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## Hyperstone introduces F3 family of CompactFlash™ and Solid State Disk controllers providing superior power efficiency, reliability, and fail safe features for Flash Memory applications

Konstanz, Germany, February 6, 2008 – Today, Hyperstone introduced its F3 family of Flash Memory controllers. Targeting applications such as Solid State Disk (SSD), Disk-on-Module (DoM), CompactFlash™ (CF) cards, and embedded Flash or disks-on-board, the F3 together with firmware provides lowest power consumption, highest reliability, endurance, and rigorous fail safe features for all Single Level Cell (SLC) and Multi Level Cell (MLC) based Flash Memory solutions.

Based on the Hyperstone 32 Bit RISC core including instruction set extensions optimized for Flash handling, the F3 offers among others, safe power fail handling, proven error detection and correction, superior wear leveling that involves all physical blocks including the ones containing static data, satisfying the most demanding requirements regarding data traffic and power fail situations.

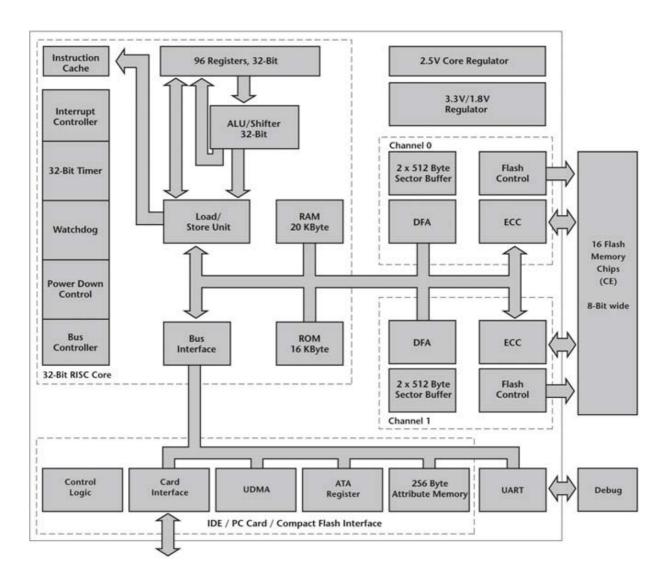
- Fully compliant to CompactFlash™ 3.0 and compatible to 4.1 specifications
- Fast ATA supporting PIO mode 6, MDMA mode 4, UDMA mode 4 in True-IDE mode
- Sustained read up to 45 MB/s and random read up to 35 MB/s
- Sustained write up to 30 MB/s and random write up to 6 MB/s
- 2 Direct Flash Access (DFA) channels including 2 Sector Buffers and interleaving capability
- Error Correcting Code (ECC) capable of correcting 4 symbols in a 512 bytes sector with additional CRC
- As firmware is stored in Flash Memory, all future Flashes can be supported by simple firmware upgrades
- Built-in voltage regulator, and detector, reducing the BoM to a few additional capacitors and resistors
- System operation current 75 mA max. depending on Flash, automatic power-down mode, power saving mode, automatic wake-up with sleep mode current < 200 µA</li>

"About 5 years ago we introduced our F2 family together with its innovative firmware concepts. Since then it has proven in many millions of industrial and consumer applications to be the industry's most robust Flash controller system as in our developments we have never compromised reliability for short-lived benchmark performance," said Axel Mehnert, Director of Marketing and Customer Support of Hyperstone.

"Since then algorithms focusing on reliability, endurance and fail safe features have been improved further. Now, our complementary F3 offers the same level of robustness that many of our customers have been satisfied with and takes it to the next level of performance," said Jim Phillips, VP of Sales at Hyperstone, Inc, "Reliable Flash handling is essential especially within industrial Flash solutions and all non-removable Flash disks".

The F3 is currently available in five different options:

- F3-LBT05 RoHS compliant, 0 to +85° C temperature range, TQFP 100, 8 chip enables
- F3-RBT05 RoHS compliant, -40 to +85° C temperature range, TQFP 100, 8 chip enables
- F3-LBT06 RoHS compliant, 0 to +85° C temperature range, TQFP 128, 16 chip enables
- F3-RBT06 RoHS compliant, -40 to +85° C temperature range, TQFP 128, 16 chip enables
- F3-0BBD0 Known-Good-Die



## Block Diagram F3 Flash Memory Controller

## **About Hyperstone**

Hyperstone, a fabless semiconductor and microprocessor design company, was founded in 1990 and is based in Konstanz, Germany. Together with subsidiaries in Taiwan, USA and with other worldwide partners, Hyperstone serves a global customer base. Hyperstone is a member of CML Microsystems Plc group, traded on the London Stock Exchange. The group currently consists of eight subsidiaries and has over 250 employees. Hyperstone research and development is based in Germany and Taiwan. Industry-leading partners provide world-class wafer subcontracting, packaging, and testing services. Hyperstone's success is based on the unique design of a unified RISC/DSP processor architecture that provides both a fast RISC processor for data and control functions together with a powerful DSP unit for efficient algorithm execution. Hyperstone designs require less silicon, are more power efficient and require lower software complexity when compared to conventional dual-core designs.

Hyperstone's products include the hyNet SoC for IP-Cameras and Real-Time Ethernet as well as microcontrollers for Solid State Disks (SSD), Disk-on-Module (DoM), Disk-on-Board (DoB), embedded Flash solutions such as eMMC, and Flash cards such as CF, SD, microSD. More information is available at www.hyperstone.com.

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