Fte®
maximal

MAXWiFi

User´s manual

V.1.2

Índice

1 Security rules

Please read the instructions carefully before using the MAXWIFI equipment. You will find information to use the equipment correctly and prevent incidents. Please keep the manual in a safe place.

1. This device is design to work in indoor.
2. Keep clean and without obstacles a minimum around this equipment.
3. Do not place any heating source near this equipment.
4. Do not install this equipment outside its temperature range.
5. Avoid placements where liquids could be poured in or with important temperature changes.
6. Never open the device by yourself. Refer servicing to qualified staff only.
7. Turn off the equipment before cleaning it with a dry cloth.
8. During connection it is suitable that the equipment is switched off and not connected to electrical current.
9. Respect electrical security rules during the assembly. Use materials that fulfil laws in force.
10. Connecting pin (power plug) must be quickly and simply accessible in order to assure a fast disconnection.
11. To prevent hock hazard, do not touch the power plug with wet hands. Always unplug the receiver before working on the connections.
12. Do not put any heavy objects over this equipment; the equipment could be damaged.

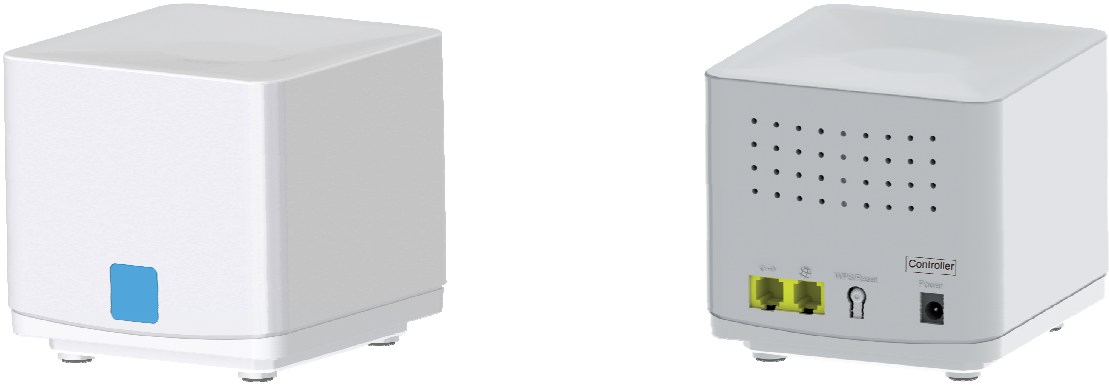
Note:

The instructions in this manual are based on version 2.7.5

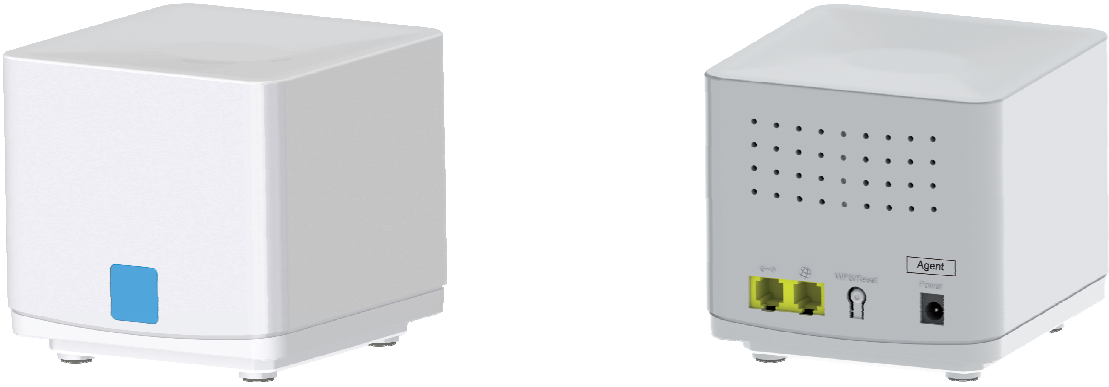
2 Content of the box

Depending on the type of product that you have purchased either a MAXWIFI 3 KIT or a MAXWIFI unit when you open the box for the first time, you will find the following items:

Content Kit MAXWIFI 3



1x Controller device



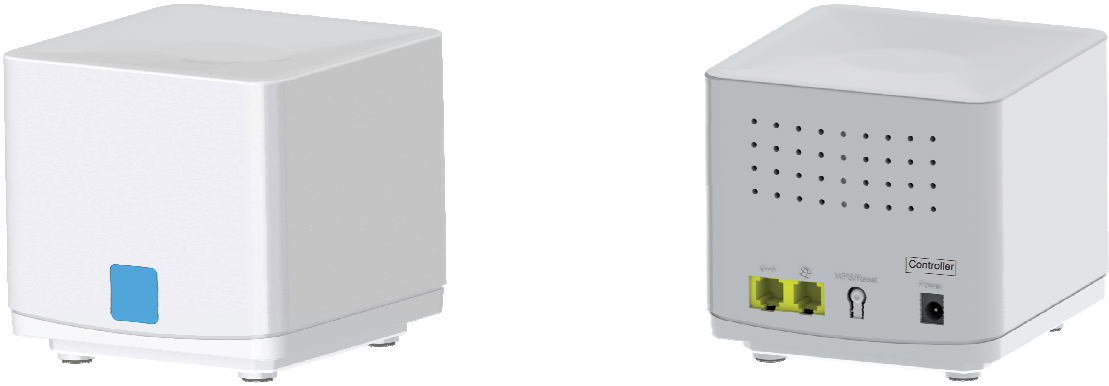
2 x Agent devices

3 x power supply 12Vdc-1A

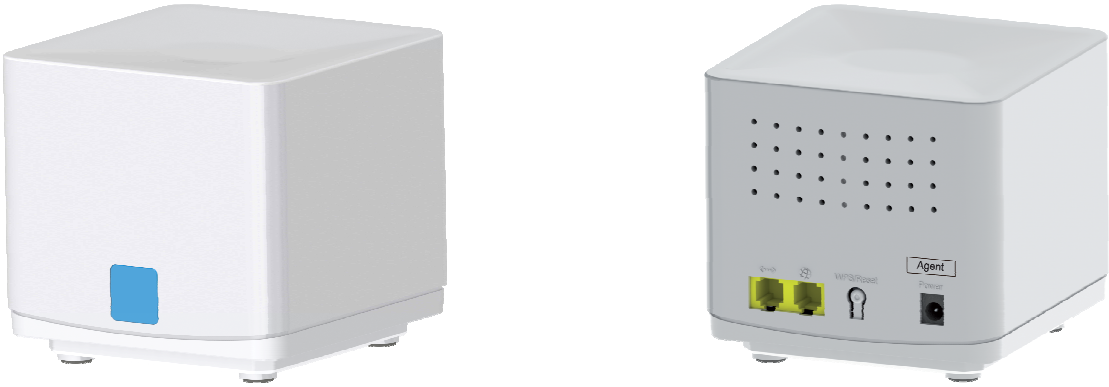

MAXWIFI3 (Kit WIFI MESH)

Quick installation guide

Content Kit MAXWIFI 3

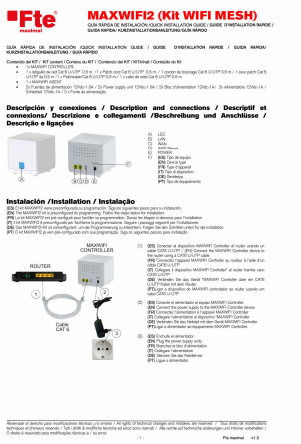


1x Controller device



1 x Agent devices

2 x power supply 12Vdc-1A



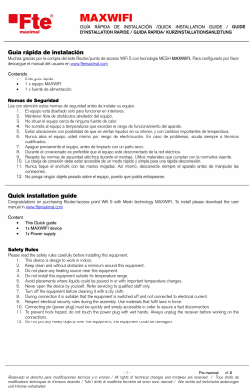
Quick installation guide

1 x patch cord cat 6 U/UTP 0.5 m

Content MAXWIFI device

1 x device MAXWIFI

1 x power supply 12Vdc-1A



Quick installation guide

3 Description of the product

Depending on the type of product selected either a KIT MAXWIFI 3, kit MAXWIFI2 or a MAXWIFI unit when you open the box for the first time, you will find the following items: The MAXWIFI equipment can be configured as a router or wireless access point. It has an 802.11 a / b / g / n / ac wireless connection with dual band support at 5GHz and 2.4 GHz. It also has two 1Gbit Ethernet connections. The first is the WAN connection and the other is the LAN connection that you can use to connect a computer via cat6 cable.

The MAXWIFI3 kit consists of 3 MAXWIFI devices already configured at the factory. The Controller device that acts as a router and network controller and two satellite or Agents devices are repeaters in the wireless network. Only need place the devices in their locations, connect the Controller to your operator router via LAN cable as described below and turn on the devices. Is possible add more devices in your installation with additional MAXWIFI equipment to cover all the rooms in your home or offices.

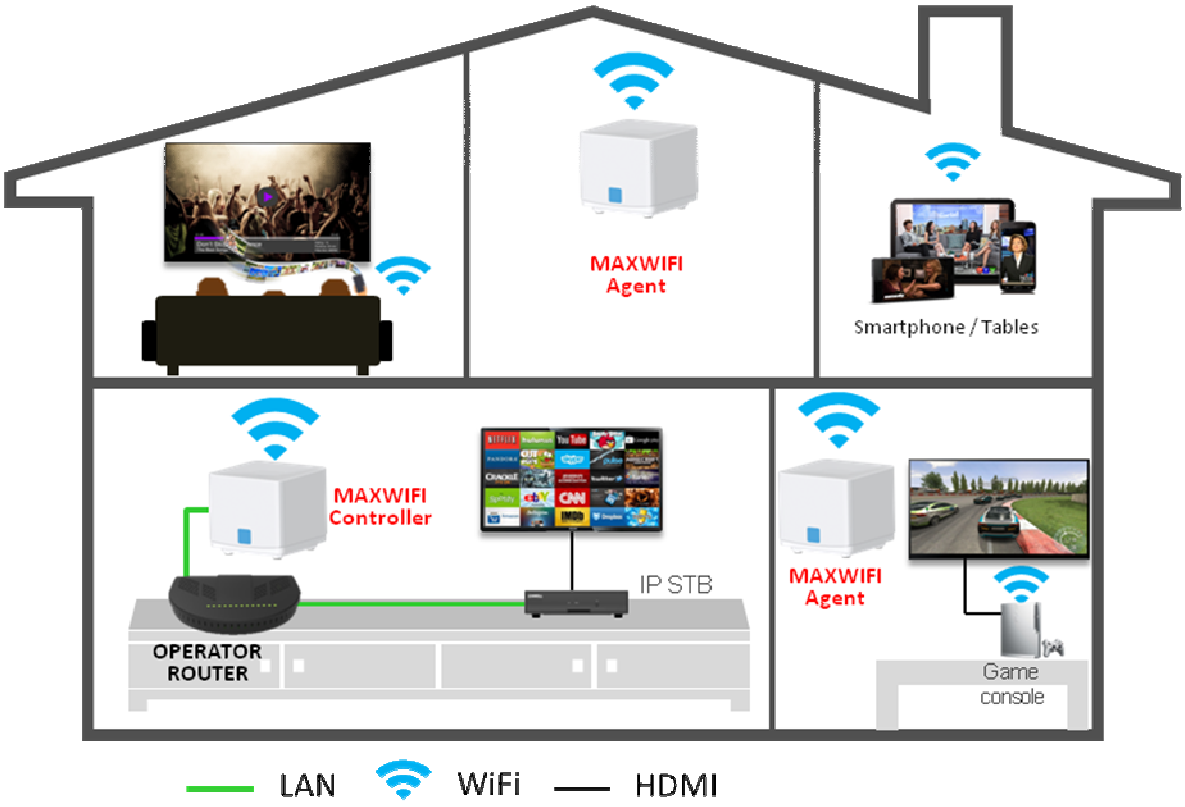
The MAXWIFI2 kit consists of 2 MAXWIFI devices already configured at the factory. The Controller device that acts as a router and network controller and one satellite or Agent device is repeater in the wireless network. Is possible add more devices in your installation with additional MAXWIFI equipment to cover all the rooms in your home or offices

MAXWIFI equipment will create a new wireless network in your facility. Unlike classic wireless repeaters, MAXWIFI equipment supports EASY MESH, which will allow you to create a single wireless network with a single SSID (network identifier), for all MAXWIFI equipment installed. In addition, the nodes of the MESH network interact with other nodes to manage the network redirecting the traffic according to the needs of each moment and improving the performance of the entire network.

4 Example of Installation

In the following example, we see a home with a MAXWIFI3 Kit installed. The kit is made up of three MAXWIFI devices. One device is configured as a controller that will connect to the operator's router to obtain the internet connection. The controller node allows you to configure the entire wireless network and information of the network identifier (SSID) and passwords. The two devices configured as Agent are repeaters of the signal.

Placing correctly theses equipment, we will have wireless coverage throughout the house for the different wireless equipment, without a problem of signal loss. All configured MAXWIFI devices create a single network. If a user moves around the house, their wireless device will connect to the MAXWIFI node that automatically provides the best quality signal.



5 Connections

A) **Status Led**: This led show a information depending the color

a) Blue: The RSSI level is very high the device has an excellent connection.

b) Green: The RSSI level is high. The device has good connection.

c) Yellow: The RSSI level is low. The device has a bad connection

d) Purple: The RSSI level is null. The device is not connected. When the device is booting the led has the same color.

e) Red: The device controller is boot or the Agent device or controller are not configured the Easymesh.

f) Aquamarine blue: The device is loading the factory values and it will be restarted.**WAN**: Connect this port of the device Controller to one LAN port of your operator router using a Cat 6 cable.

B) **Button WPS/Reset**: Pressing and hold one or two second this button start the option WPS or start the pairing of the MAXWIFI Agent with a MAXWIFI controller device. If press and hold more than 15 seconds and release the button the device load the factory values and reboot.

C) **Power connector:** Plug the jack from the external power supply 12Vdc-1A.

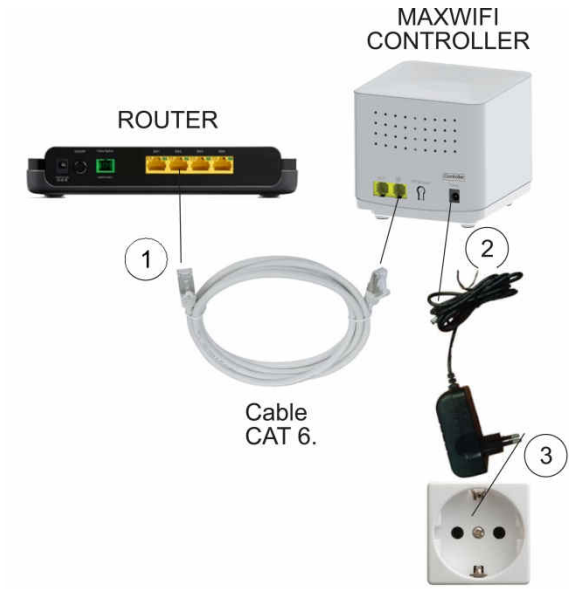
D) **Identification label:** This label allocate in the rear side is only available for the device are included in the Kit MAXWIFI3**.** It is used to identify the device configure as Controller" and the devices configure as "Agent". In the additional equipment, the label is not included and you must configure it according to its type, following the steps that will be described in this manual.

6 Installing the Kit MAXWIFI3/MAXWIFI2

As we commented before the kits MAXWIFI3 or MAXWIFI2 are configure. Only need connect and place in the correct placement to work. If you need change their settings go to the chapter "7 Device setting" of this manual.

To install your MAXWIFI3/MAXWIFI2 KIT, you must connect a Cat 6 U/UTP cable to interconnect the Controller equipment to your operator router. In the MAXWIFI 2 Kit it has one of cat 6 included. If you need a longer cable length, you will need to purchase a Cat 6 U/UTP cable separately.

The steps to connect the Controller device are:



1) Connect one side of the LAN cable cat 6 U/UTP in one LAN port of your operator's router and the other side to the WAN port of the devive MAXWIFI marked as "Controller".

2) Plug the jack of the power supply to the MAXWIFI Controller.

3) Plug the external power supply to the mains.

The MAXWIFI device needs around one minute to boot.

The equipment marked as Agent must be place in the placement. To install the MAXWIFI Agent please, follow the next steps:

4) Connect the jack of the power supply to the MAXWIFI Agent.
5) Plug the power supply to the mains.

The MAXWIFI device needs around one minute to boot. Wait until the device is boot

6) Check the colour of the Led status marked as 6 in the next picture in the front of the device.

Depend of the colour we can estimate if the placement of the Agent is correct or not.

If the color of the status is:

- **Blue:** The device Agent receives the best Wireless signal. The connection will be very fast.
- **Green:** The level and quality of the Wireless signal is good. The connection speed will be fast.
- **Yellow:** The level of the Wireless signal is low. The speed of the connection will be low.
- **Purple:** The level of the Wireless signal is null. It has not connection. In this case try to change the placement of the device to find a better Wireless signal.

It is possible to improve the wireless signal of one device needs move other devices to find the best coverage of the network.

Note:
To connect one device to the Wireless network of the Kit MAXWIFI3 must be use the SSID and password write in the bottom label of the controller device. If you change the settings remember use the new values.

7 Device settings

If you buy an additional MAXWIFI device or need change the settings of the current devices of the kit MAXWIFI you must be enter in the friendly Web interface of the device.

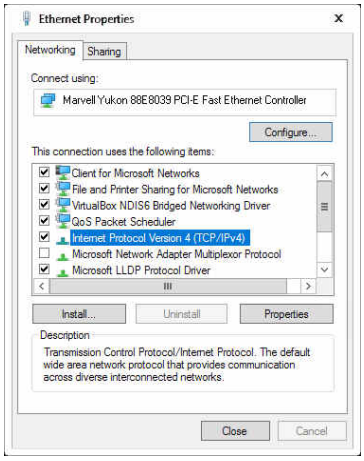
7.1 First steps

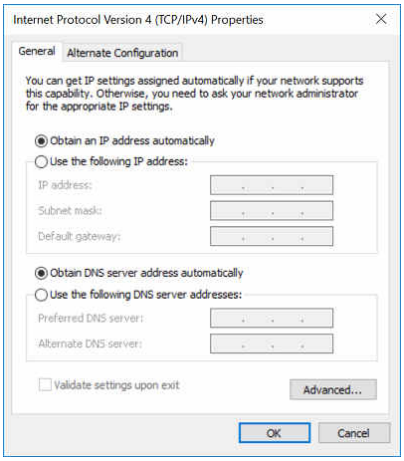
To configure the device is needed a computer or mobile device with a compatible web browser as for example: Google Chrome, Firefox or Microsoft Edge. In this manual we are explaining how we do the configuration using a computer with Windows OS and using the Ethernet interface.

Connect the Ethernet interface from the computer to the LAN port of the MAXWIFI device using a patch cord cat 6 U/UTP.
The MAXWIFI has a DHCP server. It can assign an IP address to the computer. To change the settings of MAXWIFI Agent we recommended do a factory reset and connect using the default settings.

Windows 10

Click in the Windows start button → Settings → Network and Internet → Ethernet → Change Adapter Settings. Right click on "Local Area Connection" and then select "Properties" in the contextual menu.
Follow the next steps to set the properties of the Internet protocol Version 4. Do double click on "Internet Protocol Version 4 (TCP/IPv4)" to enter the IP settings of your adaptor.





Configuring the protocol TCP/IPV4 to Obtain an IP address from DHCP
In the computer Select obtain an IP address automatically and Obtain DNS server address automatically.
Press OK and close the windows.

To change the properties of the in Internet Protocol Version 4 in other operative settings check the help.

Using the Wireless connection
If your computer only has a wireless card, you must know the values of the current SSID and password of the MAXWIFI device. The default values of SSID and password are in the bottom label of the device MAXWIFI. To connect turn on the MAXWIFI device wait a minute and select in your computer in the list of available Wireless SSID the value of the SSID of the MAXWIFI device. After that the first time is needed type the password. Type the password and the computer will be connected.

