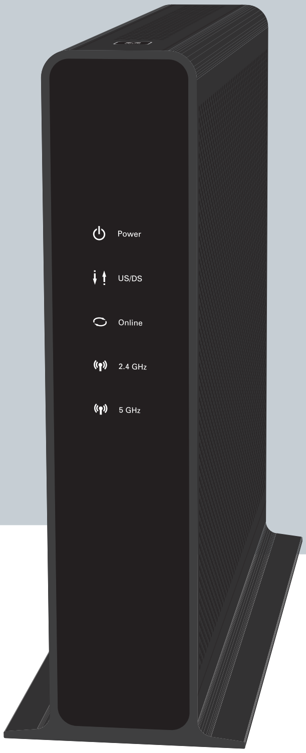
technicolor



# SETUP AND USER GUIDE

## MediaAccess TC8715D

# SAFETY INSTRUCTIONS AND REGULATORY NOTICES

*Before you start installation or use of this product, carefully read these instructions!*

*When using this product, always follow the basic safety precautions to reduce the risk of fire, electric shock and injury to persons, including the following:*

- Always install the product as described in the documentation that is included with your product.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use this product to report a gas leak in the vicinity of the leak.

## Directive

Unless express and prior approval by Technicolor in writing, you may not:

- Disassemble, de-compile, reverse engineer, trace or otherwise analyse the equipment, its content, operation, or functionality,

  or otherwise attempt to derive source code (or the underlying ideas, algorithms, structure or organization) from the equipment,

  or from any other information provided by Technicolor, except to the extent that this restriction is expressly prohibited by local law;
- Copy, rent, loan, re-sell, sub-license, or otherwise transfer or distribute the equipment to others;
- Modify, adapt or create a derivative work of the equipment;
- Remove from any copies of the equipment any product identification, copyright or other notices;
- Disseminate performance information or analysis (including, without limitation, benchmarks) from any source relating to the equipment.

Such acts not expressly approved by Technicolor will result in the loss of product warranty and may invalidate the user's authority to operate this equipment in accordance with FCC Rules.

Technicolor disclaims all responsibility in the event of use that does not comply with the present instructions.

## Safety instructions

### Climatic conditions

This product:

- Is intended for in-house stationary desktop use; the maximum ambient temperature may not exceed 40°C (104°F).
- Must not be mounted in a location exposed to direct or excessive solar and/or heat radiation.
- Must not be exposed to heat trap conditions and must not be subjected to water or condensation. Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.
- Must be installed in a Pollution Degree 2 environment (Environment where there is no pollution or only dry, nonconductive pollution).

### Cleaning

Unplug this product from the wall socket and computer before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

### Water and moisture

Do not use this product near water, for example near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool. Transition of the product from a cold environment to a hot one may cause condensation on some of its internal parts. Allow it to dry by itself before re-starting the product.

### Secure handling and disposal of used batteries

NOTE: Only use the battery qualified for this equipment.

Remember to dispose batteries properly according to local regulation, i.e. at a battery collection point. Batteries may not be disposed with domestic waste.

### Interface classifications

The external interfaces of the product are classified as follows:

- Phone: TNV circuit, not subjected to over voltages (TNV-2)
- Cable, MoCA, RF: TNV circuit subject to overvoltages (TNV-1)
- All other interface ports (e.g. Ethernet, USB, etc.), including the low voltage power input from the AC mains power supply: SELV circuits.

### Electrical powering

The powering of the product must adhere to the power specifications indicated on the marking labels.

### USB

The device is to be connected to an identified USB port complying with the requirements of a Limited Power Source.

### Accessibility

The plug on the power supply cord serves as disconnect device. Be sure that the power socket outlet you plug the power cord into is easily accessible and located as close to the equipment as possible.

### Overloading

Do not overload mains supply socket outlets and extension cords as this increases the risk of fire or electric shock.

### Servicing

To reduce the risk of electric shock, do not disassemble this product. None of its internal parts are user-replaceable; therefore, there is no reason to access the interior. Opening or removing covers may expose you to dangerous voltages. Incorrect reassembly could cause electric shock if the appliance is subsequently used.

If service or repair work is required, take it to a qualified service dealer.

### Damage requiring service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply or its plug are damaged.
- When the attached cords are damaged or frayed.
- If liquid has been spilled into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally.
- If the product has been dropped or damaged in any way.
- There are noticeable signs of overheating.
- If the product exhibits a distinct change in performance.

Immediately disconnect the product if you notice it giving off a smell of burning or smoke. Under no circumstances must you open the equipment yourself; you run the risk of electrocution.

## Regulatory information

You must install and use this device in strict accordance with the manufacturer's instructions as described in the user documentation that is included with your product.

Before you start installation or use of this product, carefully read the contents of this document for device specific constraints or rules that may apply in the country where you want to use this product.

In some situations or environments, the use of wireless devices may be restricted by the proprietor of the building or responsible representatives of the organization.

If you are uncertain of the policy that applies on the use of wireless equipment in a specific organization or environment (e.g. airports), you are encouraged to ask for authorization to use this device prior to turning on the equipment.

Technicolor is not responsible for any radio or television interference caused by unauthorized modification of the device, or the substitution or attachment of connecting cables and equipment other than specified by Technicolor. The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user.

Technicolor and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from failing to comply with these guidelines.

## North-America - United States of America

### Important safety instructions

- The cable distribution system should be grounded (earthed) in accordance with ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820,93, Grounding of outer Conductive Shield of a Coaxial Cable.
- Leave 5 to 8 cm (2 to 3 inches) around the product to ensure proper ventilation to it.
- Never push objects through the openings in this product.

### Federal Communications Commission (FCC) radio frequency interference statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

### RF-exposure statement

When the product is equipped with a wireless interface, then it becomes a mobile or fixed mounted modular transmitter and must have a separation distance of at least 20 cm (8 inches) between the antenna and the body of the user or nearby persons. In practice, this means that the user or nearby persons must have a distance of at least 20 cm (8 inches) from the modem and must not lean on the modem in case it is wall-mounted.

With a separation distance of 20 cm (8 inches) or more, the M(aximum) P(ermissible) E(xposure) limits are well above the potential this module is capable to produce.

For operation within 5.15 ~ 5.25GHz frequency range, it is restricted to indoor environment. This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

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

### Restricted frequency band

This product is equipped with an IEEE802.11b/IEEE802.11g/IEEE802.11n wireless transceiver and may only use channels 1 to 11 (2412 to 2462 MHz) on U.S.A. territory.

# SETUP AND USER GUIDE

## MediaAccess TC8715D

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Short Title: Setup and User Guide MediaAccess TC8715D

# About this Setup and User Guide

## In this Setup and User Guide

The goal of this Setup and User Guide is to show you:

- Set up your Gateway and local network
- Configure and use the main features of your Gateway.

For more advanced scenarios and features visit the documentation pages on www.technicolor.com.

## Used symbols

! The ***danger*** symbol indicates that there may be a possibility of physical injury.

! The ***warning*** symbol indicates that there may be a possibility of equipment damage.

! The ***caution*** symbol indicates that there may be a possibility of service interruption.

i The ***note*** symbol indicates that the text provides additional information about a topic.

## Terminology

Generally, the MediaAccess TC8715D will be referred to as Gateway in this Setup and User Guide.

## Typographical conventions

Following typographical convention is used throughout this manual:

- This sample text indicates a hyperlink to a Web site.

  Example: For more information, visit us at www.technicolor.com.

- This sample text indicates an internal link.

  Example: If you want to know more about guide, see *“About this Setup and User Guide” on page 1.*

- ***This sample text*** indicates an important content-related word.

  Example: To enter the network, you ***must*** authenticate yourself.

- **This sample text** indicates a GUI element (commands on menus and buttons, dialog box elements, file names, paths and folders).

  Example: On the **File** menu, click **Open** to open a file.

# 1 Getting started

## Introduction

This chapter gives you a brief overview of the main features and components of the Gateway. After this chapter we will start with the installation.

⚠ Do not connect any cables to the Gateway until instructed to do so.

## 1.1 Features at a glance

### Introduction

This section provides a brief overview of the main features of your Gateway.

### Superior wireless performance

The integrated IEEE 802.11n 2.4 GHz 3x3 and IEEE 802.11ac 5 GHz 3x3 wireless access points are optimized for high-speed video and data transfer over wireless.

Each access point has multiple wireless transmitters and receivers. This allows it to handle multiple data streams at the same time and boost the wireless transmission rate and data stream reliability.

### IPv6 Ready

Your Gateway is IPv6 ready. Internet Protocol version 6 (IPv6) is the next generation of Internet technologies aiming to effectively support the ever-expanding Internet usage and functionality, and also to address security concerns that exist in an IPv4 environment.

### Internet connection features

- ***Broadband access*** via the integrated DOCSIS 3.0 16x4 Cable Modem
- ***Parental control*** allows you to restrict access to specific websites, services or your network.
  For more information, see *"6.1 Parental control" on page 44*.
- The Gateway has an **integrated firewall** to protect you from malicious attacks.
  For more information, see *"6.2 Firewall" on page 52*.
- ***Advanced network tools*** like port forwarding, port triggering and DMZ.
  For more information, see *"7 Advanced configuration" on page 53*.

### Local networking features

- ***MoCA 2.0*** to interconnect your local MoCA devices (for example, your set-top box) via your coax network.
- ***Wireless access*** for your local network devices via the integrated IEEE 802.11b/g/n 2.4 GHz and 5 GHz wireless access points.
  For more information, see *"2.4 Connect your wireless devices" on page 17*.
- ***Wired access*** for your local network devices via the Ethernet interface.
  For more information, see *"2.3 Connect your wired devices" on page 16*.
- An **integrated file and media server** allowing you to share your media with media players and other network devices. For more information, see *"5 Sharing content" on page 37*.

### Easy configuration

The ***Admin Tool*** allows you to configure your Gateway and network via your web browser.
For more information, see *"3 Admin Tool" on page 25*.

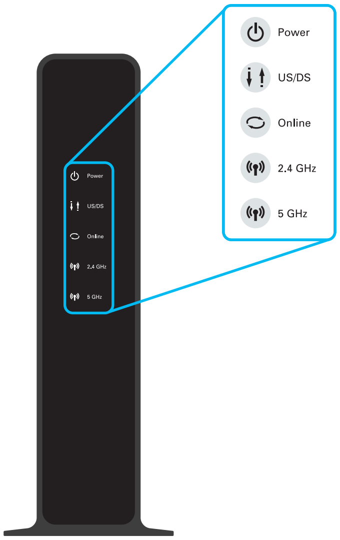
## 1.2 Getting to know the Gateway

This section introduces you to the different components of the Gateway:

## 1.2.1 Front panel

### Introduction

On the front panel of your Gateway, you can find a number of LEDs that allow you to check the state of the services offered by the Gateway.



### Power LED

| State | Description |
|---|---|
| Solid on | The Gateway is powered on from the electrical outlet. |
| Blinking | Power failure. |
| Off | The Gateway is powered off. |

### US/DS LED

| State | Description |
|---|---|
| Solid on | Upstream and downstream channel locked. |
| Blinking | Locking upstream or downstream channel. |
| Off | The Gateway is powered off. |

## Online LED

| State | Description |
|---|---|
| Solid on | Connected to your service provider's network. |
| Blinking | Connecting to your service provider's network. |
| Off | Not connected to your service provider's network. |

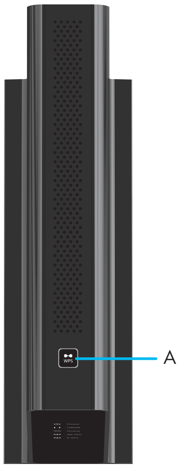
## 2.4 GHz LED

| State | Description |
|---|---|
| Solid on | One or more wireless clients connected to the 2.4 GHz access point, no wireless activity |
| Blinking | One or more wireless clients connected to the 2.4 GHz access point, wireless activity. |
| Off | The 2.4 GHz access point is disabled. |

## 5 GHz LED

| State | Description |
|---|---|
| Solid on | One or more wireless clients connected to the 5 GHz access point, no wireless activity |
| Blinking | One or more wireless clients connected to the 5 GHz access point, wireless activity. |
| Off | The 5 GHz access point is disabled. |

## 1.2.2 Top panel



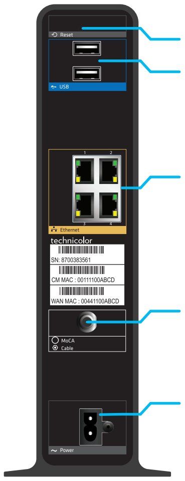
### WPS button (item A)

The **WPS** (WPS) button allows you to add new wireless clients to your local network in a swift and easy way, without the need to enter any of your wireless settings (network name, wireless network key, encryption type).

For more information about WPS, see *“2.4.1 How to connect your wireless client via WPS” on page 18*.

