## 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 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.



## 2-1. GSM General Specification

lte	em	GSM 850	EGSM 900	DCS1800	PCS1900
Freq. Ba	ind[MHz]	824~849	880~915	1710~1785	1850~1910
Uplink/E	Downlink	869~894	925~960	1805~1880	1930~1990
ARFCN	I range	128~251	0~124 & 975~1023	512~885	512~810
Tx/Rx s	spacing	45MHz	45MHz	95MHz	80MHz
Mod. E	Bit rate/	270.833kbps	270.833kbps	270.833kbps	270.833kbps
Bit P	eriod	3.692us	3.692us	3.692us	3.692us
	ot Period/	576.9us	576.9us	576.9us	576.9us
Frame	Period	4.615ms	4.615ms	4.615ms	4.615ms
	GSM/	GMSK/	GMSK/	GMSK/	GMSK/
Modulation	EGPRS	8PSK	8PSK	8PSK	8PSK
MS F	ower	33dBm~5dBm	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm
		4(GMSK)	4(GMSK)	1(GMSK)	1(GMSK)
Power	Class	E2(8PSK)	E2(8PSK)	E2(8PSK)	E2(8PSK)
Sensitivity		-102dBm	-102dBm	-100dBm	-100dBm
TDM	A Mux	8	8	8	8



## 2-2. 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±3 dBm	17	9±3 dBm	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

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## 2-3. WCDMA General Specification

ltem	WCDMA2100(B1)	WCDMA1900(B2)	WCDMA850(B5)	WCDMA900(B8)
Freq. Band[MHz]	1920~1980	1850~1910	824~849	880~915
Uplink/Downlink	2110~2170	1930~1990	869~894	925~960
ARFCN range	UL: 9612~9888	UL: 9262~9538	UL: 4132~4233	UL: 2712~2868
Aid ON lange	DL: 10562~10838	DL: 9662~9938	DL: 4357~4458	DL: 2937~3088
Tx/Rx spacing	190MHz	80MHz	45MHz	45MHz
Mod. Bit rate/	42.2Mbps(DL)	42.2Mbps(DL)	42.2Mbps(DL)	42.2Mbps(DL)
Bit Period	5.42Mbps(UL)	5.42Mbps(UL)	5.42Mbps(UL)	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
Modulation	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(↓)
Power Class	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)	3(max+24dBm)
Sensitivity	-106dBm	-104dBm	-104dBm	-103dBm



# 2-4. LTE General Specification

ltem	LTE Band1	LTE Band3	LTE Band5	LTE Band7	LTE Band8
Freq. Band[MHz]	1920~1980	1710~1785	824~849	2500~2570	880~915
Uplink/Downlink	2110~2170	1805~1880	869~894	2620~2690	925~960
	UL:18000~18599	UL:19200~19949	UL:20400~20649	UL:20750~21449	UL:21450-21799
ARFCN range	DL:0~599	DL:1200~1949	DL:2400~2649	DL:2750~3449	DL:3450-3799
Tx/Rx spacing (MHz)	190	95	45	120	45
Channel Bandwidth (MHz)	5/10/15/20	1.4/3/5/10/15/20	1.4/3/5/10	5/10/15/20	1.4/3/5/10
Modulation	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM	QPSK,16/64QAM
Modulation	256QAM(DL only)	256QAM(DL only)	256QAM(DL only)	256QAM(DL only)	256QAM(DL only)
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity (QPSK, BW 10MHz) (dBm)	-96.3	-93.3	-94.3	-94.3	-93.3

