

Model Name : AIVP1/AIVP2
File Name :

Compal Confidential

AIVP1/AIVP2 UMA M/B Schematics Document

Intel Bay Trail M

2015-01-15

REV : 0 . 2

14@
DA1 PCB

| Part Number | Description |
|-------------|-------------|
| DA6001DH000 | REV0.1 M/B |

15@
DA2 PCB

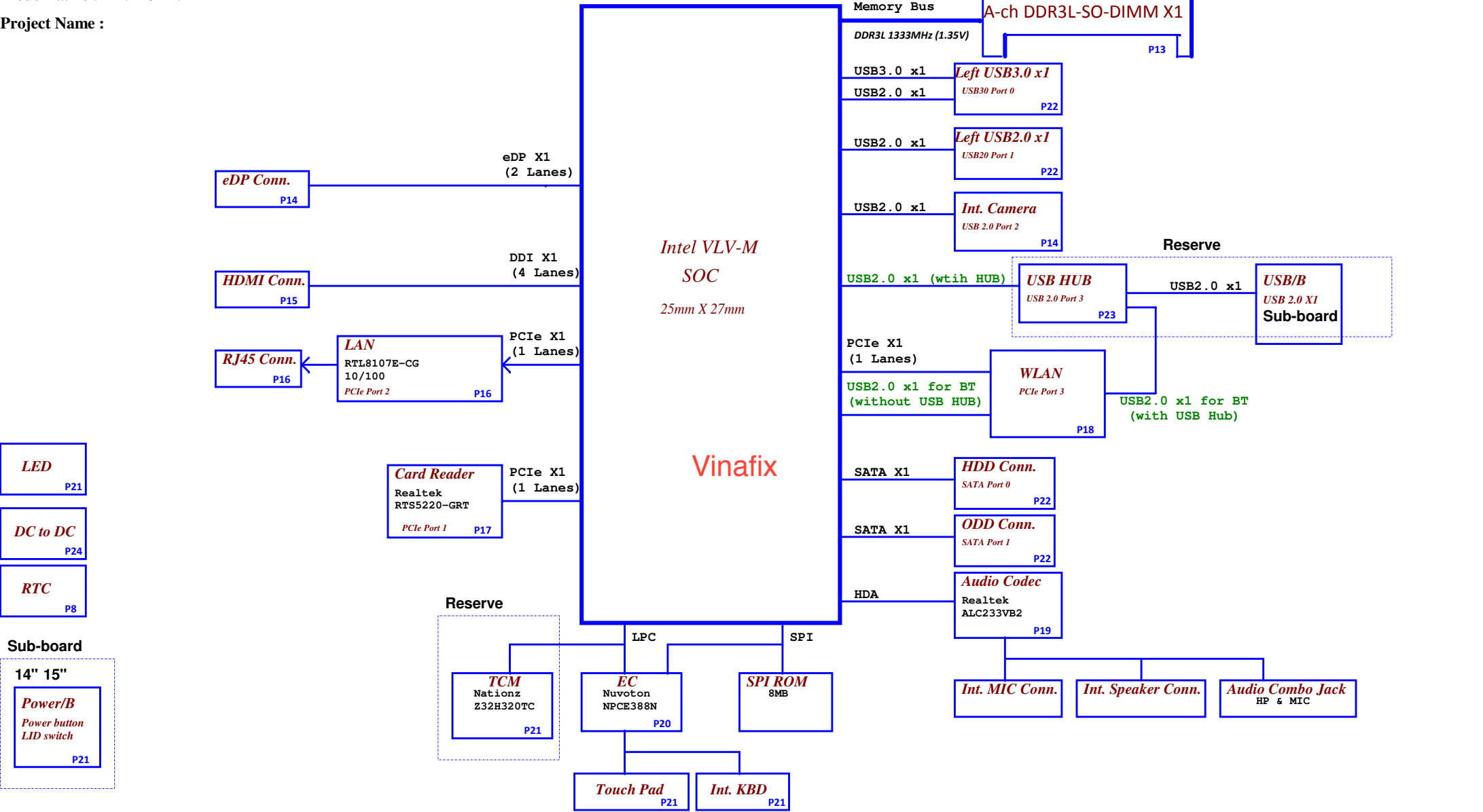
| Part Number | Description |
|-------------|-------------|
| DA6001DH000 | REV0.1 M/B |

| | | | | | | |
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Model Name : AIVP1/AIVP2

Project Name :



| | | | | | |
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| | | | | Block Diagram | |
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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 |
| +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 |
| +1.8VS | +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. | | | | |

BOM Option Table

| Item | BOM Structure |
|-----------------------|---------------|
| Unpop | @ |
| Connector | ME@ |
| XDP (Debug Port) | XDP@ |
| EMC requirement | EMI@ |
| EMC requirement unpop | @EMI@ |
| ESD requirement | ESD@ |
| ESD requirement unpop | @ESD@ |
| TCM requirement | TCM@ |
| NTCM SKU | NTCM@ |
| Camera requirement | CMOS@ |
| ODD requirement | ODD@ |
| USB HUB requirement | HUB@ |
| Port 80(Debug Port) | DB@ |
| Bluetooth requirment | BT@ |
| 14" | 14@ |
| 15" | 15@ |

EC SM Bus1 address

| Device | Address |
|---------------|--------------------|
| Smart Battery | 0001 011X b |
| Charger | 0b00010010 (0x12H) |

SOC SM Bus address

| Device | Address |
|--------------------|---------|
| SO-DIMM A (JDIMM1) | A0h |

EC SM Bus2 address

| Device | Address |
|--------|---------|
|--------|---------|

43 level BOM table

| 43 Level | Description | BOM Structure |
|----------|-------------|---------------|
| | | |
| | | |
| | | |
| | | |

