

## Press Release

### KIOXIA Strengthens Lineup of Embedded Flash Memory Products for Consumer Applications

*Next-Gen e-MMC Devices Deliver Improved Write Amplification, Performance Stability*



**Düsseldorf, Germany, 30 August 2022** – [KIOXIA Europe GmbH](#) today announced that it has begun sampling the latest generation of its JEDEC<sup>[1]</sup> e-MMC Ver. 5.1<sup>[2]</sup>-compliant embedded flash memory products for consumer applications. The new products are available in capacities of 64 and 128 gigabytes (GB) and integrate the company's BiCS FLASH™ 3D flash memory and a controller in a single package.

Demand for mid-range capacities in consumer products such as tablets and IoT devices continues to grow. Although the market slowly shifts to UFS, there are cases where e-MMC will continue to be relevant. The new KIOXIA e-MMC devices expand the available options.

A leading provider of flash memory and storage for consumer applications and mobile devices, KIOXIA has been supporting e-MMC since 2007 and was the first supplier to introduce the higher performance follow-on solution to e-MMC, UFS<sup>[3]</sup>, in early 2013. Today, KIOXIA's broad lineup of e-MMC and UFS solutions provide support across a wide range of densities (4GB-1TB).

This latest generation BiCS FLASH-based e-MMC offers the following features well-suited to the requirements of consumer applications, including:

- A newer generation of BiCS FLASH 3D flash memory<sup>[4]</sup>
- Improved architecture that reduces internal write amplification and achieves more stable sequential write performance
- Pre-programmed user data that will now have higher reliability<sup>[5]</sup> before it is sent for reflow during customer's manufacturing process
- Idle to auto-sleep time is reduced by 100x<sup>[6]</sup> from existing generation to help extend user application's battery life
- Faster performance is achievable through accessing multiple dies inside the device
- Supports JEDEC eMMC 5.1 standard with fastest interface speed (HS400)

"Reflecting on evolving consumer applications that require enhanced, next-generation e-MMC, KIOXIA addresses this need by introducing the latest JEDEC e-MMC Ver. 5.1 and delivering broader, higher-performance product lineup, and in that, leading the way forward," said Axel Stoermann, Vice President Memory Marketing & Engineering, KIOXIA Europe GmbH.

KIOXIA is now sampling its next-gen e-MMC devices, with general availability expected in October.

###

#### Notes

1: JEDEC is a registered trademark of JEDEC Solid State Technology Association.

2: One of standard specifications of embedded flash memory defined by JEDEC.

3: Universal Flash Storage (UFS) is a product category for a class of embedded memory products built to the JEDEC UFS standard specification. JEDEC is a registered trademark of JEDEC Solid State Technology Association. First claim as of 2/7/2013.

4: Compared to existing KIOXIA BiCS FLASH 3D flash memory e-MMC products.

5: Compared to existing KIOXIA BiCS FLASH 3D flash memory e-MMC products which did not have a higher reliability before soldering mode.

6: 100x is calculated from current product auto-sleep time of 200 milliseconds (ms) to the new device which is now 2ms. By allowing the e-MMC to go from idle mode to auto-sleep faster, the battery drain will be slower, extending battery life.

Other factors that would inhibit/prevent such battery life extension is if the eMMC is always active and never goes to idle.

Definition of capacity: KIOXIA Corporation defines a megabyte (MB) as 1,000,000 bytes, a gigabyte (GB) as 1,000,000,000 bytes and a terabyte (TB) as 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1Gb =  $2^{30}$  bits = 1,073,741,824 bits, 1GB =  $2^{30}$  bytes = 1,073,741,824 bytes and 1TB =  $2^{40}$  bytes = 1,099,511,627,776 bytes and therefore shows less storage capacity. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system, and/or pre-installed software applications, or media content. Actual formatted capacity may vary All company names, product names and service names may be trademarks of their respective companies.

### **About KIOXIA Europe GmbH**

KIOXIA Europe GmbH (formerly Toshiba Memory Europe GmbH) is the European-based subsidiary of KIOXIA Corporation, a leading worldwide supplier of flash memory and solid-state drives (SSDs). From the invention of flash memory to today's breakthrough BiCS FLASH, KIOXIA continues to pioneer cutting-edge memory solutions and services that enrich people's lives and expand society's horizons. The company's innovative 3D flash memory technology, BiCS FLASH, is shaping the future of storage in high-density applications, including advanced smartphones, PCs, SSDs, automotive and data centers.

Visit our [KIOXIA website](#)

### **Contact details for publication:**

KIOXIA Europe GmbH, Hansaallee 181, 40549 Düsseldorf, Germany  
Tel: +49 (0)211 368 77-0  
E-mail: [KIE-support@kioxia.com](mailto:KIE-support@kioxia.com)

### **Contact details for editorial enquiries:**

Lena Hoffmann, KIOXIA Europe GmbH  
Tel: +49 (0) 211 36877 382  
E-mail: [lena1.hoffmann@kioxia.com](mailto:lena1.hoffmann@kioxia.com)

### **Issued by:**

Birgit Schöniger, Publitek  
Tel: +49 (0)4181 968098-13  
E-mail: [birgit.schoeniger@publitek.com](mailto:birgit.schoeniger@publitek.com)  
Web: [www.publitek.com](http://www.publitek.com)

Ref. KIE082\_D1/EN