ltem	LTE Band20	LTE Band28	LTE Band38	LTE Band40	LTE Band41
Freq. Band[MHz] Uplink/Downlink	832~862 791~821	703~748 758~803	2570~2620	2300~2400	2496~2690
ARFCN range	UL:24150~24449 DL:6150~6449	UL:27210~27659 DL:9210~9659	UL/DL:37750 ~ 38249	UL/DL:38650 ~ 39649	UL/DL:39650 ~ 41589
Tx/Rx spacing (MHz)	-41	55	0	0	0
Channel Bandwidth (MHz)	5/10/15/20	3/5/10/15/20	5/10/15/20	5/10/15/20	5/10/15/20
Modulation	QPSK,16/64QAM 256QAM(DL only)				
MS Power (dBm)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)	25.7~-39(↓)
Sensitivity(QPSK, BW 10MHz) (dBm)	-93.3	-94.8	-96.3	-96.3	-94.3

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# **3. Product Function**



## **Main Function**

Item	Description
OS	Android P OS V9.0
RF	
	6000mAh
Base Band	2.3Ghz Quad + 1.7GHz Quad
Other RF	GPS, Glonass, Beidou, Galileo / BT5.0 / USB 2.0 / WIFI 802.11 a/b/g/n/ac / NFC(SM-M307FN Only)
	Triple Camera (48MP(F2.0) + 5MP(F2.2) + 8MP(F2.2)) with LED Flash / Front Camera 16MP(F2.0)
LCD	6.4", FHD+, 2400x1080
RAM	4GB / 6GB
Storage	64GB / 128GB
Sensor	Accelerometer, Fingerprint Sensor, Gyro Sensor, Geomagnetic Sensor, Proximity Sensor, Grip sensor
Accessory	Charger: 9V/1.67A and 5V/2.0A AFC charging Data cable: 3.0pi, 0.8m(USB-C) Ear phone: 3.5pi, 4pin



## 6-1. S/W Update

#### 6-1-1. Preparation

- S/W Update program : Fenrir 5.17.xxxx
- Mobile Phone
- Data Cable

#### **\* Settings**





Data Cable : GH39-02003A



#### 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)

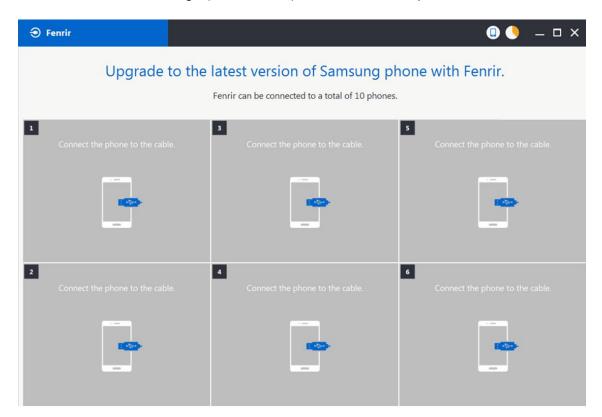
#### 2) Input ID & password

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

⊕ Fenrir		×
Input the ID and password registered to the SAMSUNG Fenrir service.	ID: Password:	
		Proxy Login Close



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.

Fenrir		N 🛛 🔸 💷 ×				
Upgrade to the latest version of Samsung phone with Fenrir. Fenrir can be connected to a total of 10 phones.						
1 Connecting to phone.	3 Connect the phone to the cable.	5 Connect the phone to the cable.				
2 Connect the phone to the cab	e. Connect the phone to the cable.	6 Connect the phone to the cable.				
	-					

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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)

€ Fenrir		□ 🌖 🗕 🗆 ×
Upgrade to the	latest version of Samsung pl Fenrir can be connected to a total of 10 phones.	
2 Update to the latest version D1222165300qL2 XSG (3579 ) Galaxy Note8 (SM-N950F) Nougat/Android 7.1.1) Sociology So	3 Connect the phone to the cable.	S Connect the phone to the cable.
2 Connect the phone to the cable.	Connect the phone to the cable.	6 Connect the phone to the cable.

