

Product Detail Page)Ferri-UFS 2.1

PART NUMBER	DESCRIPTION
SM671PXCL BFSS	20GB Ferri-UFS 2.1, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM671PXDL BFSS	40GB Ferri-UFS 2.1, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM671PXEL BFSS	80GB Ferri-UFS 2.1, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM671PXFL BFSS	160GB Ferri-UFS 2.1, WD BICS5 NAND, Wide Temp (-25C - 85C), SLC Mode
SM671PECL BFSS	20GB Ferri-UFS 2.1, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM671PEDL BFSS	40GB Ferri-UFS 2.1, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM671PEEL BFSS	80GB Ferri-UFS 2.1, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM671PEFL BFSS	160GB Ferri-UFS 2.1, WD BICS5 NAND, Extended Temp (-40C - 85C), SLC Mode
SM671PACL BFSS	20GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM671PADL BFSS	40GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM671PAEL BFSS	80GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM671PAFL BFSS	160GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), SLC Mode
SM671PBCL BFSS	20GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode
SM671PBDL BFSS	40GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode
SM671PBEL BFSS	80GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode
SM671PBFL BFSS	160GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), SLC Mode

PART NUMBER	DESCRIPTION
SM671PXCL BFST	64GB Ferri-UFS 2.1, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM671PXDL BFST	128GB Ferri-UFS 2.1, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM671PXEL BFST	256GB Ferri-UFS 2.1, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM671PXFL BFST	512GB Ferri-UFS 2.1, WD BICS5 NAND, Wide Temp (-25C - 85C), TLC Mode
SM671PECL BFST	64GB Ferri-UFS 2.1, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM671PEDL BFST	128GB Ferri-UFS 2.1, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM671PEEL BFST	256GB Ferri-UFS 2.1, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM671PEFL BFST	512GB Ferri-UFS 2.1, WD BICS5 NAND, Extended Temp (-40C - 85C), TLC Mode
SM671PACL BFST	64GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM671PADL BFST	128GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM671PAEL BFST	256GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM671PAFL BFST	512GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 3 (-40C - 85C), TLC Mode
SM671PBCL BFST	64GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM671PBDL BFST	128GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM671PBEL BFST	256GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode
SM671PBFL BFST	512GB Ferri-UFS 2.1, WD BICS5 NAND, AEC-Q100 Grade 2 (-40C - 105C), TLC Mode

Product specifications

Ferri-UFS is a highly integrated solution which combines a feature-wise flash controller compliant with the latest UFS 2.1 standard and standard NAND flash memory. Its high-performance storage accessing, better power efficiency, and ease of system design make the Ferri-UFS a fabulous solution for automotive, industry, embedded and portable applications.

The Ferri-UFS leverages industry leading technology and experience in NAND management, and supports the UFS 2.1 advanced features such as HS-Gear3 x 2-lane mode and command queue. With extended temperature and various capacity support, offering easy and rapid design integration, the Ferri-UFS also ideally fits the requirements of point-of-sale terminals, networking and telecommunications equipment, and a variety of leading-edge industrial applications. With superior performance, multitasking support, and high stability, the Ferri-UFS can seamlessly serve the needs of a wide variety of mobile devices and new booming embedded/portable applications.

Why Ferri-UFS®

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

Power Efficiency

- Dynamic power management technology enables multiple power saving modes

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

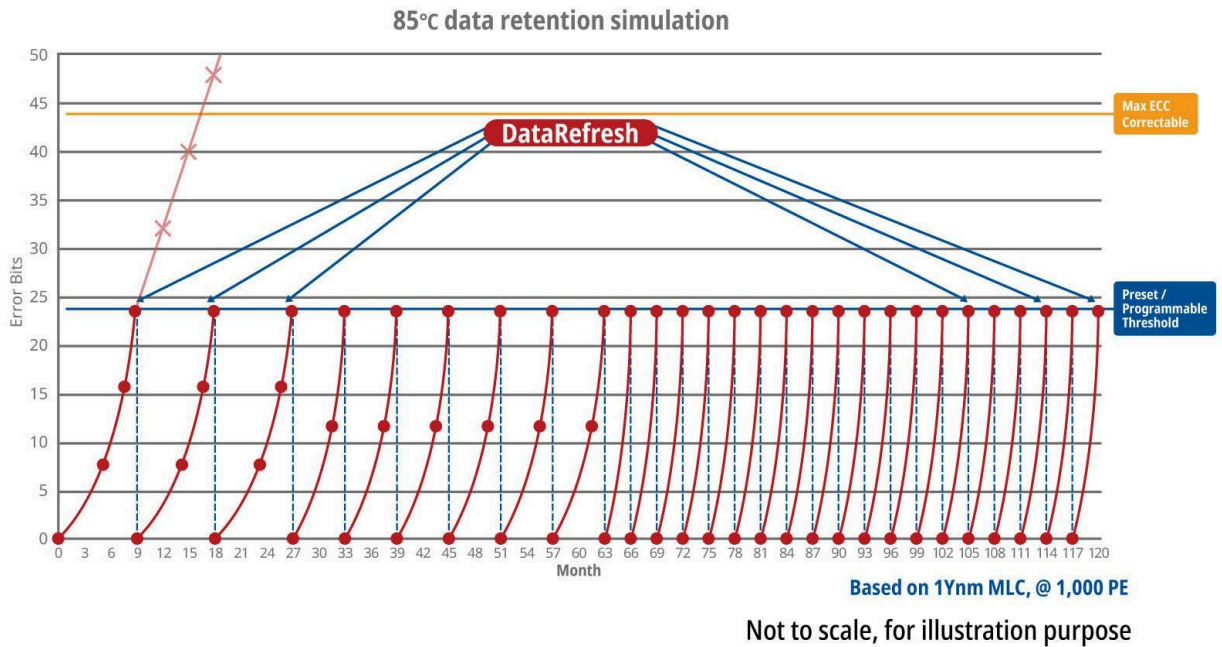
- Advanced system level protection against unstable power
- Software / hardware write protect option
- Multiple user data security zones
- Software / hardware secure erase function
- PowerShield and DataPhoenix technologies support power-down data protection

Automotive IVI compliance to the AEC-Q100 requirements

IntelligentScan™ and DataRefresh™ to Enhance Data Retention in High Temperature Environment

Silicon Motion's proprietary IntelligentScan function will activate automatically to scan recharge, repair or retire the cell block (DataRefresh) according to the host behavior and working environment (eg.

ambient temperature). As a result of the combination of IntelligentScan and DataRefresh, Ferri-UFS® can effectively prolong its service life much beyond typical NAND specifications.



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



Documents

[Silicon Motion's Ferri-UFS®: Sets new performance standard for Flash-based storage in automotive applications](#)