B85H3-M3 Rev : 1.0

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REVISION HISTORY:

Rev	Date	Notes
VA	2011 0820	Initial version
VA	2011 1015	For memroy, Change DDR3*4 to DDR3*2
VA	2011 1016	Change Audio IC from ALC892 to ALC662
VA	2011 1017	ME Disable change to 2pin
VA	2011 1017	DEL PCI-EX4 and ADD PCI2
VA	2011 1018	Change SATA3.0 X2 to SATA2.0 X2
VA	2011 1019	Modify USB Ports.
VA	2011 1023	HDMI&DP co-lay => HDMI Only.
VA	2011 1023	Add 3 pin PWR_FAN,remove smart fan function;Add 3 PIN SYS_FAN
VA	2011 1031	Add GPIO to adjust V_DIMM voltage

NOTE:
1. Model Code:
2. Modified from H87H3-M V:A

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Title	Cover Page	
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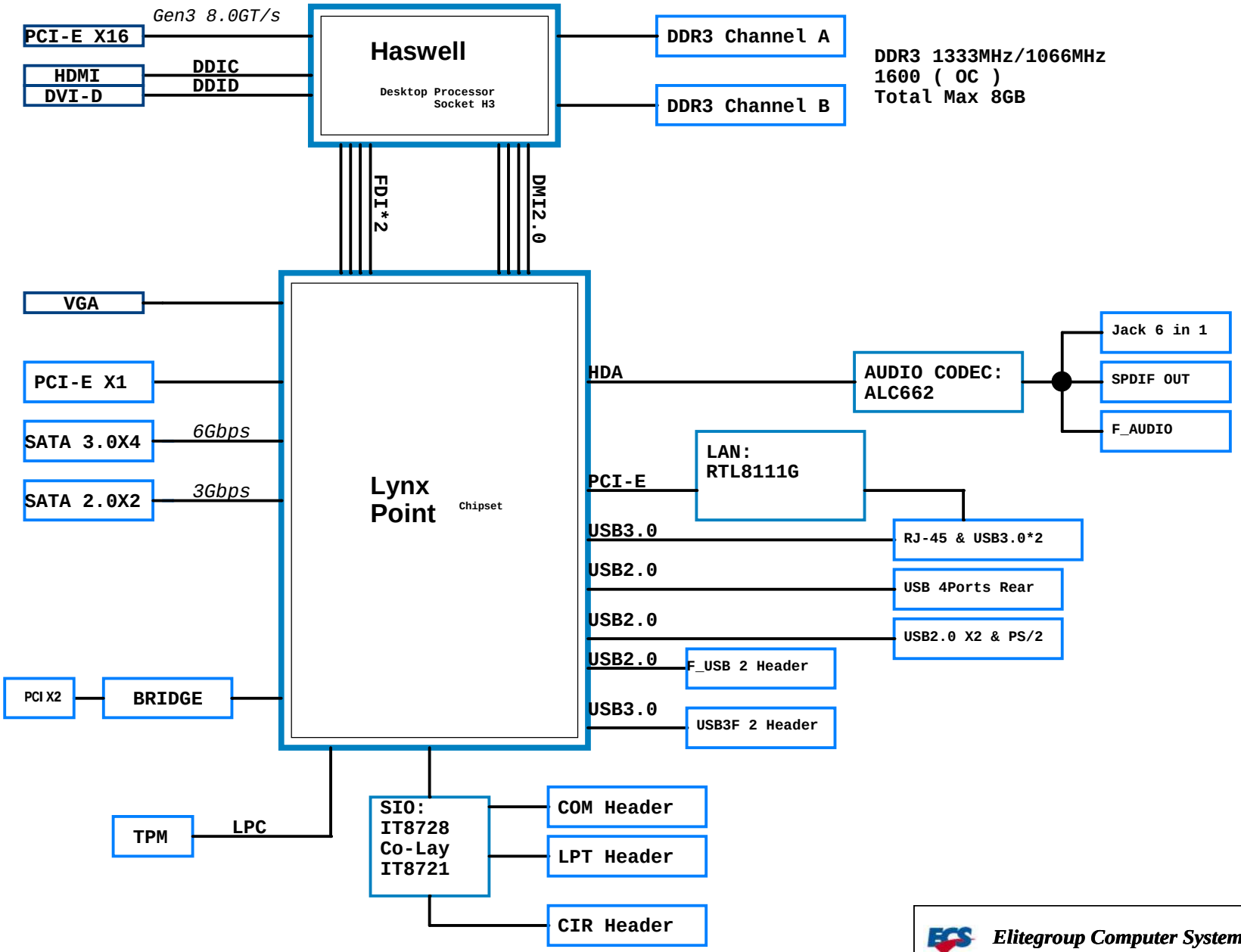

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Title: Block Diagram

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PCH-GPIO function

Pin Name	Power Well	Usage	Default Status
GPIO0	VCC3	case open(reserve)	GPI
GPIO13	3VSB	LPC_PME	GPI
GPIO24	3VSB	USB_5VDUAL control	GPO
GPIO72	3VSB	USB_5VDUAL control (reserve)	Native
GPIO45	3VSB	BIOS WP	Native
GPIO57	3VSB	BIOS WP	GPI
GPIO46	3VSB	WLAN_DIS_L	Native
GPIO61	3VSB	LPCPD_L	Native
GPIO27	ATX_3VSB	LAN_WAKE_L	GPI
GPIO1	VCC3	OBR	GPI
GPIO68	VCC3	TP_VGA	GPI

SIO-GPIO function

Pin Name	Power Well	Usage	Default Status
GP16	VCC3	Beep(reserve)	GPIO
GP33	ATX_3VSB	SUSACK#	GPIO
GP34	ATX_3VSB	SUSWARN#	GPIO
GP55	ATX_3VSB	DPWROK	RSMRST#
GP41	3VSB	RSMRST#	PWROK2
GP63	3VSB	3VSBSW_MINI	GPIO
GP35	3VSB	LED0	GPIO
GP37	3VSB	LED1	GPIO
GP72	VCC3	BOM detect	GPIO
GP73	VCC3	BOM detect	GPIO
GP74	VCC3	BOM detect	GPIO
GP75	VCC3	BOM detect	GPIO
GP76	VCC3	BOM detect	GPIO

Interrupt mapping

Function	INT# port	PCIe*1 port	Device
LAN	INTC#	port 3	Clarkville or RTL8111DP
PCIEX1	INTD#	port 4	LPT integrate
PCIEX4	INTA#/B#	port 5~8	LPT integrate
mini-PCIE	INTB#	port 2	LPT integrate
SATA	INTB#	NA	LPT integrate

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Title: GPIO Function & INT# Mapping

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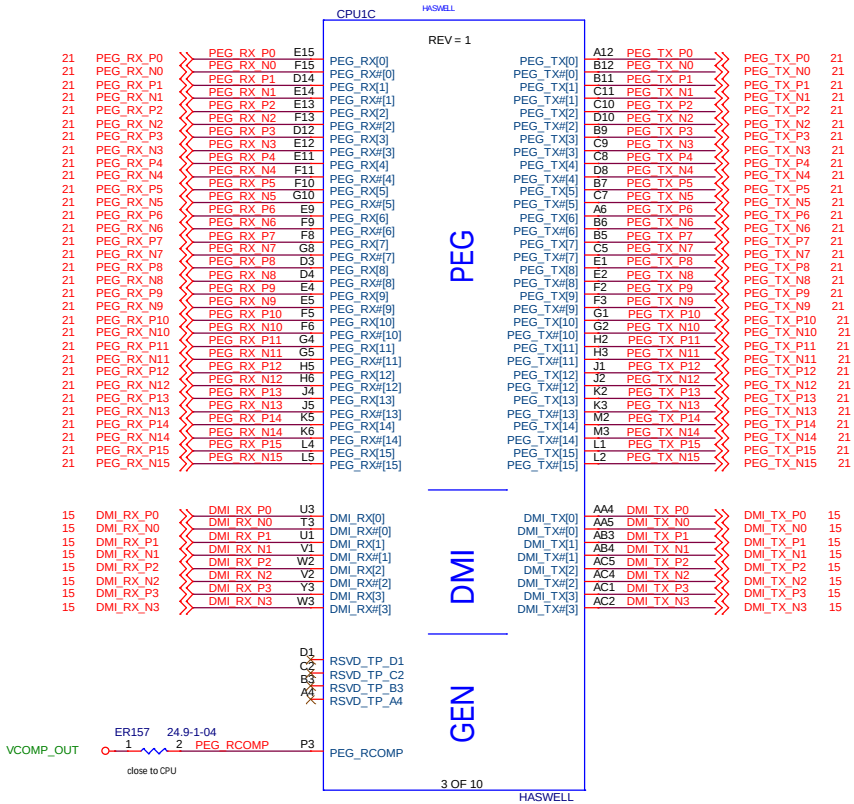

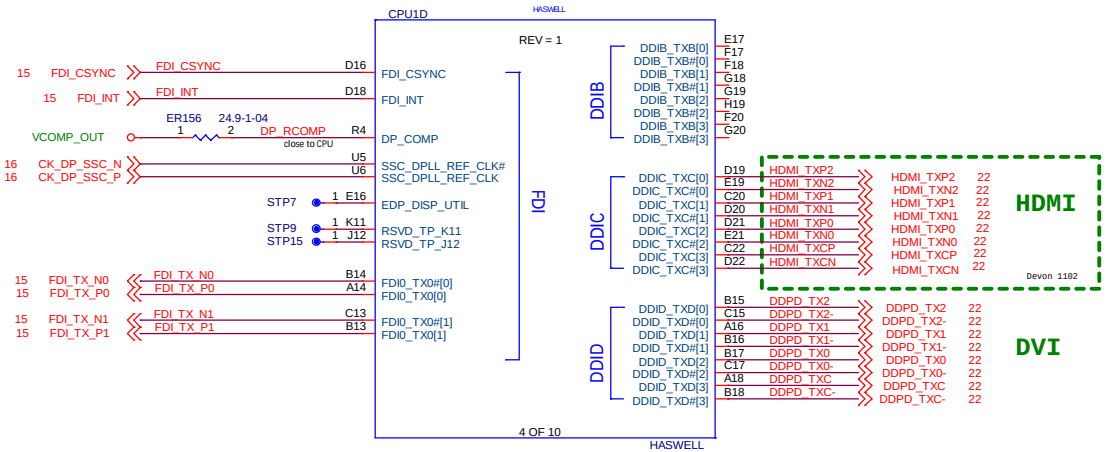

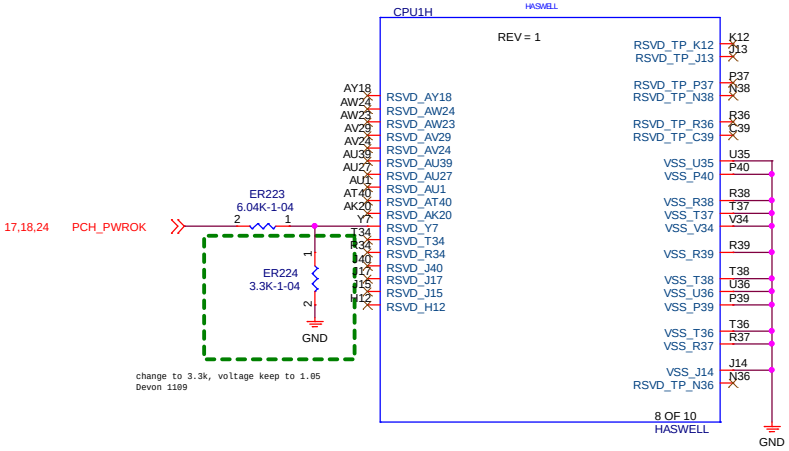

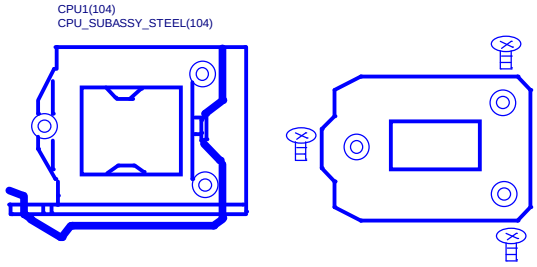

CPU steel (T/U pahse)
PN:20-800-005711 CPU SOCKET STEEL SUBASSY.STEEL....LGA 1155/1156P.W/BACK PLATE,CAP.LOTES

CPU socket (SMD phase)
PN:11-018-115128 SOCKET.CPU..LGA 1150P SMD..15u...BLACK.ACA-ZIF-138-P01...HF.LEAD-FREE.LOTES

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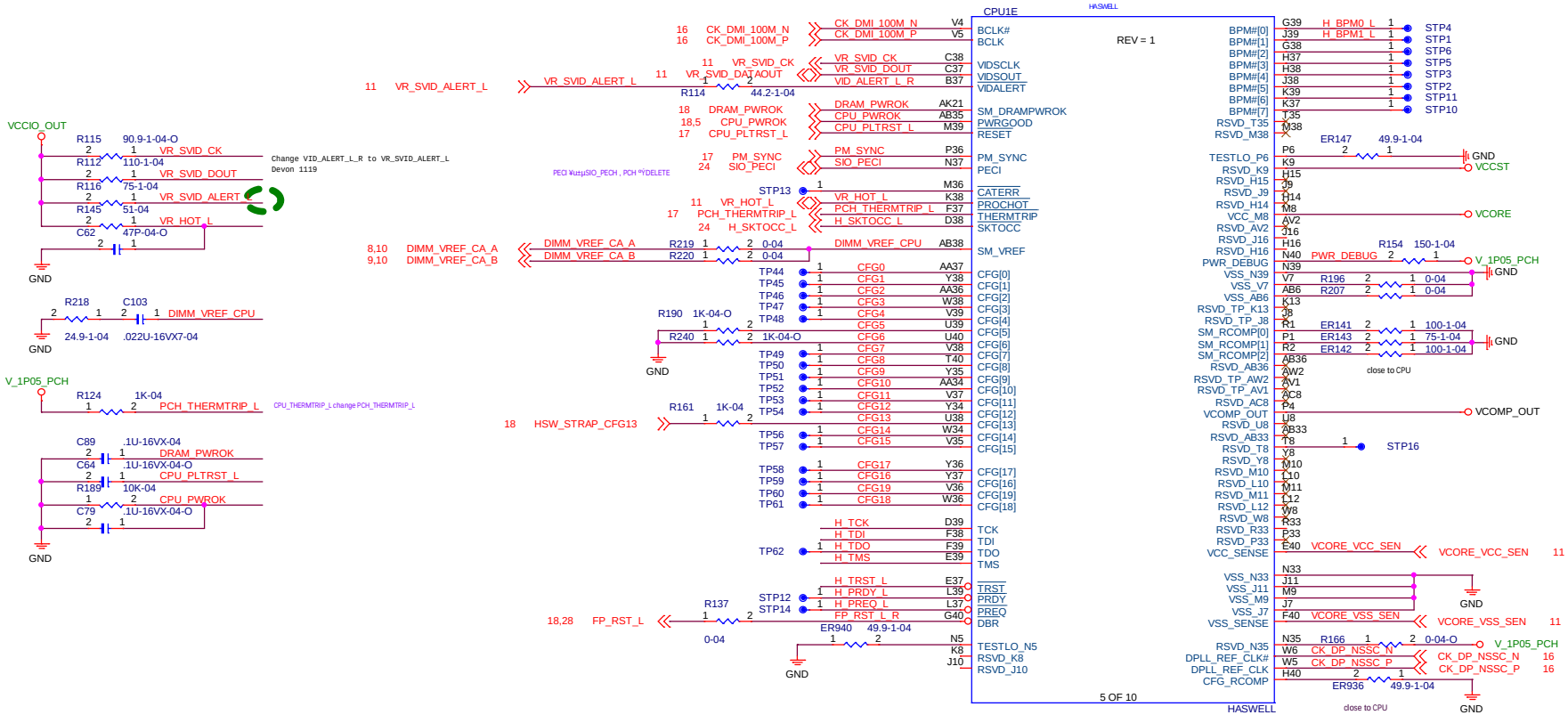

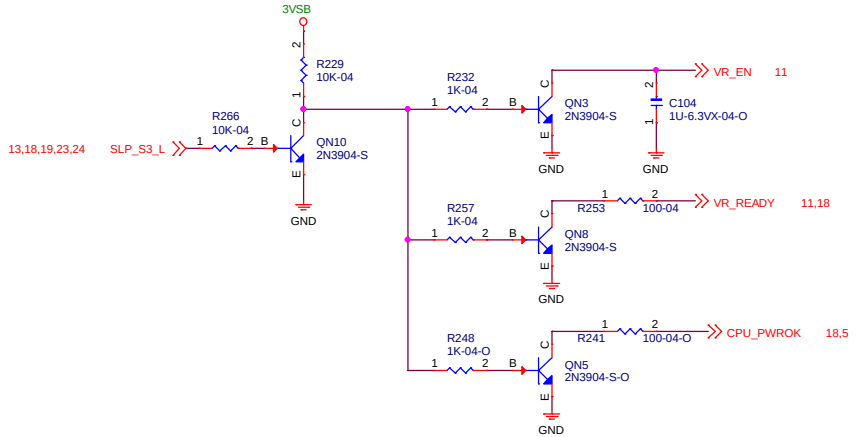

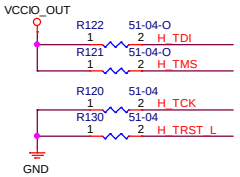

CFG_[0..17] HAVE INTERNAL PULL-UPS

PCIE CONFIG	CFG6	CFG5
1 X 16	1	1
2 X 8	1	0
Reserved	0	1
X8,X4,X4	0	0

```
CFG[1:0]: Reserved configuration lane.
CFG[2]: PCI Express* Static x16 Lane Numbering Reversal.
          1 = Normal operation
          0 = Lane numbers reversed.
CFG[3]: MSR Privacy Bit Feature
          1 = Debug capability is determined by
               IA32_Debug_Interface_MSR (0xC80) bit[0]
          0 = IA32_Debug_Interface_MSR (0xC80) bit[0]
                default setting overridden
CFG[4]: Reserved configuration lane.
CFG[6:5]: PCI Express* Bifurcation:
CFG[19:7]: Reserved configuration lanes.
```

Power Down Sequencing Circuit

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External Connection

DDR3 CH.A

8 M_DATA_A[0..63] → M_DATA_A[0..63]
8 M_DQS_A_P[0..7] → M_DQS_A_P[0..7]
8 M_DQS_A_N[0..7] → M_DQS_A_N[0..7]
8 M_MA_A[0..15] → M_MA_A[0..15]
8 M_BS_A[0..2] → M_BS_A[0..2]
8 M_CS_A_L[2..3] → M_CS_A_L[2..3]
8 M_CKE_A[2..3] → M_CKE_A[2..3]
8 M_ODT_A[2..3] → M_ODT_A[2..3]
8 M_CLK_A_P[2..3] → M_CLK_A_P[2..3]
8 M_CLK_A_N[2..3] → M_CLK_A_N[2..3] Devon 1102
10 DIMM_DQ_CPU_VREF_A → DIMM_DQ_CPU_VREF_A
8 M_WE_A_L → M_WE_A_L
8 M_CAS_A_L → M_CAS_A_L
8 M_RAS_A_L → M_RAS_A_L

DDR3 CH.B

9 M_DATA_B[0..63] → M_DATA_B[0..63]
9 M_DQS_B_P[0..7] → M_DQS_B_P[0..7]
9 M_DQS_B_N[0..7] → M_DQS_B_N[0..7]
9 M_MA_B[0..15] → M_MA_B[0..15]
9 M_BS_B[0..2] → M_BS_B[0..2]
9 M_CS_B_L[2..3] → M_CS_B_L[2..3]
9 M_CKE_B[2..3] → M_CKE_B[2..3]
9 M_ODT_B[2..3] → M_ODT_B[2..3]
9 M_CLK_B_P[2..3] → M_CLK_B_P[2..3]
9 M_CLK_B_N[2..3] → M_CLK_B_N[2..3] Devon 1103
10 DIMM_DQ_CPU_VREF_B → DIMM_DQ_CPU_VREF_B
9 M_WE_B_L → M_WE_B_L
9 M_CAS_B_L → M_CAS_B_L
9 M_RAS_B_L → M_RAS_B_L

