GSM

Quectel Cellular Engine

GSM MMS
AT Commands

GSM_MMS_ATC_V1.2

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0. Revision history

Revision	Date	Author	Description of change
1.00	2009-08-07	Jay XIN	Initial
1.01	2009-09-12	Jay XIN	Added error code 3962.
	2009-09-17	Jay XIN	Modified "**AT+QMMCFG**" default value.
	2009-09-18	Jay XIN	Added "**AT+QMMPRI**" command.
1.02	2009-09-27	Jay XIN	Modified "+**QMMRECV:(1-20),(1)** ".
	2009-10-23	Jay XIN	Removed "The maximum size of UFS is 100 Kbytes".
	2009-11-25	Jay XIN	Modified "**AT+QFUPL**" description.
1.03	2009-12-31	Jay XIN	Added GMT time description in **"AT+QMMRM"**
1.1	2010-6-19	Jay XIN	Removed **AT**+**QFXXX** command, please refer to document [4]GSM_FILE_ATC.
	2010-6-19	Jay XIN	Added "Reliable transmission".
	2010-7-10	Jay XIN	Added "**AT+QMMDUR**" command.
	2010-7-26	Jay XIN	Removed "The maximum number of 'append file' is 6".
	2010-11-20	Jay XIN	Added **AT+QMMSMS**. Added **AT+QMMCTYP**. Added **AT+QMMFTYP**.
1.2	2015-05-08	Thomas ZHANG	Added applicable modules

1. Introduction

Quectel GSM/GPRS module provides MMS application interface for sending and receiving messages that include multimedia objects (image, audio, rich text, etc.). This document is a reference guide to all the AT commands defined for MMS.

This document is applicable to all Quectel GSM modules.

1.1. Reference

Table 1: Reference

SN	Document name	Remark
[1]	Mxx_ATC	The introduction of AT commands for Mxx
[2]	GSM_TCPIP_AN	To introduce how to use the internal TCP/IP stack
[3]	wap-209-mmsencapsulation-20020105-a	WAP MMS protocol standard package of documents
[4]	GSM_FILE_ATC	AT commands for file

1.2. Terms and abbreviations

Table 2: Terms and abbreviations

Abbreviation	Description
MMS	Multimedia Message Service
MMSC	Multimedia Message Service Centre
MMS Proxy-Relay	A server which provides access to various messaging systems. It may operate as WAP origin server in which case it may be able to utilize features of the WAP system
URL	Uniform Resource Locator
UFS	User File Storage
SMIL	Synchronized Multimedia Integration Language
DUR	The DUR attribute defines the duration of displaying file in SMIL script
HEX	"HEX" Character strings consist only of hexadecimal numbers from 00 to FF, e.g. string "Hello" HEX is "48656C6C6F"
BIN	Output/input data is the content of the binary data

2. AT Commands for MMS

Quectel GSM/GPRS module supports to transfer MMS Message over HTTP protocol. The MMS service supports the following character sets: US-ASCII, UTF8, UCS2 (Big Endian), and GBK. It is recommended to use PDU (HEX) mode to input MMS Message title if the character set is not US-ASCII.

2.1. Overview

Command	Description
AT+QMMURL	Set the URL of the MMSC
AT+QMMPROXY	Set the MMS proxy
AT+QMMCFG	Set the parameter for sending MMS Message
AT+QMMSCS	Set character sets and input mode
AT+QMMSW	Write MMS Message
AT+QMMSEND	Send MMS Message
AT+QMMRM	Manage the received MMS Message
AT+QMMRR	Read received MMS Message
AT+QMMRECV	Receive MMS Message from the MMSC
AT+QMMPRI	Set priority of MMS Message and call
AT+QMMDUR	Set DUR attribute value in the SMIL script
AT+QMMSMS	Set MMS's SMS transactor
AT+QMMCTYP	Enable to output text in USC2
AT+QMMFTYP	Output file style

Note: M95 and M72 module do not support to receive MMS message.

TA will switch to data mode after executing **AT+QMMRR** command. To switch back to AT mode, please input "+++" and this will terminate the current MMS AT command. The interval time between the first "+" and the character before the first "+" **MUST NOT** be less than 500 ms and the interval time between the last "+" and the character next to the last "+" **MUST NOT** be less than 500 ms and the interval time between each "+" **MUST** be less than 1000 ms.

