

Product Detail Page: Ferri-eMMC 5.1

PART NUMBER	DESCRIPTION
SM662GXC BFST	64GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM662GXD BFST	128GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM662GXE BFST	256GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM662GXF BFST	512GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM662GEC BFST	64GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM662GED BFST	128GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM662GEE BFST	256GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM662GEF BFST	512GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM662GAC BFST	64GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM662GAD BFST	128GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM662GAE BFST	256GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM662GAF BFST	512GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM662GBC BFST	64GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM662GBD BFST	128GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM662GBE BFST	256GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM662GBF BFST	512GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode

PART NUMBER	DESCRIPTION
SM662GXC BFSS	20GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM662GXD BFSS	40GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM662GXE BFSS	80GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM662GXF BFSS	160GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM662GEC BFSS	20GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM662GED BFSS	40GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM662GEE BFSS	80GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM662GEF BFSS	160GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM662GAC BFSS	20GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM662GAD BFSS	40GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM662GAE BFSS	80GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM662GAF BFSS	160GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM662GBC BFSS	20GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode
SM662GBD BFSS	40GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode
SM662GBE BFSS	80GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode
SM662GBF BFSS	160GB Ferri-eMMC 5.1, 100 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode

PART NUMBER	DESCRIPTION
SM662PXC BFST	64GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM662PXD BFST	128GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM662PXE BFST	256GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM662PXF BFST	512GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM662PEC BFST	64GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode

SM662PED BFST	128GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM662PEE BFST	256GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM662PEF BFST	512GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM662PAC BFST	64GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM662PAD BFST	128GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM662PAE BFST	256GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM662PAF BFST	512GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM662PBC BFST	64GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM662PBD BFST	128GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM662PBE BFST	256GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM662PBF BFST	512GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode

PART NUMBER	DESCRIPTION
SM662PXC BFSS	20GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM662PXD BFSS	40GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM662PXE BFSS	80GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM662PXF BFSS	160GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM662PEC BFSS	20GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM662PED BFSS	40GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM662PEE BFSS	80GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM662PEF BFSS	160GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM662PAC BFSS	20GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM662PAD BFSS	40GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM662PAE BFSS	80GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM662PAF BFSS	160GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM662PBC BFSS	20GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode
SM662PBD BFSS	40GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode
SM662PBE BFSS	80GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode
SM662PBF BFSS	160GB Ferri-eMMC 5.1, 153 Ball, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode

Product specifications

Ferri-eMMC® is optimally designed for a wide range of embedded applications and is fully compliant to the JEDEC standards for eMMC 5.1 protocols. Available in 100/153-ball BGA packages, Ferri-eMMC® eases PCB design and enables low-cost manufacturing.

Built with industry proven controllers and high-quality NAND components, Ferri-eMMC® offers advanced NAND management features including error correction, bad block management and health monitoring – enabling the most highly reliable, non-volatile eMMC storage solution for today’s cutting edge industrial, embedded and automotive applications. For automotive IVI applications, Ferri-eMMC® features industry leading low dppm, AEC-Q100 qualification, and product longevity support.

Embedded applications using HDD or raw NAND today can migrate to Ferri-eMMC® for higher performance and capacity options. Additionally, Ferri-eMMC® can be customized via firmware for specific features and applications.

As the world's leading NAND controller vendor, Silicon Motion builds its products to the highest quality and reliability standards – backed by uncompromised sales and technical support from design through postproduction. Silicon Motion's commitment to automotive and industrial quality is fully incorporated throughout the design, manufacturing and qualification phases of its Ferri-eMMC® products.

Why Ferri-eMMC®

Easy to use

- Easy PCB traces routing and layout with high PCB/SMT yield
- Excellent long-term reliability and good heat dissipation

Lower total cost of ownership

- Eliminate requalification cost from NAND generation change
- Long product life cycle

Eliminate down time

- Supports self-monitoring, analysis and reporting health status
- Field programmable firmware update available

Customization available

- Configurable enhanced partition with content preload / protect
- Technical customization available

Key Features

High-Efficiency Error Correction

- Advanced Hardware LDPC (ECC) Engine
- StaticDataRefresh™ and EarlyRetirement™ technologies ensure the data reliability

Advanced Global Wear Leveling to Enhance Reliability

- Even distribution of program / erase cycles across all NAND flash chips
- Maximizes the lifespan with low Write Amplification Index (WAI)

Robust Data Protection

- Advanced system level protection against unstable power
- Software / hardware write protect option
- Multiple user data security zones
- Software / hardware secure erase function
- PowerShield and DataPhoenix technologies support power-down data protection

Automotive IVI compliance to the AEC-Q100 requirements

Ferri Family Enabling the NAND Flash Storage in Comprehensive Applications

Why Ferri Family

- FW & HW Customization
- Scalable Proven MP Setup
- 100% Screened for Low DPPM
- Design Service to MP Support
- Wide Temperature Support
 - Industrial Temperature
 - Commercial Temperature
 - AEC-Q100 Grade 3 / 2

Ferri

PCIe NVMe
FerriSSD®

Ferri-UFS®

Ferri-eMMC®

Applications

Telecom & Server

Automotive

Medical Device

POS & Kiosk

HMI & Thin Client

Digital Signage

MEP

Gaming

Surveillance

Video



[Ferri Family Overview](#)
[Silicon Motion Automotive Storage Solution](#)

Documents

[Ferri-eMMC® product brief](#)

[Silicon Motion's Ferri Family: AEC-Q100 Qualified Embedded Storage](#)

[Silicon Motion's Ferri Family Optimizes Embedded Flash-based Storage for Automotive Use](#)