IP Application Note

AN_SIM900_IP_APP_V1.00

Document Title:	IP Application Note
Version:	1.00
Date:	2010-07-06
Status:	New
Document Control ID:	AN_SIM900_IP_Application Note_V1.00

General Notes

Simcom offers this information as a service to its customers, to support application and engineering efforts that use the products designed by Simcom. The information provided is based upon requirements specifically provided to Simcom by the customers. Simcom has not undertaken any independent search for additional relevant information, including any information that may be in the customer's possession. Furthermore, system validation of this product designed by Simcom within a larger electronic system remains the responsibility of the customer or the customer's system integrator. All specifications supplied herein are subject to change.

Copyright

VERSION HISTORY

Now document: SIM900 IP Application Note” Version 1.00

Chapter	Chapter	What is new
V1.00	NEW	

Contents

Version history 4
1. Introduction 7
1.1 Scope of the document 7
1.2 Related documents 7
1.3 Conventions and abbreviations 7
2. Structure 8
3. AT commands 9
3.1 AT+SAPBR 9
3.2 Internet HTTP Service Commands 10
3.2.1 AT+HTTPINIT 11
3.2.2 AT+HTTPTERM 11
3.2.3 AT+HTTPPARA 12
3.2.4 AT+HTTPDATA 13
3.2.5 AT+HTTPACTION 14
3.2.6 AT+HTTPREAD 15
3.3 Internet FTP Service Commands 16
3.3.1 AT+ FTPPORT 17
3.3.2 AT+ FTPMODE 17
3.3.3 AT+FTPTYPE 18
3.3.4 AT+FTPPUTOPT 19
3.3.5 AT+FTPCID 20
3.3.6 AT+FTPREST 20
3.3.7 AT+FTPSERV 21
3.3.8 AT+FTPUN 22
3.3.9 AT+FTPPW 22
3.3.10 AT+ FTPGETNAME 23
3.3.11 AT+FTPGETPATH 24
3.3.12 AT+FTPPUTNAME 25
3.3.13 AT+FTPPUTPATH 25
3.3.14 AT+FTPGET 26
3.3.15 AT+FTPPUT 28
4. Examples 29
4.1 Bearer profile 29
4.2 HTTP GET method 29
4.3 HTTP POST method 30
4.4 HTTP HEAD method 30
4.5 Set Proxy HTTP Server 31
4.6 Set HTTP Redirection Parameter 31
4.7 Set HTTP Download Break Point Parameter 32
4.8 FTP GET 32
4.9 FTP PUT 34

4.10 FTP TIME OUT 35
4.11 FTP ERROR 35
4.12 FTP OPERATION ERROR 35
4.13 FTP READ AND WRITE ERROR 36

1. INTRODUCTION

1.1 Scope of the document

This document describes how to use IP application of SIM900 through AT commands. Examples are also given for reference. This document can be used for SIM900 serial modules, like SIM900, SIM900D, SIM900B and SIM900A.

1.2 Related documents

[1] SIM900 AT Commands Set.
[2] SIM900_TCPIP

1.3 Conventions and abbreviations

FTP	File Transfer Protocol
HTTP	Hypertext Transfer Protocol
APN	Access Point Name
GPRS	General Packet Radio Service
PDP	Packet Data Protocol

2. STRUCTURE

There are two modes of IP application for SIM900: APPTCP and SAPBR. APPTCP and SAPBR can be worked at the same time. When in APPTCP mode, it contains TCP/UDP application. When in SAPBR mode, it contains FTP and HTTP applications. About APPTCP application you can consult document SIM900_TCPIP. This document is emphasis on SAPBR application.

