

## SM3281

### SuperSpeed USB3.2 Gen1 Flash Drive Controller

The SM3281 is a USB 3.2 Gen1 Single-channel flash drive controller designed for high-end application. The controller offers high performance and high compatibility for 2D/3D NAND, high-speed Toggle and ONFI DDR NAND. For USB 3.2 Flash Disk applications, this controller supports high capacity of up to 8 NAND flash devices.

The SM3281 delivers high data transfer rate, and ensures data accuracy and reliability with the powerful ECC engine which can overcome the read/write disturbances on new generation NAND. By integrating an embedded crystal and other components, the controller can reduce customer overall cost at a system level. The SM3281 is available in QFN-68 & QFN-48 green package and die form with manufacturing-ready turnkey solution.

#### Applications

- Max 200MB/sec read speed
- USB Solid State Disk
- Embedded Application
- High-Speed NAND Storage

#### Package

- 48/68-pin QFN
- Die Form
- Lead-free and RoHS Compliant

#### Key Features

- USB 3.2 SuperSpeed (5 Gbps) and USB High-Speed Interface
  - Compliant with USB 3.2 Gen1 Specification
  - Compliant with USB 2.0 Specification
  - Supports USB3.0 multi-level link power management
- NAND Flash Support
  - Single-channel flash interface supports up to 8 NAND flash devices
  - Supports up to 4-way interleave
  - Configurable ECC
  - Supports 2D/3D NAND with 8/16KB page
  - Supports Toggle/ONFI DDR NAND flash
  - Supports 3.3V/1.8V/1.2V NAND flash
  - Low Grade NAND support
- Supports the operating systems
  - Windows 10/8/7
  - Mac OS 10.x
  - Linux kernel 2.4
- Supports VID, PID, serial number, and vender information update
- The crystal-less design offers lower BOM cost
- Built-in 3.3V/1.8V/1.2V voltage regulators
- Supports "Write Protect" security function to protect the data in USB Flash Disk
- Supports LED indicator to indicate the access status
- Supports firmware in-system programming (ISP) function for firmware upgrade
- Low power 1.2V core operation