ADU-E100D
AnyDATA USB Modem
User Manual

V7.0.0
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AnyDATA CDMA Module Series USB Modem Reference Design Specification
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⚠	**Warning: Exposure to Radio Frequency Radiation** The radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact during normal operation is minimized. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna should not be less than 20cm during normal operation and the gain of the external antenna must not exceed 1dBi. This device contains AnyDATA DTEV-DUAL module whose FCC ID is P4M-DTEVDUAL and IC certificate number is 4594A-DTEVDUAL

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0. Revision History.

The revision history for this manual is show.

Revision History

Version	Date	Description
1.0	May. 14. 2005	Initial release – AnyDATA USB Modem
1.1	May. 16. 2005	Add Hardware Information
1.2	May. 17. 2005	Uct e-mail id change
2.0.0	July. 4. 2005	1. Version Recreate – manual flow 2. Troubleshooting. add 3. Quick Guide add
3.0.0	July.8.2005	Modify Troubleshooting. Hangul Font Removed Etc…
4.0.0	July. 14. 2005	Bug And Capture Image
5.0.0	Aug. 1. 2005	LED operation change Add hardware technical standards Add Power Key operation Add FCC warning statement
6.0.0	May. 19.2006	Removed UIM Function for ADU-E100D V3.0U Removed voice/SMS support

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1. About AnyDATA USB MODEM

(1) Product Description and Feature

In today's fast-moving economy, the need to remain connected is essential. The world's most compact EVDO USB modem, ADU-E100D, offers the appropriate solution to home and mobile connectivity using antenna diversity that enables better connectivity and data speed in poor signal environment and internal antenna technology. It provides extensive and reliable wireless data communication at speed up to 2.4Mbps downlink and 153kbps uplink, The AnyDATA EVDO USB modem connects to USB port, and the application software effortlessly integrates into a Windows based PC as well as notebook computer.

- EVDO technology based on Qualcomm MSM6500 chipset
- Support CDMA EVDO and 1xRTT
- High speed wireless data up to 2.4Mbps downlink and 153kpbs uplink
- Internal antenna supporting diversity
- 4 LEDs
- Support USB 2.0 interface with PC
- Battery included, 1660mAh

(2) Technical Specification

Technical Standard	- CDMA EVDO - CDMA 1xRTT - TCP/IP and PPP
RF Technology	- Antenna Diversity - Internal Antenna
Electrical	- Sensitivity : Lower than –104dBm - Transmit Power : 400mW(26dBm) max. - 4 LED indicators
Input Power	- External Power : DC 5V - Battery : 4.2V Li-Ion, 1660mAh
Interface	- Mini-B type USB - DC Power Jack - External Antenna Port
Current Consumption	- Traffic Mode: 750mA max. at 5V - Idle Mode : 110mA - Sleep Mode : 9mA
Antenna	- Two internal antennas to support diversity
Data Speed	- Download: 2.4Mbps max. - Upload : 153kbps
System Requirement	- Windows 2000/XP - USB Port - Above 64MB RAM
Frequency	-RX :869.04MHz~893.37MHz,1931.25MHz~1988.75MHz -TX :824.04MHz~848.97MHz,1851.25MHz~1908.75MHz
Size	- 100mm(L)*56mm(W)*14mm(H) without battery - 100mm(L)*56mm(W)*25mm(H) with battery
Weight	- 61g without battery - 124g with battery
Software Spec.	- CDMA2000 High rate packet data air interface - CDMA 1xRTT, IS-95A/B - IS-637A - IS-707-A - IS-837, IS-856, IS-866, IS-890
Hardware Spec.	- IS-98E - IS-866
Environmental	- Operating Temperature: -30℃ ~ 60℃ without battery - -20℃ ~ 50℃ with battery

2. Getting Started

In order to use the AnyDATA USB MODEM, the following must be satisfied:

1. Easy Wireless Net Software and AnyDATA USB MODEM Driver have been installed on the computer.
2. Must have a proper user name and password from the local CDMA operator.
3. AnyDATA EVDO USB MODEM must have certification from the local CDMA operator.

CAUTION: PLEASE CONNECT THE BATTERY OR EXTERNAL AC/DC ADAPTOR TO INSURE OPERATION OF THE MODEM. USING THE MODEM ON-THE-ROAD, PLEASE KEEP BATTERY INTACT WITH THE MODEM. AND MAKE SURE THE BATTEY IS FULLY CHARGED BEFORE USING. WHEN THE BATTEY VOLTAGE IS LOW, MAKE SURE TO CHARGE IT BEFORE CONTINUING TO USE.

(1) USB Modem Components

IDLE LED

BUSY LED

POWER LED

POWER KEY

INTERNAL ANTENNA

+5V DC POWER JACK

Mini USB Port
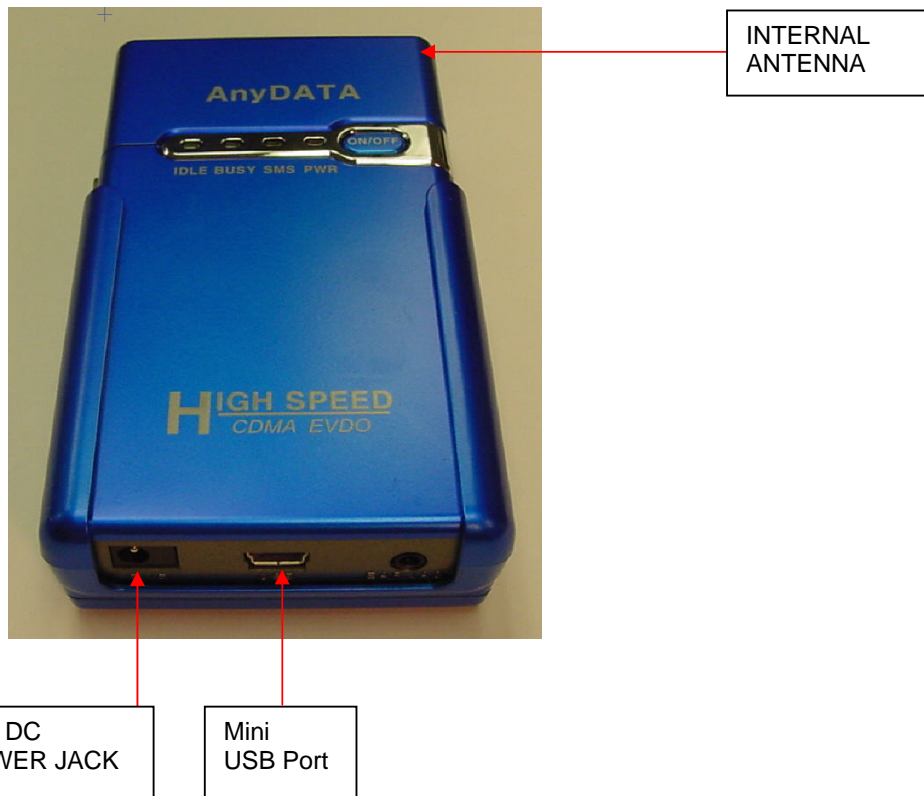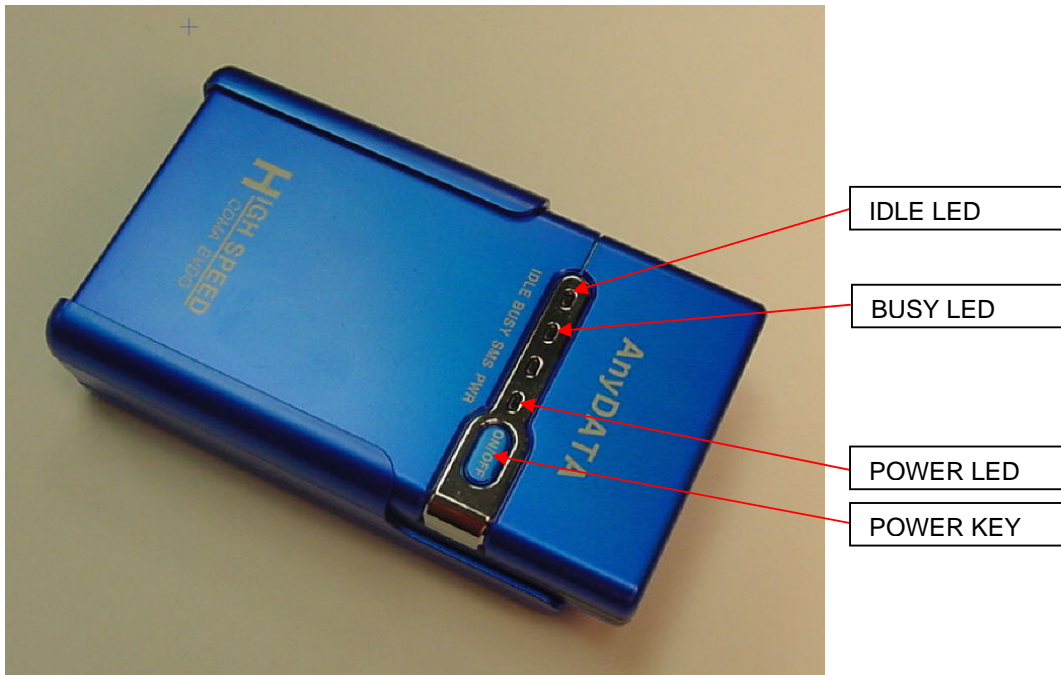
Battery Contact Switch

