

# Customer Support

In the event of problems that cannot be solved by using this manual, you should contact your vendor. If you cannot contact your vendor, then contact a ZyXEL office for the region in which you bought the device.

See <http://www.zyxel.com/homepage.shtml> and also

[http://www.zyxel.com/about\\_zyxel/zyxel\\_worldwide.shtml](http://www.zyxel.com/about_zyxel/zyxel_worldwide.shtml) for the latest information.

Please have the following information ready when you contact an office.

## Required Information

- Product model and serial number.
- Warranty Information.
- Date that you received your device.
- Brief description of the problem and the steps you took to solve it.

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- <http://www.zyxel.com>

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- ZyXEL Communications (Tianjin) Corp.
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- <http://www.zyxel.co.th>

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- <http://www.zyxel.com/be/nl/>
- <http://www.zyxel.com/be/fr/>

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- <http://www.zyxel.com/bg/bg/>

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- <http://www.zyxel.dk>

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- ZyXEL Latvia
- <http://www.zyxel.com/lv/lv/homepage.shtml>

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- <http://www.zyxel.com/lt/lt/homepage.shtml>

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# Setting Up Your Computer's IP Address

Note: Your specific NBG6817 may not support all of the operating systems described in this appendix. See the product specifications for more information about which operating systems are supported.

This appendix shows you how to configure the IP settings on your computer in order for it to be able to communicate with the other devices on your network. Windows Vista/XP/2000, Mac OS 9/OS X, and all versions of UNIX/LINUX include the software components you need to use TCP/IP on your computer.

If you manually assign IP information instead of using a dynamic IP, make sure that your network's computers have IP addresses that place them in the same subnet.

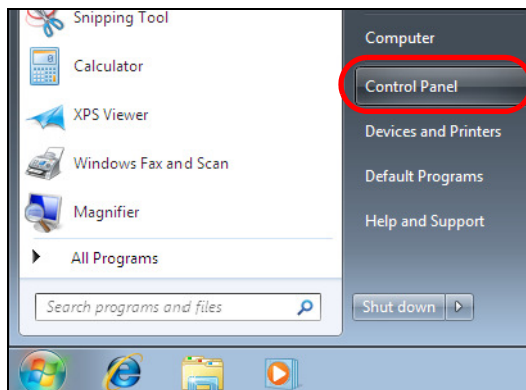
In this appendix, you can set up an IP address for:

- [Windows 7](#) on [page 176](#)
- [Mac OS X: 10.3 and 10.4](#) on [page 180](#)
- [Mac OS X: 10.5 and 10.6](#) on [page 183](#)
- [Linux: Ubuntu 8 \(GNOME\)](#) on [page 186](#)
- [Linux: openSUSE 10.3 \(KDE\)](#) on [page 190](#)

## Windows 7

This section shows screens from Windows 7 Enterprise.

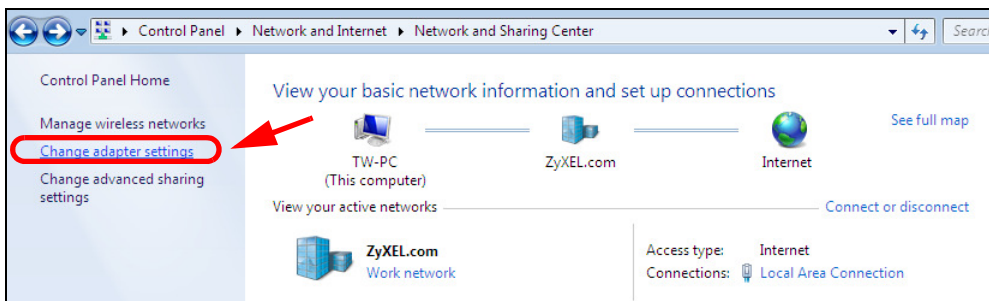
- 1 Click **Start > Control Panel**.



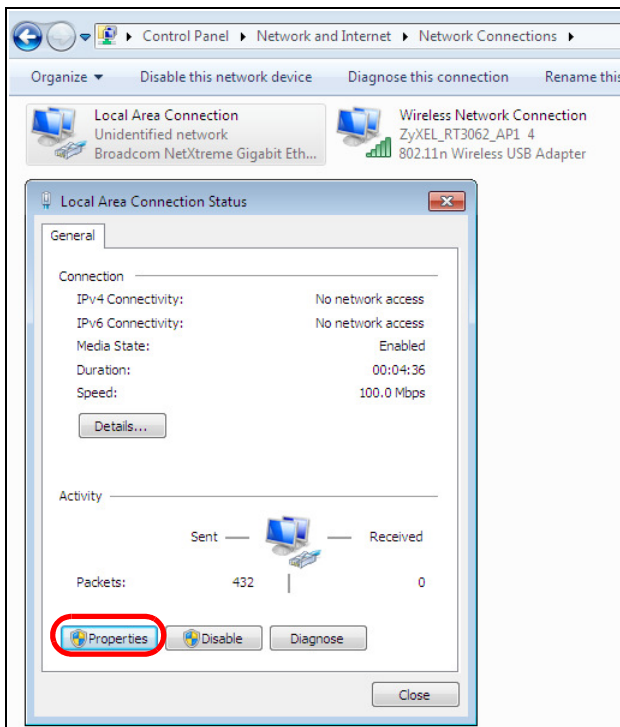
- 2 In the **Control Panel**, click **View network status and tasks** under the **Network and Internet** category.



3 Click **Change adapter settings**.

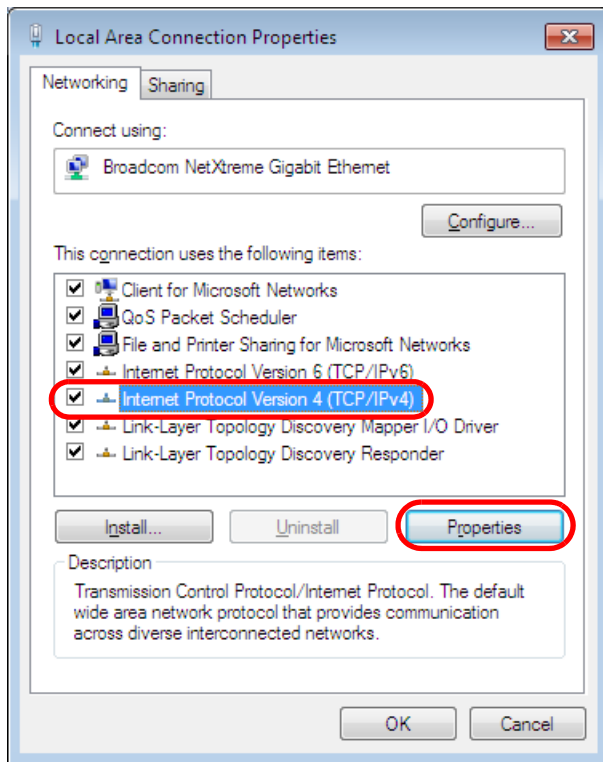


4 Double click **Local Area Connection** and then select **Properties**.

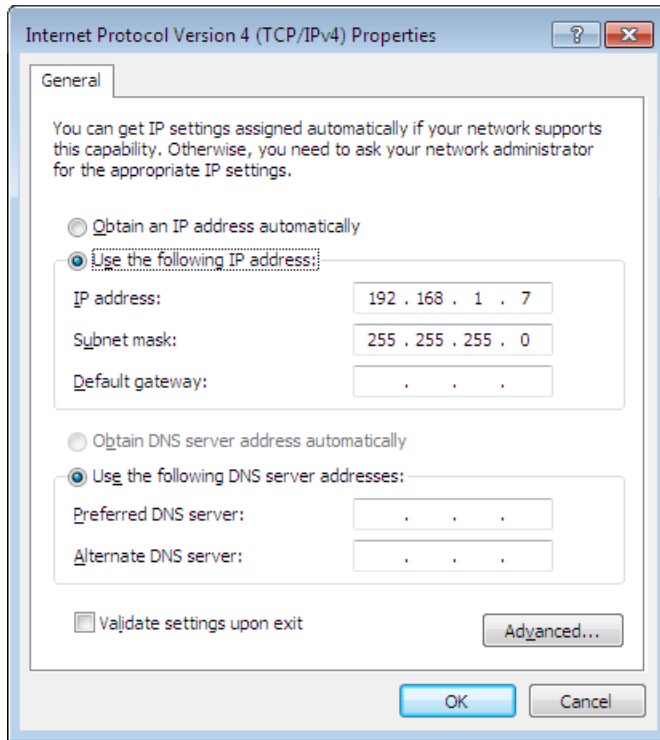


Note: During this procedure, click **Continue** whenever Windows displays a screen saying that it needs your permission to continue.

- 5 Select **Internet Protocol Version 4 (TCP/IPv4)** and then select **Properties**.



- 6 The **Internet Protocol Version 4 (TCP/IPv4) Properties** window opens.



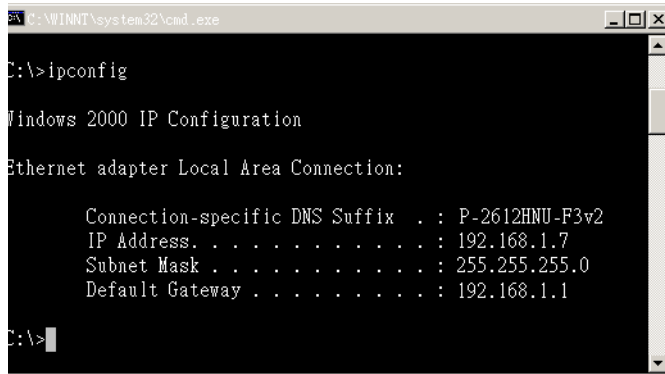
- 7 Select **Obtain an IP address automatically** if your network administrator or ISP assigns your IP address dynamically.

Select **Use the following IP Address** and fill in the **IP address**, **Subnet mask**, and **Default gateway** fields if you have a static IP address that was assigned to you by your network administrator or ISP. You may also have to enter a **Preferred DNS server** and an **Alternate DNS server**, if that information was provided. Click **Advanced** if you want to configure advanced settings for IP, DNS and WINS.