## 1.2.3 Back panel

### Overview



### Reset button (item A)

The **Reset** button allows you to:

- Restart the Gateway.
- Restore the factory defaults of the Gateway.

For more information, see *“8.3 Gateway reset and restore options” on page 69*.

### USB ports (item B)

The USB (⭠) ports allow you to:

- Connect a USB mass storage device to share your content (for example, music, movies,...) on your local network via the Network File server or the UPnP AV media server. For more information, see *“5 Sharing content” on page 37*.
- Power or charge a USB device.

### Ethernet switch (item C)

The Ethernet switch (🖧) allows you to connect an Ethernet device (for example, a computer) to your local network. For more information, see *“2.3 Connect your wired devices” on page 16*.

All Ethernet ports on the Gateway are Gigabit Ethernet ports and have a maximum speed of 1 Gbps (Gigabit per second).

Each Ethernet port has two LEDs:.

| LED | LED status | Description |
|---|---|---|
| Top LED (Green) | Solid on | Connected to a Gigabit Ethernet device. |
| | Blinking | Connected to a Gigabit Ethernet device and sending/receiving data. |
| | Off | Not connected to a Gigabit Ethernet device. |

| LED | LED status | Description |
|---|---|---|
| Bottom LED (Amber) | Solid on | Connected to a 100Mbps/10Mbps device. |
| | Blinking | Connected to a 100Mbps/10Mbps device and sending/receiving data. |
| | Off | Not connected to a 100Mbps/10Mbps device. |

### MoCA/Cable port (item D)

The **MoCA/Cable** port allows you to connect to your local coax network and to the broadband network of your services provider.

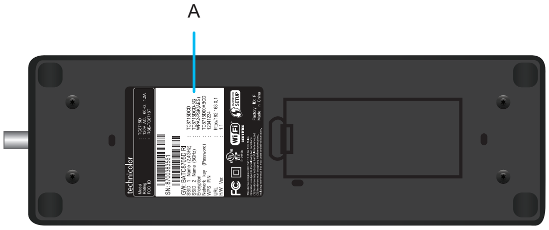
The **MoCA** LED indicates the status of the MoCA interface:

| State | Description |
|---|---|
| Solid on | The MoCA interface is enabled, no MoCA activity.. |
| Blinking | The MoCA interface is enabled, MoCA activity. |
| Off | The MoCA interface is disabled or the Gateway is powered off. |

### Power inlet (item E)

The power inlet (**Power**) allows you to connect the power cord.

## 1.2.4 Bottom panel



### Product label (item A)

The label on the bottom of the Gateway contains information about your Gateway, like:

- Device information
- Wireless security settings

For the network name, two values are available:

- **SSID 1 Name (2.4Ghz)** is the network name of the 2.4 GHz access point and is of the following format: TC8715DXX (where X is an alphanumeric character).
- **SSID 2 Name (5Ghz)** is the network name for the 5 GHz access point and is of the following format: TC8715DXX-5G (where X is an alphanumeric character).

The other values are common for both access points.

## 1.3 Preparing for the installation

### Local connection requirements

***Wireless connection***

If you want to connect your computer using a wireless connection, your computer must be equipped with a Wi-Fi Certified wireless client adapter.

***Wired connection***

If you want to connect a computer using a wired connection, your computer must be equipped with an Ethernet Network Interface Card (NIC).

### Start with the installation

You are now ready to start with the installation of your Gateway, proceed with *"2 Setup" on page 13*.

# 2 Setup

## Setup procedure

Complete the following steps to setup the Gateway:

1. Connect your Gateway to your service provider's network.
   For more information, see *"2.1 Connect the Gateway to your service provider's network" on page 14*.
2. Power on the Gateway.
   For more information, see *"2.2 Power on the Gateway" on page 15*.
3. Connect your wired devices to the Gateway.
   For more information, see *"2.3 Connect your wired devices" on page 16*.
4. Connect your wireless devices to the Gateway.
   For more information, see *"2.4 Connect your wireless devices" on page 17*.

## Optional configuration

After completing the setup procedure, the Gateway is ready for use. Optionally, you can further configure the Gateway to your needs (for example, change the wireless security) using the Gateway's Admin Tool.

For more information, see *"3 Admin Tool" on page 25*.

## 2.1 Connect the Gateway to your service provider’s network

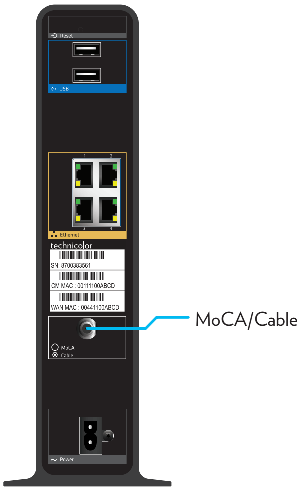
### Introduction

This section helps you to connect the Gateway to your service provider’s network.

### Connecting the cables

Proceed as follows:

1. Take one end of the coaxial cable and connect it to your cable splitter.
2. Connect the other end to the **MoCA/Cable** port of the Gateway.



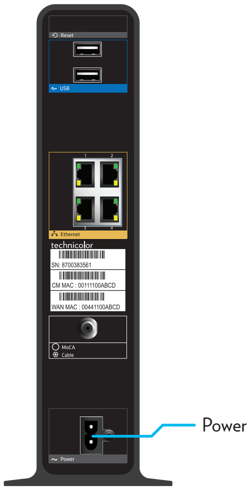
## 2.2 Power on the Gateway

### Procedure

Proceed as follows:

1 Take the power cord that is included with your Gateway.

2 Connect the small end of the power cord to the **Power** port on the back of the Gateway.



3 Plug the other end of the power cord into an electrical outlet.

4 Wait at least two minutes to allow the Gateway to complete the start up phase.

## 2.3 Connect your wired devices

### Requirements

- Both your network device (for example, a computer, a gaming console, etc.) and Gateway must have a free Ethernet port.
- Your network device must be configured to obtain an IP address automatically. This is the default setting.

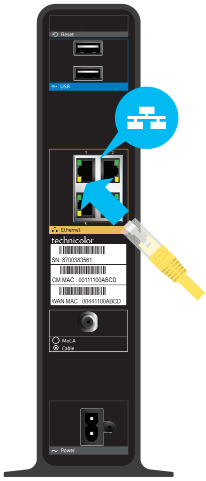
All Ethernet ports on the Gateway are Gigabit Ethernet ports and have a maximum speed of 1 Gbps (Gigabit per second).

### Procedure

Proceed as follows:

1 Take the yellow Ethernet cable that is included in your box.

2 Plug one end of the Ethernet cable into one of the ***yellow*** Ethernet ports on the back of the Gateway:



3 Plug the other end of the Ethernet cable into the Ethernet port of your network device.

4 Your network device is now connected to your network. Use the same procedure to connect your other Ethernet devices (computers, network printers and so on).

## 2.4 Connect your wireless devices

### Introduction

The Gateway has two access points that allows you to connect wireless devices to your home network:

- The 5 GHz (3x3) IEEE 802.11ac access point offers superior transfer rates, is less sensitive to interference and allows you to connect IEEE802.11a/n/ac wireless clients.
- The 2.4 GHz (3x3) IEEE 802.11n access point allows you to connect IEEE802.11b/g/n wireless clients. Use this access point for wireless clients that don't support 5 GHz.

! If you want to connect your wireless client to the 5 GHz access point, make sure that your wireless client supports 5 GHz connections.

### Procedure

To connect your device via:

- Via WPS, proceed with *"2.4.1 How to connect your wireless client via WPS" on page 18*.
- By manually entering the settings, proceed with *"2.4.2 How to manually connect your wireless client" on page 20*.

## 2.4.1 How to connect your wireless client via WPS

### WPS

Wi-Fi Protected Setup (WPS) allows you to add new wireless clients to your local network in a swift and easy way, without the need to enter any of your wireless settings (network name, wireless network key, encryption type).

Both the 2.4 GHz as the 5 GHz access point of your Gateway support WPS.

### Requirements

- Your wireless client must support WPS. Check the documentation of your wireless client for this.

  Windows 8, Windows 7 and Windows Vista Service Pack 1 have native WPS support.

- Your Gateway must use ***WPA2-PSK (AES)*** encryption (default encryption) or ***WPAWPA2-PSK (TKIP/AES)*** encryption. WPS with WEP encryption is not possible.

### WPS methods

The following WPS methods are supported by your Gateway:

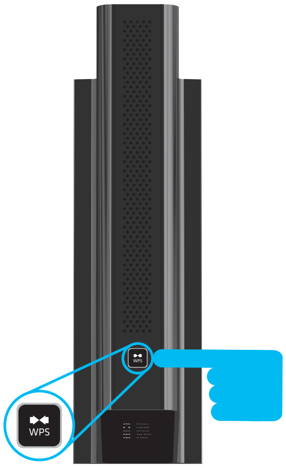
- Push Button Configuration (PBC):
  You have to put both the wireless client and the Gateway in registration mode by pushing a hardware or software button.
- PIN code entry on the wireless client:
  You have to enter the Gateway's WPS PIN code on the wireless client. For more information, see *"Adding a wireless client using WPS PIN entry on the wireless client" on page 34*.
- PIN code entry on the Gateway:
  You have to enter the wireless client's WPS PIN code on the Admin Tool. For more information, see *"Adding a wireless client using WPS PIN entry on the Gateway" on page 35*.

### Procedure for PBC

Proceed as follows:

1 Start WPS on your wireless client.

2 On the Gateway, press and hold the **WPS** button for at least 5 seconds and then release it:



3 The **WPS** button LED starts blinking. This indicates that the Gateway is now searching for wireless clients that are in registration mode.

4 The Gateway is now exchanging the security settings.

5 Your wireless client prompts you that it is now connected to the access point.

### Troubleshooting

If you are having trouble connecting your wireless client via WPS, this may be caused by one of the following reasons:

- WPS can not be correctly executed:
  Configure your wireless manually. For more information, see *"2.4.2 How to manually connect your wireless client" on page 20*.
- Your wireless client is out of range:
  If possible move your wireless client closer to your Gateway or use a wireless repeater to extend the range of your wireless network.
- Another device is interfering on the selected wireless channel:
  Change the wireless channel of your Gateway. For more information, see *"Change the wireless channel" on page 66*.

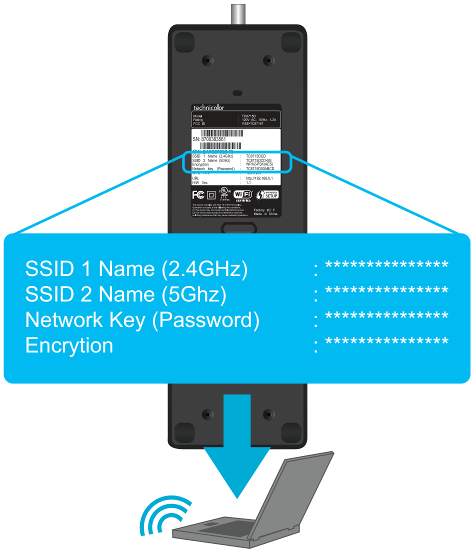
## 2.4.2 How to manually connect your wireless client

### Requirements

- Your network device must be equipped with a Wi-Fi Certified wireless client.
- Your network device must be configured to obtain an IP address automatically. This is the default setting.

### Procedure

If you want to connect a computer using the wireless network, configure the wireless client on your computer with the wireless settings printed on the Gateway's bottom panel label.


technicolor
SSID 1 Name (2.4GHz) : ***************
SSID 2 Name (5Ghz) : ***************
Network Key (Password) : ***************
Encrytion : ***************

For the network name, two values are available:

- **SSID 1 Name (2.4Ghz)** is the network name of the 2.4 GHz access point and is of the following format: TC8715DXX (where X is an alphanumeric character).
- **SSID 2 Name (5Ghz)** is the network name for the 5 GHz access point and is of the following format: TC8715DXX-5G (where X is an alphanumeric character).

The other values are common for both access points.

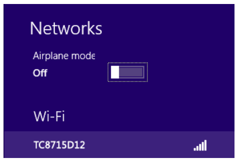
To configure these settings on:

- Windows 8, proceed with *"How to connect your computer on Windows 8" on page 21*.
- Windows 7, proceed with *"How to connect your computer on Windows 7" on page 21*.
- Windows Vista, proceed with *"How to connect your computer on Windows Vista" on page 22*.
- Windows XP, proceed with *"How to connect your computer on Windows XP" on page 23*.
- Mac OS X, proceed with*"How to connect your computer on Mac OS X" on page 24*.
- On another operating system, consult the help of your wireless client or operating system.

## How to connect your computer on Windows 8

1 Click the wireless network icon ( )in the notification area.

2 A list of available wireless networks appears.

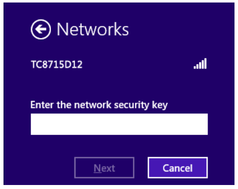


Airplane mode
Off

Double-click the Gateway access point.

