



CELL200-Series

4G LTE Cellular Module
For Private Dynamic IP Addresses



Part Number 34285
Revision: 07/2020



www.campbellsci.com.au/cellular-communications

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.

NOTE:

CR3000, CR1000 and CR800-series users must refer to the CELL200 Product Manual. This Quick Deploy Guide applies to the CR300, CR1000X and CR6 data loggers. For any other data loggers, please check the Product Manual or contact Campbell Scientific.

2. Selecting a data service

Before installing a data logging system with telemetry, you will need a SIM card and data plan. For most applications, Telstra will offer the best coverage, especially in regional areas. Telstra and Optus coverage maps can be found on each provider's respective websites.

The CELL220 and CR300-CELL220 will work with standard data plans. No extra steps are necessary because of the complimentary Konect PakBus Router service. A micro-SIM (3FF) is the correct size for use with the CELL220.

3. Install the SIM card

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.

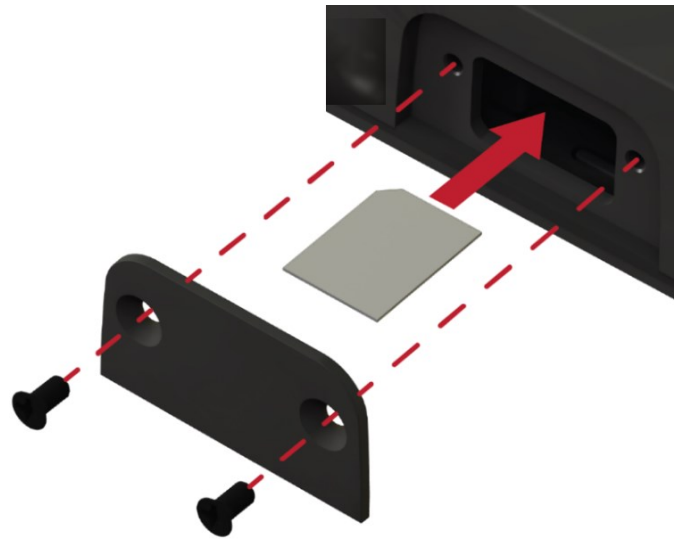



FIGURE 3-1. SIM card installation

4. Konect PakBus Router setup

4.1 Get started

You will need the Konect PakBus Router redemption code that came on a card with the CELL200 series.



Safe, secure routing for access to your IP-connected datalogger

Important Information! Do not discard!
 Activate a Complimentary PakBus® Router on Campbell Scientific's Konect PakBus Routing Service. See the Getting Started Guide at:
<http://campbellsci.com/start/pbrouter>


REDEMPTION CODE [REDACTED]

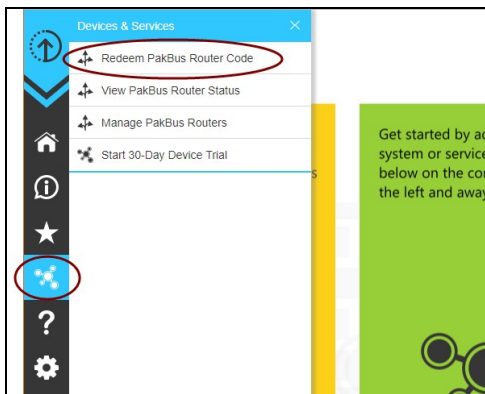
Open a web browser and go to www.konectgds.com.

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.

Cluster Details

DNS: konectgds.com

Port: 8044

Enter a TCP Password or leave blank if not required

TCP Password:

Maintained Nodes (PakBus Addresses in use)

(no addresses currently in use)

You can select a PakBus address to use between 1 - 3999, excluding any addresses already in use.

PakBus Address: 1

Submit

5. Hardware and software configuration

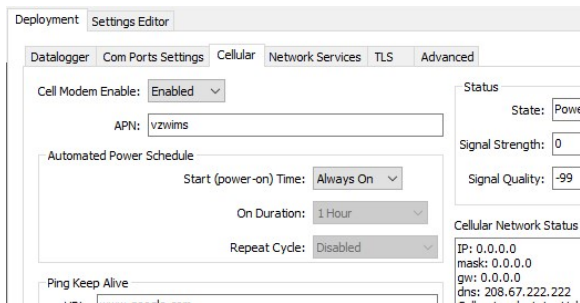
5.1 Set up hardware

1. Connect the cellular antenna, if it is not already connected. When using a MIMO antenna with multiple cellular connections, connect the primary cable to **Cellular** and the secondary to **Diversity**. If the cables are not marked in this way, they can be connected to either antenna port.
2. Connect your data logger RS-232 or CS I/O port to the CELL200-series module RS-232 or CS I/O port. Ensure the same port is used for each device, for example RS-232 to RS-232. Use an 18663 cable for RS-232 connection or a SC12 cable for CS I/O connection (either female connector on the SC12 cable can be used for the CELL220).
3. If not connecting through CS I/O, provide power to the CELL200 series. The data logger provides power through the CS I/O port. USB power is not sufficient to power the CELL200 series; 12 V is required.

