

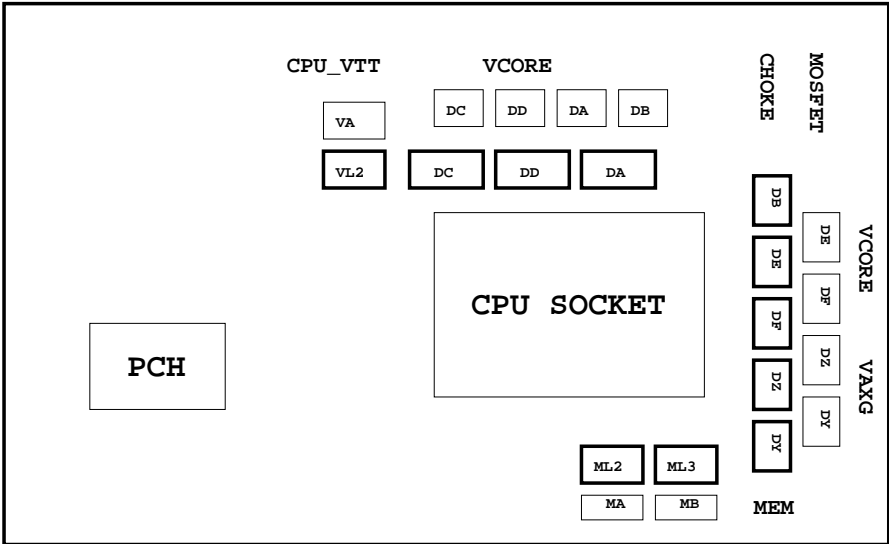
Model Name: GA-Z77X-UD3H-WB 1.03

SHEET TITLE

| | |
|----|--------------------------------|
| 01 | COVER SHEET |
| 02 | BOM & PCB MODIFY HISTORY |
| 03 | BLOCK DIAGRAM |
| 04 | CPU_LGA1155-A |
| 05 | CPU_LGA1155-B |
| 06 | CPU_LGA1155-C |
| 07 | DDR III CHANNEL A |
| 08 | DDR III CHANNEL B |
| 09 | PCH_FDI,DMI,USB,PCIE |
| 10 | PCH_DP_HDMI_DVI_DAC,CLK BUFFER |
| 11 | PCH_HOST,SATA,PCI |
| 12 | PCH_GPIO,CTRL,AUDIO |
| 13 | PCH_PWR,GND |
| 14 | PCI EXPRESS*16 SLOT |
| 15 | PCI EXPRESS*8 SLOT |
| 16 | PCI EXPRESS*16/*8 SWITCH |
| 17 | PCI EXPRESS*1 SLOTS X3 |
| 18 | PCI EXPRESS*4 SLOT / SWITCH |
| 19 | IT8892 PCIE to PCI BRIDGE |
| 20 | PCI SLOT |
| 21 | DP / HDMI / DVI Connector |
| 22 | mSATA Connector |
| 23 | Dual BIOS , TPM |
| 24 | VT2021 |
| 25 | REAR AUDIO JACK |
| 26 | VCORE PWM_IR3567-1 |
| 27 | VCORE PWM_IR3567-2 |

SHEET TITLE

| | |
|----|-------------------------------|
| 28 | DDR_15V & CPUVTT PWM_IR3570-1 |
| 29 | DDR_15V & CPUVTT PWM_IR3570-2 |
| 30 | DISCRETE POWER 1 |
| 31 | DISCRETE POWER 2 |
| 32 | I/O IT8728F |
| 33 | USB3_ESATA , KB/USB3, -PHOT |
| 34 | F_PANEL , F_USB , F_USB3 |
| 35 | ATX POWER, CLOCK GEN |
| 36 | HWM, FAN CTRL |
| 37 | Atheros 8151 |
| 38 | ESATA SE9172 |
| 39 | 80PORT / PWR SW / OV NCT3933 |
| 40 | VIA VL800 |
| 41 | TABLE LIST |

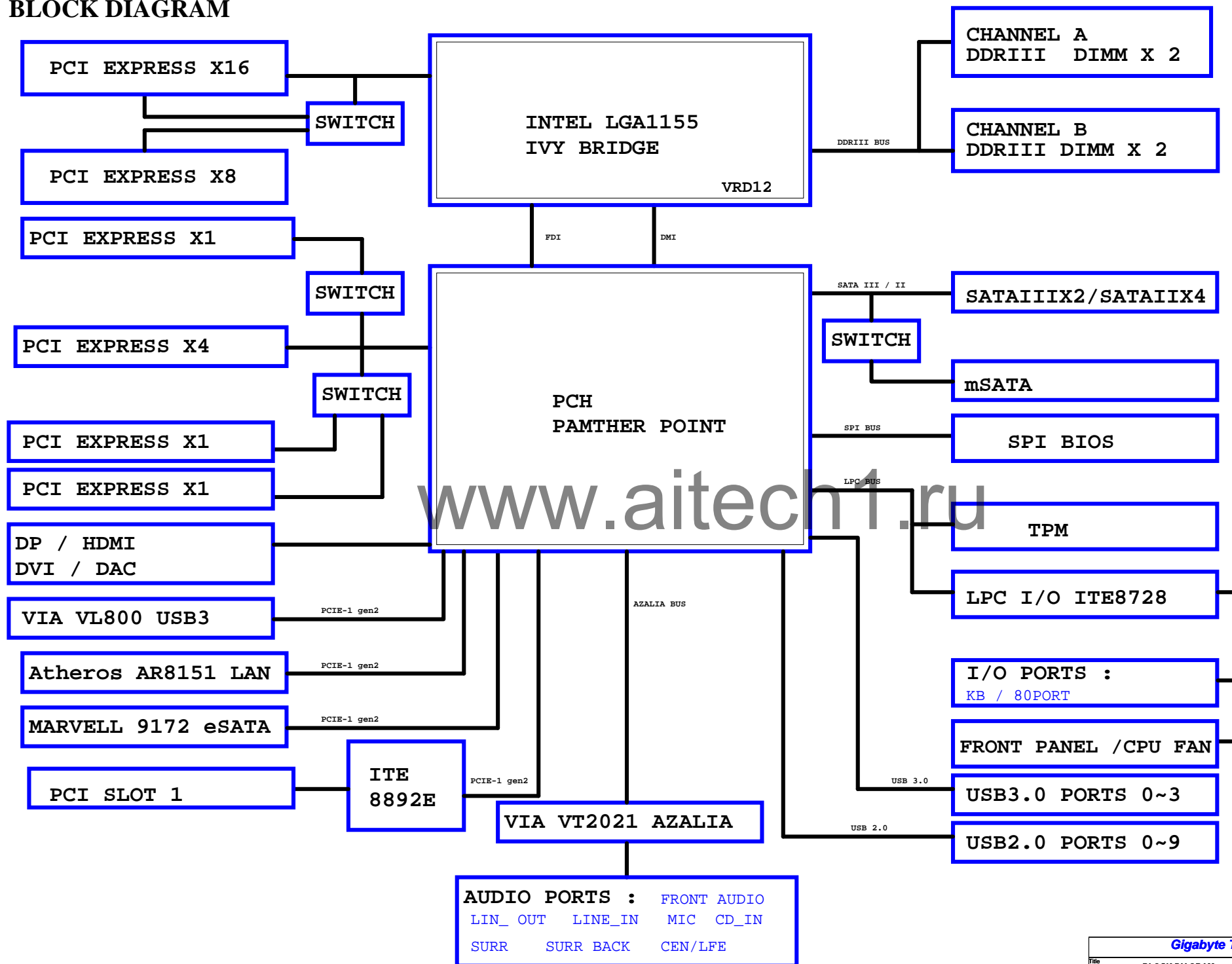


Component value change history

[illegible]

| DATE | Change Item | Reason |
|------------|---|-------------|
| 2011/12/12 | Add VIA VL800 USB3 PCIE X1_1 switch from PCIE X4 KB_USB3 , USB3_ESATA | Spec Change |
| 2012/01/08 | Add VR_HOT SCH MODIFY DDR15V POWER PLANE MODIFY IR8550 SCH | |
| 2012/01/19 | MODIFY FAN WORD RHU2 / CEC11 MASK MODIFY SW4 FOOTPRINT | |
| 2012/02/10 | 0.36uH choke footprint CHOKE1U-30A-1P MAC61 footprint change from 0805 to 0603 | |
| 2012/03/14 | DDR LAYOUT RULE CHANGE TO T | |
| 2012/04/20 | DDR LAYOUT RULE CHANGE SLOT GAP ADD DBC36 FOR CPUPWROK BY EMI | |
| | | |
| | | |
| | | |

BLOCK DIAGRAM



LGA1155A

| | | |
|--------|------|-----------|
| M_AA0 | AV27 | SA_MA[0] |
| M_AA1 | AY24 | SA_MA[1] |
| M_AA2 | AW24 | SA_MA[2] |
| M_AA3 | AW23 | SA_MA[3] |
| M_AA4 | AV23 | SA_MA[4] |
| M_AA5 | AT24 | SA_MA[5] |
| M_AA6 | AT23 | SA_MA[6] |
| M_AA7 | AU22 | SA_MA[7] |
| M_AA8 | AV22 | SA_MA[8] |
| M_AA9 | AT22 | SA_MA[9] |
| M_AA10 | AV28 | SA_MA[10] |
| M_AA11 | AU21 | SA_MA[11] |
| M_AA12 | AT21 | SA_MA[12] |
| M_AA13 | AW32 | SA_MA[13] |
| M_AA14 | AU20 | SA_MA[14] |
| M_AA15 | AT20 | SA_MA[15] |

| | | | |
|--------------|----------|------|-----------|
| (7) M_SWEA | M_SWEA | AW29 | SA_WE# |
| (7) M_SCASA | M_SCASA | AV30 | SA_CAS# |
| (7) M_SRASA | M_SRASA | AU28 | SA_RAS# |
| (7) M_SBAA0 | M_SBAA0 | AY29 | SA_BS[0] |
| (7) M_SBAA1 | M_SBAA1 | AW28 | SA_BS[1] |
| (7) M_SBAA2 | M_SBAA2 | AV20 | SA_BS[2] |
| (7) M-CSA0 | M-CSA0 | AU29 | SA_CS#0] |
| (7) M-CSA1 | M-CSA1 | AV32 | SA_CS#1] |
| (7) M-CSA2 | M-CSA2 | AW30 | SA_CS#2] |
| (7) M-CSA3 | M-CSA3 | AU33 | SA_CS#3] |
| (7) M_CKEA0 | M_CKEA0 | AV19 | SA_CKE[0] |
| (7) M_CKEA1 | M_CKEA1 | AT19 | SA_CKE[1] |
| (7) M_CKEA2 | M_CKEA2 | AU18 | SA_CKE[2] |
| (7) M_CKEA3 | M_CKEA3 | AV18 | SA_CKE[3] |
| (7) M_ODT_A0 | M_ODT_A0 | AV31 | SA_ODT[0] |
| (7) M_ODT_A1 | M_ODT_A1 | AU32 | SA_ODT[1] |
| (7) M_ODT_A2 | M_ODT_A2 | AU30 | SA_ODT[2] |
| (7) M_ODT_A3 | M_ODT_A3 | AW33 | SA_ODT[3] |

| | | | |
|--------------|----------|------|----------|
| (7) M_DCLKA0 | M_DCLKA0 | AY25 | SA_CK[0] |
| (7) M_DCLKA0 | M_DCLKA0 | AW25 | SA_CK[0] |
| (7) M_DCLKA1 | M_DCLKA1 | AU24 | SA_CK[1] |
| (7) M_DCLKA1 | M_DCLKA1 | AU25 | SA_CK[1] |
| (7) M_DCLKA2 | M_DCLKA2 | AW27 | SA_CK[2] |
| (7) M_DCLKA2 | M_DCLKA2 | AY27 | SA_CK[2] |
| (7) M_DCLKA3 | M_DCLKA3 | AU26 | SA_CK[3] |
| (7) M_DCLKA3 | M_DCLKA3 | AW26 | SA_CK[3] |

7.8) M_DDR3_RST < MR1



| | |
|------|--------------|
| AV13 | SA_DQS[8] |
| AV12 | SA_DQS[8] |
| AU12 | SA_ECC_CB[0] |
| AU14 | SA_ECC_CB[1] |
| AW13 | SA_ECC_CB[2] |
| AY13 | SA_ECC_CB[3] |
| AU13 | SA_ECC_CB[4] |
| AY12 | SA_ECC_CB[5] |
| AW12 | SA_ECC_CB[7] |

DDR_0

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LGA1155[10SC1-F01155-01R]

| | |
|----------|---------|
| AK3 | M_DQSA0 |
| AK2 | M_DQSA0 |
| AJ3 | M_DA0 |
| AJ4 | M_DA1 |
| AL4 | M_DA2 |
| AL4 | M_DA3 |
| AJ2 | M_DA4 |
| SA_DQ[4] | M_DA5 |
| SA_DQ[5] | M_DA6 |
| SA_DQ[6] | M_DA7 |
| SA_DQ[7] | M_DA8 |
| AP3 | M_DQSA1 |
| AP2 | M_DQSA1 |

| | |
|-----|---------|
| AN1 | M_DA8 |
| AN4 | M_DA9 |
| AR3 | M_DA10 |
| AR4 | M_DA11 |
| AN2 | M_DA12 |
| AN3 | M_DA13 |
| AR2 | M_DA14 |
| AR1 | M_DA15 |
| AW4 | M_DQSA2 |
| AW4 | M_DQSA2 |

| | |
|-----|---------|
| AV2 | M_DA16 |
| AW3 | M_DA17 |
| AV5 | M_DA18 |
| AW5 | M_DA19 |
| AU2 | M_DA20 |
| AJ3 | M_DA21 |
| AJ5 | M_DA22 |
| AY5 | M_DA23 |
| AV8 | M_DQSA3 |
| AW8 | M_DQSA3 |

| | |
|------|---------|
| AY7 | M_DA24 |
| AU7 | M_DA25 |
| AW7 | M_DA26 |
| AU9 | M_DA27 |
| AW7 | M_DA28 |
| AW7 | M_DA29 |
| AW9 | M_DA30 |
| AY9 | M_DA31 |
| AV37 | M_DQSA4 |
| AV36 | M_DQSA4 |

| | |
|-----------|---------|
| AU35 | M_DA32 |
| AW37 | M_DA33 |
| AU39 | M_DA34 |
| AU36 | M_DA35 |
| AW35 | M_DA36 |
| AY36 | M_DA37 |
| SA_DQ[37] | M_DA38 |
| SA_DQ[38] | M_DA39 |
| SA_DQ[39] | M_DA40 |
| AP38 | M_DQSA5 |
| AP39 | M_DQSA5 |

| | |
|------|---------|
| AR40 | M_DA40 |
| AR37 | M_DA41 |
| AN38 | M_DA42 |
| AN37 | M_DA43 |
| AR39 | M_DA44 |
| AR38 | M_DA45 |
| AN39 | M_DA46 |
| AN40 | M_DA47 |
| AK38 | M_DQSA6 |
| AK39 | M_DQSA6 |

| | |
|-----------|---------|
| SA_DQ[48] | M_DA48 |
| SA_DQ[49] | M_DA49 |
| SA_DQ[50] | M_DA50 |
| SA_DQ[51] | M_DA51 |
| SA_DQ[52] | M_DA52 |
| SA_DQ[53] | M_DA53 |
| SA_DQ[54] | M_DA54 |
| SA_DQ[55] | M_DA55 |
| AF38 | M_DQSA7 |
| AF39 | M_DQSA7 |

| | |
|------|--------|
| AG40 | M_DA56 |
| AG37 | M_DA57 |
| AE38 | M_DA58 |
| AE37 | M_DA59 |
| AG39 | M_DA60 |
| AG38 | M_DA61 |
| AE39 | M_DA62 |
| AE40 | M_DA63 |

(7) M_ODT_A[0..3] < M_ODT_A[0..3]

(8) M_ODT_B[0..3] < M_ODT_B[0..3]

(7) M_DA[0..63] < M_DA[0..63]

(8) M_DB[0..63] < M_DB[0..63]

(7) M_DQSA[0..7] < M_DQSA[0..7]

(7) M_DQSA[0..7] < M_DQSA[0..7]

(7) M_AA[0..15] < M_AA[0..15]

(8) M_AAB[0..15] < M_AAB[0..15]

(8) M_DQSB[0..7] < M_DQSB[0..7]

(8) M_DQSB[0..7] < M_DQSB[0..7]

LGA1155B

| | | |
|---------|------|-----------|
| M_AAB0 | AK24 | SB_MA[0] |
| M_AAB1 | AM20 | SB_MA[1] |
| M_AAB2 | AM19 | SB_MA[2] |
| M_AAB3 | AK18 | SB_MA[3] |
| M_AAB4 | AP19 | SB_MA[4] |
| M_AAB5 | AP18 | SB_MA[5] |
| M_AAB6 | AM18 | SB_MA[6] |
| M_AAB7 | AL18 | SB_MA[7] |
| M_AAB8 | AN18 | SB_MA[8] |
| M_AAB9 | AY17 | SB_MA[9] |
| M_AAB10 | AN23 | SB_MA[10] |
| M_AAB11 | AU17 | SB_MA[11] |
| M_AAB12 | AT18 | SB_MA[12] |
| M_AAB13 | AR26 | SB_MA[13] |
| M_AAB14 | AV16 | SB_MA[14] |
| M_AAB15 | AV16 | SB_MA[15] |

| | | | |
|--------------|---------|------|---------|
| (8) M_SWEB0 | M_SWEB | AR25 | SB_WE# |
| (8) M_SCASB0 | M_SCASB | AK25 | SB_CAS# |
| (8) M_SRASB0 | M_SRASB | AP24 | SB_RAS# |

| | | | |
|-------------|---------|------|----------|
| (8) M_SBAB0 | M_SBAB0 | AP23 | SB_BS[0] |
| (8) M_SBAB1 | M_SBAB1 | AM24 | SB_BS[1] |
| (8) M_SBAB2 | M_SBAB2 | AW17 | SB_BS[2] |

| | | | |
|------------|--------|------|----------|
| (8) M-CSB0 | M-CSB0 | AN25 | SB_CS#0] |
| (8) M-CSB1 | M-CSB1 | AN26 | SB_CS#1] |
| (8) M-CSB2 | M-CSB2 | AL26 | SB_CS#2] |
| (8) M-CSB3 | M-CSB3 | AT26 | SB_CS#3] |

| | | | |
|-------------|---------|------|-----------|
| (8) M_CKEB0 | M_CKEB0 | AU18 | SB_CKE[0] |
| (8) M_CKEB1 | M_CKEB1 | AY15 | SB_CKE[1] |
| (8) M_CKEB2 | M_CKEB2 | AW15 | SB_CKE[2] |
| (8) M_CKEB3 | M_CKEB3 | AV15 | SB_CKE[3] |

| | | | |
|--------------|----------|------|-----------|
| (8) M_ODT_B0 | M_ODT_B0 | AL26 | SB_ODT[0] |
| (8) M_ODT_B1 | M_ODT_B1 | AP26 | SB_ODT[1] |
| (8) M_ODT_B2 | M_ODT_B2 | AK26 | SB_ODT[2] |
| (8) M_ODT_B3 | M_ODT_B3 | AK26 | SB_ODT[3] |

| | | | |
|--------------|----------|------|----------|
| (8) M_DCLKB0 | M_DCLKB0 | AL21 | SB_CK[0] |
| (8) M_DCLKB0 | M_DCLKB0 | AL22 | SB_CK[0] |
| (8) M_DCLKB1 | M_DCLKB1 | AL20 | SB_CK[1] |
| (8) M_DCLKB1 | M_DCLKB1 | AK20 | SB_CK[1] |
| (8) M_DCLKB2 | M_DCLKB2 | AL23 | SB_CK[2] |
| (8) M_DCLKB2 | M_DCLKB2 | AM22 | SB_CK[2] |
| (8) M_DCLKB3 | M_DCLKB3 | AP21 | SB_CK[3] |
| (8) M_DCLKB3 | M_DCLKB3 | AN21 | SB_CK[3] |

| | | | |
|----------------|------------|-----|--------|
| (8) M_VREF_DQ8 | M_VREF_DQ8 | AH1 | FC_AH1 |
| (7) M_VREF_DQ8 | M_VREF_DQ8 | AH4 | FC_AH4 |

| | |
|------|--------------|
| AN16 | SB_DQS[8] |
| AN15 | SB_DQS[8] |
| AL16 | SB_ECC_CB[0] |
| AM16 | SB_ECC_CB[1] |
| AP16 | SB_ECC_CB[2] |
| AL15 | SB_ECC_CB[3] |
| AM15 | SB_ECC_CB[4] |
| AP15 | SB_ECC_CB[5] |

| | |
|-----------|-----------|
| SA_DQS[5] | SB_DQS[5] |
| SA_DQS[5] | SB_DQS[5] |
| SA_DQ[40] | SB_DQ[40] |
| SA_DQ[41] | SB_DQ[41] |
| SA_DQ[42] | SB_DQ[42] |
| SA_DQ[43] | SB_DQ[43] |
| SA_DQ[44] | SB_DQ[44] |
| SA_DQ[45] | SB_DQ[45] |
| SA_DQ[46] | SB_DQ[46] |
| SA_DQ[47] | SB_DQ[47] |

| | |
|-----------|-----------|
| SA_DQS[6] | SB_DQS[6] |
| SA_DQS[6] | SB_DQS[6] |
| SA_DQ[48] | SB_DQ[48] |
| SA_DQ[49] | SB_DQ[49] |
| SA_DQ[50] | SB_DQ[50] |
| SA_DQ[51] | SB_DQ[51] |
| SA_DQ[52] | SB_DQ[52] |
| SA_DQ[53] | SB_DQ[53] |
| SA_DQ[54] | SB_DQ[54] |
| SA_DQ[55] | SB_DQ[55] |

| | |
|-----------|-----------|
| SA_DQS[7] | SB_DQS[7] |
| SA_DQS[7] | SB_DQS[7] |
| SA_DQ[56] | SB_DQ[56] |
| SA_DQ[57] | SB_DQ[57] |
| SA_DQ[58] | SB_DQ[58] |
| SA_DQ[59] | SB_DQ[59] |
| SA_DQ[60] | SB_DQ[60] |
| SA_DQ[61] | SB_DQ[61] |
| SA_DQ[62] | SB_DQ[62] |
| SA_DQ[63] | SB_DQ[63] |

