i-CAN Thunder AX 3600

Wi-Fi 6 Ultra Fast Home Gateway

USER MANUAL

SAFETY INFORMATION AND WARNINGS ON THE PRODUCT

Before any operation is performed, please read the operation instructions and precautions carefully in order to minimize the possibility of accidents.

When you use this product you shall always respect basic safety measures in order to reduce risk of fire, electric shock or injury, following below instructions.

Environmental conditions for product installation and use

The product shall be installed and configured in accordance with the user guide.
The product shall be used and installed indoor with a maximum ambient temperature of 40° C.
The product shall be installed in a place with a grade 2 of environmental pollution (a place without conducting polluting agents).
The product shall not be placed near any source of heat or direct sunlight.
The product shall be placed in a well-ventilated area in order to prevent overheating. Do not cover or block the air vents on the product. These are necessary for proper ventilation.
Do not use this product near water or in close proximity to bath tub, wash bowl, kitchen sink, or laundry basin, in a wet basement, or near a swimming pool.
The product shall not get in contact with water and moisture. Moving the product from a cold environment to a hot one may cause moisture on some internal parts of the device. Wait until the product is totally dry before turning it on. In case of fire, do not use water for fire-extinguishing.

The product shall not be used during a lightning storm. There is a remote risk of electric shock from lightning.

Interface classification: The external interfaces of the product are classified as:

Telephone (Line) or FXS: ES2 circuits not subject to overvoltages.
xDSL: ES-2 circuit subject to overvoltages. This means, that although the cables to be used for the normal connection in accordance with the installation procedures are subject to overvoltages, the safety standards are respected.
The other telecommunication ports (**LAN, USB** Host) and the **low voltage power supply port**: ES1 circuits.

External xDSL cables must be connected only to the xDSL port. If these cables were connected to other ports of the product not following the installation instructions, overvoltages can occur.
FXS analogue telephone ports are classified as ES2 circuits, meaning that there is no safety issue if installation instructions are respected. FXS ports shall never be connected to analogue telephone equipment placed outside the building where the product is installed.
Ethernet (LAN) and USB ports must be connected only to devices that support the same kind of interface, and the cable used must not leave the building where the product is installed.

Wireless LAN

The product is provided with a Wi-Fi interface based on DSSS (Direct Sequence Spread Spectrum) and OFDM (Orthogonal Frequency Division Modulation) radio technologies. The product complies with the IEEE 802.11b/g/n/ac/ax standards and is Wi-Fi CertifiedTM according to Wi-Fi Alliance.
The radio equipment transmits in the 2.4GHz and 5GHz frequency bands; the maximum radio-frequency power transmitted is lower than 100 mW (2.4GHz), 200mW (5.15GHz-5.35GHz) and 1000 mW (5.47GHz-5.725GHz)

In order to comply with human exposure to radiofrequency standards this product should be installed and operated with 20 cm (8 inches) minimum distance between the radiator and your body.

Restrictions for use

In all EU member states operation of 5150-5350 MHz is restricted to indoor use only.

USB

The equipment has to be connected to a standard USB device compliant with limited current circuit (as per EN 62368-1-1).

Power source

Use only the Class II power adapter provided with the product. The product should be operated only with power source of the same kind as indicated on the power adapter rating plate.
The power adapter provided is a limited power source as per EN 62368-1 Annex Q1 and it is compliant to national standards of the specific country where the product is installed. It is strictly forbidden to use different type of power source.
The plug-socket serves as the main disconnecting device. Be sure that the used power outlet is easily accessible and located as close to the user as possible.

In order to reduce the risk of fire or electric shock, do not overload the electrical outlet, power strip, or extension power cable.

Software

Please use only software release available onboard at first delivery or upon further updates by operator. Other software releases do not guarantee compliance with essential requirements of RED Directive 2014/53/EU and may not allow the radio equipment to operate as intended.

Cleaning instructions

Unplug the product from the power outlet (or socket) and any other telecommunication interfaces before cleaning. Use a damp cloth for cleaning. Do not use liquid or aerosol cleansers.

Maintenance

Do not open the case in order to avoid electric shock or exposition to overvoltages. Improper mounting can cause electric shock during further use of the product. There are no parts inside the product that can be substituted by the user.

Damage requiring service/replacement

In case the product requires service unplug the product from the electrical outlet and contact your service provider.
Typical conditions which may require service:
– Liquid has been spilled into the product.
– The product does not operate normally when you follow the operating instructions.
– The product has been dropped or damaged.
– There are noticeable signs of overheating.
– The power cord, extension cord, or plug is damaged.
– A burning smell or smoke is perceived from the device.

UNPACKING YOUR WI-FI 6 ULTRA FAST HOME GATEWAY

Thunder Wi-Fi 6 Ultra Fast Home Gateway

Power Supply

DSL Splitter

Grey DSL Cable

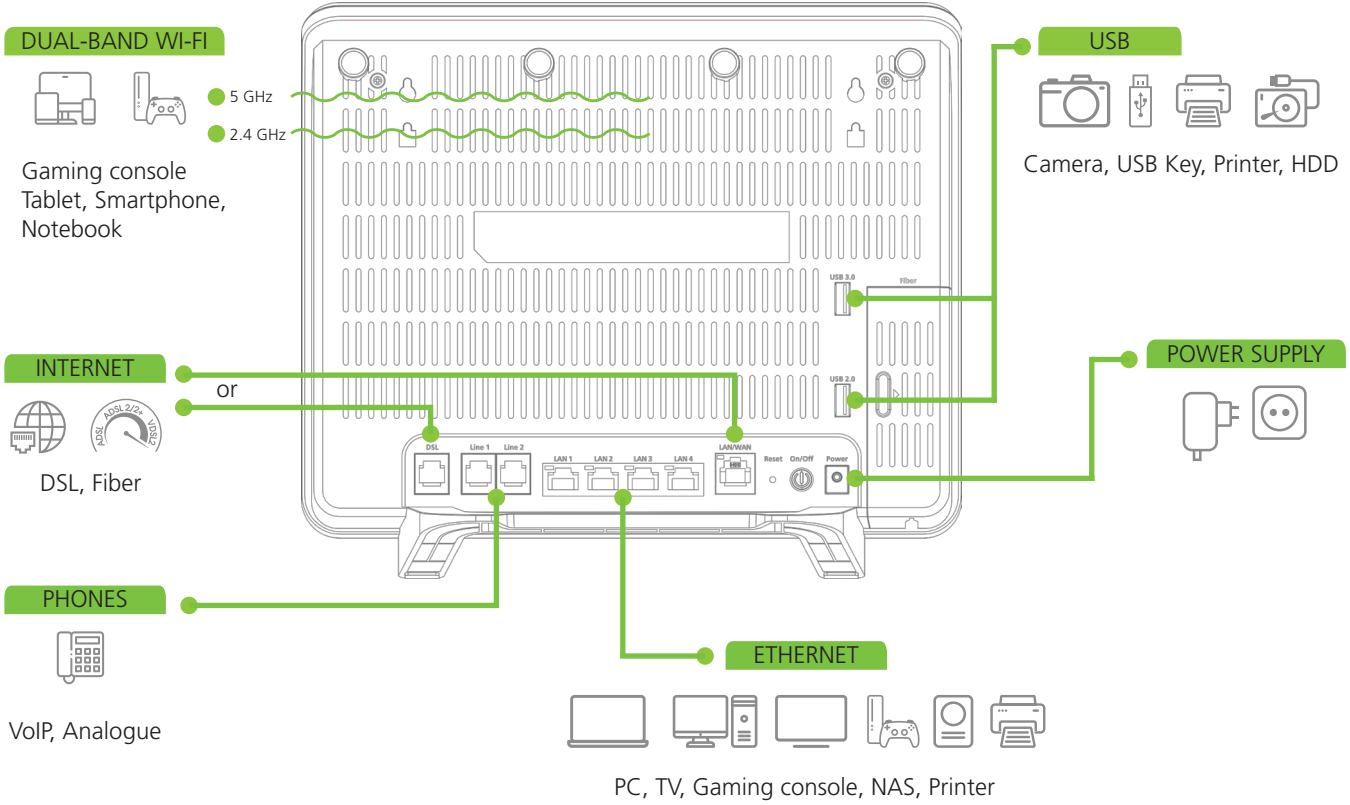
Yellow Ethernet Cable

Red Ethernet Cable

Safety Flyer

Quck Installation Guide

CONNECTIONS



01 Configuration Wizard

This chapter explains how to use the Configuration Wizard, which helps the user to quickly personalize the router and set up a connection to the Internet.
The Wizard can be launched by selecting **Wizard** in the drop-down menu available by clicking the **Menu** icon in the GUI Home page (see Section 3).

The Wizard comprises the following steps:

- Step 1: Selecting a language
- Step 2: Login and Password configuration
- Step 3: Entering the information for establishing a connection to the Internet, as determined by the Internet Service Provider (ISP)
- Step 4: Configuring Voice over IP Service (optional)
- Step 5: Assigning a name and a passphrase to secure the Wi-Fi home network (optional)
- Step 6: Personal Data Collection (optional)
- Step 7: Summary
- Step 8: Firmware Upgrade (automatic)

- NOTE:

Information needed for connecting to the Internet is typically provided by the ISP at the time a service subscription is finalized.

Step 1 – Selecting a Language

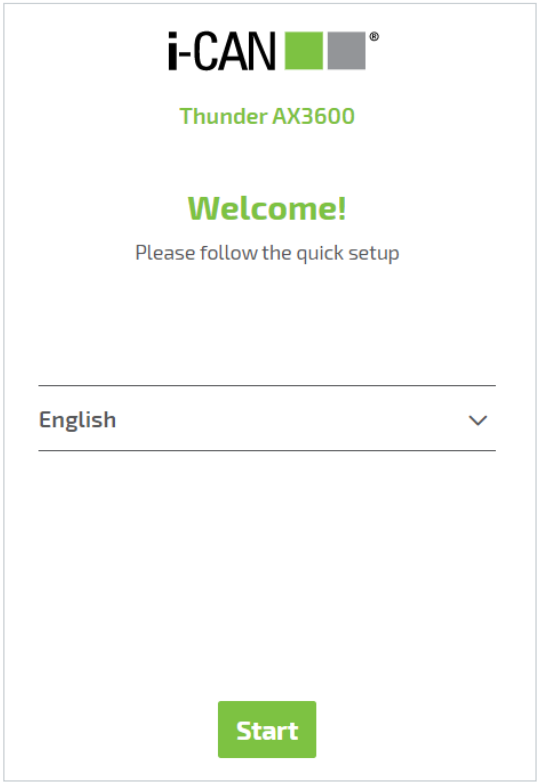
The **Welcome** screen will appear (see Figure 1), showing the i-CAN logo and the router model name.

To select a language:

1. Click **ARROW DOWN** next to the language name to display the list of available languages.
2. Click to select a language from the drop-down menu. The page refreshes with the selected language.

Click **Start** to initiate the setup process.

Figure 1. First Configuration Wizard - Language Selection



Step 2 – Login and Password Configuration

Next, mandatory step is user **Login** and **Password** configuration as shown on the tab **Configure User** (see Figure 2).
This step allows to create User's Login and Password for router access.

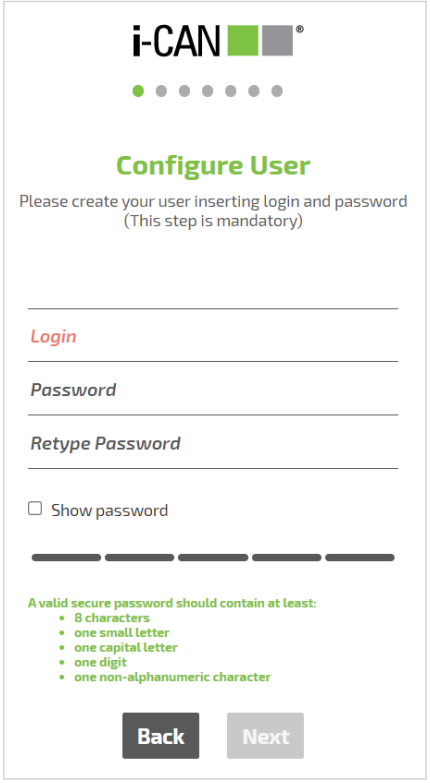
> NOTE:
> *This information enables users to enter router's full configuration.*
>
> *Please make sure to save the information properly.*

1. Enter the name to be assigned to the user's Login (e.g., "admin")
2. Enter the password for the specified login name
3. Retype the password

When all the required information has been specified, the button **Next** becomes active, allowing to proceed to Wizard **Step 3**.

Click **Back** to return to the previous Step or **Next** to continue configuring the router.

Figure 2. First Configuration Wizard – User Configuration



Step 3 – Connect to the Internet

A connection to the Internet can be set up by choosing one of the following two options (see Figure 3):

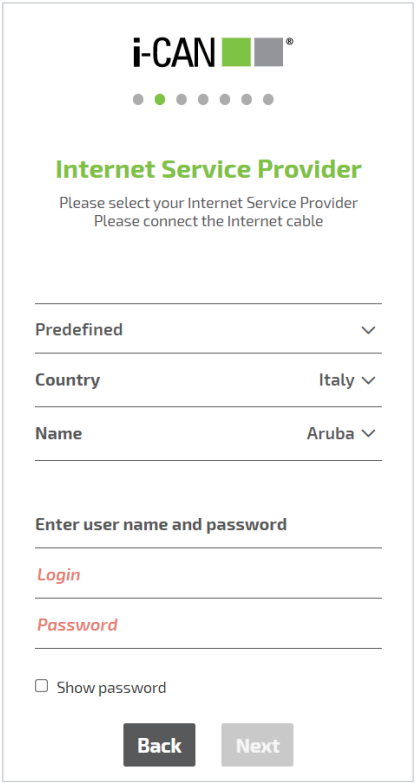
- **Predefined.** A list of pre-configured connections is shown, sorted by country and type. If the ISP and the subscribed connection type are present in the list, select the relevant entry and click Next
- **User Defined.** If the ISP and the subscribed connection type are not present in the list, the ISP name and connection parameters shall be manually entered, according to the documentation that should have been provided by, or could be obtained from the ISP.

> NOTE:
> *Please make sure that the Internet cable is properly connected to the router.*

Click **Back** to return to the previous Step or **Next** to continue configuring the router.

If this step is taken again at a later time from the **Internet** configuration page (Section 3.2) or by restarting the **Wizard** from the **Menu** in the **Home** page (see Section 4.6) it would be possible to click **Skip** to skip this step without any changes in the configuration of the Internet connection.

Figure 3. First Configuration Wizard – Internet connection set up



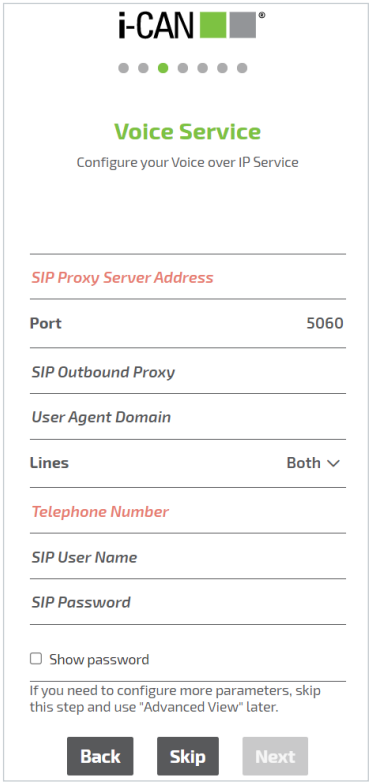
Step 4 – Configure Voice over IP Service

As for the Internet connection setup, the configuration parameters to be specified in this step (see Figure 4) are typically provided by, or attainable from, the Internet Service Provider, after applying for a Voice over IP service subscription.

Click **Back** to return to the previous Step, **Skip** to skip this step or **Next** to continue setting up the device.

If this step is skipped, it would be possible to complete the configuration of the VoIP service at a later time from the **VoIP** configuration page (Section 3.5) or by restarting the **Wizard** from the **Menu** in the **Home** page (see Section 4.6).

Figure 4. First Configuration Wizard – Voice Service



Step 5 – Wi-Fi Network Configuration

This step allows to specify the Wi-Fi network name (SSID) and password by performing the following actions (refer to Figure 5)

1. Enter the name to be assigned to the network (SSID)
2. Enter the password
3. Retype the password

When all the required information has been specified, the button **Next** becomes active, allowing to proceed to Wizard **Step 6**.

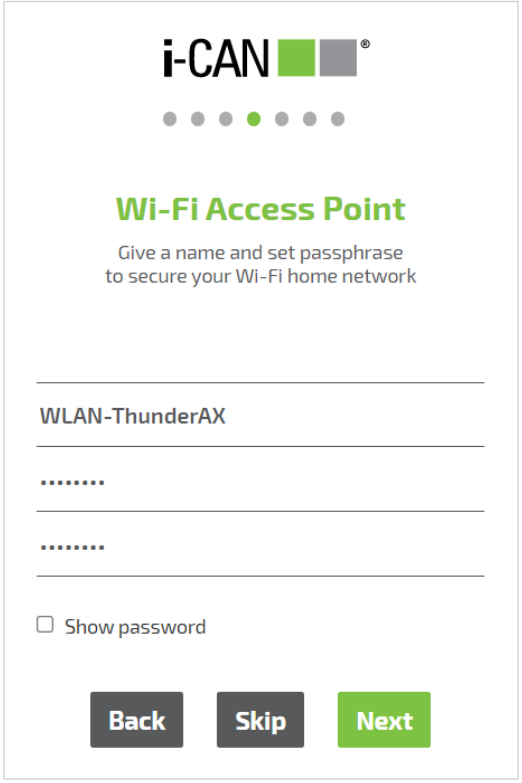
If the Skip button is pressed, no changes will be made to the current values of SSID and password, displayed on the screen.

