CLAIMS

1. A method for data transmission, comprising:

receiving, by a terminal device, indication information from a network device, the indication information indicating a first downlink scheduling time-domain resource in a first time-frequency resource region, the first time-frequency resource region corresponding to a scheduling unit in time-domain, and a frequency-domain resource in the first time-frequency resource region being a part of a system bandwidth, wherein the terminal device is configured by the network device to comprise a plurality of time-frequency resource regions comprising the first time-frequency resource region, each of the plurality of time-frequency resource regions has a different subcarrier spacing, and each of the plurality of time-frequency resource regions corresponds to a different frequency band within a same time-domain resource; and

receiving, by the terminal device, data from the network device on the first downlink scheduling time-domain resource according to the indication information;

wherein the indication information is configured to indicate a starting symbol and time-domain length of the first downlink scheduling time-domain resource.

2. The method of claim 1, wherein a starting symbol of the first downlink scheduling time-domain resource is immediately next to an ending symbol of a control channel resource in the first time-frequency resource region; or

a starting symbol of the first downlink scheduling time-domain resource is a spaced from the ending symbol of the control channel resource in the first time-frequency resource region by at least one symbol.

3. The method of claim 1 or 2, wherein receiving, by the terminal device, the indication information from the network device comprises:

receiving, by the terminal device, high-layer signaling from the network device, the high-layer signaling carrying the indication information; or

receiving, by the terminal device, a physical-layer common signal from the network device, the physical-layer common signal carrying the indication information; or

receiving, by the terminal device, a User Equipment, UE-specific control signal from the network device, the UE-specific control signal carrying the indication information.

4. A data transmission method, comprising:

determining, by a network device, a first downlink scheduling time-domain resource in a first time-frequency resource region, the first time-frequency resource region corresponding to a scheduling unit in time-domain, and a frequency-domain resource in the first time-frequency resource region being a part of a system bandwidth, wherein the network device configures a plurality of time-frequency resource regions comprising the first time-frequency resource region for a terminal device, each of the plurality of time-frequency resource regions has a different subcarrier spacing, and each of the plurality of time-frequency resource regions corresponds to a different frequency band within a same time-domain resource; and

transmitting, by the network device, indication information to the terminal device, the indication information indicating the first downlink scheduling time-domain resource;

wherein the indication information is configured to indicate a starting symbol and time-domain length of the first downlink scheduling time-domain resource.

5. The method of claim 4, wherein a starting symbol of the first downlink scheduling time-domain resource is immediately next to an ending symbol of a control channel resource in the first time-frequency resource region; or

the starting symbol of the first downlink scheduling time-domain resource is a spaced from an ending symbol of a control channel resource in the first time-frequency resource region by at least one symbol.

6. The method of claim 4 or 5, wherein transmitting, by the network device, the indication information to the terminal device comprises:

transmitting, by the network device, high-layer signaling, the high-layer signaling carrying the indication information; or

transmitting, by the network device, a physical-layer common signal, the physical-layer common signal carrying the indication information; or

transmitting, by the network device, a User Equipment, UE-specific control signal to the terminal device, the UE-specific control signal carrying the indication information.

7. A device for data transmission, comprising:

a receiving unit, configured to receive indication information from a network device, the indication information indicating a first downlink scheduling time-domain resource in a first time-frequency resource region, the first time-frequency resource region corresponding to a scheduling unit in time-domain, and a frequency-domain resource in the first time-frequency resource region being a part of a system bandwidth, wherein the device is configured by the network device to comprise a plurality of time-frequency resource regions comprising the first time-frequency resource region, each of the plurality of time-frequency resource regions has a different subcarrier spacing, and each of the plurality of time-frequency resource regions corresponds to a different frequency band within a same time-domain resource; and

a determination unit, configured to determine the first downlink scheduling time-domain resource according to the indication information received by the receiving unit, wherein

the receiving unit is further configured to receive data from the network device on the first downlink scheduling time-domain resource determined by the determination unit;

wherein the indication information is configured to indicate a starting symbol and time-domain length of the first downlink scheduling time-domain resource.

8. The device of claim 7, wherein the first downlink scheduling time-domain resource is different from a second downlink scheduling time-domain resource in a second time-frequency resource region, and the first time-frequency resource region and the second time-frequency resource region correspond to a same time-domain resource and correspond to different frequency-domain resources respectively.

