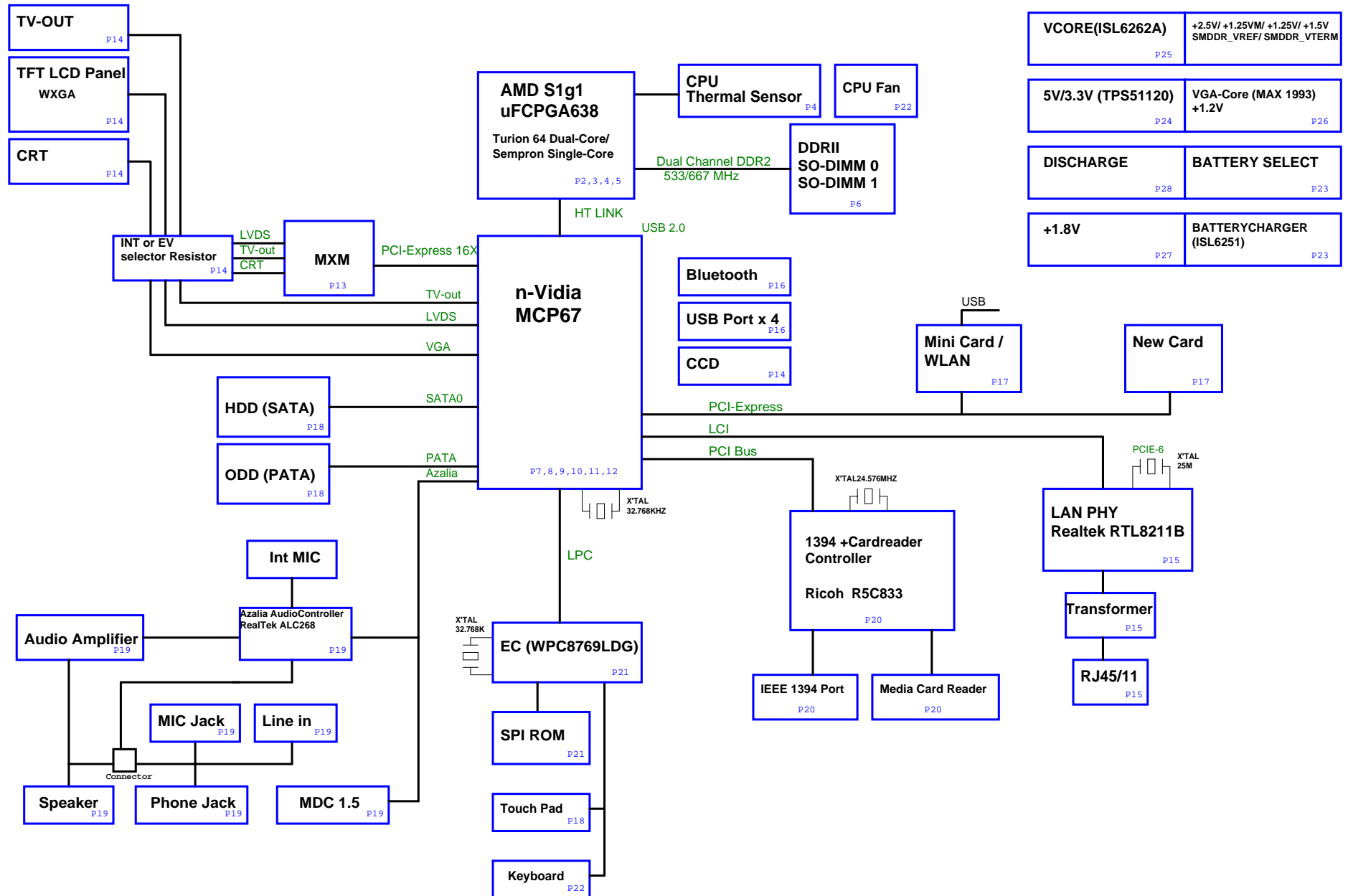


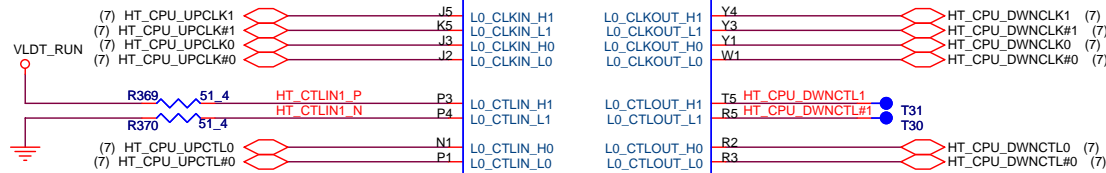
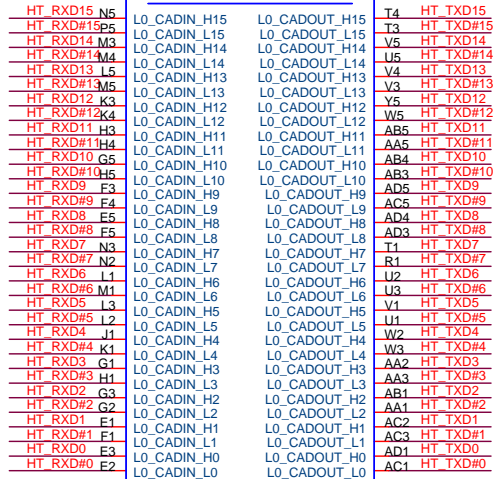
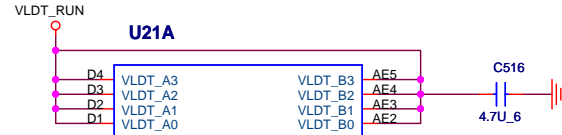
ZO3 SYSTEM BLOCK DIAGRAM



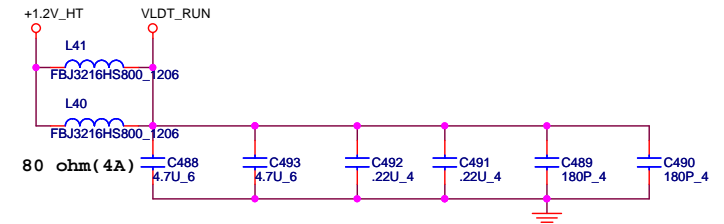


PROCESSOR HYPERTRANSPORT INTERFACE

VLDLT_Ax AND VLDLT_Bx ARE CONNECTED TO THE LDT_RUN POWER SUPPLY THROUGH THE PACKAGE OR ON THE DIE. IT IS ONLY CONNECTED ON THE BOARD TO DECOUPLING NEAR THE CPU PACKAGE



Athlon 64 S1
Processor Socket



LAYOUT: Place bypass cap on topside of board



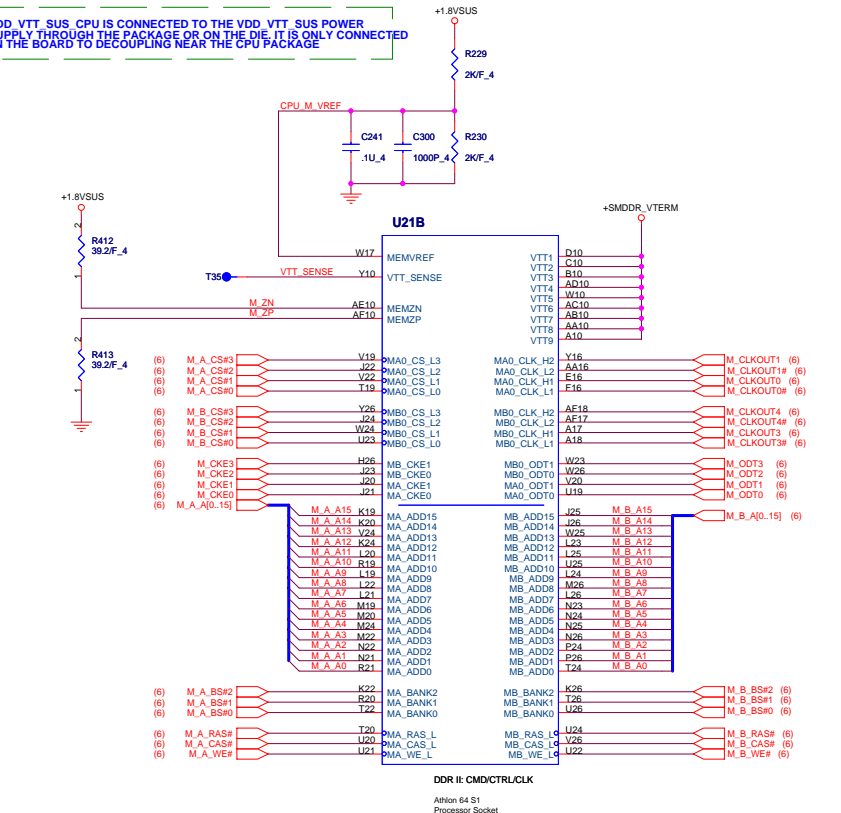
NEAR HT POWER PINS THAT ARE NOT CONNECTED DIRECTLY TO DOWNSTREAM HT DEVICE, BUT CONNECTED INTERNALLY TO OTHER HT POWER PINS
PLACE CLOSE TO VLDLT0 POWER PINS



