Campbell SCIENTIFIC | QUICK DEPLOY GUIDE

RV50(X)

Sierra Wireless Airlink® 4G LTE Cellular Module
For Private Dynamic IP Addresses



Part Number: 35782
Revision: 11/2025
www.campbellsci.com/rv50x

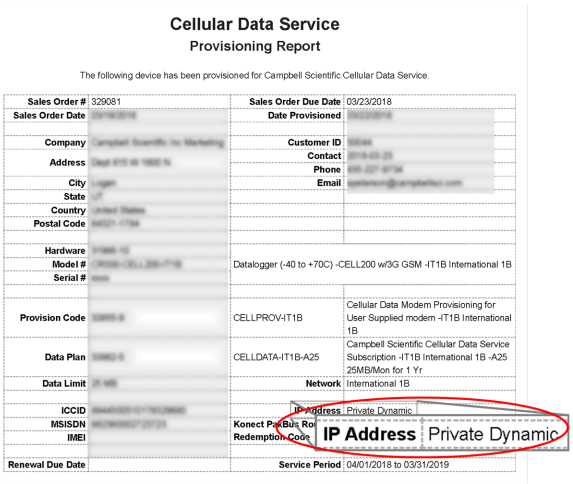
1. Introduction

> **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 private dynamic IP address.


Cellular Data Service
Provisioning Report

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

Sales Order #	329081	Sales Order Due Date	03/23/2018
Sales Order Date	[redacted]	Date Provisioned	[redacted]
Company	[redacted]	Customer ID	[redacted]
Address	[redacted]	Contact	[redacted]
		Phone	[redacted]
City	[redacted]	Email	[redacted]
State	[redacted]		
Country	[redacted]		
Postal Code	[redacted]		
Hardware	[redacted]		
Model #	[redacted]	Datalogger (-40 to +70C) -CELL200 w/3G GSM -IT1B International 1B	
Serial #	[redacted]		
Provision Code	[redacted]	CELLPROV-IT1B	Cellular Data Modem Provisioning for User Supplied modem -IT1B International 1B
Data Plan	[redacted]	CELLDATA-IT1B-A25	Campbell Scientific Cellular Data Service Subscription -IT1B International 1B -A25 25MB/Mon for 1 Yr
Data Limit	[redacted]	Network	International 1B
ICCID	[redacted]	IP Address	Private Dynamic
MSISDN	[redacted]	Konect Pass Bus Ro	
IMEI	[redacted]	Redemption Code	
Renewal Due Date		Service Period	04/01/2018 to 03/31/2019

Figure 1-1. Private dynamic IP provisioning report

Additionally, Campbell Scientific cellular modules configured with a private dynamic IP address will have one sticker on the module, as shown in the following figure. It will show the module phone number and data plan. **USE THIS GUIDE.**

Campbell Scientific cellular modules configured with a public static IP address will have two stickers on the module. One sticker will show the module phone number and data plan. The second sticker will show the static IP address. **USE THE OTHER GUIDE.**

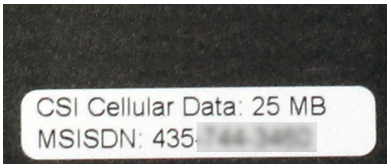


Figure 1-2. Module with private dynamic IP address

2. Campbell Scientific cellular data service

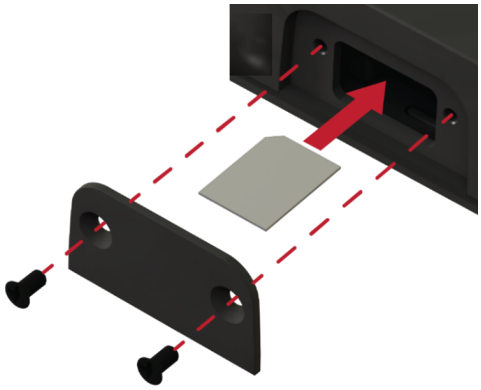
Campbell Scientific can provide subscriptions to cellular service through Verizon, AT&T, T-Mobile, Vodafone, Telstra, and over 600 other providers worldwide. When this cellular service is purchased with the module, the module will come pre-provisioned with the required SIM card and APN. If you have already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

NOTE:
Some SIM cards, particularly those purchased in Germany, come with an active personal identification number (PIN). The PIN must be deactivated before proceeding. Often, an easy way to deactivate the PIN is to install the SIM card in a mobile phone and use the device settings.

