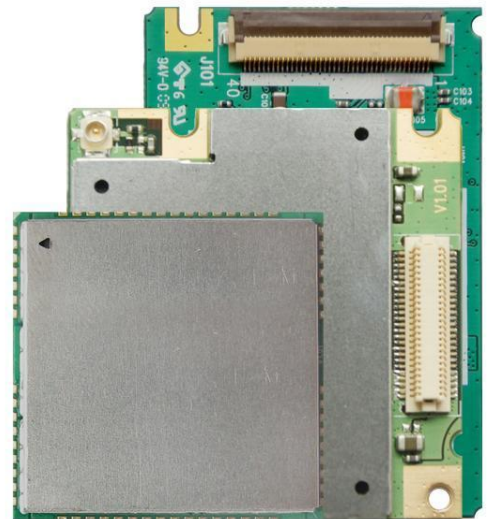




Quectel Cellular Engine

**GSM SMTP
AT Commands**

GSM SMTP_ATC_V1.1



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0. Revision history

Revision	Date	Author	Description of change
1.00	2010-04-23	Colin HU	Initial
1.1	2010-08-03	Colin HU	Add the description about how to add the file in UFS or SD or RAM as the attachment.

1. Introduction

Quectel Module provides an internal TCP/IP stack that is driven by AT commands and enables the host application to easily access the internet service. It includes TCP service, UDP service, HTTP service, FTP service and SMTP service, etc. This document is a reference guide to all the AT commands and responses defined for SMTP service.

1.1. Reference

Table 1: Reference

SN	Document name	Remark
[1]	Mxx_ATC	The introduction of AT commands for Quectel Module
[2]	GSM_TCPIP_AN	To introduce how to use the internal TCP/IP stack
[3]	GSM_File_ATC	To introduce the AT commands for the file system

1.2. Terms and abbreviations

Table 2: Terms and abbreviations

Abbreviation	Description
APN	Access Point Network
CSD	Circuit Switched Data
FTP	File Transfer Protocol
GPRS	General Packet Radio Service
HTTP	Hypertext Transfer Protocol
SMTP	Simple Mail Transfer Protocol
TCP	Transmission Control Protocol
UART	Universal Asynchronous Receiver/Transmitter
UDP	User Datagram Protocol
UFS	User File Storage. Please refer to [3]

2. AT Commands for SMTP Service

2.1. Overview of AT commands for SMTP service

Command	Description
AT+QSMTPUSER	SET THE USER NAME FOR AUTHENTICATION
AT+QSMTPPWD	SET THE PASSWORD FOR AUTHENTICATION
AT+QSMTPADDR	SET THE EMAIL ADDRESS OF THE SENDER
AT+QSMTPNAME	SET THE SENDER'S NAME
AT+QSMTPSRV	SET THE ADDRESS AND PORT OF SMTP SERVER
AT+QSMTPDST	ADD OR DELETE RECIPIENTS
AT+QSMTPSUB	EDIT THE SUBJECT OF THE EMAIL
AT+QSMTPBODY	EDIT THE CONTENT OF THE EMAIL
AT+QSMTPATT	ADD AN ATTACHMENT FOR THE EMAIL
AT+QSMTPDATT	DELETE AN ATTACHMENT
AT+QSMTPCLR	CLEAR ALL THE CONFIGURATIONS AND CONTENTS OF THE EMAIL
AT+QSMTPCFG	SMTP CONFIGURATIONS
AT+QSMTPPUT	SEND EMAIL

2.2. Detailed description of AT commands for SMTP service

2.2.1. AT+QSMTPUSER Set the user name for authentication

AT+QSMTPUSER Set the user name for authentication	
Test Command AT+QSMTPUSER R=?	Response +QSMTPUSER: "USER" OK Parameters See Write Command.
Read Command AT+QSMTPUSER R?	Response +QSMTPUSER: "<user>" OK Parameters See Write Command.
Write Command AT+QSMTPUSER	Response If format is right and it is not sending a mail, response

R="<user>"	<p>OK</p> <p>Otherwise response ERROR</p> <p>Parameters <user> The user name for the authentication. The maximum size of the parameter is 50.</p>
Reference	