- 8 Click **OK** to close the **Internet Protocol (TCP/ IP) Properties** window.
- 9 Click **OK** to close the **Local Area Connection Properties** window.

## Verifying Settings

- 1 Click **Start > All Programs > Accessories > Command Prompt**.
- 2 In the **Command Prompt** window, type "ipconfig" and then press [ENTER].
- 3 The IP settings are displayed as follows.



```
C:\WINNT\system32\cmd.exe

C:\>ipconfig

Windows 2000 IP Configuration

Ethernet adapter Local Area Connection:

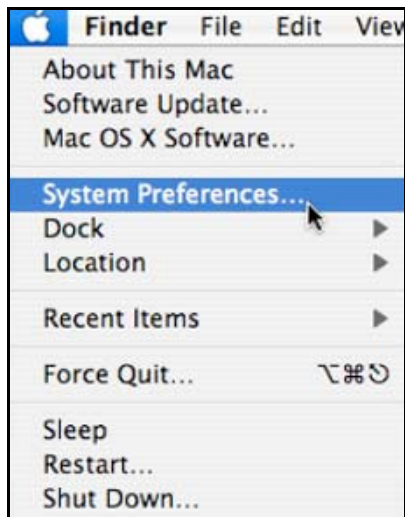
    Connection-specific DNS Suffix  . : P-2612HNU-F3v2
    IP Address. . . . . : 192.168.1.7
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

C:\>
```

## Mac OS X: 10.3 and 10.4

The screens in this section are from Mac OS X 10.4 but can also apply to 10.3.

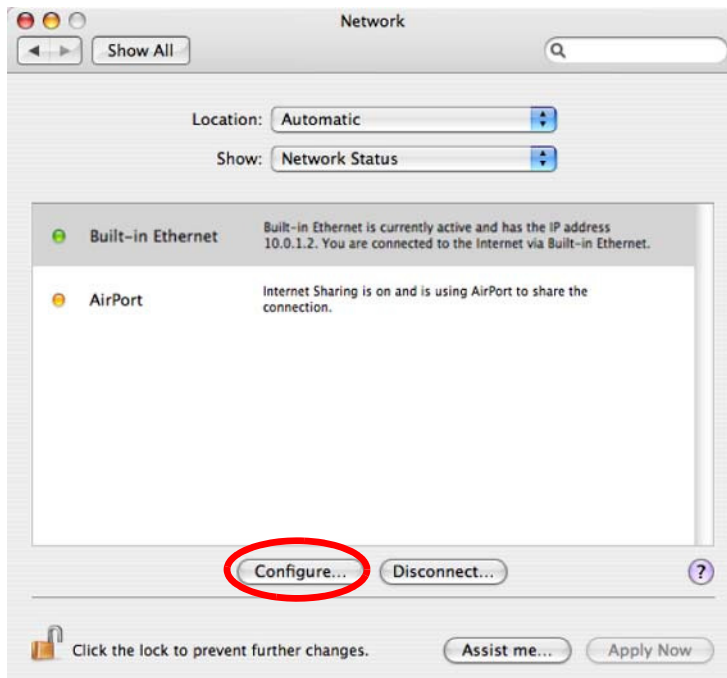
- 1 Click **Apple > System Preferences**.



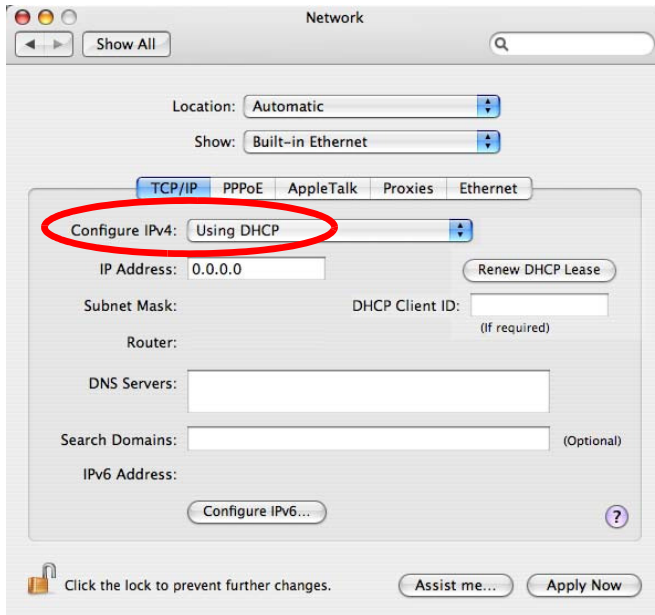
- 2 In the **System Preferences** window, click the **Network** icon.



- 3 When the **Network** preferences pane opens, select **Built-in Ethernet** from the network connection type list, and then click **Configure**.

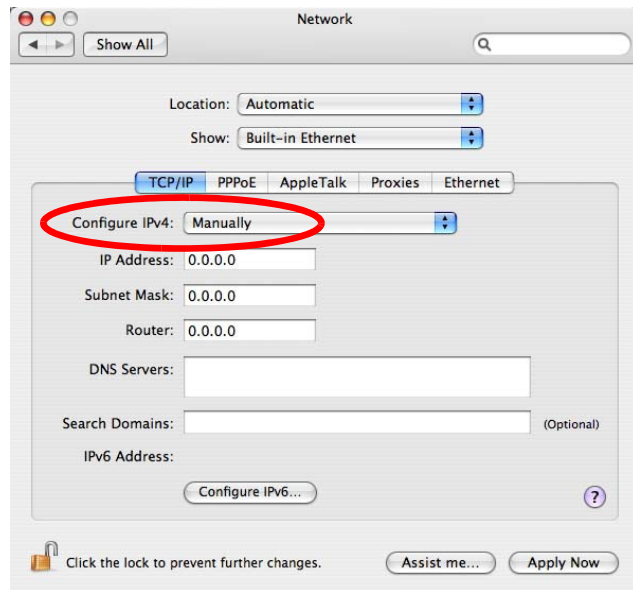


- 4 For dynamically assigned settings, select **Using DHCP** from the **Configure IPv4** list in the **TCP/ IP** tab.



5 For statically assigned settings, do the following:

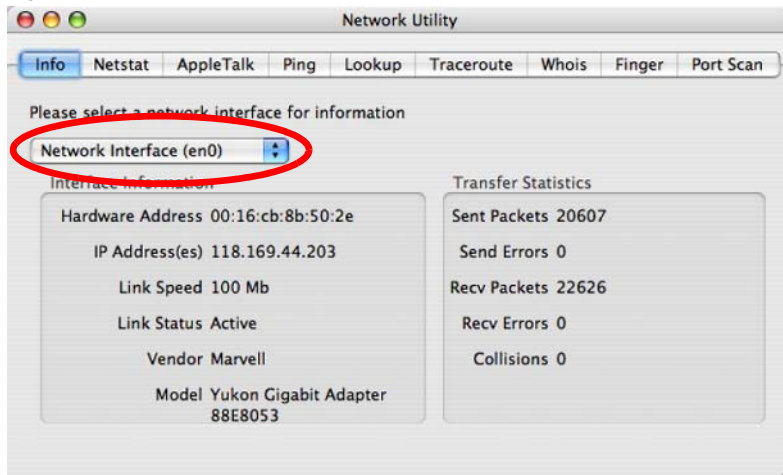
- From the **Configure IPv4** list, select **Manually**.
- In the **IP Address** field, type your IP address.
- In the **Subnet Mask** field, type your subnet mask.
- In the **Router** field, type the IP address of your device.



6 Click **Apply Now** and close the window.

## Verifying Settings

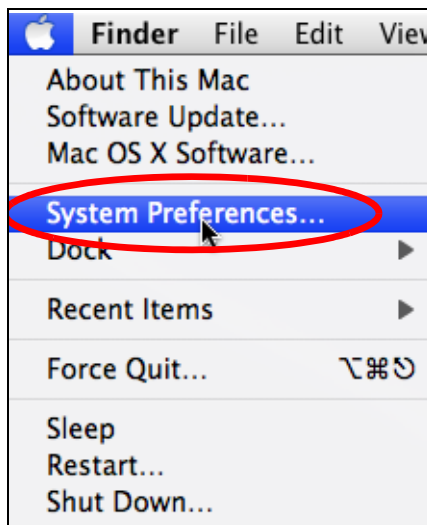
Check your TCP/IP properties by clicking **Applications > Utilities > Network Utilities**, and then selecting the appropriate **Network Interface** from the **Info** tab.

**Figure 113** Mac OS X 10.4: Network Utility

## Mac OS X: 10.5 and 10.6

The screens in this section are from Mac OS X 10.5 but can also apply to 10.6.

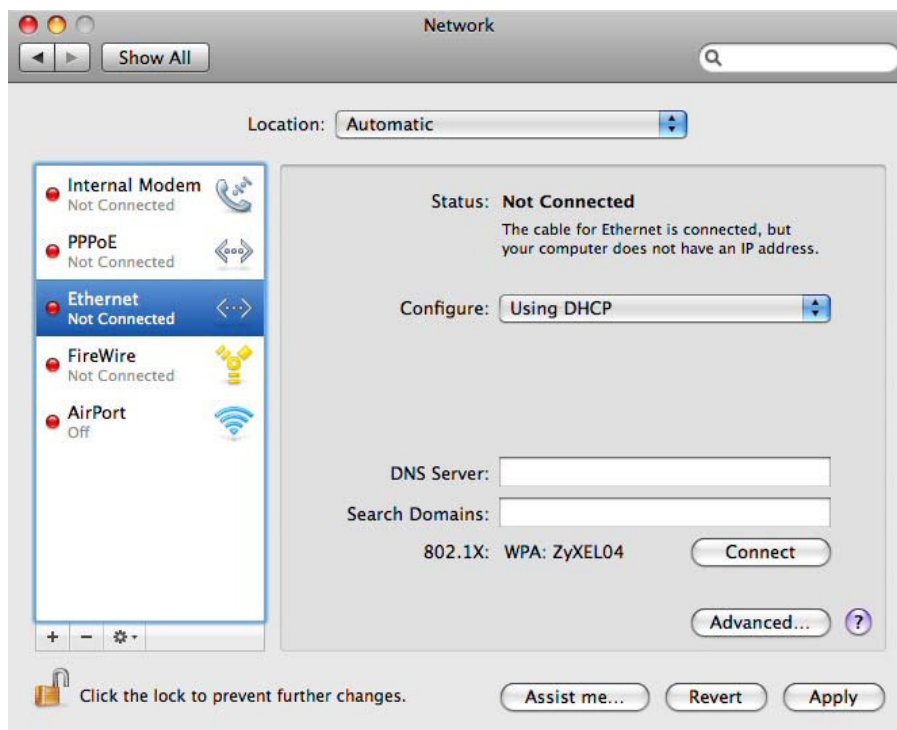
- 1 Click **Apple > System Preferences**.