2.2. Detailed descriptions of commands

2.2.1. AT+QMMURL Set the URL of the MMSC

AT+QMMURL Set the URL of the MMSC	
Test Command **AT+QMMURL=?**	Response **+QMMURL: "URL"**

	OK
	Parameter See Write Command.
Read Command **AT+QMMURL?**	Response **+QMMURL: \<mmsc url\>** **OK**
	Parameter See Write Command.
Write Command **AT+QMMURL=\<m** **msc url\>**	Response **OK** If error is related to ME functionality: **+CME ERROR: \<err\>**
	Parameter **\<mmsc url\>** The URL of the MMSC
Reference	Note: The maximum length of URL is 100 bytes.

2.2.2.   AT+QMMPROXY Set the MMS proxy

AT+QMMPROXY Set the MMS proxy	
Test Command **AT+QMMPROXY=?**	Response **+QMMPROXY: (1),"(0-255).(0-255).(0-255).(0-255)",(0-65535)** **OK**
	Parameter See Write Command.
Read Command **AT+QMMPROXY?**	Response **+QMMPROXY: \<type\>,\<gateway\>,\<port\>** **OK**
	Parameter See Write Command.
Write Command **AT+QMMPROXY** **=\<type\>,\<gateway\>[,** **\<port\>]**	Response **OK** If error is related to ME functionality: **+CME ERROR: \<err\>**
	Parameter **\<type\>** <u>1</u> HTTP protocol **\<gateway\>** IP address of MMS proxy **\<port\>** Port of MMS proxy. The range of the parameter is

	0-65535. Default is 80
Reference	

2.2.3. AT+QMMCFG   Set the parameters for sending MMS Message

AT+QMMCFG Set the parameters for sending MMS Message	
Test Command **AT+QMMCFG =?**	Response **+QMMCFG: (0-6), (0-3),(0,1),(0,1),(0-2),(0-4)** **OK**
	Parameter See Write Command.
Read Command **AT+QMMCFG?**	Response **+QMMCFG:** **<valid>,<pri>,<sendrep>,<readrep>,<visible>,<class>** **OK**
	Parameter See Write Command.
Write Command **AT+QMMCFG=<valid>[,<pri>][,<sendrep>][,<readrep>][,<visible>][,<class>]**	Response **OK** If error is related to ME functionality: **+CME ERROR: <err>**
	Parameter

	<valid> The validity period of MMS Message
	    0 1 hour
	    1 12 hours
	    2 24 hours
	    3 2 days
	    4 1 week
	    5 Maximum
	    <u>6</u> Use the network configuration

	<pri> Priority
	    0 Low
	    <u>1</u> Normal
	    2 High
	    3 Use the network configuration

	<sendrep> <u>0</u> Do not need delivery report 1 Need delivery report
	<readrep> Whether or not to read report <u>0</u> No 1 Yes
	<visible> Indicate whether or not to hide address

		0	Hide any address
		1	Show even secret address
		<u>2</u>	Use the network configuration
	<class>		The class of the MMS Message
		<u>0</u>	Personal
		1	Advertisement
		2	Informational
		3	Auto
		4	Use the network configuration
Reference			

2.2.4. AT+QMMSCS Set character sets and input mode

AT+QMMSCS Set character sets and input mode	
Test command **AT+QMMSCS=?**	Response **+QMMSCS: ("ASCII","UTF8","UCS2","GBK"),(0,1)** **OK**
	Parameter See Write Command.
Read command **AT +QMMSCS?**	Response **+QMMSCS: <charset>,<input mode>** **OK**
	Parameter See Write Command.
Write command **AT+QMMSCS =<charset>[,<input mode>]**	Response **OK** If error is related to ME functionality: **+CME ERROR: <err>**
	Parameter
	<charset> A string parameter which indicates the type of character sets: "ASCII" US-ASCII character set <u>"UTF8"</u> UTF8 character set "UCS2" ISO-10646-UCS-2 character set; this needs to specify Big Endian order. "GBK" GBK character set
	< input mode> The mode to input or view MMS Message title <u>0</u> PDU(HEX) mode 1 Text (BIN) mode
Reference	Note:

	This settings affect the following commands:
	AT+QMMSW=4,1, input MMS Message title.
	AT+QMMSW=4, view MMS Message title.
	AT+QMMSW=5,1,"test.txt", append a text file.

