SIEMENS

108 Mbit/s

Wireless LAN
Cardbus Card

IEEE 802.11g

Gigaset PC Card 108

CORDLESS HOME COMMUNICATION **Gigaset**

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Safety precautions

◆ The tic can affect medical equipment. Therefore, you should pay attention to the technical conditions of the corresponding environment.

◆ Make sure you include the operating instructions and the CD-ROM, when you pass on your Gigaset PC Card 108 to somebody else.

◆ Under no circumstances try to use a damaged device. If in doubt, please contact our service department, see Chapter "Service (Customer Care)" on page 49.

Notes on secure operation

When you have installed and configured the Gigaset PC Card 108 on your PC, you should perform security settings on the wireless network:

◆ Change the SSID for all of the wireless devices within your network (see "SSID (Service Set Identifier)" on page 19).

◆ Encrypt the communication over your wireless network (see "Configuration – Security" on page 22).

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The Gigaset PC Card 108

The Gigaset PC Card 108 is a WLAN network adapter that is connected to your PC or Notebook via a PCMCIA slot. You can use Gigaset data products to set up a wireless local network (WLAN = Wireless Local Area Network) without having to lay cables.

Your Gigaset PC Card 108 can be used to connect your PC to other PCs equipped with wireless network adapters (ad-hoc mode).

You can also connect your PC to a wireless router, e. g. to the Gigaset SE551 WLAN dsl/cable, for Internet access (infrastructure mode).

Since the PCs communicate with each other via radio, it does not matter where they are located, as long as they are within range of the wireless network. Mobile PCs, such as Notebooks, can connect to the WLAN even after changing location. This enables you to use all the files and printers on the network. The Gigaset PC Card 108 works according to the IEEE 802.11g transmission standard and is backwards compatible with the older standard IEEE 802.11b. The Gigaset PC Card 108 also supports Super G technology. By using channel bundling, this can increase the transmission rate to up to 108 Mbps on the network. For network security, wireless transmission can be encrypted using the WPA standard or 64-/128-bit WEP.

These operating instructions contain important information on how to set up a WLAN and to configure your Gigaset PC Card 108.

Wireless LAN Basics

This section provides basic information on wireless LANs to show the role of the Gigaset PC Card 108 in setting up a wireless network

Local Area Network (LAN)

A LAN is a network that exists in a limited area. A network is two or more computers which are connected together in order to share files as well as peripheral devices, e. g. a printer.

Using the Gigaset PC Card 108 you can communicate with other PCs without having to route network cable. Thus you can take your computer to another place and still remain connected to the network.

You can use the Gigaset PC Card 108 in two different ways. On the one hand, you can establish a connection to one or more PCs equipped with wireless network adapters. This is an ad-hoc network. On the other hand, you can establish a connection to an Access Point, which is used to obtain access to an already existing wired LAN (infrastructure network).

Ad-hoc network

In an ad-hoc network, PCs communicate with each other via wireless peer-to-peer connections. An ad-hoc network is set up by participants as and when required. All the PCs must have a wireless network adapter installed, e. g. a Gigaset PC Card 108, a Gigaset USB Adapter or USB Stick. Ad-hoc networks are used wherever communication networks have to be set up quickly without any existing network infrastructure and the participants are mobile.

Infrastructure network

In an infrastructure network, connections between network participants are set up via an Access Point (or several Access Points). The Access Point provides the basis for the wireless network. It controls the connections between the participants and can also establish the connection from the mobile stations of a wireless network to a wired LAN (Ethernet) or the Internet.

Roaming

Several Access Points can be installed to extend the range of a wireless network. Participants in the wireless network can move freely between the various Access Points without losing contact to the network. As soon as there is a risk of losing contact, the PC automatically looks for another Access Point with a stronger signal. All Access Points and wireless network adapters must have the same SSID. All Access Points must be connected to the same Ethernet network.

Security in wireless networksEncryption

Any network, be it wired or wireless, is exposed to the risk of eavesdropping.

Connecting your local network to the public network exposes your data and applications to not inconsiderable risks. As with an individual connection, you should always protect your network PCs against external attacks, e. g. via emails, with a virus scanner.

These virus scanners however do not provide any protection against unauthorised access from outside (hackers). To counter this risk, Gigaset data products offer various encryption procedures that largely rule out unauthorised access (hacking) to your wireless network.

WEP encryption

WEP encryption (Wired Equivalent Privacy) encodes data for sending using a key that you have defined. Once they reach the recipient, who uses the same key, the data are restored to the state before you sent them. Recipients who do not know this key cannot read the content of this data stream or only after a great deal of effort.

There are two security levels for calculating the encryption key:

◆ 64-bit mode
◆ 128-bit mode

WPA encryption

WPA is a new standard-compliant solution for greater security in wireless networks. WPA is meant to replace the existing WEP standard (Wired Equivalent Privacy) and offers more reliable encryption and authentication methods.

With your Gigaset PC Card 108 you can use WPA encryption regardless of the operating system used. WPA encryption is particularly recommended where the highest security is required.

Range of wireless communication via a WLAN

The range is up to 300 m in the open. In buildings, the maximum range is up to 30 m. The operating environment, the nature of the rooms and building may reduce the range considerably. You can boost the range of your wireless network by placing a repeater, e. g. a Gigaset WLAN Repeater, at the limit of its range. The device also supports the XR-functionality (eXtended Range). This can increase the range as well.

Installing the Gigaset PC Card 108

System requirements

For operation, you will require:

◆ a PC with at least 466 MHz and one of the following operating systems:
Windows 98SE, Windows ME, Windows 2000 or Windows XP

◆ 64 MB RAM, more working memory is recommended

◆ at least 30 MB free hard disk space

◆ a free PC card slot (Cardbus)

◆ a CD-ROM drive **or** a DVD drive

Contents

The package contains the following components:

◆ a Gigaset PC Card 108

◆ a CD-ROM containing installation and configuration software, detailed operating instructions, Adobe Reader to read the operating instructions and the document "Gigaset WLAN. Practical tips"

◆ a Quick Installation Guide

Notes on location

Choose the location of the PC where the Gigaset PC Card 108 will be connected with the fewest obstacles to radio waves. Protect the Gigaset PC Card 108 from dampness.

The PC with the Gigaset PC Card 108 should not be placed in the immediate vicinity of other electronic equipment. Electrical equipment can mutually affect each other, and radio waves may impair the functioning of other devices.

If your PC with the Gigaset PC Card 108 should be under a desk or in a housing, the range of the wireless network can be affected. For the best possible range, we recommend placing the WLAN components in a central and an open location.

Status displays

There are two status displays (LEDs) on the Gigaset PC Card 108 . They are used to display the:

◆ Operating status (PWR), red
◆ Transmission status (ACT), green
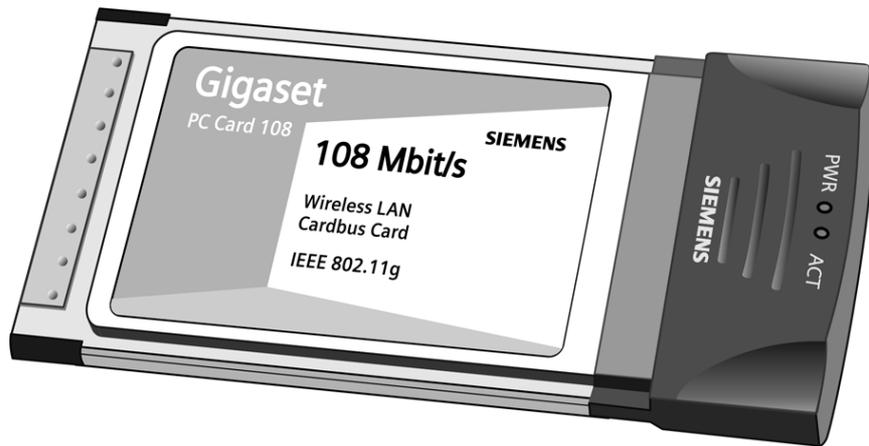
LED	State	Meaning
PWR	Continu-ously lit	The Gigaset PC Card 108 was installed successfully on your PC and is ready for operation.
	Off	The device is not ready for use.
ACT	Flashing	Data is being transmitted.
	Off	There is currently no data traffic.

Installation procedure

Please remember:
Do not insert the Gigaset PC Card 108 into a PCMCIA slot on your PC until the installation software prompts you to do so.

First, the software included in the scope of delivery must be installed. This software not only includes the driver software for the device, it can also be used as a configuration and monitoring tool, the Gigaset WLAN Adapter Monitor

Only this software has been written especially for the Gigaset PC Card 108. There are similar drivers available in the Windows driver database. But, as a rule, such drivers do not fully cover all the features or function in a different manner.

Do not connect the Gigaset PC Card 108 to your PC until prompted by the installation program. If you connect the Gigaset PC Card 108 to your PC before installing the software, Windows will automatically recognise the device and show the dialog box prompting for the appropriate driver. Click on *Cancel* to close the dialogue. Remove the Gigaset PC Card 108 from the PC and install the software.

Please remember:
You may require administrator rights for the installation process on your PC.

Information for users with Windows 98SE/ME:
If you are prompted to restart your computer during installation, click on *Restart*. After this, installation continues automatically.You should now follow the instructions and steps shown below.
Have your Windows Installation CD on hand. You may be prompted to insert it.

Running installation

➡ Close all running programs.

