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# History

| Number | Revision | Description | Author | Time |
|---|---|---|---|---|
| 1 | V1.0 | New | Liu Zhongrong | 2017-2-10 |
| 2 | V1.1 | 1.Modify the C1100 footprint<br>2.Add a sample circuit for levelshift. | ZhongMing | 2017-3-16 |
| 3 | V1.2 | 1.Change the footprint of C1100(C),modify the SPI DO/DI pin number<br>2.Add description POWER_ON# pin of C1100(C) | ZhongMing | 2017-4-7 |
| 4 | V2.0 | 1.Modify footprint of C1100 series<br>2.Modify footprint of C1100 series | ZhongMing | 2017-6-27 |
| 5 | V2.1 | 1.add codec WCD9330 | GuoLeitao | 2017-9-20 |
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## Important Notice

* In order to convenient to upgrade the software,
The below test points must be reserved

1.USB_BOOT
2.USBDP
3.USBDM
4.VBAT
5.POWER_ON#
6.GND

!!!Caution: C1100 series can only be upgraded by USB.

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C1100

# ANT_GNSS支持有源天线供电，请勿将该管脚短接到地，否则有损坏模块的风险！！！！

GNSS Antenna

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C200 should be replaced by a 0 Ohm resistor if active GNSS antenna is used. C1100(C) supports 3.0V active GNSS antenna.

!!Caution: Do not short the GNSS_ANT pin to ground,when GNSS active antenna power supply is on.

for debug use only

Diversity Antenna

C1100/C1100N does not support Diversity Antenna
C1100C supports Diversity Antenna

Main Antenna

| NO. | C1100/C1100N | C1100C |
|---|---|---|
| 16 | RESERVED | SGMII_TX_P |
| 17 | RESERVED | SGMII_TX_N |
| 18 | RESERVED | SGMII_RX_P |
| 19 | RESERVED | SGMII_RX_N |
| 46 | NC | ANT_DIV |
| 59 | GPIO7 | SGMII_RST_N |
| 60 | GPIO8 | SGMII_MDIO_CLK |
| 61 | GPIO9 | SGMII_MDIO_DATA |
| 62 | GPIO10 | SGMII_INT_N |
| 63 | NC | SGMII_PU_VDD |

| High Level compatible with 1.8~3.3V | |
|---|---|
| PIN5 | POWER_ON# |
| PIN9 | UART1_DTR |
| PIN80 | RESET# |

Caution: SPI DATA in/out direction
SPI_DO: C1100 series out, MCU in
SPI_DI: C1100 series in, MCU out

Caution: PCM DATA in/out direction
PCM_DO: C1100 series out, AP in
PCM_DI: C1100 series, AP out

VOUT_1.8V

VOUT_1.8V can output 50mA current,
Place C209 and C210 clost to C1100 series

VBAT must can provide 3.8V/2A
The ripple must be less than 300mV
The trace width must be more than 80 mils
Put C211 C212 C213 C214 C215 close to the module

DTR and DSR can be used as wakeup_in and out signal for Only UART communication;
and if USB is used, just leave it open.

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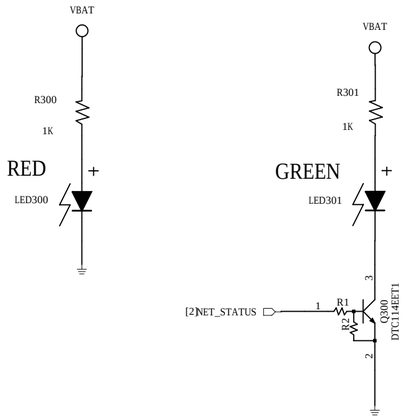
## INDICATOR LED

