

# EG800Q&EG91xQ Series FTP(S) Application Note

**LTE Standard Module Series**

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# About the Document

## Revision History

Version	Date	Author	Description
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1.0	2023-02-07	Orange LI/ Lawrence LIU	First official release
1.1	2023-09-05	Elmo HUANG	Updated the applicable modules: <ul style="list-style-type: none"><li>● Added EG916Q-GL.</li><li>● Updated EG800Q-EU to EG800Q series.</li></ul>
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# 1 Introduction

Quectel LTE Standard EG800Q series and EG91xQ family (EG915Q series and EG916Q-GL) modules support FTP and FTPS file transfer protocols (hereinafter referred to as "FTP(S)").

The FTP (File Transfer Protocol) is a standard network protocol used for transferring computer files between a client and server on a computer network, with high transmission rate.

FTPS (also known as FTP over SSL, and FTP Secure) is an extension to the commonly used File Transfer Protocol (FTP) that adds support for the Transport Layer Security (TLS) and, formerly, the Secure Sockets Layer cryptographic protocols.

This document explains how to use the FTP(S) function of the following Quectel modules through AT commands.

## 1.1. AT Command Introduction

### 1.1.1. Definitions

- **<CR>** Carriage return character.
- **<LF>** Line feed character.
- **<...>** Parameter name. Angle brackets do not appear on the command line.
- **[...]** Optional parameter of a command or an optional part of TA information response. Square brackets do not appear on the command line. When an optional parameter is not given in a command, the new value equals its previous value or the default settings, unless otherwise specified.
- **Underline** Default setting of a parameter.

### 1.1.2. AT Command Syntax

All command lines must start with **AT** or **at** and end with **<CR>**. Information responses and result codes always start and end with a carriage return character and a line feed character: **<CR><LF><response><CR><LF>**. In tables presenting commands and responses throughout this document, only the commands and responses are presented, and **<CR>** and **<LF>** are deliberately omitted.



Table 1: Types of AT Commands

Command Type	Syntax	Description
Test Command	<b>AT+&lt;cmd&gt;=?</b>	Test the existence of the corresponding command and return information about the type, value, or range of its parameter.
Read Command	<b>AT+&lt;cmd&gt;?</b>	Check the current parameter value of the corresponding command.
Write Command	<b>AT+&lt;cmd&gt;=&lt;p1&gt;[,&lt;p2&gt;[,&lt;p3&gt;[...]]]</b>	Set user-definable parameter value.
Execution Command	<b>AT+&lt;cmd&gt;</b>	Return a specific information parameter or perform a specific action.

## 1.2. Declaration of AT Command Examples

The AT command examples in this document are provided to help you learn about the use of the AT commands introduced herein. The examples, however, should not be taken as Quectel's recommendations or suggestions about how to design a program flow or what status to set the module into. Sometimes multiple examples may be provided for one AT command. However, this does not mean that there is a correlation among these examples, or that they should be executed in a given sequence.

## 1.3. Using FTP(S) AT Commands

As EG800Q series and EG91xQ family modules support FTP(S) protocol, file and directory on FTP(S) server can be operated via FTP(S) AT commands. The general process is as follows:

### Step 1: Configure and activate a PDP context

1. Configure <APN>, <username>, <password> and other parameters of a PDP context by **AT+QICSGP**. See **document [1]** for details.
2. Activate the PDP context via **AT+QIACT**. See **document [1]** for details.
3. Configure the PDP context ID for FTP(S) by **AT+QFTPCFG="contextid",<contextID>**. The PDP context should be activated first.

### Step 2: Configure user account and FTP(S) server

1. Configure account information by **AT+QFTPCFG="account",<username>,<password>**.
2. Configure file type by **AT+QFTPCFG="filetype",<file\_type>**. Either binary data or ASCII files can be transferred between FTP(S) server and client.
3. Configure the transfer mode by **AT+QFTPCFG="transmode",<transmode>**. The transfer

mode means either the FTP(S) server or client listens on a port for a data connection. Note that **AT+QFTPCFG="transmode",1** must be set for FTP(S) operations, because FTP(S) currently does not support active mode.

4. Configure the response timeout value by **AT+QFTPCFG="rsptimeout",<timeout>**.
5. If the module is an FTPS client, execute the following commands:
  - 1) Execute **AT+QFTPCFG="ssltype",1**.
  - 2) Execute **AT+QFTPCFG="sslctxid",<sslctxid>** to select **<sslctxid>**.
  - 3) Execute **AT+QSSLCFG** to configure the selected **<sslctxid>**. See *document [3]* for details.

### Step 3: Login to FTP(S) server

Login to FTP(S) server by **AT+QFTPOPEN=<hostname>,<port>**. If URC **+QFTPOPEN: 0,0** is returned, it indicates that the operation is successful. Port numbers of FTPS and FTP servers are different. FTPS server port number depends on FTPS server provider, and it is usually 990.

### Step 4: File operation

1. Set the current directory by **AT+QFTPCWD**.
2. Upload a file to FTP(S) server.
  - 1) Option 1: Upload a file from UFS by **AT+QFUPL**, then upload the file to FTP(S) server by **AT+QFTPPUT**. After successfully uploading the file to FTP(S) server, delete the file by **AT+QFDEL**. See *document [4]* for details of **AT+QFUPL** and **AT+QFDEL**.
  - 2) Option 2: Upload a file to FTP(S) server through COM port by **AT+QFTPPUT**, then the module will enter data mode. **+++** can be inputted to finish the file uploading process.
3. Download a file from FTP(S) server by **AT+QFTPGET**. The file can be outputted to COM port or saved to UFS. If the file is outputted to COM port, the module will enter data mode.
4. Get the size of the file on FTP(S) server by **AT+QFTPSIZE**.
5. Get the length of data transferred between FTP(S) server and client by **AT+QFTPLEN**.
6. Delete a file on FTP(S) server by **AT+QFTPDEL**.
7. Rename a file on FTP(S) server by **AT+QFTPRENAME**.
8. Get the file modification time on FTP(S) server by **AT+QFTPMDTM**.

### Step 5: Directory operation on FTP(S) 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. List standardized file and directory information by **AT+QFTPMLSD**.
6. Rename a directory by **AT+QFTPRENAME**.
7. Delete a directory by **AT+QFTPRMDIR**.

### Step 6: Close connection with FTP(S) server

Close the connection with FTP(S) server by **AT+QFTPCLOSE**. If **+QFTPCLOSE: 0,0** URC is

reported, it indicates that 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>**. See **document [1]** for details.

## **1.4. Description of Data Mode**

The COM port of EG800Q series and EG91xQ family modules has two working modes: AT command mode and data mode. In AT command mode, the data inputted via COM port is regarded as AT command, while in data mode, it is regarded as data.

### ● **Exit Data Mode**

Input **+++** or pull up "MAIN\_DTR" pin to make the module exit data mode. To prevent **+++** from being misinterpreted as data, the following sequence should be followed before using COM port:

1. Do not input any character for at least 1 second before and after inputting **+++**.
2. Input **+++** within 1 s, and wait until **OK** is returned. Once **OK** is returned, the COM port exits the data mode and switches to AT command mode.

If you are exiting the data mode by pulling the "MAIN\_DTR" pin up, make sure to set **AT&D1** firstly.

