UC20 FTP
AT Commands Manual

UMTS/HSPA Module Series

Rev. UC20_FTP_AT_Commands_Manual_V1.1

Date: 2014-10-13

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History

Revision	Date	Author	Description
1.0	2013-12-30	Jonathan WEN/ Nathon MA	Initial
1.1	2014-10-13	Jonathan WEN	1. Added AT commands: AT+QFTPMLSD/AT+QFTPMDTM 2. Added FTPS configurations

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1 Introduction

1.1. The Process of FTP Operation

As the module provides FTP protocol, you can operate file and directory on FTP server by these FTP AT commands. The general process is as follows:

Step 1: Configure and activate the PDP context.

1) Configure the PDP context parameters <apn>, <username>, <password> and other parameters by AT+QICSGP (Please refer to *Quectel_UC20_TCPIP_AT_Commands_Manual*). If QoS settings need to be updated, configure them by the commands AT+CGQMIN, AT+CGEQMIN, AT+CGQREQ and AT+CGEQREQ (Please refer to *Quectel_UC20_AT_Commands_Manual*).

2) Activate the PDP context by AT+QIACT.

3) Configure the PDP context ID for FTP by AT+QFTPCFG="contextid",<contextID>. You should activate the PDP context first.

Step 2: Configure FTP service settings.

1) Configure account information by AT+QFTPCFG="account",<username>,<password>.

2) Configure file type by AT+QFTPCFG="filetype",<file_type>. The file type means the transferred data between FTP server and client is binary data or ASCII data.

3) Configure the transfer mode by AT+QFTPCFG="transmode",<transmode>. The transfer mode means either the FTP server or client listens to the data connection.

4) Configure the response timeout value by AT+QFTPCFG="rsptimeout",<timeout>.

Step 3: Login to FTP server.

Login to FTP server by AT+QFTPOPEN=<hostname>,<port>. And the URC "+QFTPOPEN: 0,0" indicates that login is successful.

Step 4: File operation.

1) Set the current directory by AT+QFTPCWD.

2) Upload a file to FTP server.

a) You can upload a local file to FTP server by AT+QFTPPUT. The file can be RAM files or UFS files. It is strongly recommended to use RAM file to upload the attachments. You can upload a file to RAM or UFS by AT+QFUPL (For more details, please refer to *Quectel_UC20_FILE_AT_Commands_Manual*). After uploading the file to FTP server successfully, you can delete the file by AT+QFDEL (For more details, please refer to *Quectel_UC20_FILE_AT_Commands_Manual*).

b) You can upload a file to FTP server from COM port by AT+QFTPPUT too. Then the module will enter into data mode. You can input "+++" to complete the file uploading.

3) Download a file from FTP server.
You can download a file from FTP server by AT+QFTPGET. The file can be output to COM port or saved to RAM or UFS. It is strongly recommended to save the file in RAM. If you output the file to COM port, the module will enter into data mode.

4) Get the size of file on FTP server by AT+QFTPSIZE.
5) Get the length of data transferred between FTP server and client by AT+QFTPLEN.
6) Delete a file on FTP server by AT+QFTPDEL.
7) Rename a file on FTP server by AT+QFTPRENAME.

Step 5: Directory operation on FTP server.
1) Set the current directory by AT+QFTPCWD.
2) Create a directory by AT+QFTPMKDIR.
3) List the content of a directory by AT+QFTPLIST.
4) List file names of a directory by AT+QFTPNLST.
5) Rename a directory by AT+QFTPRENMAE.
6) Delete a directory by AT+QFTPRMDIR.
7) List standardized file and directory information by AT+QFTPMLSD.
8) Get the file modification time on FTP server by AT+QFTPMDTM.

Step 6: Close connection with FTP server.
Close the connection with FTP server by AT+QFTPCLOSE, and the URC "+QFTPCLOSE: 0,0" will be reported, it indicates the operation is successful. Step 3 to Step 6 can be repeated.

Step 7: Deactivate PDP context.
Deactivate the PDP context by AT+QIDEACT=<contextID> (For details, please refer to *Quectel_UC20_TCPIP_AT_Commands_Manual*).

1.2. Description of FTPS

UC20 supports FTPS client. FTPS means all data from control connection or data connection is SSL/TLS encrypted. The only difference between FTPS and FTP lies in the AT+QFTPCFG and AT+QFTPOPEN command.

If module plays as FTPS client, you should do as follows:

1. Execute AT+QFTPCFG="ssltype",1.
2. Execute AT+QFTPCFG="sslctxid",<sslctxid> to select a <sslctxid>.
3. Execute AT+QSSLCFG to configure the selected <sslctxid>. For details, please refer to *Quectel_UC20_SSL_AT_Commands_Manual*.

4. Login to FTPS server. The port of FTPS and FTP server is different. Usually the port of FTPS server is 990. Please confirm it with the FTPS server provider.
5. If module has been logged into FTPS server successfully, all other operation is same as FTP client, except that FTPS does not support active mode now, so AT+QFTPCFG="transmode",1 must be set.

1.3. Description of Data Mode

The mode of the COM port includes AT command mode and data mode. The difference between them is that in AT command mode, the inputted data via COM port will be treated as AT command, while in data mode, it will be treated as data.

You can exit from data mode by "+++" or pulling up DTR (AT&D1 should be set). To prevent the "+++" from being misinterpreted as data, it should comply with the following sequence:

1) Do not input any character in 1 second or longer before inputting "+++".
2) Input "+++" in 1 second, and no other characters can be input during this time.
3) Do not input any character in 1 second after "+++" has been inputted.

When you execute AT+QFTPPUT, AT+QFTPGET, AT+QFTPLIST and AT+QFTPNLST, if the local file path is "COM:", which means data will be received from or output to COM port, the module will enter into data mode. You can exit from data mode by inputting "+++" or changing DTR level from low to high. Else, you can reenter data mode by executing ATO command when executing AT+QFTPGET, AT+QFTPLIST and AT+QFTPNLST. You cannot reenter data mode by ATO when executing AT+QFTPPUT.

1.4. Error Handling

1.4.1. Executing FTP AT Command Fails

If you execute FTP AT command and receive response "ERROR" from the module, please check whether the SIM card is inserted or not and whether the result of AT+CPIN? is "+CPIN: Ready".

1.4.2. PDP Activation Fails

If you failed to activate PDP context by AT+QIACT command, please check the following aspects:

1. Query whether the PS domain is attached by AT+CGATT? command, if not, execute AT+CGATT=1 to attach PS domain.
2. Query the CGREG status by AT+CGREG? command and make sure the PS domain has already been registered.

