

# ***VFKTA***

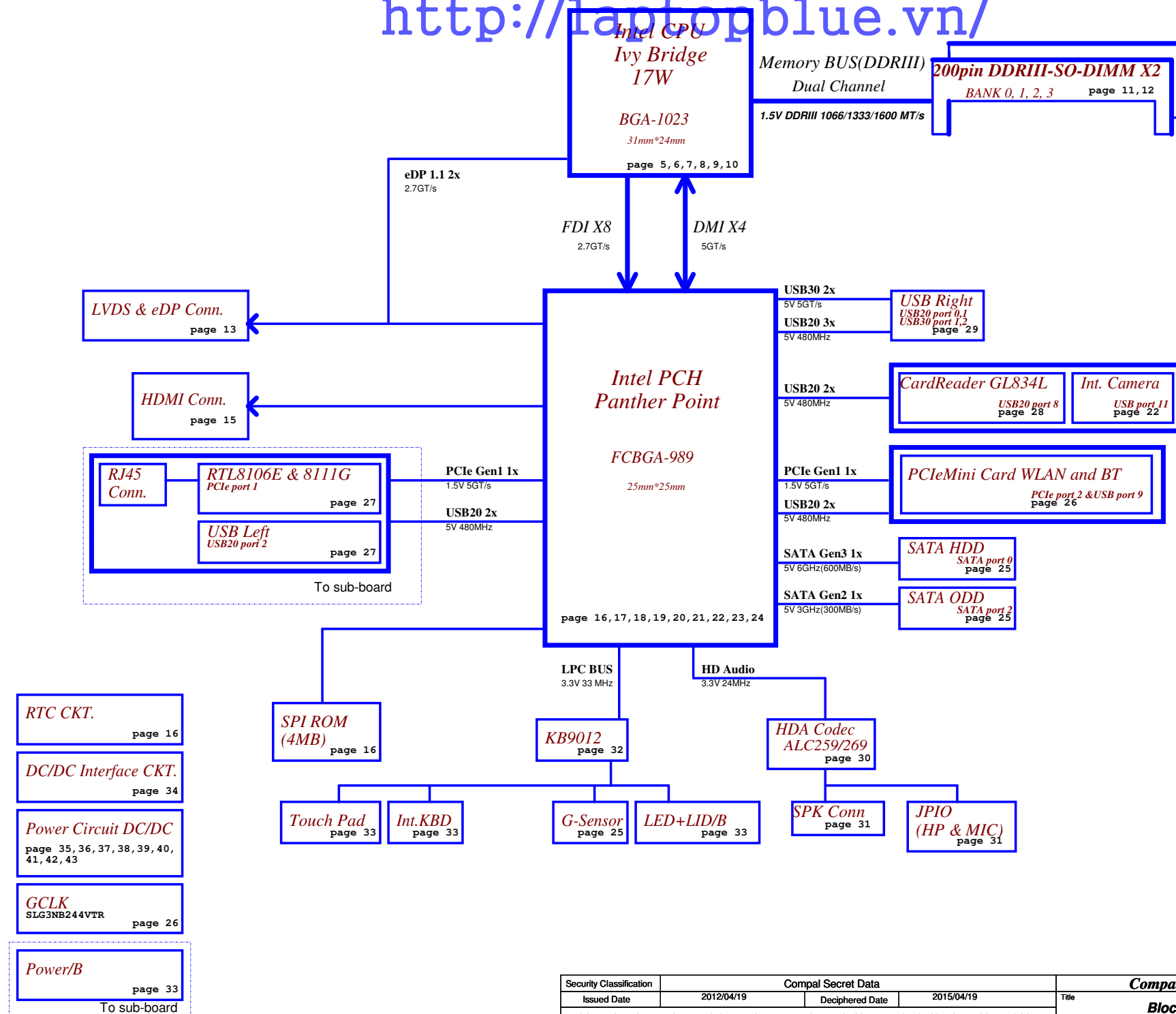
## ***Rosetta 10FT/10FTG***

### **LA-9862P REV 1.0 Schematic**

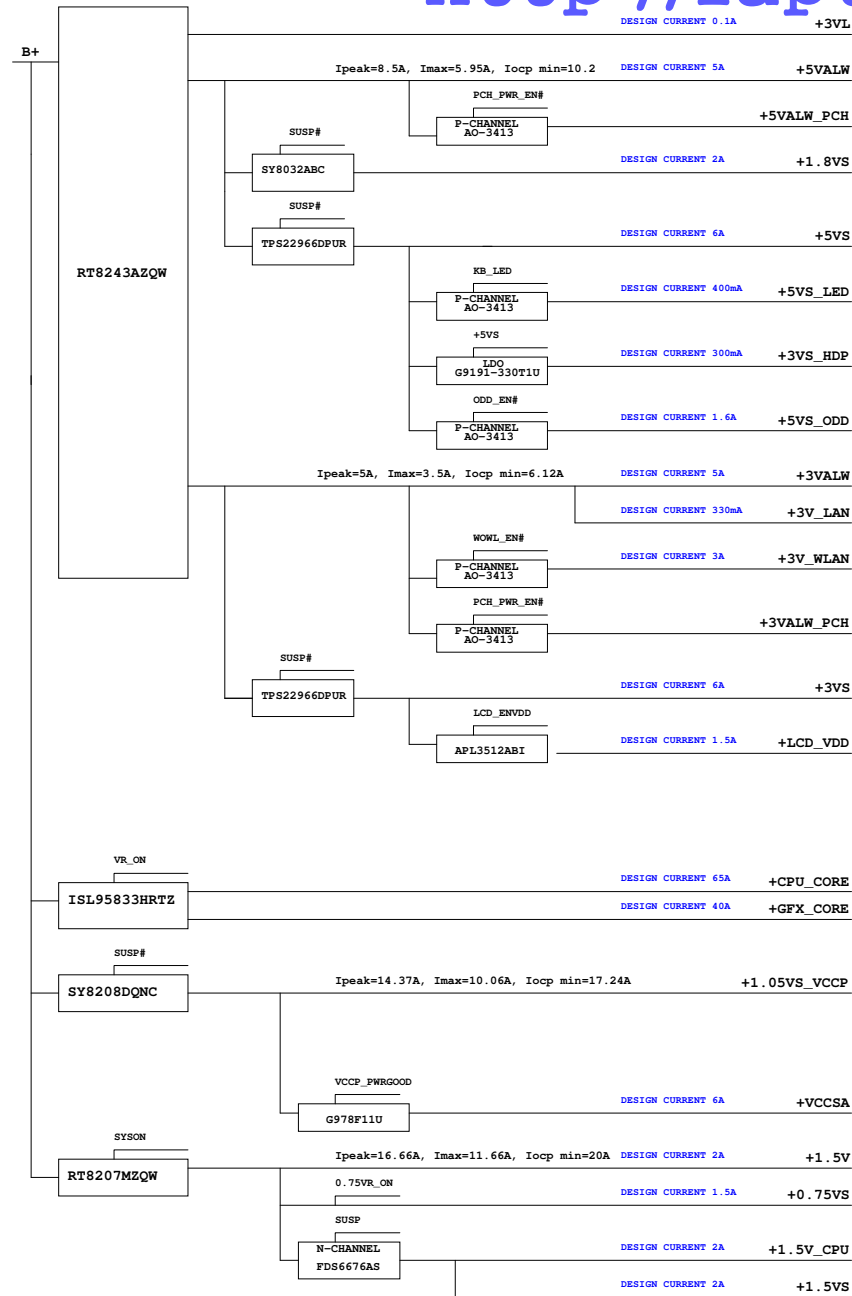
Intel Processor (Ivy Bridge/Sandy Bridge)+  
PCH(Panther Point)

2013-02-06 Rev 1.0

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |                    |            |                                        |                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|----------------------------------------|-------------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                                |            | Compal Secret Data |            | Compal Electronics, Inc.               |                   |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2012/04/19 | Deciphered Date    | 2015/04/19 | Title                                  | <b>Cover Page</b> |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |                    |            | Date: Monday, March 11, 2013           | Sheet 1 of 46     |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                    |  |                 |  |                          |  |                              |  |               |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|--|------------------------------|--|---------------|--|
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                    |  |                 |  |                          |  | Document Number              |  | Rev           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                    |  |                 |  |                          |  | VFKTA                        |  | 1.0           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                    |  |                 |  |                          |  | Date: Monday, March 11, 2013 |  | Sheet 2 of 46 |  |



Voltage Rails ( O MEANS ON X MEANS OFF )

| power plane                    | +RTCVCC | B+ | +5VL<br>+3VL | +5VALW<br>+3VALW<br>+VSB | +1.5V | +5VS<br>+3VS<br>+1.8VS<br>+1.5VS<br>+1.5V_CPU<br>+0.75VS<br>+CPU_CORE<br>+GFX_CORE<br>+VCCSA<br>+1.05VS_VCCP<br>+3V_WLAN<br>+3V_LAN<br>+LCD_VDD |
|--------------------------------|---------|----|--------------|--------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| State                          |         |    |              |                          |       |                                                                                                                                                 |
| S0                             | O       | O  | O            | O                        | O     | O                                                                                                                                               |
| S1                             | O       | O  | O            | O                        | O     | O                                                                                                                                               |
| S3                             | O       | O  | O            | O                        | O     | X                                                                                                                                               |
| S5 S4/AC                       | O       | O  | O            | O                        | X     | X                                                                                                                                               |
| S5 S4/ Battery only            | O       | O  | O            | X                        | X     | X                                                                                                                                               |
| S5 S4/AC & Battery don't exist | O       | X  | X            | X                        | X     | X                                                                                                                                               |

| PCH SM Bus Address |               |      |             |
|--------------------|---------------|------|-------------|
| Power              | Device        | HEX  | Address     |
| +3VS               | DDR SO-DIMM 0 | A0 H | 1010 0000 b |
| +3VS               | DDR SO-DIMM 1 | A4 H | 1010 0100 b |
| +3VS               | Touch Pad     | 2C H | 0010 1100 b |

| EC SM Bus1 Address |               |      |             | EC SM Bus2 Address                    |          |      |             |
|--------------------|---------------|------|-------------|---------------------------------------|----------|------|-------------|
| Power              | Device        | HEX  | Address     | Power                                 | Device   | HEX  | Address     |
| +3VL               | Smart Battery | 16 H | 0001 0110 b | +3VS                                  | PCH      | 96 H | 1001 0110 b |
| +3VL               | Smart Charger | 12 H | 0001 0010 b | +3VS                                  | G-Sensor | 40 H | 0100 0000 b |
| +3VL               | USB S&C 14640 | 35 H | 0011 0101 b |                                       |          |      |             |
| Power              | Device        | HEX  | Address     | 01/22/13 Add G-Sensor reference Hemen |          |      |             |
|                    |               |      |             |                                       |          |      |             |

01/22/13 Add Smart Charger SMbus address: 0x12 Hemen  
we Add already

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BTO Option Table

| Function    | CPU           |               |               |              |            | PCH           |         |
|-------------|---------------|---------------|---------------|--------------|------------|---------------|---------|
| description | IVB i5 3337U  | IVB i3 3227U  | IVB i3 2375M  | IVB P 2117U  | IVB C 847  | Panther Point |         |
| explain     | IVB i5 3337U  | IVB i3 3227U  | IVB i3 2375M  | IVB P 2117U  | IVB C 847  | HM76          | HM70    |
| BTO         | CPUI53337UR1@ | CPUI33227UR1@ | CPUI32375MR1@ | CPUP2117UR1@ | CPUC847R1@ | HM76R1@       | HM70R1@ |
|             | CPUI53337UR3@ | CPUI33227UR3@ | CPUI32375MR3@ | CPUP2117UR3@ | CPUC847R3@ | HM76R3@       | HM70R3@ |

| Function    | LVDS-eDP |       | Camera & Mic |  | USB S&C |        | CRT    |          | EC     |            |
|-------------|----------|-------|--------------|--|---------|--------|--------|----------|--------|------------|
| description | LVDS-eDP |       | Camera & Mic |  | 14640   | 14641  | CRT    |          | EC     |            |
| explain     | LVDS     | eDP   | Camera & Mic |  | 14640   | 14641  | w/ CRT | w/o CRT  | KB9012 | NPCE885N   |
| BTO         | LVDS@    | IEDP@ | CAM_EMI@     |  | 14640@  | 14641@ | CRT@   | CRT_EMI@ | NOCRT@ | 9012@ 885@ |

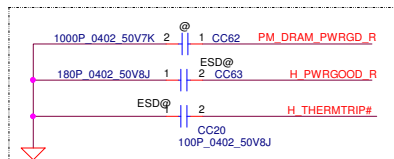
| Function    | WOWL  |         | G-SENSOR |  | ZPODD  |        | GCLK  |          | Touch Screen |  |
|-------------|-------|---------|----------|--|--------|--------|-------|----------|--------------|--|
| description | WOWL  |         | G-SENSOR |  | ZPODD  |        | GCLK  | non-GCLK | Touch Screen |  |
| explain     | w/    | w/o     | G-SENSOR |  | w/     | w/o    | GCLK  | non-GCLK | Touch Screen |  |
| BTO         | WOWL@ | NOWOWL@ | GSENSOR@ |  | ZPODD@ | NONZP@ | GCLK@ | NOGCLK@  | TOUCH_EMI@   |  |

| Function    | Sleep & Music |         | KB Light |  | EMI/ESD/RF part |       |      |       | ISPD      |         |
|-------------|---------------|---------|----------|--|-----------------|-------|------|-------|-----------|---------|
| description | Sleep & Music |         | KB Light |  | EMI/ESD/RF part |       |      |       | HDMI Logo |         |
| explain     | w/ S&M        | w/o S&M | KB Light |  | EMI/ESD/RF part |       |      |       | HDMI Logo |         |
| BTO         | 269@          | 259@    | KBL@     |  | EMI@            | @EMI@ | ESD@ | @ESD@ | @RF@      | HDMI45@ |

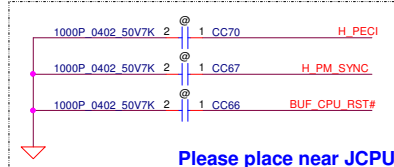
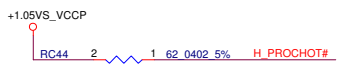
Red Word: always un-mount

| STATE                 | SIGNAL | SLP_S3# | SLP_S4# | SLP_S5# |
|-----------------------|--------|---------|---------|---------|
| Full ON               |        | HIGH    | HIGH    | HIGH    |
| S1 (Power On Suspend) |        | HIGH    | HIGH    | HIGH    |
| S3 (Suspend to RAM)   |        | LOW     | HIGH    | HIGH    |
| S4 (Suspend to Disk)  |        | LOW     | LOW     | HIGH    |
| S5 (Soft OFF)         |        | LOW     | LOW     | LOW     |
| G3                    |        | LOW     | LOW     | LOW     |

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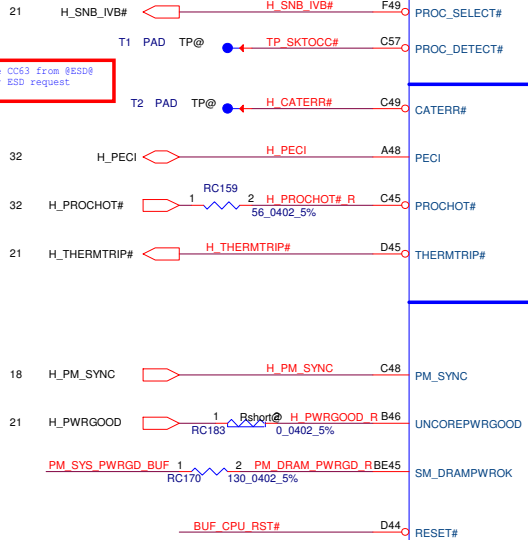


by ESD request and place near CPU



Please place near JCPU

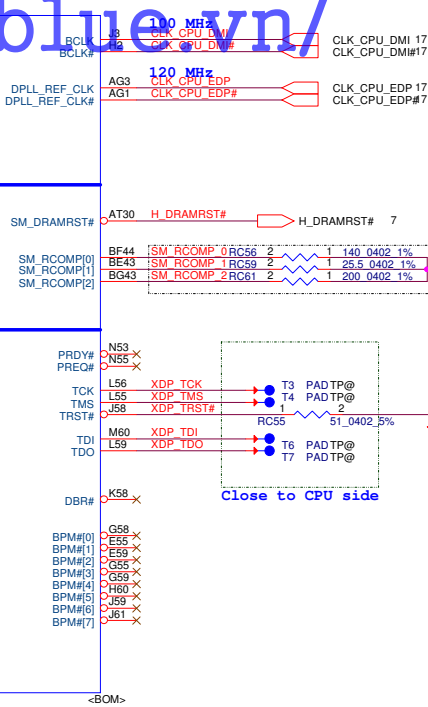
11/30 Change CC63 from ESD@ to ESD@ for ESD request



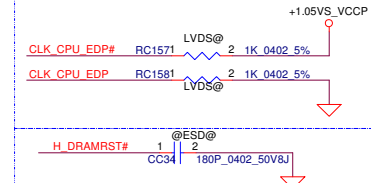
CLOCKS

DDR3 MISC

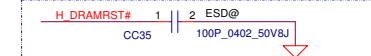
JTAG & BPM



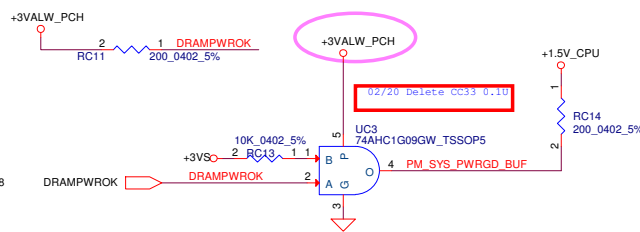
Stuff RC158&RC157 if do not support eDP



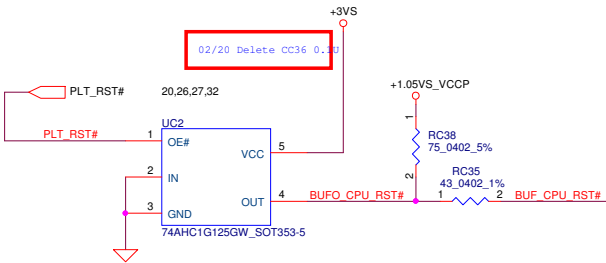
by ESD request and place near CPU



Routed as a single daisy chain

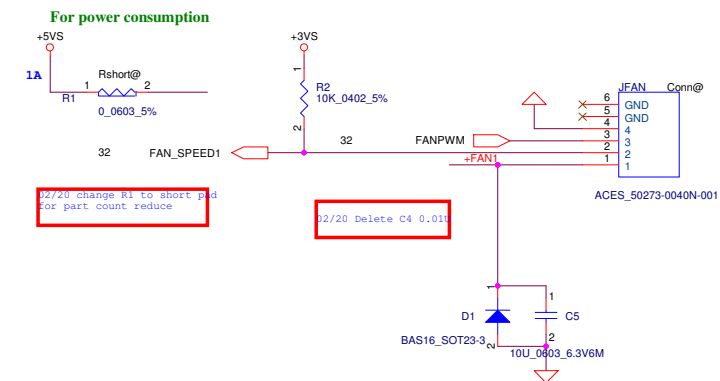


## Buffered Rest to CPU

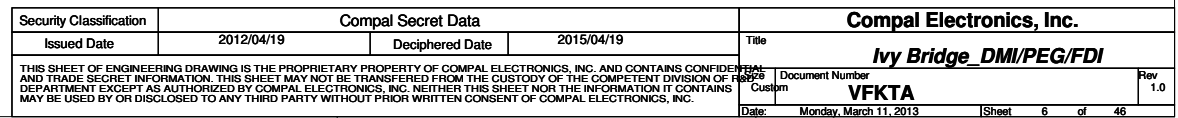


## XDP Connector

## FAN Control Circuit



| Security Classification                                                                                                                                                                                                                                                                                            |  |  |  | Compal Secret Data     |  |  |  | Title           |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|------------------------|--|--|--|-----------------|--|--|--|
| Issued Date                                                                                                                                                                                                                                                                                                        |  |  |  | 2012/04/19             |  |  |  | Deciphered Date |  |  |  |
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| Date                                                                                                                                                                                                                                                                                                               |  |  |  | Monday, March 11, 2013 |  |  |  | Sheet           |  |  |  |
| 5                                                                                                                                                                                                                                                                                                                  |  |  |  | 1.0                    |  |  |  | 46              |  |  |  |



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UC1C



DDR SYSTEM MEMORY A

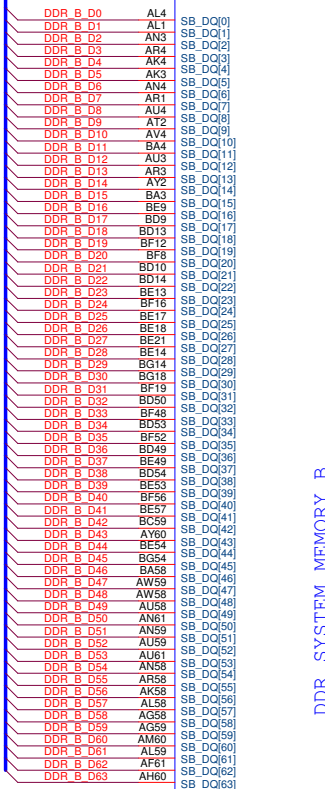
Ivy-Bridge\_BGA1023

CPU@

&lt;BOM&gt;

CPU@

UC1D



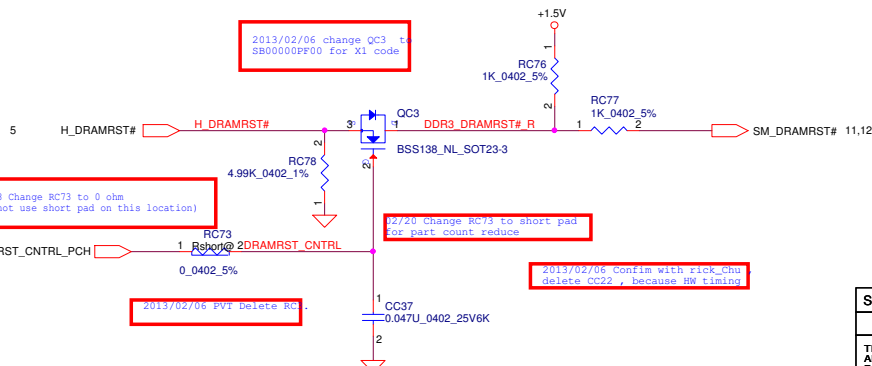
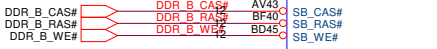
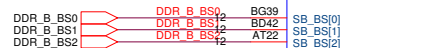
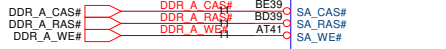
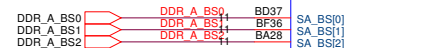
DDR SYSTEM MEMORY B