> NOTE:
> *If the Wizard is run at first device switch-on or after a reset to device factory configuration, the SSID and password will be preset to their default values, which are printed on a label or encoded in the QR-Code on the device itself.*
>
> *After the modification of Wi-Fi parameters in the Wizard, it will not be possible to use information printed on label or QR-Code.*

The configuration can be completed later on from the **Wi-Fi** configuration page (Section 3.3) or by restarting the **Wizard** from the **Menu** in the **Home** page (see Section 4.6).

The **Back** button can be clicked to return to the previous Step.

Figure 5. First Configuration Wizard – Wi-Fi Access Point



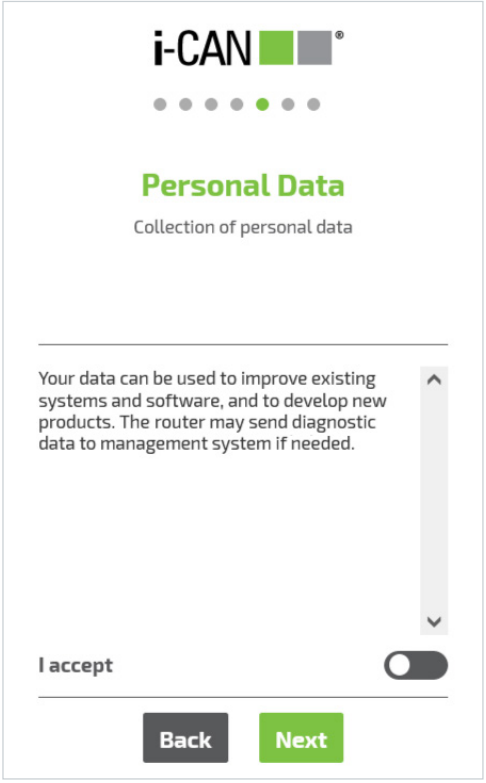
Step 6 – Personal Data Collection

The next step allows to express your consent (refer to Figure 6) to collecting and transferring diagnostic data from the router to management system if needed.

Data collection acceptance is optional, users can accept (enabling button in the menu) or discard.

Click **Back** to return to the previous Step or **Next** to continue configuring the router.

Figure 6. First Configuration Wizard – Personal Data



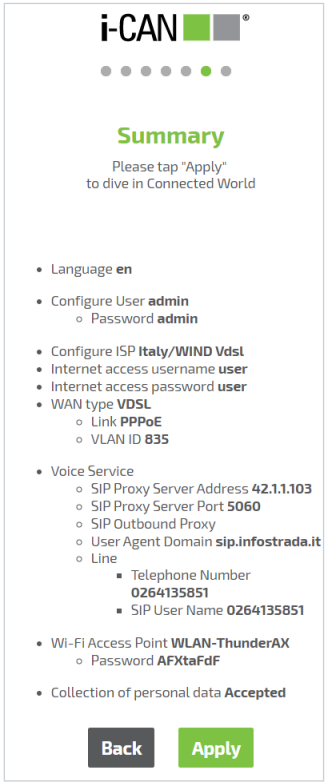
Step 7 - Summary

The **Summary** page will be shown listing all device settings specified during the procedure (see Figure 7).

Click **Back** to revisit the previous steps if any setting needs to be changed or **Apply** to confirm the configuration.

> NOTE:
> *Applying the configuration, router will connect to Internet using inserted parameters. If WAN interface failure occurs, the router will provide the skip option and will redirect to router's homepage for manual configuration. Router's GUI allows to configure WAN connection manually or to restart the Wizard process. (refer to figure 13)*

Figure 7. First Configuration Wizard - Summary



Step 8 – Firmware Upgrade

After displaying the Summary page containing all device settings specified during the procedure and carrying out auto-configuration in accordance with these settings, a page with information about the availability of the Firmware upgrade may appear (see Figure 8).

Firmware Upgrade is automatic procedure. Upgrading router to the latest available software release takes place from the page illustrated in Figure 8.

The page shows the following information:

1. New firmware is available
2. Current firmware version

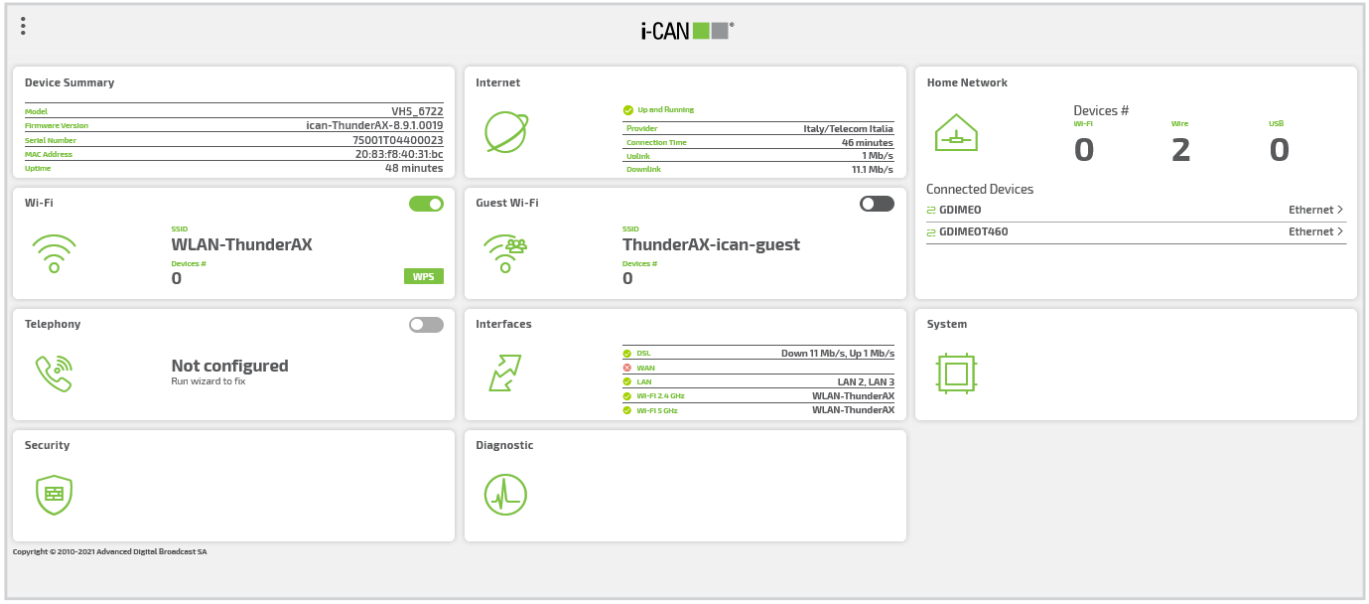
Click **Upgrade** to start the automatic installation of new software or **Retry** to check for a newer firmware version again.

> NOTE:
> *If new firmware release is available, the firmware upgrade process will take about 2 minutes.*

Figure 8. First Configuration Wizard – Firmware Upgrade

Upon successful application of all configuration parameters, the Wizard will close, and the **Home** page will be displayed (see Figure 9). A detailed description of the **Home** page content is provided in Section 3.

Figure 9. Home page



02 Use a Web Browser to Access Router Configuration

The router's web interface allows viewing or changing router settings, and displaying the information about its current status.

To access the router's web user interface:

1. Connect your device to the router via LAN cable or Wi-Fi (refer to product Quick Installation Guide).
2. Ensure that the router is switched on.
3. Open a web browser on a device connected to the router.
4. Enter the router's IP address (default: http://192.168.1.1) or router name (i-can.thunder) in the browser address field (see Figure 10).
5. The **Login** page will show up (see Figure 11).
6. Enter the router login name created during Configuration Wizard Step 2 (e.g., "admin").
7. Enter the password for the specified login name created during Configuration Wizard Step 2.
8. Optionally change the display language using the relevant dropdown list.
9. Click the **Login** button.

Figure 10. Address Field

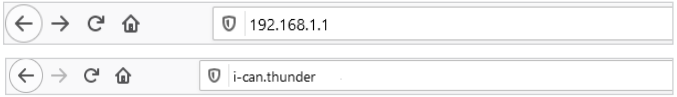
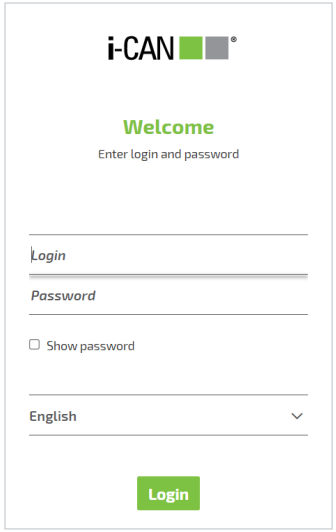


Figure 11. Login Page



■ NOTE:

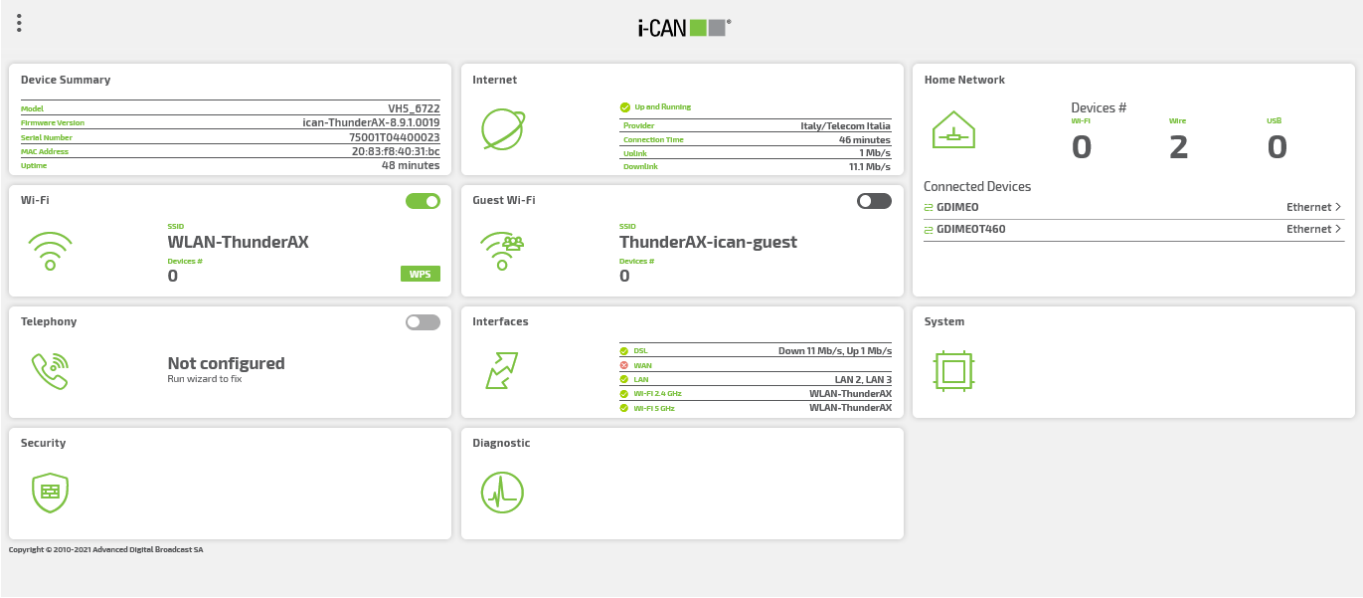
The password is not shown in clear even during typing, unless the "Show password" checkbox is ticked. This also applies to all other places where a password field is present.

Upon successful login, the **Home** page is displayed

The **Home** screen provides a complete overview of the router's status and configuration settings.

> NOTE:
> *User Interface sessions are automatically terminated after a predefined inactivity timeout. The Login page will be shown again to allow for user re-authentication.*

Figure 12. Home Page



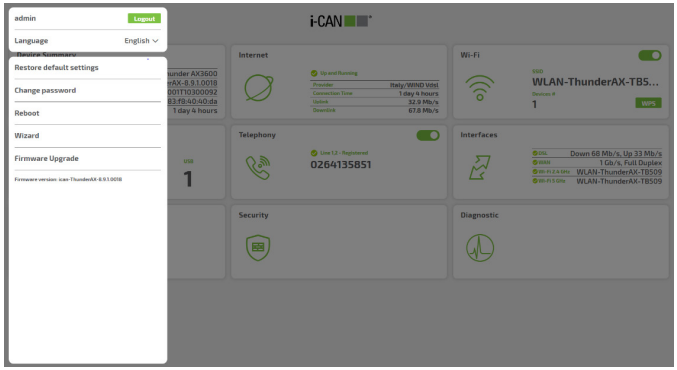
03 Menu

The **Menu** panel (see Figure 13) is displayed on the screen left side by clicking the **Menu** icon in the **Home** page.

The panel includes a number of items corresponding to actions that can be performed on the device or the device configuration pages, namely

- **Logout** (button, see Section 3.1)
- GUI **Language** choice (see Section 3.2)
- **Restore default settings** (see Section 3.3)
- **Change password** (see Section 3.4
- **Reboot** (see Section 3.5)
- **Wizard** (see Section 3.6)
- **Firmware Upgrade** (see Section 3.7)

Figure 13. Menu



3.1 Logout

The **Logout** button (Figure 14) allows to log out from the ongoing GUI session.

1. Click on the **Menu** icon ⋮ in the **Home** page to display the Menu.
2. Click the **Logout** button.

Figure 14. Logout button

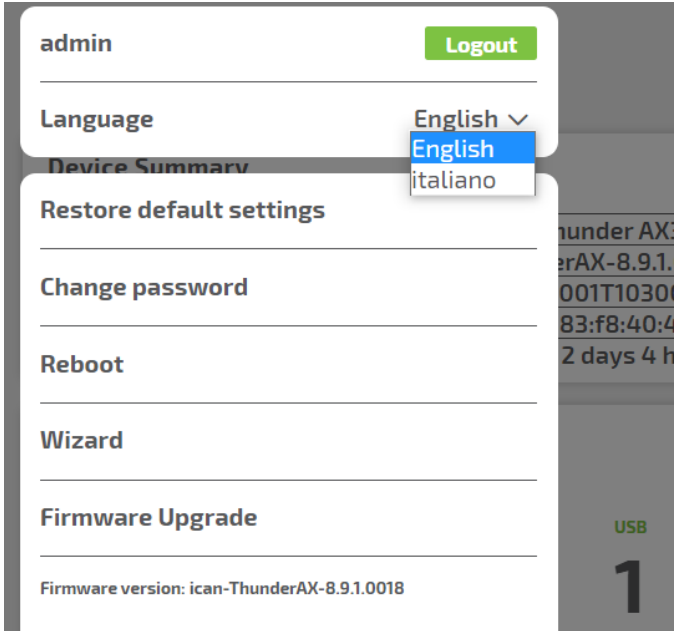
3.2 Language

The **Language** menu entry allows to select the language used in the GUI.

To change the current language:

1. Click on the **Menu** icon ⋮ in the **Home** page to display the **Menu**.
2. Click the **ARROW DOWN** icon next to the language name. to display the language drop-down menu (see Figure 15).
3. Select a language from the menu.
4. The page refreshes with the chosen language.

Figure 15. Language settings



3.3 Restore Default Settings

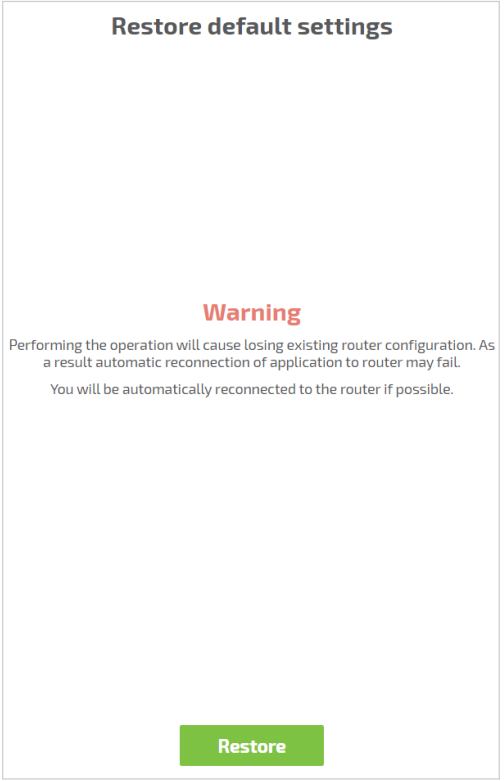
The **Restore Default Settings** panel allows, upon confirmation, to reset the router to its factory default configuration.

> WARNING:
> *This action will cause the current router configuration to be lost.*

To restore factory default settings:

1. Click on the **Menu** icon ⋮ in the **Home** page to display the **Menu**.
2. Click **Restore Default Settings** menu entry: a page will appear displaying a warning message (see Figure 16).
3. Click the **Restore** button to confirm. The process starts.
4. When factory settings are successfully restored, the user will be automatically reconnected to the router. If the operation fails, the user will be asked to log in again.

