CLAIMS

1. A data sending method, wherein the method comprises:

obtaining, by a physical medium attachment, PMA, sublayer of an Ethernet device, a data stream, wherein the data stream is a forward error correction, FEC, encoded data stream; and

performing, by the PMA sublayer, a first data processing process on the data stream, to obtain an interleaved data stream, wherein the first data processing process comprises performing interleaving in a first interleaving manner, wherein

an interleaving type of the first interleaving manner is symbol interleaving or convolutional interleaving.

2. The method according to claim 1, wherein the performing interleaving in a first interleaving manner comprises:

making, by the PMA sublayer, first obtained data of two codewords wait; and

performing interleaving on the first obtained data of the two codewords and data of two codewords that subsequently reach.

3. The method according to claim 1 or 2, wherein the data stream obtained by the PMA sublayer is a plurality of data streams, the performing interleaving comprises performing interleaving between the plurality of data streams.

4. The method according to any one of claims 1 to 3, wherein the symbol interleaving is performed at a granularity of 10 bits.

5. The method according to any one of claims 1 to 4, wherein the first data processing process further comprises bit multiplexing or symbol-group multiplexing.

6. The method according to any one of claims 1 to 5, wherein before the performing interleaving in a first interleaving manner, the first data processing process further comprises bit demultiplexing or symbol-group demultiplexing.

7. The method according to any one of claims 1 to 6, wherein before the performing interleaving in a first interleaving manner, the first data processing process further comprises alignment marker AM lock and deskew.

8. The method according to any one of claims 1 to 7, wherein

the data stream is a data stream obtained by performing a second data processing process, and the second data processing process comprises performing interleaving in a second interleaving manner.

9. The method according to claim 8, wherein an interleaving depth of the first interleaving manner is different from that of the second interleaving manner.

10. The method according to claim 8 or 9, wherein the interleaving depth of the second

interleaving manner is 2×RS.

11. The method according to any one of claims 8 to 10, wherein the first data processing process further comprises performing de-interleaving for the second interleaving manner.

12. The method according to any one of claims 8 to 11, wherein

the second data processing process is performed by a physical coding sublayer PCS or a data terminal equipment extender sublayer DTE_XS.

13. The method according to any one of claims 1 to 12, wherein the interleaving depth of the first interleaving manner is 4×RS.

14. The method according to any one of claims 1 to 13, wherein the Ethernet device comprises at least one of the following: a physical layer PHY chip, a forwarding device, or a pluggable module.

15. The method according to any one of claims 1 to 14, wherein a lane rate of the interleaved data stream is 200 gigabits per second Gbps.

16. The method according to any one of claims 1 to 15, wherein a rate of an interface for receiving the data stream by the PMA sublayer is at least one of the following: 200 Gbps or 400 Gbps.

17. The method according to any one of claims 1 to 16, wherein the data stream is obtained from an attachment unit interface AUI or a common electrical interface CEI by the PMA sublayer.

18. The method according to any one of claims 1 to 17, wherein the method further comprises:

sending, by the PMA sublayer, the interleaved data stream to a physical medium dependent PMD sublayer.

19. An Ethernet device, wherein the Ethernet device is configured to perform the method according to any one of claims 1 to 18.

20. A chip, wherein the chip is configured to perform the method according to any one of claims 1 to 18.