

PinPoint XT

Quick Start Guide for your Cellular Network



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Activating your PinPoint XT on your Cellular Network

- Installing the SIM
- Configuring the APN
- Hardware Installation
- Indicator Lights
- Optional: Setting up a DUN Connection



This Quick Start guide provides step-by-step directions for activating your PinPoint XT on your Cellular Network's network.

Tip: For additional configuration options, refer to the User Guide for your PinPoint XT.

Installing the SIM

The Subscriber Identity Module (SIM) in the PinPoint XT is a smartcard that securely stores the key identifying a cellular subscriber. Generally, you will only need to install a SIM once in the life of the modem and it may be pre-installed by your Sierra Wireless Representative.

If the SIM was pre-installed, unless you need to set a custom APN, activation of your modem is complete. Skip to the PinPoint XT Placement section and/or to the DUN instructions, if you need Dial-Up Networking.

Cellular Account Required

- **Cellular Account Required-** To use your modem, you need to have a SIM with an active account with an EDGE GPRS cellular provider (such as your Cellular Network).

Software Required

- **ACEmanager** - Graphical interface for entering most AT Commands. You can download ACEmanager from the Sierra Wireless AirLink Solutions website: <http://www.sierrawireless.com/support/>. A default installation of this utility is assumed later in these directions

Hardware Required

- **Power adapter and a power source** - You will need a power supply and power source for the modem.
- **PC or laptop** - To configure the modem, you will need a computer with an available .

Tools Required

- **Small Phillips screw driver** - The Phillips screw driver is the one which is also called a plus (+) or X screw driver.

Procedure

1. Removing the faceplate
 - a. Unplug the PinPoint XT power and all cables.
 - b. Using a small phillips head screw driver, remove the screws on the front.
 - c. Set the faceplate aside.

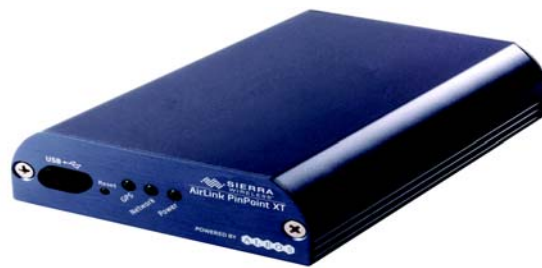


Figure 0-1: Faceplate

- d. Carefully remove the SIM card from the card you received from your Cellular Network.

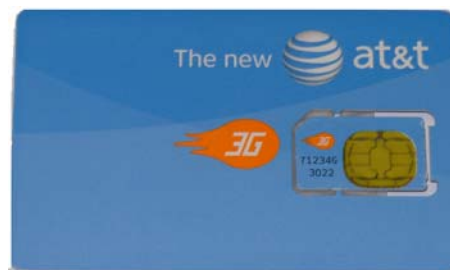


Figure 0-2: Sample of the SIM card

- e. Gently press the SIM card to secure in place.
- f.

Note: The card and SIM may be a different color than these examples.



Figure 0-3: Insert SIM in to the modem

Tip: The top of the card faces the bottom of the modem.

Replace the cover to prevent dust or other unwanted particles from entering the PinPoint XT. Once the cover is replaced, the installation is complete.

Note: The first time you power on your PinPoint XT with your new SIM, there may be a delay of up to 10 minutes for the initial network connection to occur.

Configuring the APN

The APN (Access Point Name) is the way your modem knows how it will be communicating with the network. The APN allows custom IP addressing and tailoring your company's wireless IP solution to meet the security and IP addressing requirements of your applications.

Note: Most accounts use the default addressing solution of Private or Public IP addresses supplied by the Internet and Proxy APNs. Only if you have a Static or Custom IP address should you need to configure a custom APNs.

The default APN is *Internet*. If you need a different APN, use ACEmanager to configure it.

Hardware Installation

Note: During installation, please be sure that the cables are secure but do not bear any additional weight that could loosen the connector from the unit.

Your PinPoint XT should be mounted in a position that allows easy access for the cables so they are not bent, constricted, in close proximity to high amperage, or exposed to extreme temperatures. The LEDs on the front panel should be visible for ease of operational verification. You should ensure that there is adequate airflow around the modem but that it is kept free from direct exposure to the elements, such as sun, rain, dust, etc.

