A76XX Series_ JD_Application Note

LTE Module

SIMCom Wireless Solutions Limited
SIMCom Headquarters Building, Building 3, No. 289 Linhong Road, Changning District, Shanghai P.R. China
Tel: 86-21-31575100
support@simcom.com
www.simcom.com

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SIMCom Wireless Solutions Limited
SIMCom Headquarters Building, Building 3, No. 289 Linhong Road, Changning District, Shanghai P.R. China
Tel: +86 21 31575100
Email: simcom@simcom.com

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About Document

Version History

Revision	Date	Chapter	Description
V1.00	2022.02.25	All	New version

Scope

Based on module AT command manual, this document will introduce Jamming Detection application process. Developers could understand and develop application quickly and efficiently based on this document. This document applies A1603 Series.

Contents

1 Introduction

1.1 Purpose of the document

Based on module AT command manual, this document will introduce Jamming Detection application process.
Developers could understand and develop application quickly and efficiently based on this document.

1.2 Related documents

[1] A76XX Series_AT Command Manual

1.3 Conventions and abbreviations

JD Jamming Detection

2 AT Commands for JD

2.1 Overview of AT Commands for Jamming Detection

Command	Description
AT+SJDCFG	Jamming Detection Configuration
AT+SJDR	Set JD on/off

2.2 AT+SJDCFG Jamming Detection Configuration

This command allows the module to set the JD params. These params will be autosaved when set successfully.

AT+SJDCFG Jamming Detection Configuration	
Test Command AT+SJDCFG=?	Response +SJDCFG:"period",(0-120) +SJDCFG:"mnl",(0-31) +SJDCFG:"minch",(0-254) +SJDCFG:"detecstat",(0-1) OK
Read Command AT+SJDCFG?	Response +SJDCFG:"period",<value> +SJDCFG:"mnl",<value> +SJDCFG:"minch",<value> +SJDCFG:"detecstat",<value> OK
Write Command AT+SJDCFG=<type>,<value>	Response OK or ERROR
Parameter Saving Mode	AUTO_SAVE
Max Response Time	-
Reference	-

Defined Values

<type>	“period” Period of URC of auto jamming detection report. When set to ‘0’, no periodic reporting. Default value: 0. Range: 0-120, unit: s “mnl” The minrxlev threshold (For GSM network only). Defaultvalue: 17. Range:0-31 “minch” The minimum channel number or ARFCN number which is jammed. Default value: 5. Range: 0-254 "detecstat" Enable or disable to report the jamming detection URC when the jamming is changed. Default value is 1
<value>	The value of type

2.3 AT+SJDR Enable or disable Jamming Detection Function

This command allows the module to enable or disable the jamming detection function.

AT+SJDR Enable or disable Jamming Detection Function	
Test Command **AT+SJDR=?**	Response +SJDR: (0,1) OK
Write Command **AT+SJDR=<value>**	Response OK or ERROR
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	-

Defined Values

<value>	Diable or enable the jamming detection function 0 Jamming detection function is disabled (default is 0) 1 Jamming detection function is enabled The value of type

2.4 the URC

If the module detects the jammer, it will report the urc “+SJDR: JAMMING DETECTION”

Indicate the jammer	
+SJDR: JAMMING DETECTION	

If the jammer removed, the module will report the urc “+SJDR: NO JAMMING”

Indicate the jammer	
+SJDR: NO JAMMING	

3 Jamming Detection Examples

```
AT+SJDCFG=”period”,5                    // set URC report every 5S
OK
AT+SJDCFG=”detecstat”,1                 //set URC report when jamming changed
OK

AT+SJDCFG?                              //Check the config params
+SJDCFG: "period",1
+SJDCFG: "mnl",17
+SJDCFG: "minch",5
+SJDCFG: "detecstat",1

OK
AT+SJDR=1                               //Enable the jamming detection function
OK
```