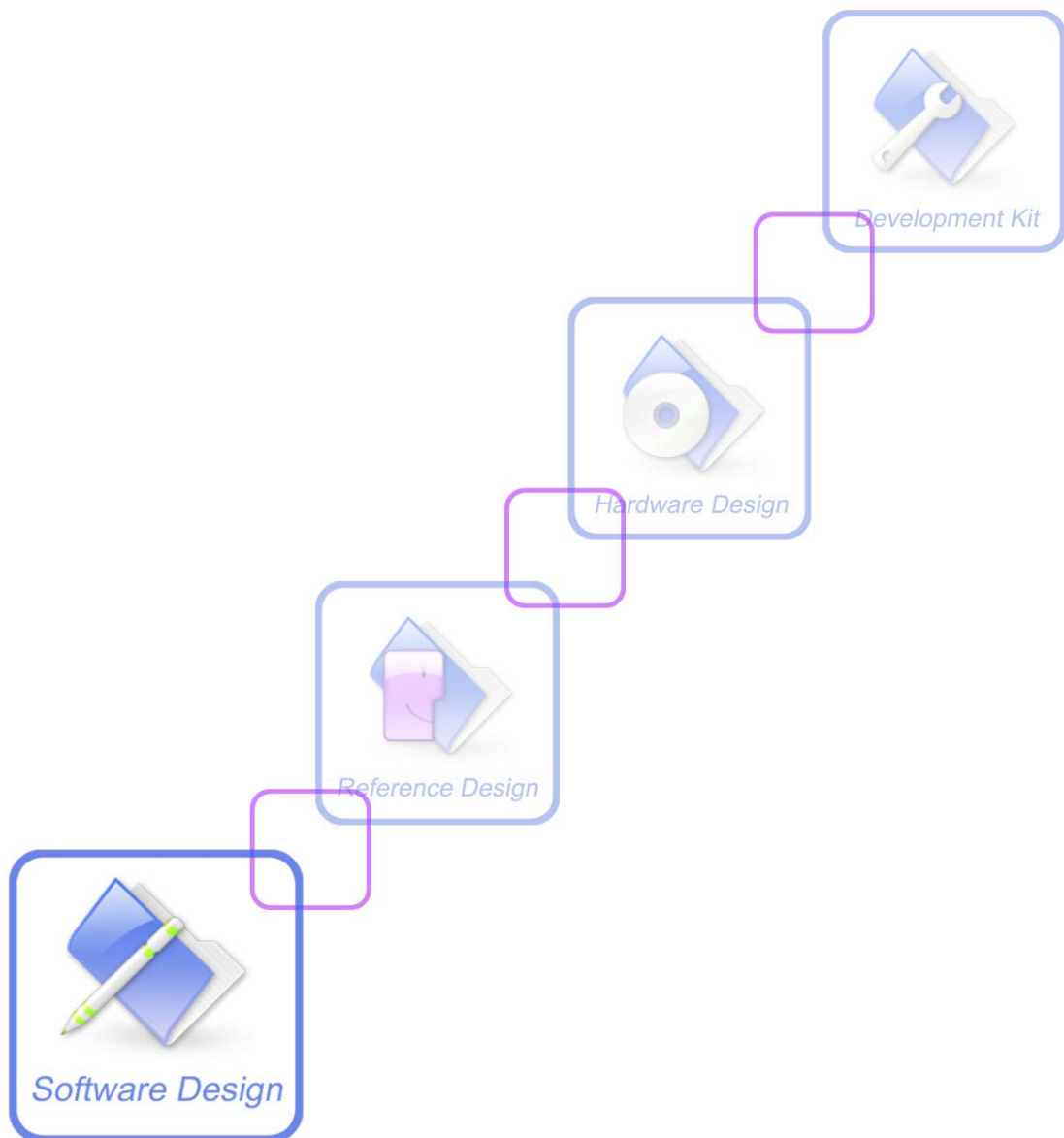




AT Command Set

For Internet Service



Document Title:	AT Command Set for Internet Service
Version:	0.01
Date:	2014-02-21
Status:	Developing
Document ID:	SIM5360_Internet_Service_Application_Note_V0.01.doc

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Version History

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V0.01	New Version	

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1 Introduction

1.1 Scope

The present document describes the AT Command Set about Internet Service on the SIMCom Module.

More information about the SIMCom Module which includes the Software Version information can be retrieved by the command [ATI](#). In this document, a short description, the syntax, the possible setting values and responses, and some examples of AT commands are presented.

Prior to using the Module, please read this document and the Version History to know the difference from the previous document.

In order to implement communication successfully between Customer Application and the Module, it is recommended to use the AT commands in this document, but not to use some commands which are not included in this document.

1.2 References

The present document is based on the following standards:

- [1] ETSI GSM 01.04: Abbreviations and acronyms.
- [2] 3GPP TS 27.007: AT command set for User Equipment (UE).

1.3 Terms and Abbreviations

For the purposes of the present document, the following abbreviations apply:

- AT ATtention; the two-character abbreviation is used to start a command line to be sent from TE/DTE to TA/DCE
- EDGE Enhanced Data GSM Environment
- EGPRS Enhanced General Packet Radio Service
- FTP File Transfer Protocol
- GPRS General Packet Radio Service
- GSM Global System for Mobile communications
- HTTP Hyper Text Transfer Protocol
- HSDPA High Speed Downlink Packet Access
- HSUPA High Speed Uplink Packet Access
- PIN Personal Identification Number
- POP3 Post Office Protocol Version 3
- POP3 client An client that can receive e-mail from POP3 server over TCP session
- RTC Real Time Clock
- SIM Subscriber Identity Module
- SMTP Simple Mail Transfer Protocol

- SMTP client An client that can transfer text-based e-mail to SMTP server over TCP session
- TA Terminal Adaptor; e.g. a data card (equal to DCE)
- TE Terminal Equipment; e.g. a computer (equal to DTE)
- UMTS Universal Mobile Telecommunications System
- URC Unsolicited Result Code
- USIM Universal Subscriber Identity Module
- WCDMA Wideband Code Division Multiple Access

1.4 Definitions and conventions

1. For the purposes of the present document, the following syntactical definitions apply:

- <CR>** Carriage return character.
- <LF>** Linefeed character.
- <...>** Name enclosed in angle brackets is a syntactical element. Brackets themselves do not appear in the command line.
- [...]** Optional subparameter of AT command or an optional part of TA information response is enclosed in square brackets. Brackets themselves do not appear in the command line. If subparameter is not given, its value equals to its previous value or the recommended default value.
- underline** Underlined defined subparameter value is the recommended default setting or factory setting.

2. Document conventions:

- ◆ Display the examples of AT commands with *Italic* format.
- ◆ Not display *blank-line* between command line and responses or inside the responses.
- ◆ Generally, the characters <CR> and <LF> are intentionally omitted throughout this document.
- ◆ If command response is ERROR, not list the ERROR response inside command syntax.

NOTE AT commands and responses in figures may be not following above conventions.

3. Special marks for commands or parameters:

- SIM PIN** – Is the command PIN protected?
 - YES – AT command can be used only when SIM PIN is READY.
 - NO – AT command can be used when SIM card is absent or SIM PIN validation is pending.
- References** – Where is the derivation of command?
 - 3GPP TS 27.007 – 3GPP Technical Specification 127 007.
 - V.25ter – ITU-T Recommendation V.25ter.
 - Vendor – The command is supported by SIMCom.

2 AT Interface Synopsis

2.1 Interface settings

Between Customer Application and the Module, standardized RS-232 interface is used for the communication, and default values for the interface settings as following:

115200bps, 8 bit data, no parity, 1 bit stop, no data stream control.

2.2 AT command syntax

The prefix “AT” or “at” (no case sensitive) must be included at the beginning of each command line (except **A/** and **+++**), and the character <CR> is used to finish a command line so as to issue the command line to the Module. It is recommended that a command line only includes a command.

When Customer Application issues a series of AT commands on separate command lines, leave a pause between the preceding and the following command until information responses or result codes are retrieved by Customer Application, for example, “OK” is appeared. This advice avoids too many AT commands are issued at a time without waiting for a response for each command.

In the present document, AT commands are divided into three categories: Basic Command, S Parameter Command, and Extended Command.

1. Basic Command

The format of Basic Command is “**AT**<x><n>” or “**AT**&<x><n>”, “<x>” is the command name, and “<n>” is/are the parameter(s) for the basic command, and optional. An example of Basic Command is “**ATE**<n>”, which informs the TA/DCE whether received characters should be echoed back to the TE/DTE according to the value of “<n>”; “<n>” is optional and a default value will be used if omitted.

2. S Parameter Command

The format of S Parameter Command is “**ATS**<n>=<m>”, “<n>” is the index of the S-register to set, and “<m>” is the value to assign to it. “<m>” is optional; in this case, the format is “**ATS**<n>”, and then a default value is assigned.