2.2.2. AT+QSMTPPWD Set the password for authentication

AT+QSMTPPWD Set the Password for Authentication	
Test Command AT+QSMTPPWD D=?	Response +QSMTPPWD: "PASSWORD" OK Parameters See Write Command.
Read Command AT+QSMTPWD ?	Response +QSMTPPWD: "<*****>" OK Parameters See Write Command.
Write Command AT+QSMTPWD D="<pwd>"	Response If format is right and it is not sending email, response OK Otherwise response ERROR Parameters <pwd> The password for the authentication. The maximum size of the parameter is 50. <*****> Mask for the password
Reference	

2.2.3. AT+QSMTPADDR Set the email address of the sender

AT+QSMTPADDR Set the email address of the sender	
Test Command AT+QSMTPADDR DR=?	Response +QSMTPADDR: "ADDRESS" OK

	Parameters See Write Command
Read Command AT+QSMTPADDR?	Response +QSMTPADDR: "<addr>" OK Parameters See Write Command
Write Command AT+QSMTPADDR="<addr>"	Response If format is right and it is not sending email, response OK Otherwise response ERROR Parameters <addr> The email address of the sender.
Reference	

2.2.4. AT+QSMTPNAME Set the sender's name

AT+QSMTPNAME Set the sender's name	
Test Command AT+QSMTPNAME=?	Response +QSMTPNAME: "NAME" OK Parameters See Write Command
Read Command AT+QSMTPNAME?	Response +QSMTPNAME: "<name>" OK Parameters See Write Command
Write Command AT+QSMTPNAME="<name>"	Response If format is right and it is not sending email, response OK Otherwise response ERROR Parameters

	<name>	The sender's name that will be shown when the recipients receive the email.
Reference		

2.2.5. AT+QSMTPSRV Set the address and port of SMTP server

AT+QSMTPSRV Set the address and port of SMTP server	
Test Command AT+QSMTPSRV =?	Response +QSMTPSRV: "SERVER",(1-65535) OK Parameters See Write Command
Read Command AT+QSMTPSRV ?	Response OK +QSMTPSRV: "<srvAddr>",<port> Parameters See Write Command
Write Command AT+QSMTPSRV ="<srvAddr>",< port>	Response If format is right and it is not sending email, response OK Otherwise, response ERROR Parameters <srvAddr> The IP address or domain name of the SMTP server. <port> The port of the SMTP server.
Reference	

2.2.6. AT+QSMTPDST Add or delete recipients

AT+QSMTPDST Add or delete recipients	
Test Command AT+QSMTPDST =?	Response +QSMTPDST: (0,1),(1-3),"ADDRESS" OK Parameters See Write Command

<p>Read Command AT+QSMTPDST ?</p>	<p>Response [+QSMTPDST: <type>,"<e-addr>"[<CR><LF>...]]</p> <p>OK</p> <p>Parameters See Write Command</p>
<p>Write Command AT+QSMTPDST =<mode>[,<type> >[,"<e-addr>"]]</p>	<p>Response If format is right and it is not sending email, response OK</p> <p>+QSMTPDST: <result> Otherwise, response ERROR</p> <p>Parameters</p> <p><mode> A numeric to indicate to add a recipient or delete a recipient. 0 delete 1 add</p> <p><type> A numeric to indicate the type of the recipient. 1 receiver 2 copy receiver 3 secret receiver</p> <p><e-addr> The email address of the recipient to add or delete.</p> <p><result> A numeric to indicate the result of the operation. If it is a negative numeric, it is the type of error (Please refer to the chapter 3). If it is 0, it means the operation is successful.</p>
<p>Reference</p>	<p>Note: If <mode>equals 0, i.e. try to delete recipients, then if <e-addr> is default, this command will delete all the recipients whose type is same as what <type> defines, and then if <type> is also default, this command will delete all the recipients. The maximum number of the recipients is 20.</p>

2.2.7. AT+QSMTPSUB Edit the subject of the email

AT+QSMTPSUB Edit the subject of the email	
<p>Test Command AT+QSMTPSUB =?</p>	<p>Response +QSMTPSUB: (0-3),"TITLE"</p> <p>OK</p> <p>Parameters See Write Command</p>

<p>Read Command AT+QSMTPSUB ?</p>	<p>Response +QSMTPSUB: <charset>,"<title>"</p> <p>OK</p> <p>Parameters See Write Command</p>
<p>Write Command AT+QSMTPSUB =<charset>,"<title>"</p>	<p>Response If format is right and it is not sending email, response OK</p> <p>Otherwise, response ERROR</p> <p>Parameters <charset> A numeric to indicate the character set of the title. 0 ASCII 1 UTF-8 2 GB2312 3 BIG5</p> <p><title> A string as the title of the email. If <charset> is 0, this string will be as the title of the email. Otherwise, it is formatted as a hexadecimal number string, e.g. "41" means the HEX value 0x41. The length of <title> is 0-100 if the character set is ASCII. The length of <title> is 0-200 if the character set is not ASCII.</p>
Reference	

