

802.11b Guide

FCC RF EXPOSURE INFORMATION (802.11b Wireless LAN)

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies.

The design of this notebook computer complies with the FCC guidelines and these international standards. Use only the supplied or an approved antenna. Unauthorized antennas, modifications, or attachments could result in violation of FCC regulations.

This device was tested for typical lap held operations with the device directly contacted to the human body to the back side of the notebook computer. To maintain compliance with FCC RF exposure compliance requirements, avoid direct contact to the transmitting antenna during transmitting. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

[Back to Contents](#)

Installation under Windows XP

Preliminary Notes



The installation instructions in this section are based on the following assumptions:

- The Intel(R) PRO/Wireless LAN Mini PCI Adapter hardware has already been installed in the computer in accordance with the computer manufacturer's instructions.
- The computer has not been powered on since the hardware installation was completed.
- No other wireless LAN card is installed in this computer.



To install the driver before installing hardware, use **Start > Run** and browse to the file **SetupWLD.exe** in the path **PROW7100\WINXP** on the Intel CD. After running SetupWLD.exe, shut down the computer and install the hardware. When the computer restarts, the driver will be automatically installed.



Before proceeding, make sure that you are operating Windows XP with administrative rights. If you log in to Windows XP without administrative rights, you may run into problems during the installation.



The Intel(R) PROSet utility or the Windows XP wireless configuration feature can be used to configure wireless network settings. The instructions below include steps for installing the PROSet utility and for turning off the Windows XP configuration feature. If you do not turn off the Windows XP feature, you will not be able to use PROSet to configure wireless network settings. For information on how to use the Windows XP feature, see your Windows XP documentation.

Driver Installation

To install drivers under Windows* XP, follow these steps:

1. Power up the computer in which the Intel(R) PRO/Wireless Mini PCI Adapter hardware has just been installed.
2. Log in with administrative rights if prompted by Windows XP.
3. Wait for Windows to detect the newly installed hardware and display the **Found New Hardware Wizard** dialog. Verify that **Install the software automatically (Recommended)** is selected. If Windows does not detect the new hardware, see Troubleshooting.
4. Insert the Intel CD into your CD drive. The **New Hardware Found Wizard** searches for the correct driver files and copies them to your hard drive.
5. On the **Network Name** screen, click **Next** to accept the default Network Name (SSID) **101**, or enter a specific SSID for your network, then click **Next**.

6. On the **Data Encryption** screen, click **Next** to accept the default encryption setting **None**, or enter specific encryption settings for your network, then click **Next**.
7. On the **Found New Hardware Wizard** screen, click **Finish**. Proceed to disable the Windows XP wireless configuration feature.

Disable Windows XP Wireless Configuration (Required)

To disable the Windows XP wireless configuration feature so that you can use Intel(R) PROSet for wireless configuration, continue as follows:



Instructions are written for use with the Windows XP Start Menu and Control Panel Category View, not with "Classic" Start Menu or Control Panel views.

8. Click **Start** and **Control Panel**.
9. On the **Pick a category** screen, click **Network and Internet Connections**, then under the heading **or pick a Control Panel icon** click **Network Connections**.
10. In the **Network Connections** window, right-click your **Wireless Network Connection** and select **Properties**.
11. Select the **Wireless Networks** tab.
12. Click to clear ("deselect") the check box **Use Windows to configure my wireless network settings**, then click **OK** on the **Wireless Network** tab. Do not click any other tabs. Continue with the installation of PROSet.

Intel(R) PROSet Installation (Required)

Continue with the following steps to install the Intel PROSet wireless configuration utility (required):



Some versions of this product do not support the **Intel(R) PRO Network Connections** menu screen for installation of utility software. If the Intel(R) PRO Network Connections menu screen does not appear, or if it does not have a menu item for Wireless LAN Adapters, you can start the PROSet installer manually using **Start > Run** and browsing to the file **PROSet.msi** in the path **APPS/PROSet/2K-NET32** on the Intel CD supplied with the product. Skip Steps 13 and 14 below and continue with **Step 15**.

13. Display the **Intel(R) PRO Network Connections** screen by removing and re-inserting the Intel CD, or by running autorun.exe from the CD. Click **Wireless LAN Adapters**.
14. On the **Intel PRO/Wireless LAN Adapters** menu screen, click **Install Software**.
15. On the **Welcome to the InstallShield Wizard for Intel(R) PROSet** screen, click **Next**.
16. On the **License Agreement** screen, after reading the license agreement, select **I accept the terms in the license agreement** and click **Next**.
17. On the **Setup Type** screen, select **Typical** and then click **Next**. This is the recommended setting for a first-time installation.
18. On the **Ready to Install the Program** screen click **Install**.
19. After the software is installed on your computer, click **Finish**. Click **Exit** to close the **Intel(R) PRO Network Connections** screen or leave it open if you wish to install Wireless Administration Tools.
20. To launch Intel PROSet, double-click the PROSet icon in the system tray or follow the path **Start > Programs > Intel Network Adapters > Intel(R) PROSet**. For additional information on the program, press **F1** or click **Help** while the program is running.

Administration Tools Installation (Optional)

Continue with the following steps to install the Intel(R) Wireless Administration Tools Site Survey and AP Discovery (optional):



Some versions of this product do not support the **Intel(R) PRO Network Connections** menu screen for installation of the Administration Tools. If the Intel(R) PRO Network Connections menu screen does not appear, or if it does not have a menu item for Wireless LAN Adapters, you can start the Administration Tools installer manually using **Start > Run** and browsing to the file **APAdmin.msi** in the path **APPS/PROSet/2K-NET32** on the Intel CD supplied with the product. Skip Steps 21 and 22 below and continue with **Step 23**.