DDR_1

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LGA1155[10SC1-F01155-01R]

| | | |
|------------|-----|---------|
| SB_DQS[0] | AH7 | M_DQSB0 |
| SB_DQS[0] | AH6 | M_DQSB0 |
| SB_DQ[0] | AG7 | M_DB0 |
| SB_DQ[1] | AG8 | M_DB1 |
| SB_DQ[2] | AJ9 | M_DB2 |
| SB_DQ[3] | AJ8 | M_DB3 |
| SB_DQ[4] | AG5 | M_DB4 |
| SB_DQ[5] | AG6 | M_DB5 |
| SB_DQ[6] | AJ6 | M_DB6 |
| SB_DQ[7] | AJ7 | M_DB7 |
| SB_DQS[11] | AM8 | M_DQSB1 |
| SB_DQS[11] | AL8 | M_DQSB1 |

| | | |
|----------|------|--------|
| SB_WE# | AM7 | M_DB8 |
| SB_CAS# | AM10 | M_DB10 |
| SB_RAS# | AL10 | M_DB11 |
| SB_BS[0] | AL6 | M_DB12 |
| SB_BS[1] | AM6 | M_DB13 |
| SB_BS[2] | AL9 | M_DB14 |
| SB_BS[2] | AM9 | M_DB15 |

| | | |
|----------|-----|---------|
| SB_CS#0] | AR8 | M_DQSB2 |
| SB_CS#1] | AP8 | M_DQSB2 |
| SB_CS#2] | AP8 | M_DQSB2 |
| SB_CS#3] | AP8 | M_DQSB2 |

| | | |
|-----------|------|--------|
| SB_CKE[0] | AP7 | M_DB16 |
| SB_CKE[1] | AR7 | M_DB17 |
| SB_CKE[2] | AP10 | M_DB18 |
| SB_CKE[3] | AP10 | M_DB19 |
| SB_ODT[0] | AP6 | M_DB20 |
| SB_ODT[1] | AP9 | M_DB21 |
| SB_ODT[2] | AP9 | M_DB22 |
| SB_ODT[3] | AP9 | M_DB23 |

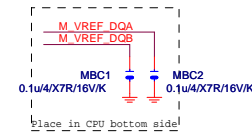
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|-----------|------|---------|
| SB_DQS[3] | AN13 | M_DQSB3 |
| SB_DQS[3] | AN12 | M_DQSB3 |
| SB_CK[0] | AM12 | M_DB24 |
| SB_CK[0] | AM13 | M_DB25 |
| SB_CK[1] | AP13 | M_DB26 |
| SB_CK[1] | AP13 | M_DB27 |
| SB_CK[2] | AL12 | M_DB28 |
| SB_CK[2] | AL13 | M_DB29 |
| SB_CK[3] | AP12 | M_DB30 |
| SB_CK[3] | AP12 | M_DB31 |

| | | |
|-----------|------|---------|
| SB_DQS[4] | AN29 | M_DQSB4 |
| SB_DQS[4] | AN28 | M_DQSB4 |
| SB_DQ[32] | AR28 | M_DB32 |
| SB_DQ[33] | AR29 | M_DB33 |
| SB_DQ[34] | AL28 | M_DB34 |
| SB_DQ[35] | AL29 | M_DB35 |
| SB_DQ[36] | AP28 | M_DB36 |
| SB_DQ[37] | AP29 | M_DB37 |
| SB_DQ[38] | AM28 | M_DB38 |
| SB_DQ[39] | AM29 | M_DB39 |

| | | |
|--------------|------|---------|
| SB_DQS[5] | AP33 | M_DQSB5 |
| SB_DQS[5] | AR33 | M_DQSB5 |
| SB_ECC_CB[0] | AP32 | M_DB40 |
| SB_ECC_CB[1] | AP31 | M_DB41 |
| SB_ECC_CB[2] | AP35 | M_DB42 |
| SB_ECC_CB[3] | AP34 | M_DB43 |
| SB_ECC_CB[4] | AR32 | M_DB44 |
| SB_ECC_CB[5] | AR31 | M_DB45 |
| SB_ECC_CB[6] | AR35 | M_DB46 |
| SB_ECC_CB[7] | AR34 | M_DB47 |

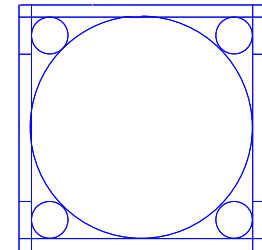
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|-----------|------|---------|
| SB_DQS[6] | AL33 | M_DQSB6 |
| SB_DQS[6] | AM33 | M_DQSB6 |
| SB_DQ[40] | AP32 | M_DB48 |
| SB_DQ[41] | AP31 | M_DB49 |
| SB_DQ[42] | AL35 | M_DB50 |
| SB_DQ[43] | AL32 | M_DB51 |
| SB_DQ[44] | AM34 | M_DB52 |
| SB_DQ[45] | AL31 | M_DB53 |
| SB_DQ[46] | AM35 | M_DB54 |
| SB_DQ[47] | AL34 | M_DB55 |

| | | |
|-----------|------|---------|
| SB_DQS[7] | AG35 | M_DQSB7 |
| SB_DQS[7] | AG34 | M_DQSB7 |
| SB_DQ[56] | AH35 | M_DB56 |
| SB_DQ[57] | AH34 | M_DB57 |
| SB_DQ[58] | AE34 | M_DB58 |
| SB_DQ[59] | AE35 | M_DB59 |
| SB_DQ[60] | AJ35 | M_DB60 |
| SB_DQ[61] | AJ34 | M_DB61 |
| SB_DQ[62] | AF33 | M_DB62 |
| SB_DQ[63] | AF35 | M_DB63 |



LGA1155

ILM_BP/1156/BKNI



Need check the new CPU ME

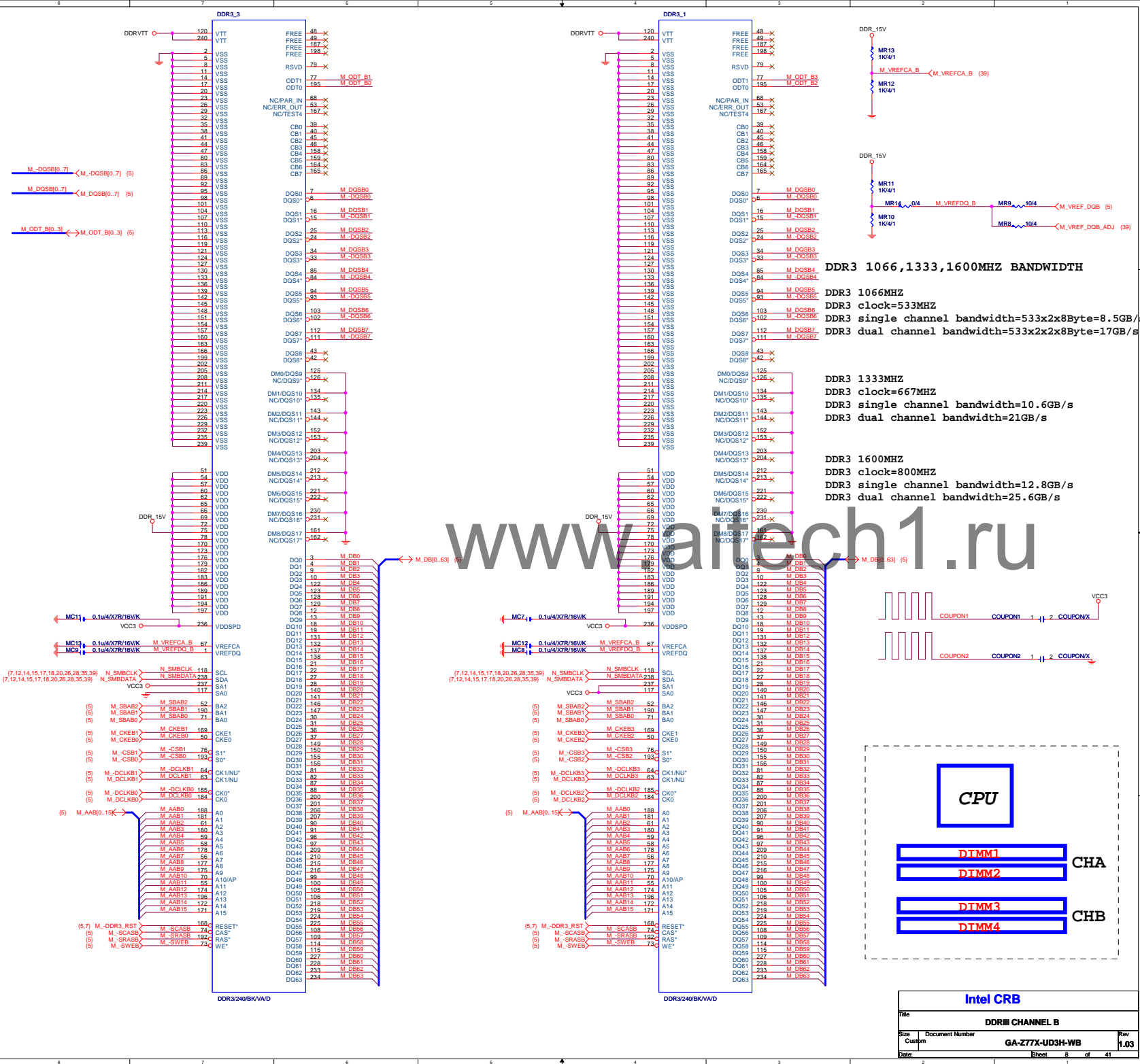
Intel CRB

CPU LGA1156-B

| | | |
|-------|--------------------------|---------------|
| Title | Document Number | Rev |
| Size | Custom | 1.03 |
| Date | Thursday, April 05, 2012 | Sheet 5 of 41 |

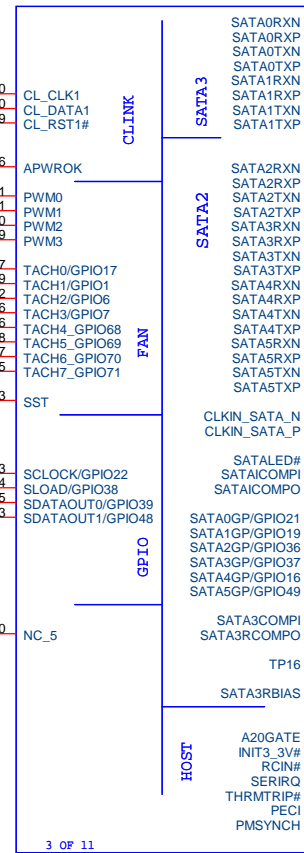
GA-Z77X-UD3H-WB

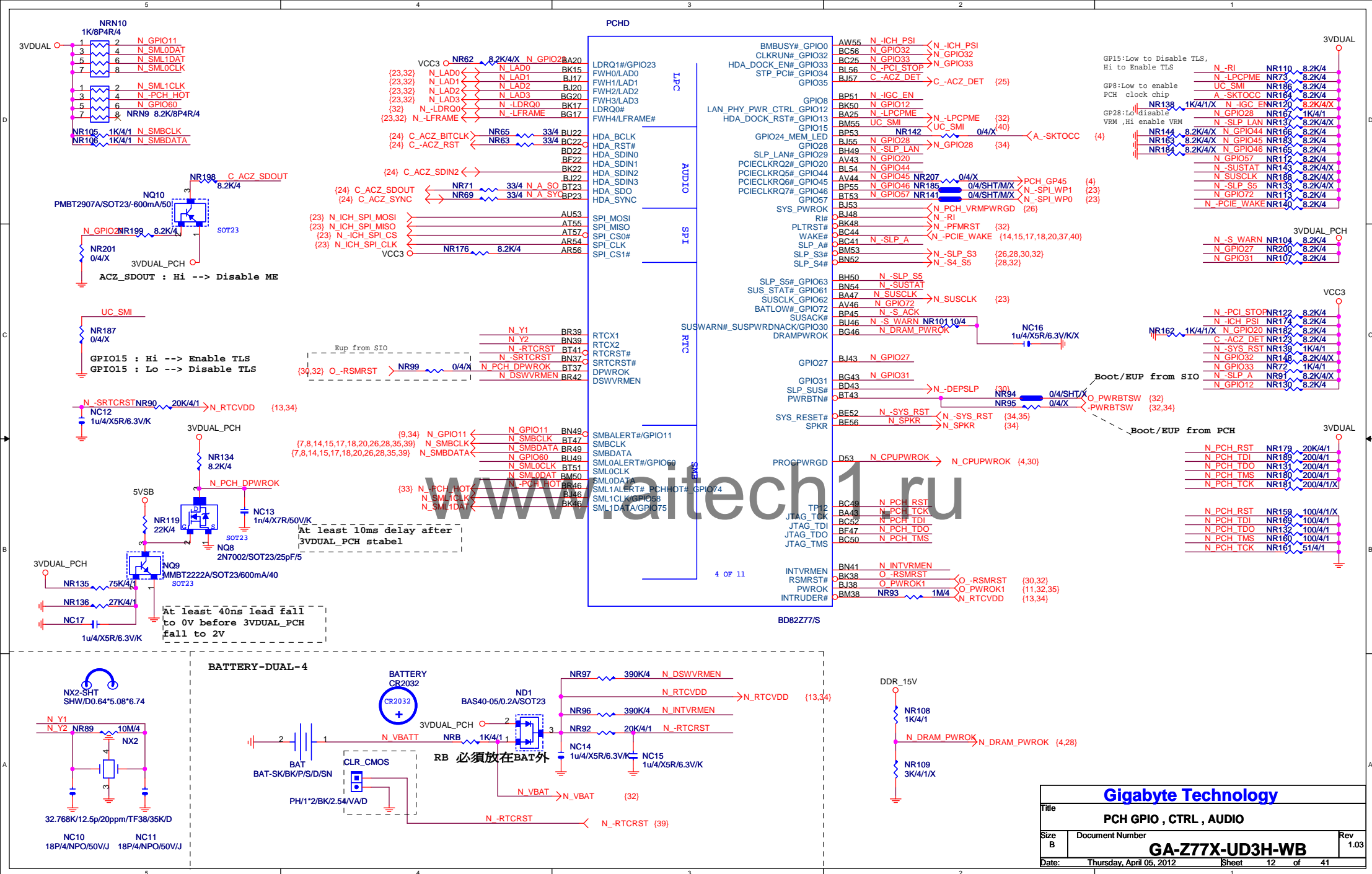


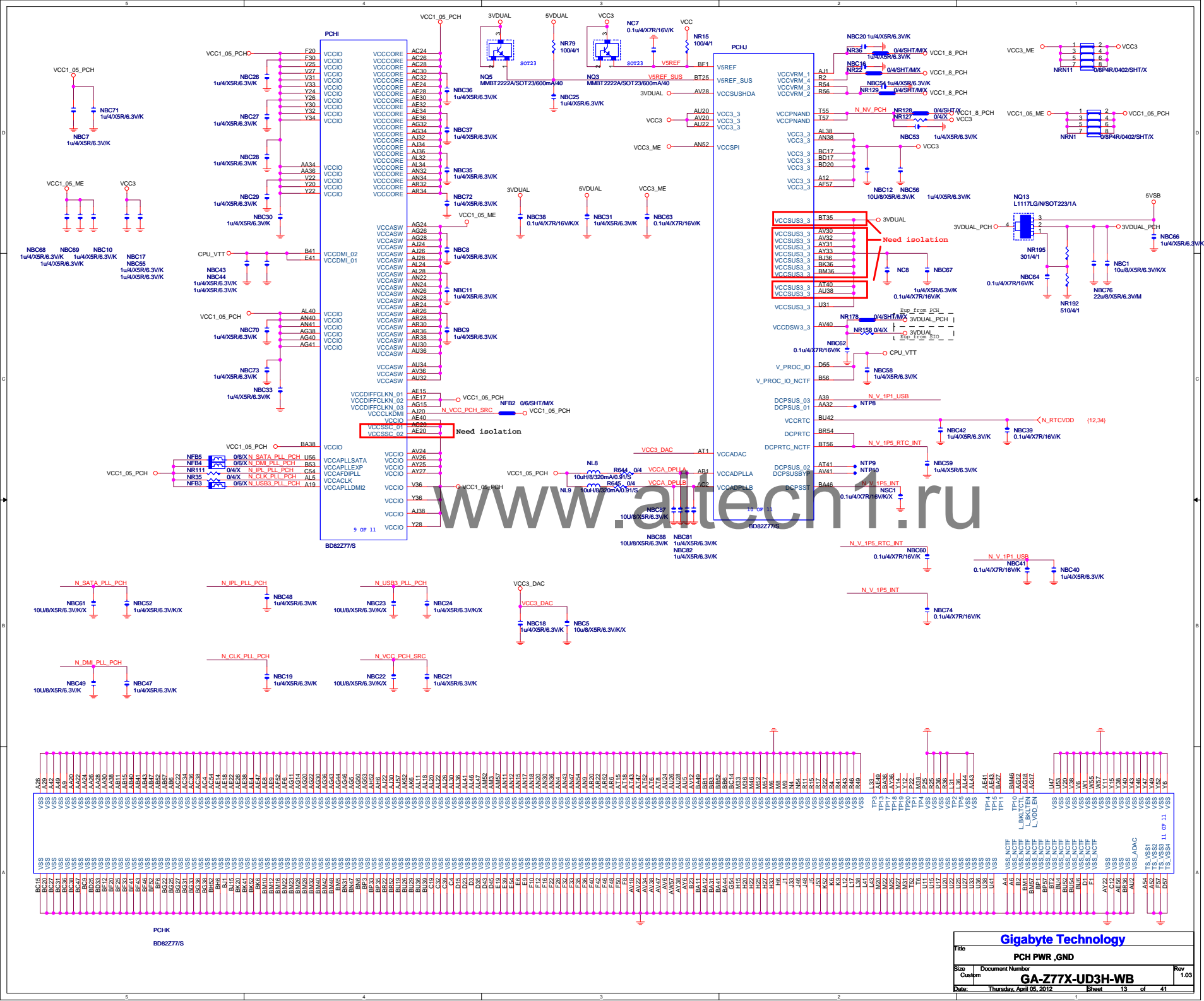


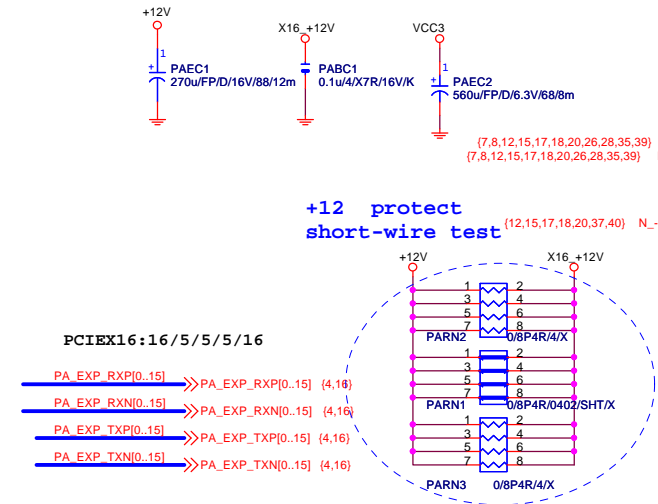
SATA:20/7.5/4.5/7.5/20 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%

