

Project Name: NSBW140X

Platform : Braswell

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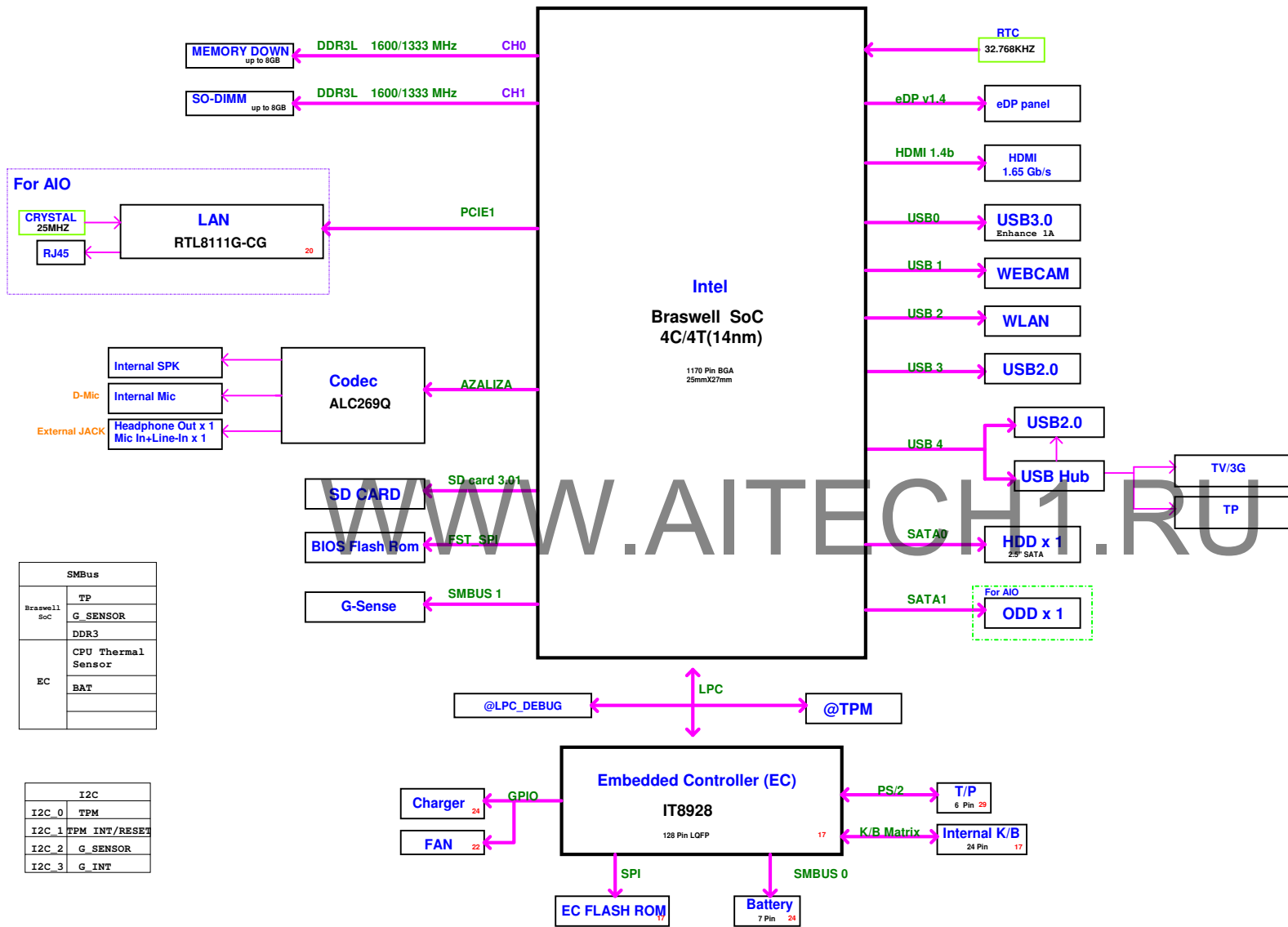
M/B Schematic Version Change List

| Release Date | Version | PCB P/N | PCB Description | PCBA P/N | Note |
|--------------|---------|---------|-----------------|----------|------|
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Daughter Board Schematic Version Change List

| Release Date | Version | PCB P/N | PCB Description | PCBA P/N | Note |
|--------------|---------|---------|-----------------|----------|------|
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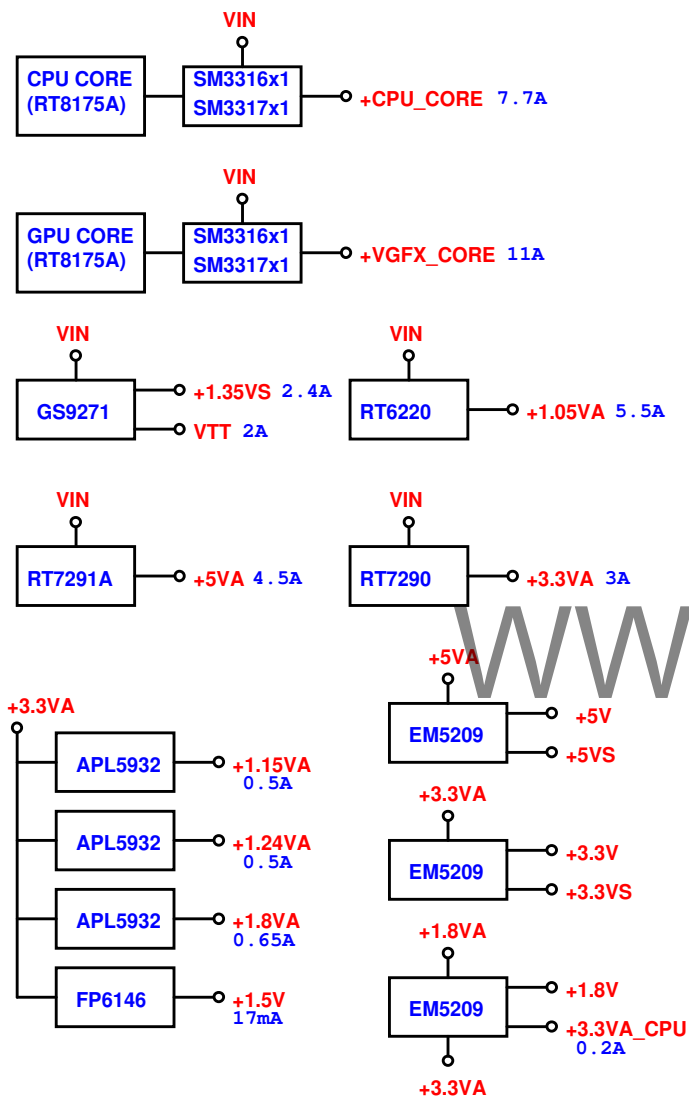
NSBW140X BLOCK DIAGRAM



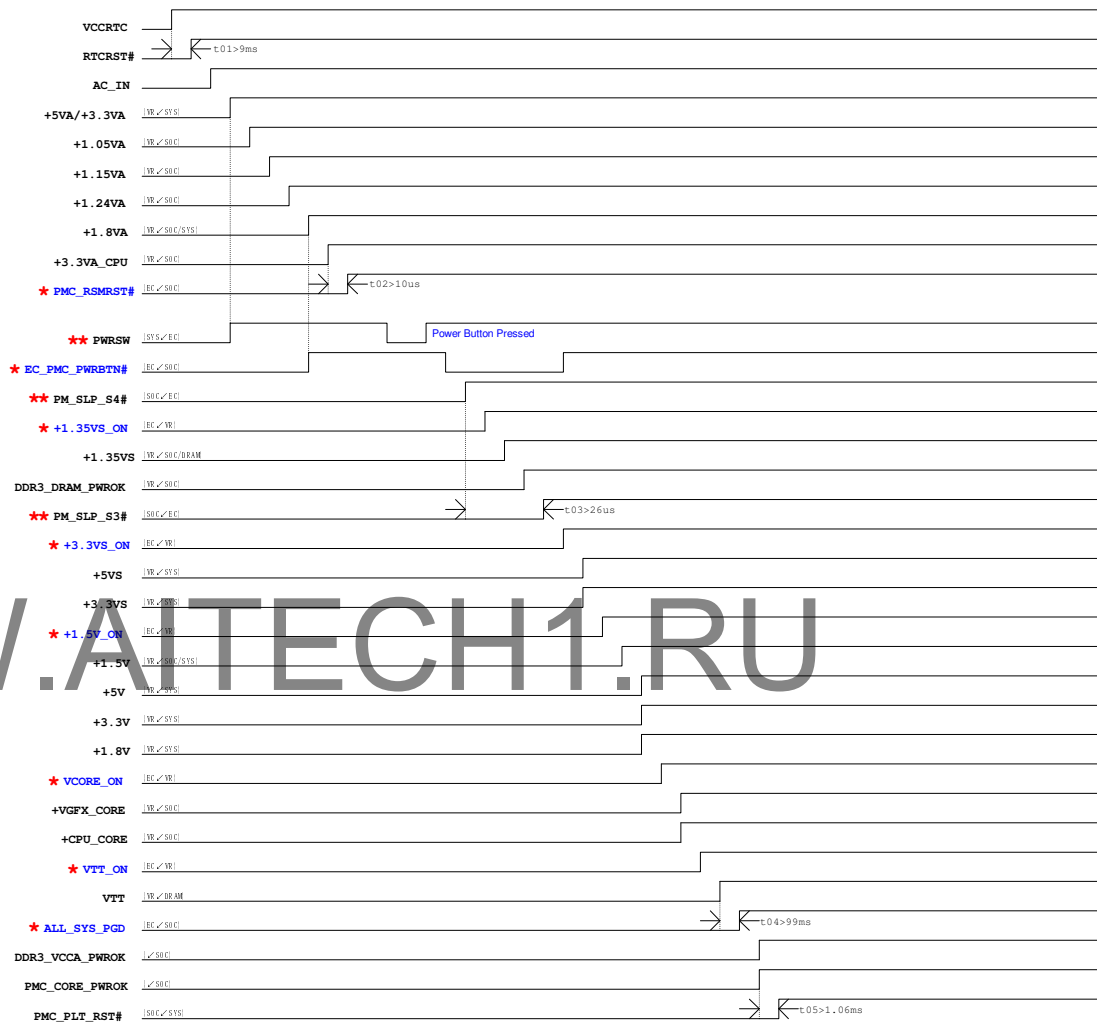
| SMBus | |
|--------------|--------------------|
| Braswell SoC | TP |
| | G_SENSOR |
| | DDR3 |
| EC | CPU Thermal Sensor |
| | BAT |
| | |
| | |

| I2C | |
|-------|---------------|
| I2C_0 | TPM |
| I2C_1 | TPM INT/RESET |
| I2C_2 | G_SENSOR |
| I2C_3 | G_INT |

POWER BLOCK DIAGRAM



Power On Sequence



★ EC Control Pin(O/P)
★★ EC Control Pin(I/P)

| Input Power | Voltage | Current | Power Rail | Voltage | Current |
|-------------|---------|---------|------------|---------|---------|
| VIN | 12-19V | 4.1A | +CPU_CORE | VID | 7.7A |
| | | | +VGFX_CORE | VID | 11.0A |
| | | | +1.35VS | 1.35V | 8.0A |
| | | | VTT | 0.675V | 2.0A |
| | | | +1.05VA | 1.05V | 5.5A |
| | | | +5VA | 5.0V | 5.5A |
| | | | +3.3VA | 3.3V | 3.0A |

| Input Power | Voltage | Current | Power Rail | Voltage | Current |
|-------------|---------|---------|--------------|---------|---------|
| +3.3VA | 3.3V | 3.0A | +3.3VA_CPU | 3.3V | 0.2A |
| | | | +1.15VA | 1.15V | 0.5A |
| | | | +1.24VA | 1.24V | 0.5A |
| | | | +1.08VA | 1.8V | 0.65A |
| | | | +1.5V | 1.5V | 0.02A |
| | | | +3.3V/+3.3VS | 3.3V | 1.5A |

| Input Power | Voltage | Current | Power Rail | Voltage | Current |
|-------------|---------|---------|------------|---------|---------|
| +5VA | 5.0V | 5.5A | +5V/+5VS | 5V | 5.5A |

