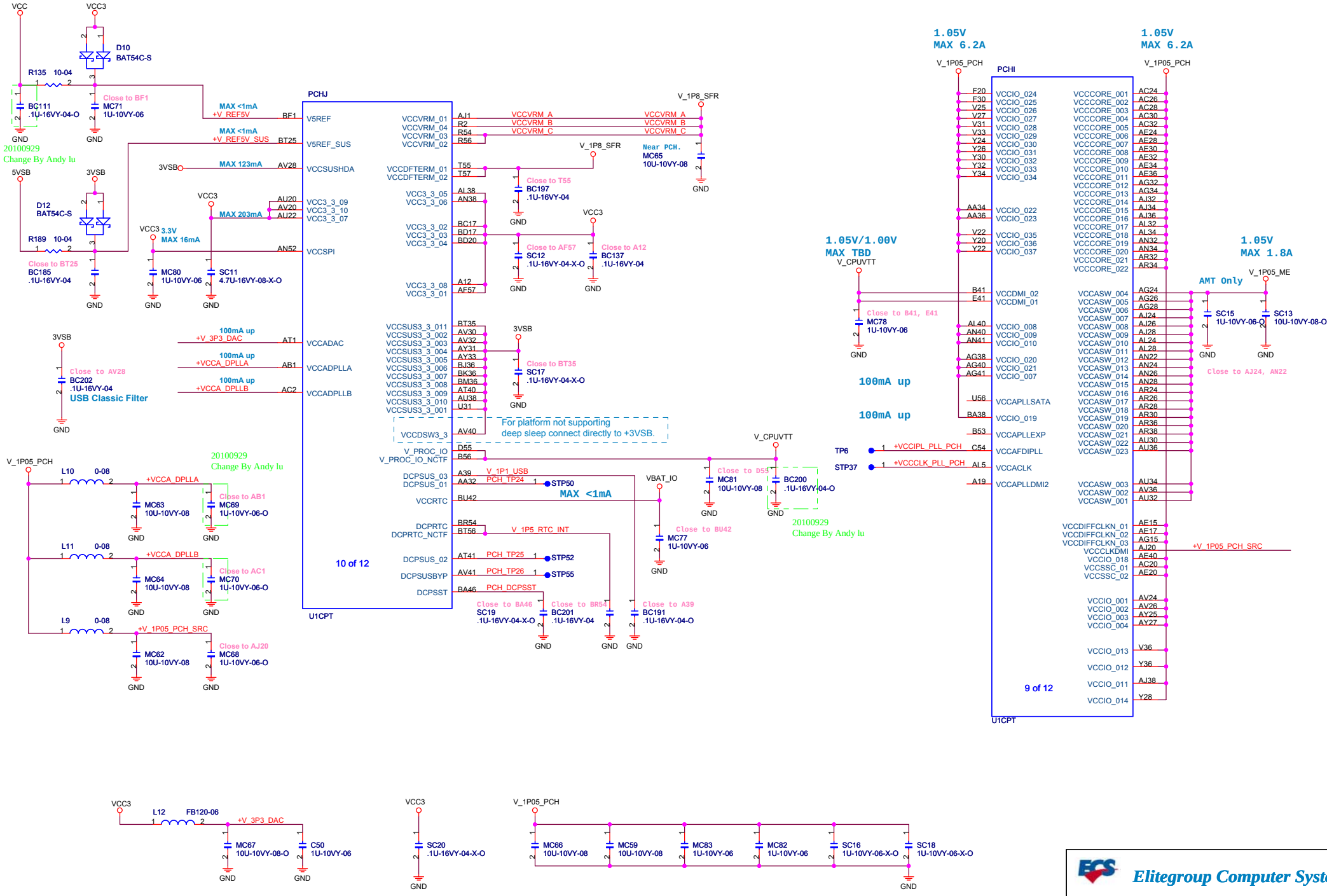
Date: Thursday, December 09, 2010 | Sheet 15 of 29

