

Model Name : Z5WAL  
File Name : LA-B211P

# Compal Confidential

## EA51\_BM UMA M/B Schematics Document

Intel Bay Trail M

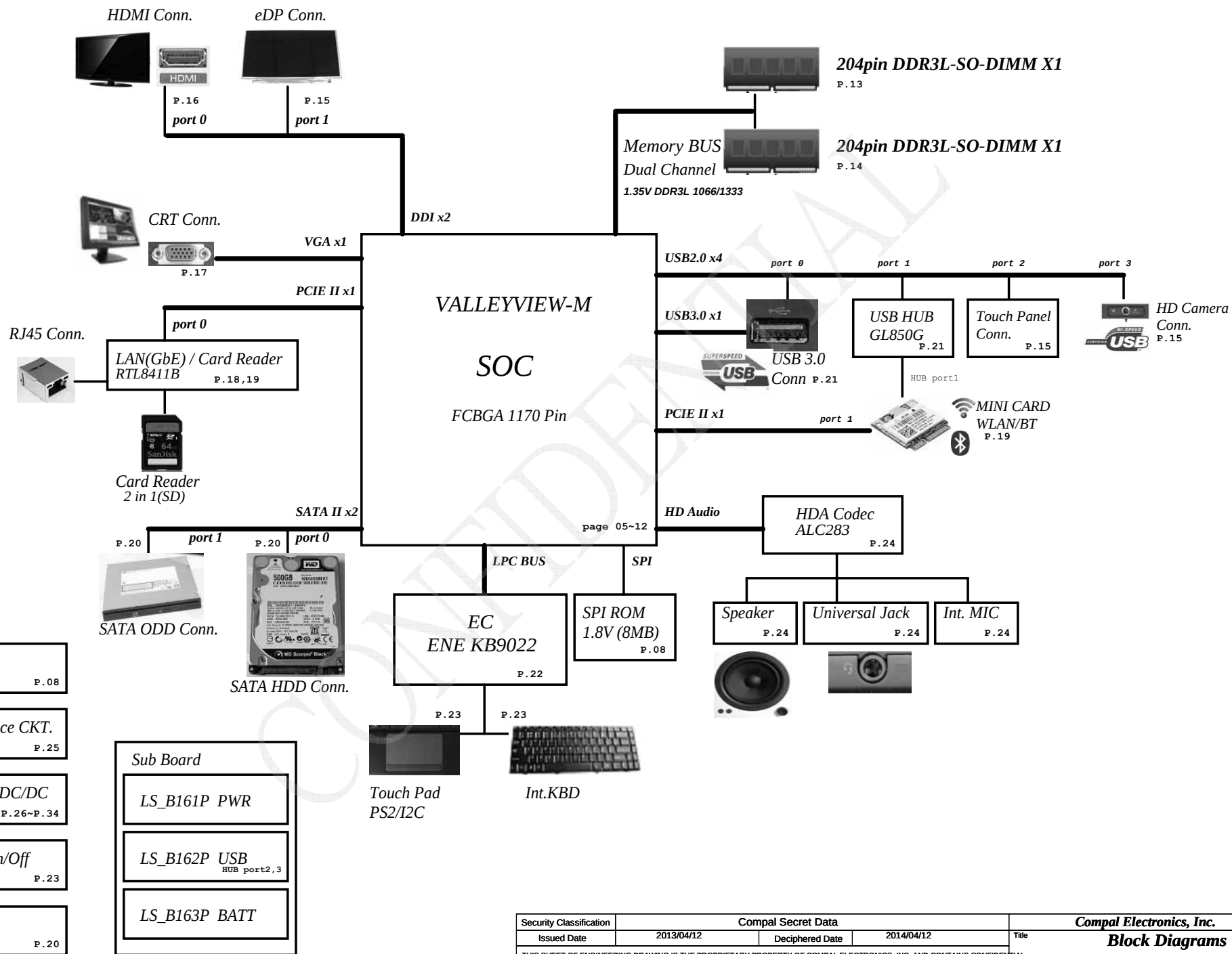
2014-04-07

REV:1.0

| Panelization Information |          |
|--------------------------|----------|
| Main Board               | LA-B211P |
| PWR Board                | LS-B161P |
| USB Board                | LS-B162P |
| BATT Board               | LS-B163P |

| PCB@<br>ZZZ PCB Z5WAL LA-B211P LS-B161P/B162P/B163P |                                         |
|-----------------------------------------------------|-----------------------------------------|
| Part Number                                         | Description                             |
| DAZ15Y00100                                         | PCB Z5WAL LA-B211P LS-B161P/B162P/B163P |

| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc. |                            |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|--------------------------|----------------------------|---------------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2013/04/12         | Deciphered Date | 2014/04/12 | Title                    | Cover Page                 |               |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Document Number          | Z5WAL Bay Trail M LA-B211P | Rev 1.0       |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                            |                 |                          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------|-----------------|--------------------------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data         |                 | Compal Electronics, Inc. |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2013/04/12                 | Deciphered Date | 2014/04/12               |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                            |                 | Block Diagrams           |  |
| Document Number                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | Rev                        |                 | 1.0                      |  |
| Customer                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | Z5WAL Bay Trail M LA-B211P |                 |                          |  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | Monday, April 07, 2014     | Sheet           | 2 of 39                  |  |

## Voltage Rails

| Power Plane | Description                                           | S0 | S3  | S4/S5 |
|-------------|-------------------------------------------------------|----|-----|-------|
| VIN         | 19V Adapter power supply                              | ON | ON  | ON    |
| BATT+       | 12V Battery power supply                              | ON | ON  | ON    |
| B+          | AC or battery power rail for power circuit. (19V/12V) | ON | ON  | ON    |
| +RTCVCC     | RTC Battery Power                                     | ON | ON  | ON    |
| +1.0VALW    | +1.0v Always power rail                               | ON | ON  | ON    |
| +1.8VALW    | +1.8v Always power rail                               | ON | ON  | ON    |
| +3VALW      | +3.3v Always power rail                               | ON | ON  | ON    |
| +5VALW      | +5.0v Always power rail                               | ON | ON  | ON    |
| +1.35V      | +1.35V power rail for DDR3L                           | ON | ON  | OFF   |
| +3V_PTP     | +3.3V power rail for PTP                              | ON | ON  | OFF   |
| +SOC_VCC    | Core voltage for SOC                                  | ON | OFF | OFF   |
| +SOC_VNN    | GFX voltage for SOC                                   | ON | OFF | OFF   |
| +0.675VS    | +0.675V power rail for DDR3L Terminator               | ON | OFF | OFF   |
| +1.0VS      | +1.0v system power rail                               | ON | OFF | OFF   |
| +1.05VS     | +1.05v system power rail                              | ON | OFF | OFF   |
| +1.35VS     | +1.35v system power rail                              | ON | OFF | OFF   |
| +1.5VS      | +1.5v system power rail                               | ON | OFF | OFF   |
| +1.8VS      | +1.8v system power rail                               | ON | OFF | OFF   |
| +3VS        | +3.3v system power rail                               | ON | OFF | OFF   |
| +5VS        | +5.0v system power rail                               | ON | OFF | OFF   |

Note : ON\* means that this power plane is ON only with AC power available, otherwise it is OFF.

## Board ID / SKU ID Table for AD channel

|          |              |             |             |             |
|----------|--------------|-------------|-------------|-------------|
| Vcc      | 3.3V +/- 5%  |             |             |             |
| Ra/Rc/Re | 100K +/- 5%  |             |             |             |
| Board ID | Rb / Rd / Rf | VAD_BID min | VAD_BID typ | VAD_BID max |
| 0        | 0            | 0 V         | 0 V         | 0 V         |
| 1        | 12K +/- 5%   | 0.347 V     | 0.354 V     | 0.360 V     |
| 2        | 15K +/- 5%   | 0.423 V     | 0.430 V     | 0.438 V     |
| 3        | 20K +/- 5%   | 0.541 V     | 0.550 V     | 0.559 V     |
| 4        | 27K +/- 5%   | 0.691 V     | 0.702 V     | 0.713 V     |
| 5        | 33K +/- 5%   | 0.807 V     | 0.819 V     | 0.831 V     |
| 6        | 43K +/- 5%   | 0.978 V     | 0.992 V     | 1.006 V     |
| 7        | 56K +/- 5%   | 1.169 V     | 1.185 V     | 1.200 V     |
| 8        | 75K +/- 5%   | 1.398 V     | 1.414 V     | 1.430 V     |
| 9        | 100K +/- 5%  | 1.634 V     | 1.650 V     | 1.667 V     |
| 10       | 130K +/- 5%  | 1.849 V     | 1.865 V     | 1.881 V     |
| 11       | 160K +/- 5%  | 2.015 V     | 2.031 V     | 2.046 V     |
| 12       | 200K +/- 5%  | 2.185 V     | 2.200 V     | 2.215 V     |
| 13       | 240K +/- 5%  | 2.316 V     | 2.329 V     | 2.343 V     |

## BOARD ID Table

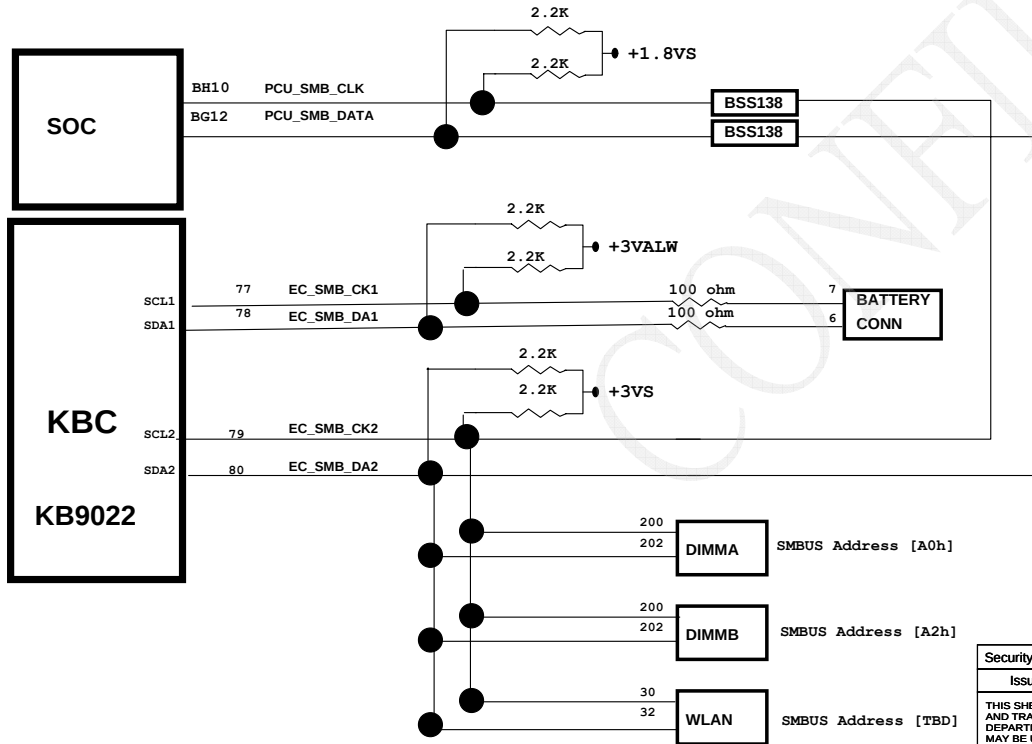
| Board ID | PCB Revision |
|----------|--------------|
| 0        |              |
| 1        | EVT          |
| 2        | DVT          |
| 3        | PVT          |
| 4        | Pre-MP       |
| 5        |              |
| 6        |              |

## 43 level BOM table

| 43 Level    | Description                       | BOM Structure                       |
|-------------|-----------------------------------|-------------------------------------|
| 4319SNBOL01 | SMT MB AB211 25WAL UMA N2920 HDMI | N2920@/9022@/EMC@/PCB@/1DMIC@/NTPM@ |
| 4319SNBOL02 | SMT MB AB211 25WAL UMA N3520 HDMI | N3520@/9022@/EMC@/PCB@/1DMIC@/NTPM@ |
| 4319SNBOL03 | SMT MB AB211 25WAL UMA N3530 HDMI | N3530@/9022@/EMC@/PCB@/1DMIC@/NTPM@ |
| 4319SNBOL04 | SMT MB AB211 25WAL UMA N2930 HDMI | N2930@/9022@/EMC@/PCB@/1DMIC@/NTPM@ |
| 4319SNBOL05 | SMT MB AB211 25WAL UMA N2820 HDMI | N2820@/9022@/EMC@/PCB@/1DMIC@/NTPM@ |
| 4319SNBOL06 | SMT MB AB211 25WAL UMA N2830 HDMI | N2830@/9022@/EMC@/PCB@/1DMIC@/NTPM@ |

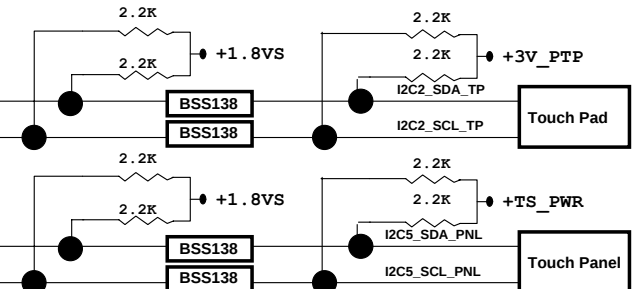
## BOM Option Table

| Item                  | BOM Structure |
|-----------------------|---------------|
| Unpop                 | @             |
| Connector             | CONN@         |
| EMC requirement       | EMC@          |
| EMC requirement depop | @EMC@         |
| KB9012                | 9012@         |
| KB9022                | 9022@         |
| Touch Screen I2C      | TSI@          |
| KB BL                 | BL@           |
| DMIC*1                | 1DMIC@        |
| DMIC*2                | 2DMIC@        |
| TPM                   | TPM@          |
| NTPM                  | NTPM@         |
| Debug SW              | DBG@          |

