This document explains how to set up dial up connection for a UMTS/HSPA Data card running Windows Vista.
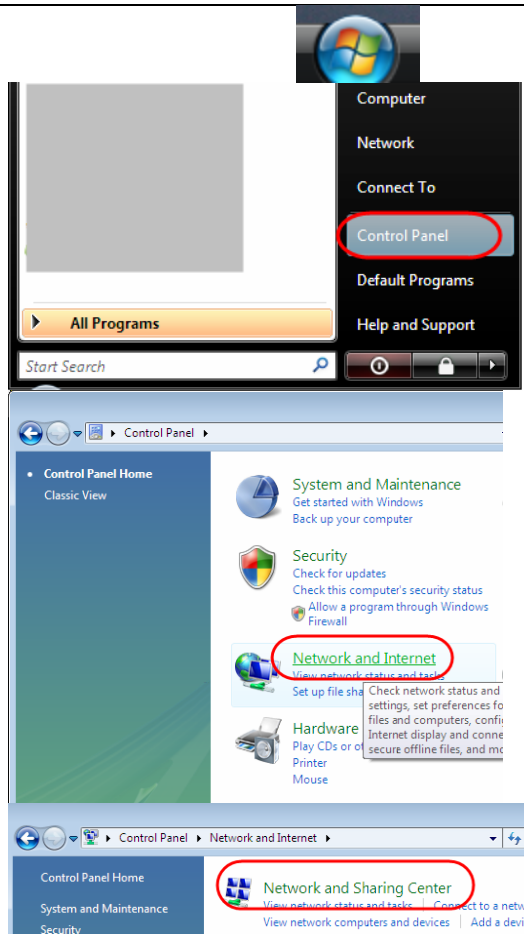

Preparation
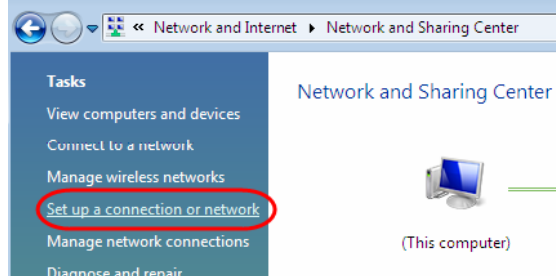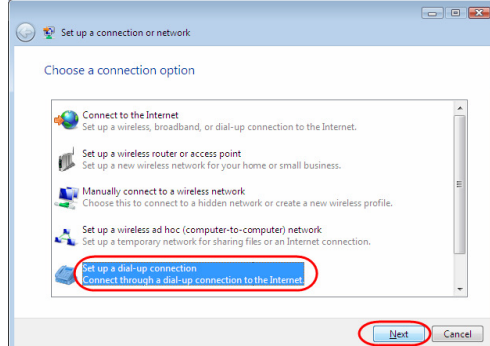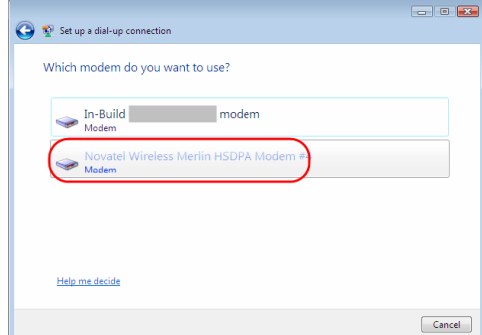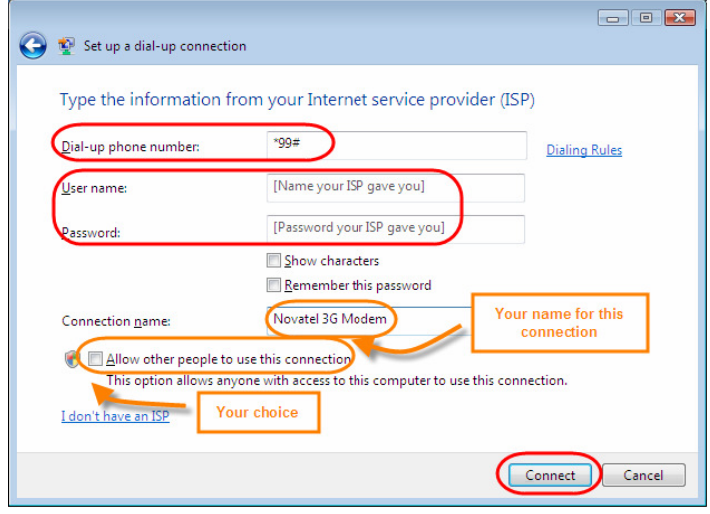
Requirements