The Gateway is listed with the Network Name (SSID1 and/or SSID2) which is printed on the Gateway's bottom panel label. For more information, see *"Product label (item A)" on page 11*.

3 Windows prompts you to enter the security key.



Type the **Network Key (Password)** which is printed on the Gateway's bottom panel label in the **Enter the network security key** box and click **Next**.

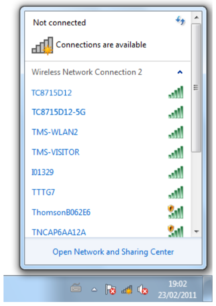
4 Windows prompts you if it should turn on sharing. Click **Yes**.

## How to connect your computer on Windows 7

Proceed as follows:

1 Click the wireless network icon ( )in the notification area.

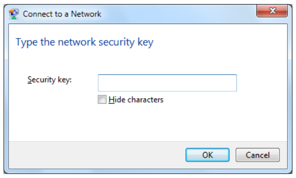
2 A list of available wireless networks appears.



Double-click the Gateway access point.

The Gateway is listed with the Network Name (SSID1 and/or SSID2) which is printed on the Gateway's bottom panel label. For more information, see *"Product label (item A)" on page 11*.

3 Windows prompts you to enter the security key.



Type the network security key

Security key:

□ Hide characters

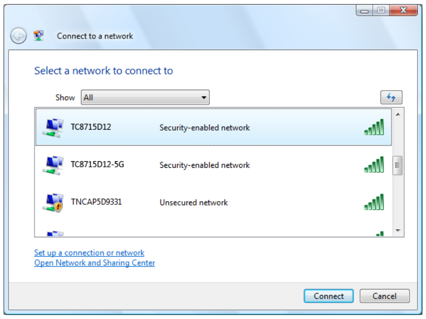
Type the **Network Key (Password)** which is printed on the Gateway's bottom panel label in the **Security key** and click **OK**.

## How to connect your computer on Windows Vista

Proceed as follows:

1 Click **Start** and click **Connect To**.

2 A list of available wireless networks appears.



Select a network to connect to

Show All

| | |
|---|---|
| TC8715D12 | Security-enabled network |
| TC8715D12-5G | Security-enabled network |
| TNCAP5D9331 | Unsecured network |

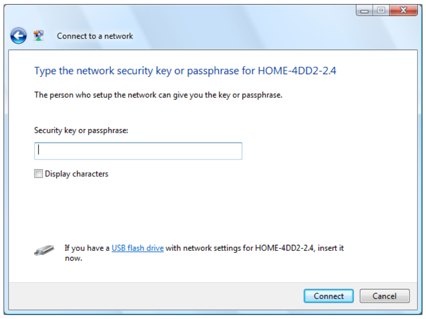
Set up a connection or network

Open Network and Sharing Center

3 Double-click the Gateway access point.

The Gateway is listed with the Network Name (SSID1 and/or SSID2) which is printed on the Gateway's bottom panel label. For more information, see *"Product label (item A)" on page 11*.

4 Windows prompts you to enter the network security key.



Type the network security key or passphrase for HOME-4DD2-2.4

The person who setup the network can give you the key or passphrase.

Security key or passphrase:

□ Display characters

If you have a USB flash drive with network settings for HOME-4DD2-2.4, insert it now.

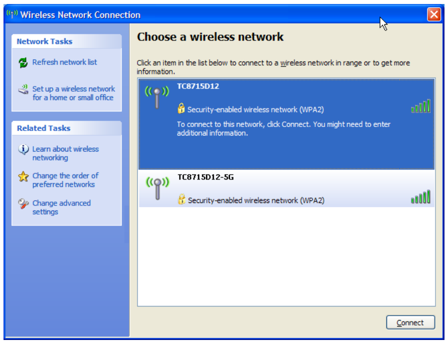
Type the **Network Key (Password)** which is printed on the Gateway's bottom panel label in the **Security key or passphrase** box and click **Connect**.

## How to connect your computer on Windows XP

Proceed as follows:

1 Right-click the wireless network connection icon ( or )in the notification area and then click **View Available Wireless Networks**.

2 A list of available wireless networks appears.


Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Connect

Choose a wireless network

Click an item in the list below to connect to a wireless network in range or to get more information.

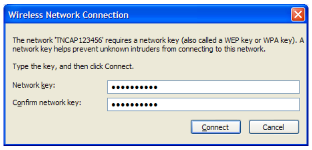
TC8715D12
Security-enabled wireless network (WPA2)
To connect to this network, click Connect. You might need to enter additional information.

TC8715D12-5G
Security-enabled wireless network (WPA2)

Double-click the Gateway access point..

The Gateway is listed with the Network Name (SSID1 and/or SSID2) which is printed on the Gateway's bottom panel label. For more information, see *"Product label (item A)" on page 11*.

3 Windows prompts you to enter the network security key.



The network 'TNCAP123456' requires a network key (also called a WEP key or WPA key). A network key helps prevent unknown intruders from connecting to this network.

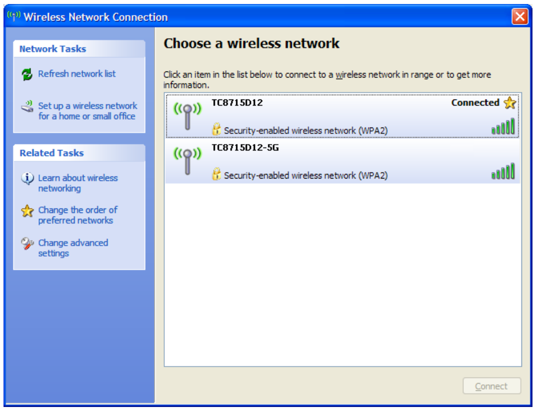
Type the key, and then click Connect.

Network key: ••••••••••

Confirm network key: ••••••••••

Type the **Network Key (Password)** which is printed on the Gateway's bottom panel label in the **Network key** and **Confirm network key** box and click **Connect**.

4 You are now connected to the Gateway:


Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Connect

Choose a wireless network

Click an item in the list below to connect to a wireless network in range or to get more information.

TC8715D12 Connected
Security-enabled wireless network (WPA2)

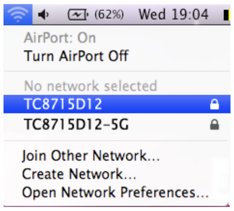
TC8715D12-5G
Security-enabled wireless network (WPA2)

## How to connect your computer on Mac OS X

Proceed as follows:

1 Click the **WiFi** icon on the menu bar.

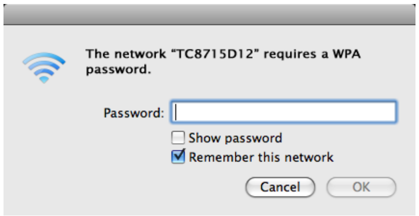
2 A list of available wireless networks appears.



Select the Gateway from the list.

The Gateway is listed with the Network Name (SSID1 and/or SSID2) which is printed on the Gateway's bottom panel label. For more information, see *"Product label (item A)" on page 11*.

3 The **WiFi** window prompts you to enter your WPA password.



The network "TC8715D12" requires a WPA password.

Password:

☐ Show password
☑ Remember this network

In the **Password** box, type the **Network Key (Password)** which is printed on the Gateway's bottom panel label and select the **Remember this network** box and click **OK**.

4 You are now connected to the Gateway network.

# 3 Admin Tool

## Introduction

The Admin Tool allows you to configure the settings of your Gateway via your web browser.

## Requirements

JavaScript must be enabled on your browser (this is the default setting). For more information, consult the help of your web browser.

## Accessing the Admin Tool

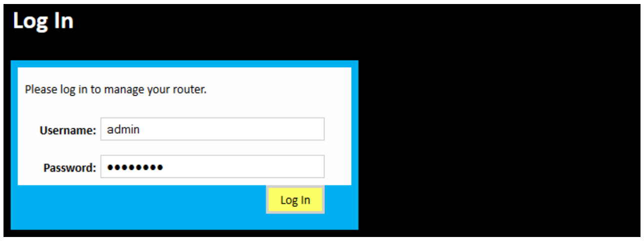
Proceed as follows:

1 Open your web browser and browse to http://192.168.0.1.

On Windows it is also possible to access the Admin Tool using UPnP. For more information, see *"7.1.1 UPnP" on page 56*.

**192.168.0.1** is the default IP address of the Gateway. If at some point you changed the IP address of the Gateway, use the new IP address instead.

2 The Gateway prompts you to enter the user name and password. Enter your user name (default: **admin**) and password (default: **password**) and click **OK**.



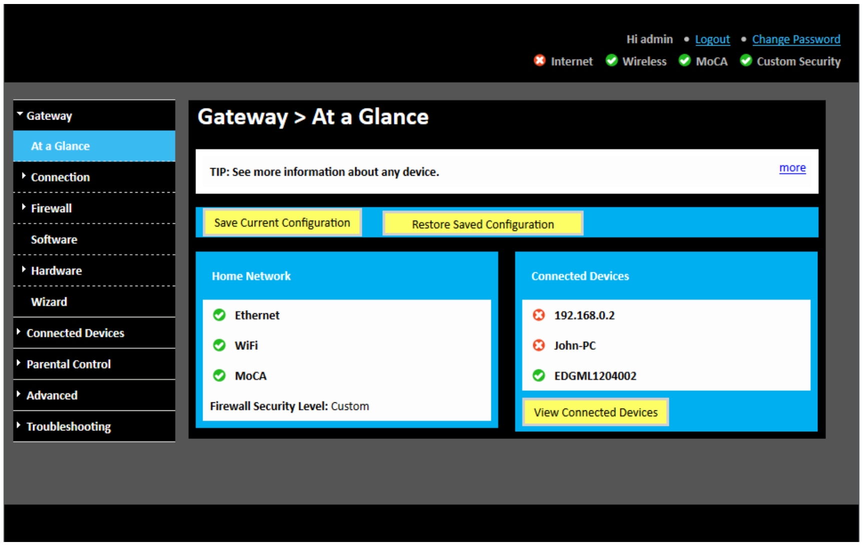
Log In

Please log in to manage your router.

Username: admin

Password: ••••••••

3 The *Admin Tool* appears.



Hi admin • Logout • Change Password

Internet • Wireless • MoCA • Custom Security

Gateway > At a Glance

TIP: See more information about any device.

Home Network: Ethernet, WiFi, MoCA

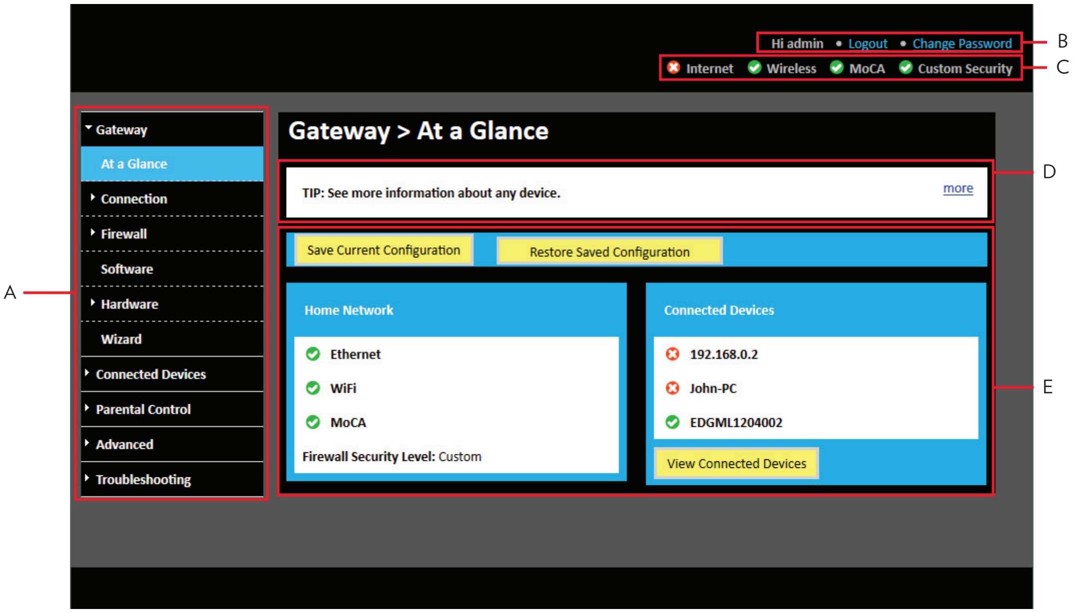
Firewall Security Level: Custom

Connected Devices: 192.168.0.2, John-PC, EDGML1204002

# 3.1 Components

## Components overview

The following diagram identifies the sections of the Admin Tool:



TIP: See more information about any device.

