

# **GSM POP3**

# **AT Command Set**

**GSM/GPRS Module Series**

Rev. POP3\_ATC\_V3.1

Date: 2015-05-08



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## About the Document

### History

Revision	Date	Author	Description
3.0	2013-01-30	Kim JIN	Initial
3.1	2015-05-08	Kim JIN	Added applicable modules

## Contents

About the Document .....	2
Contents .....	3
<b>1 Introduction .....</b>	<b>4</b>
<b>2 Description .....</b>	<b>5</b>
2.1. AT Command syntax .....	5
2.2. Description of AT Command .....	5
2.2.1. AT+QPOP3CFG POP3 Configurations .....	5
2.2.2. AT+QPOP3IN Login the POP3 Server .....	7
2.2.3. AT+QPOP3NUM Get the Email Number and Total size on POP3 Server .....	7
2.2.4. AT+QPOP3LIST Get the Size of Every Email on Server .....	8
2.2.5. AT+QPOP3GET Get the Specific Email Info on Server .....	9
2.2.6. AT+QPOP3MDEL Mark the Specific Email on Server to Delete .....	10
2.2.7. AT+QPOP3RSET Unmark All the Emails that Marked as Delete on Server .....	11
2.2.8. AT+QPOP3OUT Logout from the POP3 Server .....	11
2.2.9. AT+QPOP3READ Read the Data of the Email Received .....	11
<b>3 Appendix A Reference .....</b>	<b>13</b>
<b>4 Examples .....</b>	<b>15</b>
4.1. Configure POP3 server .....	15
4.2. Login POP3 server .....	16
4.3. Get the Information of Email Number and Size on POP3 Server .....	16
4.4. Get the Information of the Specific Email on POP3 Server .....	17
4.5. Mark the Specific Email Deleted on POP3 Server and Reset All .....	17
4.6. Logout from POP3 Server .....	18
4.7. Read the Local Email Info .....	18

# 1 Introduction

Quectel Modules provide an internal TCP/UDP 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, SMTP service and POP3 service, etc. This document is a reference guide to all the AT commands and responses defined for POP3 service.

This document is applicable to Quectel M85 module.

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## 2 Description

### 2.1. AT Command syntax

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 GSM engine

### 2.2. Description of AT Command

#### 2.2.1. AT+QPOP3CFG POP3 Configurations

AT+QPOP3CFG POP3 Configurations	
Test Command AT+QPOP3CFG=?	Response +QPOP3CFG: <property>,<value>  OK
Read Command AT+QPOP3CFG?	Response +QPOP3CFG: <property>,<value> [+QPOP3CFG: <property>,<value> [...]]  OK
Write Command AT+QPOP3CFG=<property>[,<value> ]	Response If <value> is not null, and format is right, response OK Else if <value> is null, and format is right, response +QPOP3CFG: <property>,<value>

	OK Otherwise response ERROR
Reference	

## Parameter

<b>&lt;property&gt;</b>	<p>The property of POP3</p> <p><b>“storage”</b> The local storage where to save the Email downloaded from server. It has three values.  RAM RAM file. This is the default storage  UFS UFS file in flash  SD SD file</p> <p><b>“user”</b> The user name for authentication. The maximum size is 50.</p> <p><b>“pwd”</b> The password for authentication. The maximum size is 50.</p> <p><b>“server”</b> Set the address and port of POP3 server. The address of server can be IP address or domain name. The format is similar to "192.168.1.1:110".</p> <p><b>“timeout”</b> The maximum time waited for data from server. If there is no any data coming from server within timeout value, it will be timeout and return error code -9. The unit is second. The range is 1-300. The default value is 90. This timeout value is useful for  <b>AT+QPOP3IN/AT+QPOP3NUM/AT+QPOP3LIST/AT+QPOP3GET/AT+QPOP3MDEL/AT+QPOP3RSET/AT+QPOP3OUT.</b></p> <p><b>“RAM/maxFileSize”</b> Set the maximum allowable Email size in RAM. This configuration is useful only when <b>“storage”</b> is RAM. The unit is byte. The value cannot be larger than the free space of RAM. If it is 0, it means it will use the real mail size to create file in RAM. If it is larger than 0, it will use this value to create file in RAM. Normally, there is no need to configure this value, only when the mail size provided from mail server is not reliable.</p>
<b>&lt;value&gt;</b>	The value of the property indicated by <b>&lt;property&gt;</b> .

### NOTES

1. If **<value>** is null, AT+QPOP3CFG is used for getting the value of the **<property>**, otherwise is used for setting its value.
2. **“storage”** can be saved through **AT&W**.

