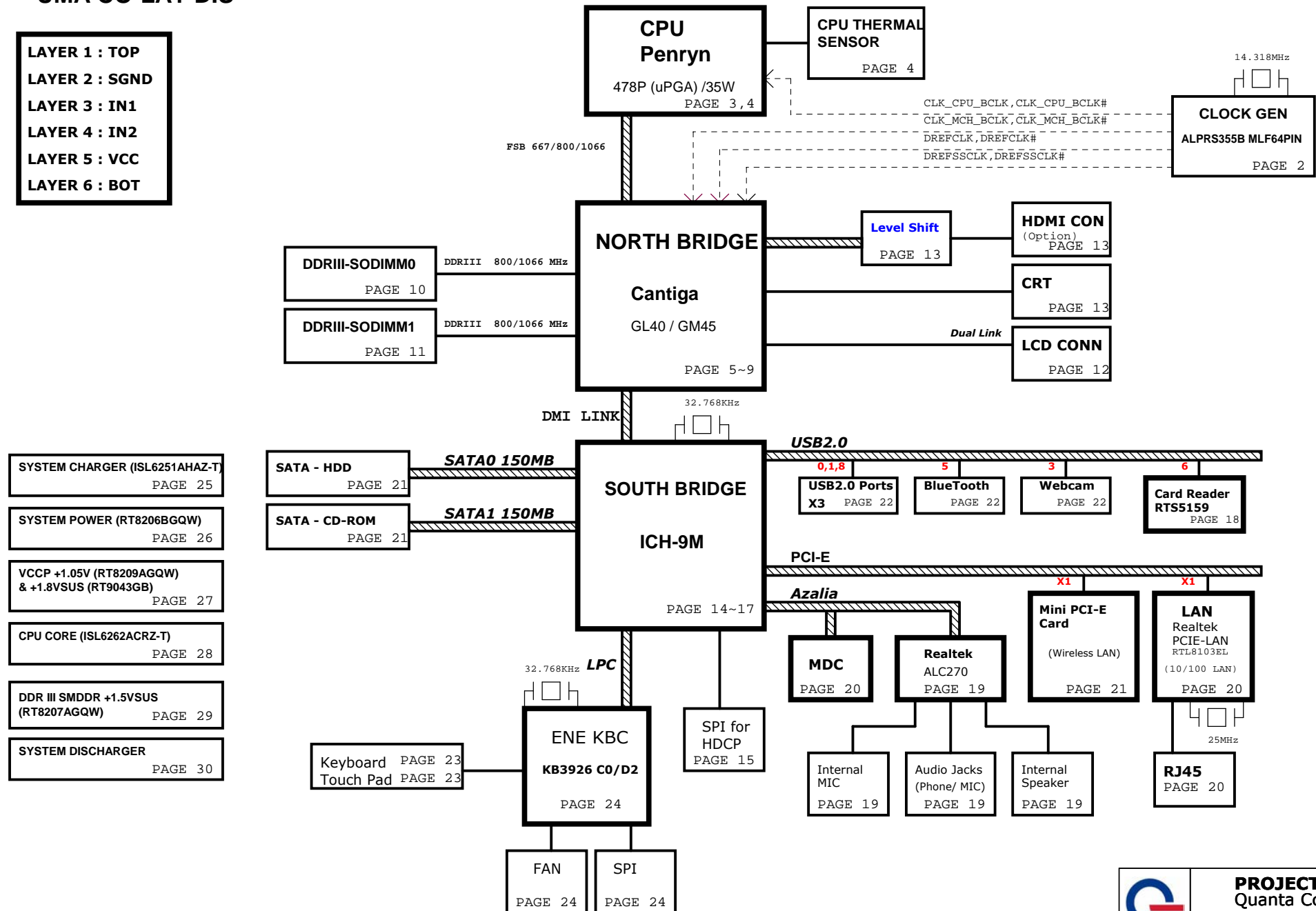
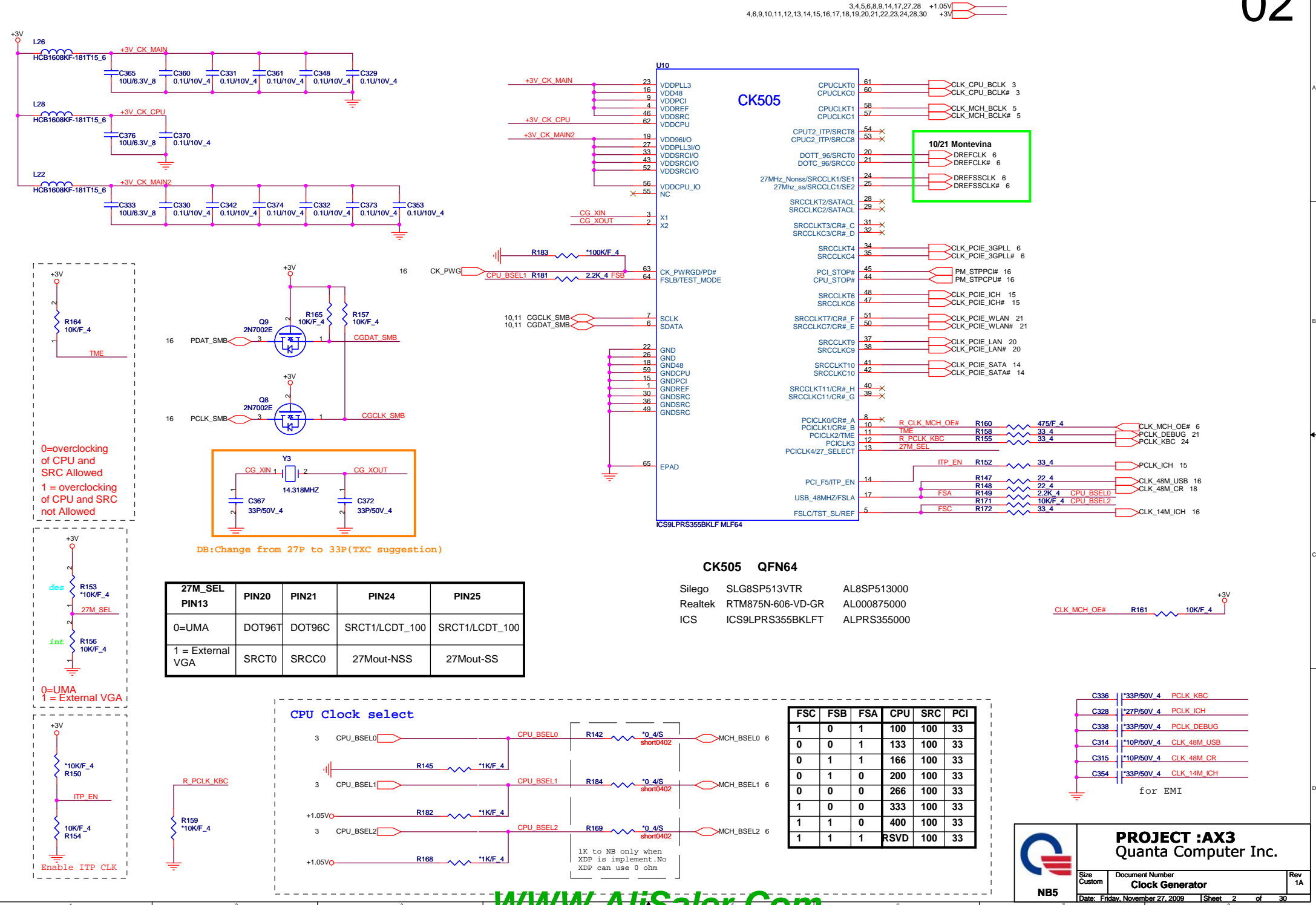


