
1. Safety Precautions

1-1. Repair Precaution

- Before attempting any repair or detailed tuning, shield the device from RF noise or static electricity discharges.
(Use only antistatic glove and strape.)
- Do not touch metallic parts or circuits with your bare hands as device(parts, circuits, etc) may be corroded.
- Use only demagnetized tools that are specifically designed for small electronic repairs, as most electronic parts are sensitive to electromagnetic forces.
- Use only high quality screwdrivers when servicing products. Low quality screwdrivers can easily damage the heads of screws.
- Use only conductor wire of the properly gauge and insulation for low resistance, because of the low margin of error of most testing equipment.
We recommend 22-gauge twisted copper wire.
- Hand-soldering is not recommended, because printed circuit boards (PCBs) can be easily damaged, even with relatively low heat. Never use a soldering iron with a power rating of more than 100 watts and use only lead-free solder with a melting point below 250°C (482°F).
- Prior to disassembling the battery charger for repair, ensure that the AC power is disconnected.
Always use the replacement parts that are registered in the SEC system. Third-party replacement parts may not function properly.

1. Safety Precautions

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Many semiconductors and ESDs in electronic devices are particularly sensitive to static discharge and can be easily damaged by it. We recommend protecting these components with conductive anti-static bags when you store or transport them.

- Always use an anti-static strap or wristband and remove electrostatic buildup or dissipate static electricity from your body before repairing ESDs.
- Ensure that soldering irons have AC adapter with ground wires and that the ground wires are properly connected.
- Use only desoldering tools with plastic tips to prevent static discharge.
- Properly shield the work environment from accidental electrostatic discharge before opening packages containing ESDs.
- The potential for static electricity discharge may be increased in low humidity environments, such as air-conditioned rooms. Increase the airflow to the working area to decrease the chance of accidental static electricity discharges.

2. Specification

2-1. GSM General Specification

Item	GSM 850	EGSM 900	DCS1800	PCS1900
Freq. Band[MHz]	824~849	880~915	1710~1785	1850~1910
Uplink/Downlink	869~894	925~960	1805~1880	1930~1990
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810
Tx/Rx spacing	45MHz	45MHz	95MHz	80MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period/ Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation (GSM / EGPRS)	GMSK/ 8PSK	GMSK/ 8PSK	GMSK/ 8PSK	GMSK/ 8PSK
MS Power (dBm)	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
Power Class	4(GMSK) E2(8PSK)	4(GMSK) E2(8PSK)	1(GMSK) E2(8PSK)	1(GMSK) E2(8PSK)
Sensitivity (QPSK, BW 10MHz)(dBm)	-102dBm	-102dBm	-100dBm	-100dBm
TDMA Mux	8	8	8	8

2. Specification

2-2. WCDMA General Specification

Item	WCDMA 2100(B1)	WCDMA 1900(B2)	WCDMA AWS(B4)	WCDMA 850(B5)	WCDMA 900(B8)
Freq. Band[MHz] Uplink/Downlink	1920~1980 2110~2170	1850~1910 1930~1990	1710~1755 2110~2155	824~849 869~894	880~915 925~960
ARFCN range	UL: 9612~9888 DL: 10562~10838	UL: 9262~9538 DL: 9662~9938	UL: 1312~1513 DL: 1537~1738	UL: 4132~4233 DL: 4357~4458	UL: 2712~2868 DL: 2937~3088
Tx/Rx spacing	190MHz	80MHz	400MHz	45MHz	45MHz
Mod. Bit rate/ Bit Period	42.2Mbps(DL) 5.42Mbps(UL)	42.2Mbps(DL) 5.42Mbps(UL)	42.2Mbps(DL) 5.42Mbps(UL)	42.2Mbps(DL) 5.42Mbps(UL)	42.2Mbps(DL) 5.42Mbps(UL)
Time Slot Period/ Frame Period	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms	WCDMA 10ms/0.667ms HSPA 2ms/0.667ms
Modulation	QPSK 16QAM 64QAM	QPSK 16QAM 64QAM	QPSK 16QAM 64QAM	QPSK 16QAM 64QAM	QPSK 16QAM 64QAM
MS Power (dBm)	25.7 ~ -49(↓)	25.7 ~ -49(↓)	25.7 ~ -49(↓)	25.7 ~ -49(↓)	25.7 ~ -49(↓)
Power Class	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)
Sensitivity (QPSK, BW 10MHz)(dBm)	-106dBm	-104dBm	-106dBm	-104dBm	-103dBm

2. Specification

2-3. GSM Tx Power Class

TX Power Control level	GSM850	TX Power Control level	EGSM900	TX Power Control level	DCS1800	TX Power Control level	PCS1900
5	33±2 dBm	5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	16	11±3 dBm	11	8±4 dBm	11	8±4 dBm
17	9±3dBm	17	9±3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
-	-	-	-	15	0±5 dBm	15	0±5 dBm

2. Specification

2-4. LTE General Specification

Item	LTE Band1	LTE Band2	LTE Band3	LTE Band4
Freq. Band[MHz] Uplink/Downlink	1920~1980 2110~2170	1850~1910 1930~1990	1710~1785 1805~1880	1710~1755 2110~2155
ARFCN range	UL:18000~18599 DL:0~599	UL:18600~19199 DL:600~1199	UL:19200~19949 DL:1200~1949	UL:19950~20399 DL:1950~2399
Tx/Rx spacing (MHz)	190	80	95	400
Channel Bandwidth (MHz)	5/10/15/20	1.4/3/5/10/15/20	1.4/3/5/10/15/20	1.4/3/5/10/15/20
Modulation	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity (QPSK, BW 10MHz) (dBm)	-96.3	-94.3	-93.3	-96.3

Item	LTE Band5	LTE Band7	LTE Band8	LTE Band12
Freq. Band[MHz] Uplink/Downlink	824~849 869~894	2500~2570 2620~2690	880~915 925~960	699~716 729~746
ARFCN range	UL:20400~20649 DL:2400~2649	UL:20750~21449 DL:2750~3449	UL:21450~21799 DL:3450~3799	UL:23010~23179 DL:5010~5179
Tx/Rx spacing (MHz)	45	120	45	30
Channel Bandwidth (MHz)	1.4/3/5/10	5/10/15/20	1.4/3/5/10	1.4/3/5/10
Modulation	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity (QPSK, BW 10MHz) (dBm)	-94.3	-94.3	-93.3	-93.3

2. Specification

Item	LTE Band17	LTE Band20	LTE Band26	LTE Band28
Freq. Band[MHz] Uplink/Downlink	704~716 734~746	832~862 791~821	814~848.9 859~893.9	703~748 758~803
ARFCN range	UL:23730~23849 DL:5730~5849	UL:24150~24449 DL:6150~6449	UL:26690~27039 DL:8690~9039	UL:27210~27659 DL:9210~9659
Tx/Rx spacing (MHz)	30	-41	45	55
Channel Bandwidth(MHz)	5/10	5/10/15/20	1.4/3/5/10/15/20	3/5/10/15/20
Modulation	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM
MS Power(dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity (QPSK, BW 10MHz)(dBm)	-93.3	-93.3	-93.8	-94.8

Item	LTE Band66	LTE Band38	LTE Band40	LTE Band41
Freq. Band[MHz] Uplink/Downlink	1710~1780 2110~2200	2570~2620	2300~2400	2496~2690
ARFCN range	UL:131972~132671 DL:66436~67335	UL/DL:37750 ~ 38249	UL/DL:38650 ~ 39649	UL/DL:39650 ~ 41589
Tx/Rx spacing (MHz)	400	0	0	0
Channel Bandwidth(MHz)	1.4/3/5/10/15/20	5/10/15/20	5/10/15/20	5/10/15/20
Modulation	QPSK,16/64QAM 256QAM(DL only)	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	28.7~-39(↓)	28.7~-39(↓)
Sensitivity (QPSK, BW 10MHz)(dBm))	-95.8	-96.3	-96.3	-94.3

2. Specification

2-5. NR General Specification [SM-A326B/BR]

Item	N1	N3	N5	N7
Freq. Band[MHz] Uplink/Downlink	1920~1980 2110~2170	1710~1785 1805~1880	824~849 869~894	2500~2570 2620~2690
ARFCN range	UL:384000~396000 DL:422000~434000	UL:342000~357000 DL:361000~376000	UL:164800~169800 DL:173800~178800	UL:500000~514000 DL:524000~538000
Tx/Rx spacing (MHz)	190	95	45	120
Channel Bandwidth(MHz)	5/10/15/20	5/10/15/20/25/30	5/10/15/20	5/10/15/20
Modulation	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM
MS Power(dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity (QPSK, BW 10MHz)(dBm)	-97.1	-94.1	-95.1	-95.1

Item	N8	N20	N28	N38
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	832~862 791~821	703~748 758~803	2570~2620
ARFCN range	UL:176000~183000 DL:185000~192000	UL:166400~172400 DL:158200~164200	UL:140600~149600 DL:151600~160600	UL/DL: 5140000~5240000
Tx/Rx spacing (MHz)	45	-41	55	0
Channel Bandwidth(MHz)	5/10/15/20	5/10/15/20	5/10/15/20	10/15/20
Modulation	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM
MS Power(dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity (QPSK, BW 10MHz)(dBm)	-94.1	-94.1	-95.6	-98.5

2. Specification

Item	N40	N41	N78	N79 (Only for A326BR)
Freq. Band[MHz] Uplink/Downlink	2300~2400	2496~2690	3300~3800	4400~5000
ARFCN range	UL/DL: 460000~480000	UL/DL: 499200 ~ 538000	UL/DL: 620000 ~ 653332	UL/DL: 693334 ~ 733333
Tx/Rx spacing (MHz)	0	0	0	0
Channel Bandwidth(MHz)	10/15/20/25/30/40/50/60/ 80	20/40/50/60/80/90/100	5/10/15/20/40/50/60/80/9 0/100	40/50/60/80/100
Modulation	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM	QPSK,16/64QAM 256QAM
MS Power(dBm)	25.7~-39(↓)	25.7~-39(↓)	EN-DC: 26~-38.7(↓)	EN-DC: 26~-38.7(↓)
Sensitivity (QPSK, BW 10MHz)(dBm)	-92.5	-88.5	-92	-91

3. Product Function

Specification

Item		Description
OS		Android R OS
SM-A326B/BR Network		2G GSM : GSM850 / GSM900 / DCS1800 / PCS1900 3G WCDMA : B1 / B2 / B4 / B5 / B8 4G LTE - B1 / B2 / B3 / B4 / B5 / B7 / B8 / B12 / B17 / B20 / B26 / B28 / B66 - TDD : B38 / B40 / B41 5G NR - NR FDD : N1 / N3 / N5 / N7 / N8 / N20 / N28 / N66 - NR TDD : N38 / N40 / N41 / N78 (Only for A326BR: N79)
SM-M326B Network		2G GSM : GSM850 / GSM900 / DCS1800 / PCS1900 3G WCDMA : B1 / B2 / B4 / B5 / B8 4G LTE - B1 / B2 / B3 / B4 / B5 / B7 / B8 / B12 / B17 / B20 / B26 / B28 / B66 - TDD : B38 / B40 / B41
Battery		5,000 mAh
Processor		MTK 5G-B(MT6853) 2.0GHz Dual(A76), 2.0GHz Hexa(A55)
Connectivity		GPS, Glonass, Beidou/Galileo, BT 4.1+HS, USB2.0,WiFi 11 a/b/g/n/ac(2.4G+5GHz), NFC
Camera		Rear - Wide : 48MP, A/F, F1.8 - Ultra Wide : 8MP, F2.2 - Bokeh : 2MP, F2.4 - Macro : 5MP, F2.4 Front : 13MP, F2.2
Display		6.5" HD+, 720 x 1600, LCD
SM-A326B/BR	RAM	4 / 6 / 8 GB
	ROM	64 / 128 GB
SM-M326B	ROM	6 / 8 GB
	ROM	128 GB
Sensor		6axis sensor(Accelerometer, Gyro Sensor), Virtual Ambient Light sensor, Geomagnetic Sensor, Hall Sensor, Fingerprint Sensor

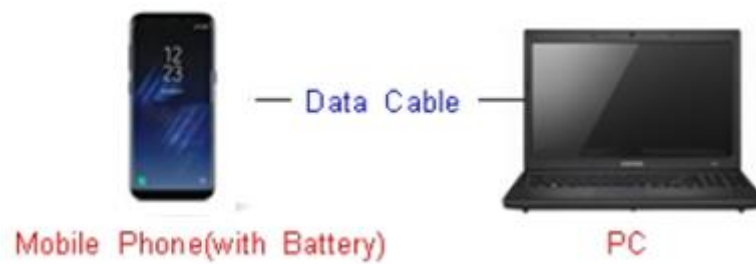
6. Level 1 Repair

6-1. S/W Update

6-1-1. Preparation

- S/W Update program : [Fenrir 5.17.xxxx](#)
- Mobile Phone
- Data Cable

※ Settings



Data Cable : [GH39-02064A](#)

6. Level 1 Repair

6-1-2. How to use 'Fenrir' S/W update program.