Ivy-Bridge\_BGA1023

CPU@

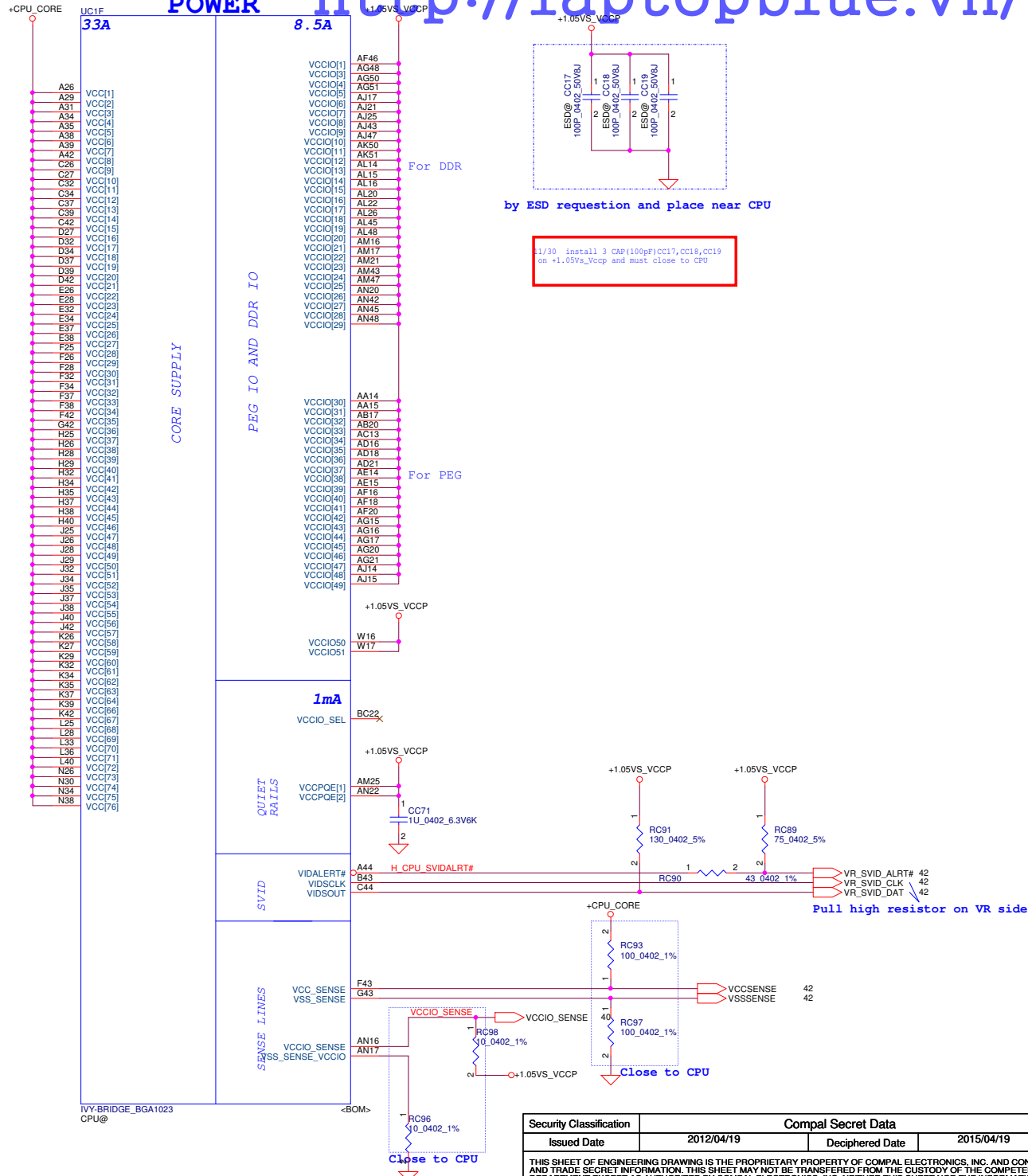
&lt;BOM&gt;

CPU@

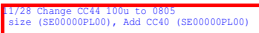


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|                                                                                                                                                                                                                                                                                                                                                                                                                        |            |                    |            | Date: Monday, March 11, 2013 | Sheet 7 of 46 |

Ivy Bridge\_DDR3



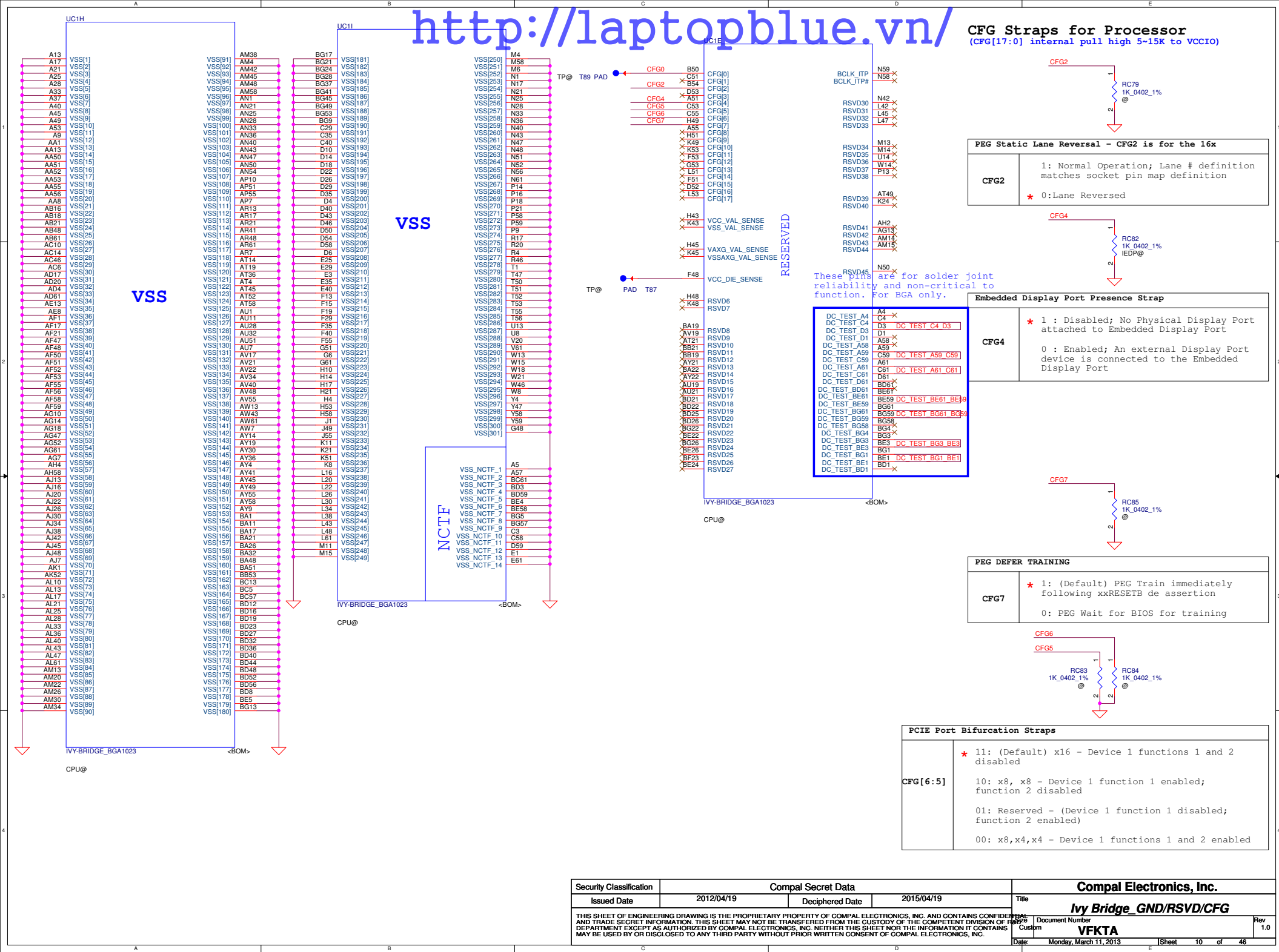
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                    |  |                 |  | Document Number          |  | VFKTA                  |  | Rev 1.0       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                    |  |                 |  | Custom                   |  |                        |  |               |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                    |  |                 |  | Date                     |  | Monday, March 11, 2013 |  | Sheet 8 of 46 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                    |  |                 |  |                          |  |                        |  |               |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                    |  |                 |  |                          |  |                        |  |               |  |



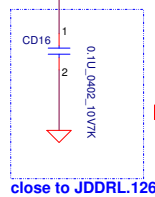
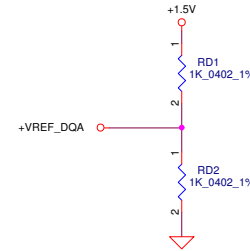
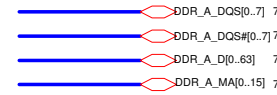
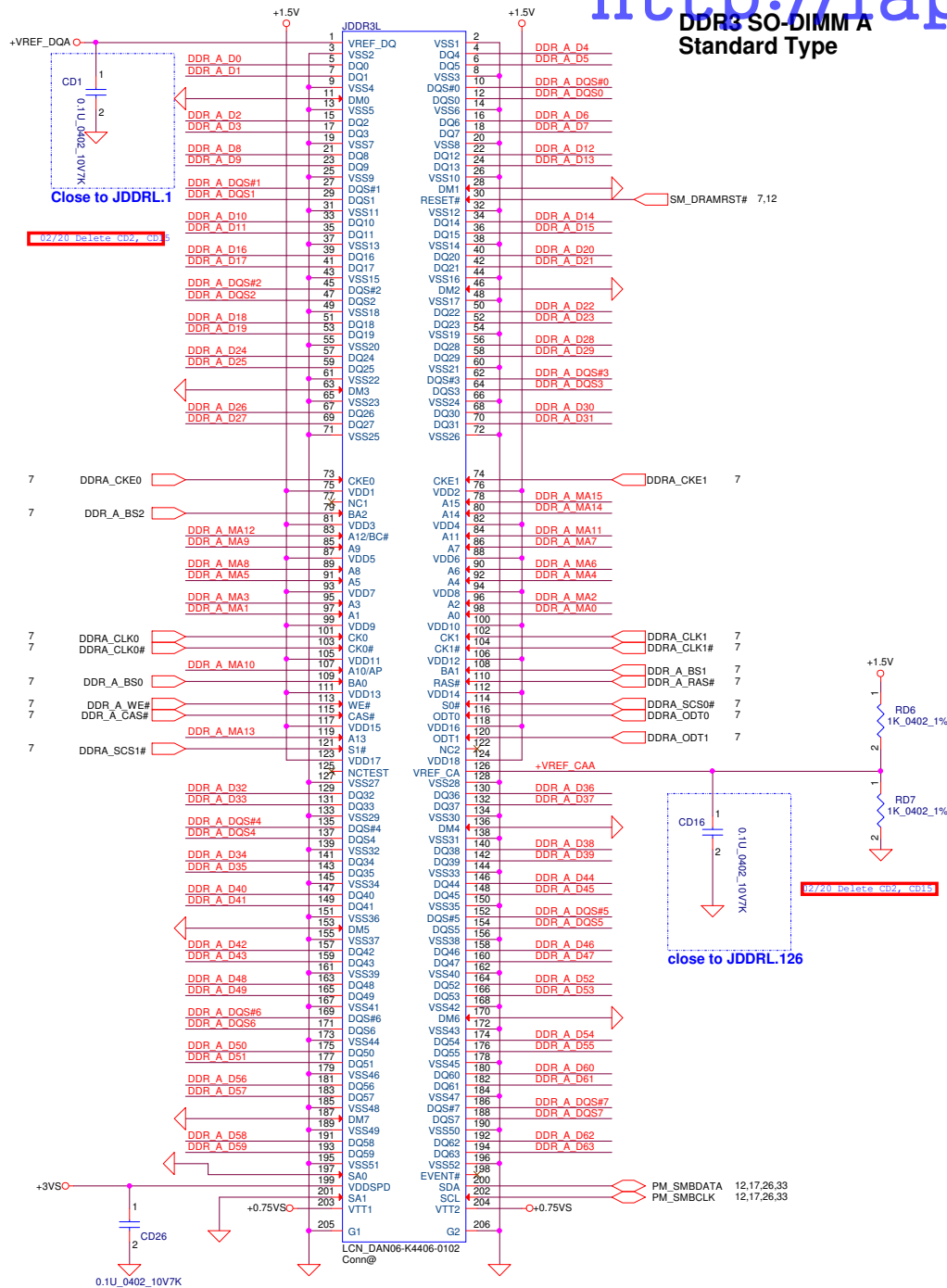
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|-------------------------------------------|---------------------------------|---------------|
| DENIAL<br>OF REQUEST<br>FOR<br>INSPECTION | Document Number<br><b>VFKTA</b> | Rev<br>1.0    |
| Date: Monday, March 11, 2013              |                                 | Sheet 9 of 46 |

# CFG Straps for Processor

(CFG[17:0] internal pull high 5~15K to VCCIO)



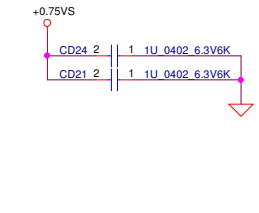
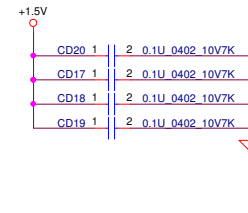
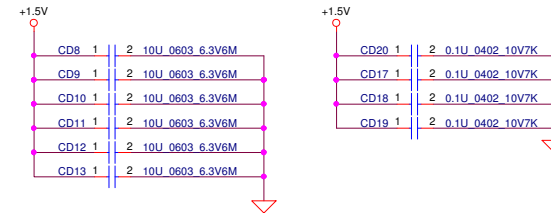
DDR3 SO-DIMM A  
Standard Type



Layout Note:  
Place near JDDR3L

Layout Note: Place these 4 Caps near  
Command and Control signals of DIMMA

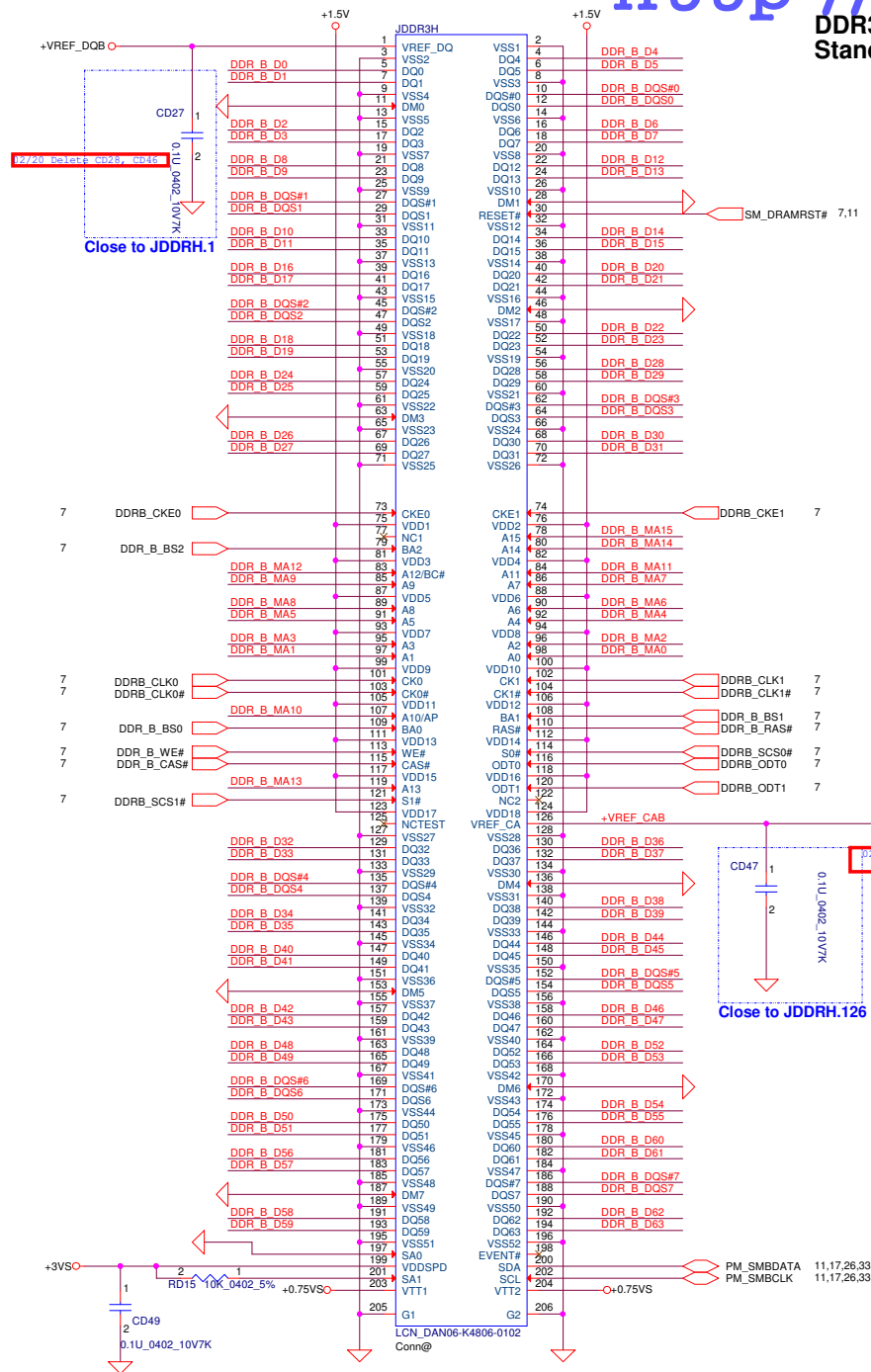
Layout Note:  
Place near JDDR3L1.203 and 204



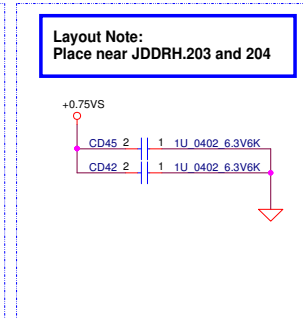
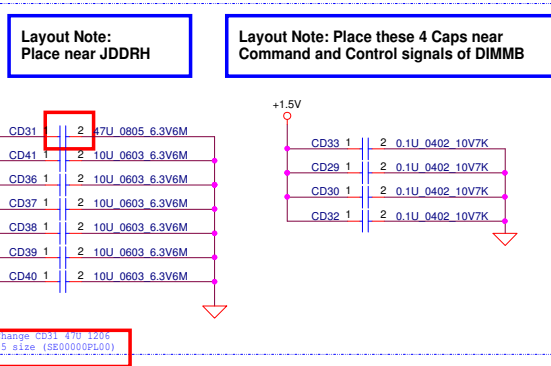
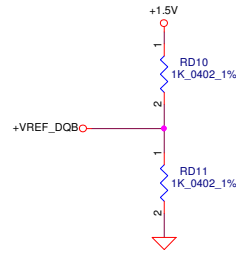
SPD setting (SA0, SA1)  
PU/PD by Channel A/B  
->Channel A 00  
->Channel B 01

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                    |  |                 |  |                          |  |                        |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|--|------------------------|--|
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                    |  |                 |  |                          |  | DDR3II-SODIMMO         |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                    |  |                 |  | Sheet                    |  | 11 of 46               |  |

DDR3 SO-DIMM B  
Standard Type

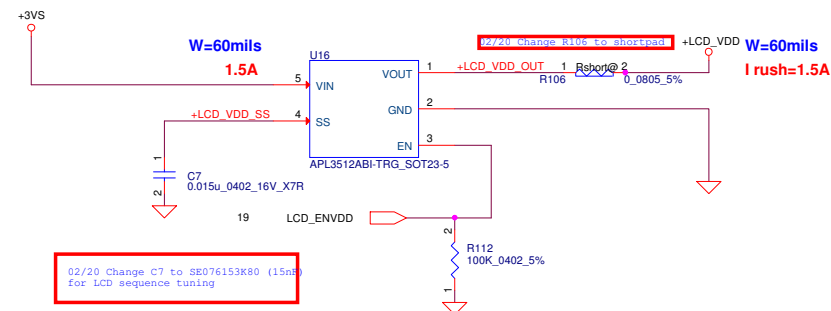
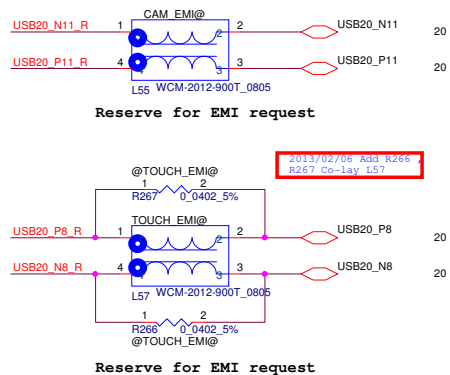


DDR\_B\_DQS#0..7  
DDR\_B\_DQS#0..7  
DDR\_B\_DQS#0..7  
DDR\_B\_MA[0..15] 7



|                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                        |  |                 |  |                          |  |                 |  |     |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|-----------------|--|--------------------------|--|-----------------|--|-----|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data     |  |                 |  | Compal Electronics, Inc. |  |                 |  |     |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2012/04/19             |  | Deciphered Date |  | 2015/04/19               |  | Title           |  |     |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                        |  |                 |  |                          |  | Document Number |  | Rev |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                        |  |                 |  |                          |  | Custom          |  | 1.0 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                        |  |                 |  |                          |  | VFKTA           |  |     |  |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Monday, March 11, 2013 |  | Sheet           |  | 12                       |  | of              |  | 46  |  |