### ● **Enter Data Mode**

Once **AT+QFTPPUT**, **AT+QFTPGET**, **AT+QFTPLIST**, **AT+QFTPMLSD** and **AT+QFTPNLST** are executed, if the local file path is "**COM:**", which means data will be received from or outputted to COM port, the COM port will enter data mode. If you input **+++** or pull the "MAIN\_DTR" pin up to make the port exit data mode, you can re-enter data mode by executing **ATO** after executing **AT+QFTPGET**, **AT+QFTPLIST**, and **AT+QFTPNLST**, whereas you cannot re-enter data mode via **ATO** after executing **AT+QFTPPUT**.

## 2 Description of FTP(S) AT Commands

### 2.1. AT+QFTPCFG Configure Parameters for FTP(S) Server

This command configures FTP(S) server parameters, including user account, file type, transfer mode and PCD context ID.

AT+QFTPCFG Configure Parameters for FTP(S) Server	
Test Command <b>AT+QFTPCFG=?</b>	Response <b>+QFTPCFG: "account",&lt;username&gt;,&lt;password&gt;</b> <b>+QFTPCFG: "ssltype",(range of supported &lt;SSL_type&gt;s)</b> <b>+QFTPCFG: "sslctxid",(range of supported &lt;sslctxid&gt;s)</b> <b>+QFTPCFG: "filetype",(list of supported &lt;file_type&gt;s)</b> <b>+QFTPCFG: "transmode",(list of supported &lt;transmode&gt; s)</b> <b>+QFTPCFG: "contextid",(range of supported &lt;contextID&gt; s)</b> <b>+QFTPCFG: "rsptimeout",(range of supported &lt;timeout&gt;s)</b> <b>+QFTPCFG: "data_address",(range of supported &lt;data_address_type&gt;s),(range of supported &lt;data_timeout&gt;s)</b>  <b>OK</b>
Write Command <b>AT+QFTPCFG="account"[,&lt;username&gt;,&lt;password&gt;]</b>	Response If the optional parameters are omitted, query the current setting: <b>+QFTPCFG: "account",&lt;username&gt;,&lt;password&gt;</b>  <b>OK</b>  If the optional parameters are specified, set the username and password for authentication: <b>OK</b> Or

	<b>+CME ERROR: &lt;result&gt;</b>
Write Command <b>AT+QFTPCFG="ssltype",&lt;SSL_type&gt;]</b>	<p>Response</p> <p>If the optional parameter is omitted, query the current setting: <b>+QFTPCFG: "ssltype",&lt;SSL_type&gt;</b></p> <p><b>OK</b></p> <p>If the optional parameter is specified, set the SSL type: <b>OK</b></p> <p>Or <b>+CME ERROR: &lt;result&gt;</b></p>
Write Command <b>AT+QFTPCFG="sslctxid",&lt;sslctxid&gt;]</b>	<p>Response</p> <p>If the optional parameter is omitted, query the current setting: <b>+QFTPCFG: "sslctxid",&lt;sslctxid&gt;</b></p> <p><b>OK</b></p> <p>If the optional parameter is specified, set the SSL context ID: <b>OK</b></p> <p>Or <b>+CME ERROR: &lt;result&gt;</b></p>
Write Command <b>AT+QFTPCFG="filetype",&lt;file_type&gt;]</b>	<p>Response</p> <p>If the optional parameter is omitted, query the current setting: <b>+QFTPCFG: "filetype",&lt;file_type&gt;</b></p> <p><b>OK</b></p> <p>If the optional parameter is specified, set the file type: <b>OK</b></p> <p>Or <b>+CME ERROR: &lt;result&gt;</b></p>
Write Command <b>AT+QFTPCFG="transmode",&lt;transmode&gt;]</b>	<p>Response</p> <p>If the optional parameter is omitted, query the current setting: <b>+QFTPCFG: "transmode",&lt;transmode&gt;</b></p> <p><b>OK</b></p> <p>If the optional parameter is specified, set the transfer</p>

	<p>mode:</p> <p><b>OK</b></p> <p>Or</p> <p><b>+CME ERROR: &lt;result&gt;</b></p>
<p>Write Command</p> <p><b>AT+QFTPCFG="contextid"[,&lt;contextID&gt;]</b></p>	<p>Response</p> <p>If the optional parameter is omitted, query the current setting:</p> <p><b>+QFTPCFG: "contextid",&lt;contextID&gt;</b></p> <p><b>OK</b></p> <p>If the optional parameter is specified, set the context ID:</p> <p><b>OK</b></p> <p>Or</p> <p><b>+CME ERROR: &lt;result&gt;</b></p>
<p>Write Command</p> <p><b>AT+QFTPCFG="rsptimeout",&lt;timeout&gt;]</b></p>	<p>Response</p> <p>If the optional parameter is omitted, query the current setting:</p> <p><b>+QFTPCFG: "rsptimeout",&lt;timeout&gt;</b></p> <p><b>OK</b></p> <p>If the optional parameter is specified, configure the response timeout:</p> <p><b>OK</b></p> <p>Or</p> <p><b>+CME ERROR: &lt;err&gt;</b></p>
<p>Write Command</p> <p><b>AT+QFTPCFG="data_address"[,&lt;data_address_type&gt;,&lt;data_timeout&gt;]</b></p>	<p>Response</p> <p>If the optional parameters are omitted, query the current setting:</p> <p>1) If &lt;data_address_type&gt; is 2:</p> <p><b>+QFTPCFG: "data_address",&lt;data_address_type&gt;,&lt;data_timeout&gt;</b></p> <p><b>OK</b></p> <p>2) If &lt;data_address_type&gt; is not 2:</p> <p><b>+QFTPCFG: "data_address",&lt;data_address_type&gt;</b></p> <p><b>OK</b></p> <p>If any of the optional parameters is specified, set the data connection address:</p> <p><b>OK</b></p>

	Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	300 ms
Characteristics	This command takes effect immediately. The configurations are not saved.

## Parameter

<b>&lt;username&gt;</b>	String type. Username for authentication. Maximum size: 255 bytes.
<b>&lt;password&gt;</b>	String type. Password for authentication. Maximum size: 255 bytes.
<b>&lt;SSL_type&gt;</b>	Integer type. Determines whether the module works as FTP or FTPS client. 0 FTP client 1 FTPS implicit encryption 2 FTPS explicit encryption
<b>&lt;sslctxid&gt;</b>	Integer type. SSL context ID. Range: 0–5. Default value: 0. Configure the SSL parameters with <b>AT+QSSLCFG</b> . See <b>document [3]</b> for details.
<b>&lt;file_type&gt;</b>	Integer type. Type of transmission data. 0 Binary 1 ASCII
<b>&lt;transmode&gt;</b>	Integer type. Determines whether the FTP(S) server or client listens on a port for data connection. 0 Active mode, the module will listen for the data connection from the FTP(S) server on the client port (Not supported currently). 1 Passive mode, the module will listen for the data connection from the client on the FTP(S) server port
<b>&lt;contextID&gt;</b>	Integer type. PDP context ID. Range: 1–15. Default value: 1. Activate PDP context ID with <b>AT+QIACT</b> before using <b>AT+QFTPOPEN</b> . See <b>document [1]</b> for details.
<b>&lt;timeout&gt;</b>	Integer type. Range: 20–180. Default value: 90. Unit: second. Generally, it is the response timeout value for most <b>+QFTPXXX: xx,xx</b> commands before the <b>OK</b> result code is returned, except for <b>AT+QFTPPUT/QFTPGET/QFTPLST/QFTPNLST/QFTPMLSD</b> . Rules for these four commands are shown below: 1) When the command has been sent, but <b>CONNECT</b> has not been outputted yet, this parameter indicates the response timeout value for <b>CONNECT</b> to be outputted after the command has been sent. 2) When the module has entered data mode, this parameter indicates the maximum interval between two packets of received/transferred data. 3) When <b>&lt;local_name&gt;</b> is not "COM:", it indicates the maximum interval between two packets of received/transferred data.
<b>&lt;data_address_type&gt;</b>	Integer type. Determines the FTP(S) data connection address selection. 0 Use server dispatched address 1 Use FTP(S) control session address

