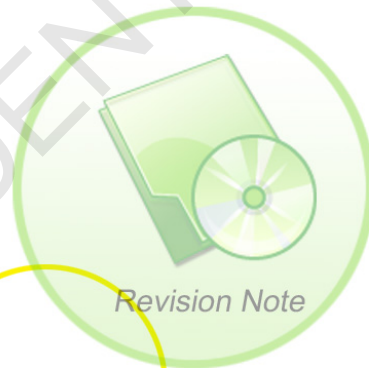




A company of SIM Tech

SIM800 Series_FS_Application Note_V1.03



SIMCOM CONFIDENTIAL FILE

Document Title	SIM800 Series_FS_Application Note
Version	1.03
Date	2016-11-17
Status	Release
Document Control ID	SIM800 Series_FS_Application Note_V1.03

General Notes

SIMCom offers this information as a service to its customers, to support application and engineering efforts that use the products designed by SIMCom. The information provided is based upon requirements specifically provided to SIMCom by the customers. SIMCom has not undertaken any independent search for additional relevant information, including any information that may be in the customer's possession. Furthermore, system validation of this product designed by SIMCom within a larger electronic system remains the responsibility of the customer or the customer's system integrator. All specifications supplied herein are subject to change.

Copyright

This document contains proprietary technical information which is the property of Shanghai SIMCom Wireless Solutions Ltd, copying of this document and giving it to others and the using or communication of the contents thereof, are forbidden without express authority. Offenders are liable to the payment of damages. All rights reserved in the event of grant of a patent or the registration of a utility model or design. All specification supplied herein are subject to change without notice at any time.

Copyright © Shanghai SIMCom Wireless Solutions Ltd. 2016

Contents

1. FS Introduction	5
1.1 Features	5
2. AT Commands.....	6
2.1 AT+FSCREATE Create File	6
2.2 AT+ FSREAD Read File	6
2.3 AT+FSWRITE Write file	7
2.4 AT+FSDEL Delete file	8
2.5 AT+FSLS List Directories/Files	8
2.6 AT+FSFLSIZE Get File Size	9
2.7 AT+FSMEM Get the Size of Available Memory	9
2.8 AT+FSRENAME Rename File	10
2.9 AT+FSDRIVE Get Drive	10
2.10 AT+FSMKDIR Make New Directory	11
2.11 AT+FSRMDIR Delete Directory	11
2.12 AT+FSHEX Set Character Format of FS Path or Name	12
3 Examples.....	13
Appendix.....	15
A Related Documents.....	15
B Terms and Abbreviations.....	15

Version History

Date	Version	What is new	Author
2013-10-31	1.00	New version	Yong.lu
2014-06-30	1.01	Chapter 2.2,Modify the parameter description of AT+FSREAD	Yong.lu
		Chapter 2.7,Add AT+FSMEM	
		Chapter 2.8,Add AT+FSRENAME	
		Chapter 2.9,Add AT+FSDRIVE	
		Chapter 2.10,Add AT+FMSKDIR	
		Chapter 2.11,Add AT+FSRMDIR	
2015-8-10	1.02	Scope, Add SIM808,SIM800C,SIM800A,SIM800F and SIM800C-DS	Yong.lu
		Chapter 2.12,Add AT+FSHEX	
2016-11-17	1.03	Scope	Yong.lu

Scope

This document presents the AT command of FS operation and application examples.
This document can apply to SIM800 series modules with FS function.

1. FS Introduction

This chapter introduces the FS application features.

1.1 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	-

2. AT Commands

SIM800 series FS AT command overview.

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

2.1 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

2.2 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.

2.3 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

	<p>Parameters</p> <p><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.</p> <p><mode> 0 Write data at the beginning of the file 1 Write data at the end of the file</p> <p><filesize> The size of the file that you want to write, the size should be less than or equal to 10240.</p> <p><inputtime> User should write file in the <inputtime> period, otherwise the operation of writing to the file fails. Unit is second.</p>
Reference	Note

2.4 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

2.5 AT+FSLS List Directories/Files

AT+FSLS List Directories/Files	
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.