- ✓ Windows Vista pre-installed on your computer
- ✓ Administrator privileges on the Windows Vista machine.
- ✓ Data Card "Modem"
- ✓ Activated SIM Card
- ✓ Network Coverage
- ✓ Network Settings Information for your service provider's network (need APN, user name, password)


Setup

When you have met all these requirements, follow these steps to perform the installation and configuration.

Close all windows and programs open on your screen	
Click **Start** ->**Settings** ->**Control Panel** **-> Network and Internet** **-> Network and Sharing Center**	

Network and Sharing Center **Select** "Set up a connection or network"	
Set up a connection or network **Select** 'Set up a dial-up connection: click **Next** to continue	
Choose Modem **Select** '**Novatel Wireless……**'.	

Enter Dial-up Phone Number
  – ***99#**
 	
Enter your user name and password
  - **User name and password** provided by your network service provider
Enter a **connection name**
 	
Depending on your preference, you may choose to make this connection available to other users on this computer
 	
Click **Connect**	

Connecting to	
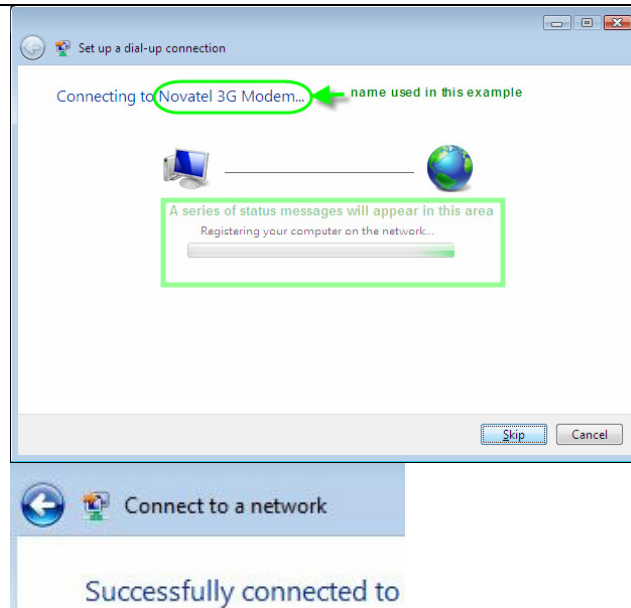
This will allow you to connect to the network. In order to use the internet, you must do one more step.