	2	Use FTP(S) control session address. If the connection fails, an address assigned by server will be used.
<data_timeout>		Integer type. Time required to switch the address assigned by the server when the FTP(S) control session address connection fails. It is valid only when <data_address_type> is 2. Range: 15–50. Default value: 25. Unit: second.
<err>		Integer type. Result code. See <b>Chapter 5</b> for details.

#### NOTE

Since FTP(S) does not currently support active mode, you must set <transmode> to 1 when using FTP(S).

## 2.2. AT+QFTPOPEN Login to FTP(S) Server

This command logs in to FTP(S) server. The PDP context should be activated with **AT+QIACT** first. **+QFTPOPEN: <err>,<protocol\_error>** indicates the result of **AT+QFTPOPEN** and it should be outputted within <timeout> configured with **AT+QFTPCFG**.

AT+QFTPOPEN Login to FTP(S) Server	
Test Command <b>AT+QFTPOPEN=?</b>	Response <b>+QFTPOPEN: &lt;hostname&gt;,&lt;port&gt;</b>  <b>OK</b>
Write Command <b>AT+QFTPOPEN=&lt;hostname&gt;[,&lt;port&gt;] ]</b>	Response <b>OK</b>  <b>+QFTPOPEN: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <timeout> configured via <b>AT+QFTPCFG</b>
Characteristics	This command takes effect immediately. The configurations are not saved.

### Parameter

<hostname>	String type. IP address and domain name of the FTP(S) server. Maximum size: 255 bytes.
<port>	Integer type. FTP(S) server port number. Range: 1–65535. Default value: 21.
<err>	Integer type. Result code. See <b>Chapter 5</b> for details.



<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.
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**NOTE**

1. Configure the server address according to your use case.
2. Port numbers of FTPS and FTP servers are different. FTPS server port number depends on FTPS server provider, and it is usually 990.

## 2.3. AT+QFTPCWD Configure the Current Directory on FTP(S) Server

The command configures the current directory on FTP(S) server. If **OK** is returned, **+QFTPCWD:** **<err>**,**<protocol\_error>** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. All file and directory operations will be performed in the current directory.

### AT+QFTPCWD Configure the Current Directory on FTP(S) Server

Test Command <b>AT+QFTPCWD=?</b>	Response <b>+QFTPCWD: &lt;path_name&gt;</b>  <b>OK</b>
Write Command <b>AT+QFTPCWD=&lt;path_name&gt;</b>	Response <b>OK</b>  <b>+QFTPCWD: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	This command takes effect immediately. The configuration is not saved.

### Parameter

<b>&lt;path_name&gt;</b>	String type. Directory path on FTP(S) server. Maximum size: 255 bytes. FTP(S) server root path: "/".
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

## 2.4. AT+QFTPPWD Get Current Directory on FTP(S) Server

This command retrieves the current directory on FTP(S) server. If **OK** is returned, **+QFTPPWD: 0,<path\_name>** or **+QFTPPWD: <err>,<protocol\_error>** should be outputted within **<timeout>** configured with **AT+QFTPCFG**.

AT+QFTPPWD Get Current Directory on FTP(S) Server	
Test Command <b>AT+QFTPPWD=?</b>	Response <b>OK</b>
Execution Command <b>AT+QFTPPWD</b>	Response <b>OK</b>  If the current directory is retrieved successfully: <b>+QFTPPWD: 0,&lt;path_name&gt;</b>  If the retrieval of current directory fails: <b>+QFTPPWD: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	This command takes effect immediately. The configuration is not saved.

### Parameter

<b>&lt;path_name&gt;</b>	String type. Directory path on FTP(S) server. Maximum size: 255 bytes. FTP(S) server root path: "/".
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

## 2.5. AT+QFTPPUT Upload a File to FTP(S) Server

This command uploads a file to FTP(S) server. If the file data are uploaded via COM port, then the module will enter data mode. Inputting **+++** will abort file uploading. A local file can be uploaded to FTP(S) server, but the file must be a UFS file. A file can be uploaded to UFS with **AT+QFUPPL**, and then uploaded to FTP(S) server via **AT+QFTPPUT**. After the file is uploaded successfully, the local UFS file can be deleted with **AT+QFDEL**. See **document [4]** for details.

A file can be uploaded from a specified file position by **<startpos>**. If **<local\_name>** is "COM:", **CONNECT** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. If **<local\_name>** is not "COM:", **OK** is outputted first, and then **+QFTPPUT: 0,<transferlen>** or **+QFTPPUT: <err>,<protocol\_error>** is outputted after data transfer is completed.

If the module has entered data mode or **<local\_name>** is not "COM:", **<timeout>** configured with **AT+QFTPCFG** indicates the maximum interval between two packets of received/transferred data.

AT+QFTPPUT Upload a File to FTP(S) Server	
Test Command <b>AT+QFTPPUT=?</b>	Response <b>+QFTPPUT: &lt;file_name&gt;,&lt;local_name&gt;,&lt;startpos&gt;,&lt;uploadlen&gt;,&lt;beof&gt;</b>  <b>OK</b>
Write Command When <b>&lt;local_name&gt;</b> is "COM:", i.e., to input data via COM port <b>AT+QFTPPUT=&lt;file_name&gt;,&lt;local_name&gt;[,&lt;startpos&gt;[,&lt;uploadlen&gt;,&lt;beof&gt;]]</b>	Response If the module enters the data mode successfully <b>CONNECT</b> <b>&lt;Input data via COM port&gt;</b> <b>OK</b>  If the file data is uploaded successfully: <b>+QFTPPUT: 0,&lt;transferlen&gt;</b>  If the data upload fails: <b>+QFTPPUT: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Write Command When <b>&lt;local_name&gt;</b> is not "COM:" <b>AT+QFTPPUT=&lt;file_name&gt;,&lt;local_name&gt;[,&lt;startpos&gt;]</b>	Response <b>OK</b>  If the file data is uploaded successfully: <b>+QFTPPUT: 0,&lt;transferlen&gt;</b>  If the data upload fails: <b>+QFTPPUT: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	This command takes effect immediately. The configurations are not saved.