2.2.5. AT+QMMSW Write MMS Message

AT+QMMSW Write MMS Message	
Test command **AT+QMMSW=?**	Response **+QMMSW: (0-5)** **OK**
	Parameter See Write Command.
Write command 1) If MMS title is written (**<function>**=4 and **<operate>**=1): **AT+QMMSW=<function>,<operate>** > title string is entered <ctrl-Z> 2) Otherwise: **AT+QMMSW=<function>[,<operate>][,<oprstring>]**	Response If the operation is successful: **OK** If error is related to ME functionality: **+CME ERROR: <err>**

	Parameter
	<function> Operate function
	   0 Clean all the content of MMS Message
	   1 Operate "TO address"
	   2 Operate "CC address"
	   3 Operate "BCC address"
	   4 Operate title
	   5 Operate file appended
	<operate> It is omitted if **<function>** is 0
	   0 Clean
	   1 Write
	<oprstring> Address string if **<function>** is 1, 2 or 3, the length of which must be less than 50.
	   File name if **<function>** is 5, the length of which must be less than 13

Reference	Note: ● The maximum number of "TO address" is 6. ● The maximum number of "CC address" is 6. ● The maximum number of "BCC address" is 6. ● Address could be a subscriber number or an email address (e.g. info@quectel.com). ● The file to be appended must have been stored in UFS. It is strongly recommended that the file name should use DOS 8.3

	format. ● The maximum length of MMS Message title is 100. ● The character set of the MMS Message title or the content of a text file are specified by **AT+QMMSCS**. For example: If the content of a text file uses UTF8 character set, **AT+QMMSCS="UTF8",0** must be executed firstly.

2.2.6. AT+QMMSEND Send MMS Message

AT+QMMSEND Send MMS Message	
Test Command **AT+QMMSEND=?**	Response **+QMMSEND: (1)** **OK**
	Parameter See Write Command.
Write Command **AT+QMMSEND=\<op erate>**	Response **OK** If error is related to ME functionality: **+CME ERROR: \<err>**
	Parameter **\<operate>** 1 Start to send
Reference	Note: The response **OK** means starting to send MMS Message. When MMS Message sending has finished, an unsolicited result code will be returned: "**+QMMNOTIFY: 1,\<mms index>,\<error code>**". It means sending MMS Message successfully if **\<error code>** is equal to 0.

2.2.7. AT+QMMRM Manage the received MMS Message

AT+QMMRM Manage the received MMS Message	
Test command **AT+QMMRM=?**	Response **+ QMMRM: (0-1)** **OK**
	Parameter See Write Command.
Write command **AT+QMMRM=\<oper**	Response If the \<**operate**>=1 is to list MMS Message:

ate>[,<from>][,<to>]	+QMMRM: <mms index>,<from address>,<ind>,<date>,<time>,<message size> […] OK Otherwise: OK If error is related to ME functionality: +CME ERROR: <err>	
	Parameter	
	<operate>	0 Delete MMS Message
		1 List MMS Message
	<from>	The beginning to be operated index of MMS Message. The minimum index is 1.
	<to>	The end to be operated index of MMS Message. The minimum index is 1.
	<mms index>	The index of MMS Message
	<from address>	Origination address
	<ind>	0 The MMS Message is not downloaded
		1 The MMS Message has been downloaded
	<date>	Download date. Its format is MM/DD/YYYY. e.g. "07/25/2009"(GMT)
	<time>	Download time. Its format is HH:MM:SS. e.g. "10:25:56"(GMT)
	<message size>	MMS Message size in bytes
Reference		

2.2.8.   AT+QMMRR Read a received MMS Message

AT+QMMRR Read a received MMS Message	
Test command AT+QMMRR=?	Response +QMMRR: (1-5) OK
	Parameter See Write Command.
Write command AT+QMMRR=<opera te>[,<mms index>][,<para>][,<fil e name>]	Response The following is the format to view "Origination address", "TO address" and "CC address"(<operate>=1,2, or 3; <para> is omitted): +QMMRR: 1,<address> OK

