i-Temp eMMC

The Perfect storage solution for mobile and embedded applications

Kingston® I-Temp eMMC™ Flash memory offers JEDEC eMMC5.1 features and is backward compatible to earlier eMMC standards. It has all the advantages of standard eMMC plus the operating temperature range of the device meets industrial operating temperature requirements (-40℃~+85℃), which make it an ideal storage solution for outdoor, harsh environment and ideal storage solution for outdoor, surveillance, factory automation, transportation, and other applications in fluid environmental conditions.

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.

- Supports industrial operating temperature range (-40°C~+85°C).

- 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)

i-Temp *e*MMC PART NUMBERS AND SPECIFICATIONS

Part Number	Capacity	eMMC Standard	Package	NAND	Operating Temperature
EMMC04G-W627	4GB	5.0/5.1 (HS400)	11.5x13x1.0	MLC	-40°C~+85°C
EMMC16G-IB29	16GB	5.1 (HS400)	11.5x13x0.8	3D TLC	-40°C~+85°C
EMMC32G-IX29	32GB	5.1 (HS400)	11.5x13x0.8	3D TLC	-40°C~+85°C
EMMC64G-IY29	64GB	5.1 (HS400)	11.5x13x0.8	3D TLC	-40°C~+85°C
EMMC128-IY29	128GB	5.1 (HS400)	11.5x13x0.8	3D TLC	-40°C~+85°C
EMMC256-IY29	245GB	5.1 (HS400)	11.5x13x1.0	3D TLC	-40°C~+85°C

KEY FEATURES

JEDEC Standard Features	eMMC 5.0	eMMC 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.

Kingston TECHNOLOGY