## Parameter

<b>&lt;file_name&gt;</b>	String type. File name on FTP(S) server. Maximum size: 255 bytes.
<b>&lt;local_name&gt;</b>	String type. Local file name. Maximum size: 63 bytes. If it is <b>"COM:"</b> , the file received by COM port will be uploaded to the FTP(S) server. Otherwise, the file specified by <b>&lt;local_name&gt;</b> will be uploaded to the FTP(S) server from UFS. After successful uploading, delete the local UFS file with <b>AT+QFDEL</b> . See <b>document [4]</b> for details.
<b>&lt;startpos&gt;</b>	Integer type. Start position of the file to be uploaded. Range: 0–4294967295. Default value: 0. If <b>&lt;uploadlen&gt;</b> and <b>&lt;beof&gt;</b> are specified, <b>&lt;startpos&gt;</b> should be the position where the data continues to be uploaded to the same file. Unit: byte.
<b>&lt;uploadlen&gt;</b>	Integer type. Length of data to be uploaded. It is valid only when <b>&lt;local_name&gt;</b> is <b>"COM:"</b> . When the length of data uploaded via COM port reaches <b>&lt;uploadlen&gt;</b> , the module exits data mode. Range: 0–4294967295. Unit: byte.
<b>&lt;beof&gt;</b>	Integer type. Determines whether it is the last data packet to be uploaded. It is valid only when <b>&lt;local_name&gt;</b> is <b>"COM:"</b> . <ul style="list-style-type: none"> <li>0 Not the last data packet. When the data length reaches <b>&lt;uploadlen&gt;</b>, the module exits data mode, and <b>+QFTPPUT: 0,&lt;transferlen&gt;</b> is outputted. In this case, do not disconnect data connection, as the remaining data needs to be uploaded to the same file on FTP(S).</li> <li>1 The last data packet. When the data length reaches <b>&lt;uploadlen&gt;</b>, the module exits data mode and data connection can be disconnected. After that <b>+QFTPPUT: 0,&lt;transferlen&gt;</b> is outputted.</li> </ul>
<b>&lt;transferlen&gt;</b>	Integer type. Length of successfully transferred data. Unit: byte.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

### NOTE

If **<uploadlen>** and **<beof>** are omitted, all data will be uploaded to FTP(S) server.

## 2.6. AT+QFTPGET Download a File from FTP(S) Server

This command downloads a file from FTP(S) server. The file can be outputted via COM port by **AT+QFTPGET=<filename>,"COM:"**. The module enters data mode on receiving data from the server. After the data is transfer is completed, the module exits data mode automatically and outputs **+QFTPGET: 0,<transferlen>**. The file can be saved to UFS by **AT+QFTPGET=<filename>,<local\_name>**. After the file transfer is complete, the module outputs **+QFTPGET: 0,<transferlen>**.

If **<local\_name>** is "COM:", **CONNECT** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. If **<local\_name>** is not "COM:", **OK** is outputted first, and then **+QFTPGET: 0,<transferlen>** or **+QFTPGET: <err>,<protocol\_error>** is outputted after data transfer is complete.

If the module has entered data mode or **<local\_name>** is not "COM:", **<timeout>** configured with **AT+QFTPCFG** indicates the maximum interval between two packets of received/transferred data.

AT+QFTPGET Download a File from FTP(S) Server	
Test Command <b>AT+QFTPGET=?</b>	Response <b>+QFTPGET: &lt;file_name&gt;,&lt;local_name&gt;,&lt;startpos&gt;,&lt;downloadlen&gt;</b>  <b>OK</b>
Write Command When <b>&lt;local_name&gt;</b> is "COM:", i.e., to output data via COM port <b>AT+QFTPGET=&lt;file_name&gt;,&lt;local_name&gt;[,&lt;startpos&gt;[,&lt;downloadlen&gt;]]</b>	Response <b>CONNECT</b> <b>&lt;Output file data&gt;</b> <b>OK</b>  If the file data is downloaded successfully: <b>+QFTPGET: 0,&lt;transferlen&gt;</b>  If the data download fails: <b>+QFTPGET: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Write Command When <b>&lt;local_name&gt;</b> is not "COM:" <b>AT+QFTPGET=&lt;file_name&gt;,&lt;local_name&gt;[,&lt;startpos&gt;]</b>	Response <b>OK</b>  If the file data is downloaded successfully: <b>+QFTPGET: 0,&lt;transferlen&gt;</b>  If the data download fails: <b>+QFTPGET: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	This command takes effect immediately. The configurations are not saved.

## Parameter

<b>&lt;file_name&gt;</b>	String type. File name on FTP(S) server. Maximum size: 255 bytes.
<b>&lt;local_name&gt;</b>	String type. Local file name. Maximum size: 63 bytes. If it is "COM:", the file data will be outputted via COM port. If it is not "COM:", the data will be saved to UFS. Then the file can be read by <b>AT+QFREAD</b> . See <b>document [4]</b> for details.
<b>&lt;startpos&gt;</b>	Integer type. Start position of the file to be downloaded. Range: 0–4294967295. Default value: 0. Unit: byte.
<b>&lt;downloadlen&gt;</b>	Integer type. Length of data to be downloaded. It is valid only when <b>&lt;local_name&gt;</b> is "COM:". If this parameter is specified, the module outputs <b>&lt;downloadlen&gt;</b> bytes to COM port and exits data mode. Data can be downloaded from <b>&lt;startpos&gt;</b> by the same AT command if there is any data left. Range: 0–4294967295. Unit: byte.
<b>&lt;transferlen&gt;</b>	Integer type. Length of actually transferred data. If the length is less than <b>&lt;downloadlen&gt;</b> , it means the file transfer is completed. Unit: byte.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

### NOTE

When **<local\_name>** is "COM:", if **<startpos>** and **<downloadlen>** are omitted, a whole file will be downloaded from FTP(S) server.

## 2.7. AT+QFTPSIZE Get File Size on FTP(S) Server

This command retrieves the file size on FTP(S) server. If **OK** is returned, **+QFTPSIZE: 0,<file\_size>** or **+QFTPSIZE: <err>,<protocol\_error>** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. Otherwise, the FTP(S) connection should be disconnected, and the network should be deactivated and reactivated.

### AT+QFTPSIZE Get File Size on FTP(S) Server

Test Command <b>AT+QFTPSIZE=?</b>	Response <b>+QFTPSIZE: &lt;file_name&gt;</b>  <b>OK</b>
Write Command <b>AT+QFTPSIZE=&lt;file_name&gt;</b>	Response <b>OK</b>  If the file size is successfully retrieved: <b>+QFTPSIZE: 0,&lt;file_size&gt;</b>

	<p>If file size retrieval fails:</p> <p><b>+QFTPSIZE: &lt;err&gt;,&lt;protocol_error&gt;</b></p> <p>Or</p> <p><b>+CME ERROR: &lt;err&gt;</b></p>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	<p>This command takes effect immediately.</p> <p>The configuration is not saved.</p>

## Parameter

<b>&lt;file_name&gt;</b>	String type. File name on FTP(S) server. Maximum size: 255 bytes.
<b>&lt;file_size&gt;</b>	Integer type. Size of file on FTP(S) server. Unit: byte.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

## 2.8. AT+QFTPDEL Delete a File on FTP(S) Server

This command deletes a specified file on FTP(S) server. If **OK** is returned, **+QFTPDEL: <err>,<protocol\_error>** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. Otherwise, the FTP(S) connection should be disconnected, and the network should be deactivated and reactivated.

