

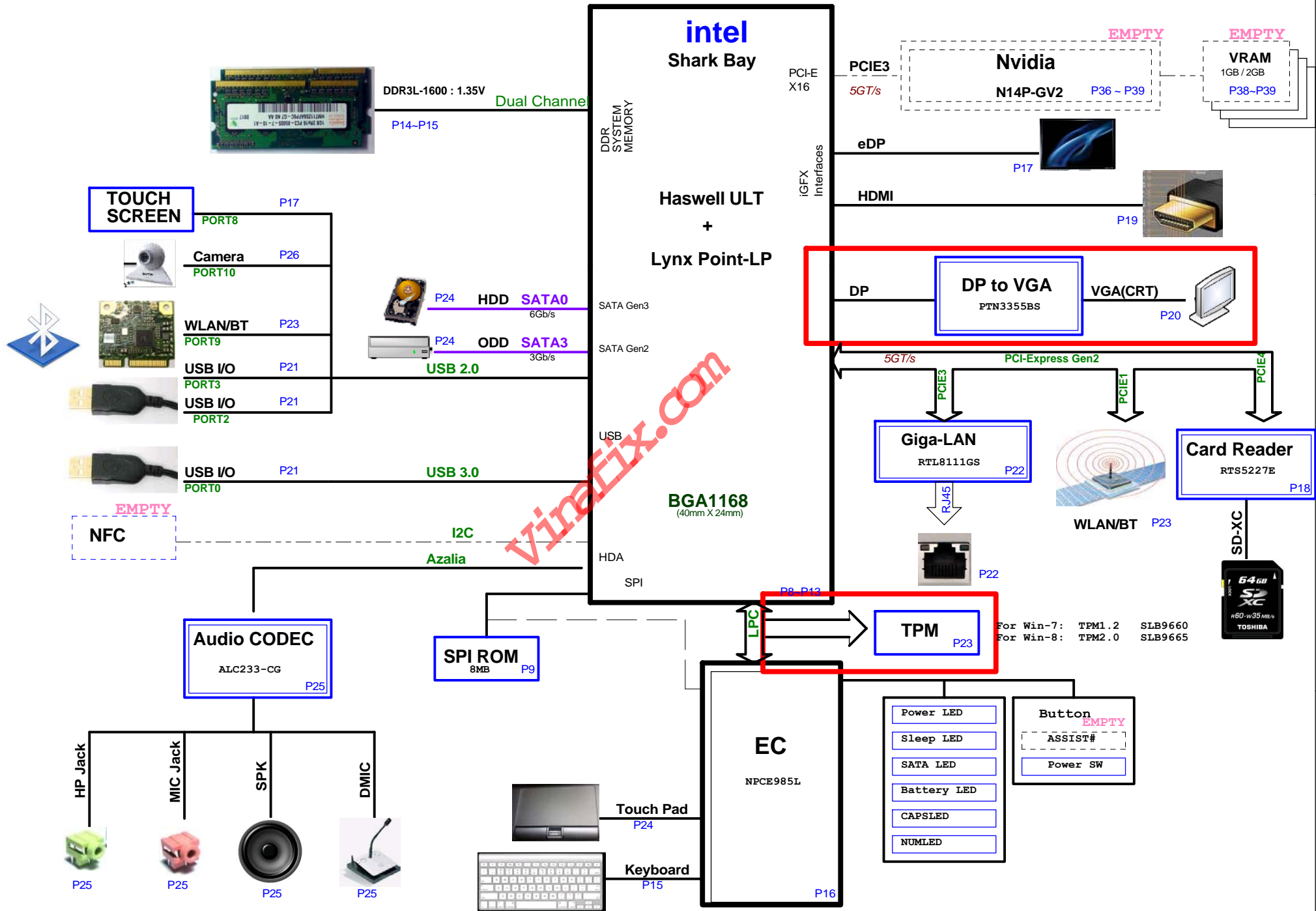
| Page | Title of schematic page | Rev. | Date |
|------|------------------------------|------|------|
| 01 | Page List | 1A | |
| 02 | Block Diagram | 1A | |
| 03 | Change List | 1A | |
| 04 | HSW MCP (DISPLAY/Sideband) | 1A | |
| 05 | HSW MCP (MEMORY/GND) | 1A | |
| 06 | HSW MCP (CFG/PwrMGT) | 1A | |
| 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 | |
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| 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

Vinafix.com

HKDD Haswell ULT BLOCK DIAGRAM



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.

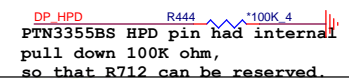
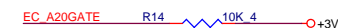
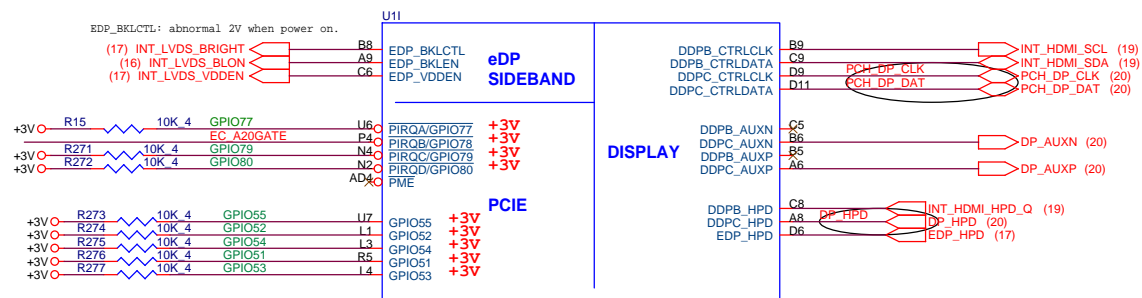
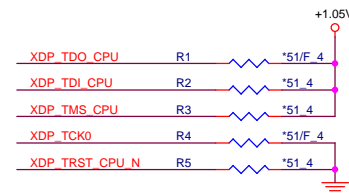
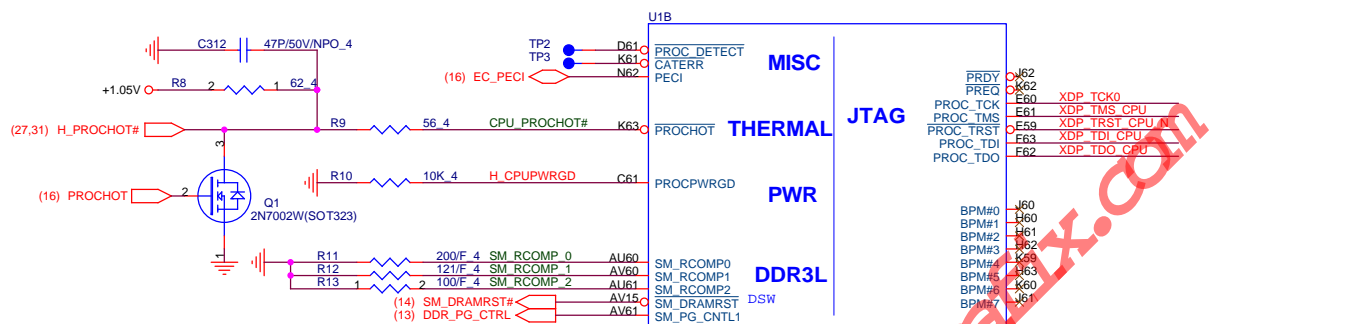
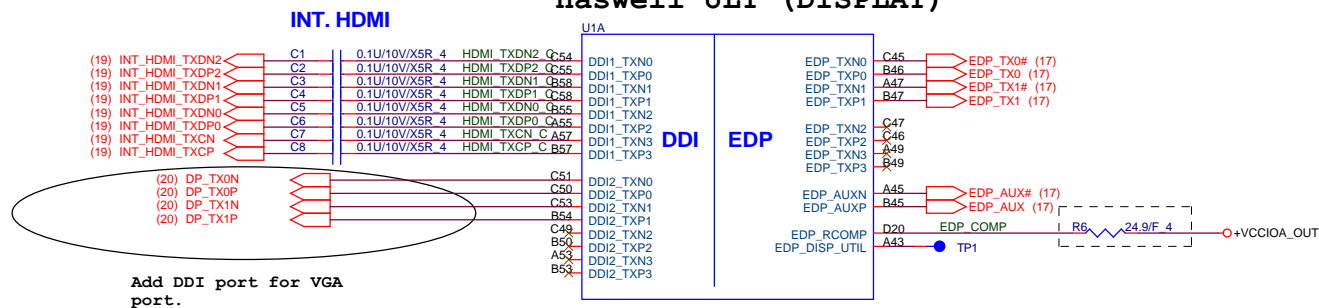
MB_SCH_FVT_02
P23- Add F8 for TPM D/B
Reason : Base on EVT overload result.
Possible Risk: No.

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.

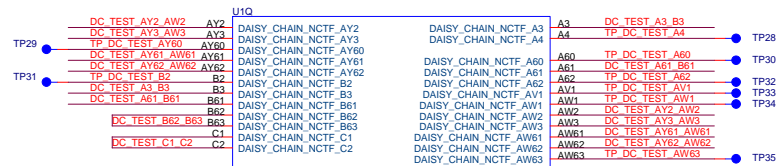
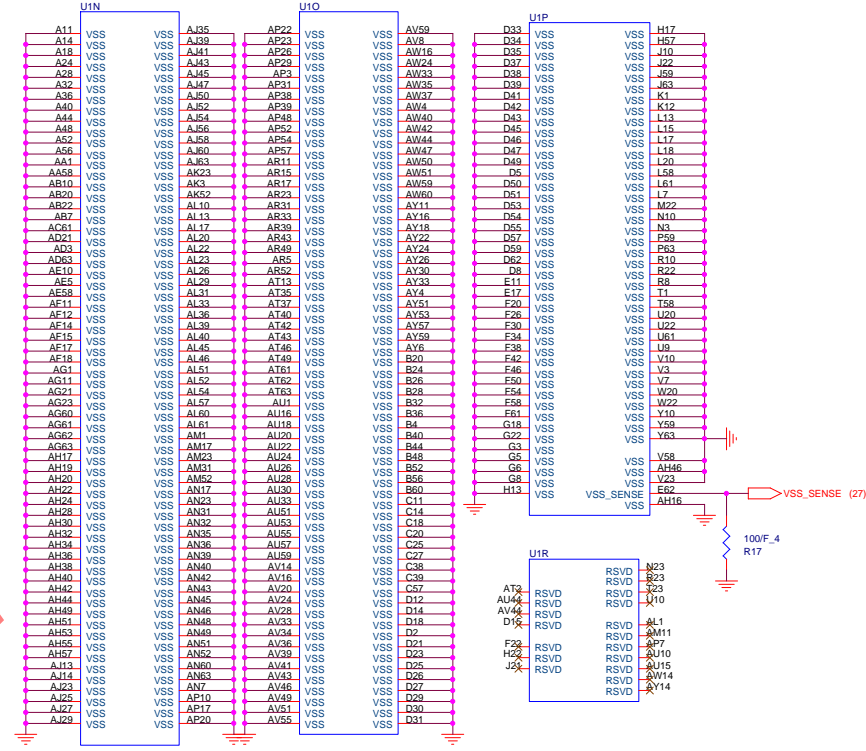
Vinafix.com



Add DDI port for VGA port.

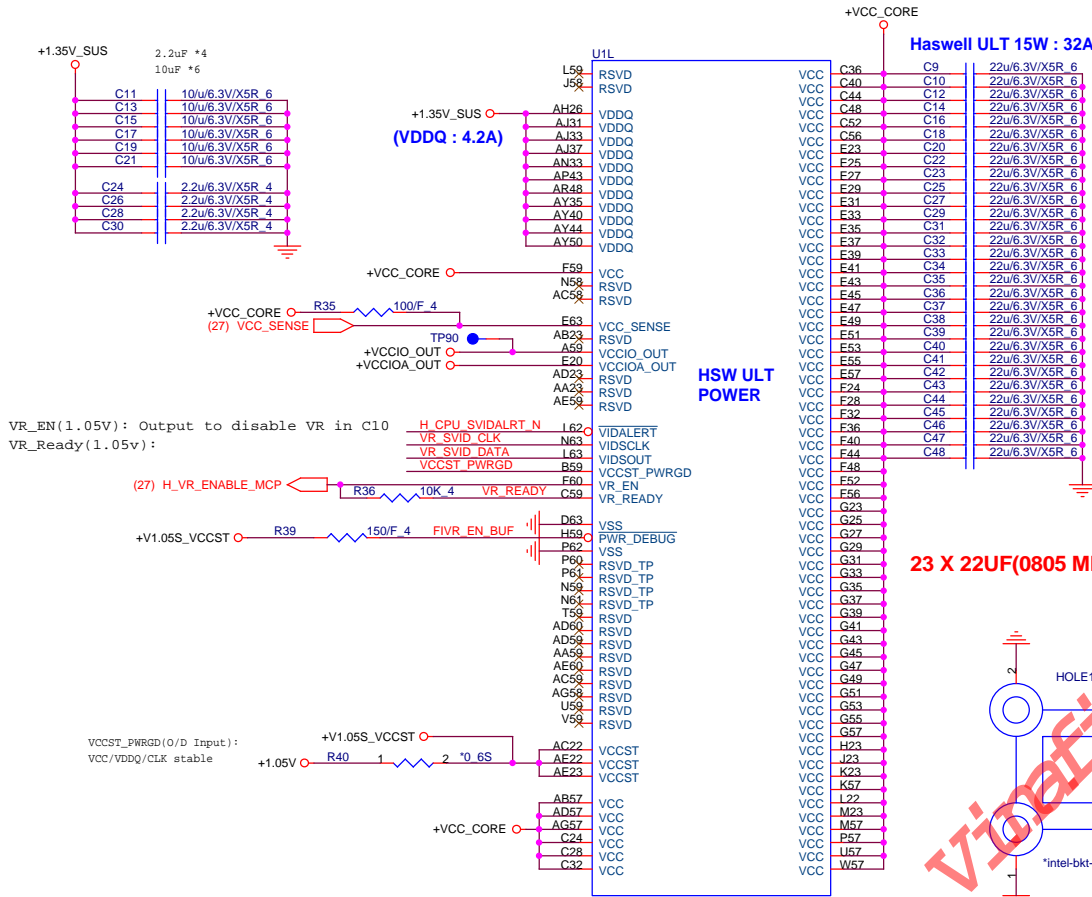
 **Quanta Computer Inc.**
PROJECT : HKDD

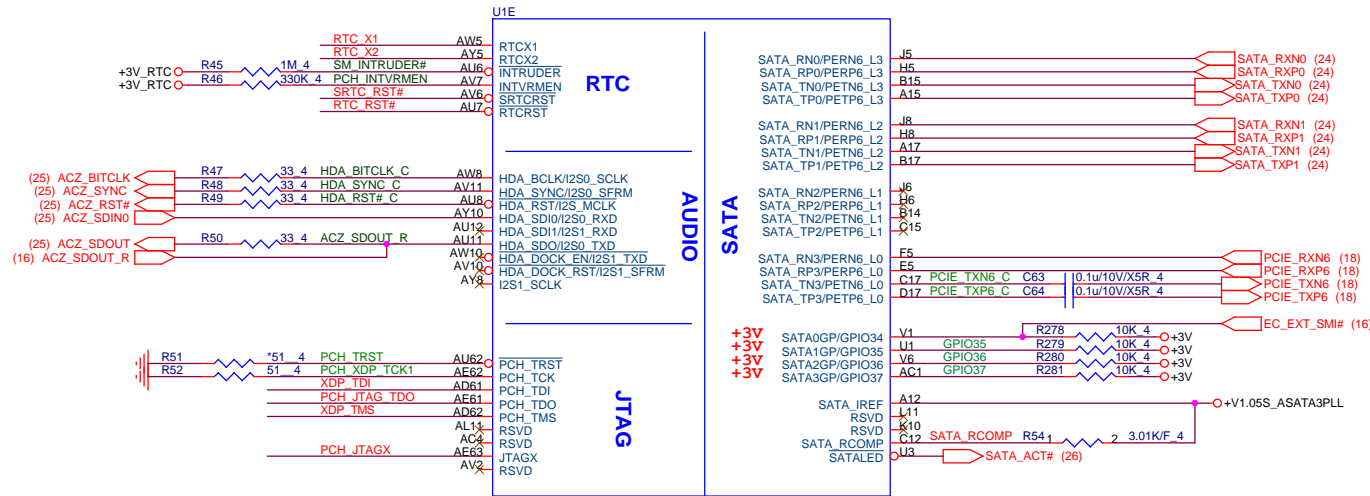
| | | |
|-------|-----------------------------|---------------|
| Size | Document Number | Rev |
| | HSW MCP(Display/eDP) | 1A |
| Date: | Monday, November 10, 2014 | Sheet 4 of 41 |



| | 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 | |

Haswell ULT MCP (POWER)

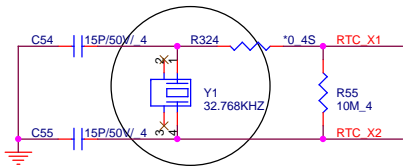




HDD

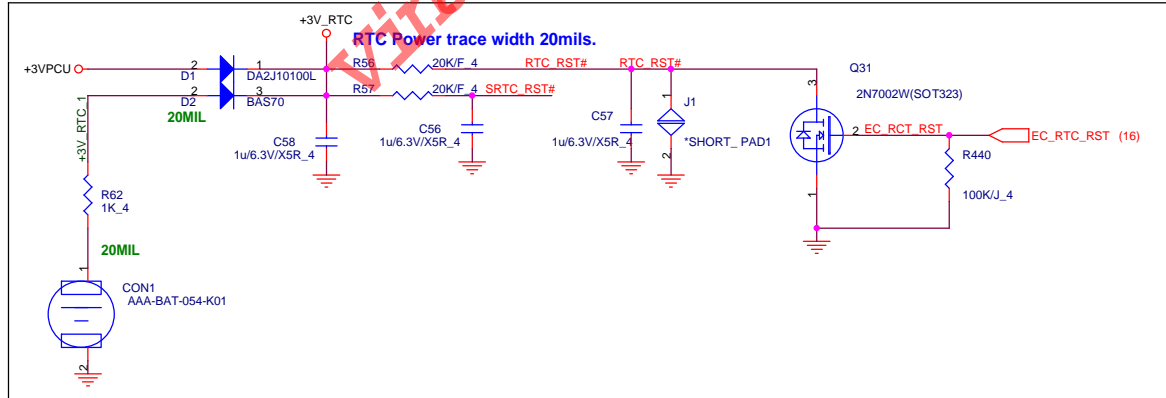
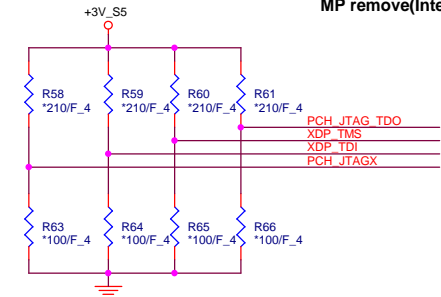
ODD

