BLU

PRODUCTS

BLU DASH JR TV

SERVICE MANUAL

TABLE OF CONTENTS

INTRODUCTION

The purpose of this document is to help service workshop technicians to service products. This service manual must be used only by authorized service suppliers. The content of it is confidential. Please note that provides other guidance documents for service suppliers. Follow these regularly and comply with the given instructions. While every effort has been made to ensure the accuracy of this document, some errors may exist. Please keep in mind also that this documentation is continuously being updated and modified, so always watch out for the newest version.

CAUTIONS

Please refer to the phone's user's guide for instructions relating to operation, care, and maintenance, Which include important safety information?

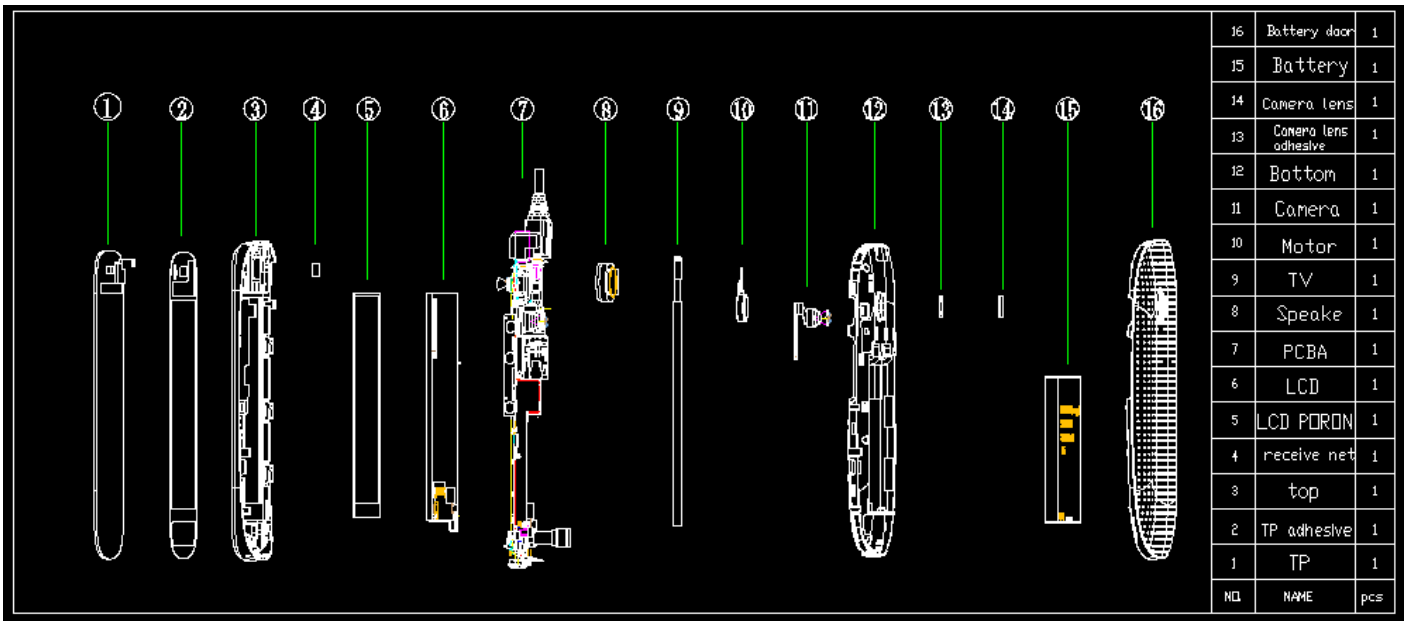
1 **Servicing and alignment must be undertaken by qualified personnel only.**
2 **Ensure all work is carried out at an anti-static workstation and that an anti-static wrist strap is worn.**
3 **Use only approved components as specified in the parts list.**
4 **Ensure all components, modules, screws, and insulators are correctly re-fitted after servicing and alignment**
5 **Ensure all cables and wires are repositioned correctly electrostatic discharge can easily damage the sensitive components of electronic products. Therefore, every service supplier must observe the precautions which mentioned above.**

GENERAL REPAIR INFORMATION

1 **Make sure your testing equipment is functioning properly before beginning repair work.**
2 **Before starting repairs you must observe ESD precautions such as being in your ESD protected area and connecting your wristband.**
3 **Use gloves to avoid corrosion and fingerprints.**
4 **Cover windows and displays with a protective film to avoid dust and scratches.**
5 **Use a lint-free cloth to clean the LCD.**
6 **When cleaning the pads use a soft cloth\ESD brush and isopropanol. Do not use a glass fiber pencil: this scratches the surface and will corrosion.**
7 **Non-faulty mechanical parts (except shielding lids and bent parts or soldered components).May be reused if they are not soldered.**
8 **When removing the shielding lids makes sure to replace them with new ones, otherwise the high-frequency leakage can affect the device.**
9 **Always use the original spare parts.**
10 **Check the soldering joints of the parts concerned with regard to the fault symptom. And re-solder them if necessary.**
11 **Remove excess soldering flux after repair.**
12 **Observe the torque requirements when assembling the unit.**
13 **please aware that some malfunctions may be software related and solved by an update**

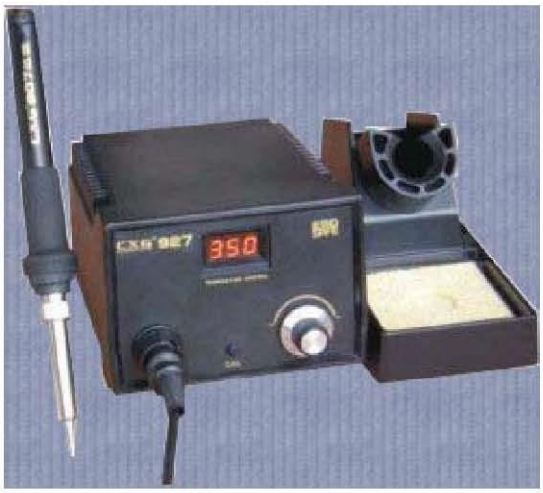
Chapter 1

EXPLODED VIEW AND COMPONENT DISPOSAL EXPLODED



NO	NAME	pcs
16	Battery door	1
15	Battery	1
14	Camera lens	1
13	Camera lens adhesive	1
12	Bottom	1
11	Camera	1
10	Motor	1
9	TV	1
8	Speake	1
7	PCBA	1
6	LCD	1
5	LCD PORON	1
4	receive net	1
3	top	1
2	TP adhesive	1
1	TP	1