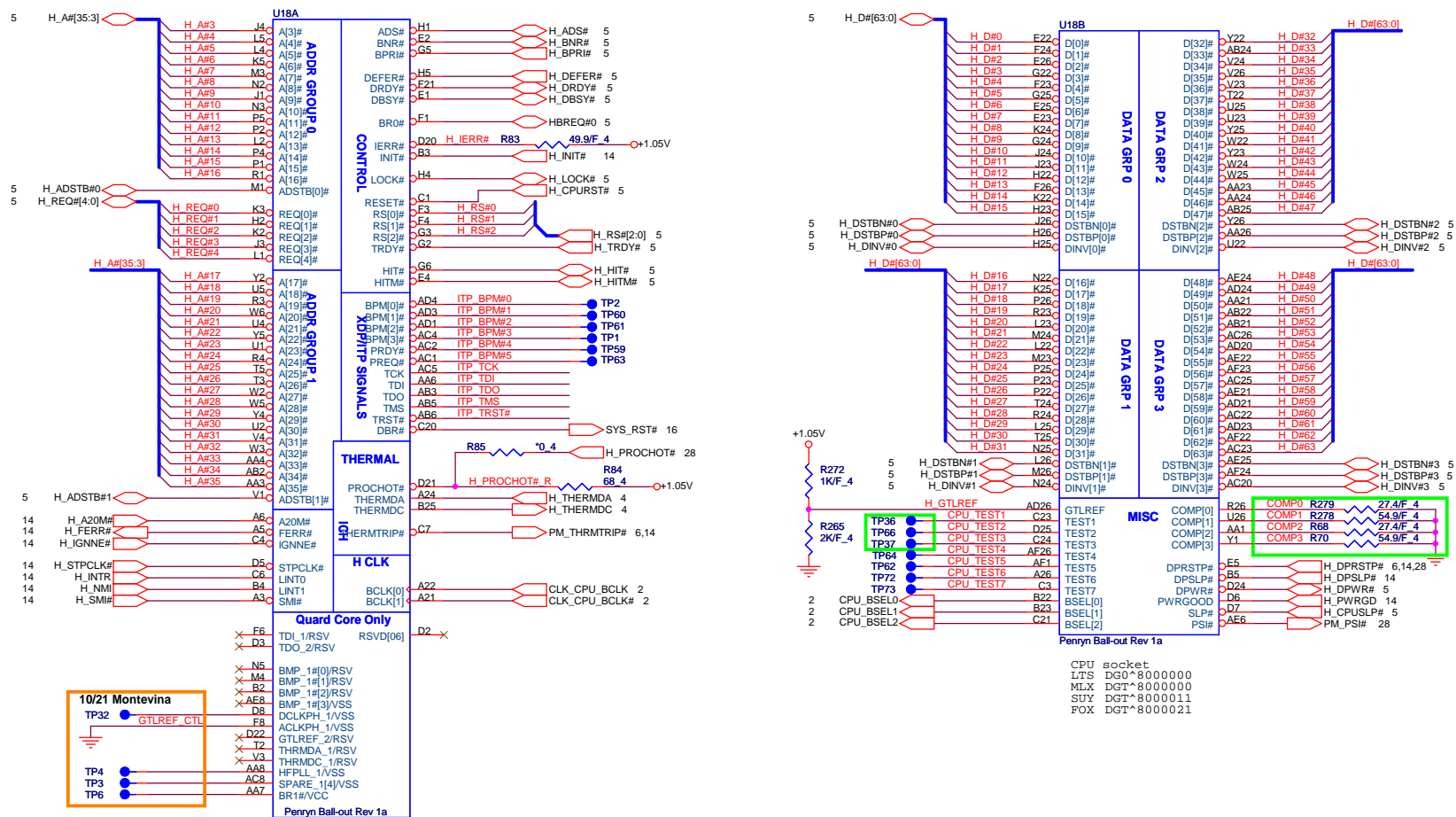
PCB STACK UP
6L UMA CO-LAY DIS

LAYER 1 : TOP
LAYER 2 : SGND
LAYER 3 : IN1
LAYER 4 : IN2
LAYER 5 : VCC
LAYER 6 : BOT

Wimbledon AX3/5 BLOCK DIAGRAM

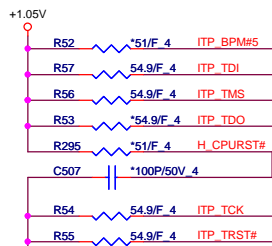






10/21 Montevina

Populate ITP700Flex for bringup



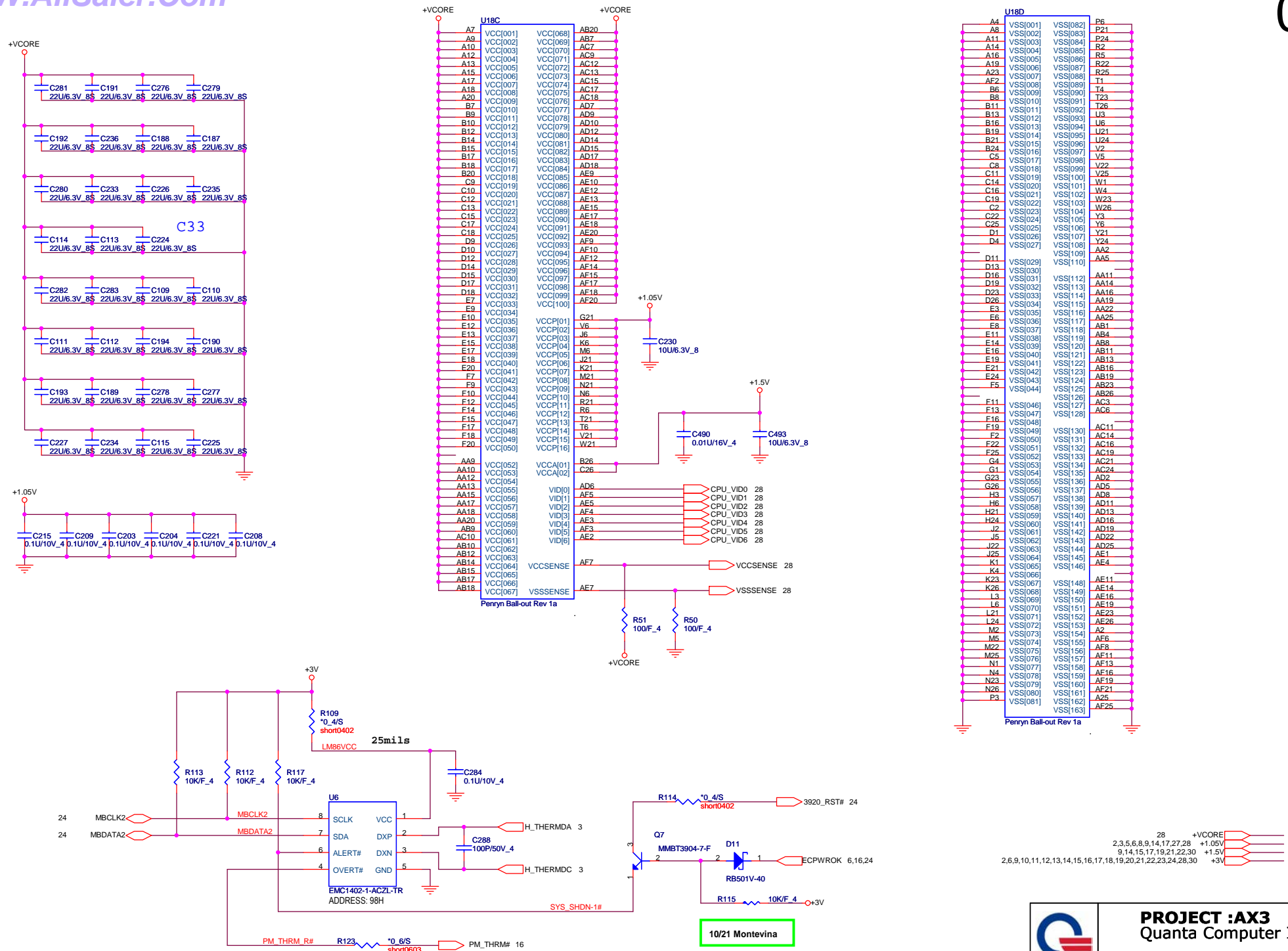
| | COMP0/2 | COMP1/3 |
|-----------|---------------------------|---------------------------|
| Dual Core | 27.4 Ohm (CS02742FB19) | 54.9 Ohm (CS05492FB19) |
| Quad Core | 24.9 Ohm (CS02492FB29) | 49.9 Ohm (CS04992FB31) |

2,4,5,6,8,9,14,17,27,28 +1.05V

PROJECT :AX3
Quanta Computer Inc.

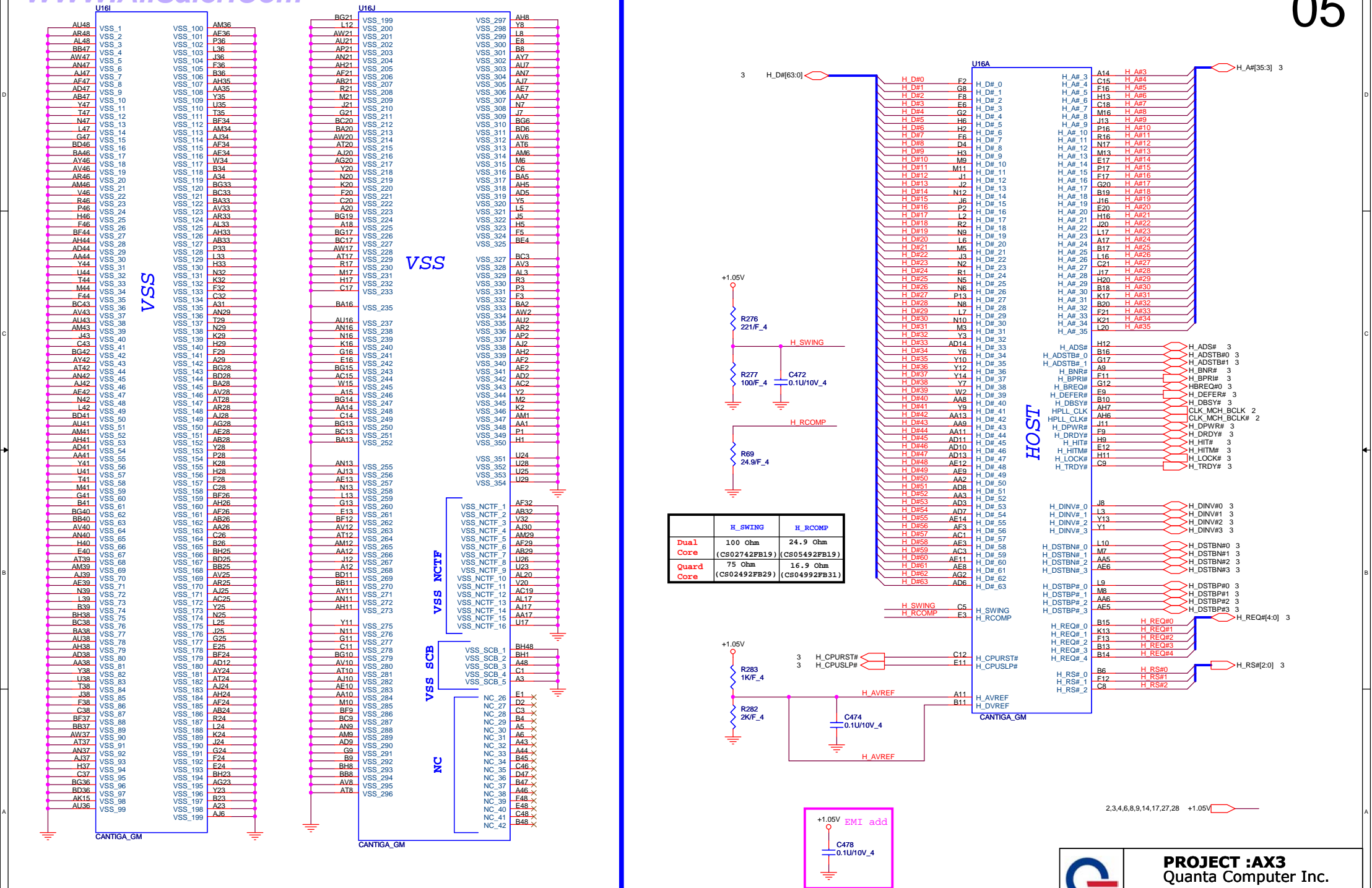
Size Custom Document Number Penryn Host 1/2 Rev 1A

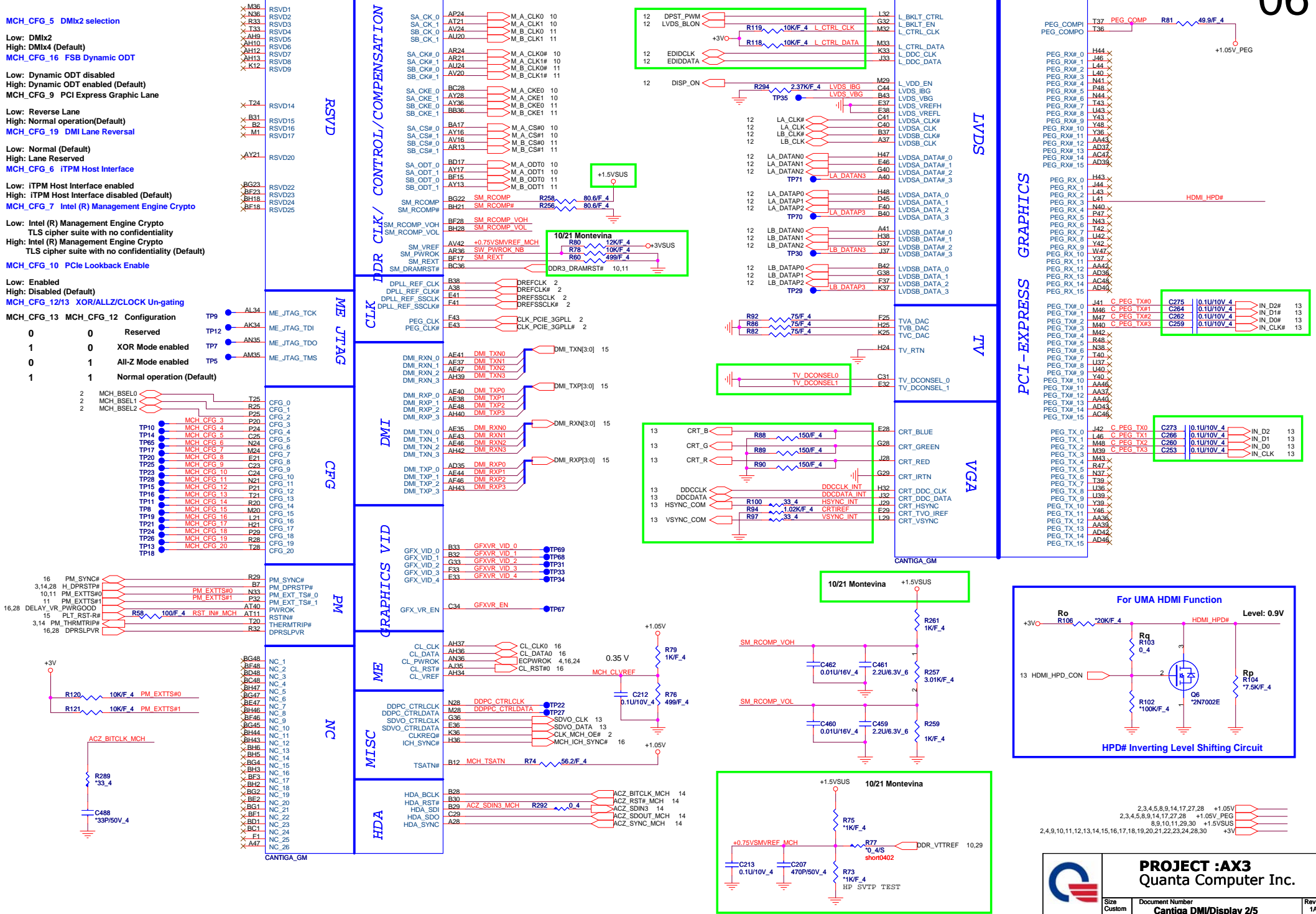
Date: Friday, November 27, 2009 Sheet 3 of 30