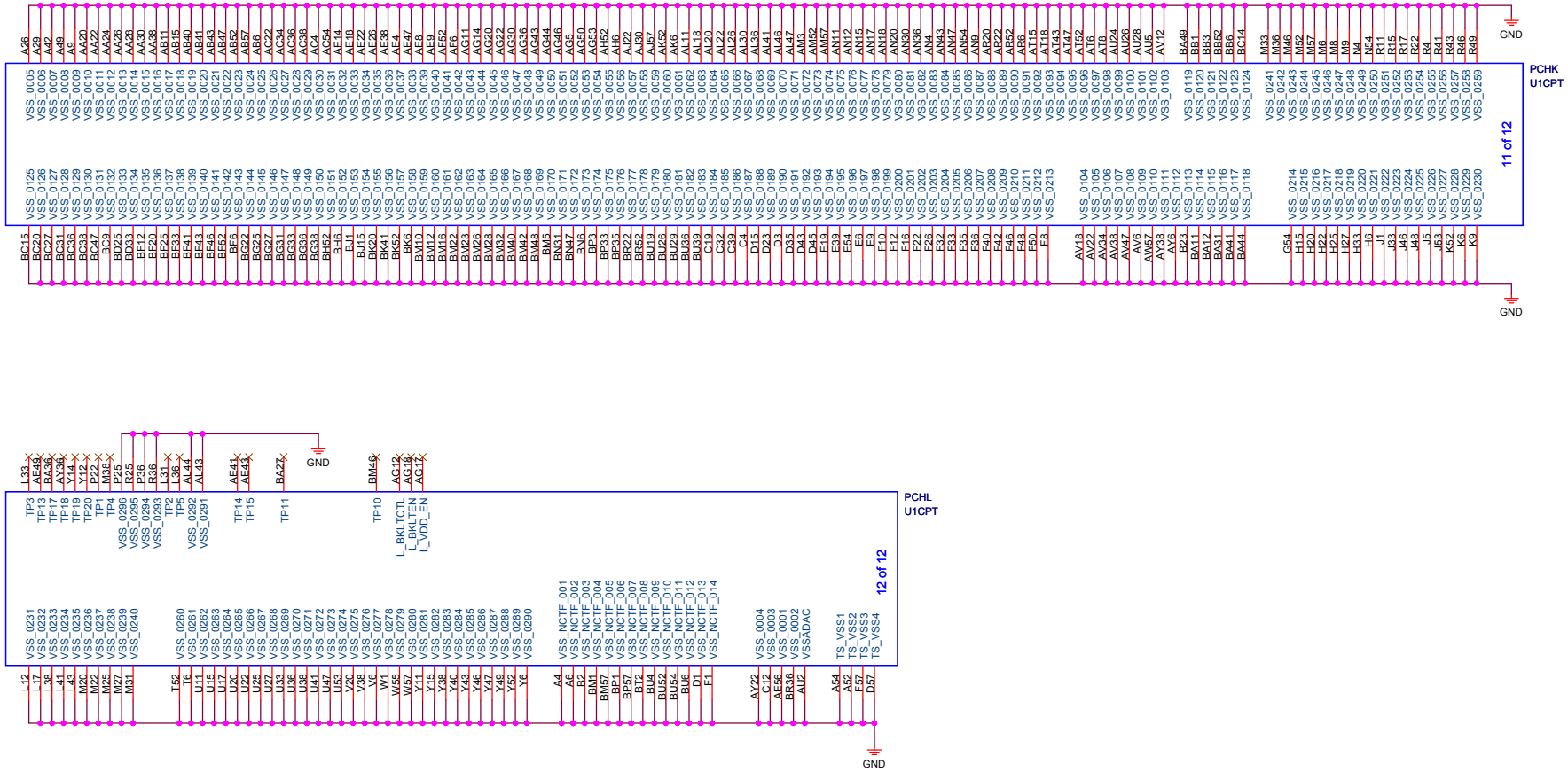

PCHD
U1CPT
4 OF 12
STP48
STP43
LPC_DRQ1_L
LPC_AD0
LPC_AD1
LPC_AD2
LPC_AD3
LPC_DRQ0_L
LPC_FRAME_L
HDA_BITCLK
HDA_RST_L
HDA_SDIN0
HDA_SDOUT
HDA_SYNC
SPI_MOSI
SPI_MISO
SPI_CS_L0
SPI_CLK
SPI_CS_L1
PCH_RTCX1
PCH_RTCX2
RTCRST_L
SRTCRST_L
INTRUDER_L
PWRGD
RSMRST_L
INTVRMEN
DPWROK
DSWODVREN
SMBALERT_L
SMBCLK
SMBDATA
SMLK0ALERT_L
SMLK0_LAN_CLK
SMLK0_LAN_DATA
SMLK1ALERT_L
SMLK1_SIO_CLK
SMLK1_SIO_DATA
LDRQ1#_GPIO23
FWH0_LAD0
FWH1_LAD1
FWH2_LAD2
FWH3_LAD3
LDRQ0#
FWH4_LFRAME#
HDA_BCLK
HDA_RST#
HDA_SDIN0
HDA_SDIN1
HDA_SDIN2
HDA_SDIN3
HDA_SDO
HDA_SYNC
SPI_MOSI
SPI_MISO
SPI_CS0#
SPI_CLK
SPI_CS1#
RTCX1
RTCX2
RTCRST#
SRTCRST#
INTRUDER#
PWROK
RSMRST#
INTVRMEN
DPWROK
DSWVRMEN
SMBALERT#_GPIO11
SMBCLK
SMBDATA
SML0ALERT#_GPIO60
SML0CLK
SML0DATA
SML1ALERT#_PCHHOT#_GPIO74
SML1CLK_GPIO58
SML1DATA_GPIO75
BMBUSY#_GPIO0
CLKRUN#_GPIO32
HDA_DOCK_EN#_GPIO33
STP_PCI#_GPIO34
GPIO35
GPIO8
LAN_PHY_PWR_CTRL_GPIO12
HDA_DOCK_RST#_GPIO13
GPIO15
GPIO24_MEM_LED
GPIO28
SLP_LAN#_GPIO29
PCIECLKRQ2#_GPIO20
PCIECLKRQ5#_GPIO44
PCIECLKRQ6#_GPIO45
PCIECLKRQ7#_GPIO46
GPIO57
SYS_PWROK
RI#
PLTRST#
WAKE#
SLP_A#
SLP_S3#
SLP_S4#
SLP_S5#_GPIO63
SUS_STAT#_GPIO61
SUSCLK_GPIO62
BATLOW#_GPIO72
SUSACK#
SUSWARN#/SUSPWRDNACK/GPIO30
DRAMPWROK
GPIO27
GPIO31
SLP_SUS#
PWRBTN#
SYS_RESET#
SPKR
PROCPWRGD
TP12
JTAG_TCK
JTAG_TDI
JTAG_TDO
JTAG_TMS
FP_AUD_DETECT
CLKRUN_L
HDA_DOCK_EN_L
PCH_PU_GP34
TP_GPIO35
IGC_EN_L
LAN_DISABLE_L
LPC_PME_L
TLS_EN
PCH_SKTOCC_L
ON_DIE_PLL_EN
SLP_LAN_L
PCH_GP20_PU
PCH_GP44
PCH_GP45
PCH_GP46
GP57_5V_DETECT
PCH_SYSPWROK
VR_READY
RI_L
PCH_PLTRST_L
PCIE_WAKE_L
SLPAMT_L
SLP3_L
SLP4_L
SLP5_L
LPCPD_L
SUSCLK
GPIO72_BOMDET5
SUSACK_L
PCH_GP30
DRAM_PWROK
PCH_GP27
PCH_GP31
SLP_SUS_L
SIO_PWRBTN_L
SYS_RST_L
PCH_SPKR
CPU_PWROK
PCH_JTAG_RST_R
PCH_JTAG_TCK_R
PCH_JTAG_TDI
PCH_JTAG_TDO
PCH_JTAG_TMS
FP_AUD_DETECT <25>
TP18
STP49
TP11
TP21
STP61
LPC_PME_L <23>
TLS_EN
GPIO15 <12>
TP20
TP15
STP62
TP8
TP7
VR_READY <9>
RI_L <21>
PCH_PLTRST_L <23>
PCIE_WAKE_L <20,26>
STP51
SLP3_L <4,11,22,23>
SLP4_L <23>
STP65
LPCPD_L <23>
STP57
STP68
TP5
DRAM_PWROK <4>
STP53
SIO_PWRBTN_L <23>
FP_RST_L <4,13>
PCH_SPKR <13>
CPU_PWROK <4>
STP67
STP56
TP24
STP66
STP64
20101203
Add By Andy lu
For Down Voltage of DIMM
20100929
Short By Andy lu
20101021
Add By Andy lu
For TPM
Buffer Through Mode /
Integrated Clock Mode
have been changed to F/W Strap.
Default: Integrated Clock Mode
Doc. Cougar Point Platform Controller Hub
(PCH) Family EDS Update V0.7.1
IGC_EN_L
R216 1K-04
GND
Integrated Clock:
IGC_EN_L (internal PU)
H Buffer Through Mode
L Integrated Clock Mode
In Sugar Bay Q series Platform,
Enable TLS for vPro.
TLS_EN
TLS Confidentiality:
TLS_EN (internal PD)
H Enable TLS
L Disable TLS
PCH_SPKR
No Reboot:
PCH_SPKR (internal PD)
H Enable No Reboot
L Disable
INTVRMEN
VBAT_IO
R201 390K-04
Integrated 1.05V SUS VRM:
INTVRMEN
H Enable
L Disable
3VSB
R219 10K-04
R215 10K-04-O
PCH_GP44
JTAG CLK FILTER:
PCH_GP44
H Enable
L Bypass
PCH_GP46
DFX TEST MODE Rings Oscillator:
PCH_GP46 (internal PU)
H Enable
L Bypass
ON_DIE_PLL_EN
On-Die PLL VR:
ON_DIE_PLL_EN (internal PU)
H Enable
L Disable
HDA_SYNC
On-Die PLL VR Source:
HDA_SYNC_R (internal PD)
H 1.5V
L 1.8V
PWRGD
C51 .1U-16VY-04-O
GND
VBAT_IO
R202 390K-04
R200 1M-04
DSWODVREN
INTRUDER_L
3VSB
RN9 2.2K-8P4R-06
SMLK0_LAN_DATA
SMLK0_LAN_CLK
SMLK1_SIO_CLK
SMLK1_SIO_DATA
R221 1K-04
PCIE_WAKE_L
RN8 8.2K-8P4R-06
PCH_GP30
PCH_GP27
PCH_GP31
PCH_GP45
R220 10K-04
SMBALERT_L
R206 2.2K-04
SMLK0ALERT_L
R205 10K-04
SMLK1ALERT_L
R171 10K-04
LPC_PME_L
RN11 2.2K-8P4R-06
RI_L
SMBCLK
SMBDATA
LPCPD_L
R197 680-04
RSMRST_L
BC189 .1U-16VY-04-O
GND
V_1P5_SM
ER66 200-1-04
DRAM_PWROK
VCC3
R213 10K-04
R226 10K-04
SPI_CS_L1
R222 10K-04-O
PCH_GP20_PU
PCH_GP45
R217 10K-04-O
GND
PCH_RTCX1
PCH_RTCX2
R204 10M-04
Y1 X-32.768K
BC193 18P-04
BC194 18P-04
GND
CASE
INTRUDER_L
H2X1-B
CLR_CMOS
Width 20 mils
VBAT_IO
VBAT_IO_S
D8 BAT54C-S
R99 1K-04
3VSB_IO
+VBAT
BT SK-CR2032-D
CLR_CMOS
H3X1-R
R106 20K-04
MC23 1U-10VY-06
RTCRST_L
MC31 1U-10VY-06
ER43 20K-1-04
SRTCRST_L
BC116 1U-10VY-06
When Deep Sleep not implemented:
1.PCH_GP30, PCH_GP27 need to be Pull Up.
2.VCCDSW3_3 should to be connected to +3VSB.
3.SLP_SUS_L, SUSACK_L left unconnected.
4.SUSWARN_L may be used as GPIO30.(Reference to 1.)
RSMRST_L
DPWROK
For platform not supporting
deep sleep connect directly
to RSMRST#.
20100929
Short By Andy lu
3VSB
R118 1K-04
ME_UNLOCK
ME_UN_PU
HDA_SDOUT
H2X1-B
ME Enable/Disable
ME_UNLOCK
1-2 UNLOCK
Float LOCK
Elitegroup Computer Systems
Title
PCH - MISC, Strap Function
Size Custom
Document Number
H61H2-M2
Rev 1.0
Date: Monday, December 06, 2010
Sheet 16 of 29



Title	PCH - DP/VGA/FDI
Size	Custom
Document Number	H61H2-M2
Rev	1.0
Date:	Monday, December 06, 2010
Sheet	17 of 29

