Occitaline
Automation Driven

Oxtopus

User Manual

Installation – Router setting

This manual describe the wiring and setting to operate the multi-protocol Oxtopus router EIA-709 and Modbus

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This manual is organized in different chapter. Each can be read independently. The annexes are supplements to use routers in their environment.

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Terminology

Lon	Name usually given to the protocol or component working in EIA-709.1.
LonWorks®	Name given to the communication system developed by Echelon Corp under denomination EIA-709.1 or ISO-14908.1.
Modbus	Protocol used in building automation and industry for exchange data between two devices.
TP / FT10	Name given to the medium “Twisted Pair Free Topology” and operating at 78125 bits / s.
EIA-709.1	Generic identification for the protocol used between nodes on a network.
Node	Common name given to device exchanging data with protocol EIA-709.1.
EIA-852	Generic name for transport protocol EIA-709.1 over IP.
Config Server	Virtual administrator for “IP Channel" (EIA-852).
Channel IP	Virtual LAN that will be seen in the administrative tools as a communication medium just like a twisted pair.
Modbus	Modbus frames NAT routing function for address translation.
Echelon	Company that created the LonWorks® technology and has deposited the brand Echelon, LonWorks, LNS®, Neuron Chip®.

Contents

1 Introduction

1.2 Range of Oxtopus routers

Oxtopus routers are available in several product references.

	Reference	Ethernet Port	Wifi	Port TP/FT10 EIA-709	Port EIA-485 Modbus
EIA-709 Only	Ox-1Lo	2 in Switch	No	1	
	Ox-1Lo-Wi	2 in Switch	Yes	1	
	Ox-2Lo	2 in Switch	No	2	
	Ox-2Lo-Wi	2 in Switch	Yes	2	
	Ox-3Lo	2 in Switch	No	3	
	Ox-3Lo-Wi	2 in Switch	Yes	3	
	Ox-4Lo	2 in Switch	No	4	
	Ox-4Lo-Wi	2 in Switch	Yes	4	
Modbus Only	Ox-1Mo	2 in Switch	No		1
	Ox-1Mo-Wi	2 in Switch	Yes		1
	Ox-2Mo	2 in Switch	No		2
	Ox-2Mo-Wi	2 in Switch	Yes		2
	Ox-3Mo	2 in Switch	No		3
	Ox-3Mo-Wi	2 in Switch	Yes		3
	Ox-4Mo	2 in Switch	No		4
	Ox-4Mo-Wi	2 in Switch	Yes		4
Mixed EIA-709 + Modbus	Ox-1Lo-1Mo	2 in Switch	No	1	1
	Ox-1Lo-1Mo-Wi	2 in Switch	Yes	1	1
	Ox-1Lo-2Mo	2 in Switch	No	1	2
	Ox-1Lo-2Mo-Wi	2 in Switch	Yes	1	2
	Ox-2Lo-1Mo	2 in Switch	No	2	1
	Ox-2Lo-1Mo-Wi	2 in Switch	Yes	2	1
	Ox-2Lo-2Mo	2 in Switch	No	2	2
	Ox-2Lo-2Mo-Wi	2 in Switch	Yes	2	2
	Ox-3Lo-1Mo	2 in Switch	No	3	1
	Ox-3Lo-1Mo-Wi	2 in Switch	Yes	3	1

Figure 1
Front view of Oxtopus router

1.3 Ethernet connection

All references are equipped with two RJ45 connectors. Communication can be done independently on both sides with network.

Figure 2
Ethernet Connectors Eth0 and Eth1

☞ The two RJ45 Ethernet connectors are configured in factory as Ethernet switch. The main connector is the left ETH0. The Computer must be primarily connected to this port.

In this configuration, the router has only one IP address for all its functions.

1.4 Wifi Connection – Ethernet

The Wifi option proposed in Oxtopus references allows access to Ethernet RJ45.