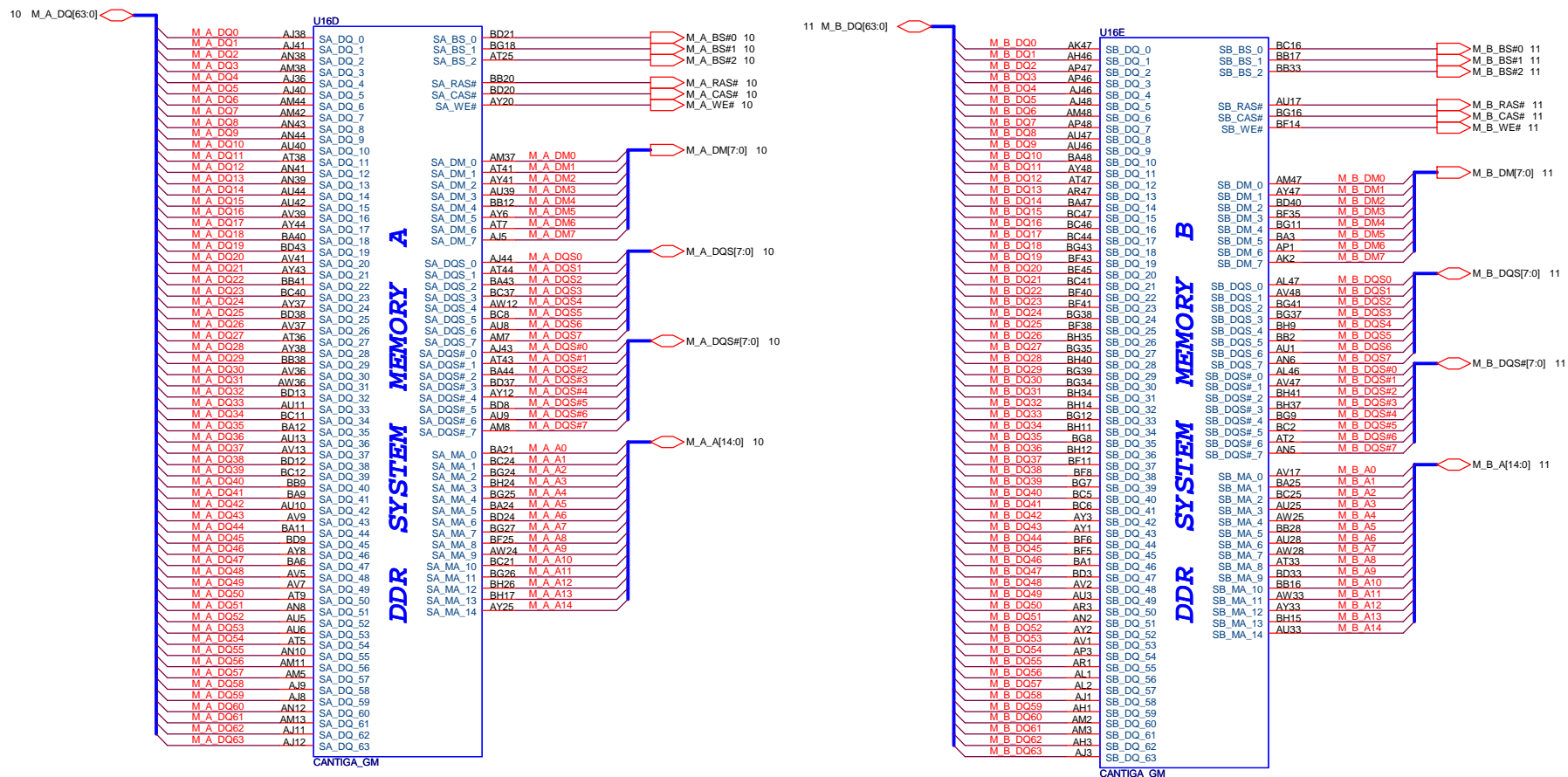


PROJECT :AX3
Quanta Computer Inc.

| Size | Document Number | Rev |
|---------------------------------|-------------------------|-----|
| Custom | Penryn & TH Monitor 2/2 | 1A |
| Date: Friday, November 27, 2009 | Sheet 4 of 30 | |







PROJECT :AX3
Quantia Computer Inc.

| | | |
|---------------------------------|--|---------------|
| Size Custom | Document Number Cantiga DDR3 3/5 | Rev 1A |
| Date: Friday, November 27, 2009 | | Sheet 7 of 30 |

10/21 Montevina +1.5VSUS

2600mA

VCC_SM_36 through VCC_SM_42 can be left as NC for DDR2 desigins.

VCC_SM_36
VCC_SM_37
VCC_SM_38
VCC_SM_40
VCC_SM_42

+1.05V

+1.05V
R65 10.4
VCC_AXG_SENSE AI14
VSS_AXG_SENSE AH14
R64 10.4

U16G

POWER

VCC SM

VCC GFX NCTF

VCC GFX

VCC SM LF

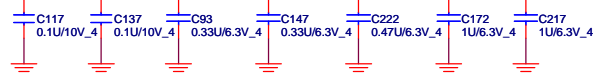
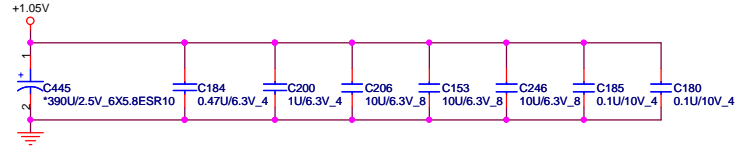
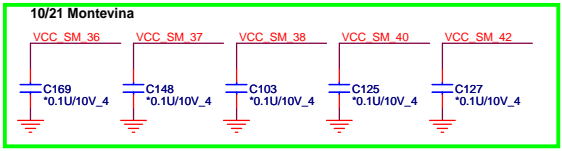
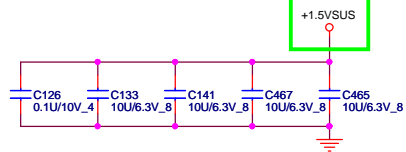
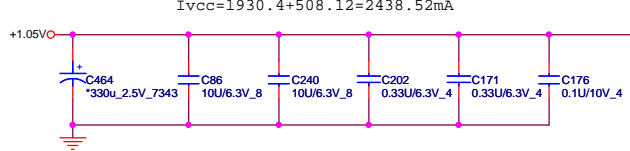
CANTIGA_GM

VCC_AXG_NCTF_1
VCC_AXG_NCTF_2
VCC_AXG_NCTF_3
VCC_AXG_NCTF_4
VCC_AXG_NCTF_5
VCC_AXG_NCTF_6
VCC_AXG_NCTF_7
VCC_AXG_NCTF_8
VCC_AXG_NCTF_9
VCC_AXG_NCTF_10
VCC_AXG_NCTF_11
VCC_AXG_NCTF_12
VCC_AXG_NCTF_13
VCC_AXG_NCTF_14
VCC_AXG_NCTF_15
VCC_AXG_NCTF_16
VCC_AXG_NCTF_17
VCC_AXG_NCTF_18
VCC_AXG_NCTF_19
VCC_AXG_NCTF_20
VCC_AXG_NCTF_21
VCC_AXG_NCTF_22
VCC_AXG_NCTF_23
VCC_AXG_NCTF_24
VCC_AXG_NCTF_25
VCC_AXG_NCTF_26
VCC_AXG_NCTF_27
VCC_AXG_NCTF_28
VCC_AXG_NCTF_29
VCC_AXG_NCTF_30
VCC_AXG_NCTF_31
VCC_AXG_NCTF_32
VCC_AXG_NCTF_33
VCC_AXG_NCTF_34
VCC_AXG_NCTF_35
VCC_AXG_NCTF_36
VCC_AXG_NCTF_37
VCC_AXG_NCTF_38
VCC_AXG_NCTF_39
VCC_AXG_NCTF_40
VCC_AXG_NCTF_41
VCC_AXG_NCTF_42
VCC_AXG_NCTF_43
VCC_AXG_NCTF_44
VCC_AXG_NCTF_45
VCC_AXG_NCTF_46
VCC_AXG_NCTF_47
VCC_AXG_NCTF_48
VCC_AXG_NCTF_49
VCC_AXG_NCTF_50
VCC_AXG_NCTF_51
VCC_AXG_NCTF_52
VCC_AXG_NCTF_53
VCC_AXG_NCTF_54
VCC_AXG_NCTF_55
VCC_AXG_NCTF_56
VCC_AXG_NCTF_57
VCC_AXG_NCTF_58
VCC_AXG_NCTF_59
VCC_AXG_NCTF_60

VCC_SM_1
VCC_SM_2
VCC_SM_3
VCC_SM_4
VCC_SM_5
VCC_SM_6
VCC_SM_7
VCC_SM_8
VCC_SM_9
VCC_SM_10
VCC_SM_11
VCC_SM_12
VCC_SM_13
VCC_SM_14
VCC_SM_15
VCC_SM_16
VCC_SM_17
VCC_SM_18
VCC_SM_19
VCC_SM_20
VCC_SM_21
VCC_SM_22
VCC_SM_23
VCC_SM_24
VCC_SM_25
VCC_SM_26
VCC_SM_27
VCC_SM_28
VCC_SM_29
VCC_SM_30
VCC_SM_31
VCC_SM_32
VCC_SM_33
VCC_SM_34
VCC_SM_35
VCC_SM_36/NC
VCC_SM_37/NC
VCC_SM_38/NC
VCC_SM_39/NC
VCC_SM_40/NC
VCC_SM_41/NC
VCC_SM_42/NC

