

# **AECO-AWM-S0021M/H (MiniCard-USB Version)**

**WiFi 802.11 b/g and Bluetooth v2.0 + EDR  
Combo Mini Card Module**

**User's\_Manual**

Ver: 1.0

## **Federal Communication Commission Interference 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 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 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.

FCC caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitters.

## **IMPORTANT NOTE :**

**End Product Labeling:** The final end product must be labeled in a visible area with the following: "Contains FCC ID: XVX-AWMS0021MH".

**Manual Information That Must be Included:** The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove. This RF module in the user's manual of the end product which integrates this module. The user's manual for OEM Integrators must include the following information in a prominent location

**IMPORTANT NOTE:** This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

# 1. Before Installation

Requirement environments :

- Windows Vista / Vista-64 / XP sp2 / Xp sp3 / 2000 sp4 or above.
- At least 50MB of available free hard disk space for installing the driver.
- An IEEE.802.11b, or IEEE 802.11g Access Point (for Infrastructure Mode) or another Wireless Adapter (for Ad-Hoc Mode). Also, the AWM-S0021M/H can compatible with most 802.11n AP router.
- One Available USB port.
- CD-ROM Drive (for Driver installation only)

# 2. Package Contents Check

- **AECO AWM-S0021M/H Combo Module X 1**
  - ✧ **Software CD X 1 include**
    - **User's Manual**
    - **IVT BlueSoleil Bluetooth software and driver**
    - **3DSP WLAN windows software and driver**
  - ✧ **This Quick Setup Guide X 1**
  - ✧ **Warranty Card X 1**

# Please informs your dealer if there are any missing or damaged parts.

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# 1. Introduction

The **AECO AWM-S0021M/H** Product Provides the highest level of integration and most Aggressive BOM cost by integrating IEEE 802.11b/g and Bluetooth v2.0 + EDR into a single MAC/Baseband chip utilizing a single 2.4GHz transceiver. Integrated on-chip power amplifier and LNA reduce external component count, while still able to deliver ample transmit power for most applications.

Different from any other wireless LAN and Bluetooth chip set vendor, **SYNTEK and 3DSP** Uses its patented Software Radio technology to implement both wireless LAN and Bluetooth in Software. The highly optimized software radio DSP technology enables **AWM-S0021M/H** to Integrate class 1 Bluetooth v2.0 + EDR function without any added cost to the total solution. No extra antenna, PA, RF transceiver, resistor, capacitor, crystal or any components are needed. The software solution even guarantees the Bluetooth RF performance if the wireless LAN Performance is tested to be good. It eliminates the need for system manufacturers to Separately test the module's Bluetooth RF performance, therefore reduce the testing time and cost.

The **AWM-S0021M/H** utilizes 3DSP's patent pending technologies to fundamentally solve the Interference and performance issues existed during 802.11b/g and Bluetooth coexistence, Thus improving both 802.11b/g and Bluetooth performance and link stability in real environment. As a result, it enhances user experience in a totally wireless environment, where all devices are connected wirelessly through either Bluetooth link or 802.11b/g link.

The single installation package allows for easy setup and configuration of both 802.11b/g and Bluetooth devices. Combined user interface is intuitive to use. Once configured, both wireless links operate transparently in the background.

## 2. Product Features

### [ WiFi ]

- ✓ Data Rate up to 54Mbps.
- ✓ Single-band 2.4-GHz 802.11b/g with Bluetooth v2.0 + EDR
- ✓ Integrated on-chip PA capable of delivering 20dBm output power
- ✓ Low active transmit and receive power dissipation and ultra-low power in stand-by and idle modes
- ✓ Supports IEEE 802.11b/g

### Security :

- ✓ WPA and WPA2 for advanced authentication and encryption
- ✓ AES and TKIP in hardware for reduced power dissipation and encryption speed
- ✓ Worldwide regulatory support
- ✓ Patent pending technology maximizes multimedia streaming performance over Bluetooth over WLAN in coexistence mode.
- ✓ Patent pending Software Radio technology allows single radio, single baseband integration of multiple standards
- ✓ Advanced network security features include WPA, WPA2, 802.11i and 802.11x
- ✓ Long and short preamble supported

### [ Bluetooth ]

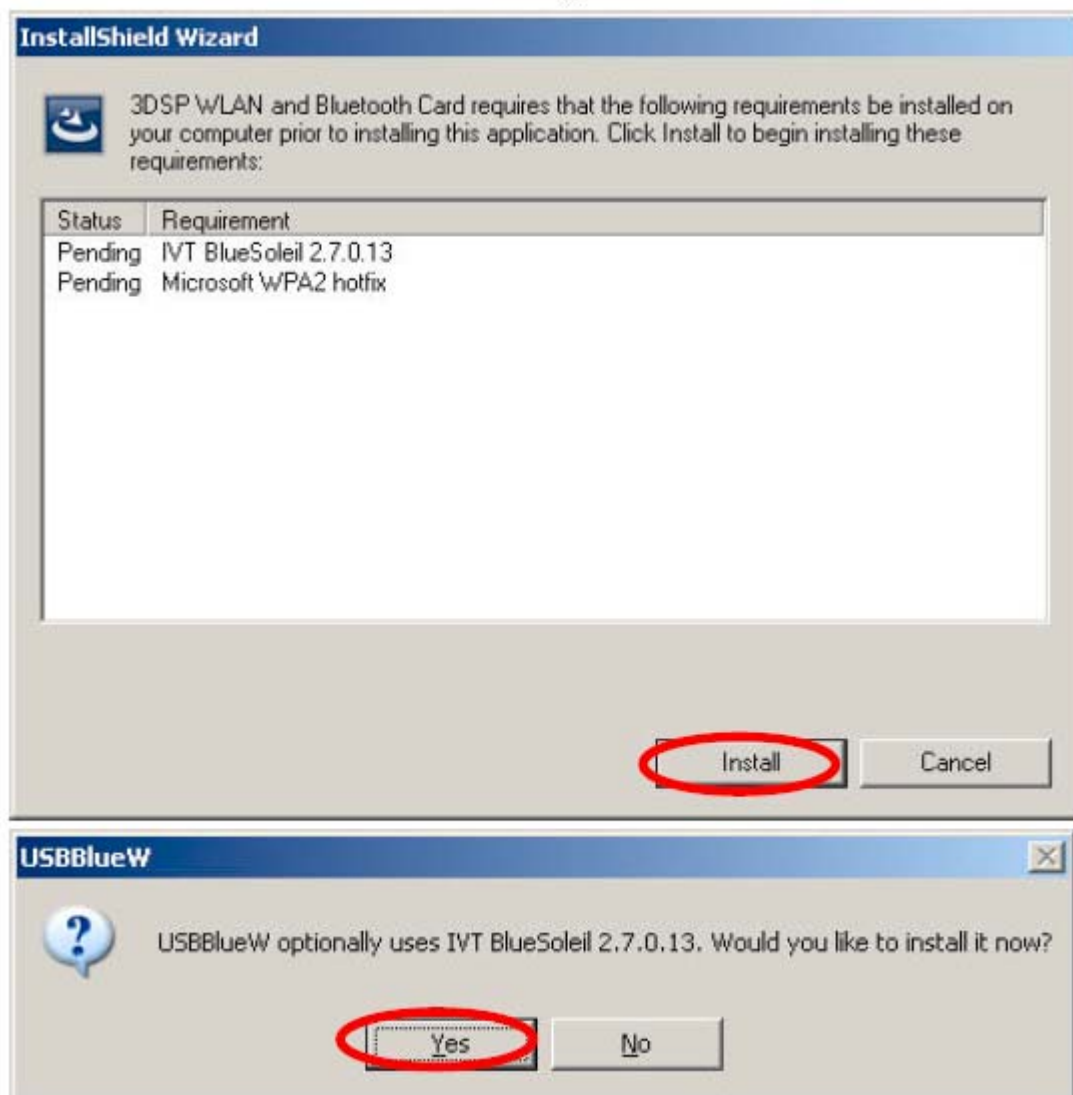
- ✓ Support AFH (Adaptive Frequency Hopping)
- ✓ Support Bluetooth v2.0 +EDR
- ✓ Forward and backward compatible with Bluetooth v1.1 and v1.2
- ✓ Support for up to seven active Bluetooth devices
- ✓ Class 1 with 18dbm PA, 100m range

### 3. Install the Drivers and Utilities

1. Insert the Installation Software CD into CD-ROM driver. If the Auto-Run function of CD-ROM is disabled, you can utilize the Windows Explorer to browse CD content and run Setup.exe manually.

If the Auto-Run function of CD-ROM is enabled (in Windows, the default setting of this function is usually enabled), then a CD menu will appear automatically.

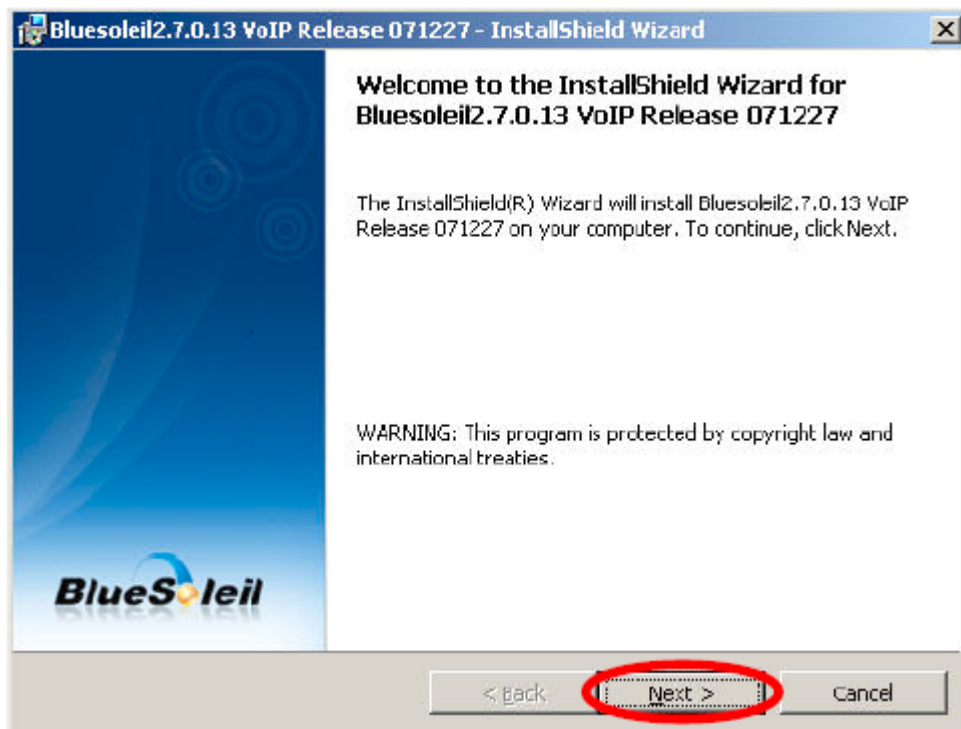
1. The Installation program before install 3DSP Wireless driver, the installation program will install the requirement program “IVT BlueSoleil” and “Microsoft WPA2 hot fix” (This is not necessary in many PCs if installed). The program will install IvT BlueSoleil first. Please press the “Yes” button start install BlueSoleil.