PWR IND NET IND




NET_STATUS can indicate the work state of Module

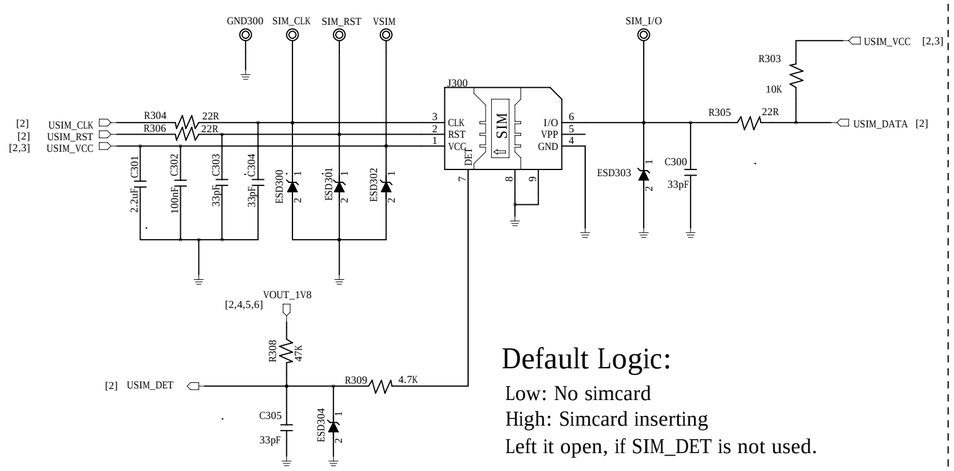
## Testpoints requirement for upgrading

* In order to convenient to upgrade the software,
The below test points must be reserved

1.USB_BOOT
2.USBDP
3.USBDM
4.VBAT
5.POWER_ON#
6.GND

!!!Caution: C1100 can only be upgraded by USB.

## SIMCARD



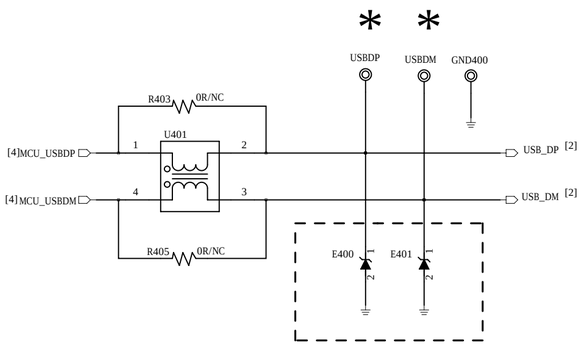

Default Logic:
Low: No simcard
High: Simcard inserting
Left it open, if SIM_DET is not used.

No simcard inserting, USIM_DET should be set to low.
After simcard inserting, USIM_DET should be set to high.
Please choose the simcard holder which match the logic level of detecting pin.

**Support configuring the simcard detect logic by AT command:
AT+LSUIMHSPOL=0 --------- High Level means card inserted
AT+LSUIMHSPOL=1 --------- High Level means card inserted

If SIMcard insert detect function is not used, please leave USIM_DET open.

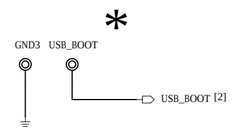
## USB




Capacitance of E400 and E401 is less than 1pF

## Emergent download

Pull USB_BOOT(pin14) low before POWER_ON# active will trigger C1100(C) boot from USB

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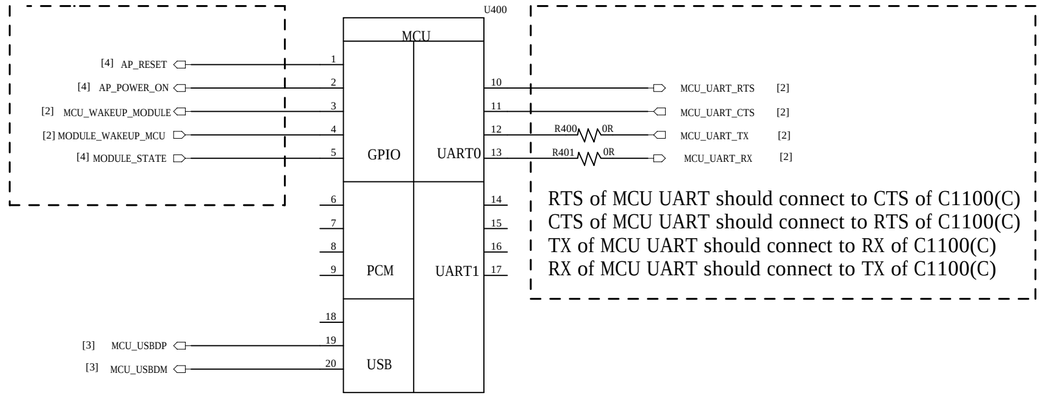
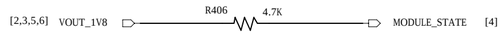
# AP MCU

