

Compal confidential

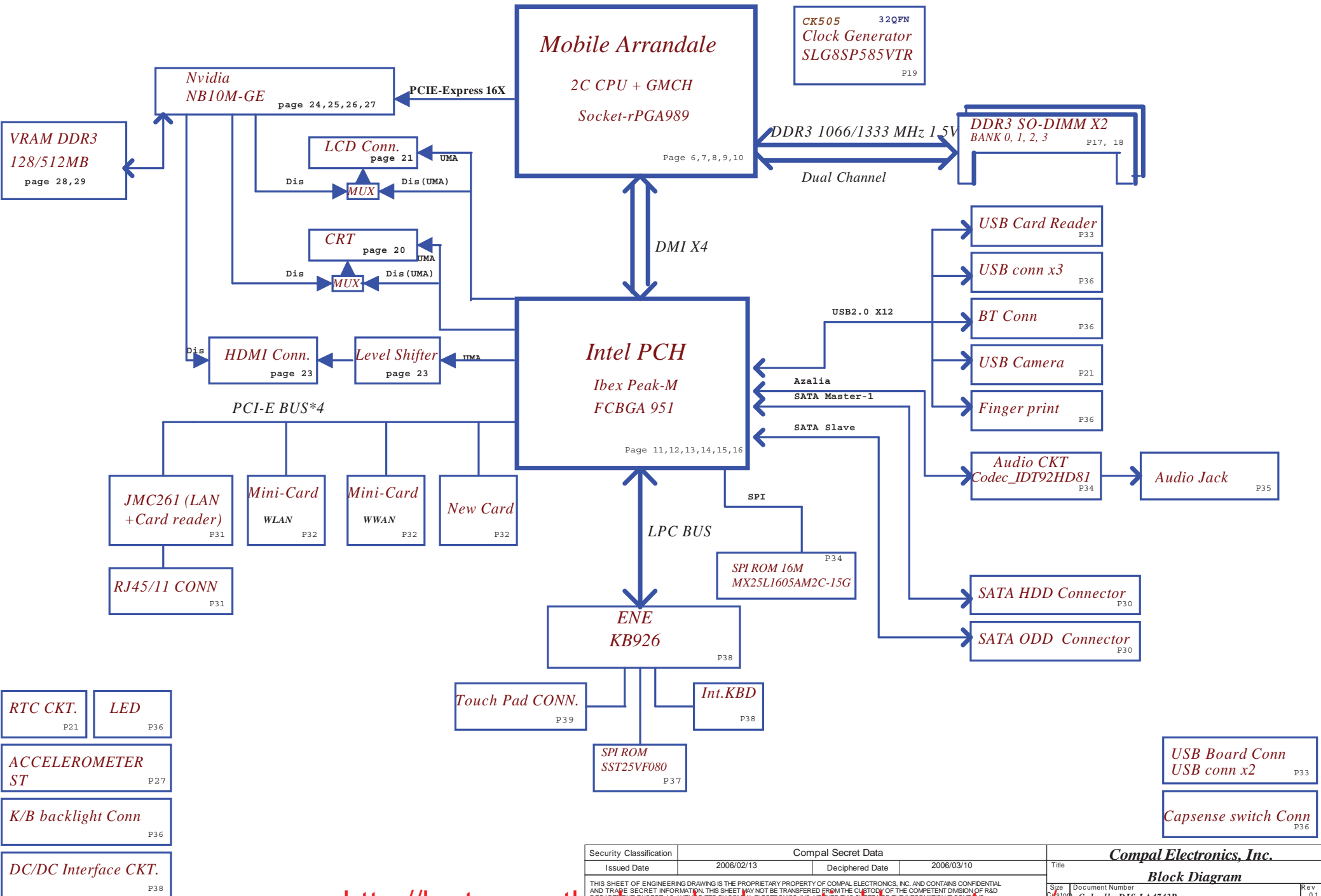
Schematics Document

Mobile Auburndale rPGA989 with
Intel PCH (Ibex Peak-M) core logic

2009-04-13



| | | | | | | |
|--|--------------------|-----------------|------------|--------------------------|------------------------|---------------|
| Security Classification | Compal Secret Data | | | Title | | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/03/10 | Compal Electronics, Inc. | | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION CONTAINED HEREIN IS TO BE USED BY OR FOR THE BENEFIT OF ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | Size | Document Number | Rev |
| | | | | Custom | Calpella DIS LA4743P | 0.1 |
| | | | | Date: | Monday, April 13, 2009 | Sheet 1 of 49 |



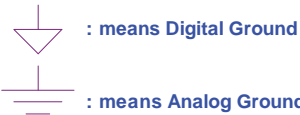
| | | | | |
|--|------------------------|-----------------|------------|--------------------------|
| Security Classification | Compal Secret Data | | Title | |
| Issued Date | 2006/02/13 | Deciphered Date | 2006/03/10 | Compal Electronics, Inc. |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT THE WRITTEN CONSENT OF THE COMPETENT DIVISION OF R&D DEPARTMENT. THIS SHEET OF THE DRAWING CONTAINS TRADE SECRET INFORMATION. ANY UNAUTHORIZED REPRODUCTION OR DISSEMINATION OF THIS SHEET OF DRAWING IS STRICTLY PROHIBITED. ANY UNAUTHORIZED REPRODUCTION OR DISSEMINATION OF THIS SHEET OF DRAWING IS STRICTLY PROHIBITED. ANY UNAUTHORIZED REPRODUCTION OR DISSEMINATION OF THIS SHEET OF DRAWING IS STRICTLY PROHIBITED. | | | | Block Diagram |
| Size | Document Number | Rev | | |
| Custom | Calpella DIS LA4743P | 0.1 | | |
| Date: | Monday, April 13, 2009 | Sheet | 2 | of 49 |

Voltage Rails

O MEANS ON X MEANS OFF

| power plane / State | +B | +5VALW +3VALW | +1.8V | +5VS +3VS +1.5VS +0.9V +VCPP +CPU_CORE +2.5VS +1.8VS |
|--------------------------------|----|------------------|-------|---|
| S0 | O | O | O | O |
| S1 | O | O | O | O |
| S3 | O | O | O | X |
| S5 S4/AC | O | O | X | X |
| S5 S4/ Battery only | O | X | X | X |
| S5 S4/AC & Battery don't exist | X | X | X | X |

Symbol Note :



| | |
|------------|---|
| @ : | means just reserve , no build |
| 45@ : | means need be mounted when 45 level assy or rework stage. |
| BATT @ : | means need be mounted when 45 level assy or rework stage. |
| CONN@ : | means ME part |
| SG@ : | means stuff when Switchable graphic |
| UMA@ : | means stuff when UMA skus |
| VRAM@ : | X76 level |
| 8111DL@ : | Only for Giga LAN |
| DEBUG@ : | For debug |
| Cypress@ : | Only For Cypress Capacitor sensor board |
| ENE@ : | Only For ENE Capacitor sensor board |
| M3@ : | Only For Intel DDR3 VREF |
| PA@ : | Only For PA |
| PR@ : | Only For PR |

USB assignment:

| | |
|--------|-----------------------|
| USB-0 | Right side |
| USB-1 | Right side |
| USB-2 | Left side(with ESATA) |
| USB-3 | X |
| USB-4 | Camera |
| USB-5 | WLAN |
| USB-6 | Bluetooth |
| USB-7 | Finger Printer |
| USB-8 | MiniCard(WWAN/TV) |
| USB-9 | Express card |
| USB-10 | X |
| USB-11 | X |

PCIe assignment:

| | |
|--------|----------|
| PCIe-1 | WWAN |
| PCIe-2 | WLAN |
| PCIe-3 | LAN |
| PCIe-4 | New card |
| PCIe-5 | X |
| PCIe-6 | X |

SATA assignment:

| | |
|-------|-------|
| SATA0 | HDD |
| SATA1 | ODD |
| SATA2 | X |
| SATA3 | X |
| SATA4 | ESATA |
| SATA5 | X |

SMBUS Control Table

| | SOURCE | XDP | BATT | Thermal Sensor | SODIMM | CLK CHIP | WLAN WWAN | NB10M Thermal Sensor | NB10M-GE | Cap sensor board | NEW CARD | G sensor |
|--------------------------|--------|-----|------|----------------|--------|----------|-----------|----------------------|----------|------------------|----------|----------|
| SMB_EC_CK1 SMB_EC_DA1 | KB926 | X | V | X | X | X | X | X | X | V | X | X |
| SMB_EC_CK2 SMB_EC_DA2 | KB926 | X | X | X | X | X | X | X | X | X | X | X |
| SMBCLK SMBDATA | PCH | V | X | X | V | V | V | X | X | X | V | V |
| SML0CLK SML0DATA | PCH | X | X | X | X | X | X | X | X | X | X | X |
| SML1CLK SML1DATA | PCH | X | X | X | X | X | X | X | X | X | X | X |

+3VS +5VL +3VS +3VS +3VALW +5VL +3VALW +3VS

PCH I2C / SMBUS ADDRESSING

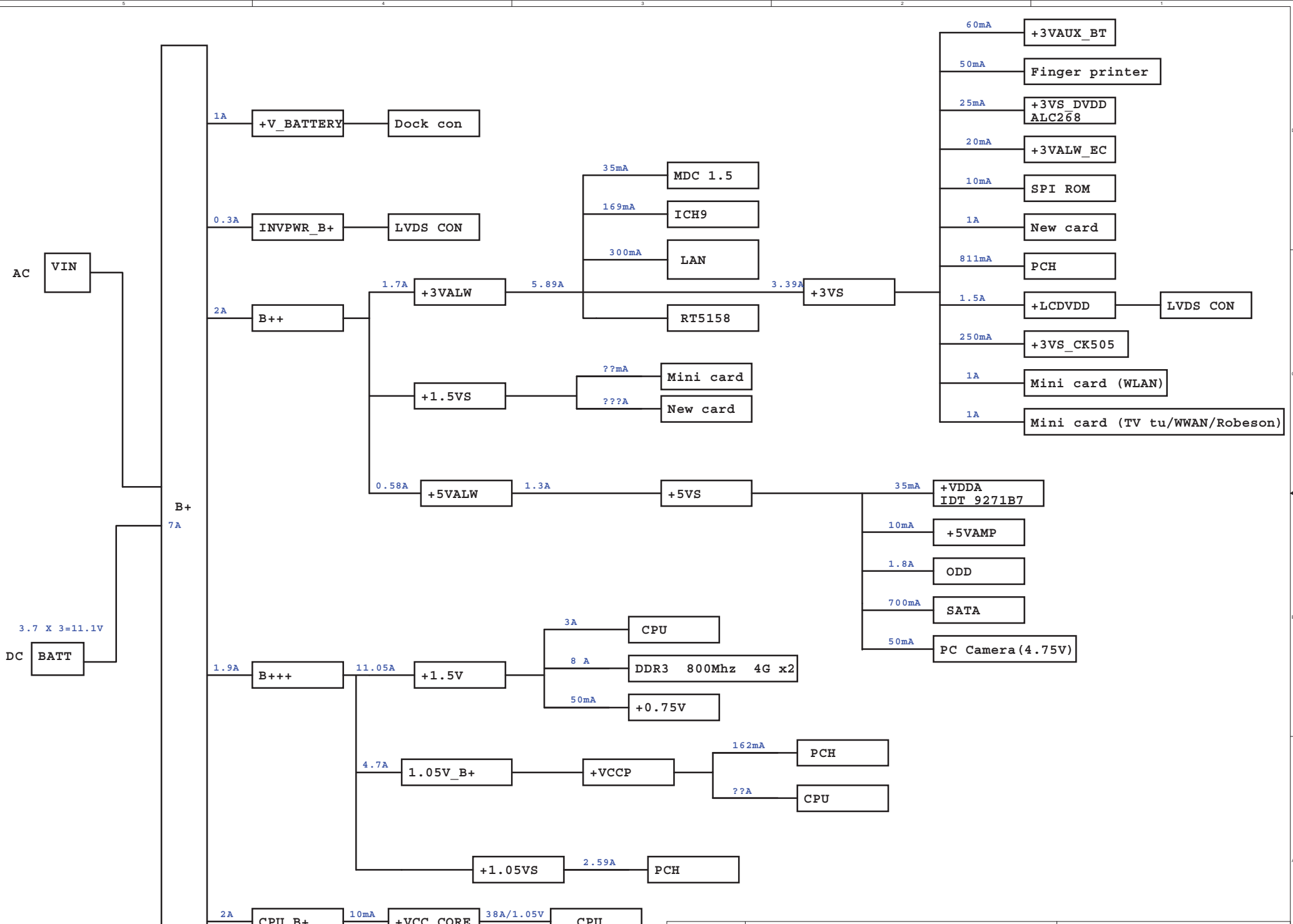
| DEVICE | HEX | ADDRESS |
|------------------------|-----|-----------------|
| DDR SO-DIMM 0 | A0 | 1 0 1 0 0 0 0 0 |
| DDR SO-DIMM 1 | A4 | 1 0 1 0 0 1 0 0 |
| CLOCK GENERATOR (EXT.) | D2 | 1 1 0 1 0 0 1 0 |

45172932L01 : Switchable graphic
45172932L02 : UMA only

NB10M-GE SMBUS Control Table

| | SOURCE | LVDS | CRT | HDMI |
|----------------------------------|--------|------|-----|------|
| D_EDID_DATA D_EDID_CLK | NB10M | V | X | X |
| D_CRT_DDC_DATA D_CRT_DDC_DATA | NB10M | X | V | X |
| HDMIDAT_VGA HDMICLK_VGA | NB10M | X | X | V |

| | | | |
|---|------------------------|-----------------|---|
| Security Classification | Compal Secret Data | | Title Compal Electronics, Inc. |
| Issued Date | 2007/08/28 | Deciphered Date | |
| <small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D TO OTHERS WITHOUT THE WRITTEN APPROVAL OF THE COMPETENT DIVISION. THIS SHEET OF ENGINEERING DRAWING CONTAINS CONFIDENTIAL INFORMATION TO WHICH THE FOLLOWING PROPRIETARY RIGHTS ARE RESERVED: COMPAL ELECTRONICS, INC.</small> | | | Document Number Calpella DIS LA 4743P |
| Date: | Monday, April 13, 2009 | Sheet | 3 of 49 |



<http://laptop-motherboard-schematic.blogspot.com/>

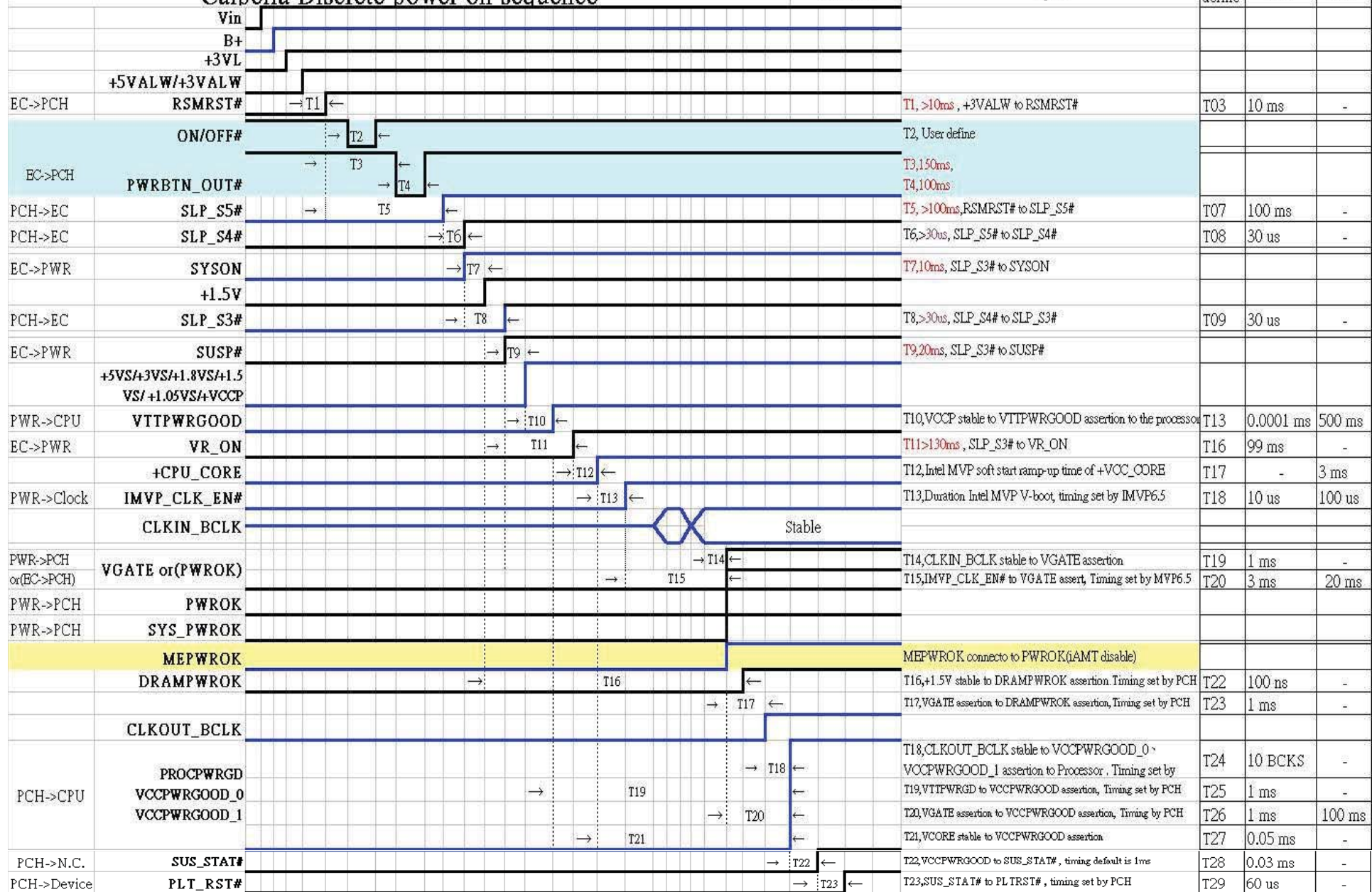
| | | | | |
|-------------------------|------------------------|-----------------|--------------------------|----------------|
| Security Classification | Compal Secret Data | | Compal Electronics, Inc. | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/03/10 | Title |
| | | | | Power delivery |
| Size | Document Number | Rev | | |
| P | Capella DIS LA4743P | 0.1 | | |
| Date | Monday, April 13, 2009 | Sheet | 4 | of 49 |

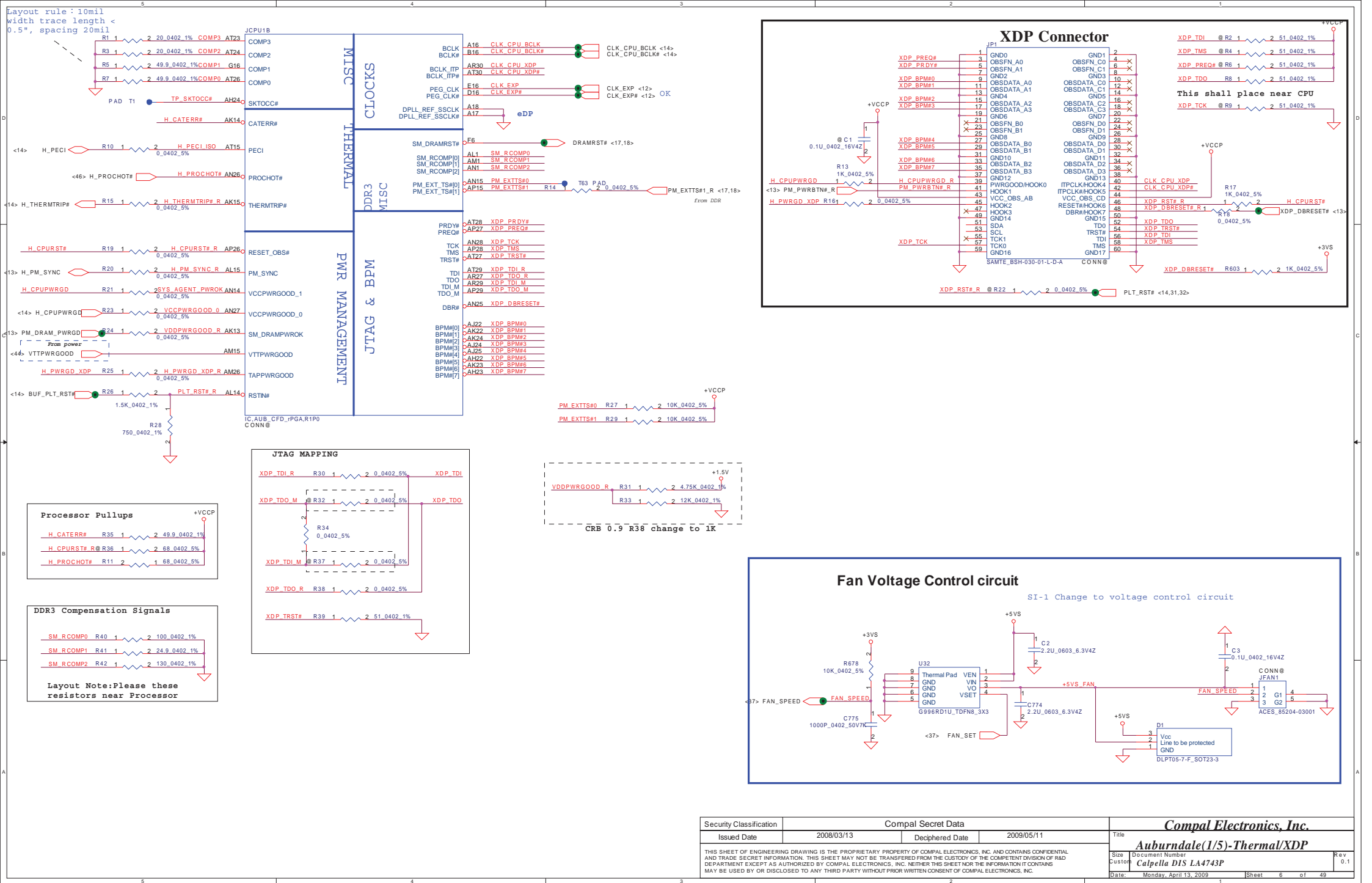
Calpella Discrete power on sequence

97.09.16.

Spec

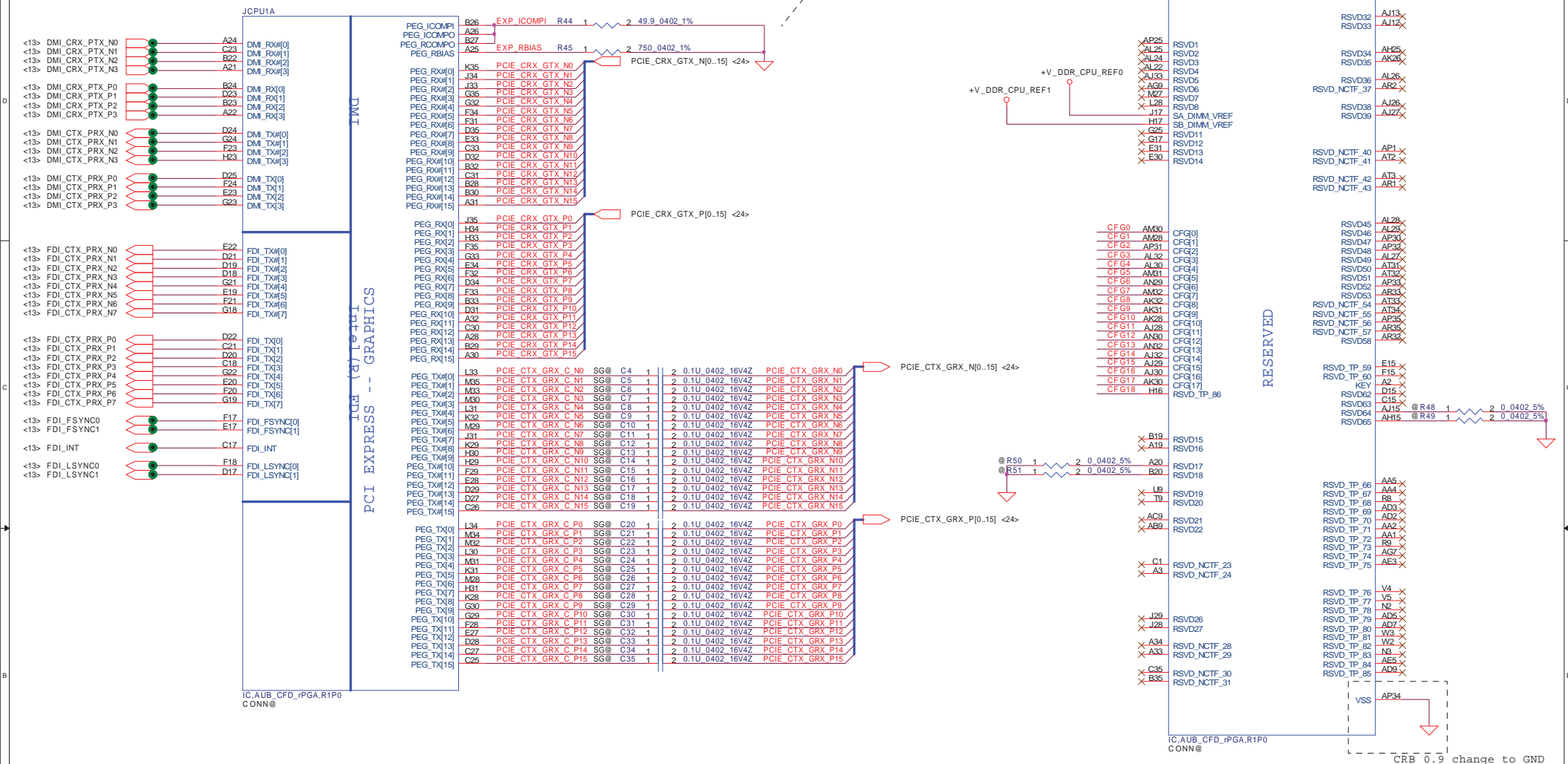
define min Max





| | | | |
|---|------------------------|-----------------|--|
| Security Classification | Compal Secret Data | | Title Compal Electronics, Inc. Auburndale(1/5)-Thermal/XDP |
| Issued Date | 2008/03/13 | Deciphered Date | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | Size Customer |
| | | | Document Number Caipella DIS LA743P |
| Date: | Monday, April 13, 2009 | Sheet | 6 of 49 |

Layout rule: trace length < 0.5"