➡ Insert the CD-ROM supplied into the CD-ROM drive of your PC and wait until the welcome screen appears. If this screen does not appear automatically, start installation manually:

– Open Windows Explorer.
– Select the CD-ROM drive.
– Double-click **start.exe**.

The language selection screen appears

➡ Select the language.

You will now see a screen showing the contents of the CD-ROM.

Installation	Install the software for your Gigaset PC Card 108.
User guide	This opens the detailed operating instructions on the CD-ROM. If you cannot open the detailed operating instructions on the CD-ROM, you will have to install the free Adobe Reader.
Practical Tips and Configuration Examples	Here you will find solutions to various problems.
Install Adobe Reader	Install Adobe Reader, Version 6.
Browse CD	If you are looking for a particular file on the CD-ROM, you can display the CD-ROM contents in an Explorer window.
Back	The program returns to the language selection screen.
Exit	This closes the program.

➜ Click on *Installation*.

Note:

The screens for the various operating systems differ only marginally. Installation is largely automatic, apart from a few mouse clicks and restarts.

The InstallShield Wizard appears.
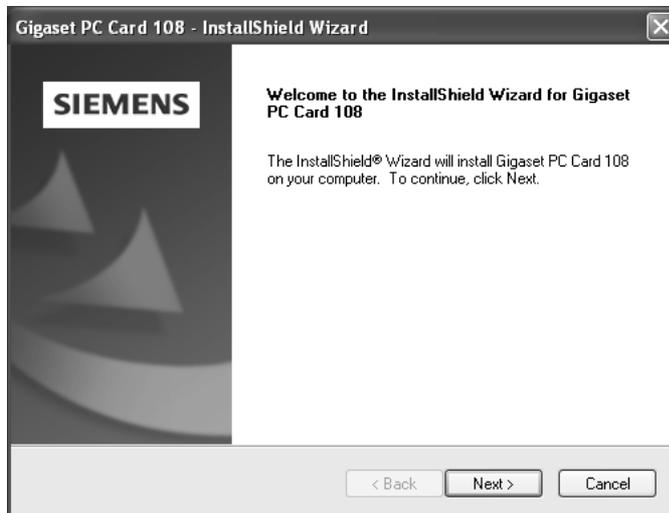
➜ Click on *Next* to continue installation.

The licence agreement screen now appears.

➜ If you accept the licence agreement, click on *Yes*.

In the next screen, choose the directory for the installation.

➜ Click on **Browse**, if you want to select another directory. Click on **Next** to continue installation.

During installation, the InstallShield Wizard uses the screen Setup progress to show which action is being carried out, and the progress is also displayed.

After this stage of installation is completed, a message appears prompting you to connect the Gigaset PC Card 108 to your PC.

Please plug in your Gigaset PC Card 108 now .

Connecting the Gigaset PC Card 108
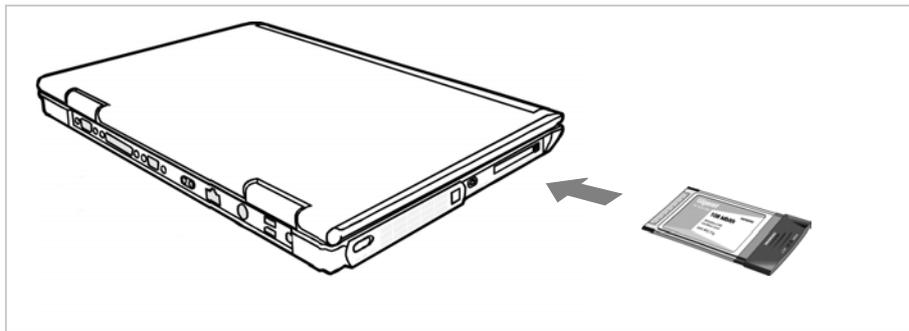
➜ Insert the Gigaset PC Card 108 in the PCMCIA slot on your PC.

Installing driver software

Once the Gigaset PC Card 108 has been plugged in, installation continues automatically. The operating system's automatic hardware recognition opens to install the drivers for the Gigaset PC Card 108.

➟ Depending on the other settings for your PC, an additional dialog box may appear. Select the **Install software automatically** option, and click on **Next**.

If the window does not appear, the installation step described here is automatically carried out by the system.

Please remember:
◆ Under Windows 98SE / ME:You may be prompted to insert your Windows Installation CD to continue driver installation. Therefore you should have this CD handy or enter the path name where the Windows installation files are stored on your PC.
◆ Restart your PC if you are prompted to do so.
◆ If your PC already contains more recent files, answer the question whether you want to keep them with **YES.**

After installation, a message will appear prompting you to complete installation.

➟ Click on **Finish**.

This closes the installation program. Depending on the Windows operating system version you are using, you may also be requested to restart your PC.

Checking installation

If installation was successful, you can now use the Gigaset WLAN Adapter Monitor. With the Gigaset WLAN Adapter Monitor you can configure your Gigaset PC Card 108 and create a connection to other network adapters or an Access Point.

The Gigaset WLAN Adapter Monitor is represented by an icon in the status area of the taskbar, this icon shows you if there is a connection to a connection partner and the quality of the connection. In a wireless network using only Siemens Gigaset products and where the standard settings were used (e. g. no encryption), the connection to an Access Point is set up automatically during installation.

The following may be displayed in the status area of the taskbar:
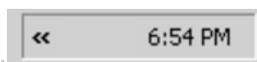
|	
« 6:54 PM	The Gigaset WLAN Adapter Monitor icon is not displayed. ➡ First try to open the Gigaset WLAN Adapter Monitor manually, see Chapter "Opening the monitor" on page 15. If this fails, then something went wrong during installation. ➡ Deinstall the software, see Chapter "Uninstalling the software" on page 35. ➡ Then install the software again, see Chapter "Running installation" on page 9.
« 6:54 PM	The Gigaset WLAN Adapter Monitor icon is displayed in the taskbar, with a red ball above the icon: The Gigaset WLAN Adapter Monitor is installed; the Gigaset PC Card 108 has not been inserted or inserted incorrectly. ➡ Check that the card is correctly positioned.
« 6:54 PM	The Gigaset WLAN Adapter Monitor icon is displayed in the taskbar, with a red cross above the icon: The Gigaset WLAN Adapter Monitor is installed and active; there is no connection to the local network. ➡ Turn to Chapter "Configuring Gigaset PC Card 108" on page 15.
« 6:54 PM	The icon is displayed in the taskbar, with a green ball above the icon: The Gigaset WLAN Adapter Monitor is installed and active; there is no connection to the local network. The number of bars displayed in the icon shows the connection quality.

You are advised to read Chapter "Notes on secure operation" on page 3.

Displaying QuickInfo for the connection

If you point the mouse over the icon in the taskbar, you will see a small window that displays the connection properties.
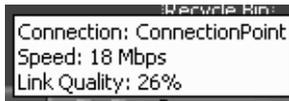
The following properties are shown:

◆ SSID (Service Set Identifier) in the *Connection* line

◆ the transmission rate (in Mbps) in the *Speed* line

◆ the transmission quality (in %) in the *Link quality* line

If there is no connection, you will see a red cross over the icon and in QuickInfo, *Disconnected* is displayed.

Reading the connection quality from the icon

The icon changes gradually depending on the current connection quality. The better the connection quality, the higher the transmission speed

With reasonable to poor connection:

➥ If possible, move your PC closer to the connection partner for greater field strength.

 No WLAN available (red cross over bar)

There is no WLAN within range of your Gigaset PC Card 108 that you could connect to.

➥ Check the configuration of the Access Point and adjust the Gigaset PC Card 108 settings accordingly.

Or

➥ Change your location to reduce the distance to a connection partner.

Configuring Gigaset PC Card 108

The Gigaset WLAN Adapter Monitor

You can use the Gigaset WLAN Adapter Monitor to configure and monitor your Gigaset PC Card 108.

Opening the monitor

In the standard setting, the Gigaset WLAN Adapter Monitor is opened automatically in the background when you launch your PC. The Gigaset WLAN Adapter Monitor icon is displayed in the status area of the task bar.

➡ Double-click on Gigaset WLAN Adapter Monitor icon in the status area of the taskbar to open the monitor user interface.

Or

➡ Right-click on the Gigaset WLAN Adapter Monitor icon in the status area of the task-bar.
In the pop-up menu, you will see the available tabs and the option *Exit*.

➡ In the pop-up menu, click on the appropriate tab to open the monitor user interface and display this tab directly.
Use the option *Exit* to close the Gigaset WLAN Adapter Monitor.
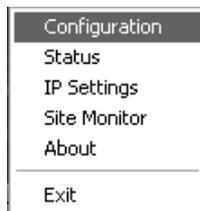
If you do not see the Gigaset WLAN Adapter Monitor icon in the status area of the task-bar, you will have to run the program first:

➡ In the start menu, click on *Start – Programs – Gigaset PC Card 108 – Gigaset WLAN Adapter Monitor*.
This launches the program. The Gigaset WLAN Adapter Monitor icon is displayed in the status area of the task bar.

Deactivating Autostart

The Gigaset WLAN Adapter Monitor is opened automatically every time you power up or reboot your PC. If you do not need the monitor all the time, you can deactivate Autostart.

↳ Select **Start** – **Programs** – **Autostart**.

↳ Right-click the **Gigaset WLAN Adapter Monitor** entry.