All MODULE I/O ports are 1.8V level.
You must add a level shift circuit if MCU are not 1.8V.
You can float these pins if you don't use the function



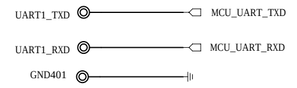

RTS of MCU UART should connect to CTS of C1100(C)
CTS of MCU UART should connect to RTS of C1100(C)
TX of MCU UART should connect to RX of C1100(C)
RX of MCU UART should connect to TX of C1100(C)

# MODULE_STATE

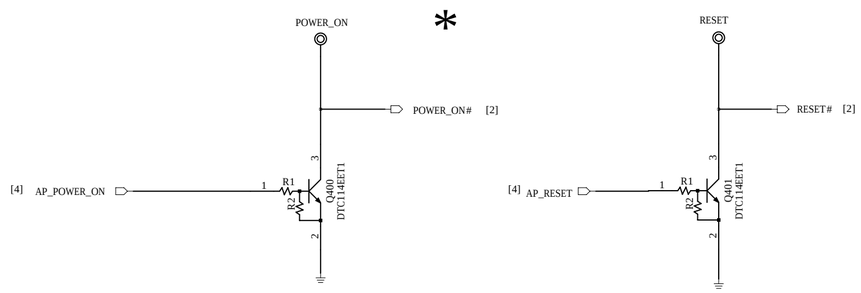



VOUT_1V8 can indicate AP MCU whether C1100 has powered on by connecting with a GPIO of AP MCU.

# UART TESTPOINTS




# POWER_ON and RESET




Pull POWER_ON# low more than 2 seconds can trigger C1100 to power on
POWER_ON#(PIN 5) has be pulled up to 0.8V in C1100(C), the VLmax=0.5V

Pull RESET# low more than 100 millseconds can reset C1100
RESET#(PIN 74) has be pulled up to 1.8V in C1100(C)

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Level shift sample circuit

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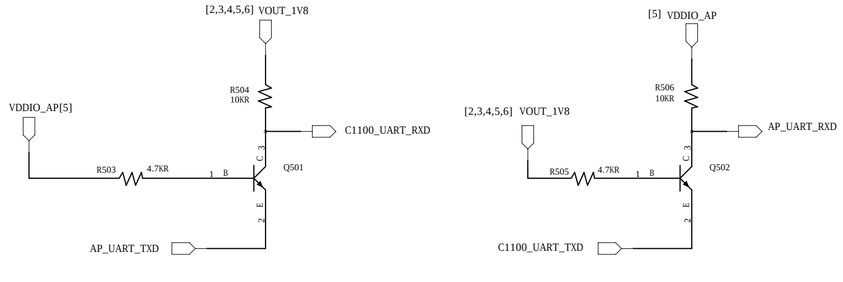
# 这里提供了一个采用NPN管实现的低成本UART电平转换电路示例图

VDDIO_AP is the VDDIO of AP MCU.




If the UART voltage level of AP are 5V or 3.3V.You must add a level shift circuit.

This sample circuit is used for low-cost level shift funciton of UART.(1.8V to 3.3V/5V)

Because of the shift speed of NPN, the baudrate is not suggested to exceed 115200bps.