ITE8928

Default

| GPIO | Pull/Mode | DSN LEVEL | EC LEVEL | IC LEVEL | Comment |
|------|------------------|--------------------|-----------|--------------------------|----------|
| GPA0 | PID_1_CHG_R_LED | UP/GPO • 3.3VA | 3.3V | | Reserved |
| GPA1 | PID_2_PWR_LED | UP/GPO • 3.3VA | 3.3V | | Reserved |
| GPA2 | BTL_BEEP | /GPO • 3.3V | 3.3V | 3.3V | Reserved |
| GPA3 | Fast_Charge | /GPO • 3.3V | 3.3V | 3.3V | |
| GPA4 | +1.05VA_ON | UP / GPO • 3.3VA | 3.3V | >1.25V | Reserved |
| GPA5 | SENBAT_V | / GPO • 3.3V | 3.3V | For NMOS | |
| GPA6 | PMC_RSMRST# | Dn / GPI • 3.3V | 3.3V | 3.3V | |
| GPA7 | +1.35VS_ON | / GPO • 3.3V | 3.3V | >1.25V | |
| GPB0 | WLAN_HOST_WAKE | / GPI • 3.3V | 3.3V | 3.3V | Reserved |
| GPB1 | WLAN_SUSPEND | / GPO • 3.3V | 3.3V | 3.3V | Reserved |
| GPB2 | WEBCAM_ON | / GPO • 3.3V | 3.3V | 3.3V | |
| GPB3 | BAT_SMBCLK1 | UP/GPIO • 3.3VA | 1.8VA | | |
| GPB4 | BAT_SMBDAT1 | UP/GPIO • 3.3VA | 1.8VA | | |
| GPB5 | SOC_BL_EN | / GPI • 1.8VA | 1.8/3.3VA | MAX 5.0V | Reserved |
| GPB6 | +3.3V_EC | UP / GPI • 3.3VA | 1.8/3.3VA | 3.3V | |
| GPB7 | SAFTY_PROTECT | Dn / GPO • 3.3V | 3.3V | For NMOS | |
| GPC0 | 3G_Power_ON_EC | / GPO • 3.3VA | 1.8/3.3VA | 3.3V | Reserved |
| GPC1 | SMB_CLK_EC | UP / GPIO • 3.3VA | 1.8/3.3VA | 3.3V | |
| GPC2 | SMB_DATA_EC | UP / GPIO • 3.3VA | 1.8/3.3VA | 3.3V | |
| GPC3 | PWRBTN1# | UP / GPI • 3.3VS | 3.3V | 3.3V | Reserved |
| GPC4 | PANEL_DETECT 2 | UP / GPI • 3.3VA | 3.3V | 3.3V | |
| GPC5 | CHG_HI_VOLT# | / GPO • 3.3V | 3.3V | For NMOS | |
| GPC6 | PANEL_3.3V_ON | UP /GPO • 3.3V | 3.3V | For NMOS | |
| GPC7 | VTT_ON | / GPO • 3.3V | 1.8/3.3VA | >1.25V | |
| GPD0 | ADAP_IN | Dn / GPI • 3.3V | 1.8/3.3VA | For NMOS | |
| GPD1 | EC_PMC_PWRBTN# | UP / GPO • 1.8VA | 1.8/3.3VA | 1.8V | |
| GPD2 | PLT_RST# | UP / GPI • 3.3V | 1.8/3.3VA | 3.3V | |
| GPD3 | SMC_WAKE_SCI# | Up / GPO • 1.8VA | 1.8/3.3VA | 1.8V | Reserved |
| GPD4 | EC_EXTSMI# | UP / GPO • 1.8VA | 1.8/3.3VA | 1.8V | |
| GPD5 | NC | | | | |
| GPD6 | +1.5V_ON | / GPO • 3.3V | 3.3V | 3.3V | |
| GPD7 | PWR_USB# | UP/ GPO • 3.3VA | 3.3V | 3.3V | |
| GPE0 | LID# | UP / GPI • 3.3VA | 1.8/3.3VA | 3.3V | |
| GPE1 | AMP_MUTE# | / GPO • 3.3V | 3.3V | 3.3V | |
| GPE2 | ALL_SYS_PGD | / GPO • 3.3V | 3.3V | For NMOS | |
| GPE3 | VCORE_ON | / GPO • 3.3V | 3.3V | 3.3V | |
| GPE4 | PWRSW | UP / GPI • 3.3VA | 3.3V | 3.3V | |
| GPE5 | LVDS_VIN | / GPO • 3.3V | 3.3V | For NMOS | |
| GPE6 | 3G_SIM_DET_EC | / GPI • 3.3V | 1.8/3.3VA | 3.3V | Reserved |
| GPE7 | PMC_SLP_S0IX#_R | / GPI • 3.3V | 1.8/3.3VA | 3.3V | Reserved |
| GPF0 | PANEL_VCC | Dn / GPO • 3.3V | 3.3V | 3.3V | Reserved |
| GPF1 | TXE_DISABLE | / GPO • 3.3V | 3.3V | For NMOS | |
| GPF2 | 3G_Reset_EC | / GPO • 3.3V | 1.8/3.3VA | 3.3V | Reserved |
| GPF3 | WLAN_ON | / GPO • 3.3V | 1.8/3.3VA | For NMOS | |
| GPF4 | TP_CLK | UP / GPIO • 3.3V | 1.8/3.3VA | 3.3V | |
| GPF5 | TP_DATA | UP / GPIO • 3.3V | 1.8/3.3VA | 3.3V | |
| GPF6 | PM_SLP_S3# | UP / GPIO • 3.3VA | 1.8/3.3VA | connect to level shifter | |
| GPF7 | PM_SLP_S4# | UP / GPI • 3.3VA | 1.8/3.3VA | connect to level shifter | |
| GPG0 | NC | | | | |
| GPG1 | +3.3VS_ON | /GPO • 3.3V | 3.3V | 3.3V | |
| GPG2 | NC | | | | |
| GPG3 | SPI_CE# | /GPO • 3.3V | 3.3V | 3.3V | |
| GPG4 | SPI_SI | /GPI • 3.3V | 3.3V | 3.3V | |
| GPG5 | SPI_SO | /GPO • 3.3V | 3.3V | 3.3V | |
| GPG6 | LAN_PW_EN | UP/GPO • 3.3V | 3.3V | For NMOS | |
| GPG7 | SPI_CLK | /GPO • 3.3V | 3.3V | 3.3V | |
| GPH0 | AUX_OFF | Dn/GPO • 3.3VA | 1.8/3.3VA | For NMOS | |
| GPH1 | PID_3_RF_LED_ON# | /GPO • 3.3VA | 1.8/3.3VA | 3.3V | |
| GPH2 | EC_LCDVDD_EN | UP/GPO • 1.8VA | 1.8/3.3VA | 1.8V | |
| GPH3 | RST | /GPO • 3.3V | 3.3V | For NMOS | Reserved |
| GPH4 | PLATFORM_ID1 | UP/GPI/ID1 • 3.3VA | 3.3V | 3.3V | |
| GPH5 | PLATFORM_ID2 | UP/GPI/ID2 • 3.3VA | 3.3V | 3.3V | Reserved |
| GPH6 | PLATFORM_ID3 | Dn/GPI/ID3 • 3.3VA | 3.3V | 3.3V | |
| GPH7 | NC | | | | |

| GPIO | Pull/Mode | LEVEL | EC LEVEL | IC LEVEL | Comment |
|------|-------------------|--------------------|----------|----------|-------------|
| GPI0 | CPU_THERMAL_SENSE | UP/GPI/ADC • 3.3V | 3.3V | 3.3V | |
| GPI1 | PANEL_DETECT | UP/GPI • 3.3VA | 3.3V | 3.3V | |
| GPI2 | LAN_WAKE# | UP/GPI • 3.3VS | 3.3V | 3.3V | EC Reserved |
| GPI3 | PWRBTN2# | UP/GPI • 3.3VS | 3.3V | 3.3V | Reserved |
| GPI4 | BAT_I | /GPI/ADC • 3.3V | 3.3V | 3.3V | Reserved |
| GPI5 | BATT_TEMP | UP/GPI/ADC • 3.3VA | 3.3V | 3.3V | |
| GPI6 | ADAPTOR | Dn/GPI/ADC • 3.3V | 3.3V | 3.3V | |
| GPI7 | BAT_V | /GPI/ADC • 3.3V | 3.3V | 3.3V | |
| GPJ0 | EC_BL_ON | /GPO • 3.3V | 3.3V | <5V | |
| GPJ1 | EC_PROCHOT | /GPO • 3.3V | 3.3V | For NMOS | |
| GPJ2 | FAN_CTRL0 | /GPO/DAC • 3.3V | 3.3V | 3.3V | |
| GPJ3 | WK_TH | /GPO/DAC • 3.3V | 3.3V | 3.3V | |
| GPJ4 | CHG_I | /GPO/DAC • 3.3V | 3.3V | 3V | |
| GPJ5 | SET_V | Dn/GPO/DAC • 3.3V | 3.3V | 3.3V | |
| GPJ6 | BATT_VA_OFF# | Dn/GPO • 3.3V | 3.3V | For NMOS | |
| GPJ7 | 3G_Module_ON_EC | /GPO • 3.3V | 3.3V | 3.3V | Reserved |
| GPM0 | LPC_AD0_EC | /GPIO • 1.8V | 1.8V | 1.8V | |
| GPM1 | LPC_AD1_EC | /GPIO • 1.8V | 1.8V | 1.8V | |
| GPM2 | LPC_AD2_EC | /GPIO • 1.8V | 1.8V | 1.8V | |
| GPM3 | LPC_AD3_EC | /GPIO • 1.8V | 1.8V | 1.8V | |
| GPM4 | CLK_EC_LPC | /GPI • 1.8V | 1.8V | 1.8V | |
| GPM5 | LPC_FRAME# | /GPI • 1.8V | 1.8V | 1.8V | |
| GPM6 | INT_SERIRQ | UP/GPIO • 1.8VA | 1.8V | 1.8V | |
| GPM7 | | | | | |

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TongFang Inc

NSBW1401

| | | |
|-------|------------------------------|---------------|
| Title | Document Number | Rev |
| Size | Custom | B1 |
| Date | Thursday, September 10, 2015 | Sheet 4 of 31 |

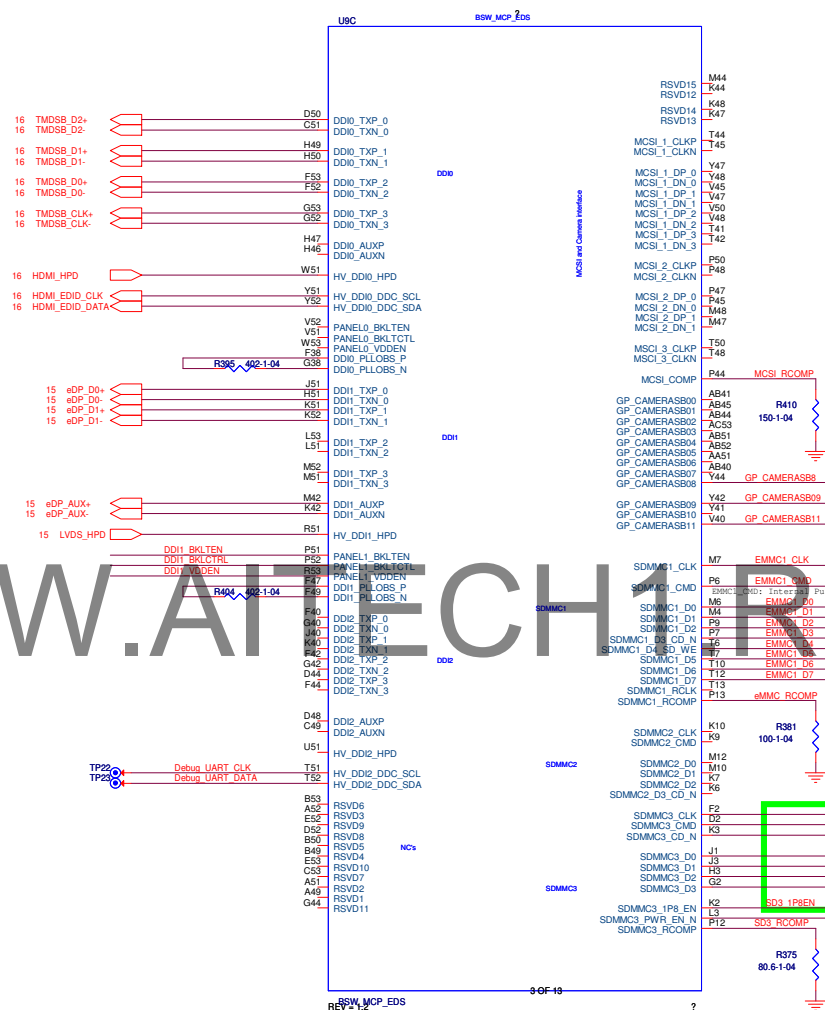
GPIO

eDP Logic Power EN

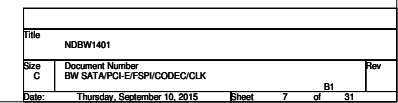
The schematic shows a signal line for **EC_LCDVDD_EN** (pin 17) which is also labeled **DD11_VDDEN**. The line is pulled up to **+1.8V_A_REF** by resistor **R414** (4.7K-04) and pulled down to ground by resistor **R416** (100K-04). A small capacitor **C4** is connected to the signal line. The signal line is labeled **1** and **2** at the junctions with the resistors, and **0-04** near the capacitor.

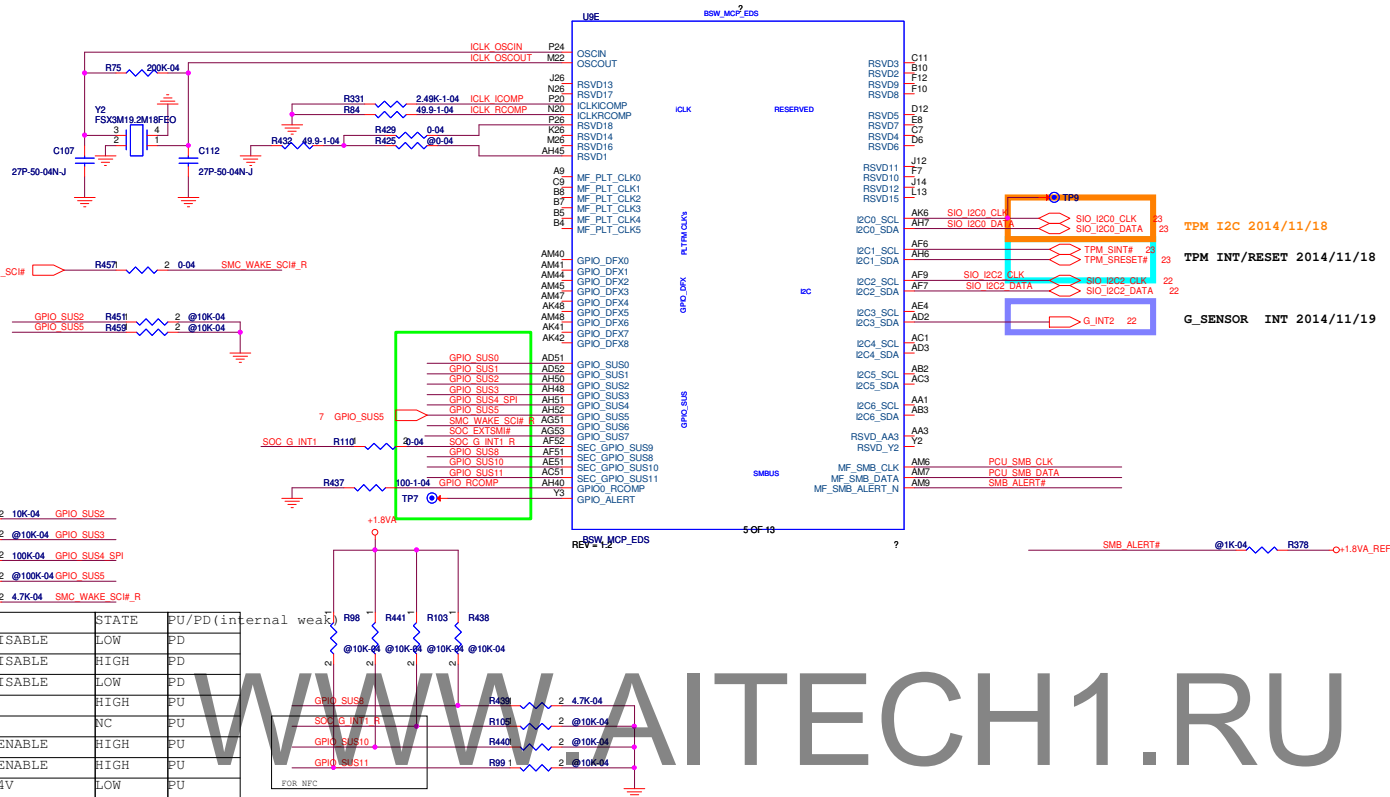
eDP BL Power EN

The diagram shows a circuit for the eDP BL Power EN signal. A purple line represents the SOC_BL_EN signal, which is connected to pin 17 of the SOC. This signal line passes through a resistor R428 (0-04) between pins 1 and 2 of a component. Pin 1 is connected to the DDII1_BKLTEN signal and a resistor R427 (100K-04) to ground. Pin 2 is connected to a resistor R444 (10K-04) to the +1.8V_A_REF supply.