CFG Straps for PROCESSOR

CFG0 @R52 1 2 3.01K 0402 1%

CFG4 @R53 1 2 3.01K 0402 1%

CFG3 R54 1 2 3.01K 0402 1%

CFG7 @R55 1 2 3.01K 0402 1%

PCI-Express Configuration Select

CFG0

1: Single PEG
0: Bifurcation enabled

Not applicable for Clarksfield Processor

CFG3-PCI Express Static Lane Reversal

CFG3

1: Normal Operation
0: Lane Numbers Reversed
15 -> 0, 14 -> 1, ... *

CFG4-Display Port Presence

CFG4

1: Disabled; No Physical Display Port
0: Enabled; An external Display Port

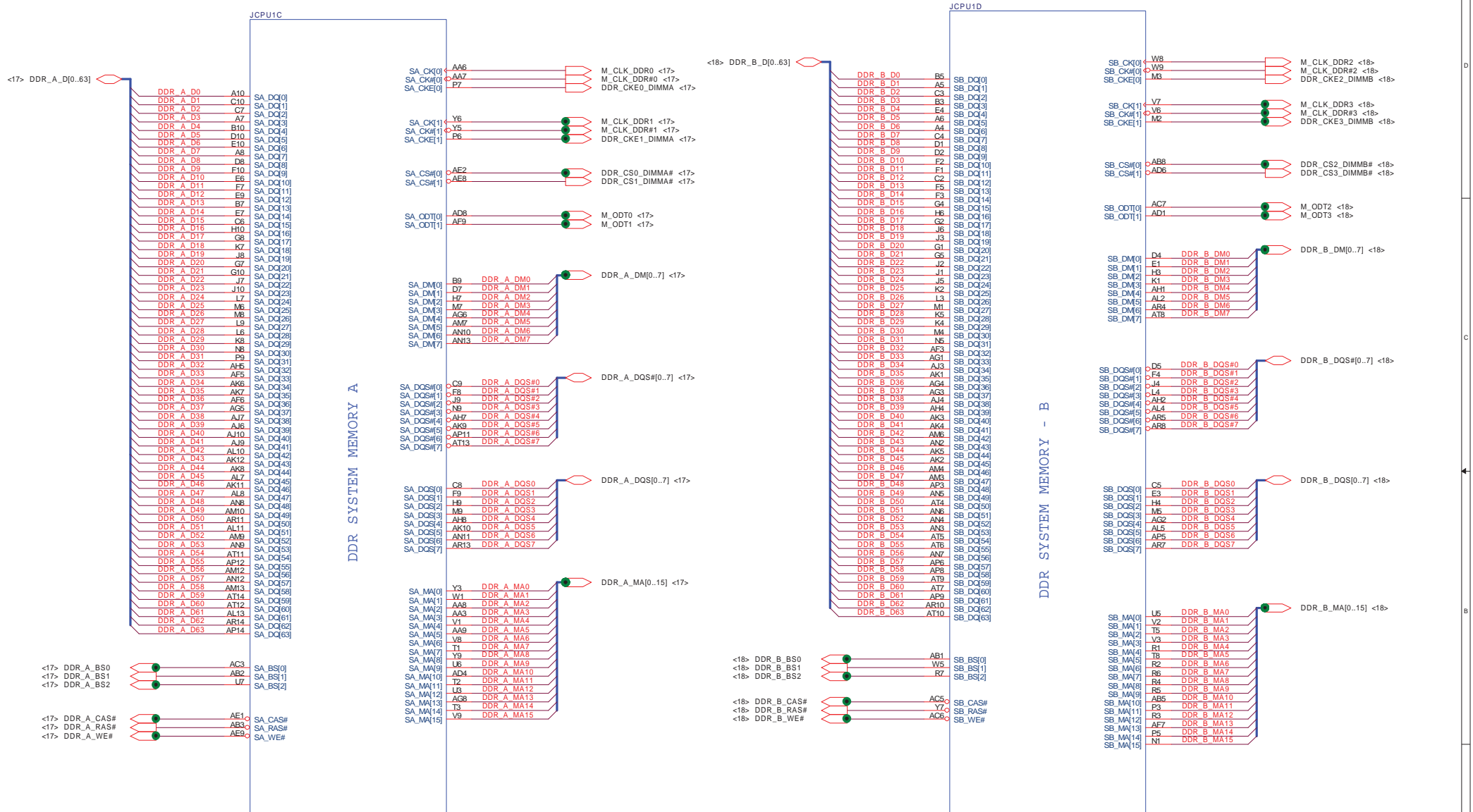
device is connected to the Embedded Display Port

CFG7

WV33 GPD 3.01K on CFG7 for PCIe Jitter
WV41: don't staff

| Security Classification | | Compal Secret Data | |
|---|----------------------|-----------------------------|------------------------|
| Issued Date | 2008/03/13 | Deciphered Date | 2009/05/11 |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT THE WRITTEN CONSENT OF THE COMPETENT DIVISION OF R&D DEPARTMENT. ANY UNAUTHORIZED REPRODUCTION OR DISSEMINATION OF THIS SHEET OF ENGINEERING DRAWING IS STRICTLY PROHIBITED. ANY VIOLATION OF THIS POLICY WILL BE PUNISHED SEVERELY. © 2008 COMPAL ELECTRONICS, INC. | | | |
| Title | | Auburndale(2/5)-DMI/PEG/FDI | |
| Size | Document Number | Rev | 0.1 |
| Custom | Calpella DIS LA4743P | Date: | Monday, April 13, 2009 |
| Sheet | | 7 of 49 | |

<http://laptop-motherboard-schematic.blogspot.com/>

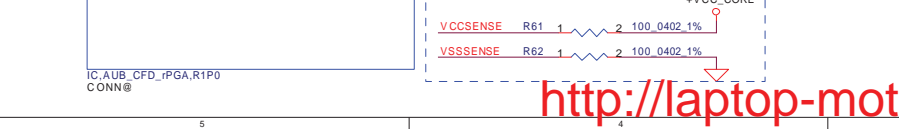
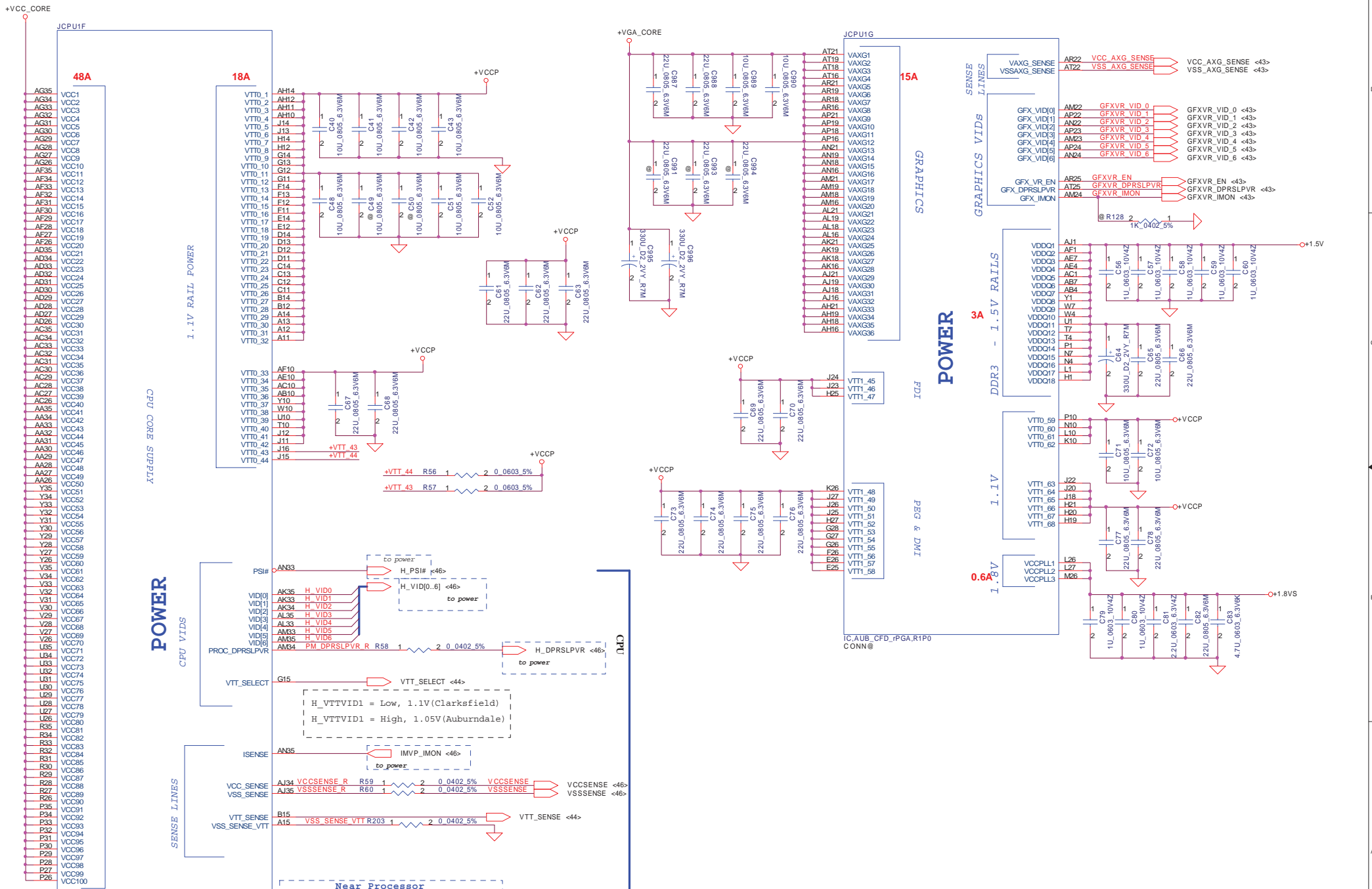


IC:AUB_CFD_rPGA,R1P0
CONN@

IC:AUB_CFD_rPGA,R1P0
CONN@

| Security Classification | | Compal Secret Data | | Title | |
|--|---------------------|--------------------|------------|--------------------------|---------------|
| Issued Date | 2008/03/13 | Deciphered Date | 2009/05/11 | Compal Electronics, Inc. | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTOMER OR THE COMPETENT DIVISION OF R&D DEPARTMENT ENGINEERING DEPARTMENT WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | Cantiga(2/6)-DDR3 A/B CH | |
| Size | Document Number | Date | | Monday, April 13, 2009 | Sheet 8 of 49 |
| Custom | Calpella DIS LA473P | Rev | | 0.1 | |

<http://laptop-motherboard-schematic.blogspot.com/>

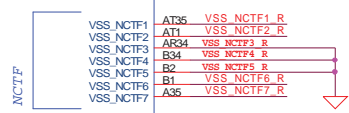
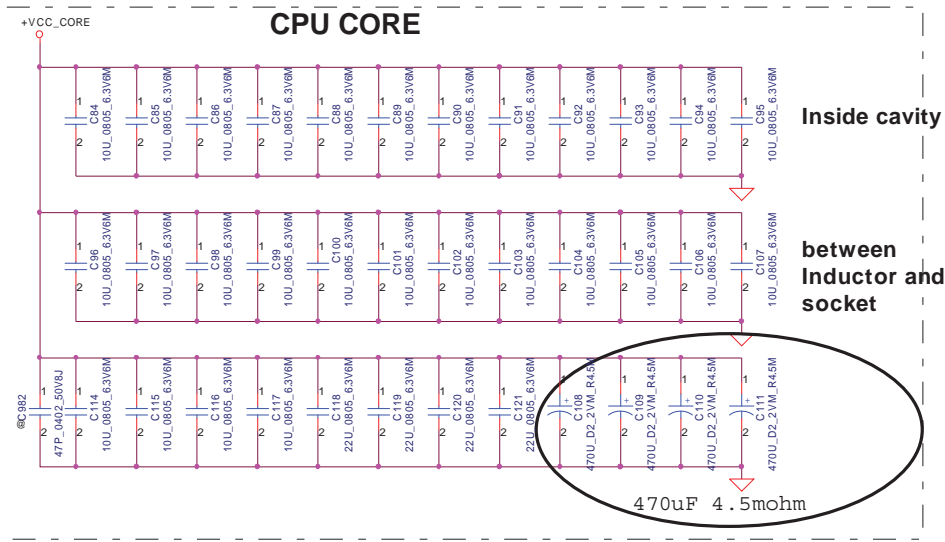
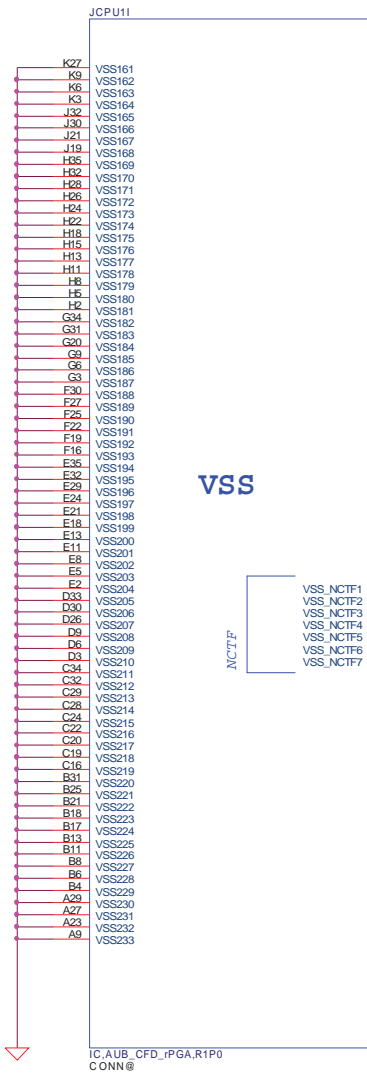
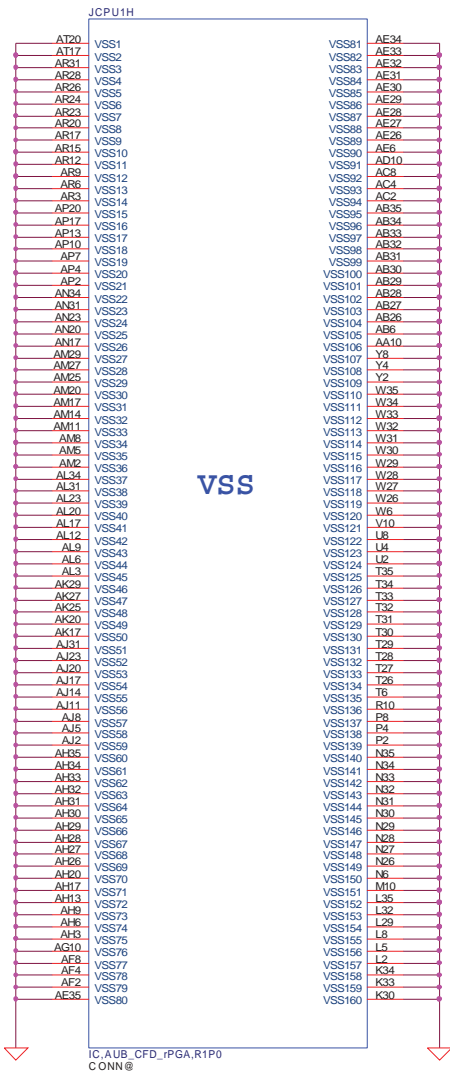


| Security Classification | Compal Secret Data | |
|-------------------------|--------------------|-----------------|
| Issued Date | 2008/03/13 | Deciphered Date |
| | | 2009/05/11 |

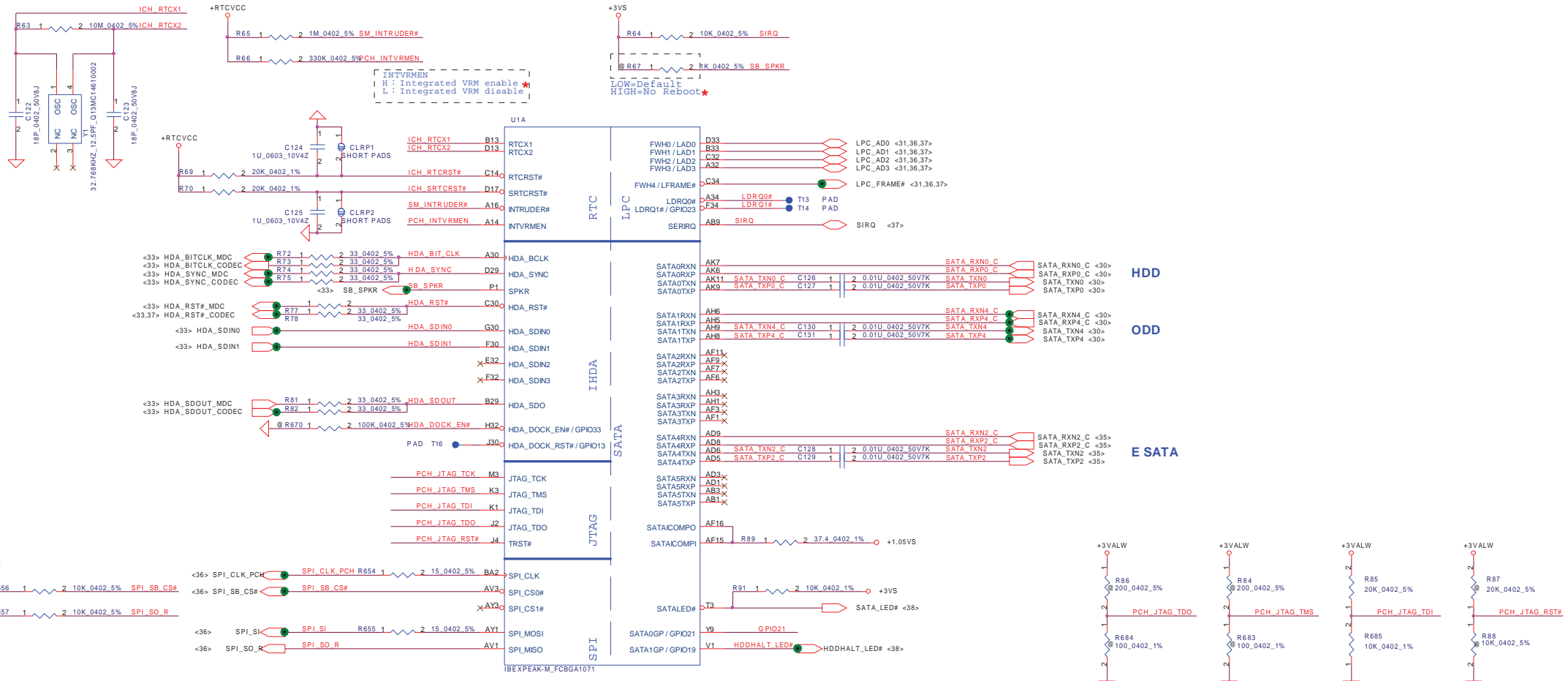
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT TO OTHER DIVISIONS WITHOUT THE WRITTEN PERMISSION OF THE COMPETENT DIVISION. THIS SHEET IS UNCLASSIFIED AND IS AVAILABLE TO THE PUBLIC THROUGH THE COMPAL WEBSITE.

| Title | | Compal Electronics, Inc. | |
|---------------------|------------------------|--------------------------|---------------------|
| Auburndale(4/5)-PWR | | Size | Document Number |
| | | Custom | Calpella DIS LA473P |
| Date: | Monday, April 13, 2009 | Sheet | 9 of 49 |

<http://laptop-motherboard-schematic.blogspot.com/>



| | | | | |
|--|--------------------|-----------------|------------|---------------------------|
| Security Classification | Compal Secret Data | | Title | |
| Issued Date | 2008/03/13 | Deciphered Date | 2009/05/11 | Compal Electronics, Inc. |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT (ENGINEERING) WITHOUT THE WRITTEN CONSENT OF THE COMPETENT DIVISION OF R&D DEPARTMENT. THIS SHEET OF THE DRAWING CONTAINS INFORMATION THAT IS UNCLASSIFIED AND IS NOT TO BE REPRODUCED OR DISCLOSED TO THE PUBLIC WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | Document Number |
| http://laptop-motherboard-schematic.blogspot.com/ | | | | Auburdale(5/5)-GND/Bypass |
| Date: Monday, April 13, 2009 | | | | Rev 0.1 |
| Sheet 10 of 49 | | | | |



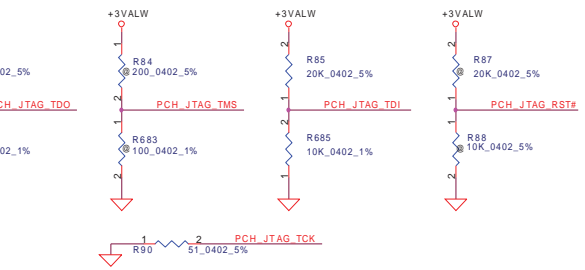
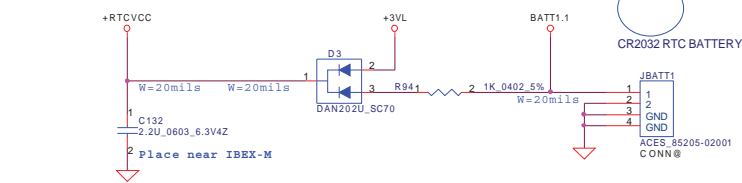
HDA_SYNC
 This signal has a weak internal pull down.
 H=>On Die PLL is supplied by 1.5V
 * L=>On Die PLL is supplied by 1.5V

HDA_SDO
 This signal has a weak internal pull down.
 This signal can't PU
 * Disable iTPM=No Stuff
 Enable iTPM=Stuff

HDA_DOCK_EN#
 ME debug mode, this signal has a weak internal PU
 * H=>security measures defined in the Flash Descriptor will be in effect (default)
 L=>Flash Descriptor Security will be overridden

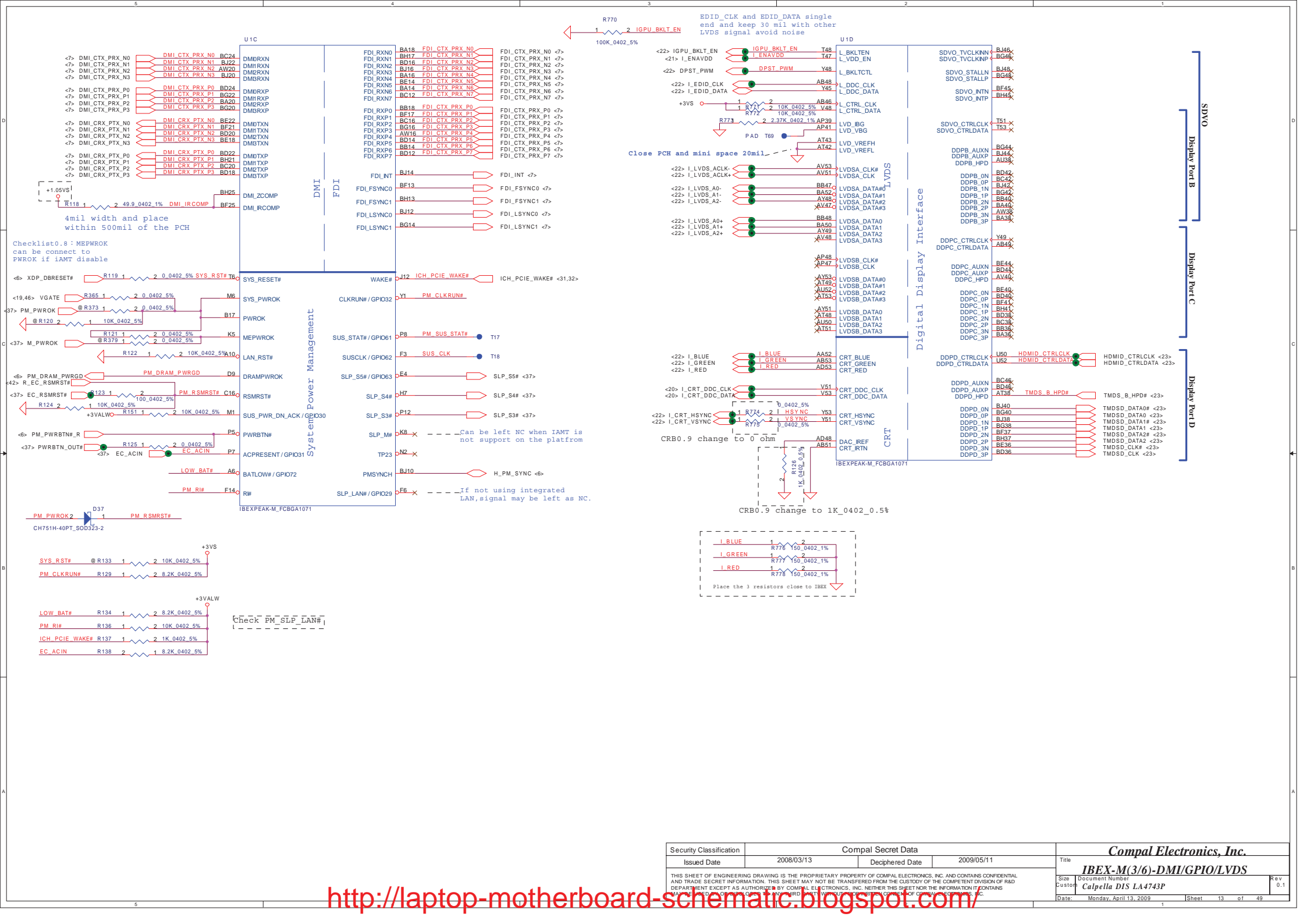
SPI_MOSI
 This signal has a weak internal pull down.
 * Disable iTPM=No Stuff
 Enable iTPM=Stuff

iTPM ENABLE/DISABLE
 * Place near IBEX-M



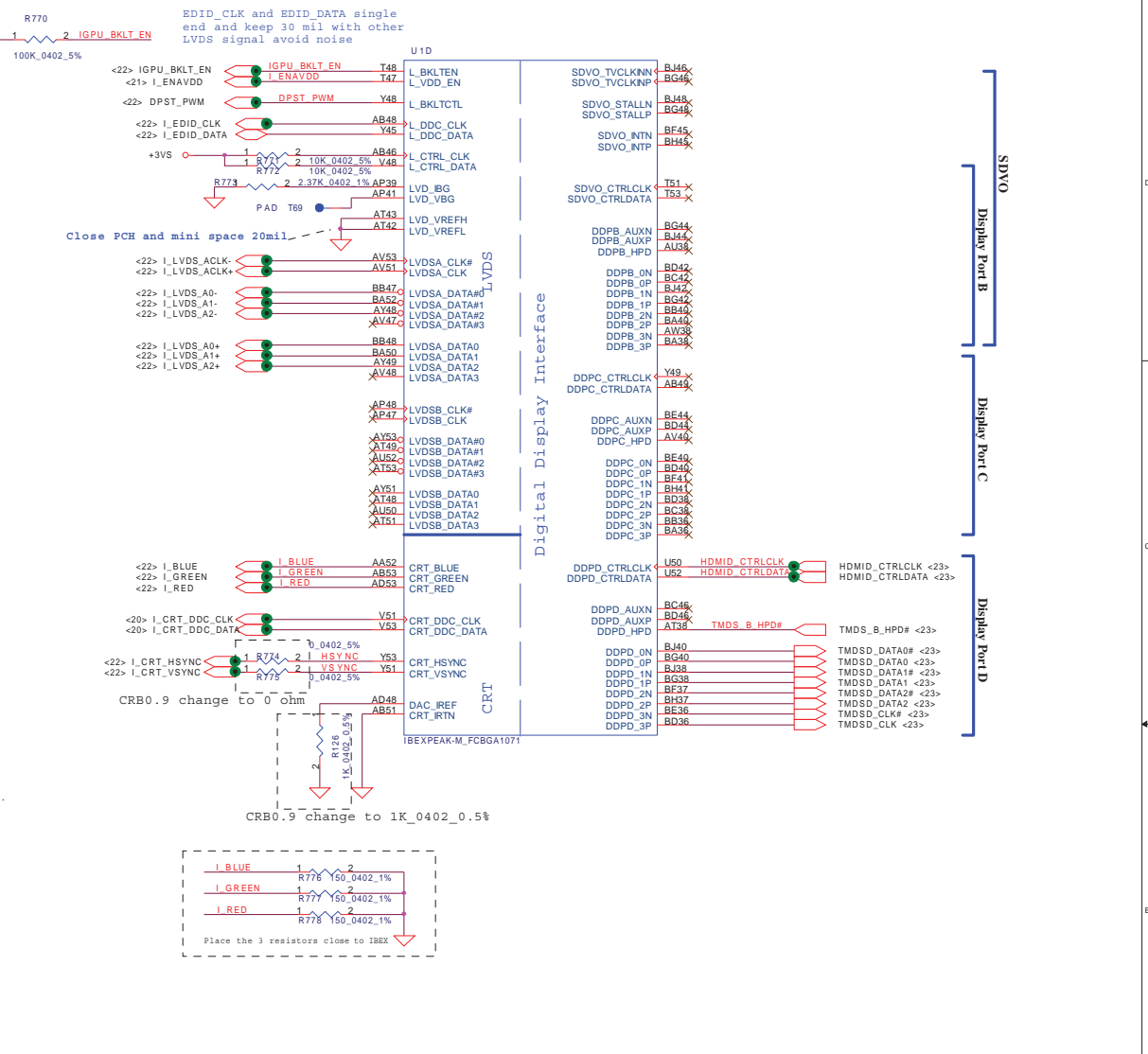
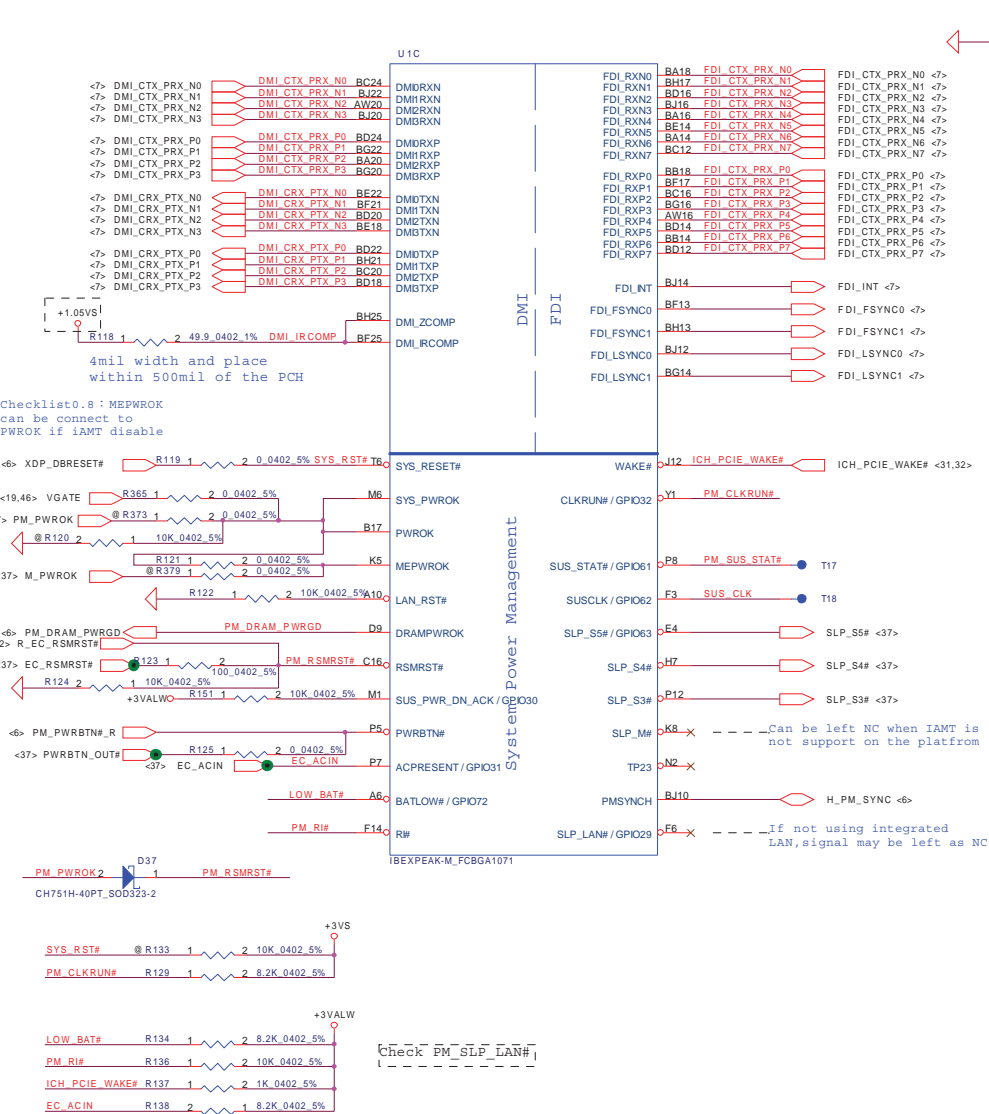
| PCH Pin | RefDes | PCH JTAG | | | |
|---------------|--------|------------|--------|------------|------------|
| | | Enable | ES2 | ES1 | Disable |
| PCH_JTAG_TDO | R86 | No Install | 200ohm | No Install | No Install |
| | R84 | No Install | 100ohm | No Install | No Install |
| PCH_JTAG_TMS | R84 | 200ohm | 200ohm | No Install | No Install |
| | R83 | 100ohm | 100ohm | No Install | No Install |
| PCH_JTAG_TDI | R85 | 200ohm | 200ohm | 20Kohm | No Install |
| | R85 | 100ohm | 100ohm | 10Kohm | No Install |
| PCH_JTAG_TCK | R90 | 51ohm | 51ohm | 51ohm | 51ohm |
| | R87 | 20Kohm | 20Kohm | No Install | No Install |
| PCH_JTAG_RST# | R87 | 20Kohm | 20Kohm | No Install | No Install |
| | R88 | 10Kohm | 10Kohm | No Install | No Install |