Caution: The PinPoint XT is in a hardened case and designed for use in industrial and extreme environments. However, unless you are using cables expressly designed for such environments, they can fail if exposed to the same conditions the PinPoint XT can withstand.



Figure 0-4: PinPoint XT Connectors

Cellular

Note: This device is not intended for use within close proximity of the human body. Antenna installation should provide for at least a 20 CM separation from the operator.

Antennas selected should not exceed a maximum gain of 5 dBi under standard installation configuration. In more complex installations (such as those requiring long lengths of cable and/or multiple connections), it's imperative that the installer follow maximum dBi gain guidelines in accordance with the radio communications regulations of the Federal Communications Commission (FCC), Industry Canada, or your country's regulatory body (if used outside the US).

Your PinPoint XT will work with most cellular antennas with a connector. Connect the primary antenna or primary RF cable directly to the antenna connector on the back of the PinPoint XT.

Tip: When using a cable to an antenna placed away from the modem, minimize the length of your cable. All gain from a more advantageous antenna placement can be lost with a long cable to the modem.

Your PinPoint XT will work with most standard active GPS antennas. Connect the GPS antenna or cable directly to the threaded SMA connector.

Mount the GPS Antenna in the vehicle. The less the cable is wrapped and bound together, the better it will perform. Place it on the roof, or on the dash, or rear panel where it has a good view of the sky (greater than a 90 angle view of the sky).

There are three options for antenna mounts:

- Magnetic roof-mount
- Through glass-mount
- Permanent mount

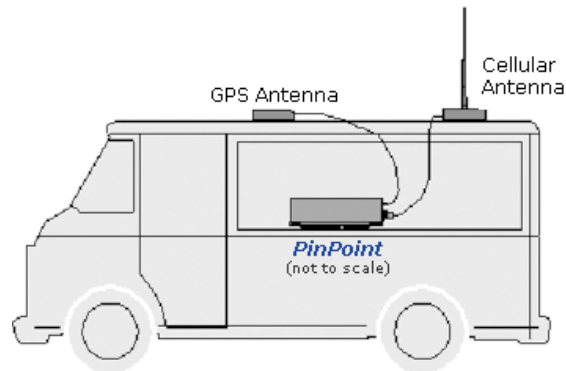


Figure 0-5: GPS Antenna Placement for a Vehicle

Power



Warning: *Risk of electric shock: Only use the supply voltages listed in this user guide.*



Warning: *When using AC to DC adapter the ambient temperature should not exceed 40°C.*

Your PinPoint XT can be used with either DC or AC, with the appropriate power adapter. DC cables and AC adapters are available as optional accessories in addition to the one included with your PinPoint XT.

The cable included with your PinPoint XT, is a DC cable with Standby Ignition Sense which connects to the 20-pin I/O connector. Other optional accessory cables include:

- A DC power cable with a DB-9 female serial connector (P/N 120-140-1021)
- A DC power cable with I/Os (P/N 120-140-1022),
- A fused DC power cable (P/N 120-140-1023),
- A DC power cable with a battery-charger circuit
- An auxiliary battery connector (P/N 120-140-1024)
- A DC power cable with 4-pin adaptor (P/N 120-140-1025) which connects to AC adaptor (P/N 120-100-1013).

The DC power cable positive lead should be connected to the battery or power source positive terminal. The power cable negative lead should be connected to the battery or power source negative terminal.

The PinPoint XT has an internal polysilicon circuit breaker that opens at 0.5 to 1.0 amps of current.

If you wish to use the Standby Ignition Sense (SISE) feature of your PinPoint XT, the wire of the DC power cable should be used to connect to your ignition. When SISE is enabled in the modem and the ignition sense connector is wired to your vehicle, the ignition sense will provide a link to the modem to enable it to enter a low-power, standby mode when your vehicle is turned off and power up more quickly when the ignition is started.

Warning: *Explosion Hazard - Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.*

Connecting to a Computer or other Device



Figure 0-6: USB

Your PinPoint XT's full-speed (12 Mbit) USB 2.0 port can be connected directly to most computers or other devices using a standard full-speed USB 2.0 cable. If the computer or device you are connecting or the cable is not rated for full-speed, the modem will communicate at a reduced speed to match. The PinPoint XT functions as a device, not a host.

When it is connected to a computer, the USB port should be seen as a COM port or Ethernet port after the applicable driver is installed.

The PinPoint XT has a standard mini-B connector.