Primary Channel RF Test Port

Second Channel RF Test Port

Battery Contact Pins

* Caution : When dismounting the battery, push the bottom of modem upward to slide easily out from the battery cradle.

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A) LED indicator Information

1. POWER :
• Red : Modem is on.
• Off : Modem is off.

2. IDLE (Service/Mode) :
• Blue : In service area
• Off : Out of service area

3. BUSY (Traffic) :
• Blue : Data call connected
• Off : Not in connection

B) Other Components

1. Internal Antenna
• Two antenna for diversity reception are already installed in the device.

2. +5V DC Power Jack
• +5V main power supply to USB modem and is used for charging. Modem works with external +5V power only.

3. Mini USB Port
• Connected to desktop or notebook computer.
• Modem doesn't work if both of battery and AC/DC adaptor are removed.

4. Ear Jack (Not Supported)

5. Battery Contact Switch

6. External Antenna Port
• Used as a test port in manufacturing.

7. Battery Contact Pins

8. Power Key
• Press shortly to turn the modem on
• Press for more than 2 seconds then release to turn off the modem

3. Program Installation

(1) Introduction

This section describes a step-by-step method to install the AnyDATA USB MODEM and the Easy Wireless Net Software.

Note : Must install the software before connecting the AnyDATA USB MODEM to PC/Notebook.

(2) Minimum System Requirement

A) PC Hardware
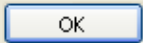
Recommended: PC/Notebook at speed of 300 MHz or higher.
Minimum: 233 MHz speed required, * Intel Pentium/Celeron products,
AMD K6/Athlon/Duron products or compatible processors
Recommend to use 128MB RAM or higher
Minimum 64MB of memory must be used,
but in this case the performance will be degraded and certain features will be limited.
Required: At least 100 MB of free hard disk space is required.
Motherboard or PCI card that supports USB.
Video adaptor with Super VGA (800 x 600) or higher resolution and Monitor
CD-ROM or DVD Optical Drive
Keyboard and Mouse

B) Operating System

Windows XP Home or Professional
Windows 2000 (with Service Pack 3 for optimal performances)

(3) Installing Easy Wireless Net Software.

1. Double click "setup.exe" from the supplied CD.

2. Select the desire language as shown below.

3. Press [OK] button to proceed.

   By pressing [Cancel] button, the installation of the Easy Wireless Net Program will stop.
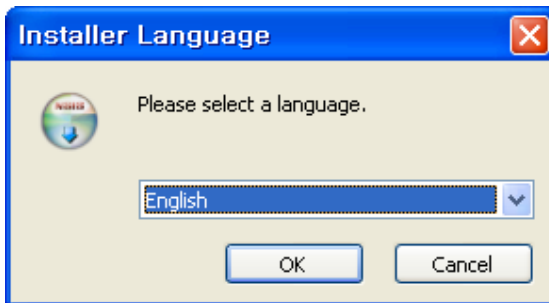
4. Welcoming message for using the Easy Wireless Net Program window will appear.

5. Press [Next >] button to proceed.
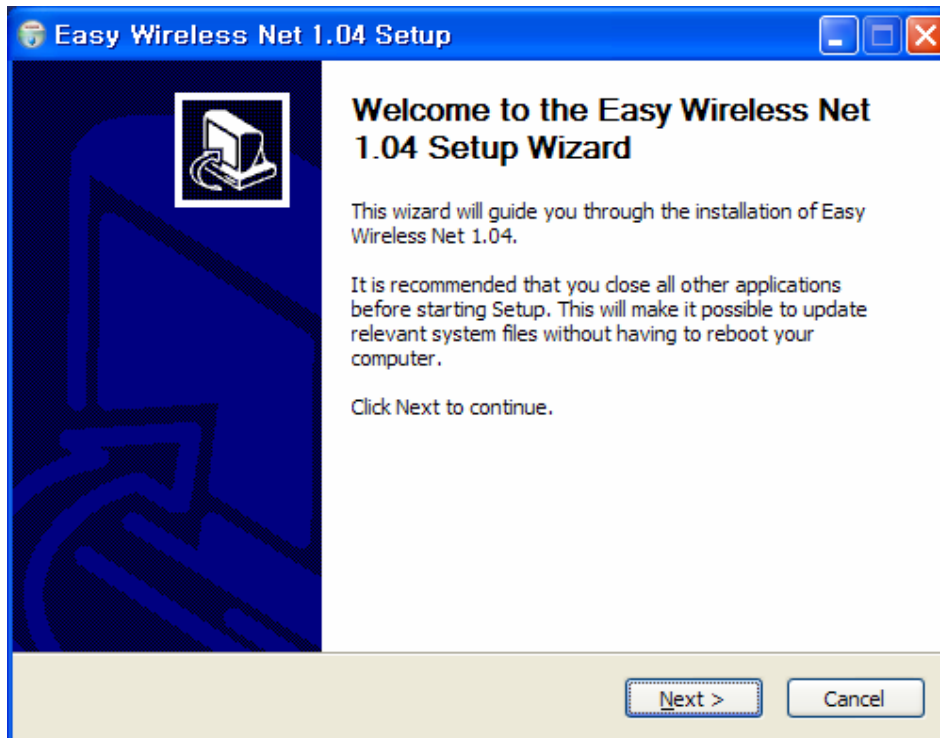
6. Next window is related to License Agreement. Please read carefully.

7. Press "I Agree" button to advance to the next step.
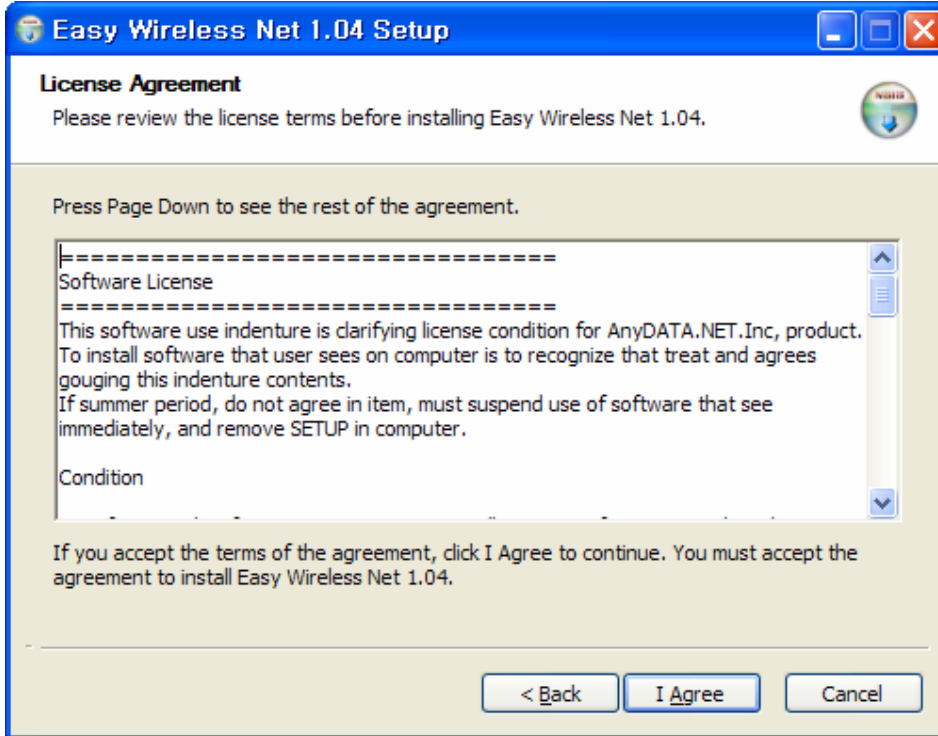
8. Next window asks for the proper path for installing the program.

