LTE Standard MMS

Application Note

LTE Standard Module Series

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About the Document

Revision History

Version	Date	Author	Description
1.0	2017-12-08	Duke XIN/ Haley HUANG	Initial
1.1	2020-02-20	Domingo DENG/ Cara TAO	1. Added AT command syntax (Chapter 1.2). 2. Added commands AT+QMMSCFG?, AT+QMMSEDIT?, AT+QMMSEND? and AT+QMMSCFG="connecttimeout" (Chapter 2). 3. Added parameter <function_configure> and updated the response description for AT+QMMSEDIT (Chapter 2.2).

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1 Introduction

Quectel LTE Standard modules provide MMS application interface for sending messages including 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 the following Quectel LTE Standard modules.

- EC2x (EC25, EC21, EC20 R2.0 and EC20 R2.1)
- EG9x (EG95 and EG91)
- EM05
- EG2x (EG25-G and EG21-G)

1.1. The Process of Sending MMS Messages

Step 1: Configure and activate a PDP context.
1) Configure **<APN>**, **<username>**, **<password>** and other parameters of a PDP context by **AT+QICSGP**. For more details, please refer to *Quectel_LTE_Standard_TCP(IP)_Application_Note*. If QoS settings need to be updated, configure them by **AT+CGQMIN**, **AT+CGEQMIN**, **AT+CGQREQ** and **AT+CGEQREQ** commands. For more details, please refer to *Quectel_LTE_Standard_AT_Commands_Manual*.
2) Activate the PDP context by **AT+QIACT**.
3) Configure the PDP context ID for MMS by **AT+QMMSCFG="contextid",<contextID>**.

Step 2: Configure URL and proxy of MMSC.
1) Configure the URL of MMSC by **AT+QMMSCFG="mmsc",<URL>**.
2) Configure the proxy of MMSC by **AT+QMMSCFG="proxy",<gateway>,<port>**.
3) Configure sending parameters by **AT+QMMSCFG="sendparam",<valid>,<pri>,<sendrep>, <visible>,<class>**.

Step 3: Edit MMS messages.
1) Add recipients address by **AT+QMMSEDIT=1,1,<optstring>**.
2) Add CC recipients address by **AT+QMMSEDIT=2,1,<optstring>**.
3) Add BCC recipients address by **AT+QMMSEDIT=3,1,<optstring>**.
4) Edit the title by **AT+QMMSEDIT=4,1,<optstring>**. The character set should be specified as title by **AT+QMMSCFG="character",<charset>** first.
5) Add attachments by **AT+QMMSEDIT=5,1,<optstring>**. The attachments can be RAM, UFS or SD files. And the files can be uploaded to RAM, UFS or SD card by **AT+QFUPL** command. After

sending MMS messages successfully, the file should be deleted by **AT+QFDEL** command. If the attachment is a text file, the character set should be specified by **AT+QMMSCFG="character",<charset>** first. For more details, please refer to *Quectel_LTE_Standard_FILE_AT_Commands_Manual*.

Step 4: Send MMS messages by **AT+QMMSEND=<timeout>**. It may take some time to send MMS messages successfully. MMS messages should be sent again before output of **"+QMMSEND:<err>,<httprsp>[,<mmsrsp>]"** which indicates the ending of sending MMS messages.

Step 5: Clear the content of an MMS message by **AT+QMMSEDIT=0** and delete the files as attachments by **AT+QFDEL**. For more details, please refer to *Quectel_ LTE_Standard_FILE_AT_Commands_Manual*.

Step 2 to **Step 5** can be repeated, and **Step 4** to **Step 5** can be repeated too.

1.2. AT Command Syntax

Table 1: Types of AT Commands and Responses

Test Command	AT+<x>=?	This command returns the list of parameters and value ranges set by the corresponding Write Command or internal processes.
Read Command	AT+<x>?	This command returns the currently set value of the parameter or parameters.
Write Command	AT+<x>=<…>	This command sets the user-definable parameter values.
Execution Command	AT+<x>	This command reads non-variable parameters affected by internal processes in the module.