| | | | | | |
|---|------------------------|-----------------|------------|---------------------------------|-----|
| Security Classification | Compal Secret Data | | Title | Compal Electronics, Inc. | |
| Issued Date | 2008/03/13 | Deciphered Date | 2009/05/11 | IBEX-M(1/6)-HDA/JTAG/SATA | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | Docu | Document Number | Rev |
| | | | Sub | Caipela DIS LA4743P | 0.1 |
| Date: | Monday, April 13, 2009 | Sheet | 11 | of | 49 |

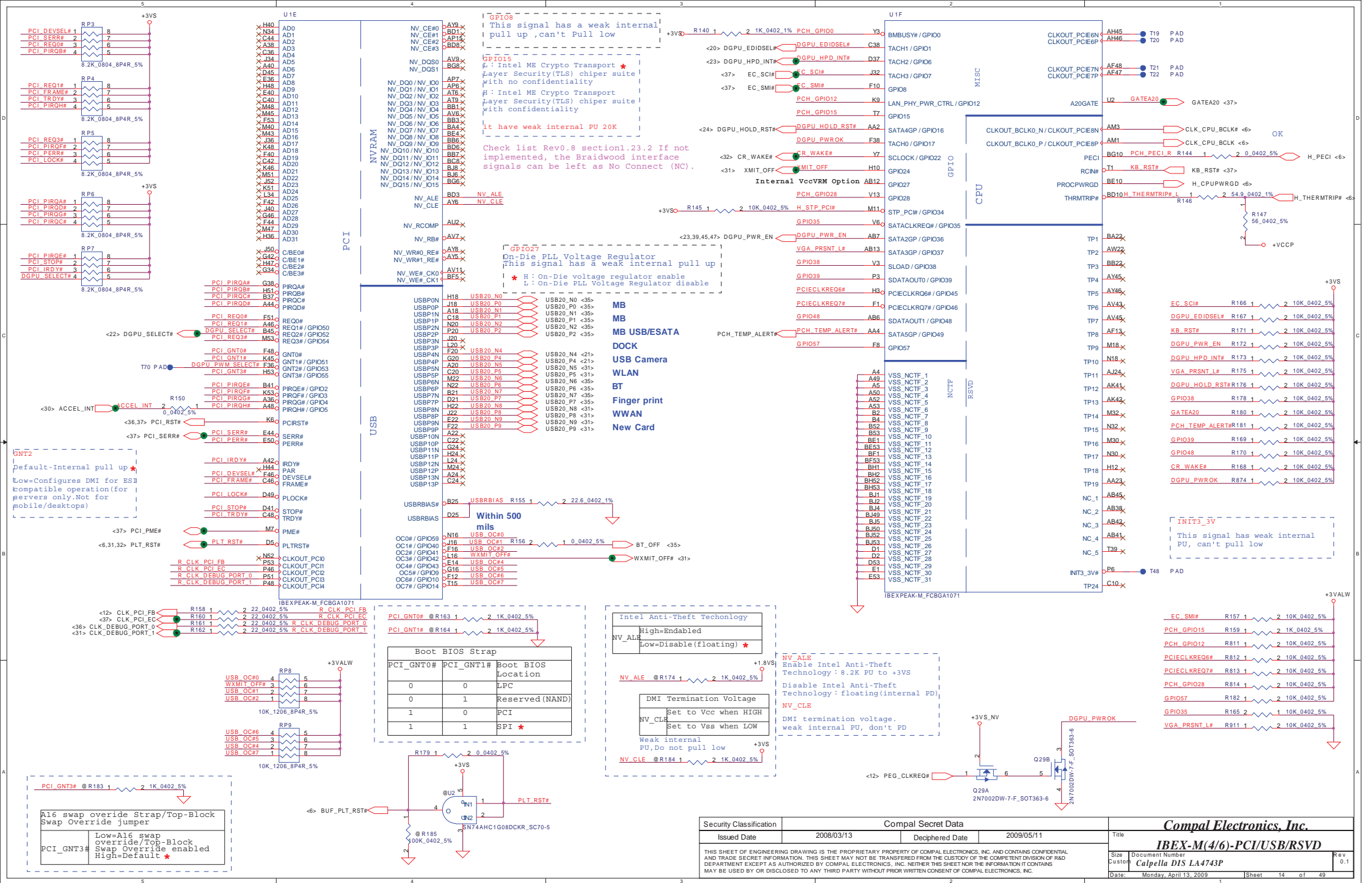


R770
100K_0402_5%

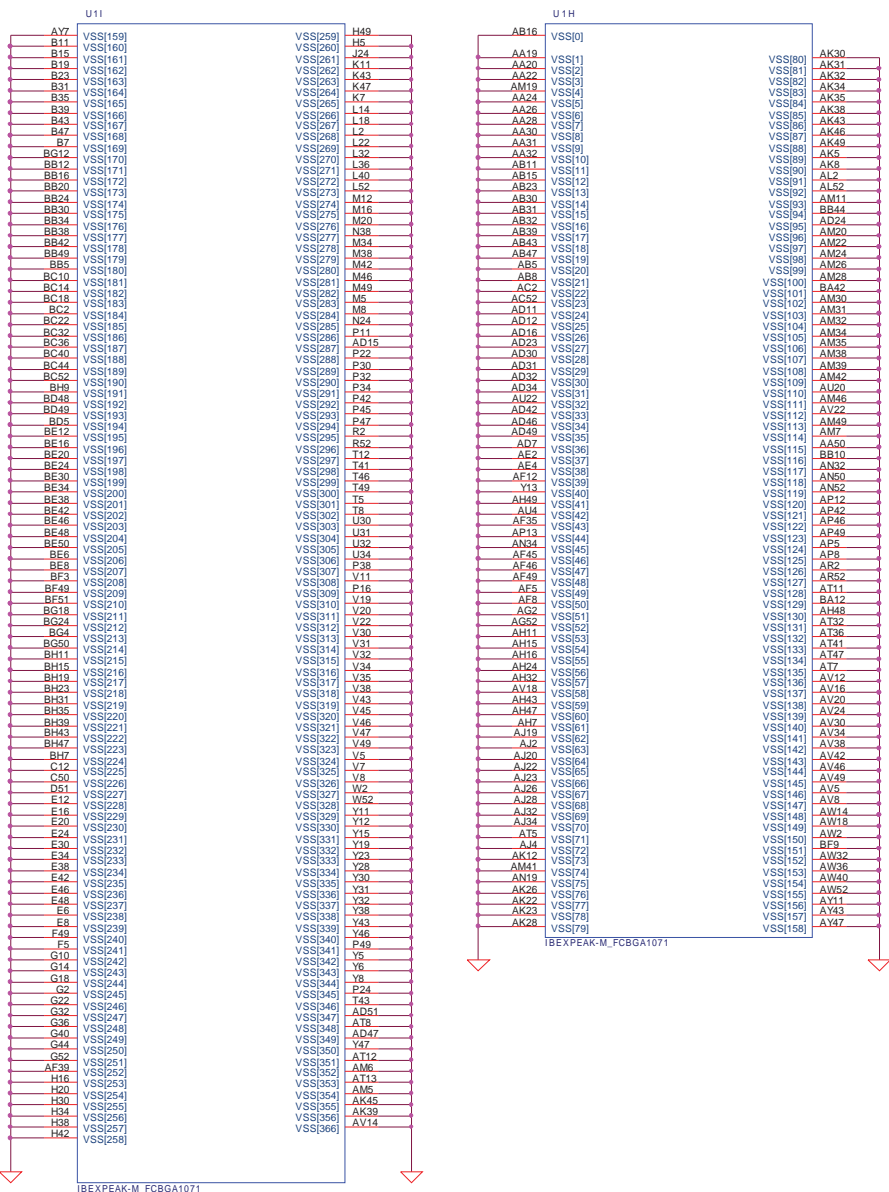
EDID_CLK and EDID_DATA single end and keep 30 mil with other LVDS signal avoid noise



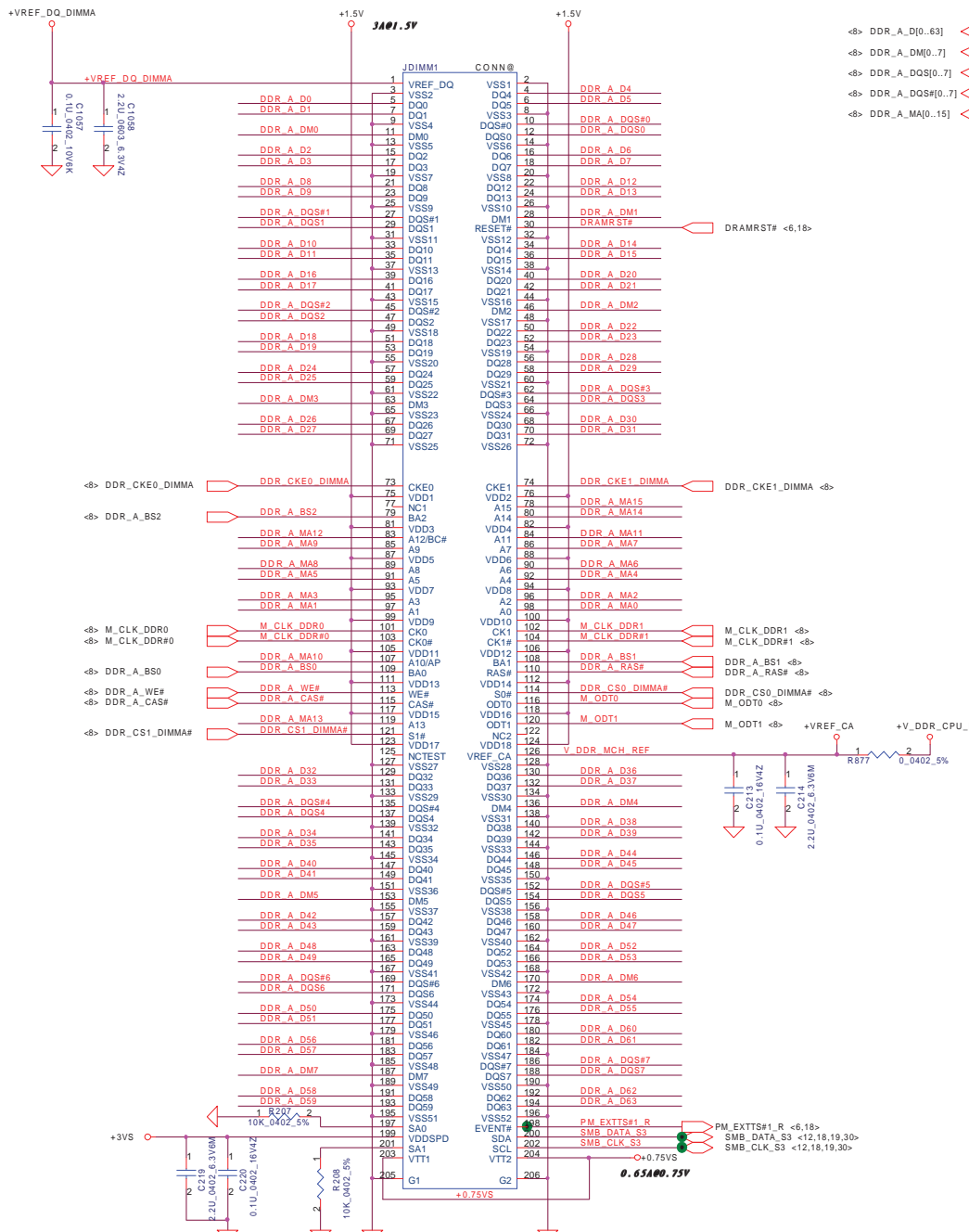
| | | | | | |
|--|------------------------|-----------------|----------------------|---------------------------------|----|
| Security Classification | Compal Secret Data | | Title | Compal Electronics, Inc. | |
| Issued Date | 2008/03/13 | Deciphered Date | 2009/05/11 | IBEX-M(3/6)-DMI/GPIO/LVDS | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS SHALL BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. | | | Site Document Number | Rev 0.1 | |
| | | | Customer | Caipella DIS LA4743P | |
| Date: | Monday, April 13, 2009 | Sheet | 13 | of | 49 |



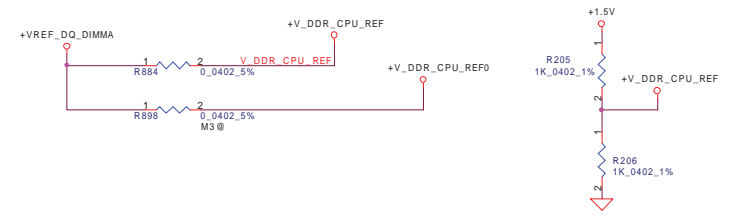
| | | | |
|---|------------------------|--------------------------|------------|
| Security Classification | Compal Secret Data | | Title |
| Issued Date | 2008/03/13 | Deciphered Date | 2009/05/11 |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | |
| Site | Document Number | IBEX-M(4/6)-PCI/USB/RSVD | |
| Custor | Customer | Calpella DIS LA473P | |
| Date: | Monday, April 13, 2009 | Sheet | 14 of 49 |



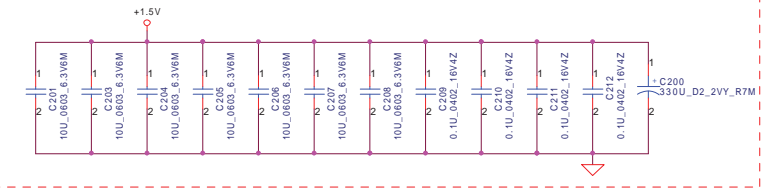
| | | | |
|---|------------------------|-----------------|---------------------------------|
| Security Classification | Compal Secret Data | | Title IBEX-M(6/6)-GND |
| Issued Date | 2008/03/13 | Deciphered Date | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | Rev 0.1 |
| Date: | Monday, April 13, 2009 | Sheet | 16 of 49 |



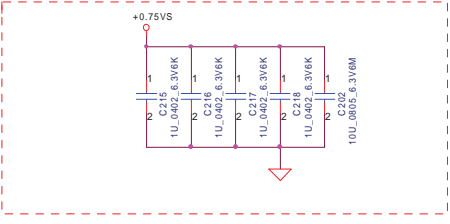
- <-> DDR_A_D[0..63]
- <-> DDR_A_DM[0..7]
- <-> DDR_A_DS[0..7]
- <-> DDR_A_DS#[0..7]
- <-> DDR_A_MA[0..15]



Layout Note:
Place near JP4



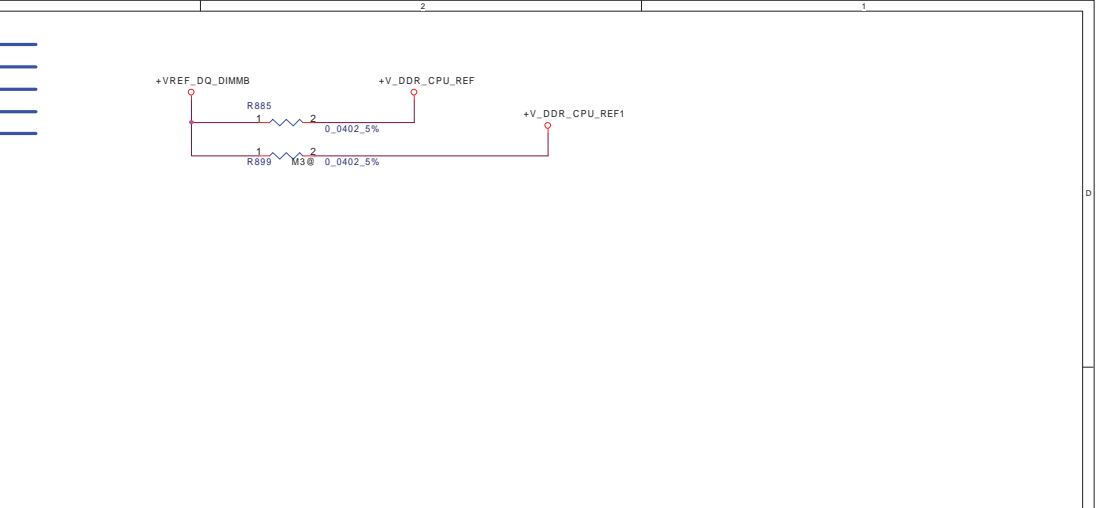
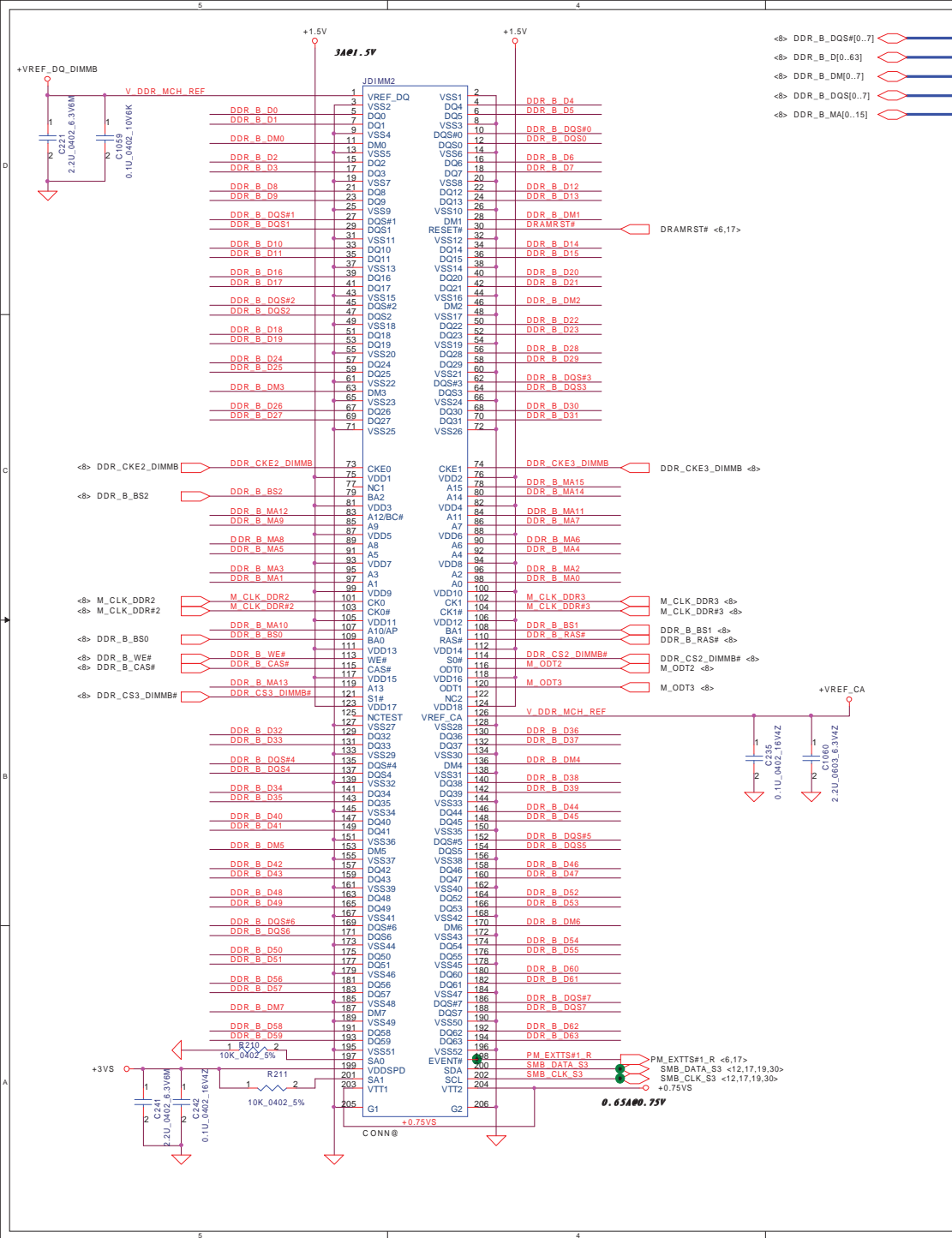
Layout Note:
Place near JP4.203 & JP4.204



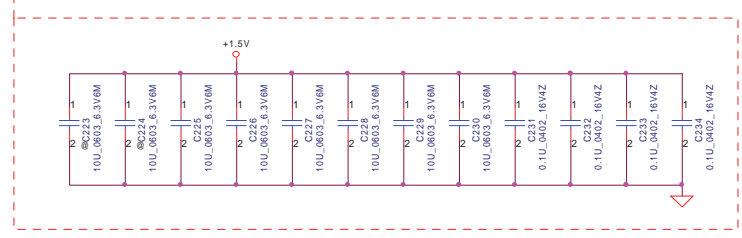
DDR3 SO-DIMM A

REVERSE

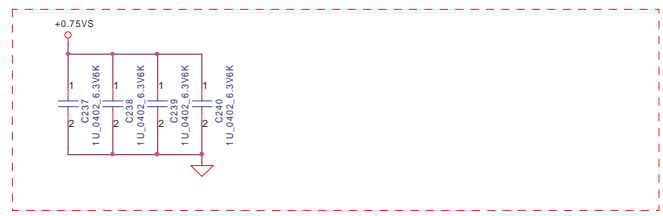
| | | | |
|---|----------------------|-----------------|---|
| Security Classification | Compal Secret Data | | Title Compal Electronics, Inc. DDR3H-SODIMM SLOT1 |
| Issued Date | 2008/03/13 | Deciphered Date | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | Rev 0.1 |
| Site | Document Number | Customer | Date |
| | Calpella DIS LA4743P | | Monday, April 13, 2009 |
| Sheet | 17 | of | 49 |



Layout Note:
Place near JP5

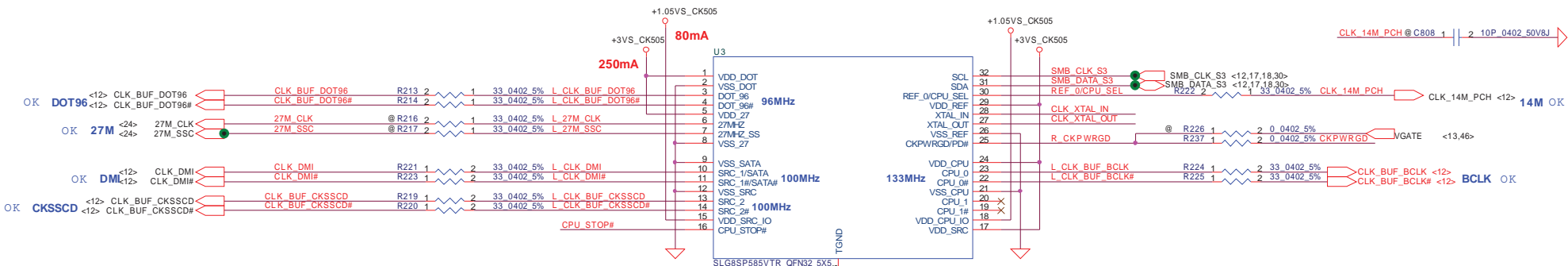


Layout Note:
Place near JP5.203 & JP5.204



DDR3 SO-DIMM B REVERSE

| | | | | |
|---|------------------------|-----------------|------------|--------------------------|
| Security Classification | Compal Secret Data | | Title | |
| Issued Date | 2008/03/13 | Deciphered Date | 2009/05/11 | Compal Electronics, Inc. |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | Document Number |
| | | | | DDR3-SODIMM SLOT2 |
| | | | | Calpella DIS LA4743P |
| Date: | Monday, April 13, 2009 | Sheet | 18 of 49 | Rev 0.1 |

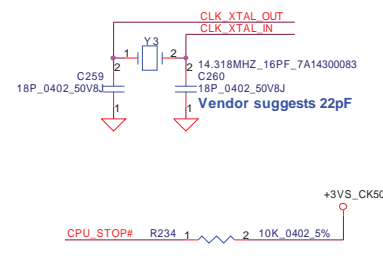
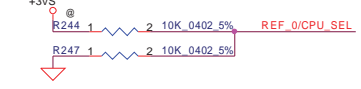