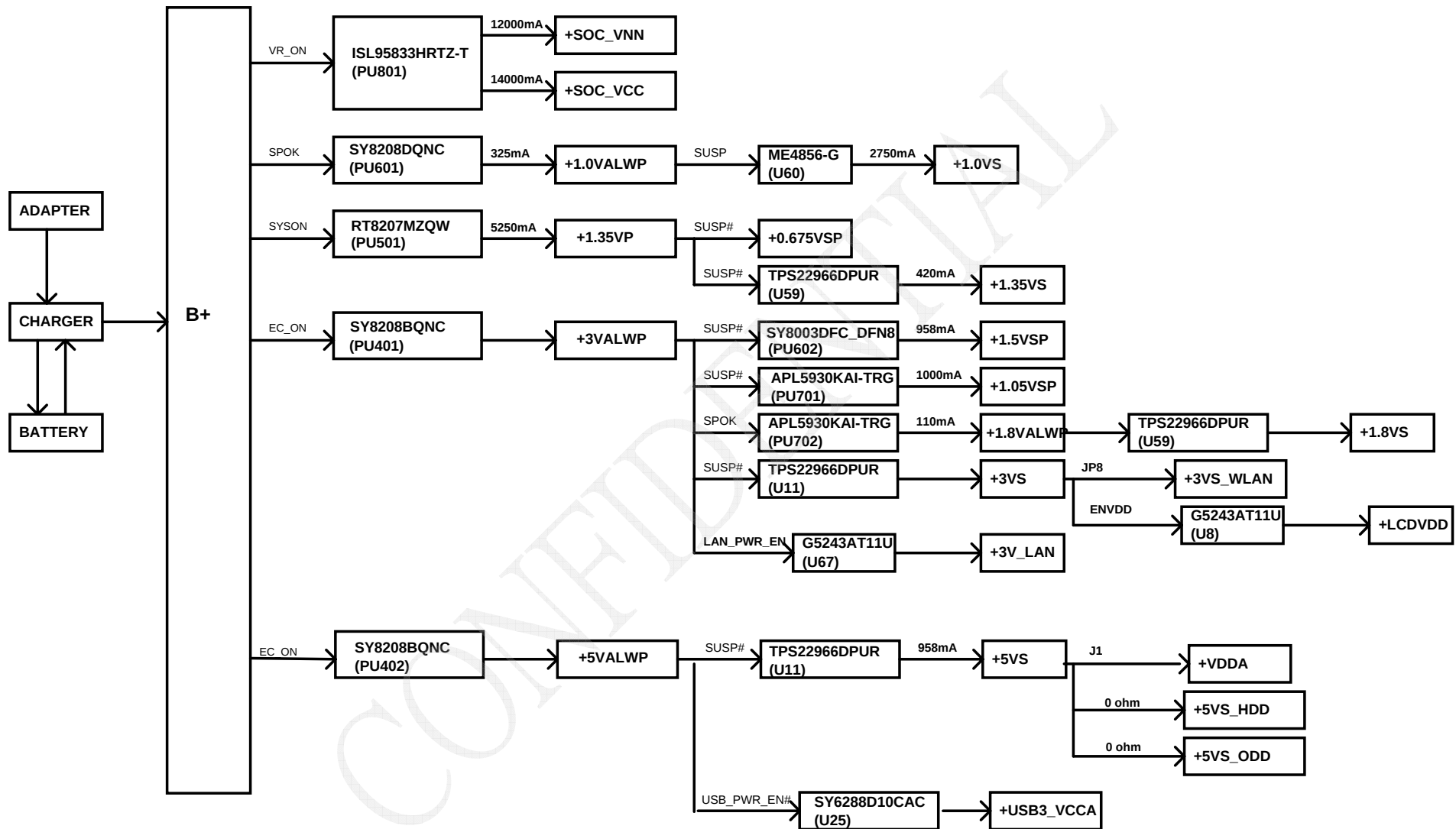


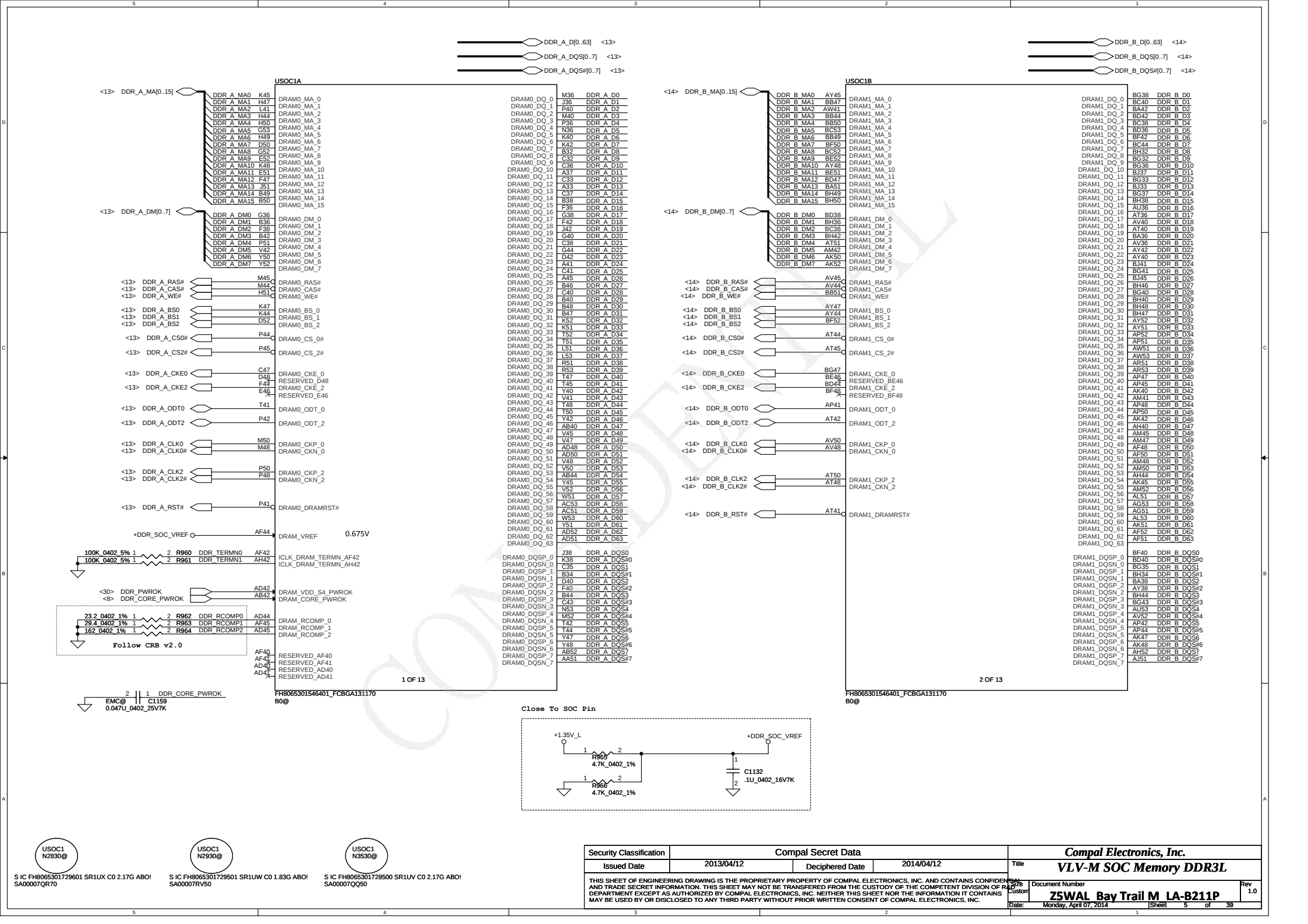
SOC

|      |               |
|------|---------------|
| BG25 | SOC_I2C2_DATA |
| BJ25 | SOC_I2C2_CLK  |
| BH28 | SOC_I2C5_DATA |
| BG28 | SOC_I2C5_CLK  |



| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 | Compal Electronics, Inc. |                                            |
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| Document Number Z5WAL Bay Trail M LA-B211P                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                 |                          | Date: Monday, April 07, 2014 Sheet 3 of 39 |





USOC1  
N2830@

S IC FH806530172901 SR1UX C0 2.17G ABOI  
SA00007QR70

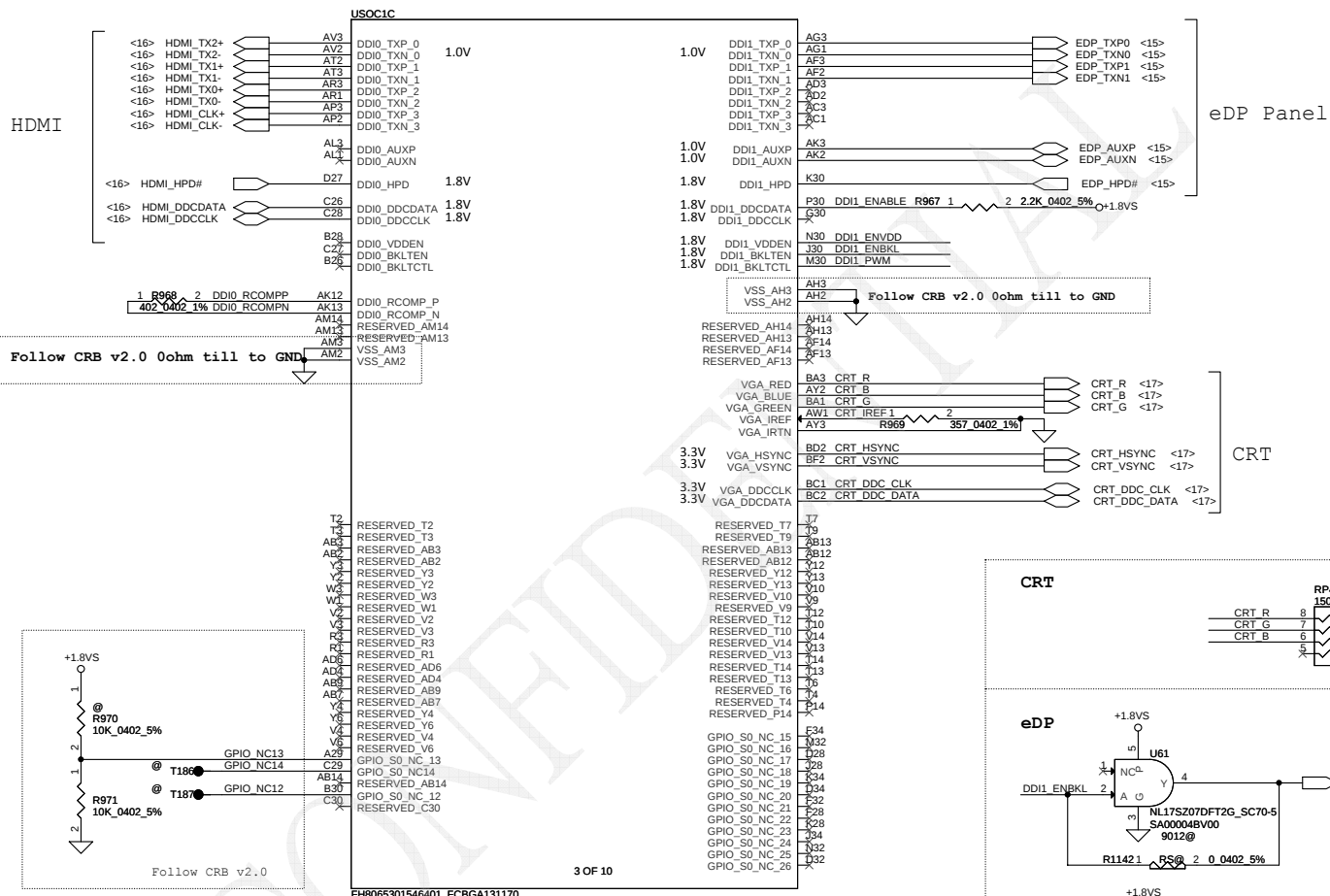
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N2930@

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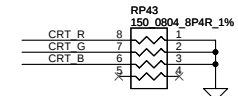
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N3530@

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SA00007QC50

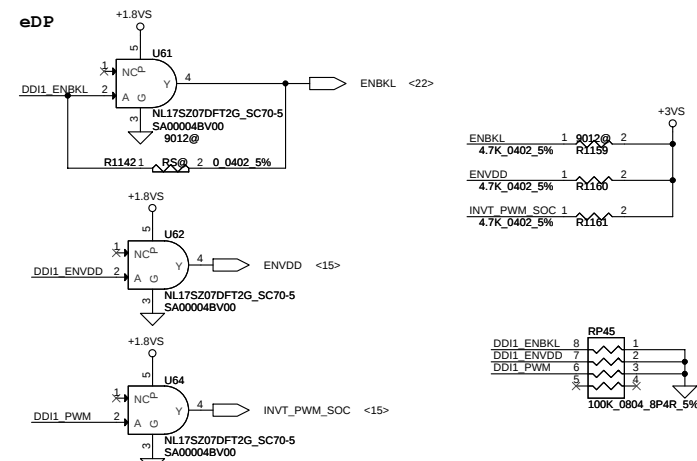
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Title                        |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|------------------------------|---------------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2013/04/12 | Deciphered Date    | 2014/04/12 | VLV-M SOC Memory DDR3L       |               |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date: Monday, April 07, 2014 | Sheet 5 of 39 |



**CRT**

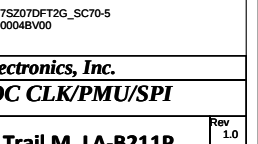
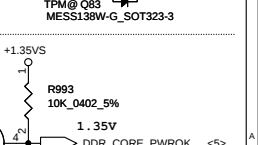
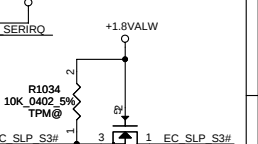
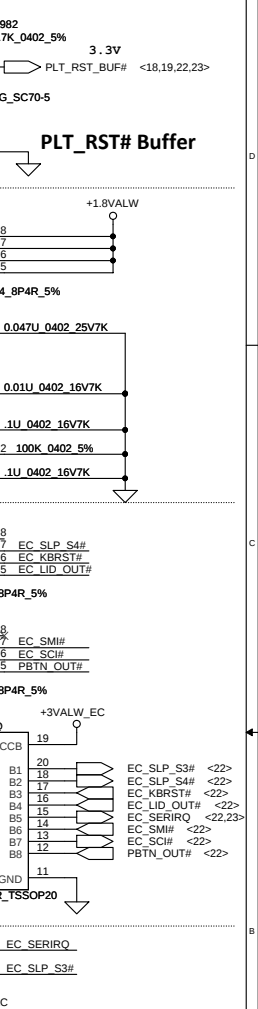
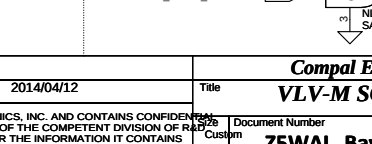
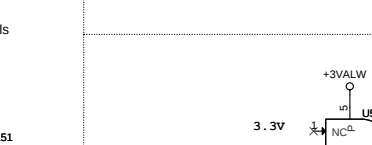
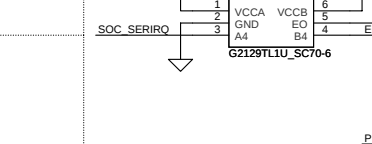
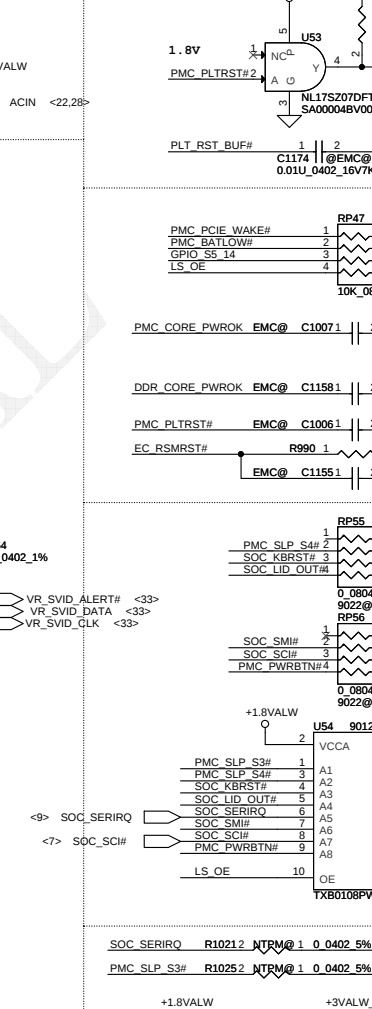
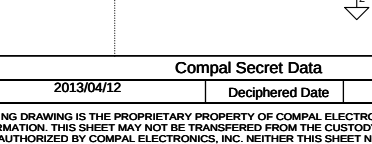
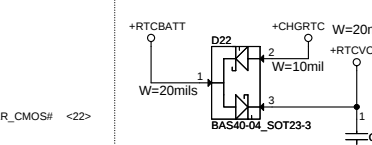
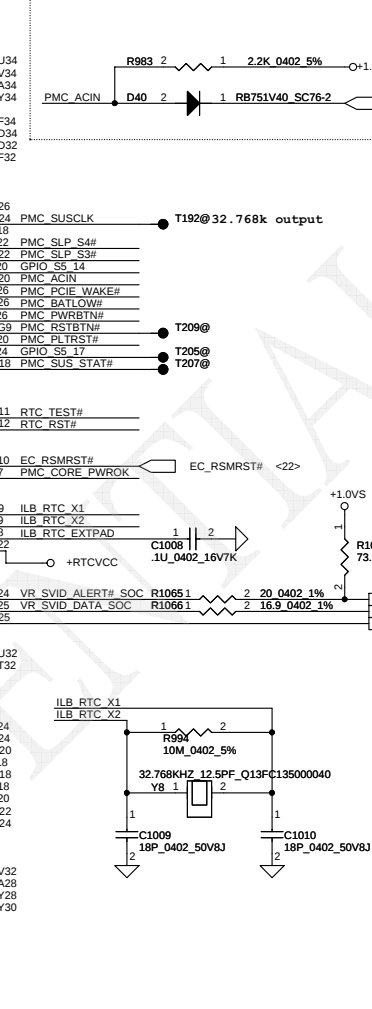
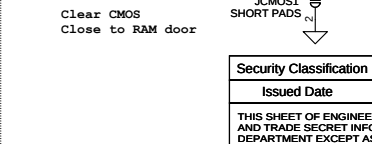
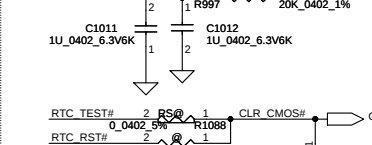
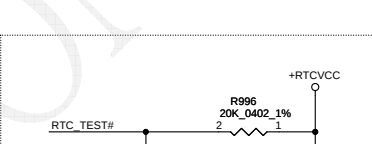
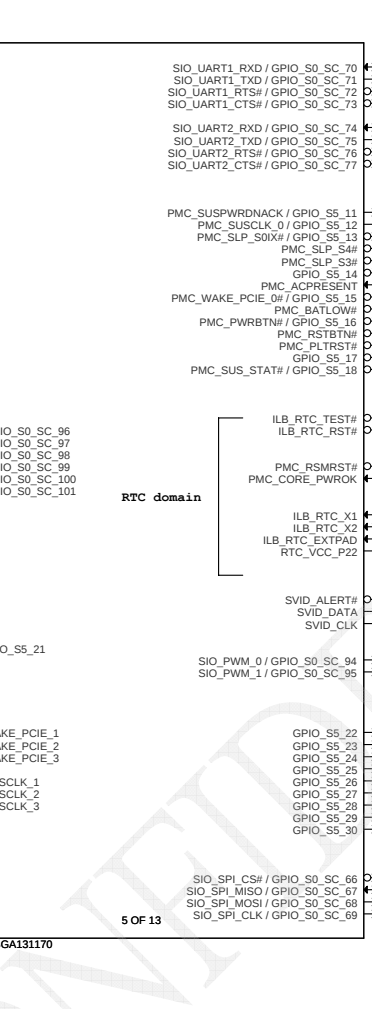
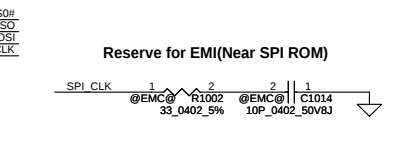
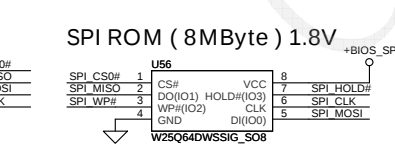
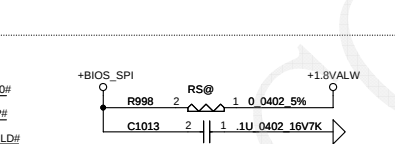
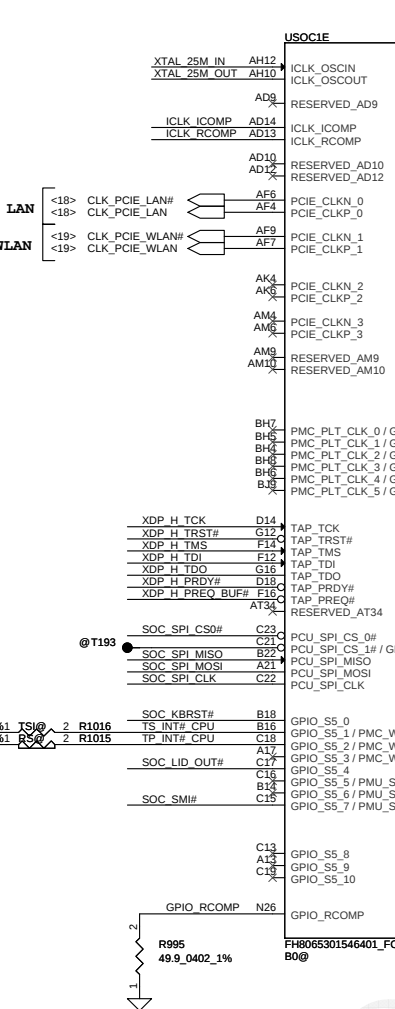
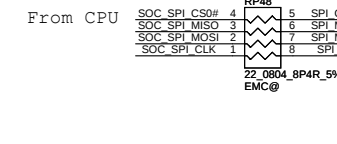
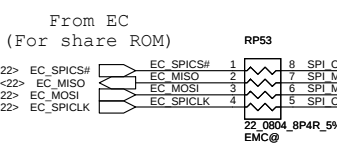
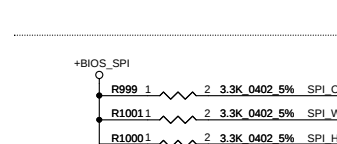
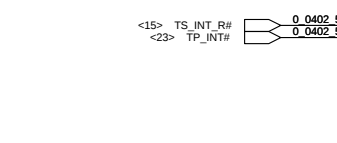
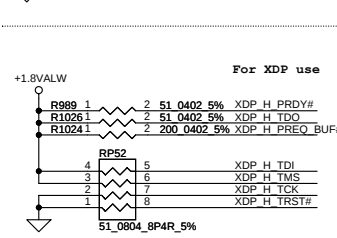
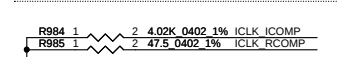
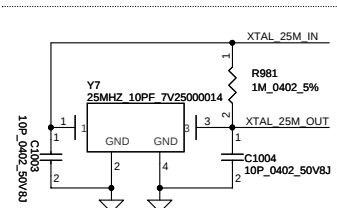