- 2 In **System Preferences**, click the **Network** icon.

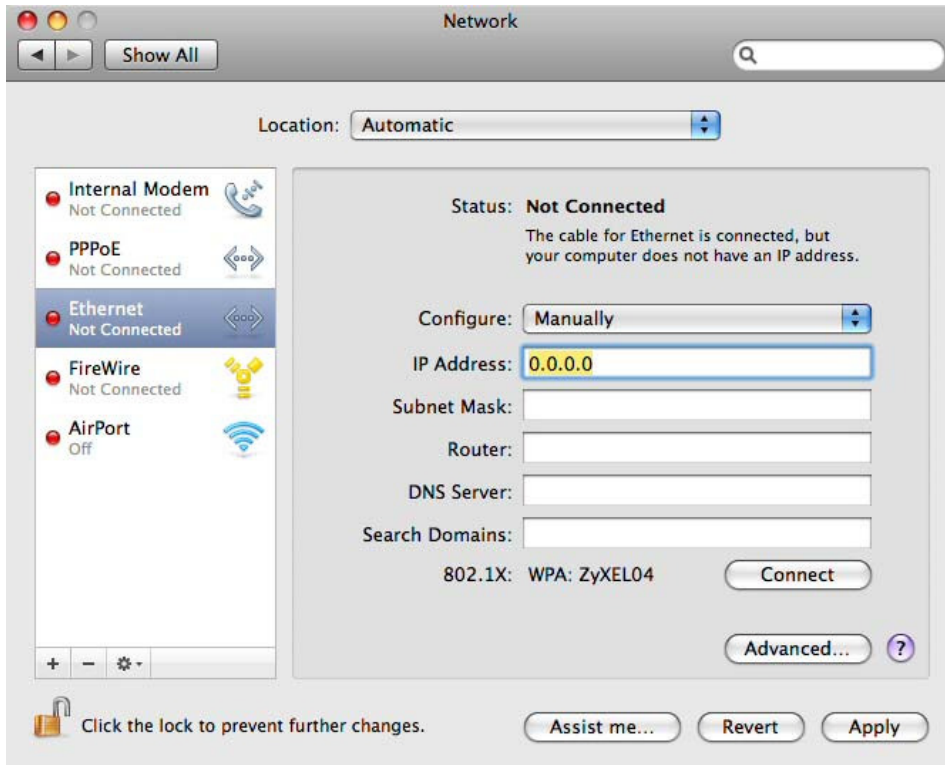


- 3 When the **Network** preferences pane opens, select **Ethernet** from the list of available connection types.



- 4 From the **Configure** list, select **Using DHCP** for dynamically assigned settings.

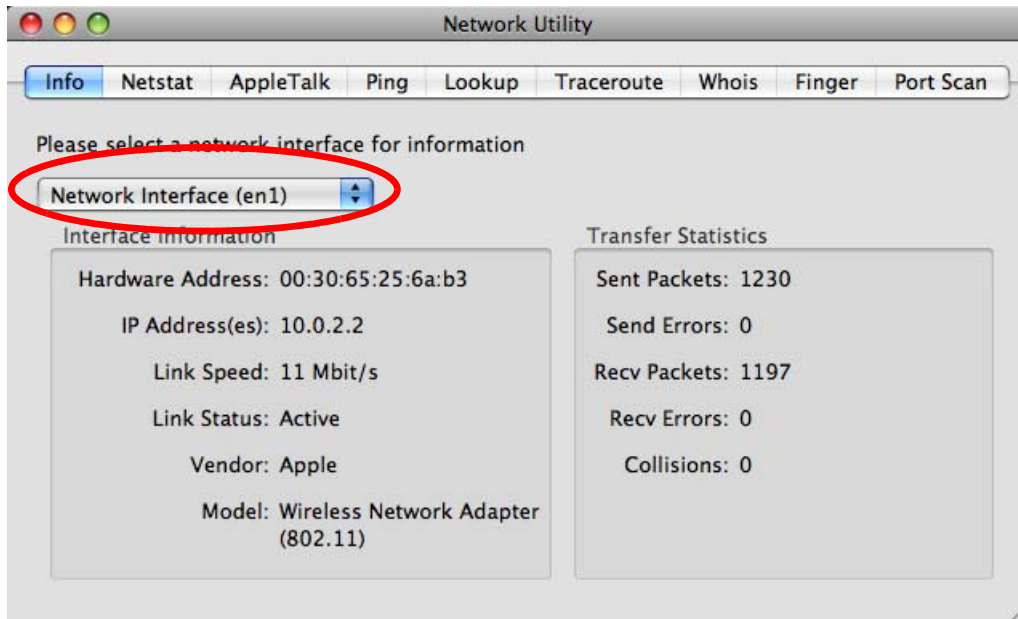
- 5 For statically assigned settings, do the following:
- From the **Configure** list, select **Manually**.
  - In the **IP Address** field, enter your IP address.
  - In the **Subnet Mask** field, enter your subnet mask.
  - In the **Router** field, enter the IP address of your NBG6817.



- 6 Click **Apply** and close the window.

## Verifying Settings

Check your TCP/IP properties by clicking **Applications > Utilities > Network Utilities**, and then selecting the appropriate **Network interface** from the **Info** tab.

**Figure 114** Mac OS X 10.5: Network Utility

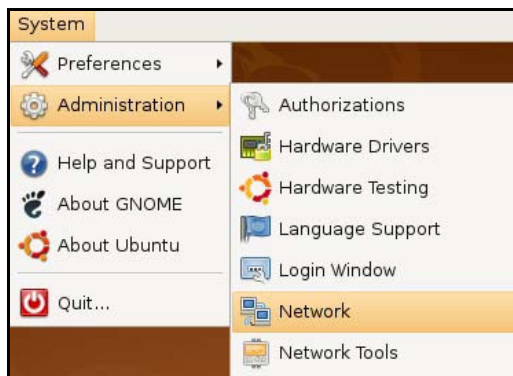
## Linux: Ubuntu 8 (GNOME)

This section shows you how to configure your computer's TCP/IP settings in the GNU Object Model Environment (GNOME) using the Ubuntu 8 Linux distribution. The procedure, screens and file locations may vary depending on your specific distribution, release version, and individual configuration. The following screens use the default Ubuntu 8 installation.

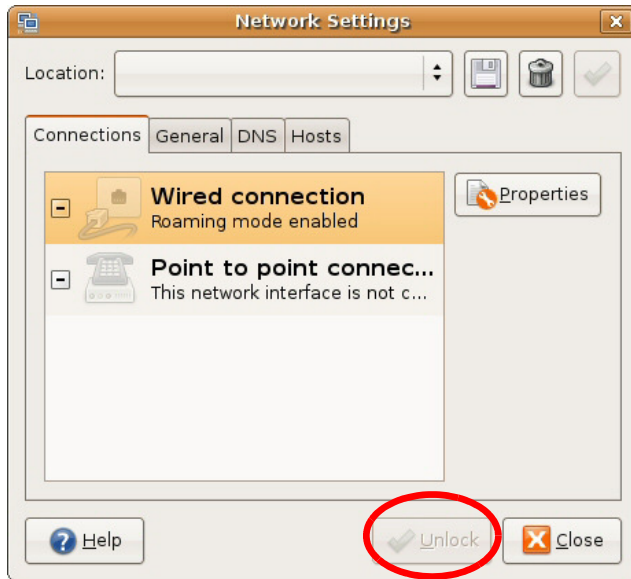
**Note:** Make sure you are logged in as the root administrator.

Follow the steps below to configure your computer IP address in GNOME:

- 1 Click **System > Administration > Network**.



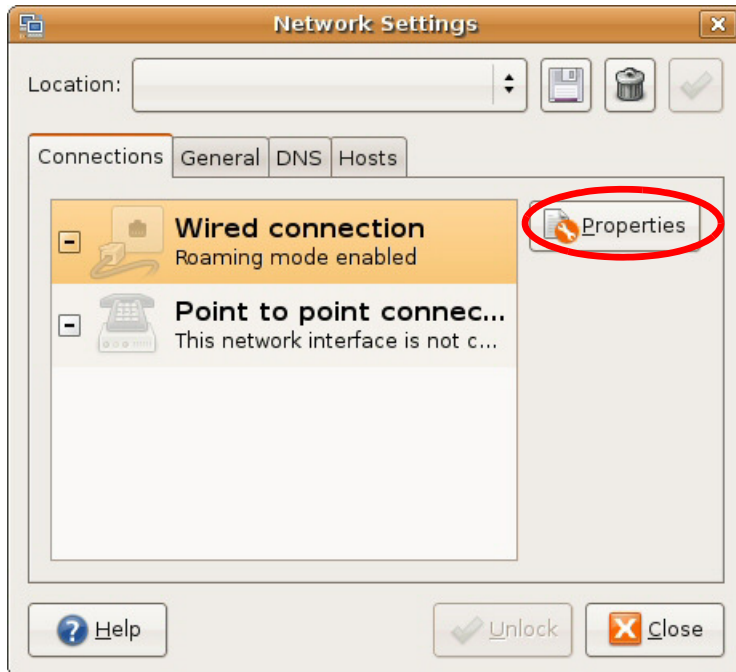
- 2 When the **Network Settings** window opens, click **Unlock** to open the **Authenticate** window. (By default, the **Unlock** button is greyed out until clicked.) You cannot make changes to your configuration unless you first enter your admin password.