Number of Clock Outputs

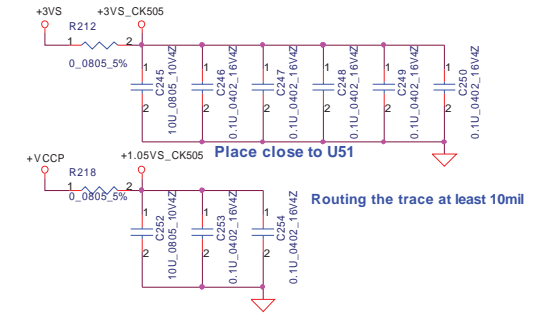
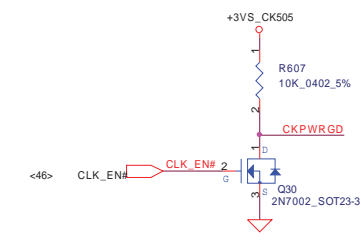
| Output | Number |
|-------------------|--------|
| 133MHz | 2 |
| SRC (100MHz_SS) | 1 |
| SRC/SATA (100MHz) | 1 |
| REF (14.318MHz) | 1 |
| DOT_CLK (96MHz) | 1 |
| 27MHz | 1 |
| 27MHz_SS | 1 |

| PIN 30 | CPU_0 | CPU_1 |
|-------------|--------|--------|
| 0 (default) | 133MHz | 133MHz |
| 1 | 100MHz | 100MHz |

CPU_SEL During CK_PEWGD Latch Pin1

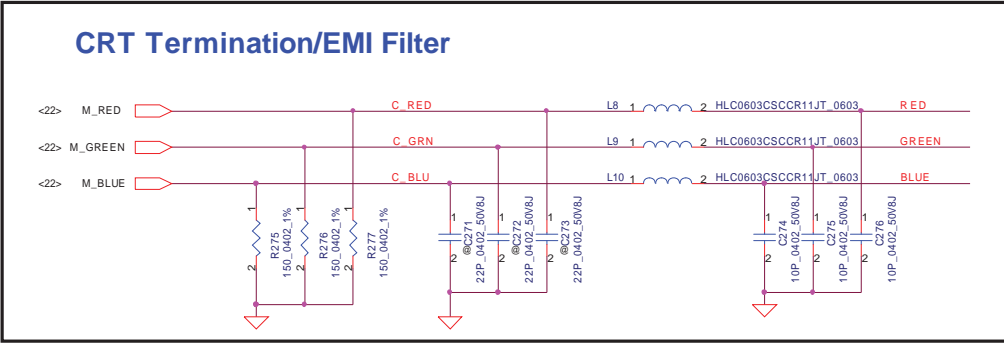
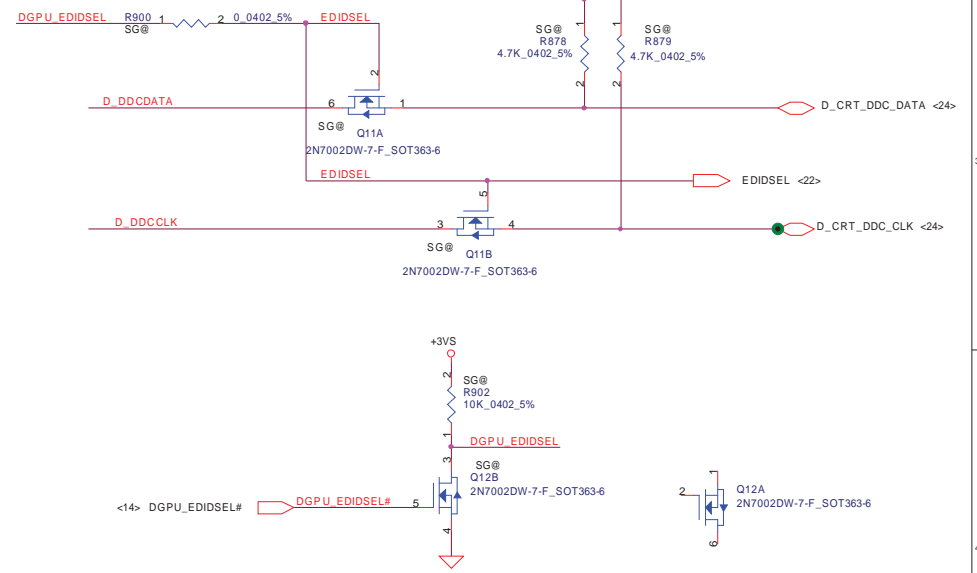
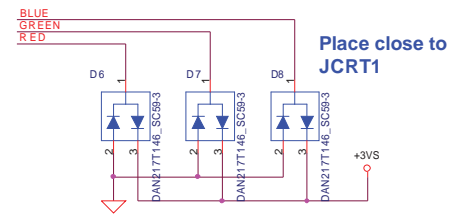
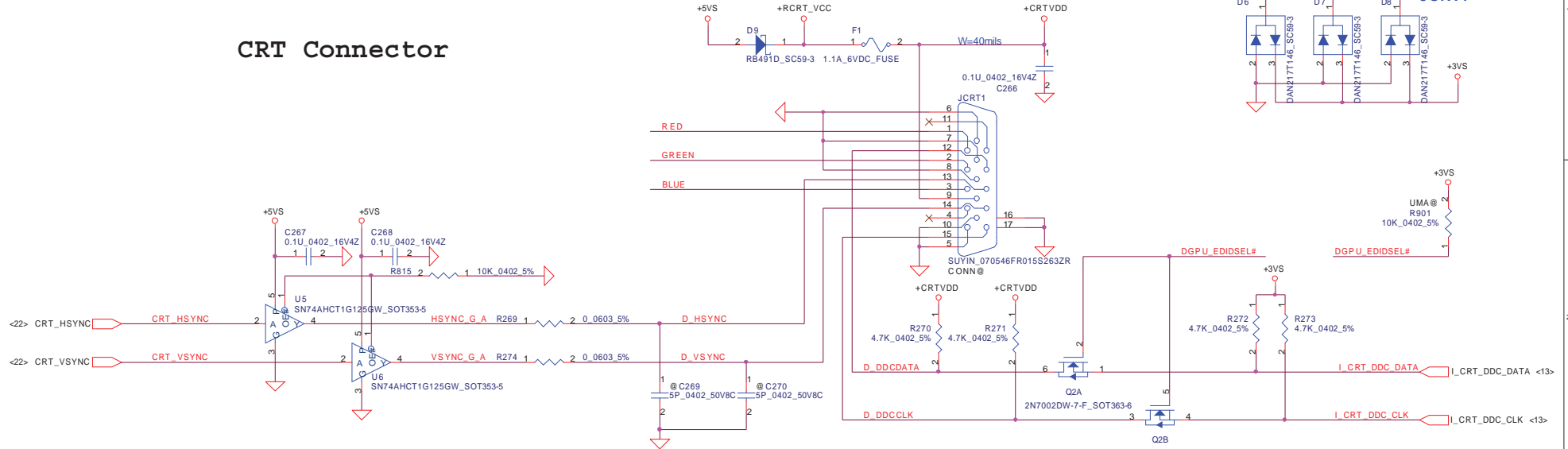


SLG8SP585 : pin8 is GND (for DELL · HP)
 SLG8SP587 : pin8 is 48MHz (For ABO or 030)



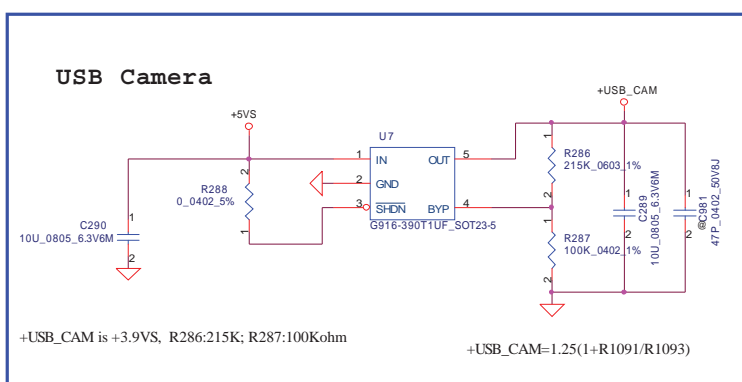
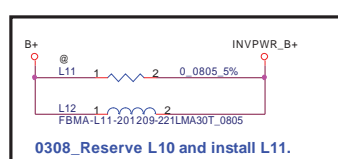
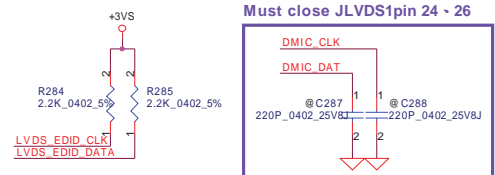
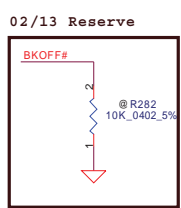
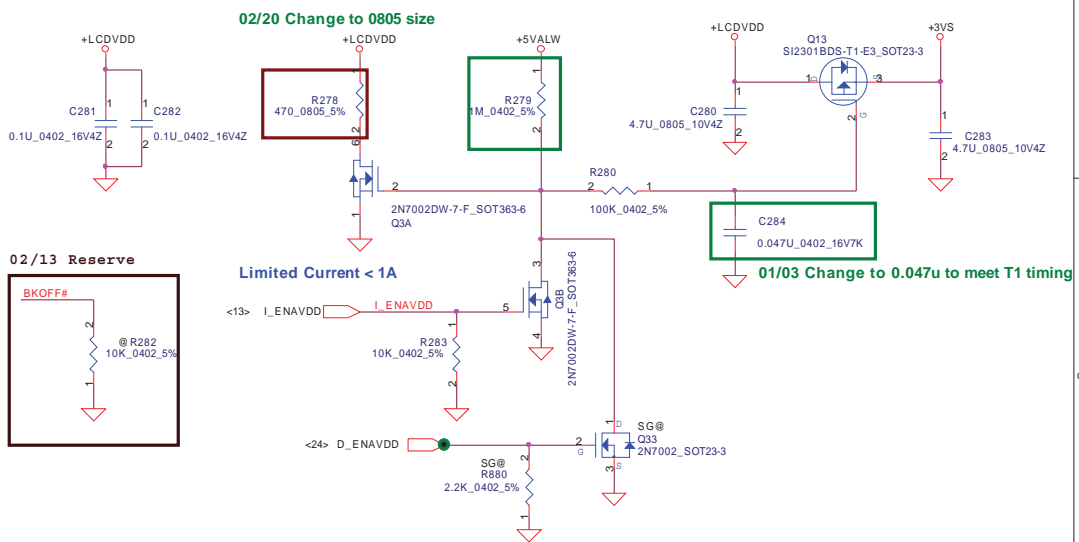
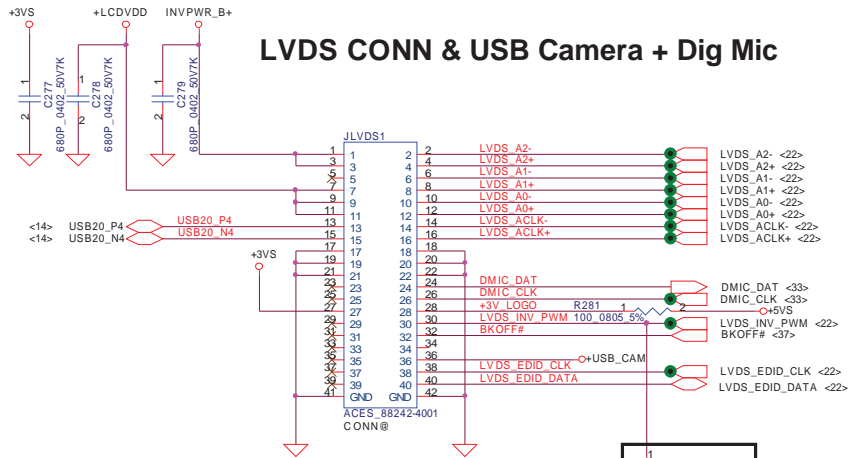
| | | | | | |
|--|------------|--------------------|------------|--------------------------|------------------------|
| Security Classification | | Compal Secret Data | | Compal Electronics, Inc. | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/03/10 | Title | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED, REPRODUCED, COPIED, DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | Size | Document Number |
| | | | | Calpella DIS LA4743P | |
| | | | | Rev | 0.1 |
| | | | | Date: | Monday, April 13, 2009 |
| | | | | Sheet | 19 of 49 |

CRT Connector



| | | | | | |
|--|----------------------|-----------------|------------------------------|---------------------------------|-------|
| Security Classification | Compal Secret Data | | Title | Compal Electronics, Inc. | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/07/26 | CRT Connector | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. ANY REPRODUCTION OR TRANSMISSION OF THIS SHEET WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. IS PROHIBITED. | | | | | |
| Size | Document Number | Rev | Date: Monday, April 13, 2009 | | |
| | Calpella DIS LA4743P | 0.1 | Sheet | 20 | of 49 |

<http://laptop-motherboard-schematic.blogspot.com/>

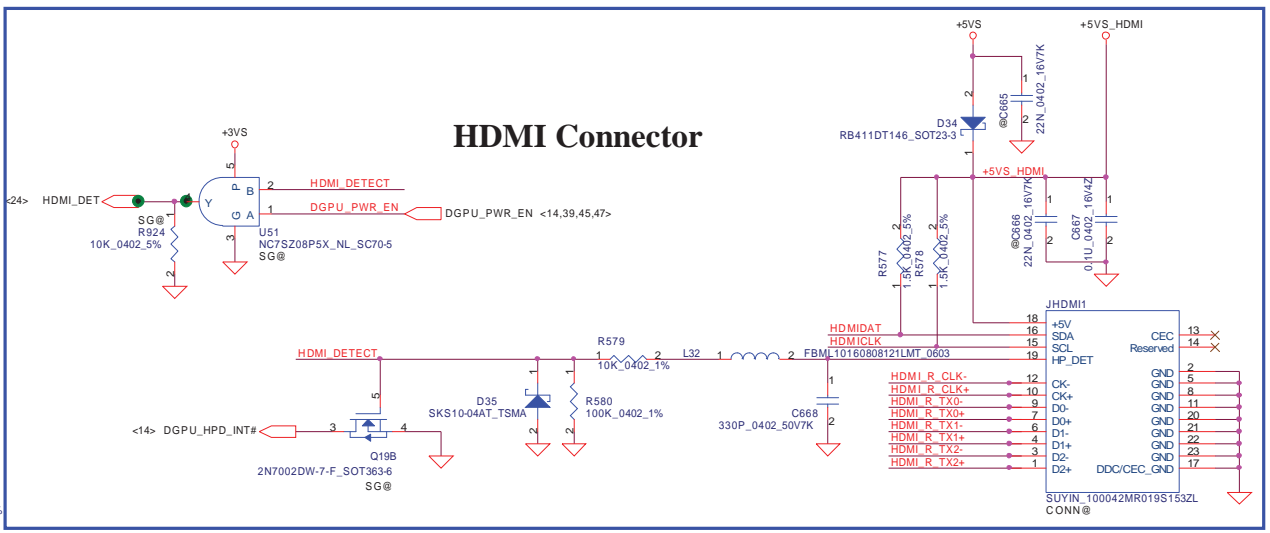
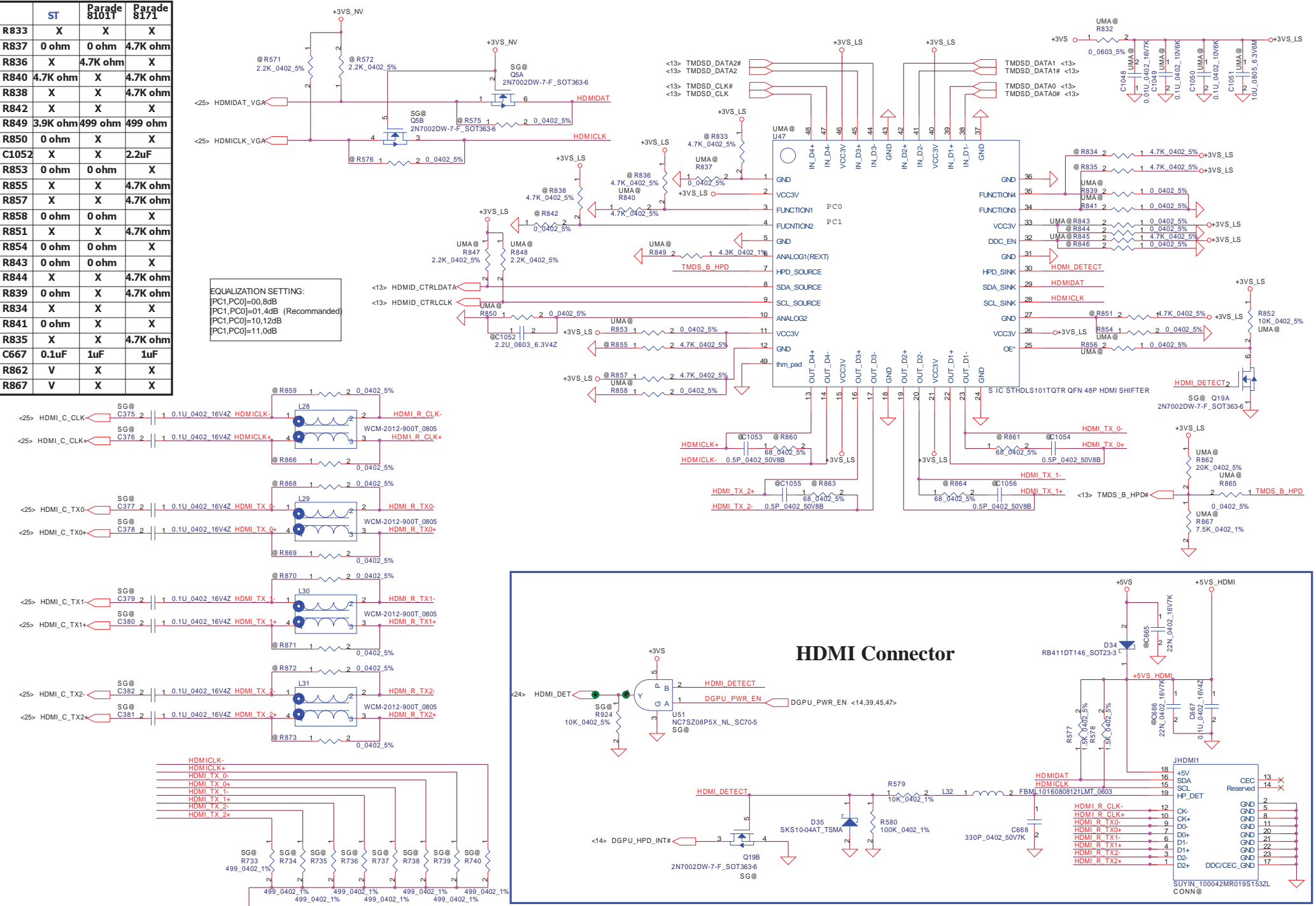


| | | | | | |
|--|--------------------|-----------------|------------|----------------------|------------------------|
| Security Classification | Compal Secret Data | | | Title | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/07/26 | LCD CONN. | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION CONTAINED THEREIN IS TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | Size | Document Number |
| | | | | Calpella DIS LA4743P | |
| | | | | Date: | Monday, April 13, 2009 |
| | | | | Sheet | 21 of 49 |
| | | | | Rev | 0.1 |

<http://laptop-motherboard-schematic.blogspot.com/>

| | ST | Parade 81011 | Parade 8171 |
|-------|----------|--------------|-------------|
| R833 | X | X | X |
| R837 | 0 ohm | 0 ohm | 4.7K ohm |
| R836 | X | 4.7K ohm | X |
| R840 | 4.7K ohm | X | 4.7K ohm |
| R838 | X | X | 4.7K ohm |
| R842 | X | X | X |
| R849 | 3.9K ohm | 499 ohm | 499 ohm |
| R850 | 0 ohm | X | X |
| C1052 | X | X | 2.2uF |
| R853 | 0 ohm | 0 ohm | X |
| R855 | X | X | 4.7K ohm |
| R857 | X | X | 4.7K ohm |
| R858 | 0 ohm | 0 ohm | X |
| R851 | X | X | 4.7K ohm |
| R854 | 0 ohm | 0 ohm | X |
| R843 | 0 ohm | 0 ohm | X |
| R844 | X | X | 4.7K ohm |
| R839 | 0 ohm | X | 4.7K ohm |
| R834 | X | X | X |
| R841 | 0 ohm | X | X |
| R835 | X | X | 4.7K ohm |
| C667 | 0.1uF | 1uF | 1uF |
| R862 | V | X | X |
| R867 | V | X | X |

EQUALIZATION SETTING:
 [PC1,PC0]=00,8dB
 [PC1,PC0]=01,4dB (Recommended)
 [PC1,PC0]=10,12dB
 [PC1,PC0]=11,0dB

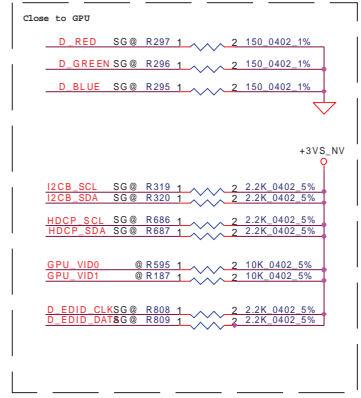
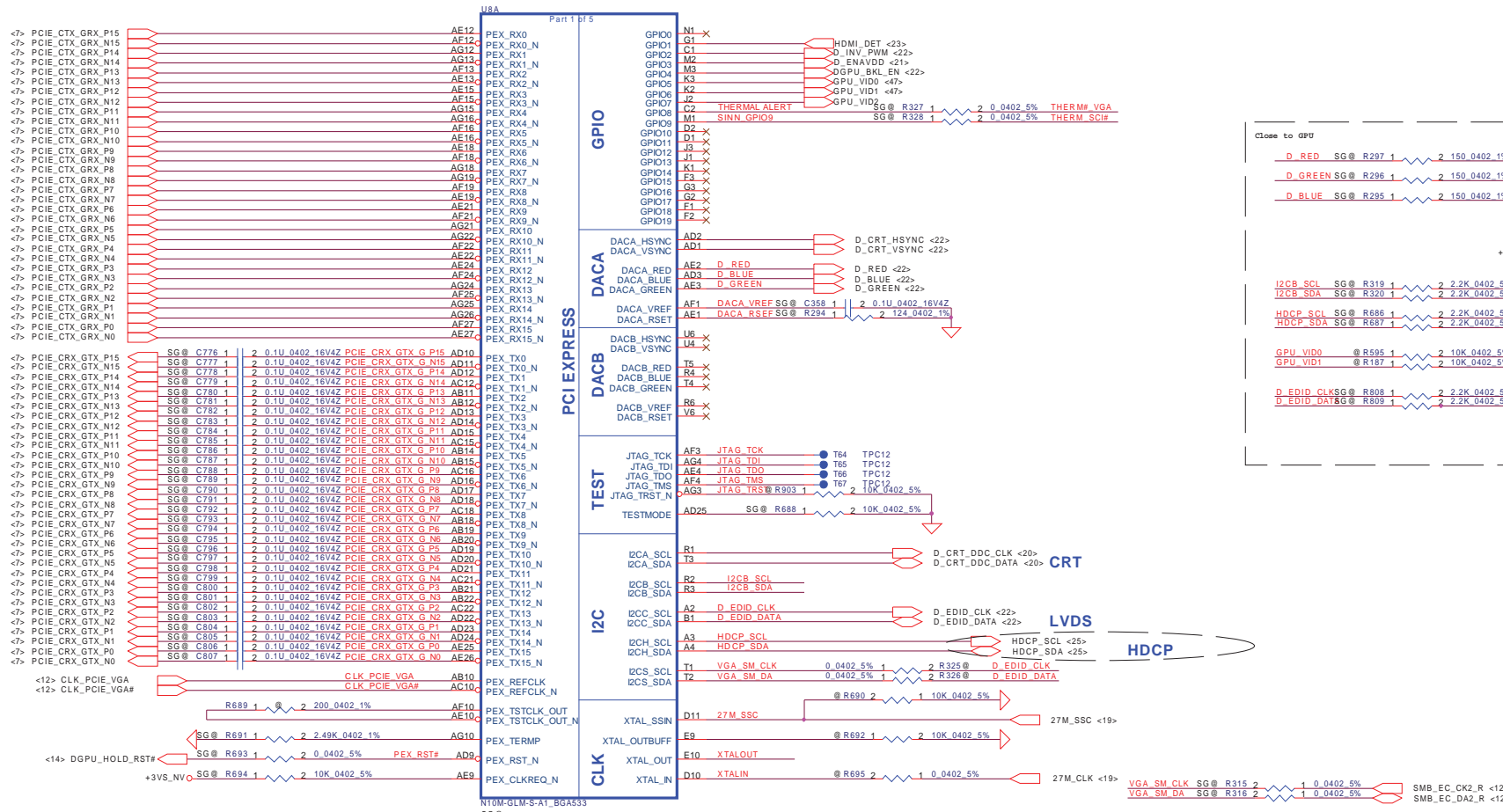


| Security Classification | Compal Secret Data | |
|-------------------------|--------------------|-----------------|
| Issued Date | 2007/08/28 | Deciphered Date |
| | | 2006/03/10 |

Title: **Compal Electronics, Inc.**
HDMI LS & Conn.

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT THE WRITTEN PERMISSION OF THE COMPETENT DIVISIONS. ANY UNAUTHORIZED REPRODUCTION OR DISSEMINATION OF THIS SHEET OF ENGINEERING DRAWING IS STRICTLY PROHIBITED. ANY UNAUTHORIZED USE OR REPRODUCTION OF THIS SHEET OF ENGINEERING DRAWING WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. IS PROHIBITED.