Card Reader



PCH JTAG Debug (CLG)

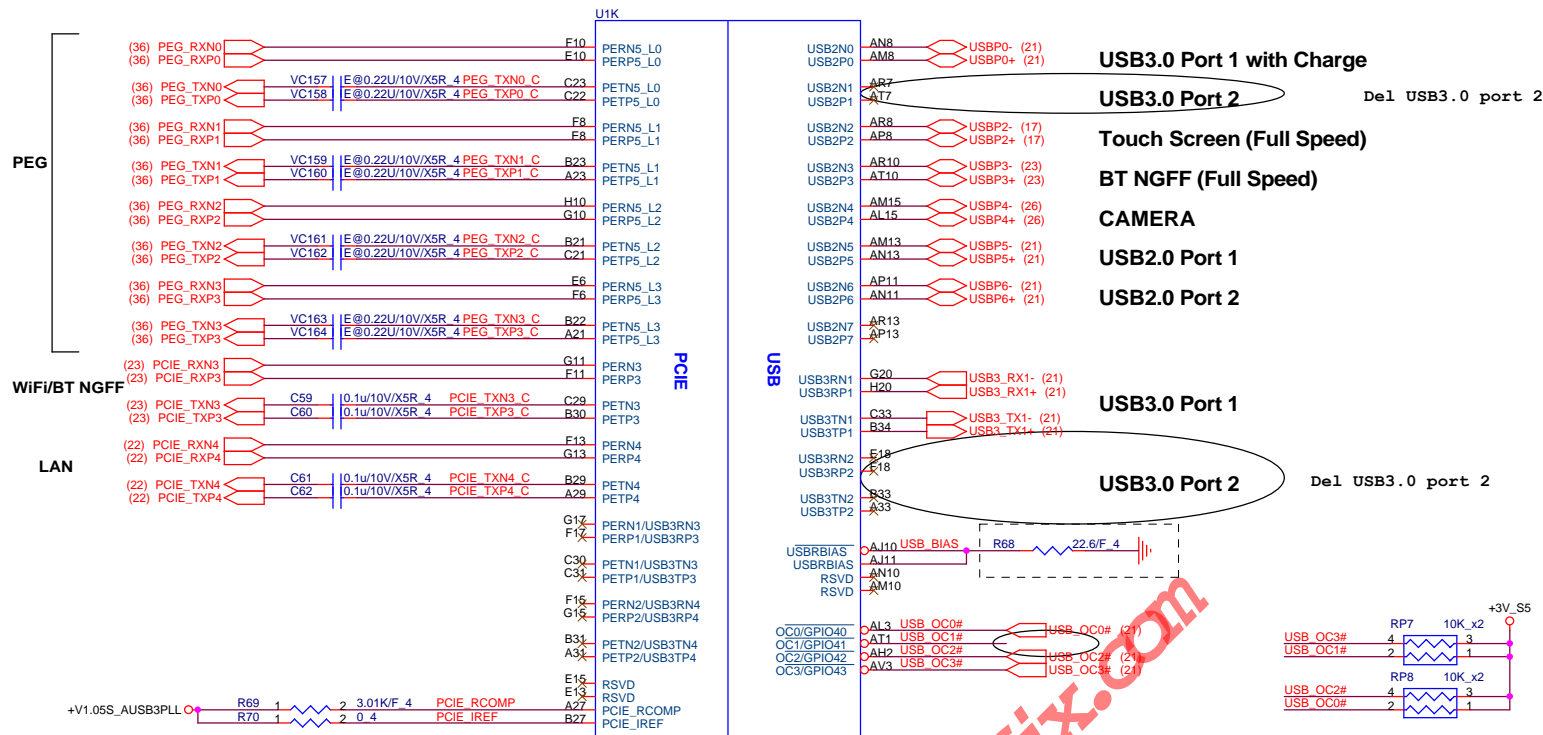
MP remove(Intel)



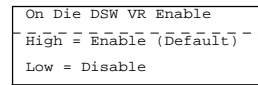
PCH Strap Table

| 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_4 — 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 | |

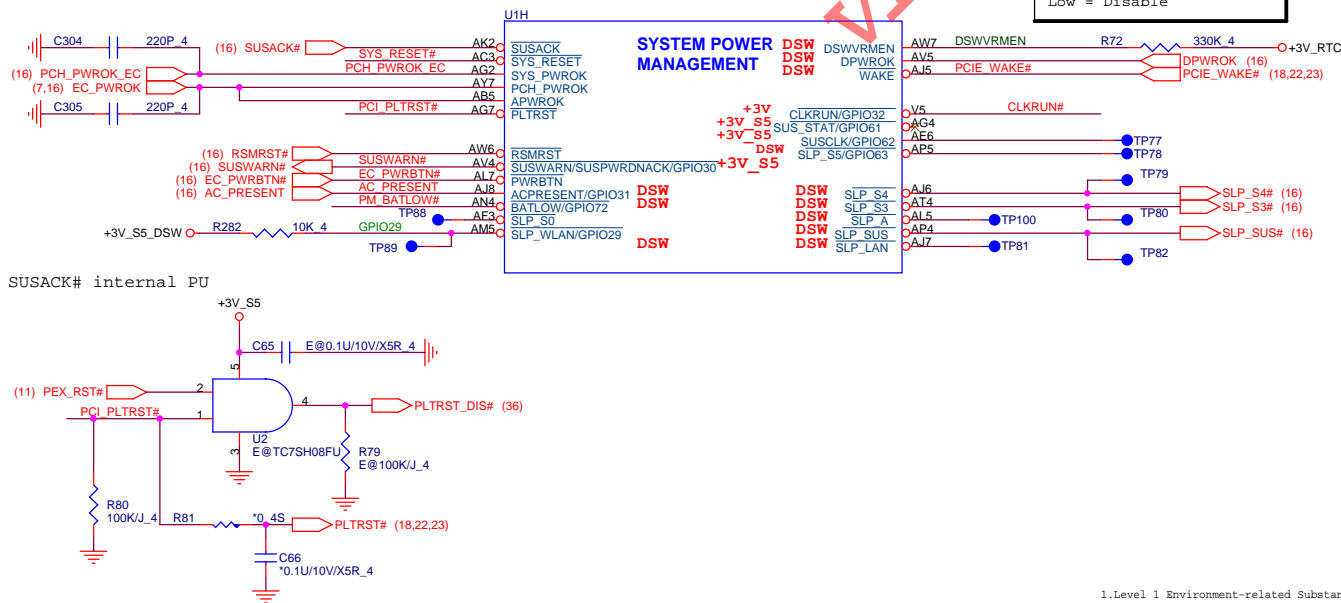
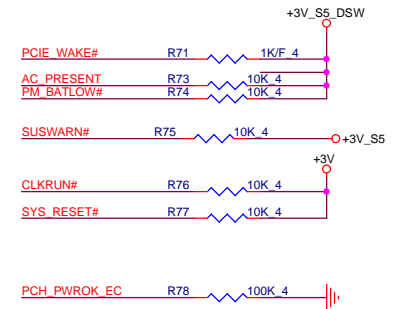
Haswell ULT (PCIe,USB)



Haswell ULT (SYSTEM POWER MANAGEMENT)



PCH Pull-high/low(CLG)



Haswell ULT (CLK)

WIFI/BT(NGFF)

LAN

GFX

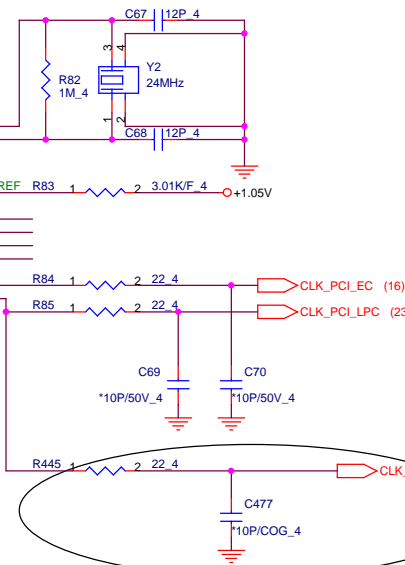
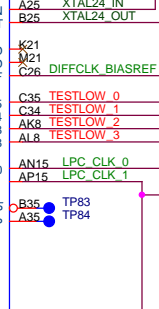
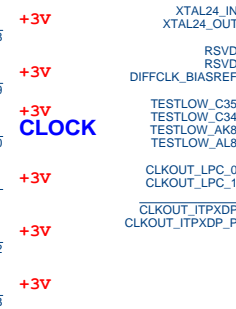
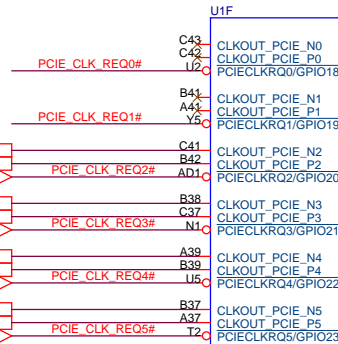
Card Reader

(23) CLK_PCIE_WIFIN
(23) CLK_PCIE_WIFIP
(23) PCIE_CLK_REQ2#

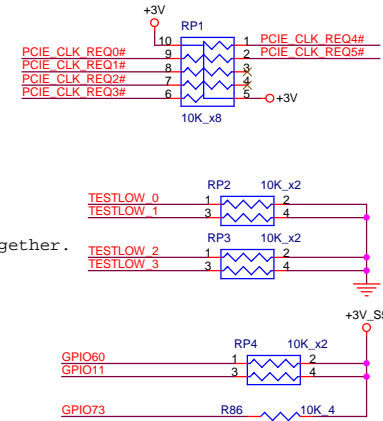
(22) CLK_PCIE_LANN
(22) CLK_PCIE_LANP
(22) PCIE_CLK_REQ3#

(36) CLK_PCIE_VGAP
(36) CLK_PCIE_VGAP
(36) PCIE_CLK_REQ4#

(18) CLK_PCIE_CRDN
(18) CLK_PCIE_CRDP
(18) PCIE_CLK_REQ5#

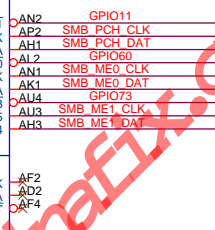
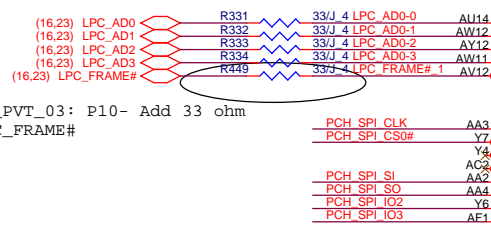


Do not short the testlow pins together.

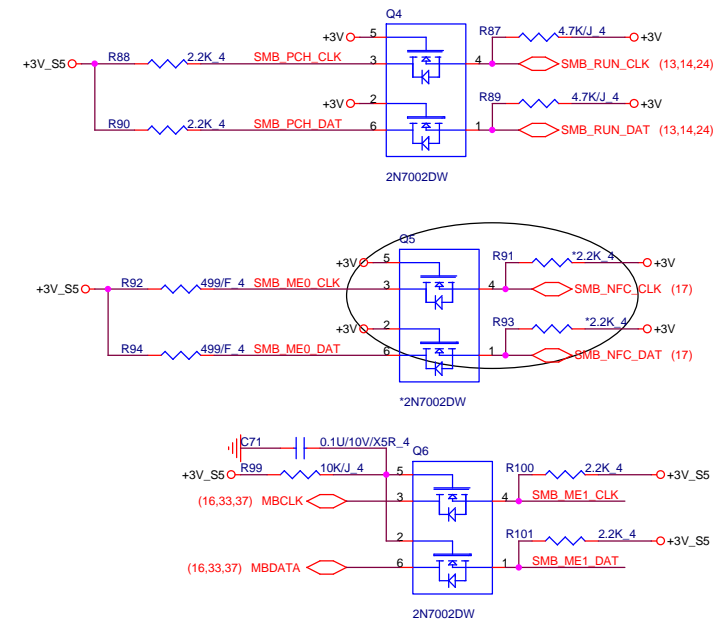


Haswell ULT (LPC/SPI/SMB/CLINK)

MB_SCH_PVT_03: P10- Add 33 ohm for LPC_FRAME#

SPD
NFC
EC

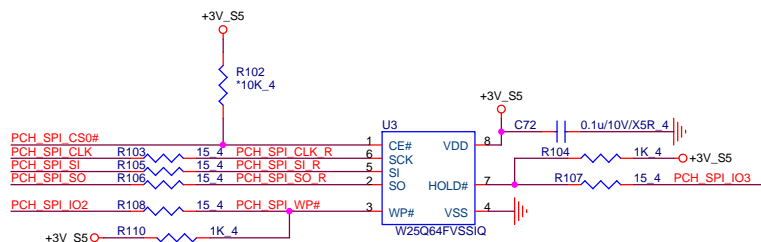
SMBus/Pull-up(CLG)



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

For NPCE985L Using

SPI FLASH



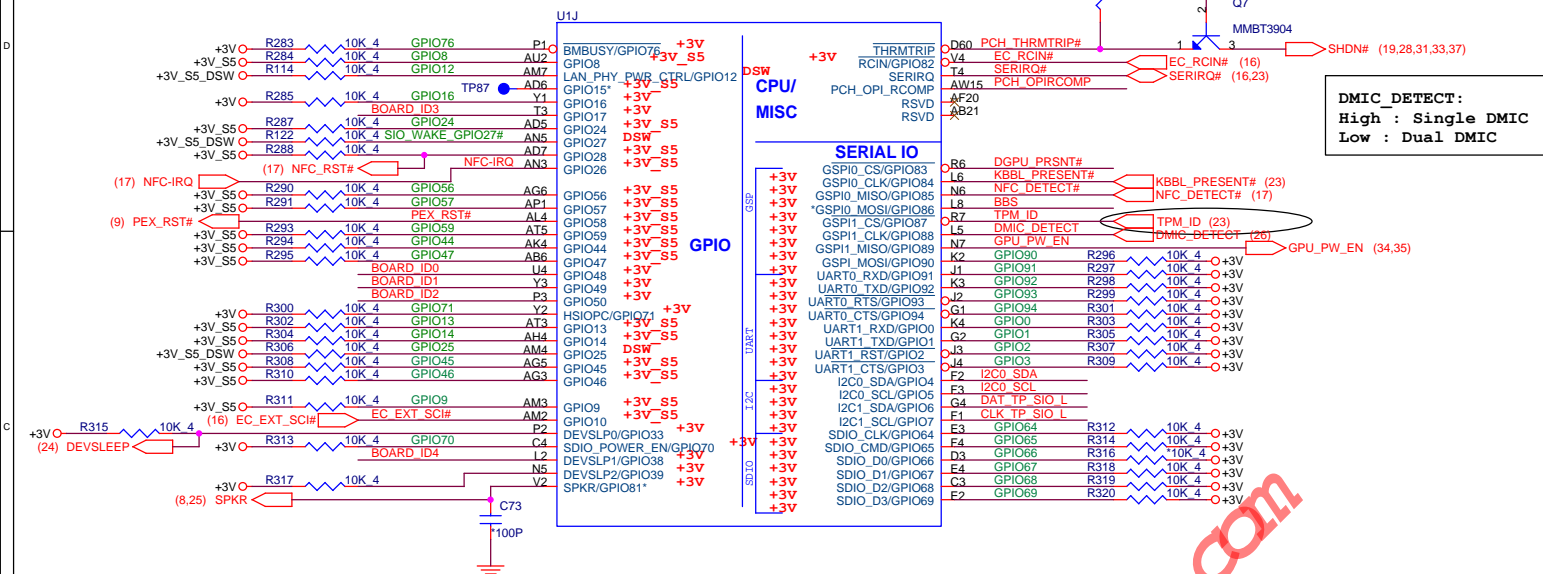
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PROJECT : HKDD

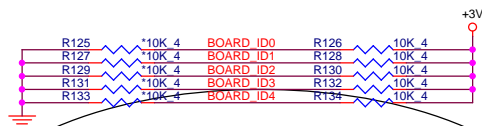
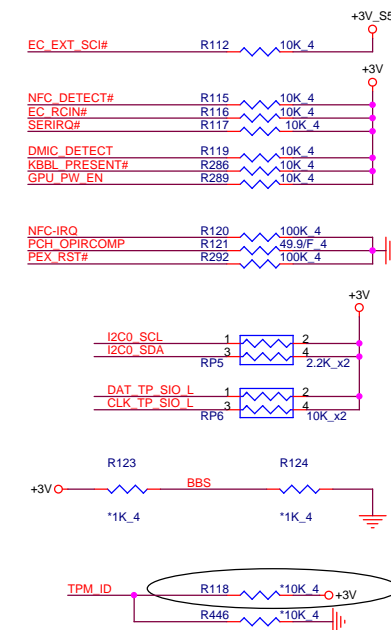
Hasswell ULT (GPIO, LPIO, MISC)