8,9 DDR3_DRAMRST_L → DDR3_DRAMRST_L

**Attention

CPU1A — HASWELL — REV = 1

M_DATA_A0	AD38	SA_DQ[0]	
M_DATA_A1	AD39	SA_DQ[1]	
M_DATA_A2	AF38	SA_DQ[2]	
M_DATA_A3	AF39	SA_DQ[3]	
M_DATA_A4	AD37	SA_DQ[4]	
M_DATA_A5	AD40	SA_DQ[5]	
M_DATA_A6	AF37	SA_DQ[6]	
M_DATA_A7	AF40	SA_DQ[7]	
M_DATA_A9	AH40	SA_DQ[8]	
M_DATA_A13	AH39	SA_DQ[9]	
M_DATA_A10	AK38	SA_DQ[10]	
M_DATA_A11	AK39	SA_DQ[11]	
M_DATA_A12	AH37	SA_DQ[12]	
M_DATA_A8	AH38	SA_DQ[13]	
M_DATA_A14	AK37	SA_DQ[14]	
M_DATA_A15	AK40	SA_DQ[15]	
M_DATA_A17	AM40	SA_DQ[16]	
M_DATA_A21	AM39	SA_DQ[17]	
M_DATA_A18	AP38	SA_DQ[18]	
M_DATA_A19	AP39	SA_DQ[19]	
M_DATA_A20	AM37	SA_DQ[20]	
M_DATA_A16	AM38	SA_DQ[21]	
M_DATA_A22	AP37	SA_DQ[22]	
M_DATA_A23	AP40	SA_DQ[23]	
M_DATA_A25	AV37	SA_DQ[24]	
M_DATA_A29	AW37	SA_DQ[25]	
M_DATA_A26	AU35	SA_DQ[26]	
M_DATA_A27	AV35	SA_DQ[27]	
M_DATA_A28	AT37	SA_DQ[28]	
M_DATA_A24	AU37	SA_DQ[29]	
M_DATA_A30	AT35	SA_DQ[30]	
M_DATA_A31	AW35	SA_DQ[31]	
M_DATA_A33	AY6	SA_DQ[32]	
M_DATA_A37	AU6	SA_DQ[33]	
M_DATA_A34	AV4	SA_DQ[34]	
M_DATA_A35	AU4	SA_DQ[35]	
M_DATA_A36	AW6	SA_DQ[36]	
M_DATA_A32	AV6	SA_DQ[37]	
M_DATA_A38	AW4	SA_DQ[38]	
M_DATA_A39	AY4	SA_DQ[39]	
M_DATA_A41	AR1	SA_DQ[40]	
M_DATA_A45	AR4	SA_DQ[41]	
M_DATA_A42	AN3	SA_DQ[42]	
M_DATA_A43	AN4	SA_DQ[43]	
M_DATA_A44	AR2	SA_DQ[44]	
M_DATA_A40	AR3	SA_DQ[45]	
M_DATA_A46	AN2	SA_DQ[46]	
M_DATA_A47	AN1	SA_DQ[47]	
M_DATA_A49	AL1	SA_DQ[48]	
M_DATA_A53	AL4	SA_DQ[49]	
M_DATA_A50	AJ3	SA_DQ[50]	
M_DATA_A51	AJ4	SA_DQ[51]	
M_DATA_A52	AL2	SA_DQ[52]	
M_DATA_A48	AL3	SA_DQ[53]	
M_DATA_A54	AJ2	SA_DQ[54]	
M_DATA_A55	AJ1	SA_DQ[55]	
M_DATA_A57	AG1	SA_DQ[56]	
M_DATA_A61	AG4	SA_DQ[57]	
M_DATA_A58	AE3	SA_DQ[58]	
M_DATA_A59	AE4	SA_DQ[59]	
M_DATA_A60	AG2	SA_DQ[60]	
M_DATA_A56	AG3	SA_DQ[61]	
M_DATA_A62	AE2	SA_DQ[62]	
M_DATA_A63	AE1	SA_DQ[63]	
M_DQS_A_P0	AE39	SA_DQS[0]	
M_DQS_A_P1	AJ39	SA_DQS[1]	
M_DQS_A_P2	AN39	SA_DQS[2]	
M_DQS_A_P3	AV36	SA_DQS[3]	
M_DQS_A_P4	AV5	SA_DQS[4]	
M_DQS_A_P5	AP3	SA_DQS[5]	
M_DQS_A_P6	AK3	SA_DQS[6]	
M_DQS_A_P7	AF3	SA_DQS[7]	
	AV32	SA_DQS[8]	
M_DQS_A_N0	AE38	SA_DQS#[0]	
M_DQS_A_N1	AJ38	SA_DQS#[1]	
M_DQS_A_N2	AN38	SA_DQS#[2]	
M_DQS_A_N3	AU36	SA_DQS#[3]	
M_DQS_A_N4	AW5	SA_DQS#[4]	
M_DQS_A_N5	AP2	SA_DQS#[5]	
M_DQS_A_N6	AK2	SA_DQS#[6]	
M_DQS_A_N7	AF2	SA_DQS#[7]	
	AU32	SA_DQS#[8]	

	AU13	SA_MA[0]	M_MA_A0
	AV16	SA_MA[1]	M_MA_A1
	AU16	SA_MA[2]	M_MA_A2
	AW17	SA_MA[3]	M_MA_A3
	AU17	SA_MA[4]	M_MA_A4
	AW18	SA_MA[5]	M_MA_A5
	AV17	SA_MA[6]	M_MA_A6
	AT18	SA_MA[7]	M_MA_A7
	AU18	SA_MA[8]	M_MA_A8
	AT19	SA_MA[9]	M_MA_A9
	AW11	SA_MA[10]	M_MA_A10
	AV19	SA_MA[11]	M_MA_A11
	AU19	SA_MA[12]	M_MA_A12
	AY10	SA_MA[13]	M_MA_A13
	AT20	SA_MA[14]	M_MA_A14
	AU21	SA_MA[15]	M_MA_A15
	AW10	SA_ODT[0]	
	AY8	SA_ODT[1]	
	AW9	SA_ODT[2]	M_ODT_A2
	AU8	SA_ODT[3]	M_ODT_A3
	AW33	SA_ECC_CB[0]	
	AV33	SA_ECC_CB[1]	
	AU31	SA_ECC_CB[2]	
	AV31	SA_ECC_CB[3]	
	AT33	SA_ECC_CB[4]	
	AU33	SA_ECC_CB[5]	
	AT31	SA_ECC_CB[6]	
	AW31	SA_ECC_CB[7]	
	AV12	SA_BS[0]	M_BS_A0
	AY11	SA_BS[1]	M_BS_A1
	AT21	SA_BS[2]	M_BS_A2
	AV22	SA_CKE[0]	
	AT23	SA_CKE[1]	
	AU22	SA_CKE[2]	M_CKE_A2
	AU23	SA_CKE[3]	M_CKE_A3
	AU14	SA_CS#[0]	
	AV9	SA_CS#[1]	
	AU10	SA_CS#[2]	M_CS_A_L2
	AW8	SA_CS#[3]	M_CS_A_L3
	AY15	SA_CK[0]	
	AY16	SA_CK#[0]	
	AW15	SA_CK[1]	
	AV15	SA_CK#[1]	
	AV14	SA_CK[2]	M_CLK_A_P2
	AW14	SA_CK#[2]	M_CLK_A_N2
	AW13	SA_CK[3]	M_CLK_A_P3
	AY13	SA_CK#[3]	M_CLK_A_N3
	AW12	RSVD_AW12	TP8
	AU12	SA_RAS	M_RAS_A_L
	AU11	SA_WE	M_WE_A_L
	AV20	RSVD_AV20	TP9
	AW27	RSVD_AW27	TP7
	AU9	SA_CAS	M_CAS_A_L
	AK22	SM_DRAMRST	DDR3_DRAMRST_L

Devon 1102 (ODT_A2, ODT_A3)
Devon 1103 (CKE_A2, CKE_A3, CS_A_L2, CLK_A_P2, CLK_A_N2, CLK_A_P3, CLK_A_N3)

C147 .1U-16VX-04-O — close to DIMM slot — GND

1 OF 10 HASWELL

**Attention

CPU1B — HASWELL — REV = 1

M_DATA_B0	AE34	SB_DQ[0]	
M_DATA_B1	AE35	SB_DQ[1]	
M_DATA_B2	AG35	SB_DQ[2]	
M_DATA_B3	AH35	SB_DQ[3]	
M_DATA_B4	AD34	SB_DQ[4]	
M_DATA_B5	AD35	SB_DQ[5]	
M_DATA_B6	AG34	SB_DQ[6]	
M_DATA_B7	AH34	SB_DQ[7]	
M_DATA_B8	AL34	SB_DQ[8]	
M_DATA_B9	AL35	SB_DQ[9]	
M_DATA_B10	AK31	SB_DQ[10]	
M_DATA_B11	AL31	SB_DQ[11]	
M_DATA_B12	AK34	SB_DQ[12]	
M_DATA_B13	AK35	SB_DQ[13]	
M_DATA_B14	AK32	SB_DQ[14]	
M_DATA_B15	AL32	SB_DQ[15]	
M_DATA_B17	AN34	SB_DQ[16]	
M_DATA_B21	AP34	SB_DQ[17]	
M_DATA_B19	AN31	SB_DQ[18]	
M_DATA_B23	AP31	SB_DQ[19]	
M_DATA_B20	AN35	SB_DQ[20]	
M_DATA_B16	AP35	SB_DQ[21]	
M_DATA_B18	AN32	SB_DQ[22]	
M_DATA_B22	AP32	SB_DQ[23]	
M_DATA_B25	AM29	SB_DQ[24]	
M_DATA_B28	AM28	SB_DQ[25]	
M_DATA_B27	AR29	SB_DQ[26]	
M_DATA_B30	AR28	SB_DQ[27]	
M_DATA_B24	AL29	SB_DQ[28]	
M_DATA_B29	AL28	SB_DQ[29]	
M_DATA_B26	AP29	SB_DQ[30]	
M_DATA_B31	AP28	SB_DQ[31]	
M_DATA_B32	AR12	SB_DQ[32]	
M_DATA_B33	AP12	SB_DQ[33]	
M_DATA_B34	AL13	SB_DQ[34]	
M_DATA_B35	AL12	SB_DQ[35]	
M_DATA_B36	AR13	SB_DQ[36]	
M_DATA_B37	AP13	SB_DQ[37]	
M_DATA_B38	AM13	SB_DQ[38]	
M_DATA_B39	AM12	SB_DQ[39]	
M_DATA_B45	AR9	SB_DQ[40]	
M_DATA_B41	AP9	SB_DQ[41]	
M_DATA_B47	AR6	SB_DQ[42]	
M_DATA_B43	AP6	SB_DQ[43]	
M_DATA_B44	AR10	SB_DQ[44]	
M_DATA_B40	AP10	SB_DQ[45]	
M_DATA_B46	AR7	SB_DQ[46]	
M_DATA_B42	AP7	SB_DQ[47]	
M_DATA_B52	AM9	SB_DQ[48]	
M_DATA_B53	AL9	SB_DQ[49]	
M_DATA_B50	AL6	SB_DQ[50]	
M_DATA_B55	AL7	SB_DQ[51]	
M_DATA_B48	AM10	SB_DQ[52]	
M_DATA_B49	AL10	SB_DQ[53]	
M_DATA_B54	AM6	SB_DQ[54]	
M_DATA_B51	AM7	SB_DQ[55]	
M_DATA_B61	AH6	SB_DQ[56]	
M_DATA_B60	AH7	SB_DQ[57]	
M_DATA_B59	AE6	SB_DQ[58]	
M_DATA_B63	AE7	SB_DQ[59]	
M_DATA_B56	AJ6	SB_DQ[60]	
M_DATA_B57	AJ7	SB_DQ[61]	
M_DATA_B58	AF6	SB_DQ[62]	
M_DATA_B62	AF7	SB_DQ[63]	
M_DQS_B_P0	AF35	SB_DQS[0]	
M_DQS_B_P1	AL33	SB_DQS[1]	
M_DQS_B_P2	AP33	SB_DQS[2]	
M_DQS_B_P3	AN28	SB_DQS[3]	
M_DQS_B_P4	AN12	SB_DQS[4]	
M_DQS_B_P5	AP8	SB_DQS[5]	
M_DQS_B_P6	AL8	SB_DQS[6]	
M_DQS_B_P7	AG7	SB_DQS[7]	
	AN25	SB_DQS[8]	
M_DQS_B_N0	AF34	SB_DQS#[0]	
M_DQS_B_N1	AK33	SB_DQS#[1]	
M_DQS_B_N2	AN33	SB_DQS#[2]	
M_DQS_B_N3	AN29	SB_DQS#[3]	
M_DQS_B_N4	AN13	SB_DQS#[4]	
M_DQS_B_N5	AR8	SB_DQS#[5]	
M_DQS_B_N6	AM8	SB_DQS#[6]	
M_DQS_B_N7	AG6	SB_DQS#[7]	
	AN26	SB_DQS#[8]	

	AL19	SB_MA[0]	M_MA_B0
	AK23	SB_MA[1]	M_MA_B1
	AM22	SB_MA[2]	M_MA_B2
	AM23	SB_MA[3]	M_MA_B3
	AP23	SB_MA[4]	M_MA_B4
	AL23	SB_MA[5]	M_MA_B5
	AY24	SB_MA[6]	M_MA_B6
	AV25	SB_MA[7]	M_MA_B7
	AU26	SB_MA[8]	M_MA_B8
	AW25	SB_MA[9]	M_MA_B9
	AP18	SB_MA[10]	M_MA_B10
	AY25	SB_MA[11]	M_MA_B11
	AV26	SB_MA[12]	M_MA_B12
	AR15	SB_MA[13]	M_MA_B13
	AV27	SB_MA[14]	M_MA_B14
	AY28	SB_MA[15]	M_MA_B15
	AM17	SB_ODT[0]	
	AL16	SB_ODT[1]	
	AM16	SB_ODT[2]	M_ODT_B2
	AK15	SB_ODT[3]	M_ODT_B3
	AM26	SB_ECC_CB[0]	
	AM25	SB_ECC_CB[1]	
	AP25	SB_ECC_CB[2]	
	AP26	SB_ECC_CB[3]	
	AL26	SB_ECC_CB[4]	
	AL25	SB_ECC_CB[5]	
	AR26	SB_ECC_CB[6]	
	AR25	SB_ECC_CB[7]	
	AK17	SB_BS[0]	M_BS_B0
	AL18	SB_BS[1]	M_BS_B1
	AW28	SB_BS[2]	M_BS_B2
	AW29	SB_CKE[0]	
	AY29	SB_CKE[1]	
	AU28	SB_CKE[2]	M_CKE_B2
	AU29	SB_CKE[3]	M_CKE_B3
	AP17	SB_CS#[0]	
	AN15	SB_CS#[1]	
	AN17	SB_CS#[2]	M_CS_B_L2
	AL15	SB_CS#[3]	M_CS_B_L3
	AM20	SB_CK[0]	
	AM21	SB_CK#[0]	
	AP22	SB_CK[1]	
	AP21	SB_CK#[1]	
	AN20	SB_CK[2]	M_CLK_B_P2
	AN21	SB_CK#[2]	M_CLK_B_N2
	AP19	SB_CK[3]	M_CLK_B_P3
	AP20	SB_CK#[3]	M_CLK_B_N3
	AP16	SB_CAS	M_CAS_B_L
	AL20	RSVD_AL20	STP17
	AM18	SB_RAS	M_RAS_B_L
	AK16	SB_WE	M_WE_B_L
	AB39	SA_DIMM_VREFDQ	DIMM_DQ_CPU_VREF_A
	AB40	SB_DIMM_VREFDQ	DIMM_DQ_CPU_VREF_B

Devon 1103 (CS_B_L2, CS_B_L3)
Devon 1104 (CLK_B_P2, CLK_B_N2, CLK_B_P3, CLK_B_N3)

STP17
C90 .022U-16VX7-04 — GND
C91 .022U-16VX7-04 — GND
ER193 24.9-1-04 — GND
ER208 24.9-1-04 — GND

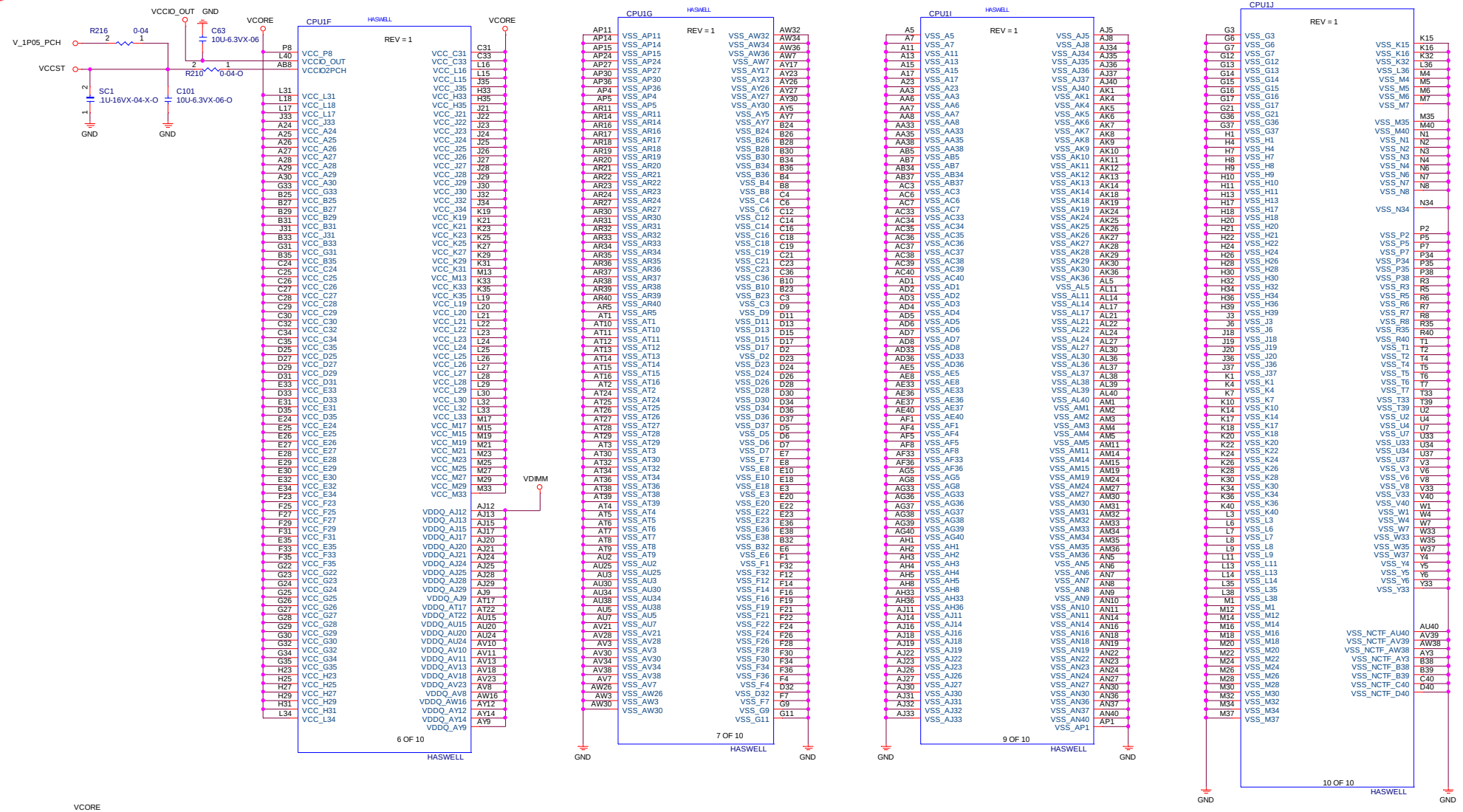
2 OF 10 HASWELL

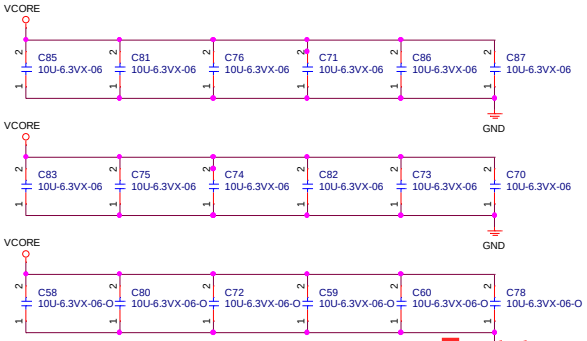
NC M_ODT_A[0..1],M_CKE_A[0..1],M_CS_A_L[0..1],M_CLK_A_P[0..1],M_CLK_A_N[0..1]
Devon 20121016