UC4
N3540@

S IC FH8065301919700 SR1YW C0 2.16G C38!
Part Number = SA00007ZH30

UC4
N2940@

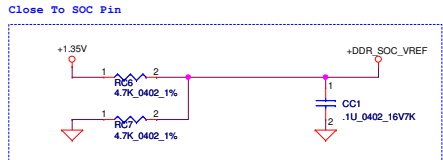
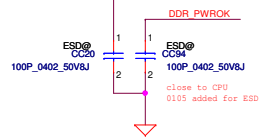
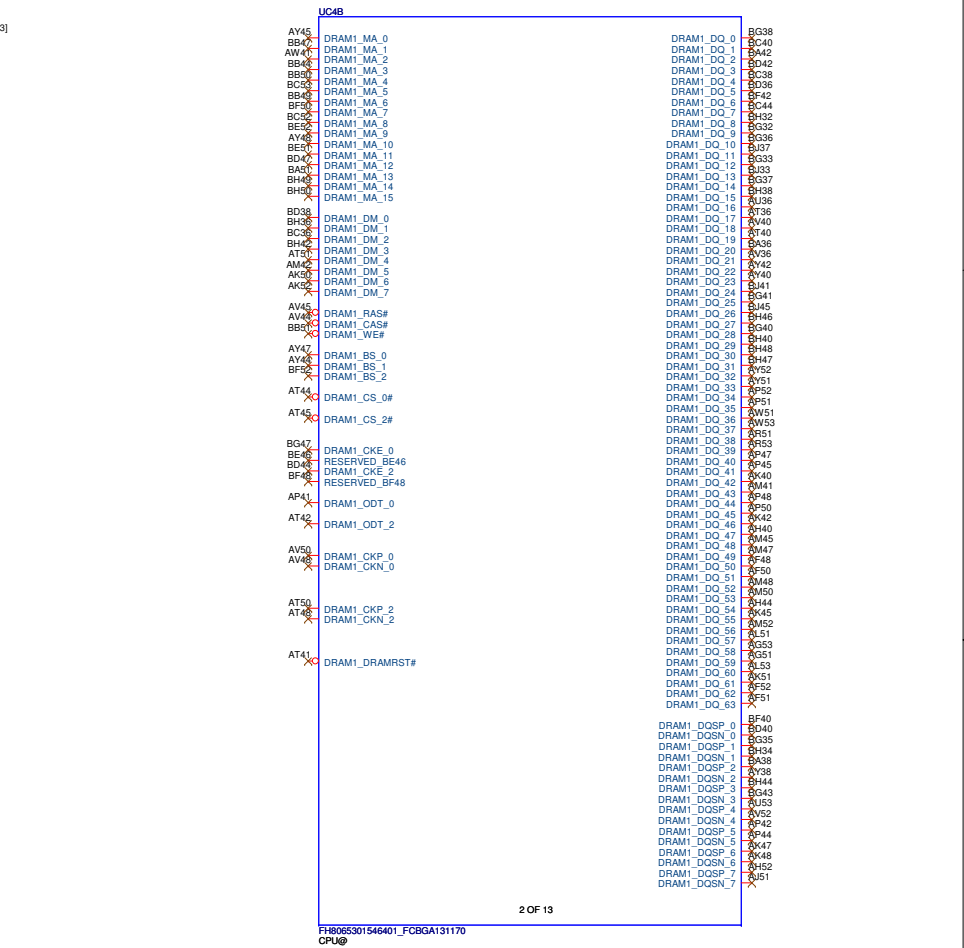
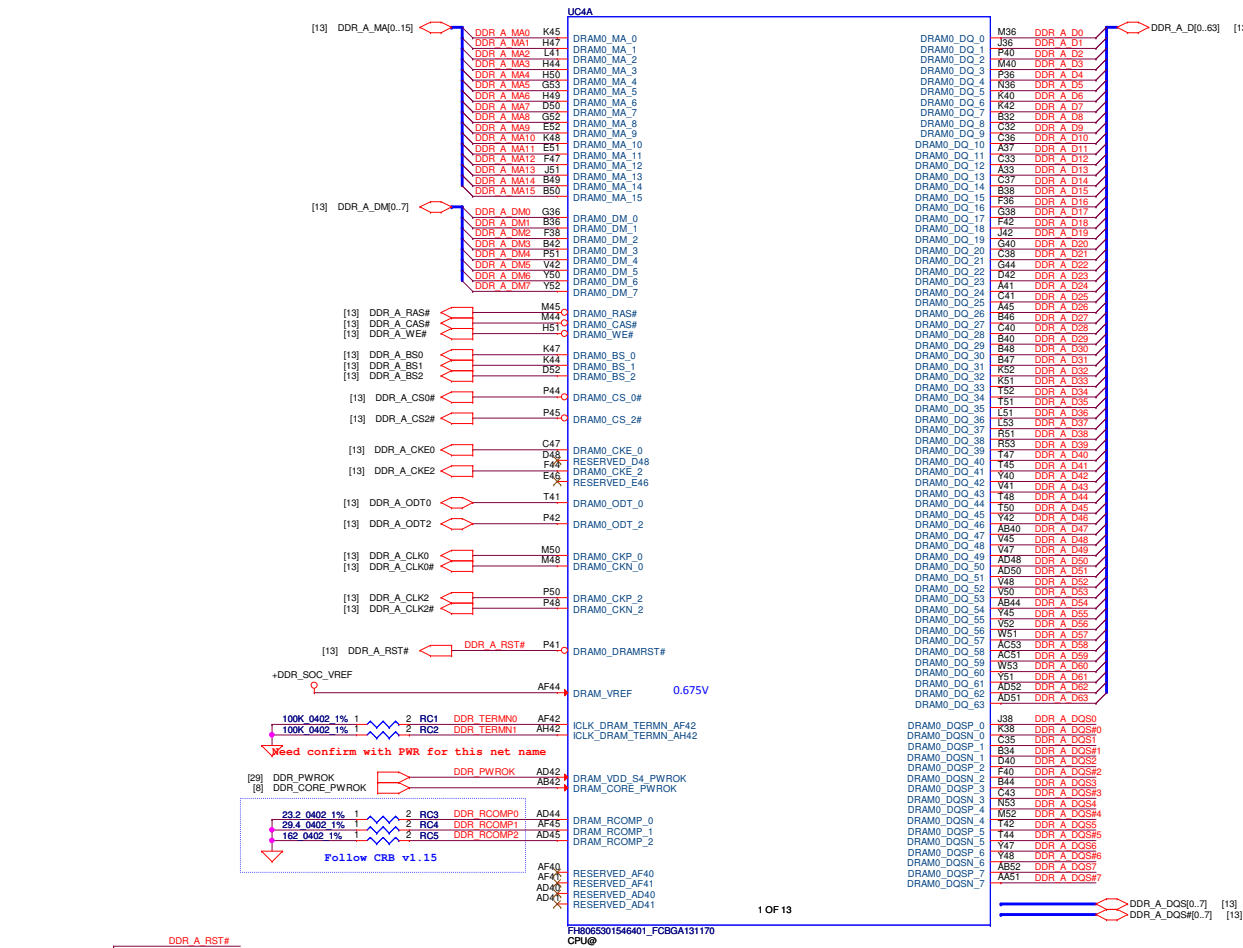
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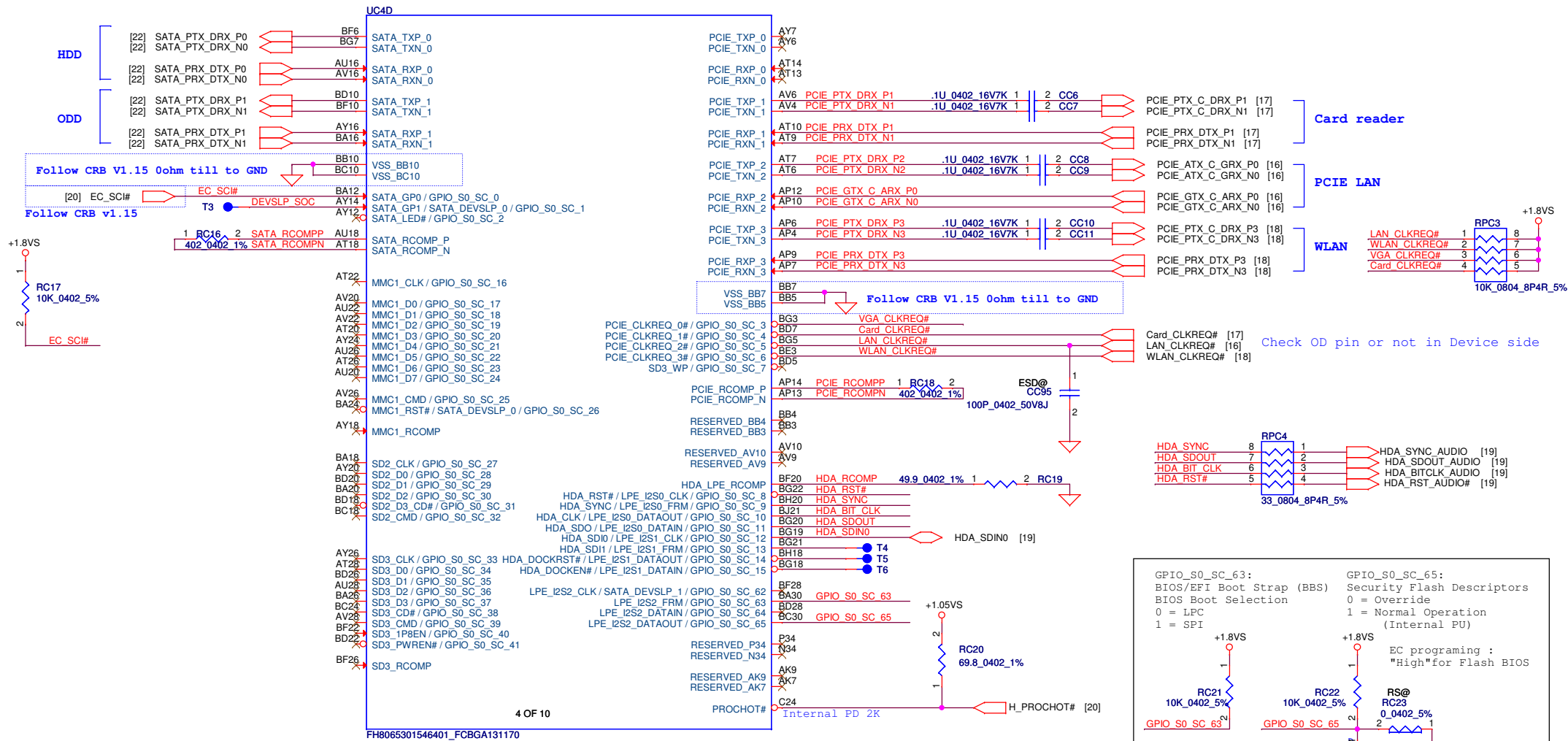
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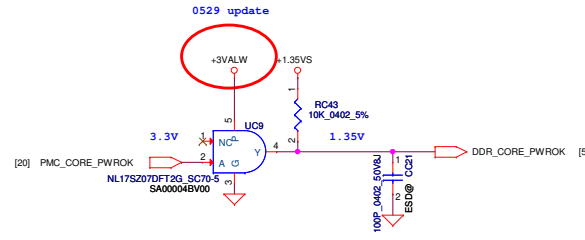
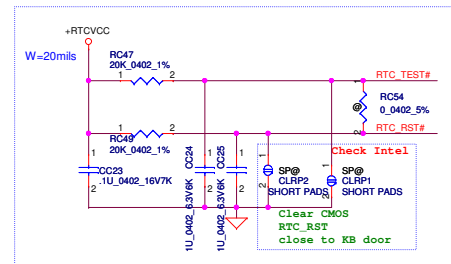
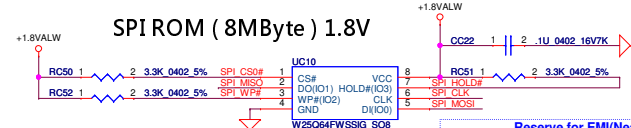
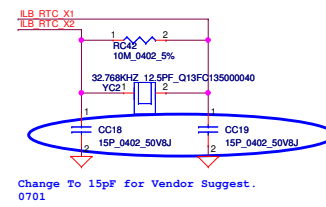
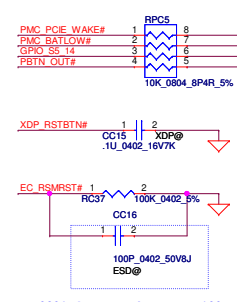
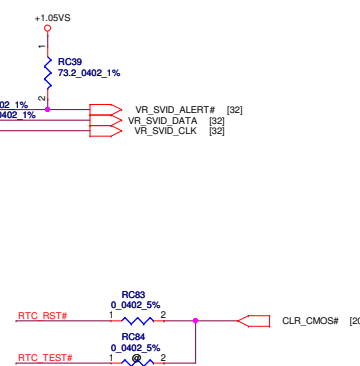
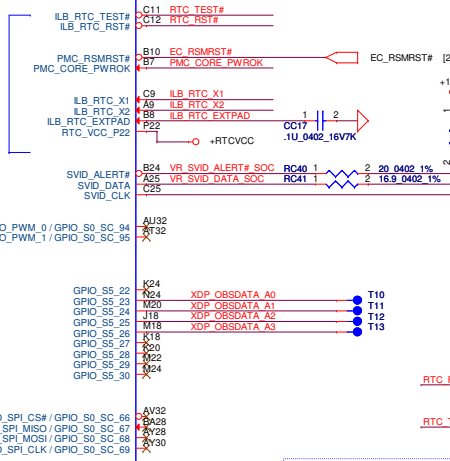
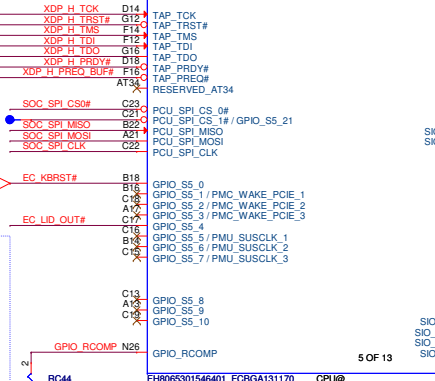
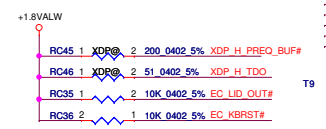
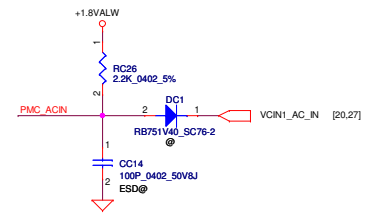
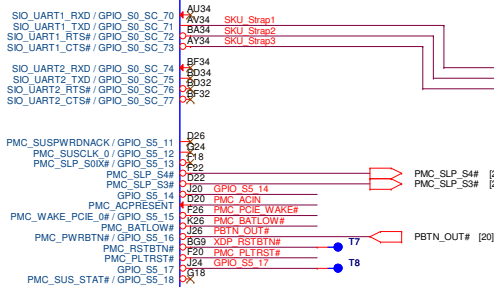
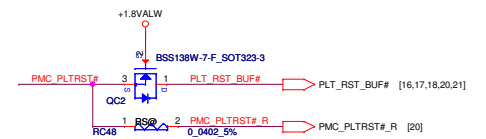
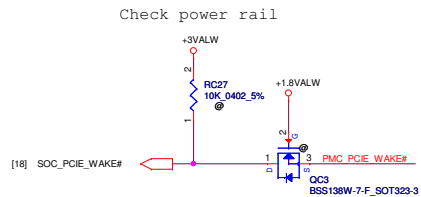