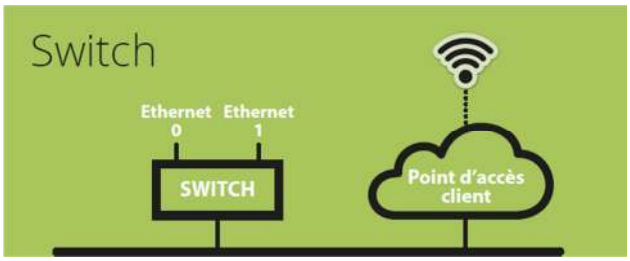


Figure 3
Architecture Ethernet IP

A computer can connect over WiFi Oxtopus to reach other Oxtopus or other equipment as the LNS server.

If a DHCP server provides an IP address on Ethernet, the computer do not need a fixed IP address, its Wi-Fi connection will assign a network address automatically.

1.5 Automation protocols supported

The EIA-709.1 and Modbus protocols are supported on Oxtopus router and run on IP separately.

1.5.1 Router EIA-709.1

In Oxtopus routers, the EIA-709.1 protocol is available either on twisted pair or over IP. In order to pass from one media to another, it is implemented in a router function. This is conforms to the EIA-709.1 protocol and ensures the traffic filtering.

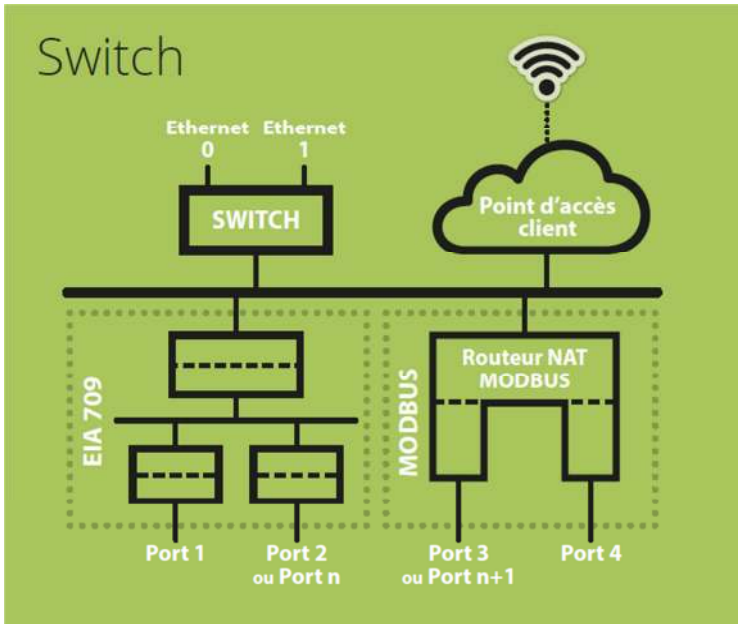


Figure 4
Architecture of Oxtopus router

To connect 2 media, a simple router is enough. To connect more than 2 medias a Virtual Media is introduced into the router to follow the installation and operate procedures of the EIA-709.1 networks.

1.5.2 Router NAT Modbus

The Modbus protocol cannot be a router function. It was implemented a frame redirection by changing the slave address. Hence the term NAT Router (Address Translation Router). Depending on the number of EIA-485 Modbus port available on the reference, Modbus master address requests on IP, the request will be redirected to the desired port with a new slave address.

Each EIA-485 port can only support 31 Modbus slaves. The Modbus address space is limited to 247 members. Within the maximum terms it is possible to send 31 * 4 = 124 Modbus slaves on EIA-485.

Configuration example:

Slave source address	Port EIA-485	Slave destination address
10	Port 3	1
11	Port 3	2
20	Port 4	1
21	Port 4	2

1.6 Other protocols supported

1.6.1 EIA-852 Device

This protocol is transparent for the installer and operator of the router. It is used for exchanges between members of a Channel IP.

1.6.2 EIA-852 Config Server

It is the virtual administrator of a Channel IP. All nodes or routers members of this channel are declared in a list ("channel list") and may share data.

If a member is forgotten it cannot share with others.

