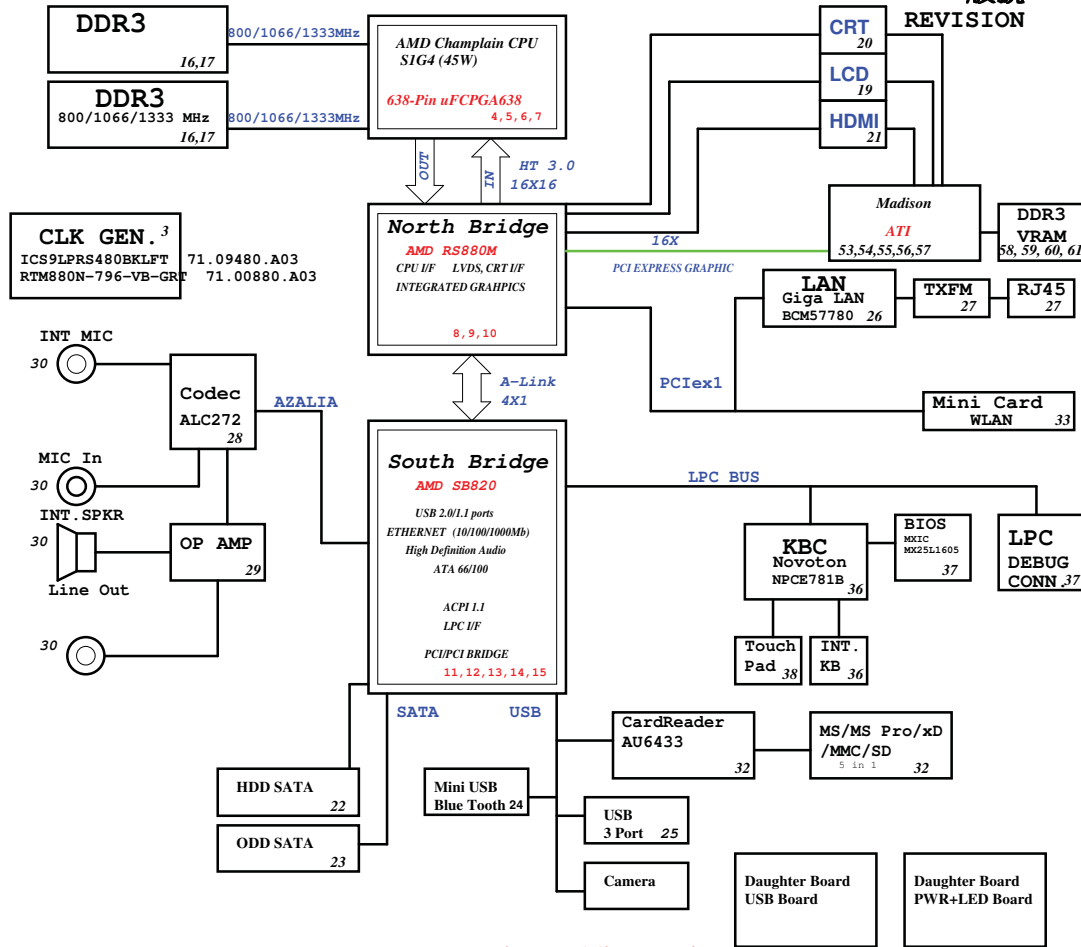


HM42-DN Block Diagram

Project code: 91.4HD01.001
 PCB P/N : 48.4GX01.0SA
 PCB 版號 : 09919 SA
 REVISION : PCB STACKUP



TOP _____
 VCC _____
 S _____
 S _____
 GND _____
 BOTTOM _____

| | |
|---------------------|-----------------|
| SYSTEM DC/DC | |
| RT8223 | 46 |
| INPUTS | OUTPUTS |
| DCBATOUT | 5V_S5 (5.5A) |
| | 3D3V_S5 (5A) |
| SYSTEM DC/DC | |
| RT8209E | 47 |
| 5V_S5 | 1D5V_S3 (1.4A) |
| RT9026 | 47 |
| 5V_S5 | 0D75_S3 (1.2A) |
| SYSTEM DC/DC | |
| RT8209E | 48 |
| INPUTS | OUTPUTS |
| DCBATOUT | 1D1V_S0 (1.1A) |
| RT9025 | 48 |
| 3D3V_S5 | 1D1V_S5 (1.4A) |
| RT9025 | 49 |
| 5V_S5 | 1D1V_VGA |
| RT9161 | 49 |
| 3D3V_S0 | 2D5V_S0 (200mA) |
| RT9025 | 49 |
| 1D5V_S3 | 1D05V_S0 (1.4A) |
| CHARGER | |
| BQ24745 | 50 |
| INPUTS | OUTPUTS |
| DCBATOUT | CHG_PWR |
| | 18V 6.0A |
| | UP+5V |
| | 5V 100mA |
| CPU DC/DC | |
| ISL6265AHR | 45 |
| INPUTS | OUTPUTS |
| DCBATOUT | VCC_CORE_S0 |
| | 0~1.55V 18A |
| | VDDNB |
| | 0~1.55V 4A |

Discrete Madison Hynix

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File: **BLOCK DIAGRAM**

Size: A3 Document Number: **JE40-DN** Rev: -3

Date: Friday, March 26, 2010 Sheet: 1 of 85

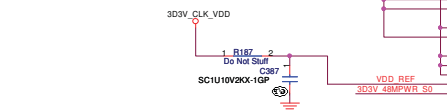
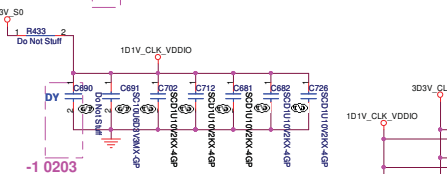
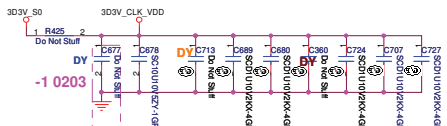
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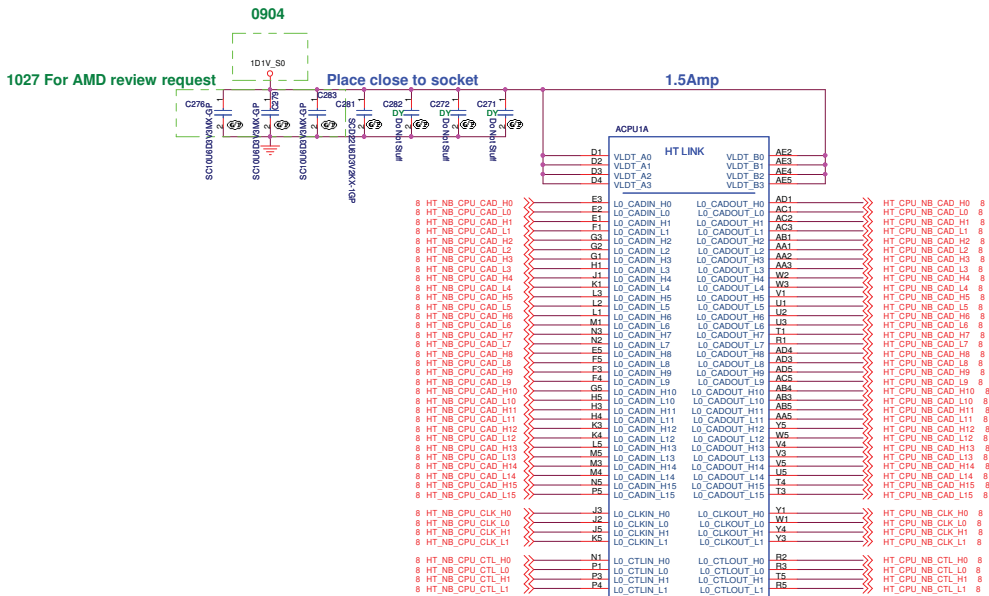
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Taipei Hsien 221, Taiwan, R.O.C.

| Title | | |
|----------------|------------------------|---------------|
| History | | |
| Size | Document Number | Rev |
| A3 | JE40-DN | -3 |
| Date: | Friday, March 26, 2010 | Sheet 2 of 63 |





SKT-CPU638P-GP-U2
62.10055.111
 2ND = 62.10055.181(ENG 未上)

SKT-BGA638H176

<http://hobi-elektronika.net>

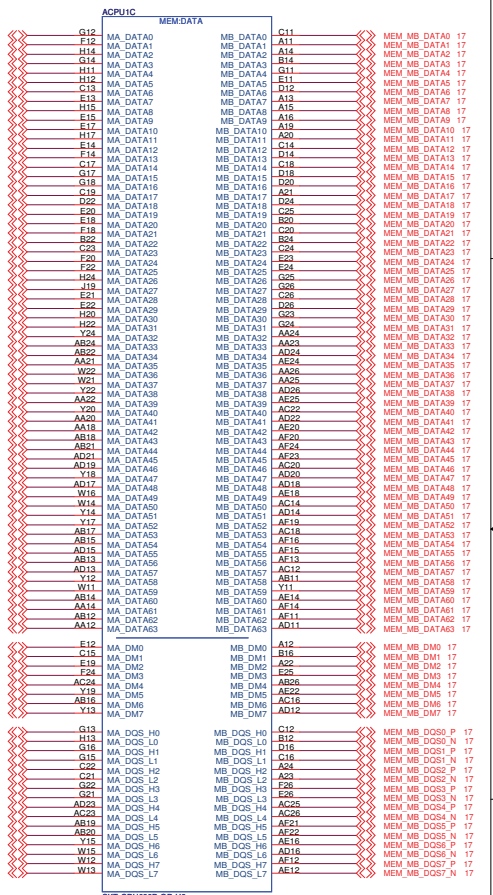
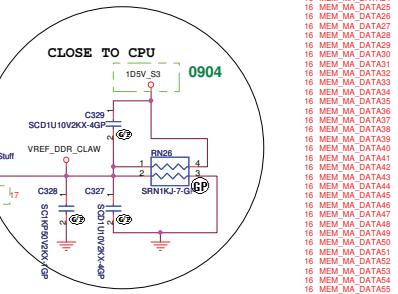
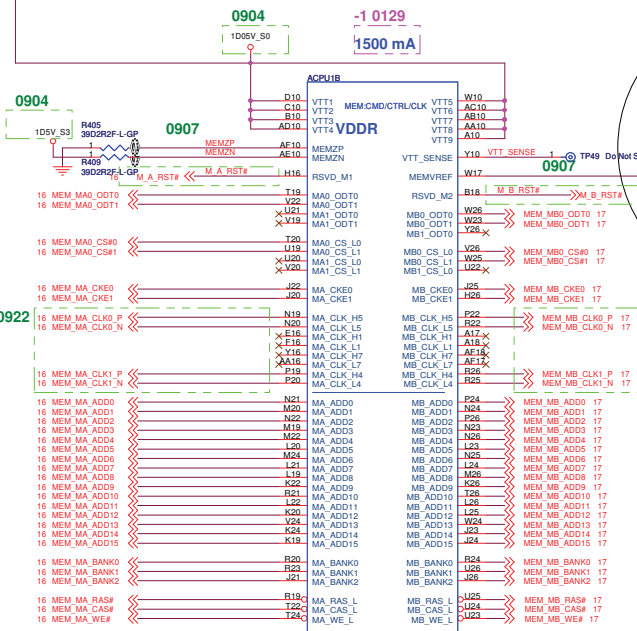
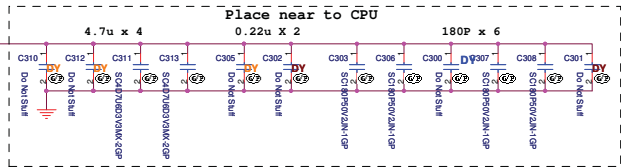
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緯創資通 **Wistron Corporation**
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 Taipei Hsien 221, Taiwan, R.O.C.

File: **CPU HT LINK I/F (1/4)**

Rev: **A3** Document Number: **JE40-DN** Rev: **-3**

Date: Friday, March 26, 2010 Sheet: 4 of 80



SKT-CPU888P-GP-U2
62.10055.111
2ND = 62.10055.181

SKT-CPU888P-GP-U2
62.10055.111
 Diemle Mediatek Hynix
2ND = 62.10055.104

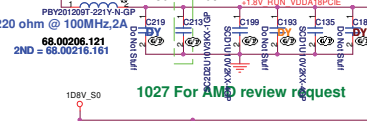
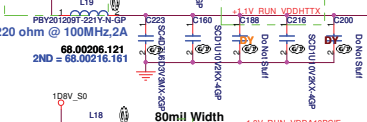
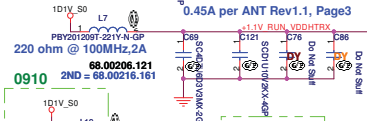
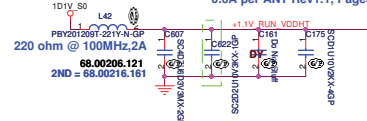
<http://hobi-elektronika.net>

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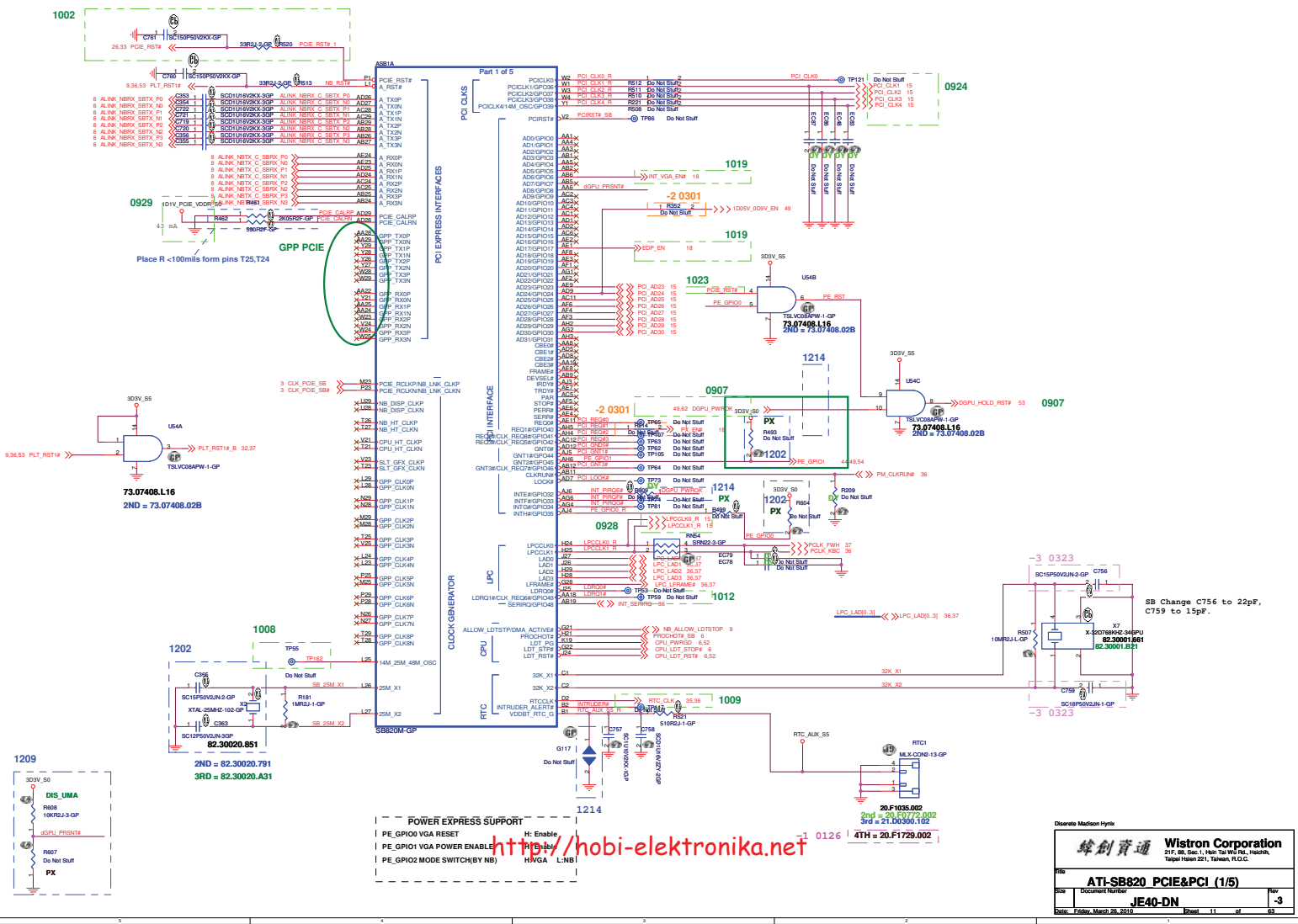
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|-------|------------------------|----------------------|---|----------|
| File | | CPU DDR (2/4) | | Rev |
| Doc | Document Number | JE40-DN | | 3 |
| Date: | Friday, March 26, 2010 | Sheet | 5 | of |