7.2 Web interface

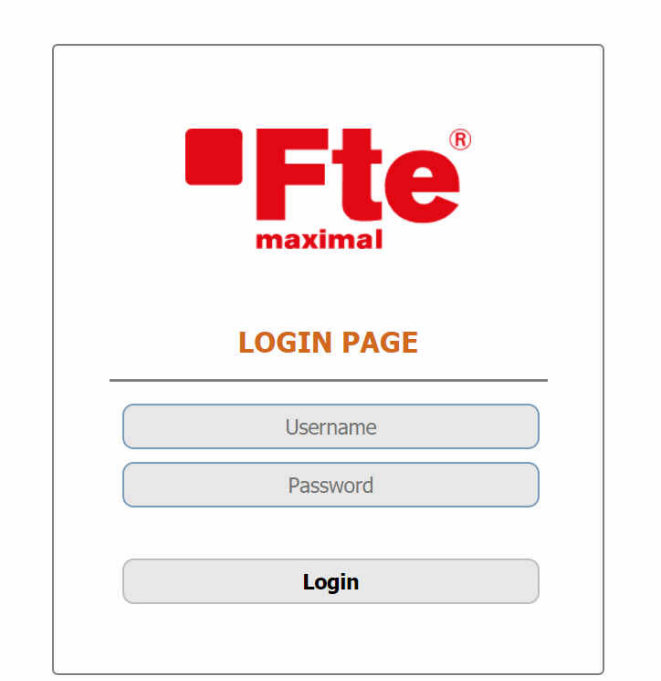
7.2.1 Login Page

If the MAXWIFI device was off, turn on the MAXWIFI device and wait a minute. Open the web browser in your computer and type in the address bar the IP address of the MAXWIFI device.

By default you must type

http://192.168.88.1

The Login page must be showing



If the MAXWIFI device has the default settings, the first time must be type the next Username and Password.

Username: **admin**
Password: **system**

Select with the mouse the button login and do Left click to access.

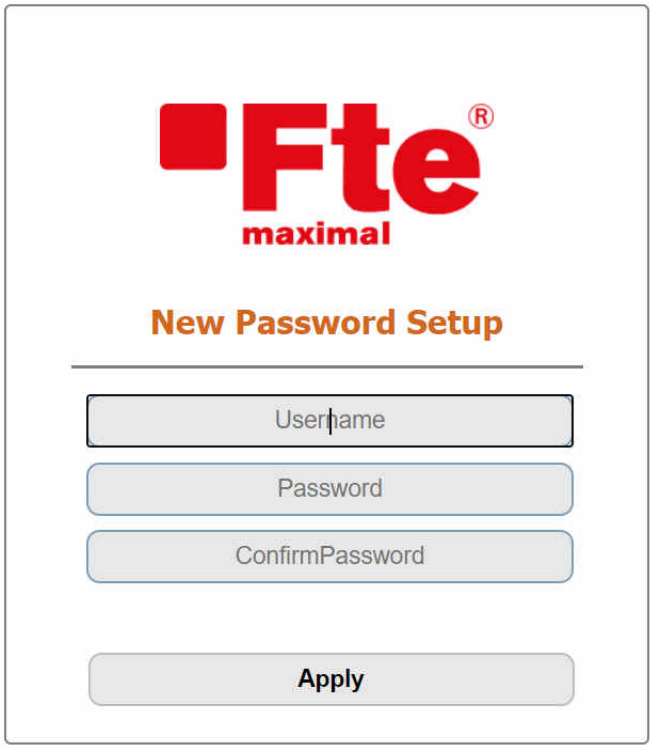
Notes:

1. For next logins is needed type the correct values.

2. The device only allows 3 trying to enter the correct login and password. If fail 3 times typing the username and password, the device block the Access some minutes as security rules.

3. If don't remember the login and password of the device, you can restore the default settings pressing and hold 15 seconds the WPS/Reset button in the rear of the device. After that you need wait around one minute to reboot the device. Now you must be connect to the default IP address of the device can type the default user and password in the login page

The first time after access with the default user and password, for security rules the device MAXWIFI ask to change the username and the password.



In this screen you must be type the next fields:

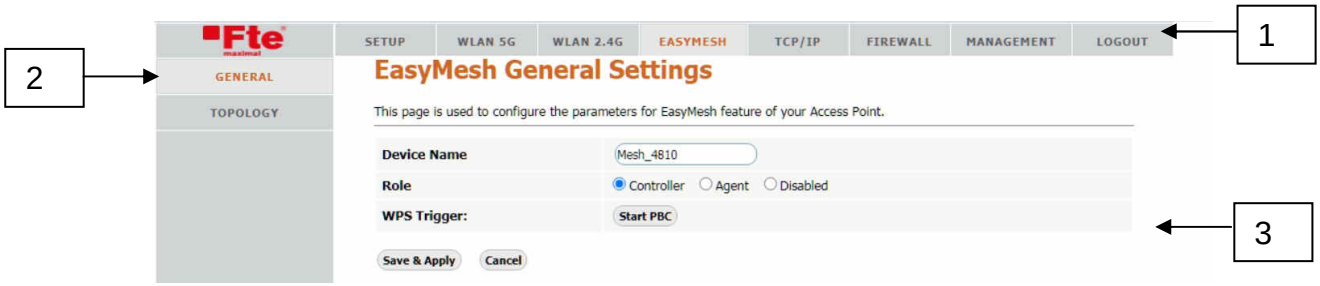
Username: Type the new username.

Password: Type the new password in this field. To be valid the password must be include uppercase characters (A..Z), lowercase characters (a..z) and numbers (0..9).

Confirm Password: Repeat the previous password.

Press apply button to confirm and access to the web interface

7.2.2 Description of the workspace

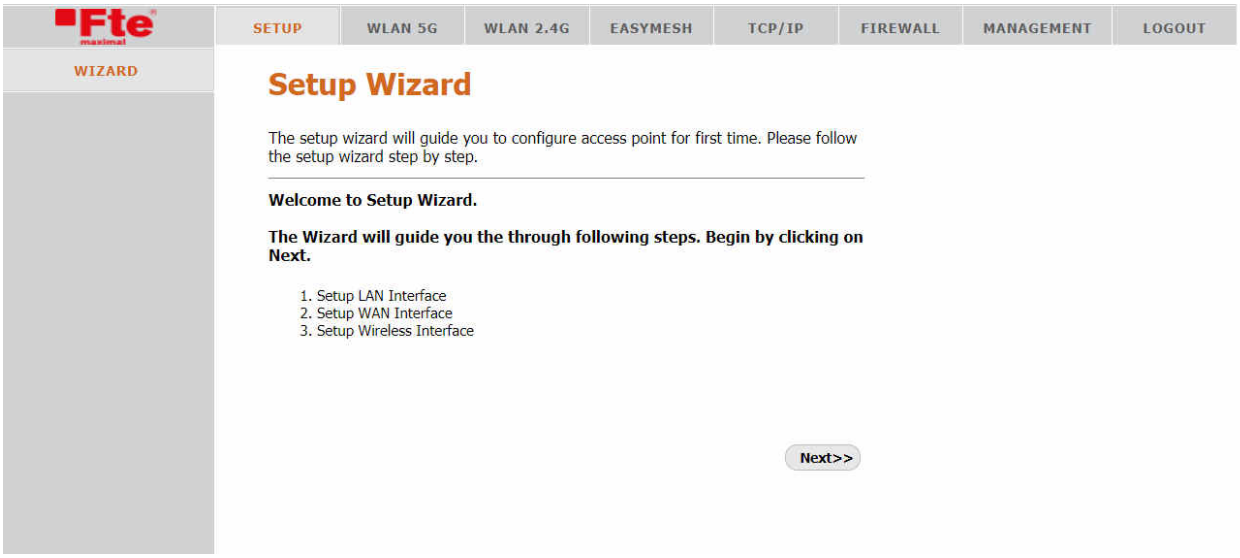


1) **Top menu:** Allow Access to the different settings tabs device.
2) **Side menu:** It is possible select sections of each tab.
3) **Workspace:** You can change the options of each section here.

7.2.3 Configuring a MAXWIFI device as MESH controller

Please, follow the next steps to set a MAXWIFI device as MESH controller of the wireless network. When access to the web interface you must be show the setup wizard screen to configure the device. If not appear, do a click over the tab Setup.

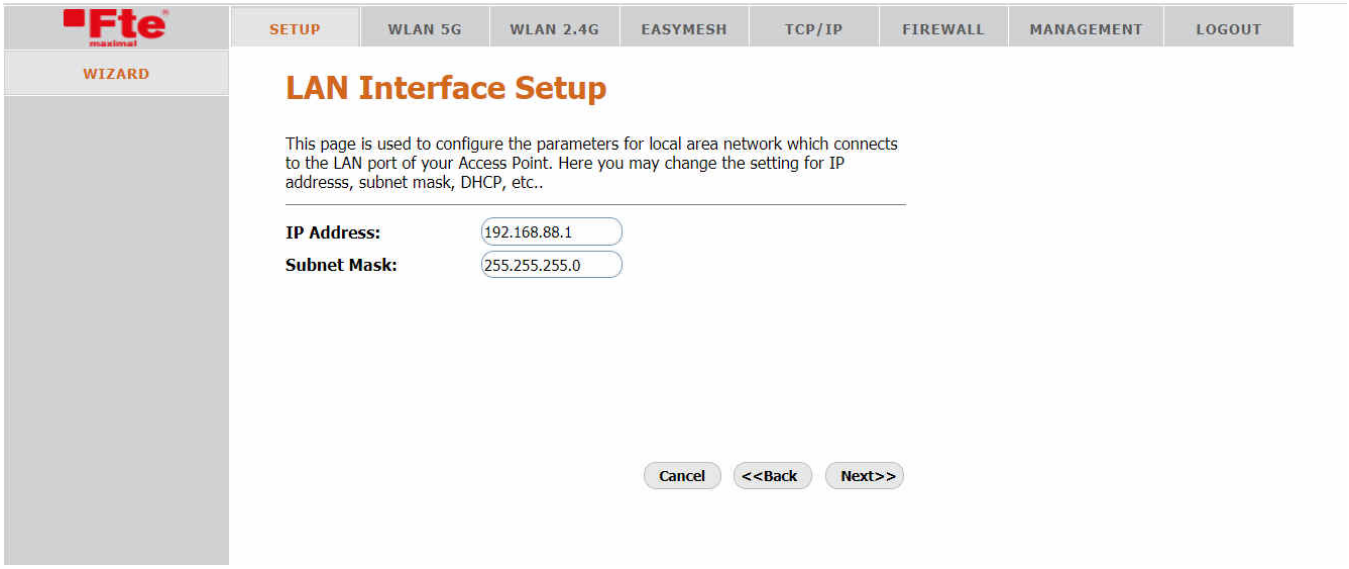
Step 1: Welcome screen.
This welcome screen appears the option will be updated by the wizard.



Press Left click of your muse over the button **Next >>** to continue to the next step

Step 2: Lan Interface setup.

In this section we configure the IP and net mask of the MAXWIFI controller device. With this information is defined the local network.



IP address: Type the IP address of your MAXWIFI device controller.
Subnet mask: Type the subnet mask.

Warning:
If change the IP address, that will be the IP address of the controller device. After finish the last wizard step you need type in the address bar of your web browser http://the new value of IP address to connect again with the controller device.

Do left click of the mouser over the button:

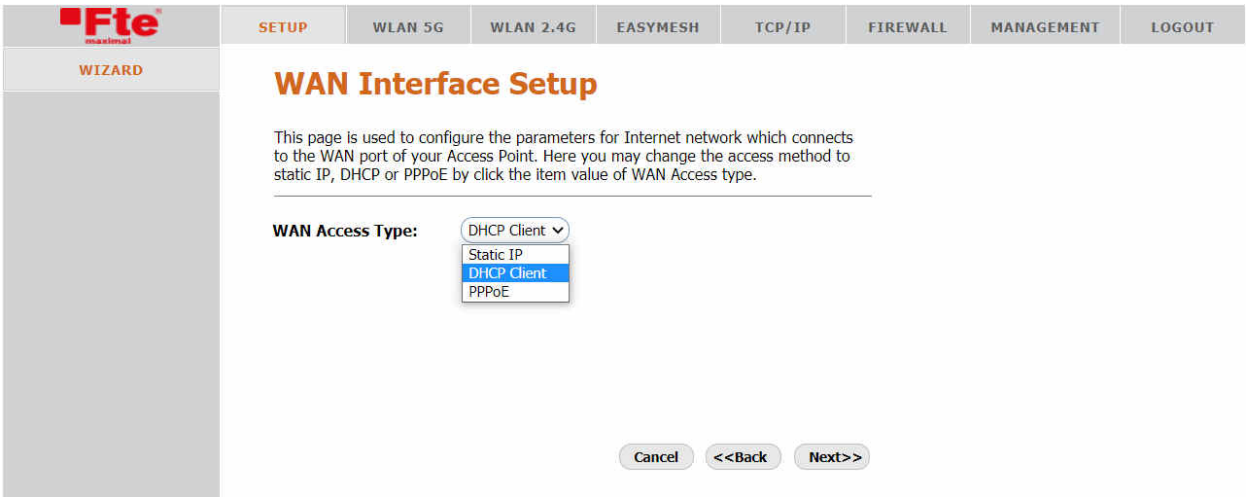
Next >>: to continue to the next step of the wizard

Cancel: To cancel the wizard and go to one settings screen of the device.

<< Back: To return to the previous step.

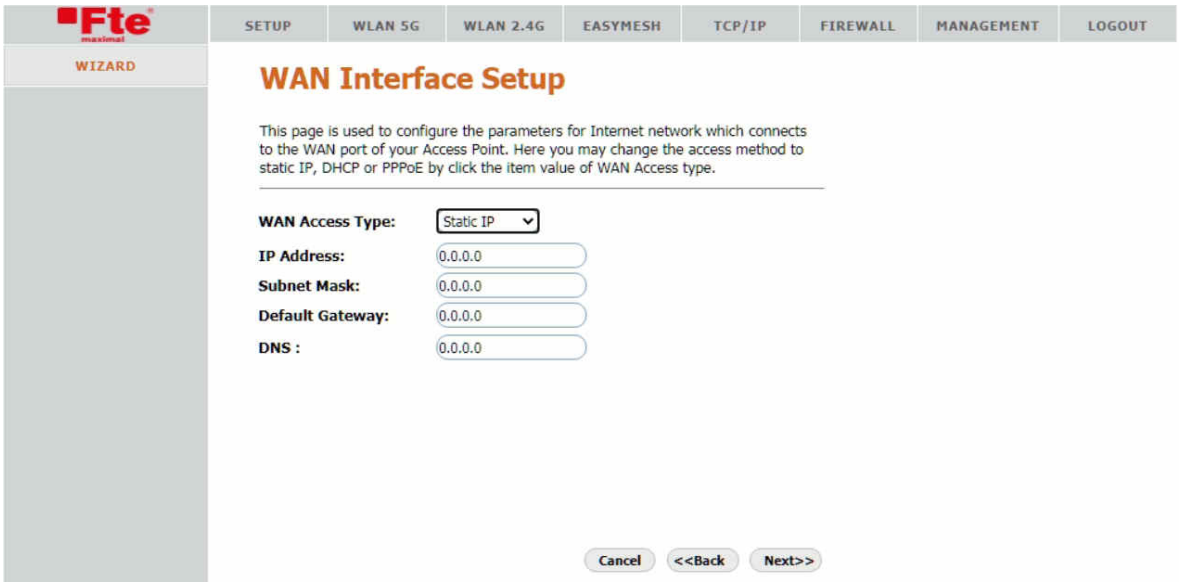
Paso 3. WAN interface setup

The WAN interface allows connect the MAXWIFI device to Access to internet, when we connect to the operator router or using a PPPoE conection. Only it is needed connect the WAN in the controller device.



The WAN access has 3 options:

- **DHCP Client.** The MAXWIFI device automatically obtains the network values through the DHCP server of its operator router. Select this option if you connect the MAXWIFI equipment to one of the Ethernet sockets of your operator router.
- **Static IP:** You must be type the IP settings of the WAN interface.



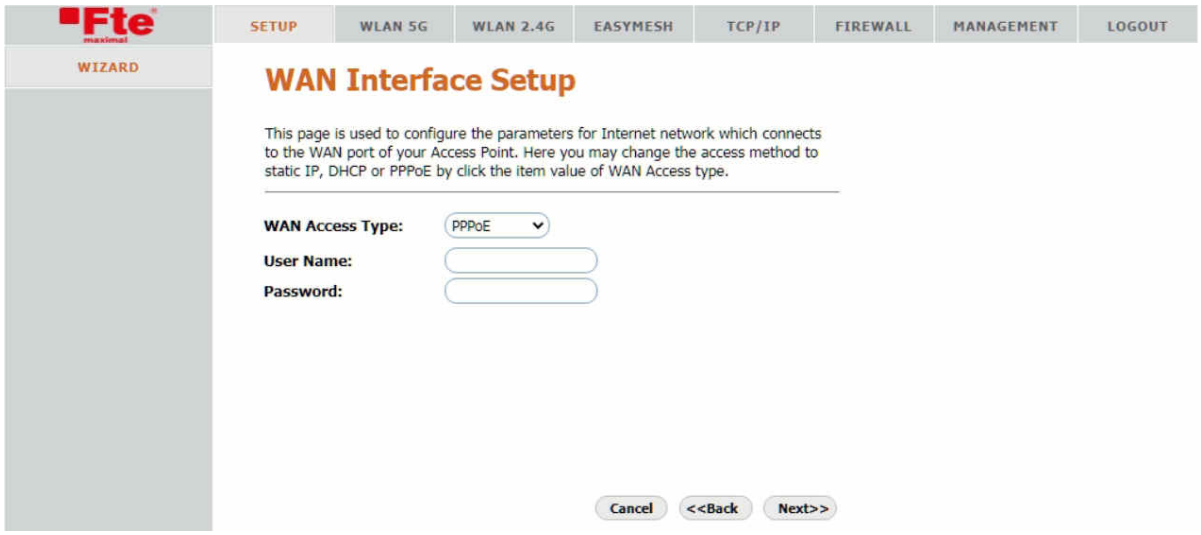
IP Address: Type the value of the IP address for the WAN interface.

Subnet Mask: Enter the new value subnet mask

Default Gateway: Type the IP address of the Gateway

DNS: Enter the value of the IP address of the DNS.

- **PPPoE:** (Point to Point Protocol over Ethernet). Check with the Service operator or your system administrator the next value to connect to PPPoE



User Name: Type the user name.
Password: Enter the password in this field.

Do left click of the mouser over the button:

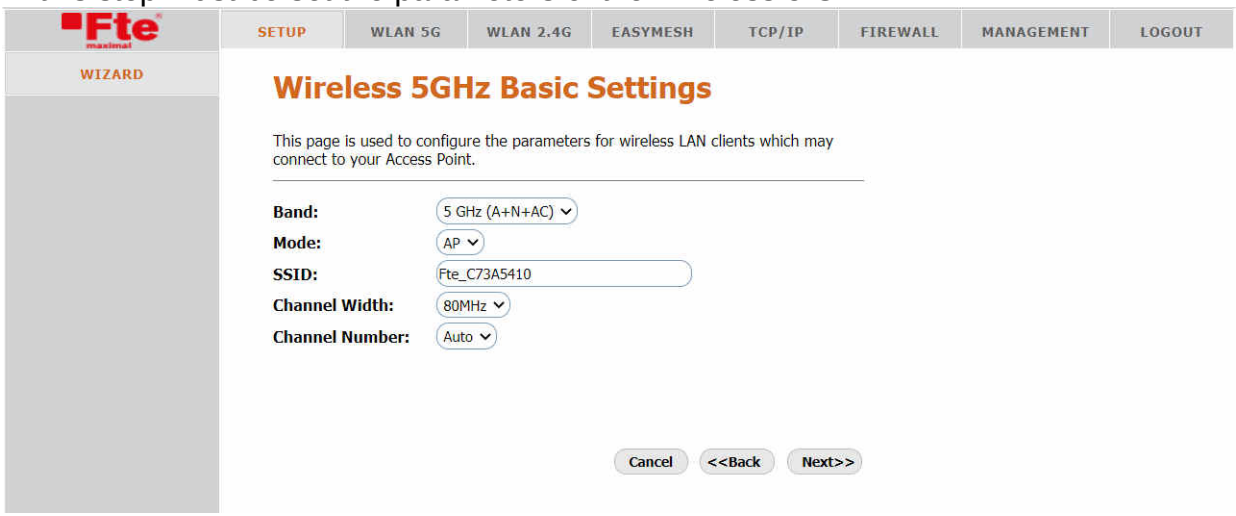
Next >>: to continue to the next step of the wizard

Cancel: To cancel the wizard and go to one settings screen of the device.

