

ABSTRACT

A semiconductor memory device includes a memory core including a plurality of memory cells, an on-chip processor and a memory security controller. The on-chip processor performs on-chip data processing. The memory security controller decrypts encrypted data provided from the memory core or from a memory controller and to provide the decrypted data to the on-chip processor and encrypts result data from the on-chip processor to provide result-encrypted data to the memory core or the memory controller. Data processing efficiency may be enhanced without degradation of data security by decrypting the encrypted data in the semiconductor memory device to perform the on-chip data processing.

FIG. 1