

SM3257

USB2.0 Flash Memory Controller

The SM3257 is the latest USB Flash Disk controller with highly compatibility, and best performance intended for supporting Single-Channel MLC and TLC NAND type Flash memory in one chip. Based on 0.152um fabricated technology and low power consumption consideration, SM3257 complies with USB power specification ver.2.0 for bus-powered devices. For USB2.0 Flash Disk application, SM3257 supports high capacity up to 4 data Flash banks, "Write Protect" function, PC boot-up from USB2.0 Flash Disk, Password protection, and Secured Partitioning functions.

SM3257 controller also delivers extremely high data transfer rate and correct data through reliable 13/24/40-bit ECC engine for the coverage of the MLC/TLC flash read/write disturbance. By integrating 5V to 3.3V regulator and Power-on-Rest components, it will help customers to save overall cost. SM3257 is available with 48pins LQFP package, 48pins TQFP package and 40pins QFN package with a manufacturing-ready turnkey solution now.

Applications

- USB Flash Drive
- USB Solid State Disk
- Embedded Application
- High-Speed NAND Storage

Key Features

- Embedded crystal offers lower BOM cost
- 1.8V low-power core operation
- Built-in 5V/3.3V and 3.3V/1.8V voltage regulators
- Complete compatibility with USB (Universal Serial Bus) Specification Rev. 2.0
- Complies with USB Mass Storage Class Specification Rev. 1.0
- USB Mass Storage Class Bulk-Only Transport Protocol
- Complies with USB power specifications for bus-powered devices
- Integrated 80C51-compatible, 8-bit microprocessor with enhanced features
- Supports suspend mode and wake-up resume
- Configurable BCH error control coding (ECC)
- Supports MLC/TLC up to 4 NAND flash devices
- Supports the operating systems: Windows 7, Windows Vista, Windows XP, Windows 2000, Windows ME, Windows 98/98SE, Mac OS 9.x and above, and Linux kernel 2.4 and above
- Supports Windows Vista and Windows 7 ReadyBoost function
- In System Programming (ISP) firmware update capability
- Supports VID, PID, serial number, and vendor information updates
- Supports LED indicator to indicate the USB Flash Disk is in the Ready/Working mode
- Supports "Write Protect" security function to protect the data in USB Flash Disk
- Available in LQFP/TQFP 48pin and QFN 40pin

