

ABSTRACT

An operating method of a memory controller to update metadata using journaling data in a short time during a booting operation, and to maintain reliability of the updated metadata. The operating method of a memory controller includes loading metadata into sub-regions of a buffer memory, updating the metadata using journaling data in a state that error correction code (ECC) functions of memory controller for the sub-regions are disabled, generating a first parity data of data stored in the first sub-region, and enabling the ECC function of the first sub-region, after the first parity data is generated.

FIG. 2