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)



MB_SCH_PVT_04: P11- Add BOARD ID table

| | BOARD_ID0 | BOARD_ID1 |
|-------------|-----------|-----------|
| CaspiV1 HSW | 1 | 1 |
| CaspiV1 BDW | 0 | 0 |


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

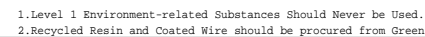
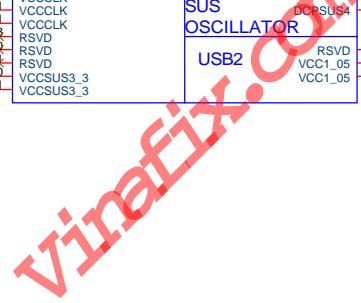
| | |
|-----------------------|---|
| GPIO66 Top-Block Swap | |
| PU | Enable |
| PD | Disable(Default) internal weak pull-dpwn |

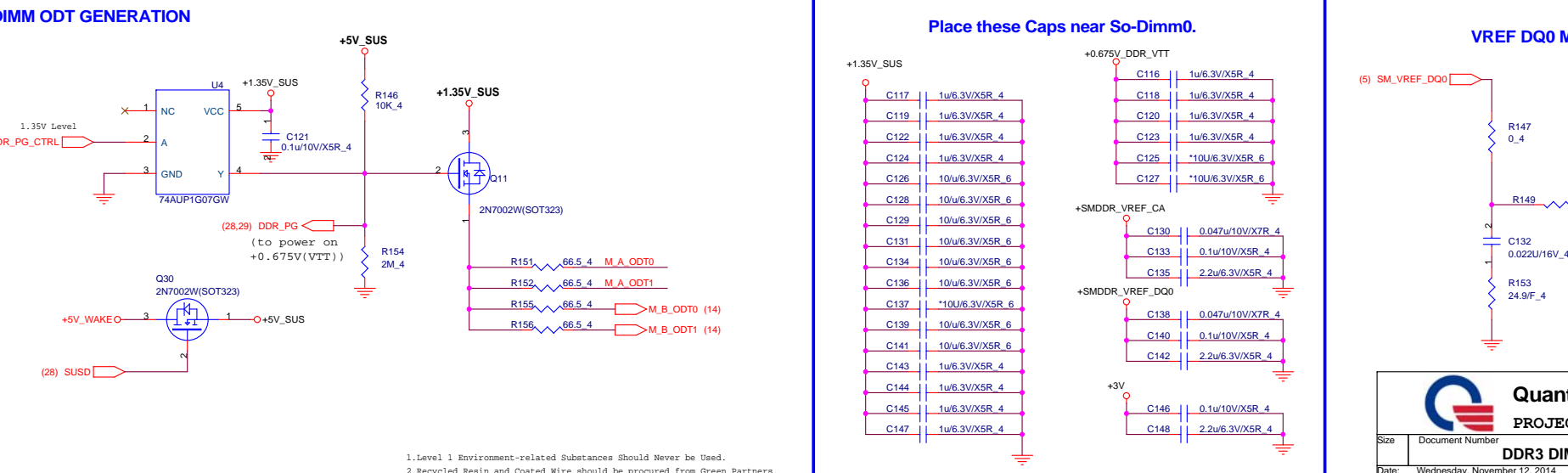
| | |
|--------|-------------------|
| GPIO86 | |
| PU | LPC |
| PD | SPI (Default IPD) |

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

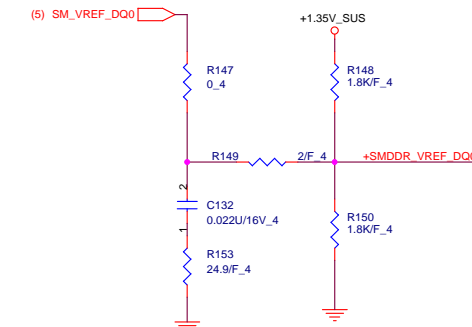
| | |
|-----------------------------------|---------|
| TLS CONFIDENTIALITY STRAP(GPIO15) | |
| NC | Default |
| PU | EN |


| | | |
|--|---------------------------|----------------|
|  Quanta Computer Inc. PROJECT : HKDD | | Rev 1/ |
| Size | Document Number | |
| HSW PCH(GPIO/MISC) | | |
| Date: | Monday, November 10, 2014 | Sheet 11 of 41 |

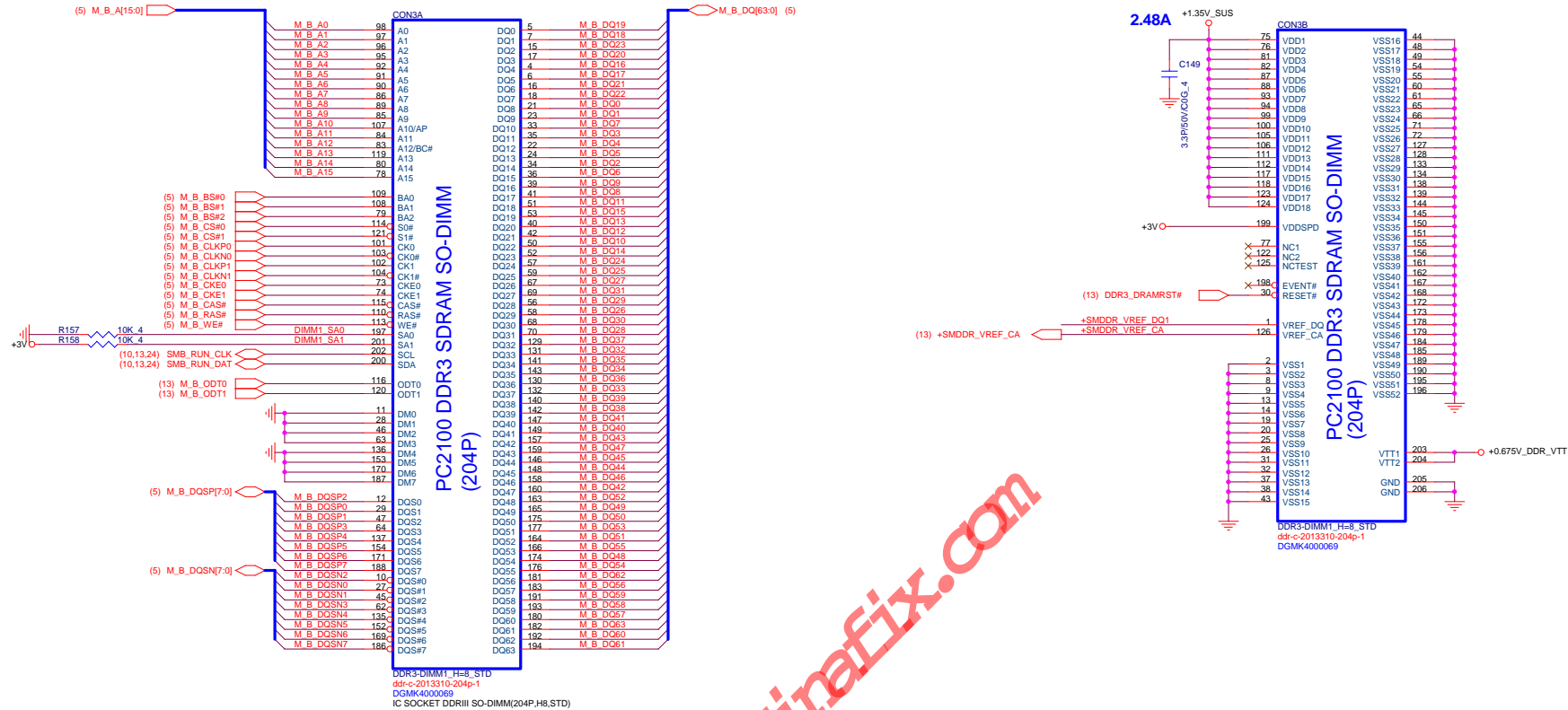




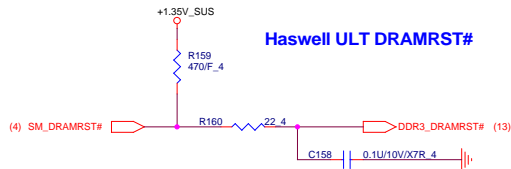
VREF DQ0 M1/M3 Solution



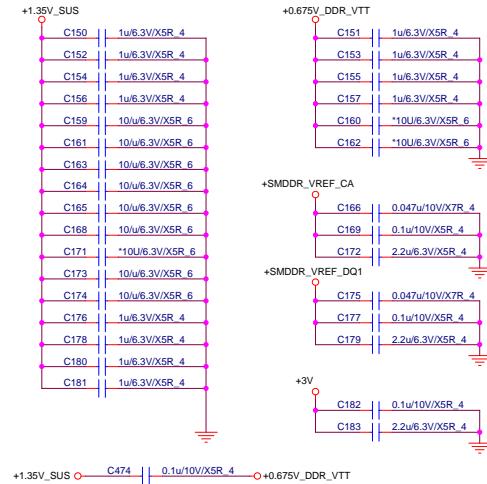
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|---|------------------------------|----------------|
|  <div> Quanta Computer Inc. PROJECT : HKDD </div> | | Rev 1A |
| Size | Document Number | |
| DDR3 DIMMO | | |
| Date: | Wednesday, November 12, 2014 | Sheet 13 of 41 |



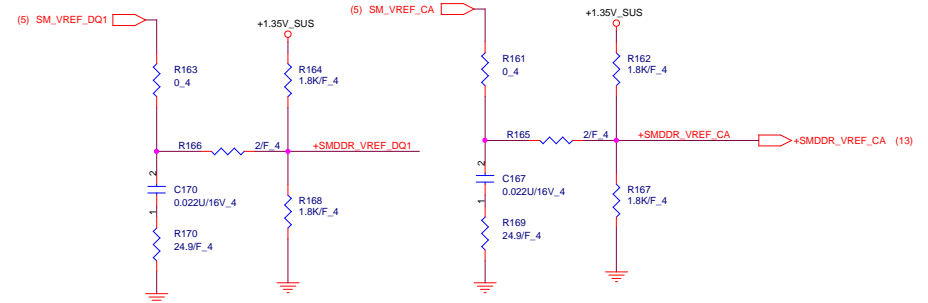
Haswell ULT DRAMRST#



Place these Caps near So-Dimm1

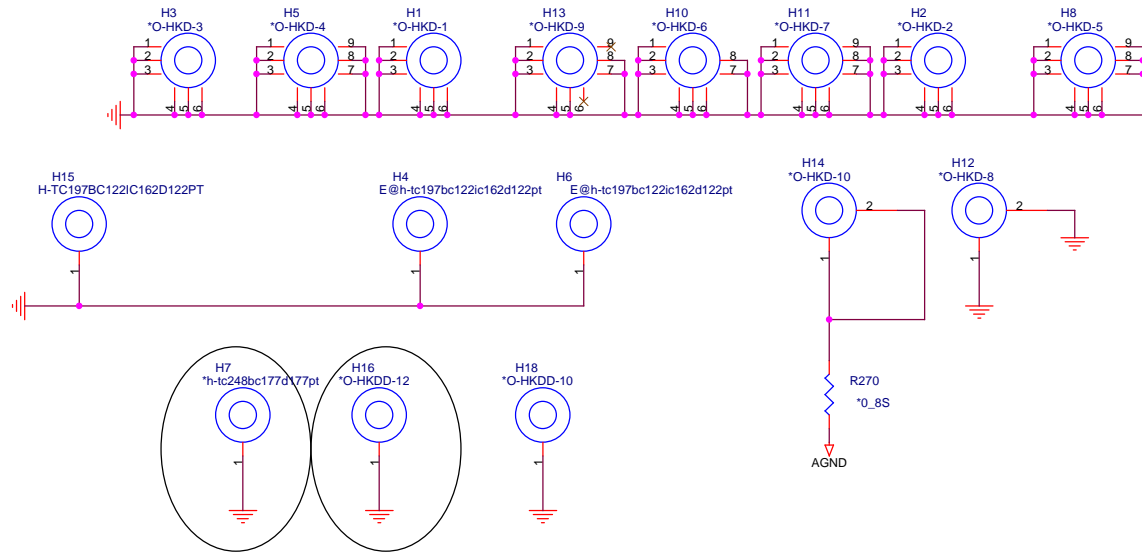


VREF DQ1 Solution

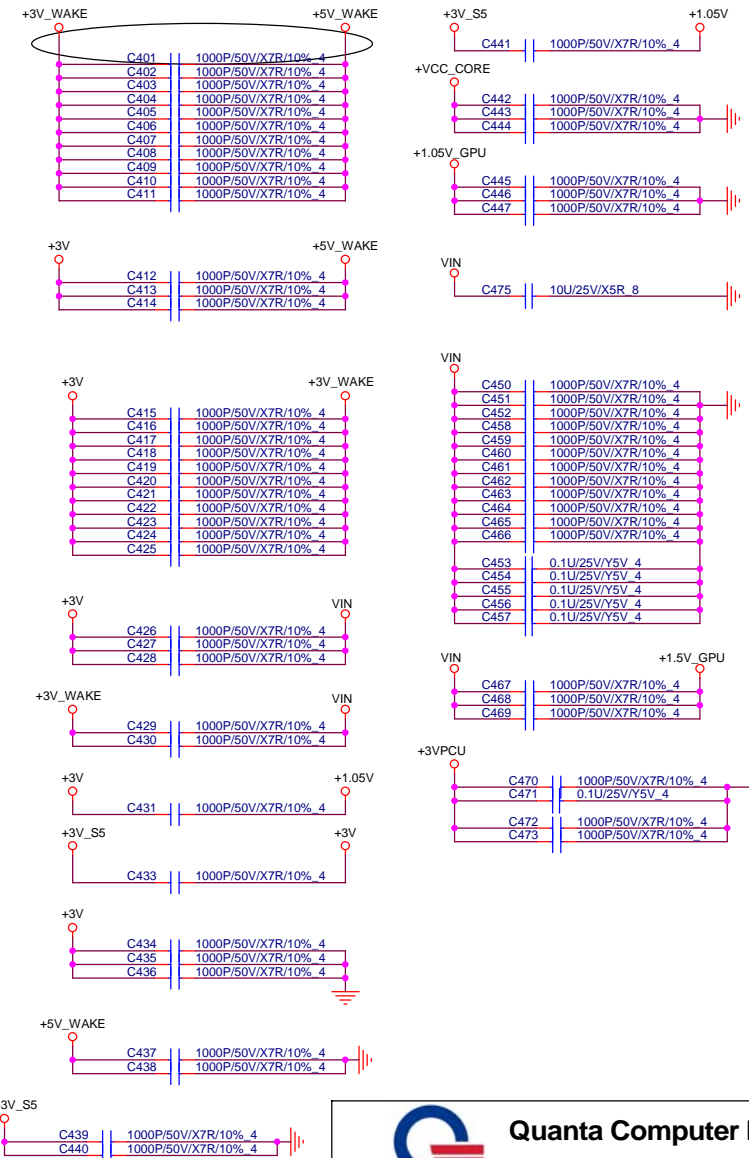
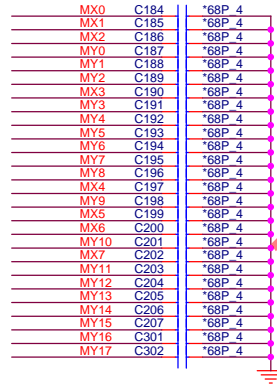
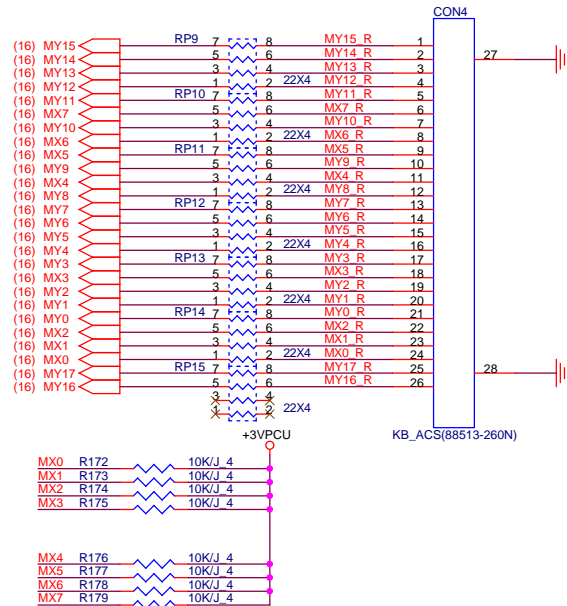


1.Level 1 Environment-related Substances Should Never be Used.

