

Platform : AMD Bbazos (Champlain APU+ hudson)

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| 44. | +1.1VA(OZ8116)/+0.75VS/+1.8V | | |
| 44. | +CPU-VDDR | | |

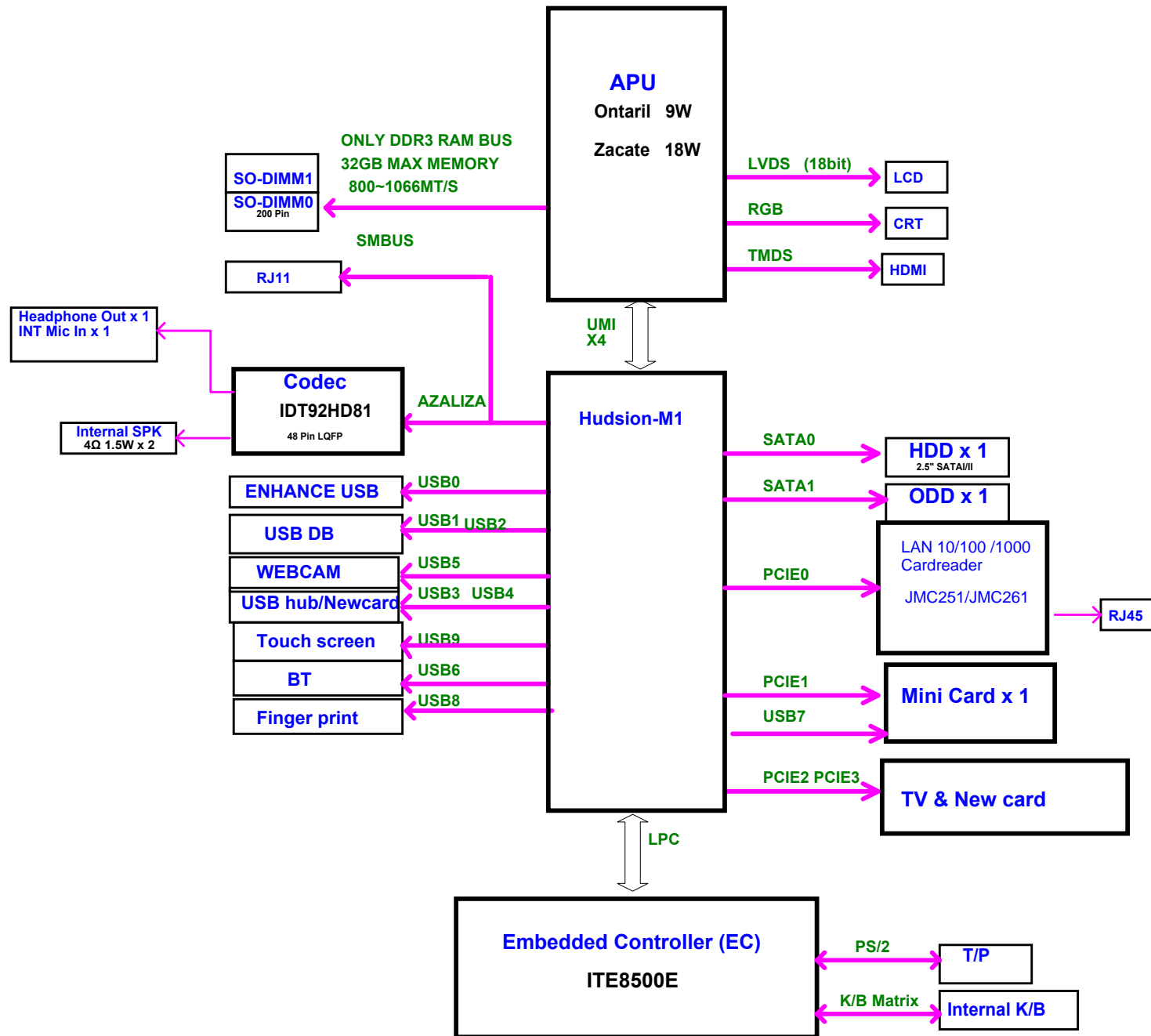
M/B Schematic Version Change List

[illegible]

Daughter Board Schematic Version Change List

[illegible]

SYSTEM BLOCK DIAGRAM

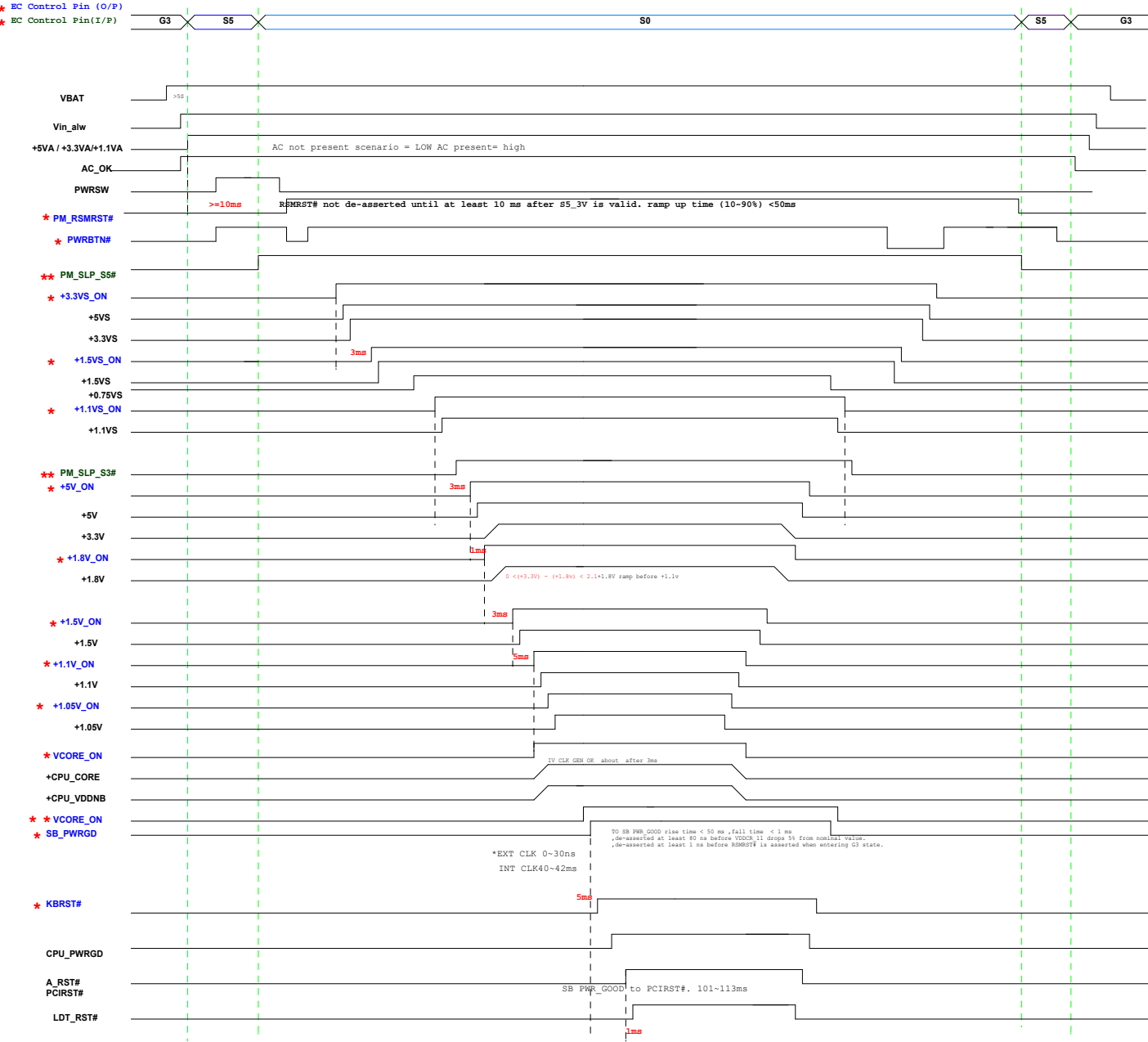


Power on Sequence required:

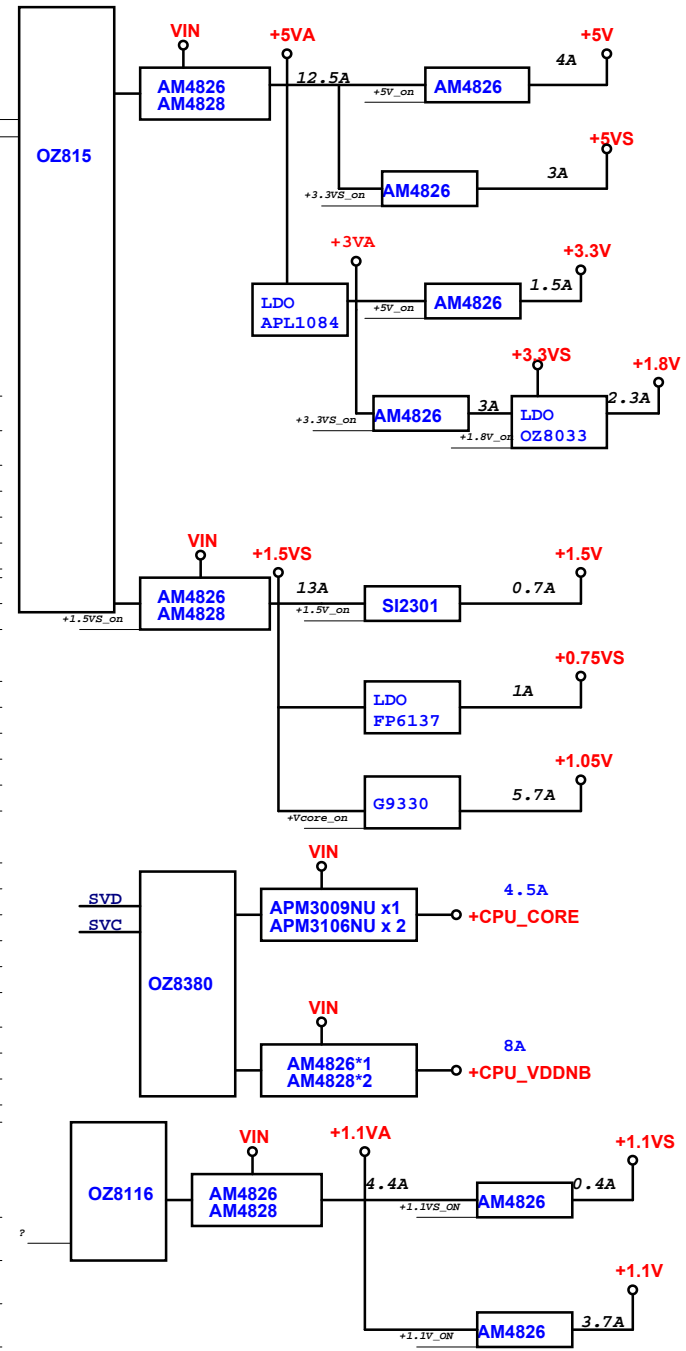
HUDSON-1M:
1, +3.3VDUAL ramp before +1.1VDUAL
2, +3.3V ramp before +1.8V
3, +1.8V ramp before +1.1V
4, +3.3V ramp before +1.1V
CPU:1, GROUP A(VDDIO, VDDI8, VDDIO, VDD33)
ramp before GROUP B(VDDCR, VDDNB)