### 2.2.2. AT+QPOP3IN Login the POP3 Server

#### AT+QPOP3IN Login the POP3 server

Test Command <b>AT+QPOP3IN=?</b>	Response <b>OK</b>
Execution Command <b>AT+QPOP3IN</b>	Response If format is right, response <b>OK</b>  <b>+QPOP3: &lt;result&gt;</b> Otherwise response <b>ERROR</b>
Reference	

#### Parameter

<b>&lt;result&gt;</b>	A numeric to indicate the result to login the server. If it is 0, it means it is successful to login the server. If it is a negative numeric, it is the same as <b>&lt;err&gt;</b> (Please refer to the chapter 3).
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### 2.2.3. AT+QPOP3NUM Get the Email Number and Total Size on POP3 Server

#### AT+QPOP3NUM Get the Email Number and Total Size on POP3 Server

Test Command <b>AT+QPOP3NUM=?</b>	Response <b>OK</b>
Execution Command <b>AT+QPOP3NUM</b>	Response If format is right, response <b>+QPOP3NUM: &lt;num&gt;,&lt;size&gt;</b>  <b>OK</b> Otherwise response <b>ERROR</b>
Reference	

#### Parameter

<b>&lt;num&gt;</b>	The Email number on the POP3 server.
<b>&lt;size&gt;</b>	Total size of all the Emails on POP3 server.



## 2.2.4. AT+QPOP3LIST Get the Size of Every Email on Server

AT+QPOP3LIST Get the Size of Every Email on Server	
Test Command <b>AT+QPOP3LIST=?</b>	Response <b>OK</b>
Write Command <b>AT+QPOP3LIST=&lt;index&gt;</b>	Response If format is right, response <b>+QPOP3LIST: &lt;index&gt;,&lt;size&gt;</b>  <b>OK</b> Otherwise response <b>ERROR</b>
Execution Command <b>AT+QPOP3LIST</b>	Response If format is right, response <b>CONNECT</b> <b>&lt;totalNum&gt;,&lt;totalSize&gt;</b> <b>[&lt;index&gt;,&lt;size&gt;</b> <b>[...]]</b>  <b>+QPOP3LIST: &lt;result&gt;</b>  <b>OK</b> Otherwise response <b>ERROR</b>
Reference	

### Parameter

<b>&lt;totalNum&gt;</b>	The total number of Emails on POP3 server
<b>&lt;totalSize&gt;</b>	The total size of Emails on POP3 server
<b>&lt;index&gt;</b>	The index of Email on server
<b>&lt;size&gt;</b>	The size of Email
<b>&lt;result&gt;</b>	A numeric to indicate the result to login the server. If it is 0, it means it is successful to list the Emails on server. If it is a negative numeric, it is the same as <b>&lt;err&gt;</b> (Please refer to the chapter 3).

## NOTES

1. If **<index>** is not null, it will get the specific Email's size. And if **<index>** is null, it will list all the Email's size.
2. In executive mode (**AT+QPOP3LIST**), if **<totalNum>** and **<totalSize>** are both 0, there are two situations. Firstly, there is no mail indeed. Secondly, the server does not support this command to get these total messages. If **<totalNum>** is greater than 0, but **<totalSize>** is 0, it means that current POP3 server only supports this command to get **<totalNum>**, does not support to get **<totalSize>**.

### 2.2.5. AT+QPOP3GET Get the Specific Email Info on Server

#### AT+QPOP3GET Get the Specific Email Info on Server

Test Command  
**AT+QPOP3GET=?**

Response  
**+QPOP3GET: <index>,(0-2)**

**OK**

Write Command  
**AT+QPOP3GET=<index>  
,<type>**

Response  
If **<type>** is 0 and format is right, response  
**+QPOP3GET: <data>**

**OK**

Else if **<type>** is 1 and format is right, response  
**CONNECT**  
**<data>**

**+QPOP3GET: <result>**

**OK**

Else if **<type>** is 2 and format is right, response  
**+QPOP3GET: <result>**

**OK**

Otherwise response  
**ERROR**

Reference

#### Parameter

<b>&lt;index&gt;</b>	The index of Email on server
<b>&lt;type&gt;</b>	Which part of data will be get
0	Get the UIDL of the specific Email

- 1 Get the header of the specific Email
- 2 Download the specific Email to local folder

**<data>** The data of the part specified by **<type>**. If **<type>** is 2, **<data>** will be null.

**<result>** A numeric to indicate the result to get the data. If it is 0, it means it is successful to get the data on server. If it is a negative numeric, it is the same as **<err>** (Please refer to the chapter 3).

#### NOTES

1. If **<type>** is 0, Data will output directly through UART in CMD Mode, and the data was already decoded.
2. If **<type>** is 1, Data will output directly through UART in Data Mode, and the data was already decoded.
3. And if the **<type>** is 2, it is used for downloading all the data of specific Email to local folder. These data will be saved to the storage refer to **AT+QPOP3CFG="storage", "..."**, and does not be output through UART. Mail data is stored in the root directory of the current storage, named "pop3.eml". If download new Email to the storage, old mail data will be deleted.