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



KEY BOARD Connector

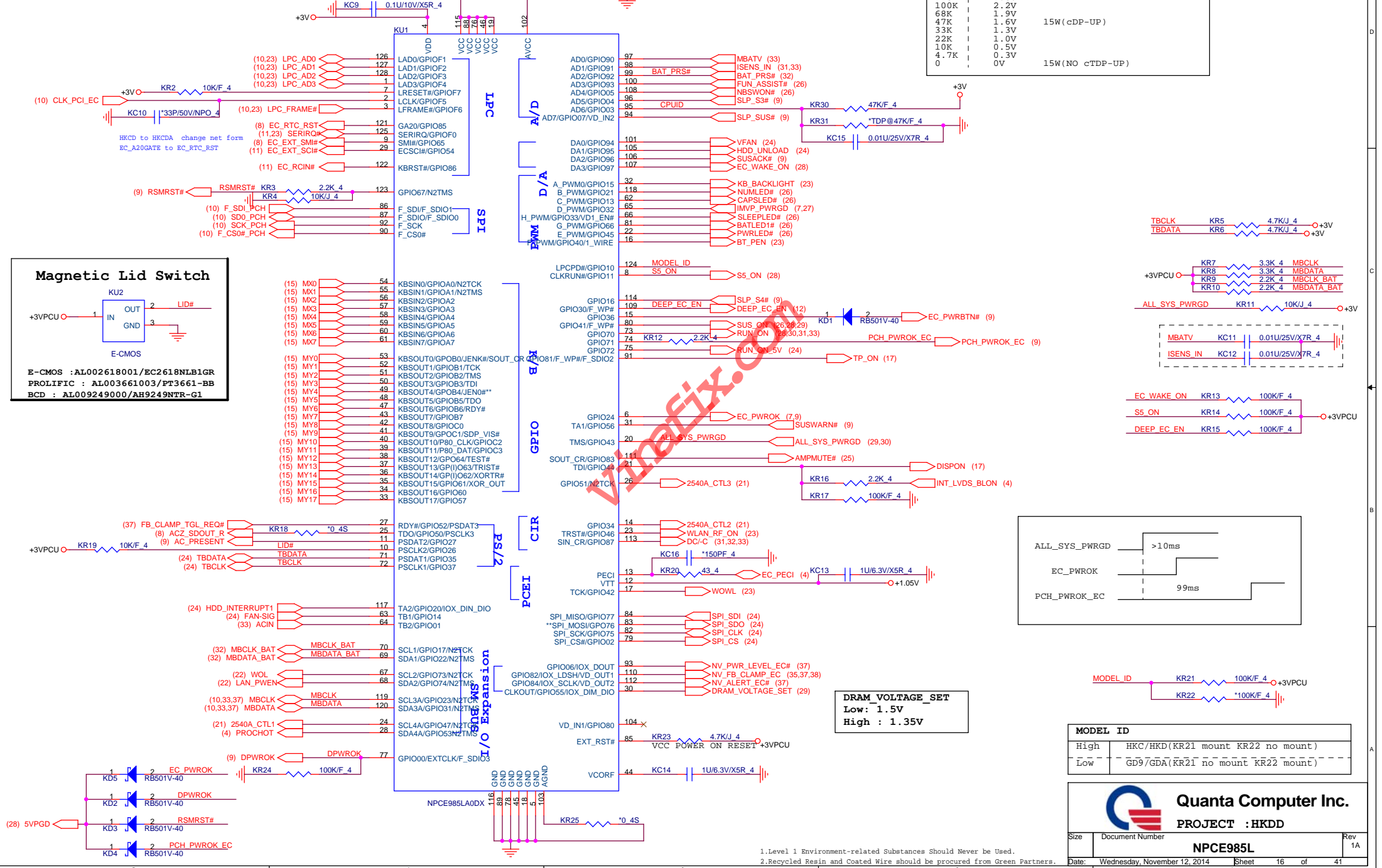


1. Level 1 Environment-related Substances Should Never be Used.
2. Recycled Resin and Coated Wire should be procured from Green Partners.

| | | | | | |
|--|------------------------------|-------|-----------------|-----|----|
| Quanta Computer Inc. PROJECT : HKDD | | Size | Document Number | Rev | |
| | | | | 1A | |
| Date: | Wednesday, November 12, 2014 | Sheet | 15 | of | 41 |

New ADD
**** 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



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

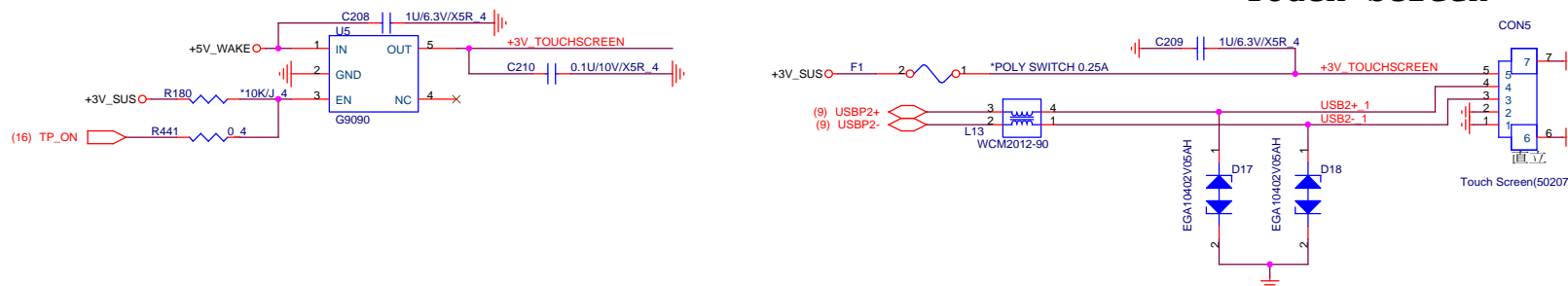
Quanta Computer Inc.
PROJECT : HKDD

Size: Document Number: **NPCE985L** Rev: 1A

Date: Wednesday, November 12, 2014 Sheet: 16 of 41

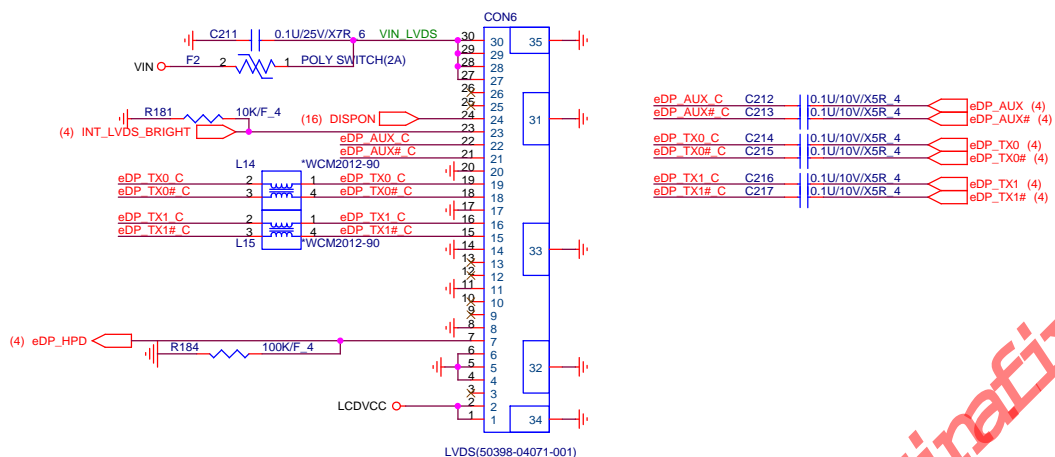
1. Level 1 Environment-related Substances Should Never be Used.
 2. Recycled Resin and Coated Wire should be procured from Green Partners.

Touch Screen

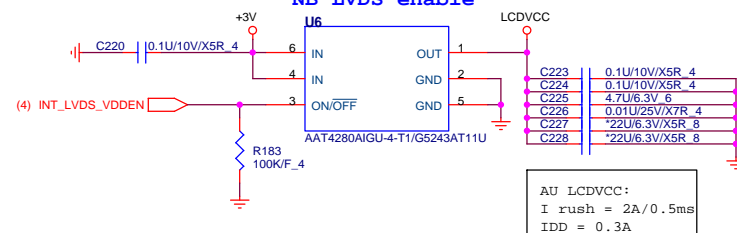


FAST, UL/CSA

eDP

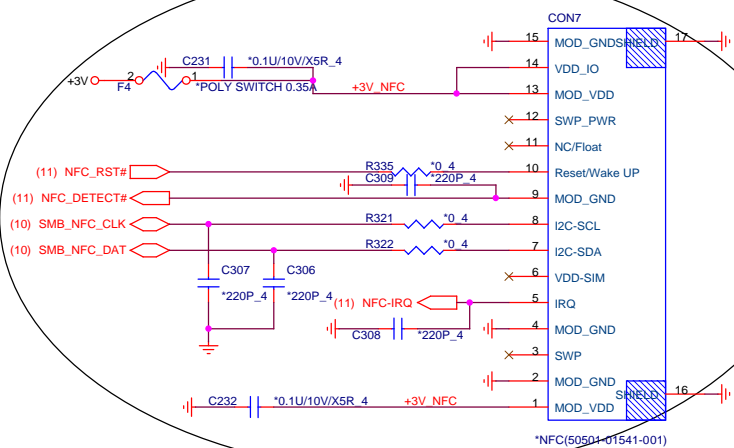


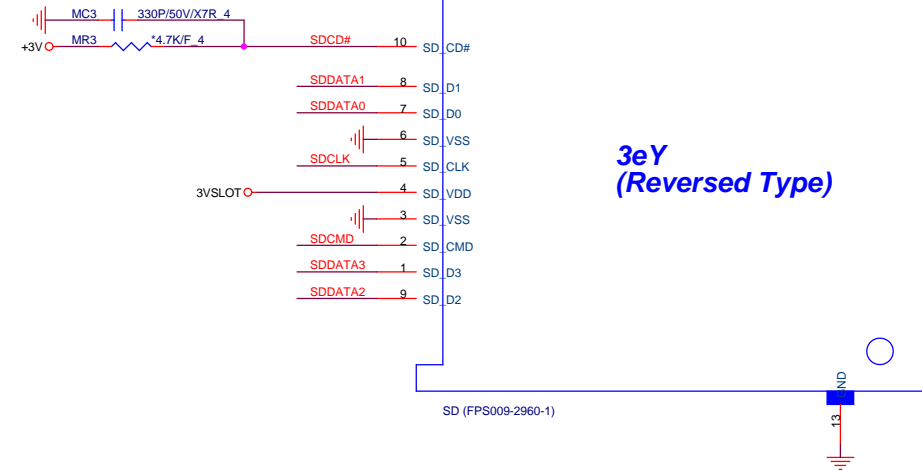
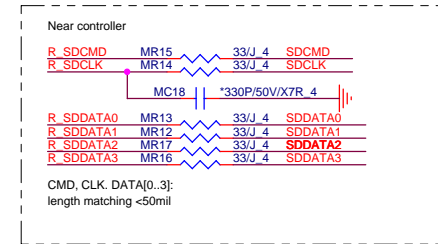
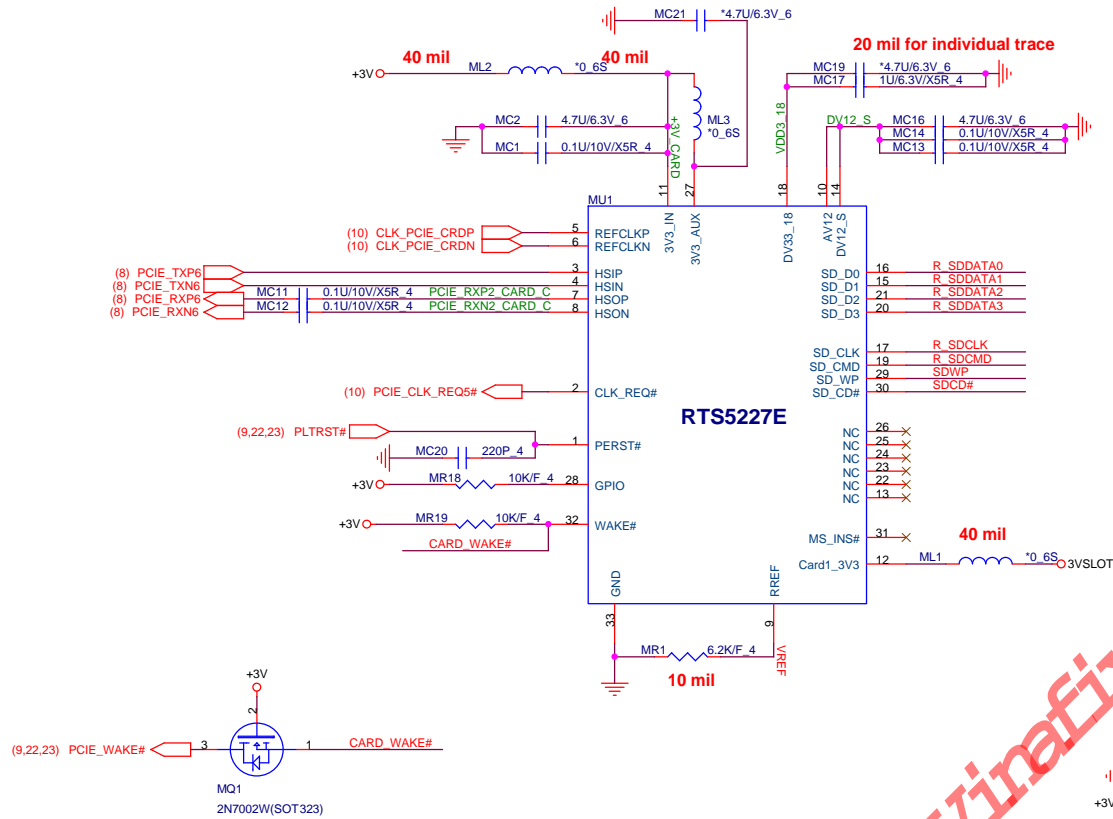
NB LVDS enable

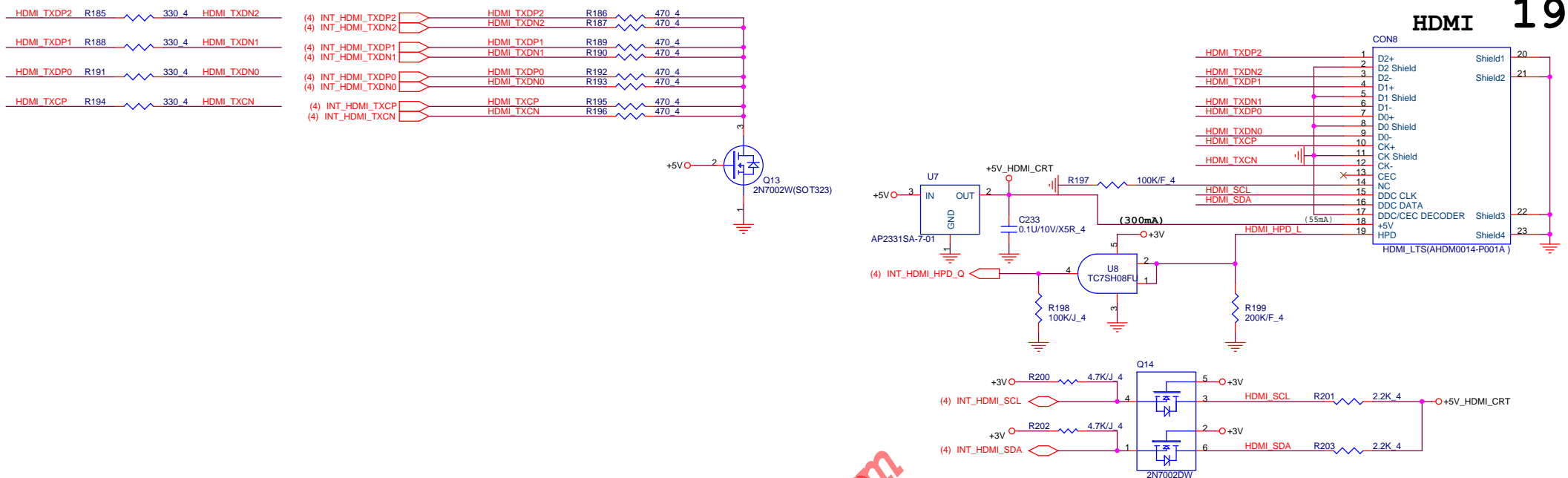


AU LCDVCC:
I_{rush} = 2A/0.5ms
IDD = 0.3A

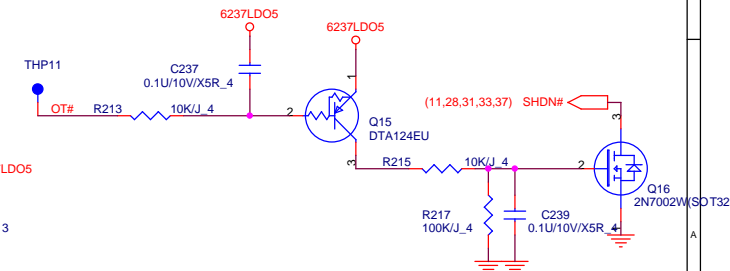
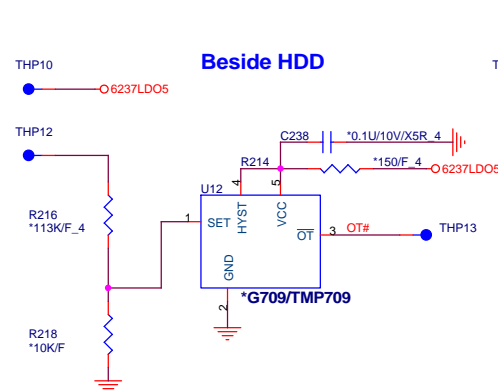
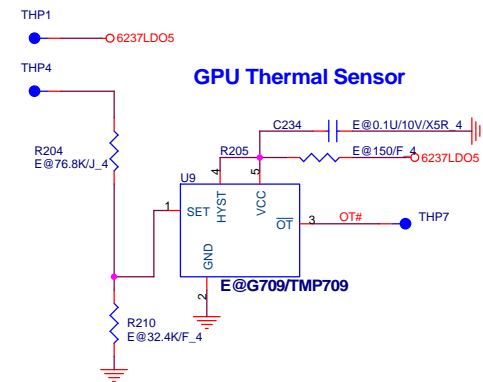
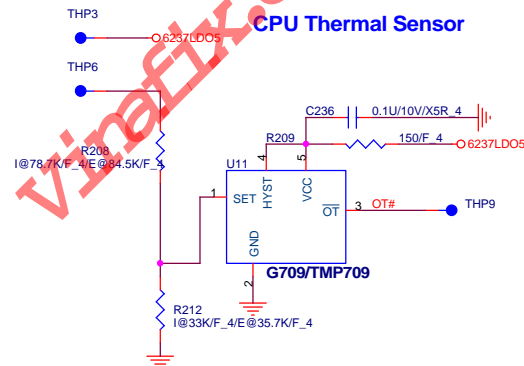
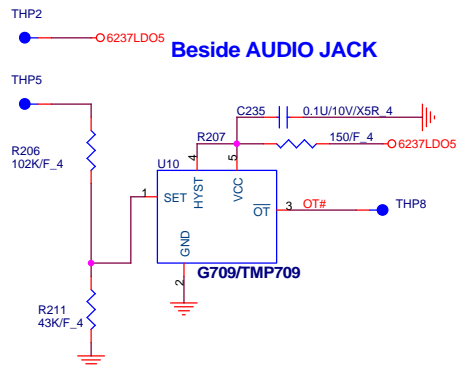
NFC