<< Back: To return to the previous step.

Paso 4 Wireless 5GHz basic settings

In this step must be set the parameters of the Wireless 5 GHz.



In the basic settings we see the next parameters:

Band: The options available are: 5 GHz (A), 5 GHz (N), 5 GHz (A+N), 5GHz (AC), 5GHz (N+AC) and 5GHz (A+N+AC). The default value is 5GHz (A+N+AC).

Mode: Only can be set the value AP.

SSID: Enter the name of your wireless network in this field. Please make a note of this value to find out later the name or identifier of your wireless network when searching for it with your wireless devices.

We recommend that both the 5GHz wireless connection and the 2.4 GHz wireless connection have the same SSID or network name. With this, in the event that a wireless device loses the coverage of the 5GHz network, it can use the 2.4GHz network automatically.

Channel Width: The available values are 80 MHz, 40 MHz and 20MHz. El default value is 80 MHz.

Channel number: By default is auto, you can select one of the next values of the list: Auto, 36, 40, 44, 48, 149, 153, 157, 161.

Do left click of the mouser over the button:

Next >>: to continue to the next step of the wizard

Cancel: To cancel the wizard and go to one settings screen of the device.

<< Back: To return to the previous step.

Step 5 Wireless 5 GHz Security setup

In this screen have the next settings:

Encryption: Select the type of encryption of the wireless network. The possible values are: None, WEP, WPA(AES), WPA Mixed. We recommended the default value WPA2 (AES) to use the MESH network.

Pre-Shared Key Format: Select between Passphrase or HEX (64 characters). El default value is Passphrase.

Pre-Share Key: Enter in this field the Pre-Share key using as password in the wireless network 5GHz.

Please, make a note of the Pre-Share Key value so that you can use this password for your wireless network.

We recommend use the same values in the wireless network 2.4 GHz and 5 GHz to be able to switch from one network to another band in a transparent way by a wireless client device.

Do left click of the mouser over the button:

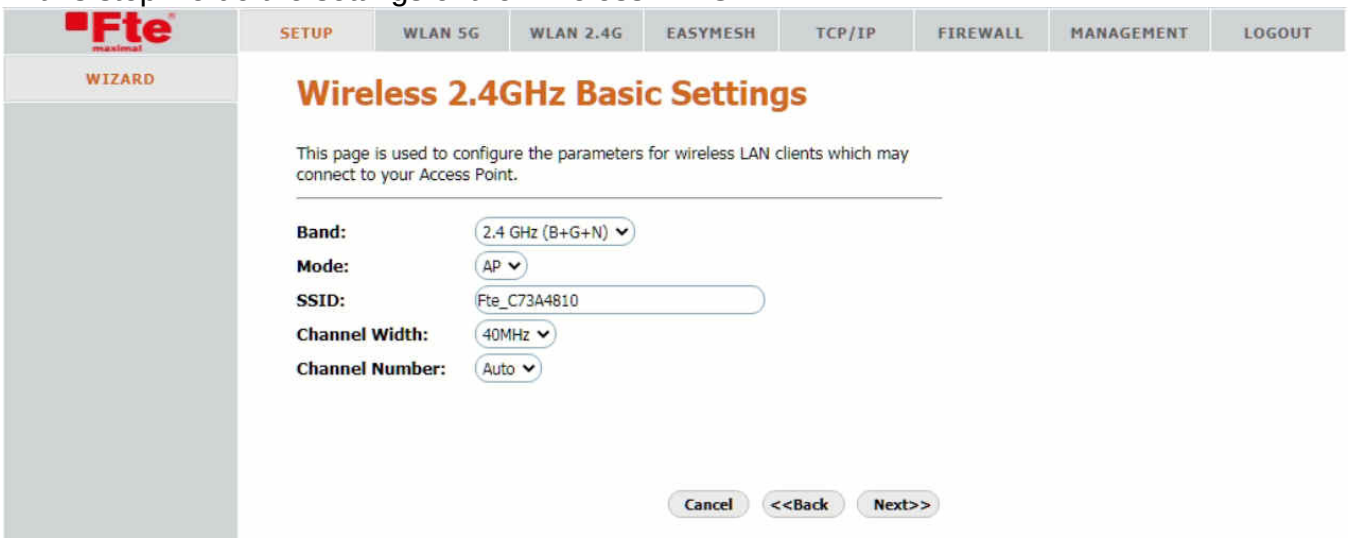
Next >>: to continue to the next step of the wizard

Cancel: To cancel the wizard and go to one settings screen of the device.

<< Back: To return to the previous step.

Step 6 Wireless 2.4 GHz basic settings

In this step we do the settings of the Wireless 2.4 GHz.



In the basic settings we see the next parameters:

Band: The options available are: 2.4 GHz (B), 2.4 GHz (G), 2.4 GHz (N), 2.4 GHz (B+G), 2.4 GHz (G+N) and 2.4 GHz (B+G+N). The default value is 2.4 GHz (B+G+N).

Mode: Only can be set the value AP.

SSID: Enter the name of your wireless network in this field. Please make a note of this value to find out later the name or identifier of your wireless network when searching for it with your wireless devices.

We recommend that both the 5GHz wireless connection and the 2.4 GHz wireless connection have the same SSID or network name. With this, in the event that a wireless device loses the coverage of the 5GHz network, it can use the 2.4GHz network automatically.

Channel Width: The available values are 40 MHz and 20MHz. El default value is 40 MHz.

Channel Number: Select one option of the next list: Auto, 5, 6, 7, 8, 9, 10, 11. The default value is **Auto**.

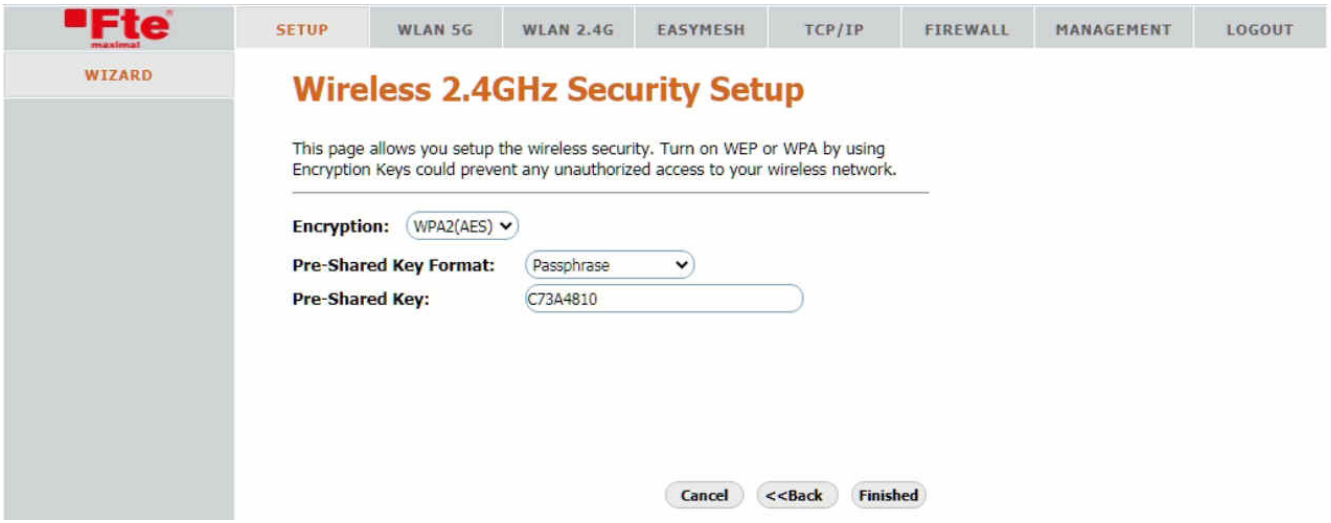
Do left click of the mouser over the button:

Next >>: to continue to the next step of the wizard

Cancel: To cancel the wizard and go to one settings screen of the device.

<< Back: To return to the previous step.

Paso 7 Wireless 2.4 GHz security setup



Encryption: Select the type of encryption of the wireless network. The possible values are: None, WEP, WPA2(AES), WPA2 Mixed. We recommended the default value WPA2 (AES) to use the MESH network.

Pre-Shared Key Format: Select between Passphrase or HEX (64 characters). El default value is Passphrase.

Pre-Share Key: Enter in this field the Pre-Share key using as password in the wireless network 2.4 GHz

Please, make a note of the Pre-Share Key value so that you can use this password for your wireless network.

We recommend use the same values in the wireless network 2.4 GHz and 5 GHz to be able to switch from one network to another band in a transparent way by a wireless client device.

Do left click of the mouser over the button:

Cancel: To cancel the wizard and go to one settings screen of the device.

<< Back: To return to the previous step.

Finished >> Press this button to save the new settings. Please, wait some second and don't close the web browser while the device saves the new settings.

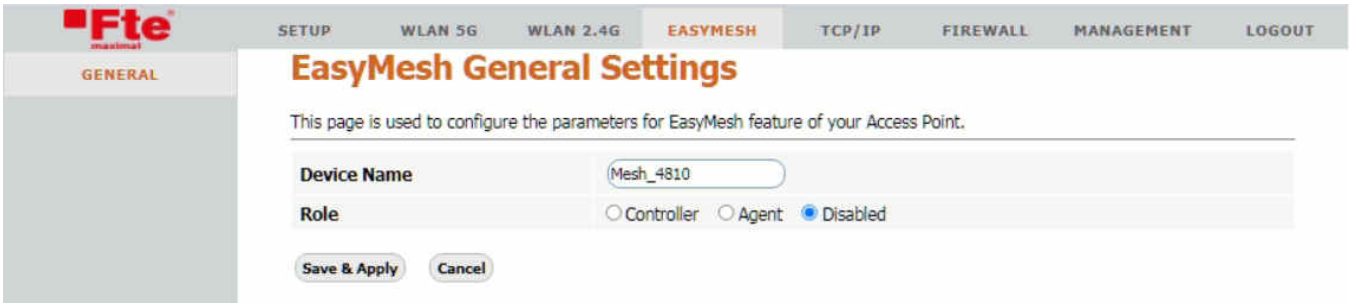
When the device was saved the settings, it shows again in the web browser the first step of the wizard.

if you are connected by wireless network and change the settings of the SSID and password remember to connect again with the device it is necessary find again the new SSID in the list of the wireless of you computer and to connect type the new password.

If you change the IP address in the local network settings remember that is the new IP of the MAXWIFI device. You need type in the web browser http://new IP address of the MAXWIFI to continue with the next step.

Step 8 EasyMesh settings for a MAXWIFI controller.

To enable the EasyMesh settings for your MAXWIFI device move the mouse over the Tab EASYMESH and do a left click to select it.



The screen General has the next options:

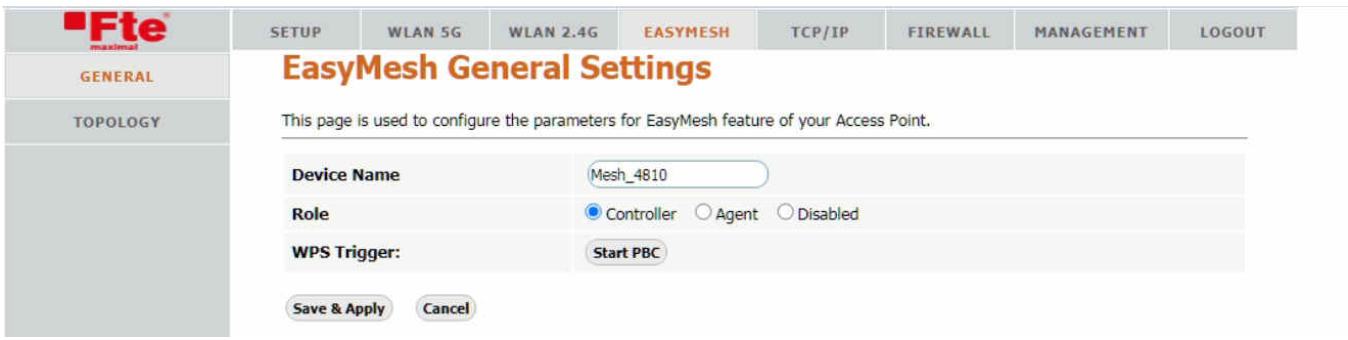
Device name: This name will be the name of the node in the MESH network. By default the device set a name but the user can change this name to identify more easily.

Role: In this option we set the type of device in the MESH network. Select controller if you set this device as controller, select Agent to set the device as Agent and disabled if this device will be not part of a MESH network. Select controller in this option because we are configure the device as controller.

Remark

Only one device could be a controller in a mesh network.

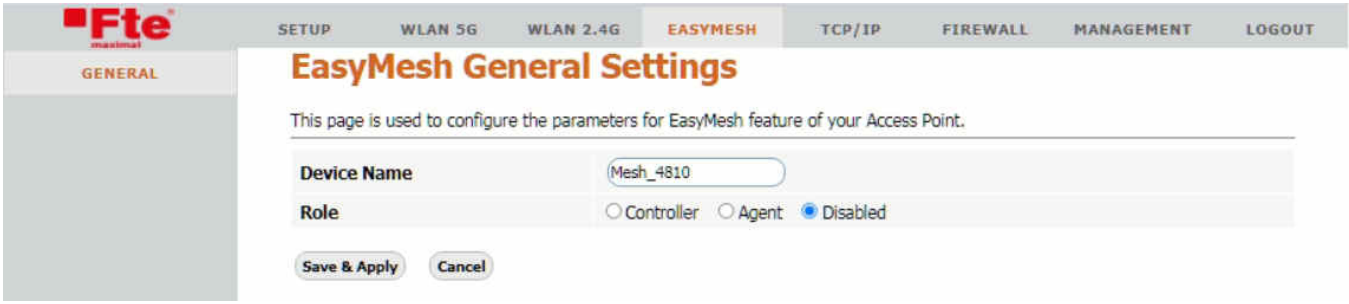
Press the button Save & Apply to save the settings and apply the change. Please, wait some seconds and don't touch any option until the device updates the screen. When it is finish appear in the left side the TOPOLOGY option where you can see all devices by node in the MESH network.



7.2.4 Configuring a Maxwifi agent

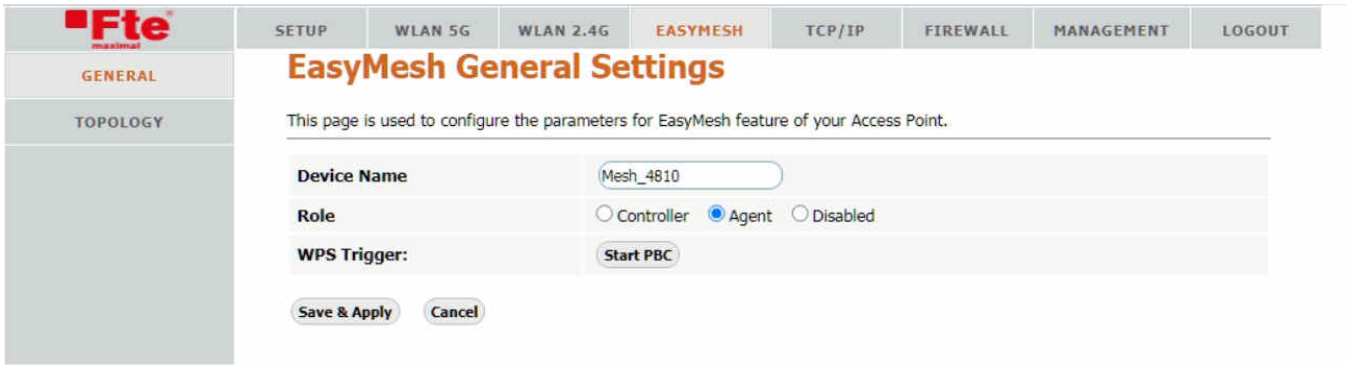
Conect the power supply to the Maxwifi agent and wait one minute. If the device was configured and don't know the settings, the best way is press and hold the WPS/Reset button 15 seconds and release the button to restore the factory reset.

Connect the Ethernet port of you computer to the LAN port of the MAXWIFI device. If you preffer use a wireless connection the default SSID and password are written in the bottom label. Please access to the device as explaining in the point 6.2.1 of this manual. When we show the wizard we skip and select the tab EASYMESH.



Device Name Type the name of the agent en la Red MESH.

Role: This option we define the role of the device. In this case select the option Agent.



Press the button **Save & Apply** to save the new settings and apply

After wait some seconds you will see the screen will be update and several tab disappear. That is normal because the Agent device depend of the controller for theses parameters.

Close the web browser and disconnect the cable of the LAN port (if you connect before). If you were connected by wireless the current SSID is not longer valid and need connect to the controller SSID.

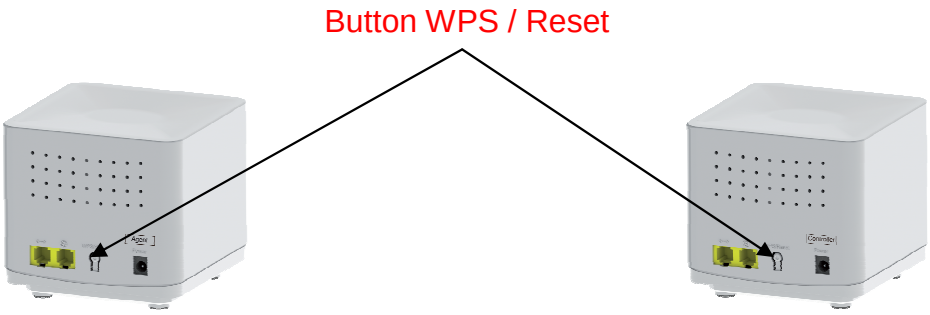
7.2.5 Pairing a MAXWIFI Agent with a MAXWIFI Controller

We recommended to pairing the equipment will be closed for example the distance less than 2 meter. To pairing the device follow the next steps:

The both equipment must be on and must be pass at least 2 minutes on. The light indicator in the Agent device must be red.

1.- Press and hold the button WPS/Reset in the MAXWIFI controller around 2 seconds. Release the button WPS/Reset. You can see the status led in the front must be blinking.

2.- Press and hold the button WPS/Reset in the MAXWIFI agent around 2 seconds. Release the button WPS/Reset. You can see the status led in the front must be blinking



3.- After some seconds the light indicator of the controller and agent device will be not blinking and the status light color of agent device will be blue because it has a excellent signal strength and quality.

Now the both devices are pairing.

After the pairing, turn off the power of the agent device and place the Agent its placement. Turn on and wait a minute to the device boot. Check the status light as we comment in the page 11 of this user manual.

Repeat all the steps for the other MAXWIFI agent.

Now you can use the new wireless network.