The following is the format to view MMS Message title (<**operate**>=4):

+QMMRR: 4,<charset>,<title data>

OK

The following is the format to list append file (<**operate**>=5; <**para**> is omitted):

+QMMRR: 5,<file index>,<file name>,<charset>,<file size>
[…]

OK

The following is the format to read the content of a file (AT command **AT+QMMRR=6, <mms index>,<para>** is entered):
CONNECT
TA switches to data mode, and the bin data of the file will be outputted. After the file is read over, TA will return to command mode and reply the following codes:
+QMMRR: 6,<download size>,<checksum>

OK

The following is the format to copy the content of file to UFS (AT command **AT+QMMRR=6,<mms index>,<para>,<file name>** is entered):
OK
If error is related to ME functionality:
+CME ERROR: <err>

Parameter		
< operate >	1	View origination address
	2	View "TO address"
	3	View "CC address"
	4	View MMS title
	5	List "Append file"
	6	Read append file data of MMS Message
<mms index >	Received MMS Message index, base 1.	
<para>	If **<operate>** is 6, it indicates file index.	
	If **<operate>** is 4, it indicates output mode.	
	0	PDU (HEX) mode
	1	Text (BIN) mode
	If **<operate>** is not 4 or 6, **<para>** is omitted.	
< file name>	It is valid only if **<operate>** is 6	

	\<download size\>	The size of the downloaded data
	\<checksum\>	The checksum of the downloaded data
Reference	Note:	
	\<checksum\> is 16 bit checksum based on bitwise XOR.	

2.2.9. AT+QMMRECV Receive a MMS Message from MMSC

AT+QMMRECV Receive a MMS Message from MMSC	
Test Command **AT+QMMRECV=?**	Response **+QMMRECV: (1-20),(1)** **OK**
	Parameter See Write Command.
Write Command **AT+QMMRECV=\<m ms index \>,\<operate\>**	Response **OK** If error is related to ME functionality: **+CME ERROR: \<err\>**
	Parameter **\< mms index \>** MMS Message index which starts from 1 **\<operate\>** 1 Start to receive MMS Message
Reference	Note: The response **OK** means starting to receive MMS Message. When MMS Message receiving has finished, an unsolicited result code will be returned: "**+QMMNOTIFY: 2,\<mms index\>,\<error code\>**". It means receiving MMS Message successfully if **\<error code\>** is equal to 0.

2.2.10. AT+QMMPRI Set priority of MMS Message and call

AT+QMMPRI Set priority of MMS Message and call	
Test Command **AT+QMMPRI =?**	Response **+QMMPRI: (0,1)** **OK**
	Parameter See Write Command.
Read Command **AT+QMMPRI?**	Response **+QMMPRI: \<pri\>**

	OK
	Parameter
	See Write Command.
Write Command **AT+QMMPRI=\<pri\>**	Response **OK** If error is related to ME functionality: **+CME ERROR: \<err\>**
	Parameter **\<pri\>** Priority 0 Call has higher priority than MMS Message <u>1</u> MMS Message has higher priority than call
Reference	

2.2.11. AT+QMMDUR Set DUR attribute value in the SMIL script

AT+QMMDUR Set DUR attribute value in the SMIL script	
Test Command **AT+QMMDUR=?**	Response **+QMMDUR: (0-4294967295)** **OK**
	Parameter See Write Command.
Read Command **AT+QMMDUR?**	Response **+QMMDUR: \<durattribute\>** **OK**
	Parameter See Write Command.
Write Command **AT+QMMPRI=\<dur attribute \>**	Response **OK** If error is related to ME functionality: **+CME ERROR: \<err\>**

	Parameter
	\<durattribute\> DUR attribute value
	        The range is 0 to 4294967295. Default is 120000. Unit
	        is ms.