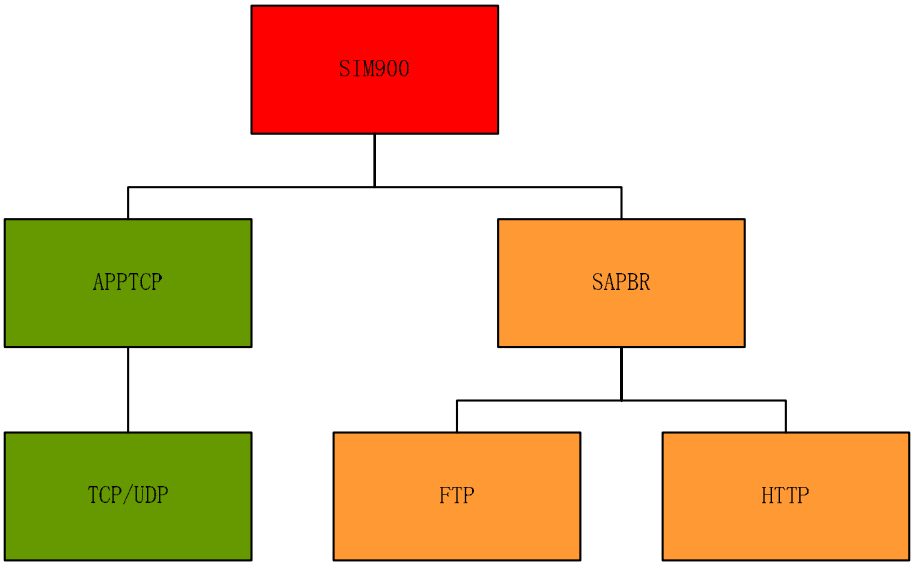

Figure1: SIM900 IP APPLICATION Structure

3. AT commands

3.1 AT+SAPBR

AT+SAPBR	SIMCOM APPLICATION BEARER
Test command **AT+SAPBR=?**	Response **+SAPBR: (0-4), (1-3), "ConParamTag","ConParamValue"** **OK**
	Parameters see Write Command
Write command **AT+SAPBR** **=<cmd_type>,<cid>** **,[<ConParamTag>,** **<ConParamValue>]**	Response **OK** **If<cmd_type> = 2** **+SAPBR: <cid>,<Status>,<IP_Addr>** **OK** **If <cmd_type>=4** **+SAPBR:** **<ConParamTag>,<ConParamValue>** **OK** **Unsolicited Result Code** **+SAPBR < cid >: DEACT**
	Parameters **< cmd_type >** 0: close bearer 1: open bearer 2: query bearer 3: set bearer parameters 4: get bearer parameters **< cid >** bearer profile identifier **<Status>** 0: bearer is connecting 1: bearer is connected 2: bearer is closing 3. bearer is closed < **ConParamTag** > bearer parameter "CONTYPE" Type of Internet connection. Value refer to

	< **ConParamValue_ConType**> “APN” Access point name string: maximum 50 characters “USER” User name string: maximum 50 characters “PWD” Password string: maximum 50 characters “PHONENUM” Phone number for CSD call “RATE” CSD connection rate. value refer to < **ConParamValue_Rate** > < **ConParamValue** > bearer paramer value **< ConParamValue_ConType >** “CSD” Circuit-switched data call. “GPRS” GPRS connection. < **ConParamValue_Rate** > 0: 2400 1: 4800 2: 9600 3: 14400 **<IP_Addr>:** the IP address of bearer
Reference	**Note**

3.2 Internet HTTP Service Commands

SIM900 has an embedded TCP/IP stack that is driven by AT commands and enables the host application to easily access the Internet HTTP service. The advantage of this solution is that it eliminates the need for the application manufacturer to implement its own TCP/IP and PPP stacks, thus minimizing cost and time to integrate Internet connectivity into a new or existing host application. This chapter is a reference guide to all the AT commands and responses defined for use with the TCP/IP stack in HTTP Service.

3.2.1 AT+HTTPINIT

AT+HTTPINIT	HTTP Service Initialize
Test command **AT+HTTPINIT=?**	Response **OK**
Write command **AT+HTTPINIT**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters
Reference	**Note** Before using HTTP service, HTTPINIT should be executed first to initialize the HTTP stack.