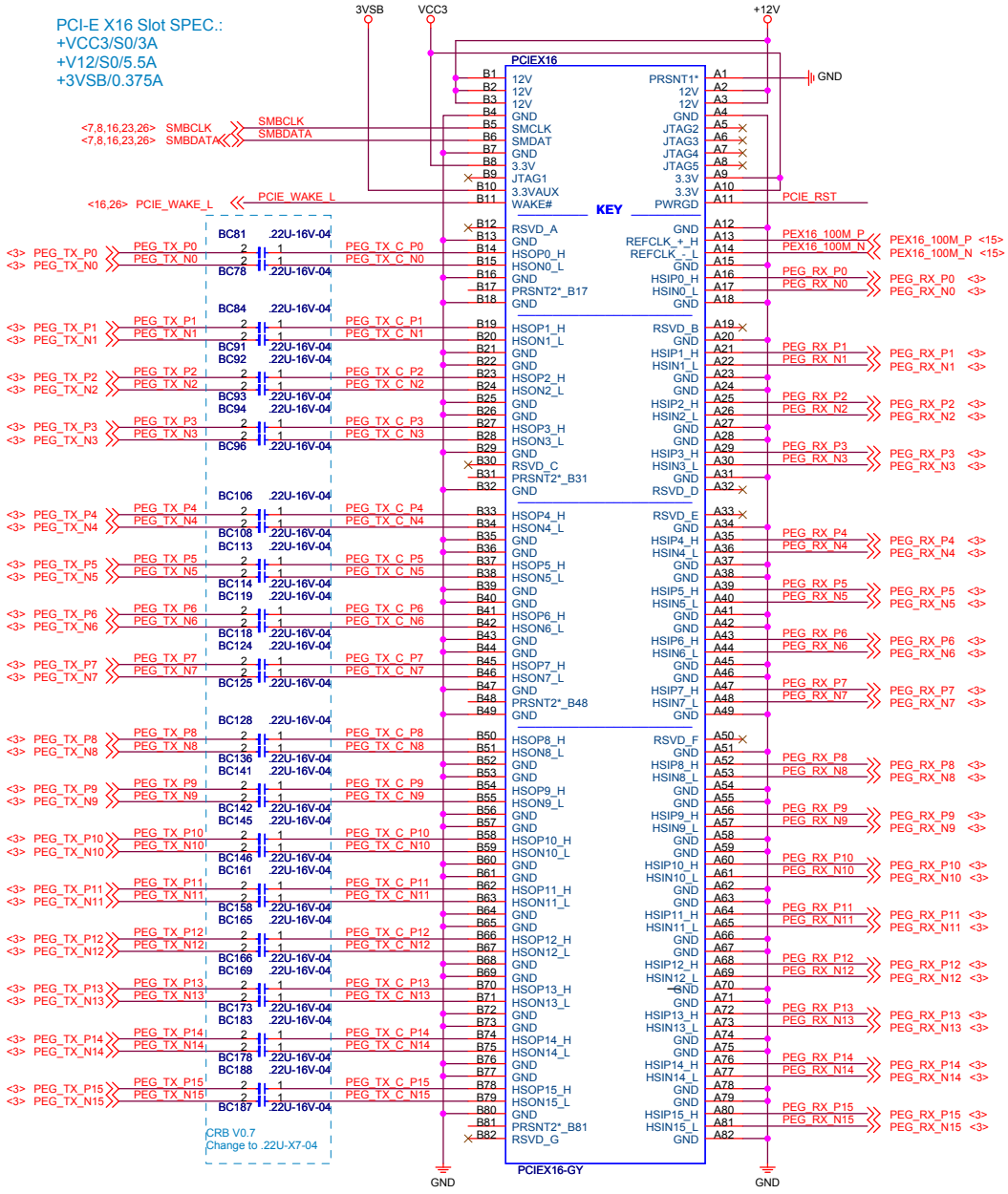
Elitegroup Computer Systems


PCHJ
PCHI
U1CPT
10 of 12
9 of 12
1.05V
MAX 6.2A
1.05V
MAX 6.2A
1.05V/1.00V
MAX TBD
1.05V
MAX 1.8A
100mA up
100mA up
MAX <1mA
MAX 123mA
MAX 203mA
MAX 16mA
MAX <1mA
USB Classic Filter
AMT Only
For platform not supporting
deep sleep connect directly to +3VSB.
20100929
Change By Andy lu
Close to BF1
Close to BT25
Close to AV28
Close to T55
Close to AF57
Close to A12
Close to BT35
Close to BU42
Close to D55
Close to AB1
Close to AC1
Close to AJ20
Close to AJ24, AN22
Near PCH.
+V_1P05_PCH_SRC
Elitegroup Computer Systems
PCH - PWR
H61H2-M2
Friday, December 03, 2010

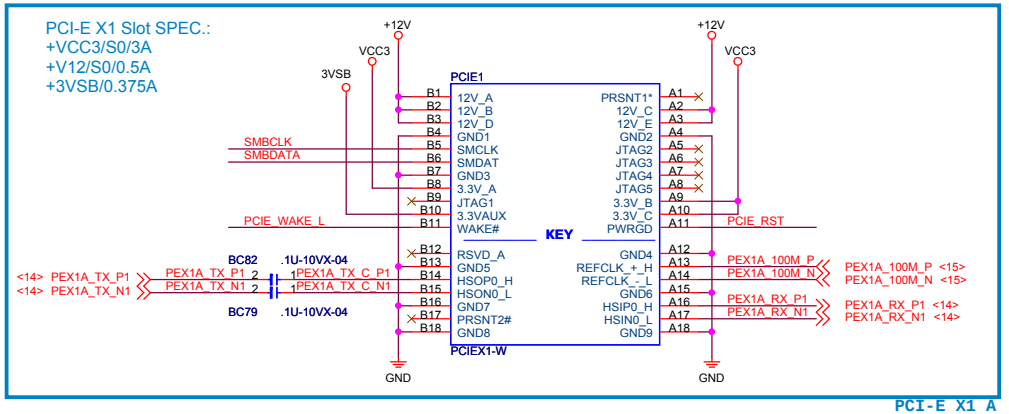


Elitegroup Computer Systems			
Title: PCH - GND			
Size: Custom	Document Number: H61H2-M2		Rev: 1.0
Date: Friday, December 03, 2010	Sheet 19 of 29		

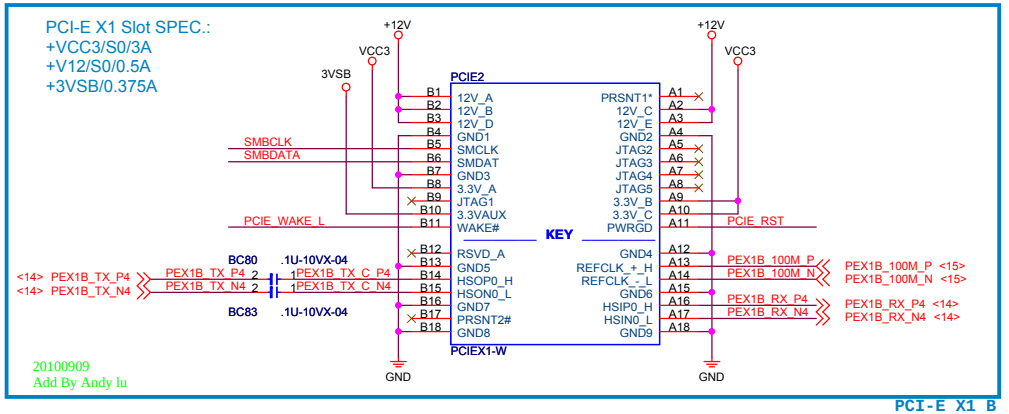
PCI-E X16 Slot SPEC.:
+VCC3/S0/3A
+V12/S0/5.5A
+3VSB/0.375A

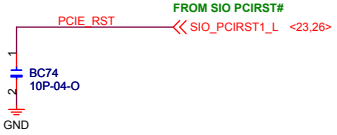


PCI-E X1 Slot SPEC.:
+VCC3/S0/3A
+V12/S0/0.5A
+3VSB/0.375A

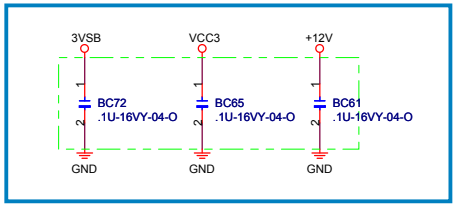


PCI-E X1 Slot SPEC.:
+VCC3/S0/3A
+V12/S0/0.5A
+3VSB/0.375A

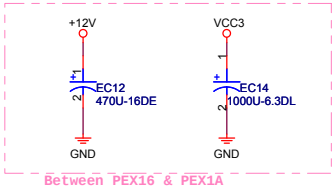




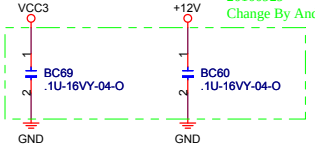
20100929
Change By Andy lu



PCI-E X1 A Decoupling Cap.