Firewall Security Level: Custom

## Menu (item A)

The menu consists of the following menu items:

- **Gateway**:
  Provides basic information about the Gateway and allows you to configure the basic settings.
- **Connected Devices**:
  Allows you to manage the access settings of the devices in your network.
- **Parental Control**:
  Allows you to manage the access rights for Internet access
- **Advanced**:
  Allows you to configure more advanced Internet services.
- **Troubleshooting:**
  Allows you to perform some basic troubleshooting on the Gateway and network connections.

Each of these items contain a number of sub-menu items.

More detailed information about the pages can be found in the tips section of each page. For more information, see *“Tips section (item D)” on page 27*.

## Login section (item B)

In the login section you can see the following details:

- User Name
- Option to logout
- Option to change the Admin Tool password

## Status section (item C)

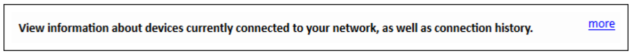
The diagnostics section provides a quick overview of:

- The status of the Internet interface
- The status of the wireless interface
- The status of the MoCA interface
- The selected firewall level

Move your mouse pointer over one of these items to view additional information.

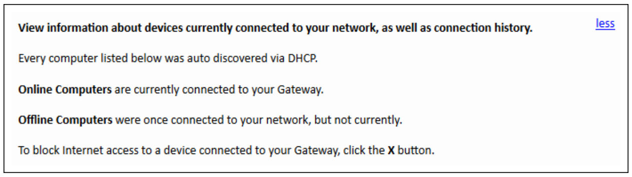
## Tips section (item D)

The tips section provides helpful information about the settings displayed on the current page.



**View information about devices currently connected to your network, as well as connection history.**

To expand the tip, click **more**.



**View information about devices currently connected to your network, as well as connection history.**

Every computer listed below was auto discovered via DHCP.

**Online Computers** are currently connected to your Gateway.

**Offline Computers** were once connected to your network, but not currently.

To block Internet access to a device connected to your Gateway, click the **X** button.

## Content panel (item E)

The content pane displays the actual configuration page.

## 3.2 How to change the default Admin Tool password

We recommend changing the default password of the Gateway.

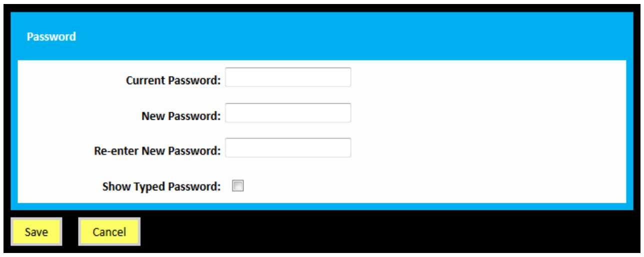
The default user name is **admin** and the default password is **password**.

### Procedure

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 In the upper-right corner, click **Change Password**.

3 The **Change Password** page appears.



Password

Current Password:

New Password:

Re-enter New Password:

Show Typed Password: □

4 In the **Current Password** box, type your current password.

The default password is **password**.

5 In the **New Password** and **Re-enter New Password** box, type your new password.

Your new password must be at least 8 characters long. It may include letters or numbers or a combination of both (no symbols). For better security, try using at least one number and a mix of upper and lower case letters.

6 Click **Save**.

7 The Gateway prompts you to login with your new password.

# 3.3 How to backup or restore a configuration

## Introduction

Once you have configured your Gateway to your needs, it is recommended to backup your configuration for later use. This way you can always return to your working configuration in case of problems.

## Backing up your configuration

Proceed as follows:

1. Browse to the Admin Tool (http://192.168.0.1).
   For more information, see *“Accessing the Admin Tool” on page 25*.
2. The **At a Glance** page appears. Click **Save Current Configuration**.
3. Your browser prompts you to save or open the backup file. Save your file to a location of your choice.

! Do not edit the backup files, this may result in corrupt files making them worthless as configuration backup.

## Restoring a previously saved configuration

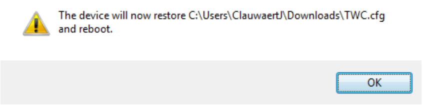
! Restoring a saved configuration will require the Gateway to restart. The reboot will cause a short service interruption of the services provided by the Gateway.

Proceed as follows:

1. Browse to the Admin Tool (http://192.168.0.1).
   For more information, see *“Accessing the Admin Tool” on page 25*.
2. The **At a Glance** page appears. Click **Restore Saved Configuration** and then open your backup file.

   i A backup file usually has a **.cfg** extension.

3. The Gateway prompts you that it will restore the configuration and reboot.

   The device will now restore C:\Users\ClauwaertJ\Downloads\TWC.cfg and reboot.

   Click **OK**.
4. The Gateway restores your configuration.

# 4 The Gateway wireless access point

## Introduction

This section will help you set up your wireless network.

## What you need to set up a wireless network

To set up a wireless network, you need the following components:

- A *Wireless access point* (already integrated into your Gateway)
- A *Wireless client* the device that you want to connect (for example, a computer, smartphone, network printer,...)

## Wireless access point

The wireless access point is the heart of your wireless network. The wireless access point:

- Connects different wireless clients.
- Secures the data sent over wireless connection.

The Gateway has two access points:

- A 5 GHz (3x3) IEEE 802.11ac access point that offers superior transfer rates, is less sensitive to interference and allows you to connect IEEE802.11a/n/ac wireless clients.
- A 2.4 GHz (3x3) IEEE 802.11n access point that allows you to connect IEEE802.11b/g/n wireless clients. Use this access point for wireless clients that don’t support 5 GHz.

! If you want to connect your wireless client to the 5 GHz access point, make sure that your wireless client supports 5 GHz connections.

## Wireless client

The wireless client allows you to connect a wireless client to a wireless access point. Both built-in and external (for example via USB) wireless clients are available.

i Devices like tablets, smart TVs and smartphones usually have a built-in wireless client. Check the documentation of your device for more information.

Check the documentation of your computer if you are not sure if your computer is equipped with a wireless client.

## Configuring your wireless clients

For more information on how to establish a wireless connection to the Gateway, see:

- *“2.4.1 How to connect your wireless client via WPS” on page 18*
- *“2.4.2 How to manually connect your wireless client” on page 20*

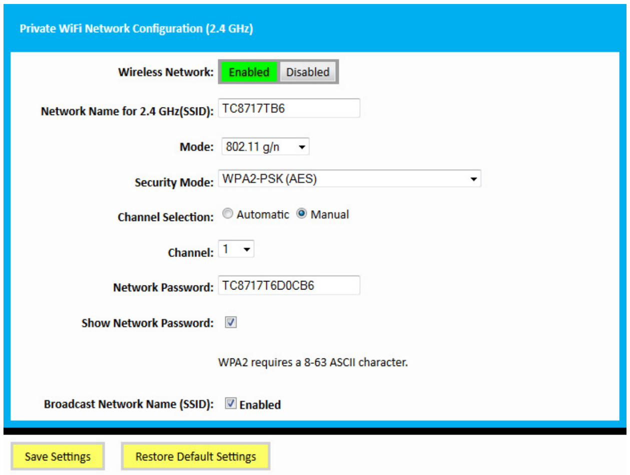
## 4.1 How to configure the wireless settings

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the **Gateway** menu, click **Connection** and then click **WiFi**.

3 The **WiFi** page appears. In the **Private WiFi Network** table, click the **Edit** button next to the access point that you want to modify.

4 The **Edit** page appears:



Private WiFi Network Configuration (2.4 GHz)

Wireless Network: Enabled Disabled

Network Name for 2.4 GHz(SSID): TC8717TB6

Mode: 802.11 g/n

Security Mode: WPA2-PSK (AES)

Channel Selection: ○ Automatic ● Manual

Channel: 1

Network Password: TC8717T6D0CB6

Show Network Password: ☑

WPA2 requires a 8-63 ASCII character.

Broadcast Network Name (SSID): ☑ Enabled

The following fields are available for configuration:

- **Wireless Network**:
  Allows you to enable or disable this access point.
- **Network Name (SSID)**:
  To distinguish one wireless network from another, each wireless network has its own network name, often referred to as Service Set IDentifier (SSID). All your wireless clients on your network must use this network name (SSID).
- **Mode**:
  The standards that are allowed for wireless communication. Only devices that support one of the selected modes can connect to the Gateway.
- **Security Mode**:
  The encryption type used to secure your wireless communication. We recommend using **WPAWPA2-PSK (TKIP/AES)** as it is compatible with most of the Wi-Fi devices and offers an excellent level of security. **Open** and **WEP** are to be avoided because of their own security flaws and should not be used in normal conditions.
- **Channel Selection**:
  When you select **Automatic**, the Gateway automatically selects the best channel for your wireless communication.
- **Channel**:
  The channel that is currently used for your wireless communication.
- **Network Password**:
  The wireless network key that is used for encrypting your wireless communication.
- **Show Network Password**:
  When you select the **Show Network Password** check box, the text in the **Network Password** will no longer be masked.

- **Broadcast Network Name (SSID)**:
  By default, the Gateway broadcasts its network name. Wireless clients can then detect the presence of your network and inform the users that this network is available.

  ℹ Enabling SSID broadcast does not mean that everyone can connect to your network. They still need the correct wireless network key (password) to connect to the Gateway network. It only informs them that your network is present.

  ⚠ SSID broadcasting is required for WPS.

5 Click **Save Settings**.

## 4.2 How to start a WPS session via the Admin Tool

### Adding a wireless client using WPS PBC

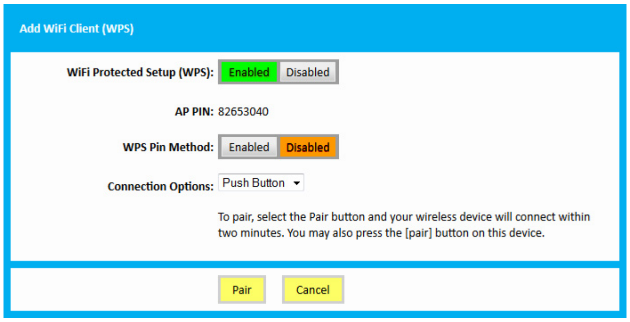
1 Make sure that the WPS button of your wireless client is accessible. This button can be a hardware button or a software button.

2 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

3 On the **Gateway** menu, click **Connection** and then click **WiFi**.

4 The **WiFi** page appears, click **Add Wifi Protected Setup (WPS) Client**.

5 The **Add WiFi Client** page appears.



Add WiFi Client (WPS)

WiFi Protected Setup (WPS): [✓ Enabled] Disabled

AP PIN: 82653040

WPS Pin Method: Enabled [✓ Disabled]

Connection Options: Push Button

To pair, select the Pair button and your wireless device will connect within two minutes. You may also press the [pair] button on this device.

6 Click **Pair**.

7 Within two minutes, press the pair button of your wireless client.

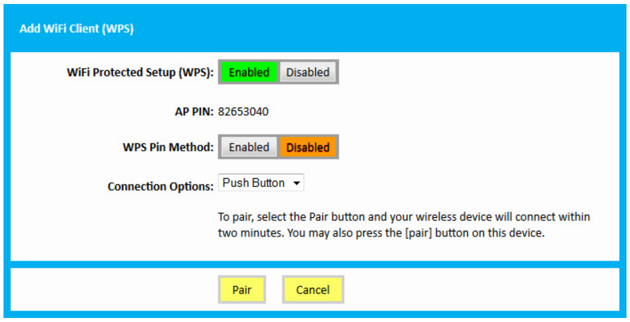
### Adding a wireless client using WPS PIN entry on the wireless client

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the **Gateway** menu, click **Connection** and then click **WiFi**.

3 The **WiFi** page appears, click **Add Wifi Protected Setup (WPS) Client**.

4 The **Add WiFi Client** page appears.



Add WiFi Client (WPS)

WiFi Protected Setup (WPS): [✓ Enabled] Disabled

AP PIN: 82653040

WPS Pin Method: Enabled [✓ Disabled]

Connection Options: Push Button

To pair, select the Pair button and your wireless device will connect within two minutes. You may also press the [pair] button on this device.

5 Write down the number displayed in **AP PIN**.

6 In the **WPS Pin Method** list, click **Enabled**.

7 Open the WPS PIN page of your wireless client and enter the PIN that you wrote down.

## Adding a wireless client using WPS PIN entry on the Gateway

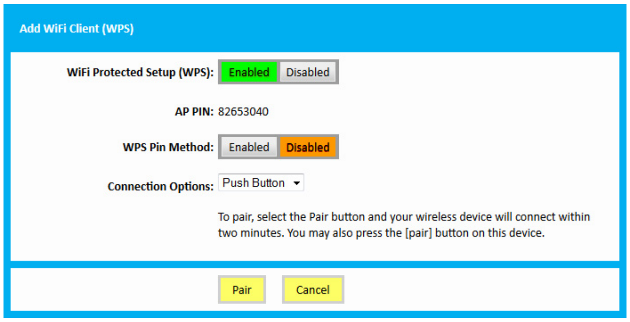
1 Locate and write down the WPS PIN of your wireless client. For more information, consult the documentation of your wireless client.

