HW Repair Guide
GT-N5100 (Galaxy Note 8.0)

March, 2013

NOTICE

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Contents

1. Introduction of GALAXY Note 8

2. Service Guide
   - RF calibration
   - IMEI writing
   - Block Diagram

3. Repair Guide
   - Assembly & Disassembly
   - Electronic Components
   - SMD parts
   - Trouble Shooting

4. Q&A

Introduction of GALAXY Note 8.0

- Specification

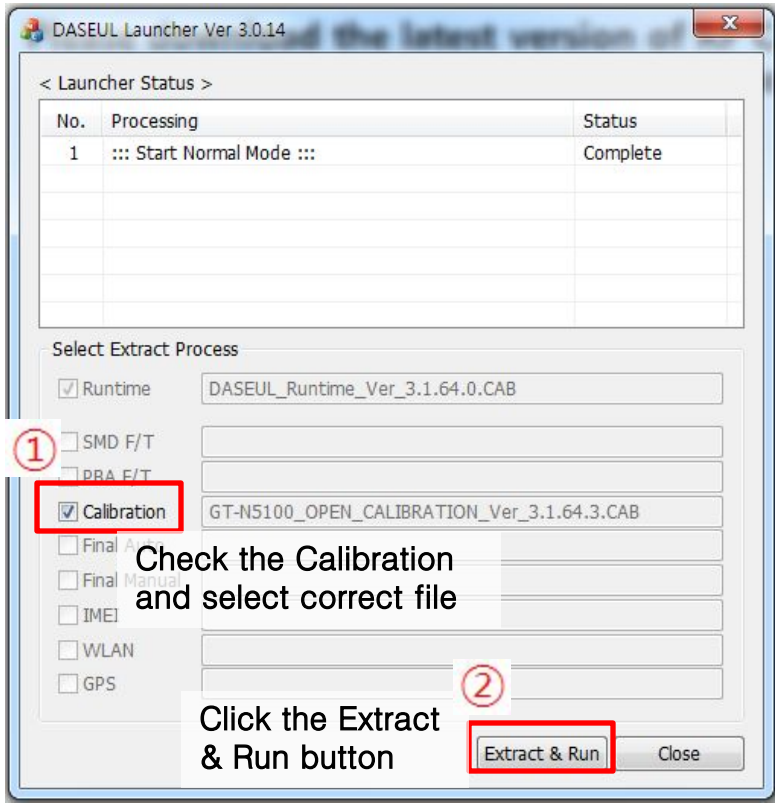
This model is the portable media Tablet device and it has 8 inches size. So, it expected to replace the diary and it has S-pen, S-planner, S-Note, etc.

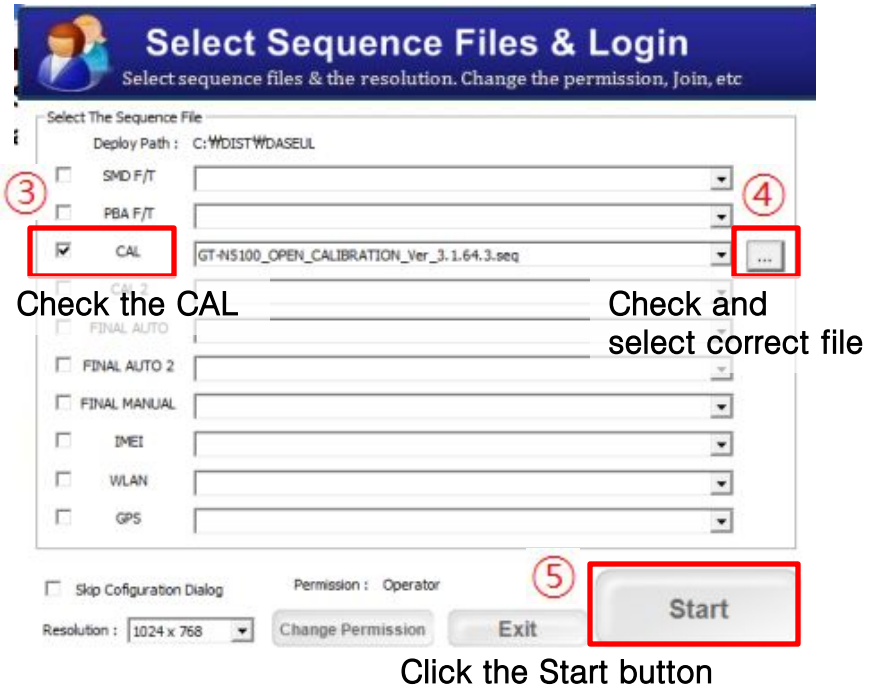
Item	spec.
AP	1.6GHz Quad Core(Exynos 4412)
OS	Android JB
CP	XMM6262(IMC), HSPA+ 21.1Mbps, HSUPA 5.76Mbps
Supported RF Bands	GSM Quad(850, 900, 1800, 1900), UMTS Quad(850, 900, 1800, 1900)
Internal Memory	16GB NAND + 2GB RAM
External Memory	**MicroSD (up to 64GB)**
Display	**8" TFT** (1280 x 800)
Camera	5MP CMOS + 1.3MP CMOS
Sensor	Accelerometer, Magnetic, Proximity, Light, Grip
Connectivity	BT 4.0, Wi-Fi a/b/g/n
GPS	A-GPS + GLONASS
Battery	4600mA

RF calibration(1/3)

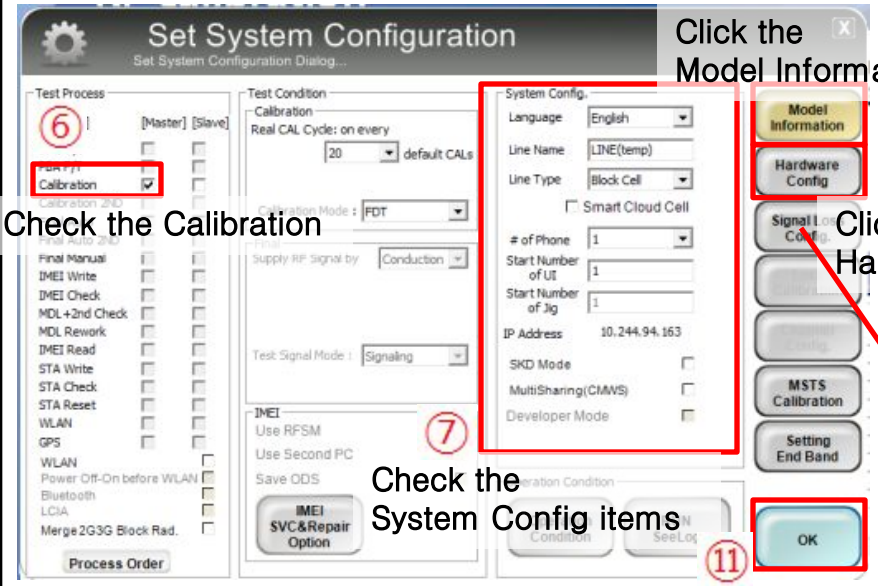
Please download the latest version of RF Calibration program on the PLM System. (Daseul Launcher, Runtime and Model File)

Run Calibration program





RF calibration(2/3)

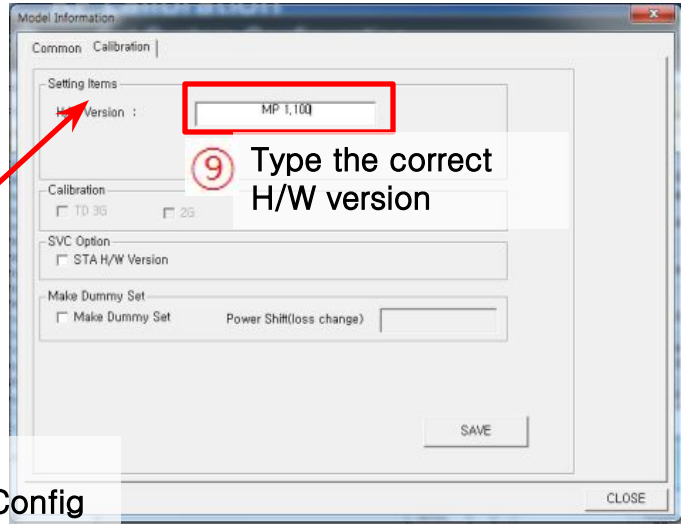


Check the Calibration

Click the Model Information

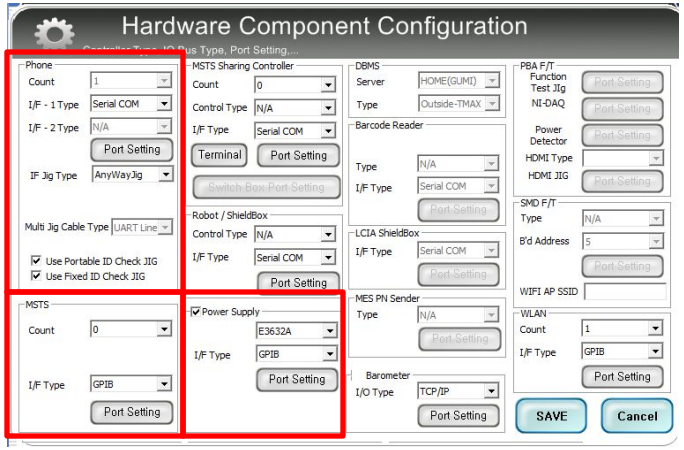
Check the System Config items

Click the OK button



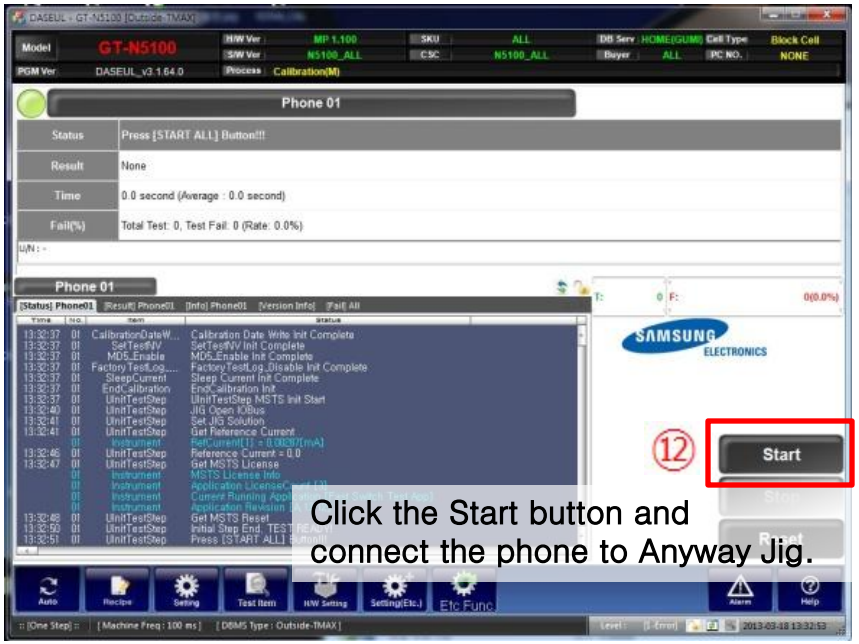
Type the correct H/W version

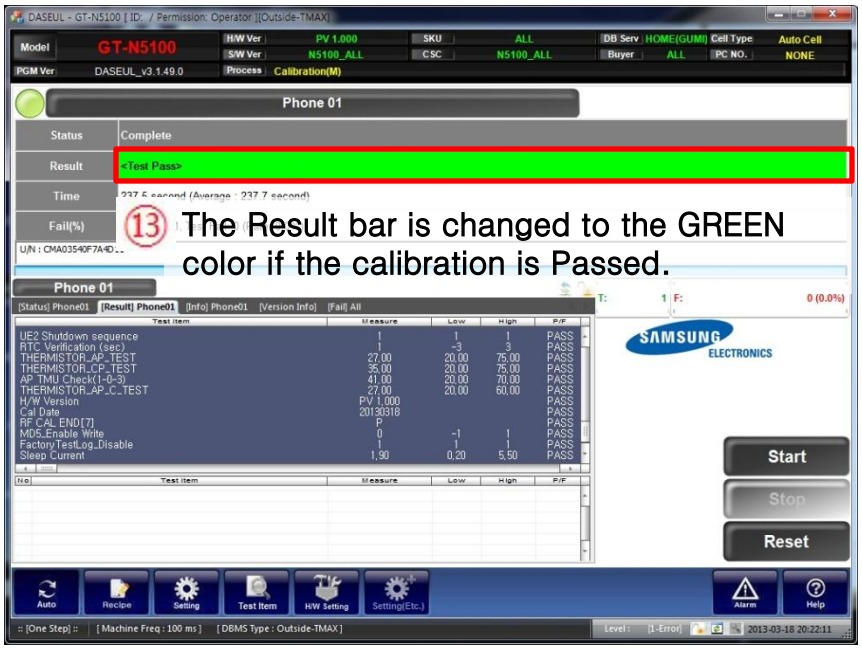
Click the Hardware Config



Check the connection port of Phone, MSTS and Power Supply

RF calibration(3/3)

