



SIM7000 Series_Email _Application Note

LPWA Module

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Document Title:	SIM7000 Series_Email_Application Note
Version:	1.02
Date:	2020.07.28
Status:	Released

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About Document

Version History

Version	Date	Owner	What is new
V1.00	2019.09.16	Jiangting.Ding	First Release
V1.01	2019.11.07	Jiangting.Ding	Change AT+SHBOD
V1.02	2020.07.28	Wenjie.Lai	All

Scope

This document applies to the following products

Name	Type	Size(mm)	Comments
SIM7000E/C/A/G	Cat-M1(/NB1/EGPRS)	24*24	
SIM7000E-N SIM7000C-N	NB1	24*24	

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1 Introduction

1.1 Purpose of the document

Based on module AT command manual, this document will introduce Email application process.

Developers could understand and develop application quickly and efficiently based on this document.

1.2 Related documents

[1] SIM7000 Series_AT Command Manual

1.3 Conventions and abbreviations

In this document, the GSM engines are referred to as following term:

- ME (Mobile Equipment);
- MS (Mobile Station);
- TA (Terminal Adapter);
- DCE (Data Communication Equipment) or facsimile DCE (FAX modem, FAX board);

In application, controlling device controls the GSM engine by sending AT Command via its serial interface.

The controlling device at the other end of the serial line is referred to as following term:

- TE (Terminal Equipment);
- DTE (Data Terminal Equipment) or plainly "the application" which is running on an embedded system;

2 Email Introduction

2.1 Introduction

Electronic mail (email or e-mail) is a method of exchanging messages ("mail") between people using electronic devices. Invented by Ray Tomlinson, email first entered limited use in the 1960s and by the mid-1970s had taken the form now recognized as email. Email operates across computer networks, which today is primarily the Internet. Some early email systems required the author and the recipient to both be online at the same time, in common with instant messaging. Today's email systems are based on a store-and-forward model. Email servers accept, forward, deliver, and store messages. Neither the users nor their computers are required to be online simultaneously; they need to connect only briefly, typically to a mail server or a webmail interface for as long as it takes to send or receive messages or to download it.

Originally an ASCII text-only communications medium, Internet email was extended by Multipurpose Internet Mail Extensions (MIME) to carry text in other character sets and multimedia content attachments. International email, with internationalized email addresses using UTF-8, has been standardized, but as of 2017 it has not been widely adopted.

The history of modern Internet email services reaches back to the early ARPANET, with standards for encoding email messages published as early as 1973 (RFC 561). An email message sent in the early 1970s looks very similar to a basic email sent today.

2.2 Email Address

The format of an email address consists of three parts: User identifier + @ + domain name

The first part "USER" represents the account of the user's mailbox. For the same mail receiving server, this account must be unique;

the second part "@" is a separator. @ is the symbol of "at", which means "at".

the third part is the domain name of the mail receiving server of the user mailbox.

The domain_name here is the identifier of the domain name, that is, the domain name of the mail destination to which the mail must be delivered. Somebody is the email address on the domain. The suffix

generally represents the nature of the domain name and the region code. The domain name is really technically a mail switch, not a machine name.

2.3 Email Protocol

There are several common email protocols: SMTP, POP3, IMAP. These several protocols are defined by the TCP / IP protocol family.

SMTP (Simple Mail Transfer Protocol): SMTP is mainly responsible for how the underlying mail system transfers mail from one machine to another.

POP (Post Office Protocol): The version is POP3. POP3 is a protocol for transmitting mail from an email box to a local computer.

IMAP (Internet Message Access Protocol): The version is IMAP4, which is an alternative protocol to POP3. It provides new functions of mail retrieval and mail processing, so that users can see the summary of the title of the mail without downloading the body of the mail. The client software can operate on the mail and folder directories on the server. The IMAP protocol enhances the flexibility of e-mail, and also reduces the direct harm of spam to the local system, and at the same time saves users the time to check the e-mail. In addition, the IMAP protocol can remember the user's operations on the mail in the offline state (such as moving mail, deleting mail, etc.) will be automatically executed the next time the network connection is opened.

Support for SSL connections is integrated into most popular email client programs.

