

WFA9271M20

IEEE 802.11b/g/n

USB Wireless Module

User's Manual

I. Introduction

i. Overview

Ajoho WFA9271M20 USB 2.0 Wireless Module is a highly integrated wireless local area network (WLAN) solution to let users enjoy the digital content through the latest wireless technology without using extra cables and cords. It provides easy-to-use, high performance, cost effective and low power solution. Moreover, WFA9271M20 enables compatible high-speed wireless connectivity within home, business and public access wireless networks.

Compliant with the IEEE 802.11n/g/b standard, WFA9271M20 uses Direct Sequence Spread Spectrum (DSSS), Orthogonal Frequency Division Multiplexing (OFDM), BPSK, QPSK, CCK and QAM baseband modulation technologies. When you are using WFA9271M20, a high level of integration and full implementation of the power management functions specified in the IEEE 802.11 standard can minimize system power requirements.

The WFA9271M20 802.11n/g/b Wireless USB module provides up to 128-bit level of WEP security to your wireless data transfers. It is able to run in the operating systems of Windows XP/Vista/Win7 in Infrastructure mode. Comparing to previous wireless technology, WFA9271M20 got great improvements on speed and range. WFA9271M20 is able to double the data rate up to 150Mbps.

This module works for 5v. Users can just plug it into the usb interface. Extra adapter is not required.

ii. Features

- ⊙ USB 2.0 Wireless Module
- ⊙ 5V for the Module
- ⊙ Compliant with IEEE 802.11n/g/b standard
- ⊙ One antenna to support 1 (Transmit) x 1 (Receive) technology
- ⊙ Two antenna to support 1 (Transmit) x 2 (Receive) technology
- ⊙ High speed wireless connection up to 150Mbps
(For download only, it must connect to the other two Spatial Streams Modulation Access Point)
- ⊙ High performance and low power consumption
- ⊙ Enhanced wireless security with 128-bit WEP encryption and WPA

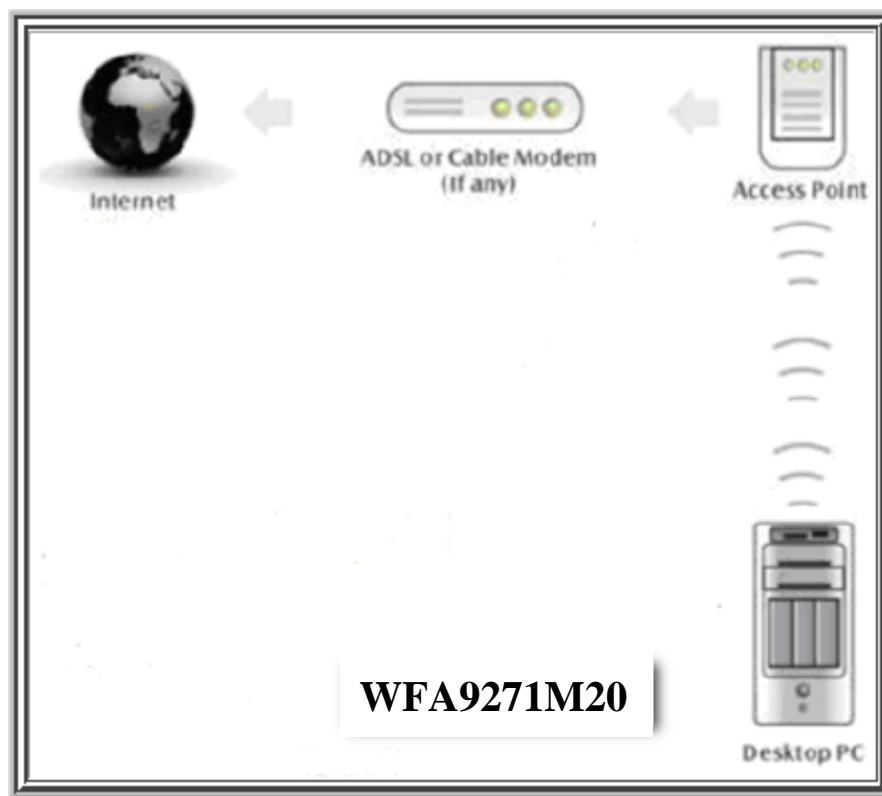
iii. Product Review

1. Connection Mode

©Infrastructure Mode

Infrastructure mode needs an access point to establish the network, which can provide wireless accesses within valid range for users to communicate with others or transmit data with a wired network. There are several benefits of Infrastructure networking:

- ✓ Roaming: a wireless LAN enabled computer can physically move from the operating range of one access point to the other without losing connection. There is a quick association made between new access point and wireless device as the computer traverses from the coverage of one access point to another.
- ✓ Range Extension: each wireless LAN enabled computer within the range of access point can communicate with other wireless LAN enabled computers within the effective range from the access point.
- ✓ Wired to wireless LAN connection: the access point will establish a bridge between wireless LAN and other wired counterparts.



Infrastructure Mode

II. Installation

i. System Requirements

Before you install WFA9271M20, please make sure your system meets the following requirements.

- *Desktop or Laptop or applications with USB 1.1/2.0 port
- *Minimum of 64MB system memory
- *Operating system: XP/Vista/Win7
- *An optical drive/CD-ROM for utilities and driver installation

ii. Hardware Installation

1. Find an available USB 1.1/2.0 port on your desktop or laptop or other applications.
2. Plug WFA9271M20 Wireless USB adapter into USB port of desktop or laptop or other applications.

iii. Operation Range

The operating range of WFA9271M20 varies from the working environment. However, this device made improvement on speed and range, which also reduced dead spots in coverage area.

By default, this USB wireless adapter will automatically adjust the data rate. The transmission speed may vary according to the environment. The closer the wireless stations are the better the signal and transmission speed they will receive.

iv. Setup: Windows XP OS

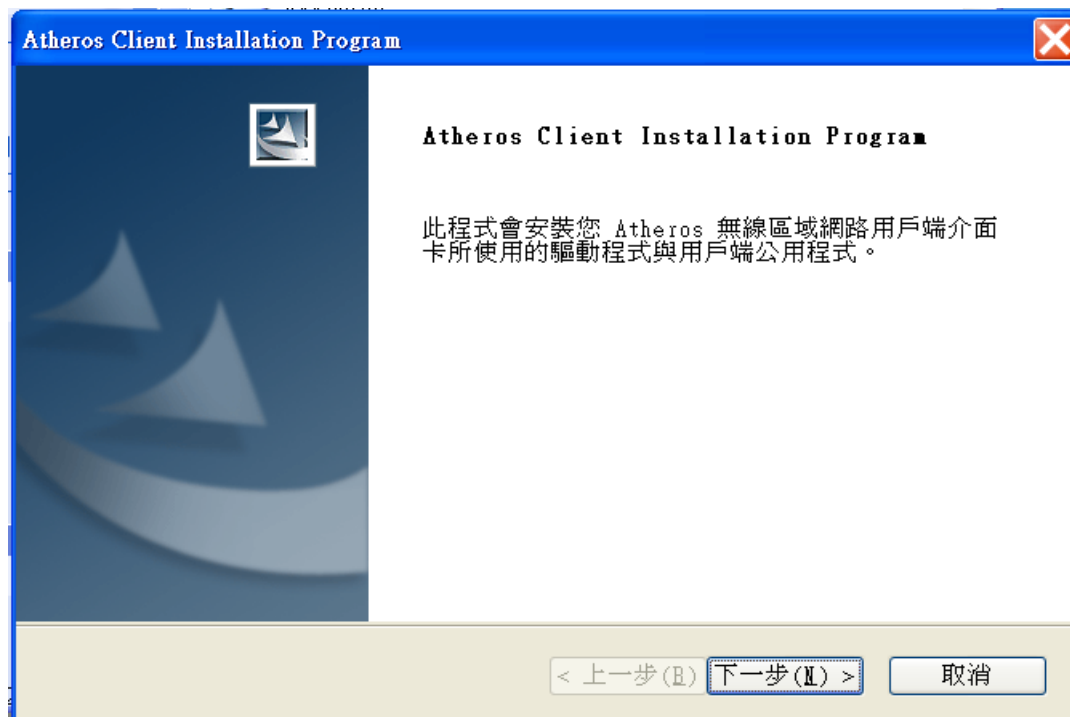
If your computer is running a Windows operating system, it will automatically detect the WFA9271M20 after the system boots up and displays a “Found New Hardware Wizard” window. Please click [Cancel] and proceed with the following steps.