AV44 +VCCSM LF1
BA37 +VCCSM LF2
AM40 +VCCSM LF3
AV21 +VCCSM LF4
AY5 +VCCSM LF5
AM10 +VCCSM LF6
BB13 +VCCSM LF7

+1.05V
Ivcc_axg=6326.84mA



U16F

POWER

VCC CORE

VCC NCTF

CANTIGA_GM

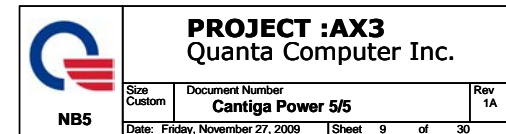
VCC_NCTF_1
VCC_NCTF_2
VCC_NCTF_3
VCC_NCTF_4
VCC_NCTF_5
VCC_NCTF_6
VCC_NCTF_7
VCC_NCTF_8
VCC_NCTF_9
VCC_NCTF_10
VCC_NCTF_11
VCC_NCTF_12
VCC_NCTF_13
VCC_NCTF_14
VCC_NCTF_15
VCC_NCTF_16
VCC_NCTF_17
VCC_NCTF_18
VCC_NCTF_19
VCC_NCTF_20
VCC_NCTF_21
VCC_NCTF_22
VCC_NCTF_23
VCC_NCTF_24
VCC_NCTF_25
VCC_NCTF_26
VCC_NCTF_27
VCC_NCTF_28
VCC_NCTF_29
VCC_NCTF_30
VCC_NCTF_31
VCC_NCTF_32
VCC_NCTF_33
VCC_NCTF_34
VCC_NCTF_35
VCC_NCTF_36
VCC_NCTF_37
VCC_NCTF_38
VCC_NCTF_39
VCC_NCTF_40
VCC_NCTF_41
VCC_NCTF_42
VCC_NCTF_43
VCC_NCTF_44

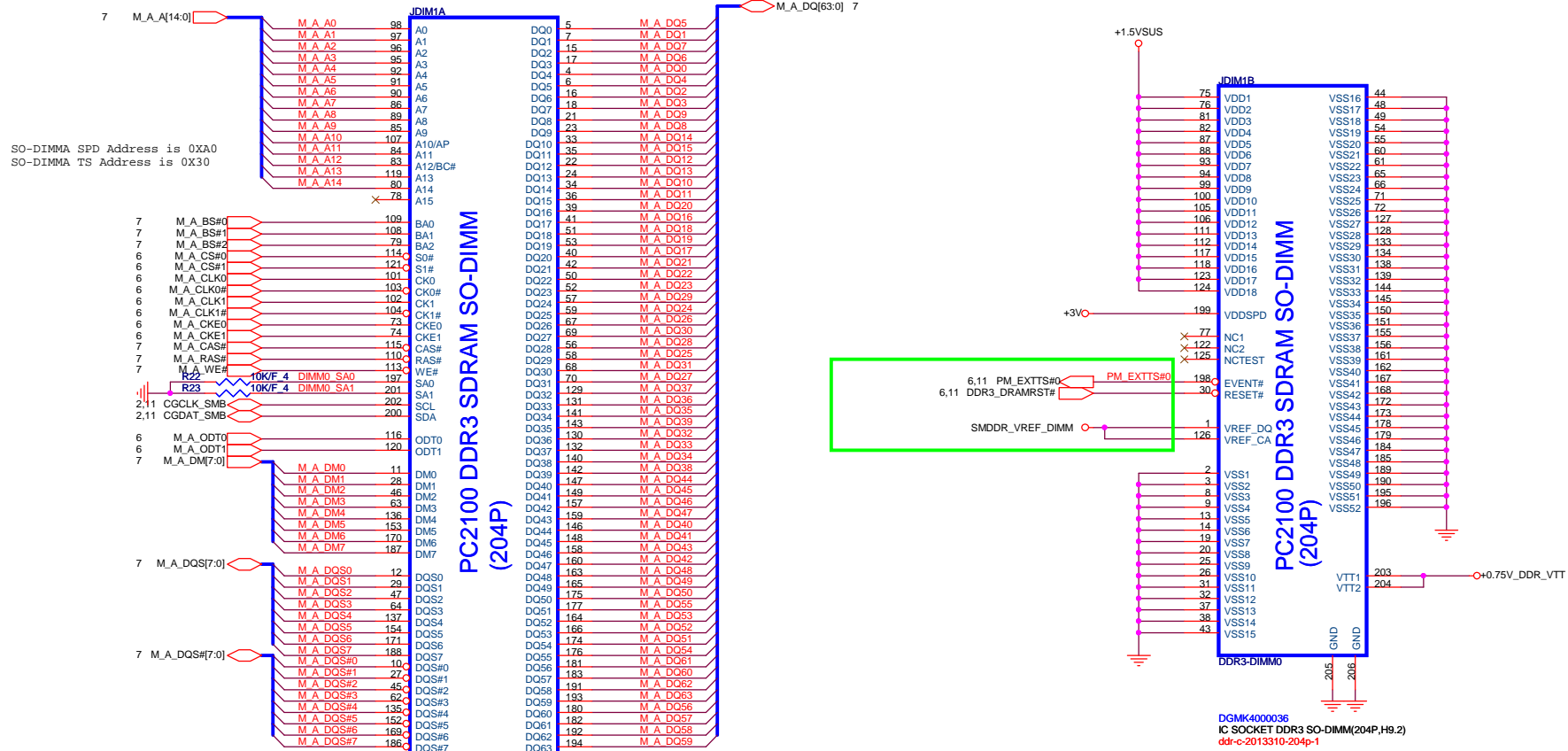
+1.05V

2,3,4,5,6,9,14,17,27,28 +1.05V
6,9,10,11,29,30 +1.5VSUS

PROJECT :AX3
Quanta Computer Inc.

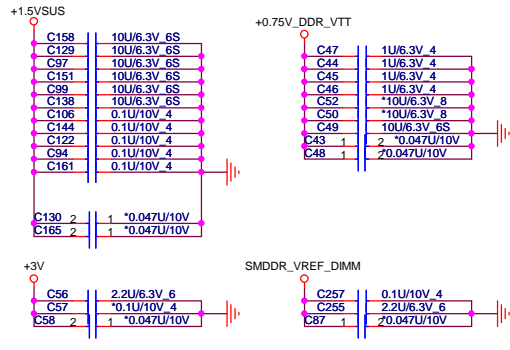
| | | |
|---------------------------------|-----------------|--------|
| Size Custom | Document Number | Rev 1A |
| Cantiga VCC 4/5 | | |
| Date: Friday, November 27, 2009 | Sheet 8 of 30 | |

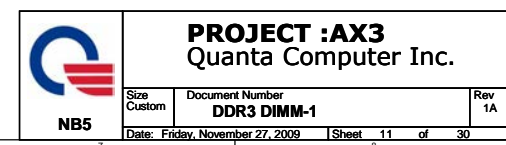
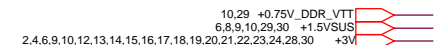




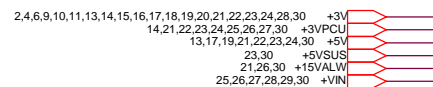
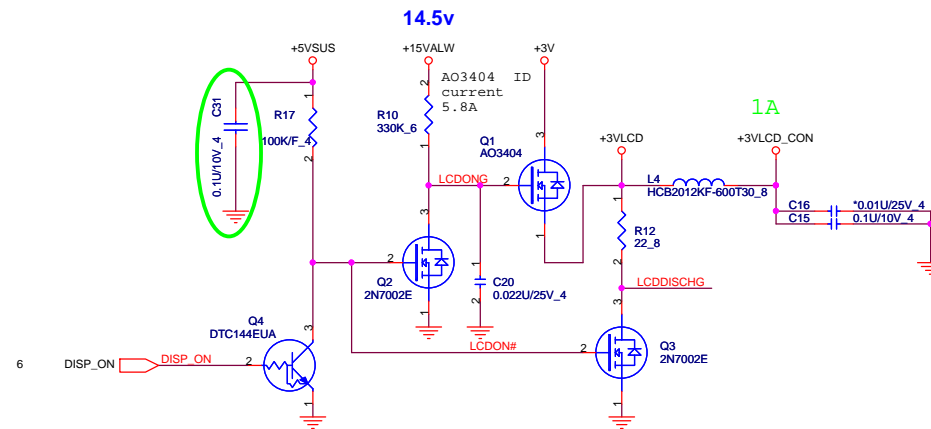
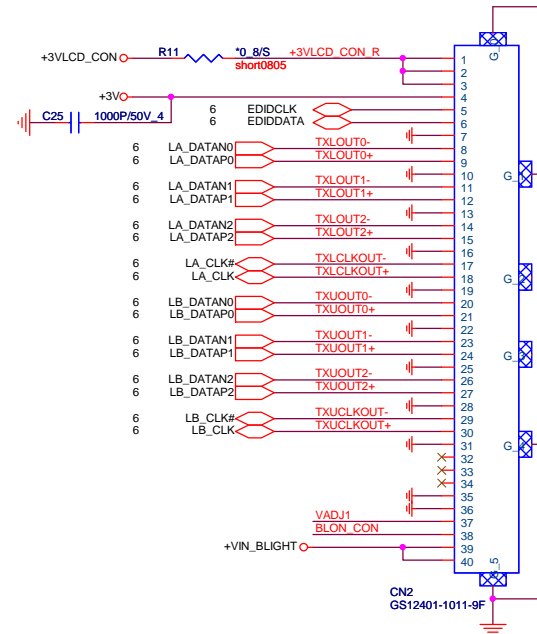
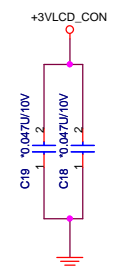
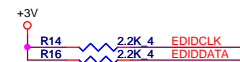
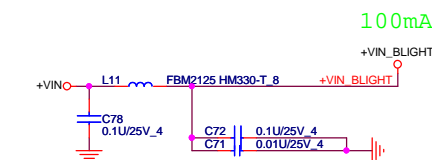
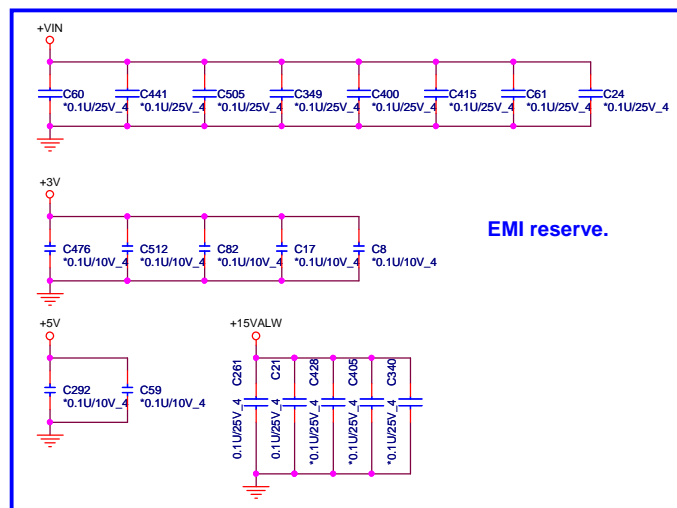
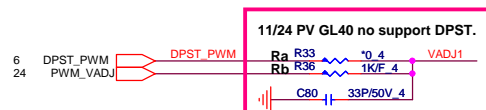
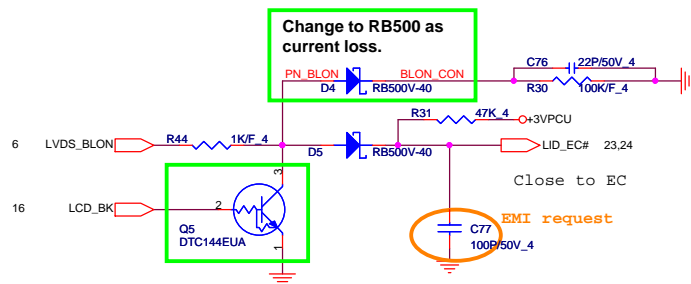
Place these Caps near So-Dimm0.