**eDP**



| Security Classification |  |  |  | Compal Secret Data |  |  |  | Compal Electronics, Inc.     |  |  |  |
|-------------------------|--|--|--|--------------------|--|--|--|------------------------------|--|--|--|
| Issued Date             |  |  |  | 2013/04/12         |  |  |  | Title                        |  |  |  |
|                         |  |  |  | Deciphered Date    |  |  |  | VLLV-M SOC Display           |  |  |  |
|                         |  |  |  | 2014/04/12         |  |  |  | Document Number              |  |  |  |
|                         |  |  |  |                    |  |  |  | Z5WAL Bay Trail M LA-B211P   |  |  |  |
|                         |  |  |  |                    |  |  |  | Rev                          |  |  |  |
|                         |  |  |  |                    |  |  |  | 1.0                          |  |  |  |
|                         |  |  |  |                    |  |  |  | Date: Monday, April 07, 2014 |  |  |  |
|                         |  |  |  |                    |  |  |  | Sheet 6 of 39                |  |  |  |





|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |       |  |                       |  |                            |  |               |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|--|-------|--|-----------------------|--|----------------------------|--|---------------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |  |       |  |                       |  |                            |  |               |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2013/04/12         |  | Deciphered Date |  | 2014/04/12               |  | Title |  | VLV-M SOC CLK/PMU/SPI |  |                            |  |               |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |       |  | Customer              |  | Z5WAL Bay Trail M LA-B211P |  | 1.0           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |       |  | Date                  |  | Monday, April 07, 2014     |  | Sheet 8 of 39 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |       |  |                       |  |                            |  |               |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |       |  |                       |  |                            |  |               |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |       |  |                       |  |                            |  |               |  |

### USB3.0 Port

### USB Hub

### Touch Panel

### Camera

NOTE: Ref checklist rev1.2 p.25

USB\_HSIC\_RCOMP must NOT float if they are not being used.

- <22,23> LPC\_AD0
- <22,23> LPC\_AD1
- <22,23> LPC\_AD2
- <22,23> LPC\_AD3
- <22,23> LPC\_FRAME#
- <22> LPC\_CLK\_EC
- <23> LPC\_CLK\_TPM
- <23> LPC\_CLK\_RUN#
- <8> SOC\_SERIRQ

ILB LPC\_CLK\_0 : Output of 25MHz,  
Need Check with EC

ILB LPC\_CLK\_1 is for CLK\_0 feedback.(Input)  
Set to Output for Normal Usage

### USOCIF

GPIO\_S5\_31  
GPIO\_S5\_32  
GPIO\_S5\_33  
GPIO\_S5\_34  
GPIO\_S5\_35  
GPIO\_S5\_36  
GPIO\_S5\_37  
GPIO\_S5\_38  
GPIO\_S5\_39

GPIO\_S5\_40  
GPIO\_S5\_41  
GPIO\_S5\_42  
GPIO\_S5\_43

USB\_DP0  
USB\_DN0

USB\_DP1  
USB\_DN1

USB\_DP2  
USB\_DN2

USB\_DP3  
USB\_DN3

ICLK\_USB\_TERM  
ICLK\_USB\_TERMN

USB\_OC\_0# / GPIO\_S5\_19  
USB\_OC\_1# / GPIO\_S5\_20

USB\_RCOMP  
USB\_RCOMP

USB\_PLL\_MON

USB\_HSIC0\_DATA  
USB\_HSIC0\_STROBE

USB\_HSIC1\_DATA  
USB\_HSIC1\_STROBE

USB\_HSIC\_RCOMP

LPC\_RCOMP / VGA\_RCOMP

ILB LPC\_AD\_0 / GPIO\_S0\_SC\_42

ILB LPC\_AD\_1 / GPIO\_S0\_SC\_43

ILB LPC\_AD\_2 / GPIO\_S0\_SC\_44

ILB LPC\_AD\_3 / GPIO\_S0\_SC\_45

ILB LPC\_FRAME# / GPIO\_S0\_SC\_46

ILB LPC\_CLK\_0 / GPIO\_S0\_SC\_47

ILB LPC\_CLK\_1 / GPIO\_S0\_SC\_48

ILB LPC\_CLK\_RUN# / GPIO\_S0\_SC\_49

ILB LPC\_SERIRQ / GPIO\_S0\_SC\_50

PCU\_SMB\_DATA / GPIO\_S0\_SC\_51

PCU\_SMB\_CLK / GPIO\_S0\_SC\_52

PCU\_SMB\_ALERT# / GPIO\_S0\_SC\_53

FH8065301546401\_FCBGA131170  
B0@

6 OF 13

RESERVED\_M10  
RESERVED\_M9

RESERVED\_P6  
RESERVED\_P7

RESERVED\_M7  
USB3\_REXT0

RESERVED\_P10  
RESERVED\_P12

RESERVED\_M4  
RESERVED\_M6

USB3\_RXP0  
USB3\_RXN0

USB3\_TXP0  
USB3\_TXN0

RESERVED\_H8  
RESERVED\_H7

RESERVED\_H4  
RESERVED\_H5

GPIO\_S0\_SC\_55  
GPIO\_S0\_SC\_56

GPIO\_S0\_SC\_57 / PCU\_UART\_TXD

GPIO\_S0\_SC\_58  
GPIO\_S0\_SC\_59

GPIO\_S0\_SC\_60  
GPIO\_S0\_SC\_61 / PCU\_UART\_RXD

ILB\_8254\_SPKR / GPIO\_S0\_SC\_54

SIO\_I2C0\_DATA / GPIO\_S0\_SC\_78  
SIO\_I2C0\_CLK / GPIO\_S0\_SC\_79

SIO\_I2C1\_DATA / GPIO\_S0\_SC\_80  
SIO\_I2C1\_CLK / GPIO\_S0\_SC\_81

SIO\_I2C2\_DATA / GPIO\_S0\_SC\_82  
SIO\_I2C2\_CLK / GPIO\_S0\_SC\_83

SIO\_I2C3\_DATA / GPIO\_S0\_SC\_84  
SIO\_I2C3\_CLK / GPIO\_S0\_SC\_85

SIO\_I2C4\_DATA / GPIO\_S0\_SC\_86  
SIO\_I2C4\_CLK / GPIO\_S0\_SC\_87

SIO\_I2C5\_DATA / GPIO\_S0\_SC\_88  
SIO\_I2C5\_CLK / GPIO\_S0\_SC\_89

SIO\_I2C6\_DATA / GPIO\_S0\_SC\_90  
SIO\_I2C6\_CLK / GPIO\_S0\_SC\_91 / SD3\_WP

GPIO\_S0\_SC\_92  
GPIO\_S0\_SC\_93

GPIO\_S0\_SC\_92  
GPIO\_S0\_SC\_93

GPIO\_S0\_SC\_92  
GPIO\_S0\_SC\_93

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GPIO\_S0\_SC\_93

GPIO\_S0\_SC\_92  
GPIO\_S0\_SC\_93

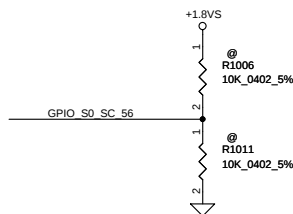
GPIO\_S0\_SC\_92  
GPIO\_S0\_SC\_93

GPIO\_S0\_SC\_92  
GPIO\_S0\_SC\_93

GPIO\_S0\_SC\_92  
GPIO\_S0\_SC\_93

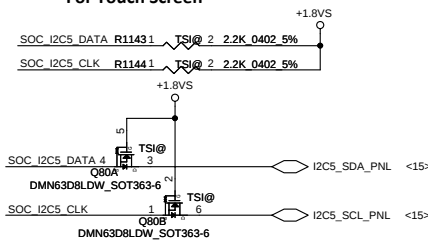
GPIO\_S0\_SC\_92  
GPIO\_S0\_SC\_93

### BIOS/EFI Top Swap

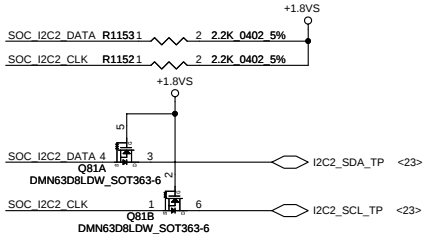


GPIO\_S0\_SC\_56: Top Swap( A16 Override )  
0 = Top address bit is unchanged  
1 = Top address bit is inverted  
Reference EDS2.0 Page 51

### For Touch Screen



### For Touch Pad

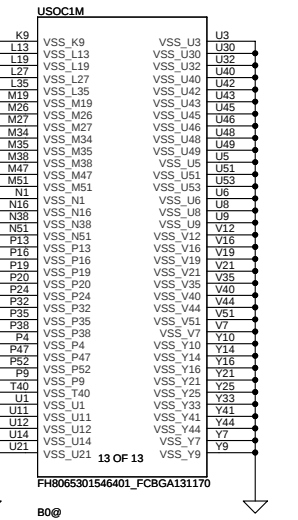
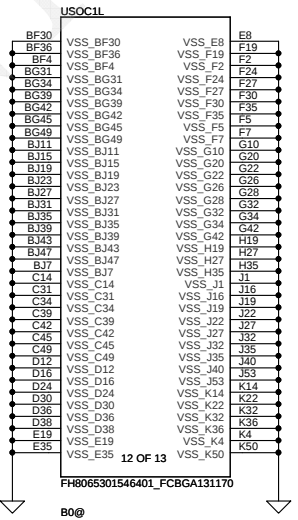
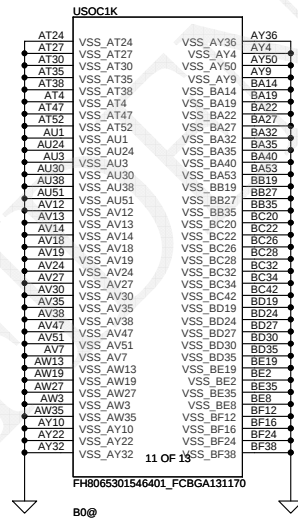
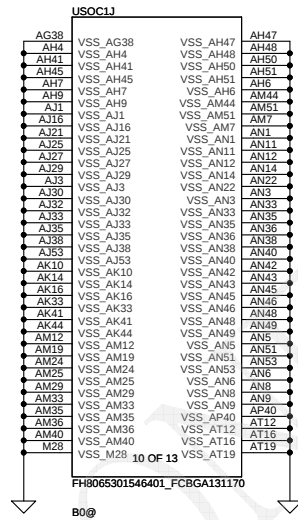
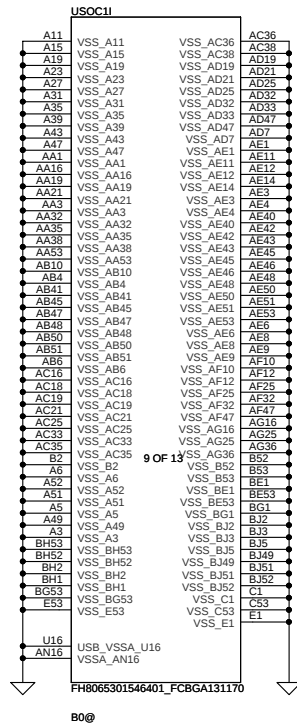


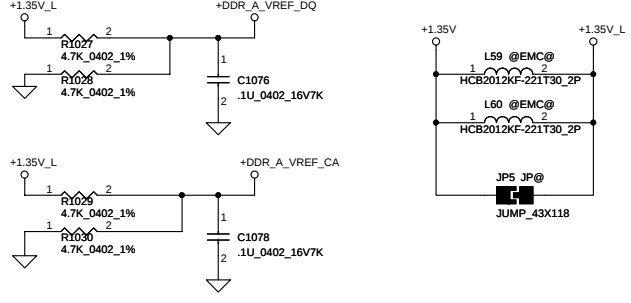
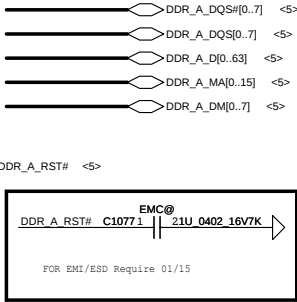
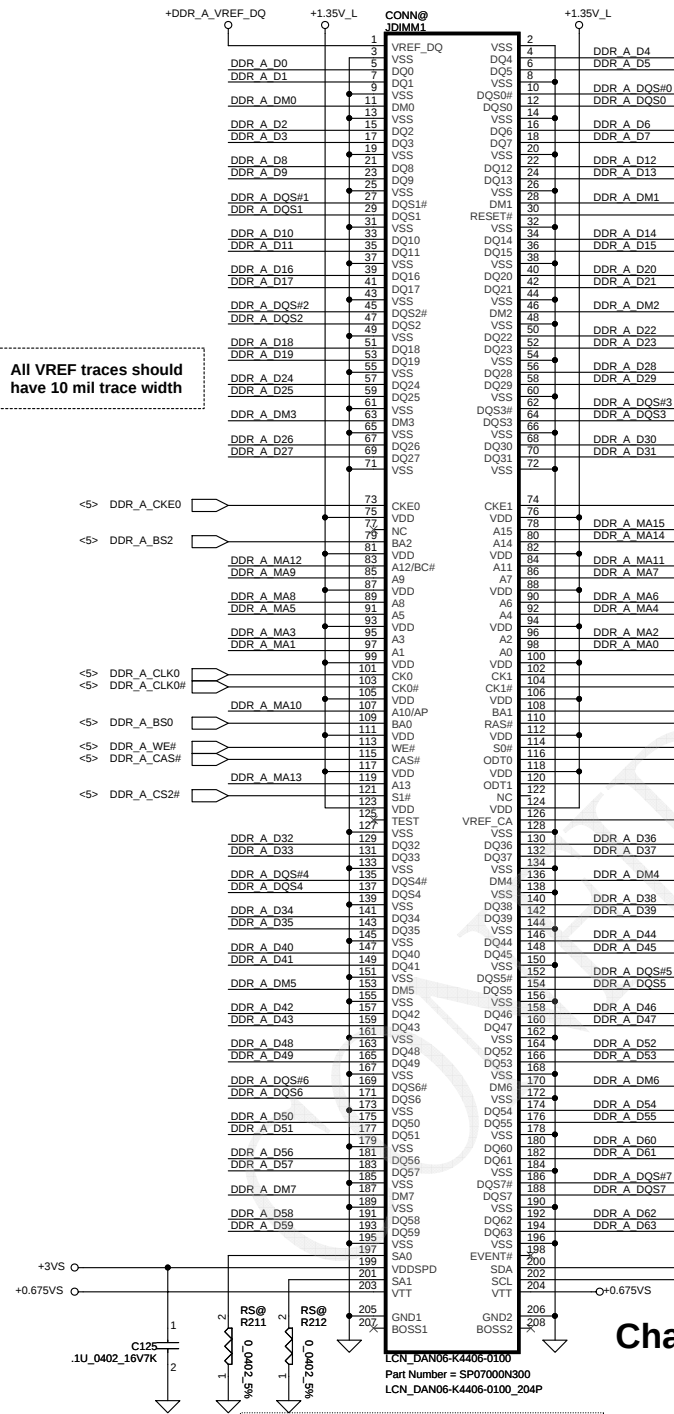
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2013/04/12 | Deciphered Date    | 2014/04/12 |
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| Compal Electronics, Inc.     |                 |
|------------------------------|-----------------|
| VLV-M SOC USB/LPC/SMBus      |                 |
| Title                        | Document Number |
| Customer                     | Rev 1.0         |
| Date: Monday, April 07, 2014 | Sheet 9 of 39   |

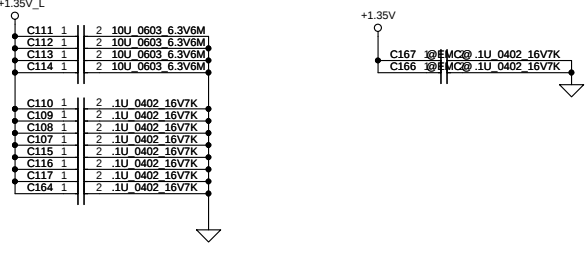








Layout Note:  
Place near JDIMM1



Layout Note:  
Place near JDIMM1.203,204

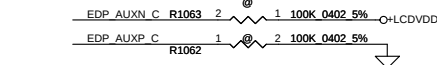
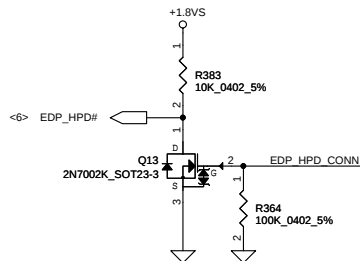
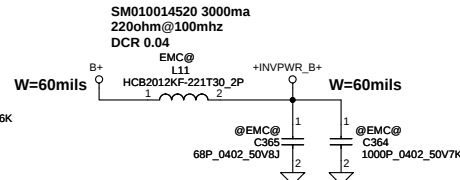
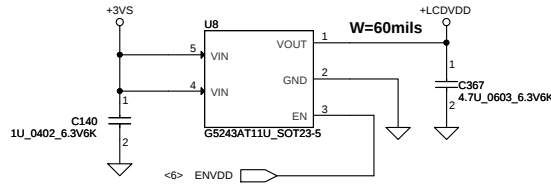
Channel A