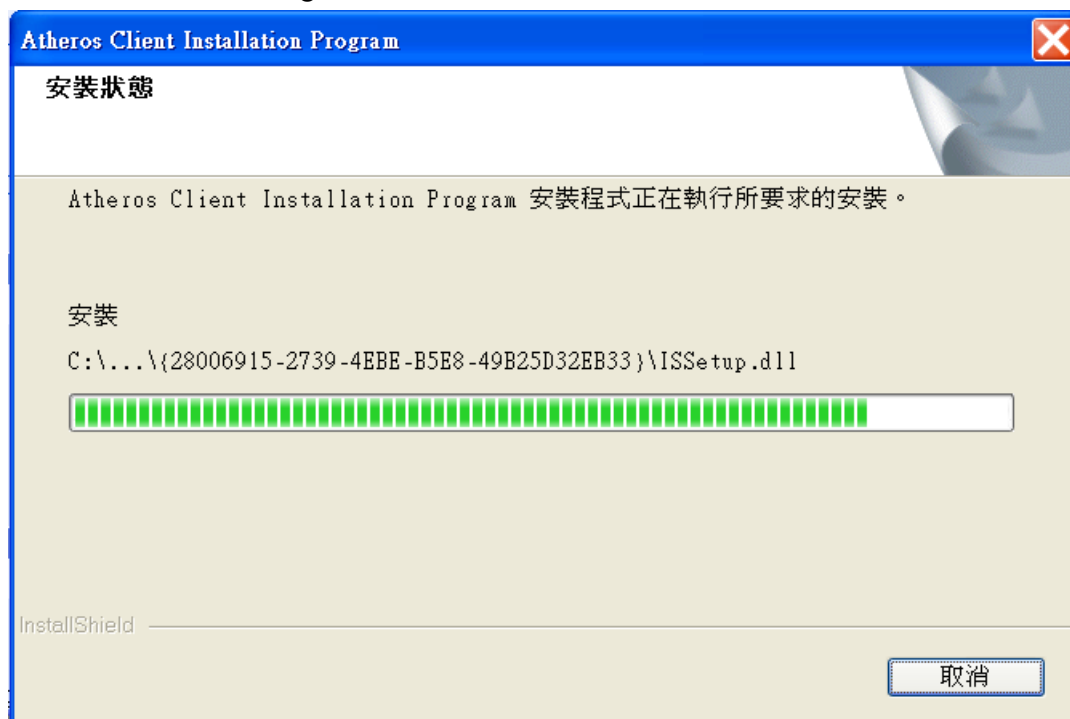
1. Find out the Driver, and launch the Setup Wizard



