



# RV50(X)

Sierra Wireless Airlink®  
4G LTE Cellular Modem  
For Public Static IP Addresses



Part Number 35781  
Revision: 04/2021



[www.campbellsci.com/rv50](http://www.campbellsci.com/rv50)

## 1. Introduction

**NOTE:**

This Quick Deploy Guide is a general reference to give the installer an overview of the steps required to make this system operational. The Product Manual is the definitive source for detailed installation instructions and information.

For best results, update to the latest data logger operating system and version of Device Configuration Utility.

You should have received two Quick Deploy Guides with your RV50(X) module. The one you follow will depend on whether your module was configured with a private dynamic or public static IP address.

The Provisioning Report received with your Cellular Data Service shows whether the module was configured with a private dynamic or public static IP address. See the following figure for an example of a Campbell Scientific Provisioning Report. Other cellular providers should provide similar information.

**USE THIS GUIDE** if your module has a public static IP address.

**Cellular Data Service  
Provisioning Report**

The following device has been provisioned for Campbell Scientific Cellular Data Service.

Sales Order #	12/31/1969	Sales Order Due Date	12/31/1969
Sales Order Date	12/31/1969	Date Provisioned	11/06/2018
Company	Campbell Scientific Inc Marketing	Customer ID	35781
Address	1000 11th St SW	Contact	
City	Bozeman	Phone	406.582.4600
State	MT	Email	marketing@campbellsci.com
Country	USA		
Postal Code	59717-1704		
Hardware	RV50	Datalogger (-40 to +70C)	-CELL210 w/4G LTE CAT1 VZ -VS Verizon US Static IP
Model #	RV50-CELL210-VS	Static IP	166.167.XX.XX
Serial #	166.167.XX.XX		
Provision Code	CR300-CELL210-VS	Datalogger (-40 to +70C)	-CELL210 w/4G LTE CAT1 VZ -VS Verizon US Static IP
Data Plan	CELLDATA-VS-A250		Campbell Scientific Cellular Data Service Subscription -VS Verizon US Static IP - A250 250MB/Mon for 1 Yr
Data Limit	250	Network	Verizon
ICCID	89012345678901234567	IP Address	166.167.XX.XX
MSISDN	166.167.167.167	Konect Plus Bus Red	IP Address 166.167.XX.XX
IMEI	35781-123456789012345	Redemption Code	
Renewal Due Date	2019-09-22	Service Period	11/15/2018 to 12/14/2019

FIGURE 1-1. Static IP provisioning report

Additionally, Campbell Scientific cellular modules configured with a public static IP address will have two stickers on the module, as shown in the following figure. One sticker will show the module phone number and data plan. The second sticker will show the static IP address. **USE THIS GUIDE.**

Campbell Scientific cellular modules configured with a private dynamic IP address will have one sticker on the module. It will show the module phone number and data plan. **USE THE OTHER GUIDE.**

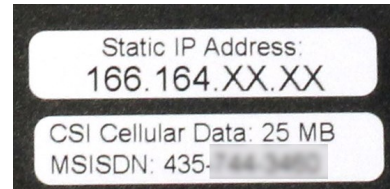


FIGURE 1-2. Module with public static IP address

## 2. Campbell Scientific cellular data service

Campbell Scientific can provide subscriptions to cellular service through Verizon, AT&T, T-Mobile, Vodafone, Telstra, and over 600 other providers worldwide. When this cellular service is purchased with the module, the module will come pre-provisioned with the required SIM card and APN. If you have already purchased the RV50(X), call Campbell Scientific to set up service.

### 3. Install the SIM card

**NOTE:**

If you purchased cellular service from Campbell Scientific with the module, it will come with the SIM (Subscriber Identity Module) card already installed.

1. Remove the SIM card cover.
2. Note the location of the notched corner for correct alignment. The gold contact points of the SIM face down when inserting the SIM card as shown in the following figure. **Gently** slide the card into the slot until it stops and locks into place. To eject the SIM card, press it in slightly and release.
3. Replace the SIM card cover.

