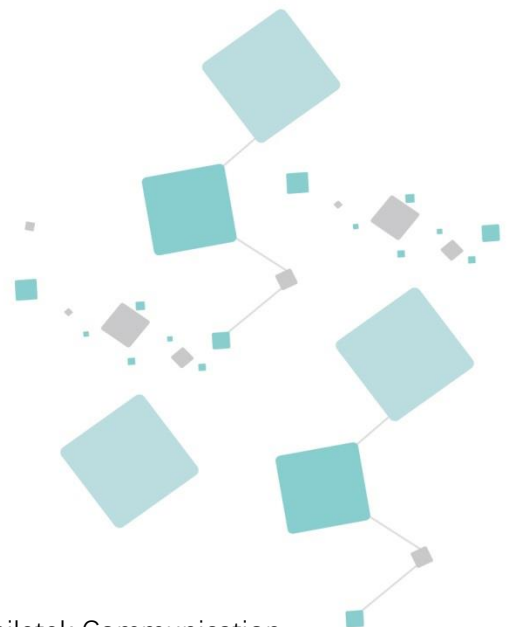


## L506 GNSS AT命令说明

LTE Modules

Version : V1.0

Date : 2017-12-07



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## Version History

Date	Version	Description of change	Author
2017-12-07	V1.0	Initial Version	Linda

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## 1 概述

本文档主要介绍 **L506** 模块常用 **GNSS** 指令。

## 2 功能流程显示

### 2.1 打开 GNSS 并输出定位信息

```
AT+CGPSNMEA=8191      //设置 NMEA，输出全部 NMEA 类型
OK
AT+CGPSINFOCFG=2       //设置每隔两秒输出一次 NMEA 信息
OK
AT+CGPS=1              //(打开 GNSS)
OK
```

```
AT+CGPS=0              //完成后关闭 GNSS
```

### 2.2 下载 XTRA 辅助文件

```
AT+CGPSXD=0            //下载 XTRA 文件
OK
+CGPSXD:1              //开始下载
+CGPSXD:2              //成功下载
```

### 2.3 基站定位

```
AT+GTPOS=1             //连接服务器
OK
CONNECT OK             //连接成功
AT+GTPOS=2             //查询定位信息
+GTPOS:104.0553231,30.5497824
OK
AT+GTPOS=0             //关闭基站定位
OK
```

### 2.4 热启动、冷启动

```
AT+CGPSHOT             //热启动
OK
AT+CGPSCOLD            //冷启动
OK
```

## 2.5 设置数据输出口和定位模式

AT+CGPSNMEATYPE=2,3 //从所有端口输出 nmea 信息，定位组合选择为第三种

OK

## 3 命令说明

### 3.1 AT+CGPSDEL

删除 GPS 定位信息，相当于冷启动，需要 GPS 停止运行的状态下才能使用。否则会返回 ERROR。

AT+CGPSDEL //删除 GPS 定位信息

OK

### 3.2 AT+CGPS=<on/off>[,<mode>]

启动和关闭 GNSS。

AT+CGPS=	start/stop GPS position session.
<on/off>[,<mode>]	parameters:
	<on/off>:
	0 – stop GPS session
	1 – start GPS session
	<mode>:
	ignore - Standalone mode
	1 – standalone mode
	2 – UE-based mode
	3 – UE-assisted mode
	attention:
	UE-based and UE-assisted mode depend on URL (AT+CGPSURL) and certificate (AT+CGPSSSL). when UE-based mode failed, will switch to Standalone mode.(if CGPSMSB=1)

### 3.3 AT+CGPSCOLD

冷启动。

AT+CGPSCOLD=?

OK

AT+CGPSCOLD

OK

### 3.4 AT+CGPSHOT

热启动。

AT+CGPSHOT=?

OK

AT+CGPSHOT

OK

### 3.5 AT+CGPSXD=<server>

AT+CGPSXD=<server>	<p>This command is to download the GPS XTRA assistant file from network by http protocol. Module will download the latest assistant file form server and write the file into gpsone engine.</p> <p>parameters:</p> <p>&lt; server&gt;:</p> <ul style="list-style-type: none"> <li>0 - xtra server 1</li> <li>1 - xtra server 2</li> <li>2 - xtra server 3</li> </ul> <p>status:</p> <ul style="list-style-type: none"> <li>1 start download xtra file</li> <li>2 download xtra file successful</li> </ul> <p>return:</p> <p>OK</p> <p>ERROR</p> <p>+CGPSXD:server</p>
--------------------	---

AT+CGPSXD=0 //下载 XTRA 文件

+CGPSXD:1 //开始下载

+CGPSXD:2 //下载成功

### 3.6 AT+GTPOS=<mode>

AT+GTPOS = <mode>	<p>The command is used to retrieve information base station positioning the command is used to retrieve information base station positioning. ( not support CDMA network)</p> <p>&lt;mode&gt;</p> <ul style="list-style-type: none"> <li>0 - Close the base station positioning function</li> <li>1 - Open the base station positioning function</li> <li>2 - Get the base station positioning function</li> </ul> <p>Responses</p> <p>OK</p> <p>CONNECT OK</p> <p>CONNECT FAILED</p> <p>ERROR</p>
----------------------	--