3. Query the PDP context parameters by AT+QICSGP command, make sure the APN of specified PDP context has been set.
4. Make sure the specified PDP context ID is neither used by PPP nor activated by AT+CGACT command.
5. The module only supports three PDP contexts activated simultaneously, so you must make sure the number of activated PDP contexts is less than 3.

If the result of checking is OK, but the result of executing AT+QIACT command still fails, please reboot the module to resolve this issue. After rebooting the module, please follow the above checking at least three times and each time at an interval of 10 minutes to avoid frequently rebooting of the module.

1.4.3. DNS Parse Fails

When executing AT+QFTPOPEN command, if "+QFTPOPEN: 604,0" is returned, please check the following aspects:

1. Make sure the domain name of FTP server is valid.
2. Query the status of PDP context by executing "AT+QIACT?" command to make sure the specified PDP context has been activated successfully.

1.4.4. Error Response of FTP Server

If the <protocol_error> in "+QFTPXX: <err>,<protocol_error>" is not 0, it is replied from FTP server. You can check the issues depending on the protocol error code. For example, if <protocol_error> is 533 (Not login, refer to Chapter 5), <username> or <password> may be wrong. If <protocol_error> is 550 (Request failed, refer to Chapter 5), the file or directory may not exist. For details, you can refer to the document RFC959 (File Transfer Protocol).

2 Description of AT Command

2.1. AT+QFTPCFG   FTP Configurations

Configure FTP server, user account, file type, transfer mode and context ID. If the Write Command just takes one parameter, it will query the specified information

AT+QFTPCFG FTP Configurations	
Test Command **AT+QFTPCFG=?**	Response **+QFTPCFG: "account",<username>,<password>** **+QFTPCFG: "filetype",(0,1)** **+QFTPCFG: "transmode",(0,1)** **+QFTPCFG: "contextid",(1-16)** **+QFTPCFG: "rsptimeout",(20-180)** **+QFTPCFG: "ssltype",(0,1)** **+QFTPCFG: "sslctxid",(0-5)** **OK**
Write Command **AT+QFTPCFG="account"[,<username>,<password>]**	Response If <username> and <password> are not omitted: **OK** or **+CME ERROR: <err>** Else query the current settings: **+QFTPCFG: "account",<username>,<password>** **OK**
Write Command **AT+QFTPCFG="filetype"[,<file_type>]**	Response If <file_type> is not omitted: **OK** or **+CME ERROR: <err>** Else query the current settings: **+QFTPCFG: "filetype",<file_type>**

	OK
Write Command **AT+QFTPCFG="transmode"[,\<transmode>]**	Response If \<transmode> is not omitted: **OK** or **+CME ERROR: \<err>** Else query the current settings: **+QFTPCFG: "transmode",\<transmode>** **OK**
Write Command **AT+QFTPCFG="contextid"[,\<contextID>]**	Response If \<contextID> is not omitted: **OK** or **+CME ERROR: \<err>** Else query the current settings: **+QFTPCFG: "contextid",\<contextID>** **OK**
Write Command **AT+QFTPCFG="rsptimeout"[,\<timeout>]**	Response If \<timeout> is not omitted: **OK** or **+CME ERROR: \<err>** Else query the current settings: **+QFTPCFG: "rsptimeout",\<timeout>** **OK**
Write Command **AT+QFTPCFG="ssltype"[,\<ssltype>]**	Response If \<ssltype> is not omitted: **OK** or **+CME ERROR: \<err>** Else query the current settings: **+QFTPCFG: "ssltype",\<ssltype>** **OK**
Write Command **AT+QFTPCFG="sslctxid"[,\<sslctxid>]**	Response If \<sslctxid> is not omitted:

OK
or
+CME ERROR: <err>

Else query the current settings:
+QFTPCFG: "sslctxid",<sslctxid>

OK

Parameter

<username>	String type, the user name for the authentication. The maximum size of the parameter is 50 bytes
<password>	String type, the password for the authentication. The maximum size of the parameter is 50 bytes
<contextID>	Integer type, the PDP context ID, the range is 1-16. It should be activated by AT+QIACT before QFTPOPEN. For details, please refer to *Quectel_UC20_TCPIP_ AT_Commands_Manual*
<file_type>	Integer type, indicates the type of transferred data is ASCII or binary data
	0 Binary
	1 ASCII
<transmode>	Integer type, indicates whether the FTP server or client listens to data connection
	0 Active mode, module will listen to data connection
	1 Passive mode, FTP server will listen to data connection
<timeout>	Integer type, the range is 20-180, the unit is second, and the default value is 90s. Generally, it is the timeout value for most +QFTPXXX: xx,xx after the result code OK is returned, except the commands QFTPPUT/QFTPGET/QFTPLST/QFTPNLST. The rules for these four commands are shown as below:
	a) When the command has been sent, but "CONNECT" has not been output yet, this parameter indicates the maximum interval time for "CONNECT" outputting after the command has been sent
	b) When the module has entered into data mode, this parameter indicates the maximum interval time between two packets of received/transmitted data
	c) When the <local_name> is not "COM:", it indicates the maximum interval time between two packets of received/transmitted data
<ssltype>	Integer type, indicates the module plays as FTP client or FTPS client
	0 FTP client
	1 FTPS client
<sslctxid>	Integer type, indicates the SSL context ID. The range is 0-5. It should be configured by AT+QSSLCFG, please refer to Quectel_*UC20_SSL_AT_Commands_Manual*
<err>	Integer type, indicates the error code of the operation. It is the type of error (Please refer to the Chapter 4)

2.2. AT+QFTPOPEN   Login to FTP Server

This command is used to login to FTP server. You should activate the PDP context by AT+QIACT first. "+QFTPOPEN: <err>,<protocol_error>" indicates the result of QFTPOPEN and it should be output in <timeout> set by AT+QFTPCFG.

AT+QFTPOPEN Login to FTP Server	
Test Command AT+QFTPOPEN=?	Response **+QFTPOPEN: <hostname>,<port>** **OK**
Write Command AT+QFTPOPEN=<hostname>[,<port>]	Response **OK** **+QFTPOPEN: <err>,<protocol_error>** or **+CME ERROR: <err>**

Parameter

<hostname>	String type, the IP address or domain name of the FTP server. The maximum size of the parameter is 50 bytes
<port>	Integer type, the port of the FTP server. The default value is 21
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

Example

AT+QFTPOPEN="quectel.3322.org",21   //Login to FTP server
OK

+QFTPOPEN: 0,0

2.3. AT+QFTPCWD   Set the Current Directory on FTP Server

Set the current directory on FTP server. If OK is returned, "+QFTPCWD: <err>,<protocol_error>" should be output in <timeout> set by AT+QFTPCFG. All the files and directory operation will be set in the current directory.

