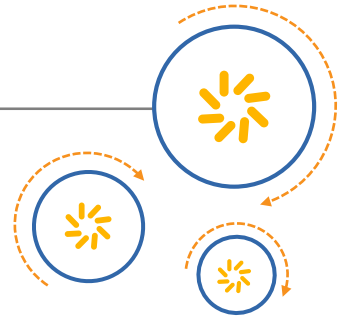




Qualcomm Technologies, Inc.



# L+G DSDS NV Settings

## Application Note

80-NM375-1 B

April 28, 2015

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## Revision history

Revision	Date	Description
A	Dec 2014	Initial release.
B	Apr 2015	Corrected the value for NV 65777 in SUB0 from 1 to 0 and added an explanation for this (Section 2.3).

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# 1 Introduction

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## 1.1 Purpose

This document provides details about NV/EFS/UI settings for LTE and GSM (L+G) DSDS.

This document is applicable to the Qualcomm Technologies, Inc. (QTI) chipsets and releases listed in [Table 1-1](#).

**Table 1-1 Affected targets and software versions**

Chipset	Applicable releases
MSM8974	DI 3.0
MSM9625	DI 3.0
MSM8926	2.0

## 1.2 Conventions

Function declarations, function names, type declarations, attributes, and code samples appear in a different font, for example, `#include`.

## 1.3 Technical assistance

For assistance or clarification on information in this document, submit a case to Qualcomm Technologies, Inc. (QTI) at <https://support.cdmatech.com/>.

If you do not have access to the CDMATech Support website, register for access or send email to [support.cdmatech@qti.qualcomm.com](mailto:support.cdmatech@qti.qualcomm.com).

## 2 Features Not Supported with L+G DSDS

---

This chapter lists NV items and EFS files for features not supported with L+G DSDS.

### 2.1 Features not supported

The following features are disabled in L+G DSDS/DSDA products:

- IMS
- VoLTE/SRVCC
- CSG
- eMBMS
- Carrier Aggregation (CA)

### 2.2 Disabling the unsupported features

#### IMS and VoLTE

See Section 3.6 of [80-NJ017-11](#).

#### CSG

Disable CSG by placing the EFS file `csg_control` under folder `/nv/item_files/modem/lte/rrc/csg/`. Write the 16-byte value `0x 01 01 01 00 01 00 00 00 E0 93 04 00 00 00 00 00`.

#### eMBMS

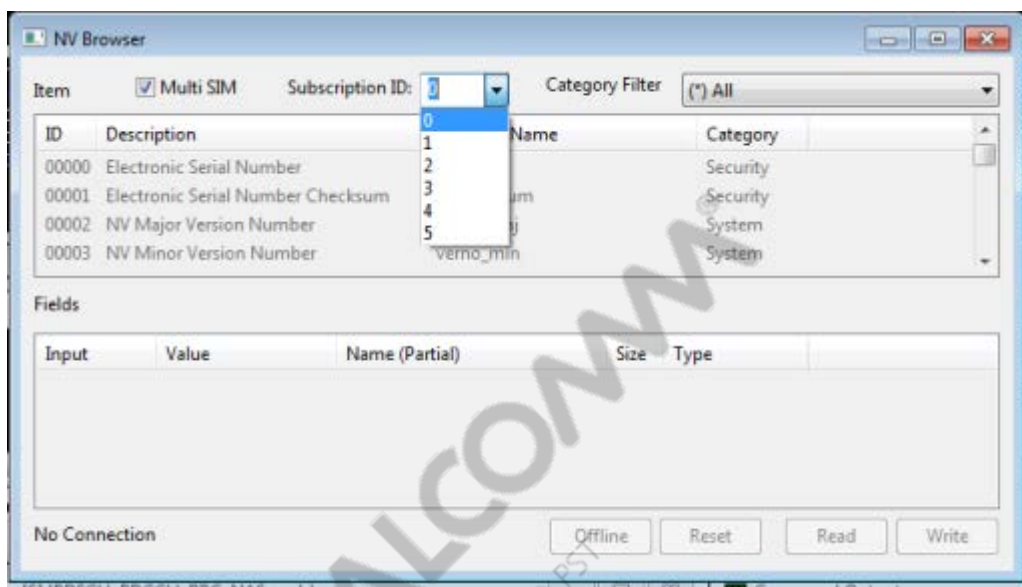
The EFS file `embms_feature_status` with value 0 should be copied under `/nv/item_files/modem/lte/rrc/`.