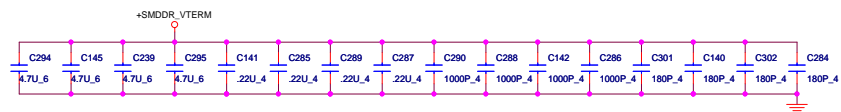
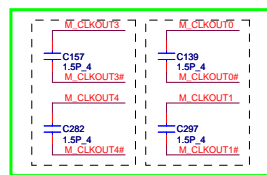
PROJECT : ZO3
Quanta Computer Inc.

| Size | Document Number | Rev |
|-------|---------------------------|---------------|
| | ATHLON64 HT I/F | 1A |
| Date: | Wednesday, April 25, 2007 | Sheet 2 of 30 |

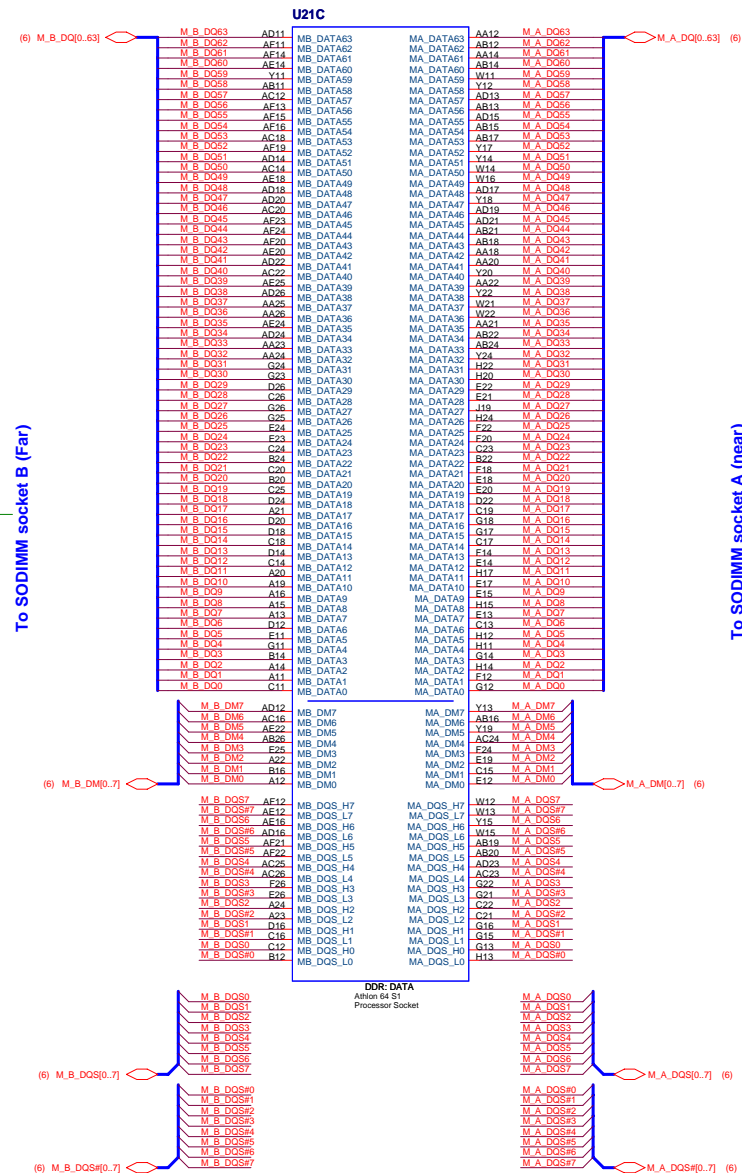
VDD VTT SUS CPU IS CONNECTED TO THE VDD VTT SUS POWER SUPPLY THROUGH THE PACKAGE OR ON THE DIE. IT IS ONLY CONNECTED ON THE BOARD TO DECOUPLING NEAR THE CPU PACKAGE



Near CPU L<1200mil



Processor DDR2 Memory Interface

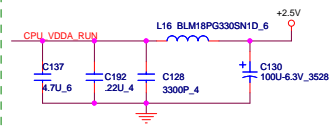


PROJECT : ZO3
Quanta Computer Inc.

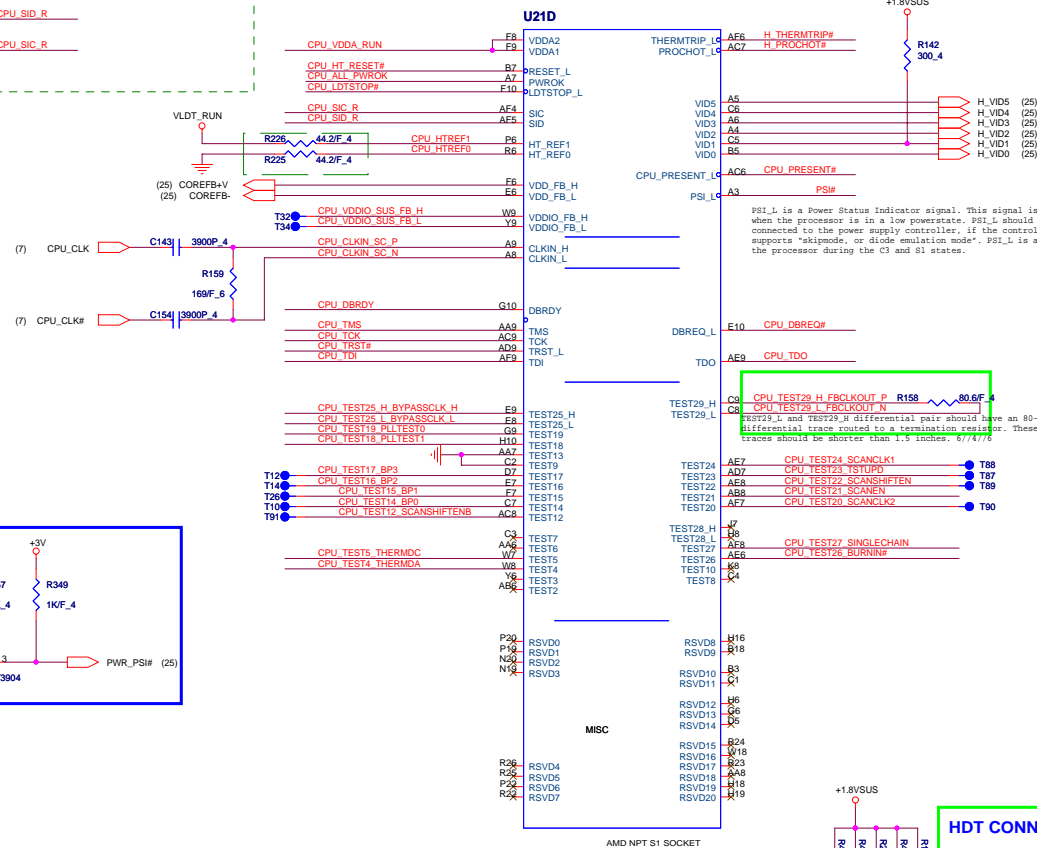
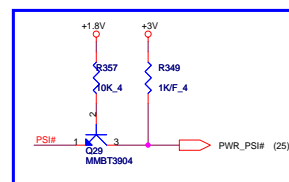
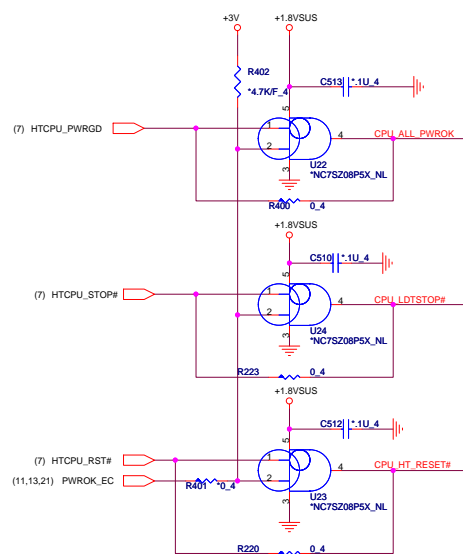
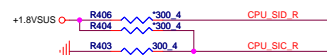


LAYOUT: ROUTE VDDA TRACE APPROX.
50 mils WIDE (USE 2x25 mil TRACES TO
EXIT BALL FIELD) AND 500 mils LONG.