DISASSEMBLY AND ASSEMBLY SERVICE TOOLS



Iron

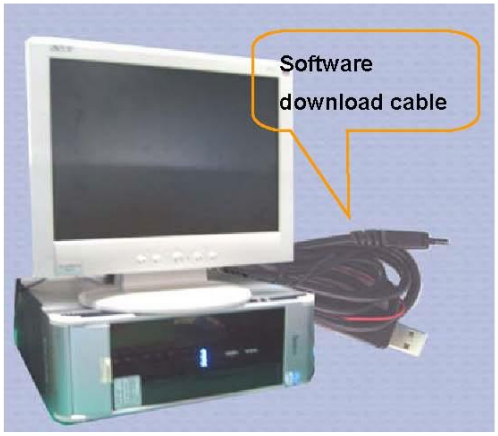
850 heater

Oscillograph

Voltage regulator

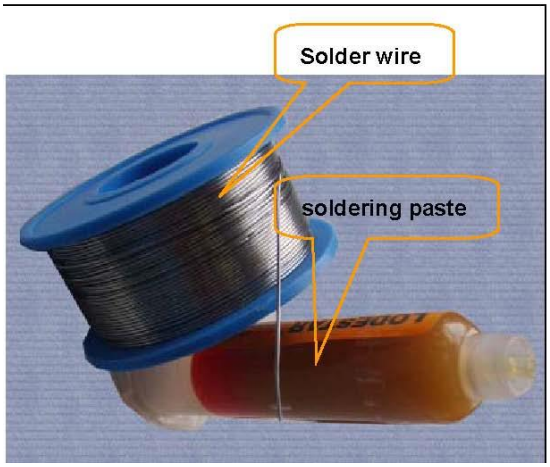
Multimeter

Constant temperature heater

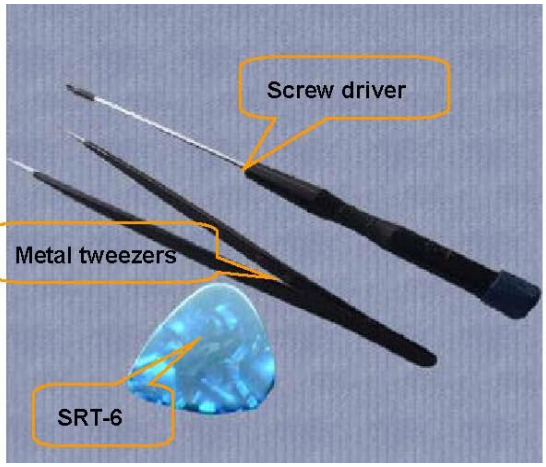


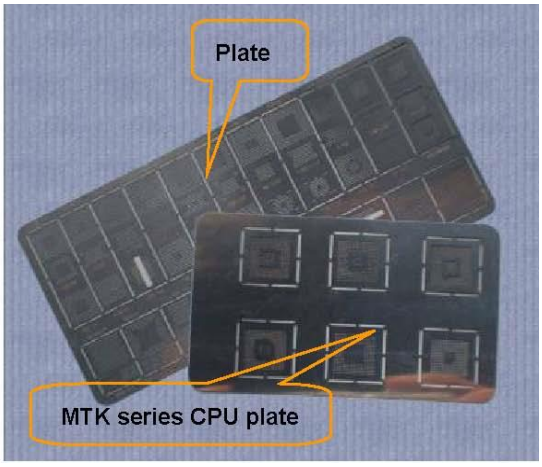
Computer and software download cable

Microscope



Solder wire, soldering paste Wrist grounding strap, Antistatic gloves

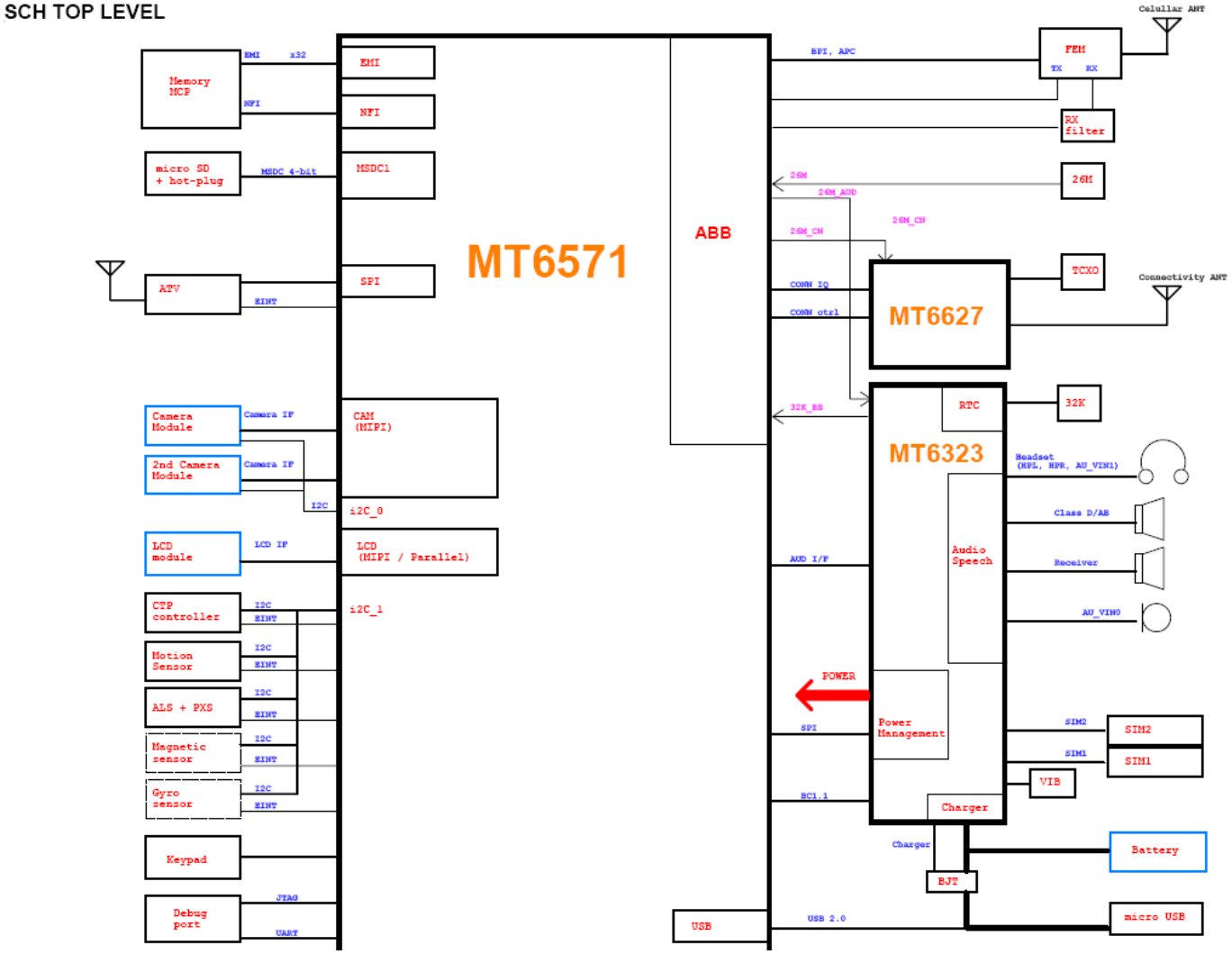




Metal tweezers, Screw driver, SRT-6 Plates

Chapter 2

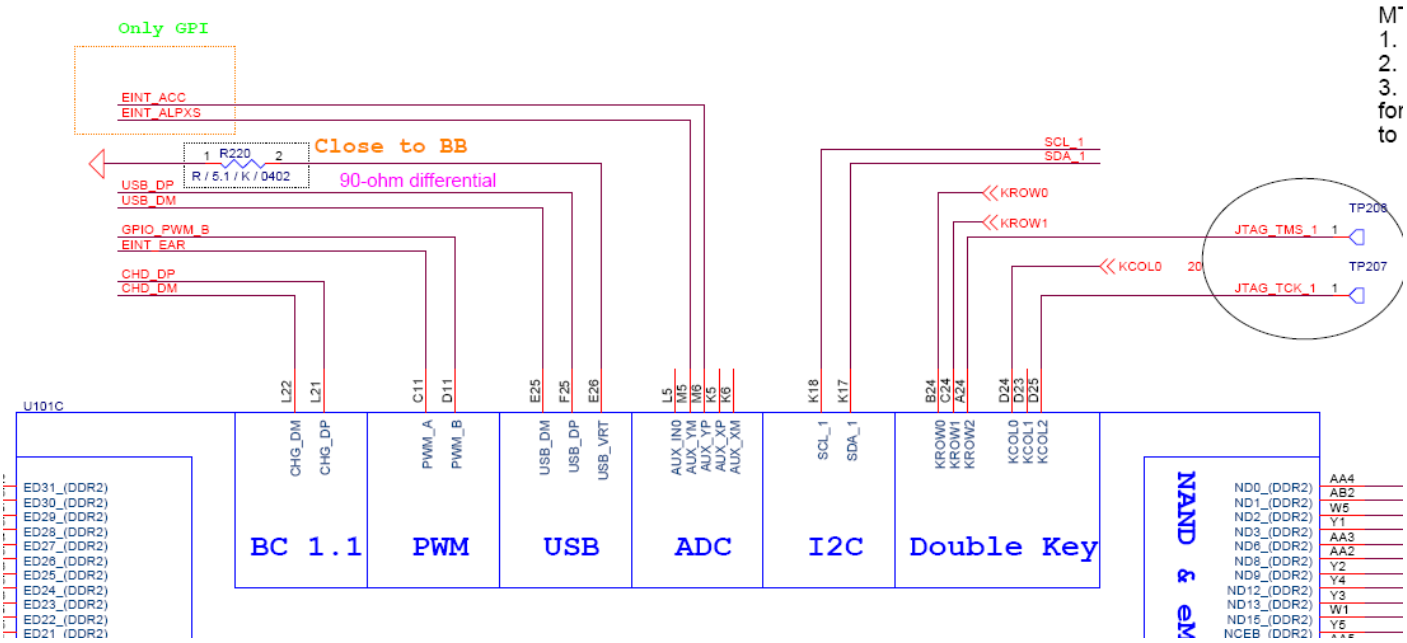
SYSTEM BLOCK DIAGRAM



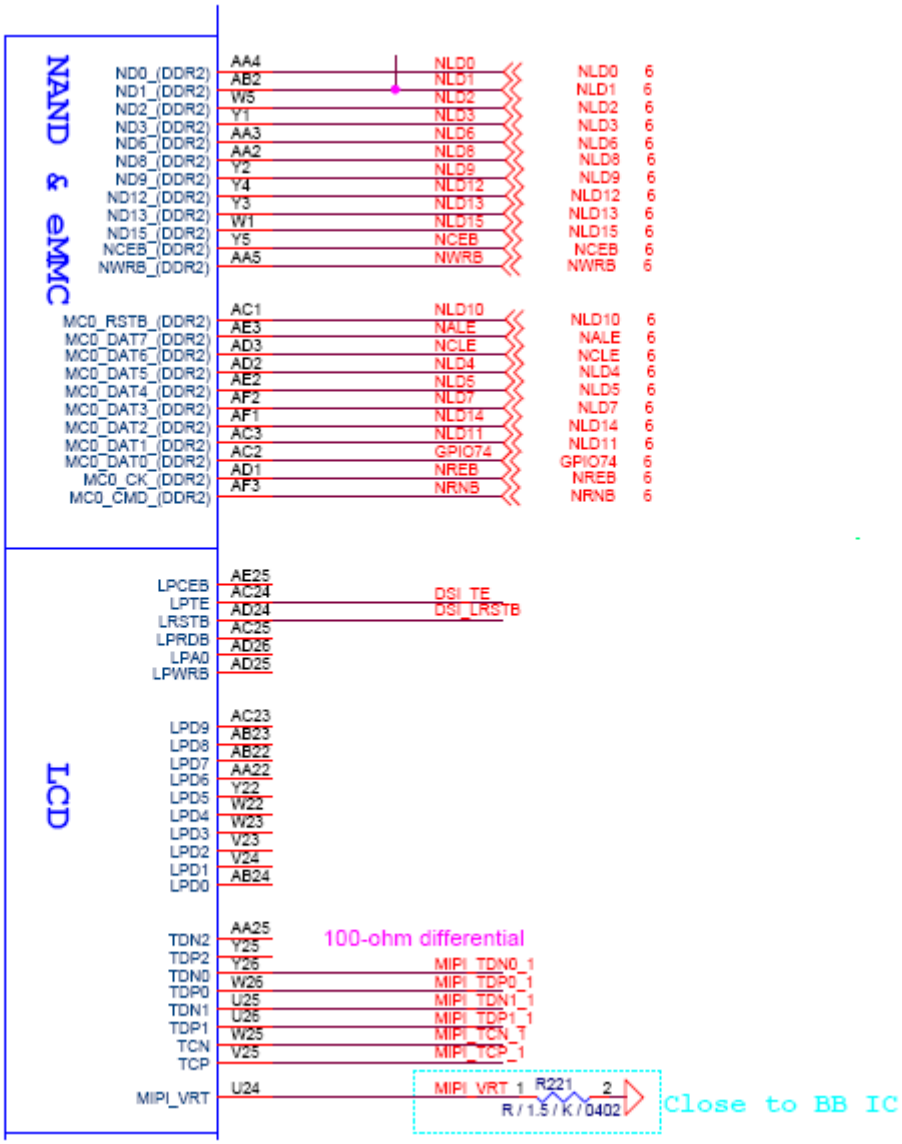
Chapter 3

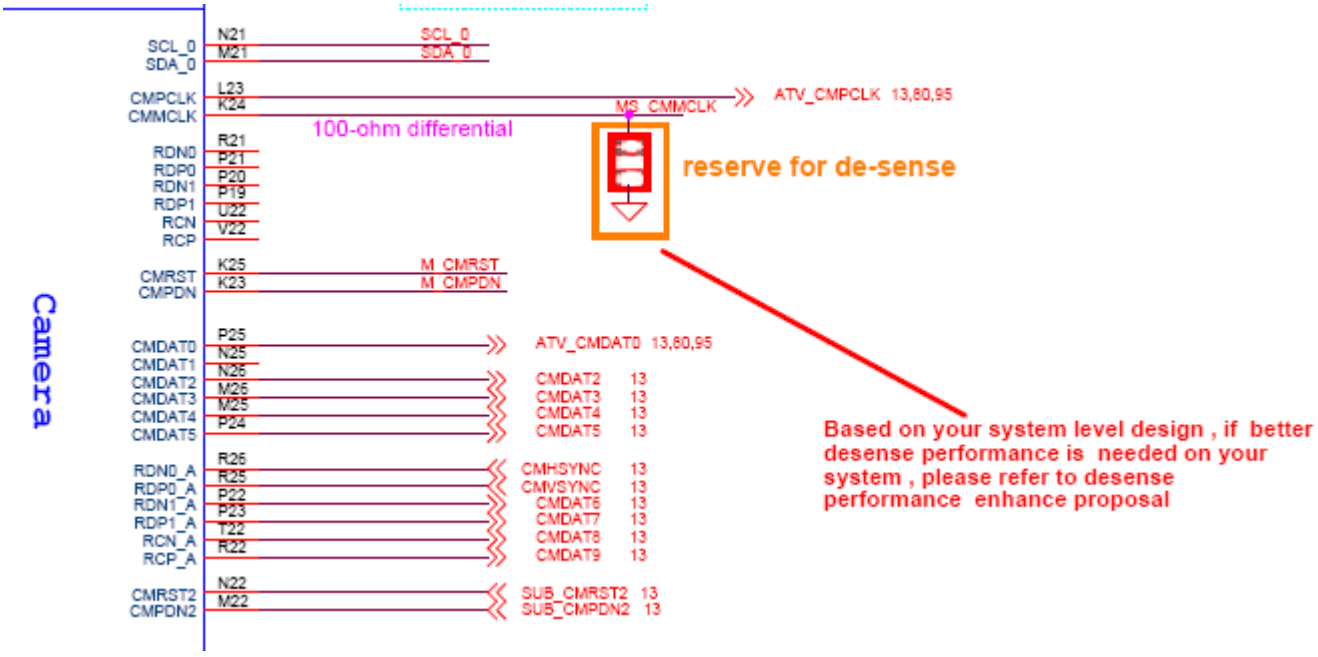
INSTRUCTION OF THE UNIT CIRCUIT

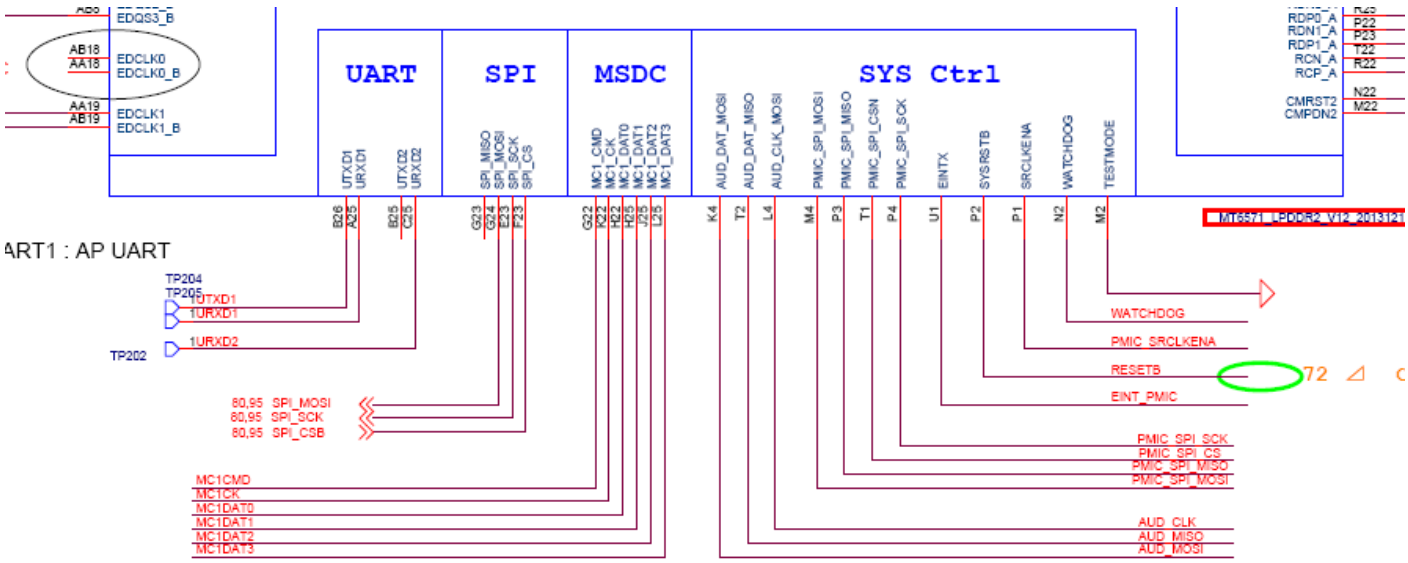
Circuit instruction of CPU



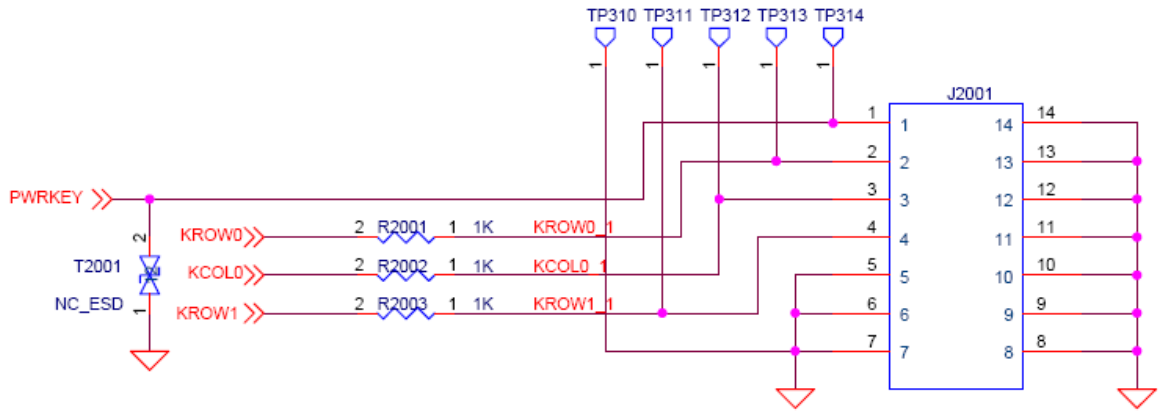

BC 1.1
EMI - LPDDR2
UART
UTXD1
URXD1
UTXD2
URXD2
for DDR2 : AG25 must NC
for DDR2 : AF26 must NC
DR2 : AA18+AB18 must NC
ED31 AG2 ED31_(DDR2)
ED30 AC5 ED30_(DDR2)
ED29 AE5 ED29_(DDR2)
ED28 AD5 ED28_(DDR2)
ED27 AG3 ED27_(DDR2)
ED26 AF5 ED26_(DDR2)
ED25 AC6 ED25_(DDR2)
ED24 AG5 ED24_(DDR2)
ED23 AC16 ED23_(DDR2)
ED22 AE15 ED22_(DDR2)
ED21 AD15 ED21_(DDR2)
ED20 AC14 ED20_(DDR2)
ED19 AG16 ED19_(DDR2)
ED18 AF14 ED18_(DDR2)
ED17 AF16 ED17_(DDR2)
ED16 AF15 ED16_(DDR2)
ED15 AE8 ED15_(DDR2)
ED14 AC9 ED14_(DDR2)
ED13 AD8 ED13_(DDR2)
ED12 AD7 ED12_(DDR2)
ED11 AG8 ED11_(DDR2)
ED10 AF7 ED10_(DDR2)
ED9 AF6 ED9_(DDR2)
ED8 AC8 ED8_(DDR2)
ED7 AF11 ED7_(DDR2)
ED6 AG9 ED6_(DDR2)
ED5 AD10 ED5_(DDR2)
ED4 AE13 ED4_(DDR2)
ED3 AG12 ED3_(DDR2)
ED2 AD13 ED2_(DDR2)
ED1 AF10 ED1_(DDR2)
ED0 AG13 ED0_(DDR2)
AG25
EA18_(DDR2)
AF23 EA17_(DDR2)
AF21 EA16_(DDR2)
AF17 EA15_(DDR2)
AF24 EA14_(DDR2)
AF22 EA13_(DDR2)
AE22 EA12_(DDR2)
AG24 EA11_(DDR2)
AC19 EA10_(DDR2)
EA9 AD23 EA9_(DDR2)
EA8 AG22 EA8_(DDR2)
EA7 AE21 EA7_(DDR2)
EA6 AD22 EA6_(DDR2)
EA5 AC20 EA5_(DDR2)
EA4 AF20 EA4_(DDR2)
EA3 AF19 EA3_(DDR2)
EA2 AC18 EA2_(DDR2)
EA1 AF18 EA1_(DDR2)
EA0 AE18 EA0_(DDR2)
AF26 ERESET
EVREF AD11 VREF0
AC17 VREF1
ECS0_B AG21 ECS0_B_(DDR2)
ECS1_B AE24 ECS1_B_(DDR2)
AD18
AG19 EWR_B_(DDR2)
AG18 ERAS_B_(DDR2)
ECKE AF25 ECAS_B_(DDR2)
ECKE_(DDR2)
EDQM0 AE12 EDQM0_(DDR2)
EDQM1 AD12 EDQM1_(DDR2)
EDQM2 AC13 EDQM2_(DDR2)
EDQM3 AE7 EDQM3_(DDR2)
EDQS0 AA13 EDQS0_(DDR2)
EDQS1 AB9 EDQS1_(DDR2)
EDQS2 AB14 EDQS2_(DDR2)
EDQS3 AA8 EDQS3_(DDR2)
EDQS0_B AB13 EDQS0_B
EDQS1_B AA9 EDQS1_B
EDQS2_B AA14 EDQS2_B
EDQS3_B AB8 EDQS3_B
AB18
AA18 EDCLK0
EDCLK0_B
EDCLK AA19 EDCLK1
EDCLK_B AB19 EDCLK1_B


NAND & eMMC
ND0_(DDR2) AA4 NLD0
ND1_(DDR2) AB2 NLD1
ND2_(DDR2) W5 NLD2
ND3_(DDR2) Y1 NLD3
ND6_(DDR2) AA3 NLD6
ND8_(DDR2) AA2 NLD8
ND9_(DDR2) Y2 NLD9
ND12_(DDR2) Y4 NLD12
ND13_(DDR2) Y3 NLD13
ND15_(DDR2) W1 NLD15
NCEB_(DDR2) Y5 NCEB
NWRB_(DDR2) AA5 NWRB
NLD0 6
NLD1 6
NLD2 6
NLD3 6
NLD6 6
NLD8 6
NLD9 6
NLD12 6
NLD13 6
NLD15 6
NCEB 6
NWRB 6
MC0_RSTB_(DDR2) AC1 NLD10
MC0_DAT7_(DDR2) AE3 NALE
MC0_DAT6_(DDR2) AD3 NCLE
MC0_DAT5_(DDR2) AD2 NLD4
MC0_DAT4_(DDR2) AE2 NLD5
MC0_DAT3_(DDR2) AF2 NLD7
MC0_DAT2_(DDR2) AF1 NLD14
MC0_DAT1_(DDR2) AC3 NLD11
MC0_DAT0_(DDR2) AC2 GPIO74
MC0_CK_(DDR2) AD1 NREB
MC0_CMD_(DDR2) AF3 NRNB
NLD10 6
NALE 6
NCLE 6
NLD4 6
NLD5 6
NLD7 6
NLD14 6
NLD11 6
GPIO74 6
NREB 6
NRNB 6
LCD
LPCEB AE25
LPTE AC24 DSI_TE
LRSTB AD24 DSI_LRSTB
LPRDB AC25
LPA0 AD26
LPWRB AD25
LPD9 AC23
LPD8 AB23
LPD7 AB22
LPD6 AA22
LPD5 Y22
LPD4 W22
LPD3 W23
LPD2 V23
LPD1 V24
LPD0 AB24
TDN2 AA25
TDP2 Y25
TDN0 Y26
TDP0 W26
TDN1 U25
TDP1 U26
TCN W25
TCP V25
MIPI_VRT U24
100-ohm differential
MIPI_TDN0_1
MIPI_TDP0_1
MIPI_TDN1_1
MIPI_TDP1_1
MIPI_TCN_1
MIPI_TCP_1
MIPI_VRT_1
R221
2
R / 1.5 / K / 0402
Close to BB IC

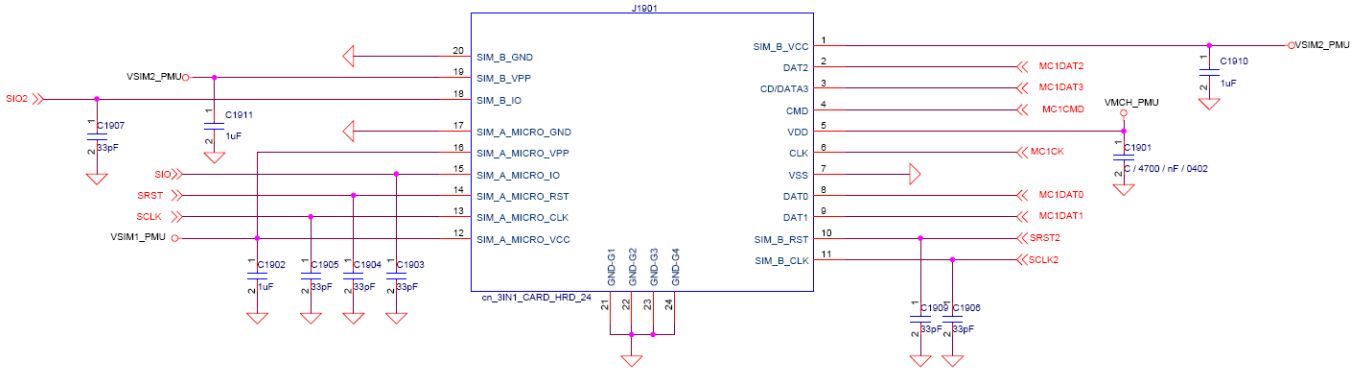

Camera
SCL_0 N21 SCL_0
SDA_0 M21 SDA_0
CMPCLK L23
CMMCLK K24
ATV_CMPCLK 13,80,95
MS_CMMCLK
100-ohm differential
reserve for de-sense
RDN0 R21
RDP0 P21
RDN1 P20
RDP1 P19
RCN U22
RCP V22
CMRST K25 M_CMRST
CMPDN K23 M_CMPDN
CMDAT0 P25
CMDAT1 N25
CMDAT2 N26
CMDAT3 M26
CMDAT4 M25
CMDAT5 P24
ATV_CMDAT0 13,80,95
CMDAT2 13
CMDAT3 13
CMDAT4 13
CMDAT5 13
RDN0_A R26
RDP0_A R25
RDN1_A P22
RDP1_A P23
RCN_A T22
RCP_A R22
CMHSYNC 13
CMVSYNC 13
CMDAT6 13
CMDAT7 13
CMDAT8 13
CMDAT9 13
CMRST2 N22
CMPDN2 M22
SUB_CMRST2 13
SUB_CMPDN2 13
Based on your system level design , if better desense performance is needed on your system , please refer to desense performance enhance proposal



