

## CLAIMS

1. A method for wireless communication at a user equipment (UE), comprising:
  - determining UE capability information for a set of UE power consumption categories, wherein each power consumption category of the set of power consumption categories corresponds to a resolution for an analog-to-digital conversion, a resolution for a digital-to-analog conversion, an antenna configuration of the UE, a radio frequency circuit configuration of the UE, an intermediate frequency circuit configuration of the UE, a baseband circuit configuration of the UE, or some combination thereof;
  - transmitting an indication of the UE capability information for the set of power consumption categories to a base station; and
  - receiving an indication of power consumption category switching information in response to the transmitted indication of the UE capability information for the set of power consumption categories.
2. The method of claim 1, further comprising:
  - determining a power consumption level for each power consumption category based at least in part on modem radio frequency circuitry associated with the resolution for the analog-to-digital conversion, modem radio frequency circuitry associated with the resolution for the digital-to-analog conversion, circuitry associated with the antenna configuration, circuitry associated with the radio frequency circuit configuration, circuitry associated with the intermediate frequency circuit configuration, circuitry associated with the baseband circuit configuration, or some combination thereof.
3. The method of claim 2, wherein the indication of the UE capability information for the set of power consumption categories comprises the power consumption level for each power consumption category.
4. The method of claim 1, wherein receiving the indication of power consumption category switching information comprises:
  - receiving, from the base station, an indication to switch to a first power consumption category of the set of power consumption categories.
5. The method of claim 1, wherein receiving the indication of power consumption category switching information comprises:

receiving, from the base station, an indication of a threshold for selecting a first power consumption category of the set of power consumption categories.

6. The method of claim 5, wherein the threshold for selecting the first power consumption category of the set of power consumption categories comprises a reference signal receive power threshold, a reference signal receive quality threshold, a signal-to-noise ratio threshold, a signal-to-noise-plus-interference ratio, or some combination thereof.

7. The method of claim 6, further comprising:  
measuring one or more signals from the base station;  
determining the measurement satisfies the threshold; and  
selecting the first power consumption category of the set of power consumption categories based at least in part on the determination that the measurement satisfies the threshold.

8. The method of claim 7, wherein the one or more signals comprise a primary synchronization signal, a secondary synchronization signal, a physical broadcast channel transmission, a channel state information reference signal, a tracking reference signal, a remaining system information transmission, other system information transmission, a random access channel transmission, a paging physical downlink control channel transmission, a paging physical downlink shared channel transmission, or some combination thereof.

9. The method of claim 8, wherein the UE uses the one or more signals during idle mode operation.

10. The method of claim 5, wherein the threshold for selecting the first power consumption category of the set of power consumption categories comprises a thermal state threshold of the UE, a battery status threshold of the UE, or some combination thereof.

11. The method of claim 10, further comprising:  
determining a thermal state of the UE has satisfied the threshold, a battery status of the UE has satisfied a threshold, or both; and

selecting the first power consumption category of the set of power consumption categories based at least in part on the determination that the thermal state of the UE satisfies the threshold, that the battery status of the UE satisfies the threshold, or both.

12. The method of claim 1, wherein receiving the indication of power consumption category switching information comprises:  
receiving an indication of a quality of service requirement; and  
selecting a first power consumption category of the set of power consumption categories based at least in part on the indication of the quality of service requirement.

13. The method of claim 1, wherein receiving the indication of power consumption category switching information comprises:  
receiving, from the base station, an indication of a mapping of one or modulation coding schemes to one or more power consumption categories of the set of power consumption categories.

14. The method of claim 13, further comprising:  
identifying a configuration for a modulation coding scheme; and  
selecting a first power consumption category of the set of power consumption categories based at least in part on the configuration for the modulation coding scheme and the mapping.

15. The method of claim 1, wherein the indication of the set of power consumption categories comprises the resolution for the analog-to-digital conversion for each power consumption category, the resolution for the digital-to-analog conversion for each power consumption category, the antenna configuration of the UE for each power consumption category, the radio frequency circuit configuration of the UE for each power consumption category, the intermediate frequency circuit configuration of the UE for each power consumption category, the baseband circuit configuration of the UE for each power consumption category, or some combination thereof.

16. The method of claim 1, further comprising:  
selecting a first power consumption category of the set of power consumption categories based at least in part on the received indication of power consumption category switching information;

selecting a first resolution for the analog-to-digital conversion, a first resolution for the digital-to-analog conversion, a first antenna configuration, a number of subarrays, a number of antennas, a first radio frequency circuit configuration, a first intermediate frequency circuit configuration of the UE, or some combination thereof, based at least in part on the selected first power consumption category; and

determining whether to turn on one or more portions of UE circuitry corresponding to the selected first resolution for the analog-to-digital conversion, the selected first resolution for the digital-to-analog conversion, the selected first antenna configuration, the selected number of subarrays, the selected number of antennas, the selected first radio frequency circuit configuration, the selected first intermediate frequency circuit configuration of the UE, or some combination thereof.

17. A method for wireless communication at a user equipment (UE), comprising:

determining UE capability information for a set of UE power consumption categories, wherein each power consumption category of the set of power consumption categories corresponds to a resolution for an analog-to-digital conversion, a resolution for a digital-to-analog conversion, an antenna configuration of the UE, a radio frequency circuit configuration of the UE, an intermediate frequency circuit configuration of the UE, a baseband circuit configuration of the UE, or some combination thereof;

transmitting an indication of the UE capability information for the set of power consumption categories to a base station;

determining a condition for UE operation in a first power consumption category of the set of power consumption categories has been satisfied; and

selecting the first power consumption category of the set of power consumption categories based at least in part on the determination that the condition has been satisfied.

