emFile: new feature enables use of gigabyte NAND flashes on microcontrollers

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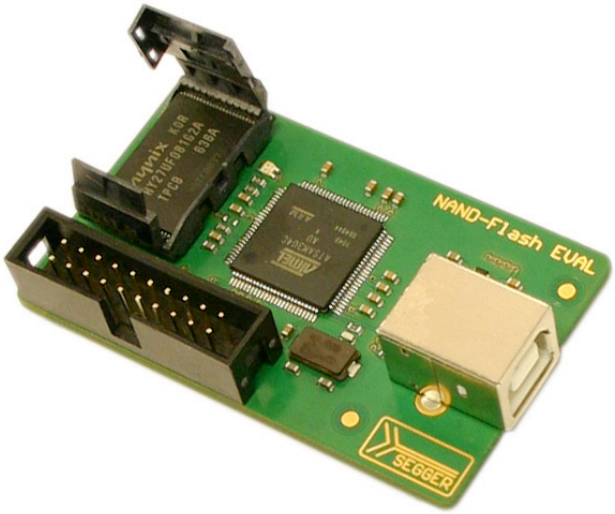

The new block grouping feature for SEGGER's emFile file system reduces RAM requirements for block management and thus allows using even very large NAND flashes with smaller microcontrollers.

Block grouping means that the driver treats multiple blocks as a single block to considerably reduce the memory used for administrating the NAND flash memory. When using external NAND memory with microcontrollers, RAM limitation is usually the bottleneck. NAND flash, however, is still the fastest and most cost-efficient way to store large data.

The size of a block group is scalable according to the users' requirements. For example, an 8 GB NAND flash, with 4096 blocks, would normally require 8 Kbyte RAM – block grouping can bring down RAM consumption to less than 1 Kbyte. Critically, block grouping does not affect processing speed.

The new feature further improves the preeminent efficiency of emFile's NAND driver. The driver has outstanding read and write performance: almost 6 Mbytes/s for reading and 3.8 Mbytes/s for writing. Furthermore, it is fail safe, which means the file system remains intact even in cases of unexpected resets. By adding the journaling feature, this safety can be extended to the data residing in the file system.

Block grouping is a built-in feature of emFile with the latest release.

More information on emFile NAND Flash driver is available at:
https://www.segger.com/emfile_driver_nand_flash.html

About emFile

SEGGER's emFile is a highly efficient file system optimized for resource usage and performance. Two versions are available, one for FAT-file systems and another for EFS, a proprietary file system which allows the use of long file names without royalties.

emFile's driver level is fail-safe by design, removing the risk of corrupted data. To add fail-safety to the upper file-system, a highly efficient journaling option is available for both EFS and FAT.

All popular flash media are supported by emFile. Removable media such as SD-Cards, MMC, and CompactFlash are supported, as well as, internal flash memories like NOR, NAND, and data flashes. The drivers for the internal flash memories include sophisticated wear leveling algorithms. The wear leveling also takes into account that files may be modified at different frequencies.

Full product specifications are available at: http://www.segger.com/emFile.html

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About SEGGER

SEGGER Microcontroller develops and distributes hardware and software development tools as well as software components for embedded systems. An "embedded system" is one in which a microprocessor and associated components are incorporated into a device helping to accomplish difficult and complex tasks in products such as cell phones, medical instruments, instrument clusters, measurement instruments, satellite radios, digital cameras etc.

SEGGER was founded in 1997, is privately held, and is growing steadily. Based in Hilden with distributors in all continents and a local office in Massachusetts, SEGGER offers its full product range worldwide.

SEGGER software products include: embOS (RTOS), emWin (GUI), emFile (File System), emUSB (USB host and device stack) and embOS/IP (TCP/IP stack). With emSecure, a unique software to generate and verify digital signatures, and the TLS-solution emSSL, SEGGER is also offering software for the growing field of data and product security.

With the experience in programming efficiently on embedded systems, SEGGER created highly integrated, cost-effective programming and development tools, such as the Flasher (stand-alone flash programmer) and the industry leading J-Link/J-Trace emulator.

SEGGER cuts software development time for embedded applications by offering affordable, high quality, flexible and easy-to-use tools and software components allowing developers to focus on their applications. Find out more at www.segger.com.

Contact information:

Dirk Akemann
Marketing Manager
Tel: +49-2103-2878-0
E-mail: info@segger.com

Issued on behalf of:

SEGGER Microcontroller GmbH & Co. KG
In den Weiden 11
40721 Hilden
Germany
www.segger.com

SEGGER Microcontroller Systems LLC
106 Front Street
Winchendon, MA 01475
United States of America
www.segger-us.com