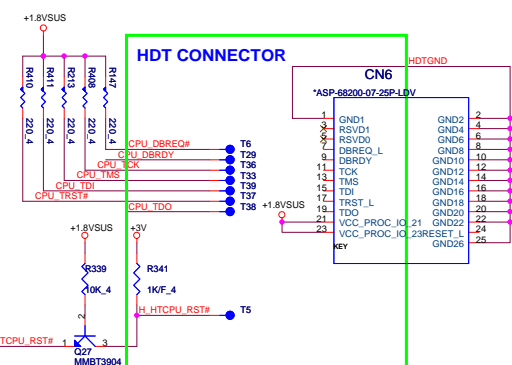
CPU_VDDA_RUN



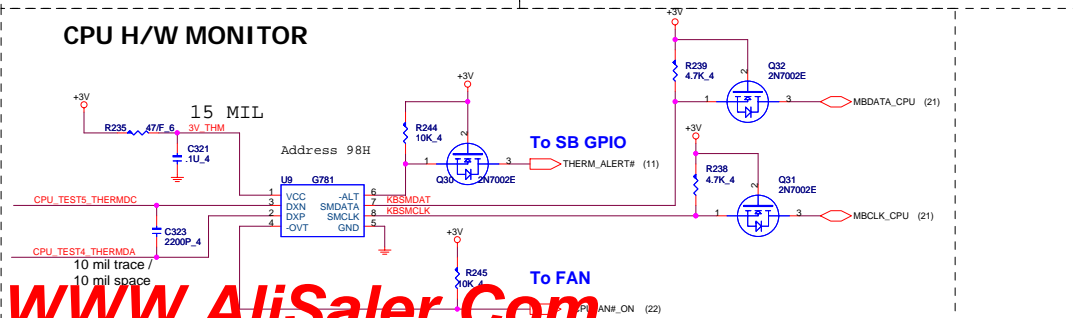
If AMD SI is not used, the SID pin can be left unconnected and SIC should have a 300- Ω ($\pm 5\%$) pulldown to VSS.



PSI_L is a Power Status Indicator signal. This signal is asserted when the processor is in a low powerstate. PSI_L should be connected to the power supply controller, if the controller supports "skipmode, or diode emulation mode". PSI_L is asserted by the processor during the C3 and S1 states.



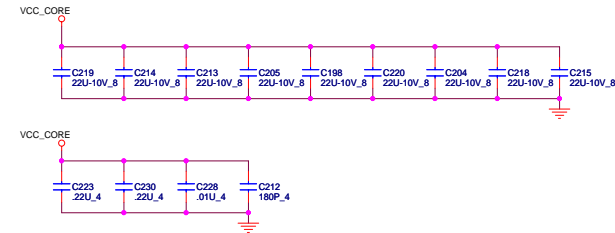
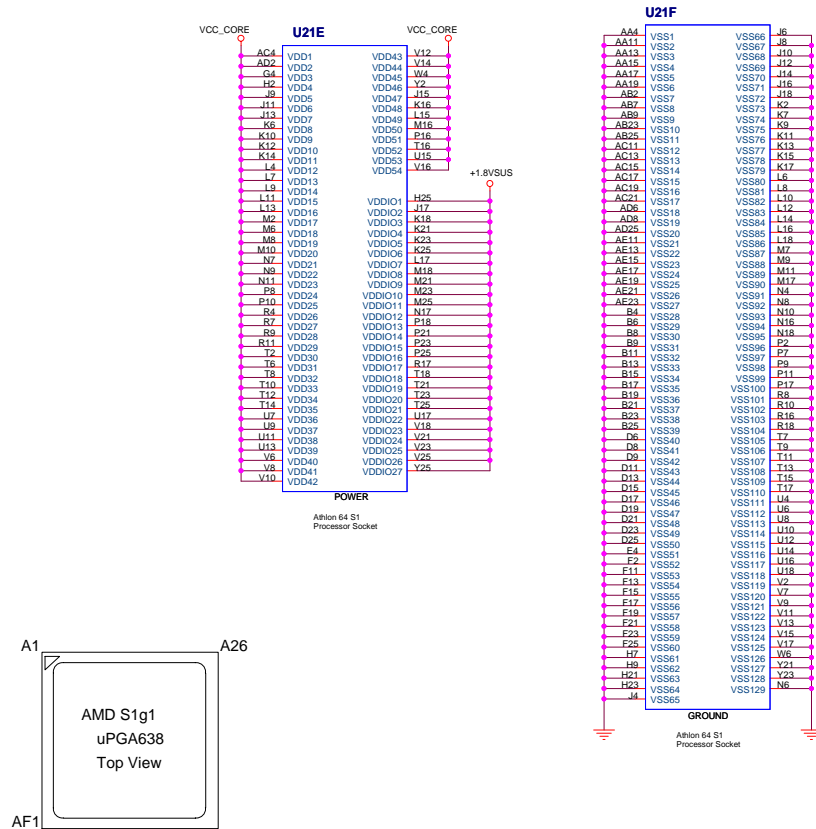
CPU H/W MONITOR



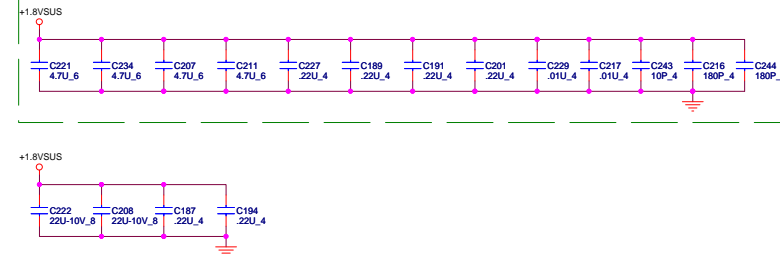
| | | |
|--------------------------|------|---------|
| CPU_TEST27_SINGLECHAIN | R409 | *300 4 |
| CPU_TEST26_BURNIN# | R407 | 300 4 |
| CPU_PRESENT# | R234 | 1K/F 4 |
| CPU_TEST25_H_BYPASSCLK_H | R148 | 510/F 4 |

| | | |
|--------------------------|------|---------|
| CPU TEST21 SCANEN | R405 | 300 4 |
| CPU TEST25 L BYPASSCLK L | R157 | 510/F 4 |
| CPU TEST19 PLLTEST0 | R185 | 300 4 |
| CPU TEST18 PLLTEST1 | R187 | 300 4 |

PROCESSOR POWER AND GROUND



DECOUPLING BETWEEN PROCESSOR AND DIMMS
PLACE CLOSE TO PROCESSOR AS POSSIBLE



PROJECT : Z03
Quanta Computer Inc.

J3
REVERSE

SO-DIMM

(H=5.2)

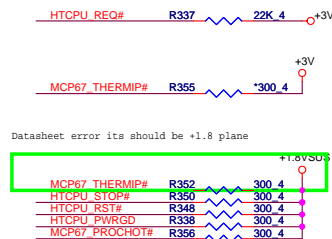
J4
REVERSE

SO-DIMM

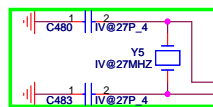
(H=9.2)

| MCP67 Unused UMA Only | |
|---|---|
| MCP67 Signal Name | Component |
| RGB_DAC_RSET RGB_DAC_VREF DDC_DATA0A | STUFF STUFF 10K PULLHIGH |
| TV_DAC_RSET TV_DAC_VREF | STUFF STUFF |
| IFPAB_RST IFPAB_VPROBE DDC_DATA2 HPLUG_DET3 | STUFF STUFF 10K PULLHIGH 22K PULLDOWN |
| HDMI_RSET HDMI_VPROBE DDC_DATA3 R HDCP_ROM_SDATA HPLUG_DET2 R | STUFF STUFF 10K PULLHIGH 10K PULLHIGH 6.2K PULLDOWN |

| MCP67 Unused UMA Only | |
|---|---|
| MCP67 Signal Name | Component |
| RGB_DAC_RSET RGB_DAC_VREF DDC_DATA0A | STUFF STUFF 10K PULLHIGH |
| TV_DAC_RSET TV_DAC_VREF | STUFF STUFF |
| IFPAB_RST IFPAB_VPROBE DDC_DATA2 HPLUG_DET3 | STUFF STUFF 10K PULLHIGH 22K PULLDOWN |
| HDMI_RSET HDMI_VPROBE DDC_DATA3 R HDCP_ROM_SDATA HPLUG_DET2 R | STUFF STUFF 10K PULLHIGH 10K PULLHIGH 6.2K PULLDOWN |



| | | |
|------|----------|-------------|
| R344 | IV@150 4 | INT CRT RED |
| R343 | IV@150 4 | INT CRT GRN |
| R342 | IV@150 4 | INT CRT BLU |
| R117 | IV@150 4 | INT TV C/R |
| R120 | IV@150 4 | INT TV Y/G |
| R113 | IV@150 4 | INT TV COMP |



+3V0 R164 EV@2.2K 4 INT CRT_DDCDAT

UNUSED HDMI ONLY



IFPAB_VPROBE (AB30) to **IFPAB_VPROBE** (C77) with a 0.01μ capacitor to ground.