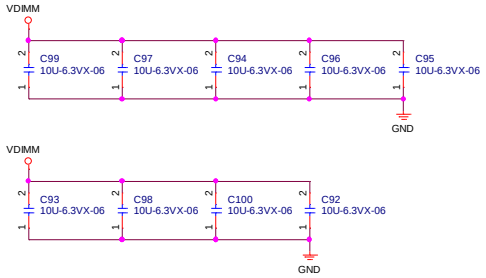
NC M_ODT_B[0..1],M_CKE_B[0..1],M_CS_B_L[0..1],M_CLK_B_P[0..1],M_CLK_B_N[0..1]
Devon 20121016

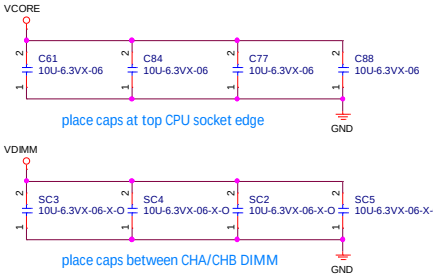
Elitegroup Computer Systems

Title: CPU-DDR3
Size: Custom | Document Number: B85H3-M3 | Rev: 1.0
Date: Tuesday, May 28, 2013 | Sheet 6 of 34







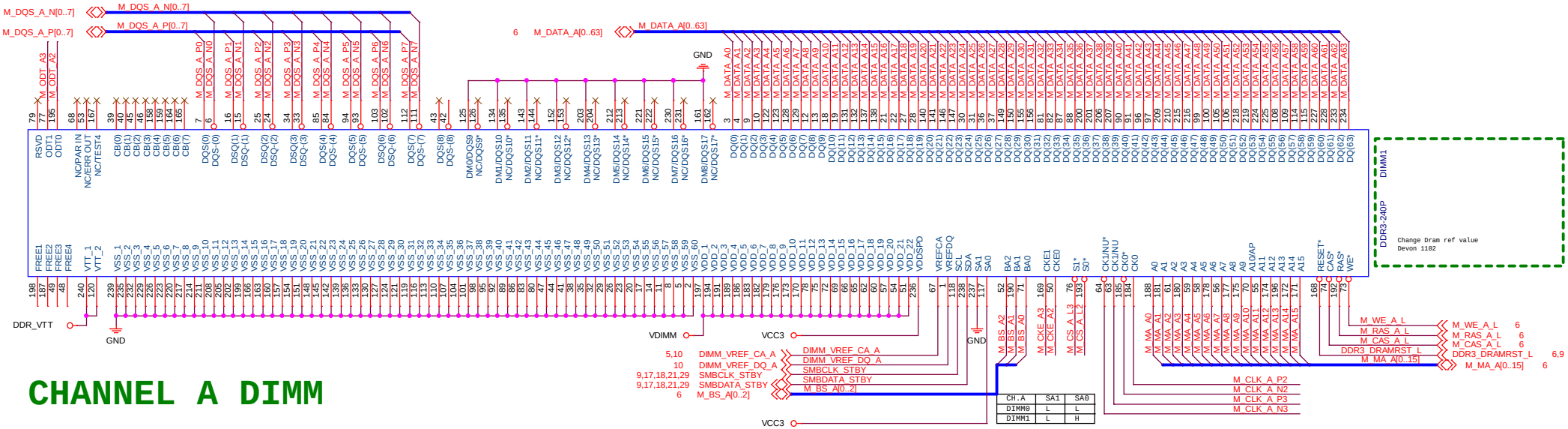


Elitegroup Computer Systems

Title: CPU-PWR/GND

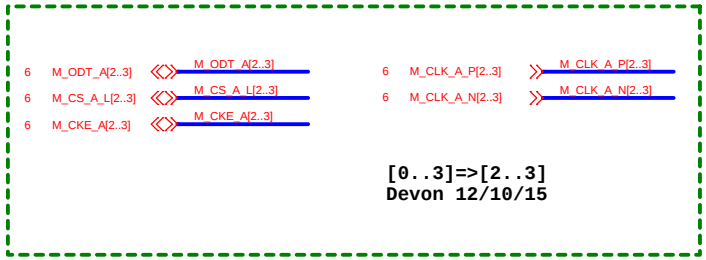
Size: Custom | Document Number: B85H3-M3 | Rev: 1.0

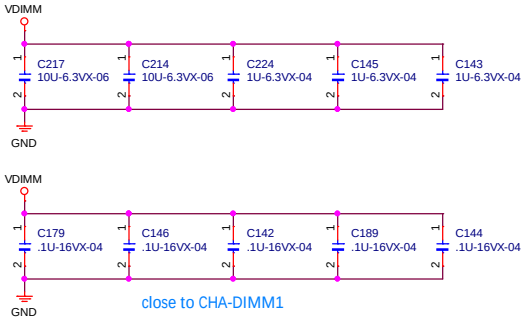
Date: Tuesday, May 28, 2013 | Sheet 7 of 34

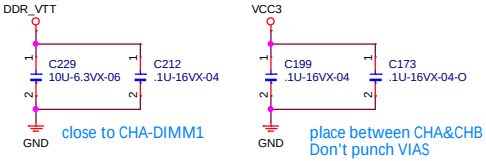


CH.A	SA1	SA0
DIMM0	L	L
DIMM1	L	H

CHANNEL A DIMM

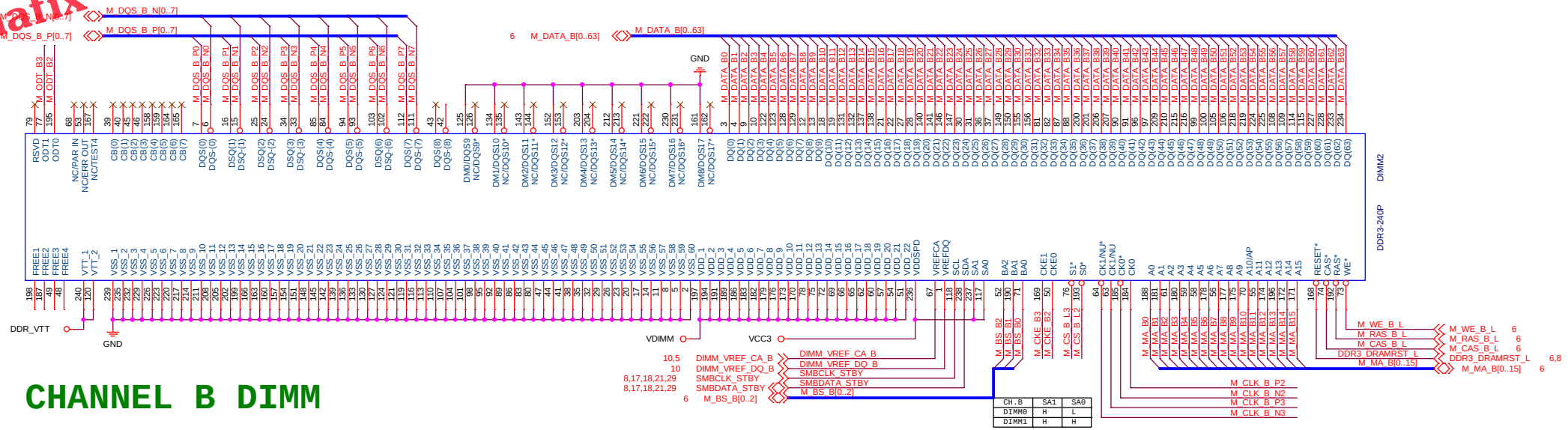




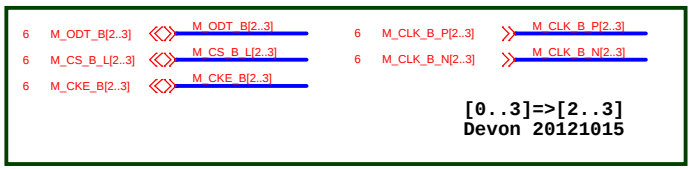


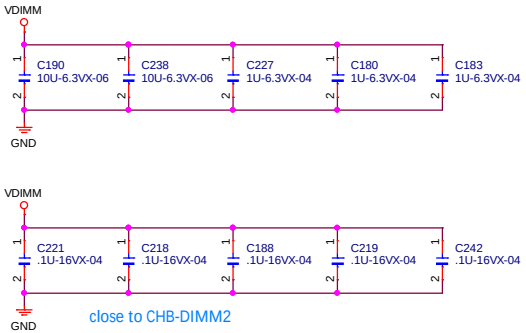
Elitegroup Computer Systems

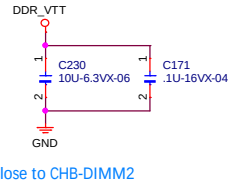
Title	DDR3-CHA	
Size: Custom	Document Number: B85H3-M3	Rev: 1.0
Date: Tuesday, May 28, 2013	Sheet 8 of 34	



CHANNEL B DIMM







Elitegroup Computer Systems

Title	DDR3-CHB
Size	Custom
Document Number	B85H3-M3
Rev	1.0
Date:	Tuesday, May 28, 2013
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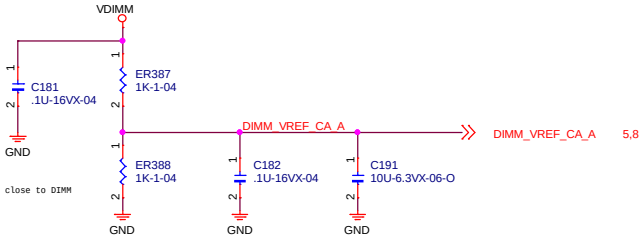
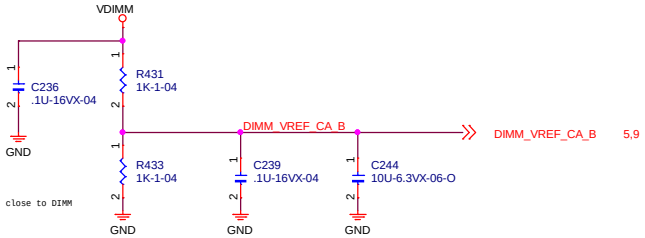
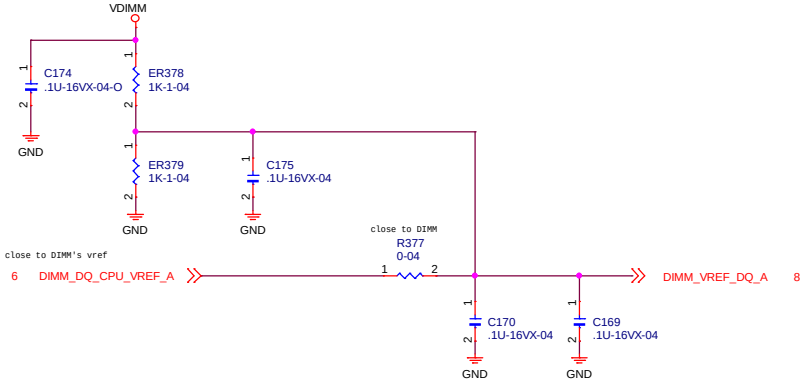
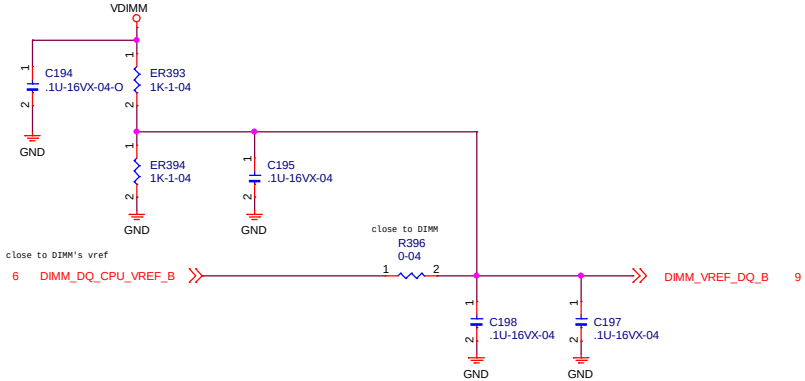
DIMM_VREF_CA Circuit





DIMM_VREF_DQ Circuit





Elitegroup Computer Systems

Title	DDR3-Vref	
Size: Custom	Document Number: B85H3-M3	Rev: 1.0
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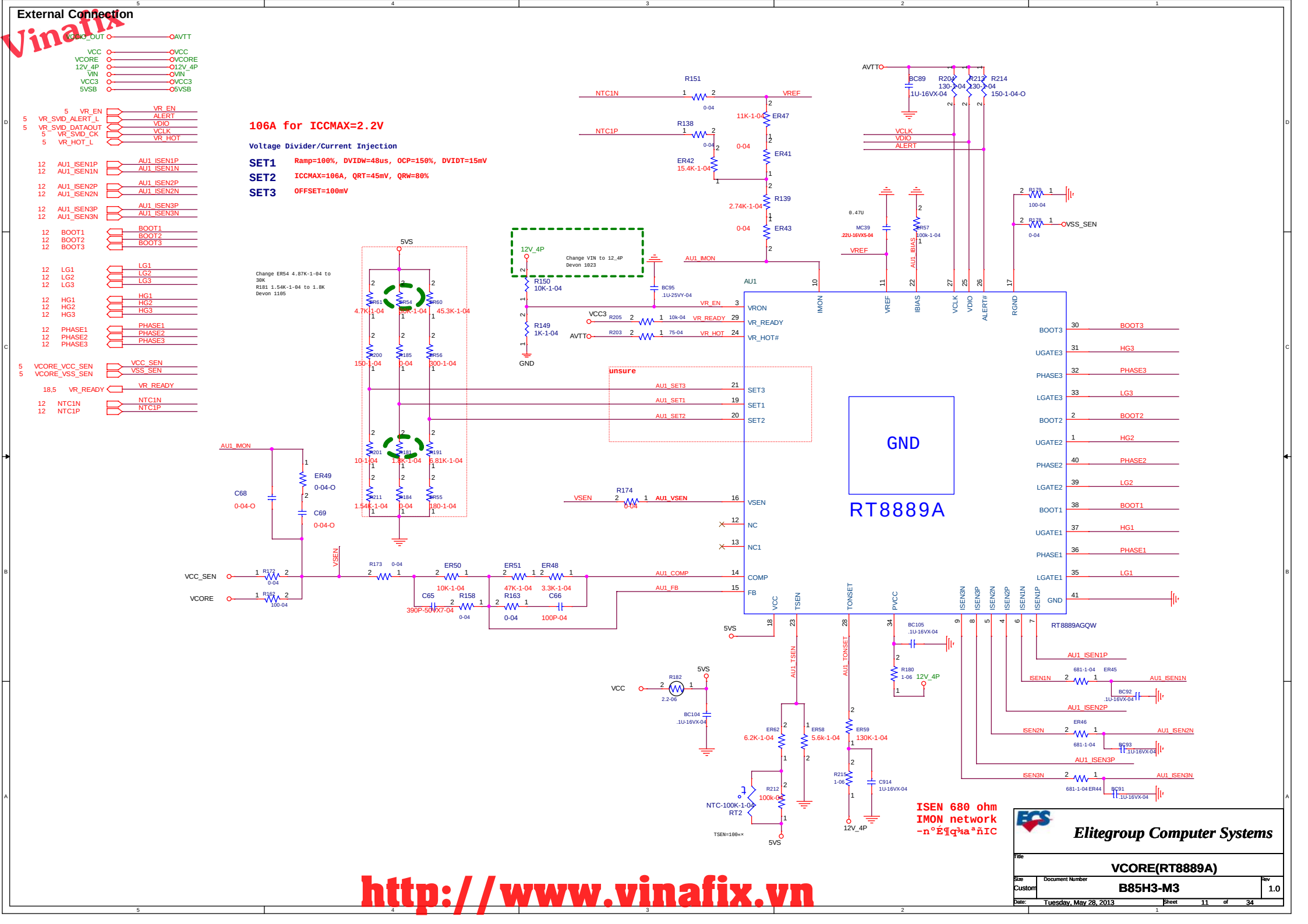

External Connection
106A for ICCMAX=2.2V
Voltage Divider/Current Injection
SET1 Ramp=100%, DVIDW=48us, OCP=150%, DVIDT=15mV
SET2 ICCMAX=106A, QRT=45mV, QRW=80%
SET3 OFFSET=100mV
RT8889A
RT8889AGQW
GND
unsure
ISEN 680 ohm
IMON network
Elitegroup Computer Systems
VCORE(RT8889A)
B85H3-M3
Tuesday, May 28, 2013
http://www.vinafix.vn

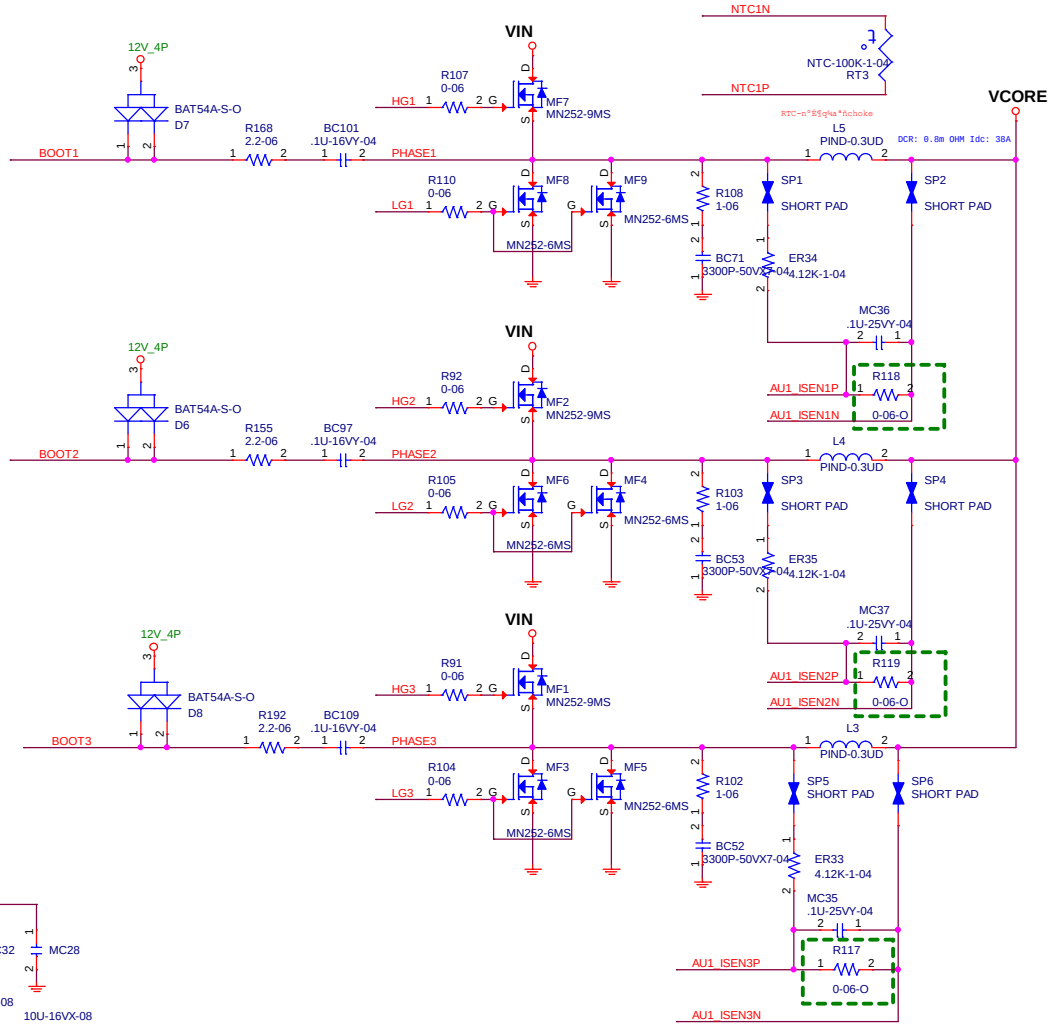
External Connection

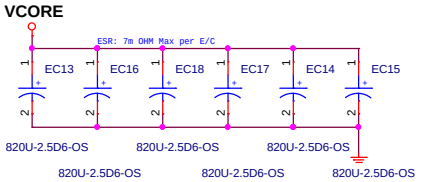
VCORE — VCORE

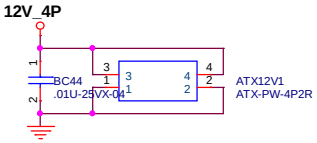
12V_4P — 12V_4P

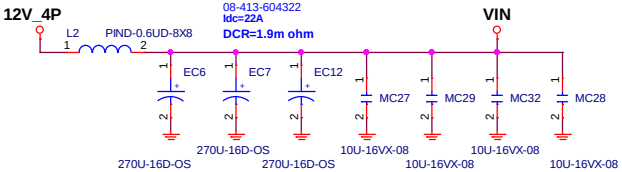
VIN — VIN

11	AU1_ISEN1P	AU1_ISEN1P
11	AU1_ISEN1N	AU1_ISEN1N
11	AU1_ISEN2P	AU1_ISEN2P
11	AU1_ISEN2N	AU1_ISEN2N
11	AU1_ISEN3P	AU1_ISEN3P
11	AU1_ISEN3N	AU1_ISEN3N
11	BOOT1	BOOT1
11	BOOT2	BOOT2
11	BOOT3	BOOT3
11	LG1	LG1
11	LG2	LG2
11	LG3	LG3
11	HG1	HG1
11	HG2	HG2
11	HG3	HG3
11	PHASE1	PHASE1
11	PHASE2	PHASE2
11	PHASE3	PHASE3
11	NTC1N	NTC1N
11	NTC1P	NTC1P