AT+QFTPCWD Set the Current Directory on FTP Server	
Test Command **AT+QFTPCWD=?**	Response **+QFTPCWD: <path_name>** **OK**
Write Command **AT+QFTPCWD=<path_name>**	Response **OK** **+QFTPCWD: <err>,<protocol_error>** or **+CME ERROR: <err>**

Parameter

<path_name>	String type, a directory path on FTP server. The maximum size of the parameter is 100 bytes. The root path of FTP server is "/"
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

2.4. AT+QFTPPWD   Get the Current Directory on FTP Server

Get the current directory on FTP server. If OK is returned, "+QFTPPWD: 0,<path_name>" or "+QFTPPWD: <err>,<protocol_error>" should be output in <timeout> set by AT+QFTPCFG.

AT+QFTPPWD Get the Current Directory on FTP Server	
Test Command **AT+QFTPPWD=?**	Response **OK**
Execute Command **AT+QFTPPWD**	Response **OK** If successfully get the current directory:

	+QFTPPWD: 0,\<path_name\>
	Else fail to get current directory:
	+QFTPPWD: \<err\>,\<protocol_error\>
	or
	+CME ERROR: \<err\>

Parameter

\<path_name\>	String type, a directory path on FTP server. The maximum size of the parameter is100 bytes. The root path of FTP server is "/"
\<err\>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
\<protocol_error\>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

2.5. AT+QFTPPUT   Upload a File to FTP Server

Upload file to FTP server. The file data can be uploaded from COM port, and the module will enter into data mode, you may input "+++" to abort the file uploading. You can also upload a local file to FTP server. The file can be RAM file or UFS file. You can upload a file to RAM or UFS by AT+QFUPL. And then use QFTPPUT command to upload it to FTP server, after uploading file successfully, you can delete the file by AT+QFDEL (For details, please refer to *Quectel_UC20_FILE_AT_Commands_Manual*).

You can upload a file from specified file position by the \<startpos\> parameter. If the \<local_name\> is "COM:", "CONNECT" should be output in \<timeout\> set by AT+QFTPCFG. If the \<local_name\> is not "COM:", "OK" will be output first, +QFTPPUT: 0,\<transferlen\> will be output after data has been transferred completely.

If the module has entered data mode or the \<local_name\> is not "COM:", the \<timeout\> set by AT+QFTPCFG indicates the maximum interval time between two packets of received/transmitted data.

AT+QFTPPUT Upload a File to FTP Server	
Test Command **AT+QFTPPUT=?**	Response **+QFTPPUT: \<file_name\>,** **\<local_name\>,\<startpos\>,\<uploadlen\>,\<beof\>** **OK**
Write Command **AT+QFTPPUT=\<file_name\>,"COM:"[,**	Response **CONNECT**

<startpos>[,<uploadlen>,<beof>]]	<Input file data> **OK** If successfully upload the data: **+QFTPPUT: 0,<transferlen>** Else fail to upload the data: **+QFTPPUT: <err>,<protocol_error>** or **+CME ERROR: <err>**
Write Command **AT+QFTPPUT=<file_name>,<local_na me>[,<startpos>]** <local_name> is not "COM:"	Response **OK** If successfully upload the data: **+QFTPPUT: 0,< transferlen>** Else fail to upload the data: **+QFTPPUT: <err>,<protocol_error>** or **+CME ERROR: <err>**

Parameter

<file_name>	String type, the file name in FTP server. The maximum size of the parameter is 50 bytes
<local_name>	String type, the local file name. The maximum size of the parameter is 60 bytes. If it is "COM:", the file data will be input from COM port If it starts with "RAM:", the file is from RAM, else from UFS. It is strongly recommended to save file in RAM. After being uploaded successfully, you should delete the file by AT+QFDEL (For details, please refer to *Quectel_UC20_FILE_AT _Commands_Manual*)
<startpos>	Integer type, the start position of file to be put. The default value is 0. If the <uploadlen> and <beof> is specified, the <startpos> should be consequent for uploading data to the same file
<uploadlen>	Integer type, length of data to be uploaded. It is valid only if <local_name> is "COM:". When data from COM reached <uploadlen>, module will exit from data mode
<beof>	Integer type, indicates whether it is the last packet of data to be uploaded 0 Not the last packet of data, when data reached <uploadlen>, module will exit from data mode, "+QFTPPUT: 0,<transferlen>" will be output, but not close data connection, so you can continue to upload data to the same file on FTP 1 The last packet of data, when data reached <uploadlen>, module will exit from data mode and close data connection, "+QFTPPUT: 0,<transferlen>"

will be output

\<transferlen\>	Integer type, length of successfully transferred data
\<err\>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
\<protocol_error\>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

Example

//Upload a file from COM port to FTP server.

AT+QFTPPUT="test.txt", "COM:",0　　　　　//All data will be saved as "test.txt" in FTP server.
CONNECT
\<Input file data\>
\<+++\>
OK

+QFTPPUT: 0,1000

//Upload a file from COM to FTP server twice, each time in 1024 bytes.

AT+QFTPPUT="test.txt", "COM:",0,1024,0　　//It is not the last 1024 bytes of "test.txt".
CONNECT
\<Input file data\>
OK　　　　　　　　　　　　　　　　　//Data length reaches to 1024.

+QFTPPUT: 0,1024
AT+QFTPPUT="test.txt", "COM:",1024,1024,1 //It is the last 1024 bytes of "test.txt".
CONNECT
\<Input file data\>
OK　　　　　　　　　　　　　　　　　//Data length reaches to 1024.

+QFTPPUT: 0,1024

//Upload a file from RAM to FTP server.

AT+QFUPL="RAM:test1.txt",1000,300,1　　　//Upload a file to RAM, the file will be saved as "test1.txt" and the maximum size of file is 1000. 300 indicates timeout, 1 indicates ACK mode. (Please refer to *Quectel_UC20_FILE_AT_Commands_Manual*).
CONNECT
\<Input 1000 bytes data\>
+QFUPL: 1000,707

OK

AT+QFLST="RAM:*"
+QFLST: "RAM:test1.txt",1000

OK
AT+QFTPPUT="test.txt", "RAM:test1.txt",0   //Upload "RAM:test1.txt" to FTP server and save it as
                                                "test.txt" on FTP server.

OK

+QFTPPUT: 0,1000
AT+QFDEL="RAM:test1.txt"
OK

//Upload a file from UFS to FTP server.