Add APN to modem initialization string.
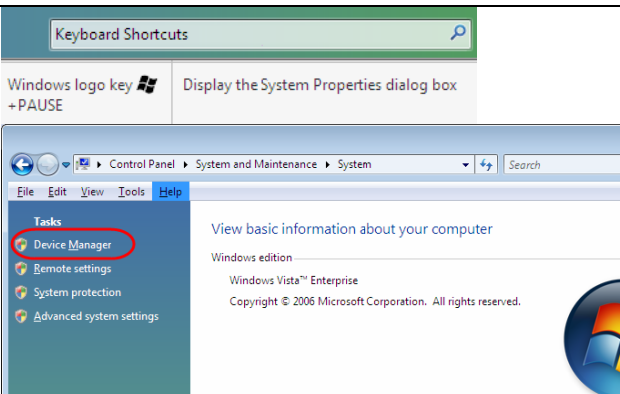
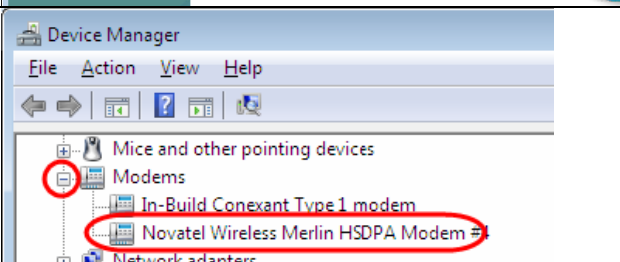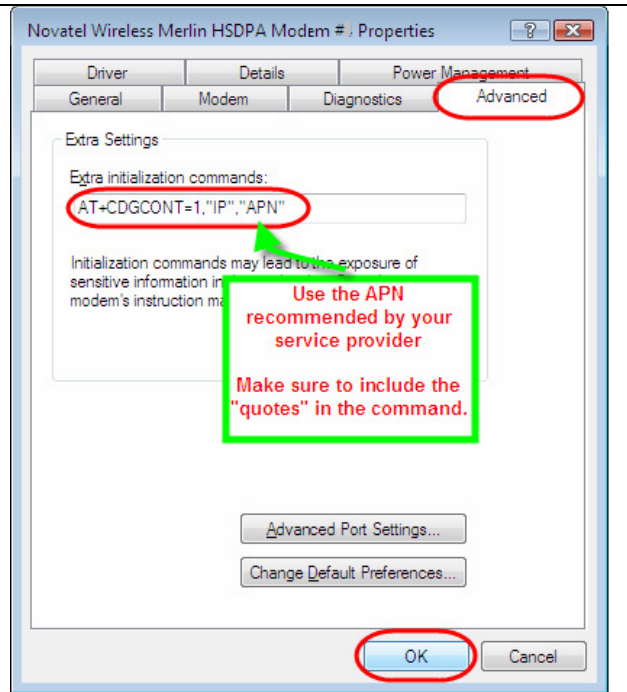|	
Go to System Properties screen Quickest way is to **Press Windows key and Pause key** at same time to open System Select '**Device Manager**'	
Expand Modems **Click on '+'** to expand Modems **Right Click on "Novatel Wireless…"** and select **Properties**	

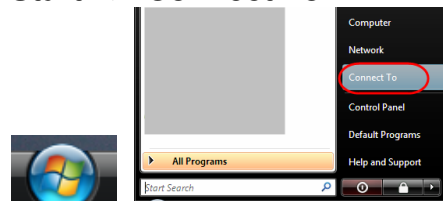|	
Choose **Advanced** tab **Enter the Extra initialization command string** in order to select the APN provided by your wireless network service provider. The format is AT+CGDCONT=1,"IP","APNstring" - "quotes" are required. - APNstring as per instruction from your service provider Select **OK**.	Novatel Wireless Merlin HSDPA Modem # Properties Driver / Details / Power Management / General / Modem / Diagnostics / Advanced Extra Settings Extra initialization commands: AT+CDGCONT=1,"IP","APN" Initialization commands may lead to the exposure of sensitive information in modem's instruction ma Use the APN recommended by your service provider Make sure to include the "quotes" in the command. Advanced Port Settings... Change Default Preferences... OK Cancel
Close Device Manager	

Connect

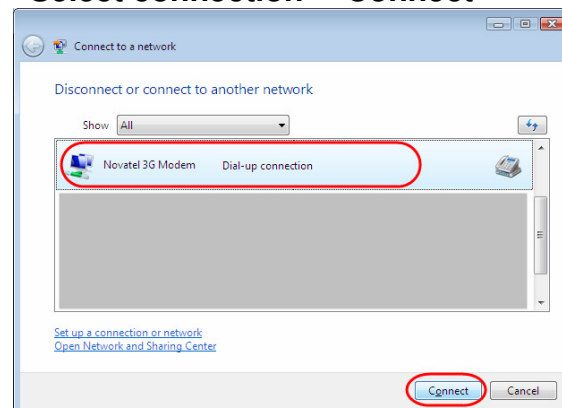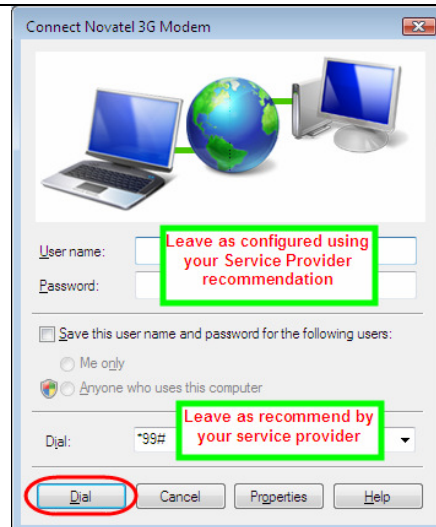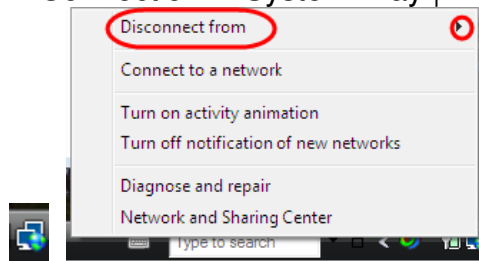|	
If you created a shortcut icon on the desktop.	Select (Double click) the shortcut icon for your connection (the name entered in the wizard) on the desktop. Click 'Dial'
If you did not create and shortcut icon or it has been deleted.	Go to '**Start**' -> '**Connect To**' Computer Network Connect To Control Panel Default Programs All Programs Help and Support Start Search '**Select connection**'– '**Connect**' Connect to a network Disconnect or connect to another network Show All Novatel 3G Modem Dial-up connection Set up a connection or network Open Network and Sharing Center Connect Cancel