Default path is "C:\Program Files\Easy Wireless Net".

9. Press [Install] button to install the program.
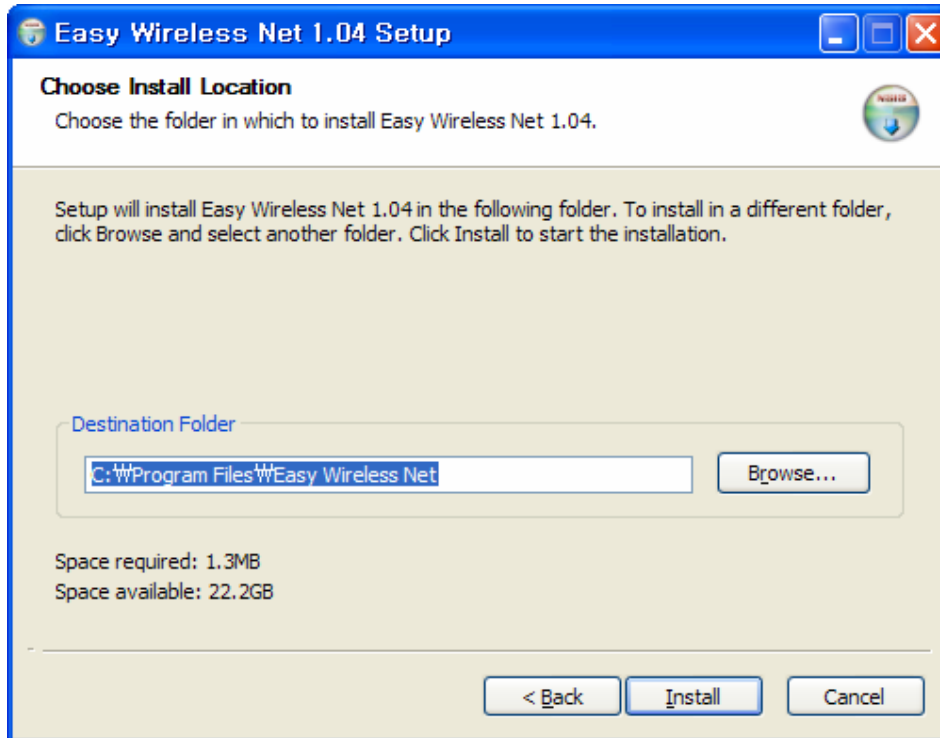
10. When program has been successfully installed, following window will display.

11. Press [Finish] button for ending the program installation.
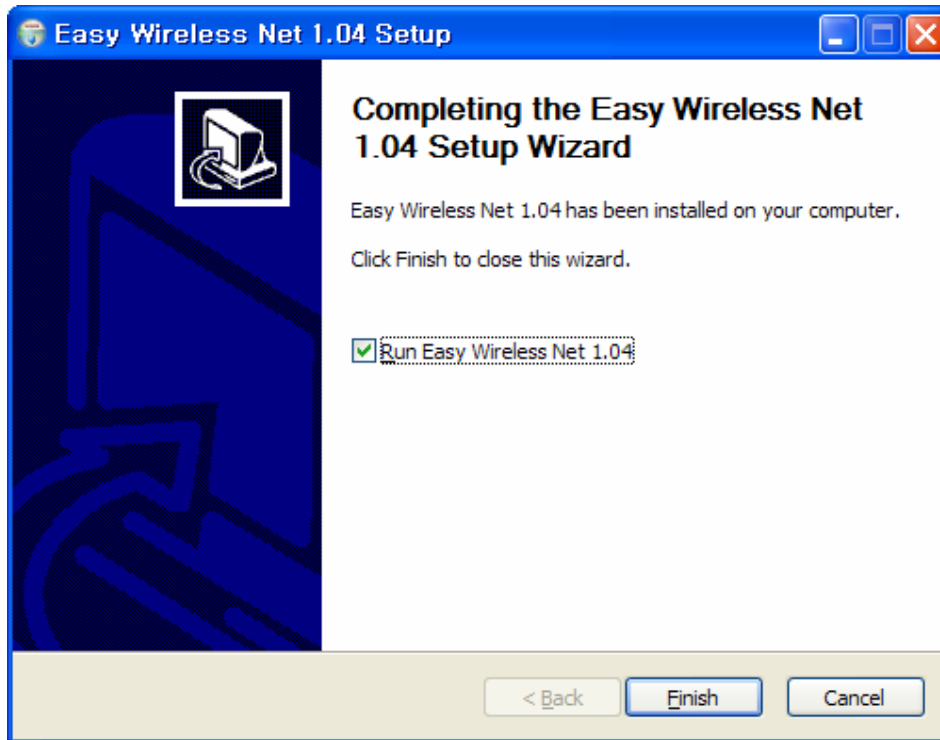
The Easy Wireless Net program is now installed on your computer.

<Remark>
If modem is not connected to the PC/Notebook and the device driver is not installed, then the program will not launch even after completion of this installation program.
Device driver installation is explained in the next section.

(4) Connecting to AnyDATA USB MODEM and Driver Installation and Uninstallation

A) Proper connection and Driver Installation

1. Connect the modem to the PC's USB port using the supplied USB cable.

2. Installing "AnyDATA USB Modem Driver" window will appear.
   Select "Install from a list or specific location (Advanced)".

3. Press [Next >] button to proceed.
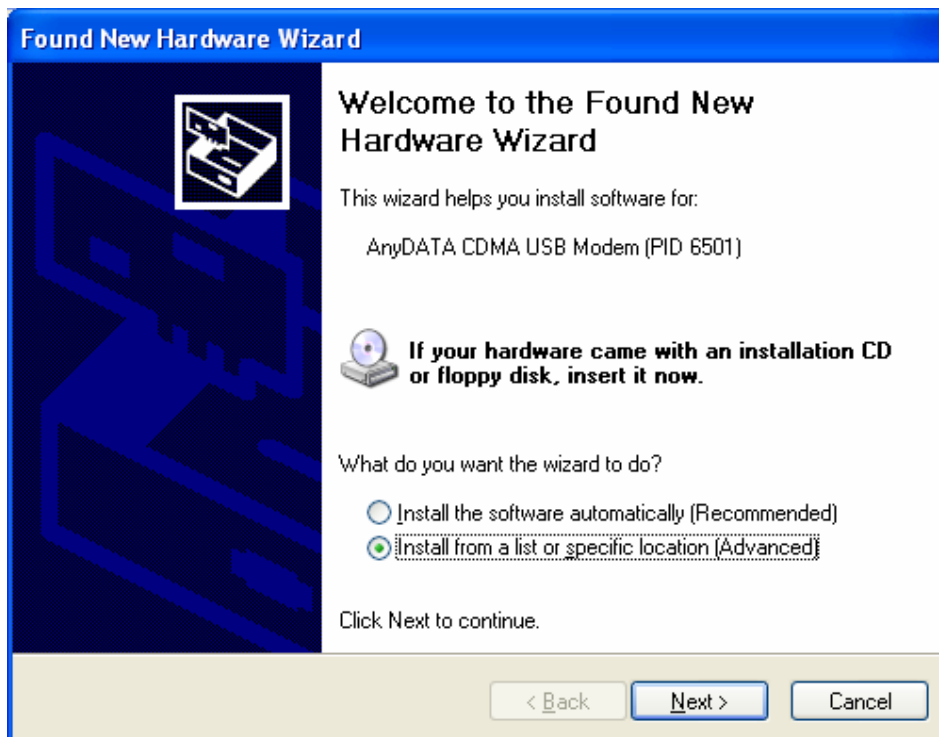
4. A window that asks for the proper path of the Driver will appear.