2. Please wait few seconds for wizard to prepare installation
3. Please select click [Install] to proceed

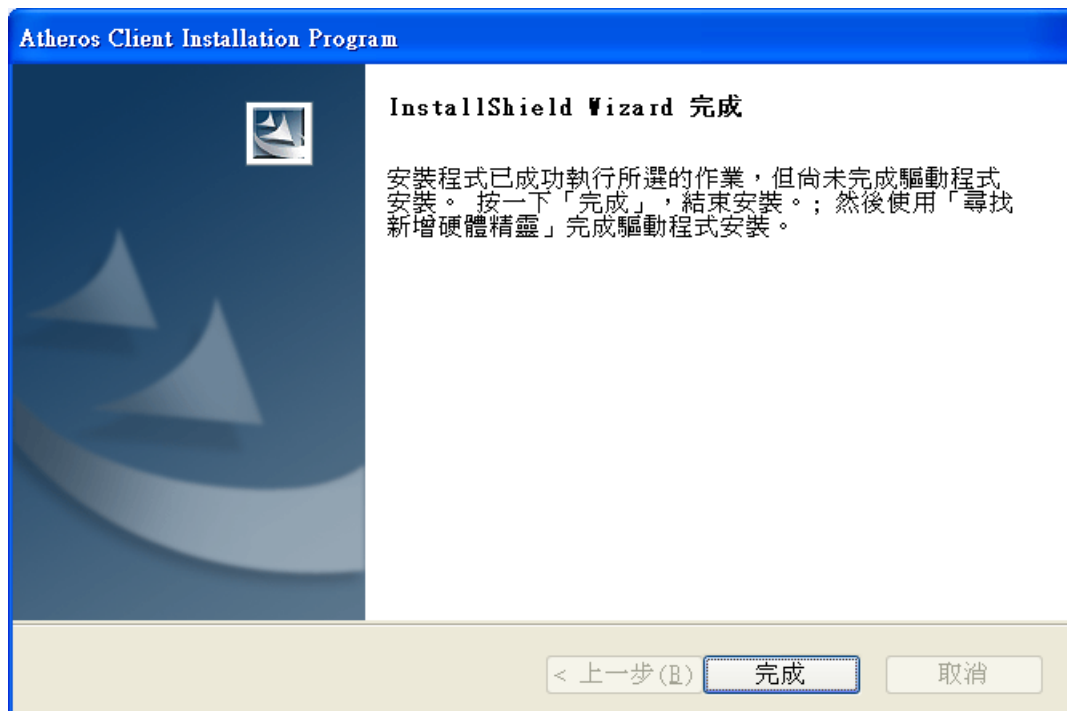


4. The Wizard is running installation

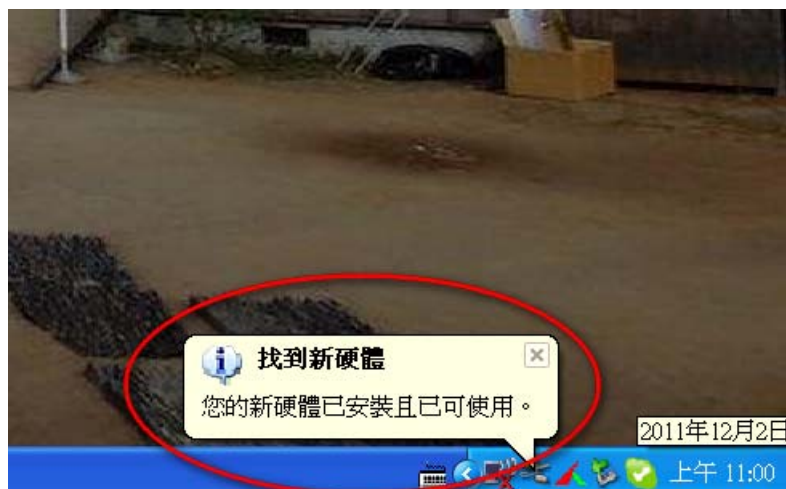


5. Please wait few seconds for Wizard to setup

6. When it is completed, please click [Finish]



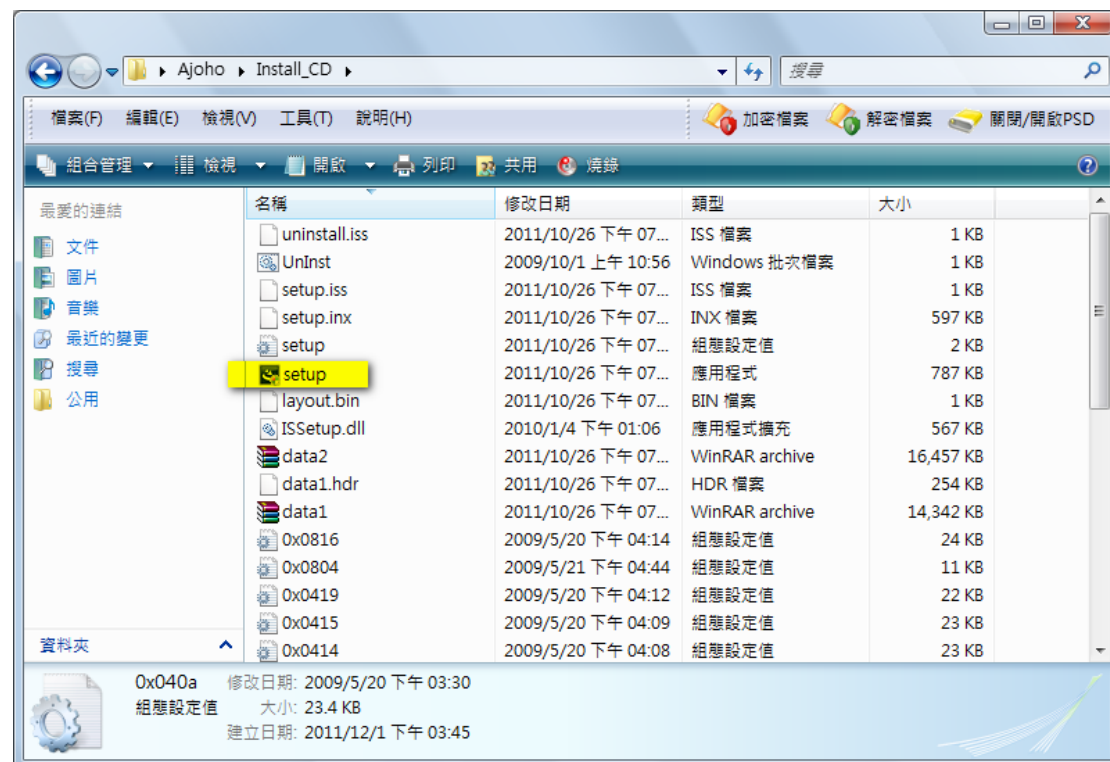
9. When the process is finished, the system will show a message of “Found New Hardware”



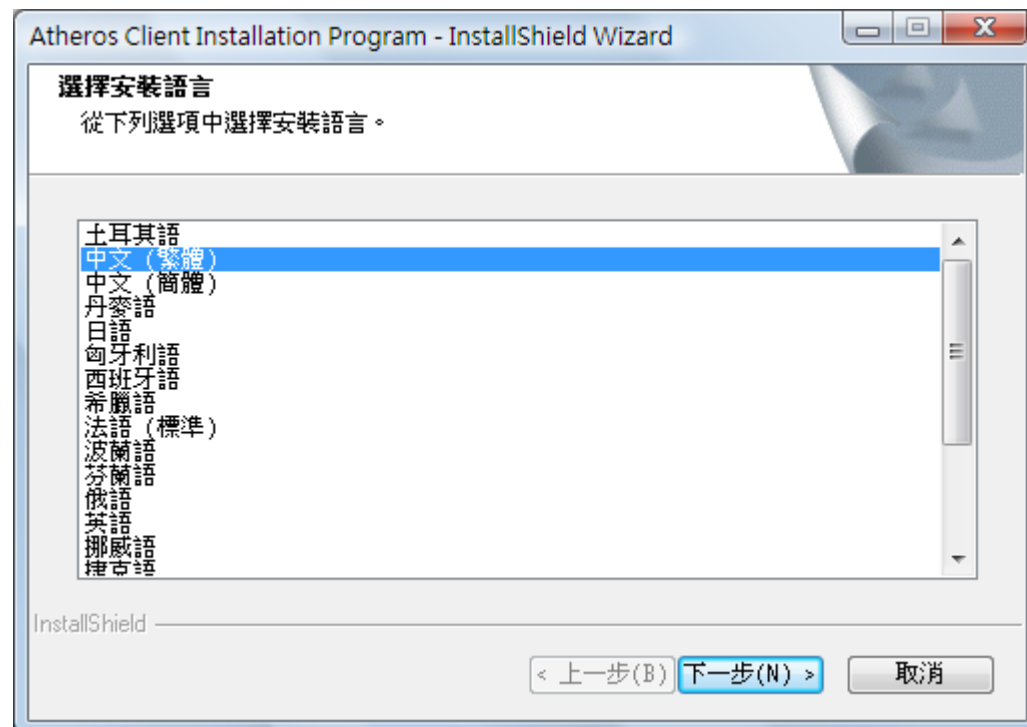
v. Setup: Windows Vista OS

Please follow the steps to complete installation.