<Address: SA1:SA0=00 (A0H)>  
DIMM\_1 STD H:4mm

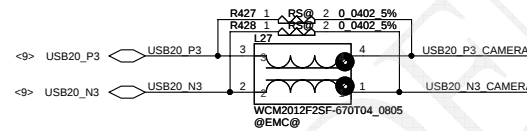
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  | Compal Secret Data         |  |  |  | Title           |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|----------------------------|--|--|--|-----------------|--|--|--|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  | 2013/04/12                 |  |  |  | 2014/04/12      |  |  |  |
| Deciphered Date                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  | 2014/04/12                 |  |  |  | 2014/04/12      |  |  |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  | Z5WAL Bay Trail M LA-B211P |  |  |  | Rev 1.0         |  |  |  |
| Date: Monday, April 07, 2014                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  | Sheet 13 of 39             |  |  |  |                 |  |  |  |



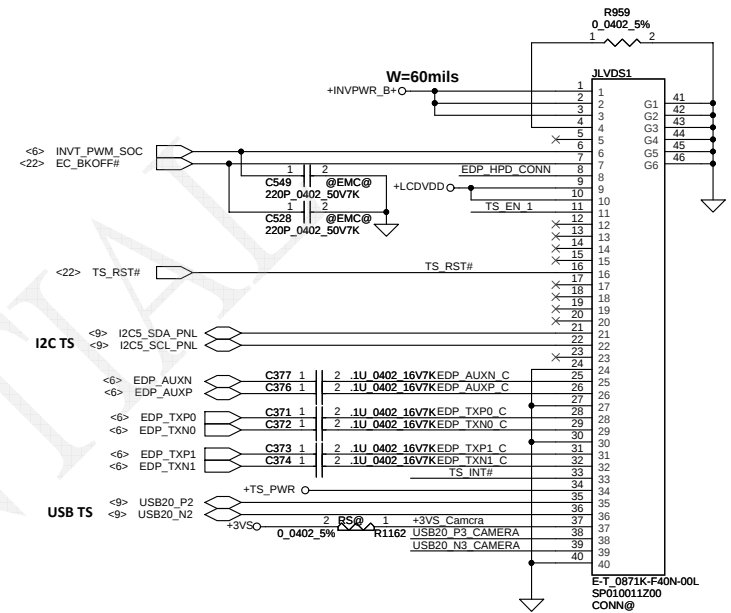
## LCD POWER CIRCUIT



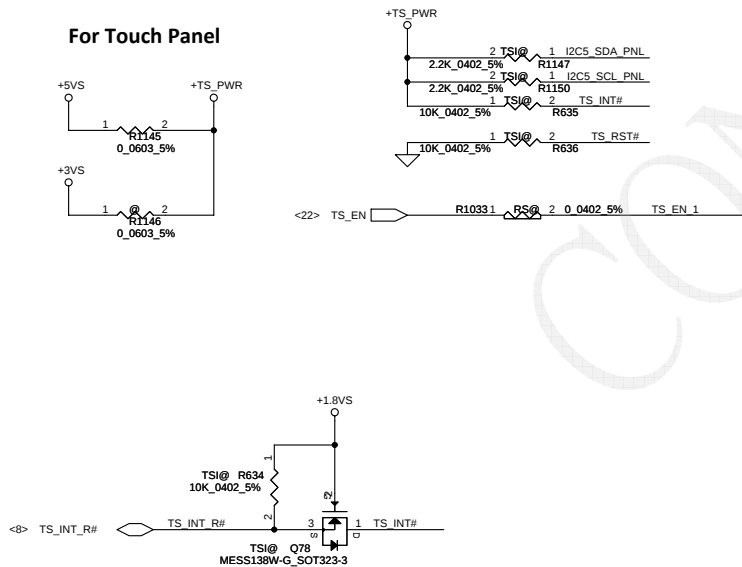
Intel recommends having a pull-up resistor of 100 kΩ for AUXN and a pull-down resistor of 100 kΩ for AUXP between the AC capacitor and the connector, to assist source detection by the sink device.



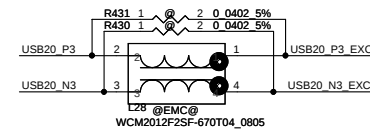
## LCD/ LED PANEL Conn.



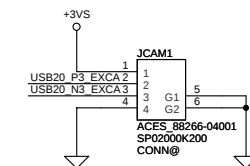
## For Touch Panel



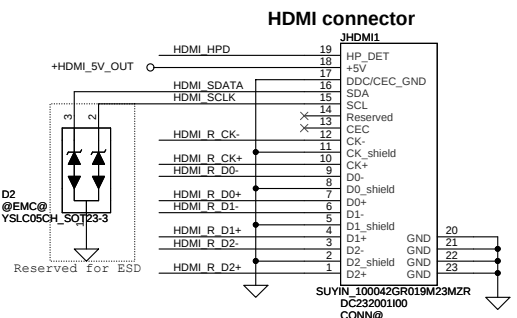
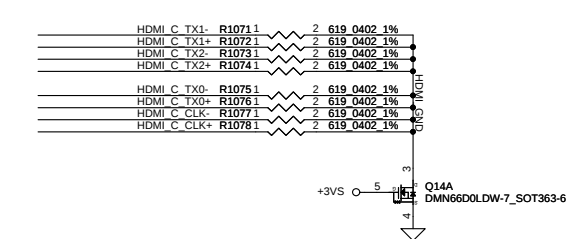
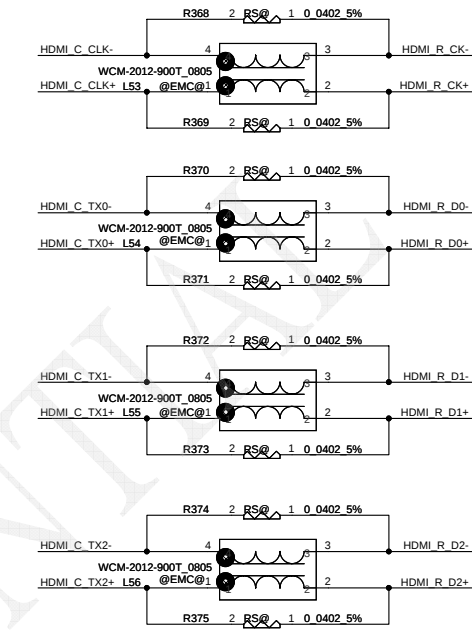
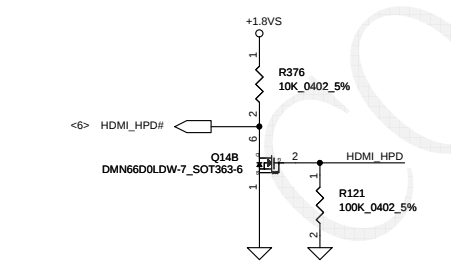
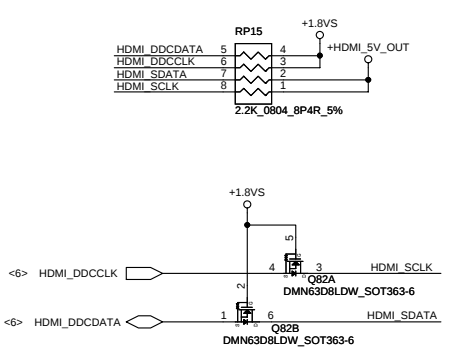
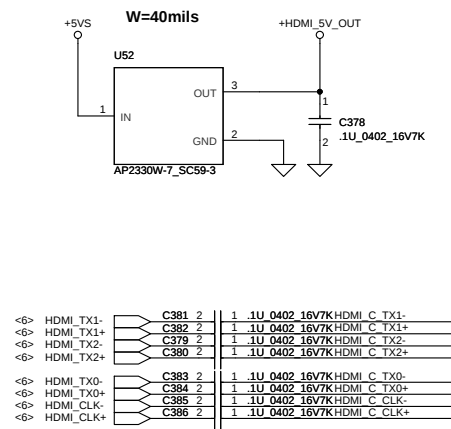
## Camera reserve



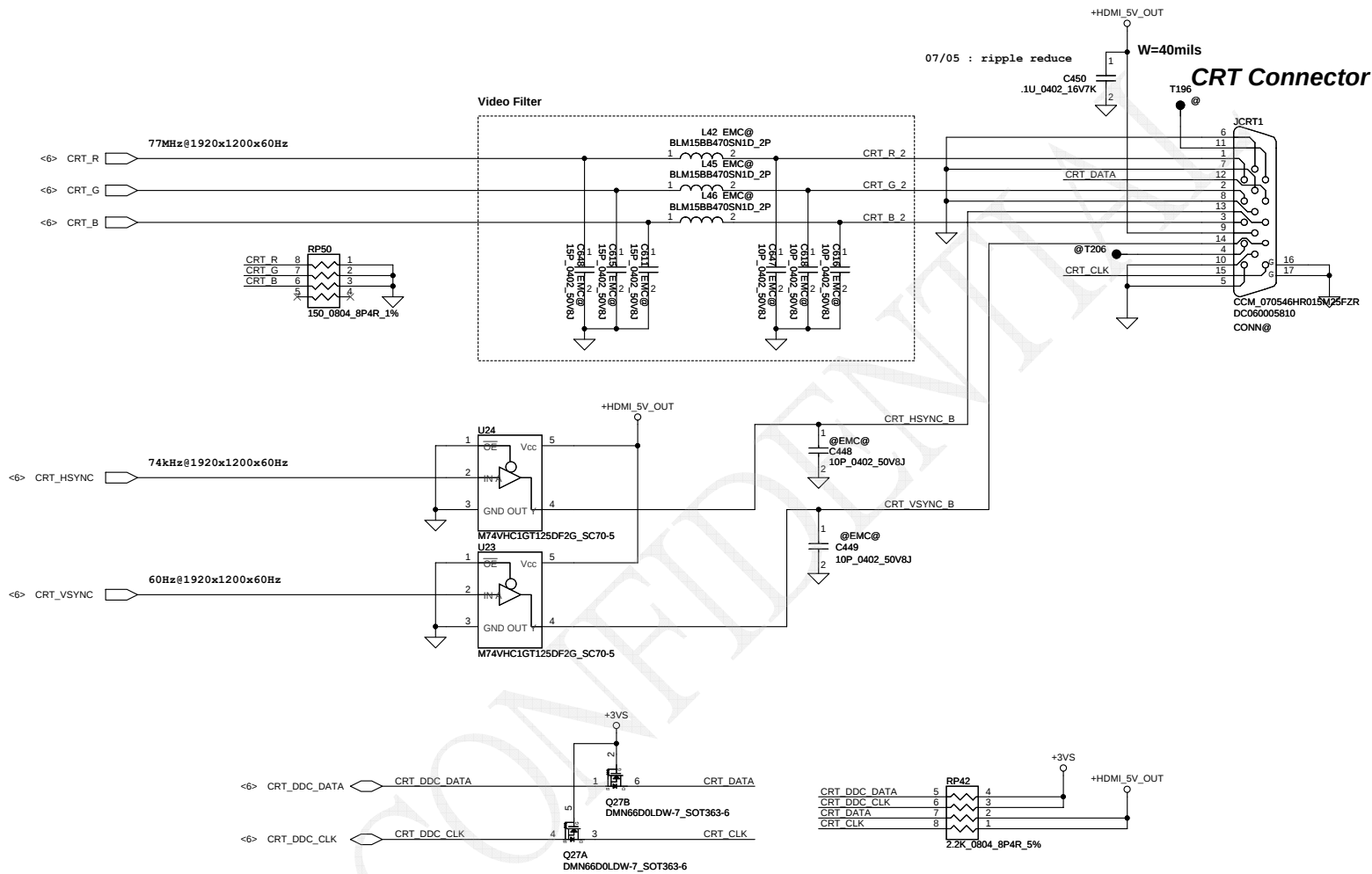
## pin define,need to confirm



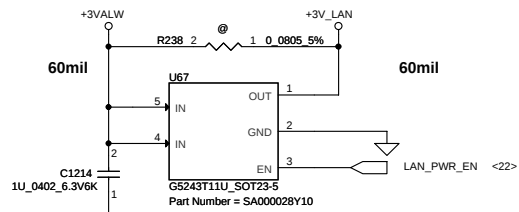
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |                              |  |                |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|--|------------------------------|--|----------------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |  |                              |  |                |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Document Number              |  | Rev            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Z5WAL Bay Trail M LA-B211P   |  |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Date: Monday, April 07, 2014 |  | Sheet 15 of 39 |  |



| Security Classification |  |  |  | Compal Secret Data         |  |  |  | Compal Electronics, Inc. |  |  |  |
|-------------------------|--|--|--|----------------------------|--|--|--|--------------------------|--|--|--|
| Issued Date             |  |  |  | 2013/04/12                 |  |  |  | 2014/04/12               |  |  |  |
| Deciphered Date         |  |  |  | 2014/04/12                 |  |  |  | 2014/04/12               |  |  |  |
| Title                   |  |  |  | HDMI CONN.                 |  |  |  | HDMI CONN.               |  |  |  |
| Document Number         |  |  |  | Z5WAL Bay Trail M LA-B211P |  |  |  | Rev 1.0                  |  |  |  |
| Date                    |  |  |  | Monday, April 07, 2014     |  |  |  | Sheet 16 of 39           |  |  |  |



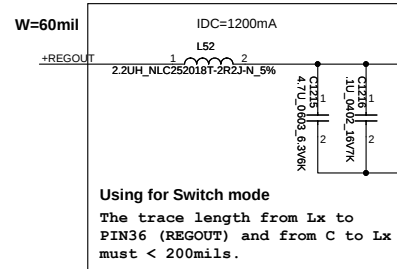
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |                 |  |                            |  |                |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|-----------------|--|--------------------------|--|-----------------|--|----------------------------|--|----------------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  |                 |  | Compal Electronics, Inc. |  |                 |  |                            |  |                |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 2013/04/12         |  | Deciphered Date |  | 2014/04/12               |  | Title           |  |                            |  |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | CRT CONN.       |  |                            |  |                |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Customer        |  | Z5WAL Bay Trail M LA-B211P |  | 1.0            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  | Date:           |  | Monday, April 07, 2014     |  | Sheet 17 of 39 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |                 |  |                            |  |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                 |  |                          |  |                 |  |                            |  |                |  |



**From EC**

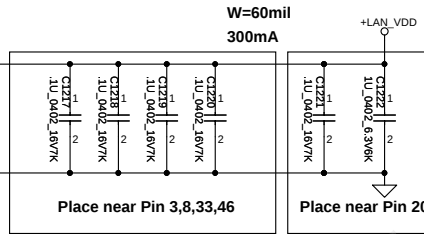
High active.  
EN threshold voltage min:1.2V typ:1.6V max:2.0V  
Current limit threshold 1.5-2.8A

**+3V\_LAN Rising time must >0.5ms and <100ms**



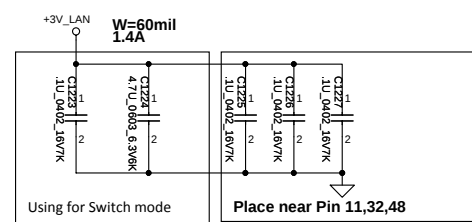
**Using for Switch mode**

The trace length from Lx to PIN36 (REGOUT) and from C to Lx must < 200mils.



Place near Pin 3,8,33,46

Place near Pin 20

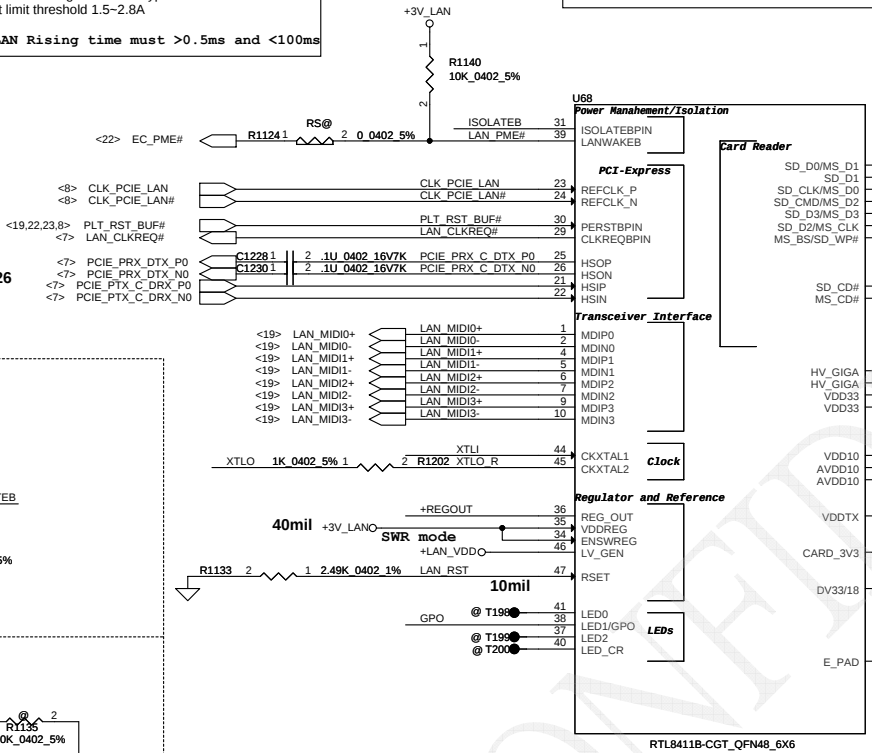


**Using for Switch mode**

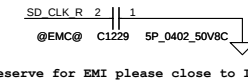
The trace length from C to PIN35(VDDREG) must < 200mils.

