CAMPBELL SCIENTIFIC
WHEN MEASUREMENTS MATTER

COM9602

Iridium Short Burst Data (SBD) Modem Kit

Short Burst Data (SBD) Solution

Ideal for remote sites
Excellent global coverage

IMPORTANT NOTE: This Quick Start Guide is meant to be a general reference to give the installer an overview of the steps required to make this system operational. The Owner's Manual is the definitive source for detailed installation instructions and information. Verify system operation prior to installation in the field.

1 Gear Required

- COM9602 Kit
- Antenna cable
- DevConfig Utility software
- Datalogger
- Power supply
- Phillip's screw driver
- Flat head screw driver
- Crescent wrench
- Serial cable
- Computer
- Resource DVD (included)
- Test program and Include file

2 COM9602 Kit - What's Included?

- COM9602 Iridium modem
- SAF5350A antenna
- L30626 antenna mount
- L17855 interface cable
- L18663 null modem cable
- C2945 power & I/O cable
- C2626 coax adapter

3 Introduction

The COM9602 enables short burst data message transmission from a remote Campbell Scientific datalogger via the Iridium network and the Internet. The COM9602 provides an RS-232 port for communication, along with power and control terminals. The COM9602 can be connected to the datalogger's COM port, RS-232, or CS I/O.

To begin, ensure that you have an active account on the Iridium network, which can be obtained by contacting Campbell Scientific Data Services.

The purpose of this guide is to provide a method of testing modem and datalogger operations and to confirm account activity prior to deployment. This is achieved by setting up the system and configuring the datalogger to send a test transmission using the available test program.

4 Antenna Installation

1. Temporarily place the antenna in a vertical orientation with skyview (ideally outside).
2. Connect antenna cable to the COM9602.

5 Wiring

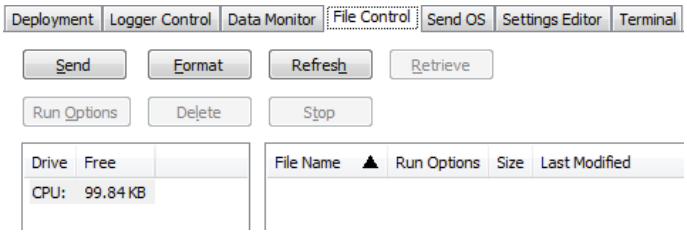
Complete the following wiring to connect system for testing.

Description	*Hardware/Colour*	*COM9602*	*Connection*
Antenna SMA Connection		Antenna	Antenna cable via C2626 adapter
Power Control	C2945 White	CTRL	C3
Modem Power	C2945 Red	Power	12V (from datalogger or direct to station power supply)
Modem Power	C2945 Black	Power	G (from datalogger or direct to station power supply)
Communications	L17855 (DB9M to pigtail cable)	RS-232 DCE	Brown to C1, White to C2, Yellow to G

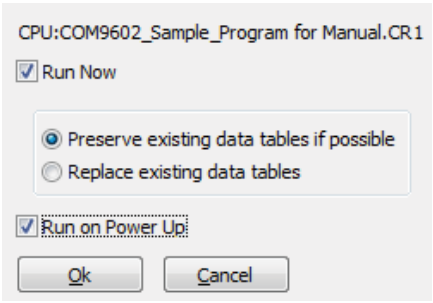
6 Datalogger Configuration

Use a PC to configure the datalogger, send test program, and monitor results

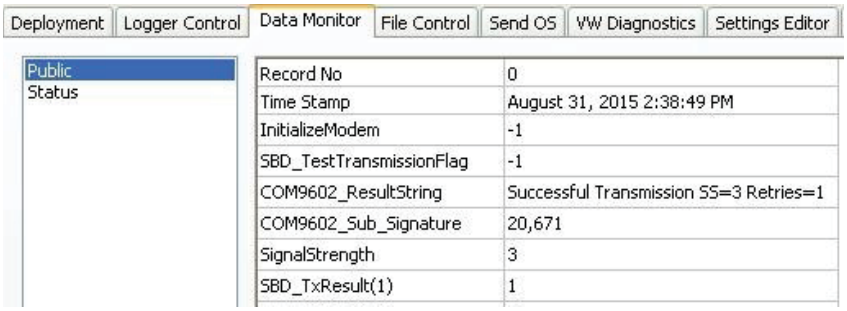
1. Supply power to datalogger and COM9602.
2. Open DevConfig Utility and connect to appropriate datalogger.
   The steps listed below reference a CR1000, but are applicable to other dataloggers when appropriate programming is used.
3. Select the File Control tab. Click the Send button, select and then open both the "COM9602 CR1000 Test Program.CR1" and the "COM9602 CR1000_Sub_str_Enc.CR1" files in the CPU drive.



4. Once both files are located on the CPU, right click the "COM9602 CR1000 Test Program.CR1", select Run Options and check both the "Run Now" and "Run on Power Up" boxes, and click OK.



5. Set Public variable "SBD_TestTransmissionFlag" to 'yes' or true. View data and the results of an SBD transmission in the Data Monitor tab.



6. The LEDs on the COM9602 also offer a visual cue that the modem is registered and communicating once it is powered up and the "COM9602 CR1000 Test Program.CR1" program is running. This can take up to 3 minutes.

7 Test Results

A successful transmission will generate the following within 3 minutes of setting power up:

1. Public variable "COM9602_ResultString". A successful transmission will be noted as (see point #5 above for reference):
   "Successful Transmission SS=X Retries=Y", where SS=Signal Strength (0-5 range) and Retries= number of transmission attempts (range 1-5)
2. 1 email with an attachment from sbdservice@sbd.iridium.com to the email address provided to CSC Data Services.

You are now ready to generate your application program using the sample datalogger program available for download at
https://www.campbellsci.ca/com9602-support

8 Retest

If there is a need to retransmit, set the "SBD_TestTransmissionFlag" public variable to "yes" in the Data Monitor tab.