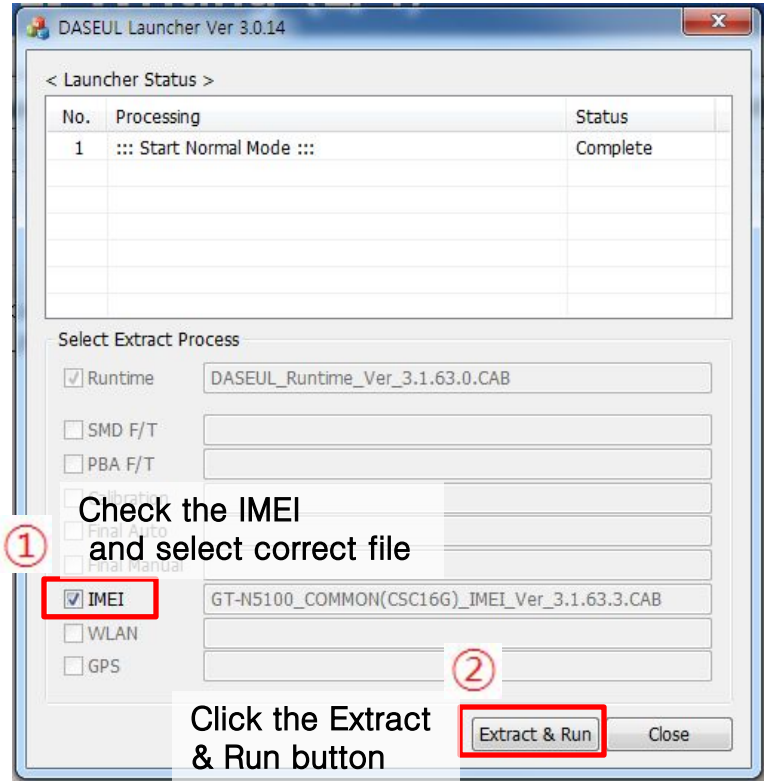


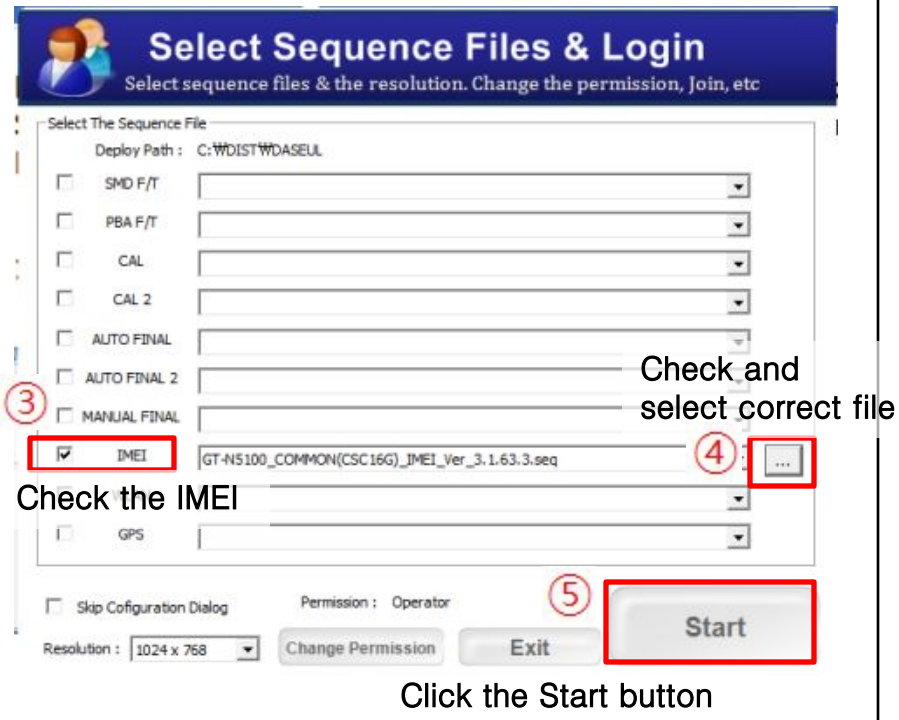


IMEI Writing (1/3)

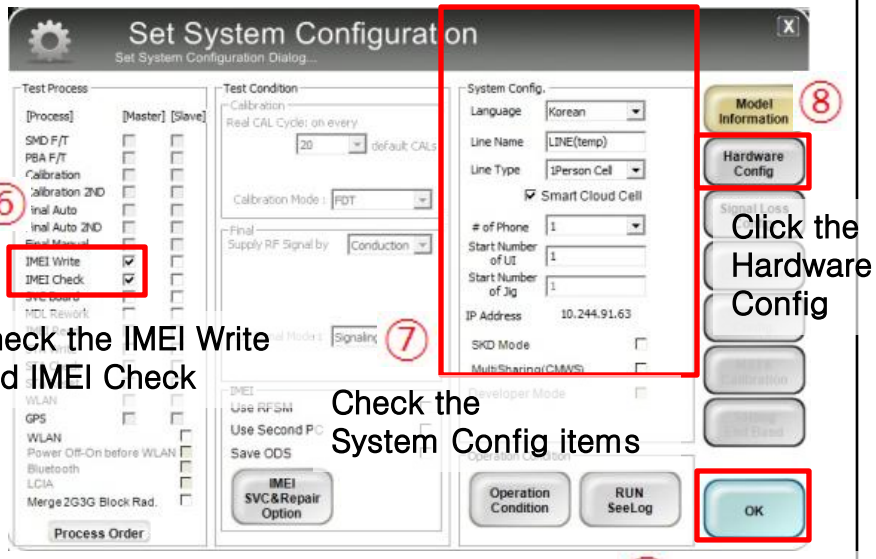
Please download the latest version of RF Calibration program on the PLM System. (Daseul Launcher, Runtime and Model File)

Run Daseul program for IMEI writing.





IMEI Writing (2/3)

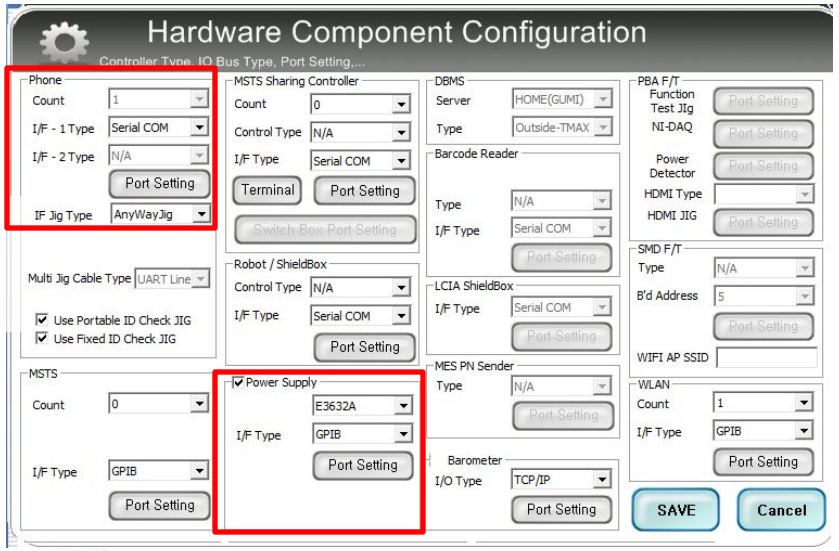


Check the IMEI Write and IMEI Check

Check the System Config items

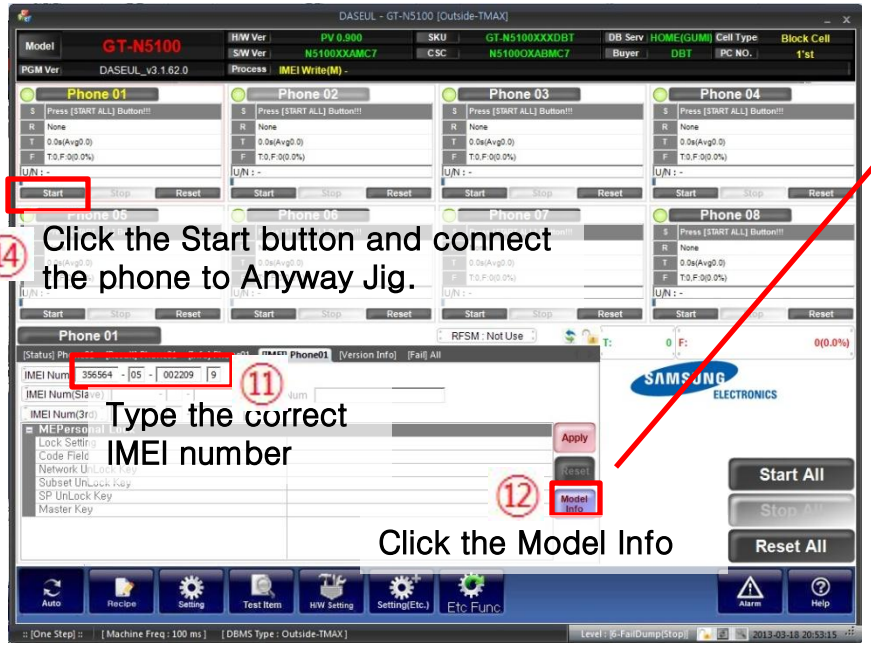
Click the Hardware Config

⑩ Check the OK button



⑨ Check the connection port of Phone and Power Supply

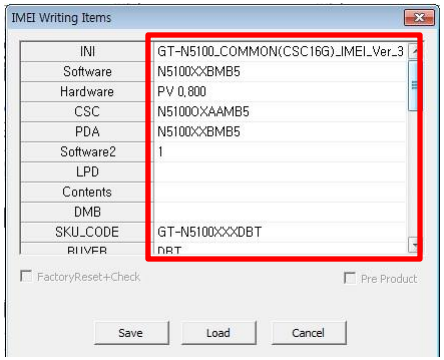
IMEI Writing (3/3)



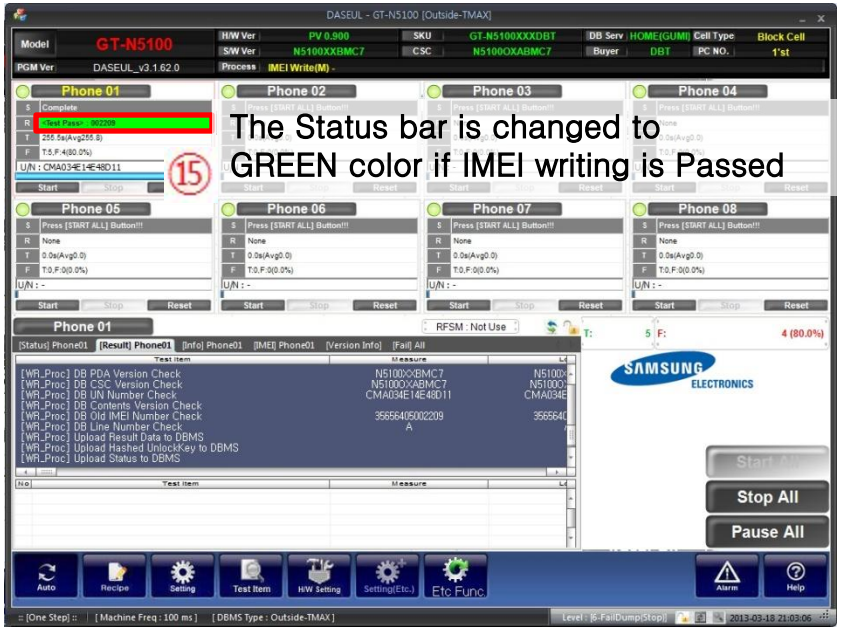
14 Click the Start button and connect the phone to Anyway Jig.