21. On the **Intel(R) PRO Network Connections** screen, click **Wireless LAN Adapters**.



You can display this screen by removing and re-inserting the Intel CD, or by running **autorun.exe** from the CD.

22. On the **Intel PRO/Wireless LAN Adapters** menu screen, click **Install AP Admin Tools**.
23. On the **Welcome to the InstallShield Wizard for Intel(R) Wireless Administration Tools** screen, click **Next**.
24. On the **License Agreement** screen, after reading the license agreement, select **I accept the terms in the license agreement** and click **Next**.
25. On the **Setup Type** screen, verify that **Typical** is selected, then click **Next**.
26. On the **Ready to Install the Program** screen click **Install**.
27. After the software is installed on your computer, click **Finish**. Click Exit to close the **Intel(R) PRO Network Connections** screen.
28. To launch the Wireless Administration Tools, follow the path **Start > Programs > Intel(R) PRO Wireless > Access Point Administration Tools** and select **AP Discovery** or **Site Survey**. For additional information on either program, press **F1** or click **Help** while the program is running.

[Back to Contents](#)

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[Back to Contents](#)

Installation under Windows 2000

Preliminary Notes



The installation instructions in this section are based on the following assumptions:

- The Intel(R) PRO/Wireless LAN Mini PCI Adapter hardware has already been installed in the computer in accordance with the computer manufacturer's instructions.
- The computer has not been powered on since the hardware installation was completed.
- No other wireless LAN card is installed in this computer.



To install the driver before installing hardware, use **Start > Run** and browse to the file **SetupWLD.exe** in the path **PROW7100\WIN2K** on the Intel CD. After running **SetupWLD.exe**, shut down the computer and install the hardware. When the computer restarts, the driver will be automatically installed.



After loading the Windows 2000 operating system, be sure to log in with administrative rights. If you log in to Windows 2000 without administrative rights, you may run into problems during the installation.



During initial adapter installation and configuration, it may take up to two minutes for adapter settings to be confirmed.

Driver Installation

To install driver software in Windows* 2000, follow these steps:

1. Power up the computer in which the Intel(R) PRO/Wireless LAN Mini PCI Adapter hardware has just been installed.
2. Log in with administrative rights when prompted by Windows 2000.
3. Wait for Windows to detect the newly installed hardware and display the **Found New Hardware Wizard** dialog. If Windows does not detect the new hardware, see Troubleshooting.
4. Insert the Intel CD-ROM into your CD-ROM drive. If the **Intel(R) PRO Network Connections** menu screen appears, leave it open and click the **Found New Hardware Wizard** dialog to make that the active window.
5. On the **Install Hardware Device Drivers** screen verify that **Search for a suitable driver for my device (recommended)** is selected, then click **Next**.
6. When the **Locate Driver Files** dialog appears, verify that the item **CD-ROM drives** is checked and click **Next**.
7. When the **Driver Files Search Results** dialog appears, indicating that a driver was found, click **Next**.
8. On the **Network Name** screen, click **Next** to accept the default Network Name (SSID) **101**, or enter a specific SSID for your network, then click **Next**.
9. On the **Data Encryption** screen, click **Next** to accept the default encryption setting **None**, or enter specific encryption settings for your network, then click **Next**.
10. On the **Found New Hardware Wizard** screen, click **Finish**. Proceed to install Intel PROSet.

Intel(R) PROSet Installation (Required)

Continue with the following steps to install the Intel PROSet wireless configuration utility (required):



Some versions of this product do not support the **Intel(R) PRO Network Connections** menu screen for installation of utility software. If the Intel(R) PRO Network Connections menu screen does not appear, or if it does not have a menu item for Wireless LAN Adapters, you can start the PROSet installer manually using **Start > Run** and browsing to the file **PROSet.msi** in the path **APPS/PROSet/2K-NET32** on the Intel CD supplied with the product. Skip Steps 11 and 12 below and continue with **Step 13**.

11. On the **Intel(R) PRO Network Connections** screen, click **Wireless LAN Adapters**.



This screen may have been launched in step 4 above. If the screen is not visible when you close the **Found New Hardware Wizard** dialog, display it by removing and re-inserting the Intel CD, or by running autorun.exe from the CD.

12. On the **Intel PRO/Wireless LAN Adapters** menu screen, click **Install Software**.
13. On the **Welcome to the InstallShield Wizard for Intel(R) PROSet** screen, click **Next**.

14. On the **License Agreement** screen, after reading the license agreement, select **I accept the terms in the license agreement** and click **Next**.
15. On the **Setup Type** screen, verify that **Typical** is selected, then click **Next**. This is the recommended setting for a first-time installation.
16. On the **Ready to Install the Program** screen click **Install**.
17. After the software is installed on your computer, click **Finish**. Click Exit to close the **Intel(R) PRO Network Connections** screen or leave it open if you wish to install Wireless Administration Tools.
18. To launch Intel PROSet, double-click the PROSet icon in the system tray or follow the path **Start > Programs > Intel Network Adapters > Intel(R) PROSet**. For additional information on the program, press **F1** or click **Help** while the program is running.




During initial adapter installation and configuration, it may take up to two minutes for adapter settings to be confirmed.