Figure 16. Restore Default Settings panel



3.4 Change Password

The **Change Password** panel (Figure 17) allows to change the password for the user account.

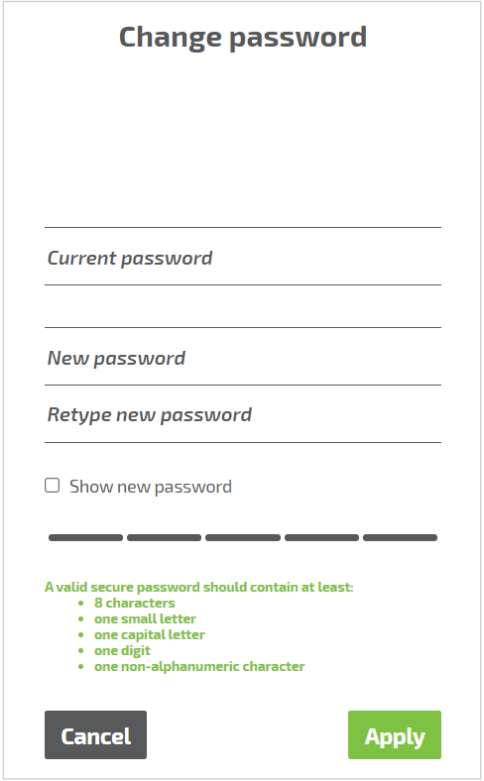
To change the password:

1. Click on the **Menu** icon ⋮ in the **Home** page to display the **Menu**.
2. Click **Change Password** menu entry: a page will appear where the password can be modified (see Figure 17).
3. Enter the current password.
4. Enter the new password.
5. Retype the new password.
6. If the same set of characters has been entered at steps 4 and 5, the **Apply** button becomes active and can be clicked to operate the password change.

■ NOTE:

The panel includes suggestions for choosing a secure password and reports a visual indication about the security grade of the one being typed. The user is however free to select whatever string he desires as the new password.

Figure 17. Change Password panel



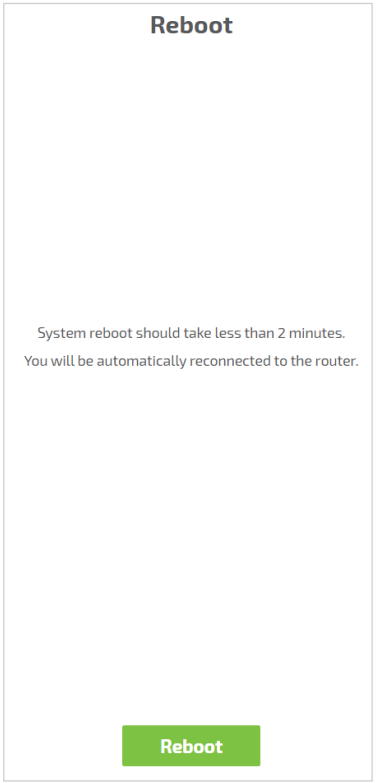
3.5 Reboot

The **Reboot** panel allows, upon confirmation, to reboot the router.

To reboot the router:

1. Click on the **Menu** icon ⋮ in the **Home** page to display the **Menu**.
2. Click **Reboot** menu entry: a page will appear displaying a notification about the reboot process (see Figure 18).
3. Click the **Reboot** button: the reboot progress pop-up (see Figure 23) will be shown until the operation completes.
4. When reboot terminates, the **Login** page will be automatically displayed in the same browser window.

Figure 18. Reboot panel



3.6 Wizard

The **Wizard** entry in the **Menu** panel restarts the configuration Wizard, described in Section 1.

■ NOTE:

The value displayed for the various configuration parameters that can be set in Wizard pages is the one currently applied. When the Wizard is run for the first time, this will correspond to the value set as factory default. For all successive Wizard execution, the value shown is the one set beforehand.

3.7 Firmware Upgrade

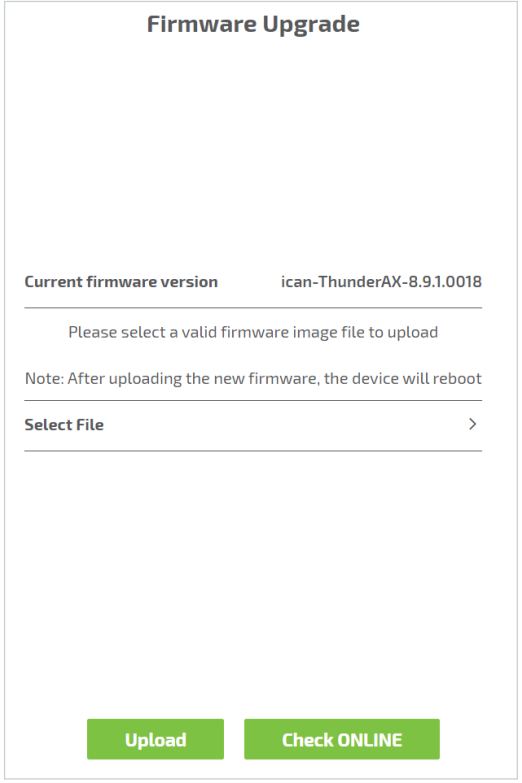
The **Firmware Upgrade** panel allows uploading and executing a new firmware image, by selecting the file that contains the image from a location in the Home Network or the Internet.

To upgrade the firmware:

1. Click on the **Menu** icon ⋮ in the **Home** page to display the **Menu**.
2. Click **Firmware Upgrade** menu entry: a page will appear displaying the version of the currently installed firmware and asking to select the file containing the new image
3. Click **Select File**: a file browser windows will appear through which it will be possible to navigate to the folder containing the new firmware image file and select it for upload
4. Click the **Upload** button
5. If the file is correctly transferred and contains a valid firmware image, the device will reboot automatically using the new firmware version

■ NOTE:
This process may require several minutes to be completed. Please do not switch off the router.

Figure 19. Firmware Upgrade panel

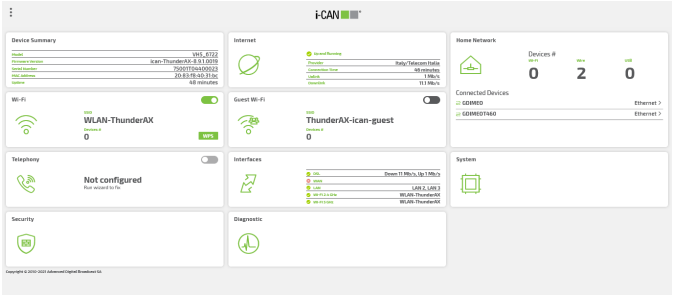


04 Home Page

After having successfully logged in, the **Home** page will be displayed (see Figure 12).
The page consists of Menu tiles, each showing an overview of the current status of a specific functional area of the router, and possibly allowing to perform simple function-specific activation / deactivation actions. When clicked, each tile displays a page with more details and configuration options relevant to the function it represents.
Information directly available from Home page tiles consists of:

- **Device Summary** with list of:
  - Model name
  - Firmware Version
  - Serial Number
  - MAC Address
  - Uptime
- **Internet** (see Section 4.2 for more information)
  - Connection profile
  - Status of the connection
  - Uplink and Downlink speed
- **Wi-Fi** (see Section 4.3 for more information)
  - Radio switch-on / switch-off toggle
  - Network name (SSID)
  - Number of currently connected devices
  - WPS function
- **Wi-Fi-Guest** (see Section 4.4 for more information)
  - Radio switch-on / switch-off toggle
  - Network name (SSID)
  - Number of currently connected devices
- **Home Network** (see Section 4.5 for more information)
  - Number of connected devices
  - Connections typology (ethernet / Wi-Fi)
- **Telephony** (see Section 4.6 for more information)
  - Service enable / disable toggle
  - Phone lines status
  - List of more recent phone calls

Figure 12. Home Page



- **Interfaces** (see Section 4.7 for more information)
  - Type, Status, Downlink and Uplink speed of the Physical Link to ISP
  - Status, speed, and mode of the WAN interface
  - Status of LAN interfaces and connected ports
  - Status and Network names (SSID) for 2,4 & 5 GHz Wi-Fi interfaces
- **System** (see Section 4.8 for more information)
- **Security** (see Section 4.9 for more information)
- **Diagnostic** (see Section 4.10 for more information)

When clicked, the **Menu** icon ⋮ shown in the **Home** page upper left corner (see section 3) opens a list box containing a number of actions, including e.g., session logout, language selection, password change, router reboot, Wizard configuration, firmware upgrade (see Figure 13).

More information about **Menu actions** are provided in Section 4.

Figure 12. Home Page

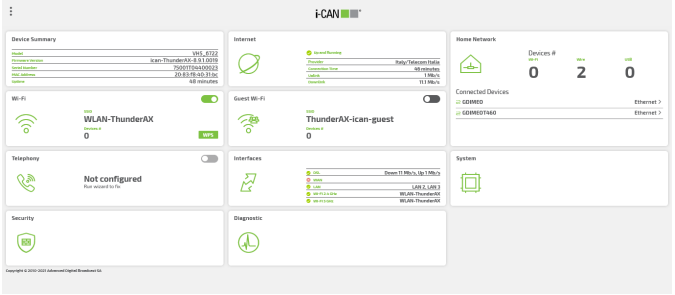
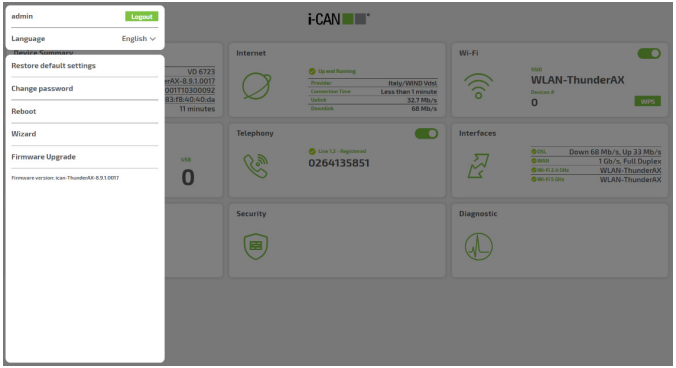


Figure 20. Home - Menu Displayed



4.1 Configuration pages structure

As written in the previous Section, clicking a tile in the **Home** page will cause a tile-specific page to be displayed.

Figure 21 illustrates an example screen with information appearing after clicking the **Internet** tile. Each tile-specific page will show up leaving the leftmost and rightmost parts of the **Home** page dimmed but still visible on the screen sides. Clicking anywhere on the dimmed area will bring the **Home** page back, the same effect can also be achieved by clicking **ARROW LEFT** at the top left corner of the page.

Tile-specific pages are organized in two panes, the one on the left listing the main page sections and the one on the right reporting status information and/or settings for the functionalities represented by those sections.

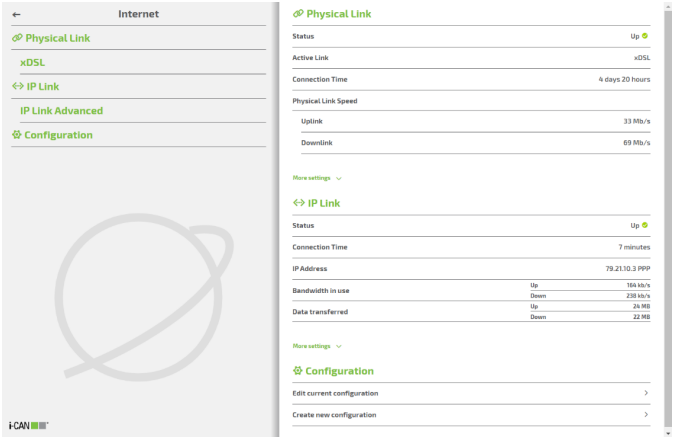
Clicking on section names in the left panel will bring information of that section top aligned in the right pane, possibly displaying items not visible beforehand.

Additional details on each section can be displayed by clicking **More settings** at the bottom of section information areas. This will also normally cause the entire right panel to become vertically scrollable.

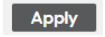
When one or more configuration parameters are changed in a page, and provided the specified values are valid, the **APPLY** button

will appear in the page bottom right corner.

Figure 21. Example of page activated by tile in Home page (Internet)



If invalid or incomplete settings have been specified for at least one parameter, the button will be shown greyed out



and disabled until such settings have been corrected.

Any change made in the page will become effective only after the **APPLY** button has been clicked.

Conversely, modifications can be discarded by leaving the page without clicking **APPLY**: in that case, a pop-up windows will be displayed asking to confirm this action, contextually offering the possibility of reenter the configuration page (see Figure 22).

Some configuration changes require the router to be rebooted: in this case, a warning page will pop-up (See Figure 23) notifying the need for such action and asking for a confirmation to proceed.

During reboot a progress bar will be shown with the indication of the approximate time remaining for completing the operation (see Figure 24).

When reboot terminates, a notification is issued and the user is redirected to home page and requested to login again.

Figure 22. Discard changes confirmation pop-up

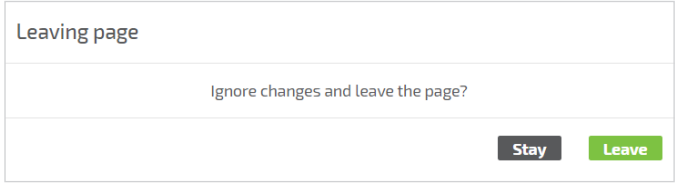


Figure 23. Reboot warning

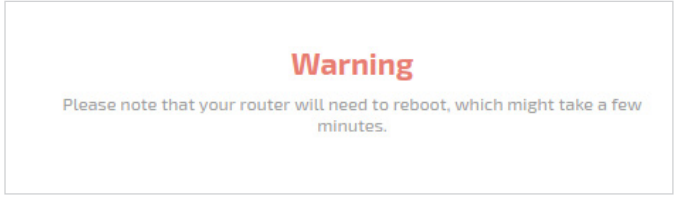
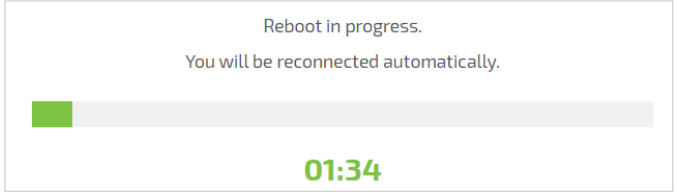


Figure 24. Reboot ongoing



4.2 Internet

The **Internet** tile in the **Home** page (see Figure 12) displays the current status of the connection with the Internet, namely whether or not the physical link is up or down, whether a public IP address has or not been assigned to the router, and, if the link is fully working, the current Uplink and Download speed.

The **Internet** page (see Figure 25) opens when clicking the **Internet** tile in the **Home** page (see Section 3).

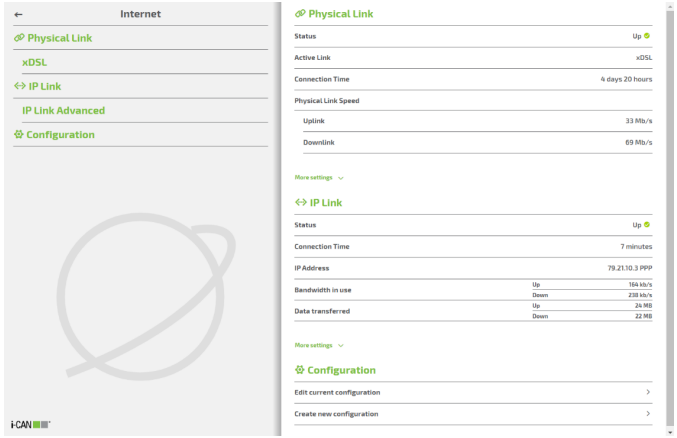
The page left panel lists five sections, namely

- Physical Link
- xDSL
- IP Link
- IP Link Advanced
- Configuration

whose relevant details are expanded in the page right panel. Note that clicking **More settings** in the **IP Link** section in the right panel has the same effect as clicking **IP Link Advanced** in the left panel.

Information reported for each section is described below.

Figure 25. Internet page



Physical Link (Figure 26)

Status — The status of Internet connection at physical layer: "**Up**" means the connection active, "**Down**" means the connection is not active.

Active Link — The technology used by the physical link e.g., **xDSL**, **Ethernet**,. In case when the router can connect to the Internet using more than one link type, the currently active one is reported. If no link is active, Active Link indicates "**Not configured**" and a link is shown leading to a **Troubleshooting** page.

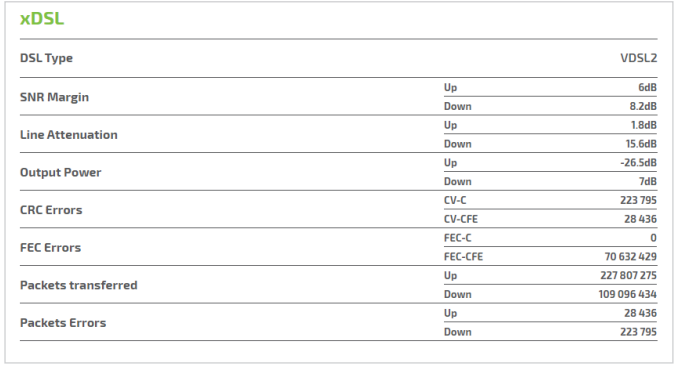
Connection Time — How long the Internet connection physical layer has been in the "**Up**" status.