11 Type the correct IMEI number

12 Click the Model Info

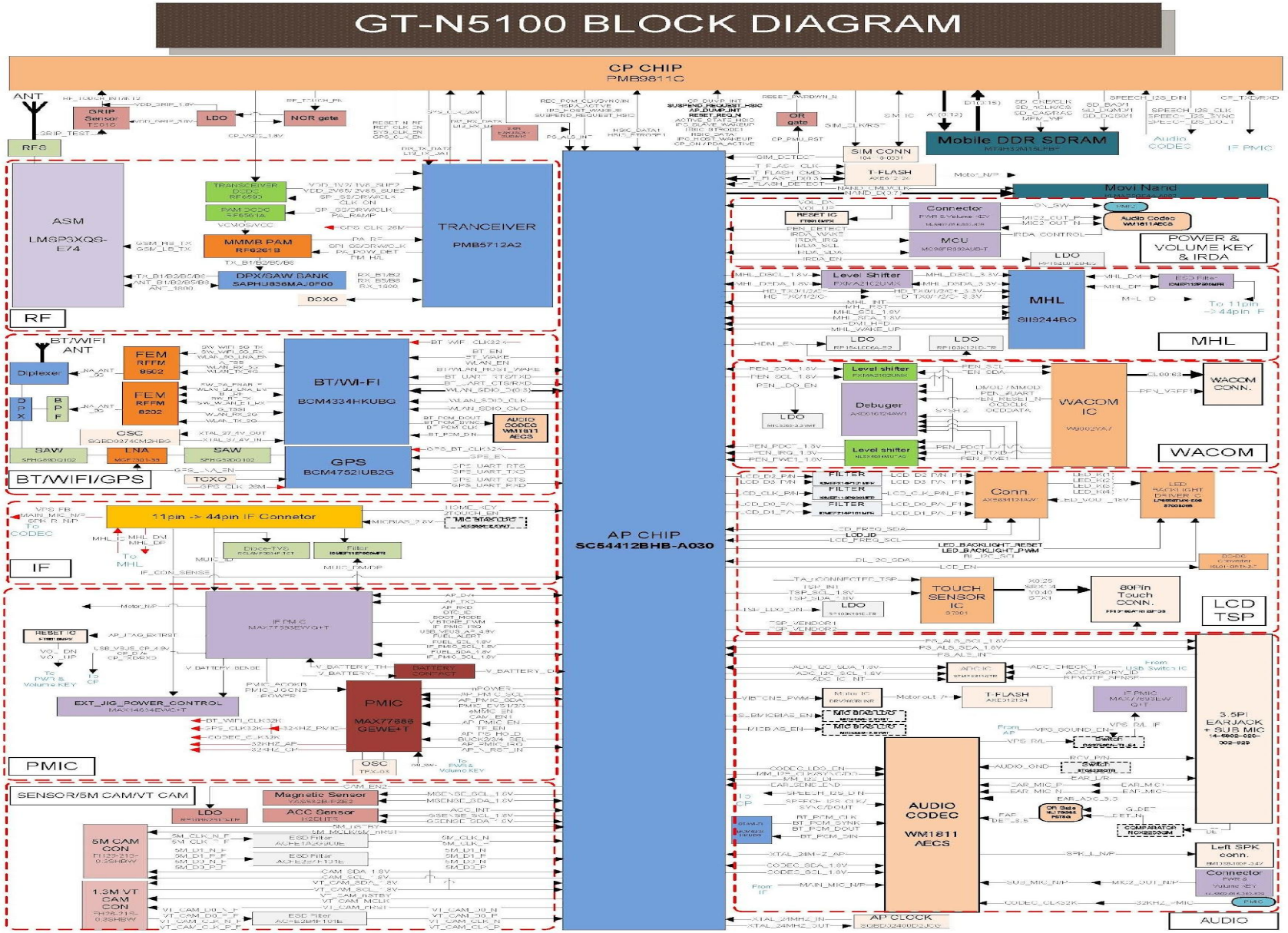


13 Type the correct Software, Hardware, CSC, PDA and SKU_CODE etc.

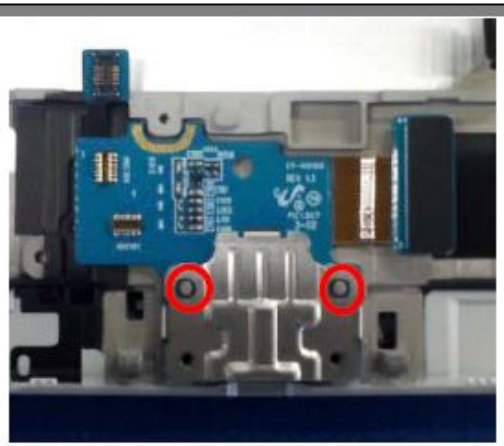
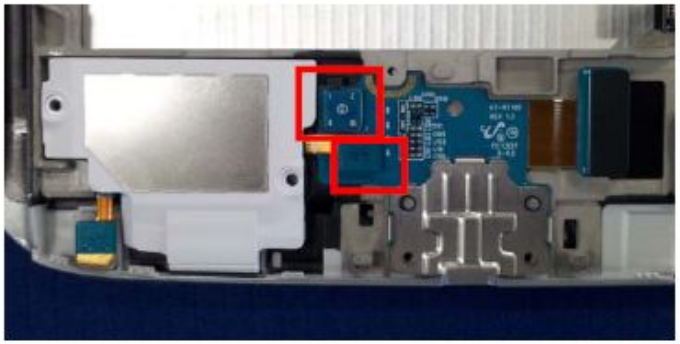
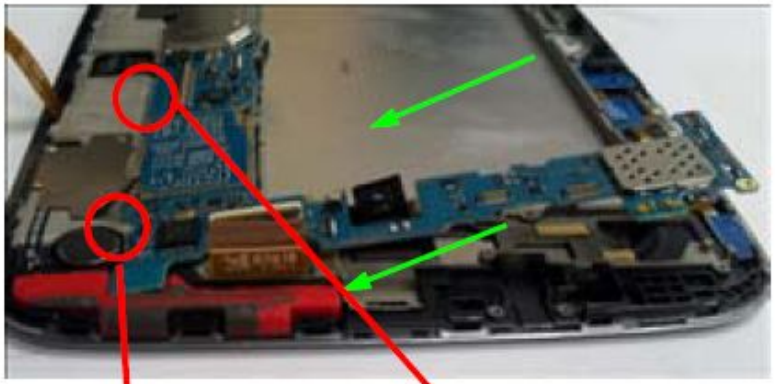
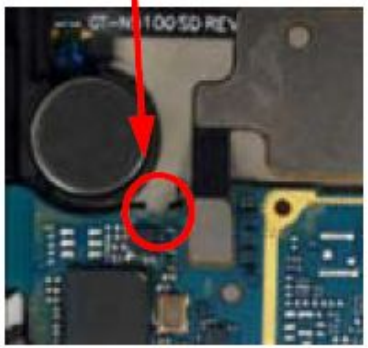
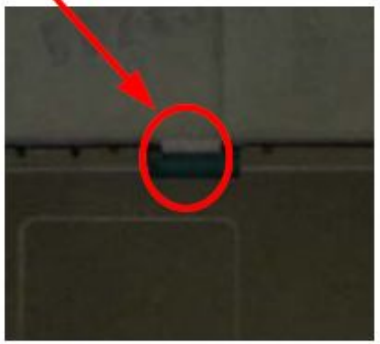


15 The Status bar is changed to GREEN color if IMEI writing is Passed

Block Diagram



<Assembly>

1 Assemble IF PCB/SPK on FRONT.	2 Assemble PBA
 	  
1) Assemble IF PCB and SPK on Front.	1) Assemble PBA on Front Ass'y 2) Check Front hook.

Assembly & Disassembly Instruction

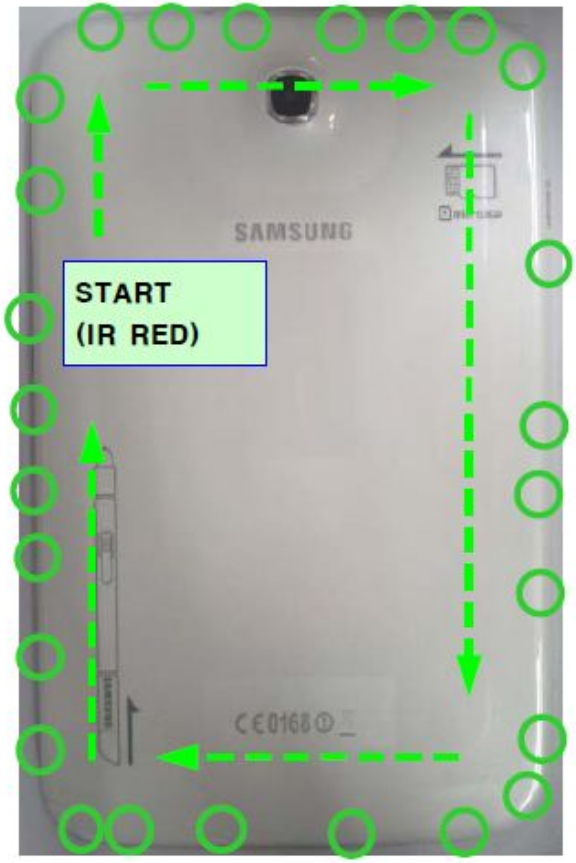
3	Assemble connector

.1) Be careful not to scratch FPCB

4	Assemble SCREW

1) ◯ : 1.4 * 2.5 (Silver, 6001-002051) 13 point
◯ : 1.4 * 4.0(Black, 6001-001479) 4 point
2) Drive Screws with torque 1.2 ± 0.1 Kgf/㎠