5. Select from the CD's path "CDRomDirve:\Driver\" folder for appropriate OS.

6. Press [Next >] button to proceed.

7. Windows that searches for the "AnyDATA CDMA USB Modem Device."
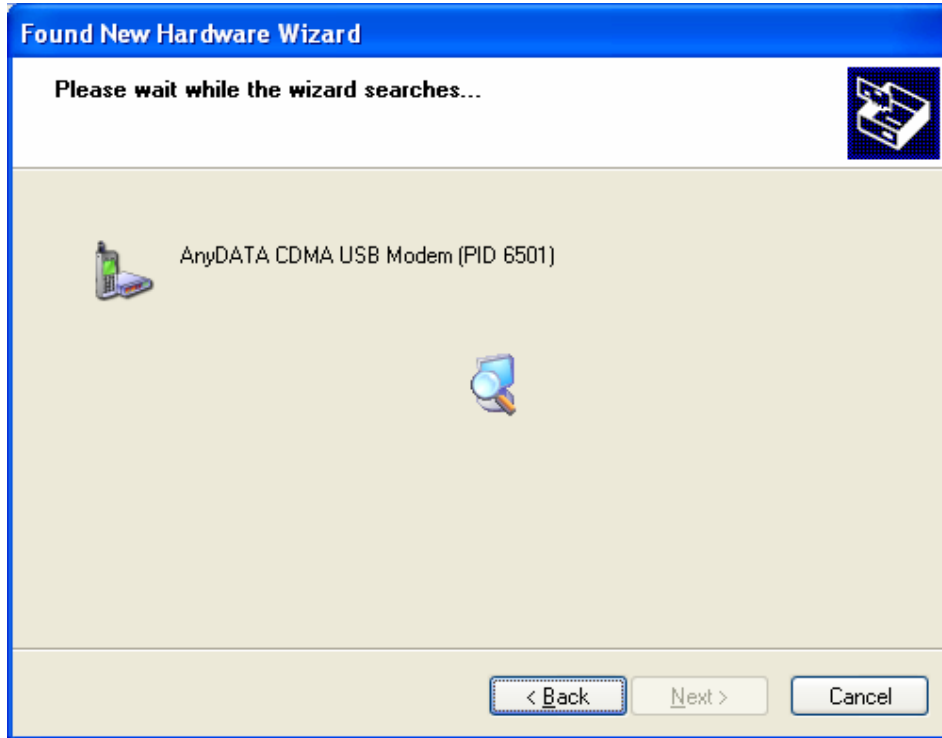
8. If windows finds the "AnyDATA CDMA USB Modem" it will asks for installation.

9. Press [Continue Anyway] button to move to the next step.

10. In the process of installing "AnyDATA CDMA USB Modem" Driver.
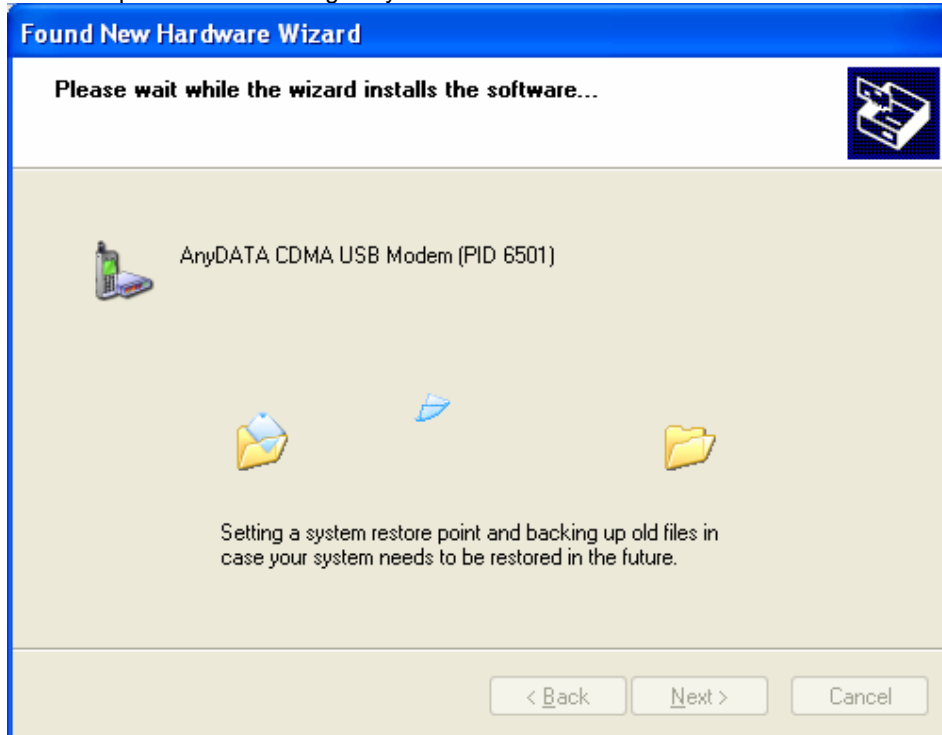
11. If the installation of "AnyDATA CDMA USB Modem" has been successfully completed, the following window will appear.
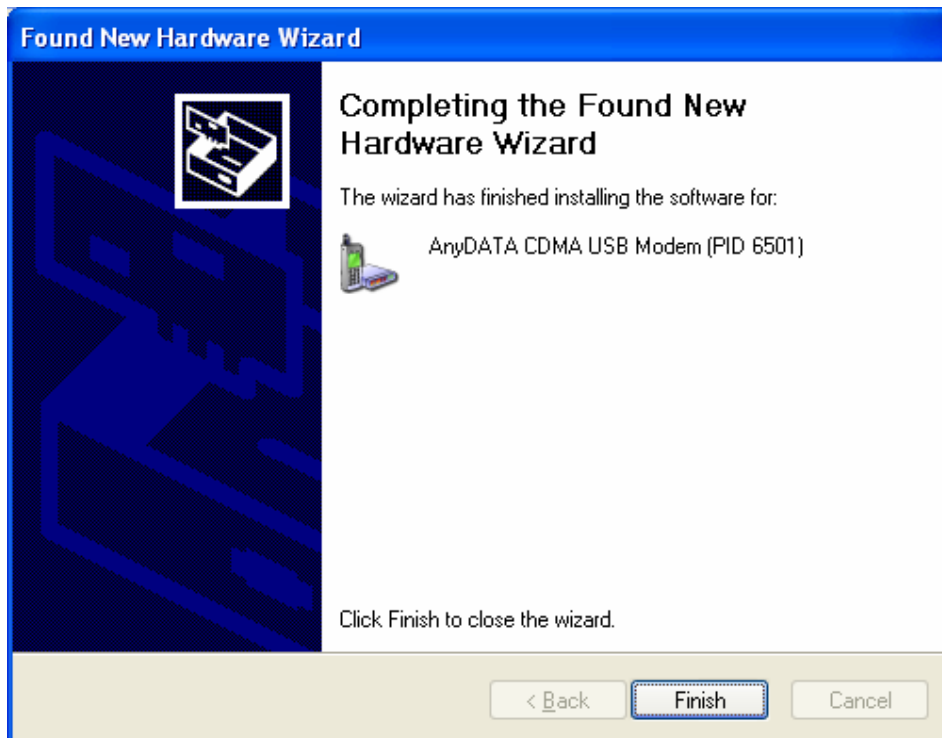
12.Next, Install the "AnyDATA CDMA USB Serial Device" Driver.

13. Select "Install from a list or specific location (Advanced)".

14. Press [Next >] button to proceed.

15. Select the proper path from the CD window.
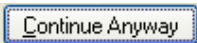
16. Select from the CD's path "CDRomDirve:\Driver\" folder for appropriate OS.