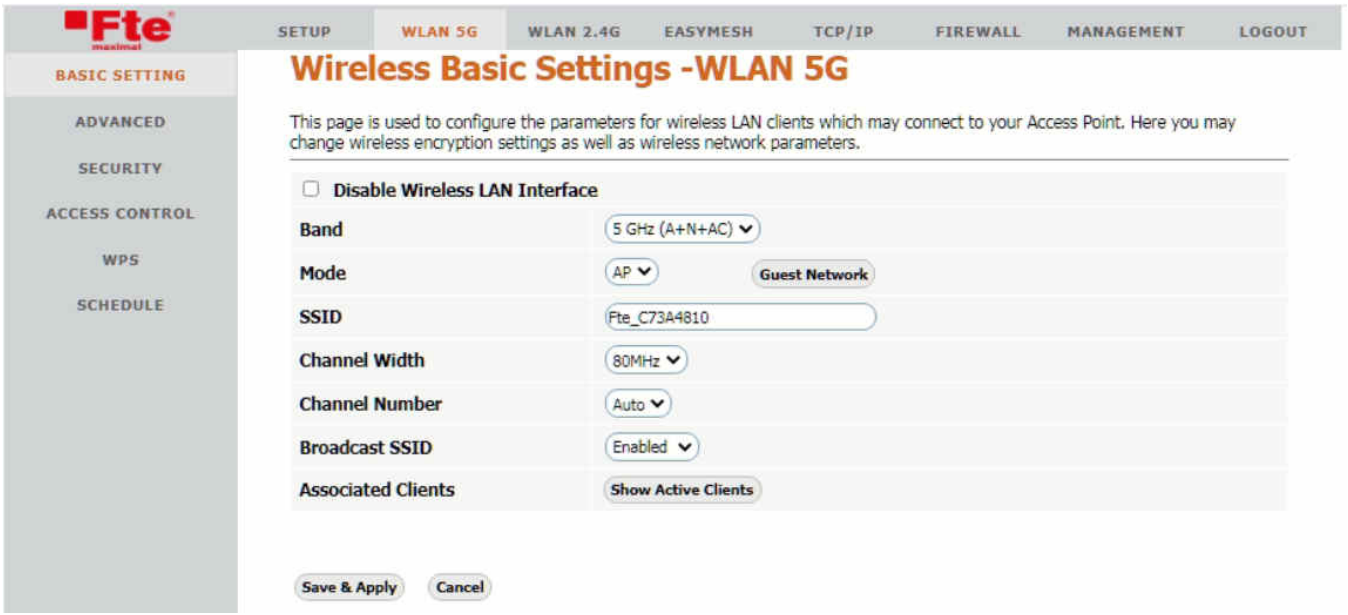
Advance settings of the Wireless network

The devices MAXWIFI have many settings. All options are only available in the device configure as EASY MESH controller. The device configured as Agent has not several options. From here we understand the user is connected to the controller device.

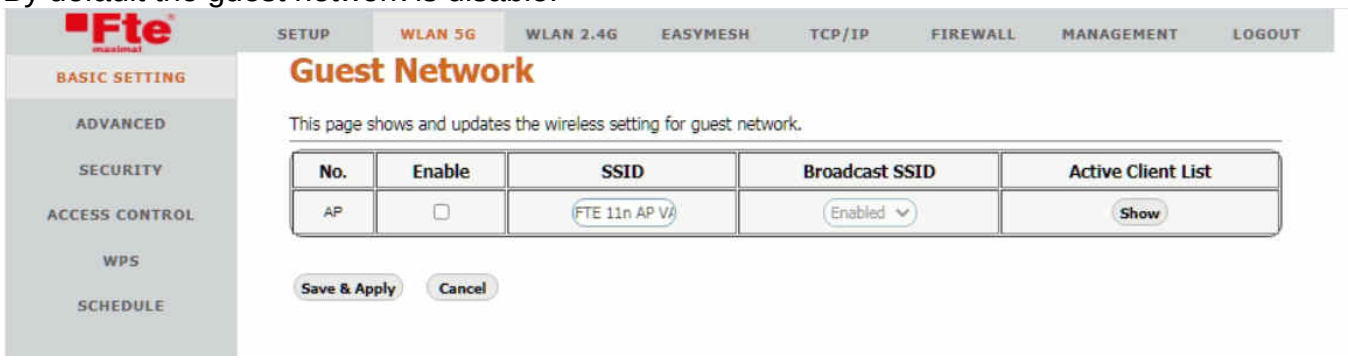
7.2.6 Guest network

In this chapter comment how enable the guest network, this network allow of your guest connect to internet without access of your local network for example try to connect to to the MAXWIFI controller.

The first step is selected the TAB **WLAN 5G** or **WLAN 2.4G** in the top menu and choose the option **BASIC Setting.** Press the button **Guest Network.**



By default the guest network is disable.



Enable: Mark this field to enable the guest network or no mark to disable the guest network.

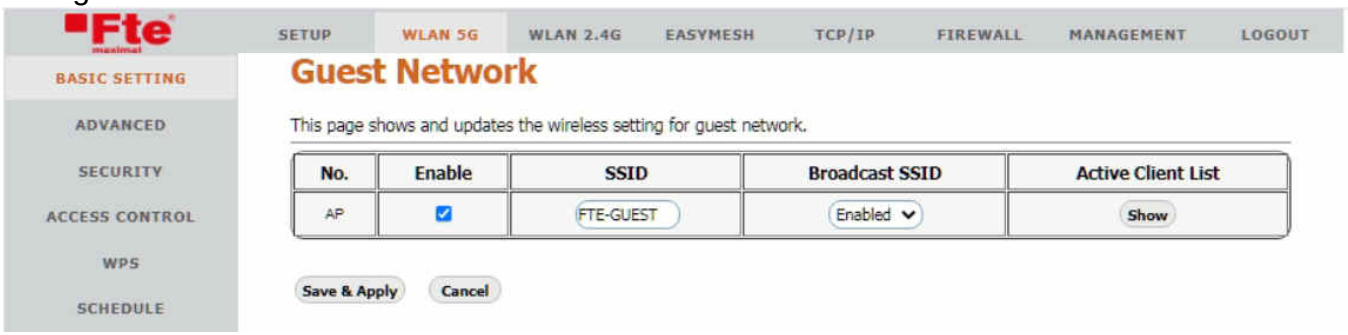
After mark the enable field it is possible change the next settings.

SSID: This filed allow modified the name of your guest network. This name appears in the list of available wireless in your Wireless client.

Broadcast SSID: Allow watch or not the name of the network in the available network of your wireless client.

Active Client List: Pressing this button we can see the number of clients are connected to the Guest network.

Press the button "Save & Apply" to save and apply the changes or press cancel to forget the changes.



After the Guest network is enabled is necessary add a Wireless security of this guest network. Select in the left menu Security. The next options are available in this screen:

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Select SSID: Choose in the list the SSID to change the Wireless security. In this example we choose the guest network FTE-GUEST.

Encryptation: The available options are: Disable (Free network), WPA, WPA2 (AES), WPA-Mixed. We recommend the option WPA2 (AES)

Authentitication Mode: You can select between Enterprise (RADIUS) or Personal (Pre-Shre Key).

If choose Radius must be enter the information of RADIUS server.

Cipher Suite: Must be use between TKIP o AES.

RADIUS Server IP Address: Type in this field the IP address of the Radius server.

RADIUS Server Port: Type in this field the value of the port used for the protocol Radius. The default value is 1812.

RADIUS Server Password: Write in this field the password to access to the RADIUS server.

If select Personal (Pre-Shared Key) is needed edit the next parameters:

Cipher Suite: If not disable the option you must be select between the option TKIP or AES. Recommended AES.

Management Frame Protection: The available options are none, capable, required

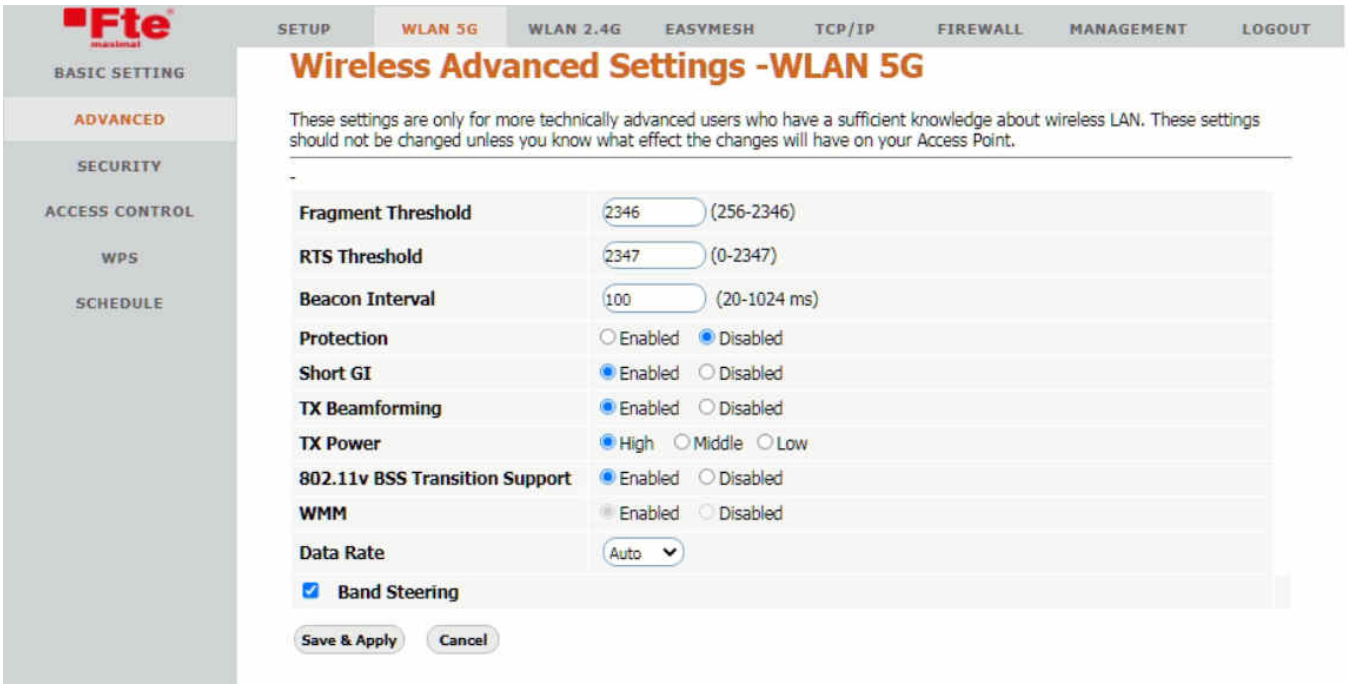
Pre-Shared key Format: You can select between Passphase o Hex (64 characters). The Hex option only permits up to 64 hexadecimal characters in the field Pre-Share key.

Pre-Shared key: Type the password of the wireless network.

After do all the steps you have a new Wireless network for the guest.

7.2.7 Wireless advance settings

We recommended left the default values of the Wireless advance setting in the WLAN 5G and WLAN 2.4G , except if the user has high knowledge how work the wireless network.



7.2.8 Access control

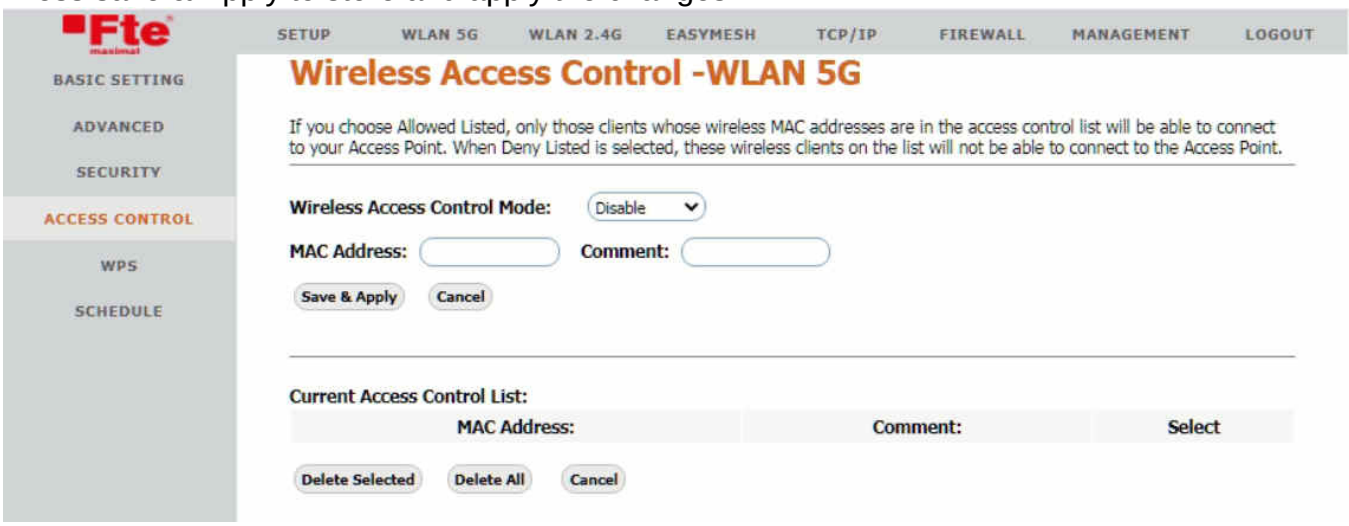
The Access control allow or not the access of the equipments in the network using the MAC address.

Wireless Access Control Mode: Selecting enable allow the access control. The available options are:

- Disable: The Wireless access control is disabling.
- Allow Listed: The elements in the list are permitted the access. This option is not compatible with security protection WPA2.
- Deny Listed: The elements in the list cannot access to the wireless network.

When wireless access control mode is not disabling, the next options are enable:

MAC Address: Type the value of MAC address to add of the Current access Control list.
Comments: Add a comment to identify the device more easily.
Press save & Apply to store and apply the changes.



7.2.9 Wireless Schedule

This option allows set the wireless schedule rules. You can set when the wireless is on or off. These rules could be independent in each band WLAN 5G and WLAN 2.4G.

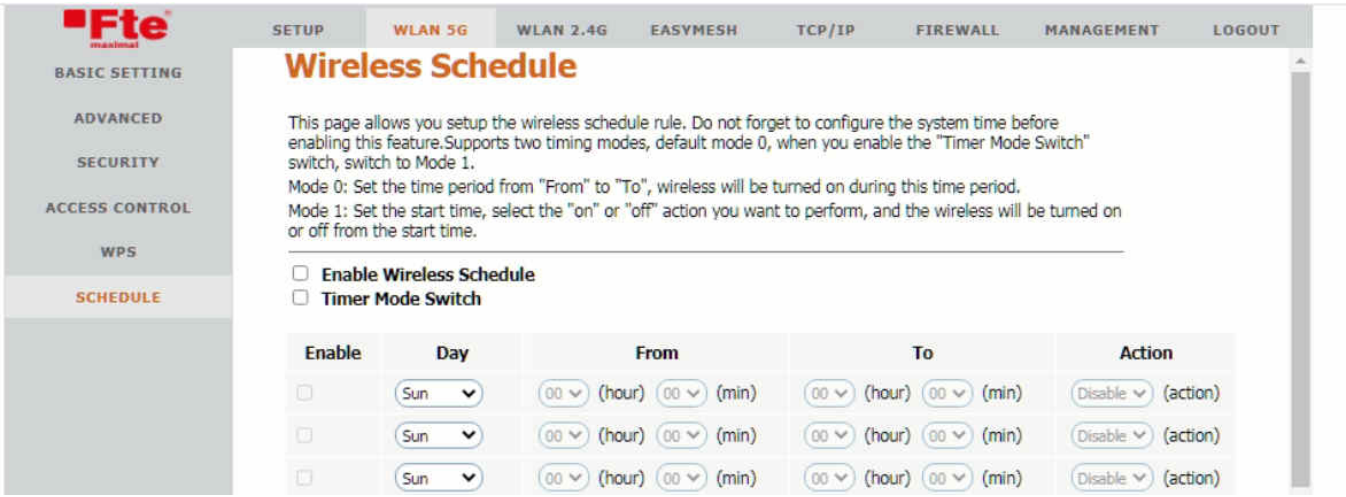
The schedule has 32 rules to permit do complex settings.

The options are:
Enable Wireless Schedule: If mark this checkbox enable the Wireless Schedule.

Timer Mode Switch: This schedule has two mode of operation. If add a check in this option is the mode 1 and without mark is the mode 0

Mode 0: Configure the time when the wireless is enabled from the time of the field "From" untll the time of the field "To" in the day of the week or for all the days of the week.

Mode 1: Select the day and time in the field "From" and select the action Enable or disable.



Enable: Check this field to allow this rules.

Day: Choose the day of the week or everyday for all the day of the week.

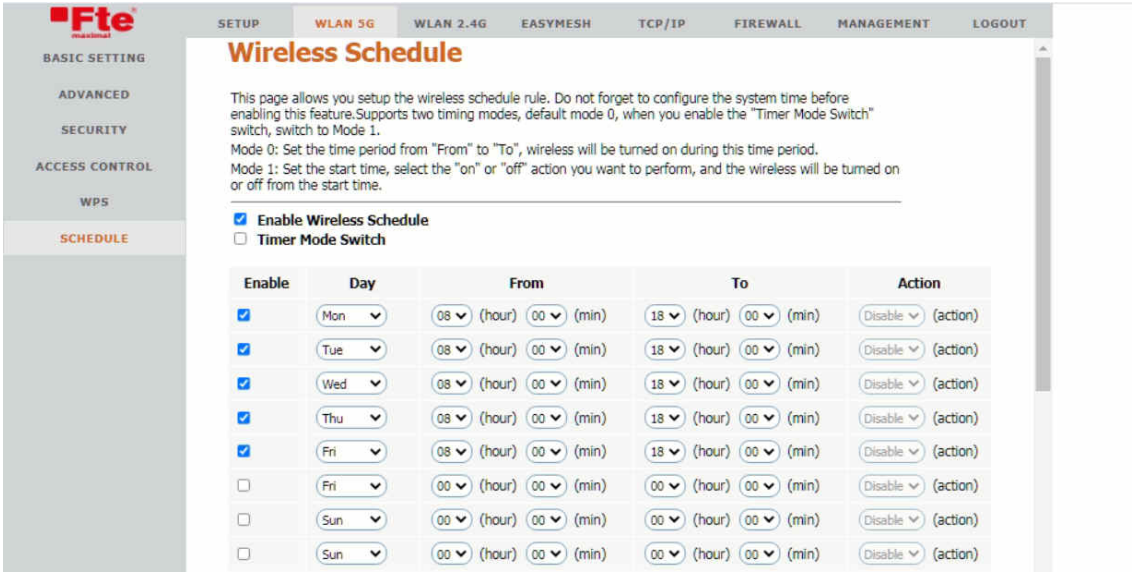
Remark:
The first day in the list is (Sun) Sunday and the last day is (Sat) Saturday.

From: Select the hour and minute to begin this rule.

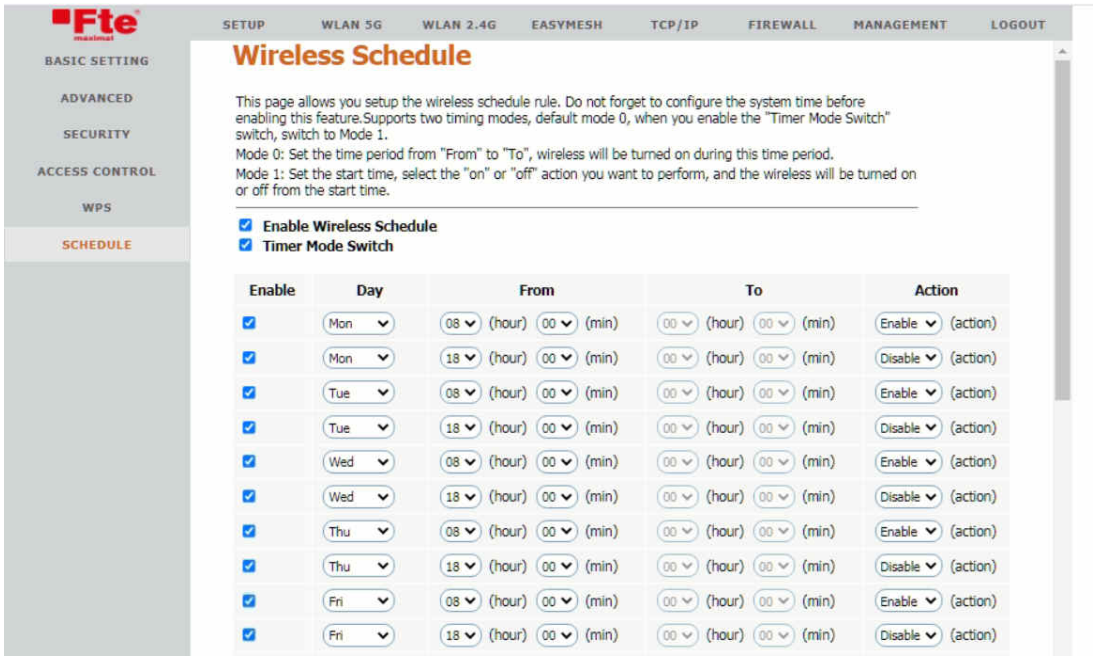
To: Select the hour and minute to end this rule. The option is only enable in mode 0

Action: this field is enabled only in mode 1. When select in the list enable, turn on the Wireless network accorded to the day and the time of the field "From". If select disable in the list turn off the Wireless network.

