

PRESS RELEASE
FOR IMMEDIATE RELEASE



Hyperstone GmbH
Line-Eid-Strasse 3, 78467 Konstanz, Germany
Web: www.hyperstone.com, Email: info@hyperstone.com

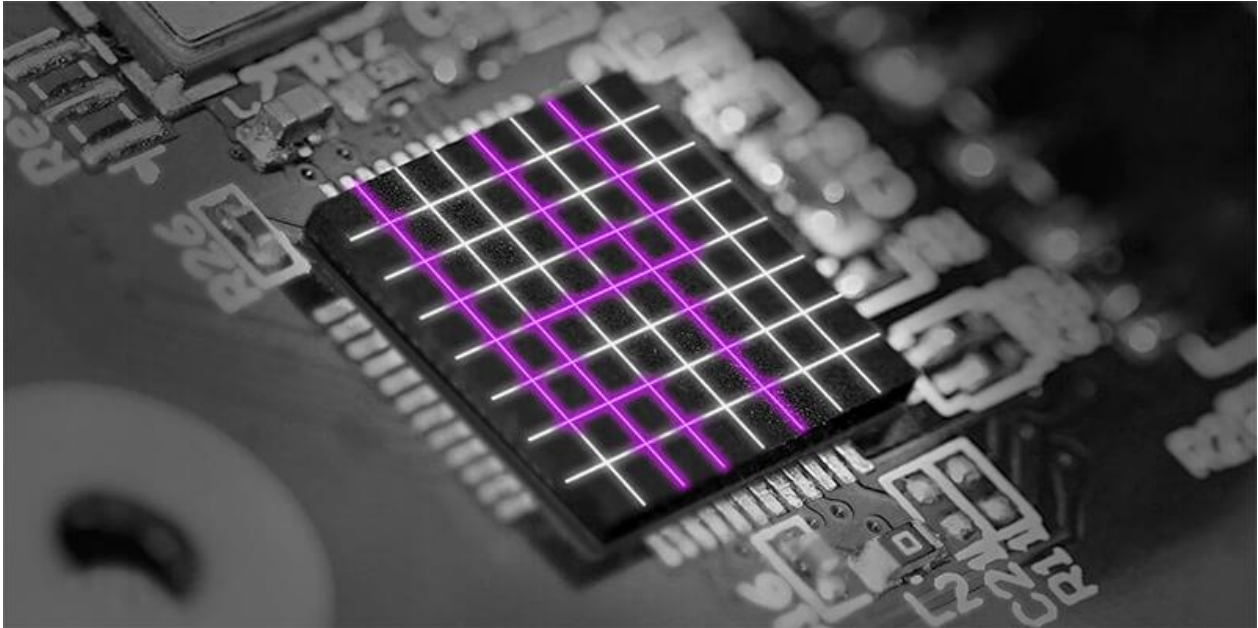
Hyperstone's FlashXE[®] for maximum reliability of 3D NAND

The recently introduced FlashXE[®] ecosystem ensures maximum reliability for NAND flash based storage systems through a feature set that comprises of extensive calibration, superior error correction recovery, error avoidance and refresh mechanisms.

Konstanz, Germany, 28 March 2019 – With the launch of Hyperstone's latest X1 low-power SSD controller comes the release of Hyperstone's newest technology – FlashXE[®] eXtended Endurance. FlashXE[®] is a feature set that comprises of extensive calibration, error correction recovery, error avoidance and refresh mechanisms in order to ensure maximum reliability of NAND flash-based storage systems. As cost of NAND flash memory is reduced due to higher densities and new technologies like 3D NAND have entered the market, the technology and algorithms required to manage this medium need to advance. Consequently, error correction and complex flash management requirements have never been higher. The FlashXE[®] ecosystem addresses these issues through an environment of different features, mechanisms and algorithms to prevent, detect and correct errors.

The collective of features and process' start to optimize long before errors occur or the system is even assembled. A qualification process characterizes each supported flash type over its lifetime and different operating temperatures. This knowledge is then implemented in the basic flash support of the firmware and delivered with the controller. The next phase, during operation, ensures the controller continuously adjusts the voltage levels of the read-out circuit over the flash's lifetime. The controller also takes further steps to prevent errors such as dynamic data-refresh, near-miss ECC and read disturb management. In the subsequent phase, in which errors occur in spite of the precautions mentioned before, there is a strong error correction in two separate modules, one being based on a BCH-code as well as the new generalized concatenated code (GCC) with support for soft-decoding.

"There are various state-of-the-art features implemented into different phases of the controller design and operation that guarantee a very high reliability in storage solutions" claims Sandro-Diego Wölfle, Product Manager at Hyperstone. "Ultimately, our aim is to increase the reliability of flash memory to a point where all storage suppliers feel safe knowing their systems are supported by a Hyperstone controller". The FlashXE[®] collective is available with Hyperstone's latest flash controller, the X1. The X1 is a highly efficient, low-power SSD controller for rugged and industrially demanding NAND flash based storage solutions.



About Hyperstone

Hyperstone is a fabless semiconductor company based in Konstanz, Germany with a strong focus on world-class flash memory controllers for industrial embedded markets. Its products set the standard for high-reliability flash management providing confidence for NAND flash performance in mission critical situations. Hyperstone's products include microcontrollers for various host interfaces and performance points, e.g. SATA, USB, CF/PATA, SD/microSD and eMMC. Flash controller firmware is supplied as complementary to the controllers and customized for each flash and application. Hyperstone is a member of the CML Microsystems Plc group, traded on the London Stock Exchange.

To learn more about Hyperstone, please visit www.hyperstone.com

Ends.

Contact Information:

Hyperstone GmbH

Line-Eid-Strasse 3
78467
Konstanz, Germany
Phone: +49 7531 9803-0

Media Contact:

Lena Harman
Marketing Coordinator
+49 7531 9803-39
lharman@hyperstone.com

This press release may include estimates and forward-looking statements that involve a number of risks or uncertainties. It should not be considered technical documentation and content is subject to change without prior notice. Brand, product or company names and trademarks are property of the respective holder. Warranties implied or expressed as well as liabilities for any damage resulting from using the provided information in this document is void. (HS-Mkt-LMH-PR-19-03-28)