| Click Dial | |

Disconnect

Network Connection in System Tray | Right Click | Disconnect from
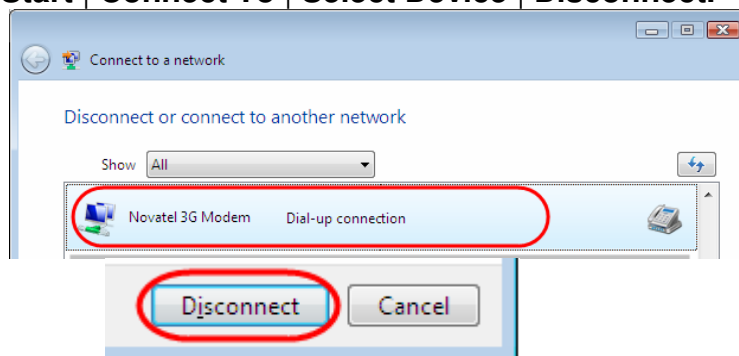
 Novatel Wireless Modem.

Or

To disconnect, **double click** on the desktop shortcut icon for your dialup connection to open connection status and click on **Disconnect.**

Or

Go to **Start** | **Connect To** | **Select Device** | **Disconnect.**

Troubleshooting

LED provides good diagnostic information.
8xx and 9xx models

LED Color		LED State	Description
RED		SIM Error	Flashing: SIM card may be missing or inserted incorrectly.
		No Service	Solid: GPRS/EDGE/UMTS/HSDPA cellular service is currently not available.
GREEN		GPRS	Flashing: GPRS service is available. Solid: Connected to a network using GPRS.
VIOLET		EDGE	Flashing: EDGE service is available. Solid: Connected to a network using EDGE.
BLUE		UMTS	Flashing: UMTS service is available. Solid:* Connected to a network using UMTS.
YELLOW		HSDPA	Solid:* HSDPA service is available and is being used during the download.

7xx, 6xx and 5xx models

Cadence (flashing sequence)	LED Display	Merlin State	Cause
(1/4sec) 250ms ON (1/4sec) 250ms OFF	RED	Merlin trying to read SIM	The modem is unable to read the SIM. An error has occurred in the modem firmware.
ON (Not flashing)	RED	Merlin Searching for wireless service	The Merlin is not receiving a signal from the wireless network
(1/4sec) 250ms ON (1 3/4sec) 1750ms OFF	BLUE	Your Merlin is currently receiving a UMTS circuit switched (CS) signal from the network and has registered on the circuit switched (CS) domain	
(1/4sec) 250ms ON (1/4sec) 250ms OFF (1/4sec) 250ms ON (1 3/4sec) 1750ms OFF	BLUE	Your Merlin is currently receiving a UMTS packet switched (PS) signal from the network and has registered on the packet switched (PS) domain (also CS i.e PS or PS+CS)	
ON (Not flashing)	BLUE	Your Merlin is currently PDP context activated on the UMTS system.	
(1/4sec) 250ms ON (1 3/4sec) 1750ms OFF	GREEN	Your Merlin is currently receiving a GSM circuit switched (CS) signal from the network and has registered on the GSM circuit switched (CS) domain	
(1/4sec) 250ms ON (1/4sec) 250ms OFF (1/4sec) 250ms ON (1 3/4sec) 1750ms OFF	GREEN	Your Merlin is currently receiving a GSM/GPRS packet switched (PS) signal from the network and has registered on the GSM/GPRS packet switched (PS) domain. (also CS i.e PS or CS)	
ON (Not flashing)	GREEN	Your Merlin is currently PDP (Packet Data Protocol) context activated on the GSM/GPRS system	

If the LED is not lit, then check that the device is connected properly. If physical connection seems good, then check for the device in the device manager.