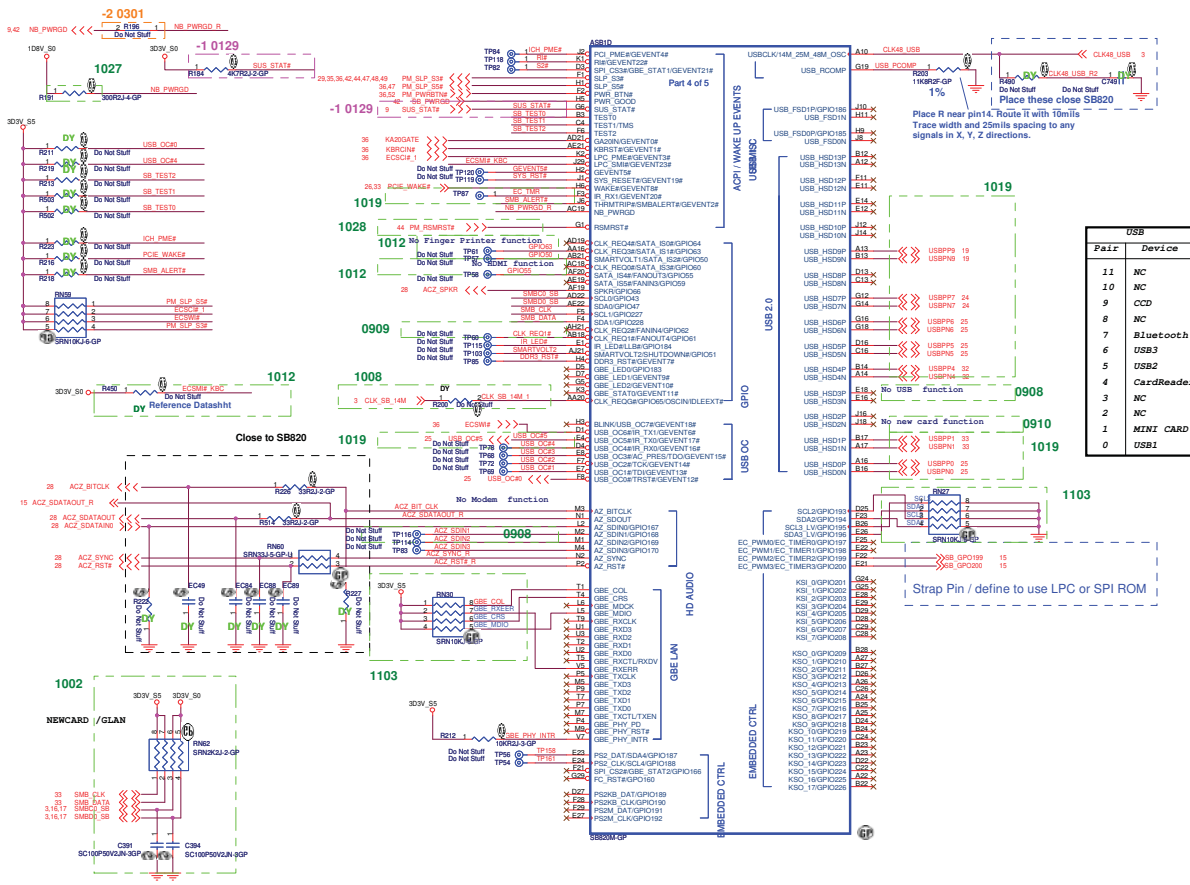
1027 For AMD review request

0.6A per ANT Rev1.1, Page3



1002





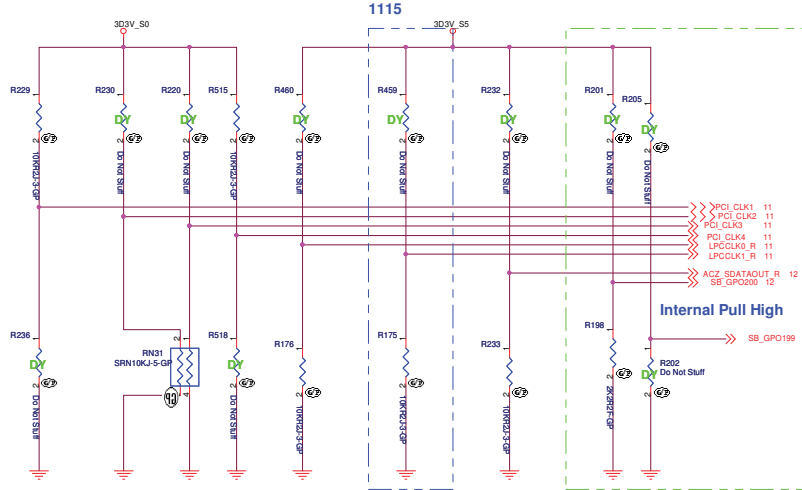
Discrete Medium Hytek

Wistron Corporation
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 Taipei Hsien 221, Taiwan, R.O.C.

No. **ATI-SB820 USB&GPIO (2/5)** Rev. **-3**
 Doc. **JE40-DN**
 Date: **Friday, March 26, 2010**

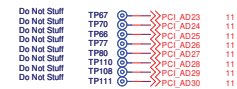
<http://hobi-elektronika.net>

REQUIRED SYSTEM STRAPS



1002

DEBUG STRAPS



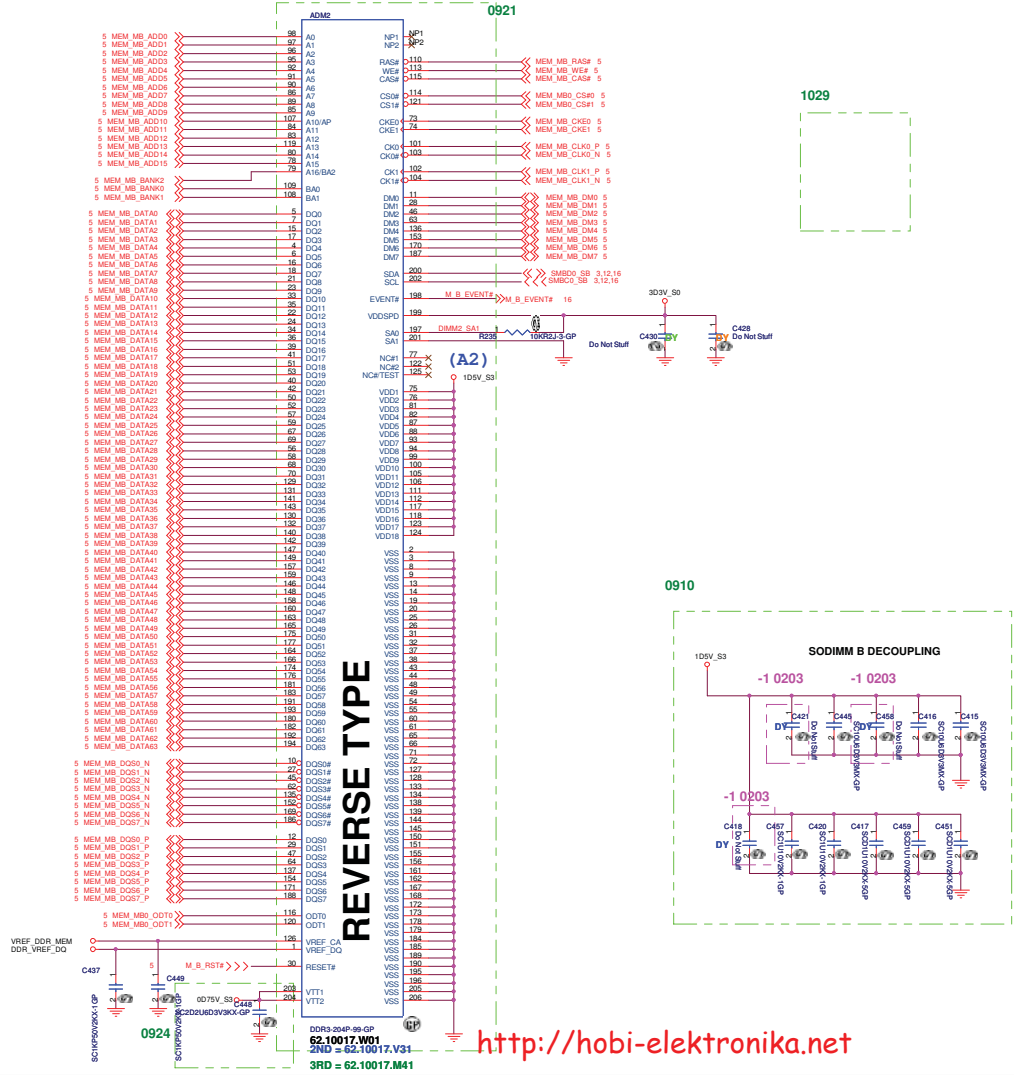
| | PCI_CLK1 | PCI_CLK2 | PCI_CLK3 | PCI_CLK4 | LPC_CLK0 | LPC_CLK1 | AZ_SDOUT | GPIO200 | GPIO199 |
|------------------|-----------------------------------|--|--------------------------------------|---|------------------------------|----------------------------------|------------------------------------|---|---------|
| PULL HIGH | ALLOW PCIe Gen2 DEFAULT | Watchdog Timer Enabled | USE DEBUG STRAP | non_Fusion CLOCK MODE DEFAULT | EC ENABLED DEFAULT | CLKGEN ENABLED DEFAULT | LOW POWER MODE | H,H = Reserved L,L = SPI ROM | |
| PULL LOW | FORCE PCIe Gen1 | Watchdog Timer Disabled DEFAULT | IGNORE DEBUG STRAP DEFAULT | FUSION CLOCK MODE | EC DISABLED | CLKGEN DISABLED | PERFORMANCE MODE DEFAULT | L,H = LPC ROM (Default) L,L = FW ROM | |

| | PCI_AD27 | PCI_AD26 | PCI_AD25 | PCI_AD24 | PCI_AD23 |
|------------------|-------------------------------|---------------------------------------|------------------------------|---|--|
| PULL HIGH | USE PCI PLL DEFAULT | DISABLE ILA AUTORUN DEFAULT | USE FC PLL DEFAULT | USE DEFAULT PCIE STRAPS DEFAULT | DISABLE PCI MEM BOOT DEFAULT |
| PULL LOW | BYPASS PCI PLL | ENABLE ILA AUTORUN | BYPASS FC PLL | USE EEPROM PCIE STRAPS | ENABLE PCI MEM BOOT |

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| | | | |
|----------------------------------|------------------------|--|-----------|
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| | | <small>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsin 321, Taiwan, R.O.C.</small> | |
| Title | | | |
| ATI-SB820 STRAPPING (5/5) | | | |
| Size | Document Number | Rev | |
| A3 | JE40-DN | | -3 |
| Date: | Friday, March 26, 2010 | Sheet | 15 of 83 |

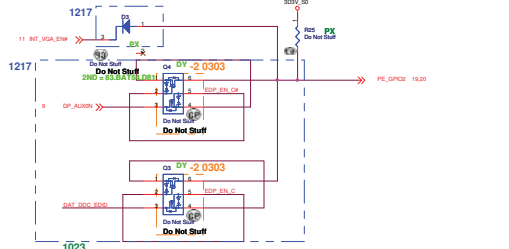
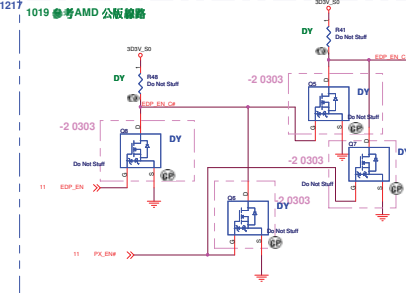


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| | | |
|------|-----------------------------|----------------|
| File | DDRIII SO-DIMM SKT_2 | |
| Rev | Document Number | Rev |
| Case | JE40-DN | |
| Date | Friday, March 28, 2010 | Sheet 17 of 83 |



Truth Table

| Function | SEL |
|------------------------------------|-----|
| A _N to N _B 1 | L |
| A _N to N _B 2 | H |

CRT

| E | S | YA | YB | YC | YD | Function |
|---|---|------------------|------------------|------------------|------------------|----------|
| H | X | H _{h-Z} | H _{h-Z} | H _{h-Z} | H _{h-Z} | Disable |
| L | L | IA0 | IB0 | IC0 | ID0 | S=0 |
| L | H | IA1 | IB1 | IC1 | ID1 | S=1 |

Function Table

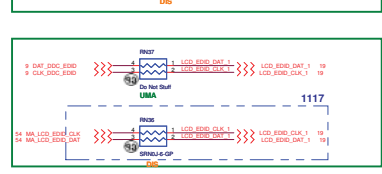
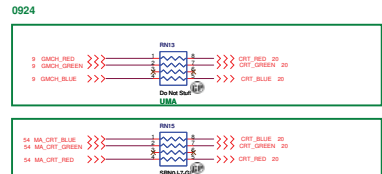
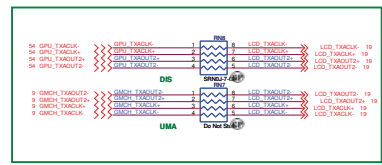
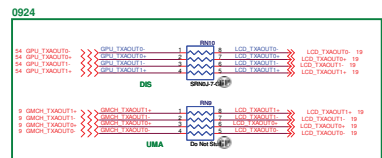
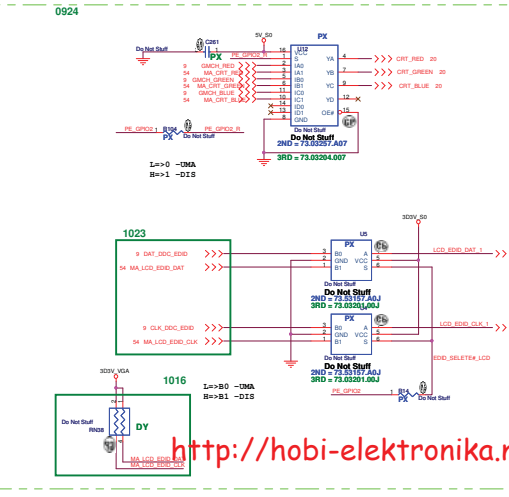
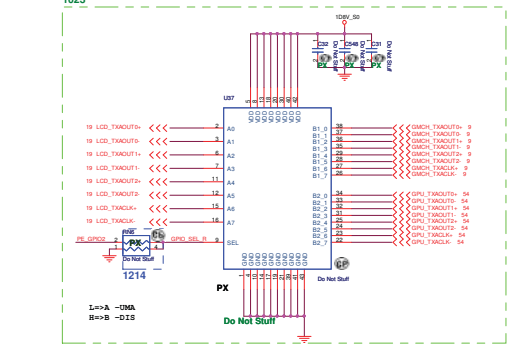
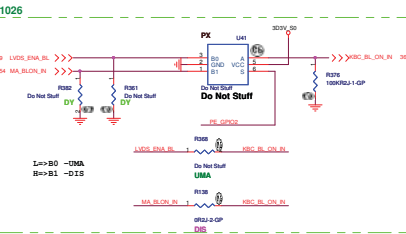
| Input (B) | Function |
|-----------|-------------------------------|
| L | B _i Connected to A |
| H | B _i Connected to A |

H = HIGH Logic Level L = LOW Logic Level

Function Table

| Input (B) | Function |
|-----------|-------------------------------|
| L | B _i Connected to A |
| H | B _i Connected to A |