IFPAB_RST (AB31) to **IFPAB_RST** (R331) with a $1K/F$ capacitor to ground.

DDC_CLK2 (J22) to **INT_LVDS_EDDCLK** (I4).

DDC_DATA2 (J22) to **INT_LVDS_EDDDATA** (I4).

LCD_PANEL_PWR (AE25) to **INT_LVDS_DIGON** (I4).

LCD_BKL_ON (AE27) to **INT_LVDS_BLON** (I6).

LCD_BKL_CTL (AD24) to **L_BKLT_CTRL** (I4).

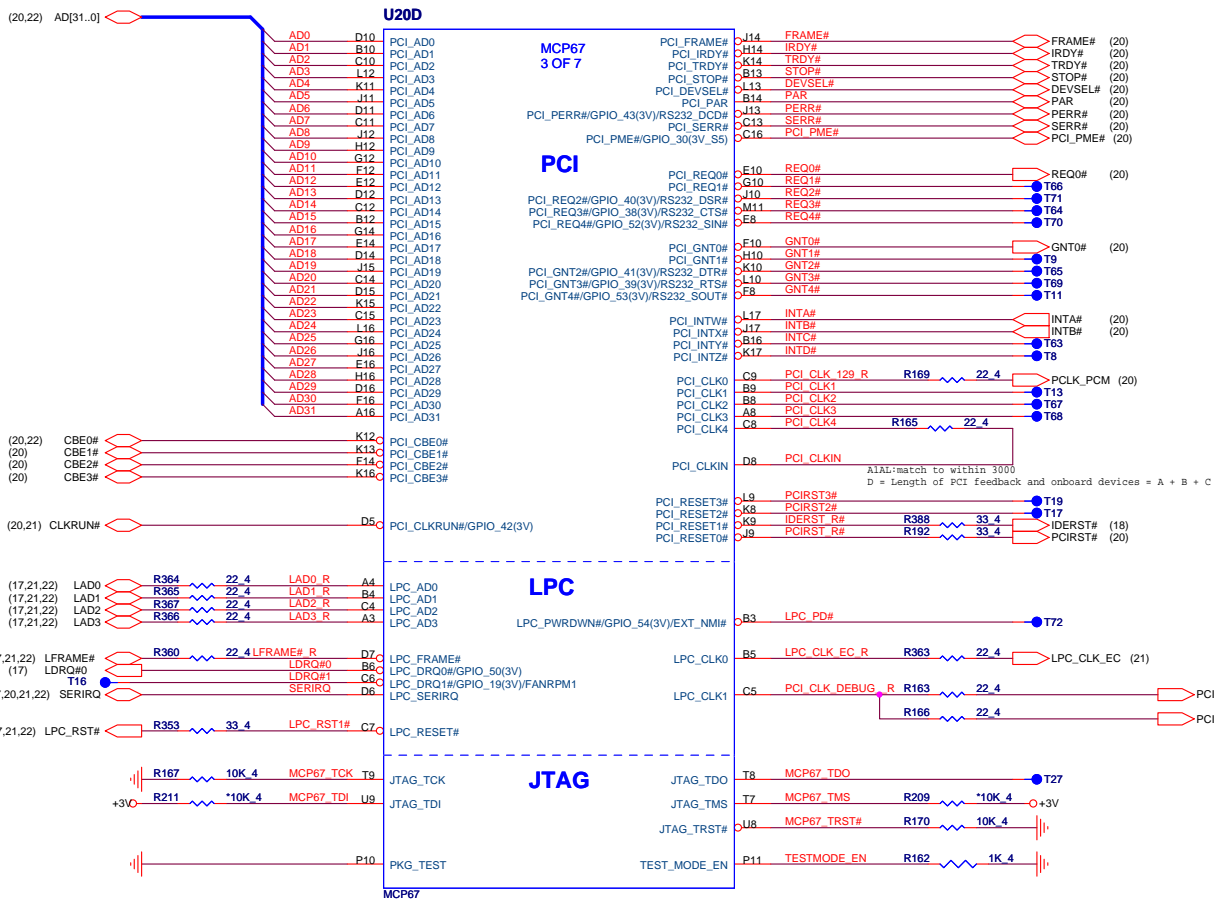
ERR/IGPU_GPIO_6 (U11) to **MCP67_GPIO6** (R168) with a $2K$ resistor to $+3V$.

ERR/IGPU_GPIO_7 (T11) to **MCP67_GPIO7** (R139) with a $2K$ resistor to $+3V$.

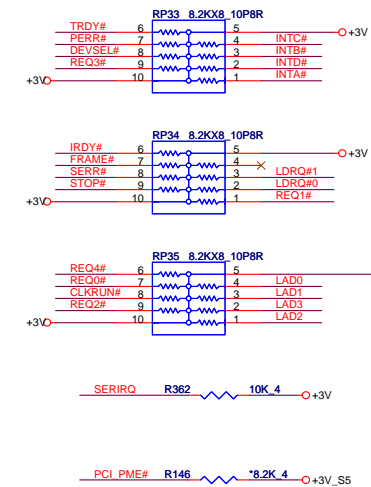
HPLUG_DET3 (AE26) to **HPLUG_DET3** (R109) with a $22K$ resistor to ground.

C3A: Remove C77,R331 for Nvidia suggest

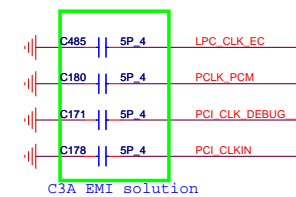
FOR DVI IS NOT IMPLEMENTED



PCI/LPC PULL-UP

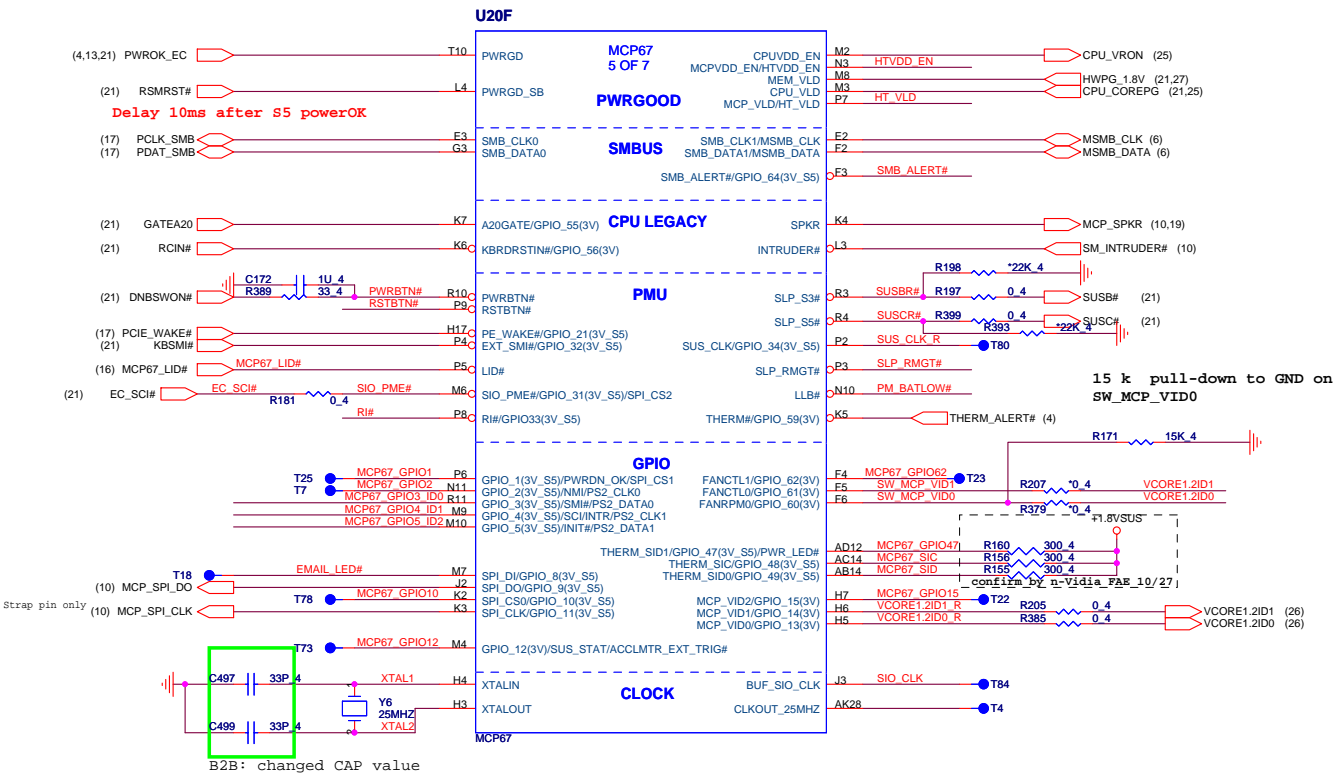


CLOCK BYPASS

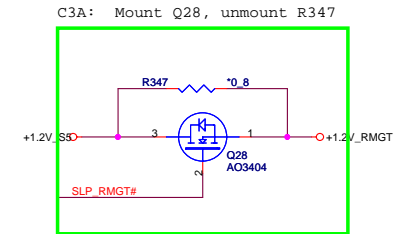


PROJECT : ZO3
Quanta Computer Inc.