<http://laptopblue.vn/>

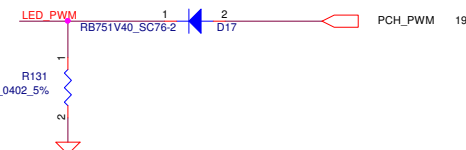
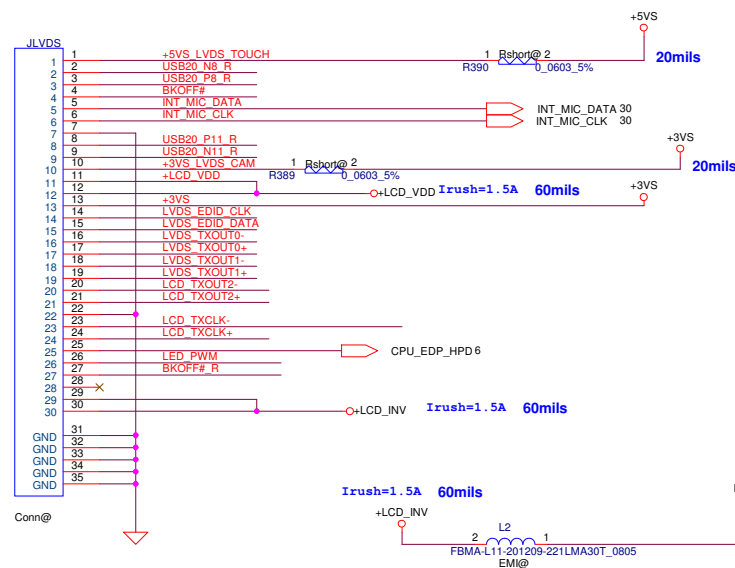


## LVDS colay eDP cable

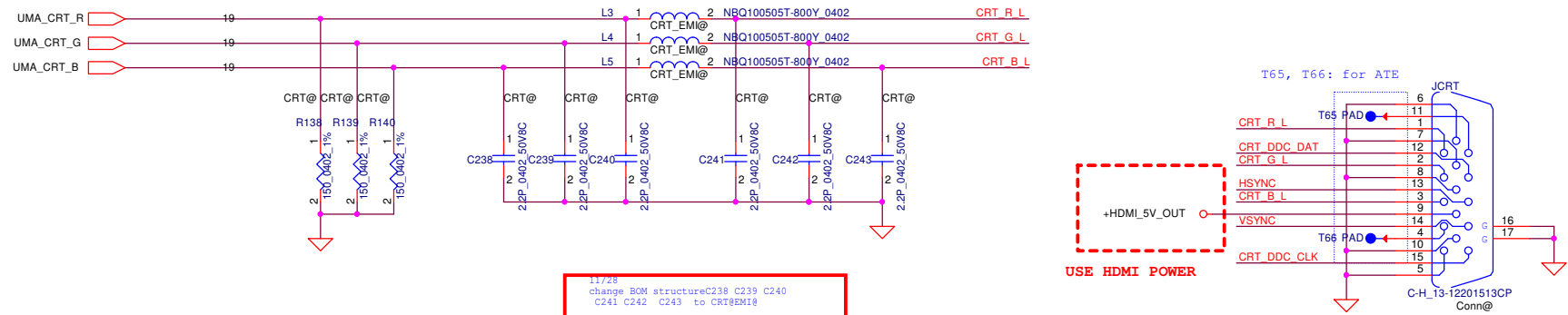
pin1-4 Touch function for panel

pin5-10 For Webcam with single or dual MIC

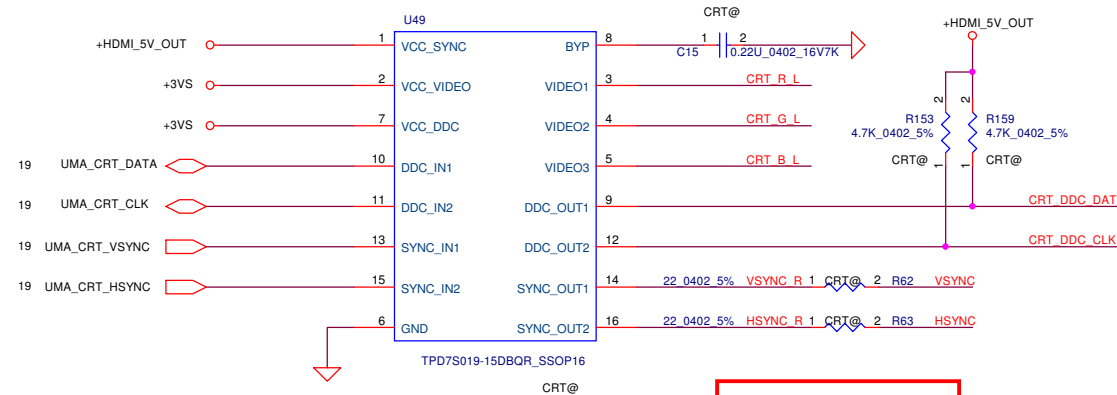
pin11-30 For LVDS or EDP panel



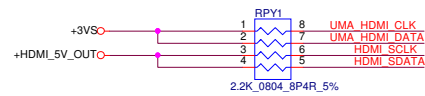
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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|---------------------------------|--|--------------------------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | Compal Secret Data |  | Title                           |  | Compal Electronics, Inc. |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | 2012/04/19         |  | Deciphered Date                 |  | 2015/04/19               |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                    |  | Date: Monday, March 11, 2013    |  | Sheet 13 of 46           |  |



02/20 Delete C250 0.1u



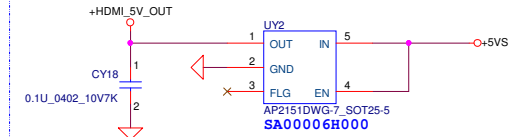
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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------|------------|--------------------------|----------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data     |            | Compal Electronics, Inc. |          |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19 | Deciphered Date        | 2015/04/19 | Title                    |          |
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| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            | Document Number        |            |                          | Rev      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            | VFKTA                  |            |                          | 1.0      |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            | Monday, March 11, 2013 |            | Sheet                    | 14 of 46 |



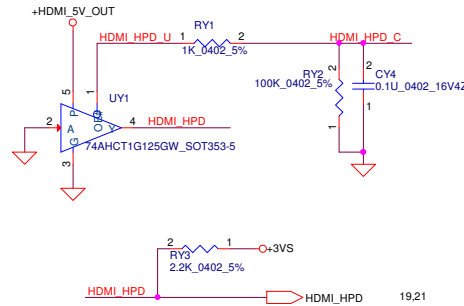
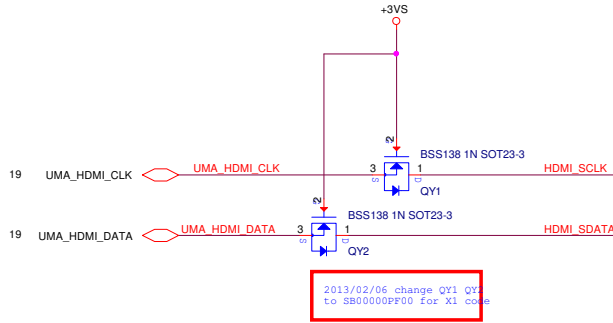
| OE# | A | Y |
|-----|---|---|
| L   | L | L |
| L   | H | H |
| H   | X | Z |

## HDMI POWER CIRCUIT

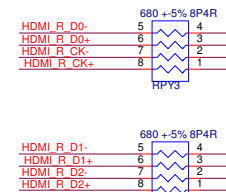
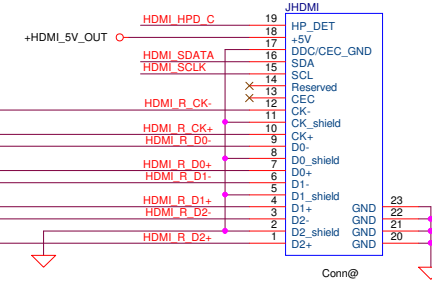
VIN = 5V, IOUT = 0.5A, RDS(ON) TYP=95m ; MAX=115m  
Current Limit: TYP=0.8A ; MAX=1A



11/28 Update HDMI current limited IC from AP230W-7 to AP2151DWG-7.



## HDMI Connector



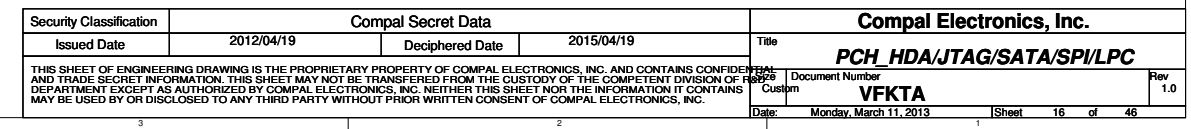
HDMI Royalty  
ZZZ HDMI45@  
R00000003HM  
HDMI W/Logo + HDCP

10/18 Modify the BOM structure @ to HDMI45@, change Location HDMI to ZZ.

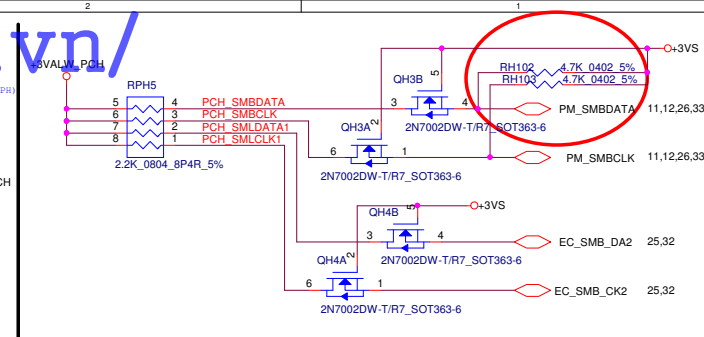
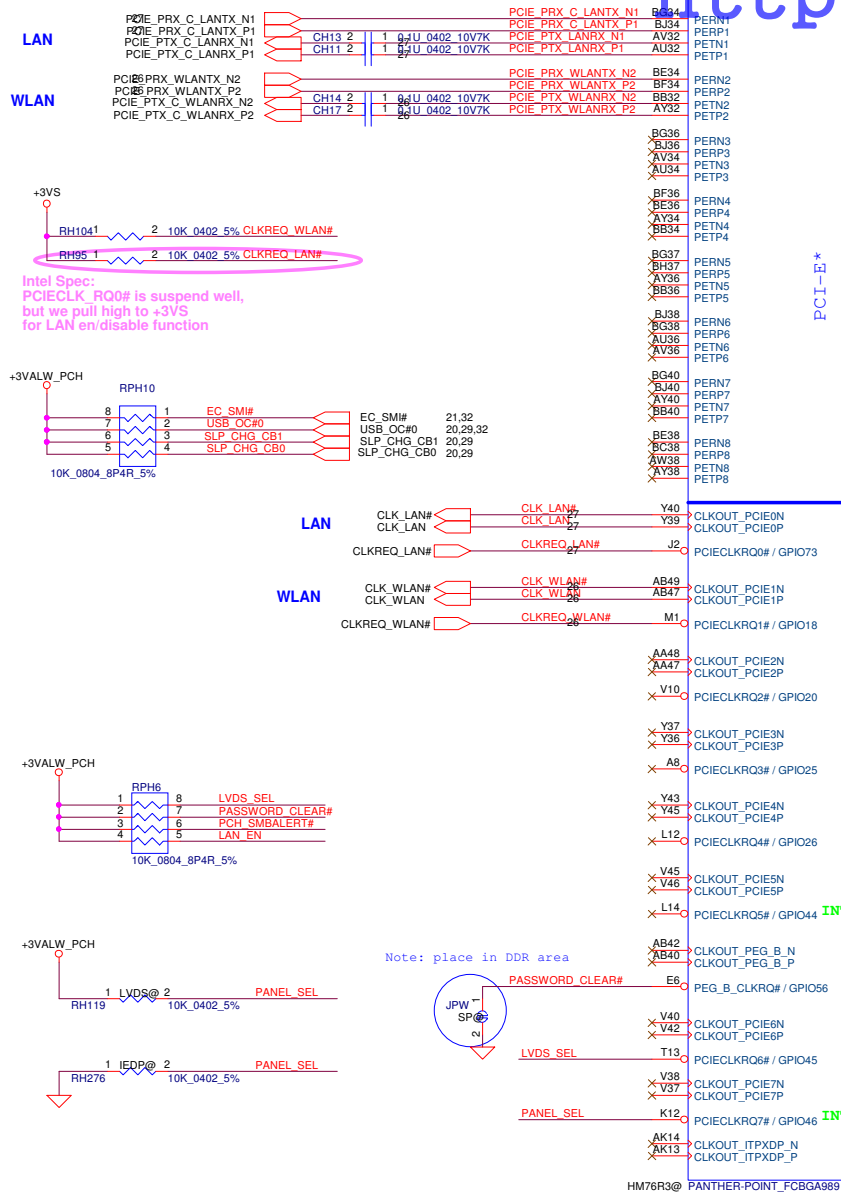
HDMI W/O Logo: R00000001HM  
HDMI W/Logo: R00000002HM  
HDMI W/Logo + HDCP: R00000003HM

please manually load  
this virtual material to 45@ BOM

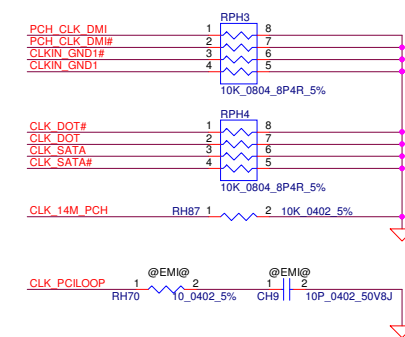
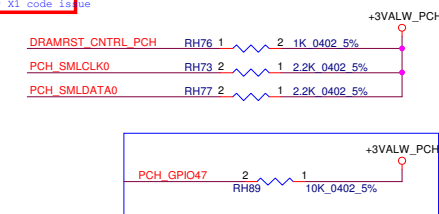
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  | Compal Secret Data |  |  |  | Title           |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--------------------|--|--|--|-----------------|--|--|--|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |  | 2012/04/19         |  |  |  | Deciphered Date |  |  |  |
| 2015/04/19                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  | 2015/04/19         |  |  |  | 2015/04/19      |  |  |  |
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| VFKTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  | 1.0                |  |  |  | Date            |  |  |  |
| Monday, March 11, 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  | Sheet              |  |  |  | 15 of 46        |  |  |  |



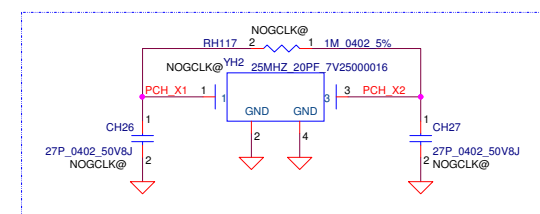
## WLAN



2013/02/06 change QC5,QH3,QH4,QW1,  
Q6 ,QA1 QR1 Q53 from SB00000EO10 to  
SB00000DH00 DVT 2nd source for X1 code issue





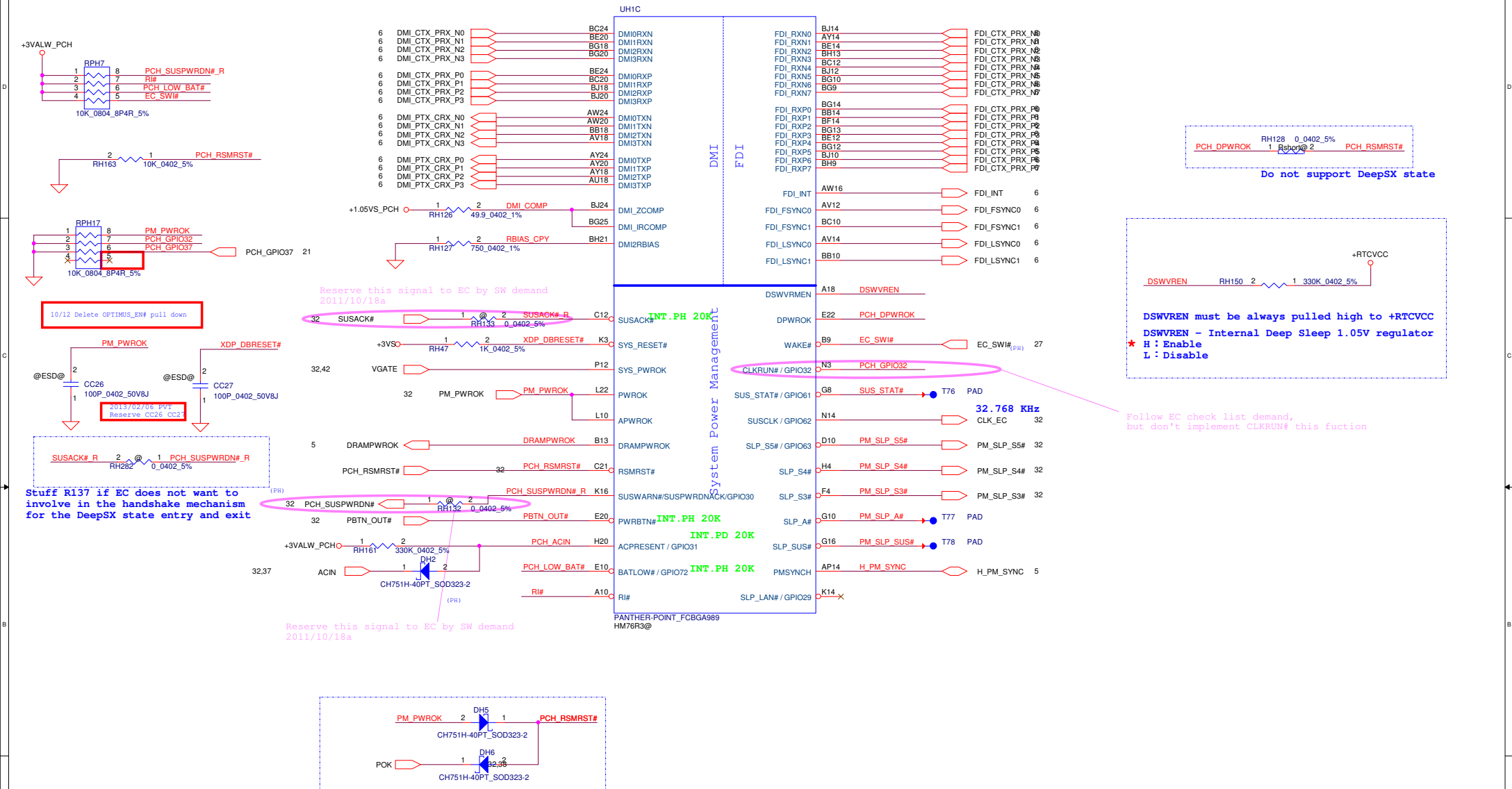


| LVDS_SEL | H                   | L    |
|----------|---------------------|------|
| Channel  | Single<br>(Default) | Dual |

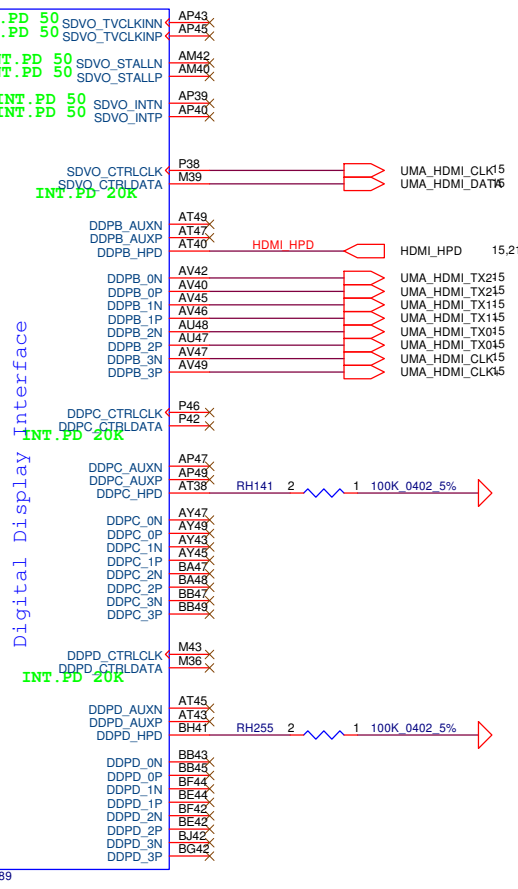
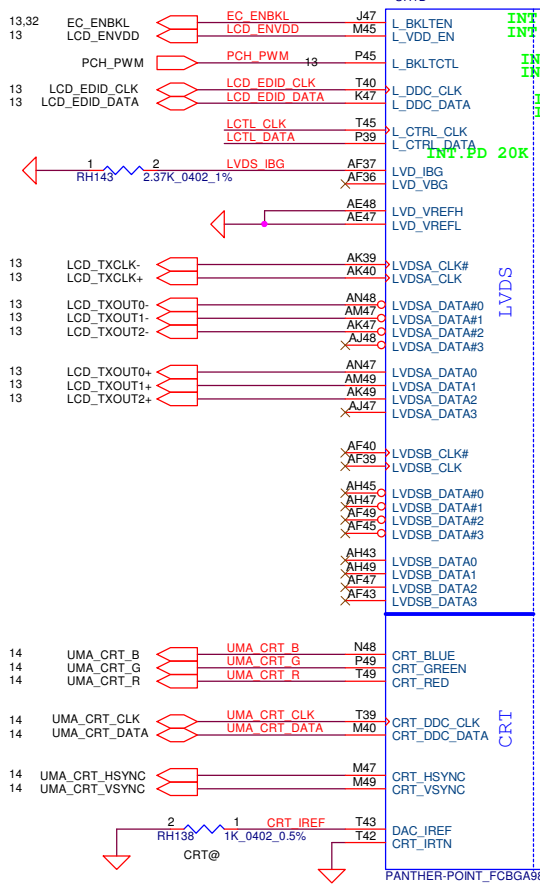
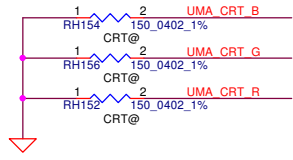
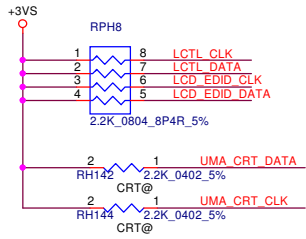
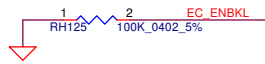
| PANEL_SEL |      |     |
|-----------|------|-----|
| PANEL_SEL | H    | L   |
| Channel   | LVDS | EDP |

| PCH_GPIO67 |     |         |
|------------|-----|---------|
| PCH_GPIO67 | H   | L       |
| M/B SKU    | UMA | DIS/OPT |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                 |            |                          |                     |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|--------------------------|---------------------|-------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Compal Secret Data |                 |            | Compal Electronics, Inc. |                     |       |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2012/04/19         | Deciphered Date | 2015/04/19 | Title                    | PCH_PCI-E/SMBUS/CLK |       |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                 |            | Customer                 | Rev 1.0             |       |
| Date: Monday, March 11, 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                 |            | Sheet                    | 17                  | of 46 |