PCHC









| | | | |
|--------------------|----------------------------|------------------|-------------------|
| PA EXP TXP0 | PAC5 | 0.22u4/X5R6.3V/K | PA EXP TXP0 C |
| PA EXP TXN0 | PAC4 | 0.22u4/X5R6.3V/K | PA EXP TXN0 C |
| PA EXP TXP1 | PAC6 | 0.22u4/X5R6.3V/K | PA EXP TXP1 C |
| PA EXP TXN1 | PAC7 | 0.22u4/X5R6.3V/K | PA EXP TXN1 C |
| PA EXP TXP2 | PAC8 | 0.22u4/X5R6.3V/K | PA EXP TXP2 C |
| PA EXP TXN2 | PAC9 | 0.22u4/X5R6.3V/K | PA EXP TXN2 C |
| PA EXP TXP3 | PAC10 | 0.22u4/X5R6.3V/K | PA EXP TXP3 C |
| PA EXP TXN3 | PAC11 | 0.22u4/X5R6.3V/K | PA EXP TXN3 C |
| PA EXP TXP4 | PAC12 | 0.22u4/X5R6.3V/K | PA EXP TXP4 C |
| PA EXP TXN4 | PAC13 | 0.22u4/X5R6.3V/K | PA EXP TXN4 C |
| PA EXP TXP5 | PAC14 | 0.22u4/X5R6.3V/K | PA EXP TXP5 C |
| PA EXP TXN5 | PAC15 | 0.22u4/X5R6.3V/K | PA EXP TXN5 C |
| PA EXP TXP6 | PAC16 | 0.22u4/X5R6.3V/K | PA EXP TXP6 C |
| PA EXP TXN6 | PAC17 | 0.22u4/X5R6.3V/K | PA EXP TXN6 C |
| PA EXP TXP7 | PAC18 | 0.22u4/X5R6.3V/K | PA EXP TXP7 C |
| PA EXP TXN7 | PAC19 | 0.22u4/X5R6.3V/K | PA EXP TXN7 C |
| PA EXP SW TXP8 | PAC20 | 0.22u4/X5R6.3V/K | PA EXP SW TXP8 C |
| PA EXP SW TXN8 | PAC21 | 0.22u4/X5R6.3V/K | PA EXP SW TXN8 C |
| PA EXP SW TXP9 | PAC22 | 0.22u4/X5R6.3V/K | PA EXP SW TXP9 C |
| PA EXP SW TXN9 | PAC23 | 0.22u4/X5R6.3V/K | PA EXP SW TXN9 C |
| PA EXP SW TXP10 | PAC24 | 0.22u4/X5R6.3V/K | PA EXP SW TXP10 C |
| PA EXP SW TXN10 | PAC25 | 0.22u4/X5R6.3V/K | PA EXP SW TXN10 C |
| PA EXP SW TXP11 | PAC26 | 0.22u4/X5R6.3V/K | PA EXP SW TXP11 C |
| PA EXP SW TXN11 | PAC27 | 0.22u4/X5R6.3V/K | PA EXP SW TXN11 C |
| PA EXP SW TXP12 | PAC28 | 0.22u4/X5R6.3V/K | PA EXP SW TXP12 C |
| PA EXP SW TXN12 | PAC29 | 0.22u4/X5R6.3V/K | PA EXP SW TXN12 C |
| PA EXP SW TXP13 | PAC30 | 0.22u4/X5R6.3V/K | PA EXP SW TXP13 C |
| PA EXP SW TXN13 | PAC31 | 0.22u4/X5R6.3V/K | PA EXP SW TXN13 C |
| PA EXP SW TXP14 | PAC32 | 0.22u4/X5R6.3V/K | PA EXP SW TXP14 C |
| PA EXP SW TXN14 | PAC33 | 0.22u4/X5R6.3V/K | PA EXP SW TXN14 C |
| PA EXP SW TXP15 | PAC34 | 0.22u4/X5R6.3V/K | PA EXP SW TXP15 C |
| PA EXP SW TXN15 | PAC35 | 0.22u4/X5R6.3V/K | PA EXP SW TXN15 C |
| | | | |
| PA EXP SW RXP8.15] | >>PA_EXP_SW_RXP[8.15] (16) | | |
| PA EXP SW RXN8.15] | >>PA_EXP_SW_RXN[8.15] (16) | | |
| PA EXP SW TXP8.15] | >>PA_EXP_SW_TXP[8.15] (16) | | |
| PA EXP SW TXN8.15] | >>PA_EXP_SW_TXN[8.15] (16) | | |

PCI-E REV:1.1--> 2.5GHZ

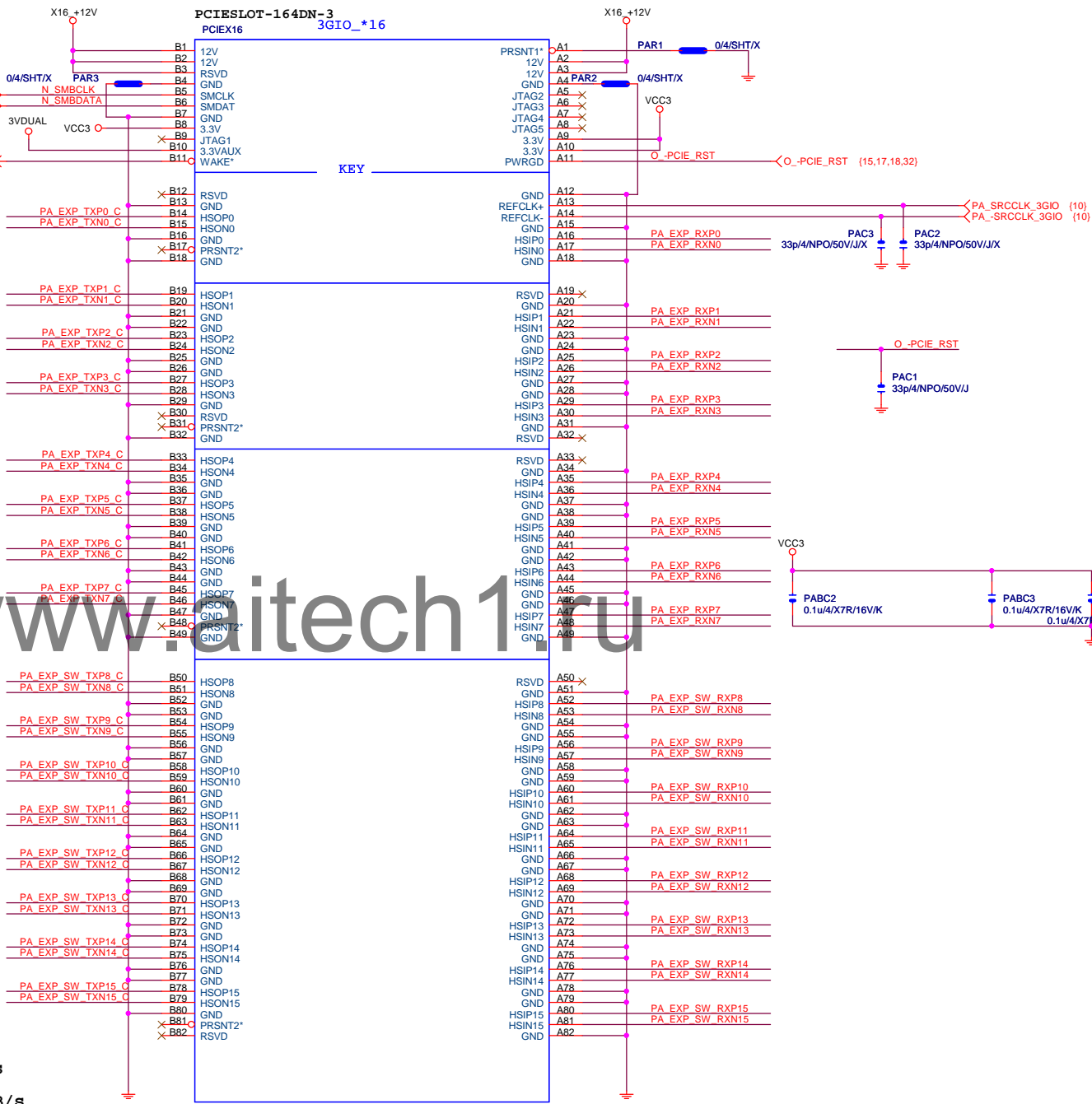
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PCE-E X1(雙向) BANDWITH=2.5GHz*(8b/10b)X2=4Gb/s=500MB/s

PCE-E X16(單向) BANDWITH=2.5GHz*(8b/10b)X16=32Gb/s=4GB/s

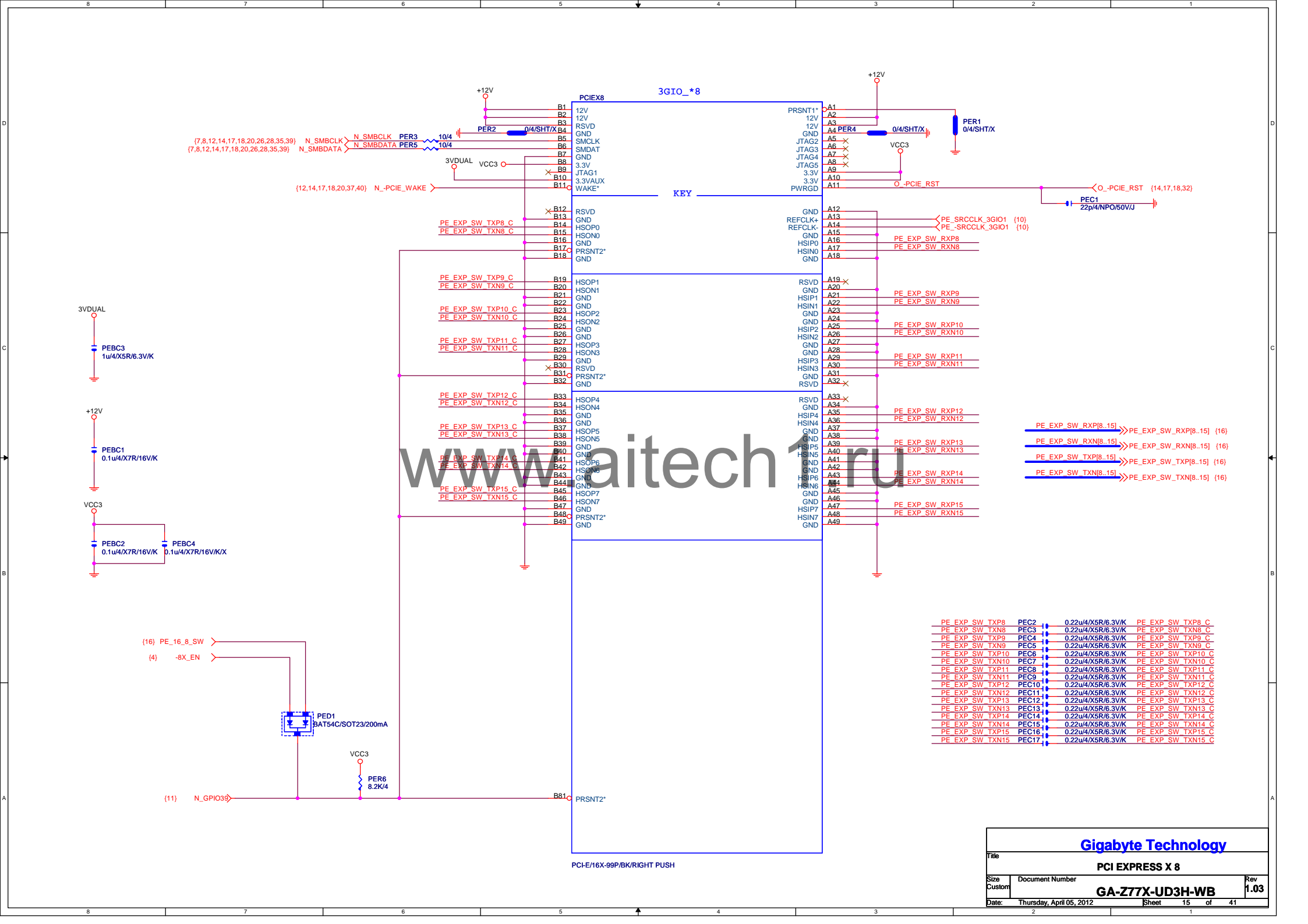
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PCI-E REV:2.0--> 5GHZ

