Overview

The LibXil fat file system (FFS) library consists of a file system and a glue layer. This FAT file system can be used with an interface supported in the glue layer.

The file system code is open source and is used as it is. Glue layer implementation supports SD/eMMC interface presently.

Application should make use of APIs provided in ff.h. These file system APIs access the driver functions through the glue layer.

File System Files

Table 1: **File System Files**

File	Description
ff.c	Implements all the file system APIs
ff.h	File system header
ffconf.h	File system configuration header – File system configurations such as READ_ONLY, MINIMAL etc. can be set here. This library uses _FS_MINIMIZE and _FS_TINY and Read/Write (NOT read only)
Integer.h	Contains type definitions used by file system

Glue Layer Files

Table 2: **Glue Layer Files**

File	Description
diskio.c	Glue layer – implements the function used by file system to call the driver APIs
diskio.h	Glue layer header

Choosing a File System with an SD Interface

To choose a file system with an SD interface:

1. In SDK, create a new bsp and select the xilffs library.
2. In xilffs options, set **fs_interface = 1** to select **SD/eMMC**. This is the default value. When this option is set, make sure there is an SD/eMMC interface available.
3. Build the bsp and application to use the file system with SD/eMMC.
4. SD or eMMC will be recognized by the low level driver.

Library Parameters in MSS File

The MSS file contains the following library parameters:

```
parameter LIBRARY_NAME = xilffs

parameter LIBRARY_VER = 3.4

parameter fs_interface = 1

parameter read_only = false

parameter use_lfn = false

parameter enable_multi_partition = false

parameter num_logical_vol = 2

parameter use_mkfs = true
```

- `LIBRARY_NAME`: Library name (xilffs)
- `LIBRARY_VER`: Library version (3.3)
- `fs_interface`: File system interface. Currently SD/eMMC is the only interface supported.
    - Value: "`1`" for SD/eMMC
    - Default value is "`1`".
- `read_only`: Enables the file system in **Read Only** mode, if true. Default is false. Zynq® UltraScale+™ MPSoC **fsbl** sets this option as true.
- `use_lfn`: Enables the long file name (LFN) support, if true. Default is false.
- `enable_multi_partition`: Enables the multi partition support, if true. Default is false.
- `num_logical_vol`: Number of volumes (logical drives, from 1 to 10) to be used. Default is 2.
- `use_mkfs`: Enables the mkfs support, if true. Default is true. Zynq UltraScale+ MPSoC fsbl set this option as false.

File System

The file system supports FAT16 and FAT32. The APIs are standard file system APIs. A detailed description can be found at http://elm-chan.org/fsw/ff/00index_e.html.

Revision R0.10b is used in the library.