CLAIMS

1. A communication method implemented by a tag, comprising:

receiving a request frame from a reader via a wireless signal, wherein the wireless signal follows an Institute of Electrical and Electronics Engineers (IEEE) 802.11 protocol, wherein the request frame carries a radio frequency identification (RFID) command and a request instruction for indicating that the request frame carries the RFID command.

2. The method according to claim 1, wherein the request instruction comprises a first frame type identification and a first payload type identification, wherein the first frame type identification indicates that the request frame is a data frame and the first payload type identification indicates that a payload of the data frame comprises the RFID command.

3. The method according to claim 1, wherein the request instruction comprises a second frame type identification, and the second frame type identification indicates that the request frame carries the RFID command.

4. The method according to any one of claims 1 to 3, wherein a timing for starting a next interaction between the tag and the reader is determined based on a predefined first timing parameter associated with the request frame.

5. The method according to any one of claims 1 to 3, wherein the request frame further comprises a first timing field for indicating a first timing parameter associated with the request frame.

6. The method according to claim 4 or 5, wherein the first timing parameter and the RFID command are delivered from a first part of a media access control (MAC) layer of the tag to a second part of the MAC layer of the tag for handling the RFID command by the second part of the MAC layer;

wherein the first part of the MAC layer of the tag corresponds to a first part of a physical layer at which the request frame is received.

7. The method according to claim 6, wherein a flag is maintained in the second part of the MAC layer of the tag for indicating that the RFID command is from the first part of the MAC layer of the tag.

8. The method according to any one of claims 1 to 7, wherein a timing for transmitting a response frame corresponding to the request frame to the reader is determined based on a predefined second timing parameter associated with the request frame.

9. The method according to any one of claims 1 to 7, wherein the request frame further comprises a second timing field for indicating a second timing parameter for transmitting a response frame corresponding to the request

frame to the reader.

10. The method according to claim 9, wherein the request frame comprises a presence field for indicating whether the second timing field is present.

11. The method according to any one of claims 8 to 10, wherein the second timing parameter is delivered from a first part of a media access control (MAC) layer of the tag to a second part of the MAC layer of the tag for obtaining an RFID response corresponding to the RFID command by the second part of the MAC layer;

wherein the first part of the MAC layer of the tag corresponds to a first part of a physical layer at which the request frame is received.

12. The method according to any one of claims 1 to 11, wherein the request frame further comprises a cyclic redundancy check (CRC) field, wherein a value of the CRC field is calculated based on all fields other than the CRC field of the request frame.

13. The method according to any one of claims 1 to 12, further comprising:

transmitting an RFID response to the reader in response to the request frame.

14. The method according to claim 13, wherein the transmitting the RFID response to the reader in response to the request frame comprises:

transmitting a response frame carrying the RFID response to the reader in response to the request frame, wherein the response frame carries a response instruction for indicating that the response frame carries the RFID response.

15. The method according to claim 14, wherein the response instruction comprises a third frame type identification and a second payload type identification, wherein the third frame type identification indicates that the response frame is a data frame and the second payload type identification indicates that a payload of the data frame comprises the RFID response.

16. The method according to claim 14, wherein the response instruction comprises a fourth frame type identification, and the fourth frame type identification indicates that the response frame carries the RFID response.

17. The method according to any one of claims 14 to 16, wherein the response frame further comprises a cyclic redundancy check (CRC) field, wherein a value of the CRC field is calculated based on all fields other than the CRC field of the response frame.

18. The method according to any one of claims 13 to 17, wherein at least one response parameter and the RFID response are delivered from a second part of a MAC layer of the tag to a first part of the MAC layer of the tag,

wherein the at least one response parameter is used by a first part of a physical layer of the tag for transmitting the RFID response to the reader under an instruction of the first part of the MAC layer.

19. The method according to claim 6, 7, 11 or 18, wherein the first part of the MAC layer is an Ambient Power (AMP) MAC layer.

20. The method according to claim 19, wherein the second part of the MAC layer is any one of a low frequency (LF), a high frequency (HF) or an ultra high frequency (UHF) MAC layer.

21. The method according to any one of claims 1 to 20, wherein the request frame is an AMP RFID frame.

22. A communication apparatus, comprising modules for executing the method according to any one of claims 1 to 21.

23. A communication apparatus, comprising at least one processor and a memory, wherein the memory stores instructions that cause the at least one processor to execute the method according to any one of claims 1 to 21.

24. A computer-readable medium storing computer execution instructions which, when executed by a processor, causes the processor to execute the method according to any one of claims 1 to 21.

25. A computer program product comprising computer execution instructions which, when executed by a processor, causes the processor to execute the method according to any one of claims 1 to 21.