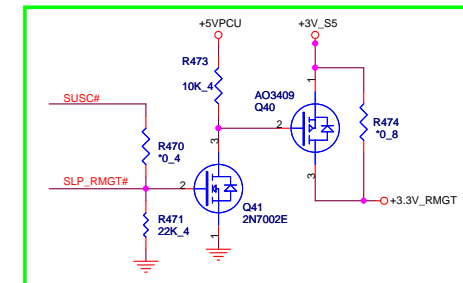
| | | |
|-------|----------------------------|---------------|
| Size | Document Number | Rev |
| | MCP67(PCI/LPC/JTAG) | 1A |
| Date: | Wednesday, April 25, 2007 | Sheet 9 of 30 |



FOR SLEEP MODE CORE POWER CIRCUIT



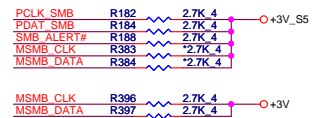
C3A: Mount Q40, Q41, R473, R471, unmount RR74



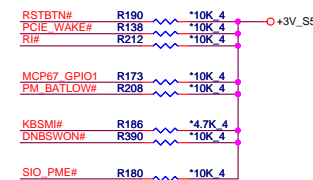
CPU LEGACY PULL-UP



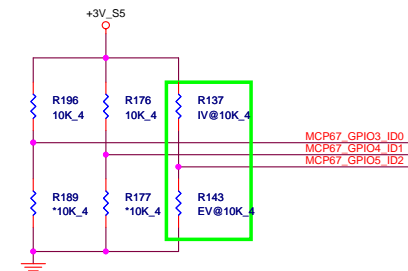
SMB/I2C PULL-UP



PMU PULL-UP

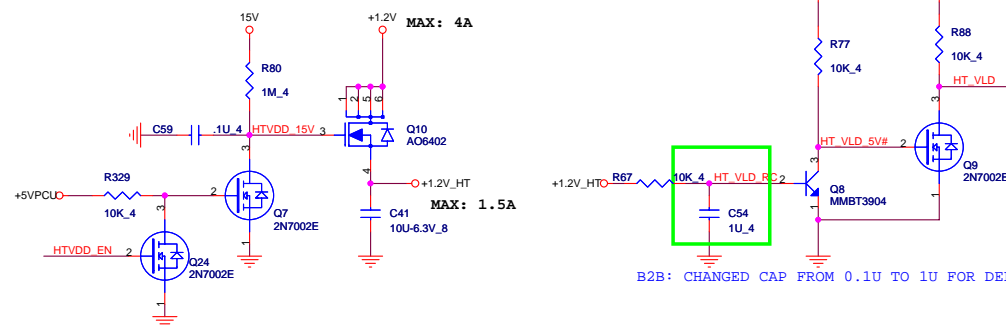


M/B ID for 14"/15"/17"



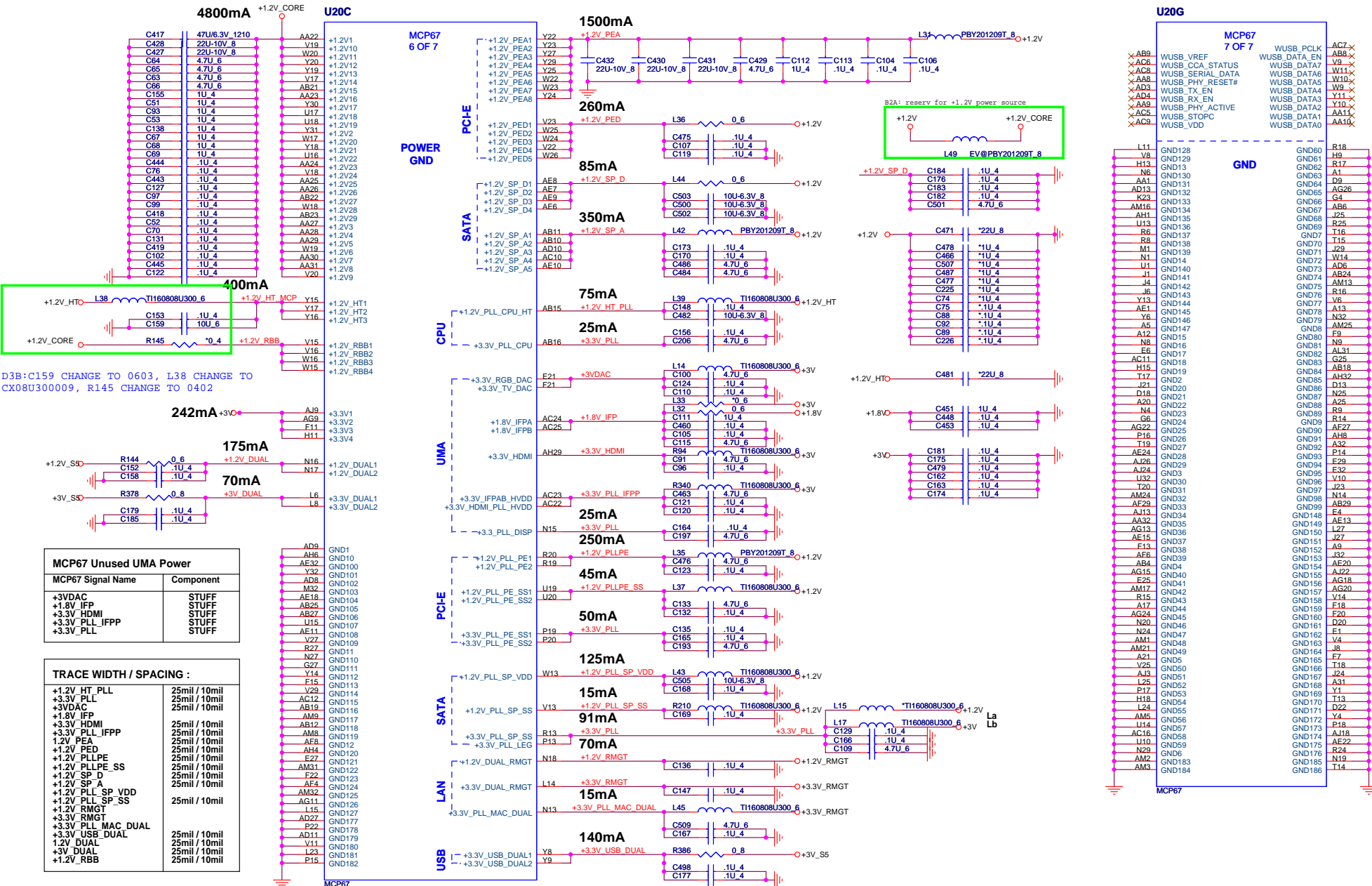
| ID0 | ID1 | ID2 | M/B |
|-----|-----|-----|-------|
| 0 | 0 | 0 | 17" D |
| 0 | 0 | 1 | X |
| 0 | 1 | 0 | 15" D |
| 1 | 0 | 0 | 15" U |
| 1 | 0 | 1 | X |
| 1 | 1 | 0 | 14" D |
| 1 | 1 | 1 | 14" U |

HyperTransport Link 1.2 V_HT Power Valid



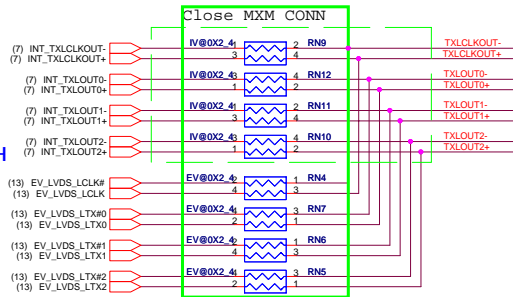
B2B: CHANGED CAP FROM 0.1U TO 1U FOR DELAY HT_VLD