Administration Tools Installation (Optional)

Continue with the following steps to install the Intel(R) Wireless Administration Tools Site Survey and AP Discovery (optional):



Some versions of this product do not support the **Intel(R) PRO Network Connections** menu screen for installation of the Administration Tools. If the Intel(R) PRO Network Connections menu screen does not appear, or if it does not have a menu item for Wireless LAN Adapters, you can start the Administration Tools installer manually using **Start > Run** and browsing to the file **APAdmin.msi** in the path **APPS/PROSet/2K-NET32** on the Intel CD supplied with the product. Skip Steps 19 and 20 below and continue with **Step 21**.

19. On the **Intel(R) PRO Network Connections** screen, click **Wireless LAN Adapters**.
 This screen may have been launched in step 4 above. If the screen is not visible when you close the **Found New Hardware Wizard** dialog, display it by removing and re-inserting the Intel CD, or by running autorun.exe from the CD.
20. On the **Intel PRO/Wireless LAN Adapters** menu screen, click **Install AP Admin Tools**.
21. On the **Welcome to the InstallShield Wizard for Intel(R) Wireless Administration Tools** screen, click **Next**.
22. On the **License Agreement** screen, after reading the license agreement, select **I accept the terms in the license agreement** and click **Next**.
23. On the **Setup Type** screen, verify that **Typical** is selected, then click **Next**.
24. On the **Ready to Install the Program** screen click **Install**.
25. After the software is installed on your computer, click **Finish**. Click Exit to close the **Intel(R) PRO Network Connections** screen.
26. To launch the Wireless Administration Tools, follow the path **Start > Programs > Intel(R) PRO Wireless > Access Point Administration Tools** and select **AP Discovery** or **Site Survey**. For additional information on either program, press **F1** or click **Help** while the program is running.

[Back to Contents](#)

Installation under Windows Me

Preliminary Notes



The installation instructions in this section are based on the following assumptions:

- The Intel(R) PRO/Wireless LAN Mini PCI Adapter hardware has already been installed in the computer in accordance with the computer manufacturer's instructions.
- The computer has not been powered on since the hardware installation was completed.
- No other wireless LAN card is installed in this computer.



To install the driver before installing hardware, use **Start > Run** and browse to the file **SetupWLD.exe** in the path **PROW7100\WINSE-ME** on the Intel CD. After running SetupWLD.exe, shut down the computer and install the hardware. When the computer restarts, the driver will be automatically installed.

Driver Installation

To install the software in Windows* Me (Millennium Edition), follow these steps:

1. Power up the computer in which the Intel(R) PRO/Wireless LAN Mini PCI Adapter hardware has just been installed.
2. Wait for Windows to detect the newly installed hardware and display the **Add New Hardware Wizard** dialog. DO NOT click **Next**. Verify that **Automatic search for a better driver (Recommended)** is selected. If Windows does not detect the new hardware, see Troubleshooting.
3. Insert the Intel CD into your CD drive. Windows installs the driver from the CD. If the installation does not start automatically, click **Next** on the **Add New Hardware Wizard** screen.
4. On the **Network Name** screen, click **Next** to accept the default Network Name (SSID) **101**, or enter a specific SSID for your network, then click **Next**.
5. On the **Data Encryption** screen, click **Next** to accept the default encryption setting **None**, or enter specific encryption settings for your network, then click **Next**.
6. Click **Finish** on the **Add New Hardware Wizard** screen when the driver installation is complete.
7. When prompted to restart the computer, click **No**. You will restart it manually later. Proceed to install PROSet.

Intel(R) PROSet Installation (Required)

To install the Intel PROSet utility, continue with the following steps:



Some versions of this product do not support the **Intel(R) PRO Network Connections** menu screen for installation of utility software. If the Intel(R) PRO Network Connections menu screen does not appear, or if it does not have a menu item for Wireless LAN Adapters, you can start the PROSet installer manually using **Start > Run** and browsing to the file **PROSet.msi** in the path **APPS/PROSet/WN98SEME** on the Intel CD supplied with the product. Skip Steps 8 and 9 below and continue with **Step 10**.


8. Display the **Intel(R) PRO Network Connections** screen by removing and re-inserting the Intel CD, or by running autorun.exe from the CD. Click **Wireless Adapters**.
9. On the **Intel PRO/Wireless LAN Adapters** menu screen, click **Install Software**.
10. On the **Welcome to the InstallShield Wizard for Intel(R) PROSet II** screen, click **Next**.
11. On the **License Agreement** screen, after reading the license agreement, select **I accept the terms in the license agreement** and click **Next**.
12. On the **Setup Type** screen, select **Typical** and then click **Next**. This is the recommended setting for a first-time installation.
13. On the **Ready to Install the Program** screen click **Install**.
14. After the software is installed on your computer, click **Finish**.
15. When prompted to restart the computer, click **Yes**.
16. To launch Intel PROSet, double-click the PROSet icon in the system tray or follow the path **Start > Programs > Intel Network Adapters > Intel(R) PROSet**. For additional information on the program, press **F1** or click **Help** while the program is running.

Administration Tools Installation (Optional)

After restarting the computer, continue with the following steps to install the Intel(R) Wireless Administration Tools Site Survey and AP Discovery (optional):



Some versions of this product do not support the **Intel(R) PRO Network Connections** menu screen for installation of the Administration Tools. If the Intel(R) PRO Network Connections menu screen does not appear, or if it does not have a menu item for Wireless LAN Adapters, you can start the Administration Tools installer manually using **Start > Run** and browsing to the file **APAdmin.msi** in the path **APPS/PROSet/WN98SEME** on the Intel CD supplied with the product. Skip Steps 17 and 18 below and continue with **Step 19**.