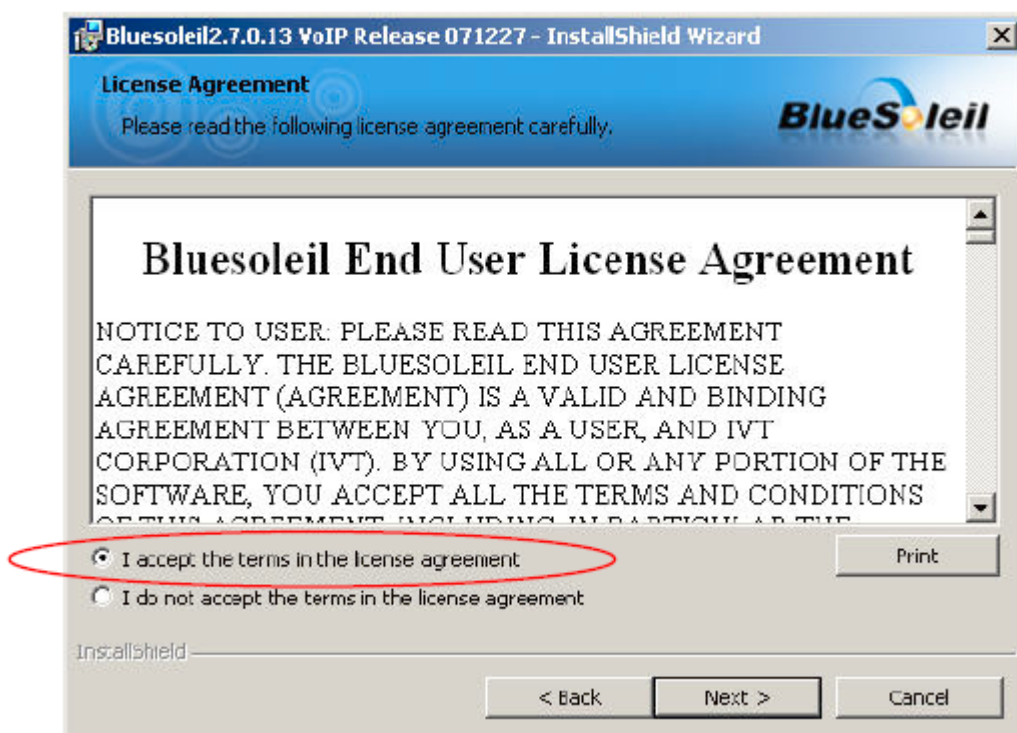
2. Select the Language you want to installation from the combo box, and then press the “OK” button to continue.



3. Please click Next button several times to continue the software installation. In the License Agreement window, please read license agreement carefully. Select "I accept the terms in the license agreement" then click "Next" button to continue.

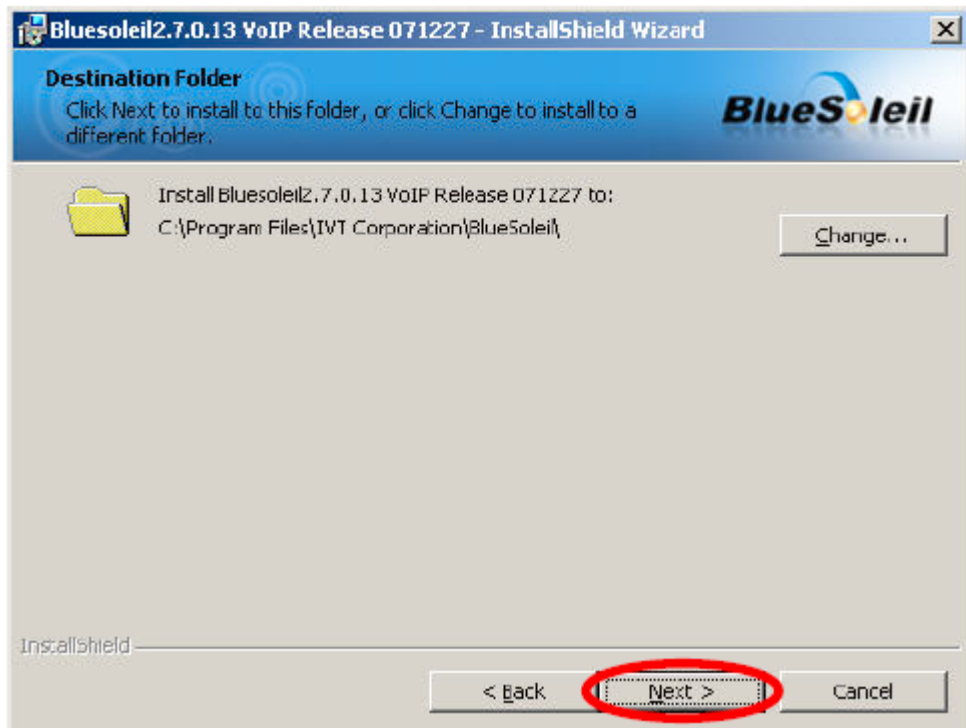




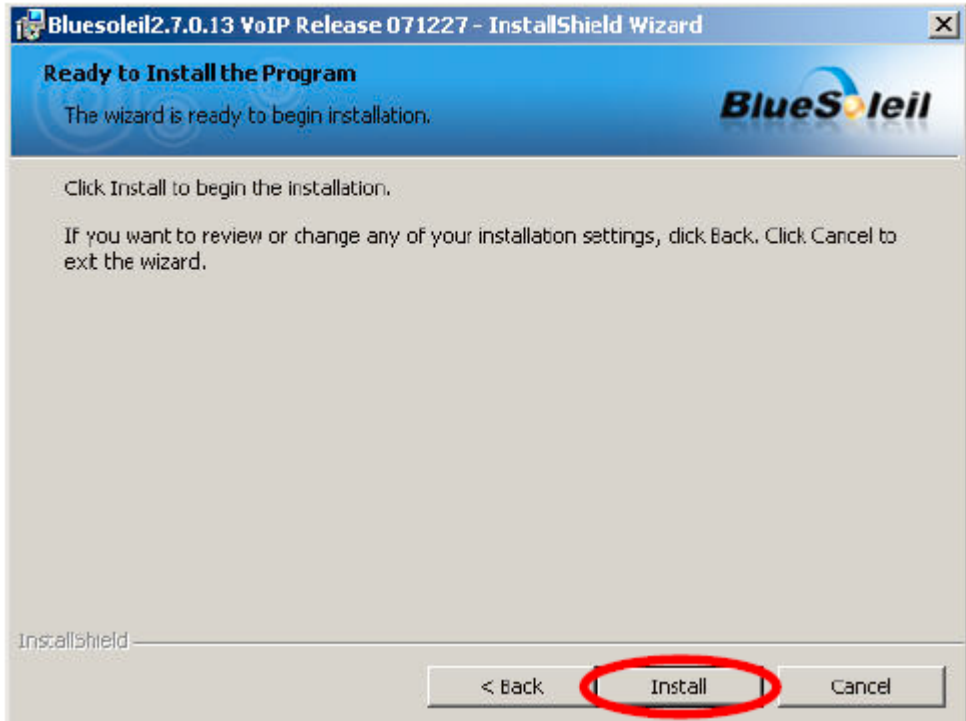


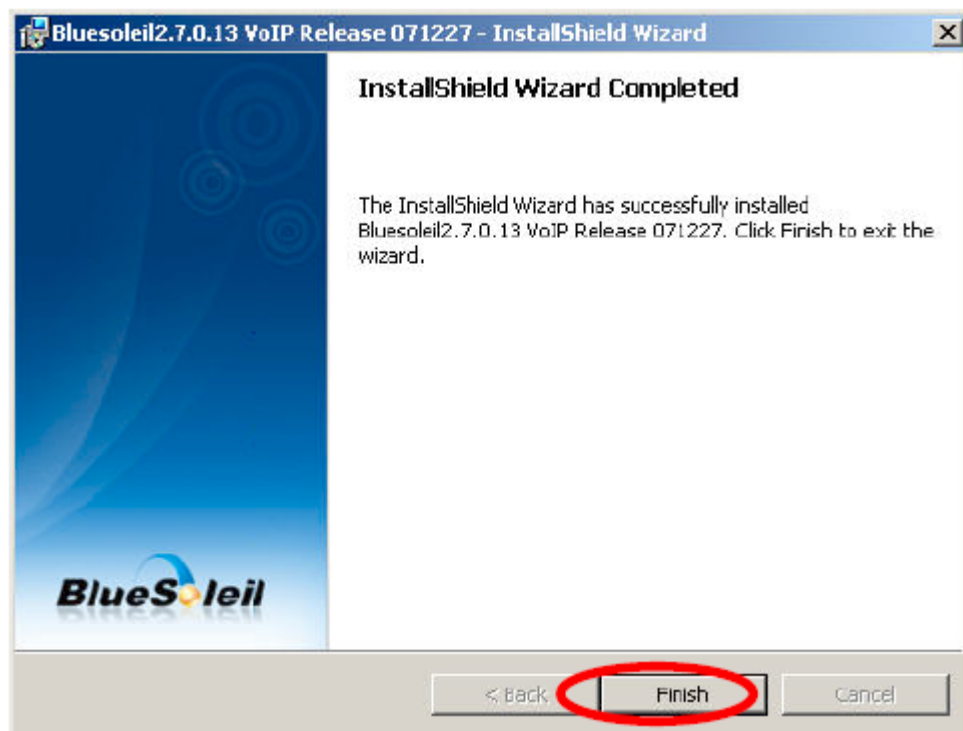
4. Select you want to place the program shortcut, and indicate the location of where you want Bluetooth Software to be stored; if you do not change the default settings, it will be stored under **C:\Program Files\IVT Corporation\BlueSoleil** (Recommended). Click on “Next” button to continue. Or you can select your prefers location to install. After finish, the installation program is ready for install.



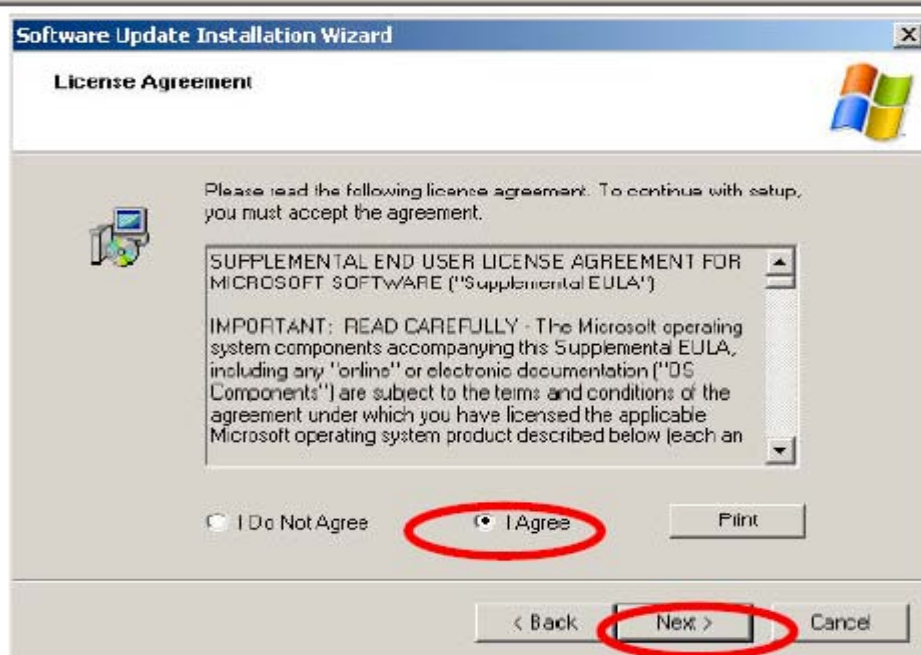
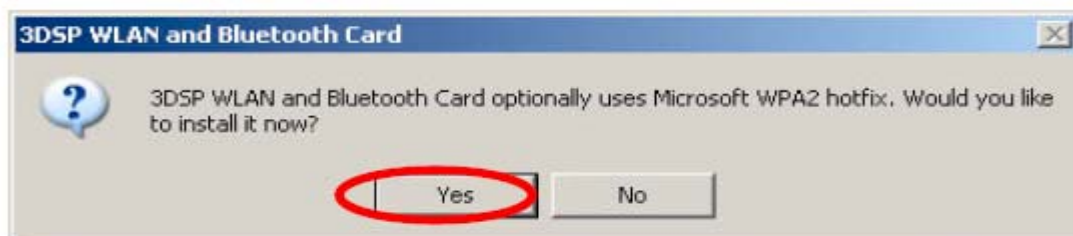