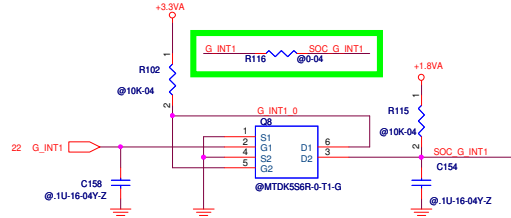


| reference design | |
|------------------|-------------|
| SDMMC3_1P8_EN | V1P8A |
| SDMMC3_CD_N | V1P8A |
| SDMMC3_CLK | V3P3A/V1P8A |
| SDMMC3_CMD | V3P3A/V1P8A |
| SDMMC3_D0 | V3P3A/V1P8A |
| SDMMC3_D1 | V3P3A/V1P8A |
| SDMMC3_D2 | V3P3A/V1P8A |
| SDMMC3_D3 | V3P3A/V1P8A |
| SDMMC3_PWR_EN_N | V1P8A |





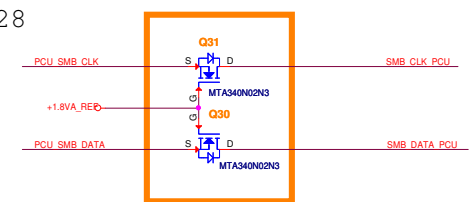
G_SENSOR_INT



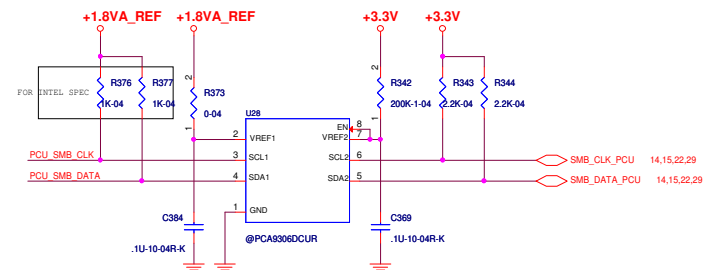
EXTSMI# NO USE



COLAY U28



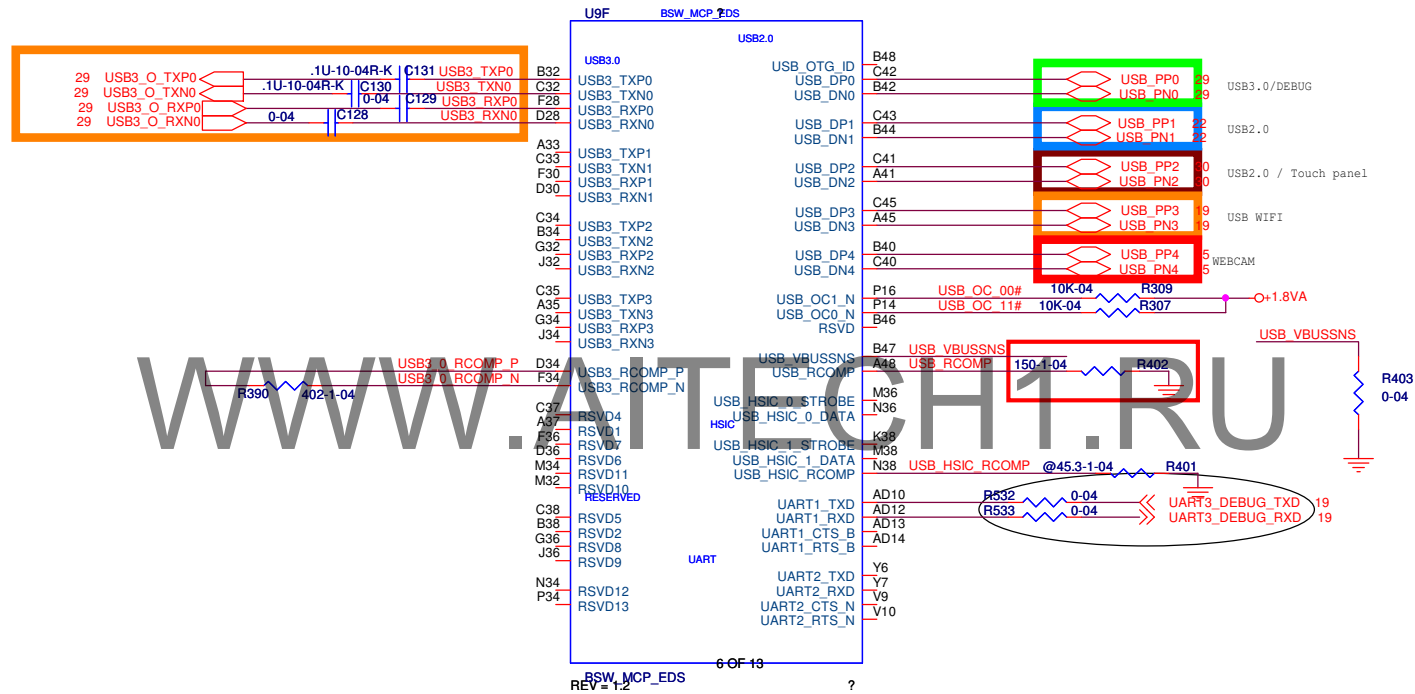
SMBUS/I2C FOR G-SENSOR/CPD/DRAM



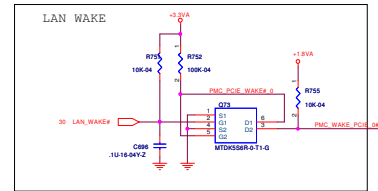
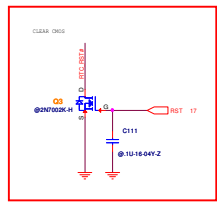
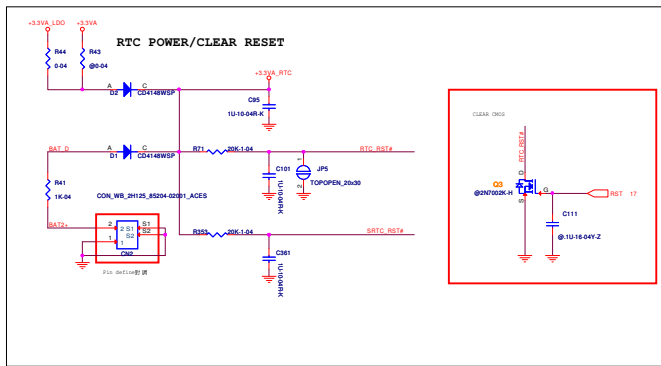
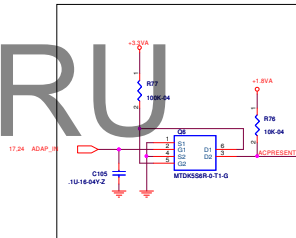
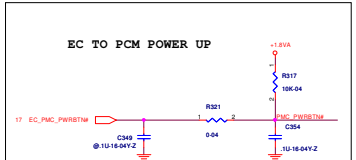
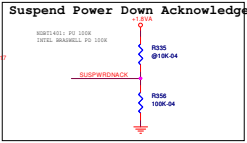
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|----------|------------------------------|-------|---------|
| Title | | | |
| NDBW1401 | | | |
| Size | Document Number | Rev | |
| C | BW I2C/GPIO | B1 | |
| Date: | Thursday, September 10, 2015 | Sheet | 8 of 31 |

USB 2.0 BUS

| | |
|------|-----------------|
| USB0 | USB3.0/DEBUG |
| USB1 | USB2.0 |
| USB2 | USB2.0 |
| USB3 | USB WLAN |
| USB4 | USB HUB/ WEBCAM |



| | | |
|----------|------------------------------|---------------|
| Title | | |
| NDBW1401 | | |
| Size | Document Number | Rev |
| B | BW USB2.0/3.0 | B1 |
| Date: | Thursday, September 10, 2015 | Sheet 9 of 31 |



+CPU_CORE MAX=6.4A

+CPU_CORE

IMAX=3.5A

+1.05V_A

+VGFX_CORE_MAX=13A

+VGFX_CORR

+1.05VA MAX=2A

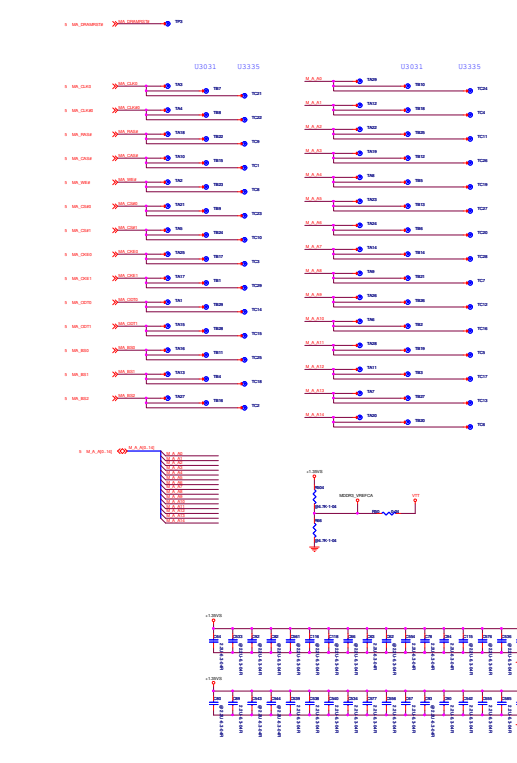
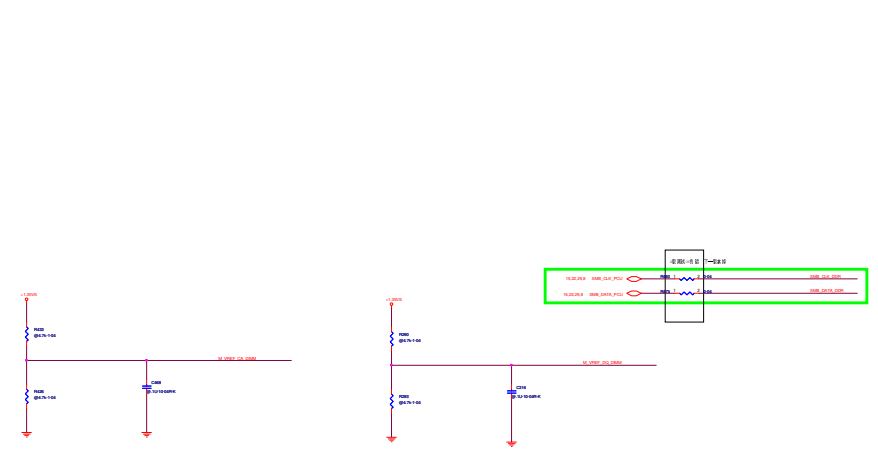
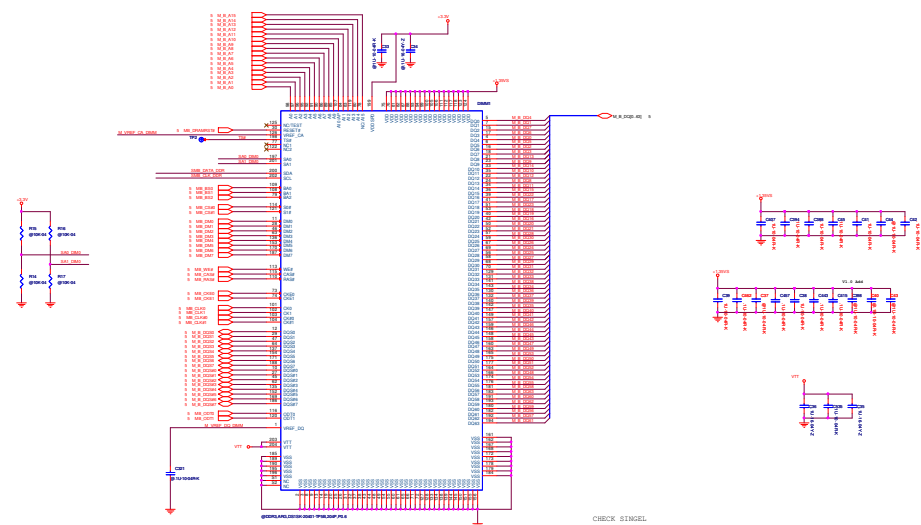
+1.15VA MAX=0.5A

+1.15VA

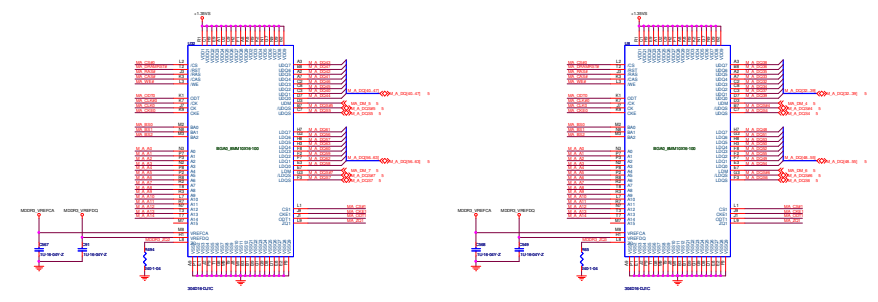
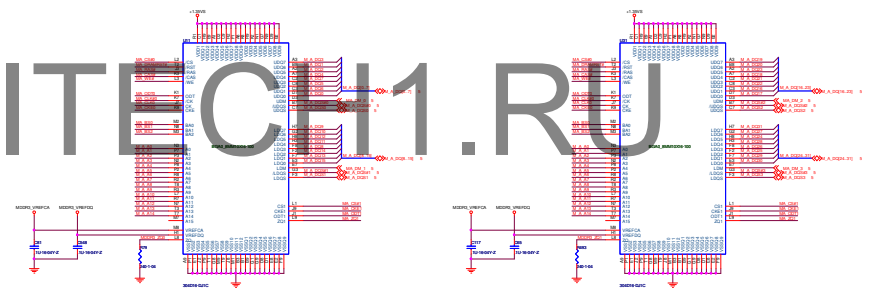
+1.15VA

