PCTV Systems
w-lantv 50n

PCTV Systems – w-lantv 50n

User's Guide

GB/US November 2009

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General Information

Safety Information

Please read and follow these instructions for your own safety, and to ensure that your device functions properly.

Power Cable and Plug

Please be sure to follow the following instructions in order to prevent the device from malfunctioning and to prevent electrical shock, fires, and injuries:

- You need to remove the power plug to completely disconnect the power.
- When disconnecting the power to your device, always unplug it by pulling the plug itself and not the cable.
- Don't ever plug in or unplug the power cable with wet hands.
- Keep the power cable away from heaters and radiators.
- Never put heavy objects on the power cable.
- Don't try to repair the power cable yourself or to modify it in any way, shape, or form.
- Regularly clean off the dust, dirt, etc. from the plug.
- If you drop the device or damage it in any fashion, disconnect the power plug.
- If the device produces smoke, strange smells, or noises disconnect the power plug. Contact your dealer immediately.
- During a thunderstorm, do not connect or disconnect the antenna or data transmission lines.

Where Not to Install the Device

Do not install the device in any of the following locations:

- In direct sunlight, next to radiators or other heat sources or in vehicles parked in direct sunlight with all the windows rolled up and the doors closed.
- Locations with extremely high temperatures (95°F or greater) or levels of humidity (90% or greater).
- Very dusty or sandy locations.
- Locations where there are vibrations, shaking or slanted surfaces underneath. This could damage the components in the device.
- On flammable surfaces such as cloth-covered tables.

- Keep the device away from flower vases, bathtubs, sinks, etc., and from locations where the device is exposed to precipitation. The device may be severely damaged if any liquid enters it.

Problems with Other Devices

- Set up the device in a horizontal position and do not place any heavy objects on it.
- Do not place the device on an amplifier or any other device that gives off heat.

Housing and Internal Components

- Never remove or open any part of the housing and do not try to perform any repairs yourself. Any maintenance or repair work should be done by a qualified repair person.
- Keep fingers and objects away from the inside of the device.
  It is dangerous to touch any of the components inside the device. Doing so may injure you and damage the device.
- Do not place any foreign objects on the device.
- The device should only be cleaned with a soft, dry, anti-static cloth.

Condensation

Condensation may develop in the device in the following circumstances:

- Right after a nearby heater or radiator has been turned on.
- In a very humid or steam-filled room.
- If the device has been moved from a cold location to a warm one.

Condensation in the device may cause it to malfunction. In this case, turn off the device and wait around 1 hour until the condensation has evaporated. Then you can use it again.

Non-Use

- If you are not planning on using the device for a long period of time, you should unplug it from the power socket.

Accessories

- Use only the accessories included with or recommended for the device in order to minimize the risk of fire, electrical shock or interference.

- CAUTION: the w-lan**tv** Access Point may be used only with the mains adaptor supplied.

CE Conformity Statement

PCTV Systems S.à r.l. hereby declares that this TV reception equipment complies with the fundamental requirements and other relevant terms and conditions of EC directive number 2004/108/EEC.

The CE declaration of conformity and identical construction for this product can be downloaded from http://www.pctvsystems.com/compliance.

Possible changes or additions which could no longer be included in this user guide are described in the readme file or on the PCTV Systems Internet site at http://www.pctvsystems.com/support.

Disposal and Recycling

Do not dispose of electric components in the garbage. Either return defective or unwanted devices to the retailer or take them to an appropriate recycling station!

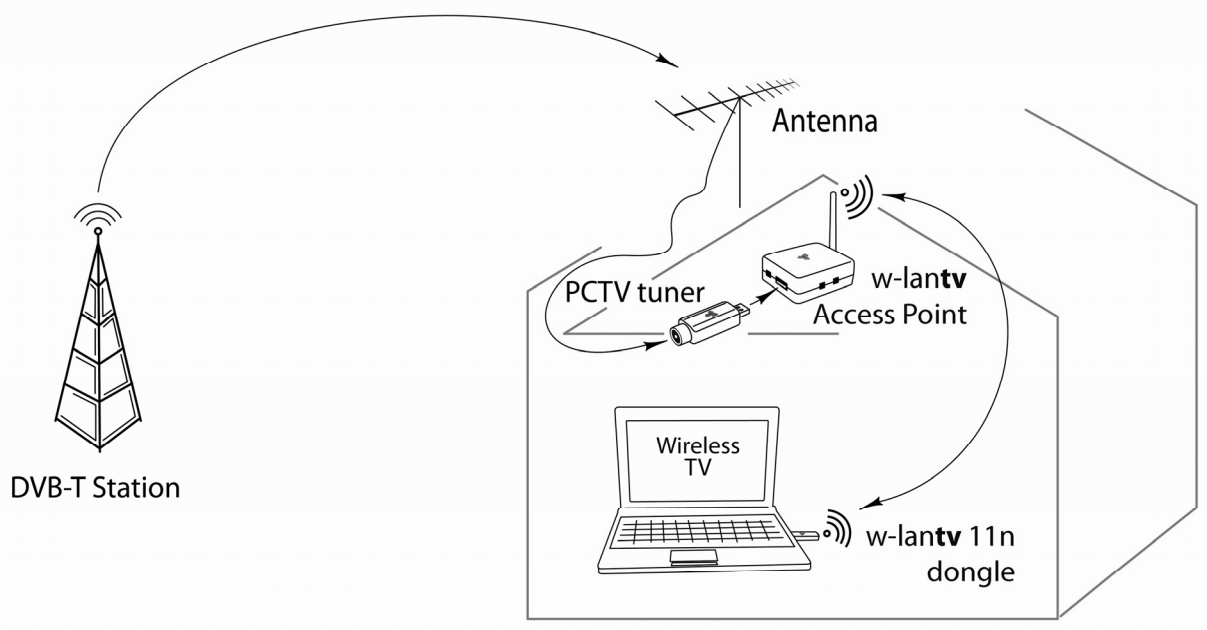
Overview

Welcome to the w-lantv 50n by PCTV Systems

Dear customer,

We would like to thank you for choosing a PCTV Systems product. You have made an excellent decision.

This state-of-the-art solution enables you to watch wireless TV anywhere within your wireless network.



The w-lan**tv** 50n functions as follows:

The w-lan**tv** Access Point establishes a connection between the certified PCTV Tuner Hardware connected to it and one PC in your wireless network. In addition to that the w-lan**tv** Access Point streams the DVB-T signal over the wireless network to the PC.

This means for you, that you can install the certified PCTV Tuner Hardware in the location with best DVB-T reception of your house.

This way you can watch DVB-T even in areas of your home where you normally do not receive DVB-T or the signal is poor.

The w-lan**tv** 50n is optimized for use with the PCTV Systems application TVCenter (Version 6.2.1.). This way it is ensured you will experience high-quality wireless TV.
Alternatively, you can also use Microsoft Windows Media Center to watch wireless TV.

The quick and user-friendly installation and setting up of the w-lan**tv** 50n completes our concept of wireless TV.

