

# **USER MANUAL**

**BCM92046 Solution**

**Bluetooth Module for Lenovo**

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## ■ Section One: Introduction

The Bluetooth Module use a monolithic single-chip, Foxconn BCM92046 and it can compliant Bluetooth 2.1. This Bluetooth module is base on the highly integrated BCM92046 stand-alone baseband processor with an integrated 2.4GHz transceiver. It is fully compliant with the Bluetooth radio specification and incorporates new modulation schemes to support enhanced data rate(EDR) of 3MBps.

### 1.1 Features

#### 1.1.1 Bluetooth Function

- Bluetooth radio firmware is upgradeable for bug fixes, initial version compatible with Bluetooth specification version 2.1
- Fully compliant to Bluetooth SIG (BQB) compatibility testing.
- USB Pin assignment is to use MDC reserve pin to communicate with Host.interface
- Bluetooth Profile Support
  - Pim Item Transfer
  - Pim Synchronization
  - Network Access
  - Dial-up Networking
  - Bluetooth Serial Port
  - Fax
  - Audio Gateway
  - Headset
  - Bluetooth Imaging
- Drivers support Windows 98, 98SE, ME, 2000, XP.
- Supports Power Management

### 1.2 Hardware Requirements

<b>Supply Voltage</b>	3.3V
<b>Frequency Range</b>	2.400-2.4835 GHz
<b>Antenna Load</b>	50 Ohm
<b>Receive Sensitivity</b>	-78 dBm@0.1% BER
<b>Maximum Receiver Signal</b>	-20 dBm
<b>TX Power</b>	4 dBm maximum (class 2)
<b>RF Power Control Step Size</b>	2 dB
<b>Range</b>	10 meters at 0 dBm TX power (class 2)
<b>Radio</b>	Compliant with Bluetooth radio specification and incorporates new modulation schemes to supports enhance data rate (EDR) of 3Mbps

<b>Pico Net</b>	1 master to 7 slaves
<b>Operating Channels</b>	79 channels of 1 MHz BW
<b>Security</b>	Full support of Bluetooth security provisions including hardware support for full length 128 bit encryption keys.
<b>Host Interface (USB)</b>	USB specification 2.1 compliant and using MDC reserve pin to communicate with Host
<b>Software Requirements</b>	Windows 98SE, ME, 2000, XP.
<b>Mechanical Requirements</b>	26mm x 14mm

## Section Two: Bluetooth Installation

The following steps provide instructions for installing Bluetooth.

1. Make sure your Bluetooth device already insert into your notebook.
2. Make sure your notebook operating system support Windows 98SE or ME or 2000 or XP.

### 2.1 ActivePerl Installation

Proceed to the following section.

Double click the program “ActivePerl-5.8.4.810-MSWin32-x86.msi” to execute theTo execute ActivePerl in the software package :



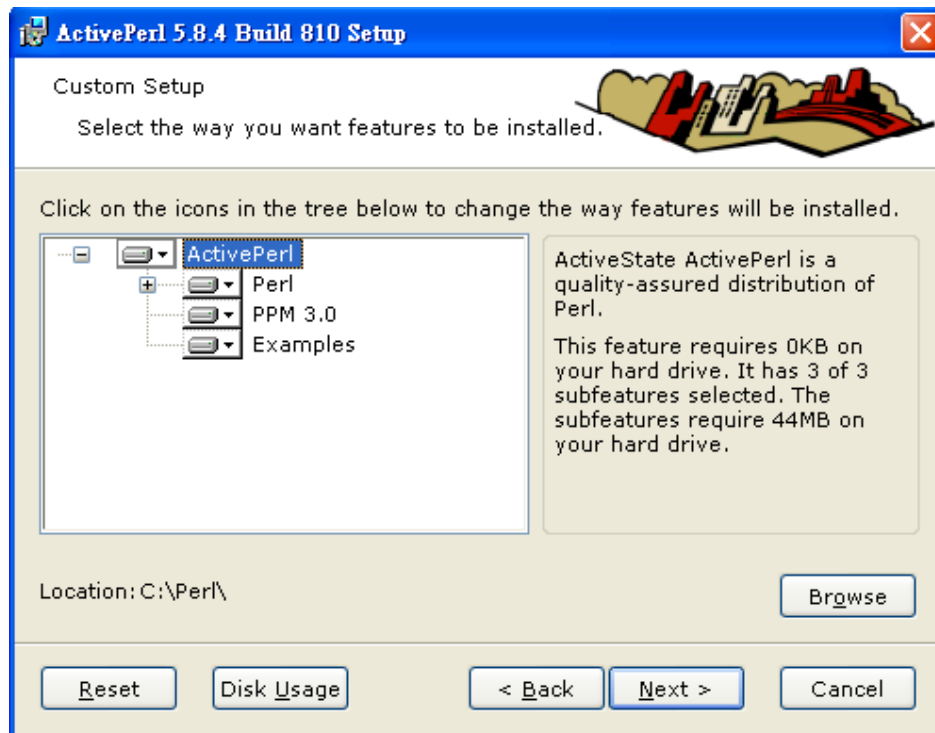
Windows shows the welcome dialog as below, click the “Next” to begin the process :



