SIM800 Series_GSM Location_Application Note

GPRS Module

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About Document

Version History

Version	Date	Owner	What is new
V1.00	2014.09.24	Dingfen.Zhu	New Release
V1.01	2016.12.06	Dingfen.Zhu	Modify CLBS format Modify catalogue error Add AT+CLBS=3,1 Modify CLBSCFG
V1.02	2017.05.06	Dingfen.Zhu	Modify LBS server to "lbs-simcom.com"
V1.03	2020.06.15	Yizhe.Tan /Wenjie.Lai	All

Scope

This document presents the AT command of base station location operation and application examples. This document can apply to SIM800 series modules, but this function needs special module and FW to be supported.

Contents

1 Introduction

1.1 Purpose of the document

Based on module AT command manual, this document will introduce the base station location application process.

Developers could understand and develop application quickly and efficiently based on this document.

1.2 Related documents

[1] SIM800 Series_AT Command Manual

1.3 Conventions and abbreviations

2 AT commands

2.1 AT+CLBS

AT+CLBS Base station Location	
Test Command **AT+CLBS=?**	Response **+CLBS:** **(1,3,4,9),(1-3),(-180.000000-180.000000),(-90.000000-90.000000),(0,** **1)** **OK**
Write Command **AT+CLBS=\<type>,\<cid>,[[\<l** **ongitude>,\<latitude>],[\<lon_** **type>]]**	Response **OK** 1)type = 1,get longitude and latitude **+CLBS: \<locationcode>[,\<longitude>,\<latitude>,\<acc>]** **OK** 2)type = 3,get access times **+CLBS: \<locationcode>[,\<times>]** **OK** 3)type = 4,get longitude latitude and date time **+CLBS:** **\<locationcode>[,\<longitude>,\<latitude>,\<acc>,\<date>,\<time>]** **OK** 4)type = 9, report positioning error **+CLBS: \<locationcode>** **OK** If error is related to ME functionality: **+CME ERROR: \<err>**
Parameter Saving Mode	-
Max Response Time	-
Reference	Note If customers think that the positioning error is too much, by setting "**\<type>**=9" to report this information, The error can be improved by this information.

Defined Values

<type>	1 Use 3 cell's information
	3 Get access times
	4 Get longitude latitude and date time
	9 Report positioning error
<cid>	Bearer profile identifier, refer to <pdpidx> of AT+CNACT
<locationcode>	0 Success
	If the operation failed, the location code is not 0, such as:
	1 Location Failed
	2 Time Out
	3 NET Error
	4 DNS Error
	5 Service Overdue
	6 Authenticate Failed
	7 Other Error
	80 Report LBS to server success
	81 Report LBS to server parameter error
	82 Report LBS to server failed
<longitude>	Current longitude in degrees.
<latitude>	Current latitude in degrees
<acc>	Positioning accuracy
<lon_type>	The type of longitude and latitude
	0 WGS84
	1 GCJ02
<times>	Access service times
<date>	Service date
<time>	Service time

2.2 AT+CLBSCFG

AT+CLBSCFG Base station Location	
Test Command **AT+CLBSCFG=?**	Response **+CLBSCFG: (0,1),(1-3),"ParamValue"** **OK**
Write Command **AT+CLBSCFG=<operate>,<para>[,<value>]**	Response **+CLBSCFG: 0,<para>,<value>** **OK**

	or **OK** If error is related to ME functionality: **+CME ERROR: <err>**
Parameter Saving Mode	-
Max Response Time	-
Reference	Note ● Server's address of"lbs-simcom.com:3002" is free. The other two servers are charged. If you want to use the charged address, the IMEI, customer information and software version must be provided to SIMCom.

Defined Values

<operate>	0 Read operator 1 Set operator

<para>	1 Customer ID
	 2 Times have used positioning command
	 3 Server's address
	     lbs-simcom.com:3001
	     lbs-simcom.com:3000
	     lbs-simcom.com:3002 (Default)

<value>	String type. The value of parameter If <operate> is 1 and <para> is 3, <value> can be set.
<len_value>	Max length of <value>

3 Examples

SIM800 base station location module provides base station location solution. The following is the examples for application.

3.1 Activate bearer profile

//Example of Activate bearer profile.

AT+SAPBR=3,1,"Contype","GPRS"	//Set bearer paramete
OK	
AT+SAPBR=3,1,"APN","CMNET"	// Set bearer context
OK	
AT+SAPBR=1,1	// Active bearer context
OK	
AT+SAPBR=2,1	// Read bearer parameter
+SAPBR: 1,1,"10.89.193.1"	
OK	

3.2 Get location

//Get Location Example	
AT+CLBSCFG=0,1	//Get customer ID
+CLBSCFG: 0,1,"CUSTES"	
OK	
AT+CLBSCFG=0,2	// Get Times have used positioning command
+CLBSCFG: 0,2,0	
OK	
AT+CLBSCFG=0,3	//Get LBS server's address
+CLBSCFG: 0,3,"lbs-simcom.com:3001"	
OK	
AT+CLBSCFG=1,3,"lbs-simcom.com :3002"	// Set LBS server's address

OK
AT+CLBS=1,1   // Get current longitude , latitude and Precision
+CLBS: 0,121.359505,31.217055,637

OK
AT+CLBS=3,1   // Get access times
+CLBS: 0,1280

OK
AT+CLBS=4,1
+CLBS: // Get current longitude , latitude , Precision and
0,121.359505,31.217055,637 ,14/11/03,10   date time
:09:00

OK

3.3 Report really location

//Report really location Example
AT+CLBS=9,1   // If the position info is error, customer can use this
+CLBS: 80   command to report. Report cell information of
                                                     positioning error to server.

OK
AT+CLBS=9,1,121.360046,31.218135,0   // Report cell information of positioning and really
+CLBS: 80   longitude and latitude to server.

OK

3.4 Deactivate bearer profile

//Deactivate bearer profile Example
AT+SAPBR=0,1   // Deactivate bearer context
OK