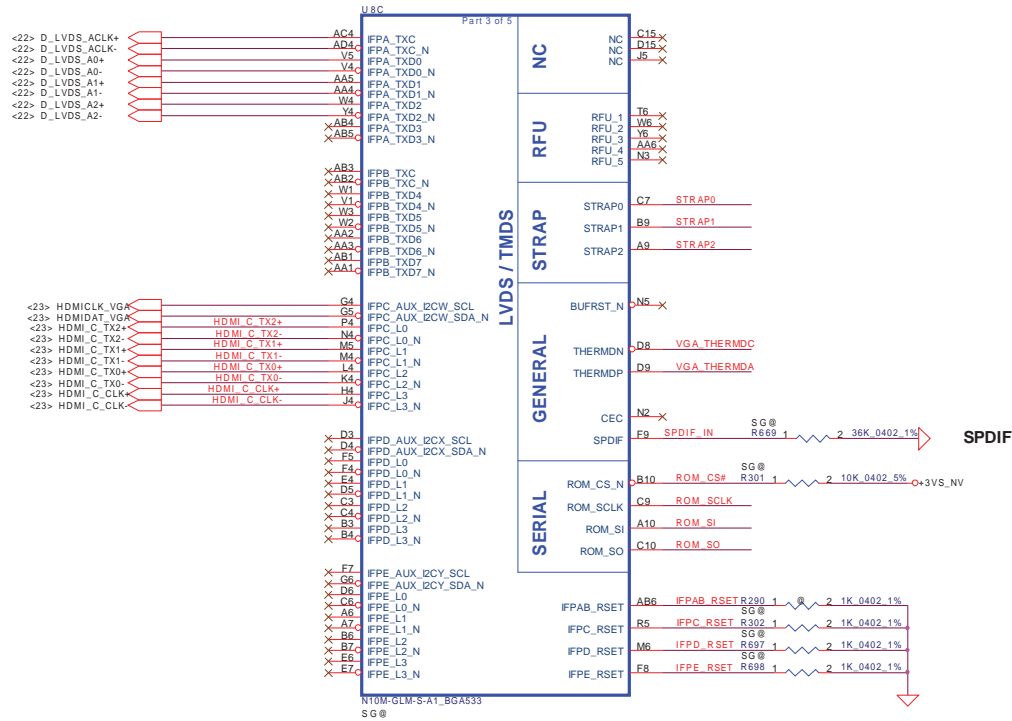
| | | |
|--------|------------------------|----------------|
| Size | Document Number | Rev |
| Custom | Calpella DIS LA473P | 0.1 |
| Date: | Monday, April 13, 2009 | Sheet 23 of 49 |



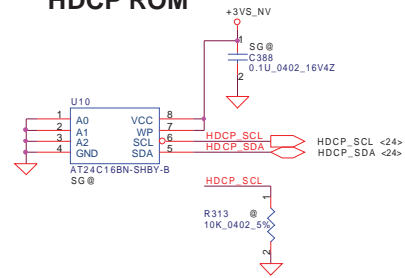
| GPIO | I/O | ACTIVE | USAGE |
|--------|-----|--------|-------------------------|
| GPIO0 | IN | N/A | HPD-C (used for IFPC) |
| GPIO1 | IN | N/A | 2nd DVI Hot-plug |
| GPIO2 | OUT | H | Panel Back-Light PWM |
| GPIO3 | OUT | H | Panel Power Enable |
| GPIO4 | OUT | H | Panel Back-Light Enable |
| GPIO5 | OUT | N/A | NVDD VID0 |
| GPIO6 | OUT | N/A | NVDD VID1 |
| GPIO7 | OUT | N/A | NVDD VID2 |
| GPIO8 | IN | L | OVERT |
| GPIO9 | OUT | L | Thermal Alert |
| GPIO10 | OUT | N/A | MEM_VREF |
| GPIO11 | OUT | L | SLI SYNCO |
| GPIO12 | IN | N/A | AC Detect |
| GPIO13 | OUT | L | MEM_VID |
| GPIO14 | OUT | H | PS Control |
| GPIO15 | IN | N/A | HPD-E (used for IFPE) |
| GPIO16 | OUT | N/A | FAN PWM Control |
| GPIO17 | | N/A | |
| GPIO18 | | N/A | |
| GPIO19 | IN | N/A | HPD-D (used for IFPD) |

| | | | | | | |
|---|----------------------|-----------------|---|---------------|--------------------------|--|
| Security Classification | Compal Secret Data | | Title | | Compal Electronics, Inc. | |
| Issued Date | 2008/09/15 | Deciphered Date | 2009/12/31 | PEG Interface | | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS SHALL BE DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. | | | | | | |
| Size | Document Number | Rev | Date: Monday, April 13, 2009 5:24:00 AM | | | |
| Custom | Calpella DIS LA4743P | 0.1 | Sheet 24 of 49 | | | |

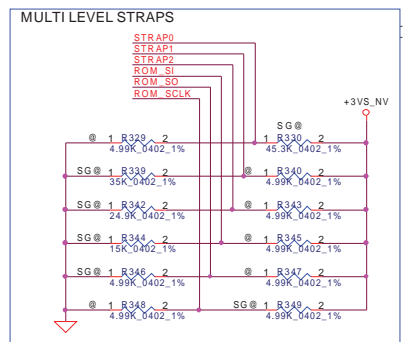
LVDS Interface



HDCCP ROM

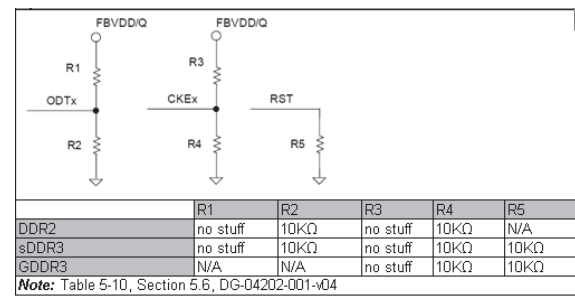
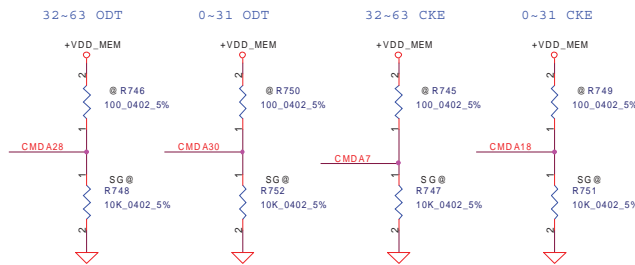
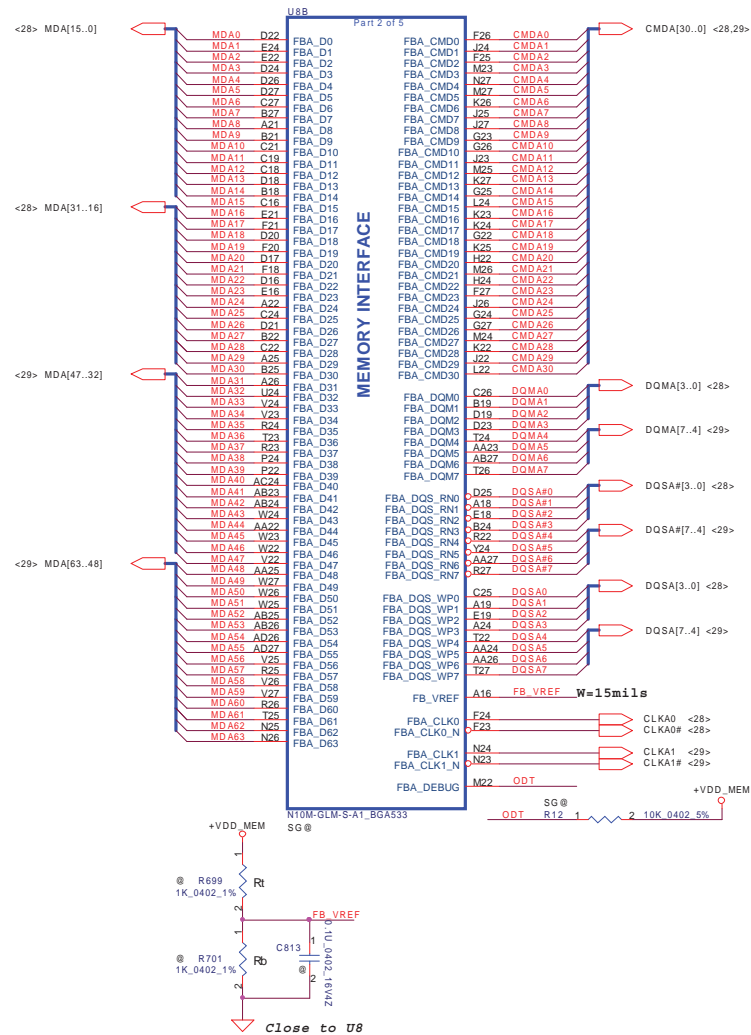


Straps

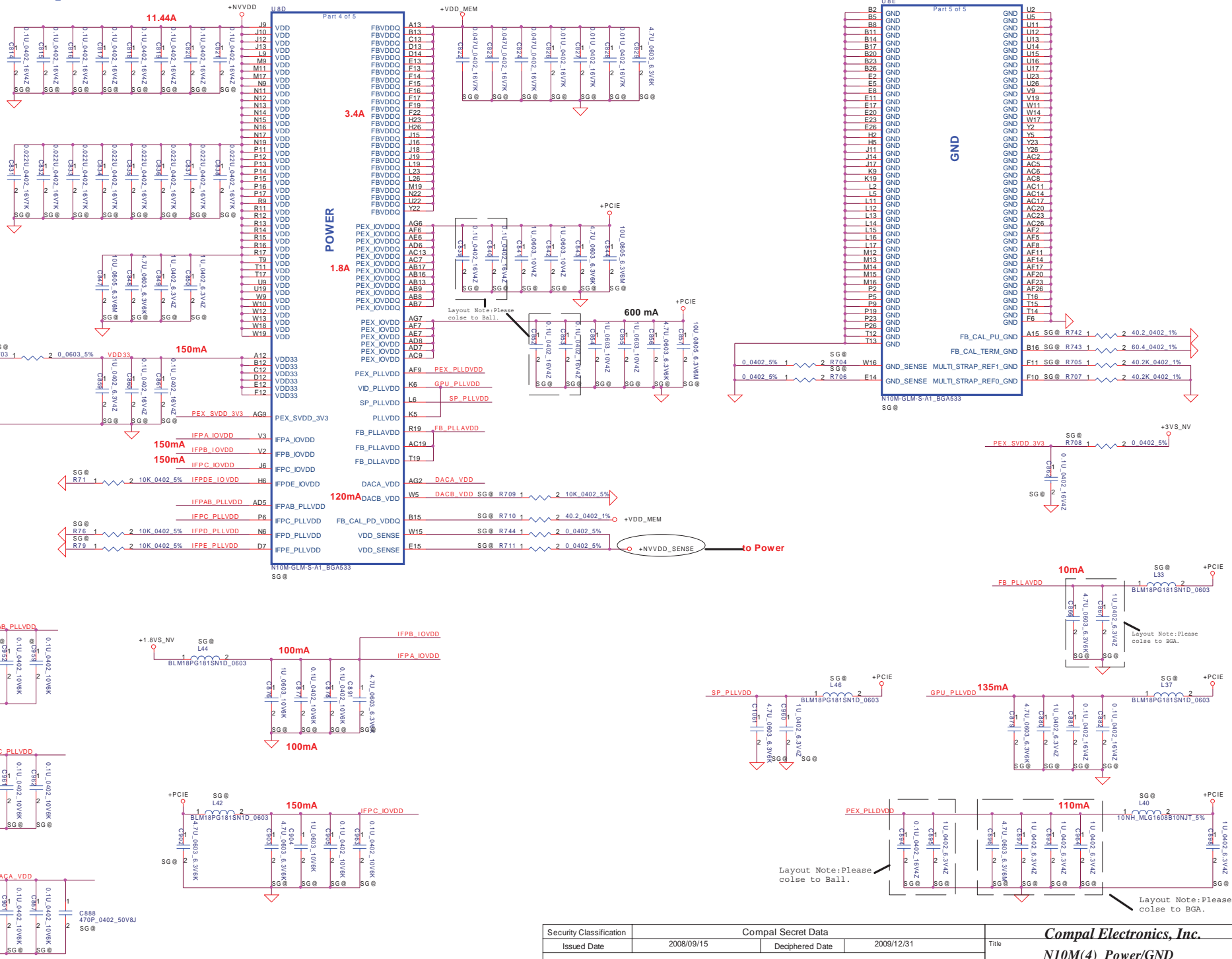


FB HW Strap for DDR3: (RAM_CFG @ROM_SI)
 Hynix 64Mx16: 0000 (R344 pull-down 15K)
 Samsung 64Mx16: 0001 (R344 pull-down 20K)

| | | | | |
|---|--------------------|-----------------|------------|---|
| Security Classification | Compal Secret Data | | Title | |
| Issued Date | 2008/09/15 | Deciphered Date | 2009/12/31 | N10M(2) LVDS&DP&HDCCP |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. | | | | Rev 0.1 |
| Customer: Calpella DIS LA4743P | | | | Date: Monday, April 13, 2009 5 Sheet 25 of 49 |



| | | | |
|--|------------------------|-----------------|------------|
| Security Classification | Compal Secret Data | | |
| Issued Date | 2008/09/15 | Deciphered Date | 2009/12/31 |
| Title: Compal Electronics, Inc. N10M(3) VGA RAM Interface | | | |
| Size | Document Number | Rev | |
| Custom | Calpella DIS LA4743P | 0.1 | |
| Date: | Monday, April 13, 2009 | Sheet | 26 of 49 |



0.022u X 9
 0.01u X 3
 0.1u X 8
 4.7u X 1
 1u (0402) X 1
 1u (0603) X 1
 10u (0805) X 3

| | | |
|-------------------------|--------------------|-----------------|
| Security Classification | Compal Secret Data | |
| Issued Date | 2008/09/15 | Deciphered Date |
| | | 2009/12/31 |

| | |
|--------------------------|---------------------|
| Compal Electronics, Inc. | |
| N10M(4) Power/GND | |
| Title | Customer |
| | Capella DIS LA4743P |
| Date | Rev |
| Monday, April 13, 2009 | 0.1 |

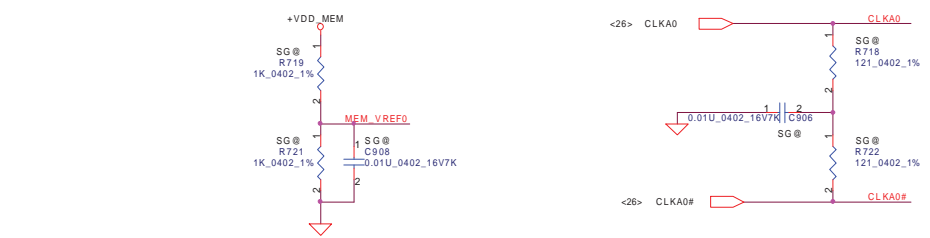
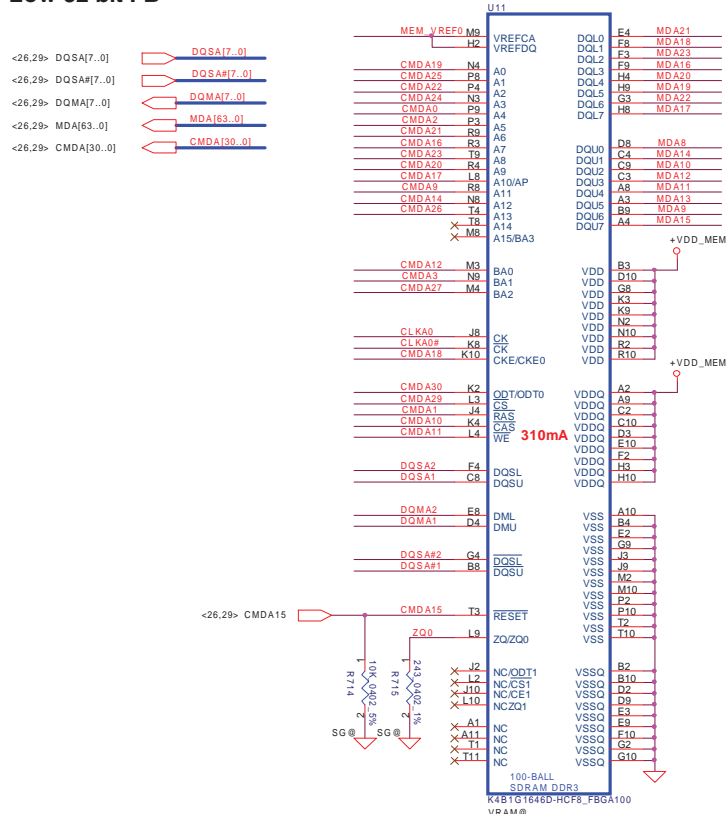
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS IS TO BE RELEASED TO ANY OTHER COMPANY OR INDIVIDUAL WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC.

VRAM DDR3 chips (512MB)

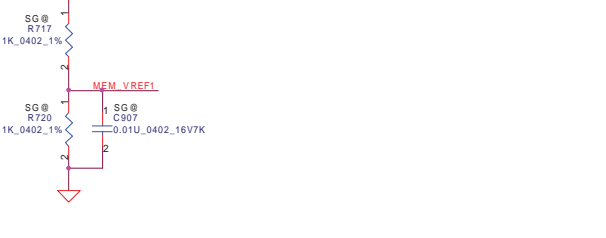
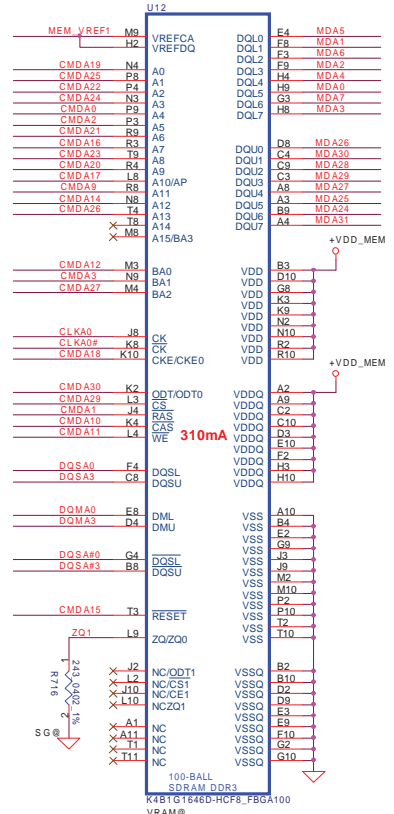
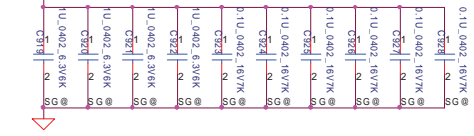
64Mx16 DDR3 700MHz*4==>512MB

Low 32 bit FB

Hynix : H5TQ1G63BFR-12C-->SA000032400
 Samsung : K4W1G1646E-HC12-->SA000035700



DDR3 BGA MEMORY



DDR3 BGA MEMORY



| DATA Bus | | |
|----------|-------|--------|
| Address | 0..31 | 32..63 |
| CMD0 | A4 | |
| CMD1 | RAS# | RAS# |
| CMD2 | A5 | |
| CMD3 | BA1 | BA1 |
| CMD4 | | A2 |
| CMD5 | | A4 |
| CMD6 | | A3 |
| CMD7 | | CKE |
| CMD8 | | CS# |
| CMD9 | A11 | A11 |
| CMD10 | CAS# | CAS# |
| CMD11 | WE# | WE# |
| CMD12 | BA0 | BA0 |
| CMD13 | | A5 |
| CMD14 | A12 | A12 |
| CMD15 | RST | RST |
| CMD16 | A7 | A7 |
| CMD17 | A10 | A10 |
| CMD18 | CKE | |
| CMD19 | A0 | A0 |
| CMD20 | A9 | A9 |
| CMD21 | A6 | A6 |
| CMD22 | A2 | A2 |
| CMD23 | A8 | A8 |
| CMD24 | A3 | A3 |
| CMD25 | A1 | A1 |
| CMD26 | A13 | A13 |
| CMD27 | BA2 | BA2 |
| CMD28 | | ODT |
| CMD29 | CS# | |
| CMD30 | | |

LOW HIGH

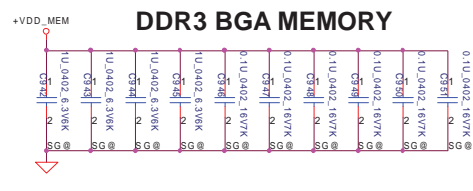
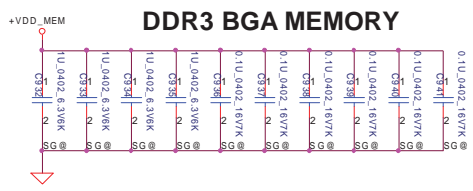
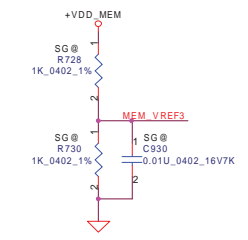
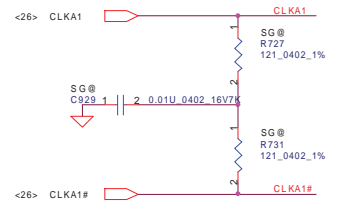
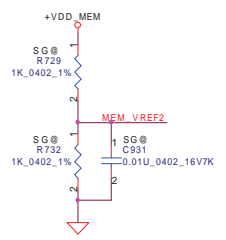
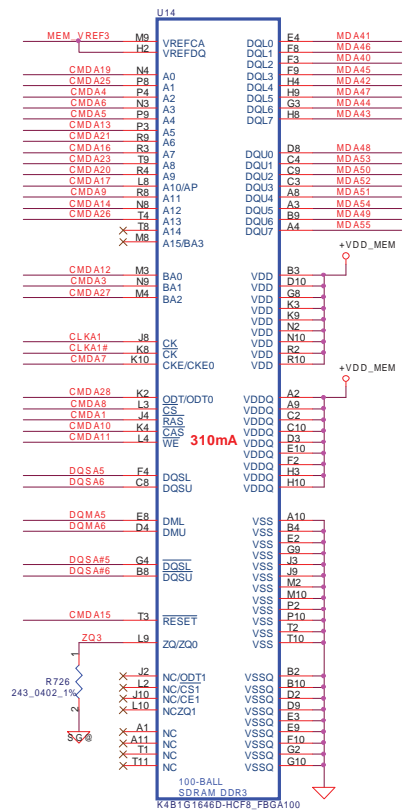
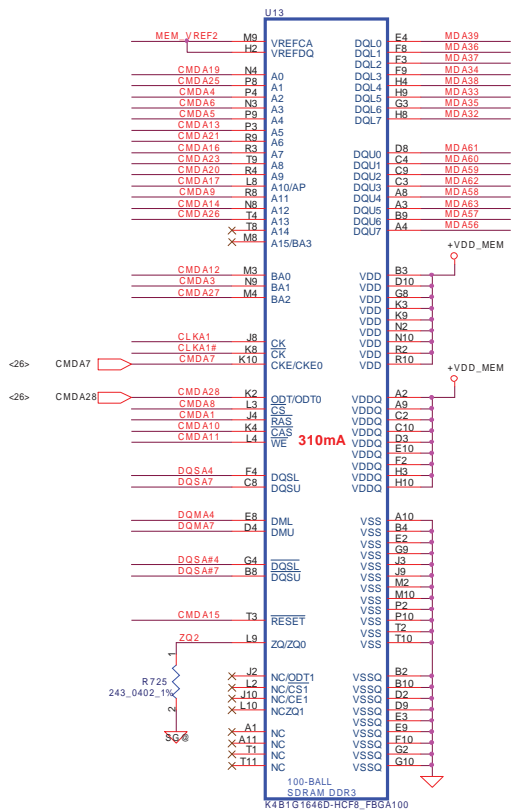
| | | | |
|---|------------------------------------|-----------------|---------------------------|
| Security Classification | Compal Secret Data | | Title VRAM DDR3 |
| Issued Date | 2008/09/15 | Deciphered Date | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. | | | |
| Size | Document Number LA-4901P | Rev 0.1 | |
| Date: | Monday, April 13, 2009 | Sheet 28 | of 49 |

VRAM DDR3 chips (512MB)

64Mx16 DDR3 700MHz*4==>512MB

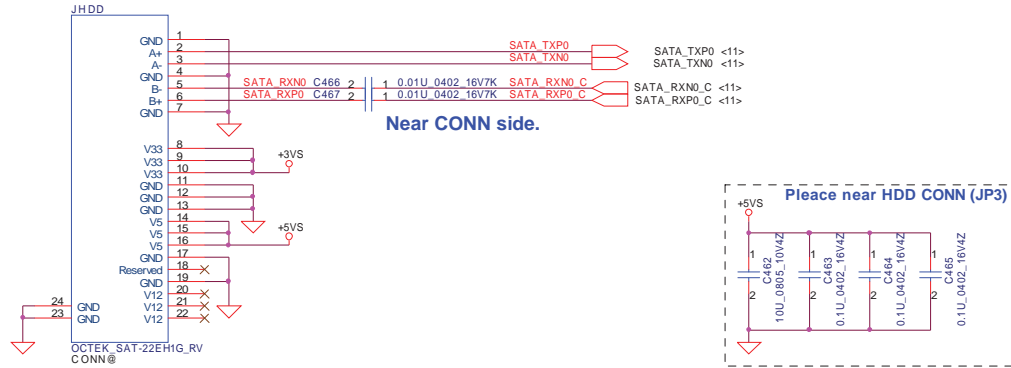
High 32 bit FB

- <26,28> DQSA[7..0] DQSA17..0]
- <26,28> DQSA# [7..0] DQSA#17..0]
- <26,28> DQMA[7..0] DQMA17..0]
- <26,28> MDA[63..0] MDA163..0]
- <26,28> CMDA[30..0] CMDA130..0]

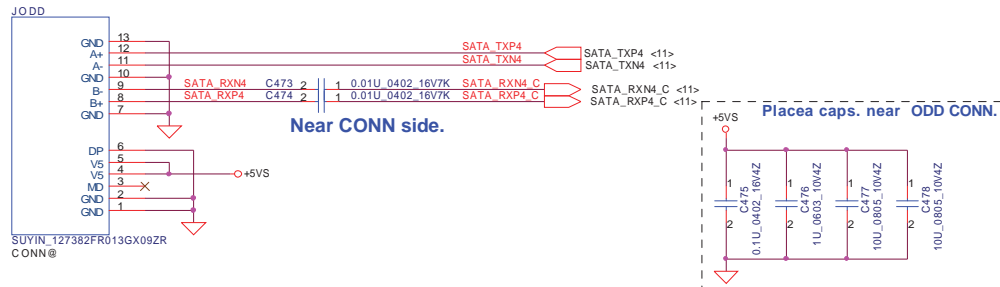


| | | | | | |
|---|--------------------|-----------------|------------|--------------------------|------------------------|
| Security Classification | Compal Secret Data | | Title | Compal Electronics, Inc. | |
| Issued Date | 2008/09/15 | Deciphered Date | 2009/12/31 | VRAM DDR3 | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. | | | | Rev 0.1 | |
| Cartier DIS | | | | Date: | Mondav, April 13, 2009 |
| | | | | Sheet | 29 of 49 |

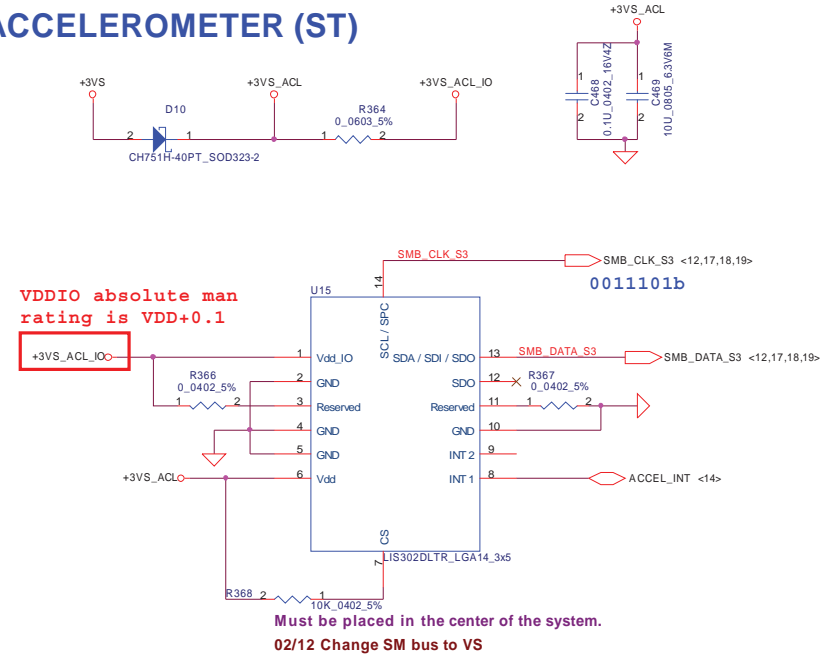
HDD Connector



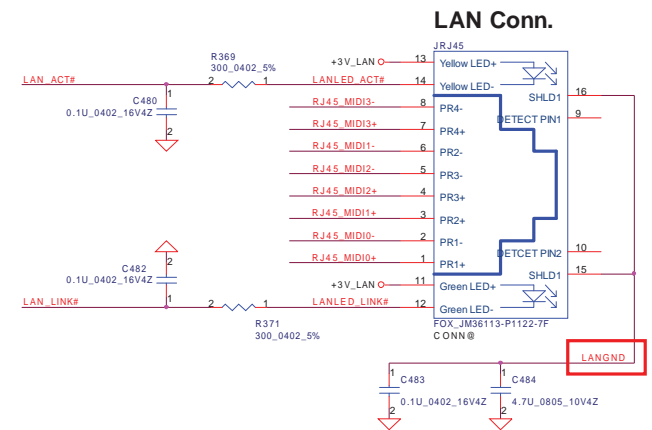
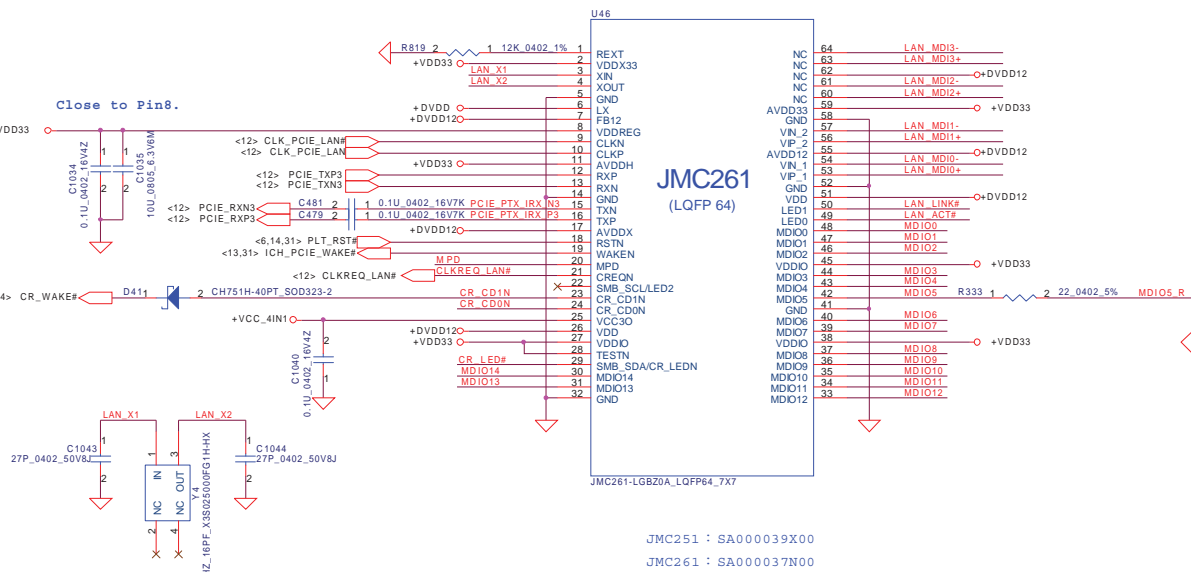
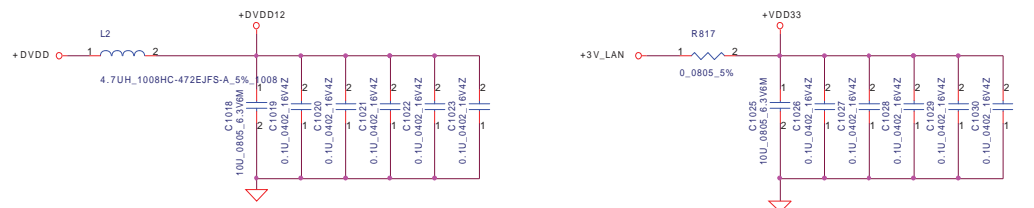
CD-ROM Connector