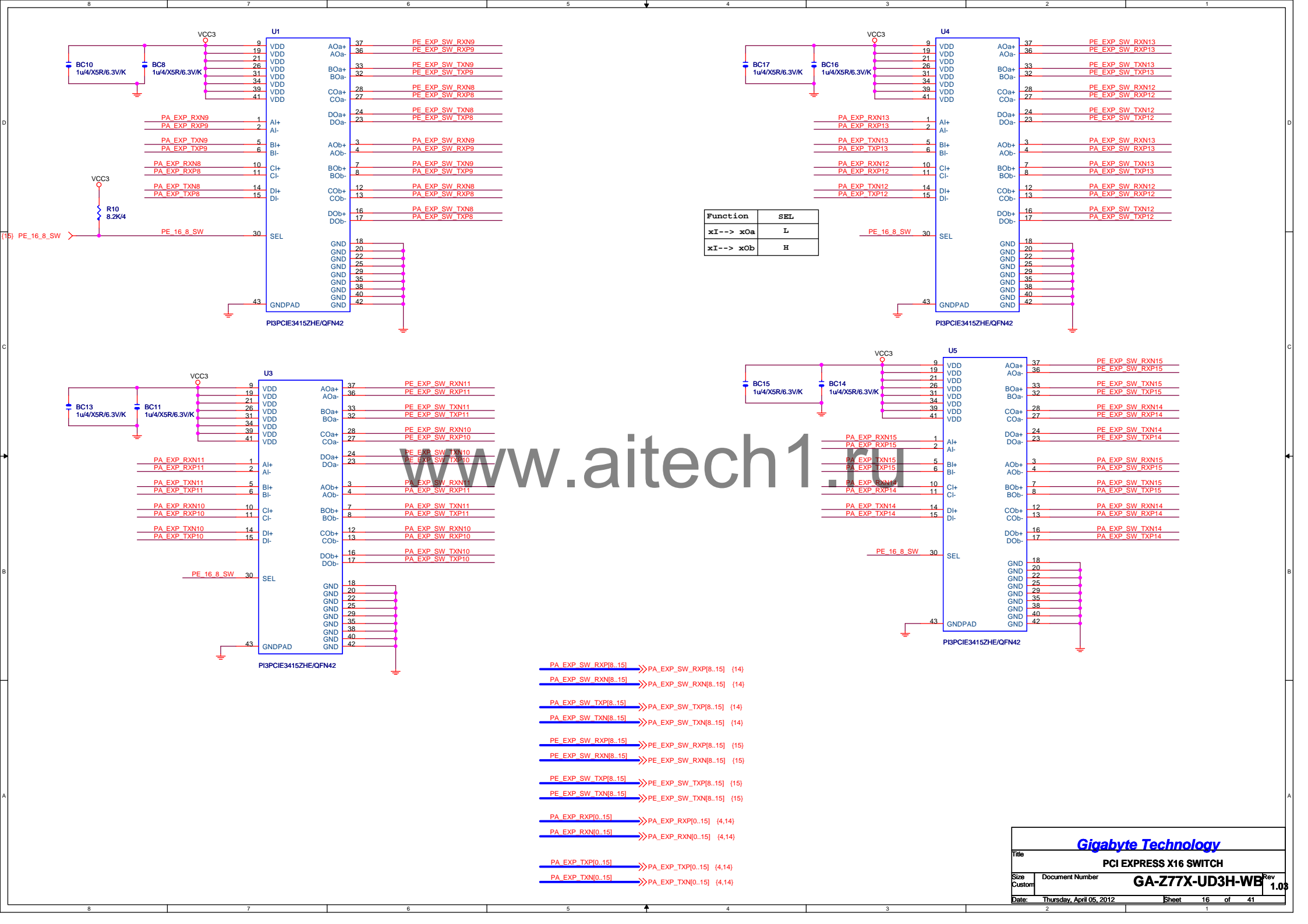


PCI-E/16X-164P/BK/RIGHT PUSH

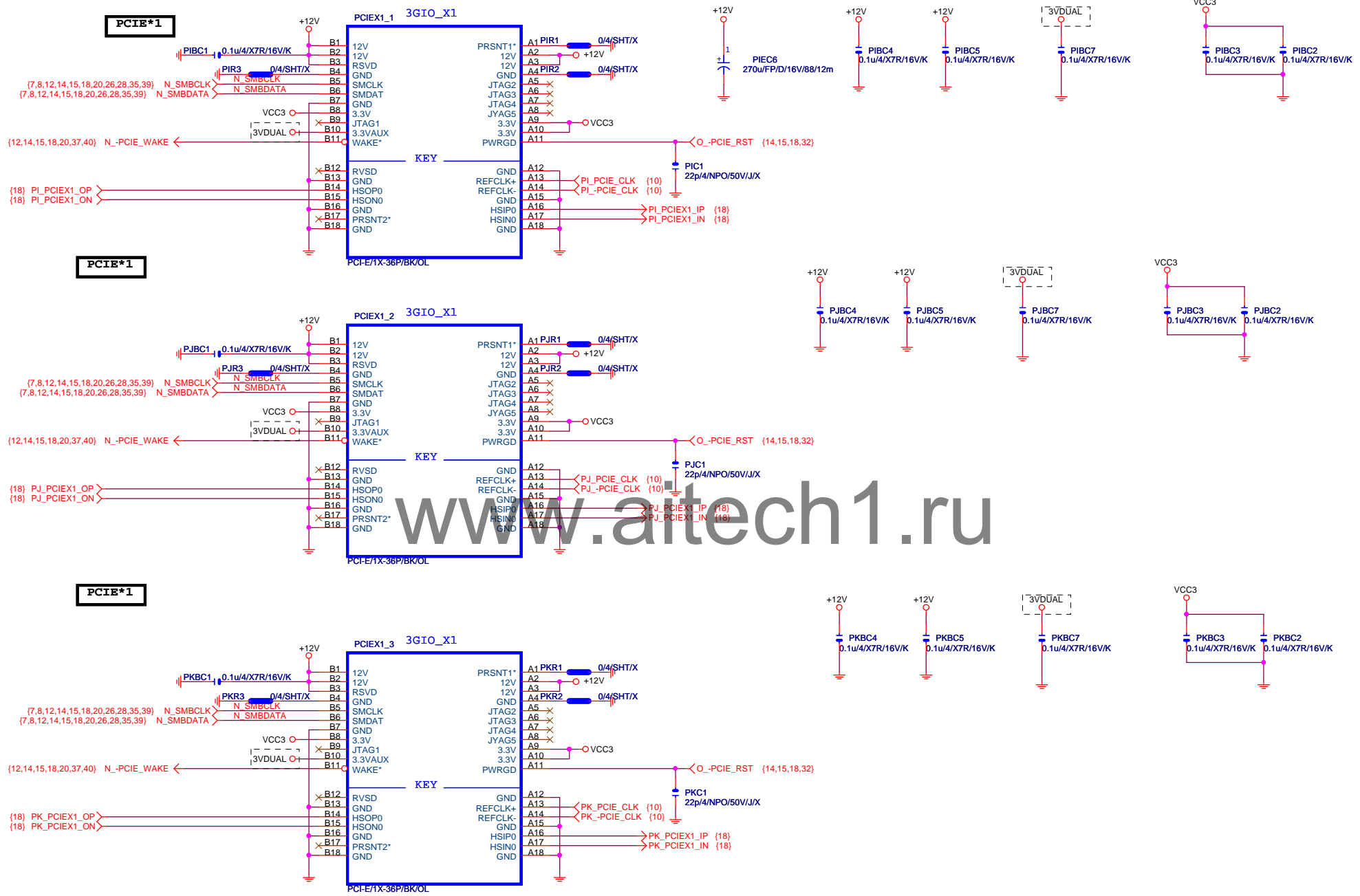
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| Gigabyte Technology | | |
| Title | | |
| PCI EXPRESS X 16 | | |
| Size | Document Number | Rev |
| Custom | GA-Z77X-UD3H-WB | 1.03 |
| Date: | Thursday, April 05, 2012 | Sheet 14 of 41 |

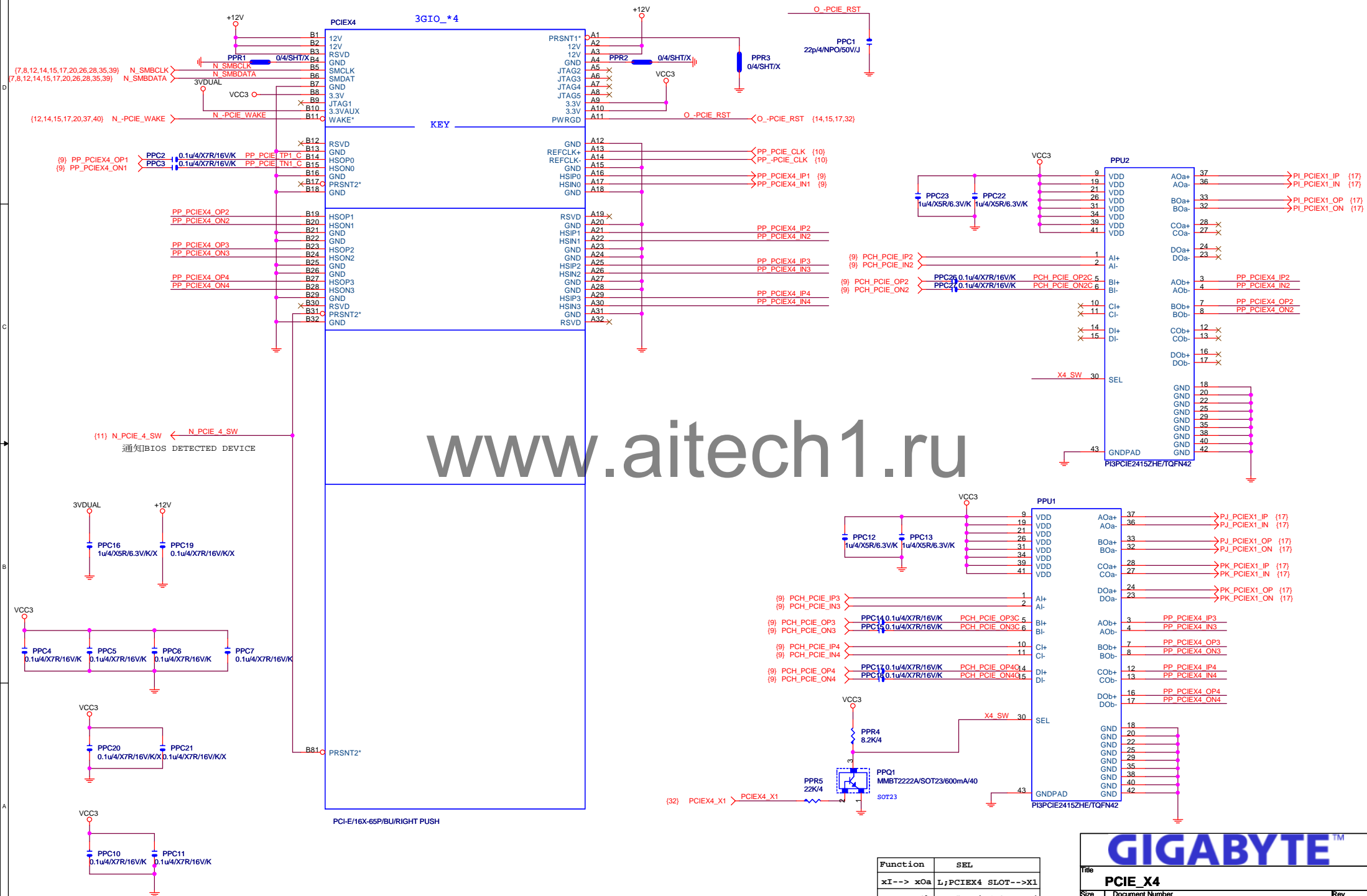


| | | | |
|-----------------|-------|-------------------|-------------------|
| PE EXP SW TXP8 | PEC2 | 0.22u4/X5R/6.3V/K | PE EXP SW TXP8 C |
| PE EXP SW TXN8 | PEC3 | 0.22u4/X5R/6.3V/K | PE EXP SW TXN8 C |
| PE EXP SW TXP9 | PEC4 | 0.22u4/X5R/6.3V/K | PE EXP SW TXP9 C |
| PE EXP SW TXN9 | PEC5 | 0.22u4/X5R/6.3V/K | PE EXP SW TXN9 C |
| PE EXP SW TXP10 | PEC6 | 0.22u4/X5R/6.3V/K | PE EXP SW TXP10 C |
| PE EXP SW TXN10 | PEC7 | 0.22u4/X5R/6.3V/K | PE EXP SW TXN10 C |
| PE EXP SW TXP11 | PEC8 | 0.22u4/X5R/6.3V/K | PE EXP SW TXP11 C |
| PE EXP SW TXN11 | PEC9 | 0.22u4/X5R/6.3V/K | PE EXP SW TXN11 C |
| PE EXP SW TXP12 | PEC10 | 0.22u4/X5R/6.3V/K | PE EXP SW TXP12 C |
| PE EXP SW TXN12 | PEC11 | 0.22u4/X5R/6.3V/K | PE EXP SW TXN12 C |
| PE EXP SW TXP13 | PEC12 | 0.22u4/X5R/6.3V/K | PE EXP SW TXP13 C |
| PE EXP SW TXN13 | PEC13 | 0.22u4/X5R/6.3V/K | PE EXP SW TXN13 C |
| PE EXP SW TXP14 | PEC14 | 0.22u4/X5R/6.3V/K | PE EXP SW TXP14 C |
| PE EXP SW TXN14 | PEC15 | 0.22u4/X5R/6.3V/K | PE EXP SW TXN14 C |
| PE EXP SW TXP15 | PEC16 | 0.22u4/X5R/6.3V/K | PE EXP SW TXP15 C |
| PE EXP SW TXN15 | PEC17 | 0.22u4/X5R/6.3V/K | PE EXP SW TXN15 C |



| Function | SEL |
|-----------|-----|
| xI--> xOa | L |
| xI--> xOb | H |





| Function | SEL |
|-----------|--------------------|
| xI--> xOa | L;PCIE*4 SLOT-->X1 |
| xI--> xOb | H;PCIE*4 SLOT-->X4 |

GIGABYTE™

Title: **PCIE_X4**

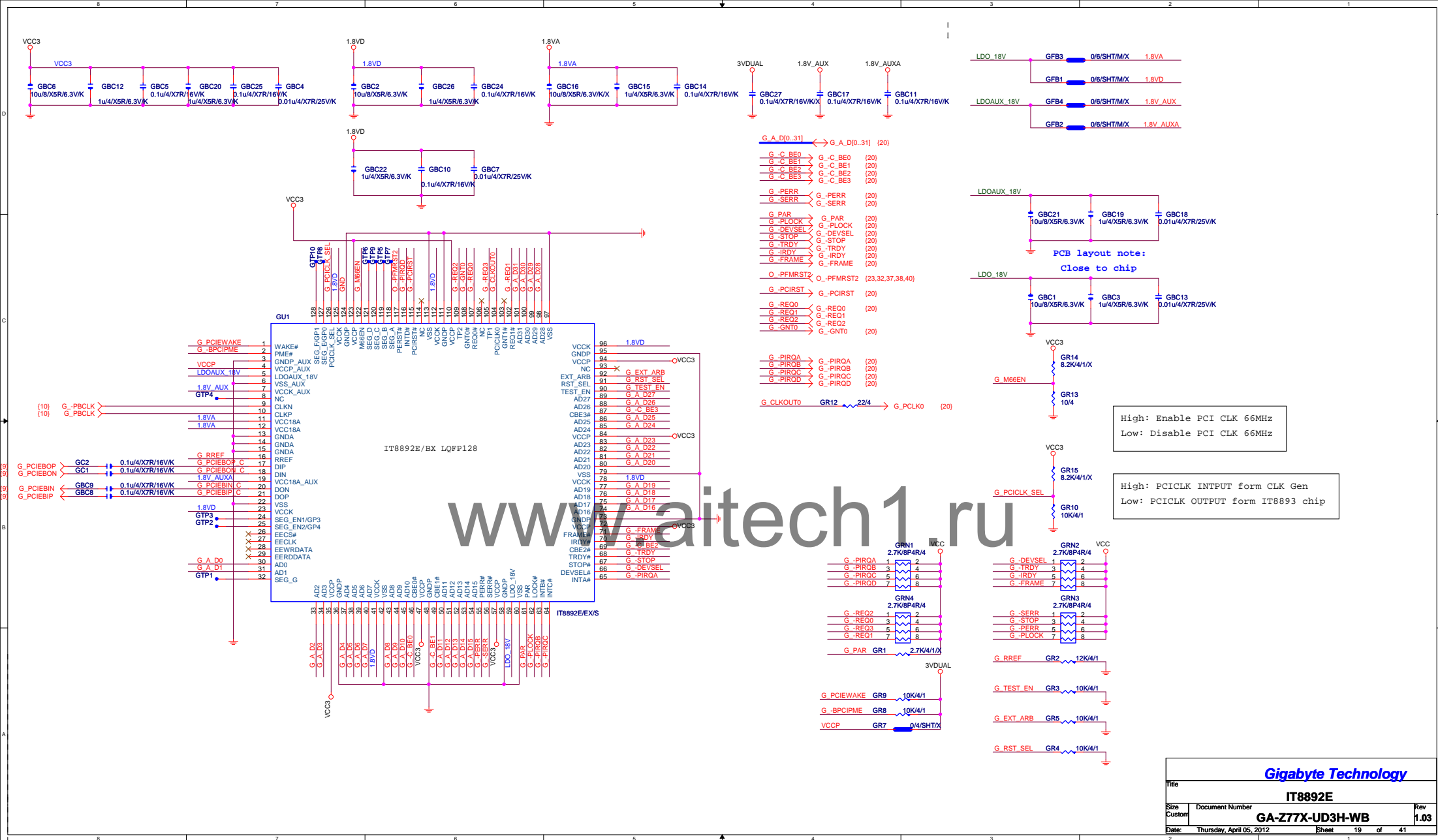
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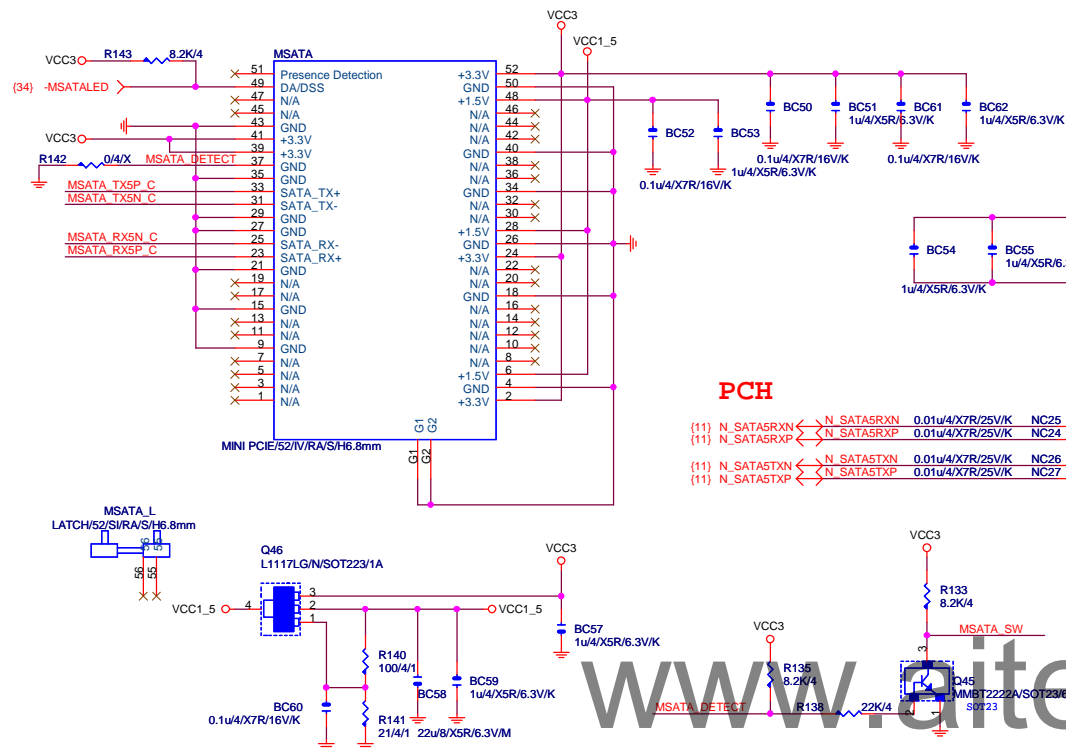
Document Number: **GA-Z77X-UD3H-WB**

Rev: **1.03**

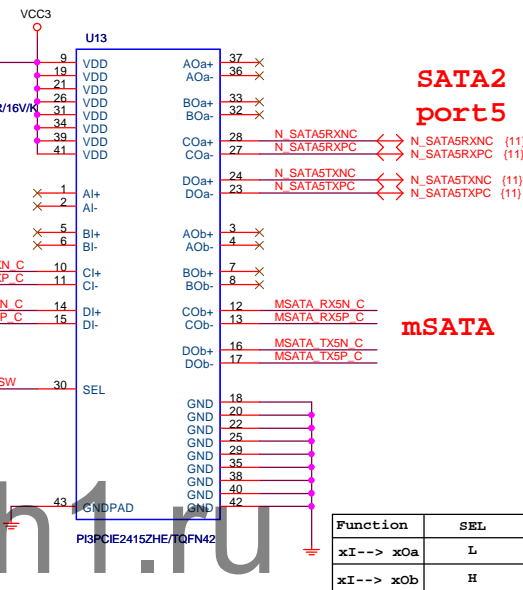
Date: Thursday, April 05, 2012

Sheet: 18 of 41





N SATA5RXN C R134 0/4/X N SATA5RXNC
 N SATA5RXP C R136 0/4/X N SATA5RXPC
 N SATA5TXN C R137 0/4/X N SATA5TXNC
 N SATA5TXP C R139 0/4/X N SATA5TXPC
FIX PCH-SATA --> SATA5
R請放在U13背面

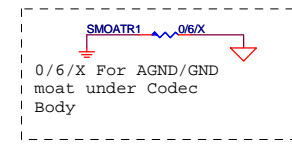


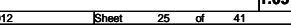
| Function | SEL |
|-----------|-----|
| xI--> xOa | L |
| xI--> xOb | H |

**SATA2
port5**

mSATA

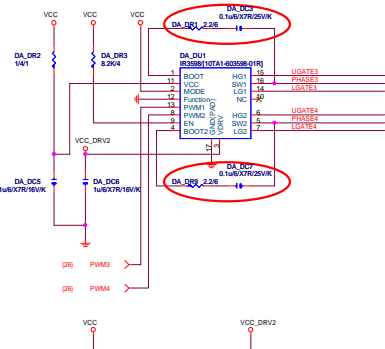
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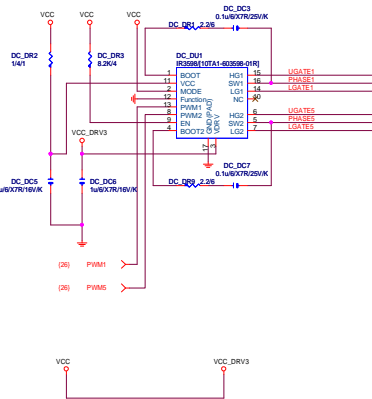
VCORE Phase 3,6



| FUNCTION | MODE | SW MODE | SW MODE | SW MODE |
|----------|------|---------|---------|---------|
| 1 | 1 | 18 | 21 | 21 |
| 2 | 2 | 19 | 22 | 22 |
| 3 | 3 | 20 | 23 | 23 |
| 4 | 4 | 21 | 24 | 24 |
| 5 | 5 | 22 | 25 | 25 |
| 6 | 6 | 23 | 26 | 26 |
| 7 | 7 | 24 | 27 | 27 |
| 8 | 8 | 25 | 28 | 28 |
| 9 | 9 | 26 | 29 | 29 |
| 10 | 10 | 27 | 30 | 30 |
| 11 | 11 | 28 | 31 | 31 |
| 12 | 12 | 29 | 32 | 32 |
| 13 | 13 | 30 | 33 | 33 |
| 14 | 14 | 31 | 34 | 34 |
| 15 | 15 | 32 | 35 | 35 |
| 16 | 16 | 33 | 36 | 36 |
| 17 | 17 | 34 | 37 | 37 |
| 18 | 18 | 35 | 38 | 38 |
| 19 | 19 | 36 | 39 | 39 |
| 20 | 20 | 37 | 40 | 40 |

