

SMART's Memory Solutions

e•MMC™ Product Family

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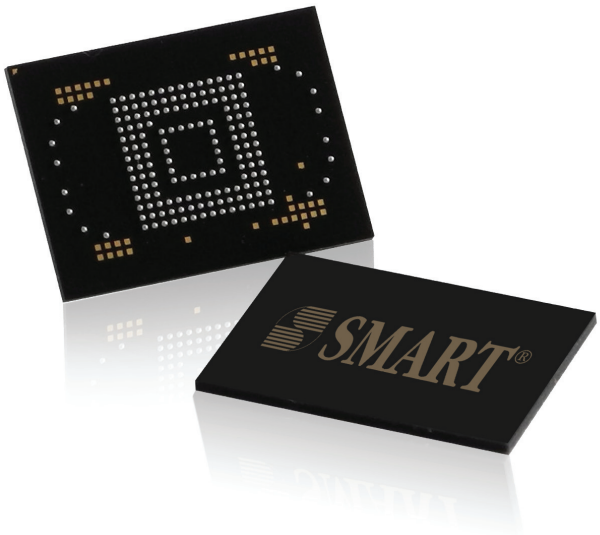
SMART's eMMC Product Family is an embedded memory solution that combines NAND Flash Memory, an embedded MMC (MultiMediaCard) controller, and advanced Firmware in a small BGA package that provides a stable yet cost effective high-density embedded storage.

eMMC can simplify your system design effort since the JEDEC standard interface makes the NAND technology invisible to the host, enabling easier design-in, reduced time-to-market, as well as simpler technology migration as the NAND memory scales.

SMART's eMMC Product Family is designed to meet the rigid requirements of the Automotive, Industrial, Medical, and Networking segments where technical support, extended life, and stable roadmaps are critical in choosing the right supplier.

Automotive Industrial Medical Networking POS Printers RFID Servers

SMART's eMMC solution is availablle in the standard JEDEC 0.5mm pitch 169-ball package as well as the 1.0mm pitch 100-ball package. Comparing to the former, the 100b package can provide customers a solution with larger ball pitch and ball diameter that enables lower cost PCB designs, and simplifies PCB routing with wider metal traces that can provide better thermal dissipation.



Why SMART for eMMC

1. A Trusted Supplier – over 25 years of supporting demanding OEMs
2. Support with a True Embedded Focus – we only focus on embedded applications so even the little guys are big in our eyes
3. Differentiated Products – team of engineers to support your every need
4. Support Across the Entire Life Cycle – dedicated support from womb to tomb

Features

- eMMC4.5 compliant (also compatible with hosts based on 4.41)
- 8GB to 64GB
- Dedicated SKU specifically for Automotive applications
- VCC = 3.3V and VCCQ = 3.3V or 1.8V
- Up to 160MB/s sequential read, up to 48MB/s sequential write
- Operating Temperature:
  - Automotive: -40°C to +85°C
  - Industrial Temp: -40°C to +85°C
  - Extended Temp: -25°C to +85°C

Customer Benefits

- Governed by JEDEC
- Future generations designed to be backwards compatible
- NAND technology concerns hidden behind advanced controller
- High performance and low power in a small form factor

Target Applications

- Automotive Infotainment (In-Dash)
- Factory Automation Equipment
- Networking appliances (e.g Routers)
- Medical Devices
- Point-of-Sale Terminals
- Printers
- RFID scanners
- Servers
- Single Board Computers
- VoIP

SMART® Modular Technologies

Ordering Information

JEDEC 0.5mm pitch 169b				
Density	**Part Number**	**eMMC Spec**	**Package**	**Temp**
8GB	SH8M08GBATCEBAA01	4.5	169b 12x16x1.0	Automotive
8GB	SH8M08GBATCEBAI01	4.5	169b 12x16x1.0	Industrial
8GB	SH8M8GCATCEBAE01	4.5	169b 12x16x1.0	Extended
16GB	SH8M16GCATCEBAA01	4.5	169b 12x16x1.0	Automotive
16GB	SH8M16GCATCEBAI01	4.5	169b 12x16x1.0	Industrial
16GB	SH8M32GCCTCEBAE01	4.5	169b 12x16x1.0	Extended
32GB	SH8M32GCCTCEBAA01	4.5	169b 12x16x1.2	Automotive
32GB	SH8M32GCCTCEBAI01	4.5	169b 12x16x1.2	Industrial
32GB	SH8M64GCETCEBAE01	4.5	169b 12x16x1.2	Extended
64GB	SH8M64GCETCEBAA01	4.5	169b 12x16x1.4	Automotive
64GB	SH8M64GCETCEBAI01	4.5	169b 12x16x1.4	Industrial
64GB	SH8M64GCETCEBAE01	4.5	169b 12x16x1.4	Extended

1.0mm pitch 100b				
Density	**Part Number**	**eMMC Spec**	**Package**	**Temp**
8GB	SH8M08GAETCEBAA01	4.5	100b 14x18x1.4	Automotive
8GB	SH8M08GAETCEBAAI01	4.5	100b 14x18x1.4	Industrial
8GB	SH8M08GAETCEBAE01	4.5	100b 14x18x1.4	Extended
16GB	SH8M16GAETCEBAA01	4.5	100b 14x18x1.4	Automotive
16GB	SH8M16GAETCEBAI01	4.5	100b 14x18x1.4	Industrial
16GB	SH8M16GAETCEBAE01	4.5	100b 14x18x1.4	Extended
32GB	SH8M32GAETCEBAA01	4.5	100b 14x18x1.4	Automotive
32GB	SH8M32GAETCEBAI01	4.5	100b 14x18x1.4	Industrial
32GB	SH8M32GAETCEBAE01	4.5	100b 14x18x1.4	Extended
64GB	SH8M64GAGTCEBAA01	4.5	100b 14x18x1.6	Automotive
64GB	SH8M64GAGTCEBAI01	4.5	100b 14x18x1.6	Industrial
64GB	SH8M64GAGTCEBAE01	4.5	100b 14x18x1.6	Extended

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