Reference	

2.2.12. AT+QMMSMS Set MMS's SMS transactor

AT+QMMSMS	Set MMS's SMS transactor
Test Command **AT+QMMSMS=?**	Response **+QMMSMS: (0,1)** **OK**
	Parameter See Write Command
Read Command **AT+QMMSMS?**	Response **+QMMSMS: <smstosim>** **OK**
	Parameter See Write Command.
Write Command **AT+QMMSMS=<sms tosim>**	Response **OK** If error is related to ME functionality: **+CME ERROR: <err>**

	Parameter
	<smstosim> Set MMS's SMS transactor
	    0 As MMS messages handling
	    1 As SMS messages handling

Reference	Note: When set **AT+QMMSMS=1**, **AT+QMMXXX** commands can't be used to download and read the MMS.

2.2.13. AT+QMMCTYP Enable to output TEXT in UCS2

AT+QMMCTYP	Enable to output TEXT in UCS2
Test Command **AT+QMMCTYP=?**	Response **+QMMCTYP: (0,1), (0,1)** **OK**
	Parameter See Write Command
Read Command **AT+QMMCTYP?**	Response **+QMMCTYP: <enableucs2>,<bigendian>** **OK**
	Parameter

	See Write Command.
Write Command **AT+QMMCTYP=\<en ableucs2\>,\<bigendian \>**	Response **OK** If error is related to ME functionality: **+CME ERROR: \<err\>**

	Parameter
	\<enableucs2\> Whether to enable to output TEXT in UCS2 or not
	     <u>0</u> Disable
	     1 Enable
	\<bigendian\> Endianness
	     <u>0</u> UCS2 big endian
	     1 UCS2 little endian

Reference	Note: If **\<enableucs2\>** is set as 1, when reading MMS, the following content will be output as UCS2 format: 1) Title with ASCII and UTF8 encoding (**AT+QMMRR=4,\<mms index\>[,\<output mode\>]**) 2) Text file with UTF8 encoding (**AT+QMMRR=5,\<mms index\>** & **AT+QMMRR=6,\<index\>,\<fileindex\>**) **Example:** 1) Set **AT+QMMCTYP=0,0** **AT+QMMRR=4,1** // Read ASCII TXT MMS title **+QMMRR: 4,"ASCII",6D7574692066696C6500** **OK** **AT+QMMRR=5,1** // List appended file list **+QMMRR: 5,1,"s.smil","UTF8",880,13** **+QMMRR: 5,2,"cont1.txt","UTF8",5,3** **+QMMRR: 5,5,"pic1.jpg","",17068,7** **OK** **AT+QMMRR=6,1,2** // Read UTF8 file **CONNECT** **test1** **+QMMRR: 6,5,3611** **OK** 2) Set **AT+QMMCTYP=1,1** **AT+QMMRR=4,1** // Output MMS title using UCS2 encoding

	+QMMRR: **4,"UCS2","6D0075007400690020006600690006C0065000000"** **OK** **AT+QMMRR=5,1** // List appended file list. For UTF8 file, **<charset>** and **<file size>** are changed to UCS2 attributes. **+QMMRR: 5,1,"s.smil","UCS2",1760,13** **+QMMRR: 5,2,"cont1.txt","UCS2",10,3** **+QMMRR: 5,5,"pic1.jpg","",17068,7** **OK** **AT+QMMRR=6,1,2** // Use UCS2 format to output TXT file content **CONNECT** **test1** **+QMMRR: 6,10,2700** **OK**

2.2.14. AT+QMMFTYP Output file style

AT+QMMFTYP Output file style	
Test Command **AT+QMMFTYP=?**	Response **+QMMFIYP: (0,1)** **OK**
	Parameter See Write Command
Read Command **AT+QMMFTYP?**	Response **+QMMFTYP: <outputstyle>** **OK**
	Parameter See Write Command.
Write Command **AT+QMMFTYP=<ou** **tputstyle>**	Response **OK** If error is related to ME functionality: **+CME ERROR: <err>**
	Parameter **<outputstyle>** Whether or not to output file style

	0	Do Not output
	1	Output
Reference	Note:	
	When set **AT+QMMFTYP=1**, run **AT+QMMRR=5,<mmsindex>** to list file, respond:	
	"**+QMMRR: 5,<fileindex>,<file name>,<charset>,<filesize>,<filetype>**"	
	Parameter **<filetype>**:	
	0	Unknown type
	1	Text
	2	Text/html
	3	Text/plain
	4	Text/xml
	5	Image
	6	Image/gif
	7	Image/jpeg
	8	Image/tiff
	9	Image/pnp
	0	Image/wbmp
	11	Audio
	12	Video
	13	SMIL

