

EC200U&EG915U Series

Dual SIM Single Standby

Application Note

LTE Standard Module Series

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Quectel Wireless Solutions Co., Ltd.

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: info@quectel.com

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About the Document

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-	2022-01-28	Joe TU	Creation of the document
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1 Introduction

This document mainly introduces how to use the Dual SIM Single Standby (hereinafter referred to as DSSS) function of Quectel LTE Standard EC200U series and EG915U series modules. The module with DSSS feature supports dual (U)SIM cards, but only one (U)SIM card can be used at a time and the other card is disabled.

2 AT Command Introduction

This chapter mainly introduces the DSSS related AT commands.

2.1. AT Command Introduction

2.1.1. Definitions

- **<CR>** Carriage return character.
- **<LF>** Line feed character.
- **<...>** Parameter name. Angle brackets do not appear on the command line.
- **[...]** Optional parameter of a command or an optional part of TA information response. Square brackets do not appear on the command line. When an optional parameter is not given in a command, the new value equals its previous value or the default settings, unless otherwise specified.
- **Underline** Default setting of a parameter.

2.1.2. AT Command Syntax

All command lines must start with **AT** or **at** and end with **<CR>**. Information responses and result codes always start and end with a carriage return character and a line feed character: **<CR><LF><response><CR><LF>**. In tables presenting commands and responses throughout this document, only the commands and responses are presented, and **<CR>** and **<LF>** are deliberately omitted.

Table 1: Types of AT Commands

Command Type	Syntax	Description
Test Command	AT+<cmd>=?	Test the existence of corresponding Write Command and return information about the type, value, or range of its parameter.
Read Command	AT+<cmd>?	Check the current parameter value of a corresponding Write Command.
Write Command	AT+<cmd>=<p1>[,<p2>[,<p3>[...]]]	Set user-definable parameter value.
Execution Command	AT+<cmd>	Return a specific information parameter or perform a specific action.

2.2. Declaration of AT Command Examples

The AT command examples in this document are provided to help you learn about the use of the AT commands introduced herein. The examples, however, should not be taken as Quectel's recommendation or suggestions about how you should design a program flow or what status you should set the module into. Sometimes multiple examples may be provided for one AT command. However, this does not mean that there exists a correlation among these examples and that they should be executed in a given sequence.

2.3. AT Commands Description

2.3.1. AT+QDSIMCFG="dsss" Enable/Disable DSSS

This command enables/disables DSSS. Partial pins of EC200U series' (U)SIM2 interface are multiplexed for other functions by default. The multiplexed function will be invalid when this command is executed to enable DSSS. For more details, see [document \[1\]](#)

AT+QDSIMCFG="dsss" Enable/Disable DSSS	
Write Command AT+QDSIMCFG="dsss"[,<enable>]	Response If the optional parameter is omitted, query the current setting: +QDSIMCFG: "dsss",<enable> OK If the optional parameter is specified, enable/disable DSSS: OK If there is any error: ERROR
Maximum Response Time	300 ms
Characteristics	The command takes effect after the module is rebooted. The configuration is saved automatically.

Parameter

<enable>	Integer type. Enable/Disable DSSS.
<u>0</u>	Disable
1	Enable

NOTE

1. For EC200U series, single card single standby is enabled by default. If the DSSS function is needed, this command should be used first to enable the DSSS function and then reboot the module.
2. For EG915U series, DSSS is enabled by default, so this command is not needed for EG915U series to enable the DSSS function.

Example

```

AT+QDSIMCFG="dsss",1 //Enable DSSS.
OK
AT+QDSIMCFG="dsss" //Query whether DSSS is enabled.
+QDSIMCFG: "dsss",1
OK
    
```

2.3.2. AT+QDSIM Select (U)SIM Card

This command selects the (U)SIM card to be used for DSSS scenario.

