Model	G4 Series
Revision	Revision 8.0
Date	24 th Dec 2015



Revision History

No	Date	Revision	Country / buyer	Contents	Target	Type	Issue	Page
1	12 th Nov 2015	1.0	Global /All (Except USA, Canada, Puertorico)	Service Guide	Service Center	S/W	G4 series MSM Big core disable tool Guide	Page 2
2	20 th Nov 2015	2.0	Global /All (Except USA, Canada, Puertorico)	Service Guide	Service Center	S/W	(Modify) G4 series MSM Big Core disable tool Guide	Page 6
3	26 th Nov 2015	3.0	Global /All (Except USA, Puertorico)	Service Guide	Service Center	S/W	(Add) G4 series MSM Big Core disable tool Guide	Page 10
4	08 th Dec 2015	4.0	Global /All (Except USA, Puertorico)	Service Guide	Service Center	S/W	(Add) G4 series MSM Big Core disable tool Guide	Page 11
5	11 th Dec 2015	5.0	Global /All (Except USA)	Service Guide	Service Center	S/W	(Add) G4 series MSM Big Core disable tool Guide	Page 12
6	18 th Dec 2015	6.0	Global /All (Except USA, Canada, Puerto rico, Chile,China, Japan)	Service Guide	Service Center	S/W	(MOS Add) G4 series MSM Big Core disable tool Guide	Page 13
7	23 th Dec 2015	7.0	Global /All	Service Guide	BRC	H/W	G4 series MSM Ball crack repair Guide	Page 16
8	23 th Dec 2015	7.1	Global /All	Service Guide	BRC	H/W	(Modify) G4 series MSM Ball crack repair Guide	Page 17
6	24 th Dec 2015	8.0	Global /All (Except USA, Canada, Chile,China, Japan)	Service Guide	Service Center	S/W	(MOS Add) G4 series MSM Big Core disable tool Guide	Page 13



G4 series MSM Big core disable tool Guide

Model	G4 series	Revision	Rev 1.0	Date	12 th Nov 2015	Со	untry	Global	Buyer	All(Except	USA,	Canada,	Puertorico)	Type	S/W
Contents	Se	rvice Inform	ation \square	Guide	☐ Notification		Target	□ BR0		DSC 👿	ASC				
					Int	form	ation G	uide							

This document must be translated to language of each country

1. Purpose

- Sometimes G4 series phone happens "Infinite loop Auto power off" issue.
- if phone's symptom is "Infinite loop Auto power off", you should Change a Main board.
- if customer wants to Data Back-up, you should use this Recovery tool.
- Please Data Back-up proceed after Recovery complete.
- This Phone (Recovery was completed) is abnormal Main Board.
- Please don't reuse the Main Board.

2. Installation Produre

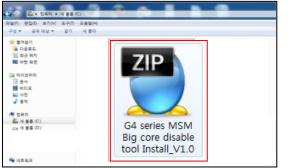
- G4 series MSM Big core disable tool Install_V1.0.zip file unzip on C Drive.
- LGUP_install_Ver**.msi file installed on the C drive.
- LGUP 8994 DLL Ver **.msi file installed on the C drive.
- Check the G4 series MSM Big core disable tool File folder. (C Drive)
- tot files must be selected according to the tot file series model.

3. Notice

- if you have checked the other symptom Power Problem (Except "Infinite loop Auto power off"), shouldn't use this tool.
- This tool is support from Only L OS.
- GSFS Customer Symptom code: "Auto Power off"

Tot file series	Model name
	LGH815
	LGH815AR
	LGH815K
H815XX Series	LGH815L
HOTOAA Selles	LGH815P
	LGH815PX
	LGH815T
	LGH815TR
	LGH818
H818XX Series	LGH818P
	LGH818N
H819XX Series	LGH819
V32 Series	LGV32
H810XX Series	LGH810PR
H820XX Series	LGH820

* Please refer more detail Install & User Guide on the Next page.





"Next" Click.