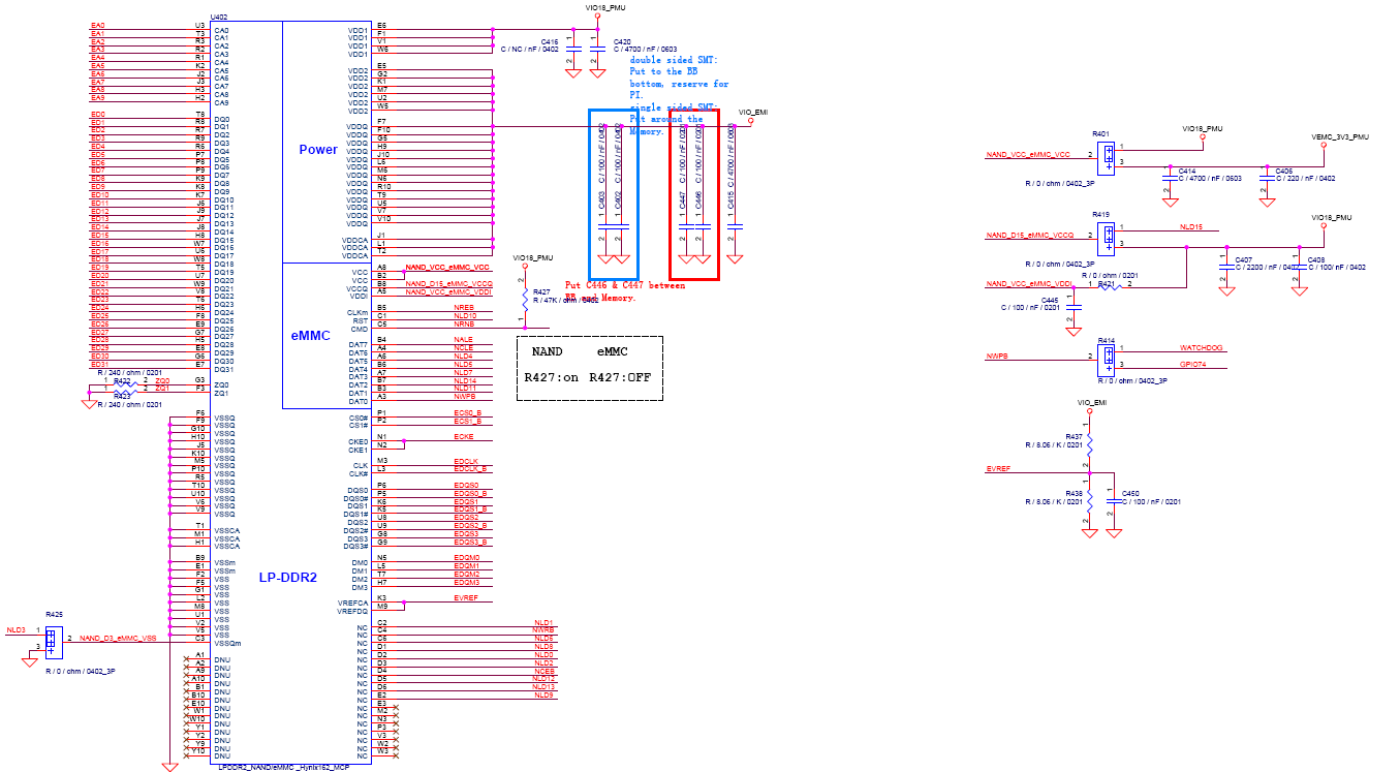
CPU—input of the keypad



The joint circuit of SIM1&SIM2&T-FLASH

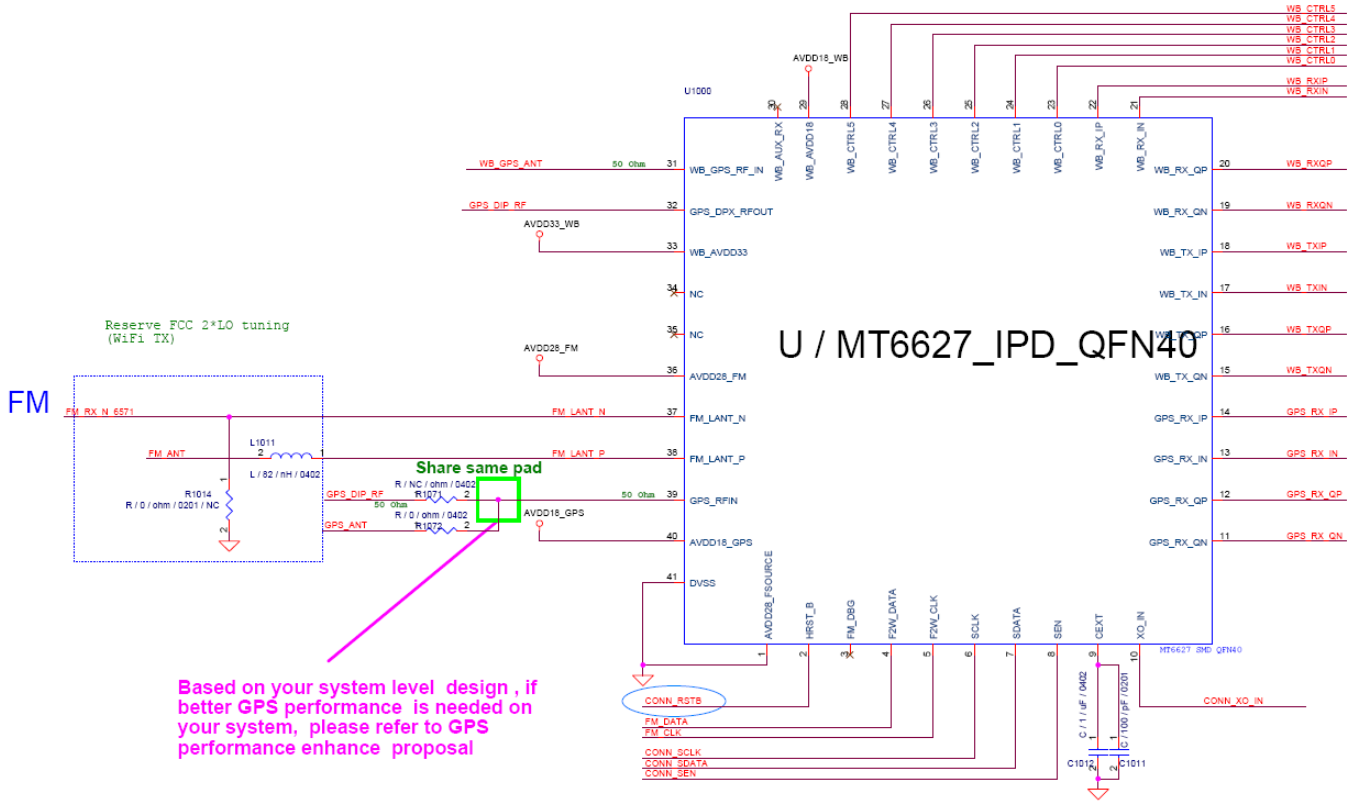


EMMC-MCP

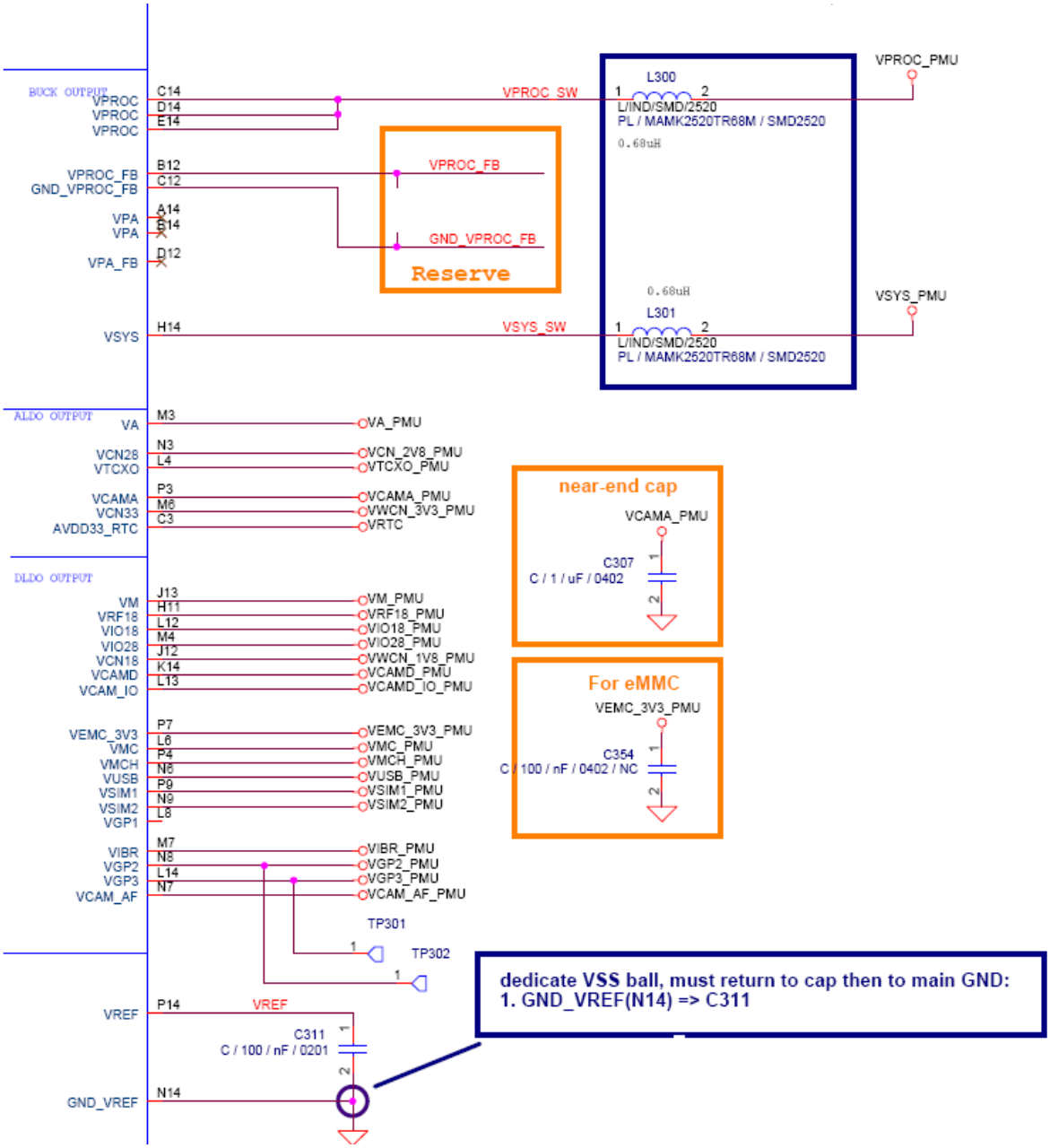


NAND	eMMC
R401 : 1-2	R401 : 2-3
R419 : 1-2	R419 : 2-3
R421 : ON	R421 : OFF
R425 : 1-2	R425 : 2-3
R414 : 1-2	R414 : 2-3

Bluetooth/WIFI/FM



MT6323 CPU power supply port



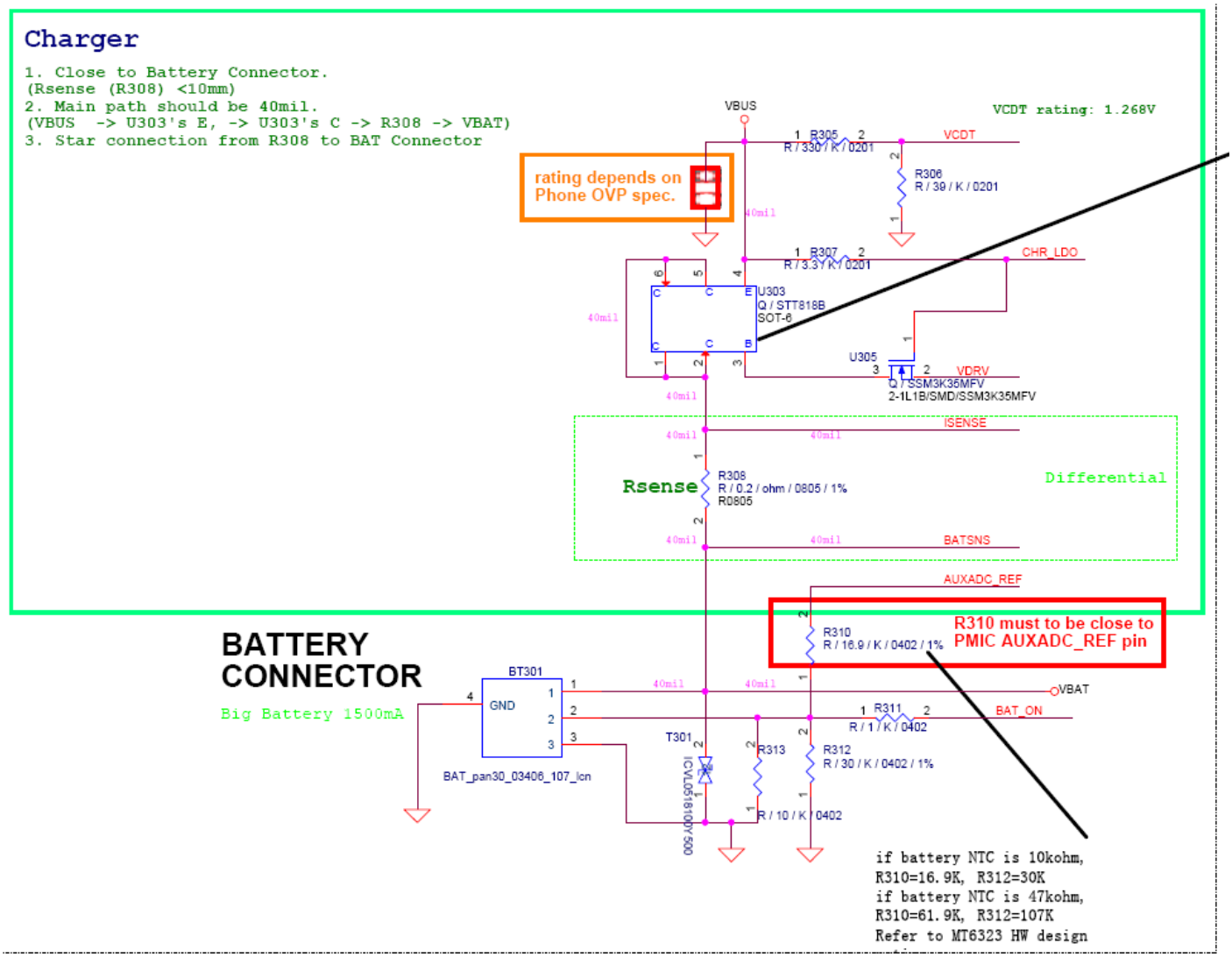
CPU voltage and current reference

Table 3-2. LDO types and brief specifications

Type	LDO name	Vout (Volt)	Imax (mA)	Application
ALDO	VCN28	2.8	30	RF chip
ALDO	VTCXO	2.8	40	13/26MHz reference clock
ALDO	VA	2.8	150	Analog baseband
ALDO	VCAMA	2.8	150	Analog power for camera module
DLDO	VCN_3V3	3.3/3.4/3.5/3.6	240	WIFI
DLDO	VIO28	2.8	200	Digital IO
DLDO	VSIM1	1.8/3.0	50	1st SIM card
DLDO	VSIM2	1.8/3.0	50	2nd SIM card
DLDO	VUSB	3.3	20	USB
DLDO	VGP1	1.2/1.3/1.5/1.8/2.0 2.8/3.0/3.3	100	General purpose LDO
DLDO	VGP2	1.2/1.3/1.5/1.8/2.0 /2.5/2.8/3.0	100	General purpose LDO
DLDO	VEMC_3V3	3.0/3.3	400	3.3V EMMC
DLDO	VCAM_AF	1.2/1.3/1.5/1.8/2.0 2.8/3.0/3.3	100	AF application
DLDO	VMC	1.8/3.3	100	SD 2.0/3.0 memory card
DLDO	VMCH	3.0/3.3	400	SD 3.0 memory card
DLDO	VIBR	1.2/1.3/1.5/1.8/2.0 2.8/3.0/3.3	100	Vibrator

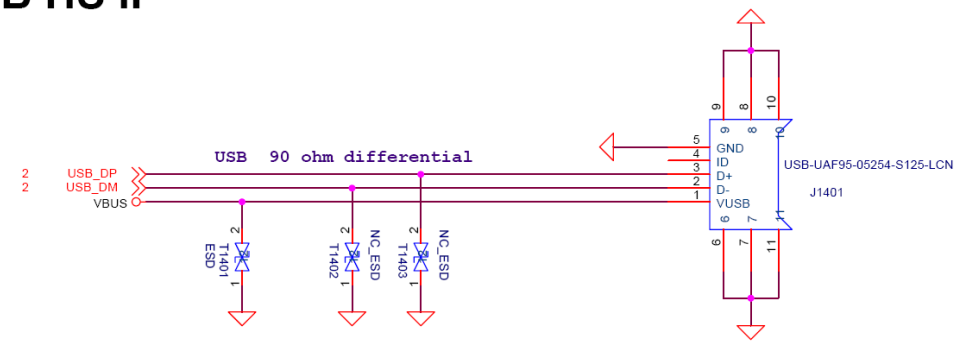
Type	LDO name	Vout (Volt)	Imax (mA)	Application
RTCLDO	VRTC	2.8	2	Real-time clock
VSYS LDO	VM	1.24/1.39/1.54/1.84	700	Memory power
VSYS LDO	VRF18	1.825	200	RF application
VSYS LDO	VIO18	1.8	300	IO pad power
VSYS LDO	VCAMD	1.2/1.3/1.5/1.8	150	Camera application
VSYS LDO	VCAM_IO	1.8	100	Camera IO application
VSYS LDO	VGP3	1.2/1.3/1.5/1.8	200	General purpose LDO
VSYS LDO	VCN18	1.8	120	General purpose LDO

Battery Connector &Charger Circuit

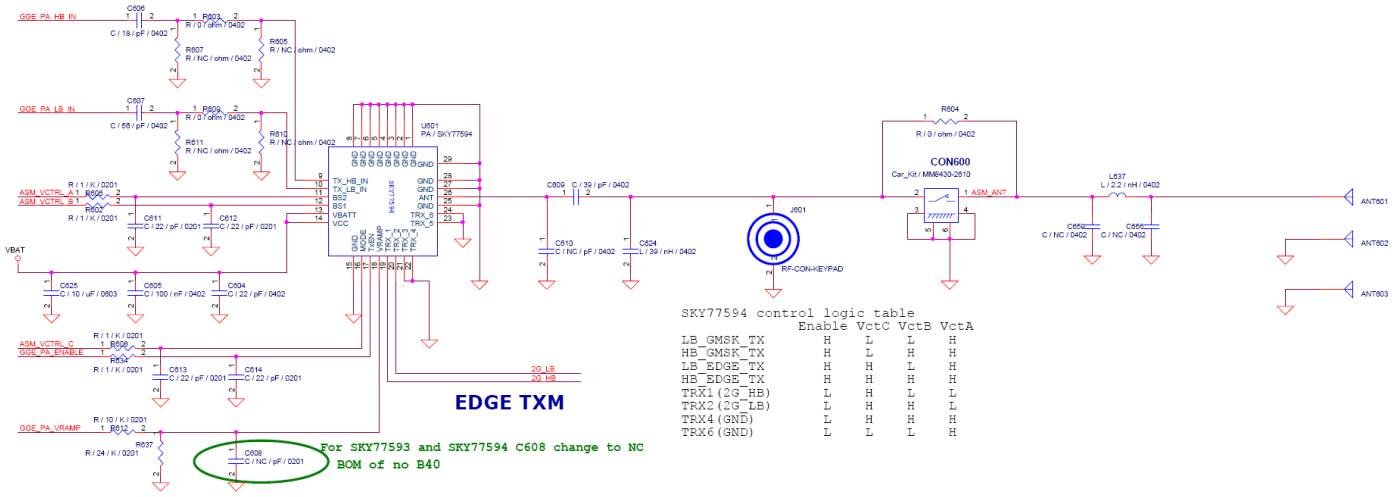


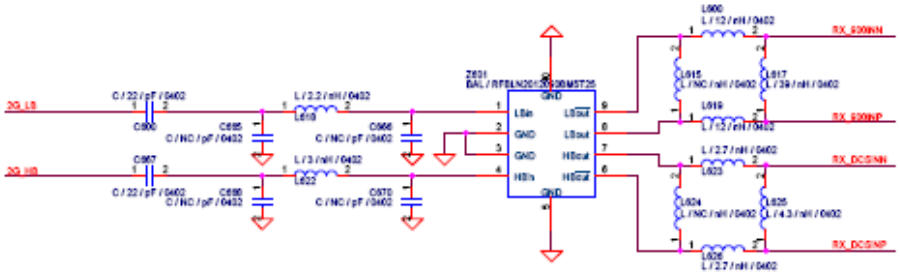
I/O connector (5PIN)

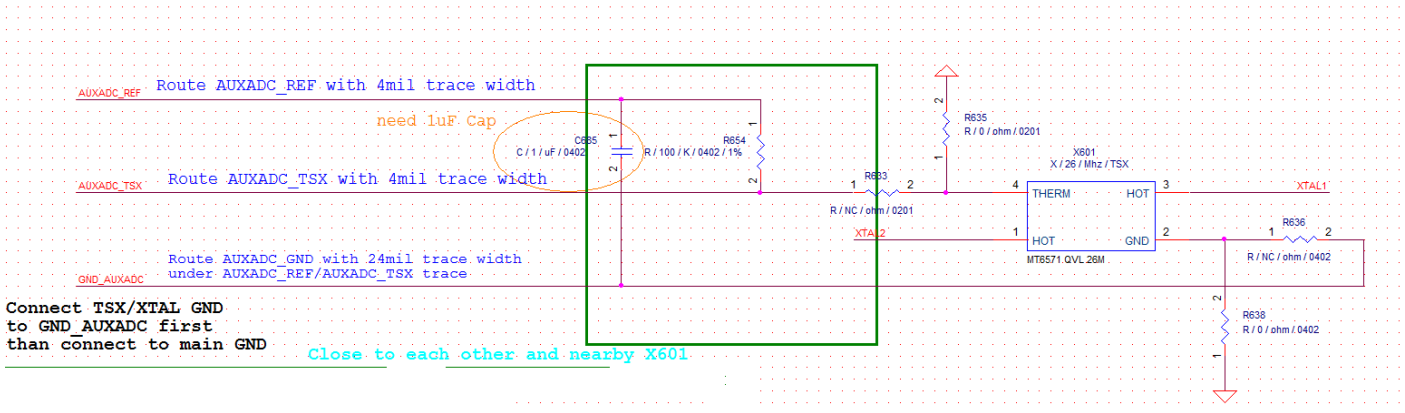
USB HS IF



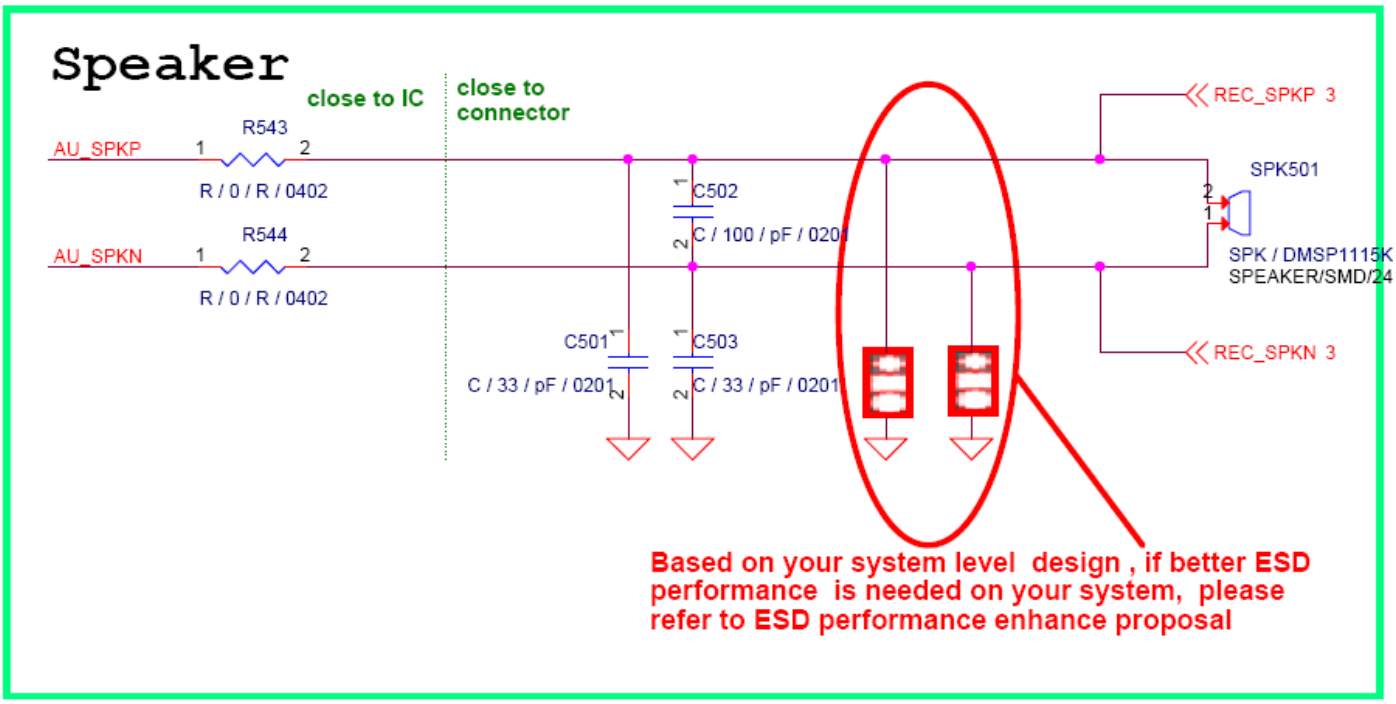
GSM RF

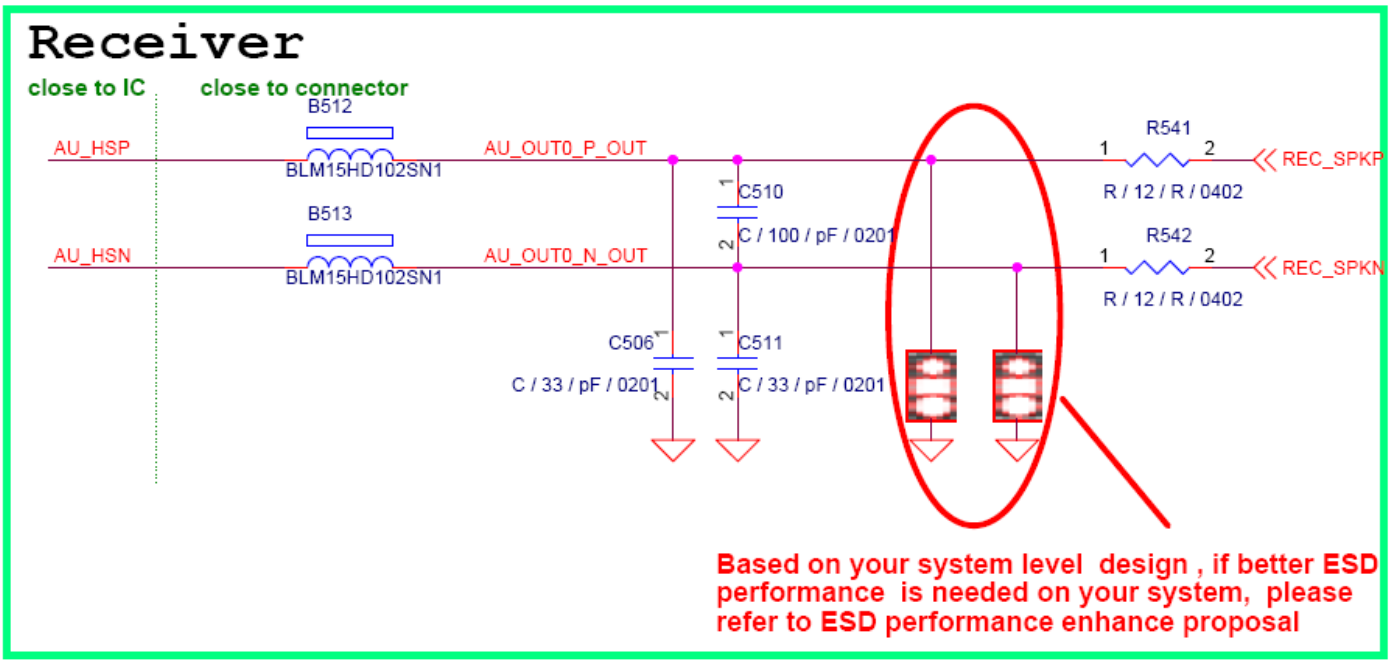

EDGE TXM
For SKY77593 and SKY77594 C608 change to NC
BOM of no B40
SKY77594 control logic table
Enable VctC VctB VctA
LB_GMSK_TX H L L H
HB_GMSK_TX H L H H
LB_EDGE_TX H H L H
HB_EDGE_TX H H H H
TRX1(2G_HB) L H L L
TRX2(2G_LB) L H H L
TRX4(GND) L H H H
TRX6(GND) L L L H