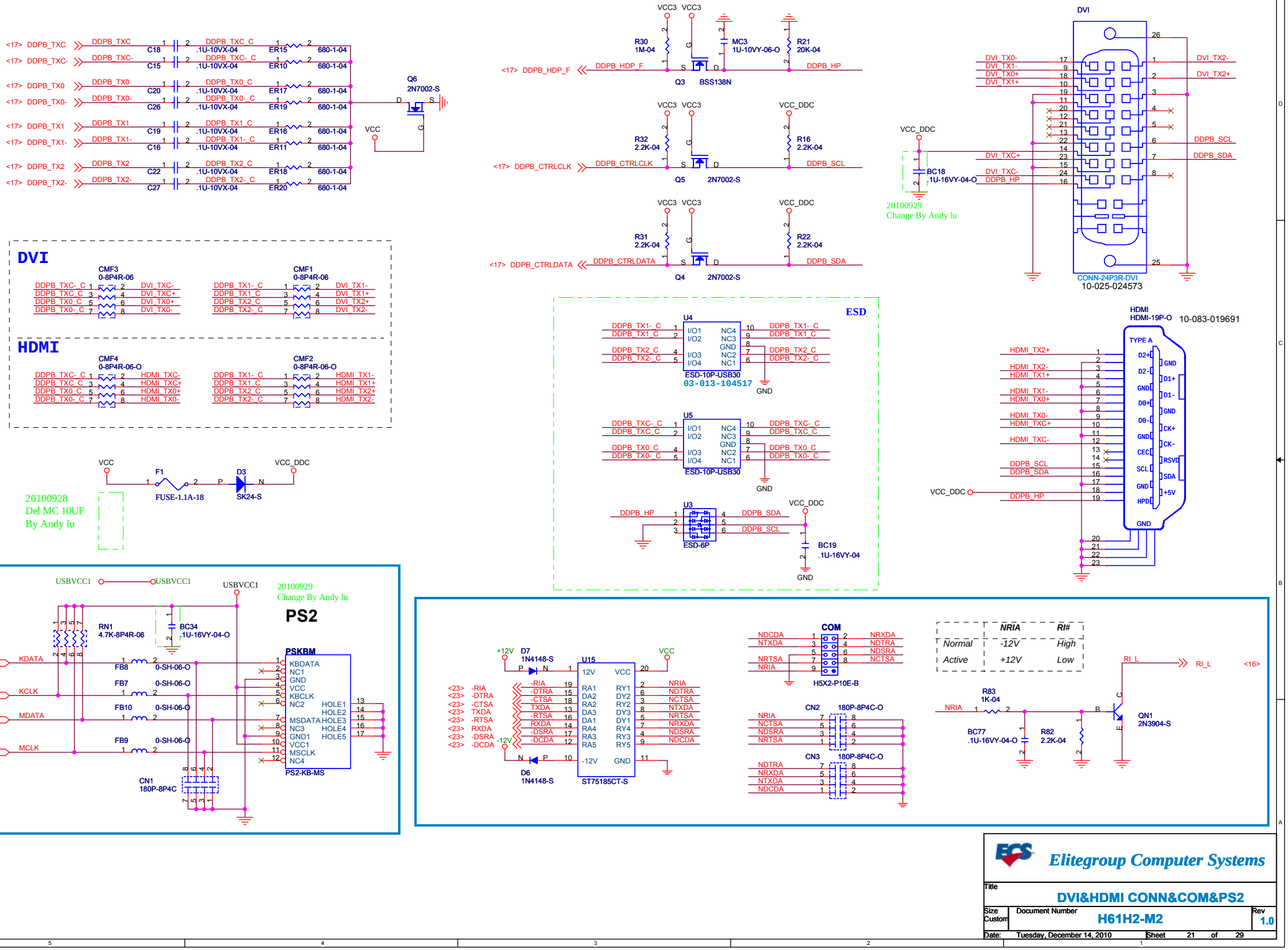


20100929
Change By Andy lu



Elitegroup Computer Systems

Title	Slot - PCI-EX16/PCI-EX1	
Size: Custom	Document Number: H61H2-M2	Rev: 1.0
Date: Monday, December 06, 2010	Sheet 20 of 29	


DDPB_TXC
DDPB_TXC-
DDPB_TX0
DDPB_TX0-
DDPB_TX1
DDPB_TX1-
DDPB_TX2
DDPB_TX2-
C18 .1U-10VX-04
C15 .1U-10VX-04
C20 .1U-10VX-04
C26 .1U-10VX-04
C19 .1U-10VX-04
C16 .1U-10VX-04
C22 .1U-10VX-04
C27 .1U-10VX-04
ER15 680-1-04
ER10 680-1-04
ER17 680-1-04
ER19 680-1-04
ER16 680-1-04
ER11 680-1-04
ER18 680-1-04
ER20 680-1-04
Q6 2N7002-S
VCC
DDPB_HDP_F
R30 1M-04
MC3 1U-10VY-06-O
R21 20K-04
DDPB_HP
Q3 BSS138N
DDPB_CTRLCLK
R32 2.2K-04
R16 2.2K-04
DDPB_SCL
Q5 2N7002-S
DDPB_CTRLDATA
R31 2.2K-04
R22 2.2K-04
DDPB_SDA
Q4 2N7002-S
VCC3
VCC_DDC
DVI
DVI_TX0-
DVI_TX1-
DVI_TX0+
DVI_TX1+
DVI_TXC+
DVI_TXC-
DVI_TX2-
DVI_TX2+
BC18 1U-16VY-04-O
CONN-24P3R-DVI
10-025-024573
20100929
Change By Andy lu
DVI
CMF3 0-8P4R-06
CMF1 0-8P4R-06
DDPB_TXC- C
DDPB_TXC C
DDPB_TX0 C
DDPB_TX0- C
DDPB_TX1- C
DDPB_TX1 C
DDPB_TX2 C
DDPB_TX2- C
DVI_TXC-
DVI_TXC+
DVI_TX0+
DVI_TX0-
DVI_TX1-
DVI_TX1+
DVI_TX2+
DVI_TX2-
HDMI
CMF4 0-8P4R-06-O
CMF2 0-8P4R-06-O
HDMI_TXC-
HDMI_TXC+
HDMI_TX0+
HDMI_TX0-
HDMI_TX1-
HDMI_TX1+
HDMI_TX2+
HDMI_TX2-
ESD
U4
U5
U3
I/O1
I/O2
I/O3
I/O4
NC1
NC2
NC3
NC4
GND
ESD-10P-USB30
03-013-104517
ESD-6P
BC19 .1U-16VY-04
HDMI
HDMI-19P-O
10-083-019691
TYPE A
D2+
D2-
D1+
D1-
D0+
D0-
CK+
CK-
CEC
RSVD
SCL
SDA
+5V
HPD
20100928
Del MC 10UF
By Andy lu
VCC
VCC_DDC
F1
FUSE-1.1A-18
D3
SK24-S
USBVCC1
20100929
Change By Andy lu
PS2
RN1 4.7K-8P4R-06
BC34 1U-16VY-04-O
PSKBM
KBDATA
KCLK
MDATA
MCLK
FB8 0-SH-06-O
FB7 0-SH-06-O
FB10 0-SH-06-O
FB9 0-SH-06-O
NC1
GND
VCC
KBCLK
NC2
MSDATA
NC3
GND1
VCC1
MSCLK
NC4
HOLE1
HOLE2
HOLE3
HOLE4
HOLE5
PS2-KB-MS
CN1 180P-8P4C
D7 1N4148-S
D6 1N4148-S
U15
ST75185CT-S
+12V
-12V
-RIA
-DTRA
-CTSA
TXDA
-RTSA
RXDA
-DSRA
-DCDA
NRIA
NDTRA
NCTSA
NTXDA
NRTSA
NDSRA
NDCDA
COM
H5X2-P10E-B
CN2 180P-8P4C-O
CN3 180P-8P4C-O
NRIA
RI#
Normal
Active
-12V
+12V
High
Low
RI_L
R83 1K-04
BC77 .1U-16VY-04-O
R82 2.2K-04
QN1 2N3904-S
Elitegroup Computer Systems
DVI&HDMI CONN&COM&PS2
H61H2-M2
1.0
Tuesday, December 14, 2010
21 of 29

5VSB 5VSB
3VSB 3VSB
USBVCC1 USBVCC1
USBVCC2 USBVCC2
USBPWR1 USBPWR1
USBPWR2 USBPWR2

USB

<14> USB_P0 USB_F0+
<14> USB_N0 USB_F0-
<14> USB_P1 USB_F1+
<14> USB_N1 USB_F1-
<14> USB_P2 USB_F2+
<14> USB_N2 USB_F2-
<14> USB_P3 USB_F3+
<14> USB_N3 USB_F3-
<14> USB_P4 USB_R4+
<14> USB_N4 USB_R4-
<14> USB_P5 USB_R5+
<14> USB_N5 USB_R5-
<4,11,16,23> SLP3_L SLP_S3_N

USBX2

USBVCC1
USB
VCC1 VCC
-DATA0 -DATA1
+DATA0 +DATA1
GND1 GND
HOLE2 HOLE
HOLE3 HOLE1
USBX2
USBR4- USBR4+ USBR5- USBR5+
G1 G2 G3 G4
AUGND2 AUGND2

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USB_R4+ USB_R4- USB_R5+ USB_R5- → USBR4+ USBR4- USBR5+ USBR5-

BC30 .1U-16VY-04
U6
USBR5+ USBR4+ USBR4- USBR5-
ESD-6P
AUGND2

F_USB1

F_USB1
USBPWR2 USBPWR2
USBF2- USBF2+ USBF3- USBF3+
H5X2-P9E-W

BC152 .1U-16VY-04
U20
USBF2- USBF3- USBF3+ USBF2+
ESD-6P

20100929
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USB_F2+ USB_F2- USB_F3+ USB_F3- → USBF2+ USBF2- USBF3+ USBF3-

Power of USB

VCC
BC151 .1U-16VY-04-O

V_1P5_SM
R134 10K-04
EN_7536
MC8 1U-16VX-06

5VSB VCC
U21 F_USB2
U7 USBX2
U8 USBLAN
U18 F_USB1
5VCC VOUT
5VSB VOUT
GND OC#
EN S3#
SLP_S3_N
UP7536AMA8S

USBVCC1 80 mils
EC1 220U-16DE
BC33 .1U-16VY-04-O
R29 1K-04
AUGND2 AUGND2

USBPWR1 80 mils
EC29 100U-16DE
BC192 .1U-16VY-04-O
R190 1K-04-O

USBVCC2 80 mils
EC4 220U-16DE
BC40 .1U-16VY-04-O
R37 1K-04

USBPWR2 80 mils
EC27 100U-16DE
BC167 .1U-16VY-04-O
R128 1K-04-O

SATA

<15> SATA_RX_N[2..5] SATA_RX_N[2..5]
<15> SATA_RX_P[2..5] SATA_RX_P[2..5]
<15> SATA_TX_N[2..5] SATA_TX_N[2..5]
<15> SATA_TX_P[2..5] SATA_TX_P[2..5]

SATA

Layout Note:
SATA2.0 4.5/7.5/15 in 90 Ω ±17.5%

SATA2
HOLE1 GND A+ A- GND B- B+ GND HOLE2
SATA-7P2R-W

SATA_TX_P2_C C66 .01U-25VX-04 SATA_TX_P2
SATA_TX_N2_C C61 .01U-25VX-04 SATA_TX_N2
SATA_RX_N2_C C57 .01U-25VX-04 SATA_RX_N2
SATA_RX_P2_C C53 .01U-25VX-04 SATA_RX_P2

SATA1
SATA_TX_P3_C C65 .01U-25VX-04 SATA_TX_P3
SATA_TX_N3_C C60 .01U-25VX-04 SATA_TX_N3
SATA_RX_N3_C C56 .01U-25VX-04 SATA_RX_N3
SATA_RX_P3_C C52 .01U-25VX-04 SATA_RX_P3

