AOVX
Aim of Valuables

AT Commands

V Series_V1.9

History

Revision	Date	Author	Description
V1.0	2021-10-12	Tommy	Initial
V1.1	2021-11-10	Tommy	Upgraded
V1.2	2022-01-11	Tommy	Upgraded QTV/APN/BLIND/QNMEA commands
V1.3	2022-03-15	Tommy	Upgraded ID/SHAKE/GPIO command
V1.4	2022-03-24	Tommy	Upgraded layout
V1.5	2022-05-10	Tommy	Upgraded layout and added SHAKE/GNSS/BTENABLE/REPORTMASK/SENSORMASK/SLEEPMODE commands and etc.
V1.6	2022-07-28	Tommy	Added RELAYMODE and BATMODE
V1.7	2022-08-08	Yuki	Upgraded layout and added band configuration
V1.8	2022-10-18	Yuki	Upgraded layout and Reportmask
V1.9	**2022-11-16**	**Yuki**	**Added AT+DISTANCE command**

Content

1. Introduction

(1) This document is described configuration commands via serial port,SMS and platform. For platform configuration, please refer to *AOVX_Vehicles Tracker_V Series_Cloud Platform Protocol*.

(2) The serial port command needs to add the start symbol "AT+" at the start of the command, and the end symbol "\r\n" at the end of the command. SMS commands do not need to add prefix "AT+" and suffix "\r\n".

(3) Command keywords are case-insensitive. Punctuation symbols are an American input method. When writing text messages, please pay attention to input method switching to avoid command format errors.

2. General Tracker AT Commands

2.1. AT+TEST Open/Close TEST Sentences

Commands	Reply	Description
Help commands **AT+TEST=?**	OK	Turn on or turn off test log output status: [on,off]
Configuration commands **AT+TEST**	+TEST:<status> OK	
Query commands **none**	none	

2.2. AT+SAVE Save Configuration

Commands	Reply	Description
Help commands **AT+SAVE=?**	OK	Save/clear all Parameter configuration Index: 0: clear all factory configurations 1: save all configurations to the factory parameter area
Configuration commands **AT+SAVE=<index>**	+SAVE:len,<len>,crc,<crc>,date,<date> OK	
Query commands **AT+SAVE?**	+SAVE:len,<len>,crc,<crc>,date,<date> OK	

2.3. AT+FORMAT Restore Factory Configuration

Commands	Reply	Description

Help commands **AT+FORMAT=?**	index: 0:restore all 1:restore all except ID 2:restore all except ID/main IP/mileage/APN 3:restore all to factory OK	Restore factory configuration index 0:all restore factory configuration 1: keep the ID, and restore the rest to the default configuration 2: keep the main IP, ID, mileage,APN and restore the rest to the default configuration 3: restore factory configuration
Configuration commands **AT+FORMAT=<index>**	+FORMAT:<index> OK	
Query commands **None**	none	

2.4. AT+LOG Configure Log Level

Commands	Reply	Description
Help commands **AT+LOG=?**	level: 0:disable all log 1:enable all log 2(default):enable some test log OK	Configure log level Level 0:close all log 1:open all log 2: Open part of the test log It takes effect immediately after configuration.
Configuration commands **AT+LOG=<level>**	+LOG:<level> OK	
Query commands **AT+LOG?**	+LOG:<level> OK	

2.5. AT+RESET Reboot the Device

Commands	Reply	Description

Help commands **AT+RESET=?**	OK	
Configuration commands **AT+RESET**	OK	
Query commands **none**		

3. Basic Parameters Query

3.1. AT+QTV Query Firmware Version

Commands	Reply	Description
Help commands **AT+QTV=?**	OK	
Configuration commands **None**		
Query commands **AT+QTV?**	QTV:<firmware version> <datetime> OK	

3.2. AT+MILEAGE Configure Initial Mileage

Commands	Reply	Description
Help commands **AT+MILEAGE=?**	the unit is meter. OK	Configure the initial mileage, the unit is meter
Configuration commands **AT+MILEAGE=<mile>**	+MILEAGE:<mile> OK	
Query commands **AT+MILEAGE?**	+MILEAGE:<mile> OK	