In Quad mode, I2C pin1 link to I2C pin10
I2C pin10 link to I2C pin1 without PU

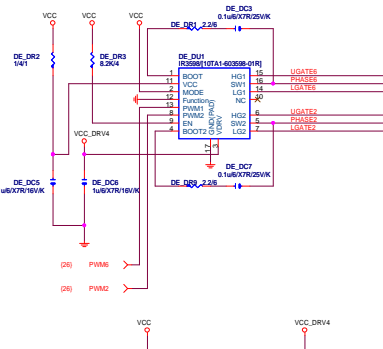
VCORE Phase 1,4



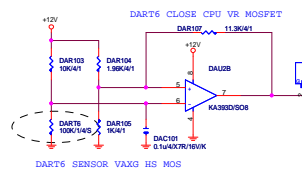
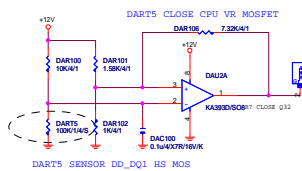
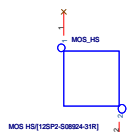
| FUNCTION | MODE | SW MODE | SW MODE | SW MODE |
|----------|------|---------|---------|---------|
| 1 | 1 | 18 | 21 | 21 |
| 2 | 2 | 19 | 22 | 22 |
| 3 | 3 | 20 | 23 | 23 |
| 4 | 4 | 21 | 24 | 24 |
| 5 | 5 | 22 | 25 | 25 |
| 6 | 6 | 23 | 26 | 26 |
| 7 | 7 | 24 | 27 | 27 |
| 8 | 8 | 25 | 28 | 28 |
| 9 | 9 | 26 | 29 | 29 |
| 10 | 10 | 27 | 30 | 30 |
| 11 | 11 | 28 | 31 | 31 |
| 12 | 12 | 29 | 32 | 32 |
| 13 | 13 | 30 | 33 | 33 |
| 14 | 14 | 31 | 34 | 34 |
| 15 | 15 | 32 | 35 | 35 |
| 16 | 16 | 33 | 36 | 36 |
| 17 | 17 | 34 | 37 | 37 |
| 18 | 18 | 35 | 38 | 38 |
| 19 | 19 | 36 | 39 | 39 |
| 20 | 20 | 37 | 40 | 40 |

In Quad mode, I2C pin1 link to I2C pin10
I2C pin10 link to I2C pin1 without PU

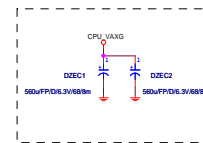
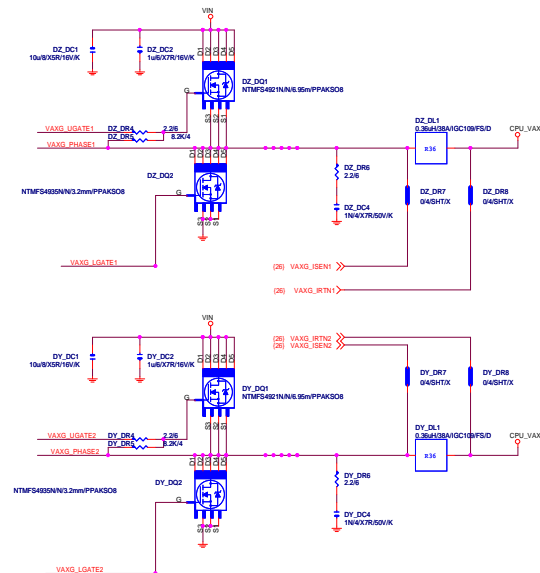
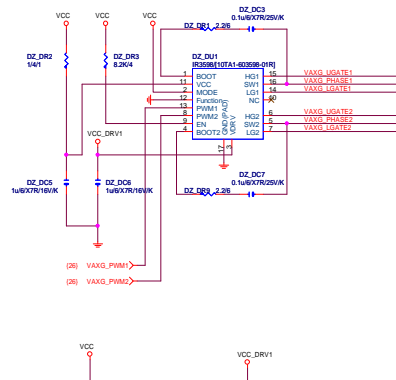
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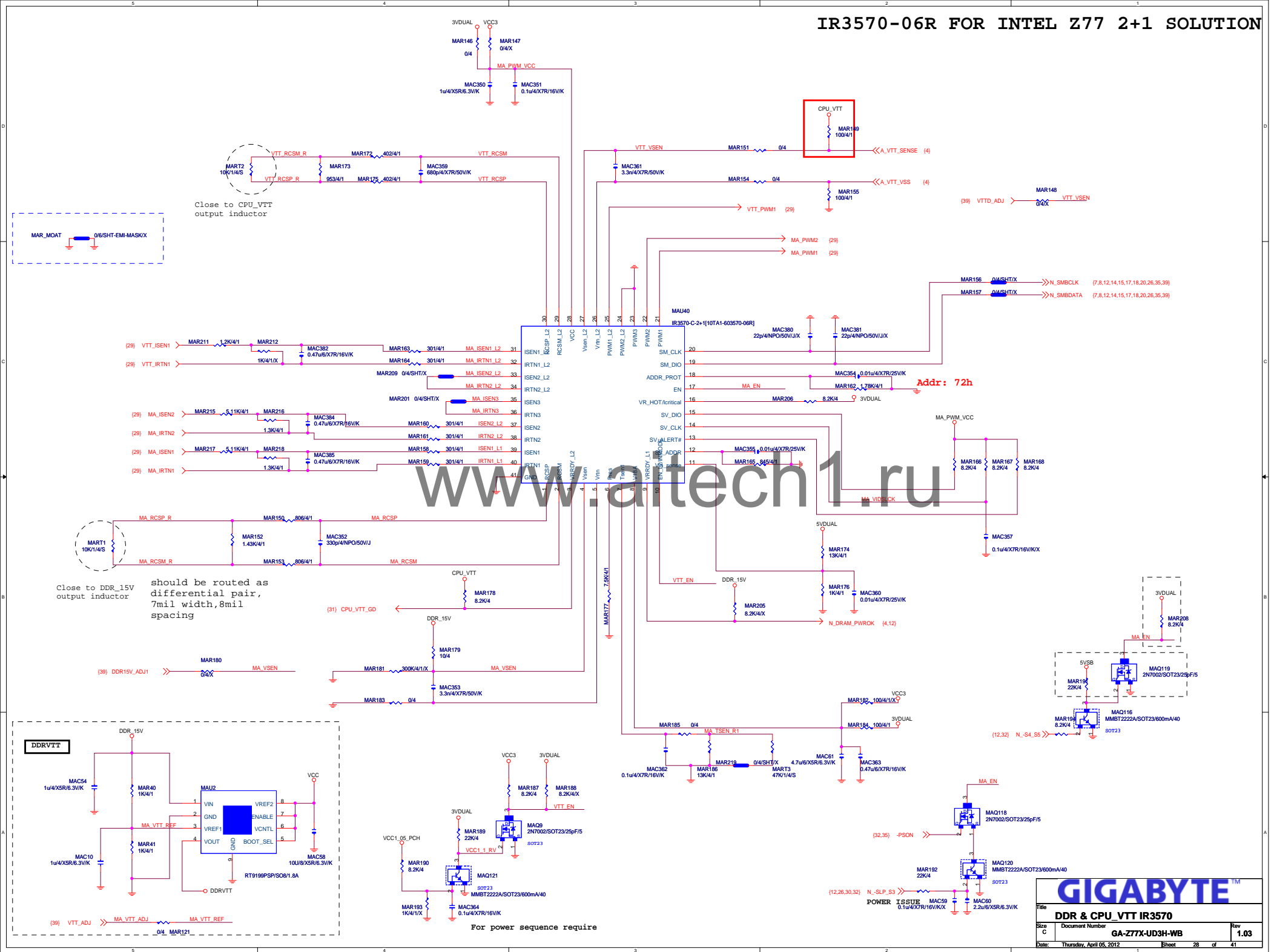
MOS HEATSINK



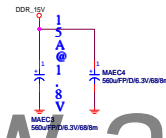
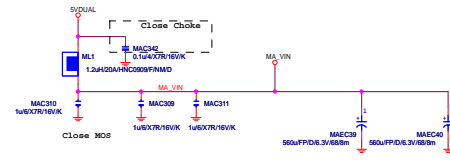
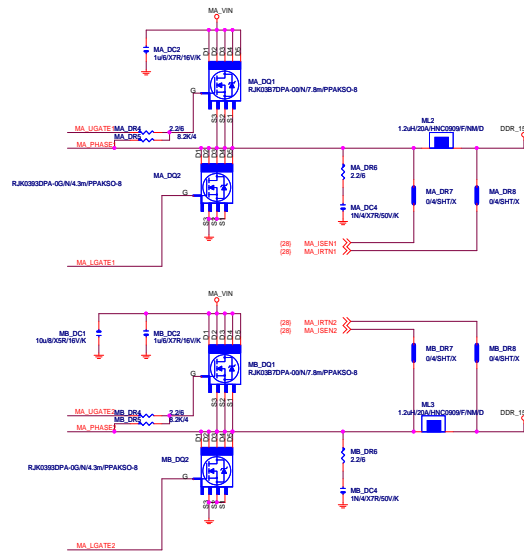
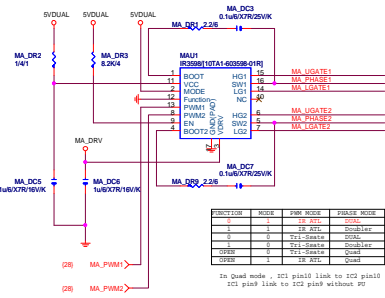
VAXG Phase



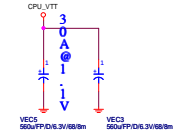
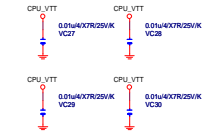
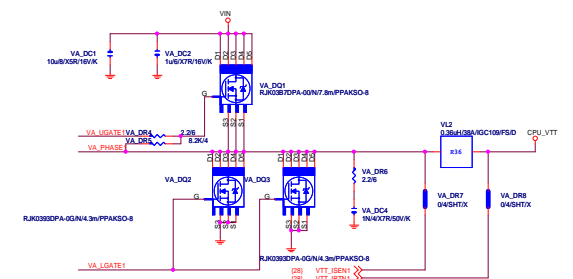
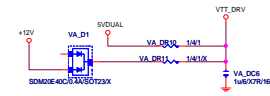
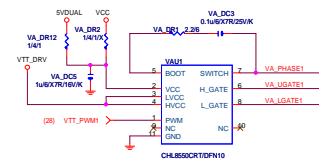
IR3570-06R FOR INTEL Z77 2+1 SOLUTION



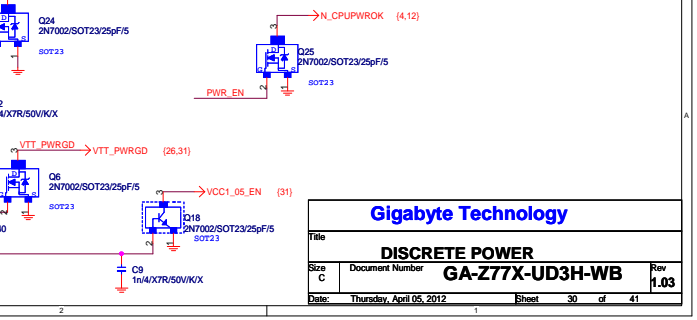
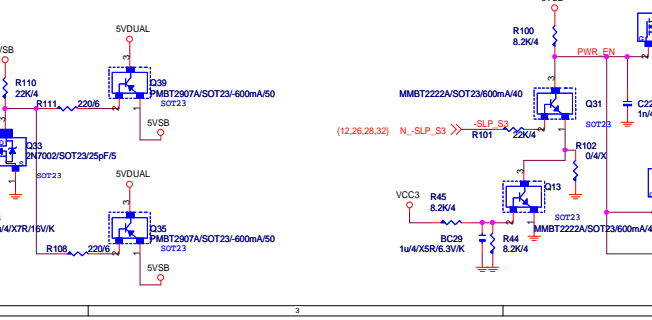
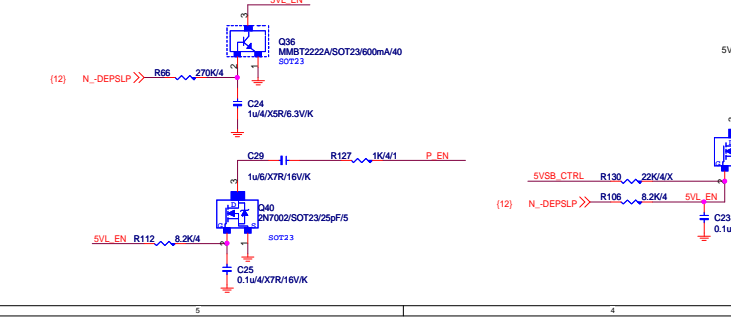
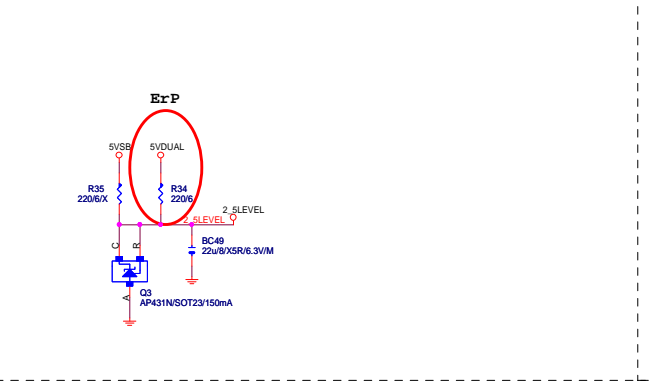
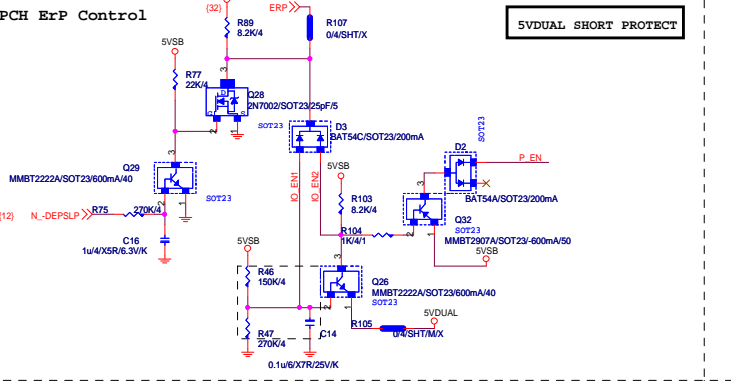
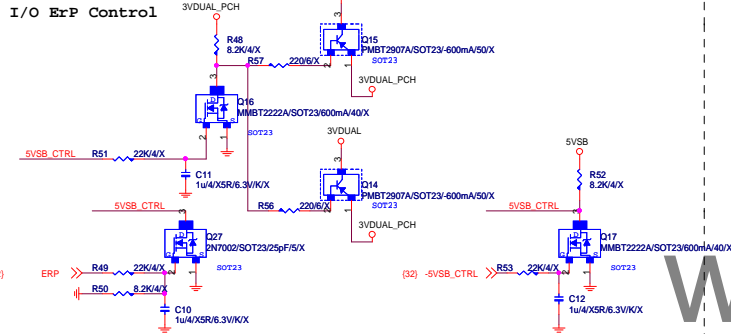
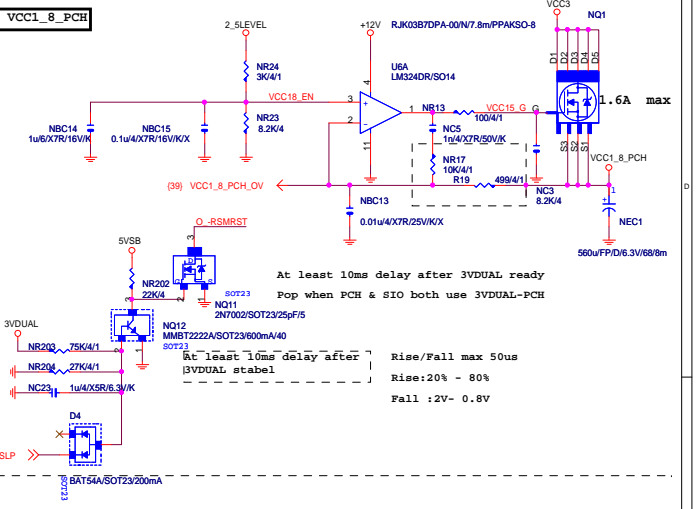
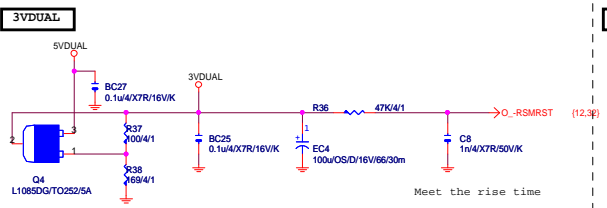
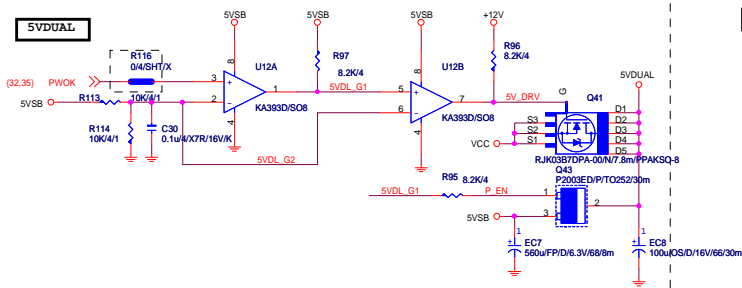
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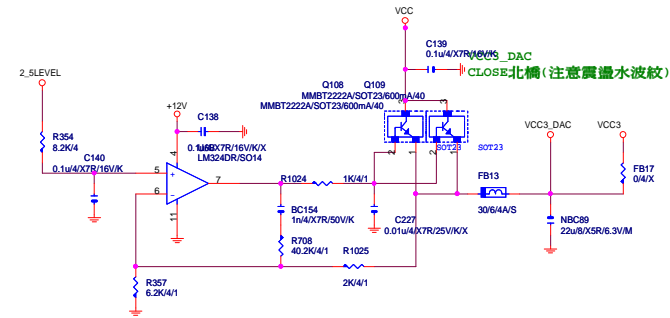
CPU_VTT