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

All data will be erased from the phone du the upgrade. Will you continue? Do not disconnect phone.	Fenrir Service terms and conditions. * Information about caution regarding data loss You are about to commence the upgrade of your mobile device software using Fenrir.All files and data on your mobile device must be backed up by you before continuing. You understand that use of Fenrir to upgrade your device's software may result in the loss of your files and data.Samsung and authorised third parties, where "Fenrir " is installed, shall not be liable for the loss of any files or data stored on your mobile device as a result of this
< Cancel Start >	< Cancel Agree >

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# 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.

Fenrir		© 🌖 – □ ×
Upgrade	e to the latest version of Samsung pl Fenrir can be connected to a total of 10 phones.	
1 Bunning upgrade Do not disconnect phone. Di 222165552ygk XSG 3579 Galaxy Note® (SM. N956 Nougat(Android 7.1.1) N950FXXU2BQKG/N956 07XXU2BQKG/N950FXX	FOXM2BQKG/N95	Connect the phone to the cable.
2 Connect the phone to the co	able. Connect the phone to the cable.	Connect the phone to the cable.

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

€ Fenrir		□ 🌖 🗕 🗆 ×			
Upgrade to the latest version of Samsung phone with Fenrir. Fenrir can be connected to a total of 10 phones.					
1 Upgrade finished. Disconnect phone. D1222165552ygx XSG 33797 Galaxy Natek (Mr.N950F) Nougat(Android 71.1) NSOFXX128Q/KG/N950F0X12	XM2BQKG/N95	S Connect the phone to the cable.			
2 Connect the phone to the cab	e. Connect the phone to the cable.	6 Connect the phone to the cable.			

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#### 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 v3.13.2.exe or above
- Mobile Phone
- Data Cable
- S/W Binary files (downloaded from GSPN)

#### **※** Settings





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

Open up the S/W Installation Program by executing the "Odin3 v3.13.2.exe"

📮 Odin3 v3.13	
Odin3	
ID:COM	
Log Options Pit	Tips - How to download HOME binary OLD model : Download one binary "(BUILD_VER)_XXX_HOME.tar.md5" ex) G925FXXU3DPA5_G925F0XA3DPA5_G925FXXU3DPA5_HOME.tar.md5 NEW model : Download BL + AP + CP + HOME_CSC
	BL
	E AP
	CP CP
	CSC
	USERDATA
	Mass D/L ►
	Start Reset Exit
Odin Community : <u>http://mobilerndhub.sec.samsung.net/hub/site/od</u>	in/

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- 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 v3.13.2 or above" checks MD5 checksum just after file selection.

🔁 Odin3 v3.13			
Odin3			
ID:COM			
	Tipe - H	low to download H	HOME biopry
Log Options Pit	103-11	OLD model : Do ex) G925F	ownload one binary "(BUILD_VER)_XXX_HOME.tar.md5" FXXU3DPA5_G925FOXA3DPA5_G925FXXU3DPA5_HOME.tar.md5 ownload BL + AP + CP + HOME_CSC
<ul><li>✓ Nand Erase</li><li>✓ Re-Partition</li></ul>		BL	3960FXXU1ARB7_CL13087450_QB17004700_REV01_user_low_ship.tar.md5
F. Reset Time	✓	AP	XXU1ARB7_CL13087450_QB17004700_REV01_user_low_ship_meta.tar.md5
DeviceInfo     Flash Lock		СР	#HFOIL121₩CP_G960FXXU1ARB7_CL717541_QB8985489_SIGNED.tar.md5
	<b>V</b>	CSC	960FOXM1ARB7_CL13087450_QB17004700_REV01_user_low_ship.tar.md5
		USERDATA	
AutoStart			Mass D/L ►
Reboot download if possible			Start Reset Exit
Odin Community : <u>http://mobilerndhub.sec.samsung.net/hub/site/od</u>	<u>lin/</u>		



#### 2. Enter into Download Mode

- To enter into Download Mode, insert USB cable into Smart phone and connect to computer And press Volume Down + UP button simultaneously followed by pressing Volume up button as a direction of the phone.