☞ The « Config Server » router must be declared in the channel list as member.

☞ A router cannot belong on two channel lists member.

1.6.3 Web

An embedded Web server provides the router setup and provides a view of the general state of the router. It is accessible via its IP address with a browser like Firefox, Chrome or Internet Explorer. You can also access via WiFi with a tablet or smartphone. Web pages are automatically resized according to your device.

The configuration pages are protected by password.

Login : « **admin** », Password: « **oxpass** »

1.6.4 Disk space embedded in FTP

A user disk space is available to store your files or documentation. This space is limited access via FTP with login and password.

Login : « **ftp** », Password: « **ftp** ».

2 Connecting and Material

2.1 Ethernet

The cables used should not exceed 90 meters. The left connector Eth0 must be privileged.

The default address is 192.168.1.254.

2.2 Wifi

The connection can support multiple devices. It can be enabled or disabled on the router with buttons and the LCD display or on the Web page

2.3 Power

The material feed may be made in DC voltage or AC voltage.

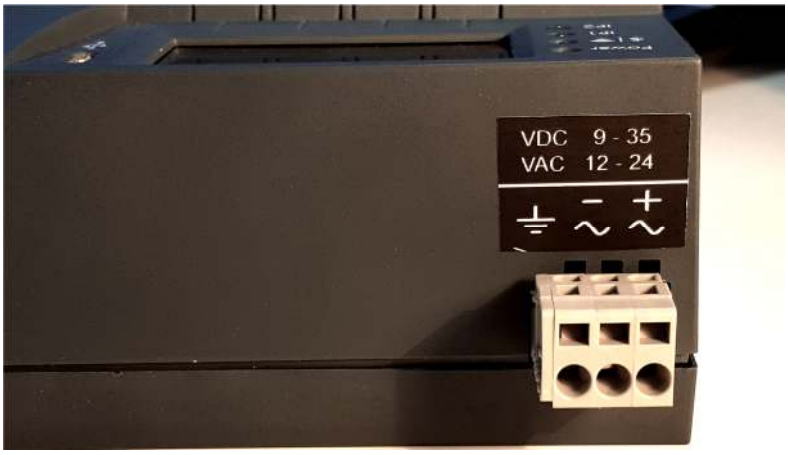


Figure 5
The rear power connector

The power connector is a clips connector. Wire are inserted using a screwdriver 2.5mm or a suitable tool.

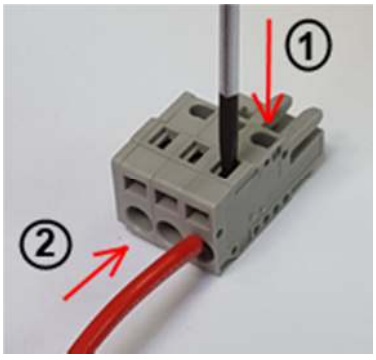


Figure 6
Insert wire in power connector

2.4 Wiring

According to the reference with 1, 2, 3 or 4 EIA-709 ports, ports are used, starting with the left.

According to reference product 1, 2, 3 or 4 EIA-485 ports, the ports are used starting from left or following EIA-709.

Reference	Port 1	Port 2	Port 3	Port 4
Ox-1Lo-1Mo	TP/FT10 EIA-709.1	EIA-485 Modbus		
Ox-1Lo-2Mo	TP/FT10 EIA-709.1	EIA-485 Modbus	EIA-485 Modbus	
Ox-2Lo-1Mo	TP/FT10 EIA-709.1	TP/FT10 EIA-709.1	EIA-485 Modbus	

2.5 Wired network EIA-709.1 / EIA-485 Modbus

The EIA-709 protocol is not polarized; the front connectors are identified in groups by three, left to right: Earth Net Net A and B.

Modbus over EIA-485 is polarized. Be careful, you must connect the + of all equipment on the right terminal and the - pole on the left terminal.

☞ When the devices are powered by different sources, the third connector must be connected to the reference.