2.2.8. AT+QSMTPBODY Edit the content of the email

AT+QSMTPBODY Edit the content of the email	
<p>Test Command AT+QSMTPBODY=?</p>	<p>Response +QSMTPBODY: (0-3),(1-48000)</p> <p>OK</p> <p>Parameters See Write Command</p>
<p>Write Command AT+QSMTPBODY=<charset> [,<timeout>]</p>	<p>Response If format is right and it is not sending email, response OK</p> <p>CONNECT</p> <p>+QSMTPBODY: <result></p> <p>Otherwise, response</p>

	<p>ERROR</p> <p>Parameters</p> <p><charset> A numeric to indicate the character set of the title.</p> <p>0 ASCII</p> <p>1 UTF-8</p> <p>2 GB2312</p> <p>3 BIG5</p> <p><timeout> The maximum time to download email body from UART. The unit is second. If it is default, the maximum time is infinite.</p> <p><result> A numeric to indicate the result to input email body. If it is a negative numeric, it is the same as <err> (Please refer to the chapter 3). If is not a negative numeric, it represents the length of the input email body data.</p>
Reference	<p>Note:</p> <ol style="list-style-type: none"> 1. "+++" is used to end downloading email body. 2. The maximum size of the email body is 10 Kbytes.

2.2.9. AT+QSMTPATT Add an attachment for the email

AT+QSMTPATT Add an attachment for the email	
<p>Test Command</p> <p>AT+QSMTPATT</p> <p>=?</p>	<p>Response</p> <p>+QSMTPATT: "FILE NAME",<fileSz>,(1-48000)</p> <p>OK</p>
<p>Read Command</p> <p>AT+QSMTPATT</p> <p>?</p>	<p>Response</p> <p>[+QSMTPATT: <fileIndex>,"<fileName>",<fileSz><CR><LF>.....]</p> <p>OK</p> <p>Parameters</p> <p>See Write Command</p>
<p>Write Command</p> <p>AT+QSMTPATT</p> <p>= "<fileName>"[,</p> <p><fileSz>,<timeou</p> <p>t>]</p>	<p>Response</p> <p>If format is right and it is not sending email, response</p> <p>OK</p> <p>If the data of the attachment fill will be input via UART and the UART enters data mode successfully, response</p> <p>CONNECT</p> <p>After the attachment has been attached successfully, response</p> <p>+QSMTPATT: <result></p> <p>Otherwise, response</p> <p>ERROR</p>

	<p>Parameters</p> <p><fileIndex> The index of the attachment.</p> <p><fileName> A string as the file name of the attachment to add. If it is started with "/UFS/", it will get the specified file in UFS as the attachment. And in M33, it is also supported to get the file in the directory of "Picture" of SD and RAM as the attachment, but it is necessary to add "/SD/" before the file name for the file in the directory "Picture" of SD card and "/RAM/" before the filename for the file in RAM.</p> <p><fileSz> the size of the attachment to add. The range is 0-102400. The unit is byte. For the file in UFS or SD or RAM, this parameter is default and the size of the attachment is the real size of the file to attach.</p> <p><timeout> the maximum time to download email attachment from UART. The unit is second. If it is default, the maximum time is infinite. The range is 1-48000. The unit is second. For the file in UFS or SD or RAM, this parameter is default.</p> <p><result> A numeric to indicate the result to input the attachment. If it is a negative numeric, it is the same as <err> (Please refer to the chapter 3). If is not a negative numeric, it represents the real length of the attachment.</p>
Reference	<p>Note:</p> <ol style="list-style-type: none"> 1. "+++" is used to end downloading attachment 2. The total number of the attachments should be no more than 10. 3. The total size of the attachments should be not greater than 100 Kbytes. This restriction is only the attachments input from UART.