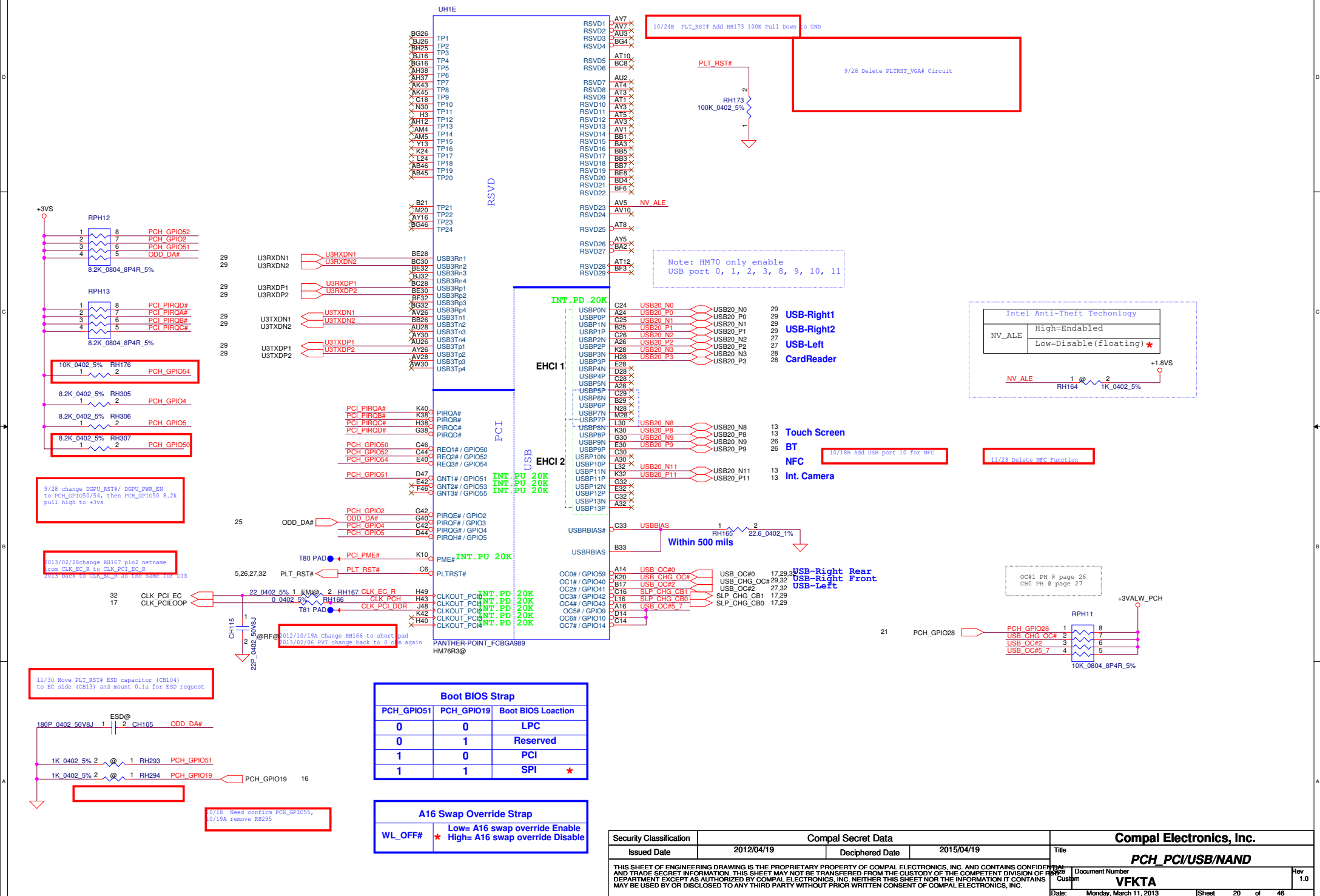
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                          |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------------------------|----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |                |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19 | Deciphered Date    | 2015/04/19 | Title                    | PCH_DMI/FDI/PM |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | VFKTA                    | 1.0            |
| Date: Monday, March 11, 2013                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |                    |            | Sheet                    | 18 of 46       |

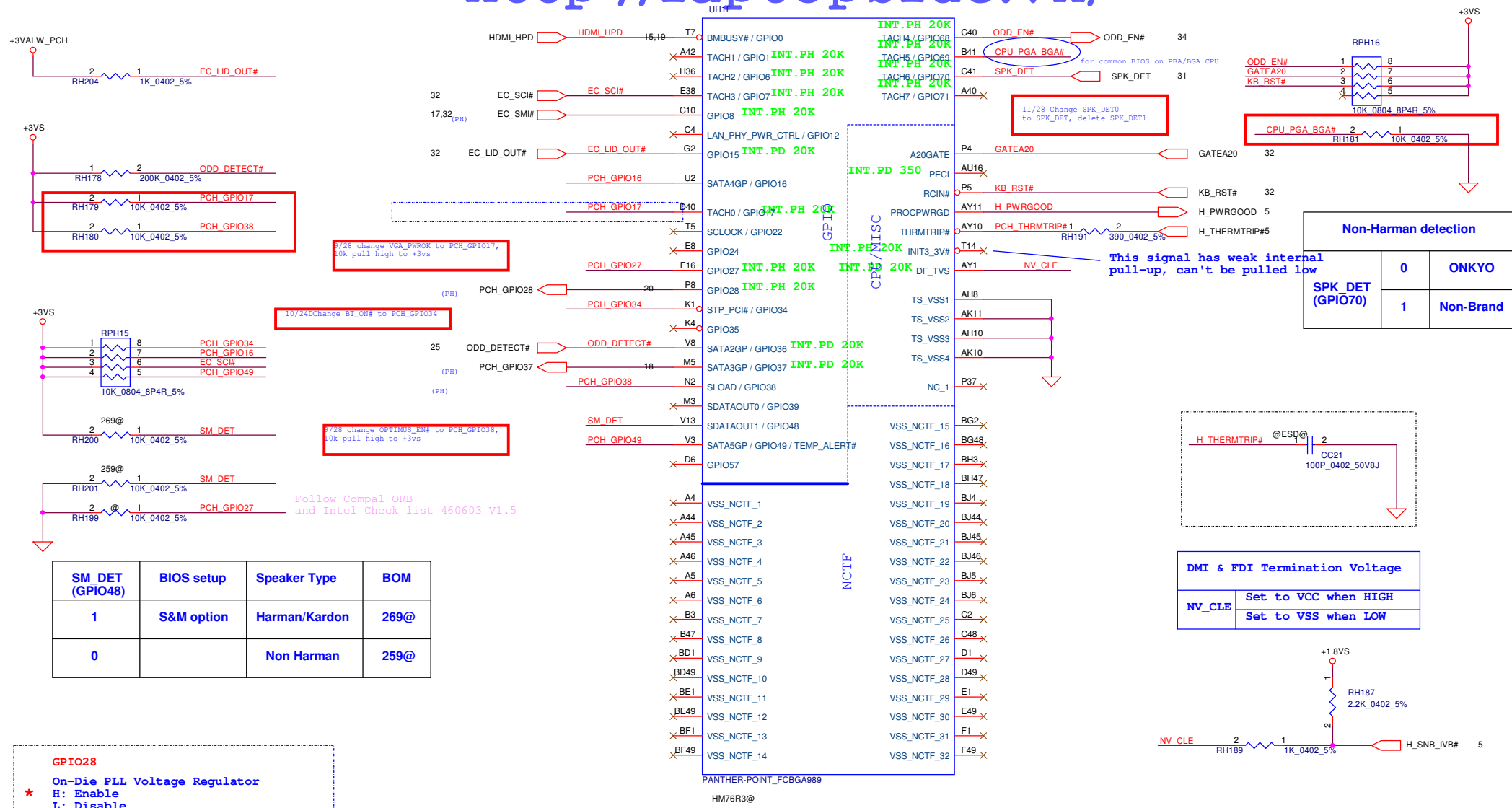


02/20 Delete RH254 100K

HDMI

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |                        |  |                |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|--|------------------------|--|----------------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |  |                        |  |                |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  | Size                     |  | Document Number        |  | Rev            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  | Custom                   |  | VFKTA                  |  | 1.0            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  | Date:                    |  | Monday, March 11, 2013 |  | Sheet 19 of 46 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |                        |  |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |                        |  |                |  |





|                            |                       |                      |             |
|----------------------------|-----------------------|----------------------|-------------|
| <b>SM_DET<br/>(GPIO48)</b> | <b>BIOS setup</b>     | <b>Speaker Type</b>  | <b>BOM</b>  |
| <b>1</b>                   | <b>S&amp;M option</b> | <b>Harman/Kardon</b> | <b>269@</b> |
| <b>0</b>                   |                       | <b>Non Harman</b>    | <b>259@</b> |

GPIO28  
On-Die PLL Voltage Regulator  
H: Enable  
L: Disable

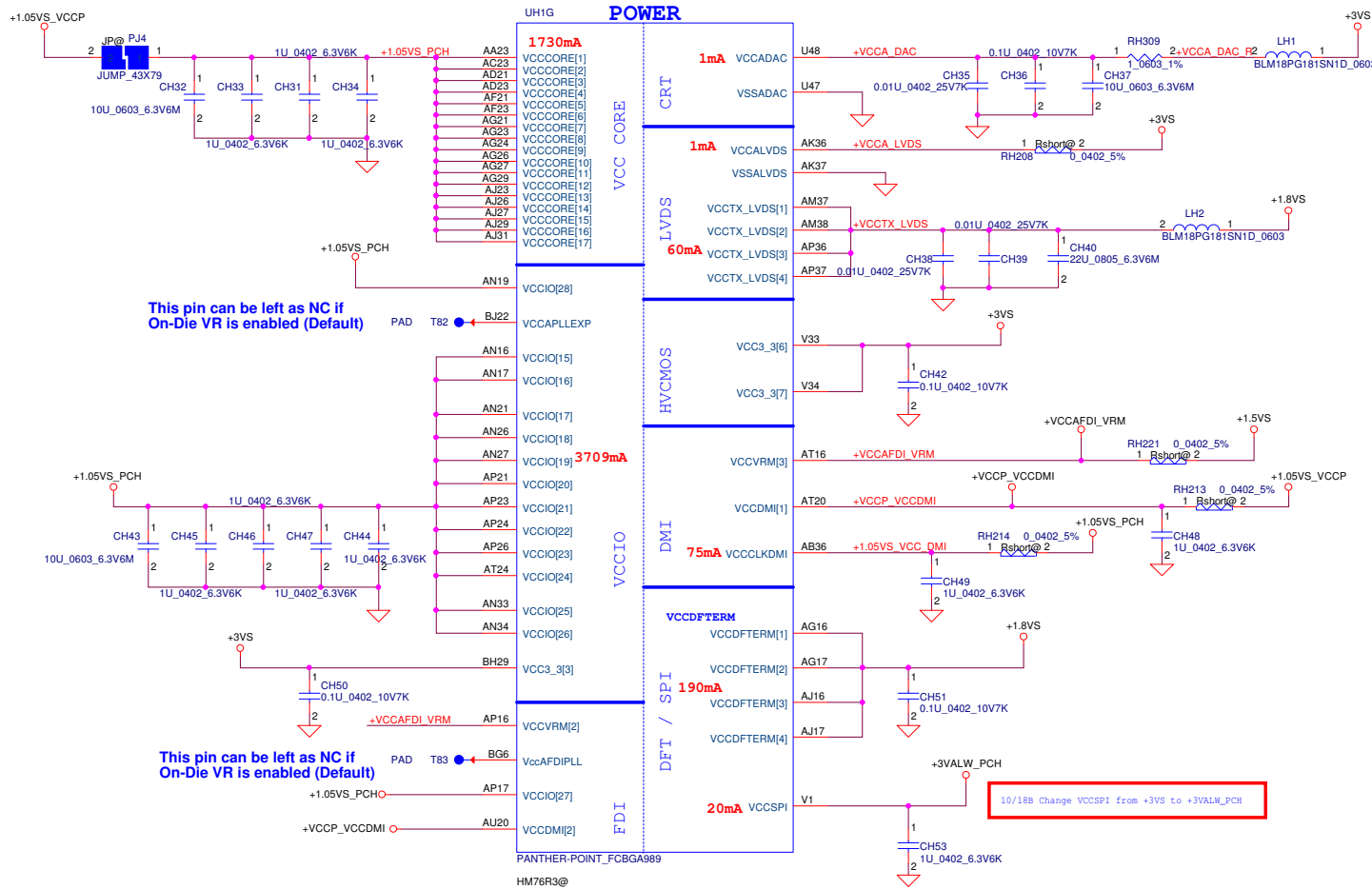
**GPI08**  
Integrated Clock Chip Enable (Removed)  
H: Disable  
L: Enable

Integrated clock enable functionality  
is achieved by soft-strap  
The current default is clock enable

| OPTIMUS_EN# |        |         |
|-------------|--------|---------|
| OPTIMUS_EN# | H      | L       |
| SKU         | NonOPT | Optimus |

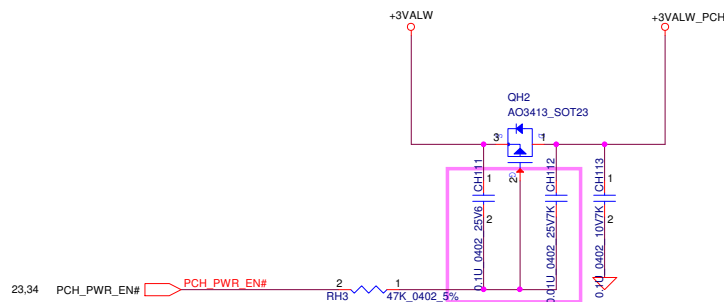
|                               |                      |
|-------------------------------|----------------------|
| DMI & FDI Termination Voltage |                      |
| NV_CLE                        | Set to VCC when HIGH |
|                               | Set to VSS when LOW  |

|                  |   |           |
|------------------|---|-----------|
| SPK_DET (GPIO70) | 0 | ONKYO     |
|                  | 1 | Non-Brand |

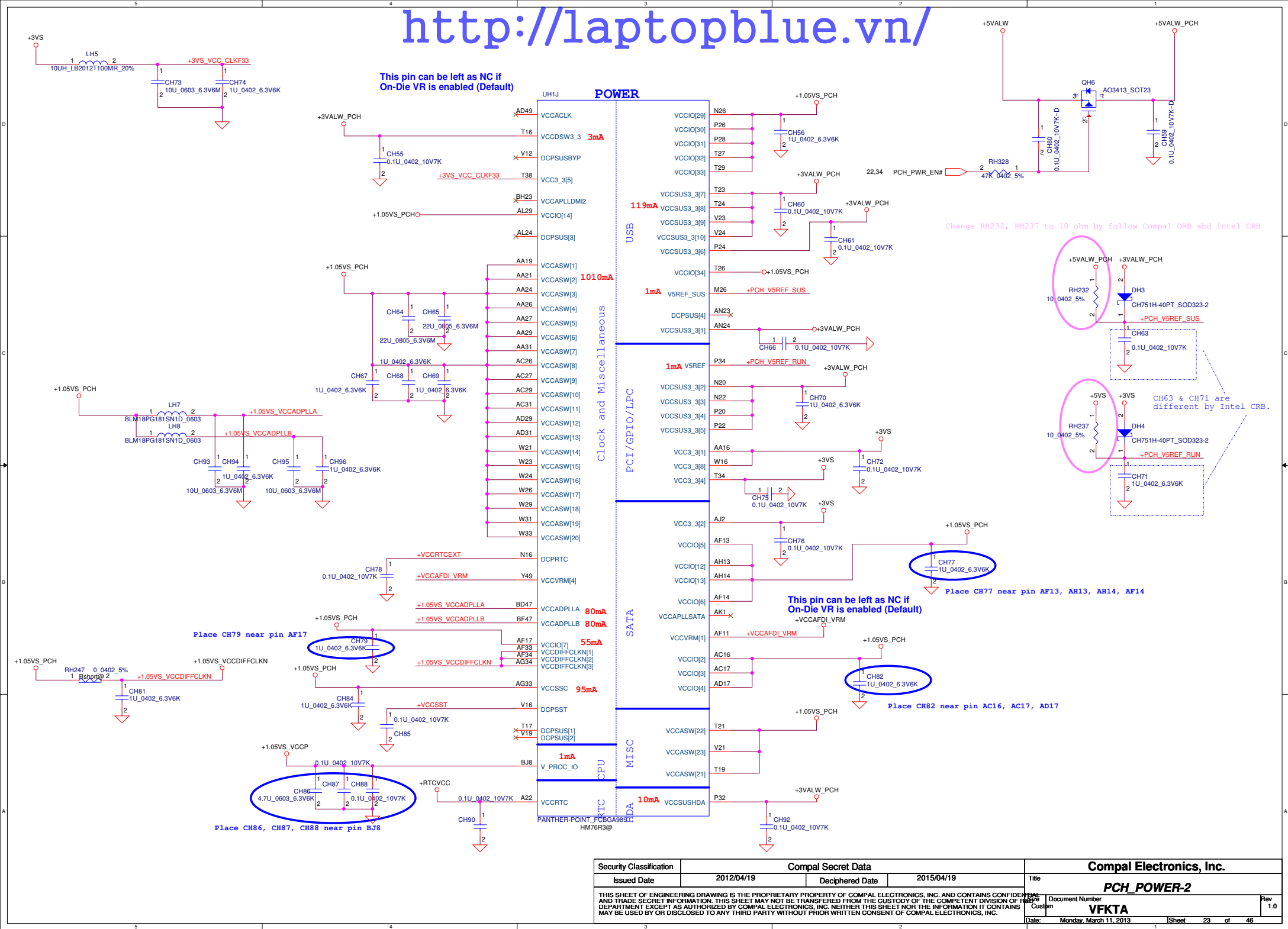


| PCH Power Rail Table<br>Refer to PCH EDS R1.0 |         |                          |
|-----------------------------------------------|---------|--------------------------|
| Voltage Rail                                  | Voltage | S0 Iccmax<br>Current (A) |
| V_PROC_IO                                     | 1.05    | 0.001                    |
| V5REF                                         | 5       | 0.001                    |
| V5REF_Sus                                     | 5       | 0.001                    |
| Vcc3_3                                        | 3.3     | 0.228                    |
| VccADAC                                       | 3.3     | 0.063                    |
| VccADPLLA                                     | 1.05    | 0.08                     |
| VccADPLLB                                     | 1.05    | 0.08                     |
| VccCore                                       | 1.05    | 1.7                      |
| VccDMI                                        | 1.1     | 0.047                    |
| VccIO                                         | 1.05    | 3.711                    |
| VccASW                                        | 1.05    | 0.903                    |
| VccSPI                                        | 3.3     | 0.01                     |
| VccDSW                                        | 3.3     | 0.001                    |
| VccDFTerm                                     | 1.8     | 0.002                    |
| VccRTC                                        | 3.3     | N/A                      |
| VccSus3_3                                     | 3.3     | 0.095                    |
| VccSusHDA                                     | 3.3     | 0.01                     |
| VccVRM                                        | 1.5     | 0.167                    |
| VccCLKDMI                                     | 1.05    | 0.07                     |
| VccSSC                                        | 1.05    | 0.095                    |
| VccDIFFCLKN                                   | 1.05    | 0.055                    |
| VccALVDS                                      | 3.3     | 0.001                    |
| VccTX_LVDS                                    | 1.8     | 0.04                     |

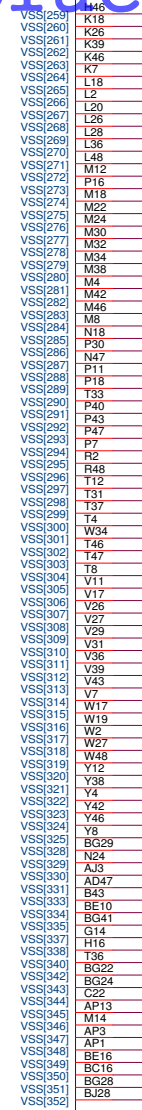
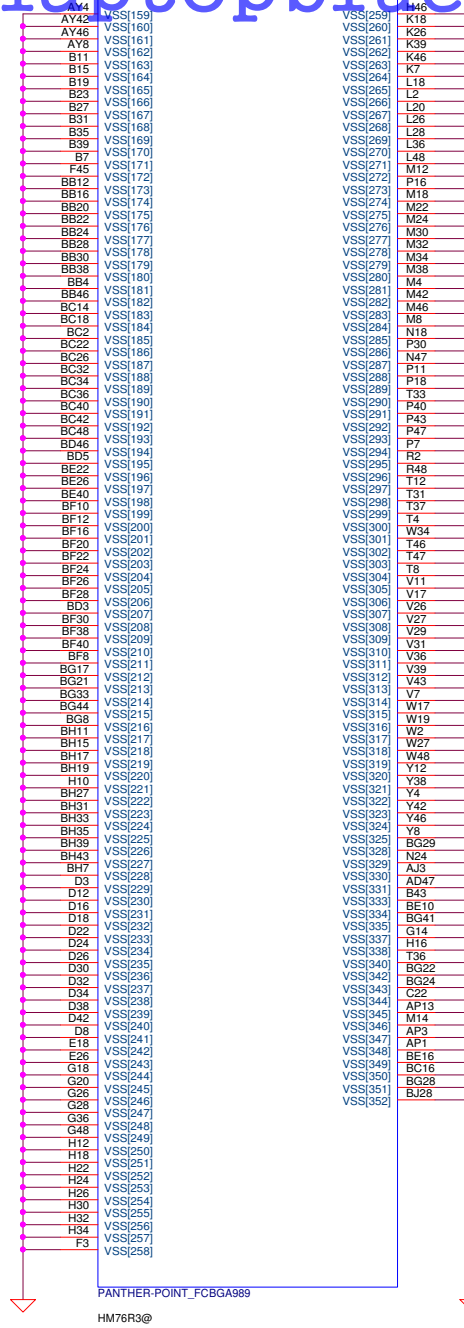
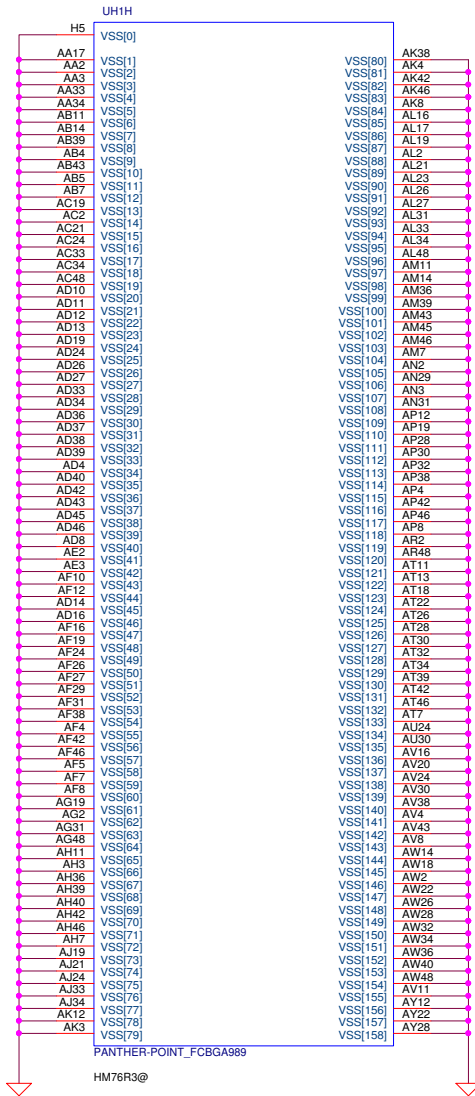
**+3VALW to +3VALW\_PCH**