3. Extended Command

The Extended Command has several formats, as following table list:

Table 2-1: Types of Extended Command

Command Type	Syntax	Comments
Test Command	AT+<NAME>=?	Test the existence of the command; give some information about the command subparameters.

Read Command	AT+<NAME>?	Check the current values of subparameters.
Write Command	AT+<NAME>=<...>	Set user-definable subparameter values.
Execution Command	AT+<NAME>	Read non-variable subparameters determined by internal processes.

NOTE The character “+” between the prefix “AT” and command name may be replaced by other character. For example, using “#” or “\$” instead of “+”.

2.3 Information responses

If the commands included in the command line are supported by the Module and the subparameters are correct if presented, some information responses will be retrieved by from the Module. Otherwise, the Module will report “ERROR” or “+CME ERROR” or “+CMS ERROR” to Customer Application.

Information responses start and end with <CR><LF>, i.e. the format of information responses is “<CR><LF><response><CR><LF>”. Inside information responses, there may be one or more <CR><LF>. Throughout this document, only the responses are presented, and <CR><LF> are intentionally omitted.

3 Simple Mail Transfer Protocol Service

Simple Mail Transfer Protocol (SMTP) is an internet standard for electronic mail (e-mail) transmission across Internet Protocol (IP) networks, and it is a text-based protocol.

To sending an e-mail successfully, TE must set some mandatory parameters for the SMTP client correctly, such as SMTP server address, sender and recipient address. After the process of sending an e-mail is started, SMTP Client will initiates a Transmission Control Protocol (TCP) session with the SMTP server to send e-mail header and body. In addition, attachments selected from file system can be sent along with an e-mail message, total size up to 10MB or maximal number up to 10.

Unsolicited Result Code (URC) “+SMTP: SUCCESS” is present from SMTP client to indicate that sending an e-mail is successful, and the TCP session for SMTP service is closed. If sending an e-mail is unsuccessful, other URCs will be returned to TE.

Sender/recipient address and e-mail subject are used to construct the e-mail’s header. In addition, data and time are also present in the e-mail’s header, which are gotten from the module. So it is recommended to set Real Time Clock (RTC) and time-zone for the module.

3.1 AT+SMTPSRV SMTP server address and port number

Description

The synchronous command is used to set SMTP server address and server’s port number. SMTP client will initiate TCP session with the specified server to send an e-mail. If the process of sending an e-mail is ongoing, the command will return “ERROR” directly.

Read command returns current SMTP server address and port number.

Execution command will clear SMTP server address and set the port number as default value.

NOTE After an e-mail is sent successfully or unsuccessfully, SMTP server address and port number won’t be cleared.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPSRV=?	+SMTPSRV: (list of supported <port>s) OK
Read Command	Responses
AT+SMTPSRV?	+SMTPSRV: <server>, <port> OK
Write Command	Responses
AT+SMTPSRV=<server> [, <port>]	OK
Execution Command	Responses

AT+SMTPSRV	OK
------------	----

Defined values

<server>
SMTP server address, non empty string with double quotes, mandatory and ASCII text string up to 128 characters.
<port>
Port number of SMTP server in decimal format, from 1 to 65535, and default port is 25 for SMTP.

Examples

AT+SMTPSRV="smtp.server.com",25
OK
AT+SMTPSRV?
+SMTPSRV: "smtp.server.com", 25
OK
AT+SMTPSRV
OK
AT+SMTPSRV?
+SMTPSRV: "", 25
OK

3.2 AT+SMTPAUTH SMTP server authentication

Description

The synchronous command is used to control SMTP authentication during connection with SMTP server. If SMTP server requires authentication while logging in the server, TE must set the authentication control flag and provide user name and password correctly before sending an e-mail. If the process of sending an e-mail is ongoing, the command will return "ERROR" directly.

Read command returns current SMTP server authentication control flag, if the flag is 0, both <user> and <pwd> are empty strings.

Execution Command cancels SMTP server authentication and clear user name and password.

NOTE After an e-mail is sent successfully or unsuccessfully, server authentication won't be cleared.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPAUTH=?	+SMTPAUTH: (list of supported <flag>s)

	OK
Read Command	Responses
AT+SMTPAUTH?	+SMTPAUTH: <flag>, <user>, <pwd> OK
Write Command	Responses
AT+SMTPAUTH= <flag>[, <user>, <pwd>]	OK
Execution Command	Responses
AT+SMTPAUTH	OK

Defined values

<flag>

SMTP server authentication control flag, integer type.

- 0 – SMTP server doesn't require authentication, factory value.
- 1 – SMTP server requires authentication.

<user>

User name to be used for SMTP authentication, non empty string with double quotes and up to 128 characters.

<pwd>

Password to be used for SMTP authentication, string with double quotes and up to 128 characters.

NOTE If <flag> is 0, <user> and <pwd> must be omitted (i.e. only <flag> is present).

Examples

AT+SMTPAUTH?

+SMTPAUTH: 0, "", ""

OK

AT+SMTPAUTH=1,"username","password"

OK

AT+SMTPAUTH?

+SMTPAUTH: 0, "username", "password"

OK

AT+SMTPAUTH

OK

AT+SMTPAUTH?

+SMTPAUTH: 0, "", ""

OK

3.3 AT+SMTPFROM Sender address and name

Description

The synchronous command is used to set sender's address and name, which are used to construct e-mail header. The sender's address must be correct, and if the process of sending an e-mail is ongoing, the command will return "ERROR" directly.

Read command returns current sender's address and name.

Execution command will clear sender's address and name.

NOTE After an e-mail is sent successfully or unsuccessfully, sender address and name won't be cleared.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPFROM=?	OK
Read Command	Responses
AT+SMTPFROM?	+SMTPFROM: <saddr>, <sname> OK
Write Command	Responses
AT+SMTPFROM= <saddr>[, <sname>]	OK
Execution Command	Responses
AT+SMTPFROM	OK

Defined values

<saddr>

E-mail sender address (MAIL FROM), non empty string with double quotes, mandatory and ASCII text up to 128 characters. <saddr> will be present in the header of the e-mail sent by SMTP client in the field: "From: ".

<sname>

E-mail sender name, string with double quotes, and alphanumeric ASCII text up to 64 characters. <sname> will be present in the header of the e-mail sent by SMTP client in the field: "From: ".

Examples

```
AT+SMTPFROM="senderaddress@server.com","sendername"
```

```
OK
```

```
AT+SMTPFROM?
```

```
+SMTPFROM: "senderaddress@server.com", "sendername"
```

```
OK
```

```
AT+SMTPFROM
```

```
OK
```

```
AT+SMTPFROM?
```

```
+SMTPFROM: "", ""
OK
```

3.4 AT+SMTPRCPT Recipient address and name (TO/CC/BCC)

Description

The synchronous command is used to set recipient address/name and kind (TO/CC/BCC). If only the parameter of “kind” is present, the command will clear all recipients of this kind, and if only parameters of “kind” and “index” are present, the command will clear the specified recipient. If the process of sending an e-mail is ongoing, the command will return “ERROR” directly.

Read command returns current recipient address/name and kind list.

Execution command will clear all recipient information.

NOTE After an e-mail is sent successfully, all recipients will be cleared, if unsuccessfully, they won't be cleared.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPRCPT=?	+SMTPRCPT: (list of supported <kind>s), (list of supported <index>s) OK
Read Command	Responses
AT+SMTPRCPT?	[+SMTPRCPT: <kind>, <index>, <raddr>, <rname> [<CR><LF>...]] OK
Write Command	Responses
AT+SMTPRCPT= <kind>[, <index> [,<raddr>[,<rname>]]]	OK
Execution Command	Responses
AT+SMTPRCPT	OK

Defined values

<kind>

Recipient kind, the kinds 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 kind of recipient, decimal format, and from 0 to 4.
<raddr>	
	Recipient address, non empty string with double quotes, and up to 128 characters.
<rname>	
	Recipient name, string type with double quotes, and up to 64 characters.

Examples

```

AT+SMTPRCPT=0, 0, "rcptaddress_to@server.com", "rcptname_to"
OK
AT+SMTPRCPT?
+SMTPRCPT: 0, 0, "rcptaddress_to@server.com", "rcptname_to"
OK
AT+SMTPRCPT=1, 0, "rcptaddress_cc@server.com", "rcptname_cc"
OK
AT+SMTPRCPT?
+SMTPRCPT: 0, 0, "rcptaddress_to@server.com", "rcptname_to"
+SMTPRCPT: 1, 0, "rcptaddress_cc@server.com", "rcptname_cc"
OK

```

3.5 AT+SMTPSUB E-mail subject

Description

The synchronous command is used to set the subject of e-mail, which is used to construct e-mail header. If the process of sending an e-mail is ongoing, the command will return "ERROR" directly. Read command returns current e-mail subject.

Execution command will clear the subject.

