

| Page | Title of schematic page | Rev. | Date |
|------|------------------------------|------|------|
| 01 | Page List | 1A | |
| 02 | Block Diagram | 1A | |
| 03 | Change List | 1A | |
| 04 | HSW MCP (DISPLAY/Sideband) | 1A | |
| 05 | HSW MCP (MEMORY/GND) | 1A | |
| 06 | HSW MCP (CFG/PwrMGT) | 1A | |
| 07 | HSW MCP (POWER) | 1A | |
| 08 | HSW PCH (RTC/HDA/SATA) | 1A | |
| 09 | HSW PCH (PCIE/USB) | 1A | |
| 10 | HSW PCH (CLK/LPC/SPI/SMB) | 1A | |
| 11 | HSW PCH (GPIO/LPIO/MISC) | 1A | |
| 12 | HSW PCH (POWER) | 1A | |
| 13 | DDR3 DIMM0-STD (5.2H) | 1A | |
| 14 | DDR3 DIMM1-RSV (5.2H) | 1A | |
| 15 | HOLE/EMI/KB | 1A | |
| 16 | NPCE985L & FLASH | 1A | |
| 17 | LVDS/TS/NFC | 1A | |
| 18 | CARD READER (RTS5227E) | 1A | |
| 19 | HDMI/THERMAL | 1A | |
| 20 | DP to VGA | 1A | |
| 21 | USB | 1A | |
| 22 | LAN (RTL8111GS) | 1A | |
| 23 | WLAN/KB-BL | 1A | |
| 24 | HDD/ODD/G-SENSOR/TP/FAN | 1A | |
| 25 | Audio ALC233-CG | 1A | |
| 26 | LED/PS/DMIC/Camera | 1A | |
| 27 | POWER +VCC_CORE (NCP81101) | 1A | |
| 28 | POWER 3VPCU&RVCC5 (TPS51427) | 1A | |
| 29 | POWER 1.35VSUS/VTT_MEM | 1A | |
| 30 | POWER +1.05V (G5602R41U) | 1A | |
| 31 | POWER VCC1.5/Thermal | 1A | |
| 32 | POWER (BAT IN / ADA IN/ UL) | 1A | |
| 33 | POWER CHARGER (ISL88731C) | 1A | |
| 34 | POWER VGA_CORE/1.0 (RT8812A) | 1A | |
| 35 | POWER VCC1.5_VRAM/1.05V | 1A | |
| 36 | NVIDIA N14 GB2-64 PCIE 1/4 | 1A | |
| 37 | NVIDIA N14 GB2-64 TMDS 2/4 | 1A | |
| 38 | NVIDIA N14 GB2-64 VRAM 3/4 | 1A | |
| 39 | NVIDIA N14 GB2-64 VRAM 4/4 | 1A | |

| Page | Title of schematic page | Rev. | Date |
|------|-------------------------|------|------|
| 40 | Woofers | 1A | |
| 41 | IO PORT LIST | 1A | |
| | | 1A | |
| | | 1A | |

* : No mount
L@ : For LVDS output
D@ : For eDP output
E@ : For DIS GFX
I@ : For UMA

www.teknisi-indonesia.com

Change List

MB_SCH_FVT_01
P20- DC27, DC28, DC33 change from 15p to 3.3p
Reason : Base on EVT aRGB VEVS, fine tune the value
Possible Risk: No.

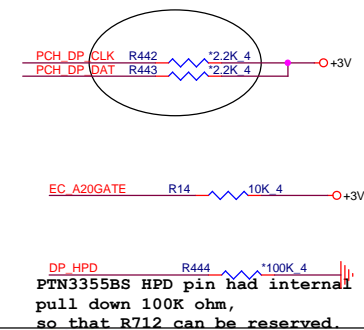
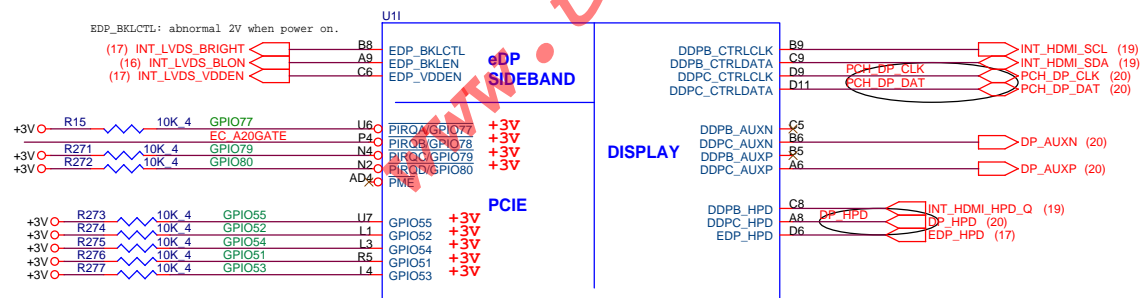
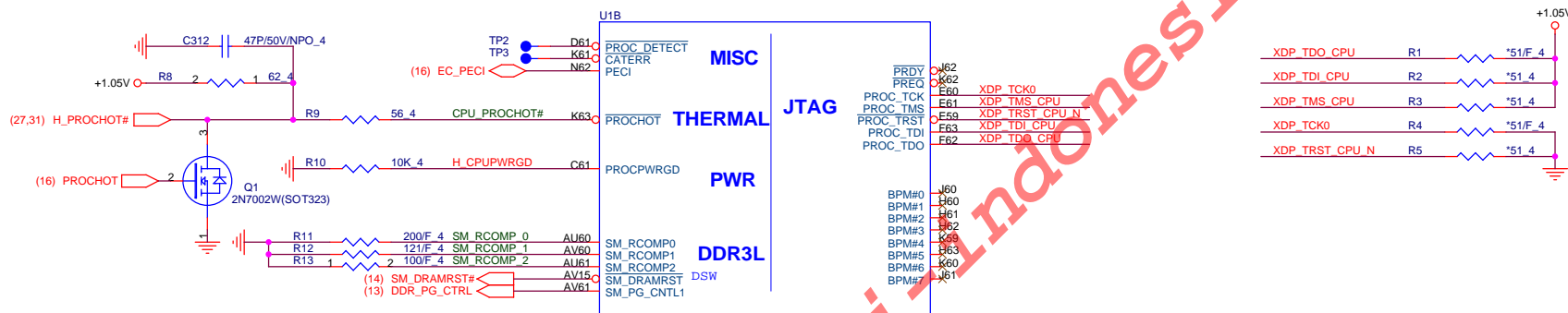
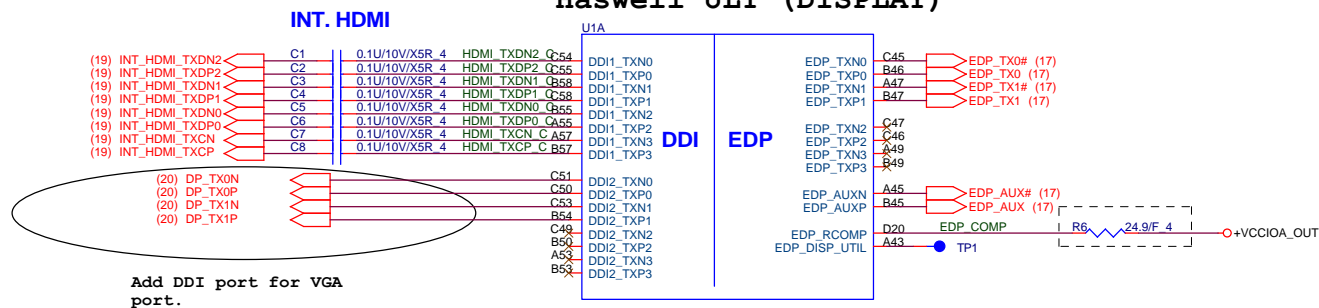
MB_SCH_FVT_02
P23- Add F8 for TPM D/B
Reason : Base on EVT overload result.
Possible Risk: No.

MB_SCH_FVT_03
P10- Add 33 ohm for LPC_FRAME#
Reason : the overshoot and undershoot is big, add 33 ohm to reduce
Possible Risk: No.

MB_SCH_FVT_04
P23- Add SW1 for TPM _ID select
Reason : Reserve for TPM_ID SW used
Possible Risk: No.

MB_SCH_EVT_05
P22- CON14, C270, F7, R239, R240, Q18, Q19, R241 change to no mount
Reason : Delete Keyboard light function for RFQ requirement
Possible Risk: No.

www.teknisi-indonesia.com

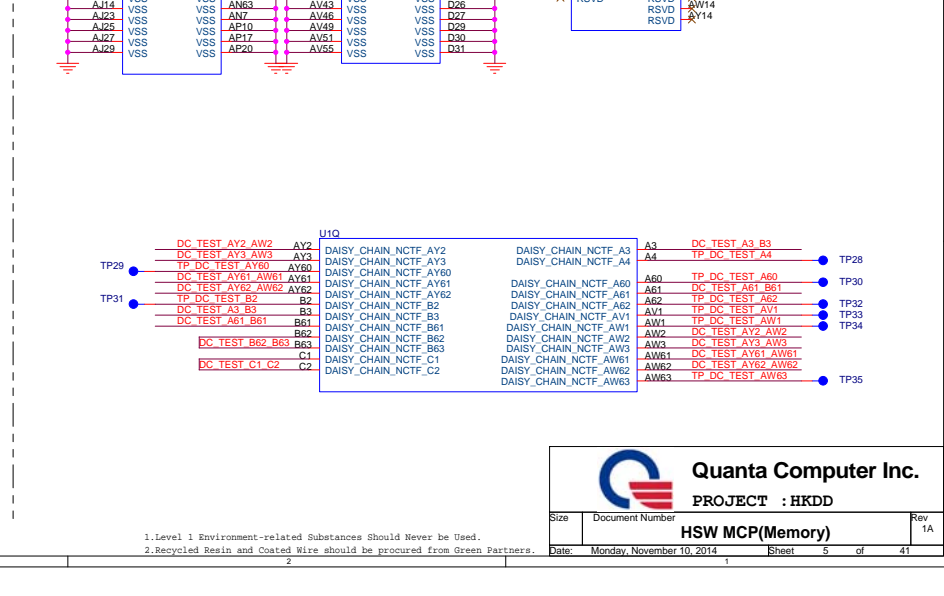
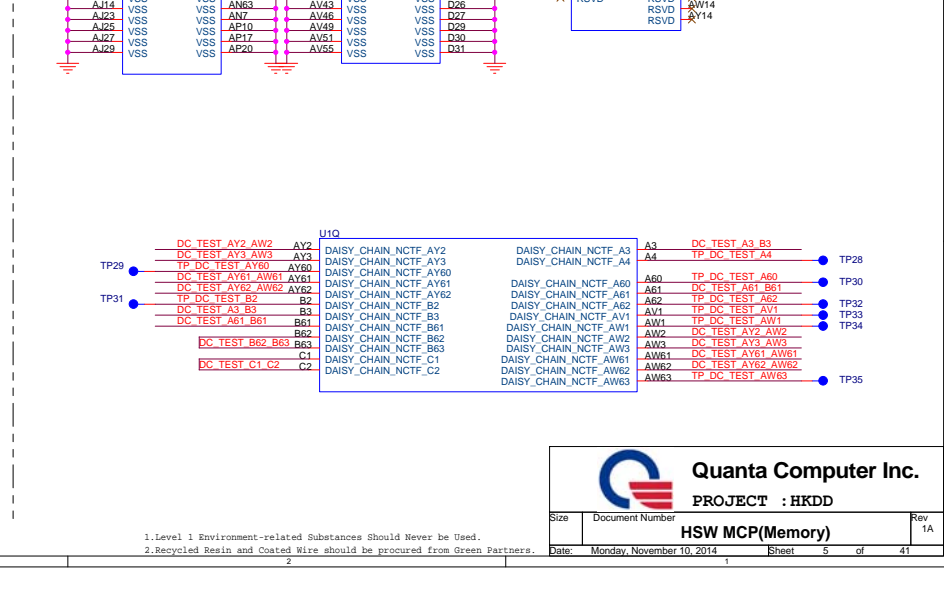


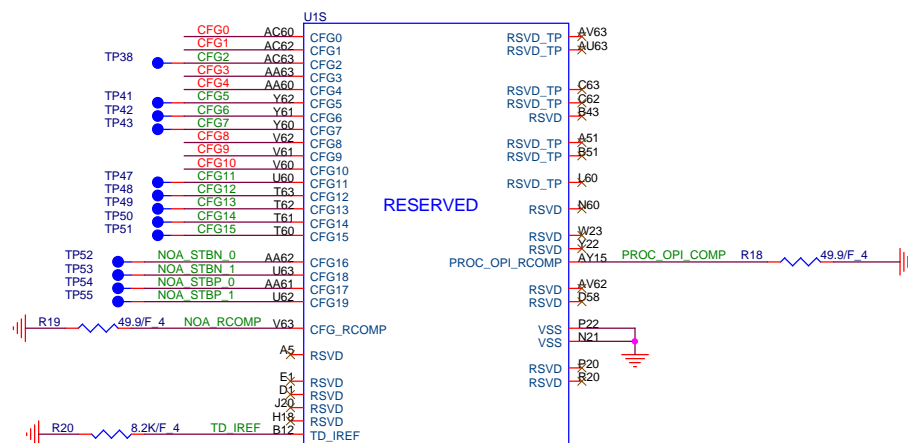
Add DDI port for VGA port.

DP_HPD R444 *100K_4
PTN3355BS HPD pin had internal
pull down 100K ohm,
so that R712 can be reserved.

 **Quanta Computer Inc.**
PROJECT : HKDD

| | | |
|-------|-----------------------------|---------------|
| Size | Document Number | Rev |
| | HSW MCP(Display/eDP) | 1A |
| Date: | Monday, November 10, 2014 | Sheet 4 of 41 |





Processor Strapping

| | 1 | 0 | |
|---|---|--|--|
| CFG0 EAR-STALL/NOT STALL RESET SEQUENCE AFTER PCU PLL IS LOCKED | (DEFAULT) NORMAL OPERATION; NO STALL | STALL | |
| CFG1 PCH/ PCH LESS MODE SELECTION | (DEFAULT) NORMAL OPERATION | PCH-LESS MODE | |
| CFG3 PHYSICAL_DEBUG_ENABLED (DFX PRIVACY) | DISABLED | ENABLED SET DFX ENABLED BIT IN DEBUG INTERFACE MSR | |
| CFG4 DISPLAY PORT PRESENCE STRAP | DISABLED NO PHYSICAL DISPLAY PORT ATTACHED TO EMBEDDED DISPLAY PORT | ENABLED; NOA WILL BE AVAILABLE REGARDLESS OF THE LOCKING OF THE UNIT | |
| CFG 8 ALLOW THE USE OF NOA ON LOCKED UNITS | DISABLED(DEFAULT); IN THIS CASE, NOA WILL BE DISABLED IN LOCKED UNITS AND ENABLED IN UN-LOCKED UNITS | ENABLED AN EXTERNAL DISPLAY PORT DEVICE IS CONNECTED TO THE EMBEDDED DISPLAY PORT | |
| CFG9 NO SVID PROTOCOL CAPABLE VR CONNECTED | VRS SUPPORTING SVID PROTOCOL ARE PRESENT | NO VR SUPPORTING SVID IS PRESENT. THE CHIP WILL NOT GENERATE (OR RESPOND TO) SVID ACTIVITY | |
| CFG10 SAFE MODE BOOT | POWER FEATURES ACTIVATED DURING RESET | POWER FEATURES (ESPECIALLY CLOCK GATINE ARE NOT ACTIVATED | |

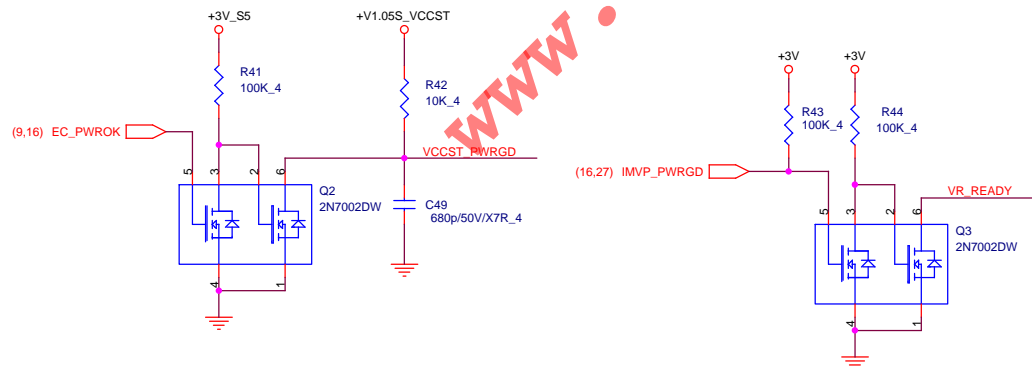
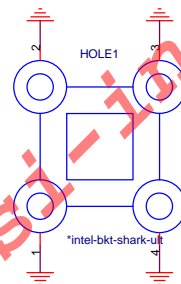
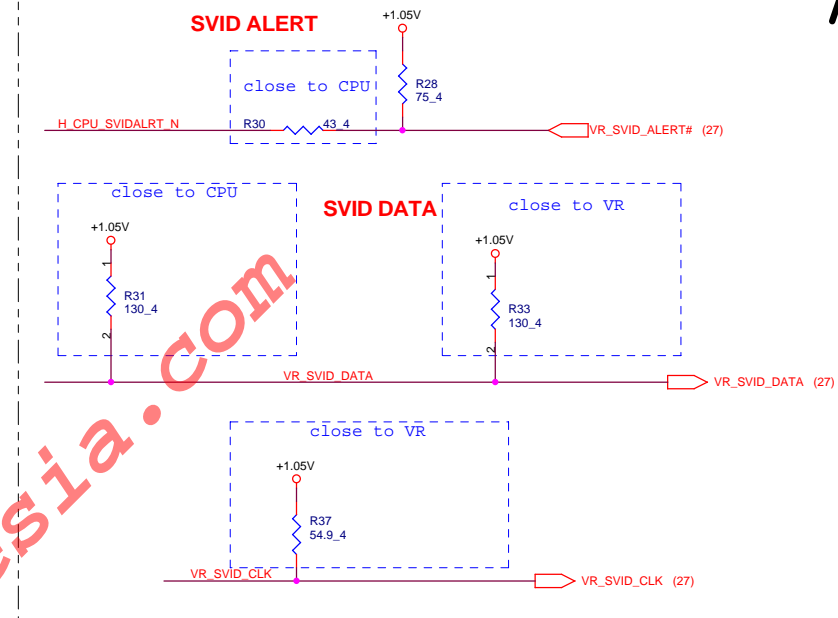
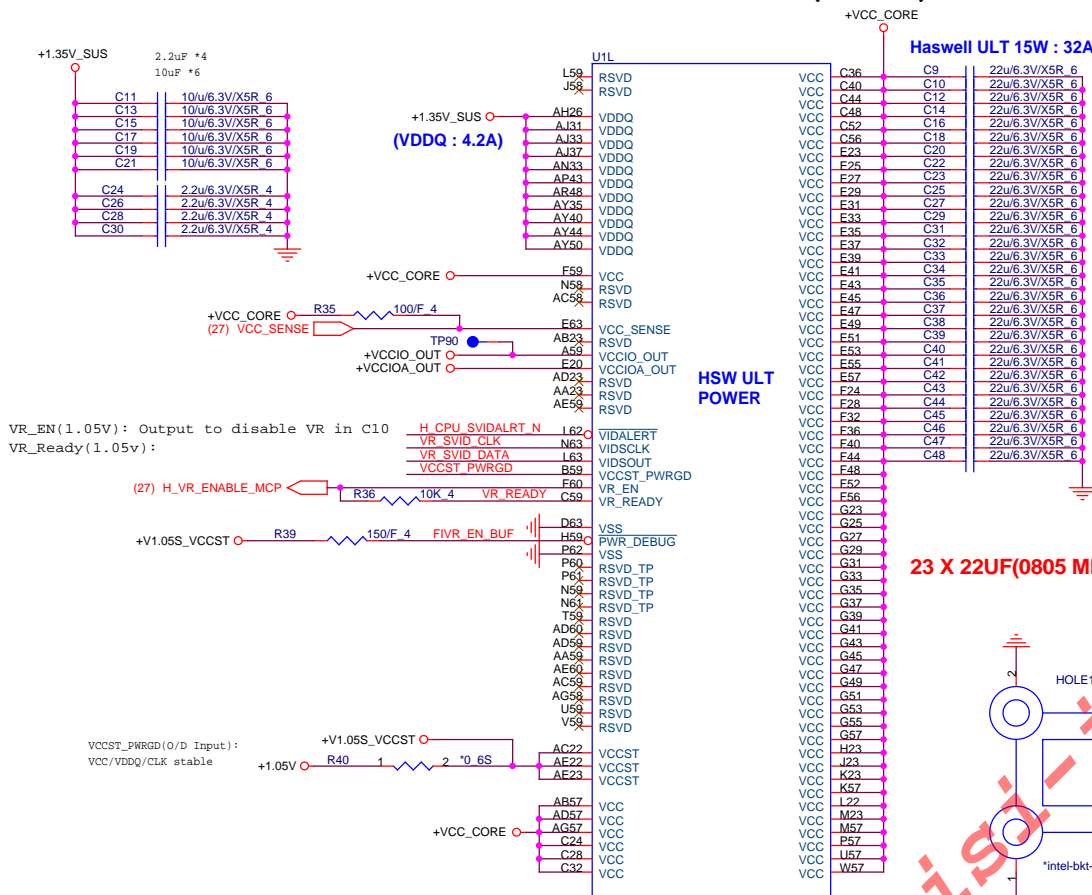


