Claims

1. A system, comprising:

a first transceiver module comprising:

a first attenuator configured to attenuate a transmission signal from a second transceiver module over a coaxial cable, the transmission signal comprising a primary component and a triple transit component, the first attenuator further configured to attenuate and provide a reflection signal over the coaxial cable to the second transceiver module, the reflection signal being based on a reflection of at least a portion of the transmission signal from ~~the~~ a filter module;

~~a~~ the filter module configured to filter the transmission signal;

a gain module configured to increase ~~the~~ gain of the transmission signal from the filter module; and

an antenna configured to transmit the transmission signal.

2. The system of claim 1, wherein the triple transit component comprises at least a portion of the reflection signal reflected from the second transceiver module over the coaxial cable.

3. The system of claim 1, further comprising:

a sensor configured to provide a sensor signal based on the transmission signal; and

a controller configured to compare the sensor signal to an attenuation threshold, to generate an attenuator control signal based on the comparison, and to control the first attenuator with the attenuator control signal.

4. The system of claim 3, wherein the controller is further configured to compare the sensor signal to a gain threshold, to generate a gain control signal based on the comparison of the sensor signal and the gain threshold, and to control the gain module with the gain control signal.

5. The system of claim 3, wherein the controller is further configured to generate a gain control signal based on the comparison of the sensor signal and the attenuator threshold, and to control the gain module with the gain control signal.

6. The system of claim 1, further comprising a waveguide filter configured to filter the transmission signal and a waveguide configured to provide the filtered transmission signal to the antenna.

7. The system of claim 1, wherein the second transceiver module comprises a second attenuator configured to attenuate the reflection signal from the first transceiver module over the coaxial cable.

8. A system, comprising:

a first transceiver module comprising:

a first attenuator configured to attenuate a receive signal from a second transceiver module over a coaxial cable, the receive signal comprising a primary component and a triple transit component, the first attenuator further configured to attenuate and provide a reflection signal over the coaxial cable to the second transceiver module, the reflection signal being based on a reflection of at least a portion of the ~~transmission~~ receive signal;

a filter module configured to filter the receive signal;

a gain module configured to increase ~~the~~ gain of the receive signal from the filter module; and

a modem configured to demodulate the receive signal and provide information associated with the demodulated receive signal to a digital device.

9. The system of claim 8, wherein the triple transit component comprises at least a portion of the reflection signal reflected from the second transceiver module over the coaxial cable.

10. The system of claim 8, further comprising:

a sensor configured to provide a sensor signal based on the receive signal; and

a controller configured to compare the sensor signal to an attenuation threshold, to generate an attenuator control signal based on the comparison, and to control the first attenuator with the attenuator control signal.

11. The system of claim 10, wherein the controller is further configured to compare the sensor signal to a gain threshold, to generate a gain control signal based on the comparison of the sensor signal and the gain threshold, and to control the gain module with the gain control signal.

12. The system of claim 10, wherein the controller is further configured to generate a gain control signal based on the comparison of the sensor signal and the attenuator threshold, and to control the gain module with the gain control signal.

13. The system of claim 8, wherein the second transceiver module comprises:

an antenna configured to receive the receive signal;

a waveguide; and

a waveguide filter configured to filter the receive signal received from the waveguide prior to the second transceiver module providing the receive signal over the coaxial cable to the first transceiver module.

14. The system of claim ~~1~~ 8, wherein the second transceiver module comprises a second attenuator configured to attenuate the reflection signal from the first transceiver module over the coaxial cable.

15. A method, comprising:

receiving, from a second transceiver module via a coaxial cable, a transmission signal, the transmission signal comprising a primary component and a triple transit component;

attenuating, by a first attenuator, the transmission signal;

attenuating, by the first attenuator, a reflection signal, the reflection signal being based on a reflection of at least a portion of the transmission signal;

providing the reflection signal to the second transceiver module via the coaxial cable;

adjusting, after attenuation by the first attenuator, ~~the~~ gain of the transmission signal; and

transmitting the transmission signal by an antenna.

16. The method of claim 15, wherein the triple transit component comprises at least a portion of the reflection signal reflected from the second transceiver module over the coaxial cable.

17. The method of claim 15, further comprising:

generating a sensor signal based on the transmission signal;

comparing the sensor signal to an attenuation threshold;

generating an attenuator control signal based on the comparison; and

controlling the attenuation of the transmission signal with the attenuator control signal.

18. The method of claim 17, further comprising:

comparing the sensor signal and a gain threshold;

generating a gain control signal based on ~~a~~ the comparison of the sensor signal and the gain threshold; and

controlling the gain adjustment of the transmission signal based on the gain control signal.

19. The method of claim 17, further comprising:

generating a gain control signal based on ~~a~~ the comparison of the sensor signal and the attenuation threshold; and

controlling the gain adjustment of the transmission signal based on the gain control signal.

20. The method of claim 15, further comprising filtering the transmission signal with a waveguide filter and providing, with a waveguide, the filtered transmission signal to the antenna.

21. The method of claim 15, further comprising attenuating, by the second transceiver module, the reflection signal from the first transceiver module over the coaxial cable.

22. A method, comprising:

receiving, from a second transceiver module via a coaxial cable, a receive signal, the receive signal comprising a primary component and a triple transit component;

attenuating, by a first attenuator, the receive signal;

attenuating, by the first attenuator, a reflection signal, the reflection signal being based on a reflection of at least a portion of the ~~transmission~~ receive signal;

providing the reflection signal to the second transceiver module via the coaxial cable;

adjusting, after attenuation by the first attenuator, ~~the~~ gain of the ~~transmission~~ receive signal;

demodulating the receive signal; and

~~proving~~ providing information from the demodulated signal to a digital device.

23. The method of claim 22, wherein the triple transit component comprises at least a portion of the reflection signal reflected from the second transceiver module over the coaxial cable.

24. The method of claim 22, further comprising:

generating a sensor signal based on the receive signal;

comparing the sensor signal to an attenuation threshold;

generating an attenuator control signal based on the comparison; and

controlling the attenuation of the receive signal with the attenuator control signal.

25. The method of claim 24, further comprising:

comparing the sensor signal and a gain threshold;

generating a gain control signal based on ~~a~~ the comparison of the sensor signal and the gain threshold; and

controlling the gain adjustment of the receive signal based on the gain control signal.

26. The method of claim 25, further comprising:

generating a gain control signal based on ~~a~~ the comparison of the sensor signal and the attenuator threshold; and

controlling the gain adjustment of the receive signal based on the gain control signal.

27. The method of claim 22, further comprising

providing the receive signal from an antenna associated with the second transceiver module; and

filtering, with a waveguide filter, the ~~transmission~~ receive signal received from the antenna via a waveguide prior to receiving, from the second transceiver module via the coaxial cable, the receive signal.

28. The method of claim ~~1~~ 22, further comprising attenuating, by the second transceiver module, the reflection signal from the first transceiver module.