NOTE After an e-mail is sent successfully, the subject will be cleared, if unsuccessfully, it won't be cleared.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPSUB=?	OK
Read Command	Responses
AT+SMTPSUB?	+SMTPSUB: <subject> OK
Write Command	Responses

AT+SMTPSUB=<subject>	OK
Execution Command	Responses
AT+SMTPSUB	OK

Defined values

<subject>

E-mail subject, string with double quotes, and ASCII text up to 512 characters. <subject> will be present in the header of the E-mail sent by SMTP client in the field: "Subject: ".

Examples

```
AT+SMTPSUB?
+SMTPSUB: ""
OK
AT+SMTPSUB="THIS IS A TEST MAIL"
OK
AT+SMTPSUB?
+SMTPSUB: "THIS IS A TEST MAIL"
OK
```

3.6 AT+SMTPBODY E-mail body

Description

The command is used to set e-mail body, which will be sent to SMTP server with text format.

Read command returns current e-mail body. If the process of sending an e-mail is ongoing, the command will return "ERROR" directly.

Execute command will switch the serial port from command mode to data mode, so TE can enter more ASCII text as e-mail body (up to 5120), and CTRL-Z (ESC) is used to finish (cancel) the input operation and switch the serial port back to command mode.

NOTE After an e-mail is sent successfully, the body will be cleared, if unsuccessfully, it won't be cleared.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPBODY=?	OK
Read Command	Responses
AT+SMTPBODY?	+SMTPBODY: <body> OK

Write Command	Responses
AT+SMTPBODY=<body>	OK
Execution Command	Responses
AT+SMTPBODY	>>

Defined values

<body>

E-mail body, string with double quotes, and printable ASCII text up to 512 or 5120 characters.

NOTE In data mode, “BACKSPACE” can be used to cancel an ASCII character.

Examples

AT+SMTPBODY="THIS IS A TEST MAIL FROM SIMCOM MODULE"

OK

AT+SMTPBODY?

+SMTPBODY: "THIS IS A TEST MAIL FROM SIMCOM MODULE"

OK

AT+SMTPBODY

>> This is a test mail.<CTRL-Z>

OK

AT+SMTPBODY?

+SMTPBODY: "This is a test mail."

OK

AT+SMTPBODY

>> This is a test mail.<ESC>

OK

AT+SMTPBODY?

+SMTPBODY: ""

OK

3.7 AT+SMTPBCH E-mail body character set

Description

This synchronous command is used to set the body character set of e-mail. If the process of sending an e-mail is ongoing, the command will return “ERROR” directly.

Read command returns current e-mail body character set.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPBCH=?	+SMTPBCH: "CHARSET" OK
Read Command	Responses
AT+SMTPBCH?	+SMTPBCH: <charset> OK
Write Command	Responses
AT+SMTPBCH=<charset>	OK ERROR
Execution Command	Responses
AT+SMTPBCH	OK ERROR

Defined values

<charset>

E-mail body character, string with double quotes. By default, it is "utf-8". The maximum length is 30 bytes.

Examples

```
AT+SMTPBCH=?
+SMTPBCH: "CHARSET"
OK
AT+SMTPBCH="gb2312"
OK
AT+SMTPBCH?
+SMTPBCH: "gb2312"
OK
```

3.8 AT+SMTPFILE Select attachment

Description

The synchronous command is used to select file as e-mail attachment. If the process of sending an e-mail is ongoing, the command will return "ERROR" directly.

Read command returns current all selected attachments with full path.

Execute command will clear all attachments.

NOTE After an e-mail is sent successfully, attachment will be cleared, if unsuccessfully, it won't be cleared. The same file can't be selected twice.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPFILE=?	+SMTPFILE: (list of supported <index>s) OK
Read Command	Responses
AT+SMTPFILE?	[+SMTPFILE: <index> , <filename> , <filesize>] [<CR><LF>...] OK
Write Command	Responses
AT+SMTPFILE= <index> [, <filename>]	OK [+SMTP: OVERSIZE] ERROR
Execution Command	Responses
AT+SMTPFILE	OK

Defined values

[<index>](#)

Index for attachments, from 1 to 10. According to the sequence of [<index>](#), SMTP client will encode and send all attachments.

[<filename>](#)

String type with double quotes, the name of a file which is under current directory (refer to file system commands). SMTP client doesn't allow two attachments with the same file name.

[<filesize>](#)

File size in decimal format. The total size of all attachments can't exceed 10MB.

Examples

```
AT+SMTPFILE=1,"file1.txt"
```

```
OK
```

```
AT+SMTPFILE?
```

```
+SMTPFILE: 1, "D:/file1.txt"
```

```
OK
```

```
AT+SMTPFILE=2,"file2.txt"
```

```
OK
```

```
AT+SMTPFILE?
```

```
+SMTPFILE: 1, "D:/file1.txt"
```

```
+SMTPFILE: 2, "D:/file2.txt"
```

```
OK
```

3.9 AT+SMTPSEND Initiate session and send e-mail

Description

The asynchronous command is used to initiate TCP session with SMTP server and send an e-mail after all mandatory parameters have been set correctly. After SMTP client has connected with specified SMTP server and SMTP client receives an indication that indicates SMTP server is working well, the command will return “+SMTP: OK”, but it doesn’t indicate that the e-mail is already sent successfully.

After the e-mail is sent and the session is closed, an Unsolicited Result Code (URC) will be returned to TE, “+SMTP: SUCCESS” indicates the e-mail is sent successfully, and other URCs indicate an failed result and the session is closed.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPSEND=?	OK
Read Command	Responses
AT+SMTPSEND?	+SMTPSEND: <ongoing> OK
Execution Command	Responses
AT+SMTPSEND	+SMTP: OK OK +SMTP: <code> +SMTP: <code> ERROR

Defined values

<ongoing>

Whether or not an e-mail is sent in process. If the process of sending an e-mail is ongoing, SMTP client can’t send the e-mail again.

- 0 – Not ongoing.
- 1 – Ongoing.

<code>

SUCCESS	SMTP client has sent the e-mail successfully.
ONGOING	The process of sending an e-mail is ongoing.
PARAM ERROR	Mandatory parameter isn’t set (SMTP server, or sender/recipient address)
NETWORK ERROR	Invalid SMTP server. Network is bad for establishing session or sending data to SMTP server.
SERVER ERROR	SMTP server released the session. SMTP server rejects the operation with wrong response.

AUTH REQUIRED	SMTP server doesn't give SMTP client a response in time.
AUTH ERROR	Authentication is required by SMTP server.
	SMTP server rejects the session because of bad user name and password combination.

Examples

AT+SMTPSEND?

+SMTPSEND: 0

OK

AT+SMTPSEND

+SMTP: OK

OK

+SMTP: SUCCESS

3.10 AT+SMTPSTOP Force to stop sending e-mail

Description

The synchronous command is used to force to stop sending e-mail and close the TCP session while sending an e-mail is ongoing. Otherwise, the command will return "ERROR" directly.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+SMTPSTOP=?	OK
Execution Command	Responses
AT+SMTPSTOP	OK
	ERROR

Examples

AT+SMTPSEND?

+SMTPSEND: 1

OK

AT+SMTPSTOP

OK

4 Post Office Protocol 3 Service

Post Office Protocol – Version 3 (POP3) is an application-layer internet standard protocol used by local e-mail client (POP3 client) to retrieve and delete e-mail from a remote POP3 server over a TCP/IP connection.

Through AT commands, the POP3 client provides the basic functionality. Things that can be done via POP3 client include:

Retrieve e-mail from POP3 server and delete it on the server.

Retrieve e-mail from POP3 server but not delete it on the server.

Ask whether new e-mail has arrived but not retrieve it.

Peek at e-mail whether it is worth retrieving.

4.1 AT+POP3SRV POP3 server and account

Description

The synchronous command is used to set all parameters to get and e-mail from POP3 server, including server address, port number, user name and password. If POP3 client isn't free, the command will return "ERROR" directly.

Read command returns current all information about POP3 server and account.

Execution command will clear POP3 server address, user name and password, and set server's port number as default value.

NOTE After an e-mail is sent successfully or unsuccessfully, POP3 server and account information won't be cleared.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+POP3SRV=?	+POP3SRV: (list of supported <port>s) OK
Read Command	Responses
AT+POP3SRV?	+POP3SRV: <server>, <user>, <pwd>, <port> OK
Write Command	Responses
AT+POP3SRV=<server>,<user>, <pwd>[, <port>]	OK
Execution Command	Responses
AT+POP3SRV	OK

Defined values

<server>
POP3 server address, non empty string with double quotes, mandatory and ASCII text string up to 128 characters.
<user>
User name to log in POP3 server, non empty string with double quotes, and up to 128 characters.
<pwd>
Password to log in POP3 server, non empty string with double quotes, and up to 128 characters.
<port>
Port number of POP3 server in decimal format, from 1 to 65535, and default port is 110 for POP3.