1) Launch Fenrir by clicking on the icon on the desktop



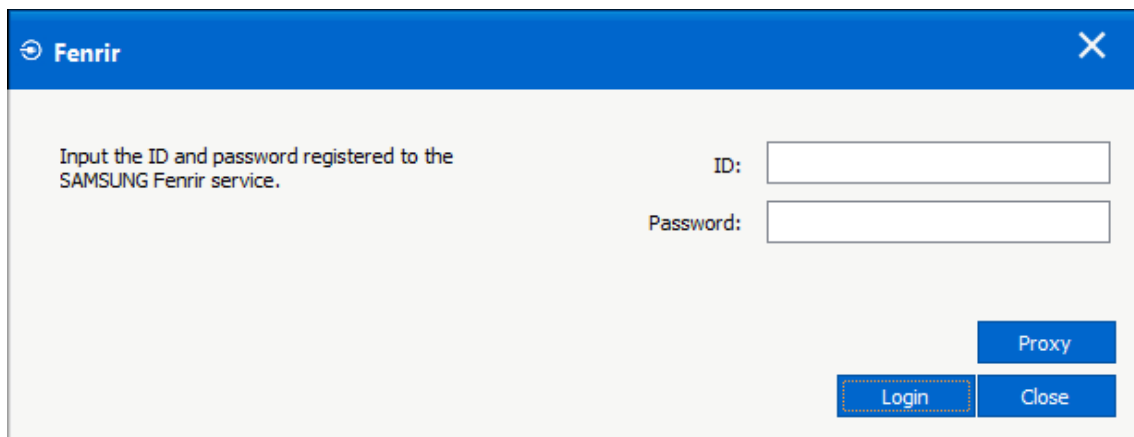
- SVH (Fenrir_Home) : It uses Home binary which does not have user data area in the memory when flashed to a device. (Keep user data)

- SVC (Fenrir_Factory) : It uses Factory binary which erases all user data in the memory when flashed to a device. (Clear user data)

- SVA (Fenrir_All) : It uses Factory and Home binaries. you can download Home and Factory binary in a PC(but requires double HDD storage and NW traffic)

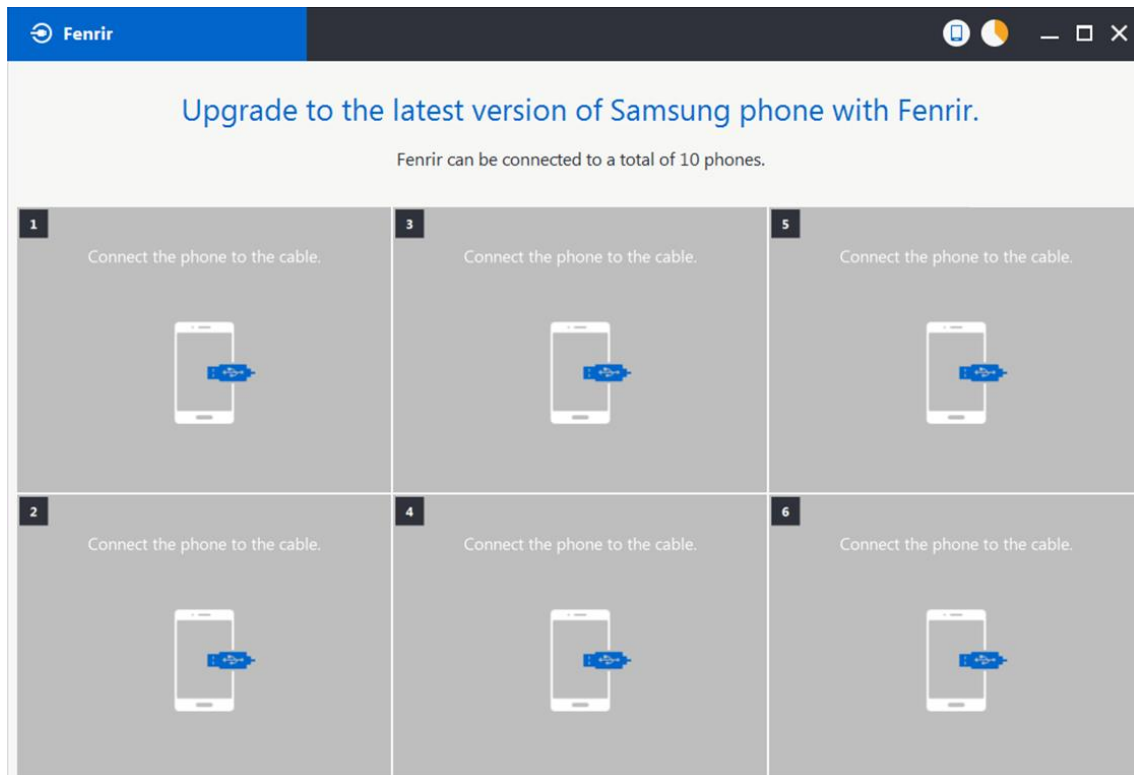
2) Input ID & password

※ You need to reset the ID information in case of PC change and format and repair, hard disk change

A screenshot of the Fenrir login window. The window has a blue title bar with the 'Fenrir' logo and a close button. The main area is white and contains the text 'Input the ID and password registered to the SAMSUNG Fenrir service.' followed by two input fields: 'ID:' and 'Password:'. Below the input fields are three buttons: 'Proxy', 'Login', and 'Close'. The 'Login' button is highlighted with a dashed orange border.

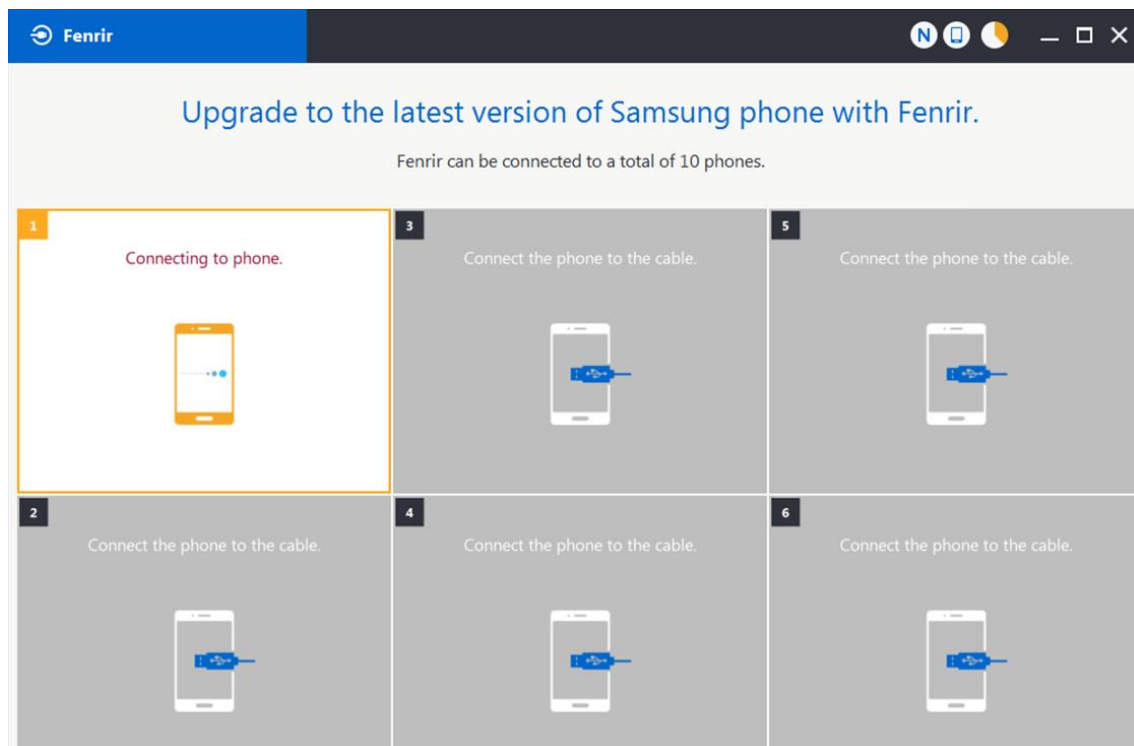
6. Level 1 Repair

3) Ensure device has sufficient charge (at least 20%) to start firmware update.



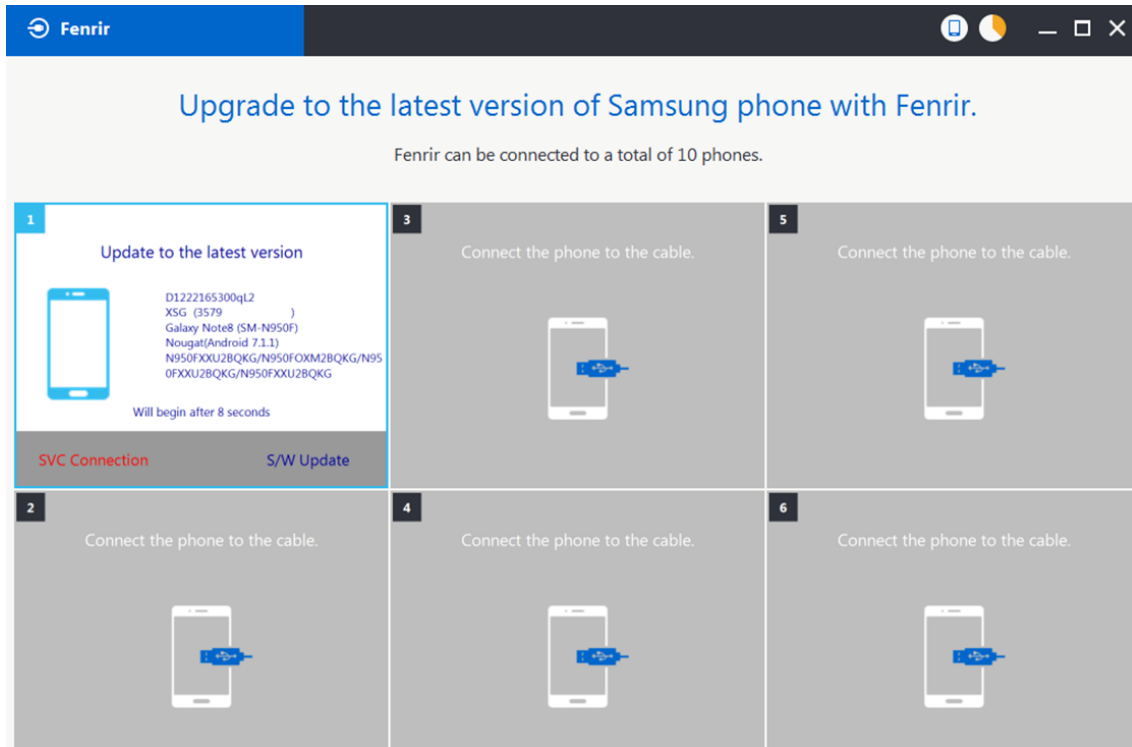
4) Connect the device to PC via data cable.