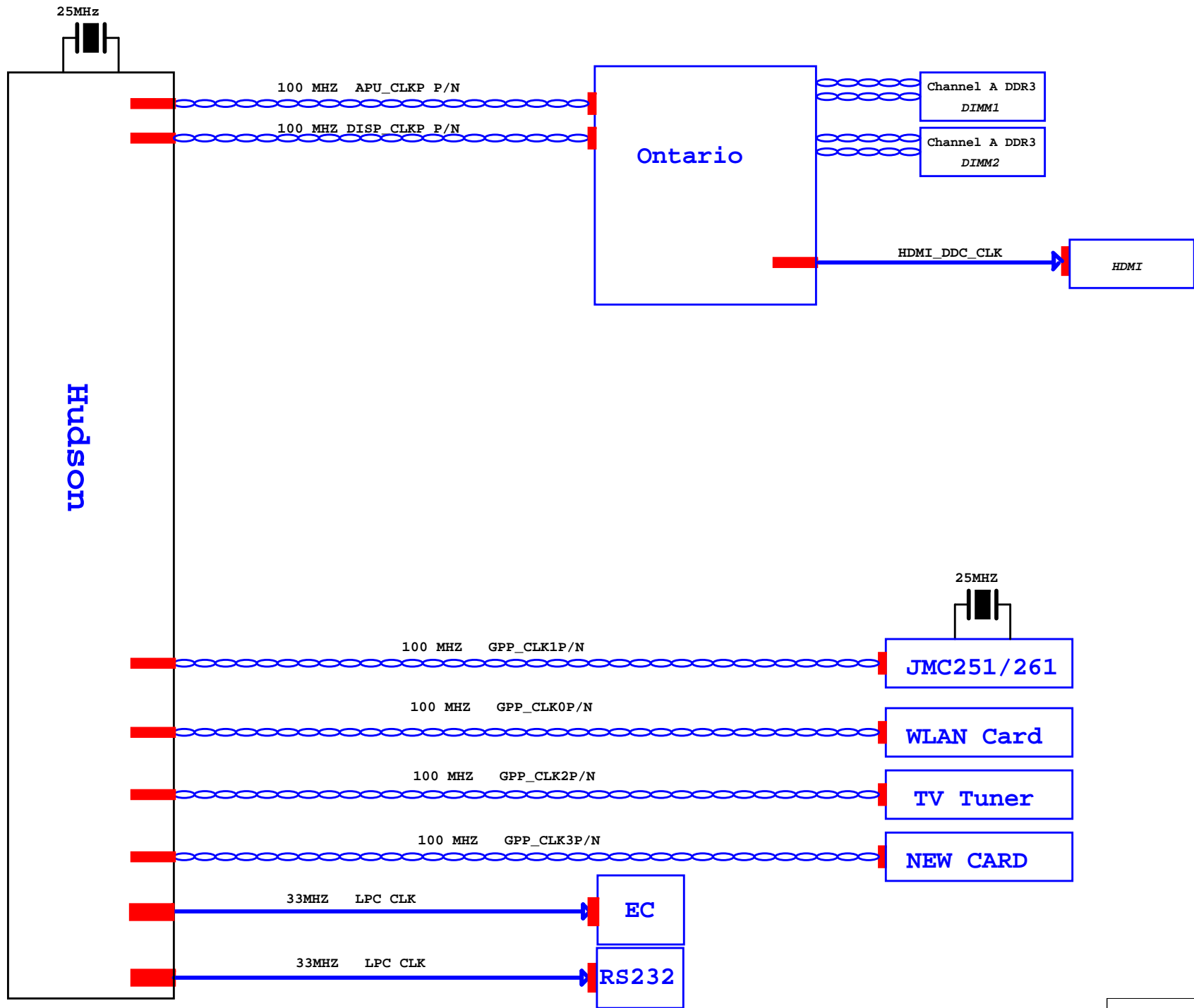
System Power On Sequence

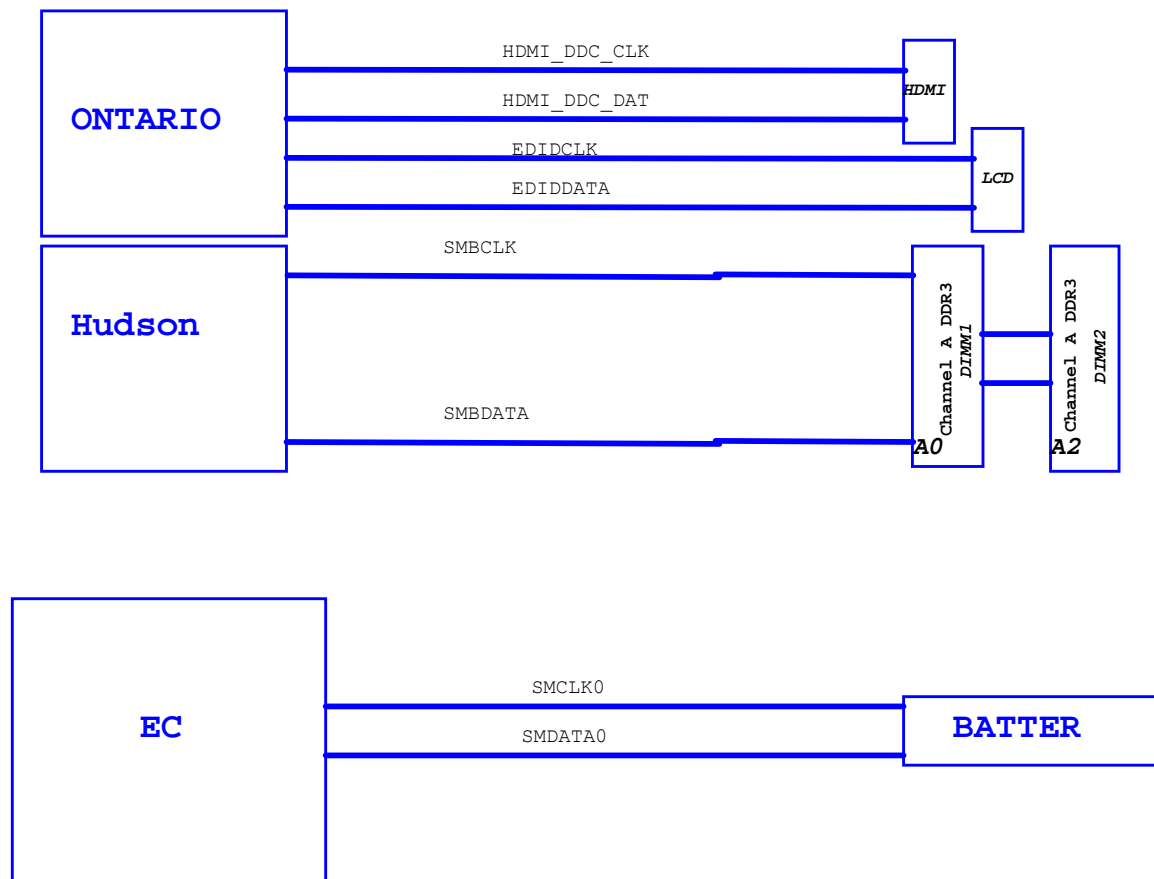
All Power Rails except +3.3VA --> 50 μ s < Power Rail Ramp time < 40 ms.
+3.3VA --> 100 μ s < Power Rail Ramp time < 40 ms.