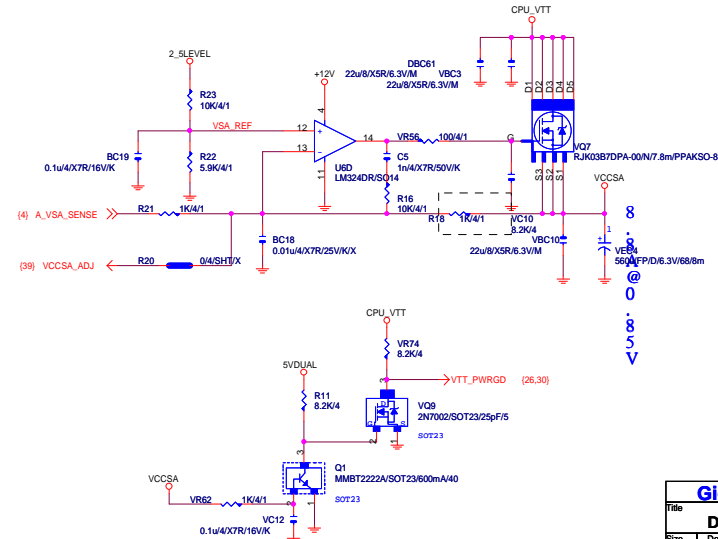
www.aitech1.ru

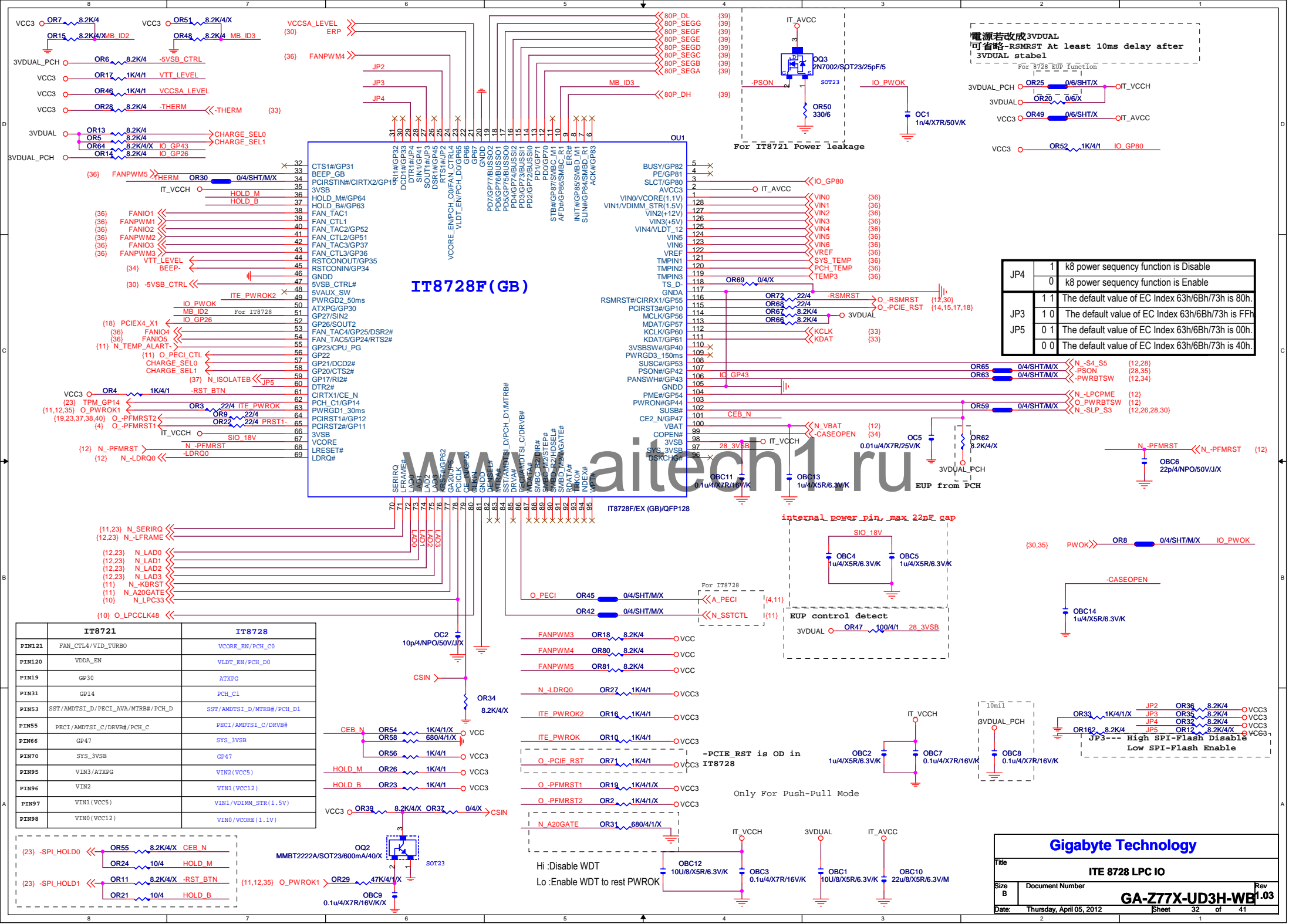


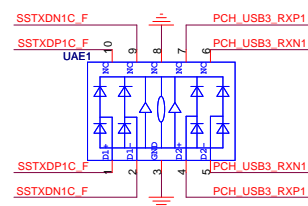
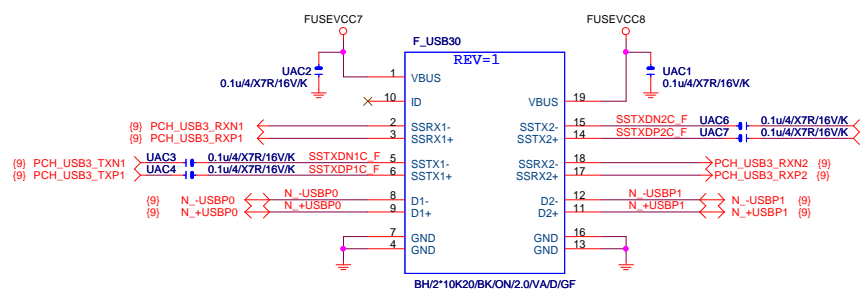
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|---------------------|--------------------------|-----------------|----------|
| DISCRETE POWER | | | |
| Size C | Document Number | GA-Z77X-UD3H-WB | Rev 1.03 |
| Date | Thursday, April 05, 2012 | Sheet 30 of 41 | |

[illegible]
$$(3.3V/70mA+360\mu A)$$


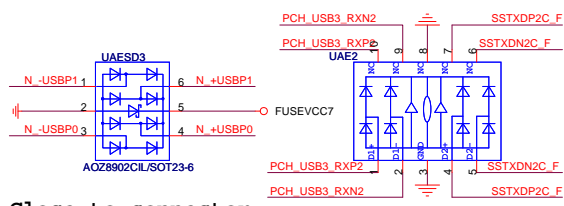
www.aitech1.ru





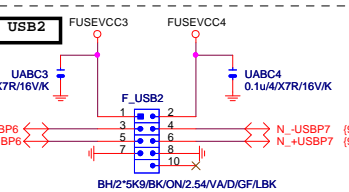
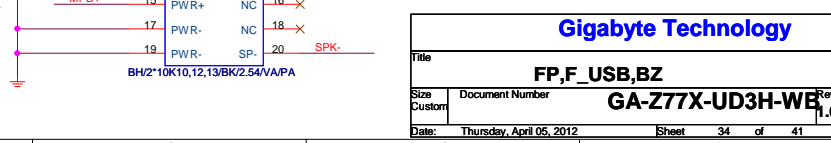
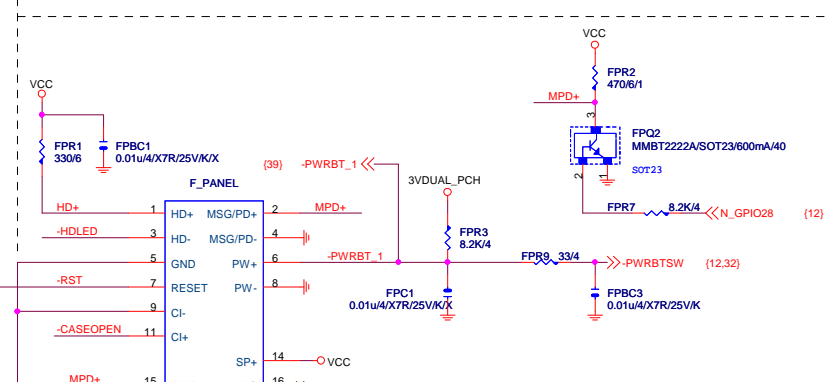
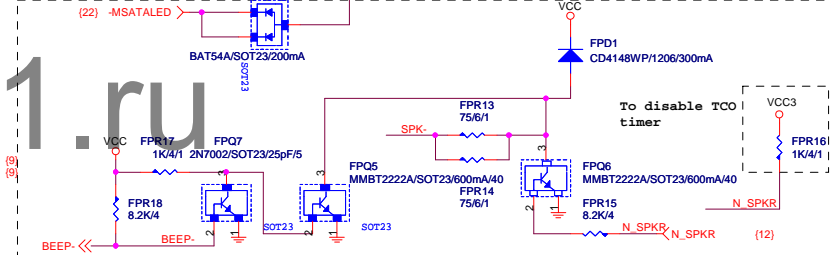
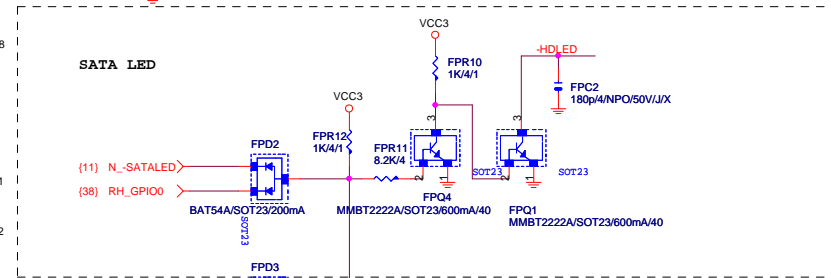
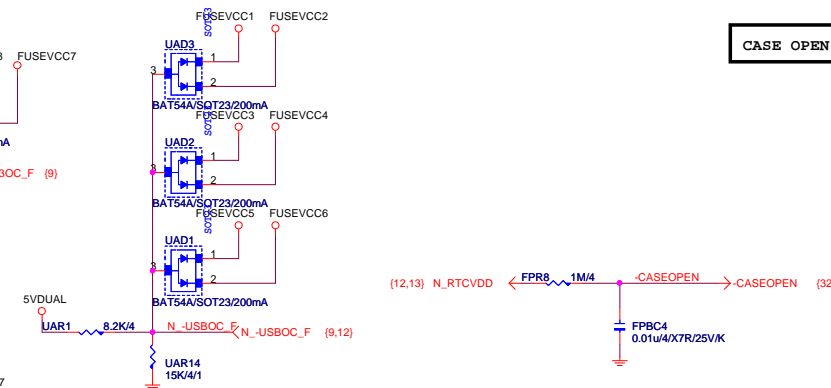
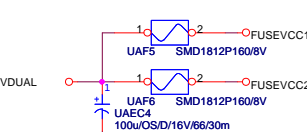
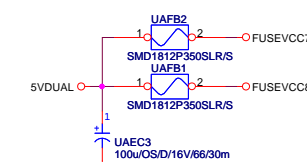
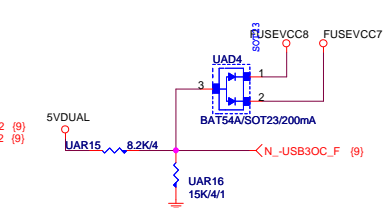


Close to connector

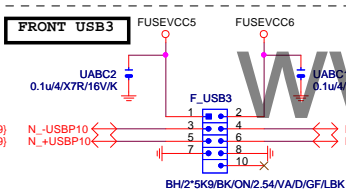


Close to connector

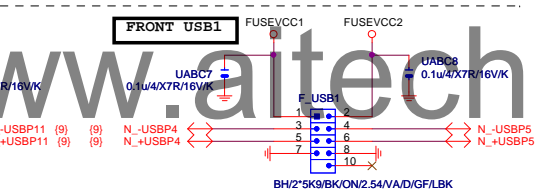
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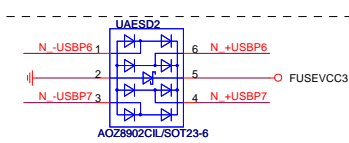
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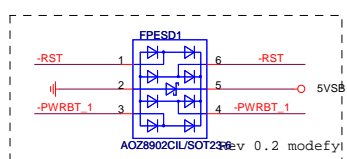
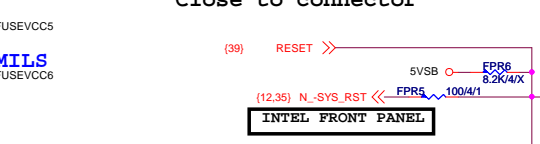
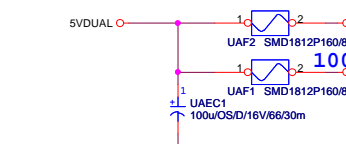
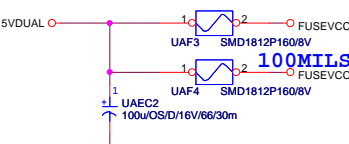
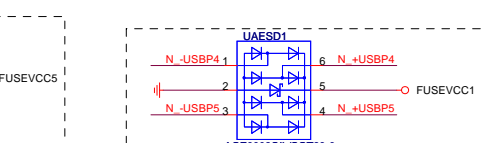
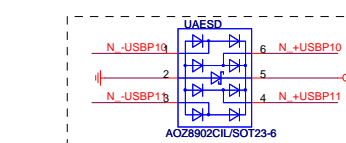
Close to connector



Close to connector

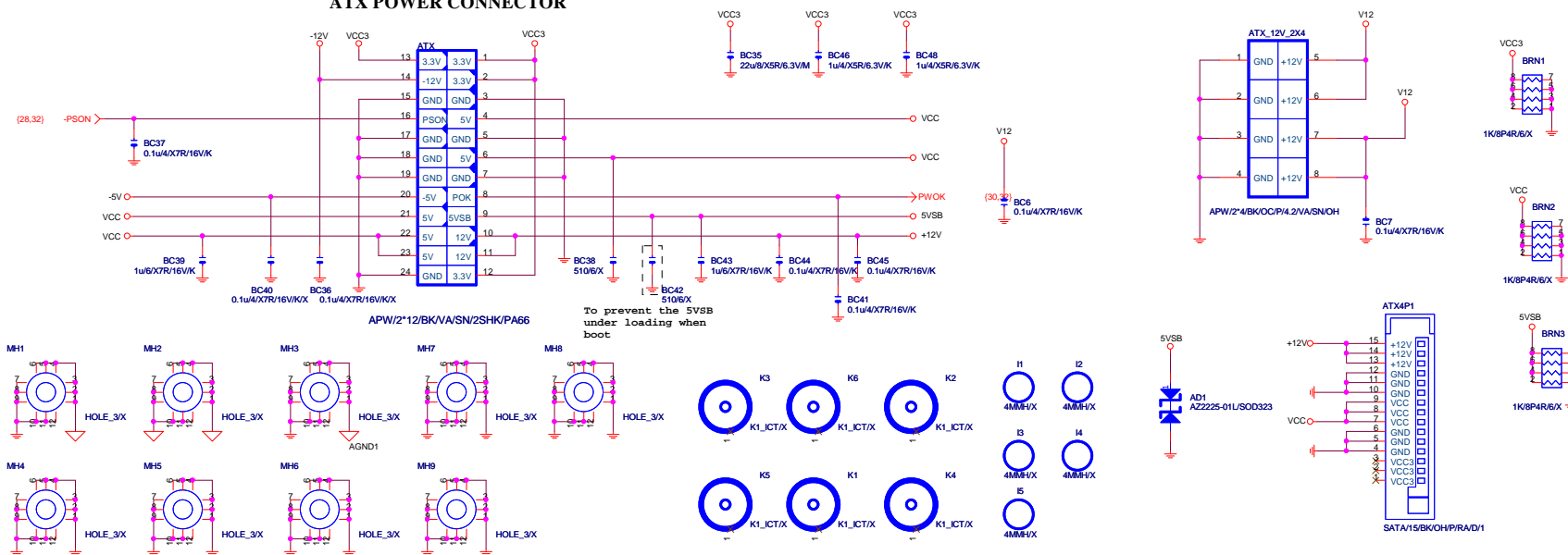


POWER PROTECT



Close to connector

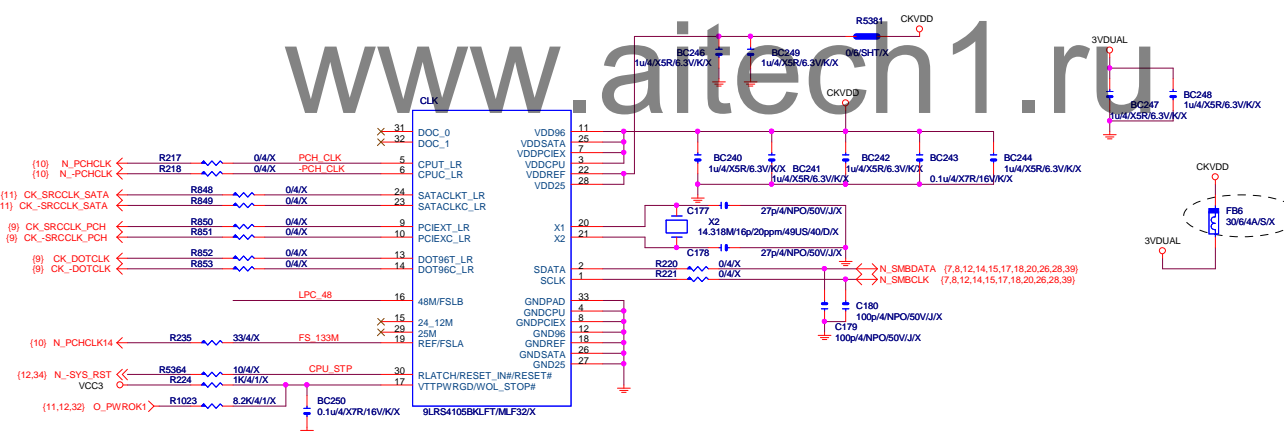
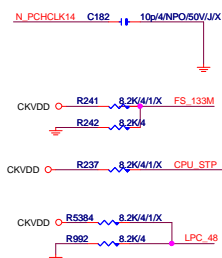
ATX POWER CONNECTOR



CLK GEN CK505

CPU Frequency Selection

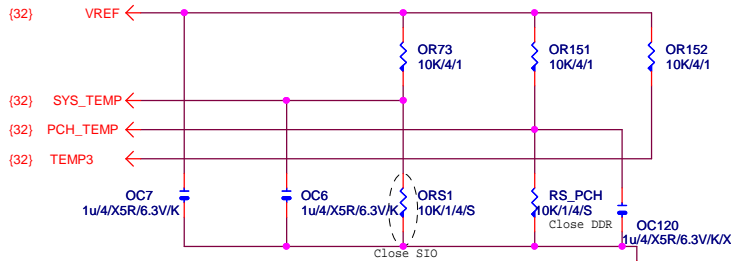
| FSLB | FSLA | CPU |
|------|------|----------------|
| 0 | 0 | 100M <Default> |
| 0 | 1 | 133M |
| 1 | 0 | 200M |
| 1 | 1 | 166M |



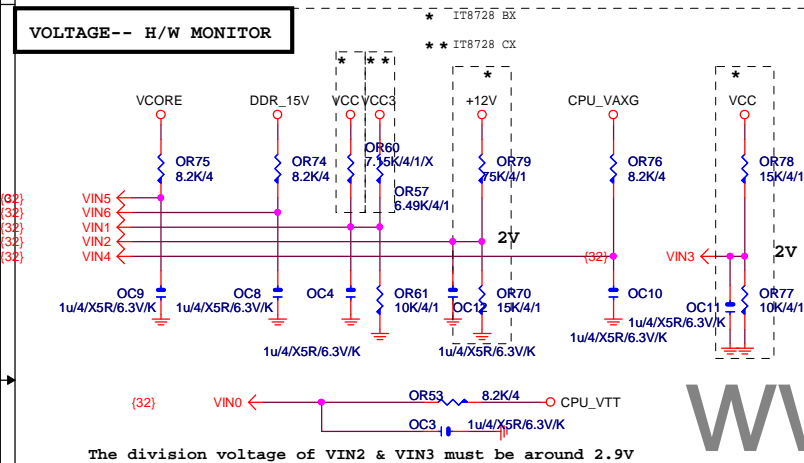
Gigabyte Technology

| | | | |
|----------------------------|--------------------------|------------------------|----------|
| Title | | | |
| ATX POWER CONNECTOR | | | |
| Size Custom | Document Number | GA-Z77X-UD3H-WB | Rev 1.03 |
| Date: | Thursday, April 05, 2012 | Sheet 35 of 41 | |