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.

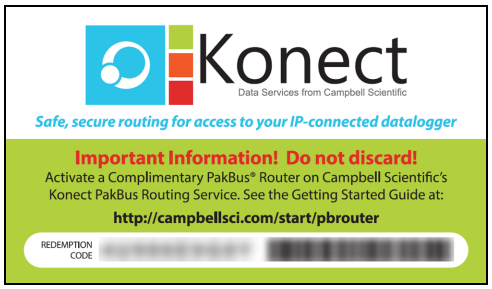


4. Konect PakBus Router setup

NOTE:
If you are not using Konect PakBus Router, skip this section.

4.1 Get started

You will need the Konect PakBus Router redemption code that came on a card with the RV50(X).



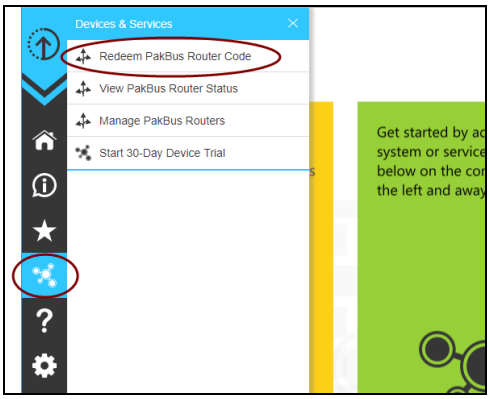
Open a web browser and go to www.konectgds.com.

First-time users need to create a **free account**. After you submit your information, you will receive two emails up to five minutes apart. One email will contain a Passport ID and the other your Password. If emails are not received, check your email junk folder.



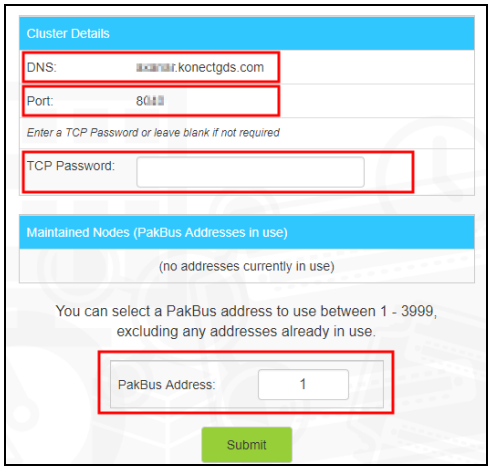
4.2 Set up Konect PakBus Router

1. Sign in to www.konectgds.com using your Passport ID and Password found in the two received emails. Once logged in, you will be at the Welcome page.
2. Click **Devices and services** on the command bar to the left and select **Redeem PakBus Router Code**. Enter your complimentary Router Code found on the included card with your cellular-enabled device and click **Submit**.



3. The next screen shows the assigned **DNS** address and **Port** for the router. Enter a **TCP Password** and select a unique **PakBus Address** for your data logger.

TIP:
Make note of this information; it will be required for data logger configuration as well as ***LoggerNet*** setup. Please note your **DNS**, **Port**, **TCP Password** and **PakBus address**; you will need them later.



5. Configure RV50(X)

1. Download the collection of RV50(X) configuration templates from 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 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.