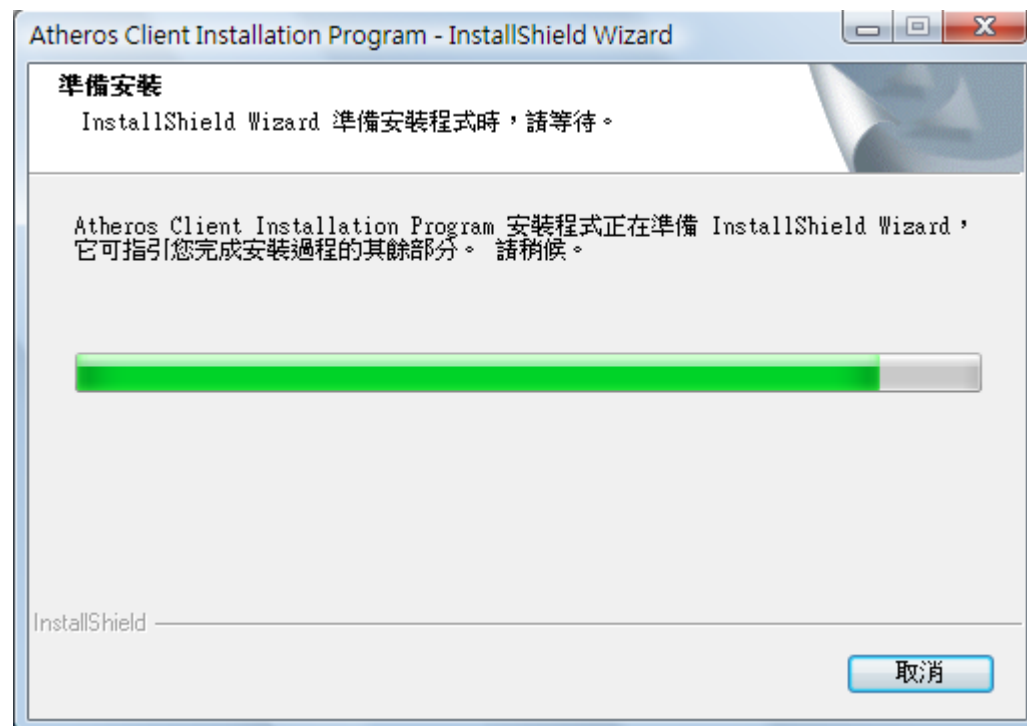
1. Launch the setup driver



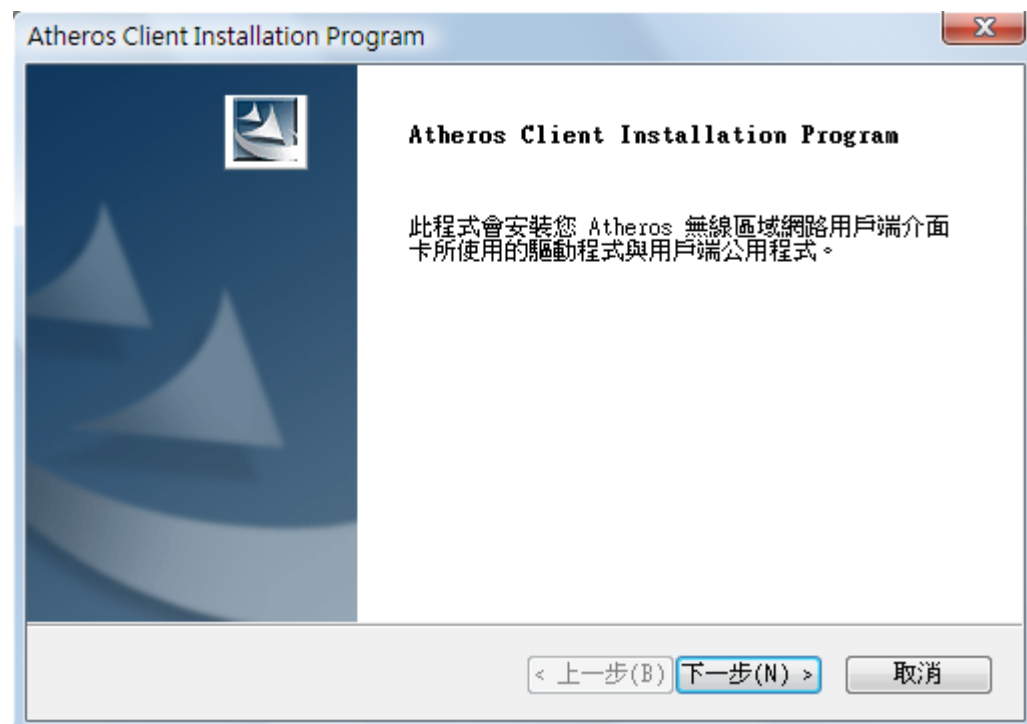
2. When you see the permission dialogue box, please click [Continue]



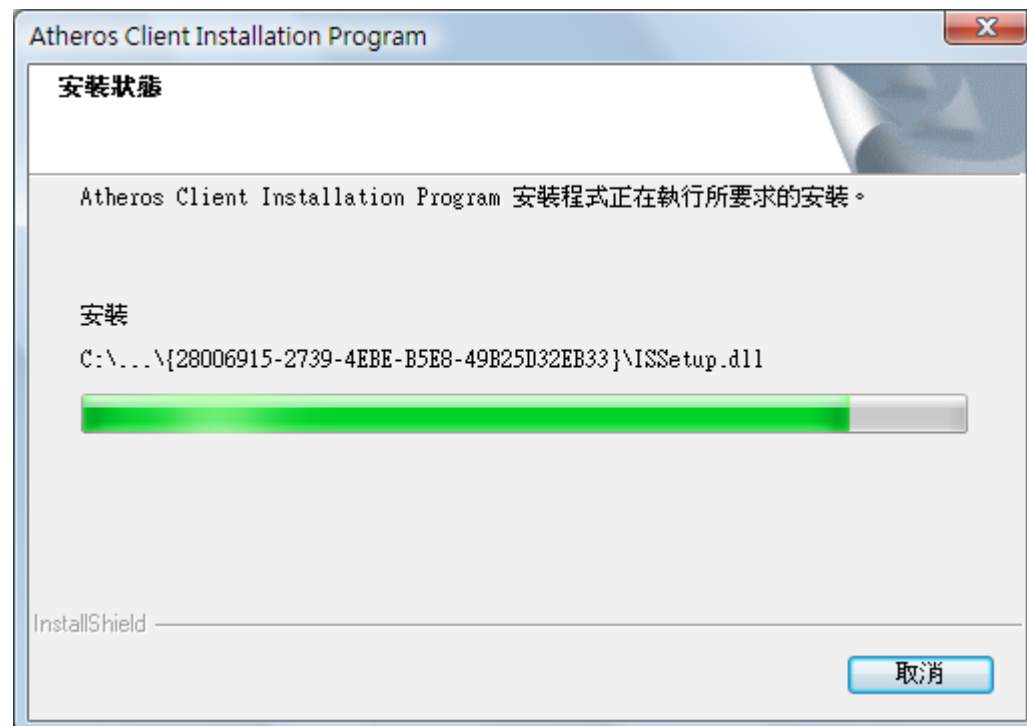
3. Now the Wizard is preparing installation