3.2.2 AT+HTTPTERM

AT+HTTPTERM	HTTP Service Terminate
Test command **AT+HTTPTERM=?**	Response **OK**
Write command **AT+ HTTPTERM**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters
Reference	**Note**

3.2.3 AT+HTTPPARA

AT+HTTPPARA	**SET HTTP Parameters Value**
Test command **AT+HTTPPARA=?**	Response **+HTTPPARA: "HTTPParamTag"," HTTPParmValue"** **OK**
	Parameters
Write command **AT+ HTTPPARA =< HTTPParamTag >,< HTTPParamValue >**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters **< HTTPParamTag >** HTTP Parameter "CID" (Mandatory Parameter) bearer profile identifier refer to AT+SAPBR "URL" (Mandatory Parameter) HTTP client URL "http://'server'/'path':'tcpPort' " "server": FQDN or IP-address "path": path of file or directory "tcpPort": If parameter is omitted the service connects to HTTP default port 80. Refer to "IETF-RFC 2616". "UA" The user agent string must be set by the application to identify the mobile. Usually operation system and software version info is set with this browser identifier. "PROIP" The IP address of HTTP proxy server "PROPORT" The port of HTTP proxy server "REDIR" This flag controls the redirection mechanism of the SIM900 acting as HTTP client(numeric). If the flag is set (1) the client automatically sends a new HTTP request if the server answers with a redirect code (range 30x).Default is 0 (no redirection). "BREAK" parameter for HTTP method "GET". get partly data range BreakPoint to the end. Note not all the HTTP Server support <BREAK> parameter **< HTTPParamValue >** HTTP Parameter value . Type and supported content depend on related

	< HTTPParamTag >.
Read command **AT+HTTPPARA?**	Response **+ HTTPPARA: < HTTPParamTag >**,< **HTTPParamValue** > **OK**
	Parameters
Reference	**Note**

3.2.4 AT+HTTPDATA

AT+HTTPDATA	**HTTP DATA WRITE**
Test command **AT+HTTPDATA=?**	Response **+HTTPDATA: (1-60416), (1000-120000)** **OK**
	Parameters
Write command **AT+HTTPDATA=<size>,<time>**	Response **DOWNLOAD** **OK** If error is related to ME functionality: **+CME ERROR: <err>**
	Parameters **<size>** Size in bytes of the data to POST. **<time>** Maximum time in milliseconds to input data.
Reference	**Note** It is strongly recommended to set the time as long as enough to input all data and that the real size of the file to download is not bigger than <size>.

3.2.5 AT+HTTPACTION

AT+HTTPACTION	HTTP method Action
Test command **AT+HTTPACTION=?**	Response **+HTTPACTION: (0-2)** **OK**
Write command **AT+HTTPACTION=<Method>**	Response **OK** If error is related to ME functionality: **+CME ERROR: <err>** **Unsolicited Result Code** **+HTTPACTION: <Method>< StatusCode >,<DataLen>**
	Parameter **< Method >** HTTP method specification: 0: GET 1: POST 2: HEAD **<StatusCode>** HTTP Status Code responded by remote server, it identifier refer to HTTP1.1(RFC2616) 100 Continue 101 Switching Protocols 200 OK 201 Created 202 Accepted 203 Non-Authoritative Information 204 No Content 205 Reset Content 206 Partial Content 300 Multiple Choices 301 Moved Permanently 302 Found 303 See Other 304 Not Modified 305 Use Proxy 307 Temporary Redirect 400 Bad Request 401 Unauthorized

	402 Payment Required 403 Forbidden 404 Not Found 405 Method Not Allowed 406 Not Acceptable 407 Proxy Authentication Required 408 Request Time-out 409 Conflict 410 Gone 411 Length Required 412 Precondition Failed 413 Request Entity Too Large 414 Request-URI Too Large 415 Unsupported Media Type 416 Requested range not satisfiable 417 Expectation Failed 500 Internal Server Error 501 Not Implemented 502 Bad Gateway 503 Service Unavailable 504 Gateway Time-out 505 HTTP Version not supported 600 Not HTTP PDU 601 Network Error 602 No memory 603 DNS Error 604 Stack Busy **<DataLen>** the length of data got
Reference	**Note**