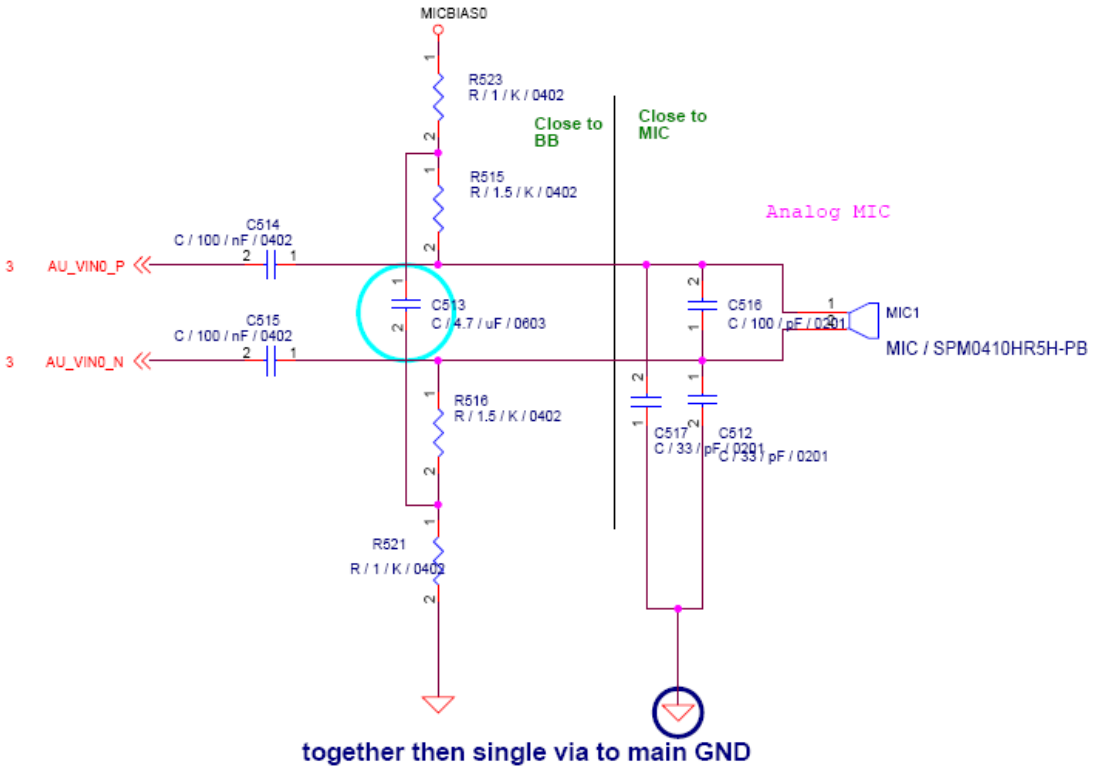

AUXADC_REF
Route AUXADC_REF with 4mil trace width
need 1uF Cap
AUXADC_TSX
Route AUXADC_TSX with 4mil trace width
GND_AUXADC
Route AUXADC_GND with 24mil trace width
under AUXADC_REF/AUXADC_TSX trace
Connect TSX/XTAL GND
to GND_AUXADC first
than connect to main GND
Close to each other and nearby X601

AUDIO

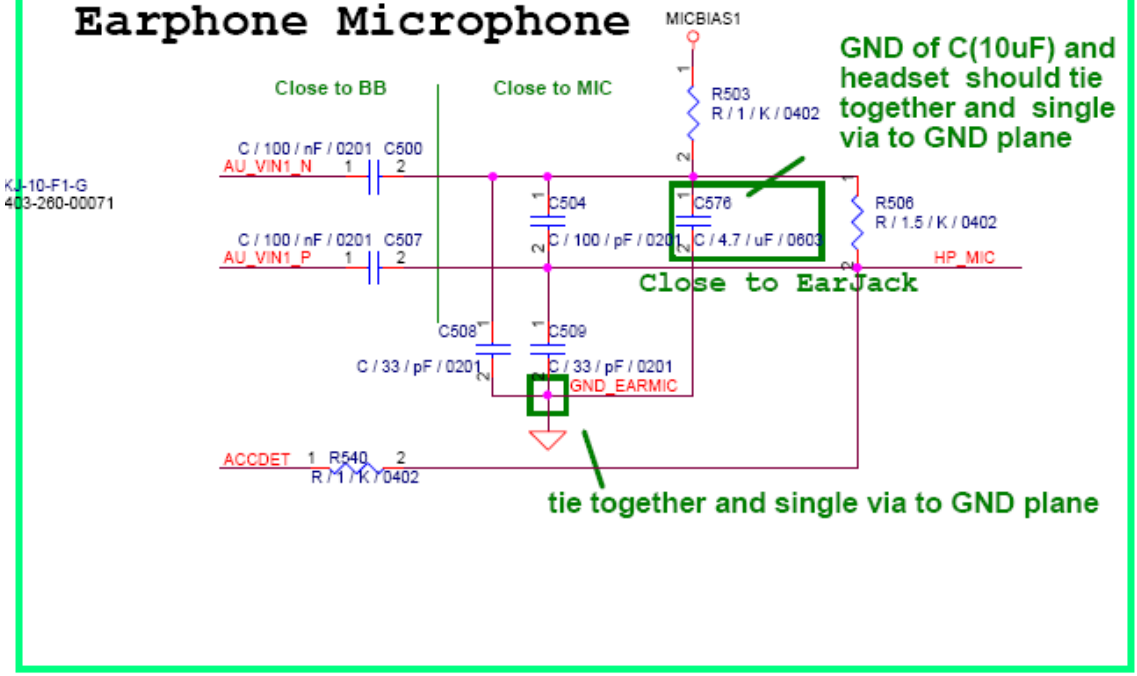

Speaker
close to IC
close to connector
AU_SPKP
AU_SPKN
R543
R544
R / 0 / R / 0402
R / 0 / R / 0402
C502
C / 100 / pF / 0201
C501
C / 33 / pF / 0201
C503
C / 33 / pF / 0201
REC_SPKP 3
REC_SPKN 3
SPK501
SPK / DMSP1115K
SPEAKER/SMD/24
Based on your system level design , if better ESD performance is needed on your system, please refer to ESD performance enhance proposal

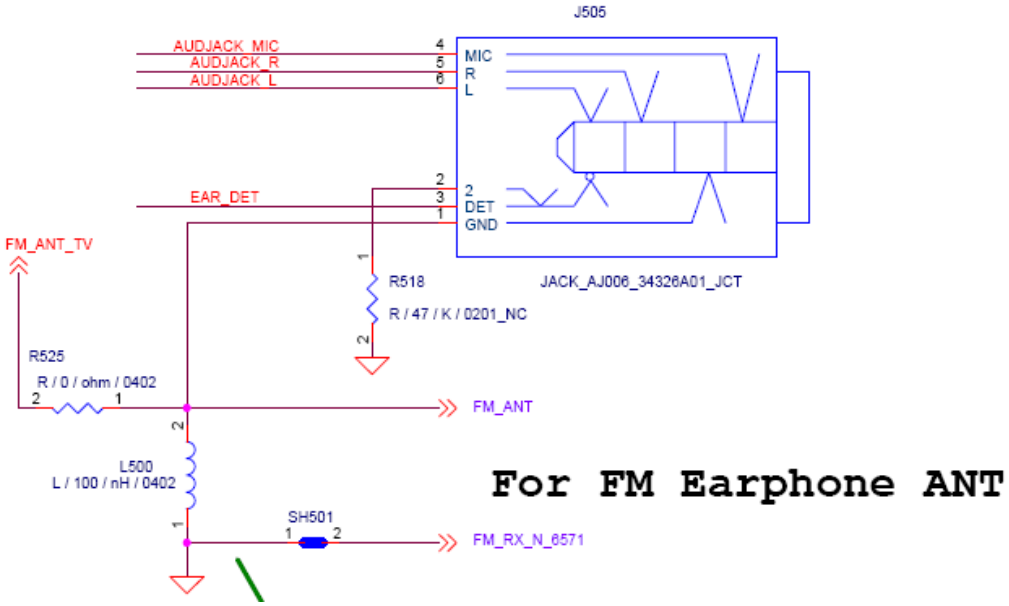

Receiver
close to IC
close to connector
AU_HSP
AU_HSN
B512
B513
BLM15HD102SN1
BLM15HD102SN1
AU_OUT0_P_OUT
AU_OUT0_N_OUT
C510
C / 100 / pF / 0201
C506
C / 33 / pF / 0201
C511
C / 33 / pF / 0201
R541
R / 12 / R / 0402
R542
R / 12 / R / 0402
REC_SPKP
REC_SPKN
Based on your system level design , if better ESD performance is needed on your system, please refer to ESD performance enhance proposal

Handset Microphone 1



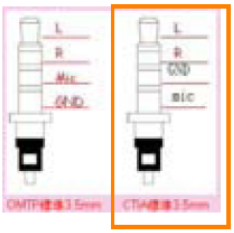
Earphone Microphone



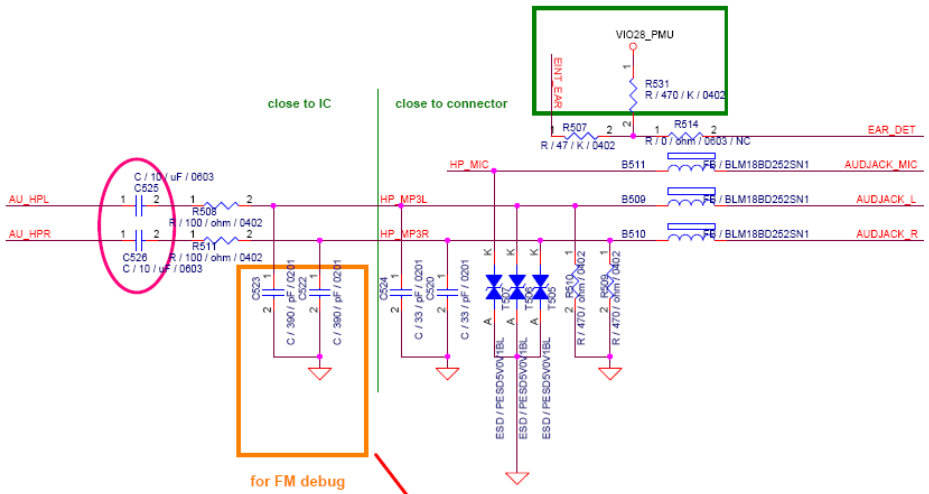


For FM Earphone ANT

Single via to GND plane

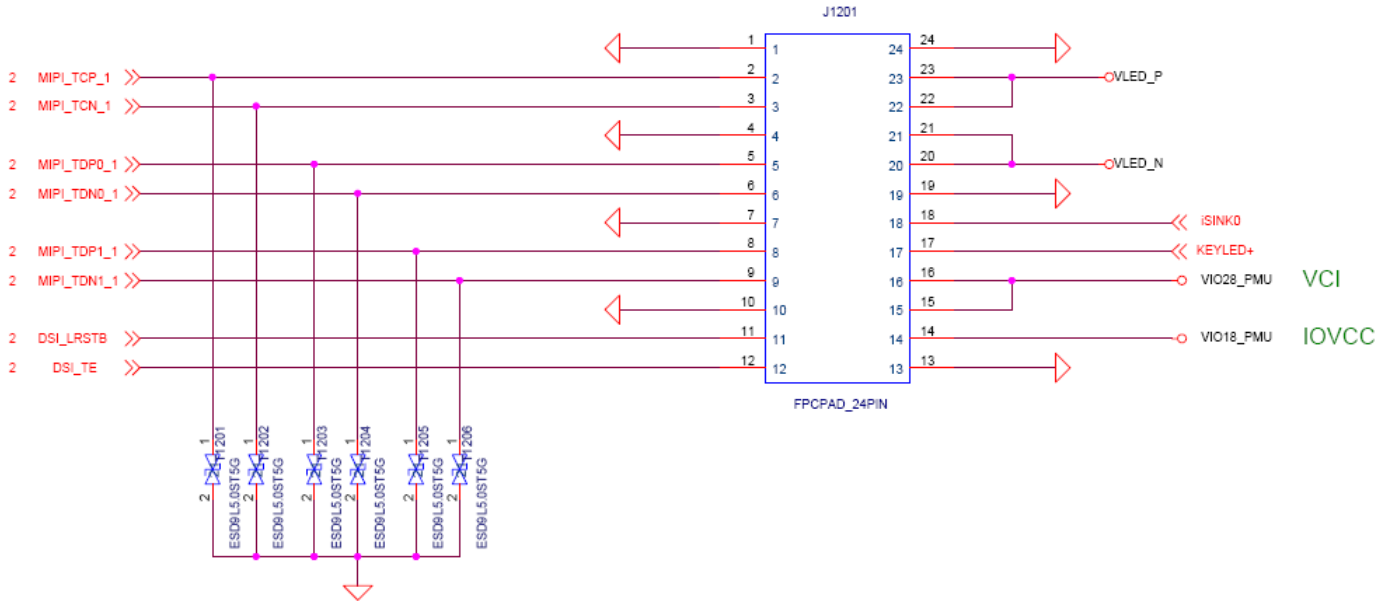


Earphone Jack 3.5"

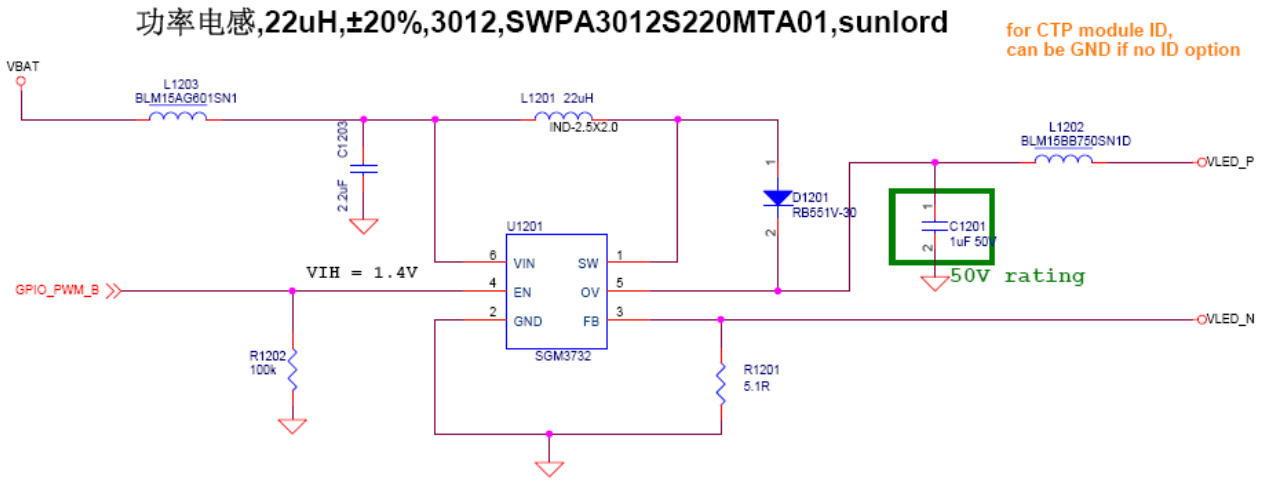


Based on your system level design , if better desense performance is needed on your system , please refer to desense performance enhance proposal