H = HIGH Logic Level L = LOW Logic Level



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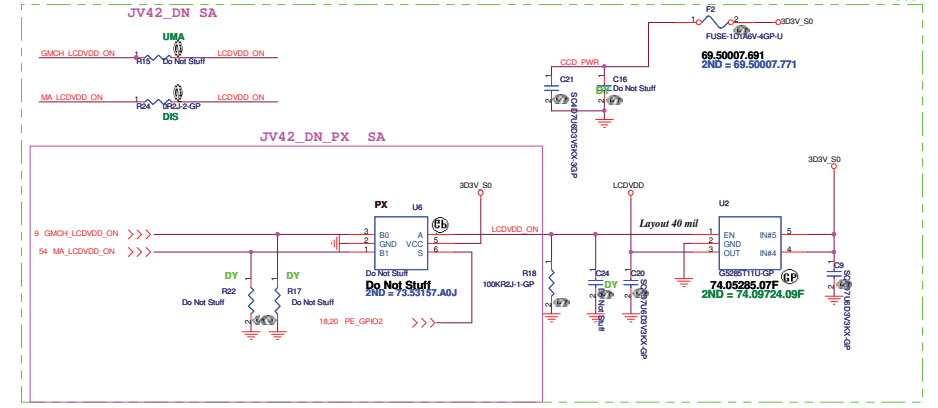
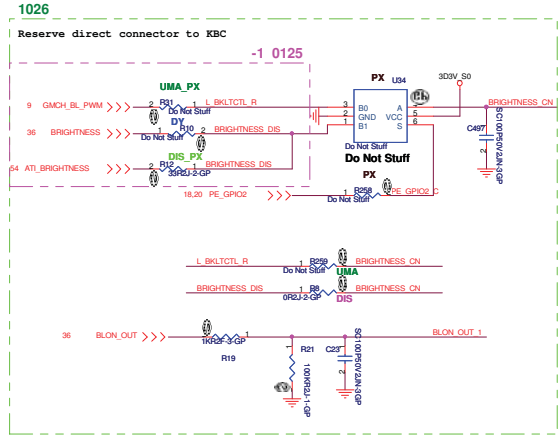
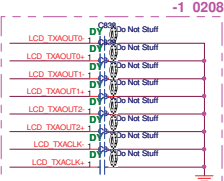
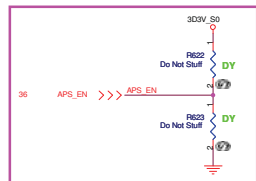
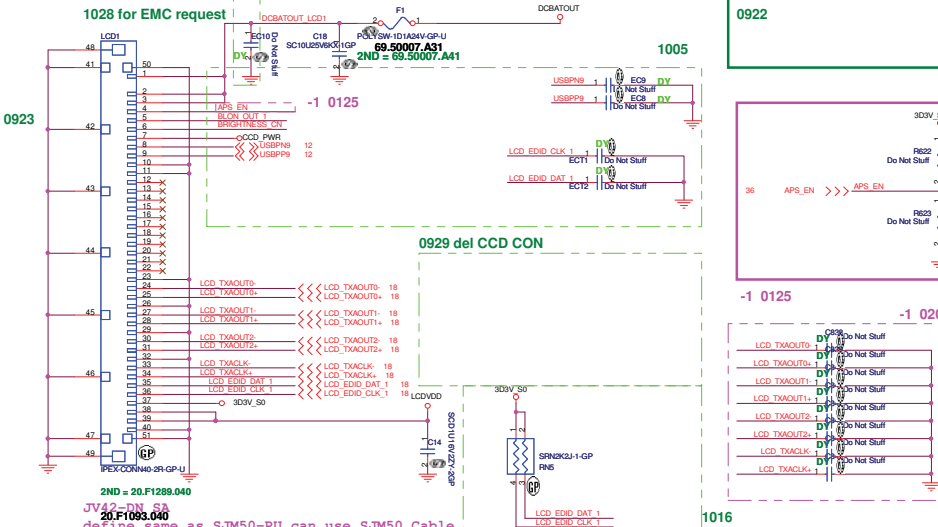
LCD/INVERTER/CCD CONN

Change PX

0922

| Inverter Pin | |
|--------------|------------|
| Pin | Symbol |
| 1 | Vin |
| 2 | Vin |
| 3 | Brightness |
| 4 | BLON |
| 5 | GND |
| 6 | GND |

| CCD Pin | |
|---------|---------|
| Pin | Symbol |
| 1 | CCD_PWR |
| 2 | USB- |
| 3 | USB+ |
| 4 | GND |
| 5 | GND |



Discrete Medicon Hyink

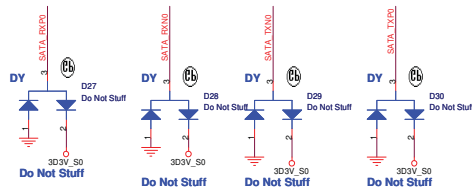
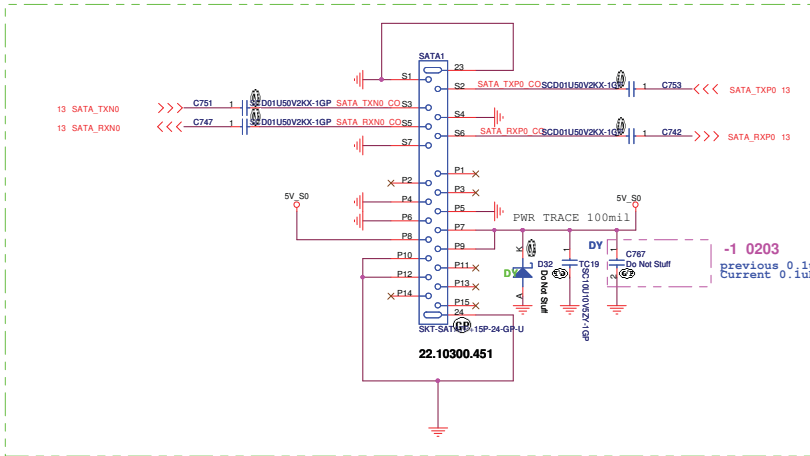
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| | | | |
|--------|------------------------|-----------------|----------|
| Title | | LCD CONN | |
| Size | Document Number | New | |
| Custom | JE40-DN | -3 | |
| Date: | Friday, March 26, 2010 | Sheet | 19 of 63 |

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SATA Connector

0923



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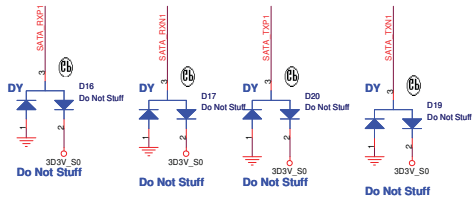
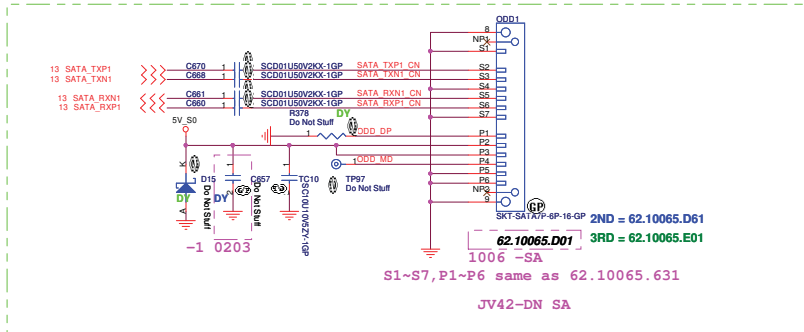
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Taipai Hsien 221, Taiwan, R.O.C.

| | | | |
|------|------------------------|---------|----------|
| File | | HDD | Rev |
| Size | Document Number | JE40-DN | |
| Date | Friday, March 26, 2010 | Sheet | 22 of 83 |

ODD Connector

1009



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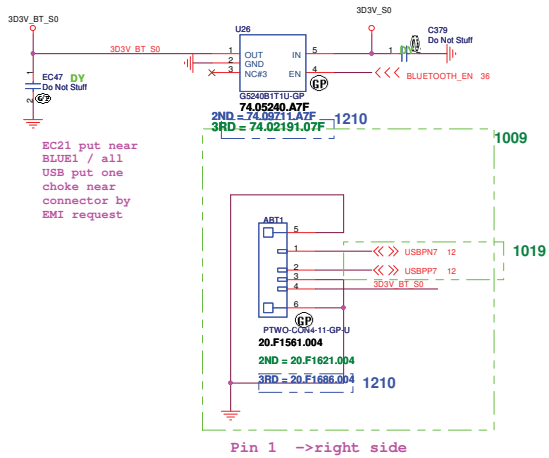
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Wistron Corporation
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 Taipei Hsien 221, Taiwan, R.O.C.

| | | | |
|-------|------------------------|-----------|------------|
| File | | | ODD |
| Size | Document Number | Rev | |
| | JE40-DN | -3 | |
| Date: | Friday, March 26, 2010 | Sheet | 23 of 63 |

BLUETOOTH MODULE

1.5A / High Active Voltage 2V

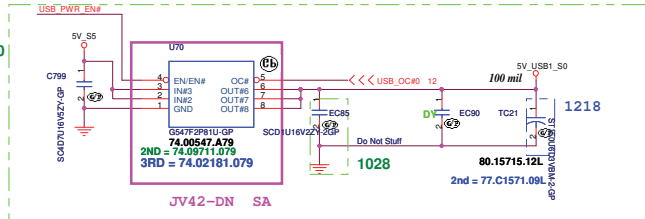


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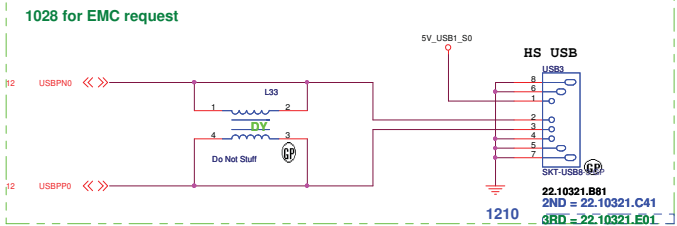
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Taipei Hsien 221, Taiwan, R.O.C.

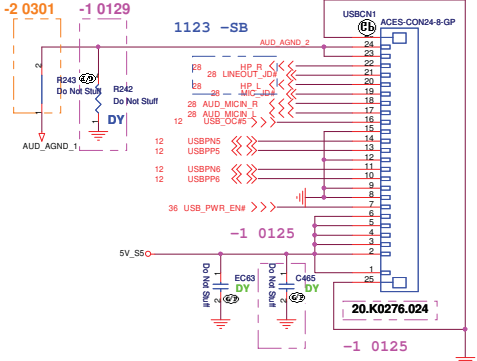
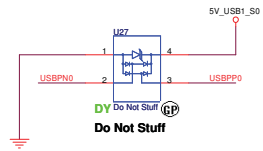
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| Title | | | BLUETOOTH |
| Size | Document Number | Rev | |
| | JE40-DN | -3 | |
| Date: Friday, March 26, 2010 | Sheet | 24 | of 63 |



0914



Pin1 -> right side
 22.10218.T51 Pin1 -> left side (JV42-DN)
 change Net sequence



Eng stuff 20.K0216.024 Pin1 -> left side
 PD change to 20.K0276.024 Pin1 -> left side
 so do not swap net

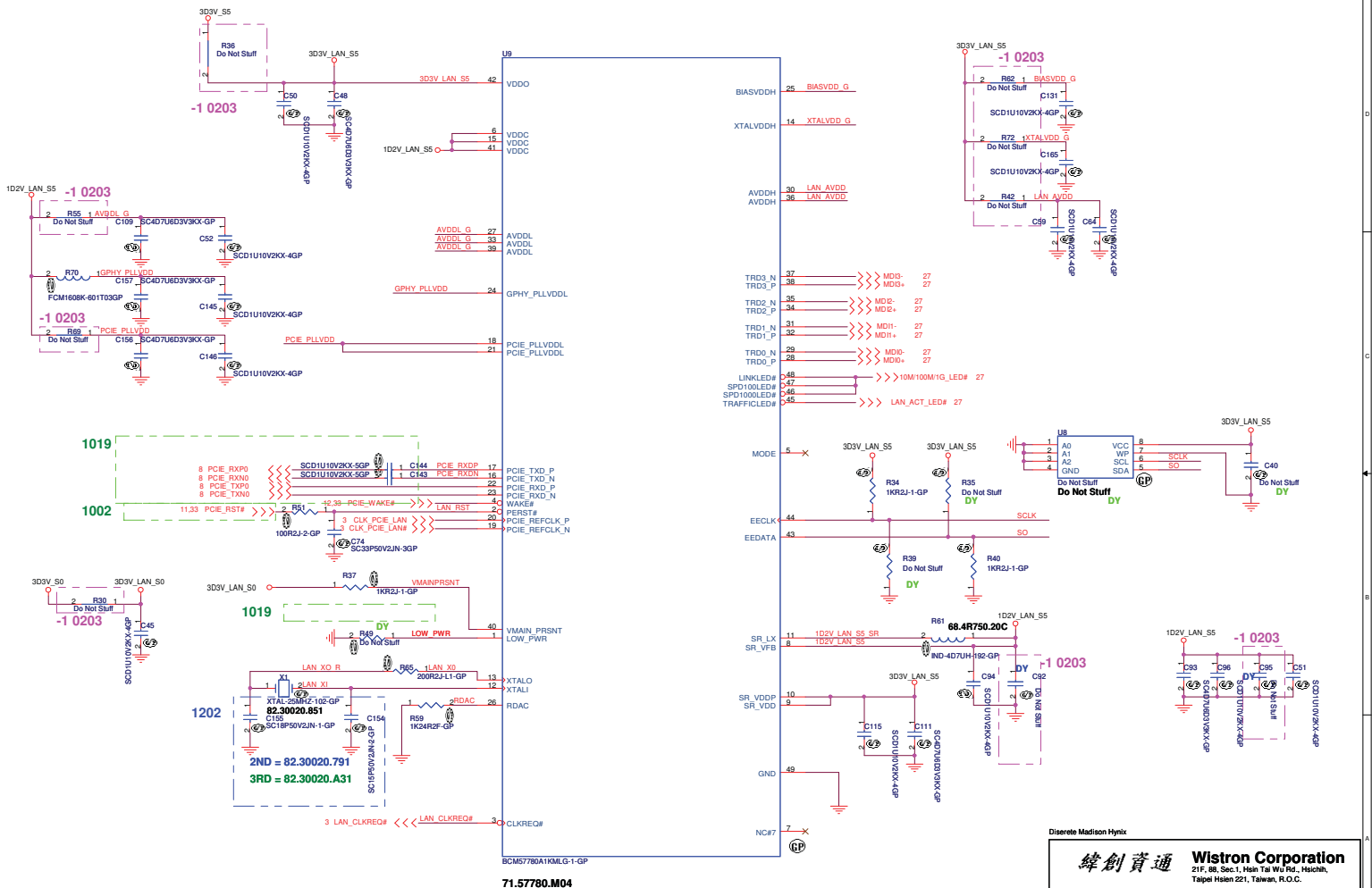
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0910

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| | | | |
|------------|------------------------|--|-----------|
| 緯創資通 | | Wistron Corporation | |
| | | 21F, 88, Sec. 1, Hsin Ta Wu Rd., Hsinchu, Taipei Hsien 321, Taiwan, R.O.C. | |
| USB | | | |
| File | | | Rev |
| Size | Document Number | JE40-DN | |
| Date | Friday, March 26, 2010 | Sheet | 25 of 63 |
| | | | -3 |



71.57780.M04

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Discrete Madison Hynix

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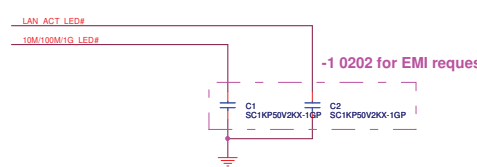
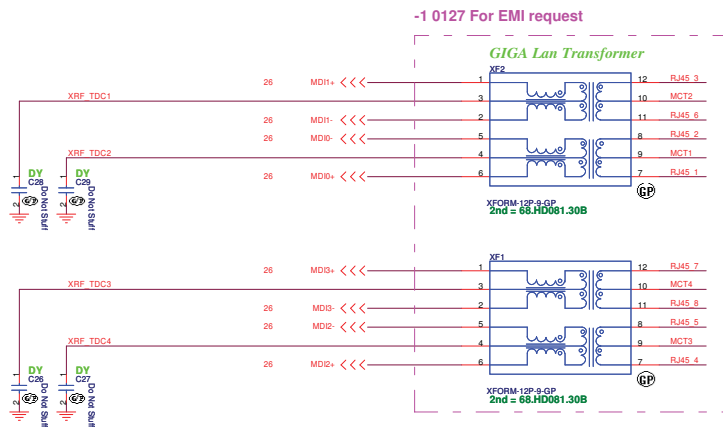
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| Size A3 | Document Number JE40-DN | Rev -3 |
| Date: Friday, March 26, 2010 | Sheet 26 of 63 | |

LAN Connector

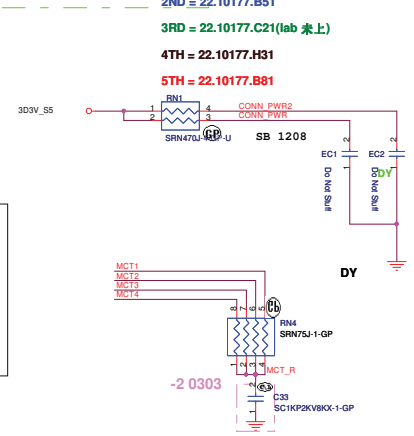
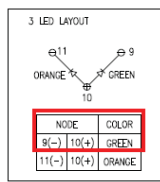
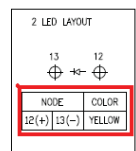
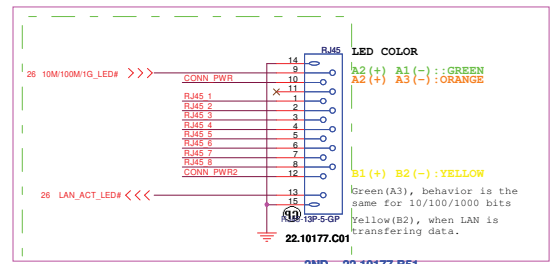
LAN Connector

- 1.route on bottom as differential pairs.
- 2.Tx+/Tx- are pairs. Rx+/Rx- are pairs.
- 3.No vias, No 90 degree bends.
- 4.pairs must be equal lengths.
- 5.6mil trace width, 12mil separation.
- 6.36mil between pairs and any other trace.
- 7.Must not cross ground moat,except RJ-45 moat.