Example mode 0. The next screen shows the setting of the Wireless Schedule. The rules enable the Wireless from 8:00 to 18:00 from Monday to Friday.



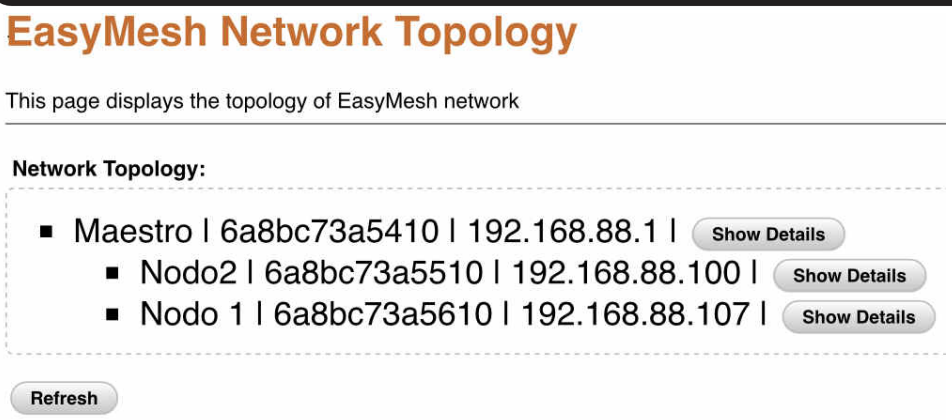
Example Mode 1: This example shows the Wireless Schedule for the WLAN-2.4GHz. From Monday to Friday we have a rule to enable the wireless from 8:00 and other rule to disable 18:00. The Saturday and Sunday will be off.



7.3 Easy Mesh

7.3.1 Network topology

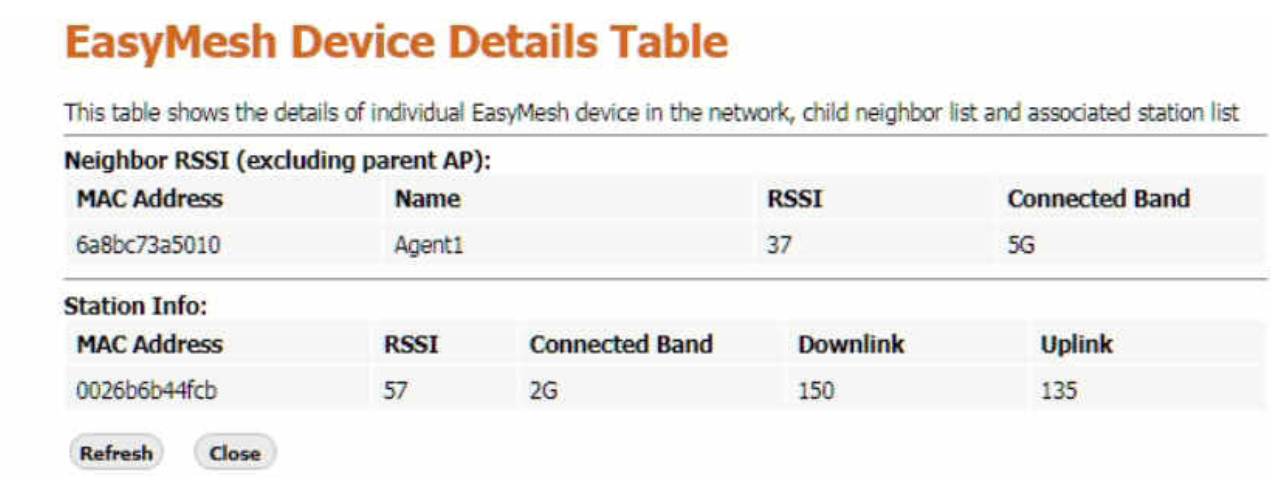
In the next picture we see EASYMESH network topology of the MESH. The Controller is identified as **Maestro** and the Agent device are identified as Nodo1 and Nodo2. The name of each node is assigned in the section EasyMesh General of each device. The level of the text indentation mean the child node connected to the Parent node. In this example we can see the both agent are connected to the controller because has the same text indentation.



After the name is showing the MAC Address and the IP address of the device. If do left click with the mouse over the button Show detail a window appear with a summary with the list of agents and Wireless clients associate in each node.

In the next example we see the details of one controller device. First appear the Agents devices in this case appear one Agent device called Agent 1 the Wireless level receiver (RSSI) and the band used to connect the Agent device with the controller.

In the stations section we saw the list of Wireless clients, The Mac address, The vaue of RSSI received of the device the band is connected 2G means 2.4 GHz the the Downlink and uplink speed in Mbps.

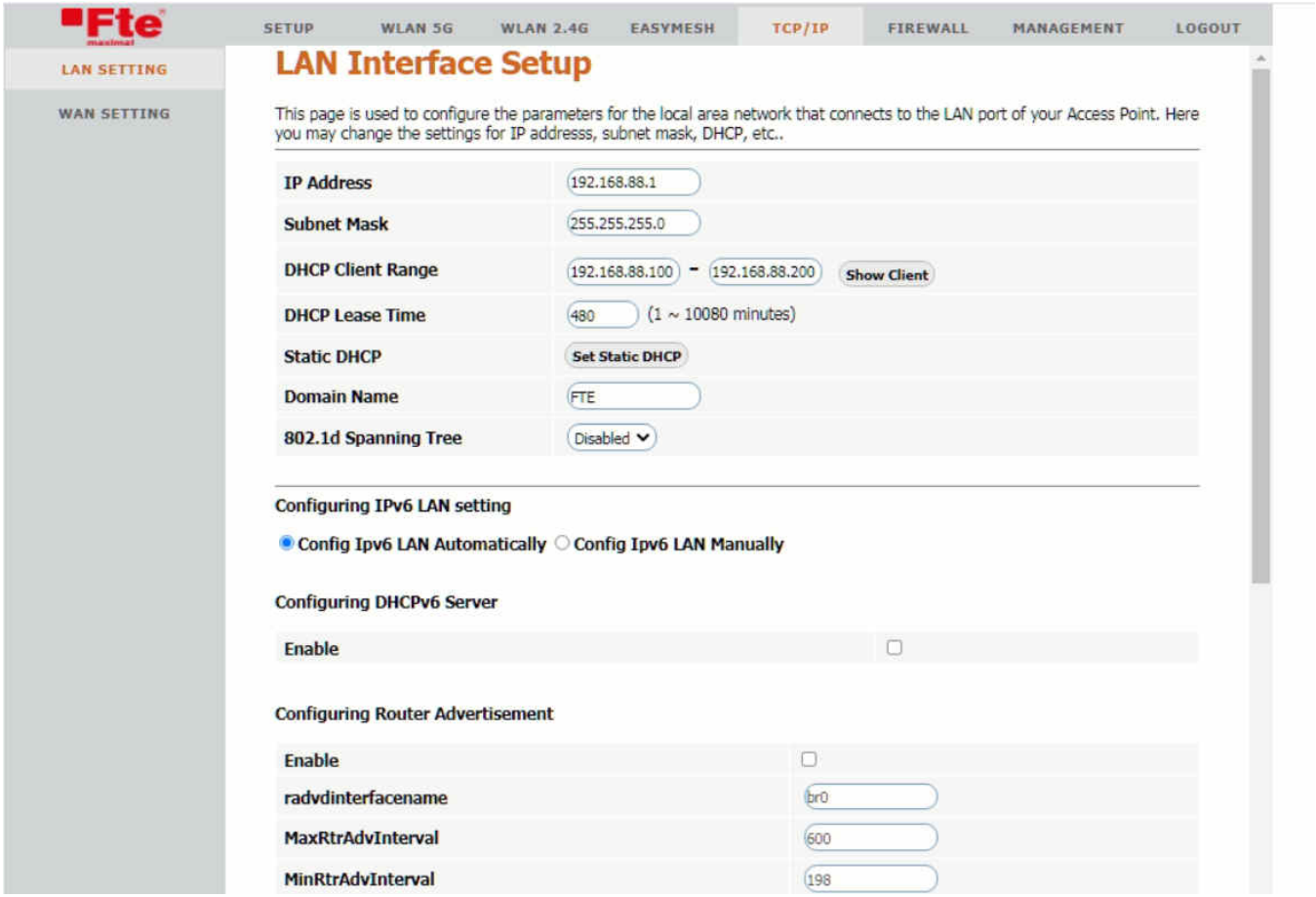


Note:
The value of RSSI is not in dBm. In this case, while more higher is the value more signal is received.

7.4 TCP/IP

7.4.1 Lan Setup Settings

In this section we can configure the Local network and DHCP server used to assign the IP address of the local network clients.



IP Address: Editing this field you can change the IP address of the MAXWIFI controller device.

Subnet Mask: Type the Subnet mask of the MAXWIFI controller device.

DHCP Client Range: This field define the IP range used for the DHCP server inside to assign the IP address to the Wireless customers devices. Type the first field the first IP of the range and in the second field the last IP of the range. Please, don't include in this IP range the IP of the MAXWIFI controller.

Show Cliente: Press this button to show the wireless clients connected.

DHCP Lease Time: Set the time where the IP is reserved for one wireless client after it connect. The value goes from 1 to 10090 minutes. By default the value is 480 minutes.

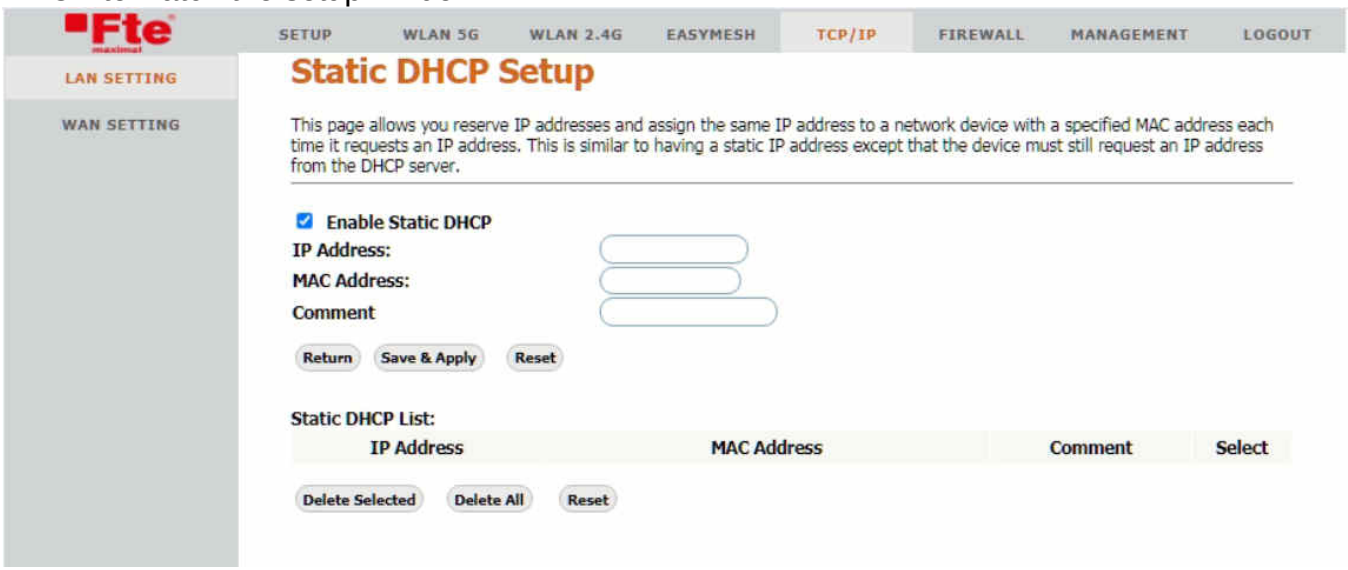
Domain Name: Type here the default domain name. The value by default is Fte.

802.1d Spanning Tree: Select in the list enable to allow this protocol. By default is disabled.

Configure IPV6 Lan settings: We recommended left the settings IPV6 LAN automatically.

Do scroll in the page until arrive the end of the page and press Save & apply to save and apply the changes.

Static DHCP: This option allow set the same IP address to one Wireless client. The IP address must be inside of the range of the DHCP Client range. Press the button Set Static DHCP to watch the setup window.



Enable Static DHCP: Check this field to enable this option Static DCHP

IP Address: Type the reserve IP address to assign for the wireless client. For example 192.168.88.100.

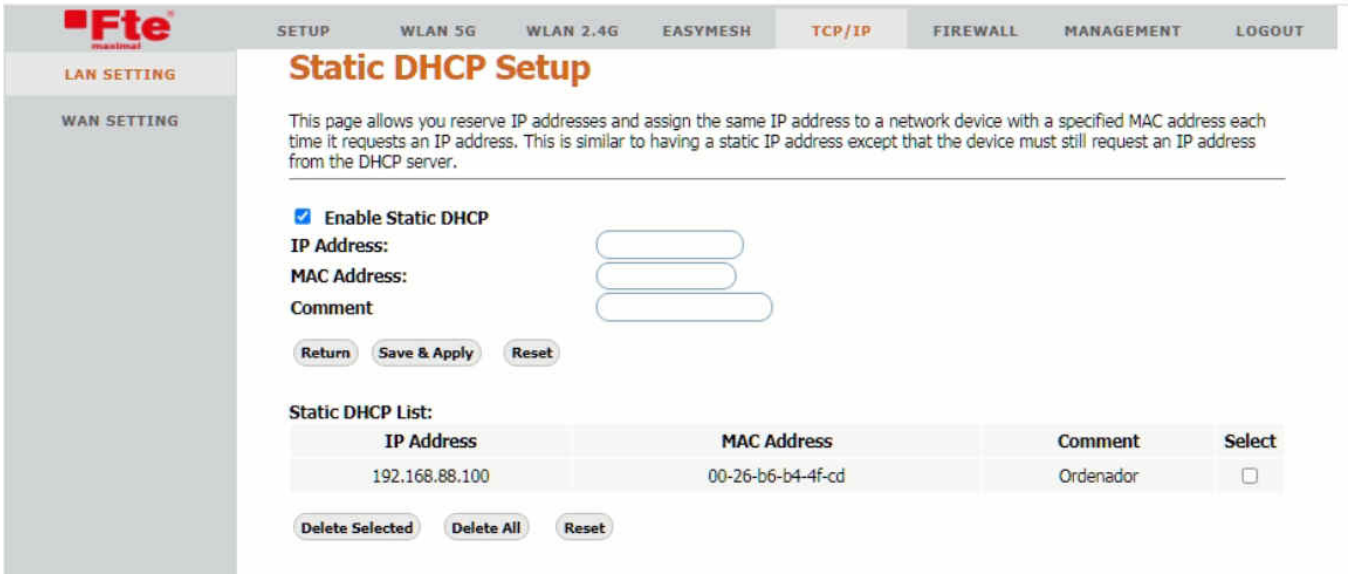
Mac Address: Type the MAC address of the wireless client.Only must be write the alphanumeric characters of the MAC address. For example if MAC address is 00-26-b6-b4-4f-cd, you must be type 0026b6b44fcd.

Comment: Type a description to identify the Wireless client to reserve the IP. The maximum length is 20 characters.

Press the button **Save & Apply** to store and apply the changes. While the MAXWIFI store the settings the screen will be white. When the process finish, show again the screen **Static DHCP Settings**.

Press the button **Reset** to clear the form and refresh the current settings.

Press the button **Return** to back to the Lan interface setup



Static DHCP List

Delete Select: To delete one or several devices of the Static DCHP List, Check the field Select of the row and press the button Delete Seleted. A confirmation will be required before deleting items from the list. Do Click in OK button in the dialog to delete the elements or cancel to avoid delete the elements from the list.

Delete All: Press this button to remove all items from the Static DHCP list. A confirmation will be required before deleting items from the list. Click on Ok button to delete items or cancel to avoid delete all element from the list.

Reset: Clear all mark on select field

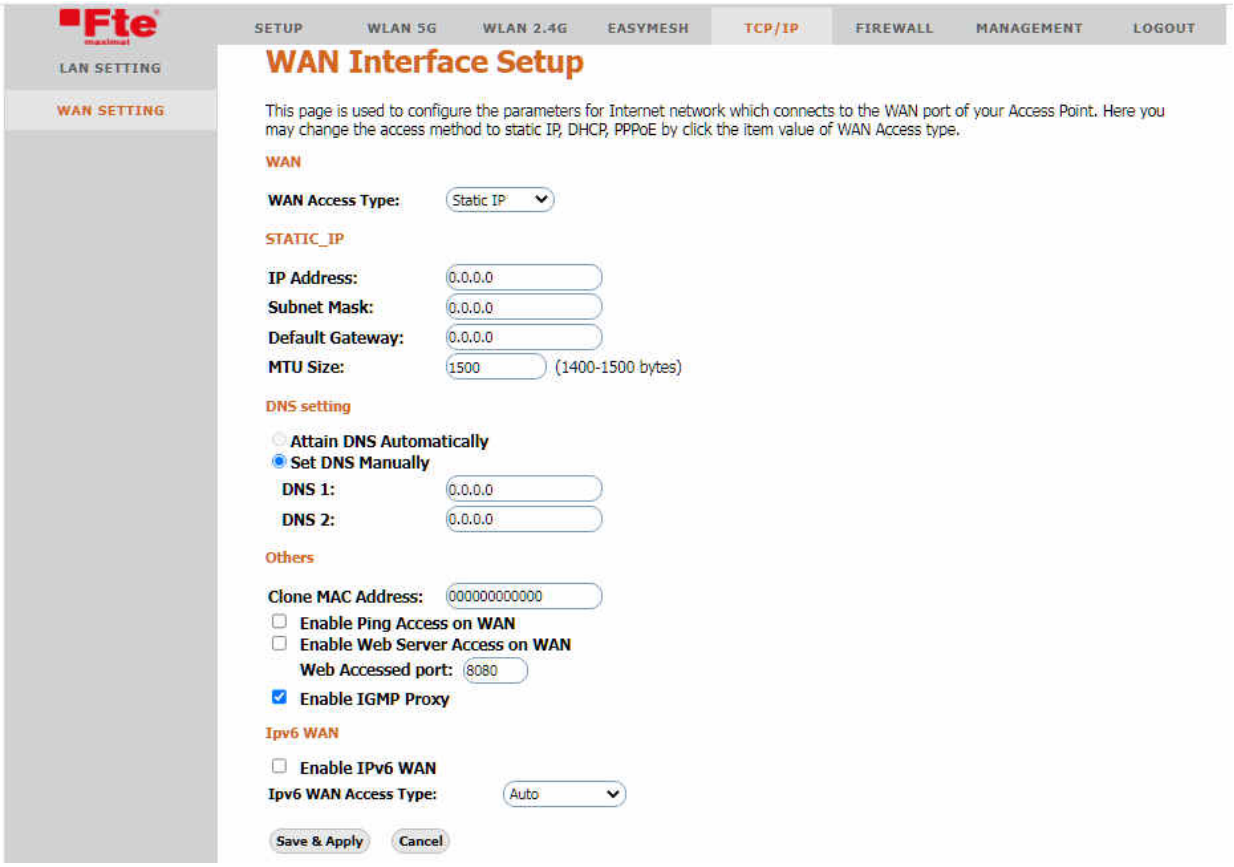
Press Return button to exit of this window