Figure 0-7: I/O

Your PinPoint XT also has an I/O port with digital inputs, analog inputs, and relay outputs which can be connected to external devices.

The I/O port can use an optional I/O harness available through Sierra Wireless.

Indicator Lights

When solid, PinPoint XT indicates a successful connection. When your PinPoint XT is connected to power and an antenna, there is a specific pattern to the lights to indicate its operation mode.



Figure 0-8: PinPoint XT Indicator lights

- **Network** - Indicates a successful connection to the cellular network with an IP address given and a channel acquired.

RSSI LED Ranges

RSSI/Signal LED Status	Ranges of RSSI (dBm)
On Solid	Equal to or stronger than -69
Fast Blink	-70 to -79
Normal blink	-80 to -89
Slow Blink	-90 to -99
Extinguished	Equal to or weaker than -100

- **GPS** - Indicates a GPS fix. When lit, the PinPoint XT has GPS coordinates to report.
- **Power** - Indicates the power adapter is connected and there is power getting to the PinPoint XT.

Caution: *If you reset the modem configuration using the reset button, you may need to reconfigure your APN.*

Light Patterns

The LEDs on the front of the modem will respond in different patterns to indicate modem states.

- **Normal** - Each LED, mentioned above, is lit as applicable.
- **Start up** - The LEDs will cycle from left to right.
- **PassThru mode** - Network LED will blink.
- **Low Power** - All LEDs will be off except the power LED which will blink every 3 seconds.
- **Bad Firmware** - The Network LED will blink.
- **Incorrect Firmware** - The GPS LED will blink.

Optional: Setting up a DUN Connection

Dial-up Networking (DUN) allows a computer or other device to use the or USB virtual serial port on your PinPoint XT to connect to the Internet or private network using PPP just like an analog modem using a standard phone line.

Caution: *To install any driver on your computer, you may need to be logged in as Administrator or have Administrator privileges for your login.*

Microsoft Windows XP is used in the examples below. The modem driver installation and DUN setup and configuration is similar in Microsoft Windows products. Examples are not provided here for installing the driver or configuring DUN for any other operating system.

Standard installations of Microsoft Windows XP and 2000 include a generic device driver which will work with your PinPoint XT.

- a. Connect the device to the computer with a DB-9 cable or the USB port in serial mode.
 - b. Plug in the AC adapter, connect the antenna(s) and power on the device.
-
- a. Select *Start > Control Panel > Phone and device Options* (in Classic View).

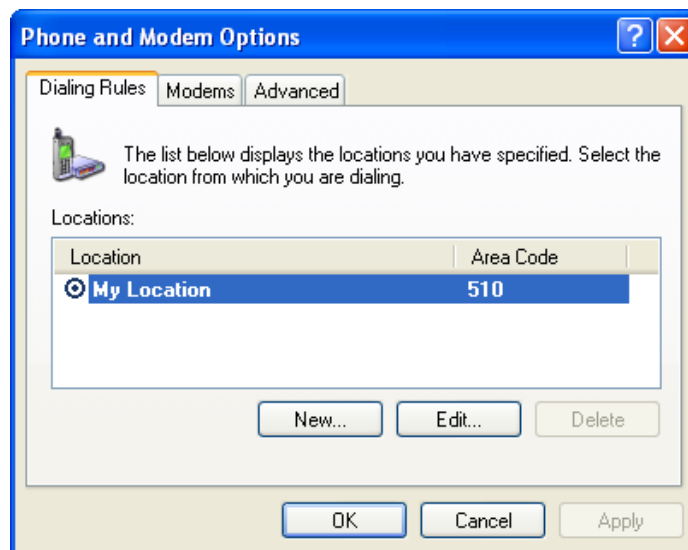


Figure 0-9: Phone and device Options

- b. Select the *devices* tab.

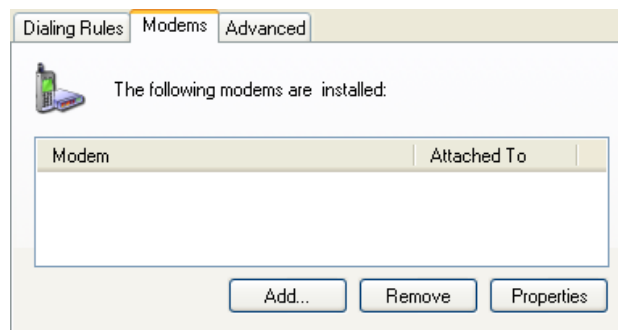


Figure 0-10: Phone and device Options: devices

c. Select *Add*.