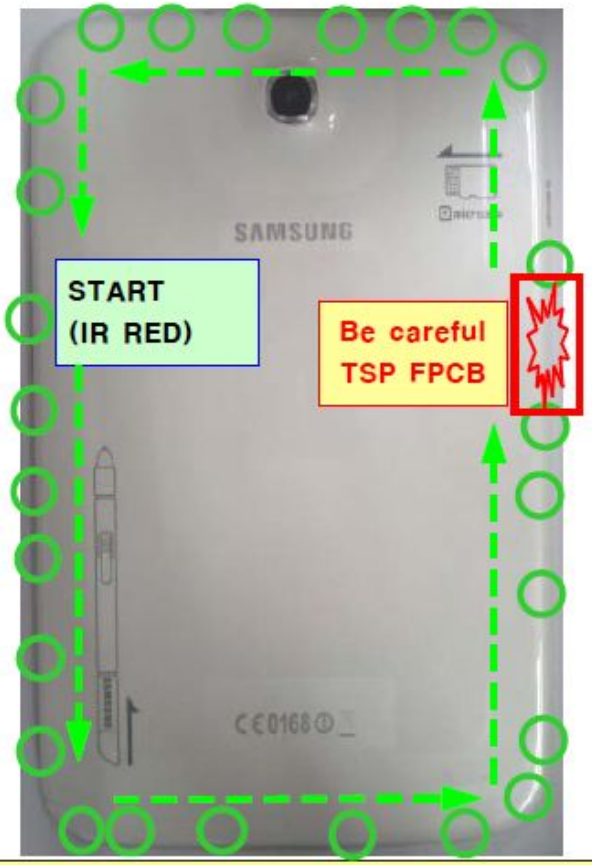
5	Assemble REAR

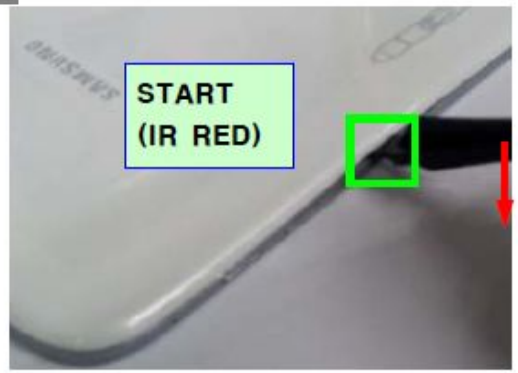


1) Assemble REAR hook

<Disassembly>

1 Disjoint Hook at REAR // Disassemble REAR





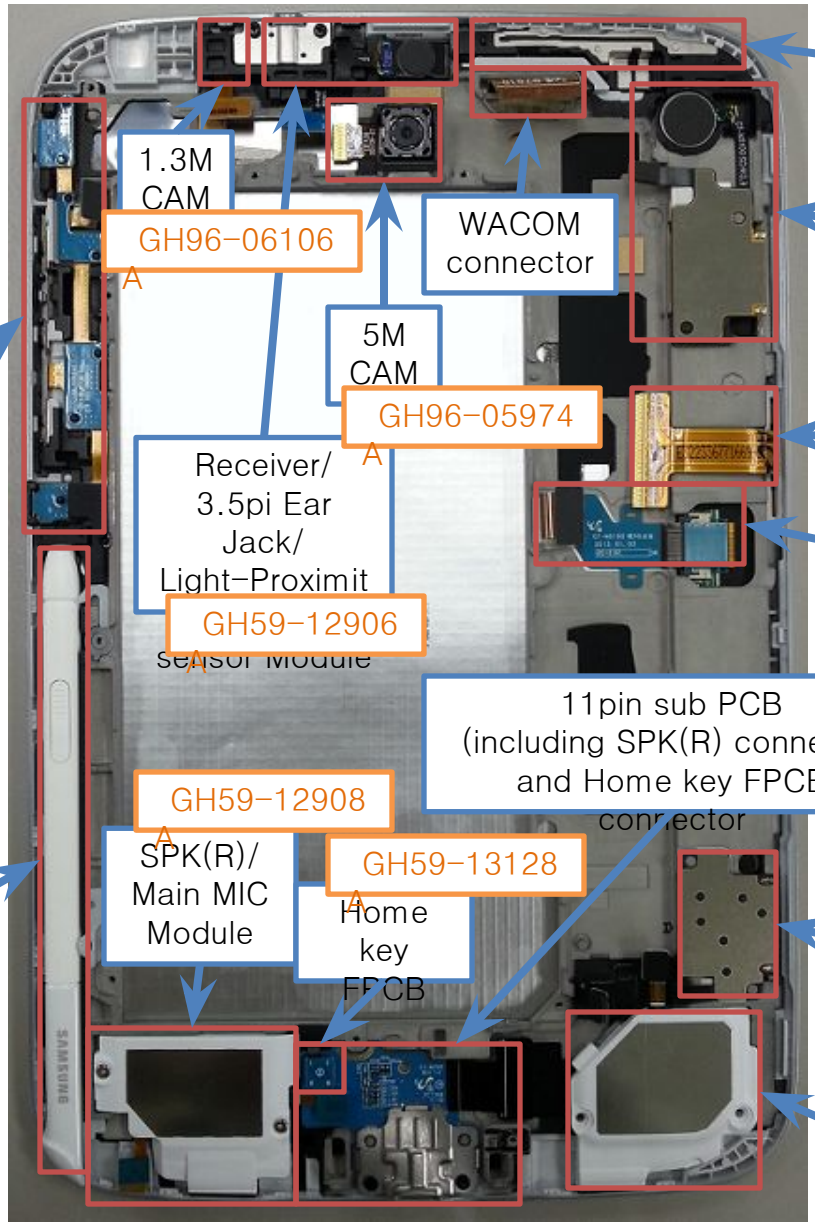
1) Be careful not to make scratch and molding damage!	1) Use flat point of disassembly jig

2	Disassemble SCREW	3	Disassemble FPCB
			
1) Disassemble SCREW(17point) 2) Detach Battery connector		1) Hold up Main PBA from bottom. 2) Be careful not to scratch FPCB	

4	Disassemble SPK(L),(R), IF PCB	5	Disassemble PBA
			
		1) Hold up Main PBA from FRONT. 2) Be careful not to scratch FPCB	

Electronic Components

BT/WIFI/GPS Antenna (on the rear
GH42-03977
A



1.3M CAM
GH96-06106
A

WACOM connector

5M CAM
GH96-05974
A

Receiver/ 3.5pi Ear Jack/ Light-Proximit
GH59-12906
A

Sub MIC/ Power-volume key/ IrDA Module
GH59-12911
A

11pin sub PCB (including SPK(R) connector and Home key FPCB connector
GH59-12910
A

GH59-12908
A

SPK(R)/ Main MIC Module

GH59-13128
A

Home key FPCB

S-Pen
GH98-25480
A

Main Antenna
GH42-03975
A

SD card socket/ Motor
GH59-13124
A

TSP connector

LCD
GH59-12919
A

SIM card socket
GH59-13117
A

SPK(L) Module
GH59-12907
A

SMD parts (TOP side)

Ant100, Ant101
3712-001375
Ant. Contact (for GSM, WCDMA)

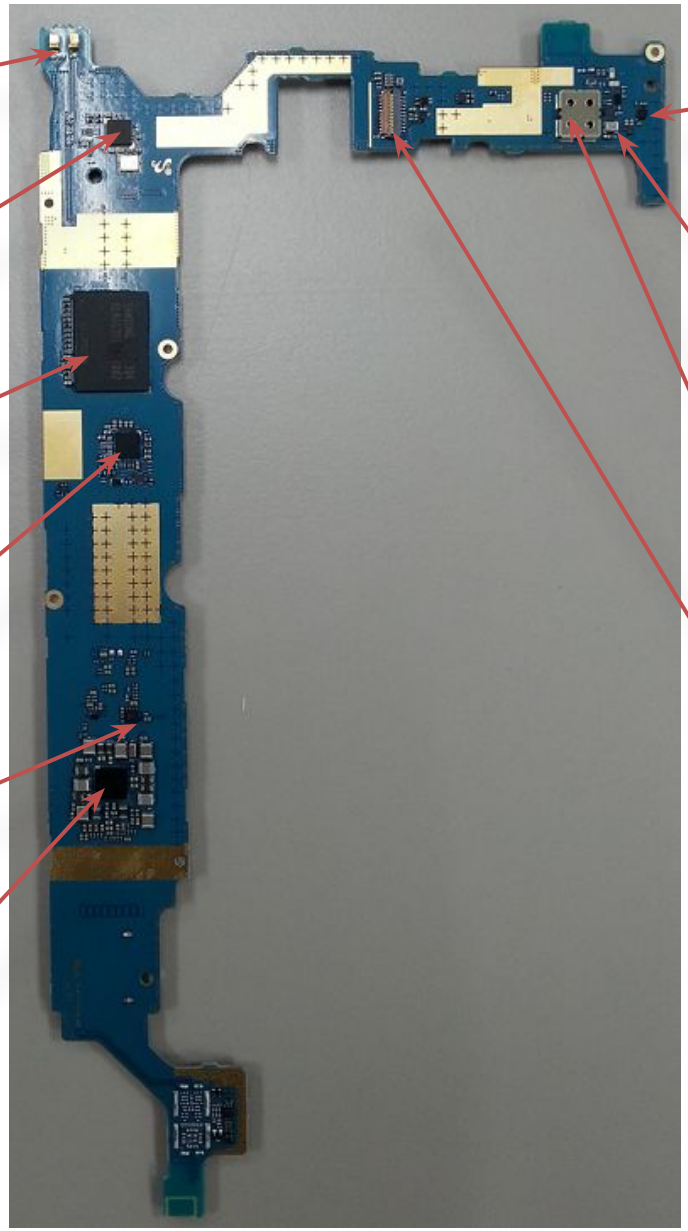
U1001 1204-003387
IrDA IC

UME600 1107-002190
MoviNAND

UCD400 1205-004510
Audio CODEC

U702 1203-006346
Reset IC

U701 1203-007657
PMIC



U900 1209-002142
Magnetic Sensor

OSC200 2805-001098
Oscillator - 26MHz

U201 1205-004649
GPS IC (inside of shield-can)

HDC900 3708-002222
Connector (5M Camera)

SMD parts (Bottom side)

Ant202, Ant203 3712-001375
Ant. Contact (for BT, WIFI, GPS)

U203 1205-004598
Bluetooth & WIFI IC
(inside of shield-can)

HDC1000 3711-006923
Connector(Power & Vol & IrDA)

HDC901 3711-006925
Connector (1.3M Camera)

HDC402 3711-007188
Connector (Receiver & Ear Jack & Light-Proximity sensor)

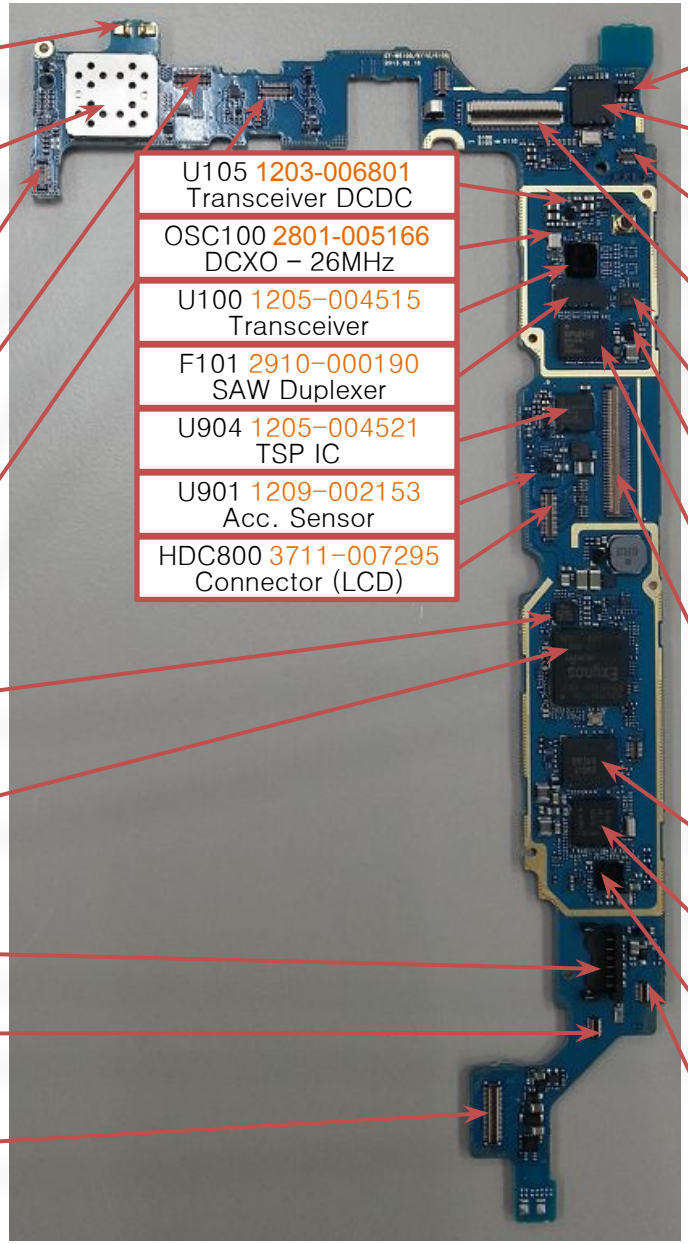
C1013 1205-004233
MHL IC

UCP600 0902-002996
Application Processor

BTC700 3711-008421
Connector (Battery)

HDC300 3711-008347
Connector (SIM)

IFC500 3711-006843
Connector (11pin sub PCB)



U106 1209-002006
Grip Sensor IC

U1008 1205-004674
WACOM IC

HDC500 3711-007173
Connector (SD card & Motor)

SLC1000 3708-003131
Connector (WACOM)

F100 2911-000236
Antenna Switch Module

U104 1203-007333
PAM DCDC

PAM100 1201-003400
Power Amplifier Module

SLC900 3708-002781
Connector (TSP)