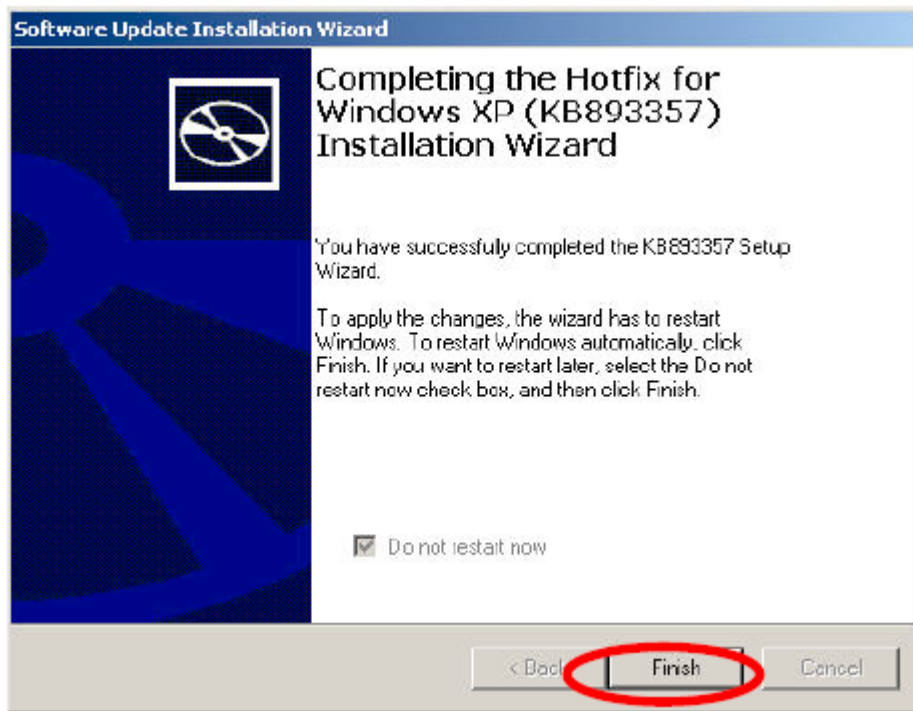
5. The Install Shield Wizard will begin to install the software and copy files to your hard disk. After copy all the files, the installation will try to install virtual Bluetooth device in your system. It may take a few minutes, please wait it finishes the installation.



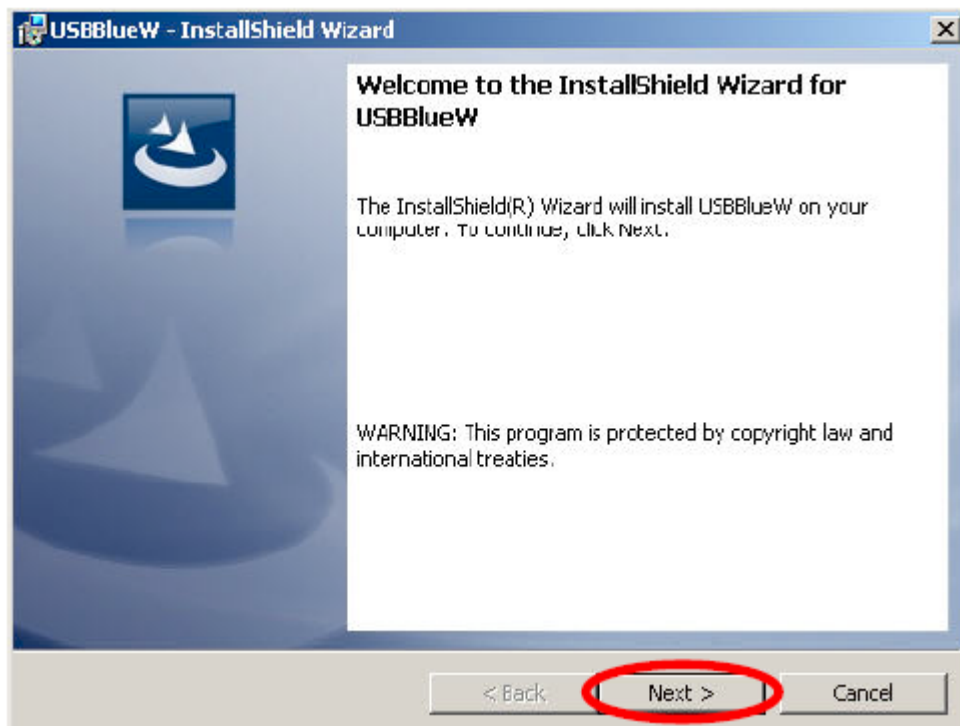


6. After finish installation the IVT Bluesoleil, then the install system will continue install. If your system is not install the WPA2 hotfix yet. The install program will ask you install it First.

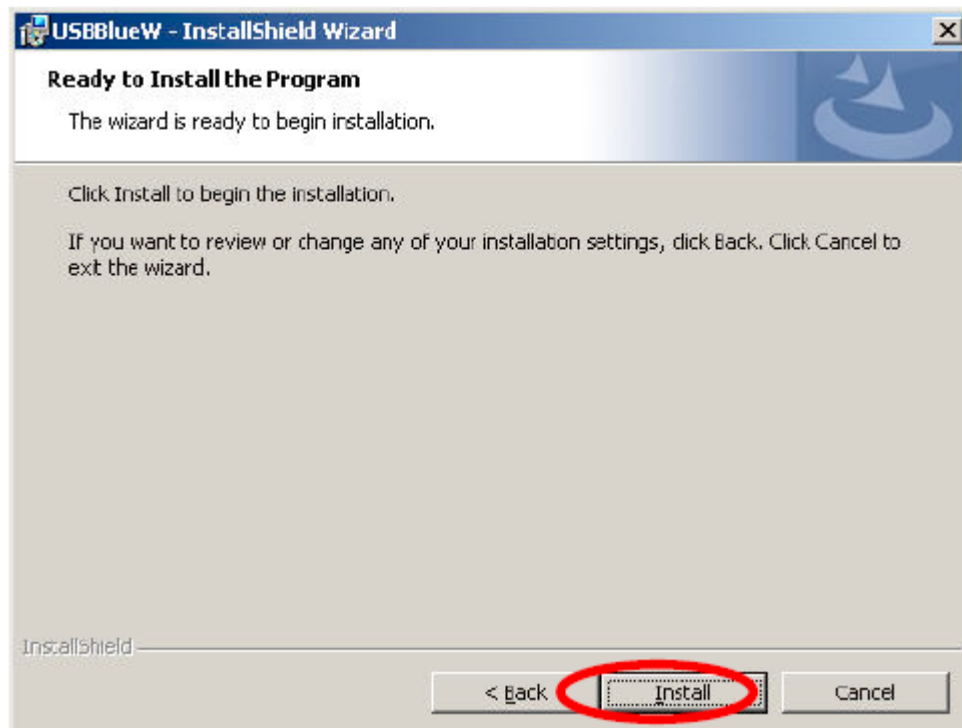




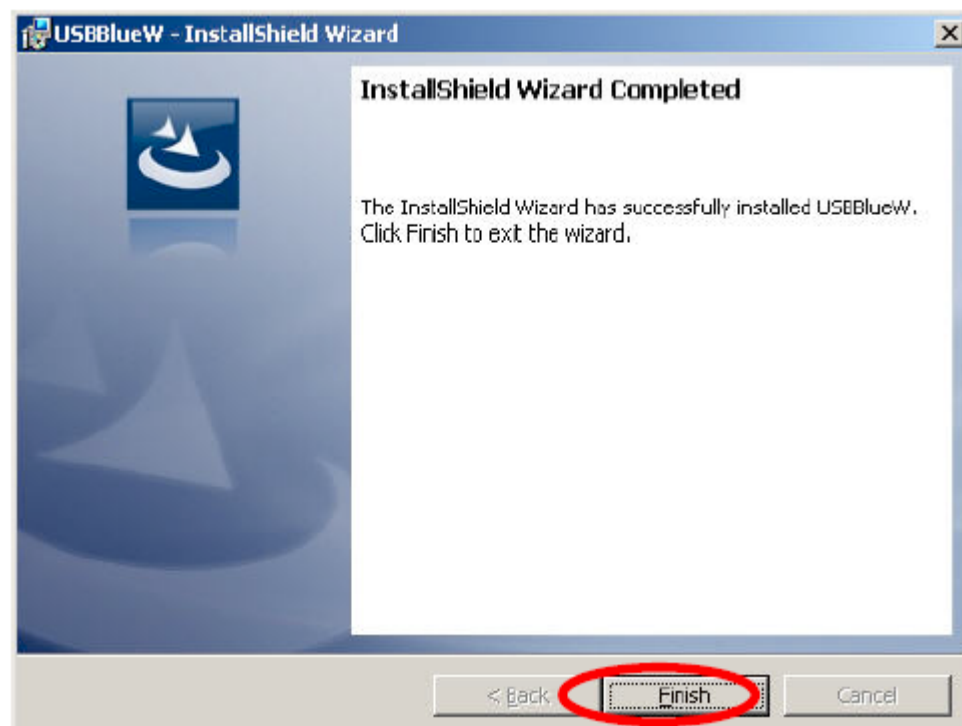
7. Continue install the 3DSP WLAN driver will be stored under C:\Program Files\3DSP\BluetoothWLAN\_usb\. Click the “Next” for continue.

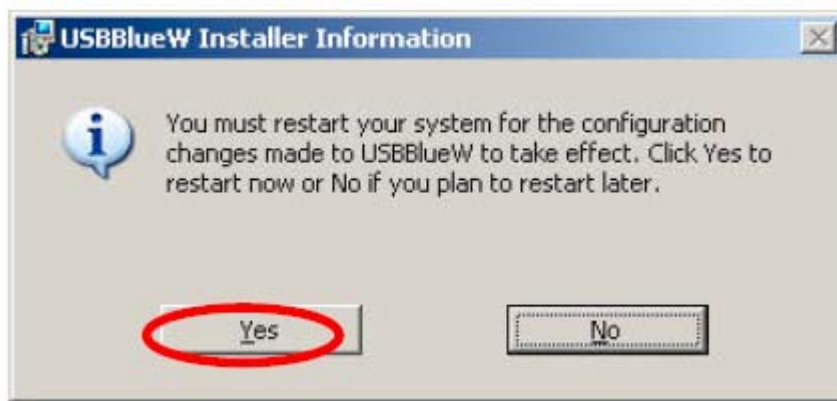


8. The Install Shield Wizard will begin to install the software and copy files to your hard disk. Please press "Install" for continues.



9. After finish installation, please select reboot your system to finish the installation.  
Or you can select to reboot later.