### 2.2.6. AT+QPOP3MDEL Mark the Specific Email on Server to Delete

#### AT+QPOP3MDEL Mark the Specific Email on Server to Delete

Test Command  
**AT+QPOP3MDEL=?**

Response  
**+QPOP3MDEL: <index>**

**OK**

Write Command  
**AT+QPOP3MDEL=<index>**

Response  
**OK**  
**ERROR**

Reference

#### Parameter

**<index>** The index of Email on server

#### NOTE

The Email marked as Delete will be deleted on server after **AT+QPOP3OUT** have been executed.

### 2.2.7. AT+QPOP3RSET Unmark All the Emails that Marked as Delete on Server

#### AT+QPOP3RSET Unmark All the Emails that Marked as Delete on Server

Test Command <b>AT+QPOP3RSET=?</b>	Response <b>OK</b>
Execution Command <b>AT+QPOP3RSET</b>	Response <b>OK</b> <b>ERROR</b>
Reference	

#### NOTE

It will unmark all the Emails that have been marked as Delete.

### 2.2.8. AT+QPOP3OUT Logout from the POP3 Server

#### AT+QPOP3OUT Logout from the POP3 Server

Test Command <b>AT+QPOP3OUT=?</b>	Response <b>OK</b>
Write Command <b>AT+QPOP3OUT</b>	Response <b>OK</b> <b>ERROR</b>
Reference	

### 2.2.9. AT+QPOP3READ Read the Data of the Email Received

#### AT+QPOP3READ Read the Data of the Email Received

Test Command <b>AT+QPOP3READ=?</b>	Response <b>+QPOP3READ: (0-2),(0-65535),"FILE_FULL_NAME"</b>  <b>OK</b>
Write Command <b>AT+QPOP3READ=&lt;type&gt;</b> <b>[,&lt;num&gt;,&lt;local_filepath&gt;]</b>	Response If read the contents of header or body, and format is right, response <b>CONNECT</b> <b>&lt;data&gt;</b>  <b>+QPOP3READ: &lt;result&gt;</b>

	<p><b>OK</b> Else if get the charset of body, and format is right response <b>+QPOP3READ: &lt;charset&gt;</b></p> <p><b>OK</b> Else response <b>+QPOP3READ: &lt;result&gt;</b></p> <p><b>OK</b> Otherwise response <b>ERROR</b></p>
Reference	

## Parameter

<b>&lt;type&gt;</b>	Which part of contents want to get 0 Read the Email header 1 Read the body text 2 List attachment content
<b>&lt;num&gt;</b>	If <b>&lt;type&gt;</b> is 1, this parameter has two values. 0 Get the char set of the Email body 1 Read the body of this Email If <b>&lt;type&gt;</b> is 2, this parameter means the ID of attachments. If <b>&lt;type&gt;</b> is 2 and <b>&lt;num&gt;</b> is null, it is used for getting the attachment numbers of the specific Email.
<b>&lt;local_filepath&gt;</b>	The path to save the specific attachment This parameter is valid only when <b>&lt;type&gt;</b> is 2.
<b>&lt;data&gt;</b>	This is the data of the Email. And the data was already decoded.
<b>&lt;result&gt;</b>	A numeric to indicate the result to read data. If it is 0, it means it is successful. If it is a negative numeric, it is the same as <b>&lt;err&gt;</b> (Please refer to the chapter 3).
<b>&lt;charset&gt;</b>	The char set of the Email body

## NOTES

1. If data of the E-mail's header or body has been got, data will output to UART in Data mode directly.
2. If AT+QPOP3READ is used for getting the specific attachment to **<local\_filepath>**, the data of the attachment will be decoded and saved to **<local\_filepath>**. The operation of FILE can be used for getting the data of the attachment.

# 3 Appendix A Reference

Table 1: Description of Different Coding Schemes

Code of <err>	Meaning
0	Executed successfully
-1	Unknown error
-2	Wait for the report of bearer info
-3	The pop3 operation is busy
-4	Failed to get IP address according to domain name
-5	Network error
-6	Unsupported command
-7	The connection for the POP3 server is closed by peer
-8	CPRS/CSD context is deactivated
-9	Timeout
-10	Server reply error
-11	Parse data error
-12	Get free space error
-13	Free space is not enough
-14	Open file failed
-15	Read file error