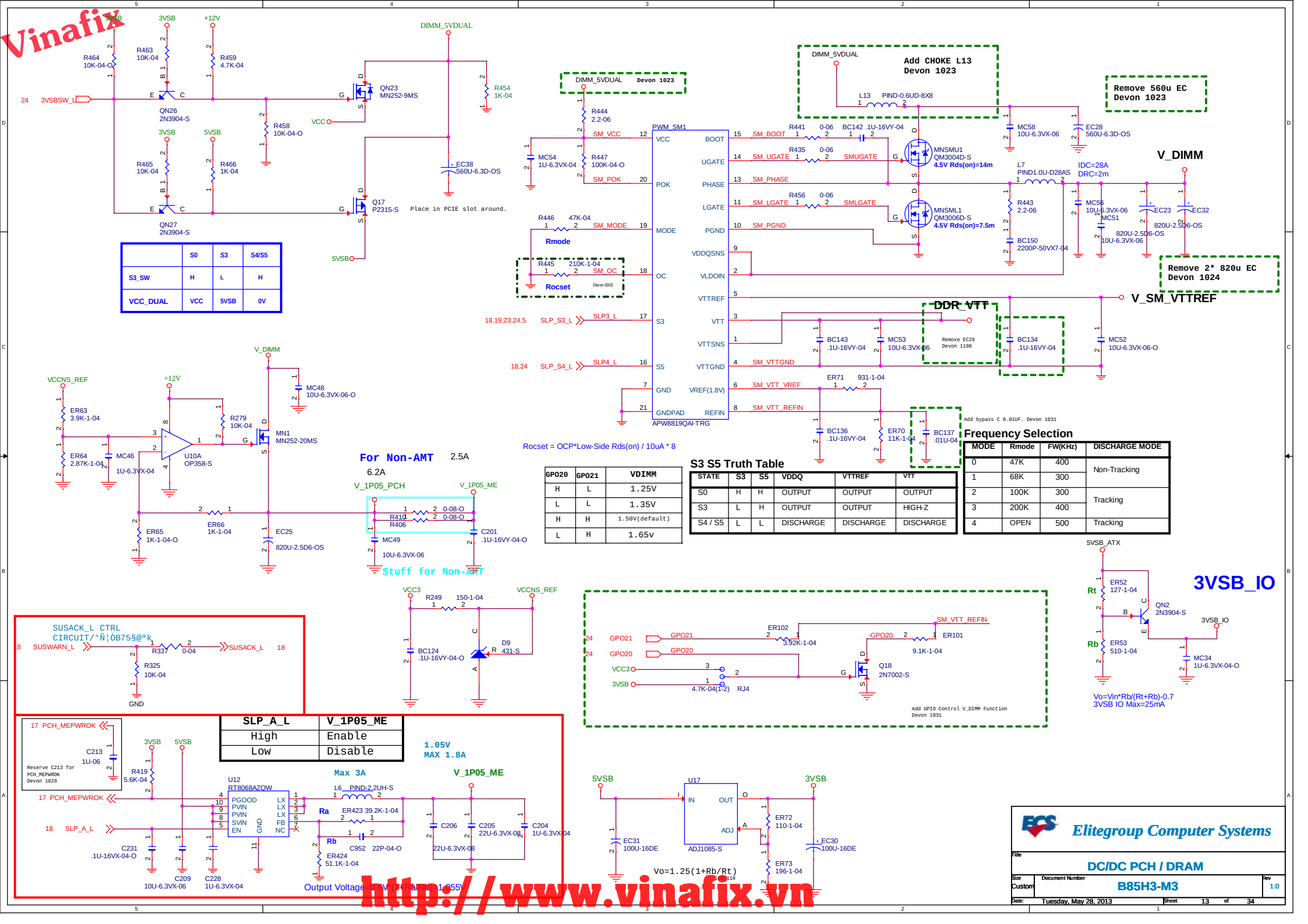








Elitegroup Computer Systems	
Title	VCORE(GATE/DRIVER)
Size: Custom	Document Number: B85H3-M3
Rev	1.0
Date: Tuesday, May 28, 2013	Sheet 12 of 34



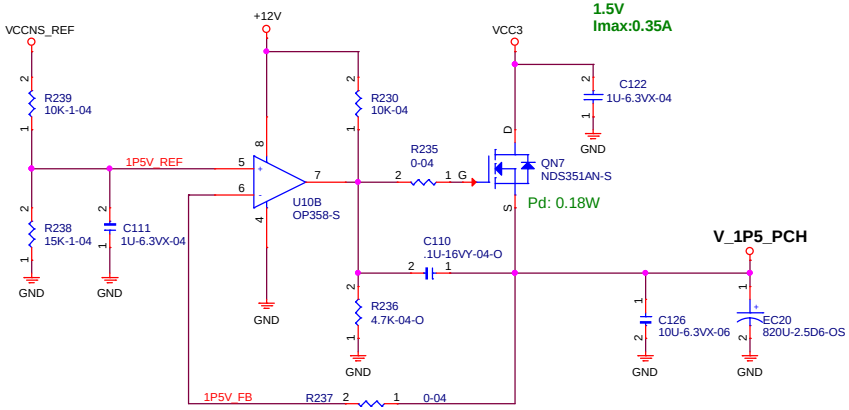
Elitegroup Computer Systems

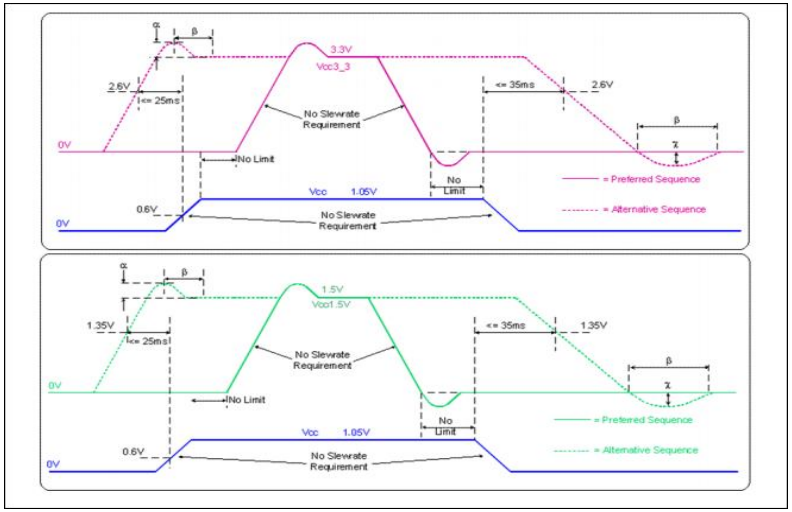
Title: DC/DC PCH / DRAM

Size: Custom | Document Number: B85H3-M3 | Rev: 1.0

Date: Tuesday, May 28, 2013 | Sheet 13 of 34

PCH DAC power





Elitegroup Computer Systems

Title: DC/DC PCH_1.5V/PCH,ME_1.05V

Size: Custom | Document Number: B85H3-M3 | Rev: B

Date: Tuesday, May 28, 2013 | Sheet 14 of 34

USB2 port 6,7 disable in B85

USB2 port 6,7,12,13 disable in H81

GPIO53 : DT shouldn't be pulled-down

GPIO55 : TOP-BLOCK swap override when LOW

GPIO51,52,53,55
with 20Kohm internal pull-up

USB3.0 (PET port 1,2) disable in B85/H81

PET port 7,8 disable in H81

USB3 port 4,5 disable in H81

BOOT device	GPIO51	SATA1GP/GPIO19
LPC	0	0
* SPI	1	1

Elitegroup Computer Systems

PCH-DMI/PE/USB/FDI

B85H3-M3

1.0

Tuesday, May 28, 2013

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NC DDPC_AUXN,AUXP.
Devon 1023

PCH1E
LPT_PCH_DT
REV 1

STP18
HDMI_HPD
DDPD_HDP_F

DDPB_HPD
DDPC_HPD
DDPD_HPD
DDPB_AUXN
DDPB_AUXP
DDPC_AUXN
DDPC_AUXP
DDPD_AUXN
DDPD_AUXP

VGA_HSYNC
VGA_VSYNC
VGA_RED
VGA_GREEN
VGA_BLUE
VGA_IRTN
VGA_DDC_DATA
VGA_DDC_CLK
DAC_IREF
DDPC_CTRLCLK
DDPC_CTRLDATA
DDPB_CTRLCLK
DDPB_CTRLDATA
DDPD_CTRLCLK
DDPD_CTRLDATA

5 OF 11

RN11 100K-8P4R-04
Swap DDPC & DDPD
Devon 1113

Port B/C/D Detected
Has a weak internal pull down
0 = is not detected
1 = is detected

PCH1G
LPT_PCH_DT
REV 1

CLKOUT_33MHZ0
CLKOUT_33MHZ1
CLKOUT_33MHZ2
CLKOUT_33MHZ3
CLKOUT_33MHZ4
CLKOUTFLEX0 / GPIO64
CLKOUTFLEX1 / GPIO65
CLKOUTFLEX2 / GPIO66
CLKOUTFLEX3 / GPIO67
DIFFCLK_BIASREF
REFCLK14IN

XTAL_25M_PCH_IN
XTAL_25M_PCH_OUT
XTAL25_IN
XTAL25_OUT

7 OF 11

CLKIN_GND0
CLKOUT_DMI
CLKOUT_DP
CLKOUT_DPNS
CLKOUT_ITPXDP
CLKOUT_PEG_A
CLKOUT_PEG_B
CLKOUT_PCIE_N0
CLKOUT_PCIE_P0
CLKOUT_PCIE_N1
CLKOUT_PCIE_P1
CLKOUT_PCIE_N2
CLKOUT_PCIE_P2
CLKOUT_PCIE_N3
CLKOUT_PCIE_P3
CLKOUT_PCIE_N4
CLKOUT_PCIE_P4
CLKOUT_PCIE_N5
CLKOUT_PCIE_P5
CLKOUT_PCIE_N6
CLKOUT_PCIE_P6
CLKOUT_PCIE_N7
CLKOUT_PCIE_P7

to X16 SLOT

Remove PCIEX4
Devon 1023

VCC3 VCC3 VCC_DDC
R86 2.2K-04
Q13 2N7002-S
R79 6.8K-04
VGA_DDC_CLK
DDCCLK
BC35 470P-50VX7-04-O

VCC3 VCC3 VCC_DDC
R85 2.2K-04
Q12 2N7002-S
R78 6.8K-04
VGA_DDC_DATA
DDCDATA
BC34 470P-50VX7-04-O

X2 X-25M
C109 27P-04
C108 27P-04
R243 1M-04

VGA

Close to Connector

VGA_RED
VGA_GREEN
VGA_BLUE
FB7 FB80-04-B
FB8 FB80-04-B
FB9 FB80-04-B
ER22 150-1-04
ER23 150-1-04
ER24 150-1-04
BC31 22P-04
BC32 22P-04
BC33 22P-04
BC25 10P-04
BC24 10P-04
BC23 10P-04

VGA
CONN-VGA-HRBL

Close to Connector

DDC1DATA
VGA1_HSYNC
VGA1_VSYNC
DDC1CLK
R67 0-04
R246 33-04
R245 33-04
R68 0-04
BC26 47P-04-O
BC14 10P-04
BC17 10P-04
BC27 47P-04-O
R56 10K-04-O
R53 10K-04-O

ESD

ESD6 ESD-6P
DDC1DATA
DDC1CLK
VGA1_VSYNC
VGA1_HSYNC
BC13 .1U-16VY-04

ESD7 ESD-6P
GREEN
BLUE
RED
BC15 .1U-16VY-04

Elitegroup Computer Systems

Title: PCH-DDI/CLK/VGA
Size: Custom
Document Number: B85H3-M3
Rev: 1.0
Date: Tuesday, May 28, 2013
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port 2,3 disable in H81

port 4,5 are SATA 3Gb/s in B85/H81

MODE	Ra	Rb
* AMT	V	X
NON AMT	X	V

Ra

13 PCH_MEPWROK — R383 1 2 0-04 — PCH_MEPWROK_R AA32

Rb

4,18,24 PCH_PWROK — R363 1 2 0-04-O

FROM SIO

C164 .1U-16VX-04-O — GND

PCH1C — LPT_PCH_DT — REV 1

CLINK: U36 CL_CLK, U35 CL_DATA, U34 CL_RST#, APWROK

FAN: AL31 PWM0, AM31 PWM1, AP31 PWM2, AV30 PWM3; AJ31 SSTCTL

GPIO

SATA

HOST

3 OF 11

LPT_PCH_DT

VCC3

RN14 10K-8P4R-04: CR_GPIO7, TACH0, CR_GPIO6, TACH5

RN15 10K-8P4R-04: SERIRQ, SDAT0, KBRST_L, SLOAD — KBRST_L_R change KBRST_L

RN16 10K-8P4R-04: A20GATE, SCLOCK, SDAT1

R360 10K-04 SATALED_L

R375 10K-04 PCH_GPIO21

R311 10K-04 TACH1

R298 10K-04 TACH4

R300 1K-04 PCH_GPIO37

SATA3GP/GPIO37 1K-04 pull high VCC3

Devon 1113

TACH0 AP28 — TACH0 / GPIO17

TACH1 AT31 — TACH1 / GPIO1

CR_GPIO6 AM28 — TACH2 / GPIO6

CR_GPIO7 AV34 — TACH3 / GPIO7

TACH4 AT30 — TACH4 / GPIO68

TACH5 AV35 — TACH5 / GPIO69

SCLOCK L38 — SCLOCK / GPIO22

SLOAD H41 — SLOAD / GPIO38

SDAT0 R31 — SDATAOUT0 / GPIO39

SDAT1 L40 — SDATAOUT1 / GPIO48

SATA_RXN0 B28 SATA3_RX_N0

SATA_RXP0 A28 SATA3_RX_P0

SATA_TXN0 F31 SATA3_TX_N0

SATA_TXP0 H31 SATA3_TX_P0

SATA_RXN1 D30 SATA3_RX_N1

SATA_RXP1 C30 SATA3_RX_P1

SATA_TXN1 B34 SATA3_TX_N1

SATA_TXP1 C34 SATA3_TX_P1

SATA_RXN2 A31 SATA3_RX_N2

SATA_RXP2 B31 SATA3_RX_P2

SATA_TXN2 B35 SATA3_TX_N2

SATA_TXP2 D35 SATA3_TX_P2

SATA_RXN3 B32 SATA3_RX_N3

SATA_RXP3 C32 SATA3_RX_P3

SATA_TXN3 G33 SATA3_TX_N3

SATA_TXP3 F33 SATA3_TX_P3

SATA_RXN4 / PERn1 A26 SATA3_RX_N4

SATA_RXP4 / PERp1 B26 SATA3_RX_P4

SATA_TXN4 / PETn1 L28 SATA3_TX_N4

SATA_TXP4 / PETp1 K28 SATA3_TX_P4

SATA_RXN5 / PERn2 C27 SATA3_RX_N5

SATA_RXP5 / PERp2 B27 SATA3_RX_P5

SATA_TXN5 / PETn2 G28 SATA3_TX_N5

SATA_TXP5 / PETp2 F28 SATA3_TX_P5

CLKIN_SATA H35 R316 1 2 10K-04

CLKIN_SATA_P H36 R315 1 2 10K-04 — GND

SATALED# J39 SATALED_L — SATALED_L 28

SATA_RCOMP D33 R309 1 2 7.5K-1-04 close to PCH — V_1P5_PCH

SATA0GP / GPIO21 M37 PCH_GPIO21

SATA1GP / GPIO19 J40 PCH_GPIO19 1 — TP31

SATA2GP / GPIO36 H40 PCH_GPIO36 1 — TP30

SATA3GP / GPIO37 N41 PCH_GPIO37

SATA4GP / GPIO16 M39 PCH_GPIO16

SATA5GP / GPIO49 N40 PCH_GPIO49

*GPIO19 with internal pull-up

*GPIO36 with internal pull-down

EDP_BKLTCTL AP2

EDP_BKLTEN AT2

EDP_VDDEN AP1

RSVD_N30 N30 A20GATE — A20GATE 24

RCIN# K36 KBRST_L — KBRST_L 24 — KBRST_L_R change KBRST_L BY PAD .1u delete

SERIRQ G39 SERIRQ — SERIRQ 24,29

THRMTRIP# C40 — PCH_THERMTRIP_L 5

PECI G40

PM_SYNCH F40 — PM_SYNC 5

PLTRST_PROC# F41 — CPU_PLTRST_L 5

RJ8 — PCH_GPIO16 — 10K-04(1-2) — GND — VCC3

RJ9 — PCH_GPIO49 — 10K-04(1-2) — GND — VCC3

Del SMBUS isolation schematic
Del pull high res.
Devon 1023

SMbus Logic Circuit

3VSB

R420 2.2K-04 SMBCLK_STBY — SMBCLK_STBY 8,9,18,21,29

R421 2.2K-04 SMBDATA_STBY — SMBDATA_STBY 8,9,18,21,29

Devon 1023

SATA 6G

SATA CONN
P/N:10-020-007042

SATA3_1/2A

C252 .01U-25VX-04 SATA3_TX_P0 — SATA3T_P0 12 — TXP GND 11

C251 .01U-25VX-04 SATA3_TX_N0 — SATA3T_N0 13 — TXN 6G GND 14

C247 .01U-25VX-04 SATA3_RX_N0 — SATA3R_N0 15 — RXN GND

C246 .01U-25VX-04 SATA3_RX_P0 — SATA3R_P0 16 — RXP GND 17

SATA3X2-GR

GND

SATA3_1/2B

C250 .01U-25VX-04 SATA3_TX_P1 — SATA3T_P1 22 — TXP GND 21

C245 .01U-25VX-04 SATA3_TX_N1 — SATA3T_N1 23 — TXN 6G GND 24

C249 .01U-25VX-04 SATA3_RX_N1 — SATA3R_N1 25 — RXN GND

C248 .01U-25VX-04 SATA3_RX_P1 — SATA3R_P1 26 — RXP GND 27

SATA3X2-GR

GND

SATA4

C235 .01U-25VX-04 SATA3_TX_P2 — SATA3T_P2 2 — TXP GND HOLD1 8 1

C233 .01U-25VX-04 SATA3_TX_N2 — SATA3T_N2 3 — TXN GND1 4

C211 .01U-25VX-04 SATA3_RX_N2 — SATA3R_N2 5 — RXN

C208 .01U-25VX-04 SATA3_RX_P2 — SATA3R_P2 6 — RXP GND2 7 HOLD2 9

SATA3-7P2R-GR

GND

SATA3

C260 .01U-25VX-04 SATA3_TX_P3 — SATA3T_P3 2 — TXP GND HOLD1 8 1

C258 .01U-25VX-04 SATA3_TX_N3 — SATA3T_N3 3 — TXN GND1 4

C256 .01U-25VX-04 SATA3_RX_N3 — SATA3R_N3 5 — RXN

C254 .01U-25VX-04 SATA3_RX_P3 — SATA3R_P3 6 — RXP GND2 7 HOLD2 9

SATA3-7P2R-GR

GND

SATA5

C234 .01U-25VX-04 SATA3_TX_P4 — SATA3T_P4 2 — TXP GND HOLD1 8 1

C232 .01U-25VX-04 SATA3_TX_N4 — SATA3T_N4 3 — TXN GND1 4

C210 .01U-25VX-04 SATA3_RX_N4 — SATA3R_N4 5 — RXN

C207 .01U-25VX-04 SATA3_RX_P4 — SATA3R_P4 6 — RXP GND2 7 HOLD2 9

SATA-7P2R-W

GND

SATA6

C259 .01U-25VX-04 SATA3_TX_P5 — SATA3T_P5 2 — TXP GND HOLD1 8 1

C257 .01U-25VX-04 SATA3_TX_N5 — SATA3T_N5 3 — TXN GND1 4

C255 .01U-25VX-04 SATA3_RX_N5 — SATA3R_N5 5 — RXN

C253 .01U-25VX-04 SATA3_RX_P5 — SATA3R_P5 6 — RXP GND2 7 HOLD2 9

SATA-7P2R-W

GND

SATA3.0 ->SATA2.0
Footprint change to SATA7P-M-HUANXUN_1
Devon 1018

Elitegroup Computer Systems

Title: PCH-HOST/SATA

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*LDRQ0/1 with internal pull-up

PCH1D

LPT_PCH_DT

REV 1

4 OF 11

INTVRMEN :
1 = Integrated 1.05V SUS VRM enabled

SUSCLK/GPIO62
PLL On-Die Voltage Regulator
internal pull-up
0 = Disable
1 = Enable

To be changed value
for HSW(A0)/LPT

ME Enable/Disable

	ME_UNLOCK
1-2	UNLOCK
Float	LOCK

Devon 2012/01/07
Reserve software type function

ME Test Header

show pin define in layout.