+1.05V_A

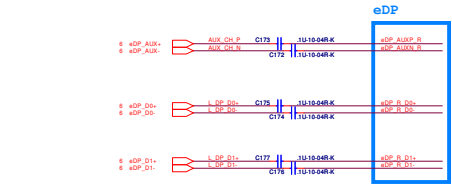
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|----------|-----------------|------------------------------|-------|----------|
| | | | | |
| Title | | | | |
| NDBW1401 | | | | |
| Size | Document Number | | | Rev |
| C | BW POWER1 | | | |
| Date: | | Thursday, September 10, 2015 | Sheet | 11 of 31 |



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eDP

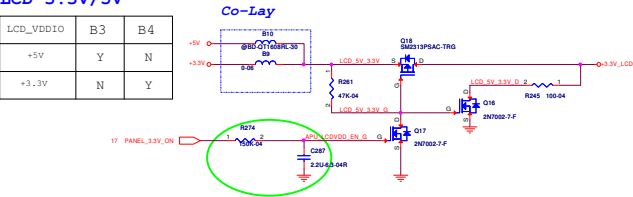


Panel Connector

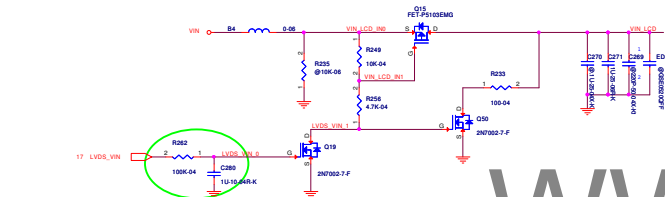
| | High | Low |
|---------------|------|-----|
| PANEL_DETECT1 | 1k | 10k |
| PANEL_DETECT2 | 10k | 10k |

LCD 3.3V/5V

| | | |
|-----------|----|----|
| LCD_VDDIO | B3 | B4 |
| +5V | Y | N |
| +3.3V | N | Y |

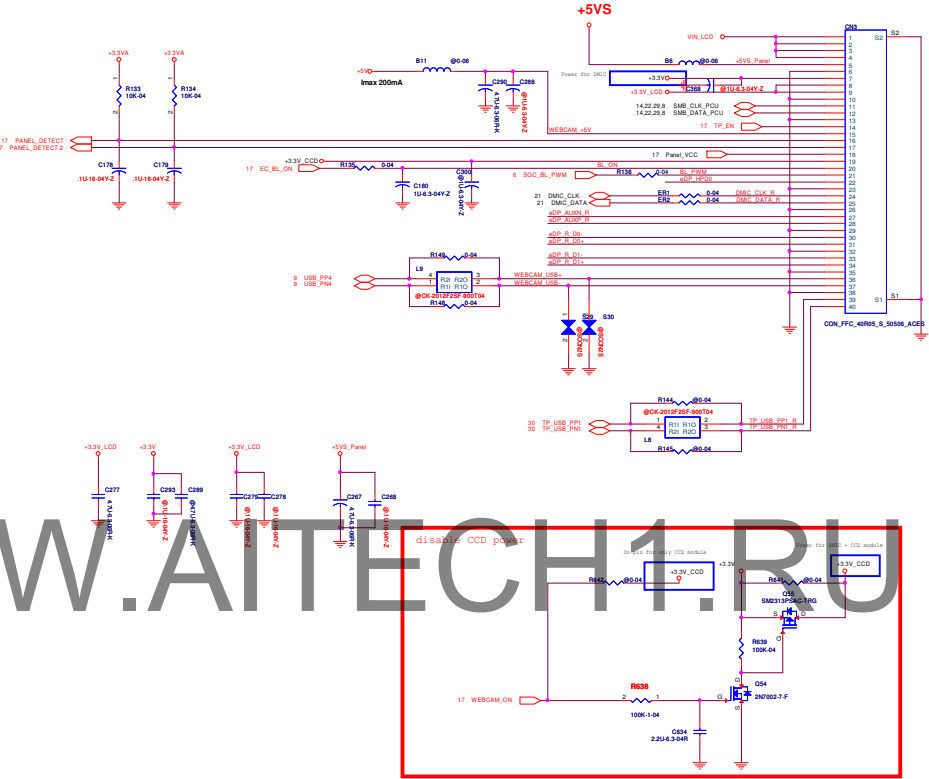
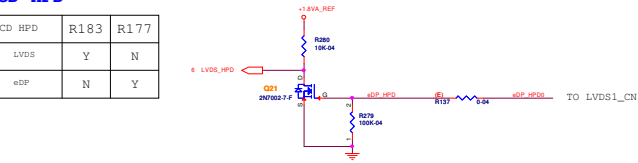


LCD 19V/BAT1+

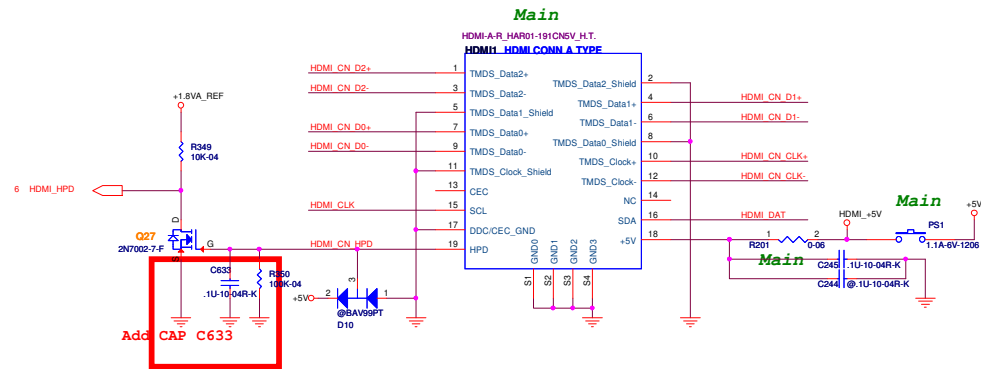
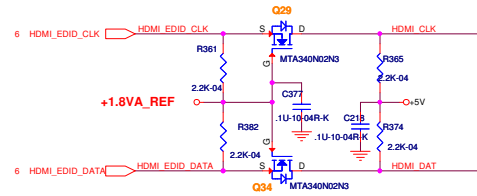


LCD HPD

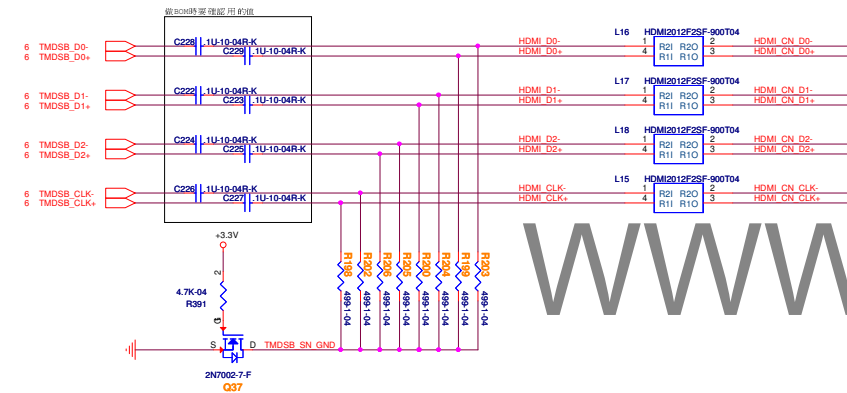
| | | |
|---------|------|------|
| LCD HPD | R183 | R177 |
| LVD5 | Y | N |
| eDP | N | Y |



HDMI EDID



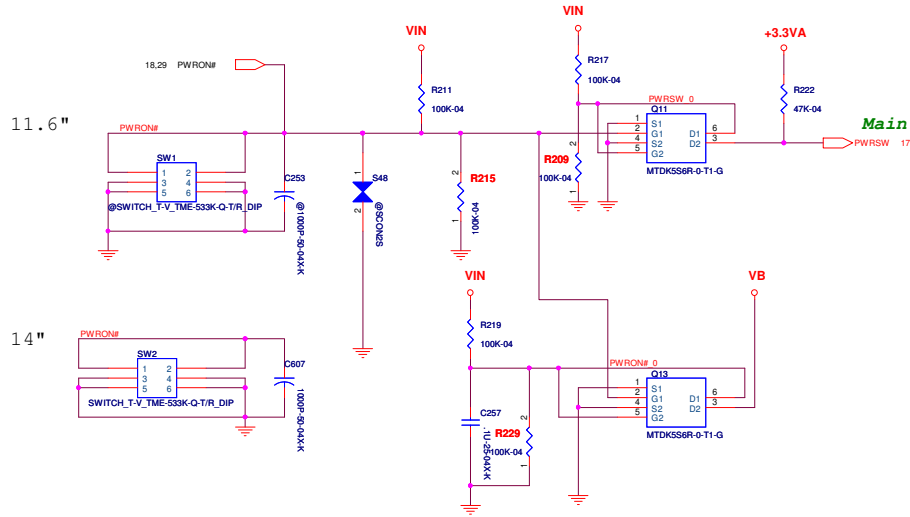
HDMI CONN



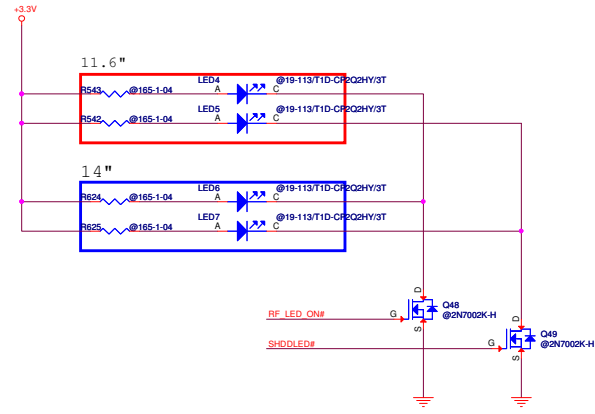
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| | | | |
|----------|------------------------------|-------|----------|
| Title | | | |
| NOBW1401 | | | |
| Size | Document Number | | Rev |
| Custom | HDMI | | B1 |
| Date: | Thursday, September 10, 2015 | Sheet | 16 of 31 |

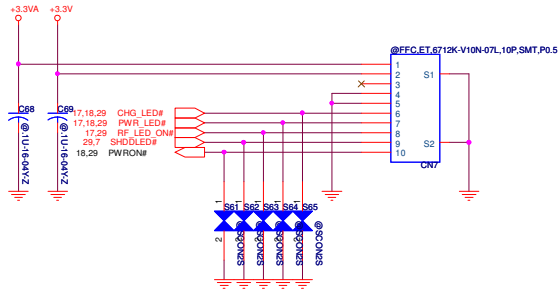
PWR SW



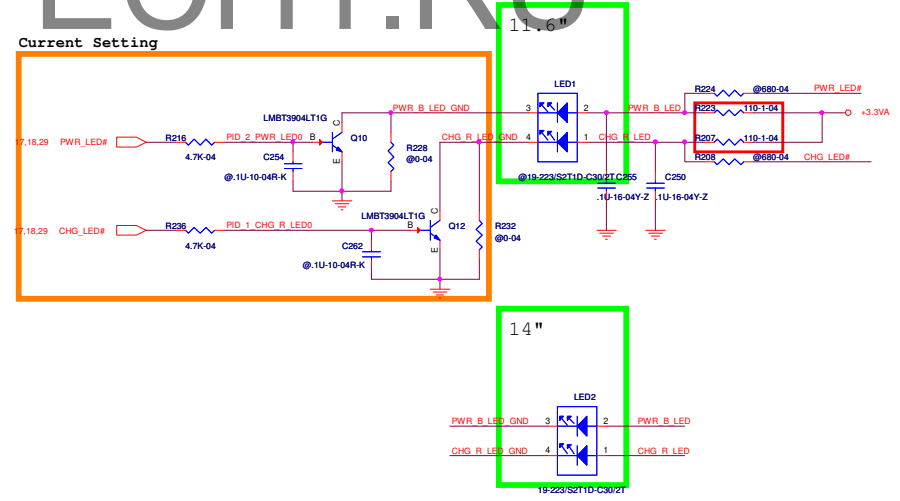
LED for WIFI & HDD



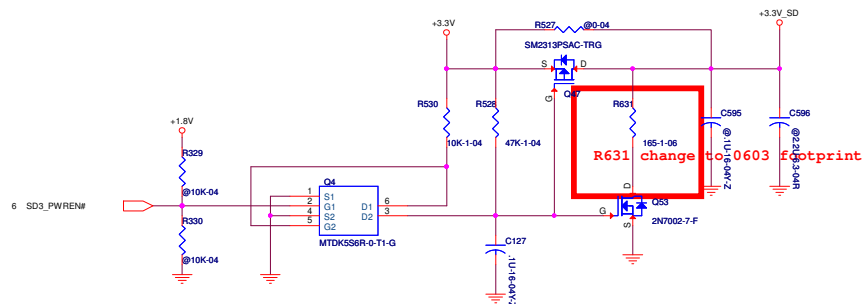
Power Board(Optional)