17. On the **Intel(R) PRO Network Connections** screen, click **Wireless LAN Adapters**.
 You can display this screen by removing and re-inserting the Intel CD, or by running autorun.exe from the CD.
18. On the **Intel PRO/Wireless LAN Adapters** menu screen, click **Install AP Admin Tools**.
19. On the **Welcome to the InstallShield Wizard for Intel(R) Wireless Administration Tools** screen, click **Next**.
20. On the **License Agreement** screen, after reading the license agreement, select **I accept the terms in the license agreement** and click **Next**.
21. On the **Setup Type** screen, verify that **Typical** is selected, then click **Next**.
22. On the **Ready to Install the Program** screen click **Install**.
23. After the software is installed on your computer, click **Finish**.
24. To launch the Wireless Administration Tools, follow the path **Start > Programs > Intel(R) PRO Wireless > Access Point Administration Tools** and select **AP Discovery** or **Site Survey**. For additional information on either program, press **F1** or click **Help** while the program is running.

[Back to Contents](#)

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[Back to Contents](#)

Installation under Windows 98SE

Preliminary Notes



The installation instructions in this section are based on the following assumptions:

- The Intel(R) PRO/Wireless LAN Mini PCI Adapter hardware has already been installed in the computer in accordance with the computer manufacturer's instructions.
- The computer has not been powered on since the hardware installation was completed.
- No other wireless LAN card is installed in the computer.



To install the driver before installing hardware, use **Start > Run** and browse to the file **SetupWLD.exe** in the path **PROW7100\WINSE-ME** on the Intel CD. After running SetupWLD.exe, shut down the computer and install the hardware. When the computer restarts, the driver will be automatically installed.

Driver Installation

To install the software in Windows* 98SE, follow these steps:

1. Power up the computer in which the Intel(R) PRO/Wireless LAN Mini PCI Adapter hardware has just been installed.
2. Wait for Windows to detect the newly installed hardware and display the **Add New Hardware Wizard** dialog. Click **Next**. If Windows does not detect the new hardware, see Troubleshooting.
3. Insert the Intel CD into your CD drive.
4. On the **New Hardware Wizard** screen, select **Search for the best driver for you device (Recommended)**, and click **Next**, then select **CD drive** and click **Next**.
5. On the **Network Name** screen, click **Next** to accept the default Network Name (SSID) **101**, or enter a specific SSID for your network, then click **Next**.
6. On the **Data Encryption** screen, click **Next** to accept the default encryption setting **None**, or enter specific encryption settings for your network, then click **Next**.
7. On the **Add New Hardware Wizard** screen, click **Finish**.
8. When prompted to restart the computer, click **No**. You will restart it manually later. Proceed to the installation of PROSet.

Intel(R) PROSet Installation (Required)

To install the Intel PROSet utility, continue with the following steps:



Some versions of this product do not support the **Intel(R) PRO Network Connections** menu screen for installation of utility software. If the Intel(R) PRO Network Connections menu screen does not appear, or if it does not have a menu item for Wireless LAN Adapters, you can start the PROSet installer manually using **Start > Run** and browsing to the file **PROSet.msi** in the path **APPS/PROSet/WN98SEME** on the Intel CD supplied with the product. Skip Steps 9 and 10 below and continue with **Step 11**.

9. Display the **Intel(R) PRO Network Connections** screen by removing and re-inserting the Intel CD, or by running autorun.exe from the CD. Click **Wireless Adapters**.
10. On the **Intel PRO/Wireless LAN Adapters** menu screen, click **Install Software**.
11. On the **Welcome to the InstallShield Wizard for Intel(R) PROSet II** screen, click **Next**.
12. On the **License Agreement** screen, after reading the license agreement, select **I accept the terms in the license agreement** and click **Next**.

13. On the **Setup Type** screen, select **Typical** and then click **Next**. This is the recommended setting for a first-time installation.
14. On the **Ready to Install the Program** screen click **Install**.
15. After the software is installed on your computer, click **Finish**.
16. When prompted to restart the computer, click **Yes**.
17. To launch Intel PROSet, double-click the PROSet icon in the system tray or follow the path **Start > Programs > Intel Network Adapters > Intel(R) PROSet**. For additional information on the program, press **F1** or click **Help** while the program is running.

Administration Tools Installation (Optional)

After restarting the computer, continue with the following steps to install the Intel(R) Wireless Administration Tools Site Survey and AP Discovery (optional):



Some versions of this product do not support the **Intel(R) PRO Network Connections** menu screen for installation of the Administration Tools. If the Intel(R) PRO Network Connections menu screen does not appear, or if it does not have a menu item for Wireless LAN Adapters, you can start the Administration Tools installer manually using **Start > Run** and browsing to the file **APAdmin.msi** in the path **APPS/PROSet/WN98SEME** on the Intel CD supplied with the product. Skip Steps 18 and 19 below and continue with **Step 20**.

18. On the **Intel(R) PRO Network Connections** screen, click **Wireless LAN Adapters**.



You can display this screen by removing and re-inserting the Intel CD, or by running **autorun.exe** from the CD.