PCH Xtal

CLR CMOS

MODE	CLR_CMOS
NORMAL	1-2
CLEAR CMOS	2-3

SRTC

HSW Strap CFG13 for overclk

Change R427 value 1K to 10K
Devon 01/23/2013

DFX TEST MODE Ring Oscillator

PCH_GP44 (internal PU)	
H	Enable
L	Bypass

No Reboot

PCH_SPKR (internal PD)	
H	Enable No Reboot
L	Disable

Elitegroup Computer Systems

Title: PCH-MISC
Size: Custom | Document Number: B85H3-M3 | Rev: 1.0
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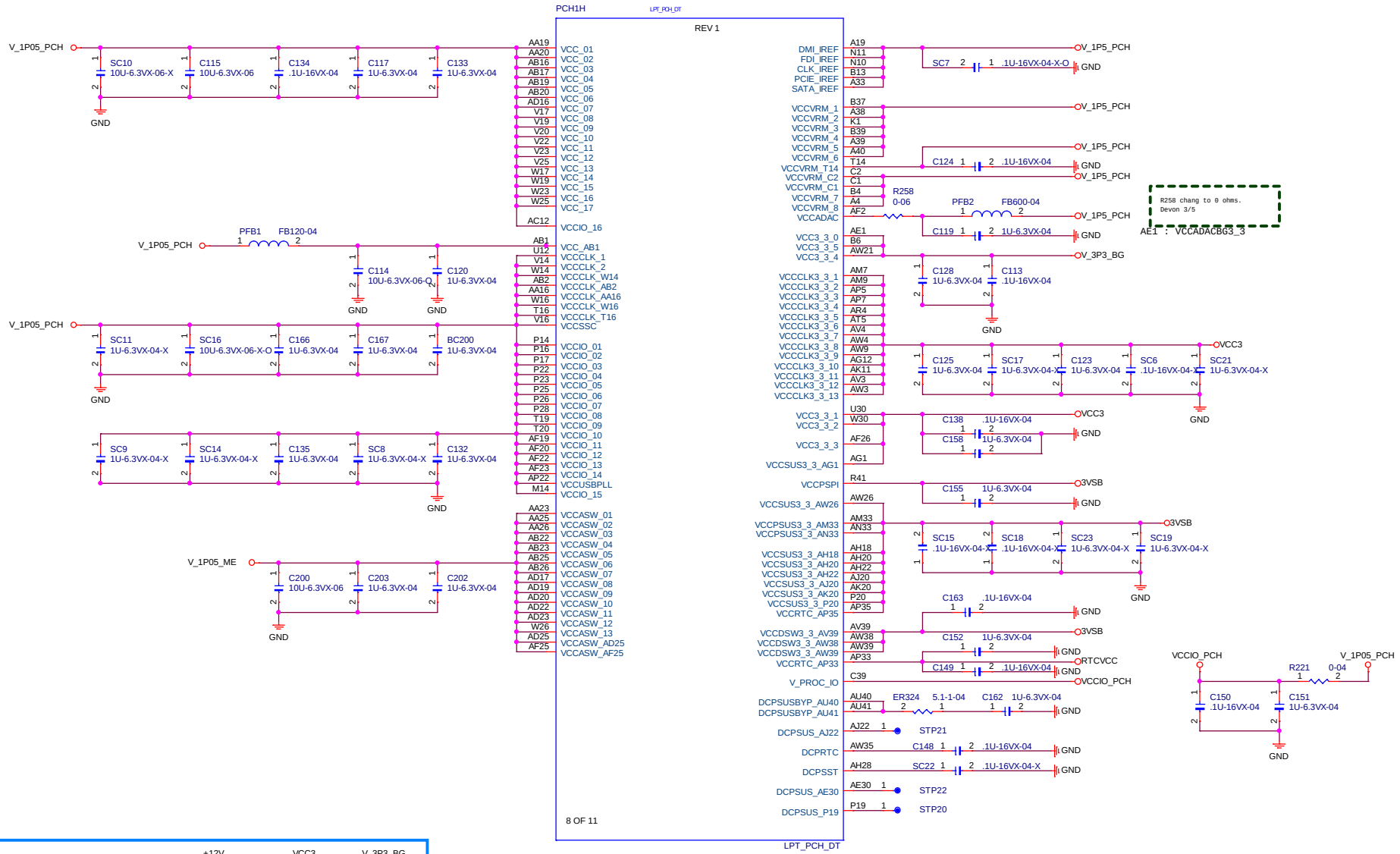

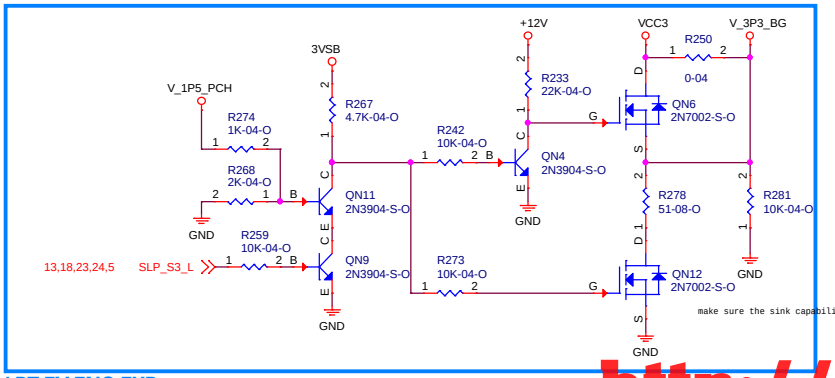

LPT EV ENG EXP

Elitegroup Computer Systems

Title	PCH-POWER	
Size: Custom	Document Number: B85H3-M3	Rev: 1.0
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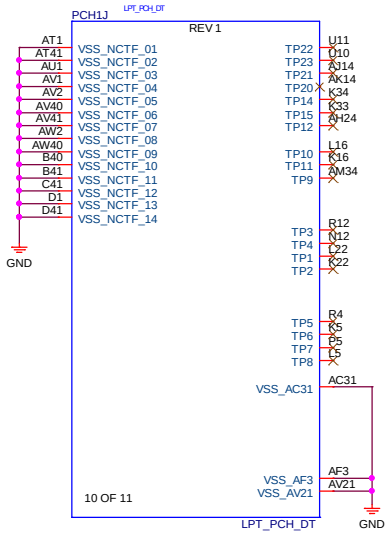

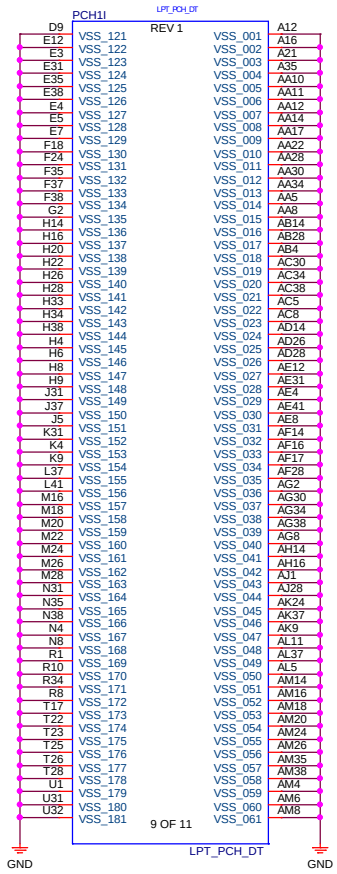

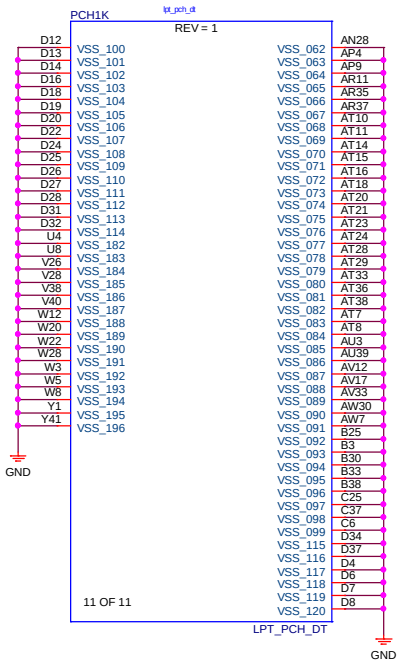

Elitegroup Computer Systems

Title	PCH-GND	
Size: Custom	Document Number: B85H3-M3	Rev: 1.0
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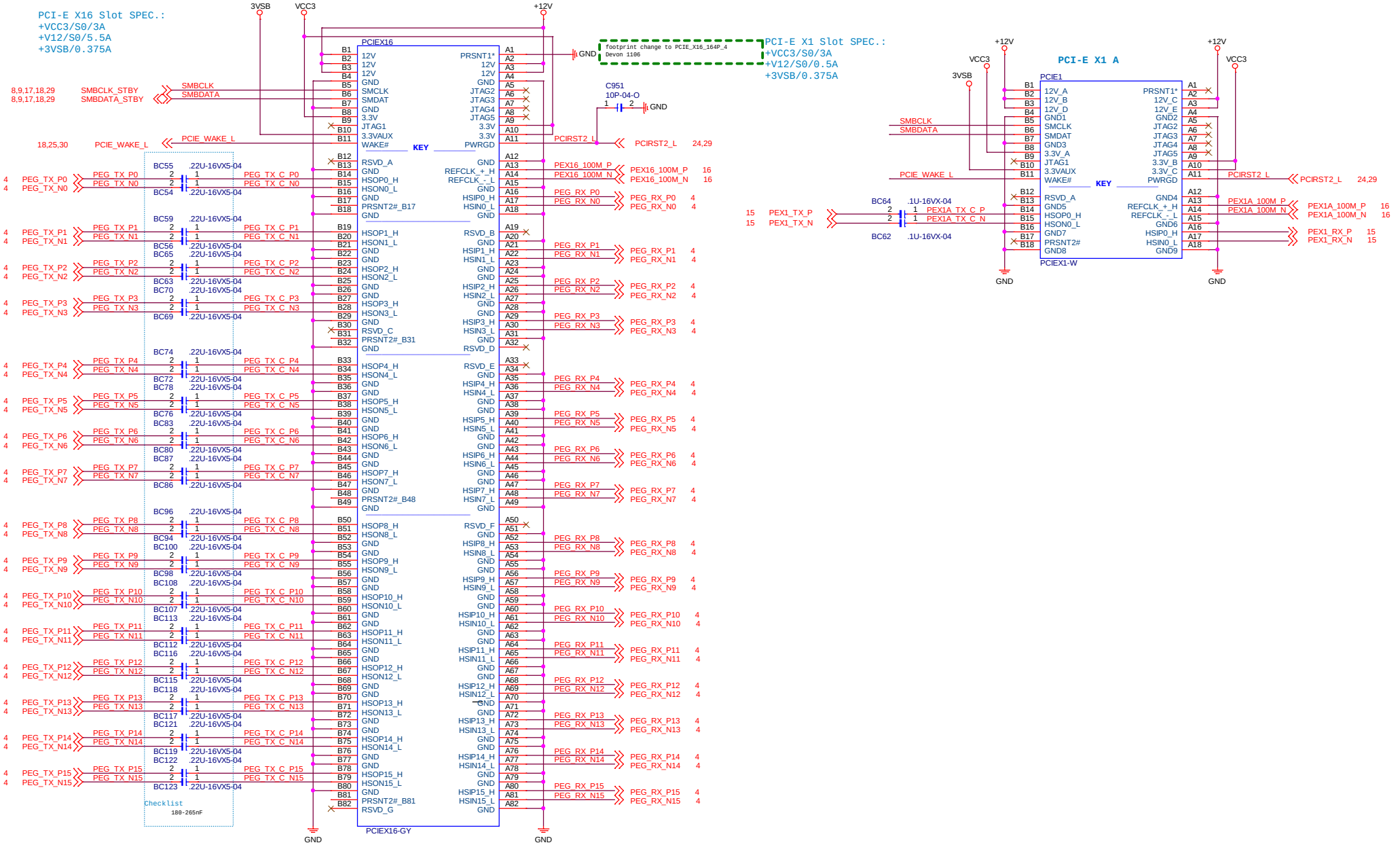
PCI-E X16 Slot SPEC.:
+VCC3/S0/3A
+V12/S0/5.5A
+3VSB/0.375A

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



Elitegroup Computer Systems

Title: Slot PCI-EX16 / PCI-EX1

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External Connection

DDPD_HDP_F
DDPD_CTRLCLK
DDPD_CTRLDATA
DDPD_TX0
DDPD_TX0-
DDPD_TX1
DDPD_TX1-
DDPD_TX2
DDPD_TX2-
DDPD_TXC
DDPD_TXC-

DDPD_TXC C46 .1U-16VX-04 ER20 680-1-04
DDPD_TXC- C47 .1U-16VX-04 ER21 680-1-04
DDPD_TX0 C45 .1U-16VX-04 ER19 680-1-04
DDPD_TX0- C44 .1U-16VX-04 ER18 680-1-04
DDPD_TX1 C41 .1U-16VX-04 ER15 680-1-04
DDPD_TX1- C40 .1U-16VX-04 ER14 680-1-04
DDPD_TX2 C42 .1U-16VX-04 ER16 680-1-04
DDPD_TX2- C43 .1U-16VX-04 ER17 680-1-04

Q3 2N7002-S
VCC

VCC3 VCC3 VCC_DDC
R88 2.2K-04 Q9 2N7002-S R70 2.2K-04
DDPD_CTRLCLK DDPD_SCL

VCC3 VCC3
R84 1M-04 Q11 MC21 1U-6.3VX-04 R69 20K-04
DDPD_HDP_F BSS138-S DDPD_HP

VCC3 VCC3 VCC_DDC
R83 2.2K-04 Q10 2N7002-S R59 2.2K-04
DDPD_CTRLDATA DDPD_SDA

R38 10K-04
+12V
Q1 NDS351AN-S
VCC F1 FUSE-1.1A-08
VCC_DDC MC1 10U-6.3VX-06

VCC_DDC BC3 .1U-16VY-04

DVI_TX0- DVI_TX0+ DVI_TX1- DVI_TX1+ DVI_TXC+ DVI_TXC- DDPD_HP

DVI
CONN-24P3R-DVI
DVI_TX2- DVI_TX2+ DDPD_SCL DDPD_SDA

VCC_DDC BC16 .1U-16VY-04
DDPD_HP ESD5 ESD-6P DDPD_SCL DDPD_SDA

ESD8 ESD-10P-USB30
ESD9 ESD-10P-USB30
GND

03-013-428402

DVI

RN27 0-8P4R-06-O-SH
DDPD_TXC- C DVI_TXC-
DDPD_TXC+ C DVI_TXC+
DDPD_TX0+ C DVI_TX0+
DDPD_TX0- C DVI_TX0-

RN28 0-8P4R-06-O-SH
DDPD_TX1- C DVI_TX1-
DDPD_TX1+ C DVI_TX1+
DDPD_TX2+ C DVI_TX2+
DDPD_TX2- C DVI_TX2-

HDMI

HDMI_TXP2
HDMI_TXN2
HDMI_TXP1
HDMI_TXN1
HDMI_TXP0
HDMI_TXN0
HDMI_TXCP
HDMI_TXCN
HDMI_CLK
HDMI_DAT
HDMI_HPD

HDMI_TXP2 BC50 .1U-16VX-04 HDMI_TX2_C
HDMI_TXN2 BC61 .1U-16VX-04 HDMI_TX2- C
HDMI_TXP1 BC60 .1U-16VX-04 HDMI_TX1_C
HDMI_TXN1 BC40 .1U-16VX-04 HDMI_TX1- C
HDMI_TXP0 BC58 .1U-16VX-04 HDMI_TX0_C
HDMI_TXN0 BC57 .1U-16VX-04 HDMI_TX0- C
HDMI_TXCP BC38 .1U-16VX-04 HDMI_TXC_C
HDMI_TXCN BC37 .1U-16VX-04 HDMI_TXC- C

HDMI TYPE A HDMI-19P
HDMI_TX2+ HDMI_TX2- HDMI_TX1+ HDMI_TX1- HDMI_TX0+ HDMI_TX0- HDMI_TXC+ HDMI_TXC-
HDMI_CLK_Q HDMI_DAT_Q HDMI_HPD_Q

VCC_DDC BC7 .1U-04 R46 20K-04

VCC3 R127 1M-04 QN17 BSS138-7-01-F-S HDMI_HPD HDMI_HPD_Q
VCC3 VCC3 VCC_DDC
R126 2.2K-04 QN13 2N7002-S R71 2.2K-04 HDMI_CLK HDMI_CLK_Q
VCC3 VCC3 VCC_DDC
R113 2.2K-04 QN14 2N7002-S R72 2.2K-04 HDMI_DAT HDMI_DAT_Q

RN29 0-8P4R-O-SH
HDMI_TX2_C HDMI_TX2+
HDMI_TX2- C HDMI_TX2-
HDMI_TX1_C HDMI_TX1+
HDMI_TX1- C HDMI_TX1-
RN30 0-8P4R-O-SH
HDMI_TX0_C HDMI_TX0+
HDMI_TX0- C HDMI_TX0-
HDMI_TXC_C HDMI_TXC+
HDMI_TXC- C HDMI_TXC-

HDMI_TX2_C ER28 470-1-04
HDMI_TX2- C ER74 470-1-04
HDMI_TX1_C ER75 470-1-04
HDMI_TX1- C ER76 470-1-04
HDMI_TX0_C ER78 470-1-04
HDMI_TX0- C ER77 470-1-04
HDMI_TXC_C ER79 470-1-04
HDMI_TXC- C ER12 470-1-04

QN18 2N7002-S
VCC R125 22K-04

680 ohms change to 470 ohms
to fix HDMI 7-2 issue
Devon 03/01

DEL DP MODULE.
Only save HDMI function.
Devon 1023

ESD15 ESD-10P-USB30
HDMI_TX2+ HDMI_TX2- HDMI_TX1+ HDMI_TX1-

ESD11 ESD-10P-USB30
HDMI_TXC- HDMI_TXC+ HDMI_TX0- HDMI_TX0+

ESD18 ESD-6P
HDMI_CLK_Q HDMI_HPD_Q HDMI_DAT_Q
VCC_DDC BC81 .1U-16VY-04

Devon 1102

Elitegroup Computer Systems

Title: DVI / Co-layout With DP/HDMI
Size: Custom
Document Number: B85H3-M3
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External Connection