Next >



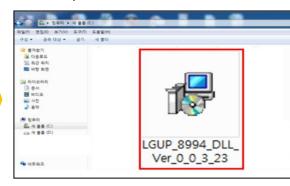
LGUP Program Install Complete.



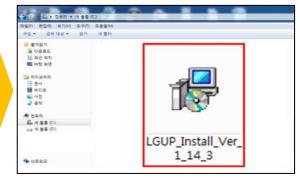
Unzip on C rive



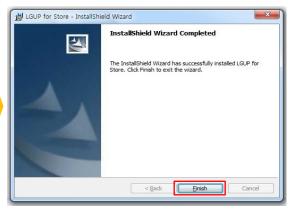
I accept~ Click & "Next" Click.



DLL Install file Double click.



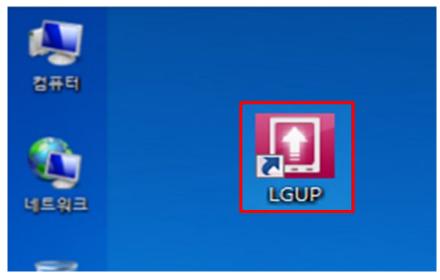
Recovery tool Install file Double click.



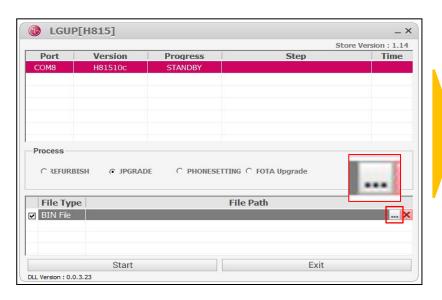
"Finish" Click

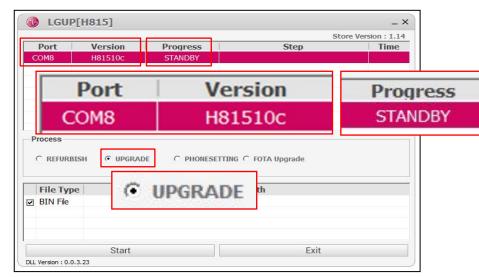


DLL file Install Complete. (You can check "Control Panel")

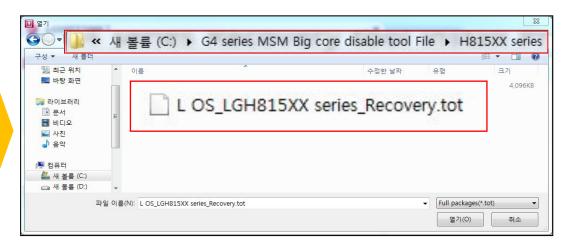


- 910K D/L Cable connect.
- LGUP icon Double click.

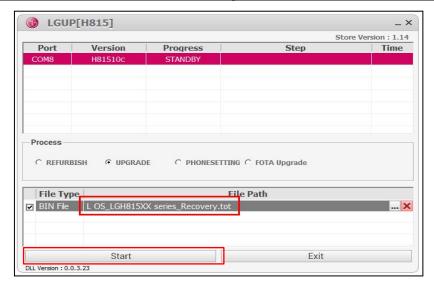




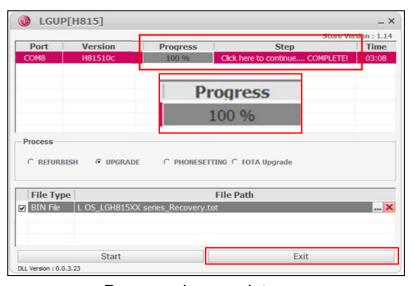
- Check the Port & Phone Model.
- Check the Progress "STANDBY"
- Check the Process "UPGRADE"



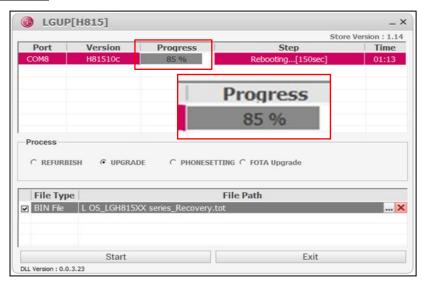
- Check the Bin file (*.tot).
- "Open" Button click.