2 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

3 On the **Gateway** menu, click **Connection** and then click **WiFi**.

4 Click **Add Wifi Protected Setup (WPS) Client**.

5 The **Add WiFi Client** page appears.



Add WiFi Client (WPS)

WiFi Protected Setup (WPS): [✓ Enabled] Disabled

AP PIN: 82653040

WPS Pin Method: Enabled [✓ Disabled]

Connection Options: Push Button

To pair, select the Pair button and your wireless device will connect within two minutes. You may also press the [pair] button on this device.

6 In the **WPS Pin Method** list, click **Enabled**.

7 In the **Connection Options** list, select **Pin Number**.

8 Enter the PIN from your wireless client in the **Wireless Client's PIN** box.

9 Click **Pair**.

# 4.3 Prevent devices from accessing your wireless network

## MAC address

A MAC (Media Access Control) address is a unique hexadecimal code that identifies a device on a network. Each network-enabled device has at least one unique MAC address.

For example, if your computer is equipped with an Ethernet and a wireless network adaptor, each of these interfaces will have its own MAC address.

## MAC filtering

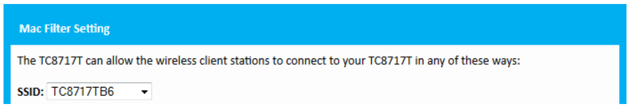
When using MAC filtering, you allow or deny devices to access your network based on their MAC address.

## How to set up MAC filtering

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the **Gateway** menu, click **Connection** and then click **WiFi**.

3 The **WiFi** page appears. In the **SSID** list under **Mac Filter Setting**, select the access point for which you want to set up the Mac filter.



Mac Filter Setting

The TC8717T can allow the wireless client stations to connect to your TC8717T in any of these ways:

SSID: TC8717TB6

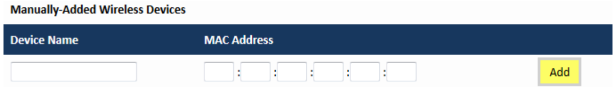
4 In the **MAC Filtering Mode** list, click:

- **Allow-All** to allow all wireless clients. The **Wireless Control List** will not be used.
- **Allow** to block wireless clients by default, except if they are listed in the **Wireless Control List**.

  If you are currently connected via this access point, you must add your device to the exceptions in the **Wireless Control List** before clicking **Save Filter Setting** (this will be done in the next step). If you do not do this you will be disconnected from the access point.
- **Deny** to allow wireless clients by default, except if they are listed in the **Wireless Control List**.

5 Add the exception on the default action, by doing one of the following:

- Under **Auto-Learned wireless clients**, select the device and click **Add**.
- Under **Manually-Added wireless clients**, type the device name and MAC address and click **Add**.



Manually-Added Wireless Devices

| Device Name | MAC Address | |
|---|---|---|
| | : : : : : | Add |

Repeat this step for each exception that you want to add.

6 Click **Save Filter Setting**.

# 5 Sharing content

## Introduction

The Gateway allows you to share the content stored on your USB storage device with other users on your network or even access this shared content from the Internet.

## Features

- The Gateway has two USB 2.0 ports
- The following file systems are supported:
  - NTFS
  - FAT32
  - FAT16
  - EXT3/EXT4

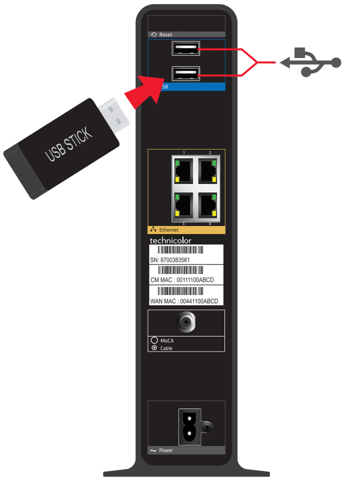
## Content sharing servers

The Gateway offers three types of services to share your content. The following table gives a you a brief overview of the main functions:

| | **Network file server** | **UPnP AV media server** |
|---|---|---|
| **Function** | Store and access your data on your local network. | Make media files available for UPnP AV capable devices like Media players, Set-Top boxes from your local network. |
| **Access** | Read and write | ***Read-only*** |
| **Accessible from** | Local network | Local network |
| **Type of content shared** | All files from all partitions and disks that are connected. | ***Media*** files (music, movies and pictures) from all partitions and disks that are connected. |
| **For more information, see...** | *"5.1 The network file server" on page 39* | *"5.2 The UPnP AV media server" on page 41* |

## Configuration

All servers are ***enabled by default***. The only thing that you need to do is to plug your USB memory stick or external hard disk in (one of) the USB port(s) of your Gateway.



# 5.1 The network file server

## Introduction

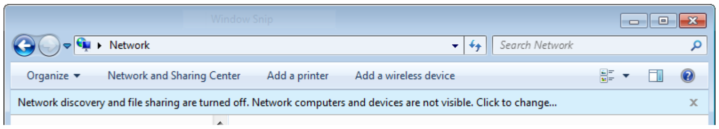
The Network Server allows you to share the content on your USB storage device(s) with other devices that are connected to your local network (mostly computers).

These devices have ***read and write access*** to this USB device(s).

## Accessing the shared content on Windows

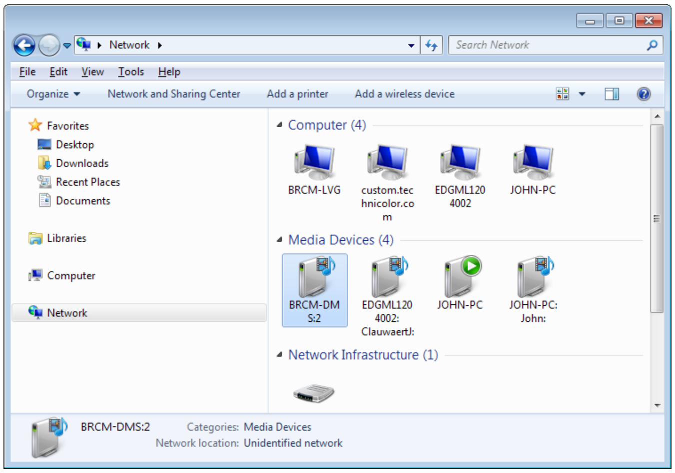
Proceed as follows:

1. On the Windows **Start** menu, click **Computer**.
2. An Explorer window appears. In the panel, click **Network**.
3. If Explorer prompts you that network discovery and/or file sharing are turned off, click on the message and turn it on.



Network discovery and file sharing are turned off. Network computers and devices are not visible. Click to change...

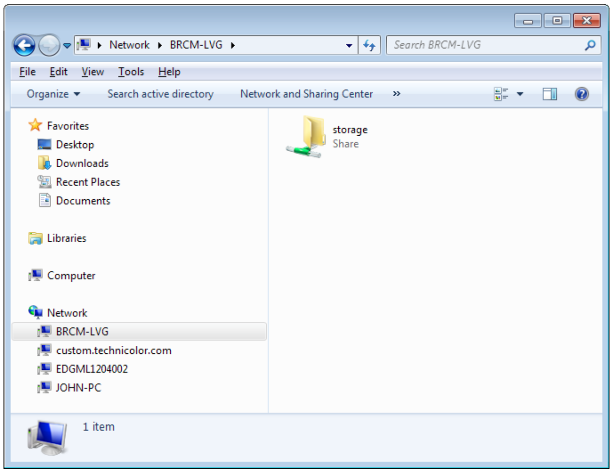
4. Explorer displays a list of detected devices.



BRCM-DMS:2 Categories: Media Devices
Network location: Unidentified network

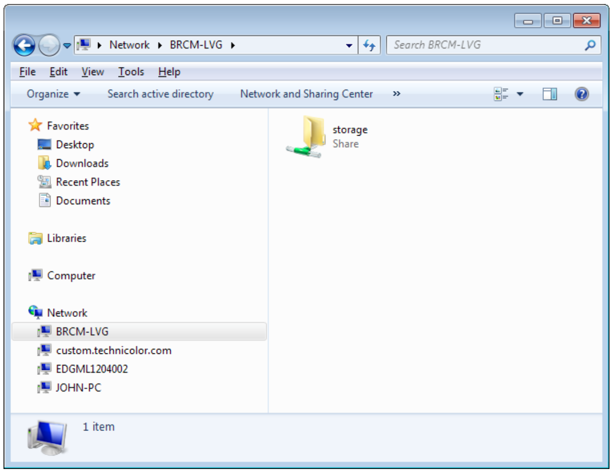
Double-click **BRCM-LVG** (this is the Gateway's file server).

**5** The following window appears:



Double-click the **storage** folder.

**6** Your connected USB devices are now displayed as a folders.



Double-click one of the folders to access the content files stored on the USB device.

# 5.2 The UPnP AV media server

## Introduction

Your Gateway has a built-in DLNA Certified UPnP AV media server. This section describes how to use and configure this media server.

## UPnP AV

UPnP AV (Universal Plug and Play Audio/Video) is a protocol especially designed to share ***media*** files on your ***local network***.

## DLNA certified

The Digital Living Network Alliance (DLNA) is an organization that imposes requirements to ensure the interoperability of your media devices and standardize the communication between them.

Buying a DLNA certified device like the Gateway guarantees that it will seamlessly integrate with your other DLNA certified devices.

To allow you to access your media in a quick and easy way, the Gateway scans your storage device for meta data information (for example, title, artist, album) and stores it in a database. When you are looking for a file, the Gateway can simply query the database instead of having to go through all the files.

## UPnP AV network components

A UPnP AV network consists of the following components:

- The ***UPnP AV server*** is directly connected to your media files and makes them available on the network. In your network the Gateway will fulfil this role.
- The ***UPnP AV client*** is a software application or hardware device that allows you to play or view the media files provided by your UPnP AV media server.

## Accessing your media files via UPnP AV

The UPnP AV media server lists all audio, video and picture files located on the connected USB storage device. All UPnP AV renderers (for example, a DLNA Certified set-top box) that are connected to your network are able to view this list and play or view items from this list.

On your UPnP AV client, the Gateway's UPnP AV media server will be listed as **BRCM-DMS**.

## Accessing your media files via UPnP AV on Windows 7

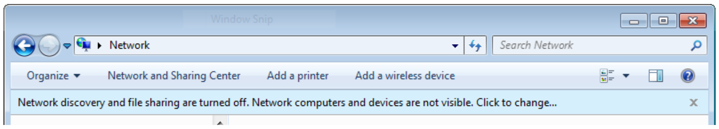
Windows 7 has native support for UPnP AV. It automatically detects UPnP AV and makes the media files provided by your UPnP AV media server available for playback on your Windows Media Player.

Proceed as follows:

1 On the Windows **Start** menu, click **Computer**.

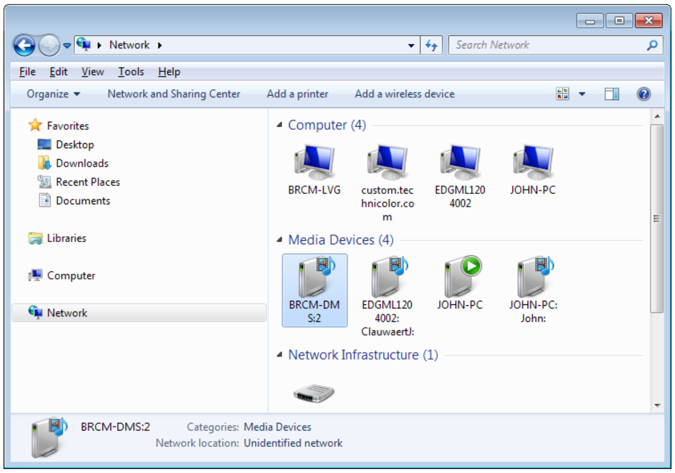
2 An Explorer window appears. In the panel, click **Network**.

3 If Explorer prompts you that network discovery and/or file sharing are turned off, click on the message and turn it on.