3.3. AT+QINFO Query Device Information

Commands	Reply	Description
Help commands **AT+QINFO=?**	OK	Query vehicle status information id:unique identification operator:operation name mode:network mode csq:network signal strength gnss status:position

		fix,position unfix Index:server ID ip:server domain or IP port:server port link status:the connection status of server voltage:VCC voltage car status:run or stop apn,name,password:the username and password of APN
Configuration commands **none**	none	
Query commands **AT+QINFO?**	+QINFO: ID:[id] NET:[operator,mode] CSQ:[csq] GNSS:[status] IP:[index]:[ip]:[port]:[status] VCC:[vol] CAR:[status] APN:[apn]:[name]:[password] OK	

3.4. AT+QIMEI Query IMEI

Command	Reply	Description
Help command **AT+QIMEI=?**	OK	Query IMEI
Configuration commands **none**	none	
Query commands **AT+QIMEI?**	+QIMEI:<imei> OK	

3.5. AT+QICCID Query ICCID

Commands	Reply	Description
Help commands **AT+QICCID=?**	OK	Query ICCID
Configuration commands **none**	none	
Query commands **AT+QICCID?**	+QICCID:<iccid> OK	

3.6. AT+QBS Query Main Base Station Information

Commands	Reply	Description
Help commands **AT+QBS=?**	OK	Query main base station information
Configuration commands **none**	none	
Query commands **AT+QBS?**	+QBS:<lac>,<ci> OK	

3.7. AT+QBAT Query Battery Charge Status

Commands	Reply	Description
Help commands **AT+QBAT=?**	OK	Check battery charge status status: yes: The battery is charging no: The battery is not connected or the battery is fully charged
Configuration commands **none**	none	
Query **AT+QBAT?**	+QBAT:<status> OK	

3.8. AT+QTIME Query Date and Time

Commands	Reply	Description
Help commands **AT+QTIME=?**	OK	Query date and time
Configuration commands **none**	none	
Query commands **AT+QTIME?**	+QTIME:<time> OK	

3.9. AT+QADC Query VCC Voltage

Commands	Reply	Description
Help commands **AT+QADC=?**	OK	Query VCC Voltage， vol: the unit is mV
Query commands **none**	none	
Query commands **AT+QADC?**	+QADC:<vol> OK	

3.10. AT+QACC Query ACC State

Commands	Reply	Description
Help commands **AT+QACC=?**	OK	Query ACC state status: [low,high]
Configuration commands **none**	none	
Query commands **AT+QACC?**	+QACC:<status> OK	

3.11. AT+QGSENSOR Query Sensor Status

Commands	Reply	Description
Help commands **AT+QGSENSOR=?**	OK	Query the id and xyz values of the G sensor. The unit is mg.
Configuration commands **none**	none	
Query commands **AT+QGSENSOR?**	+QGSENSOR:<id>,<x>,<y>,<z> OK	

3.12. AT+BLIND Query Buffer Data Status

Commands	Reply	Description
Help commands **AT+BLIND=?**	OK	Query buffer data information cnt: total number of buffer data len: total length of buffer loss: number of discarded buffer data rpos < x >: read offset address wpos < x >: write offset address
Configuration commands **none**	none	
Query commands **AT+BLIND?**	+BLIND:cnt:<cnt>,len:<len>,loss:<loss>,rpos0:<pos>,rpos1:<pos>,wpos0:<pos>,wpos1:<pos> OK	

3.13. AT+GNSS Query GNSS status

Commands	Reply	Description
Help commands **AT+GNSS=?**	OK	Query GNSS status

Configuration commands	/	/
Query commands **AT+GNSS?**	+GNSS:<status>,<latitude>,<longitude>,<viewstar1>,<viewstar2>,<posstar>,<CN>|<CN>|<CN>|<CN>|<CN>|<CN>|<CN>|<CN> OK	Query GNSS visible satellite information status:position fix/position unfix viewstar: Number of visible satellites posstar: Number of positioning satellites CN: Visible satellite signal strength, a total of 8 are displayed in order of strength, less than 8 complement 0

3.14. AT+QSTART Query START Signal State

Commands	Reply	Description
Help commands **AT+QSTART=?**	OK	Query start signal state status: [low,high]
Configuration commands **none**	none	
Query commands **AT+QSTART?**	+QSTART:<status> OK	