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                              |                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|------------------------------|--------------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc.     |                    |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19 | Deciphered Date    | 2015/04/19 | Title                        | <b>PCH_POWER-1</b> |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Custom                       | 1.0                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date: Monday, March 11, 2013 | Sheet 22 of 46     |

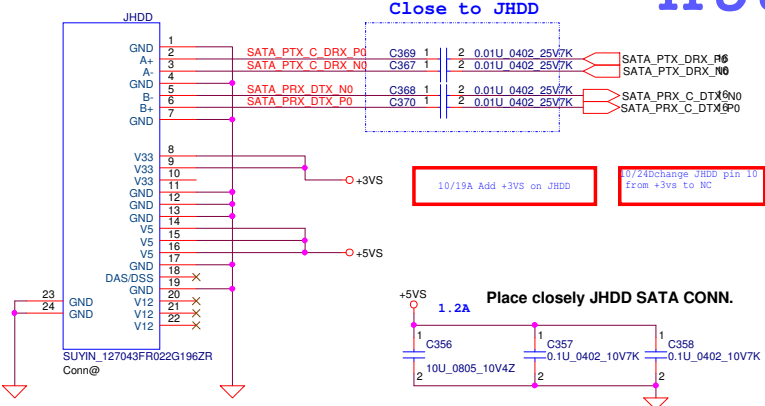


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                    |  |                 |  |                          |  |                 |  |                        |  |       |  |          |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|--|-----------------|--|------------------------|--|-------|--|----------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |  |                 |  |                        |  |       |  |          |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | 2012/04/19         |  | Deciphered Date |  | 2015/04/19               |  | Title           |  |                        |  |       |  |          |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                    |  |                 |  |                          |  | Document Number |  | VFKTA                  |  | Rev   |  | 1.0      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                    |  |                 |  |                          |  | Date:           |  | Monday, March 11, 2013 |  | Sheet |  | 23 of 46 |  |

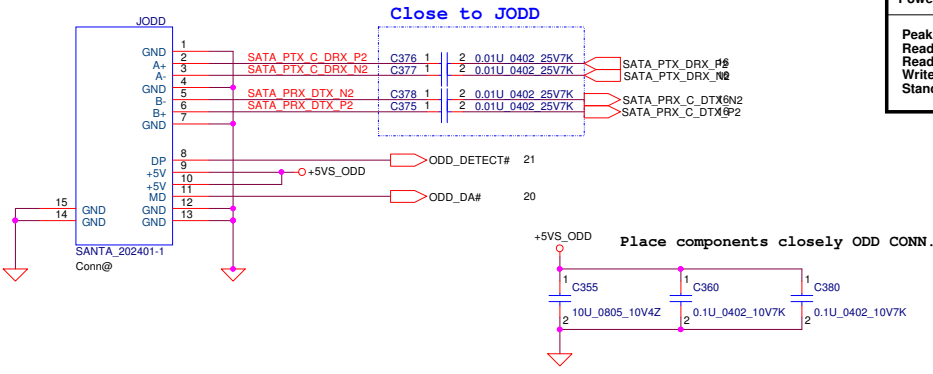


|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                        |            |                          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------|------------|--------------------------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data     |            | Compal Electronics, Inc. |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19 | Deciphered Date        | 2015/04/19 | Title                    |  |
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| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            | Document Number        |            | Rev                      |  |
| Custom                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            | VFKTA                  |            | 1.0                      |  |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            | Monday, March 11, 2013 |            | Sheet 24 of 46           |  |

SATA HDD Conn.

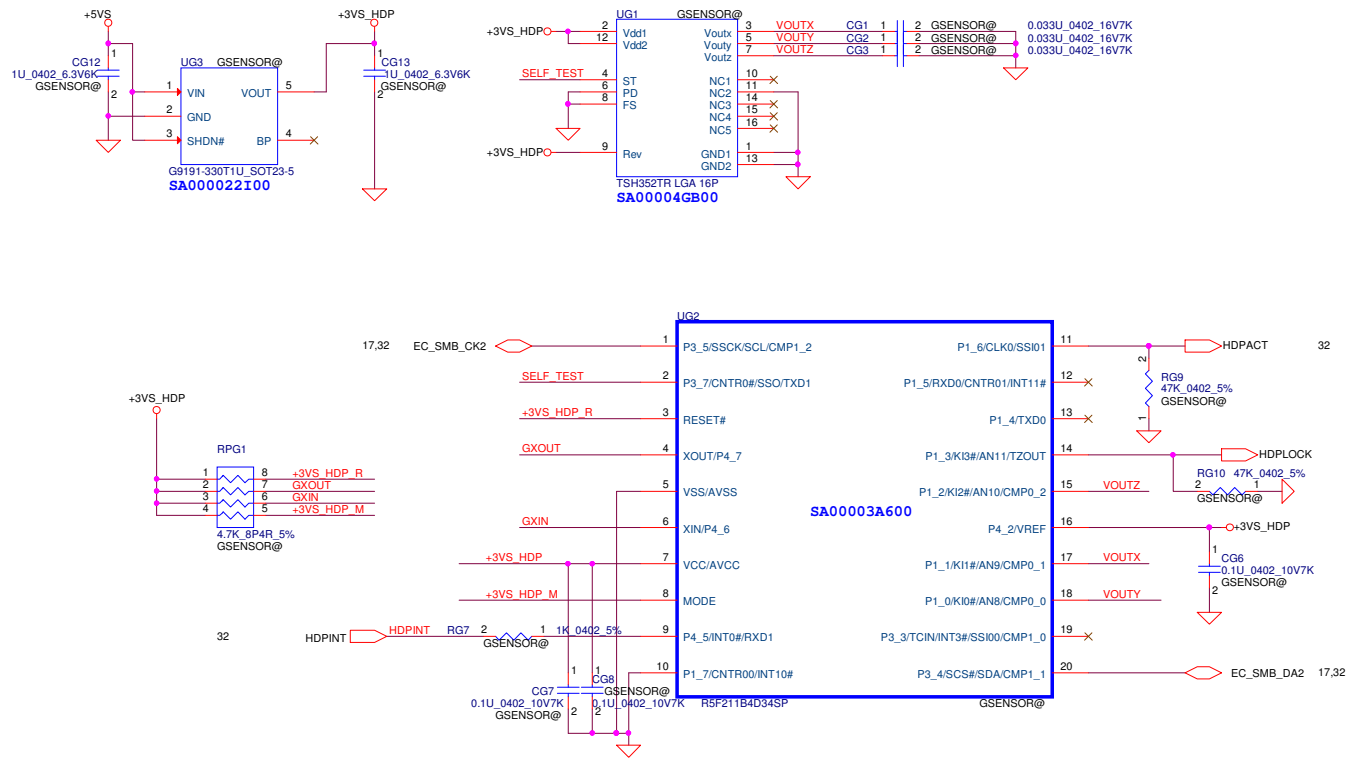


SATA ODD Conn



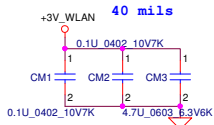
| Power Consumption |         |
|-------------------|---------|
| Peak              | 1800 mA |
| Read (CD)         | 1100 mA |
| Read (DVD)        | 950 mA  |
| Write             | 1300 mA |
| Standby           | 20mA    |

G-Sensor



Slot 1 Half PCIe Mini Card-WLAN

http://laptopblue.vn/



Reserve +1.5 power rail & cap. to support unknown keypart.

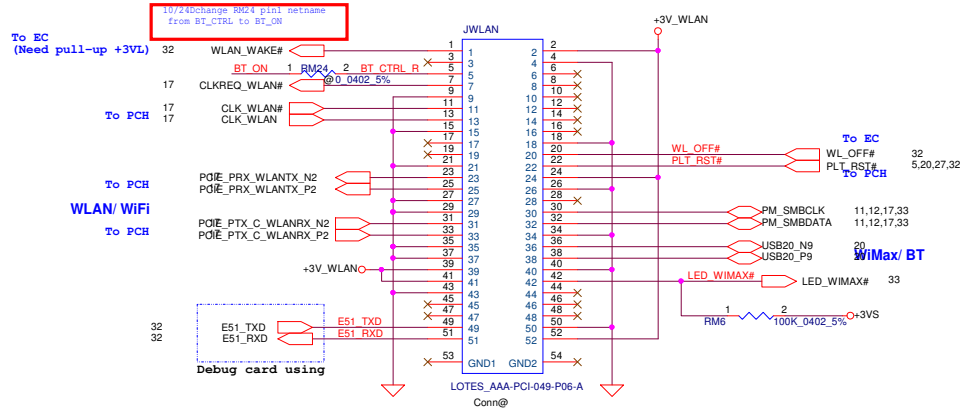
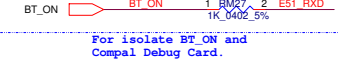
10/24 Remove +1.5V on WLAN pin6/28/48, delete CM7, CM8 Delete RM22 (EC will programming H/L)

WLAN/BT Combo module circuits

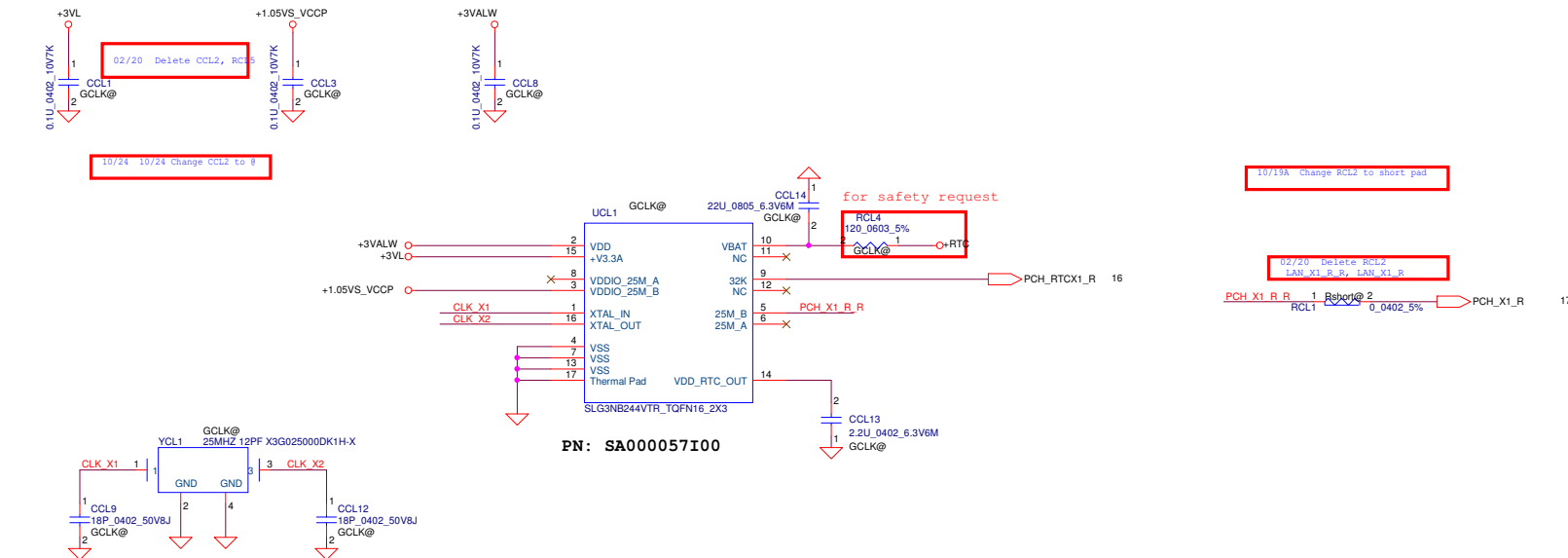
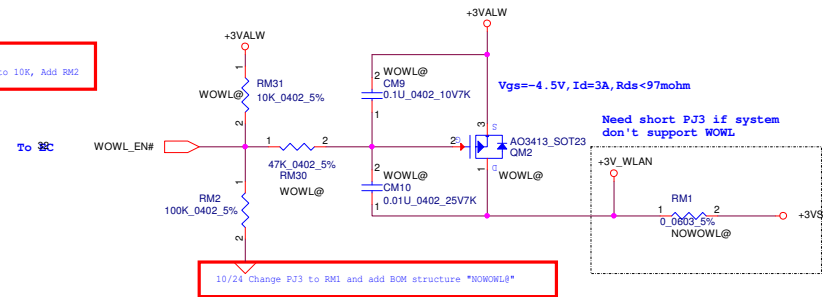
|       | BT on module<br>Enable | BT on module<br>Disable |
|-------|------------------------|-------------------------|
| BT_ON | H                      | L                       |

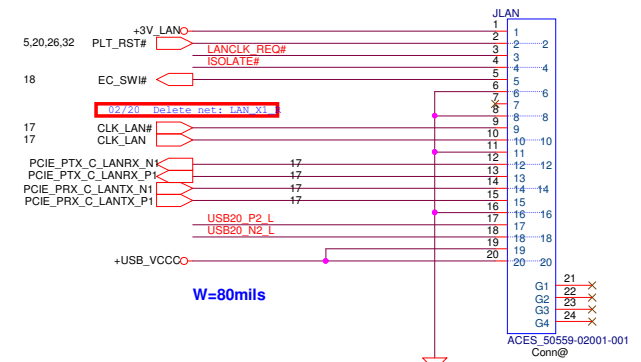
10/24 Delete CM1, change BT\_ON design

From 38:



+3VALW TO +3V\_WLAN for WOWL





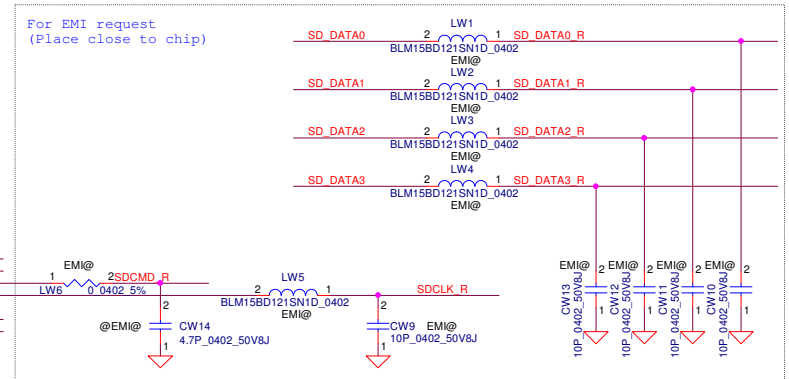
The diagram shows a circuit for the WOL\_EN# pin. It is connected to a +3VS supply through a 1K 0402\_5% resistor (RL6) and a 15K 0402\_5% resistor (RL7) to ground. The pin is also connected to a signal line labeled 'ISOLATE#' and 'WOL\_EN#'. A note indicates that the signal is 'Reopen@ 0\_0402\_5%'. A table below the diagram shows the status of the WOL\_EN# pin for S0 status.

|         | Sx Enable Wake up | Sx Disable Wake up | S0   |
|---------|-------------------|--------------------|------|
| WOL_EN# | LOW               | HIGH               | HIGH |

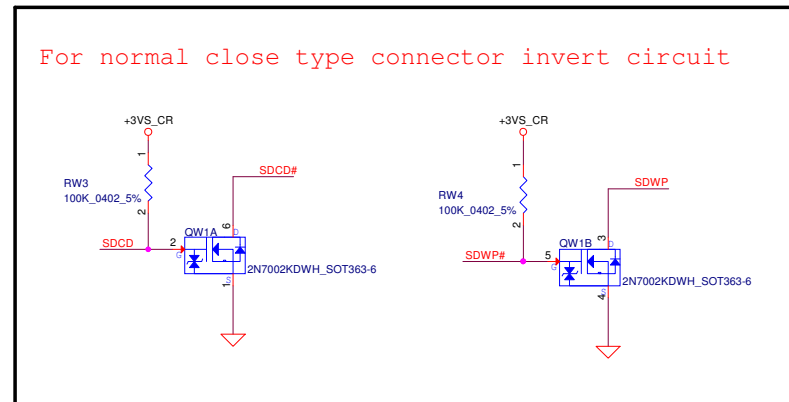
10/24 Add note for WOL\_EN# S0 status

| LAN | WOL | LAN_EN |    | ISOLATEB |    |
|-----|-----|--------|----|----------|----|
|     |     | S0     | Sx | S0       | Sx |
| 0   | 0   | 0      | 0  | 1        | 1  |
| 0   | 1   | 0      | 0  | 1        | 1  |
| 1   | 0   | 1      | 1  | 1        | 1  |
| 1   | 1   | 1      | 1  | 1        | 0* |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                                                            |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|------------------------------------------------------------|----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | <b>Compal Electronics, Inc.</b><br><b>LUSB20/LAN conn.</b> |                |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19 | Deciphered Date    | 2015/04/19 | Title                                                      |                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date: Monday, March 11, 2013                               | Sheet 27 of 46 |



De-coupling and Bulk capacitor should place near to Cardreader chip and Combo Socket

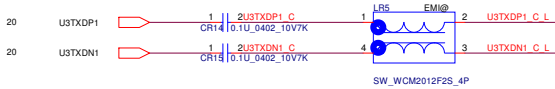
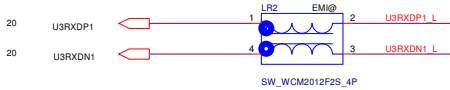
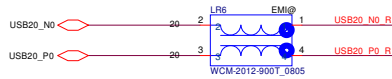


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                        |                 |                                 |                       |                 |        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|-----------------|---------------------------------|-----------------------|-----------------|--------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Compal Secret Data     |                 | <b>Compal Electronics, Inc.</b> |                       |                 |        |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | 2012/10/26             | Deciphered Date | 2013/10/26                      | Title                 |                 |        |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                        |                 |                                 | Docu                  | Document Number | Rev 1. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                        |                 |                                 | Customer              | VFKTA           |        |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | Monday, March 11, 2013 | Sheet           | 28                              | of                    | 46              |        |

| State table for MAX14641 |     |      |                                                                                                                |
|--------------------------|-----|------|----------------------------------------------------------------------------------------------------------------|
| CB0                      | CB1 | Mode | STATUS                                                                                                         |
| 0                        | 0   | AM2  | 2A auto-detection charger mode for Apple device.<br>Resistor dividers are connected to DP/DM. Including DCP    |
| 0                        | 1   | AP1  | Forced 1A charger mode for Apple devices.<br>Resistor dividers are connected to DP/DM.                         |
| 1                        | 0   | PM   | USB pass-through mode.DP/DM are connected to TDP/TDM                                                           |
| 1                        | 1   | CM   | USB pass-through mode with CDP emulation.<br>Auto connects DP/DM to TDP/TDM depending on CDP detection status. |

12/05 S&C IC Pin1 was connected to the EC(GPIO49) Pin82.