5) Upon USB connection, you will be presented with below screen.

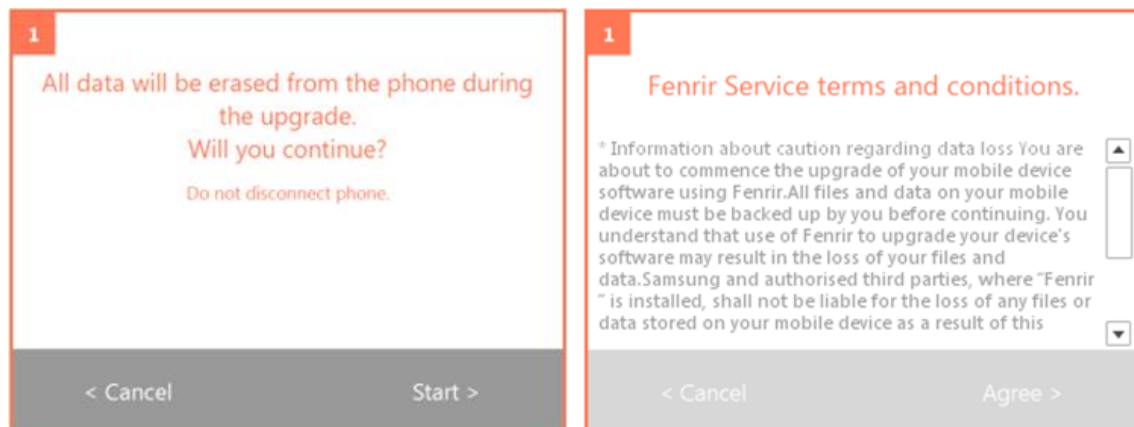


6. Level 1 Repair

6) Once device is detected, you will be presented with below screen. To update S/W, select “S/W Update” or to exit select “SVC Connection”. If you select “SVC Connection”, only Fenrir connection history (record) will be stored in the FUS server to support warranty validation. (This is known as “Service Connection” history)

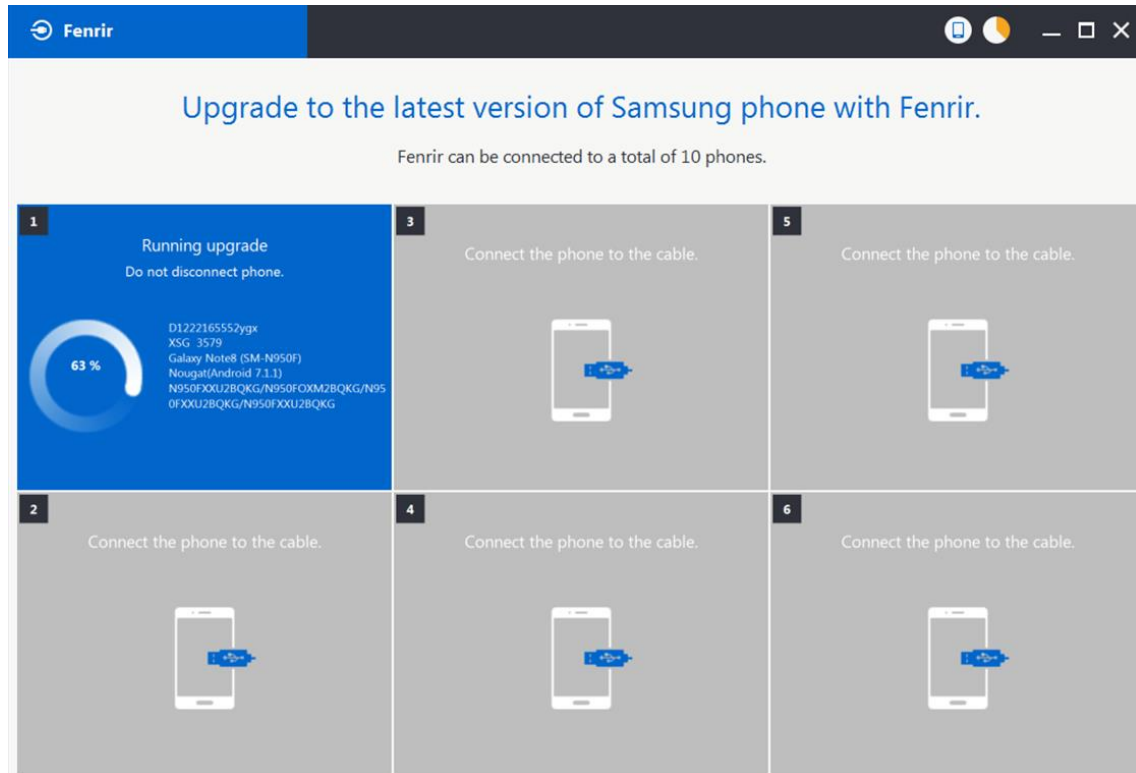


7) Once Fenrir starts, application will display the below screen. And select the Start button & Agree button.

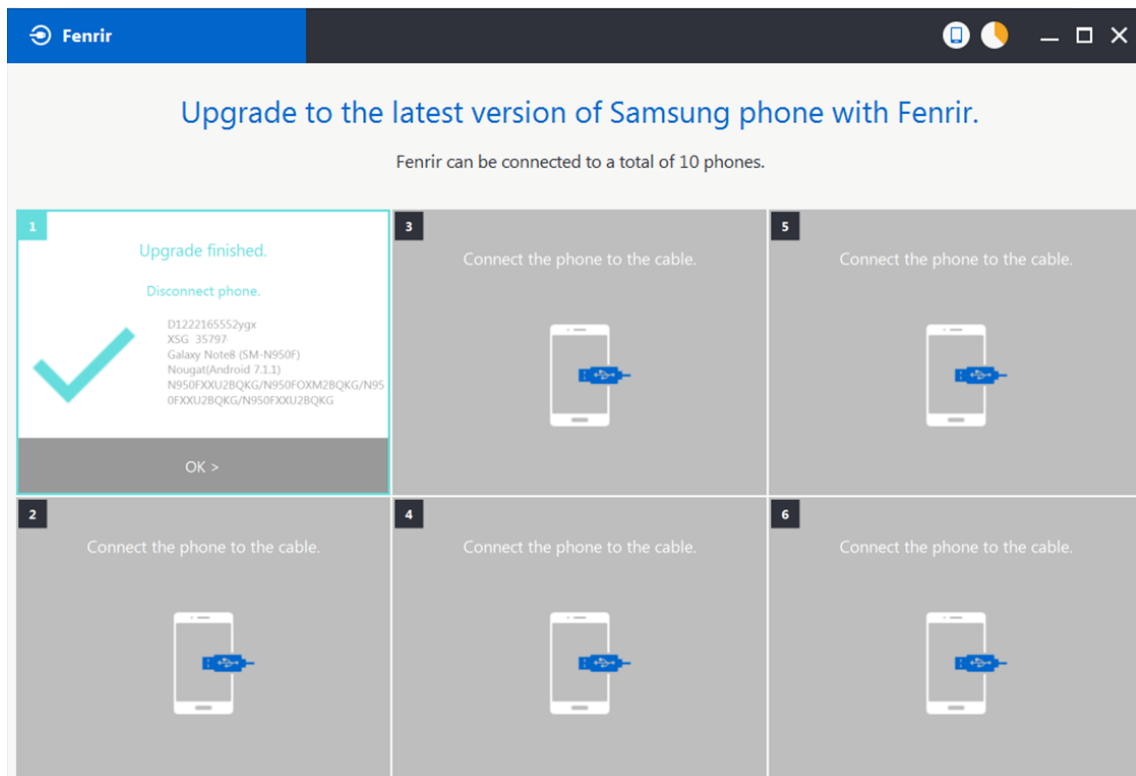


6. Level 1 Repair

8) The status circle increases as the update installs. The update process takes approximately 5-10 minutes to complete. Do not disconnect the device from USB during processing.



9) Once complete, application will present the below screen indicating update complete. Click Ok and detach device from USB.



6. Level 1 Repair

6-2. How to use 'Odin' program

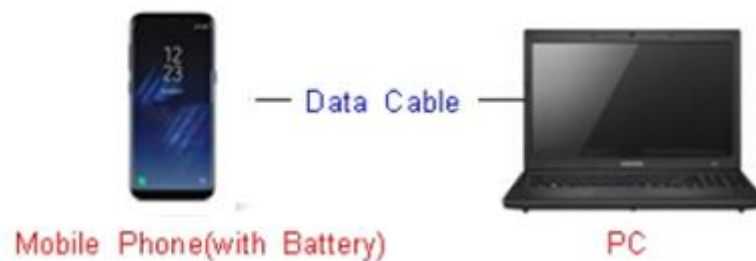
※ S/W Update via Fenrir is mandatory.

Below is the method to use 'Odin' program in any specific case.

6-2-1. Preparation

- Installation program : [Odin3 v3.14.4.exe or above](#)
- Mobile Phone
- Data Cable
- S/W Binary files (downloaded from GSPN)

※ Settings

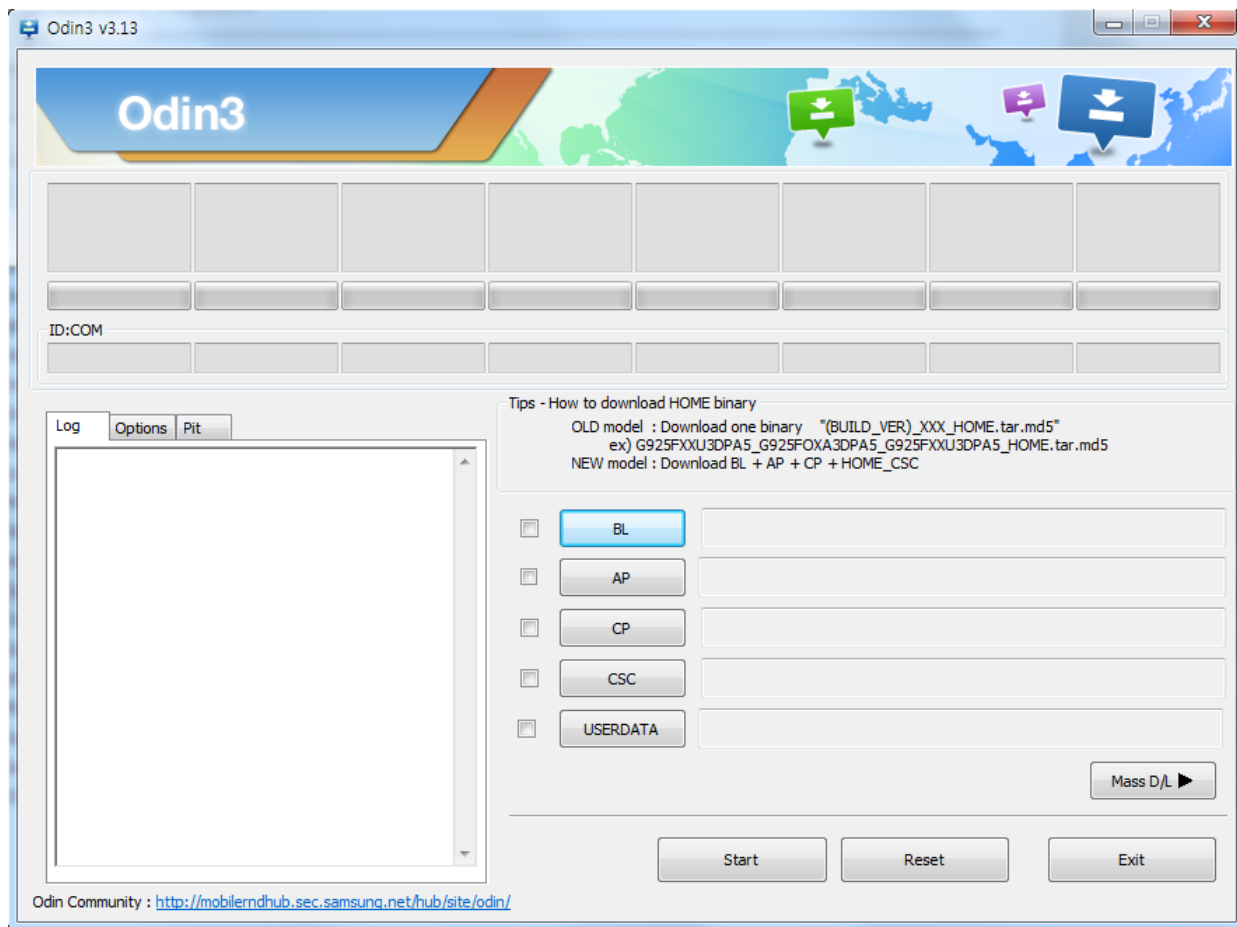


Data Cable : [GH39-02064A](#)