- Check the file Path.
- "Start" Button click.



- Recovery is complete.
- "Exit" Button click.



• Check the Progress "0~99%"

You can customer's user Data Back-up !!!



(Modify) G4 series MSM Big core disable tool Guide

Model	G4 series	Revision	Rev 2.0	Date	20 th Nov 2015	Country	Global	Buyer	All(Except U	ISA, Canada,	Puertorico)	Туре	S/W
Contents	S Se	ervice Inform	ation \square	Guide	☐ Notification	Targe	t 🗆 BR		DSC 🔽 AS	SC 🗆 CIC			
					In	formation	Guide						

* This document must be translated to language of each country

1. Purpose

- Sometimes G4 series phone happens "Infinite loop Auto power off" issue.
- if phone's symptom is "Infinite loop Auto power off", you should Change a Main board.
- if customer wants to Data Back-up, you should use this Recovery tool.
- Please Data Back-up proceed after Recovery complete.
- This Phone (Recovery was completed) is abnormal Main Board.
- Please don't reuse the Main Board.

2. Installation Produre

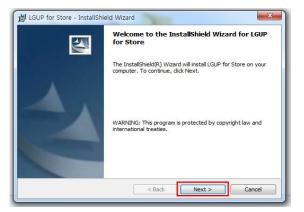
- if you had a v1.0 tot file folder,
 you should remove v1.0 tot file folder on C drive.
- you should check v2.0 tot file folder on C driver.
- if you use the LGUP tool, you should check "Model name" & "tot file name". (Please refer right side table)
- LGUP, DLL file is not changed.

- if you have checked the other symptom Power Problem (Except "Infinite loop Auto power off"), shouldn't use this tool.
- This tool is support from Only L OS.
- GSFS Customer Symptom code: "Auto Power off"

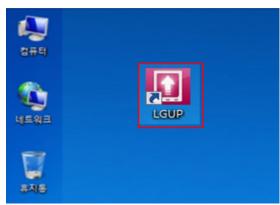
Model name	tot file Name
LGH815	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_ RECOVERY_5.1
LGH815K	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_ RECOVERY_5.1
LGH815TR	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_ RECOVERY_5.1
LGH818	H81810c_RECOVERY_5.1
LGH818P	LGH818AT-00-V10c-GLOBAL-COM-NOV-17-2015+0_ RECOVERY_5.1
LGH818N	LGH818AT-00-V10c-GLOBAL-COM-NOV-17-2015+0_ RECOVERY_5.1
LGH819	H81910c_RECOVERY_5.1
LGV32	LGV3210o_RECOVERY_5.1



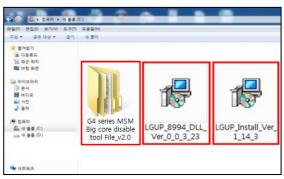
Install zip file



· "Next" Click.



• LGUP Program Install Complete.



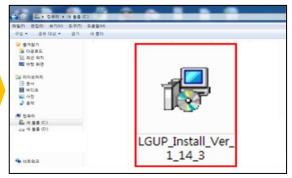
Unzip on C rive



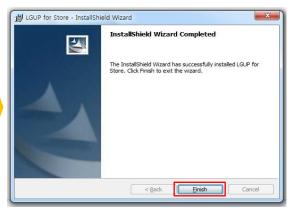
• I accept~ Click & "Next" Click.



• DLL Install file Double click.



Recovery tool Install file click.