Figure 0-11: Add Hardware Wizard

d. Check *Don't detect my device; I will select it from a list*.

e. Select *Next*.

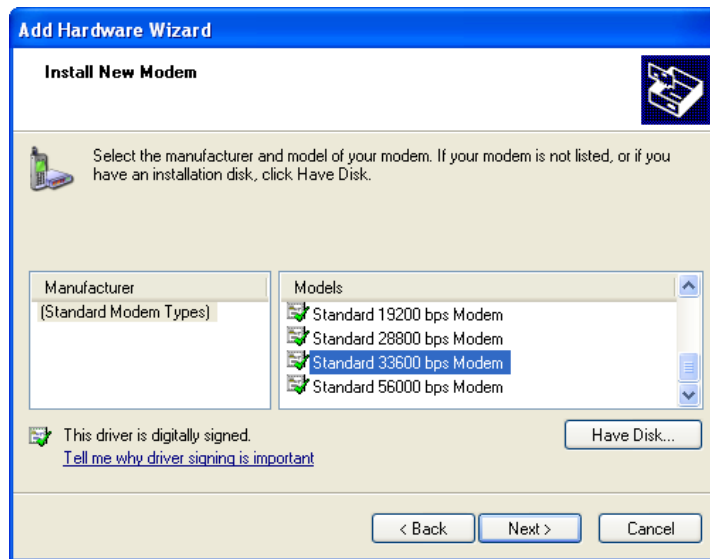


Figure 0-12: Add Hardware Wizard: Install New device

f. Select *(Standard device Types)* from the Manufacturers column.

g. Select *Standard 33600 bps device* from the Models column.

Tip: If you have the speed for your device configured as something other than the default, use the Standard device that matches the speed you configured.

h. Select *Next*.

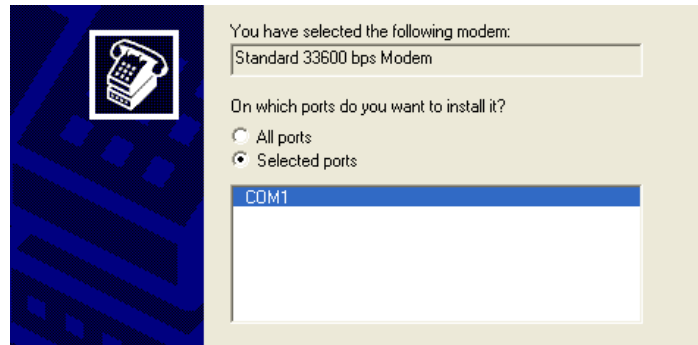


Figure 0-13: Add Hardware Wizard: Select Ports

- i. Check *Selected Ports*.
- j. Select the COM port the device is connected to (commonly COM1).
- k. Select *Next*.

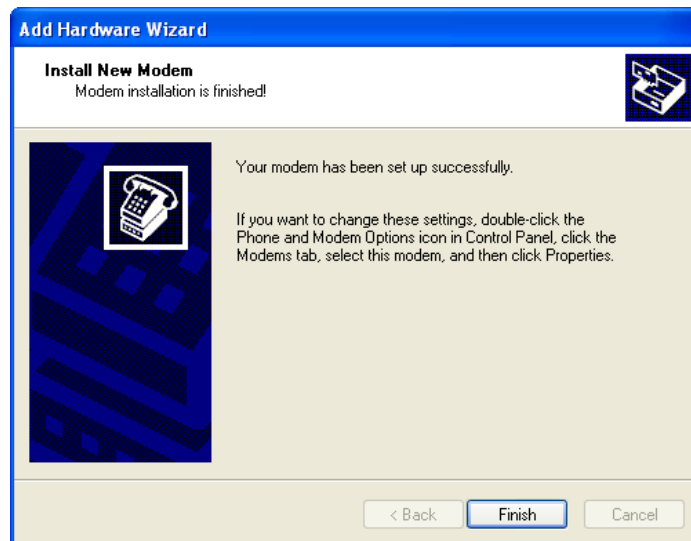


Figure 0-14: Add Hardware Wizard: Finish

- l. Once the device driver is installed, select *Finish*.

When you return to the *Phone and device Options* window, you should see the newly installed device “attached to” the correct COM port.