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 |

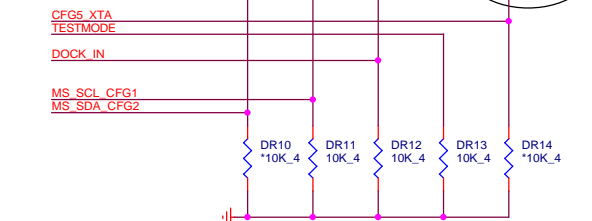
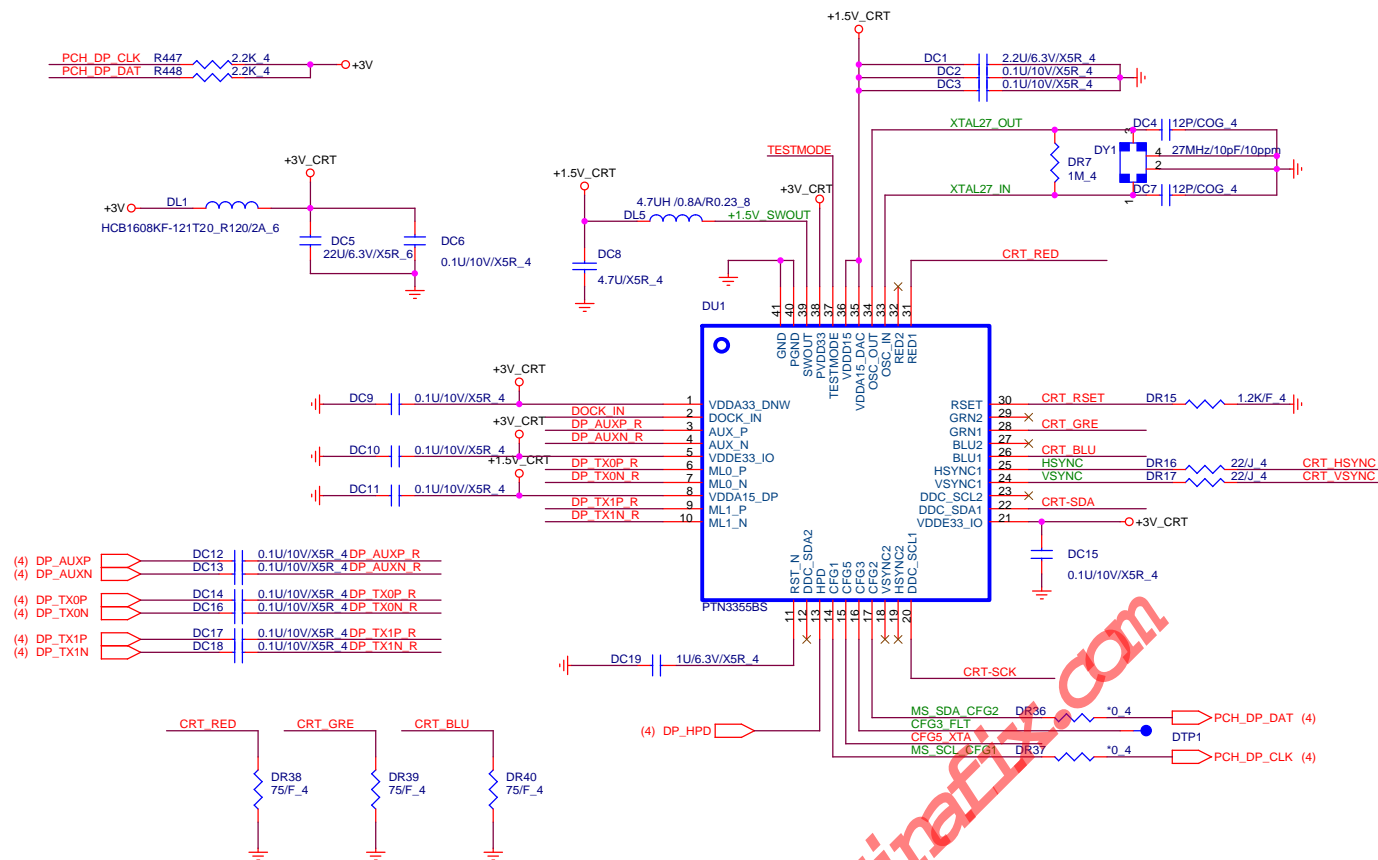


Quanta Computer Inc.

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.
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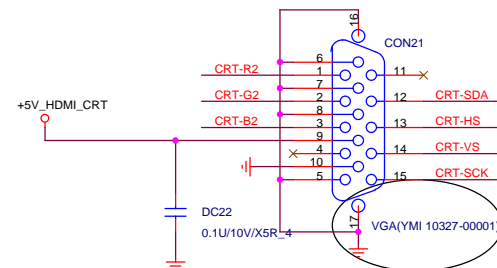
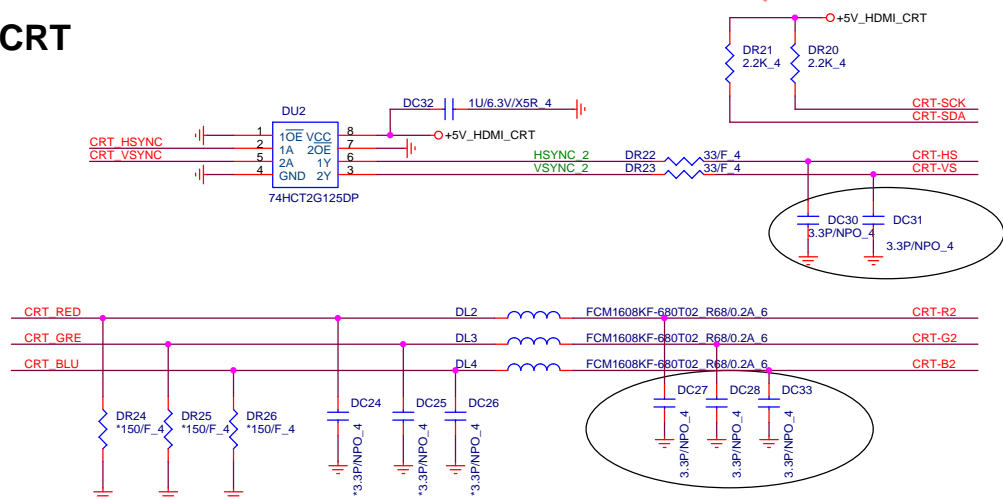


| | |
|-------------|---|
| CFG5_XTA | XTAL is used, High=33MHZ, Low=25MHZ, NC=27MHZ |
| TESTMODE | I2C address, Stuff=C0H, NC=40H |
| DOCK_IN | High=Channel 2, Low=Channel 1 |
| MS_SCL_CFG1 | General purpose configuration pin |
| MS_SDA_CFG2 | General purpose configuration pin |
| CFG3_FLT | Open: not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

Table 6. CFG1_SCL/CFG2_SDA pin definitions

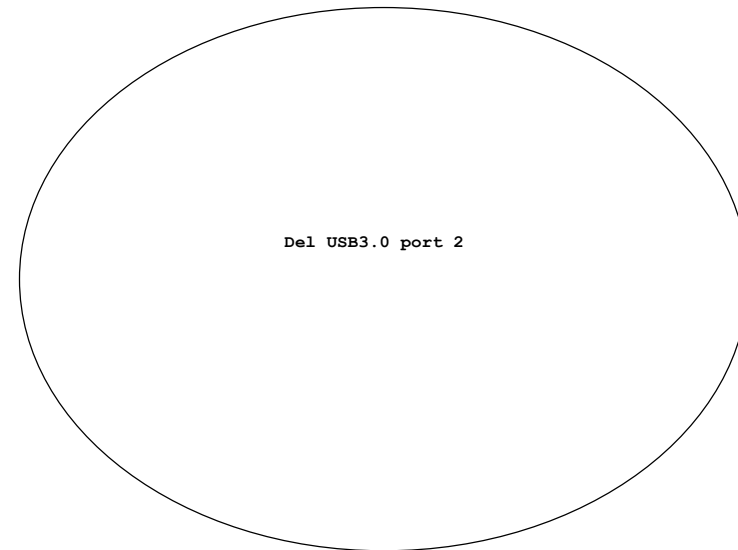
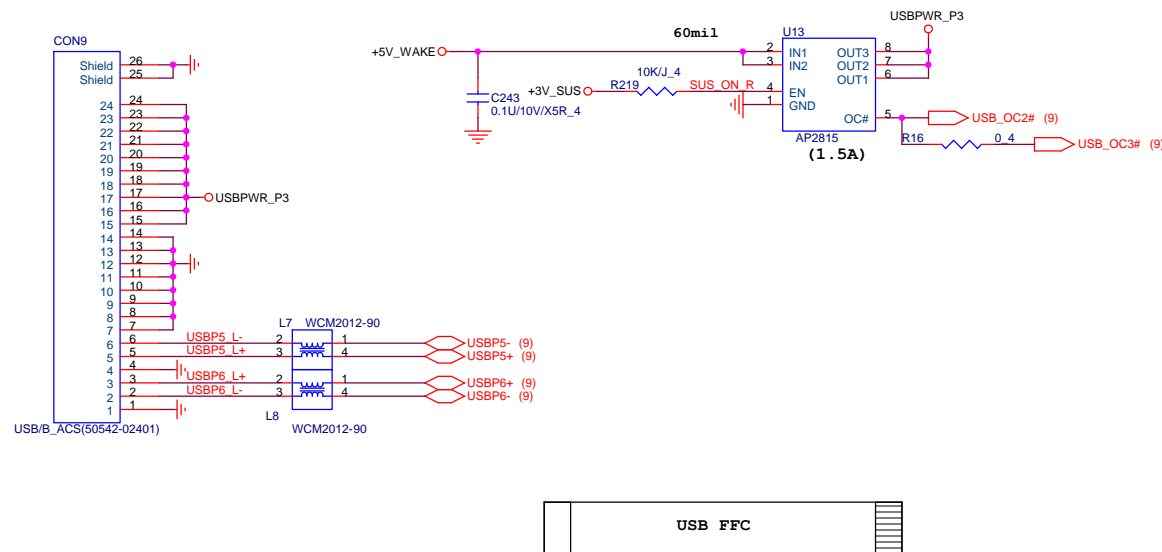
| Pin value | System behavior |
|-----------|--|
| 00 | Compliant HPD behavior |
| 01 | Most interoperable (non-compliant) HPD behavior |
| 10 | Most interoperable (non-compliant) HPD behavior |
| 11 | (Default) Compliant behavior (but configurable via PC-bus) |

CRT



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

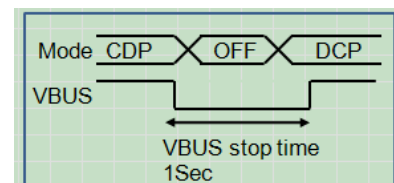
MB to USB board



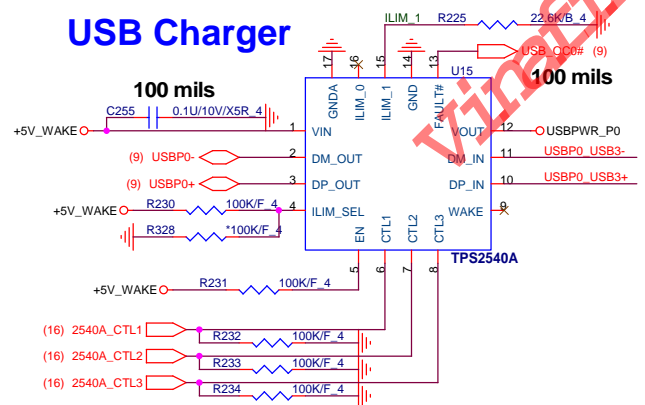
Del USB3.0 port 2

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

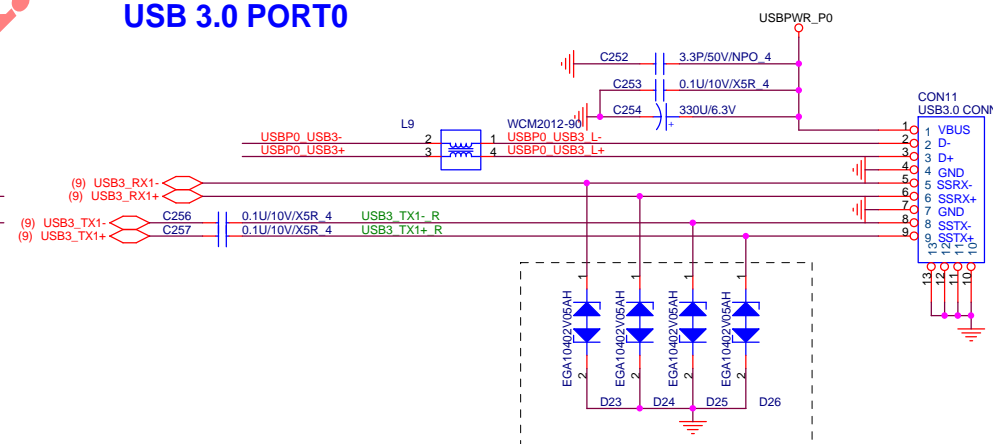
SDP : Standard Downstream Port
CDP : Charging downstream port
DCP : Dedicated Charging Port
Enable/Disable : setting by BIOS



USB Charger



USB 3.0 PORT0



| 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 |

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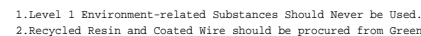
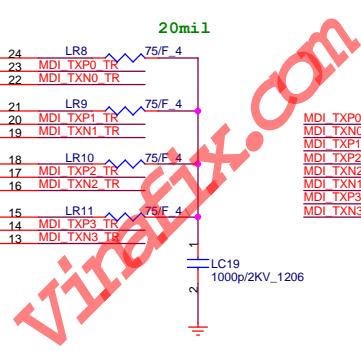
USB/USB Charger

Size Document Number

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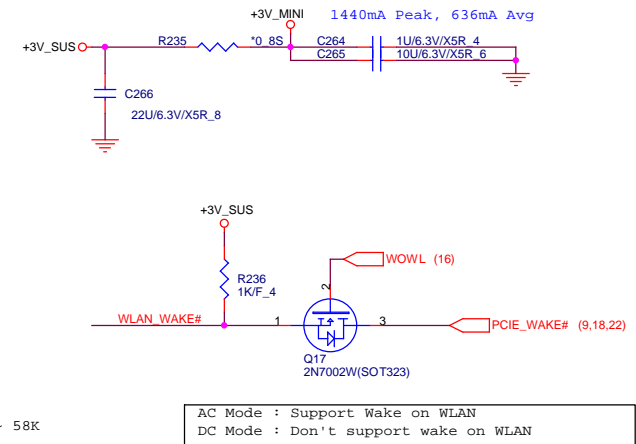
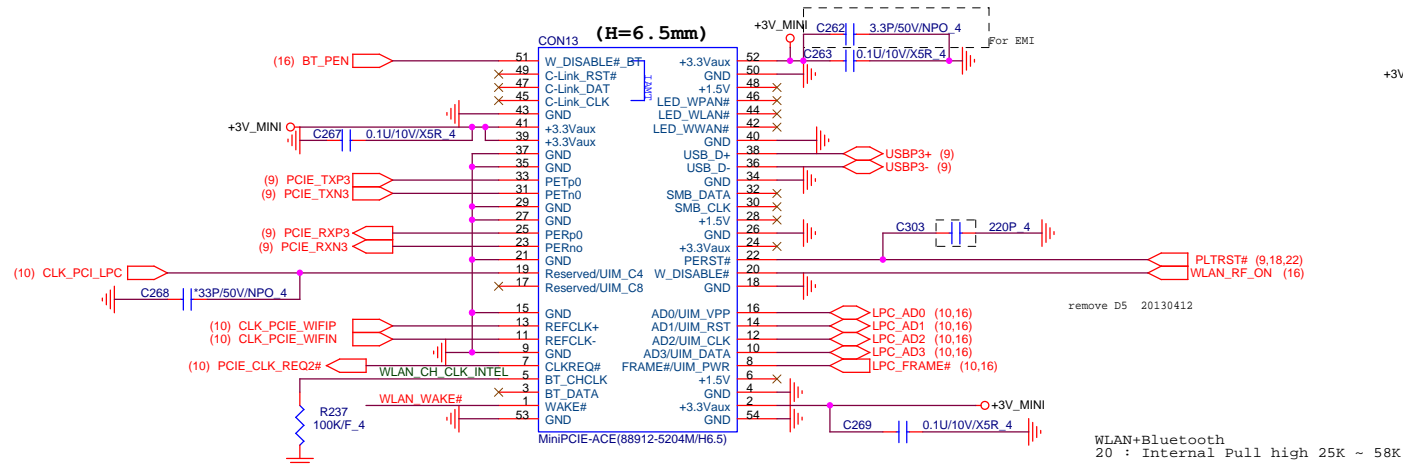
Rev 1A