We hope you have lots of fun with your new product!
Your PCTV Systems Team

The Components

w-lan**tv** 50n by PCTV Systems consists of the following components:

Hardware

The w-lantv Access Point – AP 50n

Establishes the connection between the certified PCTV Tuner Hardware and one PC within your wireless network and streams the DVB-T signal.
For further details, please refer to the chapter The w-lan**tv** Access Point.

The w-lantv USB Stick – UD 50n (11n Dongle)

Ensures an adequate data transfer rate for the streamed DVB-T signal.
For further details, please refer to the chapter
The w-lan**tv** USB Stick (11n Dongle).

Software

The w-lantv Tool

Enables the PC you use for watching TV to detect and identify the certified PCTV Tuner Hardware connected to the w-lan**tv** Access Point and access the streamed DVB-T signal.
For further details, please refer to the chapter The w-lan**tv** Tool.

The web-based Configuration Utility

Helps you configure and set-up the w-lan**tv** Access Point and the w-lan**tv** network.
For further details, please refer to the chapter
The web-based Configuration Utility.

TVCenter

Besides watching TV, the application also offers you the possibility to timeshift and schedule recordings. This way you will not miss a minute of your favorite TV show.
For further details, please refer to the TVCenter Manual. You can open the manual under:
Start > Programs > PCTV Systems > Documentation

The Hardware

The w-lantv Access Point

Inputs and Buttons– Front Side

- **Input for Certified PCTV Tuners only**
  here you can connect the certified PCTV Tuner Hardware.

- **Reset-Button**
  The **Reset**-Button has two functions: to reboot the w-lan**tv** Access Point or to restore it to factory settings.

  1. To reboot the w-lan**tv** Access Point, briefly press the **Reset**-button.
  For further details, refer to the chapter: Reboot the w-lan**tv** Access Point.

  2. To restore to factory settings, press the **Reset**-button for more than ten

seconds.
For further details, refer to the chapter: Restore to Factory Settings.

- **WPS-Button**
  Press the **WPS**-button to easily connect to a secured WPS-compatible wireless network.

  For further details, refer to the chapter: Use the WPS-Function.

Inputs – Rear Side

- **Ethernet Input**
  if you want to use the w-lan**tv** Access Point over a wired network, connect the Ethernet-cable here.

- **Power Supply Unit Input**
  make sure to use the w-lan**tv** Access Point only with the supplied Power Supply Unit.

LEDs

- **Ready-LED**
  lits green - after the w-lan**tv** Access Point started to operate and means that the firmware was uploaded successfully and the device is ready for use.

- **WPS-LED**
  blinks red – after the **WPS**-button was pressed and while the w-lan**tv** Access Point waits for the response of the WPS-compatible network.
  lits green – when a WPS-connection was successfully established.

The w-lantv Access Point Power Supply Unit

*The w-lan**tv** Access Point may only be used with the provided power supply unit.*

The Power Supply Unit is delivered with two interchangeable plugs: an euro-plug and a British three-pin plug.

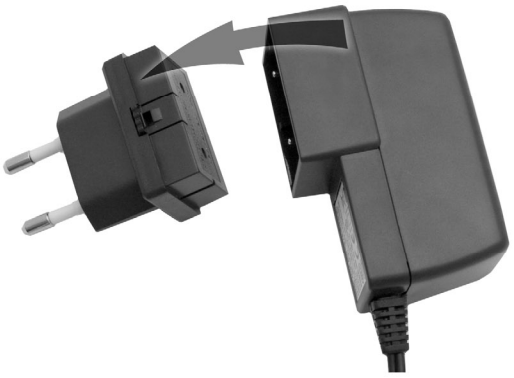
Euro-plug

British three-pin plug

Depending on your location you have to insert the corresponding plug into the Power Supply Unit.

Changing the plug

To change the plug first press on the little button on the side of the Power Supply Unit (see image) and while keeping the button pressed pull the plug towards you. Now you can insert the other plug.



When inserting the plug, make sure to place it correctly.

The w-lantv USB Stick (11n Dongle)

The supplied w-lan**tv** USB Stick supports both the new wireless network standard
IEEE 802.11n and WPS functionality.

Using the supplied w-lan**tv** 11n Dongle ensures the needed data transfer rate for streaming the DVB-T signal to the PC and enables you to activate the recommended encryption type: WPA-PSK/WPA2-PSK Mixed.

The Software

The w-lantv Tool

The w-lan**tv** Tool is a software that runs in the background. It facilitates watching TV on your PC. Its main purpose is to:

- to detect the certified PCTV Tuner Hardware connected to the w-lan**tv** Access Point
- to access the streamed DVB-T signal

In addition to that, you can use this tool to access the web-based configuration utility of the w-lan**tv** Access Point. For further details, refer to the chapter: Open the Configuration Utility and Login.

An icon in the taskbar shows the tool is running.

*The w-lan**tv** Tool is automatically installed during the installation of TVCenter.*

Launching the w-lantv Tool

To start the w-lan**tv** Tool select the option **w-lantv** under:
Start > Programs > PCTV Systems > Tools

You will now see the w-lan**tv** icon in the taskbar.

*After the first manual start, the w-lan**tv** tool is by default set to start with Windows.*

The w-lantv Icons

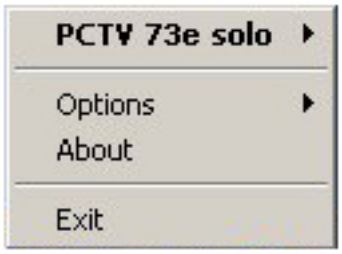
The red w-lantv icon shows either there was no certified PCTV Tuner Hardware detected or there is no connection between the PC and the w-lan**tv** Access Point.

The green w-lantv **icon** shows the certified PCTV Tuner Hardware was detected and the connection between the PC and the w-lan**tv** Access Point is established.

The Context Menu

*To be able to access all options of the context menu an ad-hoc connection between the w-lan**tv** Access Point and the PC has to be established first.*

To open the context menu, click on the green w-lan**tv** icon in the taskbar.
The four available menu items are:



Certified PCTV Tuner Hardware (in this case PCTV 73e solo)

This menu-item is available only if a certified PCTV Tuner Hardware is connected to the w-lan**tv** Access Point and the PC detected the certified PCTV Tuner Hardware.

Following sub-menu items are available:

Disconnect

If you select this item, the connection to the certified PCTV Tuner Hardware will be disabled.
Is the connection to the certified PCTV Tuner Hardware disabled this menu option changes to **Connect**.

Settings

If you select this item, the web-based configuration utility of the w-lan**tv** Access Point will be launched.

For further details regarding the web-based configuration utility, please refer to the chapter The web-based Configuration Utility.

Options

Following sub-menu items are available:

Language

You can set the language of the w-lan**tv** tool.

Start with Windows

After the first manual start of the tool, this option is activated by default.

When this option is checked, the w-lan**tv** Tool will automatically start, with Windows.

