WHAT IS CLAIMED IS:

1. A network storage device connected with a network fabric, comprising:

a network storage controller configured to perform interfacing with the network fabric and to directly translate and execute a first command provided through the network fabric into a second command for controlling a nonvolatile memory cluster, and implemented with a single chip; and

the nonvolatile memory cluster configured to exchange data with the network storage controller under control of the network storage controller,

wherein the nonvolatile memory cluster includes:

a first nonvolatile memory array directly connected with the network storage controller through a first channel;

a nonvolatile memory switch connected with the network storage controller through a second channel; and

a second nonvolatile memory array configured to communicate with the network storage controller under control of the nonvolatile memory switch.

2. The network storage device of claim 1, wherein the first command includes a network transmission format.

3. The network storage device of claim 1, wherein the network storage controller performs a command for the nonvolatile memory cluster depending on the second command.

4. The network storage device of claim 3, further comprising:

a buffer memory,

wherein the network storage controller further includes:

a first port for a communication with the network fabric;

a second port for a communication with the buffer memory; and

a third port for a communication with the nonvolatile memory cluster.

5. The network storage device of claim 4, wherein the first port includes an interface which supports a network transmission format.

6. The network storage device of claim 2 or claim 5, wherein the network transmission format includes a high-speed Ethernet system.

7. The network storage device of claim 1, wherein the network storage controller includes:

a storage controller configured to translate the first command provided from the network fabric as a command into the second command and to control the nonvolatile memory cluster depending on the second command; and

an external computing device configured to perform a command for the nonvolatile memory cluster depending on a request of the storage controller.

8. The network storage device of claim 7, wherein the external computing device includes one or more processors, which perform distributed processing based on the first command or the second command with the storage controller or solely perform processing based on the first command or the second command, or an acceleration engine.

9. The network storage device of claim 1, wherein the network storage controller includes:

a host interface configured to receive the first command provided from the network fabric as a command;

a storage controller configured to translate the first command into the second command for controlling the nonvolatile memory cluster and to perform a command for the nonvolatile memory cluster depending on the second command; and

an interface configured to access the nonvolatile memory cluster under control of the storage controller.

10. A network storage device comprising:

a network storage controller configured to directly translate a first command provided through a network switch into a second command for controlling a nonvolatile memory and to output the second command by using an interface, and implemented with a single chip; and

a nonvolatile memory cluster configured to store write data depending on the second command output from the network storage controller or to output stored data to the network storage controller,

wherein the network storage controller includes:

one or more external computing devices configured to perform a command for the nonvolatile memory cluster based on the second command,

wherein the nonvolatile memory cluster includes:

a first nonvolatile memory array directly connected with the network storage controller through a first channel and controlled through the interface.

11. The network storage device of claim 10, wherein the first command has a network transmission format, and the second command has a format for controlling the nonvolatile memory.

12. The network storage device of claim 10 or claim 11, wherein the one or more external computing devices include one or more processors which process a command according to a request of a host.

13. The network storage device of claim 12, wherein the one or more external computing devices perform a network management operation according to the request of the host.

14. The network storage device of claim 10, wherein the network storage controller includes a storage controller including an embedded computing device, and

wherein the one or more external computing devices include one or more processors which perform distributed processing on the first command or the second command with the embedded computing device.

15. The network storage device of any one of claims 10 to 14, wherein the nonvolatile memory cluster further includes a second nonvolatile memory array, and

further comprising:

a first nonvolatile memory switch connected with the network storage controller through a second channel and configured to perform interfacing between the second nonvolatile memory array and the interface.

16. The network storage device of claim 15, wherein the first nonvolatile memory switch includes:

a first switch controller configured to map a first address provided from the interface onto the second nonvolatile memory array; and

a first buffer configured to buffer data transmitted between the interface and the second nonvolatile memory array.

17. The network storage device of claim 16, wherein the nonvolatile memory cluster further includes:

a third nonvolatile memory array; and

a second nonvolatile memory switch configured to perform interfacing between the first nonvolatile memory switch and the third nonvolatile memory array.

18. The network storage device of claim 17, wherein the first and second nonvolatile memory switches perform address mapping independently of each other.