3.2.6 AT+HTTPREAD

AT+HTTPREAD	**Read the HTTP server response**
Execution command **AT+HTTPREAD**	Response **+HTTPREAD** **<data>** **OK** Read all the data response by AT+HTTPACTION=0 or AT+HTTPDATA

	If error is related to ME functionality: **+CME ERROR: <err>**
Write command **AT+ HTTPREAD =<start_address><byte_size>**	Response **+HTTPREAD: <date_len>** **<data>** **OK** Read part of the data response by AT+HTTPACTION=0 or AT+HTTPDATA If<byte_size> is bigger than the data size received, data will only return actually data size. If error is related to ME functionality: **+CME ERROR: <err>**
	Parameters **<data>** The data of HTTP server response by AT+ HTTPACTION=0 **<start_address>** The starting point for data output **<byte_size>** The length for data output **<data_len>** The actual length for data output
Test command **AT+HTTPREAD=?**	Response **+HTTPREAD: (1- 318976), (1- 318976)** **OK**
Reference	**Note** The execution command of this command is used to output the HTTP server response to UART or the data ready to POST the server.

3.3 Internet FTP Service Commands

SIM900 has an embedded TCP/IP stack that is driven by AT commands and enables the host application to easily access the Internet FTP service. The advantage of this solution is that it eliminates the need for the application manufacturer to implement its own TCP/IP and PPP stacks, thus minimizing cost and time to integrate Internet connectivity into a new or existing host application. This chapter is a reference guide to all the AT commands and responses defined for use with the TCP/IP stack in FTP Service.

3.3.1 AT+ FTPPORT

AT+FTPPORT	SET FTP CONTROL PORT
Test command **AT+FTPPORT =?**	Response **OK**
	Parameters
Write command **AT+FTPPORT** **=<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> The value of FTP Control port, from 1 to 65535. Default value is 21
Read command **AT+ FTPPORT?**	Response **+FTPPORT: < value >** **OK**
	Parameters See Write Command
Reference	**Note** Numbers above 65535 are illegal as the port identification fields are 16 bits long in the TCP header.

3.3.2 AT+ FTPMODE

AT+FTPMODE	SET FTP ACTIVE OR PASSIVE MODE
Test command **AT+FTPMODE =?**	Response **OK**
	Parameters
Write command **AT+FTPMODE** **=<value>**	Response **OK**

	If error is related to ME functionality: **ERROR**
	Parameters <value> 0 : Ftp active mode 1 : Ftp passive mode Default value is 1
Read command **AT+FTPMODE?**	Response **+FTPMODE: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.3 AT+FTPTYPE

AT+FTPTYPE	**SET THE TYPE OF DATA TO BE TRANSFERRED**
Test command **AT+FTPTYPE =?**	Response **OK**
	Parameters
Write command **AT+FTPTYPE** **=<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> “A” : for FTP ASCII sessions “I” : for FTP Binary sessions Default value is “I”
Read command **AT+FTPTYPE?**	Response **+FTPTYPE: < value >** **OK**

	Parameters See Write Command
Reference	**Note** When this value is set to A, all the data sent by the stack to the FTP server is made of 7 bits characters (NVT-ASCII: the MSB is set to 0). As a consequence binary data containing 8 bits characters will be corrupted during the transfer if the FTPTYPE is set to A.