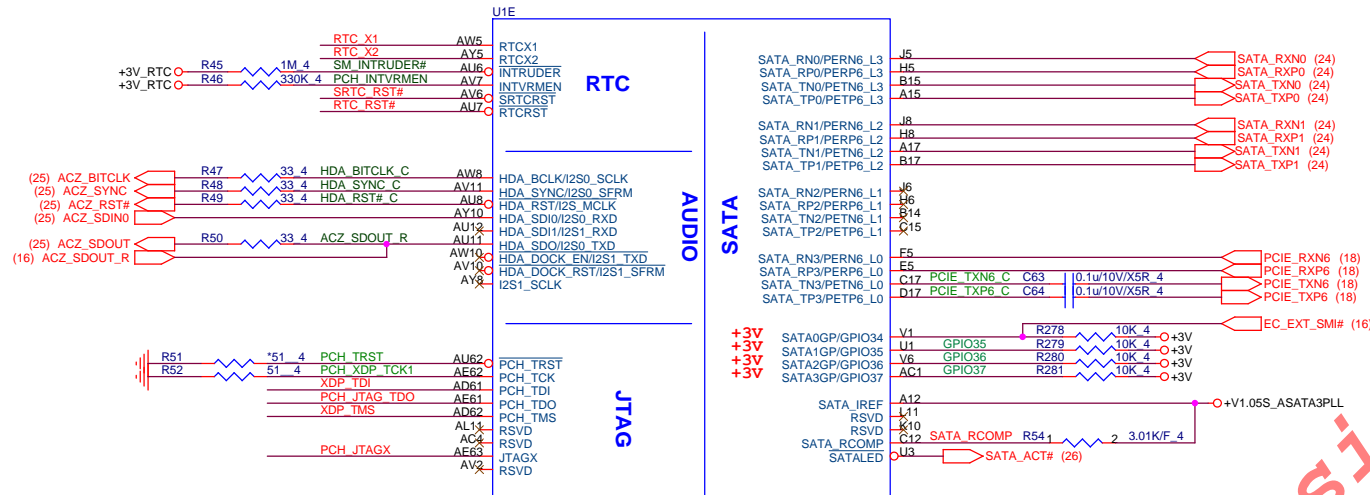
Quanta Computer Inc.

PROJECT : HKDD

| | | |
|-------|---------------------------|---------------|
| Size | Document Number | Rev |
| | HSW MCP(CFG) | 1A |
| Date: | Monday, November 10, 2014 | Sheet 6 of 41 |

1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

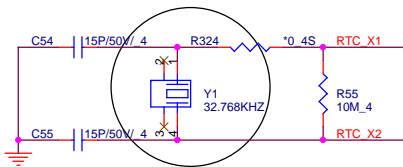
Haswell ULT MCP (POWER)



HDD

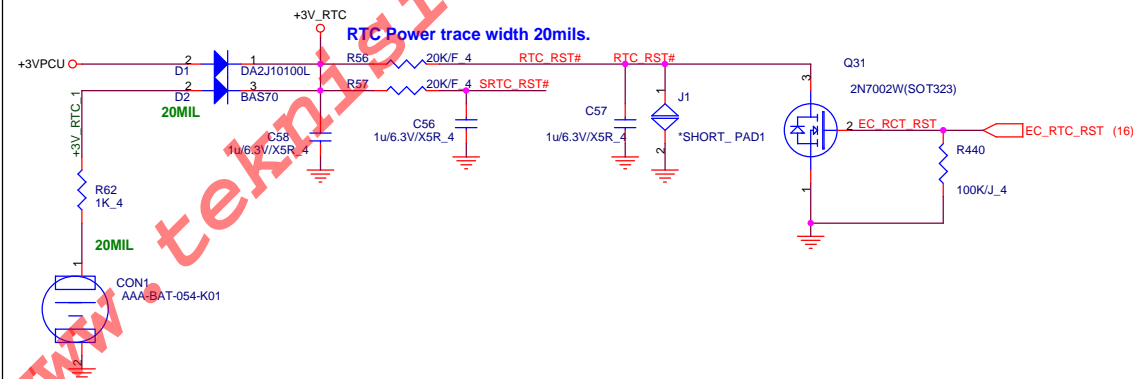
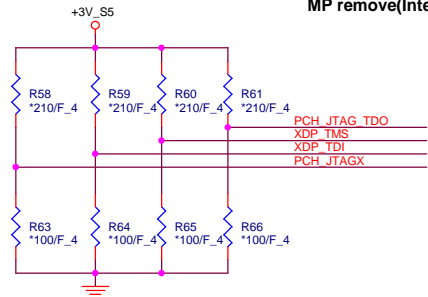
ODD

Card Reader



PCH JTAG Debug (CLG)

MP remove(Intel)



PCH Strap Table

| Pin Name | Strap description | Sampled | Configuration | note |
|----------|---|---------|---|--------------------------------|
| SPKR | No reboot mode setting | PWROK | 0 = Default (weak pull-down 20K) 1 = Setting to No-Reboot mode | +3V — R67 — *1K — SPCR (11,25) |
| HDA_SDO | Flash Descriptor Security Override / Intel ME Debug | PWROK | 0 = Security Effect (Int PD) 1 = Can be Override | |
| INTVRMEN | Mode Integrated 1.05V VRM enable | ALWAYS | Should be always pull-up | |



Quanta Computer Inc.

PROJECT : HKDD

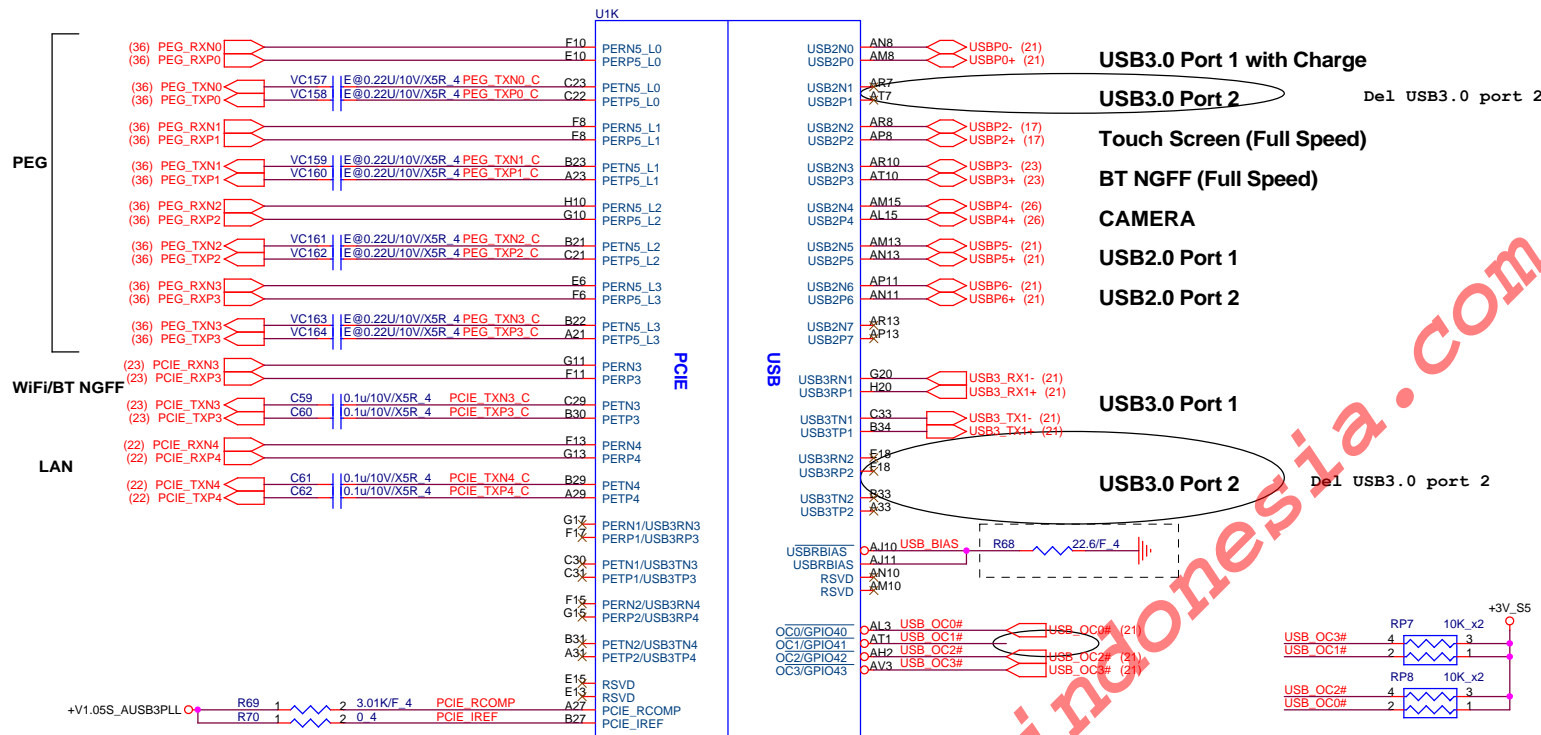
Size Document Number HSW PCH(RTC/HDA/SATA) Rev 1A

1.Level 1 Environment-related Substances Should Never be Used.

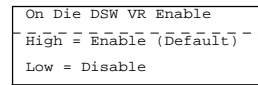
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Date: Wednesday, November 12, 2014 Sheet 8 of 41

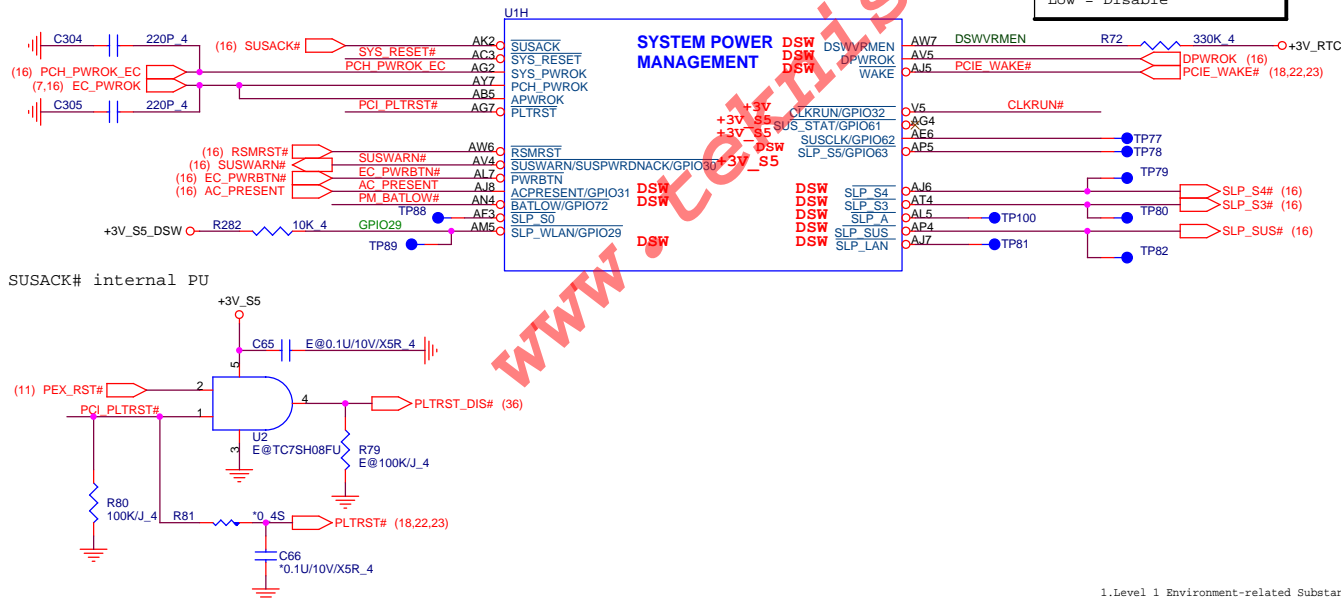
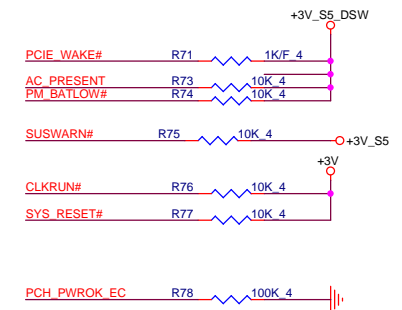
Haswell ULT (PCIe,USB)



Haswell ULT (SYSTEM POWER MANAGEMENT)



PCH Pull-high/low(CLG)



Haswell ULT (CLK)

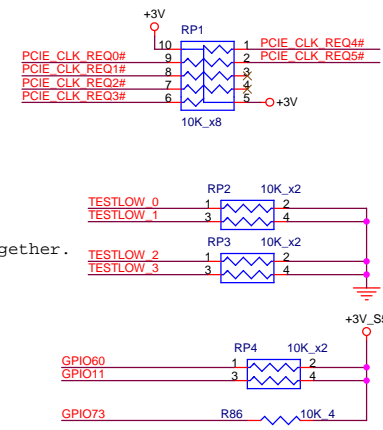
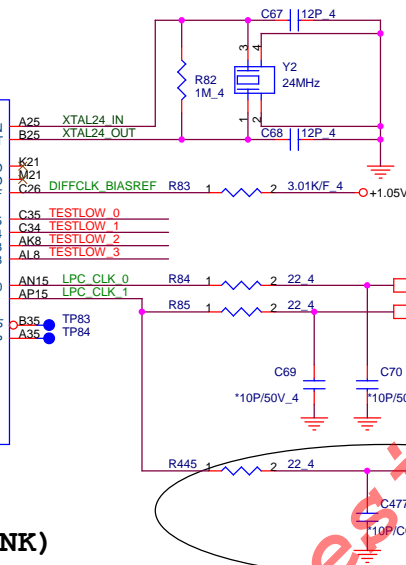
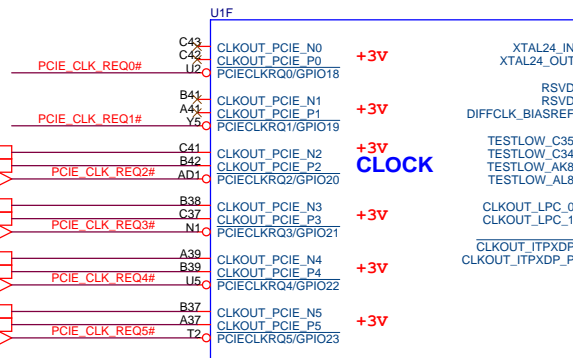
WiFi/BT(NGFF)

LAN

GFX

Card Reader

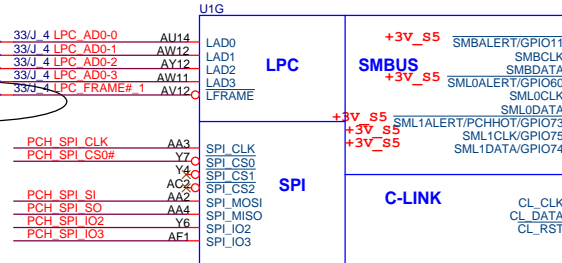
(23) CLK_PCIE_WIFIN
(23) CLK_PCIE_WIFIP
(23) PCIE_CLK_REQ2#
(22) CLK_PCIE_LANN
(22) CLK_PCIE_LANP
(22) PCIE_CLK_REQ3#
(36) CLK_PCIE_VGAP
(36) CLK_PCIE_VGAP
(36) PCIE_CLK_REQ4#
(18) CLK_PCIE_CRDN
(18) CLK_PCIE_CRDP
(18) PCIE_CLK_REQ5#



Haswell ULT (LPC/SPI/SMB/CLINK)

MB_SCH_PVT_03: P10- Add 33 ohm for LPC_FRAME#

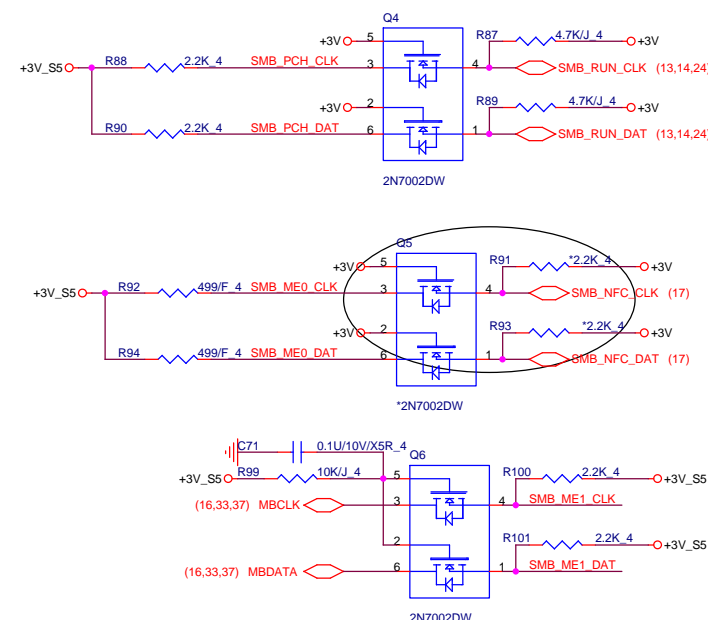
(16,23) LPC_AD0
(16,23) LPC_AD1
(16,23) LPC_AD2
(16,23) LPC_AD3
(16,23) LPC_FRAME#
PCH_SPI_CLK
PCH_SPI_CS0#
PCH_SPI_SI
PCH_SPI_SO
PCH_SPI_IO2
PCH_SPI_IO3



GPIO11
SMB_PCH_CLK
SMB_PCH_DAT
GPIO60
SMB_ME0_CLK
SMB_ME0_DAT
GPIO73
SMB_ME1_CLK
SMB_ME1_DAT

SPD
NFC
EC

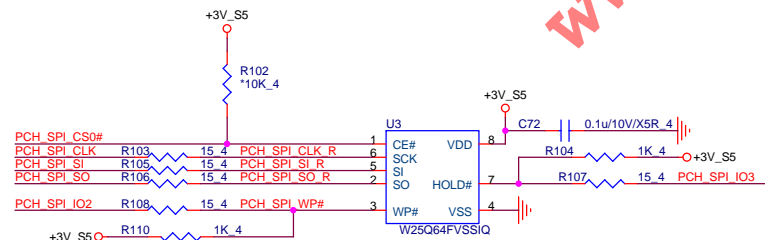
SMBus/Pull-up(CLG)



(16) F_CS0#_PCH
(16) F_SDI_PCH
(16) SCK_PCH
(16) SD0_PCH

For NPCE985L Using

SPI FLASH



1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.