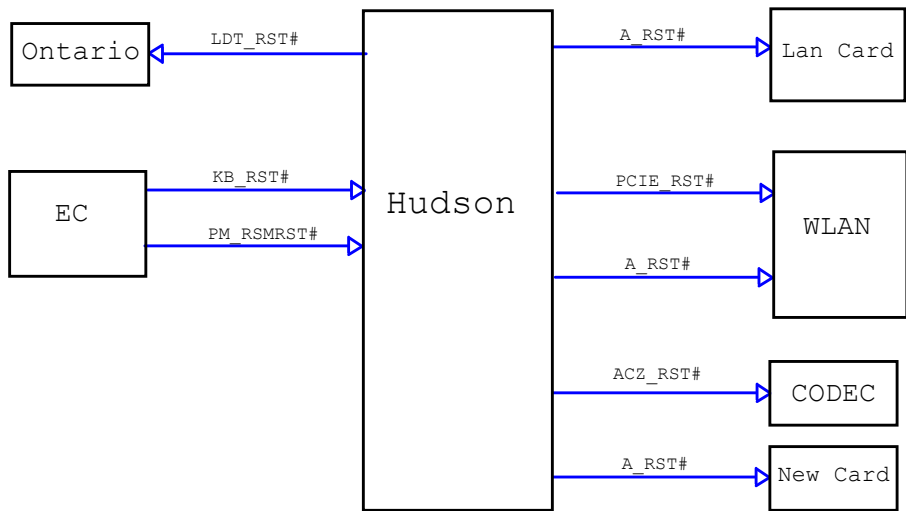


POWER BLOCK DIAGRAM





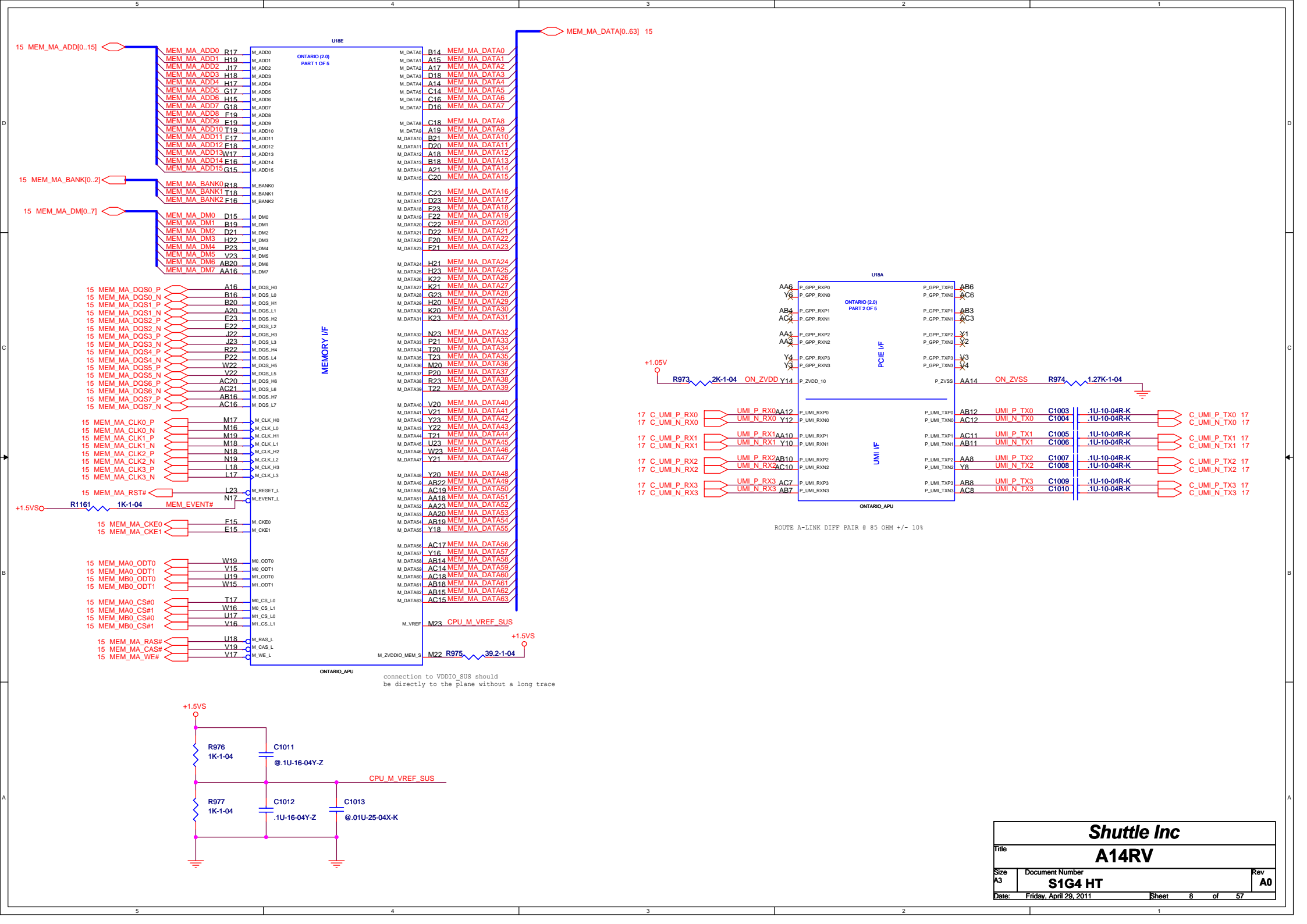


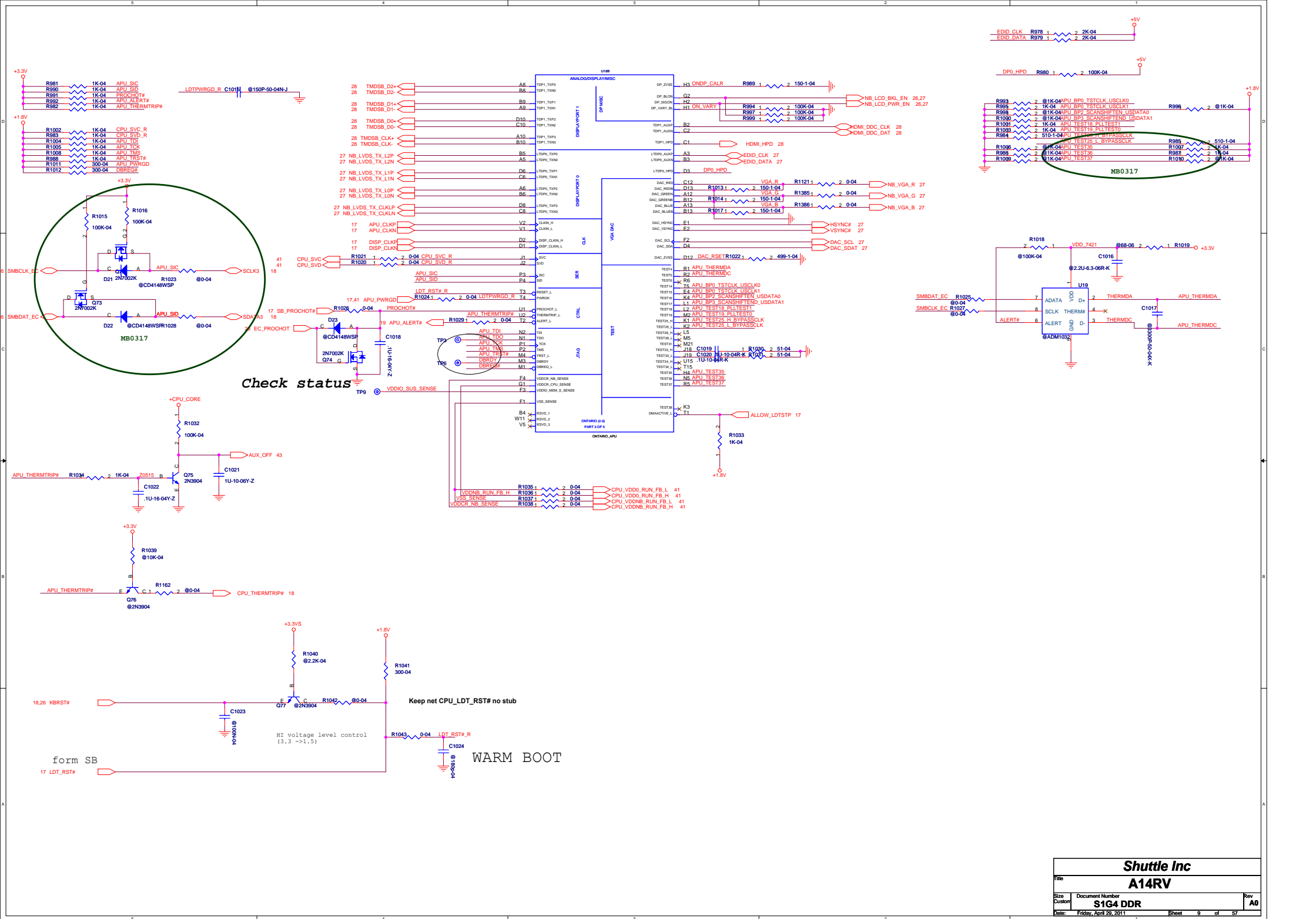


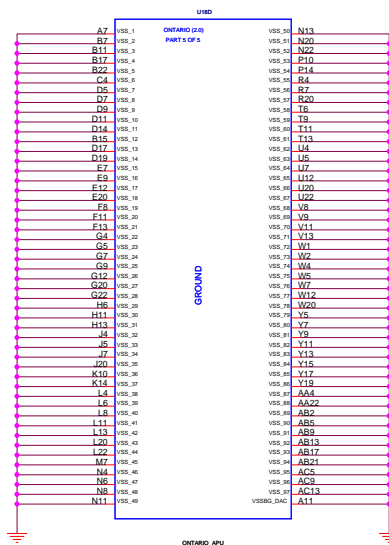
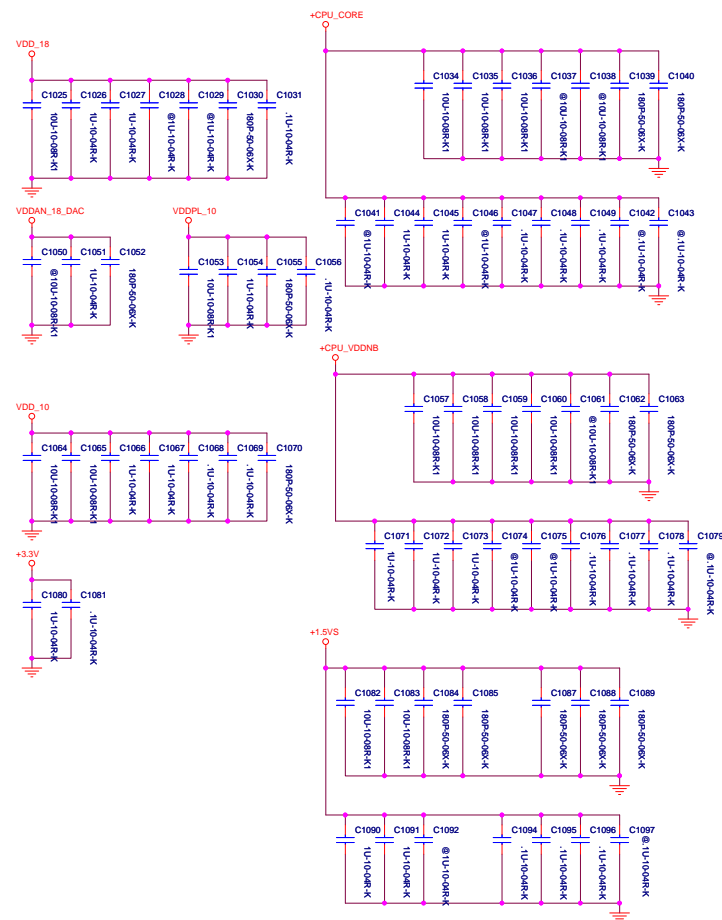
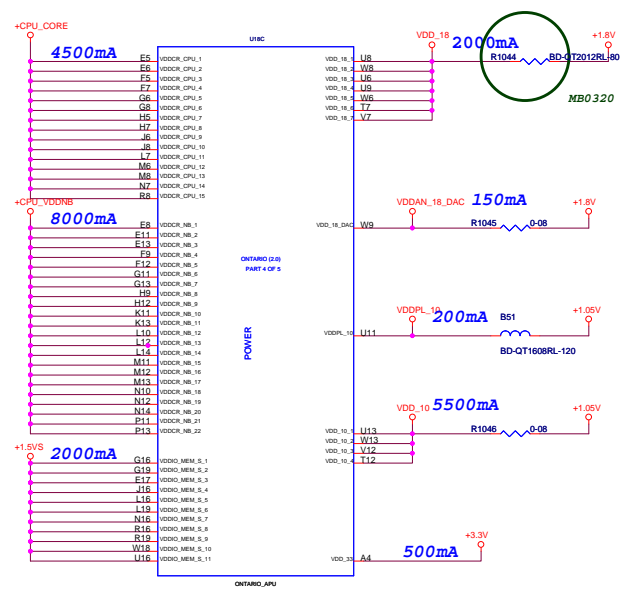
MB_13

use internal clk gen

| | | |
|-------------|-------------------------|---------------|
| Shuttle Inc | | |
| Title | | |
| A14RV | | |
| Size | Document Number | Rev |
| Custom | CLOCK GEN (ICS9LRS365B) | A0 |
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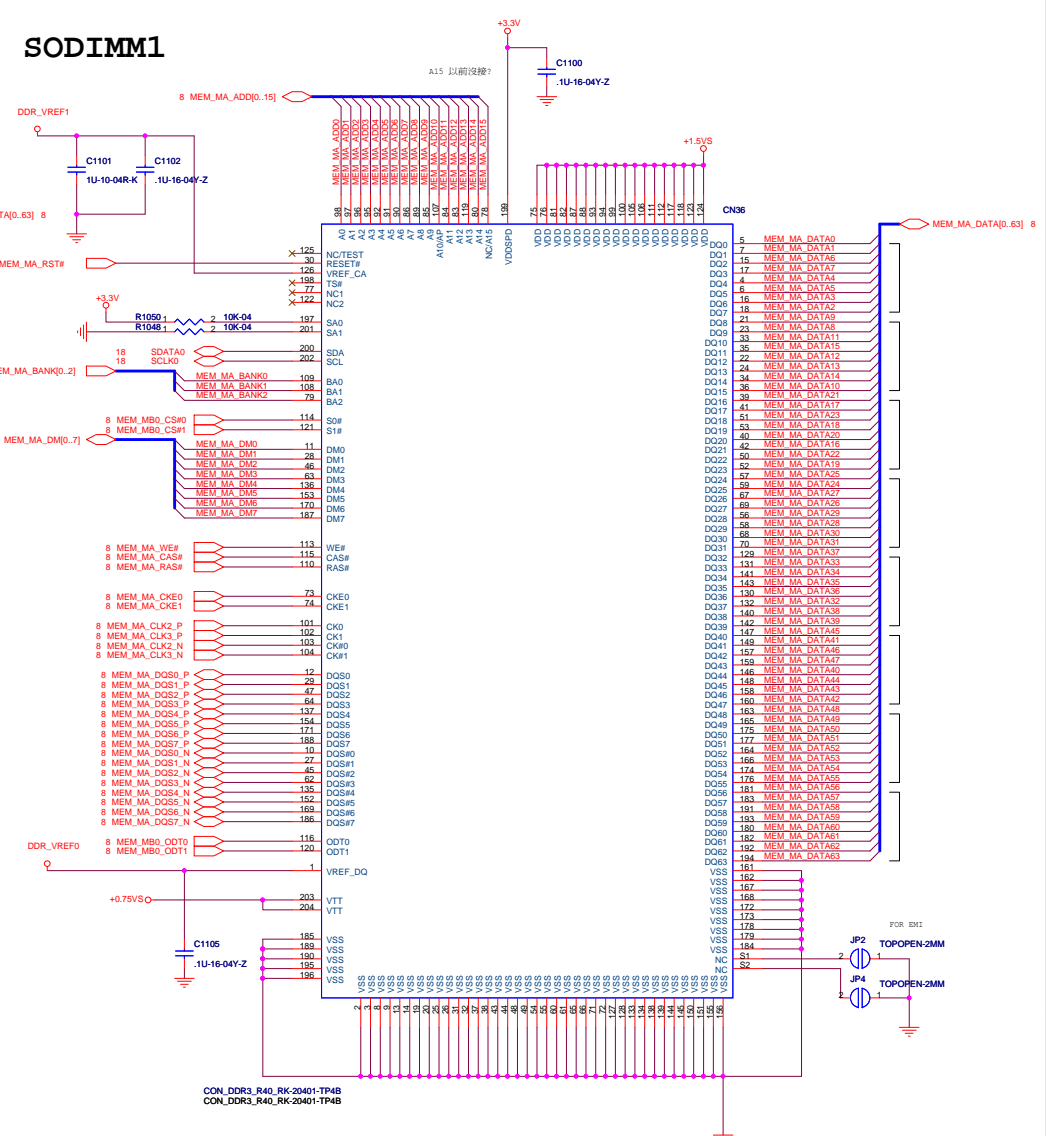
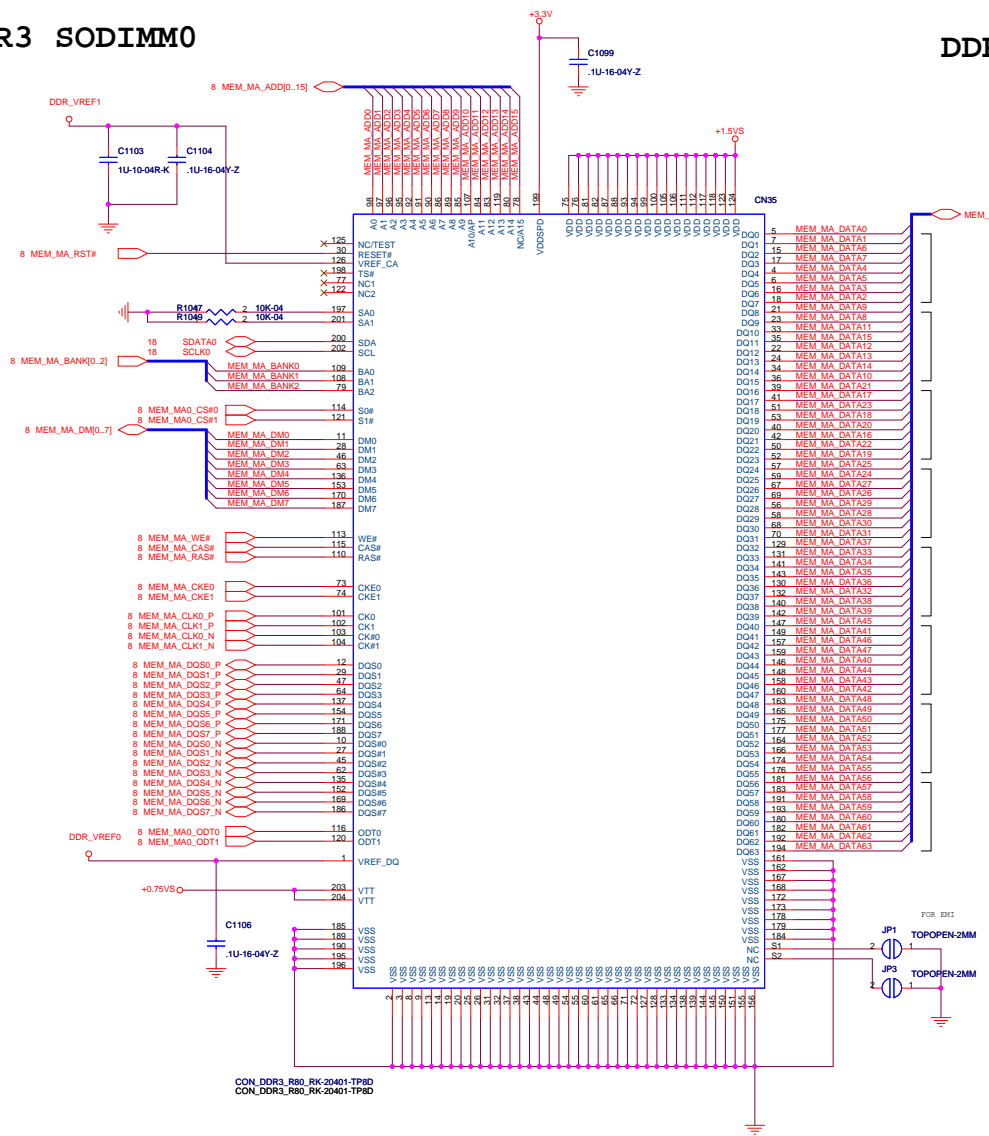