UME300 1105-002212
Mobile DDR SDRAM

UCP300 1205-004511
Call Processor

U705 1203-007321
IF PMIC

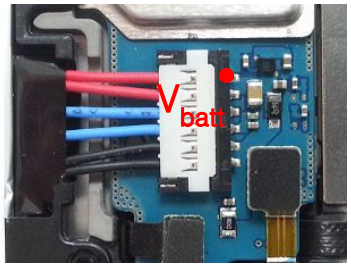
HDC400 3711-008347
Connector (SPK-L)

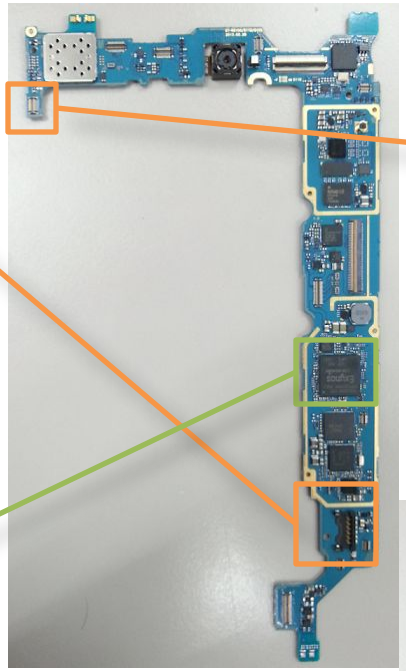
Power problem

Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the battery voltage.	Less than 3.4V	Battery
		More than 3.4V	Go to the next step
3	Check the power-key FPCB.	Abnormal(open, tear, etc)	Power-key FPCB
		Normal	Go to the next step
4	Power on the device and check the power-on sound or motor vibration.	Abnormal	Front Ass'y
		Normal	Go to the next step
5	Check the voltage of the following chips (C755, C754, C727, C736, AP_PS_HOLD(TP))	C755>1.35V, C754>2.0V, C727>1.0V, C736>1,95V AP_PS_HOLD(TP) > 1.8V	Go to the next step
		If not the correct value	PMIC (U701)
6	Check the frequency of OSC700(C705)	32KHz	Main chip (UCP600)
		If not the correct value	TCXO (OSC700)

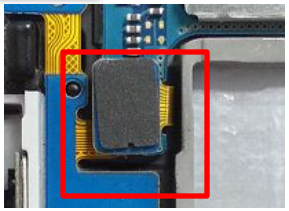
Power problem

Step2



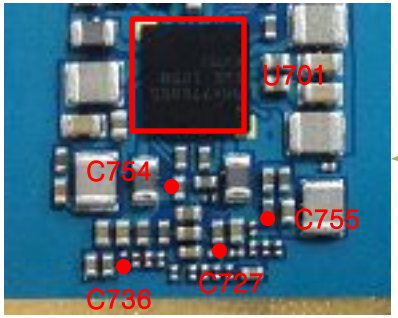


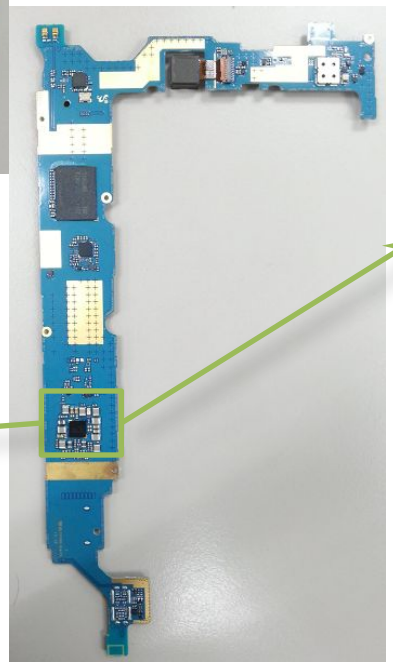
Step3



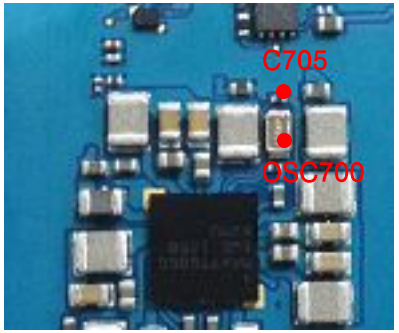
Check the power-key FPCB

Step5





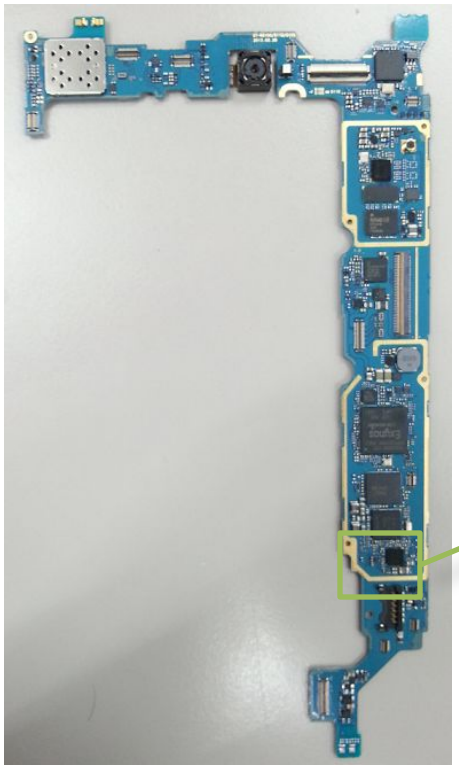
Step6

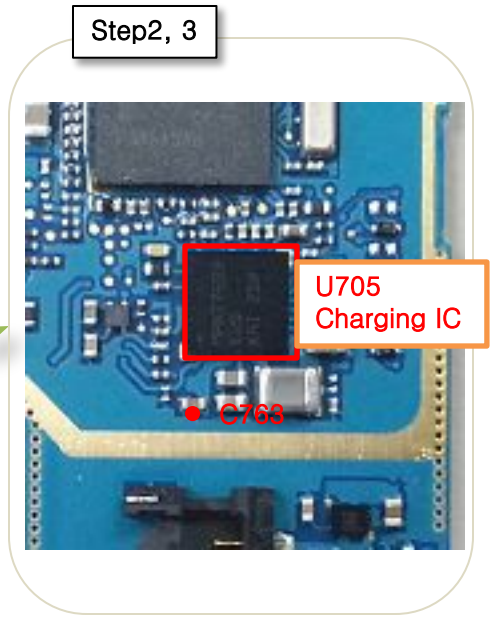


Charging

Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the voltage of V_BUS(C763).	C763 = 5V	Go to the next step
		If not the correct value	Connection status of TA or USB.
3	Check the charging operating of battery.	Abnormal	Charging IC(U705)
		Normal	-

Charging



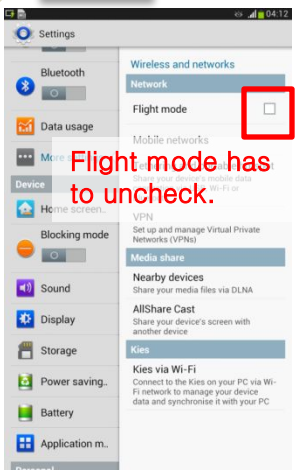


RF(GSM/WCDMA)

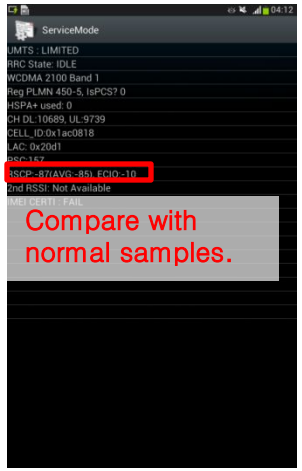
Step	Check point	Result value	Defect point
1	Confirm the defect symptom (Make a call, check the debug screen *#0011#)	-	-
2	Check the settings (airplane mode, Mobile networks)	Abnormal	Settings
		Normal	Go to the next step
3	Check the status of main ANT and Antenna clip	Broken, dust, corrosion No insert	Main ant, Antenna Clip
		Normal	Go to the next step
4	Check the status(crack, missing, Corrosion..etc) of RF components. F100(Antenna Switch Module) F101(SAW Duplexer) PAM100(Power Amplifier Module) ANT100, ANT101(Antenna contact clip) U100(Transceiver) OSC100(DCXO)	Abnormal status (compared with a good PBA)	RF components.
		Normal status (compared with a good PBA)	CP(Call Processor) (UCP300)

RF(GSM/WCDMA)

Step2

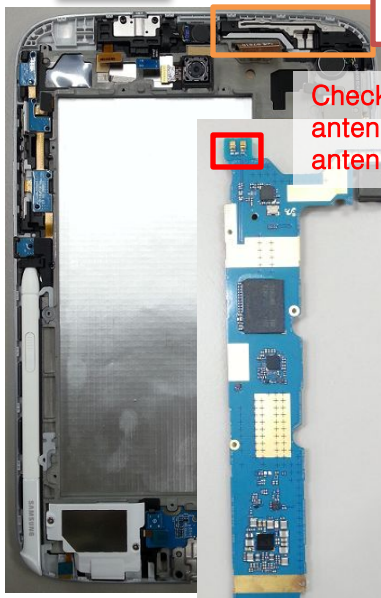


Flight mode has to uncheck.



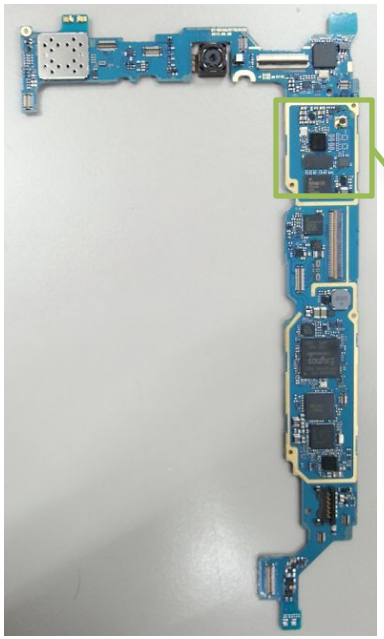
Compare with normal samples.

Step3

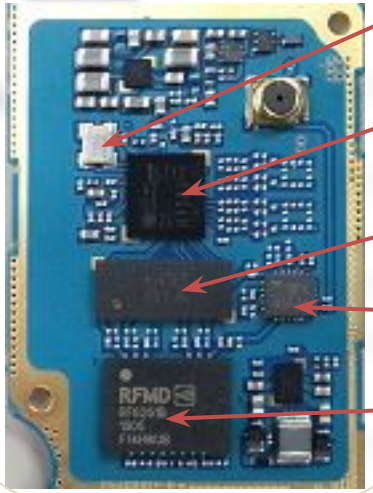


Main Antenna

Check the main antenna and antenna clip



Step4



OSC100
DCXO – 26MHz

U100
Transceiver

F101
SAW Duplexer

F100 ASM

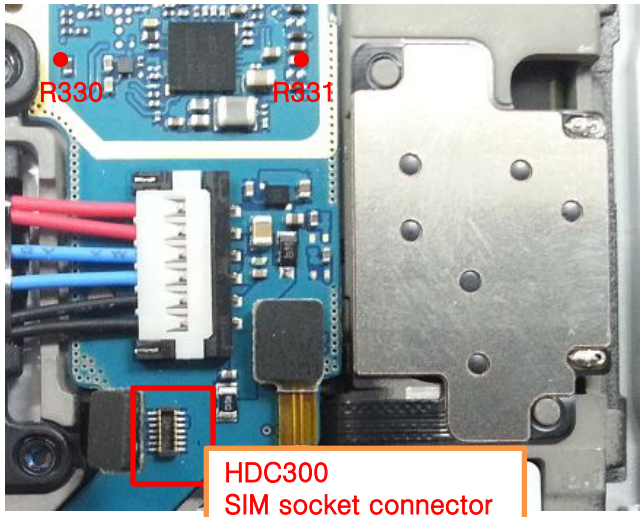
PAM100
PAM

SIM card detection problem

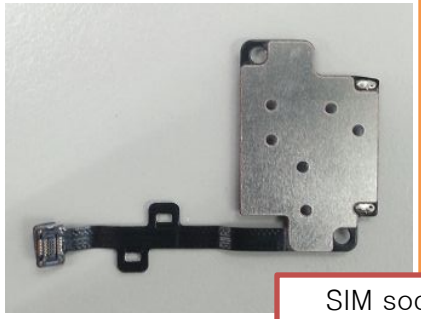
Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the SIM socket & Connector(HDC300)	Broken, dust, corrosion	SIM socket or Connector
		Normal	Go to the next step
3	Check the voltage of detection pin (R330) Notice. It should be measured when the phone is started	R330 = 1.8V	Go to the next step
		If not the correct value	SIM Card
4	Check the voltage of SIM (R331) Notice. It should be measured when the phone started	R331 = 3V	PBA
		If not the correct value	CP(UCP300)