9. The device of claim 8, wherein that the first downlink scheduling time-domain resource is different from the second downlink scheduling time-domain resource in the second time-frequency resource region in that:

a starting symbol of the first downlink scheduling time-domain resource is different from a starting symbol of the second downlink scheduling time-domain resource; and/or

a time-domain length of the first downlink scheduling time-domain resource is different from a time-domain length of the second downlink scheduling time-domain resource.

10. The device of any one of claims 7-9, wherein a starting symbol of the first downlink scheduling time-domain resource is immediately next to an ending symbol of a control channel resource in the first time-frequency resource region; or

a starting symbol of the first downlink scheduling time-domain resource is a spaced from an ending symbol of the control channel resource in the first time-frequency resource region by at least one symbol.

11. The device of claim 7, wherein the scheduling unit corresponds to one or more subframes, time slots or mini-slots.

12. The device of any one of claims 7-11, wherein the receiving unit is specifically configured to receive high-layer signaling from the network device, the high-layer signaling or a physical-layer common signal carrying the indication information; or

the receiving unit is specifically configured to receive the physical-layer signal from the network device, the physical-layer common signal carrying the indication information; or

the receiving unit is specifically configured to receive a User Equipment, UE-specific control signal from the network device, the UE-specific control signal carrying the indication information.

13. A device for data transmission, comprising:

a determination unit, configured to determine a first downlink scheduling time-domain resource in a first time-frequency resource region, the first time-frequency resource region corresponding to a scheduling unit in time-domain, and a frequency-domain resource in the first time-frequency resource region being a part of a system bandwidth, wherein the device configures a plurality of time-frequency resource regions comprising the first time-frequency resource region for a terminal device, each of the plurality of time-frequency resource regions has a different subcarrier spacing, and each of the plurality of time-frequency resource regions corresponds to a different frequency band within a same time-domain resource; and

a transmitting unit, configured to transmit indication information to the terminal device, the indication information indicating the first downlink scheduling time-domain resource determined by the determination unit;

wherein the indication information is configured to indicate a starting symbol and time-domain length of the first downlink scheduling time-domain resource.

14. The device of claim 13, wherein the first downlink scheduling time-domain resource is different from a second downlink scheduling time-domain resource in a second time-frequency resource region, and the first time-frequency resource region and the second time-frequency resource region correspond to a same time-domain resource and correspond to different frequency-domain resources respectively.

15. The device of claim 14, wherein that the first downlink scheduling time-domain resource is different from the second downlink scheduling time-domain resource in the second time-frequency resource region in that:

a starting symbol of the first downlink scheduling time-domain resource is different from a starting symbol of the second downlink scheduling time-domain resource; and/or

a time-domain length of the first downlink scheduling time-domain resource is different from a time-domain length of the second downlink scheduling time-domain resource.

16. The device of any one of claims 13-15, wherein a starting symbol of the first downlink scheduling time-domain resource is immediately next to an ending symbol of a control channel resource in the first time-frequency resource region; or

the starting symbol of the first downlink scheduling time-domain resource is a spaced from the ending symbol of the control channel resource in the first time-frequency resource region by at least one symbol.

17. The device of any one of claims 13-16, wherein the transmitting unit is specifically configured to transmit high-layer signaling, the high-layer signaling carrying the indication information; or

the transmitting unit is specifically configured to transmit a physical-layer signal, the physical-layer common signal carrying the indication information; or

the transmitting unit is specifically configured to transmit a User Equipment, UE-specific control signal to the terminal device, the UE-specific control signal carrying the indication information.

18. The device of any one of claims 13-17, wherein the first downlink scheduling time-domain resource comprises a plurality of mini-slots, and the indication information is configured to indicate a total length of the plurality of mini-slots.

19. The device of any one of claims 13-18, wherein the determination unit is specifically configured to determine an ending moment of a third downlink time-domain resource in a third time-frequency resource region as an ending moment of the first downlink scheduling time-domain resource, the third time-frequency resource region being the time-frequency resource region with a minimum subcarrier spacing in the plurality of time-frequency resource regions; and

the indication information comprises information about the third downlink scheduling time-domain resource.