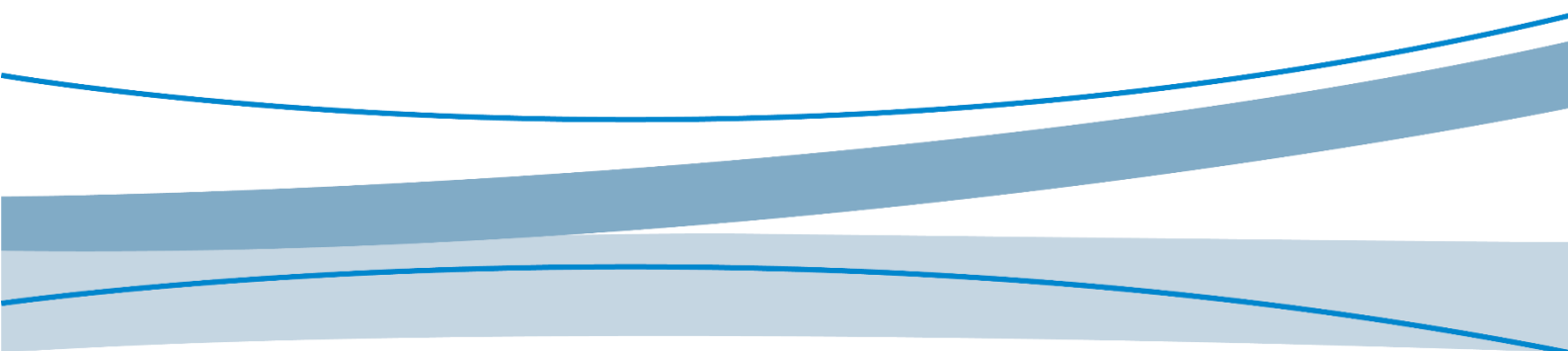




MTC

AT Commands User Manual_LBS

V1.6



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Applicable Model

No.	Applicable Model	Description
1	L716 Series	Only support GTGIS command type is 6 (amap map)
2	NL668 Series	Only support GTGIS command type is 6 (amap map)
3	MC66x Series	Extended support for GTGIS command type=7 (7: wifiscan, wifiscan localization based on amap map)
4	MG66x Series	Extended support for GTGIS command type=7 (7: wifiscan, wifiscan localization based on amap map)
5	LE Series	Extended support for GTGIS command type=7 (7: wifiscan, wifiscan localization based on amap map)
6	LC116 Series	Only support GTGIS command type is 6 (amap map)
7	MC116 Series	Only support GTGIS command type is 6 (amap map)
8	MG110 Series	Only support GTGIS command type is 6 (amap map)
9	L610 Series	Extended support for GTGIS command type=7 (7: wifiscan, wifiscan localization based on amap map)
10	LC610N Series	Extended support for GTGIS command type=7 (7: wifiscan, wifiscan localization based on amap map)
11	LG610 Series	Extended support for GTGIS command type=7 (7: wifiscan, wifiscan localization based on amap map)
12	MC610 Series	Extended support for GTGIS command type=7 (7: wifiscan, wifiscan localization based on amap map)
13	MC615 Series	Extended support for GTGIS command type=7 (7: wifiscan, wifiscan localization based on amap map)
14	FG132 Series	support GTGIS command type is 5 (google map) and type is 6 (amap map)

15	MC619 Series	Extended support for GTGIS command type=7 (7: wifiscan, wifiscan localization based on amap map)
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Change History

V1.6 (2025-07-31)	Added the Fibocom's positioning service. Added the url parameter to the +GTGIS command. Changed the key length to 256 characters. Added GTGIS command types 9 and 10. This feature is only supported by some versions. For details, please refer to the notes in Section 1.1.
V1.5 (2025-03-07)	Deleted the MA510 product.
V1.4 (2024-12-31)	Modified the maximum response time and execution return time of the +GTSET instruction.
V1.3 (2024-12-27)	Added application models (MC619 series).
V1.2 (2024-11-15)	Uniformly changed the LE13x/LE17x/LE27x/LE23x/LE37x series in the applicable models into the LE series.
V1.1 (2024-07-30)	Added GTGIS error information (+GTGIS: NO KEY).
V1.0 (2024-05-06)	Initial version.

1 LBS

1.1 +GTGIS, obtain GIS information from the network

Description

This command is used to query GIS information from the network side and return it to the module.

Format

Type	Command	Response
Setting command	AT+GTGIS=<Type>[,"<url>"]	Response 1: OK +GTGIS: < GIS information> ... Response 2: OK +GTGIS: <Error information> Response 3: ERROR
Query command parameter range	AT+GTGIS=?	+GTGIS: (list of supported <type>s) OK

Parameter

Name	Description	Value
Type	Map data interface	Type: integer 5: google map 6: amap map 7: wifiscan 8: google wifiscan(not supported currently) 9: Fibocom map 10: Fibocom wifiscan
url	LBS access domain name	Type: string
GIS information	- -	Type: string
Error information	Error information returned when obtaining GIS information	Character information +GTGIS: INVALID USER KEY +GTGIS: wifiscan timeout and none of mac found +GTGIS: Insufficient mac found and no

Name	Description	Value
		GIS info received from MAP server
		+GTGIS: NETWORK ERROR
		+GTGIS: NO KEY

Characteristic

Require SIM Card Normal	Yes	Require Network Registration	Yes
Require Data Connection	Yes	Async or Sync Command	Async command
Require Restart to Take Effect	No	Require Data Store at Power Down	No
Max Response Duration (ms)	1000	Max Result Returning Duration (ms)	120000



- type5: google map, supported by partial versions. If you need to use it, please contact technical support.
- wifiscan: Refer to the product manual for detailed support information.
- type8: reserved item, not supported currently.
- When Type is set to 9 or 10, note that accessing different domain names requires configuration of different keys by using the AT+GTKEY command before positioning. Additionally, HTTP and HTTPS services accessing the same domain name (different URLs) also require different keys. Customers can configure their own URLs for the Fibocom's LBS service, or ignore this parameter and use the software's built-in URL. Before the usage, contact technical support to confirm the correctness of software access URLs and corresponding keys.
- Type can be set to 9 or 10 only in certain projects. Use the AT+GTGIS=? command to check if values 9 and 10 are available, and use ATIO to verify that versions compiled after 20250801 support the Fibocom's LBS service. For versions before this date, contact technical support for confirmation before the usage.