Physical Link Speed — The bitrate measured at physical layer in the "**Uplink**" (to the Internet) and "**Downlink**" (from the Internet) directions.

More settings — Additionally, technology-specific details about the physical link status. As an example, Figure 20 shows information displayed for a xDSL link: such information can be useful to assist on-line troubleshooting activity operated by the Service Provider help desk.

Figure 26. Physical Link information

Figure 27. xDSL Physical Link "More settings"



IP Link (Figure 28)

Status The current status of Internet connection at IP layer: "**Up**" means that the router has received from the ISP enough information (IP address, DNS server address) to navigate the Internet, "**Down**" means some problem is preventing accessing the network.

Connection Time How long the Internet connection IP layer has been in the "**Up**" status.

IP Address When Status is "**Up**", the public IP address assigned to the router by the Internet Service Provider.

Bandwidth in use Currently used link bandwidth in Uplink ("**Up**") and Downlink ("**Down**") directions.

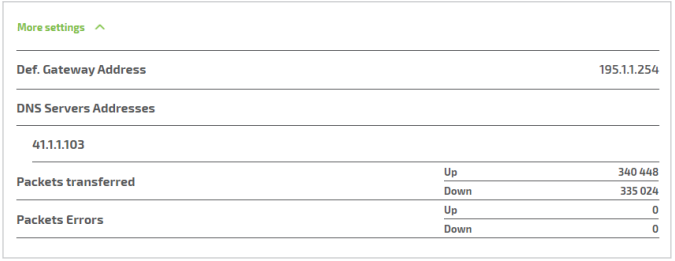
Data transferred Data transferred in Uplink and Downlink directions since last router switch-on.

More settings Additional details about the IP link status (see Figure 29). These are listed in:

- Default Gateway IP Address (assigned by the ISP)
- DNS Server IP Address(es) (assigned by the ISP or manually in Advanced Configuration pages)
- Packets correctly transferred or transferred with errors in Uplink and Downlink directions since last router switch-on

Figure 28. IP Link information

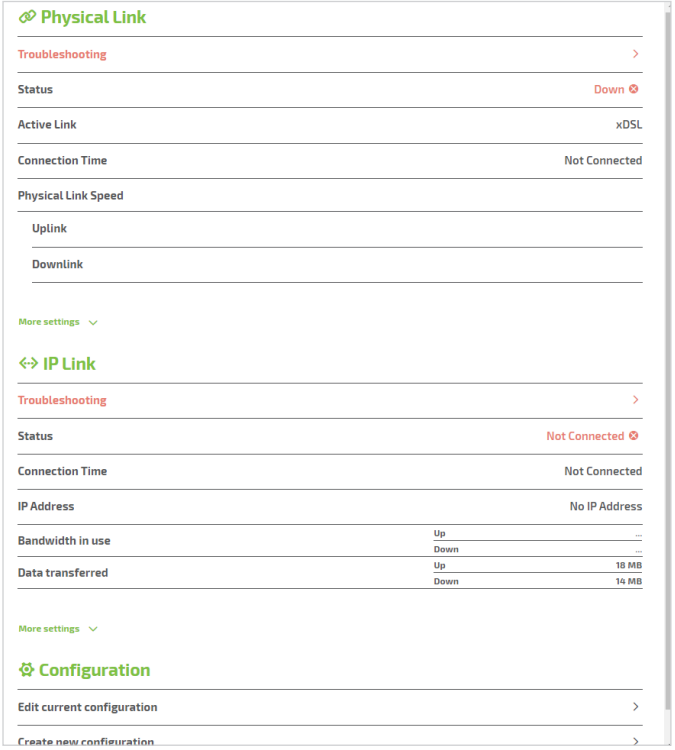
Figure 29. IP Link "More settings"



If there is no Internet connection, additional menu entries will be shown - **Troubleshooting** (see Figure 30).

Click it to go directly to the **Troubleshooting** section.

Figure 30. Internet Disconnected



4.3 Wi-Fi and Wi-Fi Guest

The **Wi-Fi** and **Wi-fi Guest** tiles in the **Home** page (see Figure 12) provide basic status information about the wireless network managed by the router:

- wireless network name (SSID)
- number of connected devices

Wi-Fi tile allows performing basic actions on the wireless network, specifically:

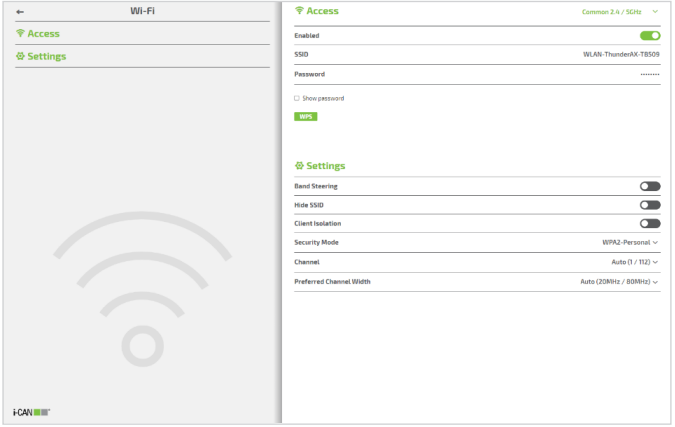
- enable / disable Wi-Fi connection via the ON/OFF slider button
- use the WPS button to trigger the WPS (Wi-Fi Protected Setup) process, used for associating a wireless client to the router without the need of entering the Wi-Fi password on the client; this has the same effect as pressing the physical button on the router

Wi-Fi Guest tile allows performing basic actions on the wireless network, specifically:

- enable / disable Wi-Fi connection via the ON/OFF slider button

To bring up more details about the Wi-Fi connection, click on the **Wi-Fi** tile. A **Wi-Fi** detailed view page will be displayed (Figure 31), allowing to configure Wi-Fi parameters.

Figure 31. Wi-Fi Page



Access section (Wi-Fi and Wi-fi Guest)

2.4 / 5 GHz Network Setting Mode

(drop-down menu on the page right top)

Switches between "**Common 2.4 / 5GHz**" (Figure 32 - shortened as "Common" in the following) and "**Separate 2.4 and 5GHz**" (Figure 33 - "Separate") setting modes for the 2.4 GHz and 5 GHz bands:

- choosing "Common" mode, the same status and configuration parameters will be presented or applied to both bands
- choosing "Separate" mode causes both Access and Settings sections to split in two parts, where status and configuration parameters are separately presented for the two bands

Enabled (ON/OFF slider button)

Enables or disables the wireless network (one or both bands, depending on the selected mode)

Network Name (SSID)

Displays / modifies the name of the wireless network (one or both bands, depending on the selected mode)

Password

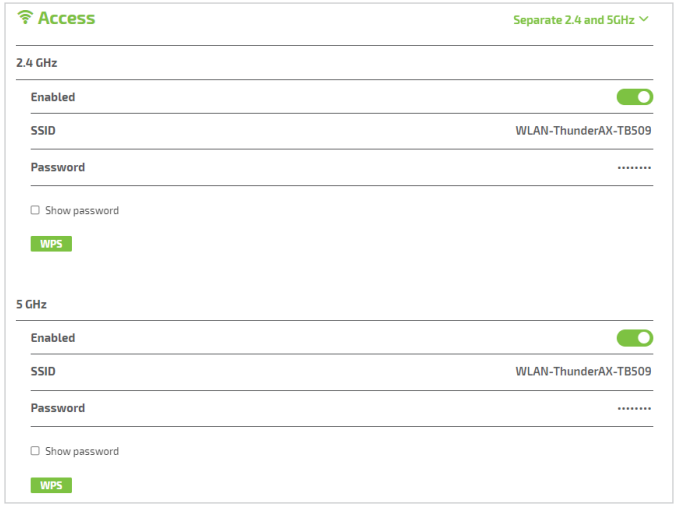
Displays / modifies the Wi-Fi password of the wireless network (one or both bands, depending on the selected mode); the password is displayed in clear only when the "**Show password**" box is checked

WPS

Triggers the WPS pairing process

Figure 32. Wi-Fi Access section (Common 2.4 / 5GHz)

Figure 33. Wi-Fi Access section (Separate 2.4 and 5GHz)



Settings section (Figure 34):

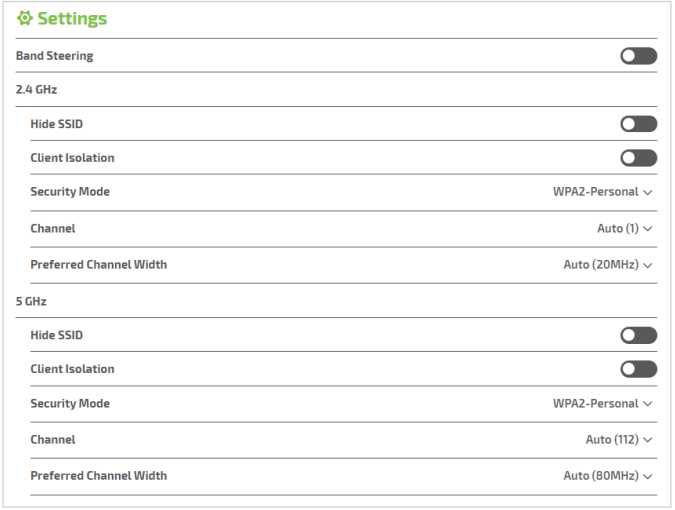
Band Steering
(ON/OFF slider button)

Hide SSID
(ON/OFF slider button)
Selects whether or not the SSID is advertised to Wi-Fi client devices: choose **ON** to hide the SSID, **OFF** to reveal it.

Client isolation
(ON/OFF slider button)
When set to **OFF**, wireless clients can see each other as well as other devices in the Home Network and mutually exchange data; when set to **ON**, each wireless client can only connect to the Internet.

Security Mode
(drop-down menu)
Displays, and allows to change, the Wi-Fi security mode. When clicking **ARROW DOWN**, the following options are shown: **None** (no security), **WPA2-Personal** (preferred) and **WPA-WPA2-Personal** (for interoperability with older wireless clients).

Figure 34. Wi-Fi Settings section (Separate 2.4 and 5GHz)



Channel

Displays, and allows to change, the Wi-Fi radio channel in use in each band (see Figure 35).

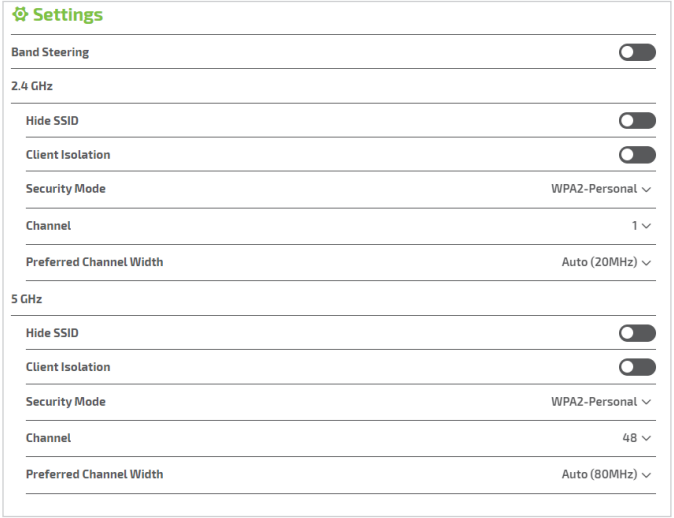
The options shown when clicking **ARROW DOWN** depend on band (2.4 GHz or 5 GHz):

- 2.4 GHz: "Auto", "1" ÷ "13"
- 5 GHz: "Auto", "36", "40", "44", "48"

The "**Auto**" option lets the router automatically select the best channel based on a survey of the radio environment.

In "**Common**" mode, the only allowed choice is "**Auto**", since the sets of available channels in the 2.4 GHz and 5 GHz bands are disjointed. The selected channel is shown in brackets after the word "**Auto**".

Figure 35. Wi-Fi Settings section (Manual channel selection)



- NOTE:

The 5 GHz network channel chosen with the "Auto" setting may not be one of those listed for manual selection. This is due to the fact that national radio regulations allow the usage of some channels only if specific checks are made beforehand. Therefore, such channels cannot be manually selected by the user.

Preferred Channel Width

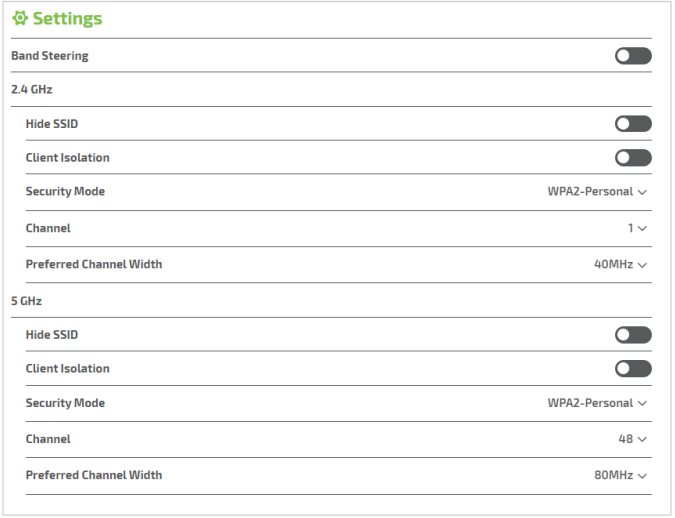
Displays, and allows to change, the bandwidth of the Wi-Fi radio channel in use by each network.

The options shown when clicking **ARROW DOWN** depend on the router model and the network band (2.4 GHz or 5 GHz):

- 2.4 GHz: "Auto", "20", "40"
- 5 GHz: "Auto", "20", "40", "80", "160"

The "Auto" option lets the router automatically select the best bandwidth.
"**Auto**" is the only option available in "**Common**" mode. Furthermore, in "**Separate**" mode, options different from "**Auto**" are only available if **Channel** is not set to "**Auto**".

Figure 36. Wi-Fi Settings section (Channel Width selection)



- NOTE:

*Changing the mode from "**Separate**" to "**Common**" is not allowed until all settings are modified to be the same for both 2.4 GHz and 5GHz networks.*

4.4 Wi-Fi Guest

The **Wi-fi Guest** tile in the **Home** page (see Figure 12) provides basic status information about the Guest wireless network managed by the router:

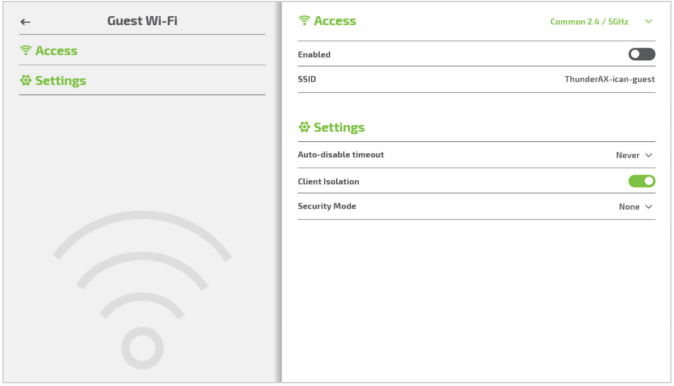
- wireless network name (SSID)
- number of connected devices

Wi-Fi Guest tile allows performing basic actions on the wireless network, specifically:

- enable / disable Wi-Fi connection via the ON/OFF slider button

To bring up more details about the Wi-Fi connection, click on the **Wi-Fi Guest** tile. A **Wi-Fi** detailed view page will be displayed (Figure 31), allowing to configure Wi-Fi parameters.

