

ABSTRACT

A storage device includes a nonvolatile memory device that receives write data based on a data strobe signal and a data signal and outputs read data based on the data strobe signal and the data signal, and a controller that performs a training operation for training the nonvolatile memory device to align the data signal and the data strobe signal. The controller detects a left edge of a window of the data signal for the training operation. The controller determines a center of the window by using the detected left edge and unit interval length information of the data signal or determines a start point of a detection operation for detecting a right edge of the window by using the detected left edge and the unit interval length information.

FIG. 1