3.3.4 AT+FTPPUTOPT

AT+FTPPUTOPT	**SET FTP PUT TYPE**
Test command **AT+FTPPUTOPT =?**	Response **OK**
	Parameters
Write command **AT+FTPPUTOPT =<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> “APPE”: for append file “STOU”: for store unique file “STOR”: for store file Default value is “STOR”
Read command **AT+FTPPUTOPT?**	Response **+FTPPUTOPT: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.5 AT+FTPCID

AT+FTPCID	SET FTP BEARER PROFILE IDENTIFIER
Test command **AT+FTPCID=?**	Response **OK**
	Parameters
Write command **AT+FTPCID=<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> bearer profile identifier refer to AT+SAPBR
Read command **AT+FTPCID?**	Response **+ FTPCID: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.6 AT+FTPREST

AT+FTPREST	SET RESUME BEOKEN DOWNLOADS
Test command **AT+ FTPREST =?**	Response **OK**
	Parameters
Write command **AT+FTPREST=<value>**	Response **OK** If error is related to ME functionality: **ERROR**

	Parameters <value> broken point to be resumed
Read command **AT+ FTPREST?**	Response **+ FTPREST: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.7 AT+FTPSERV

AT+FTPSERV	**SET FTP SERVER ADDRESS**
Test command **AT+FTPSERV =?**	Response **OK**
	Parameters
Write command **AT+FTPSERV** **=<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> 32-bit number in dotted-decimal notation (i.e. xxx.xxx.xxx.xxx) or alphanumeric ASCII text string up to 49 characters if DNS is available
Read command **AT+FTPSERV?**	Response **+FTPSERV: < value >** **OK**
	Parameters See Write Command

带格式的：项目符号和编号

Reference	**Note**

3.3.8 AT+FTPUN

AT+FTPUN	**SET FTP USER NAME**
Test command **AT+FTPUN=?**	Response **OK**
	Parameters
Write command **AT+FTPUN=<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> Alphanumeric ASCII text string up to 49 characters.
Read command **AT+FTPUN?**	Response **+FTPUN: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.9 AT+FTPPW

AT+FTPPW	**SET FTP PASSWORD**
Test command **AT+FTPPW =?**	Response **OK**
	Parameters

Write command **AT+FTPPW** **=<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> Alphanumeric ASCII text string up to 49 characters.
Read command **AT+FTPPW?**	Response **+FTPPW: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.10 AT+ FTPGETNAME

AT+FTPGETNAME	**SET DOWNLOAD FILE NAME**
Test command **AT+FTPGETNAM** **E =?**	Response **OK**
	Parameters
Write command **AT+FTPGETNAM** **E =<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> Alphanumeric ASCII text string up to 99 characters

Read command **AT+FTPGETNAME?**	Response **+ FTPGETNAME: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.11 AT+FTPGETPATH

AT+FTPGETPATH	**SET DOWNLOAD FILE PATH**
Test command **AT+FTPGETPATH=?**	Response **OK**
	Parameters
Write command **AT+FTPGETPATH=<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> Alphanumeric ASCII text string up to 99 characters
Read command **AT+FTPGETPATH?**	Response **+FTPGETPATH: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.12 AT+FTPPUTNAME

AT+FTPPUTNAME	SET UPLOAD FILE NAME
Test command **AT+FTPPUTNAME=?**	Response **OK**
	Parameters
Write command **AT+FTPPUTNAME =<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> Alphanumeric ASCII text string up to 99 characters
Read command **AT+FTPPUTNAME?**	Response **+FTPPUTNAME: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.13 AT+FTPPUTPATH

AT+FTPPUTPATH	SET UPLOAD FILE PATH
Test command **AT+FTPPUTPATH=?**	Response **OK**
	Parameters

Write command **AT+FTPPUTPATH =<value>**	Response **OK** If error is related to ME functionality: **ERROR**
	Parameters <value> Alphanumeric ASCII text string up to 99 characters
Read command **AT+FTPPUTPATH ?**	Response **+FTPPUTPATH: < value >** **OK**
	Parameters See Write Command
Reference	**Note**