2.2.10. AT+QSMTPDATT Delete an attachment

AT+QSMTPDATT Delete an attachment	
Test Command AT+QSMTPDA TT=?	Response +QSMTPDATT: (1-10) OK
Execute Command AT+QSMTPDA TT	Response If format is right and it is not sending email, response OK +QSMTPDATT: <result> Otherwise, response ERROR

	Parameters See Write Command
Write Command AT+QSMTPDA TT=<fileIndex>	Response If format is right and it is not sending email, response OK +QSMTPDATT: <result> Otherwise, response ERROR Parameters <fileIndex> The index of the attachment to delete. Please refer to <fileIndex> in 2.2.9 <result> A numeric to indicate the result to delete the attachment. If it is 0, it means it is successful to delete the attachment. If it is a negative numeric, it is the same as <err> (Please refer to the chapter 3).
Reference	Note: The Execute Command is used to delete all the attachments.

2.2.11. AT+QSMTPCLR Clear all the configurations and contents of the email

AT+QSMTPCLR Clear all the configurations and contents of the email	
Test Command AT+QSMTPCLR=?	Response OK
Execute Command AT+QSMTPCLR	If format is right, response OK Otherwise, response ERROR
Reference	Note: The execute command will clear the following configurations and contents. 1. user name (refer to the command AT+QSMTPUSER) 2. password (refer to the command AT+QSMTPPWD) 3. the sender's address (refer to the command AT+QSMTPADDR) 4. the sender's name (refer to the command AT+QSMTPNAME) 5. the address of the SMTP server (refer to the command AT+QSMTPSRV) 6. all the recipients (refer to the command AT+QSMTPDST) 7. the subject (refer to the command AT+QSMTPSUB) 8. the body (refer to the command AT+QSMTPBODY) 9. all the attachments (refer to the command AT+QSMTPATT)

2.2.12. AT+QSMTPCFG SMTP configurations

AT+QSMTPCFG SMTP configurations	
Test Command AT+QSMTPCFG G=?	Response +QSMTPCFG: (1) OK
Write Command AT+QSMTPCFG G=<type>[,<value>] e>]	Response If format is right and <value> is omitted, response +QSMTPCFG:<value> OK Else If format is right and it is not sending email, response OK Otherwise, response ERROR Parameters <type> A numeric to indicate the parameter to configure. <u>1</u> configure whether need authentication <value> the value of the parameter to configure defined by <type>. If <type> == 1 <u>0</u> don't need authentication <u>1</u> need authentication. This is factory default value.
Reference	Note: The Write Command with <value> omitted is used to query the value of the corresponding parameter.

2.2.13. AT+QSMTPPUT Send email

AT+QSMTPPUT Send email	
Test Command AT+QSMTPPUT T=?	Response +QSMTPPUT: (100-48000) OK
Execute Command AT+QSMTPPUT T	If format is right and it is not sending email, response OK +QSMTPPUT: <result> Otherwise, response ERROR Note: This means the module will try to send the email without time

	restriction.
Write Command AT+QSMTPPU T=<timeout>	<p>Response</p> <p>If format is right and it is not sending email, response OK</p> <p>+QSMTPPUT: <result> Otherwise, response ERROR</p> <p>Parameters</p> <p><timeout> the maximum time to send email. The unit is second. If it is default, the maximum time is infinite. The range is 100-48000.</p> <p><result> A numeric to indicate the result to send the email. If it is 0, it means it is successful to send the mail. If it is a negative numeric, it is the same as <err> (Please refer to the chapter 3).</p>
Reference	

3. Summary of Error Codes

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

<err>	Meaning
-1	Unknown error
-3	The SMTP service is busy. Such as, downloading body or attachment, sending email
-4	Failed to get IP address according to domain name
-5	Network error. Such as, failed to activate GPRS/CSD context, failed to establish the TCP connection with the SMTP server or failed to send email to the SMTP server, etc.
-6	Unsupported authentication type
-7	The connection for the SMTP service is closed by peer.
-8	GPRS/CSD context is deactivated
-9	Timeout
-10	No recipient for the SMTP service
-11	Failed to send email
-12	Failed to open file for attachment
-13	No enough memory for the attachment
-14	Failed to save the attachment
-15	The input parameter is wrong
-421	Service not available, closing transmission channel
-450	Requested mail action not taken: mailbox unavailable
-451	Requested action aborted: local error in processing
-452	Requested action not taken: insufficient system storage
-500	Syntax error, command unrecognized
-501	Syntax error in parameters or arguments
-502	Command not implemented
-503	Bad sequence of commands
-504	Command parameter not implemented
-521	<domain> does not accept mail (see rfc1846)
-530	Access denied
-535	Authentication failed
-550	Requested action not taken: mailbox unavailable
-551	User not local; please try <forward-path>
-552	Requested mail action aborted: exceeded storage allocation
-553	Requested action not taken: mailbox name not allowed
-554	Transaction failed

