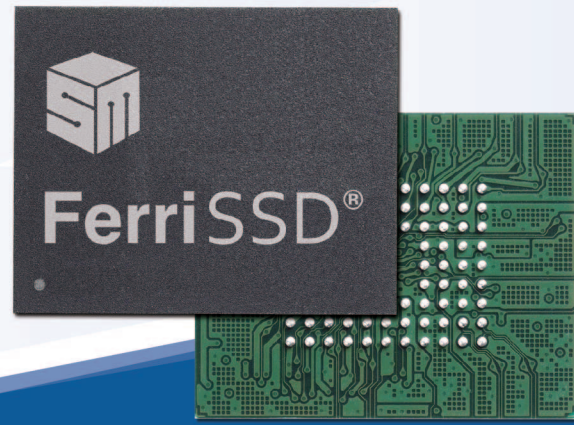


FerriSSD®

Quick Reference

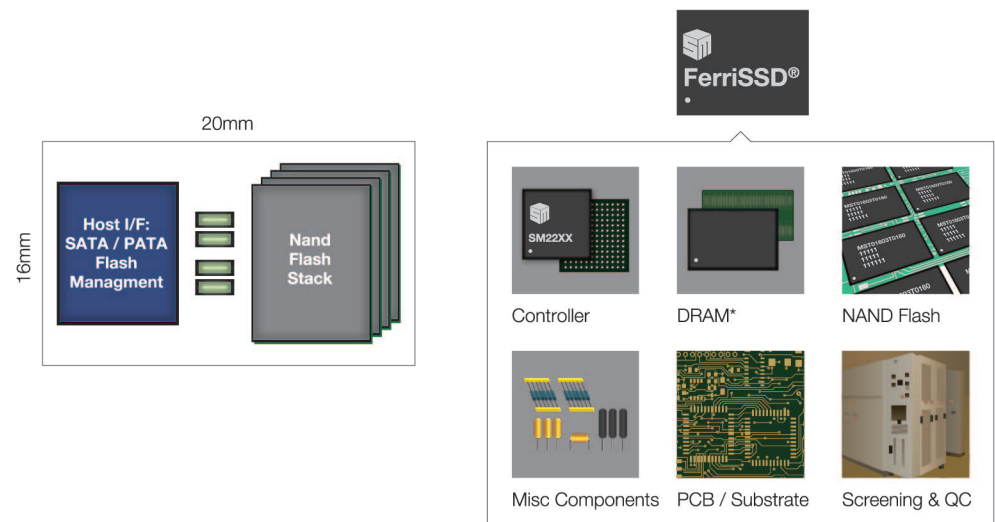


FerriSSD® BGA Solid-State Drive

The FerriSSD® is designed optimally for a wide range of embedded applications requiring faster access, small form factor and reliable SATA/PATA storage. By combining industry proven controller technology, NAND flash and passive components into a single BGA package with 1.0mm ball-pitch size, FerriSSD® simplifies design efforts, reduces time-to-market while protecting from NAND technology migration concerns. FerriSSD® also comes with advanced firmware features as well as the provision for customized firmware – enabling highly reliable and differentiable storage solutions.

The FerriSSD® family consists of the latest SM619 and SM659 series featuring SATA 6Gb/s transfer rate with embedded DRAM to enhance data storage efficiency and high random read/write IOPS of up to 75,000. Also available in the family are the SM651/SM631/SM611 SATA 3Gb/s series as well as the SM621/SM641/SM601 PATA series single-package SSDs. All FerriSSD® series support SLC, SLCmode and MLC NAND flash options.

SMI BGA-SSD Overview



Why FerriSSD®?

Easy to use

- Plug & Play only requires format/fdisk prior to use
- Small footprint for space-limited design

Lower total cost of ownership

- Rugged & Reliable (no moving parts)
- Eliminate requalification cost from NAND generation change
- Cost saving with low density FerriSSD, HDD are typically > 160GB capacity

Eliminate down time

- Supports self-monitoring, analysis and reporting technology commands (S.M.A.R.T.)
- Field programmable firmware available

Applications

Embedded applications that are currently using HDD but require only small density can migrate to FerriSSD® for customizable density with a small form factor !



