When fiber optics are required for connection between an Orolia GPS receiver device and a roof-top antenna, Spectracom offers the Optical Zonu GPS over Fiber Optic Link Kit. The link between the fiber transmitter and receiver is via 9/125 micron singlemode simplex fiber via SC/APC connectors up to 5 miles (8 km).

Use a standard Orolia GPS RF antenna, surge suppressor, and coax cable system to connect to the fiber transmitter. The transmitter requires power (external supply included) which also supplies the 5V thru the RF cable to the antenna. At the end of the fiber link, the receiver requires power (external supply included) and is connected to the GPS device with a coax cable. Spectracom provides 12” coax converter cables with SMA male to type N female connectors.

The fiber receiver includes an active DC load on the RF connector center pin to prevent the antenna failure alarm in the GPS device. However, if the fiber detects antenna failure, it opens the active DC load at the RF output which triggers the alarm.

### Specification Summary

#### Fiber Optic Transmitter

- **Input Connection**: SMA Female (N to SMA adapter included)
- **Gain**: 20 dB +/- 1 dB
- **Impedance**: 50 ohm
- **Power for Antenna**: 5 VDC, 50 mA
- **Frequency**: 1 to 2 GHz
- **Power Connection**: DB-9 12VDC (12VDC, 0.5 A power supply included)
- **Input Voltage**: DC 12VDC @ 240 mA
- **Output Connection**: SC/APC Type Fiber Optic Connector for Simplex Singlemode 9/125 Micron Cable
- **Fiber Length**: System allows Fiber Runs of up to 5 miles (8 km) of 9/125 Fiber Optic Cable
- **Delay**: < 1 ns + 3.3 ns/m fiber length
- **Storage Temp**: -40°C to +85°C
- **Operating Temp**: -40°C to +75°C
- **LEDs**
  - **Green**: OK
  - **Yellow**: Antenna Fail
  - **Red**: Tx Fail
  - **OFF**: Power Supply Fail

#### Fiber Optic Receiver

- **Input Connection**: SC/APC Type Fiber Optic Connector for Simplex Singlemode 9/125 Micron Cable
- **Power Connection**: DB-9 12VDC (12VDC, 0.5 A power supply included)
- **Input Voltage**: DC 12VDC @ 310 mA
- **Output Connection**: SMA Female (SMA to N adapter included)
- **Storage Temp**: -40°C to +85°C
- **Operating Temp**: 0°C to +50°C
- **LEDs**
  - **Green**: Rx optical power good
  - **OFF**: Rx optical power < -10 dBm