7.4.2 WAN Settings

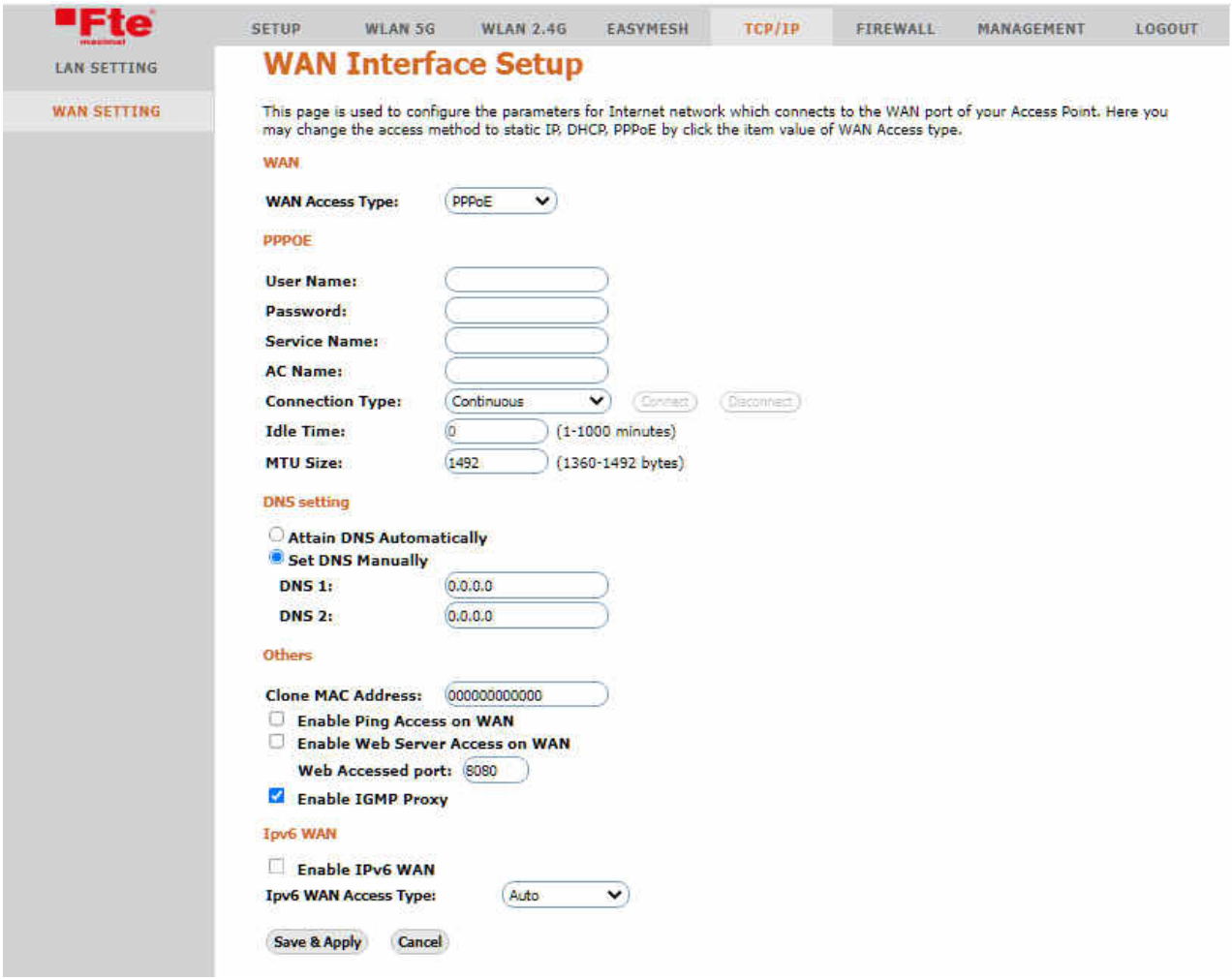
The Wan setting was explaining in the wizard. It has of tree modes DHCP client, Static IP y PPPoE.

Dynamic mode

Static mode



PPPoE mode



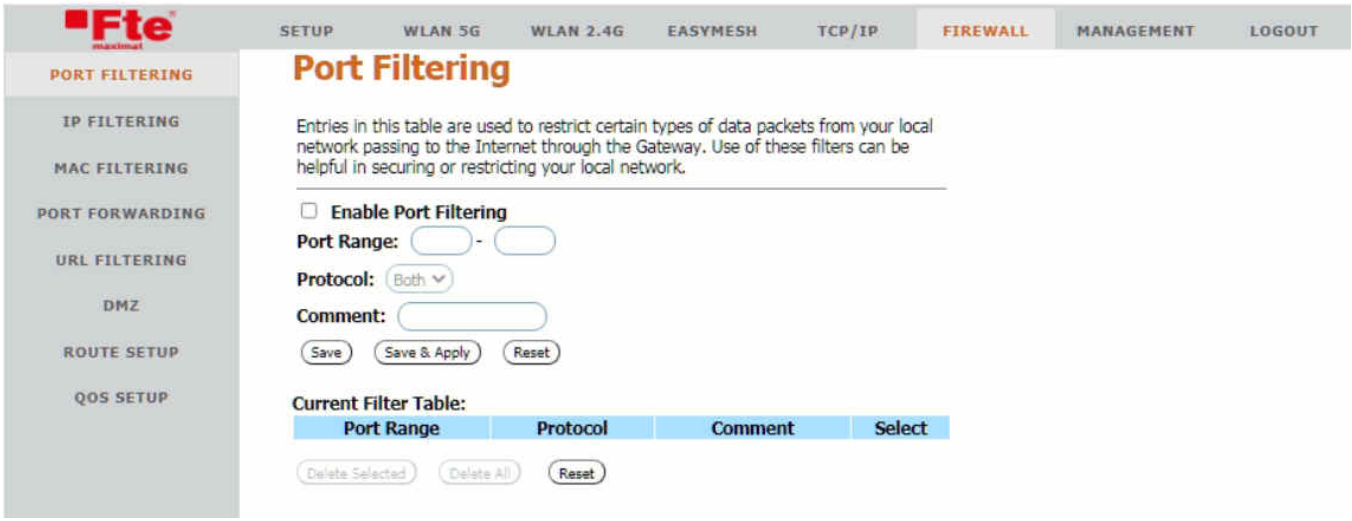
Enable Web Server Access on WAN: check this field to allow configure the MAXWIFI controller outside of the local network, in the WAN connected to the device.
Web Accessed port: In this field you can select the port to show the Web interface from the WAN
Save & Apply: Do click in this button to Save and apply the change.

7.5 Firewall

The MAXWIFI device has basic options to protect the local network. By default all the options are disabled.

7.5.1 Port Filtering

Allow filter the packets of one or a range of ports from your local network to internet.



Enable Port Filtering: Check this field to enable the Port filtering.

Port Range: Enter a port of a range of ports

Protocol: Select between the protocols TCP, UDP or both (TCP And UDP)

Comment: Type a comments to identify the type of the port will be filtering.

Save: Do click over this button save to only store the changes.

Save & Apply: Do click over this button save and apply the changes.

Reset: Reload the current settings and clear all the change in the form.

Current Filter Table
Show the list of the port added in port filtering.

Deleted selected: To delete one or several elements check the field select in each row you need delete. Do click over the button to deleted the selected items. A dialog is appears to confirm or not delete the items from the list.

Delete All: Do click in this button to delete all entries of the list. A dialog is appears to confirm or not delete all the items from the list. Press OK to confirm.

Reset: Reload the current settings and clear all the change in the form.

7.5.2 IP Filtering

In this option filter the IP address to avoid arrived to the internet.

Enable IP Filtering: Check this field enable the IP filtering.

Enable IPv4: Check this option to enable the IP address filtering for IP address of the internet protocol version 4.

Enable IPv6: Check this option to enable the IP address filtering for IP address of the internet protocol version 6.

Local IPV4 address: Type the local IPv4 address of the local computer will be filter the information.

Local IPV6 address: Type the local IPv6 address of the local computer will be filter the information.

Protocol: Select the type of protocol of the information to filter. Choose between the next options: **UDP, TCP, UDP+TCP.**

Comment: Type a description to identify the computer. The maximum length is 20 characters.

Save: Press this button to save the settings. To apply the new settings press save and apply or reboot the device.

Save & Apply: After press this button the device save the settings and apply the new settings.

Reset: Clear the form.

Current Filter table
Show the list of IP added in the IP filtering.

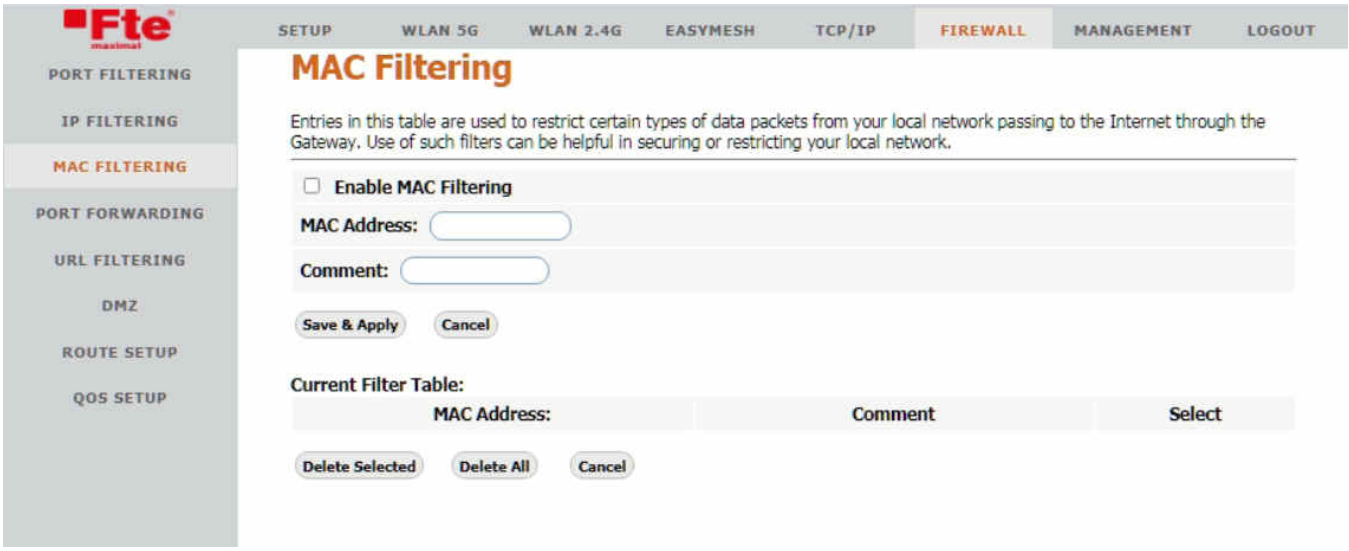
Deleted selected: To delete one or several entries in the list, the first step is check the field select in the right in each row to delete. After that, press this button. Appear a dialog window to confirm the deletion of the elements. Press OK to delete the select elements.

Delete All: Press this button to clear the list of IP filtering. After pres th button appear a dialog window. Press in the OK button to delete all the elements.

Reset: Reload the current settings and clear all change in the form.

7.5.3 MAC filtering

This option allows the equipments with the MAC is in the list cannot send information to internet.



Enable MAC filtering: Check this field to enable the MAC filtering.

MAC Address: Type the MAC address of the computer to filter. Only must be type the hexadecimal numbers.

Comment: Type a text to identify the MAC of the computer.

Save & Apply: Press this button to save and apply the change.

Cancel: If press this button clear the form.

Current Filter table
Show the list of MAC address added in the MAC filtering.

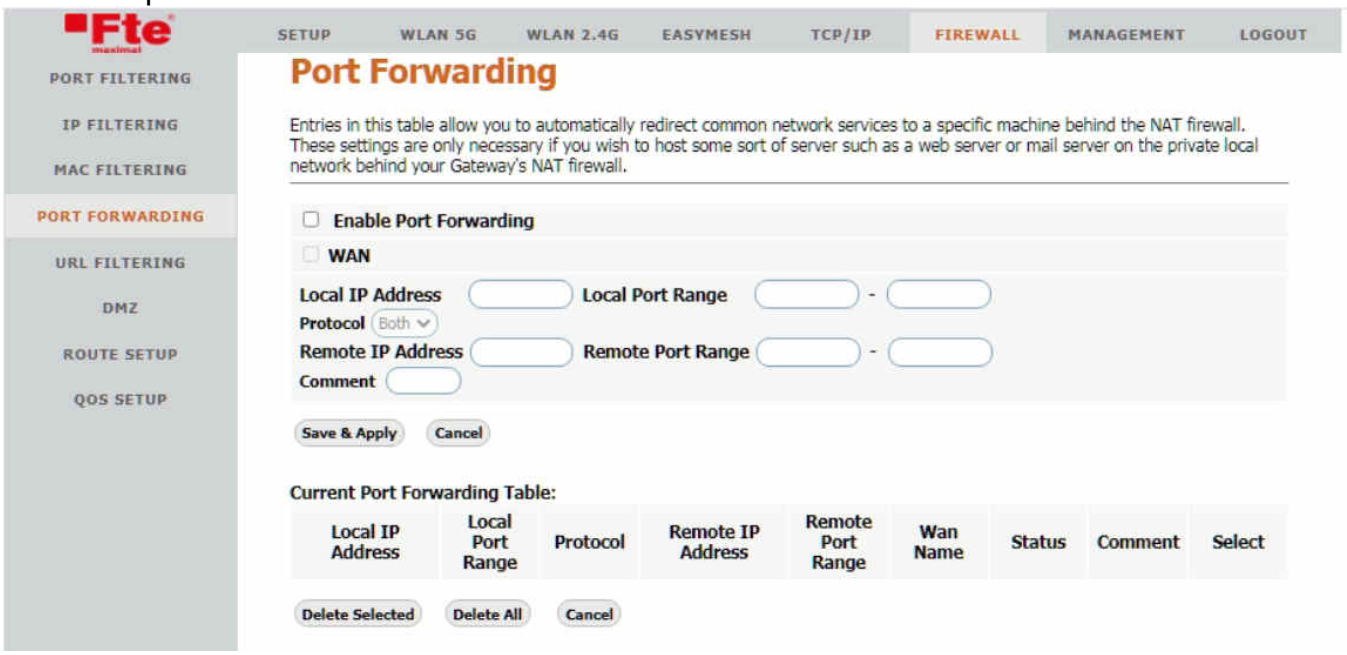
Deleted selected:
To delete one or several elements in the list of MAC filtering, the first step check the fields in the field Select in the elements to delete. After that press this button and appear a dialog window to confirm the operation. Press the button Ok to delete the elements of the list.

Delete All: When presses this button, appear a window to confirm delete all elements in the list of MAC filtering. Do click in the button Ok to delete the elements of the list.

Cancel: Do click in this button to clear the form and show the currents settings.

7.5.4 Port Forwarding

Use this option to redirect network services behind the NAT firewalll



Enable Port Forwading: Check this field to enable this option

WAN: Check this field to allow redirect service from your WAN to the lan network.

Local IP Address: Type the IP address of the local computer will be forwarding the port or range of the ports.

Local Port Range: Type the range of the local port in the both field. To forwarding only a port type the first field of the range and the second left clear.

Remote IP Address: Type the IP address If only one remote computer is connected to the network else left clear this field.

Remote Port Range: Type the range of the local port in the both field. To redirect only a port type the first field of the range and the second left clear.

Comment: Type a text with a description of the service. The maximum length is 20 characters.

Save & Apply: Press this button to save and apply the new settings.

Cancel: Press this button to clear the form and cancel any change.

Current Port forwarding Table

Show a list of ports forwarding.

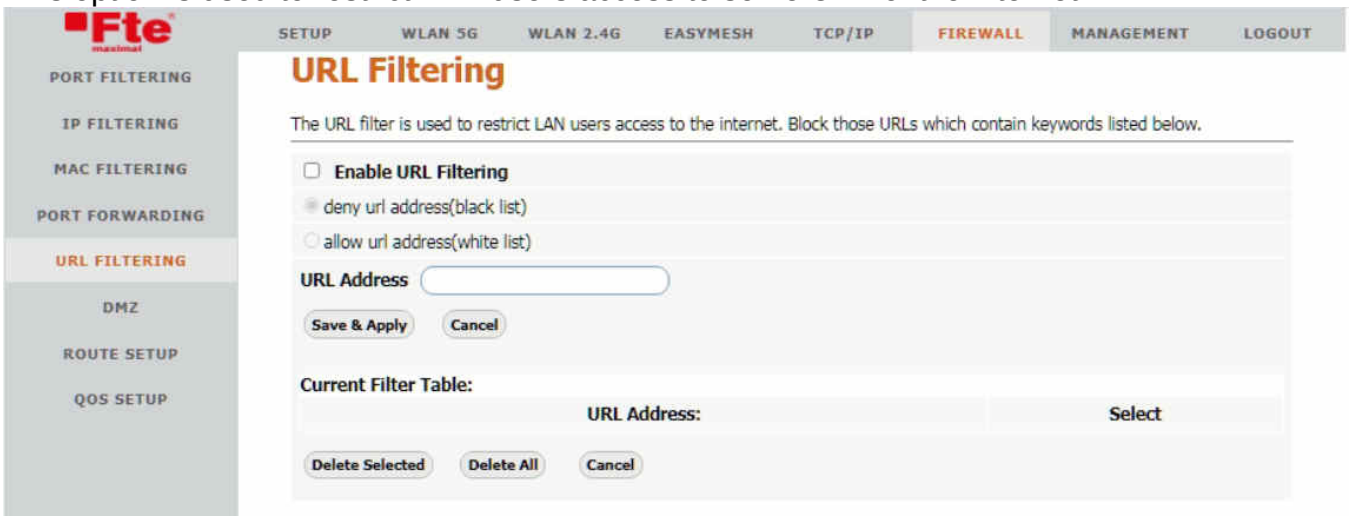
Deleted selected: To delete one or several elements in the list, the first step is check the field Select in the elements to delete. After that press this button and appear a dialog window to confirm the operation. Press the button Ok to delete the elements.

Delete All: When presses this button, appear a window to confirm delete all elements in the list of MAC filtering. Do click in the button Ok to delete the elements of the list.

Cancel: Do click in this button to clear the form and show the currents settings.

7.5.5 URL filtering

This option is used to restrict LAN users access to some URL of the internet.



Enable URL Filtering: Check this field to enable the URL filtering.

deny url address (black List): If select this option the URL address in the list will be block.

allow url address (White List): If select this option the URL address will be allowed.

URL Address: Type the URL address to filter.

Save & Apply: Press this button to save and apply the new settings.

Cancel: Press this button to clear the form and avoid enter the new information in the list

Current Filter table: Show a list of the URL was added

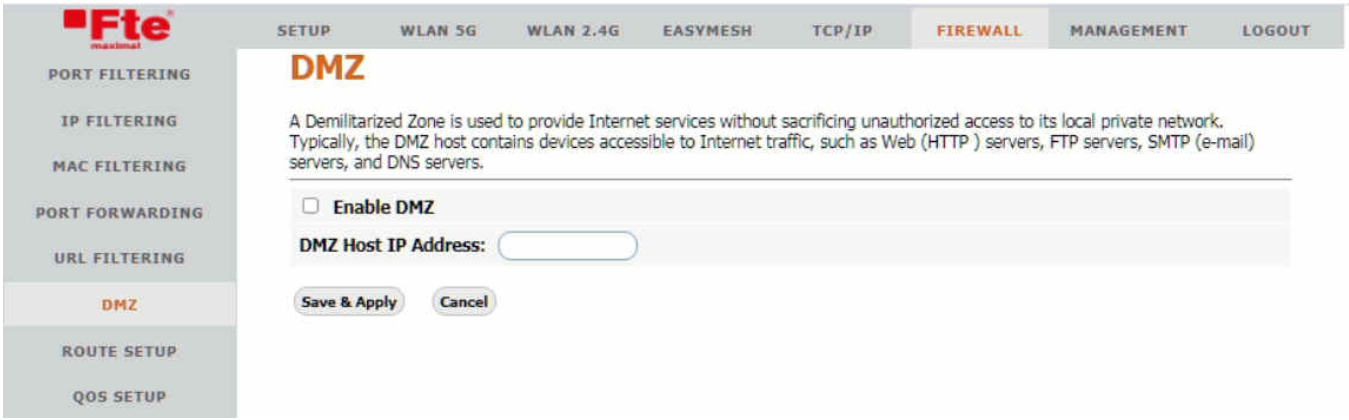
Deleted selected: To delete one or several elements in the list, the first step is check the field Select in the elements to delete. After that press this button and appear a dialog window to confirm the operation. Press the button Ok to delete the elements of the list.