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0923



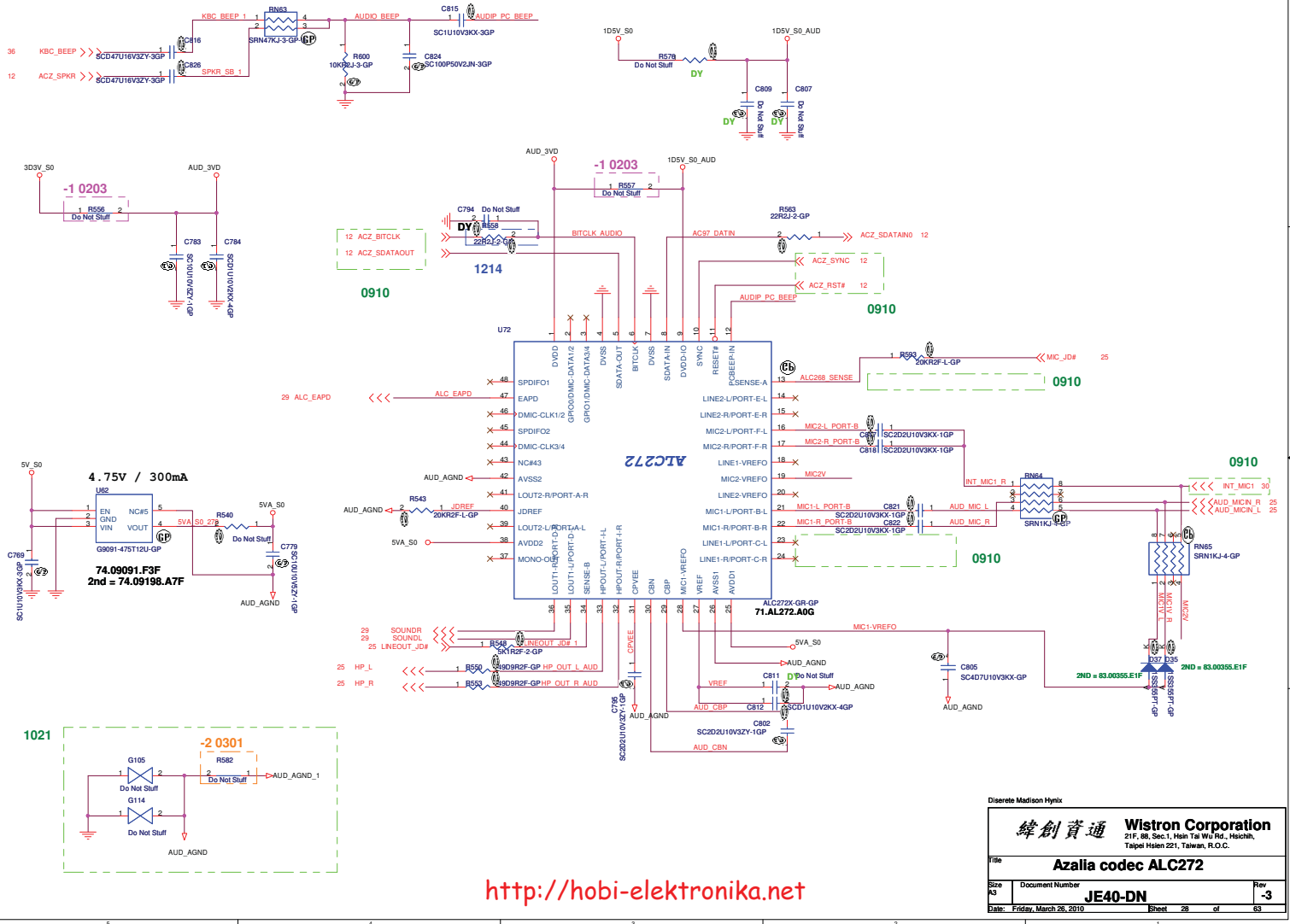
Discrete Madison Hynix

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File **LAN CONN**

| | | |
|------------------------------|--------------------------------|---------------|
| Size A3 | Document Number JE40-DN | Rev -3 |
| Date: Friday, March 26, 2010 | Sheet 27 of 80 | |



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Discrete Madison Hynix

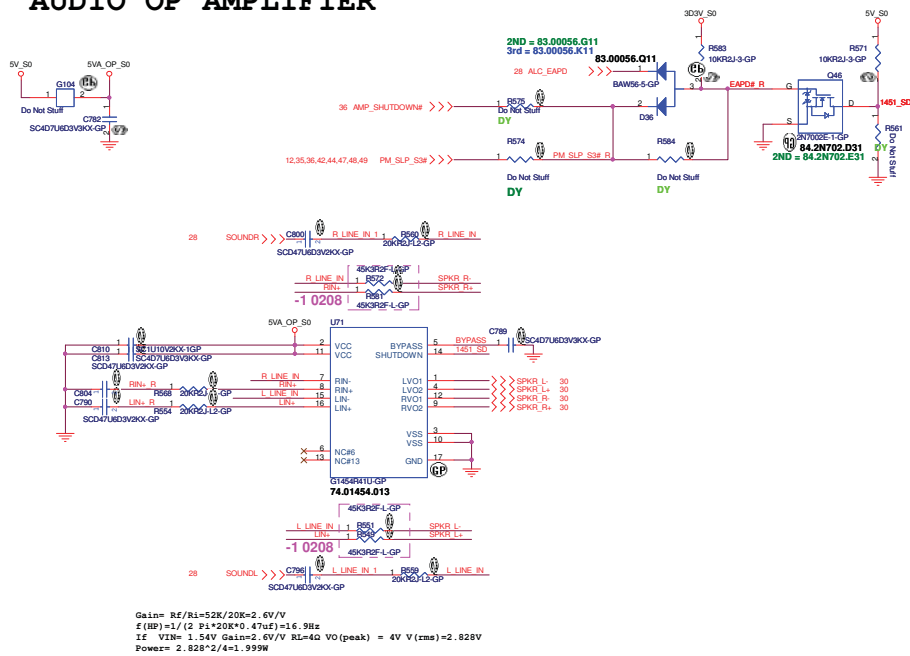
緯創資通 Wistron Corporation
 21F, 88, Sec. 1, Hsin Ta Wu Rd., Hsichih,
 Taipei Hsueh 221, Taiwan, R.O.C.

File: **Azalia codec ALC272**

| | | |
|------|-----------------|-----------|
| Size | Document Number | Rev |
| A3 | JE40-DN | -3 |

Date: Friday, March 26, 2010 Sheet 26 of 63

AUDIO OP AMPLIFIER



Discrete Medium Hybrid

緯創資通

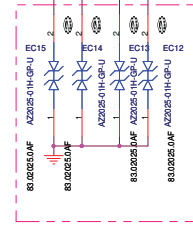
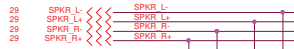
Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Heichih,
 Taipei Hsien 251, Taiwan, R.O.C.

| | | | |
|-------|------------------------|----------------|-----|
| Rev | AUDIO AMP | | Rev |
| Doc | Document Number | JE40-DN | -3 |
| Date: | Friday, March 26, 2010 | Sheet 29 of 63 | |

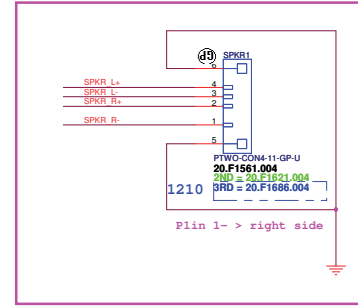
<http://hobi-elektronika.net>

Internal Speaker

0914



-1 0125 for EMI request



JV42-DN SA

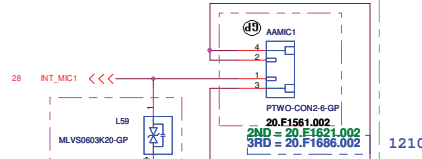
LINE OUT

0911



1016

Internal Mic



-1 0209 For MIC issue

JV42-DN PX
Pin 1 -> right side
20.F1240.002 Pin1->left side

same as JV70-CP

<http://hobi-elektronika.net>

Discrete Madison Hynix

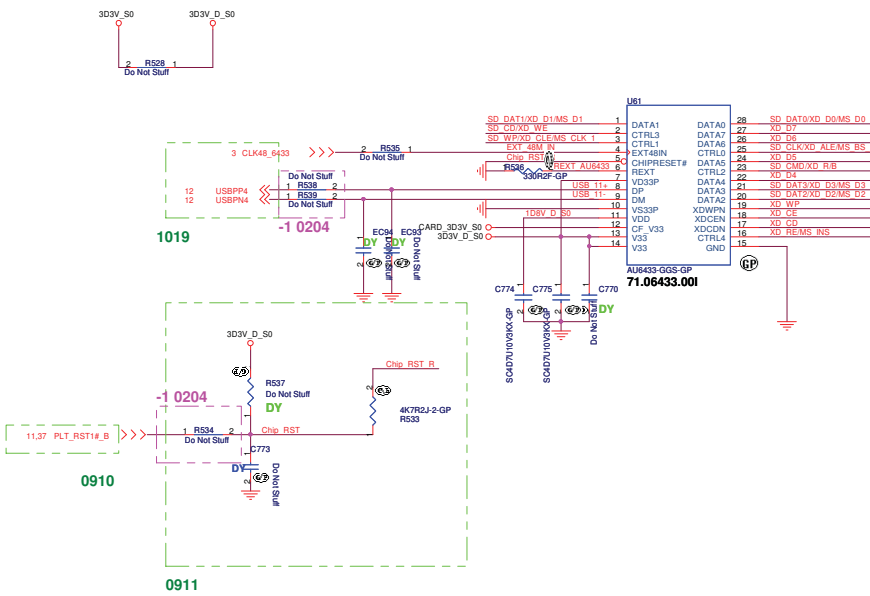
| | | | |
|-------------------|------------------------|--|----------|
| | | Wistron Corporation 21F, 88, Sec. 1, Hsin Ta Wu Rd., Hsinchu, Taipei Hsein 221, Taiwan, R.O.C. | |
| File | | | |
| AUDIO JACK | | | |
| JE40-DN | | | |
| Date: | Friday, March 26, 2010 | Sheet | 30 of 63 |
| Size | Document Number | Rev | -3 |

No Modem Function

<http://hobi-elektronika.net>

Discrete Madison Hyrix

| | | | |
|-------|------------------------|---|-----------|
| 緯創資通 | | Wistron Corporation | |
| | | 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Tapei Hsien 221, Taiwan, R.O.C. | |
| Title | | MDC | |
| Size | Document Number | | Rev |
| | JE40-DN | | -3 |
| Date: | Friday, March 26, 2010 | Sheet | 31 of 63 |

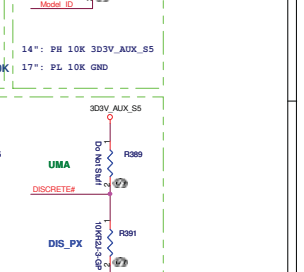
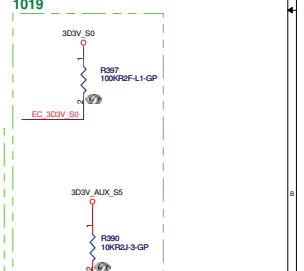
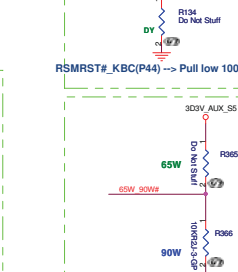
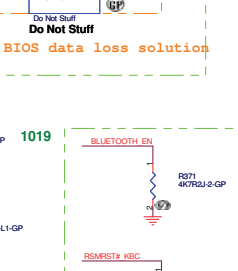
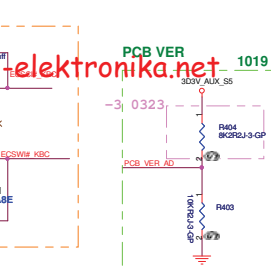
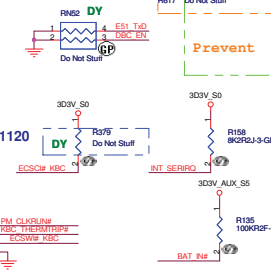
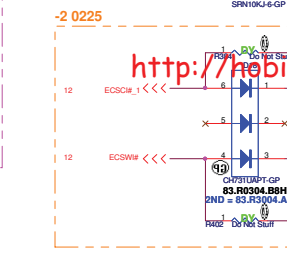
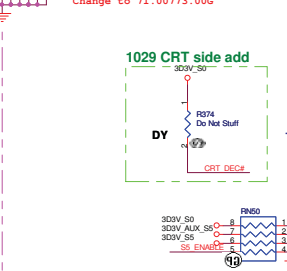
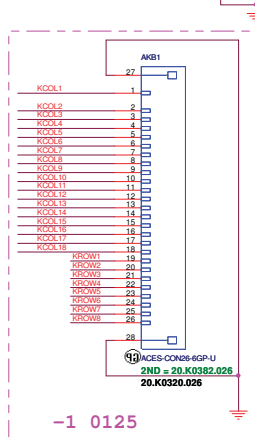
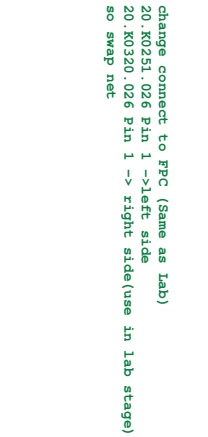
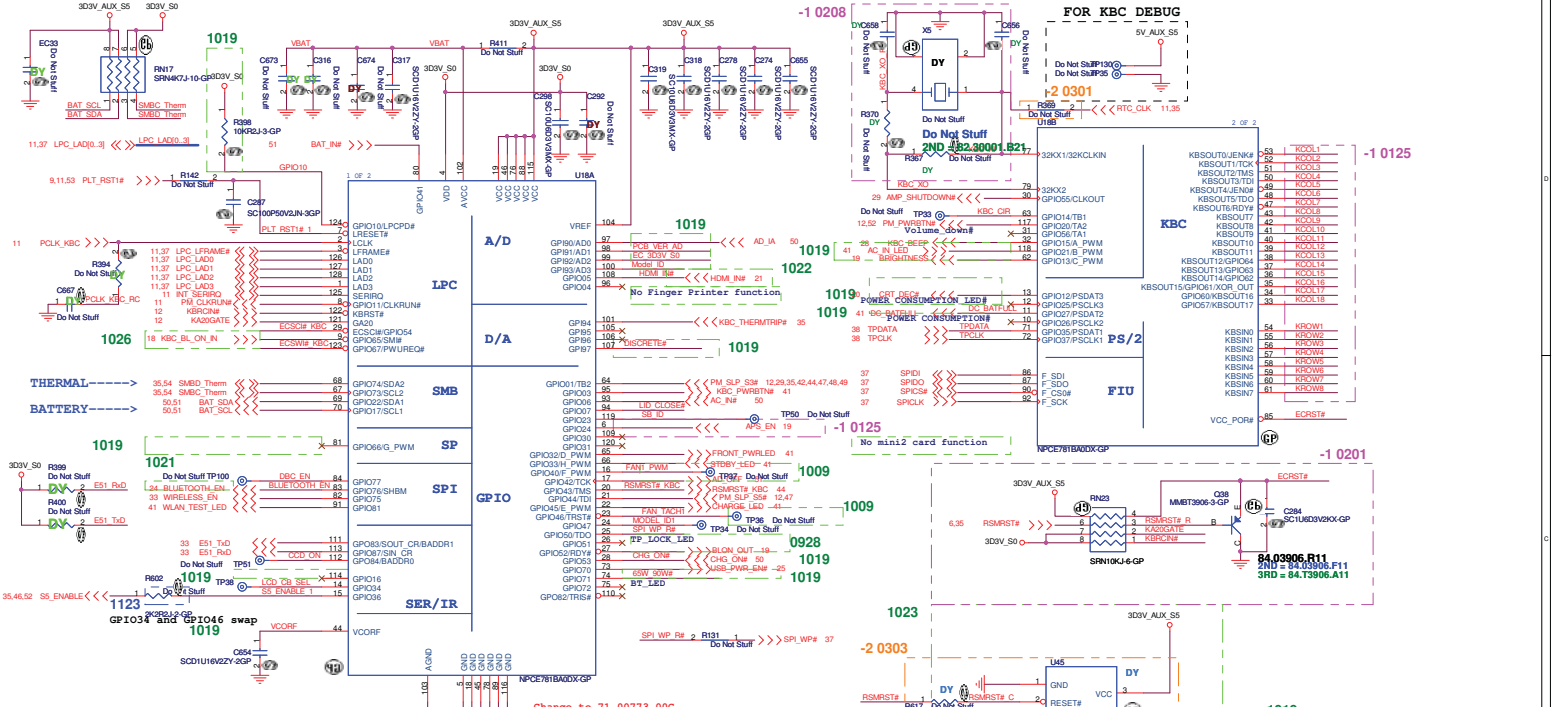