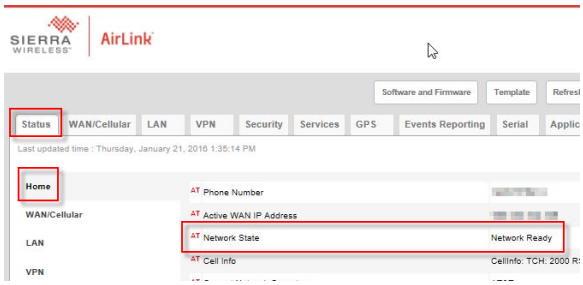
NOTE:
RV50(X)s running OS version 4.13 and older had both HTTP port 9191 and HTTPS port 9443 enabled by default. When using HTTP (not HTTPS) with these older OS versions, enter the IP address using port number 9191, for example, http://192.168.13.31:9191.

8. 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.

9. 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.



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

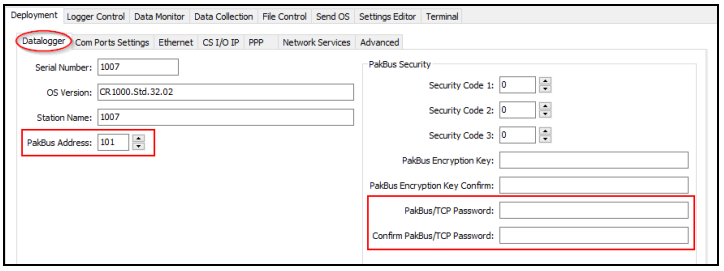
Template Files	
Template File Name	**Description**
RV50_115200.xml	Default configuration with RS-232 at 115200 baud and Ethernet communication enabled.[1]
RV50_9600.xml	Default configuration with RS-232 at 9600 baud and Ethernet communication enabled.[2]
[1]GRANITE series, CR6 series, CR3000, CR1000X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

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

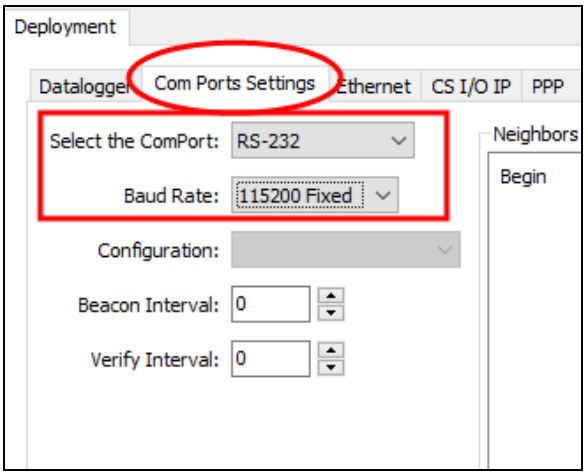
6. Enabling PPP mode

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

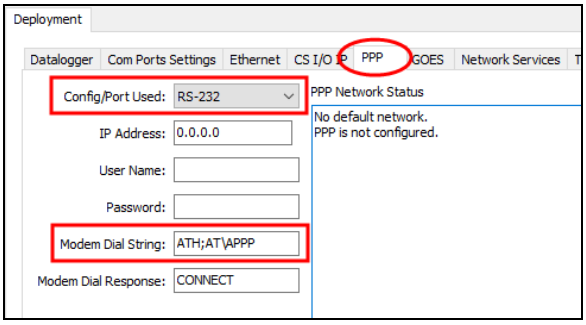
On the **Datalogger** tab, change the data logger **PakBus Address** and **PakBus/TCP Password** to match the values entered in the Set up Konect PakBus Router (p. 2) step.