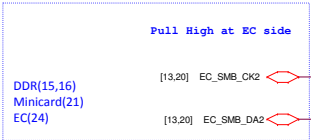
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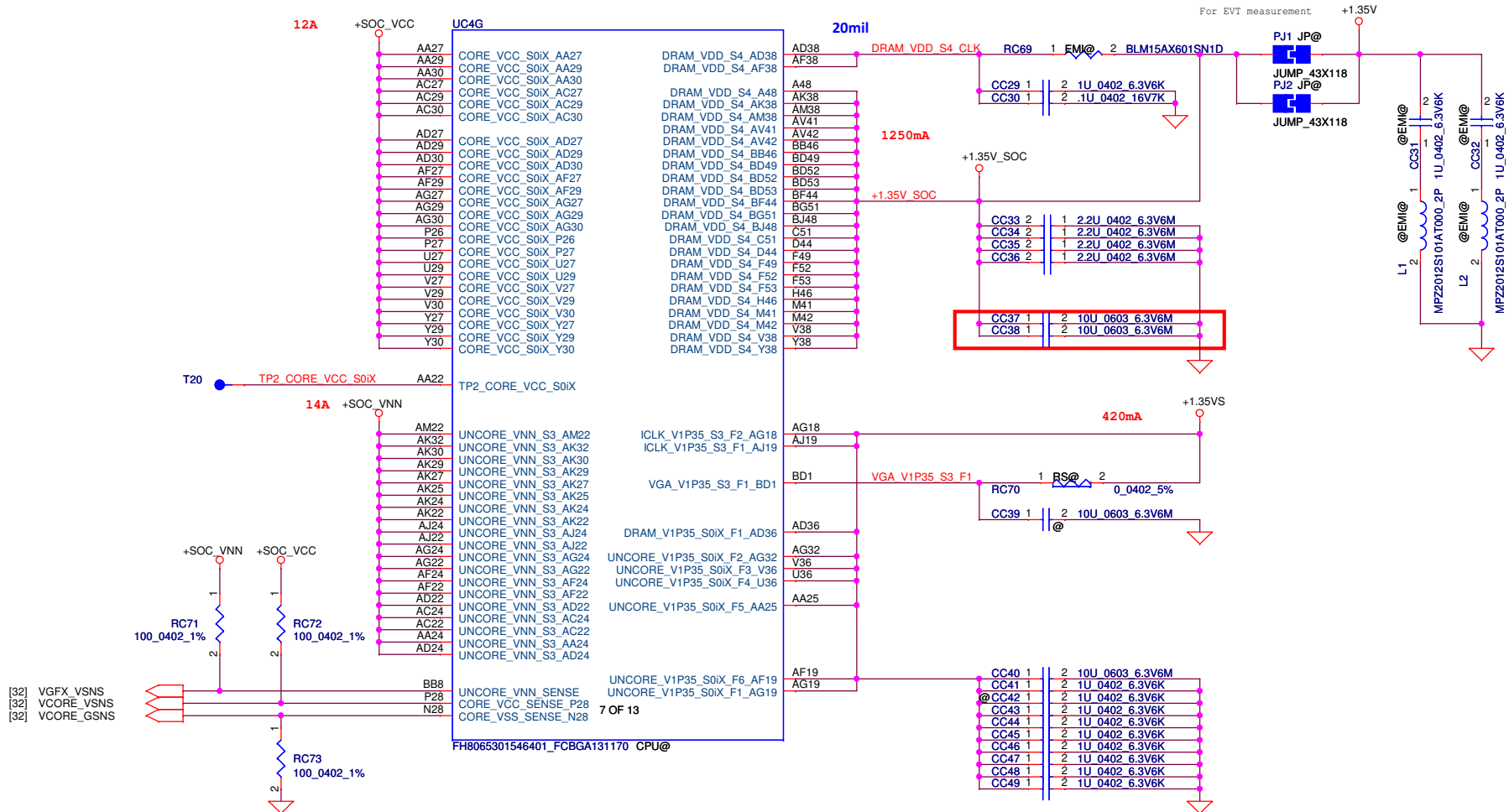
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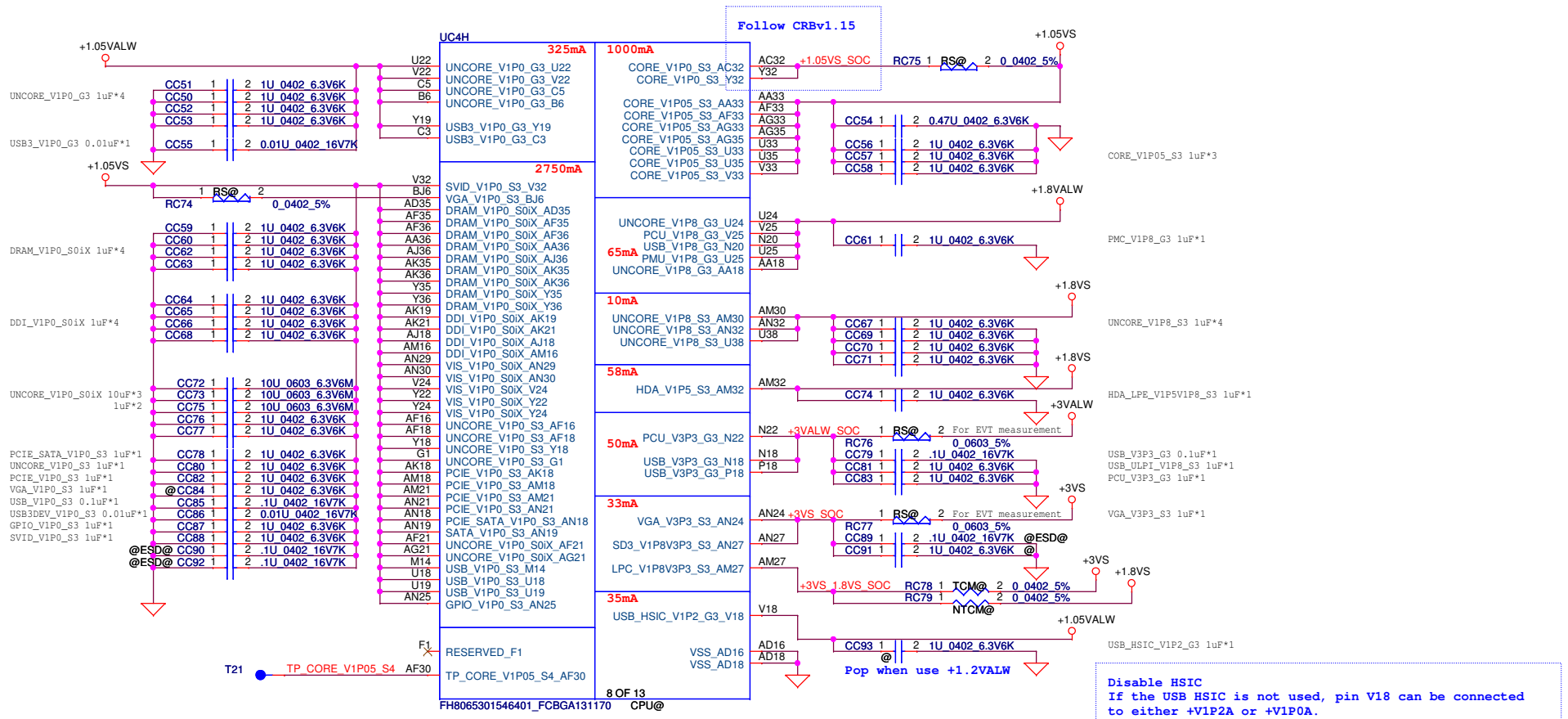
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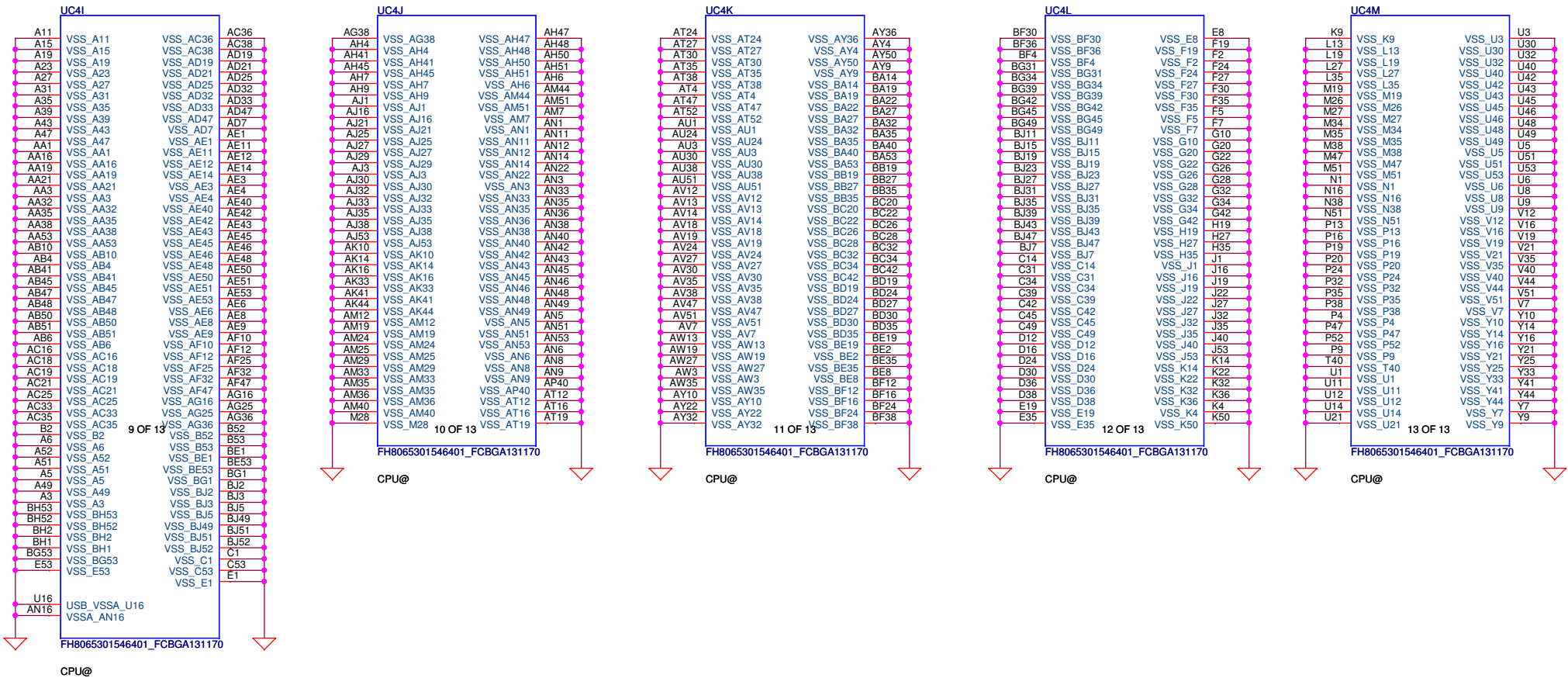
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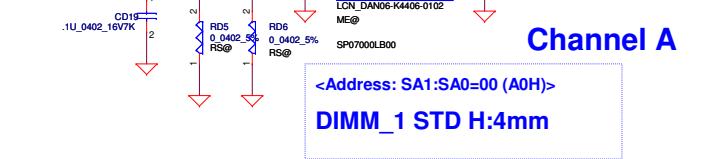
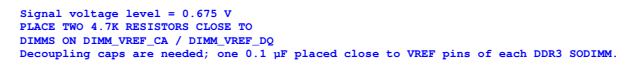
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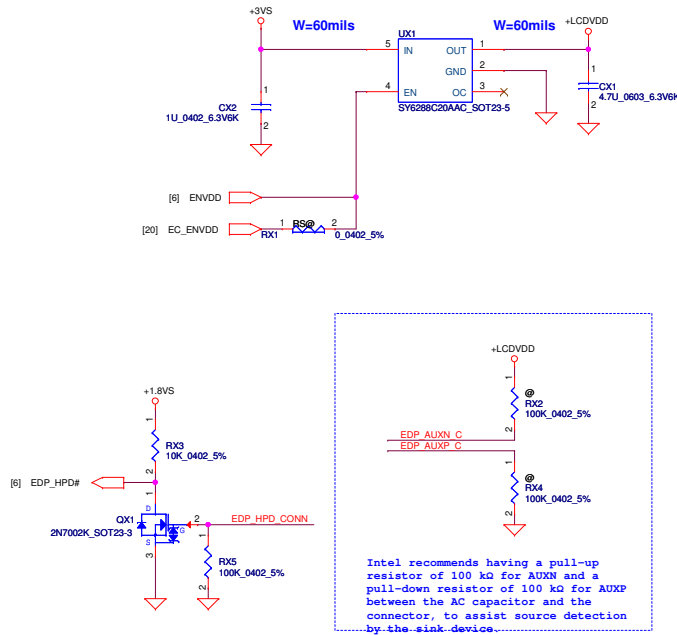
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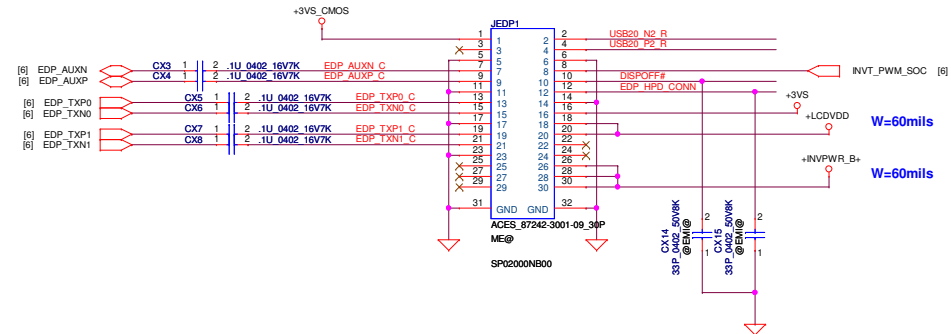
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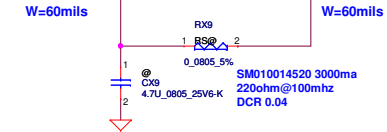
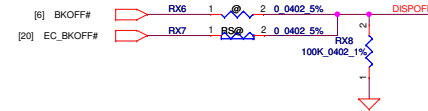
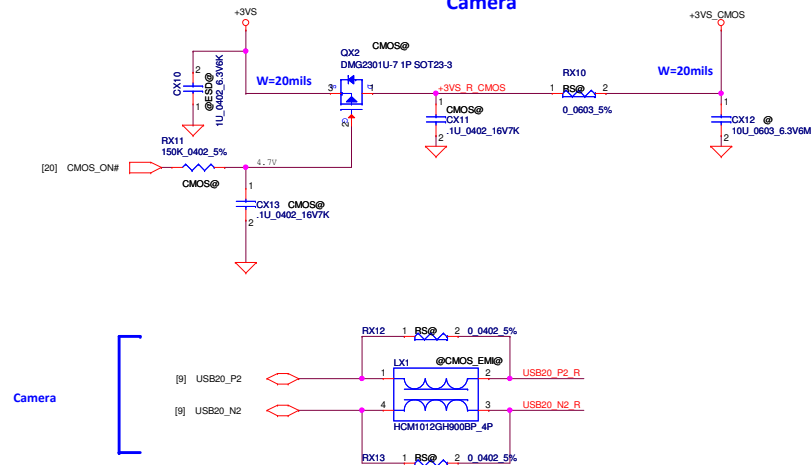
LCD POWER CIRCUIT