If you don't want the w-lan**tv** Tool to automatically start with Windows, click on this menu-item to uncheck the option.

About

Selecting this menu-item, you will get important information about the w-lan**tv** 50n, like the installed firmware or software.

You will need this information if you ever have to contact the PCTV Systems Customer Support.

Exit

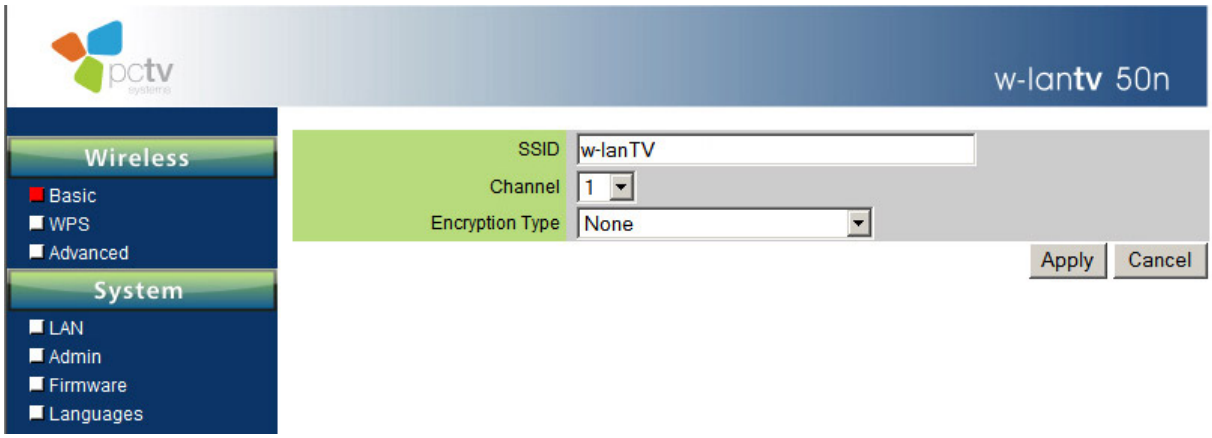
Selecting this option will close the w-lan**tv** Tool.

The web-based Configuration Utility – an Overview

The web-based configuration utility offers you the possibility to configure the w-lan**tv** Access Point according to your needs.

To be able to use the Configuration Utility an HTML browser has to be installed on your PC.

When opened, the Configuration Utility looks like this:



For further details on how to open the Configuration Utility, please refer to the chapter: How to open the web-based Configuration Utility.

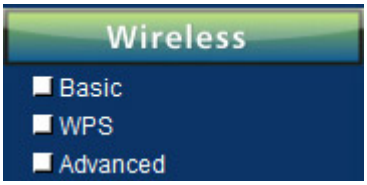
Important

*Changes you perform in the configuration of the w-lan**tv** Access Point might also affect an existing network connection. In this case, you will have to set up the affected network again.*

*If, after changing the configuration of the w-lan**tv** Access Point you are not able any longer to access it, we recommend you to restore the w-lan**tv** Access Point to factory settings. This way the device will have the same settings like at delivery.*

The Wireless-Menu

This menu offers you the following configuration possibilities:



Basic

Select this menu-item if you want to:

- change the SSID of the w-lan**tv** Access Point,
- change the broadcast channel
- secure the w-lan**tv** Network

WPS

This menu-item offers you the possibility to:

- Enable or disable the WPS function of the w-lan**tv** Access Point
- Generate a new PIN for WPS-usage
- Add a wireless station

Advanced

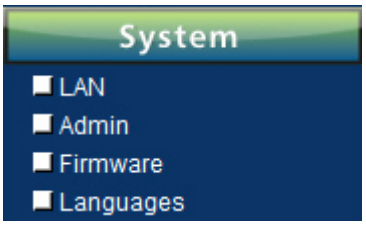
This menu-item offers you the possibility to:

- Enable or disable the WLAN function of the Access Point
- To broadcast or not the SSID
- Change the Channel Width
- Enable or disable the ShortGI

*To confirm you changes your have to click on the **Apply**-button.*
*Please note that any change you perform is followed by an automatically restart of the w-lan**tv** Access Point.*

The System-Menu

This menu offers you the following configuration possibilities:



LAN

This menu-item offers you the possibility to:

- Change the IP-settings and the Address range
- Change the subnet mask
- Enable or disable the DHCP server

Admin

This menu-item offers you the possibility to:

- Change the name of the w-lan**tv** Access Point
- Change the data needed to login to the Configuration Utility

Firmware

This menu-item offers you the possibility to:

- Update the firmware of the w-lan**tv** Access Point
- Restore the settings of the w-lan**tv** Access Point to the factory default settings
- Reboot the w-lan**tv** Access Point

Language

Select this menu-item if you want to change the language of the configuration utility.

By default the language of the Configuration Utility is set to **English**.

*To confirm you changes your have to click on the **Apply**-button.*
*Please note that any change you perform is followed by an automatically restart of the w-lan**tv** Access Point.*

TVCenter

For further information regarding the TVCenter software please refer to the TVCenter manual.

To open the TVCenter manual go to:
Start > Programs > PCTV Systems > Documentation> TVCenter Manual

Setting Up your w-lantv 50n

You have two possibilities to set up, install, and use the w-lan**tv** 50n:

- via an ad-hoc wireless network connection (recommended)
- via your home network (only for advanced network users)

Via an ad-hoc Wireless Network Connection

This is the easiest and fastest way to install your w-lan**tv** 50n and then watch wireless TV on your PC.

For a successful installation, we recommend the **following procedure**:

1. Installing TVCenter
2. Installing the w-lan**tv** 50n USB Stick (11n Dongle)
3. Connecting the certified PCTV Tuner Hardware to the w-lan**tv** Access Point
4. Installing the w-lan**tv** Access Point
5. Setting up the wireless w-lan**tv** Network
6. Watching TV

Each step will be explained in detail in the following chapters.

1. Installing the TVCenter Application

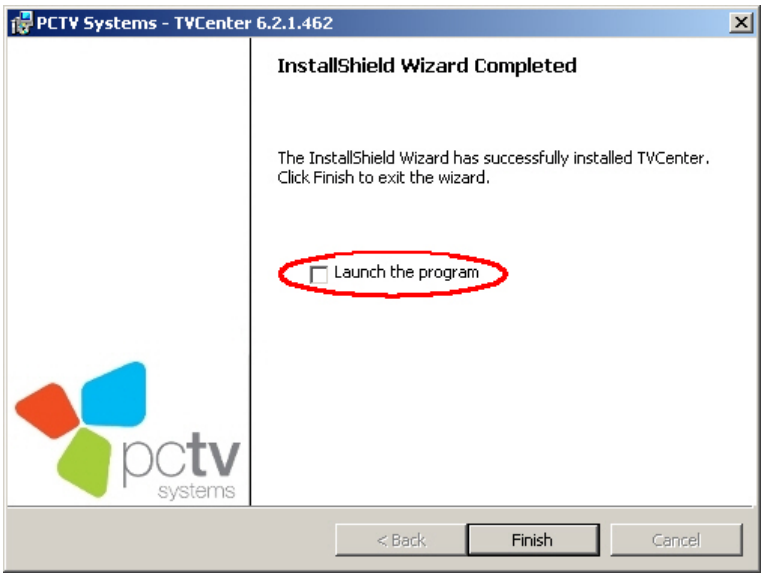
This application enables you to watch on your PC the DVB-T signal streamed by the w-lan**tv** Access Point.

