



**ULTRA-RUGGED**  
**FIELD PC**  
**CELL MODEM EXPANSION PACK**

## Quick Overview

This documentation covers how to get the cell modem ready for use:

- Set up a data account and receive a SIM card.
- Install the SIM card in the cell modem, and seal the card portal.
- Install pack on the handheld.
- Run setup program to configure the cell modem.

## GSM Modem Activation Instructions

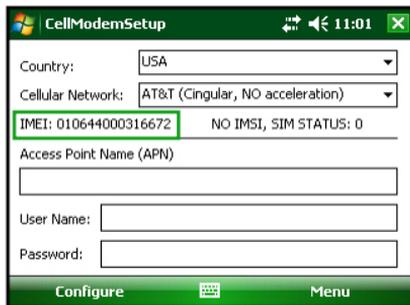
Thank you for purchasing a cell modem expansion pack. Each enclosed modem has been pre-configured to operate on the GSM network. However, before you can begin to use the modem, you will need to set up a wireless account.

## GSM Account Set Up and Activation Process

Follow these steps to set up a wireless account:

- Contact your wireless provider/partner/reseller to obtain an account and/or SIM card. Since you already have the equipment, and all you need is to set up an account, it is best to work directly with a cellular service provider, ie; AT&T, T-Mobile, Vodafone, etc.

- When you contact the service agent of the cellular carrier, inform them that you have a cellular data modem and need to set up data service for this device. Your company may already have a business account with a cell carrier. If so, you can add the account you need for this device to your business account.
- You will need to provide the following information when setting up an account:
  1. Billing Information and business ID such as your Federal Tax I.D. or VAT number.
  2. The wireless services required. You will need to specify that you need data only service. You do not need voice or messaging service.
  3. You may be asked for the modem's 15-character IMEI number, which can be found using the CellModemSetup utility when the pack is installed on the handheld.



4. You may be asked to provide the modem's model number. This number allows the carrier to verify this modem as one of its approved models.

**IMPORTANT** The model number that you should provide is the model number of the internal modem module, and not the model of the handheld computer. The cell modem module is a MultiTech cellular modem model **MTSMC-E**.

- The cellular carrier will give you a plastic card that has a smaller break out SIM card.

## Installing the Cell Modem and SIM Card

To install the cell modem on the Field PC complete the following instructions.

1. Power off the handheld by holding down the power button for a few seconds and select *Power Off*.
2. Remove the rubber cover from the pack.
3. Insert SIM card carefully making sure that the card is inserted in the correct orientation. The beveled corner on the card will line up with the outline on the socket with the gold electrical contacts facing towards the connector.



**!** **CAUTION:** There is space between the case and the connector. When inserting the card make sure that the card is inserted into the connector and not into the space above or below the connector.

4. Replace the rubber cover. Run a finger around the outside edge to make sure the gasket is flush with the case. Note: The top portion of the gasket is not flush.

**!** **CAUTION:** If the rubber cover is not replaced the unit is no longer sealed and the warranty is void.

5. Remove the four screws from the back of the handheld. Note: They do not have to be completely removed from the back.



6. Remove the back of the handheld.
7. Slide the top of the handstrap up to detach it from the back.
8. Place the pack on the back of the handheld.
9. Tighten the four screws to attach the pack.
10. Slide the handstrap onto the two screws to reattach it.

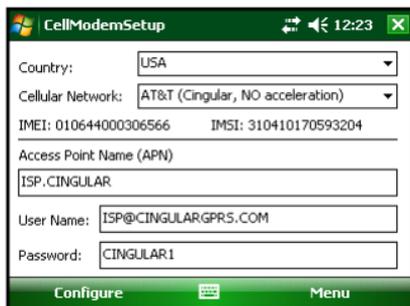
11. Attach antenna to the cell modem. Use the knurled ring at the bottom of the antenna to tighten the antenna. Do not twist on the antenna rod to tighten the antenna.
12. Turn on the unit.

## Running the Cell Modem Setup Utility

If the CellModemSetup utility is not already installed on the handheld go to <http://www.junipersys.com/support/support.cfm?id=150> to download it. The utility may also be found on the user's CD that shipped with the handheld.

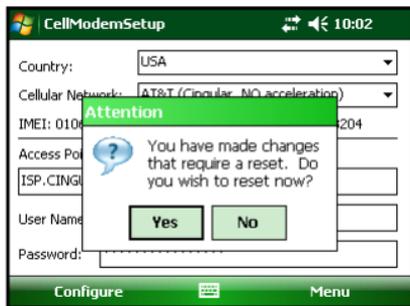
To install the utility on the handheld, connect the handheld to a PC using ActiveSync then run the cell modem setup install program on a desktop PC.