#### CA

CA is disabled automatically in DSDS mode.

## 2.3 Enabling DSDS NV settings

1. Set the following NVs in the QXDM Professional™ NV browser:



- SUB0
  - 00010→GWL
  - 00850→01
  - 65777→0 (ue\_usage\_setting)

**NOTE:** If NV65777 is not configured as 0, and if LTE does not support voice, the UI stays on LTE only and all Mobile Terminated (MT) pages are missed. If any MO voice call is originated at this time, the MO call setup is delayed, since the UE must leave LTE and search for G/W for every call. Therefore, setting the NV to voice-centric to avoid an MT page miss issue and reduce the MO call setup times is recommended.

- SUB1
  - 00010 →GSM only 13
  - 00850 →cs 00
  - 65777→0
- SUB0
  - NV 70210 – hw\_config.UIM[1].DISABLE\_UIM – Set to FALSE
  - 6876 – 5 for DS (Dual\_standby\_pref)
  - 6907 – 1 for DS
  - 4398 – 0 for DS
  - Do “Spc 000000” in QXDM and then:
    - 00855 – 0 (for both SS and DS)
    - 70266 – 1 for DS



- For IRAT scenarios

Set the following NVs on SUB0 (SUB0 supports L+G):

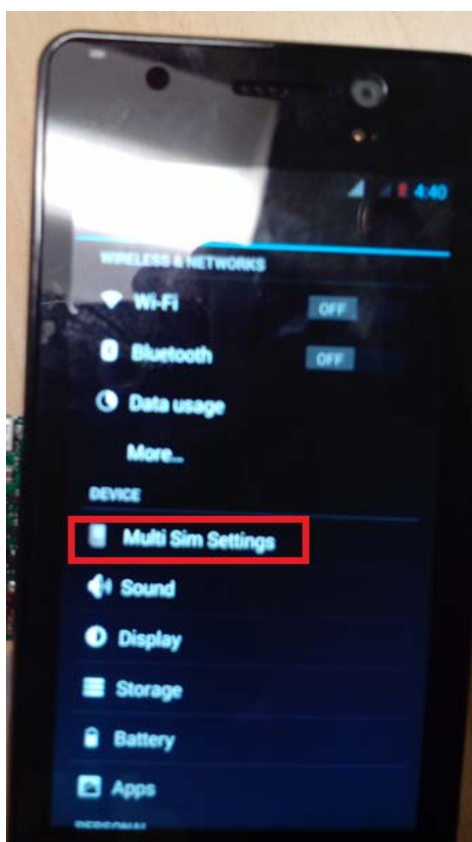
- 00010→34 (G + L)
- 00850→csps 02
- 65777→0
- NV\_BAND\_PREF\_16\_31\_I (NV00946)→1f
- NV\_BAND\_PREF\_32\_63\_I (NV02954)→0