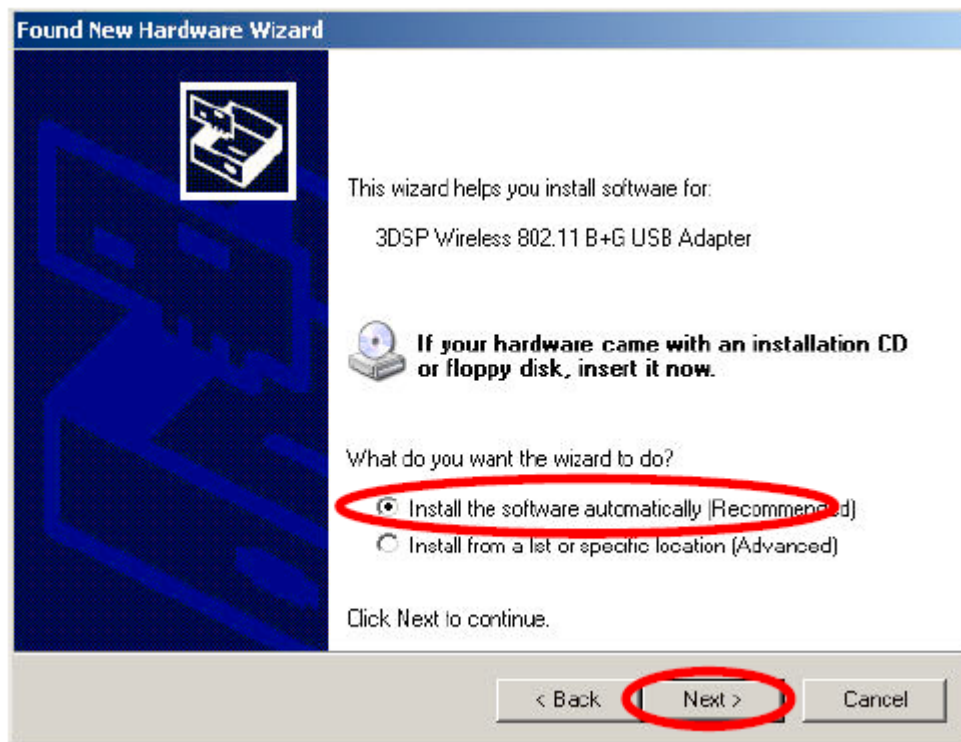




10. Please plug the AWM-S0021M/H USB dongle in your PC USB port. After a few seconds, another “Found New Hardware” message will appear briefly, as shown on the following pictures. The system will prompt installation. Windows will find another new hardware (see above), and the following screen will appear. Select **No, not this time**, and click **next** several times, then select auto installation driver.

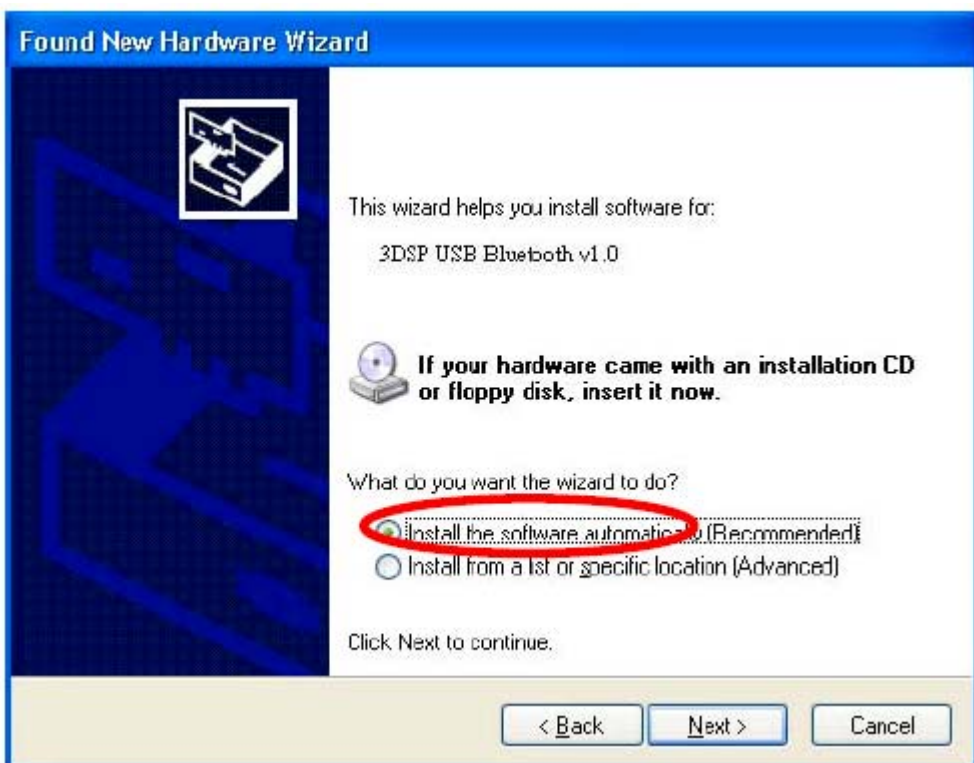




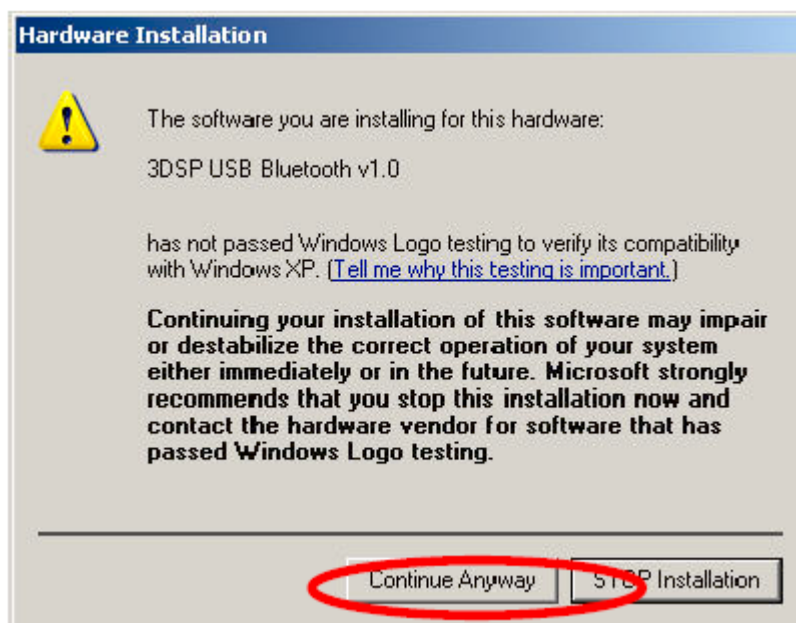
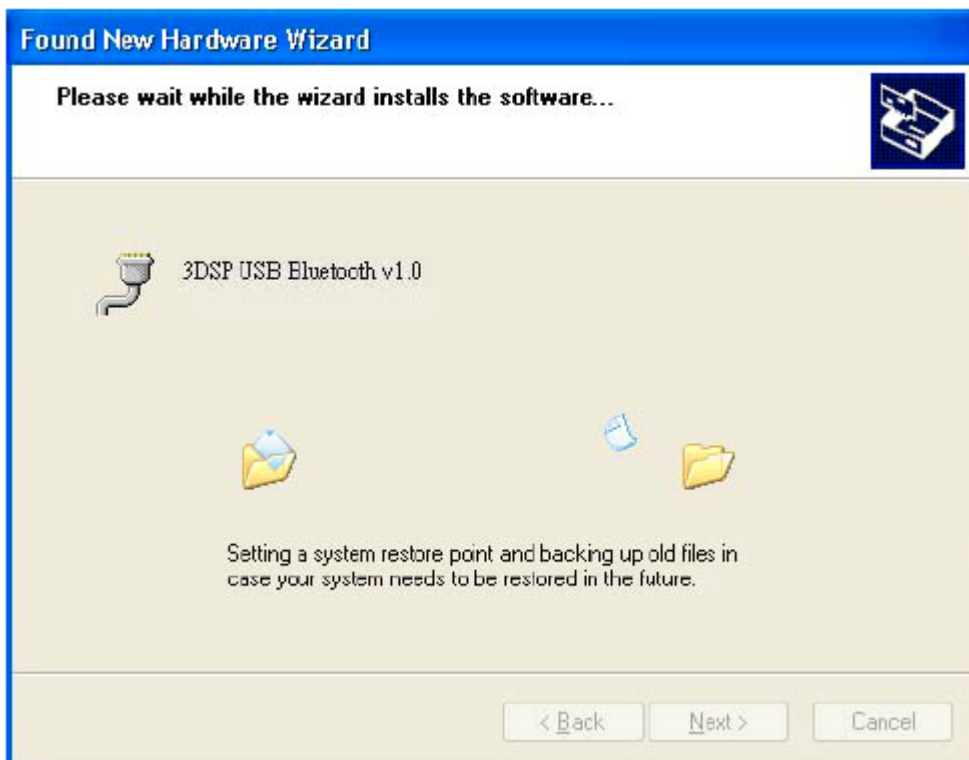


11. The system will prompt now installation the driver for the wireless USB combo dongle, select continue installation. Because the system will installation both WiFi and Bluetooth. So this procedure will repeat several times.



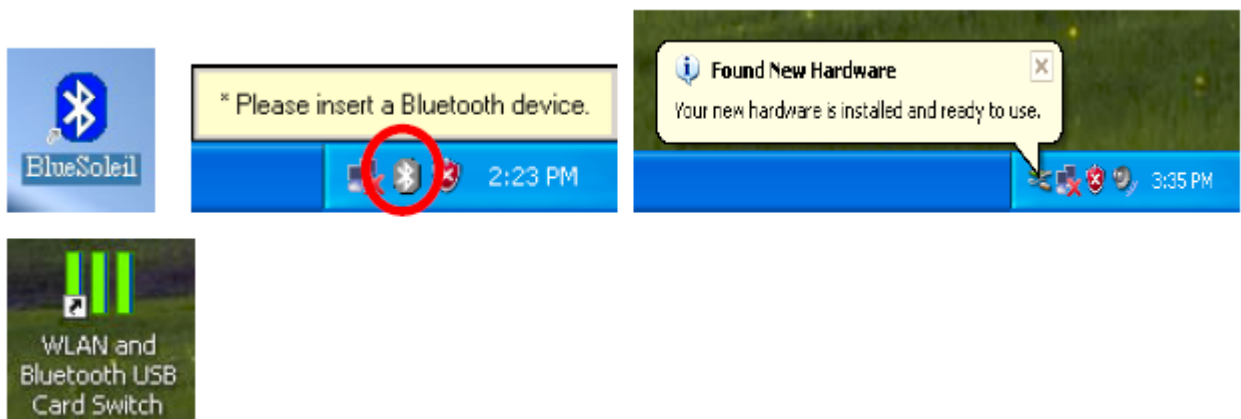








12. There are two new Bluetooth icons appear on the desktop and the windows task bar respectively when logged in Windows operating system. For more information on the BlueSoleil, please refer to Chapter 2.



13. Please remove the Software CD after the installation is complete.

14. A Bluetooth icon will appear in your system tray



Click **Finish** to close the wizard.