NOTES

1. **<...>**: Parameter name. Angle brackets **< >** are not included in the actual command line. The parameter with an underscore "_" takes the default value.
2. **[...]**: Optional parameters. Square brackets **[ ]** are not included in the actual command line. The default values will be used when optional parameters are omitted unless otherwise stated.

2 Description of MMS AT Commands

2.1. AT+QMMSCFG   Configure Parameters of MMS

The command can be used to configure PDP context ID, MMSC, proxy, character type and other MMS parameters. If the Write Command only executes one parameter, it will query the current settings.

AT+QMMSCFG Configure Parameters of MMS	
Test Command **AT+QMMSCFG=?**	Response **+QMMSCFG: "contextid",(**range of supported **<contextID>**s**)** **+QMMSCFG: "mmsc",<URL>** **+QMMSCFG: "proxy",<gateway>,(**range of supported **<port>**s**)** **+QMMSCFG: "character",(**list of supported **<charset>**s**)** **+QMMSCFG: "sendparam"[,(**range of supported **<valid>**s**),(**range of supported **<pri>**s**),(**list of supported **<sendrep>**s**),(**list of supported **<readrep>**s**),(**range of supported **<visible>**s**),(**range of supported **<class>**s**)]** **+QMMSCFG: "supportfield",(**list of supported **<mode>**s**)** **+QMMSCFG: "connecttimeout",(**list of supported **<connect_timeout>**s**)** **OK**
Read Command **AT+QMMSCFG?**	Response **OK**
Write Command **AT+QMMSCFG="contextid"[,<contextID>]**	Response If **<contextID>** is omitted, query the current settings: **+QMMSCFG: "contextid",<contextID>** **OK** If **<contextID>** is specified: **OK** Or **+CME ERROR: <err>**

Write Command **AT+QMMSCFG="mmsc"[,<URL>]**	Response If **<URL>** is omitted, query the current settings: **+QMMSCFG: "mmsc",<URL>** **OK** If **<URL>** is specified, configure MMSC URL: **OK** Or **+CME ERROR: <err>**
Write Command **AT+QMMSCFG="proxy"[,<gateway>,<port>]**	Response If **<gateway>** and **<port>** are both omitted, query the current settings: **+QMMSCFG: "proxy",<gateway>,<port>** **OK** If **<gateway>** and **<port>** are specified, configure proxy gateway and port: **OK** Or **+CME ERROR: <err>**
Write Command **AT+QMMSCFG="character"[,<charset>]**	Response If **<charset>** is omitted, query the current settings: **+QMMSCFG: "character",<charset>** **OK** If **<charset>** is specified, configure the character format: **OK** Or **+CME ERROR: <err>**
Write Command **AT+QMMSCFG="sendparam"[,<valid>,<pri>,<sendrep>,<readrep>,<visible>,<class>]**	Response If **<valid>**, **<pri>**, **<sendrep>**, **<readrep>**, **<visible>**, **<class>** are all omitted, query the current settings: **+QMMSCFG: "sendparam",<valid>,<pri>,<sendrep>,<readrep>,<visible>,<class>** **OK** If **<valid>**, **<pri>**, **<sendrep>**, **<readrep>**, **<visible>**, **<class>** are all specified: **OK** Or

	+CME ERROR: <err>
Write Command **AT+QMMSCFG="supportfield"[,<mode>]**	Response If **<mode>** is omitted, query the current settings: **+QMMSCFG: "supportfield",<mode>** **OK** If **<mode>** is specified: **OK** Or **+CME ERROR: <err>**
Write Command **AT+QMMSCFG="connecttimeout"[,<con­nect_timeout>]**	Response If **<connect_timeout>** is omitted, query the current settings: **+QMMSCFG:"connecttimeout",<connect_timeout>** **OK** If **<connect_timeout>** is specified, configure the timeout for MMS TCP handshake: **OK** Or **+CME ERROR: <err>**
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<contextID>	Integer type. The PDP context ID. The range is 1-16, and the default value is 1.
<URL>	String type. The address of MMSC. The maximum length of URL is 100 bytes.
<gateway>	String type. The IP address of MMS proxy. The maximum length of gateway is 50 bytes.
<port>	Integer type. The port of MMS proxy. The range is 1-65535, and the default value is 80.
<charset>	String type. The type of character set. "ASCII" US-ASCII character set "UTF8" UTF8 character set "UCS2" ISO-10646-UCS-2 character set, big-endian order needs to be specified "GBK" GBK character set
<valid>	Integer type. The validity period of the MMS message. 0 1 hour 1 12 hours 2 24 hours