4. Examples

4.1. Configure SMTP server

```
AT+QSMTPSRV="smtp.163.com", 25 // Set SMTP server as "smtp.163.com" and port as
                               25
OK

AT+QSMTPUSER="quectel" // Set the user name for authentication as "quectel"
OK

AT+QSMTPPWD="test" // Set the password for authentication as "test"
OK
```

Note:

Actually, the user name "quectel" and password "test" isn't a valid account. It is just an example.

4.2. Configure the information of sender

```
AT+QSMTPNAME="quectel" // Set the name of the sender as "quectel"
OK

AT+QSMTPADDR="quectel@163.com" // Set the email address of the sender as
"quectel@163.com"
OK
```

4.3. Add recipients

```
AT+QSMTPDST=1,2,"colin.hu@quectel.com" // Add a recipient
"colin.hu@quectel.com". And it is a copy
receiver which is defined by 2.
OK

+QSMTPDST: 0 // Successfully add the recipient.
```

By the way, if you find the recipient you added before is wrong and you want to delete it, please execute the following command.

```
AT+QSMTPDST=0,2,"colin.hu@quectel.com" // Delete the recipient
```

```

"colin.hu@quectel.com" in the copy
recipients list.

OK

+QSMTPDST: 0 // Successfully delete the recipient.

```

4.4. Edit the content of the email

```

AT+QSMTPSUB=0,"SMTP TEST" // Set the title of the email as "SMTP TEST"
OK

AT+QSMTPBODY=1, 10 // Prepare to input the content of the email from UART.
// And the character set of the email body is UTF-8
// which is defined by 1.

OK

CONNECT
..... // Input the data of the email body
+++ // Input "+++" to end downloading email body
+QSMTPBODY: 2009 // Successful to download email body and the size of
// the email body is 2009.

AT+QSMTPATT="bigfile.txt" // Prepare to download the attachment "bigfile.txt"
OK

CONNECT
..... // Input the data of the attachment
+++ // Input "+++" to end downloading the attachment
+QSMTPATT: 20090 // Successful to download the attachment and the size
// of the attachment is 20090.

AT+QSMTPATT? // Query the information of all attachments
+QSMTPATT: 1,"bigfile.txt", 20090 // The first attachment is "bigfile.txt" and its size is
// 20090.

OK

```

By the way, if you don't want send the attachment with the email, please delete the attachment by the following command.

```

AT+QSMTPDATT=1 // Delete the first attachment
OK

+QSMTPDATT: 0 // Successfully delete the attachment

```

4.5. Add a file in UFS as attachment

It is supported to add a file in UFS as the attachment of the email. And the following is an example to add a file in UFS as the attachment.

```

AT+QSMTPATT="/UFS/attach.txt" // Add the file "attach.txt" in UFS as attachment.
OK

+QSMTPATT: 20100 // Successful to add the file "attach.txt" in UFS as
attachment and its size is 20100.

AT+QSMTPATT? // Query the information of all attachments
+QSMTPATT: 1,"bigfile.txt", 20090 // The first attachment is "bigfile.txt" and its
size is 20090.
+QSMTPATT: 2,"/UFS/attach.txt", 20100 // The second attachment is "attach.txt" in UFS
and its size is 20100.

OK

```

In M33, it is supported to add the files in SD and RAM. And the method to add the file in SD or RAM is almost the same as the method to add the file in UFS except replacing "/UFS/" with "/SD/" or "/RAM/".

4.6. Send email

```

AT+QIFGCNT=0 // Choose the context 0 to activate GPRS/CSD
context for the SMTP service, please refer to [1] and
[2]
OK

AT+QICSGP=1,"CMNET" // Choose GPRS mode and set the APN as
"CMNET"
OK

AT+QSMTPPUT=300 // Send the email to the SMTP server and the
maximum time allowed to send email is 300 seconds.
OK
..... // Wait for a moment
+QSMTPPUT:0 // Successfully send email.

```

QUECTEL



Quectel Wireless Solutions Co., Ltd.

Room 501, Building 9, No.99, Tianzhou Road, Shanghai, China 200233

Tel: +86 21 5108 2965

Mail: info@quectel.com