SM2756

UFS 4.x Controller with LDPC

Overview

The SM2756 is the SMI UFS 4.x controller solution compliant with the latest UFS standard of JEDEC. With high-speed serial-link based MIPI MPHY HS-Gear-5, 2-lane and SCSI architecture model (SAM), the SM2756 enables high-performance storage accessing, better power efficiency, and ease of system design.

The SM2756 incorporates the proprietary firmware and controller technology that elevates the capabilities to integrate new algorithms that boost random sustained read and write performances. The adoption of data error detection in SRAM prevents the occurrence of soft-error event and enhances data reliability.

The significant enahncement in performance, power efficiency, and reliability, the SM2756 UFS solution can deliver better performance and serve the needs of a wide variety of mobile devices, embedded/portable devices and applications require storage, etc

Applications

- **Mobile devices**
- **AR/VR devices**
- **Drones**
- **Action cameras**

Key Features

- **UFS 4.x Standard Interface Compliant**
  - Supports HS-Gear-5 x 2-lane
  - Supports MPHY version 5.0
  - Supports UniPro standard version 2.0
  - Compatible with UFS 4.0 / 3.1 application
- **High Performance Platform with Proprietary Flash Controller**
  - Dual ARM 32-bit RISC based CPU
  - SECDED
  - RAID
  - Dynamic power management technology
- **Dual Channel NAND Flash Controller**
  - Dual Channel supports up to 4 chip enable
  - Supports Toggle 5.0 /ONFI 5.1 NAND up to DDR 3600MT/s
  - Supports 1.2V I/O, CTT, LTT
- **LDPC ECC Engine**
  - Supports 4KB codeword
  - Supports low-power decoding mode and high-correction capability decoding with soft information

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