AT+QFUPL="test2.txt",1000,200,1   //Upload a file to UFS, the file will be saved as "test2.txt"
                                              and the maximum of file size is 1000. 200 indicates
                                              timeout, 1 indicates ACK mode. (Please refer to
                                              Quectel_UC20_FILE_AT_Commands_Manual).
CONNECT
<Input 1000 bytes data>
+QFUPL: 1000,707

OK
AT+QFLST
+QFLST: "test2.txt",1000

OK
AT+QFTPPUT="test.txt", "test2.txt",550   //Upload a local file "test2.txt" to FTP server and will be
                                              saved as "test.txt" on FTP server. The start position is
                                              550.

OK

+QFTPPUT: 0,450
AT+QFDEL="test2.txt"
OK

2.6. AT+QFTPGET   Download a File from FTP Server

Download a file from FTP server. You can output the file to COM port by
AT+QFTPGET="filename","COM:". The module will enter data mode on receiving data from server. After
data is transferred completely, the module will exit from data mode automatically and output "QFTPGET:
0,<transferlen>". You can save the file to RAM by AT+QFTPGET="filename","RAM:localname" or to UFS

by AT+QFTPGET="filename","localname". After file has been transferred completely, the module will output "+QFTPGET: 0,<transferlen>".

If the <local_name> is "COM:", "CONNECT" should be output in <timeout> set by AT+QFTPCFG. If the <local_name> is not "COM:", "OK" will be output first, "+QFTPGET: 0,<transferlen>" will be output after data being transferred completely.

If the module has entered data mode or the <local_name> is not "COM:", the <timeout> set by AT+QFTPCFG indicates the maximum interval time between two packets of received/transmitted data.

AT+QFTPGET Get a File from FTP Server	
Test Command **AT+QFTPGET=?**	Response **+QFTPGET:** **<file_name>,<local_name>,<startpos>,<downloadlen>** **OK**
Write Command **AT+QFTPGET=<file_name>,"COM:"[, <startpos>[,<downloadlen>]]**	Response **CONNECT** <Output file data> **OK** If successfully download the file: **+QFTPGET: 0,<transferlen>** Else fail to download the file: **+QFTPGET: <err>,<protocol_error>** or **+CME ERROR: <err>**
Write Command **AT+QFTPGET=<file_name>,<local_na me>[,<startpos >]** <local_name> is not "COM:"	Response **OK** If successfully download the file: **+QFTPGET: 0,<transferlen>** Else fail to download the file: **+QFTPGET: <err>,<protocol_error>** or **+CME ERROR: <err>**

Parameter

<file_name>	String type, the file name in FTP server. The maximum size of the parameter is 50 bytes
<local_name>	String type, the local file name. The maximum size of the parameter is 60 bytes. If it is "COM:", the file data will be output to COM port. If it starts with "RAM:", the file will be saved to RAM, else it will be saved to UFS. It is strongly recommended to save the file in RAM. Then you can read the file by AT+QFREAD (For details, please refer to *Quectel_UC20_FILE_AT_Commands_Manual*)
<startpos>	Integer type, the start position of file to get. The default value is 0
<downloadlen>	Integer type, the data length to download. It is valid only if <local_name> is "COM:". If this parameter is specified, module will output <downloadlen> bytes to COM and exit from data mode. You can continue to get data from <startpos> by the same AT command if there is data left
<transferlen>	Integer type, the actually transferred data length. If it is less than <downloadlen>, it means the whole file is transferred completely
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

Example

//Download a file and output to COM port.

AT+QFTPGET="test.txt", "COM:",0
CONNECT
<Output file data>
OK

+QFTPGET: 0,1000

//Download a file and output to COM port twice, each time in 500 bytes.

AT+QFTPGET="test.txt","COM:",0,500   //The size of "test.txt" is 1000 bytes, download the first 500
                                                                              bytes.
CONNECT
<Output file data>
OK

+QFTPGET: 0,500

AT+QFTPGET="test.txt", "COM:",500,500   //Download 500-1000 bytes.
CONNECT
<Output file data>
OK

+QFTPGET: 0,500

//Download a file and save it to RAM.

AT+QFTPGET="test.txt", "RAM:test2.txt",0

OK

+QFTPGET: 0,1000
AT+QFLST="RAM:*"
+QFLST: "RAM:test2.txt",1000

OK

//Download a file from FTP server and save it in UFS.

AT+QFTPGET="test.txt", "test3.txt",550   //The start position is 550.
OK

+QFTPGET: 0,450
AT+QFLST
+QFLST: test3.txt,450

OK

2.7. AT+QFTPSIZE   Get the File Size on FTP Server

Get the file size on FTP server. If "OK" is returned, "+QFTPSIZE: 0,<file_size>" or "+QFTPSIZE: <err>,<protocol_error>" should be output in <timeout> set by AT+QFTPCFG. Otherwise, you should close the FTP connection, deactivate and reactive the network.

AT+QFTPSIZE Get the File Size on FTP Server	
Test Command **AT+QFTPSIZE=?**	Response **+QFTPSIZE: <file_name>** **OK**
Write Command **AT+QFTPSIZE=<file_name>**	Response **OK** If successfully get the file size: **+QFTPSIZE: 0,<file_size>** Else fail to get the file size:

	+QFTPSIZE: <err>,<protocol_error>
	or
	+CME ERROR: <err>

Parameter

<file_name>	String type, the file name in FTP server. The maximum size of the parameter is 50 bytes
<file_size>	Integer type, the size of file on FTP server
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

2.8. AT+QFTPDEL   Delete the File on FTP Server

Delete file on FTP server. If "OK" is returned, "+QFTPDEL: <err>,<protocol_error>" should be output in <timeout> set by AT+QFTPCFG. Otherwise, you should close the FTP connection, deactivate and reactive the network.

AT+ QFTPDEL Delete the File on FTP Server	
Test Command **AT+QFTPDEL=?**	Response **+ QFTPDEL: <file_name>** **OK**
Write Command **AT+ QFTPDEL=<file_name>**	Response **OK** **+QFTPDEL: <err>,<protocol_error>** or **+CME ERROR: <err>**

Parameter

<file_name>	String type, the file name in FTP server. The maximum size of the parameter is 50 bytes
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server

which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

2.9. AT+QFTPMKDIR   Make a Folder on FTP Server

Make a folder on FTP server. If "OK" is returned, "+QFTPMKDIR: <err>,<protocol_error>" should be output in <timeout> set by AT+QFTPCFG. Otherwise, you should close the FTP connection, deactivate and reactive the network.