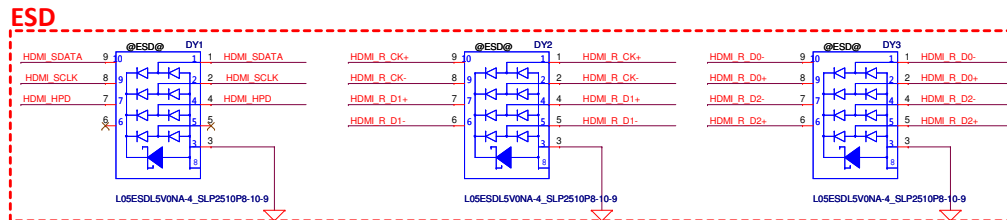
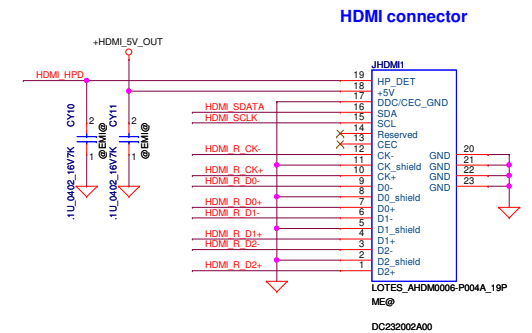
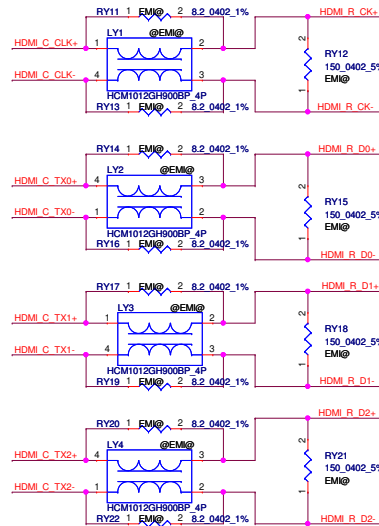
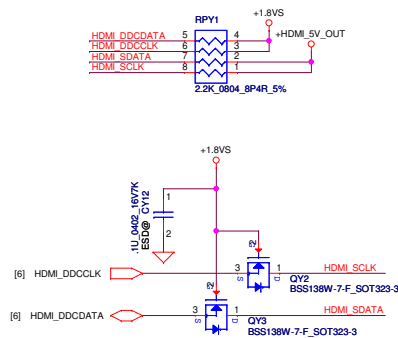
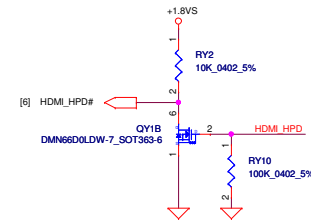
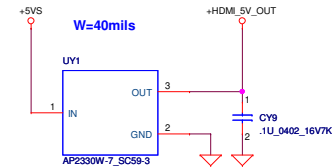
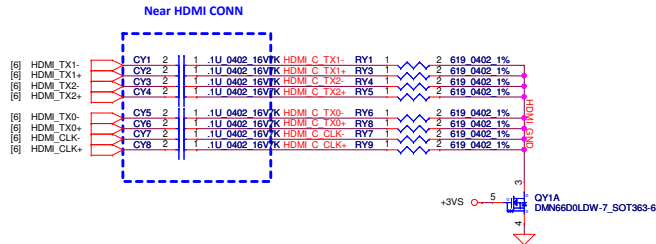
eDP PANEL Conn.



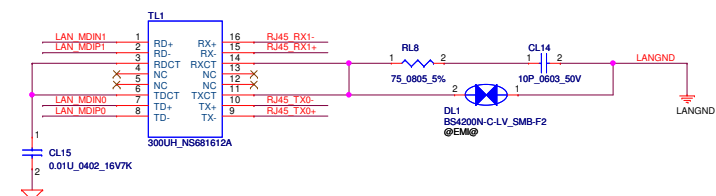
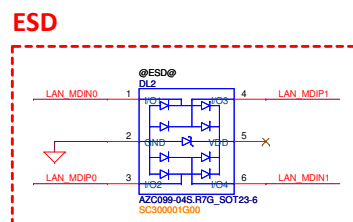
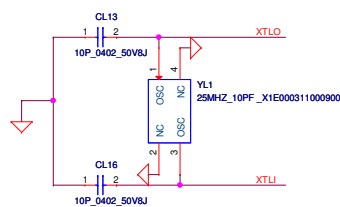
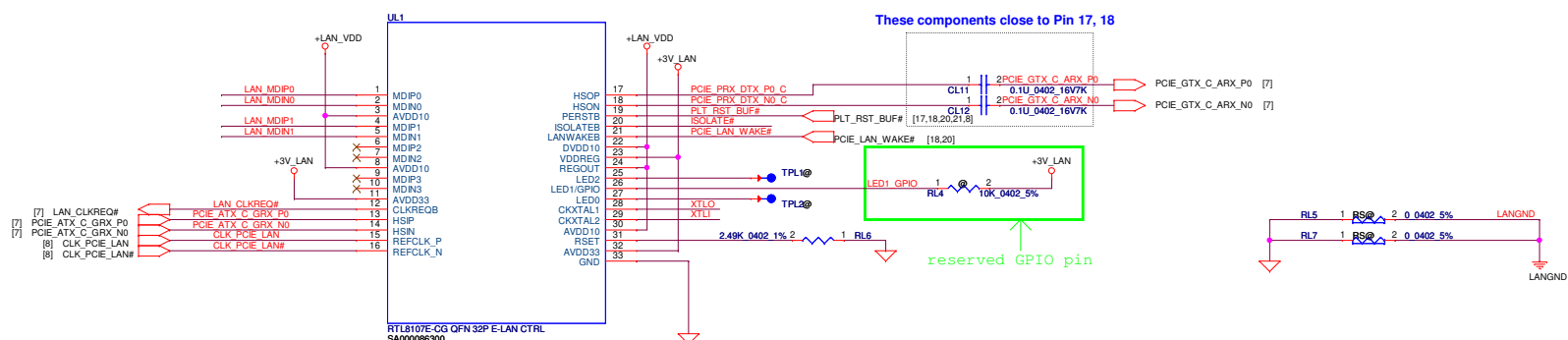
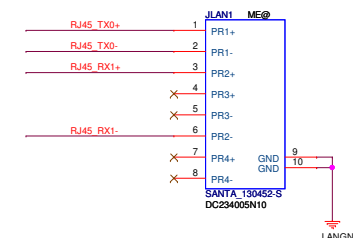
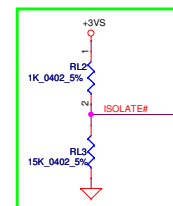
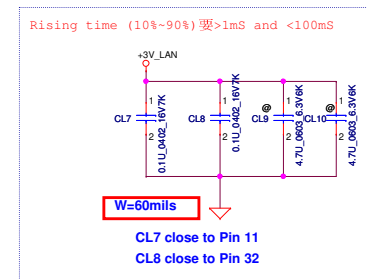
Camera



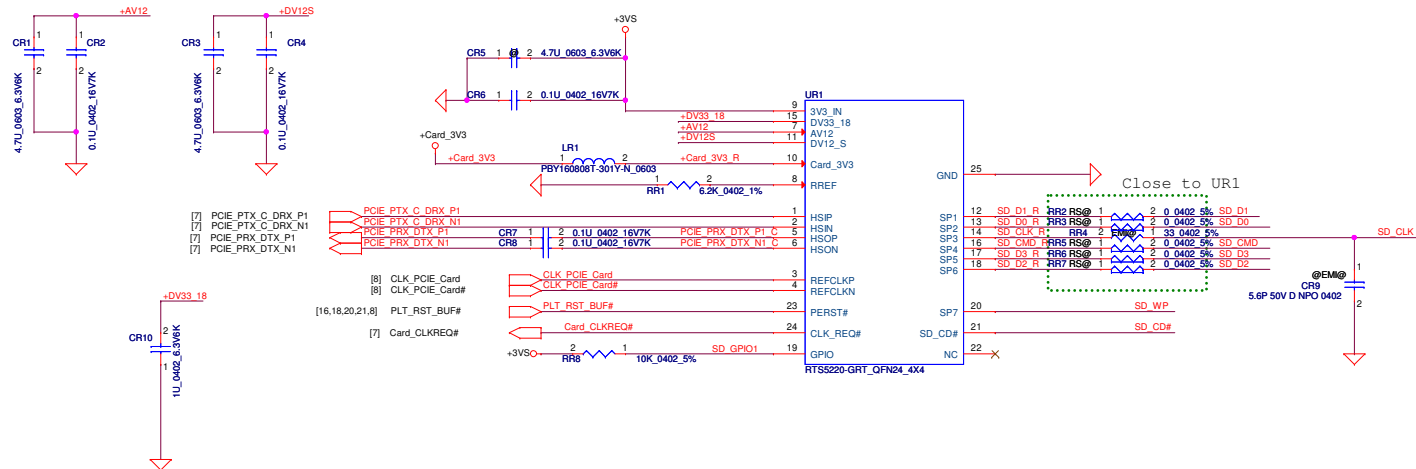
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| | | | | eDP CONN. |
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| | | | | LA-C771P |
| | | | | Rev 0.2 |
| | | | | Date: Wednesday, January 14, 2015 |
| | | | | Sheet 14 of 34 |



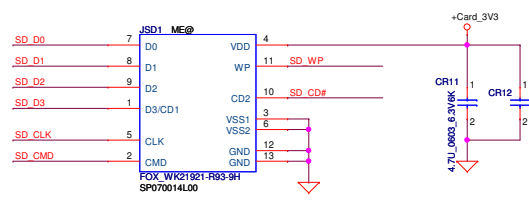
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| | | | | Date: | Wednesday, January 14, 2015 | Rev 0.2 |
| | | | | Sheet | 15 | of 34 |



| | | | | | | |
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| Issued Date | 2014/11/07 | Deciphered Date | 2015/11/07 | Title | LAN RTL8107E | |
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| | | | | Rev. | 0.2 | |
| | | | | Date: | Wednesday, January 14, 2015 | Sheet |