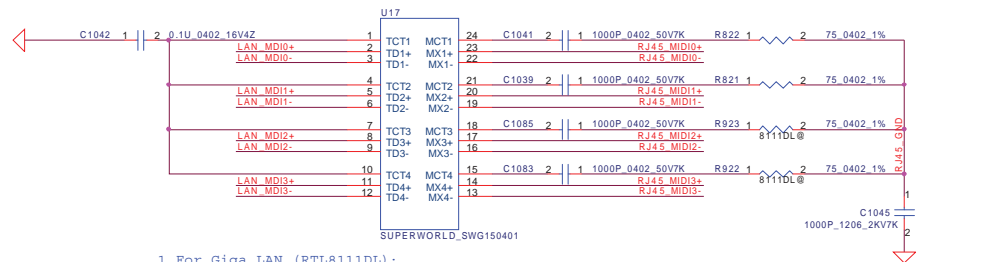
ACCELEROMETER (ST)



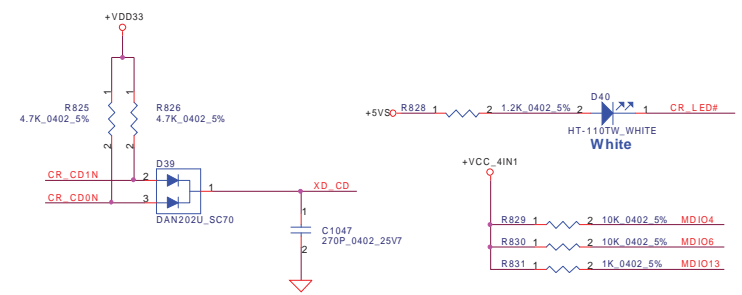
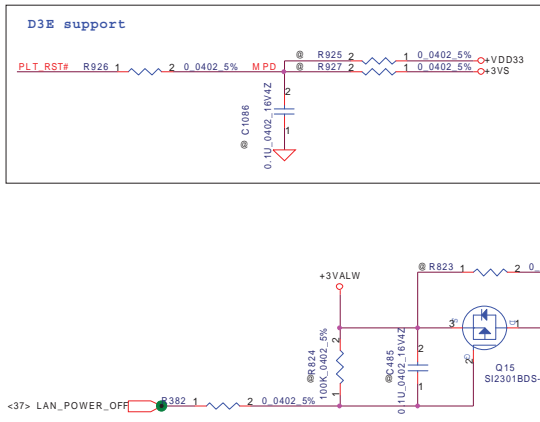
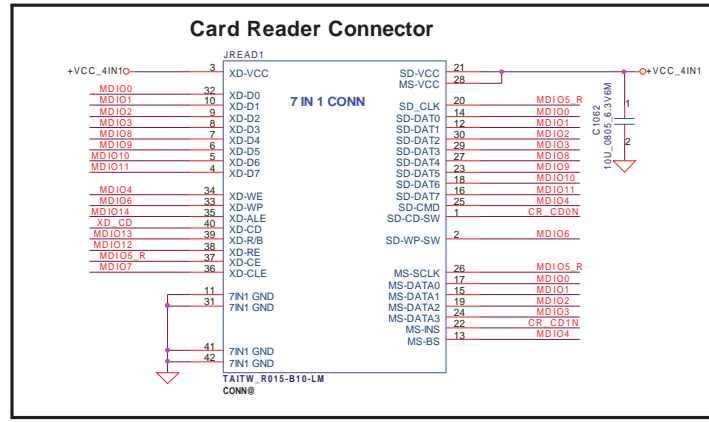
| | | | | | |
|---|--------------------|-----------------|------------|-------------|------------------------|
| Security Classification | Compal Secret Data | | | Title | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/03/10 | HDD & CDROM | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT. ENGINEERING DRAWING IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | Size | Document Number |
| | | | | Custom | Calpella DIS LA473P |
| | | | | Date: | Monday, April 13, 2009 |
| | | | | Sheet | 30 of 49 |
| | | | | Rev | 0.1 |



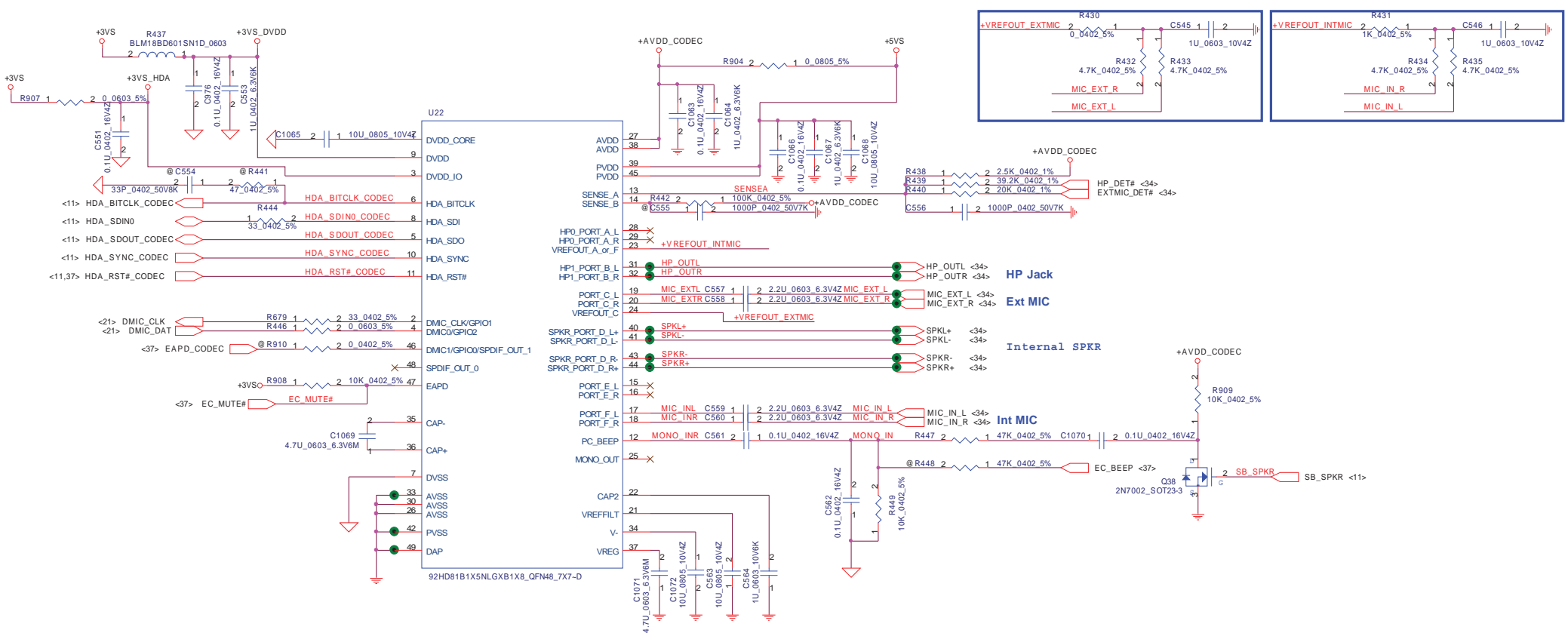
10/100 and Giga Transformer Co lay



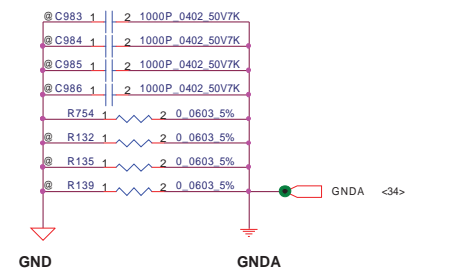
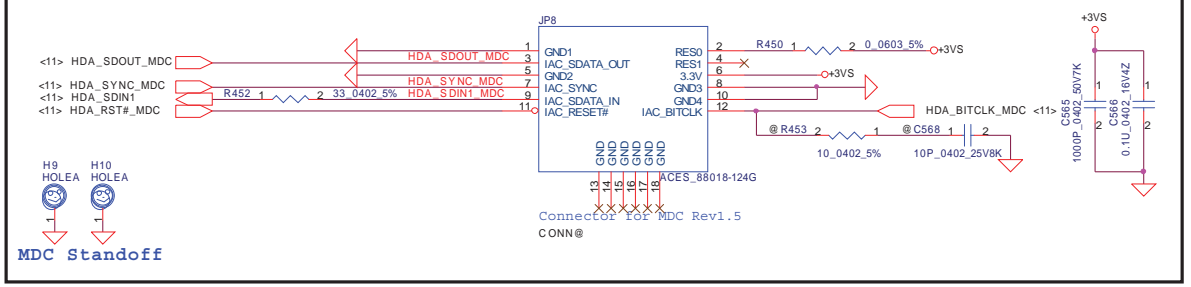
- 1. For Giga LAN (RTL8111DL):
Mail source: LANKom: LG-2446S-1 (P/N: SP050005L00)
2nd Source: MHPC: NS892406 (P/N: SP050005900)
- 2. For 10/100M (RTL 8103EL):
Main Source: MHPC NS892404 (P/N: SP050003P00)



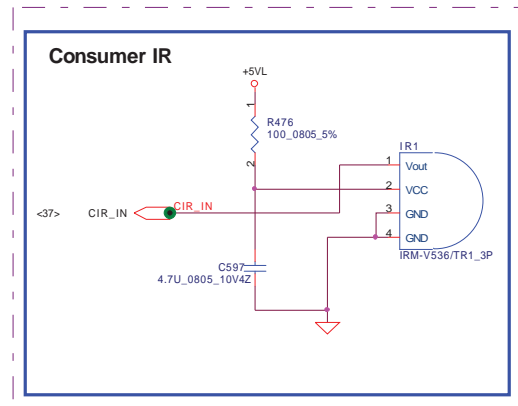
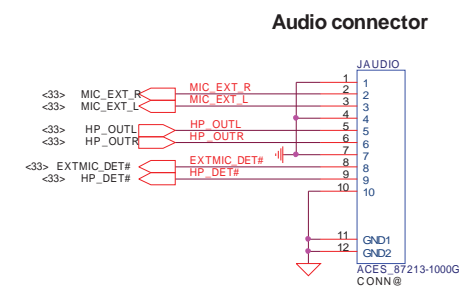
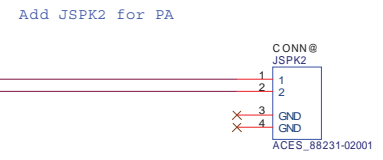
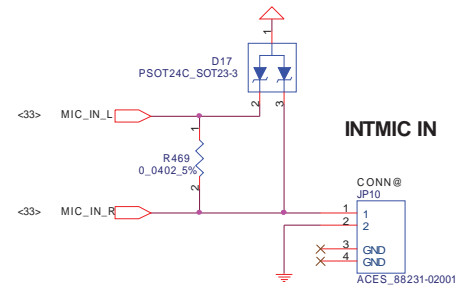
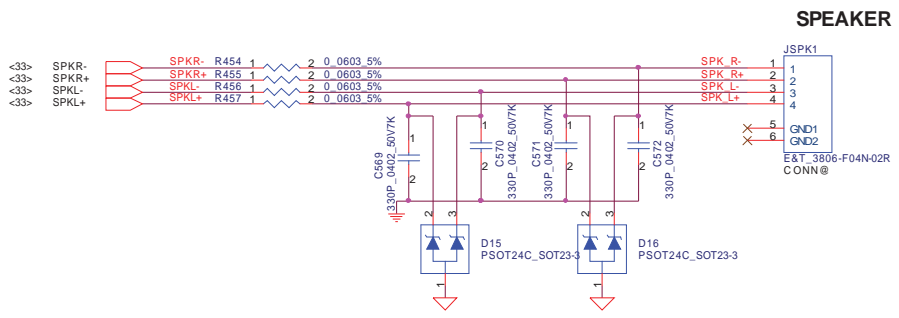
| | | | | | |
|---|------------------------|-----------------|------------|---------------------------------|----|
| Security Classification | Compal Secret Data | | Title | Compal Electronics, Inc. | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/10/06 | USB CardReader&CONN | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | | |
| Size | Document Number | | Customer | | |
| Customer | Calpella DIS LA4743P | | Rev 0.1 | | |
| Date: | Monday, April 13, 2009 | Sheet | 32 | of | 49 |



MDC 1.5 Conn.



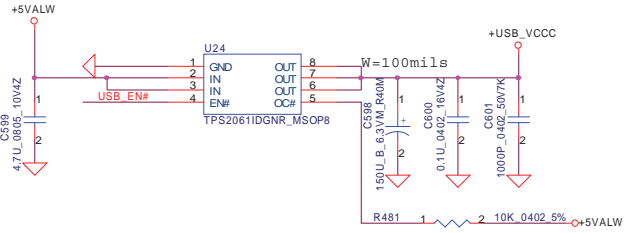
| Security Classification | Compal Secret Data | | Title |
|--|--------------------|-----------------|---|
| Issued Date | 2007/08/28 | Deciphered Date | 2006/07/26 |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT TO ANY OTHER DIVISION OR PERSON WITHOUT THE WRITTEN CONSENT OF THE COMPETENT DIVISION OF R&D DEPARTMENT. ANY USE, REPRODUCTION, OR DISSEMINATION OF THIS SHEET OR THE INFORMATION IT CONTAINS WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. IS STRICTLY PROHIBITED. | | | Size Custom |
| | | | Document Number Calpella DIS LA4743P |
| | | | Rev 0.1 |
| | | | Date: Monday, April 13, 2009 |
| | | | Sheet 33 of 49 |



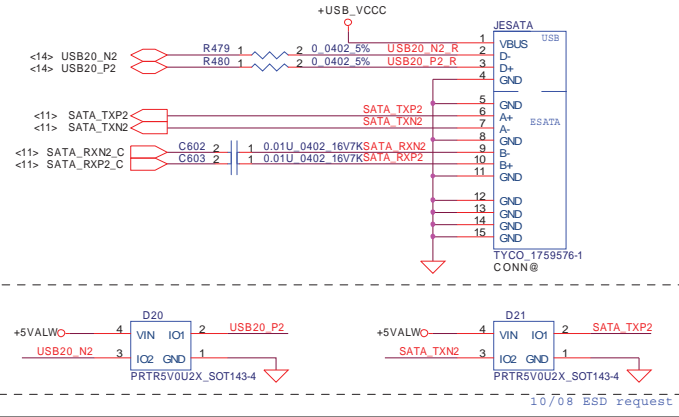
| | | | | | |
|--|--------------------|-----------------|------------|-----------------------------|------------------------|
| Security Classification | Compal Secret Data | | Title | AMP & Audio Jack | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/07/26 | Size | Document Number |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT, ENGINEERING DIVISION, OR QUALITY CONTROL DIVISION. ANY REPRODUCTION OR USE OF THIS SHEET WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. MAY BE SUBJECT TO LEGAL ACTION. | | | | Calpella DIS LA4743P | Rev 0.1 |
| | | | | Date: | Monday, April 13, 2009 |
| | | | | Sheet | 34 of 49 |

<http://laptop-motherboard-schematic.blogspot.com/>

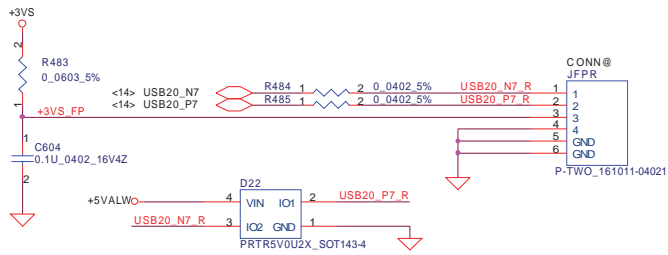
Right side USB Power Switch



Right side ESATA/USB combination Connector

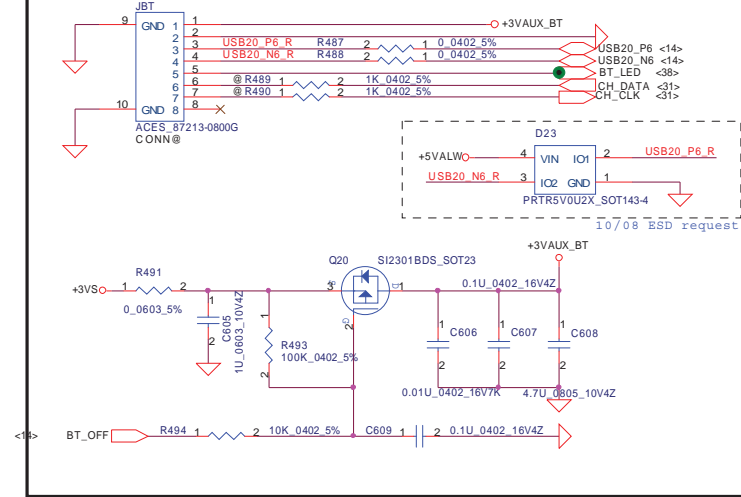


Finger printer

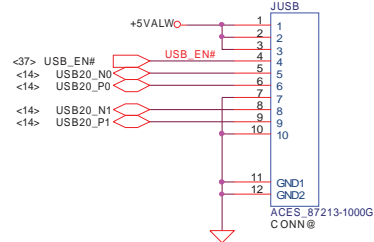


BT Connector

Need change to New version

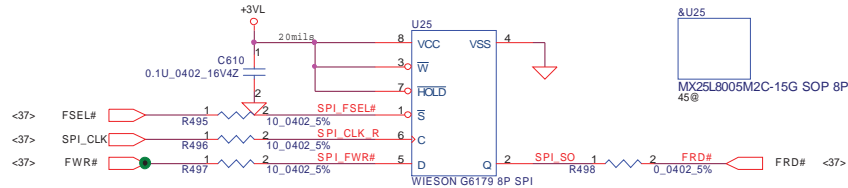


USB cable connector for Left side



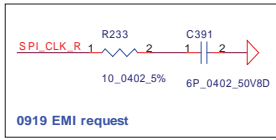
| | | | | | |
|---|--------------------|-----------------|------------|--------------------------|------------------------|
| Security Classification | Compal Secret Data | | | Title | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/07/26 | Compal Electronics, Inc. | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT, ENGINEERING GROUP, OR DESIGN GROUP. ANY REPRODUCTION OF THIS SHEET FOR OTHER THAN THE ORIGINAL INTENT, WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC., IS PROHIBITED. | | | | Size | Document Number |
| | | | | Calpella DIS LA4743P | |
| | | | | Date: | Monday, April 13, 2009 |
| | | | | Sheet | 35 of 49 |

SPI ROM => 1M (EC code)

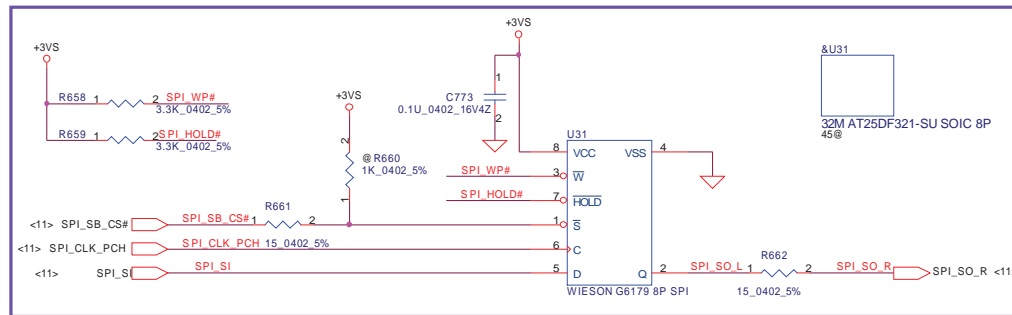


SP07000F500 S SOCKET WIESON G6179-100000 8P SPIFLASH
WIESO_G6179-100000_8P

- SA00000XT00 : S IC FL 8M MX25L8005M2C-15G SOP 8P (MXIC)
- SA00001AW00 : S IC FL 16M MX25L1605AM2C-15G SOP 8P SPI (MXIC)
- SA000021A00 : S IC FL 32M MX25L3205DM2-12G SOP 8P (MXIC)
- SA000031Q00 : S IC FL 32M AT25DF321-SU SOIC 8P (ATMEL)

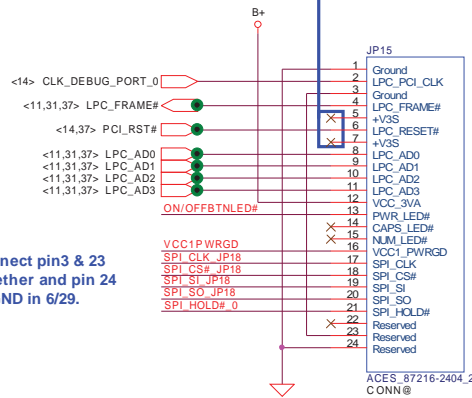


SPI ROM on PCH => 4M (ME code + System BIOS)

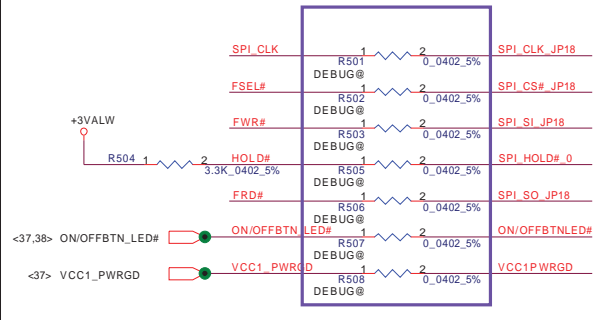


LPC Debug Port

Change from +3VL to +3VS. 6/9
Removed +3VS. 6/13

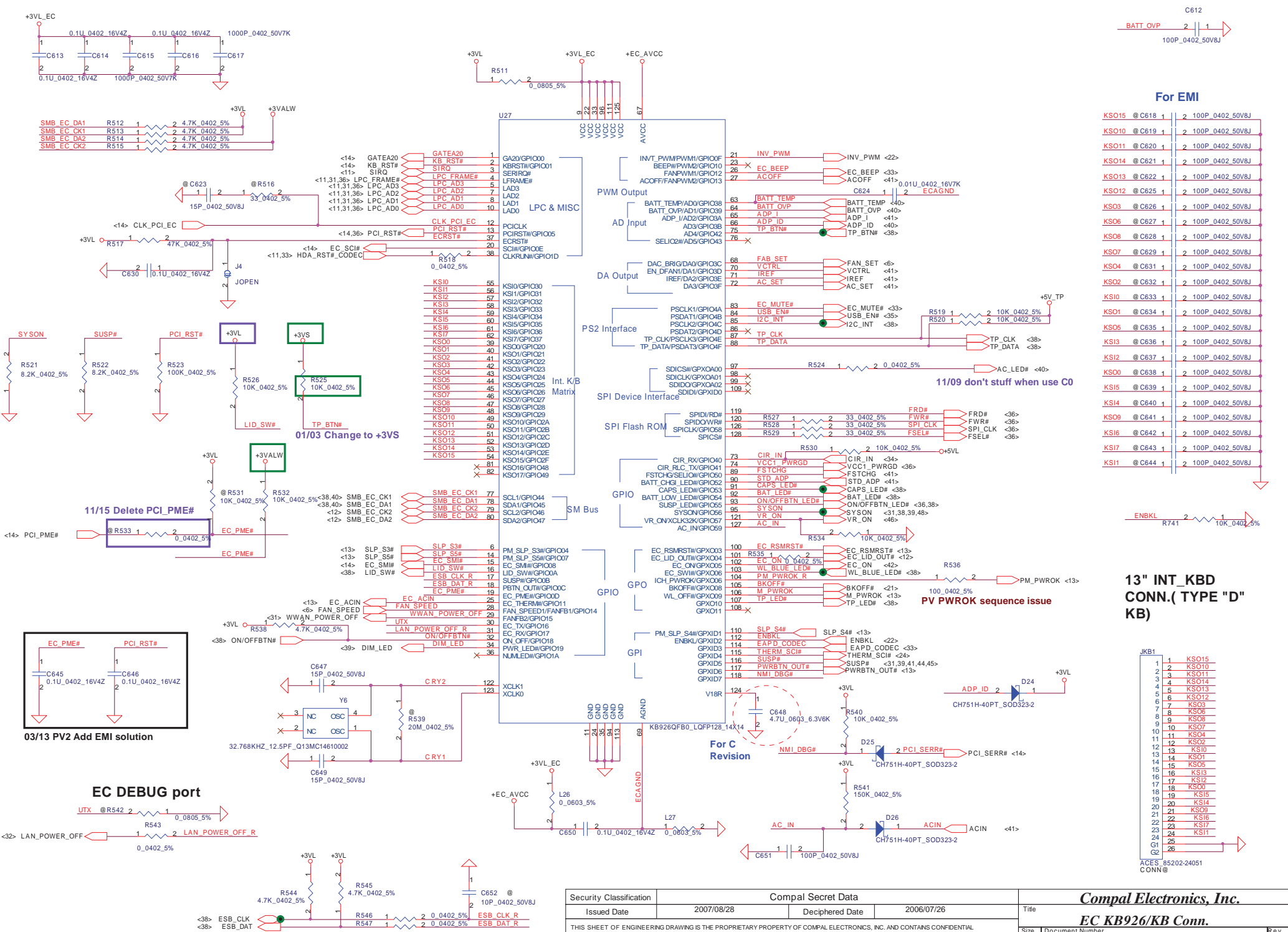


Connect pin3 & 23
together and pin 24
to GND in 6/29.



