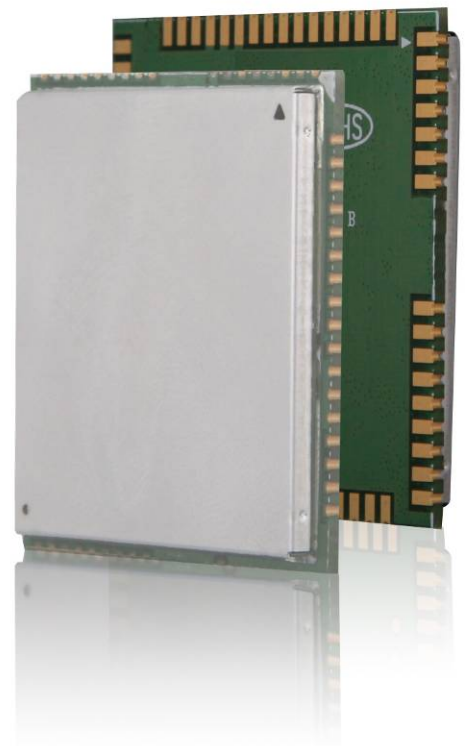




Quectel Cellular Engine

HTTP Service AT Commands

GSM_HTTP_ATC_V1.00



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0. Revision history

Revision	Date	Author	Description of change
1.00	2009-07-06	Jay XIN	Initial

1. Introduction

Quectel Module has an internal TCP/IP stack that is driven by AT commands and enables the host application to easily access the Internet service. It includes TCP service, UDP service, FTP service and HTTP service, etc. This document is a reference guide to all the AT commands and responses defined for HTTP Service. The advantage of this solution is that it eliminates the need for the application manufacturer to implement own HTTP protocol, thus minimizing cost and time to integrate Internet connectivity into a new or existing host application.

1.1. Reference

Table 1: Reference

SN	Document name	Remark
[1]	GSM_TCPIP_AN.pdf	TCPIP Application Notes
[2]	RFC 2616	

2. AT Commands for HTTP Service

2.1. Overview of AT Commands for HTTP Service

Command	Description
AT+QHTTPURL	Set HTTP Server URL
AT+QHTTPGET	Send HTTP GET Request
AT+QHTTPREAD	Read HTTP Server Response
AT+QHTTPPOST	Send HTTP POST Request

Execution of above HTTP related AT commands will switch to data mode. To switch back to AT mode, you can input “+++” and this will terminate the current HTTP AT command. The interval time between the first “+” and the character before the first “+” **MUST NOT** be less than 500 ms and the interval time between the last “+” and the character next to the last “+” **MUST NOT** be less than 500 ms and the interval time between each “+” **MUST** be less than 1000 ms.

2.2. Detailed Description of AT Commands for HTTP Service

2.2.1. AT+QHTTPURL Set HTTP Server URL

AT+QHTTPURL Set HTTP Server URL	
Test Command AT+QHTTPURL=?	Response +QHTTPURL: (1-200),(1-65535) OK
Write Command AT+QHTTPURL=<url_len>,<input_time>	Response CONNECT If error is related to ME functionality: ERROR +CME ERROR: <err>
	Parameter <url_len> the length in bytes of the URL. <input_time> Maximum time in seconds to input URL.
Reference	If send HTTP GET Request, for example, input URL path:

	<p>http://api.efxnow.com/DEMOWebServices2.8/Service.asmx/Echo?Message=helloquectel</p> <p>If send HTTP POST Request, for example, input URL path: http://api.efxnow.com/DEMOWebServices2.8/Service.asmx/Echo</p> <p>Server address must be provided as IP address in standard dot-format(e.g. "192.168.1.1") or as server address names resolvable by a DNS server(e.g. "api.efxnow.xom").</p>
--	--

2.2.2. AT+QHTTPGET Send HTTP GET Request

AT+QHTTPGET Send HTTP GET Request	
<p>Test Command AT+QHTTPGET=?</p>	<p>Response +QHTTPGET: (1-65536)</p> <p>OK</p> <p>Parameter See Write Command</p>
<p>Write Command AT+QHTTPGET=<to_read_time></p>	<p>Response OK</p> <p>If error is related to ME functionality: ERROR +CME ERROR: <err></p> <p>Parameter <to_read_time> time in seconds. AT+QHTTPREAD will be invalid if the idle time after AT+QHTTPGET is longer then to <to_read_time>.</p>
Reference	

2.2.3. AT+QHTTPREAD Read HTTP Server Response

AT+QHTTPREAD Read HTTP Server Response	
<p>Test Command AT+QHTTPREAD=?</p>	<p>Response +QHTTPREAD: (1-65535)</p> <p>OK</p> <p>Parameter See Write Command</p>
Write Command	Response