3VSB, VCC, USBVCC2, USBVCC3

USB3LAN

Add USBVCCL for USB3LAN(USB3.0)
Devon 1102

DEL USBPWR3
Devon 1022

DEL F_USB2.0 port6,7,11,12
Devon 1019

FRONT_SIDE

Modify USF3F Value
Devon 1019

FUSB1 EZ CHARGE

CB:
0: charger mode
1: pass-through mode

co-lay, place resisters footprint inside IC footprint

CEN_STRAP:
0: CEN is high active
1: CEN is low active

CEN(#)
asserting for 1 sec. to cut off USBH_PWR
that simulates the re-plugging of USB device
when CB changes

SPI

SMD TYPE socket: 11-127-008120

5VSB_ATX change to 5VSB
Devon 03/01

DIMM_5VDUAL change to VCC
Devon 1106

remove SPI_Debug header
Devon 1106

Elitegroup Computer Systems

Title: F_USB / SPI

Size: Custom | Document Number: B85H3-M3 | Rev: 1.0

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External Connection

VDIMM, ATX_5VSB, ATX_3VSB, VCC, 5VSB, VCC3, VBAT_IO, VCORE, V_1P05_PCH

RSMRST_N, -PWRBTN, -PWRON, -SLP3, SLP4_L, -ATX_PSON_SIO, ATX_PWRGD_IO, PLTRST_L, SIO_PCI_RST-, -PCIE_RSTY, PWROK, H_SKTOCC_N, PECI, LPCPME_L, -LPC_DRQ0, -LPC_FRAME, L_AD[0..3], LPC_LAD[0..3], -KB_RST, A20GATE_L, SERIRQ, SIO_PCLK, SIO_CLK48, SML1CLK, SML1DATA, CFAN_TAC1, CFAN_PWM1, SFAN_TAC2, SFAN_PWM2, G_LED1, G_LED2, -3VSBSW, GPO21, GPO20

NC R12#GP17 Devon 1017

Devon 1105

CIR HEADER

5VSB_ATX, Devon 2013/03/01

CIR: VCC, IRRX, GND, IRTX

CIRRX, CIRTX

H5X1-P2E

HW STRAPPING

Pin 122	WDT_EN	1	Disable WDT to rest PWROK
JP2		0	Enable WDT to rest PWROK
Pin 126	K8PWR_EN	1	K8 power sequence function is disabled
JP4		0	K8 power sequence function is enabled
Pin 124	FAN_CTL_SEL	11	The default value of EC Index 63h/6Bh/73h is 80h
JP3 Pin 46		10	The default value of EC Index 63h/6Bh/73h is FFh
JP5		01	The default value of EC Index 63h/6Bh/73h is 00h
		00	The default value of EC Index 63h/6Bh/73h is 40h
Pin72	RSMRST_SEL	1	RSMRST# output detected by 3VSB
JP8		0	RSMRST# output detected by SYS_3VSB

-LPC_DRQ0, R186 1K-04-O; JP4 -DTRA, JP3 TXDA, JP2 -RTSA, RN1 1K-8P4R-04; JP5 -DTRB, R144 1K-04

Del R197(repeated pull H) Devon 1105

SIO

IT8728F-FX

CTS1#/GP31, FAN_CTL5/CIRRX2/GP16, PCIRSTIN#/CIRTX2/GP15, 3VSB, GP64, GP63, FAN_TAC1, FAN_CTL1, FAN_TAC2/GP52, FAN_CTL2/GP51, FAN_TAC3/GP37, FAN_CTL3/GP36, RSTCONOUT/GP35, RSTCONIN/GP34, GNDD, 5VSB_CTRL, 5VAUX_SW, PWRGD2_50ms, ATX_PG/GP30, SIN2/GP27, SOUT2/GP26, FAN_TAC4/DSR2#/GP25, FAN_TAC5/RTS2#/GP24, CPU_PG/GP23, GP22, DCD2#/GP21, CTS2#/GP20, RI2#/GP17, DTR2#, CIRTX1, PCH_C1/GP14, PWRGD1_30ms, PCIRST1#/GP12, PCIRST2#/GP11, 3VSB, VCORE, LRESET#, LDRQ#

BUSY/GP82, PE/GP81, SLCT/GP80, AVCC3, VIN0/VCORE(1.1V), VIN1/VDIMM_STR(1.5V), VIN2/(+12V_SEN), VIN3/(+5V_SEN), VIN4/VLDT_12, VIN5, VIN6, VREF, TMPIN1, TMPIN2, TMPIN3, TS_D-, GNDA, RSMRST#/CIRRX1/GP55, PCIRST3#/GP10, MCLK/GP56, MDAT/GP57, KCLK/GP60, KDAT/GP61, 3VSBSW#/GP40, PWRGD3_150ms, SUSC#/GP53, PSON#/GP42, PANSHW#/GP43, GNDD, PME#/GP54, PWRON#/GP44, SUSB#, GP47, VBAT, COPEN#, 3VSB, SYS_3VSB, DSKCHG#

SERIRQ, -LPC_FRAME, L_AD0, L_AD1, L_AD2, L_AD3, -KB_RST, A20GATE_L, SIO_PCLK, GP50, SIO_CLK48, PECI, SST_CTI1, TP6, JP1

DEL Level shft

C981 470P-50V7-04-O, C984 470P-50V7-04-O, C1110 10P-04-O, C1111 10P-04; CFAN_TAC1, SFAN_TAC2, SIO_PCLK, SIO_CLK48

5VSB, R206 4.7K-04, Q16 2N7002-S, H_SKTOCC_N, MC43 1U-6.3VX-04-O, PWROK

VBAT_IO, MC40 1U-6.3VX-04, CLOSE TO PIN69

VCC3, BC77 .1U-16VY-04, MC33 1U-6.3VX-04-O, CLOSE TO PIN99

Thermal and Voltage Monitor

HM_AGND, RT1 NTC-10K-1-04, BC88 .1U-16VY-04, TMP_SYS, ER40 10K-1-04, HM_VREF

HM_VIN2 ER31 10K-1-04 +12V; BC79 .1U-16VY-04 ER32 2K-1-04 HM_AGND; ER37

HM_VIN3 15K-1-04 VCC; BC82 .1U-16VY-04 ER39 10K-1-04 HM_AGND

HM_VIN0 ER29 10K-1-04 VCORE

HM_VIN4 ER36 10K-1-04 VCCIO_OUT

HM_VIN1 ER30 10K-1-04 V_DIMM

HM_VIN6 ER38 10K-1-04 V_1P05_PCH

HM_VIN5 6.49K-1-04 VCC3; ER82; ER81 10K-1-04 HM_AGND; BC127 .1U-16VY-04

Devon 1102

cx--2.6V
fx--2.0V

* HM_VIN0 for VCORE
* HM_VIN4 for VCCIO_OUT
* HM_VIN1 for V_DIMM
* HM_VIN5 for VCC3
* HM_VIN6 for V_1P05_PCH

BIOS SELECTION

USE PCH GPIO.

RJ2 1K-04(1-2) VCC GP35; RJ3 1K-04(1-2) VCC GP14

EuP

3VSB, 5VSB, Option, R195 0-06-O, R440 0-08-O, 3VSB_IO, 5VSB_ATX

5VSB_ATX, R439 10K-04, MC50 1U-16VY-04, R437 10K-04, 5VSB_CTRL, MC55 1U-6.3VX-04-O, MS1, APM4500AKC

BC99 .1U-16VY-04-O, VBAT_IO, -CASE_OPEN, R171 1M-04, VCC3, -PCIE_RSTY R175 1K-04-O, SIO_PCI_RST R167 1K-04-O, PWROK R165 1K-04, GP34 R123 1K-04, 3VSB, -PWRON 10K-04 R222, 3VSB, GP47 R194 100-04, LPCPME_L R164 4.7K-04, MCLK R133 1K-04, MDATA R134 1K-04, RSMRST_L R128 1K-04, BC153 .1U-16VY-04-O

3VSB_IO, GP50 Pull high change to 3VSB_IO Devon 1102, R198 1K-04-O GP50, BC102 .1U-16VY-04, BC103 .1U-16VY-04

3VSB_IO, MC41 1U-6.3VX-04, MC42 10U-6.3VX-06, CLOSE TO PIN67

Elitegroup Computer Systems

Title: SIO / ITE8728fx

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External Connection

Change USBVCC2 to USBVCCL Devon 1115

3VSB — 3VSB
VCC3 — VCC3
USBVCCL — USBVCCL
AUGND2 — AUGND2

18,21,30 PCIE_WAKE_L — LAN1_WAKE_UP-
24,30 PCIRST1_L — LAN1_RST-

16 CK_PE_100M_LAN_H — CLK_LAN1_H
16 CK_PE_100M_LAN_L — CLK_LAN1_L

15 LAN_TX_P — LAN1_HSIP
15 LAN_TX_N — LAN1_HSIN
15 LAN_RX_P — LAN1_HSOP
15 LAN_RX_N — LAN1_HSON

15 USB_P2 — L1_USB_1+
15 USB_N2 — L1_USB_1-
15 USB_P3 — L1_USB_2+
15 USB_N3 — L1_USB_2-

For USB3.0 Add USB3.0 Devon 1019

15 USB3_TXP3 — USB3_TXP3
15 USB3_TXN3 — USB3_TXN3
15 USB3_RXP3 — USB3_RX3+
15 USB3_RXN3 — USB3_RX3-

15 USB3_TXP4 — USB3_TXP4
15 USB3_TXN4 — USB3_TXN4
15 USB3_RXP4 — USB3_RX4+
15 USB3_RXN4 — USB3_RX4-

Cf

C185 .1U-16VY-04 — 3VSB
ESD31
MDI1_P2 — MDI1_N2
MDI1_P3 — MDI1_N3
ESD-6P

Ch

AVDDREG1 MC18 10U-6.3VX-06-O — Closed To Pin 23
VDD1.0_A MC19 10U-6.3VX-06-O — Closed To The CHOKE!!

C39 .1U-16VY-04 — AUGND2 / USBVCCL
ESD17
L1_USB_P1 — L1_USB_N1
L1_USB_P2 — L1_USB_N2
ESD-6P

RN22
USB3_TXN4C — L1_USB3_TX4-
USB3_TXP4C — L1_USB3_TX4+
USB3_RX4+ — L1_USB3_RX4+
USB3_RX4- — L1_USB3_RX4-
0-8P4R-O-SH

RN21
USB3_RX3- — L1_USB3_RX3-
USB3_RX3+ — L1_USB3_RX3+
USB3_TXN3C — L1_USB3_TX3-
USB3_TXP3C — L1_USB3_TX3+
0-8P4R-O-SH

RN23
L1_USB_2- — L1_USB_N2
L1_USB_2+ — L1_USB_P2
L1_USB_1+ — L1_USB_P1
L1_USB_1- — L1_USB_N1
0-8P4R-O-SH

3VSB, VDD1.0_A

R42 1M-04-O — L_XTAL2 / L_XTAL1
X-25M X1
C11 27P-04
C15 27P-04
SWAP
R11 2.49K-1-04 — LAN1_RSET
LAN1_ACTIVE- R26 330-04 — ACTIVE1
LED1/GPO
EESK/LINK1 R29 330-04 — LINK1
TP1

LAN1

GND
AVDD33 RSET AVDD10 CKXTAL2 CKXTAL1 LED0 LED1/GPO LED2(LED1)

MDI1_P0 / MDI1_N0 — MDIP0 MDIN0 AVDD10(NC) MDIP1 MDIN1 MDIP2(NC) MDIN2(NC) AVDD10_1
MDI1_P1 / MDI1_N1 / MDI1_P2 / MDI1_N2

REGOUT(NC) VDDREG(VDD33) DVDD10(NC) LANWAKEB ISOLATEB PERSTB HSON HSOP
MDIP3(NC) MDIN3(NC) AVDD33(NC) CLKREQB HSIP HSIN REFCLK_P REFCLK_N

REALTEK

Cg

For SNR Over 75%

BC12 .1U-16VY-04
L1 IND-4.7U-S-O
R41 0-06 — VDD1.0_A
FB5 0-06 — 3VSB
R54 1K-04 — VCC3
R40 15K-04
C14 .1U-16VY-04 — LAN1_HSON
C13 .1U-16VY-04 — LAN1_HSOP

Add R40 Devon 03/01

BC157 .1U-16VY-04-O — ACTIVE1
BC158 .1U-16VY-04-O — LINK1
FOR EMI

8106E : NC PIN - 3,6,7,9,10,11,22,24

Ca

RTL8111G-CG
01-267-111367

MDI1_P3 / MDI1_N3
CLK_LAN1_L / CLK_LAN1_H
LAN1_HSIN / LAN1_HSIP
3VSB / VCC3
R16 10K-04

C37 .1U-16VY-04 — 3VSB
ESD24
MDI1_P0 — MDI1_N0
MDI1_P1 — MDI1_N1
ESD-6P

Add USB3LAN connector
Devon 1019

USB3.0

ESD16
L1_USB3_RX4- / L1_USB3_RX4+ — L1_USB3_RX4- / L1_USB3_RX4+
L1_USB3_TX4+ / L1_USB3_TX4- — L1_USB3_TX4+ / L1_USB3_TX4-
ESD-10P-USB30 — AUGND2

ESD14
L1_USB3_RX3- / L1_USB3_RX3+ — L1_USB3_RX3- / L1_USB3_RX3+
L1_USB3_TX3- / L1_USB3_TX3+ — L1_USB3_TX3- / L1_USB3_TX3+
ESD-10P-USB30 — AUGND2

USB3_TXP3 C54 .1U-16VX-04 — USB3_TXP3C
USB3_TXN3 C178 .1U-16VX-04 — USB3_TXN3C
USB3_TXN4 C172 .1U-16VX-04 — USB3_TXN4C
USB3_TXP4 C184 .1U-16VX-04 — USB3_TXP4C

For USB3.0

USBVCCL — USBVCCL
USB3LAN
USB3.0
L1_USB_N1 — L1_USB_N2
L1_USB_P1 — L1_USB_P2
AUGND2 — AUGND2
L1_USB3_RX3- / L1_USB3_RX3+ — L1_USB3_RX4- / L1_USB3_RX4+
AUGND2 — AUGND2
L1_USB3_TX3- / L1_USB3_TX3+ — L1_USB3_TX4- / L1_USB3_TX4+

Cd

R74 0-04-O
BC30 .1U-16VY-04

Ce

R80 0-04

L_TCT
MDI1_P0 / MDI1_N0 / MDI1_P1 / MDI1_N1 / MDI1_P2 / MDI1_N2 / MDI1_P3 / MDI1_N3
L_RCT
TCT(P01) TX1+ TX1- TX2+ TX2- TX3+ TX3- TX4+ TX4- RCT(P10)
GLED(P11) OLED(P12) YLED(P13) VCC(P14) H_LAN1 H_LAN2 H_LAN3 H_LAN4
LINK1 / ACTIVE1
3VSB

Cc

USB3.0X2-LAN-1000
Link: Green on
Active: Yellow blinking

AUGND2 FB11 0-06-SH
AUGND2 FB10 0-06-SH

VDD1.0_A
Closed To Pin 3, 8, 22, 24, 30
BC11 .1U-16VY-04
BC6 .1U-16VY-04
BC19 .1U-16VY-04
BC1 .1U-16VY-04
BC2 .1U-16VY-04
C1 1U-6.3VX-04
1U Close To Pin 22

3VSB
Closed To PIN 11, 23, 32
BC18 .1U-16VY-04
BC4 .1U-16VY-04
BC5 .1U-16VY-04
MC3 10U-6.3VX-06

BOM Difference

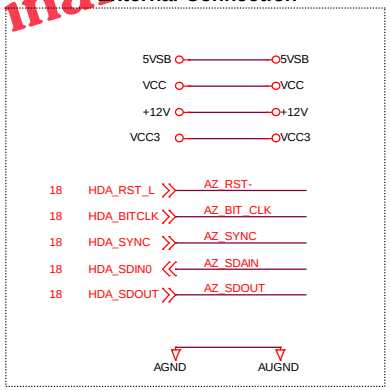
	RTL8111GS-CG (SWR mode) 1000M	RTL8111G-CG (LDO mode) 1000M	RTL8106E-CG (LDO mode) 10/100M
Ca	RTL8111GS	RTL8111G	RTL8106E
Cb	None	None	None
Cc	USBX2-LAN-1000	USBX2-LAN-1000	USBX2-LAN-100
Cd	X	X	V
Ce	0-04	0-04	.01U-25VX-04
Cf	V	V	X
Cg	L	R	X
Ch	V	X	X

DEFAULT

Elitegroup Computer Systems

Title: PCIE LAN - RTL111G(S) / 8106E
Size: Custom
Document Number: B85H3-M3
Rev: 1.0
Date: Tuesday, May 28, 2013
Sheet 25 of 34

External Connection



* VCC1.5 can remove for non-Intel G4X plateform

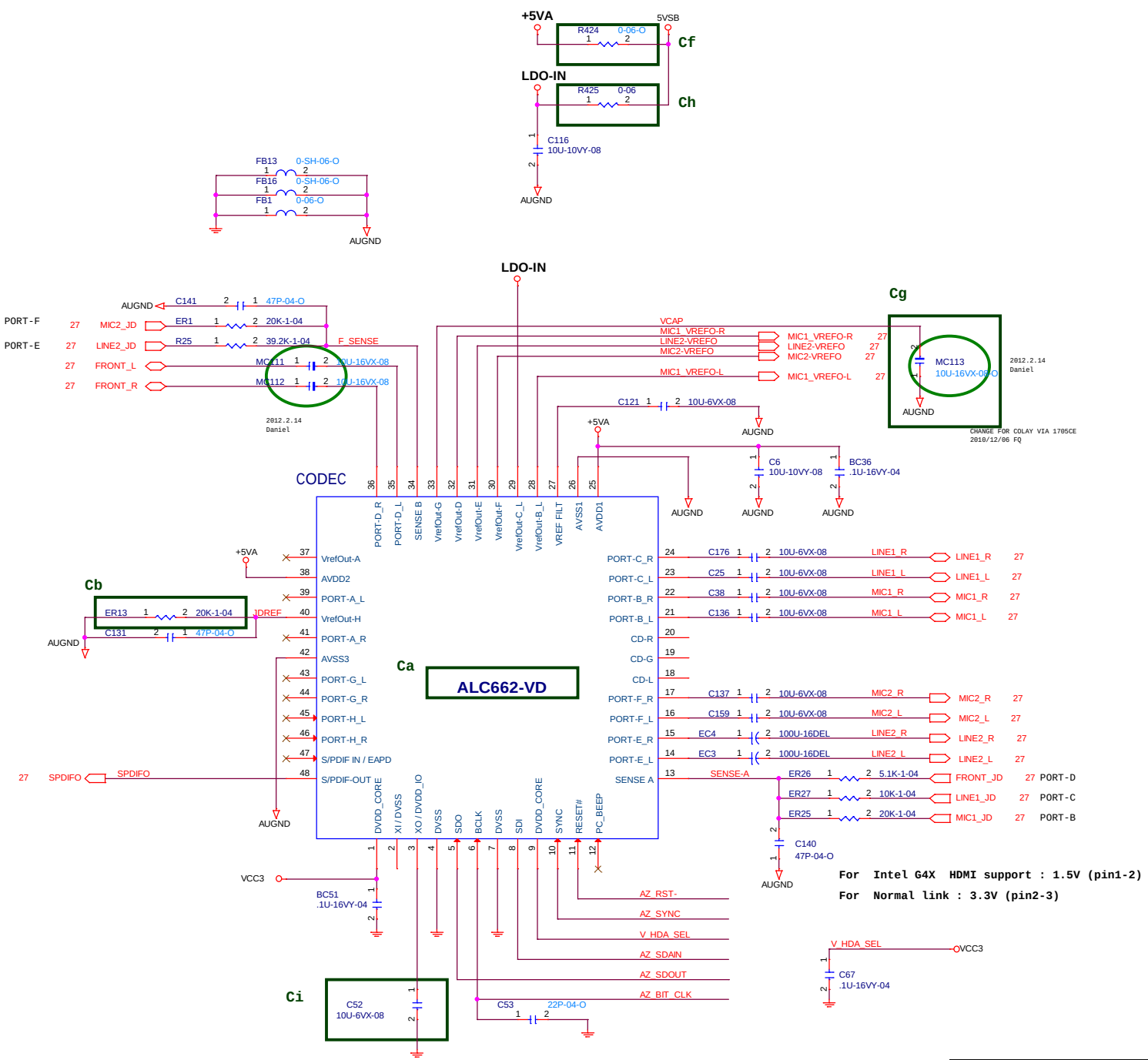
Pin Difference

Pin	ALC662 VD	VT1705CE
3	REG VREF	GPIO1
4	GPIO1	DVSS
25	LDO OUTPUT	LDO VIN
29	LDO VIN	OPTION CAP
33	LINE1 VREF	LDO OUTPUT
37	FRONT VREF ?	NC
38	LDO OUTPUT	LDO VIN
45	DMIC DATA	NC
46	DMIC CLK	NC

