Western Digital.

iNAND® MC EU551 UFS 3.1 Embedded Flash Drive

Unlocking Powerful New User Experiences for Next-Generation 5G Smartphones

The fifth generation of wireless technology—5G Networks—delivers ultra-fast speeds, low latency, and high network capacities, transforming not only smartphones, but billions of interconnected Internet of Things (IoT) devices.

IDC expects 5G smartphone shipments to account for more than 40% of global volume in 2021 and grow to 69% in 2025[1]. As networks continue to expand available bandwidth and offer lower latency, new applications are emerging, letting users take full advantage of features and applications such as high-res cameras, Augmented Reality, Virtual Reality, gaming and 8K video.

With the broad network rollouts, 5G's promise will create new and exciting worlds to play, work and learn in. To take advantage of these 5G applications and features, devices will need higher capacities and the high performance of the latest UFS 3.1 specification.

Western Digital iNAND MC EU551 EFD, featuring Sequential Write Speeds of up to 1550MB/s[2], offers UFS 3.1 JEDEC-compliant Write Booster Storage Technology for Smartphones. The MC EU551 EFD extends our leading write performance to market segments requiring the performance of SmartSLC™ technology. iNAND SmartSLC technology will continue to work with Write Booster to offer persistence of write performance even under fragmented and full media conditions. With 96L 3D NAND technology, the MC EU551 EFD is designed to meet 5G flagship smartphone requirements.

Performance

- iNAND SmartSLC technology Gen 7 is ready for 5G devices with Write Booster speeds up to 1550MB/s.
- Write Booster based on SmartSLC technology Gen 7 provides an exceptional user experience by maintaining high SLC (Single Level Cell) performance as the device approaches its maximum storage capacity by utilizing the SLC buffer to bypass the fragmented media condition.

Design

- UFS 3.1 coupled with industry-leading 96-layer 3D NAND technology delivers an energy-efficient storage solution, superior turbo Sequential Write speeds and high capacities for flagship and 5G mobile devices[3].
- Full vertical integration: UFS controller, 3D NAND technology, firmware, assembly and test, designed and developed by Western Digital.
- Capacities from 128GB to 512GB in a small form factor allow for scalability and design flexibility.

Main Features

- UFS 3.1, Gear4, 2-Lane
- Write Booster based on SmartSLC Gen 7
- UFS 3.1 RPMB multi-region configuration
- UFS 3.1 Error History
- UFS 3.1 Thermal notification
- Field Firmware Upgrade (FFU)
- Host Performance Booster (HPB) 2.0

Specifications

Capacity[4]	UFS Version	Package Size	Ordering Information
128GB	UFS 3.1	11.5×13×1.0mm	SDINFDO4–128G
256GB	UFS 3.1	11.5×13×1.0mm	SDINFDO4–256G
		11.5×13×1.0mm	SDINFEO2–256G[5]
512GB	UFS 3.1	11.5×13×1.0mm	SDINFDO4–512G

[1] Smartphone Shipments to Grow 5.5% in 2021 Driven by Strong 5G Push and Pent-up Demand, IDC, March 2021
[2] 1 MB/s = 1 million bytes per second. Based on internal testing; performance may vary depending upon host device, usage conditions, drive capacity, and other factors.
[3] Compatible with Android™, and Chrome mobile operating systems.
[4] 1 GB = 1 billion bytes. Actual user capacity may be less due to operating environment.
[5] 256GB 4 dies configuration