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

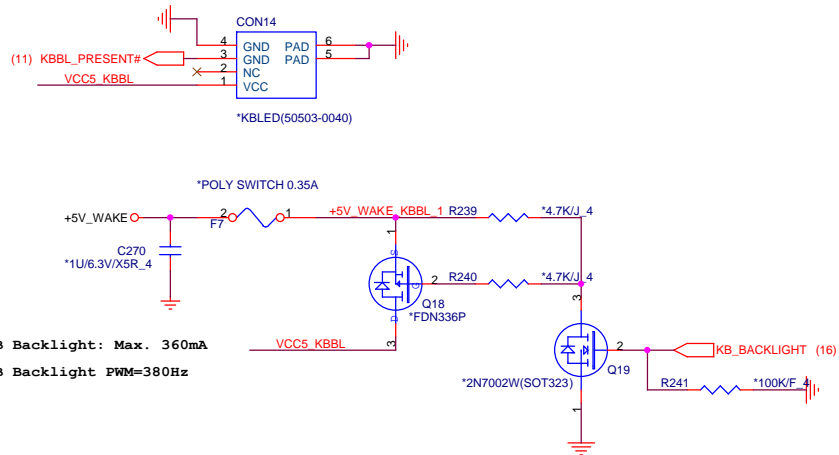


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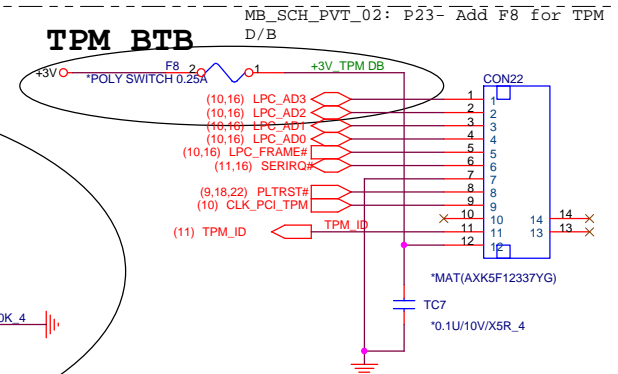
WLAN/WIMAX/WIDI



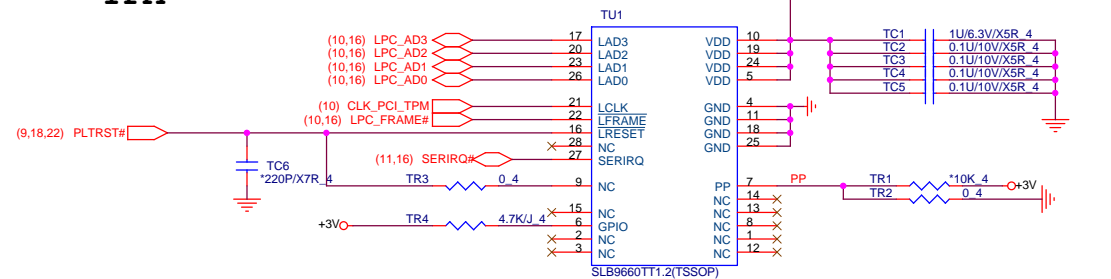
KB BACKLIGHT



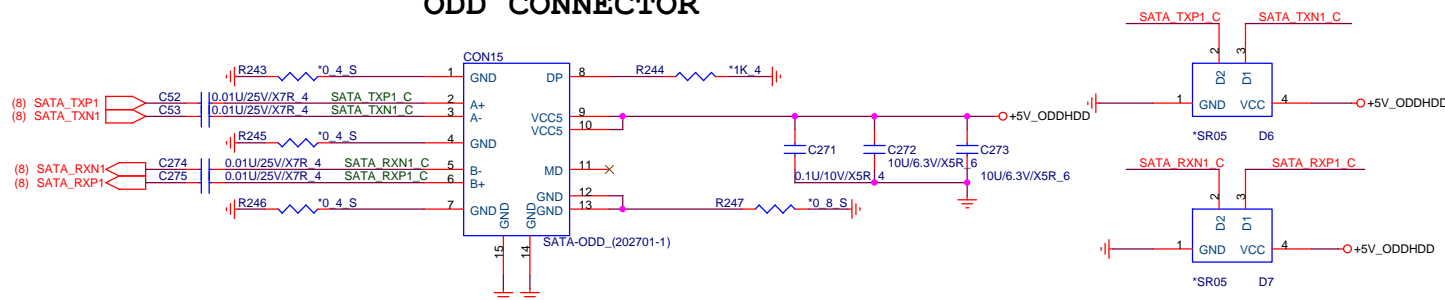
TPM BTB



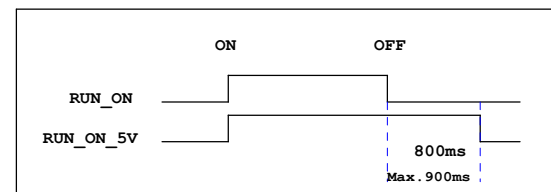
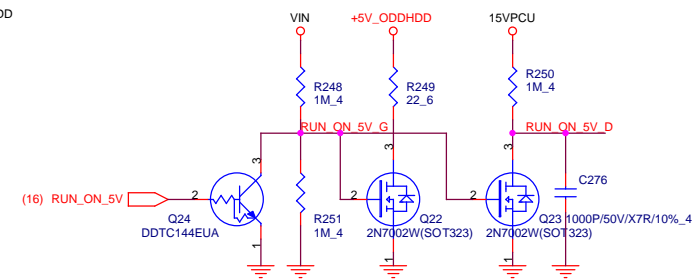
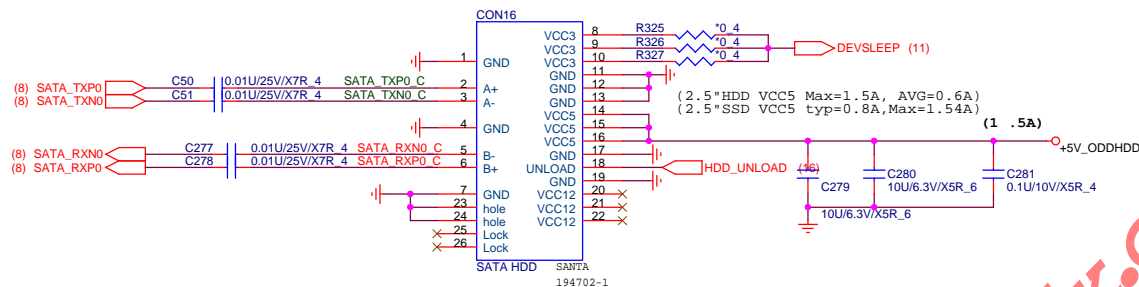
TPM



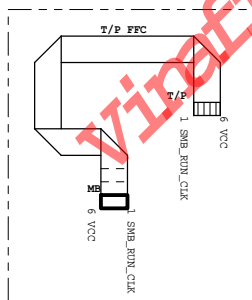
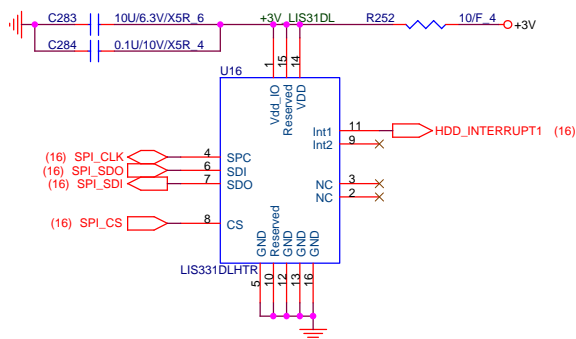
ODD CONNECTOR



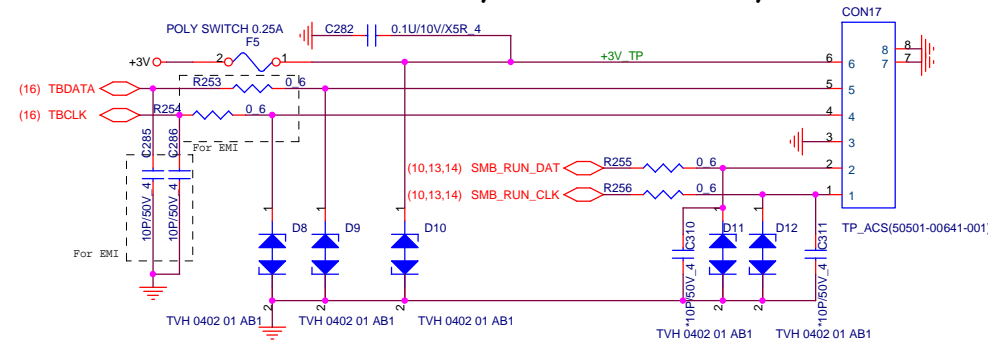
HDD CONNECTOR



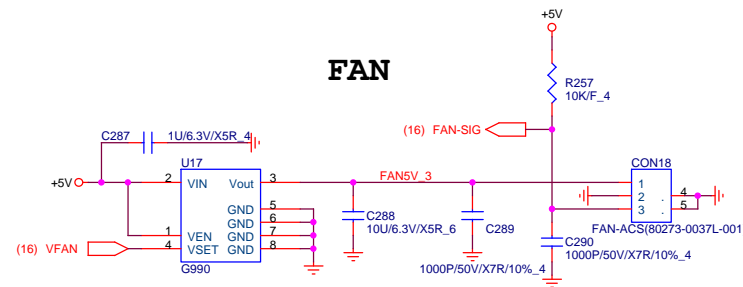
HDD PROTECT SPI INTERFACE



T/P Board to T/P



FAN



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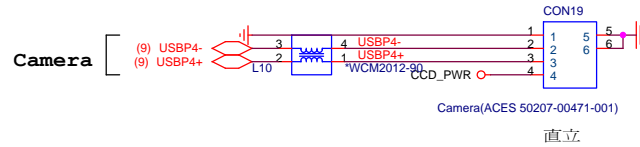
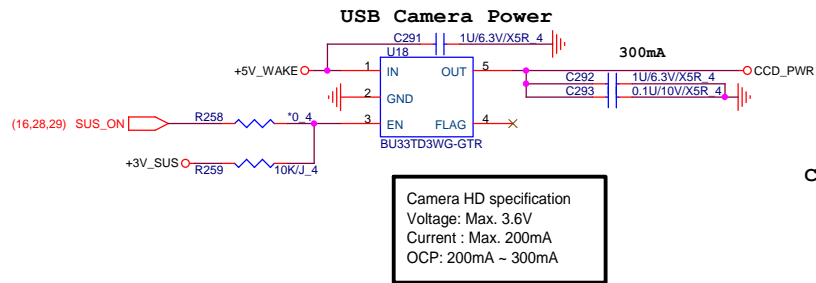
PROJECT : HKDD

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

1.Level 1 Environment-related Substances Should Never be Used.
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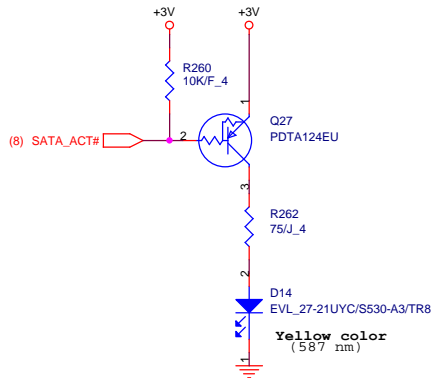
Date: Thursday, November 13, 2014 Sheet 24 of 41

Camera



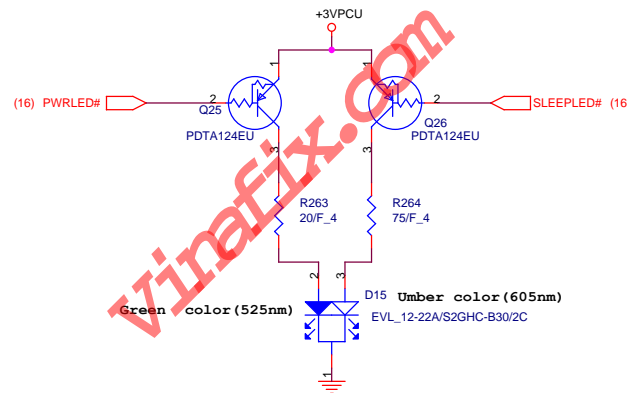
SATA LED

BATTERY LED

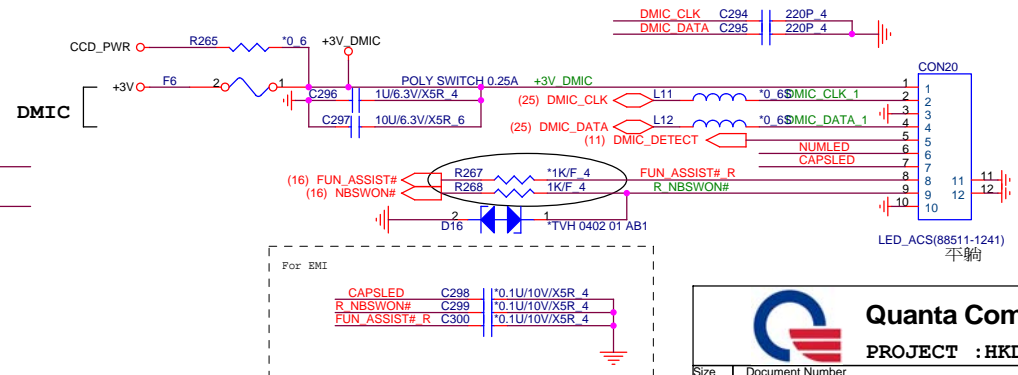
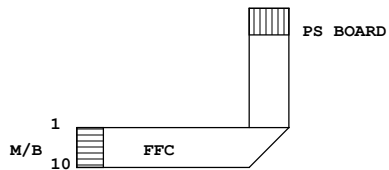