Place near Pin 11,32,48

**C1228,C1230**  
Place near Pin 25,26



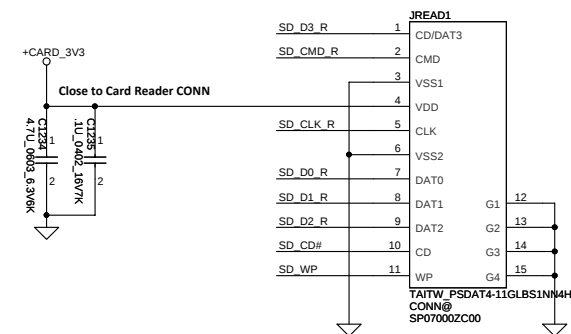
Internal pull high



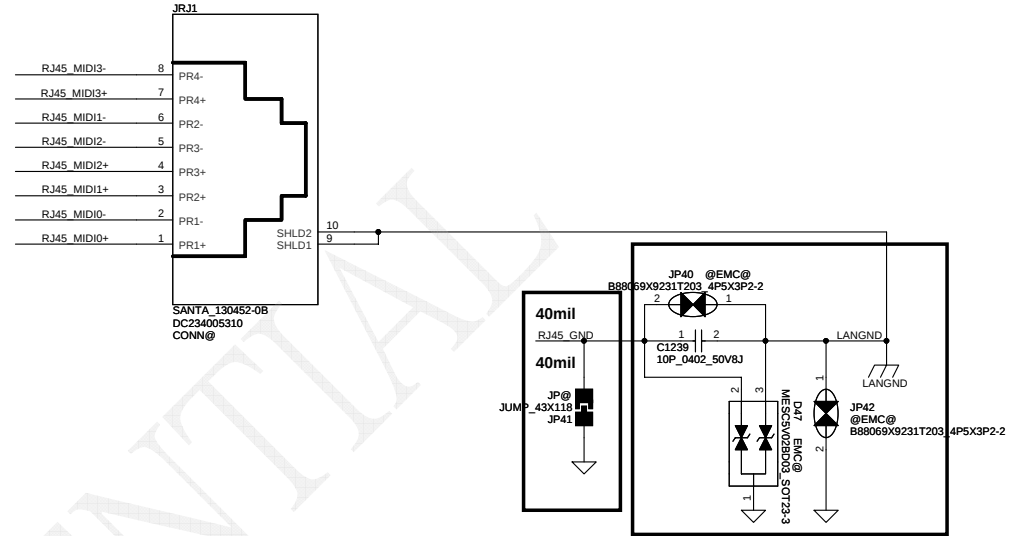
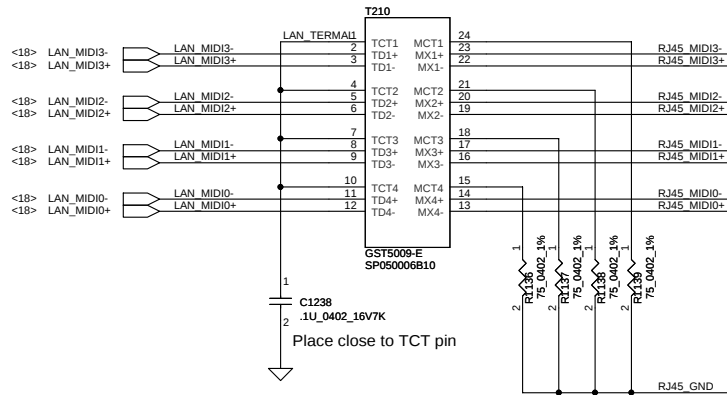
Reserve for EMI please close to IC

|               | Write protect (Lock) | Write protect (Unlock) | Card Detect |
|---------------|----------------------|------------------------|-------------|
| Without Card  | Open                 | Open                   | Open        |
| Card Inserted | Open                 | Close                  | Close       |

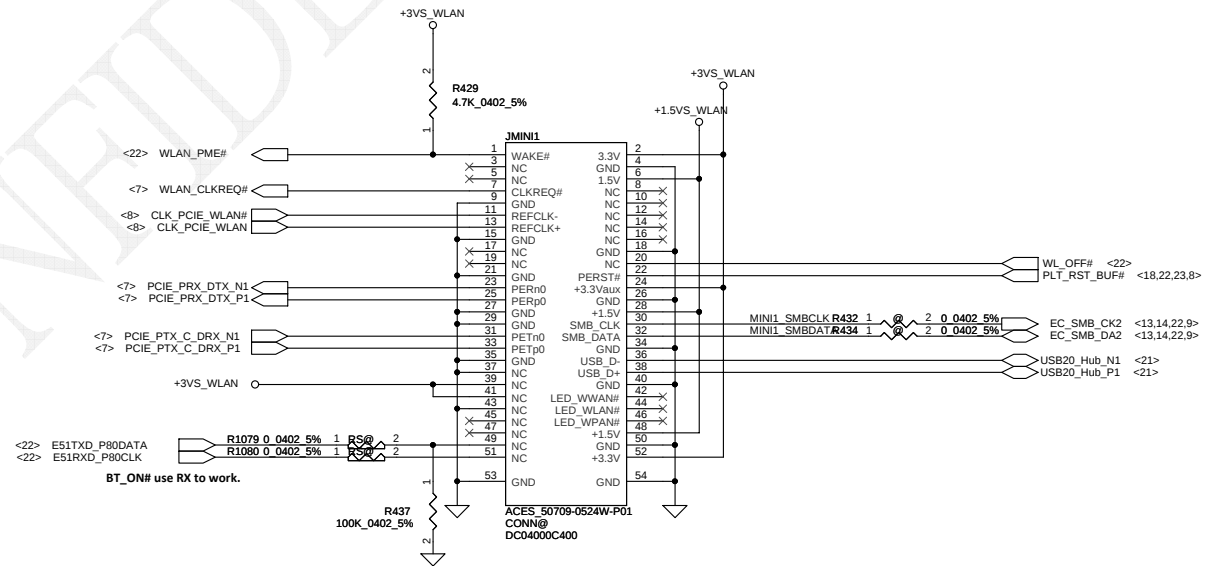
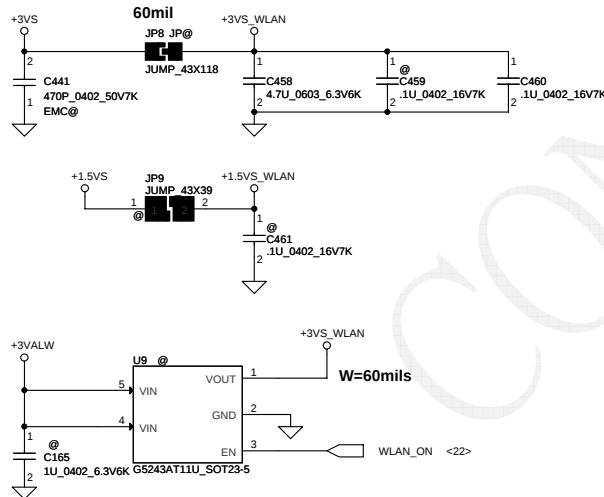
## Card Reader Connector



## LAN Connector

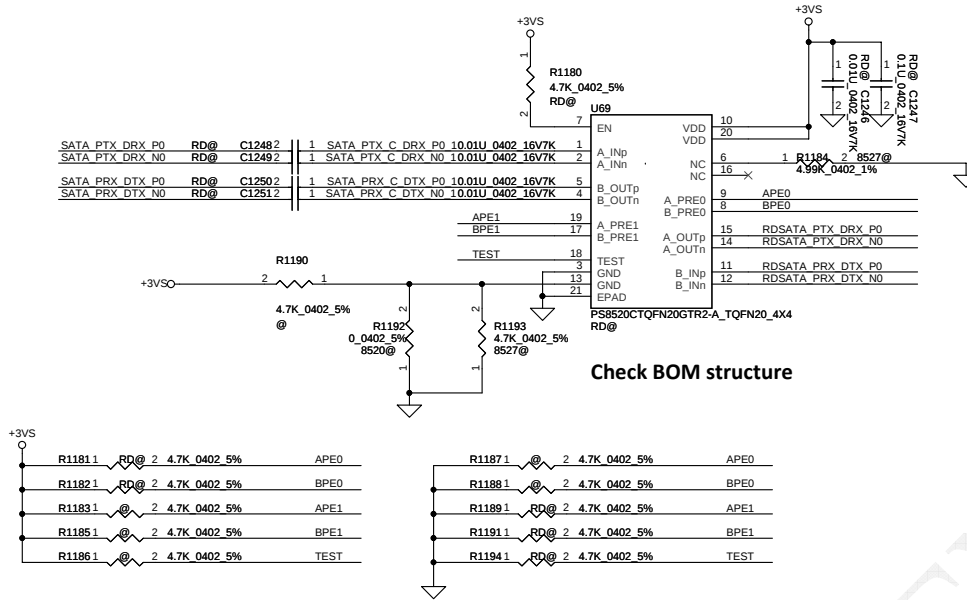


## For Wireless LAN

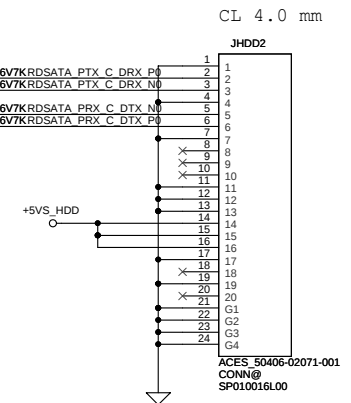


| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc. |                            |                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Customer                 | Z5WAL Bay Trail M LA-B211P |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Date                     | Monday, April 07, 2014     | Sheet 19 of 39 |

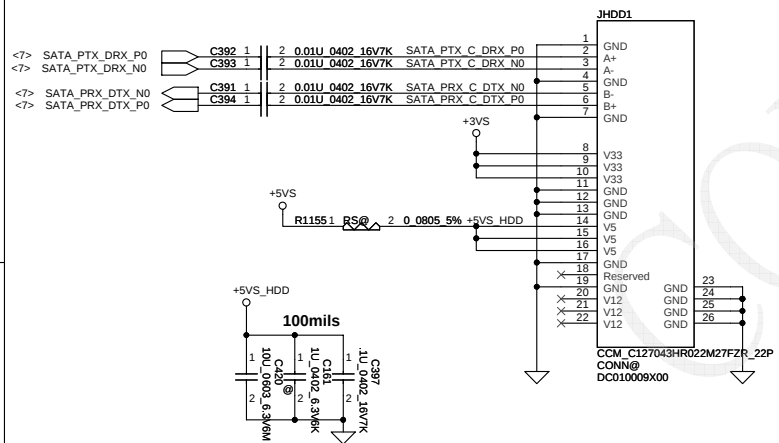
### SATA Re-Driver HDD2 Conn. Reserve



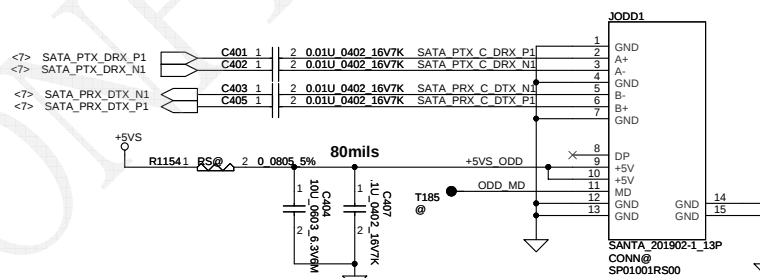
**SATA HDD2 Cable Conn.**



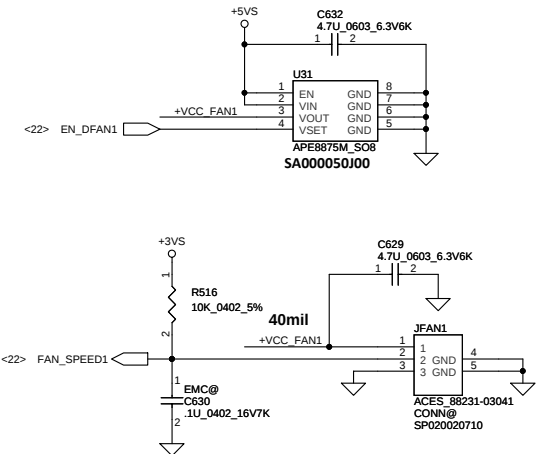
**SATA HDD1 Conn.**



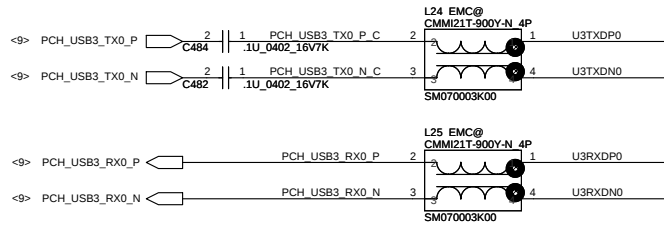
**SATA ODD Conn.**



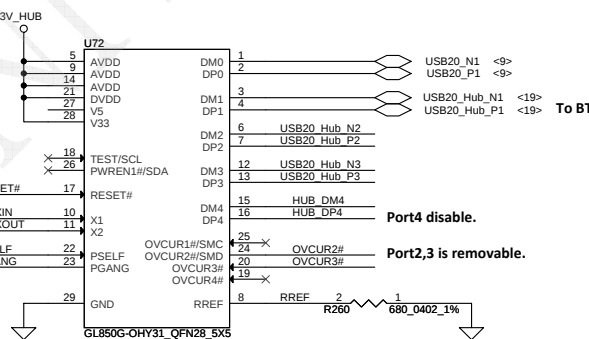
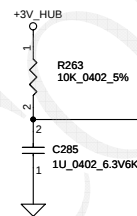
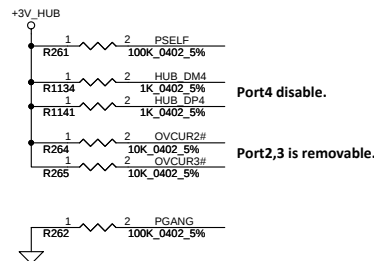
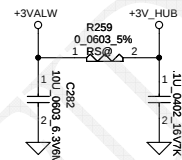
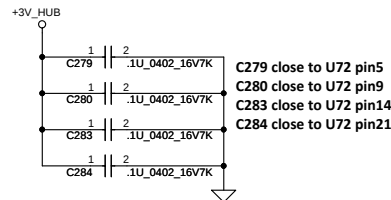
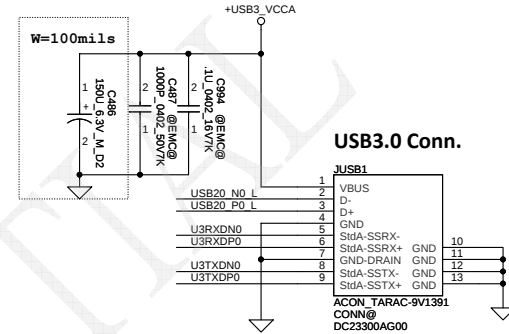
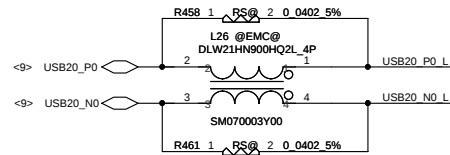
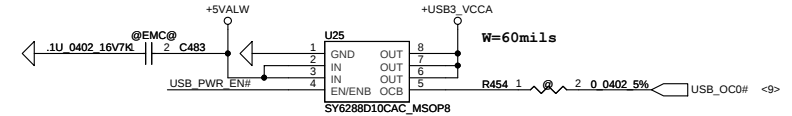
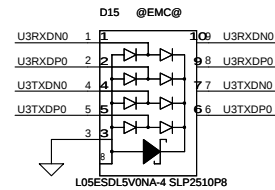
## FAN1 Conn



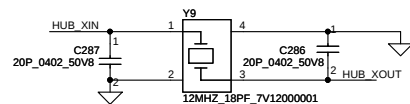
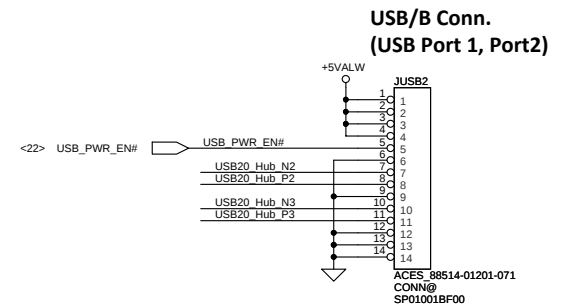
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            |                              |  |                |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------|------------------------------|--|----------------|--|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |            | Compal Secret Data |            | Compal Electronics, Inc.     |  |                |  |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2013/04/12 | Deciphered Date    | 2014/04/12 | Title<br>HDD/ODD/FAN         |  |                |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Z5WAL Bay Trail M LA-B211P   |  | 1.0            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                    |            | Date: Monday, April 07, 2014 |  | Sheet 20 of 39 |  |



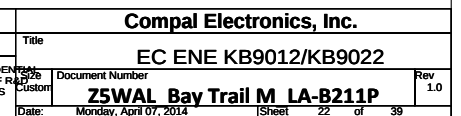
For ESD request



SA000066310, 5 IC GL850G-OHY32 QFN 28P USB2.0 HUB



| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Compal Secret Data |  | Title                        |                |
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| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | Deciphered Date    |  | Compal Electronics, Inc.     |                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  | Custom                       | 1.0            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  | Z5WAL Bay Trail M LA-B211P   |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  | Date: Monday, April 07, 2014 | Sheet 21 of 39 |

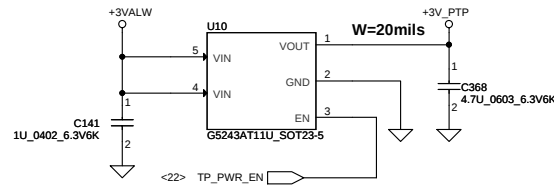


**JKB1**

| Pin | Signal |
|-----|--------|
| 1   | KSO0   |
| 2   | KSO1   |
| 3   | KSO2   |
| 4   | KSO3   |
| 5   | KSO4   |
| 6   | KSO5   |
| 7   | KSO6   |
| 8   | KSO7   |
| 9   | KSO8   |
| 10  | KSO9   |
| 11  | KSO10  |
| 12  | KSO11  |
| 13  | KSO12  |
| 14  | KSO13  |
| 15  | KSO14  |
| 16  | KSO15  |
| 17  | KSO16  |
| 18  | KSO17  |
| 19  | KSI0   |
| 20  | KSI1   |
| 21  | KSI2   |
| 22  | KSI3   |
| 23  | KSI4   |
| 24  | KSI5   |
| 25  | KSI6   |
| 26  | KSI7   |

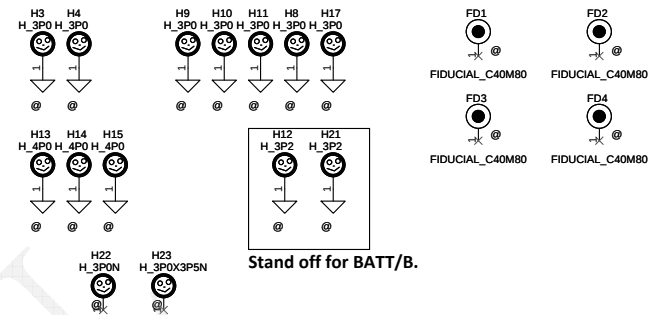
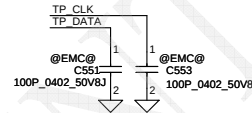
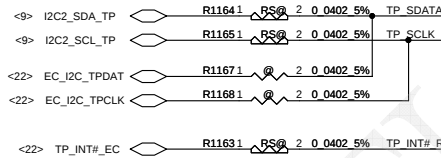
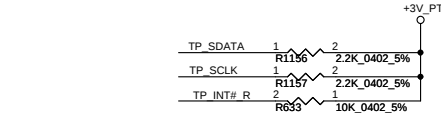
27 G1  
28 G2

**E.T. 6905 E26N-01R**  
CONN@  
SP01000J300



### TP module Conn.

The diagram illustrates the connection of the TP module. The CVILU\_CF31081D0R4-10-NH connector is connected to the TP module. The TP module has pins for +3V, PTP, R1170, R1171, C663, TP\_CLK, TP\_DATA, TP\_SDATA, TP\_SCL, TP\_INT#\_R, TP\_EN, TP\_INT#, and TP\_EN. The TP module is powered by +1.8VS and has a 2.2K resistor (R1166) connected to TP\_INT#. The TP module is a MESS138W-G\_SOT323-3.