3.3.14 AT+FTPGET

AT+FTPGET SET DOWNLOAD FILE	
Test command **AT+FTPGET =?**	Response **OK**
	Parameters
Write command **AT+FTPGET =<mode>,[< reqlength>]**	Response If mode is 1 and it is a successful FTP get session: **OK** **+FTPGET:1,1** If data transfer finished: **+FTPGET:1,0** If mode is 1 and it is a failed FTP get session: **OK** **+FTPGET:1,<error>**

	If mode is 2: **+FTPGET:2,<cnflength>** **012345678…** **OK** If error is related to ME functionality: **ERROR**
	Parameters < mode> 1: for open FTP get session 2: for read FTP download data. <reqlength> Requested number of data bytes (1-1460)to be read <cnflength> Confirmed number of data bytes to be read, which may be less than <length>. 0 indicates that no data can be read. <error>61 Net error 62 DNS error 63 connect error 64 timeout 65 server error 66 operation not allow 70 replay error 71 user error 72 password error 73 type error 74 rest error 75 passive error 76 active error 77 operate error 78 upload error 79 download error
Reference	**Note** When "**+FTPGET:1,1"** is shown,then use **AT+FTPGET:2,<reqlength>** to read data. If the module still has data unread, "**+FTPGET:1,1"** will be shown again in a certain time.

3.3.15 AT+FTPPUT

AT+FTPPUT SET UPLOAD FILE	
Test command **AT+FTPPUT=?**	Response **OK**
	Parameters
Write command **AT+FTPPUT** **=<mode>,[<** **reqlength>]**	Response If mode is 1 and it is a successful FTP get session: **OK** **+FTPPUT:1,1,<maxlength>** If mode is 1 and it is a failed FTP get session: **OK** **+FTPPUT:1,<error>** If mode is 2 and <reqlength> is not 0 **+FTPPUT:2,<cnflength>** **……** **//Input data** **OK** If mode is 2 and <reqlength> is 0, response OK, and FTP session will be closed **OK** If data transfer finished. **+FTPPUT:1,0** If error is related to ME functionality: **ERROR**
	Parameters < mode> 1: for open FTP put session 2: for write FTP upload data. <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. <error> see AT+FTPGET
Reference	**Note**

	When "**+FTPPUT:1,1,<maxlength>**" is shown, then use **AT+FTPPUT=2, <reqlength>** to write data.

4. Examples

4.1 Bearer profile

Demonstration	Syntax	Expect Result
Configure bearer profile 1	AT+SAPBR=3,1,"Contype","GPRS" AT+SAPBR=3,1,"APN","CMNET"	OK OK
To open a GPRS context.	AT+SAPBR =1,1	OK
To query the GPRS context.	AT+SAPBR=2,1	+SAPBR: 1,1,"10.89.193.1" OK
To close a GPRS context.	AT+SAPBR =0,1	OK
GPRS context is released by network		+SAPBR 1: DEACT

4.2 HTTP GET method

Demonstration	Syntax	Expect Result
Init http service	AT+HTTPINIT	OK
Set parameter for HTTP session	AT+HTTPPARA = "CID",1 AT+HTTPPARA="URL","www.sim.com"	OK OK
GET session start	AT+HTTPACTION=0	OK
GET successfully		+HTTPACTION:0,200,1000
Read the response of HTTP server	AT+HTTPREAD	+HTTPREAD: 1000 …. *//output the data to uart* OK

Terminate http service	AT+HTTPTERM	OK

4.3 HTTP POST method

Demonstration	Syntax	Expect Result
Init http service	AT+HTTPINIT	OK
Set parameter for HTTP session	AT+HTTPPARA = “CID”,1 AT+HTTPPARA=“URL”,”www.sim.com”	OK OK
POST the data whose size is 100 Bytes and the maximum latency time for inputting is 10000 ms. It is recommended to set the latency time as long as enough to download all the data in the latency time.	AT+HTTPDATA=100,10000	DOWNLOAD …… *//It is ready to receive data from uart , and DCD has been set to low.* OK *//All data has been received over, and DCD is set to high.*
POST session start	AT+HTTPACTION=1	OK
POST successfully		+HTTPACTION:1,200,0
Terminate http service	AT+HTTPTERM	OK