11/07 Add 0 Ohm for debug port

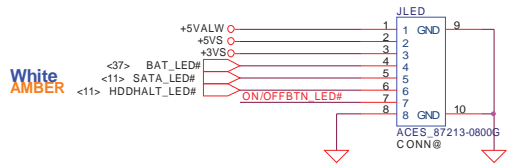
| | | | | | |
|--|--------------------|-----------------|------------|--------------------------|------------------------|
| Security Classification | Compal Secret Data | | | Title | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/07/26 | Compal Electronics, Inc. | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT. ENGINEERING AUTHORIZATION BY ANY ELECTRONIC OR MECHANICAL REPRODUCTION, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | BIOS ROM | |
| | | | | Size | Document Number |
| | | | | Calpella DIS LA4743P | |
| | | | | Date: | Monday, April 13, 2009 |
| | | | | Sheet | 36 of 49 |
| | | | | Rev | 0.1 |



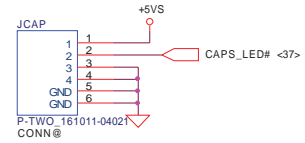
<http://laptop-motherboard-schematic.blogspot.com/>

| | | | | | |
|---|------------------------|-----------------------|------------|--------------------------|--|
| Security Classification | | Compal Secret Data | | Compal Electronics, Inc. | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/07/26 | Title | |
| THIS SHEET OF ENGINEERING DRAWINGS IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE REPRODUCED OR DISCLOSED TO ANY THIRD PARTY WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | EC KB926/KB Conn. | |
| Size | Document Number | Calpella DIS LA 4733P | | Rev 0.1 | |
| Date | Monday, April 13, 2009 | Sheet | 37 | of 49 | |

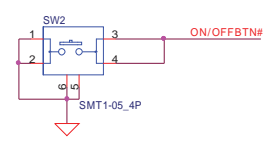
System LED Conn



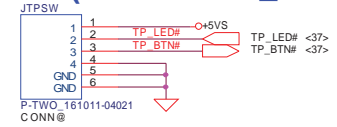
Caps-Lock Conn



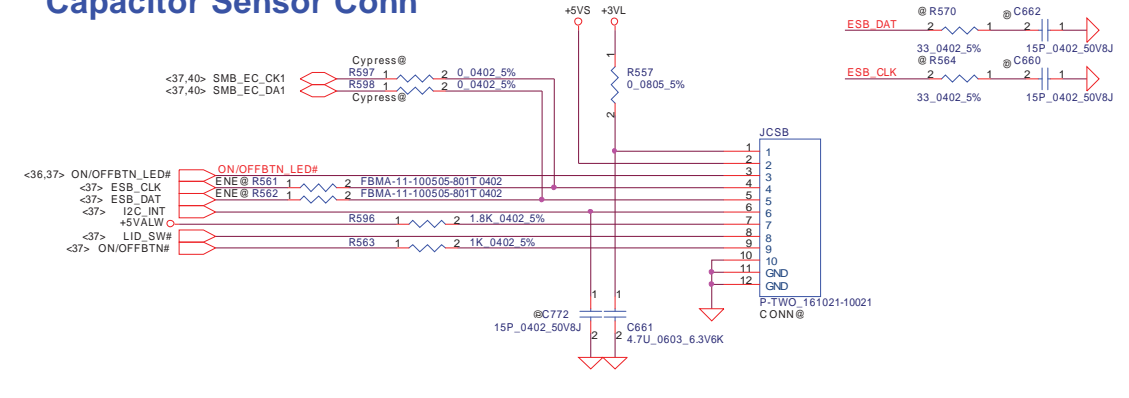
Power Button for debug only



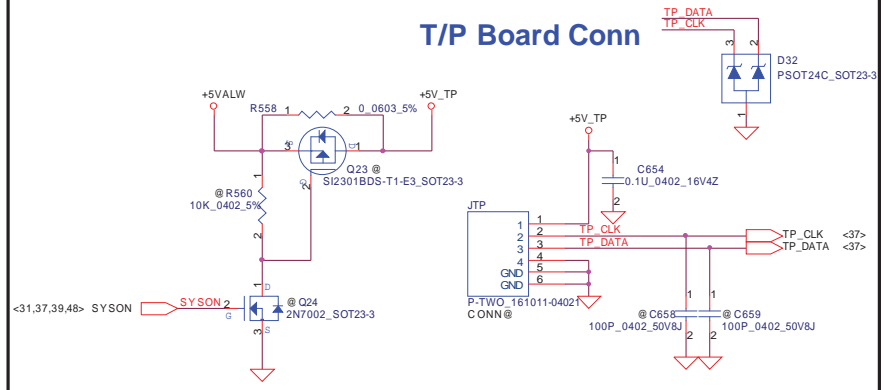
T/P Board (Include T/P_ON/OFF)



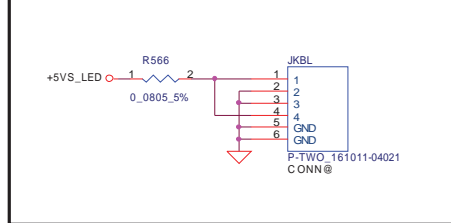
Capacitor Sensor Conn



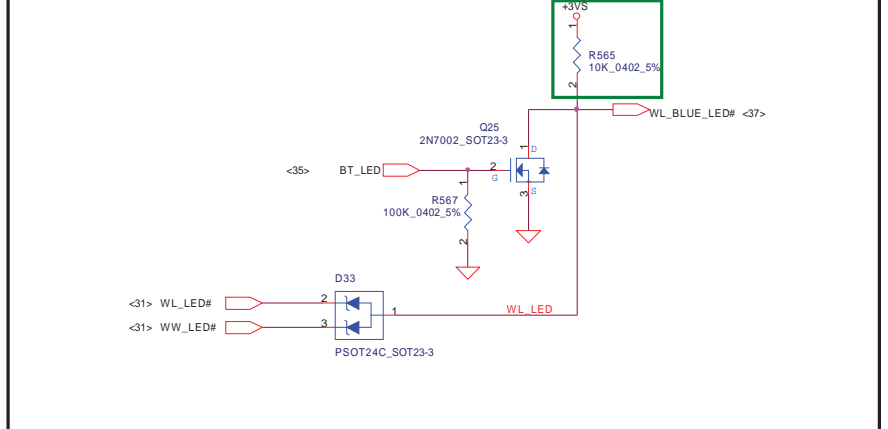
T/P Board Conn



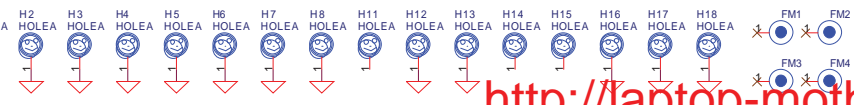
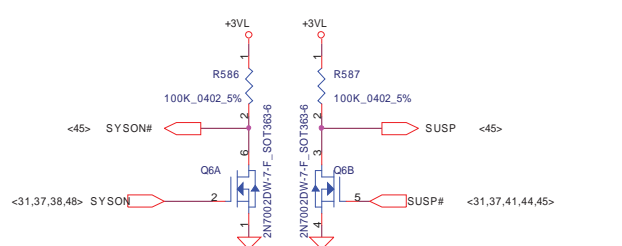
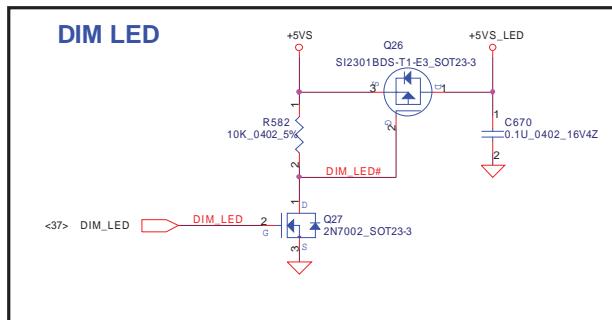
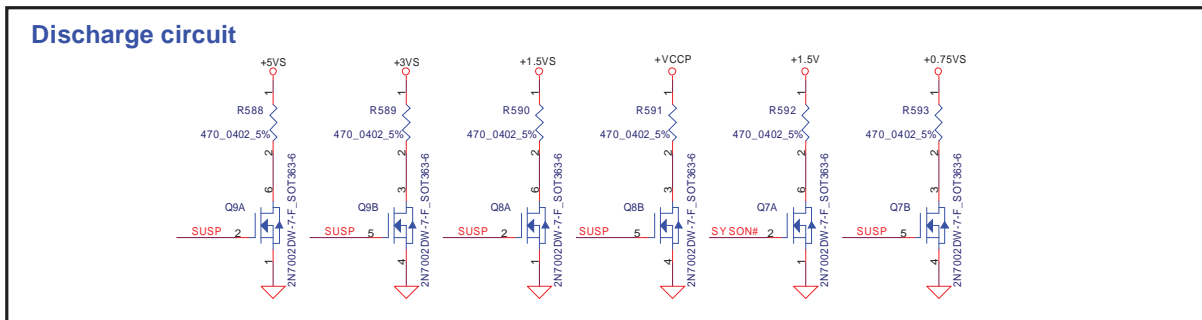
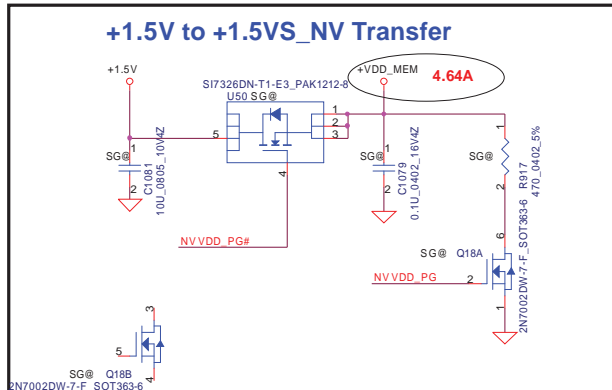
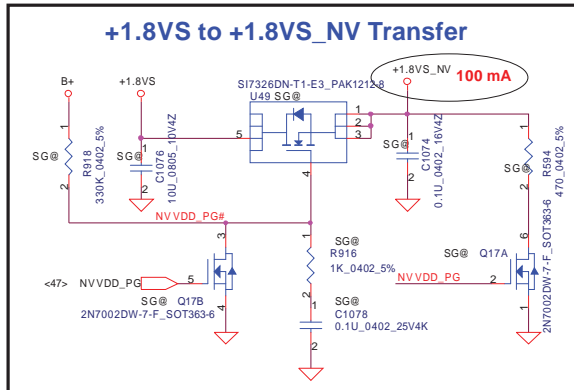
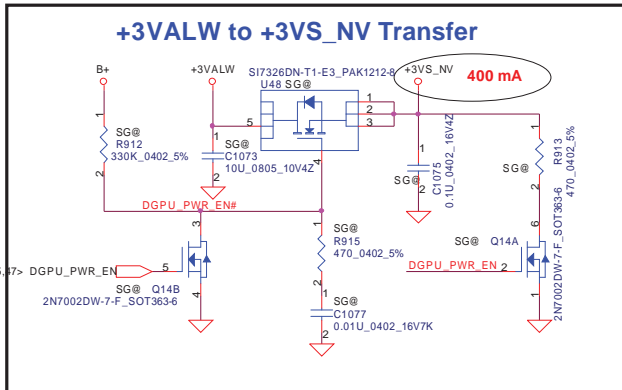
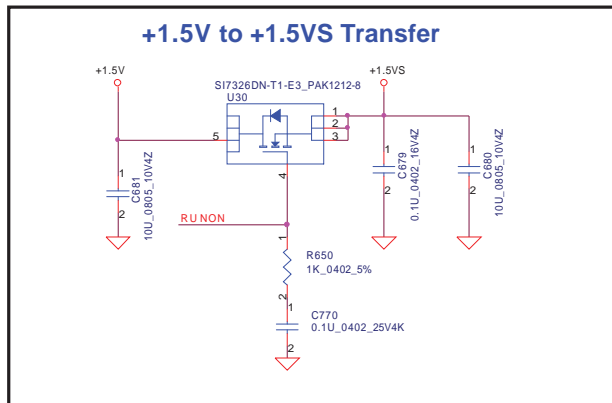
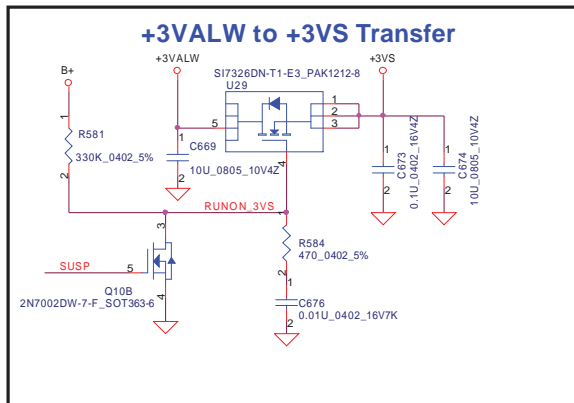
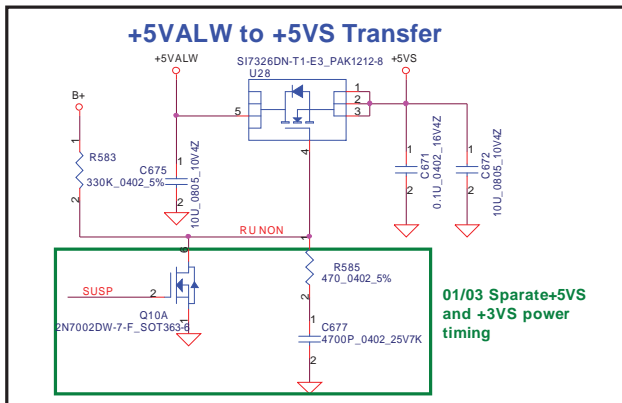
Keyboard backlight Conn



Mini card LED



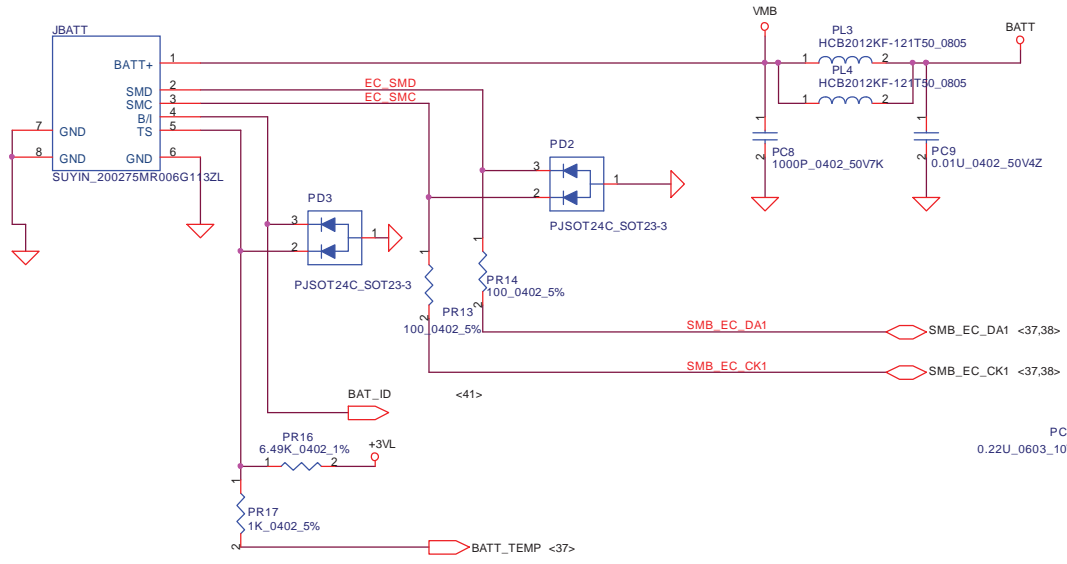
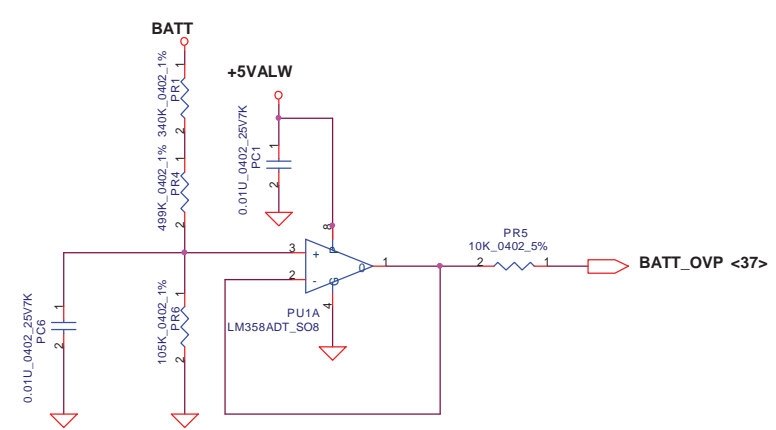
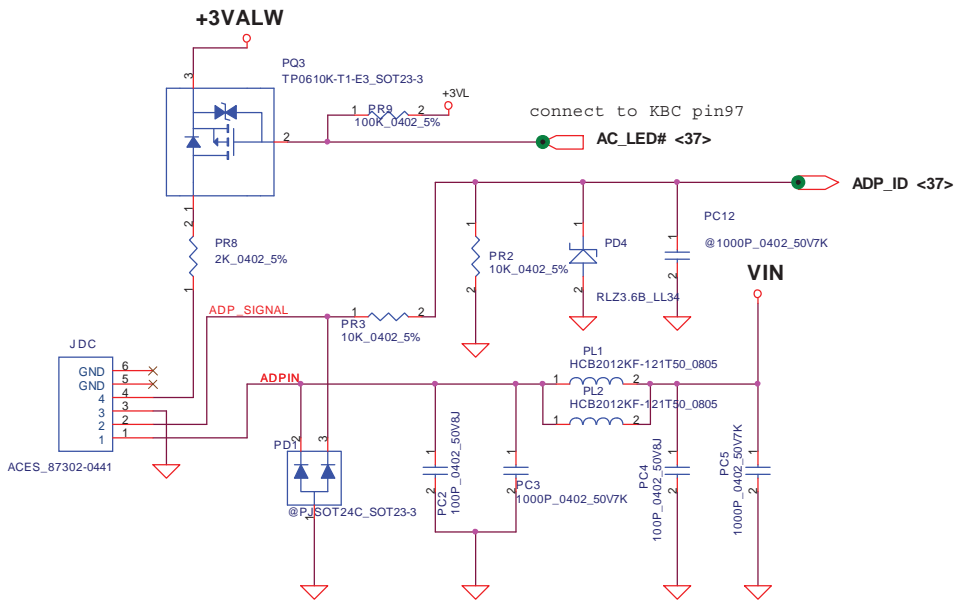
| | | | | | |
|---|------------------------|-----------------|------------|---------------------------------|-----------------|
| Security Classification | Compal Secret Data | | Title | Compal Electronics, Inc. | |
| Issued Date | 2007/08/28 | Deciphered Date | 2006/07/26 | KBD, ON/OFF, SW, CIR | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT. ANY REPRODUCTION, DISTRIBUTION, OR DISSEMINATION OF THIS SHEET WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. IS PROHIBITED. | | | | Size | Document Number |
| http://laptop-motherboard-schematic.blogspot.com/ | | | | Calpella DIS LA4743P | |
| Date: | Monday, April 13, 2009 | Sheet | 38 | of | 49 |



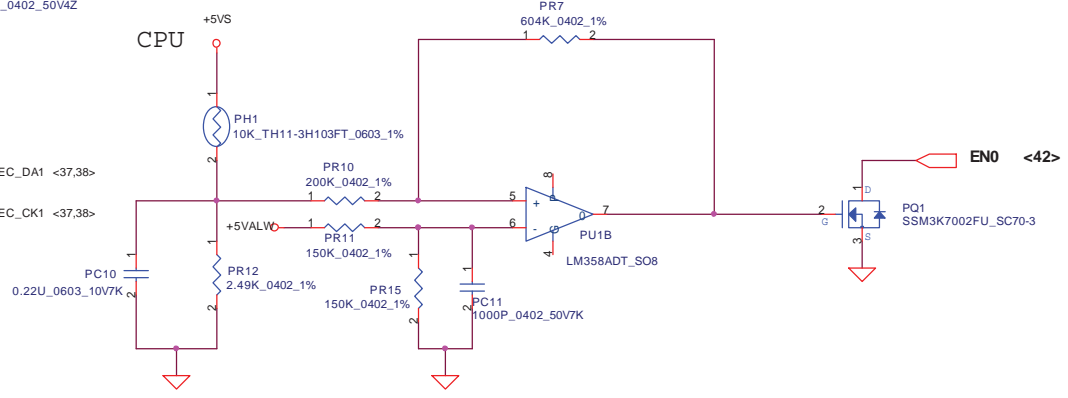
| Security Classification | Compal Secret Data | |
|-------------------------|--------------------|-----------------|
| Issued Date | 2007/08/28 | Deciphered Date |
| | | 2006/07/26 |

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. ANY UNAUTHORIZED REPRODUCTION OR DISSEMINATION OF THIS SHEET OR THE INFORMATION CONTAINED THEREIN IS STRICTLY PROHIBITED. ANY VIOLATION WILL BE PROSECUTED TO THE FULL EXTENT OF THE LAW. COMPAL ELECTRONICS, INC.

| | | |
|--------------------------|----------------------|-----|
| Title | | |
| Compal Electronics, Inc. | | |
| DC/DC Interface | | |
| Size | Document Number | Rev |
| | Calpella DIS LA4743P | 0.1 |

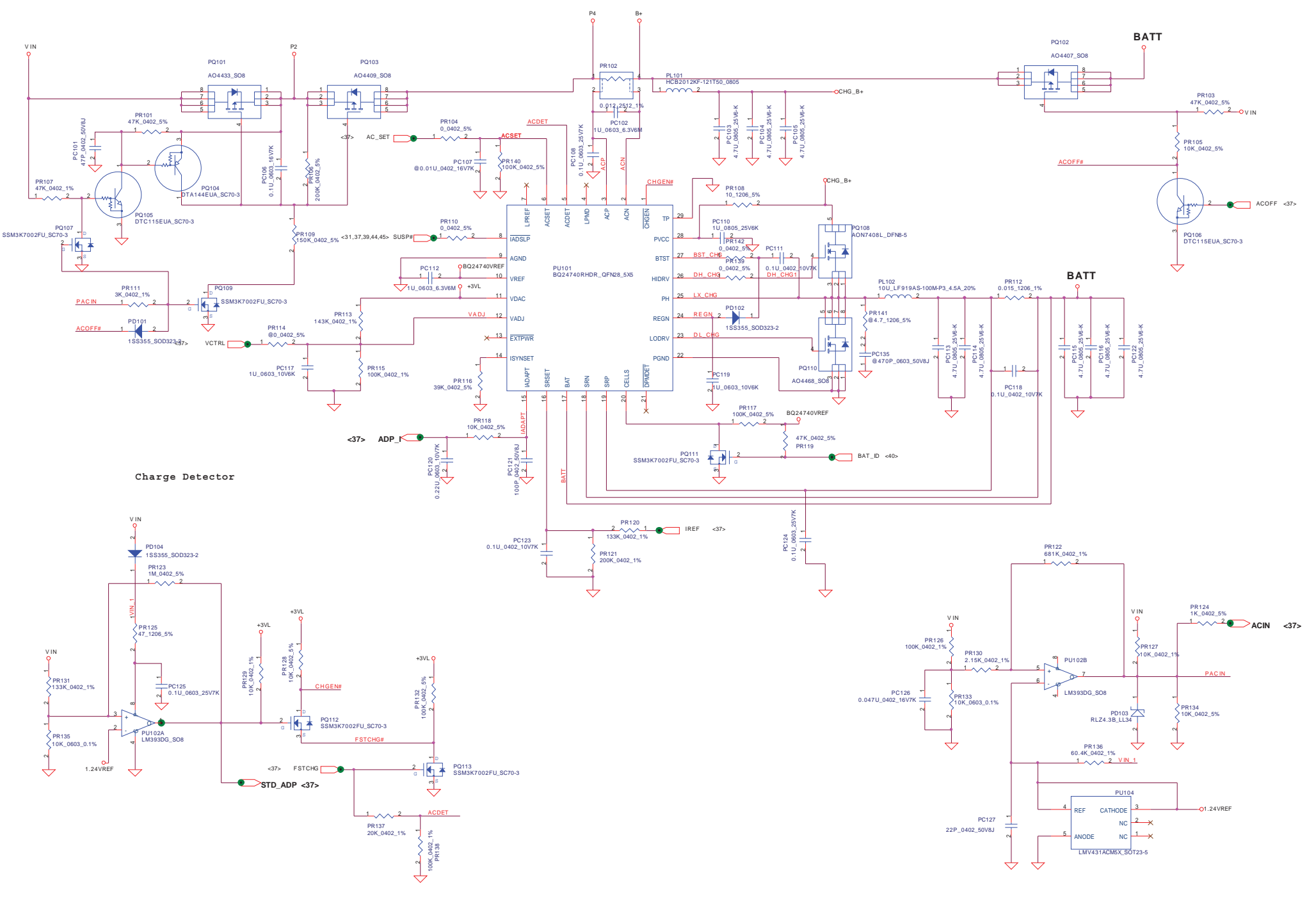


PH1 under CPU bottom side :
CPU thermal protection at 90 +/- 3 degree C



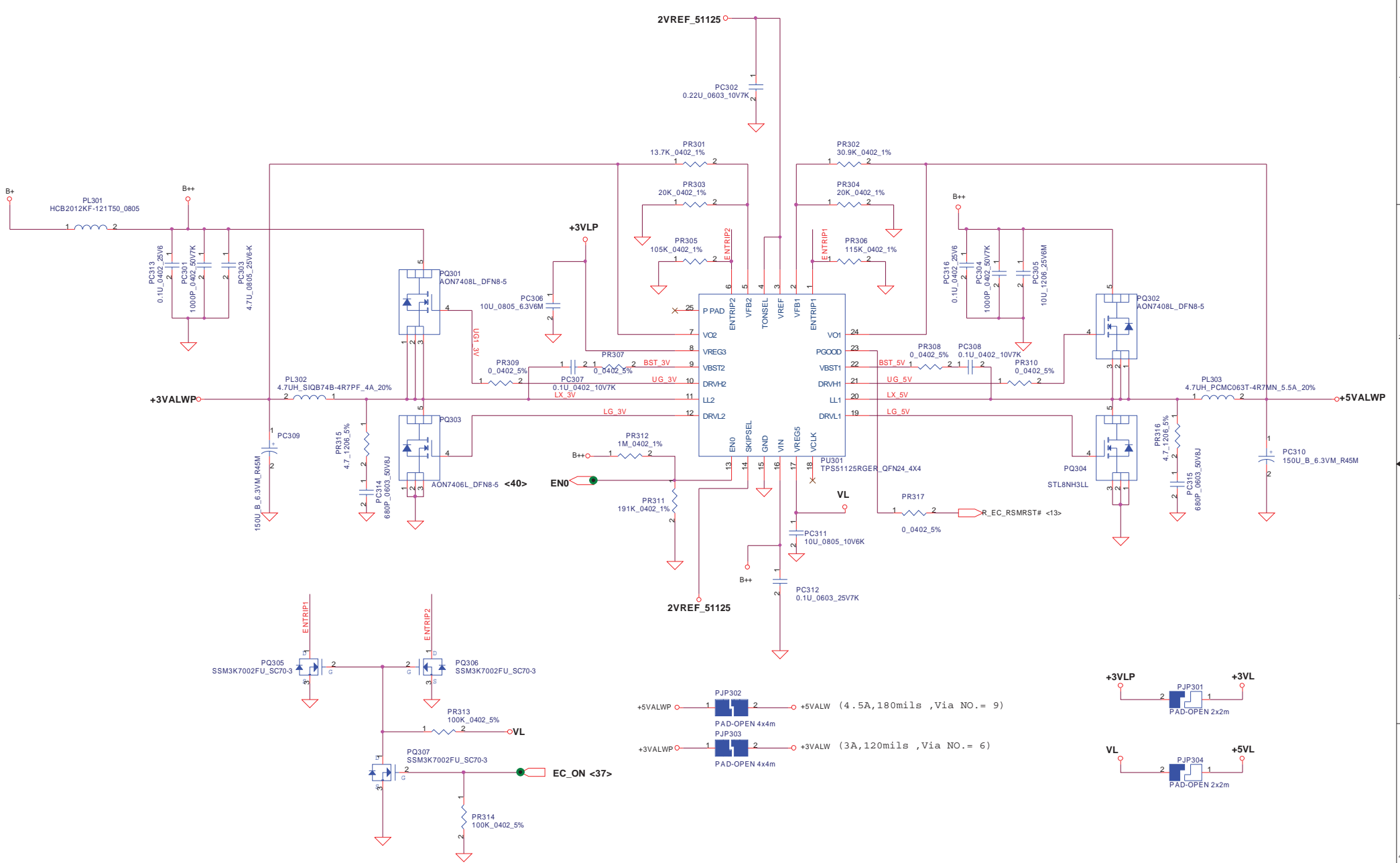
| | | | | | |
|--|--------------------|-----------------|------------|---|------------------------|
| Security Classification | Compal Secret Data | | | Title Compal Electronics, Inc. DC Connector/CPU_OTP | |
| Issued Date | 2007/05/29 | Deciphered Date | 2008/05/29 | | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D OR PRINTED, REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. | | | | Size | Document Number |
| | | | | Calpella DIS LA4743P | |
| | | | | Date: | Monday, April 13, 2009 |
| | | | | Sheet | 40 of 49 |
| | | | | Rev | 0.1 |