Quanta Computer Inc.

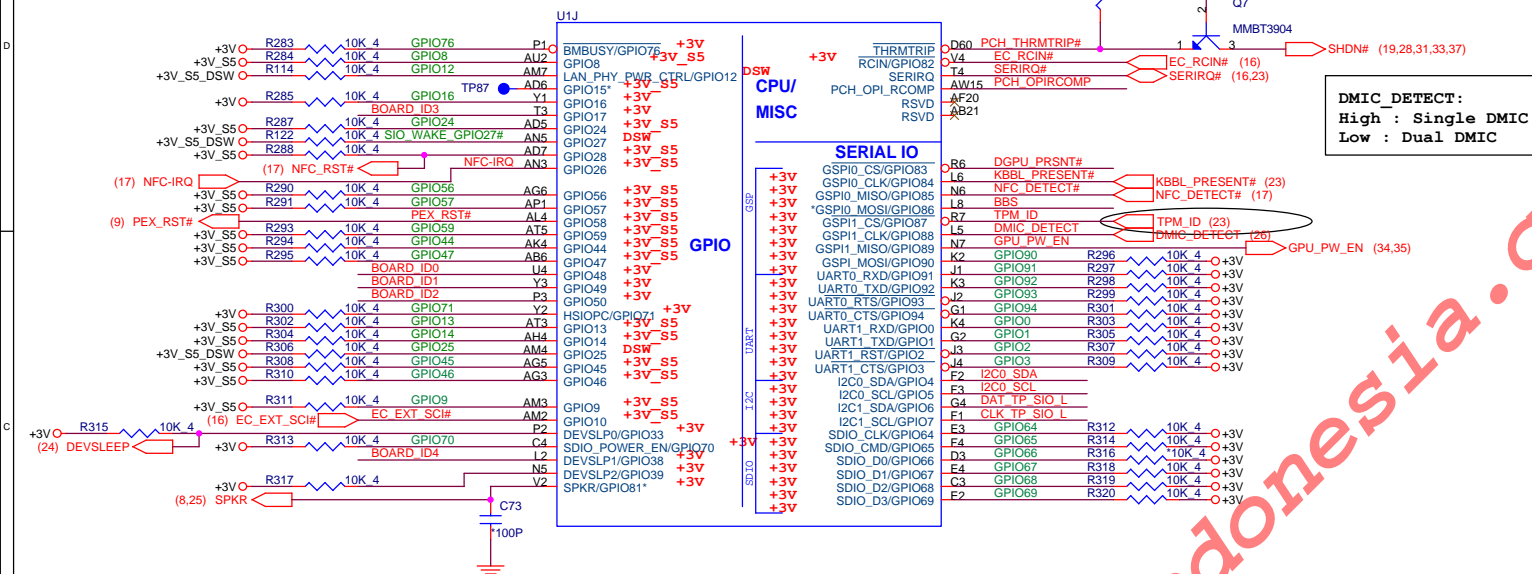
PROJECT : HKDD

| Size | Document Number | Rev |
|-------|------------------------------|----------------|
| | HSW PCH(CLK/LPC/SPI/SMB) | 1A |
| Date: | Wednesday, November 12, 2014 | Sheet 10 of 41 |

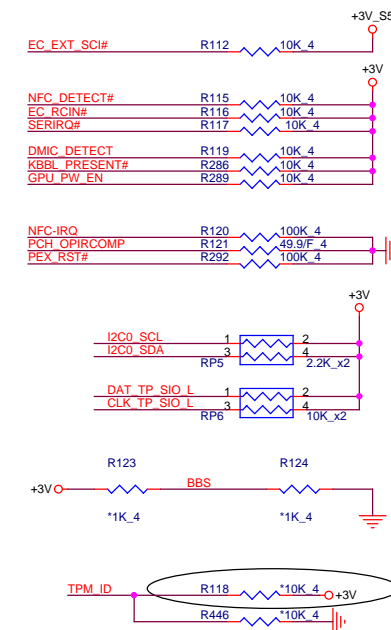
Hasswell ULT (GPIO, LPIO, MISC)

GPI027

With Intel LAN:
Connect to LANWAKE# pin on the LAN
Without Intel LAN:
Used to wake event from DSx



GPIO Pull-up/Pull-down(CLG)



| | |
|-----------------------|---|
| GPIO66 Top-Block Swap | |
| PU | Enable |
| PD | Disable(Default) internal week pull-dpwn |

| | |
|--------|-------------------|
| GPIO86 | |
| PU | LPC |
| PD | SPI (Default IPD) |

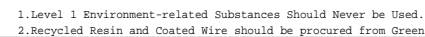
| | |
|-------------------------|---------|
| No Reboot Strap(GPIO81) | |
| NC | Default |
| PU | EN |

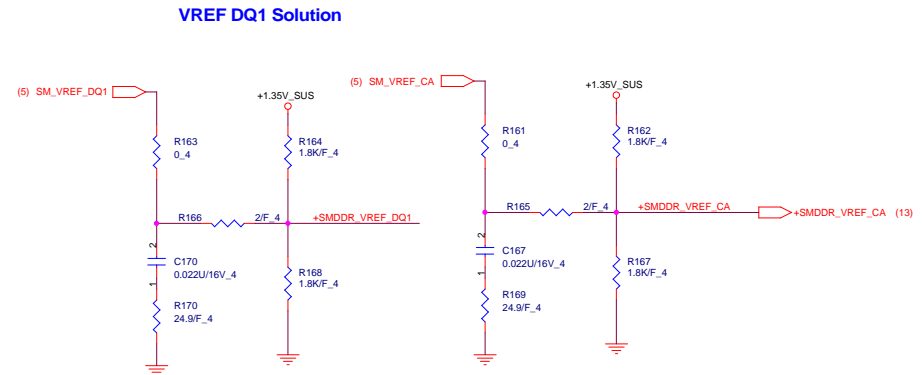
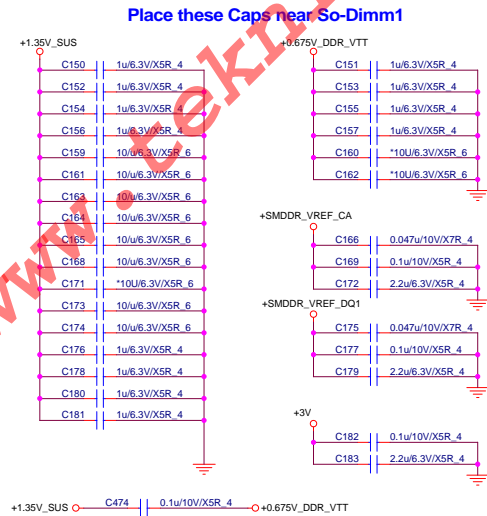
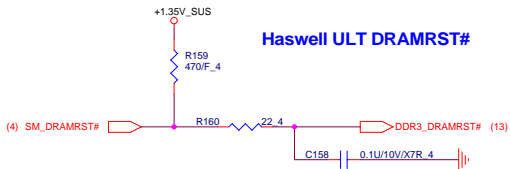
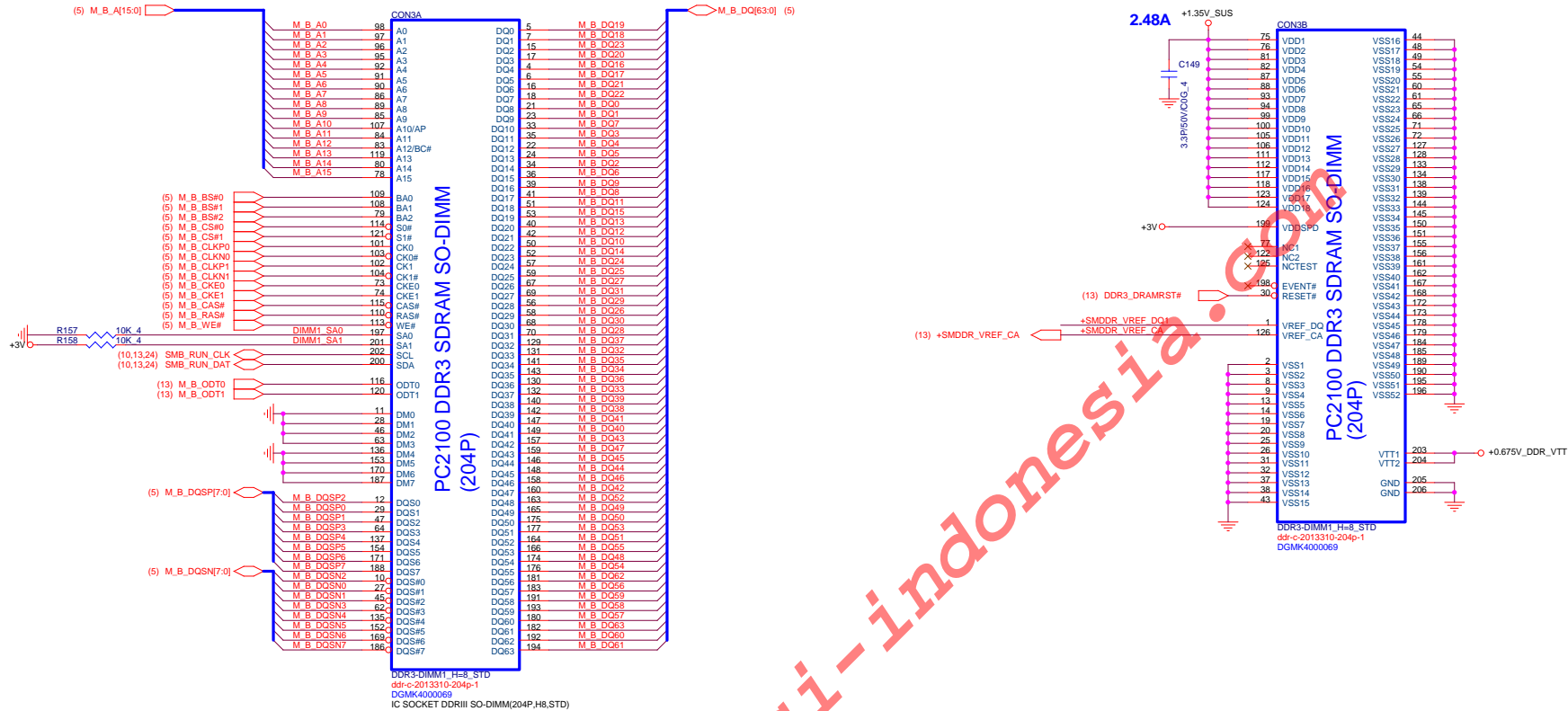
| | |
|-----------------------------------|---------|
| TLS CONFIDENTIALITY STRAP(GPIO15) | |
| NC | Default |
| PU | EN |

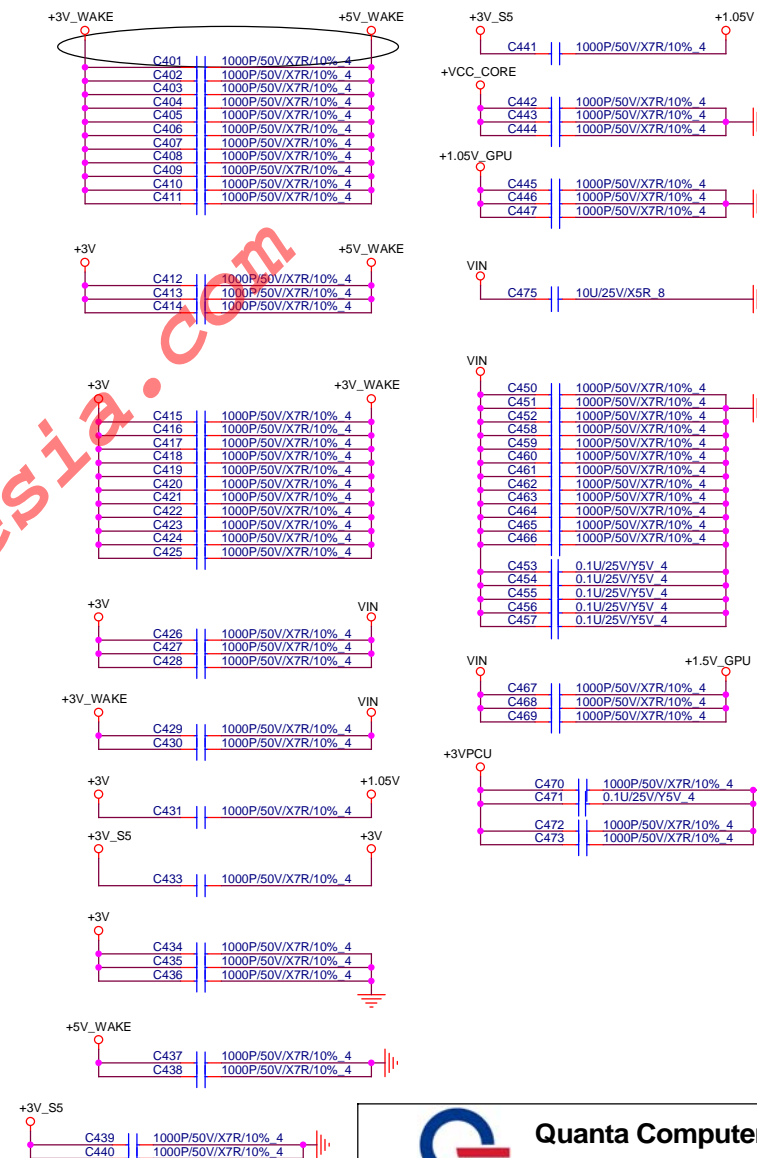
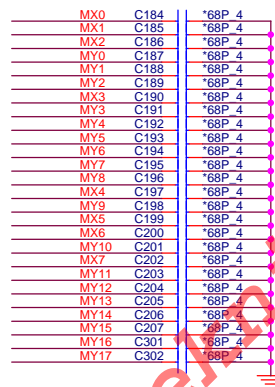
| | |
|--|--|
|  <div> Quanta Computer Inc PROJECT : HKDD </div> | |
| Size | Document Number HSW_PCH(GPIO/MISC) |

MB_SCH_PVT_04: P11- Add BOARD ID table

| PCBA SKU | Discrete | UMA |
|-----------------|----------|----------|
| R135(Pull High) | Stuff | No Stuff |
| R136(Pull Low) | No Stuff | Stuff |

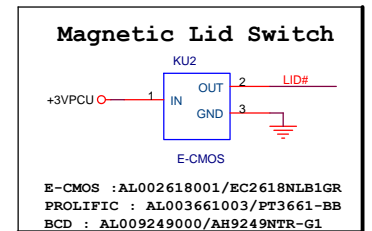
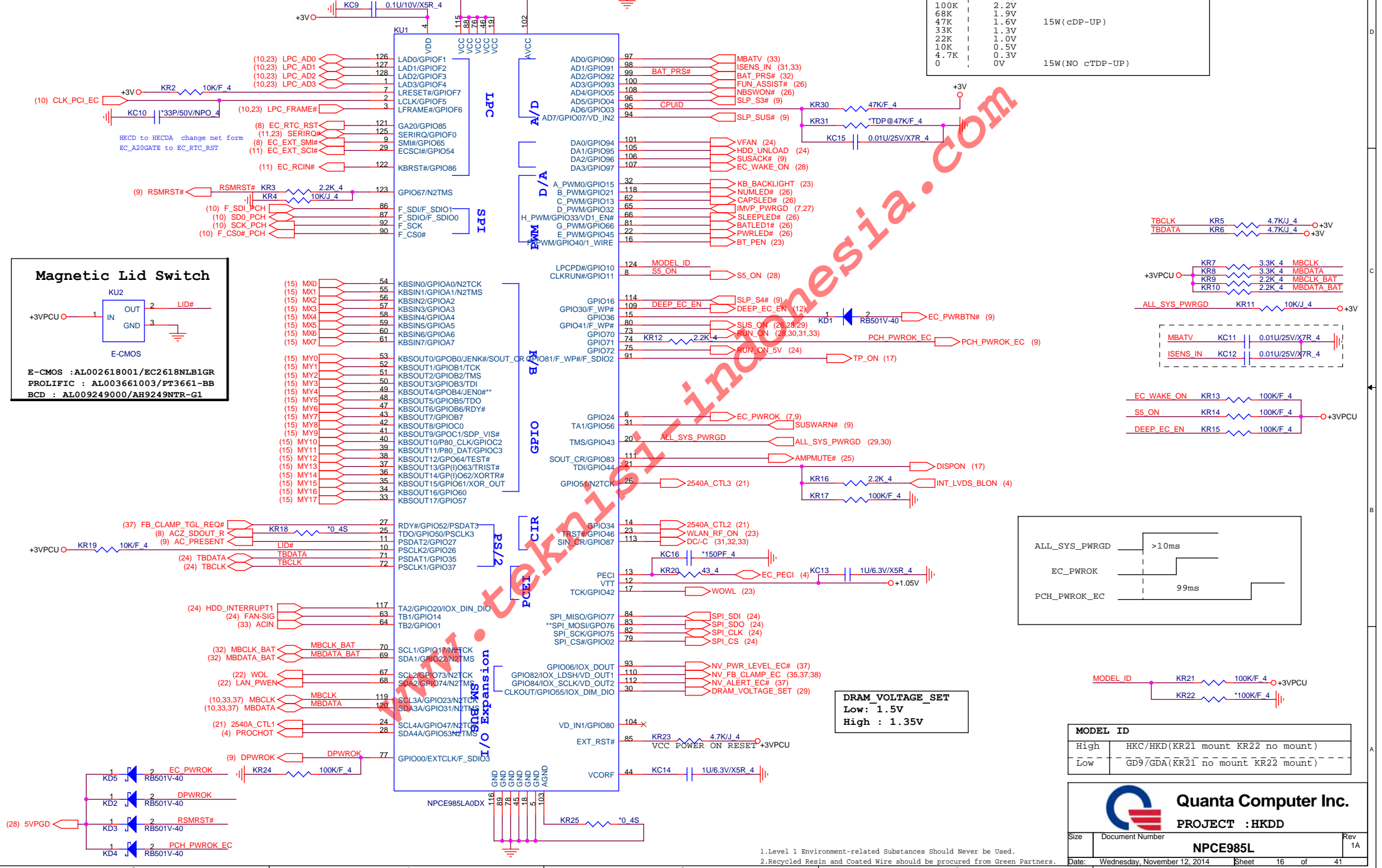