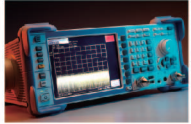
Telecom & Server



Multifunction Printer



POS & Kiosk



Testing Instrument



Ind. Handheld Device



HMI & Thin Client



Ind. / Embedded MB



In-Vehicle Infotainment



Medical Equipment

Specifications

Data Retention	JESD47G compliant
Form Factor	20mm x 16mm BGA
Green Product	RoHs compliant / Halogen free
Temperature Support	Commercial Temp (0°C ~ +70°C) Industrial Temp (-40°C ~ +85°C)

Available Density

FerriSSD® Series	PATA	SATA 3Gb/s	SATA 6Gb/s with DRAM
SLC	SM621 (1~32GB)	SM631 (1~32GB)	--
SLCmode	SM641 (1~32GB)*	SM651 (1~32GB)*	SM659 (8~32GB)*
MLC	SM601 (4~64GB)**	SM611 (2~64GB)**	SM619 (16~64GB)**

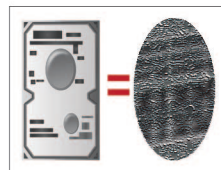
*64GB in Q1'15; **128GB in Q4'14

FerriSSD® Unique Features

GENERAL FEATURES



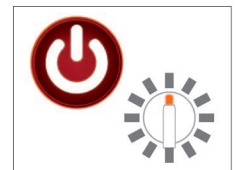
Hardware Quick Erase



Secured Erase



Secured Password Protection



Hardware Data Flush

ADVANCED FEATURES



Full Slumber / Energy Save Mode



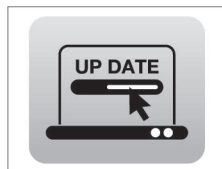
Full Disk AES Encryption



Diagnostic Port



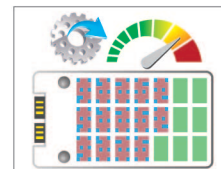
SSDLifeGuard (Monitoring AP)



Advance Field FW Update



Built-in Temperature Sensor



Intelligent Clean

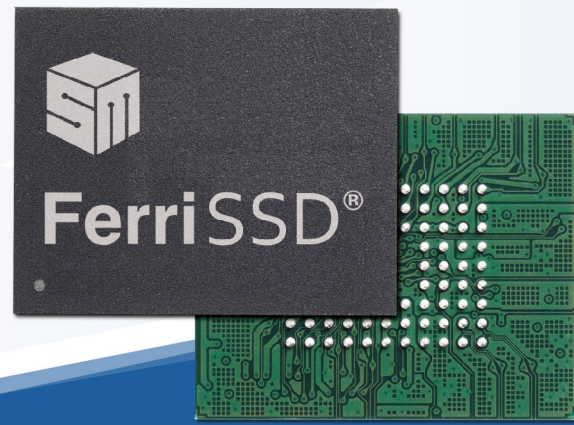


Intelligent Scan + DataRefresh

For more information about FerriSSD®, please go to www.siliconmotion.com or send e-mail to ferri@siliconmotion.com

FerriSSD®

For Server Applications

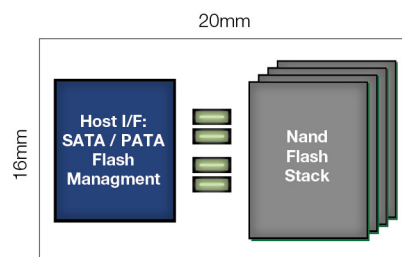


FerriSSD® BGA Solid-State Drive

The FerriSSD® is designed optimally for a wide range of embedded applications requiring faster access, small form factor and reliable SATA/PATA storage. By combining industry proven controller technology, NAND flash and passive components into a single BGA package with 1.0mm ball-pitch size, FerriSSD® simplifies design efforts, reduces time-to-market while protecting from NAND technology migration concerns. FerriSSD® also comes with advanced firmware features as well as the provision for customized firmware – enabling highly reliable and differentiable storage solutions.

The FerriSSD® family consists of the latest SM619 and SM659 series featuring SATA 6Gb/s transfer rate with embedded DRAM to enhance data storage efficiency and high random read/write IOPS of up to 75,000. Also available in the family are the SM651/SM631/SM611 SATA 3Gb/s series as well as the SM621/SM641/SM601 PATA series single-package SSDs. All FerriSSD® series support SLC, SLCmode and MLC NAND flash options.