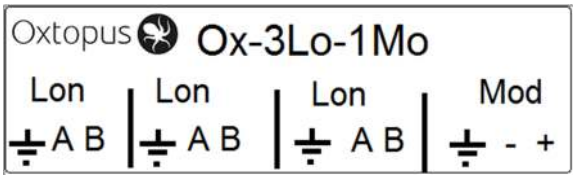


Figure 7
Stick network connector TP/FT10 and EIA-485

Figure 8

Wired connection TP/FT10 CEA_709.1

☞ A polarity inversion does not damage device, but the communication does not works.

2.6 LED signalization

2.6.1 Power LED

The **POWER** LED is ON in Green at the beginning of power on. A red color indicates a fault on the router.

2.6.2 Wifi LED

For Oxtopus routers with wifi option, **WIFI** LED will be green to indicate that wifi is active; the red color indicates that the wifi is inactive.

For routers that do not have wifi, this LED is off.

2.6.3 IP1/IP2 LED

IP LEDs indicates the status of each port and architecture

LED	Ethernet architecture
LED IP1 ON	IP Ports works in **« switch »** mode
LED IP2 ON	Ports are configured in **« double IP »**

Regardless of the architecture, the color of the LED indicates the operation of the connection.

A green LED indicates that the Ethernet connection is working properly.

A red LED indicates that the Ethernet connection is not working. This may be due to the inability to retrieve an IP address via DHCP for example.

Finally, an orange LED indicates that the Ethernet connection is working, but a fault has been detected during startup. Services such as CNIP (LON 852) Config Server and Modbus do not work. This may be due to, for example, significant time between the router startup and recovery of an IP address via DHCP. In this case the DHCP worked but the address was acquired too late, the services were launched without IP.

2.6.4 LED Activity (« Act. »)

2.6.4.1 LON FT/TP-10

EIA 709 Port of Oxtopus router has a bicolor LED:

Behavior	Description	Comment
GREEN blinking	Traffic	Receiving or sending frame
GREEN blinking at 1HZ	Port Not configured	
RED blinking	Errors on medium	Lost frame due to: - CRC Error - Most important Traffic

2.6.4.2 Modbus RS485

A Modbus-RS485 port of Oxtopus router has a bicolor LED:

Behavior	Description	Comment
GREEN blinking	Traffic	Receiving or sending frame
RED blinking	Errors on medium	Lost frame due to: - CRC Error

2.6.5 LED Z

It is used to view the state of the line impedance: fault if line break or termination not connected et each ends.

LED in GREEN indicates that impedance is good.

LED in RED indicates that impedance is fault.

2.7 Screen

The Oxtopus Router has a LCD screen in front. When the router starts, the screen displays the logo "Occitaline" and the name of the router.

Figure 9 : Home screen

The buttons below the display are used to navigate in the menu.

Press one of the buttons to access the menu which indicates the router configuration and bandwidth usage in real time to the ports LON FT / TP10.

Figure 10 : First page menu

Buttons below the arrows are used to select the port. Once selected, press the button under the symbol "**SP**" (Service Pin) to send a service pin of the Neuron Chip of that port.

Whatever the selected port, the button under the symbol "**GSP**" allows you to send a service pin of each external Neuron Chip on router.

Finally, the page after Ports show you the IP address of the router.

Figure 11 : IP page

3 Easy and fast setting

3.1 Wizard for configuration

A wizard has been developed to simplify the configuration of Oxtopus router.

Questions are asked in specific order. At the end of the sequence, the reboot of the router places it in the desired configuration.

The steps are:

1. System
2. Configure Wifi
3. EIA-709 Configuration
4. Modbus configuration
5. Reboot

When the reference does not have Wifi, EIA-709 or Modbus, the corresponding step is simply skipped (not showed) from the wizard.

All changes in the configuration Wizard will be saved at the last step. You can redo the Wizard as many times as you like without saving. All temporary values are stored until the backup or closing your session with the browser.

3.2 Starting wizard on home page

The actions menu is on the left. The user identification is at the top right of the page.