3.15. AT+QDCIN Query DCIN Signal State

Commands	Reply	Description
Help commands **AT+QDCIN=?**	OK	Query DC IN signal state status: [low,high]
Configuration commands **none**	none	
Query commands **AT+QDCIN?**	+QDCIN:<status> OK	

4. Basic Parameters Configuration

4.1. AT+ID Configure ID

Commands	Reply	Description
Help commands **AT+ID=?**	Device will use IMEI as ID when you set **AT+ID=""**; Device will add '0' or truncat automatically if the ID length does not match the protocol; The default ID is IMEI. OK	Configure the unique identification number. If not configured or configured as "", the IMEI number will be used as the ID by default. It takes effect immediately after configuration.
Configuration commands **AT+ID=<id>**	+ID:<id> OK	
Query commands **AT+ID?**	+ID:<id> OK	

4.2. AT+IP Configure IP and Port

Commands	Reply	Description
Help commands **AT+IP=?**	index: 0:main server 1:backup server 2:manage server ip: ip or domain port: Ignore this server if you set 0. OK	Configure specified IP and port, IP supports domain names; The port is configured as 0 to cancel this server. It takes effect immediately after configuration.
Configuration command **AT+IP=<index>,<ip>,<port>**	+IP:<index>,<ip>,<port> OK	
Query command **AT+IP?**	+IP:<index>,<ip>,<port> OK	

4.3. AT+APN Configure APN

Commands	Reply	Description
Help commands **AT+APN=?**	OK	Configure access point name, user name and password
Configuration commands **AT+APN=<apn>,<name>,<password>**	+APN:<apn>,<name>,<password> OK	Clear the corresponding fields: leave APN / name / password blank. For example, clear the user name and password: **AT + APN = < APN >,,**
Query commands **AT+APN?**	+APN:<apn>,<name>,<password> OK	

4.4. AT+SHAKE Configure Vibration Level

Commands	Reply	Description
Help commands **AT+SHAKE=?**	/	count: 0(Reserved) time: duration of vibration timegap: 0(Reserved)
Configuration commands **AT+SHAKE=<count>,<time>,<timegap>**	+SHAKE:<count>,<time>,<timegap> OK	
Query commands **AT+SHAKE?**	+SHAKE:<count>,<time>,<timegap> OK	

4.5. AT+SHAKETIME Configure the Shake Time Threshold

Commands	Reply	Description

Help commands **AT+SHAKETIME=?**	time: time1:continuous vibration time time2:continuous no vibration time the unit is second. OK	Configure vibration time threshold time1: Continuous vibration time time2: Continuous no vibration time The unit is second.
Configuration commands **AT+SHAKETIME=<time1>,<time2>**	+SHAKETIME:<time1>,<time2> OK	
Query commands **AT+SHAKETIME?**	+SHAKEIME:<time1>,<time2> OK	

4.6. AT+SHAKERANGE Configure Gsensor Threshold

Commands	Reply	Description
Help commands **AT+SHAKERANGE=?**	/	enable: 1(Reserved) range: 0:2g 1:4g 2:8g 3:16g sensitivity: [0-255]
Configuration commands **AT+SHAKERANGE=<enable>,<range>,<sensitivity>**	+SHAKERANGE:<enable>,<range>,<sensitivity> OK	
Query commands **AT+SHAKERANGE?**	+SHAKERANGE:<enable>,<range>,<sensitivity> OK	

4.7. AT+VOLTAGE Configure Voltage Threshold

Commands	Reply	Description
Help commands **AT+VOLTAGE=?**	index: 0:run voltage 1:stop voltage 2:sleep voltage voltage: unit is mV. OK	Configure voltage threshold index 0: run voltage 1: stop voltage 2: sleep voltage voltage The unit is mV
Configuration commands **AT+VOLTAGE=<index>,<voltage>**	+VOLTAGE:<index>,<voltage> OK	
Query commands **AT+VOLTAGE?**	+VOLTAGE:run,<voltage>,stop,<voltage>,sleep,<voltage> OK	

4.8. AT+DISTANCE Configure the Distance

Commands	Reply	Description
Help commands **AT+DISTANCE?**	<index> the unit is meter. OK	Configure the threshold of the report mileage distance, the unit is meter.
Configuration commands **AT+DISTANCE=<index>?**	+DISTANCE:<index> OK	
Query commands **AT+DISTANCE?**	+DISTANCE:<index> OK	