2. Restart the UE and run the dual-SIM commands from the ADB shell:

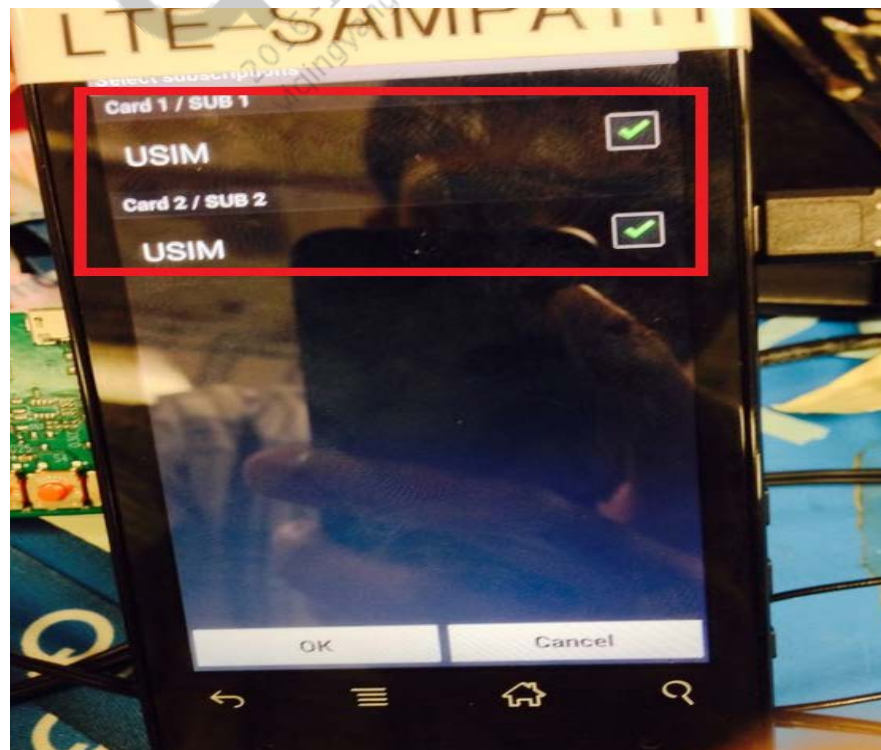
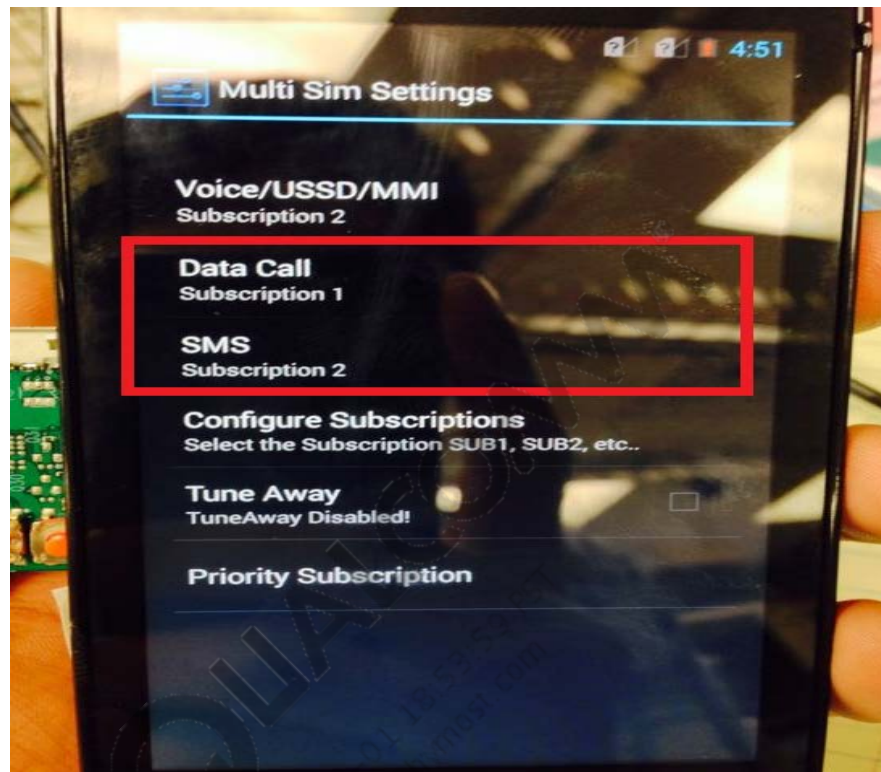
```
adb devices
adb root
adb shell
setprop persist.radio.multisim.config dsds
getprop persist.multisim.config <It should come up as DSDS>
```

Then restart the UE.