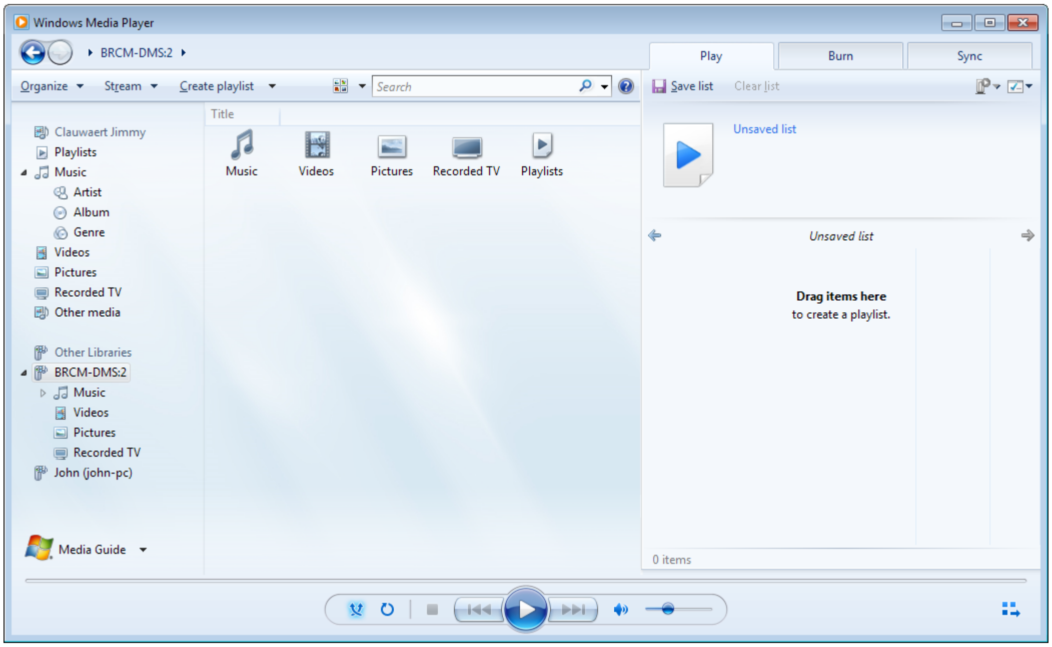
Network discovery and file sharing are turned off. Network computers and devices are not visible. Click to change...

4 Explorer displays a list of detected devices.



Double-click **BRCM-DMS** (this is the Gateway's UPnP AV media server).

5 **Windows Media Player** starts up.



Your Gateway's UPnP AV media server is listed as **BRCM-DMS** in the left panel. This entry allows you to browse to the media files provided by your UPnP AV media server.

# 6 Internet security

## Overview

The Gateway offers various options to secure your Internet connection:

# 6.1 Parental control

## Introduction

The parental control function:

- Prevents access to specific website based on the URL or keywords.
  For more information, see *"6.1.1 Manage sites" on page 45*.
- Prevents access to specific application or services (for example, FTP).
  For more information, see *"6.1.2 Manage services" on page 47*.
- Prevents devices from accessing your network.
  For more information, see *"6.1.3 Manage devices" on page 49*.

## 6.1.1 Manage sites

### Introduction

The **Managed Sites** page allows you to:

- Block specific websites (always or for a specific time frame)
- Block keywords (always or for a specific time frame)
- Mark devices as trusted
  When a device is marked as trusted, all **Managed Sites** rules will be ignored.

### How to access the Managed Sites page

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the left menu, click **Parental Control**.

3 The **Managed Sites** page appears.

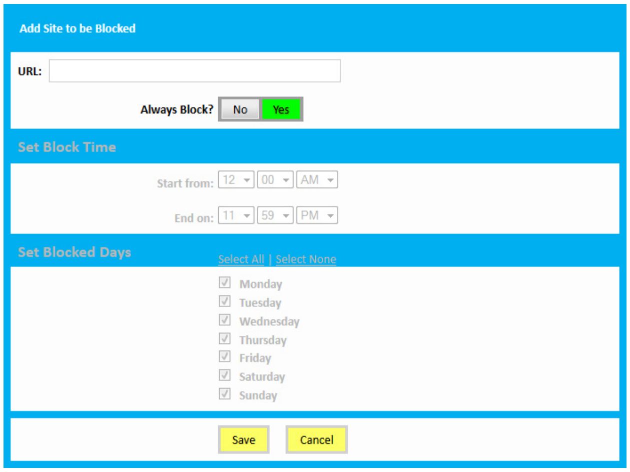
4 In the **Enable Managed Sites** list, click **Enable**.

### How to block a specific website

Proceed as follows, from the **Managed Sites** page:

1 Under **Blocked Sites**, click **+ Add**.

2 The **Add Blocked Domain** page appears.



Add Site to be Blocked

URL:

Always Block? No [✓ Yes]

Set Block Time

Start from: 12 00 AM

End on: 11 59 PM

Set Blocked Days

☑ Monday
☑ Tuesday
☑ Wednesday
☑ Thursday
☑ Friday
☑ Saturday
☑ Sunday

3 In the URL field type the address of the website (for example, **facebook.com**).

4 If you want this rule only to be applied at specific time frames, click **No** in the **Always Block** list and define when to apply the rule:

a Under **Set Block Time**, enter a start time and end time

b Under **Set Block Days**, select the days for which the selected block time should be applied.

If you want to have different time schedules depending on the day, you will have to group these in separate rules:

- One rule for weekdays (for example, access to Facebook from 8:00 PM until 10:00 PM).
- One rule for the weekend (for example, access to Facebook from 4:00 PM until 10:00 PM).

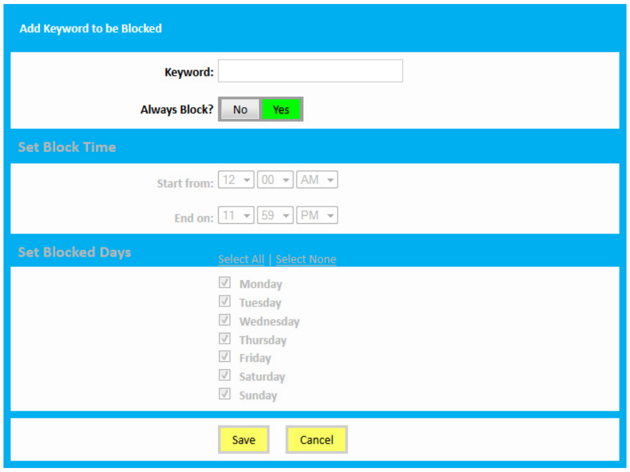
5 Click **Save**.

## How to block websites based on keywords

Proceed as follows, from the **Managed Sites** page:

1 Under **Blocked Sites**, click **+ Add**.

2 The **Add Keyword to be Blocked** page appears.



Add Keyword to be Blocked

Keyword:

Always Block? No [✓ Yes]

Set Block Time

Start from: 12 00 AM

End on: 11 59 PM

Set Blocked Days

Select All | Select None

☑ Monday
☑ Tuesday
☑ Wednesday
☑ Thursday
☑ Friday
☑ Saturday
☑ Sunday

3 In the **Keyword** box type the keyword that you want to block (for example, the **webmail** keyword will block all URLs that contain the word **webmail** in the URL).

4 If you want this rule only to be applied at specific time frames, click **No** in the **Always Block** list and define when to apply the rule:

a Under **Set Block Time**, enter a start time and end time

b Under **Set Block Days**, select the days for which the selected block time should be applied.

If you want to have different time schedules depending on the day, you have to group them in separate rules:

- One rule for weekdays (for example, rule active from 8:00 PM until 10:00 PM).
- One rule for the weekend (for example, rule active from 4:00 PM until 10:00 PM).

5 Click **Save**.

## Mark computers as trusted for all websites

When a device is marked as trusted, all Managed Sites rules will be ignored.

Proceed as follows:

1 Under **Trusted Computers**, look for your device and click **Yes** in the **Trusted** column.

2 The device is now able to access all web sites unless prevented by other parental control functions that you configured.

## 6.1.2 Manage services

### Introduction

The **Managed Services** page allows you to:

- Create a service-specific rule to block specific Internet services.

  Optionally, you can provide a time schedule for a rule. The rule will then only be activated within the specified time frame.

- Mark computers as trusted. For trusted computer all service rules will be ignored.

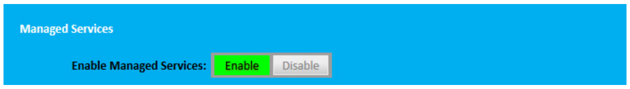
### How to create a service rule

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On **Parental Control** menu, click **Managed Services**.

3 The **Managed Services** page appears.

4 In the **Enable Managed Services** list, click **Enable**.



5 In the Blocked Services table, click **+ Add**.

6 The **Add Service to be Blocked** page appears.

7 Complete the following fields:

- In the **User Defined Service** box, type a name for the rule (for example, FTP).
- In the **Protocol** list, click on the protocol that is used (for example, TCP).
- In the **Start Port** box, type the start port of the port range (for example, 21).
- In the **End Port** box, type the end port of the port range. If the service only uses one port, enter the same value as in the **Start Port** box (for example, 21).

If the port range is not a contiguous range of numbers, you have to spread them over multiple service rules.

8 If you want this rule only to be applied at specific time frames, click **No** in the **Always Block** list and define when to apply the rule:

a Under **Set Block Time**, enter a start time and end time

b Under **Set Block Days**, select the days for which the selected block time should be applied.

If you want to have different time schedules depending on the day, you have to group them in separate rules:

- One rule for weekdays (for example, block the service from 10:00 PM until 8:00 PM).
- One rule for the weekend (for example, block the service from 10:00 PM until 8:00AM).

9 Click **Save**.

### Mark computers as trusted for all services

When a device is marked as trusted, all managed services rules will be ignored.

Proceed as follows:

1 Under **Trusted Computers**, look for your device and click **Yes** in the **Trusted** column.

2 The device is now able to use all web services unless prevented by other parental control functions that you configured.

## 6.1.3 Manage devices

On the **Managed Devices** page you can create a device-specific rule to prevent a devices from accessing your network.

Optionally, you can provide a time schedule for a rule. The rule will then only be activated within the specified time frame.

### Procedure

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the **Parental Control** menu, click **Managed Devices**.

3 In the **Enable Managed Devices** list, click **Enable**.

4 In the **Access Type** list, click:

- **Allow All** to allow all devices by default. In this case you have to create a rule for each device that you want to block on your network.
- **Block All** to block all devices by default. In this case you have to create a rule for each device that you want to allow on your network.

### Adding allowed devices

If you selected **Block All** in the **Access Type** list, proceed as follows:

1 In the **Allowed Devices** table, click **+Add Allowed Device**.

2 The **Add Device to be Allowed** page appears.

3 Under **Set Allowed Device**, select your device from the **Learned Device(s)** list. If your device is not listed, enter the computer name and MAC address under **Custom Device**.

4 If you want this rule only to be applied at specific time frames, click **No** in the **Always Allow** list and define when to apply the rule:

a Under **Set Allow Time**, enter a start time and end time

b Under **Set Allow Days**, select the days for which the selected block time should be applied.

If you want to have different time schedules depending on the day, you have to group them in separate rules:

- One rule for weekdays (for example, allow the device from 10:00 PM until 8:00 PM).
- One rule for the weekend (for example, allow the device from 10:00 PM until 8:00 AM).

5 Click **Save**.

### Adding blocked devices

If you selected **Allow All** in the **Access Type** list, proceed as follows:

1 In the **Blocked Devices** table, click **+Add Blocked Device**.

2 The **Add Device to be Blocked** page appears.

3 Under **Set Blocked Device**, select your device from the **Learned Device(s)** list. If your device is not listed, enter the computer name and MAC address under **Custom Device**.

4 If you want this rule only to be applied at specific time frames, click **No** in the **Always Block** list and define when to apply the rule:

a Under **Set Block Time**, enter a start time and end time.

b Under **Set Block Days**, select the days for which the selected block time should be applied.

If you want to have different time schedules depending on the day, you have to group them in separate rules:

- One rule for weekdays (for example, block the device from 8:00 PM until 10:00 PM).
- One rule for the weekend (for example, block the device from 8:00 AM until 10:00 PM).

5 Click **Save**.

## 6.1.4 View parental control reports

### Introduction

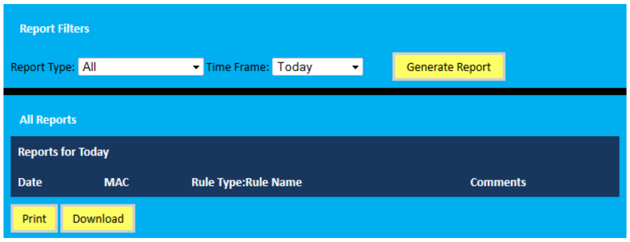
The **Reports** page allows you to generate reports on possible infringements of the parental control rules.

### Procedure

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the **Parental Control** menu, click **Reports**.

3 The **Report** page appears.



Report Type: All

Time Frame: Today

| Date | MAC | Rule Type:Rule Name | Comments |
|---|---|---|---|

Under **Report Filters**, select a report type and time frame and click **Generate Report**.

4 The **Generated report** table now lists all log entries.

5 Optionally, you can:

- Click **Print** to print the log entries.
- Click **Download** to save the log entries as a text file.

# 6.2 Firewall

## Introduction

The Gateway comes with an integrated firewall that helps you protect your network from attacks from the Internet. This firewall has a number of predefined levels to allow you to adjust the firewall to your needs.

## Predefined security levels

The Gateway has a number of predefined security levels. The following levels are available:

- For IPv4 traffic:
  - **Maximum Security (High)**:
    Blocks all the applications including IP-driven voice applications (such as Gtalk, Skype) and P2P applications. Allows Internet browsing, email, VPN, DNS and iTunes services.