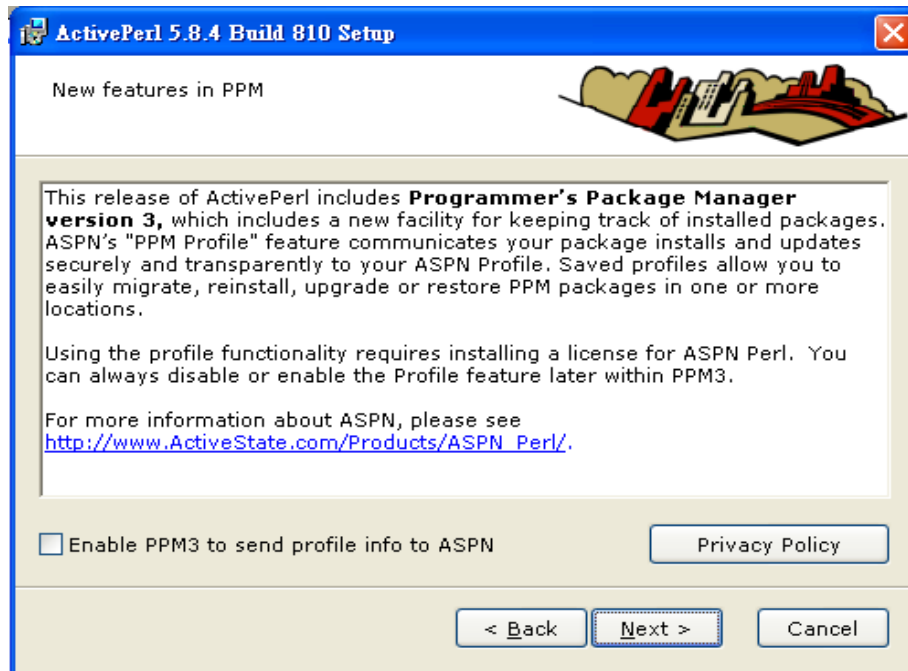
1. The license agreement dialog will pop up, please read it carefully. If you agree it, choose “**I accept the terms in the license agreement**” and click “**Next**” :



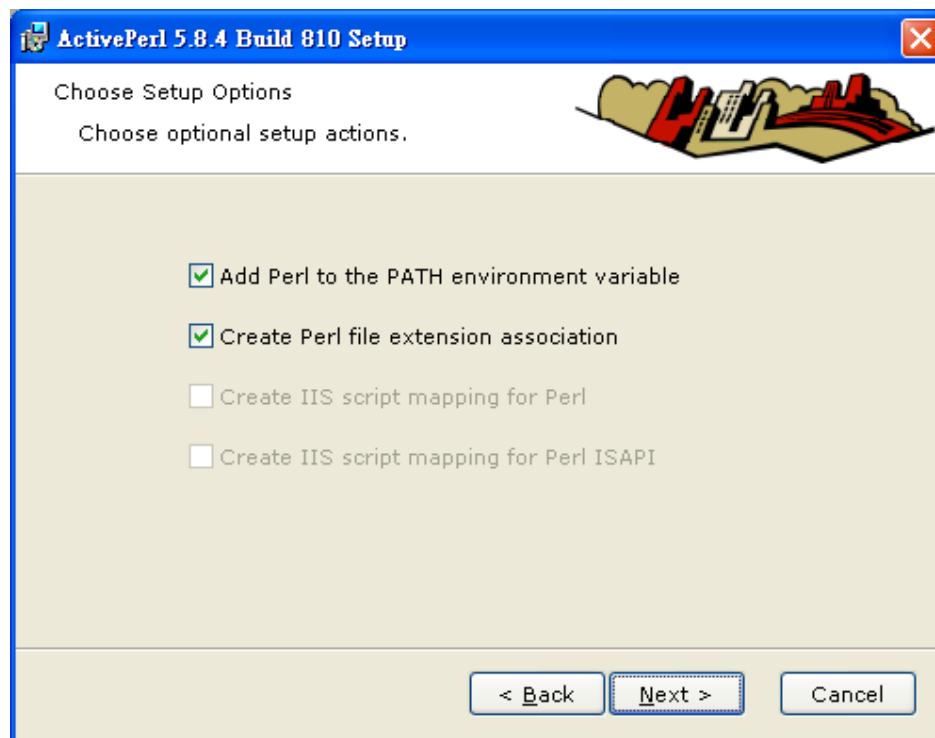
2. Windows show the custom setup, select the way you want features to be installed, and then click **Next** :