SMI BGA-SSD Overview



Available Density

FerriSSD® Series	PATA	SATA 3Gb/s	SATA 6Gb/s with DRAM
SLC	SM621 (1~32GB)	SM631 (1~32GB)	--
SLCmode	SM641 (1~32GB)*	SM651 (1~32GB)*	SM659 (8~32GB)*
MLC	SM601 (4~64GB)**	SM611 (2~64GB)**	SM619 (16~64GB)**

*64GB in Q1'15; **128GB in Q4'14

Server Applications

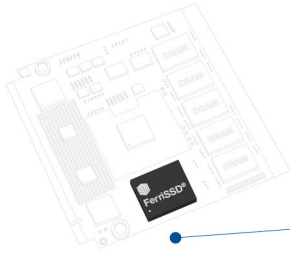
- Blade Server
- Router / Switch
- Application Server
- Telecom Base Station
- Network Firewall Server
- VoIP Server
- Business Telecom System

Specifications

Data Retention	JESD47G compliant
Form Factor	20mm x 16mm BGA
Green Product	RoHs compliant / Halogen free
Temperature Support	Commercial Temp (0°C ~ +70°C) Industrial Temp (-40°C ~ +85°C)

Application Examples :

1



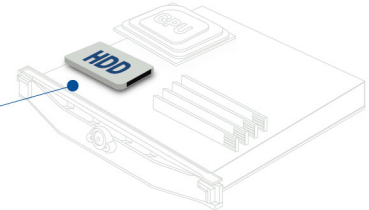
Serving as HDD on a space limited server board

20x16mm compact size makes a perfect fit for single board computer / embedded motherboard, and server board applications. With Intelligent Scan & DataRefresh algorithm, FerriSSD® is designed to meet the toughest embedded storage requirement.

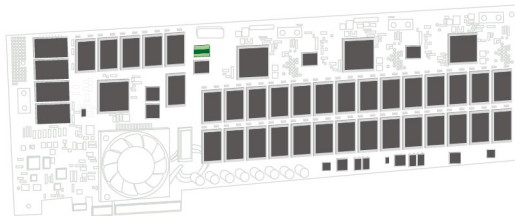
2

Replacing boot drive & serve as Data Caching

As a cost saving option, FerriSSD® serve as HDD replacement for OS/Application/log file and DRAM temp data cache.



3



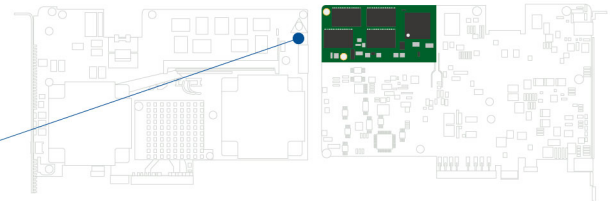
Replacing RAID SSD: multiple SSD controller + NAND

FerriSSD®'s compact size with extreme high IOPS enables a perfect RAID SSD/HDD replacement in Compact PCI / Slot CPU boards.

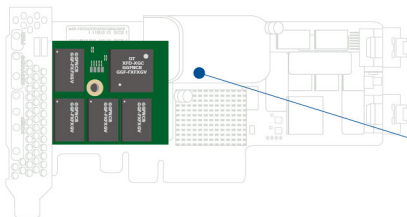
4

Replacing SSD controller + NAND for simple manufacturing

Coming in a single-BGA package, FerriSSD® is already initialized, 100% tested, screened out early failure to ensure extreme low dPPM defect during full usage life.



5



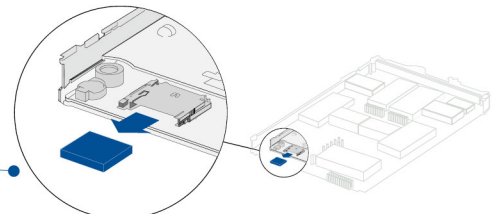
Serving as Server DRAM backup during sudden power lost

In the mission critical application, data lost is not acceptable even during sudden power lost. FerriSSD® extreme fast performance in a compact size is the best non volatile solution for DRAM data backup.