AT+QFTPMKDIR Make a File Folder on FTP Server	
Test Command **AT+QFTPMKDIR=?**	Response **+QFTPMKDIR: <folder_name>** **OK**
Write Command **AT+QFTPMKDIR=<folder_name>**	Response **OK** **+QFTPMKDIR: <err>,<protocol_error>** or **+CME ERROR: <err>**

Parameter

<folder_name>	String type, the folder name on FTP server. The maximum size of the parameter is 100 bytes.
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

2.10. AT+QFTPRMDIR   Delete a Folder on FTP Server

Delete a folder on FTP server. If "OK" is returned, "+QFTPRMDIR: <err>,<protocol_error>" should be output in <timeout> set by AT+QFTPCFG. Otherwise, you should close the FTP connection, deactivate and reactive the network.

AT+QFTPRMDIR Delete a Folder on FTP Server	
Test Command **AT+QFTPRMDIR=?**	Response **+QFTPRMDIR: <folder_name>** **OK**
Write Command **AT+QFTPRMDIR=<folder_name>**	Response **OK** **+QFTPRMDIR: <err>,<protocol_error>** or **+CME ERROR: <err>**

Parameter

<folder_name>	String type, the folder name on FTP server. The maximum size of the parameter is 100 bytes
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

2.11. AT+QFTPLIST   List Contents of Directory on FTP Server

List contents of directory on FTP server. If the <local_name> is "COM:", "CONNECT" should be output in <timeout> set by AT+QFTPCFG. Else "OK" will be returned first. "+QFTPLIST: 0,<transfer_size>" will be output after contents has been transferred completely.

If the module has entered data mode or the <local_name> is not "COM:", the <timeout> set by AT+QFTPCFG indicates the maximum interval time between two packets of received/transmitted data.

AT+QFTPLIST List Contents of Directory on FTP Server	
Test Command **AT+QFTPLIST=?**	Response **+QFTPLIST: <dirname>, <local_name>** **OK**
Write Command **AT+QFTPLIST= <dirname>[,"COM:"]**	Response **CONNECT** <Output content data> **OK**

	If successfully list contents of the directory:
	+QFTPLIST: 0,<transfer_size>
	Else fail to list contents of the directory:
	+QFTPLIST: <err>,<protocol_error>
	or
	+CME ERROR: <err>
Write Command	Response
AT+QFTPLIST=<dirname>,<local_na me>	**OK**
The <local_name> is not "COM:"	
	If successfully list contents of the directory:
	+QFTPLIST: 0,<transfer_size>
	Else fail to list contents of the directory:
	+QFTPLIST: <err>,<protocol_error>
	or
	+CME ERROR: <err>

Parameter

<dirname>	String type, the folder name on FTP server. The maximum size of the parameter is 100 bytes. If it is ".", it will get the content of current directory set by AT+QFTPCWD
<local_name>	String type, the local position to save data from FTP server. The maximum size of the parameter is 60 bytes. The default value is "COM:". If it is "COM:", the data will be output to COM port. If it starts with "RAM:", the data will be saved to RAM, else it will be saved to UFS. Then you can read the file by AT+QFREAD (For details, please refer to *Quectel_UC20_FILE_AT_Commands_Manual*)
<transfer_size>	Integer type, the size of transferred data from FTP server
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

Example

//Get contents of current directory on FTP server and output to COM port.

AT+QFTPLIST="."
CONNECT
<Output content data>
OK

+QFTPLIST: 0,1000

//Get content of specified directory on FTP server and save to RAM.

AT+QFTPLIST="TESTDIR", "RAM:test2.txt"
OK

+QFTPLIST: 0,1000
AT+QFLST="RAM:*"
+QFLST: "RAM:test2.txt",1000

OK

//Get content of specified directory on FTP server and save to UFS.

AT+QFTPLIST="TESTDIR","test.txt"
OK

+QFTPLIST: 0,1000
AT+QFLST
+QFLST: test.txt,1000

OK

2.12. AT+QFTPNLST   List File Names of Directory on FTP Server

List file names of directory on FTP server. If the <local_name> is "COM:", "CONNECT" should be output in <timeout> set by AT+QFTPCFG. Else "OK" will be returned first. "+QFTPNLST: 0,<transfer_size>" will be output after file names has been transferred completely.

If the module has entered data mode or the <local_name> is not "COM:", the <timeout> set by AT+QFTPCFG indicates the maximum interval time between two packets of received/transmitted data.

AT+QFTPLIST List File Names of Directory on FTP Server	
Test Command **AT+QFTPNLST=?**	Response **+QFTPNLST: <dirname>,<local_name>** **OK**
Write Command **AT+QFTPNLST=<dirname>["COM:"]**	Response **CONNECT** <Output content data> **OK**

	If successfully list file names:
	+QFTPNLST: 0,<transfer_size>
	Else fail to list file names:
	+QFTPNLST: <err>,<protocol_error>
	or
	+CME ERROR: <err>
Write Command	Response
AT+QFTPNLST=<dirname>,<local_name>	**OK**
<local_name> is not "COM:"	
	+QFTPNLST: 0,<transfer_size>
	or
	+CME ERROR: <err>
	If error occurs while listing file name:
	+QFTPNLST: <err>,<protocol_error>

Parameter

<dirname>	String type, the folder name on FTP server. The maximum size of the parameter is 100 bytes. If it is ".", it will get the content of current directory set by AT+QFTPCWD
<local_name>	String type, the local position to save data from FTP server. The maximum size of the parameter is 60 bytes. The default value is "COM:". If it is "COM:", the data will be output to COM port. If it starts with "RAM:", the data will be saved to RAM, else it will be saved to UFS. Then you can read the file by AT+QFREAD (For details, please refer to *Quectel_UC20_FILE_AT_Commands_Manual*)
<transfer_size>	Integer type, the size of transferred data from FTP server
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

Example

//Get file names of current directory on FTP server and output to COM port.

AT+QFTPNLST="."
CONNECT
<Output content data>
OK

+QFTPNLST: 0,1000

//Get file name of specified directory on FTP server and save to RAM.

AT+QFTPNLST="TESTDIR","RAM:test2.txt"
OK

+QFTPNLST: 0,1000
AT+QFLST="RAM:*"
+QFLST: "RAM:test2.txt",1000

OK

//Get file name of specified directory on FTP server and save to UFS.

AT+QFTPNLST="TESTDIR", "test.txt"
OK

+QFTPNLST: 0,1000
AT+QFLST
+QFLST: test.txt,1000

OK

2.13. AT+QFTPMLSD   List Standardized File and Directory Information

List standardized file and directory information on FTP server. If the <local_name> is "COM:", "CONNECT" should be output within <timeout> set by AT+QFTPCFG, else "OK" will be returned first. "+QFTPMLSD: 0,<transfer_size>" will be output after contents being transferred completely.