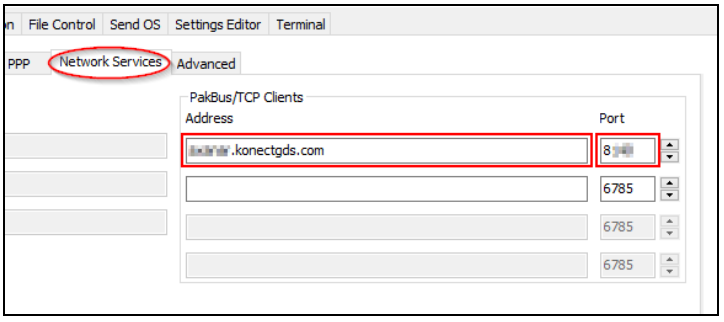
On the **Com Ports Settings** tab, select the **COMPort** where the module is connected; this is generally RS-232. Change the **Baud Rate** to **115200 Fixed**.



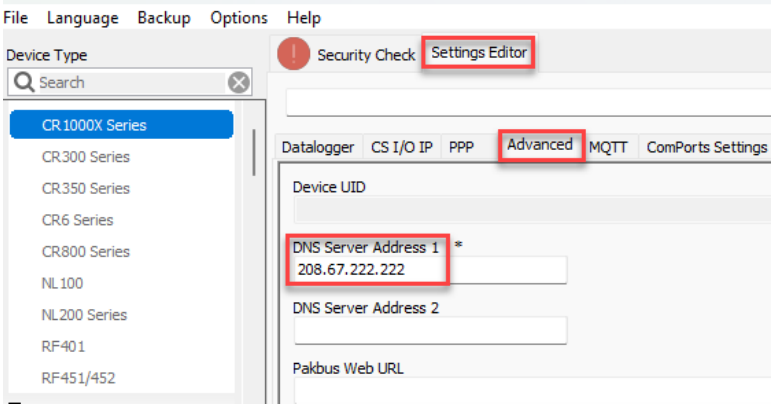
On the **PPP** tab, select the **Config/Port Used** where the modem is connected. This is the same as was selected on the **Com Ports Settings** tab. Set **Modem Dial String** to ATH;AT\APPP.



On the **Network Services** tab, in the **PakBus/TCP Clients** box, type the DNS address and Port number noted during the Set up Konect PakBus Router (p. 2) step.



On the **Settings Editor** tab, click the **Advanced** sub-tab. Enter a **DNS Server Address** that can resolve the Konect Router server address. If you don't have a specific DNS server to use, you can use OpenDNS: 208.67.222.222.



Apply to save your changes.

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

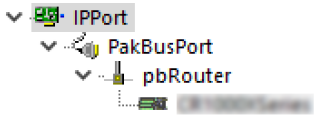
7. Set up *LoggerNet*

The ***LoggerNet*** Network Map is configured from the **LoggerNet Setup** screen.

> **NOTE:**
> Setup has two options, EZ (simplified) and Standard. Click on the **View** menu at the top of the **Setup** screen, and select **Standard** view.

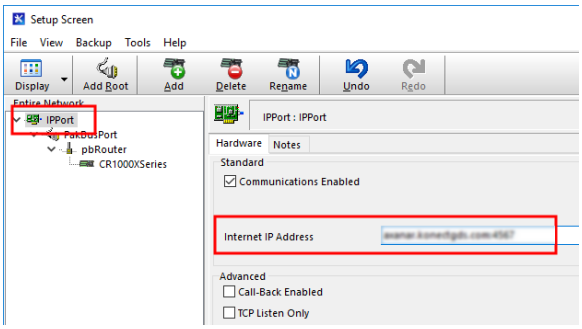
From the ***LoggerNet*** toolbar, click **Main** > **Setup** and configure the Network Map as described in the following steps:

1. Select **Add Root** > **IPPort**.
2. Select **PakBusPort** and **pbRouter** for PakBus data loggers such as the CR6 or CR1000X.