	3	2 days
	4	1 week
	5	Maximum
	6	Depend on network configuration
\<pri\>	Integer type. The priority of the MMS message.	
	0	Low
	1	Normal
	2	High
	3	Depend on network configuration
\<sendrep\>	Integer type. Whether to deliver the report.	
	0	No
	1	Yes
\<readrep\>	Integer type. Whether to read report.	
	0	No
	1	Yes
\<visible\>	Integer type. Whether to hide address.	
	0	Hide any address
	1	Show all addresses, including BCC address
	2	Depend on network configuration
\<class\>	Integer type. The class of the MMS message.	
	0	Personal
	1	Advertisement
	2	Informational
	3	Automatical
	4	Depend on network configuration
\<mode\>	Integer type. The header option of MMS x-up-calling-id.	
	0	Not add the header option of MMS x-up-calling-id
	1	Add the header option of MMS x-up-calling-id
\<connect_timeout\>	Integer type. The timeout for MMS TCP handshake. The range is 1-125, and the default value is 125. Unit: s.	
\<err\>	Integer type. The error code of the operation. Please refer to **Chapter 5**.	

2.2. AT+QMMSEDIT   Edit MMS Messages

The command can be used to add the recipient address, edit title and add attachments for MMS messages. The character set of title or text file is set by **AT+QMMSCFG="character",\<charset\>**. For example, if the content of a text file uses UTF8 character set, **AT+QMMSCFG="character","UTF8"** must be executed first.

AT+QMMSEDIT Edit MMS Messages	
Test Command **AT+QMMSEDIT=?**	Response **+QMMSEDIT: (**range of supported **\<function\>**s)**,(**list of

	supported **<function_configure>**s**),<optstring>**
	OK
Read Command **AT+QMMSEDIT?**	Response **OK**
Write Command **AT+QMMSEDIT=<function>[,<function_con figure>[,<optstring>]]**	If **<function_configure>** and **<optstring>** are omitted: When **<function>** is not 0, query the specified settings of **<function>**: List of **[+QMMSEIDT: <function>,<optstring>]** **OK** Or **+CME ERROR: <err>** When **<function>**=0, delete all content about the MMS message: **OK** Or **+CME ERROR: <err>** If **<function_configure>** is specified: When **<function_configure>**=0, **<optstring>** needs to be omitted, which means deleting the specified settings of **<function>**: **OK** Or **+CME ERROR: <err>** When **<function_configure>**=1, **<optstring>** is specified, which means setting the specified settings of **<function>**: **OK** Or **+CME ERROR: <err>**
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<function>	Integer type. Function operation.
	0 Delete all
	1 Operate "TO address"
	2 Operate "CC address"
	3 Operate "BCC address"

	4	Operate MMS message title
	5	Operate file as attachment
<function_configure>	Integer type. Enable/disable **<function>**.	
	0	Delete the specified settings of **<function>**.
	1	Set the specified settings of **<function>**.
<optstring>	String type.	
	If **<function>**=1, 2 or 3, it is the recipient address. The maximum number of recipients is 6. The maximum length of address is 50 bytes.	
	If **<function>**=4, it is the MMS message title. The maximum length of title is 200 bytes.	
	If **<function>**=5, it is the file name of attachment. If the file name is started with "RAM", "UFS" or "SD" it indicates the file is from RAM, UFS or SD card respectively. It is strongly recommended to use files from RAM as attachments. The max length of file name is 80 bytes, the maximum number of attachments is 12, and the maximum size of attachments is restricted by the operator.	
<err>	Integer type. The error code of the operation. Please refer to ***Chapter 5***.	

2.3. AT+QMMSEND   Send MMS Messages

This command is used to send MMS messages. Customers should not re-execute **AT+QMMSEND** until **+QMMSEND: <err>,<httprsp>,<mmsrsp>** is returned. When the **<timeout>** is reached, if the process of sending MMS messages has not finished yet, MMS sending will be interrupted.

