CLAIMS

1. A network card packet receiving processing method, comprising:

parsing received message data, and determining pre-fetching control information of a receiving queue corresponding to the message data;

determining corresponding pre-fetched memory block scheduling information based on the pre-fetching control information;

performing a memory block pre-fetching scheduling operation on the receiving queue in a network card based on the pre-fetched memory block scheduling information, so as to generate a pre-fetching request to acquire corresponding memory block information; and

storing the message data in a memory of a storage area based on the memory block information,

wherein determining corresponding pre-fetched memory block scheduling information based on the pre-fetching control information comprises:

acquiring a read pointer information and a write pointer information of a memory block pre-fetched by the receiving queue included in the pre-fetching control information; and

determining, in accordance with the read pointer information, the write pointer information and a pre-fetching pending flag bit, whether the current action of receiving the message data triggers a pre-fetching application action of the receiving queue, and if so, generating the corresponding pre-fetched memory block scheduling information.

2. The network card packet receiving processing method of claim 1, wherein after acquiring the read pointer information and the write pointer information, the method further comprises:

determining, based on the read pointer information and the write pointer information, whether a memory block to be used exists in a specified storage area, and if so, determining, in accordance with the read pointer information, the write pointer information and a corresponding queue serial number, a storage position of the memory block information in

a network card memory pool, and reading the memory block information in the storage position.

3. The network card packet receiving processing method of claim 1, wherein performing a memory block pre-fetching scheduling operation on the receiving queue in a network card based on the pre-fetched memory block scheduling information, so as to generate a pre-fetching request to acquire corresponding memory block information comprises:

performing the memory block pre-fetching scheduling operation on the receiving queue in the network card based on the pre-fetched memory block scheduling information, and triggering a pre-fetching application action corresponding to a sub-queue in the receiving queue, so as to generate the pre-fetching request to acquire the corresponding memory block information; the receiving queue including at least one sub-queue;

wherein the pre-fetching request includes acquiring a corresponding number of pieces of memory block information in accordance with a preset threshold of a number of pieces of memory block information pre-fetched for a single time.

4. The network card packet receiving processing method of any of claims 1-3, wherein the pre-fetching control information includes: a write pointer value for representing a number of pre-fetched memory blocks, a read pointer value for representing a number of memory blocks that have been used to receive the message data, a pre-fetching pending flag bit for representing the current pre-fetching state of the receiving queue, and a notification instruction flag bit for representing driving of memory blocks that have been allocated.

5. A network card packet receiving processing apparatus, comprising:

a pre-fetching control information acquisition unit for parsing received message data, and determining pre-fetching control information of a receiving queue corresponding to the message data;

a packet receiving processing unit for determining corresponding pre-fetched memory block scheduling information based on the pre-fetching control information;

a memory block pre-fetching management unit for performing a memory block pre-fetching scheduling operation on the receiving queue in a network card based on the pre-fetched memory block scheduling information, so as to generate a pre-fetching request to acquire corresponding memory block information; and

a message data storage unit for storing the message data in a memory of a storage area based on the memory block information,

wherein the packet receiving processing unit comprises:

a first packet receiving processing unit for acquiring a read pointer information and a write pointer information of a memory block pre-fetched by the receiving queue included in the pre-fetching control information; and

a third packet receiving processing unit for determining, in accordance with the read pointer information, the write pointer information and a pre-fetching pending flag bit, whether the current action of receiving the message data triggers a pre-fetching application action of the receiving queue, and if so, generating the corresponding pre-fetched memory block scheduling information.

6. The network card packet receiving processing apparatus of claim 5, wherein the packet receiving processing unit further comprises: a second packet receiving processing unit for determining, based on the read pointer information and the write pointer information, whether a memory block to be used exists in a specified storage area, and if so, determining, in accordance with the read pointer information, the write pointer information and a corresponding queue serial number, a storage position of the memory block information in a network card memory pool, and reading the memory block information in the storage position.

7. An electronic device, comprising:

a processor; and

a memory, which stores a computer program executable on the processor, wherein the computer program, when executed by the processor, causes the electronic device to perform

the steps of the network card packet receiving processing method according to any of claims 1 to 4.

8. A processor-readable storage medium, on which a computer program is stored, wherein the computer program, when executed by the processor, performs the steps of the network card packet receiving processing method according to any of claims 1 to 4.