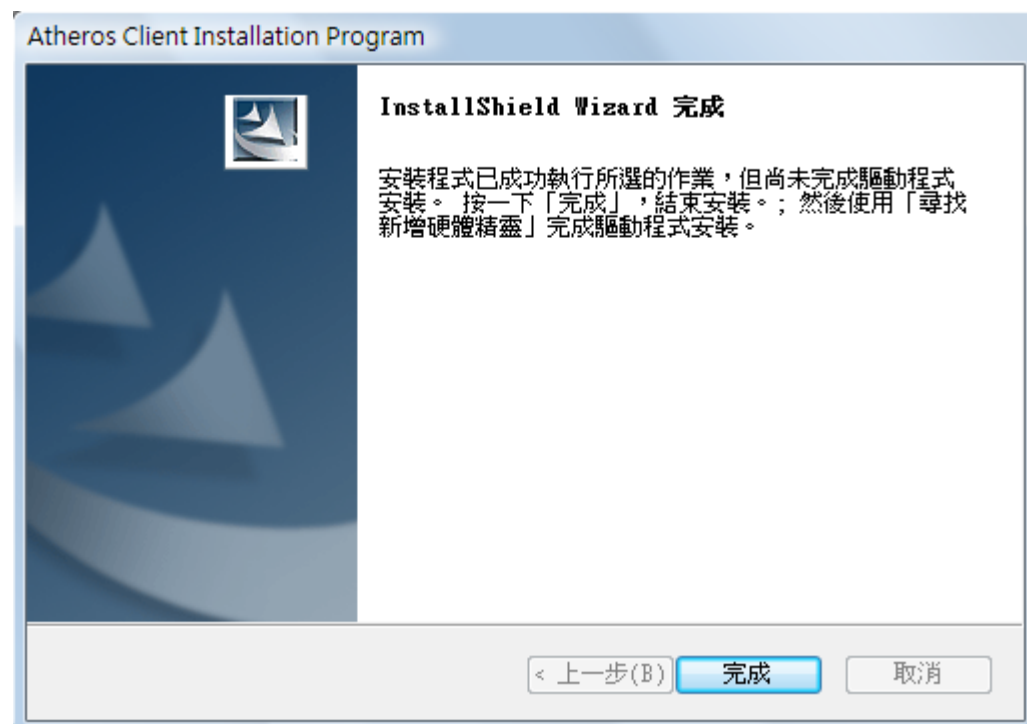
4. Please click [Install] to proceed



5. The system is process installation



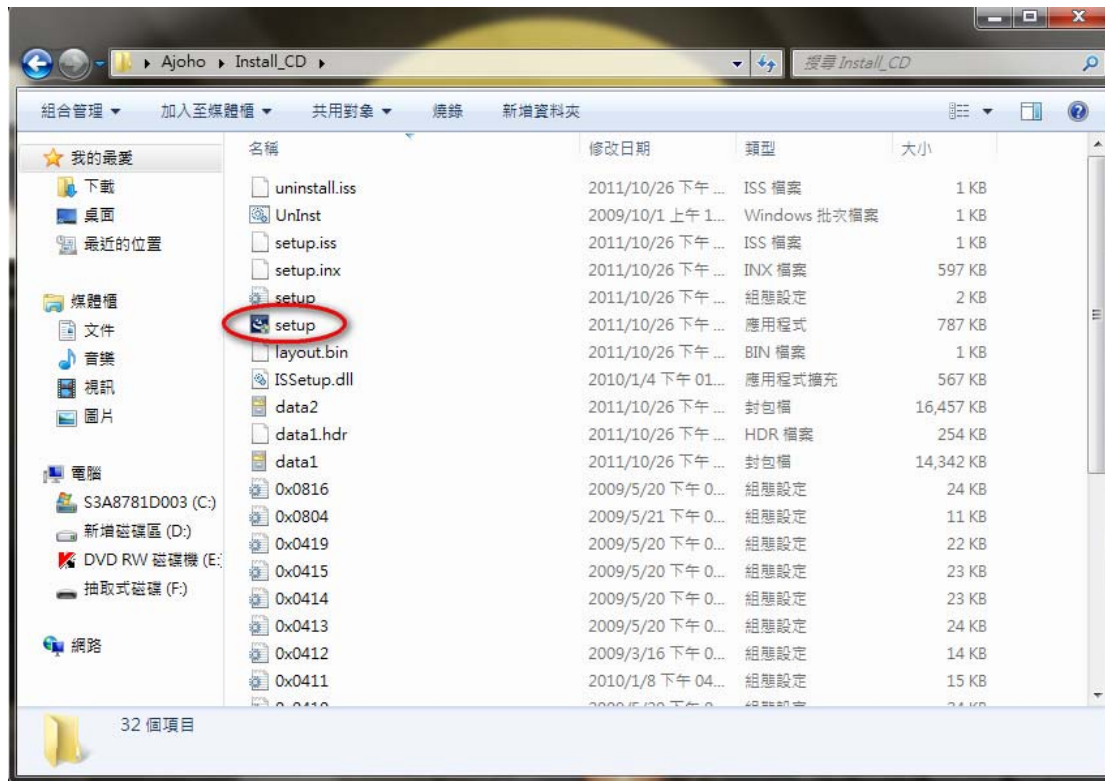
8. When the setup is completed, please click [Finish]



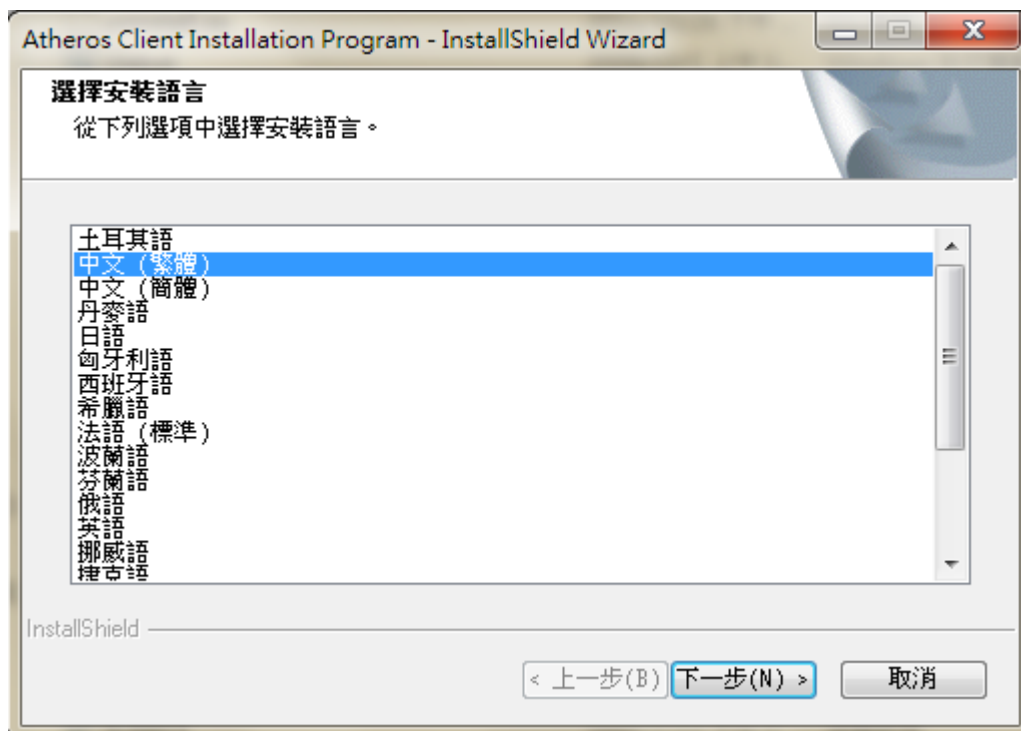
vi. Setup: Win7 OS

Please follow the steps to complete installation.