6. Level 1 Repair

6-2-2. S/W Installation Program (Downloader program)

Open up the S/W Installation Program by executing the "**Odin3 v3.14.4.exe**" or above

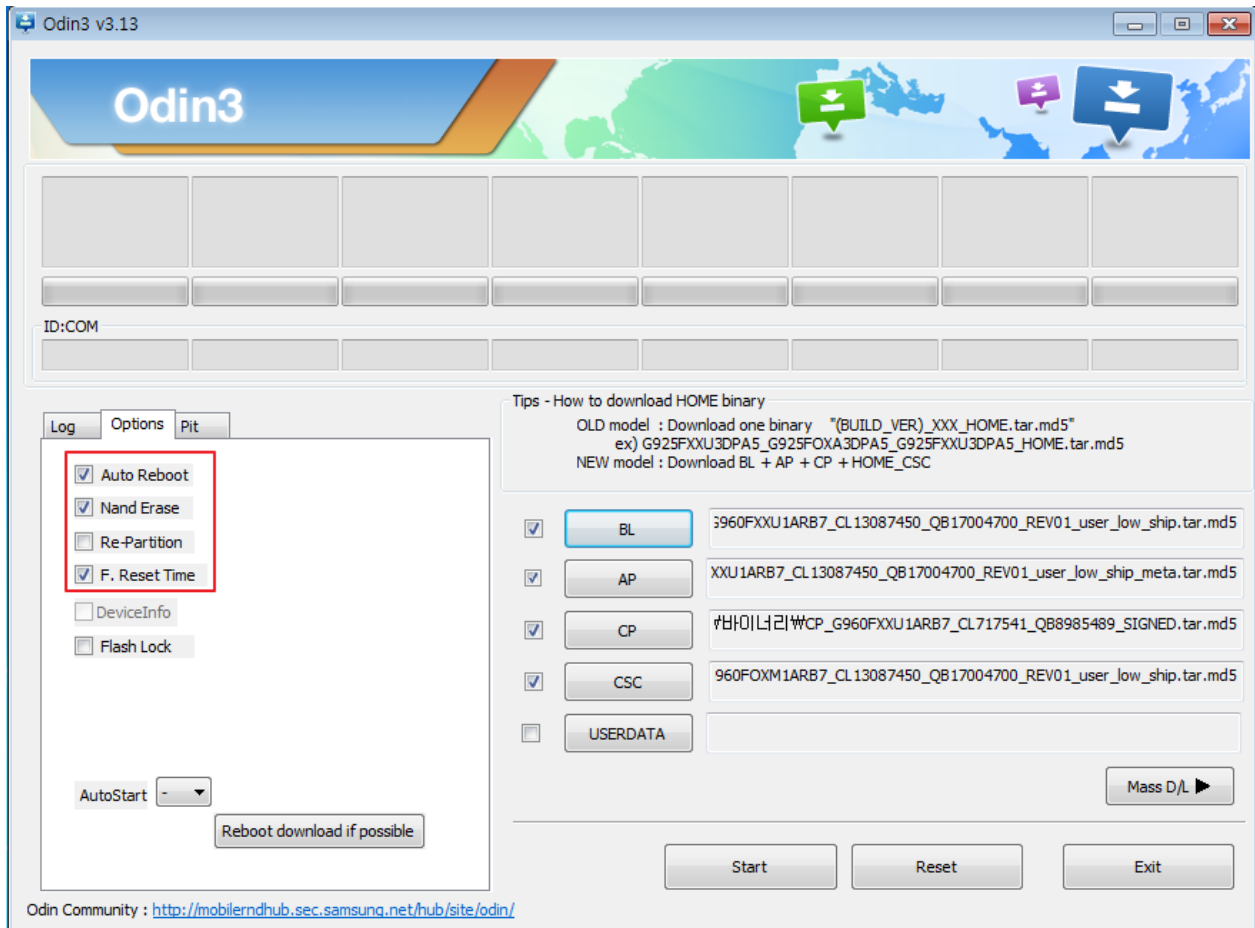


6. Level 1 Repair

1. Enable the check mark by click on the following options

- Check Auto Reboot, F. Reset Time, Nand Erase
- Check BL, AP, CP, CSC Files

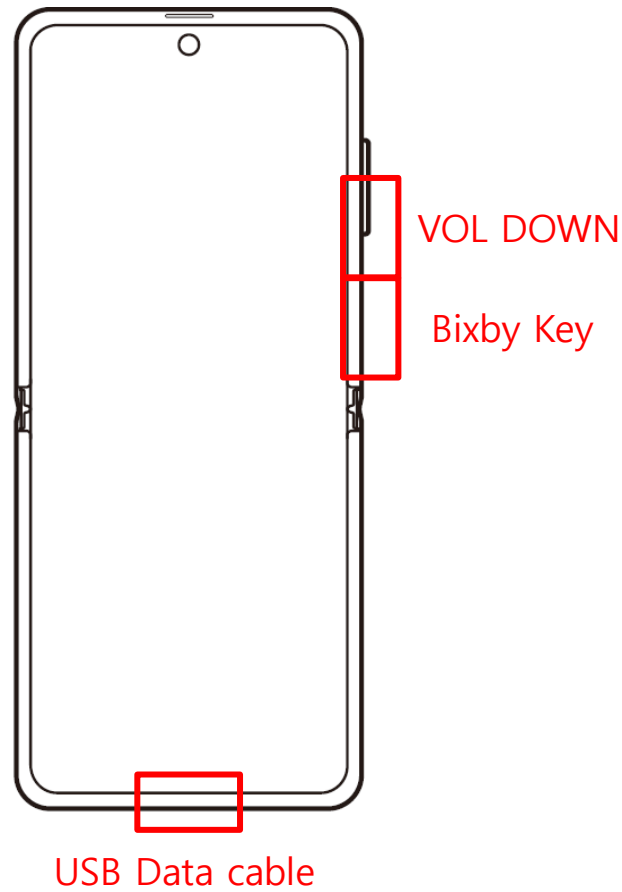
* Note : Odin PGM checks MD5 checksum just after file selection.



6. Level 1 Repair

2. Enter into Download Mode

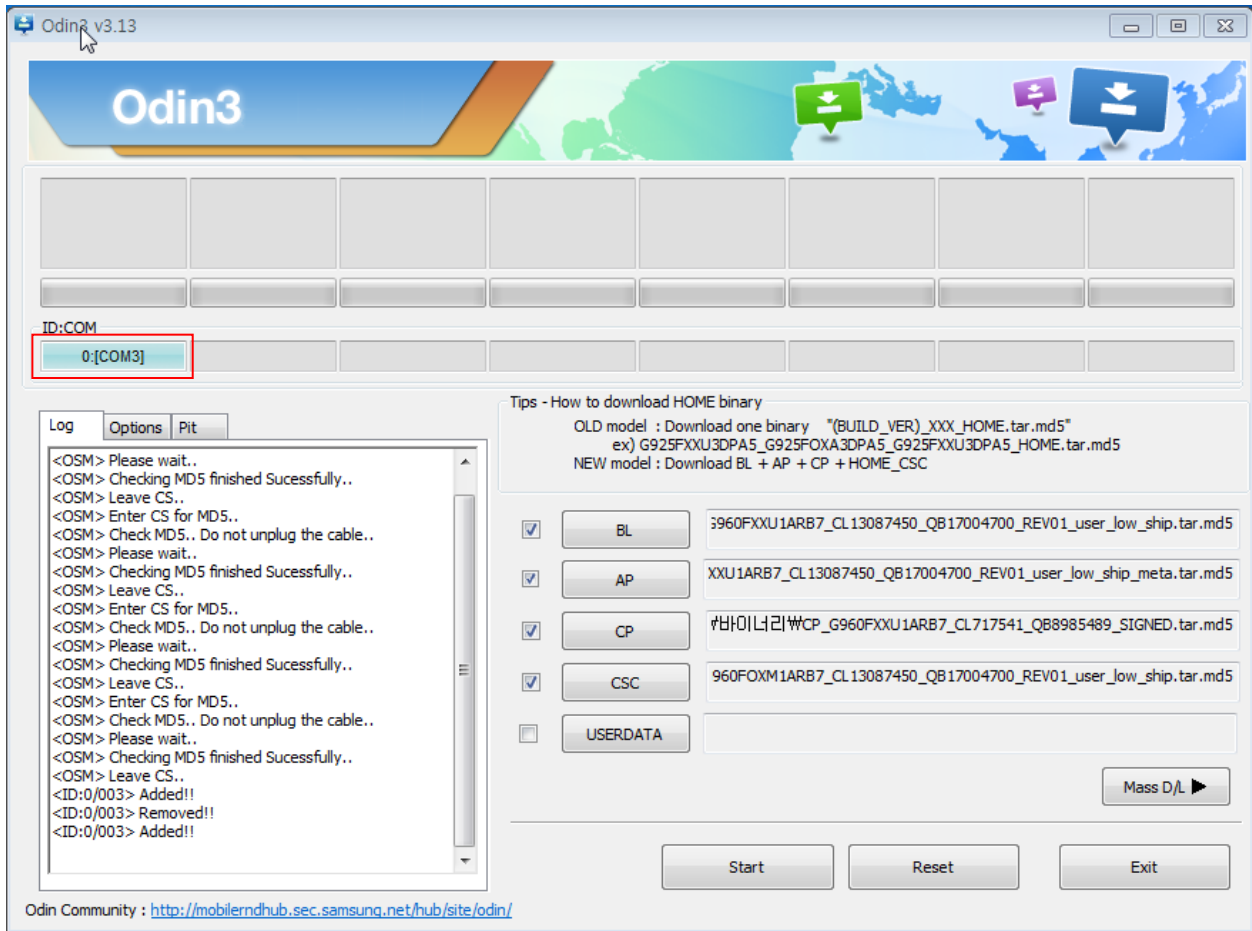
- Enter into Download Mode by pressing Volume Down button and Intelligence button simultaneously and connecting data cable followed by pressing Volume up button as a direction of the phone.