In addition, many encryption technologies are also applied to the sending and receiving and reading of e-mail. They can provide encryption strengths ranging from 128 to 2048 bits. Both unidirectional and symmetric key encryption are widely supported

3 AT Commands for Email

3.1 Overview

Command	Description
AT+EMAILCID	Set Email bearer profile identifier
AT+EMAILTO	Set timeout value of SMTP/POP3 server response
AT+SMTPSRV	Set SMTP server address and port
AT+SMTPAUTH	Set user name and password for SMTP authentication
AT+SMTPFROM	Set sender address and name
AT+SMTPRCPT	Set the Email recipient(to/cc/bcc) address and name
AT+SMTPSUB	Set the Email subject
AT+SMTPBODY	Set the Email body
AT+SMTPFILE	Set the Email attachment
AT+SMTPSEND	Send the Email
AT+SMTPFT	Transfer the Email attachment
AT+SMTPCS	Set the Email charset
AT+POP3SRV	Set POP3 server and account
AT+POP3IN	Log in POP3 server
AT+POP3NUM	Get Email number and total size
AT+POP3LIST	Get the specific Email size
AT+POP3UIDL	Get the specific Email unique-id
AT+POP3CMD	Get multi-line response
AT+POP3READ	Read multi-line response
AT+POP3DEL	Mark the specific Email to delete
AT+POP3RSET	Unmark the emails that be marked as deleted
AT+POP3OUT	Log out POP3 server

3.2 Detailed Descriptions of Commands

3.2.1 AT+EMAILCID Set Email Bearer Profile Identifier

AT+EMAILCID Set Email Bearer Profile Identifier	
Test Command AT+EMAILCID=?	Response +EMAILCID: (range of supported <cid>s) OK+
	Parameters See Write Command
Read Command AT+EMAILCID?	Response +EMAILCID: <cid> OK
	Parameters See Write Command
Write Command AT+EMAILCID=<cid>	Response OK If error is related to ME functionality: ERROR
	Parameters <cid> Bearer profile identifier refer to AT+SAPBR
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.2 AT+EMAILTO Set Timeout Value of SMTP/POP3 Server Response

AT+EMAILTO Set Timeout Value of SMTP/POP3 Server Response	
Test Command AT+EMAILTO=?	Response +EMAILTO: (range of supported <timeout>s) OK
	Parameters See Write Command
Read Command AT+EMAILTO?	Response +EMAILTO: <timeout> OK
	Parameters See Write Command

Write Command AT+EMAILTO=<timeout>	Response OK If error is related to ME functionality: ERROR
	Parameters <timeout> The timeout value of SMTP/POP3 server response, in 1 second unit. 10-120 Default: 30(seconds)
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.3 AT+SMTPSRV Set SMTP Server Address and Port

AT+SMTPSRV Set SMTP Server Address and Port	
Test Command AT+SMTPSRV=?	Response +SMTPSRV: <smtpServerLength>,(range of supported <smtpPort>s) OK
	Parameters See Write Command
Read Command AT+SMTPSRV?	Response +SMTPSRV: <smtpServer>,<smtpPort> OK
	Parameter See Write Command
Write Command AT+SMTPSRV=<smtpServer>[,<smtpPort>]	Response OK If error is related to ME functionality: ERROR
	Parameters <smtpServer> SMTP server address, string type. This parameter can be either: - IP address in the format: xxx.xxx.xxx.xxx - Host name to be solved with a DNS query <smtpPort> The SMTP port 1-65535 Default: 25 <smtpServerLength> The max length of <smtpServer>
Parameter Saving Mode	NO_SAVE

Max Response Time	-
Reference	Note

3.2.4 AT+SMTPAUTH Set User Name and Password for SMTP Authentication

AT+SMTPAUTH Set User Name and Password for SMTP Authentication	
Test Command AT+SMTPAUTH=?	Response +SMTPAUTH: (range of supported<authType>s),<userNameLength>,<passwordLength> OK Parameters See Write Command
Read Command AT+SMTPAUTH?	Response +SMTPAUTH: <authType>,<userName>,<password> OK Parameters See Write Command
Write Command AT+SMTPAUTH=<authType>[,<userName>,<password>]	Response OK If error is related to ME functionality: ERROR Parameters <authType> The type of SMTP authentication 0 SMTP server does not request authentication. <userName> and <password> must not be given. 1 SMTP server requests authentication <userName> The user name for SMTP authentication. <userNameLength> The max length of <userName>. <password> The password for SMTP authentication. <passwordLength> The max length of <password>.
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.5 AT+SMTPFROM Set Sender Address and Name