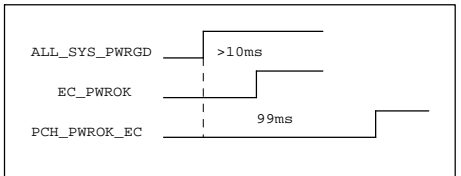
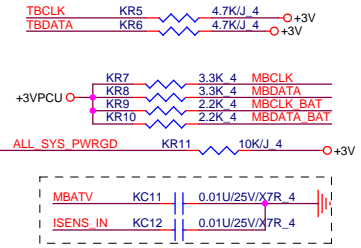
[illegible]

** Strapping Pin, Can not pull low.
Note the input leakage current to the strap pins must be less than 10uA.

Since ECSCI is OD, no need for a back-drive protection diode on this signal. But note there is internal PU in chipset at default



| KR31 | CPUID | TDP |
|------|-------|------------------|
| X | 3.3V | 28W |
| 470K | 2.9V | TDB |
| 220K | 2.6V | |
| 100K | 2.2V | |
| 68K | 1.9V | |
| 47K | 1.6V | |
| 33K | 1.3V | |
| 22K | 1.0V | |
| 10K | 0.5V | |
| 4.7K | 0.3V | |
| 0 | 0V | 15W (NO cTDP-UP) |



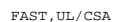
DRAM VOLTAGE SET
Low : 1.5V
High : 1.35V

| MODEL ID | |
|----------|-----------------------------------|
| High | HKC/HKD(KR21 mount KR22 no mount) |
| Low | GD9/GDA(KR21 no mount KR22 mount) |

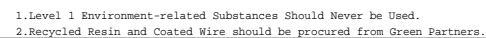
Quanta Computer Inc.
PROJECT : HKDD

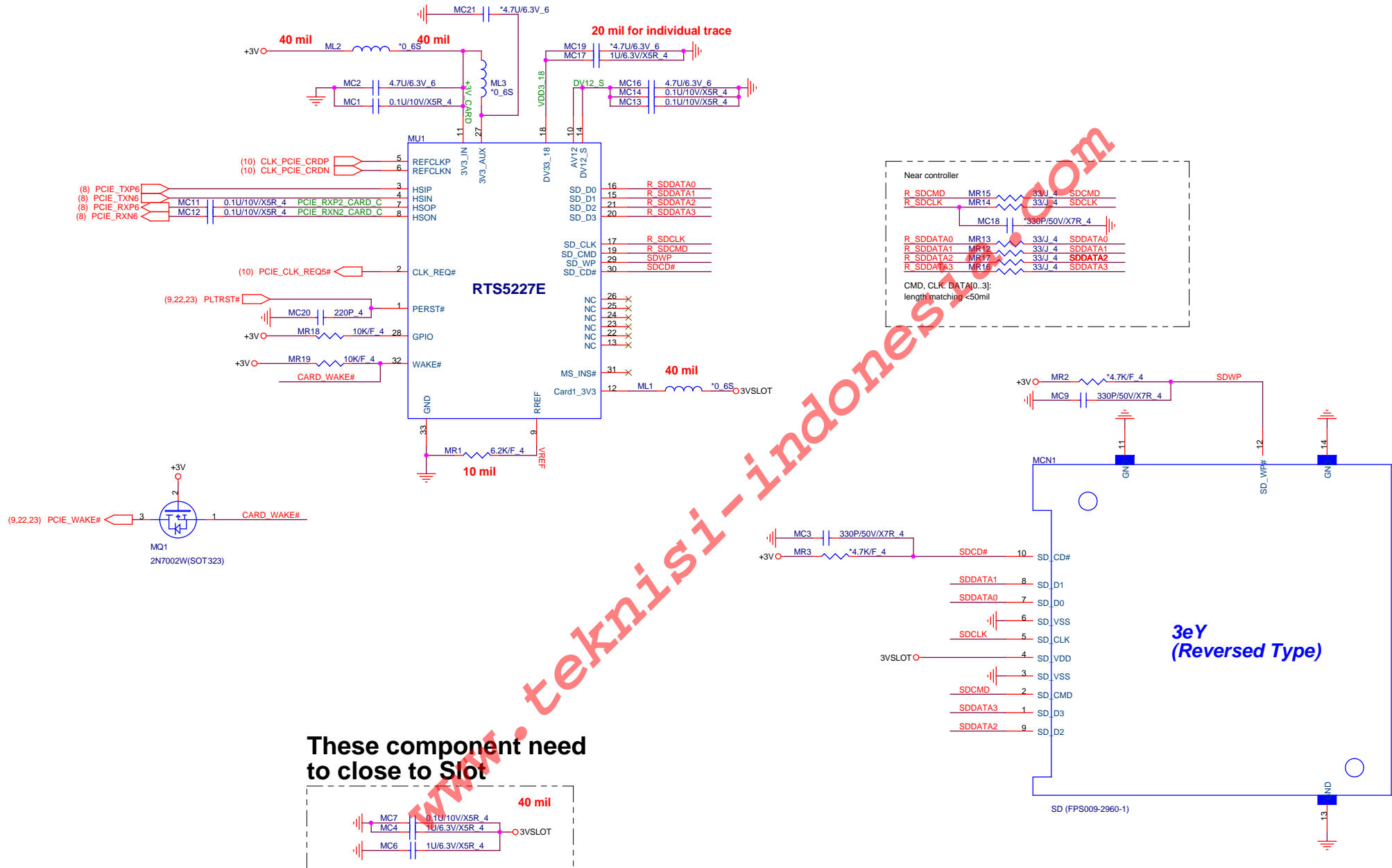
| | | | | |
|------|------------------------------|-----------------|-----|-------|
| Size | Document Number | NPCE985L | Rev | 1A |
| Date | Wednesday, November 12, 2014 | Sheet | 16 | of 41 |

1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.



eDP





Quanta Computer Inc.

PROJECT : HKDD

CARD

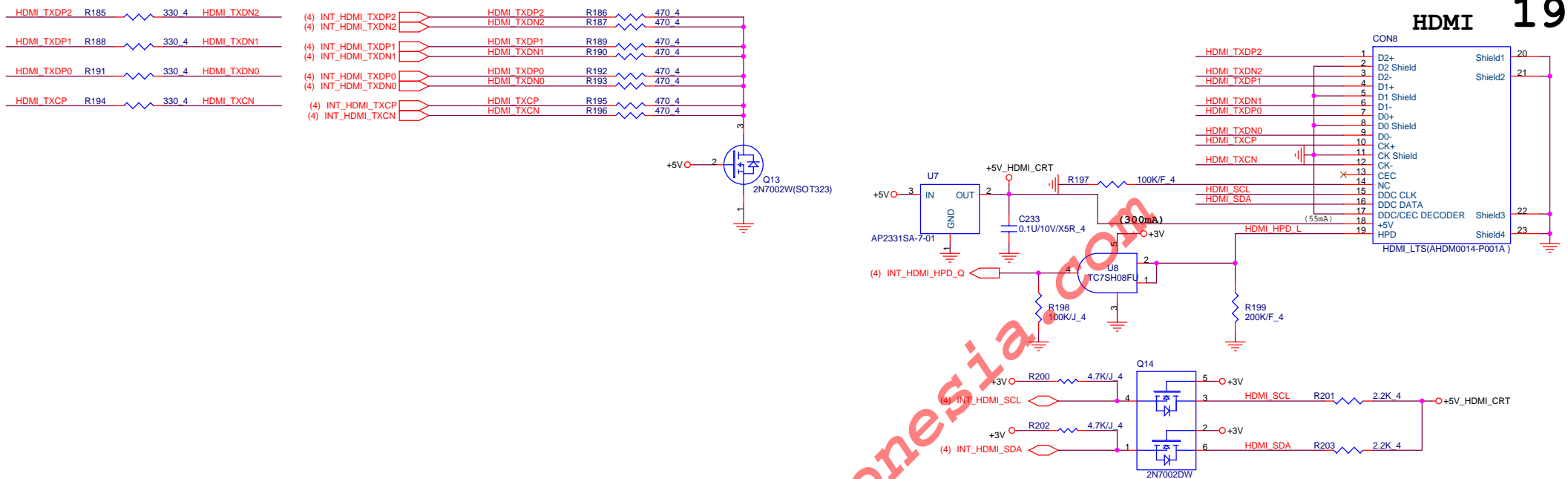
Rev 1A

1.Level 1 Environment-related Substances Should Never be Used.

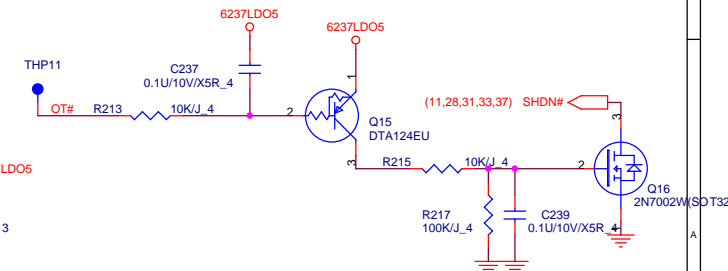
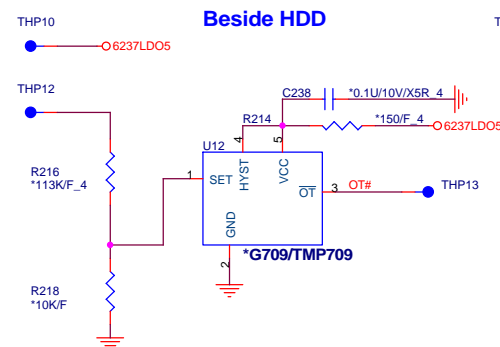
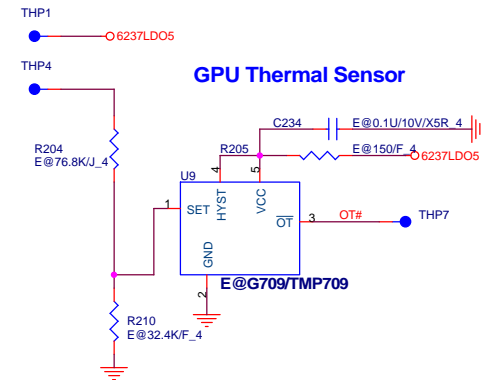
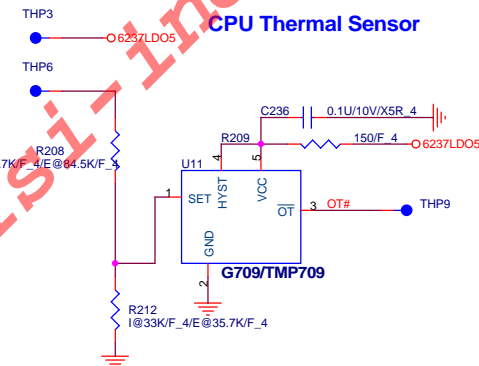
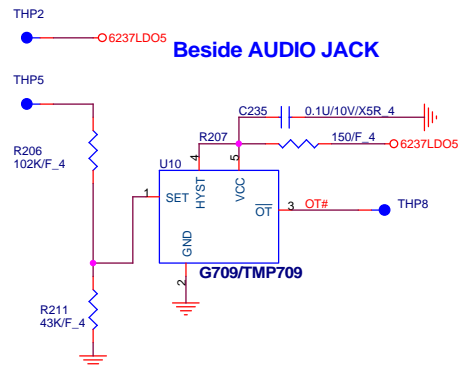
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Date: Thursday, November 13, 2014

Sheet 18 of 41



H/W Thermal Protect



$$RSET(k\Omega) = 0.0012T^2 - 0.9308T + 96.147$$

| | |
|-----|-------|
| 95 | 18.5K |
| 100 | 15K |
| 107 | 10.3K |
| 110 | 8.2K |

DIS SKU

| Location of IC | Temp | R-Set | Parts in BOM | Max | Min |
|------------------------|------|-------------|--------------|------|------|
| Near CPU sensor temp | 72 | R212=35.35K | 35.7K | 72.1 | 71.1 |
| Near GFX sensor temp | 76 | R210=40.72K | 32.4K | 76.4 | 75.4 |
| Near AUDIO sensor temp | 62 | R211=43.05K | 43K | 62 | 61 |

UMA SKU

| Location of IC | Temp | R-Set | Parts in BOM | Max | Min |
|------------------------|------|-------------|--------------|------|------|
| Near CPU sensor temp | 81 | R212=33.09K | 33K | 82.3 | 81.4 |
| Near AUDIO sensor temp | 58 | R211=43.05K | 43K | 62 | 61 |

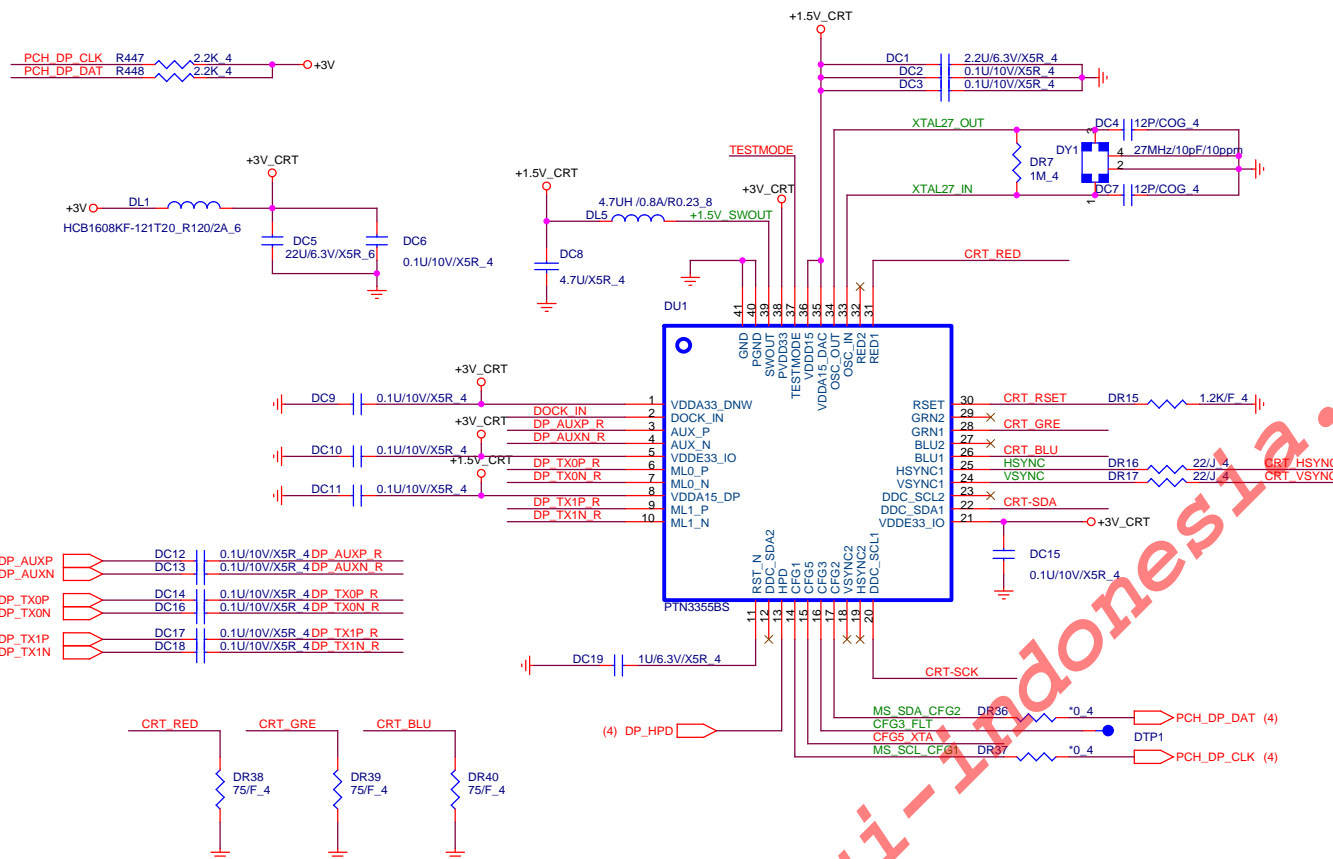


Quanta Computer Inc.