Device Manager

Verify that your device is found in Device Manager without Red 'X's or Yellow Triangles with '!". If these conditions show, then there is a driver problem or device conflict

When you insert your Novatel Wireless device into your computer, Windows will double ding and popup messages indicating new hardware found. Please note any error or warning messages that may popup.

To get Hardware Device Manager Information

Go to System Properties screen Quickest way is to **Press Windows key and Pause key** at same time to open System Select '**Device Manager'**	
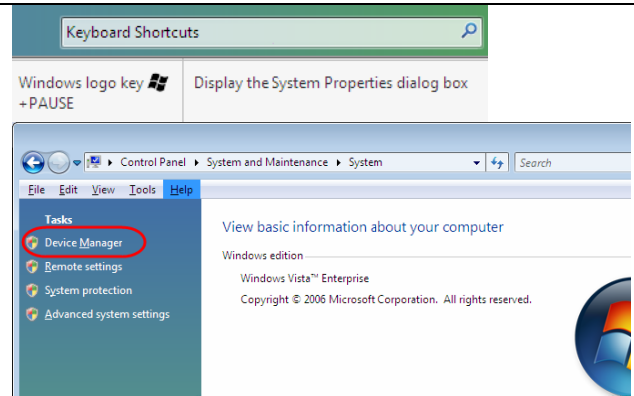
- Click '+' to expand a device type
  - Highlight device (left click)
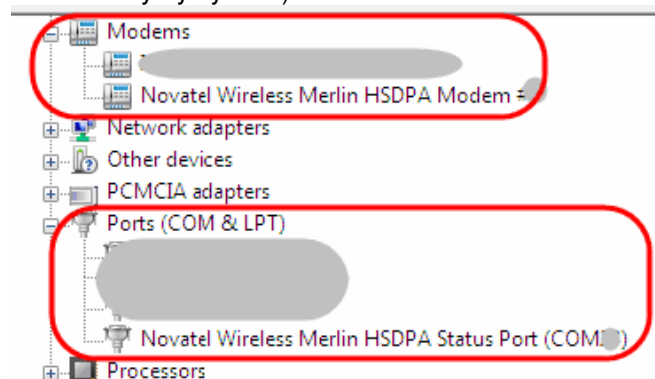 - Right Click – Select Properties (left click)

Please check one of the following sections appropriate for your device

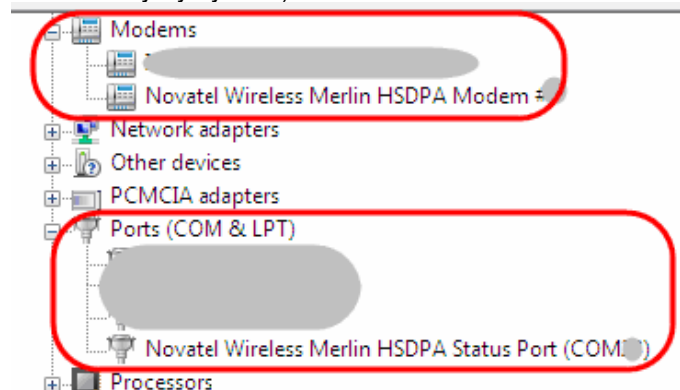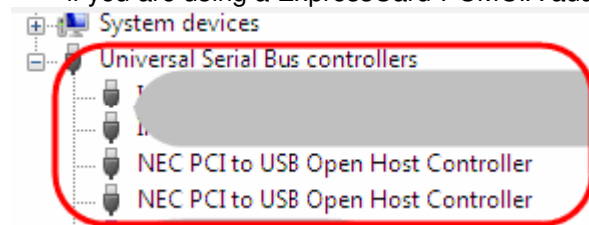|	
Ovation USB Devices MC950D MC930D	2 Devices **Must** show - Modem Section – Novatel Wireless Merlin HSDPA Modem - Ports Section – Novatel Wireless Merlin HSDPA Status Port (COM# will vary by system) - Depending on the device and options available, other Novatel Wireless Merlin ports may also show. - The 'Safely Remove Device' icon may not show in system tray – not required for this device

