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### **Hyperstone introduces S8, SD 3.0 (UHS-I) and eMMC 4.4 Flash Memory Card controller**

***The new S8 is offering highest reliability and exceptional data retention features for SD (SecureDigital), smartSD memory cards and eMMC embedded flash modules.***

**Konstanz, Germany, August 12, 2013** – Hyperstone introduces their new S8 - SD/MMC Flash Memory Controller. S8 is targeting applications such as SDHC, SDXC, SD (SecureDigital), smartSD, smart microSD, high speed and UHS-I memory cards as well as eMMC MCP modules. Together with Hyperstone's proprietary hyReliability™ firmware, it provides enhanced endurance and data retention management, as well as rigorous fail-safe features, all of which are mandatory for industrial applications.

#### **Product Highlights:**

- Fully compliant to SD 3.0 (UHS-I) and SD 2.0 specifications
- CPRM and ASSD 2.0 or Mc-EX support
- Fully compliant to eMMC 4.41 with additional support for Power-Off Notification, Discard, and Sanitize possible
- Host transfer rate of up to 104 MB/s
- ECC engine correcting up to 96-Bit, ample hardware resources to support next flash generations
- Flash interface compliant with Toggle DDR and ONFI 2.3
- Sequential read and write up to 90 MB/s
- On-the fly AES encryption hardware engine
- Additional SDIO 3.0, SPI, I2C, and ISO7816 interfaces
- hyReliability™ Flash Memory Management and firmware architecture
- Static and Global Wear leveling to maximize write endurance
- Read Disturb Management and dynamic data refresh to maximize data retention and refresh data subject to read disturbance

“Our new S8 SD/MMC controller is designed to deliver the highest level of reliability and data retention when using most recent 1x nm MLC flash technologies. Tying the possibly strongest BCH ECC to our proven hyReliability™ firmware architecture is necessary to ensure highest level of endurance and reliability that our customers are used to,” said Axel Mehnert, VP Marketing of Hyperstone. “Our mission is enabling future NAND flashes and advanced technologies, fit for use especially within industrial, ruggedized applications.”

“Besides industrial SD applications, which require highest reliability and ruggedness, the additional SDIO 3.0 and ISO 7816 interfaces as well as the on-the-fly AES encryption make it well suited for additional applications in the security and identification field.” said Dr. Jan Peter Berns, Managing Director of Hyperstone. “We have implemented hardware features and developed firmware to provide highest data retention and refresh mechanisms even when memory cards are faced with extreme environmental conditions. Such features are inevitable for memory systems used outdoors and can prevent in-car infotainment systems from failing.”

S8 will initially be available as Probed Die and in an LGA-52 package. Samples are available immediately.



### **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 the CML Microsystems Plc group, traded on the London Stock Exchange. 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 its proprietary 32-Bit RISC processor, optimized for flash handling applications.

Hyperstone's products include microcontrollers for Serial-ATA and Parallel-ATA 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. Flash controller firmware is supplied complementary to the controllers and customized for each flash and application. Hyperstone is one of the pioneers in the flash memory controller business and owns several patents for flash handling, including wear leveling algorithms and microprocessor design.

More information is available at [www.hyperstone.com](http://www.hyperstone.com).

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