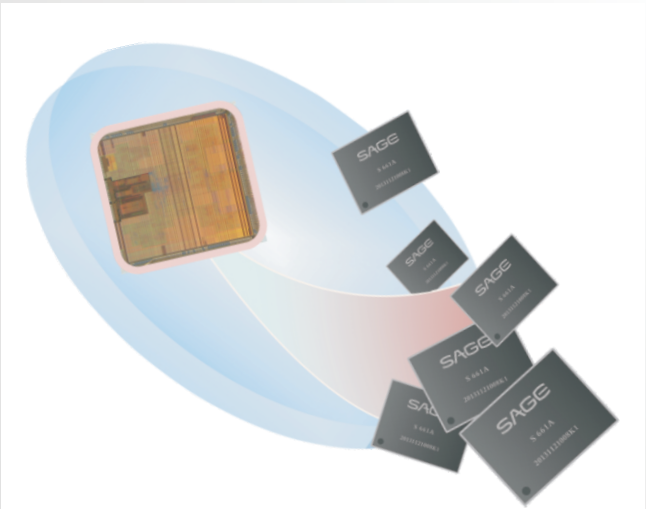
SAGE
MICROELECTRONIQUE

The World's Top Density

eRAID™ SSD Modules



Production	**SSD Family with eRAID™**		
Form Factor	2.5 inch	HalfSlim	mSATA
Dimension	69.85x100x7(mm) or 69.85x100x9.5(mm)	54.0x39.0x4.0(mm)	50.8x29.85x4.81(mm)
Controller	SageMicro's S681 or S685		
Feature	• S.M.A.R.T • TRIM	• On-board tempreture sensor. • Security Mode	
Min. Density	8GB	8GB	8GB
Max. Density	5.0TB	1TB	1TB
Sequential Read	Up to 260MB/S	Up to 260MB/S	Up to 260MB/S
Sequential Write	Up to 180MB/S	Up to 180MB/S	Up to 180MB/S
Operating Temperature	Commercial Grade: 0℃ ~ +70℃ Wide-Temperature Grade: -20℃ ~ +85℃ Industial Grade: -40°C~+85°C		
Storage Temperature	-55°C~+85°C		
Humidity	10%-90%		
Shock Resistance	1500G/1.0ms		
Vibration Resistance	15G		

Sage Microelectronics Corp (Hereafter "Sage Micro") developed the patented architecture - eRAID™ which breaks through the terabyte barrier and enables a single SSD controller IC to address up to 5TB of flash memory, achieving an industry first in high density and small form factor. The company's S68x series of controller IC currently in mass production employs a SATA interface to drive ten channels with multi-core structure. It reveals the high reliability under unexpected power-down situation because there is no external DRAM buffer.

SageMicro is currently shipping in volume high-density SSD units on a single PCB with a standard 2.5-inch, 1.8-inch, mSATA and HalfSlim form-factors, covering the density range of 8GB, 16GB, 32GB ……, 512GB, 1TB, 2TB, 2.5TB, 4TB, 5TB. The company also provides the service to make customized SSD units, such as extreme high density drives, data encrypted/decrypted drives, controlled self-destruction drives, etc.

SageMicro's eRAID™ product is proven the good solution for streaming-data recording in video or surveillance systems, smart and small instruments, mobile platforms, aerospace and industrial equipment.

News Release: EE-Times,DigiTimes on Nov.4,2014

Solid State Disk Innovator Emerges from Stealth Mode:
Sage Microelectronics / New SSD Controller Technology Breaks / Terabyte Barrier
Http://www.digitimes.com/supply_chain_window/story.asp?datepublish=2014/11/04&pages=PR&seq=203

The world's highest density - SSD

SAGE
MICROELECTRONIQUE

Encrypted

Smart Destruction

Smart Destruction Solid-State Drive (SSD)

Natrium Disk (NaDisk™) series of Solid State Drive (SSD) was designed for high-level security applications by Sage Microelectronics Corp. (SageMicro®). NaDisk™ comes with smart destruction functions supported by S685, a dedicated SSD controller chip. In addition, S685 provides data protection by embedded hardware encryption/decryption engines. NaDisk™ supports many destruction trigger modes, such as timer-triggered mode, button-triggered mode, etc. There are some destruction methods depending on the security demands. NaDisk™ can erase the data stored in the whole disk, or even destroy the controller and memory chips on board by high-voltage shock.

[Key Features]

★ Interface: SATA-II （data transfer rate:3.0Gb/s）

★ Density ： 8GB, 16GB, 32GB, ···, 512GB, 1024GB

★ Performance: Seq. Read 250MB/s ， Seq. Write 180MB/s

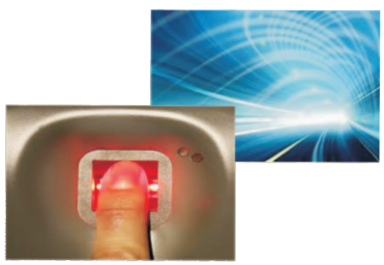
★ Operation Temperature:
0℃ ～ +70℃ （Commercial）
－20℃ ～ +85℃ （Wide-Temperature）
－40℃ ～ +85℃ （Industrial）

★ Stored Temperature: －55℃ ～ +85℃ Humidity: 10%-90%

★ Shock Resistance: 1500G/1.0ms Vibration Resistance: 15G

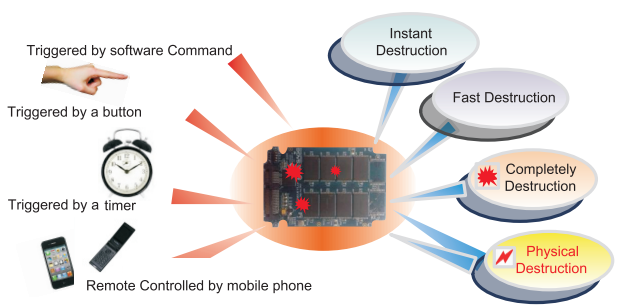
Encryption & Decryption Algorithms

AES128/256,GOST,DES/3DES,RSA,ECC,SHA,SM2,SM3,SM4



NaDisk™ supports multiple trigger modes:

- **Timer trigger;**
- **Button Trigger;**
- **Wireless command trigger;**
- **Software command trigger;**
- ……
- **Customized trigger modes.**



Four Levels of destruction per customer's demands.

- ID - Instant Destruction: Destroy keys.
- FD - Fast Destruction: Erase all user data.
- CD - Complete Destruction: Erase all physical cells in the memory.
- PD - Physical Destruction: Destroy components (chips) physically.

Warning: Once destruction triggered, data will be unrecoverable.

Smart Destruction – SSD