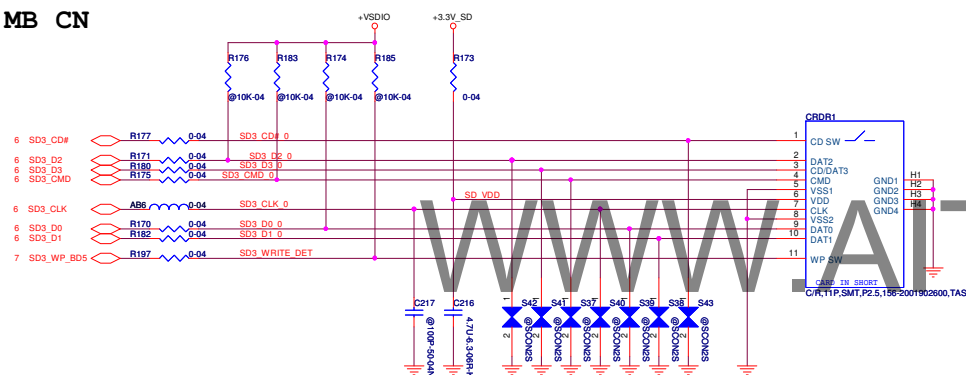
Charge LED



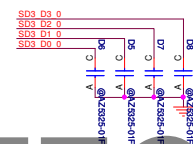
SD POWER



SD MB CN

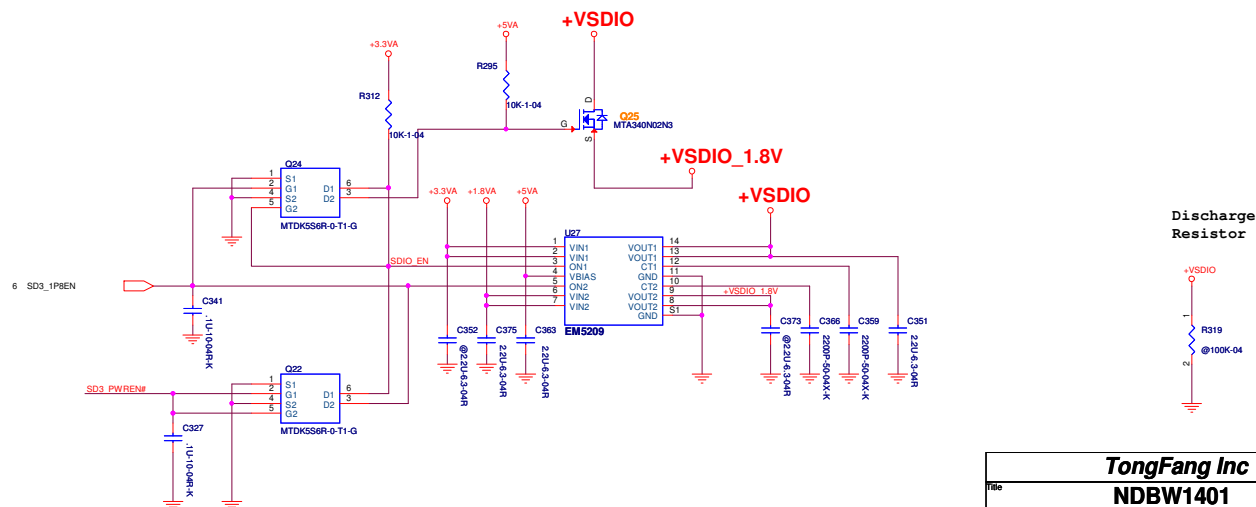


ESD



Support Ultra High Speed SD

| | | |
|-----------|------|------|
| SD3_1P8EN | High | Low |
| ON1 | Low | Low |
| | 1.8V | 3.3V |



Discharge Resistor

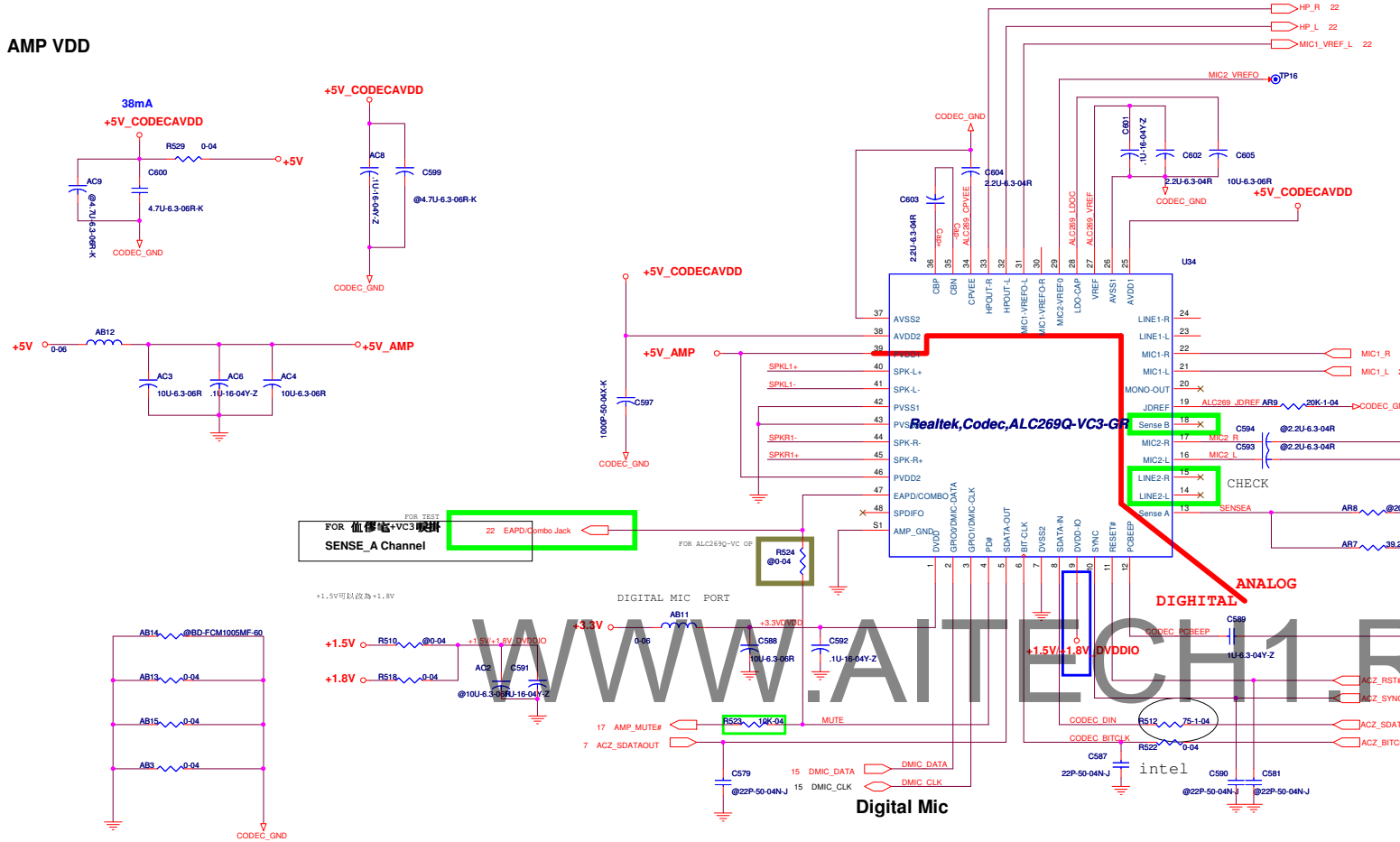
TongFang Inc

NDBW1401

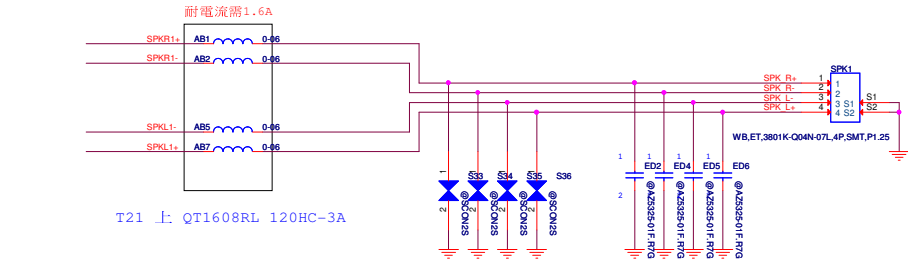
| | | |
|----------|------------------------------|----------------|
| Rev | Document Number | Rev |
| Customer | LAN/CARD READER/15DB/RT8111 | B1 |
| Date | Thursday, September 17, 2015 | Sheet 20 of 31 |

CODEC ALC269Q-VC/VB

AMP VDD



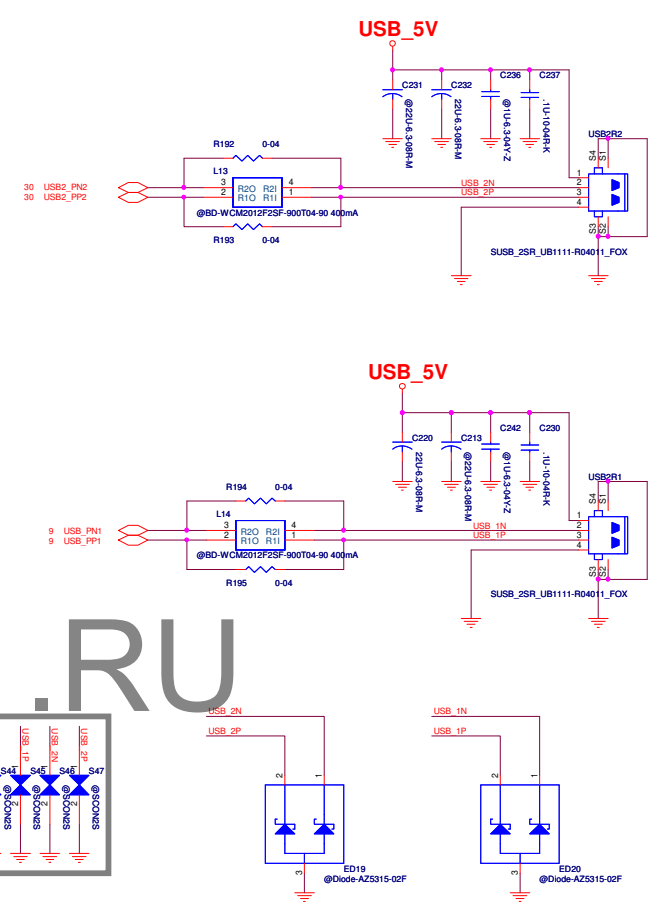
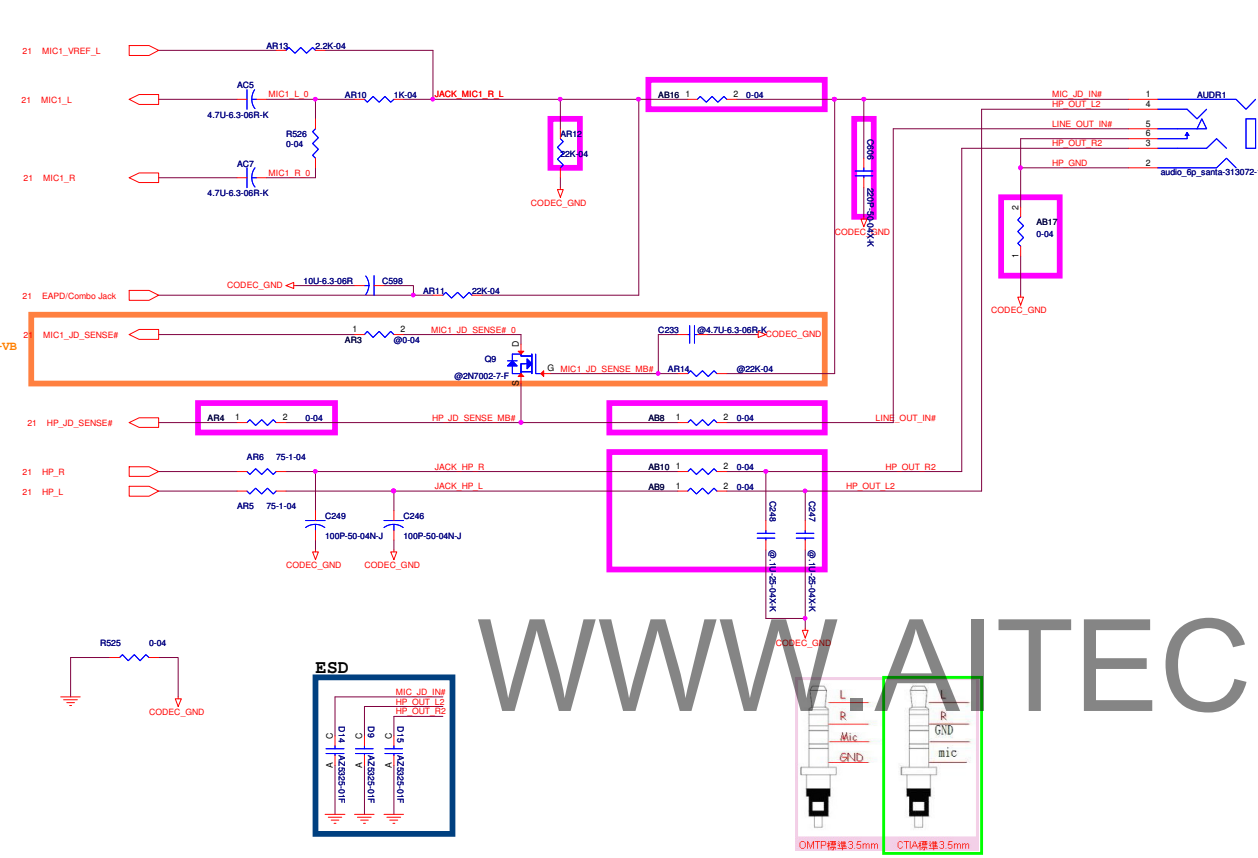
INT_SPEAKER