4.4 HTTP HEAD method

Demonstration	Syntax	Expect Result
Init http service	AT+HTTPINIT	OK
Set parameter for HTTP session	AT+HTTPPARA = “CID”,1 AT+HTTPPARA=“URL”,”www.sim.com”	OK OK
HEAD session start	AT+HTTPACTION=1	OK
HEAD successfully		+HTTPACTION:1,200,0
Terminate http service	AT+HTTPTERM	OK

4.5 Set Proxy HTTP Server

Demonstration	Syntax	Expect Result
Init http service	AT+HTTPINIT	OK
Set parameter for HTTP session	AT+HTTPPARA = “CID”,1 AT+HTTPPARA=“URL”,”www.sim.com”	OK OK
Set proxy server IP address	AT+HTTPPARA=“PROIP”,”10.0.0.172”	OK
Set proxy server port	AT+HTTPPARA = “PROPORT”,80	OK
GET session start	AT+HTTPACTION=0	OK
GET successfully		+HTTPACTION:0,200,1000
Read the response of HTTP server	AT+HTTPREAD	+HTTPREAD: 1000 …. *//output the data to uart* OK
Terminate http service	AT+HTTPTERM	OK

4.6 Set HTTP Redirection Parameter

Demonstration	Syntax	Expect Result
Init http service	AT+HTTPINIT	OK
Set parameter for HTTP session	AT+HTTPPARA = “CID”,1	OK
Set the redirection parameter	AT+HTTPPARA = “REDIR”,1	OK
Set the wrong URL	AT+HTTPPARA=“URL”,”www.sim.com/abcde”	OK
GET session start	AT+HTTPACTION=0	OK
GET successfully		+HTTPACTION:0,200,1000

Read the response of HTTP server	AT+HTTPREAD	+HTTPREAD: 1000 …. *//output the data to uart* OK
Terminate http service	AT+HTTPTERM	OK

4.7 Set HTTP Download Break Point Parameter

Demonstration	Syntax	Expect Result
Init http service	AT+HTTPINIT	OK
Set parameter for HTTP session	AT+HTTPPARA = “CID”,1	OK
Set the URL, the size of gif is 16384 byte	AT+HTTPPARA = “URL”,” http://www.sim.com/img/sim_logo_jr_1003_38.gif”	OK
Set the wrong URL	AT+HTTPPARA = “BREAK”,2000	OK
GET session start, get data from 2000 to 16384	AT+HTTPACTION=0	OK
GET successfully		+HTTPACTION:0, 200,14384
Read the response of HTTP server	AT+HTTPREAD	+HTTPREAD: 14384 …. *//output the data to uart* OK
Terminate http service	AT+HTTPTERM	OK

4.8 FTP GET

Demonstration	Syntax	Expect Result

Set parameter for FTP session	AT+FTPCID=1 AT+FTPSERV="116.228.221.52" AT+FTPUN="sim.cs1" AT+FTPPW="******" AT+FTPGETNAME="1K.txt" AT+FTPGETPATH="/"	OK OK OK OK OK OK
Open the FTP get session	AT+FTPGET=1	OK
Data are available		+FTPGET:1,1
Request to read 1024 bytes. 50 bytes are now available.	AT+FTPGET=2,1024	+FTPGET:2,50 01234567890123456789012345678901234567890123456789 OK
Request to read 1024 bytes again. 0 bytes are now available, but it is not the end of session	AT+FTPGET=2,1024	+FTPGET:2,0 OK
If the module receives data but costumer not use AT+FTPGET:2, <reqlength> to read data, "+FTPGET:1,1" will be shown again in a certain time.		+FTPGET:1,1
Request to read 1024 bytes. 1024 bytes are now available.	AT+FTPGET=2,1024	+FTPGET:2,1024 01234567890123456789012345678901234567890123456789 0…..1234 OK
Data transfer finished. The connection to the FTP server is closed.		+FTPGET:1,0