Figure 31. Wi-Fi Guest Page



Access section

2.4 / 5 GHz Network Setting Mode (drop-down menu on the page right top)

Switches between "**Common 2.4 / 5GHz**" (Figure 32 - shortened as "Common" in the following) and "**Separate 2.4 and 5GHz**" (Figure 33 - "Separate") setting modes for the 2.4 GHz and 5 GHz bands:

- choosing "**Common**" mode, the same status and configuration parameters will be presented or applied to both bands
- choosing "**Separate**" mode causes both **Access** and **Settings** sections to split in two parts, where status and configuration parameters are separately presented for the two bands

Enabled (ON/OFF slider button)

Enables or disables the wireless network (one or both bands, depending on the selected mode)

Network Name (SSID)

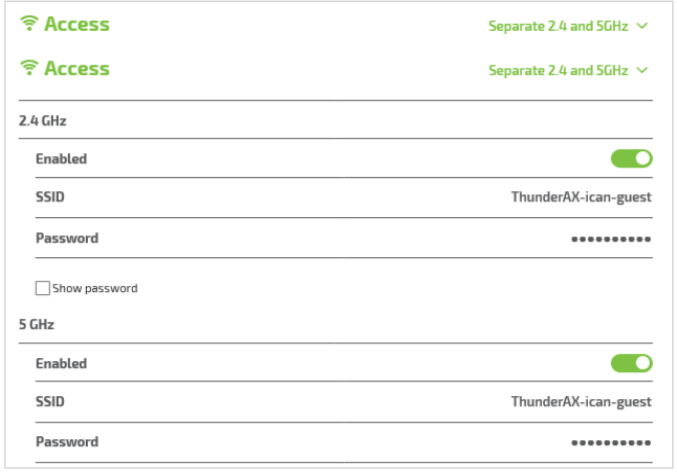
Displays / modifies the name of the wireless network (one or both bands, depending on the selected mode)

Password

Displays / modifies the Wi-Fi password of the wireless network (one or both bands, depending on the selected mode); the password is displayed in clear only when the "Show password" box is checked

Figure 32. Wi-Fi Access section (Common 2.4 / 5GHz)

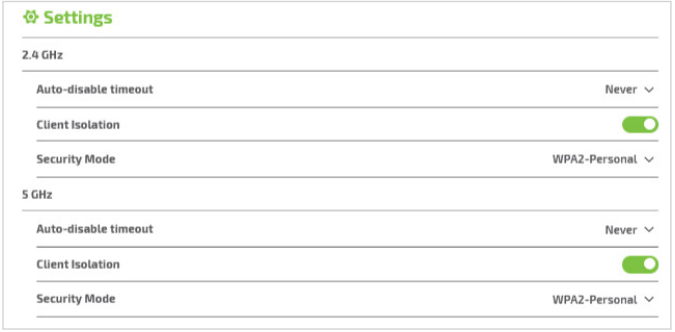
Figure 33. Wi-Fi Access section (Separate 2.4 and 5GHz)



Settings section (Figure 34):

Auto-disable timeout (drop-down menu)	Selects whether or not timeout for network availability with options: Never / End of today / End of Tomorrow.
Client isolation (ON/OFF slider button)	When set to **OFF**, wireless clients can see each other as well as other devices in the Home Network and mutually exchange data; when set to **ON**, each wireless client can only connect to the Internet.
Security Mode (drop-down menu)	Displays, and allows to change, the Wi-Fi security mode. When clicking **ARROW DOWN**, the following options are shown: None (no security), **WPA2-Personal** (preferred) and **WPA-WPA2-Personal** (for interoperability with older wireless clients).

Figure 34. Wi-Fi Settings section (Separate 2.4 and 5GHz)



4.5 Home Network

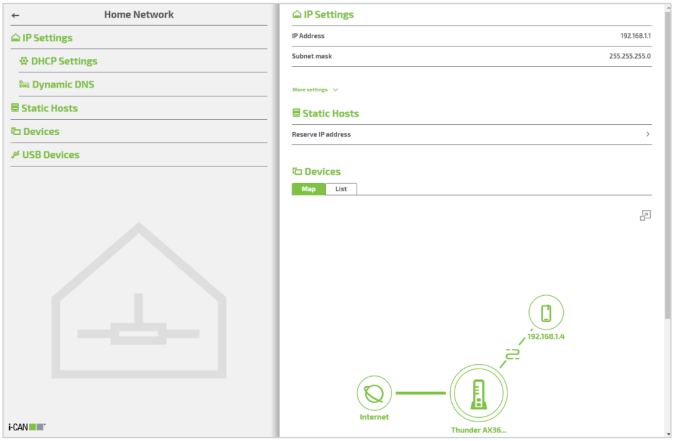
Home Network tile in the **Home** page (see Figure 12) reports the number of home network devices currently connected to the router, distinguished by the type of connection link (Wi-Fi, Wired or USB).
Clicking on the **Home Network** tile brings up the **Home Network** page (see Figure 37).

The page left panel lists four sections, namely

- IP Settings
  - DHCP Settings
  - Dynamic DNS
- Static Hosts
- Devices
- USB Devices

whose relevant details are expanded in the page right pane.
Note that clicking More settings in the IP Settings section in the right panel will display the same information shown when clicking DHCP Settings or Dynamic DNS.
Information reported for each section is described below.

Figure 37. Home Network



- WARNING:

Default values of parameters in IP Settings, DHCP Settings, and Static Hosts sections should be left unchanged if IP addressing concepts are not well understood.

IP Settings section (Figure 38):

IP Address	Displays, and allows to change, the private IP address assigned to the router in the Home Network.
Subnet Mask	Displays, and allows to change, the range of IP addresses that will be assigned to devices in the Home Network.

Figure 38. Home Network - IP Settings section

DHCP Settings section (Figure 39):

DHCP Server (ON/OFF slider button)	Enables ("ON") or disables ("OFF") the router's DHCP server, used to automatically assign IP addresses to Home Network devices
IP Address Pool:	Displays, and allows to change, the range of IP addresses that will be assigned by the DHCP Server to devices in the Home Network. The range is defined by addresses specified for the "Start IP" and "End IP" parameters, both of which must be within the subnet specified by "IP Address" and "Subnet Mask".
Domain Name:	Displays, and allows to change, the domain name used by the router's DNS server to identify devices in the Home Network. The name's valence is restricted to the Home Network itself. It is advised to only choose one of the following names ". local", ".localdomain", ".domain", ".lan", ".home", ".host".

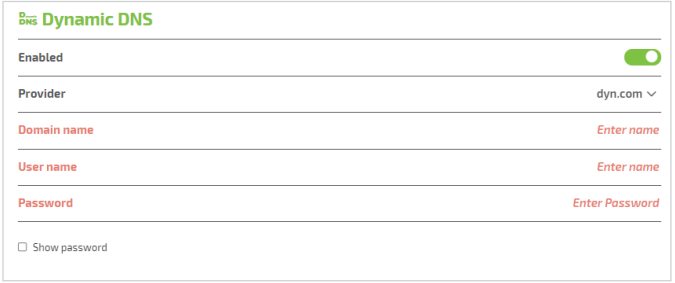
Figure 39. Home Network - DHCP Settings section

Lease Time	Displays, and allows to change, how long an IP address assigned by the DHCP server will remain valid: when such time expires, the server will automatically take care of renewing the address. Available options are 1 hour, 12 hours, one day, one week or unlimited.

Dynamic DNS section (Figure 40):

Enabled (ON/OFF slider button)	Enables ("ON") or disables ("OFF") the support of Dynamic DNS (DDNS). A DDNS provider maintains, upon subscription, an association between the router's public address and a hostname in the domain name system. This allows the router and clients in the Home Network to be reachable from the Internet using URLs in that domain instead of their IP address.
Provider (drop-down menu)	Displays, and allows to change, the name of the DDNS provider; click **ARROW DOWN** to display the list of available providers
Domain Name	Allows to specify the domain name assigned to the router by the DDNS provider
Username, Password	The username and password assigned to the router by the DDNS provider

Figure 40. Home Network – Dynamic DNS section



Static Hosts section (Figure 41):

Reserve IP Address

Certain Home Network clients can be assigned with a fixed IP address, chosen in the address range defined by the value of **Start IP** and **End IP** parameters in **DHCP Settings section**.

Clicking **ARROW RIGHT** displays the "**Reserve IP Address**" view (Figure 42), which shows the list of clients for which an address reservation has been done: each entry includes the client name (if defined, or "**Unknown host**" otherwise), its MAC address and the assigned IP address.

Click "**Add New**" to enter the "**Add New Static IP**" view (Figure 43) for adding an address reservation for a new client.

In the "**Add New Static IP**" view, click the "**Select Device**" drop-down list to choose one of the devices which have been connected to the router in the past ("**Available Devices**"), identified by the IP address that was assigned to them.

Figure 41. Home Network – Static Hosts section

Figure 42. Add New – Reserve IP Address card

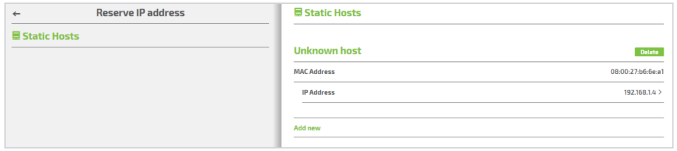


Figure 43. Static Hosts - Add New

Selecting one of such device will show a card (Figure 44) that displays the device MAC address and, using **ARROW RIGHT**, allows changing its previously assigned IP address; clicking "**Unselect**" will revert the previous view.

To make a reservation for a device which is not listed, click "**Enter MAC Address**" at the bottom of the drop-down list. A card is then displayed (Figure 45) where both the MAC address and the reserved IP address can be specified.
Click the "**Apply**" button to save modifications or exit the page to discard them.

Figure 44. Device MAC and IP addresses

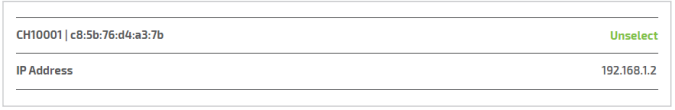


Figure 45. Add New - MAC Address & IP Address

■ NOTE:

When entering a MAC or IP address, the text will be shown in red, and the Apply button kept disabled (greyed) until a valid value has been specified.

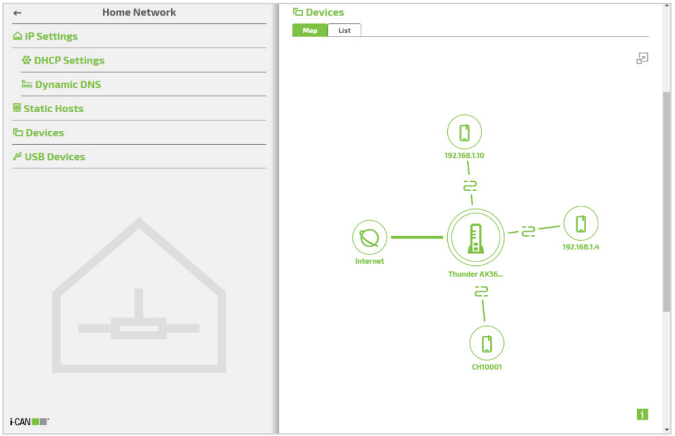
Devices section (Figure 46):

The **Device** section provides a list of all Home Network devices currently connected to the router.
The **Map** tab displays the devices in a map that graphically shows the type of device and type of connection with the router. Different device types and link technologies are indicated with specific icons and line styles, respectively. The meaning of icons and line styles is shown by clicking

in the screen bottom right. Clicking 
will display the map in full-screen mode. In full-screen mode, clicking

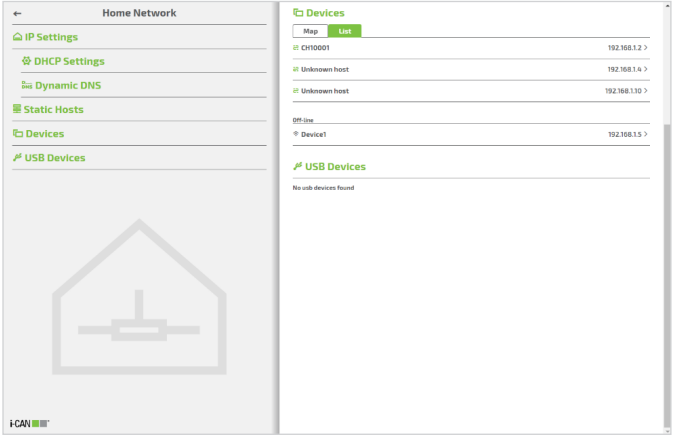
or "Home Network" **ARROW LEFT** in the screen top left will revert to the previous view.

Figure 46. Home Network – Devices section, Map tab



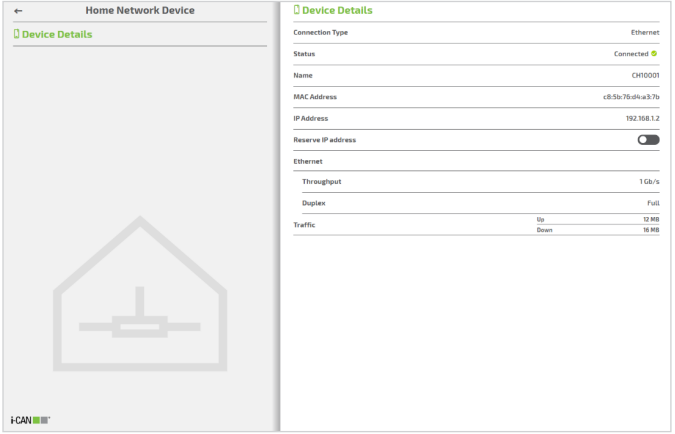
The **List** tab (Figure 47) displays a textual list of devices, split in a first part that shows those currently connected to the router (as done in **Map** tab) and a second part ("**Off-line**"), which shows devices that have been connected to the router in the past but which are currently disconnected. Each entry in the list includes the device name (if known to the router, or "**Unknown host**" otherwise) and its IP address.

Figure 47. Home Network – Devices section, List tab



Clicking on a device icon (**Map** tab) or name (**List** tab) will open the "**Device Details**" card (Figure 48), that shows a number of device specific parameters.
The card will also allow to reserve the IP address shown for the device through the "**Reserve IP address**" ON/OFF slider button, as a shortcut to what can be done in the **Static Hosts** section using the procedure described above.

Figure 48. Device Details



USB Devices section (Figure 49):

USB devices can be connected to USB port(s) on the router.

Clicking on the icon or the name of an individual USB Device will open the tab with the Device Details (Figure 50), showing the type of connection of the device to the router, its current status, the name of the device and its capacity

Figure 49. Home Network - USB Devices section

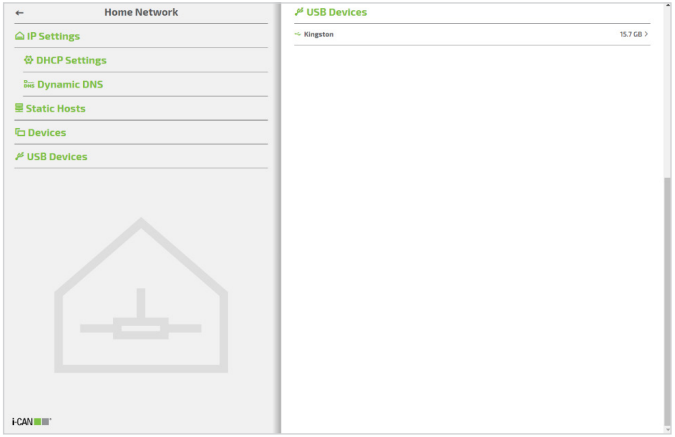
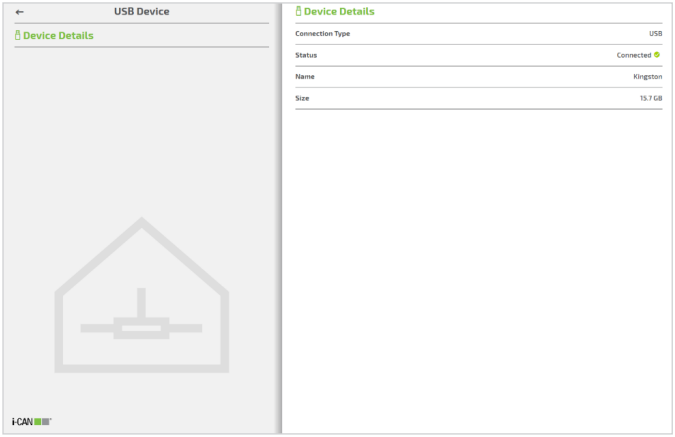


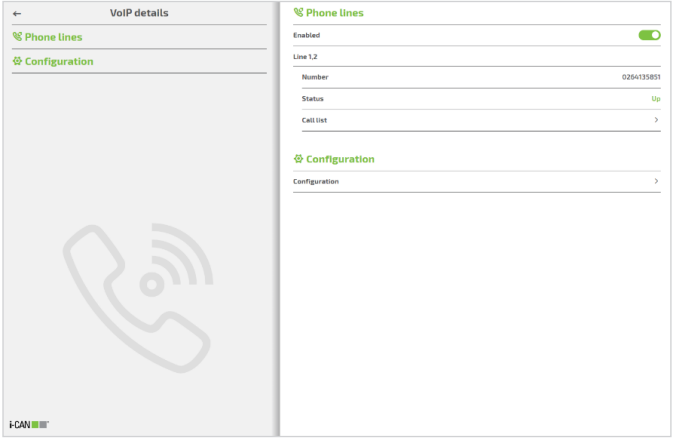
Figure 50. USB Device Details



4.6 Telephony

The **Telephony** tile in the **Home** page (see Figure 12) displays whether or not the VoIP service has been configured. If the service is configured, it can be enabled or disabled via the ON/OFF slider button.
As indicated in the tile, the VoIP service, if needed, shall be configured using the configuration **Wizard** (see Section 1).
Clicking the **Telephony** tile in the **Home** page takes to the VoIP configuration section (see Figure 51).

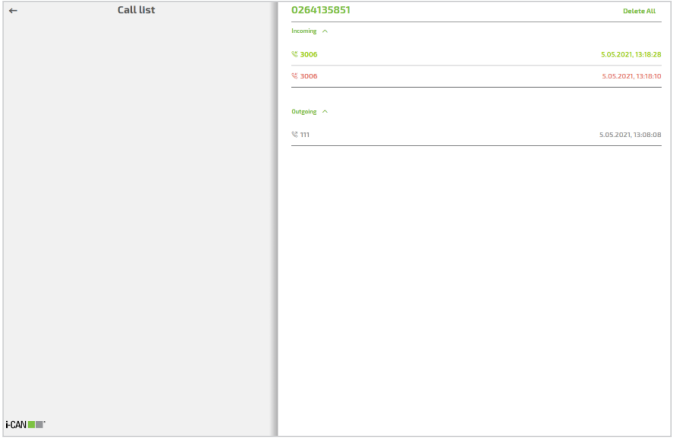
Figure 51. VoIP page



Phone Lines section:

Enabled (ON/OFF slider button)	Enables or disables the VoIP service, that it has been previously configured via the configuration **Wizard**.
Number	The telephone number registered for the service.
Status	The status of the VoIP line: **Up** if active, **Disabled** if not active.
Calls List:	Clicking this entry will display the list of phone calls made or received since the router was turned on and the VoIP phone line successfully registered (Figure 52).