SATA3
SATA_TX_P4_C C67 .01U-25VX-04 SATA_TX_P4
SATA_TX_N4_C C62 .01U-25VX-04 SATA_TX_N4
SATA_RX_N4_C C58 .01U-25VX-04 SATA_RX_N4
SATA_RX_P4_C C54 .01U-25VX-04 SATA_RX_P4

SATA4
SATA_TX_P5_C C68 .01U-25VX-04 SATA_TX_P5
SATA_TX_N5_C C63 .01U-25VX-04 SATA_TX_N5
SATA_RX_N5_C C59 .01U-25VX-04 SATA_RX_N5
SATA_RX_P5_C C55 .01U-25VX-04 SATA_RX_P5

F_USB2

F_USB2
USBPWR1 USBPWR1
USBF0- USBF0+ USBF1- USBF1+
H5X2-P9E-W

BC190 .1U-16VY-04
U22
USBF0- USBF1- USBF1+ USBF0+
ESD-6P

20100929
Change By Andy lu

USB_F0+ USB_F0- USB_F1+ USB_F1- → USBF0+ USBF0- USBF1+ USBF1-

SPI

3VSB 3VSB_SPI
D15 BAT54C-S
BC213 .1U-16VY-04

SMD TYPE
SMD TYPE socket: 11-127-008120

ROM
SPI_CSS SPI_MOS_OO SPI_WP_L
CE# VCC
SO HOLD#
WP# SCK
GND SI
SPI-ROM-S-32M
SPI_DC SPI_CLKK SPI_MOS_II

SPI_DEBUG
H4X2-B
FOR DEBUG USE

若上SMD SPI ROM, MP or A5後不上ROM Socket.

SPI
<16> SPI_MOSI SPI_MOSI
<16> SPI_MISO SPI_MISO
<16> SPI_CS_L0 SPI_CS0_N
<16> SPI_CLK SPI_CLK

SPI_DC R229 1K-04 3VSB_SPI
SPI_WP_L R228 10K-04

RN10
SPI_MOSI SPI_CLK SPI_MISO SPI_CS0_N
SPI_MOS_II SPI_CLKK SPI_MOS_OO SPI_CSS
33-8P4R-06

Elitegroup Computer Systems

Title: USB/SATA/SPI
Size: Custom
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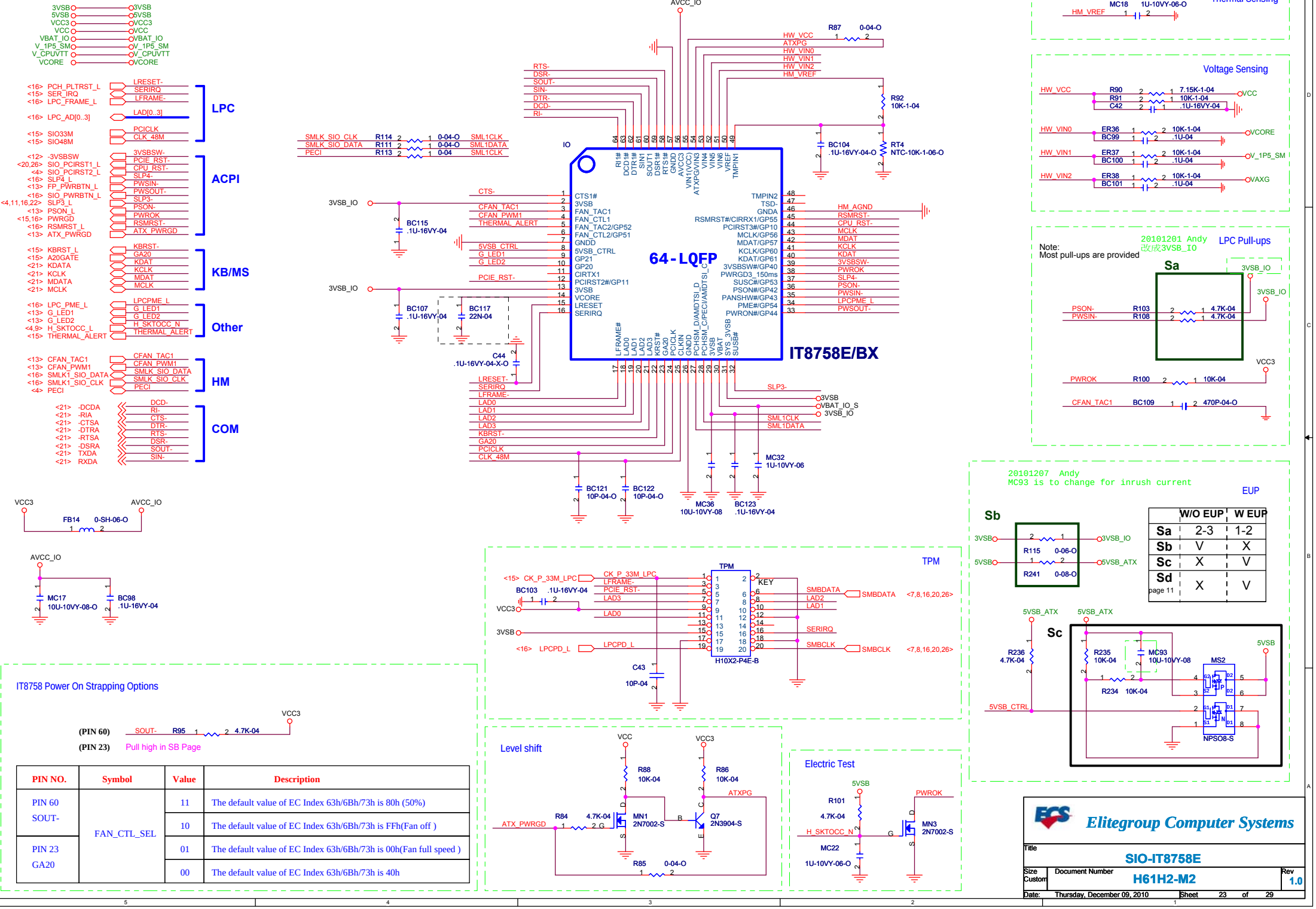
External Connection



PIN NO.	Symbol	Value	Description
PIN 60 SOUT-	FAN_CTL_SEL	11	The default value of EC Index 63h/6Bh/73h is 80h (50%)
		10	The default value of EC Index 63h/6Bh/73h is FFh(Fan off)
PIN 23 GA20		01	The default value of EC Index 63h/6Bh/73h is 00h(Fan full speed)
		00	The default value of EC Index 63h/6Bh/73h is 40h

Elitegroup Computer Systems

Title: SIO-IT8758E

Size: Custom | Document Number: H61H2-M2 | Rev: 1.0

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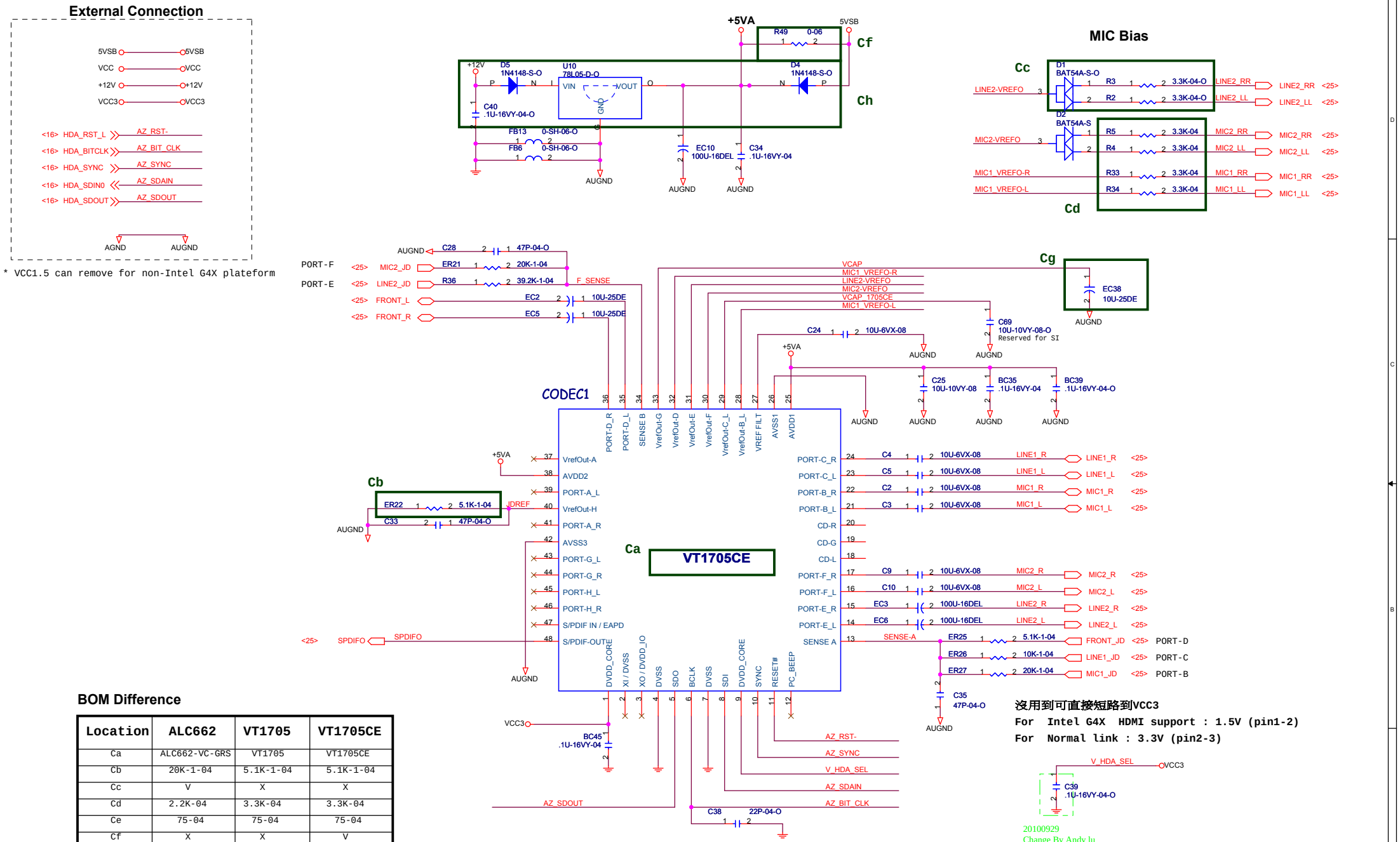

BOM Difference

Location	ALC662	VT1705	VT1705CE
Ca	ALC662-VC-GRS	VT1705	VT1705CE
Cb	20K-1-04	5.1K-1-04	5.1K-1-04
Cc	V	X	X
Cd	2.2K-04	3.3K-04	3.3K-04
Ce	75-04	75-04	75-04
Cf	X	X	V
Cg	X	X	V
Ch	V	V	X

When you change BOM, remember change GPI to inform BIOS use different Verb-Table.