Some Projects replace 10UF 0805 by 4.7UF 0603
It can cost down 30%





LID Switch

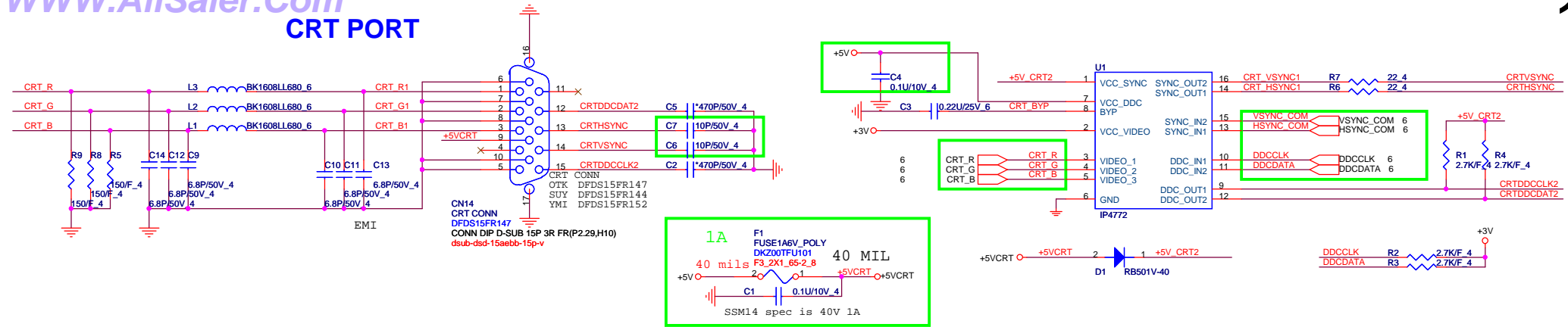


PROJECT :AX3
Quanta Computer Inc.

NB5

Size Custom Document Number **LCD CONN/LID** Rev 1A

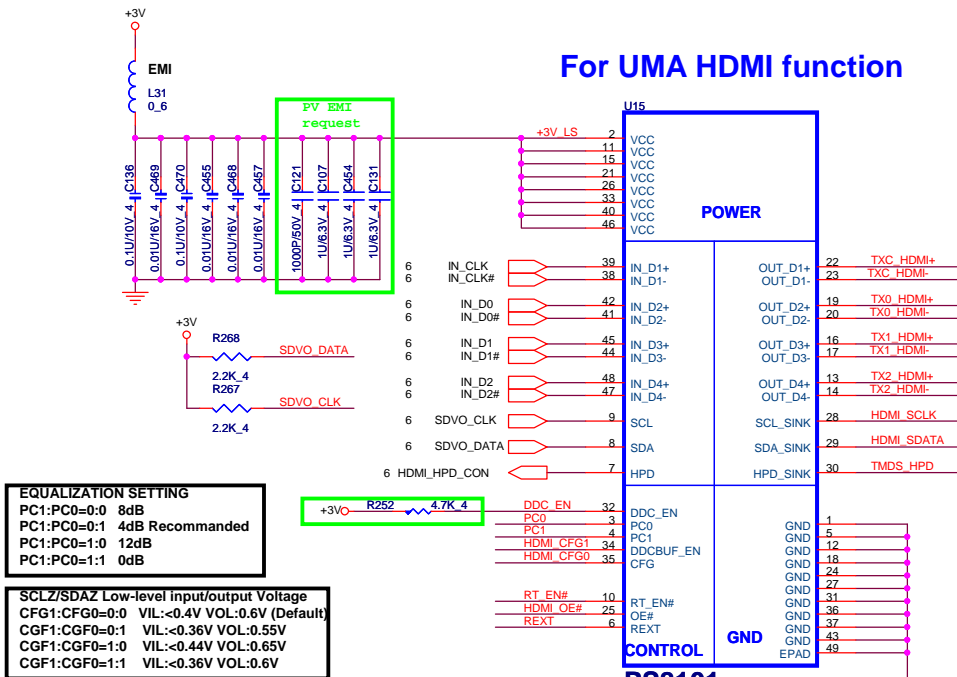
Date: Friday, November 27, 2009 Sheet 12 of 30



For UMA HDMI function

9/16 : PIM: need use ALP411LS000 or ALP411LS004 for capella
CHR : need Na R1182, add R1027 for capella

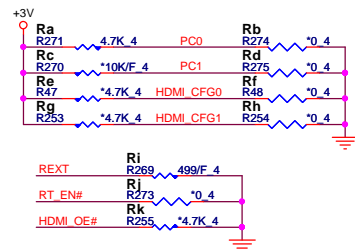
Vendor:PDT P/N:AL008101001
Vendor:CHR P/N:AL007318002
Vendor:PIM P/N:ALP411LS002



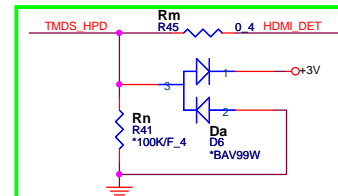
EQUALIZATION SETTING
PC1:PC0=0:0 8dB
PC1:PC0=0:1 4dB Recommended
PC1:PC0=1:0 12dB
PC1:PC0=1:1 0dB

SCLZ/SDAZ Low-level input/output Voltage
CFG1:CFG0=0:0 VIL:<0.4V VOL:0.6V (Default)
CFG1:CFG0=0:1 VIL:<0.36V VOL:0.55V
CFG1:CFG0=1:0 VIL:<0.44V VOL:0.65V
CFG1:CFG0=1:1 VIL:<0.36V VOL:0.6V

| Signals | R | PDT | CHR | PIM |
|-----------|----|------|------|-----|
| PC0 | Ra | 4.7K | NC | NC |
| | Rb | NC | NC | 0 |
| PC1 | Rc | NC | 10K | NC |
| | Rd | NC | NC | 0 |
| HDMI_CFG0 | Re | NC | 10K | NC |
| | Rf | NC | NC | 0 |
| HDMI_CFG1 | Rg | NC | 10K | NC |
| | Rh | NC | NC | 0 |
| REXT | Ri | 499 | 1.2K | 0 |
| RT_EN# | Rj | NC | NC | 0 |
| HDMI_OE# | Rk | NC | 0 | 0 |



| Detect | R | PDT | CHR | PIM |
|------------|----|-----|-------|------|
| IC | Rm | 0 | 20K | 0 |
| | Rn | NC | 47K | NC |
| | Da | NC | Stuff | NC |
| | Ro | NC | 20K | 20K |
| NB (Page6) | Rp | NC | 7.5K | 7.5K |
| | Rq | 0 | 0 | 0 |



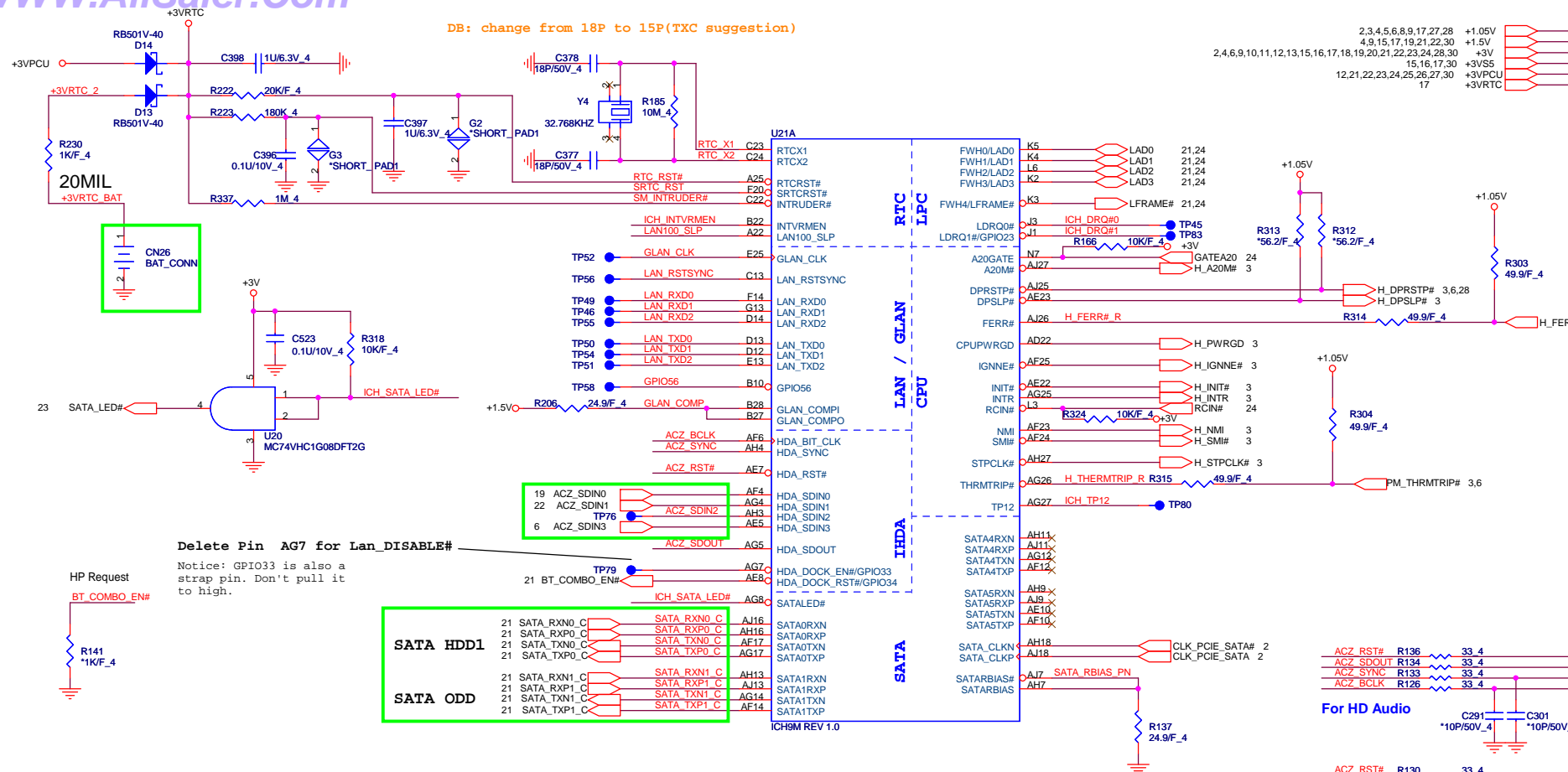
2,4,6,9,10,11,12,14,15,16,17,18,19,20,21,22,23,24,28,30
12,17,19,21,22,23,24,30 +3V
+5V

PROJECT :AX3
Quanta Computer Inc.