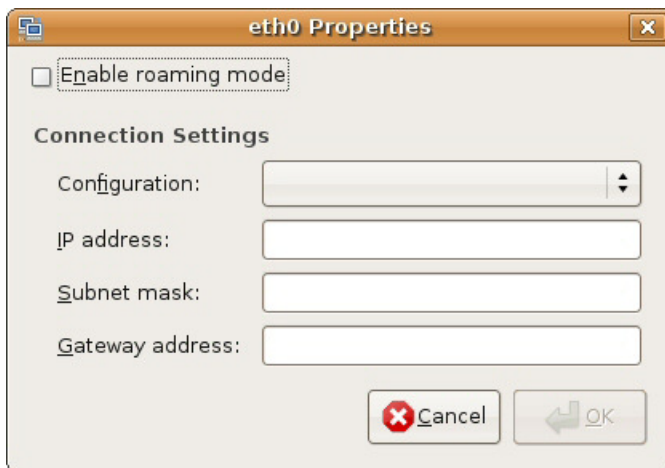
- 3 In the **Authenticate** window, enter your admin account name and password then click the **Authenticate** button.



- 4 In the **Network Settings** window, select the connection that you want to configure, then click **Properties**.



- 5 The **Properties** dialog box opens.



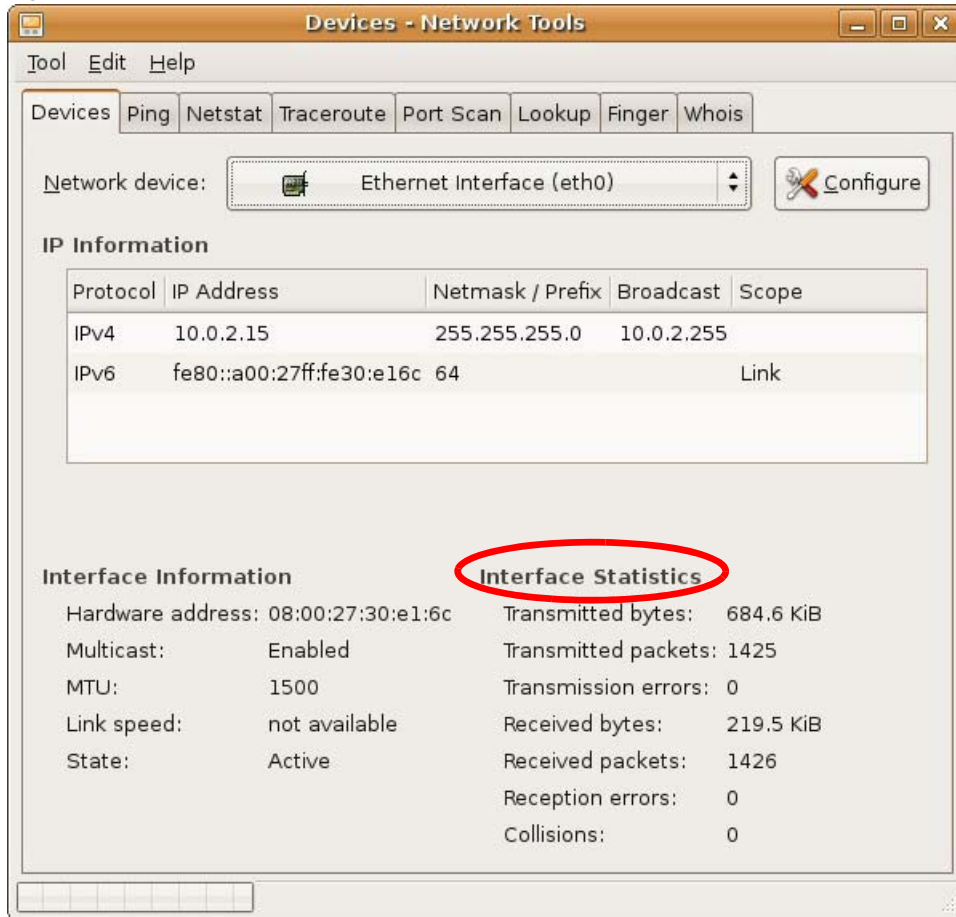
- In the **Configuration** list, select **Automatic Configuration (DHCP)** if you have a dynamic IP address.
  - In the **Configuration** list, select **Static IP address** if you have a static IP address. Fill in the **IP address**, **Subnet mask**, and **Gateway address** fields.
- 6 Click **OK** to save the changes and close the **Properties** dialog box and return to the **Network Settings** screen.
- 7 If you know your DNS server IP address(es), click the **DNS** tab in the **Network Settings** window and then enter the DNS server information in the fields provided.



- 8 Click the **Close** button to apply the changes.

## Verifying Settings

Check your TCP/IP properties by clicking **System > Administration > Network Tools**, and then selecting the appropriate **Network device** from the **Devices** tab. The **Interface Statistics** column shows data if your connection is working properly.

**Figure 115** Ubuntu 8: Network Tools

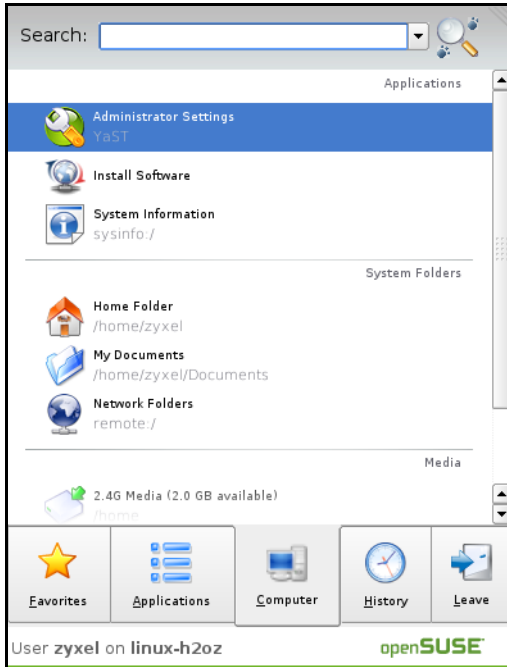
## Linux: openSUSE 10.3 (KDE)

This section shows you how to configure your computer's TCP/IP settings in the K Desktop Environment (KDE) using the openSUSE 10.3 Linux distribution. The procedure, screens and file locations may vary depending on your specific distribution, release version, and individual configuration. The following screens use the default openSUSE 10.3 installation.

**Note:** Make sure you are logged in as the root administrator.

Follow the steps below to configure your computer IP address in the KDE:

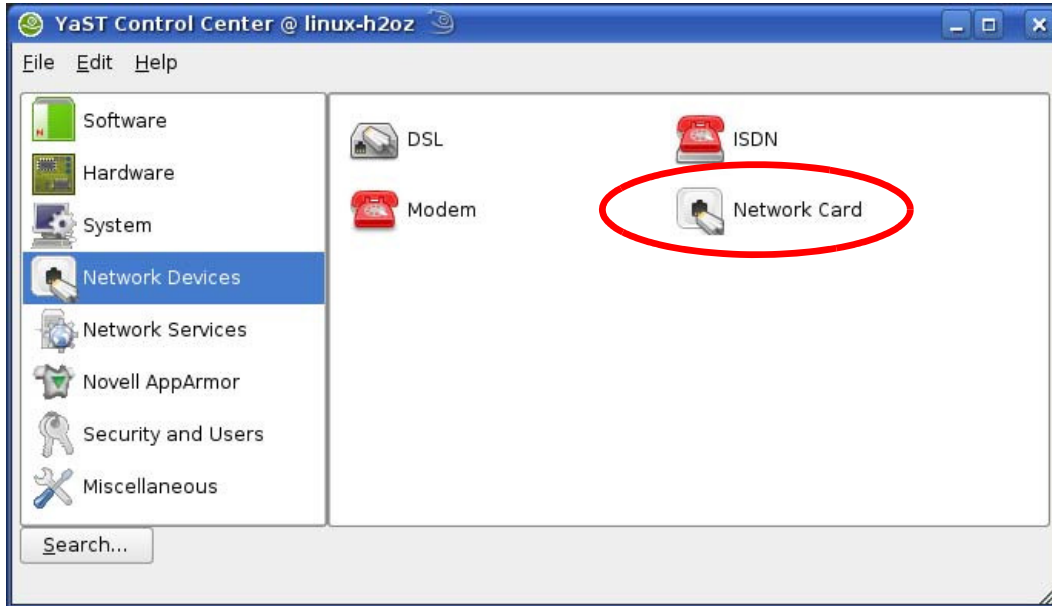
- 1 Click **K Menu > Computer > Administrator Settings (YaST)**.



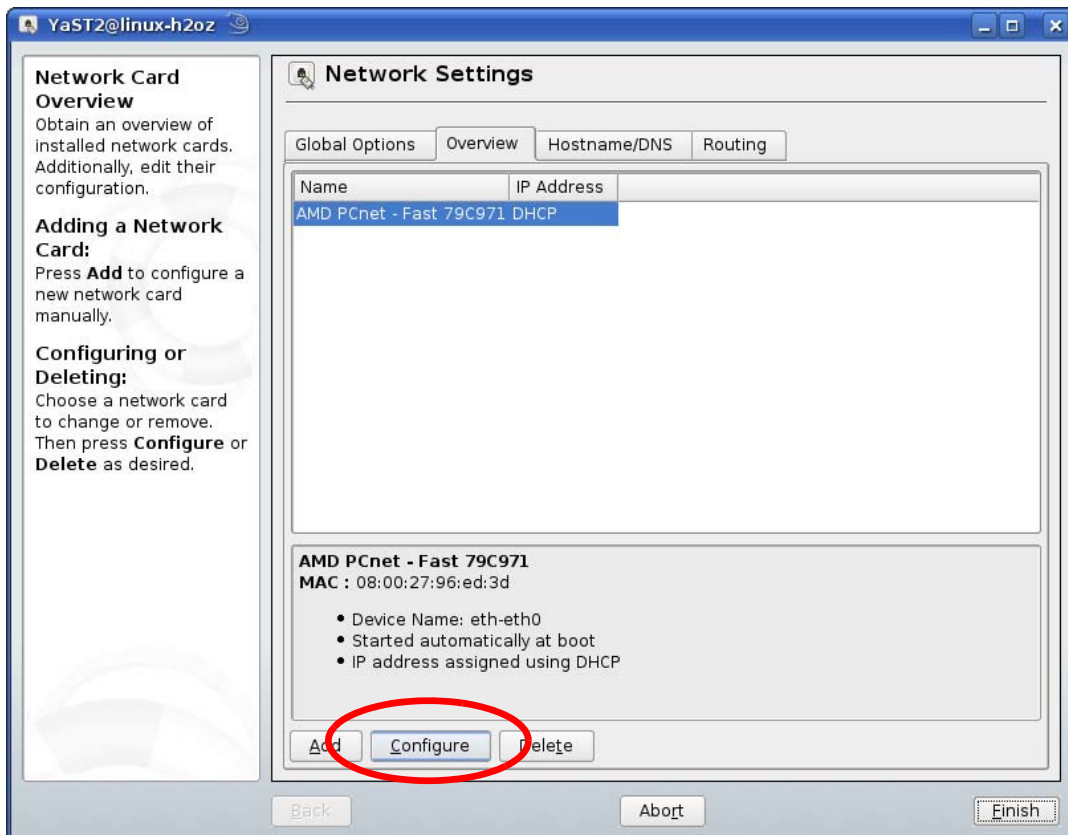
- 2 When the **Run as Root - KDE su** dialog opens, enter the admin password and click **OK**.