2.6 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

2.7 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

	<p>OK</p> <p>or</p> <p>If SD card doesn't exist:</p> <p>+FSMEM: <local_drive>:<local_size>bytes</p> <p>OK</p> <p>or</p> <p>ERROR</p> <p>Parameters</p> <p><local_drive> Local drive</p> <p><sd_drive> SD card drive</p> <p><local_size> The free space of local storage</p> <p><sd_size> The free space of SD card</p>
Reference	<p>Note</p> <p><local_drive> is got by AT+FSDRIVE=0 or</p> <p><sd_drive> is got by AT+FSDRIVE=1.</p>

2.8 AT+FSRENAME Rename File

AT+FSRENAME Rename File	
Test Command	Response
AT+FSRENAM E=?	OK or ERROR
Write Command	Response
AT+FSRENAM E=<old_name>,< new_name>	OK or ERROR
	<p>Parameters</p> <p><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</p> <p><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</p>
Reference	<p>Note</p> <p>The file name must be full path name.</p>

2.9 AT+FSDRIVE Get Drive

AT+FSDRIVE Get Drive	
Test Command	Response
AT+FSDRIVE	+FSDRIVE: (0-1)

=?	<p>OK</p> <p>or</p> <p>ERROR</p>
Write Command AT+FSDRIVE=<n>	<p>Response</p> <p>+FSDRIVE: <drive></p> <p>OK</p> <p>or</p> <p>ERROR</p> <p>Parameters</p> <p><n> 0 Local drive</p> <p>1 SD card drive</p> <p><drive> A-G</p>
Reference	Note

2.10 AT+FSMKDIR Make New Directory

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

2.11 AT+FSRMDIR Delete Directory

AT+FSRMDIR Delete Directory	
Test Command AT+FSRMDIR=?	<p>Response</p> <p>OK</p> <p>or</p> <p>ERROR</p>
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

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

AT+FSHEX Set Character Format of FS Path or Name	
Test Command AT+FSHEX=?	Response +FSHEX: (0-1) OK Parameter See Write Command
Read Command AT+FSHEX?	Response +FSHEX: <n> OK Parameters See Write Command
Write Command AT+FSHEX=<n>	Response OK Parameters <n> <u>0</u> 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 The command is only for the character format of file patch or file name.

3 Examples

In the "Grammar" columns of following tables, input of AT commands are in black , module return values are in blue.

Grammar	Description
AT+SD2PCM=0 OK AT&W OK AT+CFUN=1,1 OK	SD mode is valid In this example, reboot the module by AT command, customer can reboot the module by PWRKEY pin instead of AT command
AT+FSDRIVE=1 +FSDRIVE: E OK	Get SD card drive
AT+FSLS=E:\ Images\ Audio\ OK AT+FSCREATE=E:\test.txt OK AT+FSLS=E:\ Images\ Audio\ test.txt OK	Create test.txt
AT+FSFLSIZE=E:\test.txt +FSFLSIZE: 20 OK	
AT+FSREAD=E:\test.txt,0,100,1 asdfghjklolytedfttg OK	
AT+FSWRITE=E:\test.txt,0,2,10 > OK	Write "cc" at the beginning of the file

<p>AT+FSREAD=E:\test.txt,0,100,0 ccdfghjklolytedfttg OK</p>	<p>The first two characters is "cc"</p>
<p>AT+FSREAD=E:\test.txt,1,100,2 dfghjklolytedfttg OK</p>	<p>The offset of reading position is 2</p>
<p>AT+FSMEM +FSMEM: C:1024bytes,E:49152bytes OK</p>	
<p>AT+FSL= E:\ test1.txt OK AT+FSMKDIR=E:\media OK AT+FSRENAME=E:\test1.txt,E:\test2.txt OK AT+FSL= E:\ test2.txt media\ OK AT+FSRMDIR=E:\media OK AT+FSL= E:\ test2.txt OK</p>	<p>Make media directory Rename test1.txt Delete media directory</p>
<p>AT+FSHEX=0 OK AT+FSL=C:\ User\ OK AT+FSHEX=1 OK AT+FSL=433A5C 557365725C OK</p>	<p>The file path or file name is ASCII format The file path or file name is UTF-8 format "433A5C" is UTF-8 format, converts to ASCII is "C:\ " "557365725C" is UTF-8 format, converts to ASCII is "User\"</p>

Appendix

A Related Documents

SN	Document name	Remark
[1]	SIM800 Series_AT Command Manual	

B Terms and Abbreviations

Abbreviation	Description

SIMCOM CONFIDENTIAL FILE

Contact us:

Shanghai SIMCom Wireless Solutions Co.,Ltd.

Address: Building A, SIM Technology Building, No. 633, Jinzhong Road, Shanghai, P. R. China
200335

Tel: +86 21 3252 3300

Fax: +86 21 3252 3020

URL: www.simcomm2m.com

SIMCOM CONFIDENTIAL FILE