- 4 Show the new features in PPM, then select "**Next**" :



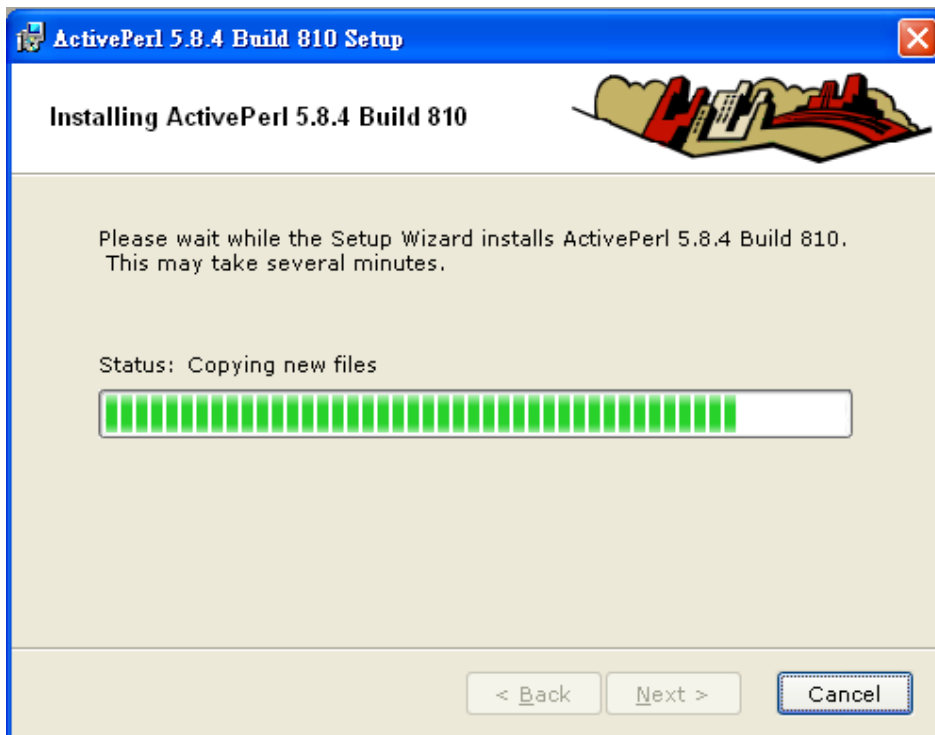
- 5 Choosing setup options shows, and you should choose the first and second items, then click "Next" :



- 6 It's ready to install the tool, click **"Install" to run it**.



- 7 Installing ActivePerl 5.8.4 Build 810.





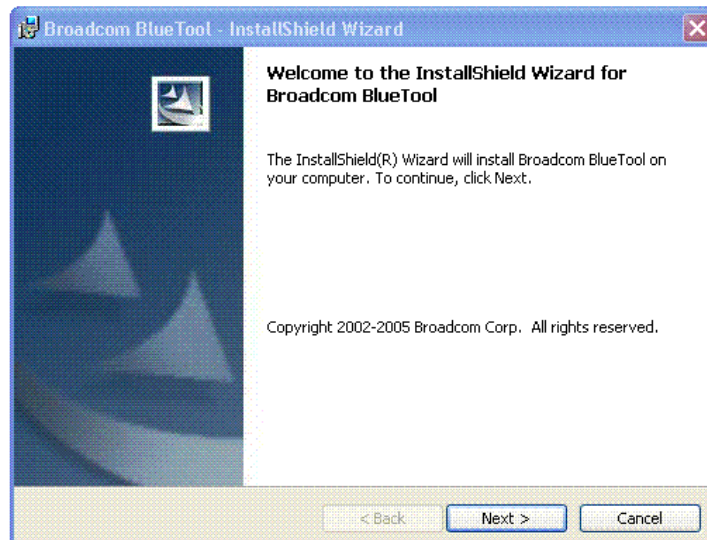
- 8 Click the “**Finish**” button, completing the setup wizard.