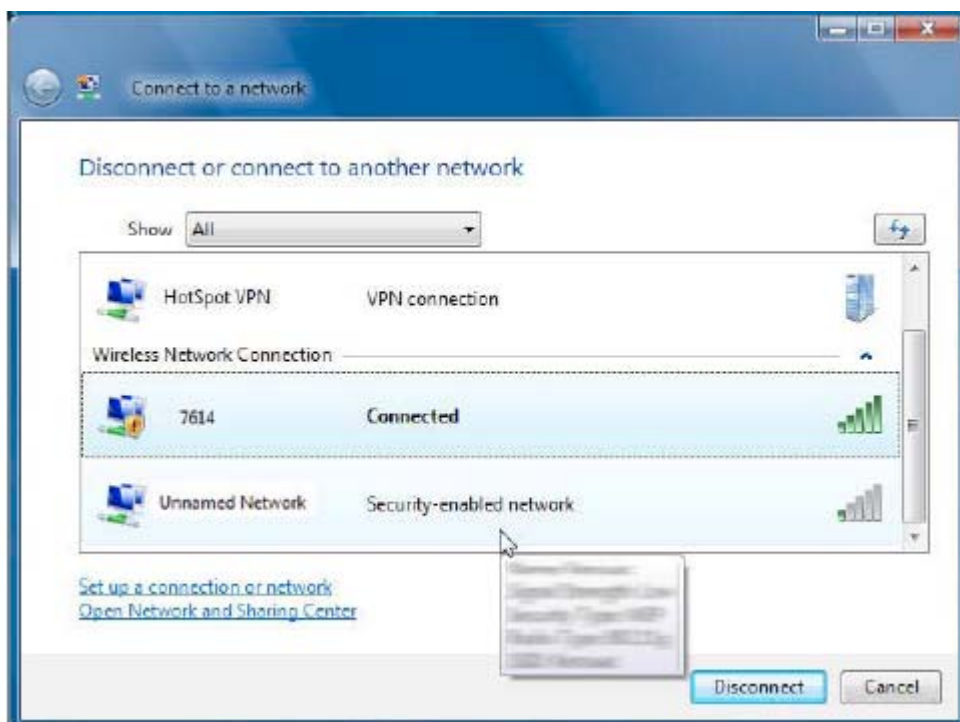
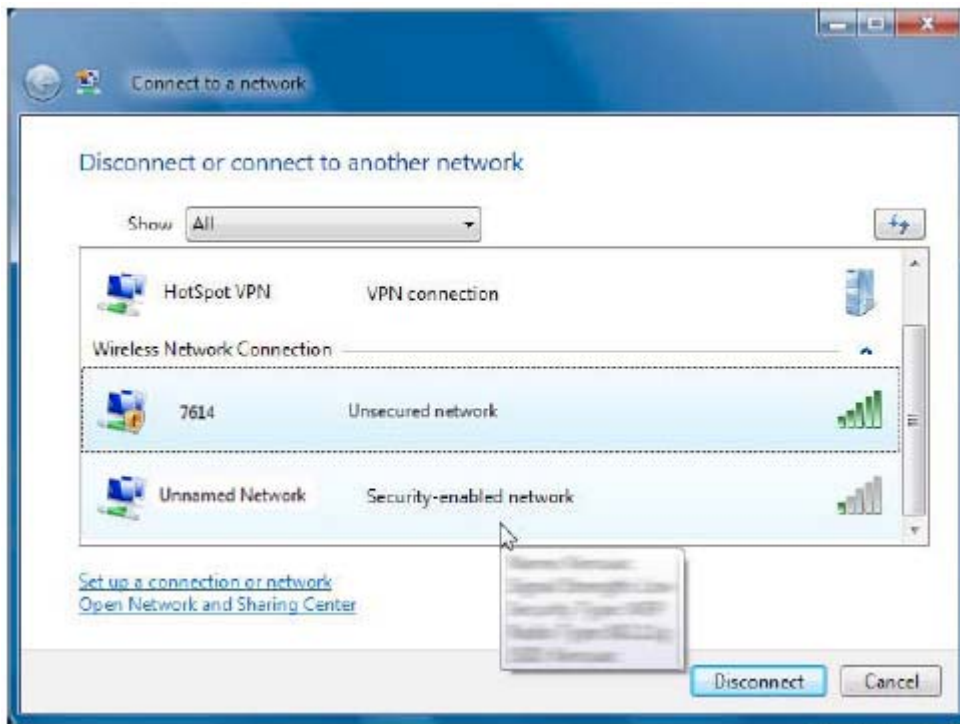
## 4. Wireless Configuration

### 4.1 Configuring Your Wireless Network with Windows XP

The Windows XP SP2 operating system has the “Wireless Zero Configuration” feature, which can be used to configure and control the AWM-S0021M/H 802.11b/g and Bluetooth v2.0+EDR Combo USB Dongle. Wireless Zero Configuration is most appropriately used in home and small office networks or in the networks where a high degree of security is required.

Follow these steps to configure your USB dongle using Wireless Zero Configuration:

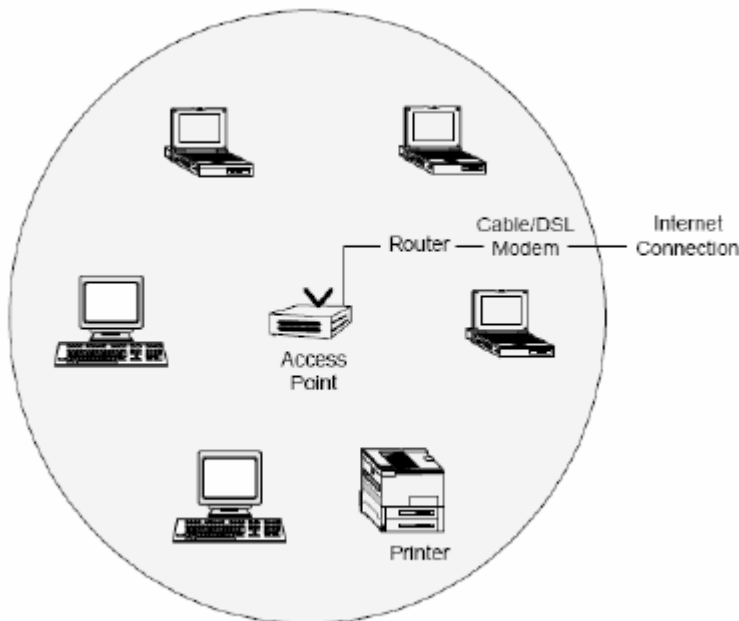
1. From the Start menu, select Control Panel.
2. Click Network Connections.
3. Right-click the network connection associated with your Wireless USB Dongle and select Properties.
4. Click the Wireless Networks tab.
5. Check the USE Windows to configure my wireless network settings checkbox.
6. Click the View Wireless Networks button.
7. Select the Access Point with which you want to connect.
8. Click the Connect button.
9. Type in a network key.



Follow these steps to start Wireless Zero Configuration:

1. From the Start menu, select Run. Enter **Services.msc**.
2. Scroll down to Wireless Zero Configuration Service. Double-click on it to open the settings box.
3. Click the Start button to start the service.
4. Set the Startup type drop-down box to automatic.
5. Insert your wireless USB dongle. Windows XP will configure it for you.

## 4.2 Single Access Point Network



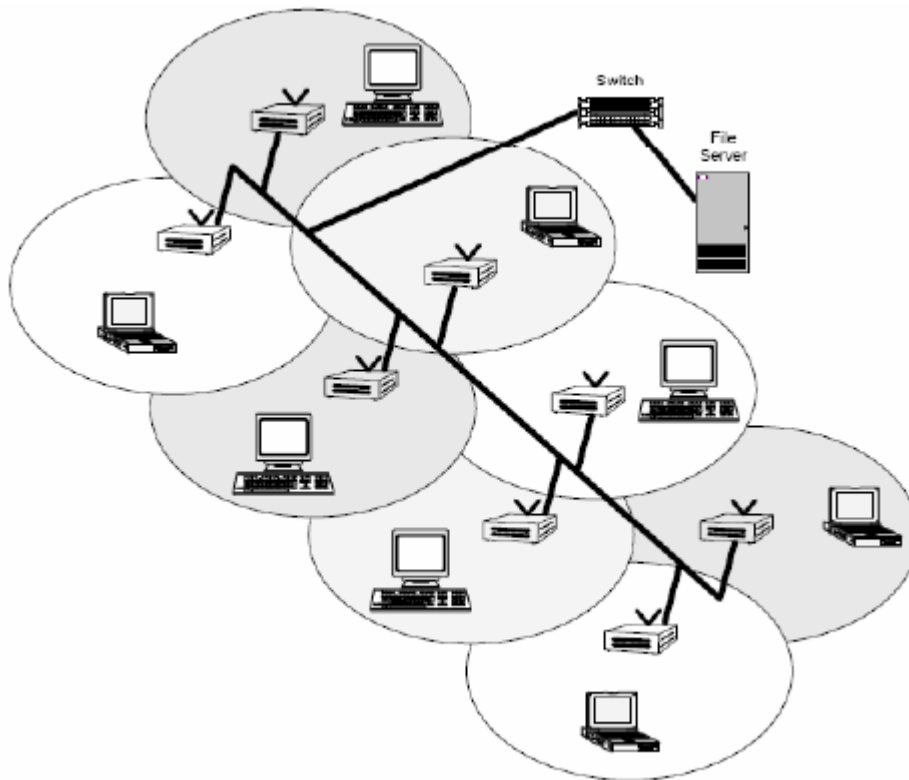
In a small environment, you can set up a wireless network using a single Access Point and one or more Wireless USB dongle. This type of network provides a coverage area sufficient to satisfy the network requirements for many homes and small businesses.

The Access Point connects your network computers to an existing network. Once this “infrastructure” is in place, you can easily add computers to the network by simply configuring the Wireless USB Dongle in those computers. This eliminates the time and expense of running costly cables throughout your network. Notebook users are now free to roam from office to conference room or from kitchen to outdoor patio.

To create a single Access Point network, the Access Point must be connected to a router and a cable modem or a DSL modem. This connection lets the wireless network access the wired network in your home or office and the Internet. Position the Access Point in the center of your network. If you Experience a weak signal or no signal at all from an outer computer, move the computer with the Wireless USB dongle closer to the Access Point or position the Access Point closer to the computer.

Many manufactures now offer wireless routers, which combine the Access Point and router in one box. Note that the Access Point and USB Dongles must have the same security settings to communicate. The Wireless USB dongle supports all types of Access Points, including 802.11b and 802.11g.

### 4.3 Multiple Access Point Network

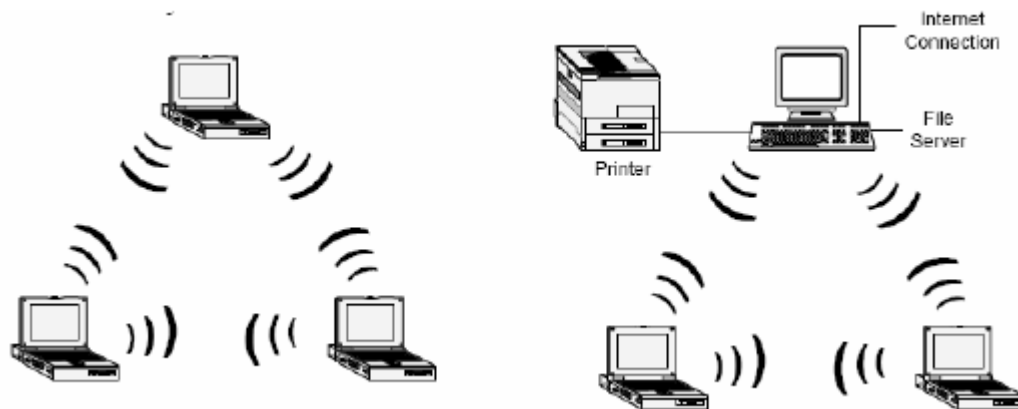


In a large environment, you can set up a wireless network using multiple Access Points and thereby create a large coverage area. In such a network, computers with Wireless USB Dongles that "roam" between different locations within the network area will be served by the various Access Points and maintain the same network connection. Roaming wireless stations in a multiple Access Point network will automatically switch between Access Points when necessary.

To create a multiple Access Point network, the Access Points must be connected by way of a wired backbone. Access Point must overlap to ensure complete connection coverage for the roaming client. Note that all the Access Points and USB Dongles must have the same security settings to communicate.