Example

AT+COPS?

①

+cops: 0,0,"CHN-UNICOM",7

OK

AT+MIPCALL=1

②

OK

+MIPCALL: 10.66.138.219

AT+GTKEY="the key value you should set"

③

OK

AT+GTGIS=6

④

OK

+GTGIS:

```
{"infocode":"10000","result":{"city":"Xi'an","province":"Shaanxi","poi":"Feiyang Commercial Building","adcode":"610113","street":"Zhangba West Road","desc":"near Feiyang Commercial Building, Zhangba West Road, Yanta District, Xi'an, Shaanxi","country":"China","type":"4","location":"108.842034,34.1985357","road":"Zhangba West Road","radius":"550","citycode":"029"},"info":"OK","status":"1"}
```

AT+GTGIS=6,"http://apilocate.amap.com/position"

OK

+GTGIS: "108.8332048,34.2050873"

+GTGIS: "Near Yunhuigu, Software New City, Yunshui 2nd Road, Yanta District, Xi'an City, Shaanxi Province"

AT+GTGIS=10,"https://fibomtc.cloud.fibocom.com/api/lbs/locate"

+GTGIS: "108.834534,34.206786"

+GTGIS: "Tiangu 8th Road Overpass, Yanta District, Xi'an City, Shaanxi Province"

- ① Device registers network
- ② Activate a PDP connection
- ③ Set key value
- ④ Obtain GIS information

1.2 +GTKEY, configure the server key value

Description

This command is used to set the key value requested by the GIS. Contact the service provider to obtain the key value. If the key value is incorrect, obtaining information by using +GTGIS will fail.

Format

Type	Command	Response
Setting command	AT+GTKEY=" <code><key></code> "	Response 1: OK Response 2: ERROR
Read current settings	AT+GTKEY?	Response 1: +GTKEY: " <code><key></code> " OK Response 2: +GTKEY: Not Set OK
Query command parameter range	AT+GTKEY=?	+GTKEY: (maximum length of the supported key string) OK

Parameter

Name	Description	Value
Key	Contact the service provider to obtain the key value	Type: string Range: 1 byte to 256 bytes

Characteristic

Require SIM Card Normal	No	Require Network Registration	No
Require Data Connection	No	Async or Sync Command	Sync command
Require Restart to Take Effect	No	Require Data Store at Power Down	No
Max Response Duration (ms)	1000	Max Result Returning Duration (ms)	1000



When using the Fibocom's LBS service, if customers need to configure their own keys, they must add the prefix "ApiKey" when configuring the keys via the AT+GTKEY command.

Example

AT+COPS?

①

`+cops: 0,0,"CHN-UNICOM",7`

OK

AT+MIPCALL=1

②

OK

`+MIPCALL: 10.66.138.219`**AT+GTKEY="the key value you should set"**

③

OK

AT+GTGIS=6

④

OK

`+GTGIS:`

```
{"infocode":"10000","result":{"city":"Xi'an","province":"Shaanxi","poi":"Feiyang Commercial Building","adcode":"610113","street":"Zhangba West Road","desc":"near Feiyang Commercial Building, Zhangba West Road, Yanta District, Xi'an, Shaanxi","country":"China","type":"4","location":"108.842034,34.1985357","road":"Zhangba West Road","radius":"550","citycode":"029"},"info":"OK","status":"1"}
```

- ① Device registers network
- ② Activate a PDP connection
- ③ Set key value
- ④ Obtain GIS information

1.3 +GTSET, set the output format of location information

Description

This command is used to set the output format of location information.

Format

Type	Command	Response
Setting command	AT+GTSET="LBSFMT",<value>	Response 1: OK

Type	Command	Response
		Response 2: ERROR

Parameter

Name	Description	Value
value	Output format ID	0: Output according to the analyzed result 1: Output according to original data default value: 0

Characteristic

Require SIM Card Normal	No	Require Network Registration	No
Require Data Connection	No	Async or Sync Command	Sync command
Require Restart to Take Effect	No	Require Data Store at Power Down	Yes
Max Response Duration (ms)	1000	Max Result Returning Duration (ms)	1000

Example

AT+GTSET="LBSFMT",0

OK

AT+GTGIS=6

OK

+GTGIS: "108.8357528,34.2052311"

+GTGIS: "Near Yunhuigu, Software New City, Yunshui 1st Road, Yanta District, Xi'an City, Shaanxi Province"

AT+GTSET="LBSFMT",1

OK

AT+GTGIS=6

OK

+GTGIS:

```
{"infocode":"10000","result":{"city":"Xi'an","province":"Shaanxi","poi":"Yunhuigu, Software New City","adcode":"610113","street":"Zhangba 8th Road","desc":"Near Yunhuigu, Software New City, Yunshui 1st Road, Yanta District, Xi'an City, Shaanxi Province","country":"China","type":"4","location":"108.8357528,34.2052311","road":"Yunshui 1st Road","radius":"550","citycode":"029"},"info":"OK","status":"1"}
```