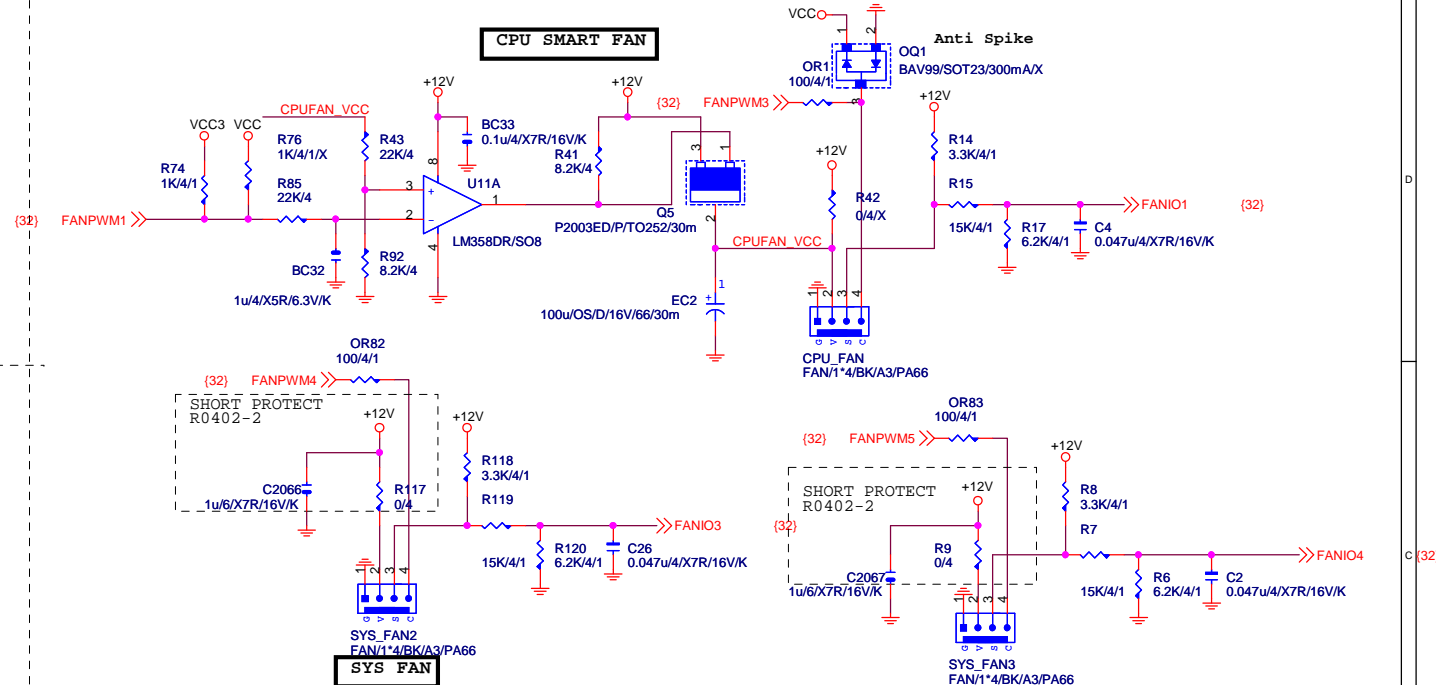
TEMP H/W MONITOR



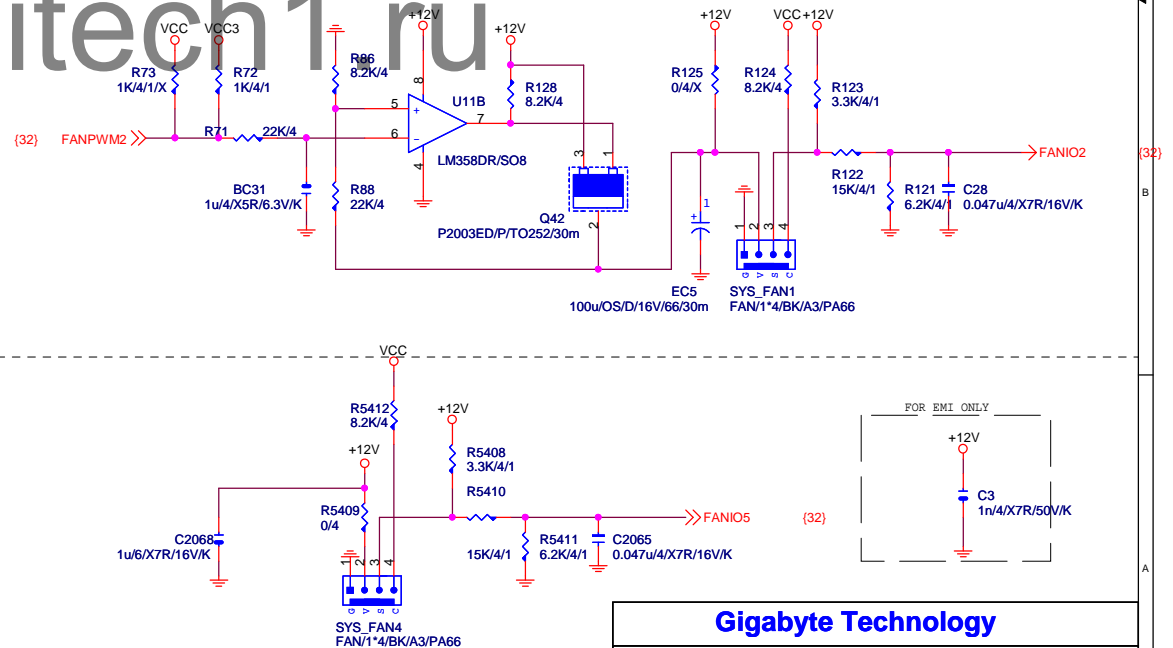
VOLTAGE-- H/W MONITOR



CPU SMART FAN



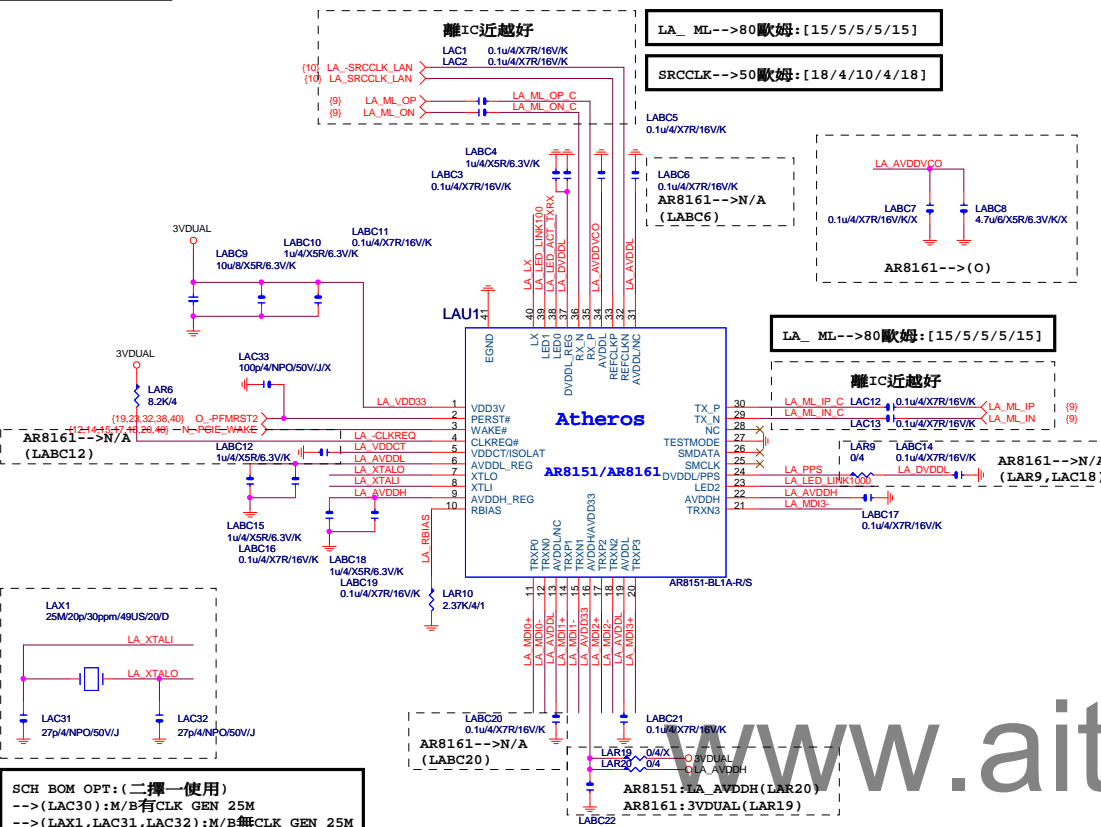
Linear SYS_FAN



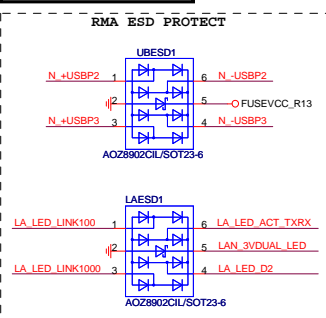
Gigabyte Technology

| Title | | |
|---------------------|--------------------------|----------------|
| HWM,KB/MS, FAN CTRL | | |
| Size | Document Number | Rev |
| Custom | GA-Z77X-UD3H-WB | 1.03 |
| Date: | Thursday, April 05, 2012 | Sheet 36 of 41 |

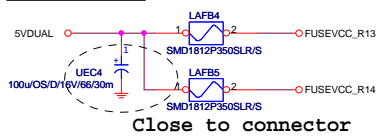
LAN:AR8151/AR8161



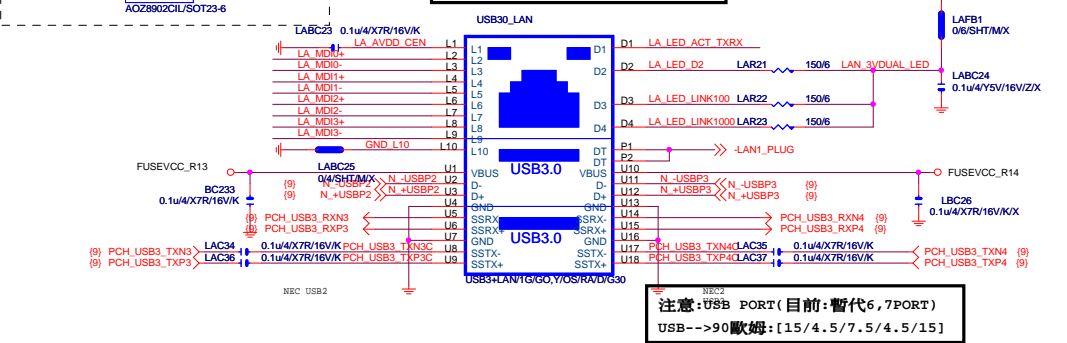
USB LAN CONNECTOR



USB X3 POWER

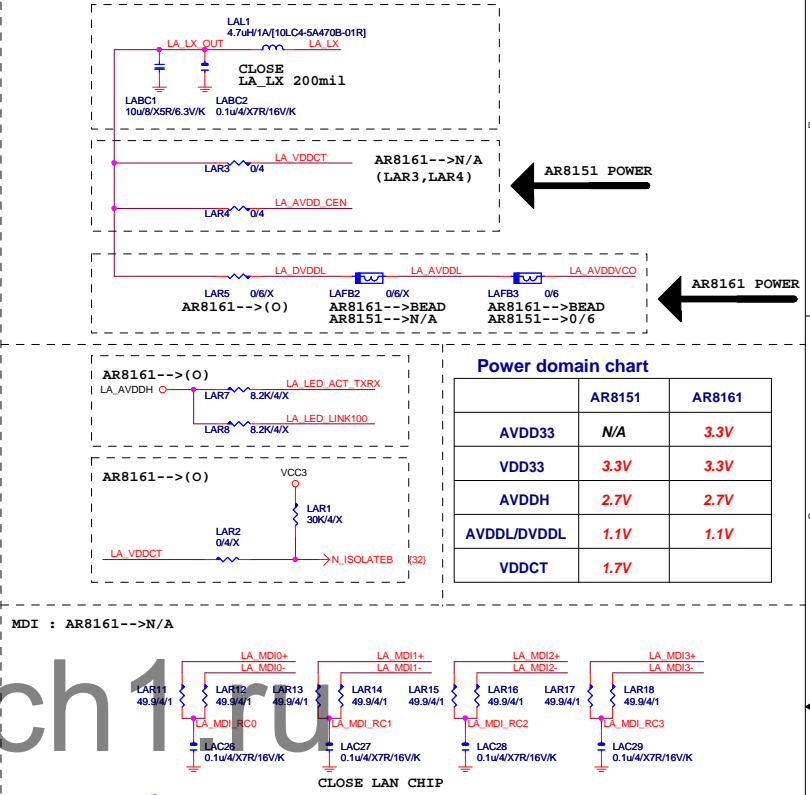


LA MPI-->100歐姆:[20/4/8/4/20]

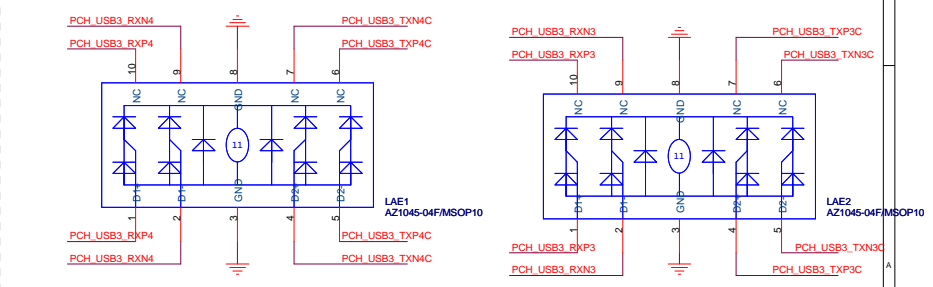
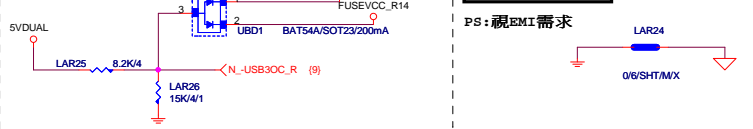


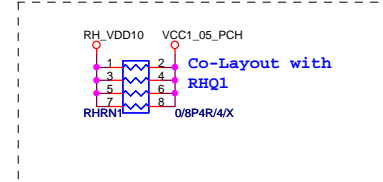
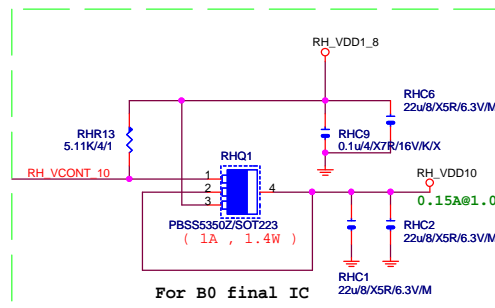
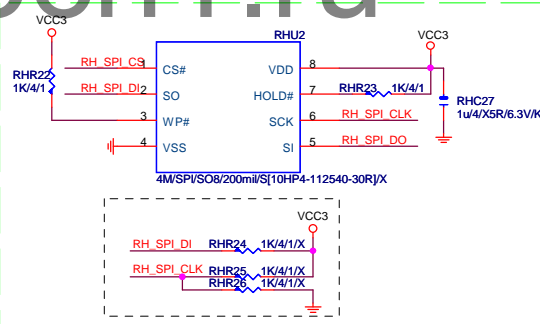
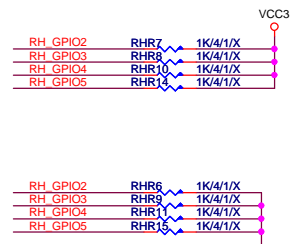
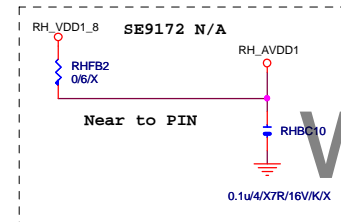
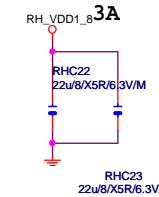
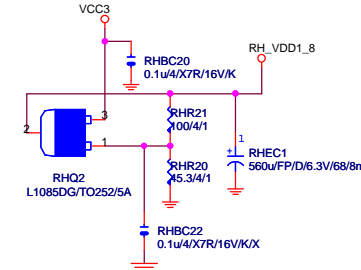
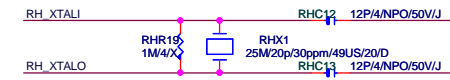
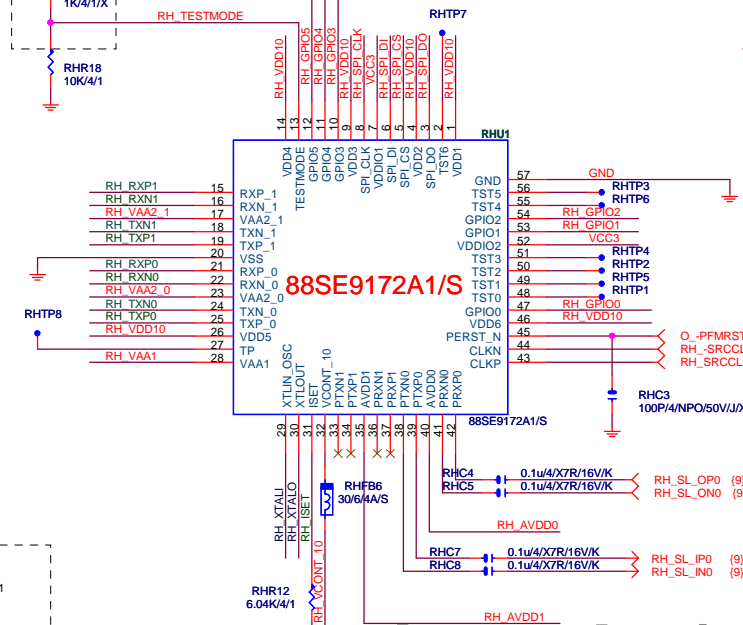
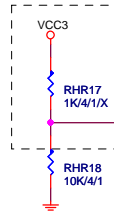
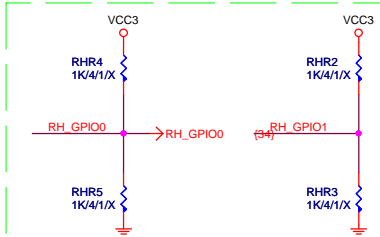
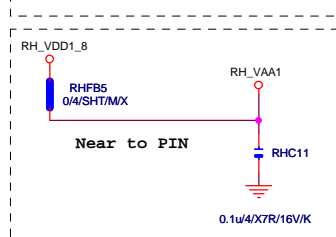
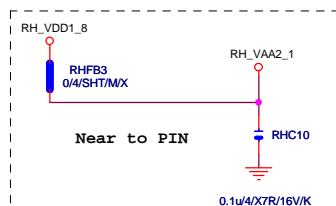
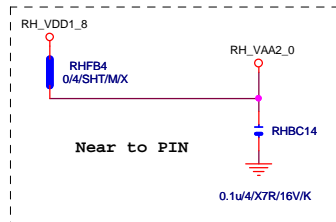
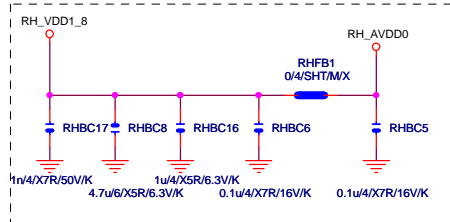
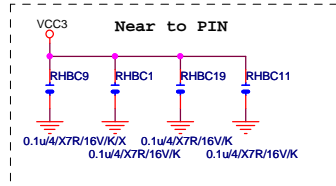
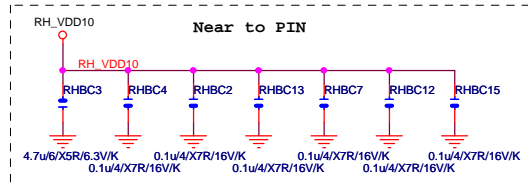
LAN POWER

```
NEW DESIGN ONLY FOR INTERNAL SWR
AR8151:LAR3(O),LAR5(X)
AR8161:LAR5(O),LAR3/LAR4(X)
```