6. Level 1 Repair

3. Connect the device to PC via Data Cable.

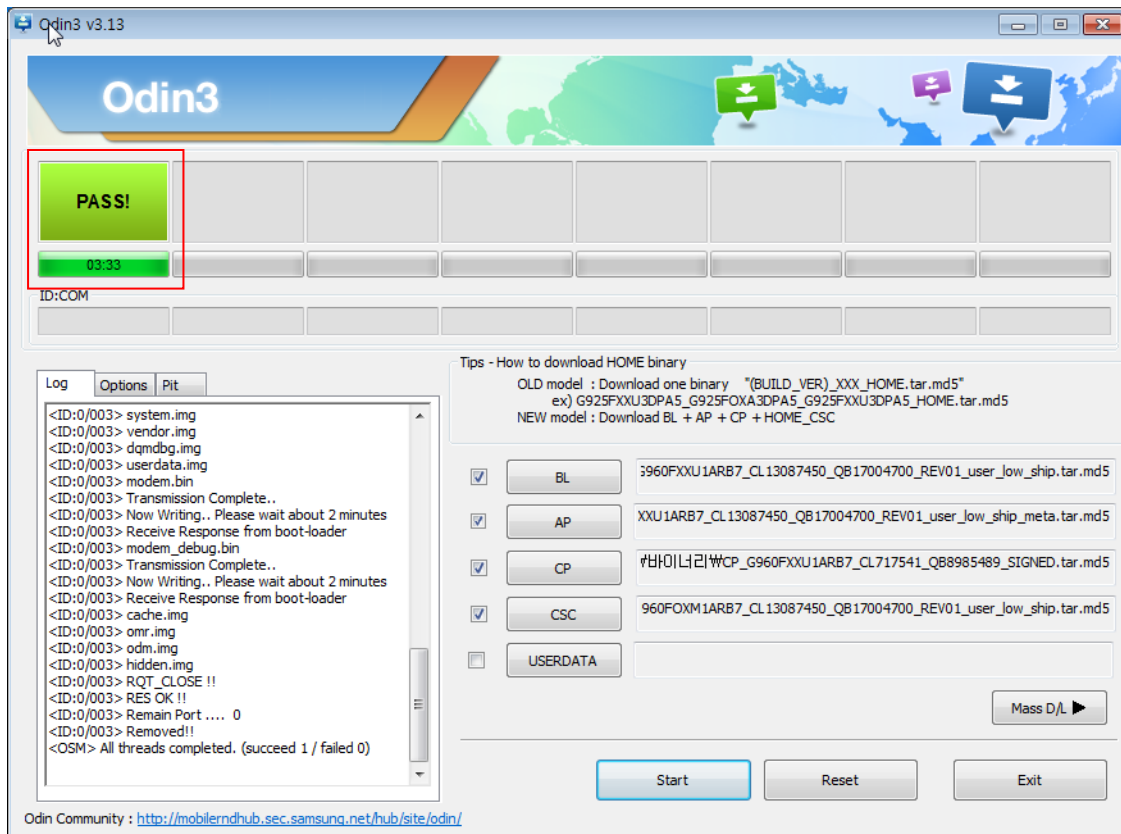
Make sure that the one of communication ports [ID:COM] box is highlighted in sky blue.
The device is now connected with the PC and ready to download the binary files in it.



6. Level 1 Repair

4. Start downloading the binary files into the device by clicking Start button on the screen.

The green colored "PASS!" sign will appear on the upper-left box if the binary files have been successfully downloaded into the device.



5. Disconnect the device from the Data cable.

6. Once the device boots up, you can check the version of the binary file or name by pressing the following code in sequence; ***#1234#**

You can perform Factory data Reset by Settings → General Management → Reset

※ Caution. Never disconnect during the S/W downloading.

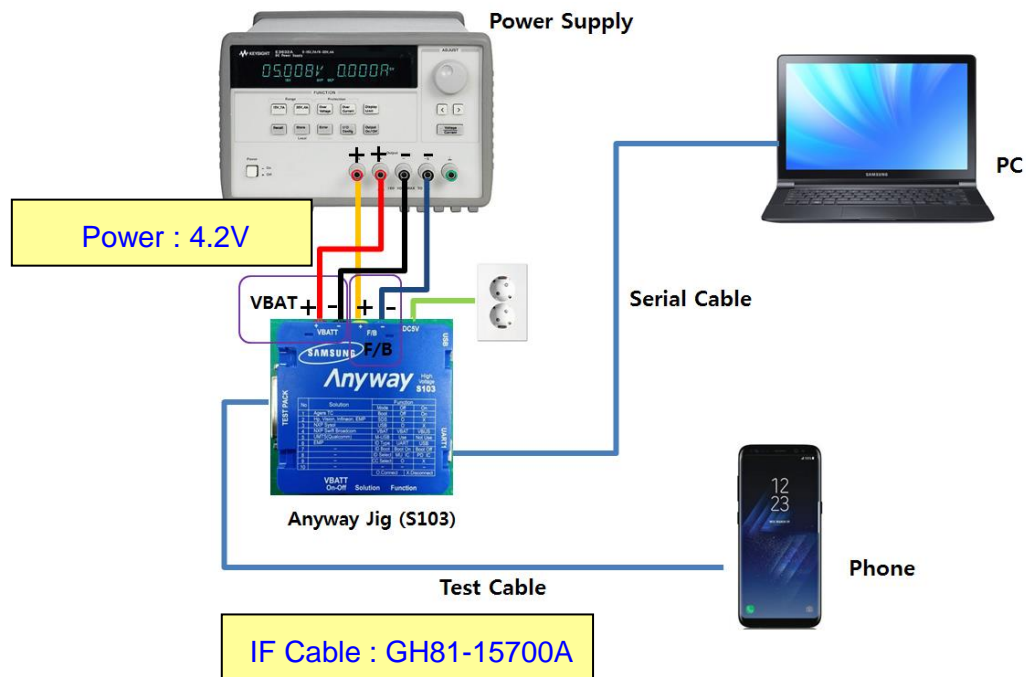
6. Level 1 Repair

6-3. IMEI writing




6-3-1. Preparation

- New IMEI writing Program has been released.
- Supported Model : Models which CAB files are uploaded on HHPsvc INI File category, instead of ini file.
- Refer to below IMEI writing procedure.

- H/W



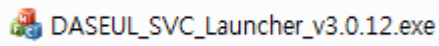
- S/W

① Library Install	To use Daseul, library files should be installed. Refer to SVC Bulletin “(11-82) Daseul (New IMEI writing Program) Library Install guide_rev1.0”
② Launcher	DASEUL_SVC_Launcher_v3.0.12 or higher -Uploaded on HHPsvc Notice
③ Runtime File	1. DASEUL_IMEI_ALL_Runtime_3.1.405.0_r00595.CAB or higher -Uploaded on HHPsvc Notice 2. Make 'ModelName' folder at the same position with launcher & Runtime file. <div> DASEUL_IMEI_ALL_Runtime_3.1.405.0_r00595  DASEUL_Launcher_v3.0.29  SM-G970F_SS(CSC)_IMEI_Ver_3.1.385.3</div>
④ Model File	Copy Model File under the 'Model Name' folder