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# WCD9330_DIGITAL

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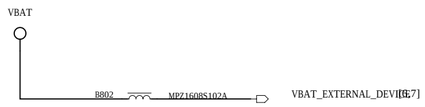
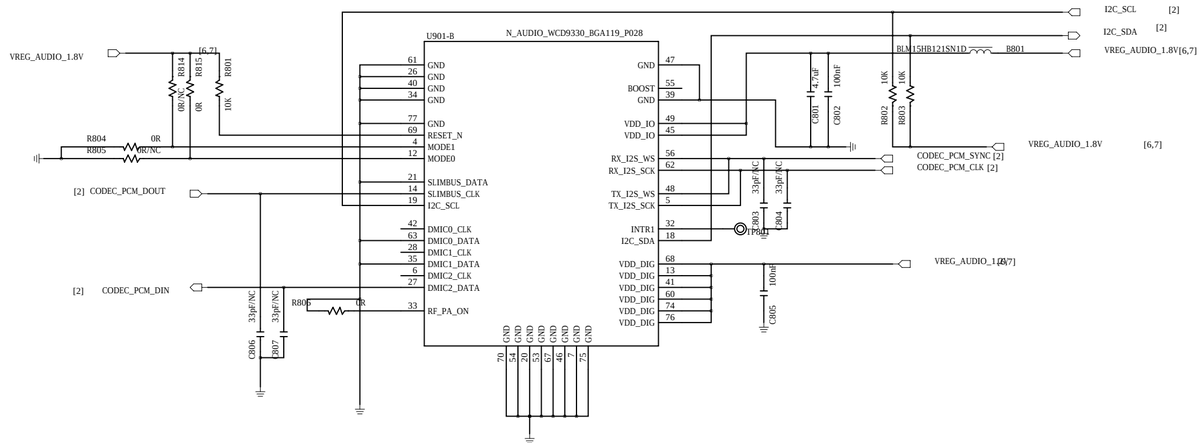
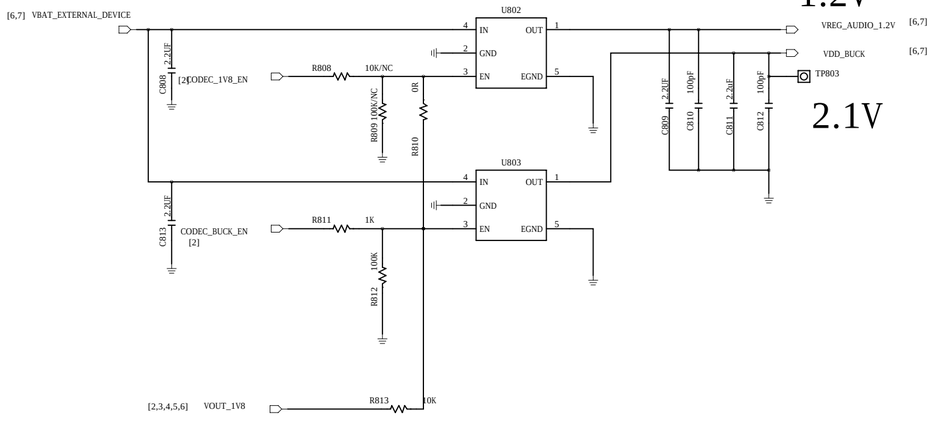


