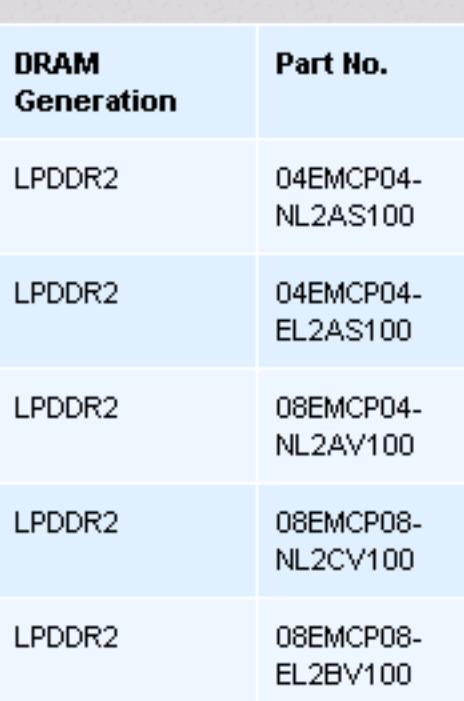


Kingston
SOLUTIONS

eMCP



Kingston offers a wide range of JEDEC standard eMCP components. eMCP integrates eMMC and low power DRAM into one small footprint package. This packaging simplifies system PCB design and speeds time to market. eMCP is an ideal memory solution for applications that require high-capacity storage and low power DRAM combinations, such as smartphones, tablets and wearable devices.

eMCP Part Numbers and Specifications

DRAM Generation	Part No.	Capacity	Description	eMMC Standard	Package
LPDDR2	04EMCP04-NL2AS100	4GB MLC eMMC + 4Gb LPDDR2	eMMC 5.0 162 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR2	04EMCP04-EL2AS100	4GB MLC eMMC + 4Gb LPDDR2	eMMC 5.0 162 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR2	08EMCP04-NL2AV100	8GB TLC eMMC + 4Gb LPDDR2	eMMC 5.0 162 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR2	08EMCP08-NL2CV100	8GB TLC eMMC + 8Gb LPDDR2	eMMC 5.0 162 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR2	08EMCP08-EL2BV100	8GB TLC eMMC + 8Gb LPDDR2	eMMC 5.0 162 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR3	08EMCP04-EL3AV100	8GB TLC eMMC + 4Gb LPDDR3	eMMC 5.0 221 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR3	08EMCP08-EL3BS100	8GB MLC eMMC + 8Gb LPDDR3	eMMC 5.0 221 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR3	08EMCP08-EL3CV100	8GB TLC eMMC + 8Gb LPDDR3	eMMC 5.0 221 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR3	08EMCP08-EL3AV100	8GB TLC eMMC + 8Gb LPDDR3	eMMC 5.0 221 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR3	16EMCP08-EL3CV100	16GB TLC eMMC + 8Gb LPDDR3	eMMC 5.0 221 Ball	5.0 (HS200)	11.5 x 13 x 1.0
LPDDR3	16EMCP16-EL3CV100	16GB TLC eMMC + 16Gb LPDDR3	eMMC 5.0 221 Ball	5.0 (HS200)	11.5 x 13 x 1.0

eMMC™

Kingston offers a variety of embedded memory products, including eMMC and DRAM components, to customers worldwide. These products are ideal for memory and storage for many embedded applications.

Kingston eMMC is an embedded, non-volatile memory system, comprised of both Flash memory and a Flash memory controller, which simplifies the application interface design and frees the host processor from low-level Flash memory management. eMMC is a popular storage component for many consumer electronic devices, including smartphones, tablets, PDAs, eBook readers, digital cameras and recorders, MP3 and MP4 players, electronic learning products, digital TVs, set-top boxes and Mobile Internet Devices. It is increasingly adopted in many industrial and embedded applications.

For developers, eMMC simplifies the interface design and qualification process, resulting in a reduction in time to market and facilitates support for future Flash device offerings.

Small BGA package sizes and low power consumption make eMMC a viable, low-cost memory solution for mobile and other space-constrained products. The technology specifications of eMMC are managed by JEDEC, the global leader in developing open standards for the microelectronics industry.

eMMC Part Numbers and Specifications

Part No.	Capacity	Description	eMMC Standard	Package	Category
EMMC04G-S100	4GB	eMMC 5.0 (HS200) 153B 4GB	5.0 (HS200)	11.5 x 13 x 1.0	Standard
EMMC08G-S100	8GB	eMMC 5.0 (HS200) 153B 8GB	5.0 (HS200)	11.5 x 13 x 1.0	Standard
EMMC16G-S100	16GB	eMMC 5.0 (HS200) 153B 16GB	5.0 (HS200)	11.5 x 13 x 1.0	Standard
EMMC16G-S110	16GB	eMMC 5.0 (HS200) 153B 16GB	5.0 (HS200)	11.5 x 13 x 1.0	Standard
EMMC32G-S100	32GB	eMMC 5.0 (HS200) 153B 32GB	5.0 (HS200)	11.5 x 13 x 1.0	Standard
EMMC16G-E100	16GB	eMMC 5.0 (HS400) 153B 16GB	5.0 (HS400)	11.5 x 13 x 1.0	Elite
EMMC32G-E100	32GB	eMMC 5.0 (HS400) 153B 32GB	5.0 (HS400)	11.5 x 13 x 1.0	Elite
EMMC64G-E100	64GB	eMMC 5.0 (HS400) 153B 64GB	5.0 (HS400)	11.5 x 13 x 1.4	Elite

TLC eMMC

Triple-Level cell (TLC) NAND Flash eMMC has 3-bit per cell and allows for lower overall prices and increased storage capacities. TLC eMMC uses an advanced controller and improved firmware capabilities for improved endurance and reliability. TLC is ideal for smartphones, tablets and smart devices.

