

Activating a Cellular Modem

Activating the DXM cellular capabilities requires these basic steps:

1. Purchase a cellular modem kit from Banner Engineering Corp.
2. Activate a cellular plan to the SIM card, then insert the SIM card into the cellular modem.
3. Install the cellular modem, connect the antenna cable, and connect the cellular antenna.

Cellular Kit Model Number	Kit Description	Notes
SXI-GSM-001	3G GSM worldwide cellular modem using Telit HE910-D modem kit. The kit includes cellular modem, antenna, and antenna cable.	Requires a GSM cellular wireless plan attached to the SIM card, IMEI (International Mobile Equipment Identity) number.
SXI-LTE-001	Verizon LTE cellular modem using Telit LE910 modem kit. (Verizon part number SENSX002). The kit includes cellular modem, SIM card, antenna, and antenna cable.	Cellular plans can be purchased through https://bannercds.com . Requires a LTE Verizon cellular wireless plan attached to the SIM card, IMEI (International Mobile Equipment Identity) number.

For additional information, refer to the Banner Connected Data Solutions support center. The support center includes video tutorials, product documentation, technical notes, and links to download configuration software.

Purchase and Install the Cellular Modem

Follow these steps to install the cellular modem and antenna cable.

Before you activate your cellular plan, verify you have one of the following cellular modem kits.

Cell Modem Kit	Cell Service
SXI-GSM-001	3G GSM (HSPA+ networks; GSM/EGPRS fallback)
SXI-LTE-001	Verizon 4G LTE

1. Insert the SIM card into the socket on the underside of the cellular modem. Verizon LTE SIM cards come in a credit card sized carrier. Snap it out and insert the SIM card into the holder on the cellular modem.
The SIM card number is on the SIM card and on the credit card sized carrier. You will need the SIM number to associate a wireless plan to this SIM card.



2. Orient the cellular modem as shown and verify the pins are properly aligned.
3. Firmly press the modem into the 24-pin socket.
4. Attach the antenna cable as shown.



5. Install the external cellular antenna on the DXM's SMA connector located next to the antenna cable.



Cellular modem and antenna installed; note that the antenna cable uses the top antenna connection. The LTE modem is shown; the HE910 GSM installation is the same.

Activate a 3G GSM Cellular Plan

The GSM cellular modem is operational world-wide and requires an activated card to operate. GSM wireless cellular plans cannot be purchased through the Banner Connected Data Solutions website.

1. Work with the local Banner technical support person to identify and purchase machine-to-machine (M2M) (data plan only) SIM cards in 3FF 'micro' form factor.
Typical monthly data use will be 20–50 MB per month. When choosing a plan, pay close attention to data rates and to SMS (text) rates.
2. When activating the SIM:
 - Note the Access Point Name, or APN, that the SIM provider says to use with their SIM
 - The IMEI is the 15-digit number on top of the cell module PCB, below the words "Telit HE910-D" and above the 2-d bar code
 - The ICCID is the 20-digit number printed on the SIM card itself

Activate a Verizon 4G LTE Cellular Plan

Activate a cellular plan for your DXM using the Banner Connected Data Solutions website.

1. Go to <https://bannercds.com> to purchase DXM cellular data plans.
2. If you have previously created an account, enter your username and password to continue.
3. If you are creating a login for the first time:
 - a) Select the subscription type and subscription plan.
 - b) Create a username and password (use an email address for the username).
 - c) Enter your payment information and mailing address.
4. Go to the **Activate a New Verizon 4G Device Here** section.
5. Enter the SIM Number (ICCID) and the Module Number (IMEI).

The **ICCID** is the 20-digit number of the SIM, the bottom barcode number on the SIM card carrier. If the carrier card is not available, the ICCID is also printed on the SIM card, but must be removed from its socket to be read.

The **IMEI** is the 15-digit number on top of the 4G LTE device.



6. Click **Activate**.



Note: Although new activations are typically functional in 20 minutes or less, it may take up to 24 hours for the cellular plan to become active on the wireless network.

Configure the DXM Controller for a Cellular Modem

Use the DXM Configuration Tool to create a configuration using a cellular connection.

1. Go to the **Settings > Cloud Services** screen.
2. Set the **Network Interface** to **Cell**
All push data, SMS messages, or email alerts will be sent using the cellular modem.
3. Under the **Cell Configuration** section, select the **Cell module** from the drop-down list.
 - For LTE, select LE910 4G VZW and set APN to `vzwinternet`.
 - For GSM, select HE910 3G GSM and set the APN based on your provider's settings.
 - For CDMA, select CE910 2G CDMA.
4. To send data to the webserver, set the **Cloud Push** settings and the Webserver settings.

When the DXM is configured to use the cellular modem, the information on the cellular modem is found on the LCD menu under **System Info > Cell**. The menu does not display values until a transaction with the wireless cell tower is complete. If there are no webserver parameters defined, the user must force a push to retrieve the data from the cellular network. On the LCD menu, select **Push > Trigger Data Push**.

Obtaining LTE service outside of Banner CDS—Customers have the option of securing a data plan for the Verizon network themselves without using the Banner Connected Data Solutions platform. Suitable plans would include those available from Verizon directly or from a Mobile Virtual Network Operator (MVNO) licensed to resell Verizon network data plans. (The SXI-LTE-001 will not function on AT&T, T-Mobile, or Sprint networks.) When purchasing a data plan, it is important to refer to the modem by its official Verizon network name, `SENSX002` and give the IMEI number (found on the cellular modem) to the plan provider. To use the SIM card that comes with the cellular modem kit, give the SIM card number to the provider. The required SIM card form factor is 3FF - Micro.