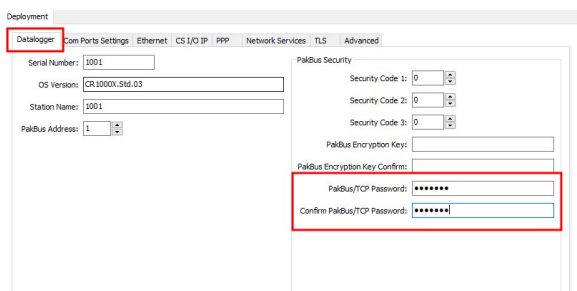
5.2 Configure data logger

1. Connect to your data logger by using Device Configuration Utility.
2. On the **Datalogger** tab, change the data logger **PakBus Address** and **PakBus/TCP Password** to match the values entered in the Konect PakBus Router setup.
3. On the **Network Services** tab in the **PakBus/TCP Client** field, enter the DNS address and Port number noted during the Konect PakBus Router setup.
4. Click **Apply** to save the changes. Verify the settings in the summary window. (Recommended) **Save** a copy of the settings to a file on the computer. Click **OK**.

- Shut down Device Configuration Utility and start it again. This will activate the **Cellular** tab needed for the next step.
- On the **Cellular** tab, enter the **APN** provided by your cellular provider. For standard Telstra SIMs, this will be **telstra.internet**.



- On the **Datalogger** tab enter the **PakBus/TCP Password** twice. This setting specifies a password that will make the data logger authenticate any incoming or outgoing PakBus/TCP connection. It must match the value entered in the Konect PakBus Router setup.



- Click **Apply** to save the changes. Verify the settings in the summary window. (Recommended) **Save** a copy of the settings to a file on the computer. Click **OK**.
- Click **Disconnect** and close Device Configuration Utility.

5.3 Set up LoggerNet

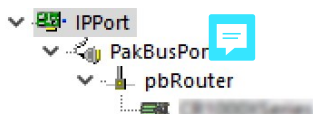
The LoggerNet Network Map is configured from the **LoggerNet Setup** screen.

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:

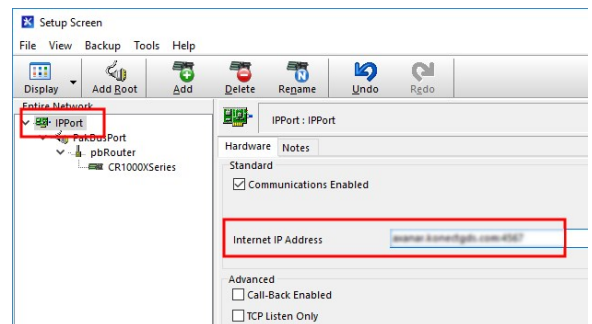
- Select **Add Root > IPPort**.
- Select **PakBusPort** and **pbRouter** for PakBus data loggers such as the **CR800** or **CR1000**.



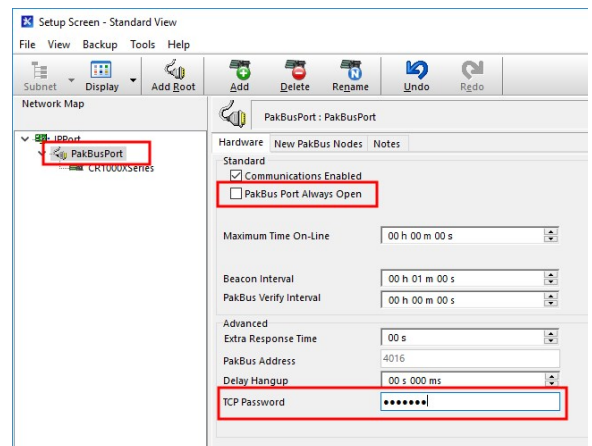
NOTE:

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

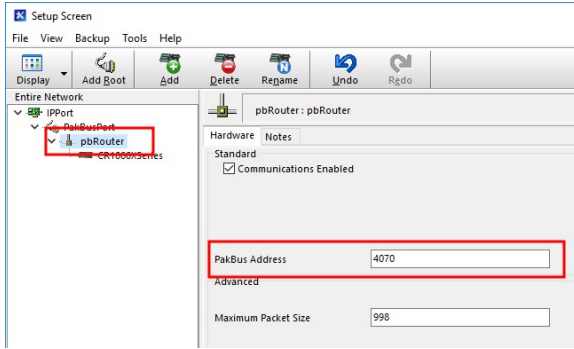
- Add a data logger to the **pbRouter**.
- From the Entire Network, on the left side, select the **IPPort**. Enter the Konect PakBus Router DNS address and port number as noted in the Konect PakBus Router setup ([Set up Konect PakBus Router](#) (p. 2)). Enter them into the **Internet IP Address** field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



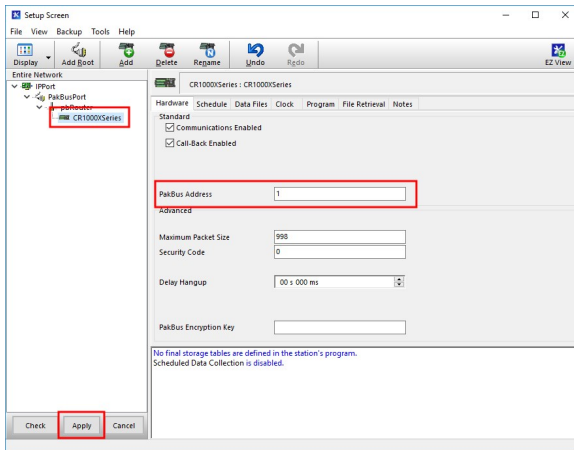
- Leave the default settings for the **PakBusPort**. **PakBus Port Always Open** should **not** be checked. In the **TCP Password** field enter the TCP Password; this must match the value entered in the Konect PakBus Router setup and LoggerNet setup.



- For PakBus data loggers, select the pbRouter in the Network Map and set the **PakBus Address** to **4070**.



- 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.



5.4 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 when powering the modem via CS I/O.

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.