Examples

```

AT+POP3SRV=?
+POP3SRV: (1-65535)
OK
AT+POP3SRV?
+POP3SRV: "", "", "", 110
OK
AT+POP3SRV="pop3.server.com", "user_name", "password", 110
OK
AT+POP3SRV?
+POP3SRV: "pop3.server.com", "user_name", "password", 110
OK
AT+POP3SRV
OK
AT+POP3SRV?
+POP3SRV: "", "", "", 110
OK

```

4.2 AT+POP3IN Log in POP3 server

Description

The asynchronous command is used to log in POP3 server and establish a session after POP3 server and account information are set rightly. If the POP3 client logs in POP3 server successfully, the response "+POP3: SUCCESS" will be returned to TE; if no POP3 operation for a long time after the session is ready, POP3 server may release the session.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
--------------	-----------

AT+POP3IN=?	OK
Read Command	Responses
AT+POP3IN?	+POP3IN: "<server>" OK +POP3IN: NULL OK
Execute Command	Responses
AT+POP3IN	+POP3: SUCCESS OK +POP3: <code> ERROR

Defined values

<code>	
NETWORK ERROR	Invalid POP3 server or network is bad for establishing session or sending data to POP3 server.
SERVER ERROR	POP3 server released the session. POP3 server rejects the operation with wrong response. POP3 server doesn't give POP3 client a response in time.
INVALID UN	Invalid user name to log in POP3 server.
INVALID UN/PWD	Invalid user name and password combination to log in POP3 server.
<server>	
The address of the POP3 server currently logged in.	

Examples

AT+POP3IN=?
OK
AT+POP3IN
+POP3: SUCCESS
OK

4.3 AT+POP3NUM Get e-mail number and total size

Description

The asynchronous command is used to get e-mail number and total size on the specified POP3 server after the POP3 client logs in POP3 server successfully and no other POP3 operation is ongoing.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+POP3NUM=?	OK
Execution Command	Responses
AT+POP3NUM	+POP3: <num>, <tsize> OK
	+POP3: <code> ERROR

Defined values

<num>	
The e-mail number on the POP3 server, decimal format.	
<tsize>	
The total size of all e-mail and the unit is in Byte.	
<code>	
NETWORK ERROR	Network is bad for sending data to POP3 server.
SERVER ERROR	POP3 server released the session.
	POP3 server rejects the operation with wrong response.
	POP3 server doesn't give POP3 client a response in time.

Examples

AT+POP3NUM=?
OK
AT+POP3NUM
+POP3: 1, 3057
OK
AT+POP3NUM
+POP3: ONGOING
OK

4.4 AT+POP3LIST List e-mail ID and size

Description

The asynchronous command is used to list e-mail number and total size, e-mail ID and each e-mail's size after the POP3 client logs in POP3 server successfully and no other POP3 operation is ongoing. The e-mail ID may be used to do those operations: get e-mail header, get the whole e-mail, and mark an e-mail to delete from POP3 server.

SIM PIN	References
YES	Vendor

Syntax Syntax

Test Command	Responses
AT+POP3LIST=?	OK
Write Command	Responses
AT+POP3LIST=<msg_id>	+POP3: <msg_id>, <size>
	OK
	ERROR
Execution Command	Responses
AT+POP3LIST	+POP3: <num> <tsize>
	[<msg_id> <size>
	[<CR><LF>...]]
	OK
	+POP3: <code>
	ERROR

Defined values

<num>	
The e-mail number on the POP3 server, decimal format.	
<tsize>	
The total size of all e-mail and the unit is in Byte.	
<msg_id>	
The e-mail's ID.	
<size>	
The size of e-mail <msg_id>, and the unit is in Byte.	
<code>	
NETWORK ERROR	Network is bad for sending data to POP3 server.
SERVER ERROR	POP3 server released the session.
	POP3 server rejects the operation with wrong response.
	POP3 server doesn't give POP3 client a response in time.
	POP3 client gives wrong e-mail's ID.

Examples

AT+POP3LIST=?
OK
AT+POP3LIST
+POP3: 1 3056
1 3056
OK
AT+POP3LIST=1
+POP3: 1, 3056

OK

4.5 AT+POP3HDR Get e-mail header

Description

The asynchronous command is used to retrieve e-mail's sender address, date and sender address, that are present in the mail's header.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+POP3HDR=?	OK
Write Command	Responses
AT+POP3HDR=<msg_id>	From: [<from>] Date: [<date>] Subject: [<sub>] OK +POP3: <code> ERROR

Defined values

<msg_id>	The e-mail's ID.
<from>	E-mail's sender name and sender address from mail
<date>	E-mail's date from mail header.
<sub>	E-mail's subject from mail header.
<code>	
NETWORK ERROR	Network is bad for sending data to POP3 server.
SERVER ERROR	POP3 server released the session. POP3 server rejects the operation with wrong response. POP3 server doesn't give POP3 client a response in time. POP3 client gives wrong e-mail's ID.

Examples

AT+POP3HDR=1

```

From: sendername<senderaddress@server.com>
Date: Mon, 17 Aug 2009 14:09:27 +0800
Subject: THIS IS A TEST MAIL

OK

```

4.6 AT+POP3GET Get an e-mail from POP3 server

Description

The command is used to retrieve specified e-mail from the POP3 server. After retrieving an e-mail successfully, POP3 client will create a directory and save the e-mail's header and body into file system as file "EmailXYZ.TXT", and save each attachment as a file under the same directory.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+POP3GET=?	OK
Write Command	Responses
AT+POP3GET=<msg_id>,[<get_type>]	OK +POP3: <code> <mail_dir>, <mail_file> +POP3: <code> ERROR

Defined values

<msg_id>

The e-mail's ID.

<mail_dir>

The directory for e-mail and attachment, string type without double quotes and the format is "YYMMDDHHMMSS" which is generated according to module's RTC.

According to the setting of command **+FSLOCA** (refer to file system commands), TE can select the location (local file system or storage card) in which POP3 client saves e-mail file and attachment.

<mail_file>

The file to save e-mail's header and body, string type without double quotes. Usually, this file name is "EMAIL000.TXT", and if e-mail includes an attachment whose name is the same as the e-mail file, the number in the e-mail file name will be increase by 1, e.g. "EMAIL001.TXT", "EMAIL002.TXT".

<code>

NETWORK ERROR	Network is bad for sending or receiving data to POP3 server.
SERVER ERROR	POP3 server released the session. POP3 server rejects the operation with wrong response. POP3 server doesn't give POP3 client a response in time. POP3 client gives wrong e-mail's ID.
FILE SYSTEM ERROR	File system is bad for saving E-mail or attachment, storage space isn't enough, or storage card is pulled out. If POP3 client encounters this error, POPE client will close the session with POP3 server.
SUCCESS	POP3 client gets an e-mail from POP3 server successfully.
FAILURE	POP3 client gets an e-mail unsuccessfully.
<get_type>	
The type to save when getting message from POP3 server:	
<u>1</u> – Save parsed body file and attachments 2 – Save the whole message as a “.eml” file. 3 – Save the parsed body file, attachments and eml file.	

Examples

```

AT+POP3GET=1
OK

+POP3: SUCCESS
C:/Email/090901120000/, EMAIL000.TXT
AT+POP3GET=1,2
OK

+POP3: SUCCESS
C:/Email/090901120000/, 090901120000.eml
AT+POP3GET=2
OK

+POP3: FAILURE

```

4.7 AT+POP3DEL Mark an e-mail to delete from POP3 server

Description

The asynchronous command is used to mark an e-mail to delete from POP3 server. The operation only marks an e-mail on the server to delete it, and after POP3 client logs out POP3 server and closes the session normally, the marked e-mail is deleted on the server. Otherwise, the e-mail isn't deleted.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+POP3DEL=?	OK
Write Command	Responses
AT+POP3DEL=<msg_id>	+POP3: SUCCESS
	OK
	+POP3: <code>
	ERROR

Defined values

<msg_id>	
E-mail's ID for mark to delete it on POP3 server.	
<code>	
NETWORK ERROR	Network is bad for sending data to POP3 server.
SERVER ERROR	POP3 server released the session.
	POP3 server rejects the operation with wrong response.
	POP3 server doesn't give POP3 client a response in time.
	POP3 client gives wrong e-mail's ID.

Examples

```
AT+POP3DEL=1
+POP3: SUCCESS
OK
```

4.8 AT+POP3OUT Log out POP3 server

Description

The command will log out the POP3 server and close the session, and if there are some e-mails which are marked to delete, it also informs POP3 server to delete the marked e-mails.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+POP3OUT=?	OK
Execution Command	Responses
AT+POP3OUT	+POP3: SUCCESS
	OK

```
+POP3: <code>
ERROR
```

Defined values

<code>	
NETWORK ERROR	Network is bad for sending data to POP3 server.
SERVER ERROR	POP3 server released the session.
	POP3 server rejects the operation with wrong response.
	POP3 server doesn't give POP3 client a response in time.
	POP3 client gives wrong e-mail's ID.