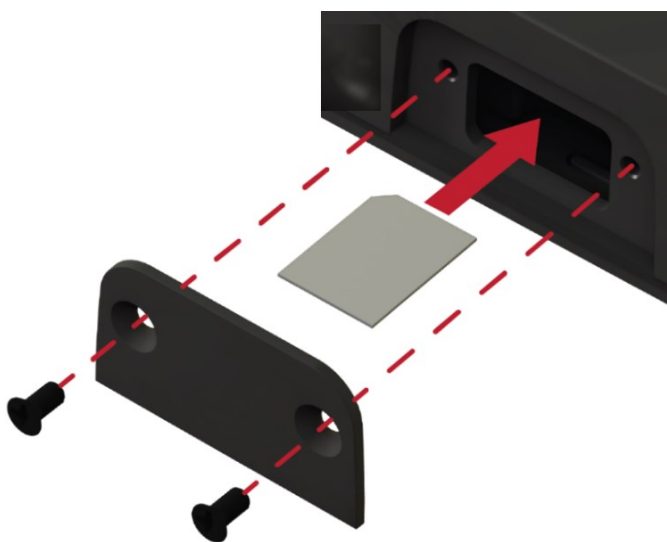


FIGURE 3-1. SIM card installation

### 4. Configure RV50(X)

1. Download the collection of RV50(X) configuration templates from [www.campbellsci.com/downloads](http://www.campbellsci.com/downloads) and run the executable downloaded.
2. Connect the **Cellular** antenna.
3. Connect the **Diversity** antenna, if used. Use of a diversity antenna is recommended, it can improve system performance. It is required in 4G networks, but not 2G or 3G. Note: If a **Diversity** antenna is not used on a 2G or 3G cellular network, use **ACEmanager** to disable **WAN/Cellular > Network Credentials > RX Diversity**.

4. Connect the power cable wires to a power supply.

Wire Color	Function	Connect To
Black	Ground	G
White	Enable (On/Off)	12V or SW12V or control port
Red	Power (7 to 36 V)	12V

5. Connect the power cable to the RV50(X) **DC Power** input. When the RV50(X) is properly set up and powered, the status LEDs will turn on. The RV50(X) will begin the activation/provisioning process and attempt to connect to the mobile network. This process typically takes 5 to 10 minutes. A successful connection is indicated by a solid green or solid amber **Network** LED.

**NOTE:**

If Campbell Scientific did not provision the RV50(X) or it does not automatically connect to the network, you may need to confirm or enter your APN information. Follow steps 6 through 8 to **WAN/Cellular > SIM Slot 1 Configuration > Network Credentials > User Entered APN**.

6. Connect your Windows® computer to the RV50(X) using the supplied Ethernet cable.

**CAUTION:**

Your computer may use the RV50(X) as a network interface while connected resulting in cellular data usage. Campbell Scientific recommends disconnecting the computer from the RV50(X) as soon as configuration is complete.

7. Launch a web browser, and enter <https://192.168.13.31:9443> into the address bar. The **ACEmanager** login screen should appear in your browser.

**NOTE:**

RV50(X)s running OS version 4.13 and older had both HTTP port 9191 and HTTPS port 9443 enabled by default. When using HTTP (not HTTPS) with these older OS versions, enter the IP address using port number 9191, for example, <http://192.168.13.31:9191>.

- Look for a sticker on the bottom of your modem with the manufacturer-generated default password. Log in using **User Name** = user and that **Password**. If there is no sticker try 12345 for the password. Make note of the password used so it can be easily referenced when off site. Remote access to the modem interface will require the password.

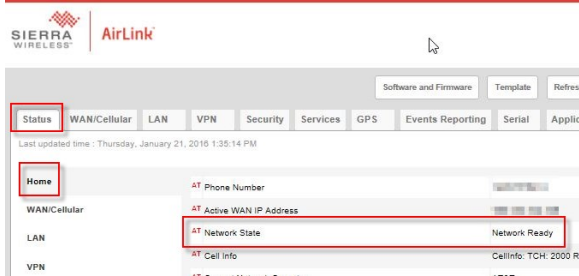
**TIP:**

We strongly recommend changing the default password to prevent unauthorized access and the potential of malware infection. The password can be changed from the **Admin** tab.