    Although BlockAll will block all connections, some mandatory types of traffic such as DNS will still be relayed between LAN and WAN by the Gateway.
  - **Typical Security (Medium):**
    Blocks P2P applications and Ping to the Gateway, allows all other traffic.
  - **Minimum Security (Low)**:
    Allows all secure applications.
  - **Custom Security** (this is the default configuration for the IPv4 firewall):
    Enables the Intrusion Detection System (IDS) and allows all traffic passing through the Gateway (from and to the Internet) is allowed, but you are able to block specific applications.
- For IPv6 traffic:
  - **Typical Security** (this is the default configuration of the IPv6 firewall):
    Allows all traffic from home network to internet and blocks all unrelated traffic from internet to home network.
  - **Custom Security**:
    Enables the Intrusion Detection System (IDS) and allows all traffic passing through the Gateway (from and to the Internet) is allowed, but you are able to block specific applications.

The firewall levels only have impact on traffic passing through your Gateway. This means that the handling of traffic directly appointed from and to the Gateway is independent of the selected firewall level.

## Changing the security level

Proceed as follows:

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the **Gateway** menu, click **Firewall**.

3 The **Firewall** page appears.
Under **Firewall Security Level**, select one of the predefined levels or select **Custom Security** to create a custom level.

4 Click **Save Settings**.

# 7 Advanced configuration

## Introduction

This chapters covers the more advanced features. The following topic are available:

## 7.1 Port configuration for applications and services

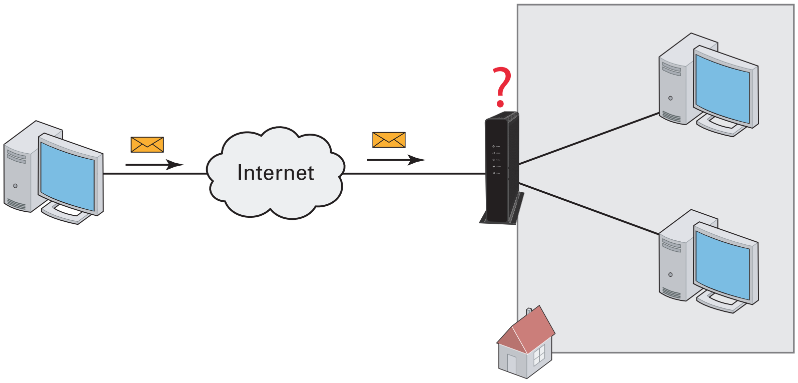
### Introduction

The Gateway allows you to use one Internet connection for multiple computers. This means that all your computers share one public IP address, as if only one computer were connected to the outside world.

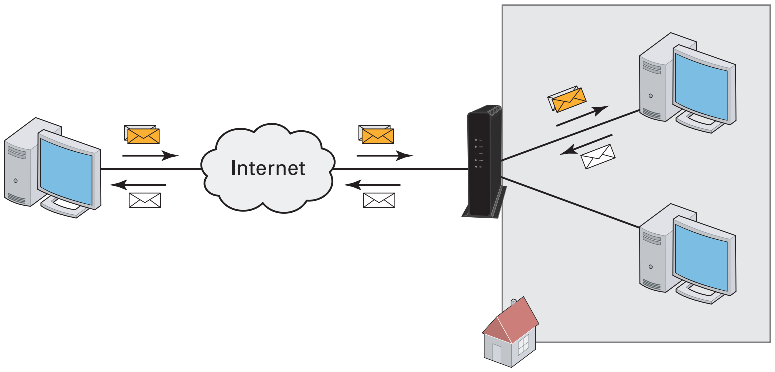
### Issue

When the Gateway receives an incoming message, the Gateway has to decide to which computer it has to send this message.

If the incoming message is a response to an outgoing message originating from one of your computers, the Gateway sends the incoming message to this computer.



But the Gateway will not be able to resolve the destination if:



- The incoming message arrives on a different port as the outgoing message. Then the Gateway will not know that the two messages are related.
- There is no outgoing message.

### Solutions

To avoid this problem, the Gateway offers the following solutions:

- The Gateway supports automatic device discovery and port configuration for UPnP-enabled devices.
  For more information, see *"7.1.1 UPnP" on page 56*.
- The Gateway allows you to assign a port to a device.
  For more information, see *"7.1.2 Port forwarding" on page 58*.

- The Gateway allows you to define a number of trigger ports. When a device sends data over one of these ports, the Gateway will automatically assign a number of related ports to the device. For more information, see *“7.1.3 Port triggering” on page 60*.

## 7.1.1 UPnP

### Introduction

UPnP is designed to automate the installation and configuration of a (small) network as much as possible. This means that UPnP-capable devices can join and leave a network without any effort of a network administrator.

### Supported operating systems

The following operating systems support UPnP:

- Windows 8
- Windows 7
- Windows Vista
- Windows XP

If your computer is running Windows XP, you first have to install the UPnP component. For more information, see Windows help.

### UPnP and the Gateway

UPnP offers you the following functions:

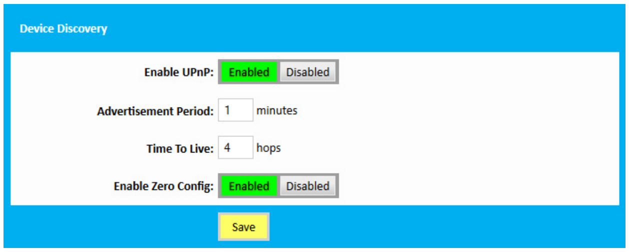
- You do not have to manually create port mappings to run services on a computer. The automatic port configuration mechanism for UPnP-enabled games and applications will do this for you. If the application is UPnP-enabled, UPnP will create these entries automatically.
- You can access the *Admin Tool* without having to remember the address of the Gateway.

### Enable UPnP on the Gateway

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the **Advanced** menu, click **Device Discovery**.

3 The **Device Discovery** page appears.



Device Discovery

Enable UPnP: [✓ Enabled] Disabled

Advertisement Period: 1 minutes

Time To Live: 4 hops

Enable Zero Config: [✓ Enabled] Disabled

In the **Enable UPnP** list, select **Enabled**.

4 Click **Save**.

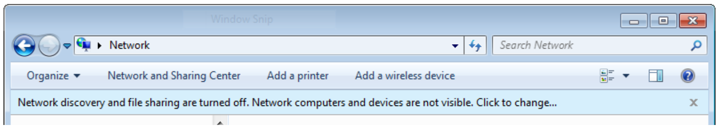
### How to use UPnP to access your Gateway on Windows 7/Vista

If you computer runs Windows 7/Vista:

1 On the Windows **Start** menu, click **Computer**.

2 An Explorer window appears. In the panel, click **Network**.

3 If Explorer prompts you that network discovery and/or file sharing are turned off, click on the message and turn it on.



Network discovery and file sharing are turned off. Network computers and devices are not visible. Click to change...

4 Right-click **Technicolor TC8715D** and click **View device web page**.

5 The Admin Tool appears.

## How to use UPnP to access your Gateway on Windows XP

If you computer runs Windows XP:

1 Go to **My Network Places**.

2 The **My Network Places** window appears.

3 Double-click **Technicolor TC8715D**.

4 The Admin Tool appears.

# 7.1.2 Port forwarding

## Introduction

Port forwarding allows you to forward incoming Internet traffic arriving on a specific port to an internal IP address.

For example: if you are running a web server and the Gateway receives a request on port 80, this request should be forwarded to your web server.

## Use a reserved IP address

The target device of the port forwarding rules will be specified by an IP address. Make sure that your device uses a fixed IP address. If you do not do this, the device might get a new IP address after some time and the port forwarding rule will no longer be applied to the device. For more information, see *7.2 Assigning a reserved IP to a device* .

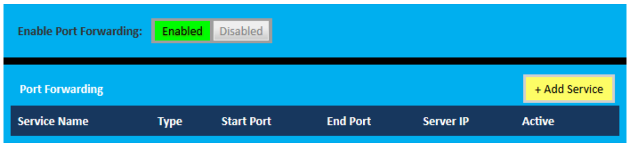
## Procedure

Proceed as follows to do so:

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *“Accessing the Admin Tool” on page 25*.

2 On the left menu, click **Advanced**.

3 The **Port Forwarding** page appears.

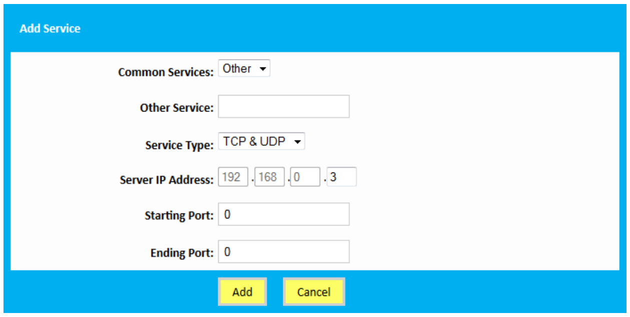


Enable Port Forwarding: Enabled

| Service Name | Type | Start Port | End Port | Server IP | Active |
|---|---|---|---|---|---|

In the **Enable Port Forwarding** list, click **Enabled**. In the **Port Forwarding** table, click **+Add Service**.

4 The **Add Service** page appears.



Add Service

Common Services: Other

Other Service:

Service Type: TCP & UDP

Server IP Address: 192 . 168 . 0 . 3

Starting Port: 0

Ending Port: 0

5 In the **Common Services** list, click the service you want to run on the computer or click **Other** if the service is not listed.

6 If you clicked **Other**, complete the following fields:

- In the **Other Service** box, type a name for the services that you want to configure.
- In the **Service Type** list, click the protocol that is used by the service.
- In the **Starting Port** box, type the start port number of the port range.
- In the **Ending port** box, type the last port number of the port range. If you only want to specify one port, use the same number as in the **Starting Port** box.

- In the **Service IP address** box, type the IP address of the computer to which you want to assign the service.

7 Click **Add**.

8 Your service is now listed in the **Port Forwarding** table. All incoming requests for the selected service will now be directed to the selected device. The Gateway also automatically configures its firewall to allow this service.

## 7.1.3 Port triggering

### Introduction

Port triggering allows you to define a set of dynamic port forwarding rules that will be activated as soon as a device sends traffic to the Internet over a specific port(s), the ***trigger port(s)***.

The difference compared to the port forwarding function described in *"7.1.2 Port forwarding" on page 58* is that:

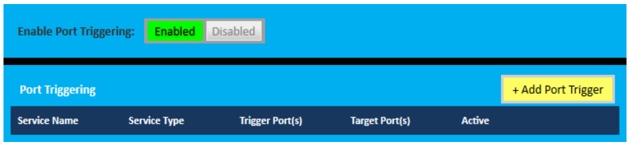
- Port triggering rules will only be activated if a local device is sending traffic over one of the trigger ports. So there must be outbound traffic first.
- Port triggering rules forward the traffic to any device that has initiated the communication while port forwarding only forwards to a specified fixed IP.
- Port triggering rules allow you to translate the port numbers. This means that the incoming port can differ from the target port.

### Procedure

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the **Advanced** menu, click **Port Triggering**.

3 The **Port Triggering** page appears.

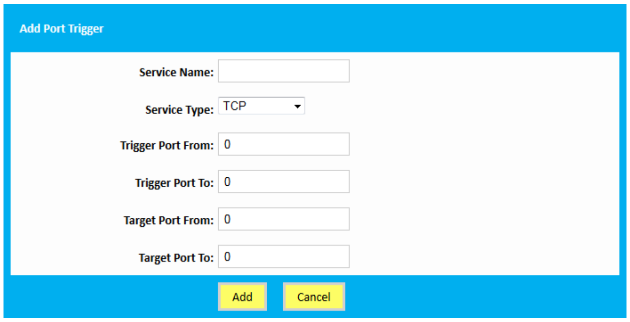


Enable Port Triggering: Enabled Disabled

| Service Name | Service Type | Trigger Port(s) | Target Port(s) | Active |
|---|---|---|---|---|

In the **Enable Port Forwarding** list, click **Enabled**. In the **Port Triggering** table, click **+Add Port Trigger**.

4 The **Add Port Trigger** page appears.



| | |
|---|---|
| Service Name: | |
| Service Type: | TCP |
| Trigger Port From: | 0 |
| Trigger Port To: | 0 |
| Target Port From: | 0 |
| Target Port To: | 0 |

Complete the following fields:

- In the **Service Name** box, type a name for the rule (for example, FTP).
- In the **Service Type** list, click on the protocol that is used (for example, TCP).
- In the **Trigger Port From** box, type the start port number of the trigger port range.
- In the **Trigger Port To** box, type the end port number of the trigger port range. If you only want to specify one port, use the same number as in the **Trigger Port From** box.
- In the **Target Port From** box, type the start port number of the target port range.