<p>AT+QHTTPREAD=<wait_time></p>	<p>CONNECT <data> OK</p> <p>If error is related to ME functionality: ERROR +CME ERROR: <err></p> <hr/> <p>Parameter <wait_time> time in seconds. It will close http session when timeout. <data> the data of HTTP server response.</p>
<p>Reference</p>	

2.2.4. AT+QHTTPPOST Send HTTP POST Request

<p>AT+QHTTPPOST Send HTTP POST Request</p>	
<p>Test Command AT+QHTTPPOST=?</p>	<p>Response +QHTTPPOST: (1-29696),(1-65535),(1-65535) OK</p> <hr/> <p>Parameter See Write Command</p>
<p>Write Command AT+QHTTPPOST=<body_size>,<input_time>,<to_read_time></p>	<p>Response CONNECT <body_data> OK</p> <p>If error is related to ME functionality: ERROR +CME ERROR: <err></p> <hr/> <p>Parameter <body_size> size in bytes of the body data to POST. <input_time> Maximum time in seconds to input the body data. <to_read_time> time in seconds. AT+QHTTPREAD will be invalid if the idle time after AT+QHTTPGET is longer then to <to_read_time> <body_data> input the body data to POST from UART.</p>
<p>Reference</p>	

3. Supported unsolicited result codes

3.1. Summary of CME ERROR Codes

Final result code +CME ERROR: <err> indicates an error related to mobile equipment or network. The operation is similar to ERROR result code. None of the following commands in the same Command line is executed. Neither ERROR nor OK result code shall be returned. The following <err> is just the new <err> code for HTTP. About other <err> codes, please refer to [1].

<err> values used by common messaging commands:

Code of <err>	Meaning
3801	http time out
3802	http busy
3803	http uart busy
3804	http no getreq
3805	http network busy
3806	http network open failed
3807	http network no config
3808	http network deactive
3809	http network error
3810	http url error
3811	http empty url
3812	http ip addr error
3813	http dns error
3814	http socket create error
3815	http socket connect error
3816	http socket read error
3817	http socket write error
3818	http socket close
3819	http data encode error
3820	http data decode error
3821	http toread timeout
3822	http reponse failed

4. Examples

4.1. Send HTTP GET Request

AT+QIFGCNT=0

OK

AT+QICSGP=1,"CMNET" //set APN

OK

AT+QIREGAPP //optional

OK

AT+QIACT //optional

OK

AT+QHTTPURL=79,30 //set the URL,

CONNECT

....

//for example, input 79 bytes:

http://api.efxnow.com/DEMOWebServices2.8/Service.aspx/Echo?Message=helloquectel

OK

AT+QHTTPGET=60 //Send HTTP GET Request

OK

AT+QHTTPREAD=30 //read the response of HTTP server.

CONNECT

....

//output the response data of HTTP server to UART.

//for example, UART outputs:

<?xml version="1.0" encoding="utf-8"?>

<string

xmlns="https://api.efxnow.com/webservices2.3">Message
='helloquectel' ASCII:104 101 108 108 111 113 117 101

99 116 101 108 </string>

OK

AT+QIDEACT //deactivate GPRS PDP connect.
DEACT OK

4.2. Send HTTP POST Request

AT+QIFGCNT=0
OK

AT+QICSGP=1,"CMNET" //set APN
OK

AT+QIREGAPP //optional
OK

AT+QIACT //optional
OK

AT+QHTTPURL=58,30 //set the URL,

CONNECT

....

//for example, input 58 bytes:

http://api.efxnow.com/DEMOWebServices2.8/Service.as
mx/Echo

OK

AT+QHTTPPOST=18,50,10

// POST the data whose size is 18 Bytes and the maximum latency time for inputting is 50 s. It is recommended to set the latency time as long as enough to download all the data in the latency time.

CONNECT

//This means it is ready to receive data from UART. And DCD has been set to low. Receive data from UART and not echo.

//for example, input 18 bytes: Message=helloworld

OK

//This means all data has been received over, and DCD is set to high.

AT+QHTTPREAD=30 //read the response of HTTP server.

CONNECT

```
.... //output the response data of HTTP server to UART
//for example, UART outputs:
<?xml version="1.0" encoding="utf-8"?>
<string
xmlns="https://api.efxnow.com/webservices2.3">Message
='helloworld' ASCII:104 101 108 108 111 119 111 114
108 100 </string>
```

OK**AT+QIDEACT**

//deactivate GPRS PDP connect.

DEACT OK

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