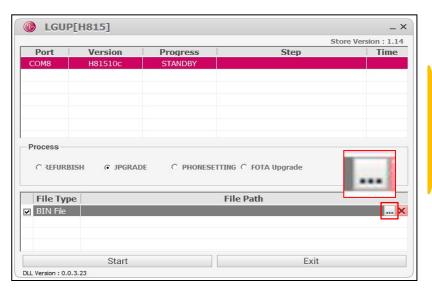
"Finish" Click



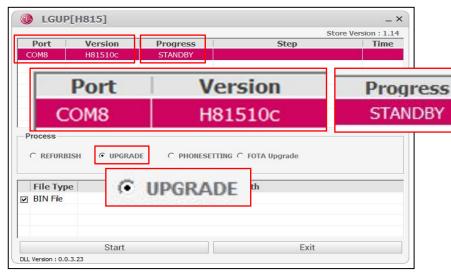
DLL file Install Complete.
 (You can check "Control Panel")



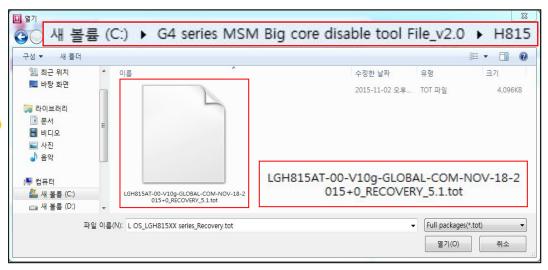
- 910K D/L Cable connect.
- LGUP icon Double click.



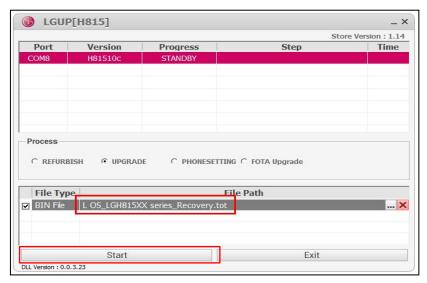
Select the Bin File (*.tot).



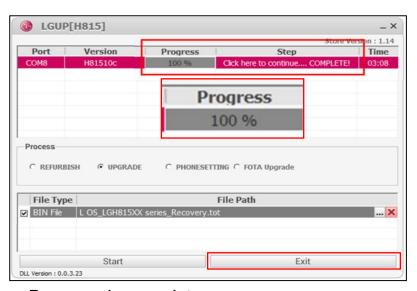
- Check the Port & Phone Model.
- Check the Progress "STANDBY"
- Check the Process "UPGRADE"



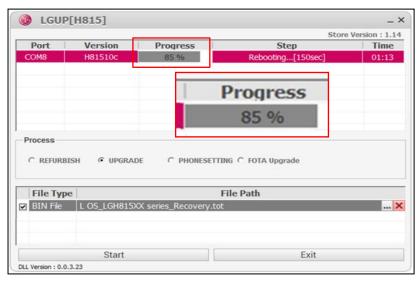
- Check the Bin file (*.tot).
- "Open" Button click.



- Check the file Path.
- "Start" Button click.



- Recovery is complete.
- "Exit" Button click.



• Check the Progress "0~99%"

You can customer's user Data Back-up !!!



(Add) G4 series MSM Big core disable tool Guide

Model	G4 series	Revision	Rev 3.0	Date	26 th Nov 2015	Country	Global	Buyer	All(Except l	JSA, Puertorico)	Тур	e S/W
Contents	S Se	ervice Inform	ation \square	Guide	☐ Notification	Target	: □ BR		DSC ASC	□ CIC		
					In	formation (auide					

* This document must be translated to language of each country

1. Purpose

- Sometimes G4 series phone happens "Infinite loop Auto power off" issue.
- if phone's symptom is "Infinite loop Auto power off", you should Change a Main board.
- if customer wants to Data Back-up, you should use this Recovery tool.
- Please Data Back-up proceed after Recovery complete.
- This Phone (Recovery was completed) is abnormal Main Board.
- Please don't reuse the Main Board.

2. Installation Produre

- if you had a v1.0 tot file folder, you should remove v1.0 tot file folder on C drive.
- you should check v2.0 tot file folder on C driver.
- if you use the LGUP tool, you should check "Model name" & "tot file name". (Please refer right side table)
- LGUP, DLL file is not changed.