**Right rear USB3.0 Conn.**

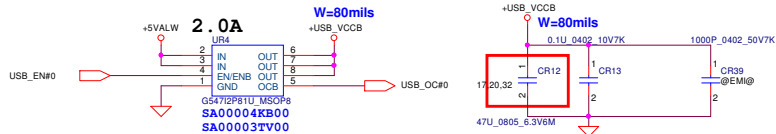


2013/02/06 change LR2,LR3,LR4,LR5  
from SM070001U00 to SM070001R00  
DVT 2nd source for X1 code issue

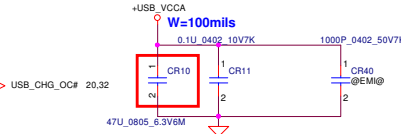
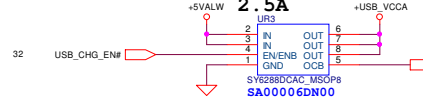
02/22 SAMP CR16 pin1 U3TXDN2  
to CR17 pin1 U3TXDP2

2013/02/06 change UR1 UR4 fr  
SA00004KB00 to SA00003TV00  
DVT 2nd source X1 code issue

11/28 Change CR10, CR12 from 47u 1206  
to 0805 size (SE000000PL00)

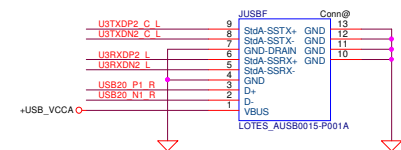
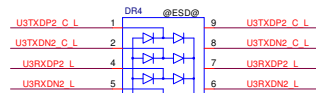
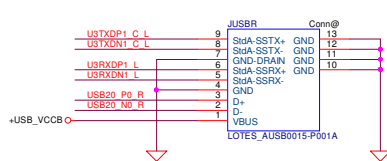
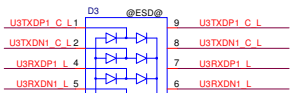


02/20 Delete CR7, CR



```
12/04 Update S&C to 14640/14641 co-layout
circuit(add RR1-RR4, QR1, modify net-name)
```

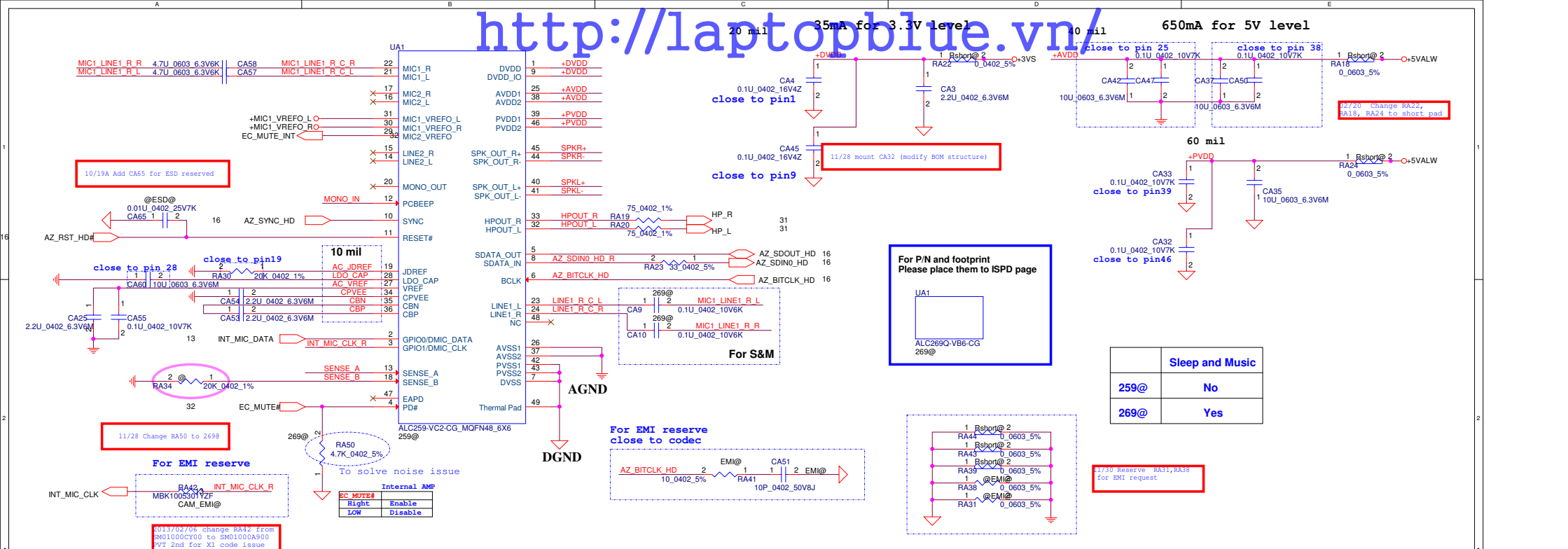
2013/02/06 change QC5,QH3,QH4,QW1,  
Q6 ,QA1 QR1 Q53 from SB00000EO10 to  
SB00000DH00 DVT 2nd source for X1 code issue



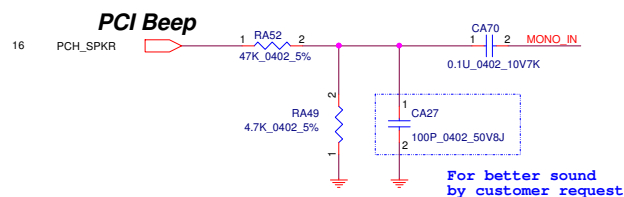
10/22A ESD request Delete DRI, DR2

10/22A ESD request Delete DR1, DR2

|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |            |                                 |                 |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|---------------------------------|-----------------|-----|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                    | Compal Secret Data |                 |            | <b>Compal Electronics, Inc.</b> |                 |     |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |            | Size                            | Document Number | Rev |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                 |            | Custom                          | <b>VFKTA</b>    | 1.0 |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                 |            | Monday, March 11, 2013          |                 |     |
| Sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |                 |            | 29 of 46                        |                 |     |



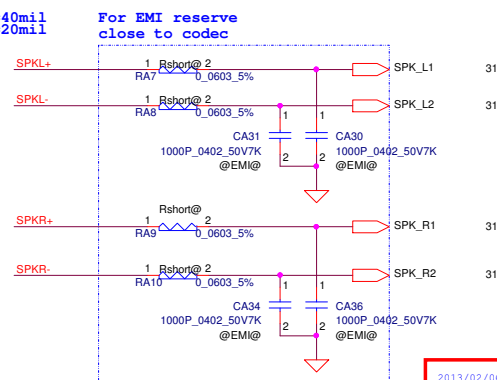
### Beep sound



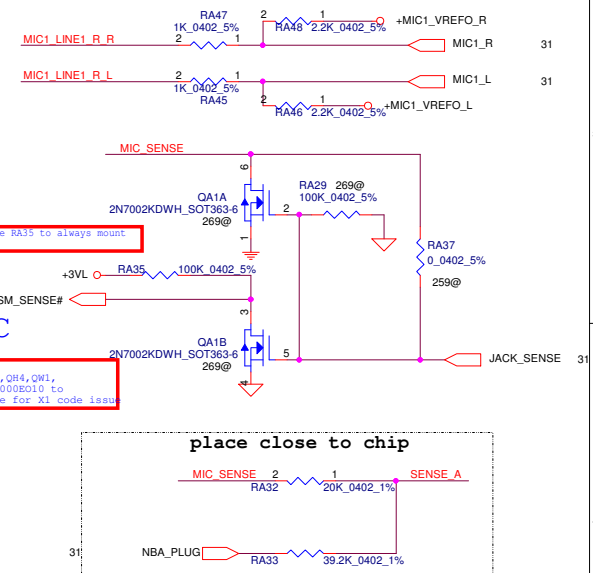
| Sense Pin | Impedance | Codec Signals       | Function      |
|-----------|-----------|---------------------|---------------|
| SENSE A   | 39.2K     | PORT-I (PIN 32, 33) | Headphone out |
|           | 20K       | PORT-B (PIN 21, 22) | Ext. MIC      |
|           | 10K       | PORT-C (PIN 23, 24) |               |
|           | 5.1K      | (PIN 48)            |               |
| SENSE B   | 39.2K     | PORT-E (PIN 14, 15) |               |
|           | 20K       | PORT-F (PIN 16, 17) |               |
|           | 10K       | PORT-H (PIN 20)     |               |

**SPK**

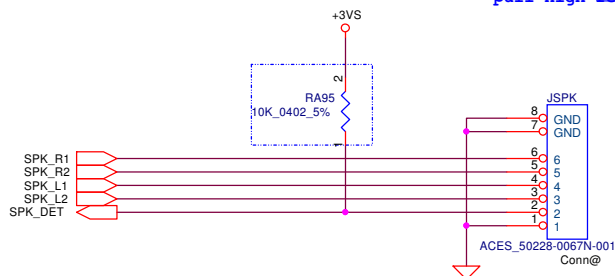
2W 4ohm =40mil  
1W 8ohm =20mil



**MIC/LINE IN**



|                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |            |  |                    |  |            |  |                                                  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|--|--------------------|--|------------|--|--------------------------------------------------|--|--|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                |  |            |  | Compal Secret Data |  |            |  | Compal Electronics, Inc.                         |  |  |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |            |  |                    |  |            |  | Part Number<br>Document Number<br>Custom         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |            |  |                    |  |            |  | Date: Monday, March 11, 2013      Sheet 30 of 46 |  |  |  |

30  
30  
30  
30  
21

10/22A ESD request Delete DA5, DA8 covered by ME design

For common design, pull-high resistor should be placed at connector side.

10/19A Follow the latest connector list to change SPK footprint, The ME drawing with new JSPK will be updated 10/20

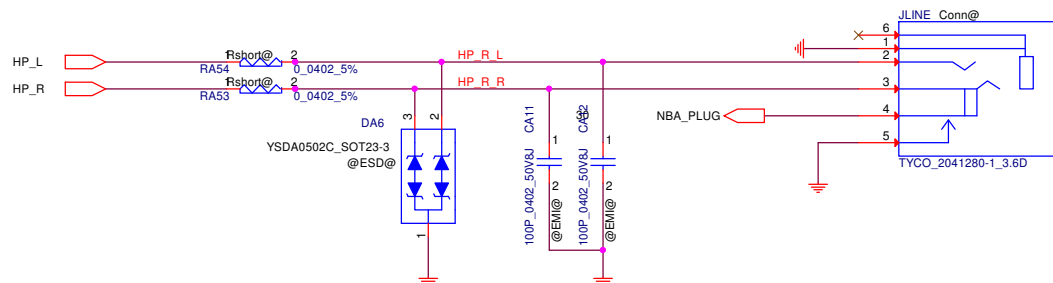
| SM_DET (GPIO48) | BIOS setup | Speaker Type  | BOM  |
|-----------------|------------|---------------|------|
| 1               | S&M option | Harman/Kardon | 269@ |
| 0               |            | Non Harman    | 259@ |

## Non-Harman detection

| SPK_DET (GPIO70) | 0         | ONKYO |
|------------------|-----------|-------|
| 1                | Non-Brand |       |

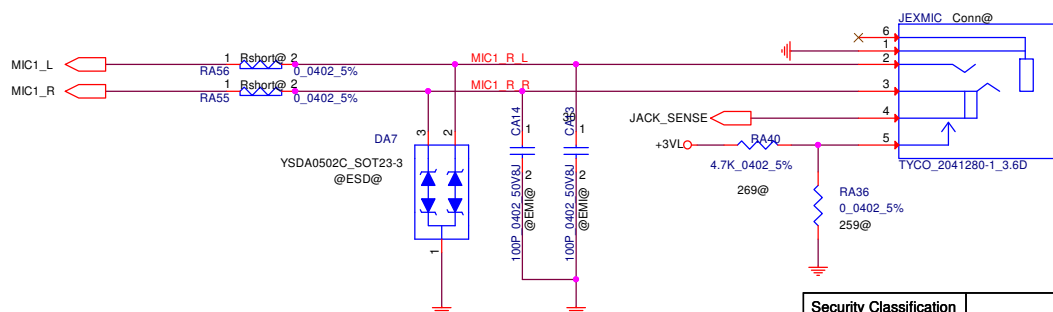
11/28 Change SPK connector to 6 pin, change SPK\_DET0 to SPK\_DET, delete SPK\_DET1 and RA96

## HeadPhone/LINE Out JACK

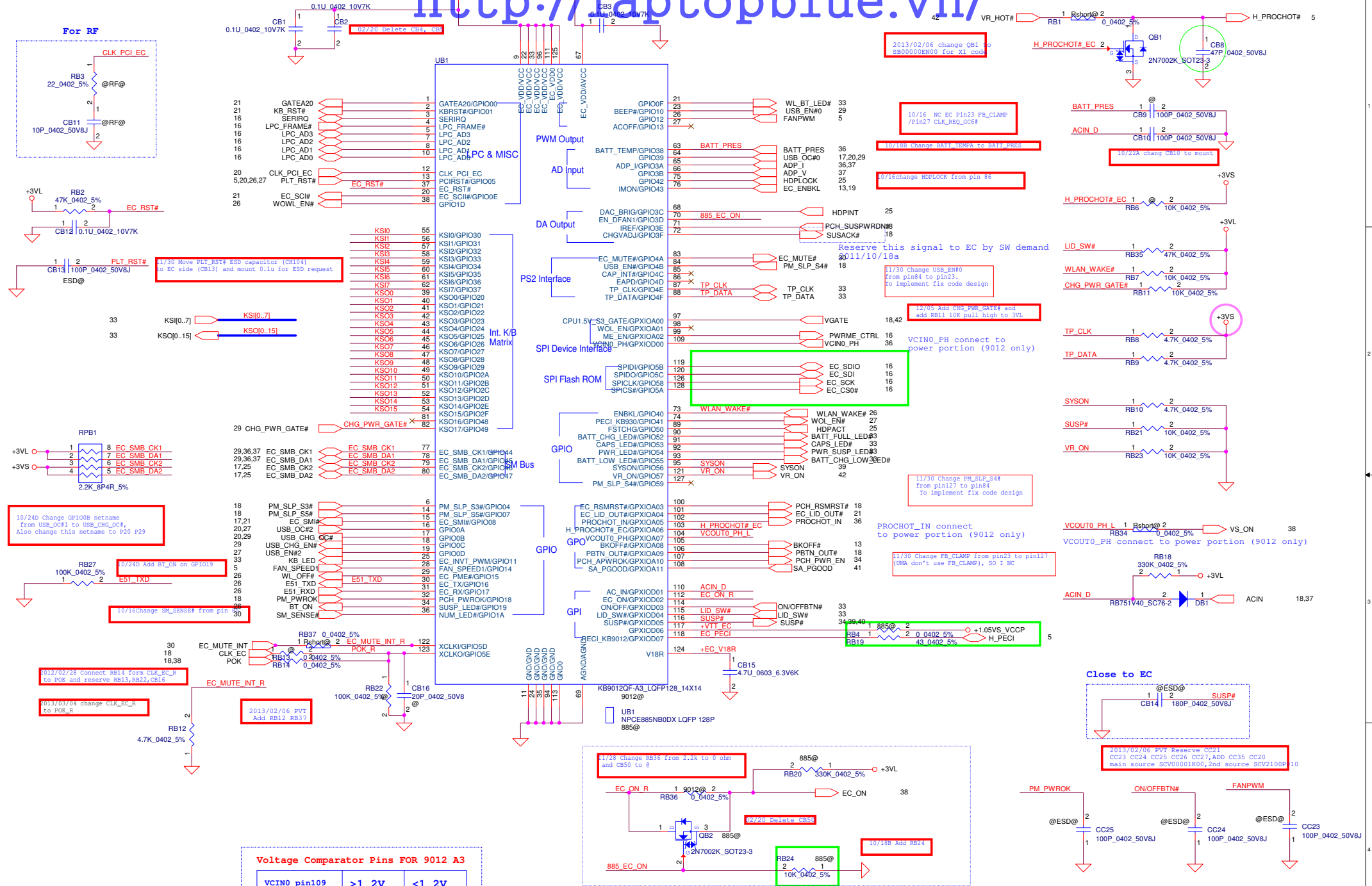


10/24 Change RA53-56 to short pad.....again.....~

## MIC/LINE IN JACK

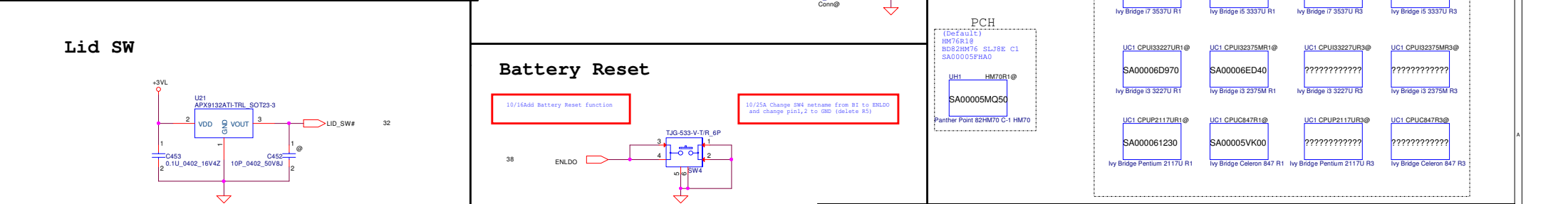
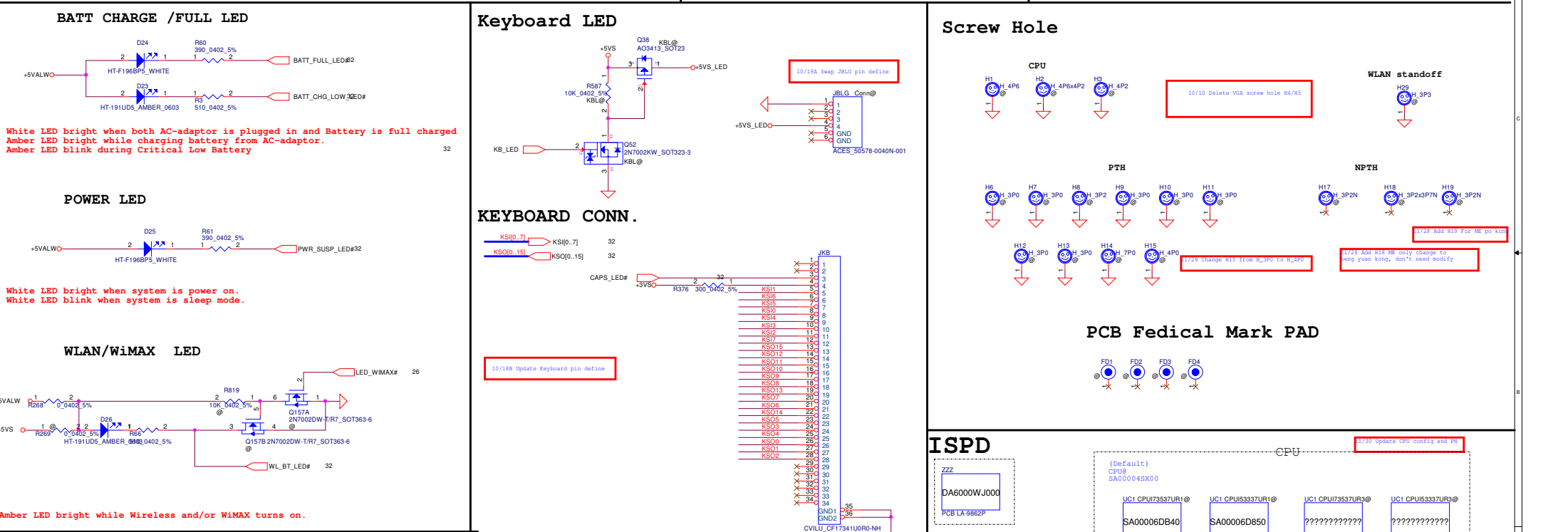
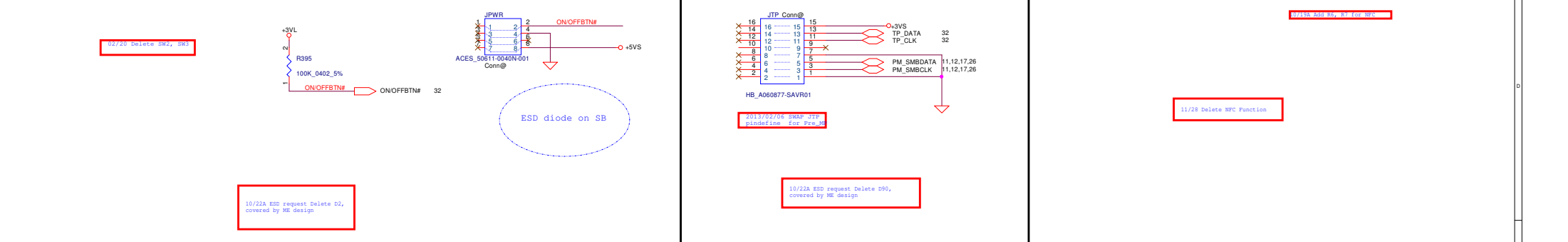


| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data     |                 | Compal Electronics, Inc. |            |
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| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19             | Deciphered Date | 2015/04/19               | Title      |
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| Size                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Document Number        |                 |                          | Rev 1.0    |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Monday, March 11, 2013 | Sheet           | 31 of 46                 |            |



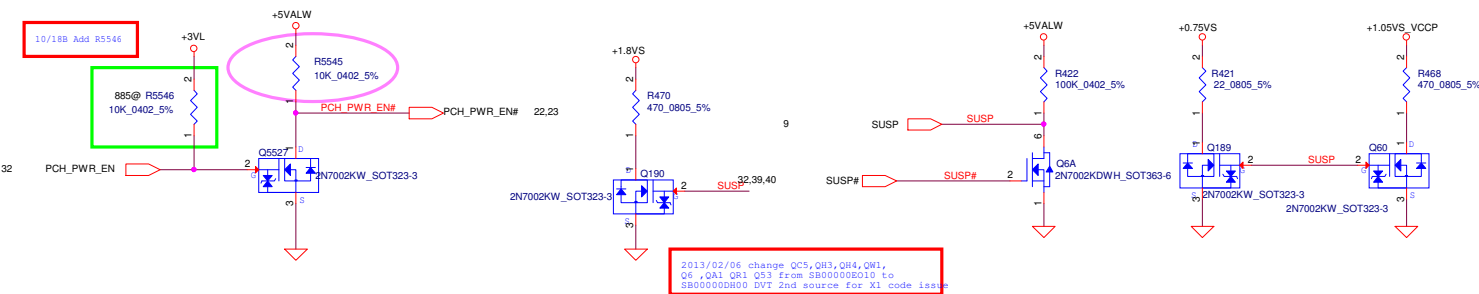
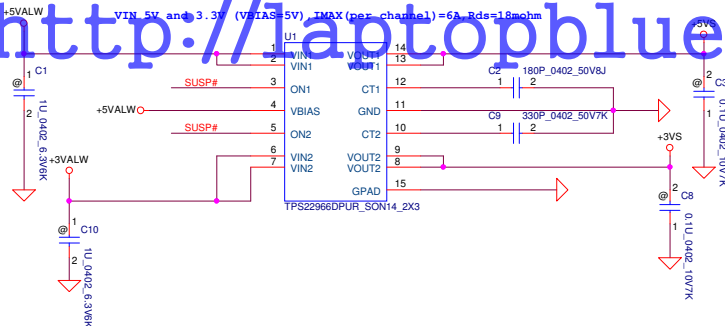
|                              |                   |                  |
|------------------------------|-------------------|------------------|
| VCIN0 pin109<br>VCIN1 pin102 | >1.2V             | <1.2V            |
| VCOUT0 pin104                | HIGH<br>(default) | LOW              |
| VCOUT1 pin103                | HIGH              | LOW<br>(default) |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |                    |            |                                                                      |                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|----------------------------------------------------------------------|----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            | Compal Secret Data |            | <b>Compal Electronics, Inc.</b><br><b>LPC-EC-KB9012&amp;NPCE885N</b> |                |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2012/04/19 | Deciphered Date    | 2015/04/19 | Title                                                                |                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |                    |            | Date: Monday, March 11, 2013                                         | Sheet 32 of 46 |

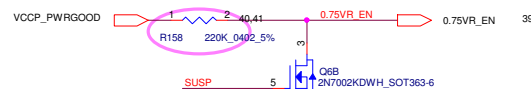


**+5VALW TO +5VS**  
**+3VALW TO +3VS**  
**Load switch**

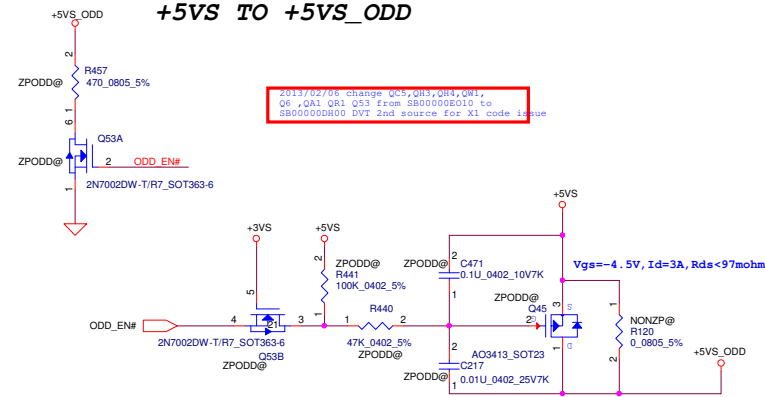
<http://laptopblue.vn/>



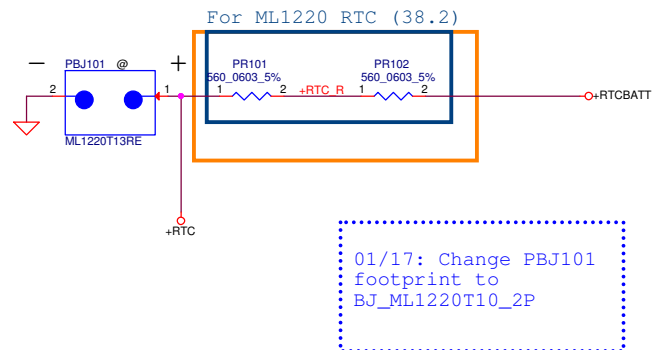
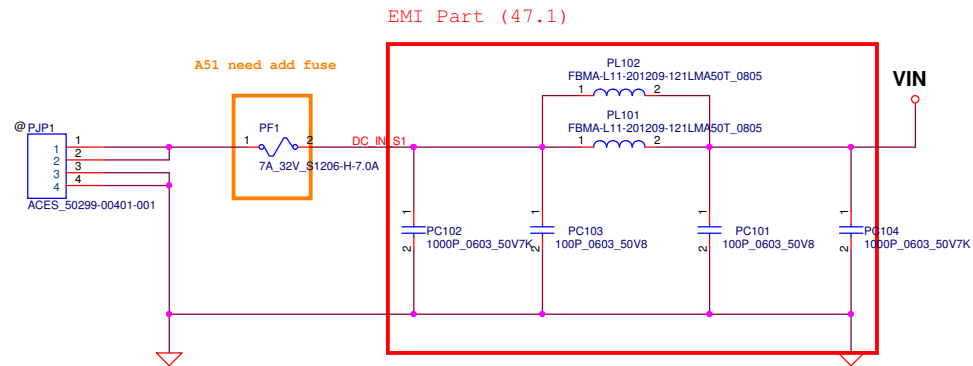
**For S3 CPU Power Saving**