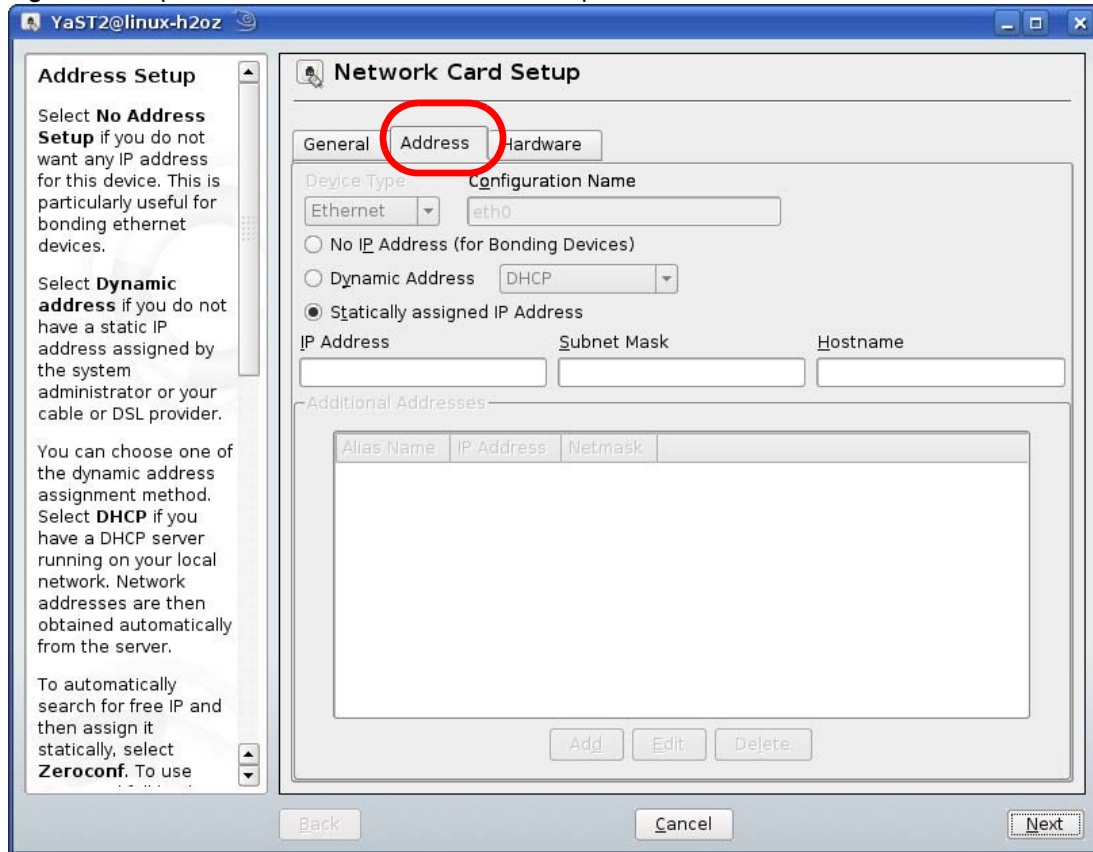
- 3 When the **YaST Control Center** window opens, select **Network Devices** and then click the **Network Card** icon.



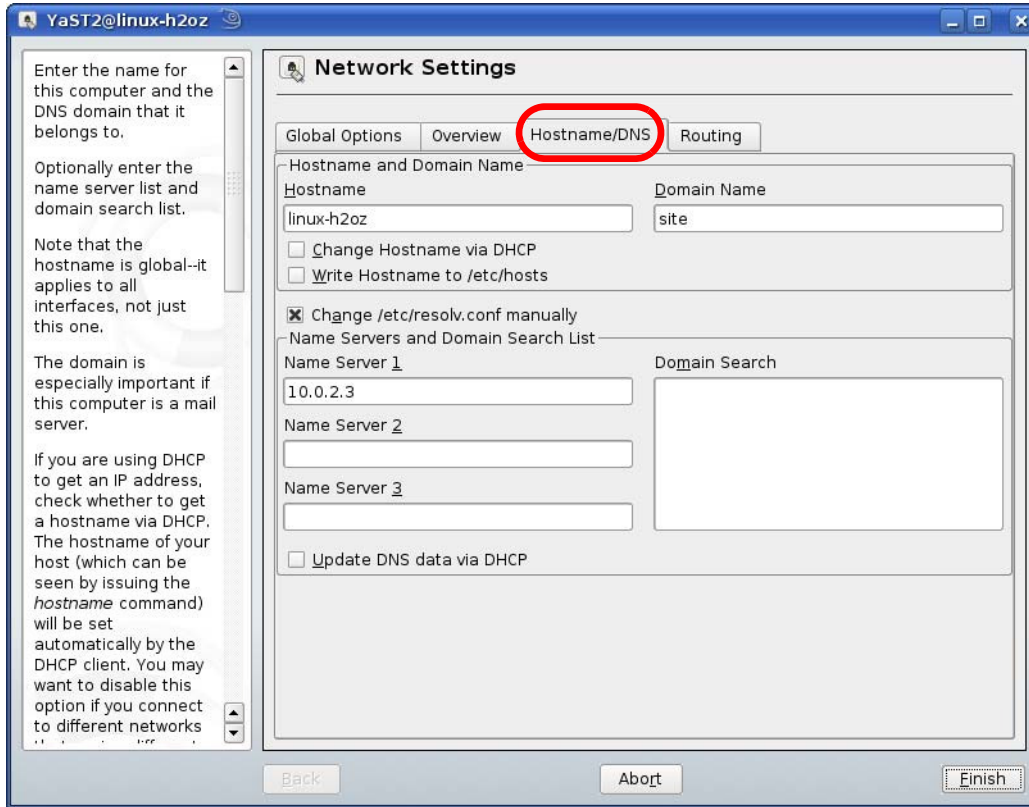
- 4 When the **Network Settings** window opens, click the **Overview** tab, select the appropriate connection **Name** from the list, and then click the **Configure** button.



- 5 When the **Network Card Setup** window opens, click the **Address** tab

**Figure 116** openSUSE 10.3: Network Card Setup

- 6 Select **Dynamic Address (DHCP)** if you have a dynamic IP address.  
Select **Statically assigned IP Address** if you have a static IP address. Fill in the **IP address**, **Subnet mask**, and **Hostname** fields.
- 7 Click **Next** to save the changes and close the **Network Card Setup** window.
- 8 If you know your DNS server IP address(es), click the **Hostname/ DNS** tab in **Network Settings** and then enter the DNS server information in the fields provided.

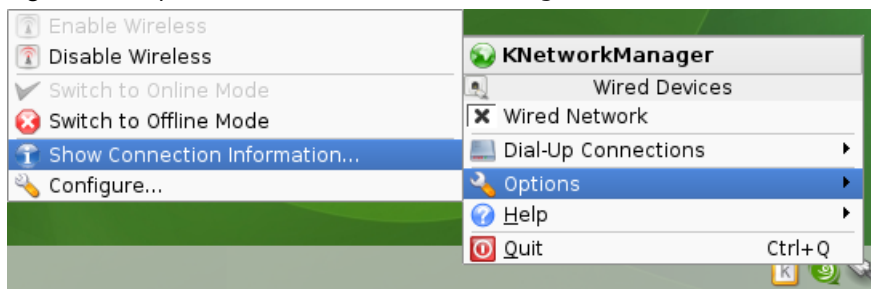


- 9 Click **Finish** to save your settings and close the window.

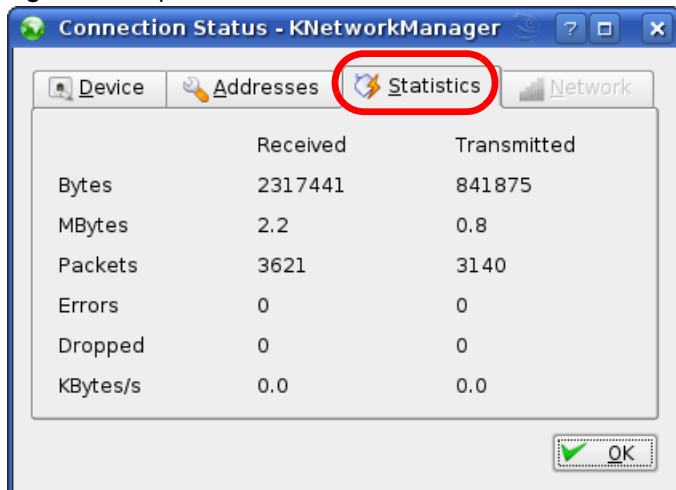
## Verifying Settings

Click the **KNetwork Manager** icon on the **Task bar** to check your TCP/IP properties. From the **Options** sub-menu, select **Show Connection Information**.

**Figure 117** openSUSE 10.3: KNetwork Manager



When the **Connection Status - KNetwork Manager** window opens, click the **Statistics** tab to see if your connection is working properly.