AT+SMTPFROM Set Sender Address and Name									
Test Command AT+SMTPFROM=?	Response +SMTPFROM: <senderAddressLength>,<senderNameLength> OK								
	Parameters See Write Command								
Read Command AT+SMTPFROM?	Response +SMTPFROM: <senderAddress>,<senderName> OK								
	Parameter See Write Command								
Write Command AT+SMTPFROM=<senderAddress>[,<senderName>]	Response OK If error is related to ME functionality: ERROR								
	Parameters <table border="0"> <tr> <td><senderAddress></td> <td>The Email sender address,string type.</td> </tr> <tr> <td><senderAddressLength></td> <td>The max length of <senderAddress></td> </tr> <tr> <td><senderName></td> <td>The Email sender name,string type.</td> </tr> <tr> <td><senderNameLength></td> <td>The max length of <senderName></td> </tr> </table>	<senderAddress>	The Email sender address,string type.	<senderAddressLength>	The max length of <senderAddress>	<senderName>	The Email sender name,string type.	<senderNameLength>	The max length of <senderName>
<senderAddress>	The Email sender address,string type.								
<senderAddressLength>	The max length of <senderAddress>								
<senderName>	The Email sender name,string type.								
<senderNameLength>	The max length of <senderName>								
Parameter Saving Mode	NO_SAVE								
Max Response Time	-								
Reference	Note								

3.2.6 AT+SMTPRCPT Set the Email Recipient(TO/CC/BCC) Address and Name

AT+SMTPRCPT Set the Email Recipient(TO/CC/BCC) Address and Name	
Test Command AT+SMTPRCPT=?	Response +SMTPRCPT: (range of supported <rcptType>s),(range of supported <index>s),<rcptAddressLength>,<rcptNameLength> OK
	Parameters See Write Command

<p>Read Command AT+SMTPRCPT?</p>	<p>Response [+SMTPRCPT: <rcptType>,<index>,<rcptAddress>,<rcptName> [<CR><LF>+SMTPRCPT: <rcptType>,<index>,<rcptAddress>,<rcptName>[...]]]</p> <p>OK</p> <p>Parameter See Write Command</p>
<p>Write Command AT+SMTPRCPT=<rcptType>[,<index>[,<rcptAddress>[,<rcptName>]]]</p>	<p>Response OK</p> <p>If error is related to ME functionality: ERROR</p> <p>Parameters <rcptType> The type of recipient, the types of TO and CC are used to construct e-mail header in the field:"To:" or "Cc:". 0 TO, Normal Recipient. 1 CC, Carbon Copy recipient. 2 BCC, Blind Carbon Copy recipient. <index> Index of the type of recipient, decimal format <rcptAddress> The Email recipient address. <rcptName> The Email recipient name. <rcptAddressLength> The max length of <rcptAddress>. <rcptNameLength> The max length of <rcptName>.</p>
<p>Parameter Saving Mode</p>	<p>NO_SAVE</p>
<p>Max Response Time</p>	<p>-</p>
<p>Reference</p>	<p>Note</p> <ul style="list-style-type: none"> ● If only <rcptType> is given, it will delete all items of <rcptType>. ● If only <rcptType> and <index> are given, it will delete the <index> item of <rcptType>.

3.2.7 AT+SMTPSUB Set the Email Subject

AT+SMTPSUB Set the Email Subject

<p>Test Command AT+SMTPSUB=?</p>	<p>Response +SMTPSUB: <subjectLength></p> <p>OK</p> <p>Parameters See Write Command</p>
<p>Read Command AT+SMTPSUB?</p>	<p>Response +SMTPSUB: <subject></p>

	OK
	Parameter See Write Command
Write Command AT+SMTPSUB=<subject>	Response OK If error is related to ME functionality: ERROR
	Parameters <subject> The Email subject, string type. It will be present in the header of the Email sent by SMTP client in the field: "Subject:" <subjectLength> The max length of <subject>.
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note If the Email charset is not ASCII, <subject> must be in hexadecimal format.

3.2.8 AT+SMTPBODY Set the Email Body

AT+SMTPBODY Set the Email Body

Test Command AT+SMTPBODY=?	Response +SMTPBODY: <bodyLength> OK
	Parameters See Write Command
Write Command AT+SMTPBODY=<length> ,then type data as Email body. When body's length equal length, command is over!	Response DOWNLOAD OK If error is related to ME functionality: ERROR
	Parameters <length> The length of Email body.
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note ● If the Email charset is not ASCII, the body of Email must be in hexadecimal format.

- After URC string "DOWNLOAD", User can input email's body.

3.2.9 AT+SMTPFILE Set the Email Attachment

AT+SMTPFILE Set the Email Attachment	
Test Command AT+SMTPFILE=?	Response +SMTPFILE: (range of <fileType>s),<fileNameLength>,(range of <encodeType>s) OK
	Parameters See Write Command
Read Command AT+SMTPFILE?	Response +SMTPFILE: <fileType>,<fileName>,<encodeType> OK
	Parameter See Write Command
Write Command AT+SMTPFILE=<fileType>[,<fileName>,<encodeType>]	Response OK If error is related to ME functionality: ERROR
	Parameters <fileType> The type of the Email attachment. 0 No attachment 1 Attach a txt file 2 Attach a binary file (bmp, mp3, video...) <fileName> The name of the Email attachment. <fileNameLength> The max length of <fileName>. <encodeType> Content-Transfer-Encoding used for attachment 0 "7bit" means data all represented as short lines of US-ASCII data 1 "base64" designed to represent arbitrary sequences of octets in a form that need not be humanly readable
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note <ul style="list-style-type: none"> ● If a txt file (<fileType>=1) is attached, <encodeType> must be 0. ● If a binary file (<fileType>=2) is attached, <encodeType> must be 1.