AT+QMMSEND Send MMS Messages	
Test Command **AT+QMMSEND=?**	Response **+QMMSEND: (**range of supported **<timeout>**s**)** **OK**
Read Command **AT+QMMSEND?**	Response **OK**
Write Command **AT+QMMSEND=<timeout>**	Response **OK** **+QMMSEND: <err>,<httprsp>[,<mmsrsp>]** Or **+CME ERROR: <err>**
Characteristics	The command takes effect immediately. The configurations will not be saved.

Parameter

<timeout>	Integer type. The maximum time to send MMS messages. The range is 1-65535. Unit: second.
<httprsp>	Integer type. The response code of HTTP(S), for reference only. For example, 200 indicates HTTP(S) posts data successfully. Please refer to *Chapter 6*.
<mmsrsp>	String type. The response string from MMSC when MMS messages are failed to be sent, and is for reference only.
<err>	If MMS messages are sent successfully, **<err>** is 0. Otherwise, **<err>** indicates the error code of the operation. Please refer to *Chapter 5*.

3 Examples

3.1. Add Recipients

//Add phone number or email address as a recipient. The maximum number of recipients is 6.

AT+QMMSEDIT=1,1,"13856122546"   //Add a phone number as a recipient.
OK
AT+QMMSEDIT=1,1,"recipient .test@quectel.com"   //Add an email address as a recipient.
OK
AT+QMMSEDIT=1   //Query the recipients address.
+QMMSEDIT: 1,"13856122546"
+QMMSEDIT: 1,"recipient.test@quectel.com"

OK
//Delete the recipients by executing **AT+QMMSEDIT=1,0**.
AT+QMMSEDIT=1,0   //Delete a recipient.
OK
AT+QMMSEDIT=1   //Query the recipients' address.
OK

3.2. Add CC Recipients or BCC Recipients

//The operation of adding CC recipients differs from adding BCC recipients only in **\<function\>** value. For CC recipients, the **\<function\>** value is 2. For BCC recipients, it is 3.
AT+QMMSEDIT=2,1,"13856122546"   //Add a phone number as a CC recipient.
OK
AT+QMMSEDIT=2   //Query the CC recipient address.
+QMMSEDIT: 2,"13856122546"

OK
//Delete the CC recipient by executing **AT+QMMSEDIT=2,0**.
AT+QMMSEDIT=2,0   //Delete the CC recipient.
OK
AT+QMMSEDIT=2   //Query the CC recipient address.

OK

3.3. Edit the Title of MMS Messages

//The character set of title is set by **AT+QMMSCFG="character",\<charset\>**. If the **\<charset\>** is "ASCII",
add the title as follows:

AT+QMMSCFG="character","ASCII"   //Set the charset as "ASCII".
OK
AT+QMMSEDIT=4,1,"test EM05 mms"   //Edit the title of the MMS message.
OK
AT+QMMSEDIT=4   //Query the title of the MMS message.
+QMMSEDIT: 4,"ASCII","test EM05 mms"

OK
//If the **\<charset\>** is not ASCII, the **\<optstring\>** should be the hex string of the inputted data.
AT+QMMSCFG="character", "UTF8"   //Set the charset as "UTF8".
OK
AT+QMMSEDIT=4,1,"745737420454D3035206D6D73"   //Edit the title of MMS message.
                                                     "745737420454D3035206D6D73" is
                                                     the hex string of "test EM05 MMS" in
                                                     UTF8.
OK
AT+QMMSEDIT=4   //Query the title of the MMS message.
+QMMSEDIT: 4,"UTF8","745737420454D3035206D6D73"

OK
//Delete the title by executing **AT+QMMSEDIT=4,0**.
AT+QMMSEDIT=4,0   //Delete the title of the MMS message.
OK
AT+QMMSEDIT=4   //Query the title of the MMS message.
OK

3.4. Add Attachments

//Customers can add attachments for an MMS message. The attachments can be RAM, UFS and SD files,
but it is strongly recommended to use RAM files. The maximum number of attachments is 12, and the
maximum length of file name is 80 bytes. The total size of attachments may be restricted by the operator.
In the following example, the attachment is an RAM text file:
AT+QFUPL="RAM:test_mms.txt",100,200,1   //Upload a file to RAM. The file will be saved as
                                              test_mms.txt and the maximum size of file is 100

bytes. 200 indicates timeout value, and 1 indicates ACK mode. For more details, please refer to *Quectel_LTE_Standard_FILE_Application_Note*.