17. Press [Next >] button to move to next step.

18. Windows then searches for the "AnyDATA CDMA USB Serial Device" will appear.
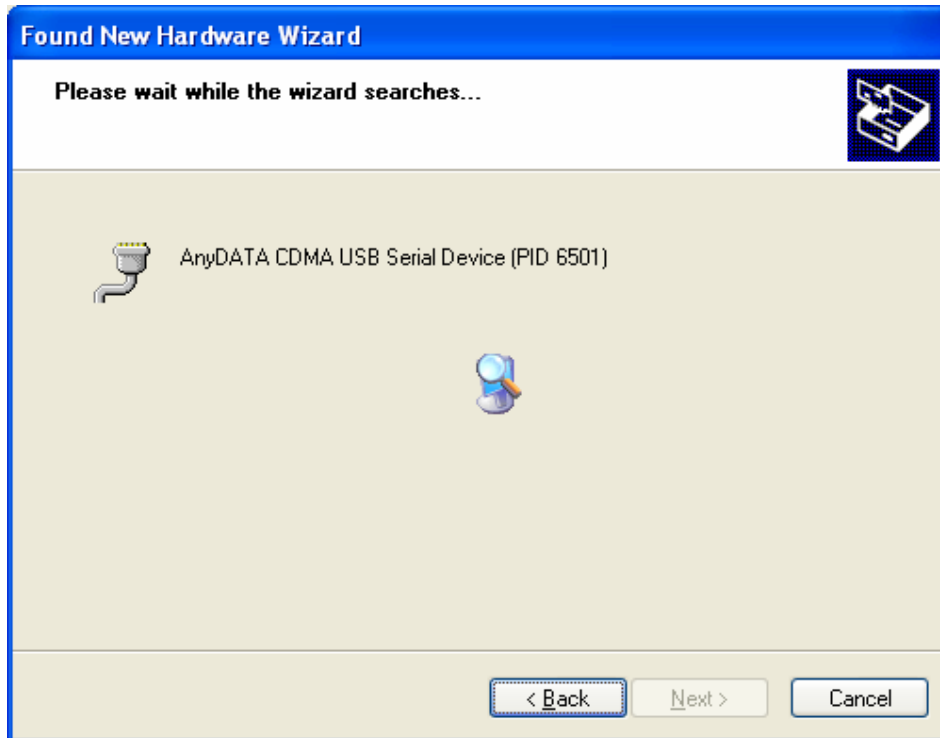
19. When the "AnyDATA CDMA USB Serial Device" has been found, it asks for installation.

20. Press [Continue Anyway] button to proceed.

21. If the installation has done properly, the following window will appear.
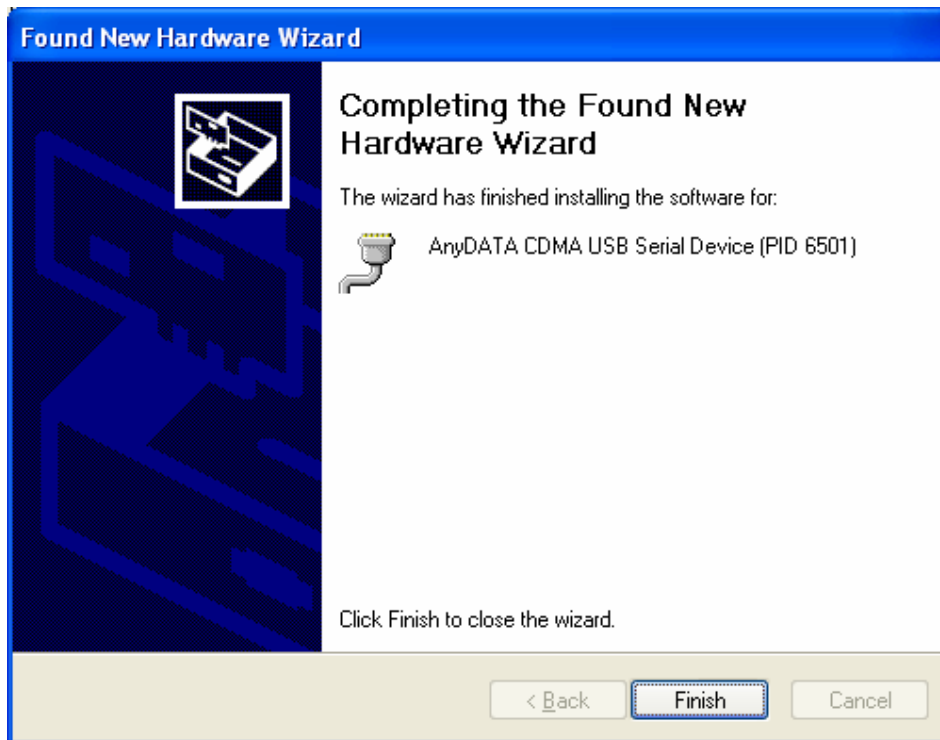
This completes the driver installation.

B) Checking for the proper installation of the Driver

If the Driver has been installed properly, it is possible to check for the proper operation from Control Panel.