---

-16	Failed to save data
-17	Error when decode data
-18	Invalid parameter

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# 4 Example

## 4.1. Configure POP3 server

```
AT+QPOP3CFG=?
+QPOP3CFG: <property>,<value>

OK
AT+QPOP3CFG="storage","UFS"           //Set storage is UFS
OK
AT+QPOP3CFG="user","test_user@163.com" //Set user
OK
AT+QPOP3CFG="pwd","password"           //Set password
OK
AT+QPOP3CFG="timeout",60                //Set timeout value
OK
AT+QPOP3CFG="server","pop.163.com:110"  //Set server name and port
OK
AT+QPOP3CFG?
+QPOP3CFG: "storage","UFS"
+QPOP3CFG: "user","test_user@163.com"
+QPOP3CFG: "pwd","*****"
+QPOP3CFG: "server","pop.163.com:110"
+QPOP3CFG: "timeout",60

OK
AT+QPOP3CFG="storage"                   //Get storage value
+QPOP3CFG: "storage","UFS"

OK
AT+QPOP3CFG="user"                       // Get user value
+QPOP3CFG: "user","test_user@163.com"

OK
AT+QPOP3CFG="pwd"                         // Get password value
+QPOP3CFG: "pwd","*****"

OK
```



```
AT+QPOP3CFG="timeout" // Get timeout value
+QPOP3CFG: "timeout",60

OK
AT+QPOP3CFG="server" // Get server address and port
+QPOP3CFG: "server","pop.163.com:110"

OK
```

#### NOTE

Actually, the user name "test\_user@163.com" and password "password" are not valid. It is just an example.

## 4.2. Login POP3 server

If configuration is right and network is ok.

```
AT+QPOP3IN // Login in POP3 server
OK
+QPOP3: 0 //Login succeeded
```

Else if server address or port error, login will fail.

```
AT+QPOP3IN // Login in POP3 server
OK
+QPOP3: -5 //Login failed. Error Id is -5.
```

## 4.3. Get the Information of Email Number and Size on POP3 Server

```
AT+QPOP3NUM //Inquire the number and total size of Email
+QPOP3NUM: 2, 21353 on Server

OK
AT+QPOP3LIST //Get the size of every Email on Server
CONNECT
2, 21353
1, 4136
2, 17217
+QPOP3LIST: 0
```

```
OK
AT+QPOP3LIST=1 //Get the size of first Email on Server
+QPOP3LIST: 1, 4136
OK
```

#### 4.4. Get the Information of the Specific Email on POP3 Server

```
AT+QPOP3GET=1,0 //Get the UIDL of first Email
+QPOP3GET: AAAFepdCAAAv60+tkuDqrqk3/6ogog+g
OK
AT+QPOP3GET=1,1 //Get the head of first Email
CONNECT
From: "bluesky" <bluesky7810@163.com>
To: "bhw98" bhw98@sina.com
Cc: bhwang@jlonline.com
Subject: Test Email
Date: Sat, 20 May 2002 10:03:36 +0800
+QPOP3GET: 0
OK
AT+QPOP3GET=1,2 //Download the first Email to local folder
+QPOP3GET: 0 //Get Email data successes
OK
```

#### 4.5. Mark the Specific Email Deleted on POP3 Server and Reset All

```
AT+QPOP3MDEL=1 //Mark the first Email on server for delete
OK
AT+QPOP3RSET //Reset all the Emails that marked for delete
OK
```

#### NOTE

The Email which be marked for Delete will be delete when logout from the POP3 server. And **AT+QPOP3RSET** will reset all the Emails that have been marked for delete.

## 4.6. Logout from POP3 Server

**AT+QPOP3OUT**  
OK

//Logout from the POP3 server

## 4.7. Read the Local Email Info

**AT+QPOP3READ=?**

+QPOP3READ: (0-2),(0-65535),"FILE\_FULL\_NAME"

OK

**AT+QPOP3READ=0**

//Read the header of this Email

CONNECT

From: "bluesky" <bluesky7810@163.com>

To: "bhw98" bhw98@sina.com

Cc: bhwang@jlonline.com

Subject: Test Email

Date: Sat, 20 May 2002 10:03:36 +0800

+QPOP3READ: 0

OK

**AT+QPOP3READ=1,0**

//Get the charset of the body

+QPOP3READ: UTF-8

OK

**AT+QPOP3READ=1,1**

//Read the body of this Email

CONNECT

This is the body of test Email.

+QPOP3READ: 0

OK

**AT+QPOP3READ=2**

//List the attachments of this Email

CONNECT

1,file.txt

2,blue.jpg

+QPOP3READ: 0

OK

**AT+QPOP3READ=2,1,"RAM:file.txt"**

//Get the first attachment of this Email  
to "RAM:file.txt"

+QPOP3READ: 0

```
OK
AT+QFOPEN="RAM:file.txt"           //Open the attachment
+QFOPEN: 12341840

OK
AT+QFREAD=12341840                 //Read the attachment
CONNECT 10                          //The data of 10 bytes will be read out
<output data>
OK
AT+QFCLOSE=12341840                //Close the attachment
OK
AT+QFDEL="RAM:file.txt"            //Delete the attachment
OK
```

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