LED6

<22> BATT\_BLUE\_LED# BATT\_BLUE\_LED# 1 2 1 R699 200\_0402\_1% +3VSWLW

<22> BATT\_AMB\_LED# BATT\_AMB\_LED# 3 4 1 R698 390\_0402\_5%

LTST-C295TBKF-CA\_AMBER-BLUE

LED7

PWR\_LED# 1 2 1 R700 200\_0402\_1%

<22> PWR\_SUSP\_LED# PWR\_SUSP\_LED# 3 4 1 R701 390\_0402\_5%

LTST-C295TBKF-CA\_AMBER-BLUE

Diagram showing the connection for JFWR1 (Pin 1 to 8) to the ACES\_51524-0060N-001 SP010014M10 CONN® connector. The connections are as follows:

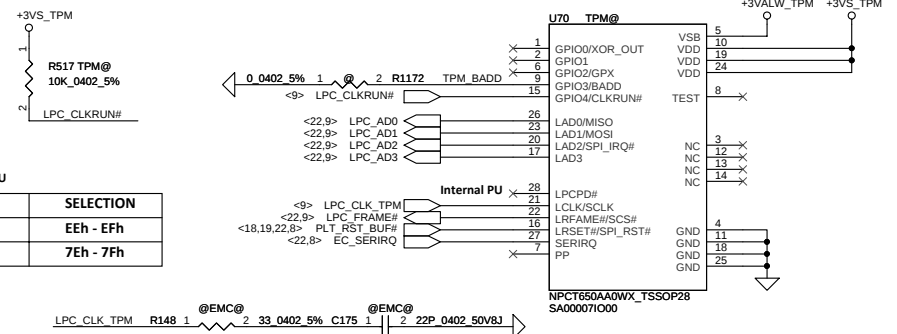
- Pin 1: 3V3LW
- Pin 2: 3V3LP
- Pin 3: LID\_SW#
- Pin 4: PWR\_LED#
- Pin 5: ON/OFFBTN#
- Pin 6: G1
- Pin 7: G2
- Pin 8: Ground

**ON/OFF BTN  
Test only**

The schematic shows two 6P TJE-532QR5 switches, SW1 and SW2. SW1 is connected to a +3VLP supply. The output of SW1 is connected to a network of capacitors (C408, EMC@, .1U, .0402, 16V7K) and a resistor (R534, 100K\_0402\_5%). The output of the network is labeled ON/OFFBTN# and is connected to a logic input labeled ON/OFFBTN# <2>.

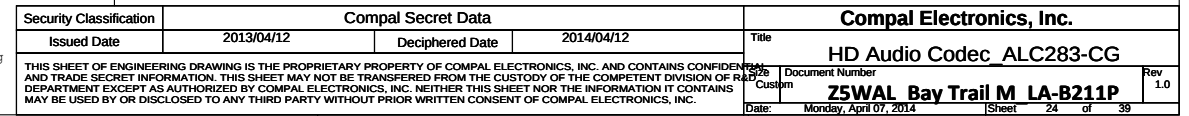
[illegible]

| Internal PU |           |
|-------------|-----------|
| BADD        | SELECTION |
| 0           | EEh - EFh |
| * 1         | 7Eh - 7Fh |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            |                          |                                   |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|--------------------------|-----------------------------------|----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc. |                                   |                |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2013/04/12         | Deciphered Date | 2014/04/12 | Title                    | KB/TP/LED/TPM/Screw Hole          |                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Date                     | <b>Z5WAL Bay Trail M LA-B211P</b> | 1.0            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Created                  | Monday, April 07, 2014            | Sheet 23 of 39 |

## M01000EJ00 3000ma 220ohm@100mhz DCR 0.04

[illegible][illegible]

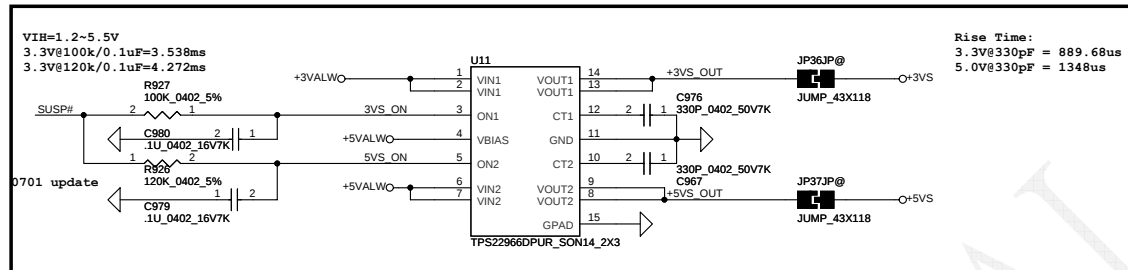
The schematic diagram illustrates the audio output stage of the SINGA\_2S13080-00111F DC23000B300 board. It is divided into two main sections: the top section shows the HP output stage, and the bottom section shows the HP plug and the headphone jack.

**Top Section: HP Output Stage**

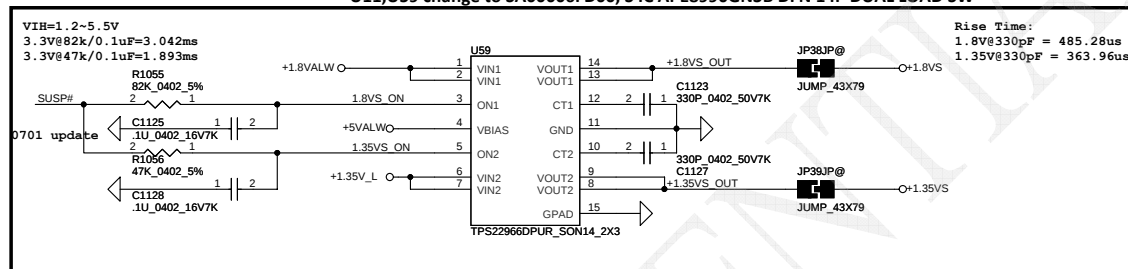
- Inputs:** HPOUT L 1, HPOUT R 1, HPOUT L 2, HPOUT R 2.
- Resistors:** R1107 (2.2K\_0402\_5%), R1108 (2.2K\_0402\_5%), R1110 (60.4\_0603\_1%), R1111 (60.4\_0603\_1%).
- Capacitors:** C1211 (330P\_0402\_50V7K), C1212 (330P\_0402\_50V7K).
- Inductors:** L57 EMC@, L58 EMC@.
- Other Components:** D45 EMC@, D46 EMC@, D47 EMC@, D48 EMC@, D49 EMC@, D50 EMC@, D51 EMC@, D52 EMC@, D53 EMC@, D54 EMC@, D55 EMC@, D56 EMC@, D57 EMC@, D58 EMC@, D59 EMC@, D60 EMC@, D61 EMC@, D62 EMC@, D63 EMC@, D64 EMC@, D65 EMC@, D66 EMC@, D67 EMC@, D68 EMC@, D69 EMC@, D70 EMC@, D71 EMC@, D72 EMC@, D73 EMC@, D74 EMC@, D75 EMC@, D76 EMC@, D77 EMC@, D78 EMC@, D79 EMC@, D80 EMC@, D81 EMC@, D82 EMC@, D83 EMC@, D84 EMC@, D85 EMC@, D86 EMC@, D87 EMC@, D88 EMC@, D89 EMC@, D90 EMC@, D91 EMC@, D92 EMC@, D93 EMC@, D94 EMC@, D95 EMC@, D96 EMC@, D97 EMC@, D98 EMC@, D99 EMC@, D100 EMC@.

**Bottom Section: HP Plug and Headphone Jack**

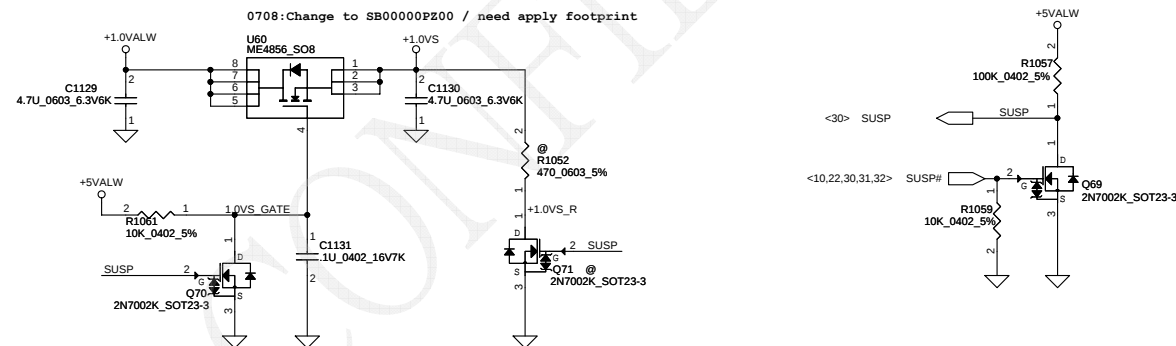
- HP Plug:** HP PLUG# (pins 1, 2, 3, 4, 5, 6, 7).
- Headphone Jack:** JHP1 (pins 1, 2, 3, 4, 5, 6, 7).
- Resistors:** R1109 (2.2K\_0402\_5%), R1110 (2.2K\_0402\_5%).
- Capacitors:** C1211 (330P\_0402\_50V7K), C1212 (330P\_0402\_50V7K).
- Inductors:** L57 EMC@, L58 EMC@.
- Other Components:** D45 EMC@, D46 EMC@, D47 EMC@, D48 EMC@, D49 EMC@, D50 EMC@, D51 EMC@, D52 EMC@, D53 EMC@, D54 EMC@, D55 EMC@, D56 EMC@, D57 EMC@, D58 EMC@, D59 EMC@, D60 EMC@, D61 EMC@, D62 EMC@, D63 EMC@, D64 EMC@, D65 EMC@, D66 EMC@, D67 EMC@, D68 EMC@, D69 EMC@, D70 EMC@, D71 EMC@, D72 EMC@, D73 EMC@, D74 EMC@, D75 EMC@, D76 EMC@, D77 EMC@, D78 EMC@, D79 EMC@, D80 EMC@, D81 EMC@, D82 EMC@, D83 EMC@, D84 EMC@, D85 EMC@, D86 EMC@, D87 EMC@, D88 EMC@, D89 EMC@, D90 EMC@, D91 EMC@, D92 EMC@, D93 EMC@, D94 EMC@, D95 EMC@, D96 EMC@, D97 EMC@, D98 EMC@, D99 EMC@, D100 EMC@.



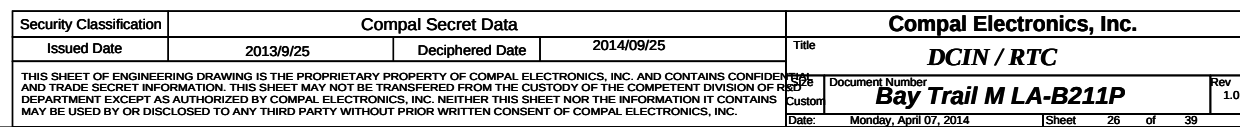
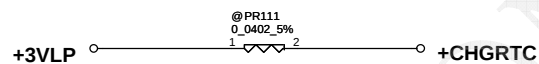
# U11,U59 change to SA00006FD00, S IC APE8990GN3B DFN 14P DUAL LOAD SW

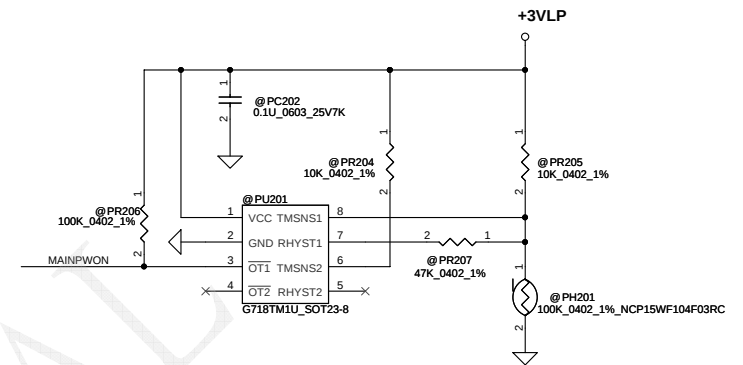
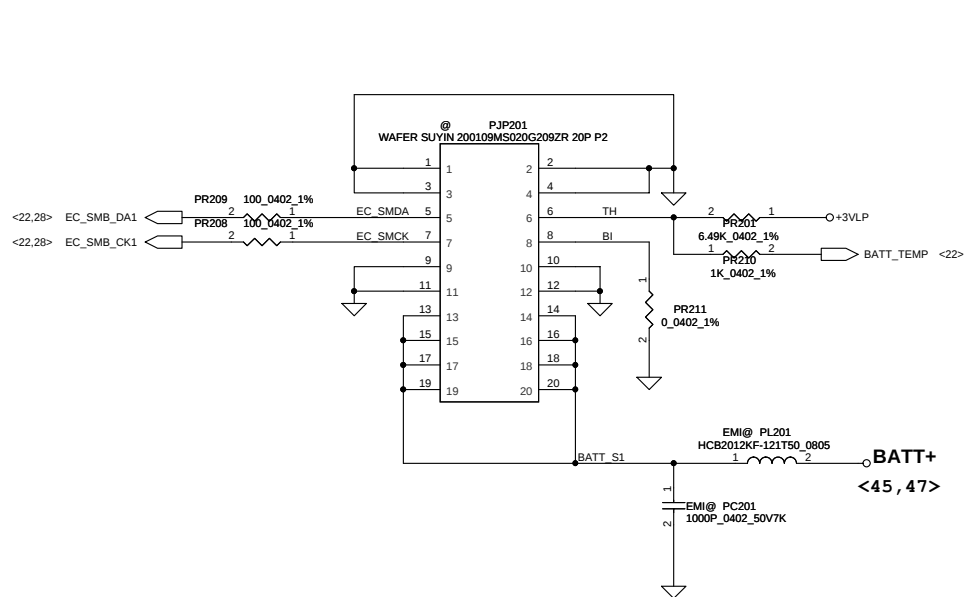


## +1.0VALW TO +1.0VS



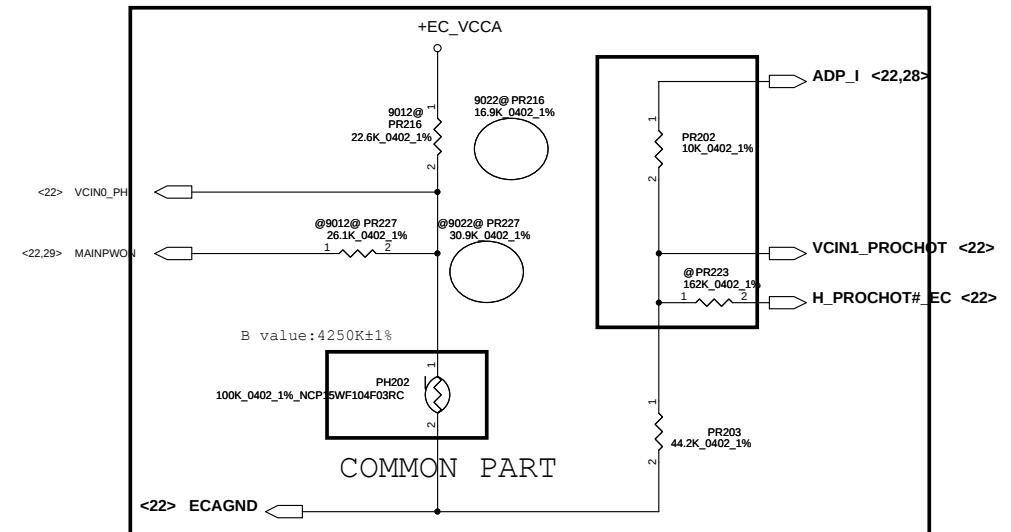
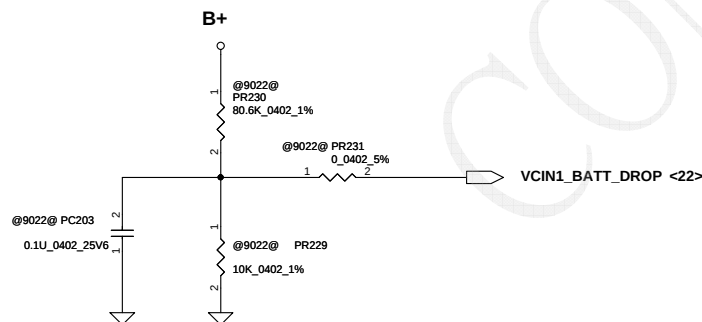
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 |            | Compal Electronics, Inc.     |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|------------|------------------------------|----------------|
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Z5WAL Bay Trail M LA-B211P   |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |            | Date: Monday, April 07, 2014 | Sheet 25 of 39 |