<http://laptop-motherboard-schematics.blogspot.com/>



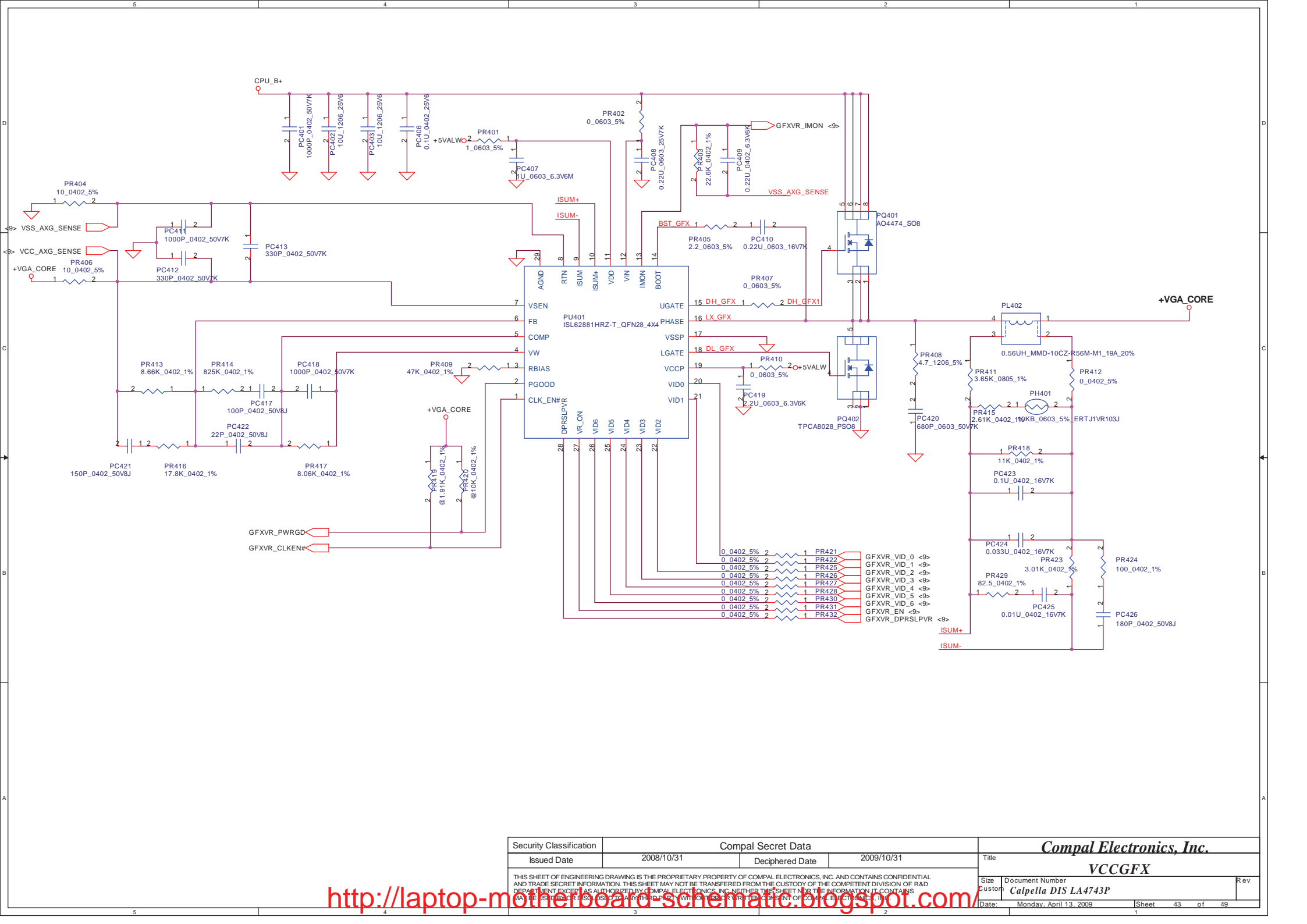
<http://laptop-motherboard.schematic.blogspot.com/>

| | | | | | |
|-------------------------|------------|--------------------|------------|--------------------------|------------------------|
| Security Classification | | Compal Secret Data | | Compal Electronics, Inc. | |
| Issued Date | 2007/05/29 | Deciphered Date | 2008/05/29 | Title | |
| | | | | Charger | |
| | | | | Size | Document Number |
| | | | | Calpella DIS LA4743P | |
| | | | | Date | Monday, April 13, 2009 |
| | | | | Sheet | 41 of 49 |



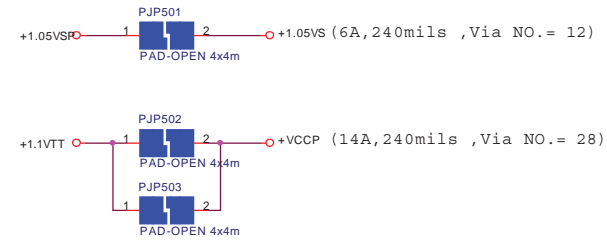
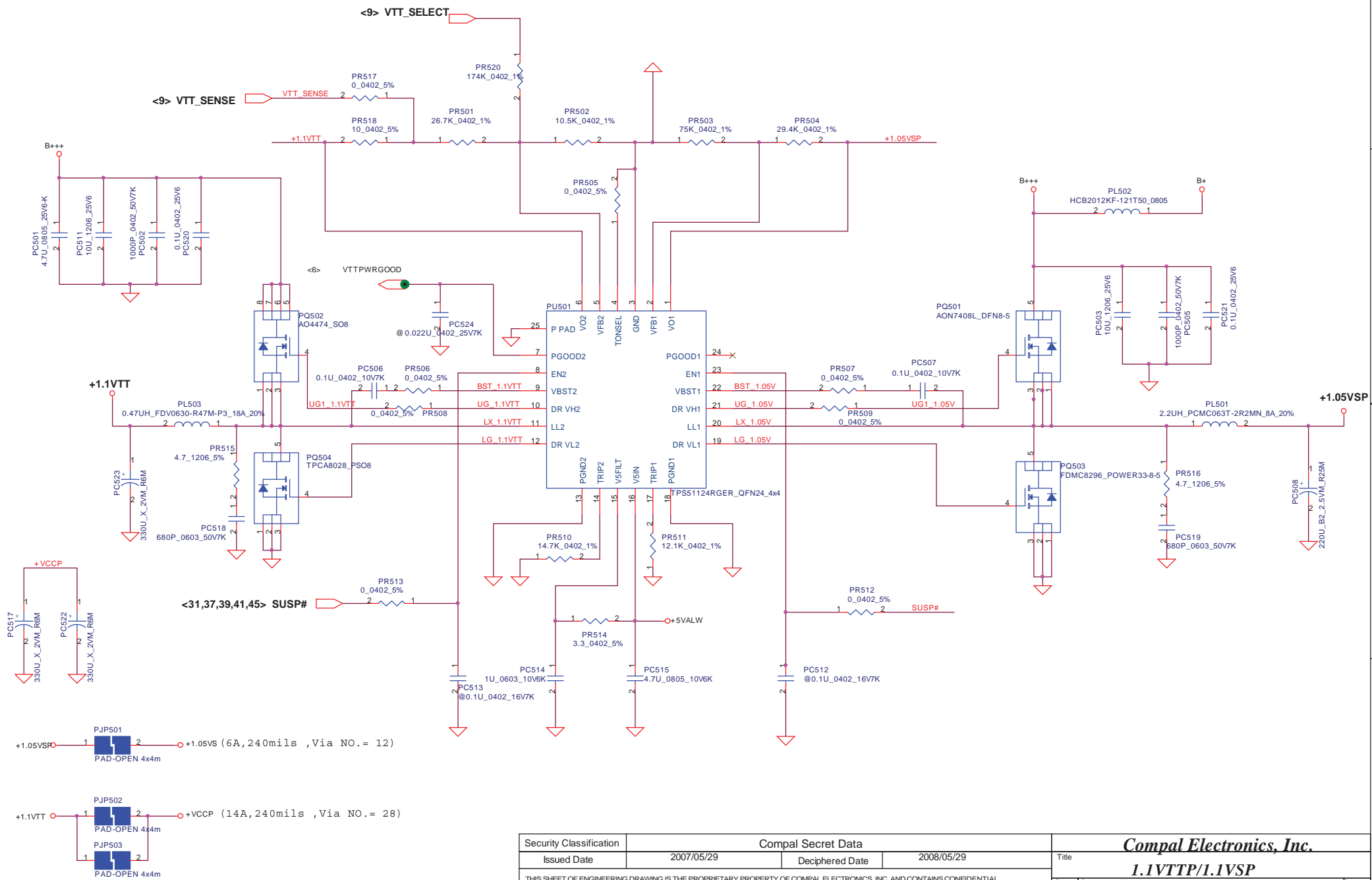
| | | | | | |
|--|--------------------|-----------------|------------|---------------------------------|----------------|
| Security Classification | Compal Secret Data | | Title | Compal Electronics, Inc. | |
| Issued Date | 2007/08/02 | Deciphered Date | 2008/08/02 | 3.3VALWP/5VALWP | |
| <small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT WITHOUT THE WRITTEN PERMISSION OF THE ELECTRONIC ENGINEERING DEPARTMENT. THIS SHEET OR THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED AND IS NOT TO BE RELEASED TO THE PUBLIC OR TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small> | | | Size | Document Number | Rev |
| | | | Custom | Calpella DIS LA4743P | 0.1 |
| | | | Date: | Monday, April 13, 2009 | Sheet 42 of 49 |

<http://laptop-motherboard-schematic.blogspot.com>



| | | | | | |
|--|----------------------|--------------------|------------|------------------------|----------|
| Security Classification | | Compal Secret Data | | Title | |
| Issued Date | 2008/10/31 | Deciphered Date | 2009/10/31 | VCCGFX | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE REPRODUCED OR DISCLOSED TO ANY THIRD PARTY WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | | |
| Size | Document Number | Rev | | Date | |
| Custom | Calpella DIS LA4743P | | | Monday, April 13, 2009 | |
| | | | | Sheet | 43 of 49 |

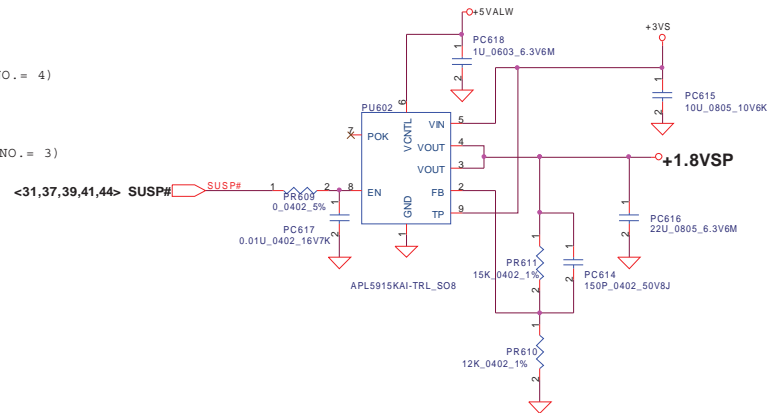
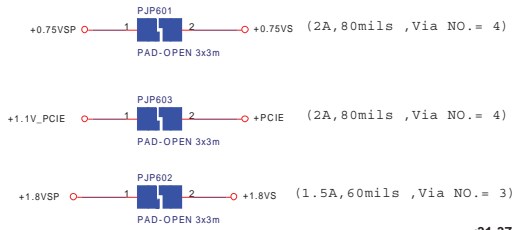
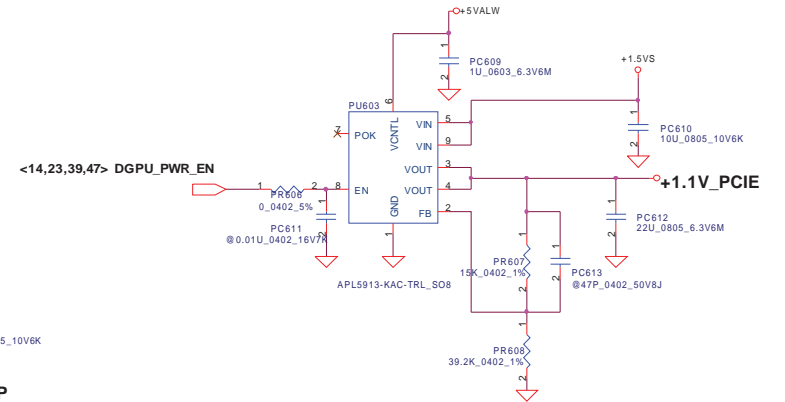
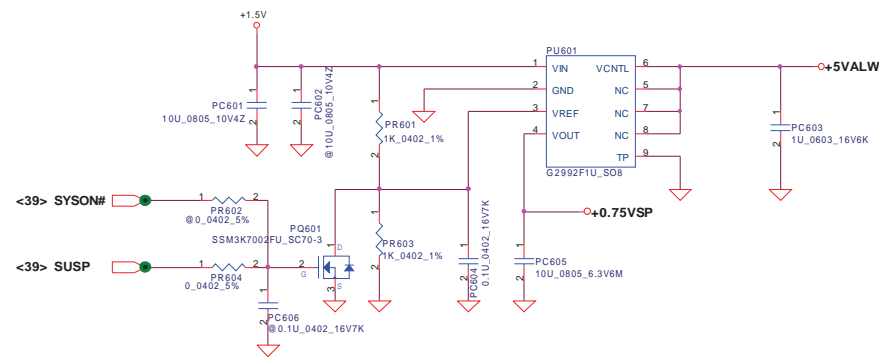
<http://laptop-motherboard-schematic.blogspot.com/>



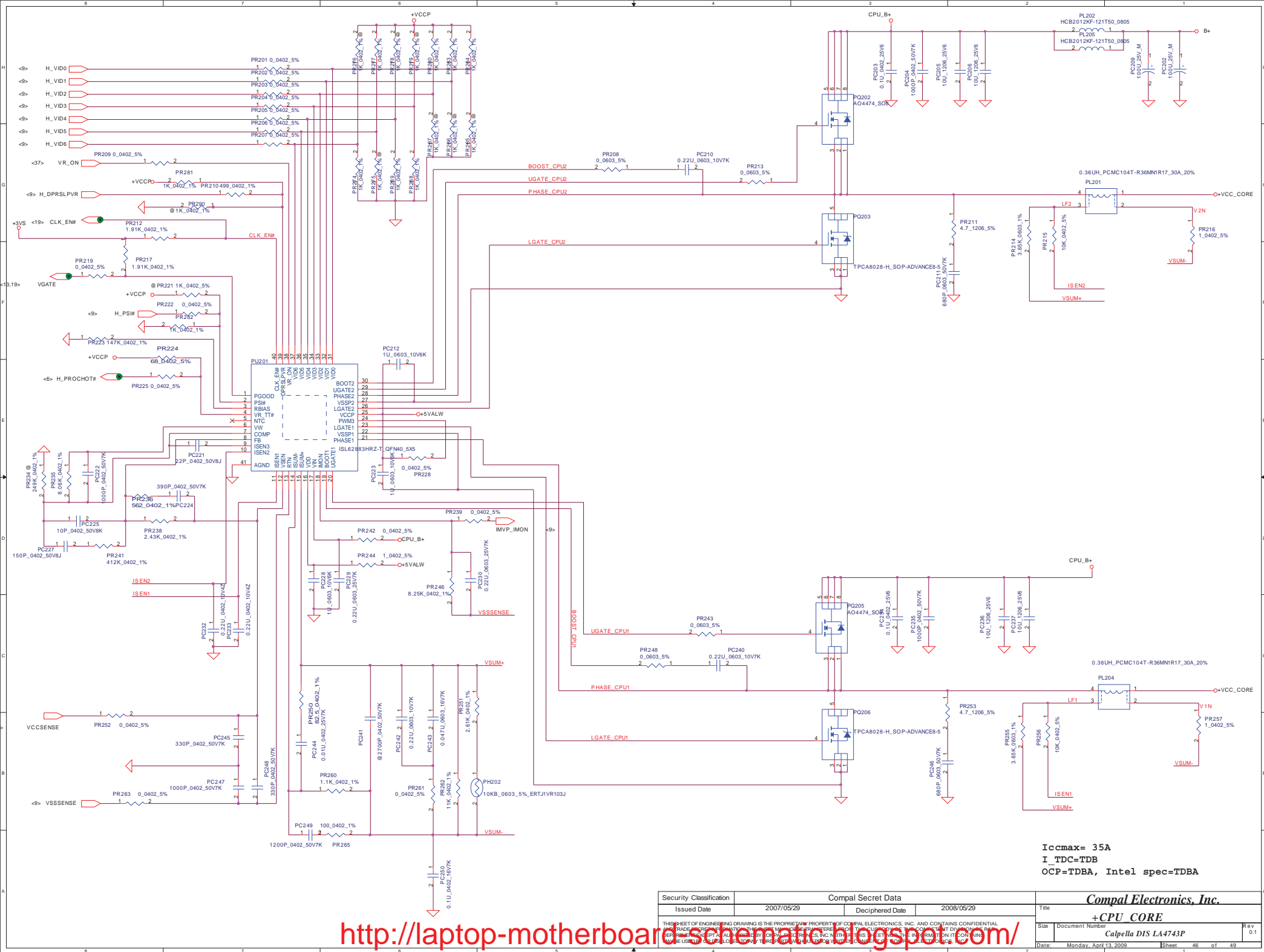
| | | | |
|--|------------|--------------------|------------|
| Security Classification | | Compal Secret Data | |
| Issued Date | 2007/05/29 | Deciphered Date | 2008/05/29 |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE REPRODUCED OR DISCLOSED TO ANY THIRD PARTY WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | |

| | | |
|---|------------------------|----------------|
| Compal Electronics, Inc. 1.1VTT/1.1VSP Calpella DIS LA4743P | | |
| Size | Document Number | Rev |
| | | 0.1 |
| Date: | Monday, April 13, 2009 | Sheet 44 of 49 |

<http://laptop-motherboard-schematic.blogspot.com/>



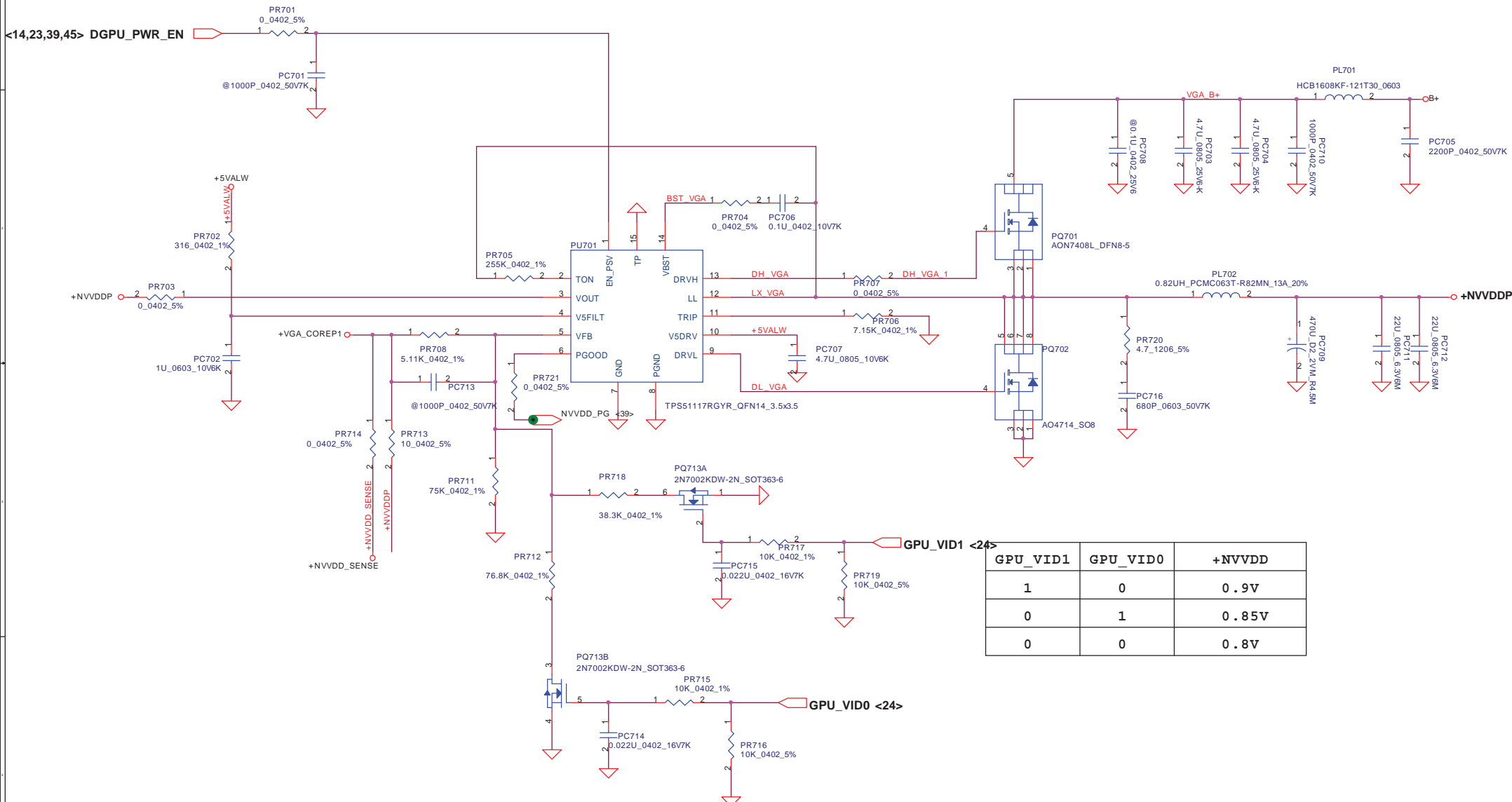
| | | | | |
|---|--------------------|-----------------|------------|-------------------------|
| Security Classification | Compal Secret Data | | Title | |
| Issued Date | 2006/11/23 | Deciphered Date | 2007/11/23 | 0.75VP/1.8VSP/1.1V_PCIE |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. | | | | Rev 0.1 |
| Date: Monday, April 13, 2009 | | | Sheet | 45 of 49 |



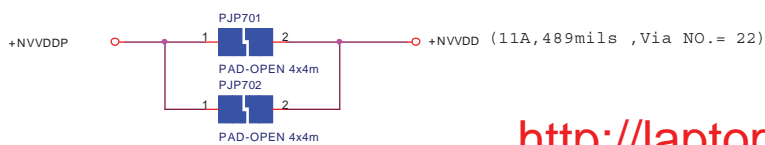
Iccmax= 35A
 I TDC=TDB
 OCP=TDBA, Intel spec=TDBA

| | | | | |
|---|------------------------|-----------------|--------------------------|---|
| Security Classification | Compal Secret Data | | Compal Electronics, Inc. | |
| Issued Date | 2007/05/29 | Deciphered Date | 2008/05/29 | Title |
| <small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. ANY UNAUTHORIZED REPRODUCTION OR DISSEMINATION OF THIS SHEET OF ENGINEERING DRAWING WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. IS STRICTLY PROHIBITED. ANY VIOLATION OF THIS PROHIBITION WILL BE SEVERELY PUNISHED. THIS SHEET OF ENGINEERING DRAWING IS INTENDED FOR USE IN THE MANUFACTURE OF THE PRODUCT IDENTIFIED HEREIN. IT IS NOT TO BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC.</small> | | | | +CPU CORE Calpetta DIS LA473P Rev 0-1 |
| Date | Monday, April 13, 2009 | Sheet | 46 | of 49 |

<http://laptop-motherboard.schematiclogspot.com/>



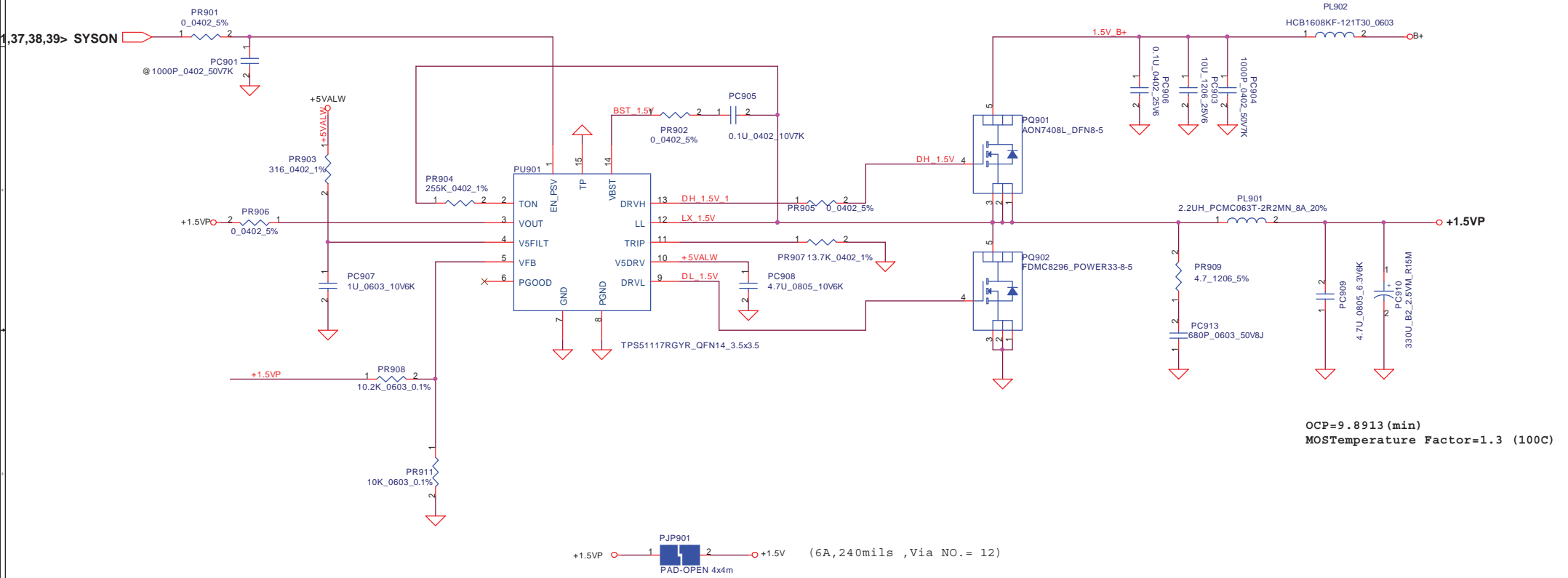
| GPU_VID1 | GPU_VID0 | +NVVDD |
|----------|----------|--------|
| 1 | 0 | 0.9V |
| 0 | 1 | 0.85V |
| 0 | 0 | 0.8V |



Security Classification: Compal Secret Data
 Issued Date: 2007/05/29
 Deciphered Date: 200810/11

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D OR BE REPRODUCED OR DISCLOSED TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC.

<http://laptop-motherboard-schematic.blogspot.com/>



| | | | | | |
|---|------------------------|--------------------|------------|----------------------|-----------------|
| Security Classification | | Compal Secret Data | | Title | |
| Issued Date | 2007/05/29 | Deciphered Date | 2008/05/29 | 1.5VP | |
| THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D OR FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D TO ANY OTHER DIVISION OF COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. | | | | Size | Document Number |
| | | | | Calpella DIS LA4743P | R ev |
| | | | | 0.1 | |
| Date: | Monday, April 13, 2009 | Sheet | 48 | of | 49 |

<http://laptop-motherboard-schematic.blogspot.com/>