Elitegroup Computer Systems

Title: AUDIO VT1705/ALC662 (CHIP)

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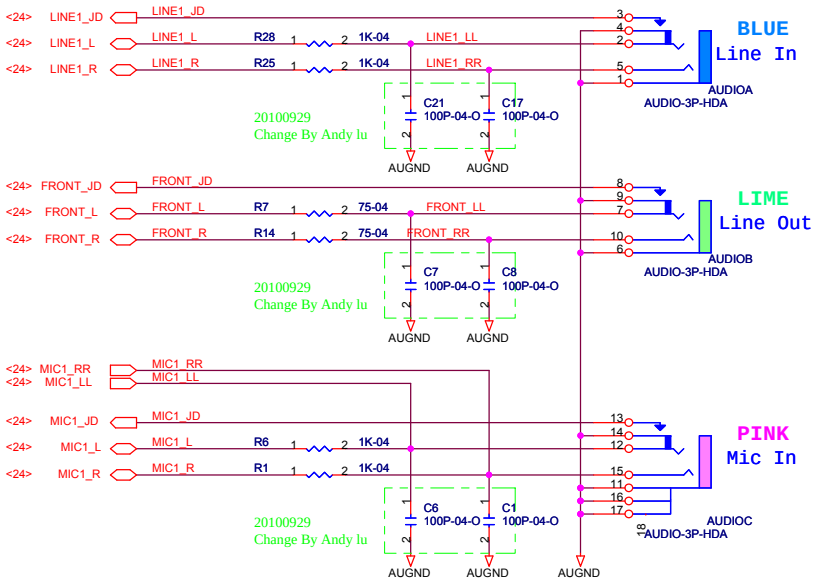
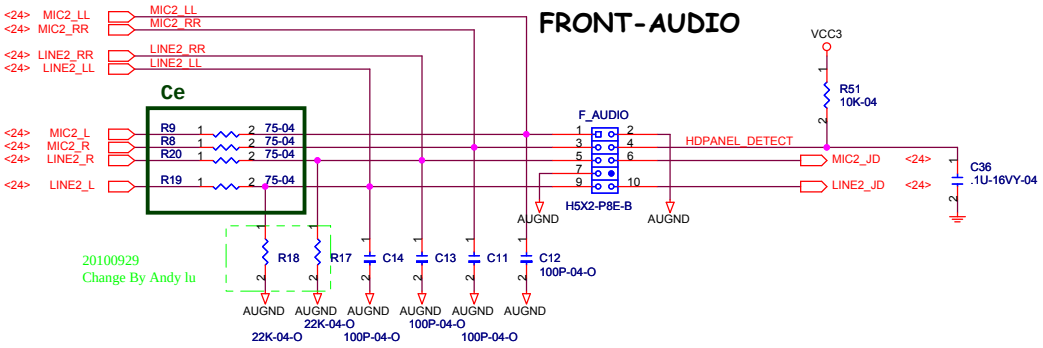
External Connection

<16> FP_AUD_DETECT ⟵ HDPANEL_DETECT

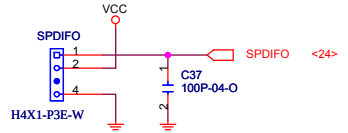
* HDPANEL_DETECT connect to SIO or SB GPIO for AC97 Panel support

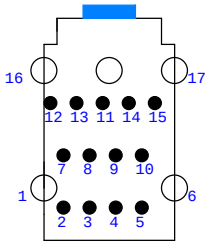
REAR-AUDIO Non re-tasking for rear panel



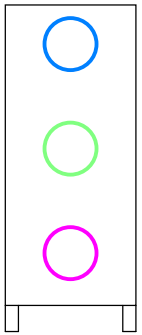


SPDIF-OUT





TOP VIEW



Line in

Front out

Mic in

FRONT VIEW

Elitegroup Computer Systems

Title	AUDIO VT1705/ALC662 (PANEL)	
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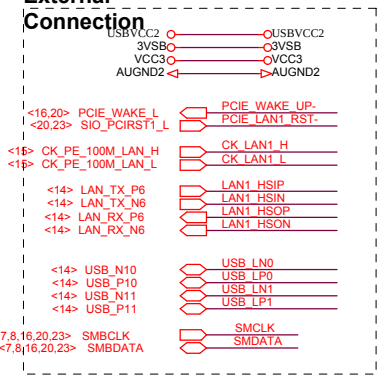
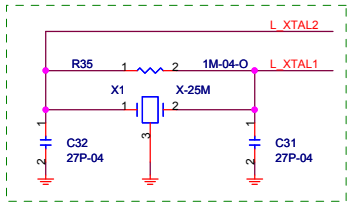
新手提醒： LAN_HSOP/N請接到SB的PCIE RX端　　LAN_HSIP/N請接到SB的PCIE TX端　　LAN_HSIP/N在SB的PCIE TX端要記得放AC coupling cap