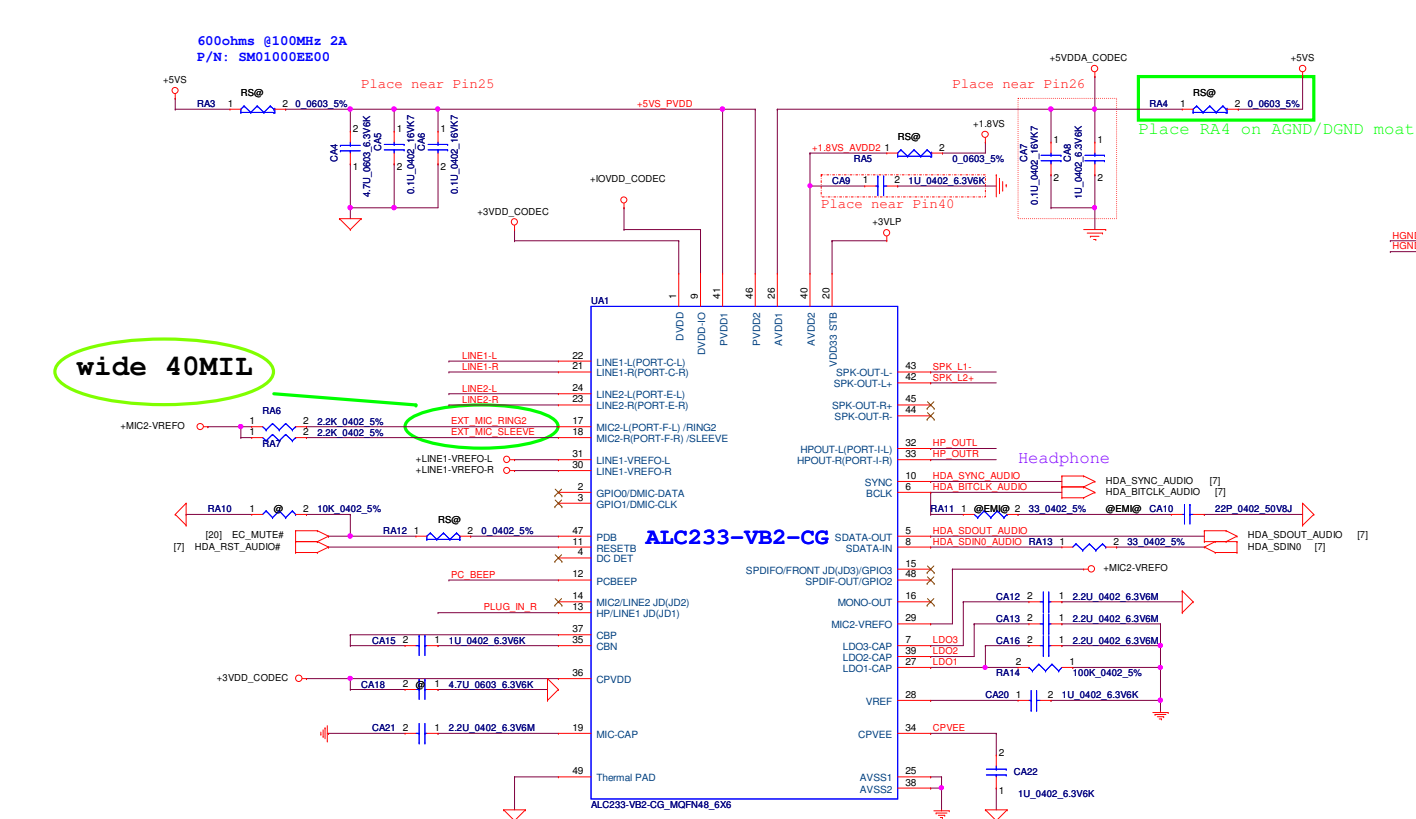


SD/SDXC

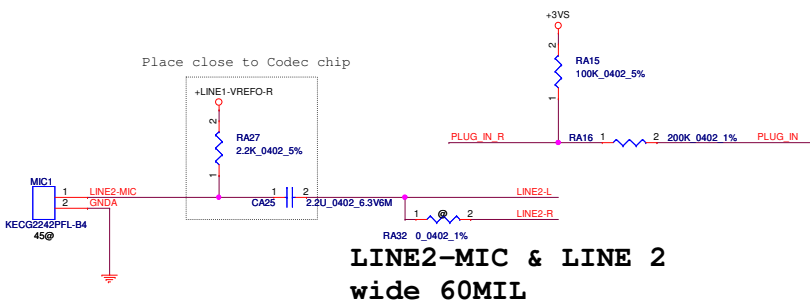
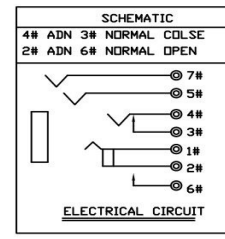
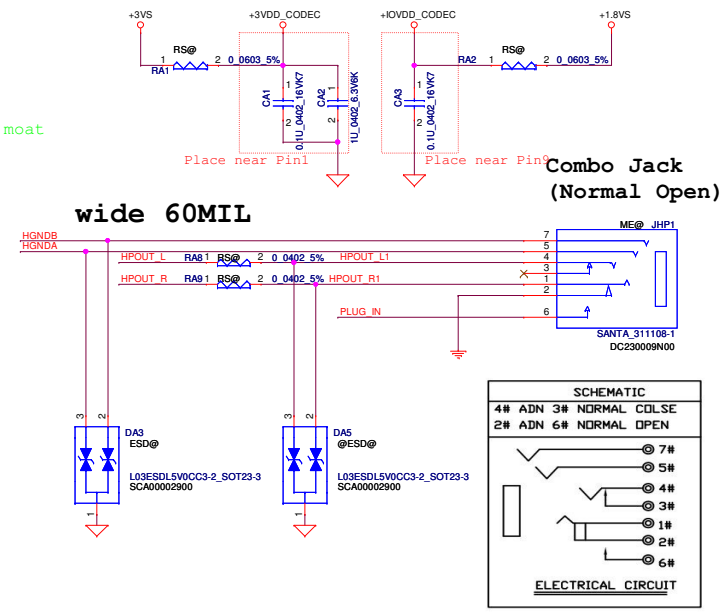


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| Security Classification | | Compal Secret Data | | Compal Electronics, Inc. | |
| Issued Date | | 2014/11/07 | Deciphered Date | 2015/11/07 | Title |
| | | | | | Card Reader_RTS5220 |
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| | | | | LA-C771P | 0.2 |
| | | | | Date: Wednesday, January 14, 2015 | Sheet 17 of 34 |

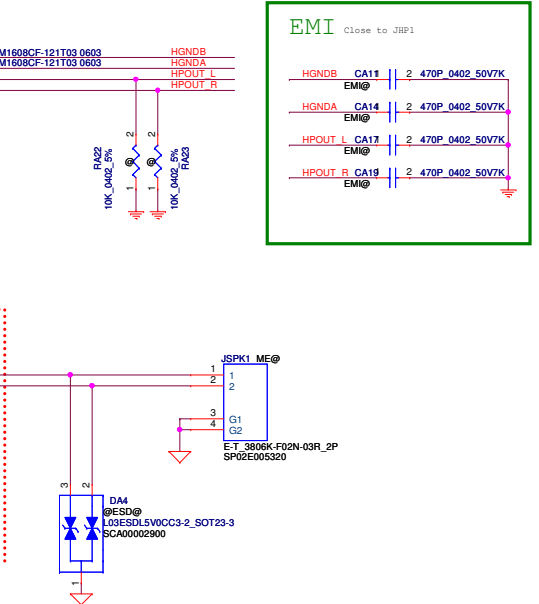
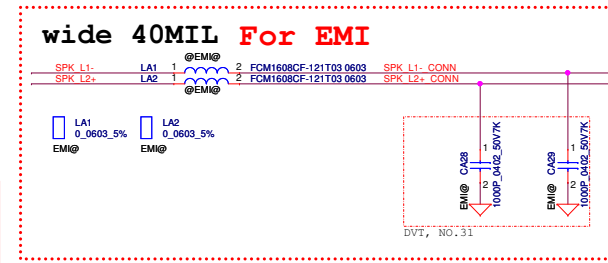
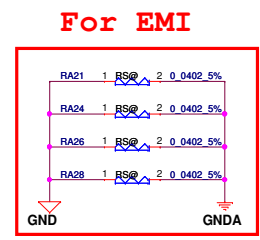
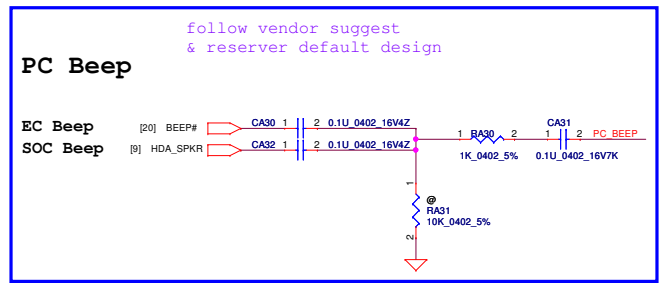
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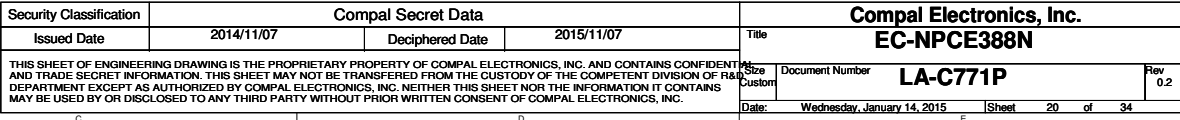
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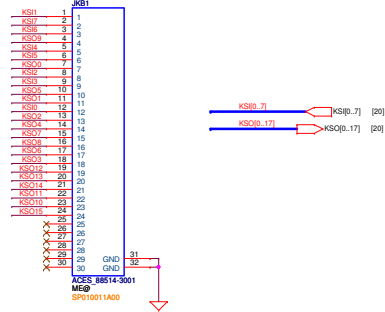
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wide 60MIL



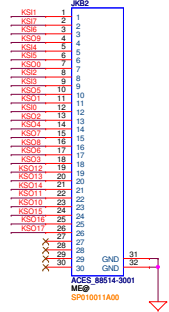
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| Issued Date | 2014/11/07 | Deciphered Date | 2015/11/07 | Compal Electronics, Inc. Audio Codec_ALC233VB2 | |
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| | | | | Custom | LA-C771P |
| | | | | Date | Wednesday, January 14, 2015 |
| | | | | Sheet | 19 of 34 |



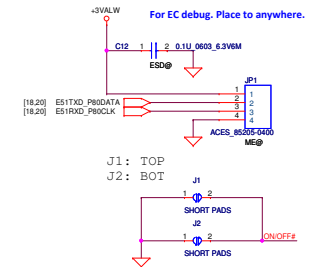
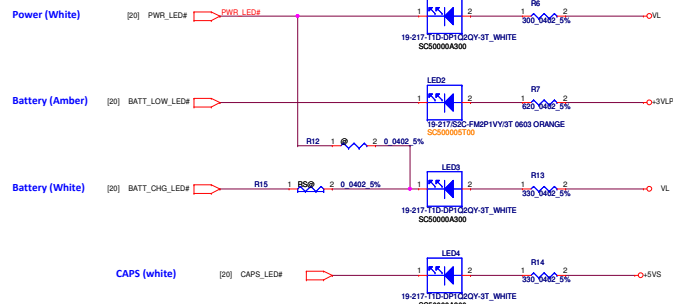
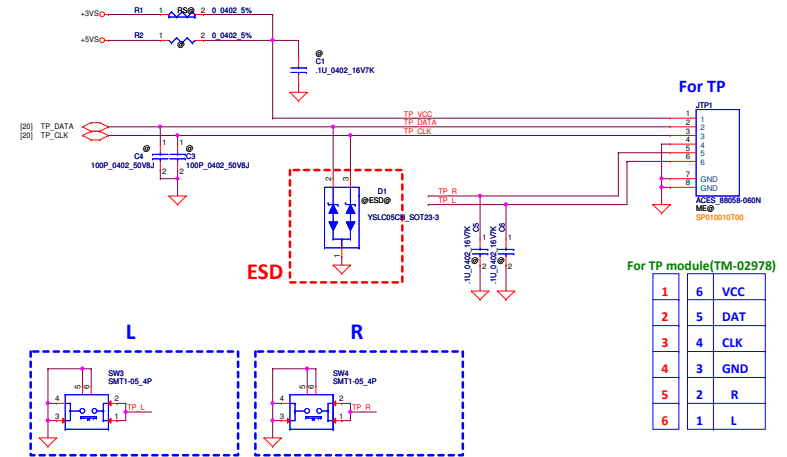
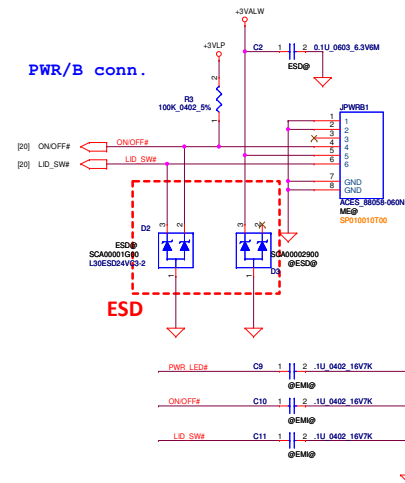
KB For 14"