If the module has entered into data mode or the <local_name> is not "COM:", the <timeout> set by AT+QFTPCFG indicates the maximum interval time between two packets of received/transmitted data.

AT+QFTPMLSD List Standardized File and Directory Information	
Test Command **AT+QFTPMLSD=?**	Response **+QFTPMLSD: <dirname>,<local_name>** **OK**
Write Command **AT+QFTPMLSD=<dirname>[,"COM:"]**	Response **CONNECT** <Output content data> **OK** If successfully list standardized file and directory information: **+QFTPMLSD: 0,<transfer_size>**

	Else fail to list standardized file and directory information: **+QFTPMLSD: <err>,<protocol_error>** or **+CME ERROR: <err>**
Write Command **AT+QFTPMLSD=<dirname>,<local_na me>** The <local_name> is not "COM:"	Response **OK** If successfully list standardized file and directory information: **+QFTPMLSD: 0,<transfer_size>** Else fail to list standardized file and directory information: **+QFTPMLSD: <err>,<protocol_error>** or **+CME ERROR: <err>**

Parameter

<dirname>	String type, the folder name on FTP server. The maximum size of the parameter is 100 bytes. If it is ".", it will list standardized file and directory information set by AT+QFTPCWD
<local_name>	String type, the local position to save data from FTP server. The maximum size of the parameter is 60 bytes. The default value is "COM:". If it is "COM:", the data will be output to COM port. If it starts with "RAM:", the data will be saved to RAM, else it will be saved to UFS. Then you can read the file by AT+QFREAD (For details, please refer to *Quectel_UC20_FILE_AT_Commands_Manual*)
<transfer_size>	Integer type, the size of transferred data from FTP server
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

Example

//Get standardized file and directory information on FTP server and output to COM port.

AT+QFTPMLSD ="."
CONNECT
<Output content data>
OK

+QFTPMLSD: 0,1000

//Get standardized file and directory information on FTP server and save to RAM.

```
AT+QFTPMLSD="TESTDIR", "RAM:test2.txt"
OK


+QFTPMLSD: 0,1000
AT+QFLST="RAM:*"
+QFLST: "RAM:test2.txt",1000


OK
```

//Get standardized file and directory information on FTP server and save to UFS.

```
AT+QFTPMLSD="TESTDIR","test.txt"
OK


+QFTPMLSD: 0,1000
AT+QFLST
+QFLST: test.txt,1000


OK
```

2.14. AT+QFTPMDTM   Get the File Modification Time on FTP Server

Get the file modification time on FTP server. If "OK" is returned, "+QFTPMDTM: 0,<modify_time>" or "+QFTPMDTM: <err>,<protocol_error>" should be output in <timeout> set by AT+QFTPCFG. Otherwise, you should close the FTP connection, deactivate and reactive the network.

AT+QFTPMDTM Get the File Modification Time on FTP Server	
Test Command AT+QFTPMDTM=?	Response +QFTPMDTM: <file_name> OK
Write Command AT+QFTPMDTM=<file_name>	Response OK If successfully get the file modification time: +QFTPMDTM: 0,<modify_time> Else fail to get the file modification time: +QFTPMDTM: <err>,<protocol_error> or +CME ERROR: <err>

Parameter

<file_name>	String type, the file name in FTP server. The maximum size of the parameter is 50 bytes
<modify_time>	String type, the file modification time on FTP server. The format is "YYYYMMDDHHMMSS", or "YYYYMMDDHHMMSS.NNN"
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

2.15. AT+QFTPRENAME   Rename a File or Folder on FTP Server

Rename a file or folder on FTP server. If "OK" is returned, "+QFTPRENAME: <err>,<protocol_error>" should be output in <timeout> set by AT+QFTPCFG. Otherwise, you should close the FTP connection, deactivate and reactive the network.

AT+QFTPRENAME Rename a File or Folder on FTP Server	
Test Command **AT+QFTPRENAME=?**	Response **+QFTPRENAME: <old_name>,<new_name>** **OK**
Write Command **AT+QFTPRENAME=<old_name>,<new_name>**	Response **OK** **+ QFTPRENAME: <err>,<protocol_error>** or **+CME ERROR: <err>**

Parameter

<old_name>	String type, the old file name or folder name on FTP server. The maximum size of the parameter is 100 bytes
<new_name>	String type, the new file name or folder name on FTP server. The maximum size of the parameter is 100 bytes
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
<protocol_error>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

2.16. AT+QFTPLEN   Get the Transferred Data Length

Get the transferred data length on FTP server.

AT+QFTPLEN Get the Transferred Data Length	
Test Command **AT+QFTPLEN=?**	Response **OK**
Execute Command **AT+QFTPLEN**	Response **OK** **+QFTPLEN: 0,<transferlen>** or **+CME ERROR: <err>**

Parameter

<transferlen>	Integer type, the transferred data length on FTP server. When executing AT+QFTPPUT, AT+QFTPGET, AT+QFTPNLST or AT+QFTPLIST, you can query the transferred data length by AT+QFTPLEN
<err>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)

2.17. AT+QFTPSTAT   Get the Status of FTP Service

Get the status of FTP service.

AT+QFTPSTAT Get the Status of FTP Service	
Test Command **AT+QFTPSTAT=?**	Response **OK**
Execute Command **AT+QFTPSTAT**	Response **OK** **+QFTPSTAT: 0,<ftpstat>** or **+CME ERROR: <err>**

Parameter

\<ftpstat\>	Integer type, indicates the current status of FTP services
	0 Opening an FTP service
	1 The FTP service is opened and idle
	2 Transferring data with FTP server
	3 Closing the FTP service
	4 The FTP service is closed
\<err\>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)

2.18. AT+QFTPCLOSE   Logout from FTP Server

Logout from FTP server. If "OK" is returned, "+QFTPCLOSE: \<err\>,\<protocol_error\>" should be output in \<timeout\> set by AT+QFTPCFG. Otherwise, you should deactivate and reactive the network.

AT+QFTPCLOSE Logout from FTP Server	
Test Command **AT+QFTPCLOSE=?**	Response **OK**
Execute Command **AT+QFTPCLOSE**	Response **OK** **+QFTPCLOSE: \<err\>,\<protocol_error\>** or **+CME ERROR: \<err\>**

Parameter

\<err\>	Integer type, indicates the operation error code. It is the type of error (Please refer to the Chapter 4)
\<protocol_error\>	Integer type, for reference only, indicates the original error code from FTP server which is defined in FTP protocol (Please refer to Chapter 5). If it is 0, it is meaningless

3 Example

3.1. Login to FTP Server

//Step 1: Configure and activate the PDP context.