TLC eMMC Part Numbers and Specifications

Part No.	Capacity	Description	eMMC Standard	Package
EMMC08G-V100	8GB TLC	eMMC 5.0 153B Ball	5.0 (HS200)	11.5 x 13 x 1.0
EMMC16G-V100	16GB TLC	eMMC 5.0 153B Ball	5.0 (HS200)	11.5 x 13 x 1.0
EMMC32G-V100	32GB TLC	eMMC 5.0 153B Ball	5.0 (HS200)	11.5 x 13 x 1.0

I-Temp eMMC

Kingston's wide-temp eMMC product offers JEDEC eMMC 5.0 features and backward compatibility to previous eMMC standards. It has all of the advantages of standard eMMC and the operating temperature range of the device meets industrial operating temperature requirements (-40°C~85°C), making it an ideal storage solution for harsh outdoor environment applications.

I-Temp Part Numbers and Specifications

Part No.	Capacity	Description	eMMC Standard	Package	Category
EMMC04G-W100	4GB	Industrial Operating Temperature eMMC 5.0(HS200) 153B 4GB	5.0(HS200)	11.5x13x1.0	I-temp
EMMC08G-W100	8GB	Industrial Operating Temperature eMMC 5.0(HS200) 153B 8GB	5.0(HS200)	11.5x13x1.0	I-temp
EMMC16G-W100	16GB	Industrial Operating Temperature eMMC 5.0(HS200) 153B 16GB	5.0(HS200)	11.5x13x1.0	I-temp
EMMC32G-W100	32GB	Industrial Operating Temperature eMMC 5.0(HS200) 153B 32GB	5.0(HS200)	11.5x13x1.0	I-temp
EMMC64G-W100	64GB	Industrial Operating Temperature eMMC 5.0(HS400) 153B 64GB	5.0(HS400)	11.5x13x1.4	I-temp

MCP

The Kingston MCP component comes with JEDEC standard ballout. It integrates SLC NAND Flash with LPDRAM inside one small footprint package. Its compact size and low power consumption make it an ideal memory solution for many IoT and wearable applications. MCP with industrial operating temperature range (-40°C~85°C) is also available.

MCP Part Numbers and Specifications

MCP PNs	SLC NAND Capacity	LPDDR2 Capacity	Description	Package	DRAM Speed	Operating Temperature
KSLCMAL2TA0M2A	2Gb SLC	1Gb LPDDR2	2Gb x8 SLC NAND + 1Gb x32 LPDDR2 162 ball MCP	8x10.5x1.0	800 Mbps	-25°C~+85°C
KSLCMBL2VA2M2A	2Gb SLC	2Gb LPDDR2	4Gb x8 SLC NAND + 2Gb x32 LPDDR2 162 ball MCP	8x10.5x1.0	1066 Mbps	-25°C~+85°C
KSLCMBL2VA2M2C	2Gb SLC	2Gb LPDDR2	Wide-temp 4Gb x8 SLC NAND + 2Gb x32 LPDDR2 162 ball MCP	8x10.5x1.0	1066 Mbps	-40°C~+85°C

Embedded DRAM

Kingston DRAM components are designed to meet the needs of embedded applications and offer a low voltage option for reduced power consumption.

Standard Part Numbers and Specifications

DDR3/3L PN	Capacity	Description	Package size	Organization (words x bits)	Speed Mbps	VDD, VDDQ	Operating Temp.
D2516EC4BXGGB	4Gb	96 ball FBGA DDR3/3L	9.0x13.5x1.2	256MX16	1600/1333	1.35V*	0°C ~ +95°C
D5128EETBPGGBU	4Gb	78 ball FBGA DDR3/3L	9.0x10.6x1.2	512Mx8	1600/1333	1.35V*	0°C ~ +95°C

*Backward compatible to 1.5V VDD, VDDQ

I-Temp Part Numbers and Specifications

I-Temp DDR3/3L PN	Capacity	Description	Package size	Configuration (words x bits)	Speed Mbps	VDD, VDDQ	Operating Temp.
D2516EC4BXGGBI	4Gb	96 ball FBGA DDR3/3L IT	9.0x13.5x1.2	256MX16	1600/1333	1.35V*	-40°C ~ +95°C
D5128EETBPGGBUI	4Gb	78 ball FBGA DDR3/3L IT	9.0x10.6x1.2	512Mx8	1600/1333	1.35V*	-40°C ~ +95°C

*Backward compatible to 1.5V VDD, VDDQ

More information

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