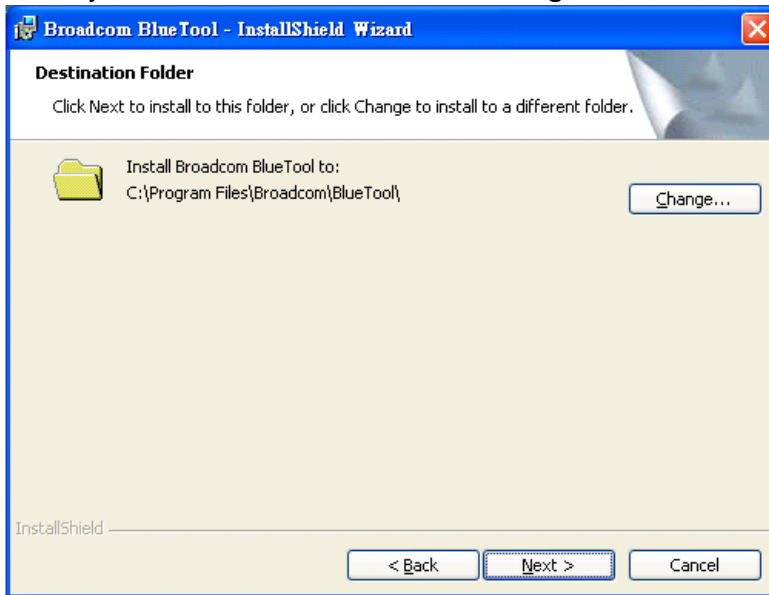
## 2.2 Bluetool Installation

Double click the program “BlueToolInstall\_v1.0.0.3.exe” to execute BluetoolInstall in the software package :

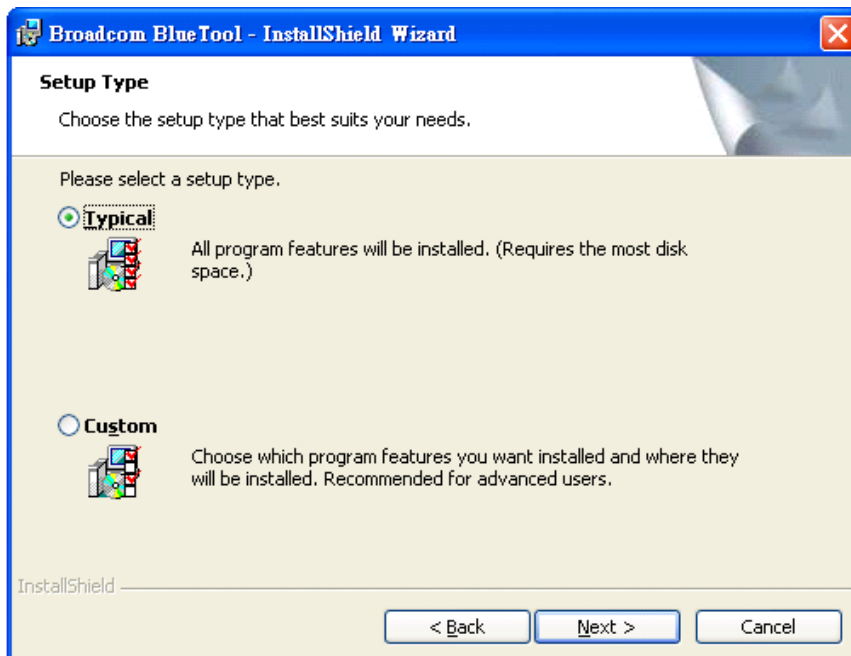
- 1 Show the welcome dialog as below, click the “**Next**” to begin the process:



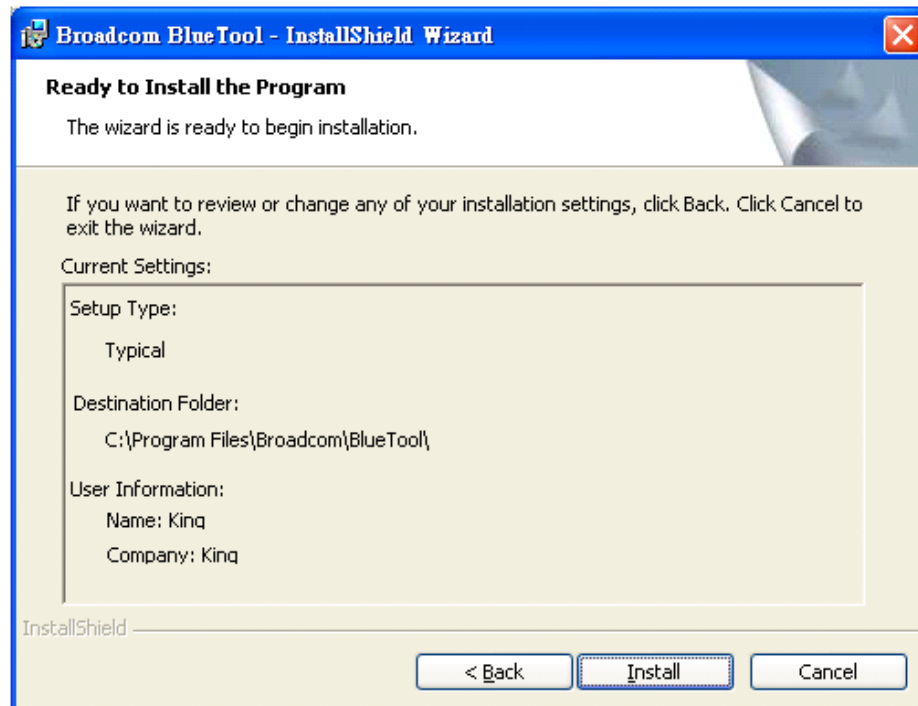
- Specify the destination folder in your local system, which you want the software install to. You may use the default folder or click **“Change”** to install to different folder, then click **“Next”** :



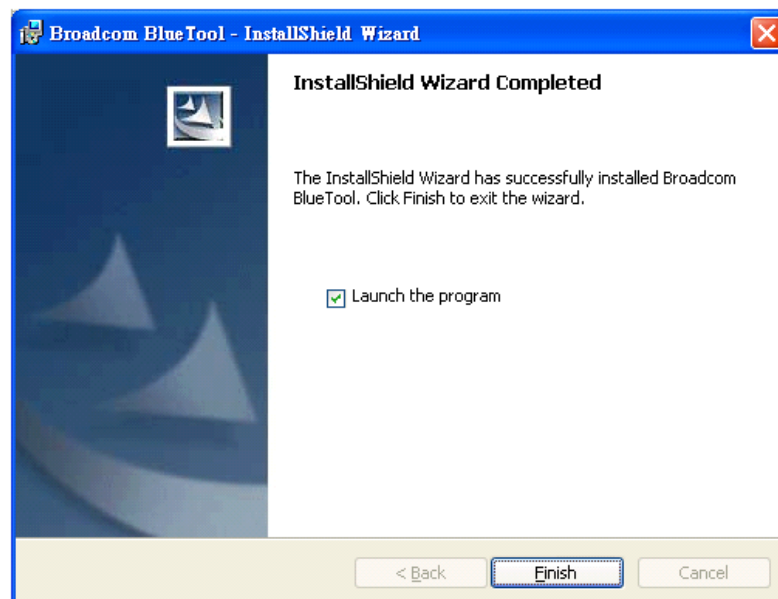
- Choose the setup type you need, here you could select the typical type for your test , then click **“Next”** :



- The wizard is ready to begin installation, and shows the setup type and destination folder you have chosen, then click **“Next”** :