You will need administrator rights to install the software.
In order to use the applications user rights are sufficient.

To install the application please follow these simple steps:

- Insert the installation disc into the corresponding drive of your PC.
- From the automatically opened Launcher choose the option: **TVCenter**.

- Follow the instructions on the screen until the installation is completed. You will not notice, but in the background a virtual USB hub -necessary for the w-lan**tv** 50n usage- will be installed as well during the TVCenter installation.
- Before finishing the installation we recommend you to make sure the option, **Launch the program** is not checked.



- You can now remove the installation disc from the drive.

After installation, if you are prompted to restart your computer, please do so. This restart needs to be done in order for the software to function properly.

2. Installing the w-lantv 50n (11n Dongle)

For the installation of the w-lan**tv** 11n Dongle the installation disc is no longer required. During the TVCenter installation, all needed drivers have been already copied onto the hard-drive of your PC.

- Plug the w-lan**tv** 11n Dongle into a free USB-port of your PC.
- If the "Add new hardware" dialog window appears during installation, press Cancel.
- If installation instructions should appear on the screen, follow the instructions until the installation is completed.

*After installation, if you are prompted to restart your computer, please do so. This restart needs to be done in order for the w-lan**tv** 11n Dongle to function properly.*

This is how you can check if the w-lan**tv** 11n Dongle was installed successfully:

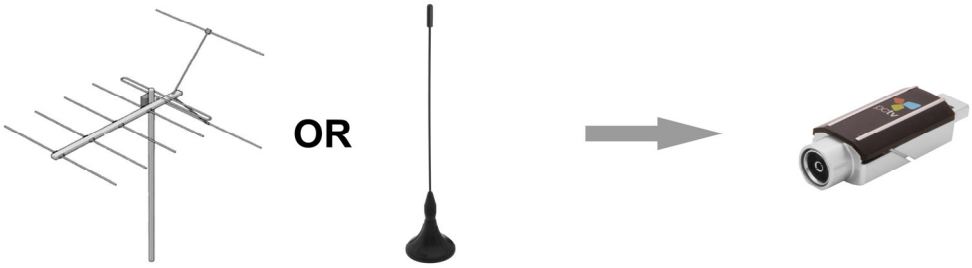
- Open the Device Manager

  Opening the Device Manager depends on the operating system installed on your PC.
- Go to: **Network adapters**
- In the list you will see the following entry:
  Realtek RTL8191SU Wireless LAN 802.11n USB 2.0 Network Adapter

  Depending on the version of your product, the name of the w-lantv 11n Dongle may vary.

3. Connecting the Certified PCTV Tuner Hardware

- Connect an external rooftop antenna or the provided rod antenna to the antenna input of your certified PCTV Tuner Hardware.



If you use a rod antenna, position it as high and as close to the window as possible. Reception depends on your location and can be impaired by steel-reinforced walls as well as tall neighboring buildings. In this type of environment, an external/roof antenna is required. Please connect the certified PCTV Tuner Hardware to your rooftop antenna using a double shielded antenna cable in order to get the best possible signal quality
In Great Britain, in most cases indoor reception with the provided rod antenna will not be possible.
Mobile reception of DVB-T, e.g., in a car or train, is generally not possible.
To avoid possible damage from the magnetic field surrounding the antenna feet, maintain a sufficient distance from any components that are sensitive to magnetic forces.

- Connect your certified PCTV Tuner Hardware to the **For Certified PCTV Tuner only** connector of the w-lan**tv** Access Point.

4. Installing the w-lantv Access Point

- Connect the w-lan**tv** Access Point to a wall socket using the provided power supply unit.

Important:

*The w-lan**tv** Access Point may only be used with the provided power supply unit.*

- The w-lan**tv** Access Point starts automatically.
- Wait until the Ready LED lits green.

5. Setting up the wireless w-lantv Network

Important:
*If another WLAN adapter is already installed on your computer, make sure to establish the network connection via the supplied w-lan**tv** 11n Dongle and not the one already installed on your PC. This way it is ensured that the w-lan connection is optimized for w-lan**tv** streaming.*

The process of setting up a wireless network is different from operating system to operating system.
Please jump to the paragraph describing this process under the operating system installed on your PC.

Under Windows 7

- Open the **Connect to a Network** window by either clicking on the **Connect to a Network** icon in the taskbar or by selecting the option **Connect to a Network** under: ***Control Panel > Network and Internet > Network and Sharing Center***.
- Refresh the network list.
- If on your PC a WLAN adapter is already installed, scroll to the new added **Wireless Network Connection.** This way you make sure to use the w-lan**tv** 11n Dongle for establishing the connection.
- In the section of the new added Wireless Network Connection, select the unsecured network with the SSID: "**w-lantv**".

  *If the operating system on your PC should point out that the "w-lan**tv**" network is unsecured connect anyway. You can secure the "w-lan**tv**" network at any time after installation. For further details, please refer to the chapter Securing the w-lan**tv** Network.*
- Check the option: **Automatically Connect.**
- Click on the **Connect**-button to establish the connection.

*Make sure the network connection is established via the supplied w-lan**tv** 11n Dongle. Only this way it is ensured that you can later access the internet via your WLAN router as you are used to.*

For further details, please refer to the Windows 7 help.

Under Windows Vista

- Open the **Connect to Network** window by either clicking on the icon in the taskbar or by right-clicking on the **Network**-icon on the desktop.
- Refresh the network list.
- If on your PC a WLAN adapter is already installed, scroll to the new added **Wireless Network Connection.** This way you make sure to use the w-lan**tv** 11n Dongle for establishing the connection.
- Connect to the unsecured network with the SSID: "**w-lantv**"

*If the operating system on your PC should point out that the "w-lan**tv**" network is unsecured connect anyway. You can secure the "w-lan**tv**" network at any time after installation. For further details, please refer to the chapter Securing the w-lan**tv** Network.*

- If you are asked if you want to use WPS or enter the network key or passphrase, please choose to enter the network key or passphrase.
- Before finishing the setup we recommend you to check the options: **Save connection** and **Automatically connect**.

*Make sure the network connection is established via the supplied w-lan**tv** 11n Dongle. Only this way it is ensured that you can later access the internet via your WLAN router as you are used to.*

For further details, please refer to the Windows Vista help.