AT+QICSGP=1,1,"UNINET","","",1   //Configure PDP context 1, APN is "UNINET" for
        China Unicom.

OK
AT+QIACT=1   //Activate PDP context 1.
OK   //Activate successfully.
AT+QIACT?   //Query the state of PDP context.
+QIACT: 1,1,1,"10.7.157.1"

OK
AT+QFTPCFG="contextid",1   //Set the PDP context ID as 1. The PDP context ID
        must be activated before.

OK

//Step 2: Configure user account and transfer settings.

AT+QFTPCFG="account","test","test"   //Set user name and password.
OK
AT+QFTPCFG="filetype",1   //Set file type as Binary.
OK
AT+QFTPCFG="transmode",1   //Set transfer mode as Passive mode.
OK
AT+QFTPCFG="rsptimeout",90   //Set response timeout value.
OK

//Step 3: Login to FTP server.

AT+QFTPOPEN="quectel.3322.org",21
OK

+QFTPOPEN: 0,0

3.2. Folder Operation

AT+QFTPCWD="/"	//Set current directory.
OK	
+QFTPCWD: 0,0	
AT+QFTPPWD	//Query current directory.
OK	
+QFTPPWD: 0,/	
AT+QFTPMKDIR="TEST"	//Create a folder as "TEST" in FTP server.
OK	
+QFTPMKDIR: 0,0	
AT+QFTPRENAME="TEST", "TEST_NEW"	//Rename a folder.
OK	
+QFTPRENAME: 0,0	
AT+QFTPRMDIR="TEST_NEW"	//Delete a folder.
OK	
+QFTPRMDIR: 0,0	

3.3. File Operation

AT+QFTPCWD="/"	//Set current directory.
OK	
+QFTPCWD: 0,0	
AT+QFTPPWD	//Query current directory.
OK	
+QFTPPWD: 0,/	
AT+QFTPSIZE="test_my1.txt"	//Query size of "test_my1.txt" on FTP server.
OK	
+QFTPSIZE: 1000	
AT+QFTPRENAME="test_my1.txt", "test_new.txt"	//Rename a file.
OK	
+QFTPRENAME: 0,0	

AT+QFTPMDTM="test_new.txt"   //Get the file modification time of "test_new.txt" on FTP server.
OK

+QFTPMDTM: 0,"20140708110039"
AT+QFTPDEL="test_new.txt"   //Delete "test_new.txt" on FTP server.
OK

+QFTPDEL: 0,0

3.4. List File Information or File Names

AT+QFTPCWD="/"   //Set current directory.
OK

+QFTPCWD: 0,0
AT+QFTPLIST="."   //List file information of current directory and output to COM.
CONNECT
<Output content data>
OK

+QFTPLIST: 0,1000
AT+QFTPLIST=".","RAM:list.txt"   //List file information of current directory and output to RAM:list.txt.
OK

+QFTPLIST: 0,1000

AT+QFTPLIST="TEST_2","COM:"   //List file information of "/TEST_2" and output to COM.
CONNECT
<Output content data>
OK

+QFTPLIST: 0,1000

AT+QFTPNLST="."   //List file names of current directory and output to COM.
CONNECT
<Output content data>
OK

+QFTPNLST: 0,1000
AT+QFTPNLST=".","RAM:nlst.txt" //List file information of current directory and output to RAM:nlst.txt.
OK

+QFTPNLST: 0,1000

AT+QFTPNLST="TEST_2","COM:"   //List file names of "/TEST_2" and output to COM.
CONNECT
<Output content data>
OK

+QFTPNLST: 0,1000

AT+QFTPMLSD="."   //List standardized file and directory information of current directory
                                        and output to COM.
CONNECT
<Output content data>
OK

+QFTPMLSD: 0,1000
AT+QFTPMLSD=".","RAM:nlst.txt" //List standardized file and directory information of current directory
                                        and output to RAM:nlst.txt.
OK

+QFTPMLSD: 0,1000

AT+QFTPMLSD="TEST_2","COM:" //List standardized directory information of "/TEST_2" and output to
                                        COM.
CONNECT
<Output content data>
OK

+QFTPMLSD: 0,1000

3.5. Upload a File to FTP Server

AT+QFTPCWD="/"
OK

+QFTPCWD: 0,0
AT+QFTPSTAT
+QFTPSTAT: 0,1

OK

//Upload a file from COM.

AT+QFTPPUT="test_my.txt", "COM:",0   //All data will be saved as "test.txt" in FTP server.
CONNECT
<Input file data>

<+++>
OK

+QFTPPUT: 0,1000
AT+QFTPLEN
+QFTPLEN: 0,1000

OK
AT+QFTPSIZE="test_my.txt"
OK

+QFTPSIZE: 0,1000

//Upload a file from COM and the start position is 1000.

AT+QFTPPUT="test_my.txt", "COM:",1000   //All data will be saved as "test.txt" in FTP server.
CONNECT
<Input file data>
<+++>
OK

+QFTPPUT: 0,500
AT+QFTPSIZE="test_my.txt"
OK

+QFTPSIZE: 0,1500

//Upload a file from COM to FTP server twice, each time in 1024 bytes.

AT+QFTPPUT="test.txt", "COM:",0,1024,0   //It is not the last 1024 bytes of "test.txt".
CONNECT
<Input file data>
OK   //Data length reaches to 1024.

+QFTPPUT: 0,1024
AT+QFTPPUT="test.txt", "COM:",1024,1024,1   //It is the last 1024 bytes of "test.txt".
CONNECT
<Input file data>
OK   //Data length reaches to 1024.

+QFTPPUT: 0,1024

//Upload a file from RAM to FTP server.

AT+QFUPL="RAM:test_ram.txt",1000,300,1   //Upload a file to RAM, the file will be saved as
                                                      "test_ram.txt" and the maximum of file size is 1000.
                                                      300 indicates timeout, 1 indicates ACK mode. (For

more details, please refer to
Quectel_UC20_FILE_AT_Commands_Manual).

CONNECT
<Input 1000 bytes data>
+QFUPL: 1000,707

OK

AT+QFLST="RAM:*"
+QFLST: "RAM:test_ram.txt",1000

OK
AT+QFTPPUT="test_my1.txt", "RAM:test_ram.txt",0 //Upload "RAM:test_ram.txt" to FTP server and
  saved as "test_my1.txt" on FTP server.