1. Start Control Panel.
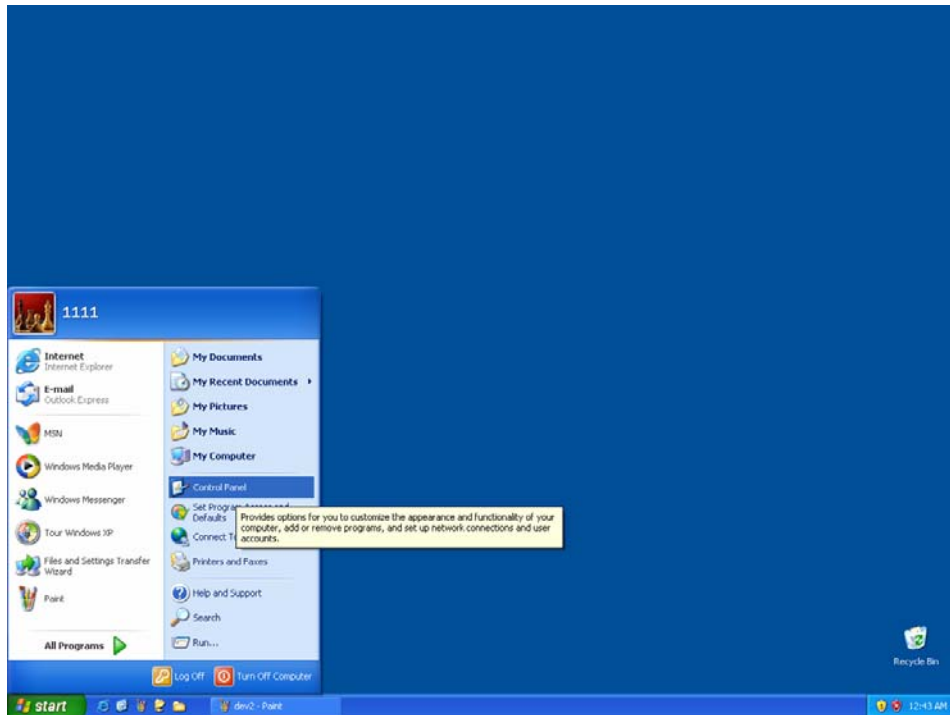
2. Select "Switch to Classic View."
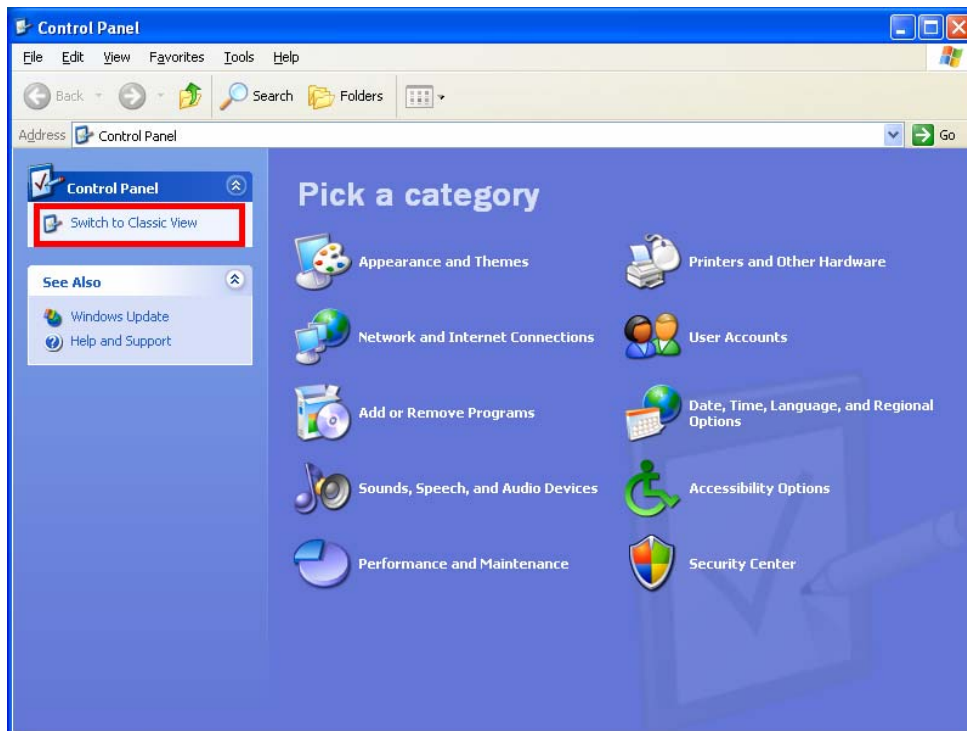
3. Select System.
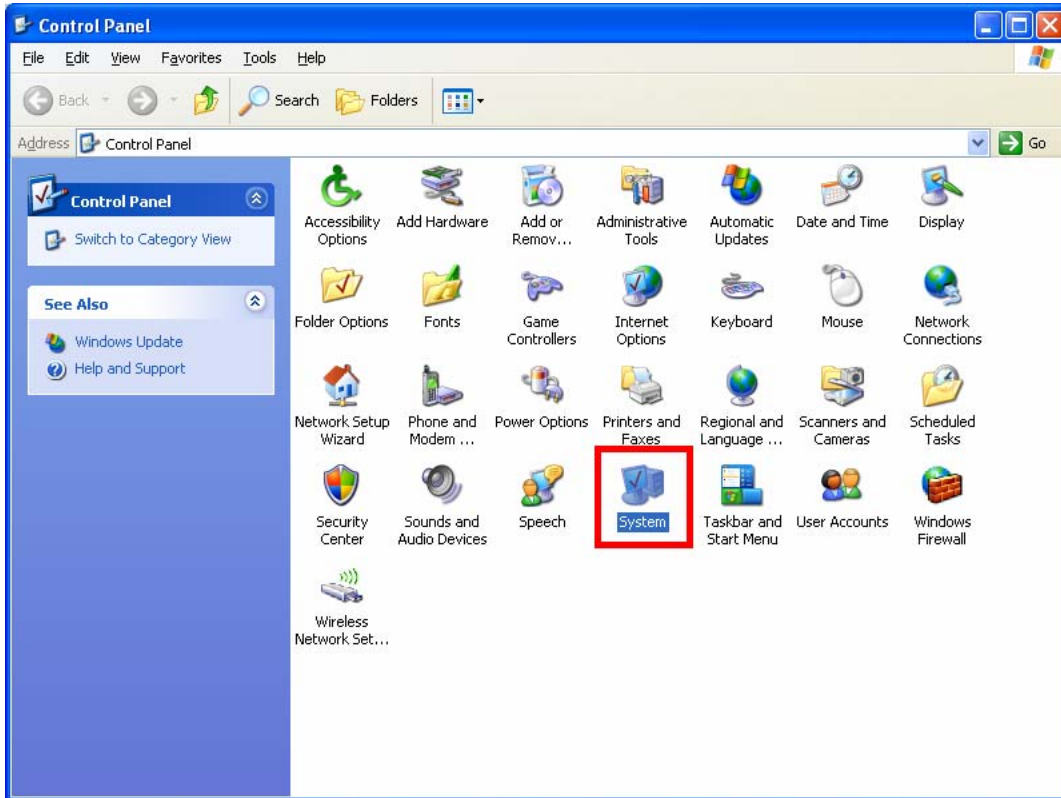
4. Select "Device Manager" from "Hardware" Tab.
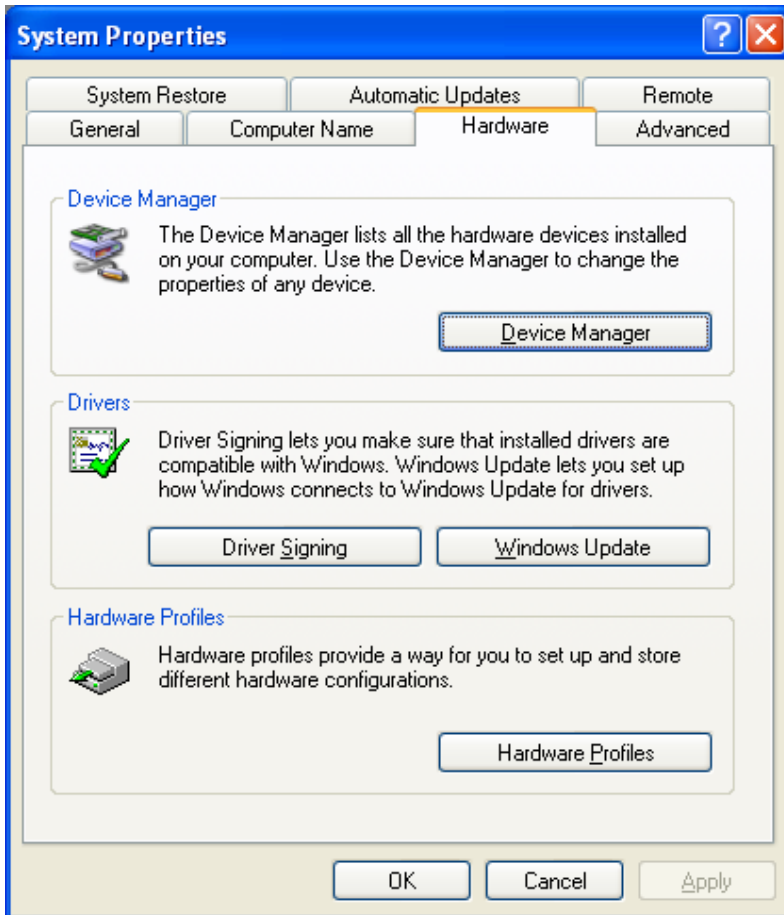
5. As shown below, with the red boxes the "AnyDATA CDMA USB Modem" and the "AnyDATA CDMA USB Serial Device," the Driver has been successfully installed.

[Note] Please pay attention and write down the COM number in "AnyDATA CDMA USB Serial Device (PID 6501) "(COM8)". In this case it was COM8, but it might be different for other installations. This COM port number will be used in the "Easy Wireless Net" program for selecting the proper port number.
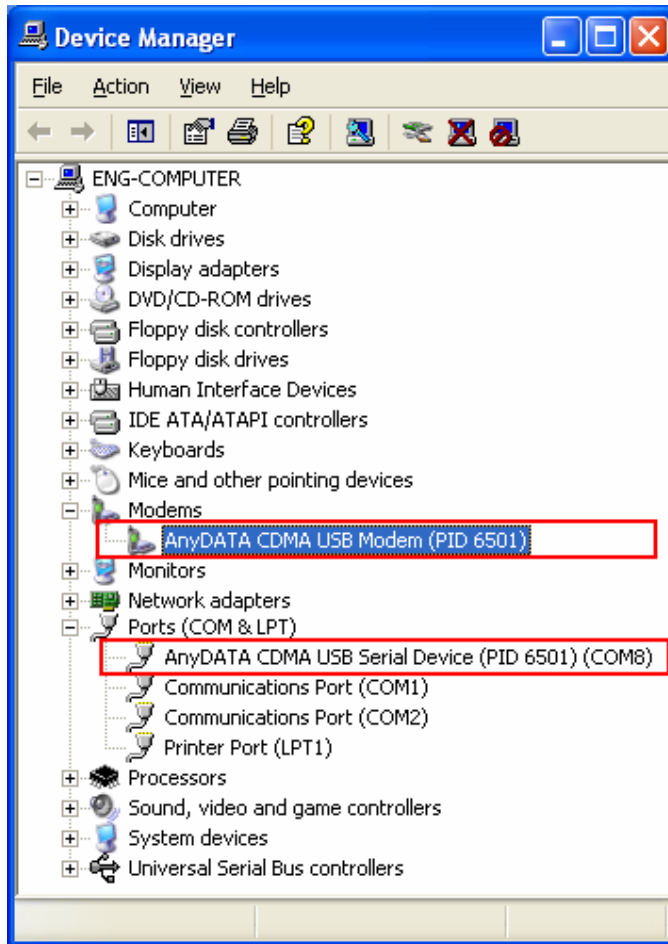
C) Uninstallation