SIM card detection problem

Step2, 3, 4



HDC300
SIM socket connector



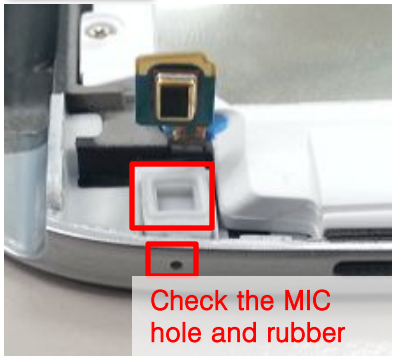
SIM socket

Microphone Problem

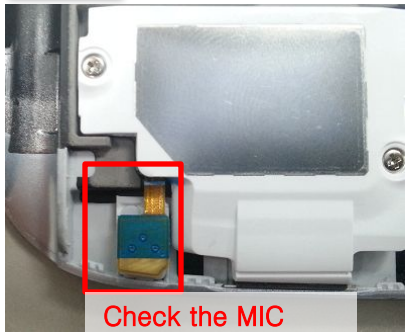
Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the microphone hole	Dust	Clean the hole
		Normal	Go to the next step
3	Check the microphone rubber	Wrong insert	Re-insert
		Normal	Go to the next step
4	Check the MIC FPCB status	Abnormal	Speaker(R)-MIC module
		Normal	Go to the next step
5	Check the voltage of C413 Notice. It should be measured when the microphone path is activated on	2.8V	Go to the next step
		If not the correct value	MIC LDO(U401)
6	Check the signal of C418, C419 Notice. It should be measured when the microphone path is activated on	Same signal compared with a good PBA	Microphone
		If not the correct value	AUDIO CODEC(UCD400)

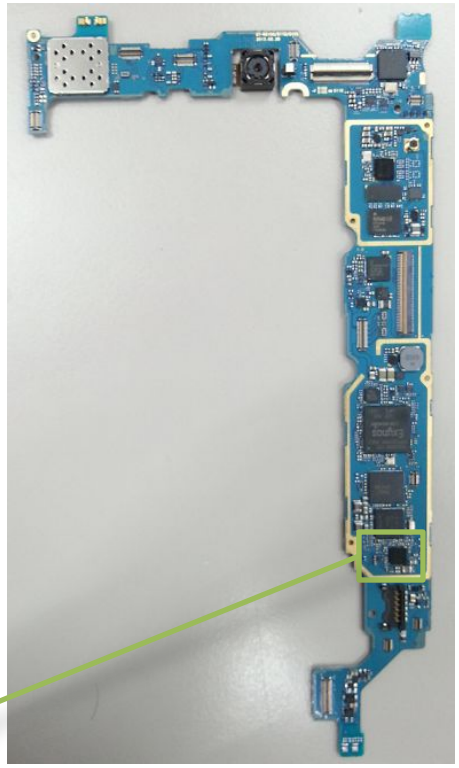
Microphone Problem

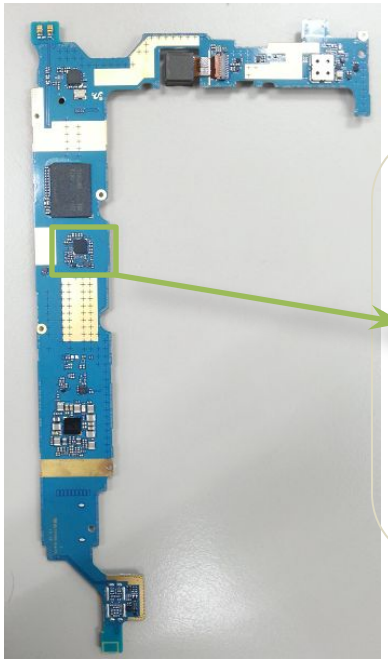
Step2, 3



Step4

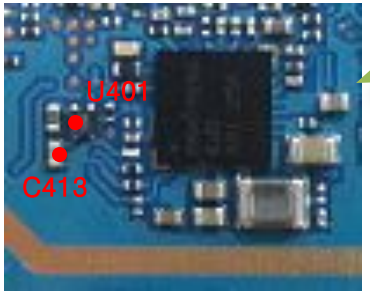






Step6

Step5

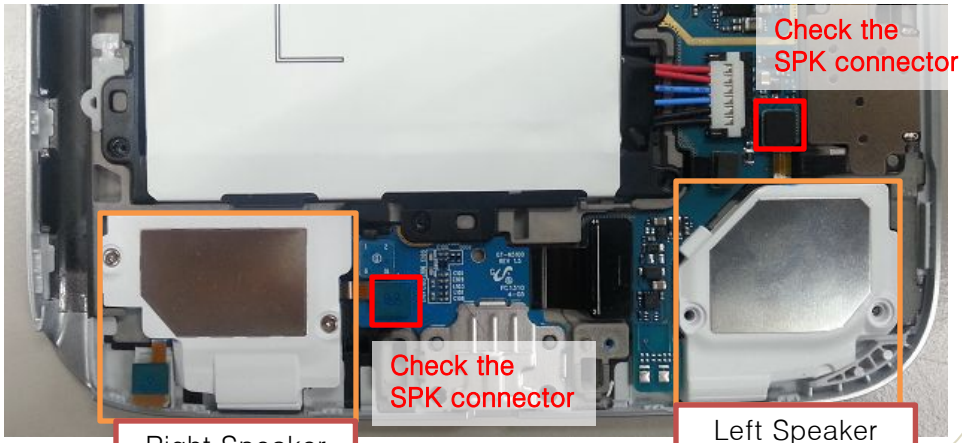


Speaker Problem

Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Make a factory reset (*2767*3855#)	Solved	Setting error
		Not solved	Go to the next step
3	Check the speaker connector (HDC400(L) in Main PCB, HDC101(R) in Sub PCB)	Broken, dust, corrosion	Speaker connector
		Normal	Go to the next step
4	Replace the speaker module	Solved	speaker
		Not solved	Go to the next step
5	Check the signals on L406, L407 of Left Speaker in main PCB, C105, C106 of Right Speaker in Sub PCB. Notice. It should be measured when the speaker path is activated on	Same signal compared with a good PBA	Speaker
		If not the correct value	Audio Codec (UCD400)

Speaker Problem

Step3



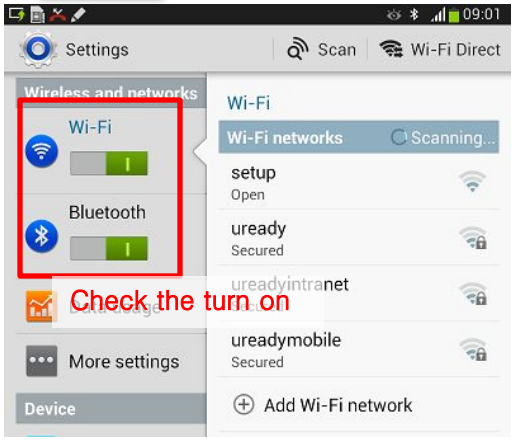
Step5

BT/WIFI Problem

Step	Check point	Result value	Defect point
1	Confirm the defect symptom (Check the turned on BT/WIFI & connected device)	Turned on	Go to the next step
		Turned off	Turn on
2	Check the BT/WIFI Ant. & Ant contact. (Rear cover Ant. & ANT202, ANT203)	Broken, dust, corrosion	BT/WIFI Ant & ANT202, ANT203
		Normal	Go to the next step
3	Check the voltage of C233 Notice. It should be measured when the BT/WIFI path is activated on	C233 = 1.8V	Go to the next step
		If not the correct value	PMIC (U701)
4	Check the clock of C250, C251 Notice. It should be measured when the BT/WIFI path is activated on	C250, C251 = 37Mhz (Same signal compared with a good PBA)	BT/WIFI IC (U203)
		If not the correct value	OSC201

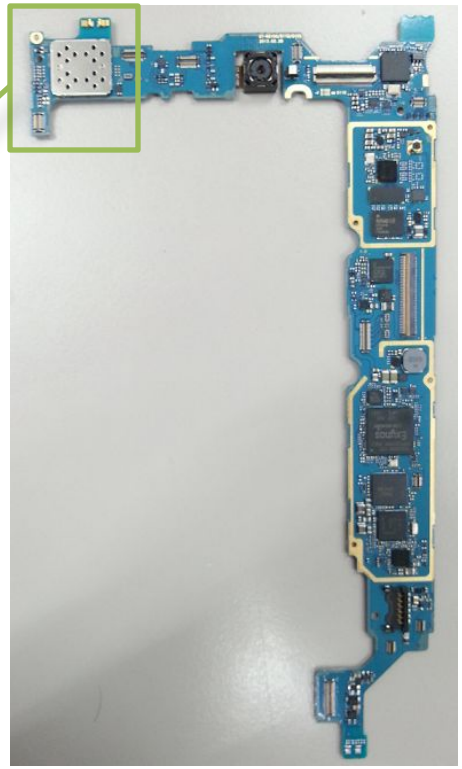
BT/WIFI Problem

Step1

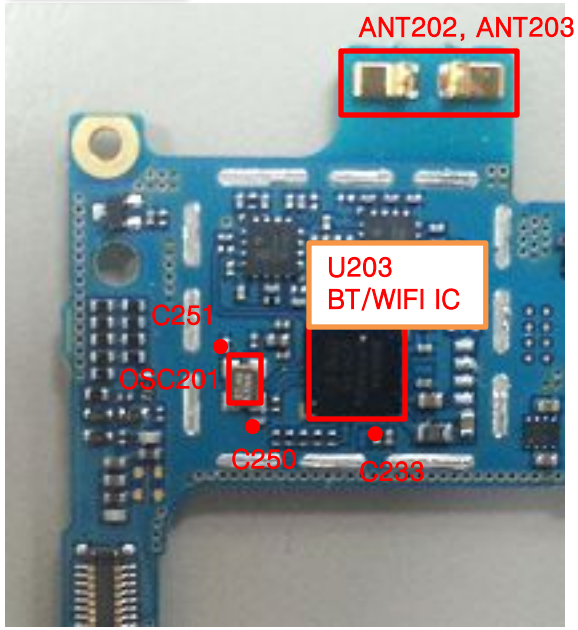


Step2

You can check the this layout
if open the shied cover



Step2, 3, 4

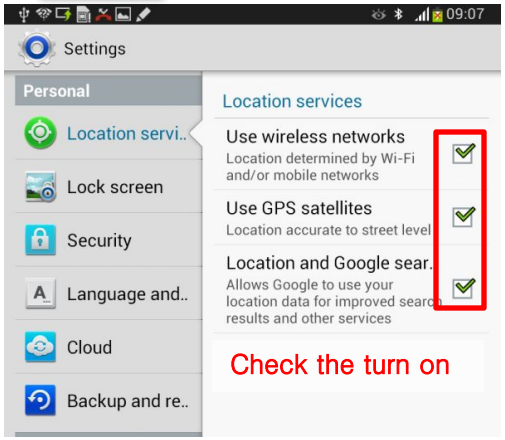


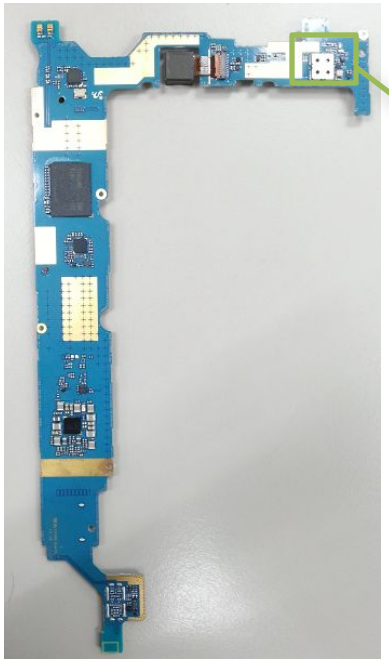
GPS/GLONASS Problem

Step	Check point	Result value	Defect point
1	Confirm the defect symptom (Check the turned on GPS function)	Turned on	Go to the next step
		Turned off	Turn on
2	Check the BT/WIFI Ant. & Ant contact. (Rear cover Ant. & ANT202, ANT203)	Broken, dust, corrosion	BT/WIFI Ant & ANT202, ANT203
		Normal	Go to the next step
3	Check the voltage of C209, C211, L200 Notice. It should be measured when the GPS path is activated on	C209 = 1.8V C211, L200 = 2.8V	Go to the next step
		If not the correct value	PMIC(U701)
4	Check the clock of C200,C201(OSC200) Notice. It should be measured when the GPS path is activated on	C200,C201 = 26Mhz (Same signal compared with a good PBA)	GPS IC(U201) GPS LNA(U200)
		If not the correct value	OSC200