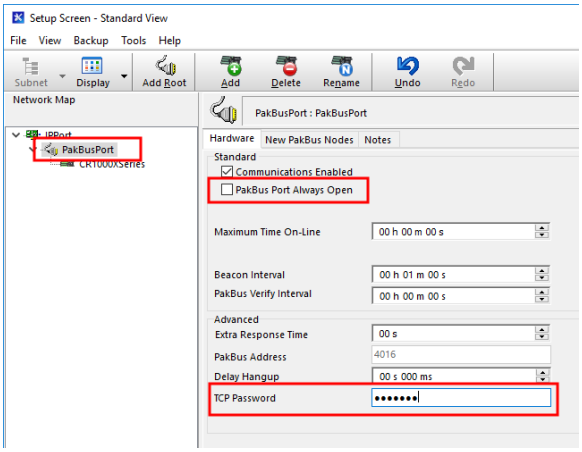


> **NOTE:**
> PakBus data loggers include the following models: GRANITE-series, CR6, CR3000, CR1000X, CR800-series, CR300-series, CR1000, and CR200(X)-series.

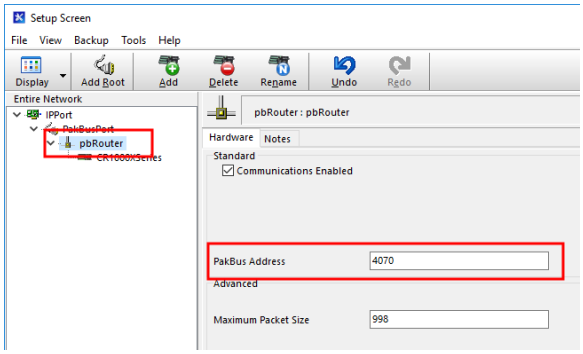
3. Add a data logger to the **pbRouter**.
4. From the Entire Network, on the left side, select the **IPPort**. Enter the Konect PakBus Router DNS address and port number as noted in the Konect PakBus Router setup (Set up Konect PakBus Router [p. 2]). Enter them into the **Internet IP Address** field in the format DNS:Port with a colon separating DNS and Port. For example, axanar.konectgds.com:pppp where pppp is the port number.



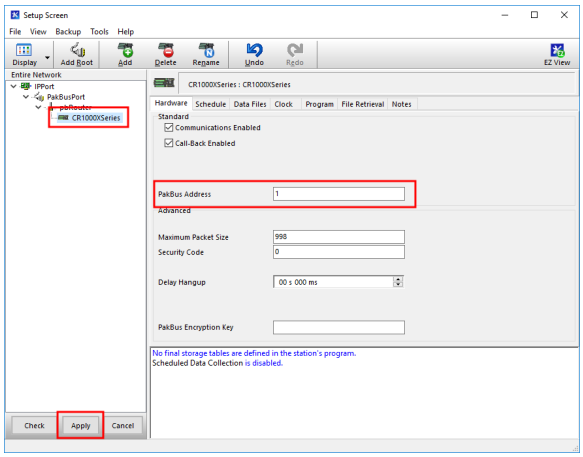
5. Leave the default settings for the **PakBusPort**. **PakBus Port Always Open** should **not** be checked. In the **TCP Password** field enter the TCP Password; this must match the value entered in the Konect PakBus Router setup and ***LoggerNet*** setup.

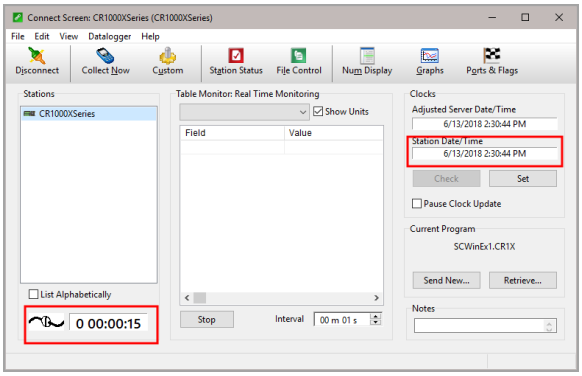


6. Select the pbRouter in the Network Map and set the **PakBus Address** to **4070**.



7. 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.





8. 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 icon 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.