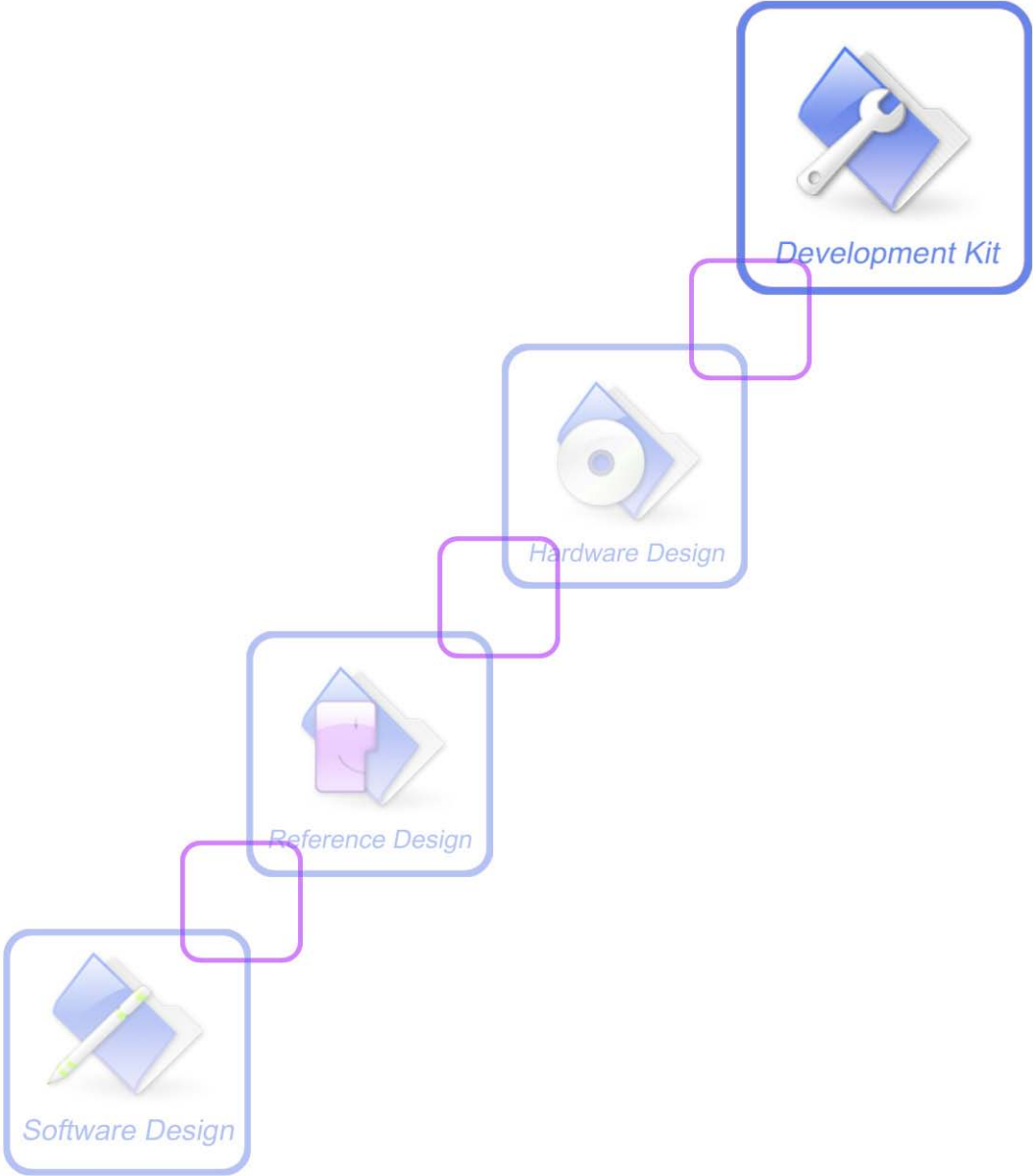


HTTP Application Note



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Version History

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1. Introduction

1.1 Overview

This document gives the usage of SIM7100 HTTP functions. User can get useful information about the SIM7100 HTTP functions quickly through this document.

The HTTP functions are provided in AT command format, and they are designed for customers to design their HTTP applications easily. User can access the HTTP AT command through UART/ USB interface which communicates with SIM7100 module.