Examples

```
AT+POP3OUT
+POP3: SUCCESS
OK
```

4.9 AT+POP3STOP Force to stop receiving e-mail/close the session

Description

The synchronous command is used to force to close the session, and if the process of receiving e-mail is ongoing, the command also stops the operation. Otherwise, the command will return "ERROR" directly. If an e-mail has been marked to delete, POP3 server won't delete the e-mail after the session is closed.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+POP3STOP=?	OK
Execution Command	Responses
AT+POP3STOP	OK
	ERROR

Examples

```
AT+POP3STOP
OK
```

4.10 AT+POP3READ Read an e-mail from file system

Description

The command is used to read an e-mail from file system. If the process of receiving e-mail is ongoing, the command can't read an e-mail.

Execution command is used to read the e-mail which is received just now.

SIM PIN	References
YES	Vendor

Syntax Syntax

Test Command	Responses
AT+POP3READ=?	OK
Write Command	Responses
AT+POP3READ= <location>, <mail_file>	<e-mail> OK ERROR
Execution Command	Responses
AT+POP3READ	<e-mail> OK ERROR

Defined values

<location>
The location from which TE reads an e-mail.
0 – Local file system.
1 – Storage card.
<mail_file>
The e-mail's file name, string type with double quotes and including a directory name and a text file name separated by the list separator "/", e.g. "090901103000/EMAIL000.TXT".
<e-mail>
The content of e-mail, including e-mail header and body.

5 File Transfer Protocol Service

5.1 AT+CFTPPORT Set FTP server port

Description

The command is used to set FTP server port.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPPORT=?	+CFTPPORT: (list of supported <port>s) OK
Read Command	Responses
AT+CFTPPORT?	+CFTPPORT: <port> OK
Write Command	Responses
AT+CFTPPORT=<port>	OK +CME ERROR

Defined values

<port>

The FTP server port, from 1 to 65535, and default value is 21.

Examples

```
AT+CFTPPORT=21
```

```
OK
```

```
AT+CFTPPORT?
```

```
+CFTPPORT:21
```

```
OK
```

```
AT+CFTPPORT=?
```

```
+CFTPPORT: (1-65535)
```

```
OK
```

5.2 AT+CFTPMODE Set FTP mode

Description

The command is used to set FTP passive/proactive mode. Default is proactive mode.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPMODE=?	+CFTPMODE: (list of supported <mode>s) OK
Read Command	Responses
AT+CFTPMODE?	+CFTPMODE: <mode> OK
Write Command	Responses
AT+CFTPMODE=<mode>	OK +CME ERROR

Defined values

<mode>
The FTP access mode:
0 – proactive mode.
1 – passive mode.

Examples

AT+CFTPMODE=1
OK
AT+CFTPMODE?
+CFTPMODE: 1
OK
AT+CFTPMODE=?
+CFTPMODE: (0,1)
OK

5.3 AT+CFTPTYPE Set FTP type

Description

The command is used to set FTP type. Default is binary type.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPTYPE=?	+CFTPTYPE: (list of supported <type>s) OK
Read Command	Responses
AT+CFTPTYPE?	+CFTPTYPE: <type> OK
Write Command	Responses
AT+CFTPTYPE=<type>	OK +CME ERROR

Defined values

<type>
The FTP type: I – binary type. A – ASCII type.

Examples

AT+CFTPTYPE=A
OK
AT+CFTPTYPE?
+CFTPTYPE: A
OK
AT+CFTPTYPE=?
+CFTPTYPE: (A,I)
OK

5.4 AT+CFTPSERV Set FTP server domain name or IP address

Description

The command is used to set FTP server domain name or IP address.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPSERV=?	+CFTPSERV: "ADDRESS" OK

Read Command	Responses
AT+CFTPSERV?	+CFTPSERV: "<address>" OK
Write Command	Responses
AT+CFTPSERV= "<address>"	OK +CME ERROR

Defined values

<address>

The FTP server domain name or IP address.

Examples

AT+CFTPSERV="www.mydomain.com"

OK

AT+CFTPSERV?

+CFTPSERV: "www.mydomain.com"

OK

AT+CFTPSERV=?

+CFTPSERV: "ADDRESS"

OK

AT+CFTPSERV="10.0.0.127"

OK

5.5 AT+CFTPUN Set user name for FTP access

Description

The command is used to set user name for FTP server access.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPUN=?	+CFTPUN: "NAME" OK
Read Command	Responses
AT+CFTPUN?	+CFTPUN: "<name>" OK
Write Command	Responses
AT+CFTPUN="<name>"	OK

	+CME ERROR
--	------------

Defined values

<name>
The user name for FTP server access.

Examples

AT+CFTPUN="myname"
OK
AT+CFTPUN="anonymous"
OK
AT+CFTPUN?
+CFTPUN: "myname"
OK
AT+CFTPUN=?
+CFTPUN: "NAME"
OK

5.6 AT+CFTPPW Set user password for FTP access

Description

The command is used to set user password for FTP server access.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPPW=?	+CFTPPW: "password" OK
Read Command	Responses
AT+CFTPPW?	+CFTPPW: "<password>" OK
Write Command	Responses
AT+CFTPPW= "<password>"	OK +CME ERROR

Defined values

<password>

The user password for FTP server access.

Examples

```
AT+CFTPPW="mypass"
```

```
OK
```

```
AT+CFTPPW?
```

```
+CFTPPW: "mypass"
```

```
OK
```

```
AT+CFTPPW=?
```

```
+CFTPPW: "mypass"
```

```
OK
```

5.7 AT+CFTPGETFILE Get a file from FTP server to EFS

Description

The command is used to download a file from FTP server to module EFS.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPGETFILE=?	+CFTPGETFILE: [{non-ascii}]“FILEPATH”, (0-8) OK
Write Command	Responses
AT+CFTPGETFILE= “<filepath>”,<dir>	OK +CFTPGETFILE: 0 +CME ERROR OK +CFTPGETFILE: <err>

Defined values

<filepath>

The remote file path. When the file path doesn't contain "/", this command transfers file from the current remote FTP directory. If the file path contains non-ASCII characters, the file path parameter should contain a prefix of {non-ascii}.

<dir>

The directory to save the downloaded file:

- 0 – current directory [refer to [AT+FSCD](#)]
- 1 – “C:/Picture” directory

- 2 – “C:/Video” directory
- 3 – “C:/VideoCall” directory
- 4 – “D:/Picture” directory
- 5 – “D:/Video” directory
- 6 – “D:/VideoCall” directory
- 7 – “C:/Audio” directory
- 8 – “D:/Audio” directory

<err>

The error code of FTP operation.

Examples

```
AT+CFTPGETFILE="/pub/mydir/test1.txt",1
OK
...
+CFTPGETFILE: 0
AT+CFTPGETFILE=" test2.txt",2
OK
...
+CFTPGETFILE: 0
AT+CFTPGETFILE={non-ascii}" B2E2CAD42E747874",2
OK
...
+CFTPGETFILE: 0
AT+CFTPGETFILE=?
+CFTPGETFILE: [{non-ascii}] "FILEPATH", (0-8)
OK
```

5.8 AT+CFTPPUTFILE Put a file in module EFS to FTP server

Description

The command is used to upload a file in the module EFS to FTP server.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPPUTFILE=?	+CFTPPUTFILE: [{non-ascii}] "FILEPATH", (0-8) OK
Write Command	Responses
AT+CFTPPUTFILE=	OK

“<filepath>”,<dir>	+CFTPPUTFILE: 0
	+CME ERROR
	OK
	+CFTPPUTFILE: <err>

Defined values

<filepath>

The remote file path. When the file path doesn't contain “/”, this command transfers file to the current remote FTP directory. If the file path contains non-ASCII characters, the file path parameter should contain a prefix of {non-ascii}.

<dir>

The directory that contains the file to be uploaded:

- 0 – current directory [refer to [AT+FSCD](#)]
- 1 – “C:/Picture” directory
- 2 – “C:/Video” directory
- 3 – “C:/VideoCall” directory
- 4 – “D:/Picture” directory
- 5 – “D:/Video” directory
- 6 – “D:/VideoCall” directory
- 7 – “C:/Audio” directory
- 8 – “D:/Audio” directory

<err>

The error code of FTP operation.

Examples

```
AT+CFTPPUTFILE="/pub/mydir/test1.txt",1
OK
AT+CFTPPUTFILE=" test2.txt",1
OK
...
+CFTPPUTFILE: 0
AT+CFTPPUTFILE={non-ascii}" B2E2CAD42E747874",1
OK
...
+CFTPPUTFILE: 0
AT+CFTPPUTFILE=?
+CFTPPUTFILE: [{non-ascii}]“FILEPATH”,(0-8)
OK
```

5.9 AT+CFTPGET Get a file from FTP server and output it from SIO

Description

The command is used to get a file from FTP server and output it to serial port. This command may have a lot of DATA transferred to DTE using serial port, The AT+CATR command is recommended to be used.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPGET=?	+CFTPGET: [{non-ascii}] "FILEPATH" OK
Write Command	Responses
AT+CFTPGET= "<filepath>"	OK +CFTPGET: DATA,<len> ... +CFTPGET: DATA,<len> +CFTPGET: 0 +CME ERROR +CFTPGET: DATA,<len> ... +CFTPGET: DATA,<len> +CFTPGET: <err>

Defined values

<filepath>

The remote file path. When the file path doesn't contain "/", this command transfer file from the current remote FTP directory. If the file path contains non-ASCII characters, the file path parameter should contain a prefix of {non-ascii}.