1.2V

2.1V

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# WCD9330_ANALOG

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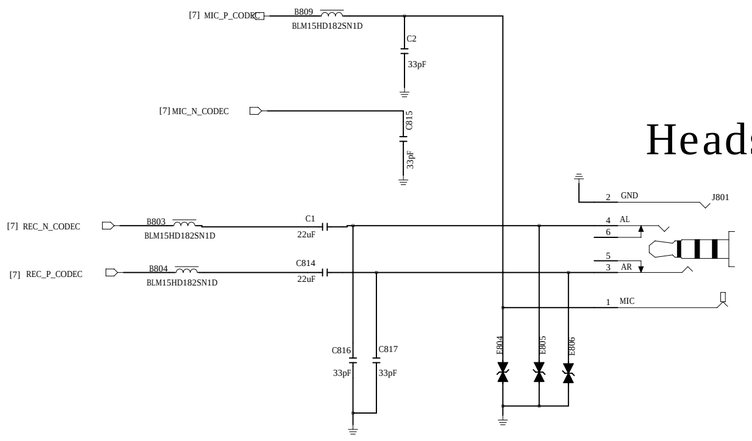
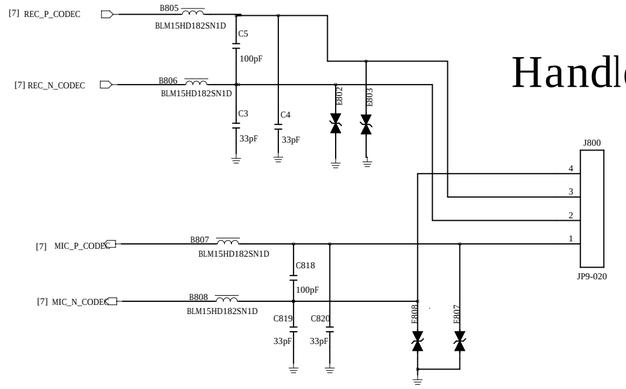
## Headset




## Handle

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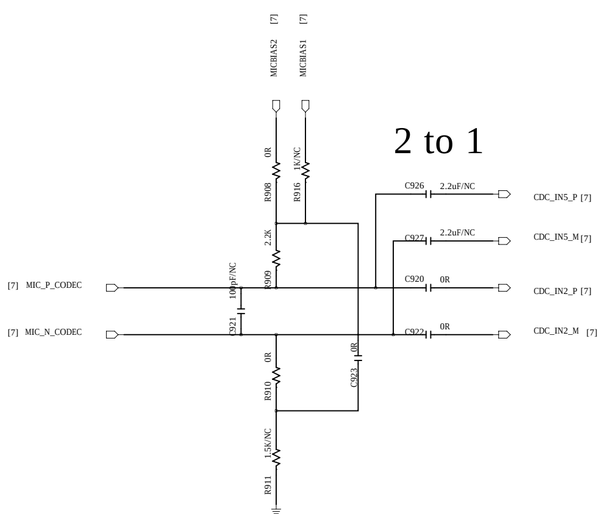
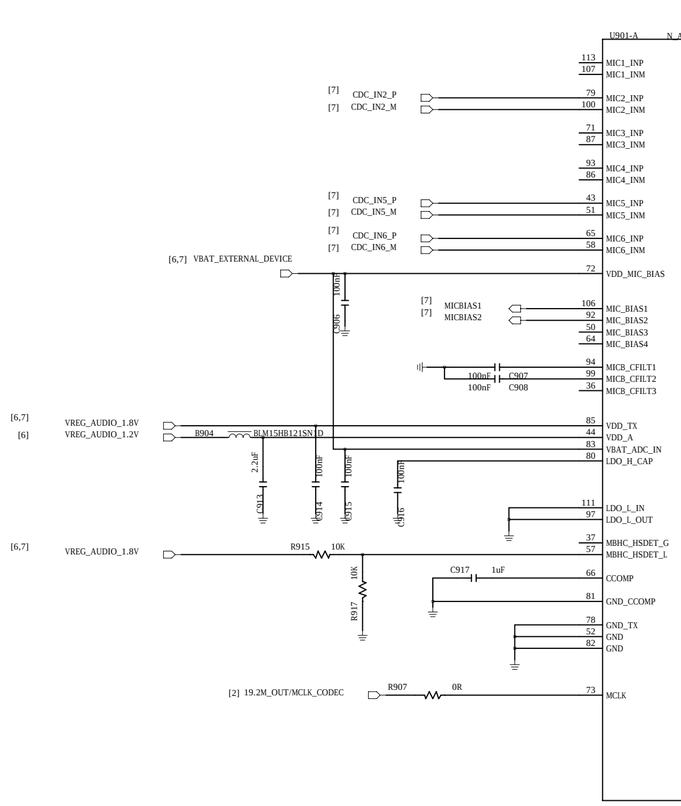
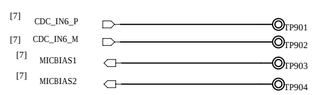



## 3 to 1

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