

THE IMPACT OF FILE SYSTEMS

Increasing Video Recording Speed

YONGJUN ZOU

Business Development Manager, Tuxera Inc.

FACTORS AFFECT OVERALL VIDEO RECORDING PERFORMANCE

Optimizing software for the best possible performance



Flash Memory

Controller

Firmware

FILE SYSTEMS



OVERALL PERFORMANCE

TEST ENVIROMENT INTRODUCTION



RECORDING



TEST ENVIRONMENT



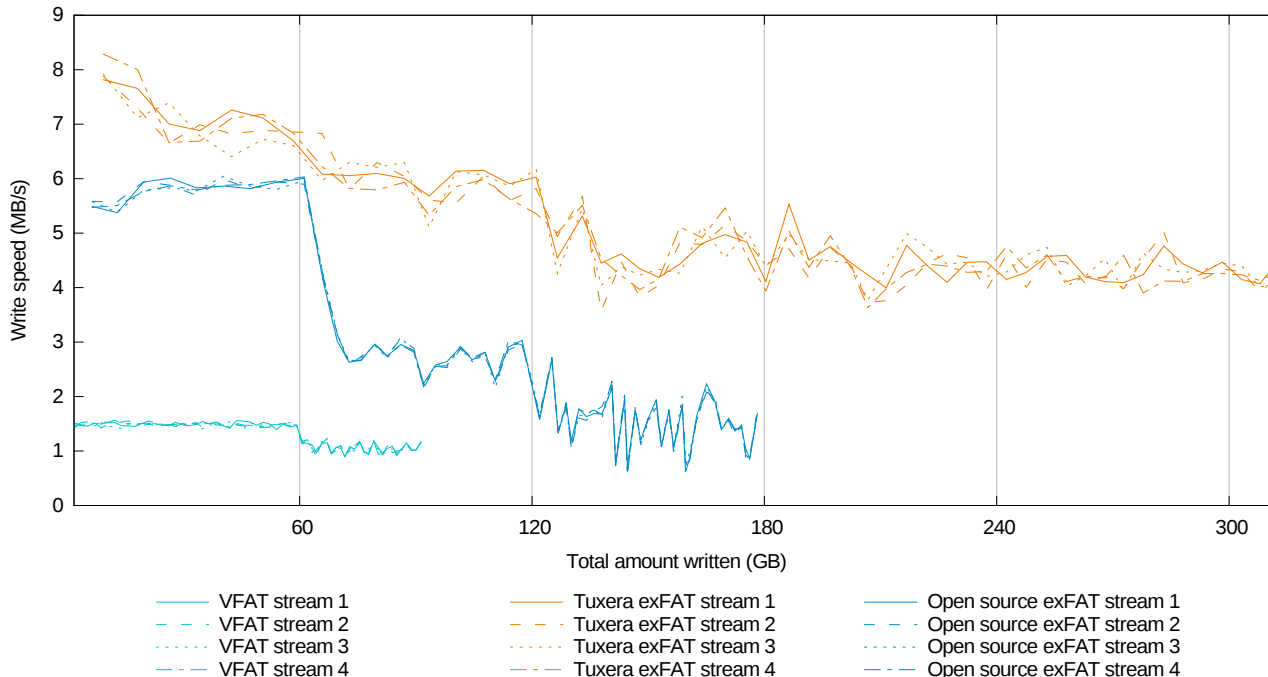
From left to right:

- Samsung Pro 64GB
- Toshiba Exceria Pro UHS-II 32GB

TEST RESULT: 4-STREAM VIDEO RECORDING

Hardware setup:

- IP Camera (ARM Cortex A9 Dual Core)
- Samsung Pro 64GB UHS-I microSDXC Card

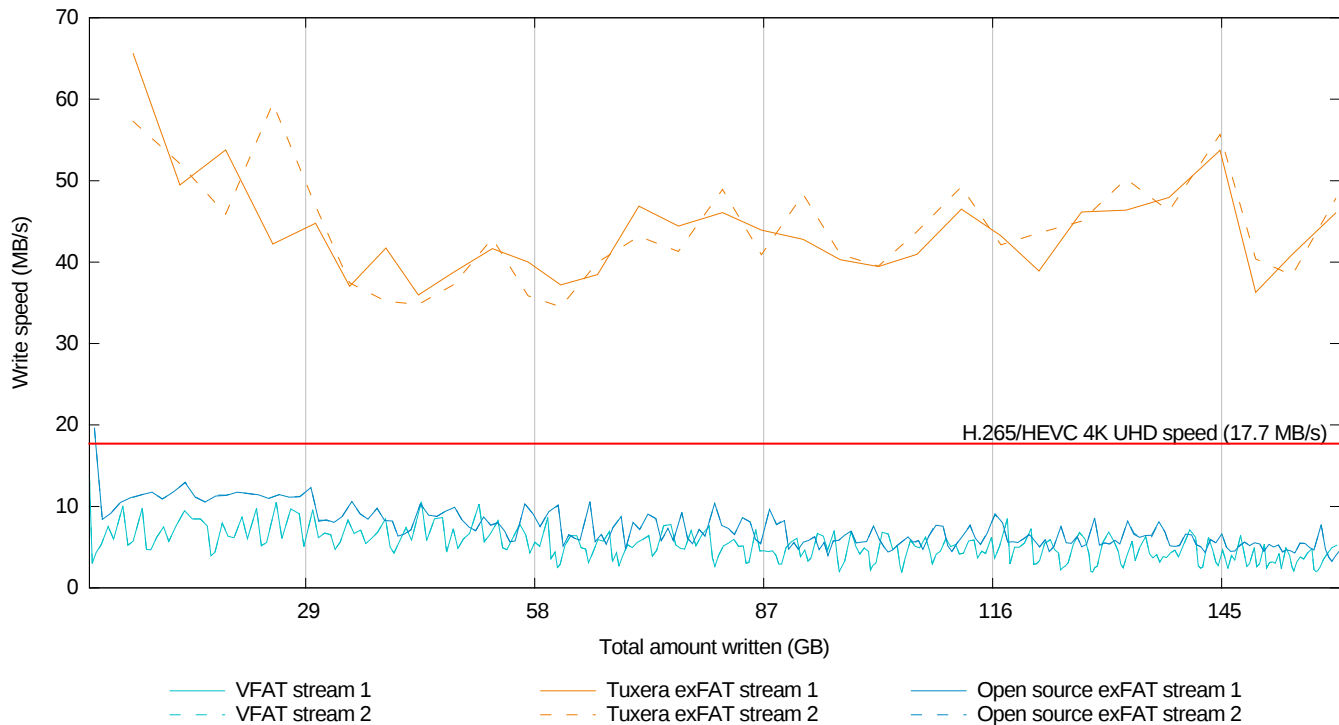


Tests with Open Source exFAT and VFAT were terminated after 5 hours writing **178GB** of data (open source exFAT) and **91GB** (VFAT). Tuxera exFAT wrote over **316GB** of data in just **4.5 hours**.

TEST RESULT: 2-STREAM VIDEO RECORDING

Hardware setup:

- X86+Linux device
- Toshiba Exceria Pro 32GB UHS-II SDHC Card

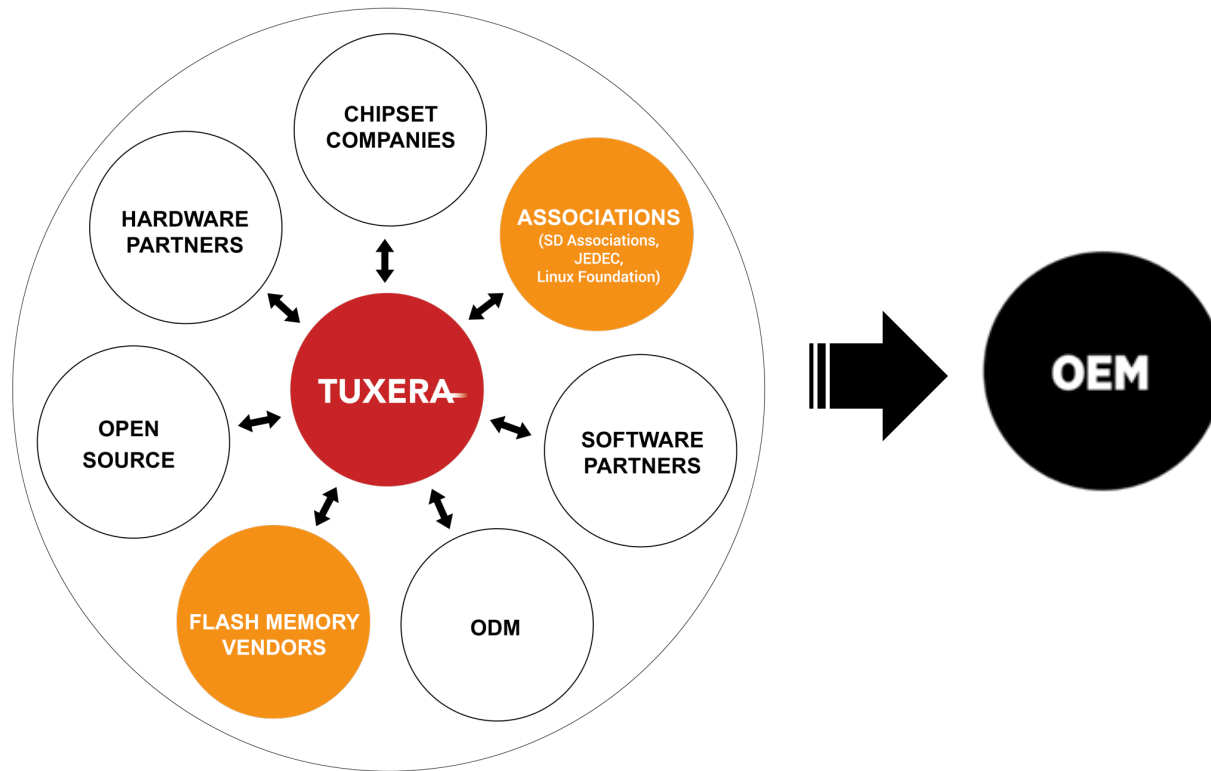


FILE SYSTEM IMPACTS

Right file system implementations bring significant better video recording experience.



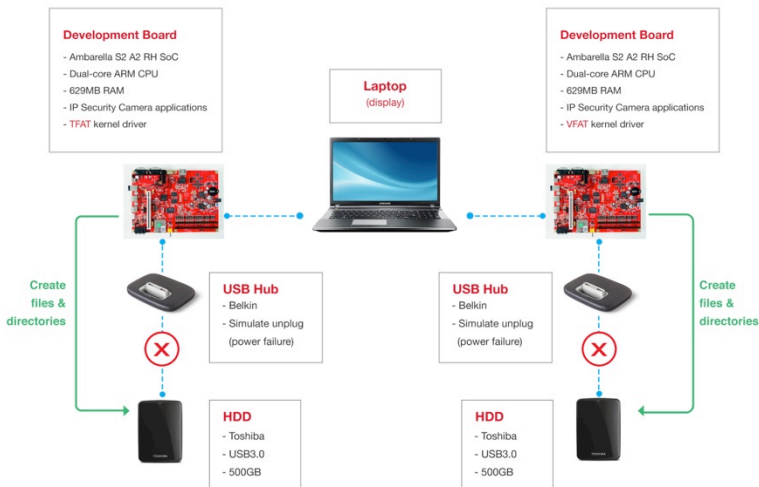
TUXERA ECOSYSTEM: FLASH MEMORY PARTNERS



August **12-13th**
 SD Association
 Booth Number **119**

TUXERA FILE SYSTEM TECHNOLOGY

Ultimate reliability in most demanding situations



Notes

- Demonstrating Tuxera file system reliability advantage over open-source alternatives
- Comparison between Tuxera FAT and open-source VFAT
- Each development board creates files and directories on an external HDD
- A USB hub is used to simulate unplugging of the HDD in the middle of write operations
- As a result in about 9 out of 10 times VFAT volume will get corrupted and switch to read-only mode
- There is no corruption of the TFAT volume
- The laptop aggregates and displays the test results



THANK YOU!