↳ Choose **Delete** to remove the link to Gigaset WLAN Adapter Monitor from Autostart.

Now that the monitor is no longer opened automatically when you launch your PC, you will have to open it manually when you need it.

Operating the Gigaset WLAN Adapter Monitor

In the Gigaset WLAN Adapter Monitor user interface you will find various settings and status displays for your network adapter in various tabs which will be described in detail in the following.
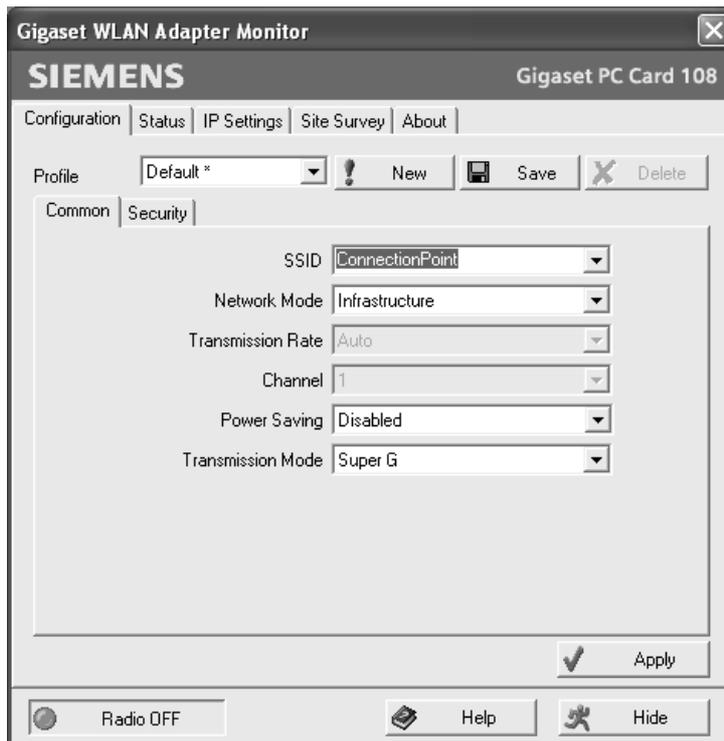
Buttons

With the buttons under each tab you can use one of the following options:

The wireless operation of the network adapter is activated (green icon). The PC is available on the network.

➥ Click on *Radio On* to deactivate the wireless operation of the network adapter.
Radio Off is now displayed. The PC is no longer available on the network.

The wireless operation of the network adapter is deactivated (red icon). The PC is not available on the network.

➥ Click on *Radio Off* to activate the wireless operation of the network adapter.
Radio On is now displayed. The PC is available on the network.
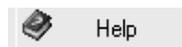
Use the *Help* button to open the Gigaset WLAN Adapter Monitor help file.

Use the *Hide* button to close the user interface of the Gigaset WLAN Adapter Monitor.
The icon in the status area of the task bar shows that the monitor is still active in the background.

➥ Double-click this icon if you want to open the Gigaset WLAN Adapter Monitor user interface again.

Closing the monitor

➥ Right-click on the Gigaset WLAN Adapter Monitor icon in the status area of the task-bar.
This opens the pop-up menu.

➥ Select *Exit* to close the program.
The Gigaset WLAN Adapter Monitor is closed. The icon disappears from the status area in the taskbar.

Configuration

In the *Configuration* tab, you can choose the general basic settings and the security options for operating the Gigaset PC Card 108. The *Configuration* tab is divided into three sections:

◆ In the *Common* tab, you can make various operational settings, you can assign the SSID, for example, and make various settings affecting data transfer (see below).

◆ In the *Security* tab, you can set up the system to encrypt data transfer and thus protect your network from unauthorised eavesdropping (see page 22).

◆ In the upper section, you can set various profiles for use in different networks (see page 26).

Configuration – General

Successful communication in a WLAN depends on all the PCs using the same ID (SSID) and the same radio channel. In addition, the connected PCs must coordinate their transmission rate for successful data transfer.

You can choose the basic settings for each profile in *Common* of the *Configuration* tab.

Please remember:
For security reasons, installation should be followed by changing the **SSID** of your WLAN, as the default SSID may also be known to unauthorised persons.
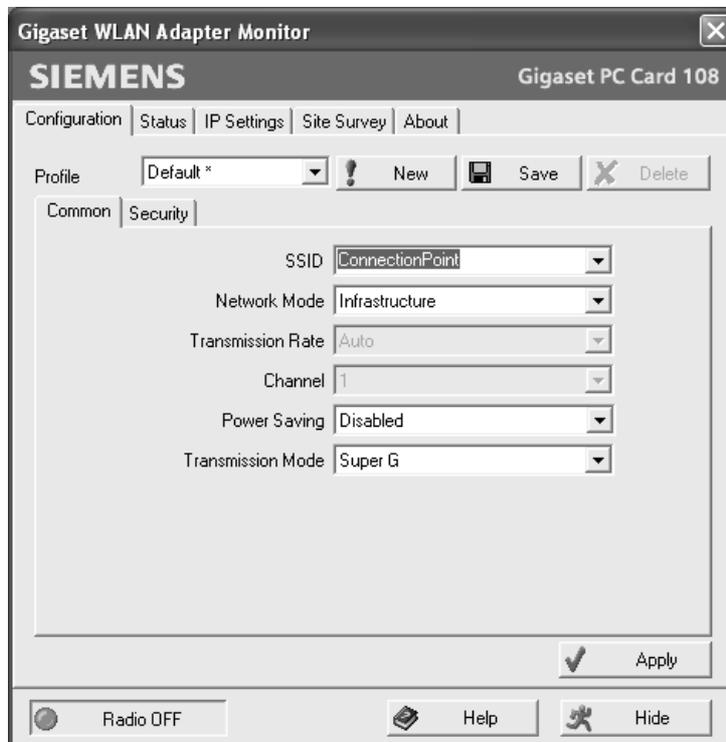
SSID (Service Set Identifier)

The SSID is the ID used for the unique identification of a wireless network (WLAN) so that this network can be distinguished from a parallel network. Within a WLAN, all the network adapters must have the same SSID.

➥ In the **SSID** field, select the ID of the partner you want to connect your PC to. The default setting is **ConnectionPoint**.

The order for defining the SSID depends on the **Network Mode** of the WLAN:

◆ **Infrastructure**:
The SSID must be defined on the Access Point first. This SSID is then assigned automatically to every network adapter registering with it.

◆ **Ad Hoc**:
It is important that all network adapters use the same SSID. The order of entry is irrelevant.

Operating mode

➜ Enter the *Network Mode* for the network environment:

– *Infrastructure*:
There are wireless (WLAN) and wired (LAN) PCs in the network environment.
The connection between WLAN and LAN is set up via an Access Point.

– *Ad Hoc*:
The network environment does not have a fixed structure, but is set up between the available wireless network adapters as and when required. No Access Point is required.

The default operating mode is Infrastructure.

Please remember:

In Ad Hoc mode, the device will work in 802.11b transmission mode, i.e. with a maximum transmission rate of 11 Mbps. You should therefore set up an Access Point so that you can transfer large volumes of data.

You will find a detailed description of the operating modes in Chapter "Wireless LAN Basics" on page 4.

Transmission rate

Transmission rate is the term used to describe the data volume sent per second between two PCs. The transmission rate is measured in Mbps (Megabits per second).

➜ Select the *Transmission Rate*:

– With the *Auto* setting, the network adapter checks the connection quality for each data transmission and automatically selects the most suitable transmission rate. The only default transmission rate setting is *Auto*.

– You can specify a different rate using the pop-up window. By doing this you are specifying the maximum value for transmission rates. If you select 24 Mbps for example, the network adapter tries to use this rate for every transmission. The setting prevents a faster transmission rate. If the connection quality falls, the network adapter will select the next lower transmission rate.

Note:

In wireless networks, the maximum achievable *Transmission Rate* depends on the *signal strength* and *link quality* of the connected network adapters. The *Signal Strength* in turn depends on other factors; for example it falls rapidly as the distance between the network adapters increases.

The setting for *Auto Transmission Rate* is particularly recommended where the operating conditions fluctuate.

Channel

The *Channel* field shows the radio channel used to set up communication with the connection partners.You can choose from radio channels **1-11**.

In *Infrastructure* mode, the radio channel is set by the Access Point for all WLAN participants and can only be changed there. In this case, the *Channel* field shows the channel being used.

In *Ad Hoc* mode, you set the network adapter channel manually.

➡ Select the channel used by the desired connection partners in the ad-hoc network.

Power saving

The Gigaset PC Card 108 can be used in power saving mode. Your PC remains reachable on the network, but the network adapter's energy consumption is reduced to a minimum.

➡ Select *Enabled* to use the network adapter in power saving mode.

Transmission mode

The Gigaset PC Card 108 is designed to operate according to various WLAN standards. You can select the transmission mode in *Infrastructure* mode:

In *Ad Hoc* mode you can perform the following settings:

➡ Select *802.11g* if the network environment uses this WLAN standard.
The maximum transmission rate possible is 54 Mbps.

Or

➡ Select *802.11b* if the network environment uses this WLAN standard.
The maximum transmission rate possible is limited to 11 Mbps.

Or

➡ Select *Mixed Mode* if the network environment uses both modes. Some of the network adapters use Standard 802.11g, others Standard 802.11b.
The maximum transmission rate possible depends on the WLAN standard of the connection partner in question.