EMI SHORT PAD






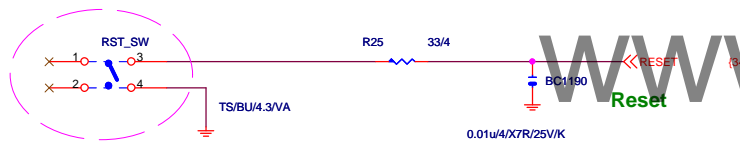
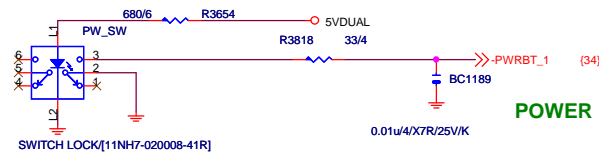
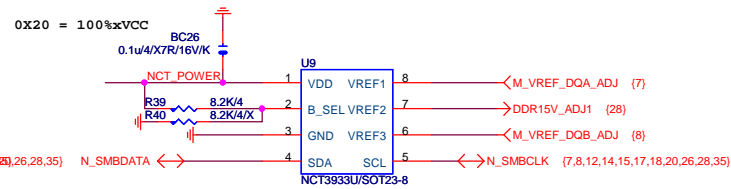
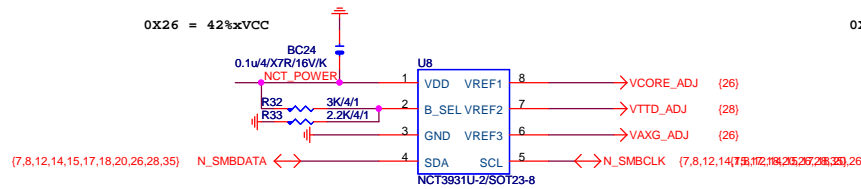
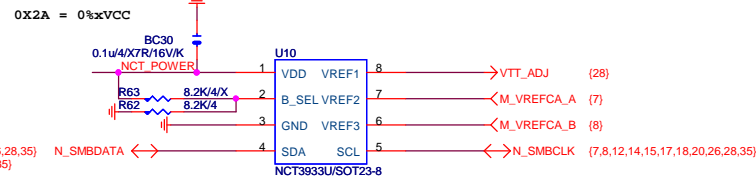
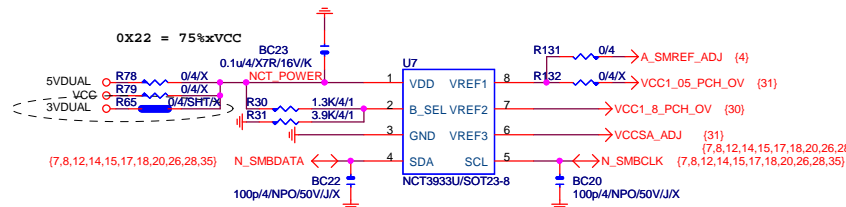
Marvell 9172 Power Requirements

Analog 1.8V 230mA

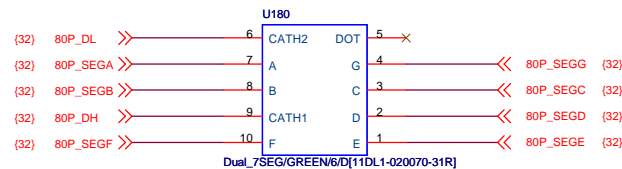
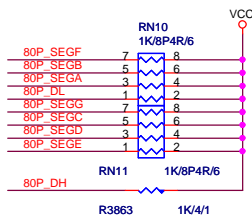
Core 1.0V 900mA

I/O 3.3V 50mA

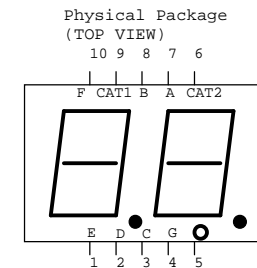
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|  | | | |
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| Marvell 9172 SATA 3.0 | | | |
| Size | Document Number | Rev | |
| Custom | GA-Z77X-UD3H-WB | 1.03 | |
| Date: | Thursday, April 05, 2012 | Sheet | 38 of 41 |

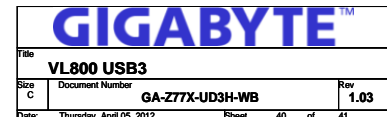


80 PORT



COMMON CATHODE





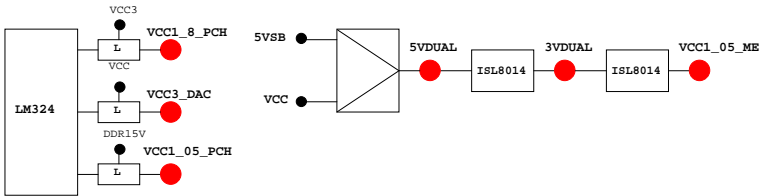
PCH GPIO LIST TABLE

| PIN NAME | PWR | Default | USAGE | NOTE |
|----------------|------|---------|----------------------|-----------------|
| GP0 | MAIN | H-Z | GPI -PECI_REQ | N/A |
| GP1/TACH1 | MAIN | GPI | ICH_FAN_TACH1 | N/A |
| GP2/PIRQE# | MAIN | GPI | -PIRQE | P/U 8.2K VCC3 |
| GP3/PIRQF# | MAIN | GPI | -PIRQF | P/U 8.2K VCC3 |
| GP4/PIRQG# | MAIN | GPI | -PIRQG | P/U 8.2K VCC3 |
| GP5/PIRQH# | MAIN | GPI | -PIRQH | P/U 8.2K VCC3 |
| GP6/TACH2 | MAIN | GPI | ICH_FAN_TACH2 | N/A |
| GP7/TACH3 | MAIN | GPI | ICH_FAN_TACH3 | N/A |
| GP8 | STBY | H | GPO GPIO8 | P/U 8.2K 3VDUAL |
| GP9/OC5# | STBY | NATIVE | OC5# | N/A |
| GP10/OC6# | STBY | NATIVE | OC6# | N/A |
| GP11/SMBALERT# | STBY | NATIVE | -SMBALERT | P/U 8.2K 3VDUAL |
| GP12 | STBY | L | GPI LAN_PHY_PWR_CTRL | P/U 8.2K 3VDUAL |
| GP13 | STBY | L | GPI GPIO13 | P/U 8.2K 3VDUAL |
| GP14/OC7# | STBY | NATIVE | OC7# | N/A |
| GP15 | STBY | L | GPO GPIO15 | N/A |
| GP16 | MAIN | GPI | -SKTOCC | P/U 8.2K VCC3 |
| GP17/TACH0 | MAIN | GPI | ICH_FAN_TACH0 | N/A |
| GP18 | MAIN | NATIVE | MB_ID0 | P/D 8.2K GND |
| GP19 | MAIN | GPI | -LAN1_ISO | P/U 8.2K VCC3 |
| GP20 | MAIN | NATIVE | LED_CTL | P/U 1K VCC3 |
| GP21 | MAIN | GPI | VCC18_PCH_OV2 | P/U 8.2K VCC3 |
| GP22 | MAIN | H-Z | GPI VCORE_OV3 | P/U 8.2K VCC3 |
| GP23 | MAIN | NATIVE | -LDRQ1 | P/U 8.2K VCC3 |
| GP24 | STBY | L | GPO TLS | P/U 8.2K 3VDUAL |
| GP25 | STBY | NATIVE | -CPU_STOP | P/U 8.2K 3VDUAL |
| GP26 | STBY | NATIVE | -AC2_DET | P/U 8.2K 3VDUAL |
| GP27 | STBY | H | GPO GPIO27 | P/U 8.2K 3VDUAL |
| GP28 | STBY | H | GPO GPIO28 | P/U 8.2K 3VDUAL |
| GP29 | STBY | L | GPI GPIO29 | N/A |
| GP30 | STBY | H-Z | GPI S_PWR_ACK | P/U 100K 3VDUAL |
| GP31 | STBY | H-Z | GPI N/A(Reverse) | P/U 8.2K VCC3 |
| GP32 | MAIN | H | GPO MB_ID1 | P/D 8.2K GND |
| GP33 | MAIN | H | GPO LOAD-LINE | P/U 1K VCC3 |
| GP34 | MAIN | H-Z | GPI -PCI_STOP | P/U 8.2K VCC3 |
| GP35 | MAIN | L | GPO GPIO35 | P/U 8.2K VCC3 |
| GP36 | MAIN | GPI | -LAN1_DSM | P/U 8.2K VCC3 |
| GP37 | MAIN | GPI | N/A | P/U 8.2K VCC3 |
| GP38 | MAIN | H-Z | GPI VCORE_OV2 | P/U 8.2K VCC3 |
| GP39 | MAIN | H-Z | GPI -LAN_DSM | P/U 8.2K VCC3 |
| GP40 | STBY | NATIVE | OC1# | N/A |
| GP41 | STBY | NATIVE | OC2# | N/A |
| GP42 | STBY | NATIVE | OC3# | N/A |
| GP43 | STBY | NATIVE | OC4# | N/A |
| GP44 | STBY | L | NATIVE N/A | P/U 8.2K 3VDUAL |
| GP45 | STBY | NATIVE | -LPCPME | P/U 8.2K 3VDUAL |
| GP46 | STBY | L | NATIVE PWR_LED | P/U 8.2K 3VDUAL |
| GP47 | STBY | NATIVE | PSI_LED | P/U 8.2K 3VDUAL |
| GP48 | MAIN | H-Z | IN EN_PWM | P/U 8.2K VCC3 |
| GP49 | MAIN | H-Z | IN VCC18_OV1 | P/U 8.2K VCC3 |
| GP50 | MAIN | NATIVE | -REQ1 | P/U 2.2K VCC |
| GP51 | MAIN | H | NATIVE -GNT1 | N/A |
| GP52 | MAIN | NATIVE | -REQ2 | P/U 2.2K VCC |
| GP53 | MAIN | H | NATIVE -GNT2 | N/A |
| GP54 | MAIN | NATIVE | -REQ3 | P/U 2.2K VCC |
| GP55 | MAIN | H | NATIVE -GNT3 | N/A |
| GP56 | STBY | NATIVE | N/A(Reverse) | P/U 8.2K 3VDUAL |
| GP57 | STBY | H-Z | IN VCORE_OV1 | P/U 8.2K 3VDUAL |
| GP58 | STBY | H-Z | NATIVE F_USB_OC | P/U 8.2K 3VDUAL |
| GP59 | STBY | NATIVE | USB_OC0# | N/A |
| GP60 | STBY | H-Z | NATIVE N/A(Reverse) | P/U 8.2K 3VDUAL |
| GP61 | STBY | L | NATIVE -SUSTAT | N/A |
| GP62 | STBY | L | NATIVE SUSCLK | N/A |
| GP63 | STBY | L | NATIVE GPIO63 | N/A |
| GP64 | MAIN | L | NATIVE CLKOUTFLEX0 | N/A |
| GP65 | MAIN | L | NATIVE CLKOUTFLEX1 | N/A |
| GP66 | MAIN | L | NATIVE CLKOUTFLEX2 | N/A |
| GP67 | MAIN | L | NATIVE CLKOUTFLEX3 | N/A |
| GP72 | STBY | H-Z | NATIVE VCORE_OV4 | P/U 8.2K 3VDUAL |
| GP73 | STBY | NATIVE | 1_05V_OV1 | P/U 8.2K 3VDUAL |
| GP74 | STBY | H-Z | NATIVE 1_05V_OV2 | P/U 8.2K 3VDUAL |
| GP75 | STBY | H-Z | NATIVE N/A(Reverse) | P/U 8.2K 3VDUAL |

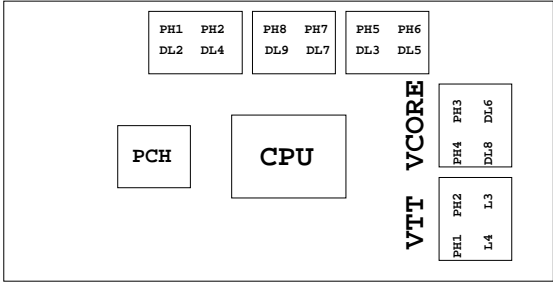
Super I/O ITE8720 GPIO Table

| PIN NAME | USAGE | NOTE |
|----------------------------|------------------|------|
| SVC/PECI_RQT/GP14 | -PECI_REQ | |
| PWROK1/GP13 | PWROK1/ITE_PWROK | |
| KRST#/GP62 | -KBRST | |
| SO/GP50 | -ICH_SPI_CS | |
| IRTX/GP47/CE2_N/JP7 | CEB_N | |
| GP46/IRRX | -LAN2_DSM | |
| PSION#/GP42 | -PSON | |
| PWROK2#/GP41 | PECI_CTL | |
| PCIRST3#/GP10/VDIMM_STR_EN | -PCIE_RST | |
| RSMRST#CIRRX1/GP55 | -RSMRST | |
| PME#/GP54 | -LPCPME | |
| PD5/GP75/BUSS00 | N/A | |

| PIN NAME | USAGE | NOTE |
|-----------------------------|-------------------|------------------|
| FAN_TAC2/GP52 | FANIO2 | |
| FAN_TAC3/GP37 | FANIO3 | |
| VIDO3/FAN_TAC4/GP25/DSR2# | FANIO4 | |
| FAN_CTL2/GP51 | FANPWM2 | |
| FAN_CTL3/GP36 | FANPWM3 | |
| VID4/GP34 | BEEP- | |
| VID3/GP33 | TURBO1 | |
| VID2/GP32 | TURBO0 | |
| VCORE_GOOD/VID6/GP63 | CPUT_LED1_C | |
| VID5/GP35 | CPUT_LED2_C | |
| VID1/GP31 | CPUT_LED3_C | |
| VID0/GP30 | -LAN1_DSM | NBT_LED1_C |
| SLCT/GP80 | CPU_LED1_C | |
| PE/GP81 | CPU_LED2_C | |
| BUSY/GP82 | CPU_LED3_C | |
| PD3/GP73/BUSS11 | SB_LED1_C | |
| PD4/GP74/BUSS12 | SB_LED2_C | |
| VCORE_EN/VID7/GP64 | IT_GP64 | SB_LED3_C |
| PD0/GP70 | NB_LED1_C | |
| PD1/GP71 | NB_LED2_C | |
| PD2/GP72/BUSS10 | NB_LED3_C | |
| GP22/SEC | LOW_PWR_1 | |
| VIDO5/GP27/SIN2 | LOW_PWR_2 | |
| PCIRST2#/GP11 | -PFMRST1 | |
| PCIRST1#/GP12 | -PFMRST2 | |
| 3VSB5W#/GP40 | CSI_F0 | BSEL166_1 |
| SUSCH#/GP53 | CSI_F1 | BSEL166_2 |
| GP23/SI | BSEL166_3/CsisBSL | |
| VIDO0/GP20/CTS2# | CPUT_LED1_C | BSEL166_4 |
| GP65/VDDA_EN/GB_01 | MB_ID2 | |
| PD6/GP76/BUSS01 | MB_ID3 | |
| PD7/GP77/BUSS02 | MB_ID4 | |
| AFD#/GP86/SMBC_R | ⚡ PIN | FST_2X8 |
| INIT#/GP85/SMBD_M | SEC_2x8 | GTLREF_AD2 |
| ACK#/GP83 | DDR_LED1_C | |
| VIDO1/GP21/DCD2# | DDR_LED2_C | |
| STB#/GP87/SMBC_M | DDR_LED3_C | |
| PWRON#GP44 | VCORE_OV1 | |
| PANSWH#/GP43 | PWRBTSW | |
| KDAT/GP61 | -PWRBTSW | |
| KCLK/GP60 | KDAT | |
| MDAT/GP57 | KCLK | |
| MACL/GP56 | MDAT | |
| GP66/VLDT_EN/GB_02 | NBT_LED1_C | MCLK |
| SVD/PCIRSTIN#/CIRTX/GP15 | PWM2_CR | |
| KDAT/GP61 | PWM2_CR | |
| GP67/CPU_PG/GB_03 | EN_LOADLINE | IT_GP67/-EN_PWM2 |
| SLIN#/GP84/SMBD_R | -EN_PWM2 | |
| PSI_L/FAN_CLT15/CIRRX2/GP16 | -THERM | |
| VIDO4/GP26/SOUT2 | DDR18V_PH2_EN | |
| VIDO2/FAN_TAC5/GP24/DSR2# | DDR18V_LED | |
| VIDO6/GP17/RI2# | 1_1V_PH_EN | |
| VIDO7/JP6/DTR2# | JP6 | |
| PD5/GP75/BUSS00 | SB_LED3_C | |



PWM各相位的擺法如下：



BIOS超電壓對應表：

| 線路圖名稱 | BIOS選項 |
|--------------------|------------------|
| Vcore | CPU Vcore |
| CPU_VTT | CPU Termination |
| CPU_VAXG | CPU Graphic Core |
| VCC1_8_PCH | CPU PLL |
| VCC1_05_PCH | PCH core |
| 3VDUAL | 3VDUAL |
| DDR15V | DRAM voltage |
| DDRVTT | DRAM Terminatio |
| VREF_CA_AVREF_CA_B | DRAM Address Ref |
| VREF_DQ_AVREF_DQ_B | DRAM Data Ref |

散熱模組料號：

8IBP：
1.12SP2-01A001-Y1R/Y2R
2.12SP2-01A001-Z1R/Z2R
(HIBRID模組)包材階

| | 3 pin FAN control | 4 pin FAN control | FAN speed | Controller |
|---------|-------------------|-------------------|---------------|------------|
| CPU FAN | FANPWM1 | FANPWM3 | FANIO1 | IT8720 |
| | ICH_FAN_PWM2 | ICH_FAN_PWM0 | ICH_FAN_TACH0 | PCH |
| SYS FAN | FANPWM2 | N/A | FANIO2 | IT8720 |
| | ICH_FAN_PWM1 | N/A | ICH_FAN_TACH1 | PCH |
| PWR FAN | N/A | N/A | FANIO3 | IT8720 |
| | | | ICH_FAN_TACH2 | PCH |

| Gigabyte Technology | | | |
|---------------------|--------------------------|-------|----------|
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| | GA-Z77X-UD3H-WB | 1.03 | |
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