The Wireless USB Dongle supports roaming between all types of Access Points, including 802.11b and 802.11g.

#### 4.4 Setting Up a Peer-to Peer Network



A Peer-to-Peer Network consists of two or more notebook or desktop computers with Wireless USB Dongles that communicate directly to each other without the use of an Access Point. Such networks are usually small but they can be very useful.

Co-workers can quickly set up a Peer-to Peer group in a temporary environment. If there is a printer nearby that is equipped with a wireless device, the members of the Peer-to Peer group can send print files to that printer. In addition, if one member of the group is connected to an Infrastructure Network (one that uses an Access Point), all the members of the Peer-to Peer group can access network storage devices and the Internet, provided that their computers have been set up with the necessary software.

In wireless-LAN literature, Peer-to-Peer Networks is sometimes referred to as Ad Hoc Networks. Both terms mean exactly the same thing. The original term was Ad Hoc (from the Latin “to this”). Ad hoc means done or set up solely in response to a particular situation or problem. Because of the vagueness introduced by the Latin term, some manufacturers have been using the more descriptive term “Peer-to-Peer”. Peer-to-Peer Networks are used far less widely than Infrastructure Networks. Perhaps that is because users have not learned the simple steps to set up a Peer-to-Peer Network. One person in the group has to create a profile with a Network Name (SSID) and other simple settings. After you create the profile, you can communicate that Network Name (SSID) to the other people in your group. They will see the Network Name on their Site Survey screen and connect to the network. These are the steps that the first person, the person who is creating the network, must do on the Connection Profile screen.

1. Enter a unique Profile Name and Network Name (SSID).
2. Select the Peer-to Peer radio button.
3. In the Network Type pull-down menu, select the network type that matches all the

WiFi device in your Peer-to-Peer Group (802.11b and 802.11g).

4. Establish the Privacy settings that all the computers in the network will be using.

Remember that if you need to enable encryption in your network, the other computers in the network will need the encryption key.

To share an Internet connection, you will need to purchase Internet Sharing Software or use the Internet Connection Sharing (ICS) utility provided with Windows XP.

## **4.5 Wireless Performance Considerations**

Many factors determine the range, coverage, and transmission rate of wireless components (Access Points and Wireless USB Dongle). Be aware of the following:

- ✧ When a radio signal travels through building materials such as walls, floors, concrete, and metal framing, its strength is reduced. The best performance is achieved when wireless components are in direct line-of-sight with one another. A wall may be six inches thick, but if two wireless components form an acute angle to the wall, the wall may appear to be three feet thick to the radio wave.
- ✧ Place wireless components away from cordless telephones, microwave ovens, printers, and monitors. Cordless telephones and other devices that operate in the 5 GHz frequency range can interfere with wireless transmission. The 2.4GHz spectrum might be occupied by microwave ovens, cordless telephones, and Bluetooth devices.
- ✧ Increasing the distance between wireless components significantly decreases the number of successfully transmitted packets. If you are far away from your Access Point, you cannot expect to have the same transmission rate as someone who is near the same AccessPoint.
- ✧ Your actual data throughput will always be less than the data rate of the device (54 Mbps or 11Mbps). In addition to the considerations listed above, the data throughput is less because some of the available bandwidth is used to send control messages and to regulate the wireless traffic. After your dongle receives data, the computer processor and operating system that you are using can cause further delay in the display of that data.



## 4.6 WiFi Security Considerations

Transmitting data via radio waves presents real security risks. Someone within your wireless network range could, with a fair amount of effort, access your network and the data you transmit. You might have heard about the white vans that drive slowly through neighborhoods and capture account numbers and passwords. Eavesdropping on computer networks (a.k.a. “sniffing”) requires costly equipment and it is therefore unlikely that your neighbor is a real threat.

If you want to ensure the security of your data, wireless LAN technology provides different means to that end. WLAN security standards have progressed from WEP to TKIP to WPA and AES. Each stage in this progression provides users with more protection than the previous stage. Using the same type of security standard throughout the network is a necessity. You cannot configure a profile using WPA and expect to communicate with an Access Point using WEP.

For those who want an effective security feature, the AWM-S0021M/H 802.11b/g and Bluetooth v2.0+EDR Combo USB Dongle support the wired Equivalent Privacy (WEP) security standard. This feature uses a network key called a WEP key, which encrypts data so that it is only readable by other computers that have a matching WEP key. The WEP key must be entered and stored on each wireless device in the network. You cannot configure a profile using one WEP key and expect to communicate with an Access Point using a different WEP key. Assigning WEP keys in a large environment can be problematic for the system administrator. If an employee leaves your company, new WEP keys should be assigned to protect the network from the former employee who knows the secret key.

## 5. Bluetooth Configuration and Utilities

### 5.1 Start the Bluetooth Device

Start the Bluetooth service for ready to service.

1. After you install the USB Dongle, the system tray Icon will become available.

If the Bluetooth Services is not start up, please start the IVT BlueSoleil program on your system.



2. Right Click the Bluetooth service tray Icon, press the **“Display”**.



3. Give this Bluetooth service computer a name and computer type, let the other Bluetooth identify.



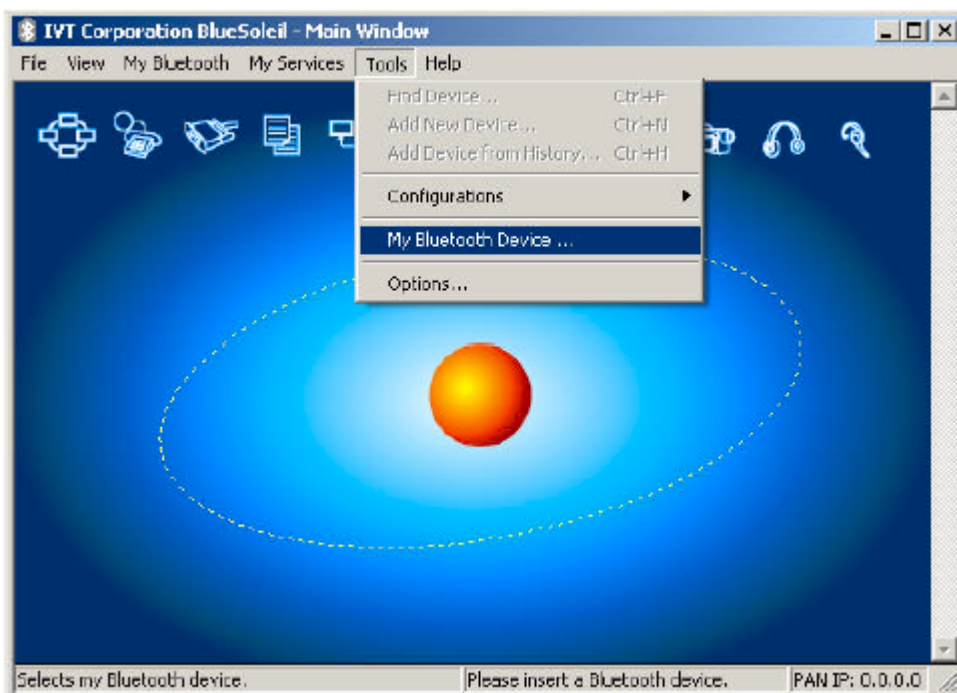
## 5.2 Manual Configuration Bluetooth Dongle

If the IVT BlueSoleil can not identify the USB Dongle Bluetooth services, there you can manually configuration the IVT BlueSoleil.

- a. Open the Device management of your system. [Setup]=>[Windows Control Panel]=>[Device Management]. The search the connection port for 3DSP USB Bluetooth v1.0 (**COM X**). **X** is the **COM** port assign like the fallowing picture.



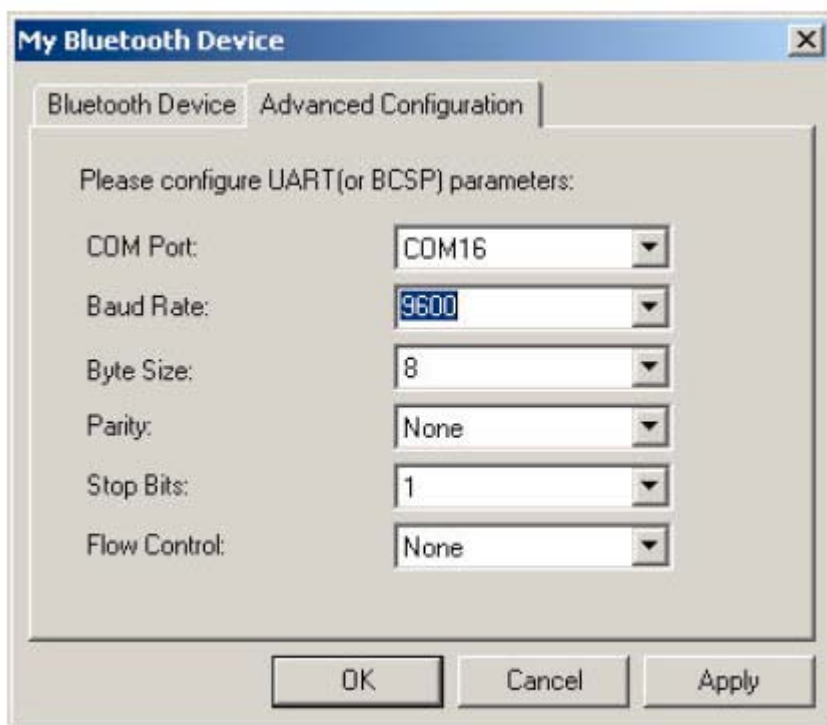
b. Start the IVT BlueSoleil, then go to [Tool]=>[My Bluetooth Device].



c. Set as **UART** device, and then go to the advance setup page.



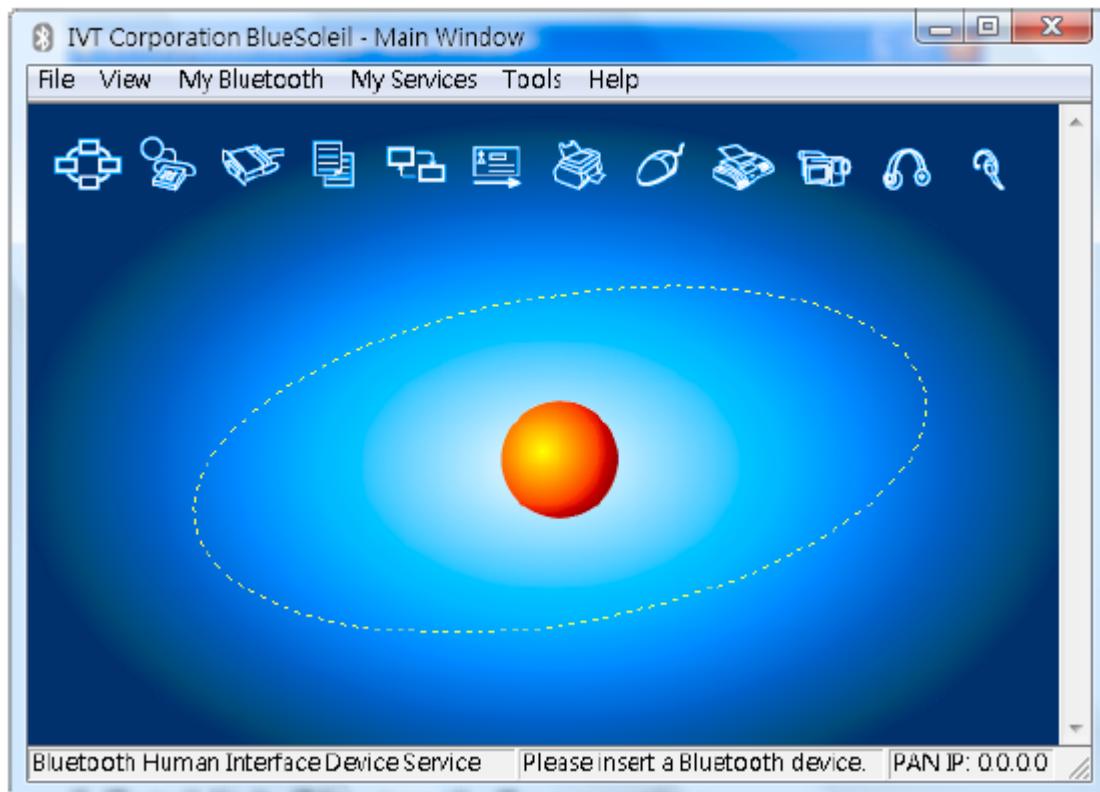
d. Configuration as the following picture setting. Setup the [COM Port][Transmit speed][Data Bit][Parity Check][Stop bit][Flow Control]. As COM Port = X that reference from the device management information. Transmit speed = 9600, Data Bit=8, Parity Check = None, Stop bit =1, Flow Control = None.



e. After finish setting, please "OK" for finish manually Bluetooth device configuration.

