CLAIMS

1. A method of wireless communications by a user equipment (UE), comprising:

receiving, at a modem of the UE from a base station, a UE configuration based on UE band combination constraint information, the UE configuration including a carrier aggregation combination and band processing combination configuration;

configuring the UE, by a processor of the UE, according to the carrier aggregation combination and band processing combination configuration; and

performing a communication with the base station, via the modem of the UE, according to the carrier aggregation combination and band processing combination configuration.

2. The method of claim 1, further comprising:

transmitting the UE band combination constraint information to the base station, wherein receiving the UE configuration is in response to the transmitting of the UE band combination constraint information.

3. The method of claim 2, wherein transmitting the UE band combination constraint information further comprises transmitting, to the base station, a total number of layers supported in a carrier aggregation band combination.

4. The method of claim 1, further comprising:

transmitting UE radio frequency (RF) band capability information to the base station, wherein the UE configuration is further based on the UE RF band capability information.

5. The method of claim 4, wherein transmitting the UE RF band capability information further comprises transmitting, to the base station, information on multiple input multiple output (MIMO) capability per component carrier.

6. The method of claim 1, further comprising:

transmitting UE identification information to the base station, wherein receiving the UE configuration is in response to the transmitting of the UE identification information.

7. A wireless communication device, comprising:

a modem;

a memory storing instructions; and

a processor in communication with the modem and the memory, wherein the processor is configured to execute the instructions to:

receive, at the modem from a base station, a user equipment (UE) configuration based on UE band combination constraint information, the UE configuration including a carrier aggregation combination and band processing combination configuration;

configure the UE according to the carrier aggregation combination and band processing combination configuration; and

perform a communication with the base station, via the modem, according to the carrier aggregation combination and band processing combination configuration.

8. The wireless communication device of claim 7, wherein the processor is further configured to execute the instructions to:

transmit the UE band combination constraint information to the base station, wherein the UE configuration is received in response to the UE band combination constraint information being transmitted.

9. The wireless communication device of claim 8, wherein the processor is further configured to execute the instructions to:

transmit, to the base station, a total number of layers supported in a carrier aggregation band combination.

10. The wireless communication device of claim 7, wherein the processor is further configured to execute the instructions to:

transmit UE radio frequency (RF) band capability information to the base station, wherein the UE configuration is further based on the UE RF band capability information.

11. The wireless communication device of claim 10, wherein the processor is further

configured to execute the instructions to:

transmit, to the base station, information on multiple input multiple output (MIMO) capability per component carrier.

12. The wireless communication device of claim 7, wherein the processor is further configured to execute the instructions to:

transmit UE identification information to the base station, wherein the UE configuration is received in response to the UE identification information being transmitted.

13. A method of wireless communications by a base station, comprising:

generating, at a processor of the base station, a user equipment (UE) configuration based on UE band combination constraint information, the UE configuration including a carrier aggregation combination and band processing combination configuration;

transmitting the UE configuration, via a modem of the base station, to the UE; and

performing a communication with the UE, via the modem of the base station, according to the carrier aggregation combination and band processing combination configuration.

14. The method of claim 13, further comprising:

receiving the UE band combination constraint information, wherein the UE configuration is generated in response to the UE band combination constraint information being received.

15. The method of claim 14, wherein the UE band combination constraint information is received from signaling by the UE.

16. The method of claim 14, wherein the UE band combination constraint information is received from an evolved packet core.

17. The method of claim 14, wherein receiving the UE band combination constraint information further comprises receiving a total number of layers supported in a carrier aggregation band combination.

18. The method of claim 13, further comprising receiving UE radio frequency (RF) band capability information, wherein generating the UE configuration further comprises generating the UE configuration based on the UE RF band capability information.

19. The method of claim 18, wherein receiving the UE RF band capability information further comprises receiving information on multiple input multiple output (MIMO) capability per component carrier.

20. The method of claim 13, further comprising:

receiving UE identification information from the UE, wherein the UE configuration is generated in response to the receiving of the UE identification information.

21. A wireless communication device, comprising:

a modem;

a memory storing instructions; and

a processor in communication with the modem and the memory, wherein the processor is configured to execute the instructions to:

generate a user equipment (UE) configuration based on UE band combination constraint information, the UE configuration including a carrier aggregation combination and band processing combination configuration;

transmit the UE configuration to the UE; and

perform a communication with the UE according to the carrier aggregation combination and band processing combination configuration.

22. The wireless communication device of claim 21, wherein the processor is further configured to execute the instructions to:

receive the UE band combination constraint information, wherein the UE configuration is generated in response to the UE band combination constraint information being received.

23. The wireless communication device of claim 22, wherein the UE band combination constraint information is received signaling from the UE.

24. The wireless communication device of claim 22, wherein the UE band combination constraint information is received from an evolved packet core.

25. The wireless communication device of claim 22, wherein the processor is further configured to execute the instructions to:

receive a total number of layers supported in a carrier aggregation band combination.

26. The wireless communication device of claim 21, wherein the processor is further configured to execute the instructions to:

receive UE radio frequency (RF) band capability information, wherein the UE configuration is generated based on the UE RF band capability information.

27. The wireless communication device of claim 26, wherein the processor is further configured to execute the instructions to:

receive information on multiple input multiple output (MIMO) capability per component carrier.

28. The wireless communication device of claim 21, wherein the processor is further configured to execute the instructions to:

receive UE identification information from the UE, wherein the UE configuration is generated in response to the receiving of the UE identification information.