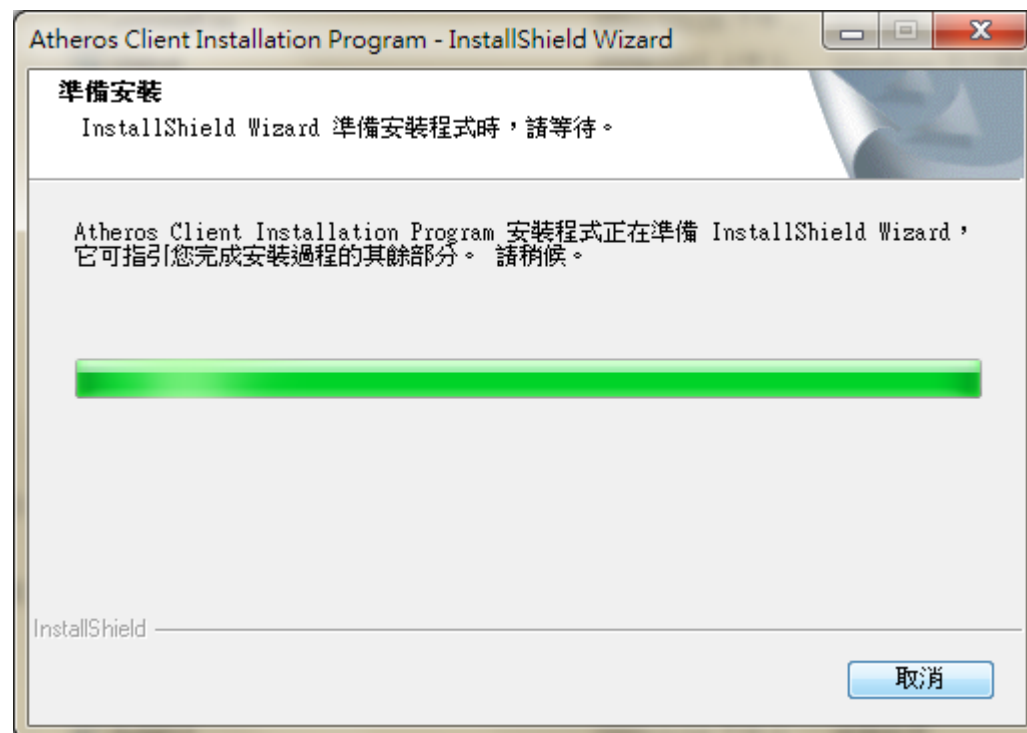
1. Launch the setup driver



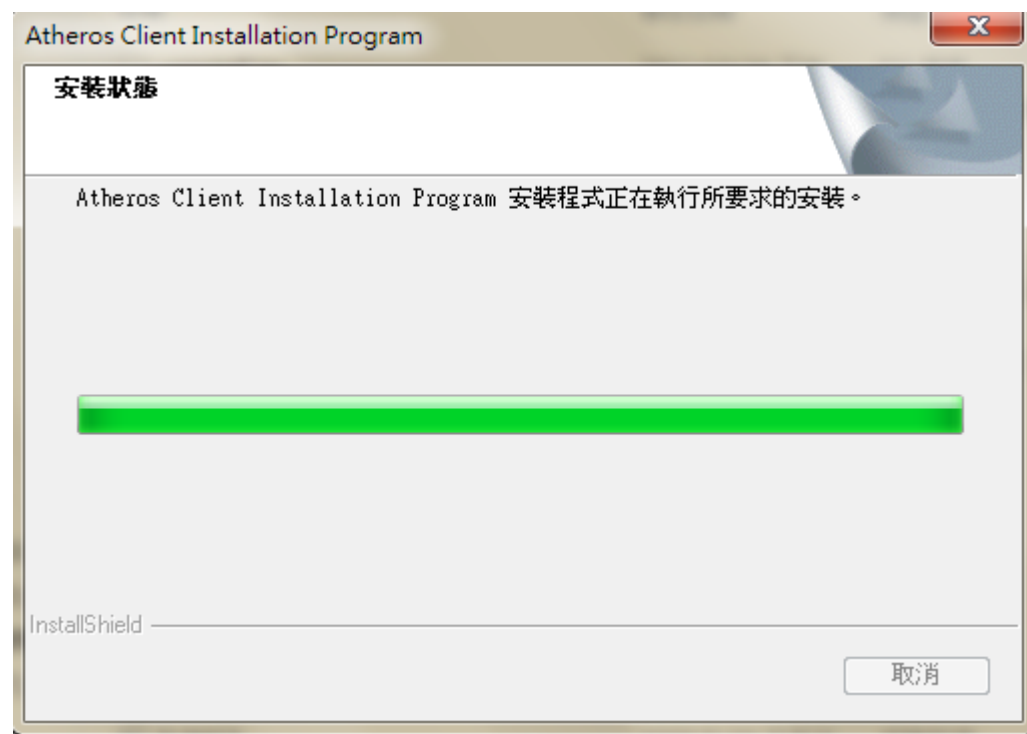
2. When you see the permission dialogue box, please click [Continue]



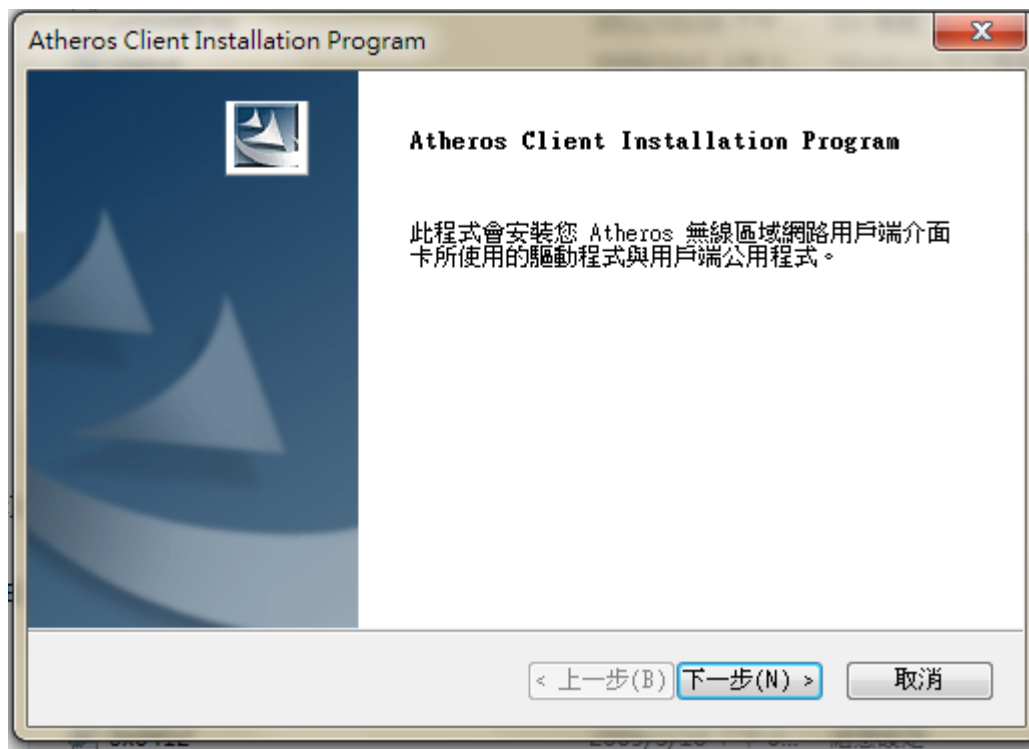
3. Now the Wizard is preparing installation