(16) BATLED1#

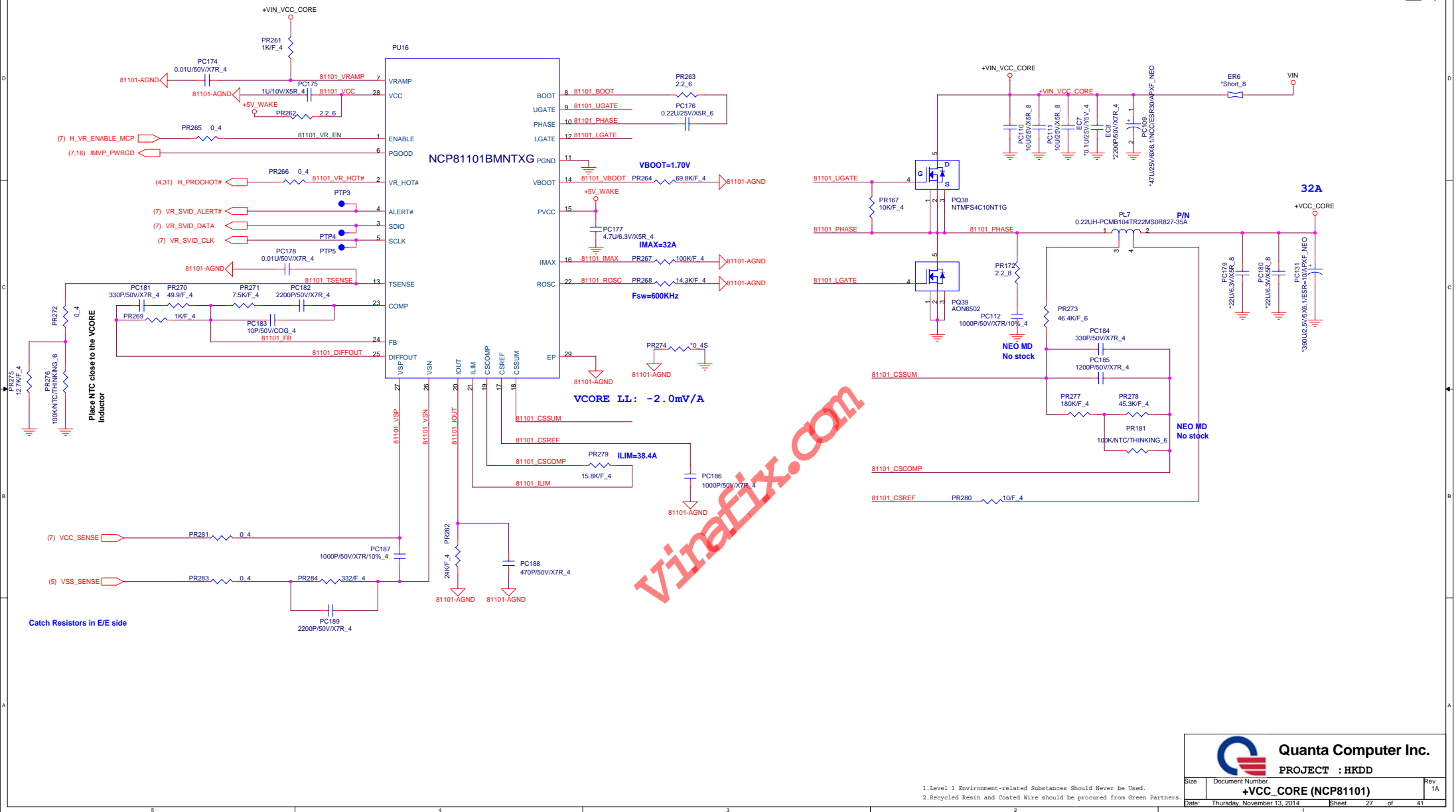
Power/Sleep LED



Power SW Board Connector



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



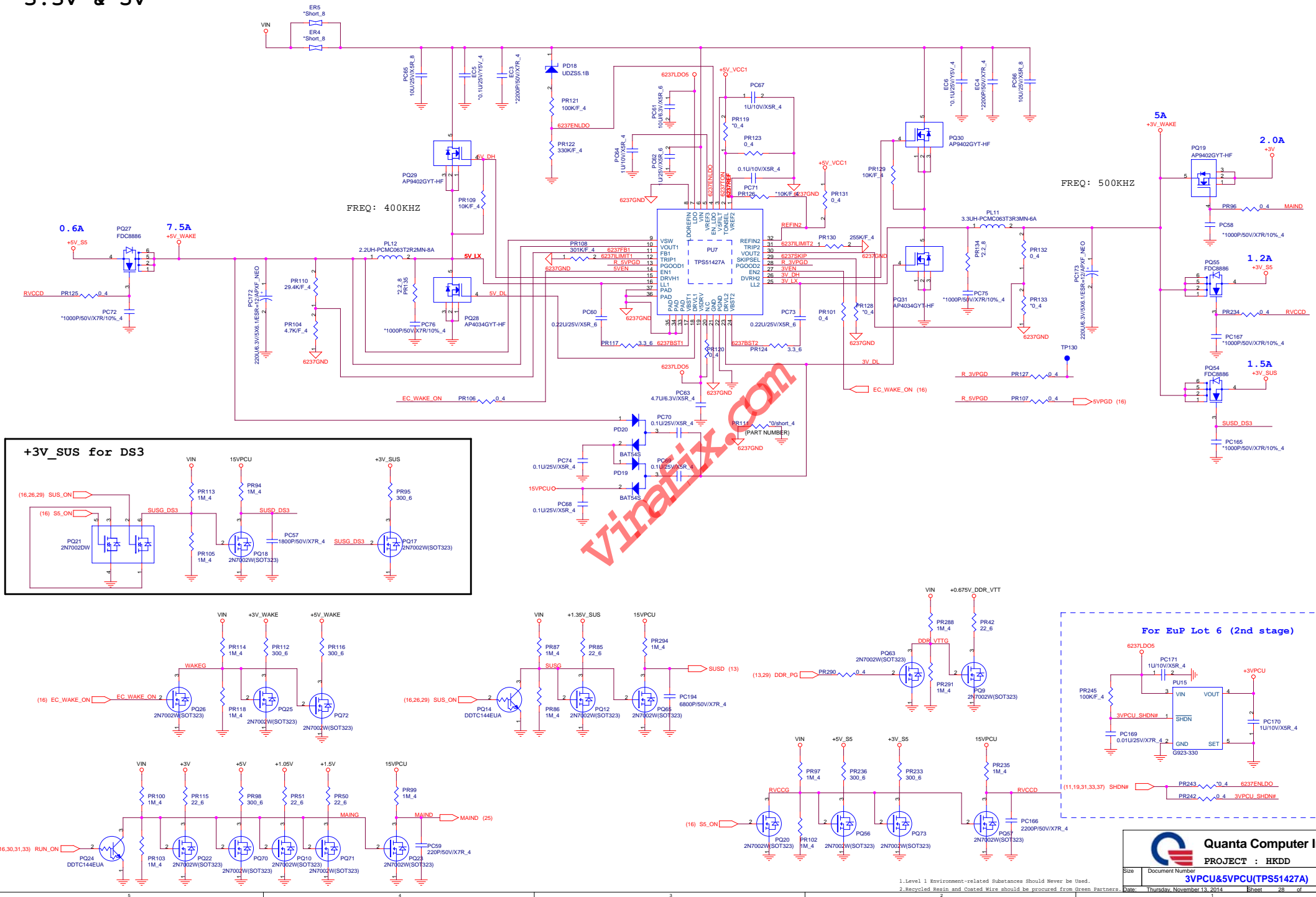
Quanta Computer Inc.

PROJECT : HKDD

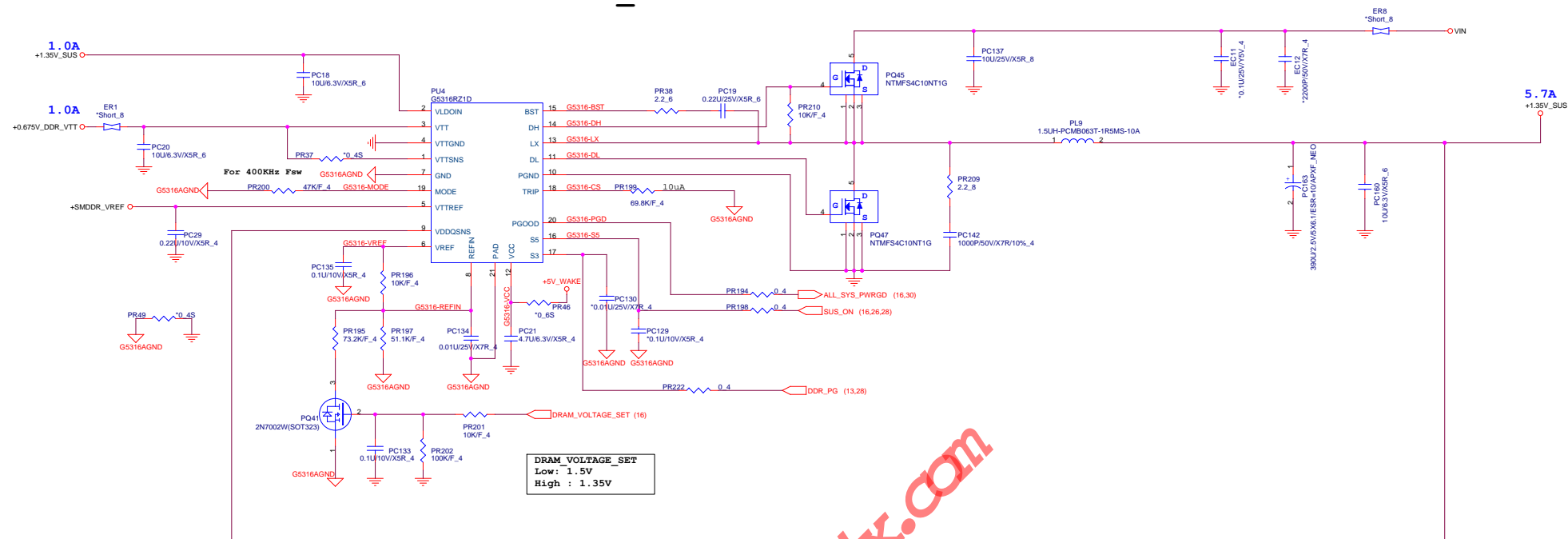
+VCC_CORE (NCP81101)

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

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1.5VSUS & VTT_MEM



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

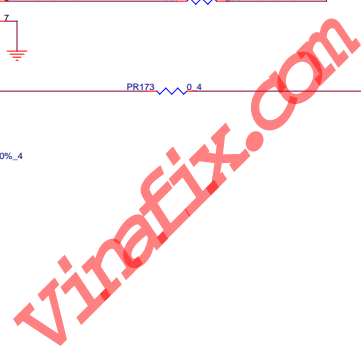
| STATE | S3 | S5 | 1.5VSUS | VTTREF | VTT |
|-------|----|----|---------|--------|------------|
| S0 | 1 | 1 | On | On | On |
| S3 | 0 | 1 | On | On | Off/High Z |
| S4/S5 | 0 | 0 | Off | Off | Off |



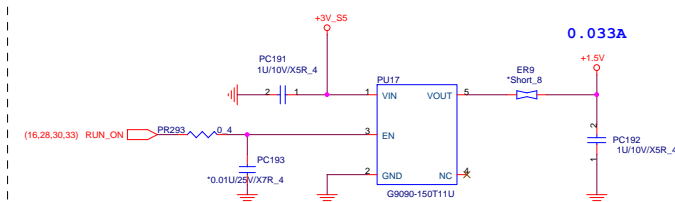
Quanta Computer Inc.
PROJECT : HKDD

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

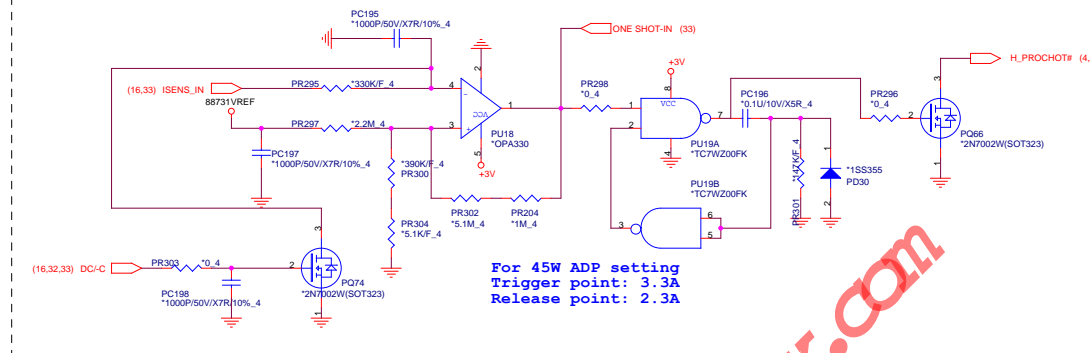
1. Level 1 Environment-related Substances Should Never be Used.
2. Recycled Resin and Coated Wire should be procured from Green Partners.



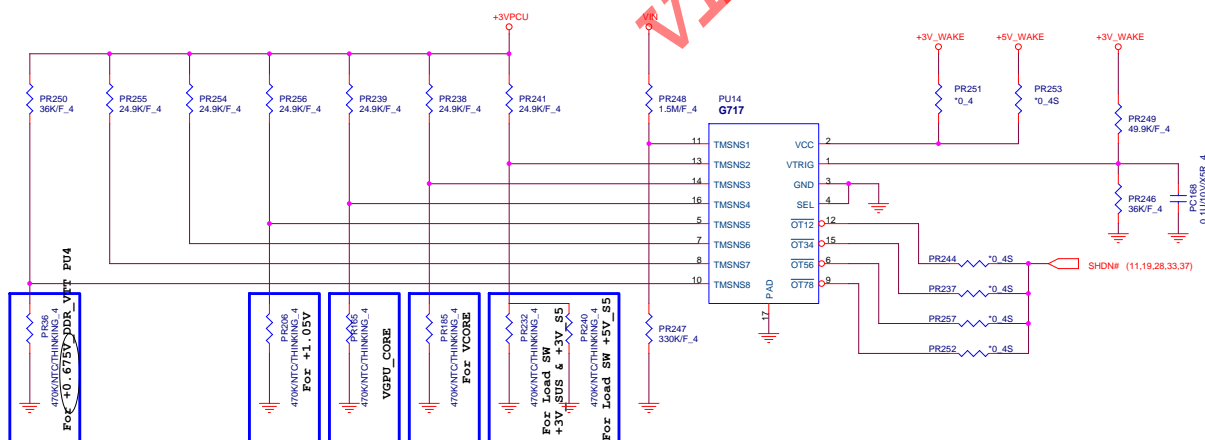
VCC1.5



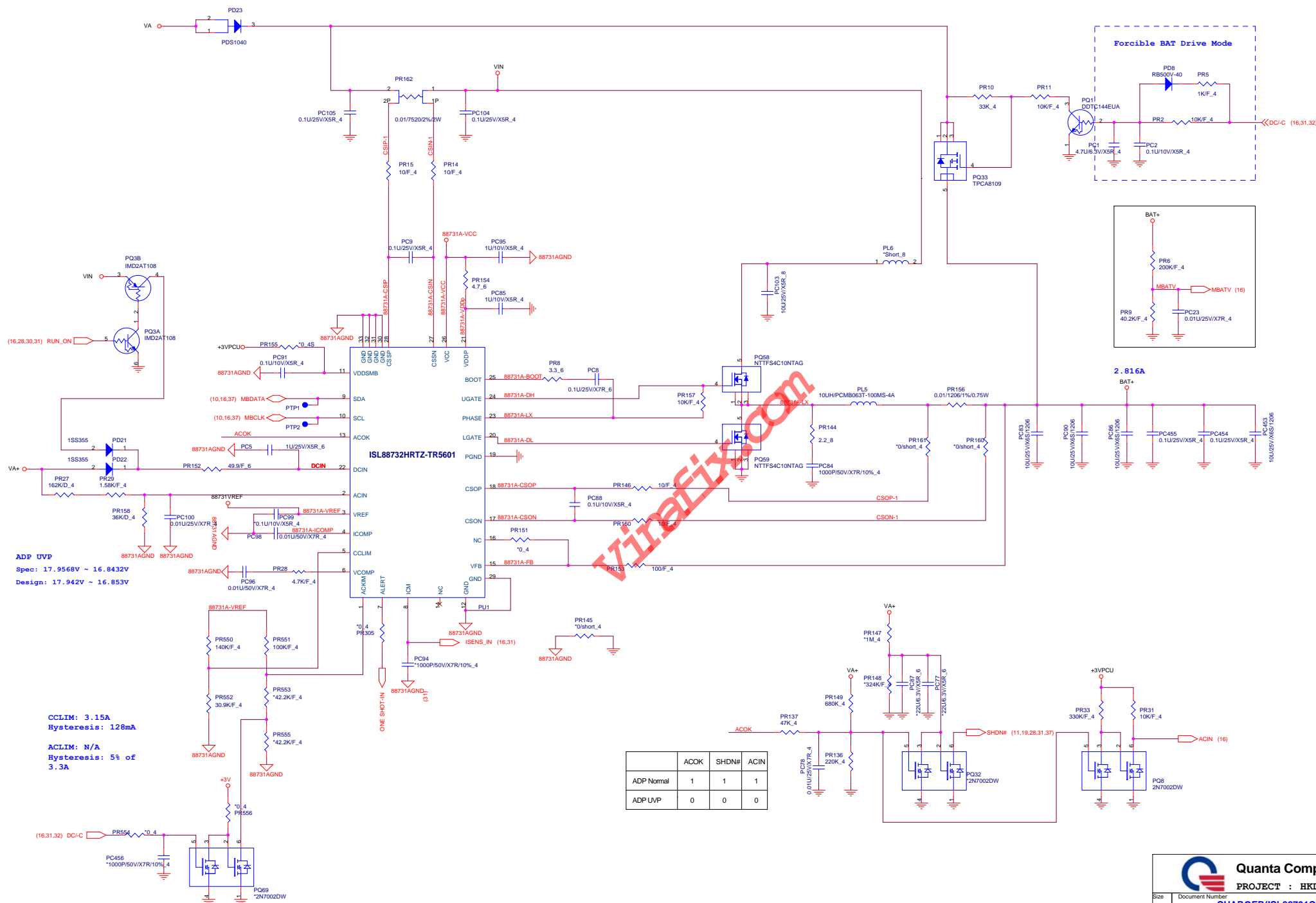
One-Shot 10ms PROCHOT# For ADP/BAT



Thermal Protection and Battery UVP for VEDS



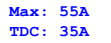


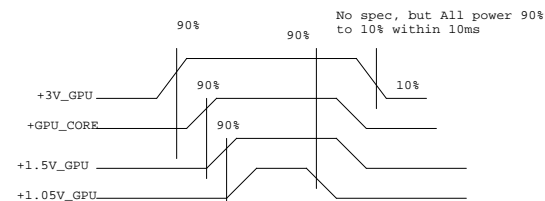
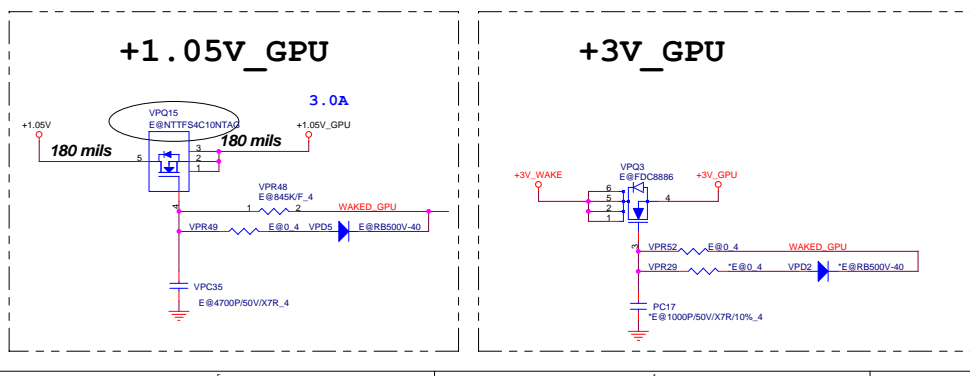
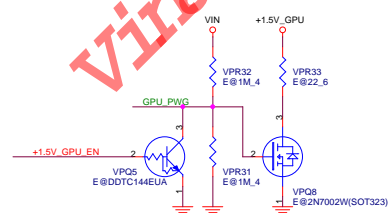
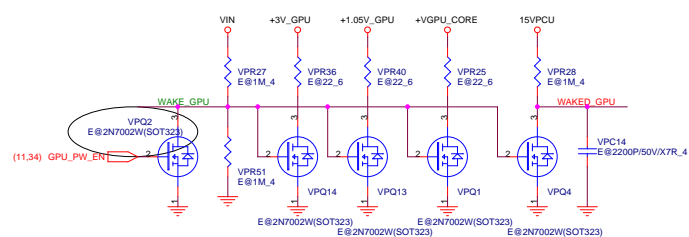
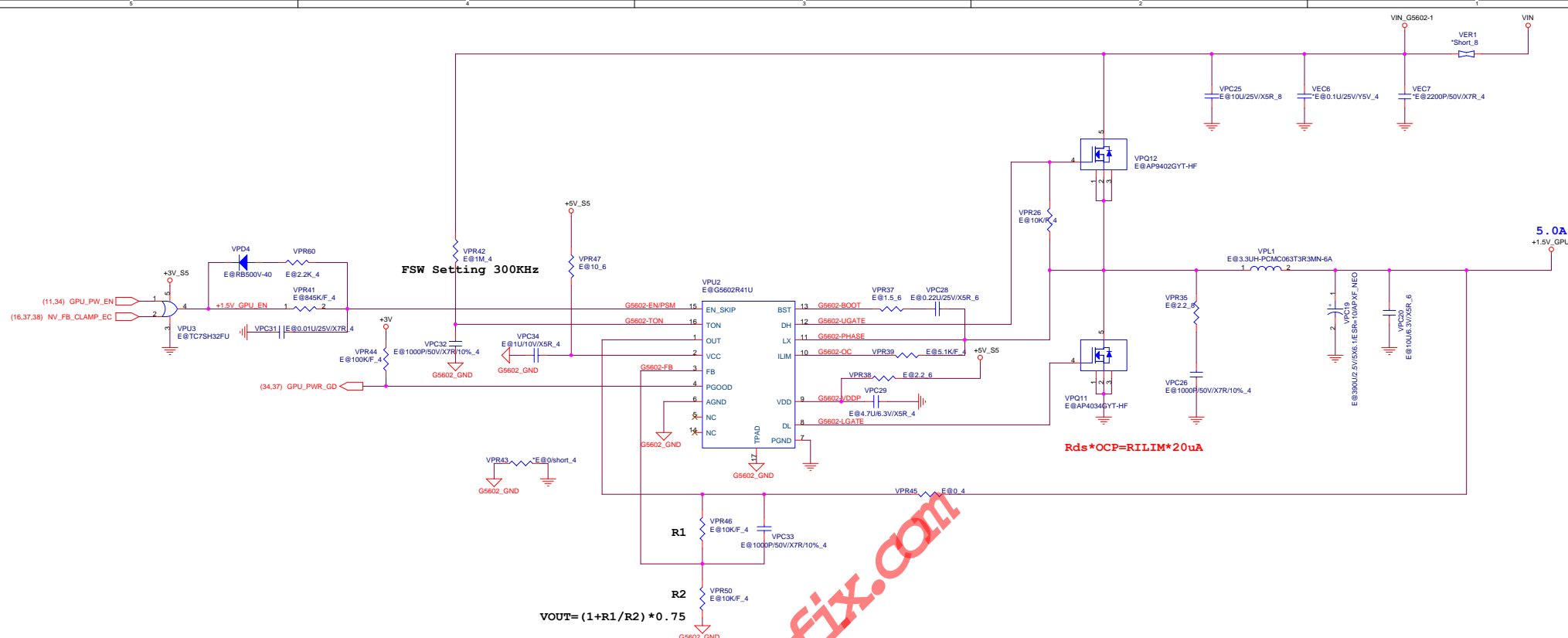