1. To start the utility, Tap *Start > Programs > CellModemSetup*.
2. This screen will be displayed:



3. Tap the *Country* drop down box and select your country.
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- 6** Cell Modem Expansion Pack

4. Tap the *Cellular Network*: drop down box and select your cellular network. The appropriate Access Point Name, user name and password will be displayed.  
If there is more than one entry for your carrier, go through the list to find the that one works. It is best to get this information directly from the carrier when you subscribe. This information occasionally changes.
6. If the cellular provider cannot be found in the list, the user must obtain that information (Access Point Name, User name, and password) from the cellular provider. Enter that information manually into the appropriate boxes.
7. The cellular provider may require the IMEI number from the modem. This is indicated on this screen.
8. Tap *Configure* to configure the modem and the handheld.

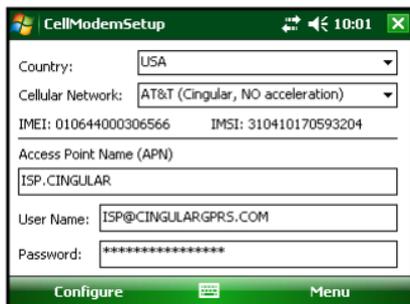


The expansion pod modem will not be available until the handheld is reset.

9. Tap *Yes* to close the application and reset the handheld.

## View Current Settings

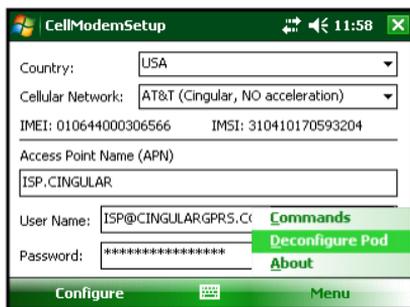
To view current settings, launch the application as above. Note that the password is now **\*\*\*\*\***. This is normal.



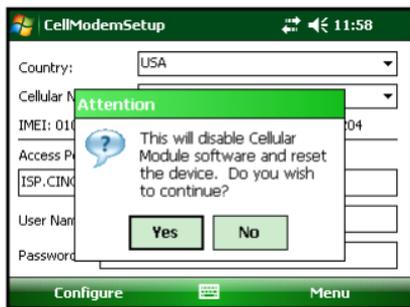
By tapping **X** the application will close and no changes will be made to the current configuration.

## Uninstall/Deactivate Cell Modem Pack

1. To uninstall the cell modem pack, tap *Menu*.



2. Tap *Deconfigure Pod*. The program will de-configure the handheld and exit. Power off the handheld by holding down the power button for several seconds and select Power Off from the displayed menu. Then remove the cell modem pack.



## Send AT Commands

This screen is used for trouble shooting by a qualified technician. There is no need to use it otherwise.



**CAUTION:** There is no warranty for use of this dialog as it can cause the modem to become unresponsive and even potentially cause damage to your equipment.

1. To send *AT* commands directly to the modem, tap *Menu > Commands* to view this screen:

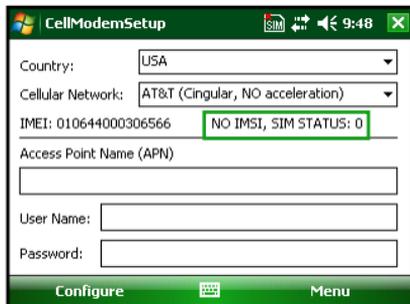


The current port is displayed along with the current baud rate. In this example, the Cellular Modem Expansion Pod has not yet been configured. **Port:** is “COM5.” When it is configured, **Port:** will be “VCA2.”

2. Type commands in the command box and press Return to send commands directly to the modem. Responses will be displayed in the box above the command box. This may be useful for diagnosing problems or performing additional modem configurations.

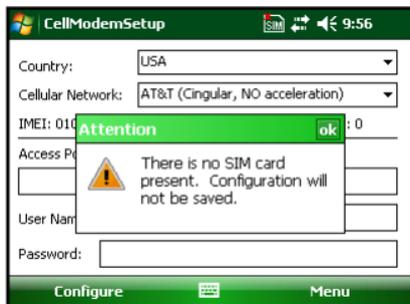
## Troubleshooting

1. If there are problems with the SIM card, the main screen will indicate that it is missing.



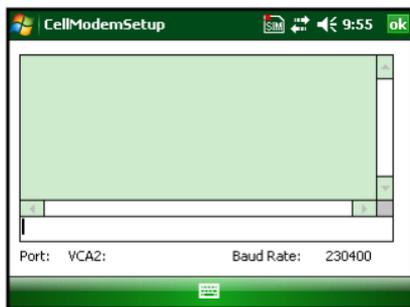
The IMSI number is an indication from the SIM card. It is unique to each card. The above example shows what is displayed when a SIM card is not present.

2. Configuration is not possible if the SIM card is not detected:



If a SIM card has been installed and there is still an error a new SIM card may be required.

3. If the SIM card is not present or functional, it is still possible to send commands to the modem.



## Cell Modem Operation

Once the cell modem expansion pack has been properly configured and set up, the following icons can be displayed on the status star:



No SIM Card icon—This icon notifies the user that:  
a) no SIM card is installed and b) it will be impossible to create an internet connection using the cell modem until a valid SIM card is installed.