**Figure 118** openSUSE: Connection Status - KNetwork Manager

## Common Services

The following table lists some commonly-used services and their associated protocols and port numbers. For a comprehensive list of port numbers, ICMP type/code numbers and services, visit the IANA (Internet Assigned Number Authority) web site.

- **Name:** This is a short, descriptive name for the service. You can use this one or create a different one, if you like.
- **Protocol:** This is the type of IP protocol used by the service. If this is **TCP/ UDP**, then the service uses the same port number with TCP and UDP. If this is **USER-DEFINED**, the **Port(s)** is the IP protocol number, not the port number.
- **Port(s):** This value depends on the **Protocol**. Please refer to RFC 1700 for further information about port numbers.
  - If the **Protocol** is **TCP, UDP, or TCP/ UDP**, this is the IP port number.
  - If the **Protocol** is **USER**, this is the IP protocol number.
- **Description:** This is a brief explanation of the applications that use this service or the situations in which this service is used.

**Table 61** Commonly Used Services

| NAME                  | PROTOCOL     | PORT(S)       | DESCRIPTION                                                                                                                         |
|-----------------------|--------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------|
| AH<br>(IPSEC_TUNNEL)  | User-Defined | 51            | The IPSEC AH (Authentication Header) tunneling protocol uses this service.                                                          |
| AIM/New-ICQ           | TCP          | 5190          | AOL's Internet Messenger service. It is also used as a listening port by ICQ.                                                       |
| AUTH                  | TCP          | 113           | Authentication protocol used by some servers.                                                                                       |
| BGP                   | TCP          | 179           | Border Gateway Protocol.                                                                                                            |
| BOOTP_CLIENT          | UDP          | 68            | DHCP Client.                                                                                                                        |
| BOOTP_SERVER          | UDP          | 67            | DHCP Server.                                                                                                                        |
| CU-SEEME              | TCP<br>UDP   | 7648<br>24032 | A popular videoconferencing solution from White Pines Software.                                                                     |
| DNS                   | TCP/UDP      | 53            | Domain Name Server, a service that matches web names (for example <a href="http://www.zyxel.com">www.zyxel.com</a> ) to IP numbers. |
| ESP<br>(IPSEC_TUNNEL) | User-Defined | 50            | The IPSEC ESP (Encapsulation Security Protocol) tunneling protocol uses this service.                                               |
| FINGER                | TCP          | 79            | Finger is a UNIX or Internet related command that can be used to find out if a user is logged on.                                   |
| FTP                   | TCP<br>TCP   | 20<br>21      | File Transfer Program, a program to enable fast transfer of files, including large files that may not be possible by e-mail.        |
| H.323                 | TCP          | 1720          | NetMeeting uses this protocol.                                                                                                      |
| HTTP                  | TCP          | 80            | Hyper Text Transfer Protocol - a client/server protocol for the world wide web.                                                     |

**Table 61** Commonly Used Services (continued)

| NAME              | PROTOCOL     | PORT(S) | DESCRIPTION                                                                                                                                           |
|-------------------|--------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| HTTPS             | TCP          | 443     | HTTPS is a secured http session often used in e-commerce.                                                                                             |
| ICMP              | User-Defined | 1       | Internet Control Message Protocol is often used for diagnostic or routing purposes.                                                                   |
| ICQ               | UDP          | 4000    | This is a popular Internet chat program.                                                                                                              |
| IGMP (MULTICAST)  | User-Defined | 2       | Internet Group Management Protocol is used when sending packets to a specific group of hosts.                                                         |
| IKE               | UDP          | 500     | The Internet Key Exchange algorithm is used for key distribution and management.                                                                      |
| IRC               | TCP/UDP      | 6667    | This is another popular Internet chat program.                                                                                                        |
| MSN Messenger     | TCP          | 1863    | Microsoft Networks' messenger service uses this protocol.                                                                                             |
| NEW-ICQ           | TCP          | 5190    | An Internet chat program.                                                                                                                             |
| NEWS              | TCP          | 144     | A protocol for news groups.                                                                                                                           |
| NFS               | UDP          | 2049    | Network File System - NFS is a client/server distributed file service that provides transparent file sharing for network environments.                |
| NNTP              | TCP          | 119     | Network News Transport Protocol is the delivery mechanism for the USENET newsgroup service.                                                           |
| PING              | User-Defined | 1       | Packet INternet Groper is a protocol that sends out ICMP echo requests to test whether or not a remote host is reachable.                             |
| POP3              | TCP          | 110     | Post Office Protocol version 3 lets a client computer get e-mail from a POP3 server through a temporary connection (TCP/IP or other).                 |
| PPTP              | TCP          | 1723    | Point-to-Point Tunneling Protocol enables secure transfer of data over public networks. This is the control channel.                                  |
| PPTP_TUNNEL (GRE) | User-Defined | 47      | PPTP (Point-to-Point Tunneling Protocol) enables secure transfer of data over public networks. This is the data channel.                              |
| RCMD              | TCP          | 512     | Remote Command Service.                                                                                                                               |
| REAL_AUDIO        | TCP          | 7070    | A streaming audio service that enables real time sound over the web.                                                                                  |
| REXEC             | TCP          | 514     | Remote Execution Daemon.                                                                                                                              |
| RLOGIN            | TCP          | 513     | Remote Login.                                                                                                                                         |
| RTELNET           | TCP          | 107     | Remote Telnet.                                                                                                                                        |
| RTSP              | TCP/UDP      | 554     | The Real Time Streaming (media control) Protocol (RTSP) is a remote control for multimedia on the Internet.                                           |
| SFTP              | TCP          | 115     | Simple File Transfer Protocol.                                                                                                                        |
| SMTP              | TCP          | 25      | Simple Mail Transfer Protocol is the message-exchange standard for the Internet. SMTP enables you to move messages from one e-mail server to another. |
| SNMP              | TCP/UDP      | 161     | Simple Network Management Program.                                                                                                                    |
| SNMP-TRAPS        | TCP/UDP      | 162     | Traps for use with the SNMP (RFC:1215).                                                                                                               |

**Table 61** Commonly Used Services (continued)

| NAME       | PROTOCOL | PORT(S) | DESCRIPTION                                                                                                                                                                                                    |
|------------|----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SQL-NET    | TCP      | 1521    | Structured Query Language is an interface to access data on many different types of database systems, including mainframes, midrange systems, UNIX systems and network servers.                                |
| SSH        | TCP/UDP  | 22      | Secure Shell Remote Login Program.                                                                                                                                                                             |
| STRM WORKS | UDP      | 1558    | Stream Works Protocol.                                                                                                                                                                                         |
| SYSLOG     | UDP      | 514     | Syslog allows you to send system logs to a UNIX server.                                                                                                                                                        |
| TACACS     | UDP      | 49      | Login Host Protocol used for (Terminal Access Controller Access Control System).                                                                                                                               |
| TELNET     | TCP      | 23      | Telnet is the login and terminal emulation protocol common on the Internet and in UNIX environments. It operates over TCP/IP networks. Its primary function is to allow users to log into remote host systems. |
| TFTP       | UDP      | 69      | Trivial File Transfer Protocol is an Internet file transfer protocol similar to FTP, but uses the UDP (User Datagram Protocol) rather than TCP (Transmission Control Protocol).                                |
| VDOLIVE    | TCP      | 7000    | Another videoconferencing solution.                                                                                                                                                                            |

# Legal Information

## Copyright

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## Disclaimer

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## Regulatory Notice and Statement

### UNITED STATES of AMERICA



The following information applies if you use the product within USA area.

#### FCC EMC Statement

- The device complies with Part 15 of 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.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.
- This product has been tested and complies with the specifications 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 device generates, uses, and can radiate radio frequency energy and, if not installed and used according to 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 device does cause harmful interference to radio or television reception, which is found by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna
  - Increase the separation between the devices
  - Connect the equipment to an outlet other than the receiver's
  - Consult a dealer or an experienced radio/TV technician for assistance

#### FCC Radiation Exposure Statement

- This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

This transmitter must be at least 24 cm from the user and must not be co-located or operating in conjunction with any other antenna or transmitter.

### CANADA

The following information applies if you use the product within Canada area

#### Industry Canada ICES statement

CAN ICES-3 (B)/NMB-3(B)

**Industry Canada RSS-GEN & RSS-247 statement**

- This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
- This radio transmitter (2468C-NBG6817) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

**Antenna Information (For External Antenna)**

| TYPE   | MANUFACTURER | GAIN                                                                                          | CONNECTOR |
|--------|--------------|-----------------------------------------------------------------------------------------------|-----------|
| Dipole | Aristotle    | 2.25dBi<br>(2400~2483.5MHz)<br><br>2.48dBi<br>(5150~5250MHz)<br><br>2.81dBi<br>(5725~5850MHz) | UFL       |

If the product with 5G wireless function operating in 5150-5250 MHz and 5725-5850 MHz, the following attention must be paid,

- The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.
- For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate; and
- The worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in Section 6.2.2(3) of RSS 247 shall be clearly indicated.

If the product with 5G wireless function operating in 5250-5350 MHz and 5470-5725 MHz, the following attention must be paid.

- For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit
- Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
- Le présent émetteur radio (2468C-NBG6817) de modèle s'il fait partie du matériel de catégorie I a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

**Informations Antenne (For External Antenna)**

| TYPE   | FABRICANT | GAIN                                                                                          | CONNECTEUR |
|--------|-----------|-----------------------------------------------------------------------------------------------|------------|
| Dipole | Aristotle | 2.25dBi<br>(2400~2483.5MHz)<br><br>2.48dBi<br>(5150~5250MHz)<br><br>2.81dBi<br>(5725~5850MHz) | UFL        |

Lorsque la fonction sans fil 5G fonctionnant en 5150-5250 MHz and 5725-5850 MHz est activée pour ce produit, il est nécessaire de porter une attention particulière aux choses suivantes

- Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;
- Pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée pour l'exploitation point à point et l'exploitation non point à point, selon le cas;
- Les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, et énoncée à la section 6.2.2 3) du CNR-247, doivent être clairement indiqués.

Lorsque la fonction sans fil 5G fonctionnant en 5250-5350 MHz et 5470-5725 MHz est activée pour ce produit, il est nécessaire de porter une attention particulière aux choses suivantes

- Pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5 250 à 5 350 MHz et de 5 470 à 5 725 MHz doit être conforme à la limite de la p.i.r.e.