Figure 52. Call List details



Configuration section (Figure 53):

Clicking this entry will display the list of phone lines configuration parameters, starting from number(s), line status and call status (Figure 54).

The **Telephony** configuration panel (see Figure 54) is displayed on the screen by clicking the **Configuration** menu item in VoIP configuration section.
The panel includes a number of tabs corresponding to actions that can be performed on the device or the device configuration pages.

TAB	DESIGNATION
Telephony lines	Adding and configuring telephony numbers
Voice Profile	Configuring line parameters and SIP
Service Settings	Configuring call service (call transfer, call waiting ...)
Numbering Plan	Adding/editing rules for digit manipulation
Voice Codec	Configuring voice codec list
Call control	Adding/editing rules for call routing
Call data Record	Keeping list of calls with all details
Blacklist	Configuring blacklist containing specific numbers or anonymous calls

■ WARNING:

VoIP configuration parameters depend on your VoIP provider data, to be received on VoIP service activation.

Default values of parameters in **Telephony** *sections should be left unchanged if VoIP concepts are not well understood.*

Figure 53. Configuration page

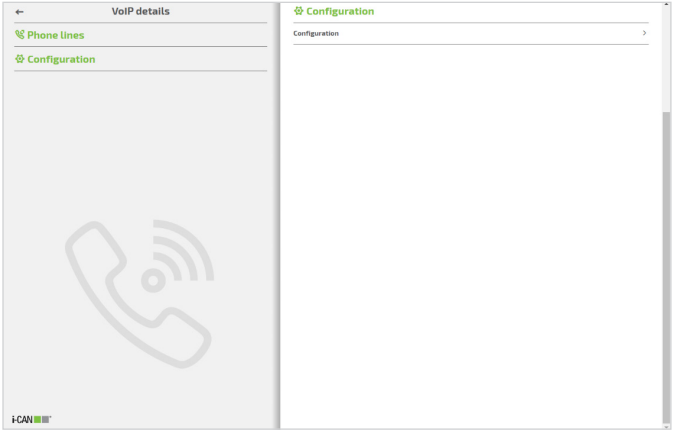
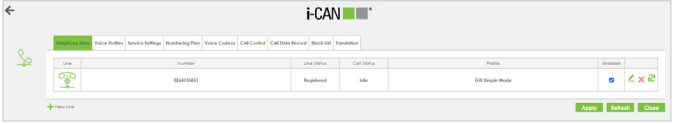


Figure 54. Telephony Configuration details



4.7 Interfaces

The **Interfaces** tile in the **Home** page (see Figure 12) shows a synthetic view about the status of router connections toward the Internet and the Home Network.

Clicking on the **DSL** tile, takes to the status page of the DSL interface (see Figure 55).

Other action on this page that allows to select may include:

- Ethernet WAN link (Figure 56)
- Ethernet LAN link (Figure 56)
- Internet (Figure 57)
- VoIP (Figure 58)
- Wi-Fi 5 GHz network (Figure 59)
- Wi-Fi 2.4 GHz network (Figure 60)

Figure 55. Interfaces – DSL status page

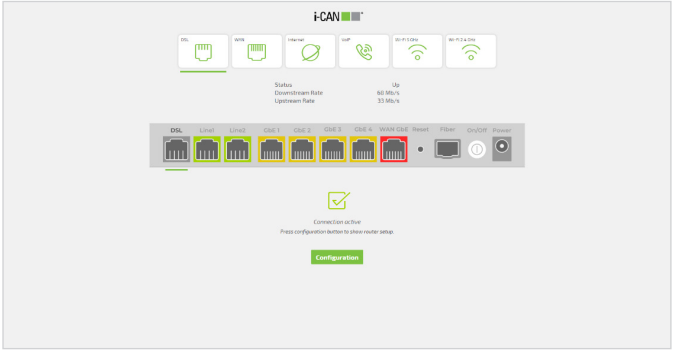


Figure 56. Interfaces - Ethernet WAN status page

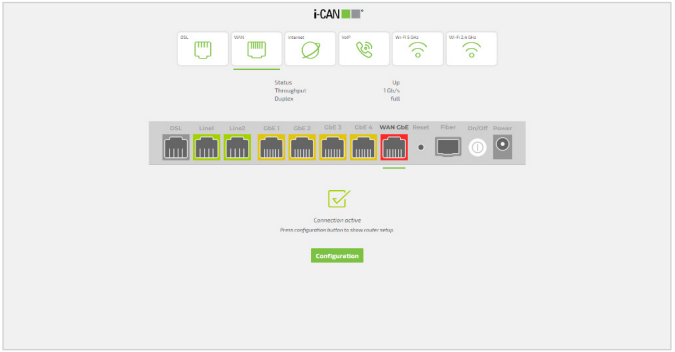


Figure 57. Interfaces – Internet status page

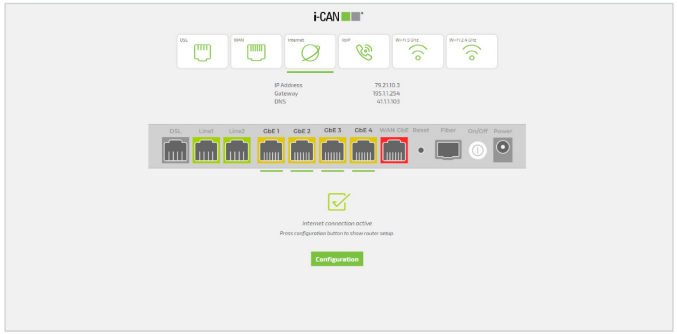


Figure 58. Interfaces – VoIP status page

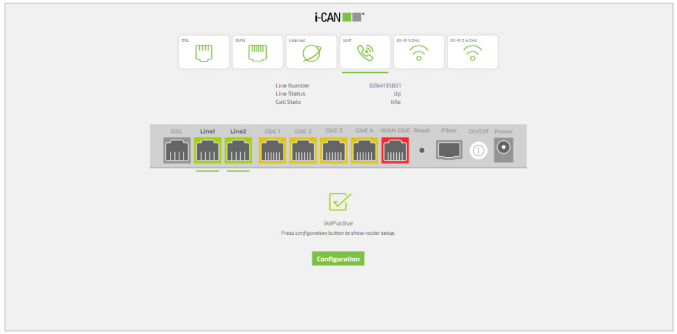


Figure 59. Interfaces – Wi-Fi (5 GHz) status page

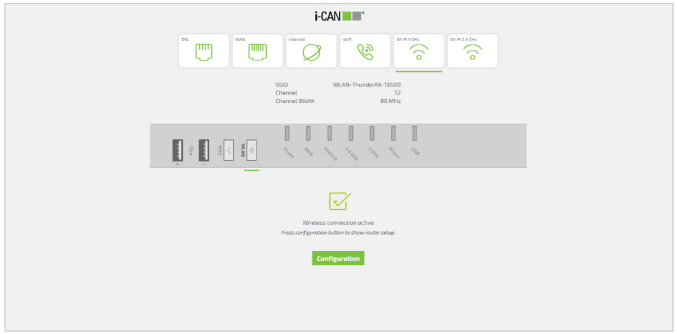
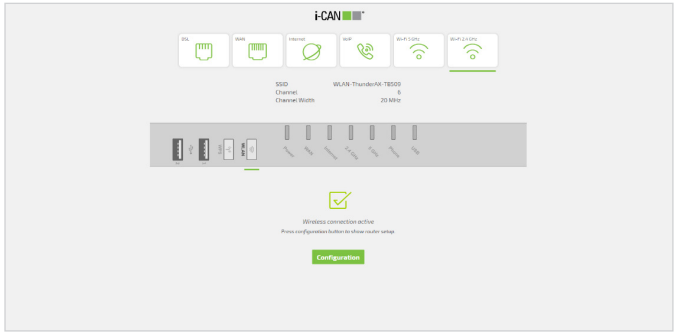


Figure 60. Interfaces – Wi-Fi (2.4 GHz) status page



4.8 System

Clicking the **System** tile in the **Home** page (see Figure 12), takes to the page with a set of additional action tiles (Figure 61).

- Logging – review, filter and change settings for system logs collected by the device (Figure 62)
- Reboot (see Figure 63)
- Factory Reset (see Figure 64)
- Backup Configuration file (see Figure 65)
- Load Configuration (see Figure 66)
- Firmware upgrade (see 67)
- Date / Time – Network Time Setting (see Figure 68)
- DLNA Media Sharing - (see Figure 69).
- USB Sharing - configuration of USB devices (see 70).

Figure 61. System

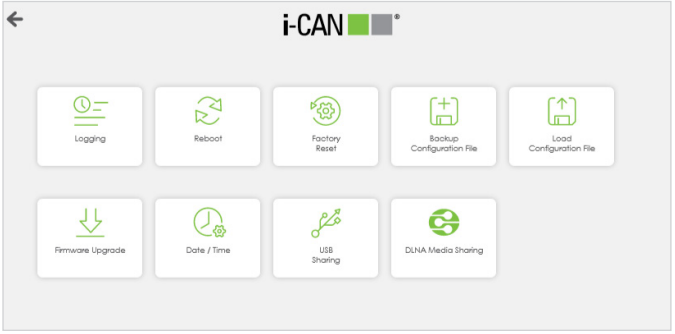


Figure 62. Logging - log page

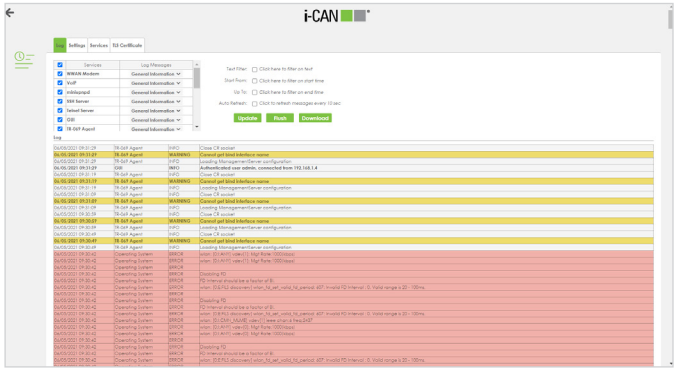


Figure 63. Reboot

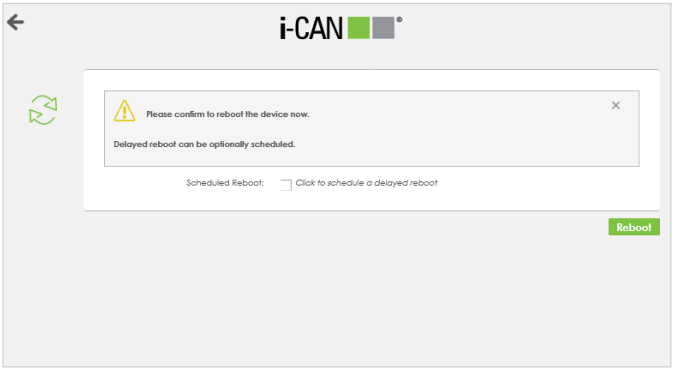


Figure 64. Factory Reset

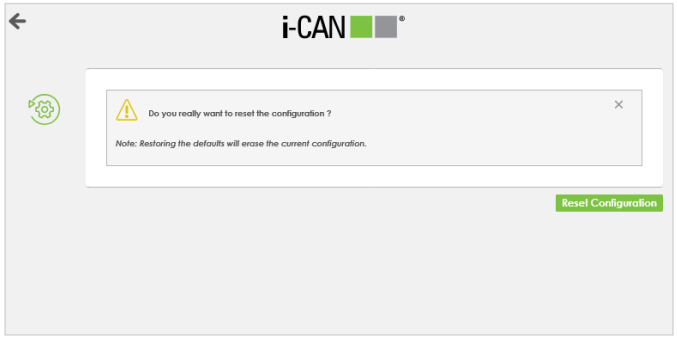


Figure 65. Backup Configuration

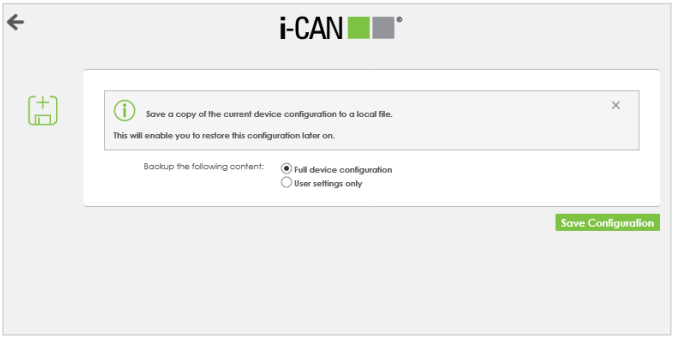


Figure 66. Load Configuration

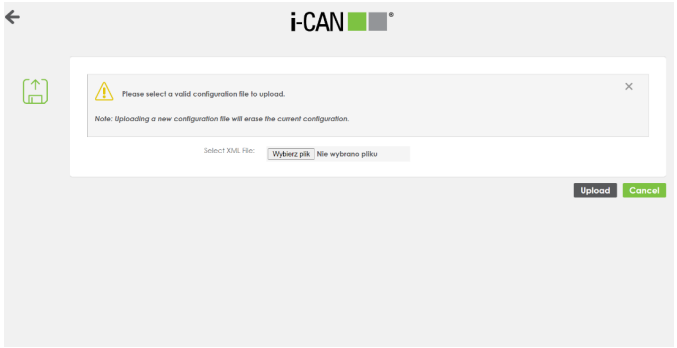


Figure 67. Firmware Upgrade

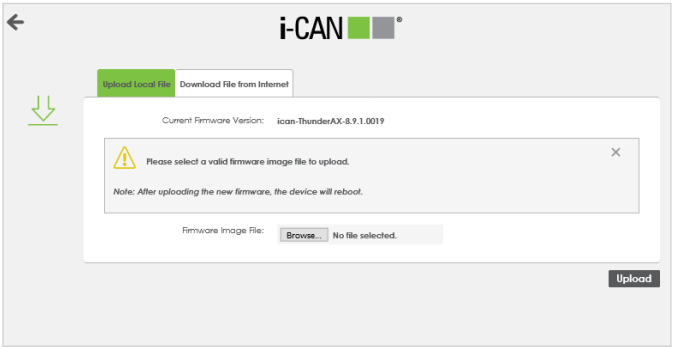


Figure 68. Date / Time

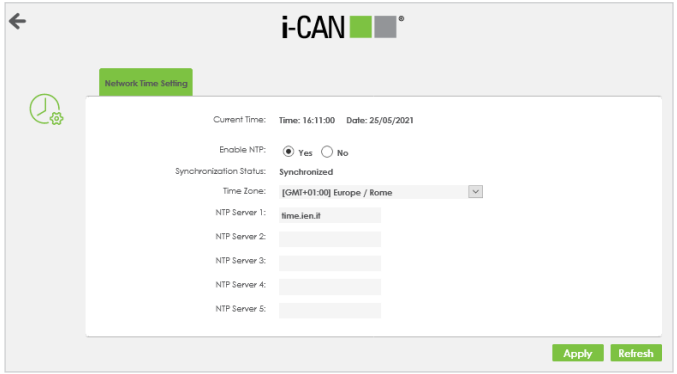
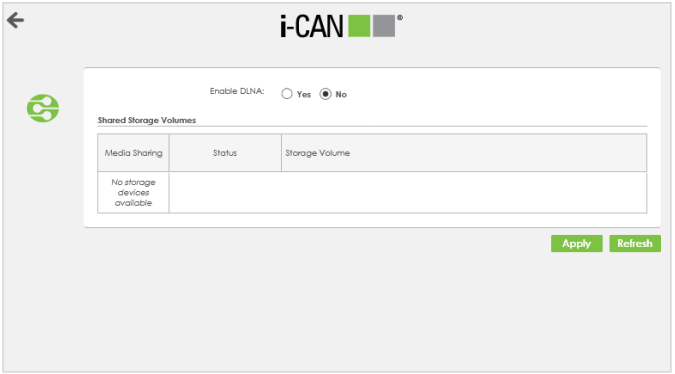
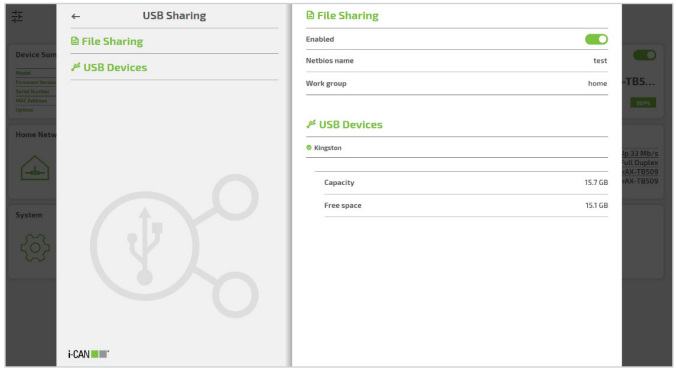


Figure 69. DLNA



USB Sharing service allows the content of one or more USB storage devices (USB memory stick, USB hard-disk) connected to the router's USB port(s) to be accessible from client devices in the Home Network.
Clicking the **USB Sharing** tile in the System page (see Figure 61), takes to the configuration section of USB devices (Figure 70).