4.9. AT+TURNANGLE Configure the turn angle

Commands	Reply	Description
Help commands **AT+TURNANGLE=?**	angle: [1,180]	Configure the turn angle ,the value range of angle [1,180],

	the unit is degree. OK	the unit is degree
Configuration commands **AT+TURNANGLE=<angle>**	+TURNANGLE:<angle> OK	
Query commands **AT+TURNANGLE?**	+TURNANGLE:<angle> OK	

4.10. AT+OVERSPEED Overspeed Configuration

Commands	Reply	Description
Help commands **AT+OVERSPEED=?**	speed: the unit is km/h. time: continuous overspeed time,the unit is second. OK	Configure the overspeed threshold and overspeed duration, the speed unit is km/h, and the time unit is seconds. Exceeding the configured duration is judged as overspeed.
Configuration commands **AT+OVERSPEED=<speed>,<time>**	+OVERSPEED:<speed>,<time> OK	
Query commands **AT+OVERSPEED?**	+OVERSPEED:<speed>,<time> OK	

4.11. AT+ACCPWD Configure ACC Password

Commands	Reply	Description
Help commands **AT+ACCPWD=?**	password: Disable the ACCPWD if you set password to 0; The valid password length is 2. OK	Set ACC password，It is used to open the fuel circuit locally through the ACC switch sequence when there is no communication after the fuel circuit is closed. The length of password is 2. If the password is set to 0, the ACC password function will be canceled.
Configuration commands	+ACCPWD:<password>	

AT+ACCPWD=<password>	OK	
Query commands **AT+ACCPWD?**	+ACCPWD:<password> OK	

4.12. AT+PROTOCOL Configure the Protocol Version Number

Commands	Reply	Description
Help commands **AT+PROTOCOL=?**	version: [2011,2013,2019] encryption: [NULL,RSA,AES,XTEA] OK	Configure JTT808, version: [2011,2013,2019], encryption: [NULL,RSA,AES,XTEA]
Configuration commands **AT+PROTOCOL=<version>,<encryption>**	+PROTOCOL:<version>,<encryption> OK	
Query commands **AT+PROTOCOL?**	+PROTOCOL:<version>,<encryption> OK	

4.13. AT+QNMEA Open/Close NMEA Sentences

Commands	Reply	Description
Help commands **AT+QNMEA=?**	OK	Open or close NMEA sentence output status: [yes,no]
Configuration commands **AT+QNMEA**	+QNMEA:<status> OK	
Query commands **none**	none	

4.14. AT+FOTA Start FOTA Upgrade

Commands	Reply	Description
Help commands **AT+FOTA=?**	type: 0:update app 1:update core version: It can be ignore if the “url” include the version. url: full http url for fota OK	OTA upgrade type: 0:update app 1:update core version: It can be ignore if the “url” include the version. url: full http url for fota OK
Configuration commands **AT+FOTA=[type],[version],[url]**	+FOTA:<type>,<version>,<url> OK	
Query commands **None**		

4.15. AT+POWER Turn ON/OFF External Power Output

Commands	Reply	Description
Help commands **AT+POWER=?**	status: ON: turn on the power OFF: turn off the power OK	Set power output status status: [ON,OFF]
Configuration commands **AT+POWER=<status>**	+POWER:<status> OK	
Query commands **AT+POWER?**	+POWER:<status> OK	

4.16. AT+TIMEGAP Configure the Reporting Interval

Commands	Reply	Description

Help commands **AT+TIMEGAP=?**	index: 0:location in run mode 1:location in sleep mode 2:heartbeat in sleep mode 3:manage heartbeat in all mode time: unit is second;the manage heartbeat will be report with the protocol data if you set manage heartbeat time to 0. OK	index: 0:location in run mode 1:location in sleep mode 2:heartbeat in sleep mode 3:manage heartbeat in all mode time: unit is second;the manage heartbeat will be report with the protocol data if you set manage heartbeat time to 0. After configuration, the next report will take effect.
Configuration commands **AT+TIMEGAP=<index>,<time>**	+TIMEGAP:<index>,<time> OK	
Query commands **AT+TIMEGAP?**	+TIMEGAP:run,<time>,sleep,<time>,heart,<time>,manage,<time> OK	