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PROJECT : HKDD

Size Document Number
CHARGER(ISL88731C)
Rev 1A

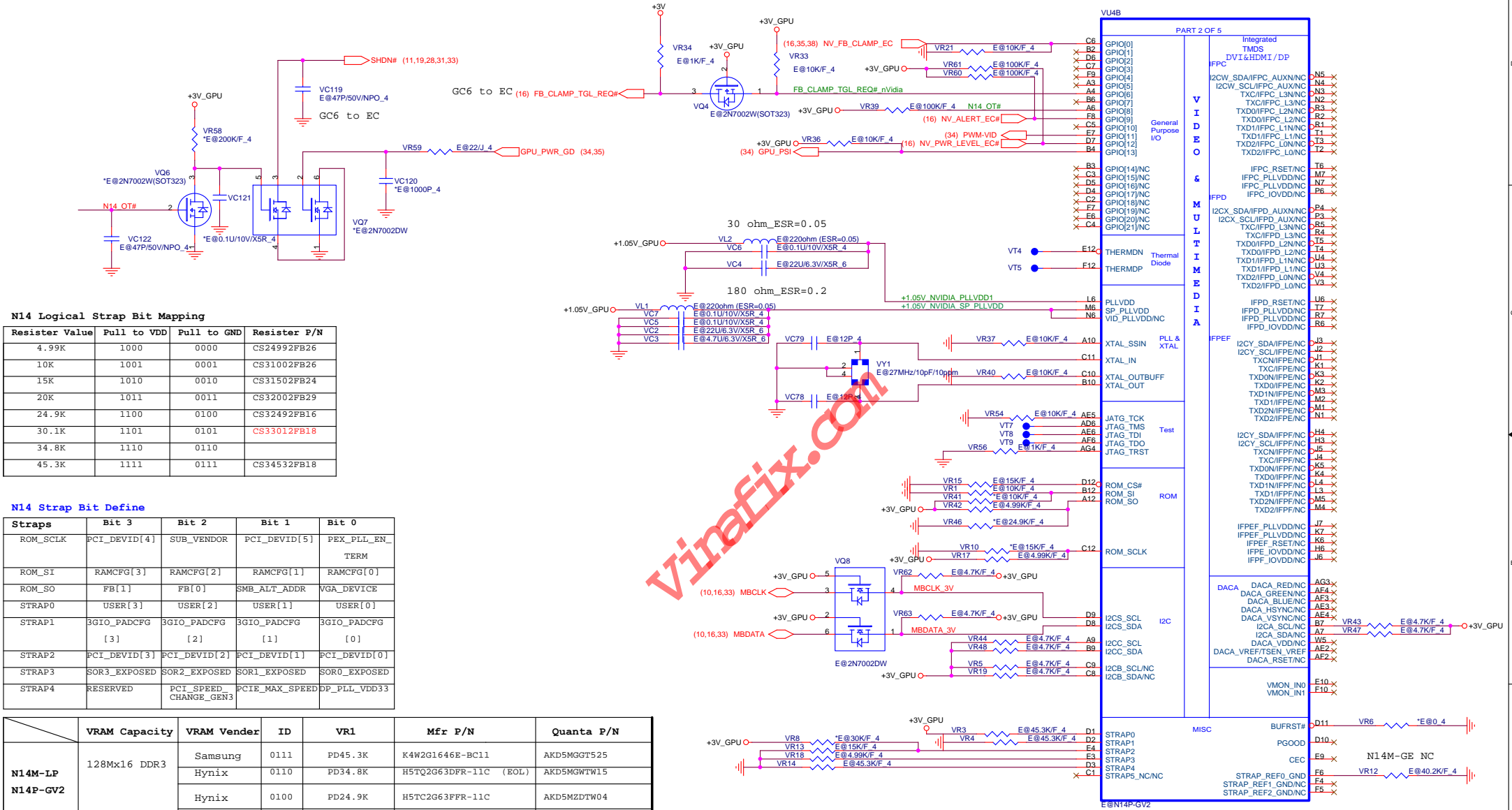
1. Level 1 Environment-related Substances Should Never be Used.
2. Recycled Resin and Coated Wire should be procured from Green Partners.
Date: Thursday, November 13, 2014 Sheet 33 of 41





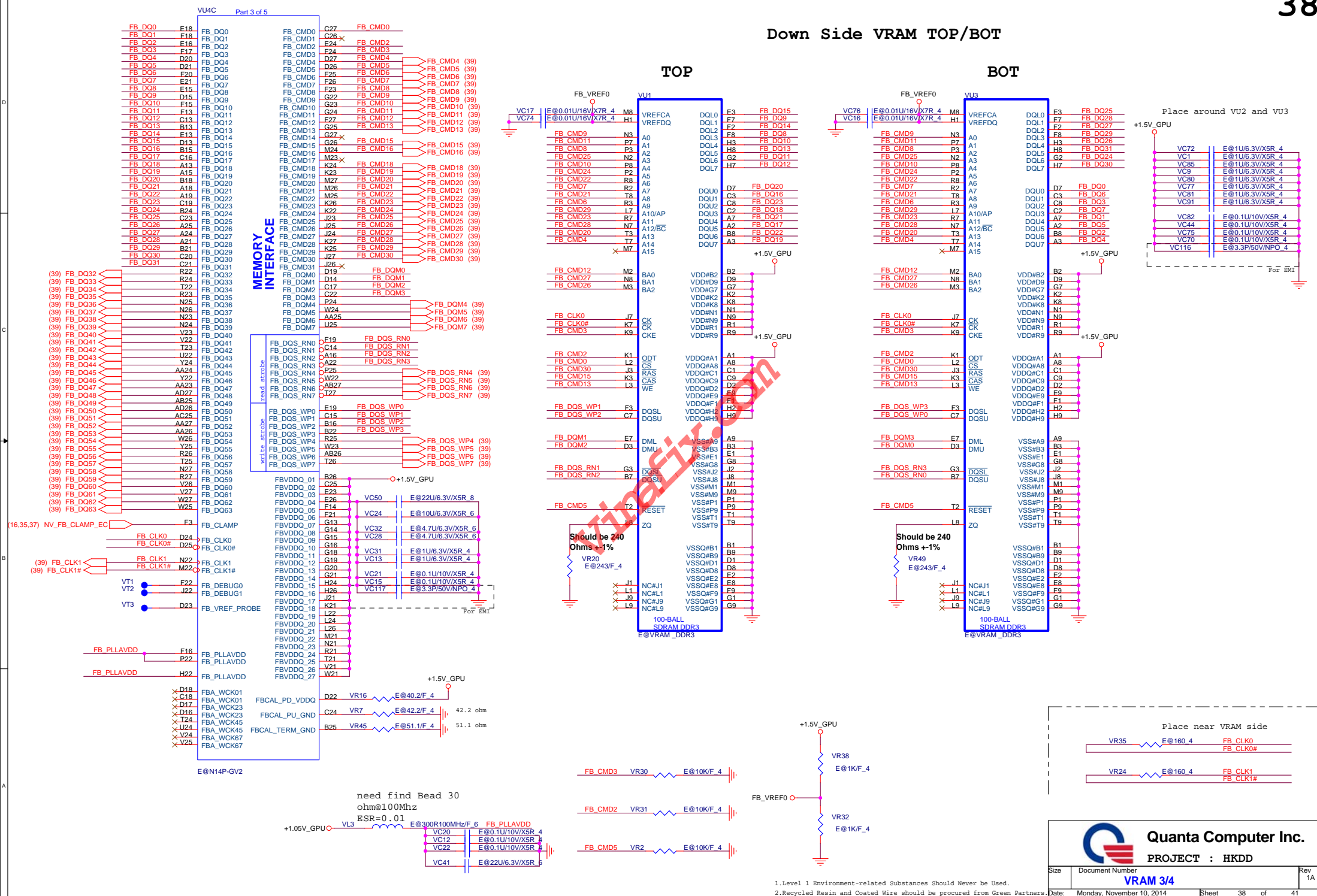


For GC6 GPU Monitor
Status(FB_CLAMP_MON)



1.Level 1 Environment-related Substances Should Never be Used.
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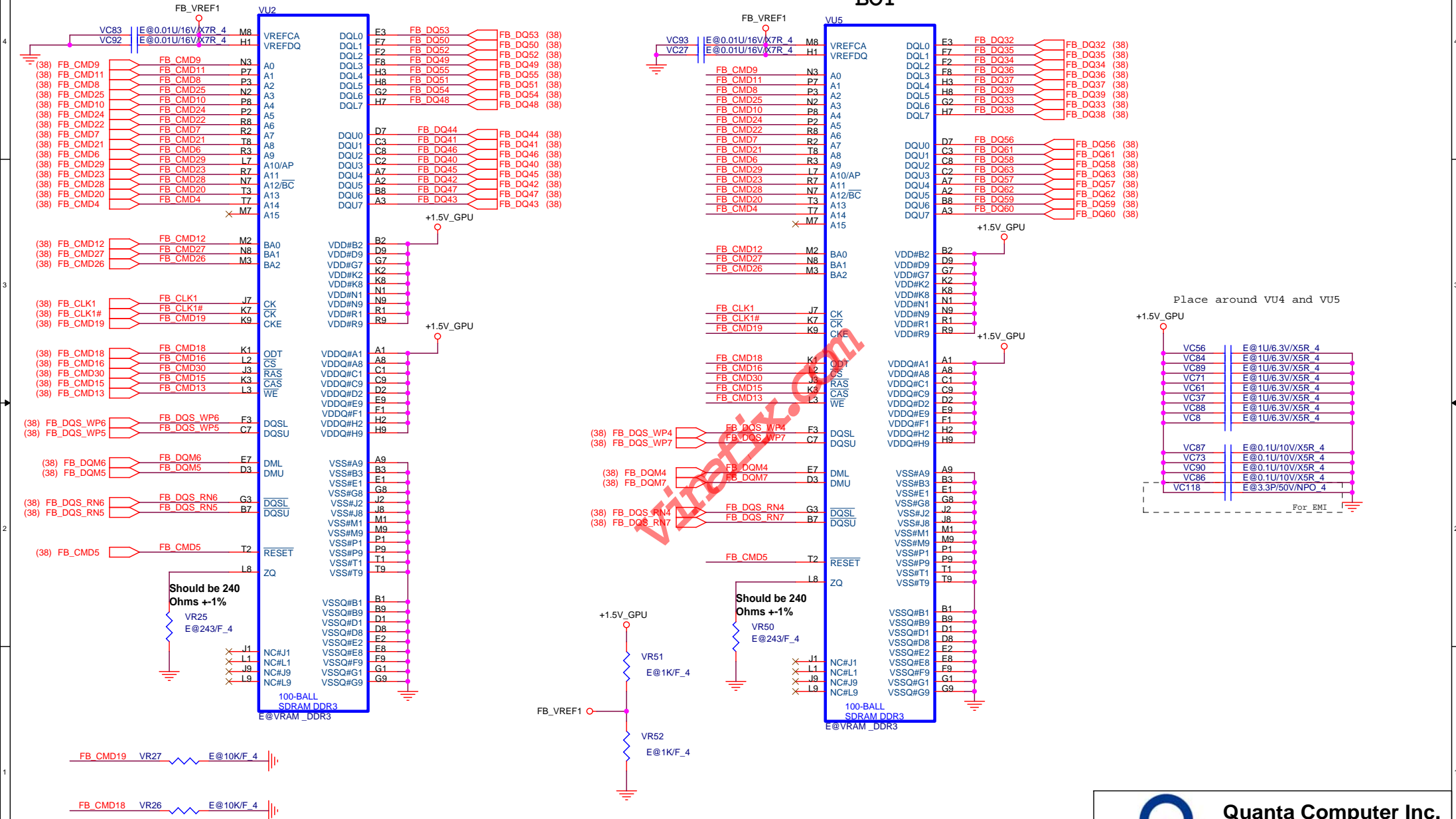
Down Side VRAM TOP/BOT



Up Side VRAM TOP/BOT

TOP

BOT



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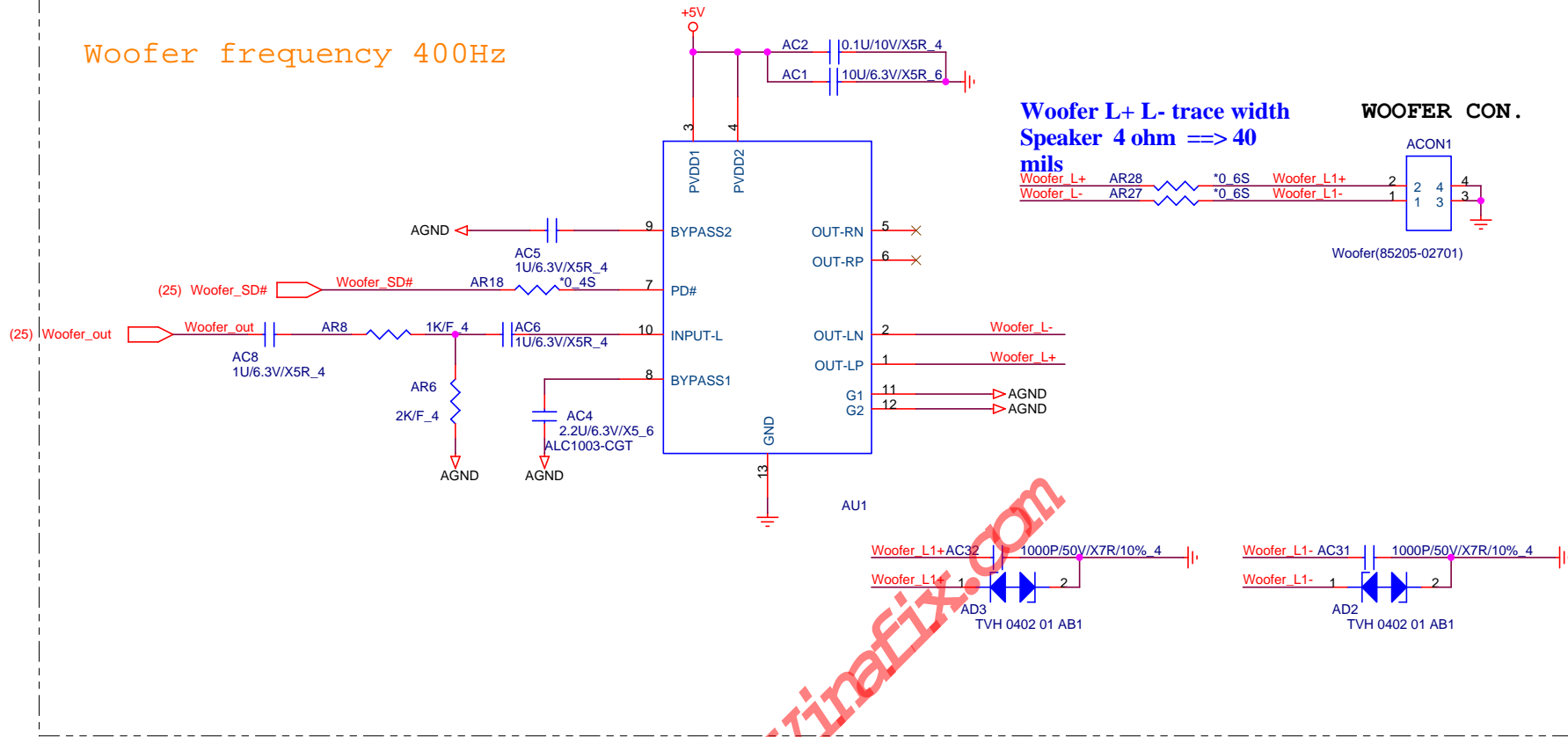
PROJECT : HKDD

| | | |
|-------|---------------------------|----------------|
| Size | Document Number | Rev |
| | VRAM 4/4 | 1A |
| Date: | Monday, November 10, 2014 | Sheet 39 of 41 |

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

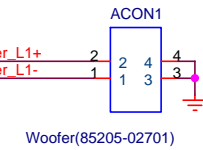
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Woofers frequency 400Hz



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

WOOFER CON.



Vinafix.com

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 |
| | | 1A |
| Date: | Thursday, November 13, 2014 | Sheet 40 of 41 |

Audio Codec Woofer

| 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 |