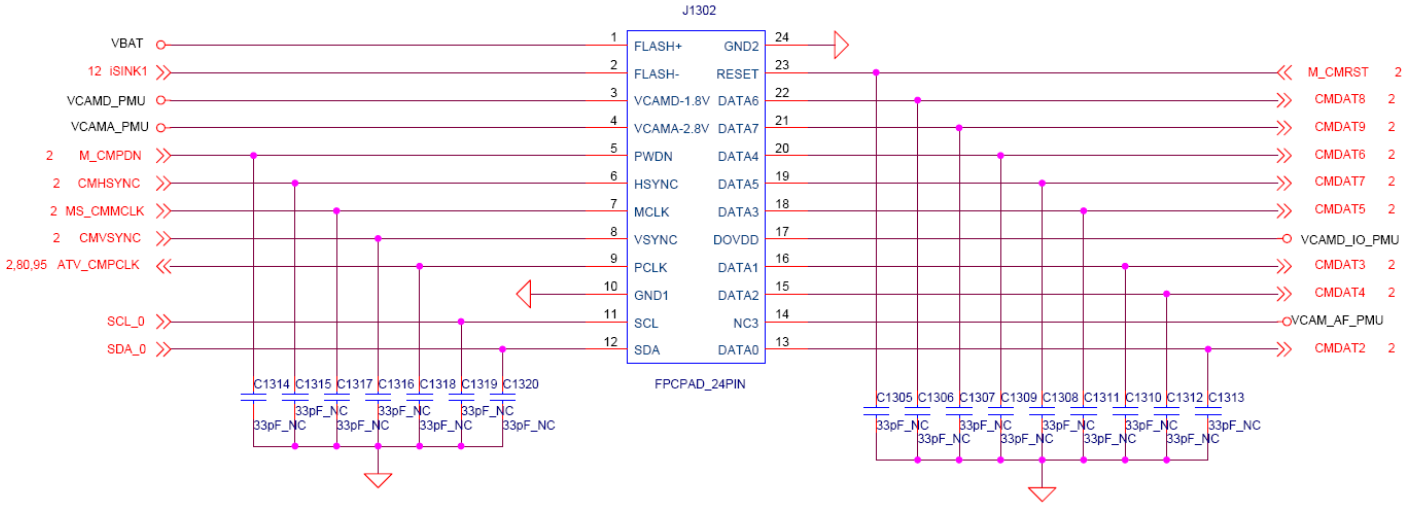
LCD INTERFACE

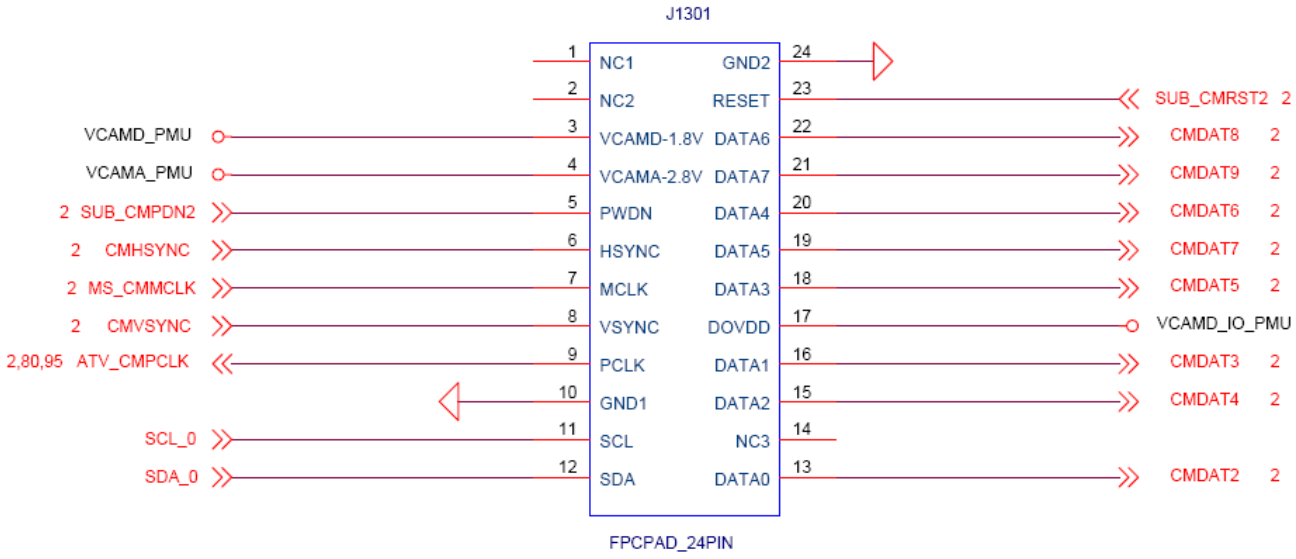


LCD BACKLIGHT

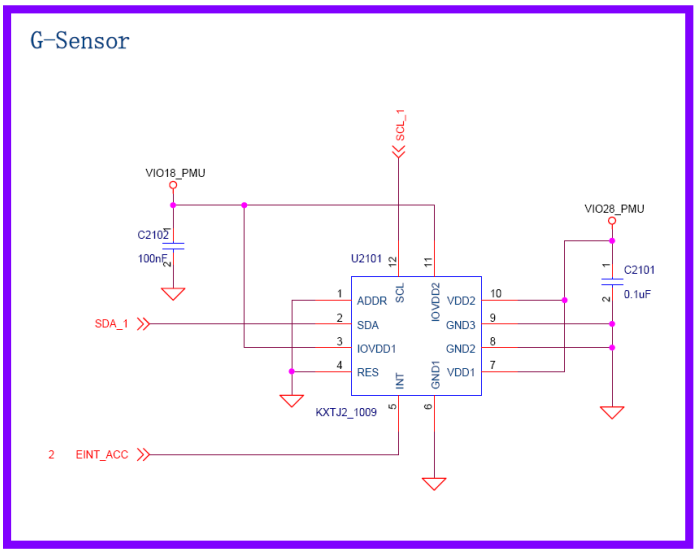


CAMERA INTERFACE

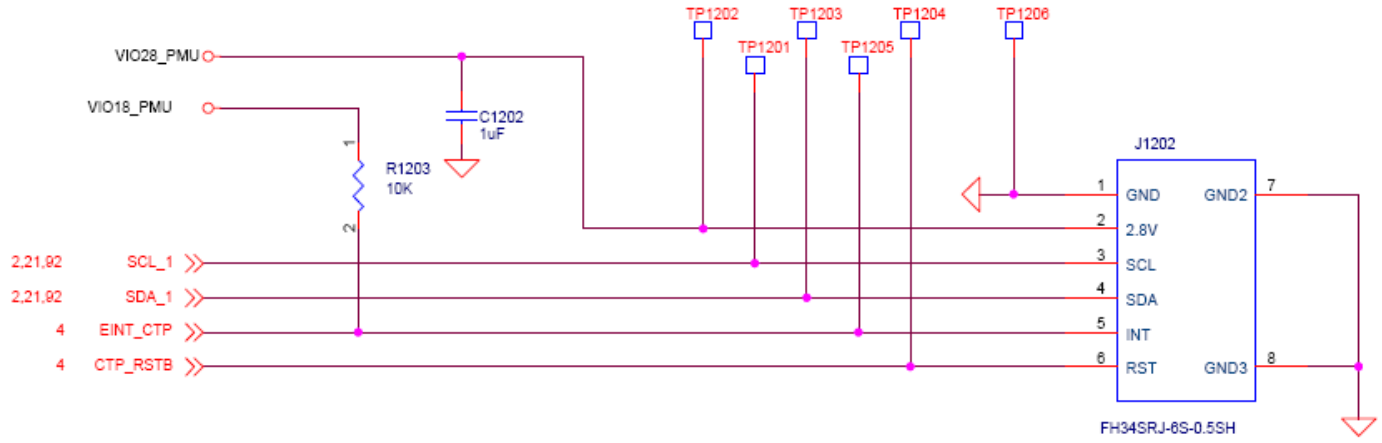




G-sensor

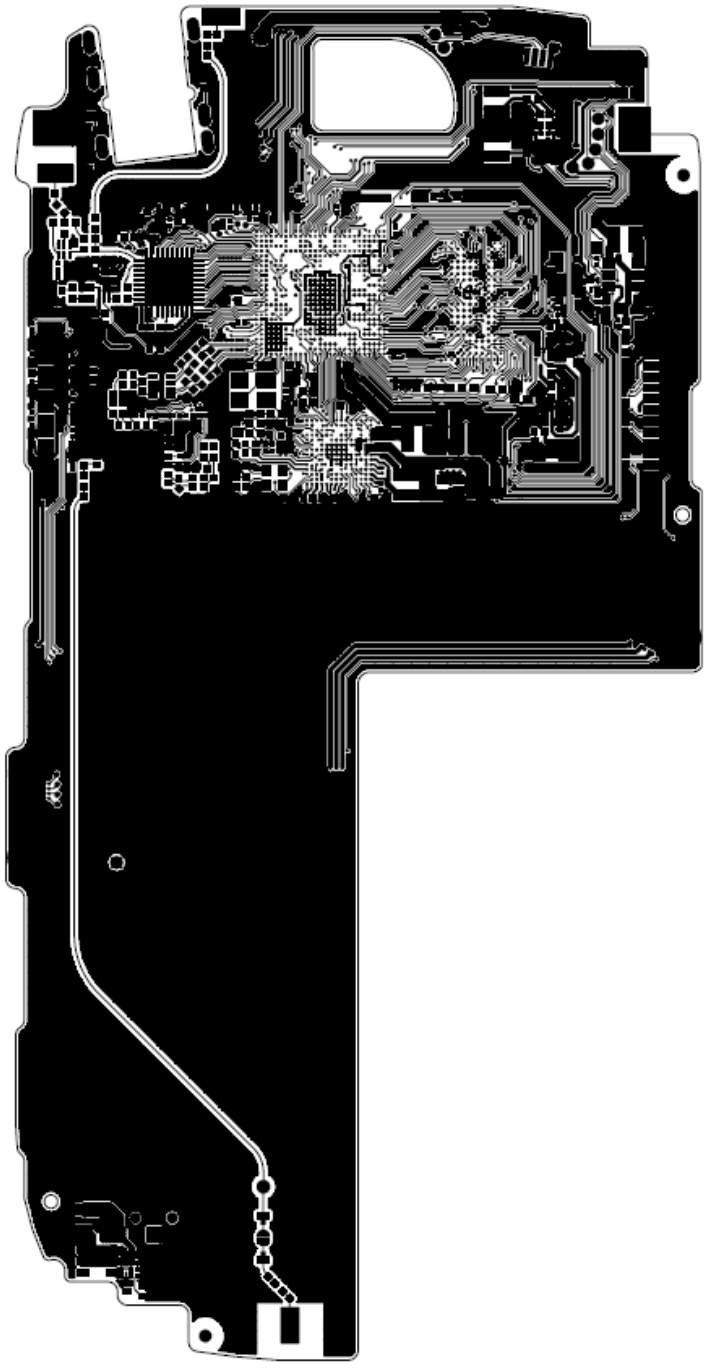


Touch Panel

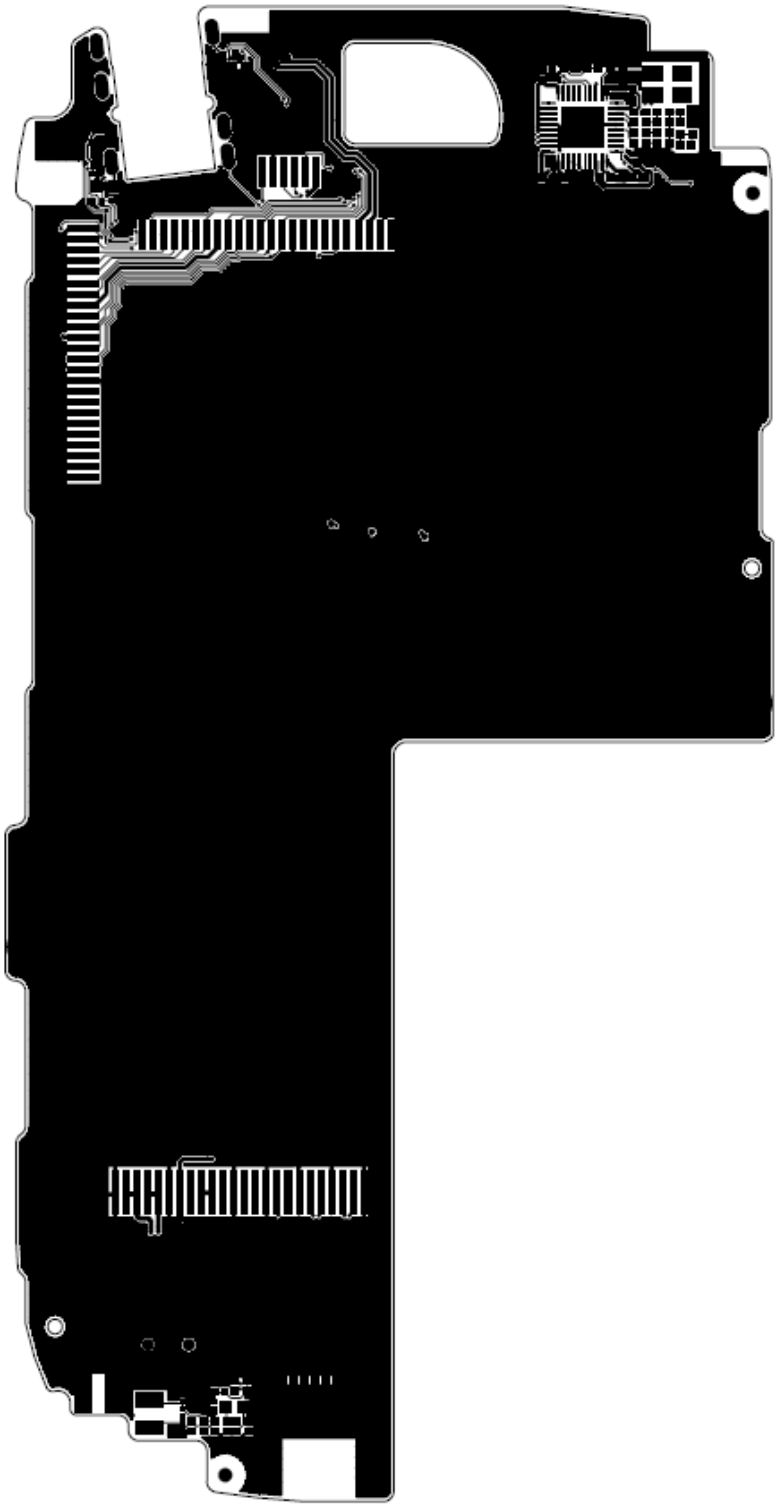


Chapter 4 PCB Layout chart

PCB layout SIDE A

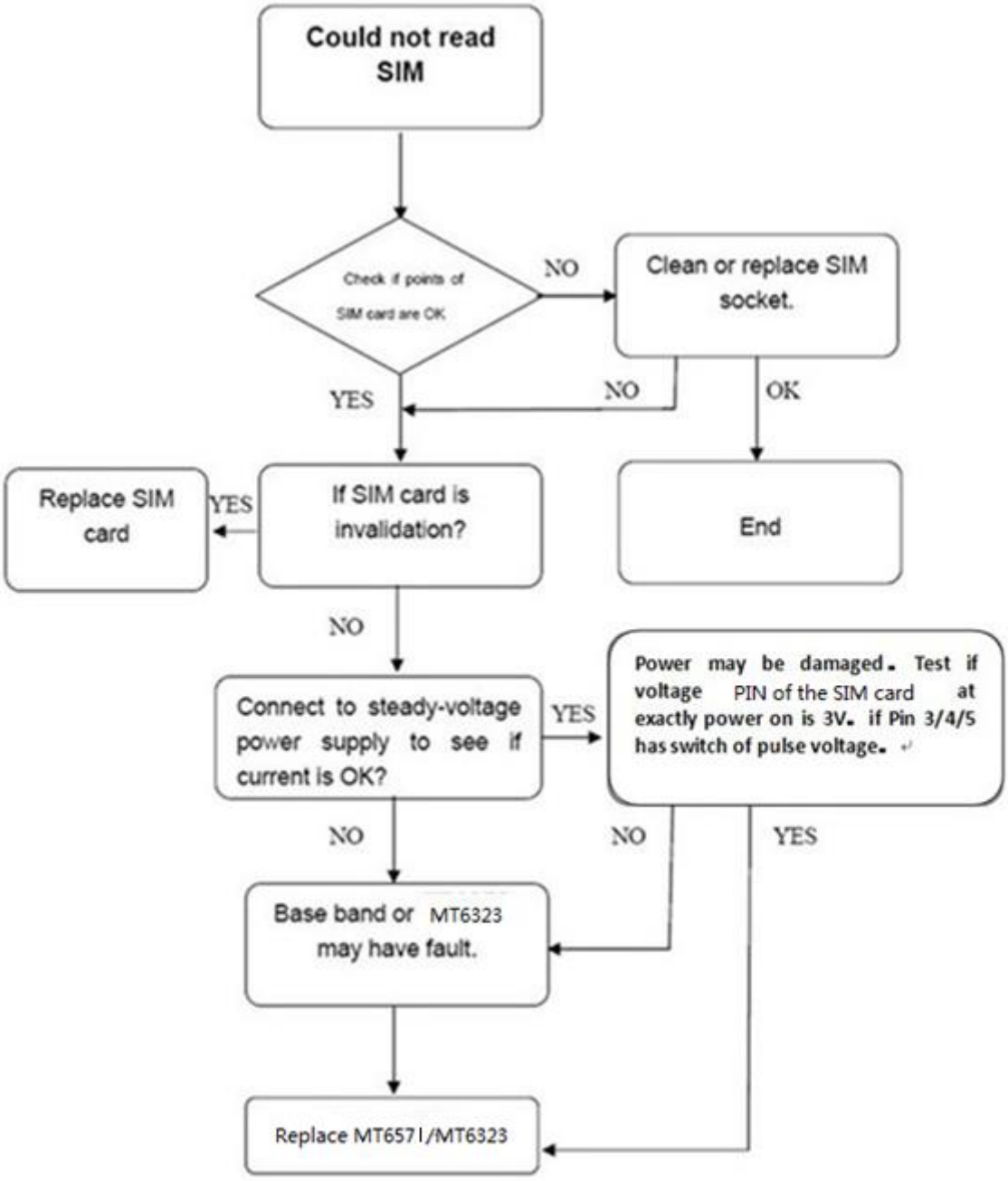


PCB layout SIDE B

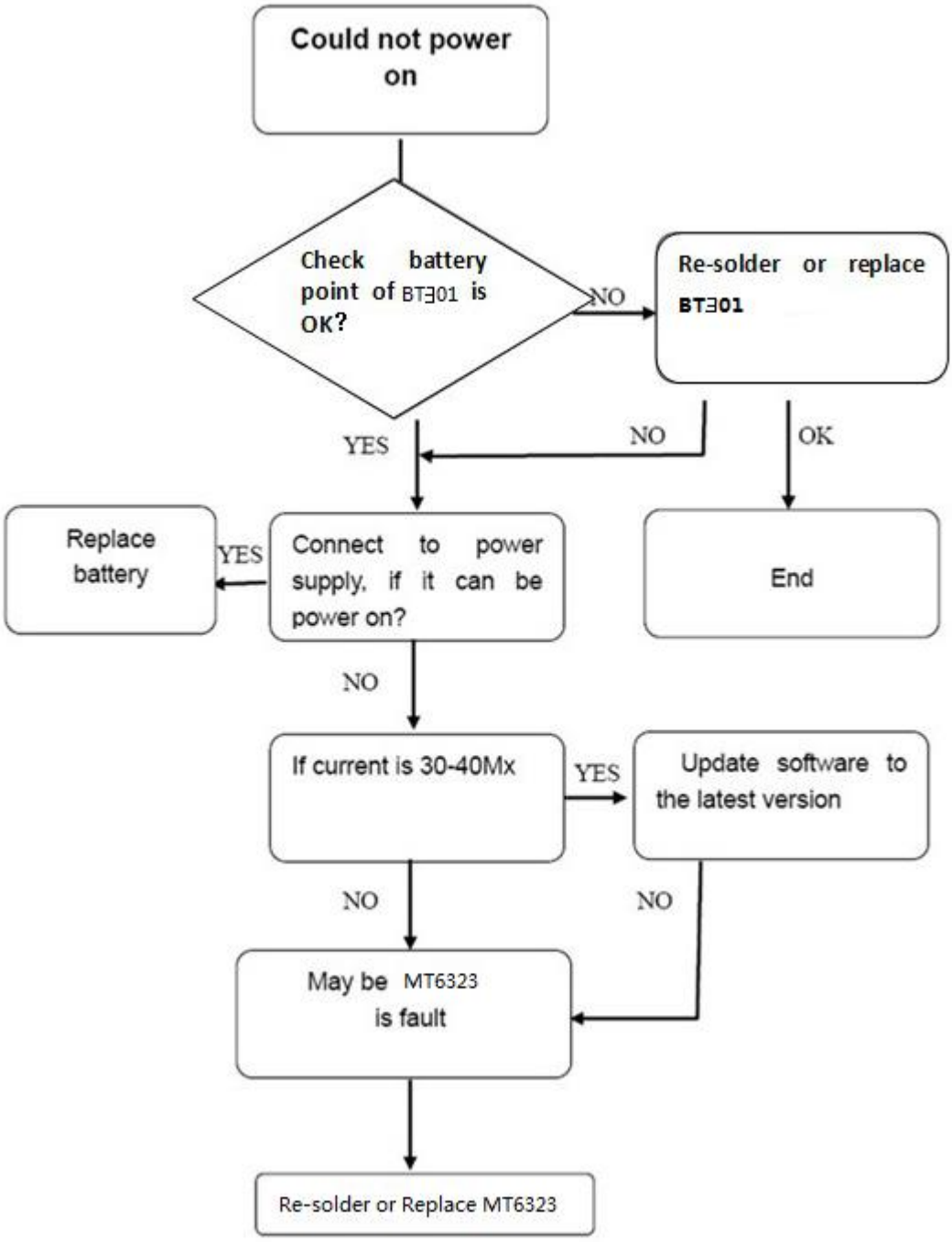


Chapter 5

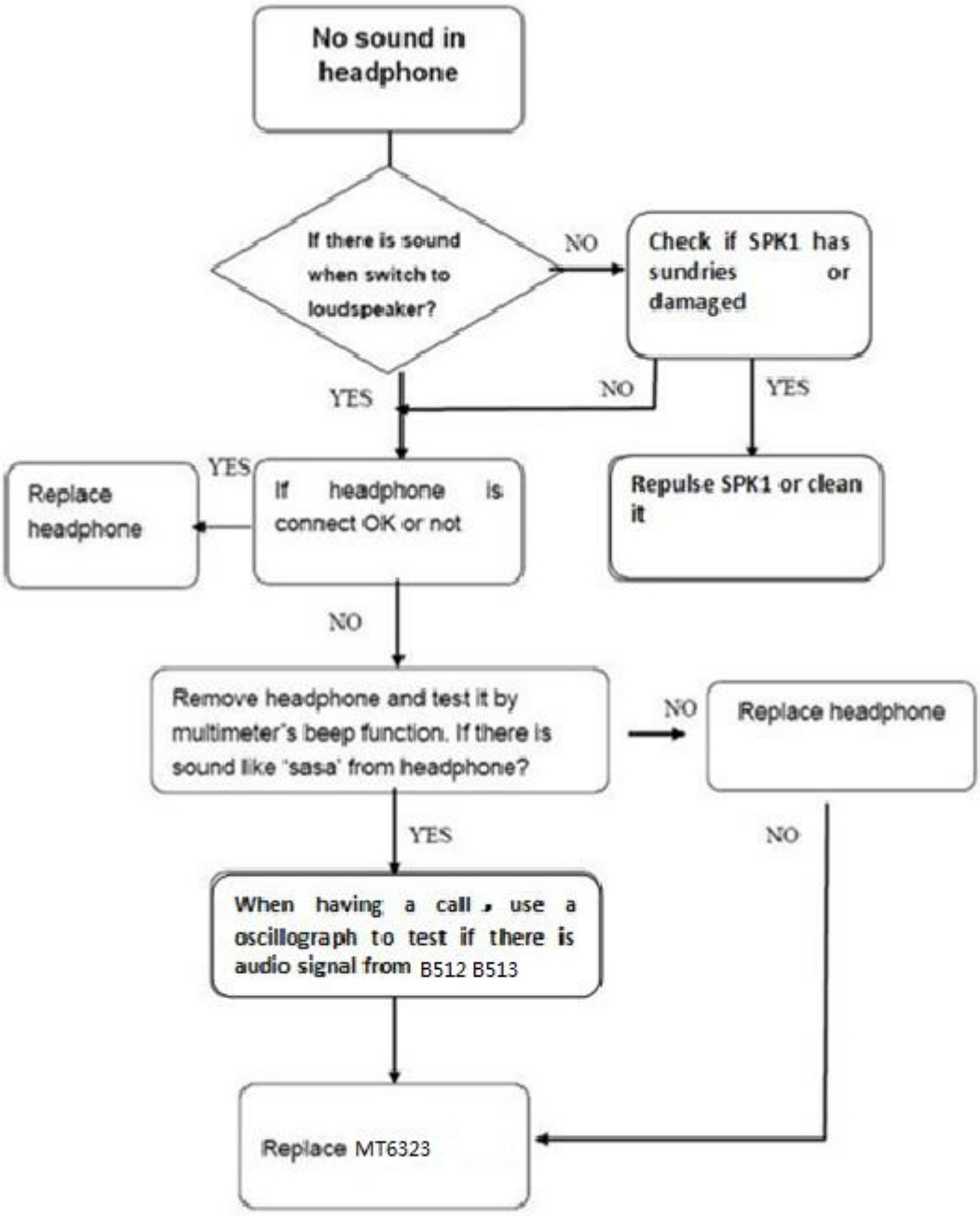
TROUBLE SHOOTING Test flow chart of test SIM card



