Product Detail Page: Ferri-eMMC 5.1 Samsung 14nm

PART NUMBER	DESCRIPTION
SM662PX8 C4VM	8GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, Wide Temp (-25C - 85C), MLC Mode
SM662PXA C4VM	16GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, Wide Temp (-25C - 85C), MLC Mode
SM662PE8 C4VM	8GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, Extended Temp (-40C - 85C), MLC Mode
SM662PEA C4VM	16GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, Extended Temp (-40C - 85C), MLC Mode
SM662PA8 C4VM	8GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, AEC-Q100 Grade 3 (-40C - 85C), MLC Mode
SM662PAA C4VM	16GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, AEC-Q100 Grade 3 (-40C - 85C), MLC Mode
SM662PB8 C4VM	8GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, AEC-Q100 Grade 2 (-40C - 105C), MLC Mode
SM662PBA C4VM	16GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, AEC-Q100 Grade 2 (-40C - 105C), MLC Mode
SM662PXB C6VT	32GB Ferri-eMMC 5.1, 153 Ball, Samsung V6 3D TLC NAND, Wide Temp (-25C - 85C), TLC Mode
SM662PEB C6VT	32GB Ferri-eMMC 5.1, 153 Ball, Samsung V6 3D TLC NAND, Extended Temp (-40C - 85C), TLC Mode
SM662PAB C6VT	32GB Ferri-eMMC 5.1, 153 Ball, Samsung V6 3D TLC NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM662PBB C6VT	32GB Ferri-eMMC 5.1, 153 Ball, Samsung V6 3D TLC NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM662PX8 C4VM	8GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, Wide Temp (-25C - 85C), MLC Mode
SM662PXA C4VM	16GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, Wide Temp (-25C - 85C), MLC Mode
SM662PE8 C4VM	8GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, Extended Temp (-40C - 85C), MLC Mode
SM662PEA C4VM	16GB Ferri-eMMC 5.1, 153 Ball, Samsung 14nm MLC NAND, Extended Temp (-40C - 85C), MLC Mode

Product specifications

The new 8GB/16GB/32GB Ferri-eMMC® SM662Px series is armed with the eMMC 5.1 interface with reliable MLC/TLC NAND Flash and 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 to meet the reliability requirements of cutting-edge infotainment, navigation, HD mapping, V2V/V2I communication, drive event recorders, and autonomous driving applications.

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
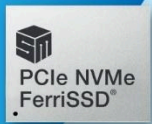
Automotive IVI compliance to the AEC-Q100 requirements
Ferri Family Enabling the NAND Flash Storage in Comprehensive Applications

Video

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

Documents
[Ferri-eMMC® small density 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](#)