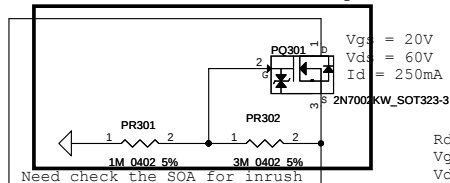


|       | For KB9012<br>OTP | For KB9022<br>OTP |
|-------|-------------------|-------------------|
| 92    | 1.2V              | 1.0V              |
| 56    | 1.2V              | 1.0V              |
| PR216 | 22.6K ohm         | 32.4K ohm         |
| PR227 | 26.1K ohm         | 30.9K ohm         |

| Need confirm the setting |              |              |
|--------------------------|--------------|--------------|
| For KB9012<br>sense 10mΩ | Active       | Recovery     |
|                          |              |              |
|                          |              |              |
| 40W                      | 42.8W, 0.43V | 34.4W, 0.43V |



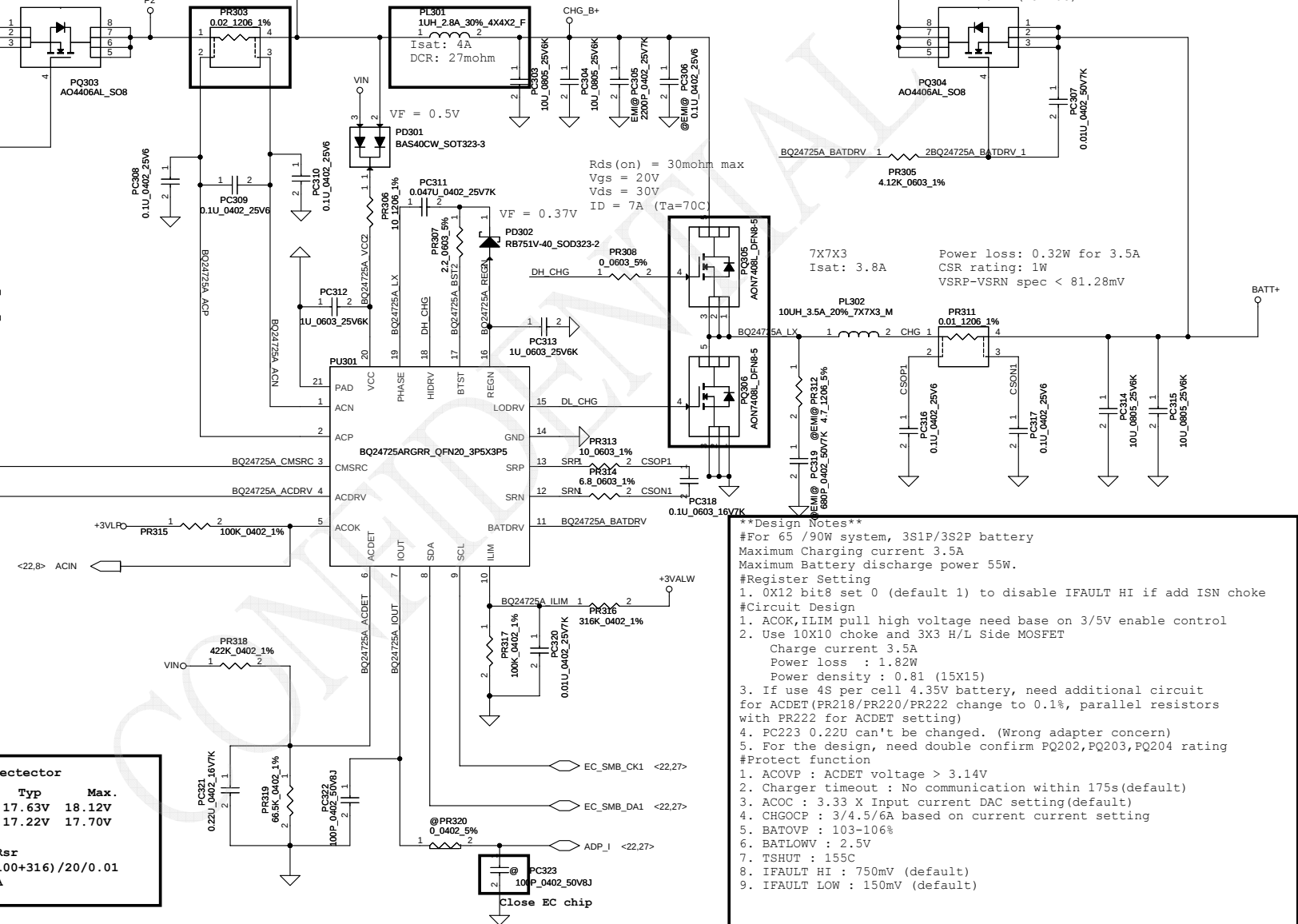
# Protection for reverse input



Rds(on) typ = 35mohm max  
Vgs = 20V  
Vds = 30V  
ID = 7.7A (Ta=70C)

max Power loss 0.22W for 90W; 0.12W for 65W system  
CSR rating: 1W  
VACP-VACN spec < 80.64mV

## COMMON PART



| Vin Detector |        |        |        |
|--------------|--------|--------|--------|
|              | Min.   | Typ    | Max.   |
| L-->H        | 17.16V | 17.63V | 18.12V |
| H-->L        | 16.76V | 17.22V | 17.70V |

VILIM = 20\*ILIM\*Rsr  
ILIM = 3.3\*100/(100+316)/20/0.01  
= 3.966 A

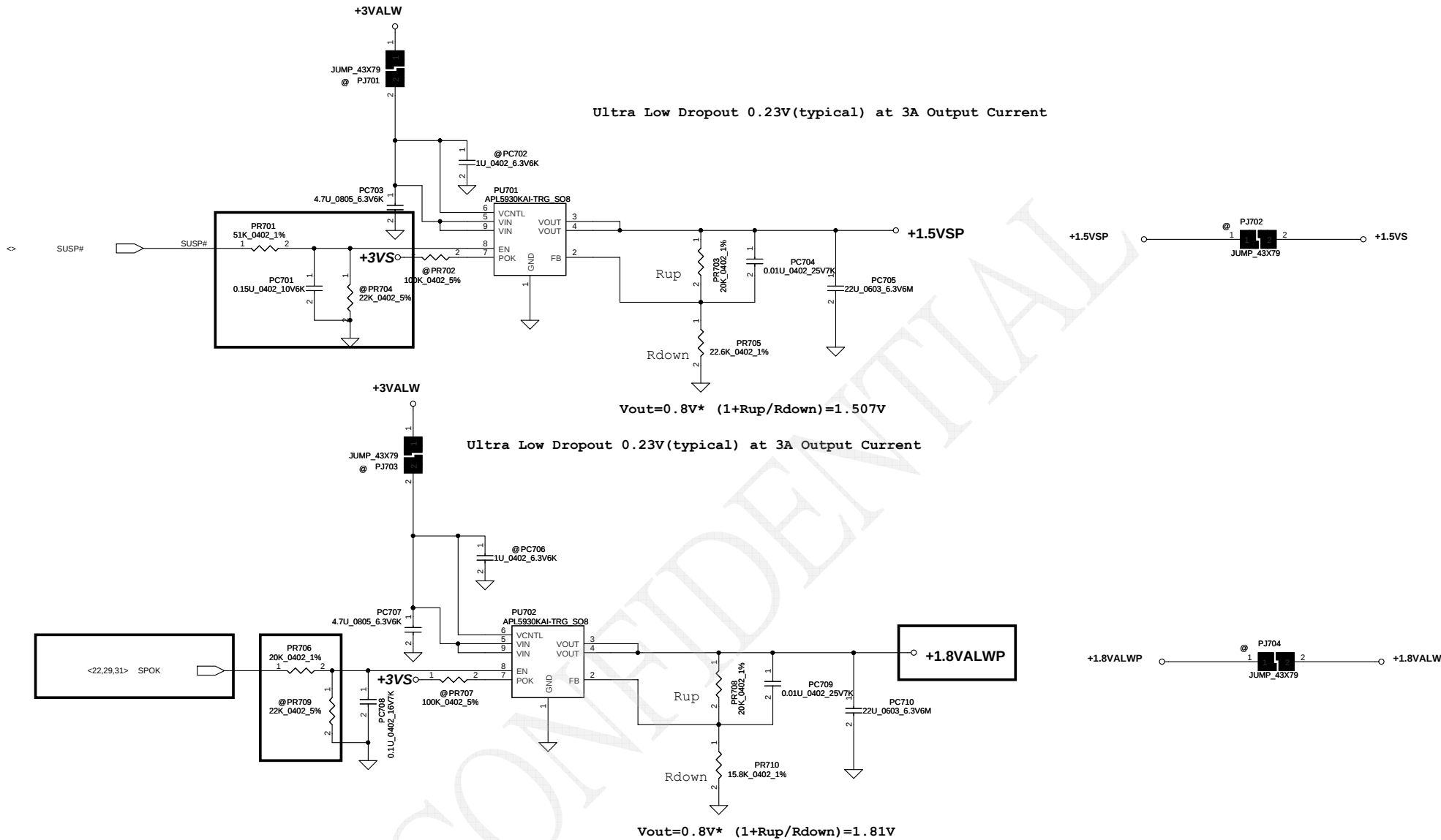
**\*\*Design Notes\*\***  
#For 65 /90W system, 3S1P/3S2P battery  
Maximum Charging current 3.5A  
Maximum Battery discharge power 55W.  
#Register Setting  
1. 0X12 bit8 set 0 (default 1) to disable IFAULT HI if add ISN choke  
#Circuit Design  
1. ACOK,ILIM pull high voltage need base on 3/5V enable control  
2. Use 10X10 choke and 3X3 H/L Side MOSFET  
Charge current 3.5A  
Power loss : 1.82W  
Power density : 0.81 (15X15)  
3. If use 4S per cell 4.35V battery, need additional circuit for ACDET (PR218/PR220/PR222 change to 0.1%, parallel resistors with PR222 for ACDET setting)  
4. PC223 0.22u can't be changed. (Wrong adapter concern)  
5. For the design, need double confirm PQ202,PQ203,PQ204 rating  
#Protect function  
1. ACOVP : ACDET voltage > 3.14V  
2. Charger timeout : No communication within 175s(default)  
3. ACOC : 3.33 X Input current DAC setting(default)  
4. CHGOC : 3/4.5/6A based on current current setting  
5. BATOV : 103-106%  
6. BATLOW : 2.5V  
7. TSHUT : 155C  
8. IFAULT HI : 750mV (default)  
9. IFAULT LOW : 150mV (default)

| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       |           | Compal Secret Data |            | Compal Electronics, Inc. |                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------|------------|--------------------------|------------------------|
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2013/9/25 | Deciphered Date    | 2014/09/25 | Title                    | Charger                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                    |            | Date                     | Monday, April 07, 2014 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                    |            | Sheet                    | 28 of 39               |









|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |                          |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|--------------------------|-----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                       | Compal Secret Data |                 | Compal Electronics, Inc. |                 |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2013/9/25          | Deciphered Date | 2014/09/25               | Title           |
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| Date: Monday, April 07, 2014                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    | Sheet 32 of 39  |                          | Rev 1.0         |

Design Note

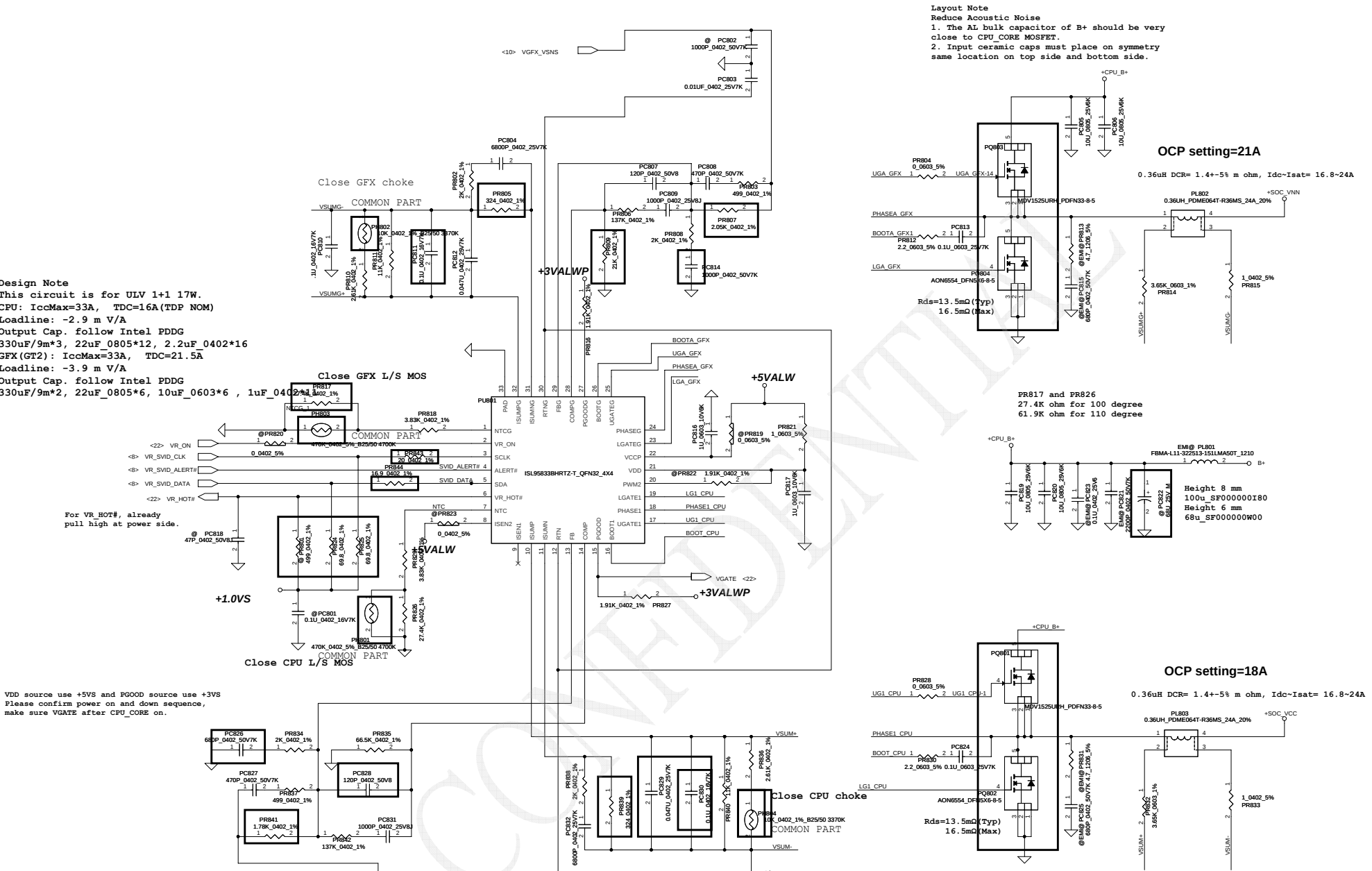
This circuit is for ULV 1+1 17W.  
CPU: IccMax=33A, TDC=16A(TDP NOM)  
Loadline: -2.9 m V/A  
Output Cap. follow Intel PDDG  
330uF/9m\*3, 22uF\_0805\*12, 2.2uF\_0402\*16  
GFX(GT2): IccMax=33A, TDC=21.5A  
Loadline: -3.9 m V/A  
Output Cap. follow Intel PDDG  
330uF/9m\*2, 22uF\_0805\*6, 10uF\_0603\*6, 1uF\_0402\*16

For VR\_HOT#, already pull high at power side.

VDD source use +VS and PGOOD source use +VS  
Please confirm power on and down sequence, make sure VGATE after CPU\_CORE on.

Layout Note

- Alert# signal must be routed between the Clock and Date lines to reduce the cross talk between them. Signal order arrangement: mobile order is Clock-Alert-Date.
- SVID spacing requirement is 18mils(0.475mm).
- Maximum total microstrip routing length of each SVID signal must not exceed 6000mils(152.4mm).
- The SVID bus must be ground reference, It cannot be referenced to input (Vbat or 12V) power plans as they can couple noise into the SVID bus as power states change.
- Avoid routing under noisy circuit, e.g. switch node, Gate driver, B+, Vin, high speed signal.
- When SVID signal changes Layer, GND return path may be changed also. We need add GND via for GND reference.



$$C_n = L / ((R_{ntcnet} * R_{sum}) / (R_{ntcnet} + R_{sum}) * DCR)$$
  
If Cn is correctly selected, when the load current has a square change, the output voltage also has a square response.

- Layout Note  
Reduce Acoustic Noise  
1. The AL bulk capacitor of B+ should be very close to CPU\_CORE MOSFET.  
2. Input ceramic caps must place on symmetry same location on top side and bottom side.

OCP setting=21A

0.36uH DCR= 1.4+-5% m ohm, I<sub>dc</sub>-I<sub>sat</sub>= 16.8-24A

PR817 and PR826  
27.4K ohm for 100 degree  
61.9K ohm for 110 degree

OCP setting=18A

0.36uH DCR= 1.4+-5% m ohm, I<sub>dc</sub>-I<sub>sat</sub>= 16.8-24A

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                    |            |                        |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------|------------|------------------------|----------------|
| Security Classification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           | Compal Secret Data |            | Title                  |                |
| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2013/9/25 | Deciphered Date    | 2014/09/25 | CPU CORE/GFX CORE      |                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                    |            | Document Number        |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                    |            | Revision               |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                    |            | Bay Trail M LA-B211P   |                |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |                    |            | Monday, April 07, 2014 | Sheet 33 of 39 |

PWR Rule  
需確認最新SPEC.  
Modify 8/6.