**WARNING:**

Failure to set a strong password in the RV50(X) may result in misuse of the modem by malware or hackers. Significant data overage charges may apply.

- Once logged in, check the **Status > Home > Network State** field. It should read Network Ready, indicating the RV50(X) is connected to the cellular network. You can easily test the RV50(X) connection to the Internet by selecting the **Admin > Advanced** tab and using the PING tool to ping an Internet server, such as www.campbellsci.com.

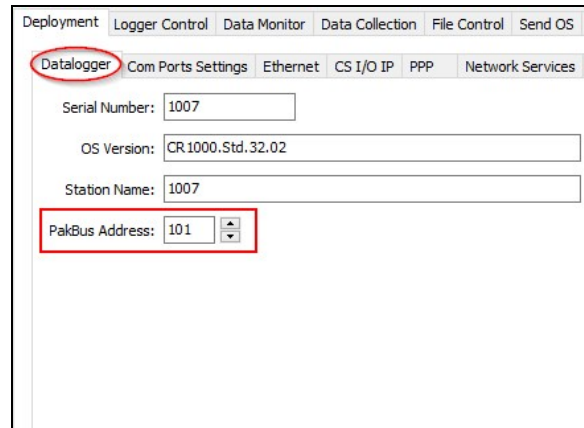


- Reboot the RV50(X) after successfully applying the configuration template. You can do this by clicking the Reboot button on the **ACManager** toolbar, by momentarily pressing the Reset button (2 sec), or by temporarily removing power from the RV50(X).

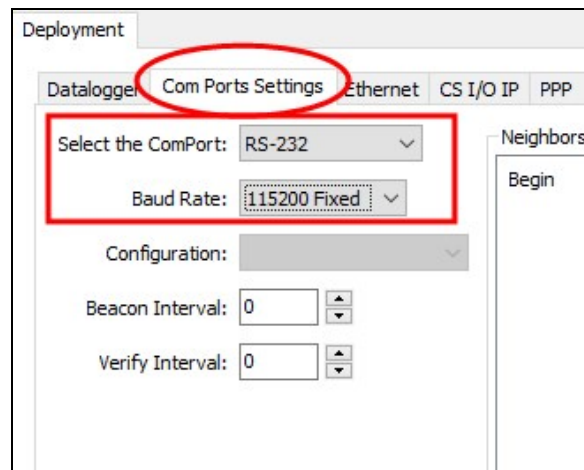
## 5. Enabling PPP mode

Launch the Device Configuration Utility . All tabs are within the **Deployment** category.

On the **Datalogger** tab, make note of the data logger **PakBus Address** (default address is 1).



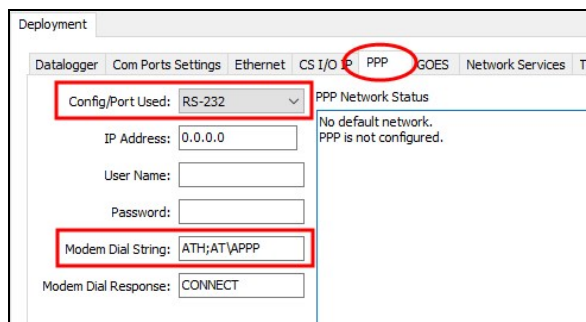
On the **Com Ports Settings** tab, select the **COMPort** where the module is connected; this is generally RS-232. Change the **Baud Rate** to 115200 Fixed.



- Click the Template button in the **ACManager** toolbar. A template application window will appear. Browse to and upload one of the configuration templates downloaded from Campbell Scientific.