3.2.10 AT+SMTPSEND Send the Email

AT+SMTPSEND Send the Email	
Test Command AT+SMTPSEND=?	Response OK
	Parameters
Execution Command AT+SMTPSEND	Response OK If error is related to ME functionality: ERROR If send successfully or not, return: +SMTPSEND: <code>
	Parameters <code> The result of sending Email. <ul style="list-style-type: none"> 1 The Email has been sent successfully. 61 Network error. 62 DNS resolve error 63 SMTP TCP connection error. 64 Timeout of SMTP server response 65 SMTP server response error 66 Not authentication 67 Authentication failed. SMTP user name or password may be not right. 68 Bad recipient.
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.11 AT+SMTPFT Transfer the Email Attachment

AT+SMTPFT Transfer the Email Attachment	
Test Command AT+SMTPFT=?	Response OK
	Parameters See Write Command

<p>Write Command AT+SMTPFT=<reqLength></p>	<p>Response When the URC below is reported, the attachment can be transferred: +SMTPFT: 1,<maxLength></p> <p>If <reqLength> is not 0 and send data successfully: +SMTPFT: 2,<cnfLength> //Input data OK</p> <p>If <reqLength> is not 0 and send data unsuccessfully: +SMTPFT: 2,<cnfLength> //Input data ERROR</p> <p>If <reqLength> is 0,it indicates that transferring the attachment have finished: OK</p> <p>If error is related to ME functionality: ERROR</p> <p>If some error occur: +SMTPSEND: <code></p> <p>Parameters <reqLength> Requested number of data bytes(0-<maxLength>) to be transmitted <cnfLength> Confirmed number of data bytes to be transmitted <maxLength> The max length of data can be sent at a time. It depends on the network status. <code> See AT+SMTPSEND</p>
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	<p>Note</p> <ul style="list-style-type: none"> ● <reqLength> does not be greater than <maxLength>. ● When "+SMTPFT: 1,<maxLength>" is reported, then use "AT+SMTPFT=<reqLength>" to send data.

3.2.12 AT+SMTPCS Set the Email Charset

AT+SMTPCS Set the Email Charset

Test Command AT+SMTPCS=?	Response +SMTPCS: <charsetLength> OK
	Parameters See Write Command
Read Command AT+SMTPCS?	Response +SMTPCS: <charset> OK
	Parameter See Write Command
Write Command AT+SMTPCS=<charset>	Response OK If error is related to ME functionality: ERROR
	Parameters <charset> The Email charset, string type. It shows which charset the subject and the body are encoded in. If <charset> is not ASCII but UTF-8 or other, the subject and the body must be in hexadecimal format (e.g. "TEST" should be converted to "54455354"). The default charset is ASCII. <charsetLength> The max length of <charset>.
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.13 AT+POP3SRV Set POP3 Server and Account

AT+POP3SRV Set POP3 Server and Account

Test Command AT+POP3SRV=?	Response +POP3SRV: <pop3ServerLength>,<userNameLength>,<password-Length>,(range of supported <pop3Port>s) OK
	Parameters See Write Command

Read Command AT+POP3SRV?	Response +POP3SRV: <pop3Server>,<userName>,<password>,<pop3Port> OK Parameters See Write Command
Write Command AT+POP3SRV=<pop3Server>,<userName>,<password>[,<pop3Port>]	Response OK If error is related to ME functionality: ERROR Parameters <pop3Server> POP3 server address, string type. This parameter can be either: - IP address in the format: xxx.xxx.xxx.xxx - Host name to be solved with a DNS query <userName> The user name to log in POP3 server, string type. <password> The password to log in POP3 server, string type. <pop3Port> The port of POP3 server. 1-65535 Default: 110 <pop3ServerLength> The max length of <pop3Server>. <userNameLength> The max length of <userName>. <passwordLength> The max length of <password>.
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.14 AT+POP3IN Log in POP3 Server

AT+POP3IN Log in POP3 Server

Test Command AT+POP3IN=?	Response OK Parameters
Execution Command AT+POP3IN	Response OK If error is related to ME functionality: ERROR If logging in POP3 server or not, return: +POP3IN: <code> Parameters