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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.

📮 Odina v3.13		
Odin3		
ID:COM		
0:[COM3]		
Log         Options         Pit <osm> Please wait         <osm> Checking MD5 finished Sucessfully           <osm> Leave CS         <osm> Enter CS for MD5           <osm> Check MD5 Do not unplug the cable         <osm> Please wait           <osm> Check MD5 Do not unplug the cable         <osm> Enter CS for MD5           <osm> Check MD5 Do not unplug the cable         <osm> Check MD5           <osm> Enter CS for MD5         <osm> Check MD5 Do not unplug the cable           <osm> Check MD5 Do not unplug the cable         <osm> Check MD5           <osm> Check MD5 Do not unplug the cable         <osm> Check MD5           <osm> Check MD5 Do not unplug the cable         <osm> Check MD5           <osm> Check MD5 Do not unplug the cable         <osm> Check MD5           <osm> Check MD5         Do not unplug the cable           <osm> Check MD5         OSM&gt; Check MD5           <osm> Check MD5         OSM&gt; Check MD5           <osm> Check MD5         Osm&gt; Checking MD5 finished Sucessfully           <osm> Check MD5         Osm&gt; Checking MD5 finished Sucessfully           <osm> Leave CS         <id:0 003=""> Added!!           <id:0 003=""> Added!!         <id:0 003=""> Added!!</id:0></id:0></id:0></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm></osm>	E	Tips - How to download HOME binary OLD model : Download one binary "(BUILD_VER)_XXX_HOME.tar.md5" ex) G925FXXU3DPA5_G925F0XA3DPA5_G925F0XU3DPA5_HOME.tar.md5 NEW model : Download BL + AP + CP + HOME_CSC BL 3960FXXU1ARB7_CL13087450_QB17004700_REV01_user_low_ship.tar.md5 W AP XXU1ARB7_CL13087450_QB17004700_REV01_user_low_ship_meta.tar.md5 W CP #UH0ILH2I\#CP_G960FXXU1ARB7_CL717541_QB8985489_SIGNED.tar.md5 GCS 960F0XM1ARB7_CL13087450_QB17004700_REV01_user_low_ship.tar.md5 W CSC 960F0XM1ARB7_CL13087450_QB17004700_REV01_user_low_ship.tar.md5 Mass D/L ► Start Reset Exit

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.

😝 Odin3 v3.13			
Odin3			
PASS!			
03:33 ID:COM			
Log         Options         Pit <id:0 003=""> system.img            <id:0 003=""> vendor.img            <id:0 003=""> dandba.img</id:0></id:0></id:0>	-	ex) G925F	NCME Dining y "(BUILD_VER)_XXX_HOME.tar.md5" FXXU3DPA5_G925FOXA3DPA5_G925FXXU3DPA5_HOME.tar.md5 ownload BL + AP + CP + HOME_CSC
<id:0 003=""> userdata.img <id:0 003=""> modem.bin <id:0 003=""> Transmission Complete</id:0></id:0></id:0>		BL	3960FXXU1ARB7_CL13087450_QB17004700_REV01_user_low_ship.tar.md5
<id:0 003=""> Now Writing Please wait about 2 minutes <id:0 003=""> Receive Response from boot-loader</id:0></id:0>		AP	XXU1ARB7_CL13087450_QB17004700_REV01_user_low_ship_meta.tar.md5
<pre><id:0 003=""> modem_debug.bin <id:0 003=""> Transmission Complete <id:0 003=""> Now Writing Please wait about 2 minutes</id:0></id:0></id:0></pre>		СР	#H이너리₩CP_G960FXXU1AR87_CL717541_Q88985489_SIGNED.tar.md5
<id:0 003=""> Receive Response from boot-loader <id:0 003=""> cache.img <id:0 003=""> omr.img</id:0></id:0></id:0>		CSC	960FOXM1ARB7_CL13087450_Q817004700_REV01_user_low_ship.tar.md5
<id:0 003=""> odm.img <id:0 003=""> hidden.img <id:0 003=""> RQT_CLOSE !!</id:0></id:0></id:0>		USERDATA	
<pre><id:0 003=""> RES OK !! <id:0 003=""> Remain Port 0 <id:0 003=""> Removed!!</id:0></id:0></id:0></pre>			Mass D/L ►
<osm> All threads completed. (succeed 1 / failed 0)</osm>			Start Reset Exit
Odin Community : <u>http://mobilerndhub.sec.samsung.net/hub/site</u>	/odin/		

