CLAIMS

1. A physical layer protocol data unit transmission method based on frequency band stitching, comprising:

generating, by a communication apparatus, a physical layer protocol data unit (PPDU), wherein the PPDU comprises a plurality of segments used for sensing, the plurality of segments used for sensing comprise a first segment and a second segment, and a time gap between the first segment and the second segment is greater than duration of one sensing symbol; and

sending, by the communication apparatus, the PPDU.

2. The method according to claim 1, wherein sending, by the communication apparatus, the PPDU comprises:

transmitting, by the communication apparatus, an ultra-wideband (UWB) pulse within duration of the first segment and the second segment.

3. The method according to claim 1 or 2, wherein before sending, by the communication apparatus, the PPDU, the method further comprises:

sending, by the communication apparatus, enabling information, wherein the enabling information indicates whether to enable intra-packet frequency band stitching, wherein

when the enabling information indicates to enable intra-packet frequency band stitching, the time gap between the first segment and the second segment is greater than the duration of the one sensing symbol.

4. The method according to any one of claims 1 to 3, wherein a transmission frequency band of the first segment is different from a transmission frequency band of the second segment.

5. The method according to any one of claims 1 to 4, wherein the plurality of segments used for sensing further comprise a third segment and a fourth segment, and a transmission frequency band of the third segment is the same as a transmission frequency band of the fourth segment; and

a time gap between the third segment and the fourth segment is different from the time gap between the first segment and the second segment.

6. The method according to any one of claims 1 to 5, wherein before sending, by the communication apparatus, the PPDU, the method further comprises:

sending, by the communication apparatus, a control message, wherein the control message indicates one or more of the following: an ultra-wideband UWB channel index corresponding to a segment used for sensing, or whether a synchronization field is used for frequency band stitching.

7. A physical layer protocol data unit transmission method based on frequency band stitching, comprising:

receiving, by a communication apparatus, a physical layer protocol data unit (PPDU),

wherein the PPDU comprises a plurality of segments used for sensing, the plurality of segments used for sensing comprise a first segment and a second segment, and a time gap between the first segment and the second segment is greater than duration of one sensing symbol; and

performing, by the communication apparatus, sensing measurement based on the first segment and the second segment.

8. The method according to claim 7, wherein receiving, by the communication apparatus, the PPDU comprises:

receiving, by the communication apparatus, an ultra-wideband (UWB) pulse within duration of the first segment and the second segment.

9. The method according to claim 7 or 8, wherein before receiving, by the communication apparatus, the PPDU, the method further comprises:

receiving, by the communication apparatus, enabling information, wherein the enabling information indicates whether to enable intra-packet frequency band stitching, wherein

when the enabling information indicates to enable intra-packet frequency band stitching, the time gap between the first segment and the second segment is greater than the duration of the one sensing symbol.

10. The method according to any one of claims 7 to 9, wherein a transmission frequency band of the first segment is different from a transmission frequency band of the second segment.

11. The method according to any one of claims 7 to 10, wherein the plurality of segments used for sensing further comprise a third segment and a fourth segment, and a transmission frequency band of the third segment is the same as a transmission frequency band of the fourth segment; and

a time gap between the third segment and the fourth segment is different from the time gap between the first segment and the second segment.

12. The method according to any one of claims 7 to 11, wherein before receiving, by the communication apparatus, the PPDU, the method further comprises:

receiving, by the communication apparatus, a control message, wherein the control message indicates one or more of the following: a UWB channel index corresponding to a segment used for sensing, or whether a synchronization field is used for frequency band stitching.

13. A communication apparatus, comprising a module or unit configured to perform the method according to any one of claims 1 to 12.

14. A communication apparatus, comprising:

one or more processors, wherein the one or more processors are coupled to one or more

memories; and

the one or more memories are configured to store a computer program, and the one or more processors are configured to execute the computer program stored in the one or more memories, to enable the communication apparatus to perform the method according to any one of claims 1 to 12.

15. A readable storage medium, configured to store a program, wherein the program is executed by one or more processors, to enable an apparatus comprising the one or more processors to perform the method according to any one of claims 1 to 12.