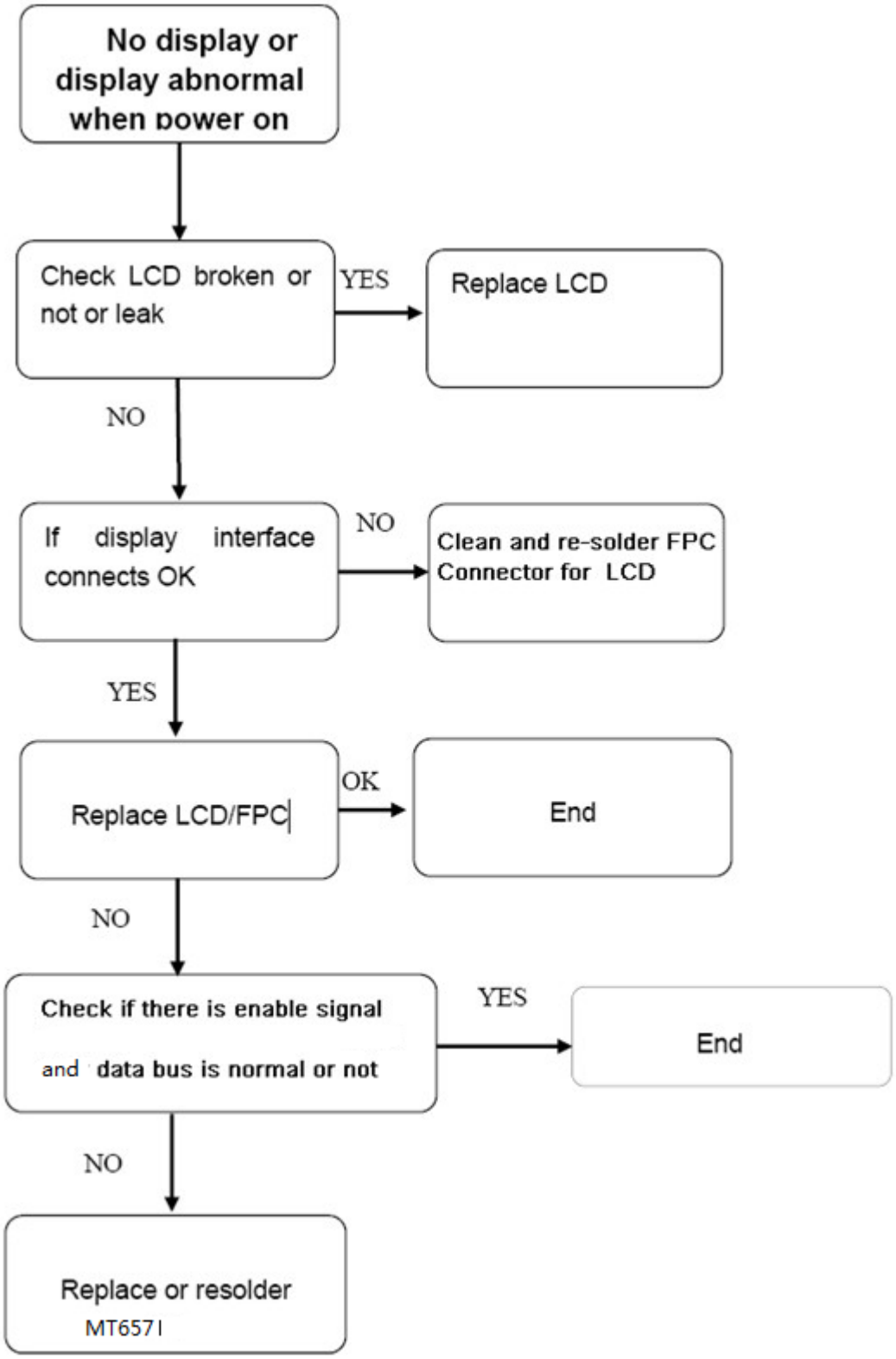
Test flowchart of cannot power on (main)



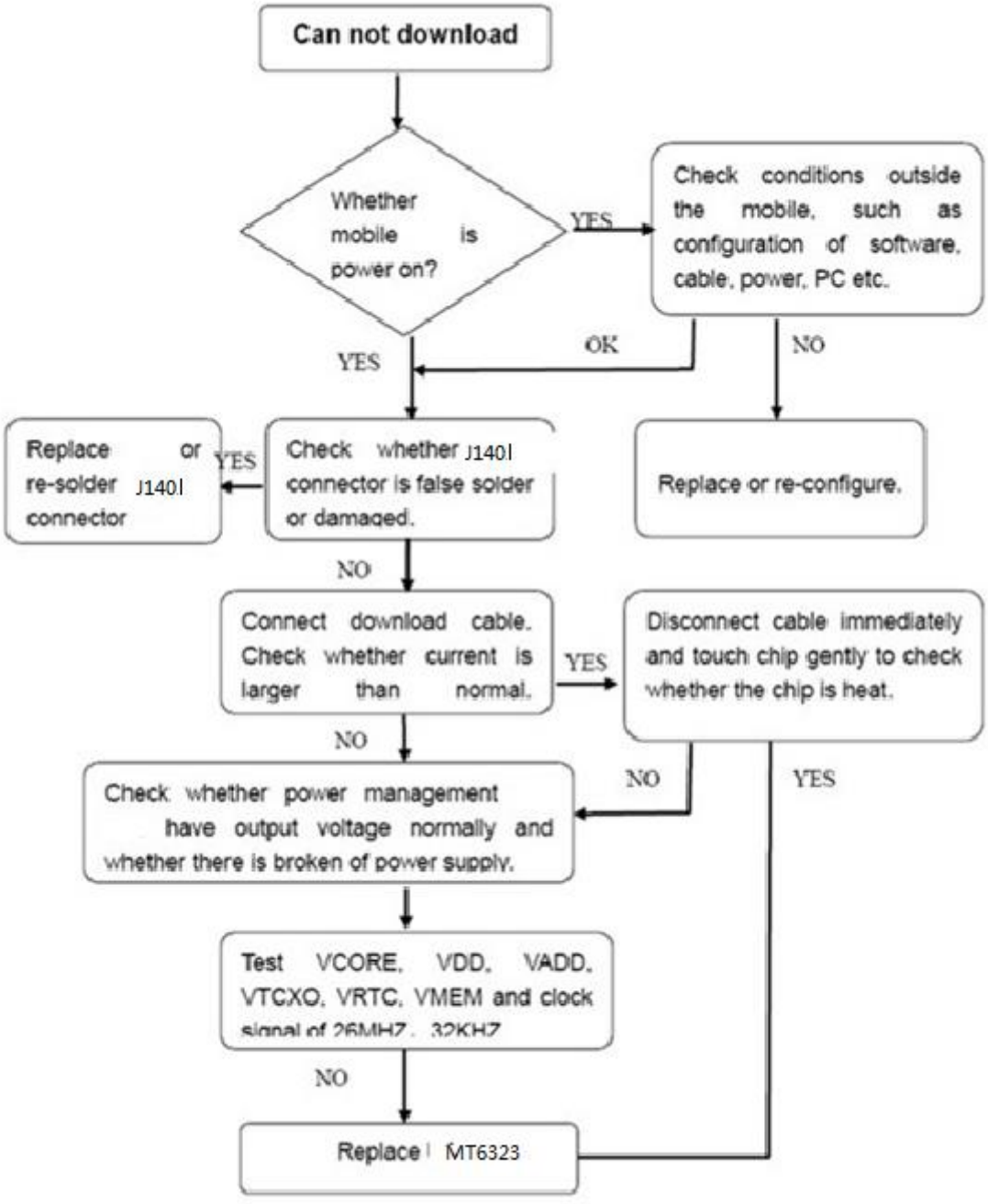
The test flowchart of head phone



Test flowchart of no display or display abnormally.



The test flowchart of download failed

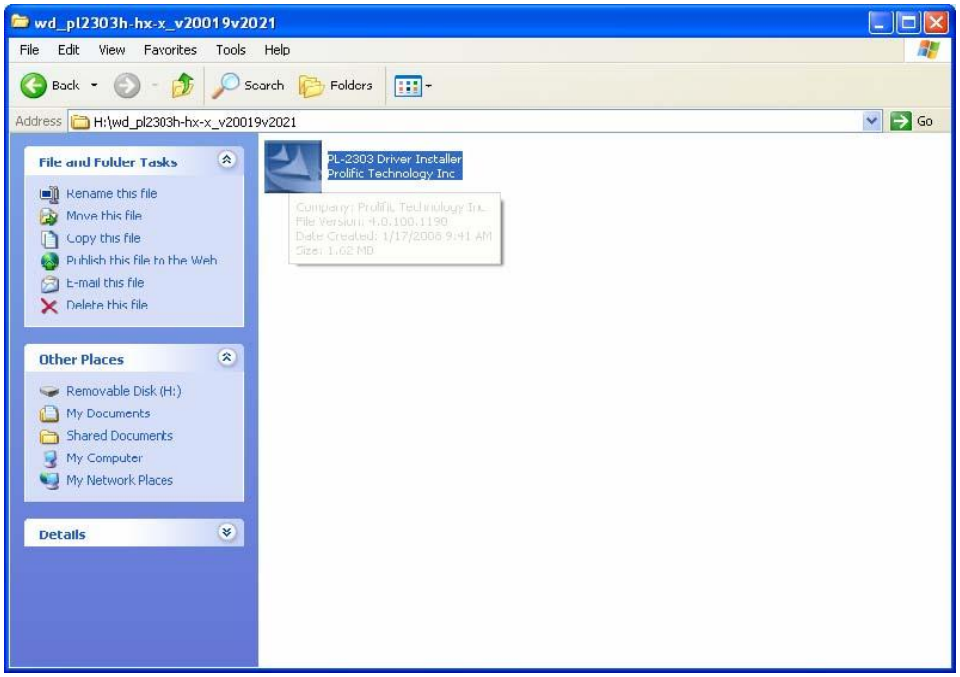


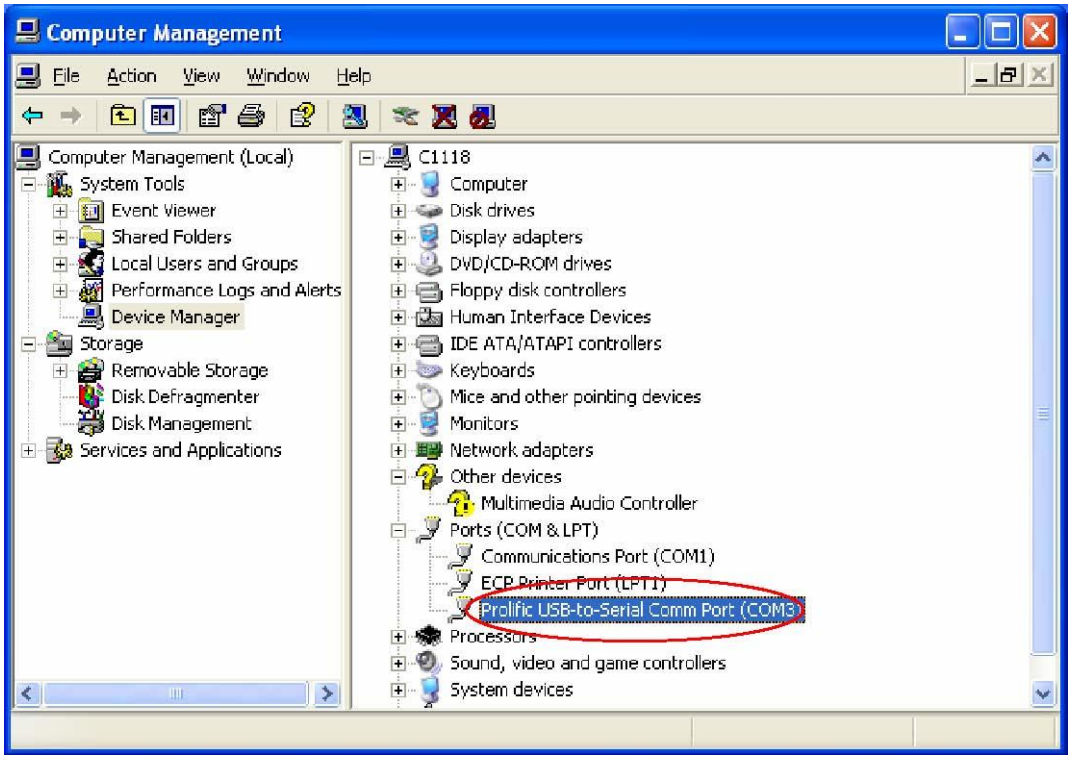
Chapter 6
Instruction of SW update

1 **1. Install the USB driver** 

without the USB cable plugged into the computer.

2 **After it is ok, plug the cable then check the device manager as the picture below:**

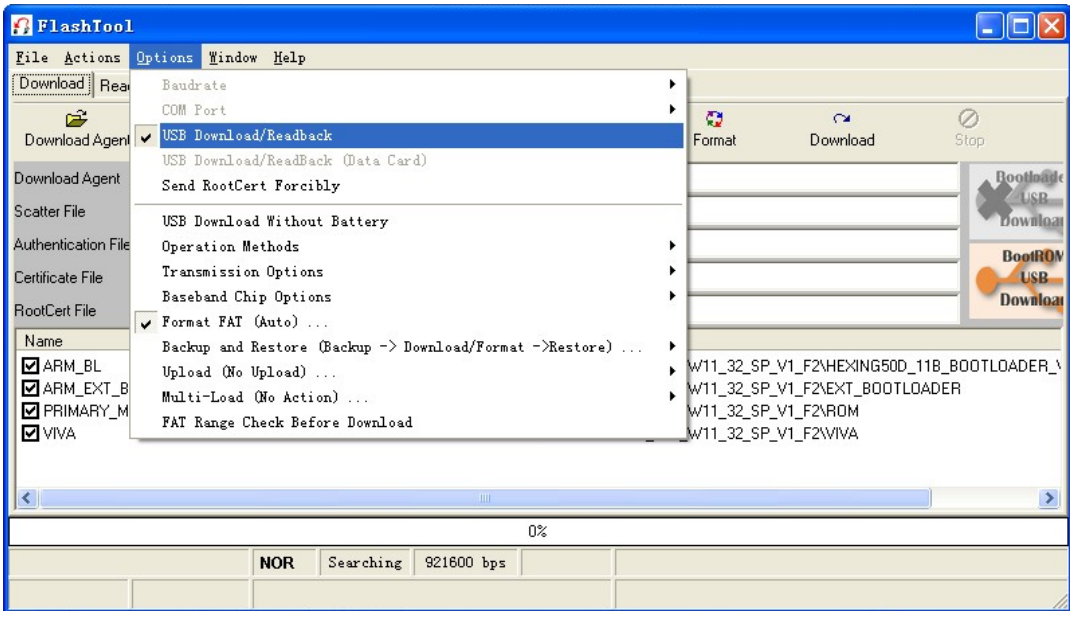




3. Double click

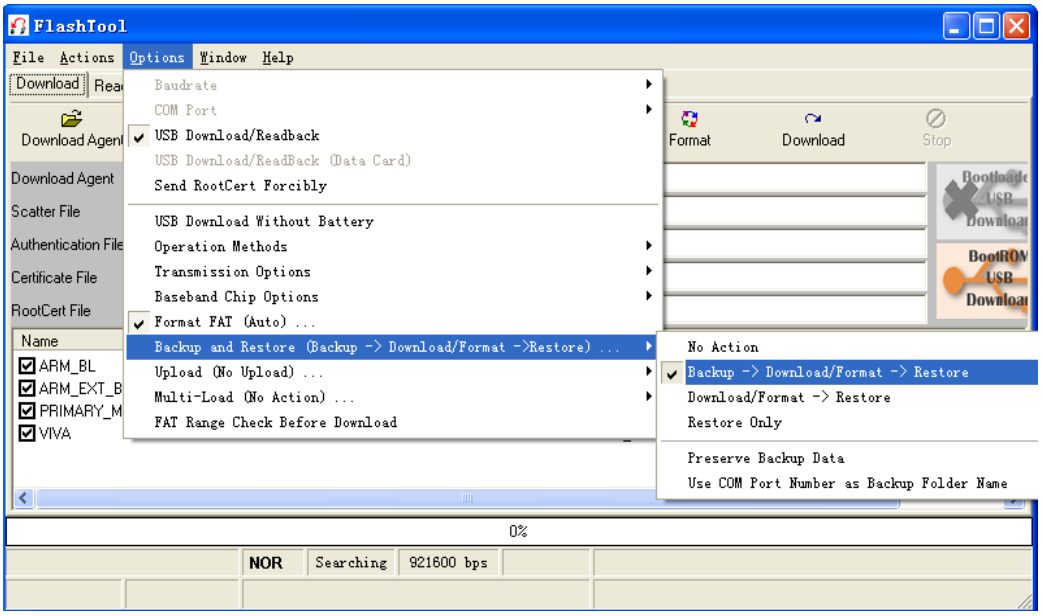
to run FlashTool_v3.0848

Choose right com port

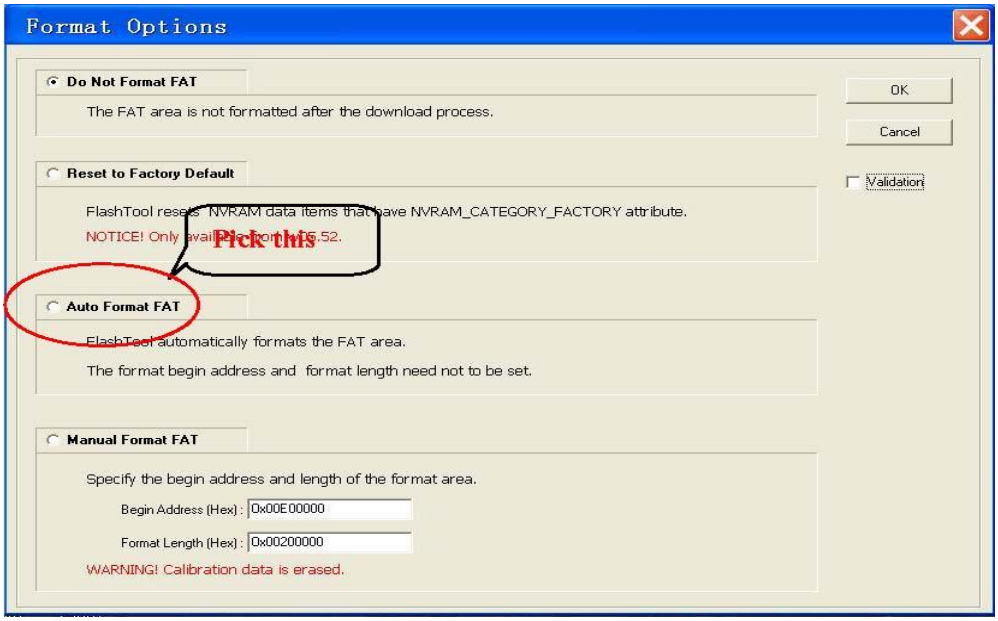


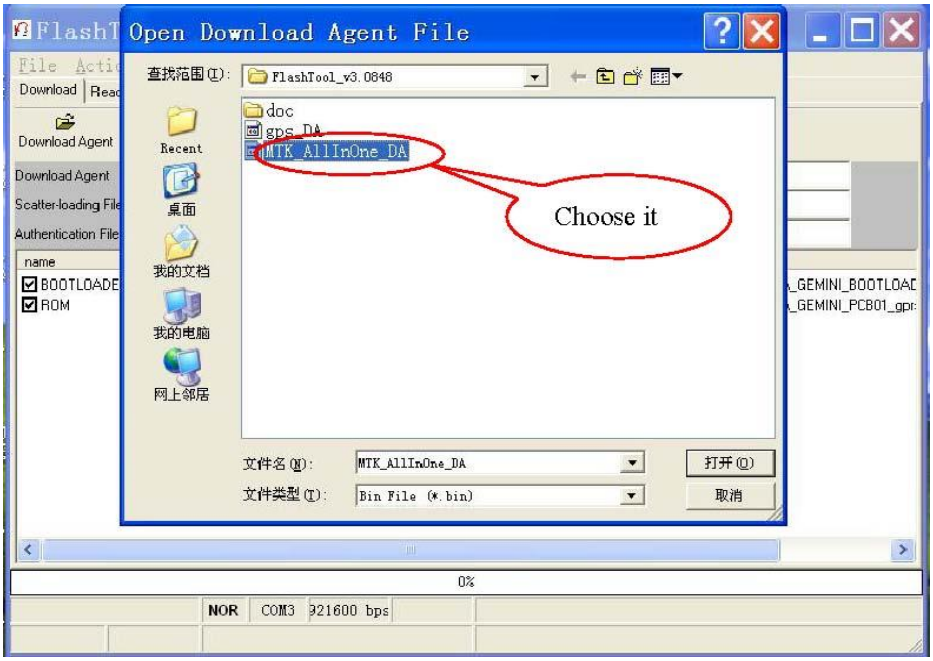
1 **You better choose auto format FAT in "Format FAT" like belows,**