	<p><code> The result of logging in POP3 server</p> <ul style="list-style-type: none"> 1 Log in POP3 server successfully 61 Network error 62 DNS resolve error 63 POP3 TCP connection error 64 Timeout of POP3 server response 65 POP3 server response error 66 POP3 server rejects to log in 67 Incorrect user name 68 Incorrect user name or password 69 Timeout of read data
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.15 AT+POP3NUM Get Email Number and Total Size

AT+POP3NUM Get Email Number and Total Size	
Test Command AT+POP3NUM=?	<p>Response OK</p> <p>Parameter</p>
Execution Command AT+POP3NUM	<p>Response OK</p> <p>If error is related to ME functionality: ERROR</p> <p>If POP3 server issues a positive response: +POP3NUM: 1,<totalNumber>,<totalSize></p> <p>If POP3 server issues a negative response: +POP3NUM: 0</p> <p>If some error occur: +POP3OUT: <code></p> <p>Parameters</p> <p><totalNumber> The Email number on the POP3 server, decimal format. <totalSize> The total size of all Email and the unit is in byte.</p> <p><code> The result of logging out POP3 server</p> <ul style="list-style-type: none"> 1 Normally log out POP3 server 61 Network error 62 DNS resolve error 63 POP3 TCP connection error 64 Timeout of POP3 server response

Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.16 AT+POP3LIST Get the Specific Email Size

AT+POP3LIST Get the Specific Email Size	
Test Command AT+POP3LIST=?	<p>Response</p> <p>+POP3LIST: (range of supported <msgNumber>s)</p> <p>OK</p> <p>Parameter See Write Command</p>
Write Command AT+POP3LIST=<msgNumber>	<p>Response</p> <p>OK</p> <p>If error is related to ME functionality: ERROR</p> <p>If POP3 server issues a positive response: +POP3LIST: 1,<msgNumber>,<size></p> <p>If POP3 server issues a negative response: +POP3LIST: 0</p> <p>If some error occur: +POP3OUT: <code></p> <p>Parameters</p> <p><msgNumber> The message number of Email.</p> <p><size> The size of Email <msgNumber> and the unit is in byte.</p> <p><code> The result of logging out POP3 server</p> <ul style="list-style-type: none"> 1 Normally log out POP3 server 61 Network error 62 DNS resolve error 63 POP3 TCP connection error 64 Timeout of POP3 server response
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.17 AT+POP3UIDL Get the Specific Email Unique-id

AT+POP3UIDL Get the Specific Email Unique-id	
--	--

Test Command AT+POP3UIDL=?	Response +POP3UIDL: (range of supported <msgNumber>s) OK
	Parameters See Write Command
Write Command AT+POP3UIDL=<msgNumber>	Response OK If error is related to ME functionality: ERROR If POP3 server issues a positive response: +POP3UIDL: 1,<msgNumber>,<uid> If POP3 server issues a negative response: +POP3UIDL: 0 If some error occur: +POP3OUT: <code>
	Parameters <msgNumber> The message number of Email . <UID> The Email unique-id, the unique-id is an arbitrary server-determined string, consisting of 1 to 70 characters in the range 0x21 to 0x7E, which uniquely identifies a message within a maildrop and which persists across sessions. <code> The result of logging out POP3 server 1 Normally log out POP3 server 61 Network error 62 DNS resolve error 63 POP3 TCP connection error 64 Timeout of POP3 server response
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.18 AT+POP3CMD Get Multi-line Response

AT+POP3CMD Get Multi-line Response

Test Command AT+POP3CMD=?	Response +POP3CMD: (range of supported <cmdType>s),(range of supported<msgNumber>s),(range of supported <lineNumber>s) OK
	Parameters See Write Command

Response

OK

If error is related to ME functionality:

ERROR

If POP3 server issues a positive response:

+POP3CMD: 1

If POP3 server issues a negative response:

+POP3CMD: 0

If some error occur:

+POP3OUT: <code>

Parameters

<cmdType> The values that supported POP3 user command

1 List command

The "List" command returns a multi-line "scan listing". For each message on the maildrop list of the server the POP3 service returns a line containing the message number and its size in bytes. A final "dotline" will be printed at the end of the "scan listing". If there are no messages on the maildrop list of the server, the POP3 service returns a positive response, i.e. It does not issue an error response, but the "scan listing" will be empty. In either case, each scan listing will be finished by so-called "dotline", i.e. a new line with just a single dot. <msgNumber> and <lineNumber> must not be given.