<b>AT+QFTPDEL Delete a File on FTP(S) Server</b>	
Test Command <b>AT+QFTPDEL=?</b>	<p>Response</p> <p><b>+QFTPDEL: &lt;file_name&gt;</b></p> <p><b>OK</b></p>
Write Command <b>AT+QFTPDEL=&lt;file_name&gt;</b>	<p>Response</p> <p><b>OK</b></p> <p><b>+QFTPDEL: &lt;err&gt;,&lt;protocol_error&gt;</b></p> <p>Or</p> <p><b>+CME ERROR: &lt;err&gt;</b></p>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	/

## Parameter

<b>&lt;file_name&gt;</b>	String type. File name on FTP(S) server. Maximum size: 255 bytes.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

## 2.9. AT+QFTPMKDIR Create a Folder on FTP(S) Server

This command creates a folder on FTP(S) server. If **OK** is returned, **+QFTPMKDIR: <err>,<protocol\_error>** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. Otherwise, the FTP(S) connection should be disconnected, and the network should be deactivated and reactivated.

AT+QFTPMKDIR Create a Folder on FTP(S) Server	
Test Command <b>AT+QFTPMKDIR=?</b>	Response <b>+QFTPMKDIR: &lt;folder_name&gt;</b>  <b>OK</b>
Write Command <b>AT+QFTPMKDIR=&lt;folder_name&gt;</b>	Response <b>OK</b>  <b>+QFTPMKDIR: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	/

## Parameter

<b>&lt;folder_name&gt;</b>	String type. Folder name on FTP(S) server. Maximum size: 255 bytes.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.



## 2.10. AT+QFTPRMDIR Delete a Folder on FTP(S) Server

This command deletes a specified folder on FTP(S) server. If **OK** is returned, **+QFTPRMDIR: <err>,<protocol\_error>** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. Otherwise, the FTP(S) connection should be disconnected and the network should be deactivated and reactivated.

AT+QFTPRMDIR Delete a Folder on FTP(S) Server	
Test Command <b>AT+QFTPRMDIR=?</b>	Response <b>+QFTPRMDIR: &lt;folder_name&gt;</b>  <b>OK</b>
Write Command <b>AT+QFTPRMDIR=&lt;folder_name&gt;</b>	Response <b>OK</b>  <b>+QFTPRMDIR: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	/

### Parameter

<b>&lt;folder_name&gt;</b>	String type. Folder name on FTP(S) server. Maximum size: 255 bytes.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

## 2.11. AT+QFTPLIST List Content of a Directory on FTP(S) Server

This command lists content of a directory on FTP(S) server. If **<local\_name>** is "COM:", **CONNECT** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. If **<local\_name>** is not "COM:", **OK** is returned first, and then **+QFTPLIST: 0,<transfer\_size>** or **+QFTPLIST: <err>,<protocol\_error>** is outputted after the content transfer is completed.

If the module has entered data mode or **<local\_name>** is not "COM:", **<timeout>** configured with **AT+QFTPCFG** indicates the maximum interval between two packets of received/transferred data.

AT+QFTPLIST List Content of a Directory on FTP(S) Server	
Test Command <b>AT+QFTPLIST=?</b>	Response <b>+QFTPLIST: &lt;dirname&gt;,&lt;local_name&gt;</b>  <b>OK</b>
Write Command When <local_name> is "COM:" <b>AT+QFTPLIST=&lt;dirname&gt;[,&lt;local_name&gt;]</b>	Response <b>CONNECT</b> <b>&lt;Output directory data&gt;</b> <b>OK</b>  If the directory content is listed successfully: <b>+QFTPLIST: 0,&lt;transfer_size&gt;</b>  If directory content listing fails: <b>+QFTPLIST: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Write Command When <local_name> is not "COM:" <b>AT+QFTPLIST=&lt;dirname&gt;,&lt;local_name&gt;</b>	Response <b>OK</b>  If the directory content is listed successfully: <b>+QFTPLIST: 0,&lt;transfer_size&gt;</b>  If directory content listing fails: <b>+QFTPLIST: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <timeout> configured via <b>AT+QFTPCFG</b>
Characteristics	This command takes effect immediately. The configuration will not be saved.

## Parameter

<dirname>	String type. Folder name on FTP(S) server. Maximum size: 255 bytes. If it is ".", the command will list the content of current directory configured with <b>AT+QFTPCWD</b> .
<local_name>	String type. Local file name. Maximum size: 63 bytes. Default value: "COM:". If it is "COM:", the data will be outputted from the COM port. If it is not "COM:", the data will be saved to UFS, and then the file can be read via <b>AT+QFREAD</b> . See <b>document [4]</b> for details.
<transfer_size>	Integer type. Size of data transferred from FTP(S) server. Unit: byte.
<err>	Integer type. Result code. See <b>Chapter 5</b> for details.

<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.
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## 2.12. AT+QFTPNLST List File Names of a Directory on FTP(S) Server

This command lists file names of a directory on FTP(S) server. If **<local\_name>** is "COM:", **CONNECT** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. If **<local\_name>** is not "COM:", **OK** is returned first. And then **+QFTPNLST: 0,<transfer\_size>** or **+QFTPNLST: <err>,<protocol\_error>** is outputted after file name transfer is complete.

If the module has entered data mode or **<local\_name>** is not "COM:", **<timeout>** configured with **AT+QFTPCFG** indicates the maximum interval between two packets of received/transferred data.

### AT+QFTPNLST List File Names of a Directory on FTP(S) Server

Test Command <b>AT+QFTPNLST=?</b>	Response <b>+QFTPNLST: &lt;dirname&gt;,&lt;local_name&gt;</b>  <b>OK</b>
Write Command When <b>&lt;local_name&gt;</b> is "COM:" <b>AT+QFTPNLST=&lt;dirname&gt;[,&lt;local_name&gt;]</b>	Response <b>CONNECT</b> <b>&lt;output file name data&gt;</b> <b>OK</b>  If file names are successfully listed: <b>+QFTPNLST: 0,&lt;transfer_size&gt;</b>  If the file name listing fails: <b>+QFTPNLST: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Write Command When <b>&lt;local_name&gt;</b> is not "COM:" <b>AT+QFTPNLST=&lt;dirname&gt;,&lt;local_name&gt;</b>	Response <b>OK</b>  If the file names of the directory are successfully listed: <b>+QFTPNLST: 0,&lt;transfer_size&gt;</b>  If the file name listing fails: <b>+QFTPNLST: &lt;err&gt;,&lt;protocol_error&gt;</b>  If there is any error: <b>+CME ERROR: &lt;err&gt;</b>

Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	This command takes effect immediately. The configurations are not saved.

## Parameter

<b>&lt;dirname&gt;</b>	String type. Folder name on FTP(S) server. Maximum size: 255 bytes. If it is ".", it will list the file names of the current directory configured with <b>AT+QFTPCWD</b> .
<b>&lt;local_name&gt;</b>	String type. Local file name. Maximum size: 63 bytes. Default value: " <b>COM:</b> ". If it is " <b>COM:</b> ", the data will be outputted from the COM port. If it is not " <b>COM:</b> ", the data can be saved to UFS. Then the file can be read via <b>AT+QFREAD</b> . See <b>document [4]</b> for details.
<b>&lt;transfer_size&gt;</b>	Integer type. Size of data transferred from FTP(S) server. Unit: byte.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

## 2.13. AT+QFTPMLSD List Standardized File and Directory Information

This command lists standardized file and directory information on FTP(S) server. If **<local\_name>** is "**COM:**", **CONNECT** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. If **<local\_name>** is not "**COM:**", **OK** will be returned first. And then **+QFTPMLSD: 0,<transfer\_size>** or **+QFTPMLSD: <err>,<protocol\_error>** will be outputted after the content has been transferred completely.