- In the **Target Port To** box, type the end port number of the target port range. If you only want to specify one port, use the same number as in the **Target Port From** box.

5 Click **Add**.

6 Your service is now listed in the **Port Triggering** table. All incoming requests for the selected service will now be directed to the selected device. The Gateway also automatically configures its firewall to allow this service.

# 7.1.4 Configure a DMZ Host

## Introduction

The Gateway allows you to configure one local device as a De-Militarized Zone (DMZ) host. This means that:

- None of the Gateway firewall rules will be applied to this device.
- All traffic originating from the Internet will be forwarded to this devices unless there is a port forwarding rule defined for this type of traffic. Port forwarding rules always have higher priority.

## Use a reserved IP address for the DMZ host

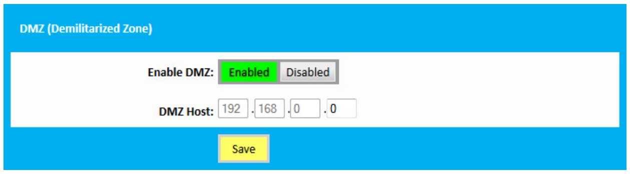
Make sure that your DMZ host uses a fixed IP address. If not, the device might get a new IP address after some time through DHCP and the port forwarding rule will no longer be applied to the device and another device may suddenly be acting as DMZ host. For more information, see *7.2 Assigning a reserved IP to a device* .

## How to configure a device as DMZ host

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 On the **Advanced** menu, click **DMZ**.

3 The **DMZ** page appears:



DMZ (Demilitarized Zone)

Enable DMZ: Enabled Disabled

DMZ Host: 192 . 168 . 0 . 0

Complete the following fields:

- In the **Enable DMZ** list, click **Enabled**.
- In the **DMZ Host** box, type the IP address of the device.

4 Click **Save**.

## 7.2 Assigning a reserved IP to a device

### Introduction

By default, each device will get an IP address from the Gateway's DHCP server. The IP address becomes available and can be re-used for other devices when one of the following cases:

- The device disconnects for your network or is turned off.
- The lease time of the address has expired.

When you want to run a service on a network device (for example, a web server, network printer, ...), it is advised to assign a reserved IP to the device. This way, the device will always be reachable on the same IP address and there is no risk that you are accessing the wrong device.

### How to assign a reserved IP

Proceed as follows to do so:

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

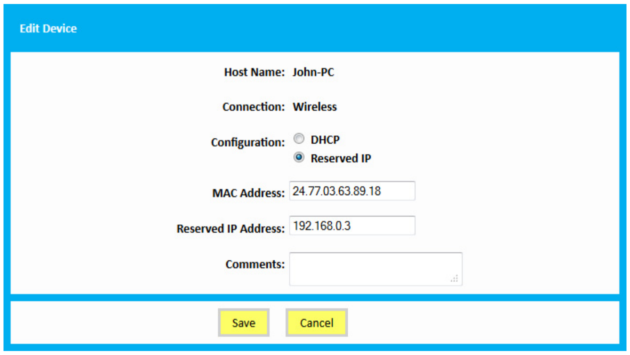
2 On the left menu, click **Connected Devices**.

3 The **Devices** page appears.

- If your device is already listed in one of the tables, proceed as follows:

  1 Click **Edit**.

  2 The **Edit Device** page appears.



Edit Device

Host Name: John-PC

Connection: Wireless

Configuration: ○ DHCP ● Reserved IP

MAC Address: 24.77.03.63.89.18

Reserved IP Address: 192.168.0.3

Comments:

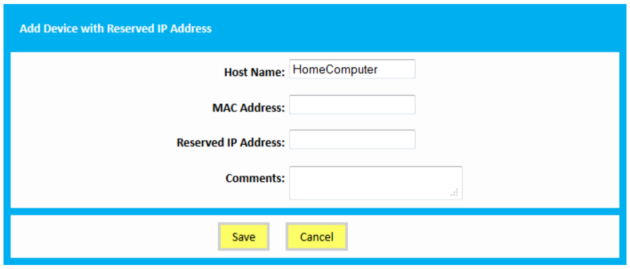
  3 In the **Configuration** list, click **Reserved IP**.

  4 If needed, change the value in the **Reserved IP Address** box.

- If your device is not listed, proceed as follows:

1 On the **Device**, click **Add Device With Reserved IP**.

2 The **Add Device** page appears.



Add Device with Reserved IP Address

Host Name: HomeComputer

MAC Address:

Reserved IP Address:

Comments:

3 Enter the settings of your choice.

4 Click **Save**.

# 8 Support

## Introduction

This chapter suggests solutions for issues that you may encounter while installing, configuring or using your Gateway.

If the suggestions do not resolve the problem, look at the support pages on www.technicolor.com or contact your service provider.

## Topics

This chapter describes the following topics:

# 8.1 Wireless connection troubleshooting

## No wireless connectivity

Try the following:

- Make sure that the wireless client is enabled (message like “radio on”).
- Make sure that the wireless client is configured with the correct wireless settings (Network Name, security settings).
- If the signal is low or not available, try to reposition the Gateway.
- Make sure that the wireless client supports the wireless band, protocol and the selected wireless security that are currently used by the access point.
- *Change the wireless channel*.
- Make sure that the access point is enabled.
  For more information, see *“Make sure that the wireless access point is enabled” on page 67*.

## Poor wireless connectivity or range

Try the following:

- Check the signal strength, indicated by the wireless client manager. If the signal is low, try to reposition the Gateway.
- If you are connected to the 5 GHz access point, try connecting to the 2.4 GHz access point instead.
- *Change the wireless channel*.
- Use **WPAWPA2-PSK (TKIP/AES)** as encryption.
  For more information, see *“4.1 How to configure the wireless settings” on page 32*.

## Change the wireless channel

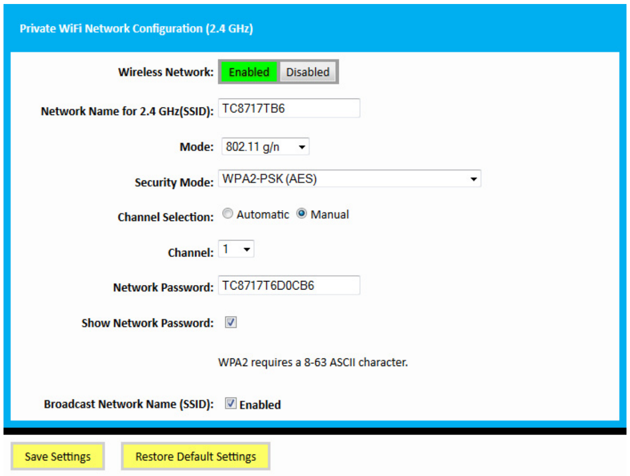
Proceed as follows:

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *“Accessing the Admin Tool” on page 25*.

2 Under **Gateway**, click **Connection** and then click **WiFi**.

3 The **WiFi** page appears. Click the **Edit** button next to the access point that you want to modify.

4 The **Edit** page appears.



Private WiFi Network Configuration (2.4 GHz)

Wireless Network: Enabled | Disabled

Network Name for 2.4 GHz(SSID): TC8717TB6

Mode: 802.11 g/n

Security Mode: WPA2-PSK (AES)

Channel Selection: ○ Automatic ● Manual

Channel: 1

Network Password: TC8717T6D0CB6

Show Network Password: ☑

WPA2 requires a 8-63 ASCII character.

Broadcast Network Name (SSID): ☑ Enabled

5 In the **Channel Selection** list, click **Manual**.

6 In the **Channel** list, click on one of the channels.

7 Click **Save Settings**.

## Make sure that the wireless access point is enabled

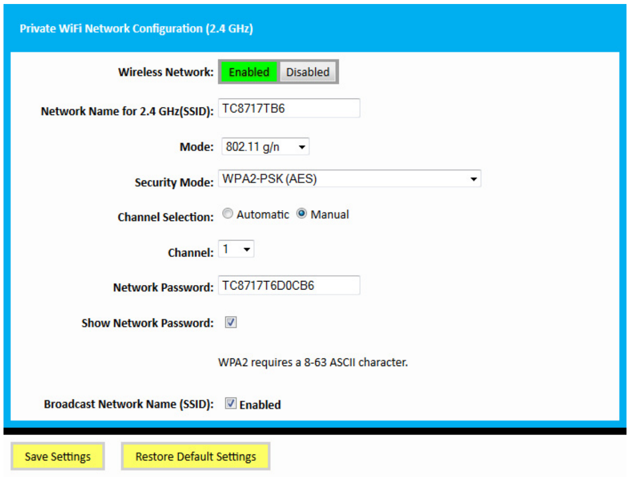
Proceed as follows:

1 Browse to the Admin Tool (http://192.168.0.1).
For more information, see *"Accessing the Admin Tool" on page 25*.

2 Under **Gateway**, click **Connection** and then click **WiFi**.

3 The **WiFi** page appears. Click the **Edit** button next to the access point that you want to modify.

4 The **Edit** page appears.



Private WiFi Network Configuration (2.4 GHz)

Wireless Network: Enabled Disabled

Network Name for 2.4 GHz(SSID): TC8717TB6

Mode: 802.11 g/n

Security Mode: WPA2-PSK (AES)

Channel Selection: ○ Automatic ● Manual

Channel: 1

Network Password: TC8717T6D0CB6

Show Network Password: ☑

WPA2 requires a 8-63 ASCII character.

Broadcast Network Name (SSID): ☑ Enabled

5 In the **Wireless Network** list, click **Enabled**.

6 Click **Save Settings**.

## Cannot connect via WPS

If you are having trouble connecting your wireless client via WPS, try to configure it manually. For more information, see *"2.4.2 How to manually connect your wireless client" on page 20*.

# 8.2 Network diagnostic tools

## Introduction

The Admin Tool offers a number of diagnostics tools to test your network connectivity.

## How to access the network diagnostics tools

1. Browse to the Admin Tool (http://192.168.0.1).
   For more information, see *"Accessing the Admin Tool" on page 25*.
2. On the **Troubleshooting** menu, click **Diagnostic Tools**.
3. The **Network Diagnostic Tools** page appears. The following tools are available:
   - Test Connectivity Results
   - Check for IPv4 Address Results
   - Check for IPv6 Address Results

# 8.3 Gateway reset and restore options

### Reset

By performing a ***reset*** you will restart a specific set of services (or the complete Gateway).

### Restore

By performing a ***restore*** you will reset a specific set of services (or the complete Gateway) ***and*** reapply their factory default settings.

A reset to factory default settings deletes all configuration changes you made. Therefore, after the reset a reconfiguration of your Gateway or a restore of a previously saved configuration (see *"Restoring a previously saved configuration" on page 29*) will be needed.

Also your wireless clients will have to be re-associated, as described in *"2.4 Connect your wireless devices" on page 17*.

### Methods

You can choose between:

- *Performing a reset (restart) or restore via the Admin Tool*.
  With this method you can choose to only reset (restart) or restore a specific module of the Gateway or perform a complete reset/restore of the Gateway.
- *Reset/restore the Gateway via the Reset button*
  With this method you can only perform a complete reset (restart) or restore of the Gateway

### Performing a reset (restart) or restore via the Admin Tool

Proceed as follows:

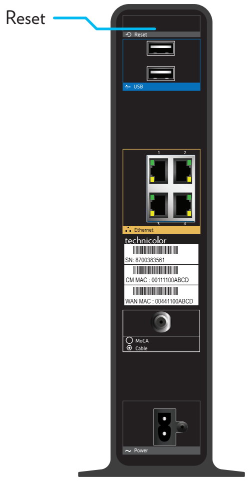
1. Browse to the Admin Tool (http://192.168.0.1).
   For more information, see *"Accessing the Admin Tool" on page 25*.
2. On the **Troubleshooting** menu, click **Reset/Reboot Gateway**.
3. The **Reset/Reboot Gateway** page appears. Click:
   - **Reset** to restart the Gateway.
   - **Reset WiFi Module** to restart just the wireless module only.
   - **Reset WiFi Router** to restart the wireless and router modules.
   - **Restore WiFi Settings** to activate the Gateway default settings for wireless only. All changes to the default wireless settings will be undone.
   - **Restore Factory Settings** to activate all Gateway default settings. All changes to the default settings will be undone.
4. The Gateway prompts you to confirm your choice. Click **OK**.
5. If you selected **Restore Factory Settings,** the Gateway will restart. In all other cases, no restart is needed.

### Reset/restore the Gateway via the Reset button

Proceed as follows:

1. Make sure that the Gateway is turned on.
2. If you want to:

- Reset the Gateway, use a pen or an unfolded paperclip to push the recessed **Reset** button on the back panel of the Gateway for approximately 5 seconds and then release it.
- Restore the factory default settings of the Gateway, use a pen or an unfolded paperclip to push the recessed **Reset** button on the back panel of the Gateway for at least 15 seconds and then release it.



**3** The Gateway restarts.

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