No Internet Connection icon—This icon is displayed when there is no internet connection present or if the internet connection has been dropped. There are two ways to (re)establish an internet connection when the cell modem expansion pack is properly installed and has a valid SIM card installed:

1) If the application automatically establishes an internet connection (Internet Explorer is one example of an application that automatically establishes an internet connection, consult with your application supplier to determine the capabilities of the application), simply run the application and attempt to access the internet.

2) Go to the connections menu (tap *Start* > *Settings* > *Connections* or tap the No Internet Connection icon > *Settings*). Tap *Manage Existing Connections*, tap and hold *Modem connection* until the menu is displayed. Select *Connect*.



Internet Connection icon—This icon is displayed when an internet connection is present.

Signal Strength icon—This icon is displayed when an internet connection has been established using the cell modem expansion pack. It contains either the letter E or G and 0 to 4 bars. The E indicates EDGE and the G indicates GPRS. The quality of the cell modem signal and the data transmission speed is dependent on the number of signal strength bars displayed.

0–1 bar: signal strength is weak and the data transmission speed will be slow.

2–4 bars: signal strength is strong and transmission speed will be faster.

If no bars are displayed, the cell modem can still maintain an internet connection, but may not be able to transmit

any data. It may be necessary to move to another location with better signal strength in order to send and receive data effectively.

When the Internet Connection icon is displayed, the cell modem expansion pack will automatically send and receive data once sufficient signal strength is obtained.

When the No Internet Connection icon is displayed, the internet connection has been lost and it is necessary to reestablish an internet connection before data is sent or received.

## **Wireless Safety**

### **General Safety**



**CAUTION:** Maintain a separation distance of at least 20 cm (8 inches) between the transmitter's antenna and the body of the user and nearby persons.

### **RF Interference Issues**

It is important to follow any special regulations regarding the use of radio equipment due in particular to the possibility of radio frequency, RF, interference. Please follow the safety advice given below carefully.

- Switch OFF your cell modem when in an aircraft. The use of cellular telephones in an aircraft may endanger the operation of the aircraft, disrupt the cellular network and is illegal.

- Switch OFF your cell modem in hospitals and any other place where medical equipment may be in use.
- Respect restrictions on the use of radio equipment in fuel depots, chemical plants or where blasting operations are in progress.
- There may be a hazard associated with the operation of your cell modem close to inadequately protected personal medical devices such as hearing aids and pacemakers. Consult the manufacturers of the medical device to determine if it is adequately protected.
- Operation of your cell modem close to other electronic equipment may also cause interference if the equipment is inadequately protected. Observe any warning signs and manufacturers' recommendations.

## **Maintenance of Your Modem**

Your cell modem is the product of advanced engineering, design, and craftsmanship and should be treated with care. The suggestions below will help you to enjoy this product for many years.

- Do not attempt to disassemble the cell modem. There are no user serviceable parts inside.
- Do not place the cell modem alongside computer discs, credit or travel cards, or other magnetic media. The modem may affect the information contained on discs or cards.

## **Compliance and Regulatory Information**

### **United States and Canada**

In compliance with the FCC rules, 47 CFR 15.19(a)(3), and the Industry Canada rules, the following statement must appear on the device or in the user documentation.

This Class B digital apparatus complies with Canadian ICES-003. This device also complies with Part 15 of the FCC Rules. Operation of this equipment is subject to the following two conditions:

1. The device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

In compliance with the FCC rules, 47 CFR 15.105(b), the user must be notified that this equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause

harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

In compliance with the FCC rules, 47 CFR 15.21, the user must be notified that changes or modifications to the Field PC that are not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Only approved accessories may be used with this equipment. In general, all cables must be high quality, shielded, correctly terminated, and normally restricted to two meters in length. Wall chargers approved for this product employ special provisions to avoid radio interference and should not be altered or substituted.

This device is approved for co-location with the P700 Wi-Fi transceiver and BC04 Bluetooth transceiver radios integrated in the main units. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

This device operates in compliance with the FCC radio frequency exposure limits for an uncontrolled environment. Users must follow instructions provided in the user documentation to satisfy compliance with FCC radio frequency exposure requirements.

There cannot be any alteration to the authorized antenna system. The antenna shipped with the cell modem is the only one authorized for use. An antenna must be used when the pack is on the device. Using the wrong antenna or using the pack without an antenna voids the warranty.

This wireless modem is compliant with FCC regulations when operated within the temperature range of -30°C to +50°C. Do not operate the wireless modem outside of this temperature range.

### **European Union (CE Marking)**

This product is compliant with Council Directives 73/23/EEC, 89/336/EEC, and 1999/5/EC and conformity to the following standards is declared:

EN60950:2000, EN 301 511 V7.0.1 covered by 3GGP TS 51.010 V5.0.0

EN 301 489-1 V1.2.1 (2002-08), EN 301 489-7 V1.4.1 (2002-08)