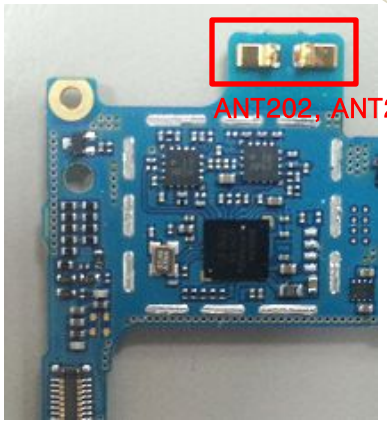
GPS/GLONASS Problem

Step1

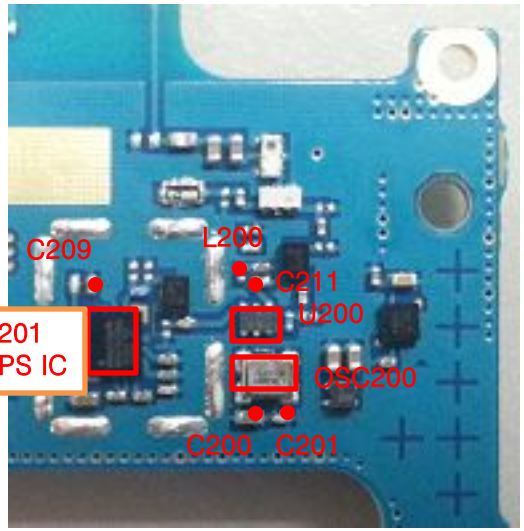




Step2



Step3, 4

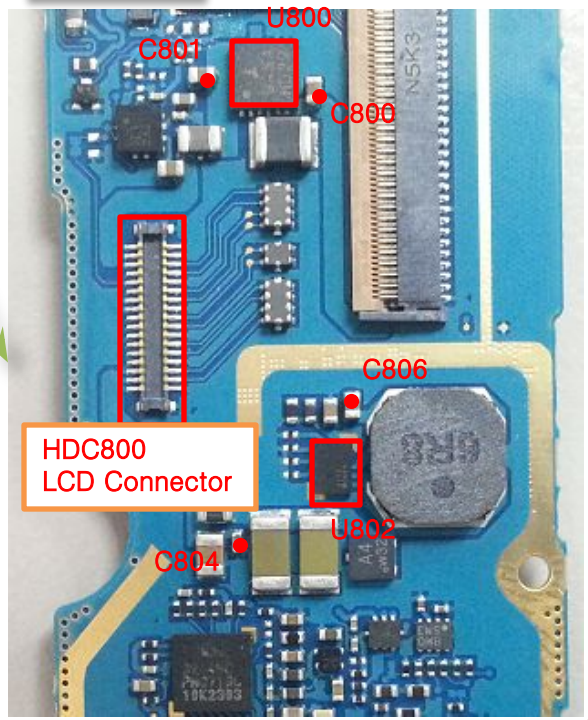


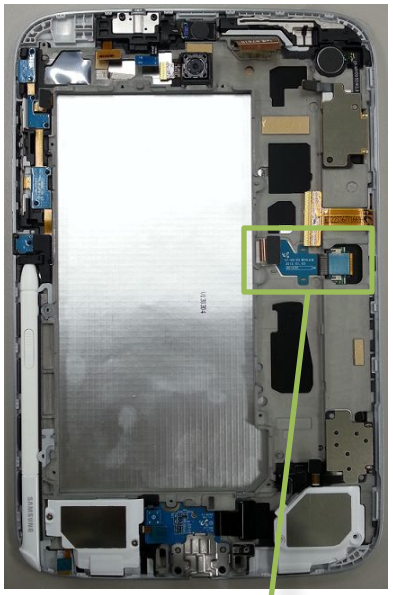
Display Problem

Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the LCD connector (HDC800)	Broken, dust, corrosion Insert status	LCD connector (HDC800)
		Normal	Go to the next step
3	Check the signal or voltage of C804 and C806 Notice. It should be measured when the display is activated on	If not the correct value	LED Backlight IC(U802)
		Normal(C804 = high(18V), C806 = V_BATT)	Go to the next step
4	Check the voltage of C800 and C801 Notice. It should be measured when the display is activated on	If not the correct value	Buck boost Reg.(U800)
		Normal(C800 = V_BATT, C801 = 3.3V)	Go to the next step
5	Replace the LCD	Solved	LCD
		Not solved	Main Chip or PBA

Display Problem

Step2, 3, 4





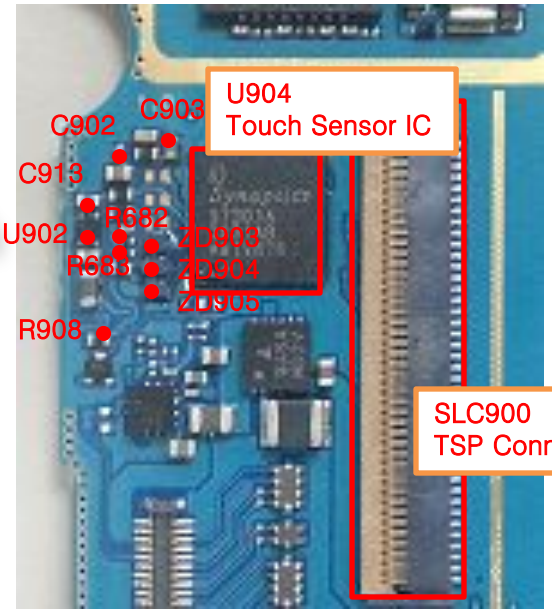
Step2

Touch Problem

Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the TSP connector (SLC900)	Broken, dust, corrosion	TSP connector (SLC900)
		Normal	Go to the next step
3	Check the voltage of C913 Notice. It should be measured when the display is activated on	If not the correct value	TSP LDO(U902)
		C913 = 1.8V	Go to the next step
4	Check the voltage of C902, C903 Notice. It should be measured when the display is activated on	If not the correct value	Touch Sensor IC(U904)
		C902 = 3.3V C903 = 1.8V	Go to the next step
5	Check the **Signal** of following chips (ZD903, ZD904, ZD905, R908, R682, R683) Notice. It should be measured when the display is activated on	If not the correct value	ZD903, ZD904, ZD905, R908, R682, R683
		Same signal compared with a good PBA	Go to the next step
6	Replace the TSP	Solved	TSP
		Not solved	Main chip or PBA

Touch Problem

Step2, 3, 4, 5



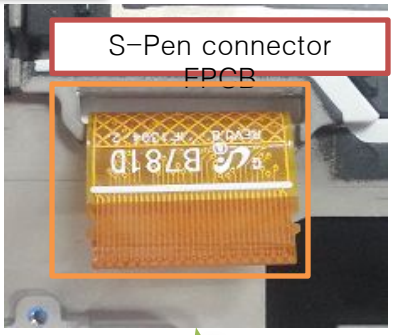
Step2

S-Pen Problem

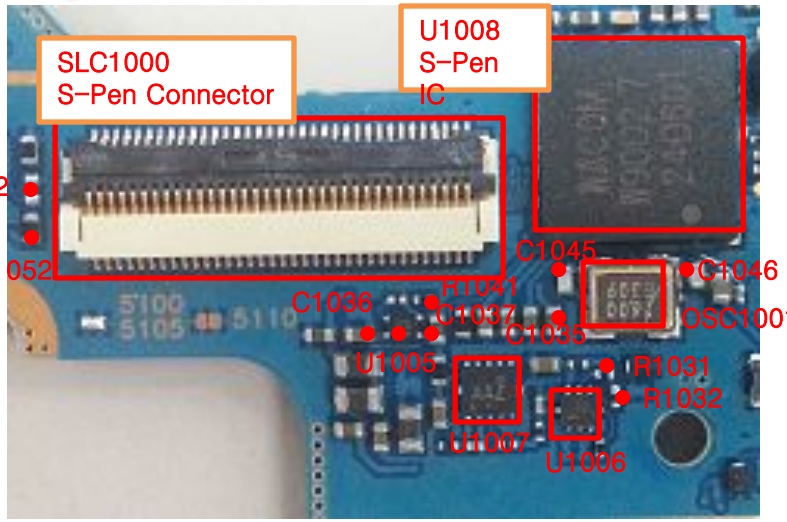
Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the S-Pen connector (SLC1000)	Broken, dust, corrosion	S-Pen connector (SLC1000)
		Normal	Go to the next step
3	Check the voltage of C1035 Notice. It should be measured when the S-Pen is activated on	If not the correct value	C1036, C1037, U1005, U1006, U1007
		R1035 = 3.3V	Go to the next step
4	Check the clock of C1045, C1046 Notice. It should be measured when the S-Pen is activated on	C1045, C1046 = 16Mhz (Same signal compared with a good PBA)	Go to the next step
		If not the correct value	OSC1001
5	Check the **Signal** of following chips (C1052, R1042, R1031, R1032) Notice. It should be measured when the display is activated on	If not the correct value	C1052, R1031, R1032, U1006
		Same signal compared with a good PBA	Go to the next step
6	Check the **Signal** of R1041 Notice. It should be measured when the display is activated on	If not the correct value	R1041, U1007, U1008
		Same signal compared with a good PBA	Go to the next step
7	Replace the Front Ass'y	Solved	Front Ass'y
		Not solved	Main chip or PBA