19. On the **Intel PRO/Wireless LAN Adapters** menu screen, click **Install AP Admin Tools**.
20. On the **Welcome to the InstallShield Wizard for Intel(R) Wireless Administration Tools** screen, click **Next**.
21. On the **License Agreement** screen, after reading the license agreement, select **I accept the terms in the license agreement** and click **Next**.
22. On the **Setup Type** screen, verify that **Typical** is selected, then click **Next**.
23. On the **Ready to Install the Program** screen click **Install**.
24. After the software is installed on your computer, click **Finish**.
25. To launch the Wireless Administration Tools, follow the path **Start > Programs > Intel(R) PRO Wireless > Access Point Administration Tools** and select **AP Discovery** or **Site Survey**. For additional information on either program, press **F1** or click **Help** while the program is running.

[Back to Contents](#)

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[Back to Contents Page](#)

Using Wireless Profiles in PROSet

- Creating a New Profile
- Creating a VPN Profile
- Importing and Exporting Profiles
- Automatic Profile Distribution
- Editing an Existing Profile

- Deleting a Profile
- Connecting to a Network without a Profile
- Profile Connection Preferences
- Loading a Profile from the Task Tray

A profile is a saved group of network settings. Profiles are displayed in the Profile List in the PROSet General page. Profiles can be arranged in order of network connection priority. You can connect to one network using the first profile in the Profile List, then automatically connect to another network using the next profile. This allows you to stay connected while roaming freely from one wireless network to another. Although you can assign multiple profiles to a single network, you can only use one profile per connection.

Profile general settings include, the network name (SSID), channel, security settings, and TCP/IP settings. The Networks tab allows you to add, edit and delete profiles.

Creating a New Profile

To add a new profile, use the Profile Wizard sequence of dialogs to configure the profile contents. The following example uses all of the Profile Wizard dialogs. Some settings may not be required for all profiles.

To create a new profile and connect to a network:

1. Select the wireless adapter in the left-side pane.
2. From the General page, click the **Networks** tab.
3. Click the **Add** button. The General Settings dialog displays.



NOTE: *If this is the first time you have created a profile, click the profile named **Default** in the Profile List, click the **Edit** button and rename the default profile in the Profile Name field on the General page.*

Step 1 of 4: General Settings

4. Enter a profile name in the Profile Name field.
5. Enter the network SSID, in the **Network Name (SSID)** field.
6. Click the operating mode to use, **Infrastructure** or **Ad hoc**.
7. The Mandatory AP option is not required unless the adapter has to connect to a specific access point or computer. Click the **Mandatory AP** button to force the adapter to connect to a specific access point. Enter the Ethernet address for the access point or computer (Ad-hoc). Click **OK** to save the setting and return to the General Settings page.
8. The **Mandatory AP** option is not required unless the adapter has to connect to a specific access point or computer. Click the **Mandatory AP** button to force the adapter to connect to a specific access point. Enter the Ethernet address for the access point or computer (Ad-hoc). Click **OK** to save the setting and return to the General Settings page. Click the **Configure TCP/IP and VPN settings** checkbox to access the TCP/IP and VPN settings. If these settings are not required, leave the box unchecked, proceed to step 9.
9. Check the **Enable Auto-Import** check box to allow this profile to be imported. Refer to Automatic Profile Distribution for more information.
10. Click **Next**.

Step 2 of 4: TCP/IP and VPN Client Settings

11. Use these options to configure TCP/IP and VPN settings for a VPN profile. Click **Next** when finished.

Step 3 of 4: Security Settings

12. Select **Open** or **Shared** in the Network Authentication drop-down menu. Open, does not use any authentication method. Shared uses the WEP key as the authentication method.
13. Click the **Enable data encryption (WEP)** checkbox to configure WEP encryption settings.
14. Click the **Password protect this profile** checkbox to assign a password to the profile.
15. Click **Next**.

Step 4 of 4: Password Protection Settings

16. Click the **Password protect this profile** checkbox.
17. Enter a password in the Password field.
18. Reenter the same password in the Confirm New Password field.
19. Click the **Back** button to change or verify the settings or click **Finish** when you have completed the profile settings and return to the Networks page.
20. Click the new profile name shown in the Profile List. Use the up and down arrows to position the priority of the new profile in the priority list.
21. Click the **Advanced** button to set the network connection preferences.
22. Click the **Connect** button to connect to the network.
23. Click **OK** to close the PROSet dialog.

Creating a VPN Profile

To create a VPN profile:

1. Select the wireless adapter in the left-side pane.
2. From the General page, click the **Networks** tab.
3. Select the profile to add VPN settings to from the Profile List.
4. Click the **Edit** button and the General page appears.
5. Click the **Network** tab.
6. Click the **Configure** button for the TCP/IP Settings. Make sure that **Obtain an IP address automatically** and **Obtain DNS address automatically** is selected.
7. Click the **Close** button to close the dialog.
8. Click the **Configure** button for the VPN Client Settings.
9. Click **Enable VPN for this profile** checkbox.
10. Select the VPN client software from the **Available VPN Clients** drop-down menu.
11. Select the VPN profile if your VPN client software displays the VPN tunnel name.
12. Click the **Close** button to close the dialog.
13. Click **OK** on any of the pages to save all the settings and return to the Networks page.
14. Click the VPN profile name shown in the Profile List. Use the up and down arrows to position the priority of new profile in the priority list.
15. Click the **Connect** button to connect to the network. The VPN profile name displays a connect icon. **Note:** There must be an IP address assigned before the VPN client software can be launched. Click the **Details** button to verify that an IP address has been assigned.
16. Follow the on-screen instructions and enter your credentials before connecting.
17. Click **OK** to close the PROSet dialog.