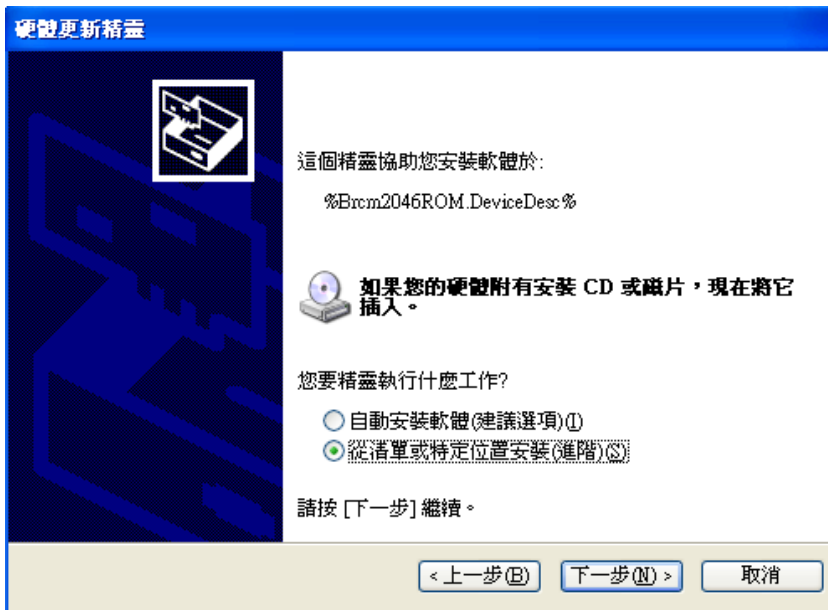


4. The dialog “**installshied wizard completed**” shows, after selecting the item launch the program ,click “**Finish**” :

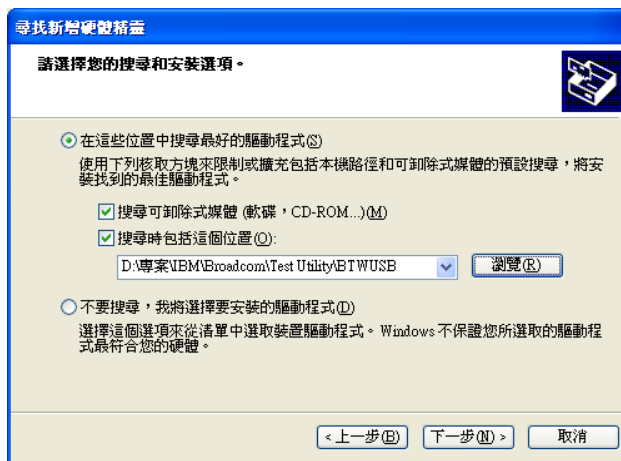


### 2.3 Driver in BTWUSB

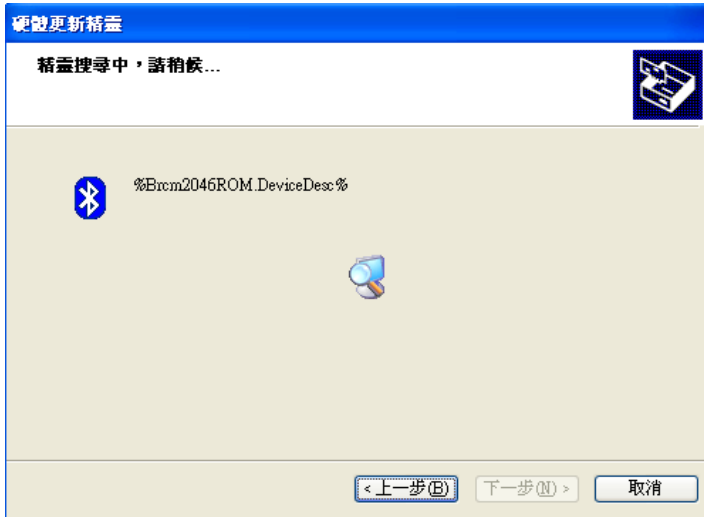
- 1 After inserting the bluetooth module, it will search driver of BTWUSB as below, you could select the destination of the driver from the second option, then click “next”



2 Then Select the Driver location and click “Next”:



3 Searching for the driver, please wait for it.



4 Finishing searching for the driver, and the driver is installed, then click the “**Finish**” to finish the installation.



## Section Three: FCC Notice

### 3.1 FCC Compliance

This Equipment complies with Part 68 of the FCC Rules. On this equipment is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will be notify in advience. But if advance notice isn't practical, you will notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect proper operation of your equipment. If they do, you will be notified in advance to give you an opportunity you maintain uninterrupted telephone service.

The FCC prohibits this equipment's should fail to operate properly, disconnect the equipment from the phone line to determine if it is causing the problem. If the problem is with the equipment, discontinue use and contact your dealer or vendor.

### 3.2 FCC Class B Statement

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 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 the 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

**Notice:** (1)Shielded cables, if any, must be used in order to comply with the emission limits. (2) Any change or modification not expressly approved by the grantee of the equipment authorized could void the user authority to operate the equipment.

**Caution:** Please make sure you already disconnect the phone cable before you want to touch or remove modem module.