Or

➡ Select *Super G*, to double the transmission rate. This mode is based on *802.11g* mode and enables a maximum transmission rate of 108 Mbps thanks to channel bundling.

The default setting is *Super G*.

> **Notes:**
>
> ◆ Super G mode can only be used if the Access Point supports this transmission mode. If this is not the case and you leave the Super G default setting, the transmission mode actually supported by the Access Point is used.
>
> ◆ If not all components in your wireless network support Super G, this can reduce the transmission rate for technical reasons.
>
> ◆ Super G mode always uses channel 6. You cannot use Super G if this channel is assigned to another network within the transmission range of your wireless network.

Configuration – Security

The range of a wireless network cannot be restricted to an enclosed area. The advantage of a location-independent connection set-up brings with it the risk of unauthorised persons eavesdropping on your wireless communications. To avoid misuse of your data, it is especially important to encrypt transmission over your WLAN.

With Gigaset data products, you can adjust the security settings for each configuration profile to suit your needs. The following encryption methods are available:

◆ WPA-PSK (recommended)

◆ WEP encryption (128 bit or 64 bit)

You can perform the security settings in *Security* of tab *Configuration*.

◆ *WPA* is available for networks with authentication servers:

> **Please remember:**
>
> Successful communication depends on all the connection partners in a WLAN using the same security settings (type of encryption and the appropriate keys).

Activating security options

In the *Configuration – Security* tab, the default security mode is *Disabled*. You can use this to register on all wireless networks which do not use encryption for data transfer.

If you would like to register on a wireless network where registration is checked and data transfer is encrypted, you must activate the security options of your Gigaset PC Card 108.

➥ Select the security mode in the pop-up window *Security*:

A window opens to configure the mode.

    – *WEP* (see page 23)

    – *WPA-PSK* (see page 25)

    WPA-PSK offers greater protection for your network than WEP. You should therefore use *WPA-PSK* for registration if all components in your network support this.

↳ **WPA**

If **WPA** is used for authentication in your network, you must select the parameters according to the settings for the network. Contact your administrator.

A window opens to configure the mode.

WEP
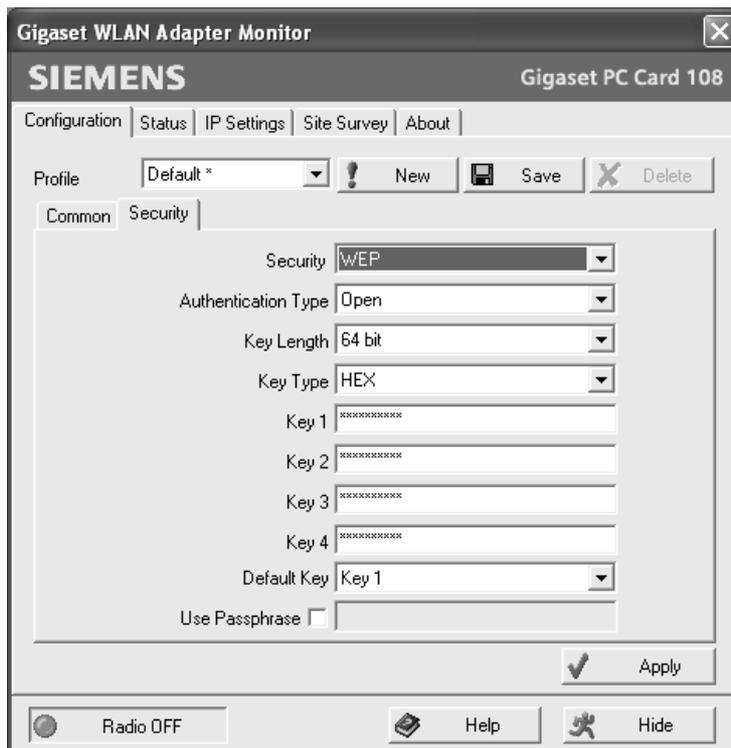
↳ For the **Authentication Type** select the default setting **Open**. The setting **Shared** is normally only used in networks with authentication. Contact your administrator for more information.

↳ In the **Key Length** field, select the required length of the WEP key.

Note that all components in a network must use the same key length to be able to communicate with each other.

Use a key of length **128 bit** if all network components support this. This offers greater protection for the data in your network.

➥ In the **Key Type** field, select the character format for creating keys:

– **HEX**
The keys are entered as hexadecimal characters. Please only use the digits 0 to 9 and the letters A to F when entering. For a key with length of 128 bits, 26 hexadecimal characters are used, and for a key with length of 64 bits, 10 hexadecimal characters are used.

– **ASCII**
The keys are formed from characters of the ASCII character set. For a key with length of 128 bits, 13 characters are used, and for a key with length of 64 bits, 5 characters are used.

After selecting key length and key type, you can used either a passphrase to generate your key automatically, or manually enter the key:

◆ Generating keys with a passphrase

For encryption, you can use a passphrase from which the required keys are generated automatically.

➥ Activate the option **Use Passphrase**.
This activates the appropriate entry field.

➥ In the **Use Passphrase** field, enter any sequence of characters as the passphrase. You can enter up to 260 characters.

Notes:
◆ Remember that all the connection partners must use the same passphrase for encryption.
◆ Make a note of your passphrase and store it in a safe place.

After entering the passphrase, you can jump to the next step and save your changes.

◆ Creating keys manually

In the fields **Key 1** to **Key 4** you can enter up to four keys. The length of the keys entered is determined by the settings in the fields **Key Length** and **Key Type**.

➥ Enter at least one key in one of the four text fields.

Please remember:
all connection partners must use the same key for encryption.

➥ In the **Default Key** field, select one of these four created keys with which data transfer on your PC is to be encrypted.

➥ Click **Apply** to accept the changes.

The security options of your Gigaset PC Card 108 have been activated.

WPA-PSK
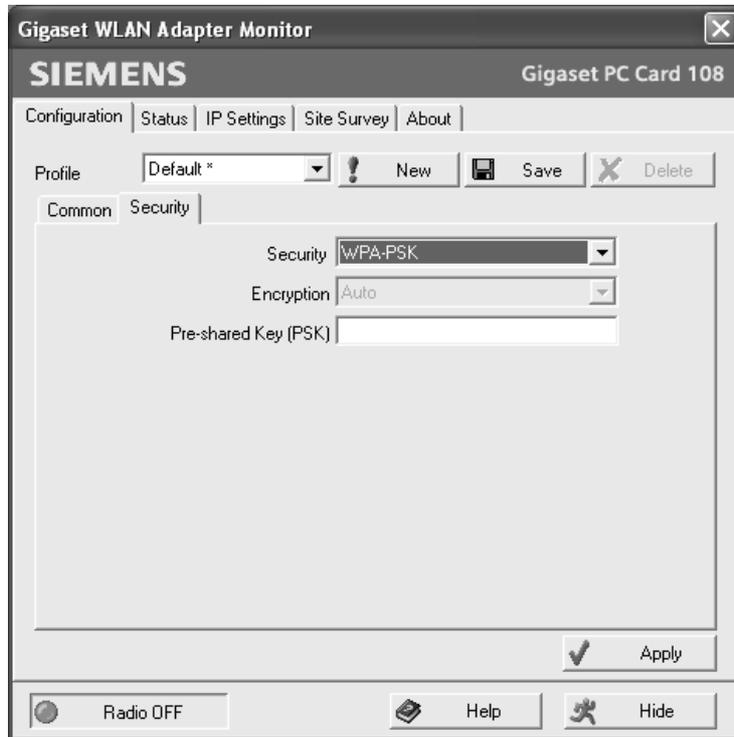
WPA-PSK can be used with various encryption standards. Depending on which standard the Access Point supports, encryption is automatically selected. In the *Encryption* field, *Auto* cannot be changed.

➟ In the field *Pre-shared Key (PSK)*, enter the key you would like to use for registration on the network.

Note that all components in a network must use the same *Pre-shared Key (PSK)* to be able to communicate with each other.

If you would like to register on a network in *Infrastructure* mode, first define a Pre-Shared Key (PSK) on your wireless router for your network. Then use this for all remaining components in your network. You can find more information in the user manual for your wireless router.

➟ Click *Apply* to accept the changes.

Configuration – Profile

Selecting a profile

The Gigaset WLAN Adapter Monitor can manage several configuration profiles for your Gigaset PC Card 108. If you want to use your PC in different wireless networks, for example, you can create several profiles and adjust them to the requirements of the corresponding networks. When changing networks, you only have to choose the appropriate profile for registering your PC in the new network.

The Gigaset PC Card 108 always uses the settings for the profile displayed in the *Profile* field.

> **Note:**
> After installation, the **DEFAULT** profile contains common settings.

Creating a profile

➟ Click next to the field *Profile* on *New*.
   This opens a dialogue for entering a profile name.
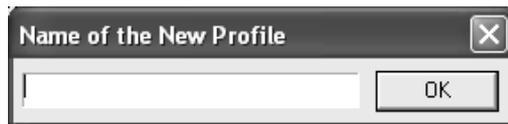
➟ Enter a name for the new profile and confirm your entry with *OK*. The maximum length of the profile name is 29 characters.

> **Note:**
> To make it easier to recognise them again, it is advisable to use an "illustrative" name for the profiles. A suitable name for a profile could be the location of the wireless network.

   The currently applicable settings continue to be shown.

➟ Adjust the settings to the requirements of the network environment.

