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SIM800 Series_FS_Application Note_V1.01



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Version History

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| 2013-10-31 | 1.00 | New version | Yong.lu |
| 2013-11-18 | | Add AT+FSMEM Add AT+FSRENAME | Yong.lu |
| 2013-11-28 | | Modify the parameter of AT+FSMEM Add AT+FSDRIVE Add AT+FSMKDIR Add AT+FSRMDIR | Yong.lu |
| 2013-12-13 | | Modify the parameter description of AT+FSREAD Modify the response result of AT+FSDRIVE Modify the parameter of AT+FSMEM Add the example of AT+FSRENAME Modify AT+FSRMDIR | Yong.lu |

Scope

This document presents the AT commands of FS operation and application examples. This document can apply to “1308B01SIM800H32_BT” version.

1. FS Introduction

This chapter introduces the FS application features.

1.1. Features

Local storage space is mapped to “C:”, the system will create User directory in “C:” 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.

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 |

2.1. AT+FSCREATE Create File

| AT+FSCREATE Create File | |
|---|--|
| Test Command AT+FSCREATE =? | Response OK or ERROR |
| Write Command AT+FSCREATE =<filename> | <div>Response OK or ERROR</div> <div>Parameter <filename> String without double quotes, the length of the file name should be less than or equal to 64 characters</div> |
| 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 Parameter <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>Parameter</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> Second, user should send file during this period or you can not send file when time out</p> |
| Reference | Note |

2.4. AT+FSDEL Delete File

| AT+FSDEL Delete File | |
|--|--|
| Test Command AT+FSDEL=? | <p>Response</p> <p>OK</p> <p>or</p> <p>ERROR</p> |
| Write Command AT+FSDEL =<filename> | <p>Response</p> <p>OK</p> <p>or</p> <p>ERROR</p> <p>Parameter</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> |
| Reference | Note |

2.5. AT+FSLS List Directories/Files

| AT+FSLS List Directories/Files | |
|---|---|
| Test Command AT+FSLS=? | <p>Response</p> <p>OK</p> <p>or</p> <p>ERROR</p> |
| Write Command AT+FSLS =<filepath> | <p>Response</p> <p><list of subdirectories/files></p> <p>OK</p> <p>or</p> |

| | |
|-----------|---|
| | ERROR |
| | <p>Parameter</p> <p><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 “\”</p> |
| Reference | <p>Note</p> <p>If the last character of the result string is “\”, this means that it is a directory, otherwise, it is a file.</p> |

2.6. AT+FSFLSIZE Get File Size

| AT+FSFLSIZE Get File Size | |
|--|---|
| <p>Test Command</p> <p>AT+FSFLSIZE</p> <p>=?</p> | <p>Response</p> <p>OK</p> <p>or</p> <p>ERROR</p> |
| <p>Write Command</p> <p>AT+FSFLSIZE</p> <p>=<filename></p> | <p>Response</p> <p>+FSFLSIZE: <n></p> <p>OK</p> <p>or</p> <p>ERROR</p> <p>Parameter</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><n> The file size</p> |
| Reference | Note |

2.7. AT+FSMEM Get The Size Of Available Memory

| AT+FSMEM Get The Size Of Available Memory | |
|---|---|
| <p>Test Command</p> <p>AT+FSMEM</p> <p>=?</p> | <p>Response</p> <p>OK</p> <p>or</p> <p>ERROR</p> |
| <p>Execution Command</p> <p>AT+FSMEM</p> | <p>Response</p> <p>If SD card exist:</p> <p>+FSMEM: <local_drive>:<local_size>bytes, <sd_drive>:<sd_size>bytes</p> <p>OK</p> <p>or</p> <p>If SD card doesn't exist:</p> |

| | |
|-----------|---|
| | +FSMEM: <local_drive>:<local_size>bytes OK or ERROR |
| | Parameter <local_drive> The local drive <sd_drive> The sd card drive <local_size> The free space of local storage space <sd_size> The free space of SD card |
| Reference | Note <local_drive> or <sd_drive> is got by AT+FSDRIVE=0 or AT+FSDRIVE=1 |

2.8. AT+FSRENAME Rename File

| AT+FSRENAME Rename File | |
|---|--|
| Test Command AT+FSRENAM E=? | Response OK or ERROR |
| Write Command AT+FSRENAM E=<old_name>,< new_name> | Response OK or ERROR Parameter <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 file should have already existed. The length of the file name should be less than or equal to 64 characters |
| Reference | Note |

2.9. 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 |
| | Parameter <n> 0 local drive 1 sd card drive <drive> A-G |
| Reference | Note |

2.10. AT+FSMKDIR Make New Directory

| AT+FSMKDIR Make New Directory | |
|--|---|
| Test Command AT+FSMKDIR =? | Response OK or ERROR |
| Write Command AT+FSMKDIR= <dir_name> | Response OK or ERROR |
| | Parameter <dir_name> String without double quotes, the dir should not exist. The length of the dir name should be less than or equal to 64 characters |
| Reference | Note |

2.11. AT+FSRMDIR Delete Directory

| AT+FSRMDIR Delete Directory | |
|---|---|
| Test Command AT+FSRMDIR= ? | Response OK or ERROR |
| Write Command AT+FSRMDIR =<dir_name> | Response OK or ERROR |

| | |
|-----------|---|
| | <p>Parameter</p> <p><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</p> |
| Reference | Note |

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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 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 |

| | |
|---|--|
| AT+FSREAD=E:\test.txt,0,100,0 ccdfghjkloiyledfttg OK | The first two characters is "cc" |
| AT+FSREAD=E:\test.txt,1,100,2 dfghjkloiyledfttg OK | The offset of reading position is 2 |
| AT+FSMEM +FSMEM: C:1024bytes,E:49152bytes OK | |
| 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 | Make media directory Rename test1.txt Delete media directory |

Appendix

A Related Documents

| SN | Document name | Remark |
|-----|---------------------------------|--------|
| [1] | SIM800 Series_AT Command Manual | |

B Terms and Abbreviations

| Abbreviation | Description |
|--------------|-------------|
| | |
| | |
| | |

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