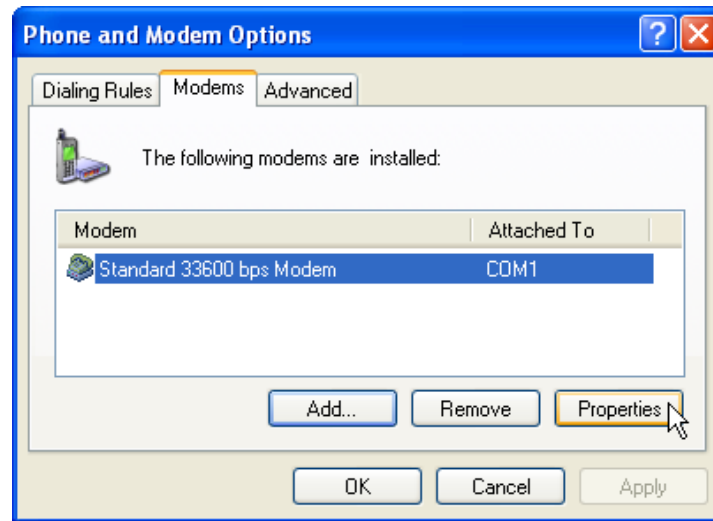


Figure 0-15: Phone and device Options: devices

- a. Highlight the device and select *Properties*.

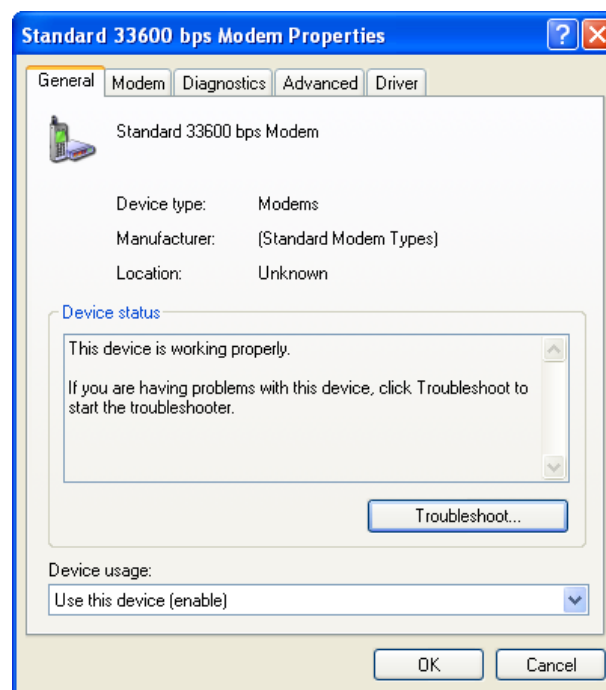


Figure 0-16: device Properties

- b. Select the device tab.

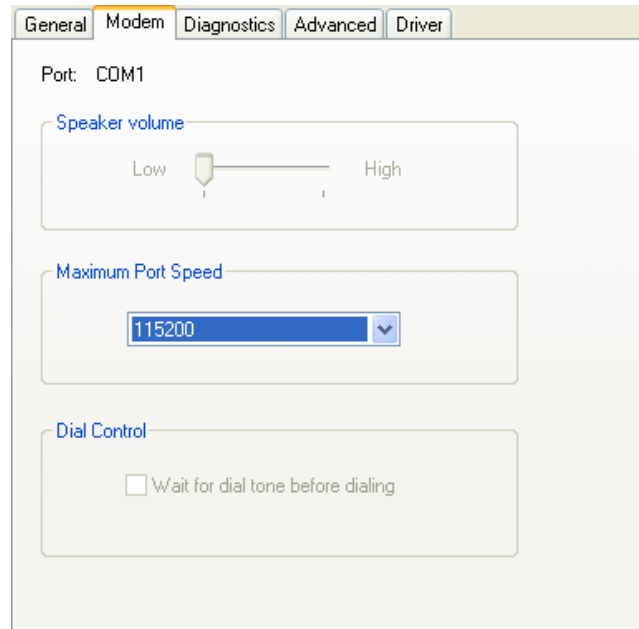


Figure 0-17: device Properties: device

- c. Maximum Port Speed should be set to 115200 (default).
- d. Select *OK* to exit.
- e. Select *OK* again to exit out of the Phone and device Options.