MCP67 POWER PLANE/GND & BYPASS

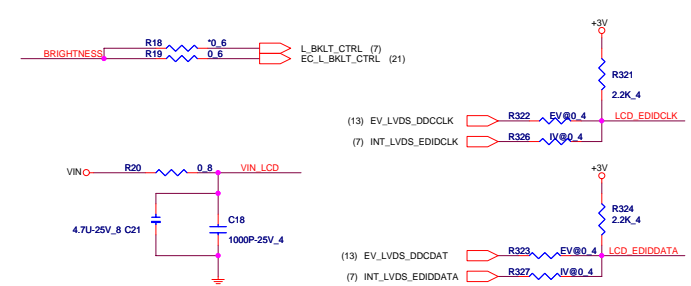
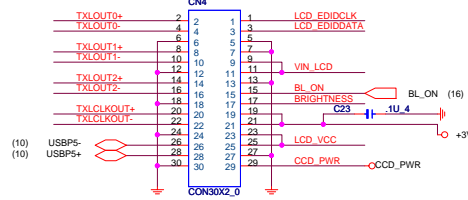


LVDS

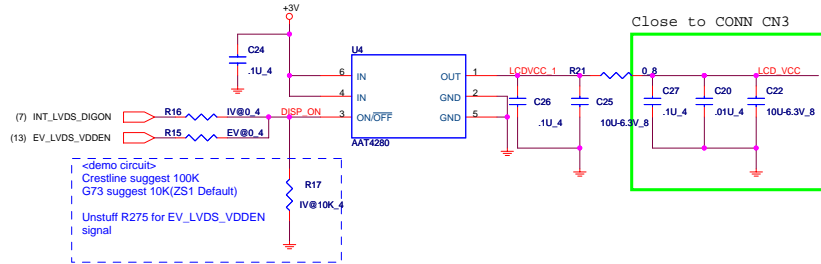
SINGLE_CH



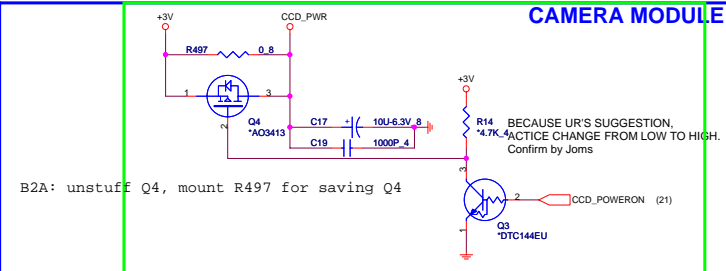
Edison-- 1025 Modify the LVDS pin definition



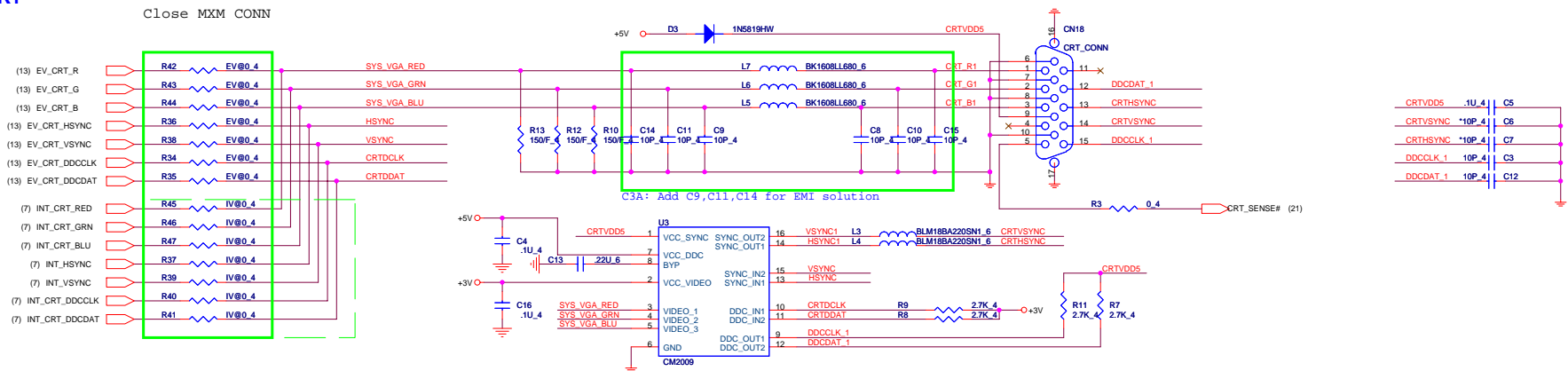
LCD POWER



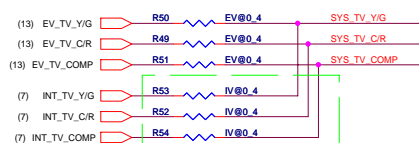
CAMERA MODULE POWER



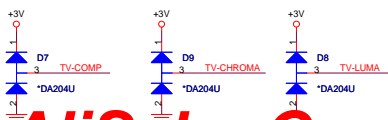
CRT



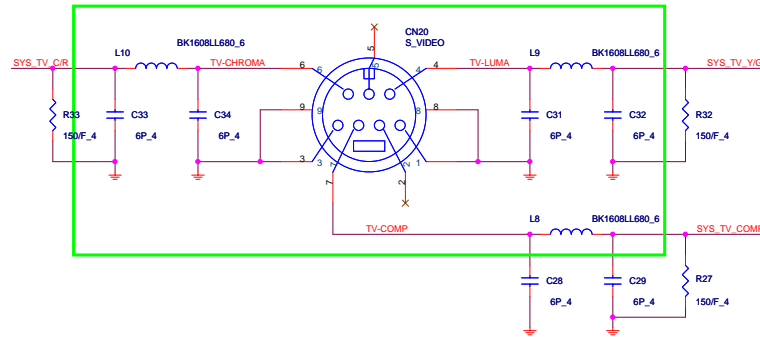
TV Out (SVHS) MiniDIN 7-pin



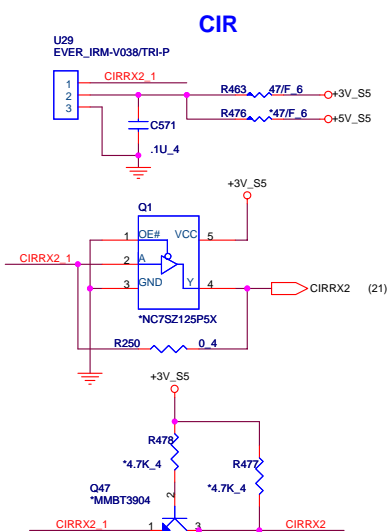
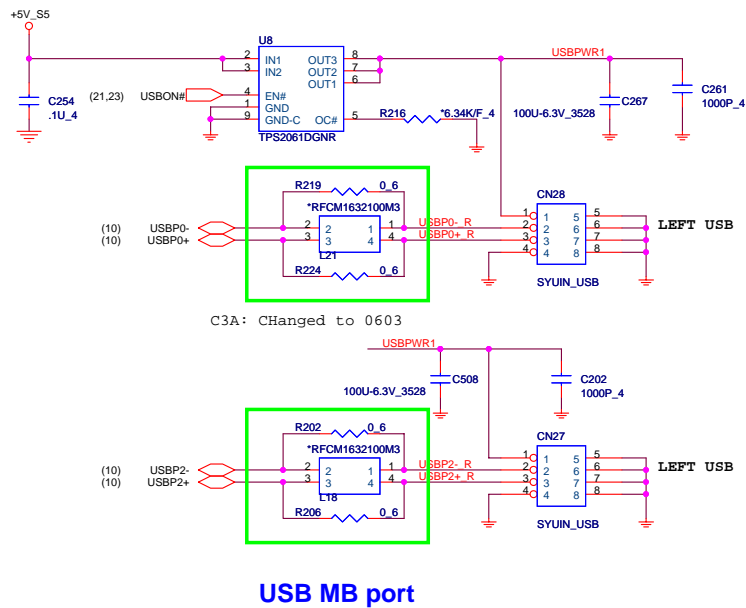
ESD Protect