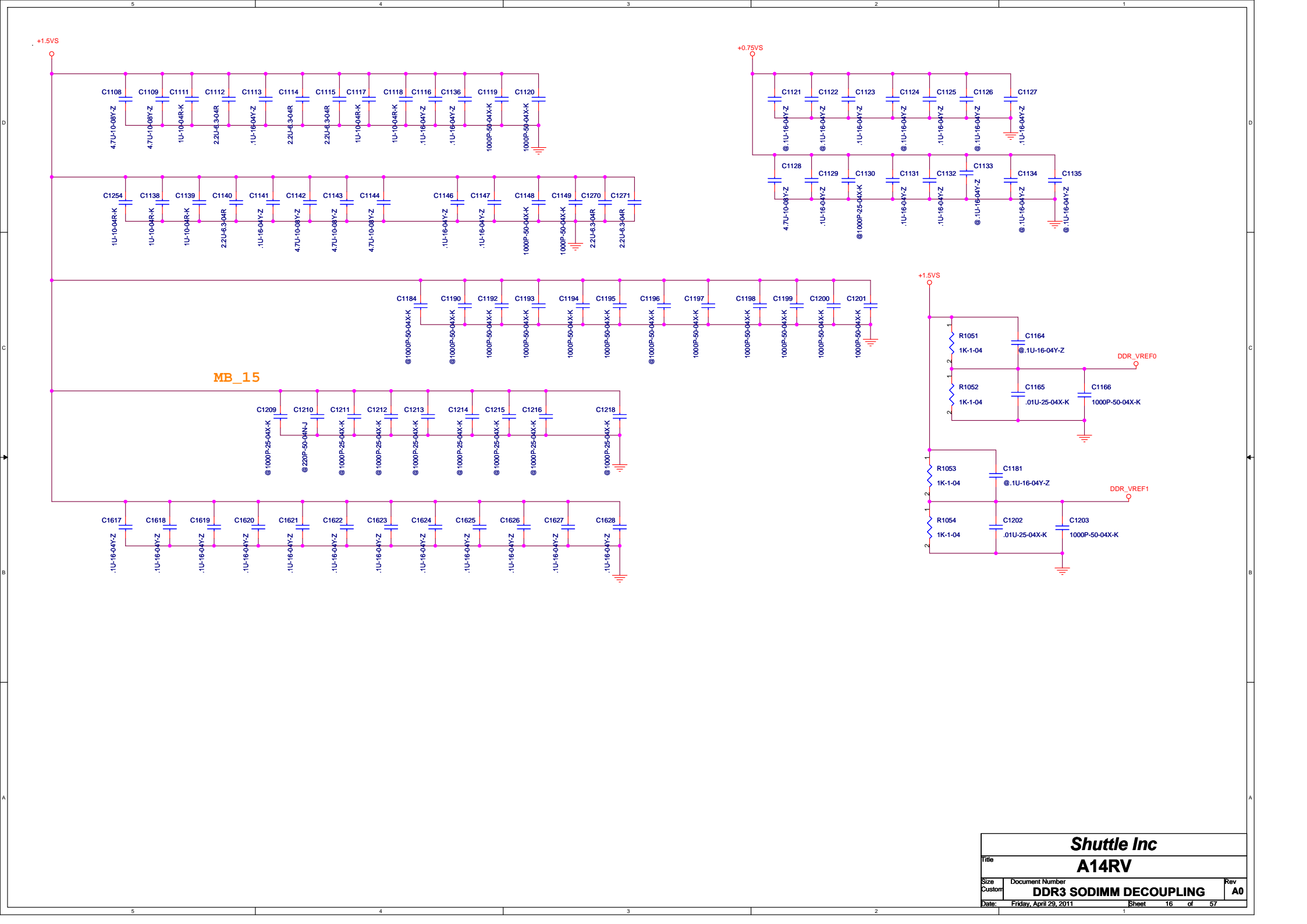
DDR3 SODIMM0

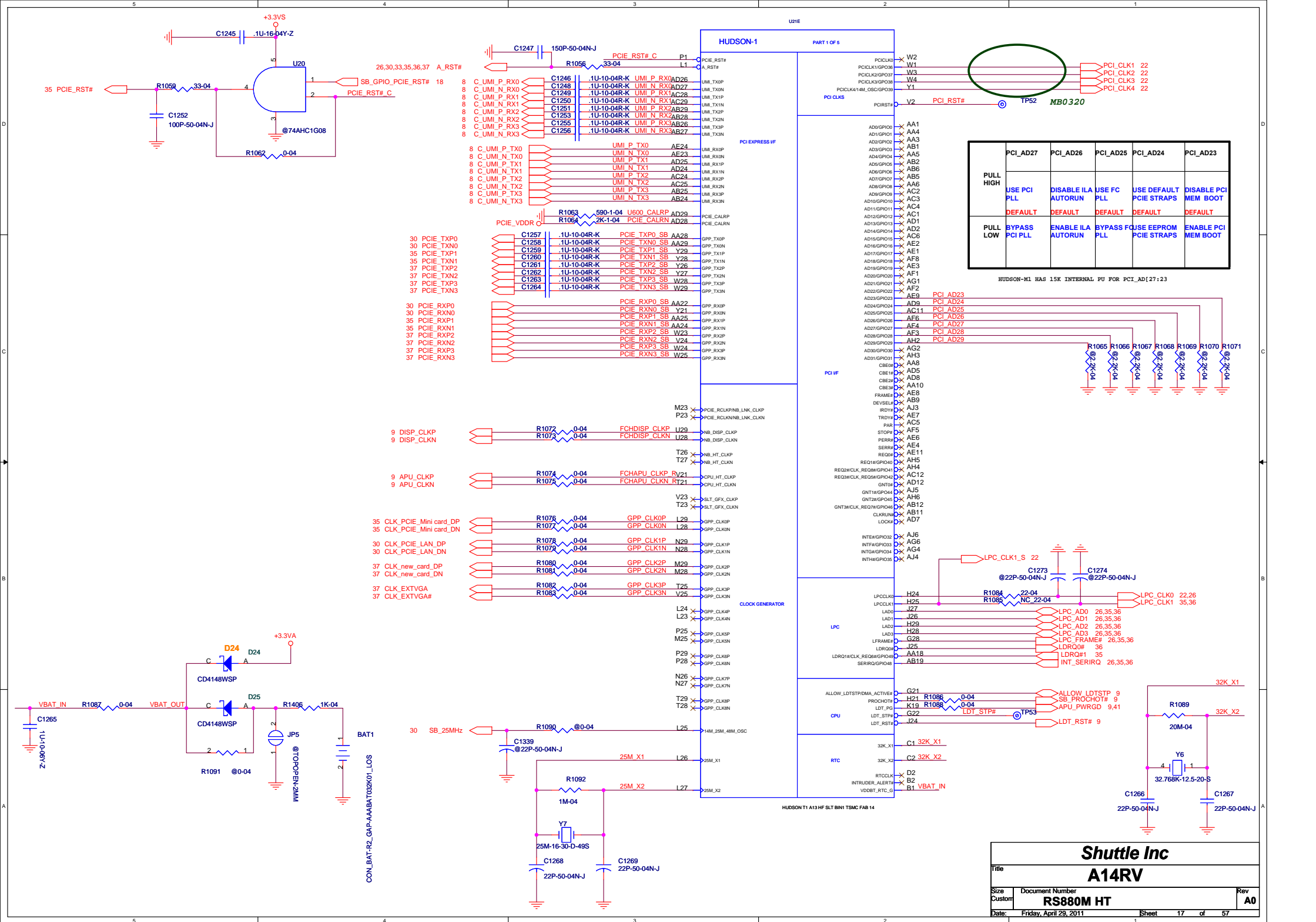
DDR3 SODIMM1

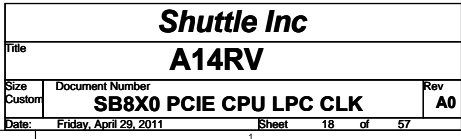


| | | | |
|---------|-------------|-----|-------|
| SODIMM | SMB address | SA1 | SA0 |
| SODIMM0 | A0 | GND | GND |
| SODIMM1 | A2 | GND | +3.3V |

populate SODIMM0 first





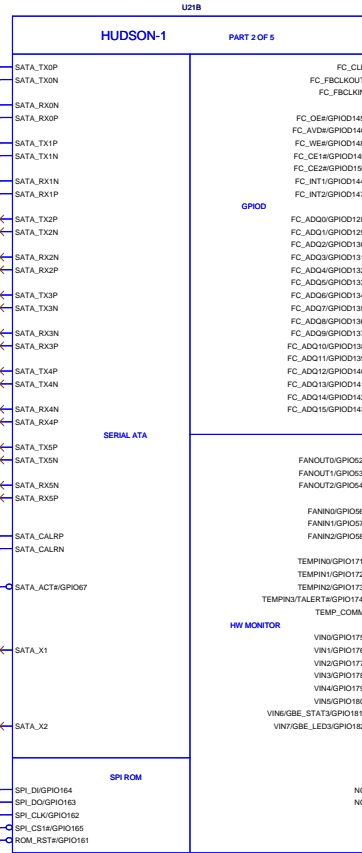
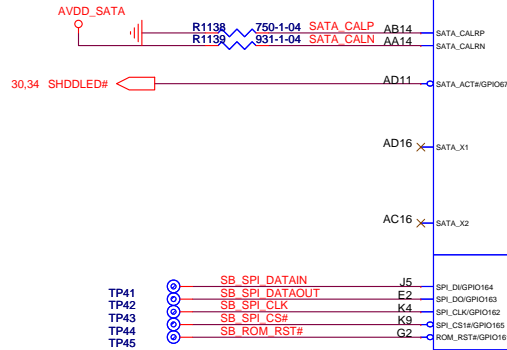




SATA trace should use only 1via on the trace. customers can use 2vias with GND via within 150mils of signal via as long as they can ensure that their platform meets SATA logo requirements. Return loss is expected to get affected with 2 vias. AMD platforms are validated with one via only

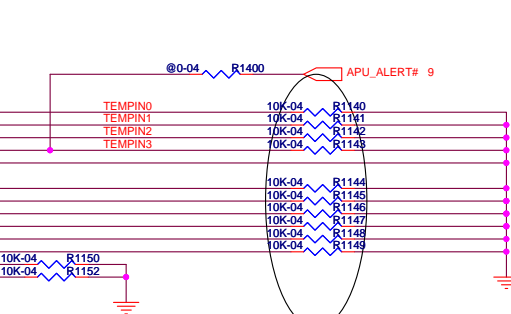
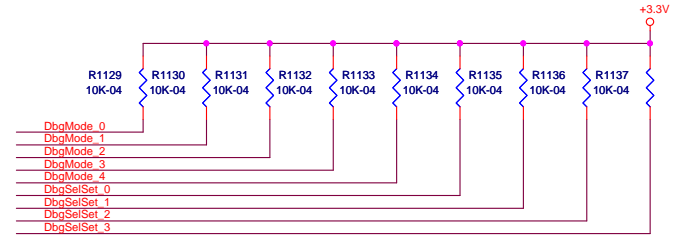
29 SATA_TXP0_C
29 SATA_TXN0_C
29 SATA_RXN0_C
29 SATA_RXP0_C
29 SATA_TXP1_C
29 SATA_TXN1_C
29 SATA_RXN1_C
29 SATA_RXP1_C

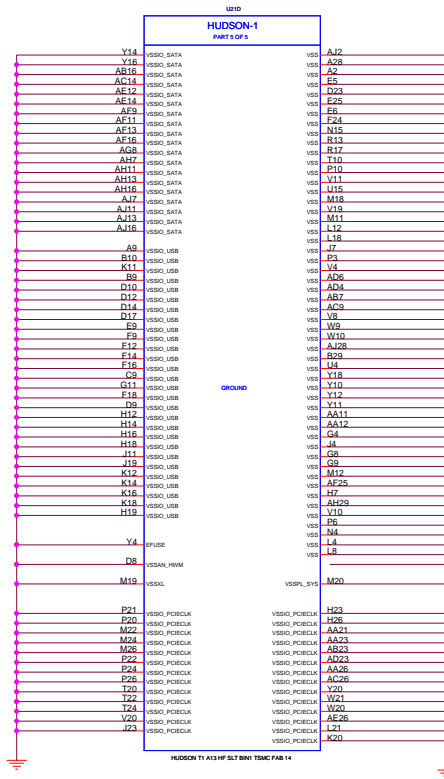
SATA PORTS DISTRIBUTION:
0, - 2.5 INCH DISK DRIVER
1, SATA ODD
2, - 2.5 INCH DISK DRIVER
3, eSATA
4 & 5, NOT USED