Under Windows XP

- Open the **Wireless Network Connection** window either by clicking on the icon in the taskbar or by selecting the option: **Wireless Network Connection** under: ***Start > Settings > Network Connections.***
- If on your PC a WLAN adapter is already installed, make sure to select from the **Network Connections** window the wireless network connection via the delivered 11n Dongle (*Realtek RTL8191SU Wireless LAN 802.11n USB 2.0 Network Adapter*) to establish the connection.
- Refresh the network list.
- Connect to the unsecured network with the SSID: "**w-lantv**"

*If the operating system on your PC should point out that the "w-lan**tv**" network is unsecured connect anyway. You can secure the "w-lan**tv**" network at any time after installation. For further details, please refer to the chapter Securing the w-lan**tv** Network.*

- Before finishing the setup we recommend you to check the options: **Save connection** and **Automatically connect**.

*Make sure the network connection is established via the supplied w-lan**tv** 11n Dongle. Only this way it is ensured that you can later access the internet via your WLAN router as you are used to.*

For further details, please refer to the Windows XP help.

6. Watching TV

You are one step away from watching wireless TV on you PC.

To do so, please follow the instructions below:

- Manually start the **w-lantv** Tool under: **Start > Programs > PCTV Systems > Tools > w-lantv.** In the taskbar of your PC the red w-lan**tv** icon is visible.
- A connection between the PC and the certified PCTV Tuner Hardware will now be established. This process might take a few seconds.
- When the connection is established, the green w-lan**tv** icon is visible in the taskbar of your PC and the certified PCTV Tuner Hardware driver is being installed.
- Launch the TVCenter application by selecting the option: **TVCenter** under: ***Start > Programs > PCTV Systems.***
- The **Setup Wizard** starts to help you set up the certified PCTV Tuner Hardware and run the first channel scan.

- Follow the instructions on the screen until the wizard is complete.

For the channel scan to be accurate, make sure to choose the correct location when prompted.

- When the Setup Wizard was completed successfully, TVCenter opens and displays the first channel that was found during the channel scan.

For further details, please, refer to the TVCenter help or user manual.

Via your home network

*Please set up and use the w-lan**tv** 50n via your home network only if you are an experienced network user.*

The w-lan**tv** Access Point can be also used as a normal network client so that you can integrate it into your existing home network.
To do so, first you have to establish an ad-hoc network connection between the w-lan**tv** Access Point and your PC so that you can change the configuration of the w-lan**tv** Access Point.

Since there are many network configurations possible, we will describe the most common and simplest way to integrate the w-lan**tv** Access Point into your existing home network that is: to connect the w-lan**tv** Access Point to your router via an Ethernet cable. Using an Ethernet cable to connect the w-lan**tv** Access Point to the router ensures the needed data transfer rate for streaming a DVB-T signal.

For a successful installation, we recommend the following procedure:

*If you have already established an ad-hoc wireless connection between the w-lan**tv** Access Point and your PC and you have used w-lan**tv** to watch TV, please jump to step 7: Changing the w-lan**tv** Access Point configuration.*

1. Installing TVCenter
2. Installing the w-lan**tv** 50n USB Stick (11n Dongle)
3. Connecting the certified PCTV Tuner Hardware to the w-lan**tv** Access Point
4. Installing the w-lan**tv** Access Point
5. Setting up an ad-hoc connection between the Access Point and the PC
6. Launch the w-lan**tv** Tool
7. Changing the w-lan**tv** Access Point configuration
8. Connecting the w-lan**tv** Access Point to the Router
9. Disabling the WLAN-function of the w-lan**tv** Access Point (optional)
10. Setting up your home Network
11. Watching TV

Each step will be explained in detail in the following chapters.

1. Installing the TVCenter Application

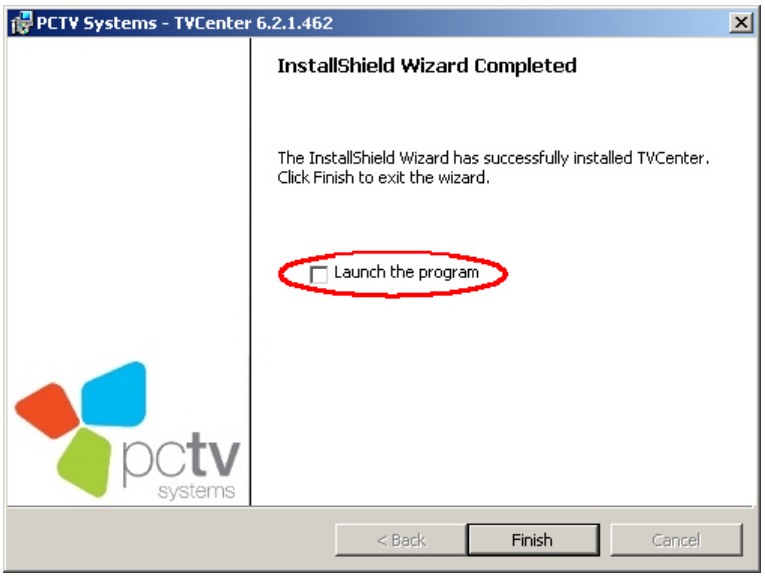
This application enables you to watch on your PC the DVB-T signal streamed by the w-lan**tv** Access Point.

You will need administrator rights to install the software.
In order to use the applications user rights are sufficient.

To install the application please follow these simple steps:

- Insert the installation disc into the corresponding drive of your PC.
- From the automatically opened Launcher choose the option: **TVCenter**.

- Follow the instructions on the screen until the installation is completed. You will not notice, but in the background a virtual USB hub -necessary for the w-lan**tv** 50n usage- will be installed as well during the TVCenter installation.
- Before finishing the installation we recommend you to make sure the option, **Launch the program** is not checked.



- You can now remove the installation disc from the drive.

After installation, if you are prompted to restart your computer, please do so. This restart needs to be done in order for the software to function properly.

2. Installing the w-lantv 50n (11n Dongle)

For the installation of the w-lan**tv** 11n Dongle the installation disc is no longer required. During the TVCenter installation, all needed drivers have been already copied onto the hard-drive of your PC.

- Plug the w-lan**tv** 11n Dongle into a free USB-port of your PC.
- If the "Add new hardware" dialog window appears during installation, press Cancel.
- If installation instructions should appear on the screen, follow the instructions until the installation is completed.