➟ Click on *Save*.
   This saves your configuration as a new profile. The selection in the *Profile* field is expanded to include the new profile name.

Selecting a profile

➟ Open the selection in the *Profile* field.

➟ Click on the profile name you want.
   This activates the selected profile and displays it in the *Profile* field.

➟ Click on *Apply* to activate the selected profile.

Editing a profile

➜ In the *Profile* field, select the required profile.

➜ Make the required changes to the settings.

➜ Click on *Save*.
This saves your changes in the selected profile.

> **Please remember:**
> *Save* updates the selected profile. The old settings are overwritten and are no longer available.

Deleting a profile

➜ In the *Profile* field, select the profile you want to delete.

➜ Click on *Delete*.
The name of the selected profile is removed from the selection in the *Profile* field. The settings in this profile are now lost.

> **Note:**
> The **DEFAULT** can be changed, but not erased.

Status

The **Status** tab provides information about the status of the wireless network your PC is currently connected to via the network adapter:

◆ The left-hand pane shows the valid settings for the active configuration profile.
◆ The right-hand and lower pane show the statistics for the previous data transfer.
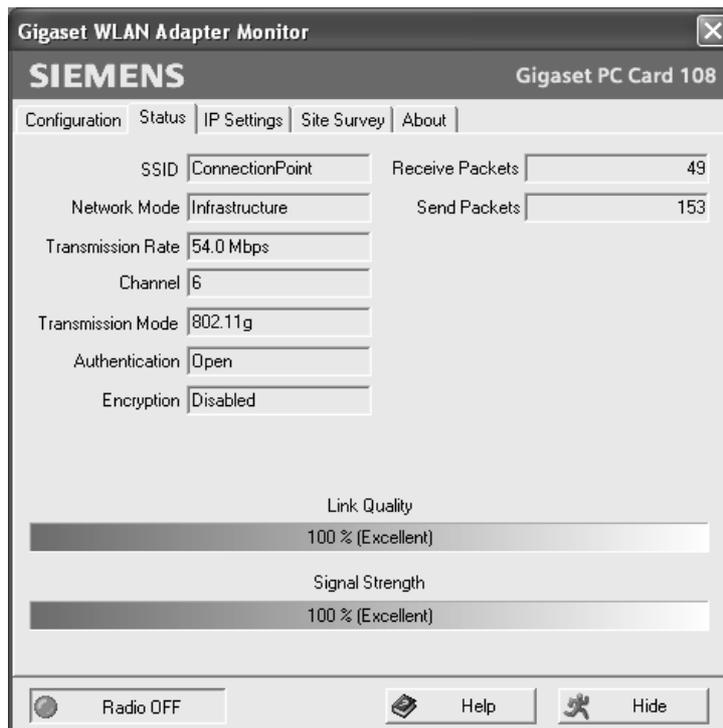
SSID	Shows the ID for the network environment. (see "SSID (Service Set Identifier)" on page 19).
Network Mode	Shows the structure of the network environment (see "Operating mode" on page 20).
Transmission Rate	Shows the current transmission rate in Mbps (see "Transmission rate" on page 20)
Channel	Shows the channel used for radio transmission (see "Channel" on page 21)
Transmission Mode	Shows the WLAN standard used for data transmission (see "Transmission mode" on page 21)
Authentication	Shows the Authentication Type (see "WEP" on page 23).
Encryption	Shows the encryption method (see "Configuration – Security" on page 22)

Received Packets	Shows how many data packets have been received from connection partners on the current WLAN since the connection was set up.
Sent Packets	Shows how many data packets have been sent on the current WLAN since the connection was set up between your PC and your connection partner.
Link Quality	Shows the quality of the wireless connection. The graphic display of the connection quality is supported with a percentage figure and an evaluation of the signal (***Excellent***, ***Good***, ***Fair*** or ***Poor***).
Signal Strength	Shows the strength of the radio signal of the wireless connection. The graphic display of the signal strength is supported with a percentage figure and an evaluation of the signal (***Excellent***, ***Good***, ***Fair*** or ***Poor***).

IP settings

The **IP Settings** tab provides you will all the information relevant for using your PCs in the network (LAN and WLAN). There are two buttons for updating and releasing your PC's WLAN address. A graphic display in the lower section of the tab shows data traffic over time on the WLAN.

IP Address	Shows the Internet Protocol address with which your PC is registered to the WLAN. As a rule the IP address is assigned to your PC by the DHCP server coordinating the PC's access to a network. In a WLAN, for example, this is the Access Point's DHCP server.
Host Name	Computer name entered for your PC during installation of the operating system.
MAC Address	Shows the physical address of your network adapter.
Subnet Mask	Shows the value of the subnet mask that defines the address block of the IP -address. For example, the value 255.255.255.0 shows that the network address is formed by the first three blocks of the IP address. The last block is for the PC addresses in this network. The number of IP address blocks used for PC addressing depends on the size of the network and hence the number of connected PCs.
DHCP Server	Shows the IP address of the system which provides the DHCP server for automatic addressing and coordination of the connected PCs.
Gateway	Shows the IP address of the system that enables access to an upper-level, for example a connection to the Internet.

Updating the IP address

➜ Click on *Renew IP Address* to connect your PC to a WLAN network.
The network adapter checks whether there is a DHCP server available within its radio range whose settings are compatible with those of the active configuration profile. If this is the case, the DHCP server responds to the query by assigning an IP address that your PC can use to exchange data over the new network.

Releasing the IP address

➜ Click on *Release IP Address* to deregister your PC from the current WLAN.
Your PC is deregistered at the DHCP server and is no longer available to WLAN connection partners. The DHCP server can assign the IP address allocated to your PC to a new connection partner.

Network utilisation

The diagram in the lower section of the *IP Settings* tab shows the network utilisation achieved between the connection partner and your PC.

Divided into data received and data sent, the actual transmission rates are shown and compared with the theoretical transmission rate available on this WLAN. The percentage values are updated continuously in the diagram.

Site Monitor

The *Site Monitor* tab provides a comprehensive overview of the connection partners available via the visible SSID. One click reads in a list with all the relevant information on the potential connection partners. If you want, you can set up a connection to one of the connection partners shown directly from the list.
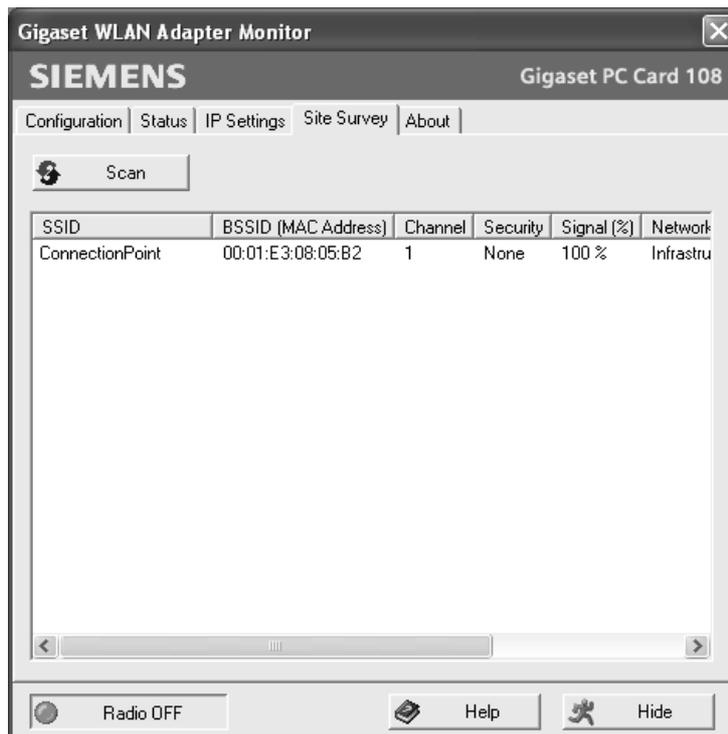
Reading in the list

➥ Click on *Scan* to search the network environment for potential connection partners. This creates a list of the currently available connection partners.

➥ Click on *Scan* again to update the displayed list.

Depending on the reaction time of the various connection partners, updating the list may take 1-2 minutes.

The list shows the following parameters for each connection partner:

SSID	Shows the connection partner's ID (see "SSID (Service Set Identifier)" on page 19).
BSSID (MAC Address)	Shows the connection partner's physical address (Basic Service Set Identifier). In networks with *Ad Hoc* mode the *BSSID* corresponds to the *MAC address* of the Access Point.
Channel	Shows the radio channel the connection partner uses to transmit data (see "Channel" on page 21).
Security	Shows whether radio traffic to the connection partner is encrypted (see "Configuration – Security" on page 22). If this is the case, you will see a key icon.
Signal (%)	Shows the signal strength of the radio traffic between your PC and the connection partner as a percentage (see "Signal Strength" on page 29).
Transmission Mode	Shows the connection partner's current transmission mode (see "Transmission mode" on page 21).
XR	Shows whether the Access Point's XR function (Extended Range) is active. This function is activated if a range is too large to establish a connection. It increases the range and decreases the transmission rate.
Network Mode	Shows the connection partner's current network mode (see "Operating mode" on page 20).

Establishing a connection

➥ Double-click in the list on the connection partner with which you want to set up a connection.
   This connects your PC to the connection partner.

Note:

If your network adapter's active configuration profile is not compatible with the connection partner's settings, for example the encryption has not been set correctly, you will first see the **Configuration – Security** tab:

➥ Change the settings required for the connection.