PROJECT : HKDD

| Size | Document Number | Date | Thursday, November 13, 2014 | Sheet | 19 | of | 41 |
|-----------------|-----------------|------|-----------------------------|-------|----|----|----|
| HDMI/Thermal IC | | | | | | | |

1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

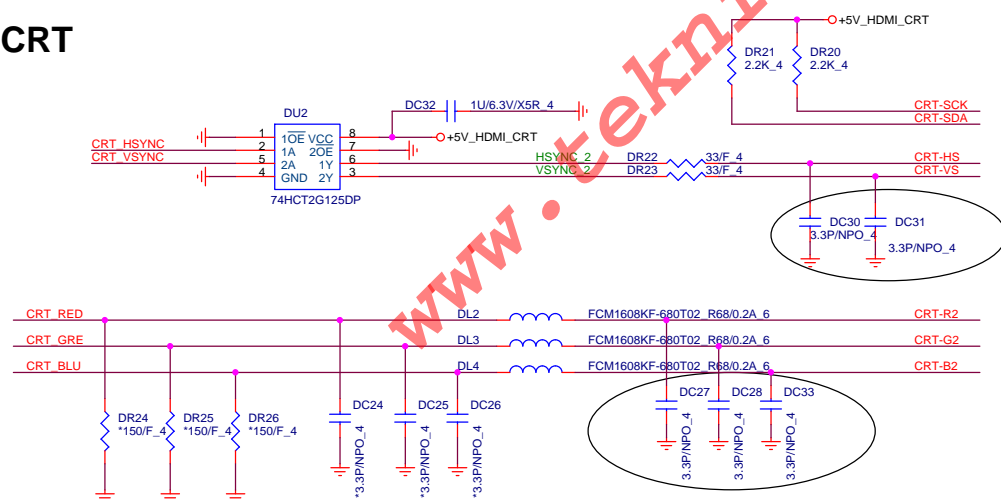


| | |
|-------------|--|
| CFG5_XTA | XTAL is used, High=33MHZ, Low=25MHZ, NC=27MHZ |
| TESTMODE | I2C address, Stuff=C0H, NC=40H |
| DOCK_IN | High=Channel 2, Low=Channel 1 |
| MS_SCL_CFG1 | General purpose configuration pin |
| MS_SDA_CFG2 | General purpose configuration pin |
| CFG3_FLT | Open: not used |

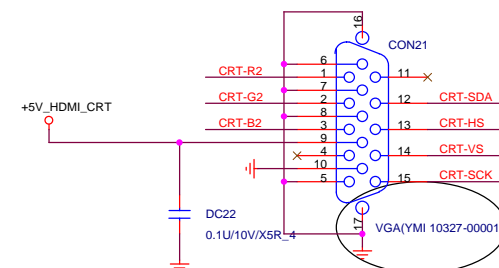
Table 8. CFG1_SCL/CFG2_SDA pin definitions

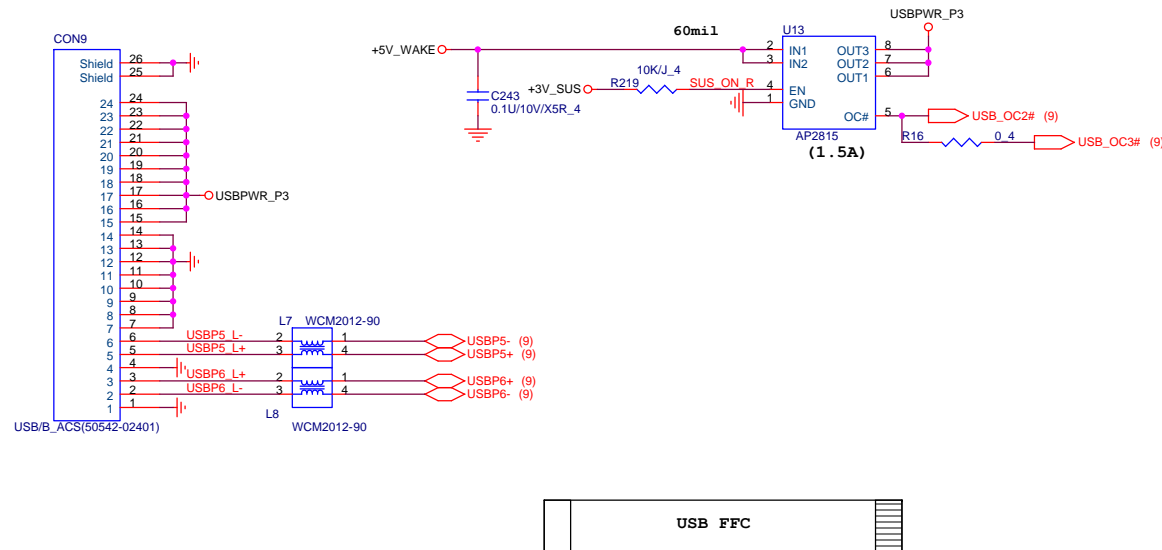
| Pin value | System behavior |
|-----------|--|
| 00 | Compliant HPD behavior |
| 01 | Most interoperable (non-compliant) HPD behavior |
| 10 | Most interoperable (non-compliant) HPD behavior |
| 11 | (Default) Compliant behavior (but configurable via I ² C-bus) |

CRT



MB_SCH_PVT_01 DC27, DC28, and DC33
change from 15p to 3.3p



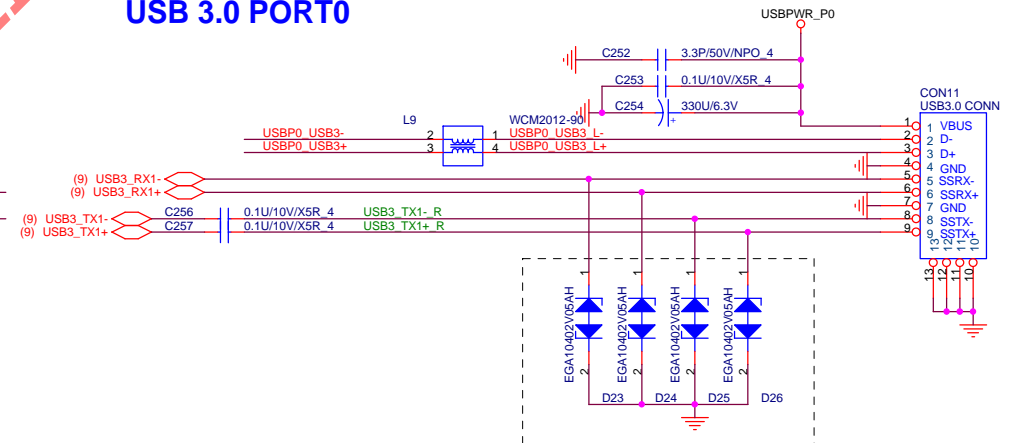
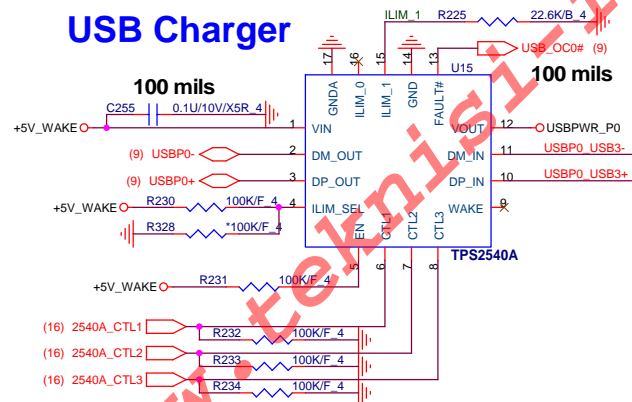
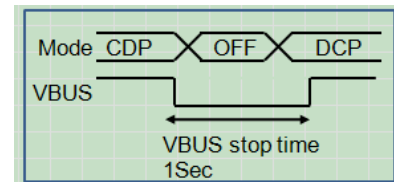


USB 3.0 PORT0

USB Charger

| | TPS2540A | | TPS2543 | |
|----------|----------|-------|---------|-------|
| ILIM_SEL | Pin15 | Pin16 | Pin15 | Pin16 |
| High | V | | | V |
| Low | | V | V | |

SDP : Standard Downstream Port
 CDP : Charging downstream port
 DCP : Dedicated Charging Port
 Enable/Disable : setting by BIOS

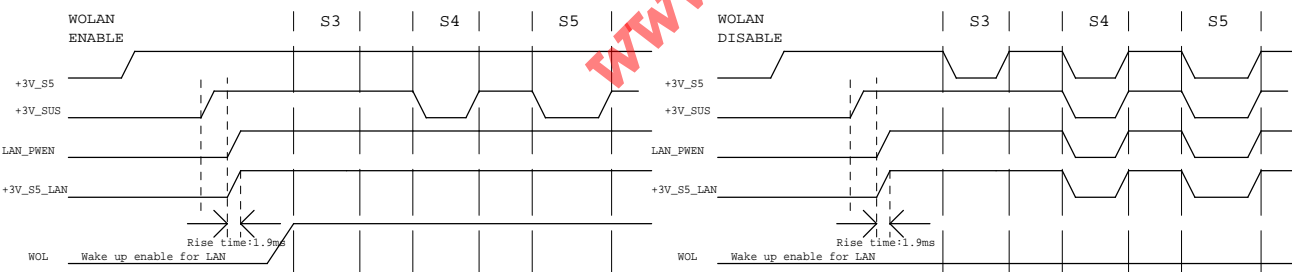
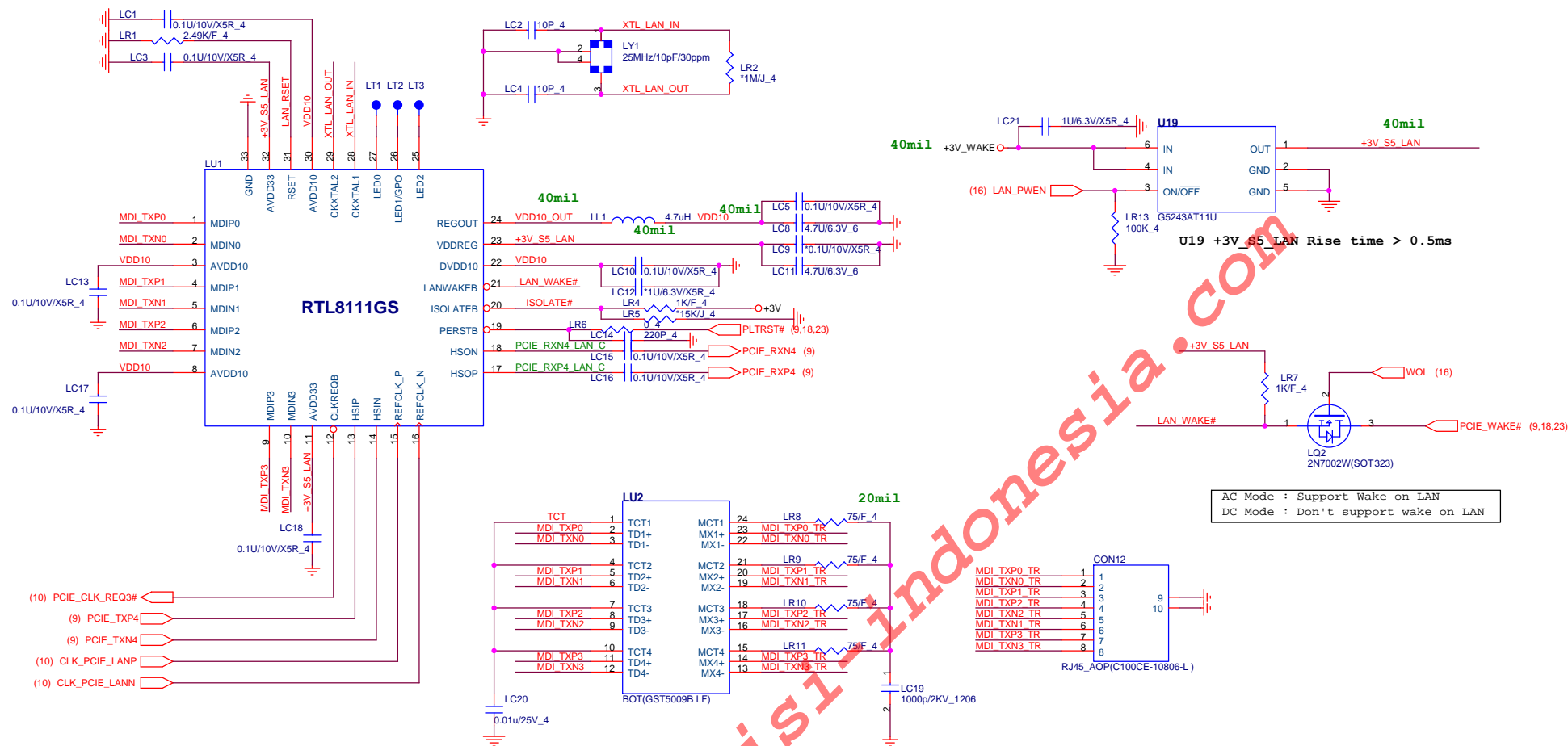


| CTL_1 | CTL_2 | CTL_3 | TPS 2540A/2543 Truth Table |
|-------|-------|-------|---|
| 0 | 0 | 0 | OUT discharge, power switch OFF |
| 0 | X | 1 | DCP, Auto-detect(S3/S4/S5, 1.5A) |
| X | 1 | 0 | SDP, USB2.0 mode(S0, 0.5A) |
| 1 | 0 | 0 | DCP, BC SPEC1.2 only(S3/Deep standby/S4/S5, 1.5A) |
| 1 | 0 | 1 | DCP, Divider mode only(S3/S4/S5, 1.5A) |
| 1 | 1 | 1 | CDP (S0, 1.5A) |

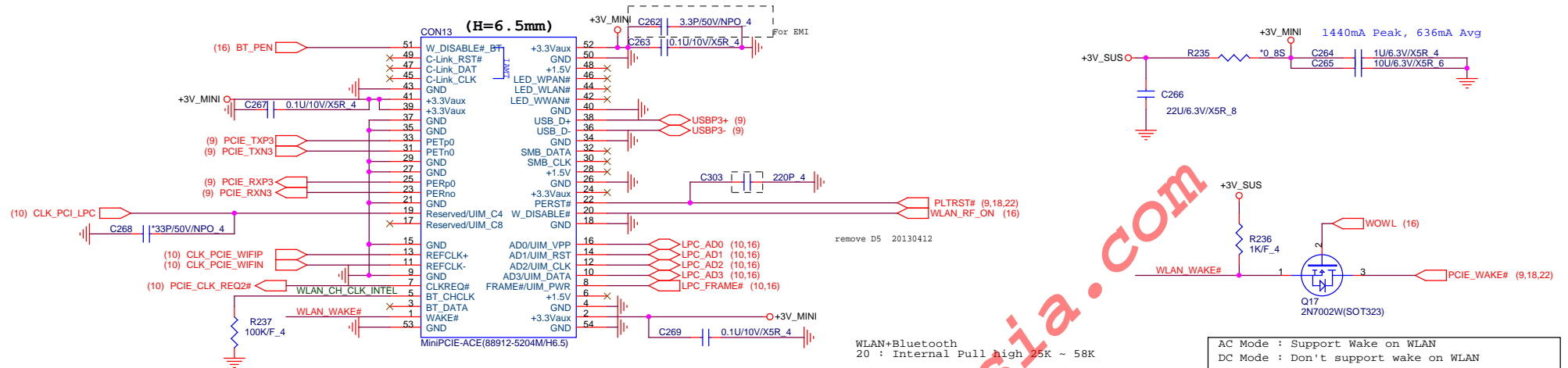
| System State | USB Battery Charging Setting | | | |
|--------------|------------------------------|----------|--------|----------|
| | Disable | C(1 2 3) | Enable | C(1 2 3) |
| S0 | | | | |
| S3 | SDP | (X 1 0) | CDP | (1 1 1) |
| DS3 | SDP | (X 1 0) | DCP BC | (1 0 0) |
| S4 | Charger OFF | (0 0 0) | DCP BC | (1 0 0) |
| S5 | Charger OFF | (0 0 0) | DCP BC | (1 0 0) |

| ILIM_SEL (I LIMIT(A)= 48000/R) | |
|--------------------------------|---------|
| HI | I_LIM_1 |
| LO | I_LIM_0 |

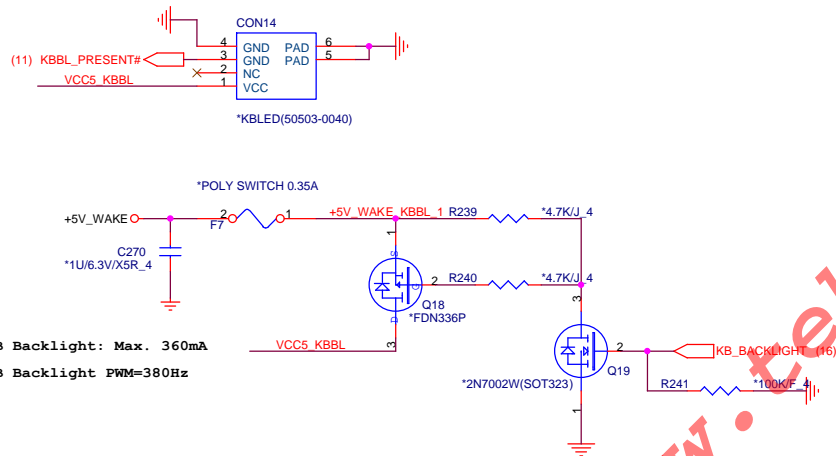
| | | | |
|-------|-----------------|-----------------|-----------------------------|
| | | PROJECT : HKDD | |
| | | USB/USB Charger | |
| Size | Document Number | Date | Thursday, November 13, 2014 |
| Sheet | 21 | of | 41 |



WLAN/WIMAX/WIDI



KB BACKLIGHT



KB Backlight: Max. 360mA

KB Backlight PWM=380Hz

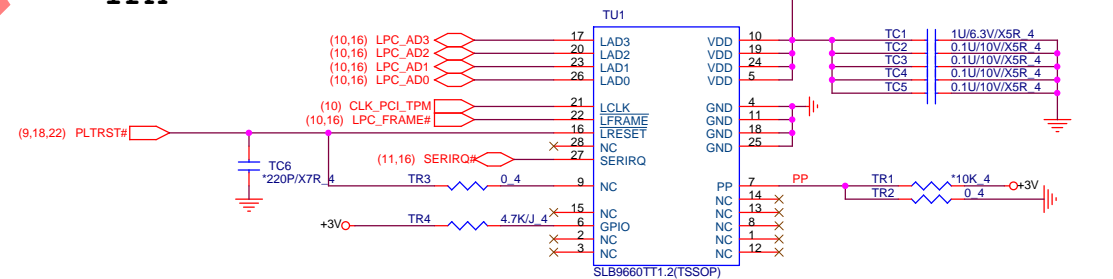
| TPM_ID | TPM |
|--------|---------|
| 0 | TPM 1.2 |
| 1 | TPM 2.0 |

TPM ID

*DIP(DHN-02-T-Q-T/R)

MB_SCH_PVT_04: P23- Add SW1 for
TPM_ID select

TPM



Quanta Computer Inc.