6

Replacing CF card on servers for cost down (reducing component) & performance improvement

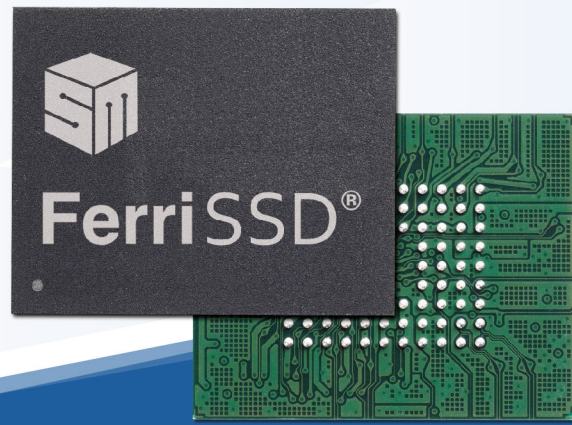
FerriSSD® in PATA interface serve as direct replacement for CF at higher performance.



For more information about FerriSSD®, please go to www.siliconmotion.com or send e-mail to ferri@siliconmotion.com

FerriSSD®

For Embedded Computing Applications

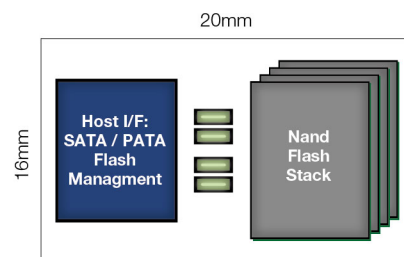


FerriSSD® BGA Solid-State Drive

The FerriSSD® is designed optimally for a wide range of embedded applications requiring faster access, small form factor and reliable SATA/PATA storage. By combining industry proven controller technology, NAND flash and passive components into a single BGA package with 1.0mm ball-pitch size, FerriSSD® simplifies design efforts, reduces time-to-market while protecting from NAND technology migration concerns. FerriSSD® also comes with advanced firmware features as well as the provision for customized firmware – enabling highly reliable and differentiable storage solutions.

The FerriSSD® family consists of the latest SM619 and SM659 series featuring SATA 6Gb/s transfer rate with embedded DRAM to enhance data storage efficiency and high random read/write IOPS of up to 75,000. Also available in the family are the SM651/SM631/SM611 SATA 3Gb/s series as well as the SM621/SM641/SM601 PATA series single-package SSDs. All FerriSSD® series support SLC, SLCmode and MLC NAND flash options.

SMI BGA-SSD Overview



Available Density

FerriSSD® Series	PATA	SATA 3Gb/s	SATA 6Gb/s with DRAM
SLC	SM621 (1~32GB)	SM631 (1~32GB)	--
SLCmode	SM641 (1~32GB)*	SM651 (1~32GB)*	SM659 (8~32GB)*
MLC	SM601 (4~64GB)**	SM611 (2~64GB)**	SM619 (16~64GB)**