- if you have checked the other symptom Power Problem (Except "Infinite loop Auto power off"), shouldn't use this tool.
- This tool is support from Only L OS.
- GSFS Customer Symptom code: "Auto Power off"

Model name	tot file Name
LGH812	H81210h_recovery_RECOVERY_5.1
LGH815	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECO ERY_5.1
LGH815K	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_5.1
LGH815TR	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_5.1
LGH818	H81810c_RECOVERY_5.1
LGH818P	LGH818AT-00-V10c-GLOBAL-COM-NOV-17-2015+0_RECOVERY_5.1
LGH818N	LGH818AT-00-V10c-GLOBAL-COM-NOV-17-2015+0_RECOVERY_5.1
LGH819	H81910c_RECOVERY_5.1
LGV32	LGV3210o_RECOVERY_5.1



(Add) G4 series MSM Big core disable tool Guide

Model	G4 series	Revision	Rev 4.0	Date	08 th Dec 2015	Country	Global	Buyer	All(Exc	cept U	SA, Puertorico)	Туре	S/W
Contents	s Se	ervice Inform	ation \square	Guide	☐ Notification	Target	□ BR		DSC 🔽	ASC	□ CIC		
					Int	formation (auide						

* This document must be translated to language of each country

1. Purpose

- Sometimes G4 series phone happens "Infinite loop Auto power off" issue.
- if phone's symptom is "Infinite loop Auto power off", you should Change a Main board.
- if customer wants to Data Back-up, you should use this Recovery tool.
- Please Data Back-up proceed after Recovery complete.
- This Phone (Recovery was completed) is abnormal Main Board.
- Please don't reuse the Main Board.

2. Installation Produre

- if you had a v1.0 tot file folder, you should remove v1.0 tot file folder on C drive.
- you should check v2.0 tot file folder on C driver.
- if you use the LGUP tool, you should check "Model name" & "tot file name". (Please refer right side table)
- LGUP, DLL file is not changed.

- if you have checked the other symptom Power Problem (Except "Infinite loop Auto power off"), shouldn't use this tool.
- This tool is support from Only L OS.
- GSFS Customer Symptom code: "Auto Power off"

Model	tot file Name
LGH812	H81210h_recovery_RECOVERY_5.1
LGH815	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECO ERY_5.1
LGH815AR	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECO ERY_5.1
LGH815K	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECO ERY_5.1
LGH815L	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECO ERY_5.1
LGH815P	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECO ERY_5.1
LGH815PX	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECO ERY_5.1
LGH815T	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECO ERY_5.1
LGH815TR	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECO ERY_5.1
LGH818	H81810c_RECOVERY_5.1
LGH818N	LGH818AT-00-V10c-GLOBAL-COM-NOV-17-2015+0_RECOVERY_5.1
LGH818P	LGH818AT-00-V10c-GLOBAL-COM-NOV-17-2015+0_RECOVERY_5.1
LGH819	H81910c_RECOVERY_5.1
LGV32	LGV3210o_RECOVERY_5.1



(Add) G4 series MSM Big core disable tool Guide

Model	G4 series	Revision	Rev 5.0	Date	11 th Dec 2015	Country		Global	Buye	r	All (Except USA)	Туре	S/W
Contents	Serv	ice Inform	ation \square	Guide	□ Notification	Target		BRC 🗹	DSC	V	ASC	□ CIC		
					Inf	ormation Gu	uide							

* This document must be translated to language of each country

1. Purpose

- Sometimes G4 series phone happens "Infinite loop Auto power off" issue.
- if phone's symptom is "Infinite loop Auto power off", you should Change a Main board.
- if customer wants to Data Back-up, you should use this Recovery tool.
- Please Data Back-up proceed after Recovery complete.
- This Phone (Recovery was completed) is abnormal Main Board.
- Please don't reuse the Main Board.

2. Installation Produre

- if you had a v1.0 tot file folder, you should remove v1.0 tot file folder on C drive.
- you should check v2.0 tot file folder on C driver.
- if you use the LGUP tool, you should check "Model name" & "tot file name". (Please refer right side table)
- LGUP, DLL file is not changed.