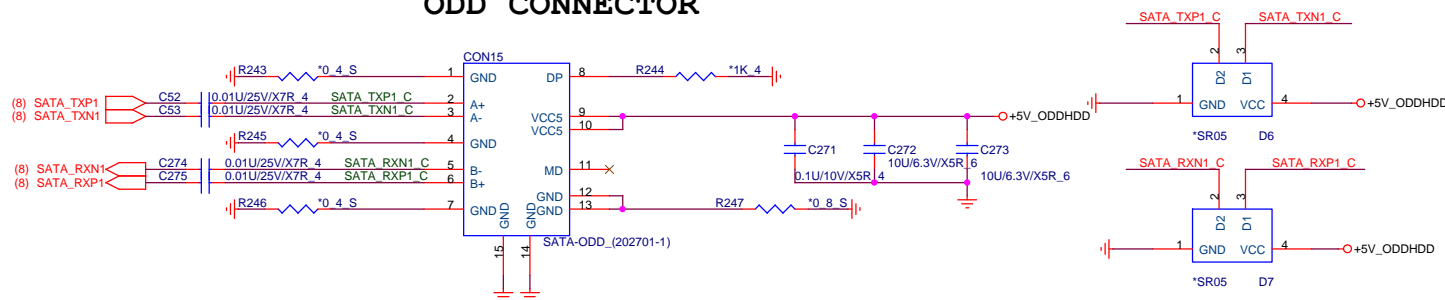
PROJECT : HKDD

| | |
|------|-----------------------|
| Size | Document Number |
| | WLAN/KB BL/TPM |

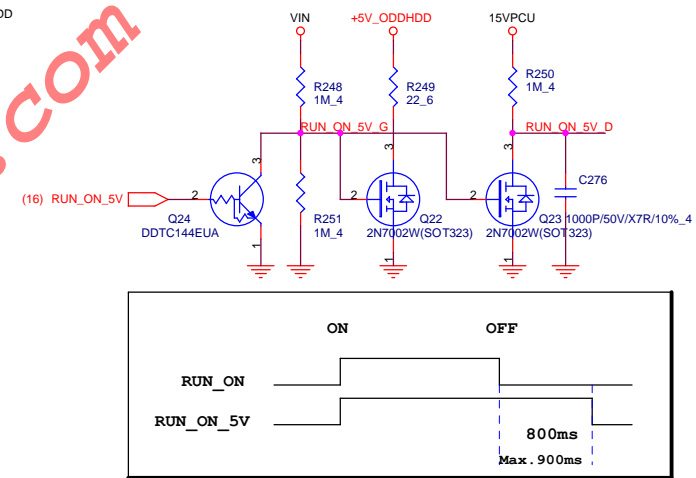
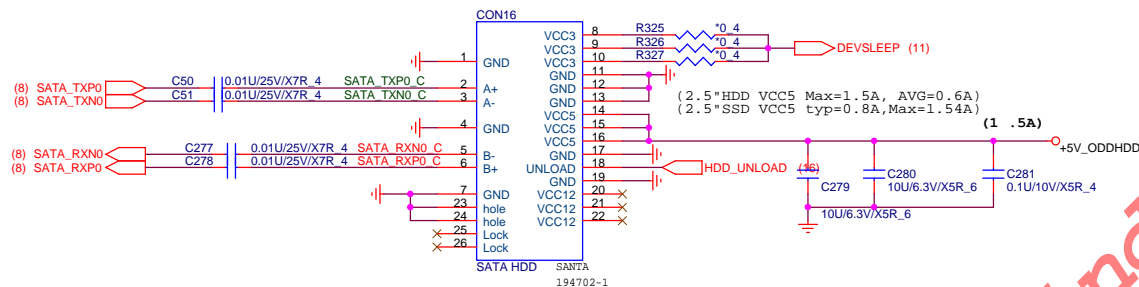
| | |
|-----|--|
| Rev | |
| 1A | |

Date: Tuesday, December 16, 2014 Sheet 23 of 41

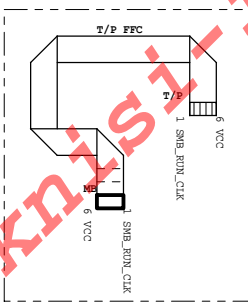
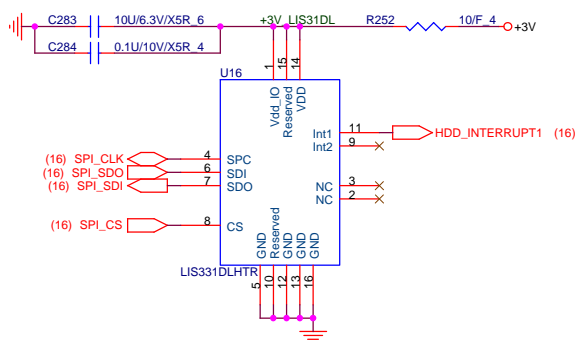
ODD CONNECTOR



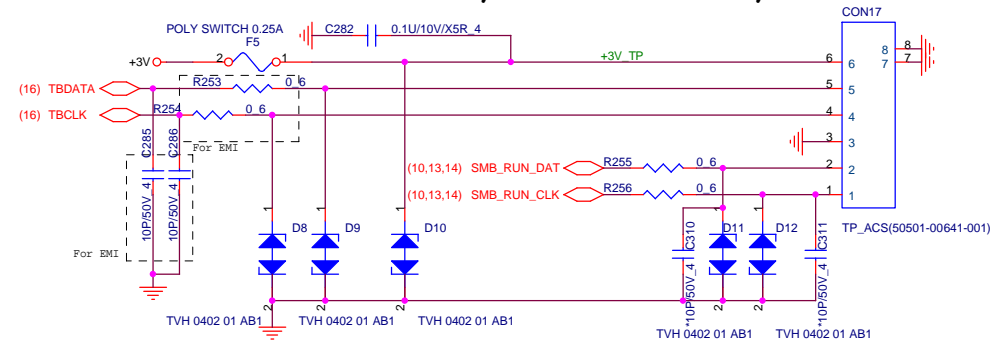
HDD CONNECTOR



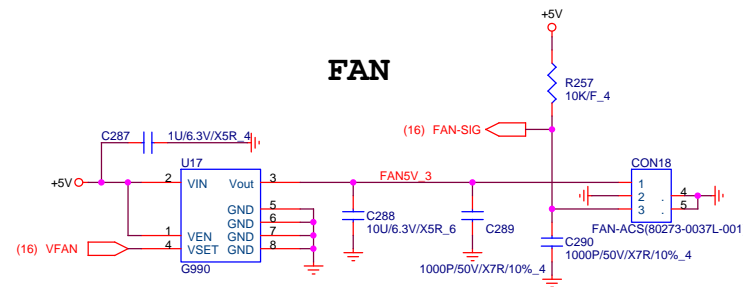
HDD PROTECT SPI INTERFACE



T/P Board to T/P



FAN



Quanta Computer Inc.
PROJECT : HKDD

| | | |
|------|-----------------|-----|
| Size | Document Number | Rev |
| | HDD/ODD/TP/FAN | 1A |

1. Level 1 Environment-related Substances Should Never be Used.
2. Recycled Resin and Coated Wire should be procured from Green Partners.

Date: Thursday, November 13, 2014 Sheet 24 of 41

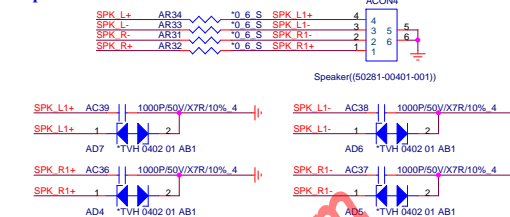
Analog

Digital

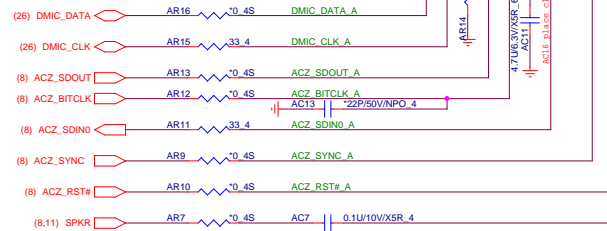
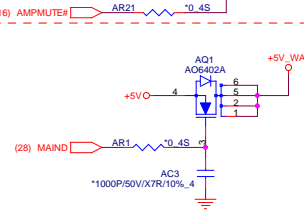
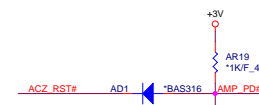
ALC233-CG

SPK L+ L- R+ R- trace width
Speaker 4 ohm => 40 mils

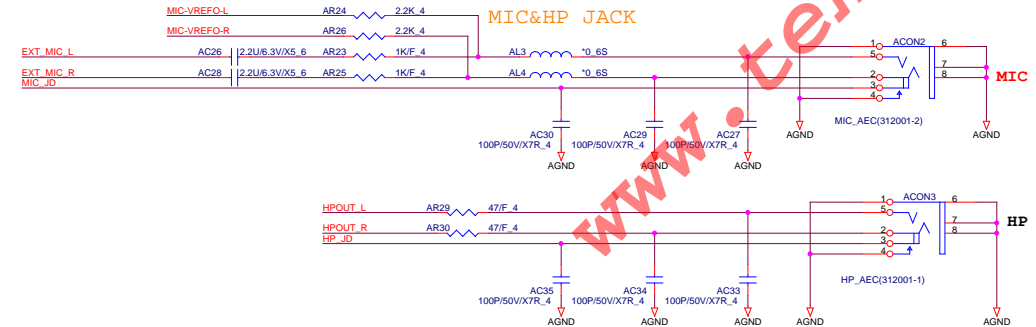
SPEAKER CON.

<<Attention>>
Place these EMI components close to codec; For EMI issue.

For EMI



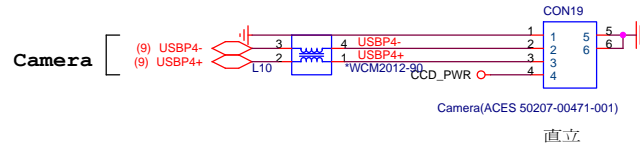
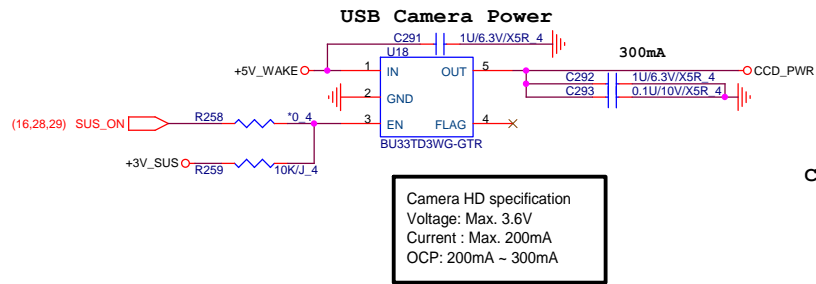
MIC&HP JACK

Quanta Computer Inc.
PROJECT : HKDD

| | | |
|------|-----------------------------|----------------|
| Size | Document Number | Rev |
| | Audio Codec ALC233-CG | 1A |
| Date | Thursday, November 13, 2014 | Sheet 28 of 41 |

1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

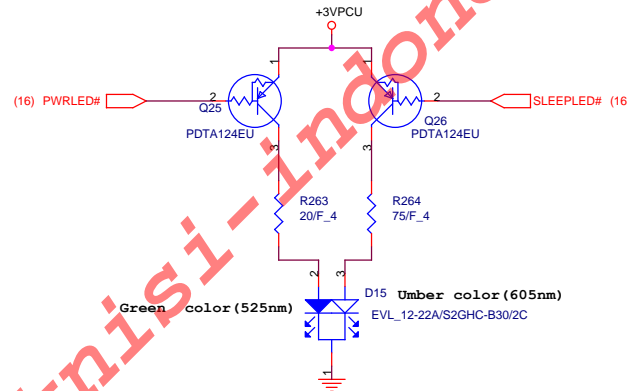
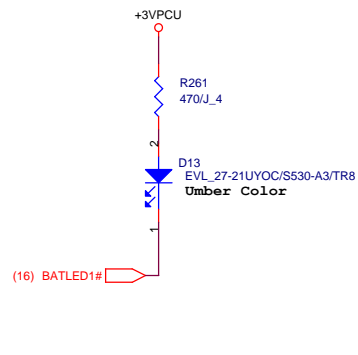
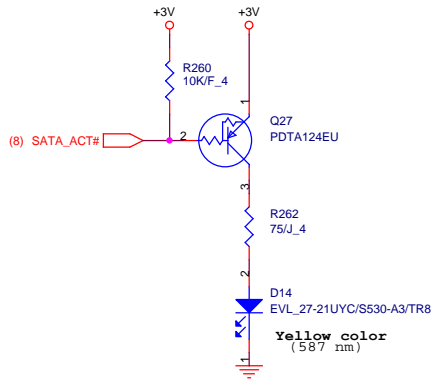
Camera



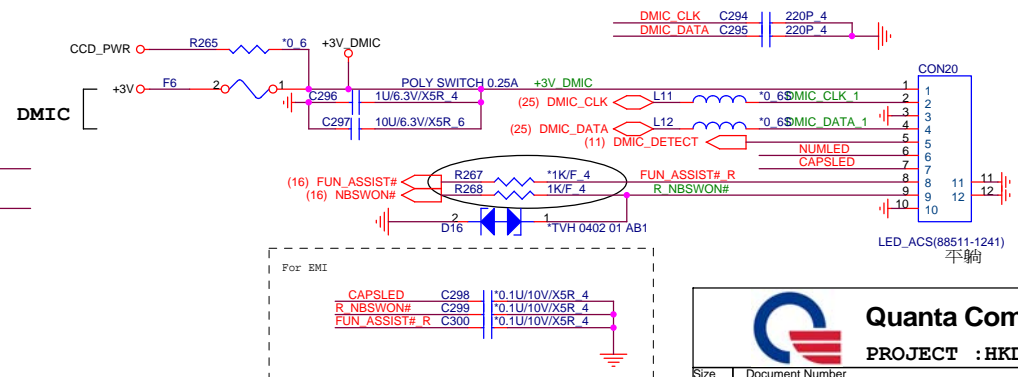
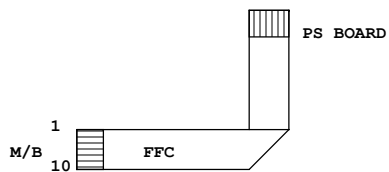
SATA LED

BATTERY LED

Power/Sleep LED

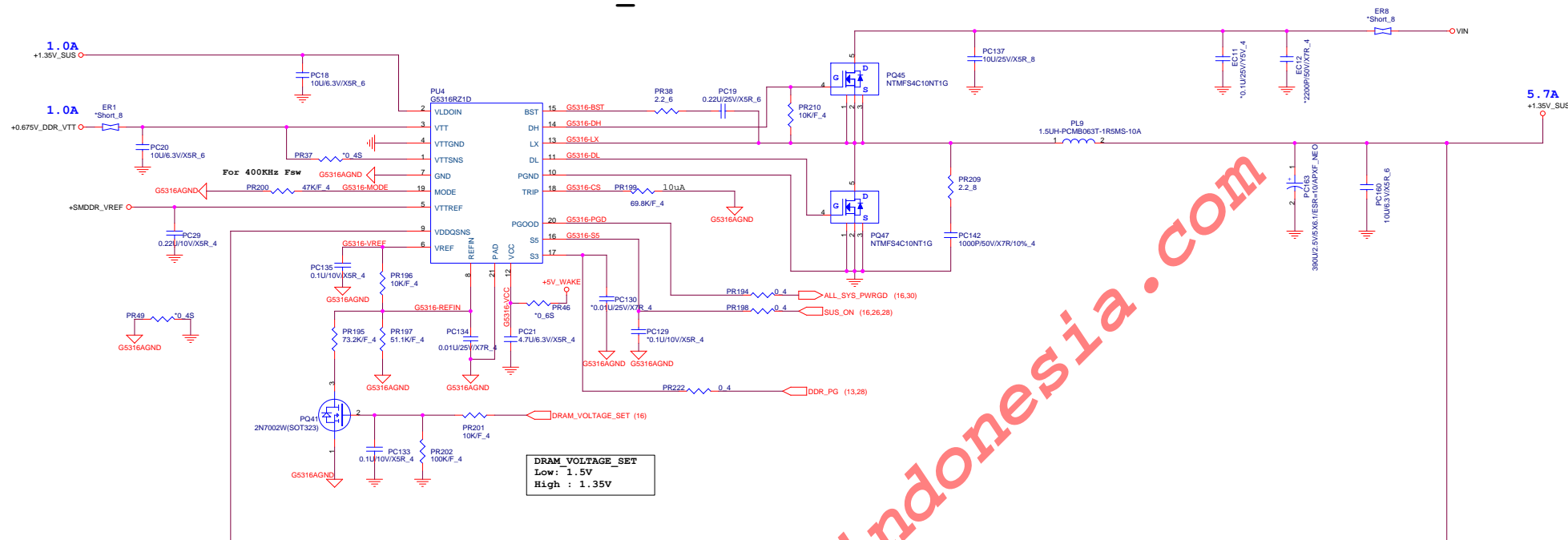


Power SW Board Connector



1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green
Partners.

1.5VSUS & VTT_MEM



| MODE | Resistor on Mode | Fsw | Discharge Mode |
|------|------------------|--------|------------------------|
| 3 | 200Kohm | 400KHz | Tracking discharge |
| 2 | 100Kohm | 300KHz | Non-tracking discharge |
| 1 | 68Kohm | 300KHz | Non-tracking discharge |
| 0 | 47Kohm | 400KHz | Non-tracking discharge |

| STATE | S3 | S5 | 1.5VSUS | VTTREF | VTT |
|-------|----|----|---------|--------|------------|
| S0 | 1 | 1 | On | On | On |
| S3 | 0 | 1 | On | On | Off/High Z |
| S4/S5 | 0 | 0 | Off | Off | Off |

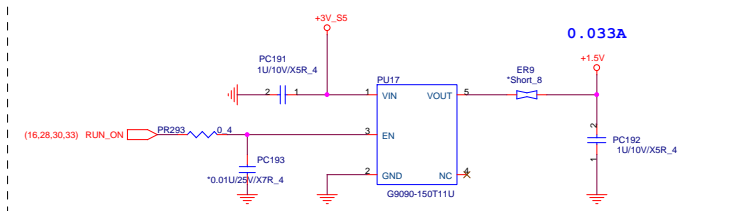


Quanta Computer Inc.
PROJECT : HKDD

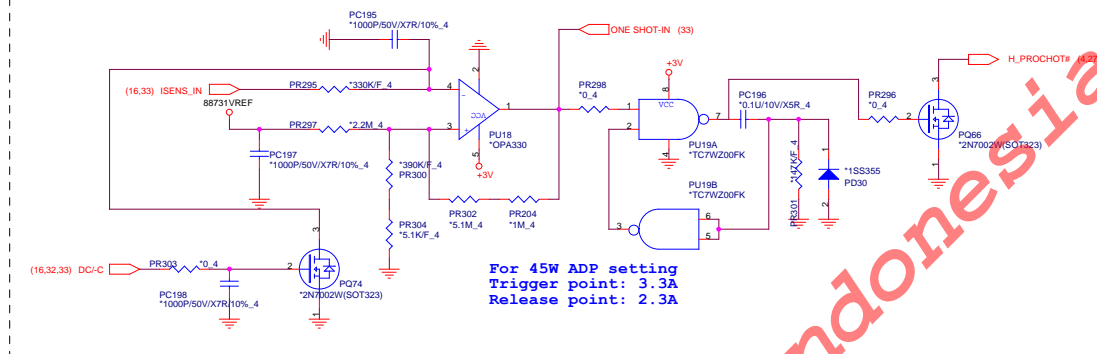
Size Document Number
1.5VSUS/VTT_MEM
Date: Thursday, November 13, 2014 Sheet 29 of 41 Rev 1A

1. Level 1 Environment-related Substances Should Never be Used.
2. Recycled Resin and Coated Wire should be procured from Green Partners.