Figure 70. USB Sharing panel



File Sharing section:

Enabled (ON/OFF slider button)	Enables or disables File Sharing service.
Netbios Name:	Allows to set the name of the storage device as will be seen by clients in the Home Network.
Work Group	Allows to specify the name of the Work Group which the storage device will be assigned to; Home Network devices belonging to the same Work Group will be able to discover and access the device through Windows File Explorer or any compatible file browser in other operating systems.

USB Devices section:

Shows characteristics of each connected USB devices, including device name, overall storage capacity and free space left.

4.9 Security

Clicking the **Security** tile in the **Home** page (see Figure 12), takes to the page with a set of additional action tiles (Figure 71).

- **Firewall** page (Figure 72) - changing system security settings included on two levels **Basic** and **Advanced**.
- **DMZ** (see Figure 73) – enable, disable and changing parameters for local DMZ.
- **Parental Control** (see Figure 74) – enable, disable and changing parameters for Parental control.
  - In order to start Parental control application, you might need PIN code from administrator
- **VPN** (see Figure 75) – Configure VPN Client and Server
  - VPN IPSec configuration: manual or automatic via available wizard (Remote Gateway, Road Warrior, Mikrotik, Cisco)
- **Port Mapping** (see Figure 76) – Configure router Port mapping for known or custom Applications
- **Routing QoS** (see Figure 77) - Clicking tile takes to the page with set of additional Menu:
  - Routing policy
  - Traffic Classification
  - ALG Flows
  - Policies
  - Queues
- **User** (see Figure 78) – configuration of access user password
- **Management** (see Figure 79) - Clicking tile takes to the page with a set of additional Menu:
  - UPnP
  - Telnet Server
  - SSH Server
  - Web GUI
  - Users

Figure 71. Security

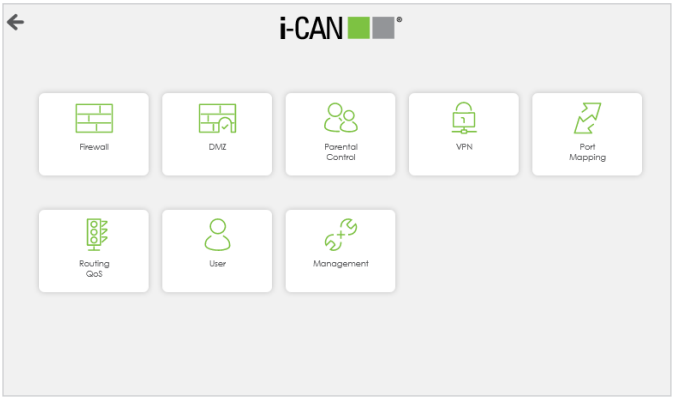


Figure 72. Firewall settings page

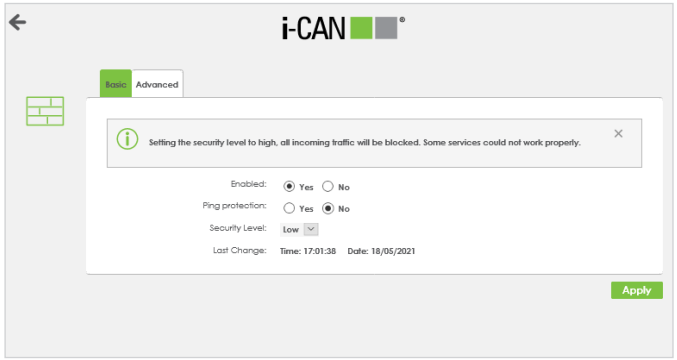


Figure 73. DMZ settings page

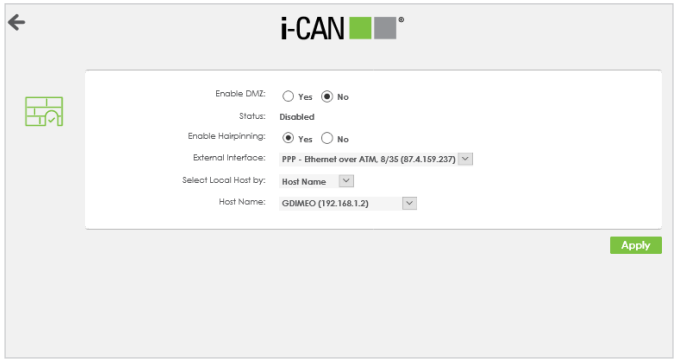


Figure 74. Parental Control access page

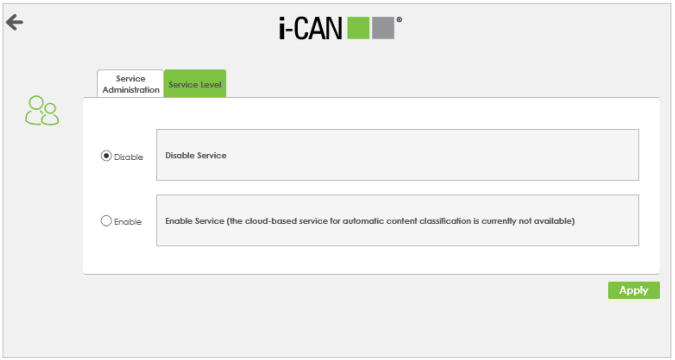


Figure 75. VPN type selection

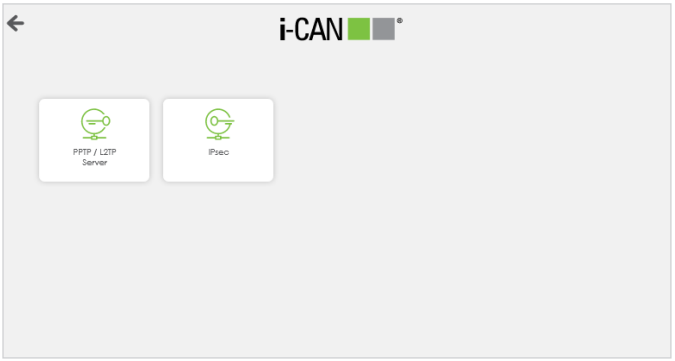


Figure 76. Port Mapping

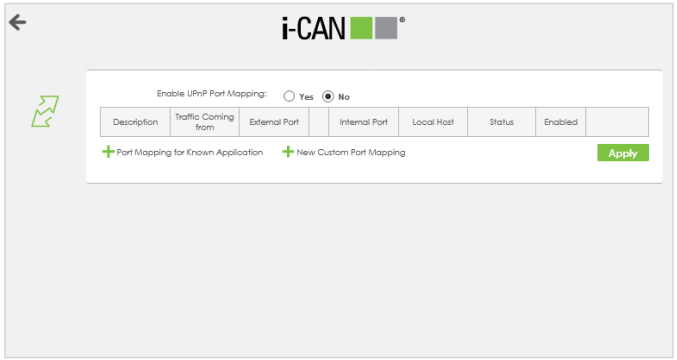


Figure 77. Routing QoS

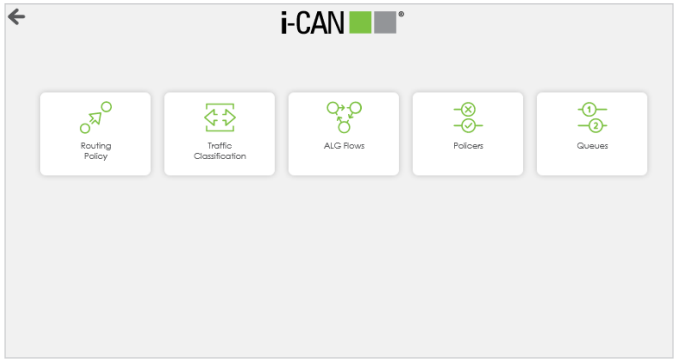


Figure 78. User

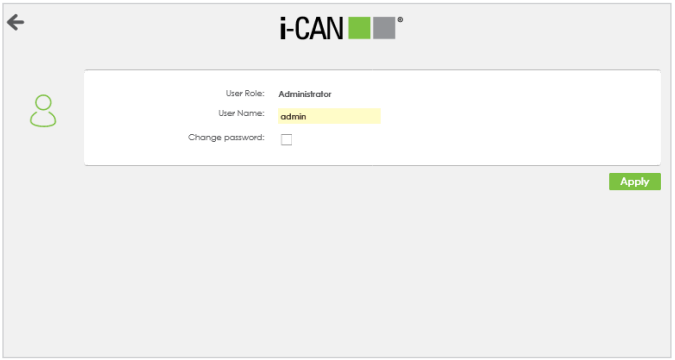
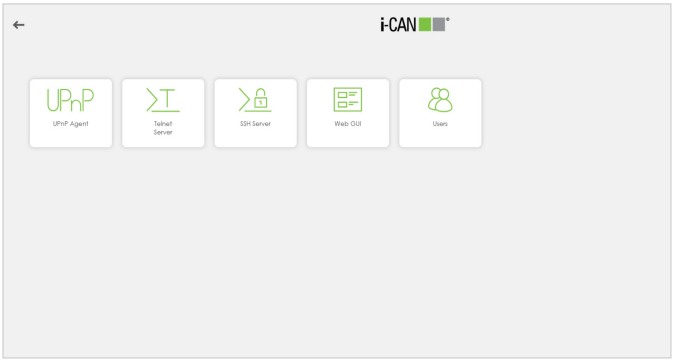


Figure 79. Management



4.10 Diagnostic

Clicking the **Diagnostic** tile in the **Home** page (see Figure 12), takes to a set of local diagnostic tools and information (see Figure 80):

- **Ping** tool (see Figure 81) - page allowing you to define a set of parameters to launch a ping to an IP address to be specified.
- **Download** test (see Figure 82), **Upload** test. (see Figure 83) - pages allowing you to launch a diagnostic tool (dow/upl) for displaying speed and state of WAN access across an Internet Protocol (IP) network.
- **Traceroute** tool. (see Figure 84) - page allowing you to launch a diagnostic tool for displaying the path and measuring transit delays of packets across an Internet Protocol (IP) network.
- **Interfaces Summary** list (see Figure 85) - page allowing you to monitor and check details about all interfaces.
- **Active Connections** list (see Figure 86) - page allowing active connections monitor. Information includes Protocols, source and destination, routing …..

Figure 80. Diagnostic panel

Figure 81. Ping

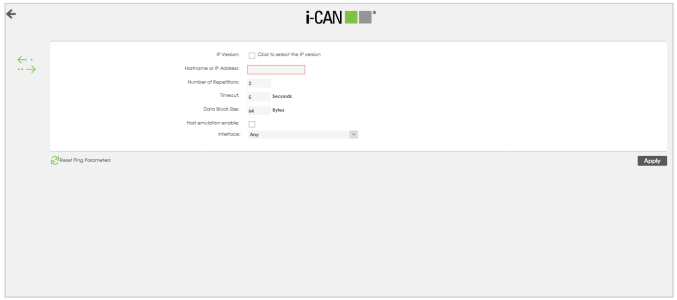


Figure 82. Download

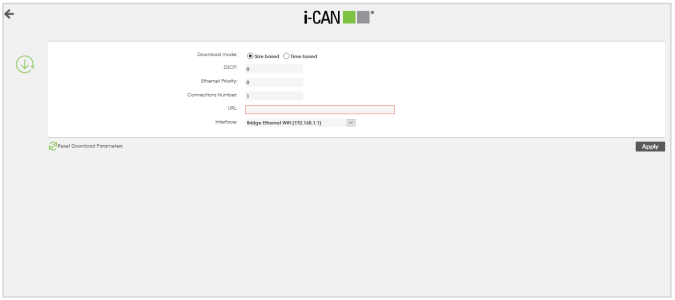


Figure 83. Upload

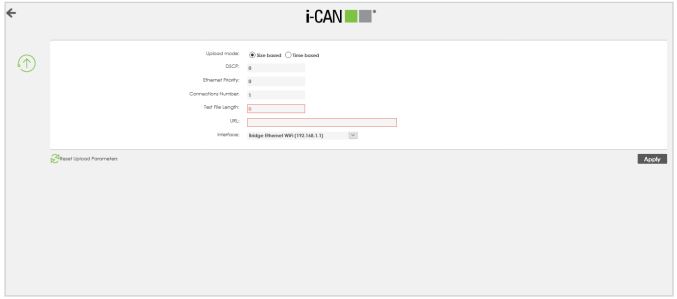


Figure 84. Traceroute

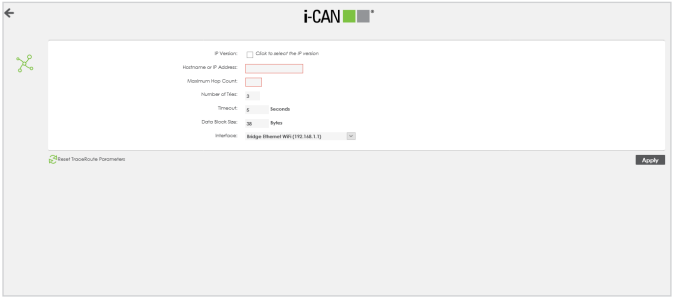
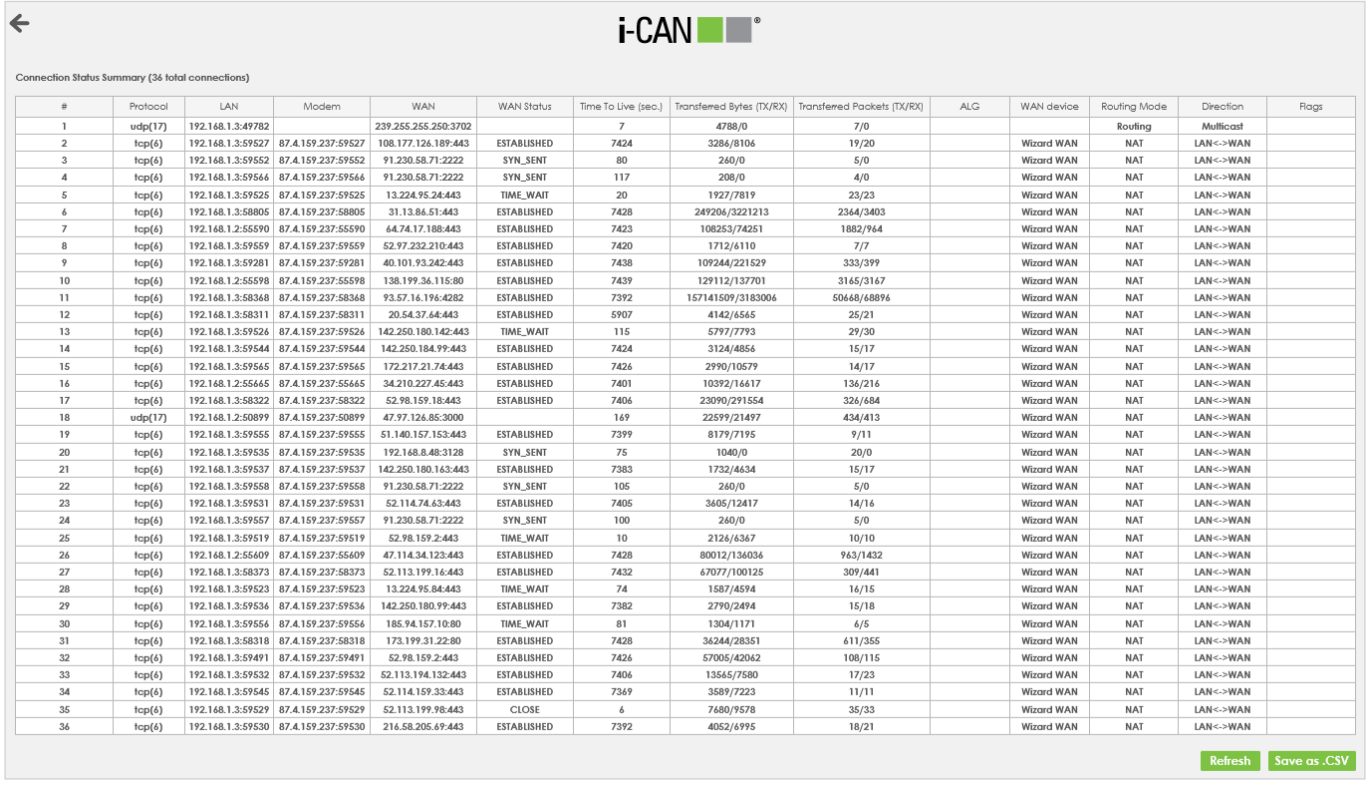


