Microsoft FAT by Tuxera

General features

Supported operating systems	Android, Linux, Chrome OS, Firefox OS, Tizen
Hardware architectures	ARM, ARM64, Intel x86/x86_64 or compatible, MIPS, MIPS64, PowerPC, SH4, and more
Interoperability	• Conforms to all Microsoft FAT versions including XP, Vista, Windows 7, Windows 8, and Windows 10 • (Microsoft Interop Vendor Alliance) • Compatible with Linux VFAT (including Android VFAT) • Compatible with Mac OS X FAT driver • Support for all flash-based storage types such as SD cards, eSD, CF cards, SSD, USB-connected storages, and eMMC • Support for APM, GPT, and MBR partition schemes

Capacity	Maximize volume size:
	
	   - 2 TiB with 512-byte sectors
	   - 16 TiB with 4096-byte sectors
	
	Maximum allocation block size = (sector size in bytes) x 128
	
	Maximum file size: 4 GiB - 1 byte
	
	Maximum filename length: 255 characters (16-bit)
	
	Supported sector sizes: 512, 1024, 2048, and 4096 bytes

System requirements

Minimum system requirements	RAM: 1 MB Processor: 25 MHz
Memory and CPU footprint	Read-Write: 40–60 kiB Read-Only: 25–35 kiB CPU usage: 0–10%
High availability features	
Security features	
High performance	

Proprietary file system features

Power-safe / fail-safe	Volume consistency ensured if storage is removed, or power or battery is disconnected
Long File Names (LFN)	Supported
Tuxera POSIX Test Suite	Tuxera maintains POSIX File System Test Suite. The following system calls are tested: • chmod: changes permission • chown: changes ownership • link: creates hardlinks • mkdir: creates directories • mkfifo: creates fifo files • open: opens a file • rename: changes file name • rmdir: removes directories • symlinks: creates symbolic links • truncate: decreases/increases file size • unlink: removes regular files, symbolic links, fifos, and sockets • xacl: reports errors when getting/setting ACLs

Performance and reliability

High performance	Advanced algorithms and data structures ensure maximum I/O throughput, low CPU usage for small and large files, and achieve high IOPS for file operations Tunable settings Low power use, optimized for increased battery life When saving files on SD cards, MMC-based storage (incl. eMMC), or USB memory sticks, full speed is achieved No data fragmentation
Reliability	Rigorous quality assurance, wide deployment, and fault-tolerant design guarantee outstanding file system robustness

Get in touch to start your evaluation of Microsoft FAT by Tuxera: **sales@tuxera.com**