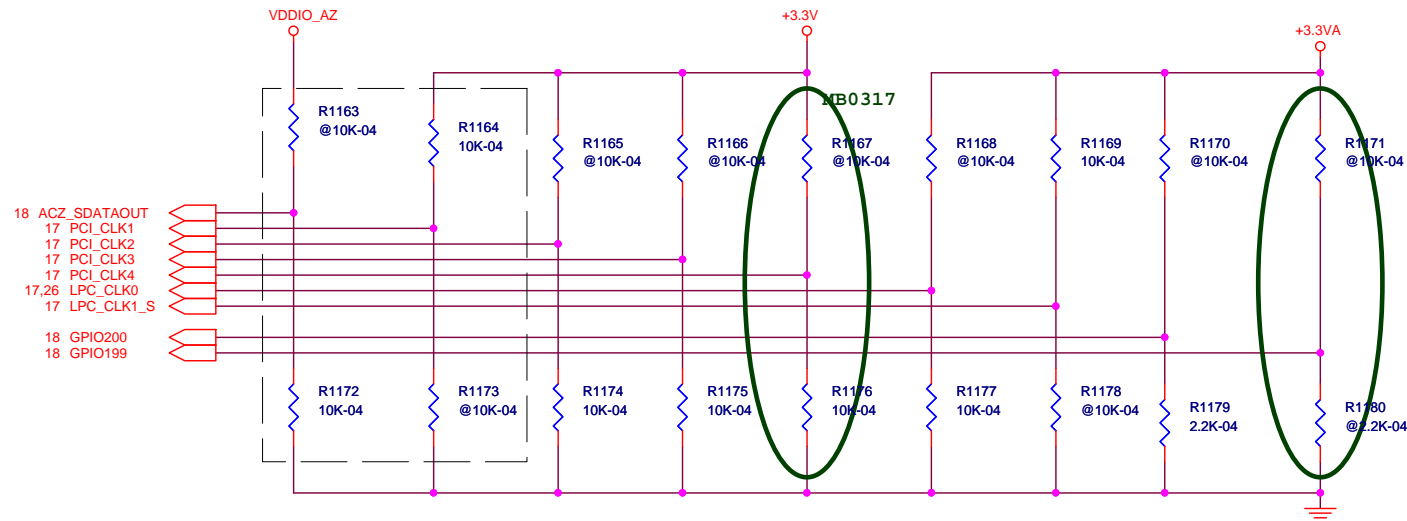


Dbgsetset_2 check list left unconnect

- AH28 DbgTestOut 15
- AF26 DbgSelSet 2
- AF28 DbgTestOut 14
- AG29 DbgTestOut 2
- AG26 DbgMode 3
- AF27 DbgTestOut 6
- AE28 DbgTestOut 8
- AE29 DbgSelSet 3
- AH27 DbgTestOut 5
- AJ27 DbgTestOut 0
- AJ26 DbgTestOut 1
- AJ25 DbgMode 0
- AH24 DbgTestOut 3
- AG23 DbgTestOut 4
- AH23 DbgMode 1
- AJ22 DbgTestOut 7
- AG21 DbgMode 4
- AH22 DbgTestOut 9
- AJ23 DbgTestOut 10
- AJ24 DbgTestOut 11
- AJ25 DbgTestOut 12
- AJ26 DbgSelSet 0
- AG25 DbgTestOut 13
- AH26 DbgSelSet 1







REQUIRED STRAPS

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

for int clk only

check list write
 LL FWH
 LX LPC
 XL SPI
 XX RSVD
 (do'nt need pull HI)
 FWH are connect vis SIO

| | | |
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| Title | | |
| A14RV | | |
| Size Custom | Document Number | Rev |
| | SB8X0 STRAPS | A0 |
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Platform ID

CPPE#

R352 1 2

R351 1 2

R356 R360 R1185 R355

R357 R359 R358 R1184

C340 10uF 3-04V

+3.3V

Default

| ID | (ID0) | (ID1) | Pannel_Det | (ID3) |
|--------------|-------|-------|------------|-------|
| MODEL | | | | |
| NB (14") 9W | 0 | 0 | 1 | |
| NB (15") 9W | 0 | 0 | 0 | |
| NB (14") 18W | 1 | 0 | 1 | |
| NB (15") 18W | 1 | 0 | 0 | |
| AIO 9W | 0 | 1 | x | |
| AIO 18W | 1 | 1 | x | |
| | | | | |

SHUTTLE

Title

A14RV

Size

Document Number

SCHEMATIC1

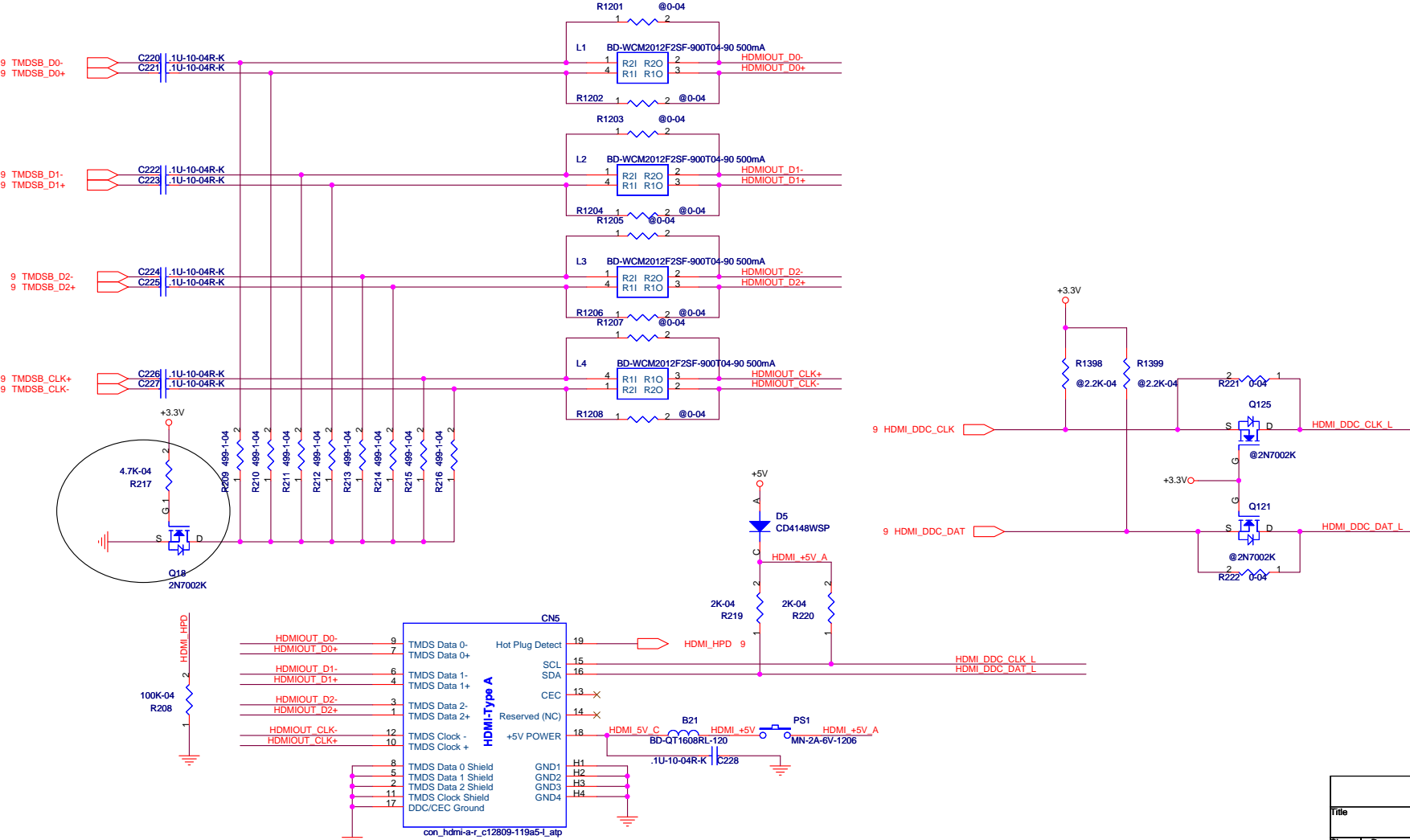
Rev

AD

Date: Friday, April 29, 2011

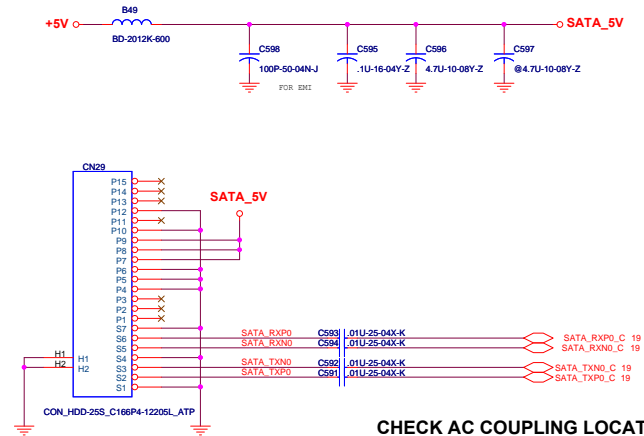
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HDMI



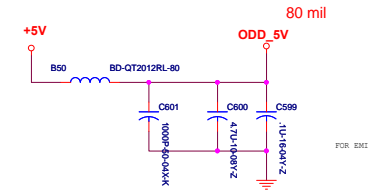
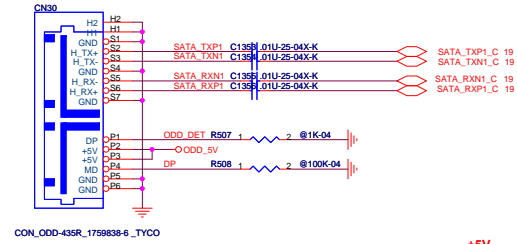
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|---|------------------------|--|--|--|------------|
| <i>Shuttle Inc</i> | | | | | |
| Title | | | | | |
| A14RV | | | | | |
| Size | Document Number | | | | Rev |
| Custom | HDMI (CH7318C) | | | | A0 |
| Order # _____ Expires April 29, 2044 Price \$_____ of \$_____ Qty _____ of _____ Date _____ | | | | | |