Template Files	
Template File Name	Description
RV50_115200.xml	Default configuration with RS-232 at 115200 baud and Ethernet communication enabled. <sup>1</sup>
RV50_9600.xml	Default configuration with RS-232 at 9600 baud and Ethernet communication enabled. <sup>2</sup>
<sup>1</sup> CR1000X series, CR300 series, CR6 series, CR1000, CR3000, CR800 series, CR5000, and GRANITE 6/9/10 <sup>2</sup> CR10X, CR10X-PB, CR510, CR510-PB, CR23X, CR23X-PB, and CR200(X) series data loggers	

On the **PPP** tab select the **Config/Port Used** where the modem is connected. This is the same as was selected on the **Com Ports Settings** tab. Set **Modem Dial String** to ATH;AT\APPP.

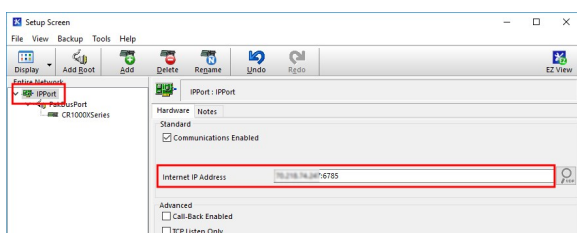


**Apply** to save your changes.

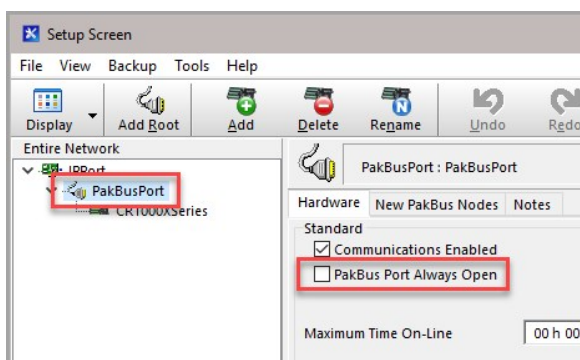
Disconnect the Ethernet cable between the RV50(X) and computer.

## 6. Set up LoggerNet

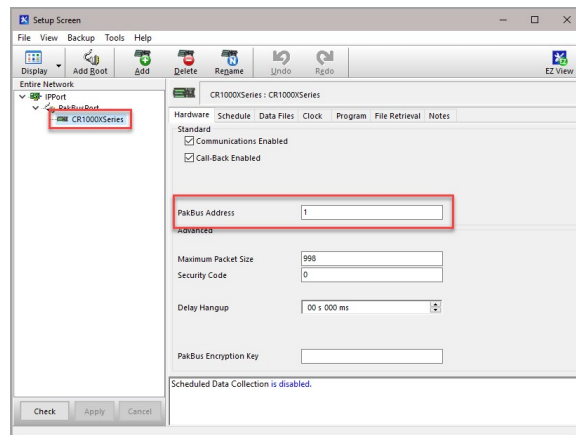
1. Select **Add Root > IPPort**.
2. Select **PakBusPort**
3. Add a data logger to the **PakBusPort**.
4. Select the **IPPort** in the Network Map. Enter the RV50(X) IP address and port number. The IP address and port number are input in the **Internet IP Address** field separated by a colon. Preceding zeros are not entered in the **Internet IP Address** (for example, 070.218.074.247 is entered as 70.218.74.247). The default port number is 6785.



5. For PakBus data loggers, leave the default settings for the **PakBusPort**. **PakBus Port Always Open** should **not** be checked. If used, enter the **TCP Password**.



6. For PakBus data loggers, select the data logger in the Network Map and set the **PakBus Address** to match that of the data logger (default address in the data logger is 1). If a **PakBus Encryption Key** was entered during data logger setup, also enter it here. Click **Apply** to save the changes.



## 7. Test the connection

Use the **Connect** screen to test the connection. Click on the appropriate station and click **Connect** to initiate a call to the data logger. The data logger must have 12 V power.

### TIP:

The connection time is subject to many external factors. It is often less than 30 seconds but could be up to 15 minutes. Be patient.

If the connection is successful, the connectors at the bottom of the screen will come together and clock information from the data logger will be displayed in the **Station Date/Time** field.