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  $\rightarrow$  General Management  $\rightarrow$  Reset

#### **\*** Caution. Never disconnect during the S/W downloading.

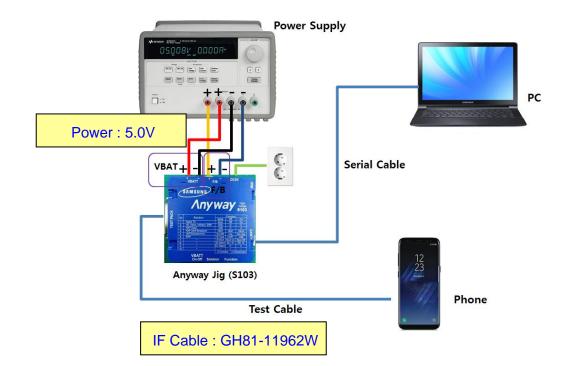


## 6-3. IMEI writing

#### 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"
②Launcher	DASEUL_Launcher_v4.0.0 or higher -Uploaded on HHPsvc Notice
③ Runtime File	<ol> <li>DASEUL_IMEI_ALL_Runtime_3.1.386.0_r00573.CAB or higher</li> <li>-Uploaded on HHPsvc Notice</li> <li>Make 'ModelName' folder at the same position with launcher &amp; Runtime file.</li> </ol>
	<ul> <li>DASEUL_IMEI_ALL_Runtime_3.1.386.0_r00573.CAB</li> <li>DASEUL_Launcher_v4.0.0.exe</li> <li>SM-A920F_128DS(CSC)_IMEI_Ver_3.1.385.1.CAB</li> </ul>
④Model File	Copy Model File under the 'SM-G8870' folder

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## 6-3-2. IMEI writing Process

DASKUL Laincher for Service Ver 30.10      Clauncher Status >     HODE: Service ····     Service ·····     Service ····     Service ·····	1. Run DASEUL_Launcher_	_v4.0.0
Club Lundre for sense ver 1210	ASEUL_Launcher_v4.0.0.exe	
A clock of for some ::: Complete	2. Select Service Mode	52
Image: State Merrie Media for Service 2:       Complete         Select State Merrie Media for Service 2::       Complete         Image: State Merrie Media for Service 2::       Service 1::         Image: State Merrie Media for Service 2::       Service 1::         Image: State Merrie Media for Service 2::       Service 1::         Image: State Merrie Media for Service 2::       Service 1::         Image: State Merrie Merie Me	-	
State Herme Hede for Service ::::::::::::::::::::::::::::::::::::	< Launcher Status >	
I weeken Setting         I weeken Seting         I weeken Seting </td <td></td> <td></td>		
I weeken Setting         I weeken Seting         I weeken Seting </td <td>- Select Extract Process-</td> <td></td>	- Select Extract Process-	
Section Wood Pan Section Wood		System Setting
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Test Process

[Process]