SIM7100 HTTP features:

- Basic HTTP GET and POST operation.
- Support transferring file between internal EFS and FTP server
- Support HTTP URL parsing using DNS

1.2 References

The present document is based on the following documents:

- [1] SIM7100_Internet_Service_Application_Note_VX.xx.doc.

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
- 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

2. Transfer a File

3.1 Send GET command to HTTP Server

The following command gets the html web page from `http://www.mywebsite.com:80/`:

1) TE inputs `AT+CHTTPACT` command

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

2) Module reports `+CHTTPACT: REQUEST` to indicate that HTTP server has been connected successfully, and TE can input the HTTP request now.

```
+CHTTPACT: REQUEST
```

3) TE inputs HTTP request. If the request data contains character with decimal value of 03 or 26, it should convert it to 03 03 or 03 26 which contains two characters.

```
GET /index.html HTTP/1.1
Host: www.mywebsite.com
User-Agent: MY WEB AGENT
Content-Length: 0
```

4) TE inputs `<CTRL+Z>` with decimal value 26 to indicate end of the HTTP request data.

```
<CTRL+Z>
```

5) Module reports OK.

```
OK
```

6) Module reports `+CHTTPACT: DATA, <len>\r\n<data>` to indicate that module has received new data from HTTP server. The `<len>` is the the length of `<data>` part. The `<data>` part contains the data received from HTTP server. This unsolicited result may be reported for multiple times which depends on the real size of the file transferred using HTTP.

```
+CHTTPACT: DATA, 1024
```

```
...
```

```
+CHTTP: DATA, 1024
```

...

7) Module reports +CHTTPACT: <result>

+CHTTPACT: 0

3.2 Send POST command to HTTP Server

The following command sends a POST command to the HTTP server:

1) TE inputs AT+CHTTPACT command

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

2) Module reports +CHTTPACT: REQUEST to indicate that HTTP server has been connected successfully, and TE can input the HTTP request now.

+CHTTPACT: REQUEST

3) TE inputs HTTP request. If the request data contains character with decimal value of 03 or 26, it should convert it to 03 03 or 03 26 which contains two characters.

+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

If the HTTP request data contains character with decimal value of 03 or 26, the character should be converted to 03 03 or 03 26 which contains two characters.

4) TE inputs <CTRL+Z> with decimal value 26 to indicate end of the HTTP request data.

<CTRL+Z>

5) Module reports OK.

OK

6) Module reports +CHTTPACT: DATA, <len>\r\n<data> to indicate that module has received new data from HTTP server. The <len> is the the length of <data> part. The <data> part contains the data received from HTTP server. This unsolicited result may be reported for multiple times which depends on the real size of the file transferred using HTTP.

+CHTTPACT: DATA, 1024

...

+CHTTP: DATA, 1024

...

7) Module reports +CHTTPACT: <result>

+CHTTPACT: 0

3.3 Timer values of HTTP transferring

Following are the timer value setting for FTP transferring:

Timer	Value
Socket connect	2 minutes
HTTP transferring timer	1 hours

3. Unsolicited Result Code of HTTP

Following is the unsolicited result code of +CHTTPACT and +CME RROR:

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

4. HTTP AT Command Samples

Get a html page from HTTP server	Comments
<pre>AT+CGSOCKCONT=1,"IP","myapn" OK AT+CHTTPACT="www.mywebsite.com",80 OK +CHTTPACT: REQUEST GET /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</pre>	<p>Set the PDP context profile.</p> <p>Connect HTTP server http://www.mywebsite.com:80/</p> <p>Get the http://www.mywebsite.com:80/index.html web page from HTTP server</p> <p>Module reports the web page content received from HTTP server.</p>
Post data to HTTP server	Comments
<pre>AT+CGSOCKCONT=1,"IP","myapn" OK AT+CHTTPACT="www.mywebsite.com",80 OK +CHTTPACT: REQUEST POST /mydir/test.jsp HTTP/1.1 Host: www.mywebsite.com User-Agent: MY WEB AGENT Accept: */* Content-Type: application/x-www-form-urlencoded</pre>	<p>Set the PDP context profile.</p> <p>Connect HTTP server http://www.mywebsite.com:80/</p> <p>Post data to http://www.mywebsite.com/mydir/test.jsp</p>

```
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
```

Module reports the post response received from HTTP server.

5. Conflict AT Commands

Following AT commands cannot be used with HTTP AT commands together:

- TCP/IP Related AT Commands.
- MMS AT Commands
- GPS AT Commands

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