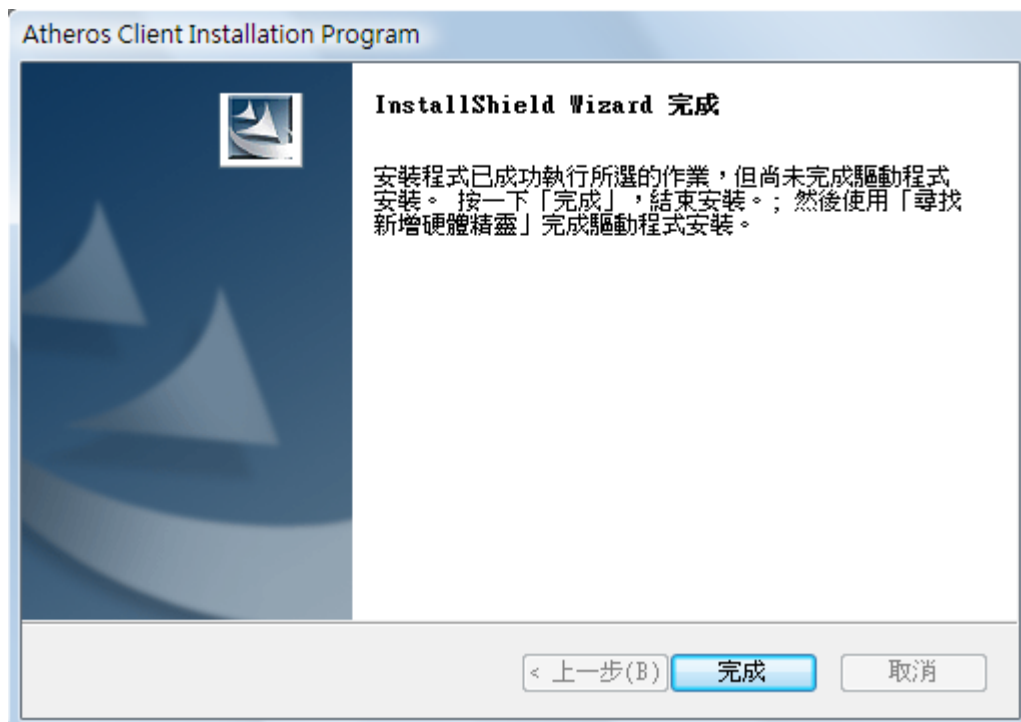
4. Please click [Install] to proceed



5. The system is process installation



8. When the setup is completed, please click [Finish]

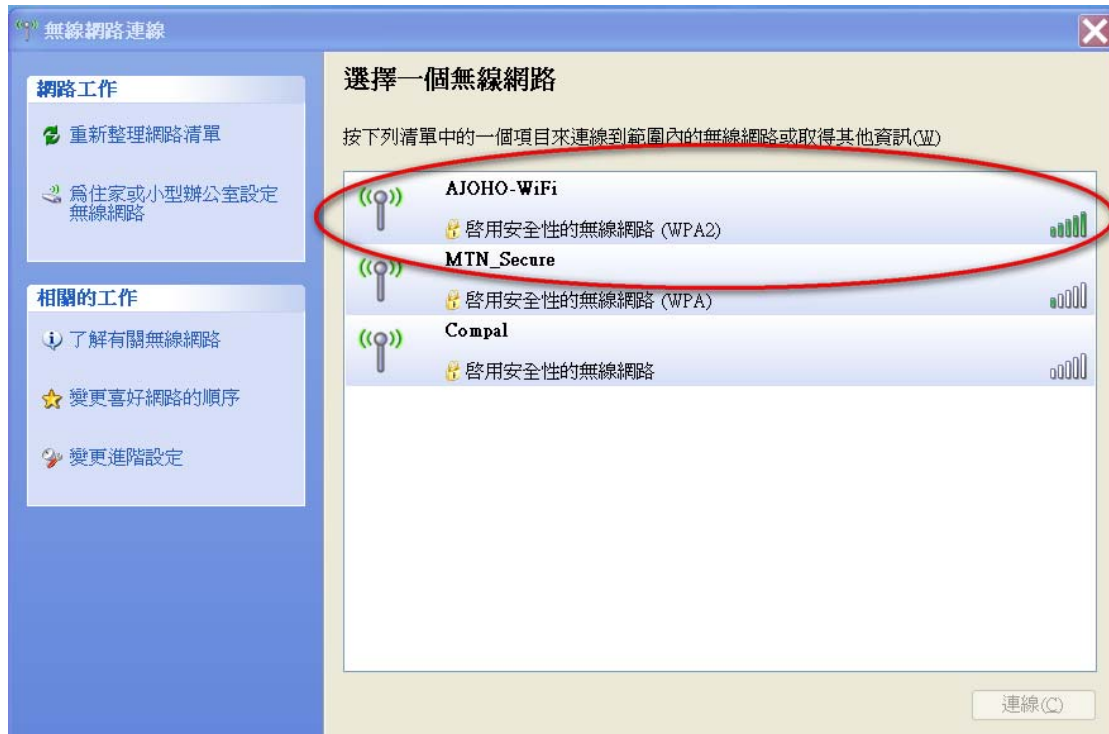


III. Network Connection

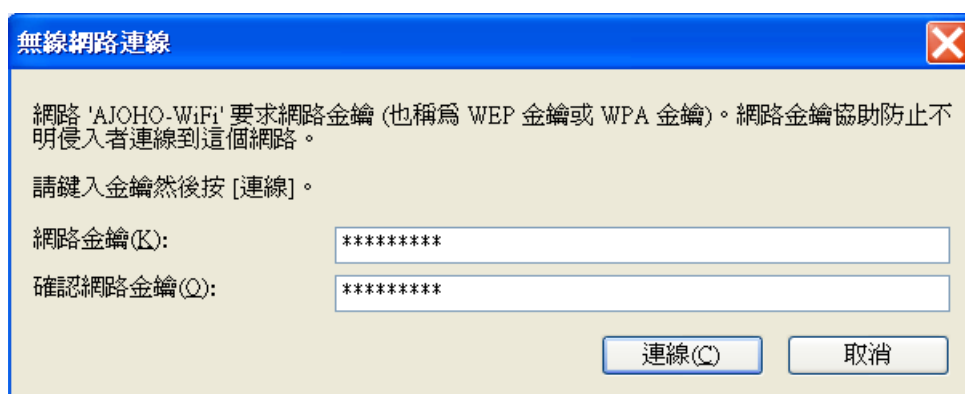
i. For Windows XP OS

Please see the following steps to setup network connection for Windows XP.

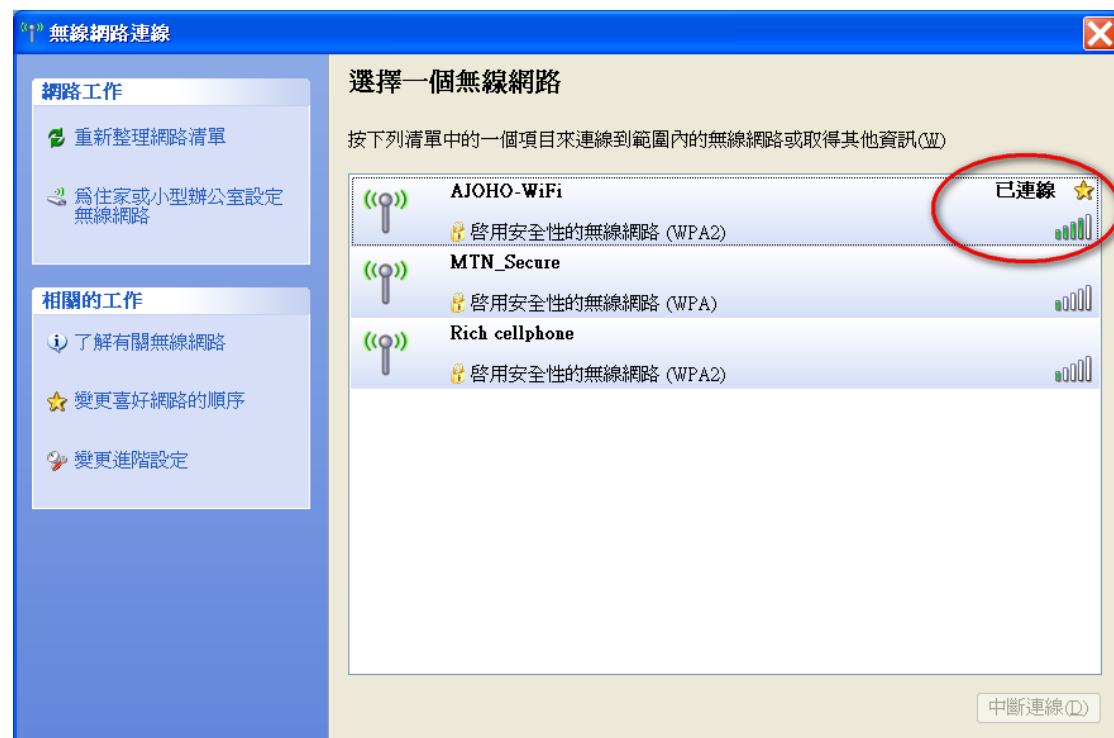
1. Find the network icon on the desktop shortcut and right-click on it. Choose “View Available Wireless networks”
2. You will see several options, please select one and click [Connect]



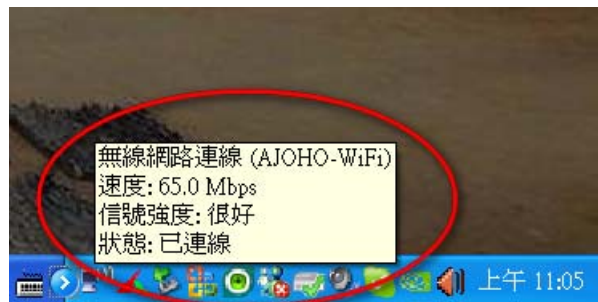
3. Please wait for few seconds to let system connecting to selected wireless network
4. You may need to type the network key when it is required



