

Press Release

KIOXIA Debuts UFS Ver. 3.1 Embedded Flash Memory Devices
Delivers Significant Performance Boost to 5G Applications – and Beyond



The image is available for download in high and low resolution [here](#)

Düsseldorf, Germany, 24 February 2020 - Further cementing its position as a leading provider of storage for next-gen mobile devices, KIOXIA Europe GmbH (formerly Toshiba Memory Europe) today announced that it has started sampling^[1] Universal Flash Storage^[2] (UFS) Ver. 3.1 embedded flash memory devices. Well suited for mobile applications including 5G networks requiring high-performance with low power consumption, the new line-up utilizes KIOXIA's cutting-edge BiCS FLASH™ 3D flash memory and is supported in four capacities: 128GB, 256GB, 512GB, and 1TB^[3].

The new devices integrate BiCS FLASH 3D flash memory and a controller in a JEDEC-standard 11.5mm x 13.0mm package. The controller performs error correction, wear leveling, logical-to-physical address translation, and bad-block management for simplified system development.

The newest offerings enable next-gen mobile devices to take full advantage of the connectivity benefits of 5G, leading to faster download and reduced lag time. As a result mobile customers benefit from the improved user experience of their mobile device.

“KIOXIA stays at the forefront of UFS memory development” comments Axel Störmann Vice President for Memory Marketing & Engineering, KIOXIA Europe GmbH “with UFS, first introduced by us in 2013^[4] and UFS ver. 3.0 last year^[5] the presentation of UFS 3.1. today, highlights KIOXIA’s dedication to advancement and innovation further.” he continues.

All four devices include the following features:

WriteBooster*: Enables significantly faster write speeds by approximately 2 to 3 times than the normal write performance.

Sequential Read performance: Improved by approximately 30% over KIOXIA’S existing Ver. 3.0 product.

Host Performance Booster (HPB) Ver. 1.0 (defined as an extension spec): Improves random read performance by utilizing the host side memory.

UFS-DeepSleep Power Mode*: Achieves power consumption reduction in sleep mode compared to the existing UFS-Sleep Power Mode.

Performance Throttling Event Notification: The UFS may throttle performance if the internal temperature reaches its upper limit, to avoid overheating and damage to the internal device circuits.

Notes:

[1] Sample shipments of the 256GB device are available now with the rest of the line-up to gradually follow after March. Specification of the samples may differ from that of commercial products.

[2] Universal Flash Storage (UFS) is a trademark and 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.

[3] In every mention of a KIOXIA product: Product density is identified based on the density of memory chip(s) within the Product, not the amount of memory capacity available for data storage by the end user. Consumer-usable capacity will be less due to overhead data areas, formatting, bad blocks, and other constraints, and may also vary based on the host device and application. For details, please refer to applicable product specifications.

[4] Toshiba Starts Sample Shipment of Industry's First Embedded NAND Flash Memory Modules/ Source: Toshiba Corporation as of February 2013: <https://business.kioxia.com/en-jp/news/2013/20130208-1.html>

[5] Toshiba Memory unveils industry's first UFS ver. 3.0 embedded flash memory devices/Source: KIOXIA Corporation as of January 23, 2019 : <https://business.kioxia.com/en-emea/news/2019/20190123-1.html>

* New spec from JEDEC Ver. 3.1

* Company names, product names, and service names mentioned herein 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 3D technology, 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.

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