



j1FS - FS Library Functions

v1.0

Features

- A simple linear memory read-only file system

General Description

Developed mainly for our webserver page storage in internal or external flash. This simple read-only file system uses a very stripped down flat memory footprint similiary to very early DOS floppy disk 8.3 file type systems. Also includes a Perl script to create a binary image for inclusion in the project file.

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Initial Documentation (original design notes)

j1FS – Joshua 1 File System

For internal flash or external flash we will use a simple read only disk image structure. A Perl script is provided to read a 'normal' disk structure from your drive and create hex file that can be added to your project.

The structure is a VERY simplified version of disk blocks.

A directory entry is based on a very simple 8.3 old DOS style entry.

All directories and files are contiguous.

The disk structure is broken into blocks of 16, 32, or 64 bytes. Using 16 bit block start address and 16 bit file size data areas in the directory structure will allow for a maximum of 64KB for a single file.

Block Size	Total Size
16B	1MB
32B	2MB
64B	4MB

Any larger data needs can be broken down into multiple 'drives' or moved to our FAT32 file system.

The 0th block (16, 32, or 64) is the device header. Only the first 16 bytes are used for compatibility.

Device Header:

- 11 bytes – volume name
- 1 byte – block size (16,32, or 64)
- 2 bytes – 16 bit starting block for root directory (always 0x0001)
- 2 bytes – 16 bit byte count of root directory (always multiples of 16)

Each directory will be filled with 16 byte directory entries:

- 8 bytes – file name
- 3 bytes – file extension
- 1 byte – flag byte (0x80 = directory)
- 2 bytes – block start address (max 64K)
- 2 bytes – file/directory size in bytes (max 64K)

The usual unix path hierarchy will be used:

- / = root
- /img/logos/j1sys.gif = sample gif file two layers down
- ../harry = my brother harry

“Use The Source Luke”

No further documentation available at this time. Future releases will include full functional documentation.