No NEWCARD Function

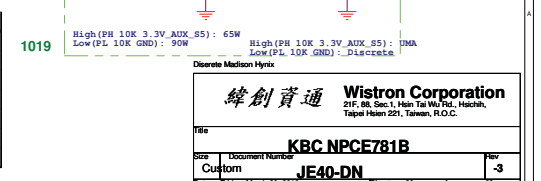
<http://hobi-elektronika.net>

Discrete Madison Hynix

| | | | |
|--|------------------------|--|--------------|
| 緯創資通 | | Wistron Corporation | |
| <small>21F, 88, Sec. 1, Hsin Ta Wu Rd., Hsinchu, Taippei Hsien 321, Taiwan, R.O.C.</small> | | <small>21F, 88, Sec. 1, Hsin Ta Wu Rd., Hsinchu, Taippei Hsien 321, Taiwan, R.O.C.</small> | |
| File | | | |
| NEW CARD | | | |
| Size | Document Number | Rev | -3 |
| JE40-DN | | | |
| Date: Friday, March 26, 2010 | | Sheet 34 | of 63 |



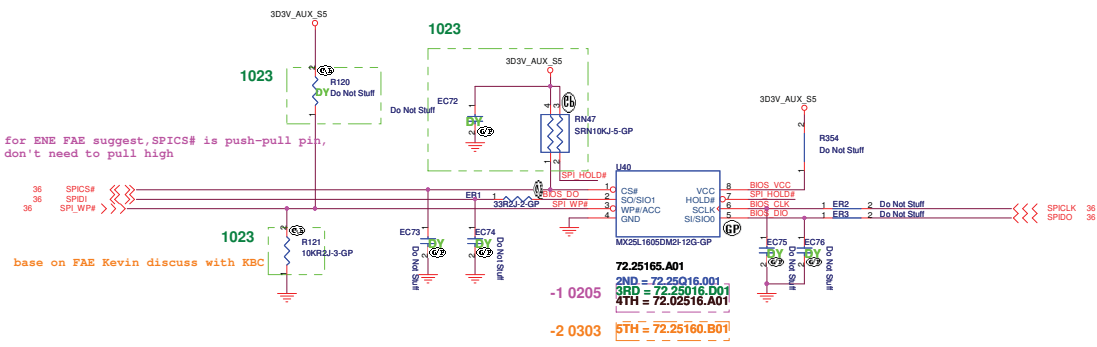
| Pull-High Resistor (303V_AUX_S5) | Voltage |
|----------------------------------|---------|
| 1.0 K | 3.0 V |
| 2.0 K | 2.75 V |
| 3.0 K | 2.54 V |
| 4.7 K | 2.24 V |
| 6.98 K | 1.94 V |
| 8.2 K | 1.81 V |
| 10.0 K | 1.65 V |



Wistron Corporation
 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsinchu, Taiwan Hsinchu 301, Taiwan, R.O.C.

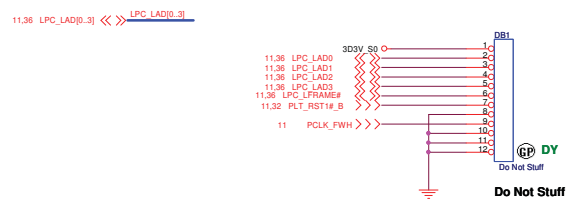
PCB VER 1019
 Date: Friday, March 26, 2010 Sheet 36 of 63

| Rev | Document Number | Rev |
|-----|-----------------|-----|
| 00 | KBC NPCE781B | 00 |
| 01 | Custom | 01 |
| 02 | JE40-DN | 03 |



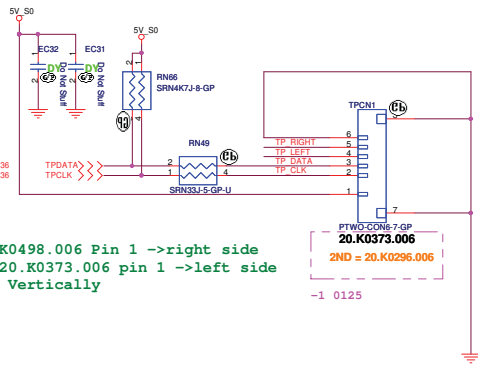
3rd 4th source LAB ENG未上
16M Bits
SPI FLASH ROM

GOLDEN FINGER FOR DEBUG BOARD

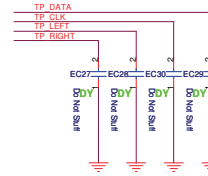


<http://hobi-elektronika.net>

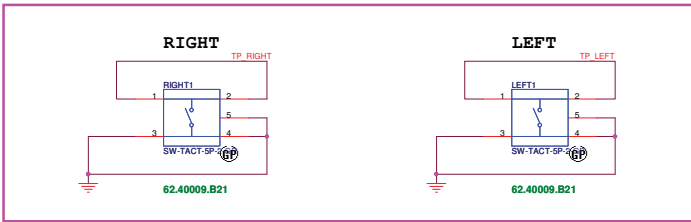
| | | | |
|------------------------|-----------|--|-------------------|
| Discrete Madison Hynix | | 緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C. | |
| File | | | |
| BIOS | | Document Number JE40-DN | |
| Size A3 | Rev -3 | Date Friday, March 26, 2010 | Sheet 37 of 63 |



Eng stuff 20.K0498.006 Pin 1 -->right side
 PD change to 20.K0373.006 pin 1 -->left side
 so net mirror Vertically



-1 0205



No Finger printer Function

<http://hobi-elektronika.net>

Discrete Madison Hynix

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 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichang,
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| | | | |
|-------|------------------------|-------|------------------|
| Title | | | Touch PAD |
| Size | Document Number | Rev | |
| A3 | JE40-DN | -3 | |
| Date: | Friday, March 26, 2010 | Sheet | 38 of 63 |

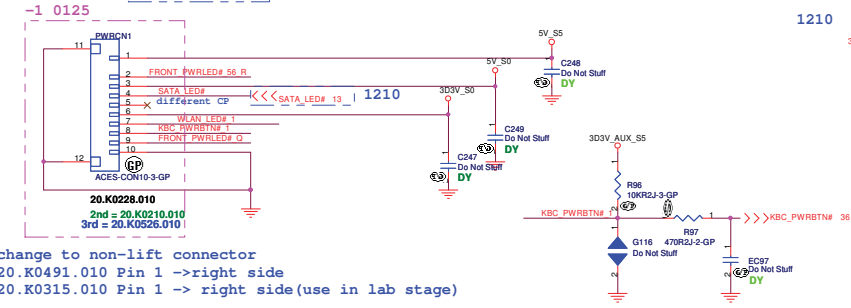
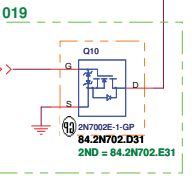
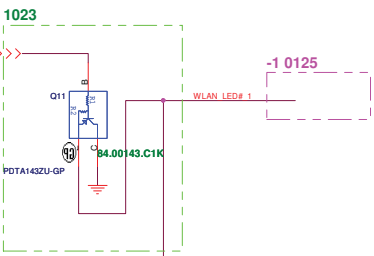
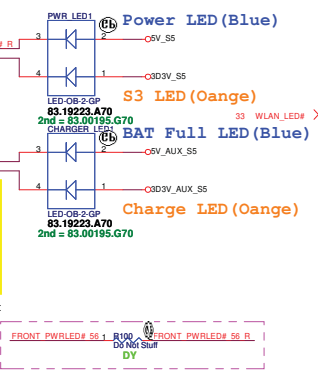
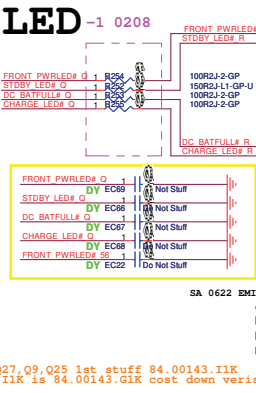
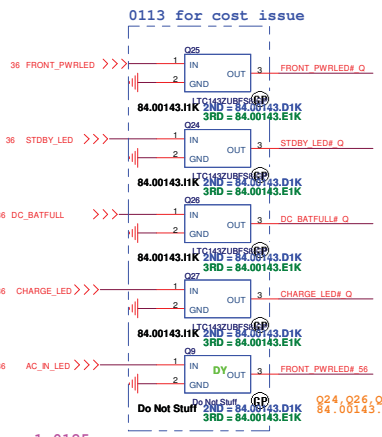
NONE BOARD

<http://hobi-elektronika.net>

| | | | |
|-------------------|------------------------|--|----------|
| 緯創資通 | | Wistron Corporation | |
| | | 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. | |
| Title | | | |
| NONE BOARD | | | |
| Size | Document Number | Rev | |
| A3 | JE40-DN | -3 | |
| Date | Friday, March 26, 2010 | Sheet | 39 of 63 |

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| | | | |
|---|--|---|--|
| 緯創資通 | | Wistron Corporation | |
| 23F, 88, Sec. 2, Hsueh-Tai Rd., Hsinshu, Taipei Hsien 231, Taiwan, R.O.C. | | 23F, 88, Sec. 2, Hsueh-Tai Rd., Hsinshu, Taipei Hsien 231, Taiwan, R.O.C. | |
| Rev | | SWITCH | |
| Doc | | JE40-DN | |
| Date: Friday, March 26, 2010 | | Sheet 00 of 03 | |



1210

1210 del media LED-->SATA LED

| | | |
|--------|--------------------|--------------|
| Pin 1 | 5V_S5 | |
| Pin 2 | FRONT_PWRLED#_56_R | AC IN |
| Pin 3 | 5V_S0 | |
| Pin 4 | SATA_LED# | HDD |
| Pin 5 | NA | |
| Pin 6 | 3D3V_S0 | |
| Pin 7 | WLAN_LED#_R | WLAN |
| Pin 8 | KBC_PWRBTN#_1 | Power button |
| Pin 9 | FRONT_PWRLED#_Q | Power LED |
| Pin 10 | GND | |

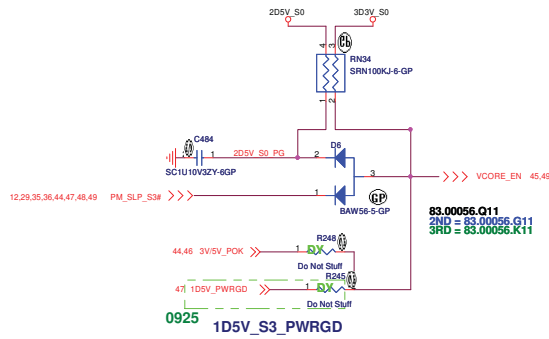
<http://hobi-elektronika.net>

緯創資通 **Wistron Corporation**
 21F, 88, Sec.1, Hsin Ta Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

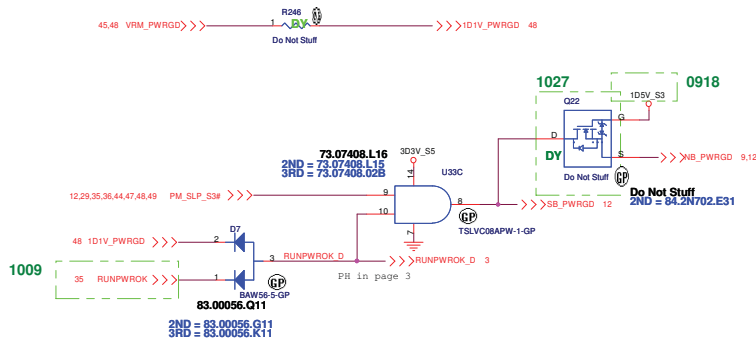
File: **LED**

Size: A3 Document Number: **JE40-DN** Rev: -3

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P/H @ 1D8V_S3 PAGE



<http://hobi-elektronika.net>

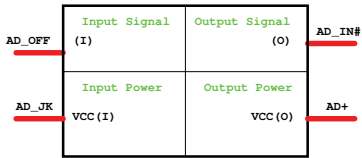
Discrete Madison Hynix

緯創資通

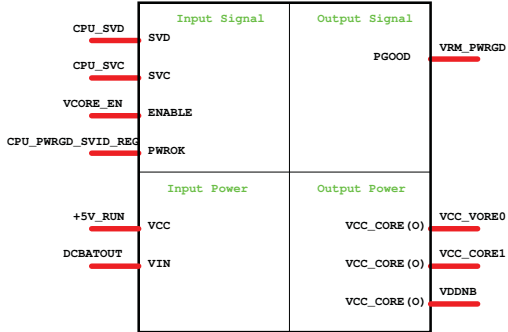
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu,
Taippei Hsien 221, Taiwan, R.O.C.

| | | | |
|-------|------------------------|-----------------------|----------|
| Title | | POWER ON LOGIC | |
| Size | Document Number | Rev | |
| A3 | JE40-DN | -3 | |
| Date: | Friday, March 26, 2010 | Sheet | 42 of 50 |

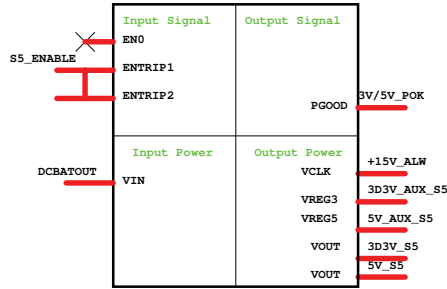
Adapter



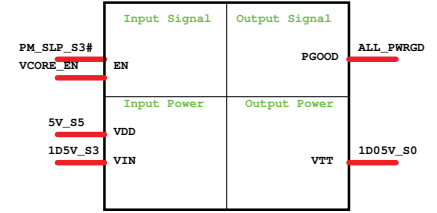
CPU_CORE ISL6265HRTZ



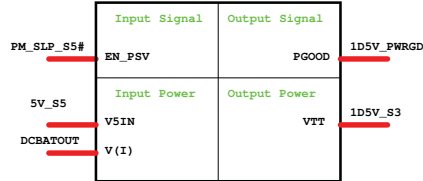
DCDC 5V/3D3V(RT8223)



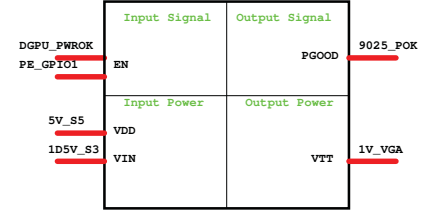
DCDC 1D05V_S0(RT9025)



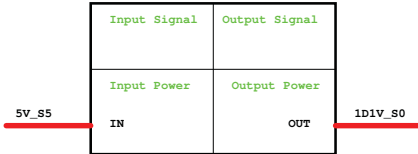
DCDC 1D5V(RT8209E)



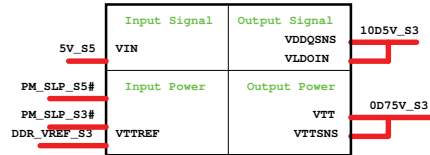
DCDC 1V_VGA(RT9025)