3. URC for MMS

URC	Meaning
+QMMNOTIFY: 1,<mms index>,0	Send MMS Message successfully, **<mms index>** is 0.
+QMMNOTIFY: 1,<mms index>,<error code>	Sending MMS Message failed, **<mms index>** is 0. Please refer to Chapter 4 for **<error code>**.
+QMMNOTIFY: 2,<mms index>,0	Receive MMS Message successfully.
+QMMNOTIFY: 2,<mms index>,<error code>	Receiving MMS Message failed. Please refer to Chapter 4 for **<error code>**.
+QMMNOTIFY: 3,<mms index>,0	A new MMS Message has arrived. **AT**+**QMMRECV** can be used to receive it.
+QMMNOTIFY: 4,0,<error code>	Received a Service Indication (SI) message. For example, when a new MMS Message has arrived, but it has not been received via the command **AT**+**QMMRECV**, MMSC will send an SI message to inform you. Of course, other service applications also send SI messages, such as push email, stock information, news, or some advertising, etc. You can ignore this message.

4. Summary of error codes

Final result code **+CME ERROR: <err>** indicates an error related to mobile equipment or network. The operation is similar to **ERROR** result code. None of the following commands in the same command line is executed. Neither **ERROR** nor **OK** result code shall be returned. The listed **<err>** codes here are just related with MMS. About other **<err>** codes, please refer to document [1].

Code of <err>	Meaning
3901	Timeout
3902	URL too long
3903	Invalid URL
3904	Unsupported proxy
3905	Invalid proxy address
3906	IP address error
3907	DNS error
3908	Parameter error
3909	TO addresses exceeded
3910	CC addresses exceeded
3911	BCC addresses exceeded
3912	Appended file capacity exceeded
3913	File name too long
3914	The number of files exceeded
3915	Non-existent address
3916	UFS storage full
3917	Drive full
3918	Drive error
3919	File not found
3920	Invalid file name
3921	File already existed
3922	Failed to create file
3923	Failed to write file
3924	Failed to open file
3925	Failed to read file
3926	MMS busy
3927	Sending MMS busy
3928	Sending MMS stopped
3929	Already stopped to send
3930	Receiving MMS busy
3931	Receiving MMS stopped
3932	Already stopped to receive

3933	HTTP response failure
3934	Invalid MMS response
3935	MMS response error
3936	Invalid push message
3937	Already downloaded
3938	Network busy
3939	Failed to open network
3940	Network no configured
3941	Network deactivated
3942	Network error
3943	Network shutdown
3944	UART busy
3945	UART escaped
3946	Failed to create socket
3947	Failed to connect socket
3948	Failed to read socket
3949	Failed to write socket
3950	Socket closed
3951	MMS length error
3952	Failed to encode MMS
3953	Failed to decode MMS
3954	Failed to decode HTTP
3955	Failed to decode push message
3956	PDU(HEX) align error
3957	PDU(HEX) character error
3958	String too long
3959	MMS full
3960	Non-existent MMS
3961	Invalid address
3962	Voice call busy
3963	ALLOC memory failed

5. Reliable transmission

For reliable transmission when using "**AT+QMMRR=6, …**" command to download the content of a file, it's recommended that users turn on hardware flow control capabilities, while also opening MCU hardware flow control function. Using the **AT+IFC=2,2<CRLF>** command to open the hardware flow control function. It is turned on by default.

As general serial transmission is reliable, in order to further reliability, we provide additional ways to verify the data transmission reliability by the command's response information.

When using " **AT+QMMRR=6, …**" command to download a file, the module will report "**+QMMRR: 6,<download size>,<checksum>**" information tips at the end of data transmission. Then MCU can judge whether the data has lost by comparing the value of **< download size>** and **<checksum>**.

<download size> is the data length which the module received. MCU compares **<download size>** with the actual length of the file which MCU has received. If unequal, it means the module lost data.

<**checksum**> is calculated by doing XOR for every 2 bytes. Similarly MCU calculates the actual file's checksum as below example, and then compares this value with <**checksum**> which module reports. If not equal, the received data may be problematic. User can re-download data.