- if you have checked the other symptom Power Problem (Except "Infinite loop Auto power off"), shouldn't use this tool.
- This tool is support from Only L OS.
- GSFS Customer Symptom code: "Auto Power off"

Model	tot file Name
LGH810PR	LGH810AT-00-V10a-GLOBAL-COM-DEC-08-2015+0_RECOVERY_
LGH812	H81210h_recovery_RECOVERY_5.1
LGH815	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_
LGH815AR	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_
LGH815K	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_
LGH815L	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_
LGH815P	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_
LGH815PX	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_
LGH815T	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_
LGH815TR	LGH815AT-00-V10g-GLOBAL-COM-NOV-18-2015+0_RECOVERY_
LGH818	H81810c_RECOVERY_5.1
LGH818N	LGH818AT-00-V10c-GLOBAL-COM-NOV-17-2015+0_RECOVERY_0
LGH818P	LGH818AT-00-V10c-GLOBAL-COM-NOV-17-2015+0_RECOVERY_
LGH819	H81910c_RECOVERY_5.1
LGV32	LGV3210o_RECOVERY_5.1



(MOS Add) G4 series MSM Big core disable tool Guide

Model	G4 series	Revision	Rev 6.0	Date	18 th Dec 2015	Country	Global	Buyer		All (Excep	ot USA, Ca Jap	nada, Chile,China, an)	Туре	S/W
Contents	S □ Se	ervice Inforr	mation [□ Guid	le 🗆 Notificatio	on T	Target [□BRC		DSC	☐ ASC	□ CIC		
-	Information Guide													

* This document must be translated to language of each country

1. Purpose

- Sometimes G4 series phone happens "Infinite loop Auto power off" issue.
- if phone's symptom is "Infinite loop Auto power off", you should Change a Main board.
- if customer wants to Data Back-up, you should use this Recovery tool.
- Please Data Back-up proceed after Recovery complete.
- This Phone (Recovery was completed) is abnormal Main Board.
- Please don't reuse the Main Board.

2. Installation Produre

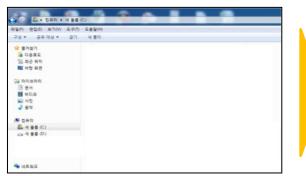
[Case 1] if there is Previously tot file folder.

- Delete old tot file folder, Download New tot file folder on C drive [Case 2] if there is no a Previously tot file folder.
- : Download New tot file folder on C drive
- if you use the LGUP tool, you should check
- "Model name" "Android OS version & "tot file name". (Please refer right side table)
- LGUP, DLL file is not changed.

- if you have checked the other symptom Power Problem (Except "Infinite loop Auto power off"), shouldn't use this tool.
- GSFS Customer Symptom code: "Auto Power off"

Model	tot file	e Name				
Model	Android OS : LOS	Android OS : MOS				
LGH810PR	LGH810AT-00-V10a-GLOBAL-COM-DEC- 08-2015+0_RECOVERY_5.1					
LGH812	H81210h_recovery_RECOVERY_5.1					
LGH815	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0				
LGH815A R	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_6.0				
LGH815K	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0				
LGH815L	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0				
LGH815P	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_6.0				
LGH815PX	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1					
LGH815T	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0				
LGH815TR	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0				
LGH818	H81810c_RECOVERY_5.1					
LGH818N	LGH818AT-00-V10c-GLOBAL-COM-NOV-1 7-2015+0_RECOVERY_5.1	LGH818AT-00-V20a-GLOBAL-COM-DEC- 08-2015+0_RECOVERY_6.0				
LGH818P	LGH818AT-00-V10c-GLOBAL-COM-NOV-1 7-2015+0_RECOVERY_5.1	LGH818AT-00-V20a-GLOBAL-COM-DEC- 08-2015+0_RECOVERY_6.0				
LGH819	H81910c_RECOVERY_5.1					
LGV32	LGV3210o_RECOVERY_5.1					

