Overview

The RF500M serves as a field, repeater, or base station communication interface, generally for our licensed radio applications. It provides an interface between a datalogger or computer and a radio and can be a stand-alone repeater when onsite logging is not required. The RF500M is powered from the CS I/O port or from an external power connection. This modem is software configurable, and has been designed to interface with data telemetry radios such as our RF320-, RF310-, and RF300-series VHF/UHF radios.

Benefits and Features

- Supports multiple radio configurations including our RF320-series, our RF310-series, our RF300-series, and the DataRadio DL-3400 radio
- Uses software instead of hardware modifications to upgrade the operating system (OS) and change RF ID or other settings
- Provides an RS-232 port (DTE) for modem configuration or attachment of an RS-232 radio
- Avoids all collisions within a network, thus increasing polling speeds and reducing overall current drain

Our RF networks require line-of-sight transmission. The mountain in this drawing obstructs line-of-sight with the base station. Use of the repeater station allows the base station to receive data from the field stations.
**Operating System (OS) Options Descriptions**

**PakBus OS**
Considered the standard for the RF500M, the -PB OS uses TDRF polling to quickly and efficiently move data through a network. Each station can be individually dialed by LoggerNet. This OS is compatible with -TD, -PB, and our current generation of PakBus dataloggers.

**ALERT Dual Mode OS**
The ALERT (Automated Local Evaluation in Real Time) OS allows for transmission, repeating, and reception of binary ALERT formatted data. It is a derivative of the -PB OS, and therefore supports both ALERT and TDRF communications (allowing true two-way communication with a station). This OS is compatible with the CR200(X)-series, CR800-series, CR1000, and CR3000 dataloggers.

**Dial OS**
The dial OS works with both mixed-array and PakBus/table-based dataloggers. Each station can be dialed by LoggerNet for downloading data, sending programs, and performing other tasks. Additionally, this OS allows stations to create point-to-point networks for sharing of measurement and control tasks.

**Specifications**
- Voltage: 7 to 20 Vdc (can be provided by the CS I/O port)
- Active Current Drain: < 8 mA RMS @ 12 Vdc
- View the EU Declaration of Conformity document at: [www.campbellsci.com/rf500m](http://www.campbellsci.com/rf500m)
- Dimension: 160 x 95 x 22 mm (6.31 x 3.69 x 0.88 in.)
- Weight: 0.18 kg (0.4 lb)

**Transceiver Audio Output (pin 5)**
- J1 Jumper Configuration: 310 mV peak-to-peak (Campbell Scientific adjusts the audio input gain so that it is compatible with J1)
- J3 Jumper Configuration: 670 mV peak-to-peak

At the field station, the RF500M modem functions as a communication interface between the datalogger and radio. Field stations are located at the measurement site. This field station uses a Yagi antenna to transmit the data.