If the module has entered data mode or **<local\_name>** is not "**COM:**", **<timeout>** configured with **AT+QFTPCFG** indicates the maximum interval between two packets of received/transferred data.

AT+QFTPMLSD List Standardized File and Directory Information	
Test Command <b>AT+QFTPMLSD=?</b>	Response <b>+QFTPMLSD: &lt;dirname&gt;,&lt;local_name&gt;</b>  <b>OK</b>
Write Command When <b>&lt;local_name&gt;</b> is " <b>COM:</b> " <b>AT+QFTPMLSD=&lt;dirname&gt;[,&lt;local_name&gt;]</b>	Response <b>CONNECT</b> <b>&lt;output standardized file and directory data&gt;</b> <b>OK</b>  If the standardized file and directory information is successfully listed: <b>+QFTPMLSD: 0,&lt;transfer_size&gt;</b>

	<p>If the standardized file and directory information listing fails:</p> <p><b>+QFTPMLSD: &lt;err&gt;,&lt;protocol_error&gt;</b></p> <p>Or</p> <p><b>+CME ERROR: &lt;err&gt;</b></p>
<p>Write Command</p> <p>When <b>&lt;local_name&gt;</b> is not <b>"COM:"</b></p> <p><b>AT+QFTPMLSD=&lt;dirname&gt;,&lt;local_name&gt;</b></p>	<p>Response</p> <p><b>OK</b></p> <p>If the standardized file and directory information is successfully listed:</p> <p><b>+QFTPMLSD: 0,&lt;transfer_size&gt;</b></p> <p>If the standardized file and directory information listing fails:</p> <p><b>+QFTPMLSD: &lt;err&gt;,&lt;protocol_error&gt;</b></p> <p>Or</p> <p><b>+CME ERROR: &lt;err&gt;</b></p>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	/

## Parameter

<b>&lt;dirname&gt;</b>	String type. Folder name on FTP(S) server. Maximum size: 255 bytes. If it is ".", it will list standardized file and directory information configured with <b>AT+QFTPCWD</b> .
<b>&lt;local_name&gt;</b>	String type. Local file name. Maximum size: 63 bytes. Default value: <b>"COM:"</b> . If it is <b>"COM:"</b> , the data will be outputted from the COM port. If it is not <b>"COM:"</b> , the data will be saved to UFS and then the file can be read via <b>AT+QFREAD</b> . See <b>document [4]</b> for details.
<b>&lt;transfer_size&gt;</b>	Integer type. Size of data transferred from FTP(S) server. Unit: byte.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

## 2.14. AT+QFTPMDTM Get File Modification Time on FTP(S) Server

This command gets the file modification time on FTP(S) server. If **OK** is returned, **+QFTPMDTM: 0,<modify\_time>** or **+QFTPMDTM: <err>,<protocol\_error>** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. Otherwise, the FTP(S) connection should be disconnected, and the network should be deactivated and reactivated.

AT+QFTPMDTM Get File Modification Time on FTP(S) Server	
Test Command <b>AT+QFTPMDTM=?</b>	Response <b>+QFTPMDTM: &lt;file_name&gt;</b>  <b>OK</b>
Write Command <b>AT+QFTPMDTM=&lt;file_name&gt;</b>	Response <b>OK</b>  If the file modification time is successfully retrieved: <b>+QFTPMDTM: 0,&lt;modify_time&gt;</b>  If the retrieval of file modification time fails: <b>+QFTPMDTM: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	/

## Parameter

<b>&lt;file_name&gt;</b>	String type. File name on FTP(S) server. Maximum size: 255 bytes.
<b>&lt;modify_time&gt;</b>	String type. File modification time on FTP(S) server. Format: "YYYYMMDDHHMMSS" or "YYYYMMDDHHMMSS.NNN".
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

## 2.15. AT+QFTPRENAME Rename a File or Folder on FTP(S) Server

This command renames a file or folder on FTP(S) server. If **OK** is returned, **+QFTPRENAME: <err>,<protocol\_error>** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. Otherwise, the FTP(S) connection should be disconnected, and the network should be deactivated and reactivated.

AT+QFTPRENAME Rename a File or Folder on FTP(S) Server	
Test Command <b>AT+QFTPRENAME=?</b>	Response <b>+QFTPRENAME: &lt;old_name&gt;,&lt;new_name&gt;</b>  <b>OK</b>

Write Command <b>AT+QFTPNAME=&lt;old_name&gt;,&lt;new_name&gt;</b>	Response <b>OK</b>  <b>+QFTPNAME: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	/

## Parameter

<b>&lt;old_name&gt;</b>	String type. Old file name or folder name on FTP(S) server. Maximum size: 255 bytes.
<b>&lt;new_name&gt;</b>	String type. New file name or folder name on FTP(S) server. Maximum size: 255 bytes.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

## 2.16. AT+QFTPLEN Get Length of Transferred Data

This command gets the length of data transferred between the FTP(S) server and client, after executing **AT+QFTPPUT**, **AT+QFTPGET**, **AT+QFTPNLST** or **AT+QFTPLIST**.

<b>AT+QFTPLEN Get Length of Transferred Data</b>	
Test Command <b>AT+QFTPLEN=?</b>	Response <b>OK</b>
Execution Command <b>AT+QFTPLEN</b>	Response <b>OK</b>  <b>+QFTPLEN: 0,&lt;transferlen&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	/

## Parameter

<b>&lt;transferlen&gt;</b>	Integer type. Length of data transferred between FTP(S) server and the client. Unit: byte.
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.

## 2.17. AT+QFTPSTAT Get Status of FTP(S) Server

This command gets the status of FTP(S) server.

AT+QFTPSTAT Get Status of FTP(S) Server	
Test Command <b>AT+QFTPSTAT=?</b>	Response <b>OK</b>
Execution Command <b>AT+QFTPSTAT</b>	Response <b>OK</b>  <b>+QFTPSTAT: 0,&lt;ftpstat&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	/

## Parameter

<b>&lt;ftpstat&gt;</b>	Integer type. Current status of FTP(S) server 0      Opening an FTP(S) server 1      FTP(S) server is open and idle 2      Transferring data to FTP(S) server 3      Closing the FTP(S) server 4      FTP(S) server is closed
<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.



## 2.18. AT+QFTPCLOSE Log Out from FTP(S) Server

This command logs out from FTP(S) server. If **OK** is returned, **+QFTPCLOSE: <err>,<protocol\_error>** should be outputted within **<timeout>** configured with **AT+QFTPCFG**. Otherwise, the network should be deactivated and reactivated.

AT+QFTPCLOSE Log Out from FTP(S) Server	
Test Command <b>AT+QFTPCLOSE=?</b>	Response <b>OK</b>
Execution Command <b>AT+QFTPCLOSE</b>	Response <b>OK</b>  <b>+QFTPCLOSE: &lt;err&gt;,&lt;protocol_error&gt;</b> Or <b>+CME ERROR: &lt;err&gt;</b>
Maximum Response Time	Determined by <b>&lt;timeout&gt;</b> configured via <b>AT+QFTPCFG</b>
Characteristics	This command takes effect immediately. The configuration is not saved.