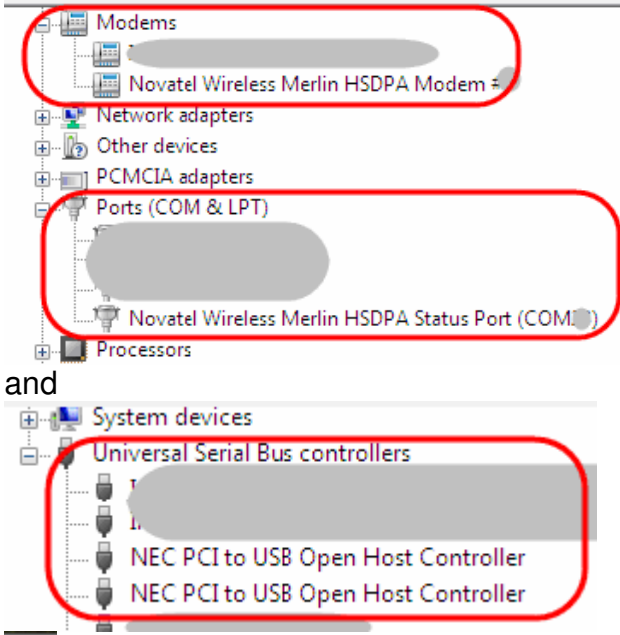| ExpressCard Devices XU870 X950D	2 Devices **Must** show - Modem Section – Novatel Wireless Merlin HSDPA Modem - Ports Section – Novatel Wireless Merlin HSDPA Status Port (COM# will vary by system) - Depending on the device and options available, other Novatel Wireless Merlin ports may also show. - The 'Safely Remove Device' icon may not show in system tray – not required for this device Note - if you are using a ExpressCard-PCMCIA adapter, you will also see - Safely Remove Device Icon will show in System Tray

PCMCIA Devices U730, U740 U630 U520, U530	3 Devices **MUST** show - Modem Section – Novatel Wireless Merlin UMTS or HSDPA Modem - Ports Section – Novatel Wireless Merlin UMTS or HSDPA Status Port (COM# will vary by system) - Universal Serial Bus Controller – NEC PCI to USB Open Host Controller and Safely Remove Device Icon will show in System Tray

To remove PCMCIA modems or Expresscard modems using a PCMCIA adapter without shutting down the computer

– Right click on the safely remove icon is system tray

– Click on
– Click on "**NEC PCI to USB….**", **Stop** | click **OK** | click **Close**.
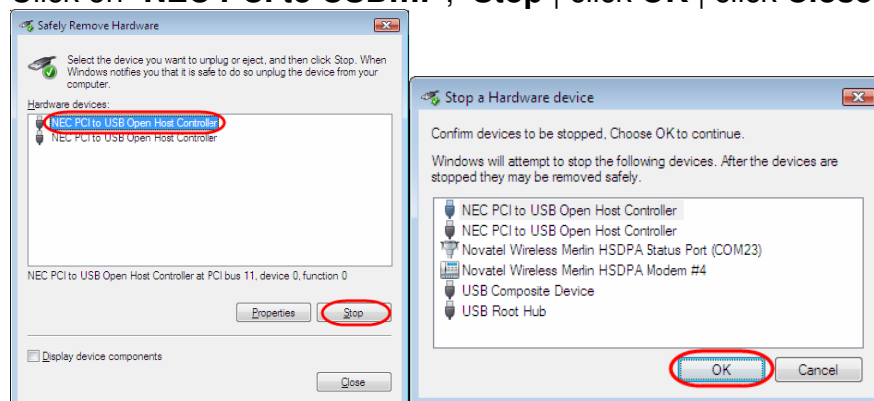
If required, drivers are available for download at
www.nvtl.com/releases/NvtlDriver_V2.01.07MSI.zip