When disconnecting the USB cable from the AnyDATA USB MODEM and the USB port, the diver will be automatically uninstalled.
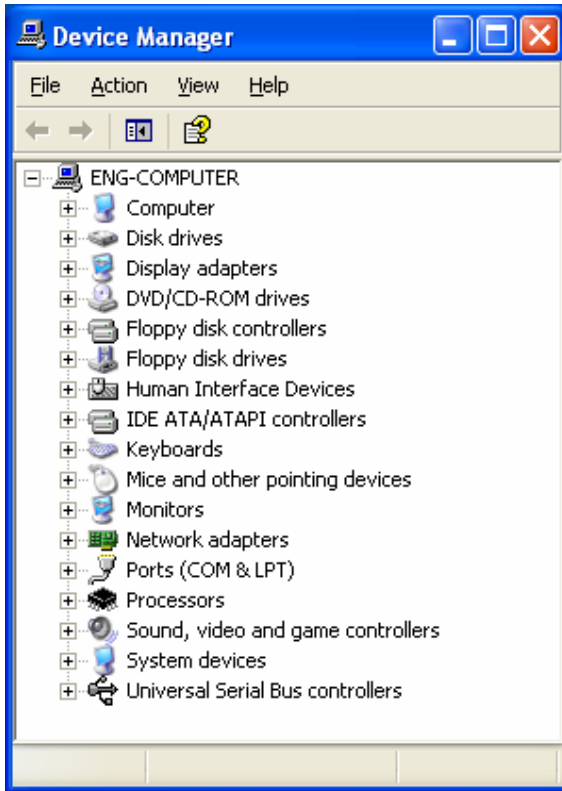
4. Using Easy Wireless Net Program

(1) Running the program

There are 2 (two) ways to run the installed Easy Wireless Net program.

As shown below, either pressing the shortcut icon on the Desktop or pressing
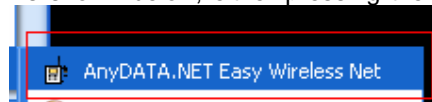
 this program.
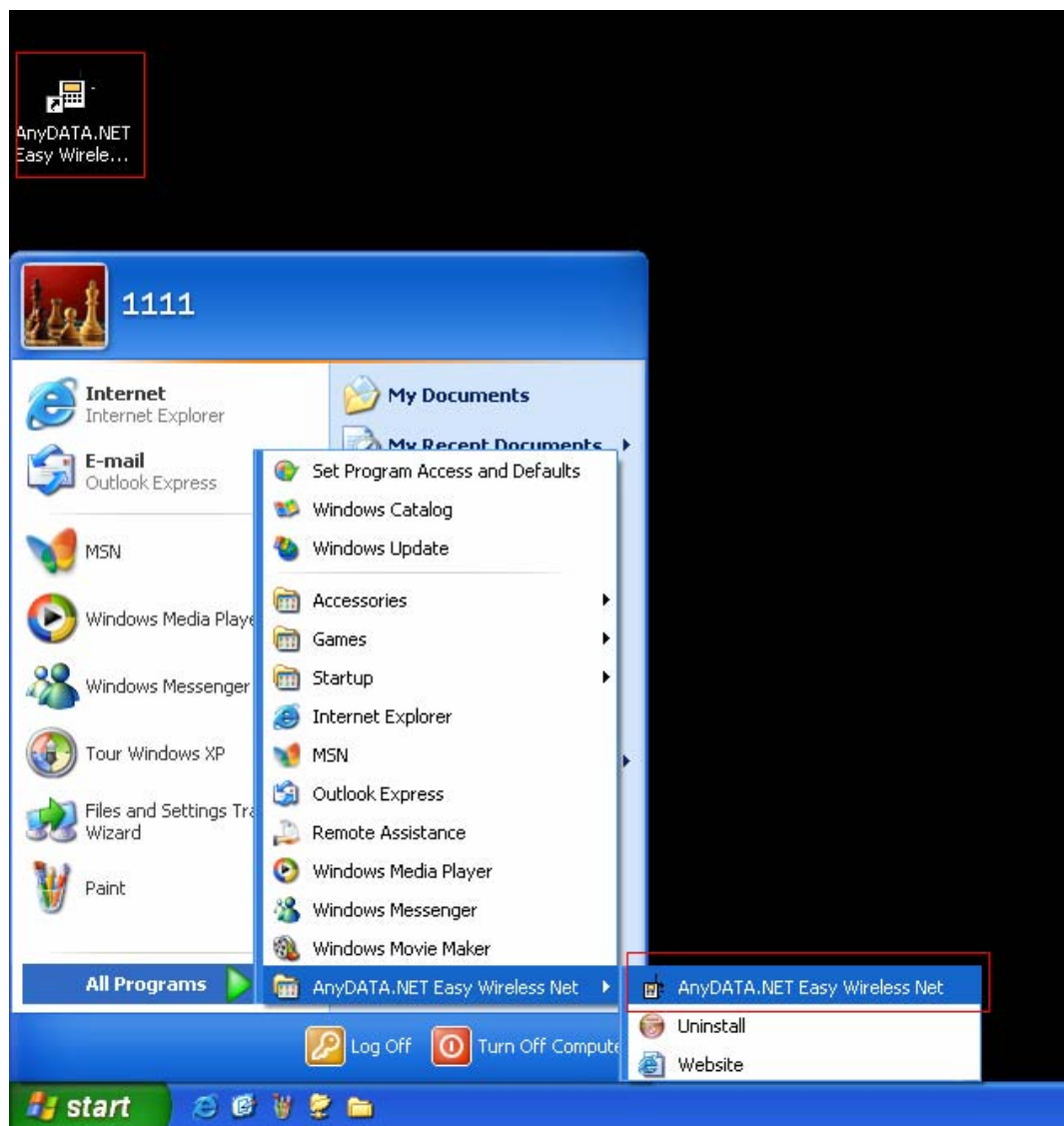
(2) Exiting the program

From the Easy Wireless Net program, pressing [▣▨] button will quit the program.

[Note] If DUN is running, the program will end after the completion of these commands.

(3) Screen Display of Easy Wireless Net

A) Executed Screen.

B) Window for information and input

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C) Description of each icon

	RSSI Signal Strength Indicator
	No signal
	1X Mode
	EVDO Mode
	Hybrid Mode
	Calling Possible
	Calling not Possible
	Rx Diversity Mode.
	Supports Hybrid mode
	Only 1X mode available
	Only EVDO mode available
	Battery Indicator
	Connected to the Modem
	Either the cable is disconnected to the modem or improper port connection.
	Internet connected
	Internet disconnected
	Button to connect to the Internet.
	Button to disconnect to the Internet
	Setup Easy Wireless Net