Or

➥ Select a saved profile.

Then the connection will be set up automatically.

About

The *About* tab provides information about the software company and the version number of the software installed on your PC. The Internet address takes you directly to the company's product page containing the latest information and software updates for your network adapter.
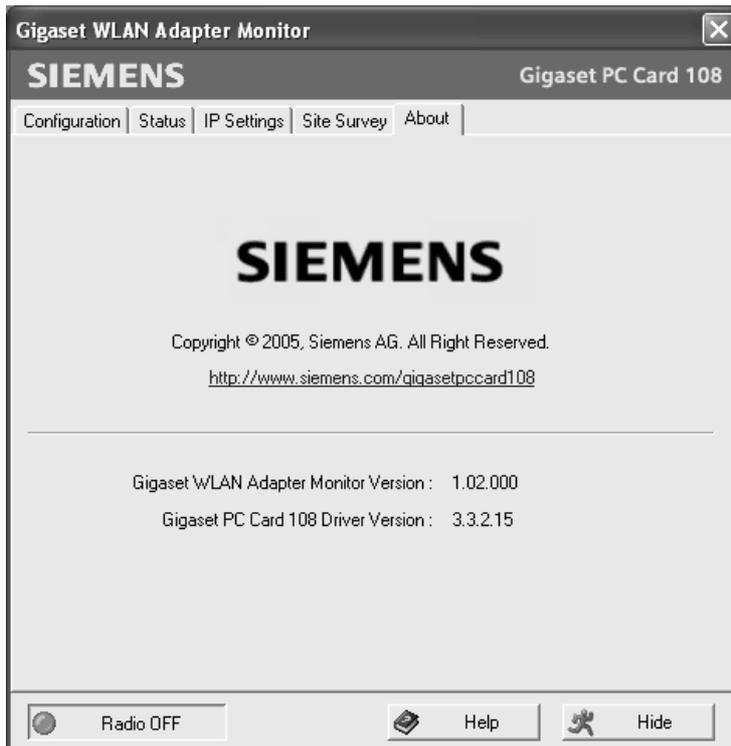
Uninstalling Gigaset PC Card 108

You may have to uninstall the Gigaset PC Card 108:

◆ If an error occurred during installation.

◆ The Gigaset PC Card 108 is not working properly and the problem cannot be rectified (see Chapter "Trouble shooting" on page 44).

◆ You have acquired a newer version of Gigaset PC Card 108 and the operating instructions of the new device recommend uninstalling the older version.

◆ You no longer need the Gigaset PC Card 108 and want to free up space on the hard disk and working memory.

Uninstalling involves the following steps:

1. First uninstall the software for the Gigaset PC Card 108.

2. Then uninstall the hardware.

3. Complete uninstalling.

Uninstalling the software

To uninstall the software for the Gigaset PC Card 108 from your PC:

➡ Close all running programs.

➡ Select *Start – Programs – Gigaset PC Card 108 – Gigaset PC Card 108 Uninstall*.

➡ Confirm the security prompt for deinstallation with *OK*.

The software and all the drivers will now be removed from your PC.

➡ Do not restart your PC until you have also removed the hardware.

> **Note:**
> If you restart the PC before removing the Gigaset PC Card 108, Windows will automatically start its hardware recognition program. If this happens, close automatic hardware recognition by clicking on *Cancel*.

Completing Uninstall

➡ Remove the Gigaset PC Card 108 from the PCMCIA slot on your PC.

➡ Follow the remaining instructions and then restart your PC.

Updating device drivers

You should update the driver of the Gigaset PC Card 108 if there is a newer driver version. You can find information about the latest driver updates on our website, www.siemens.com/gigasetpccard108.

➜ Download the latest driver.

Then follow the following steps to update the device driver:

➜ Uninstall the software for the Gigaset PC Card 108 as described in Chapter "Uninstalling Gigaset PC Card 108" on page 35.

➜ After restarting your PC, open the directory where you downloaded the new drivers.

➜ Start the update and follow the instructions given.

You will find further information about installation in Chapter "Installing the Gigaset PC Card 108" on page 7.

Glossary

Access Point

An Access Point, such as the Gigaset SE551 dsl/cable, is the centre of a wireless local network (WLAN). It handles the connection of the wireless linked network components and regulates the data traffic in the wireless network. The Access Point also serves as an interface to other networks, e.g. an already existing Ethernet LAN or via a modem to the Internet. The operating mode of wireless networks with an Access Point is called Infrastructure mode.

Ad-hoc mode

Ad-hoc modus describes wireless local networks (WLAN) in which the network components set up a spontaneous network without an Access Point, e.g. several notebooks in a conference. All the network components are peers. They must have a wireless network adapter.

Authentication

Authentication checks the true identity of a PC using a particular property.

Bridge

A Bridge connects several network segments to form a joint network, e.g. to make a TCP/IP network. The segments can have different physical characteristics, e.g. different linking such as Ethernet and wireless LANs. Linking individual segments using Bridges allows local networks of practically unlimited size.

See also Gateway, Hub, Router, Switch

Broadcast

A Broadcast is a data packet not directed to a particular recipient but to all the network components on the network. The Gigaset SE551 dsl/cable does not pass broadcast packets on; they always remain within the local network (LAN) it administers.

DHCP

Dynamic Host Configuration Protocol

DHCP handles the automatic assignment of IP addresses to network components. It was developed because in large networks – especially the Internet – the defining of IP addresses is very complex as participants frequently move, drop out or new ones join. A DHCP Server automatically assigns the connected network components (DHCP clients) dynamic addresses from a defined IP pool range thus saving a great deal of configuration work. In addition, the address blocks can be used more effectively: since not all participants are on the network at the same time, the same IP address can be assigned to different network components in succession as and when required.

The Gigaset SE551 dsl/cable includes a DHCP Server and so it can automatically assign IP addresses for the PCs on its local network. For certain PCs you can specify that their IP addresses are never changed.

DHCP Server

See DHCP

DNS

Domain Name System

DNS permits the assignment of IP addresses to PC or domain names that are easier to remember. A DNS server must administer this information for each LAN with an Internet connection. As soon as a page on the Internet is called up, the browser obtains the corresponding IP address from the DNS Server so that it can establish the connection.

On the Internet the assignment of domain names to IP addresses follows a hierarchical system. A local PC only knows the address of the local DNS server. This in turn knows all the addresses of the PCs in the local network and the next higher DNS server, which again knows addresses in its network and that of the next DNS server.

DNS server

See DNS

Domain name

The domain name is the reference to one or more web servers on the Internet (e. g. siemens.com). The domain name is mapped via the DNS service to the corresponding IP address.

DSL

Digital Subscriber Line

DSL is a data transmission technology in which a connection to the Internet can be run at up to 1.5 Mbps over normal telephone lines. A DSL connection is provided by an Internet provider. It requires a DSL modem.

Dynamic IP address

A dynamic IP address is assigned to a network component automatically via DHCP. This means that the IP address of a network component can change with every login or at certain intervals.

See also Static IP address

Encryption

Encryption protects confidential information against unauthorised access. With an encryption system data packets can be sent securely over a network.

Ethernet

Ethernet is the most widely-distributed network technology for local networks (LAN). It was defined by IEEE as standard 802.3. Ethernet uses a base band cable for data transmission with a transmission rate of 10 or 100 Mbps.

Gateway

A Gateway is the system component that connects networks with completely different architectures (addressing, protocols, application interfaces etc.). Although it is not totally correct, the term is also used as a synonym for router.

See also Bridge, Hub, Router, Switch

Hub

A Hub connects several network components in a star-topology network by sending all the data it receives from one network component to all the other network components.

See also Bridge, Gateway, Router, Switch

IEEE

Institute of Electrical and Electronics Engineers

IEEE is an international body for defining network standards, especially for standardising LAN technologies, transmission protocols and speeds, and wiring.

IEEE 802.11

IEEE 802.11 is a standard for wireless 2.4-GHz band LANs. In Infrastructure mode, end devices can be connected to a base station (Access Point) or connect with each other spontaneously (Ad-hoc mode).

Infrastructure mode

Infrastructure mode is a way of operating wireless local networks (WLAN), in which an Access Point handles the data traffic. Network components cannot establish a direct connection with each other as is the case in Ad-hoc mode.

Internet

The Internet is a wide-area network (= Wide Area Network), linking several million users around the world. A number of protocols have been created for exchanging data, and these are known collectively as TCP/IP. All participants on the Internet are identifiable by an IP address. Servers are addressed by a domain name (e.g. siemens.com). Domain Name Service (DNS) is used to assign domain names to IP addresses.

Among the most important Internet services are:

◆ electronic mail (email)
◆ the World Wide Web (WWW)
◆ file transfer (FTP)
◆ discussion forums (Usenet / Newsgroups)

Internet Service Provider

An Internet Service Provider offers access to the Internet for a fee.

IP

Internet Protocol

The IP protocol is one of the TCP/IP protocols. It is responsible for the addressing of participants in a network using IP addresses and routes data from the sender to the recipient. It decides the paths along which the data packets travel from the sender to the recipient in a complex network (routing).

IP address

An IP address is a network-wide unique address of a network component in a network based on the TCP/IP protocol (e. g. in a local network (LAN) or on the Internet). The IP address has four parts (values from 0 to 255) separated by periods (e. g. 192.168.2.1). The IP address comprises the network address and the PC address. Depending on the subnet mask one, two or three parts form the network address, the remainder the computer address.You can find out the IP address of your PC by entering `ipconfig` in the command prompt.