2 **Tip Download Agent, choose MTK-ALLInOne.bin**

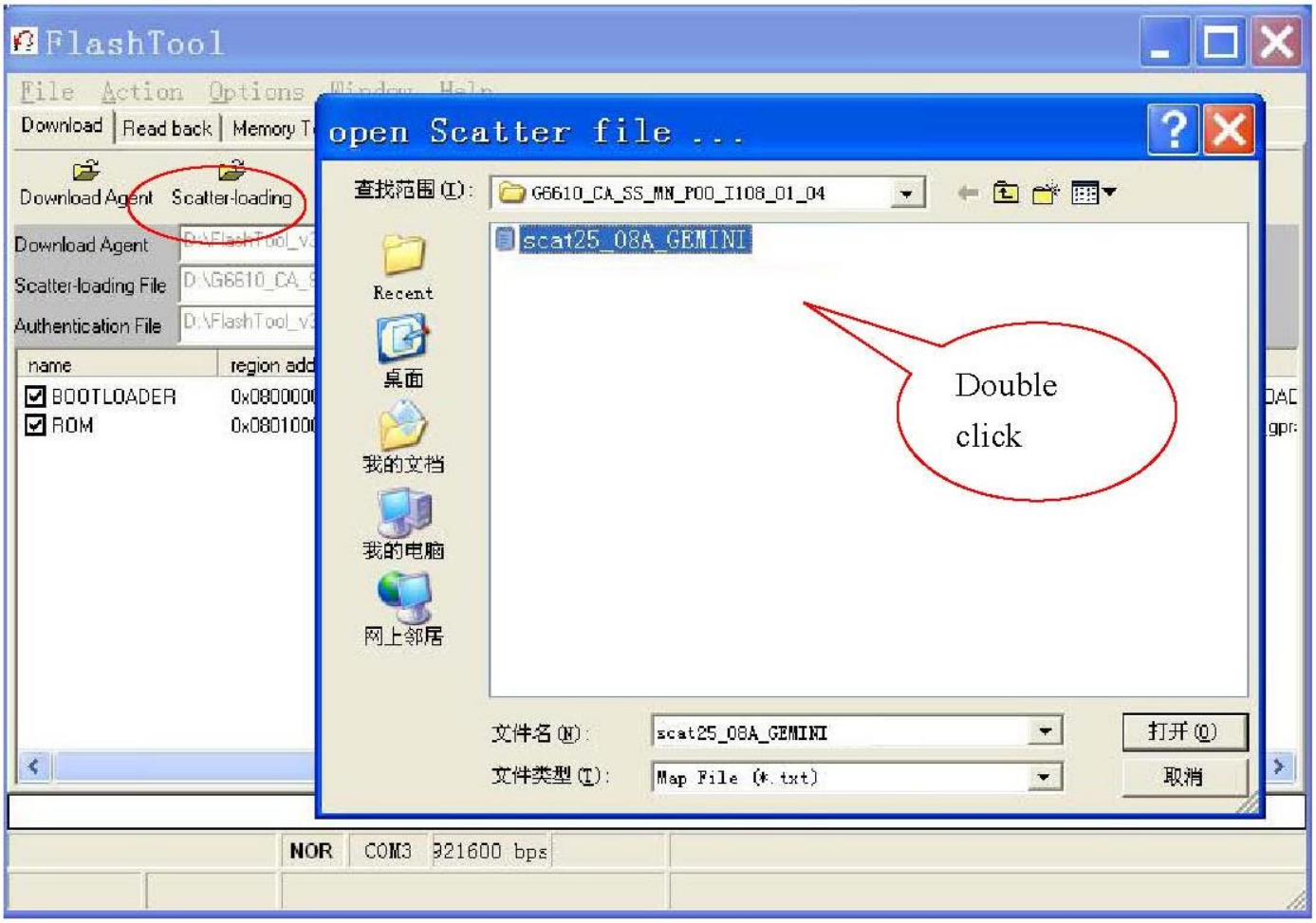


Choose “Auto Format FAT”,

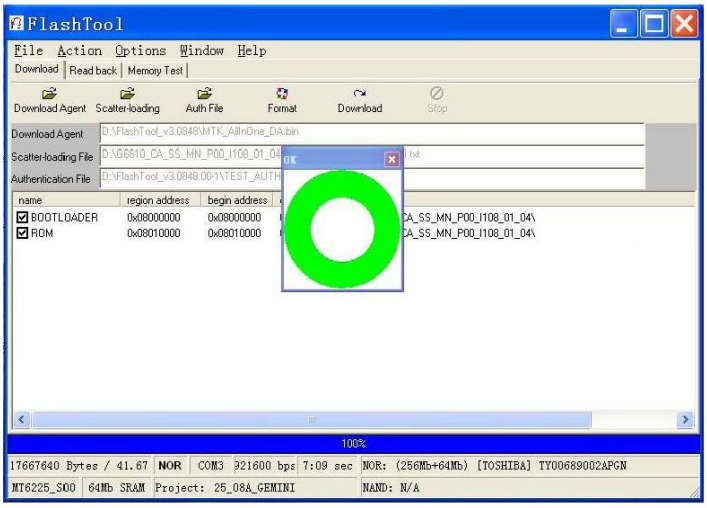




6. Tip Scatter-loading to choose “ txt ” file in the SW folder, such as scat25_08A_GEMINI. Then the BOOTLOADER and ROM will also set to be well .



7.**Keep phone off , and tip Download to run the program, and the red bar appear, it shows the phone can connect with this tool successfully, then it will write data into phone and tool will show the blue bar , after Ok appear with the green circle. The process finish.**



¾ Check if the SW is correctly

8. Power on the phone and input“#*37#*”, check its version number on the first option.

Chapter 7

FUNCTION TEST

Press “*#37*#” to check these items in standby mode:

1 Version: to check the version of the software
2 Echo Loop: blow to the mic, the receiver will have a sound
3 Key: press relevant keys appear in the screen

1 Vibration: The cellphone will vibrate
2 Loud SPK: there will be a sound from the speaker
3 Ring: press start there will be some music from the speaker
4 LED: press confirm button to check if LED is normal
5 LCD: LCD will Auto Display

11. Receiver: there will be a sound from the receiver

Chapter 8

PARAMETER SETTING INSTRUCTION China mobile as an example, other countries please inquire the local operator

1. WAP parameter setting instruction

1) Data Account Process: Menu→Services→Data Account

GSM Data: Account Name: (default)
Number: 17266
User Name: WAP
Password: WAP
Line Type: ISDN
Speed: 9.6 Kbps
DNS: 010.000.000.172

GPRS: Account Name: (default)
APN: cnwap
User Name: WAP
Password: WAP

Auth. Type: (default)

2) WAP setting process: Menu→Services→WAP→Settings→Edit Profile

Edit Profile: Rename Profile: Optional Homepage: http://monternet.com Data Account: GSM/GPRS Connection Type: HTTP (Proxy Address: 010.000.000.172) Username: Optional Password: Optional

After setting as above, the WAP is ready.

2. MMS parameter setting instruction (Premise is WAP is valid)

Setting process: Menu→Messages→MMS→Message Settings→Server Profile→Edit profile

Edit Profile: Rename Profile: Same as WAP Profile name Homepage: http://mmsc.monternet.com Data Account: Same as WAP Data Account Connection Type: Same as WAP Data Account Username: Optional Password: Optional

After setting as above, the MMS is ready.

3. Email parameter setting instruction (Premise is WAP is valid)

1) GPRS setting process: Menu→Services→Data Account→GPRS

Edit Profile: Account Name: Optional APN: cmnet 2) Email

Profile setting process: Menu→Messages→Email→Email Profile

A. Outgoing server: stmp.126.com (depend on the user's Email website)

E-Mail Address: Full E-Mail Address of the user's Password: Password of the use's E-Mail

B. Incoming server: pop3.126.com (depend on the user's Email website) E-Mail Address: Full E-Mail Address of the user's Password: Password of the use's E-Mail

After setting as above, the MMS is ready.

Chapter 9

CATCHER INSTRUCTION General: The figures in this document help to understanding, and they may not be exactly the same as showed in your computer. Contact us please when you have any queries.

1 Install the USB driver if not yet.

1.1 Run the USB driver 

without the upgrade cable plugged into the computer.

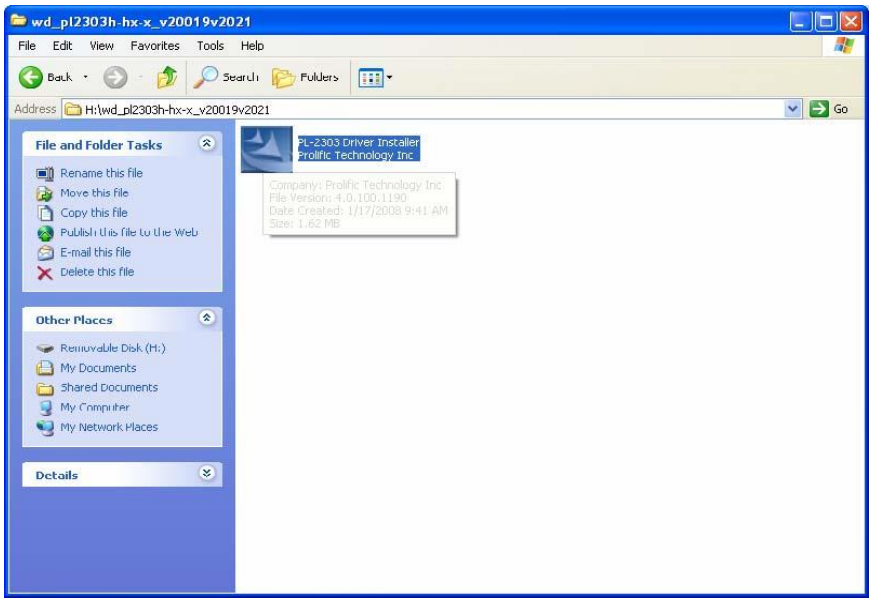


Figure 1 1.2 After the installation is completed, plug the upgrade cable into the computer's USB connector, and then check the device manager as in figure 2:

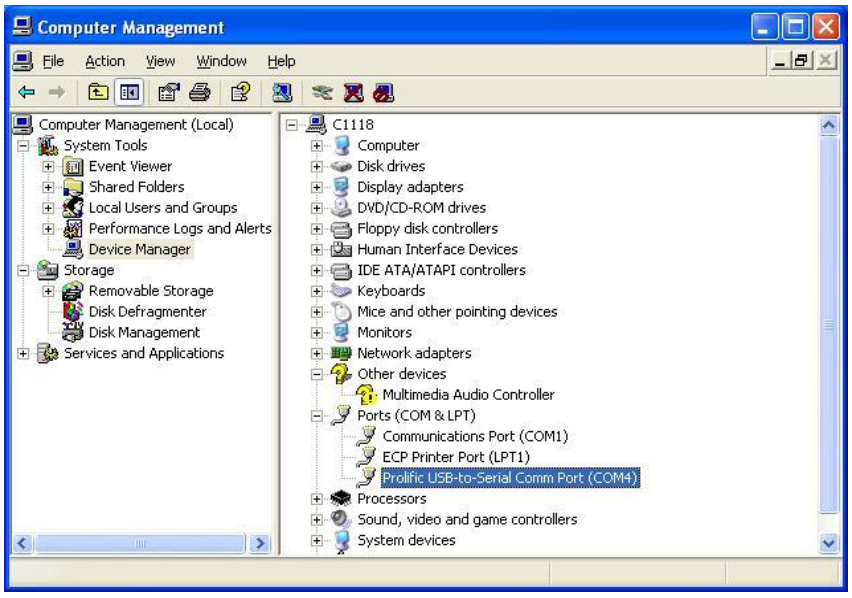


Figure 2

2 set the phone to prepare for using Catcher.

Open the phone and input "*#84666364*#" to enter the setting screen. In sequence enter DEVICE, UART, and TST config. Choose UART1 and Clink done, and then the phone restarts. After the phone restarts, power it off.

3 choose the Database of the phone's software.

3.1 run "Catcher.exe", choose Config →.Set Database Path. The figures (figure 3, figure 4, and figure 5) occur in sequence as below.

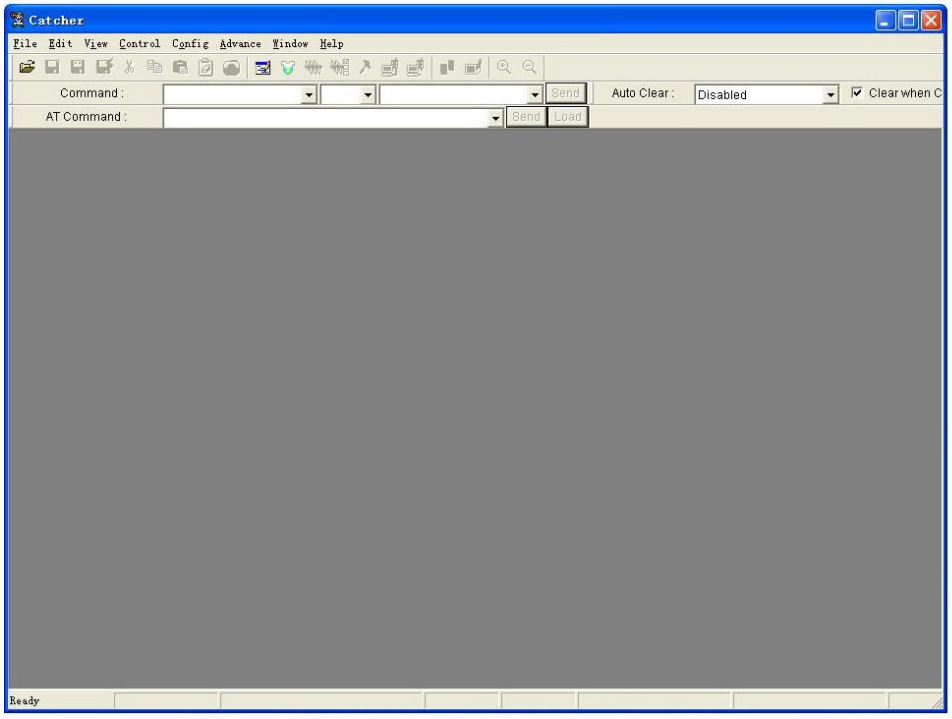


Figure 3

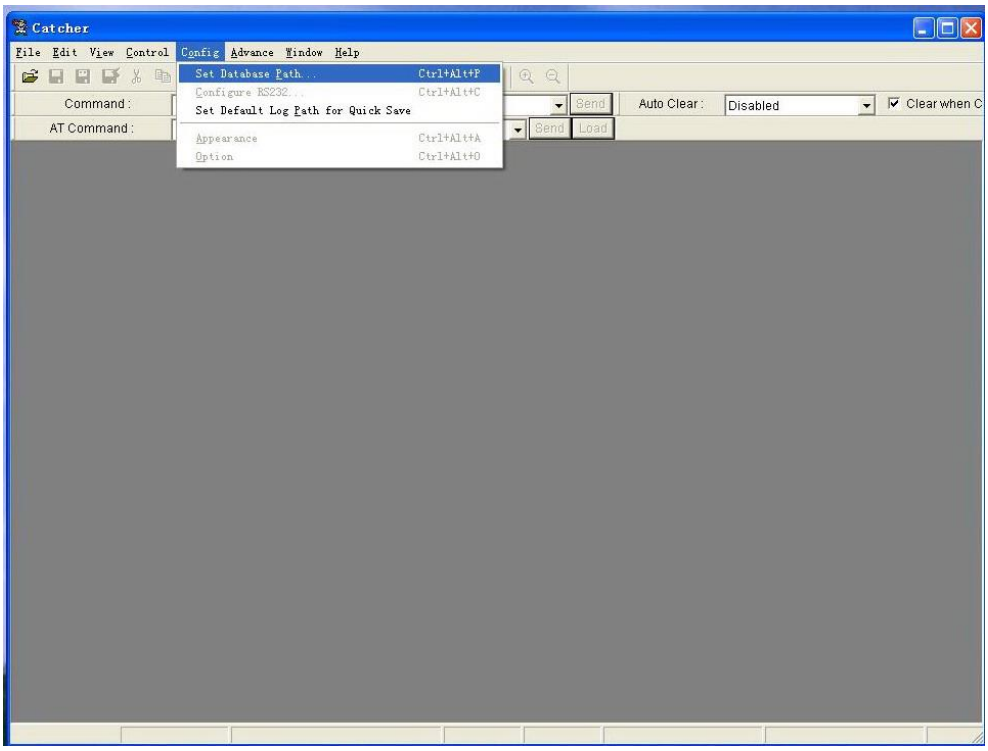


Figure 4

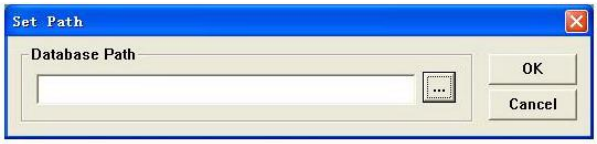


Figure 5

3.2 Clink the button "..." in figure 5 to choose the Database file of the master phone or slave phone (for example "BPLGUInfoCustomSrcP_MT6226M_S01_X6+_FLP_06_12_V3_2-TN-MP-5B-QN" file). Refer to figure 6 showed as below:

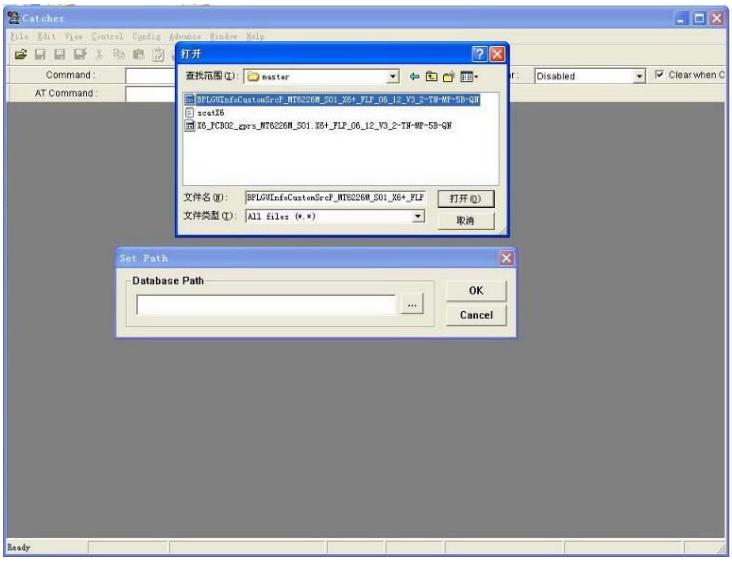


Figure 6 When you examine the master phone's problems, choose the master phone software's database file, and when the slave phone's problems, the slave phone's database file. The database in the phone must be exactly the same as the chose database for Catcher, or the figure 14 will occur when the Catcher work.

4 enter Logging mode and choose the right COM

4.1 clink the "Logging code" button in the red note in figure 7. Then figure 8 occurs.

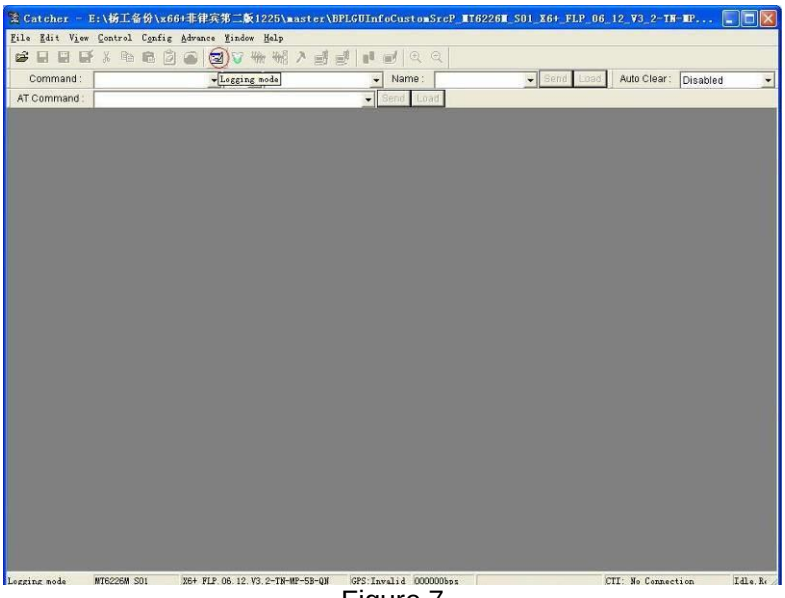


Figure 7

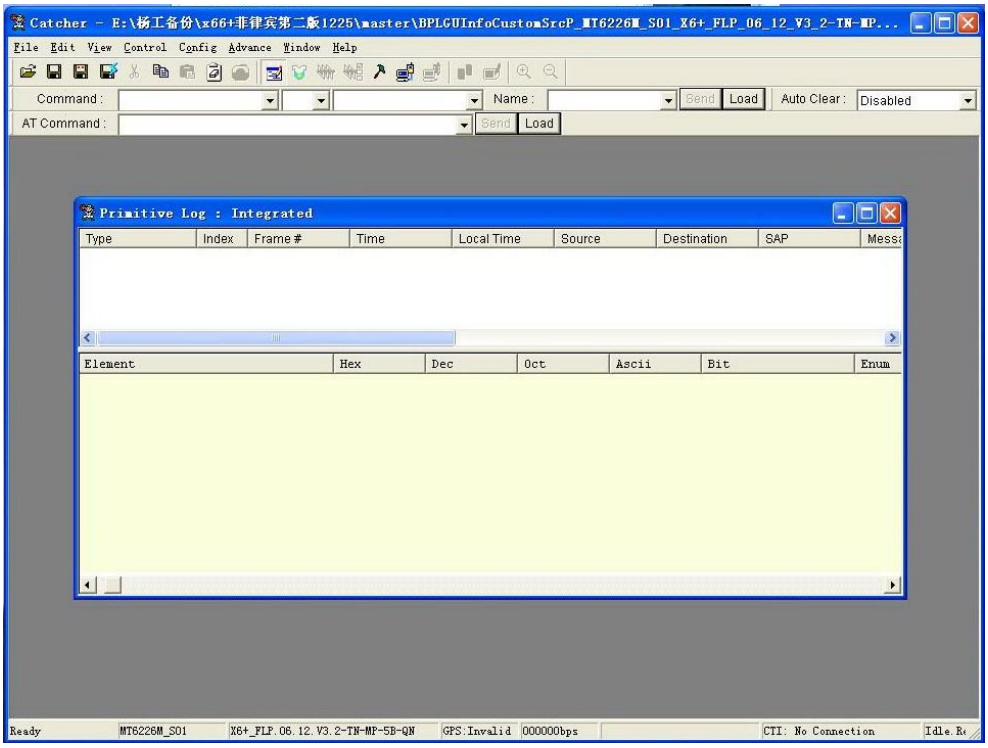


Figure 8

4.2 clink button “Configure RS232” in figure 9, then figure 10 occurs, choose the right COM in Port option, and clink OK.