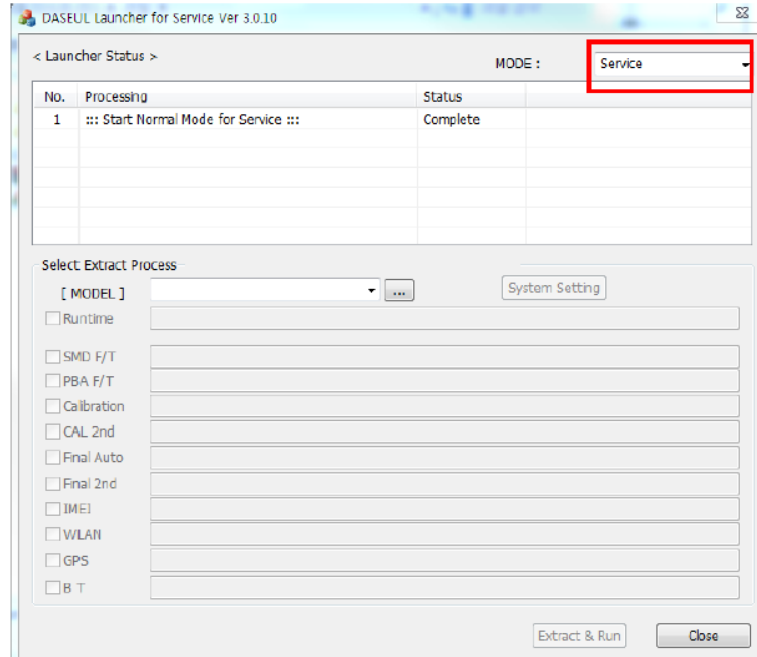
6. Level 1 Repair

6-3-2. IMEI writing Process

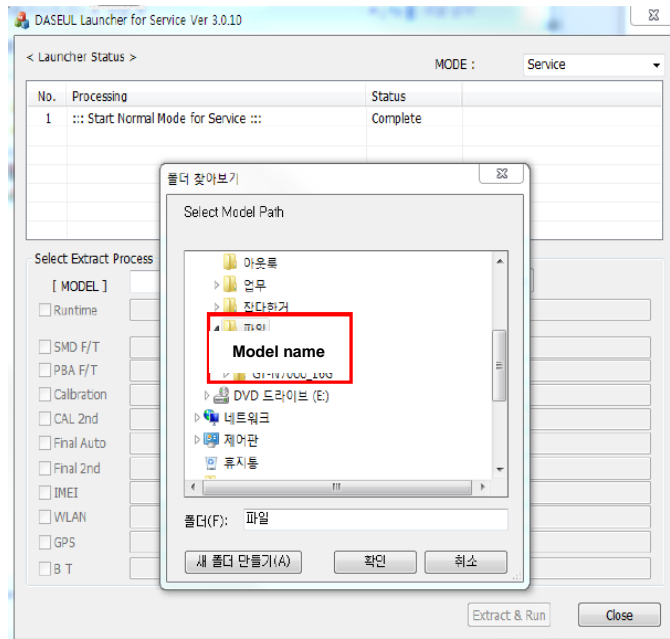
1. Run DASEUL_SVC_Launcher_v3.0.12.exe



2. Select Service Mode

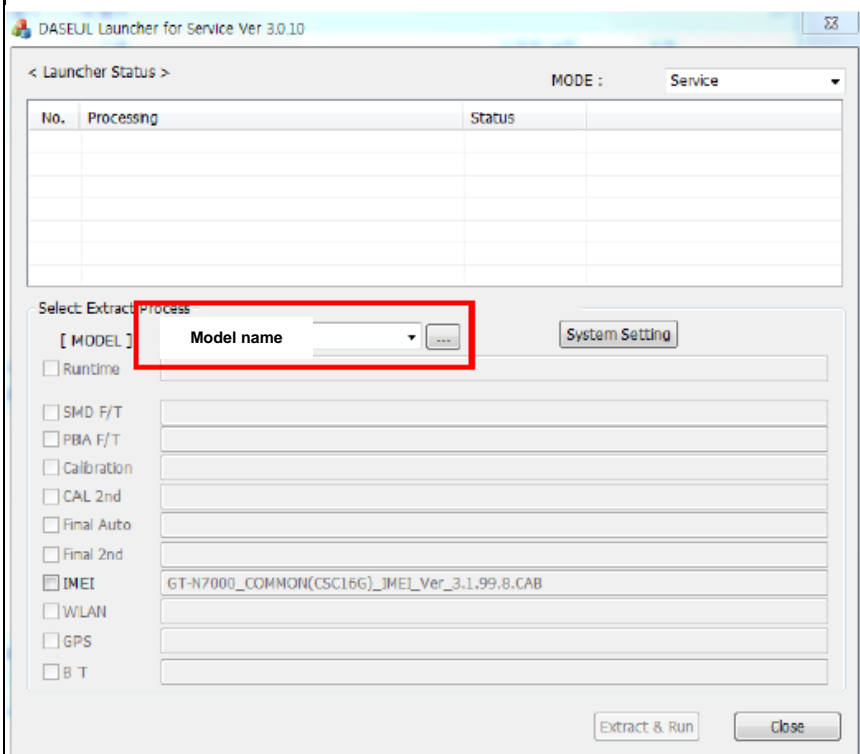


3. Click  and Select folder where the Launcher exists



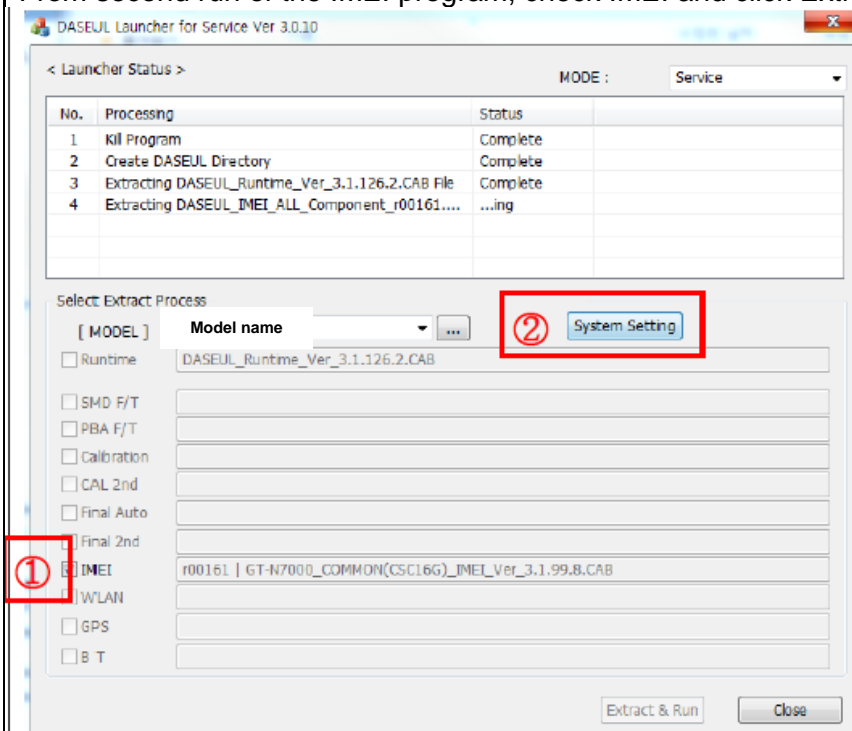
6. Level 1 Repair

4. Select Model



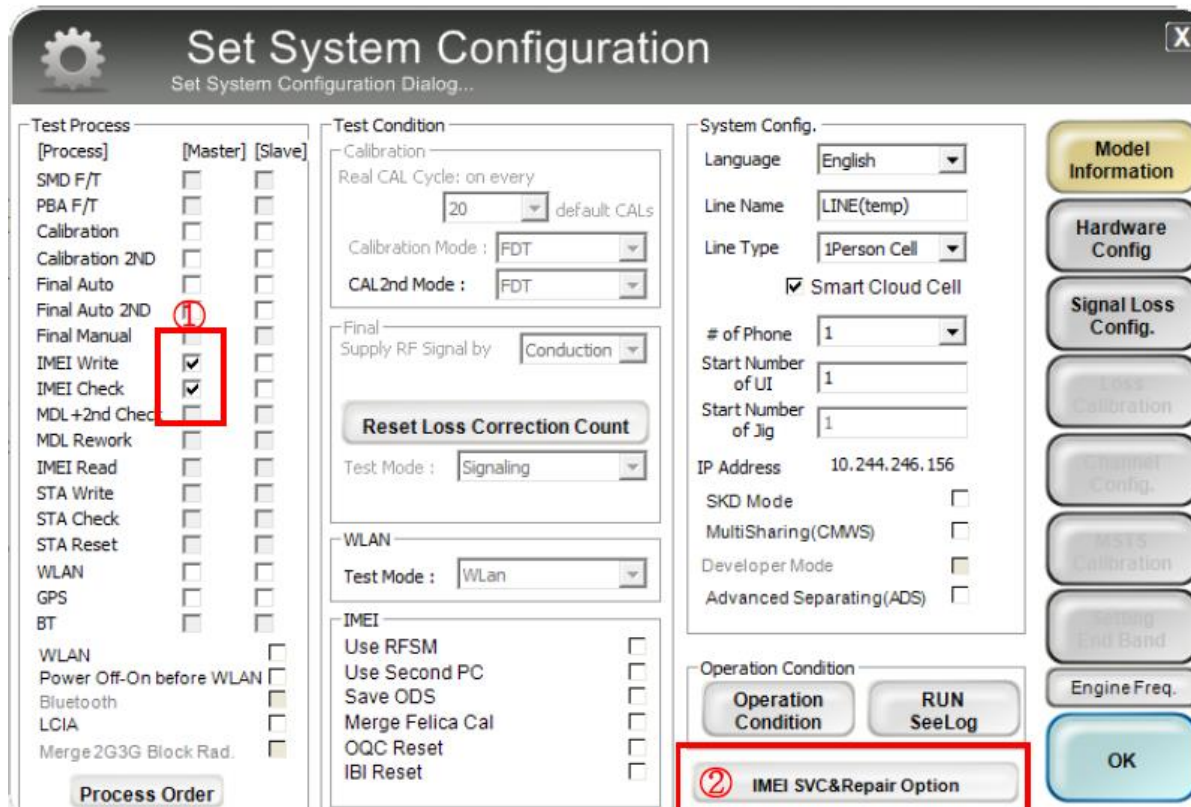
5. Check IMEI and click System Setting

※ Once you setup the setting, you don't have to do it again, unless there is change.
From second run of the IMEI program, check IMEI and click Extract & Run.



6. Level 1 Repair

6. Check IMEI Write / IMEI Check and click IMEI SVC & Repair Option.



The 'Set System Configuration' dialog box is shown. It has a title bar with a gear icon and a close button. The main area is divided into several sections: 'Test Process' with a table of checkboxes for various tests; 'Test Condition' with dropdowns for calibration and RF signal; 'System Config.' with various settings like language, line name, and IP address; and a right sidebar with buttons for 'Model Information', 'Hardware Config', 'Signal Loss Config.', 'Loss Calibration', 'Channel Config.', 'MMS Calibration', 'Setting End Band', and 'Engine Freq.'. At the bottom, there are buttons for 'Operation Condition', 'RUN SeeLog', and 'IMEI SVC&Repair Option' (which is circled in red with a '2'). A red box with a '1' highlights the 'IMEI Write' and 'IMEI Check' checkboxes in the 'Test Process' table.

[Process]	[Master]	[Slave]
SMD F/T	<input type="checkbox"/>	<input type="checkbox"/>
PBA F/T	<input type="checkbox"/>	<input type="checkbox"/>
Calibration	<input type="checkbox"/>	<input type="checkbox"/>
Calibration 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto	<input type="checkbox"/>	<input type="checkbox"/>
Final Auto 2ND	<input type="checkbox"/>	<input type="checkbox"/>
Final Manual	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Write	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IMEI Check	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MDL+2nd Check	<input type="checkbox"/>	<input type="checkbox"/>
MDL Rework	<input type="checkbox"/>	<input type="checkbox"/>
IMEI Read	<input type="checkbox"/>	<input type="checkbox"/>
STA Write	<input type="checkbox"/>	<input type="checkbox"/>
STA Check	<input type="checkbox"/>	<input type="checkbox"/>
STA Reset	<input type="checkbox"/>	<input type="checkbox"/>
WLAN	<input type="checkbox"/>	<input type="checkbox"/>
GPS	<input type="checkbox"/>	<input type="checkbox"/>
BT	<input type="checkbox"/>	<input type="checkbox"/>
WLAN	<input type="checkbox"/>	<input type="checkbox"/>
Power Off-On before WLAN	<input type="checkbox"/>	<input type="checkbox"/>
Bluetooth	<input type="checkbox"/>	<input type="checkbox"/>
LCIA	<input type="checkbox"/>	<input type="checkbox"/>
Merge 2G3G Block Rad.	<input type="checkbox"/>	<input type="checkbox"/>

Process Order

Test Condition

Calibration

Real CAL Cycle: on every 20 default CALs

Calibration Mode: FDT

CAL2nd Mode: FDT

Final

Supply RF Signal by: Conduction

Reset Loss Correction Count

Test Mode: Signaling

WLAN

Test Mode: WLAN

IMEI

Use RFSM ☐

Use Second PC ☐

Save ODS ☐

Merge Felica Cal ☐

OQC Reset ☐

IBI Reset ☐

System Config.

Language: English

Line Name: LINE(temp)

Line Type: 1Person Cell

☒ Smart Cloud Cell

of Phone: 1

Start Number of UI: 1

Start Number of Jlg: 1

IP Address: 10.244.246.156

SKD Mode ☐

MultiSharing(CMWS) ☐

Developer Mode ☐

Advanced Separating(ADS) ☐

Operation Condition

Operation Condition

RUN SeeLog

IMEI SVC&Repair Option

Model Information

Hardware Config

Signal Loss Config.

Loss Calibration

Channel Config.

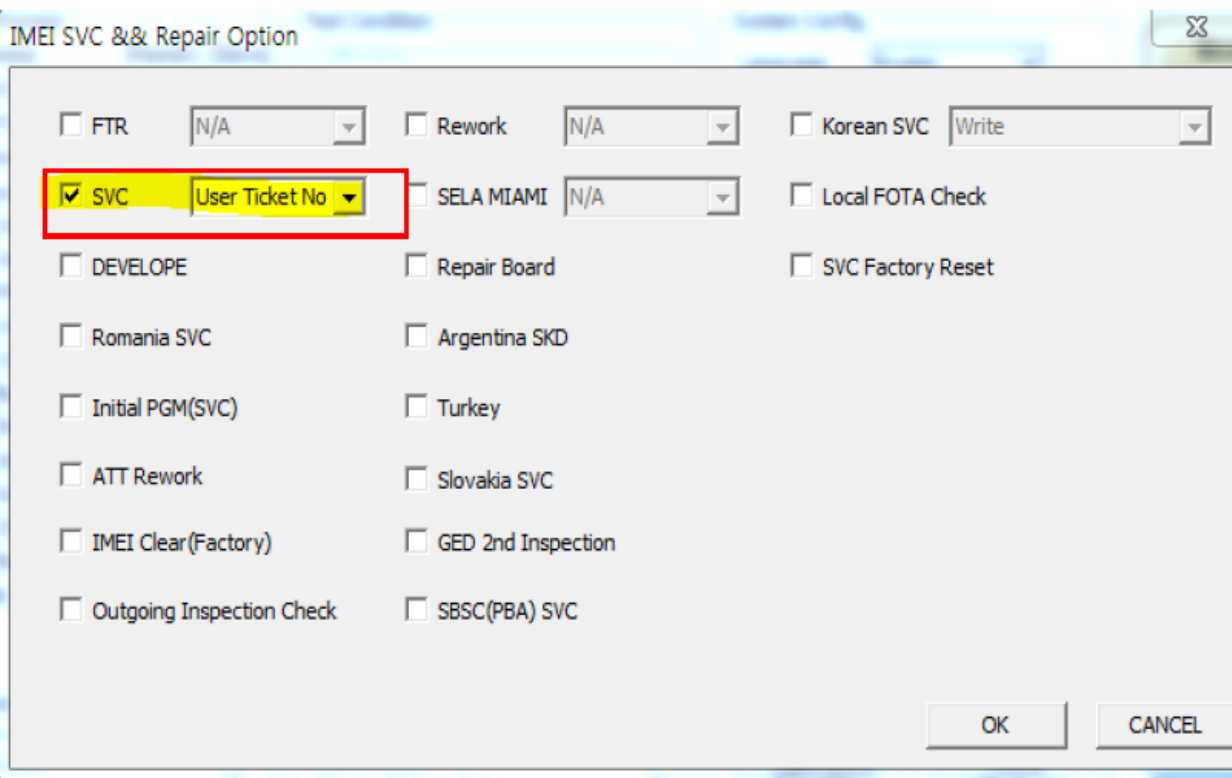
MMS Calibration

Setting End Band

Engine Freq.