18. The method of claim 17, wherein determining that the condition has been satisfied comprises:

receiving a user input selection of the first power consumption category of the set of power consumption categories, wherein the determination that the condition has been satisfied is based at least in part on the received user input selection.

19. The method of claim 17, wherein determining that the condition has been satisfied comprises:

determining a thermal state of the UE has exceeded a thermal state threshold, a battery status of the UE has exceeded a battery status threshold, or both, wherein the determination that the condition has been satisfied is based at least in part on the determination that the thermal state of the UE exceeds the thermal state threshold, that the battery status of the UE exceeds the battery status threshold, or both.

20. The method of claim 17, wherein determining that the condition has been satisfied comprises:

selecting a first resolution for the analog-to-digital conversion, a first resolution for the digital-to-analog conversion, a first antenna configuration, a number of subarrays, a number of antennas, a first radio frequency circuit configuration, a first intermediate frequency circuit configuration of the UE, or some combination thereof, based at least in part on the selected first power consumption category; and

determining whether to turn on one or more portions of UE circuitry corresponding to the selected first resolution for the analog-to-digital conversion, the selected first resolution for the digital-to-analog conversion, the selected first antenna configuration, the selected number of subarrays, the selected number of antennas, the selected first radio frequency circuit configuration, the selected first intermediate frequency circuit configuration of the UE, or some combination thereof.

21. A method for wireless communication at a base station, comprising:  
receiving an indication of user equipment (UE) capability information for a set of power consumption categories for the UE;

determining a condition for UE operation in a first power consumption category of the set of power consumption categories, wherein each power consumption category of the set of power consumption categories corresponds to a resolution for an analog-to-digital conversion, a resolution for a digital-to-analog conversion, an antenna configuration of the UE, a radio frequency circuit configuration of the UE, an intermediate frequency circuit configuration of the UE, a baseband circuit configuration of the UE, or some combination thereof; and

transmitting, to the UE, an indication of power consumption category switching information based at least in part on the determined condition.

22. The method of claim 21, further comprising:

identifying, based at least in part on the received indication, a power consumption level for each power consumption category of the set of power consumption categories, a resolution for an analog-to-digital conversion for each power consumption category of the set of power consumption categories, a resolution for a digital-to-analog conversion for each power consumption category of the set of power consumption categories, an antenna configuration of the UE for each power consumption category of the set of power consumption categories, a radio frequency circuit configuration of the UE for each power consumption category of the set of power consumption categories, an intermediate frequency circuit configuration of the UE for each power consumption category of the set of power consumption categories, a baseband circuit configuration of the UE for each power consumption category of the set of power consumption categories, or some combination thereof, wherein the condition is determined based at least in part on the identifying.

23. The method of claim 21, wherein determining the condition for UE operation in the first power consumption category comprises:

determining, for each of one or more power consumption categories of the set of power consumption categories, a reference signal receive power threshold, a reference signal receive quality threshold, a signal-to-noise ratio threshold, a signal-to-noise-plus-interference ratio, or some combination thereof.

24. The method of claim 23, further comprising:

transmitting one or more signals comprising a primary synchronization signal, a secondary synchronization signal, a physical broadcast channel transmission, a remaining system information transmission, other system information transmission, a random access channel transmission, a paging physical downlink control channel transmission, a paging physical downlink shared channel transmission, or some combination thereof, wherein the condition for UE operation in the first power consumption category is based at least in part on the transmitted one or more signals.

25. The method of claim 21, wherein determining the condition for UE operation in the first power consumption category comprises:

determining a thermal state threshold of the UE, a battery status threshold of the UE, or some combination thereof.

26. The method of claim 21, wherein determining the condition for UE operation in the first power consumption category comprises:

determining a mapping of one or more quality of service requirements to one or more power consumption categories of the set of power consumption categories, wherein the power consumption category switching information comprises the mapping; and

transmitting an indication of a quality of service requirement to the UE.

27. The method of claim 21, wherein determining the condition for UE operation in the first power consumption category comprises:

determining a mapping of one or more modulation coding schemes to one or more power consumption categories of the set of power consumption categories, wherein the power consumption category switching information comprises the mapping.

28. The method of claim 21, further comprising:

determining the condition has been satisfied, wherein the indication of power consumption category switching information comprises an indication of the first power consumption category based at least in part on the determination that the condition for UE operation in the first power consumption category has been satisfied.

29. The method of claim 28, wherein determining the condition has been satisfied comprises:

determining the UE is capable of operating in the first power consumption category based at least in part on the received indication of UE capability information.

30. An apparatus for wireless communication at a user equipment (UE), comprising:

means for determining UE capability information for a set of UE power consumption categories, wherein each power consumption category of the set of power consumption categories corresponds to a resolution for an analog-to-digital conversion, a resolution for a digital-to-analog conversion, an antenna configuration of the UE, a radio frequency circuit configuration of the UE, an intermediate frequency circuit configuration of the UE, a baseband circuit configuration of the UE, or some combination thereof;

means for transmitting an indication of the UE capability information for the set of power consumption categories to a base station; and

means for receiving an indication of power consumption category switching information in response to the transmitted indication of the UE capability information for the set of power consumption categories.