4.17. AT+TIMEZONE Configure Time Zone

Commands	Reply	Description
Help commands **AT+TIMEZONE=?**	[-11,12] OK	Configure time zone, the value range of zone [-11,12]
Configuration commands **AT+TIMEZONE=<zone>**	+TIMEZONE:<zone> OK	
Query commands **AT+TIMEZONE?**	+TIMEZONE:<zone> OK	

4.18. AT+REPORTMASK Set Report Mask for 0x0200 Package

Commands	Reply	Description

Help commands **AT+REPORTMASK=?**	/	mask: Bit0:GPS enable/disable Bit1:mileage Bit2:signal Bit3:gnss number Bit4:main cell Bit5:neighborhood cell Bit6:external power voltage Bit7:firmware version Bit8:bluetooth infomation Bit9:wifi infomation Bit10:gpio infomation Bit11:sensor infomation Bit12:battery infomation Bit13:device infomation Bit14:assist infomation
Configuration commands **AT+REPORTMASK=<mask>**	+REPORTMASK:<mask> OK	
Query commands **AT+REPORTMASK?**	+REPORTMASK:<mask> OK	

4.19. AT+SENSORMASK Set Sensor Mask for 0x0200 Package

Commands	Reply	Description
Help commands **AT+SENSORMASK=?**	/	mask: Bit0-2:reserve Bit3:acceleration value Bit4-7:reserve
Configuration commands **AT+SENSORMASK=<mask>**	+SENSORMASK:<mask> OK	
Query commands	+SENSORMASK:<mask>	

AT+SENSORMASK?	OK	

4.20. AT+GNSSAST Enable/Disable GNSS Assist in Virtual ACC Mode

Commands	Reply	Description
Help commands **AT+GNSSAST=?**	/	enable: 0:disable 1:enable
Configuration commands **AT+GNSSAST=<enable>**	+GNSSAST:<enable> OK	
Query commands **AT+GNSSAST?**	+GNSSAST:<enable> OK	

4.21. AT+GPIOVALUE Configure or Query GPIO Value

Commands	Reply	Description
Help command **AT+GPIOVALUE=?**	OK	Query or configure GPIO value channel: 0-15: output GPIO 0:first output GPIO(RELAY) 1:second output GPIO 16-32: input GPIO 16:first input GPIO value: output GPIO or digital input GPIO, only 1 and 0 represent high and low levels analog input GPIO:voltage value, the unit is mV
Configure command **AT+GPIOVALUE=<channel**	+GPIOVALUE:<channel>,<value>	only output GPIO support configuration commands

>,<value>	OK	The range of channel: 0-15
Query command **AT+GPIOVALUE?**	For VG300: +GPIOVALUE:0,<value> 16,<value> OK For VL30X/VM30X: +GPIOVALUE:0,<value> 1,<value> 16,<value> OK	

4.22. AT+WIFIENABLE Enable/Disable WIFI

Commands	Reply	Description
Help commands **AT+WIFIENABLE=?**	/	enable: 0:disable 1:enable
Configuration commands **AT+WIFIENABLE=<enable>**	+WIFIENABLE:<enable> OK	
Query commands **AT+WIFIENABLE?**	+WIFIENABLE:<enable> OK	

4.23. AT+BTENABLE Enable/Disable Bluetooth

Commands	Reply	Description
Help commands **AT+BTENABLE=?**	/	enable: 0:disable 1:enable
Configuration commands **AT+BTENABLE=<enable>**	+BTENABLE:<enable> OK	

Query commands **AT+BTENABLE?**	+BTENABLE:<enable> OK	

5. Modes Configuration and Query

5.1. AT+FUEL Control FUEL Circuit

Commands	Reply	Description
Help commands **AT+FUEL=?**	status: ON: turn on the fuel circuit OFF: turn off the fuel circuit OK	Control fuel circuit status: ON: Open the fuel circuit OFF: Close the fuel circuit
Configuration commands **AT+FUEL=<status>**	+FUEL:<status> OK	
Query commands **AT+FUEL?**	+FUEL:<status> OK	