2 IN 1 Audio Jack / USB

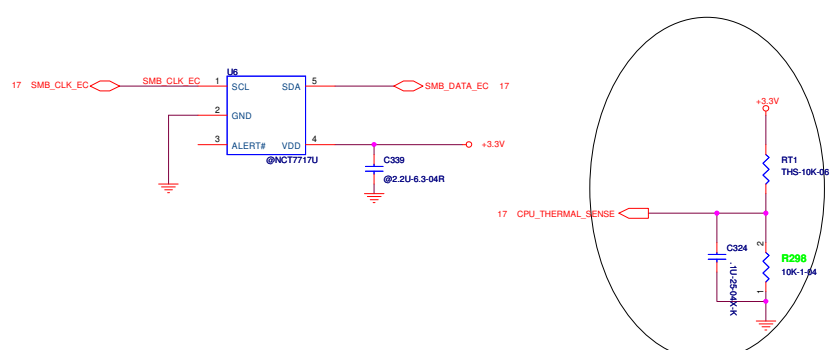
USB2.0

FOR
ALC2690-VB
MIC JD

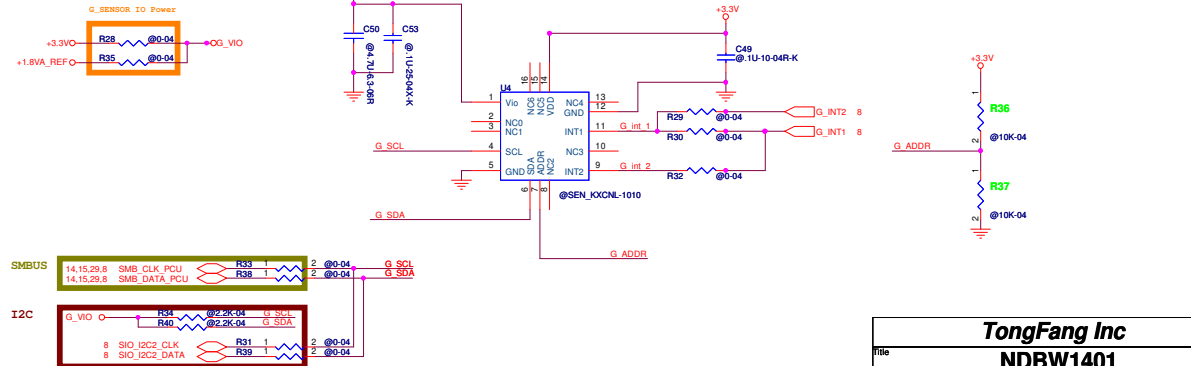


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CPU Thermal Sensor

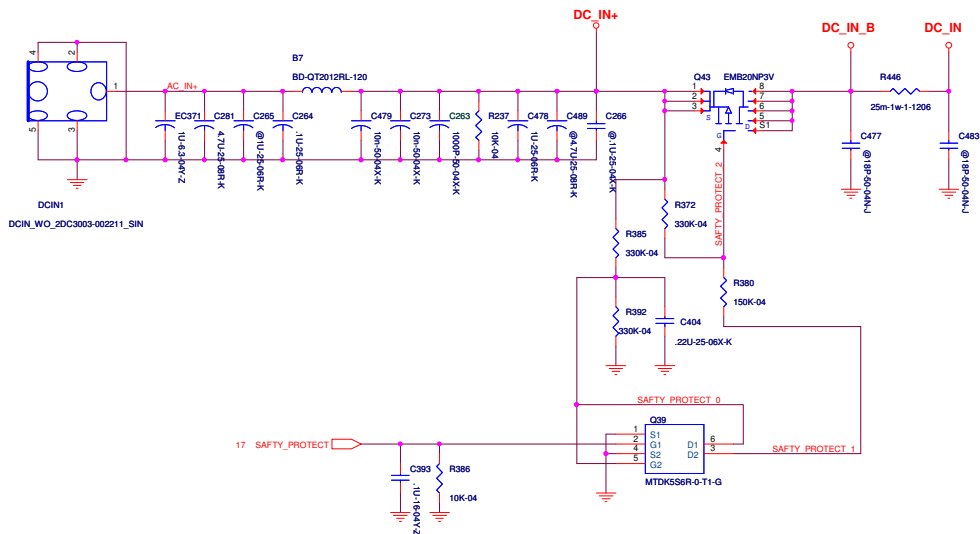


G SENSOR

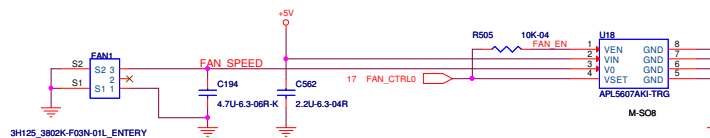


DC IN

| | | | |
|--------------|----------|--|--|
| PROJECT | NDBT1401 | | |
| Adaptor | 40W | | |
| Rsense | 25m Ohm | | |
| Stop Charger | | | |



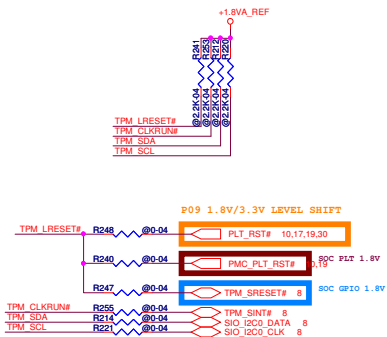
FAN CONTROLLER



TPM I2C Interface for NPCT65X 2014/11/18

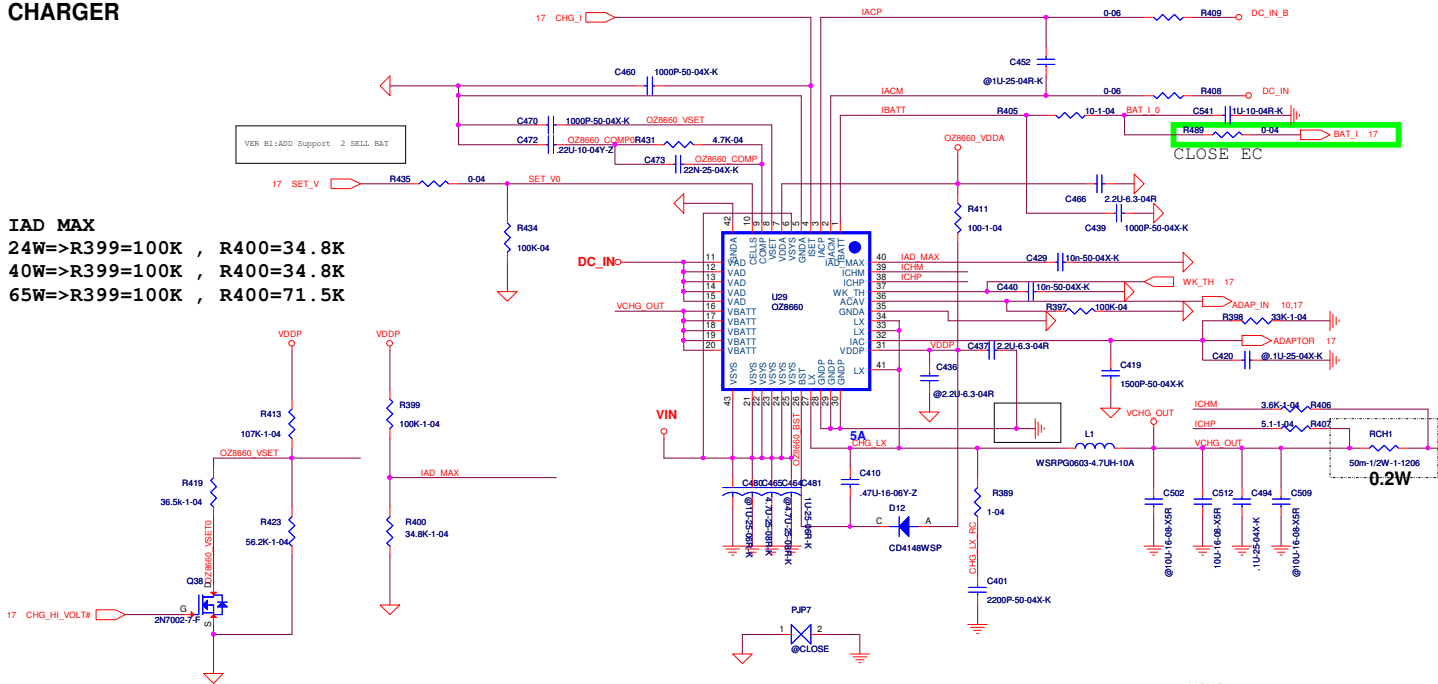
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Second DC IN



CHARGER

IAD MAX
24W=>R399=100K , R400=34.8K
40W=>R399=100K , R400=34.8K
65W=>R399=100K , R400=71.5K



| SET_V | |
|-------|----------------|
| H | 16.84V (4CELL) |
| L | 12.71V (3CELL) |
| Hi-Z | 8.4V (2CELL) |

| HI_CHARGE | Each CELL |
|-----------|-----------|
| *H | 4.21V |
| L | 4.35V |

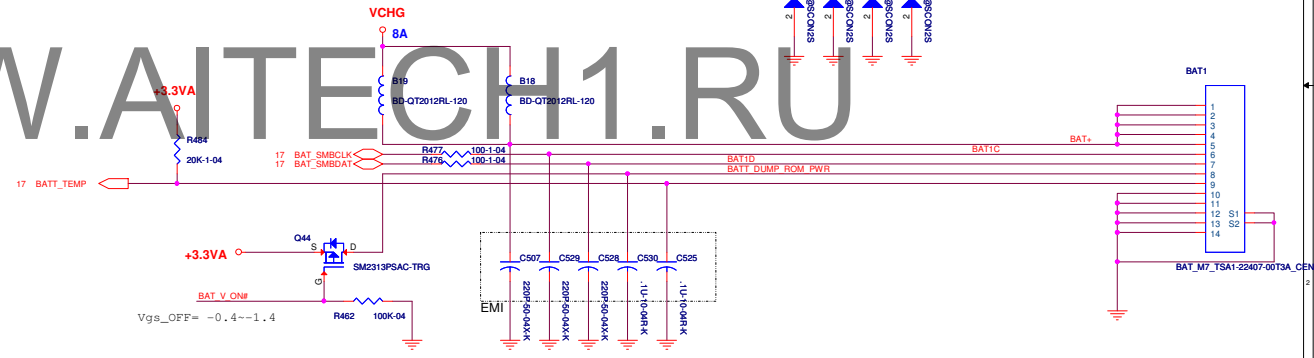
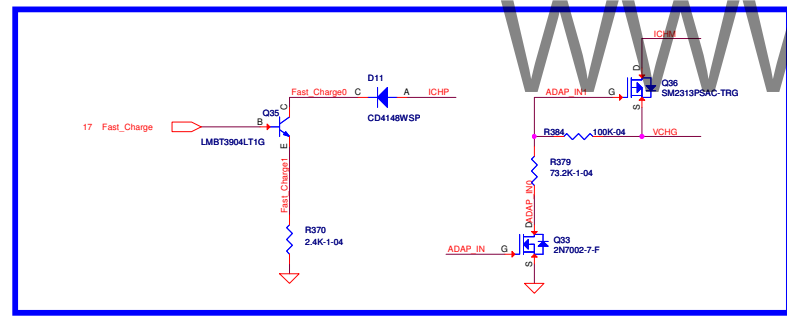
Vch =Nx(4.1 +Vset/10)
N=Cell (pin2 =hing -->4, low -->3)

| CHG_I | Fastchg_EN | CHG Current |
|-------|------------|-------------|
| 300mv | Low | 100mA |
| 750mv | Low | 250mA |
| 3V | Low | 1A |
| 3V | Hi | 2A |

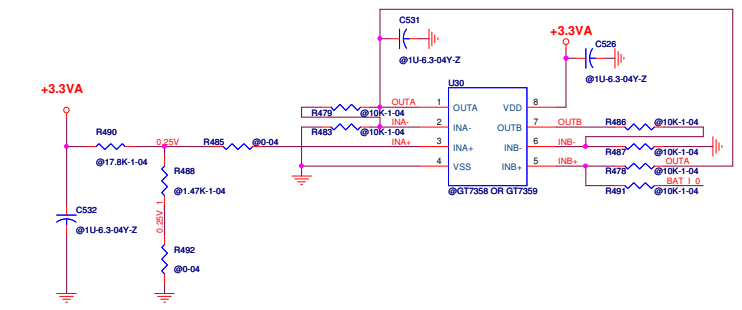
| ADAPTOR_I | |
|-----------|------|
| Voltage | W |
| 330mV | 20W |
| 660mV | 40W |
| 990mV | 60W |
| 1320mV | 80W |
| 1650mV | 100W |

CHARGER CURRENT =V(CGHI)/(Rch*30)