Delete All: When presses this button, appear a window to confirm delete all elements in the list of MAC filtering. Do click in the button Ok to delete the elements of the list.

Cancel: Do click in this button to clear the form and show the currents settings.

7.5.6 DMZ

A Demilitarized zone is used to provide Internet services without sacrificing unauthorized access to your lan network. Typically is used for internet servers as Web server, FTP server and email servers.



Enable DMS: Check this field to enable the demilitarized zone.

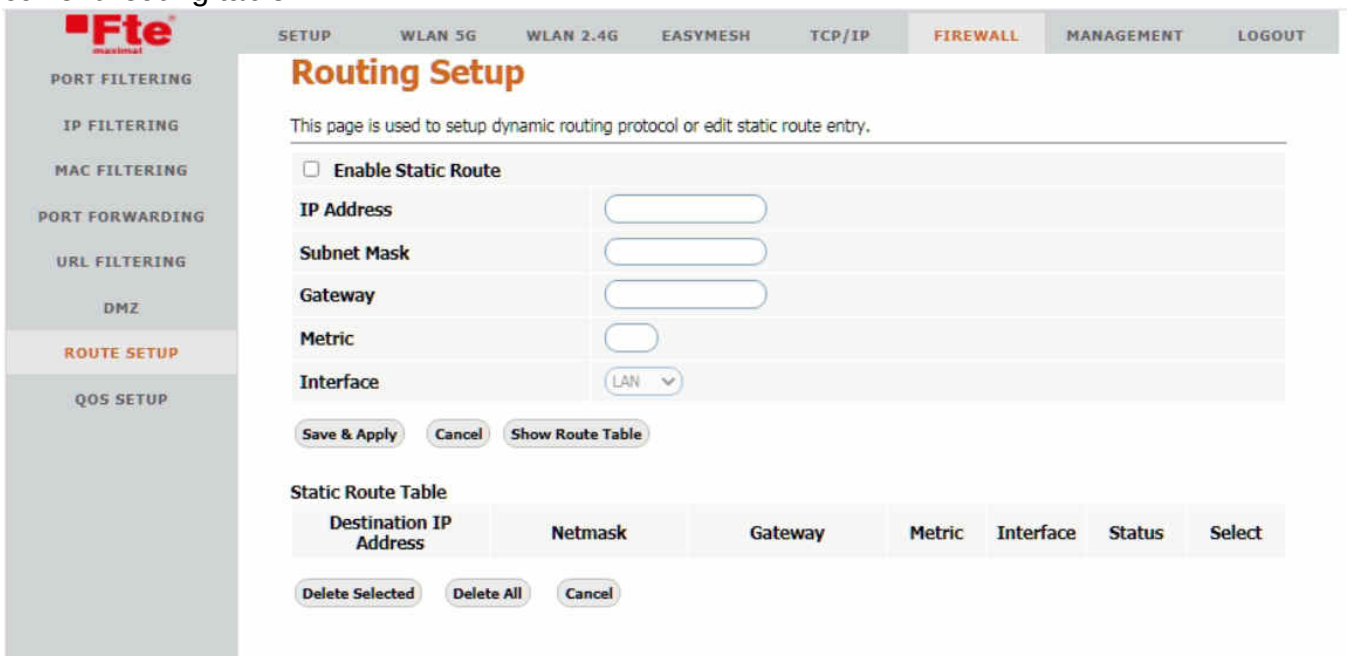
DMZ Host IP address: Type the IP address the computer will be in the demilitarized zone.

Save & Apply: Do click in this button to save and apply the new settings.

Cancel: Do click over this button to cancel any change and refresh the form.

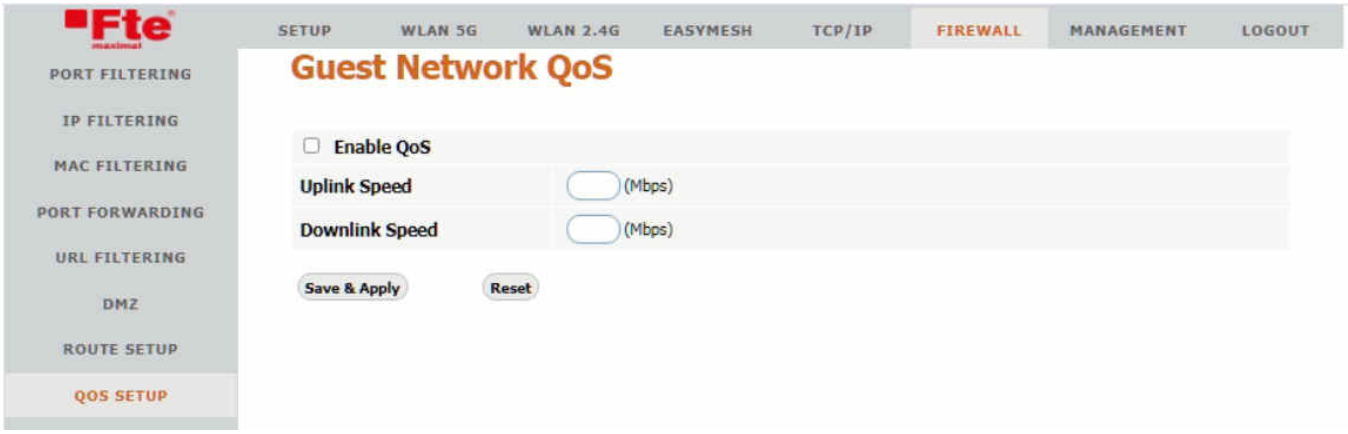
7.5.7 Route setup

Only use this option if have enough knowledge of the routing else we recommended left disable to use el dynamic routing. Pressing the button Show route Table you can see the current routing table.



7.5.8 QoS Setup (Guest Network QoS).

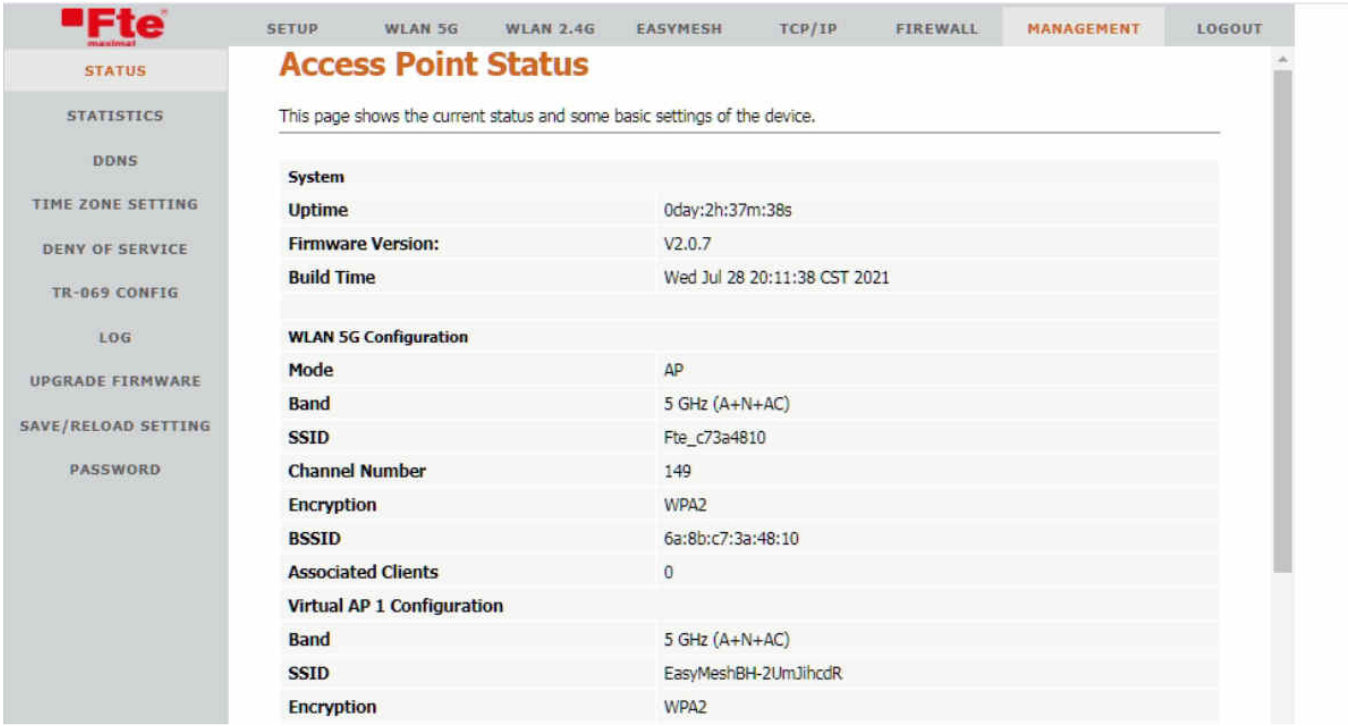
Enable the QoS and set the maximum Uplink and downlink speed for the guest network. By default is disable.



7.6 Management

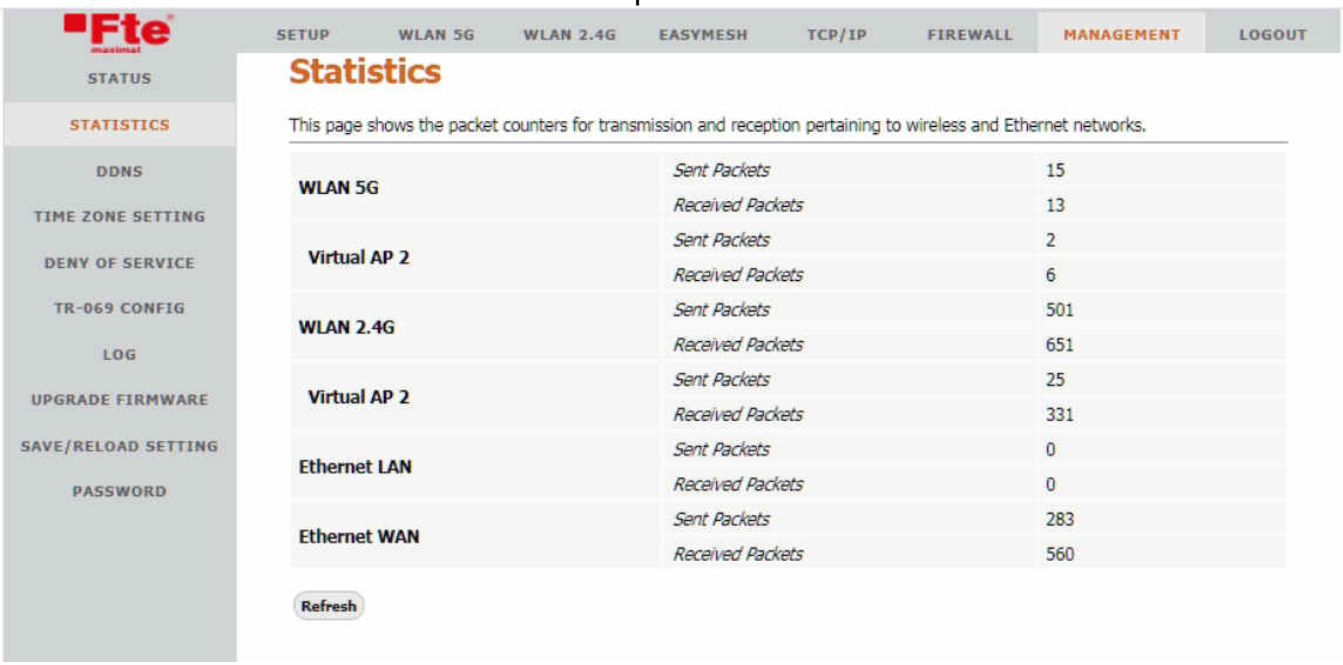
7.6.1 Status

Show the status information of the device.



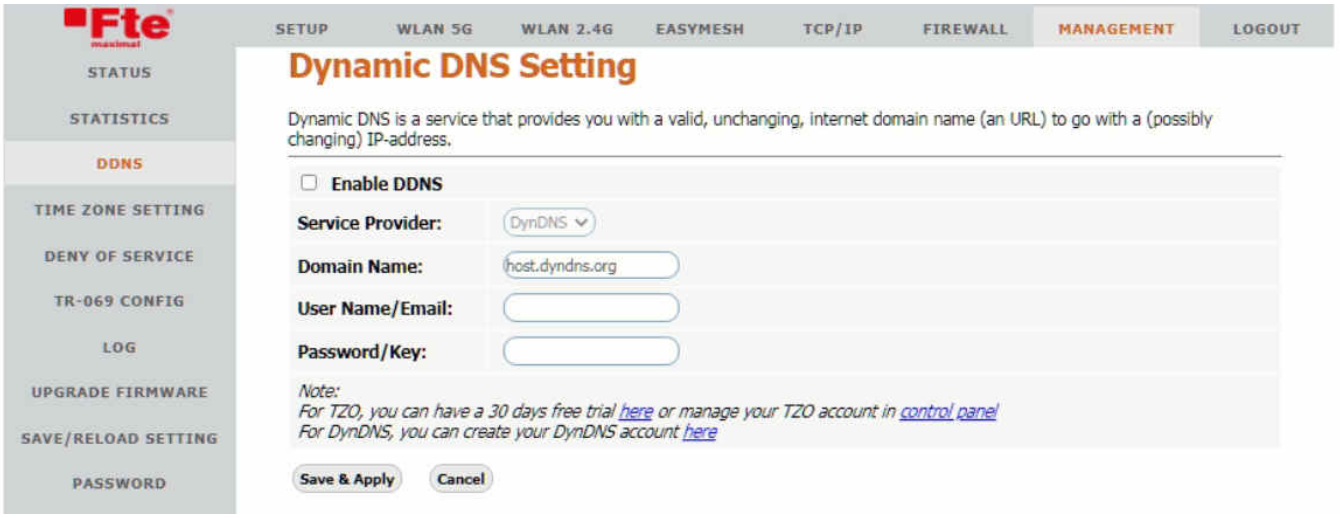
7.6.2 Statistics

Show the statistics of the send and received packet in each interfaz.



7.6.3 Dynamic DNS

The Dynamic Domain name server allows resolved the URL of one site if you have a dynamic IP address. This service must be purchased from a DDNS service provider if you needed. The settings are:



Enable DDNS: Check this field to enable DDNS.

Service provider: Select the internet provider of DDNS. Tha available options are: DynDNS, TZO, NO-IP, ORAY.

Domain name: Name of the URL or domain you are register in the DDNS provider

User Name/Email: Type the user name or the email depending of the DDNS provider selected

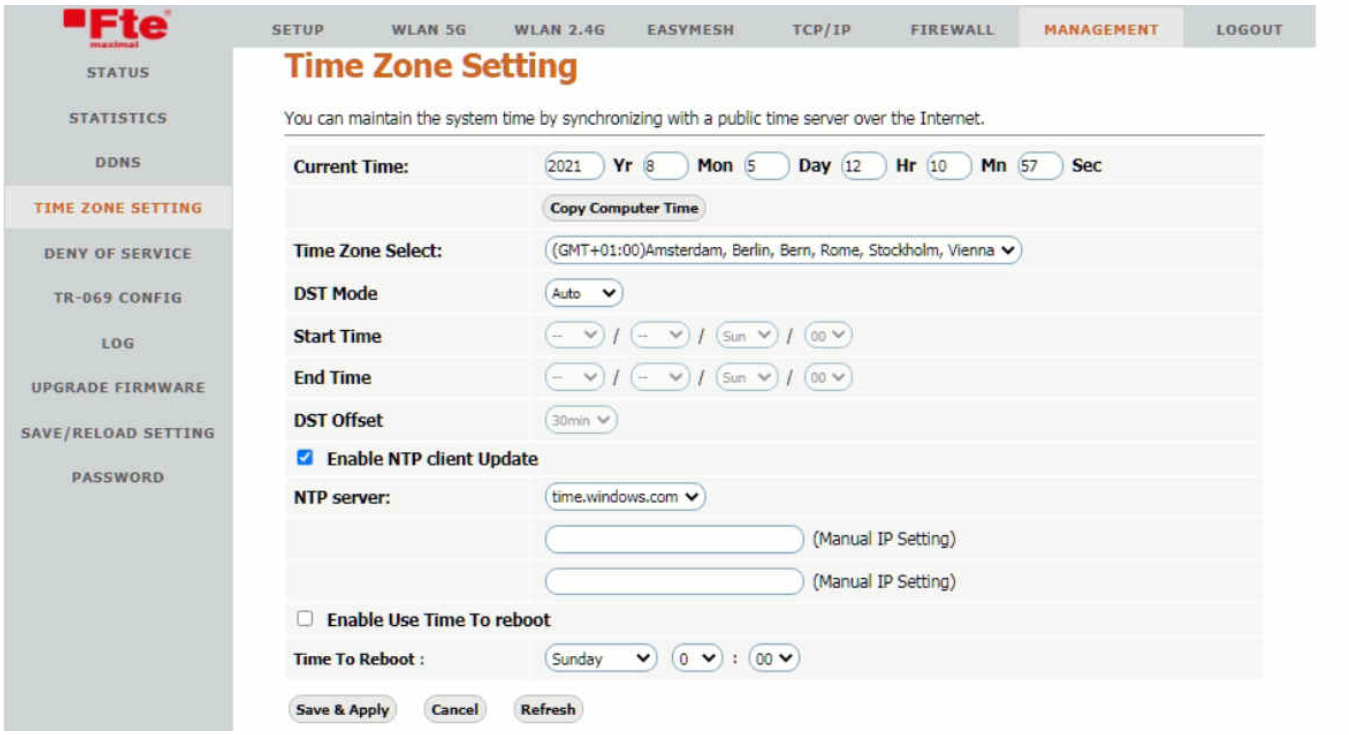
Password/Key: Type here the password.

Save & Apply: Do click over this button to save and apply the changes.

Cancel: Do click over this button to cancel any changes in the form.

7.6.4 Time Zone settings

Set the date, time and the time zone of the device. We can set a timer to reboot the device.



Current time: Theses fields are the date and time of the system. Press the button refresh to update to the current time.

Copy Computer time: Pressing this button the device gets the time of the computer and set the current time of the device.

Time Zone Select: Choose in the list the timezone.

DST Mode: Daylight Saving Time. Choose in the list one of the next available option: Auto, Manual and Disable. The default value is Auto. If we select manual then the field Start time, End Time and DST Offset will be enabled.

Start Time: Must be set the month, the week, the date and time where start the Dayligth saving time.

End Time Must be set the month, the week, the date and time where end the Daylight saving time.

DST Offset: Choose the time offset of the daylight saving time. The values available are: +30 and +60 minutes.

Enable NTP Client Update: Check this field to allow the deice get the current time from a internet time server.

NTP server: If it is check the previous option, select here the internet time server.

Enable Use time to reboot: Check this field to program a weekly reboot.

Time to Reboot: Choose the date and time to reboot the device.