*After installation, if you are prompted to restart your computer, please do so. This restart needs to be done in order for the w-lan**tv** 11n Dongle to function properly.*

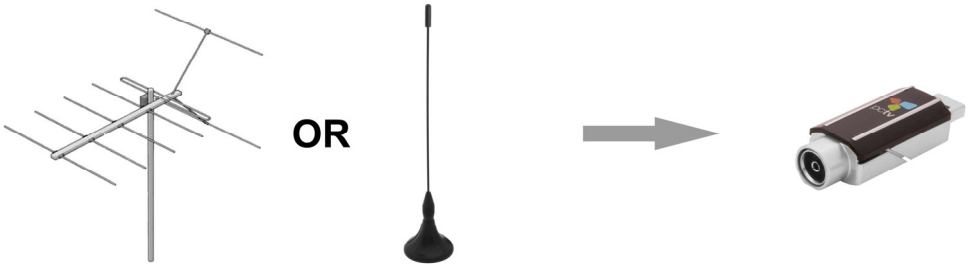
This is how you can check if the w-lan**tv** 11n Dongle was installed successfully:

- Open the Device Manager
  Note: *Opening the Device Manager depends on the operating system installed on your PC.*
- Go to: **Network adapters**

In the list you will see the following entry:
Realtek RTL8191SU Wireless LAN 802.11n USB 2.0 Network Adapter
Note: *depending on the version of your product, the name of the w-lan**tv** 11n Dongle may vary.*

3. Connecting the Certified PCTV Tuner Hardware

- Connect an external rooftop antenna or the provided rod antenna to the antenna input of your certified PCTV Tuner Hardware.



If you use a rod antenna, position it as high and as close to the window as possible. Reception depends on your location and can be impaired by steel-reinforced walls as well as tall neighboring buildings. In this type of environment, an external/roof antenna is required. Please connect the certified PCTV Tuner Hardware to your rooftop antenna using a double shielded antenna cable in order to get the best possible signal quality
In Great Britain, in most cases indoor reception with the provided rod antenna will not be possible.
Mobile reception of DVB-T, e.g., in a car or train, is generally not possible.
To avoid possible damage from the magnetic field surrounding the antenna feet, maintain a sufficient distance from any components that are sensitive to magnetic forces.

- Connect your certified PCTV Tuner Hardware to the **For Certified PCTV Tuner only** connector of the w-lan**tv** Access Point.

4. Installing the w-lantv Access Point

- Connect the w-lan**tv** Access Point to a wall socket using the provided power supply unit.

Important:

The w-lantv Access Point may only be used with the provided power supply unit.

- The w-lan**tv** Access Point starts automatically.
- Wait until the Ready LED lits green.

5. Setting up an ad-hoc Wireless Network Connection

- Open the **Wireless Network Connection** window.

*Depending on the operating system installed on your PC this window may have a different name and you may open it in several ways. For further details please refer to the section 5. Setting up the wireless w-lan**tv** network or the Windows help.*

- Choose the w-lan**tv** 11n Dongle for establishing the connection.
- Refresh the network list.
- Connect to the unsecured network with the SSID: "**w-lan**tv"

*If the operating system on your PC should point out that the "w-lan**tv**" network is unsecured connect anyway.*

6. Launch the w-lantv Tool

*If you have already started once the w-lan**tv** tool manually, please jump to the next step.*

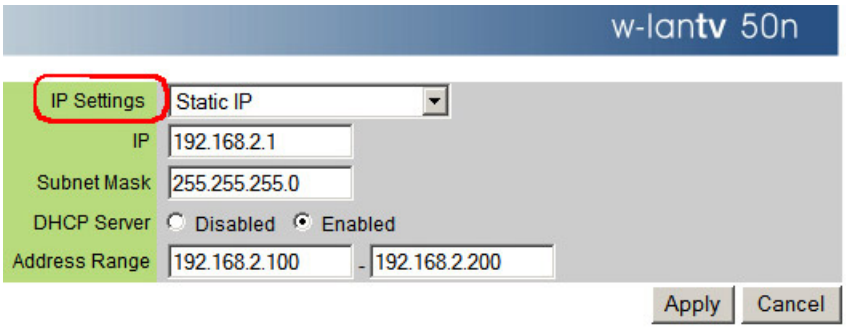
- Manually start the w-lan**tv** Tool under:
  Start > Programs > PCTV Systems > Tools > w-lantv.
  In the taskbar of your PC the red w-lan**tv** icon is visible.
- A connection between the PC and the certified PCTV Tuner Hardware will now be established. This process might take a few seconds.
- When the connection is established, the green w-lan**tv** icon is visible in the taskbar of your PC and the certified PCTV Tuner Hardware driver is being installed.

7. Changing the w-lantv Access Point Configuration

Important:
*For the further steps of the installation procedure, the certified PCTV Tuner Hardware has to be connected to the w-lan**tv** Access Point.*

To be able to change the configuration of the w-lan**tv** Access Point first you have to launch the w-lan**tv** Access Point web-based configuration utility.

- Open an HTML browser and type into the address-filed the following: http://192.168.2.1
  Alternatively you can click on the green w-lan**tv** icon in the taskbar and from the context-menu select:
  Certified PCTV Tuner Hardware (e.g. PCTV 73e solo) > Settings
- Into the now open login dialog type the following:
  User: admin
  Password: admin
- From the **System**-menu select: **LAN**
- From the **IP Settings** drop-down menu select the option**: DHCP Automatically set.** (the default setting is: **Static IP**)



- Confirm your changes by clicking the **Apply**-button
- The w-lan**tv** Access Point will be restarted.
- The former established ad-hoc wireless network connection will be disabled and the
  w-lan**tv** icon in the taskbar will change to red.
- We recommend you to remove the w-lan**tv** 11n Dongle from the PC.

8. Connecting the w-lantv Access Point to the Router

- Use an Ethernet cable to connect the w-lan**tv** Access Point to the router of your existing home network.

*We recommend connecting the w-lan**tv** Access Point to the router via an Ethernet cable to ensure the needed data transfer rate for streaming DVB-T signal over your home network.*

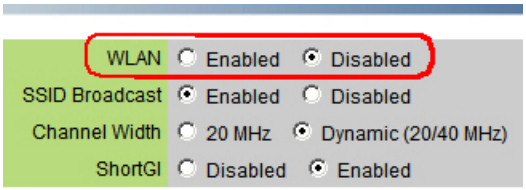
- When the connection was established successfully, the w-lan**tv** icon in the taskbar will change from red to green.

9. Disabling the WLAN-Function of the w-lantv Access Point (optional)

Now that the w-lan**tv** Access Point is connected via Ethernet to your router, you might also want to disable its WLAN function. This way you can minimize signal disturbances, which could affect your wireless home network.

To do so you first have to open the w-lan**tv** Access Point web-based configuration utility.

- Click on the green w-lan**tv** icon in the taskbar and from the context-menu select: ***Certified PCTV Tuner Hardware (e.g. PCTV 73e solo) > Settings***
- Into the now open login dialog type the following:
  User: admin
  Password: admin
- From the **Wireless**-menu select: **Advanced**
- Disable the **WLAN function** of the w-lan**tv** Access Point**.**



- Confirm your changes by clicking the **Apply**-button.
- The w-lan**tv** Access Point will be restarted.

10. Setting up your Home Network

Make sure your usual connection between the router and the PC is established. If this is not the case, please establish the connection as usually.

11. Watching TV

You are one step away from watching wireless TV on you PC.

To do so, please follow the instructions below:

- Launch the TVCenter application by selecting the option: **TVCenter** under: ***Start > Programs > PCTV Systems.***
- If you start TVCenter for the first time, the **Setup Wizard** starts to help you set up the certified PCTV Tuner Hardware and run the first channel scan.