OK

+QFTPPUT: 0,1000
AT+QFTPLEN
+QFTPLEN: 0,1000

OK
AT+QFTPSIZE="test_my1.txt"
OK

+QFTPSIZE: 0,1000
AT+QFDEL="RAM:test_ram.txt"   //Delete local RAM file.
OK

3.6. Download a File from FTP Server

AT+QFTPCWD="/"
OK

+QFTPCWD: 0,0

//Download a file from FTP server and output to COM.

AT+QFTPGET="test_my.txt", "COM:"
CONNECT
<Output file data>
OK

+QFTPGET: 0,1000

//Download a file and output to COM port twice, each time in 500 bytes.

AT+QFTPGET="test.txt","COM:",0,500   //The size of test.txt is 1000 bytes, download the
                                                                          first 500 bytes.

CONNECT
<Output file data>
OK

+QFTPGET: 0,500
AT+QFTPGET="test.txt", "COM:",500,500   //Download 500-1000 bytes.
CONNECT
<Output file data>
OK

+QFTPGET: 0,500

//Download a file from FTP server and save to RAM.

AT+QFTPGET="test_my1.txt","RAM:test.txt"   //Download file and save it to RAM as "test.txt".
OK

+QFTPGET: 0,1000
AT+QFLST="RAM:*"
+QFLST: RAM:test.txt,1000

OK

//Download a file from FTP server and save it to RAM, the start position is 450.

AT+QFTPGET="test_my1.txt", "RAM:test1.txt",450   //Download file and save to RAM as "test.txt".
OK

+QFTPGET: 0,550
AT+QFTPLEN
+QFTPLEN: 0,550

OK
AT+QFLST="RAM:*"
+QFLST: RAM:test.txt,1000
+QFLST: RAM:test1.txt,550

OK

3.7. Logout from FTP Server

```
AT+QFTPCLOSE                              //Logout from FTP server.
OK


+QFTPCLOSE: 0,0
AT+QIDEACT=1                              //Deactivate the PDP context which was activated for
                                           FTP.

OK
```

3.8. FTPS Configuration

```
//Step 1: Configure and activate the PDP context.

AT+QICSGP=1,1,"UNINET","","",1           //Configure PDP context 1, APN is "UNINET" for China
                                           Unicom.

OK
AT+QIACT=1                                //Activate PDP context 1.
OK                                        //Activate successfully.
AT+QIACT?                                 //Query the state of PDP context.
+QIACT: 1,1,1,"10.7.157.1"


OK
AT+QFTPCFG="contextid",1                  //Set the PDP context ID as 1. The PDP context ID must be
                                           activated before.

OK

//Step 2: Configure user account and transfer settings.

AT+QFTPCFG="account","test","test"       //Set user name and password.

OK
AT+QFTPCFG="filetype",1                   //Set file type as binary.
OK
AT+QFTPCFG="transmode",1                  //Set transfer mode as passive mode.
OK
AT+QFTPCFG="rsptimeout",90                //Set response timeout value.
OK

//Step 3: FTPS configuration

AT+QFTPCFG="ssltype",1                    //Set SSL type as 1, module plays as FTPS client.

OK
AT+QFTPCFG="sslctxid",1                   //Select SSL context 1.
OK
AT+QSSLCFG="ciphersuite",1, 0xffff        //Configure SSL cipher suite type as 0xffff, which supports all
                                           cipher suite type .
```

OK
AT+QSSLCFG="seclevel",1,0   //Configure SSL security level as 0, which means the SSL CA
                                      cert is not needed .

OK
AT+QSSLCFG="sslversion",1,1   //Configure SSL version as 1, which means TLS1.0.
OK

//Step 4: Login to FTPS server.

AT+QFTPOPEN="quectel.3322.org",990

OK

+QFTPOPEN: 0,0

//Step 5: Logout from FTPS server.

AT+QFTPCLOSE   //Logout from FTPS server.
OK

+QFTPCLOSE: 0,0
AT+QIDEACT=1   //Deactivate the PDP context which was activated for FTPS.
OK

4 Summary of Error Codes

The error code <err> indicates an error related to mobile equipment or network. The details about <err> are described in the following table.

Table 1: Summary of Error Codes

<err>	Meaning
0	Operate successfully
601	Unknown error
602	FTP service would block
603	FTP service busy
604	DNS parse fails
605	Network error
606	Control connection closed.
607	Data connection closed
608	Socket closed by peer
609	Timeout error
610	Invalid parameter
611	Fail to open file
612	File position invalid
613	File error
614	Service not available, closing control connection
615	Open data connection fails
616	Connection closed; transfer aborted
617	Requested file action not taken

618	Requested action aborted: local error in processing
619	Requested action not taken: insufficient system storage
620	Syntax error, command unrecognized
621	Syntax error in parameters or arguments
622	Command not implemented
623	Bad sequence of commands
624	Command parameter not implemented
625	Not logged in
626	Need account for storing files
627	Requested action not taken.
628	Requested action aborted: page type unknown
629	Requested file action aborted
630	Requested file name invalid
631	SSL auth fail

5 Summary of FTP Protocol Error Codes

The protocol error code <protocol_error> indicates an error replied from FTP server. Please refer to RFC959 (File Transfer Protocol).The details about <protocol_error> are described in the following table.

Table 2: Summary of FTP Protocol Error Codes

<protocol_error>	Meaning
421	Service not available, closing control connection
425	Open data connection fails
426	Connection closed; transfer aborted
450	Requested file action not taken
451	Requested action aborted: local error in processing
452	Requested action not taken: insufficient system storage
500	Syntax error, command unrecognized
501	Syntax error in parameters or arguments
502	Command not implemented
503	Bad sequence of commands
504	Command parameter not implemented
530	Not logged in
532	Need account for storing files
550	Requested action not taken. File unavailable
551	Requested action aborted: page type unknown
552	Requested file action aborted. Exceeded storage allocation
553	Requested action not taken. File name not allowed

6 Appendix A Reference

Table 3: Related Documents

SN	Document Name	Remark
[1]	RFC959	File Transfer Protocol
[2]	Quectel_UC20_TCPIP_AT_Commands_Manual	Introduction about UC20 TCPIP AT commands
[3]	Quectel_UC20_FILE_AT_Commands_Manual	Introduction about UC20 file AT commands
[4]	Quectel_UC20_AT_Commands_Manual	UC20 AT commands manual
[5]	Quectel_UC20_SSL_AT_Commands_Manual	Introduction about UC20 SSL AT commands

Table 4: Terms and Abbreviations

Abbreviation	Description
FTP	File Transfer Protocol
PDP	Packet Data Protocol
DTR	Data Terminal Ready
PPP	Point-to-Point Protocol
DNS	Domain Name Server