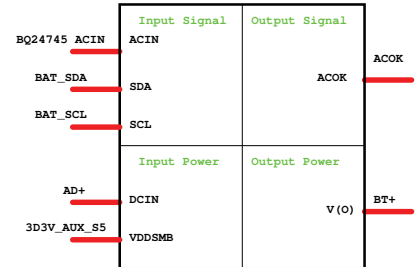
1D1V LDO RT8209E



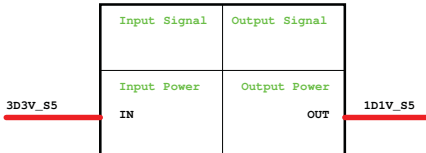
0D75V LDO RT9026



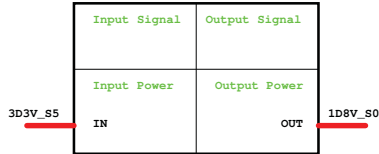
CHARGER BQ24745



1D1V LDO RT9025



1D8V LDO RT8015A



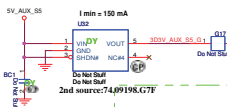
<http://hobi-elektronika.net>

Discrete Madison Hynix

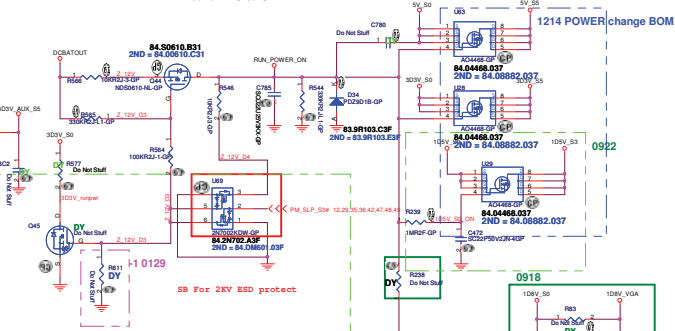
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu,
Taippei Hsien 221, Taiwan, R.O.C.

| | | | | |
|-------|------------------------|---------|---------------------|-----|
| File | | | Power Block Diagram | |
| Size | Document Number | JE40-DN | | Rev |
| A3 | | | | -3 |
| Date: | Friday, March 28, 2010 | Sheet | 43 | of |
| | | | 83 | |

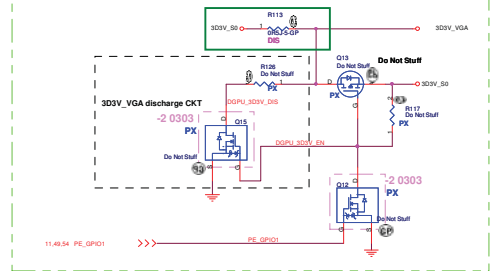
Aux Power 3D3V_AUX_S5



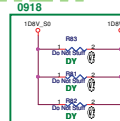
Run Power



+3VS to 3.3V_DELAY Transfer



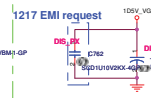
1008



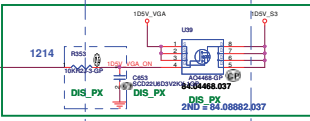
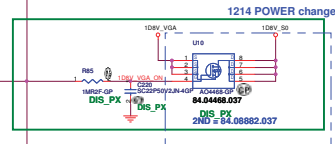
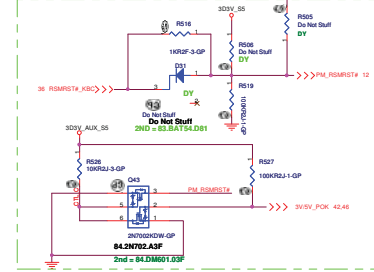
-1 0204

Please closed U77 for Park issue

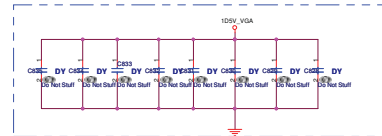
1021



1022



1217 RF request



-2 0303

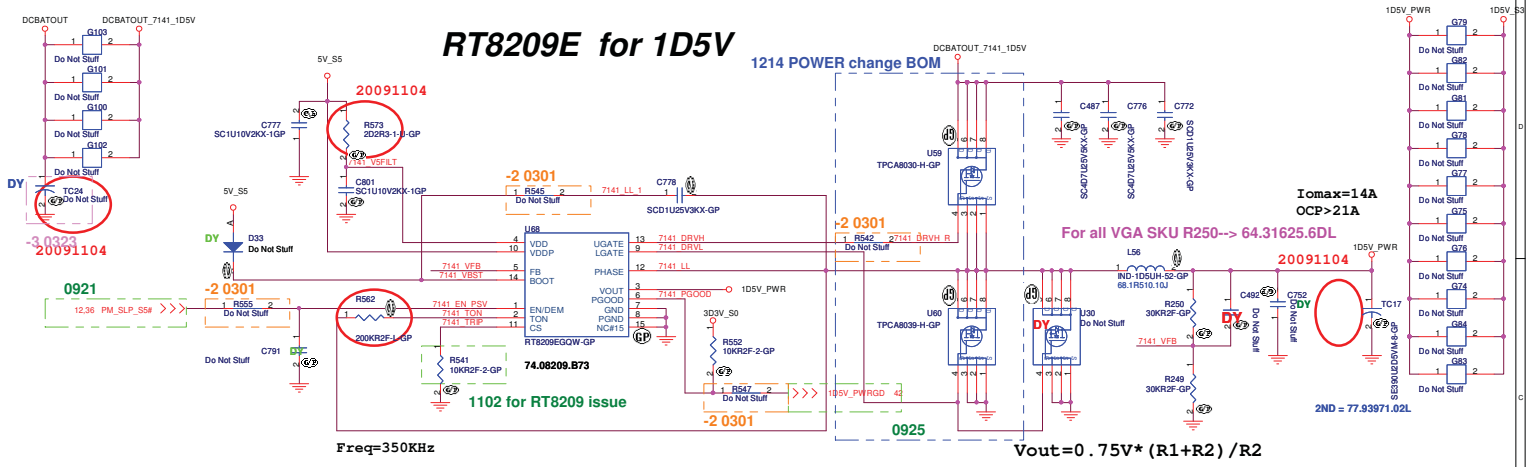


Discrete Medium-High

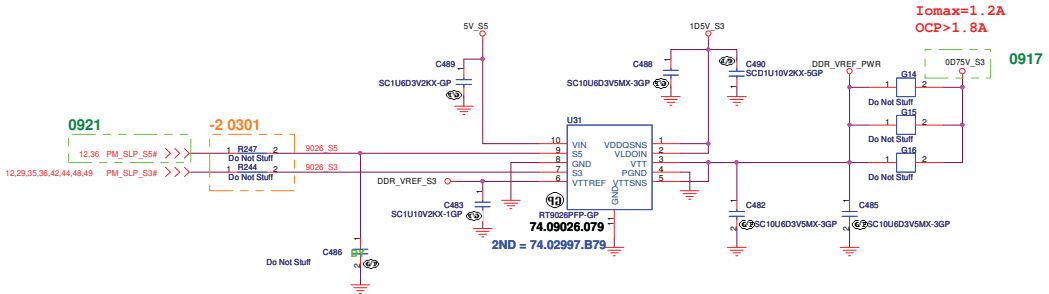
緯創資通 Wistron Corporation
235, Sec. 5, Keelung Rd., Keelung, Taiwan, R.O.C.

| | | |
|-----------------------------|------------------|-------|
| RUN AND AUX POWER | | |
| Doc. No. | Document Version | Rev. |
| Custom | JE40-DN | -3 |
| Doc. Format: March 28, 2012 | Sheet: 44 | of 63 |

RT8209E for 1D5V



RT9026 for 0D75V_S3



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Discrete Madison Hynix

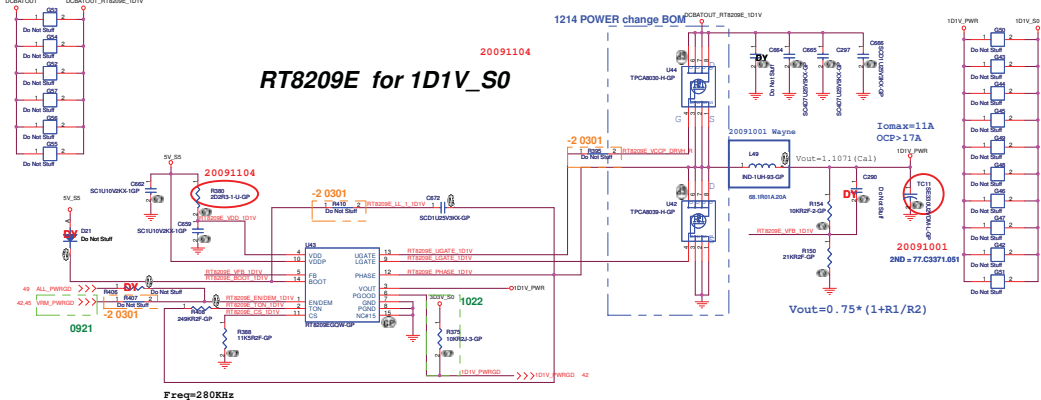
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsin 221, Taiwan, R.O.C.

| | | | | |
|-------|------------------------|----------------|-----|-------|
| File | RT8209E 1D5V | | Rev | -3 |
| Size | Document Number | JE40-DN | | |
| Date: | Monday, March 29, 2010 | Sheet | 47 | of 63 |

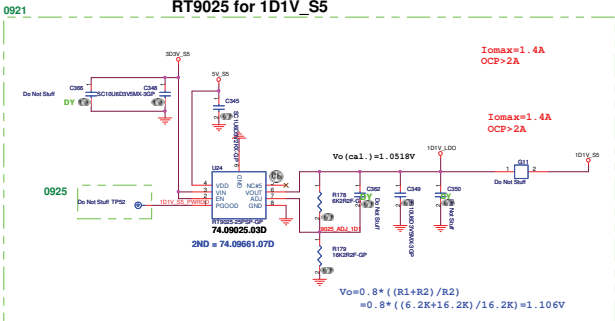
0917

RT2809E for 1D1V_S0

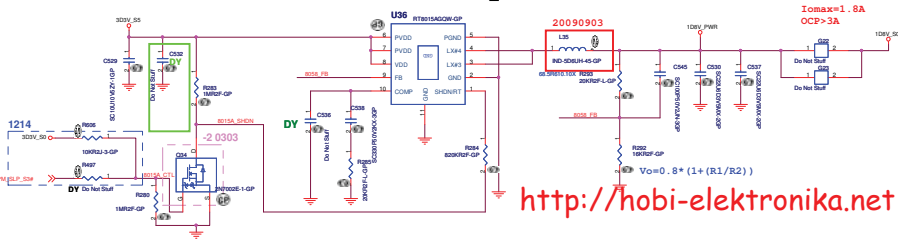
20091104



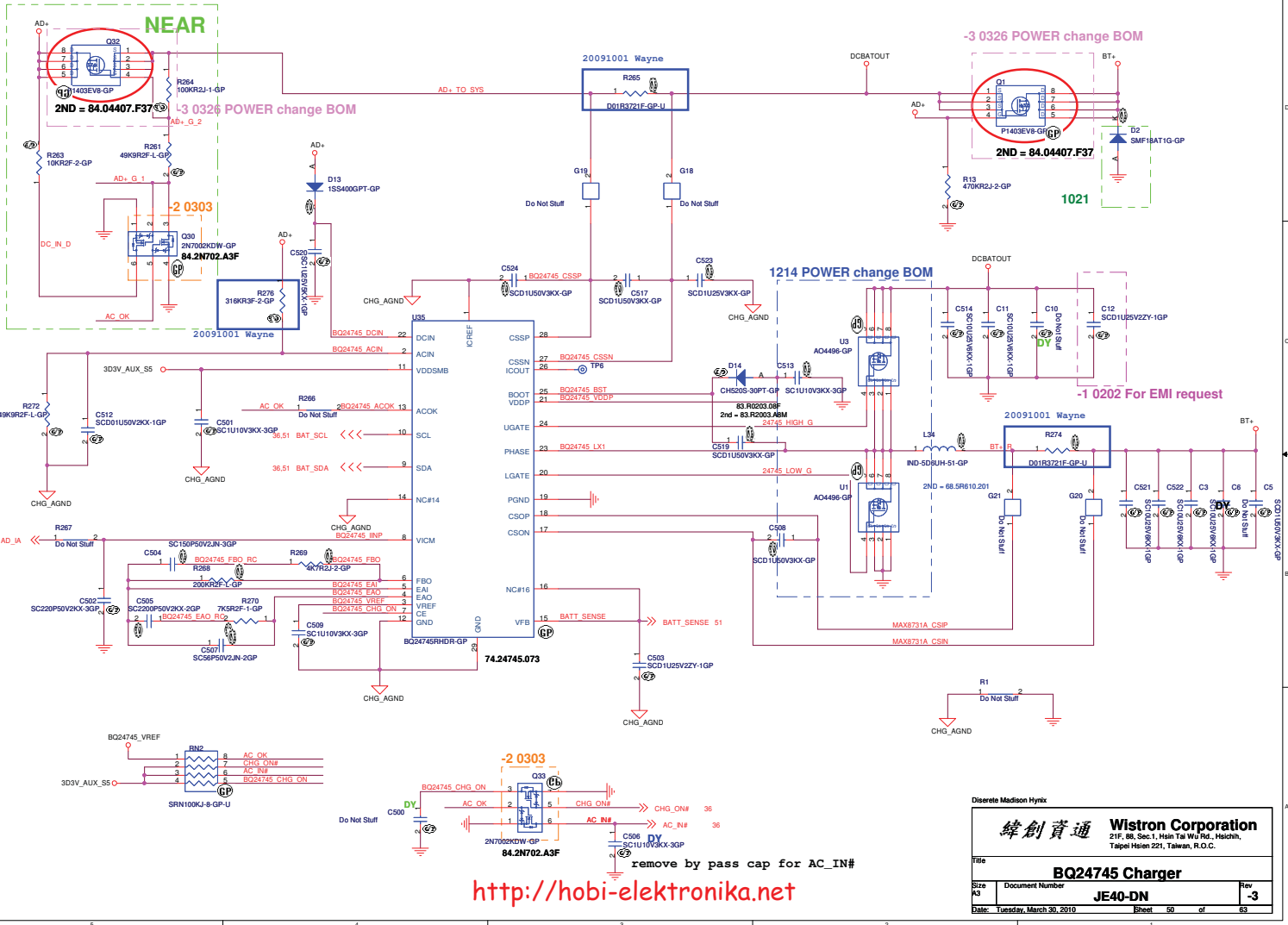
RT9025 for 1D1V_S5



RT8015A for 1D8V_S0



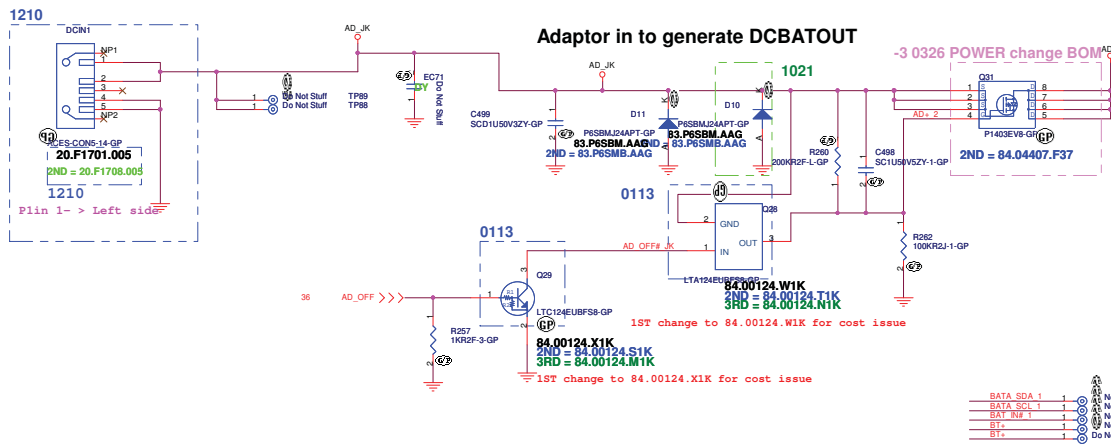
<http://hobi-elektronika.net>



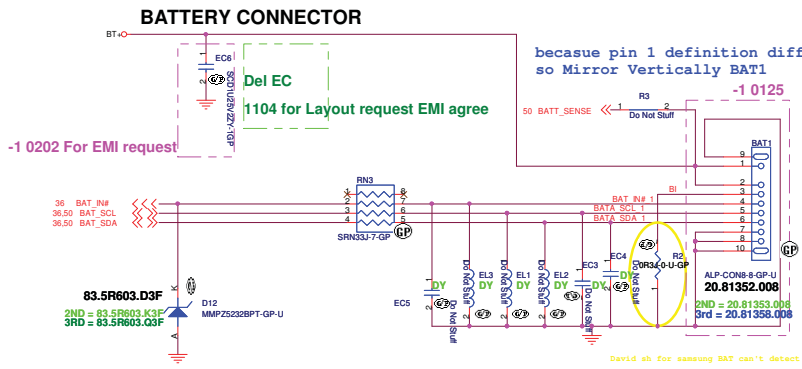
Discrete Madison Hynix

緯創資通 Wistron Corporation
21F, 88, Sec 1, Main Tai Wu Rd., Hsinchu, Taipei Hsin 321, Taiwan, R.O.C.