CONNECT
<Input 100 bytes data>
+QFUPL: 100,0

OK
AT+QFLST="RAM:*"   //Query the file list of RAM.
+QFLST: "RAM:test_mms.txt",100

OK
AT+QMMSCFG="character","ASCII"   //Set the charset as "ASCII" for *RAM:test_mms.txt*.
OK
AT+QMMSEDIT=5,1,"RAM:test_mms.txt" //Add attachments for the MMS message.
OK
AT+QMMSEDIT=5   //Query the attachments.
+QMMSEDIT: 5,"RAM:test_mms.txt"

OK
//In the following example, the attachment is an RAM JPG file:
AT+QFUPL="RAM:test_pic.jpg",200,300,1 //Upload a file to RAM. The file will be saved as *test_pic.jpg* and the maximum size of file is 200 bytes. 300 indicates timeout value, and 1 indicates ACK mode. For more details, please refer to *Quectel_LTE_Standard_FILE_Application_Note*.

CONNECT
<Input 200 bytes data>
+QFUPL: 200,0

OK
AT+QFLST="RAM:*"   //Query the file list of RAM.
+QFLST: "RAM:test_mms.txt",100
+QFLST: "RAM:test_pic.jpg",200

OK
AT+QMMSEDIT=5,1,"RAM:test_pic.jpg" //*RAM:test_pic.jpg* is not a text file. There is no need to specify the character set.

OK
AT+QMMSEDIT=5   //Query the attachments.
+QMMSEDIT: 5,"RAM:test_mms.txt"
+QMMSEDIT: 5,"RAM:test_pic.jpg"

OK

//Delete the attachments by executing **AT+QMMSEDIT=5,0**.

AT+QMMSEDIT=5,0   //Delete attachments for the MMS message. All
                                             attachments will be deleted.

OK

AT+QMMSEDIT=5   //Query the attachments.

OK

//After the MMS message is sent successfully, RAM files should be deleted by **AT+QFDEL**.

AT+QFDEL="RAM:test_mms.txt"   //Delete the RAM file.

OK

AT+QFDEL="RAM:test_pic.jpg"   //Delete the RAM file.

OK

AT+QFLST="RAM:*"   //Query the file list of RAM.

OK

3.5. Clear all Contents of MMS Messages

//Delete the content, recipients, CC recipients, BCC recipients, title and attachments of an MMS message
by **AT+QMMSEDIT=0**.

AT+QMMSEDIT=0   //Clear all contents of the MMS message.

OK

AT+QMMSEDIT=1   //Query recipients.

OK

AT+QMMSEDIT=2   //Query CC recipients.

OK

AT+QMMSEDIT=3   //Query BCC recipients.

OK

AT+QMMSEDIT=4   //Query title of the MMS message.

OK

AT+QMMSEDIT=5   //Query attachments.

OK

3.6. Send MMS Messages

//Step 1: Configure and activate a PDP context.

AT+QICSGP=1,1,"UNIWAP","" ,"",1   //Configure PDP context 1. APN is "UNIWAP" for
                                             China Unicom.

OK

AT+QIACT=1   //Activate PDP context 1.