- Follow the instructions on the screen until the wizard is complete.

For the channel scan to be accurate, make sure to choose the correct location when prompted.

- When the Setup Wizard was completed successfully, TVCenter opens and displays the first channel that was found during the channel scan.

For further details, please, refer to the TVCenter help or user manual.

Important:
*Should you experience problems while trying to integrate the w-lan**tv** Access Point into your existing home network, we recommend you to reset the w-lan**tv** Access Point to factory settings. This way, you can establish again the recommended ad-hoc connection between the w-lan**tv** Access Point and your PC.*

How To…

Open the Configuration Utility and Login

*The w-lan**tv** Access Point has to be connected to the PC to be able to open the Configuration Utility. We recommend an ad-hoc connection.*

There are two possible ways to open the configuration utility.

Via the w-lantv Tool

*To be able to open the configuration utility via the w-lan**tv** Tool, the w-lan**tv** Tool must be running and a certified PCTV Tuner Hardware must be connected to the w-lan**tv** Access Point.*

- Click on the green w-lan**tv** icon in the taskbar
- From the context menu, select the option: certified PCTV Tuner Hardware (e.g. PCTV 73e solo)
- Now select the option: **Settings**
- In the now open login dialog type the required data
- The configuration utility now opens

Via a HTML browser

*You can use this way to open the configuration utility only if the w-lan**tv** Access Point is ad-hoc connected to the PC and you did not change the IP of the w-lan**tv** Access Point.*

- Open the HTML browser installed on your PC.
- In the address-field of the browser, type the following data: http://192.168.2.1
- In the now open login dialog type the required data
- The configuration utility now opens

Login data - important

*Please note that at delivery and after you restore the w-lan**tv** Access Point to factory settings the data needed to log in is:*

***User name**: admin*
***Password**: admin*

Change the Language of the Configuration Utility

Make sure an ad-hoc connection between the w-lan**tv** Access Point and the PC exists

- Open the Configuration Utility and if needed log in.
- Go to: ***System > Languages***
- From the **Language** dropdown-menu select the language you prefer
- Confirm your settings by clicking the **Apply**-button.

Change the Login Data for the Configuration Utility

Make sure an ad-hoc connection between the w-lan**tv** Access Point and the PC exists

- Open the Configuration Utility and if needed log in.
- Go to: ***System > Admin***
- In the **New Password** field enter the password you would like to use
- Retype the password in the respective field
- Confirm your changes by clicking the **Apply**-button
- The w-lan**tv** Access Point will restart automatically.

Secure the w-lantv Network

Make sure an ad-hoc connection between the w-lan**tv** Access Point and the PC exists

- Open the Configuration Utility and if needed log in.
- Go to: ***Wireless > Basic***
- From the **Encryption Type** dropdown-menu select the encryption type you prefer.

We recommend you to select the encryption type:
WPA-PSK/WPA2-PSK Mixed *and check both WPA Cipher Suites:* ***TKIP*** *and* ***CCMP****.*
*To be sure the recommended encryption type is supported please use the delivered w-lan**tv** 11n Dongle.*

- Enter the further required data
- Confirm your changes by clicking the **Apply**-button
- The w-lan**tv** Access Point will restart automatically.

*This change affects any existing network connection to the w-lan**tv** Access Point. Please set up the network connection again.*

Use the WPS-Function

WPS or Wi-Fi Protected Setup is a standard for easy and secure establishment of a wireless home network.

With pressing one button, you can connect to a secured network without having to enter any passphrase.

Windows XP does not support the WPS-function.

If you use Windows Vista and want to use WPS, make sure Service Pack 1 or higher is installed on your PC.

The usage of WPS slightly differs depending on the operating system installed on your PC.
Here is how it works under Windows 7:

*This function is helpful only if the w-lan**tv** network is secured.*

Make sure the w-lan**tv** network is secured.

- Open the **Network Connection** window.
- Refresh the network list
- From the network list, select the **w-lantv** network
- Check the option: **Automatically Connect**
- Click the **Connect**-button
- The following dialog appears on the screen

- Now press the **WPS**-button on the w-lan**tv** Access Point
- The WPS-LED on the w-lan**tv** Access Point blinks red, while the connection is being established. This process may take up to two minutes.
- The WPS-LED constantly lits green, when the connection is established successfully.

Update the firmware of the w-lantv Access Point

In order to take advantage of the latest product improvements, you should regularly check the PCTV Systems Web site http://www.pctvsystems.com/support for the latest firmware updates.

To update your firmware, please do the following:

- From the PCTV Systems web site download the new firmware and unpack it if needed
- Make sure an ad-hoc connection between the w-lan**tv** Access Point and the PC exists
- Open the Configuration Utility and if needed login
- Go to: ***System > Firmware***
- Using the **Browse**-button navigate to the downloaded and unpacked new firmware-file and open it
- Click the **Upgrade**-button
- The w-lan**tv** Access Point will restart automatically

Important:
*Do not turn off the w-lan**tv** Access Points power supply while updating the firmware.*

Reboot the w-lantv Access Point

If the w-lan**tv** Access Point behaves unexpected, a reboot of the device might be useful.
After a reboot, the configurations of the w-lan**tv** Access Point remain the same.

You have two possibilities to perform a reboot:

1. Briefly press the **Reset**-button on the w-lan**tv** Access Point.

*If you want to use the **Reset**-button, a needle-shaped pen is required.*

2. Use the Configuration Utility. To do so, please follow the instructions below:

- Make sure an ad-hoc connection between the w-lan**tv** Access Point and the PC exists
- Open the Configuration Utility and if needed log in
- Go to: ***System > Firmware***
- Click on the **Reboot**-button
- The w-lan**tv** Access Point reboots automatically.

Restore to Factory Settings

You might want to restore the w-lan**tv** Access Point to factory settings if the changes you performed in the configuration utility do not allow you any longer to access the device or for example if you want to resell it.

Once you restore the w-lan**tv** Access Point to factory settings, all personal settings are lost.

You have two possibilities to perform a reboot:

1. Press the **Reset**-button on the w-lan**tv** Access Point for 10 seconds.

*If you want to use the **Reset**-button, a needle-shaped pen is required.*

2. Use the Configuration Utility. To do so, please follow the instructions below:

- Make sure an ad-hoc connection between the w-lan**tv** Access Point and the PC exists
- Open the Configuration Utility and if needed log in
- Go to: ***System > Firmware***
- Click on the **Restore default** –button
- The w-lan**tv** Access Point reboots automatically.

*This change affects any existing network connection to the w-lan**tv** Access Point. Please set up the network connection again.*

Tips

Checklist for wireless TV

Following requirements have to be met in order to be able to watch wireless TV on your PC.