BOM Difference

Location	ALC662 VD	VT1705CE
Ca	ALC662-VD0-GR	VT1705CE
Cb	20K-1-04	5.1K-1-04
Cc	V	X
Cd	2.2K-04	3.3K-04
Ce	75-04	16-04
Cf	X	V
Cg	X	V
Ch	V	X
Ci	V	X

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



Change ALC892 to ALC662.
Devon 20121016

Elitegroup Computer Systems

Title: ALC662(CHIP)

Size: Custom | Document Number: B85H3-M3 | Rev: 1.0

Date: Tuesday, May 28, 2013 | Sheet 26 of 34

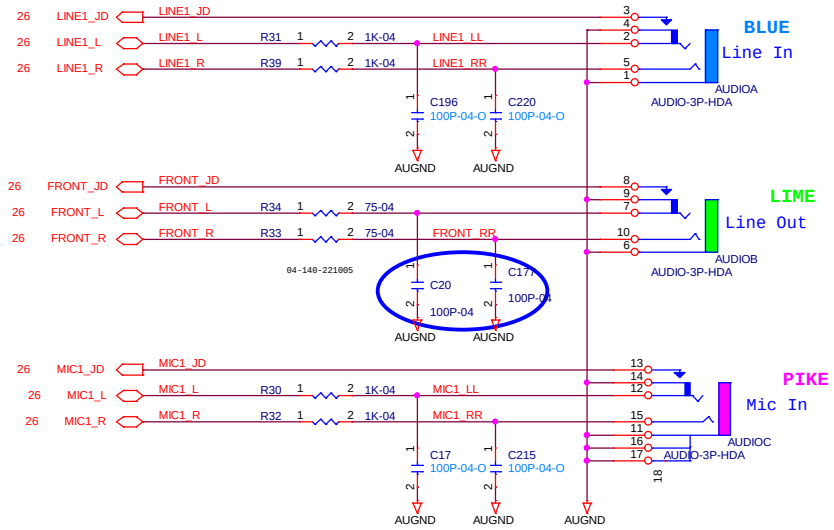
External Connection

18 FP_AUD_DETECT ⟵ FP_AUD_DETECT

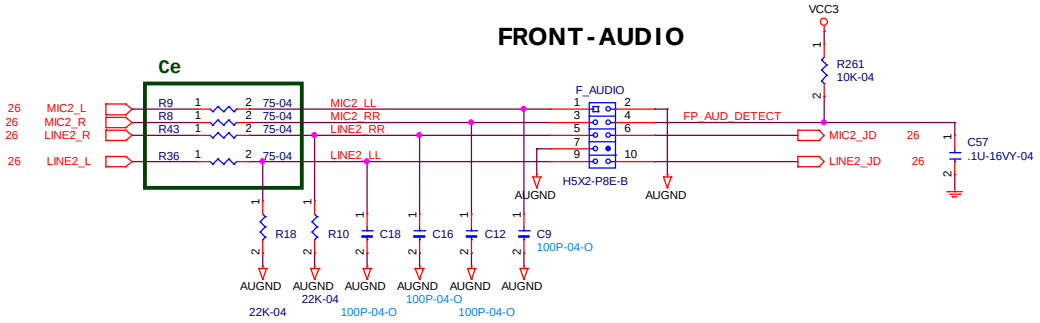
* HDPANEL_DETECT connect to SIO or SB GPIO for AC97 Panel support

REAR-AUDIO

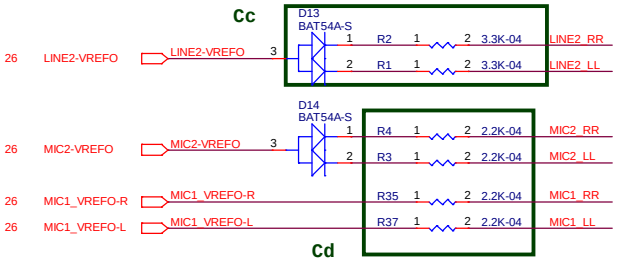
Non re-tasking for rear panel



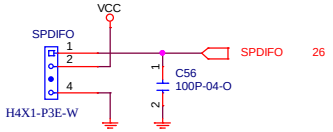
FRONT-AUDIO

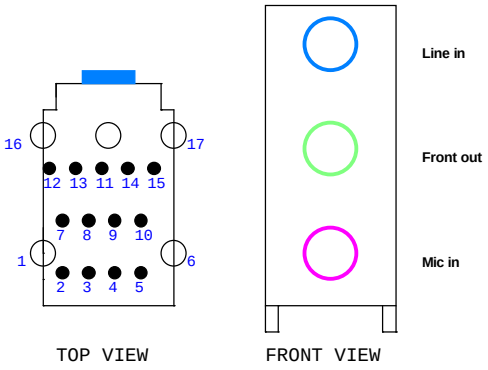


MIC Bias



SPDIF-OUT





Elitegroup Computer Systems	
Title	ALC662(CHIP)
Size: Custom	Document Number: B85H3-M3
Rev	1.0
Date: Tuesday, May 28, 2013	Sheet 27 of 34

External Connection

SATA_LED1- / SATALED_L
18,5 FP_RST_L
24 FP_PWRBTN_L → HWRST_L, -PWRBTN
24 G_LED1 → G_LED1
24 G_LED2 → G_LED2
18 PCH_SPKR → PCH_SPKR

FRONT PANEL

F_PANEL connector: +HDLED, +MSGLED, RST, PWR

VCC3, VCC
R461 8.2K-04
R434 180-04
HDD_LED
SATA_LED1-
HWRST_L
R460 100-04
MC60 1U-6.3VX-04
F_PANEL H5X2-P10E-B
DIMM_5VDUAL
RN20 330-8P4R-04
G_LED1X
G_LED2X
PWRBTN_1
-PWRBTN
R457 100-04
MC59 1U-6.3VX-04

5VSB
R451 4.7K-04
G_LED1
QN24 2N3904-S
G_LED1X

	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

R455 4.7K-04
G_LED2
QN25 2N3904-S
G_LED2X

PCH_SPKR
R106 1K-04
QN1 2N3904-S
R109 100-04
SPKOUT
BC73 .1U-16VY-04-O
SPK
H4X1-P2E-B

5VSB, VCC
BC148 .1U-16VY-04-O
BC68 .1U-16VY-04-O
BC145 .1U-16VY-04-O
BC146 .1U-16VY-04-O
BC144 .1U-16VY-04-O

POWER CONNECTOR

External Connection

ATX_5VSB → 5VSB_ATX
VCC3 → VCC3
-12V → -12V
5VSB → 5VSB
VCC → VCC
+12V → +12V
DIMM_5VDUAL → DIMM_5VDUAL
24 ATX_PSON_L → -ATX_PSON_SIO
17,24 ATX_PWRGD → ATX_PWRGD

-12V, VCC, VCC3, VCC3, VCC +12V, 5VSB_ATX
-ATX_PSON_SIO
ATX_POWER

13	3.3V	3.3V	1
14	-12V	3.3V	2
15	GND	GND	3
16	PS_ON	+5V	4
17	GND	+5V	5
18	GND	GND	6
19	GND	PWROK	7
20	-5V	AUX5V	8
21	+5V	+12V	9
22	+5V	+12V	10
23	+5V	+12V	11
24	GND	3.3V	12

ATX-PW-24P2R

VCC
R442 10K-04
ATX_PWRGD
BC147 .1U-16VY-04

VCC
EC8
560U-6.3D-OS
Devon 1023

FAN

Kent 1016

External Connection

+12V → +12V
VCC → VCC
24 CFAN_PWM1 → CFAN_PWM1
24 CFAN_TAC1 → CFAN_TAC1
24 SFAN_TAC2 → SFAN_TAC2
24 SFAN_PWM2 → SFAN_PWM2

Top Veiw

+12V, VCC3
D11 1N4148-S
R286 4.7K-04
R285 27K-04
R284 10K-04
CFAN_TAC1
R292 4.7K-04
R293 100-04
CFAN_PWM1
CFAN_PWM1_R
CPU_FAN
GPO, SENSE, +12V, GND
H4X1-P-W
EC24 100U-16DE
MC47 1U-16VX5-04-O

SYS_FAN

VCC3
R329 4.7K-04
SFAN_PWM2
R326 15K-04
C127 10U-08
+12V
VSET_SYS
FON
VOUT_SYS
MC127 10U-08
MC114 10U-08
U29
VOUT, VIN, FON#, VSET, NC, GND
NCT3941S-A

RJ12 0-04-O(1-2)
FON
1-2 VOUT 4 times of VSET voltage
2-3 Fully turn on
=>Internal pull-high

+12V
R262 4.7K-04
D19 1N4148-S
SFAN_TAC2
R263 27K-04
R264 10K-04
R338 0-08-O
VOUT_SYS
EC39 100U-16D6-OS-O
MC44 10U-16V-08
SYS_FAN
SENSE, +12V, GND
H3X1-P-W

MC112 & MC127 as close as possible to the each pin

PWR_FAN

+12V
PWR_FAN
SENSE, +12V, GND
H3X1-P-W
BC438 .1U-04

SYS_FAN smart default
PWR_FAN SPEC no smart fan
Devon 1023

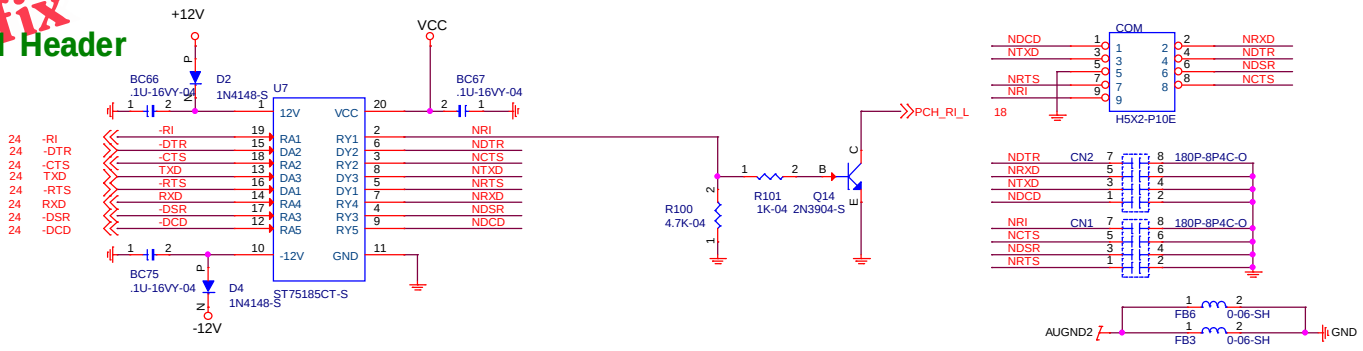
+12V
BC439 .1U-04-O
BC440 .1U-04-O
DIMM_5VDUAL
BC441 .1U-04
BC442 .1U-04-O
BC443 .1U-04-O
reserve bypass C for +12V and DIMM_5VDUAL
Devon 1119

H3 TH8
H4 TH8
H5 TH8
H2 TH8
H1 TH8
H6 TH8

Elitegroup Computer Systems

Title: F_PANEL / FAN / PWR CONN
Size: Custom
Document Number: B85H3-M3
Rev: 1.0
Date: Tuesday, May 28, 2013
Sheet 28 of 34

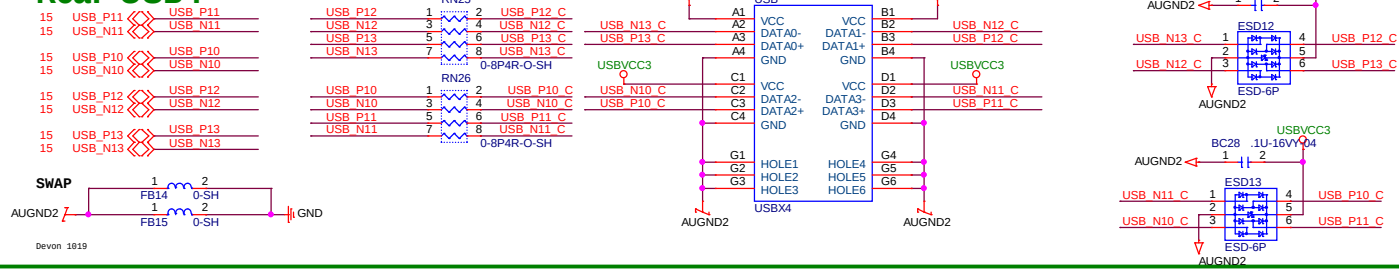
COM Header

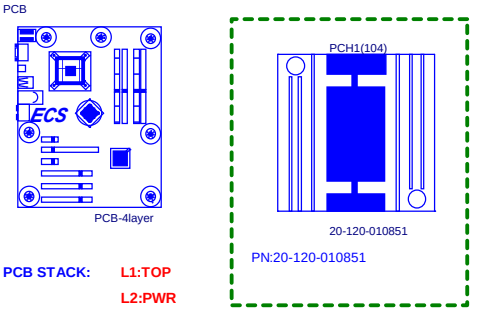


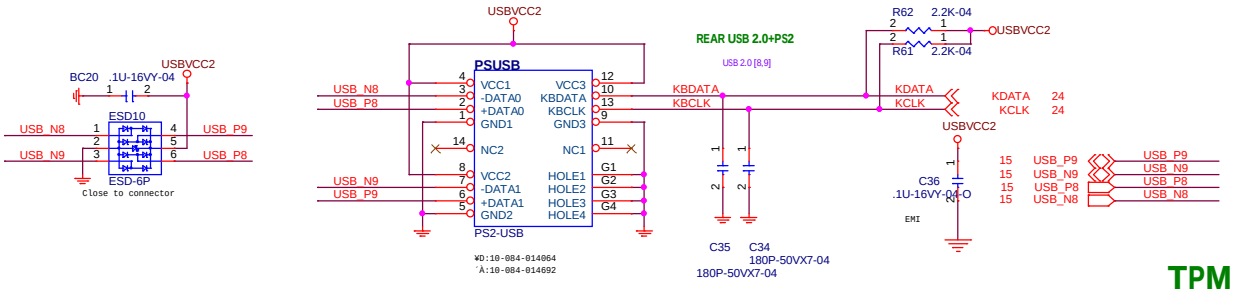
1)Circuit type 1

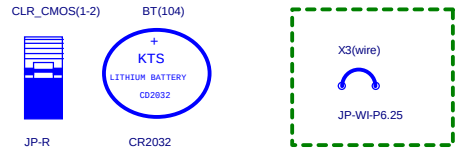
Layer 1:TOP	
Layer 2:PWR	
Layer 3:GND	
Layer 4:BOTTOM	

Rear USB4

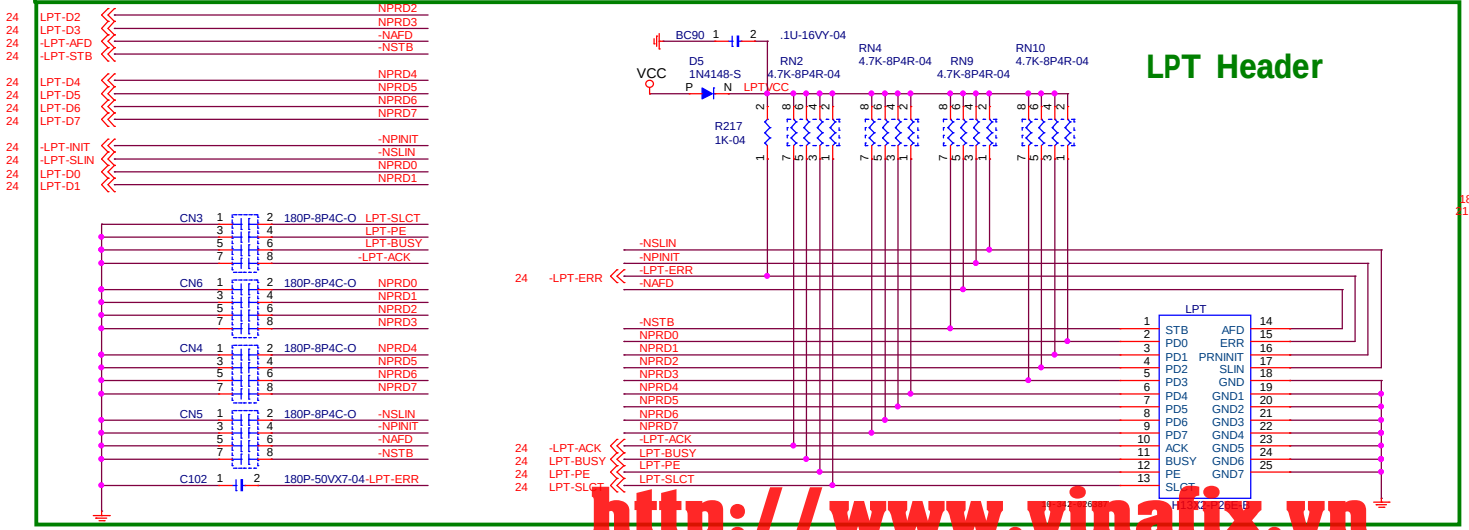




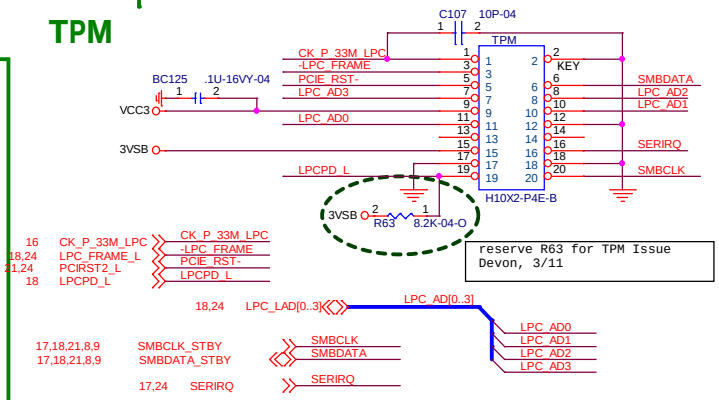




LPT Header



TPM



Elitegroup Computer Systems

Title	LPT / COM / RUSB / TPM	
Size: Custom	Document Number: B85H3-M3	Rev: 1.0
Date: Tuesday, May 28, 2013	Sheet 29 of 34	

External Connection

VCC 3VSB VCC3

PAD[31:0]

PCH CLKOUT
CK_PCIEN1_BRIDGE
CK_PCIEP1_BRIDGE

PCH PEX
PEX_PCI_TP
PEX_PCI_TN
PEX_PCI_RP
PEX_PCI_RN

PEX RST
PCIE_WAKE_L
PME#_IT
PERST#
PCIRST1_L

PCI
PCBE0# PCBE1# PCBE2# PCBE3# PM66EN PFRAME# PIRDY# PTRDY# PSTOP# PDVSEL# PPAR PSERR# PPERR# PCIRST# PLOCK# PCICLK0 PGNT0# PREQ0#
PCICLK1 PGNT1# PREQ1#

Devon 1017

PETER 1004
DELETE NET RES 0-8P4R-04
INTD# INTB# INTC# INTA#

CK_PCIEN1_BRIDGE — R474 33-04 — CLKN
CK_PCIEP1_BRIDGE — R475 33-04 — CLKP
PCIE CLK signals
Close to chip

PCH PEX — ITE8893E
C263 .1U-16VX-04 PEX_PCI_RN — PEX_PCI_RN_C
C264 .1U-16VX-04 PEX_PCI_RP — PEX_PCI_RP_C
PCIE TX signals
Close to chip

RREF — R476 12K-04 — AUGND5
Close to chip

PCB layout note:
Connect to PCIE
PERST# Signal

R477 33-04 PCICLK0
R131 33-04 PCICLK1
Devon 1102

ADD PGNT1#,PREQ1#,PCICLK1
Devon 1017

U41

IT8893E-FX
LQFP 128(14x14 mm)

3VSB
AUGND5
TX
RX

HW Strapping

RJ10 10K-04(2-3) PCICLK_SEL
RJ11 0-04(2-3) PM66EN
VCC3

NET Name	HI	LO
PCICLK_SEL	External PCICLK	Internal PCICLK
PM66EN	PCICLK=62.5MHz	PCICLK=33.3MHz

PCIe BUS 3.3_AUX Power

1.8VD — L8 120mA FB120-04 — 1.8VA
1.8V_AUX — L9 100mA FB120-04 — 1.8V_AUXA
L10 0-06-SH — AUGND5

1.8V_AUX Power source

100mA
1.8V_AUX
MC61 10U-6.3VX-06

3VSB
PCIE_WAKE_L R469 1K-04
PME#_IT R470 10K-04
RST_SEL R471 10K-04
TEST_EN R472 10K-04
EXT_ARB R473 10K-04
Pull hige R change to 1K. Devon 1031

PCI BUS 5V external pull up

VCC — L11 0-06
RN31: PLOCK# INTD# PSERR# PPERR# — 2.7K-8P4R-04
RN33: PFRAME# PIRDY# PTRDY# PSTOP# — 2.7K-8P4R-04
Add PREQ1# pull high Devon 1023

PCI BUS 3.3V external pull up

VCC3 — L12 0-06-O
RN32: PDVSEL# INTA# INTC# INTB# — 2.7K-8P4R-04
Test mode
RN34: NC8 PREQ1# PREQ0# NC6 — 2.7K-8P4R-04
PCIRST# — R481 2.7K-04

Pull high PCIRST#,PREQ1#
Devon 1019

PGNT1# ,PGNT0# ,PPAR del pull high
Devon 1102

1.8VA — MC72 10U-6.3VX-06, MC63 1U-6.3VX-04, BC204 .1U-16VY-04 — AUGND5
1.8VD — MC73 10U-6.3VX-06, MC64 1U-6.3VX-04, BC207 .1U-16VY-04
1.8V_AUX — BC202 .1U-16VY-04 — AUGND5
VCCP — BC201 .1U-16VY-04 — AUGND5
1.8V_AUXA — BC203 .1U-16VY-04 — AUGND5
VCC3 — MC74 10U-6.3VX-06, MC65 1U-6.3VX-04, BC205 .1U-16VY-04, BC206 .1U-16VY-04

PCIE DIP;DIN;DOP;DON PCB layout note:
To meet Differential Impedance :85 ohm +/- 15%
To meet Single-ended Impedance :50 ohm +/- 15%
PCIE DIP and DIN trace width:9.5 mils
PCIE DOP and DON trace width:9.5 mils
Space between DIP/DIN and DOP/DON:14.5 mils
L1 & L2 height:5 mils
The signal traces Number of vias: 2 (Max.)
The signal trace above analog GND plane
Spacing from other groups:>25 mils
Total trace length: 12 inchs (Max.)