SMD F/T

PBA F/T

Calibration

Final Auto Final Manual

IMEI Process

IMEI Write

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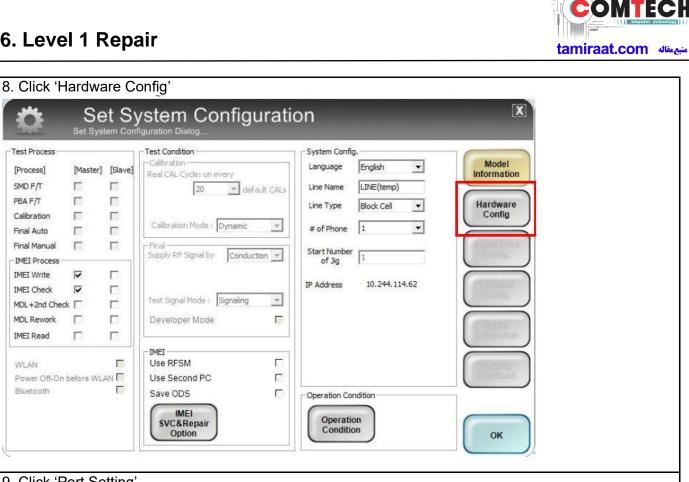
MDL Rework

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Common		Port #1		
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IMEI Writing Items	
CSC PDA Software2 LPD Contents DMB SKU_CODE	
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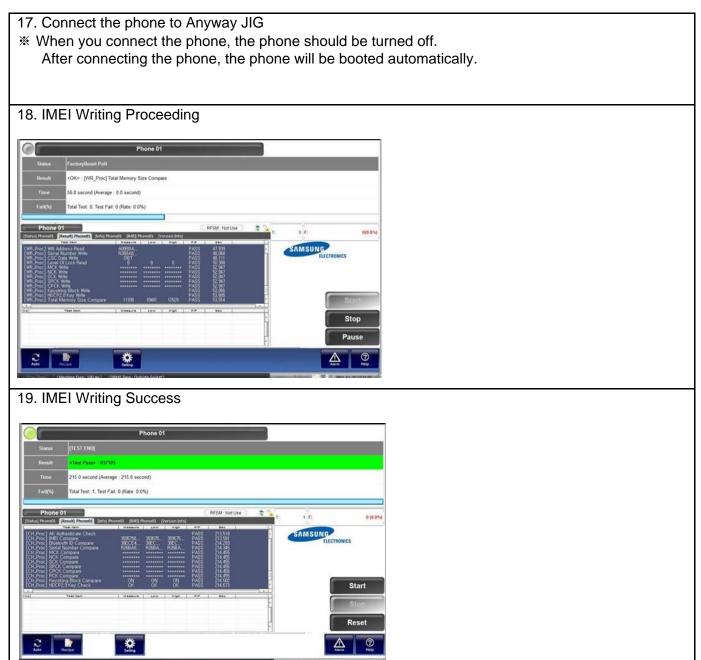
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16. ① Click Start $\rightarrow$ ②Input IMEI writing ID and Password & OTP $\rightarrow$ ③Input Ticket No	
Model     Model     Model     Nover     REV0.7A     SKU     GEV70002BAD(0T     DBS server HOME (GUMIt) Cell Type     Block Cell       Model     Model     MW Ver     N20000ERCU9     CSC     N/2000TEGKJ7     Buyer     DBT     PC NO.     Fat       RGM Ver     DASEUL_V2.2 3673.49     Process     METW/He(M) - METCheck(M)     DETCheck(M)     Fat       Status     Press (START ALL) Burron111     Result     None       Time     0.0 second (Average : 0.0 second)	
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Image: Start       Image: Start         Image: Start       Image: Start	
<ul> <li>※ OTP(One time Password) : OTP is valid for 6 hours.</li> <li>After that, you can get new OTP by click the "Forgotten your IMEI OTP PW or Crete new IMEI OTP PW" button.</li> <li>☞ OTP Location : GSPN → Knowledge → HHP svc → Home</li> </ul>	
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팀 페이지의 메시지 않 ▲ NEW IMEI OTP PASSWORD : SLD12HBJ 록민	

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## **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