IP addresses can be assigned manually (see static IP address) or automatically (see dynamic IP address).

On the Internet domain names are normally used instead of the IP addresses. DNS is used to assign domain names to IP addresses.

ISP

Internet Service Provider

LAN

Local Area Network

A local network links network components so that they can exchange data and share resources. The physical range is restricted to a particular area (e.g. a site). As a rule the users and operators are identical. A local network can be connected to other local networks or to a wide-area network (WAN) such as the Internet.

MAC address

Media Access Control Address

The MAC address is used for the globally unique identification of a network adapter. It comprises six parts (hexadecimal numbers), e.g. 00-90-96-34-00-1A. The MAC address is assigned by the network adapter manufacturer and cannot be changed. You can find out the MAC address of your PC by entering `ipconfig/all` in the "physical address" entry in the command prompt.

Mbps

Megabits per second / Millions of bits per second (MBit/s)

Mbps is a unit which can be used to describe the speed when transmitting data in a network.

Network

A network is a group of devices connected in wired or wireless mode so that they can share resources such as data and peripherals. A general distinction is made between local networks (LAN) and wide-area networks (WAN).

Network adapter

The network adapter is the hardware device that implements the connection of a network component to a local network. The connection can be wired or wireless. An Ethernet network card is an example of a wired network adapter. Wireless network adapters are, for example, the Gigaset PC Card 108 or the Gigaset USB Adapter 108.

A network adapter has a unique address, the MAC address.

Protocol

A protocol describes the agreements for communicating on a network. It contains rules for opening, administering and closing a connection, about data formats, time frames and error handling. Communications between two applications require different protocols at various levels, e.g. the TCP/IP protocols for the Internet.

RC4

RC4 is an encryption algorithm on which WEP and TKIP encryption is based. Particular features of this algorithm are a secret key and variable key length.

Roaming

In order to extend the range of a wireless local network, roaming involves several Access Points with the same SSID and radio channel that are connected via Ethernet. The PCs on the network can switch dynamically between the various Access Points without interrupting an open network connection.

Router

A router directs data packets from one local network (LAN) to another via the fastest route. A router makes it possible to connect networks that have different network technologies. For example, it connects a WLAN to the Internet.

See also Bridge, Gateway, Hub, Switch

SSID

Service Set Identifier

The SSID is used to identify the stations of a wireless network (WLAN). All wireless network components with the same SSID form a common network. The SSID can be assigned by the network operator.

Static IP address

A static IP address is assigned to a network component manually during network configuration. Unlike a dynamic address, a static IP address never changes.

See also dynamic IP address

Subnet

A subnet divides a network into smaller units.

Subnet mask

The subnet mask determines how many parts of the IP addresses of a network represent the network address and how many parts represent the computer address.

The subnet mask administered by the Gigaset SE551 dsl/cable is always 255.255.255.0. That means the first three parts of the IP address form the network address and the final part is used for assigning PC addresses. The first three parts of the IP address of all network components are always the same in this case.

Super G

Super G is an extension of IEEE 802.11g. This allows for the maximum transfer rate to be increased to 108 Mbps thanks to channel bundling.

Switch

A Switch, like a Hub, is an element for linking different network segments or components. Unlike a Hub however, the Switch has its own intelligence that enables it to forward packets to only that subnet or network component they are meant for.

See also Bridge, Gateway, Hub, Router

TKIP

Temporal Key Integrity Protocol

TKIP is a further development of WEP encryption. Like WEP, TKIP encryption is based on the RC4 encryption algorithm. TKIP however generates new keys after every 10-Kbyte packet, thus meeting higher security requirements.

UDP

User Datagram Protocol

UDP is a protocol in the TCP/IP family that handles data transport between communication partners (applications.) Unlike TCP, UDP is a non-session based protocol. It does not establish a fixed connection. The data packets, so-called datagrams, are sent as a broadcast. The recipient is responsible for making sure the data is received. The sender is not notified about whether it is received or not.

WAN

Wide Area Network

A WAN is a network that is not restricted to one particular area, such as the LAN. The Internet is the most frequently used WAN. A WAN is run by one or more public providers to enable private access. You access the Internet via an Internet provider.

WEP

Wired Equivalent Privacy

WEP is a security protocol defined in the IEEE 802.11 standard. In a WLAN, WEP encryption protects data against unauthorised access. WEP encryption uses the RC4 encryption algorithm.

Wireless network

See WLAN

WLAN

Wireless LAN

Wireless LANs enable network components to communicate with a network using radio waves as the transport medium. A wireless LAN can be connected as an extension to a wired LAN or it can form the basis for a new network. The basic element of a wireless network is the cell. This is the area where the wireless communication takes place. A WLAN can be operated in Ad-hoc mode or Infrastructure mode.

WLAN is currently specified in standard IEEE 802.11. The Gigaset PC Card 108 complies with Standard 802.11g.

WPA

WPA is a standard-conformant solution for greater security in wireless networks. WPA is meant to replace the existing WEP standard (Wired Equivalent Privacy) and offers more reliable encryption and authentication methods.

WPA-PSK

WPA – Pre-Shared Key

WPA-PSK is a form of authentication in wireless networks that allows users to define their own key. This key must then be used by all connection partners for WPA authentication.

XR technology

eXtended Range

XR technology increases a WLAN's range and ensures better coverage of the area in the home or office network. When activated at the Access Point, this function can double or triple the range to the network adapters.

Appendix

Trouble shooting

Problem	Causes and remedies
Drivers not found.	WLAN or LAN adapters were possibly installed earlier on your PC. It is possible that the drivers are being looked for in the wrong installation path.
	➜ Enter the path name for the drivers manually. The drivers are stored in **CD-ROM:\Installation\Gigaset PC Card 108\Driver**
Gigaset WLAN Adapter Monitor icon does not appear in the task-bar.	The Gigaset WLAN Adapter Monitor software or the device drivers were not installed properly or the device has been deactivated in the device manager.
	➜ First check in the device manager of the control panel whether the device exists and has been activated. If not, activate it. If it is not there, deinstall the software and install it again as described in Chapter "Installing the Gigaset PC Card 108" on page 7.
The PC does not recognise the Gigaset PC Card 108.	The Gigaset PC Card 108 is not inserted properly in the slot.
	➜ Check to see if it is loose and push it in properly.
	➜ Check in the device manager of the Windows operating system whether the PCMCIA socket has been activated or not. If not, activate it.
The connection quality is poor, or there is interference	➜ Increase the distance between your Gigaset PC Card 108 and the device causing the interference.
	➜ Make sure that the PC in which the Gigaset PC Card 108 is installed and the device causing the interference are connected to the power supply via different sockets.
	➜ Do not place your PC with the Gigaset PC Card 108 near microwave devices or devices with wireless video-audio transmission, e. g. room monitors used as baby alarms, or near large metal objects. Ask your dealer or an experienced radio technician for advice.

Problem	Causes and remedies
The connection is not set up at all or not properly.	If you cannot set up a connection between your PC with the Gigaset PC Card 108 and another wireless network adapter, this may be due to a number of causes:
	The PC you want to connect to has not been powered up.
	➡ Power up the PC.
	The transmission speed set does not match that of the partners in the network.
	➡ Check whether you have set a particular transmission speed. If this is the case, change to "Auto" (infrastructure mode).
	You are working in an ad-hoc network and a different radio channel is being used.
	➡ Select the correct radio channel.
	The wrong mode has been set (infrastructure or ad-hoc mode).
	➡ Select the correct mode.
	The SSIDs of the devices that are to communicate with each other are different.
	➡ Make sure that the same SSID is used for all connection partners with network adapters for wireless operation.
	Different encryption is being used.
	➡ Select the same encryption on all devices.
	Changes in the configuration have not been applied by your PC
	➡ Reboot your PC.
	The IP address or the subnet mask is configured incorrectly.
	➡ Make sure that the IP address and the subnet mask are correctly configured in the **IP settings** tab. As a rule, it is necessary to assign static IP addresses when operating a network in ad-hoc mode.
It takes a long time to set up a connection	Depending on the environment and the devices, setting up a connection may take a while.
	➡ Click on the **Site Monitor** tab on **Scan** or double-click on the network in question.

Problem	Causes and remedies
You cannot set up a connection to the Access Point	If you cannot set up a connection between your Gigaset PC Card 108 and an Access Point, try one or more of the following: ➜ Make sure that the physical connection of the Access Point operates reliably. ➜ Make sure that the same SSID is used for the Gigaset PC Card 108 and the Access Point. ➜ Check whether the security settings configured for the Gigaset PC Card 108 match those for the Access Point, e. g. the same key for WEP encryption. ➜ Check whether your access to the Access Point is blocked by other security measures, e. g. by a MAC filter or filter for IP addresses. ➜ Make sure that the IP address and the subnet mask are correctly configured in the **IP settings** tab. As a rule, it is necessary to assign dynamic IP addresses when operating a network in infrastructure mode.
Installation cancelled under Windows 2000	If the following error message appears when installing the Gigaset PC Card 108 under Windows 2000 "1608:Unable to create InstallDriver instance" and the installation is cancelled, the cause is that the Microsoft Network Client component is missing. To install the Microsoft Network Client: ➜ Select **Start** – **Settings** – **Control Panel** – **Network and Dial-up Connections**. ➜ Right-click on **LAN Connection**, and select **Properties**. ➜ Then click on the following **Install** – **Client** – **Add** – **Client for Microsoft Networks – OK**. The Microsoft Network Client component is now installed. ➜ Restart your PC to apply the change. ➜ Install the software, see Chapter "Installing the Gigaset PC Card 108" on page 7.
The data transfer rate seems too low	➜ If possible, position your PC with the Gigaset PC Card 108 closer to the Access Point or remove any visible obstacles. ➜ Re-align the aerials of the Access Point. ➜ Change the transfer rate from AUTO to a fixed value. ➜ Change the transmission mode of the Gigaset PC Card 108 to 802.11g. ➜ Try another channel. Make sure that the channel setting is changed on the Access Point first.