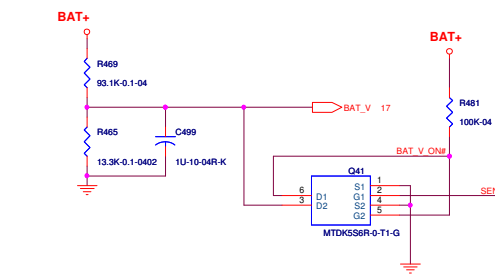
Vichg =RAD1*Irsense*10



EC 0.25V AD/DA



Battery Voltage Detect

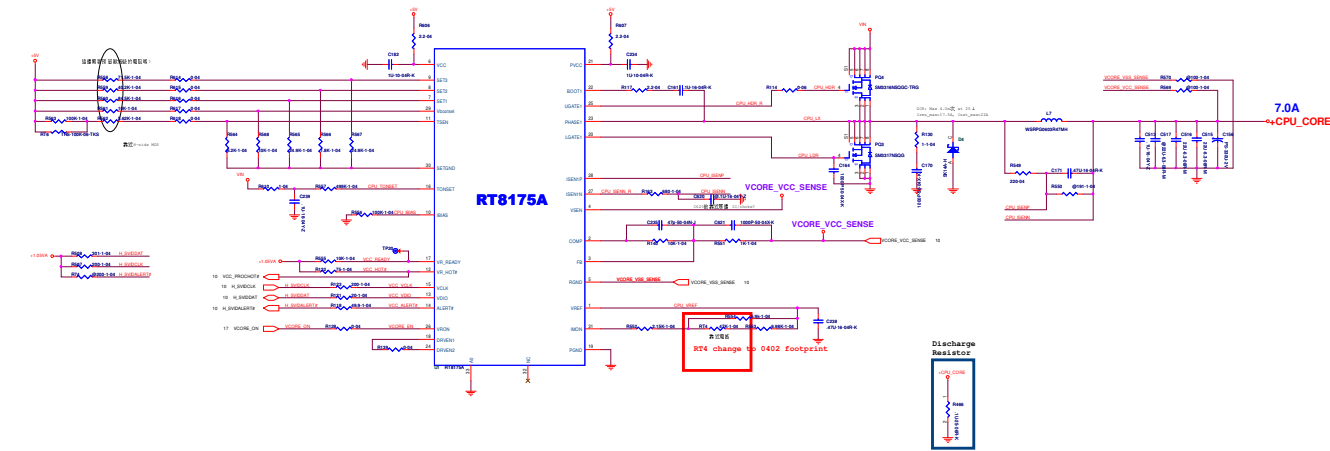


17.6V->BAT_V=2.2V
16.8V->BAT_V=2.1V
13.2V->BAT_V=1.65V
12.6V->BAT_V=1.575V
9.0V->BAT_V=1.125V

+CPU_CORE

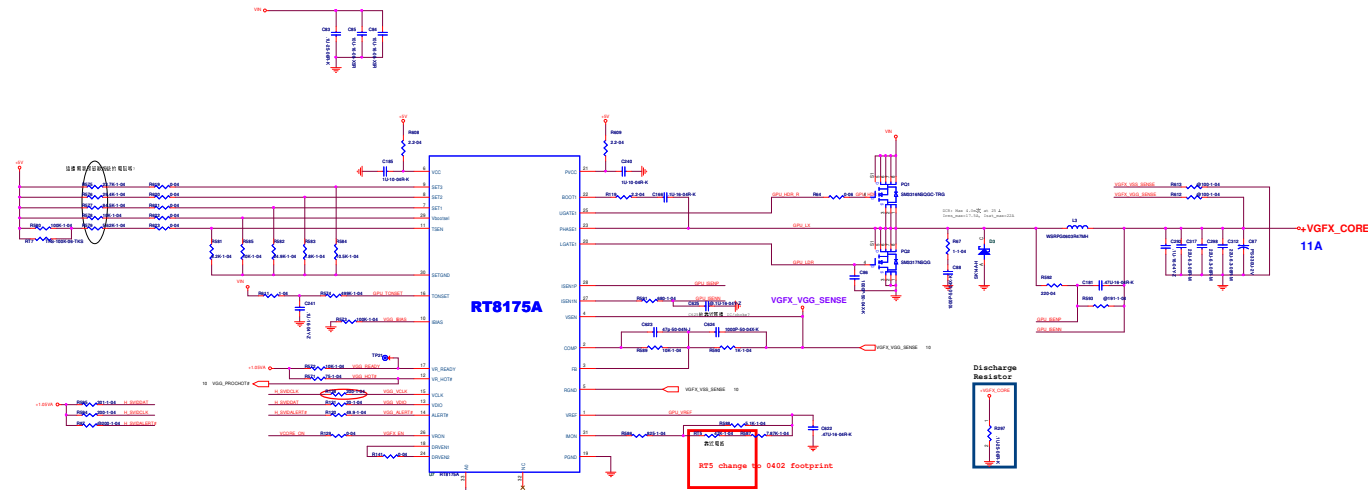
| | | | |
|-----|-------|-------------------|------------------|
| Q51 | Q51.5 | 5VDD_HB_400 | Q51_HB_400 |
| Q52 | Q52.5 | 5VDD_VDDIO_VDDIO1 | Q52_VDDIO_VDDIO1 |
| Q53 | Q53.5 | 5VDD_VDDIO_VDDIO2 | Q53_VDDIO_VDDIO2 |

Note: Place RT1 close to inductor on the same side



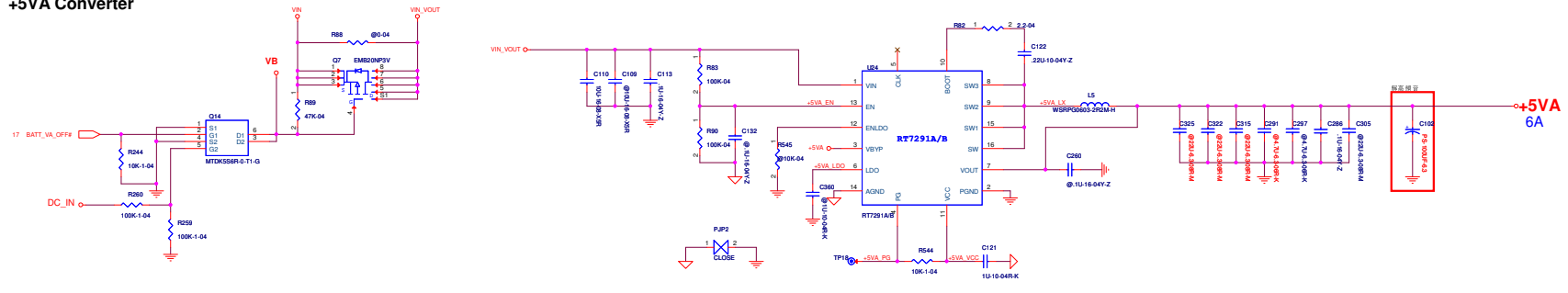
+VGFX_CORE

Note: Place RT3 close to inductor on the same side

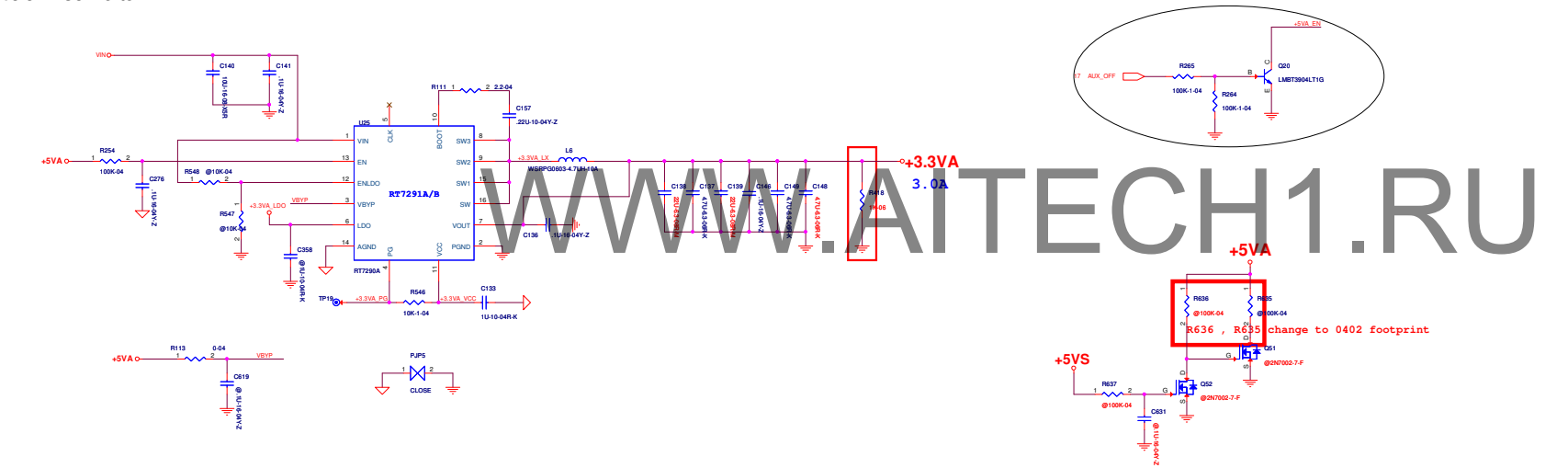


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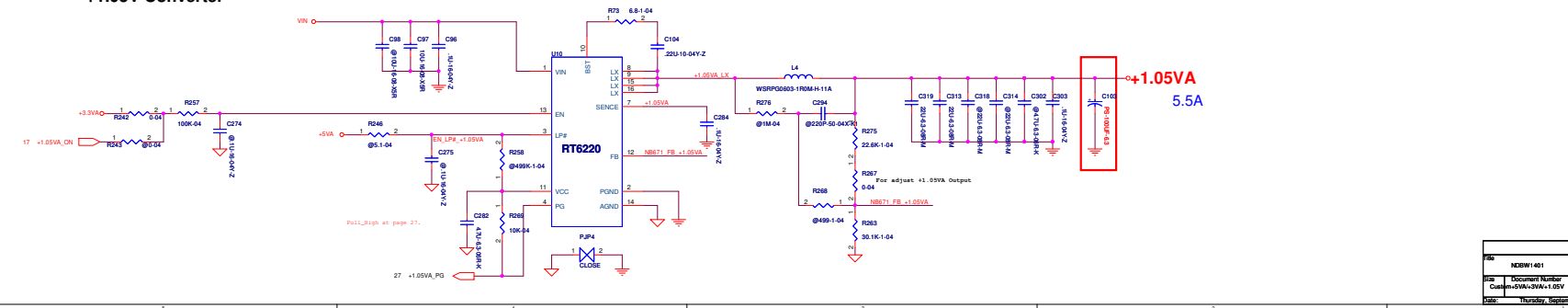
+5VA Converter



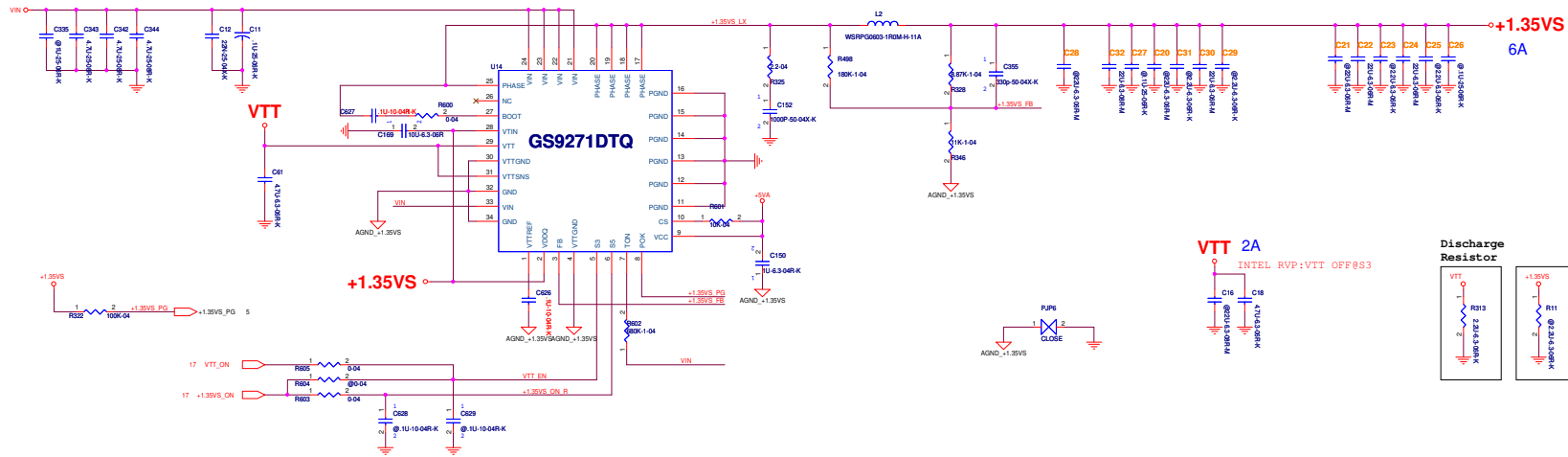
+3.3VA Converter



+1.05V Converter

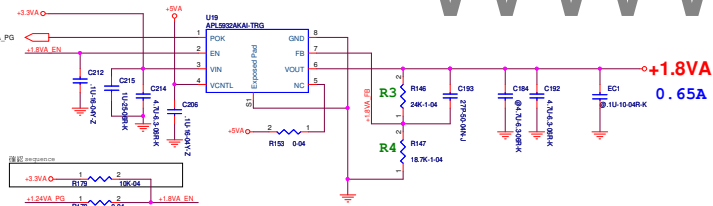


+1.35VS



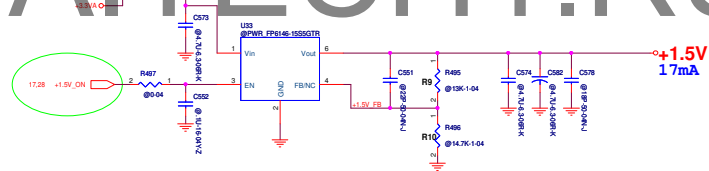
+1.8VA

$V_{OUT} = V_{REF} * (1 + R3/R4)$
 $0.8 * (1 + 24/18.7) = 1.8267$



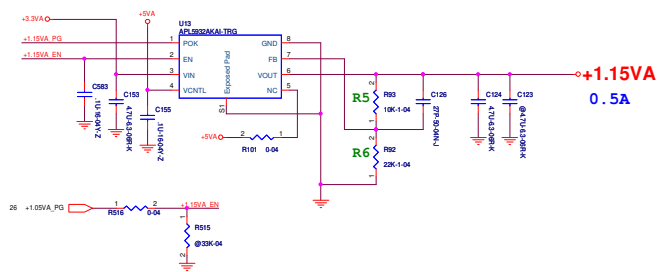
+1.5V

$V_{out} = 0.8V * (1 + R9/R10)$
 $0.8V * (1 + 13K/14.7K) = 1.5575V$



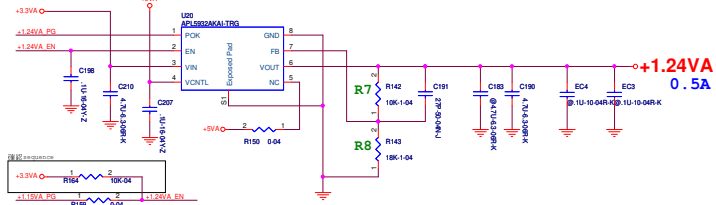
+1.15VA

$V_{OUT} = V_{REF} * (1 + R5/R6)$
 $0.8 * (1 + 10/22) = 1.164$

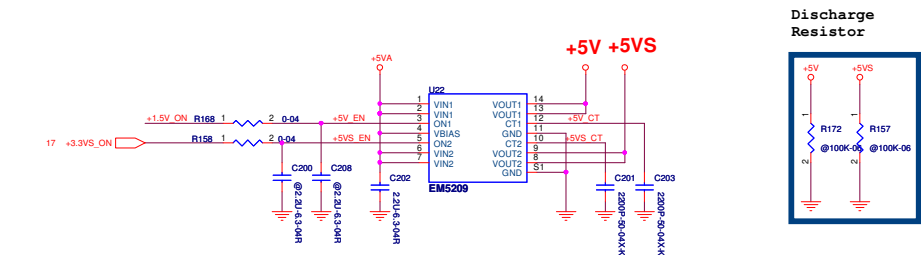


+1.24VA

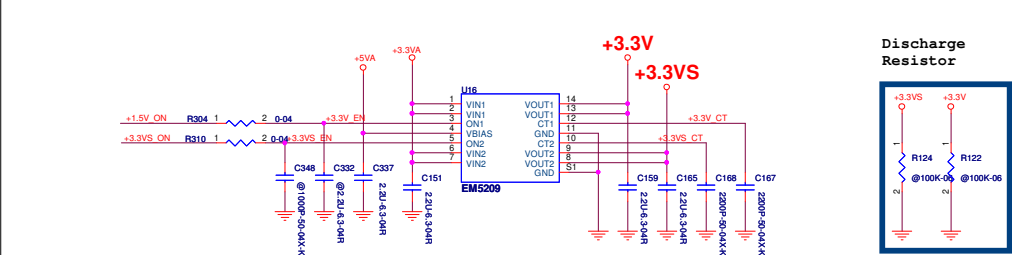
$V_{OUT} = V_{REF} * (1 + R7/R8)$
 $0.8 * (1 + 10/18) = 1.244$