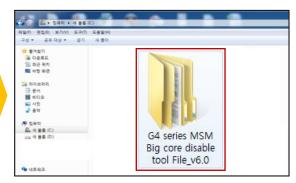
◆ G4 series MSM Big core disable tool Install Procedure [Case 1]



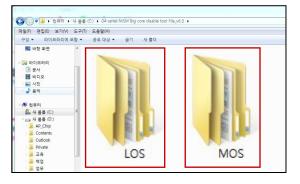
Delete the tot file folder on C drive



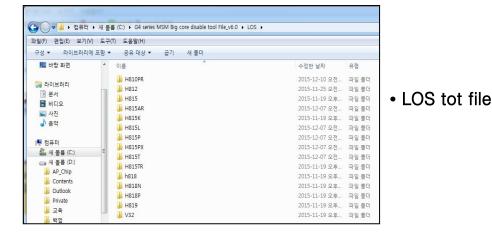
• Install Only tot file folder

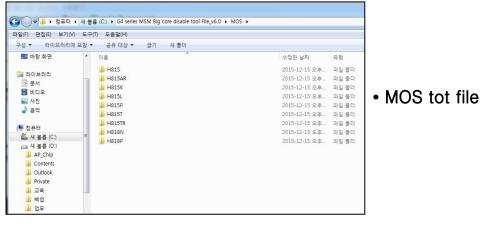


New tot file folder



LOS & MOS folder

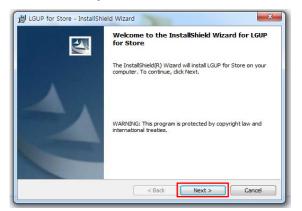




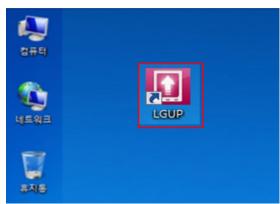
◆ G4 series MSM Big core disable tool Install Procedure [Case 2]



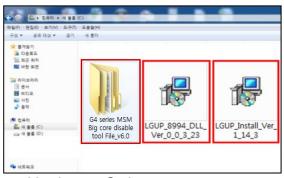
Install zip file



· "Next" Click.



LGUP Program Install Complete.



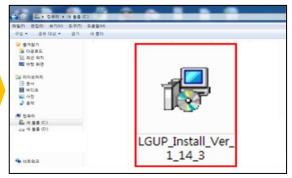
Unzip on C rive



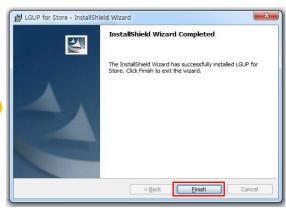
I accept~ Click & "Next" Click.



• DLL Install file Double click.



• Recovery tool Install file click.



"Finish" Click



DLL file Install Complete.
 (You can check "Control Panel")



G4 series MSM Ball crack repair Guide

Model	G4 series	Revision	Rev 7.0	Date	23 th Dec 2015	Country	Global	Buyer		All	Туре	H/W
Contents	□ Serv	ice Inform	ation 👿	Guide	□ Notification	Target N	BRC □ □	SC 🗆	ASC	□ CIC		
Information Guide												

* This document must be translated to language of each country

1. Customer Symptom

- In case of Auto Power off symptom, please check either this is related with Ball crack issue or not in advance. (refer to "How to know Ball Crack")

2. Repair Guide

- In case of Ball Crack issue, please replace eMMc, MSM with new Parts.

3. Notice

- Please add "MSM Ball crack" in the remarks column.