OK

7. Check 'SVC , User Ticket No' and click OK



The 'IMEI SVC && Repair Option' dialog box is shown. It has a title bar with a close button. The main area contains various checkboxes and dropdown menus for different service options. A red box highlights the 'SVC' checkbox and the 'User Ticket No' dropdown menu. At the bottom, there are 'OK' and 'CANCEL' buttons.

IMEI SVC && Repair Option

☐ FTR N/A ☐ Rework N/A ☐ Korean SVC Write

☒ SVC User Ticket No ☐ SELA MIAMI N/A ☐ Local FOTA Check

☐ DEVELOPE ☐ Repair Board ☐ SVC Factory Reset

☐ Romania SVC ☐ Argentina SKD

☐ Initial PGM(SVC) ☐ Turkey

☐ ATT Rework ☐ Slovakia SVC

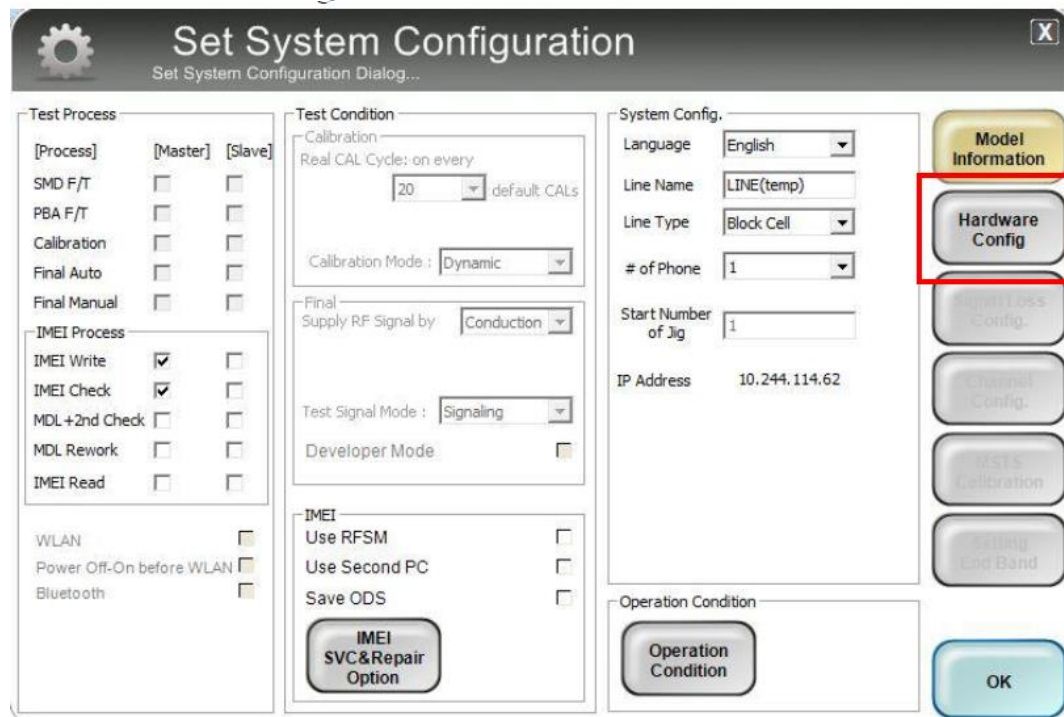
☐ IMEI Clear(Factory) ☐ GED 2nd Inspection

☐ Outgoing Inspection Check ☐ SBSC(PBA) SVC

OK CANCEL

6. Level 1 Repair

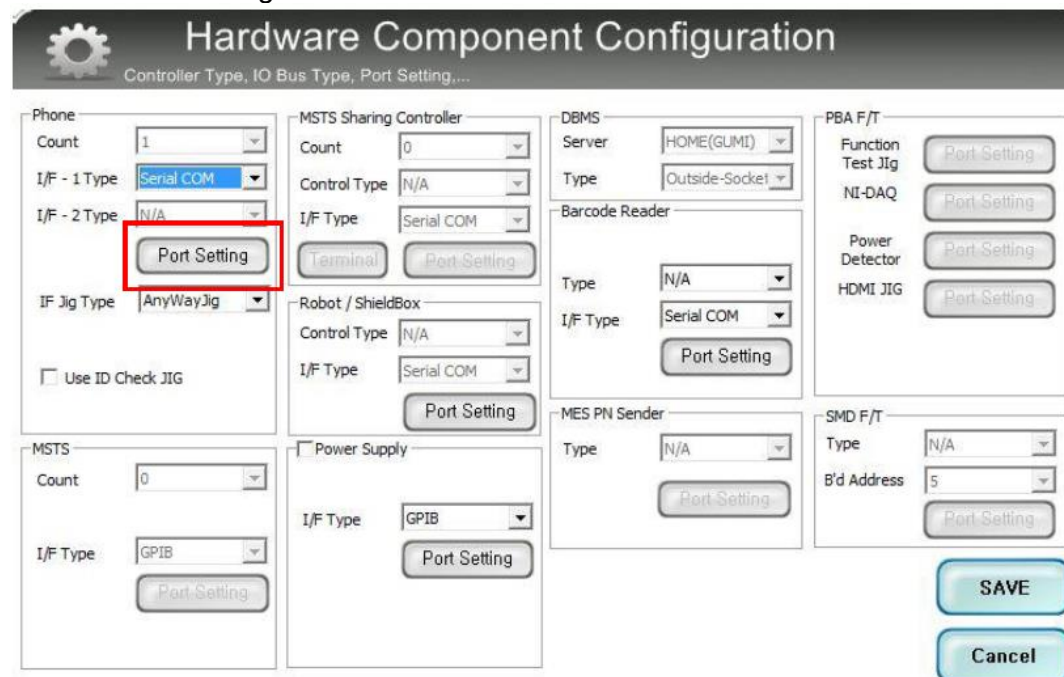
8. Click 'Hardware Config'



The 'Set System Configuration' dialog box is shown. It has a title bar with a gear icon and the text 'Set System Configuration Dialog...'. The dialog is divided into several sections:

- Test Process:** Includes checkboxes for [Process], [Master], and [Slave] for SMD F/T, PBA F/T, Calibration, Final Auto, and Final Manual. It also has an IMEI Process section with checkboxes for IMEI Write, IMEI Check, MDL +2nd Check, MDL Rework, and IMEI Read.
- Test Condition:** Includes a Calibration section with a dropdown for 'Real CAL Cycle: on every' (set to 20) and a 'default CALs' label. It also has a 'Calibration Mode' dropdown (set to Dynamic) and a 'Final Supply RF Signal by' dropdown (set to Conduction). There is also a 'Test Signal Mode' dropdown (set to Signaling) and a 'Developer Mode' checkbox.
- System Config.:** Includes a 'Language' dropdown (set to English), a 'Line Name' text field (set to LINE(temp)), a 'Line Type' dropdown (set to Block Cell), a '# of Phone' dropdown (set to 1), a 'Start Number of Jig' text field (set to 1), and an 'IP Address' text field (set to 10.244.114.62).
- Model Information:** A vertical sidebar on the right with buttons for 'Model Information', 'Hardware Config' (highlighted with a red box), 'Signal Loss Config.', 'Channel Config.', 'MSTS Calibration', and 'Setting End Band'.
- IMEI:** Includes checkboxes for 'Use RFSM', 'Use Second PC', and 'Save ODS'. There is an 'IMEI SVC&Repair Option' button.
- Operation Condition:** Includes an 'Operation Condition' button.
- WLAN:** Includes checkboxes for 'WLAN', 'Power Off-On before WLAN', and 'Bluetooth'.
- Buttons:** An 'OK' button is at the bottom right.

9. Click 'Port Setting'



The 'Hardware Component Configuration' dialog box is shown. It has a title bar with a gear icon and the text 'Hardware Component Configuration'. The dialog is divided into several sections:

- Phone:** Includes a 'Count' dropdown (set to 1), an 'I/F - 1 Type' dropdown (set to Serial COM), an 'I/F - 2 Type' dropdown (set to N/A), and an 'IF Jig Type' dropdown (set to AnyWayJig). There is a 'Port Setting' button highlighted with a red box. There is also a checkbox for 'Use ID Check JIG'.
- MSTS Sharing Controller:** Includes a 'Count' dropdown (set to 0), a 'Control Type' dropdown (set to N/A), an 'I/F Type' dropdown (set to Serial COM), and a 'Port Setting' button.
- Robot / ShieldBox:** Includes a 'Control Type' dropdown (set to N/A), an 'I/F Type' dropdown (set to Serial COM), and a 'Port Setting' button.
- Power Supply:** Includes a checkbox for 'Power Supply', an 'I/F Type' dropdown (set to GPIB), and a 'Port Setting' button.
- DBMS:** Includes a 'Server' dropdown (set to HOME(GUMI)), a 'Type' dropdown (set to Outside-Socket), and a 'Barcode Reader' section with a 'Type' dropdown (set to N/A) and an 'I/F Type' dropdown (set to Serial COM) with a 'Port Setting' button.
- MES PN Sender:** Includes a 'Type' dropdown (set to N/A) and a 'Port Setting' button.
- PBA F/T:** Includes a 'Function Test Jig' dropdown (set to N/A), an 'NI-DAQ' dropdown (set to N/A), a 'Power Detector' dropdown (set to N/A), and an 'HDMI JIG' dropdown (set to N/A). There are 'Port Setting' buttons for each of these.
- SMD F/T:** Includes a 'Type' dropdown (set to N/A), a 'B'd Address' dropdown (set to 5), and a 'Port Setting' button.
- Buttons:** 'SAVE' and 'Cancel' buttons are at the bottom right.

6. Level 1 Repair

10. Select Port Number and SAVE

Set IO BUS Configuration

Phone IO Bus Setting

Common

BaudRate: 115200
Data Bit: 8
Parity: No
Stop Bit: 1

No.	Port #1
1	1

SAVE

Cancel

11. Click OK to proceed

Set System Configuration

Set System Configuration Dialog...

Test Process

[Process] [Master] [Slave]

SMD F/T ☐ ☐
PBA F/T ☐ ☐
Calibration ☐ ☐
Final Auto ☐ ☐
Final Manual ☐ ☐
IMEI Process
IMEI Write ☒ ☐
IMEI Check ☒ ☐
MDL+2nd Check ☐ ☐
MDL Rework ☐ ☐
IMEI Read ☐ ☐
WLAN ☐
Power Off-On before WLAN ☐
Bluetooth ☐

Test Condition

Calibration
Real CAL Cycle: on every 20 default: CALs
Calibration Mode: Dynamic
Final Supply RF Signal by: Conduction
Test Signal Mode: Signaling
Developer Mode ☐
IMEI
Use RFSM ☐
Use Second PC ☐
Save ODS ☐
IMEI SVC&Repair Option

System Config.