2 Uidl command

The "Uidl" command returns a multi-line "unique-id Listing". For each message on the maildrop list of the Server the POP3 service returns a line containing the message number and its unique-id. A final "dotline" will be printed at the end of the "unique-id listing" If there are no messages on the maildrop list of the server. The POP3 service returns a positive response, i.e. It does not issue an error response, but the "unique-id listing" will be empty. In either case, each unique-id listing will be finished by so-called "dotline", i.e. a new line with just a singledot. <msgNumber> and <lineNumber> must not be given.

3 Top command

The command retrieves the number of lines of the message's body from the POP3 server's maildrop list. The POP3 server sends the headers of the message, the blank line separating the headers from the body, and then the number of lines of the message's body. If the number of lines requested by The POP3 client is greater than the number of lines in the body, then the POP3 server sends the entire message. If no such message exists on the server the POP3 service issues an error response to the user.

Write Command

AT+POP3CMD=<cmdType>[,<msgNumber>[,<lineNumber>]]

Each email will be finished by a so-called "dotline", i.e. a new line with just a single dot. <msgNumber> and <lineNumber> must be given.

4 Retrieve command

The command retrieves the related message from the POP3 server's maildrop list. If no such message exists on the server the POP3 service issues an error response to the user. Each email will be finished by a so-called "dotline", i.e. a new line with just a single dot. <msgNumber> must be given.

<msgNumber> The message number of Email.

<lineNumber> The number of lines of the message body.

<code> The result of logging out POP3 server

1 Normally log out POP3 server

61 Network error

62 DNS resolve error

63 POP3 TCP connection error

64 Timeout of POP3 server response

Parameter Saving Mode NO_SAVE

Max Response Time -

Reference

Note

After sending these POP3 commands and POP3 server issuing a positive response, you can get the response by "AT+POP3READ".

3.2.19 AT+POP3READ Read Multi-line Response

AT+POP3READ Read Multi-line Response

Test Command AT+POP3READ=?	Response +POP3READ: (range of supported <reqLength>s) OK
Write Command AT+POP3READ=<reqLength>	Parameters See Write Command
	Response If the data of response not to be read completely: +POP3READ: 1,<cnfLength> If the data of response to be read completely: +POP3READ: 2,<cnfLength> If some data need to be read,the URC below is reported: +POP3READ: 3,<dataLength> If error is related to ME functionality: ERROR If some error occur:

	<p>+POP3OUT: <code></p> <p>Parameters</p> <p><reqLength> Requested number of data bytes (1-1460) to be read</p> <p><cnfLength> Confirmed number of data bytes to be read, which may be less than <reqLength>. 0 indicates that no data can be read.</p> <p><dataLength> Received number of data bytes.</p> <p><code> The result of logging out POP3 server</p> <ul style="list-style-type: none"> 1 Normally log out POP3 server 61 Network error 62 DNS resolve error 63 POP3 tcp connection error 64 Timeout of POP3 server response 69 Read data timeout
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	<p>Note</p> <ul style="list-style-type: none"> ● Other AT commands (but "AT+POP3OUT") do not be executed until the data of response are read completely. ● If <cnfLength> is less than <reqLength>, you should wait for a URC "+POP3READ: 3,<dataLength>" reported. Then you may continue to read data by "AT+POP3READ". ● If the module has some unread data, the URC "+POP3READ: 3,<dataLength>" is reported every once in a while. After some time, these data are not still been read, the module will quit the POP3 process.

3.2.20 AT+POP3DEL Mark the Specific Email to Delete

AT+POP3DEL Mark the Specific Email to Delete	
<p>Test Command</p> <p>AT+POP3DEL=?</p>	<p>Response</p> <p>+POP3DEL: (range of supported <msgNumber>s)</p> <p>OK</p>
	<p>Parameters</p> <p>See Write Command</p>
<p>Write Command</p> <p>AT+POP3DEL=<msgNumber></p>	<p>Response</p> <p>OK</p> <p>If error is related to ME functionality:</p> <p>ERROR</p>

	<p>If POP3 server issues a positive response: +POP3DEL: 1</p> <p>If POP3 server issues a negative response: +POP3DEL: 0</p> <p>If some error occur: +POP3OUT: <code></p> <p>Parameters</p> <p><msgNumber> The message number of Email</p> <p><code> The result of logging out POP3 server</p> <ul style="list-style-type: none"> 1 Normally log out POP3 server 61 Network error 62 DNS resolve error 63 POP3 TCP connection error 64 Timeout of POP3 server response
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	<p>Note</p> <p>The POP3 server marks the Email as deleted. Any future reference to the message-number associated with the Email in a POP3 command generates an error. The POP3 server does not actually delete the Email until the POP3 client logs out POP3 server and closes the session normally.</p>