1. TVCenter is successfully installed.
   You can find the application under: ***Start > Programs > PCTV Systems > TVCenter***

2. The Virtual USB Hub is successfully installed.
   You can check it under: ***Device Manager > System devices > Virtual USB Hub***

3. The w-lan**tv** 11n Dongle is plugged to your PC and successfully installed.
   You can check it under: ***Device Manager > Network adapters > 802.11n USB Wireless LAN Card***

4. The connection between the w-lan**tv** Access Point and your PC is established.
   In the ***Wireless Network Connection*** *window, you can check if your PC is connected to the "****w-lantv****" network.*
   *Also make sure the connection is established via the supplied w-lan****tv*** *11n Dongle and that the signal strength is at least "good".*

5. The w-lan**tv** Tool is running.
   *You can see the green w-lan****tv*** *icon* *in the taskbar.*

6. The certified PCTV Tuner Hardware is successfully installed.
   You can check it under: ***Device Manager > Sound, Video and Game Controllers > certified PCTV Tuner Hardware.***

Wireless Network Connection

- Try to place the w-lan**tv** Access Point in a central location, so that the signal disperses over a wide area of your home.
- Try to reduce interferences caused by home appliances, which might work on the same frequency as the w-lan**tv** Access Point.
- Make sure the signal strength of the wireless network connection is at least “good”.
- Try to keep in mind that obstacles such as: walls, steel-reinforced ceilings, glass fronts, etc. can influence “good" wireless network signal strength.
- We recommend you to secure your WLAN connection.

w-lantv 11n Dongle

- If the performances of the supplied 11n Dongle do not meet your expectations, try to change the position (vertical/horizontal) of the 11n Dongle. To do so, use the supplied USB extension-cable.

DVB-T Reception

- Make sure to provide the certified PCTV Tuner Hardware you are using with a stable DVB-T signal.
- Place the delivered rod antenna in the location of your home with the best DVB-T coverage.
- The usage of a rooftop antenna can improve the DVB-T reception.

Glossary

A

Ad-hoc network: an ad-hoc network allows wireless devices to directly communicate with each other. Wireless devices within range of each other can discover and communicate directly without involving central access points.

B

Broadcast channel: is the radio channel used by the WLAN to broadcast the data.

C

Client: A system (computer or program) in a network or on the Internet that requests files or services. The system (computer or program) that provides the files or services is called a server. The client can request a data transfer or a print job from the server.

D

Data rate: The data rate is also known as the bit rate. The bit rate measures how fast bits of data can be transferred over a medium in a given period of time. This rate is listed in bits per second (bps).

DHCP: Abbreviation for "Dynamic Host Configuration Protocol". Windows-Server software that assigns an IP address to each computer in a network (see also "IP Address")

E

Encryption: is the process of transforming information using an algorithm (called cipher) to make it unreadable to anyone except those possessing special knowledge, usually referred to as a key.

Ethernet: The most common type of local-area network. Each node (computer or server) in the network checks whether any other computer is transmitting data. It then waits for the other computers to finish with their transmissions before it starts its own transmission. (see also "LAN")

F

Firmware: Firmware is system software stored in ROM or Flash memory. Firmware is not deleted when the system has been turned off.

H

HTML: Abbreviation for "Hyper Text Markup Language". A document standard developed during the World Wide Web project that provides a simple logical structure for titles, headings, paragraphs, numbering, forms, tables and mathematical formulas as well as a language for defining hypertext links.

HTTP: Abbreviation for "Hyper Text Transfer Protocol". A standard mechanism used on the Internet to share documents between servers and clients.

I

IP Address: Abbreviation for "Internet Protocol". Every computer connected to the Internet receives a unique identification number that consists of four sections. This number is called an IP address. This allows other computers in the network to identify it, send data packets to it and to process data they have received from it. IP addresses make sure that the right data packets are sent to the right recipient via the right path.

L

LAN: Abbreviation for "Local-Area Network". A local network located in a building or on company premises that is based on private transmission media and equipment. Ethernet and Token Ring are common LAN technologies.

N

Netmask: A netmask is a mask used to divide an IP address into subnets and specify the networks available hosts

R

Router: Routers, also known as "Intermediate Systems (IS)", are linking elements that interconnect two or more subnetworks. In addition to acting as a bridge, routers can expand the boundaries of a network (number of nodes, physical extension). Routers also control data traffic by not forwarding defective data packets.

S

Short GI: is a guard intervals used for transmitting data. The purpose of a guard interval is to introduce immunity to propagation delays, echoes, and reflections to which digital data is normally very sensitive.
Short means the length of the guard interval is 400ns.

SSID: is the abbreviation of “Service set identifier” and it is a name that identifies a particular 802.11 wireless LAN. As the SSID displays to users, it normally consists of human-readable ASCII characters.

Streaming: The act of transferring compressed video and audio files over the Internet. Streaming does not download all the data at once, but downloads it in stages using a store-and-forward method. The data does not arrive as a continuous file, but is cached in the buffer, which can create delays at the start of transmission. The data can be transmitted live or it can be downloaded later. The computer receiving the data stream must have a program (player) installed on it to be able to decompress the data. Players are usually installed in browsers such as Internet Explorer. The speed and quality of the data depend heavily on how much bandwidth is available. In order to ensure smooth playback, the Internet connection should offer at least 300 Kbps in bandwidth. There are various file formats for audio and video streaming. The most popular formats are MP3, RealAudio and WMA.

Subnet: A subnet or subnetwork comprises the components of a network that have a partially-coinciding network address, but nevertheless a separate

subnetwork number. For example, a subnetwork can be defined on a network as all the devices whose IP addresses have the same prefix. For example, all the devices whose IP address begins with 100.100.100.xxx are a part of the same subnetwork.

W

WEP: is the abbreviation of Wired Equivalent Privacy and it is a deprecated algorithm to secure IEEE 802.11 wireless networks. Wireless networks broadcast messages using radio and are thus more susceptible to eavesdropping than wired networks. When introduced in 1997, WEP was intended to provide confidentiality comparable to that of a traditional wired network.

WLAN: Abbreviation for "Wireless Local Area Network". WLANs provide a Local Area Network (LAN) using radio instead of wires over a small area such as a home, office, or school. Most wireless LANs are based on the IEEE 802.11 standards

WLAN Access Point: A Wireless Access Point is an electronic device that functions as an interface between one wireless network and a computer network connected with cables.

WLAN Adapter: also known as a wireless adapter is an interface to a wireless network (WLAN). It is mainly used to connect a
computer to a Wireless Access Point (WLAN base station).

WPA: is the abbreviation of **Wi-Fi Protected Access** (**WPA** and **WPA2**) and is a certification program created by the Wi-Fi Alliance to indicate compliance with the security protocol created by the Wi-Fi Alliance to secure wireless computer networks. This protocol was created in response to several serious weaknesses researchers had found in the previous system, WEP (Wired Equivalent Privacy).

WPS: is a standard for easy and secure establishment of a wireless home network, created by the Wi-Fi Alliance. The goal of the WPS protocol is to simplify the process of configuring security on wireless networks, and allow home users who know little of wireless security and may be intimidated by the available security options to configure Wi-Fi Protected Access, which is supported by all Wi-Fi certified devices.