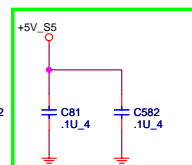
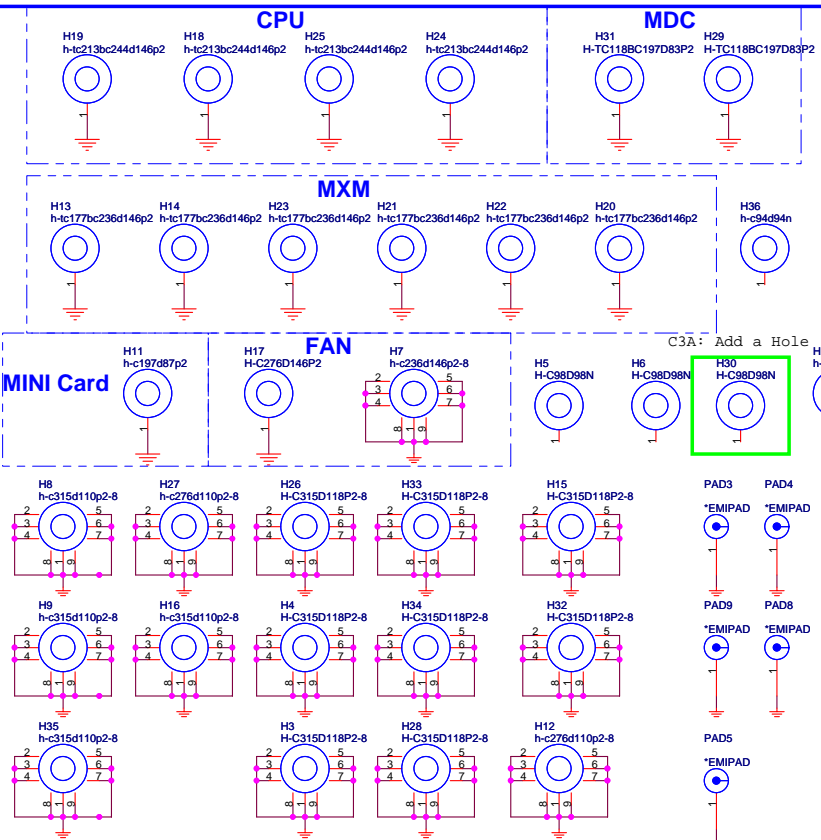
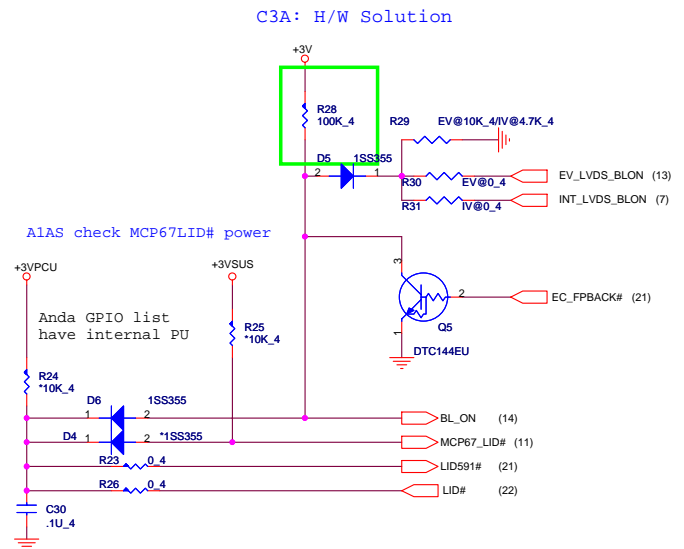
D3B: Change L8,L9,L10 P/N



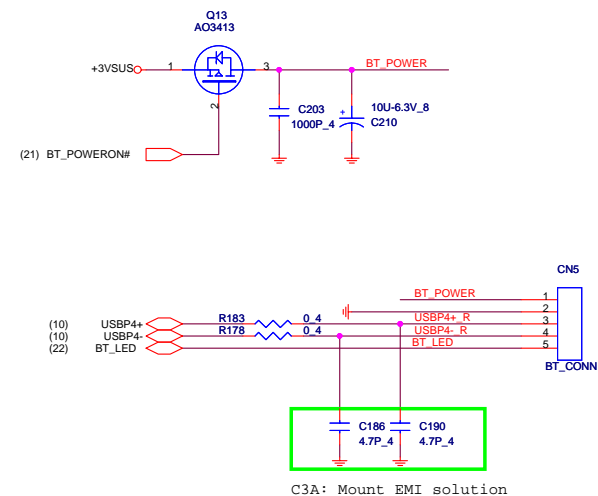
Remove HDMI



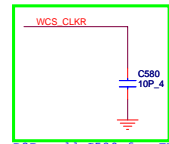
LID SWITCH



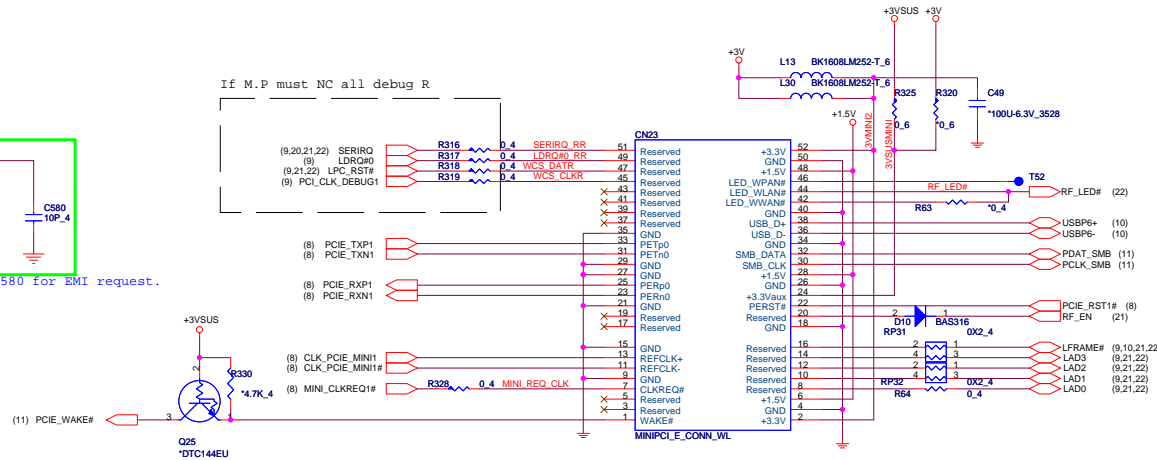
BLUETOOTH MODULE CONNECTOR



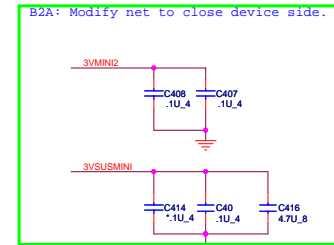
MINI-Card



D3B: add C580 for EMI request.



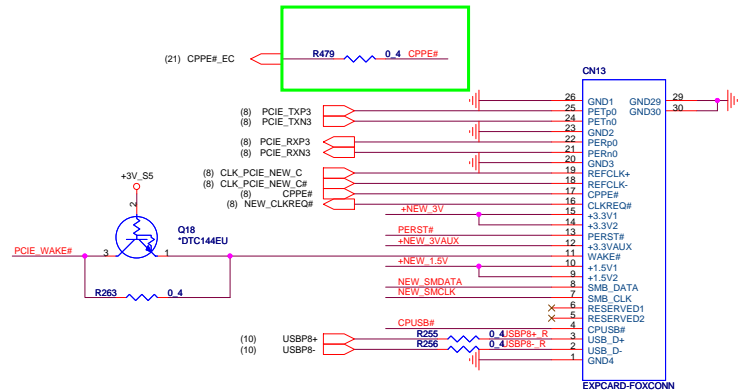
Need reserve 3G pin define
Check Footprint



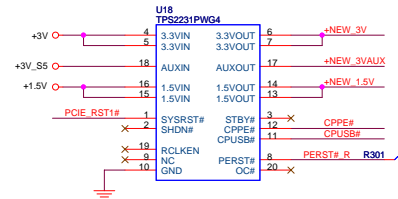
B2A: Modify net to close device side.

New card

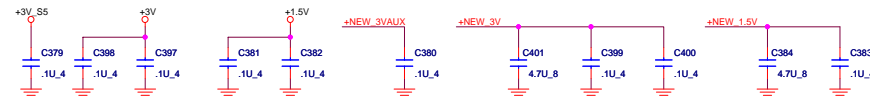
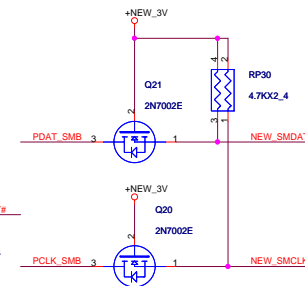
D3B: Add R479 for NEW card CPPE#



NEW CARD'S POWER SWITCH



CPPE# : (Internal Pull Up , active low when card support PCIE)
CPUSB# : (Internal Pull Up , active low when card support USB)
SHDN# : (Internal Pull Up)



