



eMMC — the perfect storage solution for mobile applications

Overview

Kingston's current eMMC™ product follows the JEDEC eMMC4.41 standard. It is an ideal universal storage solution for many electronic devices, including smartphones, tablet PCs, PDAs, eBook readers, MIDs, digital cameras and recorders, MP3, MP4 players, electronic learning products, digital TVs and set-top boxes. eMMC encloses the MLC NAND and eMMC controller inside one JEDEC standard package, providing a standard interface to the host. The eMMC controller directs the Flash management, including ECC, wear leveling, IOPS optimization and read sensing.

Key Benefits

- Simplifies the system design and reduces the time to market. The standard interface makes the fast-changing NAND technology invisible to the host. The host processor doesn't have to keep changing its software to accommodate every NAND technology change and variation. This helps to significantly reduce the design-in complexity and shorten the qualification cycle.
- Helps to improve the whole system performance. The eMMC controller frees up the host processor's valuable resources from NAND management, so the host processor can use its processing power on other tasks.
- Provides a cost-effective solution. As opposed to SLC NAND, eMMC uses MLC NAND. It makes higher capacity storage in mobile devices much more affordable and enables today's mobile devices to meet the increasing storage need.

24nm Part Numbers and Specifications

Part Number	Capacity	24nm Description	eMMC Standard	Package	Category
KE4BS2A5A	4GB	Embedded MMC 4.41 153B 4GB	4.41+	11.5 x 13 x 1.2	Standard
KE4BS3A5A	8GB	Embedded MMC 4.41 153B 8GB	4.41+	11.5 x 13 x 1.2	Standard
KE4BS4A5A	16GB	Embedded MMC 4.41 153B 16GB	4.41+	11.5 x 13 x 1.2	Standard
KE4BS5F6A	32GB	Embedded MMC 4.41 169B 32GB	4.41+	14 x 18 x 1.2	Standard
KE4BS6D6A	64GB	Embedded MMC 4.41 169B 64GB	4.41+	14 x 18 x 1.4	Standard
KE4BE4F6A	16GB	Embedded MMC 4.41 169B 16GB	4.41+	14 x 18 x 1.2	Elite
KE4BE5F6A	32GB	Embedded MMC 4.41 169B 32GB	4.41+	14 x 18 x 1.2	Elite
KE4BE6D6A	64GB	Embedded MMC 4.41 169B 64GB	4.41+	14 x 18 x 1.4	Elite

Key Features

Features	eMMC 4.41+
Boot operation	✓
Partitioning	✓
Sleep mode	✓
Replay protected memory block	✓
Trim	✓
Hardware reset	✓
Enhanced reliable write	✓
Background operation	✓
High priority interrupt	✓
DDR interface	✓
Discard CMD	✓
Sanitize CMD	✓
Packed commands	✓
Context IDs	✓
Power off notification	✓

For more information, please visit kingston.com/emmc