Importing and Exporting Profiles

Important: Only password protected profiles can be imported and exported. Refer to Setting a Profile Password for more information.

To import profiles:

1. From the General page, click the **Networks** tab.
2. Click the **Advanced** button.
3. Click the **Import/Export** button.
4. Click the **Import** button.
5. Locate the profile to import on your hard disk or enter the profile name in the File name field. The profile extension is .profile.
6. Click the **Import** to import the profile into the Profile List.
7. Click **OK** twice to return to the General page.
8. Click **OK** to close the PROSet dialog.

To export profiles:

1. From the General page, click the **Networks** tab.
2. Click the **Advanced** button.
3. Click the profiles to export from the export profile list.
4. Click the **Browse** button and select a directory to save the profiles in. Click **OK** to return to the previous dialog.
5. Click the **Export** button to start exporting the profiles.
6. Click **OK** twice to return to the General dialog.
7. Click **OK** to close the PROSet dialog.

Automatic Profile Distribution

The Enable Auto-Import feature allow a network administrator to distribute a profile automatically to computers connected to a network. The Enable Auto-Import box is located on the Profile Wizard dialogs. When the checkbox is checked the profile must be copied to a specific directory on the host computer, from there it can be distributed to multiple computers. Once the profile is received by the remote computer it will automatically be available for use from the Scan profile list. If an attempt is made to edit a distributed profile that is password protected, a password prompt will appear.

Automatically importing WLAN profiles is accomplished by monitoring the *import* folder on your hard disk for new profile files. Only profile that have the **Enable Auto-Import** checked on the Profile Wizard dialog can be automatically imported. If a profile of the same name already exists in the Profile List, a dialog is displayed from which you can either reject the import, or accept in which case the existing profile will be replaced. All imported profiles will be placed at the bottom of the Profile List, and the profile file will be immediately deleted after the import whether the import was successful or not.

To distribute a profile to other computers on a network:

1. Select a profile to be edited from the Profile List in the Networks page, and click the **Edit** button or click the **Add** button to create a new profile using the Profile Wizard.
2. Check the **Enable Auto-Import** checkbox on the General page.
3. Click **OK** (Edit a profile) or **Finish** (Add a profile) to save the setting.
4. Copy the profile to the Programs Files/Intel/PROSet/Import directory. The profile is now ready to distribute to other computers.

Editing an Existing Profile

To edit an existing profile:

1. Select the wireless adapter in the left-side pane.
2. From the General page, click the **Networks** tab.
3. Click the **Edit** button. The General page displays.
4. Click on the **General**, **Security**, **Network** and **Password** tabs to make the necessary changes for the network profile settings:
5. Click **OK** on any of the pages to save all the settings and return to the Networks page.
6. Click the new profile name shown in the Profile List. Use the up and down arrows to position the priority of new profile in the priority list.
7. Click the **Advanced** button to set the network connection preferences.
8. Click the **Connect** button to connect to the network.
9. Click **OK** to close the PROSet dialog.

Deleting a Profile

To delete a profile:

1. Select the wireless adapter in the left-side pane.
2. From the General page, click the **Networks** tab.
3. Click the profile to be deleted from the Profile List.
4. Click the **Delete** button.
5. Click **Yes** to permanently delete the profile.

Connecting to a Network Without a Profile

To connect to an available network without a profile:

1. Select the wireless adapter in the left-side pane.
2. From the General page, click the **Networks** tab.
3. Click the **Scan** button.
4. Select the network profile name with **<no profile>** shown, and click the **Connect** button.
5. Click the **No, connect me directly without creating a profile** option. Note, you can click **Yes, create a profile for this network now** to create a profile to be used later.
6. Click **OK** to connect.

Profile Connection Preferences

To access the profile connection preference option:

1. From the General page, click the **Networks** tab.
2. Click the **Advanced** button.
3. Under the **Auto-connection** heading, click the one of the following options:
 - *Connect to available networks using profiles only (Default setting):* Use the profiles in the Profile List to connect to any available network.
 - *Connect to any available network if no matching profile is found:* Connect to any available network without using a profile from the Profile List.

4. Click **OK** to save the setting and return to the previous dialog.

Loading a Profile from the Task Tray

To load a profile from the Task Tray:

1. Right-click **PROSet** icon in the task tray.
2. Select the **Intel PRO/Wireless LAN 7100 3B Mini PCI Adapter**.
3. Click **Select Profile** and select the profile to be launched.

[Back to Contents Page](#)

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[Back to Contents Page](#)

Connecting to a Network using PROSet

- Connecting to a Network Automatically
- Scanning for Available Networks
- Connecting to a Network Using an Access Point
- Connecting to a Peer-to-Peer (Ad Hoc) Network
- Disconnecting from a Network
- Switching the Adapter Off and On
- Switching Between Wired and Wireless Adapters

Connecting to a Network Automatically

The Configuration Service feature operates in background to automatically display available networks not listed in the Profile List. This method provides automatic connection in a 2.4 environment to available networks in the range of your wireless adapter. The Configuration Service constantly monitors your wireless adapter's connection status. If no matching profiles are found in the Profile List for a network, a dialog automatically displays the available network access points and computers (ad hoc mode) within range of the wireless adapter. The Configuration Service can also be used if there is more than one wireless adapter installed using 802.11b bands.