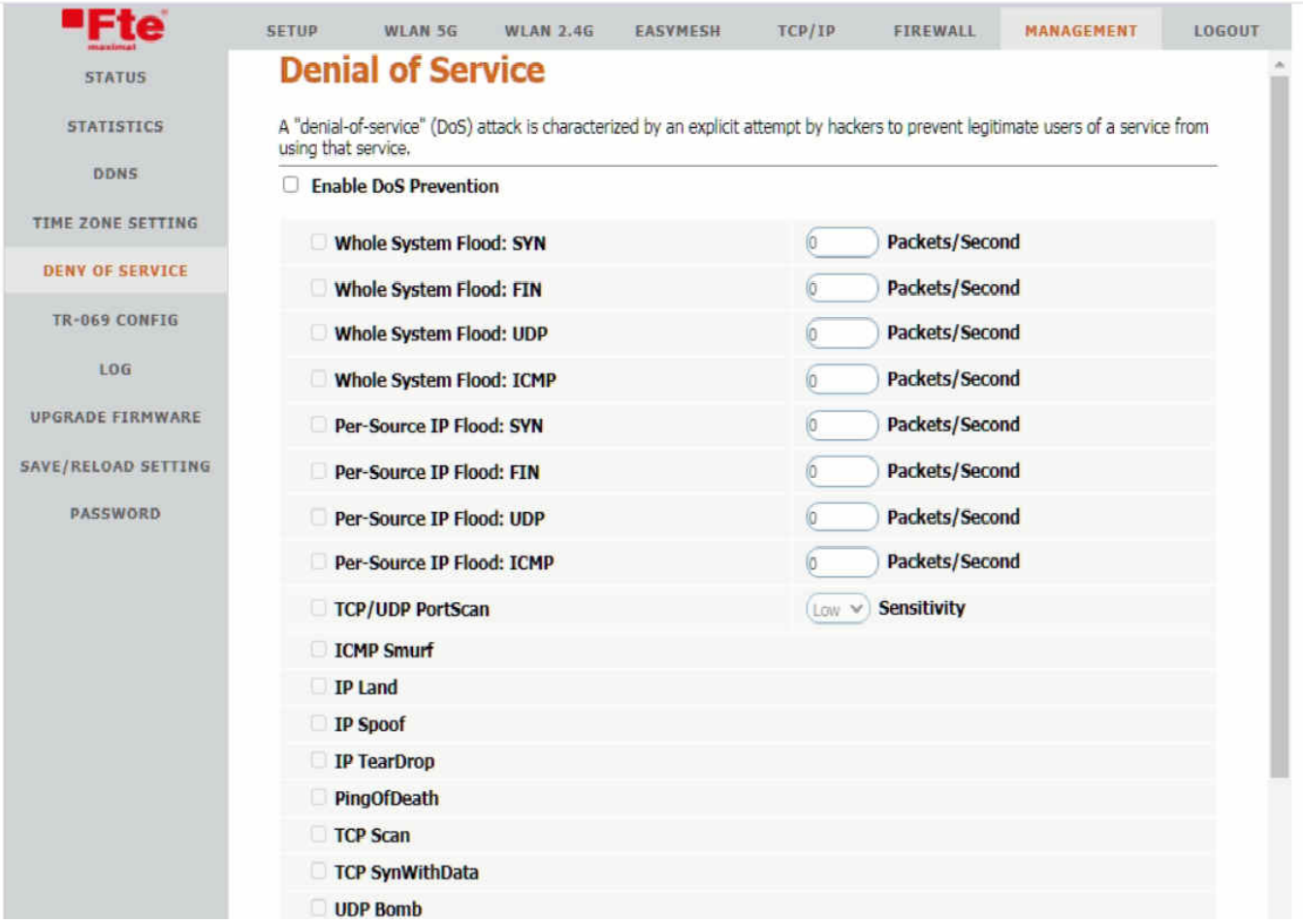
Save & Apply: Press this button to save and apply the new settings.

Cancel: Cancel all change in the form.

Refresh: Reload the information of the date time from the device.

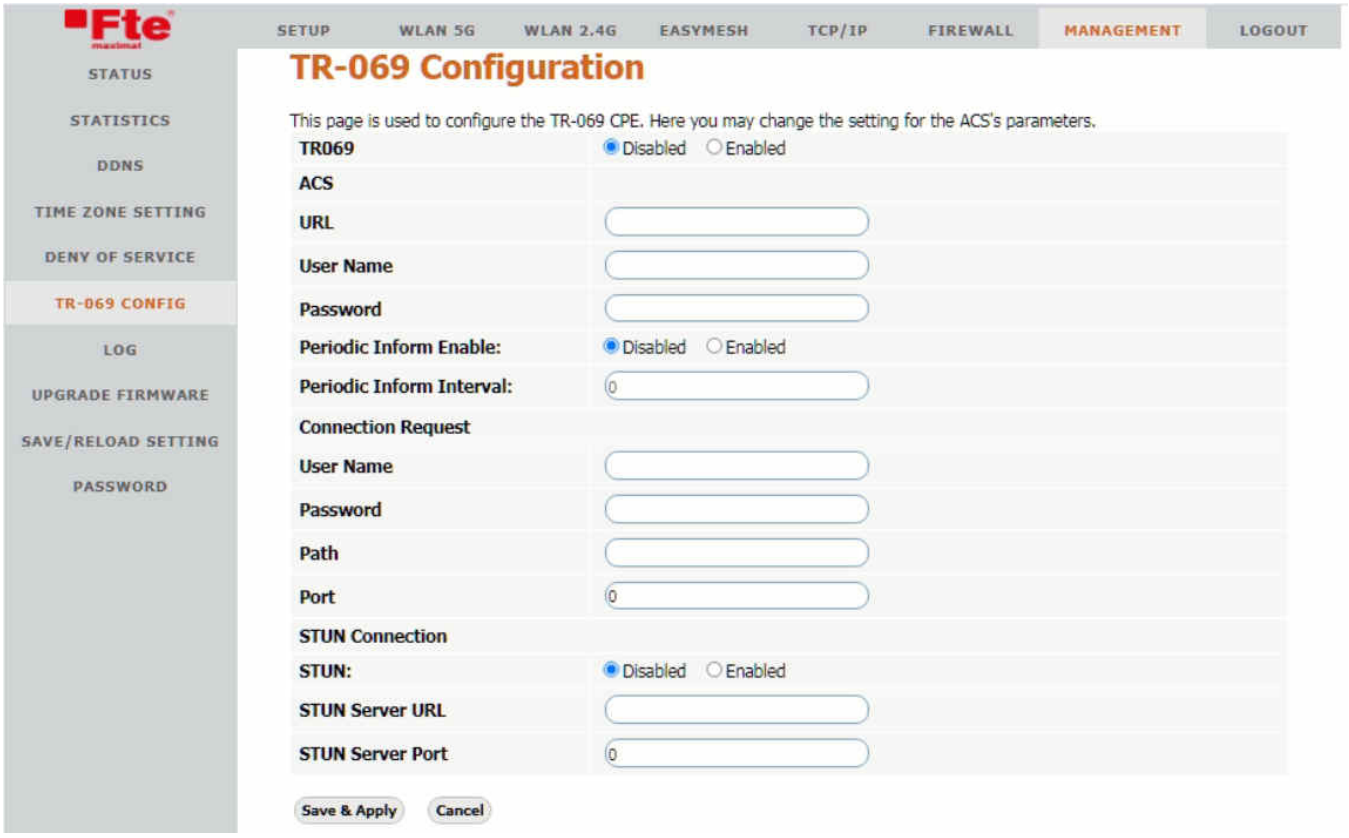
7.6.5 Denial of Service.

In this screen we can check method to avoid denial of services.



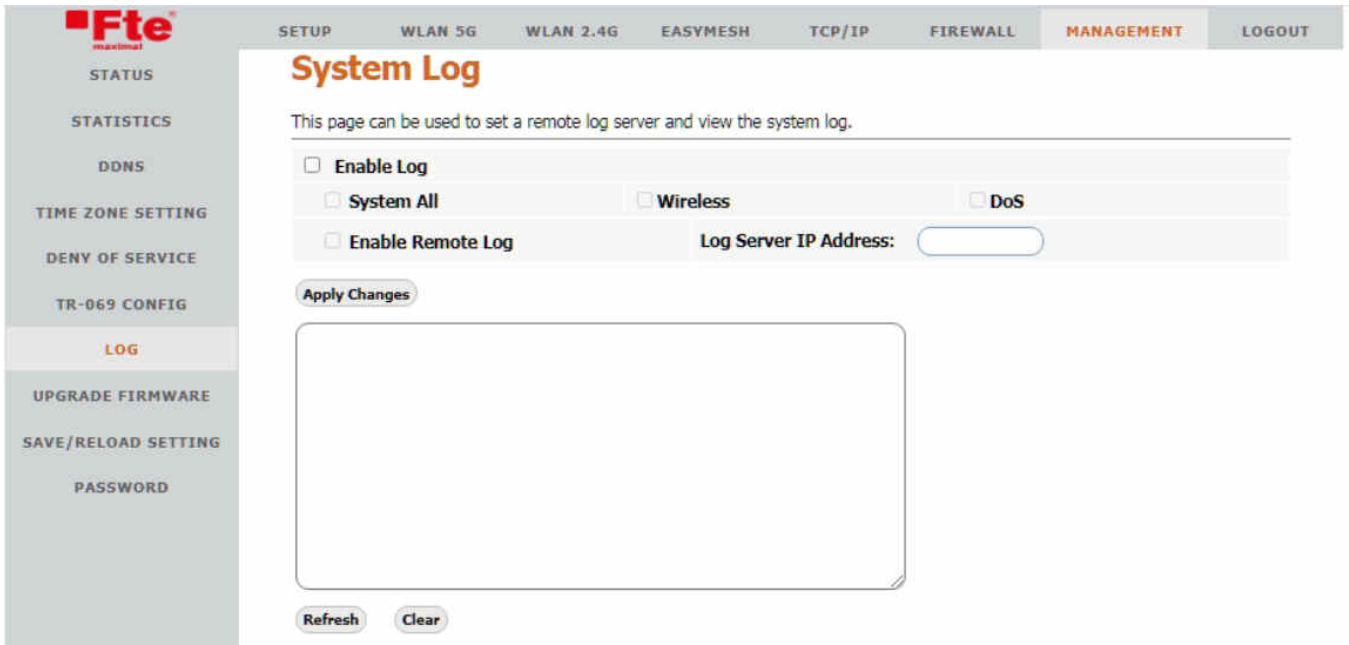
7.6.6 Configuración TR-069

In this section you can configure the access to one server TR-069 to auto configure and update the device. If use this time of server must be fill the next field of this page.



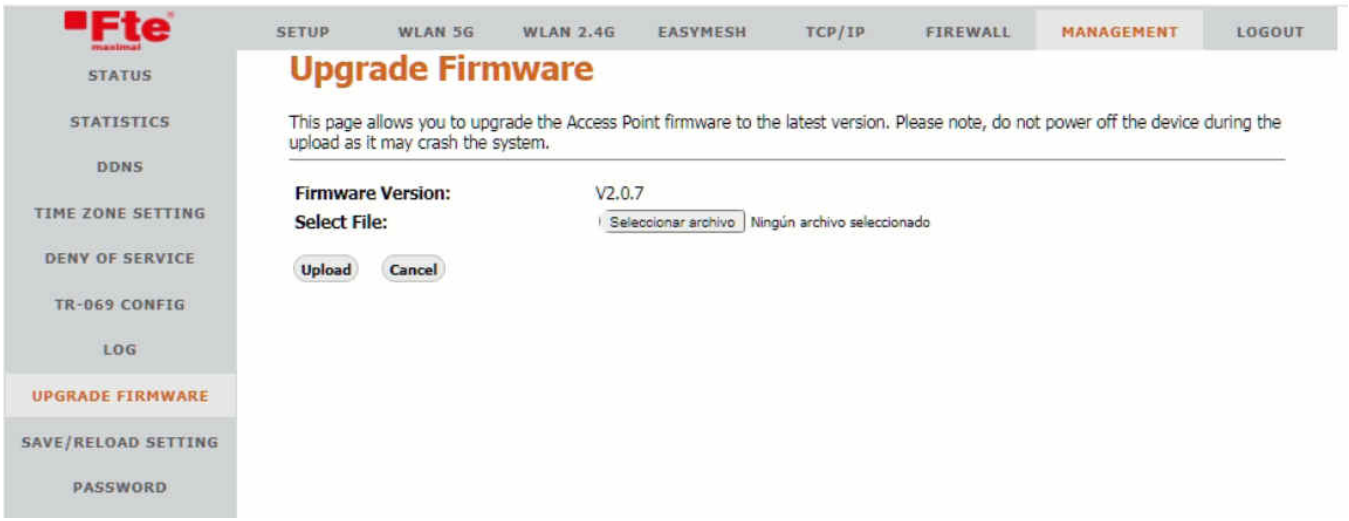
7.6.7 Log

When enable the field enable Log you can see debug information of the device. By default this option is disable.



7.6.8 Upgrade firmware

Show the current version and allow update the firmware of the device.



Firmware version: Show the current software version of the device.

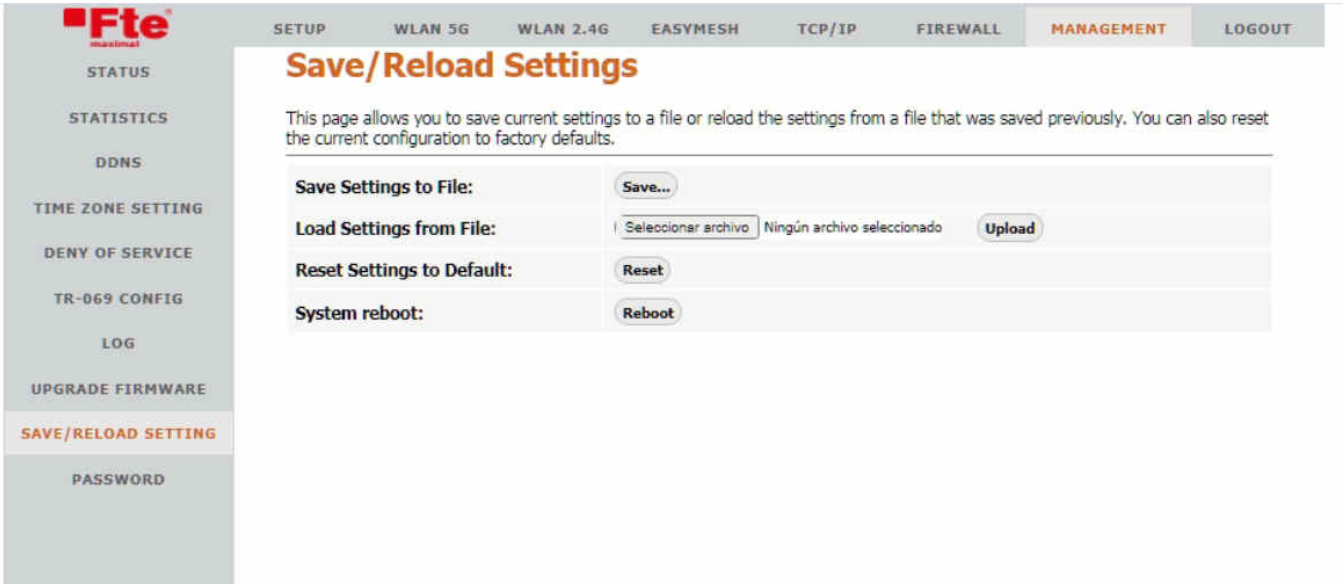
Select file: Do click in this button to open a dialog to select the fw.bin file with the firmware. After select press Ok to confirm the file and close the dialog.

Upload: Do click in this button to send the firmware to the device and do the upgrade. In the screen appears a progress of the sw upgrade. **Please, don't turn off the device and no change of the tab or refresh the current tab of the web browser until not finish the upgrade to avoid damage the device**. The device will be reboot to load the new firmware after finish the software upgrade.

Cancel: Cancel the upgrade before to start the upgrade procedure.

7.6.9 Save / Reload Settings

This section allow save and restore the current configuration, load the factory default or do a reboot of the device.



Save Settings to File: do click in the button Save to save all the current settings of the MAXWIFI device in the file config.dat in your download folder.

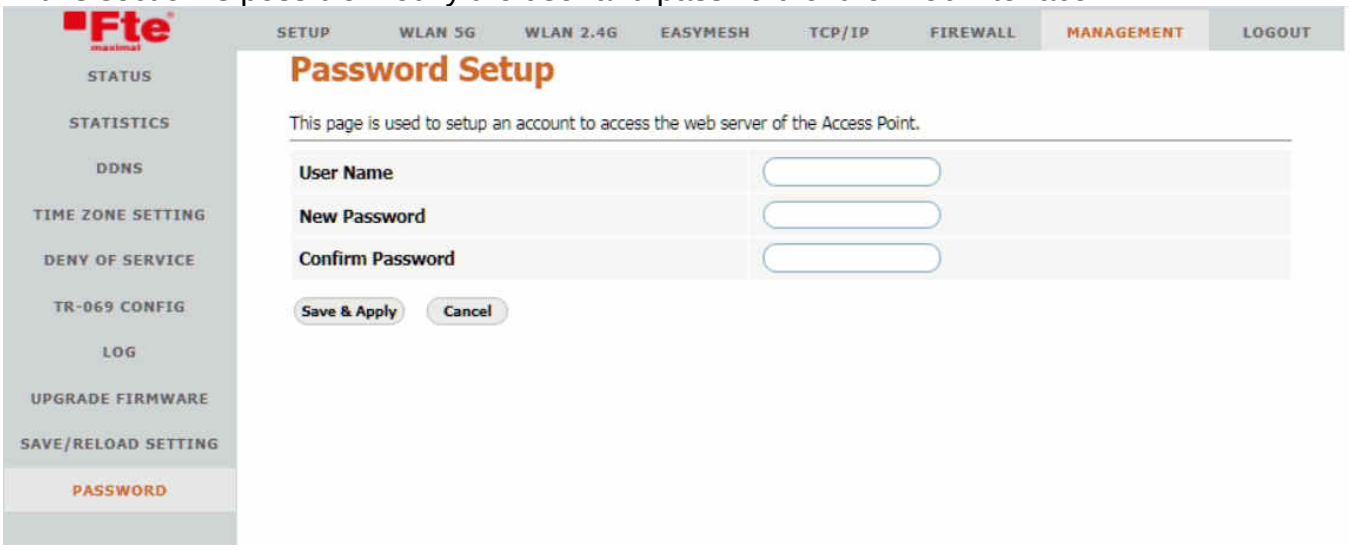
Load Settings from File: Restore the setting saving in a file in the previous option. Press the button Select file. Then appear a dialog to find the file with the configuration of the device. The file extension is .dat. One time is found do click in the button Ok in the dialog. The last step is press Upload to send to the device and update the settings.

Reset Settings to Default: Load the factory values and reboot the device. This option delete all the current settings include the Wifi and local ip settings. The device need some time to finish the process. To reconfigure the device is needed access with the default user and password.

System Reboot: Do a reboot of the device. Wait until finish the process.

7.6.10 Password

In this section is possible modify the user and password of the Web interface.



User Name: Type the new user name.

New Password: Type the new password. Remember must be include lower and Upcase characters and number to validate the password the device. If not appear an error message.

Confirm Password: Repeat the previous password.

Save & Apply: Do click in this button to save and apply the new settings

Cancel: Do click in this button to forget the changes.

7.7 Logout

Move the mouse to the top menu Logout and do click to close the current session and show the login page.

8 Technical specification

Model	MAXWIFI
Code	**7400101**
Device interface	2x 10/100/1000 Mbps ethernet 1x Lan/ 1x (WAN) 1 x IEEE 802.11 ac/a/b/g/n Wireless LAN
LED	Power / Status (coverage)
Antenna type	2 x 2 internal antennas
Wireless Speed	2.4 GHz: up to 300 Mbps 5 GHz: up to 867 Mbps
Ethernet speed	10/100/1000 Mbps (auto negotiation)
Wireless protection	WPA2-PSK (AES-CCMP and TKIP)
Wireless features	• EasyMESH R1 • MIMO/MU MIMO • DFC/TPC • IEEE 802.11 k/v/n • STBC/LDPC • Band steering • QoS: WiFi Multimedia (WMM) • Auto rate adaptive
Operation mode	• Router • Access Point
Network features	• Support IPV4 and IPV6 protocol • WAN options: Dynamic IP, Static IP, PPPoE • NAT/NAPT • 802.1Q VLAN • QoS/DSCP/802.1P • DHCP • IGMP v1/v2/v3
Security and manager	• TR-069/TR-081 • NAT (RFC 3022) Basic firewall support • MAC/IP/URL filtering • DOS Attack Prevention • Guess Network
Max. number of Agent by controller	4
Temperature range	• Operative: 0º C – 45º C (32ºF to 113ºF) • Storage: -30º C – 60º C (-22º F to 140 º F)
Humidity	• Operative: 10 – 85 RH (Non-condensing) • Storage: 10 – 90 RH (Non-condensing)
Supply voltage	12 Vdc
Power supply	100-240V~50/60Hz-0.3A / 12Vdc-1A
Power consumption (Network standby)	< 3 W
Maximum power consumption	7 W
Dimensions	106 mm x 106mm x 99.1 mm

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