

### Standard UFS 2.2

Product Brief



#### Capacities

**64GB, 128GB,  
256GB, 512GB**

#### Advanced Features

- Temperature Range: -25 to +85C
- UFS 2.2 compliant
- Full-cycle bad block management
- Emergency power failure protection
- Supports HS-GEAR3 2-lane
- LDPC ECC algorithm
- Supports Write Booster (WB) and Host Performance Booster (HPB)
- Supports mainstream compatible platforms
- S.M.A.R.T. health monitoring
- FFU support
- Full-device wear leveling

#### Applications



**Smartphones**



**Tablets**



**High-speed cameras**



**VRs/Ars**



**Smart cars**

Universal Flash Storage (UFS) devices offer significant advantages over other storage options, including faster data transfer speeds, lower power consumption, and increased reliability. Leveraging a serial interface and command protocols optimized for high-speed data access, they are ideal for demanding commercial environments where quick access to large amounts of data is crucial. Additionally, UFS parts are designed to withstand rigorous usage conditions, making them a reliable choice.

#### Key Benefits

##### Write Booster

Burst-write performance is increased when the firmware algorithms utilize free block acceleration (FBA) to use TLC as pSLC.

##### Host Performance Booster

Host Performance Boost (HPB) technology optimizes the interaction between the host system and the UFS controller to improve overall performance, endurance, and efficiency. It achieves this by prioritizing random-access operations, reducing write amplification, and dynamically optimizing data management.

#### Performance Comparison Between UFS and eMMC

UFS 2.2 offers several technical advantages over eMMC 5.1, notably in performance and efficiency. It significantly surpasses eMMC 5.1, with capabilities for HS-Gear3 x2 lane (up to 1200 MB/s), compared to eMMC's HS400 mode (up to 400MB/s). UFS 2.1 supports full duplex operation, allowing simultaneous read and write operations, unlike eMMC 5.1's half duplex, which restricts to one operation at a time. Additionally, UFS 2.2 includes a Command Queue feature to process multiple commands simultaneously for improved random read/write speeds and is generally more power-efficient, making it ideal for high-performance mobile and embedded devices.

Specifications

Part Number	Capacity	NAND Flash	Package	Operating Temperature	Protocol and Interface	Operating Voltage	Size
FEUDNN064G-C2G07	64GB	TLC	BGA153	-25 to +85C	UFS2.2	VCC 3.3V VCCQ 1.8V	11.5x13x1.0mm
FEUDNN128G-C2G07	128GB	TLC	BGA153	-25 to +85C	UFS2.2	VCC 3.3V VCCQ 1.8V	11.5x13x1.0mm
FEUDNN256G-C2G07	256GB	TLC	BGA153	-25 to +85C	UFS2.2	VCC 3.3V VCCQ 1.8V	11.5x13x1.0mm
FEUDNN512G-C2G07	512GB	TLC	BGA153	-25 to +85C	UFS2.2	VCC 3.3V VCCQ 1.8V	11.5x13x1.0mm

\*Data based on internal testing. Actual performance may vary due to equipment differences.