The Configuration Service features are as follows:

- The Configuration Service is launched when you log on to your computer.
- No *active* profile switching will be performed. Once the adapter is associated with the access point, if a higher priority profile becomes available, no switching will occur.
- The Configuration Service is only be available if the PROSet is installed.
- If a connection to an access point cannot be made using any of the profiles in the Profile List, a dialog will display the available networks.
- If there are multiple profiles listed for an available network, a dialog box will list the profiles for you to choose from.

The Configuration Service can be used in two ways:

- To connect using preferred profiles only. In this mode the Configuration Service will attempt to connect to a network access point using the Profile List only. If a matching profile is not found, a dialog appears that lists available networks. From this dialog you can connect to any available network. You can also close this dialog without connecting by clicking the **Cancel** button. The adapter will remain unassociated, and the list of available networks will NOT be displayed again unless a new available network is detected.
- To connect to any available network (if no matching profile found). In this mode, the Configuration Service attempts to connect to a network access point using the Profile List. If no matching profile is found, the Configuration Service attempts to automatically connect to any available network. This mode is set in the Advanced Setting.

Enabling Automatic Connection

The Configuration Service also monitors for the "resume status" after a laptop computer suspend event. When this occurs, the Configuration Service will re-enable the automatic connection service.

These features can be enabled again after rebooting your computer or after a suspend and resume cycle.

Disabling Automatic Connection

The Configuration Service watches for another profile management service, such as Windows* XP Zero Config and AAA clients, to be detected. When another service is found, the Configuration Service stops processing connection information and a dialog box gives you the option of disabling the Configuration Service or continuing your wireless connection without interruption.

To re-enable the Configuration Service:

1. Reboot your computer.
2. Resume after a computer suspend.
3. Use the Advanced Settings options to manually re-enable the Configuration Service.



NOTE: *The Configuration Service displays a list of available networks within the range of your wireless adapter when no matching profiles are found in the Profile List and the **Connect** button is not used to connect to a network.*

When the Configuration Service is disabled, the current connection will continue with the following PROSet features disabled:

- The **Connect** button on the Profile page is disabled.
- The **Scan** button can be used to scan for available networks, but the **Connect** button is disabled when used to connect to a network.
- Ad hoc mode is disabled and the **Connect** button in the Ad Hoc Connect dialog box is disabled.
- From the Task Tray menu, launching an ad hoc profile and applying a profile is disabled.

- The buttons described above will not be disabled if you click the message: *Another wireless LAN utility is communicating with the Intel PRO/Wireless LAN Adapter. To avoid conflicts, PROSet has temporarily disabled its Profile Management features.*

Scanning for Available Networks

A fast way to connect to a network is to use the **Scan** button to search for a network access point in range of your wireless adapter. When a network is found, you can instantly connect without a profile or create a new profile.



NOTE: Profiles with the Enable Auto-Import feature enabled will also be displayed in the profile list of available networks. Refer to Automatic Profile Distribution for more information.

To scan for available networks:

1. From the General page, select the wireless adapter on the left side pane.
2. Select the Networks tab.
3. Click the **Scan** button.
4. The Available Networks dialog displays the names of the available networks.
5. Select the network from the list, and click the **Connect** button. Click the **Refresh** button to refresh the list of available networks.
6. To connect without creating a profile, click **No, connect me directly without creating a profile.**

Click **Yes, create a profile for this network now** to create a new profile using the Profile Wizard.

7. Click **OK** to connect to a network.

Connecting to a Network Using an Access Point

An infrastructure network consists of one or more access points and one or more computers with wireless adapters installed. Each access point must have a wired connection to the Local Area Network (LAN).

The following describes how to create a new profile using the Profile Wizard and connect to an access point using the Connect button. You can also connect to a network, by using the Scan button.

1. From the General page, select the wireless adapter on the left side pane.
2. Click the Networks tab.
3. Click the **Add** button.
4. Enter the *profile name* in the text box.
5. Enter a *network name (SSID)* in the text box.
6. Select **Infrastructure** for the operating mode.
7. The Mandatory AP option is not required unless the adapter has to connect to a specific access point or computer. Click the **Mandatory AP** button to force the adapter to connect to a specific access point. Enter the Ethernet address for the access point or computer (Ad-hoc). Click **OK** to save the setting and return to the General Settings page.

8. Click the **Configure TCP/IP and VPN settings** check box and click the Next button to access the TCP/IP and VPN settings. If these settings are not required, leave the box unchecked and proceed to step 11.
9. Click the **Next** button to select the WEP security settings.
10. Click the **Password protect this profile** checkbox and click **Next** button to access the Password Protection settings. Click **Finish** after the password information has been entered. If this option is not required, leave the box unchecked and proceed to step 11.
11. Click **OK** to save the profile settings and return to the Networks page.
12. Under **Transmit channel**, Channel 7 is the default transmit channel. Unless the other computers in the ad hoc network use a different channel, there is no need to change the default channel. To change the channel, click the Adapter tab and click the **Configure** button under Adapter **Settings**. Select a channel from the **802.11b Channel List** pull-down menu. Click **OK** to save the setting.
13. Click **OK** to save the settings and return to the Networks page.
14. After creating the new profile, click the profile in the Profile List. Profiles using infrastructure mode are indicated by a computer icon next to the profile name.
15. Click the **Connect** button to connect to the ad hoc network.