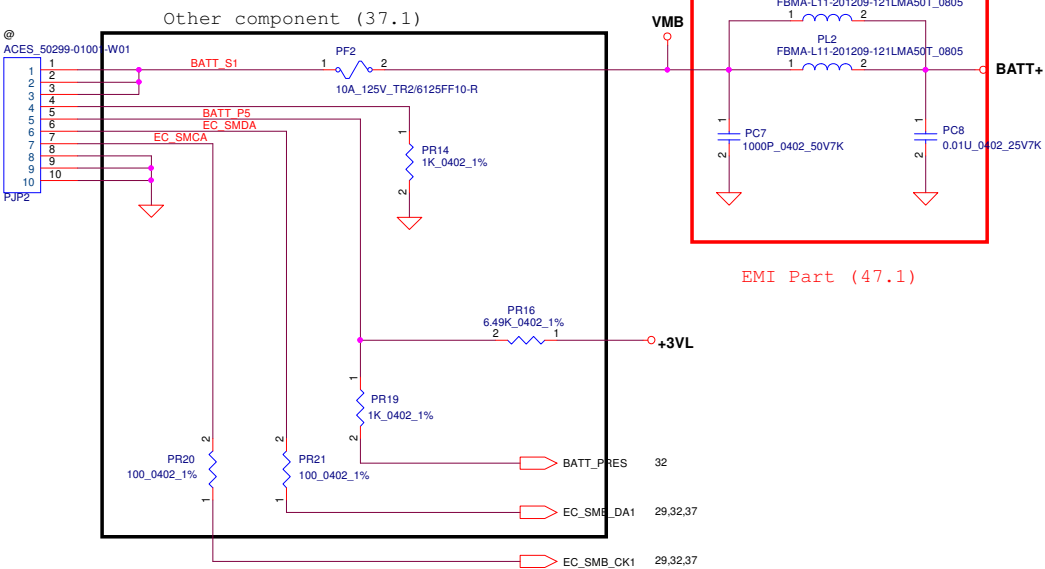
**+5VS TO +5VS\_ODD**



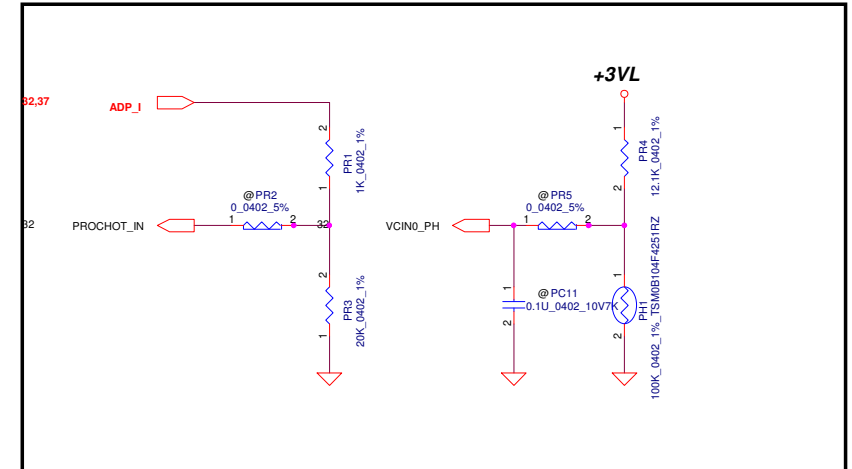
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                          |                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------------------------|------------------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |                        |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19 | Deciphered Date    | 2015/04/19 | Title                    | DC-DC INTERFACE        |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date                     | Monday, March 11, 2013 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Sheet                    | 34 of 46               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Rev                      | 1.0                    |



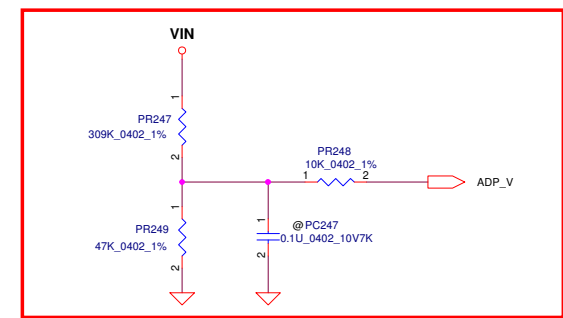
|                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |                 |            |                          |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|--------------------------|----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                             | Compal Secret Data |                 |            | Compal Electronics, Inc. |                |
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| Date:                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Sheet                    | 35 of 46       |



ОТР (39.7)



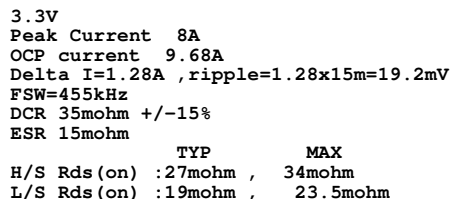
Charger controller (40.1), Support component (40.2)



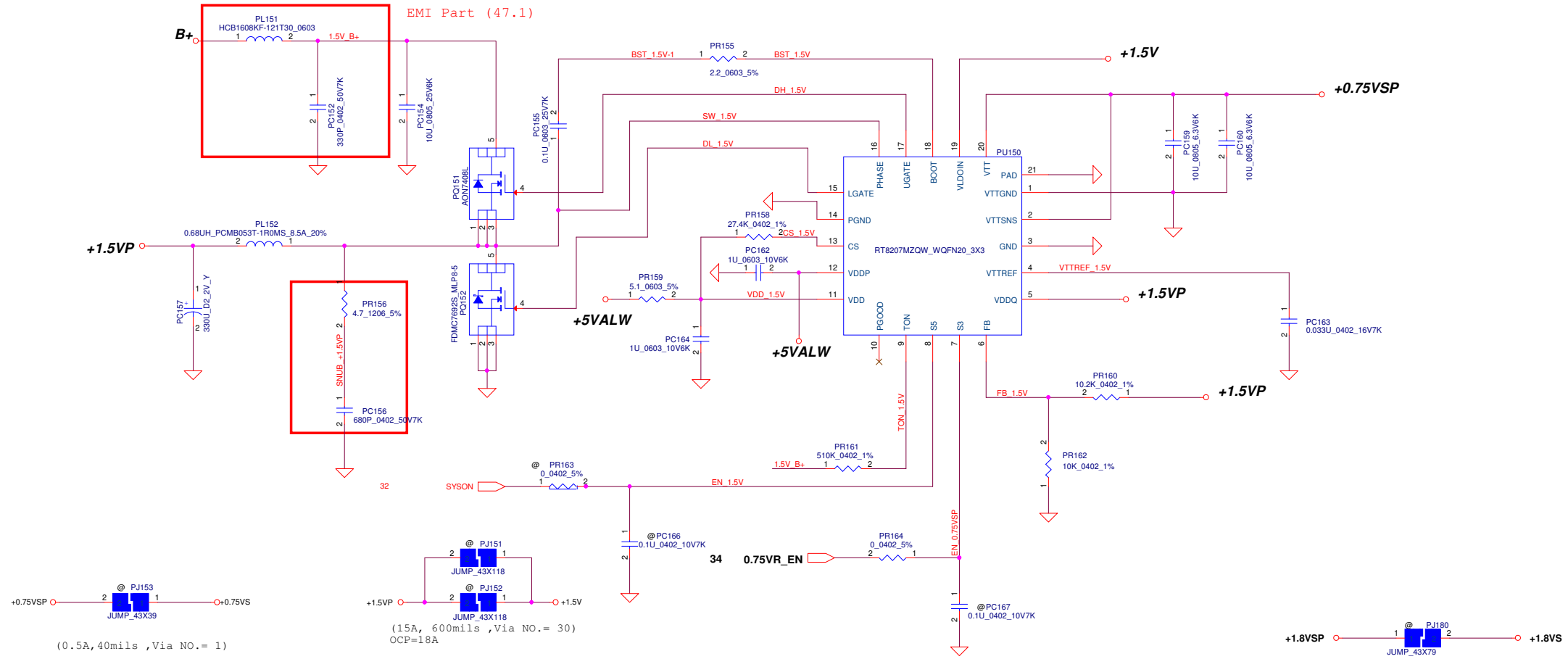
For A51 ADP\_V function

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                          |                 |     |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------------------------|-----------------|-----|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |                 |     |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Size                     | Document Number | Rev |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Custom                   | VFKTA           | 1.0 |  |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            | Sheet              |            | 37                       | of              | 46  |  |

|              | TYP       | MAX      |
|--------------|-----------|----------|
| H/S Rds (on) | :27mohm   | 34mohm   |
| L/S Rds (on) | :10.8mohm | 13.6mohm |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |             |                 |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|--|-------------|-----------------|----------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |  |             |                 |          |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Size        | Document Number | Rev      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Custom      | VFKTA           | 1.       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Date:       | Sheet           | 98 of 46 |

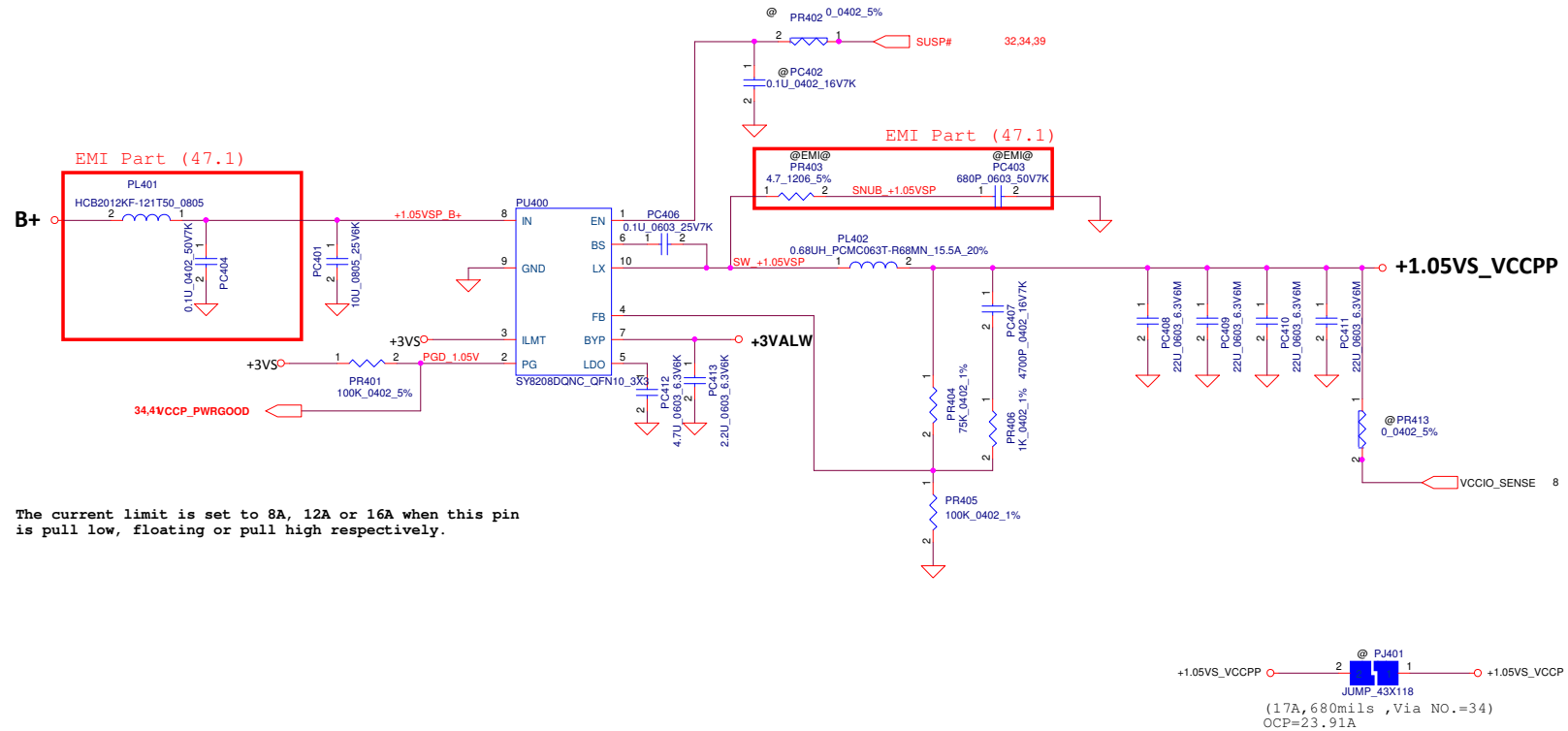


| STATE | S3 | S5 | 1.5VP           | VTT_REFP        | 0.75VSP         |
|-------|----|----|-----------------|-----------------|-----------------|
| S0    | Hi | Hi | On              | On              | On              |
| S3    | Lo | Hi | On              | On              | Off (Hi-Z)      |
| S4/S5 | Lo | Lo | Off (Discharge) | Off (Discharge) | Off (Discharge) |

Note: S3 - sleep ; S5 - power off

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |                      |                 |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|--|----------------------|-----------------|-----|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |  |                      |                 |     |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Size                 | Document Number | Rev |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Custom               | VFKTA           | 1.0 |
| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Sheet              |  | 39              |  | of                       |  | 46                   |                 |     |

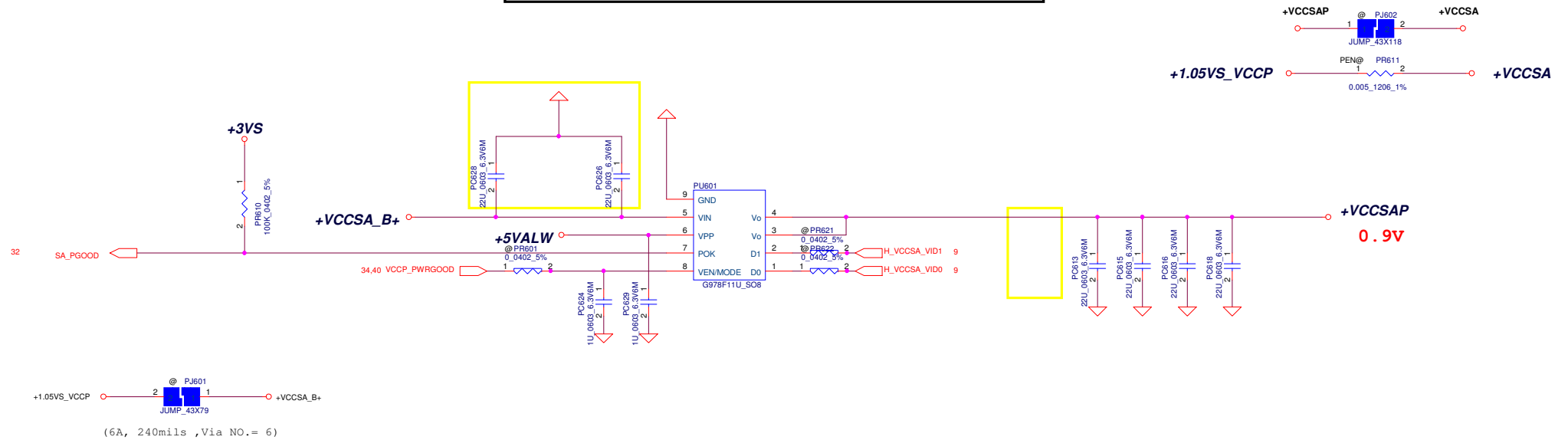
1.05VCCP controller (35.5), Support component (35.6)



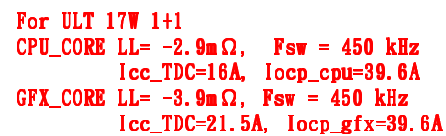
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc. |                        |
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| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19 | Deciphered Date    | 2015/04/19 | Title                    | +1.05VS_VCCP           |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date:                    | Monday, March 11, 2013 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Sheet                    | 40 of 46               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Rev                      | 1.0                    |

| VID [0] | VID[1] | VCCSA Vout |
|---------|--------|------------|
| 0       | 0      | 0.9V       |
| 0       | 1      | 0.85V      |
| 1       | 0      | 0.775V     |
| 1       | 1      | 0.75V      |

VCCSA controller (35.17), Support component (35.18)



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            |                          |                 |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|--------------------------|-----------------|----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc. |                 |                |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19         | Deciphered Date | 2015/04/19 | Title                    | VCC_SAP         |                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Custom                   | VFKTA           | 1.0            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Date:                    | 1               | Sheet 41 of 48 |



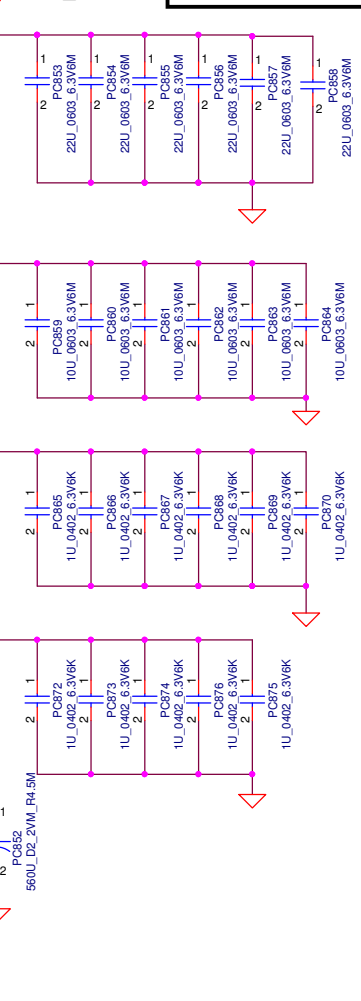
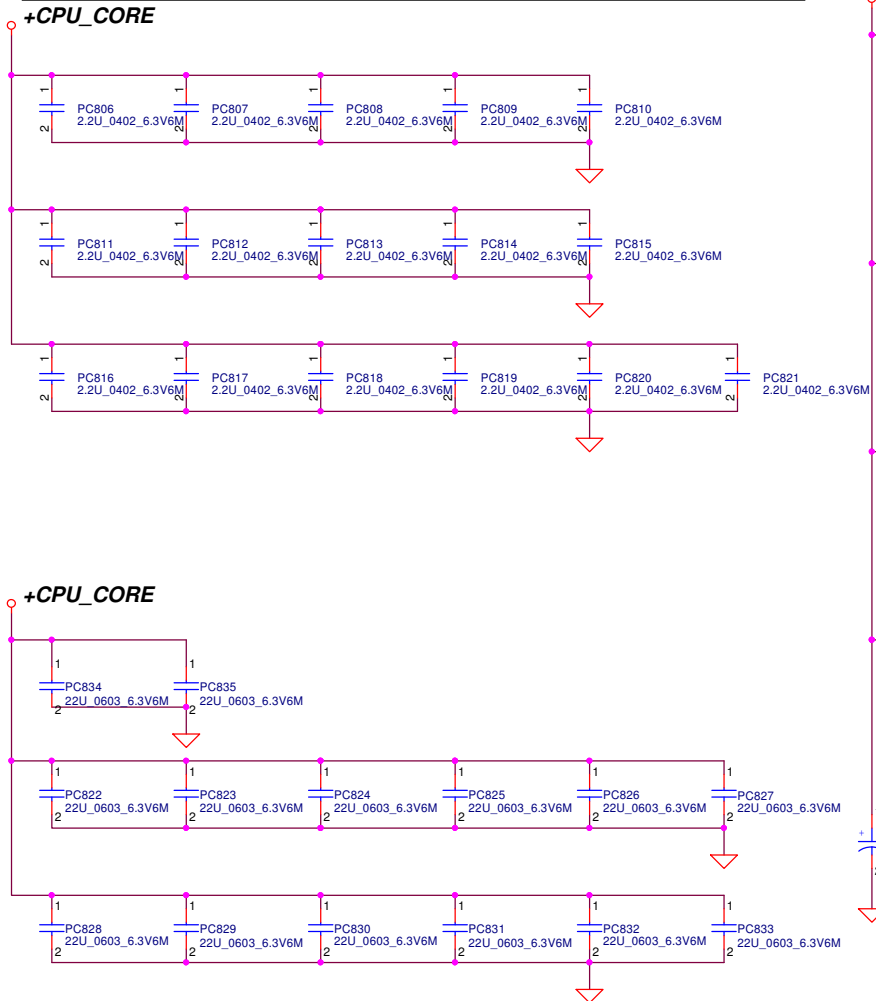
- Close Phase 1 choke

local sense reverse HW

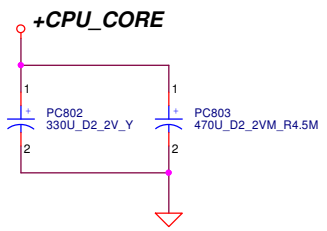
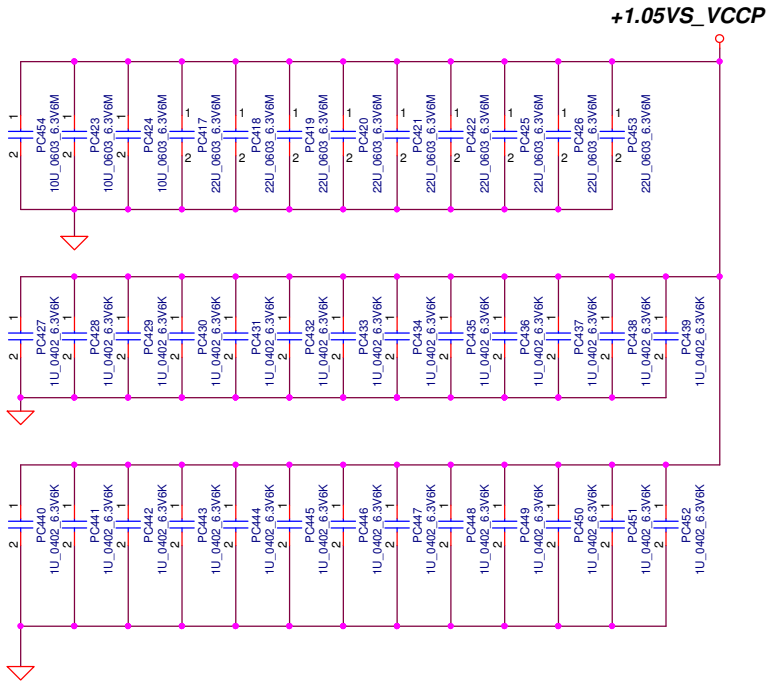
CPU\_Core output CAP (Including MLCC) 36.4

