CLAIMS

1. A method for operating user equipment (UE), comprising:

transmitting, to a base station (BS), capability information for the UE, the capability information including a first capability for a first number of ports and a second capability for a second number of ports, the second number of ports being less than the first number of ports;

receiving, from the BS, a radio resource control (RRC) message for configuring the UE for full power uplink transmission, wherein the RRC message includes at least one sounding reference signal (SRS) resource including the second number of ports; and

transmitting, to the BS, uplink data using a physical uplink shared channel (PUSCH) based on the RRC message.

2. The method of claim 1, wherein the first capability comprises an indication of one or more transmit precoding matrix indicators (TPMIs) for full power transmission using the first number of ports, and wherein the second capability comprises an indication of one or more TPMIs for full power transmission using the second number of ports.

3. The method of claim 1, wherein the second capability comprises an indication of a TPMI group for the second number of ports, and wherein the SRS resource is mapped to the TPMI group.

4. The method of claim 1, wherein the RRC message configures the UE for full power uplink transmission based on the second capability.

5. The method of claim 1, wherein the RRC message includes a second SRS resource with the first number of ports.

6. The method of claim 1, wherein transmission of the second capability information for the second number of ports that is less than the first number of ports comprises an

indication that the UE supports full power uplink transmission using the second number of ports.

7. The method of claim 1, wherein transmission of the second capability information for the second number of ports that is less than the first number of ports comprises an indication that the UE supports full power uplink transmission for multiple transmit precoding matrix indicators (TPMIs) of a particular rank or for a particular TPMI of the particular rank.

8. A user equipment (UE), comprising:

one or more processors; and

memory storing instructions that, when executed by the one or more processors, cause the one or more processors to perform the method of any one of claims 1-7.

9. A non-transitory computer-readable medium storing instructions that, when executed by one or more processors, cause the one or more processors to perform the method of any one of claims 1-7.

10. A method for a base station (BS), comprising:

receiving, from a user equipment (UE), capability information for the UE, the capability information including a first capability for a first number of ports and a second capability for a second number of ports, the second number of ports being less than the first number of ports;

transmitting, to the UE, a radio resource control (RRC) message for configuring the UE for full power uplink transmission, wherein the RRC message includes at least one sounding reference signal (SRS) resource including the second number of ports; and

receiving, from the UE, uplink data using a physical uplink shared channel (PUSCH) based on the RRC message.

11. The method of claim 10, wherein the first capability comprises an indication of one or more transmit precoding matrix indicators (TPMIs) for full power transmission using the first number of ports, and wherein the second capability comprises an indication of one or more TPMIs for full power transmission using the second number of ports.

12. The method of claim 10, wherein the second capability comprises an indication of a TPMI group for the second number of ports, and wherein the SRS resource is mapped to the TPMI group.

13. The method of claim 10, wherein the RRC message configures the UE for full power uplink transmission based on the second capability.

14. The method of claim 10, wherein the RRC message includes a second SRS resource with the first number of ports.

15. The method of claim 10, comprising:

determining that the UE supports full power uplink transmission using the second number of ports based on receipt of the second capability information for the second number of ports that is less than the first number of ports.

16. The method of claim 15, wherein determining that the UE supports full power uplink transmission using the second number of ports includes determining that the UE supports full power uplink transmission for multiple transmit precoding matrix indicators (TPMIs) of a particular rank or for a particular TPMI of the particular rank.

17. A base station (BS), comprising:

one or more processors; and

memory storing instructions that, when executed by the one or more processors, cause the one or more processors to perform the method of any one of claims 10-16.

18. A non-transitory computer-readable medium storing instructions that, when executed by one or more processors, cause the one or more processors to perform the method of any one of claims 10-16.