3.2.21 AT+POP3RSET Unmark the Emails that Be Marked as Deleted

AT+POP3RSET Unmark the Emails that Be Marked as Deleted

<p>Test Command</p> <p>AT+POP3RSET=?</p>	<p>Response</p> <p>OK</p> <p>Parameter</p>
<p>Execution Command</p> <p>AT+POP3RSET</p>	<p>Response</p> <p>OK</p> <p>If error is related to ME functionality: ERROR</p> <p>If POP3 server issues a positive response: +POP3RSET: 1</p> <p>If POP3 server issues a negative response: +POP3REST: 0</p> <p>If some error occur: +POP3OUT: <code></p> <p>Parameters</p> <p><code> The result of logging out POP3 server</p> <ul style="list-style-type: none"> 1 Normally log out POP3 server

	61 Network error
	62 DNS resolve error
	63 POP3 TCP connection error
	64 Timeout of POP3 server response
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

3.2.22 AT+POP3OUT Log Out POP3 Server

AT+POP3OUT Log Out POP3 Server	
Test Command AT+POP3OUT=?	Response OK
	Parameters
Execution Command AT+POP3OUT	Response OK If error is related to ME functionality: ERROR If the process is completed, return: +POP3OUT: <code>
	Parameters <code> The result of logging out POP3 server 1 Normally log out POP3 server 61 Network error 62 DNS resolve error 63 POP3 TCP connection error 64 Timeout of POP3 server response 69 Timeout of read data
Parameter Saving Mode	NO_SAVE
Max Response Time	-
Reference	Note

4 Bearer Configuration

Usually module will register PS service automatically.

4.1 PDN Auto-activation

//Example of PDN Auto-activation.

```

AT+CPIN? //Check SIM card status
+CPIN: READY

OK
AT+CGDCONT=1,"IP","APN" //Configure APN for registration when needed
OK
AT+CSQ //Check RF signal
+CSQ: 27,99

OK
AT+CGATT? //Check PS service.
+CGATT: 1 //1 indicates PS has attached.

OK
AT+COPS? //Query Network information, operator and network
+COPS: 0,0,"460 01",9 mode 9, NB-IOT network

OK
AT+SAPBR=3,1,"APN","CMNET" //Configure APN of bearer profile 1
OK
AT+SAPBR=1,1 //To open a wireless bearer.
OK
AT+SAPBR=2,1 //To query IP address of wireless bearer
+SAPBR:1,1,"10.89.193.1"

OK
AT+SAPBR=0,1 //To close the wireless bearer
OK
+SAPBR 1: DEACT //Wireless bearer is released by network

```

5 Email Examples

5.1 Synchronize time

To ensure that the received email has the correct time, first the time must be synchronized.

//Example of Synchronize time

```
AT+CNTPCID? //Query GPRS bearer profile's ID
+CNTPCID: 1

OK
AT+CNTP="ntp1.aliyun.com",32 //Set server and time zone
OK
AT+CNTP //Synchronize Network Time
OK

+CNTTP: 1,"2018/12/26,10:36:49"
AT+CCLK? //Query clock time
+CCLK: "18/12/26,10:36:57+32"

OK
```

5.2 Send an Email

//Example of Send an Email

```
AT+EMAILCID=0 //Set parameters of Email
OK
AT+EMAILTO=30 //Set parameters of Email
OK
AT+SMTPSRV="mail.sim.com",25 //Set SMTP server address and port
OK
```

```

AT+SMTPAUTH=1,"ohn","123456" //Set user name and password
OK
AT+SMTPFROM="john@sim.com","john" //Set sender address and name
OK
AT+SMTPRCPT=0,0,"john@sim.com","john" //Set the recipient(To:)
OK
AT+SMTPRCPT=1,0,"john@sim.com","john" //Set the recipient(Cc:)
OK
AT+SMTPRCPT=2,0,"john@sim.com","john" //Set the recipient(Bcc:)
OK
AT+SMTPSUB="Test" //Set the subject
OK
AT+SMTPBODY=19 //Set the body
DOWNLOAD
This is a new Email

OK
AT+SMTPSEND //Send the Email
OK

+SMTPSEND: 1

```

5.3 Send an Email with an attachment

//Example of Send an Email with an attachment

```

AT+EMAILCID=0 //Set parameters of Email
OK
AT+EMAILTO=30 //Set parameters of Email
OK
AT+SMTPSRV="mail.sim.com",25 //Set SMTP server address and port
OK
AT+SMTPAUTH=1,"john","123456" //Set user name and password
OK
AT+SMTPFROM="john@sim.com","john" //Set sender address and name
OK
AT+SMTPRCPT=0,0,"john@sim.com","john" //Set the recipient (To:)