OK   //Activated successfully.

```
AT+QIACT?                                    //Query the state of PDP context.
+QIACT: 1,1,1,"10.7.157.1"
OK
AT+QMMSCFG="contextid",1                     //Set the PDP context ID as 1. The PDP context ID
                                               must be activated first.
OK
AT+QMMSCFG="contextid"                       //Query the PDP context ID.
+QMMSCFG: "contextid",1

OK
//Step 2: Configure the URL and proxy of MMSC.
AT+QMMSCFG="mmsc","mmsc.myuni.com"           //Configure the URL of MMSC. "mmsc.myuni.com"
                                               is for China Unicom.
OK
AT+QMMSCFG="mmsc"                            //Query the URL of MMSC.
+QMMSCFG: "mmsc","mmsc.myuni.com"

OK
AT+QMMSCFG="proxy","10.0.0.172",80           //Configure the proxy address and port of MMSC.
                                               "10.0.0.172:80" is for China Unicom.
OK
AT+QMMSCFG="proxy"                           //Query the proxy address and port of MMSC.
+QMMSCFG: "proxy","10.0.0.172",80

OK
//Step 3: Configure sending parameters.
AT+QMMSCFG="sendparam",6,2,0,0,2,4           //Configure the sending parameters.
OK
AT+QMMSCFG="sendparam"                       //Query the sending parameters.
+QMMSCFG: "sendparam",6,2,0,0,2,4

OK
//Step 4: Edit the MMS message.
AT+QMMSEDIT=1,1,"13856122546"                //Add a phone number as a recipient.
OK
AT+QMMSEDIT=2,1,"copy.test@quectel.com"      //Add an email address as a CC recipient.
OK
AT+QMMSEDIT=3,1,"secret.test@quectel.com"    //Add an email address as a BCC recipient.
OK
AT+QMMSEDIT=1                                //Query the recipient address.
+QMMSEDIT: 1,"13856122546"

OK
AT+QMMSEDIT=2                                //Query the CC recipient address.
```

```
+QMMSEDIT: 2,"copy.test@quectel.com"


OK
AT+QMMSEDIT=3                              //Query the BCC recipient address.
+QMMSEDIT: 3,"secret.test@quectel.com"


OK
AT+QMMSCFG="character","ASCII"             //Configure the character type as ASCII for title.
OK
AT+QMMSEDIT=4,1,"test EM05 mms"            //Edit the title of the MMS message.
OK
AT+QMMSEDIT=4                              //Query the title of the MMS message.
+QMMSEDIT: 4,"ASCII","test EM05 mms"


OK
//Add attachments.
AT+QFUPL="RAM:test_ram.txt",100,300,1      //Upload a file to RAM. The file will be saved as
                                             test_ram.txt and the maximum size of file is 100
                                             bytes. 300 indicates timeout value, and 1
                                             indicates ACK mode. For more details, please
                                             refer                                       to
                                             Quectel_LTE_Standard_FILE_Application_Note.
CONNECT
<Input 100 bytes data>
+QFUPL: 100,0


OK
AT+QFLST="RAM:* "                          //Query the file list of RAM.
+QFLST: "RAM:test_ram.txt",100


OK
AT+QMMSCFG="character","ASCII"             //Configure the character type as ASCII for
                                             RAM:test_ram.txt.
OK
AT+QMMSEDIT=5,1,"RAM:test_ram.txt"         //Add attachments for the MMS message.
                                             test_ram.txt is an RAM file.
OK
AT+QMMSEDIT=5                              //Query the attachments.
+QMMSEDIT: 5,"RAM:test_ram.txt"


OK
AT+QFUPL="RAM:test_pic.jpg",200,300,1      //Upload a file to RAM. The file will be saved as
                                             test_pic.jpg and the maximum size of file is 200
                                             bytes. 300 indicates timeout value, and 1
```

	indicates ACK mode. For more details, please refer to *Quectel_LTE_Standard_FILE_Application_Note.*
CONNECT **<Input 200 bytes data>** **+QFUPL: 200,0** **OK**	
AT+QFLST="RAM:*" **+QFLST: "RAM:test_ram.txt",100** **+QFLST: "RAM:test_pic.jpg",200** **OK**	//Query the file list of RAM.
AT+QMMSEDIT=5,1,"RAM:test_pic.jpg" **OK**	//*RAM:test_pic.jpg* is not a text file. There is no need to specify the character set.
AT+QMMSEDIT=5 **+QMMSEDIT: 5,"RAM:test_ram.txt"** **+QMMSEDIT: 5,"RAM:test_pic.jpg"** **OK**	//Query the attachments.
//Step 5: Send the MMS message. **AT+QMMSEND=100** **OK**	//Send the MMS message.
+QMMSEND: 0,200 //Step 6: Clear content of the MMS message.	//Indicate the result of sending the MMS message.
AT+QMMSEDIT=0 **OK**	//Clear the content of the MMS message.
AT+QFDEL="RAM:test_ram.txt" **OK** **AT+QFDEL="RAM:test_pic.jpg"** **OK**	//Delete the RAM file. //Delete the RAM file.