<len>

The length of FTP data contained in this packet.

<err>

The error code of FTP operation.

Examples

```
AT+CFTPGET="/pub/mydir/test1.txt"
```

```
OK
```

```

+CFTPGET: DATA, 1020,
...
+CFTPGET: DATA, 1058,
...
...
+CFTPGET: 0
AT+CFTPGET={non-ascii}"/2F74657374646972/B2E2CAD42E747874"
OK
+CFTPGET: DATA, 1020,
...
+CFTPGET: 0
AT+CFTPGET=?
+CFTPGET:[{non-ascii}] "FILEPATH"
OK

```

5.10 AT+CFTPPUT Put a file to FTP server

Description

The command is used to put a file to FTP server using the data got from serial port. Each <Ctrl+Z> character present in the data flow of serial port when downloading FTP data will be coded as <ETX><Ctrl+Z>. Each <ETX> character will be coded as <ETX><ETX>. Single <Ctrl+Z> means end of the FTP data.

<ETX> is 0x03, and <Ctrl+Z> is 0x1A.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPPUT=?	+CFTPPUT: [{non-ascii}] "FILEPATH" OK
Execution Command	Responses
AT+CFTPPUT="<filepath>"	+CFTPPUT: BEGIN OK
	+CME ERROR
	+CFTPPUT: BEGIN +CME ERROR

Defined values

<filepath>

The remote file path. When the file path doesn't contain "/", this command transfers file to the

current remote FTP directory. If the file path contains non-ASCII characters, the file path parameter should contain a prefix of {non-ascii}.

Examples

```
AT+CFTPPUT="/pub/mydir/test1.txt"
+CFTPPUT: BEGIN
.....<Ctrl+Z>
OK
AT+CFTPPUT={non-ascii}"/2F74657374646972/B2E2CAD42E747874"
+CFTPPUT: BEGIN
.....<Ctrl+Z>
OK
AT+CFTPPUT=?
+CFTPPUT: [{non-ascii}] "FILEPATH"
OK
```

5.11 AT+CFTPLIST List the items in the directory on FTP server

Description

This command is used to list the items in the specified directory on FTP server

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPLIST=?	+CFTPLIST: [{non-ascii}] "FILEPATH" OK
Write Command	Responses
AT+CFTPLIST="<dir>"	OK [+CFTPLIST: DATA,<len> ...] +CFTPLIST:<err> +CME ERROR

Defined values

<dir>
The directory to be listed. If the directory contains non-ASCII characters, the <dir> parameter should contain a prefix of {non-ascii}.

<len>

The length of data reported

<err>

The result code of the listing

Examples

```
AT+CFTPLIST="/testd"
```

OK

```
+CFTPLIST: DATA,193
```

```
drw-rw-rw-  1 user    group      0 Sep  1 18:01 .
```

```
drw-rw-rw-  1 user    group      0 Sep  1 18:01 ..
```

```
-rw-rw-rw-  1 user    group    2017 Sep  1 17:24 19800106_000128.jpg
```

```
+CFTPLIST: 0
```

5.12 AT+CFTPMKD Create a new directory on FTP server

Description

This command is used to create a new directory on the FTP server. The maximum length of the full path name is 256.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPMKD=?	+CFTPMKD: [{non-ascii}] "DIR" OK
Write Command	Responses
AT+CFTPMKD="<dir>"	OK +CFTPMKD:<err> ERROR

Defined values

<dir>

The directory to be created. If the directory contains non-ASCII characters, the <dir> parameter should contain a prefix of {non-ascii}.

<err>

The result code of the command

Examples

```
AT+CFTPMKD="/testdir"
OK
AT+CFTPMKD={non-ascii}"74657374646972"
OK
```

5.13 AT+CFTPRMD Delete a directory on FTP server

Description

This command is used to delete a directory on FTP server

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPRMD=?	+CFTPRMD: [{non-ascii}] "DIR" OK
Write Command	Responses
AT+CFTPRMD="<dir>"	OK +CFTPRMD:<err> ERROR

Defined values

<dir>
The directory to be removed. If the directory contains non-ASCII characters, the <dir> parameter should contain a prefix of {non-ascii}.
<err>
The result code of the command

Examples

```
AT+CFTPRMD="/testdir"
OK
AT+CFTPRMD={non-ascii}"74657374646972"
OK
```

5.14 AT+CFTPDELE Delete a file on FTP server

Description

This command is used to delete a file on FTP server

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPDELE=?	+CFTPDELE: [{non-ascii}] "FILENAME" OK
Write Command	Responses
AT+CFTPDELE="<filename>"	OK
	+CFTPDELE:<err>
	ERROR

Defined values

<filename>
The name of the file to be deleted. If the file name contains non-ASCII characters, the <filename> parameter should contain a prefix of {non-ascii}.
<err>
The result code of the command

Examples

AT+CFTPDELE="test"
OK
AT+CFTPDELE={non-ascii}"74657374"
OK

5.15 Unsolicited FTP Codes (Summary of CME ERROR Codes)

Code of <err>	Description
201	Unknown error for FTP
202	FTP task is busy
203	Failed to resolve server address
204	FTP timeout
205	Failed to read file
206	Failed to write file
207	Not allowed in current state
208	Failed to login
209	Failed to logout

210	Failed to transfer data
211	FTP command rejected by server
212	Memory error
213	Invalid parameter
214	Network error

6 Hyper Text Transfer Protocol Service

6.1 AT+CHTTPACT - Launch a HTTP operation

Description

The command is used to launch a HTTP operation like GET or POST. Each <Ctrl+Z> character presented in the data flow of serial port will be coded as <ETX><Ctrl+Z>. Each <ETX> character will be coded as <ETX><ETX>. Single <Ctrl+Z> means end of the HTTP request data or end of the HTTP responded data.

<ETX> is 0x03, and <Ctrl+Z> is 0x1A.

For this command there may be a lot of DATA which need to be transferred to DTE using serial port, it is recommended that the AT+CATR will be used.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CHTTPACT=?	+CHTTPACT: "ADDRESS", (1-65535) OK
Write Command	Responses
AT+CHTTPACT= "<address>",<port>	+CHTTPACT: REQUEST +CHTTPACT: DATA, <len> ... +CHTTPACT: DATA, <len> +CHTTPACT: 0 +CME ERROR +CHTTPACT: REQUEST +CME ERROR +CHTTPACT: REQUEST +CHTTPACT: <err> +CHTTPACT: REQUEST +CHTTPACT: DATA, <len> ... +CHTTPACT: DATA, <len> +CHTTPACT: <err>

Defined values

<address>

The HTTP server domain name or IP address.

<port>

The HTTP server port.

<len>

The length of HTTP data in the packet.

<err>

The error code of HTTP operation.

Examples

```
AT+CHTTPACT="www.mywebsite.com",80
```

```
+CHTTPACT: REQUEST
```

```
GET http://www.mywebsite.com/index.html HTTP/1.1
```

```
Host: www.mywebsite.com
```

```
User-Agent: MY WEB AGENT
```

```
Content-Length: 0
```

```
<Ctrl+Z>
```

```
OK
```

```
+CHTTPACT: DATA, 249
```

```
HTTP/1.1 200 OK
```

```
Content-Type: text/html
```

```
Content-Language: zh-CN
```

```
Content-Length: 57
```

```
Date: Tue, 31 Mar 2009 01:56:05 GMT
```

```
Connection: Close
```

```
Proxy-Connection: Close
```

```
<html>
```

```
<header>test</header>
```

```
<body>
```

```
Test body
```

```
</body>
```

```
+CHTTPACT: 0
```

```
AT+CHTTPACT="www.mywebsite.com",80
```

```
+CHTTPACT: REQUEST
```

```
POST http://www.mywebsite.com/mydir/test.jsp HTTP/1.1
```

```
Host: www.mywebsite.com
```

```
User-Agent: MY WEB AGENT
```

```
Accept: */*
```

```
Content-Type: application/x-www-form-urlencoded
```

```
Cache-Control: no-cache
```

```

Accept-Charset: utf-8, us-ascii
Pragma: no-cache
Content-Length: 29

myparam1=test1&myparam2=test2<Ctrl+Z>
OK
+CHTTPACT: DATA, 234
HTTP/1.1 200 OK
Content-Type: text/html
Content-Language: zh-CN
Content-Length: 54
Date: Tue, 31 Mar 2009 01:56:05 GMT
Connection: Close
Proxy-Connection: Close

<html>
<header>result</header>
<body>
Result is OK
</body>
+CHTTPACT: 0
AT+CHTTPACT=?
+CHTTPACT: "ADDRESS",(1-65535)
OK

```

6.2 Unsolicited HTTP Codes (Summary of CME ERROR Codes)

Code of <err>	Description
220	Unknown error for HTTP
221	HTTP task is busy
222	Failed to resolve server address
223	HTTP timeout
224	Failed to transfer data
225	Memory error
226	Invalid parameter
227	Network error

7 Secure Hyper Text Transfer Protocol Service

7.1 AT+CHTTPSSTART - Acquire HTTPS protocol stack

Description

This command is used to acquire HTTPS protocol stack.