Figure 85. Interfaces Summary page

#	Protocol	LAN	Modem	WAN	WAN Status	Time To Live (sec.)	Transferred Bytes (TX/RX)	Transferred Packets (TX/RX)	ALG	WAN device	Routing Mode	Direction	Flags
1	udp(17)	192.168.1.3:49782		239.255.255.250:3702		7	4788/0	7/0			Routing	Multicast	
2	tcp(6)	192.168.1.3:59527	87.4.159.237:59527	108.177.126.189:443	ESTABLISHED	7424	3286/8106	19/20		Wizard WAN	NAT	LAN<->WAN	
3	tcp(6)	192.168.1.3:59552	87.4.159.237:59552	91.230.58.71:2222	SYN_SENT	80	260/0	5/0		Wizard WAN	NAT	LAN<->WAN	
4	tcp(6)	192.168.1.3:59566	87.4.159.237:59566	91.230.58.71:2222	SYN_SENT	117	208/0	4/0		Wizard WAN	NAT	LAN<->WAN	
5	tcp(6)	192.168.1.3:59525	87.4.159.237:59525	13.224.95.24:443	TIME_WAIT	20	1927/7819	22/23		Wizard WAN	NAT	LAN<->WAN	
6	tcp(6)	192.168.1.3:58805	87.4.159.237:58805	31.13.84.51:443	ESTABLISHED	7428	249206/3221213	2364/3403		Wizard WAN	NAT	LAN<->WAN	
7	tcp(6)	192.168.1.2:55590	87.4.159.237:55590	64.74.17.188:443	ESTABLISHED	7423	108253/74251	1882/964		Wizard WAN	NAT	LAN<->WAN	
8	tcp(6)	192.168.1.3:59559	87.4.159.237:59559	52.97.232.210:443	ESTABLISHED	7420	1712/6110	7/7		Wizard WAN	NAT	LAN<->WAN	
9	tcp(6)	192.168.1.3:59281	87.4.159.237:59281	40.101.93.242:443	ESTABLISHED	7438	109244/221529	333/399		Wizard WAN	NAT	LAN<->WAN	
10	tcp(6)	192.168.1.2:55598	87.4.159.237:55598	138.199.36.115:80	ESTABLISHED	7439	129112/137701	3165/3167		Wizard WAN	NAT	LAN<->WAN	
11	tcp(6)	192.168.1.3:58368	87.4.159.237:58368	93.57.16.196:4282	ESTABLISHED	7392	157141509/3183006	50668/68896		Wizard WAN	NAT	LAN<->WAN	
12	tcp(6)	192.168.1.3:58311	87.4.159.237:58311	20.54.37.64:443	ESTABLISHED	5907	4142/6565	25/21		Wizard WAN	NAT	LAN<->WAN	
13	tcp(6)	192.168.1.3:59526	87.4.159.237:59526	142.250.180.142:443	TIME_WAIT	115	5797/7793	29/30		Wizard WAN	NAT	LAN<->WAN	
14	tcp(6)	192.168.1.3:59544	87.4.159.237:59544	142.250.184.99:443	ESTABLISHED	7424	3124/4856	15/17		Wizard WAN	NAT	LAN<->WAN	
15	tcp(6)	192.168.1.3:59565	87.4.159.237:59565	172.217.21.74:443	ESTABLISHED	7426	2990/10579	14/17		Wizard WAN	NAT	LAN<->WAN	
16	tcp(6)	192.168.1.2:55665	87.4.159.237:55665	34.210.227.45:443	ESTABLISHED	7401	10392/16617	136/216		Wizard WAN	NAT	LAN<->WAN	
17	tcp(6)	192.168.1.3:58322	87.4.159.237:58322	52.98.159.18:443	ESTABLISHED	7406	23090/291554	326/684		Wizard WAN	NAT	LAN<->WAN	
18	udp(17)	192.168.1.2:50899	87.4.159.237:50899	47.97.126.85:3000		169	22599/21497	434/413		Wizard WAN	NAT	LAN<->WAN	
19	tcp(6)	192.168.1.3:59555	87.4.159.237:59555	51.140.157.152:443	ESTABLISHED	7399	8179/7195	9/11		Wizard WAN	NAT	LAN<->WAN	
20	tcp(6)	192.168.1.3:59535	87.4.159.237:59535	192.168.8.48:3128	SYN_SENT	75	1040/0	20/0		Wizard WAN	NAT	LAN<->WAN	
21	tcp(6)	192.168.1.3:59537	87.4.159.237:59537	142.250.180.163:443	ESTABLISHED	7383	1732/4634	15/17		Wizard WAN	NAT	LAN<->WAN	
22	tcp(6)	192.168.1.3:59558	87.4.159.237:59558	91.230.58.71:2222	SYN_SENT	105	260/0	5/0		Wizard WAN	NAT	LAN<->WAN	
23	tcp(6)	192.168.1.3:59531	87.4.159.237:59531	52.114.74.63:443	ESTABLISHED	7405	3605/12417	14/16		Wizard WAN	NAT	LAN<->WAN	
24	tcp(6)	192.168.1.3:59557	87.4.159.237:59557	91.230.58.71:2222	SYN_SENT	100	260/0	5/0		Wizard WAN	NAT	LAN<->WAN	
25	tcp(6)	192.168.1.3:59519	87.4.159.237:59519	52.98.159.2:443	TIME_WAIT	10	2126/4367	10/10		Wizard WAN	NAT	LAN<->WAN	
26	tcp(6)	192.168.1.2:55609	87.4.159.237:55609	47.114.34.122:443	ESTABLISHED	7428	80012/136036	963/1432		Wizard WAN	NAT	LAN<->WAN	
27	tcp(6)	192.168.1.3:58373	87.4.159.237:58373	52.113.199.16:443	ESTABLISHED	7432	67077/100125	309/441		Wizard WAN	NAT	LAN<->WAN	
28	tcp(6)	192.168.1.3:59523	87.4.159.237:59523	13.224.95.84:443	TIME_WAIT	74	1587/4594	16/15		Wizard WAN	NAT	LAN<->WAN	
29	tcp(6)	192.168.1.3:59536	87.4.159.237:59536	142.250.180.99:443	ESTABLISHED	7382	2790/2494	15/18		Wizard WAN	NAT	LAN<->WAN	
30	tcp(6)	192.168.1.3:59556	87.4.159.237:59556	185.94.157.10:80	TIME_WAIT	81	1304/1171	6/5		Wizard WAN	NAT	LAN<->WAN	
31	tcp(6)	192.168.1.3:58318	87.4.159.237:58318	173.199.31.22:80	ESTABLISHED	7428	36244/28351	611/355		Wizard WAN	NAT	LAN<->WAN	
32	tcp(6)	192.168.1.3:59491	87.4.159.237:59491	52.98.159.2:443	ESTABLISHED	7426	57005/42062	108/115		Wizard WAN	NAT	LAN<->WAN	
33	tcp(6)	192.168.1.3:59532	87.4.159.237:59532	52.113.194.132:443	ESTABLISHED	7406	12565/7580	17/23		Wizard WAN	NAT	LAN<->WAN	
34	tcp(6)	192.168.1.3:59545	87.4.159.237:59545	52.114.159.33:443	ESTABLISHED	7369	3589/7223	11/11		Wizard WAN	NAT	LAN<->WAN	
35	tcp(6)	192.168.1.3:59529	87.4.159.237:59529	52.113.199.98:443	CLOSE	6	7680/9578	35/33		Wizard WAN	NAT	LAN<->WAN	
36	tcp(6)	192.168.1.3:59530	87.4.159.237:59530	216.58.205.69:443	ESTABLISHED	7392	4052/6995	18/21		Wizard WAN	NAT	LAN<->WAN	

Figure 86. Active Connections



Connection Status Summary (36 total connections)

#	Protocol	LAN	Modem	WAN	WAN Status	Time To Live (sec.)	Transferred Bytes (TX/RX)	Transferred Packets (TX/RX)	ALG	WAN device	Routing Mode	Direction	Flags
1	udp(17)	192.168.1.3:49782		239.255.255.250:3702		7	4788/0	7/0			Routing	Multicast	
2	tcp(6)	192.168.1.3:59527	87.4.159.237:59527	108.177.126.189:443	ESTABLISHED	7424	3286/8106	19/20		Wizard WAN	NAT	LAN<->WAN	
3	tcp(6)	192.168.1.3:59552	87.4.159.237:59552	91.230.58.71:2222	SYN_SENT	80	260/0	5/0		Wizard WAN	NAT	LAN<->WAN	
4	tcp(6)	192.168.1.3:59566	87.4.159.237:59566	91.230.58.71:2222	SYN_SENT	117	208/0	4/0		Wizard WAN	NAT	LAN<->WAN	
5	tcp(6)	192.168.1.3:59525	87.4.159.237:59525	13.224.95.24:443	TIME_WAIT	20	1927/7819	23/23		Wizard WAN	NAT	LAN<->WAN	
6	tcp(6)	192.168.1.3:58805	87.4.159.237:58805	31.13.86.51:443	ESTABLISHED	7428	249206/3221213	2364/3403		Wizard WAN	NAT	LAN<->WAN	
7	tcp(6)	192.168.1.2:55590	87.4.159.237:55590	64.74.17.188:443	ESTABLISHED	7423	108253/74251	1882/964		Wizard WAN	NAT	LAN<->WAN	
8	tcp(6)	192.168.1.3:59559	87.4.159.237:59559	52.97.232.210:443	ESTABLISHED	7420	1712/6110	7/7		Wizard WAN	NAT	LAN<->WAN	
9	tcp(6)	192.168.1.3:59281	87.4.159.237:59281	40.101.93.242:443	ESTABLISHED	7438	109244/221529	333/399		Wizard WAN	NAT	LAN<->WAN	
10	tcp(6)	192.168.1.2:55598	87.4.159.237:55598	138.199.36.115:80	ESTABLISHED	7439	129112/137701	3165/3167		Wizard WAN	NAT	LAN<->WAN	
11	tcp(6)	192.168.1.3:58368	87.4.159.237:58368	93.57.16.196:4282	ESTABLISHED	7392	157141509/3183006	50668/68896		Wizard WAN	NAT	LAN<->WAN	
12	tcp(6)	192.168.1.3:58311	87.4.159.237:58311	20.54.37.64:443	ESTABLISHED	5907	4142/6565	25/21		Wizard WAN	NAT	LAN<->WAN	
13	tcp(6)	192.168.1.3:59526	87.4.159.237:59526	142.250.180.142:443	TIME_WAIT	115	5797/7793	29/30		Wizard WAN	NAT	LAN<->WAN	
14	tcp(6)	192.168.1.3:59544	87.4.159.237:59544	142.250.184.99:443	ESTABLISHED	7424	3124/4856	15/17		Wizard WAN	NAT	LAN<->WAN	
15	tcp(6)	192.168.1.3:59565	87.4.159.237:59565	172.217.21.74:443	ESTABLISHED	7426	2990/10579	14/17		Wizard WAN	NAT	LAN<->WAN	
16	tcp(6)	192.168.1.2:55665	87.4.159.237:55665	34.210.227.45:443	ESTABLISHED	7401	10392/16617	136/216		Wizard WAN	NAT	LAN<->WAN	
17	tcp(6)	192.168.1.3:58322	87.4.159.237:58322	52.98.159.18:443	ESTABLISHED	7406	23090/291554	326/684		Wizard WAN	NAT	LAN<->WAN	
18	udp(17)	192.168.1.2:50899	87.4.159.237:50899	47.97.126.85:3000		169	22599/21497	434/413		Wizard WAN	NAT	LAN<->WAN	
19	tcp(6)	192.168.1.3:59555	87.4.159.237:59555	51.140.157.153:443	ESTABLISHED	7399	8179/7195	9/11		Wizard WAN	NAT	LAN<->WAN	
20	tcp(6)	192.168.1.3:59535	87.4.159.237:59535	192.168.8.48:3128	SYN_SENT	75	1040/0	20/0		Wizard WAN	NAT	LAN<->WAN	
21	tcp(6)	192.168.1.3:59537	87.4.159.237:59537	142.250.180.163:443	ESTABLISHED	7383	1732/4634	15/17		Wizard WAN	NAT	LAN<->WAN	
22	tcp(6)	192.168.1.3:59558	87.4.159.237:59558	91.230.58.71:2222	SYN_SENT	105	260/0	5/0		Wizard WAN	NAT	LAN<->WAN	
23	tcp(6)	192.168.1.3:59531	87.4.159.237:59531	52.114.74.63:443	ESTABLISHED	7405	3605/12417	14/16		Wizard WAN	NAT	LAN<->WAN	
24	tcp(6)	192.168.1.3:59557	87.4.159.237:59557	91.230.58.71:2222	SYN_SENT	100	260/0	5/0		Wizard WAN	NAT	LAN<->WAN	
25	tcp(6)	192.168.1.3:59519	87.4.159.237:59519	52.98.159.2:443	TIME_WAIT	10	2126/6367	10/10		Wizard WAN	NAT	LAN<->WAN	
26	tcp(6)	192.168.1.2:55609	87.4.159.237:55609	47.114.34.123:443	ESTABLISHED	7428	80012/136036	963/1432		Wizard WAN	NAT	LAN<->WAN	
27	tcp(6)	192.168.1.3:58373	87.4.159.237:58373	52.113.199.16:443	ESTABLISHED	7432	67077/100125	309/441		Wizard WAN	NAT	LAN<->WAN	
28	tcp(6)	192.168.1.3:59523	87.4.159.237:59523	13.224.95.84:443	TIME_WAIT	74	1587/4594	16/15		Wizard WAN	NAT	LAN<->WAN	
29	tcp(6)	192.168.1.3:59536	87.4.159.237:59536	142.250.180.99:443	ESTABLISHED	7382	2790/2494	15/18		Wizard WAN	NAT	LAN<->WAN	
30	tcp(6)	192.168.1.3:59556	87.4.159.237:59556	185.94.157.10:80	TIME_WAIT	81	1304/1171	6/5		Wizard WAN	NAT	LAN<->WAN	
31	tcp(6)	192.168.1.3:58318	87.4.159.237:58318	173.199.31.22:80	ESTABLISHED	7428	36244/28351	611/355		Wizard WAN	NAT	LAN<->WAN	
32	tcp(6)	192.168.1.3:59491	87.4.159.237:59491	52.98.159.2:443	ESTABLISHED	7426	57005/42062	108/115		Wizard WAN	NAT	LAN<->WAN	
33	tcp(6)	192.168.1.3:59532	87.4.159.237:59532	52.113.194.132:443	ESTABLISHED	7406	13565/7580	17/23		Wizard WAN	NAT	LAN<->WAN	
34	tcp(6)	192.168.1.3:59545	87.4.159.237:59545	52.114.159.33:443	ESTABLISHED	7369	3589/7223	11/11		Wizard WAN	NAT	LAN<->WAN	
35	tcp(6)	192.168.1.3:59529	87.4.159.237:59529	52.113.199.98:443	CLOSE	6	7680/9578	35/33		Wizard WAN	NAT	LAN<->WAN	
36	tcp(6)	192.168.1.3:59530	87.4.159.237:59530	216.58.205.69:443	ESTABLISHED	7392	4052/6995	18/21		Wizard WAN	NAT	LAN<->WAN	

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EU DECLARATION OF CONFORMITY

Hereby, Advanced Digital Broadcast SA declares that the radio equipment is in compliance with Directives RED 2014/53/EU, RoHS 2011/65/EU & 2015/863/EU and ErP 2009/125/EC relevant implementing measures.
The full text of the EU declaration of conformity may be obtained contacting ADB at
https://www.adbglobal.com/contact/

ENVIRONMENTAL INFORMATION

CONSUMER INFORMATION as per ErP Directive 2009/125/EC for the setting of ecodesign requirements for energy-related products
ADB products are designed and manufactured so as to assure the best environmental performance in compliance with applicable regulations. In particular, power adapters comply with (EU) 2019/1782 about no-load condition electric power consumption and average active efficiency, and the product meets (EC) No 1275/2008 & 801/2013 related to electric power consumption of electrical and electronic household and office equipment in standby, off mode and networked standby.
Find here below some important notes to further reduce the environmental impact of the product during use and for its proper disposal at end of life.

Power consumption of the product

The power consumption of the product in networked standby if all wired network ports are connected and all wireless network ports are activated is less than 12 W.

How to save energy during product use

When the product is not being used or full performance are not needed, follow below advice for saving energy consumption:

– By switching OFF the ON/OFF Button, energy use will be reduced to less than 0.1 W.
– By unplugging the mains, energy use will be reduced to zero. It is recommended when the product is not being used for a long time.
– By switching OFF the Wireless ON/OFF Button, energy savings can reach 30%. It is recommended when the wireless interface is not used. Turning off wireless also has a security benefit, since it calls off the risk of unauthorized access.

End of life disposal

INFORMATION FOR USERS as per WEEE Directive 2012/19/EU on waste electrical and electronic equipment and Directive 94/62/EC on packaging and packaging waste

The crossed-out wheeled bin symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste.
Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment, or to return it to the dealer when purchasing a new appliance.
The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment and supports the reuse and/or recycling of materials the equipment is made of.
For more information about where you can drop off your waste equipment for recycling, please contact your local city office or your household waste disposal service.
The unlawful disposal of the product by the user may entail a fine.

Waste packaging should be separated and delivered at the collection points in accordance with the local waste collection rules.

DO NOT DISPOSE OF AS HOUSEHOLD UNSORTED WASTE

FINAL REMARKS

This product must be installed and used in strict accordance with the manufacturer's instructions as described in the enclosed user documentation.

In some cases the use of wireless devices could be limited by the proprietary or representative of the building. In case of doubts about the disposals and rules regarding the use of wireless devices in specific environment (ex. airports and hospitals), it is recommended to ask the authorization before using the product.

Advanced Digital Broadcast SA is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution or attachment of connecting cables and equipment other than specified by Advanced Digital Broadcast SA. The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user. Advanced Digital Broadcast SA and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from the user failing to comply with these guidelines.

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