S-Pen Problem

Step2



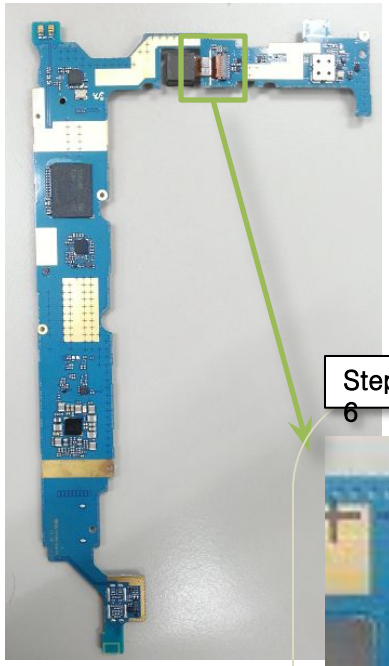
Step2, 3, 4, 5, 6



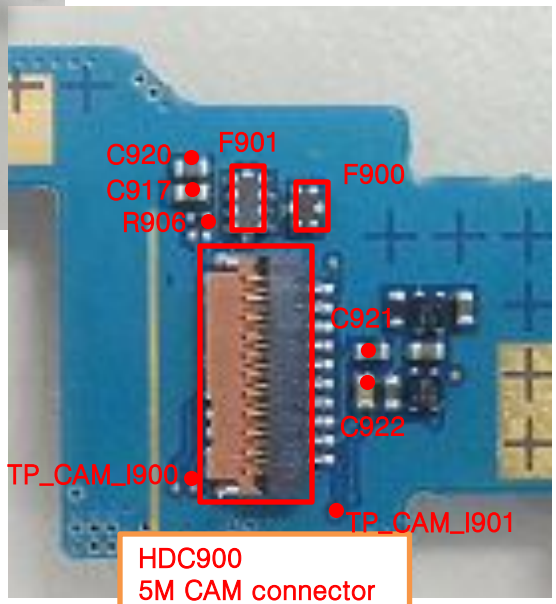
5M CAM Problem

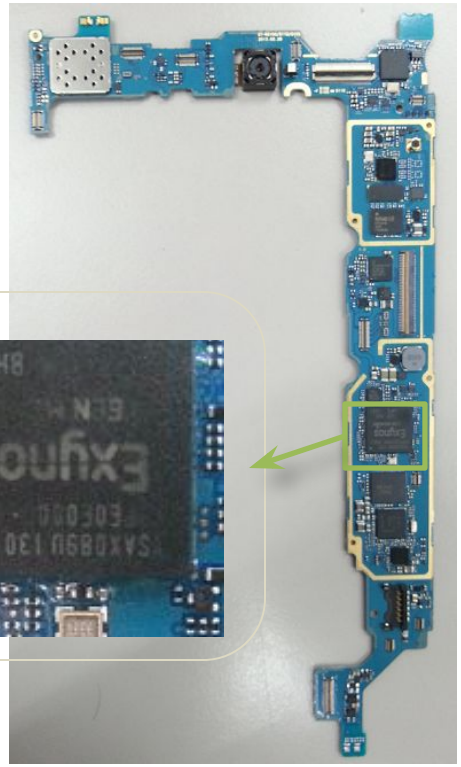
Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the 5M CAM connector (HDC900)	Broken, dust, corrosion	5M CAM connector (HDC900)
		Normal	Go to the next step
3	Check the voltage of following chips (C917, C920, C921, C922) Notice. It should be measured when the 5M CAM is activated on	If not the correct value	C917, C920, C921, C922
		C917 = 1.2V, C920 = 1.8V, C921 = 2.8V, C922 = 2.8V	Go to the next step
4	Check the clock of R906 Notice. It should be measured when the 5M CAM is activated on	R906 = 24Mhz (Same signal compared with a good PBA)	Go to the next step
		If not the correct value	Main chip
5	Check the Signal of following Test Point (TP CAM I900, TP CAM I901) Notice. It should be measured when the 5M CAM is activated on	Same signal compared with a good PBA	Go to the next step
		If not the correct value	R678, R679
6	Check the F900, F901 Notice. It should be measured when the 5M CAM is activated on	Abnormal	F900, F901
		Normal	Go to the next step
7	Replace the 5M CAM	Solved	5M CAM
		Not solved	Main chip or PBA

5M CAM Problem

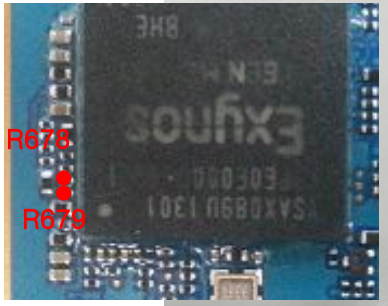


Step2, 3, 4, 5, 6





Step5



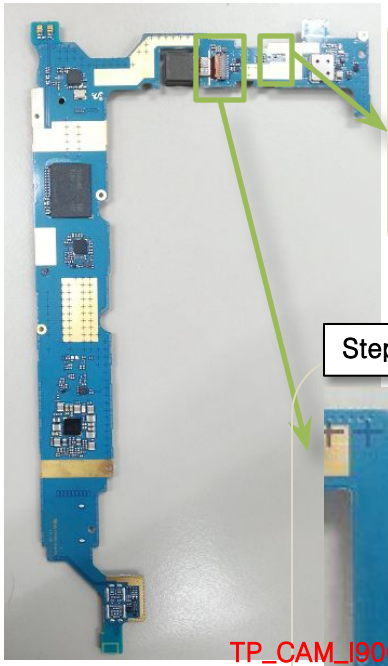
Step7

5M CAM Module

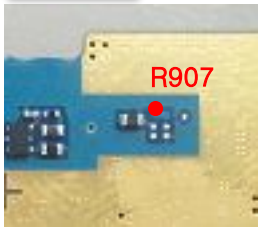
1.3M CAM Problem

Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the 1.3M CAM connector (HDC901)	Broken, dust, corrosion	5M CAM connector (HDC901)
		Normal	Go to the next step
3	Check the voltage of following chips (C925, C926, C927) Notice. It should be measured when the 1.3M CAM is activated on	If not the correct value	C925, C926, C927
		C925 = 1.8V, C926 = 2.8V, C927 = 1.8V	Go to the next step
4	Check the clock of R907 Notice. It should be measured when the 1.3M CAM is activated on	R907 = 24Mhz (Same signal compared with a good PBA)	Go to the next step
		If not the correct value	Main chip
5	Check the Signal of following Test Point (TP CAM I900, TP CAM I901) Notice. It should be measured when the 1.3M CAM is activated on	Same signal compared with a good PBA	Go to the next step
		If not the correct value	R678, R679
6	Check the F902 Notice. It should be measured when the 1.3M CAM is activated on	Abnormal	F902
		Normal	Go to the next step
7	Replace the 1.3M CAM	Solved	1.3M CAM
		Not solved	Main chip or PBA

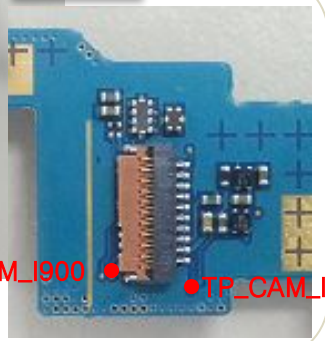
1.3M CAM Problem



Step4

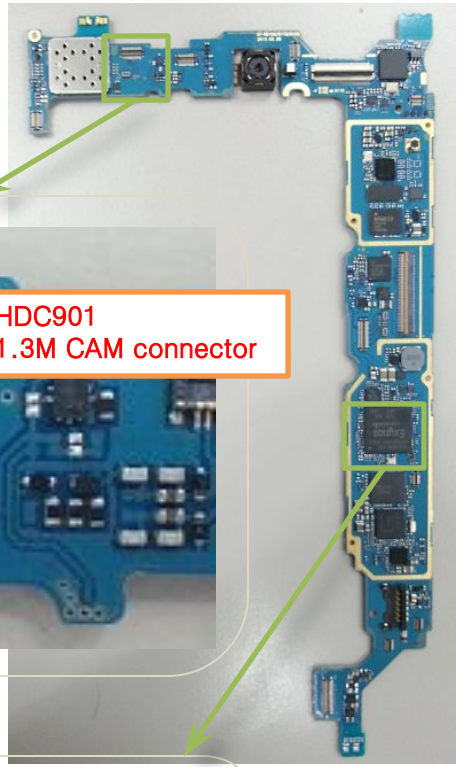


Step5



Step7

1.3M CAM Module



Step2, 3, 6

HDC901
1.3M CAM connector

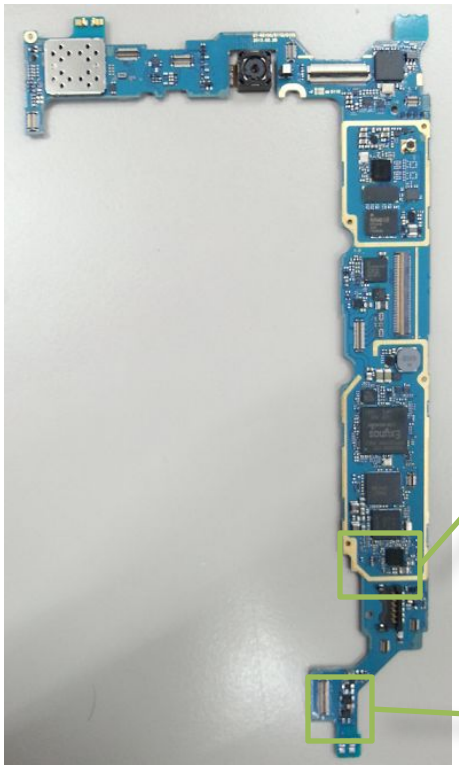
F902
C925
C927
C926

Step5

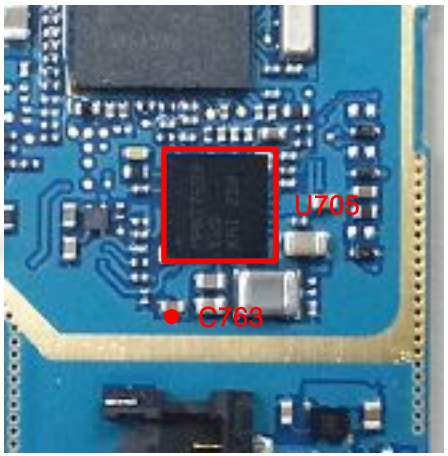
OTG Problem

Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the voltage of V_BUS(C763)	C763 = 5V	Go to the next step
		If not the correct value	Charging IC(U705)
3	Check the voltage of V_BUS_IN(C506)	C506 = 5V	Go to the next step
		If not the correct value	Charge protection (U504)
4	Replace the Sub PCB	Solved	Sub PCB
		Not solved	Main chip or PBA

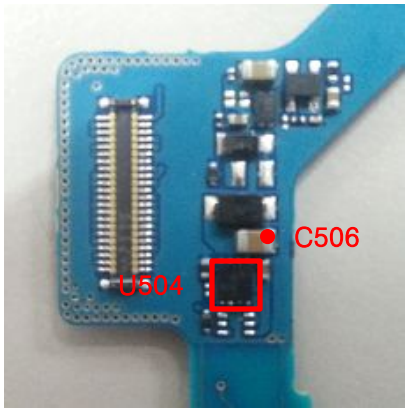
OTG Problem



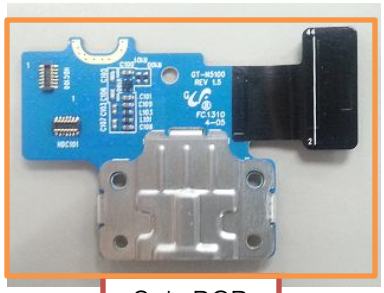
Step2



Step3



Step4

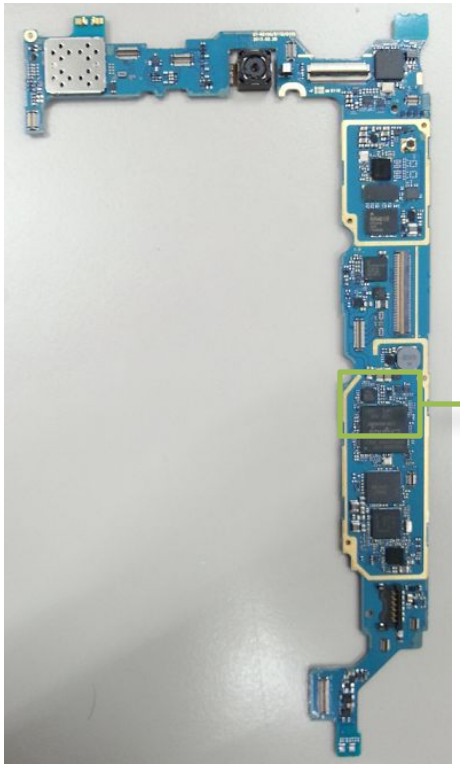


Sub PCB

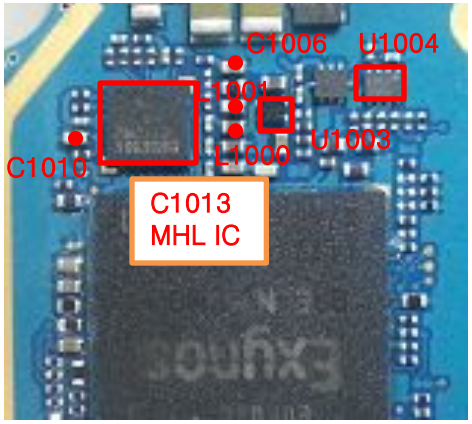
MHL Problem

Step	Check point	Result value	Defect point
1	Confirm the defect symptom	-	-
2	Check the voltage of following chips (L1000, C1006, L1001, C1010)	L1000 = 1.2V, C1006 = 3.3V, L1001 = 1.2V, C1010 = 1.8V	Go to the next step
		If not the correct value	MHL LDO (U1003, U1004)
4	Replace the C1013	Solved	MHL IC(C1013)
		Not solved	Main chip or PBA

MHL Problem



Step2, 3



- Question