NB5

Size Custom Document Number CRT/HDMI Conn Rev 1A

Date: Friday, November 27, 2009 Sheet 13 of 30



SB Strap

ICH9-M Internal VR Enable strap
(Internal VR for VccSus1_05, VccSus1_5 and VccCL1_5)

Low = Internal VR disable
High = Internal VR enable(Default)

ICH9-M LAN100_SLP Strap
(Internal VR for VccLAN1_05 and VccCL1_05)

Low = Internal VR disable
High = Internal VR enable(Default)

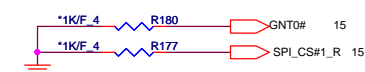
XOR Chain Entrance Strap

| ICH_TP3 | HDA_SDOOUT | Description |
|---------|------------|----------------------------|
| 0 | 0 | RSVD |
| 0 | 1 | Enter XOR Chain |
| 1 | 0 | Normal operation(Default) |
| 1 | 1 | Set PCIe port config bit 1 |

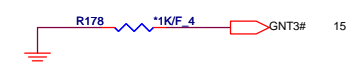
ICH9 Boot BIOS select

| STRAP | PCI_GNT0# | SPI_CS#1 |
|-------|-----------|----------|
| SPI | 0 | 1 |
| PCI | 1 | 0 |
| LPC | 1 | 1 |

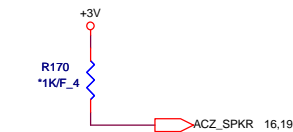
(default)



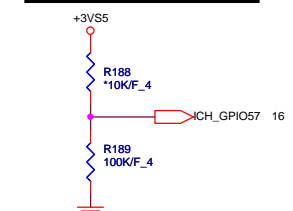
| A16 swap override | |
|-------------------|---|
| strap | |
| PCI_GNT#3 | Low = A16 swap override enabled Hi = Default |



| No Reboot Strap | |
|-----------------|-------------------------------|
| ACZ_SPKR | |
| | Low: Default Hi: No reboot |

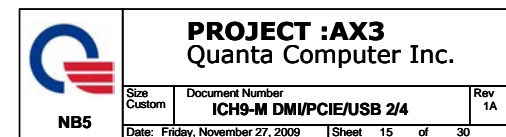
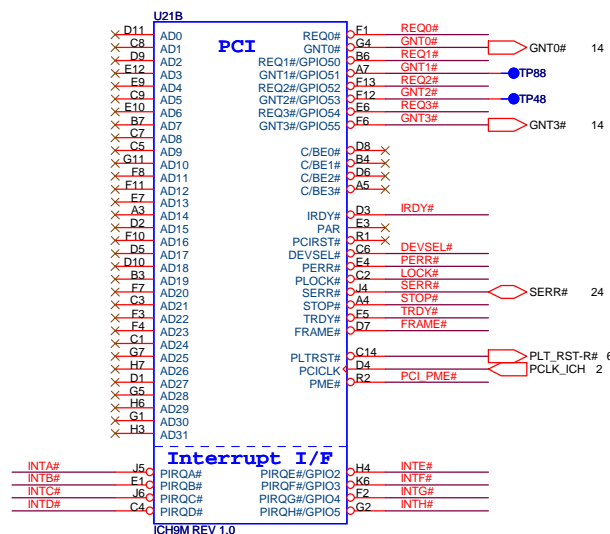
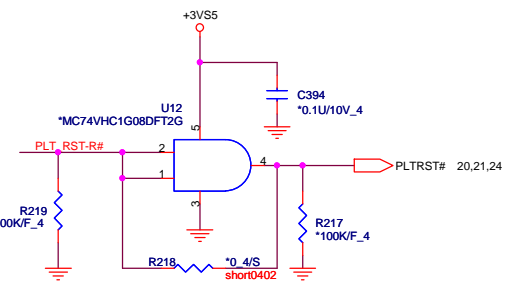
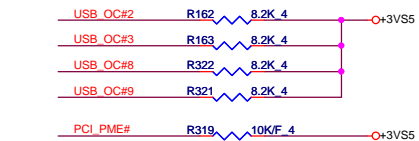
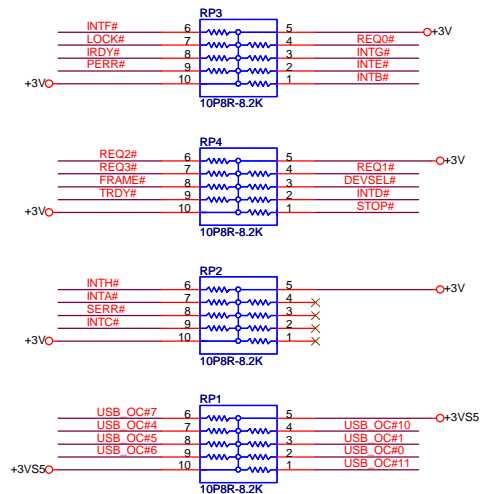
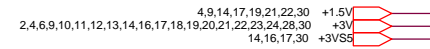


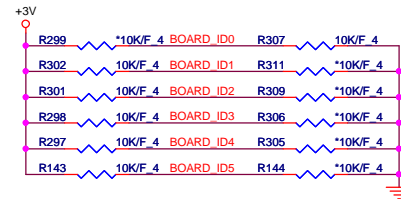
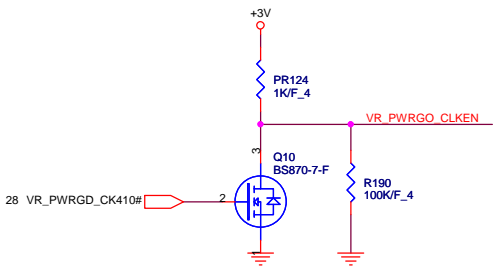
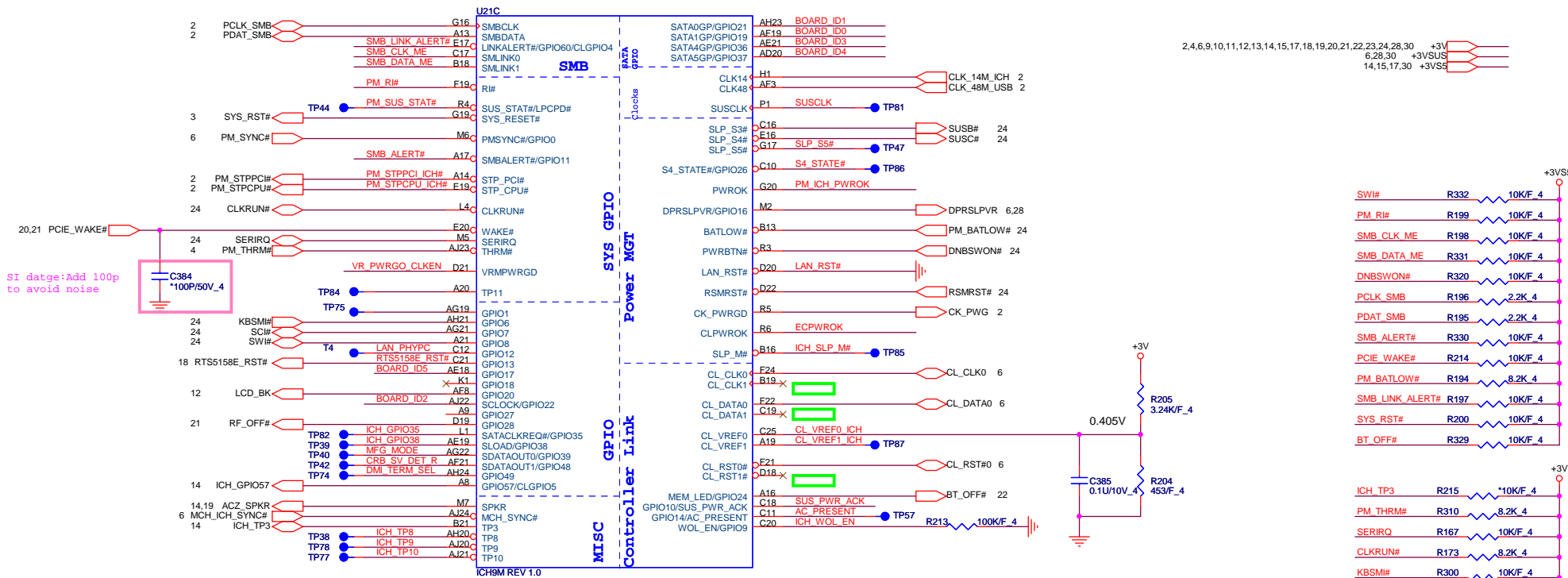
| TPM physical presence | |
|-----------------------|--------------|
| ICH_GPIO57 | |
| | Low: Default |



PROJECT :AX3
Quanta Computer Inc.

Size Custom Document Number ICH9-M SATA/HDA/RTC 1/4 Rev 1A
Date: Friday, November 27, 2009 Sheet 14 of 30





| Board ID | ID0 | ID1 | ID2 | ID3 | ID4 | ID5 |
|------------|-----------------|---------------|---------------|---------------|---------------|--------|
| | GPIO19 | GPIO21 | GPIO22 | GPIO36 | GPIO37 | GPIO17 |
| UMA/DIS | 0=UMA 1=Dis. | | | | | |
| CardReader | 0=No 1=Yes | | | | | |
| HDMI | | 0=No 1=Yes | | | | |
| Bluetooth | | | 0=No 1=Yes | | | |
| Camera | | | | 0=No 1=Yes | | |
| Modem | | | | | 0=No 1=Yes | |

| AX3 MB P/N | ID0 | ID1 | ID2 | ID3 | ID4 | ID5 |
|-------------|-----|-----|-----|-----|-----|-----|
| 31AX6MB0000 | 0 | 1 | 1 | 1 | 1 | 1 |
| 31AX6MB0010 | 0 | 1 | 1 | 1 | 1 | 1 |
| 31AX6MB0020 | 0 | 1 | 1 | 1 | 1 | 1 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

PROJECT :AX3
Quanta Computer Inc.

