

KIOXIA

**Together,
we move
memory forward.**



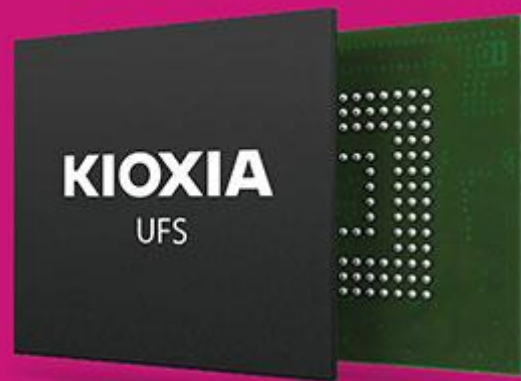
Redefining Smartphone User Experiences via KIOXIA UFS Technology

Smartphones and other mobile devices are now universally accepted as an essential element of people's lives, playing a vital part in modern society. By utilizing them, we are able to stay connected with the world around us - not only providing us with a means for communication (phone calls, messaging, emails, etc.) and the accessing of knowledge, but also to interact with each other through gaming, social media and suchlike. The data-intensive applications for which smartphone handsets are now being employed, especially those that are predominantly video-centric, are placing considerable strain on existing memory architectures and interfaces. Bottlenecks are being witnessed and these are severely impinging on the user experiences that can be derived.

Capacity and performance: optimal storage solutions from KIOXIA

The [Universal Flash Storage \(UFS\)](#) solutions now available from [KIOXIA](#) are set to enable dramatic improvements to embedded memory performance in mobile devices - thereby making it ready for the new wave of applications that will come with the roll-out 5G mobile communication infrastructure.

The Need for UFS



Supplied in compact packages with standardized interfaces to ease integration, KIOXIA UFS has huge appeal to smartphone manufacturers. It will provide heightened operational responsiveness and prevent lags from being witnessed. These advanced devices can deliver greatly accelerated read/write speeds when compared to conventional memory solutions.

Key Features of KIOXIA's UFS Technology

- Leverages BiCS FLASH 3D stacked NAND flash memory topology
- Incorporated high-speed differential serial interfacing
- Various different capacities supported - 128GB, 256GB, 512GB and 1TB
- Integrated controller that addresses numerous memory management tasks:
 - Error correction
 - Bad block management
 - Wear-levelling
- Supports lower power operation than competing memory solutions
- Inclusion of sophisticated power management functions (to help conserve handset battery reserves)
- Thermal throttling mechanism to prevent the possibility of overheating

Boosting Performance by Taking a More Innovative Approach

At the core of KIOXIA'S UFS technology is the company's proprietary high-capacity NAND flash memory. Rather than adding more memory capacity by migrating to ever-smaller semiconductor processes, extra capacity is added through 3D stacking of memory cells. This means that there is more room available, which allows greater

cell spacing - with cell-to-cell noise and interference both being reduced significantly, as well as major improvements in read/write endurance.

Find out more >

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