5.2. AT+GNSSMODE Set the GNSS galaxy

Commands	Reply	Description
Help commands **AT+GNSSMODE=?**	/	galaxy: 0:gps+bd 1:gps+glo 2:gps+gal reserve:0
Configuration commands **AT+GNSSMODE=<galaxy>,<reserve>,<reserve>**	+GNSSMODE:<galaxy>,<reserve>,<reserve> OK	
Query commands **AT+GNSSMODE?**	+GNSSMODE:<galaxy>,<reserve>,<reserve> OK	

5.3. AT+GPIOMODE Configure Input GPIO Mode

Commands	Reply	Description
Help commands **AT+GPIOMODE=?**	OK	Configure input GPIO mode channel: 16:first input GPIO mode: 0:digital input 1:analog input Only one input GPIO is supported now.
Configuration commands **AT+GPIOMODE=<channel>,<mode>**	+GPIOMODE:<channel>,<mode> OK	
Query command **AT+GPIOMODE?**	+GPIOMODE:<channel>,<mode> OK	

5.4. AT+BTMODE Set Bluetooth Mode and Mask

Commands	Reply	Description
Help commands **AT+BTEMODE=?**	/	mode: 0:reserve mask: Bit0:name Bit1:firmware version Bit2:voltage Bit3:temperature Bit4:humidity Bit5:acceleration value Bit6-7:reserve

Configuration commands **AT+BTEMODE=<mode>,<mask>**	+BTMODE:<mode>,<mask> OK	
Query commands **AT+BTMODE?**	+BTMODE:<mode>,<mask> OK	

5.5. AT+REPORTMODE Set Report Transmission Protocol Mode

Commands	Reply	Description
Help commands **AT+REPORTMODE=?**	/	mode: 0:TCP 1:UDP
Configuration commands **AT+REPORTMODE=<mode>**	+REPORTMODE:<mode> OK	
Query commands **AT+REPORTMODE?**	+REPORTMODE:<mode> OK	

5.6. AT+SLEEPMODE Set Sleep Mode

Commands	Reply	Description
Help commands **AT+SLEEPMODE=?**	/	mode: 0:heartbeat mode(MCU:on Net:on GNSS:off) 1:hibernation mode(MCU:sleep Net:off GNSS:off)
Configuration commands **AT+SLEEPMODE=<mode>**	+SLEEPMODE:<mode> OK	
Query commands **AT+SLEEPMODE?**	+SLEEPMODE:<mode>	

	OK	

5.7. AT+RELAYMODE Control RELAYMODE

Commands	Reply	Description
Help commands **AT+RELAYMODE=?**	/	mode: 0: GPIO channel 0 used for fuel control 1: GPIO channel 0 used for GPIO(output)
Configuration commands **AT+RELAYMODE=<mode>**	+RELAYMODE:<mode> OK	
Query commands **AT+RELAYMODE?**	+RELAYMODE:<mode> OK	

5.8. AT+BATMODE Set BATMODE

Commands	Reply	Description
Help commands **AT+BATMODE=?**	/	mode: 0: VCC power supply mode; 1: Internal battery supply mode;
Configuration commands **AT+BATMODE=<mode>**	+BATMODE:<mode> OK	
Query commands **AT+BATMODE?**	+BATMODE:<mode> OK	

6. Module AT Commands Transparent Transmission

6.1. AT+CMD Module AT Command Transparent Transmission

Commands	Reply	Description
Help commands **AT+CMD=?**	OK	Module AT transparent transmission command
Configuration commands **AT+CMD=<command>**	<at respond>	
Query commands **none**	none	

6.2. AT+QCFG=band Configure Frequency Band

6.2.1. VM300/VM350

AT+QCFG="band" Configure Frequency Band

This Write Command configures the frequency bands to be searched for or queries the current setting.

AT+QCFG="band" Configure Frequency Band	
Write Command **AT+QCFG="band"[,<GSM_bandval>,<eMTC_bandval>,<NB-IoT_bandval>[,<effect>]]**	Response If the optional parameters are omitted, query the current setting: +QCFG: "band",<GSM_bandval>,<eMTC_bandval>,<NB-IoT_bandval>
	OK
	If any of the optional parameters is specified, configure the frequency bands to be searched for: OK
	If there is an error related to ME functionality:

	+CME ERROR: <err>
	If there is any other error: ERROR
Maximum Response Time	300 ms
Characteristics	<effect> determines when the command will take effect. The configurations will be saved automatically.