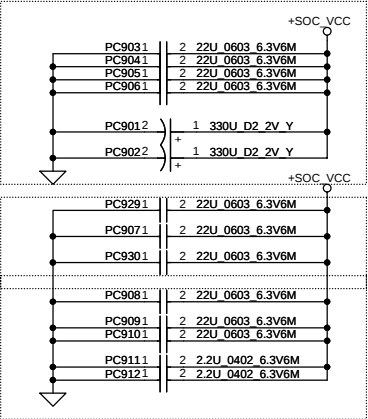
3 X 330u/9m(47W)  
2 X 330u/9m(37W)  
24 pcs 22uF and reserve 4 pcs  
2013/08/16

+SOC\_VCC =+CPU\_CORE

Output Cap  
(330uF\*2+22uF\*4)

Package Edge Cap  
(22uF\*3)

Back Side Cap  
(10uF\*1+4.7uF\*2+2.2uF\*2)

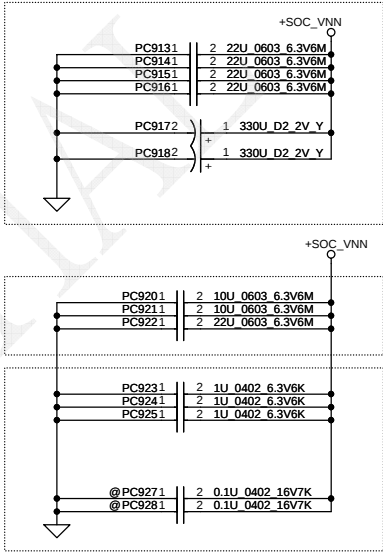


Output Cap  
(330uF\*3+22uF\*4)

Package Edge Cap  
(22uF\*3)

Back Side Cap  
(1uF\*3)

+SOC\_VNN =+VGFX\_CORE



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                    |            |                          |                        |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                    |            | Custom                   | Bay Trail M LA-B211P   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                    |            | Date                     | Monday, April 07, 2014 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                    |            | Sheet                    | 34 of 39               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                    |            | Rev                      | 1.0                    |

## Version change list (P.I.R. List)

Page 1 of 2  
for PWR

| Item | Fixed Issue       | Reason for change           | Rev. | PG#   | Modify List                                                     | Date | Phase |
|------|-------------------|-----------------------------|------|-------|-----------------------------------------------------------------|------|-------|
| 1    | Battery BI pin    | for acer server             |      | 27    | PR211 change to 0_0402_1%                                       | 1/10 | DVT   |
| 2    | common part       | PH202 change to common part |      | 27    | PH202 part number change to SL200002H00                         | 1/10 | DVT   |
| 3    | OTP protect       | no hysteresis               |      | 27    | PR227 change to un-pop                                          | 1/10 | DVT   |
| 4    | cost down         | chock size change small     |      | 28    | PL302 change to 10UH_3.5A_20%_7X7X3_M                           | 1/10 | DVT   |
| 5    | MOSFET quality    | AO4466L has no good quality |      | 28    | PQ303、PQ304 change to AO4406AL                                  | 1/10 | DVT   |
| 6    | OTP protect       | no hysteresis               |      | 29    | PC426 change to pop                                             | 1/10 | DVT   |
| 7    | rename            | for 1.35V laccation         |      | 30    | @PQ805 change @PQ503                                            | 1/10 | DVT   |
| 8    | voltage ripple    | change chock value          |      | 31    | PL602 change to 1.5UH PCMC063T-1R5MN_9A_20%                     | 1/10 | DVT   |
| 9    | CPU tranistion    | CPU tranistion test         |      | 33    | PR839 change to 324_0402_1%                                     |      |       |
| 10   |                   |                             |      |       | PR814、PR832 change to 3.65K_0603_1%                             | 1/10 | DVT   |
| 11   |                   |                             |      |       | PC908、PC909、PC910、PC922                                         |      |       |
| 12   |                   |                             |      | 34    | change to 22U_0603_6.3V6M                                       | 1/10 | DVT   |
| 13   | OTP protect       | no hysteresis               |      | 27    | PR216 change 16.9K_0402_1%                                      | 1/20 | DVT   |
| 14   | ADPI protect      | no hysteresis               |      | 27    | PR202 change to 10K_0402_1%                                     | 1/20 | DVT   |
|      |                   |                             |      |       | PR203 change to 44.2K_0402_1%                                   |      |       |
| 15   | no sequence issue | unused part                 |      | 29    | PD401 change to PR410 R-short                                   | 2/21 | PVT   |
| 16   | for layout        | no placement                |      | 34    | delt PC919                                                      |      | PVT   |
| 17   | for layout        | no placement                |      | 34    | delt PC926                                                      |      | PVT   |
| 18   | for component     | BOM change                  |      | 28    | PR308 SD00001FX00 change to SD013000080                         |      | PVT   |
| 19   | common part       | PL301 change to common part |      | 28    | PL301 change to common part SH00000YG00                         |      | Pr-MP |
| 20   |                   | Improve part rating         |      | 34    | Change PC901,PC902,PC917,PC918 from SGA000026800 to SGA20331E10 |      | Pr-MP |
| 21   |                   | unused part                 |      | 29 31 | PR407、PR601、PR607change to R-short                              |      | Pr-MP |
| 22   |                   | symbol change               |      | 33    | PQ801, PQ803 change symbol name:MDV1525URH_PDFN33-8-5)          |      | Pr-MP |
|      |                   | unused part                 |      | 33    | PC822 change to un-pop                                          |      | Pr-MP |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                 |            |                          |                      |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------|------------|--------------------------|----------------------|--|
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| Issued Date                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2013/12/12             | Deciphered Date | 2014/09/25 | Title                    | PWR PIR              |  |
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| Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Monday, April 07, 2014 |                 |            | Rev                      | 1.0                  |  |
| Sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 35                     |                 |            | of                       | 39                   |  |

| Item | Page#   | Function | Date  | Request Owner | Issue Description                                   | Solution Description                                                                                                                                                                                         | Rev. |
|------|---------|----------|-------|---------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1    | P.15    | HW       | 12/23 |               | Change JCAM1 pin assignment(Follow Z5WAH) .         | 1. Swap JCAM1 pin assignment.                                                                                                                                                                                | 0.3  |
| 2    | P.17    | HW       | 12/23 |               | Follow VESA CRT connector pin assignment.           | 1. Connect JCRT1.5 to GND.                                                                                                                                                                                   | 0.3  |
| 3    | P.20    | HW       | 12/23 |               | Connect JHDD1 pin8,9,10 to +3VS.                    | 1. Connect JHDD1 pin8,9,10 to +3VS.                                                                                                                                                                          | 0.3  |
| 4    | P.19    | HW       | 12/23 |               | Connect JMINI1 pin6,28,48 to +1.5VS_WLAN.           | 1. Add JP9 for +1.5VS_WLAN.<br>2. Connect JMINI1 pin6,28,48 to +1.5VS_WLAN.                                                                                                                                  | 0.3  |
| 5    | P.24    | HW       | 12/25 |               | Update codec schematic for vendor and ESD required. | 1. Change C1209,C1210 to 4.7uF 0603 size.<br>2. Reserve R1123 100k,PU +3VS for CPVREF.<br>3. Change D46 to SCA00001B00.<br>4. Add L57,L58,C2142,C2143.<br>5. Change C2141 to SE080105K80.                    | 0.3  |
| 6    | P.22    | HW       | 12/25 |               | Update EC schematic.                                | 1. Change TXE_DBG to pin99.<br>2. Add R1169 between EC and SoC for H_PROCHOT#.<br>3. Reserve Q51,R483 to pin27 for clear CMOS.<br>4. Change R506 to 15k for DVT board ID.<br>5. Rename ON/OFF to ON/OFFBTN#. | 0.3  |
| 7    | P.23    | HW       | 12/25 |               | Rename Screw hole(follow Z5WAH) .                   | 1. Change H12 and add H21 to H_3P2 for stand-off.<br>2. Add H8.<br>3. Del H16,H20.                                                                                                                           | 0.3  |
| 8    | P.15,19 | HW       | 12/25 |               | Rename Conn.(follow Z5WAH)                          | 1. Rename JRJ45 to JRJ1.<br>2. Rename JEDP1 to JLVDS1.                                                                                                                                                       | 0.3  |
| 9    | P.9     | HW       | 12/25 |               | Correct I2C connection.                             | 1. Change Q80.1 to SOC_I2C5_CLK.<br>2. Change Q81.1 to SOC_I2C2_CLK.                                                                                                                                         | 0.3  |
| 10   | P.18,22 | HW       | 12/30 |               | Leakage and reserve disable LAN feature.            | 1. Add R1140 PU to +3V_LAN for LAN_PME# and de-pop R484.<br>2. Connect U28.106 to U68.38 for disable LAN PHY.                                                                                                | 0.3  |
| 11   | P.23    | HW       | 01/07 |               | Del Screw hole(follow ME drawing)                   | 1. Del H6.                                                                                                                                                                                                   | 0.3  |
| 12   | P.25    | HW       | 01/07 |               | SA00004MM00 is X1 code.                             | 1. Change U11,U59 to SA00006FD00.                                                                                                                                                                            | 0.3  |
| 13   | P.21    | HW       | 01/09 |               | Follow 2014 OSCON standard part.                    | 1. Change C486 to SF000006R00.                                                                                                                                                                               | 0.3  |
| 14   | P.24    | HW       | 01/09 |               | For codec vendor test result.                       | 1. Change R1109,R1112 to 59ohm,SD000006J80.                                                                                                                                                                  | 0.3  |
| 15   | P.8     | HW       | 01/09 |               | Rename CLRPl for load BOM error.                    | 1. Rename CLRPl to JCMOS1.                                                                                                                                                                                   | 0.3  |
| 16   | P.24    | HW       | 01/09 |               | Cap. 1uF 0603 change to 0402.                       | 1. Change C2141 to SE000000K80.                                                                                                                                                                              | 0.3  |
|      |         |          |       |               |                                                     |                                                                                                                                                                                                              |      |

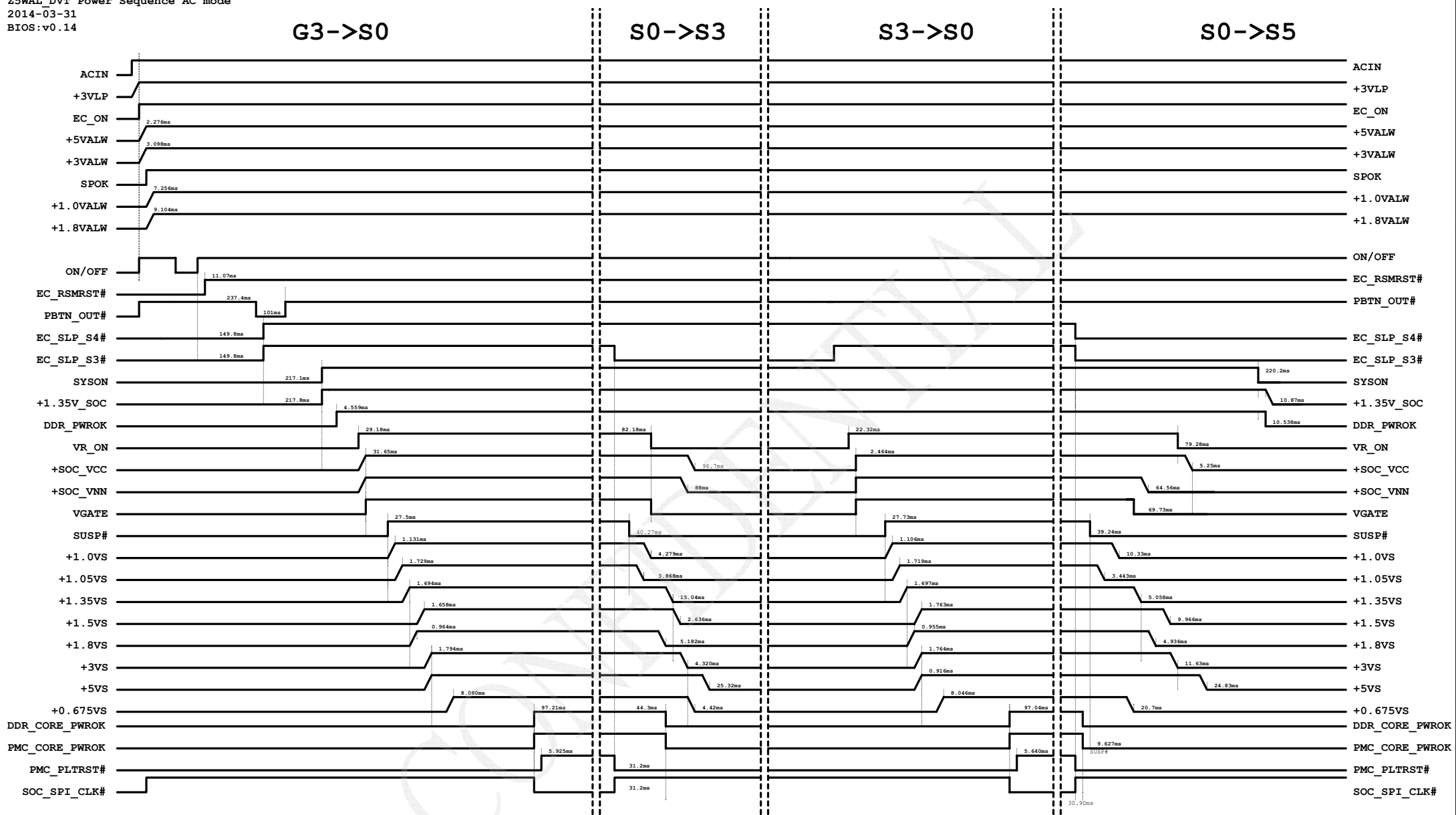
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |  |                          |                            |       |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |  | Document Number          | Z5WAL_Bay Trail M LA-B211P |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |  | Date:                    | Monday, April 07, 2014     |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                 |  | Sheet                    | 36                         | of 39 |

| Item | Page#       | Function | Date  | Request Owner | Issue Description                             | Solution Description                                                                                                                                                                                                           | Rev. |
|------|-------------|----------|-------|---------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 17   | P.21        | HW       | 01/09 |               | Change USB hub solution to GL850G-OHY32.      | 1. Del U58,R1045,R1046,R1047,R1048,R1049,R1050,C1117,C1118,C1119,C1120,C1121,C1122.<br>2. Add U72,R259,R260,R261,R262,R263,R264,R265,R1134,R1141,C279,C280,C281,C282,C283,C284,C285,C286,C287.                                 | 0.3  |
| 18   | P.22,23     | HW       | 01/09 |               | TP support wake feature and leakage issue.    | 1. Add U10,C141,C368,net "TP_PWR_EN" for +3V_PTP and reserve R1170,R1171 for +3VALW,+3VS.<br>2. Change R478,R479,R633,R1156,R1157 PU to +3V_PTP and pop R1163.<br>3. Change R1156.1 to TP_SDATA.<br>Change R1157.1 to TP_SCLK. | 0.3  |
| 19   | P.8,9,22,23 | HW       | 01/13 |               | Reserve TPM circuit.                          | 1. Reserve U70,U71,Q83,R148,R496,R517,R1017,R1034,R1172,R1203,R1204,C175,C398,C399,C400,C406,C421,C422. Add R1021,R1025.                                                                                                       | 0.3  |
| 20   | P.23        | HW       | 01/14 |               | Change TP conn. type for ME required.         | 1. Change JTP1 to SP01001AA00.                                                                                                                                                                                                 | 0.3  |
| 21   | P.9,21      | HW       | 01/14 |               | Swap USB2.0 port for customer required.       | 1. Change USB2.0 port0 to USB3.0 connector.<br>Change USB2.0 port1 to USB hub.                                                                                                                                                 | 0.3  |
| 22   | P.15        | HW       | 01/14 |               | Separate TS USB/I2C connection(follow Z5WAH). | 1. Remove R1146,R1148,R1149,R1151.<br>2. Change I2C5_SDA_PNL to JLVDS1.21.<br>Change I2C5_SCL_PNL to JLVDS1.22.                                                                                                                | 0.3  |
| 23   | P.21        | HW       | 01/14 |               | Height limit issue.                           | 1. Change C486 to SGA00009100,D2 size.                                                                                                                                                                                         | 0.3  |
| 24   | P.8         | HW       | 01/14 |               | Add test point.                               | 1. Add T207 for PMC_SUS_STAT#.                                                                                                                                                                                                 | 0.3  |
| 25   | P.23        | HW       | 01/14 |               | For LED brightness(follow Z5WAH's result).    | 1. Change R699,R700 to 330ohm.<br>Change R698,R701 to 560ohm.                                                                                                                                                                  | 0.3  |
| 26   | P.8,15,18   | HW       | 01/16 |               | Unused part.                                  | 1. Change R998,R1124,R1162 to R-short.                                                                                                                                                                                         | 0.3  |
| 27   | P.8,18      | HW       | 01/16 |               | For crystal vendor test result.               | 1. Change C1009,C1010 to 18pF.<br>2. Change C1236,C1237 to 15pF and add R1202.                                                                                                                                                 | 0.3  |
| 28   | P.15        | HW       | 02/21 |               | Reserve +3VS for touch screen.                | 1. Reserve R1146.<br>2. Rename net +5V_TS to +TS_PWR.                                                                                                                                                                          | 0.4  |
| 29   | P.25        | HW       | 02/21 |               | Fine tune sequence.                           | 1. Pop C1131.                                                                                                                                                                                                                  | 0.4  |
| 30   | P.22        | HW       | 02/25 |               | For PVT board ID.                             | 1. Change R506 to 20k ohm.                                                                                                                                                                                                     | 0.4  |
| 31   | P.5         | HW       | 02/25 |               | Add new SoC.                                  | 1. Add N2830,N2930,N3530.                                                                                                                                                                                                      | 0.4  |
| 32   | P.8         | HW       | 02/27 |               | Cover pad for unused part.                    | 1. Change U54 footprint to TXB0108PWR_TSSOP20-S.                                                                                                                                                                               | 0.4  |
| 33   | P.23        | HW       | 03/03 |               | Change TP connector symbol.                   | 1. Change JTP1 to CVILU_CF31081D0R4-10-NH_8P-T.                                                                                                                                                                                | 0.4  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                              |                |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    | Z5WAL_Bay Trail M LA-B211P   | 1.0            |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    | Date: Monday, April 07, 2014 | Sheet 37 of 39 |  |

## Page 3/3 for HW

|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  |                            |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|----------------------------|----------------|
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                    |  | Z5WAL Bay Trail M LA-8211P |                |
| Date: Monday, April 07, 2014                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                    |  | Sheet                      | 38 of 39       |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                    |            |                              |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------|------------|------------------------------|----------------|
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |                    |            | Date: Monday, April 07, 2014 | Sheet 39 of 39 |

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