*64GB in Q1'15; **128GB in Q4'14

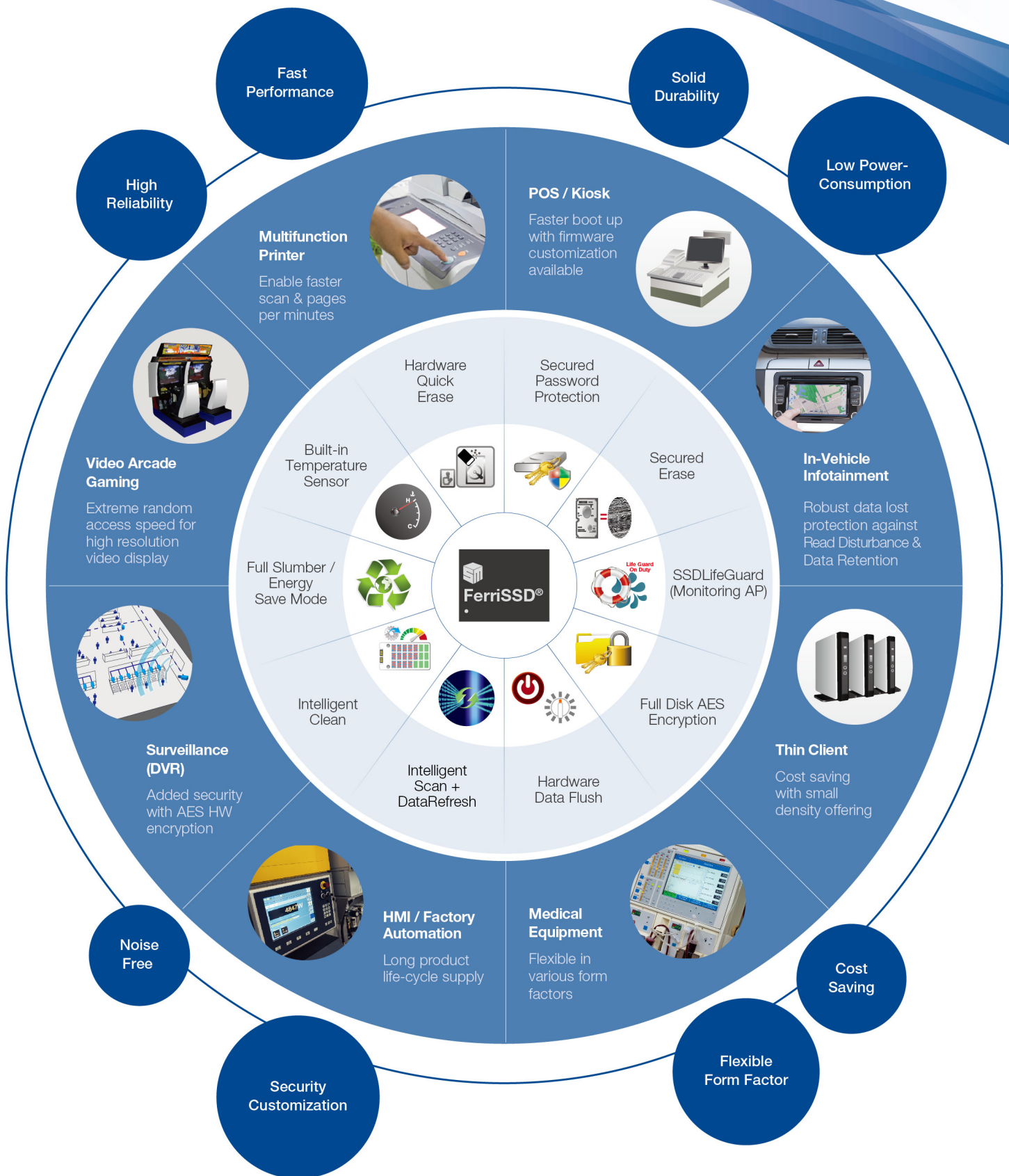
Embedded Computing Applications

- POS / Kiosk
- Video Arcade Gaming
- Multifunction Printer
- In-Vehicle Infotainment
- Surveillance (DVR)
- Thin Client
- HMI / Factory Automation
- Medical Equipment

Specifications

Data Retention	JESD47G compliant
Form Factor	20mm x 16mm BGA
Green Product	RoHs compliant / Halogen free
Temperature Support	Commercial Temp (0°C ~ +70°C) Industrial Temp (-40°C ~ +85°C)

Application Examples :



For more information about FerriSSD®, please go to www.siliconmotion.com or send e-mail to ferri@siliconmotion.com



Silicon Motion, Inc.
8F-1, No. 36, Taiyuan St., Jhubei City,
Hsinchu County 30265, Taiwan
Tel: +886-3-5526888

www.siliconmotion.com

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [silicon motion manufacturer](#):

Other Similar products are found below :

[SM689GXD AES](#) [SM681GXD AES](#) [SM768GX000000-AB](#) [SM681GXA AES](#) [SM681GXB AES](#) [SM689GXA AES](#) [SM681GXC AES](#)

[SM619GED-CDZ SPA31L](#) [SM611GX4-BB M0625C](#) [SM668GXB-ACS O1118](#) [SM651GEB-BD P0318H](#) [SM631GEA-BA-M0425C](#)

[SM712GX04LF04-BA](#)