AT+QDSIM Select (U)SIM Card	
Test Command AT+QDSIM=?	Response +QDSIM: (list of supported <simID>s) OK
Read Command AT+QDSIM?	Response +QDSIM: <simID> OK
Write Command AT+QDSIM=<simID>	Response OK Or ERROR If there is any error: +CME ERROR: <err>
Maximum Response Time	10 s
Characteristics	The command takes effect immediately. The configuration is saved automatically.

Parameter

<simID>	Integer type. (U)SIM card ID. 0 (U)SIM card 1 (hereinafter referred to as SIM1) 1 (U)SIM card 2 (hereinafter referred to as SIM2)
<err>	Error code. For more details, see document [2] .

Example

```

AT+QDSIM=0 //Select SIM1.
OK
AT+QDSIM? //Query the current (U)SIM card.
+QDSIM: 0
OK
    
```

NOTE

1. This command can be used in both the DSDS mode and DSSS mode, but there are some differences:
 - For DSDS, this command takes effect on the current AT channel only, and the configuration is not saved.
 - For DSSS, this command takes effect on all AT channels, and the configuration is saved automatically.
2. For EG915U series module, values 10 and 11 are also supported by **<simID>**, but they are not related to DSSS function, you can ignore these two values when using DSSS function.
3. For different firmware versions, this command takes effect in different ways. See the specific release note of different modules for details.
4. For details about DSDS, see **document [3]**.

3 Example

This chapter introduces how to switch (U)SIM cards through DSSS function, and then use (U)SIM card services after successful switching.

3.1. Enable DSSS Function

For EC200U series modules, you need to enable DSSS function and then reboot the module before switching the (U)SIM card.

```

AT+QDSIMCFG="dsss"           //Query whether DSSS is enabled.
+QDSIMCFG: "dsss",0

OK
AT+QDSIMCFG="dsss",1        //Enable DSSS.
OK
AT+CFUN=1,1                 //Reboot the module to reset (U)SIM card pin function.
OK
AT+QDSIMCFG="dsss"         //Query whether DSSS is enabled.
+QDSIMCFG: "dsss",1

OK
    
```

NOTE

For details about **AT+CFUN**, see *document [2]*.

3.2. Dual (U)SIM Cards Switch

```

AT+QDSIM? //Query which (U)SIM card is currently in use.
+QDSIM: 0

OK
AT+QDSIM=1 //Select SIM2
OK
AT+QDSIM? //Query which (U)SIM card is currently in use.
+QDSIM: 1

OK
    
```

3.3. (U)SIM Card Initialization

After switching the (U)SIM card, (U)SIM card will be initialized automatically.

```

+CPIN: READY //Report (U)SIM card status.

+QUSIM: 1

+QIND: SMS DONE //SMS initialization of (U)SIM card was completed.

+QIND: PB DONE //PHB initialization of (U)SIM card was completed.
    
```

3.4. (U)SIM Card Application

After switching the (U)SIM card, the operation of the switched card is the same as that of previously used card. This section takes **AT+CIMI** as an example to introduce the related operations after switching the (U)SIM card .

```

AT+QDSIM? //Query which (U)SIM card is currently in use.
+QDSIM: 0

OK
AT+CIMI //Query the IMSI of the (U)SIM card in MT.
460010154043866

OK
AT+QDSIM=1 //Select SIM2.
OK
AT+CIMI //Query the IMSI of the (U)SIM card in MT.
460028055174284

OK
    
```

NOTE

For details about **AT+CIMI**, see *document [2]*.

4 Appendix References

Table 2: Related Documents

Document Name
[1] Quectel_EC200U_Series_Hardware_Design_V1.0
[2] Quectel_EC200U&EG915U_Series_AT_Commands_Manual
[3] Quectel_EC200U_Series_Dual_SIM_Dual_Standby_Application_Note

Table 3: Terms and Abbreviations

Abbreviation	Description
DSDS	Dual SIM Dual Standby
DSSS	Dual SIM Single Standby
IMSI	International Mobile Subscriber Identity
I/O	Input/Output
MT	Mobile Terminal
PHB	Phone Book
SIM	Subscriber Identity Module
SMS	Short Message Service
(U)SIM	(Universal) Subscriber Identity Module