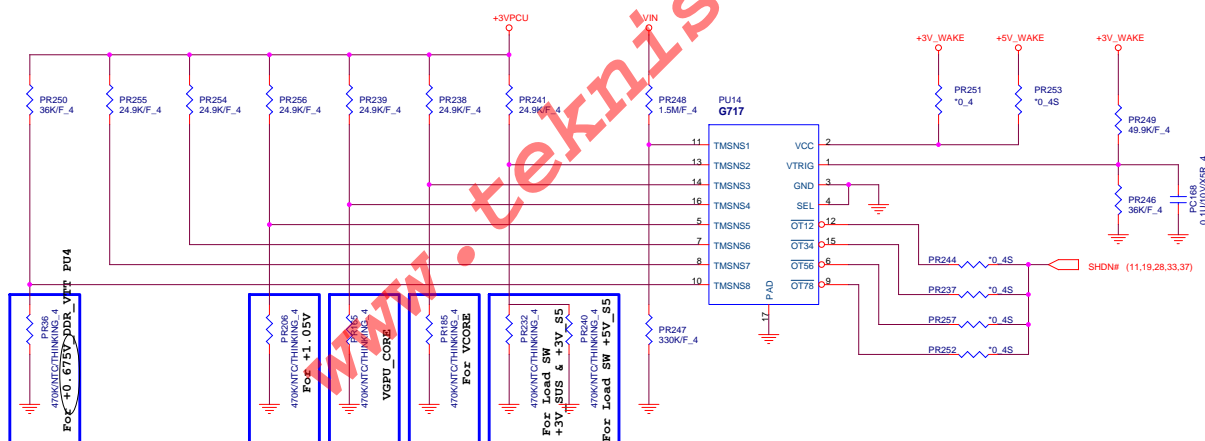
VCC1.5

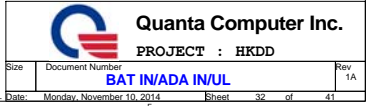


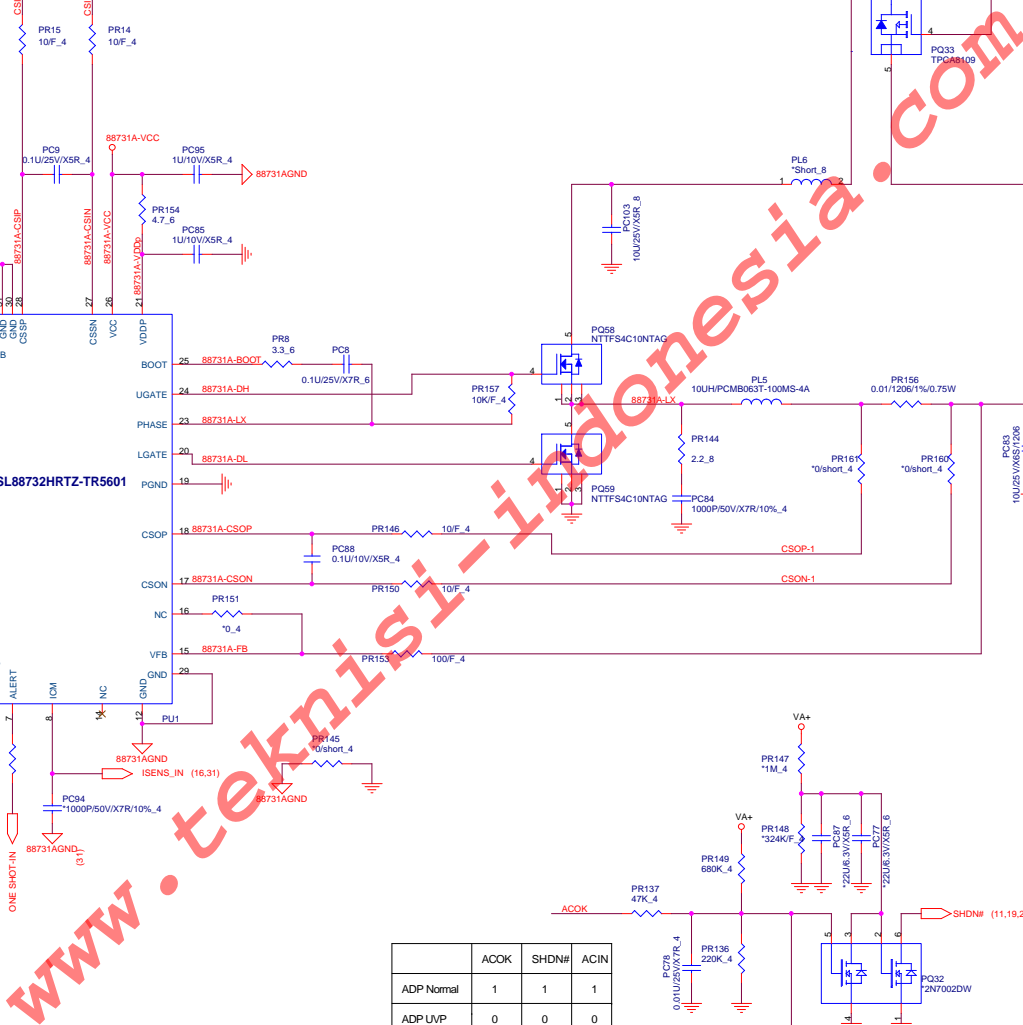
One-Shot 10ms PROCHOT# For ADP/BAT



Thermal Protection and Battery UVP for VEDS

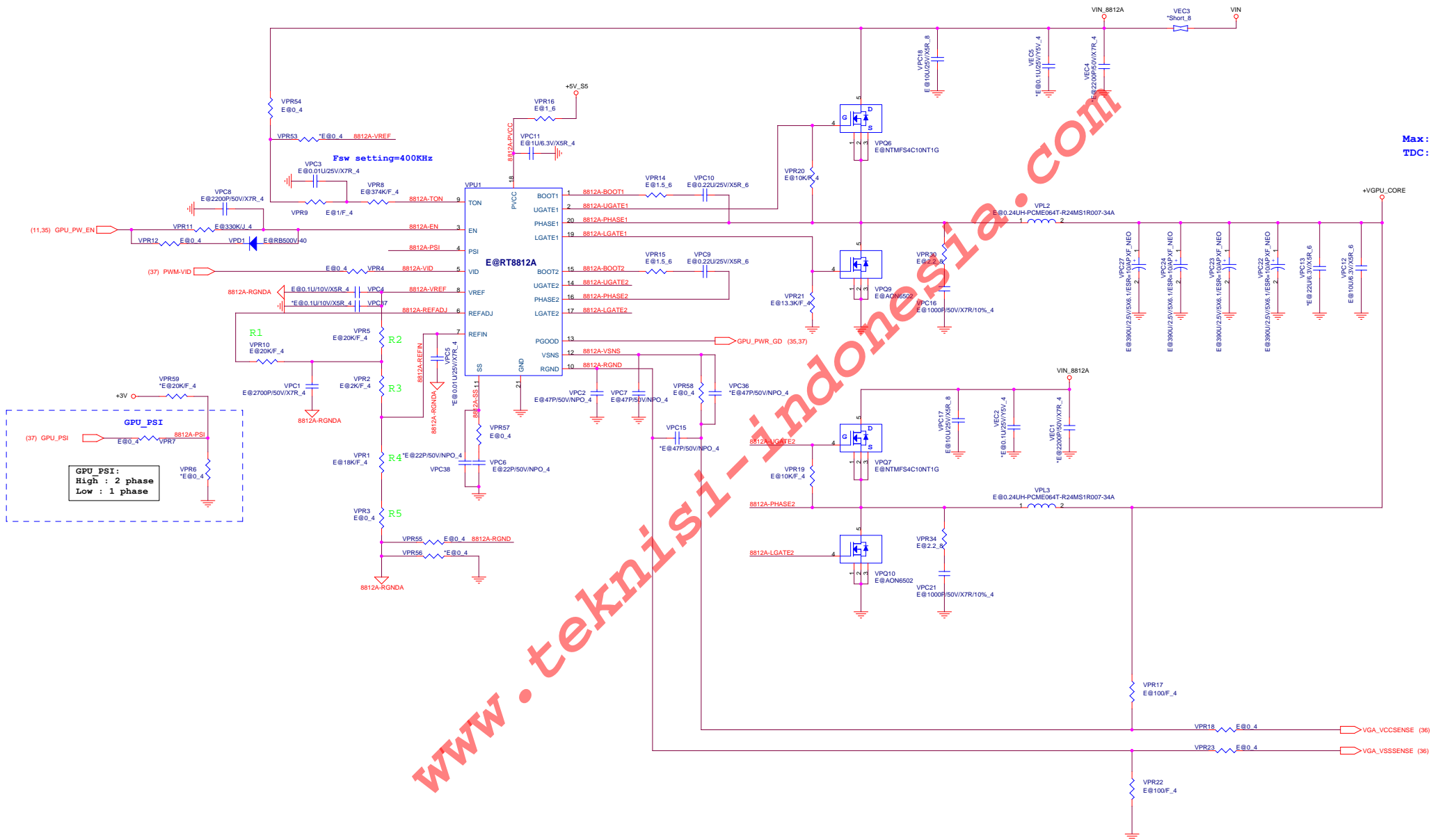






| | | | |
|------------|------|-------|------|
| | ACOK | SHDN# | ACID |
| ADP Normal | 1 | 1 | 1 |
| ADP UVP | 0 | 0 | 0 |

VGA-CORE



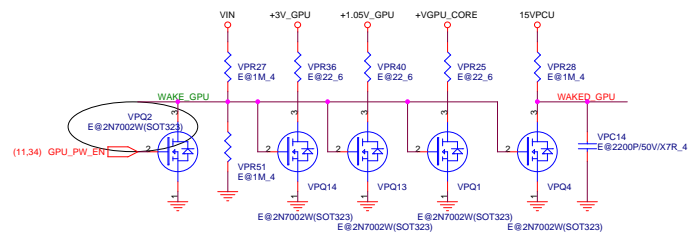
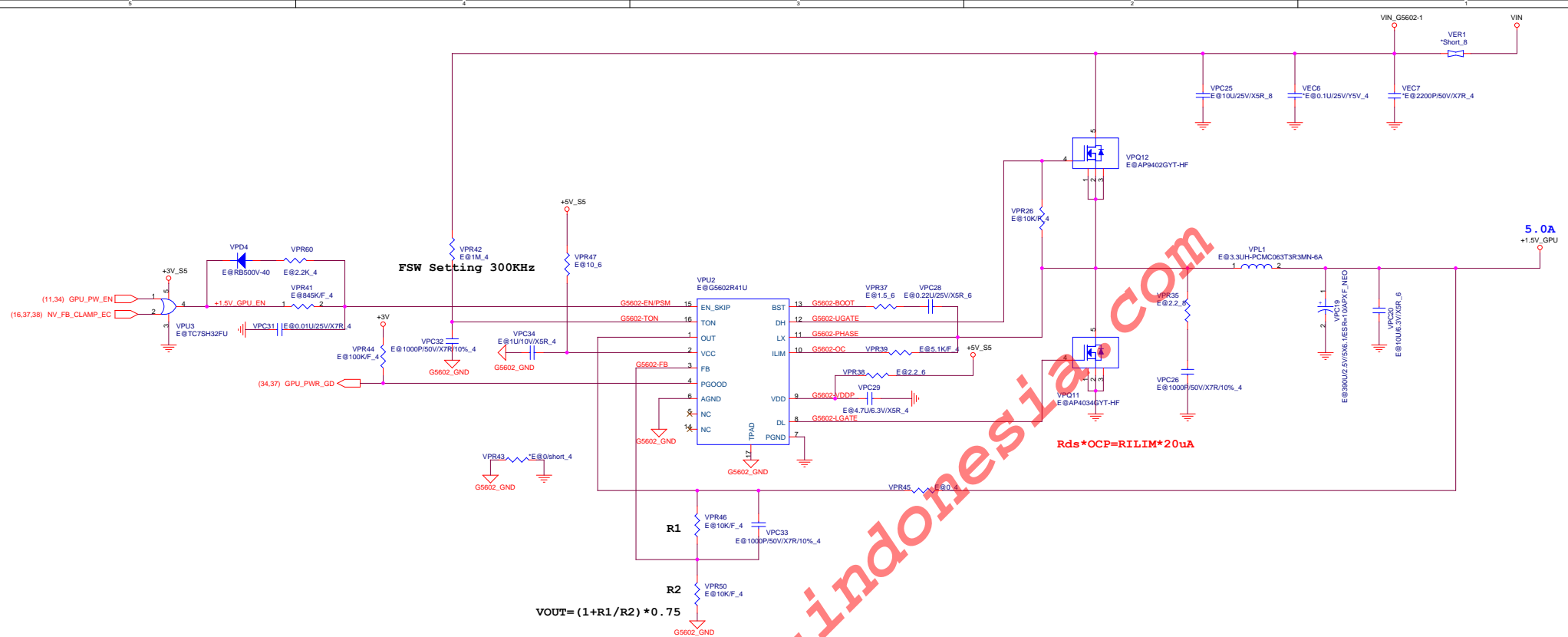
Quanta Computer Inc.
PROJECT : HKDD

Size Document Number
VGA_CORE (RT8812A)
Rev 1A

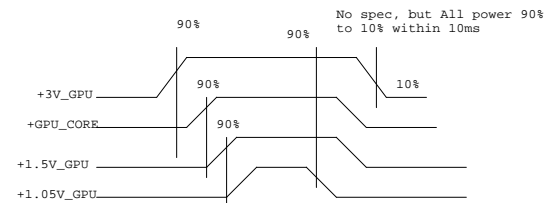
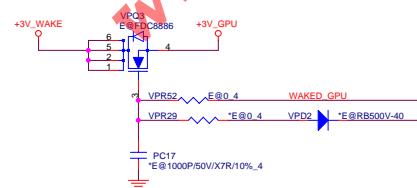
1. Level 1 Environment-related Substances Should Never be Used.

2. Recycled Resin and Coated Wire should be procured from Green Partners.

Date: Thursday, November 13, 2014 Sheet 34 of 41



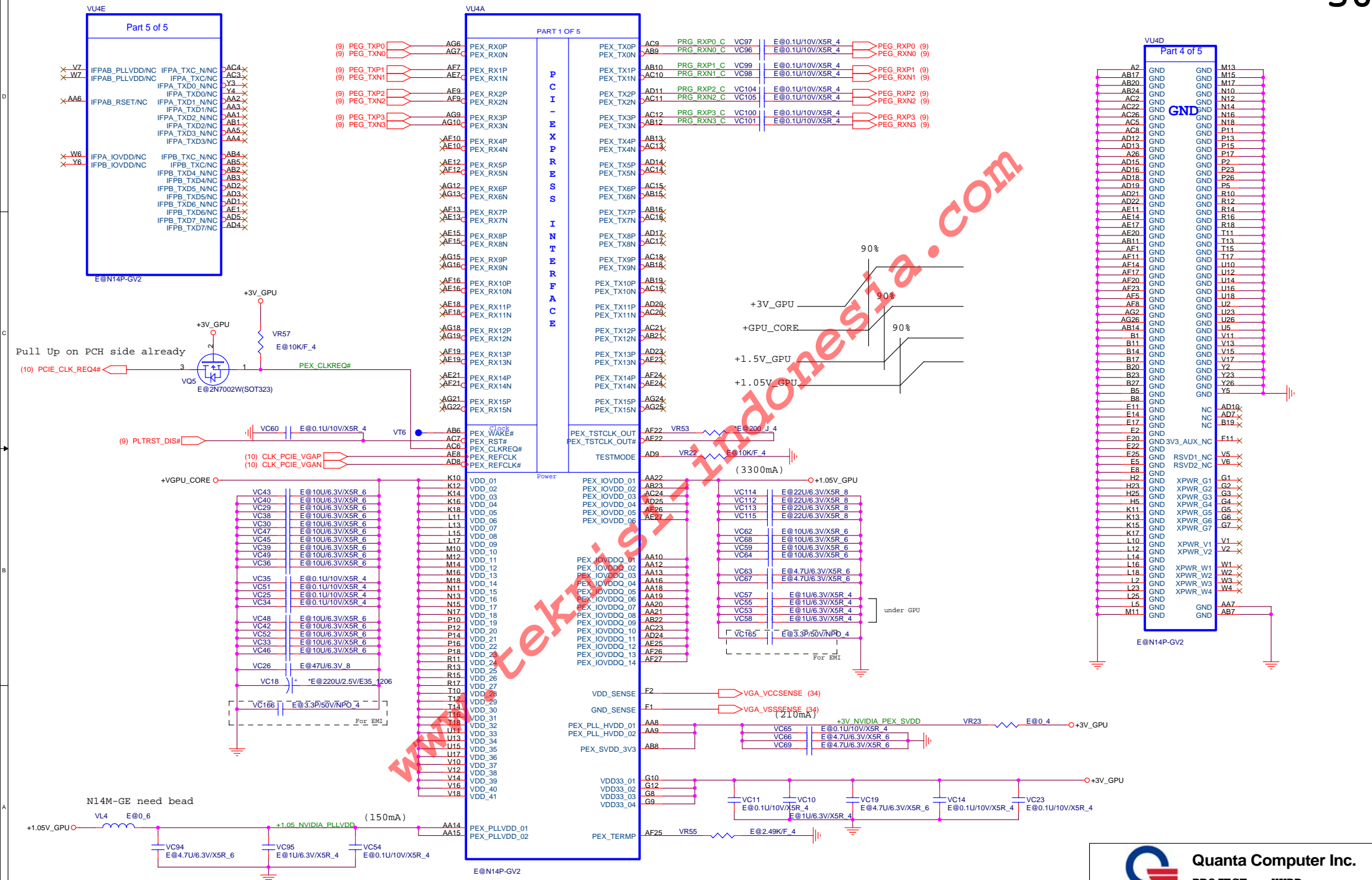
+3V_GPU

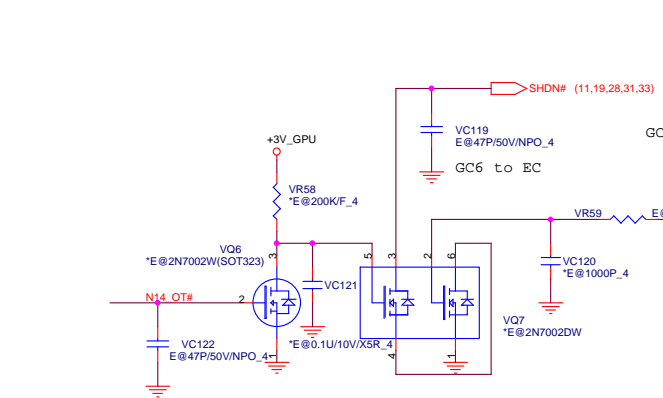


Quanta Computer Inc.
PROJECT : HKDD

Size Document Number
1.8 GPU / 1.0 GPU
Rev 1A

1. Level 1 Environment-related Substances Should Never be Used.
2. Recycled Resin and Coated Wire should be procured from Green Partners. Date: Thursday, November 13, 2014 Sheet 35 of 41