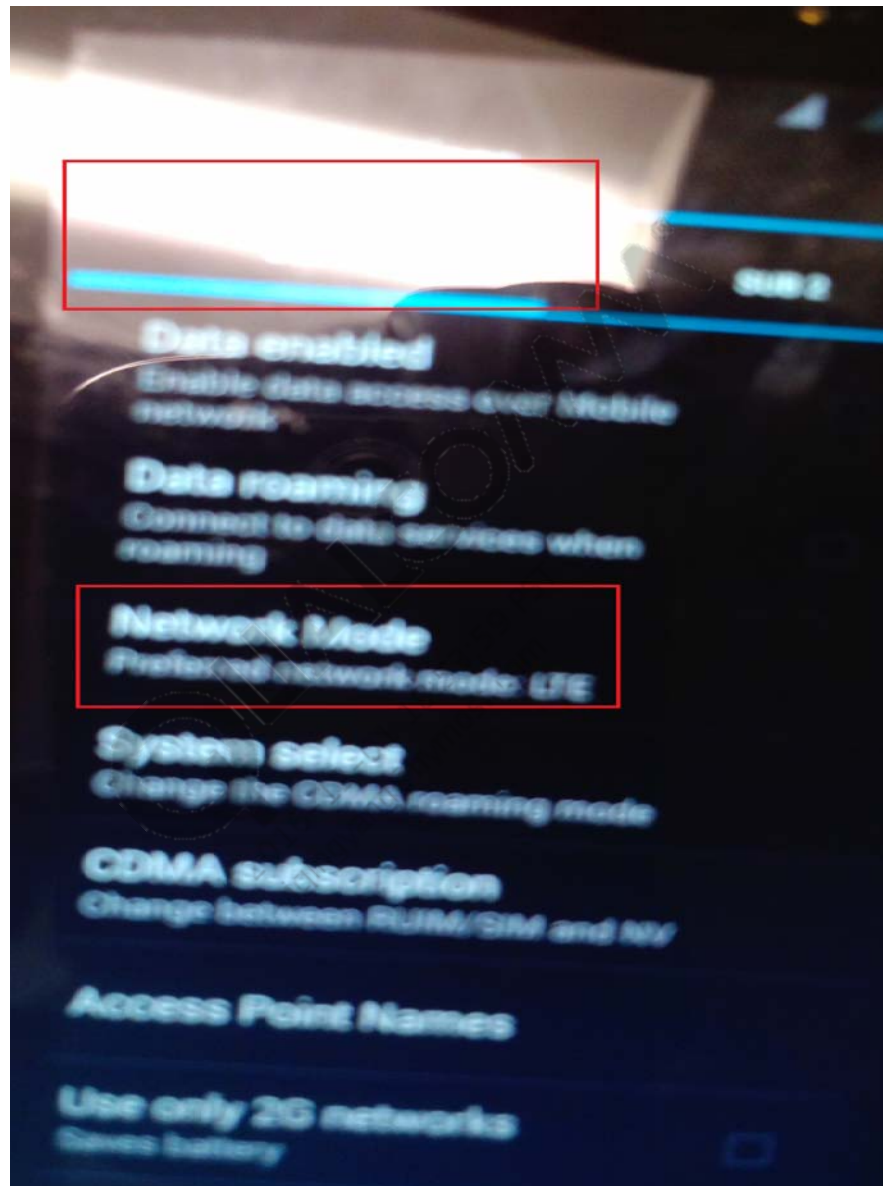
3. Perform the following steps from the UI:
  - a. Select Settings→Multi Sim Settings.