Size Custom

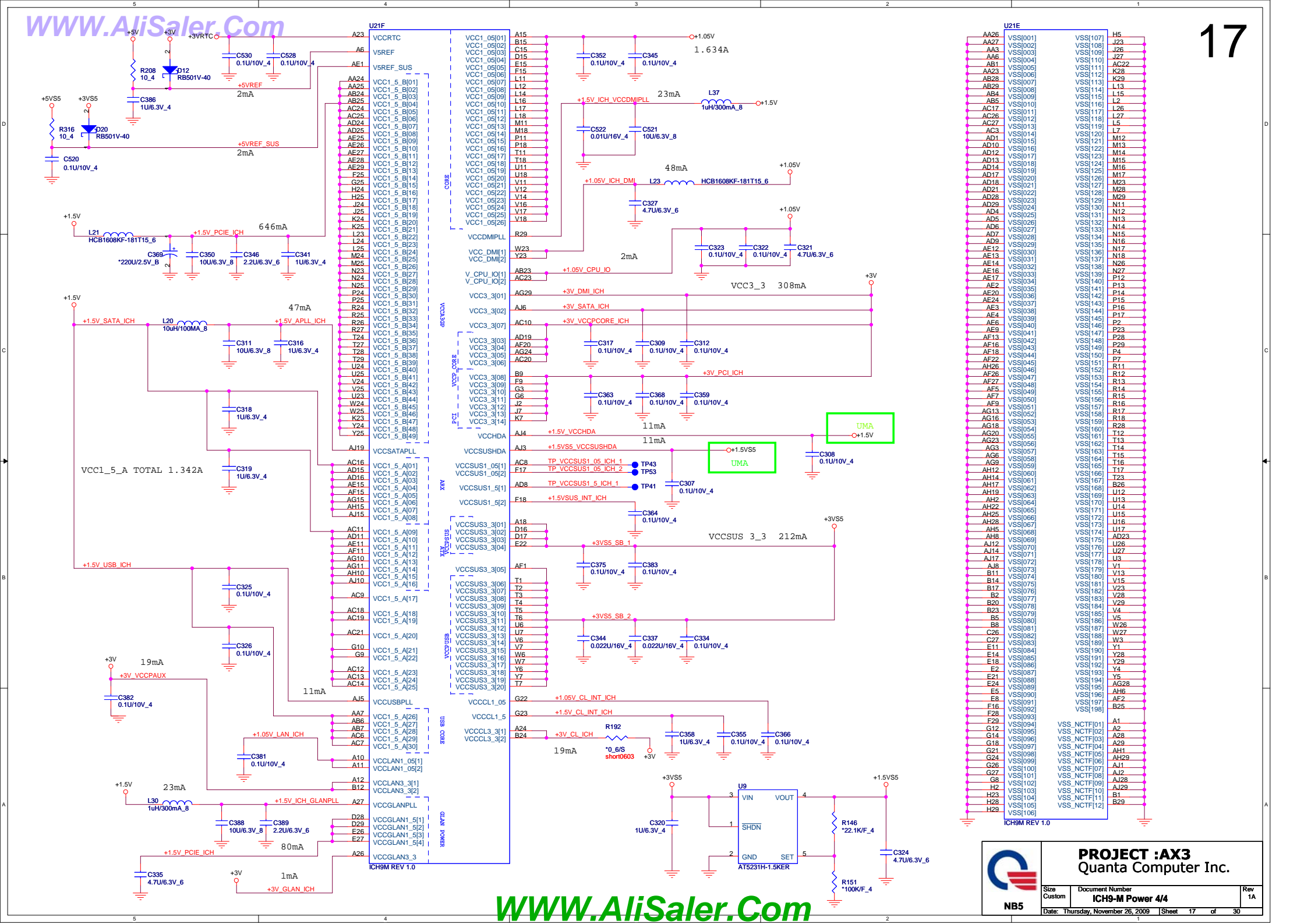
Document Number

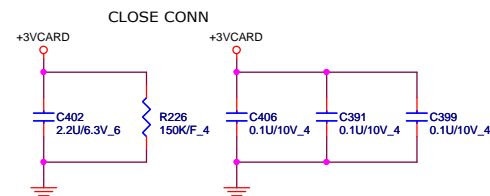
ICH9-M GPIO/Board ID 3/4

Date: Friday, November 27, 2009

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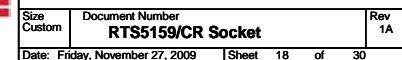
Rev 1A

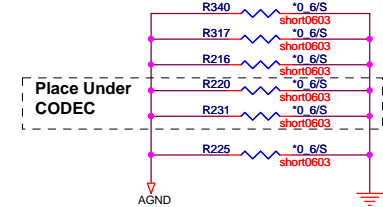
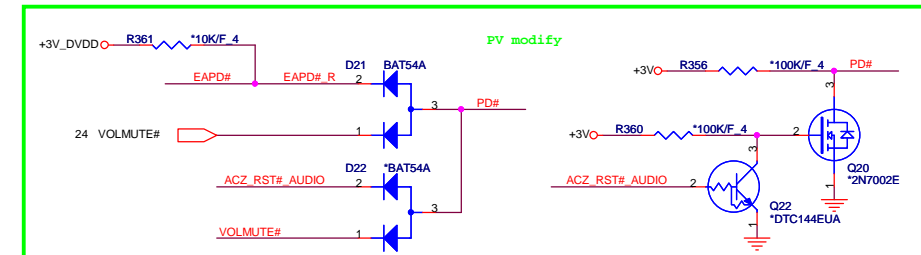
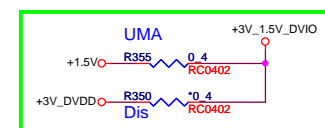


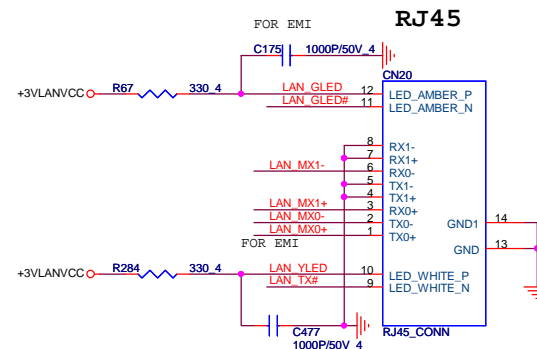
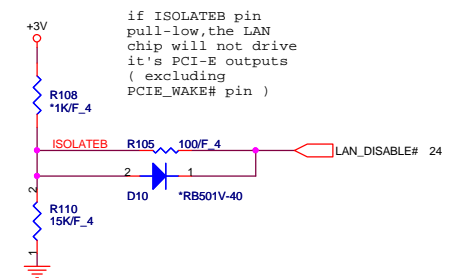
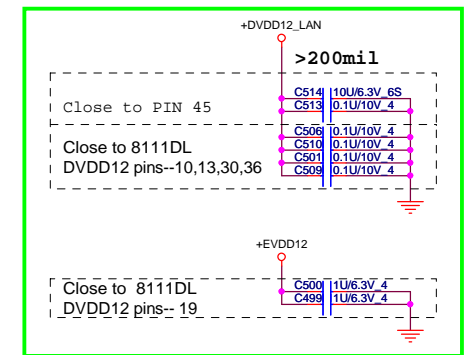
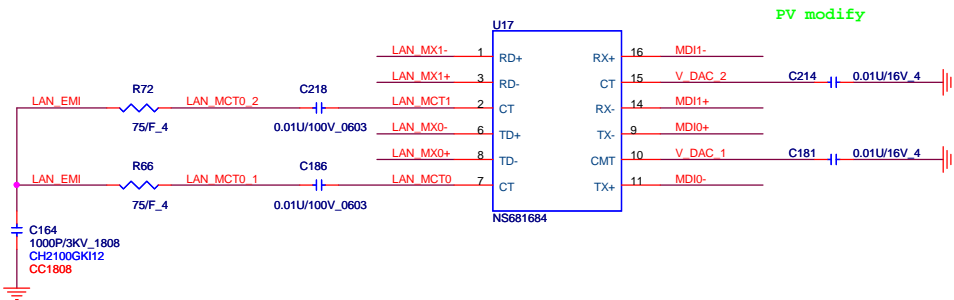
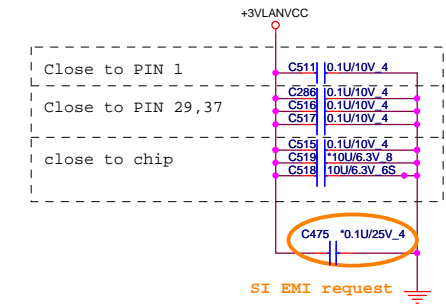


+3V

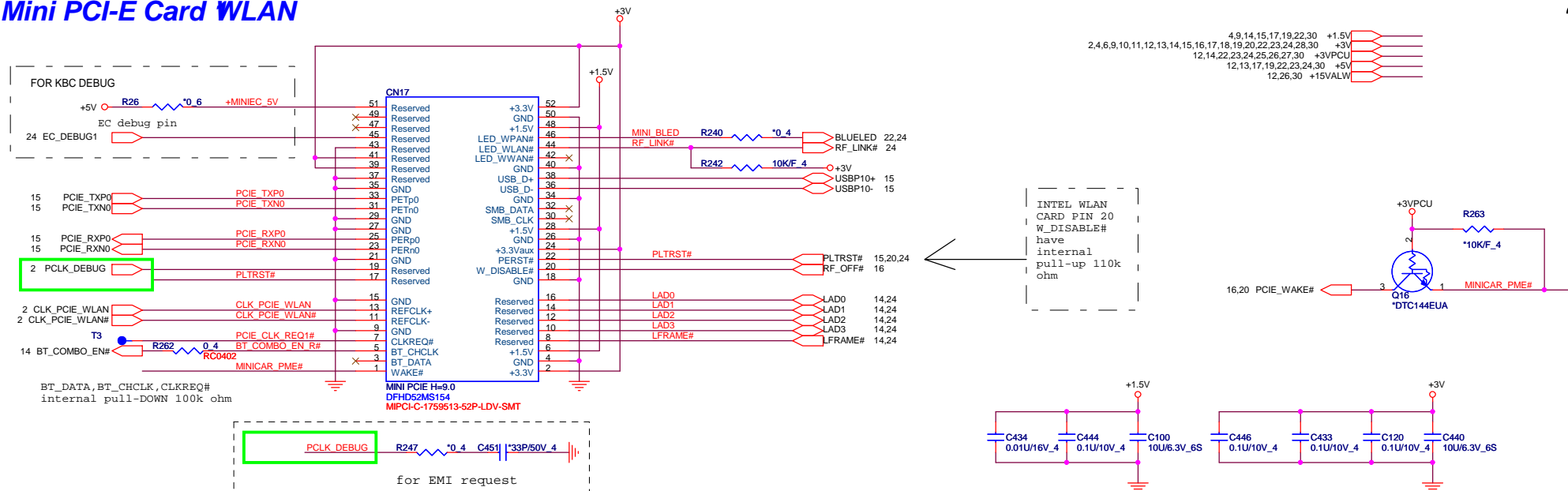
| | SD/MMC | MS | XD |
|------|----------|---------|---------|
| SP0 | | | |
| SP1 | | | XD CD# |
| SP2 | SD WP | | |
| SP3 | SD CD# | | |
| SP4 | SD DAT1 | | |
| SP5 | | MS BS | XD D4 |
| SP6 | | MS D1 | XD D3 |
| SP7 | SD DAT0 | MS D0 | XD D6 |
| SP8 | SD DAT17 | MS D2 | XD D2 |
| SP9 | | MS INV# | |
| SP10 | SD DAT6 | MS D3 | XD D7 |
| SP11 | SD CLK | MS SCLK | XD D1 |
| SP12 | SD DAT5 | | XD D0 |
| SP13 | SD DAT4 | | XD WP# |
| SP14 | | | XD R/B# |
| SP15 | SD DAT3 | | XD VUE# |
| SP16 | SD DAT2 | | XD RE# |
| SP17 | | | XD ALA |
| SP18 | | | XD CE# |
| SP19 | | | XD CLE |