Problem	Causes and remedies
The Gigaset PC Card 108 does not work properly	You have checked all of the causes specified above, and still no communication is possible. ➜ Uninstall the software and install it again as described in chapters "Uninstalling Gigaset PC Card 108" on page 35 and "Installing the Gigaset PC Card 108" on page 7.

Specifications

The specifications are subject to change.

Software

Compliance with standards	IEEE 802.11b/802.11g
Operating modes	Ad-hoc mode Infrastructure mode
Security properties	Support of SSID network identification for security Support of data encryption using the WEP algorithm (64 bit/128 bit) WPA-PSK encryption Authentication with WPA Further security settings for routers (filter for MAC addresses, Firewall, etc.)
Configuration and monitoring	Monitor for configuration and monitoring Dynamic configuration 2 LED displays for operation and transmission status
Supported operating systems	Windows 98SE, Windows ME, Windows 2000 and Windows XP

Hardware

Interface	Cardbus, 32-bit

Wireless properties

Frequency range	2.400 to 2.4835 GHz
Spreading	Direct Sequence Spread Spectrum (DSSS)
Modulation	CCK, OFDM
Number of channels	IEEE 802.11b: 11 IEEE 802.11g: **11**
Transmission rate	IEEE 802.11b: 1 / 2 / 5.5 / 11 Mbps IEEE 802.11g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps Super G: 72 / 96 / 108 Mbps
Antenna	2 internal aerials
Antenna output power	< 100 mW

Requirements for the power mains and the operating environment

Temperature	Operating temperature: 0 °C to +55 °C Storage temperature: -20 °C to +70 °C
Humidity	5 % to 90 % (non condensing)
Power consumption	In operation: Tx 350mA / 5V; Rx 260mA / 5V Power saving: 90 mA / 5V
Compliance with security conditions and regulations	CE, EN 6095

Authorisation

This device is intended for use within the European Union and Switzerland. If used in other countries, it must first be approved nationally in the country in question.

Country-specific conditions have been taken into consideration. We, Siemens AG, declare that this device meets with the fundamental regulations laid down in Directive 1999/5/EC.

A copy of the Declaration of Conformity is available at: www.siemens.com/gigasetdocs.

CE 0682①

Dispose of devices in accordance with statutory requirements.

Regulatory Compliance

FCC Part 15 Declaration of Conformity (DoC)

The following equipment:

Product Name: Wireless LAN Card

is herewith confirmed to comply with the requirements of FCC Part 15 rules. The 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.

FCC Rules and Regulations - Part 15

Warning: This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the Federal Communications Commissions Rules and Regulation. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Relocate your WLAN equipped laptop computer.

- Increase the separation between the WLAN equipped laptop computer and other electronics.

- Connect the WLAN equipped laptop computer into an outlet on a circuit different from that of other electronics.

- Consult the dealer or an experienced radio/TV technician for help.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device was tested for typical lap held operations with the device contacted directly to the human body to the either sides of the notebook computer. To maintain compliance with FCC RF exposure compliance requirements, avoid direct contact to the transmitting antenna during transmitting.

FCC Caution:

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

Canada(IC):

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Service (Customer Care)

We offer you support that is fast and tailored to your specific needs!

◆ Our **Online Support on the Internet** can be reached any time from anywhere:

<u>www.siemens.com/gigasetcustomercare</u>

It will give you 24/7 support for all our products. It also provides interactive trouble-shooting, a list of FAQs and answers plus operating instructions and current software updates for you to download.

You will also find frequently asked questions and answers in this user guide and in the document "Gigaset WLAN. Practical tips" on the included CD.

◆ You will be given personal advice about our range of products on our
Premium Hotline:

United Kingdom   0906 9597555   (0.75 £/minute)

You can talk to qualified Siemens technicians who will guide you expertly through product information and installation.

◆ For fast and dependable assistance with any repairs or guarantee/warranty claims, contact our **Service Centres**:

United Kingdom   0 87 05 33 44 11
Ireland   18 50 77 72 77

Please have your record of purchase ready when calling.

In some countries repair and replace services are impossible where the products are not sold through our authorised dealers.

Please address any questions about the DSL or cable connection to your network provider.

Guarantee Certificate United Kingdom

Without prejudice to any claim the user (customer) may have in relation to the dealer or retailer, the customer shall be granted a manufacturer's Guarantee under the conditions set out below:

◆ In the case of new devices and their components exhibiting defects resulting from manufacturing and/or material faults within 24 months of purchase, Siemens shall, at its own option and free of charge, either replace the device with another device reflecting the current state of the art, or repair the said device. In respect to parts subject to wear and tear (including but not limited to, batteries, keypads, casing), this warranty shall be valid for six months from the date of purchase.

◆ This Guarantee shall be invalid if the device defect is attributable to improper treatment and/or failure to comply with information contained in the user manuals.

◆ This Guarantee shall not apply to or extend to services performed by the authorised dealer or the customer themselves (e.g. installation, configuration, software downloads). User manuals and any software supplied on a separate data medium shall be excluded from the Guarantee.

◆ The purchase receipt, together with the date of purchase, shall be required as evidence for invoking the Guarantee. Claims under the Guarantee must be submitted within two months of the Guarantee default becoming evident.

◆ Ownership of devices or components replaced by and returned to Siemens shall vest in Siemens.

◆ This Guarantee shall apply to new devices purchased in the European Union. The Guarantee is issued by Siemens plc, Siemens House, Oldbury, Bracknell, Berkshire, RG12 8FZ.

◆ Any other claims resulting out of or in connection with the device shall be excluded from this Guarantee. Nothing in this Guarantee shall attempt to limit or exclude a Customers Statutory Rights, nor the manufacturer's liability for death or personal injury resulting from its negligence.

◆ The duration of the Guarantee shall not be extended by services rendered under the terms of the Guarantee.

◆ Insofar as no Guarantee default exists, Siemens reserves the right to charge the customer for replacement or repair.

◆ The above provisions do not imply a change in the burden of proof to the detriment of the customer.

To invoke this Guarantee, please contact the Siemens telephone service. The relevant number is to be found in the accompanying user guide.

Guarantee Certificate Ireland

Without prejudice to any claim the user (customer) may have in relation to the dealer or retailer, the customer shall be granted a manufacturer's Guarantee under the conditions set out below:

◆ In the case of new devices and their components exhibiting defects resulting from manufacturing and/or material faults within 24 months of purchase, Siemens shall, at its own option and free of charge, either replace the device with another device reflecting the current state of the art, or repair the said device. In respect of parts subject to wear and tear (including but not limited to, batteries, keypads, casing), this warranty shall be valid for six months from the date of purchase.

◆ This Guarantee shall be invalid if the device defect is attributable to improper care or use and/or failure to comply with information contained in the user manuals. In particular claims under the Guarantee cannot be made if:
  – The device is opened (this is classed as third party intervention)
  – Repairs or other work is done by persons not authorised by Siemens.
  – Components on the printed circuit board are manipulated
  – The software is manipulated

– Defects or damage caused by dropping, breaking, lightning or ingress of moisture. This also applies if defects or damage was caused by mechanical, chemical, radio interference or thermal factors (e.g.: microwave, sauna etc.)

– Devices fitted with accessories not authorised by Siemens

◆ This Guarantee shall not apply to or extend to services performed by the authorised dealer or the customer themselves (e.g. installation, configuration, software downloads). User manuals and any software supplied on a separate data medium shall be excluded from the Guarantee.

◆ The purchase receipt, together with the date of purchase, shall be required as evidence for invoking the Guarantee. Claims under the Guarantee must be submitted within two months of the Guarantee default becoming evident.

◆ Ownership of devices or components replaced by and returned to Siemens shall vest in Siemens.

◆ This Guarantee shall apply to new devices purchased in the European Union. For Products sold in the Republic of Ireland, the Guarantee is issued by Siemens Ireland Limited, Ballymoss Road, Sandyford Industrial Estate, Dublin 18 – The Republic of Ireland.

◆ Any other claims resulting out of or in connection with the device shall be excluded from this Guarantee. Nothing in this Guarantee shall attempt to limit or exclude a Customers Statutory Rights, nor the manufacturer's liability for death or personal injury resulting from its negligence.

◆ The duration of the Guarantee shall not be extended by services rendered under the terms of the Guarantee.

◆ Insofar as no Guarantee default exists, Siemens reserves the right to charge the customer for replacement or repair.

◆ The above provisions do not imply a change in the burden of proof to the detriment of the customer.

◆ To make a claim under this Guarantee, please contact the Siemens helpdesk on 1850 777 277. This number is also to be found in the accompanying user guide.

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