**Industry Canada radiation exposure statement**

This device complies with IC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with a minimum distance of 28 cm between the radiator and your body.

**Déclaration d'exposition aux radiations:**

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 28 cm de distance entre la source de rayonnement et votre corps.

## EUROPEAN UNION



The following information applies if you use the product within the European Union.

### Declaration of Conformity with Regard to EU Directive 1999/5/EC (R&TTE Directive)

Compliance information for 2.4GHz and/or 5GHz wireless products relevant to the EU and other Countries following the EU Directive 1999/5/EC (R&TTE)

|                                |                                                                                                                                                                                             |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Български<br>(Bulgarian)       | С настоящото ZyXEL декларира, че това оборудване е в съответствие със съществените изисквания и другите приложения разпоредбите на Директива 1999/5/EC.                                     |
| Español<br>(Spanish)           | Por medio de la presente ZyXEL declara que el equipo cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.              |
| Čeština<br>(Czech)             | ZyXEL tímto prohlašuje, že tento zařízení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/EC.                                                        |
| Dansk (Danish)                 | Undertegnede ZyXEL erklærer herved, at følgende udstyr overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.                                                         |
| Deutsch<br>(German)            | Hiermit erklärt ZyXEL, dass sich das Gerät Ausstattung in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EU befindet. |
| Eesti keel<br>(Estonian)       | Käesolevaga kinnitab ZyXEL seadme seadmed vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.                               |
| Ελληνικά<br>(Greek)            | ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ ΖΥΧΕΛ ΔΗΛΩΝΕΙ ΟΤΙ ΕΞΟΠΛΙΣΜΟΣ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.                                            |
| English                        | Hereby, ZyXEL declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.                                              |
| Français<br>(French)           | Par la présente ZyXEL déclare que l'appareil équipements est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/EC.                          |
| Hrvatski<br>(Croatian)         | ZyXEL ovime izjavljuje da je radijska oprema tipa u skladu s Direktivom 1999/5/EC.                                                                                                          |
| Íslenska<br>(Icelandic)        | Hér með lýsir, ZyXEL því yfir að þessi búnaður er í samræmi við grunnkröfur og önnur viðeigandi ákvæði tilskipunar 1999/5/EC.                                                               |
| Italiano<br>(Italian)          | Con la presente ZyXEL dichiara che questo attrezzatura è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.                        |
| Latviešu valoda<br>(Latvian)   | Ar šo ZyXEL deklarē, ka iekārtas atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.                                                                 |
| Lietuvių kalba<br>(Lithuanian) | Šiuo ZyXEL deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.                                                                               |
| Magyar<br>(Hungarian)          | Alulírott, ZyXEL nyilatkozom, hogy a berendezés megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EK irányelv egyéb előírásainak.                                                 |
| Malti (Maltese)                | Hawnhekk, ZyXEL, jiddikjara li dan taghmir jikkonforma mal-htigijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.                                       |
| Nederlands<br>(Dutch)          | Hierbij verklaart ZyXEL dat het toestel uitrusting in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EC.                                 |
| Polski (Polish)                | Niniejszym ZyXEL oświadcza, że sprzęt jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.                                                  |
| Português<br>(Portuguese)      | ZyXEL declara que este equipamento está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/EC.                                                                  |
| Română<br>(Romanian)           | Prin prezenta, ZyXEL declară că acest echipament este în conformitate cu cerințele esențiale și alte prevederi relevante ale Directivei 1999/5/EC.                                          |
| Slovenčina<br>(Slovak)         | ZyXEL týmto vyhlasuje, že zariadenia spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/EC.                                                                           |
| Slovenščina<br>(Slovene)       | ZyXEL izjavlja, da je ta oprema v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/EC.                                                                      |
| Suomi<br>(Finnish)             | ZyXEL vakuuttaa täten että laitteet tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.                                 |

|                      |                                                                                                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Svenska<br>(Swedish) | Härmed intygar ZyXEL att denna utrustning står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EC. |
| Norsk<br>(Norwegian) | Erklærer herved ZyXEL at dette utstyret er i samsvar med de grunnleggende kravene og andre relevante bestemmelser i direktiv 1999/5/EF.                                |

This device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

### National Restrictions

This product may be used in all EU countries (and other countries following the EU Directive 1999/5/EC) without any limitation except for the countries mentioned below:

Ce produit peut être utilisé dans tous les pays de l'UE (et dans tous les pays ayant transposés la directive 1999/5/CE) sans aucune limitation, excepté pour les pays mentionnés ci-dessous:

Questo prodotto è utilizzabile in tutte i paesi EU (ed in tutti gli altri paesi che seguono le direttive 1999/5/EC) senza nessuna limitazione, eccetto per i paesi menzionati di seguito:

Das Produkt kann in allen EU Staaten ohne Einschränkungen eingesetzt werden (sowie in anderen Staaten die der Richtlinie 1999/5/CE folgen) mit Ausnahme der folgenden aufgeführten Staaten:

In the majority of the EU and other European countries, the 2.4GHz and 5GHz bands have been made available for the use of wireless local area networks (LANs). Later in this document you will find an overview of countries in which additional restrictions or requirements or both are applicable.

The requirements for any country may evolve. ZyXEL recommends that you check with the local authorities for the latest status of their national regulations for both the 2.4GHz and 5GHz wireless LANs.

The following countries have restrictions and/or requirements in addition to those given in the table labeled "Overview of Regulatory Requirements for Wireless LANs":

#### Belgium

The Belgian Institute for Postal Services and Telecommunications (BIPT) must be notified of any outdoor wireless link having a range exceeding 300 meters. Please check <http://www.bipt.be> for more details.

Draadloze verbindingen voor buitengebruik en met een reikwijdte van meer dan 300 meter dienen aangemeld te worden bij het Belgisch Instituut voor postdiensten en telecommunicatie (BIPT). Zie <http://www.bipt.be> voor meer gegevens.

Les liaisons sans fil pour une utilisation en extérieur d'une distance supérieure à 300 mètres doivent être notifiées à l'Institut Belge des services Postaux et des Télécommunications (IBPT). Visitez <http://www.ibpt.be> pour de plus amples détails.

#### Denmark

In Denmark, the band 5150 - 5350 MHz is also allowed for outdoor usage.

I Danmark må frekvensbåndet 5150 - 5350 også anvendes udendørs.

#### Italy

This product meets the National Radio Interface and the requirements specified in the National Frequency Allocation Table for Italy. Unless this wireless LAN product is operating within the boundaries of the owner's property, its use requires a "general authorization." Please check <http://www.sviluppoeconomico.gov.it/> for more details.

Questo prodotto è conforme alla specifiche di Interfaccia Radio Nazionali e rispetta il Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installato all'interno del proprio fondo, l'utilizzo di prodotti Wireless LAN richiede una "Autorizzazione Generale". Consultare <http://www.sviluppoeconomico.gov.it/> per maggiori dettagli.

#### Latvia

The outdoor usage of the 2.4 GHz band requires an authorization from the Electronic Communications Office. Please check <http://www.esd.lv> for more details.

2.4 GHz frekvenču joslas izmantošanai ārpus telpām nepieciešama atļauja no Elektronisko sakaru direkcijas. Vairāk informācijas: <http://www.esd.lv>.

#### Notes:

1. Although Norway, Switzerland and Liechtenstein are not EU member states, the EU Directive 1999/5/EC has also been implemented in those countries.

2. The regulatory limits for maximum output power are specified in EIRP. The EIRP level (in dBm) of a device can be calculated by adding the gain of the antenna used (specified in dBi) to the output power available at the connector (specified in dBm).

### List of national codes

| COUNTRY        | ISO 3166 2 LETTER CODE | COUNTRY        | ISO 3166 2 LETTER CODE |
|----------------|------------------------|----------------|------------------------|
| Austria        | AT                     | Liechtenstein  | LI                     |
| Belgium        | BE                     | Lithuania      | LT                     |
| Bulgaria       | BG                     | Luxembourg     | LU                     |
| Croatia        | HR                     | Malta          | MT                     |
| Cyprus         | CY                     | Netherlands    | NL                     |
| Czech Republic | CZ                     | Norway         | NO                     |
| Denmark        | DK                     | Poland         | PL                     |
| Estonia        | EE                     | Portugal       | PT                     |
| Finland        | FI                     | Romania        | RO                     |
| France         | FR                     | Serbia         | RS                     |
| Germany        | DE                     | Slovakia       | SK                     |
| Greece         | GR                     | Slovenia       | SI                     |
| Hungary        | HU                     | Spain          | ES                     |
| Iceland        | IS                     | Switzerland    | CH                     |
| Ireland        | IE                     | Sweden         | SE                     |
| Italy          | IT                     | Turkey         | TR                     |
| Latvia         | LV                     | United Kingdom | GB                     |

### Safety Warnings

- Do not use this product near water, for example, in a wet basement or near a swimming pool.
- Do not expose your device to dampness, dust or corrosive liquids.
- Do not store things on the device.
- Do not obstruct the device ventilation slots as insufficient airflow may harm your device. For example, do not place the device in an enclosed space such as a box or on a very soft surface such as a bed or sofa.
- Do not install, use, or service this device during a thunderstorm. There is a remote risk of electric shock from lightning.
- Connect ONLY suitable accessories to the device.
- Do not open the device or unit. Opening or removing covers can expose you to dangerous high voltage points or other risks. ONLY qualified service personnel should service or disassemble this device. Please contact your vendor for further information.
- Make sure to connect the cables to the correct ports.
- Place connecting cables carefully so that no one will step on them or stumble over them.
- Always disconnect all cables from this device before servicing or disassembling.
- Do not remove the plug and connect it to a power outlet by itself; always attach the plug to the power adaptor first before connecting it to a power outlet.
- Do not allow anything to rest on the power adaptor or cord and do NOT place the product where anyone can walk on the power adaptor or cord.
- Please use the provided or designated connection cables/power cables/ adaptors. Connect it to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe). If the power adaptor or cord is damaged, it might cause electrocution. Remove it from the device and the power source, repairing the power adapter or cord is prohibited. Contact your local vendor to order a new one.
- Do not use the device outside, and make sure all the connections are indoors. There is a remote risk of electric shock from lightning.
- CAUTION: Risk of explosion if battery is replaced by an incorrect type, dispose of used batteries according to the instruction. Dispose them at the applicable collection point for the recycling of electrical and electronic devices. For detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the store where you purchased the product.