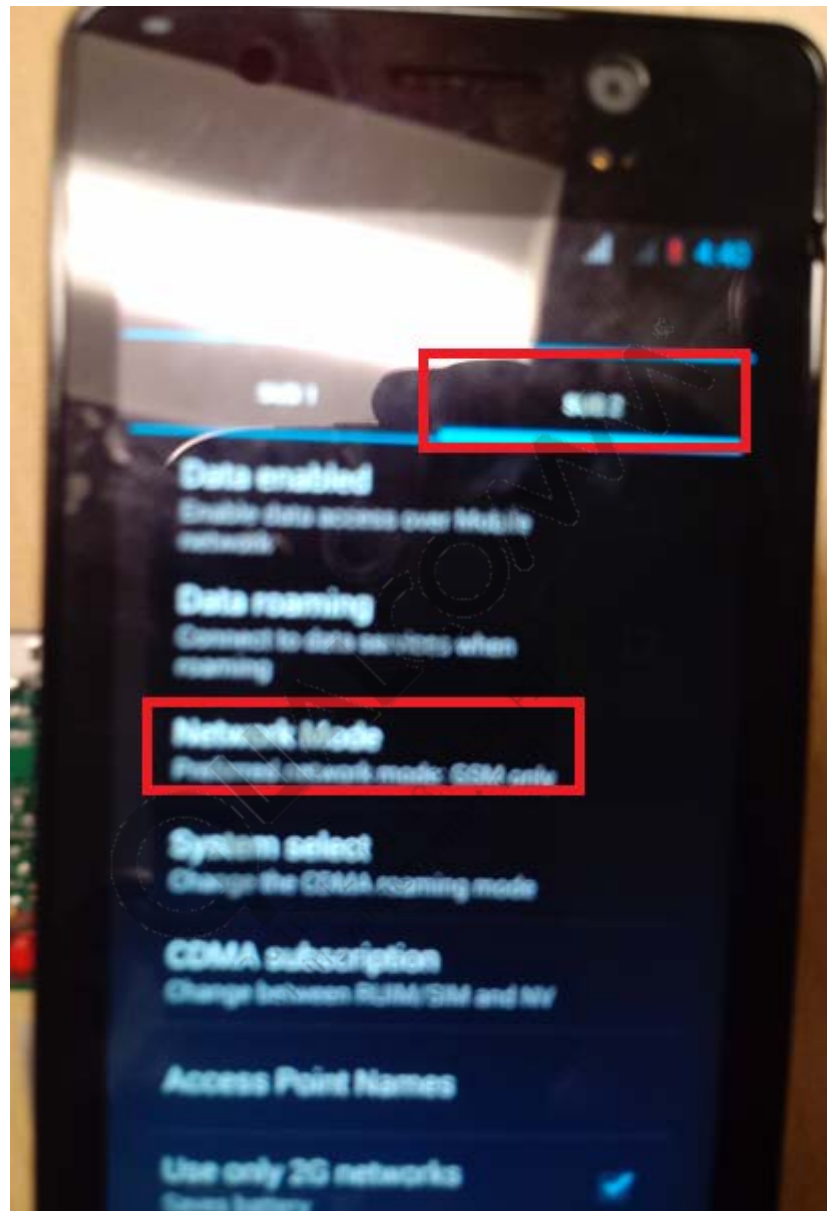


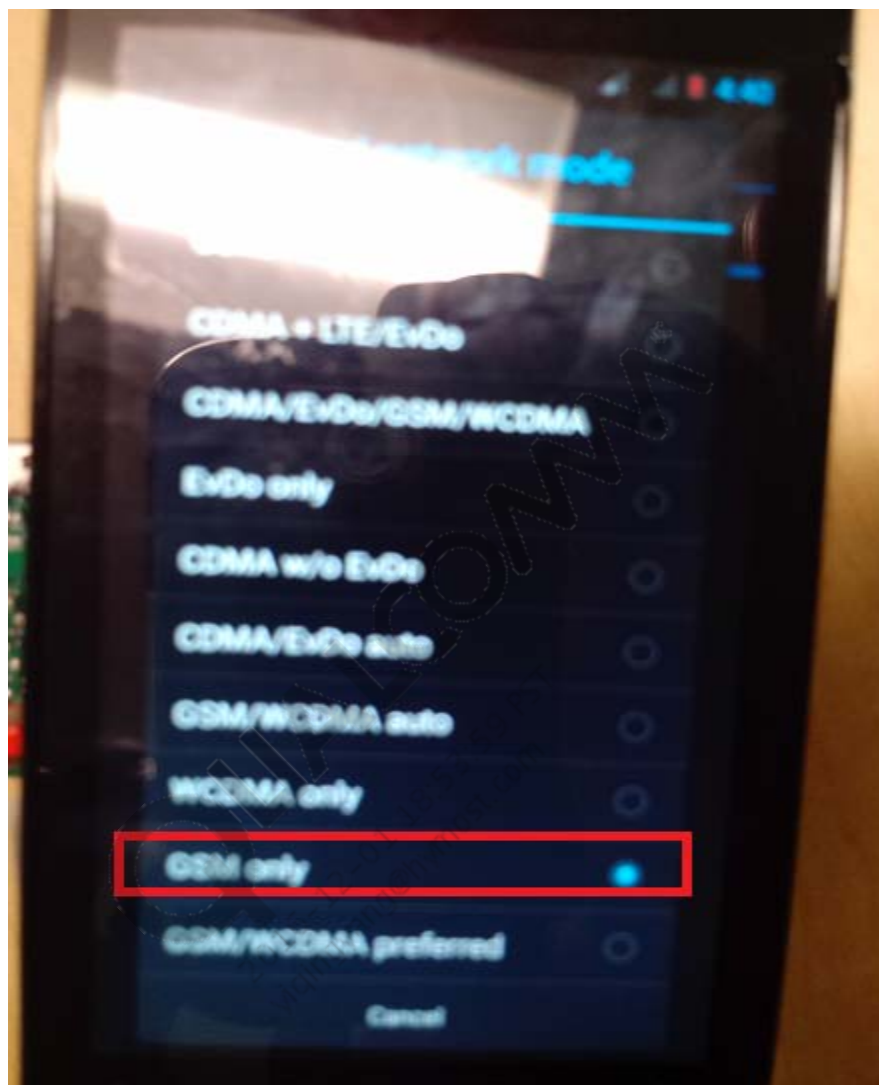
- b. Select Configure Subscriptions and configure the UIM cards to their respective subscriptions.



- c. Return to settings and select Mobile Networks. Select subscriptions and set the respective subs to L and G.







After power-up, run the following command to check whether both RILs are activated for DSDS.

```
=====
C:\>adb shell ps rild
USER      PID    PPID  VSIZE  RSS      WCHAN    PC         NAME
radio     243    1      17968  2900    ffffffff 00000000 S /system/bin/rild
radio     247    1      17952  2932    ffffffff 00000000 S /system/bin/rild
=====
```

If the following command returns only one radio as the output, the RIL is still in Single SIM mode.

```
=====
C:\>adb shell ps rild
USER      PID    PPID  VSIZE  RSS      WCHAN    PC         NAME
radio     166    1      16928  2828    ffffffff 00000000 S /system/bin/rild
=====
```



# A References

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## A.1 Related documents

Documents	
<b>Qualcomm Technologies, Inc.</b>	
<i>Application Note: SGLTE Device Configuration</i>	80-NJ017-11
<b>Standards</b>	
<i>LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol Specification</i>	3GPP TS 36.331
<i>Universal Mobile Telecommunications System (UMTS); LTE Non-Access-Stratum (NAS) Protocol for Evolved Packet System (EPS)</i>	3GPP TS 24.301
<i>LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) Procedures in Idle Mode</i>	3GPP TS 36.304

## A.2 Acronyms and terms

Term	Definition
CA	carrier aggregation
CSG	closed subscriber group
DSDA	dual SIM dual active
DSDS	dual SIM dual standby
EFS	embedded file system
eMBMS	enhanced multimedia broadcast multicast service
IRAT	inter radio access technology
L+G	LTE and GSM
RIL	radio interface layer
SRVCC	single radio voice call continuity
VoLTE	voice over LTE