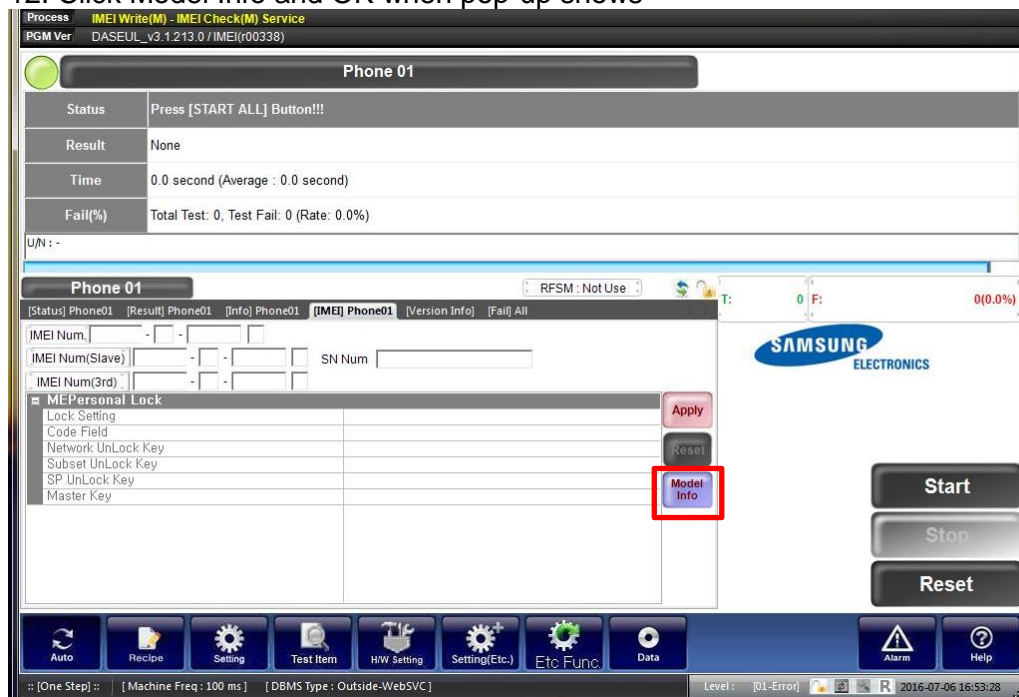
Language: English
Line Name: LINE(temp)
Line Type: Block Cell
of Phone: 1
Start Number of Jig: 1
IP Address: 10.244.114.62
Operation Condition

Model Information
Hardware Config
Signal Loss Config.
Channel Config.
WIFI Calibration
Setting and Band

OK

6. Level 1 Repair

12. Click Model Info and OK when pop-up shows



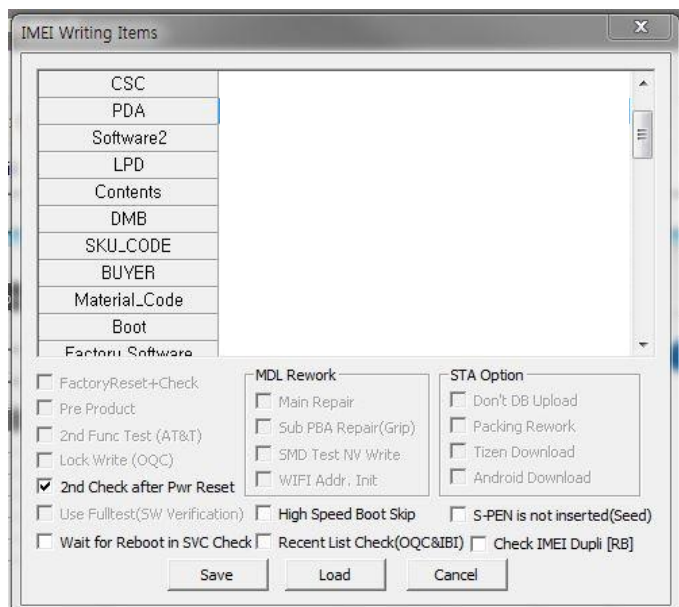
13. Click OK



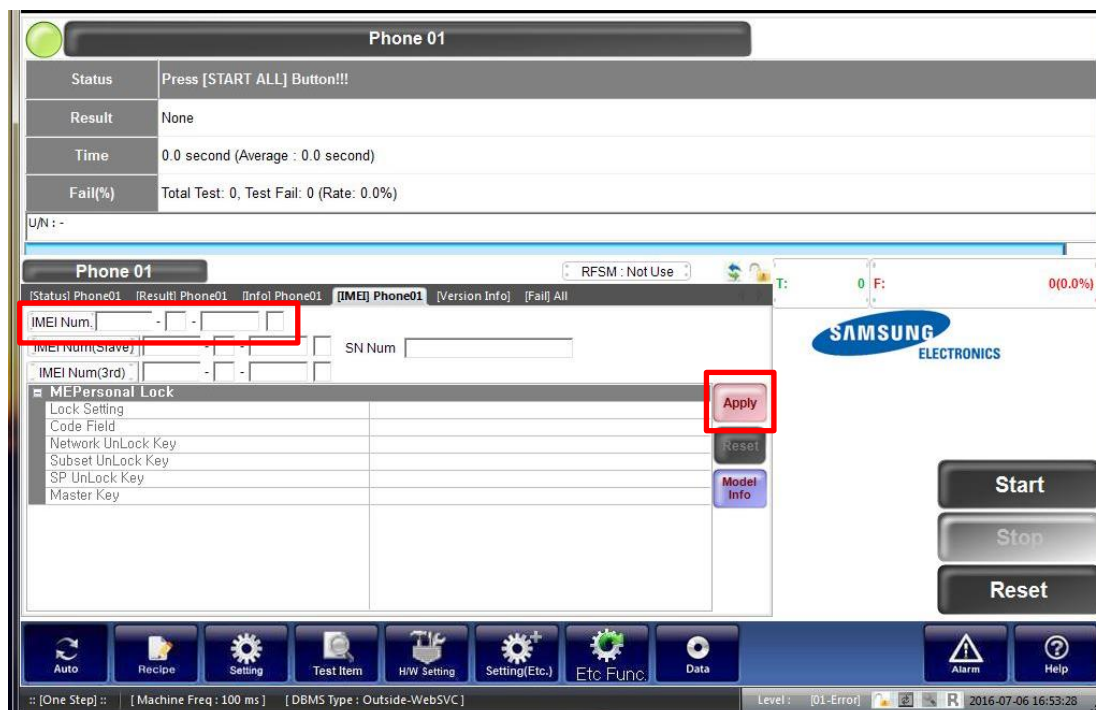
6. Level 1 Repair

14. Input SKU_CODE and BUYER, then click Save button.

※ Refer to HHPsvc→IMEI Review to check SKU Code and buyer

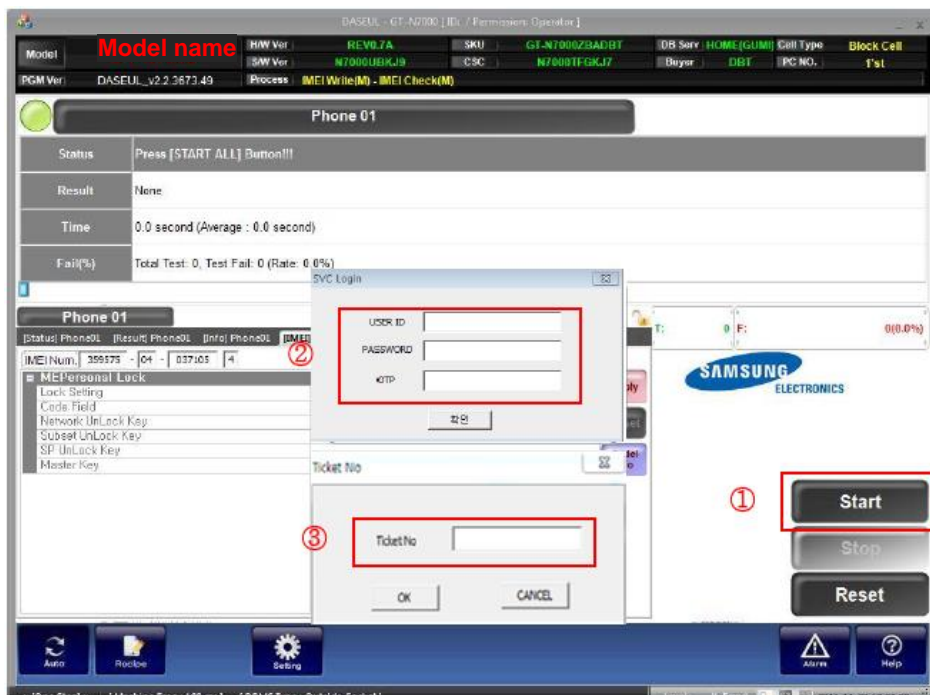


15. Input IMEI Number and click Apply



6. Level 1 Repair

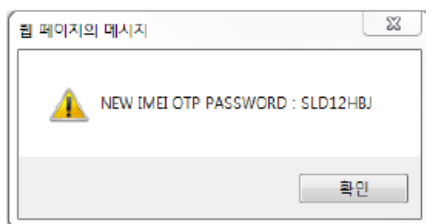
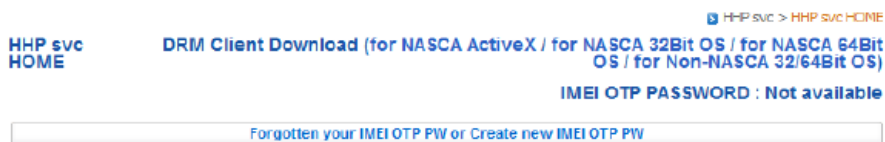
16. ① Click Start → ② Input IMEI writing ID and Password & OTP → ③ Input Ticket No



※ OTP(One time Password) : OTP is valid for 6 hours.

After that, you can get new OTP by click the “Forgotten your IMEI OTP PW or Create new IMEI OTP PW” button.

☞ OTP Location : GSPN → Knowledge → HHP svc → Home

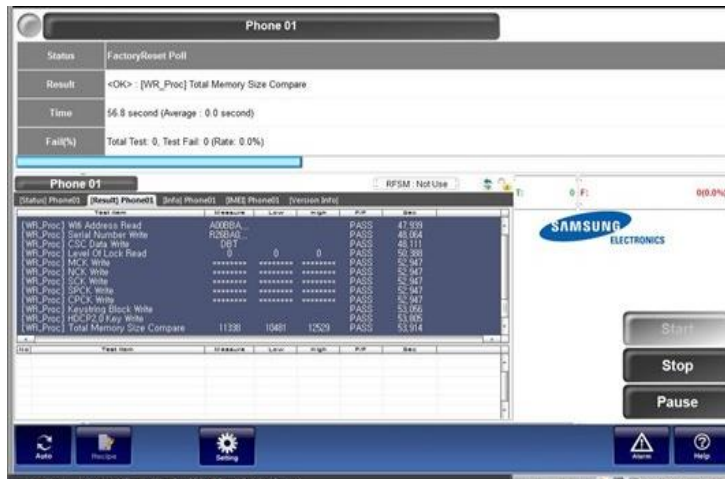


6. Level 1 Repair

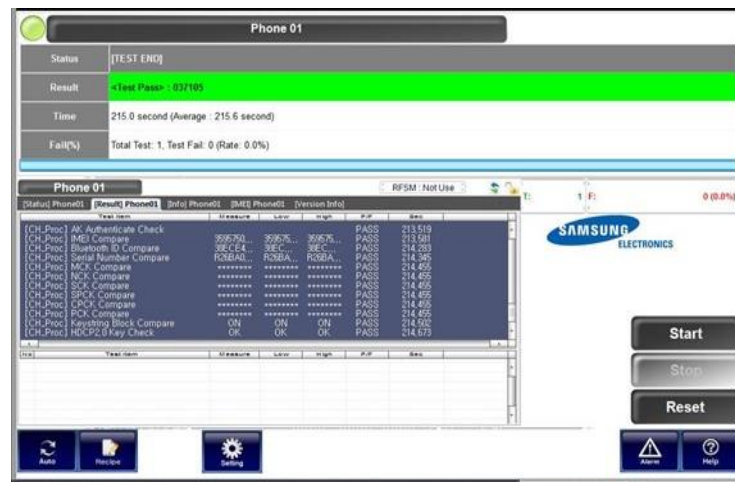
17. Connect the phone to Anyway JIG

- ※ When you connect the phone, the phone should be turned off.
After connecting the phone, the phone will be booted automatically.

18. IMEI Writing Proceeding



19. IMEI Writing Success



9. Reference Abbreviation

Reference Abbreviation

- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream