SIM800 Series_FS _Application Note

GPRS Module

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About Document

Version History

Version	Date	Owner	What is new
1.00	2013-10-31	Yong.lu	New version
1.01	2014-06-30	Yong.lu	Chapter 2.2,Modify the parameter description of AT+FSREAD Chapter 2.8,Add AT+FSRENAME Chapter 2.9,Add AT+FSDRIVE Chapter 2.10,Add AT+FSMKDIR Chapter 2.11,Add AT+FSRMDIR
1.02	2015-08-10	Yong.lu	Scope,Add SIM808,SIM800C,SIM800A,SIM800F and SIM800C-DS Chapter 2.12,Add AT+FSHEX
1.03	2016-11-17	Wenjie.Lai	Scope
1.04	2020-06-15	Yizhe.Tan /Wenjie.Lai	All

Scope

This document presents the AT command of FS operation and application examples.

This document can apply to SIM800 series modules with FS function.

Contents

1 Introduction

1.1 Purpose of the document

Based on module AT command manual, this document will introduce FS application process.

Developers could understand and develop application quickly and efficiently based on this document.

1.2 Related documents

[1] SIM800 Series_AT Command Manual

1.3 Conventions and abbreviations

2 FS Introduction

2.1 Features

Local storage space is mapped to the drive which can get by AT+FSDRIVE=0, the system will create User directory in local drive after first boot, and storage space of SD card is mapped to the drive which can get by AT+FSDRIVE=1.

As PCM interface and SD card interface is multiplexing function, shown as below table. At the first time to use SD card, customer must execute "AT+SD2PCM=0" and "AT&W", then reboot the module by AT command or PWRKEY pin.

PCM and SD card multiplexing function:

Pin name	Pin number	Mode 0(default)	Mode 1	Mode 2	Mode 3
PCMCLK	29	PCMCLK	DISP_RSTB	MC3CM0	GPIO18
PCMOUT	30	PCMOUT	DISP_DI	MC3DA3	GPIO19
PCMSYNC	65	PCMSYNC	DISP_CEB	MC3CK	GPIO20
PCMIN	66	PCMIN	DISP_DA	MC3DA2	GPIO21
GPIO2	27	GPIO2	DISP_A0DA	MC3DA0	-
GPIO3	28	GPIO3	DISP_CLK	MC3DA1	-

3 AT Commands

SIM800 series FS AT command overview.

AT Command	Description
AT+FSCREATE	Create file
AT+FSREAD	Read file
AT+FSWRITE	Write file
AT+FSDEL	Delete file
AT+FSLS	List directories/files
AT+FSFLSIZE	Get file size
AT+FSMEM	Get the size of available memory
AT+FSRENAME	Rename file
AT+FSDRIVE	Get drive
AT+FSMKDIR	Make new directory
AT+FSRMDIR	Delete directory
AT+FSHEX	Set character format of FS path or name

3.1 AT+FSCREATE   Create File

AT+FSCREATE Create File	
Test Command **AT+FSCREATE=?**	Response **OK** or **ERROR**
Write Command **AT+FSCREATE=<filename>**	Response **OK** or **ERROR** Parameters **<filename>** String without double quotes, the length of the file name should be less than or equal to 64 characters
Reference	Note

3.2 AT+FSREAD   Read File

AT+FSREAD Read File	
Test Command **AT+FSREAD=?**	Response **OK** or **ERROR**
Write Command **AT+FSREAD=<filename>,< mode>,<filesize>,<position>**	Response **<data>** **OK** or **ERROR** Parameters **<filename>** String without double quotes, the file should have already existed. The length of the file name should be less than or equal to 64 characters **<mode>** **0** Read data at the beginning of the file **1** Read data at the <position> of the file **<filesize>** The size of the file that you want to read, the size should be less than or equal to 10240.If the <filesize> is more than the file real size, the <filesize> will be set to the file real size **<position>** The starting position that will be read in the file. The **<position>** should be less than the file size **<data>** The data which is read will be putted out by UART port
Reference	Note When <mode> is 0, <position> is invalid.

3.3 AT+FSWRITE   Write File

AT+FSWRITE Write File	
Test Command **AT+FSWRITE=?**	Response **OK** or **ERROR**
Write Command **AT+FSWRITE=<filename>,< mode>,<filesize>,<inputtime >**	Response **>** **OK** or

	ERROR or **TimeOut** Parameters **\<filename>** String without double quotes, the file should have already existed. The length of the file name should be less than or equal to 64 characters. **\<mode>** **0** Write data at the beginning of the file **1** Write data at the end of the file **\<filesize>** The size of the file that you want to write, the size should be less than or equal to 10240. **\<inputtime>** User should write file in the \<inputtime> period, otherwise the operation of writing to the file fails. Unit is second.
Reference	Note

3.4 AT+FSDEL   Delete File

AT+FSDEL Delete File	
Test Command **AT+FSDEL=?**	Response **OK** or **ERROR**
Write Command **AT+FSDEL=\<filename>**	Response **OK** or **ERROR** Parameters **\<filename>** String without double quotes, the file should have already existed. The length of the file name should be less than or equal to 64 characters.
Reference	Note

3.5 AT+FSLS   List Directories/File

AT+FSLS List Directories/File	
Test Command **AT+FSLS=?**	Response **OK**

	or
	ERROR
Write Command **AT+FSLS=<filepath>**	Response **<list of subdirectories/files>** **OK** or **ERROR** Parameters **<filepath>** String without double quotes, directory for selection. The length of the directory name should be less than or equal to 64 characters. The string format such as C:\,the directory must have "\"
Reference	Note If the last character of the result string is "\", this means that it is a directory, otherwise, it is a file.