### Parameter

<b>&lt;err&gt;</b>	Integer type. Result code. See <b>Chapter 5</b> for details.
<b>&lt;protocol_error&gt;</b>	Integer type. For reference only. Indicates the original error code from FTP(S) server defined in FTP(S) protocol. See <b>Chapter 6</b> for details. If it is 0, it is invalid.

# 3 Examples

## 3.1. Login to FTP Server

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

**AT+QICSGP=1,1,"UNINET","",1** //Set PDP context as 1 and China Unicom APN as "UNINET".

OK

**AT+QIACT=1** //Activate PDP context 1.

OK //Activated successfully.

**AT+QIACT?** //Query the status 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 first.

OK

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

**AT+QFTPCFG="account","test","test"** //Set username and password.

OK

**AT+QFTPCFG="filetype",1** //Set file type as ASCII.

OK

**AT+QFTPCFG="transmode",1** //Set transfer mode as passive mode.

OK

**AT+QFTPCFG="rsptimeout",90** //Set the response timeout value.

OK

//Step 3: Login to FTP server.

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

OK

+QFTPOPEN: 0,0

### NOTE

1. The server address in the above example is a demo address, configure the server address according to your use case.
2. Port numbers of FTPS and FTP servers are different. FTPS server port number depends on FTPS

server provider, and it is usually 990.

## 3.2. Login to FTPS Server

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

**AT+QICSGP=1,1,"UNINET","",1** //Set PDP context as 1 and China Unicom APN as "UNINET".

OK

**AT+QIACT=1** //Activate PDP context 1.

OK //Activated successfully.

**AT+QIACT?** //Query the status 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 first.

OK

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

**AT+QFTPCFG="account","test","test"** //Set username and password.

OK

**AT+QFTPCFG="filetype",1** //Set file type as ASCII.

OK

**AT+QFTPCFG="transmode",1** //Set transfer mode as passive mode.

OK

**AT+QFTPCFG="rsptimeout",90** //Set the response timeout value.

OK

//Step 3: Configure FTPS.

**AT+QFTPCFG="ssltype",1** //Set SSL type as 1 (the module works as FTPS client).

OK

**AT+QFTPCFG="sslctxid",1** //Set SSL context as 1.

OK

**AT+QSSLCFG="ciphersuite",1,0xffff** //Set SSL cipher suite type as 0xffff, which supports all cipher suite types.

OK

**AT+QSSLCFG="secllevel",1,0** //Set SSL security level as 0, which means the SSL CA certificate is not needed.

OK

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

OK

//Step 4: Log into FTPS server.

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

OK

**+QFTPOPEN: 0,0**

### NOTE

1. The server address in the above example is a demo address, configure the server address according to your use case.
2. Port numbers of FTPS and FTP servers are different. FTPS server port number depends on FTPS server provider, and it is usually 990.

## 3.3. Work with Folders

```

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 on FTP(S) server.
OK

+QFTPMKDIR: 0,0
AT+QFTPRENAME="TEST","TEST_NEW" //Rename the folder as TEST_NEW.
OK

+QFTPRENAME: 0,0
AT+QFTPRMDIR="TEST_NEW" //Delete the folder TEST_NEW.
OK

+QFTPRMDIR: 0,0

```

## 3.4. Work with Files

```

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

+QFTPCWD: 0,0
AT+QFTPPWD //Query current directory.
OK

```

```

+QFTPPWD: 0,"/"
AT+QFTPSIZE="test_my1.txt" //Query the size of test_my1.txt on FTP(S) server.
OK

+QFTPSIZE: 0,1000
AT+QFTPFILENAME="test_my1.txt","test_new.txt" //Rename the file as test_new.txt.
OK

+QFTPFILENAME: 0,0
AT+QFTPMDTM="test_new.txt" //Get the file modification time of test_new.txt on
FTP(S) server.
OK

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

+QFTPDEL: 0,0

```

### 3.5. List File Information or File Names of a Directory

```

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

+QFTPCWD: 0,0
AT+QFTPLIST="." //List the content of current directory on the FTP(S) server and
the data is outputted via COM port.

CONNECT
<output content of directory data>
OK

+QFTPLIST: 0,1000
AT+QFTPLIST="","UFS:list.txt" //List the content of current directory on the FTP(S) server and
save it to UFS as UFS:list.txt.
OK

+QFTPLIST: 0,1000
AT+QFTPLIST="TEST_2","COM:" //List the content of TEST_2 on the FTP(S) server and the data is
outputted via COM port.

CONNECT
<output file name data>
OK

```

**+QFTPLIST: 0,1000**

**AT+QFTPNLST=".", "COM:"**

//List file names of current directory on the FTP(S) server and the data is outputted via COM port.

**CONNECT**

**<output file name data>**

**OK**

**+QFTPNLST: 0,1000**

**AT+QFTPNLST=".", "UFS:nlst.txt"**

//List file names of current directory on the FTP(S) server and save them to UFS as *UFS:nlst.txt*.

**OK**

**+QFTPNLST: 0,1000**

**AT+QFTPNLST="TEST\_2", "COM:"**

//List file names of *TEST\_2* on the FTP(S) server and the data is outputted via COM port.

**CONNECT**

**<output file name data>**

**OK**

**+QFTPNLST: 0,1000**

**AT+QFTPMLSD=".", "COM:"**

//List standardized file and directory information of current directory on the FTP(S) server and the data is outputted via COM port.

**CONNECT**

**<output standardized file and directory data>**

**OK**

**+QFTPMLSD: 0,1000**

**AT+QFTPMLSD=".", "UFS:nlst.txt"**

//List standardized file and directory information of current directory on the FTP(S) server and save it to UFS as *UFS:nlst.txt*.

**OK**

**+QFTPMLSD: 0,1000**

**AT+QFTPMLSD="TEST\_2", "COM:"**

//List standardized directory information of *TEST\_2* on the FTP(S) server and the data is outputted via COM port.

**CONNECT**

**<output standardized directory data>**

**OK**

**+QFTPMLSD: 0,1000**

### 3.6. Upload a File to FTP(S) Server

```

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

+QFTPCWD: 0,0
AT+QFTPSTAT                                   //Get the current status of FTP(S) server.
+QFTPSTAT: 0,1                               //FTP(S) server is open and idle.

OK
//Upload a file via COM port to the FTP(S) server.
AT+QFTPPUT="test_my1.txt","COM:",0           //All data will be saved as test_my1.txt on
                                              FTP(S) server.

CONNECT
<Input the data via COM port>
+++                                           //Exit the data mode.
OK

+QFTPPUT: 0,1000
AT+QFTPLEN
OK

+QFTPLEN: 0,1000
AT+QFTPSIZE="test_my1.txt"
OK

+QFTPSIZE: 0,1000
//Upload a file via COM port to the FTP(S) server and the start position is 1000.
AT+QFTPPUT="test_my1.txt","COM:",1000       //All data will be saved as test_my1.txt on
                                              FTP(S) server.

CONNECT
<Input the data via COM port>
+++                                           //Exit the data mode.
OK

+QFTPPUT: 0,500
AT+QFTPSIZE="test_my1.txt"
OK

+QFTPSIZE: 0,1500
//Solution 1: Upload a file via COM port to FTP(S) server twice in 1024-byte chunks.
AT+QFTPPUT="test_my1.txt","COM:",0,1024,0   //It is not the last 1024-byte chunk of
                                              test_my1.txt.