Parameter	
<GSM_bandval> A	hexadecimal value that specifies the GSM frequency band (e.g.: 0xa = 0x2(DCS1800) + 0x8(PCS1900)). If it is set to 0, it means not to change GSM frequency band. 0 No change 0x1 EGSM900 0x2 DCS1800 0x4 GSM850 0x8 PCS1900 0xF All of the supported bands above
<eMTC_bandval> A	hexadecimal value that specifies the eMTC frequency band (e.g.: 0x15 = 0x1(LTE B1) + 0x4(LTE B3) + 0x10(LTE B5)). If it is set to 0, it means not to change the eMTC frequency band. 0 No change 0x1 (BAND_PREF_LTE_BAND1) LTE B1 0x2 (BAND_PREF_LTE_BAND2) LTE B2 0x4 (BAND_PREF_LTE_BAND3) LTE B3 0x8 (BAND_PREF_LTE_BAND4) LTE B4 0x10 (BAND_PREF_LTE_BAND5) LTE B5 0x80 (BAND_PREF_LTE_BAND8) LTE B8 0x800 (BAND_PREF_LTE_BAND12) LTE B12 0x1000 (BAND_PREF_LTE_BAND13) LTE B13 0x20000 (BAND_PREF_LTE_BAND18) LTE B18 0x40000 (BAND_PREF_LTE_BAND19) LTE B19 0x80000 (BAND_PREF_LTE_BAND20) LTE B20 0x1000000 (BAND_PREF_LTE_BAND25) LTE B25 0x2000000 (BAND_PREF_LTE_BAND26) LTE B26 0x4000000 (BAND_PREF_LTE_BAND27) LTE B27

	0x8000000 (BAND_PREF_LTE_BAND28) LTE B28 0x40000000 (BAND_PREF_LTE_BAND31) LTE B31 0x20000000000000000 (BAND_PREF_LTE_BAND66) LTE B66 0x800000000000000000 (BAND_PREF_LTE_BAND72 LTE B72 0x1000000000000000000 (BAND_PREF_LTE_BAND73) LTE B73 0x100000000000000000000 (BAND_PREF_LTE_BAND85) LTE B85
<NB-IoT_bandval> **A**	hexadecimal value that specifies the NB-IoT frequency band (e.g.: 0x15 = 0x1(LTE B1) + 0x4(LTE B3) + 0x10(LTE B5)). If it is set to 0, it means not to change the NB-IoT frequency band. 0 No change 0x1 (BAND_PREF_LTE_BAND1) LTE B1 0x2 (BAND_PREF_LTE_BAND2) LTE B2 0x4 (BAND_PREF_LTE_BAND3) LTE B3 0x8 (BAND_PREF_LTE_BAND4) LTE B4 0x10 (BAND_PREF_LTE_BAND5) LTE B5 0x80 (BAND_PREF_LTE_BAND8) LTE B8 0x800 (BAND_PREF_LTE_BAND12) LTE B12 0x1000 (BAND_PREF_LTE_BAND13) LTE B13 0x20000 (BAND_PREF_LTE_BAND18) LTE B18 0x40000 (BAND_PREF_LTE_BAND19) LTE B19 0x80000 (BAND_PREF_LTE_BAND20) LTE B20 0x1000000 (BAND_PREF_LTE_BAND25) LTE B25 0x8000000 (BAND_PREF_LTE_BAND28) LTE B28 0x40000000 (BAND_PREF_LTE_BAND31) LTE B31 0x20000000000000000 (BAND_PREF_LTE_BAND66) LTE B66 0x400000000000000000 (BAND_PREF_LTE_BAND71) LTE B71 0x800000000000000000 (BAND_PREF_LTE_BAND72) LTE B72 0x1000000000000000000 (BAND_PREF_LTE_BAND73) LTE B73 0x100000000000000000000 (BAND_PREF_LTE_BAND85) LTE B85
<effect>	Integer type. When to take effect. 0 Take effect after rebooting 1 Take effect immediately

NOTE:

- For the specific bands supported by each model, see corresponding specifications of the

modules.

<GSM_bandval> is valid only on BG95-M3, BG95-M5 and BG600L-M3 modules.

<NB-IoT_bandval> is invalid on BG95-M1 module.