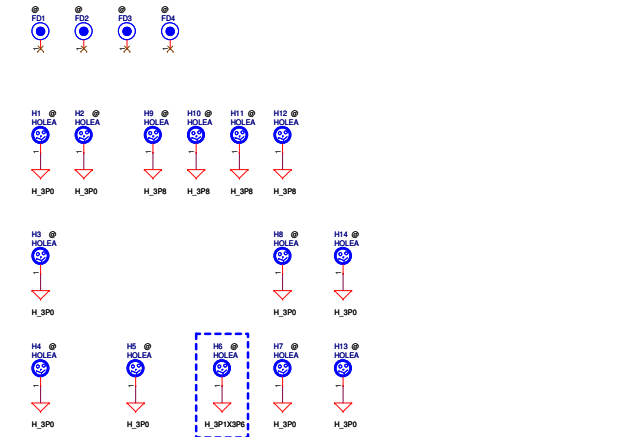
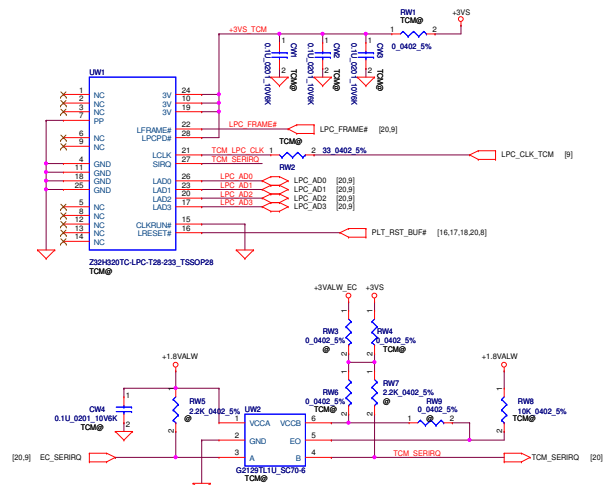
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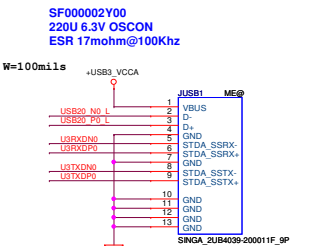
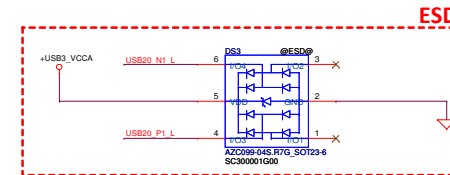
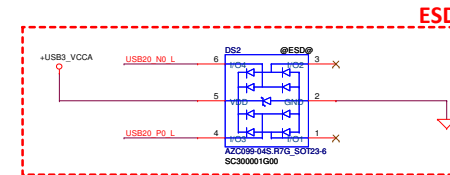
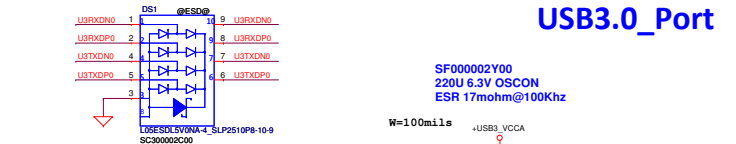
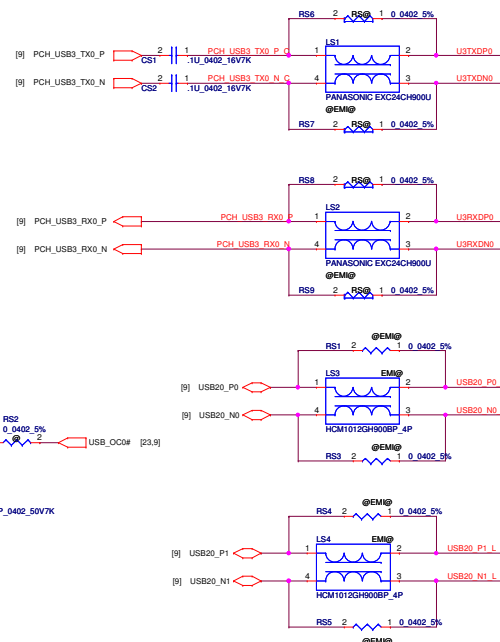
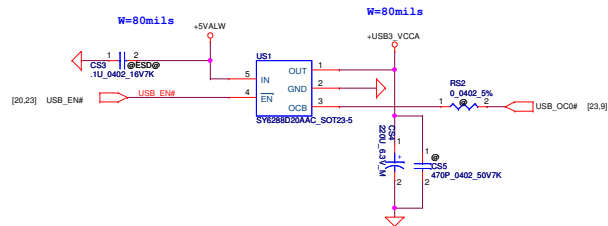
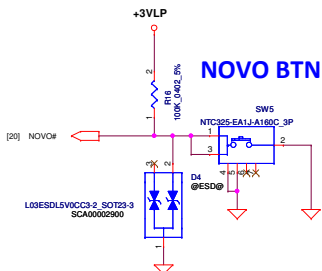
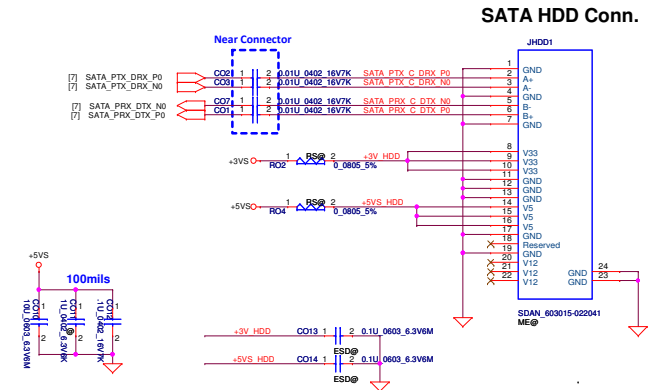
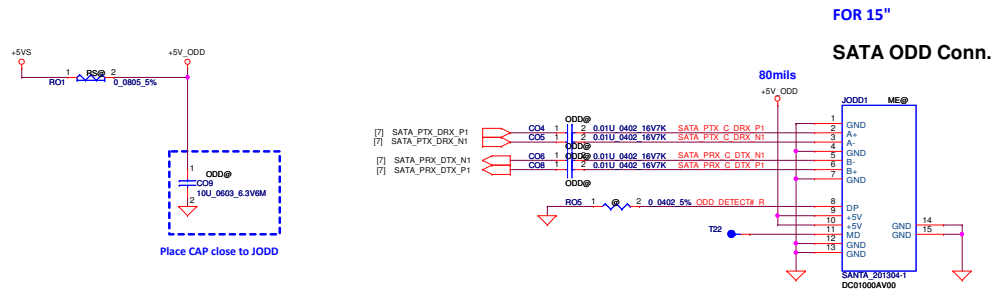


PWR/B conn.



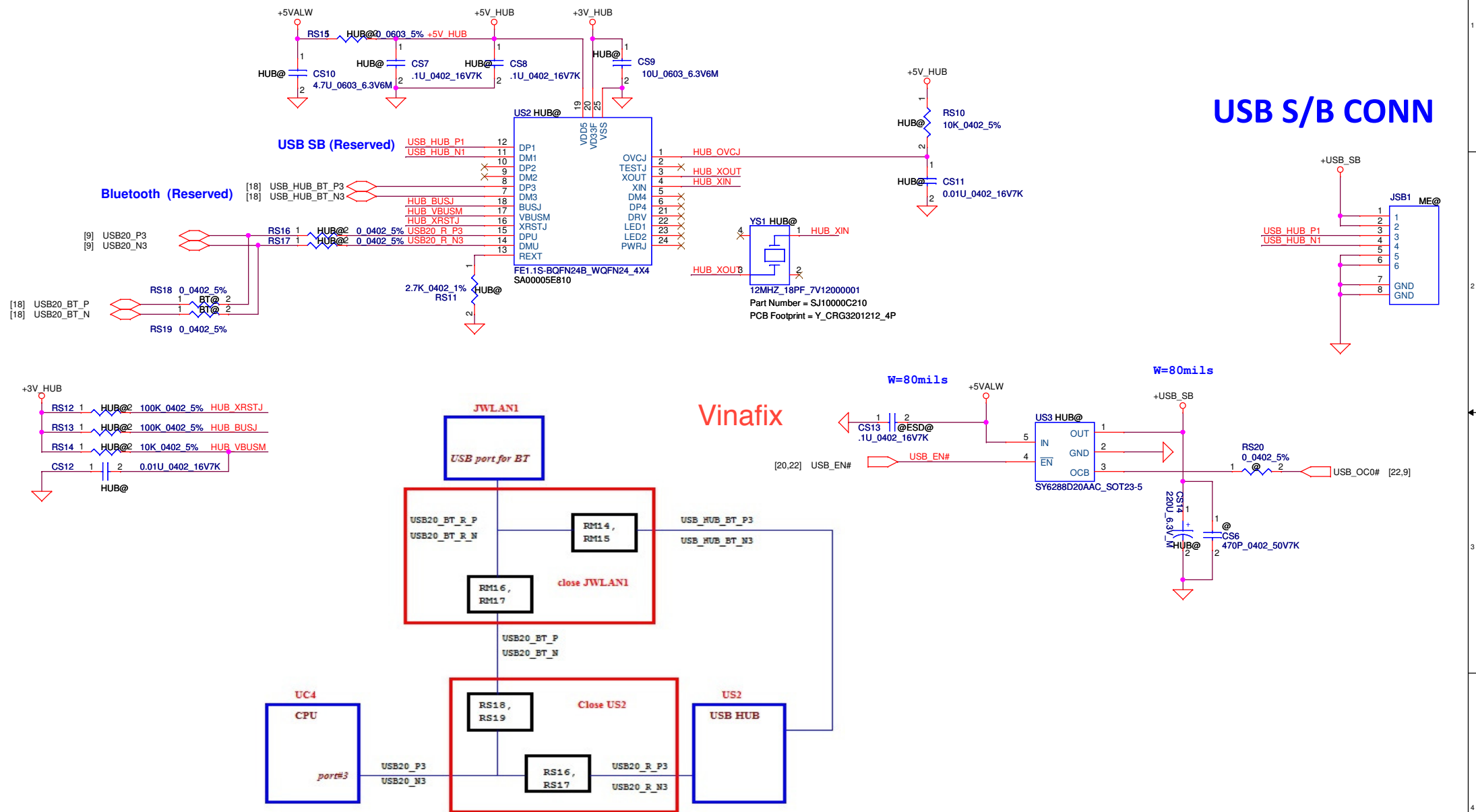
TCM (TPM)





| Security Classification | | Compal Secret Data | | Compal Electronics, Inc. | |
|---|------------|--------------------|------------|--------------------------|-----------------------------|
| Issued Date | 2014/11/07 | Deciphered Date | 2015/11/07 | HDD/ODD/USB | |
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| | | | | Date | Wednesday, January 14, 2015 |
| | | | | Sheet | 22 of 34 |
| | | | | Rev | 0.2 |