| | | | | | |
|-------------------------------|--|--|-----------------|--|--|
| Title | | | BQ24745 Charger | | |
| Size | | | Document Number | | |
| A3 | | | JE40-DN | | |
| Date: Tuesday, March 30, 2010 | | | Sheet 50 of 83 | | |
| Rev | | | -3 | | |



| | | | |
|------------|---|--------------|-----|
| BATA_SDA_1 | 1 | Do Not Stuff | TP2 |
| BATA_SCL_1 | 1 | Do Not Stuff | TP1 |
| BAT_IN_1 | 1 | Do Not Stuff | TP3 |
| BI_+ | 1 | Do Not Stuff | TP5 |
| BI_+ | 1 | Do Not Stuff | TP4 |



• Pin Definition •

| | | |
|----|-------|--|
| 1- | GND- | Batt. Battery Negative Terminal- |
| 2- | GND+ | Batt. Battery Negative Terminal- |
| 3- | SMD- | SMBus data interface I/O pin- |
| 4- | SMD+ | SMBus clock interface I/O pin- |
| 5- | TH+ | Connect to Resistor to GND (10K to GND)- |
| 6- | BI+ | System present pin, low active- |
| 7- | BATT+ | Batt. Battery Positive Terminal+ |
| 8- | BATT+ | Batt. Battery Positive Terminal+ |

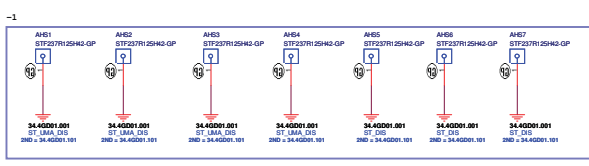
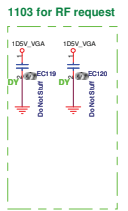
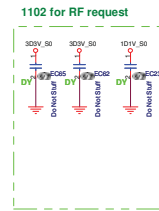
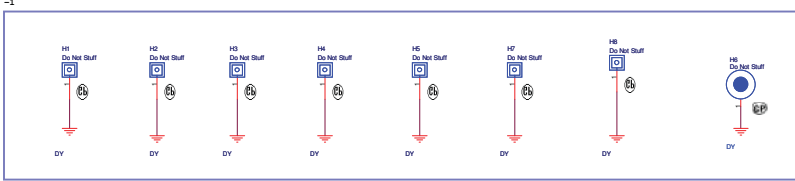
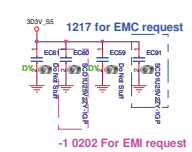
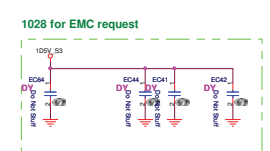
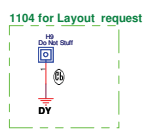
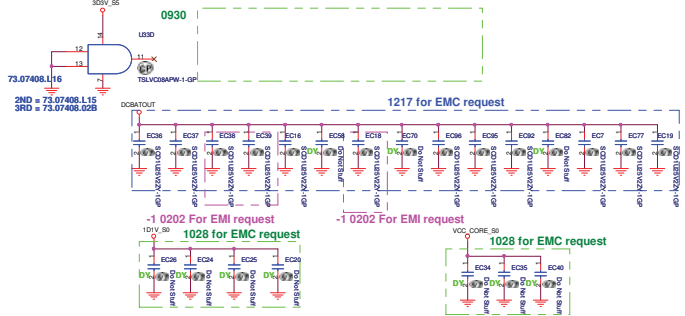
if stuff R344 10K, Samsung SDI battery is abnormal, so change to 0 -ohm 1210

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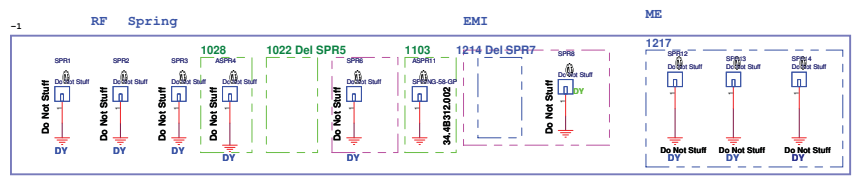
| | | |
|------------------------------|-----------------|---------------------|
| Title | | AD/BATT CONN |
| Size | Document Number | JE40-DN |
| Date: Friday, March 28, 2010 | | Sheet 51 of 63 |
| Rev | | -3 |



Check test point

- 30V_50 ⊗ TP120 Do Not Stuff
- 30V_AUX_55 ⊗ TP125 Do Not Stuff
- 30V_55 ⊗ TP123 Do Not Stuff
- 5V_55 ⊗ TP122 Do Not Stuff
- 12.36 PM_POWER <<<< ⊗ TP124 Do Not Stuff
- 6.11 CPU_POWER <<<< ⊗ TP127 Do Not Stuff
- 35.34 SS_ENABLE <<<< ⊗ TP126 Do Not Stuff
- 6.11 CPU_LED_RST <<<< ⊗ TP128 Do Not Stuff

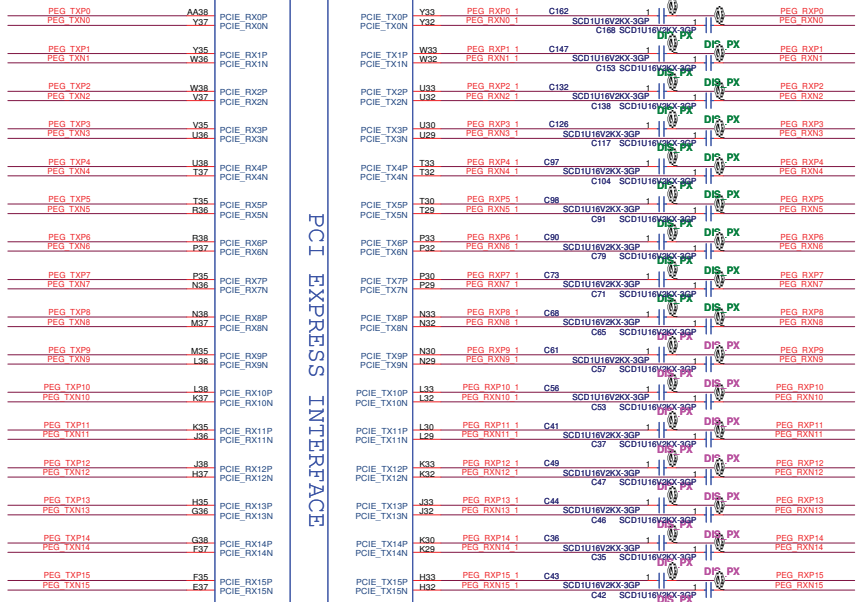
Test Point放在Dimm Door打開可量測處



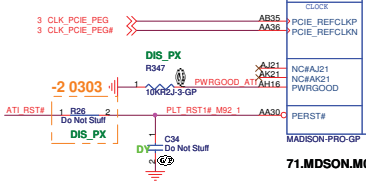
<http://hobi-elektronika.net>

8 PEG_TXP[15..0] << PEG_TXP[15..0]
 8 PEG_TXN[15..0] << PEG_TXN[15..0]

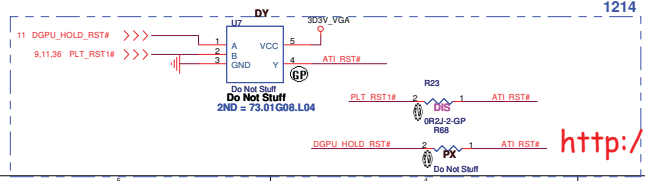
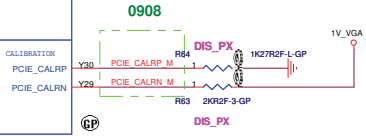
8 PEG_RXP[15..0] << PEG_RXP[15..0]
 8 PEG_RXN[15..0] << PEG_RXN[15..0]



PCI EXPRESS INTERFACE



71.MDSON.M01
 DIS_PX



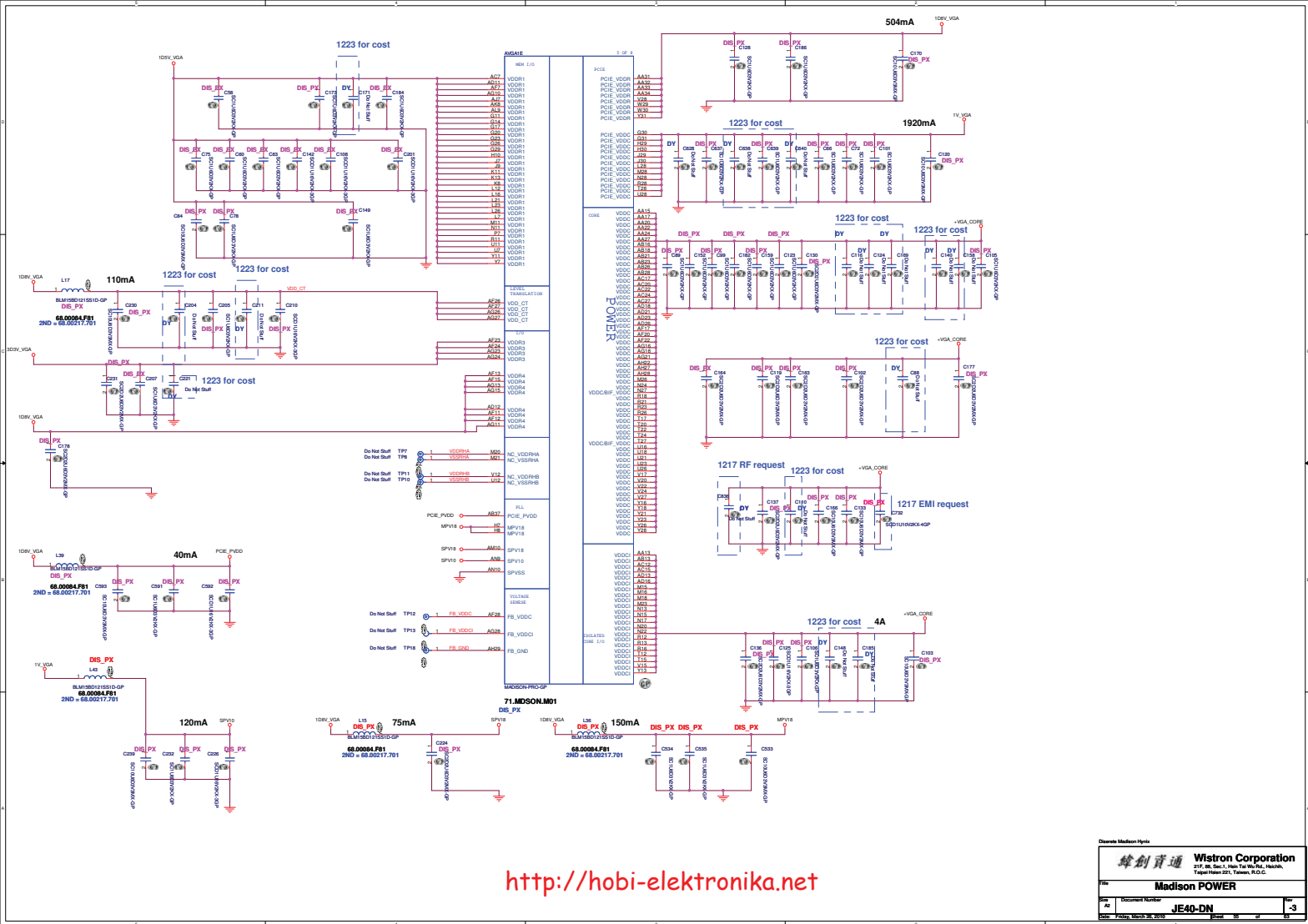
<http://hobi-elektronika.net>

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| | | | |
|-------|------------------------|---------------------|----------|
| Title | | Madison PCIE | |
| Size | Document Number | JE40-DN | |
| Date: | Friday, March 26, 2010 | Sheet | 53 of 53 |

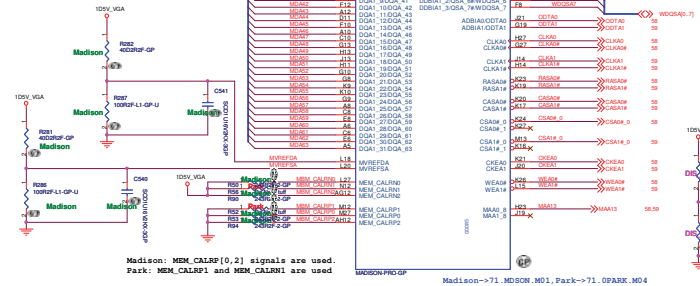
Rev **-3**



<http://hobi-elektronika.net>

For SSTL-1.8/SSTL-2/DRI/GDDR1: 0.5 * VDDR1.
For DDR3/GDDR3/GDDR4/GDDR5: 0.7 * VDDR1.

| | | | |
|-------------------|-------|----------|-------|
| DIVIDER RESISTORS | GDDR5 | DDR3 | DDR3 |
| VYREF | 1.5V | 1.8/1.5V | 1.5V |
| VYREF TO PWR | 40.2R | 10.2R | 40.2R |
| VYREF TO GND | 100R | 100R | 100R |



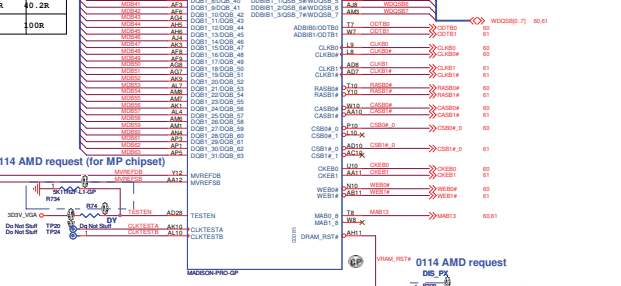
Madison: MEM_CALRP[0,2] signals are used
Park: MEM_CALRP1 and MEM_CALRP2 are used

| STRAPS | PIN | DESCRIPTION | RECOMMENDED SETTINGS (DO NOT RESET! RESISTOR 1: RETAIL, RESISTOR X: DESIGN DEFERRANT NA: NOT APPLICABLE) |
|---------------------------------------|------------------------|--|--|
| TX_PRRS_ENB (Internal PD) | GP100 | FOR FULL TX OUTPUT SWING Transmitter Power Savings Enable 0 = 50% TX output swing 1 = Full TX output swing | X |
| TX_DEEMPH_EN (Internal PD) | GP101 | Transmitter De-emphasis Enable 0 = 1x de-emphasis disabled 1 = 2x de-emphasis enabled | X |
| RESERVED | GP108 | RESERVED | 0 |
| BIF_VGA_DIS | GP109 | VGA ENABLED | 0 |
| RESERVED | GP1021 | RESERVED | 0 |
| BIOS_ROM_EN | GP1022_ROMCS | ENABLE EXTERNAL BIOS ROM | 0 |
| VIP_DEVICE_STRAP_ENA (Internal PD) | GP01[13,12,11] | SERIAL ROM TYPE OR MEMORY APERTURE SIZE SELECT If BIOS_ROM_EN=1, then Config[3:0] defines the ROM type If BIOS_ROM_EN=0, then Config[3:0] defines the primary memory aperture size | X X X |
| RSV0 | V2SYNC | 0 | 0 |
| RSV0 | R2SYNC | 0 | 0 |
| ADD[1] ADD[0] (Internal PD) | VGA_HSYNC VGA_VSYNC | ADD[1:0] 0:0= audio function 0:1= audio for Displayport and HDMI 1:0= audio for Displayport and HDMI 1:1= audio for both Displayport and HDMI | S X |

