CLAIMS

1. A portable communication device comprising:

a plurality of antennas comprising a first antenna and a second antenna;

a plurality of radio frequency (RF) circuits comprising a first RF circuit electrically connected with the first antenna and a second RF circuit electrically connected with the second antenna;

a transceiver comprising a transmitting port, a first receiving port, and a second receiving port;

a switching circuit configured to establish at least one signal path between the transceiver and at least one of the first RF circuit or the second RF circuit; and

a processor configured to:

establish, using the switching circuit, a first signal-receiving path between the first receiving port and the first RF circuit to receive a signal detected through the first antenna, and

replace, using the switching circuit, the first signal-receiving path with a second signal-receiving path between the second receiving port and the first RF circuit based at least in part on reception performance associated with the first signal-receiving path satisfying a specified condition.

2. The portable communication device of claim 1,

wherein the transceiver further comprises a third receiving formed between the first receiving port and the second receiving port, and

wherein the processor is further configured to:

as part of the replacing, select the second receiving port based at least in part on a determination that the second

receiving port is spaced apart from the first receiving port at least by the third receiving port.

3. The portable communication device of claim 1, wherein the second RF circuit is electrically connected between the second antenna and the transmitting port.

4. The portable communication device of claim 3, wherein the processor is further configured to:

establish, using the switching circuit, a third signal-receiving path between a third receiving port of the transceiver and the second RF circuit while the first signal-receiving path or the second signal-receiving path is remained as established.

5. The portable communication device of claim 4, wherein the second RF circuit comprises a duplexer via which the second antenna is electrically connected with the transmitting port and the third receiving port at the same time.

6. The portable communication device of claim 1, wherein the specified condition comprises at least one of a throughput less than a specified throughput, a signal-to-noise ratio (SNR) less than a specified SNR, a received signal strength less than a specified received signal strength, or an error rate greater than a specified error rate.

7. The portable communication device of claim 1, wherein the processor is further configured to:

replace the first signal-receiving path with the second signal-receiving path based on transmitting a signal using the second RF circuit.

8. The portable communication device of claim 1, wherein the processor is further configured to:

replace the first signal-receiving path with the second signal-receiving path based on receiving a signal using the second RF circuit.

9. A method of a portable communication device comprising:

establishing, using a switching circuit, a first signal-receiving path between a first receiving port and a first radio frequency (RF) circuit to receive a signal detected through a first antenna; and

replacing, using the switching circuit, the first signal-receiving path with a second signal-receiving path between a second receiving port and the first RF circuit based at least in part on reception performance associated with the first signal-receiving path satisfying a specified condition,

wherein the portable communication device comprises:

a plurality of antennas comprising the first antenna and a second antenna,

a plurality of RF circuits comprising the first RF circuit electrically connected with the first antenna and a second RF circuit electrically connected with the second antenna,

a transceiver comprising a transmitting port, the first receiving port, and the second receiving port, an

a switching circuit configured to establish at least one signal path between the transceiver and at least one of the first RF circuit or the second RF circuit.

10. The method of claim 9,

wherein the replacing comprises selecting the second receiving port based at least in part on a determination that the second receiving port is spaced apart from the first receiving port at least by a third receiving port of the

transceiver, the third receiving port formed between the first receiving port and the second receiving port.

11. The method of claim 9, wherein the second RF circuit is electrically connected between the second antenna and the transmitting port.

12. The method of claim 11, further comprising:

establishing, using the switching circuit, a third signal-receiving path between a third receiving port of the transceiver and the second RF circuit while the first signal-receiving path or the second signal-receiving path is remained as established.

13. The method of claim 12, wherein the second RF circuit comprises a duplexer via which the second antenna is electrically connected with the transmitting port and the third receiving port at the same time.

14. The method of claim 9, wherein the specified condition comprises at least one of a throughput less than a specified throughput, a signal-to-noise ratio (SNR) less than a specified SNR, a received signal strength less than a specified received signal strength, or an error rate greater than a specified error rate.

15. The method of claim 9, wherein the replacing comprises replacing the first signal-receiving path with the second signal-receiving path based on transmitting a signal using the second RF circuit.

16. The method of claim 9, wherein the replacing comprises replacing the first signal-receiving path with the second

signal-receiving path based on receiving a signal using the second RF circuit.