(4) Setting Environment

There are two sections for setting the environment. One is data from operator for connecting to the Internet, and another is to set the proper port for status monitoring.
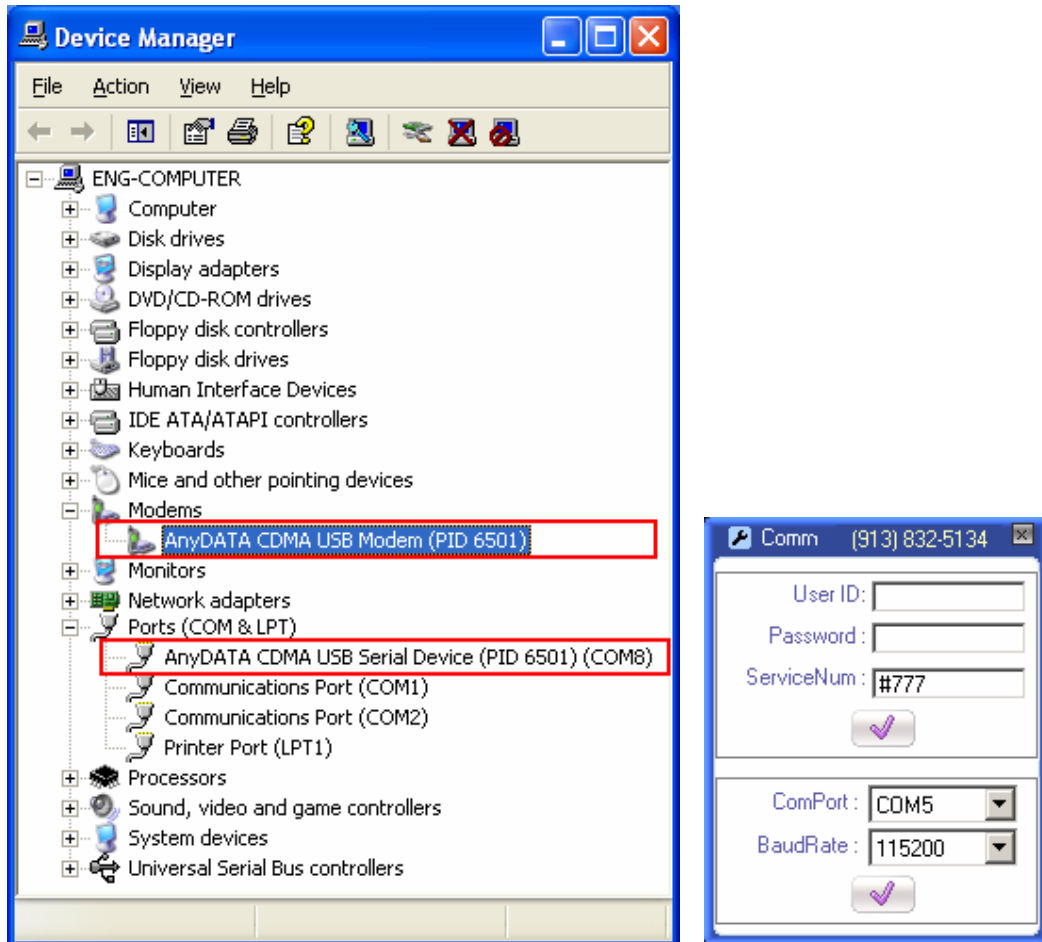
Set ServiceNum. For Sprint, enter #777 and the User ID and Password is not necessary.

Select the proper port. This is the same port from the device manager com port section.
Select BaudRate at 115200.

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(5) Connecting to the Internet

Must set proper UserName, Password, and ServiceNum in the above settings.

Then press [e] button, the tool will automatically connect to the Internet.

If the modem is trying to connect or is connected to the Internet, this [e] icon will appear as shown above. If it cannot connect to the Internet, then [e] icon will appear.

(6) Disconnecting from the Internet

When user is ready to disconnect from the Internet, press [e] button to end the connection.

Please check the following if abrupt disconnection of modem occurred:

    1) Did I intentionally disconnect USB modem?
    2) Are cables properly connected?
    3) Did I intentionally change Port number in environment settings?
    4) Did I quit/exit the program?

5. Troubleshooting

Q: I cannot connect to the Internet?
A: Please check "environment setting" of program for correct ID, password and Service number. For proper ID, password and Service number, please contact service provider for more information.

Q: The Internet connection speed is too slow.
A; Please check whether the modem is set at 1X mode. If USB modem is set at 1X mode, then the Internet is not connected as EVDO mode. EVDO icon must be appeared in the display to ensure that the modem has been connected in EVDO mode.

Q: The Internet connection is poor and frequently it gets disconnected.
A: The CDMA frequency is at unstable state. Try to move to a different place then use it again. Also, if you touch or block the USB modem with hand/body contact, the modem connection speed degrades. Please be careful not to touch the modem with your hand or any part of the body.

Q: Can I leave the external power adopter in the electric socket even after the battery is fully charged?
A: Yes, it is safe to leave adopter in the electric socket even after the battery is fully charged if you are using genuine battery and adopter from the manufacturer.

Q: No matter how long I pressed the power button, the power does not get turned off.
A: Please check whether the external power is connected or not. If external power adopter is connected then the power will not turn off.

Q: All of the display on the program's screen shows as prohibited icons.
A: Please check whether the port is properly set for communicating between computer and the modem in the "environment setting" category.

Q: After the installation of the program, the program does not run and displays following message.
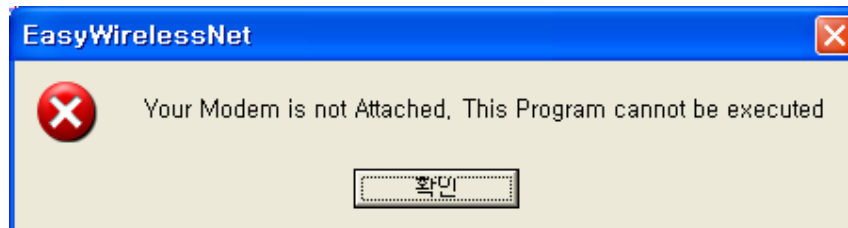
A: This means that USB modem and the computer are not connected properly. Please double check whether USB modem is connected properly to the computer.

Q: During the running of the program, the following message appears and the program halts.

A: The actual connection of USB modem and computer has been disconnected. Please check whether the cable is dismounted, cable is disconnected or USB modem power has been turned off. Then try to reconnect the modem.

Q: Cannot make a call
A: If you see a [EVDO] icon in the display, call cannot be made. Please change mode other than [EVDO] mode then try to make a call. There are three different icons in that field, [1X], [1X/EVDO] and [EVDO].

Q: How many people can I send SMS messages at once?
A: It is possible to send maximum of 5 people at once.
Q: The program has ended but the USB modem power has not turned off.
A: The power of USB modem is not controlled by the program. The point when the USB modem turns on automatically is when the USB cable is connected to the PC/Notebook. In order to turn off the modem, press ON/OFF button for at least 5 seconds.

Q: I tried to turn-on the modem by pressing ON/OFF button but was unsuccessful.
A: Please dismount the battery and disconnect the USB cable, then remount the battery and connect the USB cable. If the power is still not on, please contact A/S center for further information.
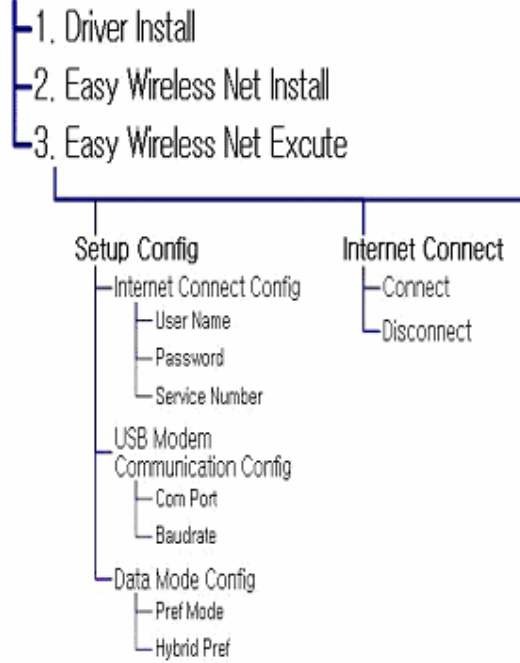
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6. Quick Guide.

(1) Display Indicators.

The display may show the following icons to indicate the usb modem's status or fundtion.

Display	Function
	RSSI Signal Strength Indicator
	No signal
	1X Mode
	EVDO Mode
	Hybrid Mode
	Calling Possible
	Calling not Possible
	Rx Diversity Mode.
	Supports Hybrid mode
	Only 1X mode available
	Only EVDO mode available
	Battery Indicator
	Connected to the Modem
	Either the cable is disconnected to the modem or improper port connection.
	Internet connected
	Internet disconnected
	Connecting to the Internet button.
	Disconnecting to the Internet
	Setup Easy Wireless Net
	Voice call menu.

(2) USB Modem Quick Start Map

USB Modem
- 1. Driver Install
- 2. Easy Wireless Net Install
- 3. Easy Wireless Net Excute

Setup Config
- Internet Connect Config
  - User Name
  - Password
  - Service Number
- USB Modem Communication Config
  - Com Port
  - Baudrate
- Data Mode Config
  - Pref Mode
  - Hybrid Pref

Internet Connect
- Connect
- Disconnect

Thank you.