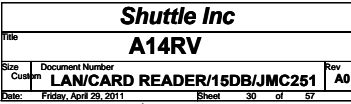
SATA-HDD 1A



CHECK AC COUPLING LOCATION
REFERENCE DG P316

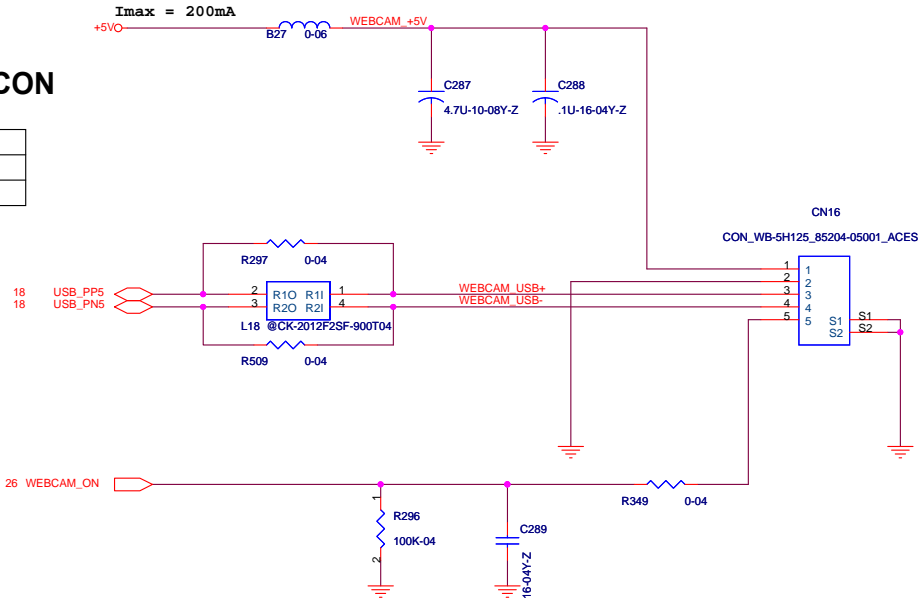
CD-ROM



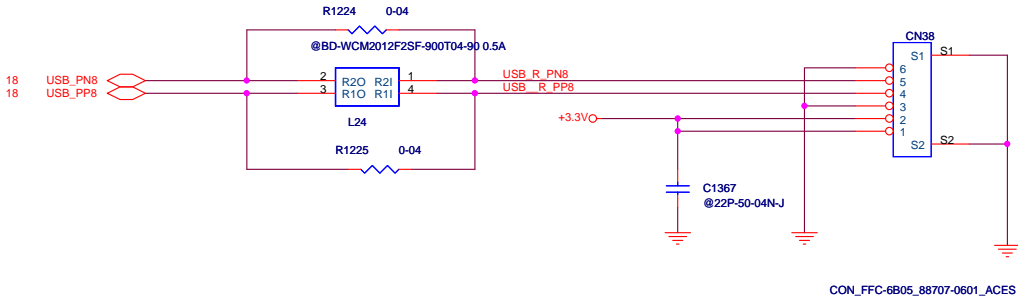


WEBCAM CON

| WEBCAM_ON | |
|-----------|-----|
| 1 | ON |
| 0 | OFF |



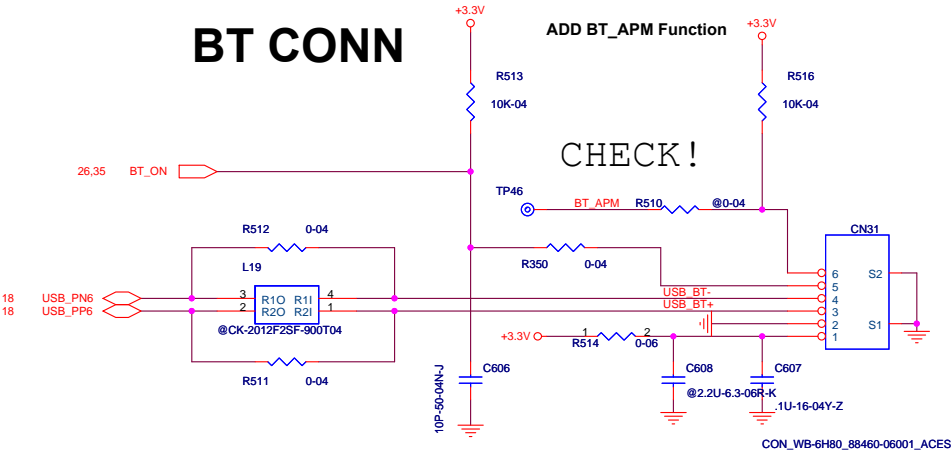
Finger print



BT CONN

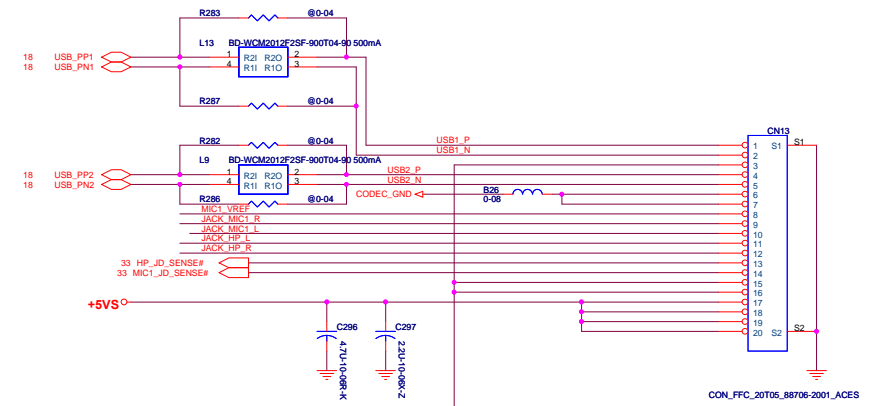
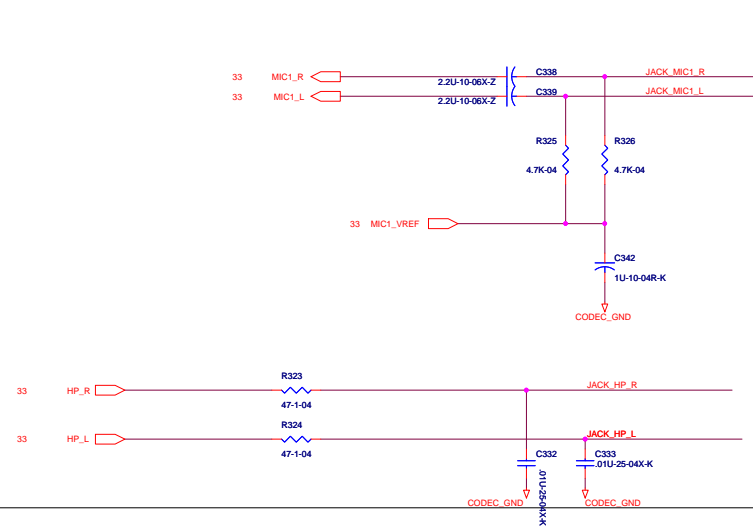
ADD BT_APM Function

CHECK!

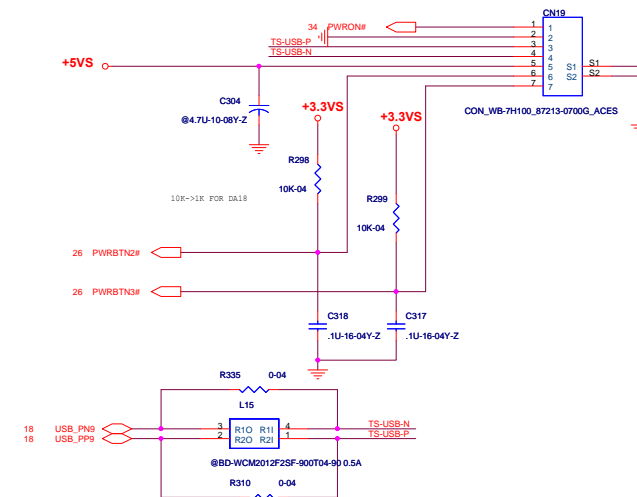
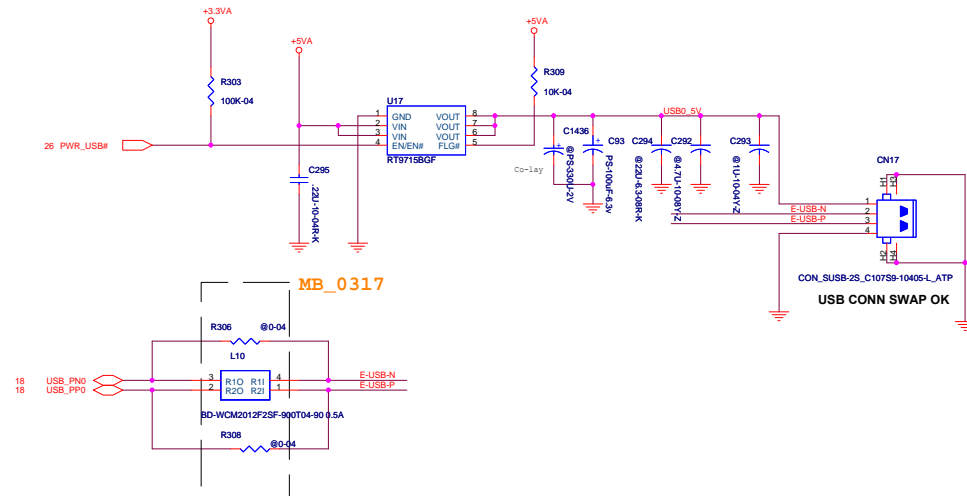


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| Title | | |
| A14RV | | |
| Size | Document Number | Rev |
| Custom<Doc> | | A0 |
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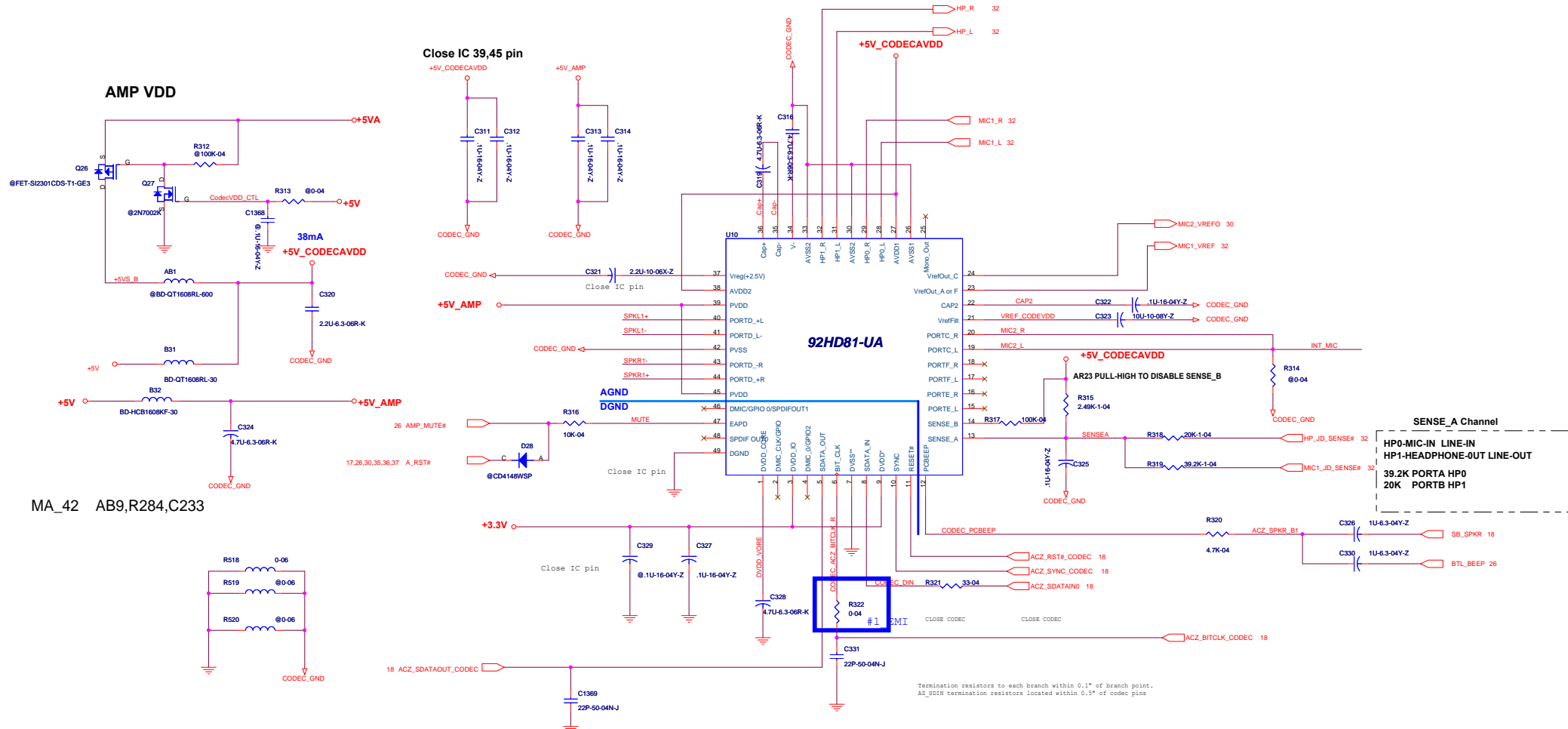
EXT MIC/EXT Line In/ EXT USB JACK



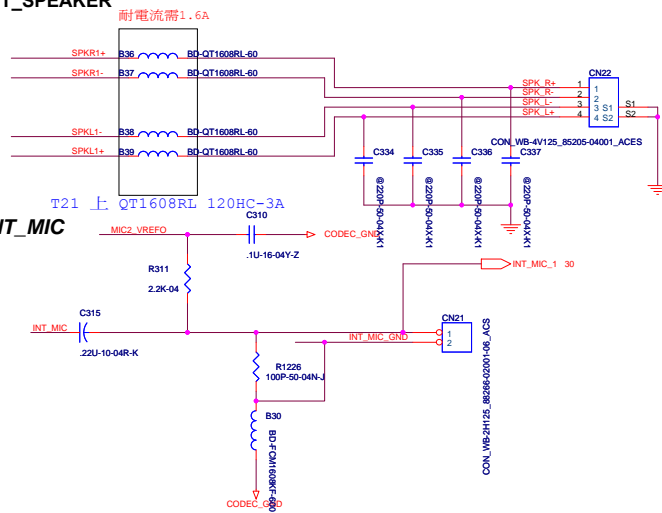
ENHANCE USB Port



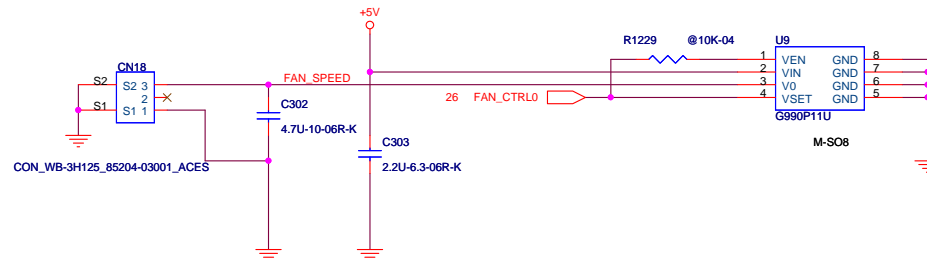
CON_WB-10V100_87216-100406_ACES is
SAME type as LVDS