SIM PIN	References
YES	Vendor

Syntax

Execute Command	Responses
AT+CHTTPSSTART	OK ERROR

Examples

```
AT+CHTTPSSTART
OK
```

7.2 AT+CHTTPSSTOP - Release HTTPS protocol stack

Description

This command is used to release HTTPS protocol stack.

SIM PIN	References
YES	Vendor

Syntax

Execute Command	Responses
AT+CHTTPSSTOP	OK ERROR

Examples

```
AT+CHTTPSSTOP
OK
```

7.3 AT+CHTTPSOPSE – Open HTTPS session

Description

This command is used to open a new HTTPS session. Every time, the module must call AT+CHTTPSSTART before calling AT+CHTTPSOPSE.

SIM PIN	References
YES	Vendor

Syntax

Write Command	Responses
AT+CHTTPSOPSE="<host> >",<port>	OK ERROR

Defined values

<host>
The host address
<port>
The host listening port for SSL

Examples

AT+CHTTPSOPSE="www.mywebsite.com",443
OK

7.4 AT+CHTTPSCLSE – Close HTTPS session

Description

This command is used to close the opened HTTPS session.

SIM PIN	References
YES	Vendor

Syntax

Execute Command	Responses
AT+CHTTPSCLSE	OK ERROR

Examples

AT+CHTTPSCLSE
OK

7.5 AT+CHTTPSEND – Send HTTPS Request

Description

This command is used to send HTTPS request. The AT+CHTTPSEND=<len> is used to download the data to be sent. The AT+CHTTPSEND is used to wait the result of sending.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CHTTPSEND=?	+CHTTPSEND: (1-4096) OK
Read Command	Responses
AT+CHTTPSEND?	+CHTTPSEND: <unsent_len> OK
Write Command	Responses
AT+CMMSSEND=<len>	> OK ERROR
Execute Command	Responses
AT+CHTTPSEND	OK +CHTTPSEND: <result> ERROR

Defined values

<unsent_len>

The length of the data in the sending buffer which is waiting to be sent.

<len>

The length of the data to send

<result>

The final result of the sending.

Examples

AT+CMMSSEND=88

>GET /[HTTP/1.1](http://www.mywebsite.com)

Host: www.mywebsite.com

User-Agent: MY WEB AGENT

Content-Length: 0

```
OK
AT+CHTTPSEND
OK
+CHTTPSEND: 0
AT+CHTTPSEND?
+CHTTPSEND: 88
OK
```

7.6 AT+CHTTPSRECV – Receive HTTPS Response

Description

This command is used to receive HTTPS response after sending HTTPS request.

SIM PIN	References
YES	Vendor

Syntax

Write Command	Responses
AT+CHTTPSRECV=<recv_len>	OK +CHTTPSRECV: DATA,<len> ... +CHTTPSRECV: DATA,<len> ... +CHTTPSRECV:<result> +CHTTPSRECV:<result> ERROR ERROR

Defined values

<recv_len>
The minimum length of the data to be received. The final length of the received data may be larger than the requested length.
<len>
The length of the data received.
<result>
The final result of the receiving.

Examples

```
AT+CHTTPSRECV=1
OK
+CHTTPSRECV: DATA,249
```

```

HTTP/1.1 200 OK
Content-Type: text/html
Content-Language: zh-CN
Content-Length: 57
Date: Tue, 31 Mar 2009 01:56:05 GMT
Connection: Close
Proxy-Connection: Close

<html>
<header>test</header>
<body>
Test body
</body>

+CHTTPSRECV: 0

```

7.7 Unsolicited HTTPS Codes

Code of <err>	Description
+CHTTPS: RECV EVENT	When the AT+CHTTPSRECV is not being called, and there is data cached in the receiving buffer, this event will be reported.

8 Secure File Transfer Protocol Service

8.1 AT+CFTPSSTART Acquire FTPS protocol stack

Description

This command is used to acquire FTPS protocol stack.

Syntax

Execute Command	Responses
AT+CFTPSSTART	OK ERROR

Examples

```
AT+CFTPSSTART
OK
```

8.2 AT+CFTPSSTOP Stop FTPS protocol stack

Description

This command is used to stop FTPS protocol stack. Currently only explicit FTPS mode is supported.

Syntax

Execute Command	Responses
AT+CFTPSSTOP	OK ERROR

Examples

```
AT+CFTPSSTOP
OK
```

8.3 AT+CFTPSLOGIN Login the FTPS server

Description

This command is used to login the FTPS server. Each time, the module must call AT+CFTPSSTART before calling AT+CFTPSLOGIN.

Syntax

Write Command	Responses
AT+CFTPSLOGIN="<host> ,<port>",<username>","<password>"	OK ERROR

Defined values

<host>
The host address
<port>
The host listening port for SSL
<username>
The user name
<password>
The password

Examples

```
AT+CFTPSLOGIN="www.myftpsserver.com",990,"myname","mypassword"
OK
```

8.4 AT+CFTPSLOGOUT Logout the FTPS server

Description

This command is used to logout the FTPS server.

Syntax

Execute Command	Responses
AT+CFTPSLOGOUT	OK ERROR

Examples

```
AT+CFTPSLOGOUT
OK
```

8.5 AT+CFTPSMKD Create a new directory on FTPS server

Description

This command is used to create a new directory on the FTPS server.

Syntax

Test Command	Responses
AT+CFTPSMKD=?	+CFTPSMKD: "DIR" OK
Write Command	Responses
AT+CFTPSMKD="<dir>"	OK ERROR

Defined values

<dir>

The directory to be created

Examples

```
AT+CFTPSMKD="testdir"
```

```
OK
```

```
AT+CFTPSMKD={non-ascii}"74657374646972"
```

```
OK
```

8.6 AT+CFTPSRMD Delete a directory on FTPS server

Description

This command is used to delete a directory on FTPS server

Syntax

Test Command	Responses
AT+CFTPSRMD=?	+CFTPSRMD: "DIR" OK
Write Command	Responses
AT+CFTPSRMD="<dir>"	OK ERROR

Defined values

<dir>

The directory to be removed. If the directory contains non-ASCII characters, the <dir> parameter should contain a prefix of {non-ascii}.

Examples

```
AT+CFTPSRMD="testdir"
```

```
OK
```

```
AT+CFTPSRMD={non-ascii}"74657374646972"
```

```
OK
```

8.7 AT+CFTPSDEL Delete a file on FTPS server

Description

This command is used to delete a file on FTPS server

Syntax

Test Command	Responses
AT+CFTPSRMD=?	+CFTPSRMD: "FILENAME" OK
Write Command	Responses
AT+CFTPSRMD="<filename e>"	OK ERROR

Defined values

<filename>

The name of the file to be deleted. If the file name contains non-ASCII characters, the <filename> parameter should contain a prefix of { non-ascii }.

Examples

```
AT+CFTPSDEL="test"
```

```
OK
```

```
AT+CFTPSDEL={non-ascii}"74657374"
```

```
OK
```

8.8 AT+CFTPSCWD Change the current directory on FTPS server

Description

This command is used to change the current directory on FTPS server

Syntax

Test Command	Responses
--------------	-----------

AT+CFTPSCWD=?	+CFTPSCWD: "DIR" OK
Write Command	Responses
AT+CFTPSCWD="<dir>"	OK ERROR

Defined values

<dir>

The directory to be changed. If the directory contains non-ASCII characters, the <dir> parameter should contain a prefix of {non-ascii}.

Examples

AT+CFTPSCWD="testdir"

OK

AT+CFTPSCWD={non-ascii}"74657374646972"

OK

8.9 AT+CFTPSPWD Get the current directory on FTPS server

Description

This command is used to get the current directory on FTPS server.

Syntax

Execute Command	Responses
AT+CFTPSPWD	+CFTPSPWD: "<dir>" OK ERROR

Defined values

<dir>

The current directory on FTPS server.