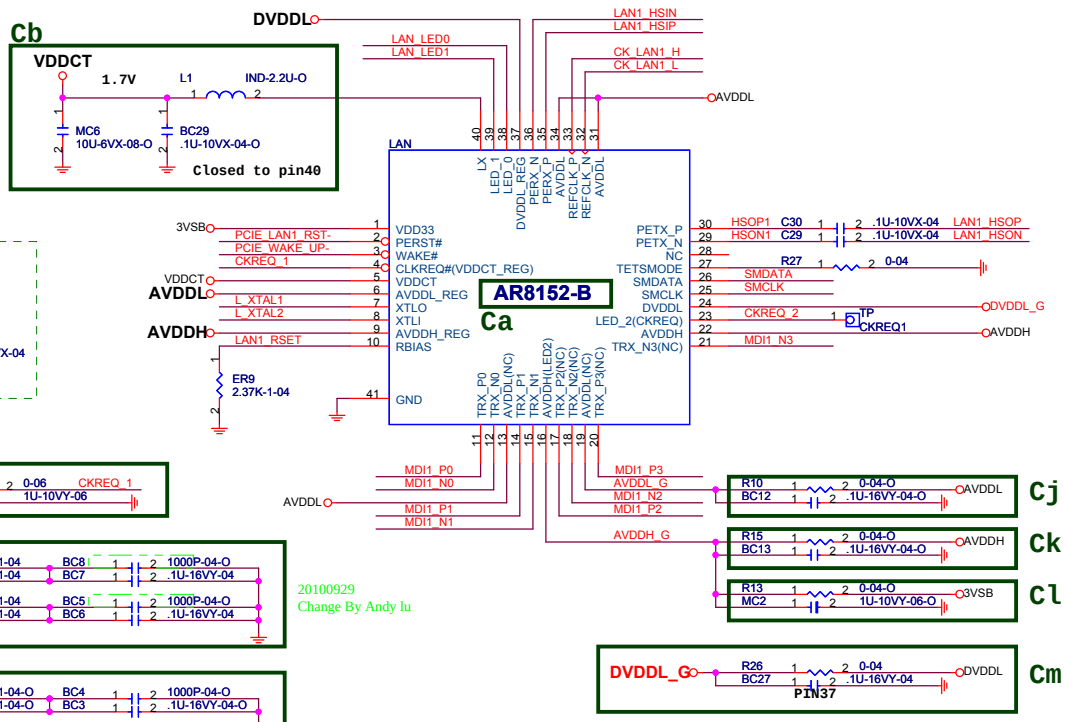
External Connection

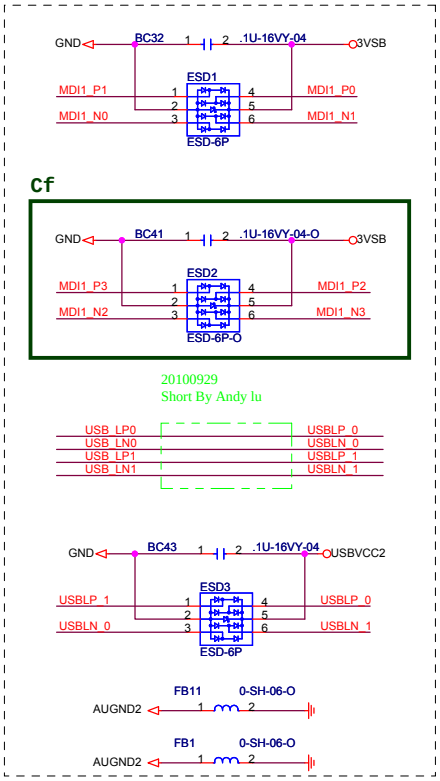


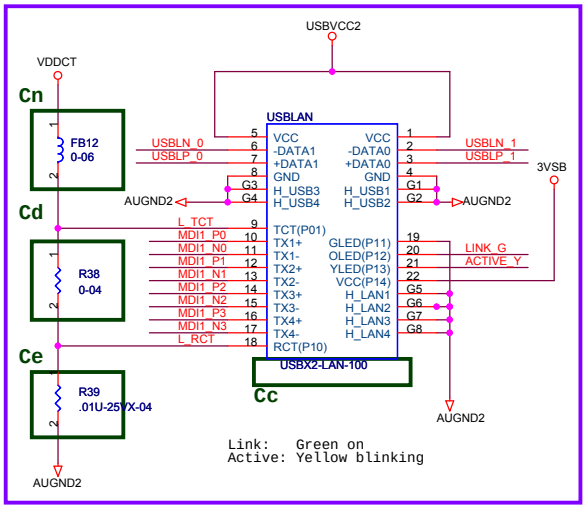


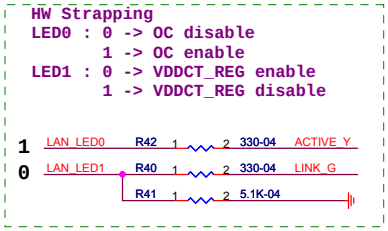
BOM Difference

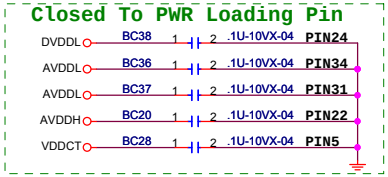
	AR8151-B 1000M	AR8152-B 10/100M	AR8161-B 1000M
Ca	AR8151-B	AR8152-B	AR8161-B
Cb	V	X	X
Cc	USBX2-LAN-1000	USBX2-LAN-100	USBX2-LAN-1000
Cd	X	V	X
Ce	0-04	.01U-25VX-04	0-04
Cf	V	X	V
Cg	V	X	X
Ch	X	V	X
Ci	V	V	X
Cj	V	X	V
Ck	V	X	V
Cl	X	X	V
Cm	V	V	X
Cn	V	V	X

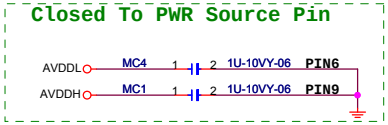












Elitegroup Computer Systems	
Title	AR8151-B / AR8152-B
Size: Custom	Document Number: H61H2-M2
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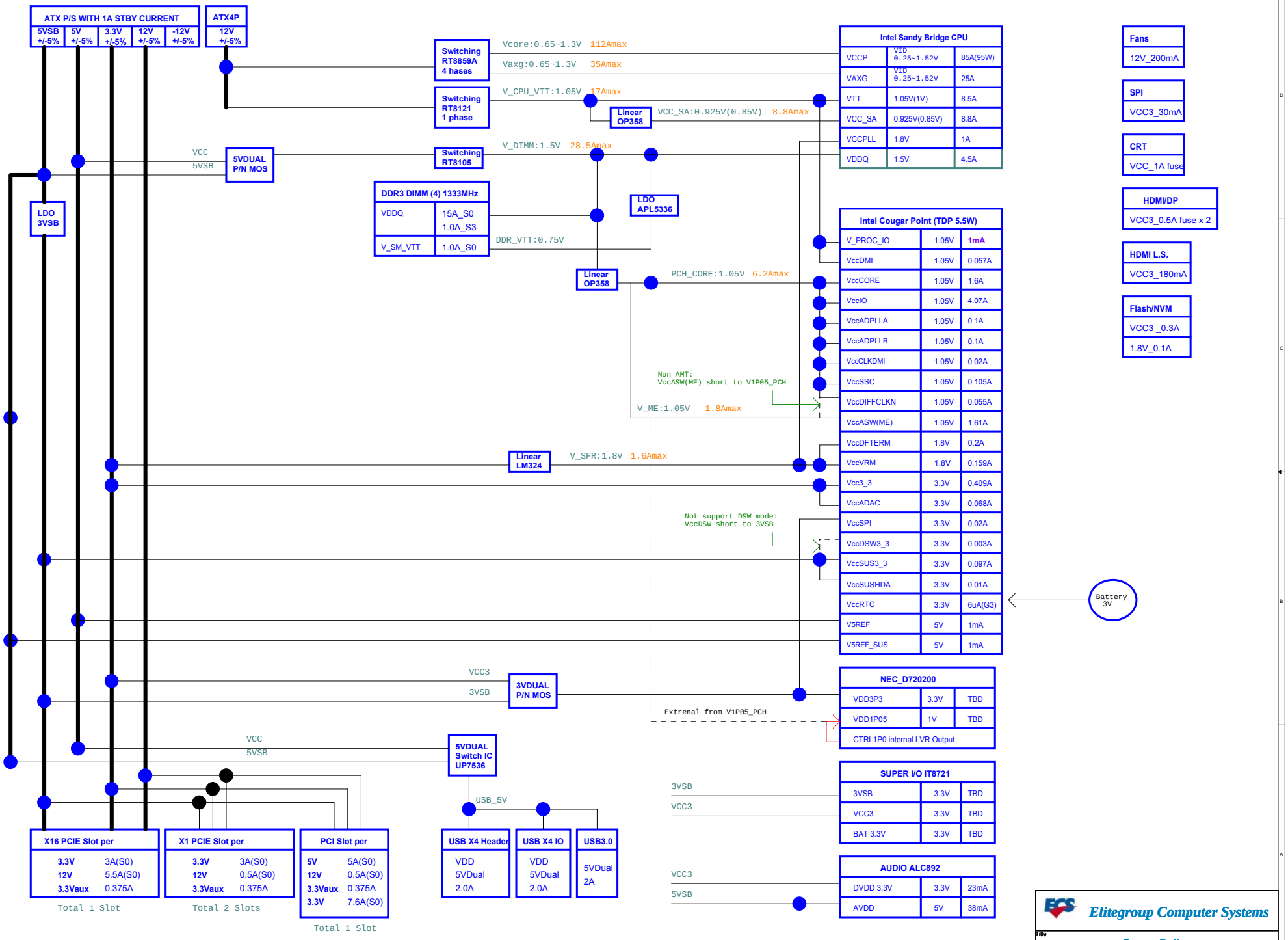
ATX P/S WITH 1A STBY CURRENT
5VSB +/-5%
5V +/-5%
3.3V +/-5%
12V +/-5%
-12V +/-5%
ATX4P
12V +/-5%
Switching RT8859A 4 hases
Vcore:0.65~1.3V 112Amax
Vaxg:0.65~1.3V 35Amax
Switching RT8121 1 phase
V_CPU_VTT:1.05V 17Amax
Linear OP358
VCC_SA:0.925V(0.85V) 8.8Amax
Intel Sandy Bridge CPU
VCCP VID 0.25~1.52V 85A(95W)
VAXG VID 0.25~1.52V 25A
VTT 1.05V(1V) 8.5A
VCC_SA 0.925V(0.85V) 8.8A
VCCPLL 1.8V 1A
VDDQ 1.5V 4.5A
Fans
12V_200mA
SPI
VCC3_30mA
CRT
VCC_1A fuse
HDMI/DP
VCC3_0.5A fuse x 2
HDMI L.S.
VCC3_180mA
Flash/NVM
VCC3 _0.3A
1.8V_0.1A
VCC
5VSB
5VDUAL P/N MOS
Switching RT8105
V_DIMM:1.5V 28.5Amax
DDR3 DIMM (4) 1333MHz
VDDQ 15A_S0 1.0A_S3
V_SM_VTT 1.0A_S0
LDO APL5336
DDR_VTT:0.75V
LDO 3VSB
Linear OP358
PCH_CORE:1.05V 6.2Amax
Intel Cougar Point (TDP 5.5W)
V_PROC_IO 1.05V 1mA
VccDMI 1.05V 0.057A
VccCORE 1.05V 1.6A
VccIO 1.05V 4.07A
VccADPLLA 1.05V 0.1A
VccADPLLB 1.05V 0.1A
VccCLKDMI 1.05V 0.02A
VccSSC 1.05V 0.105A
VccDIFFCLKN 1.05V 0.055A
VccASW(ME) 1.05V 1.61A
VccDFTERM 1.8V 0.2A
VccVRM 1.8V 0.159A
Vcc3_3 3.3V 0.409A
VccADAC 3.3V 0.068A
VccSPI 3.3V 0.02A
VccDSW3_3 3.3V 0.003A
VccSUS3_3 3.3V 0.097A
VccSUSHDA 3.3V 0.01A
VccRTC 3.3V 6uA(G3)
V5REF 5V 1mA
V5REF_SUS 5V 1mA
Non AMT:
VccASW(ME) short to V1P05_PCH
V_ME:1.05V 1.8Amax
Linear LM324
V_SFR:1.8V 1.6Amax
Not support DSW mode:
VccDSW short to 3VSB
Battery 3V
VCC3
3VSB
3VDUAL P/N MOS
NEC_D720200
VDD3P3 3.3V TBD
VDD1P05 1V TBD
CTRL1P0 internal LVR Output
Extrenal from V1P05_PCH
VCC
5VSB
5VDUAL Switch IC UP7536
USB_5V
SUPER I/O IT8721
3VSB 3.3V TBD
VCC3 3.3V TBD
BAT 3.3V 3.3V TBD
3VSB
VCC3
X16 PCIE Slot per
3.3V 3A(S0)
12V 5.5A(S0)
3.3Vaux 0.375A
Total 1 Slot
X1 PCIE Slot per
3.3V 3A(S0)
12V 0.5A(S0)
3.3Vaux 0.375A
Total 2 Slots
PCI Slot per
5V 5A(S0)
12V 0.5A(S0)
3.3Vaux 0.375A
3.3V 7.6A(S0)
Total 1 Slot
USB X4 Header
VDD 5VDual 2.0A
USB X4 IO
VDD 5VDual 2.0A
USB3.0
5VDual 2A
VCC3
5VSB
AUDIO ALC892
DVDD 3.3V 3.3V 23mA
AVDD 5V 38mA
Elitegroup Computer Systems
Title
Power Delivery
Size C
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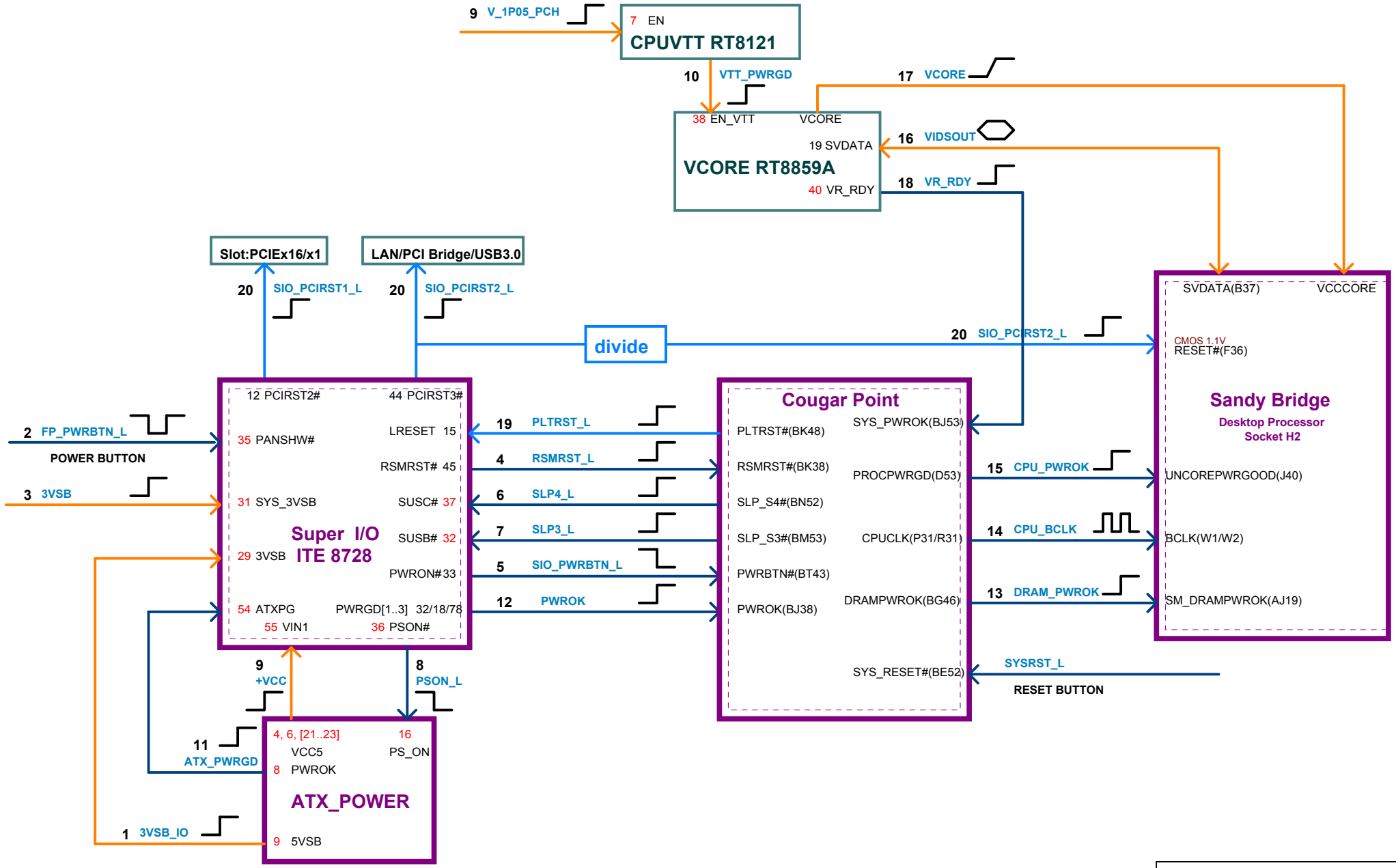