Detail Symptom



How to know Ball Crack

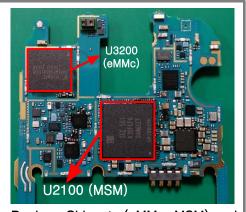


Power on by Smart JIG



But Auto Power off after insert Battery

Repair method



Replace Chipsets (eMMc, MSM) and attached with new Part

***** Important





(modify) G4 series MSM Ball crack repair Guide

Model	G4 series	Revision	Rev 7.1	Date	23 th Dec 2015	Country		Global	Buyer		All	Туре	H/W
Contents	☐ Serv	ice Inform	ation 🗹	Guide	□ Notification	Target	N/	BRC 🗆 D	SC 🗆	ASC	□ CIC		
	Information Guide												

* This document must be translated to language of each country

1. Customer Symptom

- In case of Auto Power off symptom, please check either this is related with Ball crack issue or not in advance. (refer to "How to know Ball Crack")

2. Repair Guide

- In case of Ball Crack issue, please replace eMMc, MSM with new Parts.

3. Notice

- Please add "MSM Ball crack" in the remarks column.

Detail Symptom



Infinite Auto Power off

How to know Ball Crack

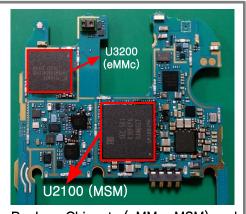


Power on by Smart JIG



But Auto Power off after insert Battery

Repair method



Replace Chipsets (eMMc, MSM) and attached with new Part

***** Important



Do not apply Underfill after New MSM Chipset changed.



(MOS Add) G4 series MSM Big core disable tool Guide

Model	G4 series	Revision	Rev 8.0	Date	24 th Dec 2015	Country		Global	Buyer	All (I	Except USA)	Туре	S/W
Contents	Serv	ice Inform	ation \square	Guide	□ Notification	Target	□ E	BRC 🗹 🖸	SC 🗹	ASC	□ CIC		
Information Guide													

* This document must be translated to language of each country

1. Purpose

- Sometimes G4 series phone happens "Infinite loop Auto power off" issue.
- if phone's symptom is "Infinite loop Auto power off", you should Change a Main board.
- if customer wants to Data Back-up, you should use this Recovery tool.
- Please Data Back-up proceed after Recovery complete.
- This Phone (Recovery was completed) is abnormal Main Board.
- Please don't reuse the Main Board.

2. Installation Produre

[Case 1] if there is Previously tot file folder.

- Delete old tot file folder, Download New tot file folder on C drive [Case 2] if there is no a Previously tot file folder.
- : Download New tot file folder on C drive
- if you use the LGUP tool, you should check
 "Model name" "Android OS version & "tot file name".
 (Please refer right side table)
- LGUP, DLL file is not changed.

- if you have checked the other symptom Power Problem (Except "Infinite loop Auto power off"), shouldn't use this tool.
- GSFS Customer Symptom code: "Auto Power off"

Model	tot file Name										
Model	Android OS : LOS	Android OS : MOS									
LGH810PR	LGH810AT-00-V10a-GLOBAL-COM-DEC- 08-2015+0_RECOVERY_5.1	LGH810AT-00-V19t-GLOBAL-COM-DEC-1 5-2015+7									
LGH812	H81210h_recovery_RECOVERY_5.1										
LGH815	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0									
LGH815A R	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_6.0									
LGH815K	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0									
LGH815L	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0									
LGH815P	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_6.0									
LGH815PX	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1										
LGH815T	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0									
LGH815TR	LGH815AT-00-V10g-GLOBAL-COM-NOV-1 8-2015+0_RECOVERY_5.1	LGH815AT-00-V20a-GLOBAL-COM-NOV-0 2-2015+00_RECOVERY_6.0									
LGH818	H81810c_RECOVERY_5.1										
LGH818N	LGH818AT-00-V10c-GLOBAL-COM-NOV-1 7-2015+0_RECOVERY_5.1	LGH818AT-00-V20a-GLOBAL-COM-DEC- 08-2015+0_RECOVERY_6.0									
LGH818P	LGH818AT-00-V10c-GLOBAL-COM-NOV-1 7-2015+0_RECOVERY_5.1	LGH818AT-00-V20a-GLOBAL-COM-DEC- 08-2015+0_RECOVERY_6.0									
LGH819	H81910c_RECOVERY_5.1										
LGV32	LGV3210o_RECOVERY_5.1										