Examples

AT+CFTPSPWD

+CFTPSPWD: "/testdir"

OK

8.10 AT+CFTPSTYPE Set the transfer type on FTPS server

Description

This command is used to set the transfer type on FTPS server

Syntax

Test Command	Responses
AT+CFTPSTYPE=?	+CFTPSTYPE: (A,I) OK
Read Command	Responses
AT+CFTPSTYPE?	+CFTPSTYPE: <type> OK
Write Command	Responses
AT+CFTPSTYPE=<type>	OK ERROR

Defined values

<type>
The type of transferring:
A – ASCII.
I – Binary.

Examples

```
AT+CFTPSTYPE=A
OK
```

8.11 AT+CFTPSSLIST List the items in the directory on FTPS server

Description

This command is used to list the items in the specified directory on FTPS server

Syntax

Write Command	Responses
AT+CFTPSSLIST="<dir>"	OK +CFTPSSLIST: DATA,<len> ... +CFTPSSLIST:<err> ERROR

Execute Command	Responses
AT+CFTPSLIST	OK +CFTPSLIST: DATA,<len> ... +CFTPSLIST:<err> ERROR

Defined values

<dir>
The directory to be listed. If the directory contains non-ASCII characters, the <dir> parameter should contain a prefix of {non-ascii}.
<len>
The length of data reported
<err>
The result code of the listing

Examples

AT+CFTPSLIST="/testd"
OK
+CFTPSLIST: DATA,193
drw-rw-rw- 1 user group 0 Sep 1 18:01 .
drw-rw-rw- 1 user group 0 Sep 1 18:01 ..
-rw-rw-rw- 1 user group 2017 Sep 1 17:24 19800106_000128.jpg
+CFTPSLIST: 0
AT+CFTPSLIST
OK
+CFTPSLIST: DATA,193
drw-rw-rw- 1 user group 0 Sep 1 18:01 .
drw-rw-rw- 1 user group 0 Sep 1 18:01 ..
-rw-rw-rw- 1 user group 2017 Sep 1 17:24 19800106_000128.jpg
+CFTPSLIST: 0

8.12 AT+CFTPSGETFILE Get a file from FTPS server to EFS

Description

The command is used to download a file from FTPS server to module EFS.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPSGETFILE=?	+CFTPSGETFILE: [{non-ascii}]“FILEPATH”, (0-8) OK
Write Command	Responses
AT+CFTPSGETFILE= “<filepath>”,<dir>	OK +CFTPSGETFILE: 0 ERROR OK +CFTPSGETFILE: <err>

Defined values

<filepath>

The remote file path. When the file path doesn't contain "/", this command transfers file from the current remote FTPS directory. If the file path contains non-ASCII characters, the file path parameter should contain a prefix of {non-ascii}.

<dir>

The directory to save the downloaded file:

- 0 – current directory [refer to [AT+FSCD](#)]
- 1 – “C:/Picture” directory
- 2 – “C:/Video” directory
- 3 – “C:/VideoCall” directory
- 4 – “D:/Picture” directory
- 5 – “D:/Video” directory
- 6 – “D:/VideoCall” directory
- 7 – “C:/Audio” directory
- 8 – “D:/Audio” directory

<err>

The error code of FTPS operation.

Examples

```
AT+CFTPSGETFILE="/pub/mydir/test1.txt",1
OK
...
+CFTPSGETFILE: 0
AT+CFTPSGETFILE=" test2.txt",2
OK
...
+CFTPSGETFILE: 0
AT+CFTPSGETFILE={non-ascii}" B2E2CAD42E747874",2
OK
```

```
...
+CFTPSGETFILE: 0
AT+CFTSPGETFILE=?
+CFTPSGETFILE: [{non-ascii}] "FILEPATH", (0-8)
OK
```

8.13 AT+CFTPSPUTFILE Put a file in module EFS to FTPS server

Description

The command is used to upload a file in the module EFS to FTPS server.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPSPUTFILE=?	+CFTPSPUTFILE: [{non-ascii}] "FILEPATH", (0-8) OK
Write Command	Responses
AT+CFTPSPUTFILE= "<filepath>",<dir>	OK +CFTPSPUTFILE: 0
	ERROR
	OK +CFTPSPUTFILE: <err>

Defined values

<filepath>

The remote file path. When the file path doesn't contain "/", this command transfers file to the current remote FTPS directory. If the file path contains non-ASCII characters, the file path parameter should contain a prefix of {non-ascii}.

<dir>

The directory that contains the file to be uploaded:

- 0 – current directory [refer to [AT+FSCD](#)]
- 1 – "C:/Picture" directory
- 2 – "C:/Video" directory
- 3 – "C:/VideoCall" directory
- 4 – "D:/Picture" directory
- 5 – "D:/Video" directory
- 6 – "D:/VideoCall" directory
- 7 – "C:/Audio" directory
- 8 – "D:/Audio" directory

<err>

The error code of FTPS operation.

Examples

```
AT+CFTPSPUTFILE="/pub/mydir/test1.txt",1
OK
AT+CFTPSPUTFILE=" test2.txt",1
OK
...
+CFTPSPUTFILE: 0
AT+CFTPSPUTFILE={non-ascii}" B2E2CAD42E747874",1
OK
...
+CFTPSPUTFILE: 0
AT+CFTPSPUTFILE=?
+CFTPSPUTFILE: [{non-ascii}] "FILEPATH", (0-8)
OK
```

8.14 AT+CFTPGET Get a file from FTPS server to serial port

Description

The command is used to get a file from FTPS server and output it to serial port. This command may have a lot of DATA transferred to DTE using serial port, The AT+CATR command is recommended to be used.

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPGET=?	+CFTPGET: [{non-ascii}] "FILEPATH" OK
Write Command	Responses
AT+CFTPGET= "<filepath>"	OK +CFTPGET: DATA, <len> ... +CFTPGET: DATA, <len> +CFTPGET: 0 ERROR

```

+CFTPSGET: DATA, <len>
...
+CFTPSGET: DATA, <len>
...
...
+CFTPSGET: <err>

```

Defined values

<filepath>

The remote file path. When the file path doesn't contain "/", this command transfer file from the current remote FTPS directory. If the file path contains non-ASCII characters, the file path parameter should contain a prefix of {non-ascii}.

<len>

The length of FTPS data contained in this packet.

<err>

The error code of FTPS operation.

Examples

```
AT+CFTPSGET="/pub/mydir/test1.txt"
```

OK

```
+CFTPSGET: DATA, 1020,
```

...

```
+CFTPSGET: DATA, 1058,
```

...

...

```
+CFTPSGET: 0
```

```
AT+CFTPSGET={non-ascii}"/2F74657374646972/B2E2CAD42E747874"
```

OK

```
+CFTPSGET: DATA, 1020,
```

...

```
+CFTPSGET: 0
```

```
AT+CFTPSGET=?
```

```
+CFTPSGET:[{non-ascii}] "FILEPATH"
```

OK

8.15 AT+CFTPSPUT Put a file to FTPS server

Description

This command is used to put a file to FTPS server through serial port. The AT+CFTPSPUT=<len> is used to download the data to be sent. The AT+CFTPSPUT is used to wait the result of sending.

SIM PIN	References
YES	Vendor

Syntax

Read Command	Responses
AT+CFTPSPUT?	+CFTPSPUT: <unsent_len> OK
Write Command	Responses
AT+CFTPSPUT=[“<filepath>”,]<len>	> OK ERROR
Execute Command	Responses
AT+CFTPSPUT	OK +CFTPSPUT: <result> ERROR

Defined values

<filepath>
The path of the file on FTPS server.
<unsent_len>
The length of the data in the sending buffer which is waiting to be sent.
<len>
The length of the data to send
<result>
The final result of the sending.

Examples

AT+CFTPSPUT="t1.txt",10
>testcontent
OK
AT+CFTPSPUT
OK
+CFTPSSPUT: 0
AT+CFTPSPUT?
+CFTPSPUT: 88
OK

8.16 AT+CFTPSSINGLEIP Set FTPS data socket address type

Description

The command is used to set FTPS server data socket IP address type

SIM PIN	References
YES	Vendor

Syntax

Test Command	Responses
AT+CFTPSINGLEIP=?	+CFTPSINGLEIP: (0,1) OK
Read Command	Responses
AT+CFTPSINGLEIP?	+CFTPPORT: <singleip> OK
Write Command	Responses
AT+CFTPSINGLEIP=<singleip>	OK
	ERROR

Defined values

<singleip>

The FTPS data socket IP address type:

- 0 – decided by PORT response from FTPS server
- 1 – the same as the control socket.

Examples

```
AT+CFTPSINGLEIP=1
```

```
OK
```

```
AT+CFTPSINGLEIP?
```

```
+CFTPSINGLEIP:1
```

```
OK
```

```
AT+CFTPSINGLEIP=?
```

```
+CFTPSINGLEIP: (0,1)
```

```
OK
```

Contact us

Shanghai SIMCom Wireless Solutions Ltd.

Add: Building A, SIM Technology Building, No.633, Jinzhong Road, Changning District
200335

Tel: +86 21 3252 3300

Fax: +86 21 3252 3301

URL: <http://www.sim.com/wm/>