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Title: Power Sequence, Reset Diagram

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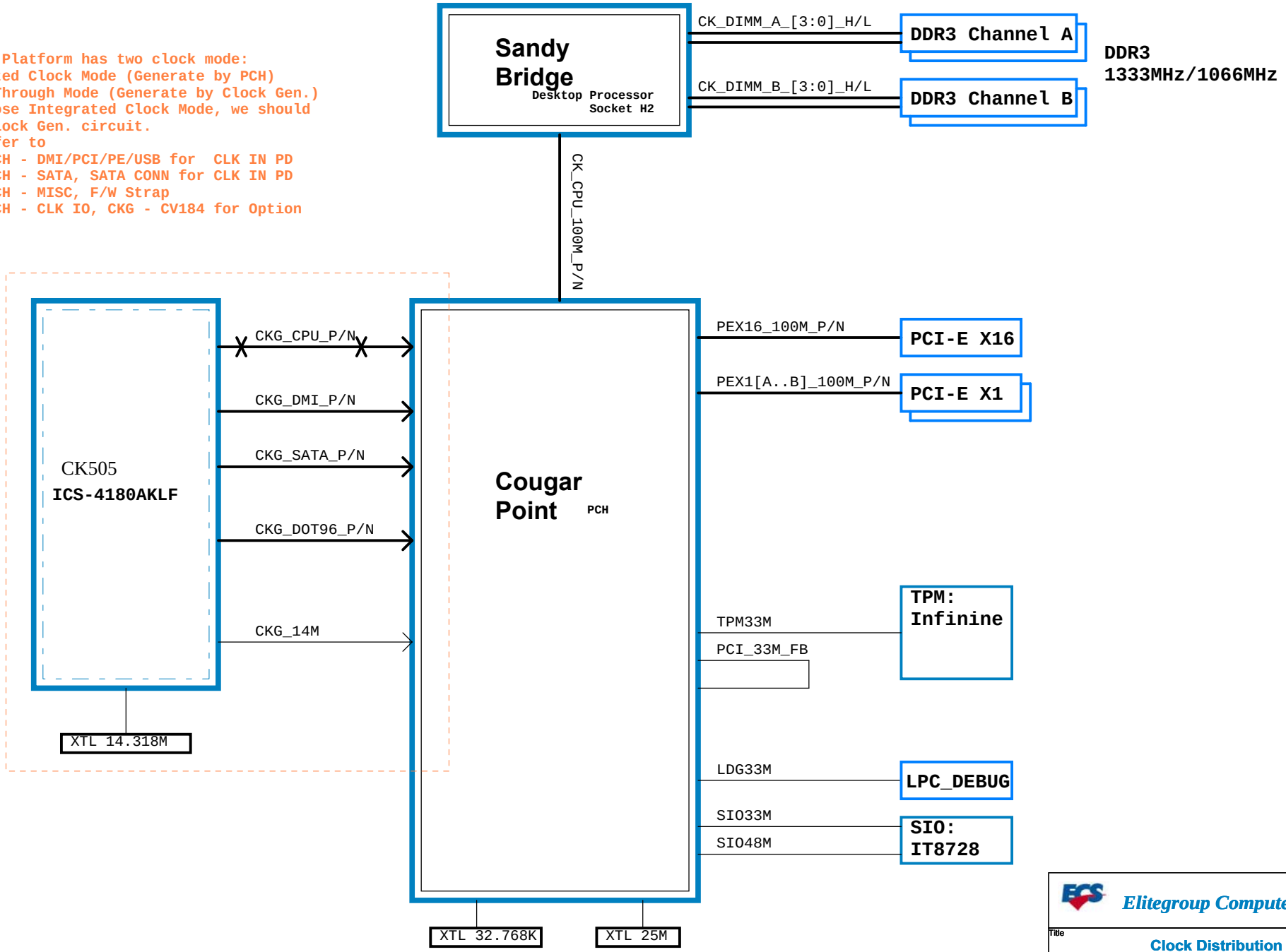
NOTE:

Sugar Bay Platform has two clock mode:
1.Integrated Clock Mode (Generate by PCH)
2.Buffer Through Mode (Generate by Clock Gen.)
If we choose Integrated Clock Mode, we should unstuff Clock Gen. circuit.
Please refer to
Page.12 PCH - DMI/PCI/PE/USB for CLK IN PD
Page.13 PCH - SATA, SATA CONN for CLK IN PD
Page.14 PCH - MISC, F/W Strap
Page.15 PCH - CLK IO, CKG - CV184 for Option



Elitegroup Computer Systems

Title	Clock Distribution	
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Date: Friday, December 03, 2010	Sheet 29 of 29	