

WHAT IS CLAIMED IS:

1. A communication method, comprising:

determining a first message frame, wherein the first message frame comprises first information, and the first information is configured to indicate at least one of a support capability of applying a single-type resource unit of a first size to a 4096- Quadrature Amplitude Modulation (QAM), or a support capability of applying a multi-type resource unit of the first size to the 4096-QAM; and

sending the first message frame.

2. The method of claim 1, wherein at least one of the single-type resource unit or the multi-type resource unit of the first size is a resource unit smaller than 242-tone.

3. The method of claim 2, wherein the first information comprises a first identifier and a second identifier,

the first identifier is configured to indicate support capabilities of applying the single-type resource unit of the first size and the multi-type resource unit of the first size to a reception of the 4096-QAM; and

the second identifier is configured to indicate support capabilities of applying the single-type resource unit of the first size and the multi-type resource unit of the first size to the transmission of the 4096-QAM.

4. The method of any one of claims 1 to 3, wherein the first message frame further comprises second information, and the second information is configured to indicate at least one of a support capability of applying the single-type resource unit of the first size to a 1024-QAM or the support capability of applying a multi-type resource unit of the first size to the 1024-QAM.

5. The method of claim 4, wherein the second information comprises a fifth identifier and a sixth identifier,

the fifth identifier is configured to indicate support capabilities of applying the single-type resource unit of the first size and the multi-type resource unit of the first size to a reception of the 1024-QAM; and

the sixth identifier is configured to indicate support capabilities of applying the single-type resource unit of the first size and the multi-type resource unit of the first size to a transmission of the 1024-QAM; or

wherein the second information comprises a seventh identifier and an eighth identifier,

at least one bit of the seventh identifier is configured to indicate a support capability

of applying the single-type resource unit of the first size to a reception of the 1024-QAM,
at least one bit of the seventh identifier is configured to indicate a support capability
of applying the multi-type resource unit of the first size to the reception of the 1024-QAM,
at least one bit of the eighth identifier is configured to indicate a support capability
of applying the single-type resource unit of the first size to a transmission of the 1024-
QAM, and

at least one bit of the eighth identifier is configured to indicate a support capability
of applying the multi-type resource unit of the first size to the transmission of the 1024-
QAM.

6. The method of claim 4, wherein the second information is configured to indicate
that applying at least one of the single-type resource unit or the multi-type resource unit
of the first size to the 1024-QAM is supported in response to the first formation indicating
that applying at least one of the single-type resource unit or the multi-type resource unit
of the first size to the 4096-QAM is supported.

7. The method of claim 2, wherein the first information in the first message frame is
further configured to indicate at least one of a support capability of applying the single-
type resource unit of the first size to a 1024-QAM, or a support capability of applying the
multi-type resource unit of the first size to the 1024-QAM.

8. The method of claim 7, wherein the first information comprises a ninth identifier
and a tenth identifier,

the ninth identifier is configured to indicate support capabilities of applying the
single-type resource unit of the first size and the multi-type resource unit of the first size
to a reception of the 4096-QAM and the 1024-QAM, and

the tenth identifier is configured to indicate support capabilities of applying the
single-type resource unit of the first size and the multi-type resource unit of the first size
to a transmission of the 4096-QAM and the 1024-QAM.

9. The method of claim 4, wherein at least one of the first information or the second
information is included in an extremely high throughput (EHT) physical layer (PHY)
capability information element of the first message frame.

10. A communication method, comprising:

receiving a first message frame, wherein the first message frame comprises first
information, and the first information is configured to indicate at least one of a support
capability of applying a single-type resource unit of a first size to a 4096-Quadrature
Amplitude Modulation (QAM), or a support capability of applying a multi-type resource

unit of the first size to the 4096-QAM; and

performing a communication operation based on the first message frame.

11. The method of claim 10, wherein at least one of the single-type resource unit or the multi-type resource unit of the first size is a resource unit smaller than 242-tone.

12. The method of claim 11, wherein the first information comprises a first identifier and a second identifier,

the first identifier is configured to indicate support capabilities of applying the single-type resource unit of the first size and the multi-type resource unit of the first size to a reception of the 4096-QAM, and

the second identifier is configured to indicate support capabilities of applying the single-type resource unit of the first size and the multi-type resource unit of the first size to a transmission of the 4096-QAM.

13. The method of any one of claims 10 to 12, wherein the first message frame comprises second information, and the second information is configured to indicate at least one of a support capability of applying the single-type resource unit of the first size to a 1024-QAM, or a support capability of applying a multi-type resource unit of the first size to the 1024-QAM.

14. The method of claim 13, wherein the second information comprises a fifth identifier and a sixth identifier,

the fifth identifier is configured to indicate support capabilities of applying the single-type resource unit and the multi-type resource unit of the first size to a reception of the 1024-QAM, and

the sixth identifier is configured to indicate support capabilities of applying the single-type resource unit and the multi-type resource unit of the first size to a transmission of the 1024-QAM; or

wherein the second information comprises a seventh identifier and an eighth identifier,

at least one bit of the seventh identifier is configured to indicate a support capability of applying the single-type resource unit of the first size to a reception of the 1024-QAM,

at least one bit of the seventh identifier is configured to indicate a support capability of applying the multi-type resource unit of the first size to the reception of the 1024-QAM,

at least one bit of the eighth identifier is configured to indicate a support capability of applying the single-type resource unit of the first size to a transmission of the 1024-QAM, and

at least one bit of the eighth identifier is configured to indicate a support capability of applying the multi-type resource unit of the first size to the transmission of the 1024-QAM.

15. The method of claim 13, wherein the second information is configured to indicate that applying at least one of the single-type resource unit or the multi-type resource unit of the first size to the 1024-QAM is supported in response to the first information indicating that applying at least one of the single-type resource unit or the multi-type resource unit of the first size to the 4096-QAM is supported.

16. The method of claim 11, wherein the first information in the first message frame is further configured to indicate at least one of a support capability of applying the single-type resource unit of the first size to a 1024-QAM, or a support capability of applying the multi-type resource unit of the first size to the 1024-QAM.

17. The method of claim 16, wherein the first information comprises a ninth identifier and a tenth identifier,

the ninth identifier is configured to indicate support capabilities of applying the single-type resource unit of the first size and the multi-type resource unit of the first size to a reception of the 4096-QAM and the 1024-QAM, and

the tenth identifier is configured to indicate support capabilities of applying the single-type resource unit of the first size and the multi-type resource unit of the first size to a transmission of the 4096-QAM and the 1024-QAM.

18. The method of claim 13, wherein at least one of the first information or the second information is included in an extremely high throughput (EHT) physical layer (PHY) capability information element of the first message frame.

19. An electronic device, comprising a memory, a processor and a computer program stored on the memory and executable by the processor, wherein when the computer program is executed by the processor, the method according to any one of claims 1 to 9 or the method according to any one of claims 10 to 18 is performed.

20. A non-transitory computer-readable storage medium, having a computer program stored thereon, wherein when the computer program is executed by a processor, the method according to any one of claims 1 to 9 or the method according to any one of claims 10 to 18 is performed.