Connecting to a Peer-to-Peer (Ad Hoc) Network

In peer-to-peer (ad hoc) mode, you can send and receive information to other computers without using an access point. Each computer in a peer-to-peer network is called a peer.

To create or join an ad hoc network, enter a personal password. Network related settings (SSID), operating mode, WEP 128-bit encryption, and IP addresses are automatically created. Once a network connection is established, after permission rights are given by other computers in the ad hoc network, you can freely share files. All wireless clients in the ad hoc network must use the same network name (SSID) and channel number. For a list of allowed 802.11b ad hoc channels, refer to the Adapter Settings for more information.



NOTE: *While scanning with an ad hoc profile set to a specific transmit channel, if an ad hoc network is found on another channel, you will be connected using the new channel. The new channel number is displayed in the Adapter Settings.*

There are two ways to connect to an ad hoc network:

- Connect using an ad hoc profile. Refer to *Creating a New Profile* for details. Select an ad hoc profile from the Profile List and click the **Connect** button. This method uses a pre-defined ad hoc profile created by the Profile Wizard. The ad hoc profile is displayed in the Profile List.
- One-time ad hoc session. Refer to *Starting an Ad Hoc (peer-to-peer) Connection* below for details. This method does not use a pre-defined profile. To connect to any ad hoc network, use the **Scan** button to scan for any ad hoc networks, enter the password (SSID), then click the **Connect** button to connect. To end the session, click the **Close** button to end the session.

Ending an Ad Hoc Session

To end an ad hoc session, click the **Close** button. After the session is ended, an attempt is made to re-connect to the last profile used from the Profile List.

Creating an Ad Hoc Profile Using the Profile Wizard

The following describes how to create a new ad hoc profile using the Profile Wizard and connect to an ad hoc network. You can also connect to a network, by using the Scan button.

1. From the General page, select the wireless adapter on the left side pane.
2. Click the Networks tab.
3. Click the **Add** button.
4. Enter the *profile name* in the text box.
5. Enter a *network name (SSID)* in the text box.
6. Select **Ad Hoc** for the operating mode.
7. The Mandatory AP option is not required unless the adapter has to connect to a specific access point or computer. Click the **Mandatory AP** button to force the adapter to connect to a specific access point. Enter the Ethernet address for the access point or computer (Ad-hoc). Click **OK** to save the setting and return to the General Settings page.
8. Click the **Configure TCP/IP and VPN settings** check box and click the Next button to access the TCP/IP and VPN settings. If these settings are not required, leave the box unchecked and proceed to step 11.
9. Click the **Next** button to select the WEP security settings.
10. Click the **Password protect this profile** checkbox and click **Next** button to access the Password Protection settings. Click **Finish** after the password information has been entered. If this option is not required, leave the box unchecked and proceed to step 11.
11. Click **OK** to save the profile settings and return to the Networks page.
12. Under **Transmit channel**, Channel 7 is the default transmit channel. Unless the other computers in the ad hoc network use a different channel, there is no need to change the default channel. To change the channel, click the Adapter tab and click the **Configure** button under Adapter **Settings**. Select a channel from the **802.11b Channel List** pull-down menu. Click **OK** to save the setting.
13. Click **OK** to save the settings and return to the Networks page.
14. After creating the new profile, click the profile in the Profile List. Profiles using infrastructure mode are indicated by a computer icon next to the profile name.
15. Click the **Connect** button to connect to the ad hoc network.

Starting an Ad Hoc (peer-to-peer) Connection

To communicate properly, all computers/peers on an ad hoc network must have Intel wireless adapters installed. To connect to an ad hoc network for a one-time session:

1. From the General page, select the wireless adapter on the left side pane.
2. Click the Networks tab.
3. Click the **Start** button.
4. Enter the password (SSID) in the text box.
5. Under **Transmit channel**, Channel 7 is the default transmit channel. Unless the other computers in the ad hoc network use a different channel, there is no need to change the default channel. To change the channel, click the **Advanced** button. Select a channel from the pull-down channel menu under Adapter Configuration. Click **OK** to save the setting and return to the Ad Hoc dialog.
6. Under **IP Address**, the IP address is automatically assigned for your laptop wireless adapter. However, this DHCP assigned IP address can be changed. To change the IP address, click the **Advanced** button. Select *Manual* under Network Configuration, and enter the IP address and subnet mask for your laptop wireless adapter. Click **OK** to save the setting and return to the Ad Hoc dialog.
7. Select the peer name from the displayed list of computers in the ad hoc network.
8. Click the **Connect** button to connect to the ad hoc network.

9. Under **Send Files**, files can be sent to another computer in the ad hoc network. To send a file, click the **Send File** button. Locate the file you want to send, and click **Send**.
10. Click the **Close** button to end the ad hoc session.

Disconnecting from a Network

To disconnect from a network, turn the radio to OFF from the General page in PROSet.

Switching the Adapter Off and On

When your laptop is switched on, the adapter radio is constantly transmitting signals. In certain situations, such as in a plane, signals from the radio may cause interference. This software function allows you to use your laptop with the radio switched off.

To switch off the adapter radio from the General page (next to Wireless Device) click the **Off** button for the following results:

- The wireless adapter is not associated with the network.
- PROSet can be used to edit or add profile contents.

To switch on the adapter radio on from the General page (next to Wireless Device), click the **On** button for the following results:

- With PROSet active, the wireless adapter will try to associate with the network access point using the last profile. If the adapter cannot connect to the access point, the Configuration Service will attempt to find an available network. Refer to Configuration Service above for more information.