## 5.3 Start Bluetooth

Start BlueSoleil. (Double click the IVT Bluesoleil icon or in the Start Menu)



## 5.4 Establish Bluetooth Connection

A connection is normally initiated from the client.

- On the server side, start the service.
- On the client side, initiate the connection.

### Start Service on Server

If BlueSoleil provides service, please start the service:

1. Change to Service Window.
2. Right-click the service icon, select Start Service on the pop-up menu.

### Initiate Connection on Client

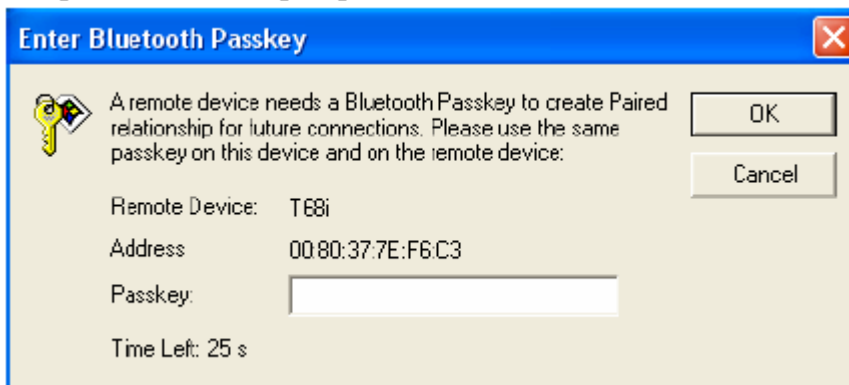
In Main Windows:

1. Single click my device, the center ball, to search the Bluetooth device in range.
2. Search the selected Bluetooth device service by double-clicking the device icon.

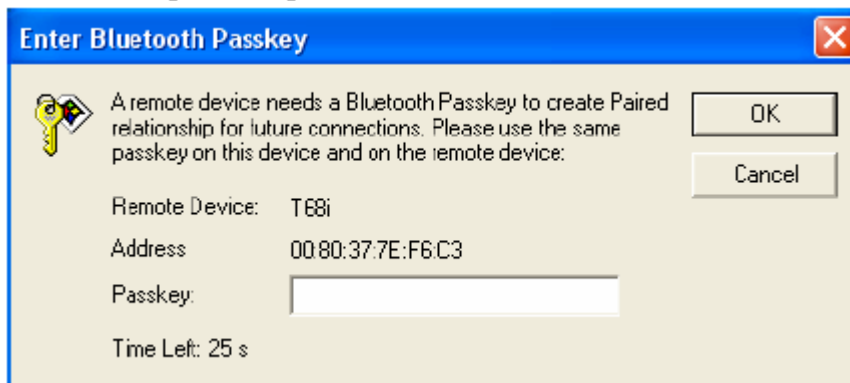
Service button on the top of the BlueSoleil Main Window will be highlighted if the service is supported by the device. Enter the same Bluetooth passkey on both devices if necessary to pair the two devices.

3. Connect.

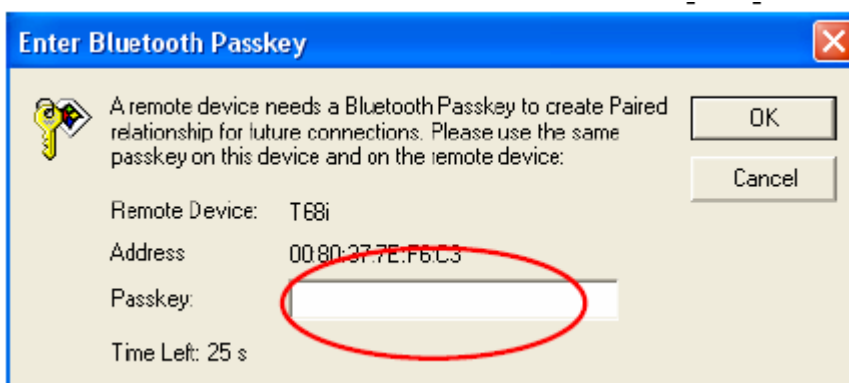
Single-click the highlighted service button to establish the connection



4. If the other device needs pair, the Bluetooth Icon in the system tray will show a warning message that the Bluetooth connection need input pair numbers.



5. Input the same pair number as you input in the other Bluetooth device. Then click ok to finish the Bluetooth connection pair procedure.



## 5.5 Stop the Bluetooth Device

Remove the USB Dongle from the system. The tray bar icon will show the BlueSoleil is not available.

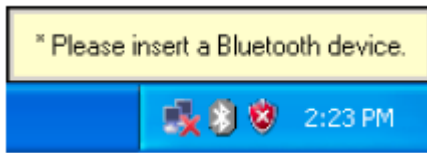


Figure 1-26: The Bluetooth Device is not available.



## 6. 3DSP Combo USB Dongle Configuration

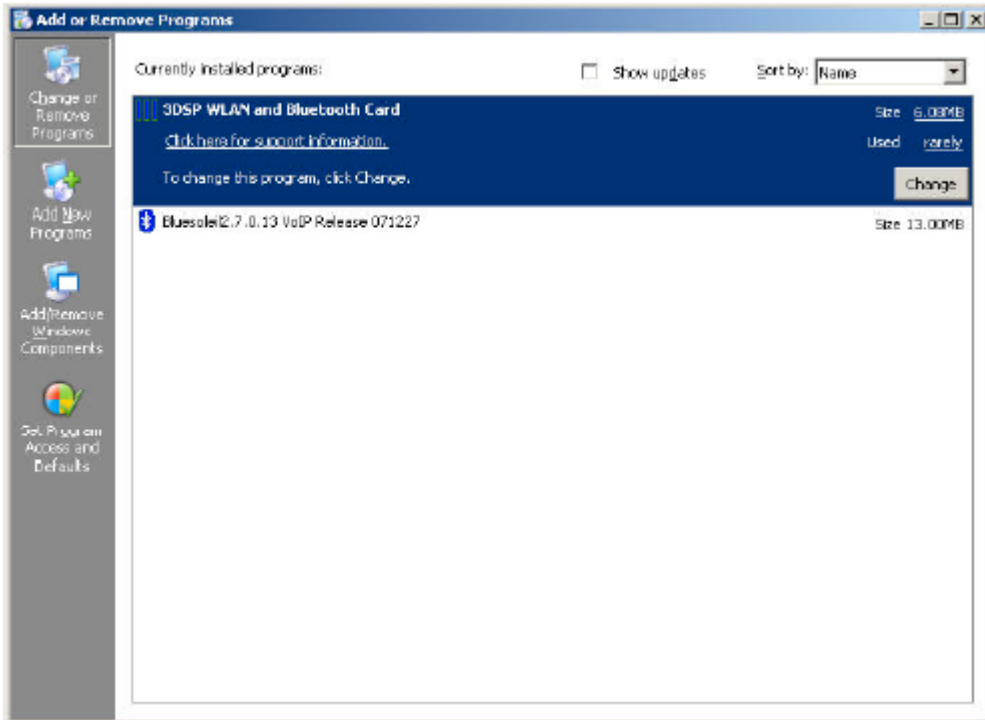
- ✓ Right-Click on the green three-bar icon in the system tray, a pop-up list that displays several options will appear. (Recommended)
  1. Click Coexist to use both utilities simultaneously.
  2. Click Exit to exit the USB Dongle configuration program.



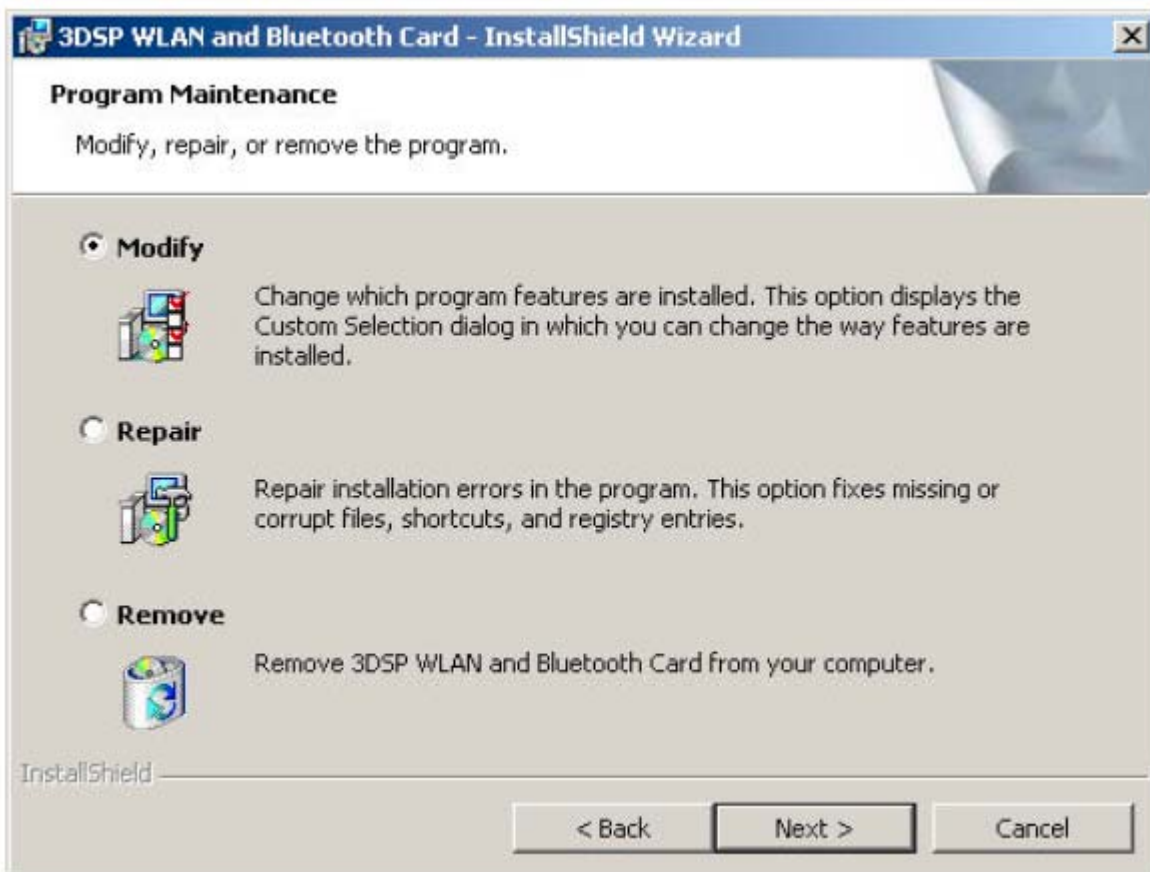
## 7. Remove Driver

If you want to remove the wireless Combo card driver, please read this chapter for introduction.

