

What is eMMC?

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Embedded applications today such as digital cameras, smart phones, and tablets often store content on flash memory. It used to have its own controller to control the reading and writing of applications.

However, the development of semiconductor technology allows for increased storage capacity, making it difficult to use this controller to work outside flash memory. Therefore, eMMC was developed, becoming the standard for grouping controllers into memory.



When the improved eMMC, the standard will also provide features such as secure deletion and cutting, high-level interventions to meet security and work level requirements. eMMC was born to improve the data transfer rate on chips with high memory, high resolution video storage, but later generations will do more for many applications, each generation will have New features, bringing a better experience to users.

The widely accepted eMMC standard is v4.5, which is provided in JESD84-A441: Embedded MultiMediaCard (eMMC) Product Standard v4.5 issued by JEDEC in 6/2011. JEDEC has recently released JESD84-B45: Embedded MultiMediaCard (eMMC), Electrical Standard (Version 4.5 Device) for eMMC v4.5 in 6/2011.

Where is eMMC used?

eMMC is suitable for high demand applications such as mobile electronic products (smartphones, tablets, multimedia players, PDAs, navigation systems, digital cameras). eMMC can be used on mobile devices, memory expansion solutions and replacing traditional storage methods (such as HDD).

Benefits of eMMC

The architecture of the eMMC integrating the flash memory controller into the general package should simplify the design of the application interface, helping the processor not to manage low-level flash memory. Product developers can simplify the design of static electrical memory interfaces and standard processes - reduce the time required before launching products to the market, supporting future flash devices.

In other words, eMMC hides the complexity of flash memory technology in a convenient 'plug and play' package that reduces time for developers.

In addition, eMMC also eliminates the development of software interfaces for all types of NAND memory by integrating the embedded memory controller, providing an easy-to-use memory solution, high-speed data transmission. on devices like mobile.

Thanks to eMMC, there is no need for an expansion slot by aligning the functions of the memory vertically, helping to bring a very small footprint on the device memory. This design also helps the supplier get more components from more places, which will help reduce costs and increase revenue.

What is the requirement for software support required with eMMC?

The eMMC 4.41 standard provides security, speed and reliability such as security deletion or high-level intervention. These features need software support from the system file, otherwise the application cannot reach the storage location via the file system. To switch to eMMC, ensure software support from internal and external sources.

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