



# SM3282

## SuperSpeed USB 3.2 Portable SSD Controller Solution

The SM3282 is a single chip solution equips with embedded USB 3.2 Gen 1 interface and support USB Attached SCSI Protocol (UASP). With the fully integrated hardware and software, SM3282 enables the ultra high-speed data transfer between PC and external SSD for next generation applications. Because it can interface directly to the host without the need for an external bridge chip, it enables manufacturers of external SSDs to reduce system size and lower their Bill-Of-Materials (BOM) cost.

The SM3282 delivers peak sequential read and write transfer speeds up to 440MB/s and 430MB/s, while enabling new SSD designs to take full advantage of high-density NAND Flash, including the latest generation of 9x-layer QLC NAND.

Silicon Motion supplies the SM3282 with a production-ready reference design, providing a complete turnkey solution which gives customers a fast time-to-market.

### KEY FEATURES

- **Ultra High Performance**
  - Sequential Read: up to 440 MB/s
  - Sequential Write: up to 430 MB/s
- **Low power consumption**
  - Supports Flash devices operating at 1.2V, 1.8V, 2.5V or 3.3V
  - Controller core operates from low-power 1.2V supply bus
- **Broad host device compatibility**
  - Compatible with Windows 10/Windows 8/Windows 7, Mac OS 10.x and Linux kernel v2.4
  - Supports USB Type-A and Type-C
- **High data integrity**
  - Built-in configurable BCH (ECC)



## SPECIFICATIONS

### SM3282

<b>Host Interface</b>	- USB 3.2 Gen 1
<b>Command Protocol</b>	- USB Attached SCSI Protocol (UASP)
<b>NAND Flash Support</b>	- 2-CH/ 4CE per CH - 3D TLC/QLC - Toggle/ONFI DDR NAND Flash - VCCQ 1.8V/1.2V - VCC 3.3V or 2.5V - Up to 8CE
<b>ECC Support</b>	- Configurable BCH ECC
<b>Performance</b>	- Sequential Read up to 440 MB/s - Sequential Write up to 430 MB/s
<b>Capacity Range</b>	- 256GB ~ 2TB
<b>Operating System Support</b>	- Windows 10/Windows 8/Windows 7 - Mac OS 10.x - Linux kernel 2.4
<b>Package</b>	- 68-pin QFN - Lead-free and RoHS compliant

## BLOCK DIAGRAM