PCIE CLK PCB layout note:
To meet Differential Impedance :100 ohm +/- 15%
To meet Single-ended Impedance :50 ohm +/- 15%
CLKP and CLKN trace width:7 mils
Space between CLKP and CLKN:14 mils
L1 & L2 height:5 mils
The signal traces Number of vias: 4 (Max.)
The signal trace above analog GND plane
Spacing from other groups:>25 mils
Total trace length: 12 inchs (Max.)

Elitegroup Computer Systems

Title: PCI BRIDGE ITE8893
Size: Custom
Document Number: B85H3-M3
Rev: 1.0
Date: Tuesday, May 28, 2013
Sheet 30 of 34

External Connection

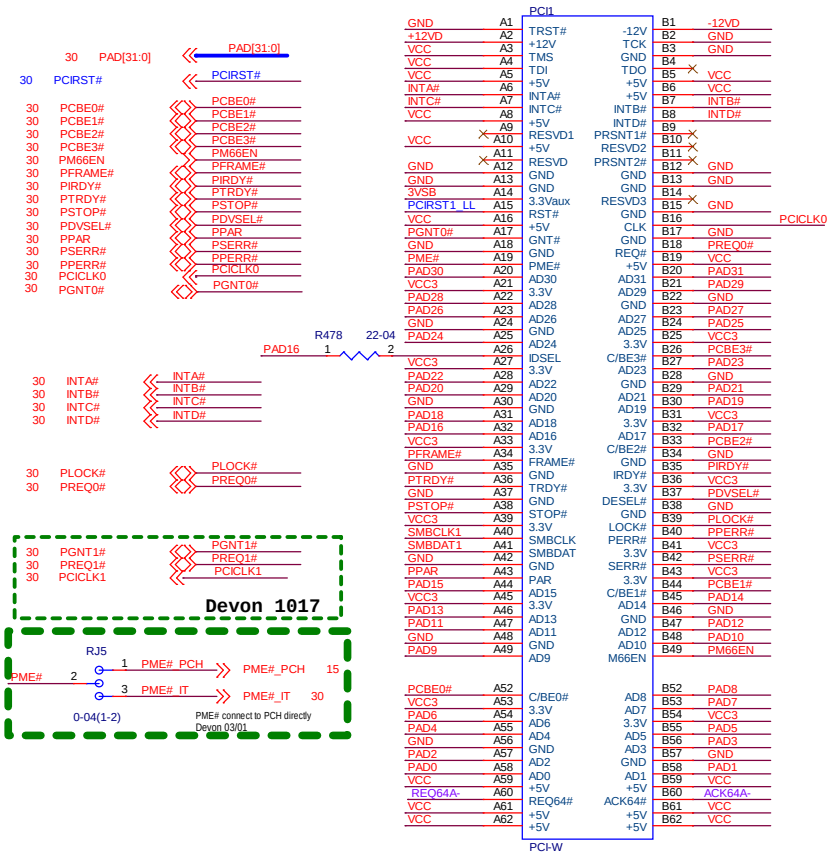
VCC → VCC
3VSB → 3VSB
VCC3 → VCC3
-12V → -12VD
+12V → +12VD

PCI CHIP

PCI Slot:
+VCC/S0/5A
+VCC3/S0/7.6A
+V12/S0/0.5A
+3VSB/0.375A

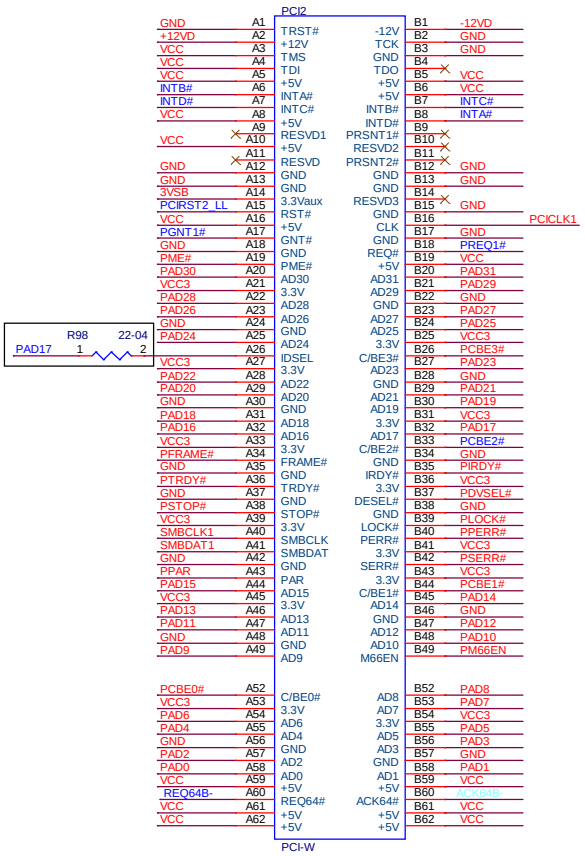
SPI ROM Circuit

PCI1



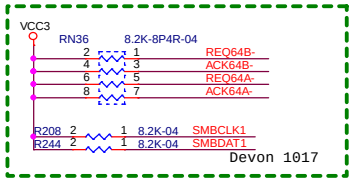
PCI1:REQ0;GNT0 IDSEL:16 INT:ABCD

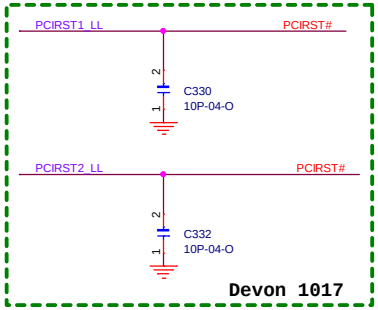
PCI2

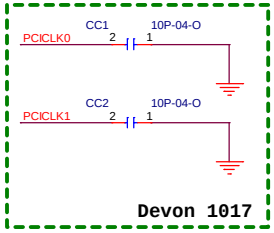


PCI2:REQ1;GNT1 IDSEL:17 INT:BCDA

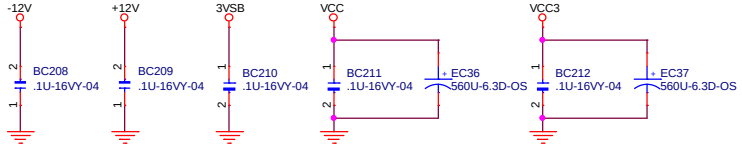
Add PCI2
Devon 1017







FROM PCH PCIRST#



Elitegroup Computer Systems

Title: PCI slot
Size: Custom
Document Number: B85H3-M3
Rev: 1.0
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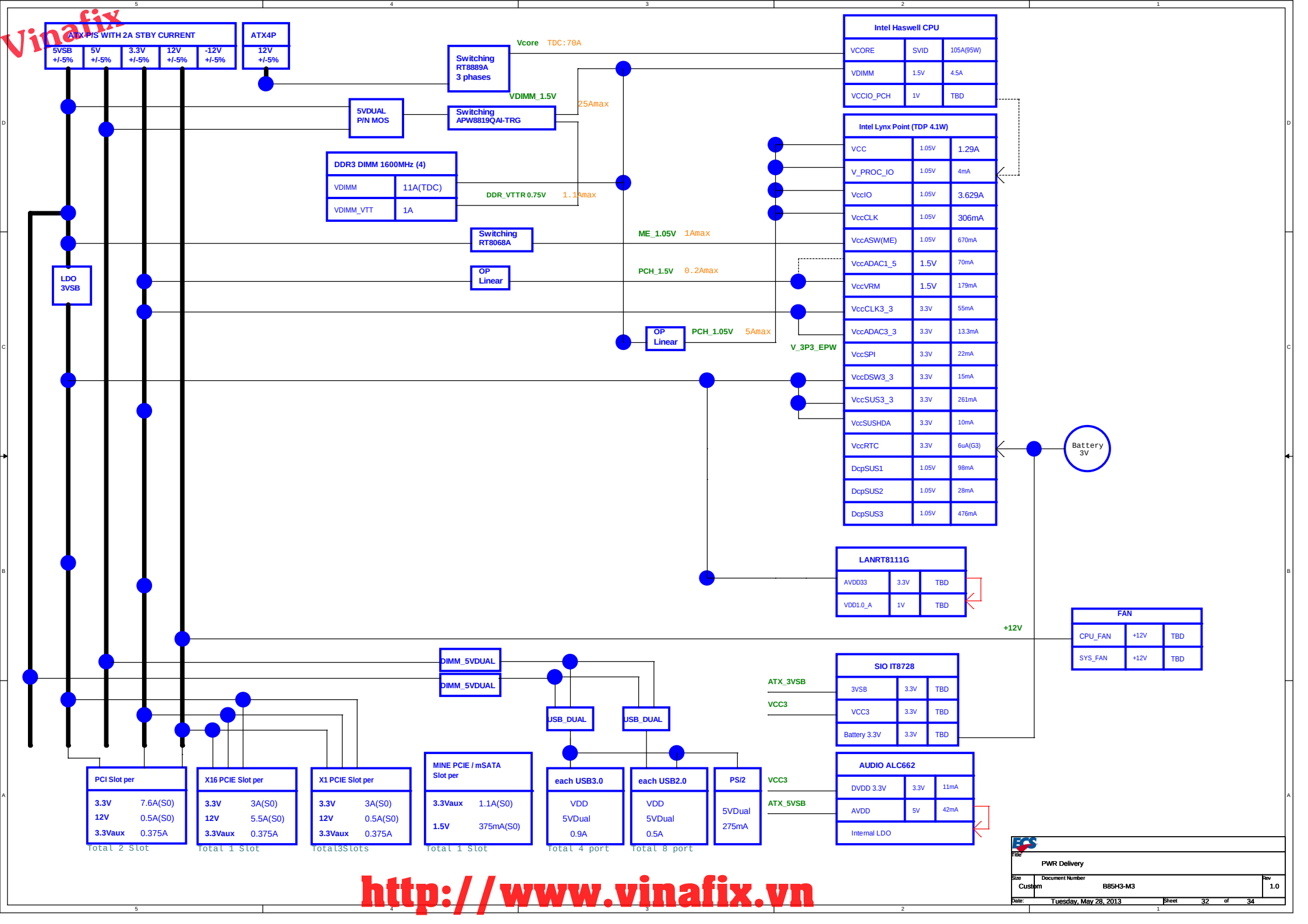

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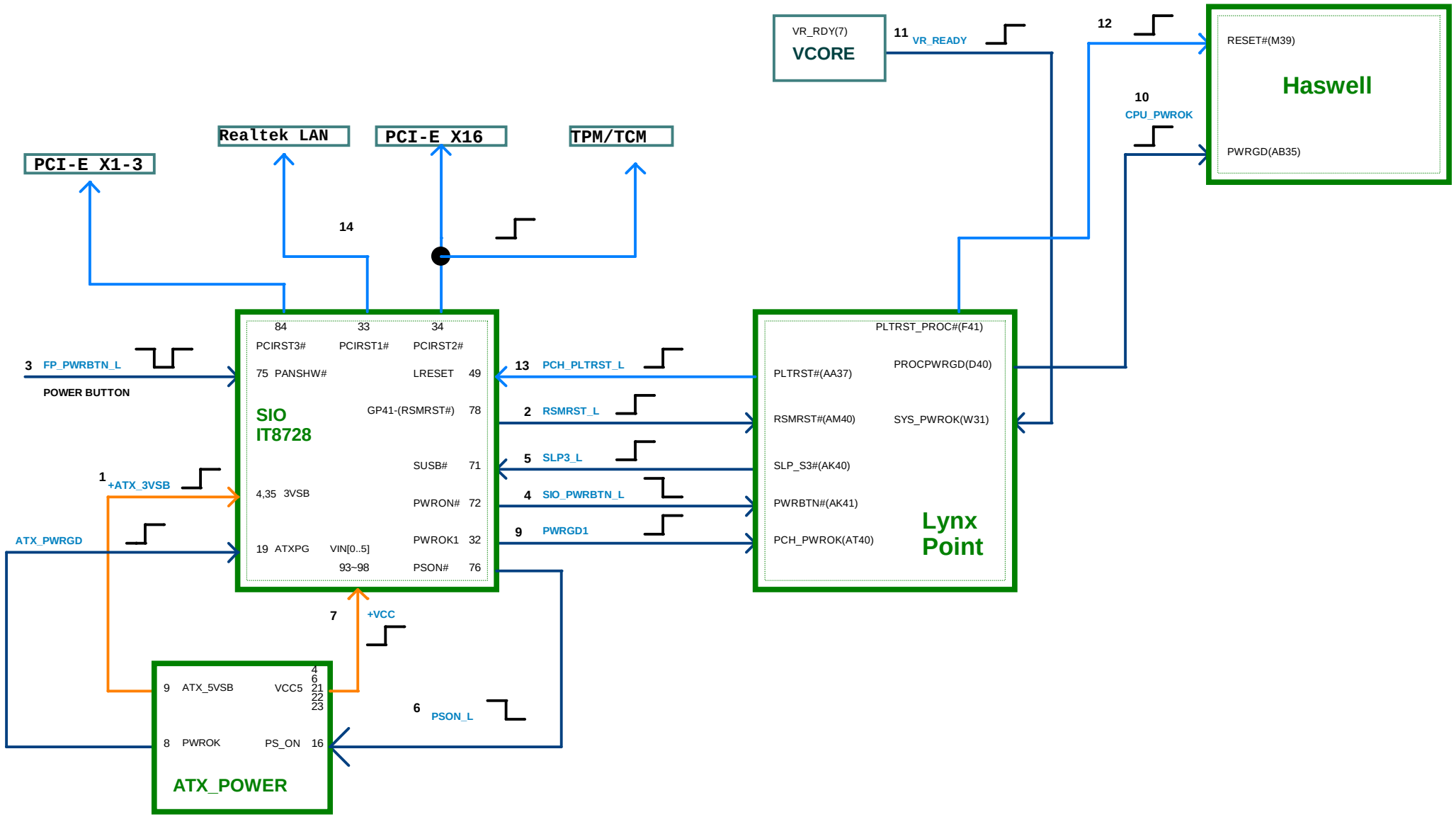

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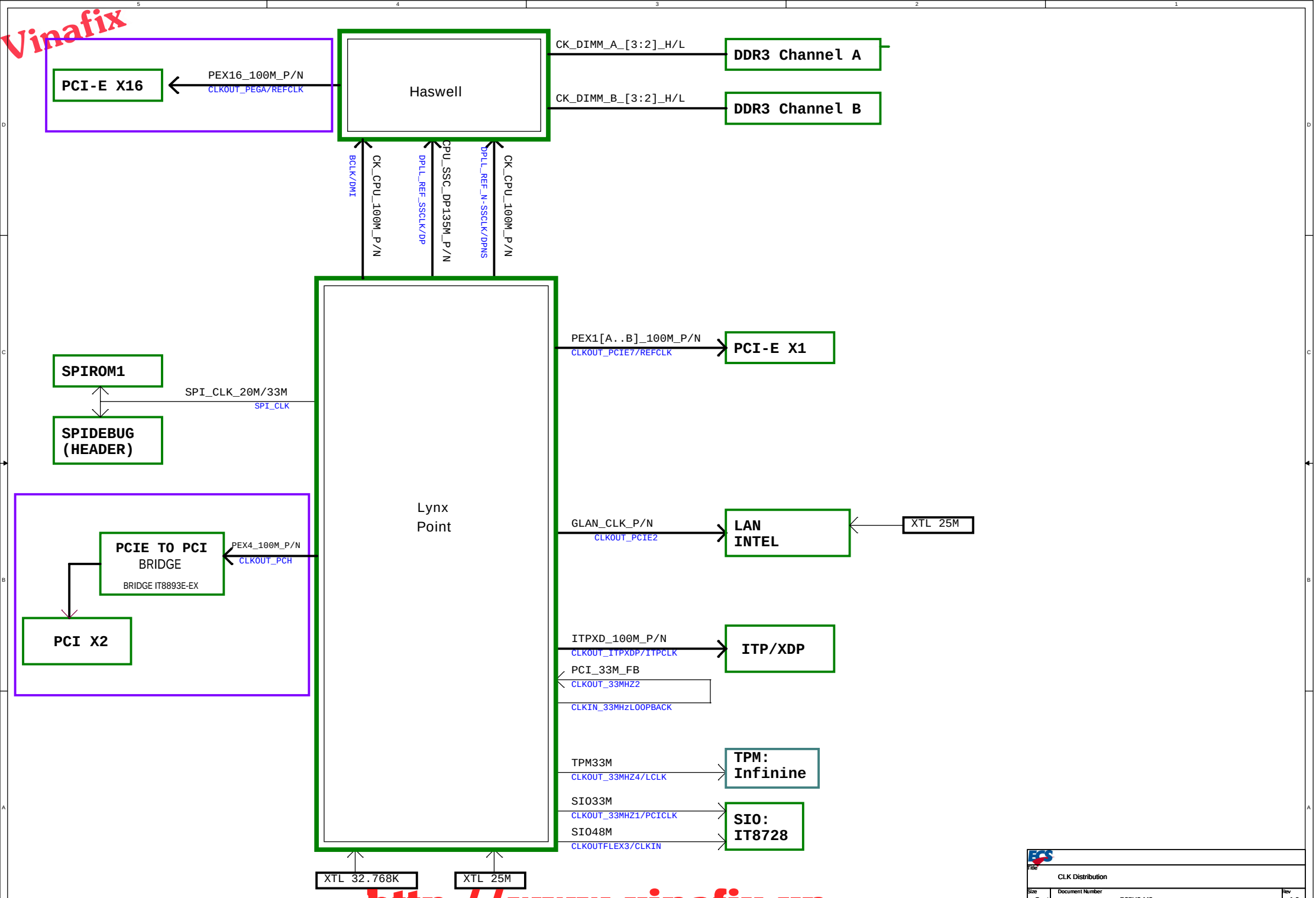

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