



R7072_FTP(S)_Application Note

LPWA Module

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About Document

Version History

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1 Introduction

1.1 Purpose of the document

Based on module AT command manual, this document will introduce FTP(S) application process. Developers could understand and develop application quickly and efficiently based on this document.

1.2 Related documents

[1] R7070 Series_AT Command Manual

1.3 Conventions and abbreviations

In this document, the GSM engines are referred to as following term:

ME (Mobile Equipment);

MS (Mobile Station);

TA (Terminal Adapter);

DCE (Data Communication Equipment) or facsimile DCE (FAX modem, FAX board);

In application, controlling device controls the GSM engine by sending AT Command via its serial interface.

The controlling device at the other end of the serial line is referred to as following term:

TE (Terminal Equipment);

DTE (Data Terminal Equipment) or plainly "the application" which is running on an embedded system;

2 FTP Introduction

FTP (File Transfer Protocol) is an application layer protocol. File Transfer Protocol is a standard Protocol for transferring files over a network, using the client / server mode. It's part of the Communications Protocol Application Layer.

2.1 Characteristic

A control connection is a communication link established between a client protocol interpreter and a server protocol interpreter for exchanging commands and responses. A data connection is a full-duplex connection for transmitting data. The transfer of data can occur between DTP for the server data transfer process and DTP for the client, or between DTP for the two servers.

2.2 The process of Using FTP(S) AT Commands

Step 1: Ensure GPRS network is available before performing FTP(S) related operations.

Step 2: Configure the parameter of PDP context by AT+CGDCONT.

Step 3: Activate the PDP context to start FTP(S) service by AT+CGACT.

Step 4: Login FTP(S) server by AT^FTPOPEN

Step 5: Download a file and save to module by AT^FTPGET

Step 6: Use AT^FTPCLOSE to logout FTP(S) server while finish FTP(S) operation.

Step 8: Deactivate the PDP context to stop FTP(S) service by AT+CGACT

Note: make sure you login to a FTP(S) sever successfully before any other FTP(S) operations.

3 AT Commands for FTP(S)

Command	Description
AT^FTPOPEN	Start FTP(S) service
AT^FTPCLOSE	Stop FTP(S) Service
AT^FTPGETSET	Login to a FTP(S)server
AT^FTPPUTSET	Logout FTP(S) server
AT^FTPSIZE	Get size of target file on FTP(S) server
AT^FTPGET	Delete a directory on FTP(S) server
AT^FTPPUT	Delete a file on FTP(S) server

For detail information, please refer to “R7070 Series_AT Command Manual_V1.00”.

4 Bearer Configuration

4.1 PDN activation

```
AT+CPIN? //Check SIM card status
+CPIN: READY

OK
AT+CSQ //Check RF signal
+CSQ: 27,99

OK
AT+CREG? //Check CS service
+CREG: 0,1

OK
AT+CGREG? //Check PS service
+CGREG: 0,1

OK
AT+COPS? // Check Information of Operator
+COPS: 0,2,"46000", 0

OK
AT+CGDCONT=1, "IP", "CMNET" // Set PDP context Parameters
OK
AT+CGDCONT?
+CGDCONT:1,"IP","CMNET","0.0.0.0",0,0 // Check Information of PDP Context

OK
AT+CFGDUALMODE?
+CFGDUALMODE: 1,1

OK
AT+CFGRATPRIO?
+CFGRATPRIO: 4
```

OK

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5 FTP(S) Samples

5.1 Access to FTP server

5.1.1 Download a file from FTP server to module

//Example of download a file from FTP server to module

```
AT+CGACT=1,1 //Activate PDP
OK
AT^FTPOPEN="116.246.23.94","admin","admin",0,180,1 //login to a FTP server
OK
AT^FTPGETSET="/tmp/somefile.name",3,6 // set download file
OK
AT^FTPGET=2,6
OK
^FTPGET:1,1 // FTP connection successfully
^FTPGET:2,3 // get ftp file length
ABCDEF // ftp file data
^FTPGET:2,0 // FTP get finished
```

5.1.2 Upload a file to FTP server form module

//Example of upload a file to FTP server form module

```
AT+CGACT=1,1 //Activate PDP
OK
AT^FTPOPEN="116.246.23.94","admin","admin",0,180,1 //login to a FTP server
OK
AT^FTPPUTSET="/tmp/somefile.name" // set download file
```

OK

AT^FTPPUT=1

OK

^FTPPUT:1,3072

AT^FTPPUT =2,6

ABCDEF

OK

// Upload data

AT^FTPCLOSE

OK

^URCFTP:0

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