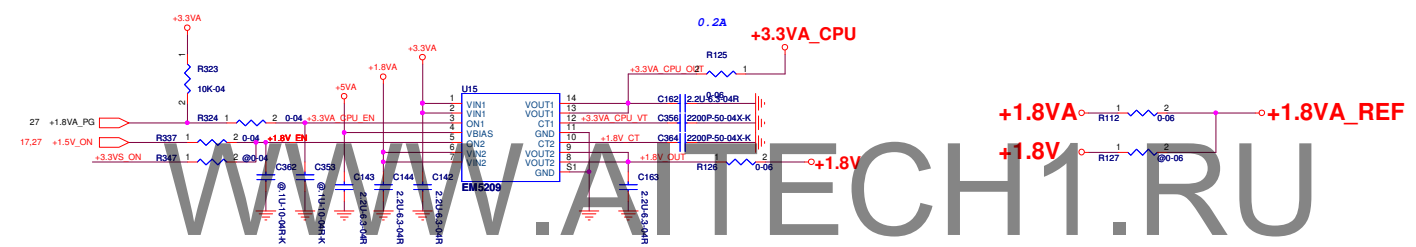
VCCSW +5V/+5VS



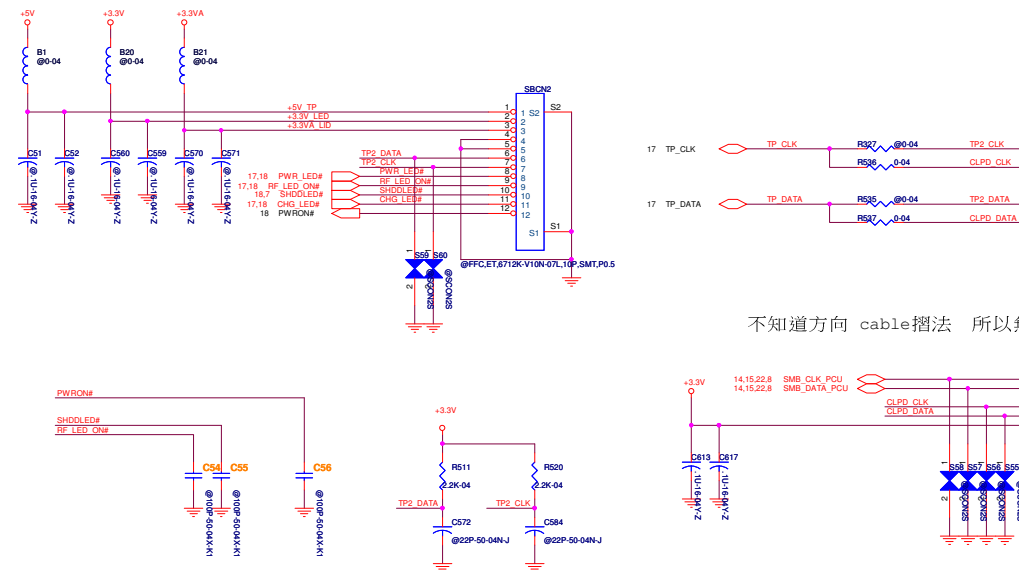
VCCSW +3.3V/+3.3VS



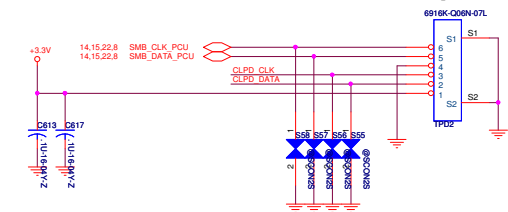
VCCSW +1.8V
VCCSW +3.3VA_CPU



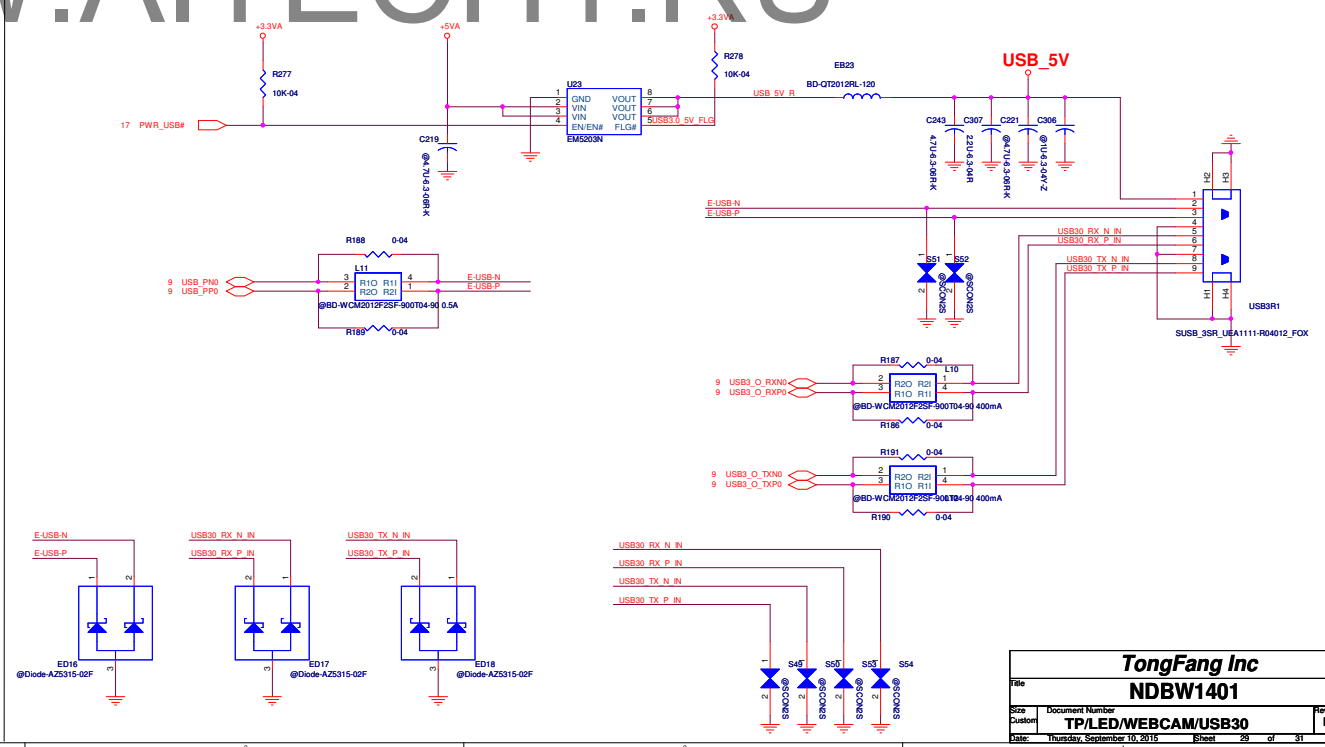
TP DB Connector

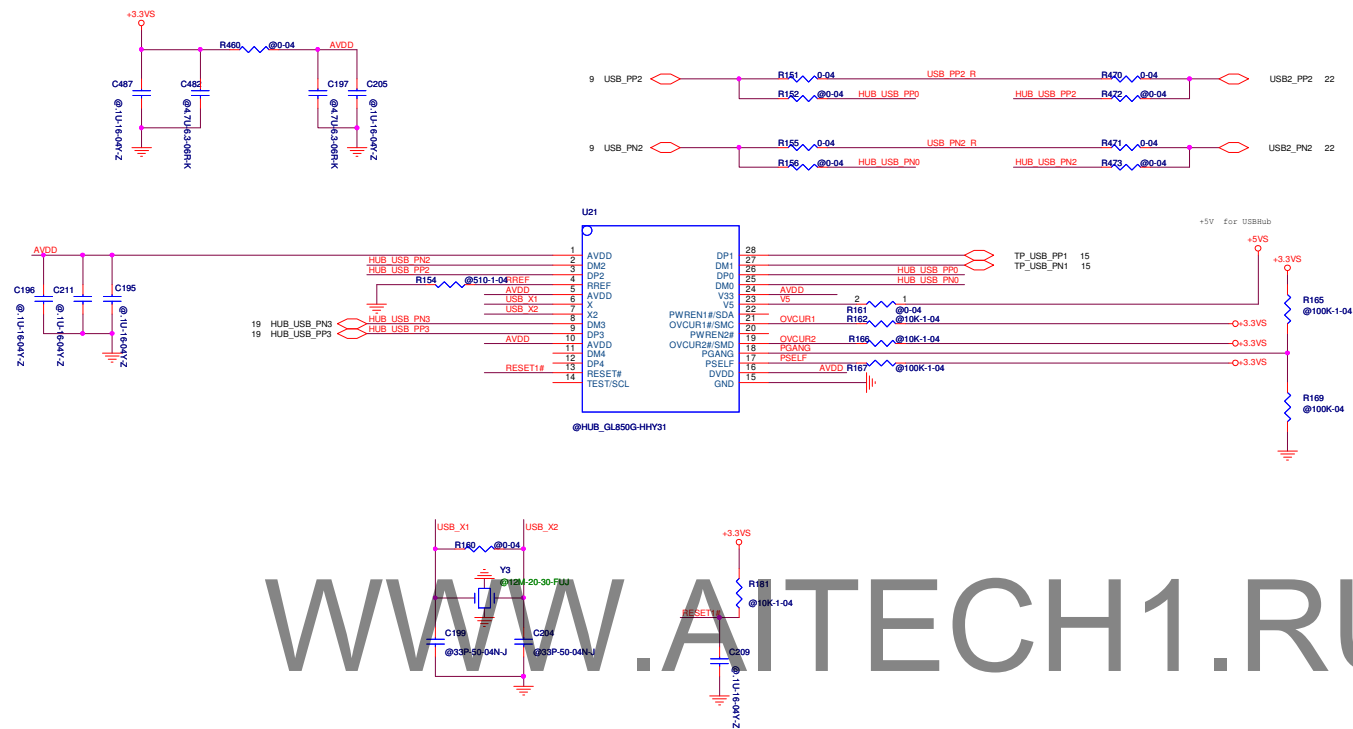


不知道方向 cable摺法 所以無法確認pin define



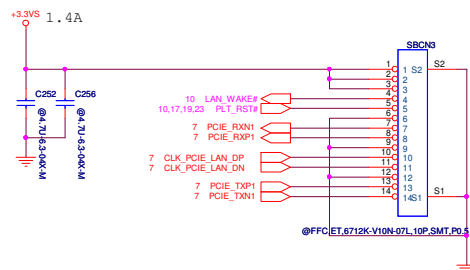
Enhance USB3.0 Port





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LAN(for AIO)



B phase

1. ER182, ER183 EMI solution
 2. R245修改為100 ohm
 3. 新增VIN_LCD放電路徑，R233改為100 ohm，新增Q50
 4. 修改+1.5V_PG改為+1.5V_ON
 5. R402改為200 ohm，USB2.0 信號才會PASS
 6. R305刪除
 7. 新增R498 180K, R328改為8.06K, R346改為10K, C355上件容值改為330p
 8. +1.05V solution：R276, R268, R258, C294 皆OP
 9. Vcore, Vgfx新增snuuber R130, R67：1 ohm, C88, C170：1000p
 10. ACZ_BITCLK新增電容EC160
 11. VIN_LCD ESD 元件ED3
 12. AC_IN+新增1uF電容EC371
 13. eMMC VDDQ預留一組switch(PQ5)，原因是SOC漏電會串到1.8V
 14. C107, C112修改為27P
 15. SERIRQ新增level shift(U17, R326, R628, R629, R630, C251, C553)
 16. TXE_disable(GPIO_SUS5)修改
 17. 新增TXE_disable(Q32)
 18. C424, C403, C416改為22uF
 19. 新增C447, C458, C433, C445 1uF, C632 22uF
 20. R138改為200 ohm
 21. EMI要求(Medion)
- 1uF：C453,C493,C413,C244,C242,C236,C265,C517,C325,C138,C319,C335,C27,C221 共14顆
- 0.1uF：C397,C441,C293,C278,C268,C311,C68,C469,C266,C526,C260,C358,C619,C274,C26,C51,C52,C560,C570,C613,C306 共21顆
- Diode,SMD,GSE0520QFF,GT：ED3,D9,D14,D15
22. 調整transient C621,C624 改為1000p, R140,R589改為10K, R551,R590改為1K

B1

1. RT4,RT5,R635,R636 0603 footprint change to 0402 footprint
2. Del JP
3. Change HDD,ODD 18 pin conn pin define
4. Change H2 footprint
5. Add Q55,Q54,R639,R638,C634,R641 for disable CCD power
6. Add Q53,R631 for cardreader

V1.0

1. 新增5VA poscap(C102)，R418加一顆下地電阻(1K ohm) 刪除MLCC (C325,C322,C315,C291,C286)解高頻音
2. 修改CN2 pin define
3. OP R641
4. Co-lay BX/CX EC, 修改SPI ROM的power 1.8V
5. R534上件, SIRIRO周邊零件OP (U17,R628,R629,R630,C553,R628,C251)
6. 新增C103 100uF POSCAP (BurnIn test)
7. R402改為150 ohm(USB driving)
8. LED R223, R207 改為110 ohm
9. CN5,CN6刪除
10. VCC, VGG家diode(SK34, 位置：D3,D4)
11. +1.05V新增RC(R246,C275)
12. C138, C139 改為22uF(0805)，C148上件4.7uF 0603
13. R78 OP
14. B13刪除, B23上件