4 Error Handling

4.1. Executing MMS AT Commands Fails

When executing MMS AT commands, if response **"ERROR"** is received from the module, please check whether the (U)SIM card is inserted, and whether it is **+CPIN: READY** returned when executing **AT+CPIN?**.

4.2. PDP Activation Fails

If it is failed to activate a PDP context by **AT+QIACT** command, please check the following configurations:

1. Query whether PS domain is attached or not by **AT+CGATT?** command. If not, please execute **AT+CGATT=1** to attach PS domain.
2. Query the PS domain status by **AT+CGREG?** command and make sure the PS domain has been registered.
3. Query the PDP context parameters by **AT+QICSGP** command and make sure the APN of specified PDP context has been set.
4. Make sure the specified PDP context ID is neither used by PPP nor activated by **AT+CGACT** command.
5. According to *3GPP specifications*, the module only supports three PDP contexts activated simultaneously, so customers must make sure the number of activated PDP contexts is less than 3.

If all above configurations are correct, but activating the PDP context by **AT+QIACT** command still fails, please reboot the module to resolve this issue. After rebooting the module, please execute the configurations mentioned above for at least three times and each time at an interval of 10 minutes to avoid frequently rebooting the module.

4.3. Error Response of AT+QMMSEND

+QMMSEND: <err>,<httprsp>[,<mmsrsp>] will be returned after executing **AT+QMMSEND**. If **<err>** is not 0, it indicates that MMS sending failed, and please resend it. If resending is not successful, please

deactivate the PDP context by **AT+QIDEACT** command and re-activate it by **AT+QIACT** command, then send the MMS message again.

5 Summary of <err> Code

The error code **<err>** indicates an error related to mobile equipment or network. The details about **<err>** are described in the following table.

Table 2: Summary of Error Codes

<err>	Meaning
751	Unknown error
752	URL length error
753	URL error
754	Invalid proxy type
755	Proxy address error
756	Invalid parameter
757	Recipient address full
758	CC recipient address full
759	BCC recipient address full
760	Attachments full
761	File error
762	No recipient
763	File not found
764	MMS busy
765	Server response failed
766	Error response of HTTP(S) post
767	Invalid report of HTTP(S) post

768	PDP activation failed
769	PDP deactivated
770	Socket creation failed
771	Socket connection failed
772	Socket read failed
773	Socket write failed
774	Socket closed
775	Timeout
776	Encode data error
777	HTTP(S) decode data error

6 Description of HTTP(S) Response Codes

The HTTP(S) protocol error code **<httprsp>** indicates an error replied from MMSC. Please refer to *RFC2616* (Hypertext Transfer Protocol--HTTP/1.1). The details about **<httprsp>** are described in the following table.

Table 3: Description of HTTP(S) Response Code

<httprsp>	Meaning
200	OK
400	Bad request
403	Forbidden
404	Not found
409	Conflict
411	Length required
500	Internal server error
502	Bad gate way

7 Appendix A References

Table 4: Related Documents

SN.	Document Name	Remark
[1]	Wap-209-mmsencapsulation-20020105-a	Wap MMS protocol standard package of documents
[2]	RFC2616	Hypertext transfer protocol--HTTP/1.1
[3]	Quectel_LTE_Standard_FILE_Application_Note	LTE Standard FILE Application Note
[4]	Quectel_LTE_Standard_TCP(IP)_Application_Note	Introduction about LTE Standard TCP/IP Application Note
[5]	Quectel_LTE_Standard_AT_Commands_Manual	AT commands manual for LTE Standard modules

Table 5: Terms and Abbreviations

Abbreviation	Description
BCC	Blind Carbon Copy
CC	Carbon Copy
HTTP	Hypertext Transfer Protocol
MMS	Multimedia Messaging Service
MMSC	Multimedia Messaging Service Center
PDP	Packet Data Protocol
SD	Secure Digital
UFS	User File Storage
URL	Uniform Resource Locator