CODEC 92HD81

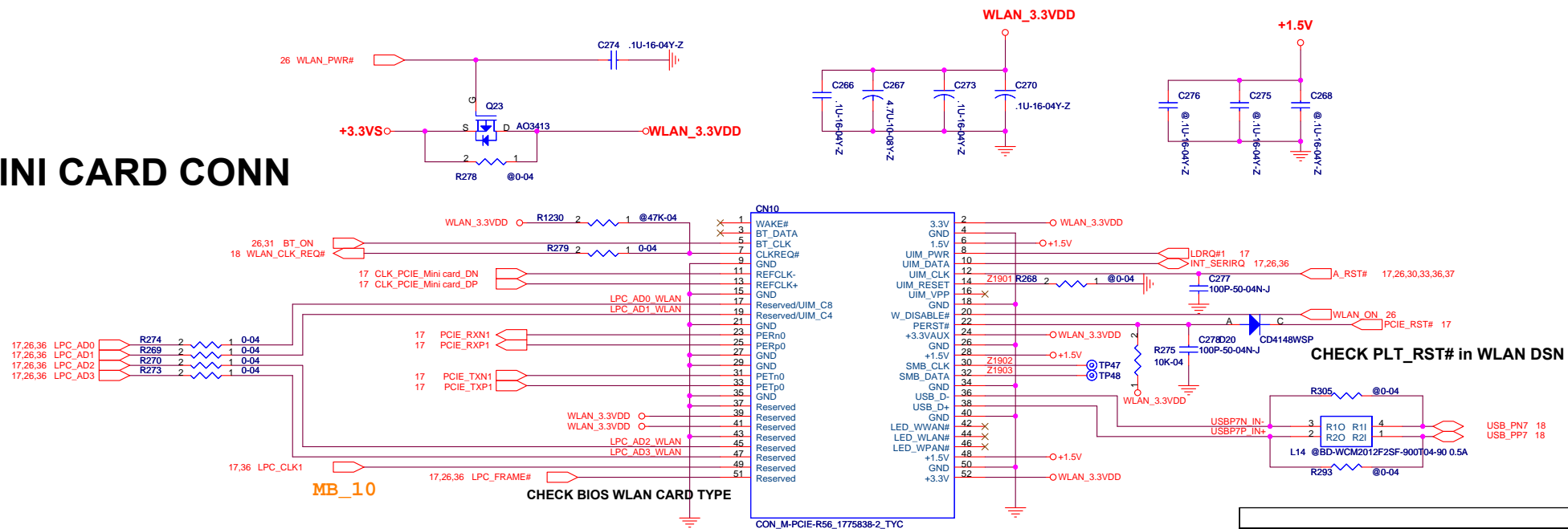
INT_SPEAKER



FAN CONTROLLER

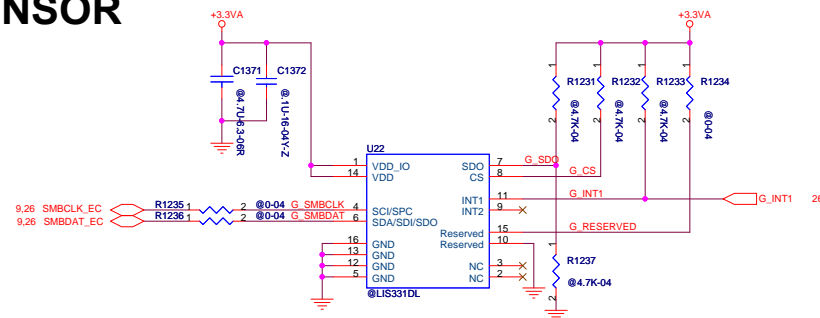


MINI CARD CONN

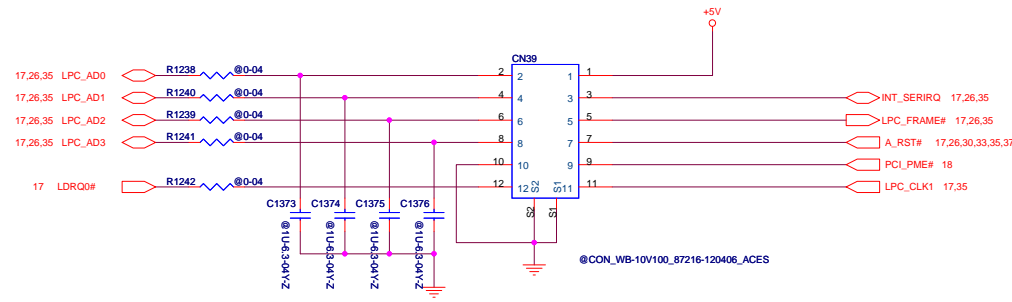


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| Custom | <Doc> | | | | | | | | A0 |
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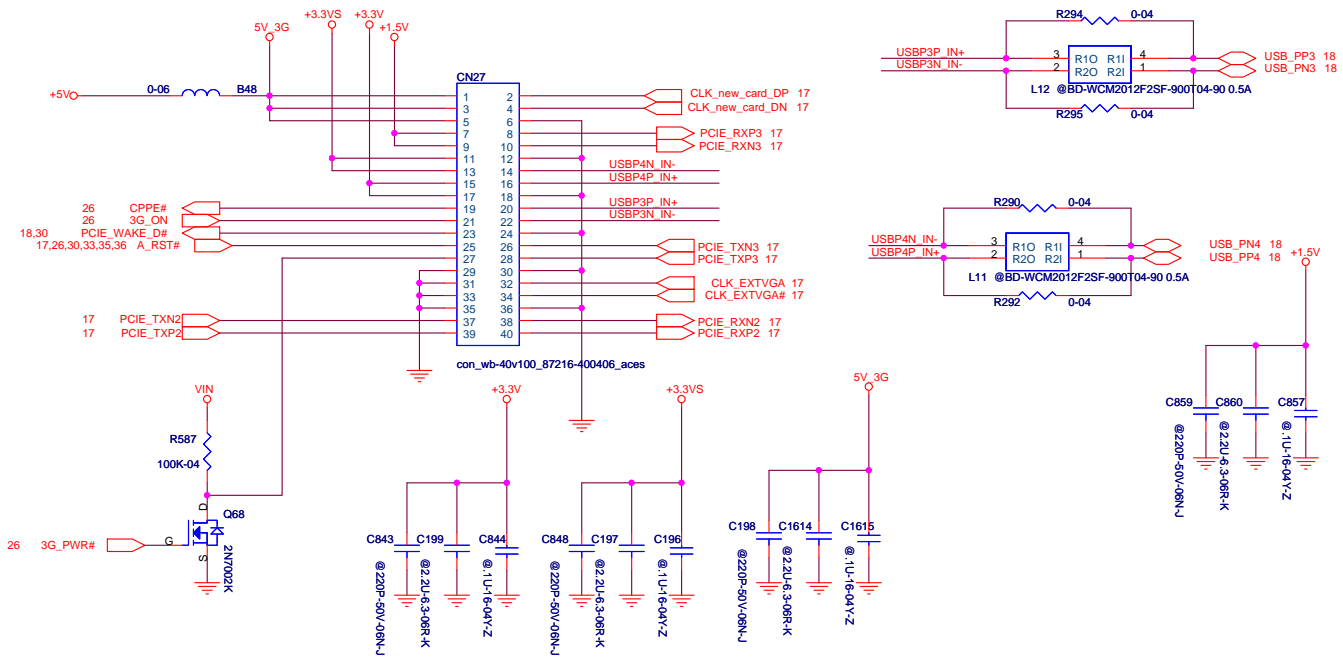
G-SENSOR



RS232



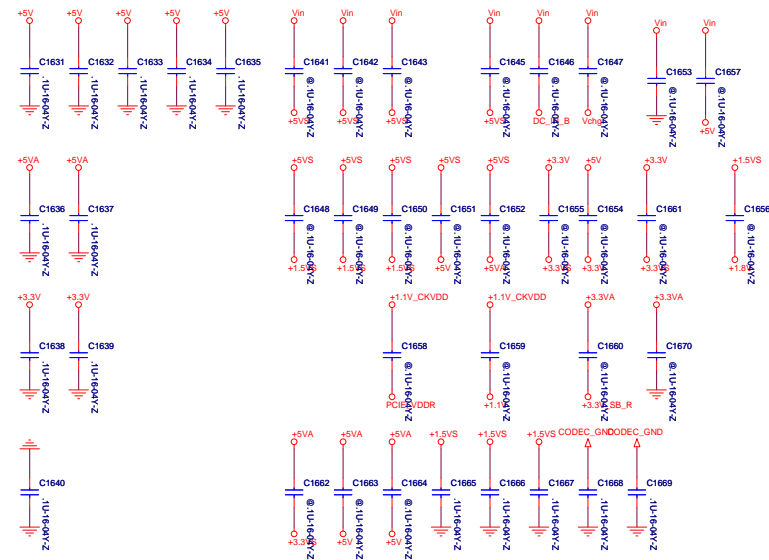
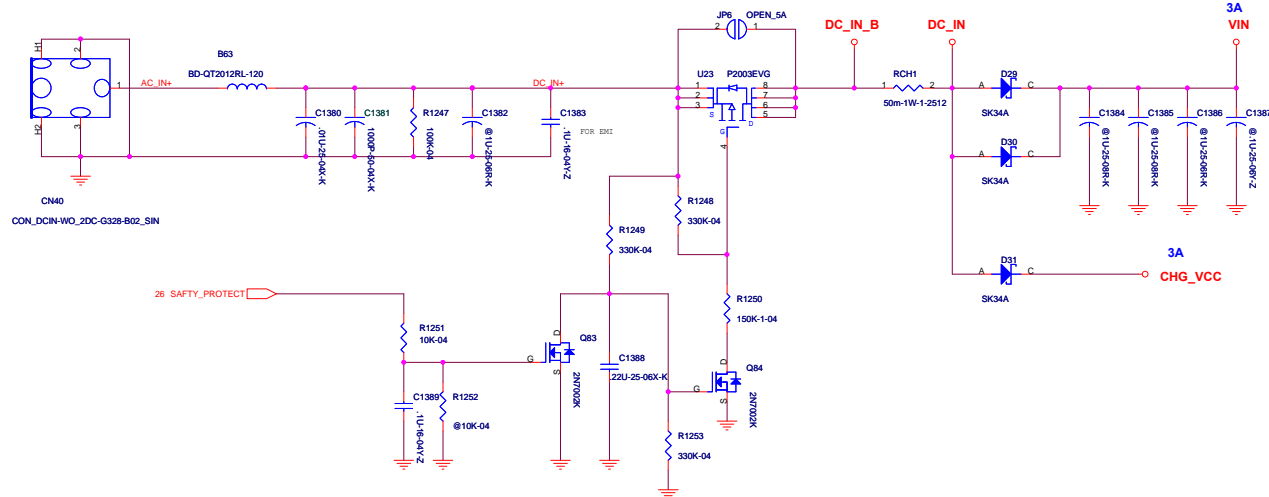
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| Title | | | | |
| A14RV | | | | |
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| Custom | <Doc> | | | |
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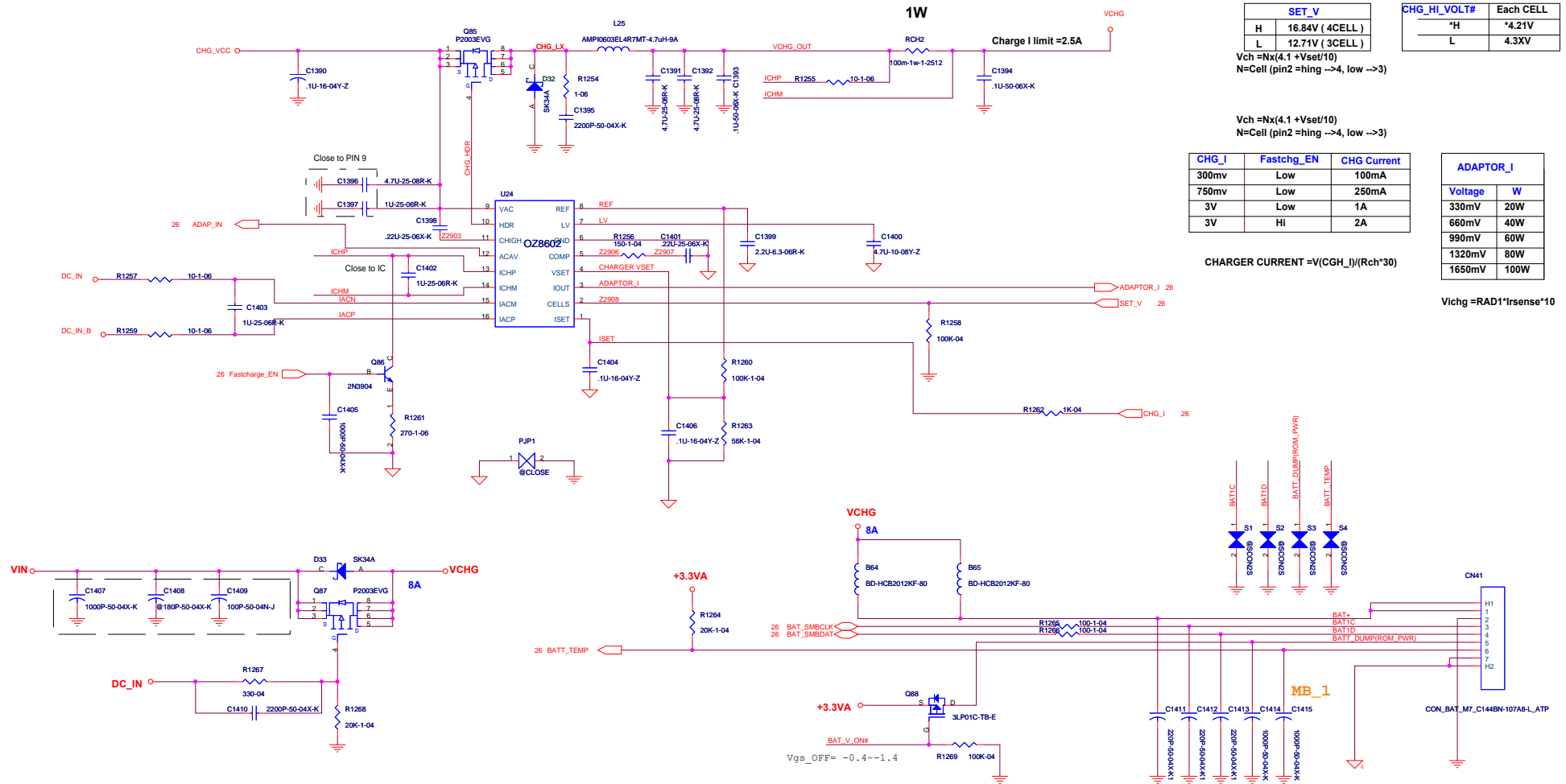
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|------------------------------|-----------------|--|--|--|---|--|--|--|--|---|--|--|--|--|---|--|--|---|--|---|--|--|--|--|-------|--|--|--|--|--|--|-------|--|--|--|--|--|--|------|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----|--|--|--|--|--|---|-------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|--|--|--|--|--|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 5 | | | | | 4 | | | | | 3 | | | | | 2 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | <table><tr><td colspan="7">Title</td></tr><tr><td colspan="7">A14RV</td></tr><tr><td>Size</td><td colspan="17">Document Number</td><td>Rev</td><td colspan="5"></td></tr><tr><td>A</td><td colspan="17" rowspan="2"><Doc></td><td>A0</td><td colspan="5" rowspan="2"></td></tr><tr><td colspan="18">Date: Friday, April 29, 2011</td><td colspan="7">Sheet 38 of 57</td></tr></table> | | | | | | | Title | | | | | | | A14RV | | | | | | | Size | Document Number | | | | | | | | | | | | | | | | | Rev | | | | | | A | <Doc> | | | | | | | | | | | | | | | | | A0 | | | | | | Date: Friday, April 29, 2011 | | | | | | | | | | | | | | | | | | Sheet 38 of 57 | | | | | | | | | | | | | |
| Title | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A14RV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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DC IN