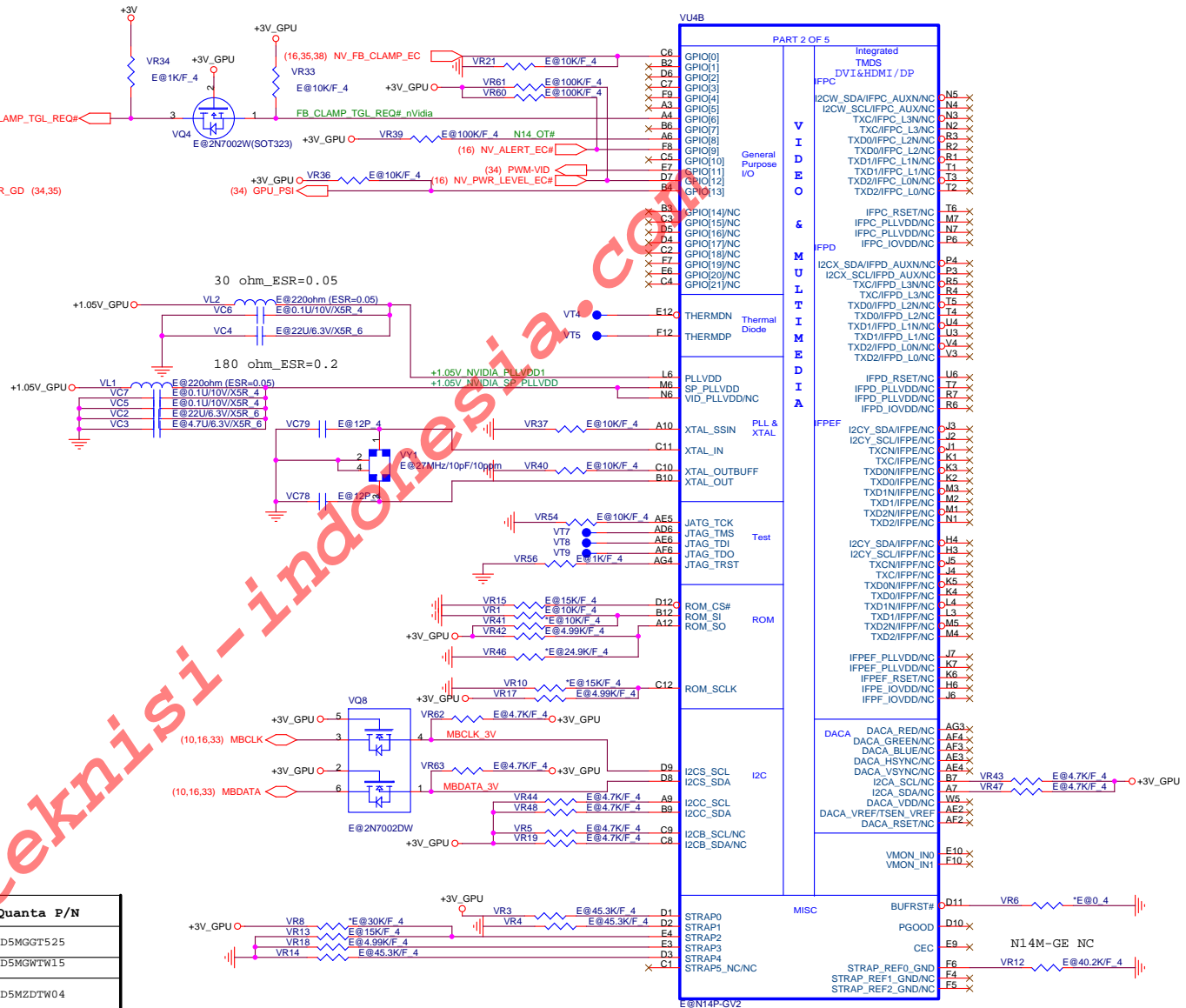
N14 Logical Strap Bit Mapping

| Resistor Value | Pull to VDD | Pull to GND | Resistor P/N |
|----------------|-------------|-------------|--------------|
| 4.99K | 1000 | 0000 | CS24992FB26 |
| 10K | 1001 | 0001 | CS31002FB26 |
| 15K | 1010 | 0010 | CS31502FB24 |
| 20K | 1011 | 0011 | CS32002FB29 |
| 24.9K | 1100 | 0100 | CS32492FB16 |
| 30.1K | 1101 | 0101 | CS33012FB18 |
| 34.8K | 1110 | 0110 | |
| 45.3K | 1111 | 0111 | CS34532FB18 |

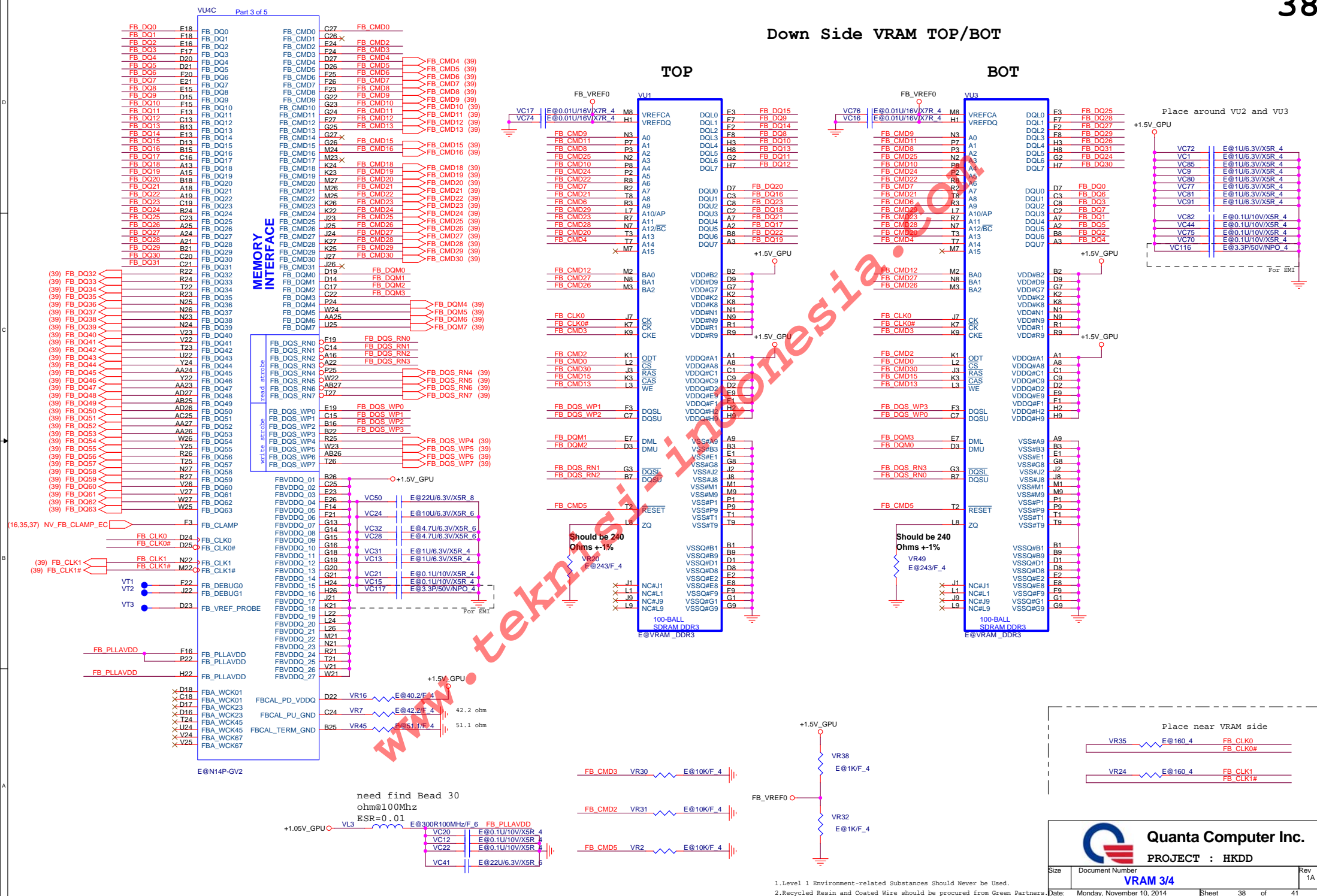
N14 Strap Bit Define

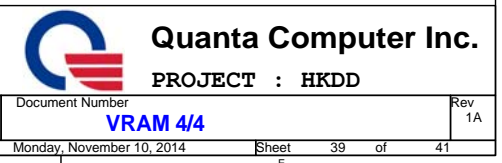
| Straps | Bit 3 | Bit 2 | Bit 1 | Bit 0 |
|----------|--------------------|-----------------------|----------------|--------------------|
| ROM_SCLK | PCI_DEVID[4] | SUB_VENDOR | PCI_DEVID[5] | PEX_PLL_EN_TERM |
| ROM_SI | RAMCFG[3] | RAMCFG[2] | RAMCFG[1] | RAMCFG[0] |
| ROM_SO | FB[1] | FB[0] | SMB_ALT_ADDR | VGA_DEVICE |
| STRAP0 | USER[3] | USER[2] | USER[1] | USER[0] |
| STRAP1 | 3GIO_PADCFG [3] | 3GIO_PADCFG [2] | 3GIO_PADCFG | 3GIO_PADCFG [0] |
| STRAP2 | PCI_DEVID[3] | PCI_DEVID[2] | PCI_DEVID[1] | PCI_DEVID[0] |
| STRAP3 | SOR3_EXPOSED | SOR2_EXPOSED | SOR1_EXPOSED | SOR0_EXPOSED |
| STRAP4 | RESERVED | PCI_SPEED_CHANGE_GEN3 | PCIE_MAX_SPEED | DP_PLL_VDD33 |

| | VRAM Capacity | VRAM Vender | ID | VR1 | Mfr P/N | Quanta P/N |
|---------------------|---------------|-------------|------|-------------------------------|------------------------|--------------|
| N14M-LP N14P-GV2 | 128Mx16 DDR3 | Samsung | 0111 | PD45.3K | K4W2G1646E-BC11 | AKD5MGGT525 |
| | | Hynix | 0110 | PD34.8K | H5TQG2G63DFR-11C (EOL) | AKD5MGWTTW15 |
| | | Hynix | 0100 | PD24.9K | H5TC2G63DFR-11C | AKD5MZDTW04 |
| | | Micron | 0101 | PD30.1K | MT41J128M16JT-107G:K | AKD5MGSTL14 |
| | 256Mx16 DDR3 | Samsung | 0011 | PD20K | K4W4G1646B-HC11 | AKD5MGWT525 |
| | | Hynix | 0010 | PD15K | H5TC4G63AFR-11C | AKD5PGWTTW10 |
| | | Micron | 0001 | VR41 no mount VR1 PD10Kohm | MT41K256M16HA-107G:E | AKD5PGSTL07 |

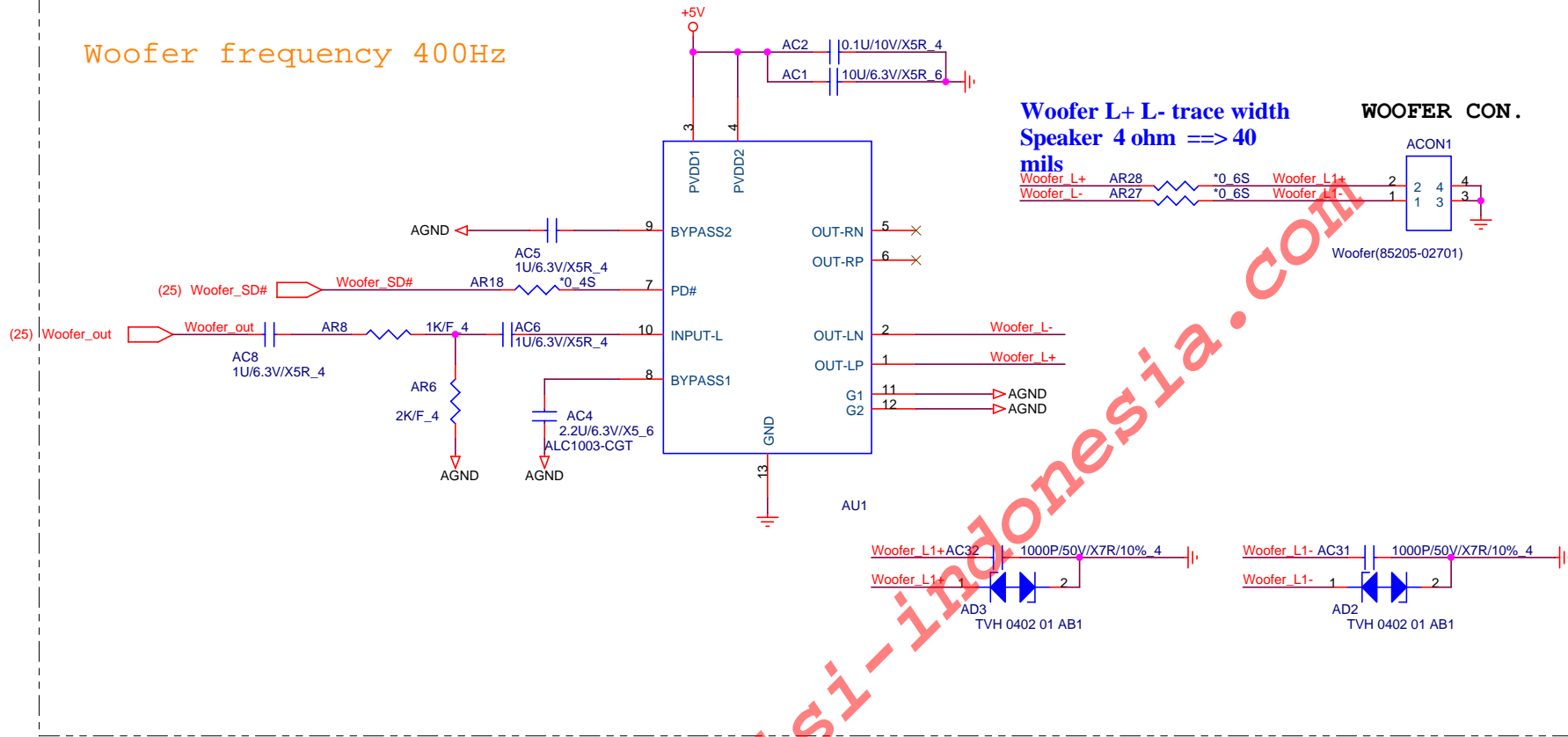


- 1.Level 1 Environment-related Substances Should Never be Used.
- 2.Recycled Resin and Coated Wire should be procured from Green Partners





Woofers frequency 400Hz



1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green
Partners.



Quanta Computer Inc.

PROJECT : HKDD

| | | |
|-------|-----------------------------|----------------|
| Size | Document Number | Rev |
| | Audio Codec Woofer | 1A |
| Date: | Thursday, November 13, 2014 | Sheet 40 of 41 |

| USB PORT Architecture | |
|-----------------------|--------------|
| PORT 0 | USB3.0 |
| PORT 1 | USN3.0 |
| PORT 2 | USN2.0 |
| PORT 3 | USB2.0 |
| PORT 4 | NFC |
| PORT 5 | N/A |
| PORT 6 | N/A |
| PORT 7 | N/A |
| PORT 8 | N/A |
| PORT 9 | WiMax/BT |
| PORT 10 | Camera |
| PORT 11 | Card Reader |
| PORT 12 | Touch Screen |
| PORT 13 | N/A |

| PCIE BUS | |
|----------|-----------------|
| PORT 1 | WLAN Port |
| PORT 2 | CARD READER |
| PORT 3 | GLAN (RTL8111G) |
| PORT 4 | N/A |
| PORT 5 | N/A |
| PORT 6 | N/A |
| PORT 7 | N/A |
| PORT 8 | N/A |

| SATA BUS | |
|----------|-----|
| PORT 0 | HDD |
| PORT 1 | N/A |
| PORT 2 | N/A |
| PORT 3 | N/A |
| PORT 4 | ODD |
| PORT 5 | N/A |

| SM BUS | MBCLK/MBDATA | WRITE | READ | Function |
|---------------|--------------|-----------|-----------|----------|
| ISL88731CHRTZ | 0001 001X | 0001 0010 | 0001 0011 | Charger |
| Nvidia | 1001 1110 | - | 1001 1110 | Graphice |
| LIS331DL | 0011 101X | 0011 1010 | 0011 1011 | G Sensor |

| SM BUS | MBCLK_BAT/MBDATA_BAT | WRITE | READ | Function |
|------------|----------------------|-----------|-----------|----------|
| VGP-BPS35A | 0001 011X | 0001 0110 | 0001 0111 | Battery |

| SM BUS | SMB_PCH_CLK/SMB_PCH_DAT | WRITE | READ | Function |
|---------------|-------------------------|-----------|-----------|-----------|
| DIMM Module0 | 1010 000X | 1010 0000 | 1010 0001 | DDRIII |
| DIMM Module 1 | 1010 010X | 1010 0100 | 1010 0101 | DDRIII |
| Synaptics | 0010 110X | 0010 1100 | 0010 1101 | Click PAD |

Not support "DC only"

| OS status | S0 | S3 | DS3 | (Soft OFF) | (Soft OFF) | (Soft OFF) | (Soft OFF) | (Soft OFF) |
|-------------------|----|----|-----|--|--|---------------------|-------------------------------------|------------------|
| H/W status | S0 | S3 | DS3 | S4 (Win8 off) RTC wake Enable WOLAN Enable | S4 (Win8 off) RTC wake Disable WOLAN Disable | S5 Charge Enable | S5 Charge Disable WoL Disable | S5 WoL Enable |
| RUN_ON | H | L | L | L | L | L | L | L |
| +3V | H | L | L | L | L | L | L | L |
| +5V | H | L | L | L | L | L | L | L |
| +0.675V_DDR_VTT | H | L | L | L | L | L | L | L |
| +1.05V | H | L | L | L | L | L | L | L |
| +0.85V | H | L | L | L | L | L | L | L |
| +1.5V | H | L | L | L | L | L | L | L |
| +3V_GPU | H | L | L | L | L | L | L | L |
| +1.05V_GPU | H | L | L | L | L | L | L | L |
| +VGPU_CORE | H | L | L | L | L | L | L | L |
| +VCC_CORE | H | L | L | L | L | L | L | L |
| SUS_ON | H | H | H | L | L | L | L | L |
| +1.35V_SUS | H | H | H | L | L | L | L | L |
| S5_ON | H | H | L | H | L | L | L | H |
| +5V_S5 | H | H | L | H | L | L | L | H |
| +3V_S5 | H | H | L | H | L | L | L | H |
| EC_WAKE_ON | H | H | H | H | L | H | L | H |
| +3V_WAKE | H | H | H | H | L | H | L | H |
| +5V_WAKE | H | H | H | H | L | H | L | H |
| DEEP_EC_EN | H | H | H | H | L | L | L | H |
| +3V_S5_DSW | H | H | H | H | L | L | L | H |
| +3V_SUS | H | H | L | L | L | L | L | L |