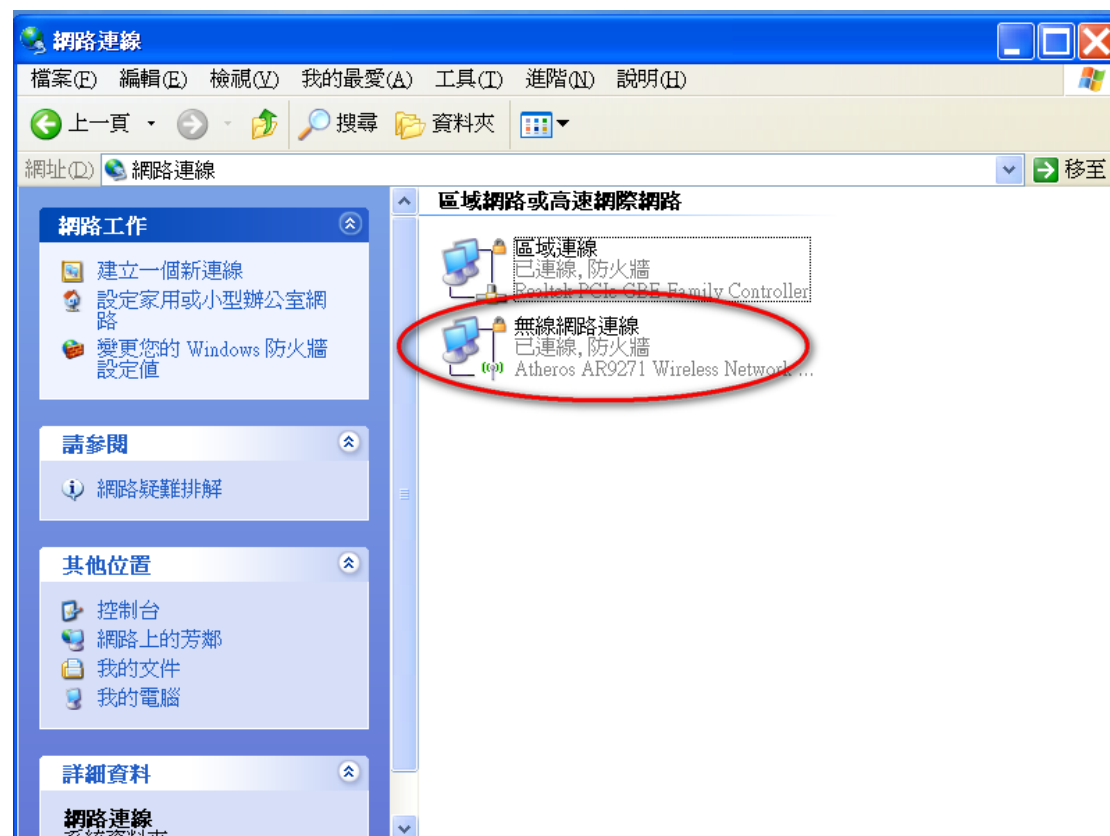
5. Now the selected wireless network is connected



6. You can check the connection status by clicking [Status] in the pop-up dialogue



7. Here is the wireless network connection status



ii. For Windows Vista OS

Following are the instructions to setup wireless connection for Windows Vista.

1. Right-click on the network icon located on desktop shortcut. When you see the dialogue, please click [Connect to a network]



2. Choose wireless network within your range and click [Connect]



* If selected network is not secure, please choose [Connect anyway]

3. You may need to wait for few seconds when Windows connects to wireless network

4. Now the selected wireless network is connected

5. If you want to see the connection status, please right-click on the network you choose and select [Status]



6. This is the information of network status



iii. For Win7 OS

Following are the instructions to setup wireless connection for Windows Vista.

1. Right-click on the network icon located on desktop shortcut. When you see the dialogue, please click [Connect to a network]
2. Choose wireless network within your range and click [Connect]
- * If selected network is not secure, please choose [Connect anyway]
3. You may need to wait for few seconds when Windows connects to wireless network
4. Now the selected wireless network is connected



5. If you want to see the connection status, please right-click on the network you choose and select [Status]



6. This is the information of network status



Federal Communication Commission Interference Statement

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 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 to radio communications. However, there is no guarantee that 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 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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

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 device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: “Contains FCC ID: **XEH-WFA9271M01**”. The grantee's FCC ID can be used only when all FCC compliance requirements are met.

Manual Information To the End User

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.

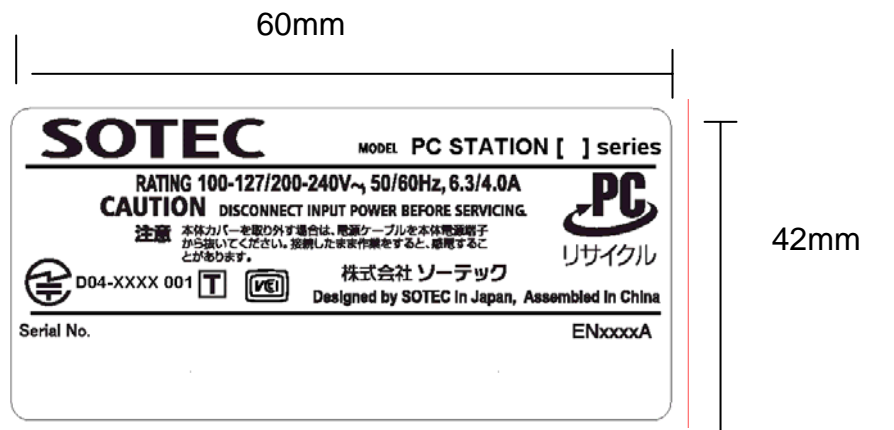
The end user manual shall include all required regulatory information/warning as show in this manual.

Japanese Notice

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Japanese Modem Notice

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VCCIの対角線長：4.5mm

認定マークの直径：5mm

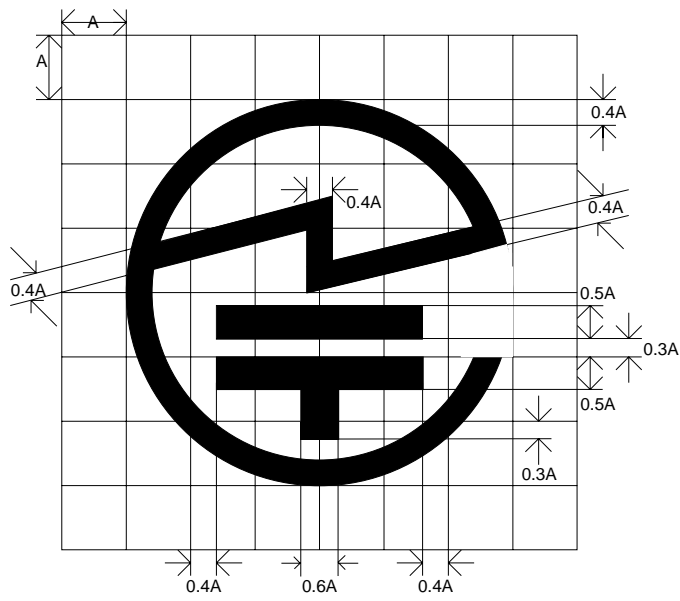
材質：PVC

地色：T-02015HB（銀）

印刷色：Pantone cool gray 11c

粘着材：アクリル樹脂系糊

認定マークの形状



$A = 0.83\text{mm}$

認定マークの直径 = 5mm