7.1 Go to windows Control Panel, select and start “Add or remove programs” service.



7.2 Click the 3DSP WLAN and Bluetooth Card, and then press the “Change” button. The system will ask you what you want to do with this program. Select “Remove” and press the “Next” button for remove the program.

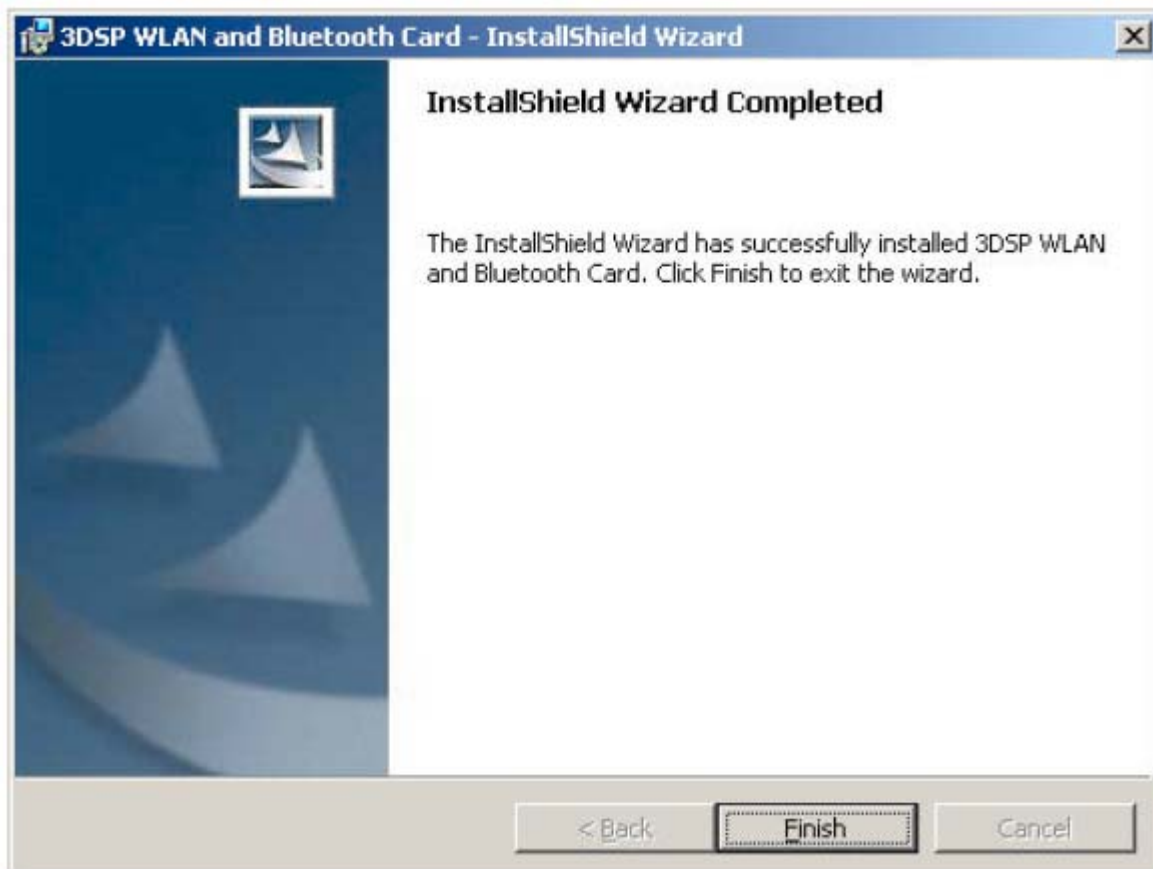


7.3 System will ask you again for sure you want to remove it. Click “Continue” for remove the program.



7.4 Finish removes the program. Please follow the same method to remove the

IVT BlueSoleil for clean your system.



## 8. Troubleshooting

This section provides solutions to problems that may occur when trying to use the AWM-S0021M/H 802.11b/g and Bluetooth v2.0+EDR Combo USB Dongle.

**Q1 The computer does not recognize the AWM-S0021M/H 802.11b/g and Bluetooth v2.0+EDR Combo USB Dongle.**

A1. Verify that the Wireless USB Dongle is properly inserted into the computer's USB port. If the problem still exists, please reinstall the driver.

**Q2 The computer with the AWM-S0021M/H 802.11b/g and Bluetooth v2.0+EDR Combo USB Dongle is unable to connect to the wireless network.**

A2.1 In Infrastructure mode, make sure that the exact same Network Name (SSID) exists on the Wireless USB Dongle Site Survey Screen and on the Access Point settings screen.

A2.2 In Peer-to Peer mode, all computers in the network must have the exact same Network Name (SSID).

A2.3 On the Connection Profile Screen, verify that the Wireless Mode is set correctly on all computers. It must be Access Point if an Access Point is used or Peer-to-Peer if an Access Point is not used.

A2.4 If Enable Encryption is checked, verify that the encryption keys entered in your profile are the same as the encryption keys on the other network computers.

**Q3 The AWM-S0021M/H 802.11b/g and Bluetooth v2.0+EDR Combo USB Dongle are draining my battery's life.**

A3. Any wireless adapter will shorten your battery's life to some extent. Heavy network activity (Transmitting and receiving lots of data) will drain your battery much more than if the USB dongle is in idle mode. To get the best energy efficiency, go to the Connection Profile Screen and check **Enable Power Saving**.

**Q4. When I want to install a new version of the software, I have to uninstall the older version. But when I do it, it always asks me for the location of the wlcards50.sys file.**

A previous installation did not cleanly remove its driver and INF file. Click 'Cancel' to allow the current uninstall to complete. Then do the following steps to remove any leftover INF file(s):

A4.1 Open a My Computer view of the files in your Windows \INF folder.

- This folder is hidden when Windows is installed. To make it visible, click on the \Windows directory, and then select "Folder Options....." from the "Tools" menu. Select the "View" tab, select "Show hidden files and folders", and click "OK". Then click on the INF folder to see the contents.

A4.2 Make a backup copy of the INF folder before continuing, and follow the procedure very carefully. Your system may become unusable if you delete INF files for devices other than the 3DSP Wireless LAN.

A4.3 Click the "Search" button in the toolbar, and select "All files and folders". Enter \*.INF for the file name, and "3d5b" for the text to search for in the file, and then click "Search".

A4.4 For all matching files found, delete both the .INF and the corresponding PNF files. Repeat for all \*.INF files that are found to contain "3d5b". For example, if oem6.inf is found to contain "3d5b", delete oem6.inf and oem6.pnf.

A4.5 Reboot the machine and follow the normal installation procedure.

**Q6. I upgrade my driver from V2.1 to V2.2 and use 2.2 version's uninstallation shortcut to uninstall driver and utilities, but c:\Program Files\3DSP folder still exists after uninstallation.**

A6. If you use v2.2's 3DSP Wireless LAN uninstallation shortcut or running setup.exe to uninstall and your machine has the previous released v2.1CD installed, a wlancfgdlg.ico and its 3DSP folder will exist after uninstallation. You can manually remove 3DSP folder under program files after the driver uninstallation.

This problem will not exist if you use v2.2CD and later version to upgrade or remove programs.

If your machine has the previously released version 2.1 installed, it is recommended to use Add/Remove Programs to uninstall the driver and manually remove c:\program files\3DSP folder before upgrading to version 2.2. You don't need to do this step in the future driver upgrading.

**Q7. I've plugged in the USB dongle before running setup.exe, but I am still asked to attach the device at the end of the installation.**

A7. If you plug in the USB Dongle before running setup.exe and this is your first time installing driver on a machine, you will be asked to attach the device at the end of the installation. The installation will continue and complete if you remove the device and plug it back in. There won't be a problem if it is a driver upgrade. The installation program can detect the USB Dongle. You do not need to remove the USB Dongle and plug it back in.

**Q8 My PC is Microsoft Windows XP SP2, why I can't make connection with the AP Router which encryption is WPA2-AES or WPA2-TKIP?**

A8. It's because the Microsoft XPSP2 original version is not support the Wireless WPA2. It needs a hotfix pack (KB903357) to solve this problem. In the driver install CD, there are the hotfix files in the folder (Microsoft WPA2 hotfix for XP Service Pack2). We put the English, Simple Chinese and Traditional Chinese version on it. If your environment is different languages, please download it from Microsoft and install.

**Q9 Why I can't hear any sound from my Bluetooth Headset or Bluetooth Speaker?**

A9.

1. Please connect the Bluetooth Headset, after connect. The Headset icon will change to Green and there is a small "stop" sign on it. Please press the "connect key" on your headset.
2. Please double click your Audio manger on your windows lower right bar. Or go to control panel => Sound and Audio device.

Check the speaker device is the Bluetooth SCO is the default device? If not, please select the 3DSP Bluetooth SCO as the default device.

(Usually it will change automatically, but sometimes are not)

The microphone device set as above if you wish to use Bluetooth Headset as microphone too.

3. Play the sound on your PC, it should work. (Please double check the Volume too, sometimes user set it as mute)

**Q10 Why I can detect many wireless APs, but can't get connected any of them?**

A10

1. Please reinstall the Wireless Combo's driver again after reinstall. Please restart your windows for Enable your Wireless Combo device.
2. Restart access point then try it again.
3. If it still can't works, please disable your notebook's WiFi device (It usually has hardware key). Then connect the AP router you want and try again. And please make sure it's use the right code.
4. Please double confirm how many signal strength show on the WiFi search screen. If signal is too weak to get connect, please closer to your Access Point the try again.
5. If it still can't works, please tell us witch AP router Brand and module you are use. We will check it out ASAP.





## 9. Specifications

<b>WLAN Spec</b>	<b>IEEE 802.11b/g</b>
Transmit Power	13 dBm to 17 dBm
Sensitivity	-74dBm@54Mbps, -85dBm@11Mbps
Frequency Channel	11channels (2412~2462MHz)
Modulation	802.11g: OFDM / 802.11b: DSSS
Security Features	WEP, WPA, AES, TKIP, WPA2
WEP Key Bits	64 / 128 bit
Protocol TCP/IP	TCP/IP
<b>Bluetooth Spec</b>	<b>Bluetooth v1.2 and v2.0 + EDR</b>
Transmit Power	≤ 20dBm
Sensitivity	3DH5@BER=1%%, -76dBm ; 2DH5@BER=1%%, -90dBm ; GFSK@BER=0.1%, -88dBm
Frequency Channel	79
Modulation	DQPSK, D8PSK, GFSK
Profile	SPP, DUN,HID, HSP, A2DP, OPP, SYN, LAN, PAN, FAX, FTP, BIP
Operating Temperature	32°F to 131°F (0° C to 55° C)
Storage Temperature	04°F to 185°F (-20° C to 85° C)
Operating Humidity	Operating Humidity 10% to 85%, Non-Condensing
Storage Humidity	5% to 90%, Non-Condensing
Interface Standard	USB 2.0
Power	DC: 5V@USBs, Normal 320mA / Peak 500mA
Certifications	CE, FCC Class B, Wi-Fi Certification(802.11b/g), BQB , WHQL: Vista 32-bit, Vista-64bit, XP, 2000

## **10. Contact Information**

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