Example for calculating checksum:
If the data length of the downloaded file is 9, the 16 hex values are as follows:
0x23 0x13 0x65 0x B6 0x76 0x88 0xA3 0xEF 0x55

So, checksum is calculated as follows:
checksum = 0x2313 XOR 0x65B6 XOR 0x7688 XOR 0xA3EF XOR 0x5500

Every two data form a group and do XOR with another group. If the last group is less than 2 bytes, supplement it with 0x00.

6. Examples

6.1. Set the parameters

AT+QIFGCNT=0	
OK	
AT+QICSGP=1,"CMWAP"	// Set APN
OK	
AT+QMMURL="http://mmsc.monternet.com"	// Set the MMSC URL
OK	
AT+QMMPROXY=1,"10.0.0.172",80	// Use HTTP protocol to send MMS Message, set the IP address and port of MMS proxy to "**10.0.0.172**" and **80**.
OK	

6.2. File transmit operation

Please refer to the document: [4] GSM_FILE_ATC

AT+QFUPL="test.txt",3222	// Upload the text file "**test.txt**"
CONNECT	
<input file bin data>	
+QFUPL: 3222,B3E4	
OK	
AT+QFDWL="test.txt"	// Download the file "**test.txt**"
CONNECT	
<output file bin data>	
+QFDWL: 3222,B3E4	
OK	
AT+QFUPL="test2.txt",4222	// Upload the text file "**test2.txt**"
CONNECT	
<input file bin data>	
+QFUPL: 4222,13E4	
OK	

AT+QFUPL="pic1.jpg",13222	// Upload the picture file "**pic1.jpg**"
CONNECT	
\<input file bin data\>	
+QFUPL: 13222,D5E4	
OK	

6.3. Write and send a MMS Message

AT+QMMSW=0	// Clean the content of MMS Message
OK	
AT+QMMSW=1,1,"13072168083"	// Add the first "TO address"
OK	
AT+QMMSW=1,1,"13156789900"	// Add the second "TO address"
OK	
AT+QMMSW=1,1,"jay.xin@yahoo.com"	// Add the third "TO address"
OK	
AT+QMMSCS="UTF8",1	// Character set is UTF8, input mode is Text(BIN) mode
OK	
AT+QMMSW=4,1	// Input MMS Message title
\>abcd\<Ctrl-Z\>	
OK	
AT+QMMSW=5,1,"pic1.jpg"	// Add the first file to MMS Message, this file is jpg file
OK	
AT+QMMSCS="UTF8"	// Must select character set before adding text file
OK	
AT+QMMSW=5,1,"test.txt"	// Add the second file to MMS Message, this file character set is UTF8
OK	
AT+QMMSW=5,1,"test2.txt"	// Add the third file to MMS Message, this file character set is UTF8

```
OK

AT+QMMSEND=1                              // Send the MMS Message
OK


+QMMNOTIFY: 1,0,0                         // Send the MMS Message successfully


AT+QIDEACT                                //Deactivate GPRS context
DEACT OK
```

6.4. Receive MMS Message

```
+QMMNOTIFY:3,1                            // Receive an MMS push message,
                                             indicating a new MMS, index is 1.
AT+QMMRECV=1,1                            // Receive MMS Message from MMSC
OK


+QMMNOTIFY: 2,1,0                         // Receive MMS Message successfully


AT+QIDEACT                                // Deactivate GPRS context
DEACT OK
```

6.5. Manage received MMS Message

```
AT+QMMRM=1                               // List MMS Message
+QMMRM: 1,"+8613950062882",1,"7/23/2009","0:39:4",3745


OK


AT+QMMRR=1,1                             // Read MMS Message "Original address"
+QMMRR: 1," +8613950062882"


OK


AT+QMMRR=4,1,1                           // Read MMS Message title
+QMMRR: 4,"UTF8","abcde"


OK


AT+QMMRR=5,1                             // List the files in the MMS Message
+QMMRR: 5,1,"test.txt","UTF8",3222       // It includes one file whose index is 1
```

OK

AT+QMMRR=6,1,1   // Get the data of the file **1** (defined by the
                                                second "**1**") in the MMS **1** (defined by the
                                                first "**1**")

CONNECT
+QMMRR: 6,3222,B3E4

OK