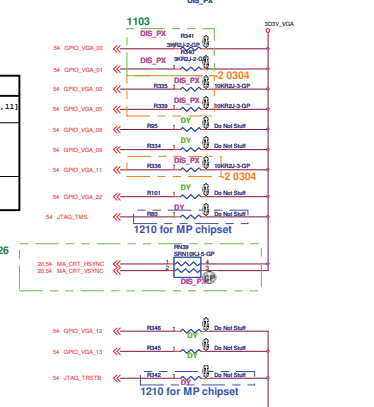
| AMD RESERVED CONFIGURATION STRAPS | | | |
|--|----------------|-----------------------------|-------------|
| ALLOW FOR PULLUP PADS FOR THESE STRAPS AND IF THESE GPIOs ARE USED, THEY MUST NOT CONFLICT DURING RESET | | | |
| H2SYNC, GENERIC0, GPIO0, GPIO1 | | | |
| If BIOS_ROM_EN (GPIO22) = 0 | | If BIOS_ROM_EN (GPIO22) = 1 | |
| Size of the primary memory aperture | GPIO[13,12,11] | Manufacturer | Part Number |
| 128MB | x000 | SP | M25P05A |
| 256MB | x001 | Microelectronics | M25P10A |
| 512MB | x010 | | M25P20 |
| 1024MB | x011 | | M25P40 |
| 2048MB | x012 | | M25P80 |
| 4096MB | x013 | Chingis (Formerly PMC) | PL25LV012A |
| | | | PL25LV010A |

For SSTL-1.8/SSTL-2/DRI/GDDR1: 0.5 * VDDR1.
For DDR3/GDDR3/GDDR4/GDDR5: 0.7 * VDDR1.

| | | | |
|-------------------|-------|----------|-------|
| DIVIDER RESISTORS | GDDR5 | DDR3 | DDR3 |
| VYREF | 1.5V | 1.8/1.5V | 1.5V |
| VYREF TO PWR | 40.2R | 10.2R | 40.2R |
| VYREF TO GND | 100R | 100R | 100R |



Madison: MEM_CALRP[0,2] signals are used
Park: MEM_CALRP1 and MEM_CALRP2 are used



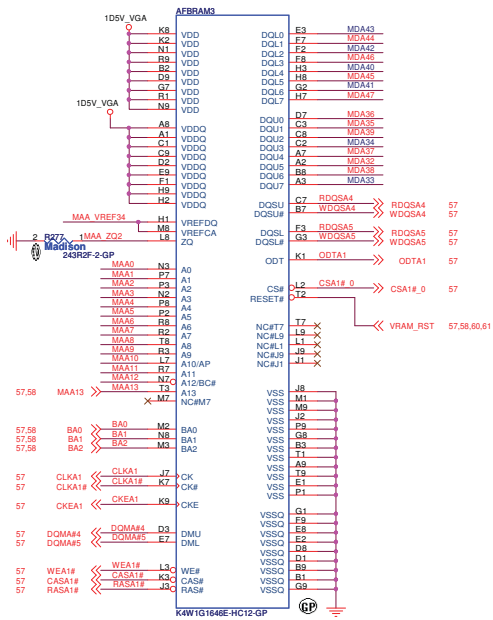
| Designator | For M97-M2 | For Manhattan |
|------------|------------|---------------|
| R_MEM_1 | 10K | 10K |
| R_MEM_2 | 40R/Short | 51R |
| R_MEM_3 | DY | DY |
| C_MEM | 2.2nF | 68pF |

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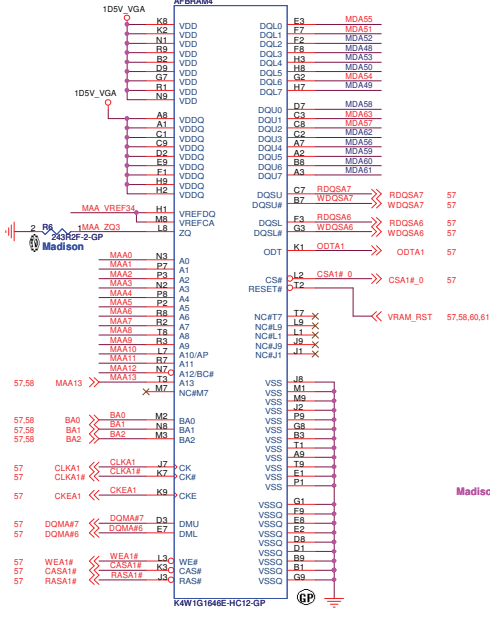
Wistron Corporation
217, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th

Madison Memory / Straps
JE40-DN

DDR3



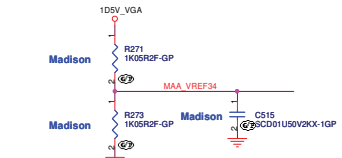
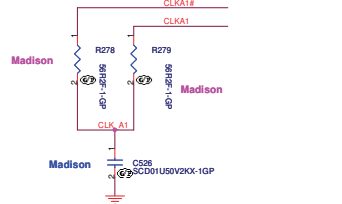
Madison
72.41164.H0U



Madison
72.41164.H0U

SAMSUNG: 72.41164.H0U
HYNIX: 72.51G63.C0U

- 57.58 DQMA[0..7] <<>
- 57.58 RDOSA[0..7] <<>
- 57.58 WDOA[0..7] <<>
- 57.58 MAA[0..12] <<>
- 57.58 MDA[0..63] <<>



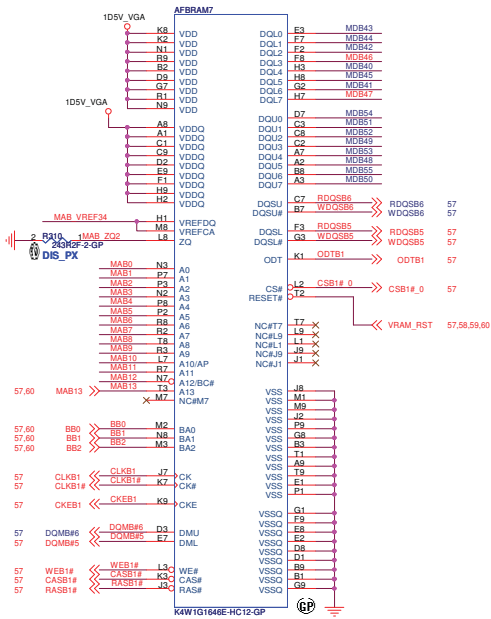
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| | | | |
|-------|------------------------|-------|----------|
| File | VRAM(2/4) | | Rev |
| Size | Document Number | -3 | |
| Date: | Friday, March 26, 2010 | Sheet | 59 of 63 |

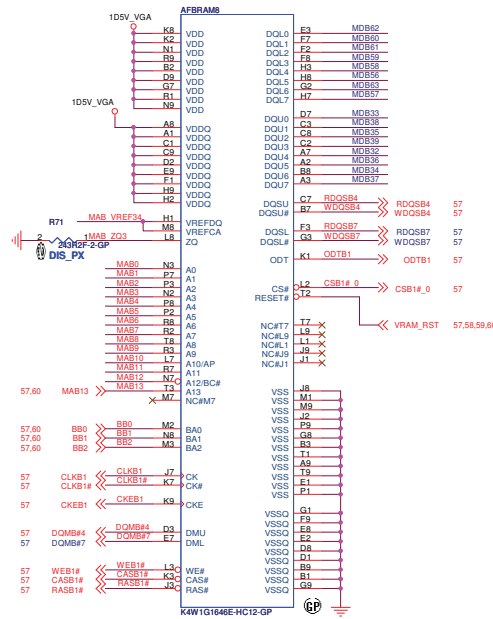
<http://hobi-elektronika.net>

DDR3



DIS_PX
72.41164.H0U

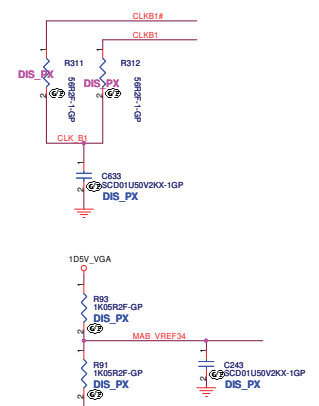
- 57.60 D0MB[0..7] <<>
- 57.60 RDQS[0..7] <<>
- 57.60 WDQS[0..7] <<>
- 57.60 MAB[0..12] <<>
- 57.60 MD[0..63] <<>



DIS_PX
72.41164.H0U

- 57.60 D0MB[0..7] <<>
- 57.60 RDQS[0..7] <<>
- 57.60 WDQS[0..7] <<>
- 57.60 MAB[0..12] <<>
- 57.60 MD[0..63] <<>

SAMSUNG: 72.41164.H0U
HYNIX: 72.51G63.C0U



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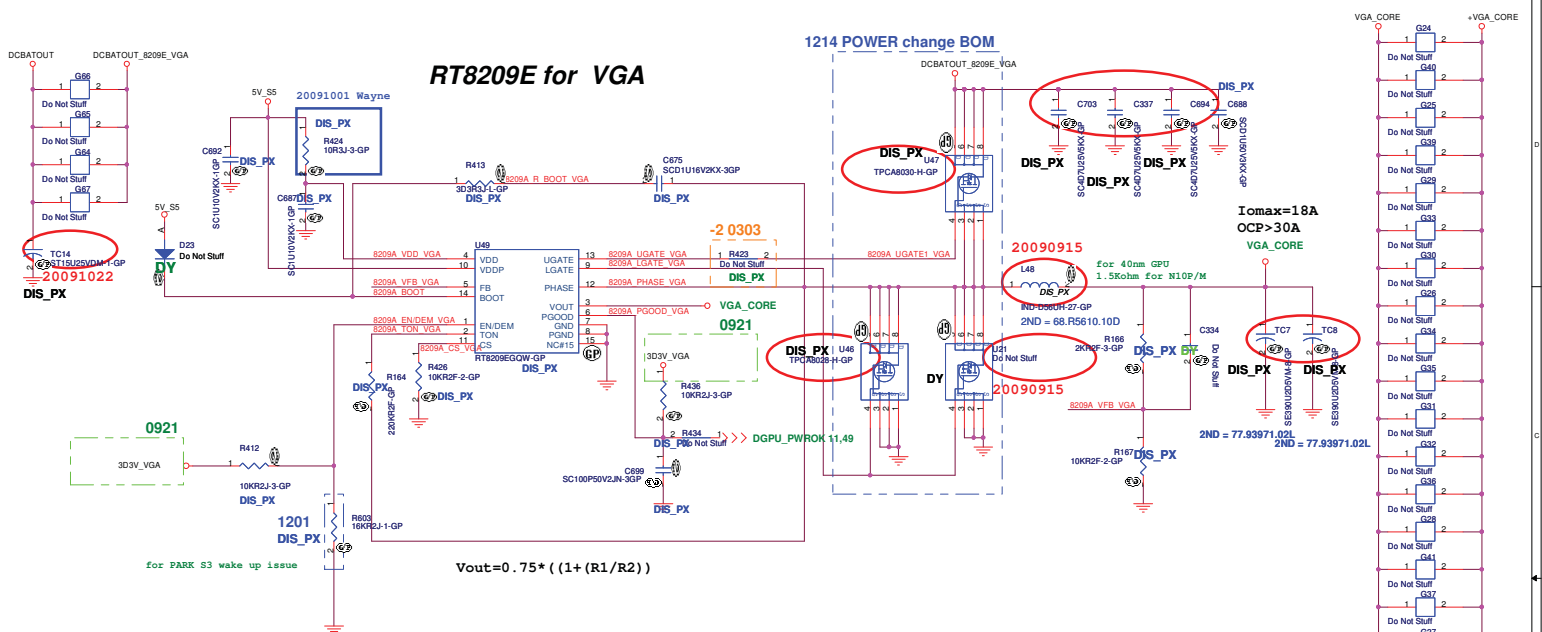
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File: **VRAM(4/4)**

Size: A3 Document Number: **JE40-DN** Rev: -3

Date: Friday, March 26, 2010 Sheet: 61 of 63

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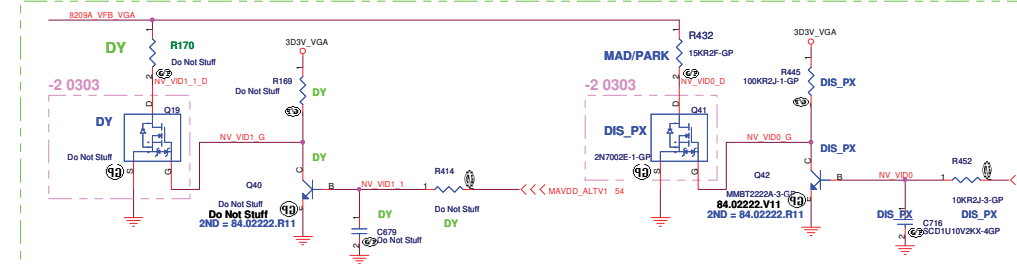
RT8209E for VGA

1214 POWER change BOM

-2 0303

$V_{out} = 0.75 * ((1 + (R1/R2)))$

1022 Reference JV50CP-1



MADSION PRO

| | I/O | Inter Pull Low | GPIO TABLE |
|-------------|-----|----------------|--|
| NVVDV_ALTVO | O | YES | GPU VOLTAGE L: 1.00V GPU VOLTAGE H: 0.90V |

PARK XT

| | I/O | Inter Pull Low | GPIO TABLE |
|-------------|-----|----------------|--|
| NVVDV_ALTVO | O | YES | GPU VOLTAGE L: 1.12V GPU VOLTAGE H: 0.90V |

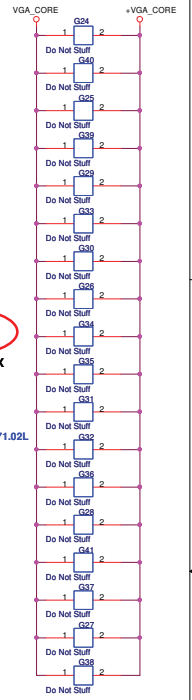
| | |
|---------|--------------|
| | R432 |
| MADSION | 15KR2F |
| PARK | 6R81K |
| XT | 64.68115.6DL |

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| | | | |
|------------------------------|-------------------------|----------------|-------|
| File | RT8209E VGA CORE | | Rev |
| Size | Document Number | JV42-DN | -3 |
| Customer | | | |
| Date: Monday, March 29, 2010 | Sheet | 62 | of 63 |



NB
RS780-->RS880M
71.RS780.M02-->71.RS880.M02

BOM
1st -> All SKU

SB
SB820M-1-GP
71.SB820.00U-->71.SB820.M03

SATA_CALRP
A11: 80歐姆 1% resistor to GND
A12: TBD歐姆 1% resistor to GND

SATA_CALRN
A11:A11: 931歐姆 1% resistor to VDDAN_11_SATA
A12: TBD歐姆 1% resistor to VDDAN_11_SATA.

R250
Madison-->R250 64.32425.6DL R402H16 32K4R2F
Park -->R250 64.32425.6DL R402H16 32K4R2F
PX -->R250 64.32425.6DL R402H16 32K4R2F

VGA
Madison--> PN:71.MDSON.M01
Park--> PN:71.0PARK.M04

VRAM
Samsung-->VRAM FBRAM1~8 PN:VR.1GB0B.006
Hynix--> VRAM FBRAM1~8 PN:VR.1GB0G.004
ATI--> VRAM FBRAM1~8 PN: VR.1GB0T.002

CRT
UMA-->L1-->2R 0603
C62-->47U/6.3V
DIS-->L1-->Bead(L1 68.00217.711 L1608-UH38 SBK160808T-221Y-N-GP)
C62-->DY
PX--> 133 歐姆 (R58 63.10334.1DL R402H16 133R2F-GP)

R605(MAD/PARK/PX)
Madison-->R605 64.15005.6DL R402H16150R2F-L-GP
Park -->R605 64.15005.6DL R402H16150R2F-L-GP
PX -->R605 64.15005.6DL R402H16150R2F-L-GP

HDMI
UMA -->R612 R613 R618 R619 R620 R621 R624 R625 64.71505.6DL R402H16715R2F-2-GP

R432(MAD/PARK)
Madison-->15KR2F 64.15025.6DL
Park-->R432 64.68115.6DL R402H16 6.81KR2F

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| | | | |
|--|-----------------|----------------------------|--|
| 緯創資通 | | Wistron Corporation | |
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| NOTE | | | |
| Size A3 | Document Number | Rev | |
| | JV42-DN | -3 | |
| Date: Monday, March 29, 2010 | Sheet 63 | of 63 | |