```

CONNECT

<Input the data via COM port>

OK

//Data length reaches 1024 bytes.

+QFTPPUT: 0,1024

AT+QFTPPUT="test\_my1.txt","COM:",1024,1024,1

//It is the last 1024-byte chunk of *test\_my1.txt*.

CONNECT

<Input the data via COM port>

OK

//Data length reaches 1024 bytes.

+QFTPPUT: 0,1024

//Solution 2: Upload a file from UFS to FTP(S) server.

AT+QFUPL="UFS:test\_ufs.txt",1000,300,1

//Upload a file to UFS, the file will be saved as *test\_ufs.txt*. Maximum file size is 1000 bytes. In this example, 300 indicates timeout value and 1 indicates ACK mode. See **document [4]** for details.

CONNECT

<Input 1000 bytes data>

+QFUPL: 1000,707

OK

AT+QFLST=""

+QFLST: "UFS:test\_ufs.txt",1000

OK

AT+QFTPPUT="test\_my1.txt","UFS:test\_ufs.txt",0

//Upload *UFS:test\_ufs.txt* file to FTP(S) server and save it as *test\_my1.txt* on FTP(S) server.

OK

+QFTPPUT: 0,1000

AT+QFDEL="UFS:test\_ufs.txt"

//Delete local UFS file.

OK

### 3.7. Download a File from FTP(S) Server

AT+QFTPCWD="/"

//Set the current directory.

OK

+QFTPCWD: 0,0

//Solution 1: Output downloaded data directly via COM port.

//Download a file from FTP(S) server and the data is outputted via COM port.



```

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

+QFTPGET: 0,1000
//Download a file from FTP(S) server and the data is outputted via COM port twice in 500-byte chunks.
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 the remaining 500 bytes.

CONNECT
<output file data>
OK

+QFTPGET: 0,500
//Solution 2: Save downloaded data to UFS file.
//Download a file from FTP(S) server and save it to UFS.
AT+QFTPGET="test_my1.txt","UFS:test.txt" //Download file and save it to UFS as test.txt.
OK

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

OK
//Download a file from FTP(S) server and save it to UFS. The start position is 450.
AT+QFTPGET="test_my1.txt","UFS:test1.txt",450 //Download file and save it to UFS as test1.txt.
OK

+QFTPGET: 0,550
AT+QFLST="" //Query the downloaded file and file size in UFS.
+QFLST: UFS:test.txt,1000
+QFLST: UFS:test1.txt,550

OK

```

### 3.8. Log out from FTP(S) Server

<b>AT+QFTPCLOSE</b>	//Log out from FTP(S) server.
OK	
+QFTPCLOSE: 0,0	
<b>AT+QIDEACT=1</b>	//Deactivate the PDP context, which was activated for FTP(S).
OK	

## 4 Error Handling

### 4.1. Executing FTP(S) AT Command Fails

If **ERROR** response is received from the module after executing FTP(S) AT commands, check whether:

1. the USIM card is inserted, and
2. **+CPIN: READY** is returned after executing **AT+CPIN?**.

### 4.2. PDP Activation Failure

If the PDP context activation with **AT+QIACT** fails, check the following configurations:

1. Query the PS domain status by executing **AT+CGATT?** to make sure that the PS domain is registered. If not, execute **AT+CGATT=1** to attach the PS domain.
2. Query the network registration status with **AT+CGREG?** and make sure the network is registered.
3. Query the PDP context parameters with **AT+QICSGP** and make sure the APN of the specified PDP context is set.
4. Make sure the specified PDP context ID is neither used by PPP nor activated via **AT+CGACT**.
5. The module supports maximum 5 simultaneously activated PDP contexts under the VoLTE function, and maximum 7 under the non-VoLTE function. The number of activated PDP contexts depends on the USIM card.

If all above configurations are correct, but PDP context activation with **AT+QIACT** still fails, reboot the module to resolve this issue. After rebooting the module, check the above configurations at least three times at 10-minute interval to avoid frequent module rebooting.

### 4.3. DNS Parsing Failure

If **+QFTPOPEN: 604,0** is returned after executing **AT+QFTPOPEN**, check the following:

1. Make sure the domain name of FTP(S) server is valid.
2. Query the status of the PDP context with **AT+QIACT?** to make sure the specified PDP context has been activated successfully.

### 4.4. Error Response from FTP(S) Server

If **<protocol\_error>** in **+QFTPXX: <err>,<protocol\_error>** is not 0, it indicates an error code returned by FTP(S) server.

You can check the issue based on the protocol error code. For example, if **<protocol\_error>** is 530 (not logged in), it indicates **<username>** or **<password>** may be wrong. If **<protocol\_error>** is 550 (requested action not taken: file unavailable), it means the file or directory may not exist. See *RFC959* for details.

# 5 Summary of Result Codes

The result code **<err>** indicates a result related to mobile equipment or network. The details about **<err>** are provided in the following table.

**Table 2: Summary of Result Codes**

<b>&lt;err&gt;</b>	<b>Description of Result Codes</b>
0	Operation successful
601	Unknown error
602	FTP(S) server blocked
603	FTP(S) server busy
604	DNS parse failed
605	Network error
606	Control connection closed.
607	Data connection closed
608	Socket closed by peer
609	Timeout error
610	Invalid parameter
611	Failed to open file
612	File position invalid
613	File error
614	Service not available, closing control connection
615	Open data connection failed
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
631	SSL authentication failed
632	Source IP address for transmission cannot use
633	Send data failed
634	Receive data failed

---

# 6 Summary of FTP(S) Protocol Error Codes

The protocol error code **<protocol\_error>** indicates an error response from FTP(S) server. See *RFC959* for details. The details about **<protocol\_error>** are provided in the following table.

**Table 3: Summary of FTP(S) Protocol Error Codes**

<b>&lt;protocol_error&gt;</b>	<b>Meaning</b>
421	Service not available, closing control connection
425	Open data connection failed
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

# 7 Appendix References

**Table 4: Related Documents**

Document Name
[1] Quectel_EG800Q&EG91xQ_Series_TCP(IP)_Application_Note
[2] Quectel_EG800Q&EG91xQ_Series_AT_Commands_Manual
[3] Quectel_EG800Q&EG91xQ_Series_SSL_Application_Note
[4] Quectel_EG800Q&EG91xQ_Series_FILE_Application_Note

**Table 5: Terms and Abbreviations**

Abbreviation	Description
ACK	Acknowledgement
APN	Access Point Name
ASCII	American Standard Code for Information Interchange
DNS	Domain Name Server
DTR	Data Terminal Ready
FTP	File Transfer Protocol
FTPS	FTP over SSL/FTP Secure
ID	Identifier
IP	Internet Protocol
PDP	Packet Data Protocol
PPP	Point-to-Point Protocol



PS	Packet Switching
QoS	Quality of Service
SSL	Secure Sockets Layer
TLS	Transport Layer Security
UFS	Universal Flash Storage
URC	Unsolicited Result Code
USIM	Universal Subscriber Identity Module
VoLTE	Voice over Long-Term Evolution