+GFX\_CORE

GFX output CAP (Including MLCC) 36.5



VCCP output Cap (Including MLCC) 36.6



|                 |          |      |      |       |     |       |       |
|-----------------|----------|------|------|-------|-----|-------|-------|
| Chief River ULV | 330uF*9m | 22uF | 10uF | 2.2uF | 1uF | 470uF | 560uF |
| CPU             | 2        | 14   |      | 16    |     |       |       |
| GFX_CORE        |          | 6    | 6    |       | 11  | 1     |       |
| 1.05V_VCCP      |          |      | 10   |       | 26  |       | 1     |

| Item | Time (When)        | Page (Where)                 | Location / Discription ( How / What)                    | Request (Who) | Reson (Why)                                  |
|------|--------------------|------------------------------|---------------------------------------------------------|---------------|----------------------------------------------|
| 1    | EVT--2012/10/24    | P36-PWR-BATTERY CONN / OTP   | @PD5 / Remove ESD diode                                 | company       | For part count reduction                     |
| 2    | EVT--2012/10/24    | P36-PWR-BATTERY CONN / OTP   | @PD6 / Remove ESD diode                                 | company       | For part count reduction                     |
| 3    | EVT--2012/10/24    | P37-PWR-CHARGER              | @PC221 /Remove 10uF capacitor                           | company       | For part count reduction                     |
| 4    | EVT--2012/10/24    | P38-PWR-3VALW/5VALW          | PC331 /Reserve                                          | PWR           | ME limitation                                |
| 5    | EVT--2012/10/24    | P38-PWR-3VALW/5VALW          | @PC354/mount                                            | PWR           | ME limitation                                |
| 6    | EVT--2012/10/24    | P38-PWR-3VALW/5VALW          | PR337/235K change to 137K                               | PWR           | for RT8243 3V OCP setting                    |
| 7    | EVT--2012/10/24    | P38-PWR-3VALW/5VALW          | PR357/156K change to 143K                               | PWR           | for RT8243 5V OCP setting                    |
| 8    | EVT--2012/10/24    | P39-1.5VP/0.75VSP/1.8VSP     | PR158/16.2K change to 27.4K                             | PWR           | for RT8207 OCP setting                       |
| 9    | EVT--2012/10/24    | P43-PWR +CPU_CORE DECOUPLING | PC416/ change 560uF                                     | PWR           | Based on height and space limitation         |
| 10   | EVT--2012/10/24    | P43-PWR +CPU_CORE DECOUPLING | PC415/ Remove                                           | PWR           | Based on height and space limitation         |
| 11   | EVT--2012/10/25    | P37-PWR-CHARGER              | PQ203/change to TPCA8507                                | PWR           | for design change                            |
| 12   | DVT--2012/12/06    | P37-PWR-CHARGER              | PU200/change to BQ24725RGRR                             | PWR           | for design change                            |
| 13   | DVT--2012/12/06    | P37-PWR-CHARGER              | PQ203/ change to TPCA8507                               | PWR           | AON6504 has burnt out issue                  |
| 14   | DVT--2012/12/06    | P38-PWR-3VALW/5VALW          | PC534,PC351/Delete                                      | PWR           | Based on height and space limitation         |
| 15   | DVT--2012/12/06    | P38-PWR-3VALW/5VALW          | PR335/add 100K ohm                                      | PWR           | Pull high +3VL                               |
| 16   | DVT--2012/12/06    | P38-PWR-3VALW/5VALW          | PC344/add 4.7U                                          | PWR           | for design request                           |
| 17   | DVT--2012/12/06    | P38-PWR-3VALW/5VALW          | PC341/change to 4.7U                                    | PWR           | for design request                           |
| 18   | DVT--2012/12/06    | P38-PWR-3VALW/5VALW          | PC352,PC353/add 150U_D2                                 | PWR           | Based on height and space limitation         |
| 19   | DVT--2012/12/06    | P39-1.5VP/0.75VSP/1.8VSP     | PL152/change to 0.68UH                                  | PWR           | for design change                            |
| 20   | DVT--2012/12/06    | P40-PWR-1.05VS_VCCP          | PL401/change PN                                         | PWR           | to integrate PN                              |
| 21   | DVT--2012/12/06    | P40-PWR-1.05VS_VCCP          | PR403 PC403/Reserve                                     | EMI           | EMI Command                                  |
| 22   | DVT--2012/12/06    | P42-CPU_CORE                 | CPU_CORE(PR5XX,PC5XX)/change solution                   | PWR           | change solution                              |
| 23   | DVT--2012/12/06    | P43-PWR +CPU_CORE DECOUPLING | PC802 PC803/change to 470U                              | PWR           | change solution                              |
| 24   | DVT--2012/12/06    | P36-PWR-BATTERY CONN / OTP   | PF2/change PN                                           | company       | For cost down                                |
| 25   | PVT--2013/01/18    | P39-1.5VP/0.75VSP/1.8VSP     | PC157/change 390U                                       | PWR           | for design change                            |
| 26   | PVT--2013/01/18    | P40-PWR-1.05VS_VCCP          | PC414 / change 0ohm                                     | PWR           | change solution                              |
| 27   | PVT--2013/01/18    | P40-PWR-1.05VS_VCCP          | PC417,PC418,PC419,PC420,PC421,PC422,PC425/change to 22U | PWR           | for 1.05VCCP test                            |
| 28   | PVT--2013/01/18    | P40-PWR-1.05VS_VCCP          | PC426,PC453/add 22U                                     | PWR           | for 1.05VCCP test                            |
| 29   | PVT--2013/01/18    | P40-PWR-1.05VS_VCCP          | PC407/change 4700P                                      | PWR           | for design change                            |
| 30   | PVT--2013/01/18    | P40-PWR-1.05VS_VCCP          | PC416/Delete                                            | PWR           | for 1.05VCCP test                            |
| 31   | PVT--2013/01/18    | P40-PWR-1.05VS_VCCP          | PL402/change to 0.68U                                   | PWR           | for 1.05VCCP test                            |
| 32   | PVT--2013/01/18    | P42-CPU_CORE                 | PQ501,PQ503 /change AON7518                             | PWR           | AON7514 EOL                                  |
| 33   | PVT--2013/01/18    | P42-CPU_CORE                 | PR553/Reserve                                           | PWR           | change solution                              |
| 34   | PVT--2013/01/18    | P42-CPU_CORE                 | PR541/change to 2.67K                                   | PWR           | for CPU setting                              |
| 35   | PVT--2013/01/18    | P42-CPU_CORE                 | PC543/change to 2.2nF                                   | PWR           | for CPU setting                              |
| 36   | PVT--2013/01/18    | P42-CPU_CORE                 | PC553/change to 8.2nF                                   | PWR           | for CPU setting                              |
| 37   | PVT--2013/01/18    | P42-CPU_CORE                 | PR567/change to 2.05K                                   | PWR           | for CPU setting                              |
| 38   | PVT--2013/01/21    | P43-PWR +CPU_CORE DECOUPLING | PC802,PC852/change to 560U                              | PWR           | for CPU,GFX Transient                        |
| 39   | PVT--2013/01/21    | P39-1.5VP/0.75VSP/1.8VSP     | PC152/add 2200p                                         | PWR           | EMI Command                                  |
| 40   | PVT--2013/01/21    | P39-1.5VP/0.75VSP/1.8VSP     | PR156/add 4.7ohm                                        | PWR           | EMI Command                                  |
| 41   | PVT--2013/01/21    | P39-1.5VP/0.75VSP/1.8VSP     | PC156/add 680p                                          | PWR           | EMI Command                                  |
| 42   | PVT--2013/01/21    | P39-1.5VP/0.75VSP/1.8VSP     | PR155/add 2.2ohm                                        | PWR           | EMI Command                                  |
| 43   | PVT--2013/01/21    | P42-CPU_CORE                 | PQ502,PQ504 /change TPCA8059                            | PWR           | for design change                            |
| 44   | Pre-MP--2013/03/05 | P37-PWR-CHARGER              | PC214/add 0.1u                                          | PWR           | EMI Command                                  |
| 45   | Pre-MP--2013/03/05 | P38-PWR-3VALW/5VALW          | PC339/add 0.1u                                          | PWR           | EMI Command                                  |
| 46   | Pre-MP--2013/03/05 | P39-1.5VP/0.75VSP/1.8VSP     | PC157 /change to 330u                                   | PWR           | ME limitation                                |
| 47   | Pre-MP--2013/03/05 | P39-1.5VP/0.75VSP/1.8VSP     | PC152 /change to 330p                                   | PWR           | EMI Command                                  |
| 48   | Pre-MP--2013/03/05 | P40-PWR-1.05VS_VCCP          | PR406/add 1 K ohm                                       | PWR           | for 1.05 VCCP test(change to location sense) |
| 49   | Pre-MP--2013/03/05 | P40-PWR-1.05VS_VCCP          | PC404/add 0.1u                                          | PWR           | EMI Command                                  |
| 50   | Pre-MP--2013/03/05 | P42-CPU_CORE                 | PC510/add 0.1u                                          | PWR           | EMI Command                                  |
| 51   | Pre-MP--2013/03/05 | P42-CPU_CORE                 | PC553/change to 22nF                                    | PWR           | for CPUPtransient                            |
| 52   | Pre-MP--2013/03/05 | P43-PWR +CPU_CORE DECOUPLING | PC802/change to 330U                                    | PWR           | for CPUPtransient                            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                              |                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|------------------------------|-----------------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc.     |                       |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2012/04/19 | Deciphered Date    | 2015/04/19 | Title                        | PWR-PIR               |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date: Monday, March 11, 2013 | Sheet 44 of 46        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Rev 1.0                      |                       |

# HW PIR (Product Improve Record)

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VFKTA LA-9862P SCHEMATIC CHANGE LIST  
REVISION CHANGE: 0.1 TO 0.2

| NO  | DATE  | PAGE   | MODIFICATION LIST                                                                   | PURPOSE                       |
|-----|-------|--------|-------------------------------------------------------------------------------------|-------------------------------|
| 1.  | 11/28 | (P.30) | Mount CA32 (SE102104K00)                                                            | BOM structure change          |
| 2.  | 11/28 | (P.32) | Change RB36 from 2.2k to 0 ohm and CB50 to @                                        | Design change                 |
| 3.  | 11/28 | (P.24) | Add @ to JHDMI                                                                      | BOM structure change          |
| 4.  | 11/28 | (P.11) | Move RD10, RD11 to page 12.                                                         |                               |
| 5.  | 11/28 | (P.33) | Delete NFC Function                                                                 | Design change                 |
| 6.  | 11/28 | (P.28) | Change JCARD.10 to SDWP# and JCARD.11 to SDCD.                                      | Design change                 |
|     |       | (P.28) | Add QW1, RW3, RW4 for normal close type connector                                   |                               |
| 7.  | 11/28 | (P.13) | Add D92 for LID_SW#_D to isolate the +3VL power rail from LID_SW#                   | Design change                 |
| 8.  | 11/28 | (P.15) | Update HDMI power circuit                                                           | Design change                 |
| 9.  | 11/28 | (P.20) | Change USB port 10 to NC.                                                           | Design change                 |
| 10. | 11/28 | (P.16) | Change UH3 from socket to IC                                                        | Design change                 |
| 11. | 11/28 | (P.09) | Change CC44 to 0805 size (SE000000PL00), Add CC40                                   | For 1206 MLCC Crack issue     |
|     |       | (P.09) | Change CC53 to 47U 0805 (SE000000PL00), Add CC50 (SE000000PL00)                     |                               |
|     |       | (P.12) | Change CD31 to 0805 size (SE000000PL00)                                             |                               |
|     |       | (P.29) | Change CR10, CR12 to 0805 size (SE000000PL00)                                       |                               |
| 12. | 11/28 | (P.14) | change BOM structure C238, C239, C240, C241, C242, C243 to CRT@EMI@                 | EMI request                   |
| 13. | 11/28 | (P.16) | Change UH3 from socket to IC                                                        | Design change                 |
| 14. | 11/28 | (P.07) | Change RC73 to 0 ohm (do not use short pad on this location)                        | For debug                     |
| 15. | 11/28 | (P.30) | Change RA50 to 269@                                                                 | Design change                 |
| 16. | 11/28 | (P.31) | Change SPK connector to 6 pin, change SPK_DET0 to SPK_DET, delete SPK_DET1 and RA96 | Design change                 |
| 17. | 11/28 | (P.21) | Change SPK_DET0 to SPK_DET, delete SPK_DET1                                         | Design change                 |
| 18. | 11/28 | (P.13) | Delete D92 and change the netname to BKOFF# for touch Screen                        | Avoid LCD_INV leak to Touch/B |
| 19. | 11/28 | (P.13) | SWAP R92, R100 L60 config, SWAP R93, R101, L59 config                               | BOM structure change          |
| 20. | 11/28 | (P.13) | Reverse LVDS connector pin definition                                               | Design change                 |
| 21. | 11/28 | (P.33) | Change H15 from H_3P0 to H_4P0, Add h19 H_3P2N ME follow ME change                  | ME request                    |
| 22. | 11/29 | (P.28) | Modify Jcard @ to update Netlist                                                    | BOM structure change          |
| 23. | 11/29 | (P.13) | Delete R87, R88, R89, R90, R92, R93, R100, R101, L59, L60, JCAM, JEDP               | Design change                 |
|     |       | (P.13) | Change L56 to L55, L58 to L57, JLVDS type and modify net name for LVDS              | Design change                 |
| 24. | 11/29 | (P.14) | add R62, R63, 22-ohm (PN: SD028220A80) on CRT HSYNC/VSYNC trace.                    | For CRT undershoot issue      |
| 25. | 11/29 | (P.16) | Chane UH4, RH269, RH271 to @, change RH267 from shortpad to 0-ohm                   | Design change                 |
| 26. | 11/30 | (P.8)  | Add CC17~CC19 for ESD request                                                       | ESD request                   |
| 27. | 11/30 | (P.20) | Move PLT_RST# ESD capacitor (CH104) to EC side (CB13) and mount 0.1uF               | ESD request                   |
| 28. | 11/30 | (P.5)  | Change CC63 from @ESD@ to ESD@ for ESD request                                      | ESD request                   |
| 29. | 11/30 | (P.30) | Reserve RA31, RA38 for EMI request                                                  | EMI request                   |
| 30. | 11/30 | (P.32) | Change PM_SLP_S4# from pin127 to pin84.                                             |                               |
|     |       | (P.32) | Change USB_EN#0 from pin84 to pin23.                                                |                               |
| 31. | 11/31 | (P.33) | Update CPU config&PN                                                                |                               |
| 32. | 12/04 | (P.29) | Update S&C to 14640/14641 co-layout circuit , add RR1~RR4, QR1, modify net-name     | Design change                 |

REVISION CHANGE: 0.2 TO 0.3

| NO  | DATE  | PAGE   | MODIFICATION LIST                                    | PURPOSE             |
|-----|-------|--------|------------------------------------------------------|---------------------|
| 1.  | 01/18 | (P.28) | Delete QW2                                           | Design Change       |
| 2.  | 01/18 | (P.20) | Change RH166 from ShortPad to 0 ohm resistor.        | For ESD Request     |
| 3.  | 01/18 | (P.07) | Delete RC3.                                          | Design Change       |
| 4.  | 01/18 | (P.32) | Add RB12, RB37, connect EC_MUTE_INT from codec to EC | For boot bobo issue |
| 5.  | 01/18 | (P.05) | Add CC35, CC20                                       | For ESD Request     |
| 6.  | 01/18 | (P.21) | reserve CC21                                         | For ESD Request     |
| 7.  | 01/18 | (P.32) | reserve CC23, CC24, CC25                             | For ESD Request     |
| 8.  | 01/18 | (P.18) | reserve CC26, CC27                                   | For ESD Request     |
| 9.  | 01/18 | (P.32) | Change CB13 to 100P P/NSE071101J80                   | Design Change       |
| 10. | 01/18 | (P.28) | Add RW2 CW9                                          | For EMI Request     |

|                                                                                                                                                                                                                                                                                                                                                                                                                        |            |                    |            |                          |                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|--------------------------|------------------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                |            | Compal Secret Data |            | Compal Electronics, Inc. |                        |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                            | 2012/04/19 | Deciphered Date    | 2015/04/19 | Title                    | HW-PIR                 |
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|                                                                                                                                                                                                                                                                                                                                                                                                                        |            |                    |            | Date                     | Monday, March 11, 2013 |
|                                                                                                                                                                                                                                                                                                                                                                                                                        |            |                    |            | Sheet                    | 45 of 46               |

HW PIR (Product Improve Record)

HW PIR (Product Improve Record)

VFKTA LA-9862P SCHEMATIC CHANGE LIST  
REVISION CHANGE: 0.3 TO 1.0

| NO  | DATE  | PAGE                 | MODIFICATION LIST                                                                                   | PURPOSE                              |
|-----|-------|----------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------|
| 1.  | 01/28 | (P.33)               | Modify JTP pin with the same as VFKTA DIS                                                           | Design Change                        |
| 2.  | 01/28 | (P.13)               | Reserve R267&R266 0 ohm                                                                             | For EMI cost down                    |
| 3.  | 01/28 | (P.32)               | Change QB1 to SB000000EN00                                                                          | For X1 code issue                    |
| 4.  | 01/28 | (P.07)               | Change QC3 to SB000000PF00                                                                          | For X1 code issue                    |
| 5.  | 01/28 | (P.15)               | Change QY1 QY2 to SB000000PF00                                                                      | For X1 code issue                    |
| 6.  | 01/28 | (P.16)               | Change UH3 from SA000003K800 to SA000004LI00                                                        | For X1 code issue                    |
| 7.  | 01/28 | (P.27/29)            | Change UR1 UR4 from SA000004KB00 to SA000003TV00                                                    | For X1 code issue                    |
| 8.  | 01/28 | (P.13)               | Change L2 SM010000CD00E to SM010000JB00                                                             | For EOL issue                        |
| 9.  | 01/28 | (P.9/17/28/34/30/29) | Change QC5,QH3,QH4,QW1,Q6 ,QA1, QR1, Q53 from SB000000EO10 to SB000000DH00                          | For X1 code issue                    |
| 10. | 01/28 | (P.30)               | Change RA42 from SM010000CY00 to SM010000A900                                                       | For X1 code issue                    |
| 11. | 01/28 | (P.29)               | Change LR2,LR3,LR4,LR5 from SM0700001U00 to SM0700001R00                                            | For X1 code issue                    |
| 12. | 02/18 | (P.06)               | Swap H_EDP_TXN[0\1] to H_EDP_TXP[0\1]                                                               | Design mistake                       |
| 13. | 02/18 | (P.13)               | Change C7 to SE076153K80 (15nF)                                                                     | for LCD sequence tuning              |
| 14. | 02/19 | (P.05)               | Delete CC33, CC36, C4; change R1 to short pad                                                       | for part count reduce                |
| 15. | 02/19 | (P.07)               | Change RC73 to short pad                                                                            | for part count reduce                |
| 16. | 02/19 | (P.09)               | Delete CC61, CC83; change RC119 to short pad                                                        | for part count reduce                |
| 17. | 02/19 | (P.11)               | Delete CD2, CD15                                                                                    | for part count reduce                |
| 18. | 02/19 | (P.12)               | Delete cD28, CD46                                                                                   | for part count reduce                |
| 19. | 02/19 | (P.13)               | Change R106 to shortpad                                                                             | for part count reduce                |
| 20. | 02/19 | (P.14)               | Delete C250                                                                                         | for part count reduce                |
| 21. | 02/19 | (P.16)               | Delete CH6, CH100; change RH67, RH68 to short pad                                                   | for part count reduce                |
| 22. | 02/19 | (P.19)               | Delete RH254                                                                                        | for part count reduce                |
| 23. | 02/19 | (P.26)               | Delete CCL2, RCL5, RCL2, net: LAN_X1_R_R, LAN_X1_R                                                  | for part count reduce                |
| 24. | 02/19 | (P.27)               | Delete net: LAN_X1_R                                                                                | for part count reduce                |
| 25. | 02/19 | (P.28)               | Change RW1 to shortpad                                                                              | for part count reduce                |
| 26. | 02/19 | (P.29)               | Delete CR7, CR8                                                                                     | for part count reduce                |
| 27. | 02/19 | (P.30)               | Change RA22, RA18, RA24 to short pad                                                                | for part count reduce                |
| 28. | 02/19 | (P.41)               | Delete CB4, CB5, CB50                                                                               | for part count reduce                |
| 29. | 02/19 | (P.42)               | Delete SW2, SW3                                                                                     | for part count reduce                |
| 30. | 02/28 | (P.32)               | Connect RB14 form CLK_EC_R to POK and reserve RB13,RB22,CB16                                        | for abnormal shut down power request |
| 31. | 02/28 | (P.20)               | change RH167 pin2 netname from CLK_EC_R to CLK_PCI_EC_R                                             |                                      |
| 32. | 03/04 | (P.20)               | change RH167 pin2 netname from CLK_PCI_EC_R to CLK_EC_R                                             |                                      |
| 33. | 03/04 | (P.32)               | Connect RB14 from POK_R to POK and reserve RB13,RB22,CB16                                           | For keep the same as DIS             |
| 34. | 03/04 | (P.28)               | Add RW5~RW8 for EMI request and change netname SD_DATA[0...3] to SD_DATA[0...3]_R on connector side | for abnormal shut down power request |
| 35. | 03/06 | (P.28)               | Add 10pF CV10~CV13 on SD_DATA[0:3]                                                                  | for EMI request                      |
|     |       |                      |                                                                                                     | for EMI request.                     |