TP CONN

(21) TPDATA
(21) TPCLK

R215 4.7K 4
R214 4.7K 4 +5V

L19 LZA10-2ACB104MT 6 0.1A
L20 LZA10-2ACB104MT 6 0.1A

+5V L46 BKP1608HS181T_6_1.5A
C511 .1U 4

EMI near CN15

TPDATA C231 12P 4
TPCLK C224 12P 4

CN8

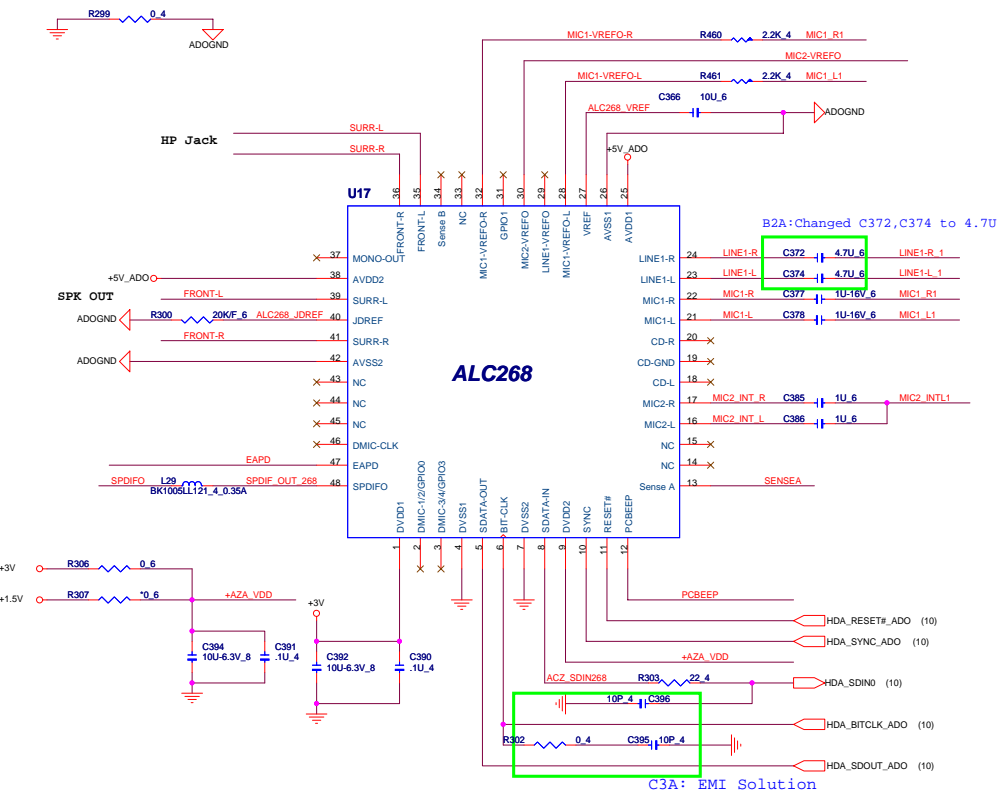
| | |
|----|------------|
| 1 | TP VCC |
| 2 | |
| 3 | TPDATA_R |
| 4 | TPCLK_R |
| 5 | |
| 6 | RIGHT# |
| 7 | SCR_RIGHT# |
| 8 | SCR_UP# |
| 9 | SCR_LEFT# |
| 10 | SCR_DN# |
| 11 | LEFT# |
| 12 | |

TOUCH_PAD_TP_12P

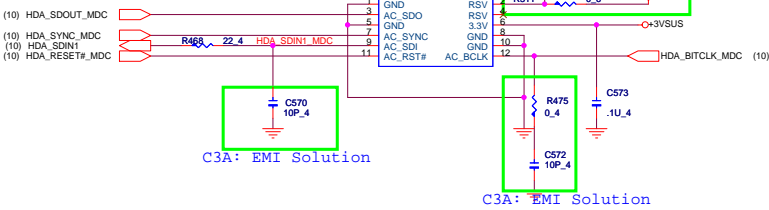
C3A: Add EMI solution

[illegible]

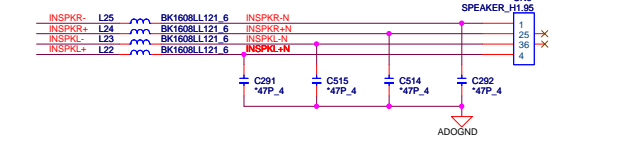
CODEC (ALC268)



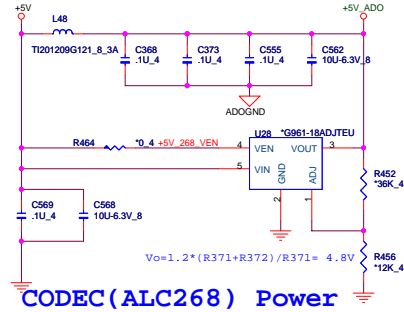
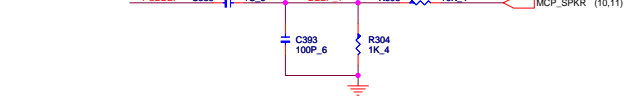
MDC



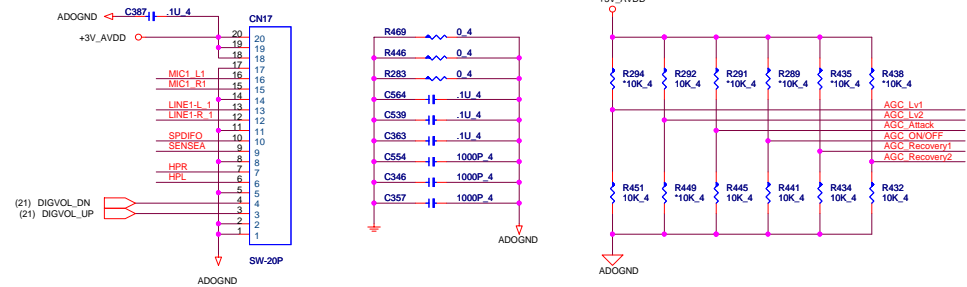
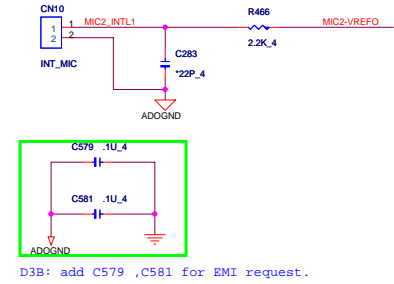
SPK



Beep



```
INT MIC array
```



AGC-attack-time selection

| AGC_Attack (4 pin) | Attack time |
|--------------------|-------------|
| LOW | 1 ms |
| Hi | 2 ms |

AGC ON/OFF selection

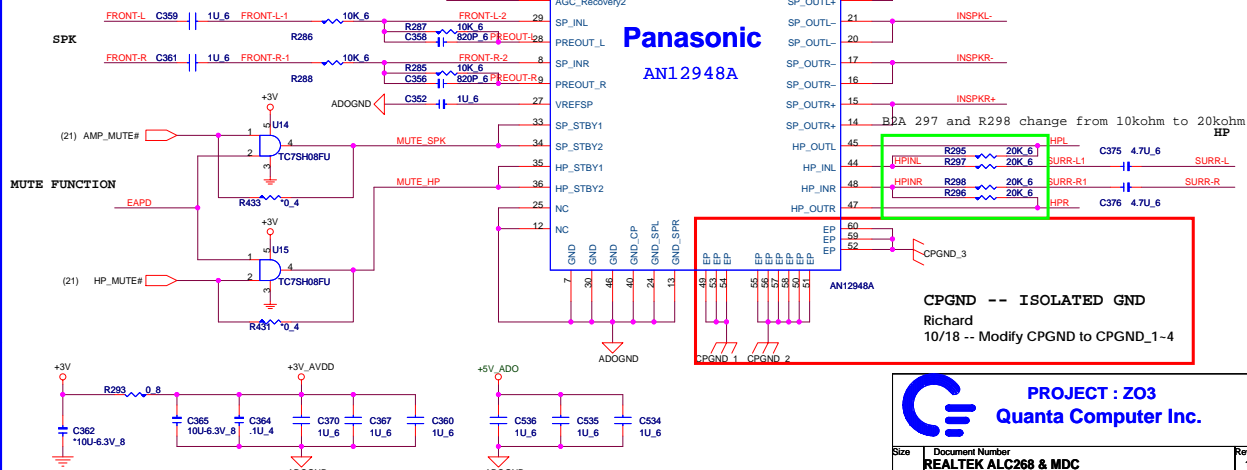
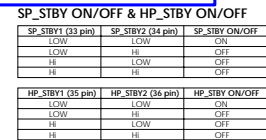
| AGC_ON/OFF (6 pin) | AGC ON/OFF |
|--------------------|------------|
| LOW | ON |
| Hi | OFF |

AGC-recovery-time selection

| AGC_Recovery1 (10 pin) | AGC_Recovery2 (11 pin) | Recovery Time |
|------------------------|------------------------|---------------|
| LOW | LOW | 1.0 s |
| LOW | HI | 2.0 s |
| HI | LOW | 4.0 s |
| HI | HI | 8.0 s |

AGC-on-level selection

| AGC, Lv1 (2 pin) | AGC, Lv2 (3 pin) | AGC ON Level | Output Po (RL=8 ohm) |
|------------------|------------------|--------------|----------------------|
| LOW | LOW | 9.8 dBV | 1.2 W |
| LOW | Hi | 9.0 dBV | 1.0 W |
| Hi | LOW | 8.1 dBV | 0.8 W |
| Hi | Hi | 6.0 dBV | 0.5 W |



PROJECT : ZO3
Quanta Computer Inc.