4.9 FTP PUT

Demonstration	Syntax	Expect Result
Set parameter for FTP session	AT+FTPCID=1	OK
	AT+FTPSERV="116.228.221.52"	OK
	AT+FTPUN="sim.cs1"	OK
	AT+FTPPW="******"	OK
	AT+FTPPUTNAME="1K.txt"	OK
	AT+FTPPUTPATH="/"	OK
Open the FTP put session	AT+ FTPPUT =1	OK
FTP session is ready for upload. 1280 is the max length of data can be sent at a time. It depends on the network status.		+FTPPUT:1,1,1280
Client requests to send 100 bytes. Response confirms that 100 bytes must be transferred now.	AT+FTPPUT=2,100	+FTPPUT:2,100 …… *//It is ready to receive data from uart , and DCD has been set to low.* OK *//All data has been received over, and DCD is set to high.*
URC indicates that the FTP session is ready to transfer more data.		+FTPPUT:1,1,1280
No more data to be uploaded. And close FTP put session	AT+FTPPUT=2,0	OK
Data transfer finished. The connection to the FTP server is closed.		+FTPPUT:1,0

4.10 FTP TIME OUT

Demonstration	Syntax	Expect Result
Open the FTP Get session	AT+ FTPGET =1	OK
If network is poor, may be time out. The connection to the FTP server is closed		+FTPGET:1,64
Open the FTP Get session	AT+ FTPGET =1	OK
Data are available		+FTPGET:1,1
If costumer not use AT+FTPGET:2, <reqlength> to read data, "+FTPGET:1,1" will be shown again in a certain time.		+FTPGET:1,1 …….. +FTPGET:1,1
If not read data too long ,may be time out		+FTPGET:1,64

4.11 FTP ERROR

Demonstration	Syntax	Expect Result
Set wrong password	AT+FTPPW="3214567"	OK
Open the FTP Get session	AT+ FTPGET =1	OK
FTP session password error. The connection to the FTP server is closed		+FTPPUT:1,72
Note : Another error ,you can see AT+FTPGET		

4.12 FTP OPERATION ERROR

Demonstration	Syntax	Expect Result
Open the FTP Get session.	AT+ FTPGET =1	OK

Get file name is empty. Show ftp operation error		+FTPPUT:1,66
Open the FTP PUT session	AT+ FTPPUT =1	OK
Open the FTP PUT session again. Show ftp operation error	AT+ FTPPUT =1	OK +FTPPUT:1,66

4.13 FTP READ AND WRITE ERROR

Demonstration	Syntax	Expect Result
Open the FTP Get session.	AT+ FTPGET =1	OK
Read data before "+FTPGET:1,1" is shown	AT+FTPGET=2,1000	ERROR
Data are available		+FTPGET:1,1
Read data after "+FTPGET:1,1" is shown	AT+ FTPGET =1	+FTPGET:2,50 01234567890123456789012345678901234567890123456789 OK
Data transfer finished. The connection to the FTP server is closed.		+FTPGET:1,0
Read data after FTP session is stopped	AT+FTPGET=2,1000	ERROR
Open the FTP PUT session.	AT+ FTPPUT =1	OK
Write data before "+FTPPUT:1,1,1280" is shown	AT+FTPPUT=2,1000	ERROR
Data are available		+FTPPUT:1,1,1280
Write data after "+FTPPUT:1,1,1280" is shown	AT+FTPPUT=2,100	+FTPPUT:2,100 …… OK
No more data to be uploaded. And close FTP put session	AT+FTPPUT=2,0	OK

Write data after FTP session is stopped	AT+ FTPPUT=2,100	ERROR

Contact us:
Shanghai SIMCom Wireless Solutions Ltd.
Add: Building A, SIM Technology Building, No.633 Jinzhong Road, Changning District, Shanghai, P. R. China 200335
Tel: +86 21 3252 3300
Fax: +86 21 3252 3301
URL: www.sim.com/wm