e•MMC —
the perfect storage solution for mobile and embedded applications.

Overview

Kingston® 15nm e•MMC™ Flash memory follows the JEDEC e•MMC 5.1 standard and encloses the MLC NAND and e•MMC controller inside one JEDEC standard package to provide a standard interface to the host CPU. The e•MMC controller directs the Flash management, including ECC, wear-leveling, IOPS optimization and read sensing, significantly reducing the storage management burden on the host CPU. A universal storage solution, Kingston 15nm e•MMC is ideal 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. Beyond its use in consumer products, e•MMC is being rapidly adopted in embedded applications, such as many Computer on Module (COM) designs, smart appliances, medical and wearable devices because of its compact size, low-power consumption and many enhanced features.

Key Benefits

- Simplifies system design and reduces time to market. The standard interface makes fast-changing NAND technology invisible to the host and 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 whole system performance. The e•MMC 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, e•MMC uses MLC NAND so it makes higher capacity storage in embedded applications much more affordable and enables today's embedded designs to meet increasing demands for storage.

e•MMC Part Numbers and Specifications

Part Number	Capacity	e•MMC Standard	Package
EMMC04G-M627	4GB	5.0/5.1 (HS400)	11.5x13x1.0
EMMC08G-M325	8GB	5.0/5.1 (HS400)	11.5x13x1.0
EMMC16G-M525	16GB	5.0/5.1 (HS400)	11.5x13x1.0
EMMC32G-M525	32GB	5.0/5.1 (HS400)	11.5x13x1.0
EMMC64G-M525	64GB	5.0/5.1 (HS400)	11.5x13x1.0

For more information, please visit kingston.com/emmc

Key Features

JEDEC Standard Features	e•MMC 5.0	e•MMC 5.1
Boot Operation	√	√
Partitioning	√	√
Sleep Mode	√	√
Replay Protected Memory Block	√	√
Secure Trim/Secure Erase	√	√
Hardware Reset	√	√
Reliable Write	√	√
Background Operation	√	√
High Priority Interrupt	√	√
DDR Interface	√	√
Discard/Sanitize CMD	√	√
Packed Commands, Context IDs	√	√
Power OFF Notification	√	√
Data Tag	√	√
Device Health Report	√	√
Field FW Update	√	√
Production State Awareness	√	√
CMD Queuing		√

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TECHNOLOGY