

# DuraFlash™ eMMC

## BGAE440 Product Family

DuraFlash eMMC

SMART's DuraFlash™ eMMC is soldered-down Flash storage solution that combines NAND Flash Memory, an embedded MMC (MultiMediaCard) controller, and advanced firmware in a small BGA (Ball Grid Array) package that provides a stable, yet cost effective high-density embedded storage.

eMMC can simplify system design because of the widely adopted JEDEC® eMMC standard interface in host system chipsets and operating system software driver support.

The new BGAE440 eMMC product family joins SMART's growing portfolio of DuraFlash BGA products that are designed to meet the rigid requirements of the industrial, medical and networking markets where technical support, extended life, and stable roadmaps are critical in choosing the right supplier.

DuraFlash BGAE440 eMMC is compliant to eMMC v5.1 specification and is available in the standard JEDEC 0.5mm pitch, 153-ball BGA package as well 1.0mm pitch, 100-ball BGA package. The 100-ball package offers larger ball pitch and ball diameter which enables lower cost PCB designs and simplifies PCB routing with wider metal traces.

### Why SMART for eMMC

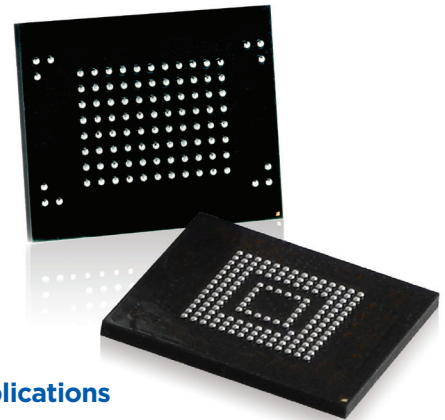
1. A Trusted Supplier – supporting OEMs
2. Support with a True Embedded Focus – every customer is treated with equal focus and respect for their individual application
3. Differentiated Products – a wide variety of product features suited for a range of markets and applications
4. Support Across the Entire Life Cycle – dedicated support from product introduction to obsolescence

### Features & Benefits

- Compliant to JEDEC v5.1 standard
- 16GB, 32GB, 64GB, 128GB, 256GB
- Pre-configurable to pSLC Enhanced Storage Media Mode
- Commercial temp (0 °C to 70 °C)  
Industrial temp (-40 °C to 85 °C)
- VCC = 3.3V and VCCQ = 3.3V or 1.8V

### DuraFlash eMMC Product Family Overview

Capacity	Maximum Performance	Operating Temperature
16GB to 256GB	Up to 315MB/s sequential read Up to 225MB/s* sequential write	Commercial Temp: 0°C to +70°C Industrial Temp: -40°C to +85°C



### Applications

- Factory Automation
- Networking Appliances
- Medical Devices
- POS Terminals
- RFID Scanners
- Single Board Computers
- Telecom Infrastructure
- IIoT

## DuraFlash BGAE440 eMMC Ordering Information

JEDEC v5.1, 0.5mm pitch, 11.5x13mm		
SMART Part Number	Density	Operating Temperature
SP9MEGR1AWC01	256GB	Commercial 0°C to +70°C
SP9MDGR1AWC01	128GB	
SP9MCGR1AWC01	64GB	
SP9MBGR1AWC01	32GB	
SP9MAGR1AWC01	16GB	
JEDEC v5.1, 0.5mm pitch, 11.5x13mm		
SMART Part Number	Density	Operating Temperature
SP9MEGR1AWI01	256GB	Industrial -40°C to +85°C
SP9MDGR1AWI01	128GB	
SP9MCGR1AWI01	64GB	
SP9MBGR1AWI01	32GB	
SP9MAGR1AWI01	16GB	
JEDEC v5.1, 1.0mm pitch, 14x18mm		
SMART Part Number	Density	Operating Temperature
SP9LEGR1AWC01	256GB	Commercial 0°C to +70°C
SP9LDGR1AWC01	128GB	
SP9LCGR1AWC01	64GB	
SP9LBGR1AWC01	32GB	
SP9LAGR1AWC01	16GB	
JEDEC v5.1, 1.0mm pitch, 14x18mm		
SMART Part Number	Density	Operating Temperature
SP9LEGR1AWI01	256GB	Industrial -40°C to +85°C
SP9LDGR1AWI01	128GB	
SP9LCGR1AWI01	64GB	
SP9LBGR1AWI01	32GB	
SP9LAGR1AWI01	16GB	

### Contact information

**Corporate Headquarters/North America:** T: (+1) 800-956-7627 • T: (+1) 510-623-1231 • F: (+1) 510-623-1434 • E: info@smartm.com

**Customer Service:** T: (+1) 510-623-1231 • E: customers@smartm.com

**Latin America:** T: (+55) 11 4417-7200 • E: sales.br@smartm.com

**EMEA:** T: (+44) 7825-084427 • E: sales.euro@smartm.com

**Asia/Pacific:** T: (+65) 6678-7670 • E: sales.asia@smartm.com

For more information, please visit: [www.smartm.com](http://www.smartm.com)