LTE B31/B72/B73 is valid on BG95-M4 module only.

- The value setting of <eMTC_bandval> when all eMTC bands are intended to be searched for:

  0x100182000000004F0E189F for BG95-M4

  0x100002000000000F0E189F for BG77, BG600L-M3 and other BG95 series modules

- The value setting of <NB-IoT_bandval> when all NB-IoT bands are intended to be searched for:

  0x10018200000000490E189F for BG95-M4

  0x10004200000000090E189F for BG77, BG600L-M3 and other BG95 series modules

6.2.2. VL300/VL350

This Write Command configures the frequency bands to be searched for or queries the current setting.

AT+QCFG="band" Configure Frequency Band	
Write Command **AT+QCFG="band"[,<bandval>,<lte ba ndval>[,<effect>]**	Response If the optional parameters are omitted, query the current setting: +QCFG: +QCFG: "band",<bandval>,<ltebandval>
	OK
	If any of the optional parameters is specified, configure the frequency bands to be searched for: OK or

	ERROR
	If there is an error related to ME functionality: +CME ERROR: <err>
Maximum Response Time	300 ms
Characteristics	<effect> determines when the command will take effect. The configurations will be saved automatically.

Parameter	
<bandval>	hexadecimal value that specifies the LTE frequency band. If it is set to 0, it means not to change LTE frequency band.(eg: 0x15 = 0x1 (LTE B1) + 0x4 (LTE B3) + 0x10 (LTE B5)) 0 No change 0001 EGSM900 0002 DCS1800 0004 GSM850 0008 PCS1900 FFFF All of the supported bands above
<ltebandval>	hexadecimal value that specifies the LTE frequency band. If it is set to 0, it means not to change the LTE frequency band.(e.g.: 0x15 = 0x1 (LTE B1) + 0x4 (LTE B3) + 0x10 (LTE B5)) 0 No change 0x1 (CM_BAND_PREF_LTE_EUTRAN_BAND1) LTE B1 0x2 (CM_BAND_PREF_LTE_EUTRAN_BAND2) LTE B2 0x4 (CM_BAND_PREF_LTE_EUTRAN_BAND3) LTE B3 0x8 (CM_BAND_PREF_LTE_EUTRAN_BAND4) LTE B4 0x10 (CM_BAND_PREF_LTE_EUTRAN_BAND5) LTE B5 0x40 (CM_BAND_PREF_LTE_EUTRAN_BAND7) LTE B7

	0x80 (CM_BAND_PREF_LTE_EUTRAN_BAND8) LTE B8 0x80000 (CM_BAND_PREF_LTE_EUTRAN_BAND20) LTE B20 0x8000000 (CM_BAND_PREF_LTE_EUTRAN_BAND28 LTE B28 0x200000000 (CM_BAND_PREF_LTE_EUTRAN_BAND34) LTE B34 0x2000000000 (CM_BAND_PREF_LTE_EUTRAN_BAND38) LTE B38 0x4000000000 (CM_BAND_PREF_LTE_EUTRAN_BAND39) LTE B39 0x8000000000 (CM_BAND_PREF_LTE_EUTRAN_BAND40) LTE B40 0x10000000000 (CM_BAND_PREF_LTE_EUTRAN_BAND41) LTE B41 0x20000000000000000(CM_BAND_PREF_LTE_EUTRAN_BAND66) LTE B66 0x7FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF(CM_BAND_PREF_ANY) All of the supported bands above
<effect>	Integer type. When to take effect. 0 Take effect after rebooting 1 Take effect immediately

NOTE:

- The module can set up to 5 LTE bands at the same time (<ltebandval>when set to "all Band", all the set bands can be unlocked); If it sets more than 5 frequency bands, an error code will be responsed.
- For details of the frequency bands actually supported by the module, please refer to the product specification of each device.

6.2.3. VG300*/VG200*

AT+QBAND Get and Set Mobile Operation Band

Test Command **AT+QBAND=?**	Response +QBAND: (list of supported <op_band>s) OK
Read Command **AT+QBAND?**	Response +QBAND: <op_band> OK
Write Command **AT+QBAND=<op_band>**	Response OK If there is any error related to ME functionality: +CME ERROR: <err>
Maximum Response Time	30s, determined by network.