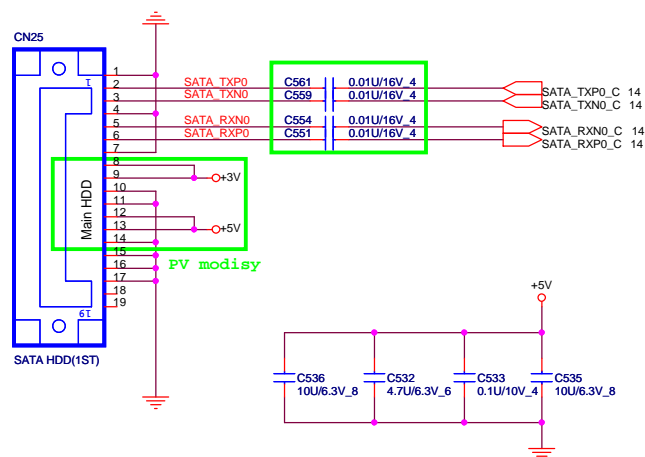




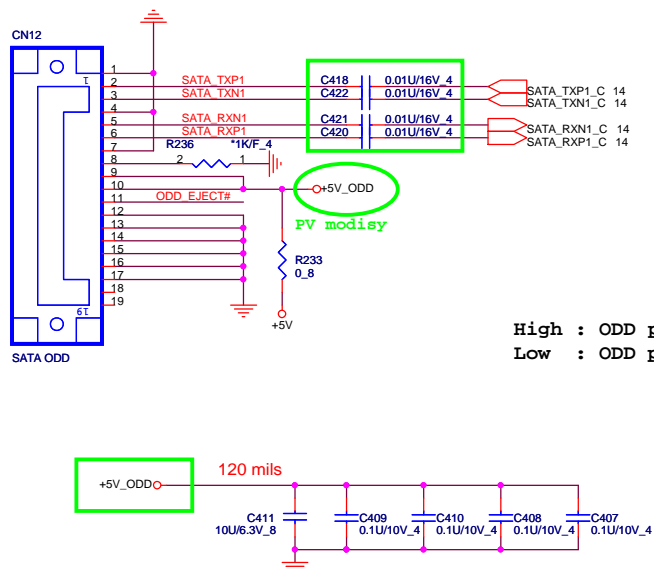
Mini PCI-E Card WLAN



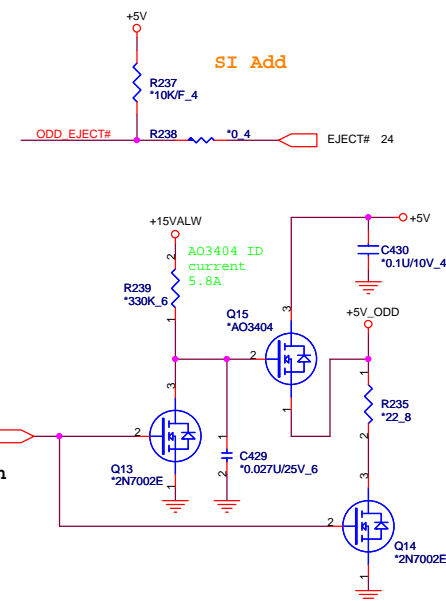
SATA HDD CONNECTOR



SATA ODD CONNECTOR



High : ODD power down
Low : ODD power on

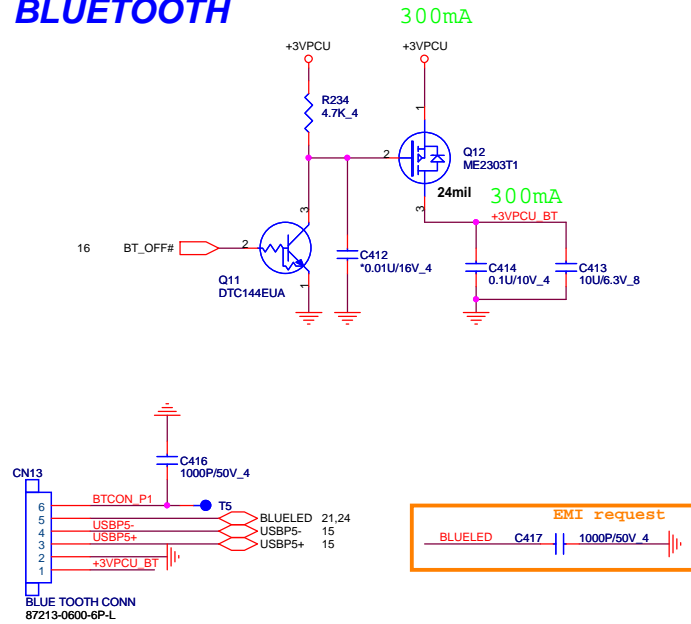


PROJECT :AX3
Quanta Computer Inc.

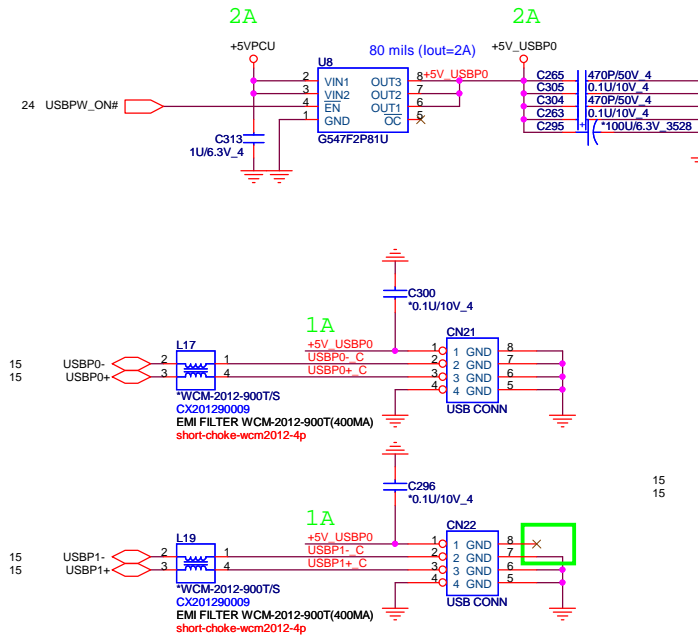
Size Custom Document Number HDD/ODD/FAN Rev 1A

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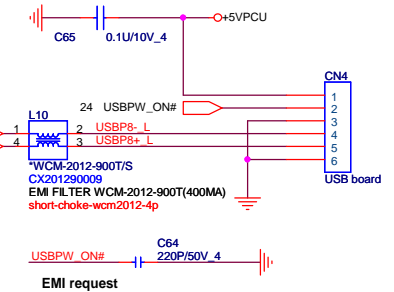
BLUETOOTH



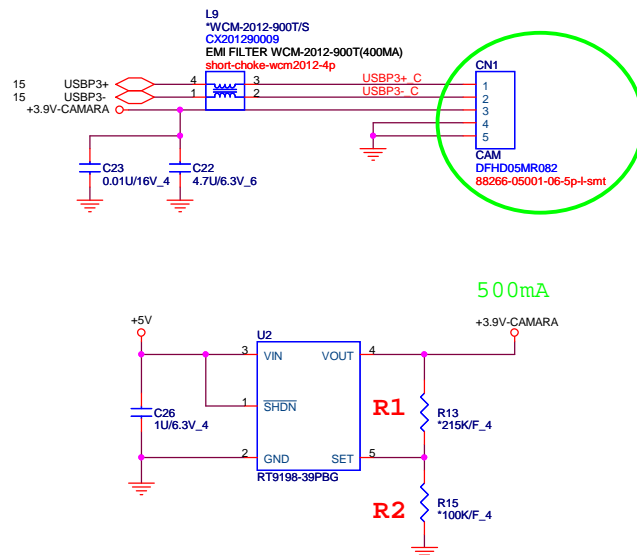
LEFT SIDE USBX1



Right SIDE USBX1

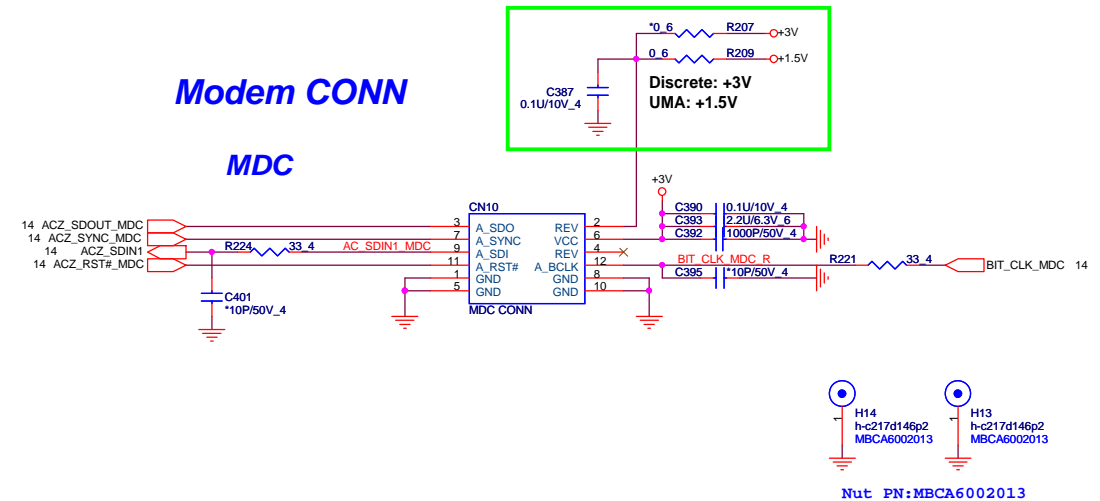


CAMERA

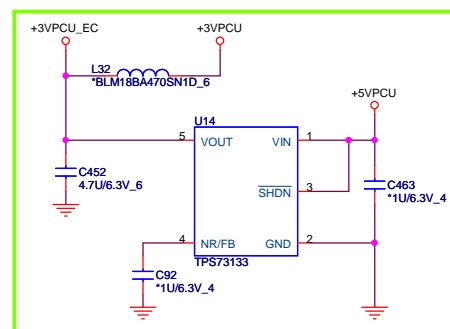


Modem CONN

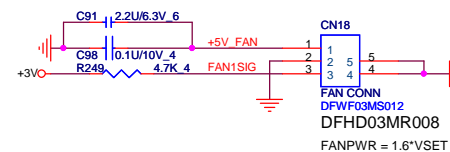
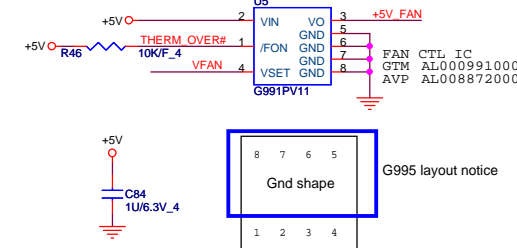
MDC



Nut PN: MBCA6002013

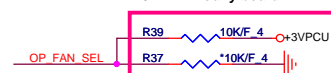


30 MIL

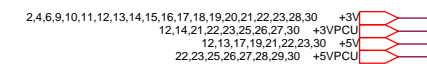


Hi ==> 120W
Low ==> 65W/90W

11/24 PV modify board ID.

[illegible]

```
Socket: DG008000031
WINBOND AKE3GZN0N00
EON AKE3GZP0Q00
AIT AKE3GZP0801
MAX AKE5GFK0Z09
```



| | | |
|---------------------------------|---|----------------|
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| Date: Friday, November 27, 2009 | | Sheet 24 of 30 |

Change to 1S355 as Current loss

D16
1S355

R62
100F_4

R61
24.3K_F_4

C118
0.1uF/10V_4

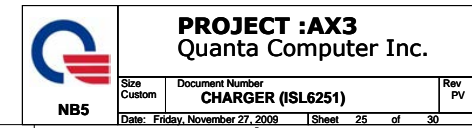
C119
100P/50V_4

AD_ID

AD_TYPE

Figure 1 illustrates the architecture of a 16-to-16-bit parallel multiplier. It features six 4-bit inputs and six 4-bit outputs. The inputs are SC1#1, PM_BATLOW#1, DNBSWON#1, KBSM#1, SWI#1, and an unlabeled 4-bit input. The outputs are SC#, PM_BATLOW#, DNBSWON#, KBSM#, SWI#, and an unlabeled 4-bit output. Each input is connected to a 4-bit bus, which is then connected to a 4-bit output bus. The outputs are labeled with their respective bit ranges: SC# (16-19), PM_BATLOW# (16-19), DNBSWON# (16-19), KBSM# (16-19), SWI# (16-19), and an unlabeled 4-bit output (16-19).

Add Pin 117,103 for DSM,116 for Bluetooth
Delete T10 and tie pin 117 from Lan for DSM



+5V +/- 5%
Countinue current:6A
Peak current :8A
OCP minimum :10A

+3.3V +/- 5%
Countinue current:5A
Peak current:6A
OCP minimum 7.5A

