



# **SIM800 Series\_GSM Location\_Application Note\_V1.02**



<b>Document Title:</b>	SIM800 Series_GSM Location_Application Note
<b>Version:</b>	1.02
<b>Date:</b>	2019-05-06
<b>Status:</b>	Release
<b>Document Control ID:</b>	SIM800 Series_GSM Location_Application Note_V1.02

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## Version History

Date	Version	Description	Author
2014-09-24	1.00	New version	ZhuDingFen
2016-12-06	1.01	Modify CLBS format Modify catalogue error Add AT+CLBS=3,1 example Modify CLBSCFG parameter	ZhuDingFen
2019-05-06	1.02	Modify LBS server to "lbs-simcom.com"	ZhuDingFen

## 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.

For the detail, please help to contact with SIMCom.

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## 1 Introduction

This chapter introduces the base station location feature of SIM800 series modules.

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## 2 AT commands

### 2.1 AT+CLBS

AT+CLBS Base station Location	
Test Command <b>AT+CLBS=?</b>	Response <b>+CLBS:</b> <b>(1,3,4,9),(1-3),(-180.000000-180.000000),(-90.000000-90.000000),(0,1)</b>  <b>OK</b>  Parameters See Write Command
Write Command <b>AT+CLBS=&lt;type&gt;,&lt;cid&gt;,[&lt;longitude&gt;,&lt;latitude&gt;],[&lt;lon_type&gt;]]</b>	Response <b>OK</b> 1)type = 1,get longitude and latitude <b>+CLBS: &lt;locationcode&gt;[,&lt;longitude&gt;,&lt;latitude&gt;,&lt;acc&gt;]</b>  <b>OK</b> 2)type = 3,get access times <b>+CLBS: &lt;locationcode&gt;[,&lt;times&gt;]</b>  <b>OK</b> 3)type = 4,get longitude latitude and date time <b>+CLBS: &lt;locationcode&gt;[,&lt;longitude&gt;,&lt;latitude&gt;,&lt;acc&gt;,&lt;date&gt;,&lt;time&gt;]</b>  <b>OK</b> 4)type = 9, report positioning error <b>+CLBS: &lt;locationcode&gt;</b>  <b>OK</b>  If error is related to ME functionality: <b>+CME ERROR: &lt;err&gt;</b>  Parameters <b>&lt;type&gt;</b> 1 Use 3 cell's information 3 Get access times 4 Get longitude latitude and date time 9 Report positioning error <b>&lt;cid&gt;</b> Network parameters, refer to AT+SAPBR <b>&lt;locationcode&gt;</b>

	<p>0 Success</p> <p>If the operation failed, the location code is not 0, such as:</p> <p>1 Location Failed</p> <p>2 Time Out</p> <p>3 NET Error</p> <p>4 DNS Error</p> <p>5 Service Overdue</p> <p>6 Authenticate Failed</p> <p>7 Other Error</p> <p>80 Report LBS to server success</p> <p>81 Report LBS to server parameter error</p> <p>82 Report LBS to server failed</p> <p>&lt;longitude&gt; Current longitude in degrees</p> <p>&lt;latitude&gt; Current latitude in degrees</p> <p>&lt;acc&gt; Positioning accuracy</p> <p>&lt;lon_type&gt; The type of longitude and latitude</p> <p>0 WGS84, the default type</p> <p>1 GCJ02</p> <p>&lt;times&gt; Access service times</p> <p>&lt;date&gt; Service date</p> <p>&lt;time&gt; Service time</p>
Reference	<p>Note</p> <ul style="list-style-type: none"> <li>If customers feel that the positioning error is too large, &lt;type&gt;=9 can be used to report this information. The error can be improved by this information.</li> </ul>

## 2.2 AT+CLBSCFG

AT+CLBSCFG Base station Location configure	
<p>Test Command</p> <p>AT+CLBSCFG=?</p>	<p>Response</p> <p>+CLBSCFG: (0,1),(1-3),"ParamValue"</p> <p><b>OK</b></p> <p>Parameters</p> <p>See Write Command</p>
<p>Write Command</p> <p>AT+CLBSCFG=&lt;operate&gt;,&lt;para&gt;[,&lt;value&gt;]</p>	<p>Response</p> <p>+CLBSCFG: 0,&lt;para&gt;,&lt;value&gt;</p> <p><b>OK</b></p> <p>or</p> <p><b>OK</b></p> <p>If error is related to ME functionality:</p>

	<p><b>+CME ERROR: &lt;err&gt;</b></p> <p>Parameters</p> <p><b>&lt;operate&gt;</b></p> <ul style="list-style-type: none"> <li>0 Read operator</li> <li>1 Set operator</li> </ul> <p><b>&lt;para&gt;</b></p> <ul style="list-style-type: none"> <li>1 Customer ID</li> <li>2 Times have used positioning command</li> <li>3 Server's address</li> </ul> <p><a href="http://lbs-simcom.com:3001">lbs-simcom.com:3001</a>  <a href="http://lbs-simcom.com:3000">lbs-simcom.com:3000</a>  <a href="http://lbs-simcom.com:3002">lbs-simcom.com:3002</a> (Default)</p> <p><b>&lt;value&gt;</b> The value of parameter          If <b>&lt;operate&gt;</b> is 1 and <b>&lt;para&gt;</b> is 3, <b>&lt;value&gt;</b> can be set.</p>
Reference	<p>Note</p> <ul style="list-style-type: none"> <li>● Server's address of "lbs-simcom.com:3002" is free. The other two servers are charged.</li> <li>● If you want to use the charged address, the IMEI, customer information and software version must be provided to SIMCom.</li> </ul>

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### 3 Examples

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

In the "Grammar" columns of following tables, input of AT commands are in black, module return values are in blue.

#### 3.1 Activate bearer profile

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

#### 3.2 Get location

Grammar	Description
AT+CLBSCFG=0,1 +CLBSCFG: 0,1,"CUSTES" OK	Get customer ID
AT+CLBSCFG=0,2 +CLBSCFG: 0,2,0 OK	Get Times have used positioning command
AT+CLBSCFG=0,3 +CLBSCFG: 0,3,"lbs-simcom.com:3001" OK	Get LBS server's address
AT+CLBSCFG=1,3,"lbs-simcom.com:3002" OK	Set LBS server's address
AT+CLBS=1,1 +CLBS: 0,121.359505,31.217055,637	Get current longitude , latitude and Precision

OK	
AT+CLBS=3,1 +CLBS: 0,1280	Get access times
OK	
AT+CLBS=4,1 +CLBS: 0,121.359505,31.217055,637 ,14/11/03,10:09:00	Get current longitude , latitude , Precision and date time
OK	

### 3.3 Report really location

Grammar	Description
AT+CLBS=9,1 +CLBS: 80	If the position info is error, customer can use this command to report. Report cell information of positioning error to server.
OK	
AT+CLBS=9,1,121.360046,31.218135,0 +CLBS: 80	Report cell information of positioning and really longitude and latitude to server.
OK	

### 3.4 Deactivate bearer profile

Grammar	Description
AT+SAPBR=0,1	Deactivate bearer context
OK	

# Appendix

## A Related Documents

SN	Document name	Remark
[1]	SIM800 Series AT Command Manual	

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# Contact

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