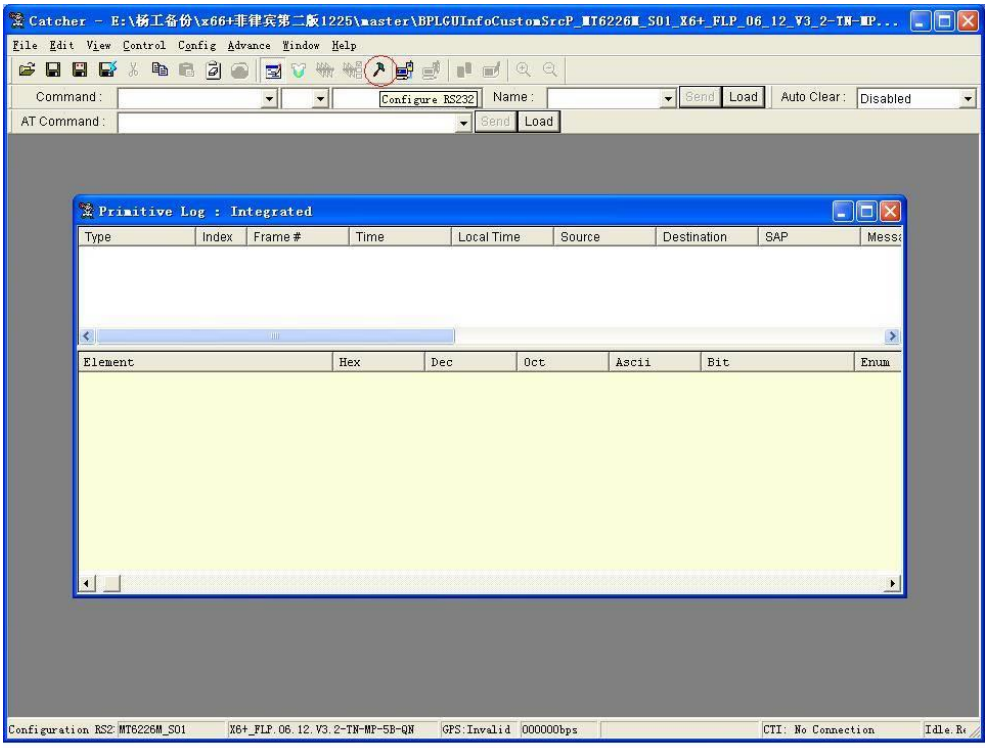


Figure 9

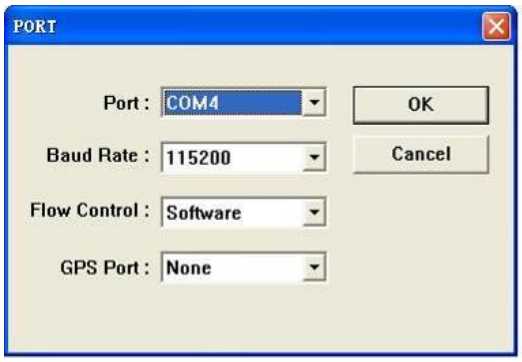


Figure 10

5 use the Catcher to record debug information

5.1 clink the button “connect” in figure 11, clink the button “Default Filter” in figure12, select “Field Trial” button in figure 13, and then clink “set” in Figure13.

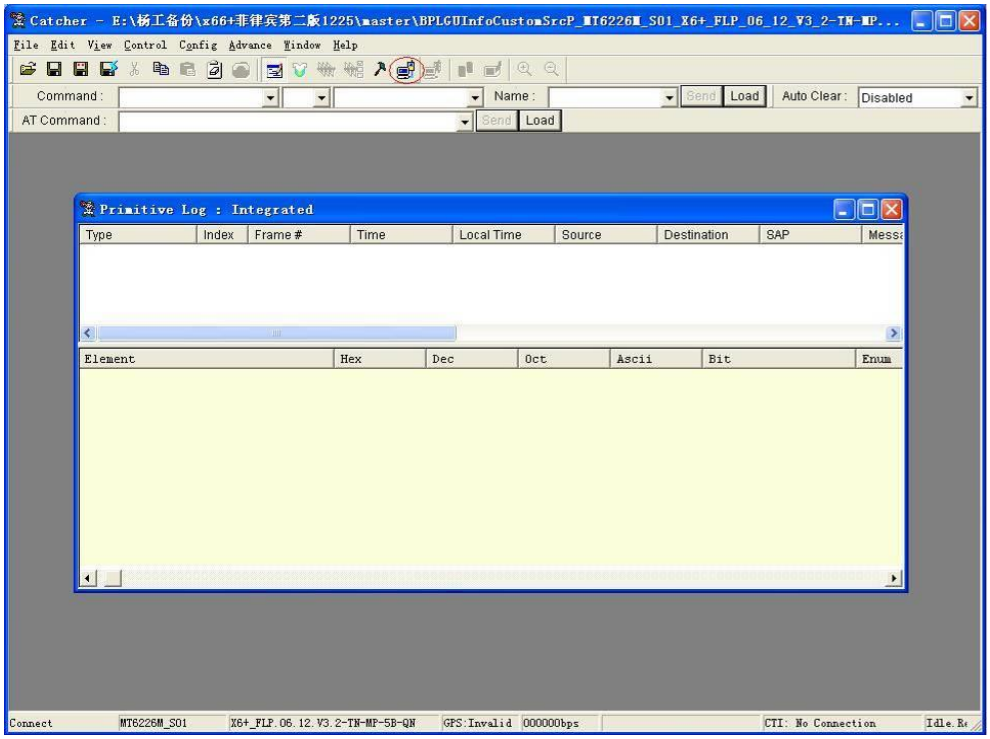


Figure 11

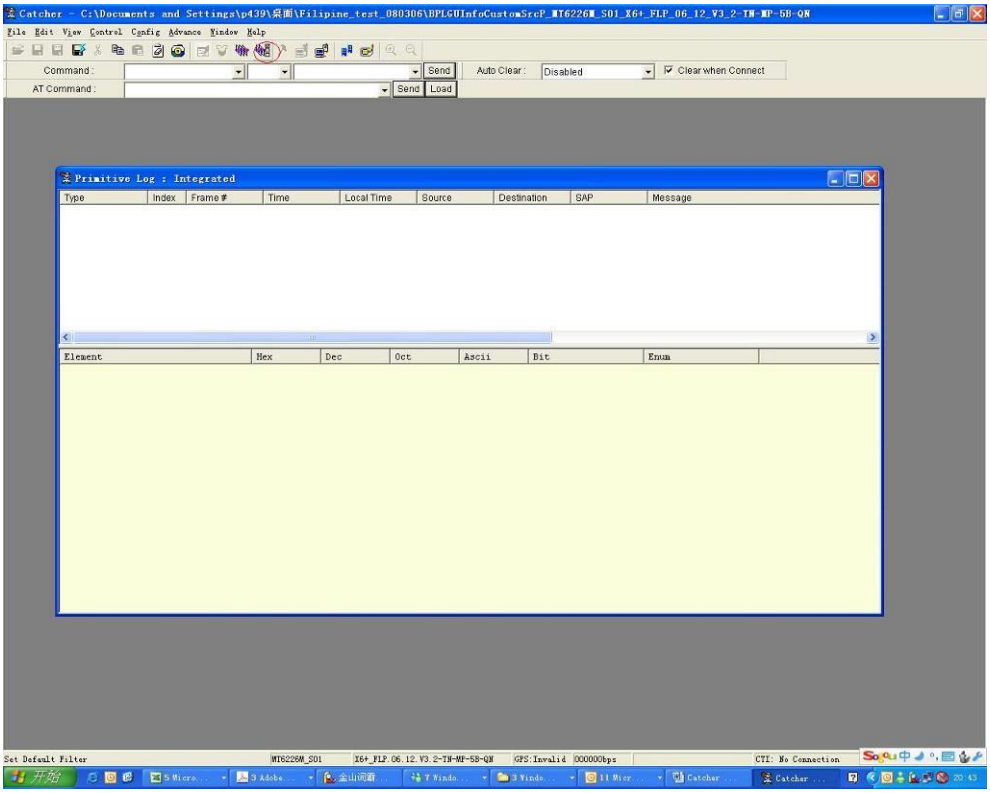


Figure 12

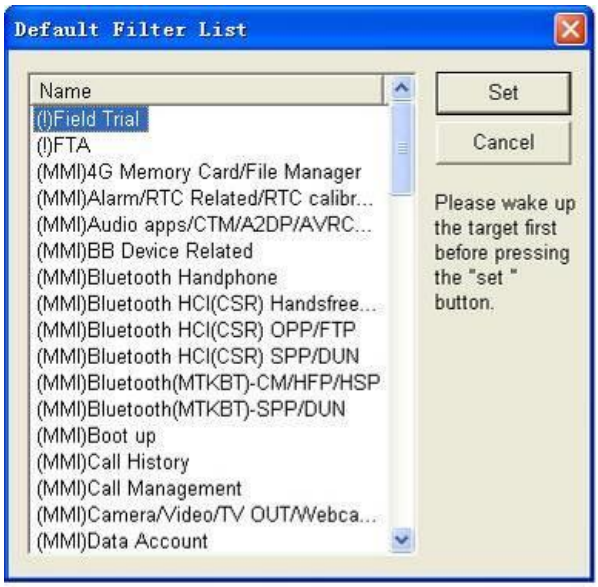


Figure 13

5.2 Clink “Filter” in figure 14, choose some items in figure 15, and then clink ok in figure 15. (Please query us if you need to choose the filter settings)

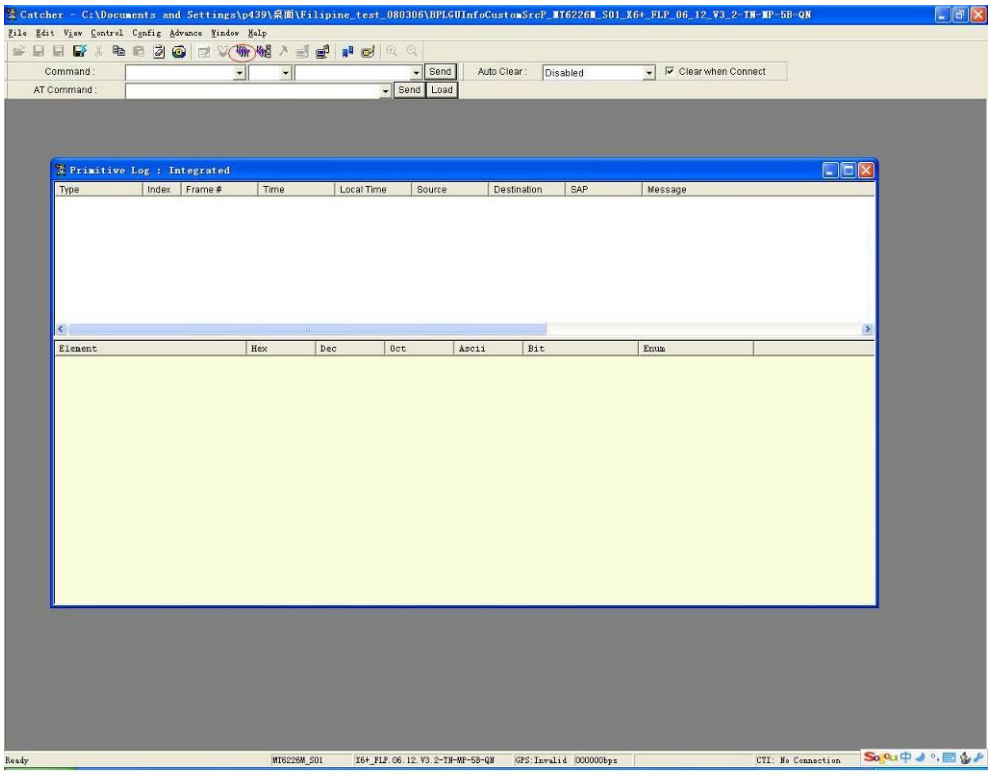


Figure 14

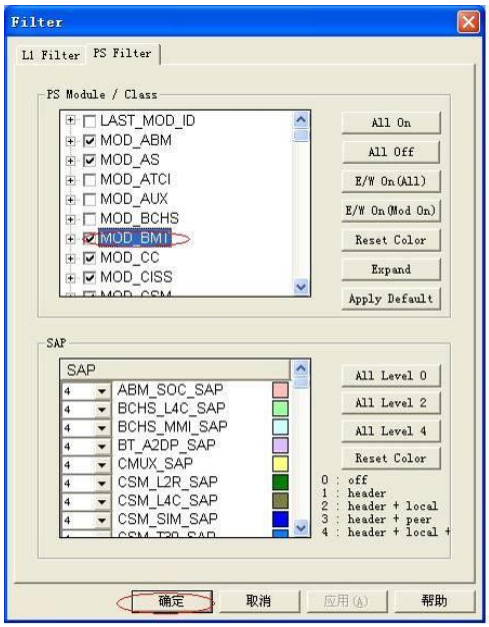


Figure 15

5.2 connect the upgrade cable to the phone and power on the phone. If the database in the phone is not exactly the same as the chose database in Catcher, figure 16 occurs (for example, different software versions and wrong cable connectors lead to the difference between the databases). You have to clink “EXIT” and make the databases the same.

Figure 16

5.3 The catcher records primitive information as showed in figure 17. Clink the button “clear” in figure 18 to clear the useful primitive information. Then the phone user carries on some operations to the phone to make the failures recur. After the wanted failures occur wholly, clink the button “disconnect” in figure 19. You can save the “.clg” file now as showed in figure 20, and name it. The “.clg” file is that needed for analyzing the failures of phone.

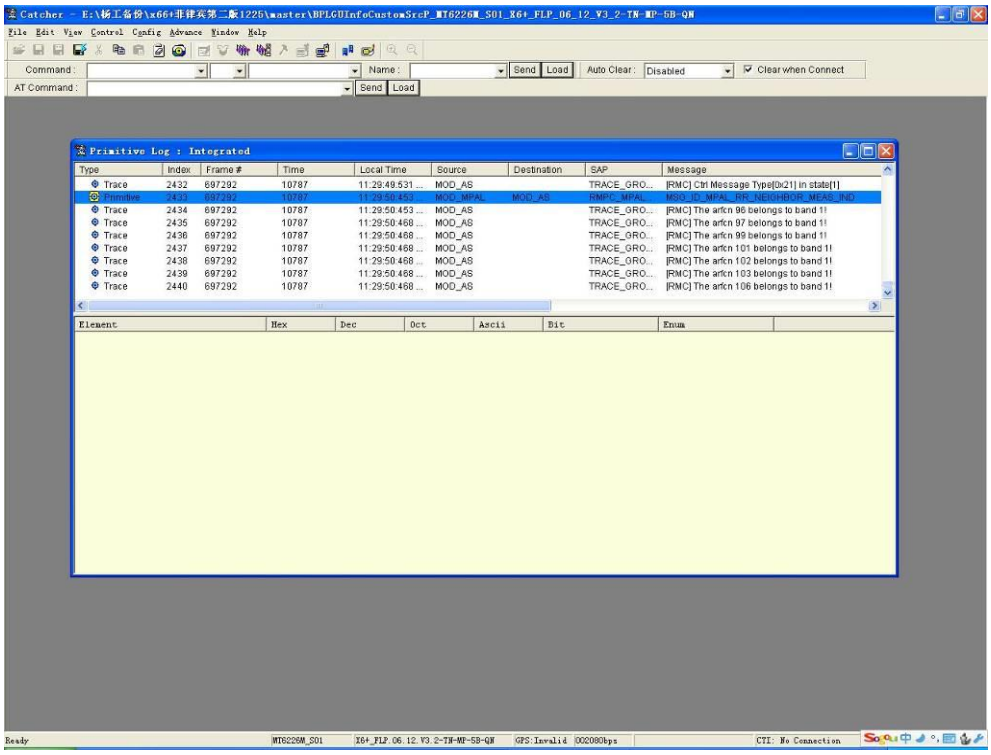


Figure 17

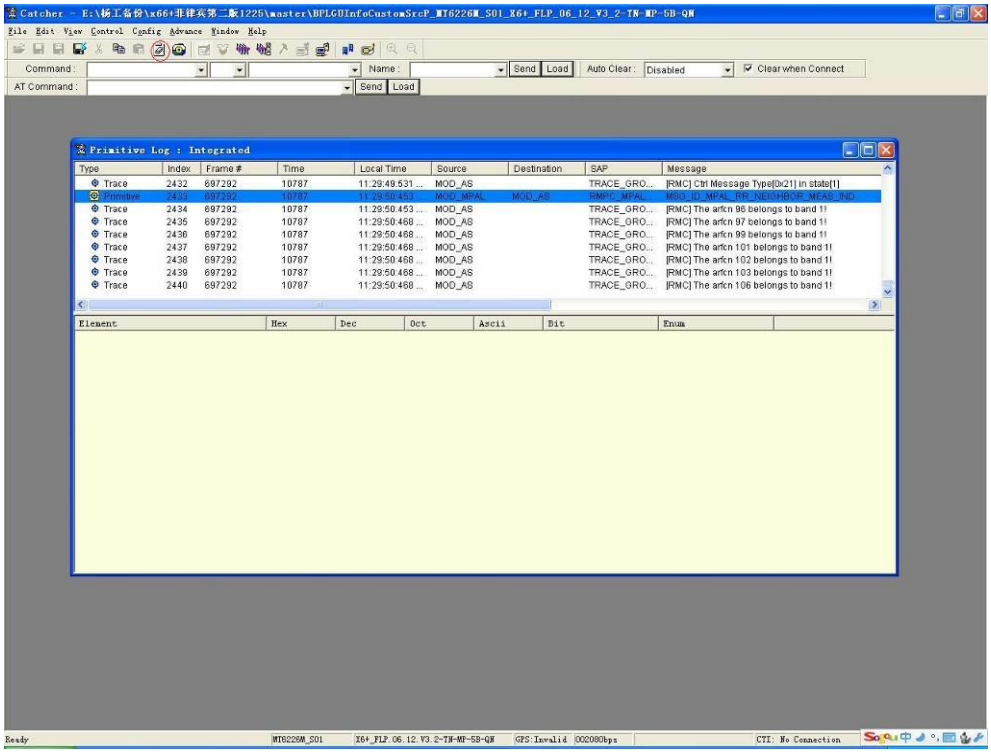


Figure 18

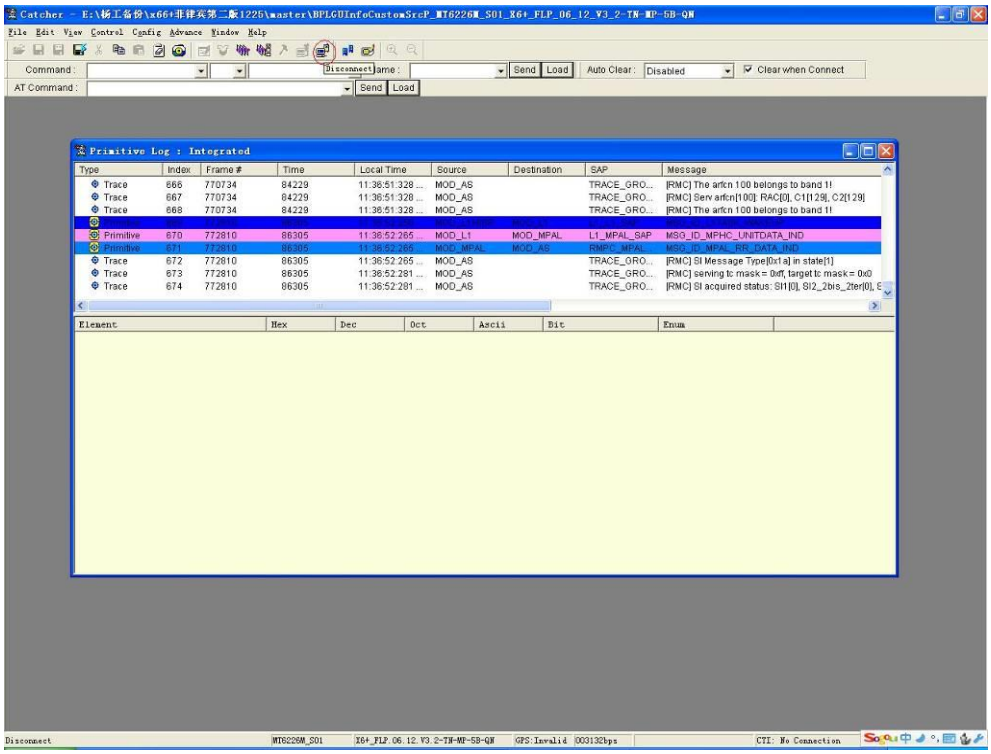


Figure 19

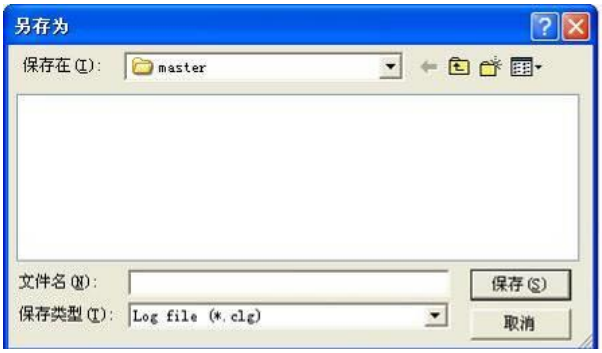


Figure 20