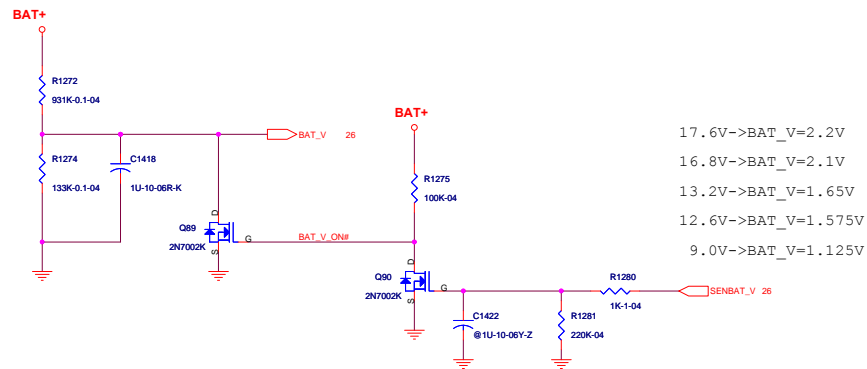
| PROJECT | A14HM02 | | | |
|--------------|---------|---------|---------|---------|
| Adaptor | 65W | 90W | 120W | 40W |
| Rsense | 33m Ohm | 25m Ohm | 18m Ohm | 50m Ohm |
| Stop Charger | 60W | 80W | 110W | 40W |



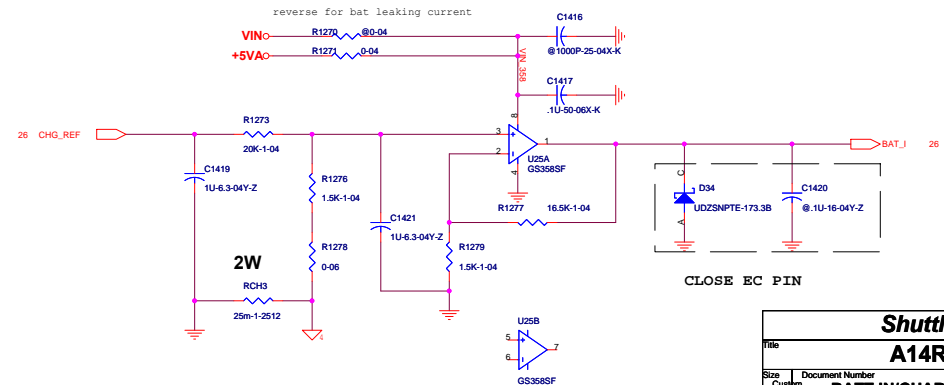
CHARGER



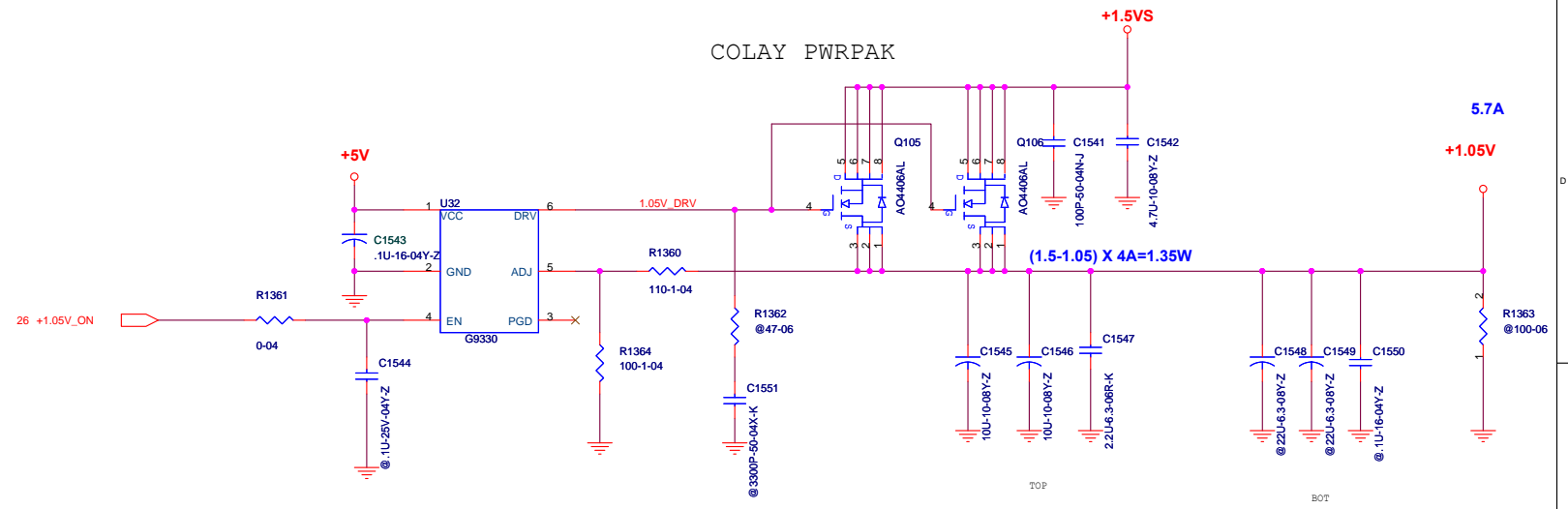
Battery Voltage Detect



Charge / Discharge Detect

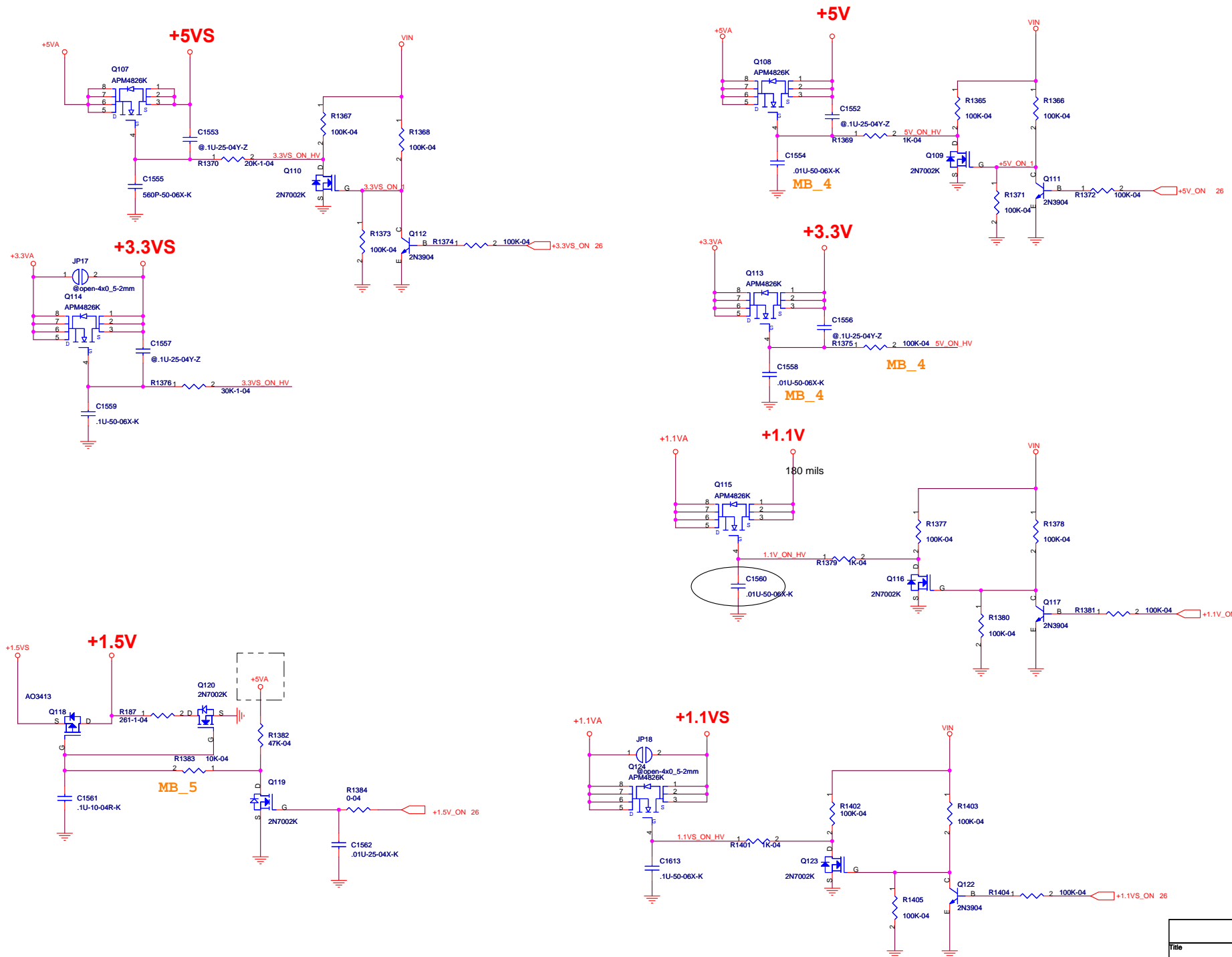




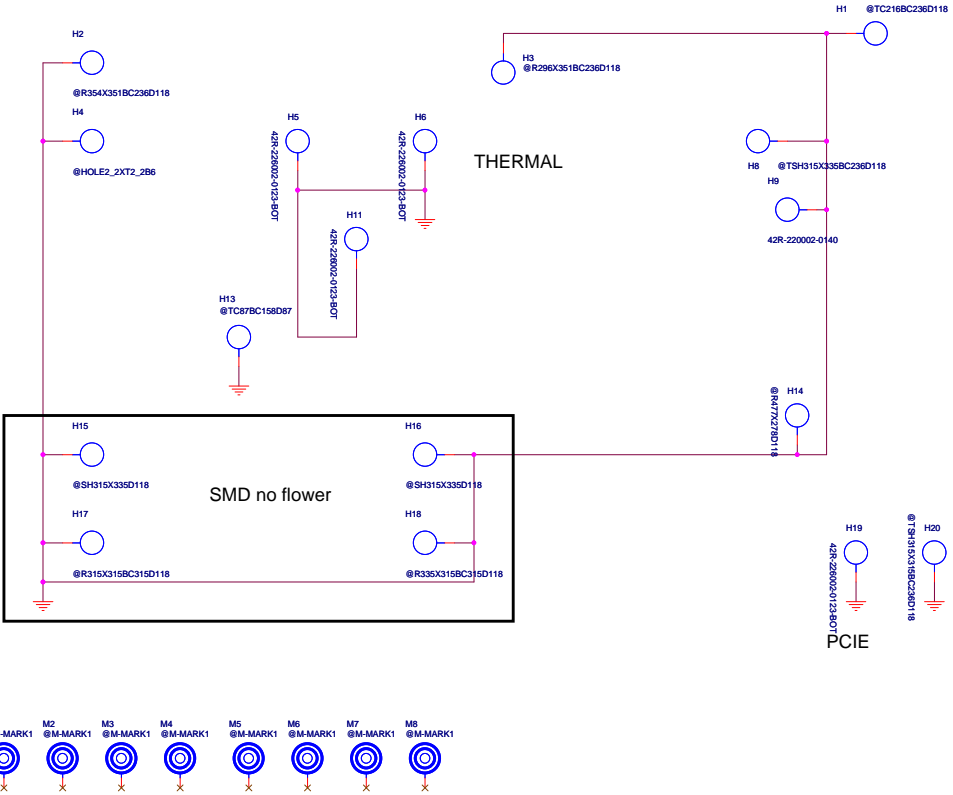


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VCCSW



Screw holes



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RB change list:

| Modify: | Page | Symbol | What change | BOM/FOOTPRINT: | Page | Symbol | What change |
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RC change list:

Modify: Page Symbol What change BOM/FOOTPRINT: Page Symbol What change

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| SHUTTLE | | | |
| Title | | | |
| A14RV | | | |
| Size | Document Number | | Rev |
| | SCHEMATIC1 | | A0 |
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