3.6 AT+FSFLSIZE   Get File Size

AT+FSFLSIZE Get File Size	
Test Command **AT+FSFLSIZE=?**	Response **OK** or **ERROR**
Write Command **AT+FSFLSIZE=<filename>**	Response **+FSFLSIZE: <n>** **OK** or **ERROR** Parameters **<filename>** String without double quotes, the file should have already existed. The length of the file name should be less than or equal to 64 characters **<n>** The file size
Reference	Note

3.7 AT+FSMEM   Get the Size of Available Memory

AT+FSMEM Get the Size of Available Memory	
Test Command **AT+FSMEM=?**	Response **OK** or **ERROR**
Execution Command **AT+FSMEM**	Response If SD card exist: **+FSMEM:** **<local_drive>:<local_size>bytes,<sd_drive>:<sd_size>bytes** **OK** or If SD card doesn't exist: **+FSMEM: <local_drive>:<local_size>bytes** **OK** or **ERROR** Parameters **<local_drive>** Local drive **<sd_drive>** SD card drive **<local_size>** The free space of local storage **<sd_size>** The free space of SD card
Reference	Note <local_drive> is got by AT+FSDRIVE=0 or <sd_drive> is got by AT+FSDRIVE=1.

3.8 AT+FSRENAME   Rename File

AT+FSRENAME Rename File	
Test Command **AT+FSRENAME=?**	Response **OK** or **ERROR**
Write Command **AT+FSRENAME=<old_name>,<new_name>**	Response **OK** or

	ERROR
	Parameters
	<old_name> Old name of specified file, string without double quotes, the file should have already existed. The length of the file name should be less than or equal to 64 characters
	<new_name> New name of specified file**,** string without double quotes.
	The length of the file name should be less than or equal to 64 characters
Reference	Note
	The file name must be full path name.

3.9 AT+FSDRIVE   Get Drive

AT+FSDRIVE Get Drive	
Test Command **AT+FSDRIVE**	Response **+FSDRIVE: (0-1)** **OK** or **ERROR**
Write Command **AT+FSDRIVE=<n>**	Response **+FSDRIVE: <drive>** **OK** or **ERROR** Parameters **<n>** 0 Local drive 1 SD card drive **<drive>** A-G
Reference	Note

3.10 AT+FSMKDIR   Make New Directory

AT+FSMKDIR Make New Directory	
Test Command	Response

AT+FSMKDIR=?	**OK**
	or
	ERROR
Write Command	Response
AT+FSMKDIR=<dir_name>	**OK**
	or
	ERROR
	Parameters
	<dir_name> String without double quotes. The length of the dir name should be less than or equal to 64 characters.
Reference	Note

3.11 AT+FSRMDIR   Delete Directory

AT+FSRMDIR Delete Directory	
Test Command	Response
AT+FSRMDIR=?	**OK**
	or
	ERROR
Write Command	Response
AT+FSRMDIR=<dir_name>	**OK**
	or
	ERROR
	Parameters
	<dir_name> String without double quotes, the dir should have already existed. The length of the dir name should be less than or equal to 64 characters
Reference	Note

3.12 AT+FSHEX   Set Character Format of FS Path or Name

AT+FSHEX Set Character Format of FS Path or Name	
Test Command	Response
AT+FSHEX=?	**+FSHEX: (0-1)**
	OK
	Parameter
	See Write Command

Read Command **AT+FSHEX?**	Response **+FSHEX: <n>** **OK** Parameters See Write Command
Write Command **AT+FSRMDIR=<dir_name>**	Response **OK** Parameters **<n>** **0** The character format of the file patch or name is ASCII **1** The character format of the file patch or name is UTF-8
Parameter Saving Mode	AT&W_SAVE
Reference	Note

4 FS Examples

```
//Example of FS
AT+SD2PCM=0                          //SD mode is valid
OK
AT&W
OK
AT+CFUN=1,1                          //In this example, reboot the module by AT
OK                                   command, customer can reboot the module by
                                     PWRKEY pin instead of   AT command

AT+FSDRIVE=1                         //Create test.txt file in /customer directory
+FSDRIVE: E                          //Get SD card drive

OK
AT+FSLS=E:\
Images\
Audio\

OK
AT+FSCREATE=E:\test.txt              //Create test.txt
OK
AT+FSLS=E:\
Images\
Audio\
test.txt

OK
AT+FSFLSIZE=E:\test.txt
+FSFLSIZE: 20

OK
AT+FSREAD=E:\test.txt,0,100,1
asdfghjkloiytedftttg
OK
AT+FSWRITE=E:\test.txt,0,2,10        // Write "cc" at the beginning of the file
>

OK
AT+FSREAD=E:\test.txt,0,100,0        // The first two characters is "cc"
ccdfghjkloiytedftttg
OK
```

AT+FSREAD=E:\test.txt,1,100,2   // The offset of reading position is 2
dfghjkloiytedftttg
OK
AT+FSMEM
+FSMEM: C:1024bytes,E:49152bytes

OK
AT+FSLS=E:
test1.txt

OK
AT+FSMKDIR=E:\media   // Make media directory
OK
AT+FSRENAME=E:\test1.txt,E:\test2.txt   // Rename test1.txt
OK
AT+FSLS=E:
test2.txt
media
                    // Delete media directory
OK
AT+FSRMDIR=E:\media
OK
AT+FSLS=E:
test2.txt

OK
AT+FSHEX=0   // The file path or file name is ASCII format
OK
AT+FSLS=C:
User

OK
AT+FSHEX=1   // The file path or file name is UTF-8 format
OK
AT+FSLS=433A5C   //"433A5C" is UTF-8 format, converts to ASCII is
557365725C   "C:\ "
                    //"557365725C" is UTF-8 format, converts to ASCII
OK   is "User\"