```

```

OK
AT+SMTPRCPT=1,0,"john@sim.com","john" //Set the recipient (Cc:)
OK
AT+SMTPRCPT=2,0,"john@sim.com","john" //Set the recipient (Bcc:)
OK
AT+SMTPSUB="Test" //Set the subject
OK
AT+SMTPBODY=19 //Set the body
DOWNLOAD
This is a new Email

OK
AT+SMTPTFILE=1,"test.txt",0 //Set the attachment
OK
AT+SMTPESEND //Send the Email
OK
+SMTPFT: 1,1360 //URC indicates that the attachment may be
send.1360 is the max length of data which can be
sent at a time. It depends on the network status.

AT+SMTPFT=100 //SMTP client requests to send 100 bytes.
Response will indicates that user must input 100
bytes for transferring now.

+SMTPFT: 2,100
..... //Input data

OK
+SMTPFT: 1,1360 //URC indicates that more data can be sent
AT+SMTPFT=0 //The attachment has been transferred completely.
OK
+SMTPSEND: 1 //URC indicates that the entire email has been
send successfully

```

5.4 Send a UTF-8 Email

//Example of Send UTF-8 Email

```

AT+EMAILCID=0 //Set parameters of Email
OK
AT+EMAILTO=30 //Set parameters of Email

```

```
OK
AT+SMTPCS="UTF-8" //Set the mail charset
OK
AT+SMTPSRV="mail.sim.com",25 //Set SMTP server address and port
OK
AT+SMTPAUTH=1,"john","123456" //Set user name and password
OK
AT+SMTPFROM="john@sim.com","john" //Set sender address and name
OK
AT+SMTPRCPT=0,0,"john@sim.com","john" //Set the recipient(To:)
OK
AT+SMTPRCPT=1,0,"john@sim.com","john" //Set the recipient(Cc:)
OK
AT+SMTPRCPT=2,0,"john@sim.com","john" //Set the recipient(Bcc:)
OK
AT+SMTPSUB="54455354" //Set the subject
OK
AT+SMTPBODY=40 //Set the body
DOWNLOAD
38546869732069732061206E657720456D61696C

OK
AT+SMTPSEND //Send the Email
OK

+SMTPSEND: 1
```

5.5 Retrieve the Email

//Example of Retrieve an Email

```
AT+EMAILCID=0 //Set parameters of Email
OK
AT+EMAILTO=30 //Set parameters of Email
OK
AT+POP3SRV="mail.sim.com","john","123456",110 //Set POP3 server and account
OK
AT+POP3IN //Log in POP3 server
OK
```

```
+POP3IN: 1
AT+POP3NUM //Get Email number and total size
OK

+POP3NUM: 1,2,11124
AT+POP3LIST=1 //Get the specific Email's size
OK

+POP3LIST: 1,1,5556
AT+POP3CMD=4,1 //Retrieve the specific Email
OK

+POP3CMD: 1
AT+POP3READ=1460 //Get the Email content
+POP3READ: 1,1460
...

OK
AT+POP3READ=1460
+POP3READ: 1,1460
...

OK
AT+POP3READ=1460 //The Email's content is read completely
+POP3READ: 2,1183
...

OK
AT+POP3OUT //Log out POP3 SERVER
OK

+POP3OUT: 1
```

5.6 Delete the Email

```
//Example of Delete an Email

AT+EMAILCID=0 //Set parameters of Email
OK
AT+EMAILTO=30 //Set parameters of Email
```

```
OK
AT+POP3SRV="mail.sim.com","john","123456",110 //Set POP3 server and account
OK
AT+POP3IN //Log in POP3 server
OK
+POP3IN: 1
AT+POP3NUM //Get Email number and total size
OK
+POP3NUM: 1,2,11124
AT+POP3DEL=1 //Mark the Email to delete
OK
+POP3DEL: 1
AT+POP3OUT //Log out POP3 SERVER
OK
+POP3OUT: 1
```

5.7 Get the Email's size and unique-id

//Example of Get Email's size and unique-id

```
AT+EMAILCID=0 //Set parameters of Email
OK
AT+EMAILTO=30 //Set parameters of Email
OK
AT+POP3SRV="mail.sim.com","john","123456",110 //Set POP3 server and account
OK
AT+POP3IN //Log in POP3 server
OK
+POP3IN: 1
AT+POP3NUM //Get Email number and total size
OK
+POP3NUM: 1,2,35797
AT+POP3LIST=1 //Get the specific Email's size
OK
```

+POP3LIST: 1,1,16601

AT+POP3UIDL=1

//Get the specific Email's unique-id

OK

+POP3UIDL: 1,1,

AAAFOPdCAAav60+tkSFqRqk3/6ogog+g

AT+POP3OUT

//Log out POP3 SERVER

OK

+POP3OUT: 1

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