

eMMC

The Perfect storage solution for mobile and embedded applications

Kingston® eMMC™ Flash memory follows the JEDEC eMMC 5.1 standard and encloses the NAND Flash and eMMC controller inside one JEDEC standardized package to provide a standard interface to the host CPU. The eMMC controller directs the Flash management, including ECC, wear-leveling, lOPS optimization and read sensing, significantly reducing the storage management burden on the host CPU. A universal storage solution, Kingston eMMC is ideal for many electronic devices, including: smartphones, tablet PCs, eBook readers, electronic learning products, smart TVs, set-top boxes, smart home appliances and many wearable devices. Beyond its use in consumer products, eMMC is being rapidly adopted in many other embedded applications, such as Single Board Computers (SBC), robotics, medical devices, networking and building control devices because of its compact size, low-power consumption and numerous enhanced features. With the rapid growth of the loT market, eMMC is finding its way to newer applications.

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 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, Kingston eMMC utilizes MLC and 3D TLC NAND making higher capacity storage for embedded applications much more affordable and enables today's embedded designs to meet increasing demands for storage.
- Enhanced Mode (pSLC Mode) configuration available for better performance/endurance.

MARKET SEGMENTS



Industrial IoT / Robotics & Factory Automation



5G Networking/Telecommunications Communication Modules (WiFi Routers and Mesh Devices)



Wearables (Smart Watches, Health Monitors, AR & VR)



Smart Home (Sound Bars, Thermostats, Fitness Equipment, Vacuums, Beds, Faucets)



Smart City (HVAC, Lighting, Power Monitoring/ Metering, Parking Meters)

*e*MMC PART NUMBERS AND SPECIFICATIONS

Part Number	Capacity	*eMMC Standard*	Package	NAND
EMMC04G-M627	4GB	5.0/5.1 (HS400)	11.5x13x1.0	MLC
EMMC04G-MK27	4GB	5.0/5.1 (HS400)	11.5x13x0.8	MLC
EMMC04G-M657	4GB	5.0/5.1 (HS400)	9.0x7.5x0.8	MLC
EMMC08G-ML36	8GB	5.1 (HS400)	11.5x13x0.8	MLC
EMMC16G-TB29	16GB	5.1 (HS400)	11.5x13x0.8	3D TLC
EMMC32G-TX29	32GB	5.1 (HS400)	11.5x13x0.8	3D TLC
EMMC32G-KC30	32GB	5.1 (HS400)	8.0x8.5x0.9	3D TLC
EMMC64G-TY29	64GB	5.1 (HS400)	11.5x13x0.8	3D TLC
EMMC128-TY29	128GB	5.1 (HS400)	11.5x13x0.8	3D TLC
EMMC256-TY29	256GB	5.1 (HS400)	11.5x13x1.0	3D TLC

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		√
Backward Compatibility	√	√

Learn more about the different eMMC versions:

eMMC 5.0: http://www.jedec.org/sites/default/files/docs/JESD84-B50.pdf

eMMC 5.1: http://www.jedec.org/sites/default/files/docs/JESD84-B51.pdf

For more information, including sample and quote requests, please visit kingston.com/emmc.

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