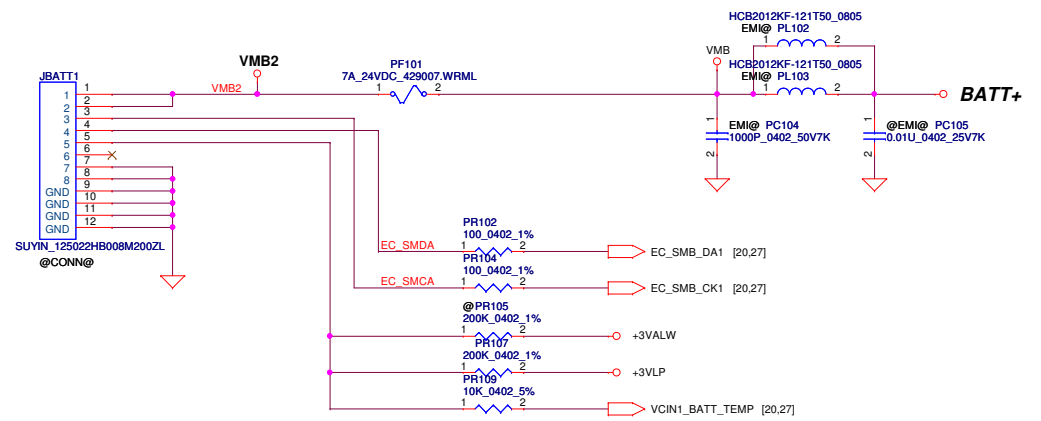
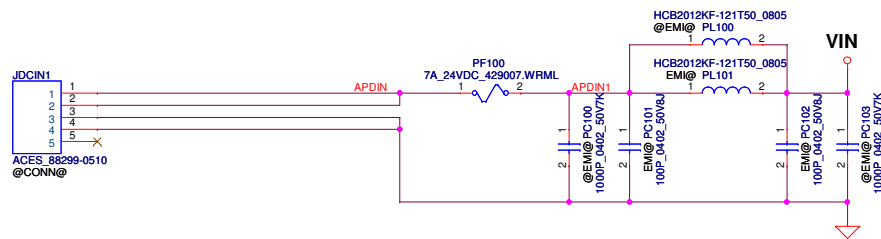
USB2.0 HUB



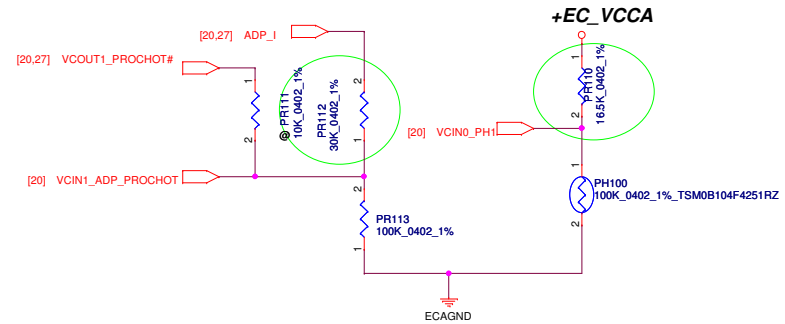
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| Security Classification | Compal Secret Data | | | Compal Electronics, Inc. | | |
| Issued Date | 2014/11/07 | Deciphered Date | 2015/11/07 | Title USB 2.0 HUB | | |
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| | | | | Custom | LA-C771P | 0.2 |
| | | | | Date: | Wednesday, January 14, 2015 | Sheet 23 of 34 |

Version Change List (P. I. R. List)

| Item | Page # | Title | Date | Request Owner | Issue Description | Solution Description | Rev. |
|------|--------|-------|------------|---------------|---|---|------|
| 1 | 22 | HW | 2014/11/18 | COMPAL | added NOVO BTN function | SW5, R16 connected to EC for NOVO function | 0.1 |
| 2 | 18 | HW | 2014/11/19 | COMPAL | reserver level shift for BT | Reserver QM1, RM18, Rm19and RM20 for BT level shift | 0.1 |
| 3 | 9 | HW | 2014/11/19 | COMPAL | added TCM, NTCM BOM option | added RC82 reserve for LPC_CLKRUN# PU 1.8VS | 0.1 |
| 4 | 21 | HW | 2014/11/19 | COMPAL | Move the hall sensor to power S/B | remove hall sensor circiut | 0.1 |
| 5 | 8, 20 | HW | 2014/11/21 | COMPAL | reserver EC clean CMOS | reserver QB1, RB31, RC83, and RC84 | 0.1 |
| 6 | 14 | EMI | 2014/11/24 | COMPAL | for EMI request | reserver CX14 and CX15 | 0.1 |
| 7 | 20 | HW | 2014/11/25 | COMPAL | EC vendor implement | Added NUVOTON_VTT RB32 PD | 0.1 |
| 8 | 23 | HW | 2014/11/25 | COMPAL | Reserve USB 2.0 HUB for external USB CONN | Added page 23 for USB 2.0 HUB | 0.1 |
| 9 | 20 | EC | 2014/11/25 | COMPAL | Change and remove EC pin define | PMC_SLP_S3# 97 pin -> 106 pin PCIE_LAN_WAKE# 123 pin -> 19 pin EC_SLP_S4# 89 pin -> 123 pin VR_ON 121 pin -> 108 pin SOC_SWDIO? 1 pin -> 121 pin EC_SWDIO? 76 pin -> 74 pin VUART 16 pin -> 21 pin SOC_BBCLK 18 pin -> 97 pin Remove BRDID EC_SW_OFF# HDD_DETECT# EC_LID_OUT# | 0.1 |
| 10 | 23 | HW | 2014/11/27 | COMPAL | Change USB S/B from 2 port to lport | Change JSB1 | 0.1 |
| 11 | 22 | EMC | 2014/11/28 | COMPAL | Reserve ESD diode | Reserve D4 and DA5 | 0.1 |
| 12 | 19 | HW | 2014/12/01 | COMPAL | for Audio vendor review change | change RA27 form 4.7K to 2.2K | 0.1 |
| 13 | 20 | HW | 2014/12/01 | COMPAL | Reserver SMBus resistor from CPU to EC | Reserve RB16 and RB17 | 0.1 |
| 14 | 21 | HW | 2014/12/02 | COMPAL | Change LED form green to white | Change LED1, LED2, and LED3 form SC590KGK020 to SC50000A300, and change R6 from 100 to 300 ohm | 0.1 |
| 15 | 23 | HW | 2014/12/02 | COMPAL | Reserve USB power switch for S/B on M/B side | Reserve US3, CS13, CS14, CS6 and RS20 | 0.1 |
| 16 | 18 | HW | 2014/12/03 | COMPAL | For support BT funciton WLAN card | Add RM21 for support BT WLAN CARD, reserve RM11, RM12, RM13 for debug | 0.1 |
| 17 | 21 | HW | 2014/12/22 | COMPAL | JTP1 pin swap for Tp module imformation error | Swap JTP1 pin define | 0.2 |
| 18 | 16, 22 | EMI | 2014/12/22 | COMPAL | For EMI requested | Change DL1, LS1 and LS2 Bom structure from EMI@ to @EMI@ and chage RS6, RS7, RS8, and RS9 from @EMI@ to EMI@ | 0.2 |
| 19 | 23 | HW | 2014/12/22 | COMPAL | BT function fail, pin connected error | Swap USB20_BT_P & USB20_BT_N | 0.2 |
| 20 | 15 | HW | 2014/12/22 | COMPAL | HDMI function fail, pin connected error | Swap HDMI_R_CK- & HDMI_R_CK+, HDMI_R_D1+ & HDMI_R_D1- | 0.2 |
| 21 | 22, 23 | HW | 2014/12/24 | COMPAL | ME Z-high interfere | Change CS4, CS14 from SF000006900 to SF000006R00 | 0.2 |
| 22 | | HW | 2014/12/24 | COMPAL | change o ohm to short pad | change RX9, RX10, RL3, RMI, RA3, RA4, RA1, RA2, RA5, RB7, RB4, R01, R04, RX7, RC76, RC77, RC48, RC70, RC74, RC80 to short pad | 0.2 |
| 23 | | EMI | 2015/01/05 | COMPAL | change o ohm to short pad for EMI requested | change RK12, RK13, RL5, RL7, RA21, RA24, RA26, RA28, RS6, RS7, RS8, RS9 to short pad | 0.2 |
| 24 | 15 | EMI | 2015/01/05 | COMPAL | change BOM structure | Change LY1, LY2, LY3 and LY4 BOM structure form EMI@ to @EMI@ Change RV12, RV15, RV18, and RV21 form @EMI@ to EMI@ Change RV11, RV13, RV14, RV16, RV17, RV19, RV20, RV22 form 0 ohm @EMI@ to 8.2 ohm EMI@ | 0.2 |
| 25 | 5, 7 | ESD | 2015/01/05 | COMPAL | add ESD cap for ESD requested | Add CC20, CC94, CC95 and change CD2 form 0.1U to 100P for ESD | 0.2 |
| 26 | 8 | HW | 2015/01/07 | COMPAL | prevent the power leakage issue. | Chaneg RC29 and RC33 bom structure form 14@ to @ | 0.2 |
| 27 | 20 | HW | 2015/01/09 | COMPAL | prevent the antenna effect | Add CB13, CB14 0.1u 0402 | 0.2 |
| 28 | 22 | DFB | 2015/01/10 | COMPAL | add test point for DFB requested | Add T22 (JODD1.11) | 0.2 |
| 29 | 21 | HW | 2015/01/14 | COMPAL | add screw hole conneted to GND | add H13, H14 conneted to GND | 0.2 |

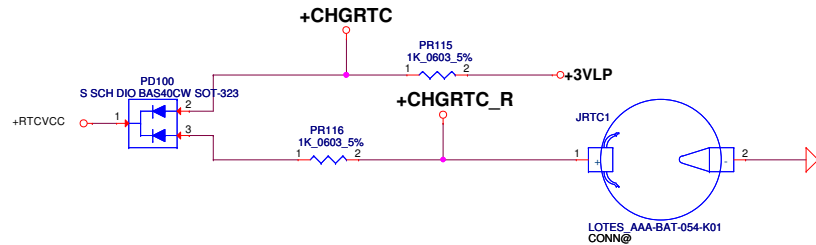


PH7 under CPU bottom side :
CPU thermal protection at 93 \pm 3 degree C
Recovery at 56 \pm 3 degree C