The following warning statements apply, where the disconnect device is not incorporated in the device or where the plug on the power supply cord is intended to serve as the disconnect device,

- For permanently connected devices, a readily accessible disconnect device shall be incorporated external to the device;
- For pluggable devices, the socket-outlet shall be installed near the device and shall be easily accessible.

### Environment Statement

#### ErP (Energy-related Products)

ZyXEL products put on the EU market in compliance with the requirement of the European Parliament and the Council published Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products (recast), so called as "ErP Directive (Energy-related Products directive)" as well as ecodesign requirement laid down in applicable implementing measures, power consumption has satisfied regulation requirements which are:

Network standby power consumption < 12W, and/or

Off mode power consumption < 0.5W, and/or

Standby mode power consumption < 0.5W.

Wireless setting, please refer to "Wireless" chapter for more detail.

### European Union - Disposal and Recycling Information

The symbol below means that according to local regulations your product and/or its battery shall be disposed of separately from domestic waste. If this product is end of life, take it to a recycling station designated by local authorities. At the time of disposal, the separate collection of your product and/or its battery will help save natural resources and ensure that the environment is sustainable development.

Die folgende Symbol bedeutet, dass Ihr Produkt und/oder seine Batterie gemäß den örtlichen Bestimmungen getrennt vom Hausmüll entsorgt werden muss. Wenden Sie sich an eine Recyclingstation, wenn dieses Produkt das Ende seiner Lebensdauer erreicht hat. Zum Zeitpunkt der Entsorgung wird die getrennte Sammlung von Produkt und/oder seiner Batterie dazu beitragen, natürliche Ressourcen zu sparen und die Umwelt und die menschliche Gesundheit zu schützen.

El símbolo de abajo indica que según las regulaciones locales, su producto y/o su batería deberán depositarse como basura separada de la doméstica. Cuando este producto alcance el final de su vida útil, llévelo a un punto limpio. Cuando llegue el momento de desechar el producto, la recogida por separado éste y/o su batería ayudará a salvar los recursos naturales y a proteger la salud humana y medioambiental.

Le symbole ci-dessous signifie que selon les réglementations locales votre produit et/ou sa batterie doivent être éliminés séparément des ordures ménagères. Lorsque ce produit atteint sa fin de vie, amenez-le à un centre de recyclage. Au moment de la mise au rebut, la collecte séparée de votre produit et/ou de sa batterie aidera à économiser les ressources naturelles et protéger l'environnement et la santé humaine.

Il simbolo sotto significa che secondo i regolamenti locali il vostro prodotto e/o batteria deve essere smaltito separatamente dai rifiuti domestici. Quando questo prodotto raggiunge la fine della vita di servizio portarlo a una stazione di riciclaggio. Al momento dello smaltimento, la raccolta separata del vostro prodotto e/o della sua batteria aiuta a risparmiare risorse naturali e a proteggere l'ambiente e la salute umana.

Symbolen innebär att enligt lokal lagstiftning ska produkten och/eller dess batteri kastas separat från hushållsavfallet. När den här produkten når slutet av sin livslängd ska du ta den till en återvinningsstation. Vid tiden för kasseringen bidrar du till en bättre miljö och mänsklig hälsa genom att göra dig av med den på ett återvinningsställe.



## Environmental Product Declaration

| Български (Bulgarian)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Čeština (Czech)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Dansk (Danish)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Deutsch (German)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Екологична продуктова декларация</p> <p>RoHS Директива 2011/65/ЕС<br/>WEEE Директива 2012/19/ЕС<br/>PPW Директива 94/62/ЕО<br/>REACH Регламент (ЕО) № 1907/2006<br/>ErP Директива 2009/125/ЕС</p> <p>Име/ titlu : Richard Hu / Quality Management<br/>Division Senior Manager<br/>Подпис : Дата (dd/mm/yyyy): 01/10/2014</p> <p> </p>                       | <p>Environmentální prohlášení o produktu</p> <p>RoHS Směrnice 2011/65/EU<br/>WEEE Směrnice 2012/19/EU<br/>PPW Směrnice 94/62/ES<br/>REACH Nařízení (ES) č. 1907/2006<br/>ErP Směrnice 2009/125/ES</p> <p>Jméno/ titul : Richard Hu / Quality Management<br/>Division Senior Manager<br/>Podpis : Datum (dd/mm/yyyy): 01/10/2014</p> <p> </p>               | <p>Miljøvaredeklaration</p> <p>RoHS Direktiv 2011/65/EU<br/>WEEE Direktiv 2012/19/EU<br/>PPW Direktiv 94/62/EF<br/>REACH Forskrift (EF) nr. 1907/2006<br/>ErP Direktiv 2009/125/EF</p> <p>Navn/ titel : Richard Hu / Quality Management<br/>Division Senior Manager<br/>Underskrift : Dato (dd/mm/åååå): 01/10/2014</p> <p> </p>                          | <p>Produkt-Umweltdeklaration</p> <p>RoHS Richtlinie 2011/65/EU<br/>WEEE Richtlinie 2012/19/EU<br/>PPW Richtlinie 94/62/EG<br/>REACH VERORDNUNG (EG) Nr. 1907/2006<br/>ErP Richtlinie 2009/125/EG</p> <p>Name/ titel : Richard Hu / Quality Management<br/>Division Senior Manager<br/>Unterschrift : Datum (dd/mm/jj): 2014/10/01</p> <p> </p>          |
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## 台灣



以下訊息僅適用於產品具有無線功能且銷售至台灣地區

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

電磁波曝露量 MPB 標準值  $1 \text{ mW/cm}^2$ ，本產品使用時建議應距離人體  $24 \text{ cm}$

無線資訊傳輸設備忍受合法通信之干擾且不得干擾合法通信；如造成干擾，應立即停用，俟無干擾之虞，始得繼續使用。

無線資訊傳輸設備的製造廠商應確保頻率穩定性，如依製造廠商使用手冊上所述正常操作，發射的信號應維持於操作頻帶中

以下訊息僅適用於產品操作於 5.25-5.35 赫茲頻帶內並銷售至台灣地區

- 在 5.25-5.35 赫茲頻帶內操作之無線資訊傳輸設備，限於室內使用。

以下訊息僅適用於產品屬於專業安裝並銷售至台灣地區

- 本器材須經專業工程人員安裝及設定，始得設置使用，且不得直接販售給一般消費者

#### 安全警告

為了您的安全，請先閱讀以下警告及指示：

- 請勿將此產品接近水、火焰或放置在高溫的環境。
- 避免設備接觸任何液體。切勿讓設備接觸水、雨水、高濕度、污水腐蝕性的液體或其他水份。
- 灰塵及污物。切勿接觸灰塵、污物、沙土、食物或其他不合適的材料。
- 雷雨天氣時，不要安裝、使用或維修此設備。有遭受電擊的風險。
- 切勿重摔或撞擊設備，並勿使用不正確的電源變壓器。
- 若接上不正確的電源變壓器會有爆炸的風險。
- 請勿隨意更換產品內的電池。
- 如果更換不正確之電池型式，會有爆炸的風險，請依製造商說明書處理使用過之電池。
- 請將廢電池丟棄在適當的電器或電子設備回收處。
- 請勿將設備解體。
- 請勿阻礙設備的散熱孔，空氣對流不足將會造成設備損害。
- 請插在正確的電壓供給插座（如：北美 / 台灣電壓 110V AC，歐洲是 230V AC）。
- 假若電源變壓器或電源變壓器的纜線損壞，請從插座拔除，若您還繼續插電使用，會有觸電死亡的風險。
- 請勿試圖修理電源變壓器或電源變壓器的纜線，若有毀損，請直接聯絡您購買的店家，購買一個新的電源變壓器。
- 請勿將此設備安裝於室外，此設備僅適合放置於室內。
- 請勿隨一般垃圾丟棄。
- 請參閱產品背貼上的設備額定功率。
- 請參考產品型錄或是彩盒上的作業溫度。
- 產品沒有斷電裝置或者採用電源線的插頭視為斷電裝置的一部分，以下警語將適用：
  - 對永久連接之設備，在設備外部須安裝可觸及之斷電裝置；
  - 對插接式之設備，插座必須接近安裝之地點而且是易於觸及的。

## Viewing Certifications

Go to <http://www.zyxel.com> to view this product's documentation and certifications.

## ZyXEL Limited Warranty

ZyXEL warrants to the original end user (purchaser) that this product is free from any defects in material or workmanship for a specific period (the Warranty Period) from the date of purchase. The Warranty Period varies by region. Check with your vendor and/or the authorized ZyXEL local distributor for details about the Warranty Period of this product. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, ZyXEL will, at its discretion, repair or replace the defective products or components without charge for either parts or labor, and to whatever extent it shall deem necessary to restore the product or components to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal or higher value, and will be solely at the discretion of ZyXEL. This warranty shall not apply if the product has been modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions.

### Note

Repair or replacement, as provided under this warranty, is the exclusive remedy of the purchaser. This warranty is in lieu of all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular use or purpose. ZyXEL shall in no event be held liable for indirect or consequential damages of any kind to the purchaser.

To obtain the services of this warranty, contact your vendor. You may also refer to the warranty policy for the region in which you bought the device at [http://www.zyxel.com/web/support\\_warranty\\_info.php](http://www.zyxel.com/web/support_warranty_info.php).

## Registration

Register your product online to receive e-mail notices of firmware upgrades and information at [www.zyxel.com](http://www.zyxel.com) for global products, or at [www.us.zyxel.com](http://www.us.zyxel.com) for North American products.

## Open Source Licenses

This product contains in part some free software distributed under GPL license terms and/or GPL like licenses. Open source licenses are provided with the firmware package. You can download the latest firmware at [www.zyxel.com](http://www.zyxel.com). To obtain the source code covered under those Licenses, please contact [support@zyxel.com.tw](mailto:support@zyxel.com.tw) to get it.

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