AT+GTPOS=1 //连接服务器

OK

CONNECT OK //连接成功

AT+GTPOS=2 //查询定位信息

+GTPOS:104.0553231,30.5497824

OK

AT+GTPOS=0                      //关闭基站定位

OK

### 3.7 AT+CGPSINFO=<time>

获取当前位置信息。

<b>AT+CGPSINFO =</b> <b>&lt;time&gt;</b>	Get current GPS position information.  <b>parameters:</b> <b>&lt;time&gt;:</b> Range is (0-255) seconds, report the GPS information every time seconds. When time is 0, cancel reporting.  <b>return:</b> OK ERROR Information report every time seconds is: +CGPSINFO:<lat>,<N/S>,<log>,<E/W>,<date>,<UTC time>,<alt>,<speed>,<course>,<time> OK Among: <lat> Latitude of current position. <N/S> N/S Indicator, N=north or S=south <log> Longitude of current position. <E/W> E/W Indicator, E=east or W=west <date> Date. Output format is ddmmyyyy <UTC time> UTC Time. Output format is hhmmss.ss <alt> MSL Altitude. Unit is meters <speed> Speed Over Ground. Unit is knots <course> Course. Degrees
<b>Examples</b>	AT+CGPSINFO? +CGPSINFO:5 OK AT+CGPSINFO=3 OK

### 3.8 AT+CGPSNMEA=<NMEA>

该命令用于设置 NMEA 的输出，默认值为 63。



AT+CGPSNMEA = <nmea>	<p>This command is to configure NMEA output sentences which are generated by the gpsOne engine when position data is available.</p> <p>parameters: &lt; nmea &gt;:</p> <p>Each bit enables an NMEA sentence output as follows:</p> <p>Bit 0 – GPGGA (global positioning system fix data)</p> <p>Bit 1 – GPRMC (recommended minimum specific GPS/TRANSIT data)</p> <p>Bit 2 – GPGSV (GPS satellites in view)</p> <p>Bit 3 – GPGSA (GPS DOP and active satellites)</p> <p>Bit 4 – GPVTG (track made good and ground speed)</p> <p>Bit 5 – PQXFI (Global Positioning System Extended Fix Data.)</p> <p>Bit 6 – GLGSV (GLONASS satellites in view GLONASS fixes only)</p> <p>Bit 7 – GNGSA (DOP and GLONASS satellites; GPS+GLONASS or GLONASS-only fixes. Contains DOP information for all active satellites, but other information is GLONASS-only)</p> <p>Bit 8 – GNGNS (fix data for GNSS receivers; output for GPS-only, GLONASS-only, hybrid GLONASS+GPS fixes, or even AFLT fixes)</p> <p>Bit 9 – PQGSA (bds qzss DOP and active satellites)</p> <p>Bit 10 – PQGSV (bds qzss satellites in view)</p> <p>Bit 11 – GPGLL (Geographic Position – Latitude/Longitude)</p> <p>Bit 12 – GPZDA (Time &amp; Date – UTC, Day, Month, Year and Local Time Zone)</p> <p>return: OK ERROR</p>
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### 3.9 AT+CGPSMD=<mo>

该命令用于设置 GNSS 工作模式，默认为 user plane.

AT+CGPSMD=<mo>	<p>This command specifies if the Mobile-Originated (MO) GPS session should use the control plane session or user plane session. Default value is user plane.Only can be used when gps is off.</p> <p>parameters: &lt; mo &gt;:</p> <p>0 - control plane 1 - user plane</p> <p>return: OK</p>
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Examples	AT+CGPSMD=1 OK
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### 3.10 AT+CGPSURL

该命令用于设置 AGPS 服务器地址，断电不保存。

AT+CGPSURL= <URL>	<p>This command is used to set AGPS server URL. Can not save, when reboot url will restore to default</p> <p>parameters:</p> <p>&lt;URL&gt;: AGPS server URL. It needs double quotation marks</p> <p>return: OK ERROR</p>
Examples	<p>AT+CGPSURL=? OK AT+CGPSURL="211.151.53.216:7275" OK</p>

### 3.11 AT+CGPSSSL=<ssl>

该命令用于设置 SSL 安全模式。

AT+CGPSSSL=<SSL>	<p>This command is used to select transport security, used certificate or not. The certificate gets from local carrier. If the AGPS server doesn't need certificate, execute AT+CGPSSSL=0, only can be used when gps is off</p> <p>parameters:</p> <p>&lt;SSL&gt;: 0 disable SSL 1 enable SSL</p> <p>return: OK ERROR</p>
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