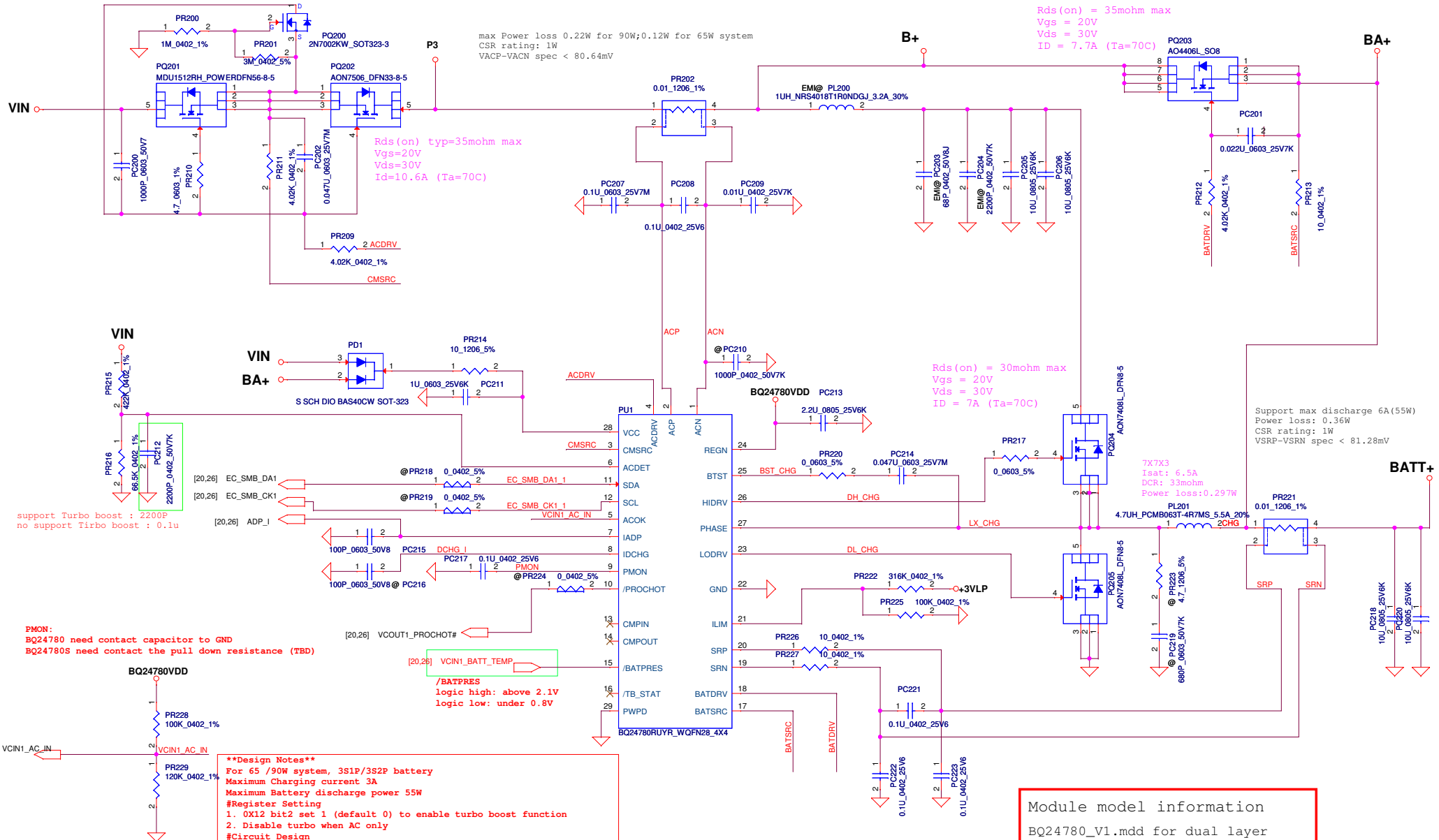


VCIN1 setting
Trigger point is 1.0V at 65W
Recovery point is 0.692V at 45W

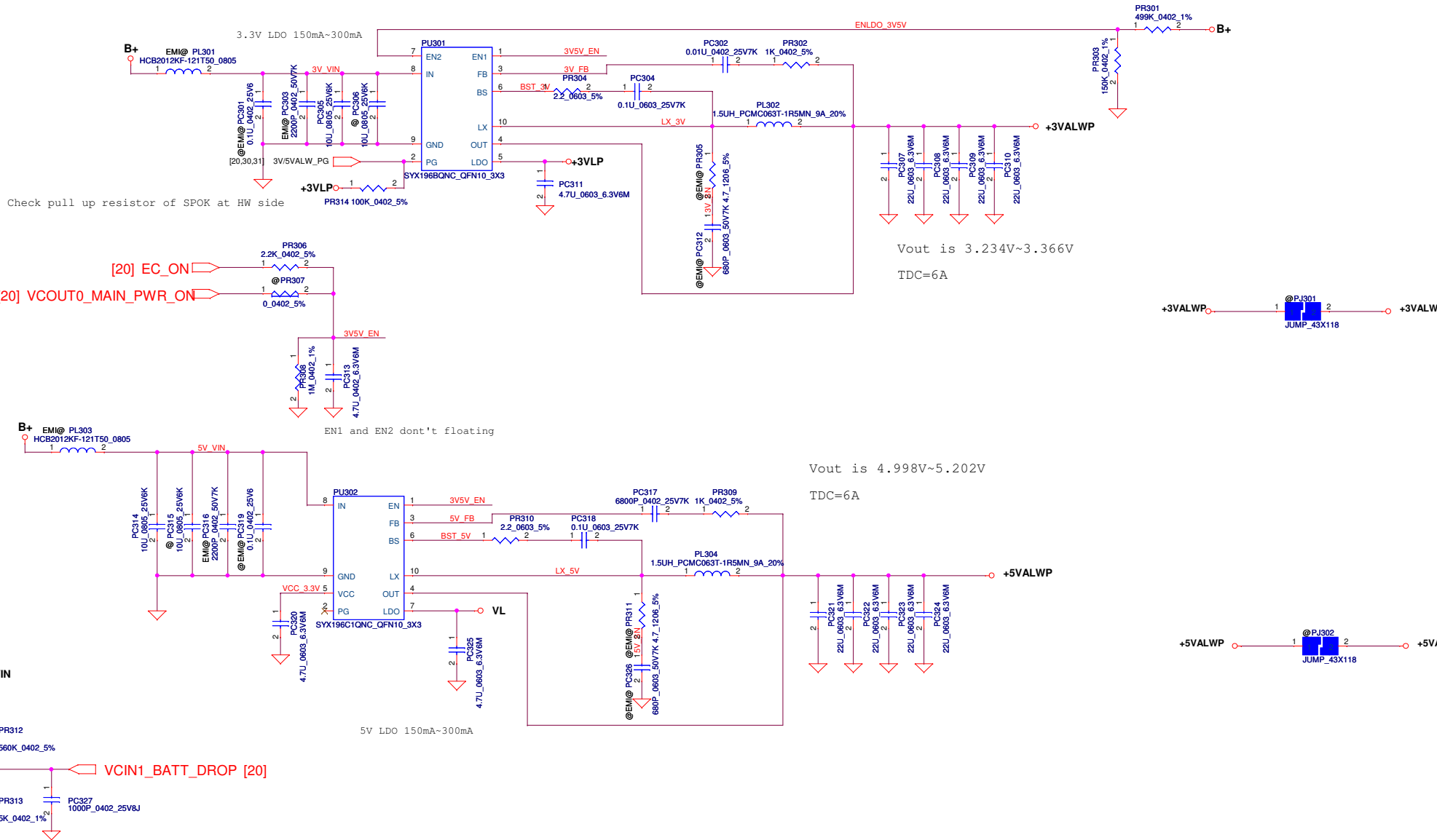
RTC



| | ADP_SET1 | ADP_SET2 |
|--------------|----------|----------|
| 45W adapter | 0 | 0 |
| 60W adapter | 1 | 0 |
| 90W adapter | 0 | 1 |
| 135W adapter | 1 | 1 |



| | | | | | |
|---|------------|--------------------|------------|--------------------------|----------------------------|
| Security Classification | | Compal Secret Data | | Compal Electronics, Inc. | |
| Issued Date | 2013/11/05 | Deciphered Date | 2015/11/05 | Title | BQ24780 |
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| | | | | Bay Trail M LA-C771P | |
| | | | | Date: | Thursday, January 15, 2015 |
| | | | | Sheet | 27 of 27 |

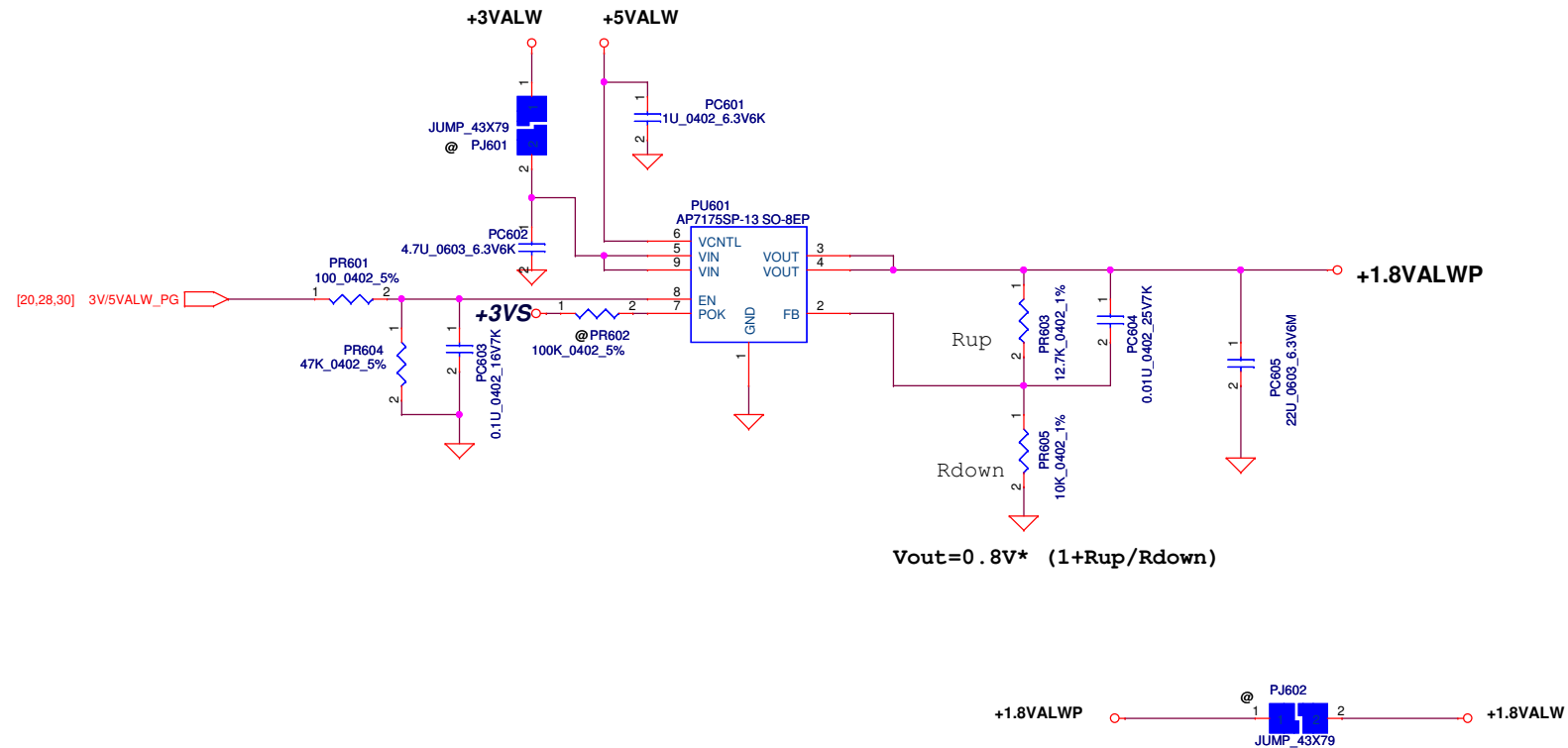


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| Issued Date | 2011/06/15 | Deciphered Date | 2012/07/11 | Title | Bay Trail M LA-C771P |
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| | | | | Date | Thursday, January 15, 2015 |
| | | | | Sheet | 28 of 28 |

| | |
|----------------|------------------|
| RT8207P_V1.mdd | For Single layer |
| RT8207P_V2.mdd | For Dual layer |



| | | | | | |
|---|------------|--------------------|------------|----------------------------|-----------------|
| Security Classification | | Compal Secret Data | | | |
| Issued Date | 2011/06/15 | Deciphered Date | 2013/09/17 | Title | |
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| | | | | Size | Document Number |
| | | | | Bay Trail M LA-C771P | |
| Date: | | | | Thursday, January 15, 2015 | Sheet 29 of 29 |



| | | | | |
|---|----------------------------|-----------------|--------------------------|----------------------|
| Security Classification | Compal Secret Data | | Compal Electronics, Inc. | |
| Issued Date | 2011/07/08 | Deciphered Date | 2013/09/17 | Title |
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| | | | | Document Number |
| | | | | Bay Trail M LA-C771P |
| Date: | Thursday, January 15, 2015 | Sheet | 31 of 31 | Rev 0.1 |

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

| Item | Reason for change | PG# | Modify List | Date | Phase |
|------|--|----------|-------------|-----------|-------|
| 1 | PR601_0_0402 change PR601_100_0402 | 31 | HW 需求 | | SIT |
| 2 | 修正PC207 fromluF to 0.1uF・修正PC209 from 0.1u to 0.01uF | 27 | 線路修正 | | SIT |
| 3 | pc203改EMI@上件 | 27 | EMI 需求 | | SIT |
| 4 | unpop cap from PC785 to PC786 | 32 | ME 需求 | | SIT |
| 5 | change PR410,PR411,PR501,PR218,PR219,PR224 to short pad | 27,29,30 | HW 需求 | | SIT |
| 6 | change PC715・PC718・PC723・PC770・PC774・PC777・PC779 From 0402 to 0603 | 32 | 線路修正 | | SIT |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
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| 16 | | 38 | | | |
| 17 | | 31 | | | |
| 18 | | 31 | | | |
| 19 | | 35 | | | |
| 20 | | 35 | | | |
| 21 | | 38 | | | |
| 22 | | 35 | | | |
| 23 | | 32 | | 2014/4/4 | SVT |
| | | 33 | | | |
| | | 34 | | | |
| 24 | | 38 | | 2014/4/14 | SVT |
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