The home page shows the status of the router. (For more details see chapter 0)

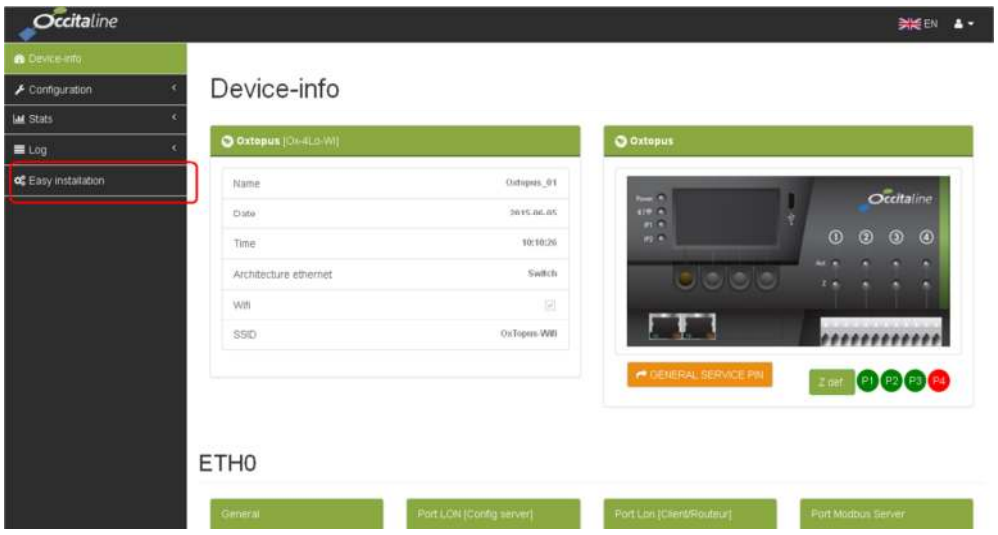


Figure 12
Home page and Easy installation menu

3.3 Login page

When access to a configuration page, if the user is not logged, the login page is proposed. (See Chapter 3.3)

The account is "**admin**", password is "**oxpass**".

3.4 Name of router

The name will be visible on the LCD screen and in the members list of the Channel IP.

Figure 13
Define router name

3.5 IP address

The router can obtain an IP address by DHCP server or you can define a fixed IP address.

Figure 14
Router with dynamic IP address

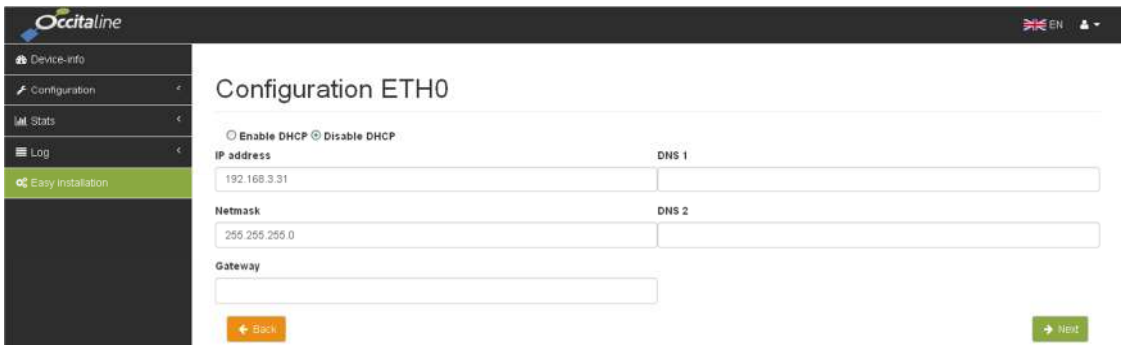


Figure 15
Router with fixed IP address

3.6 Wifi configuration

This page allows you to enable or disable the Wifi as well and set the access parameters.

Figure 16
Disabling Wifi option

If WiFi is activated from the LCD screen, the values stored in the configuration will be used. By enabling WiFi by the Web, you can change its setting.

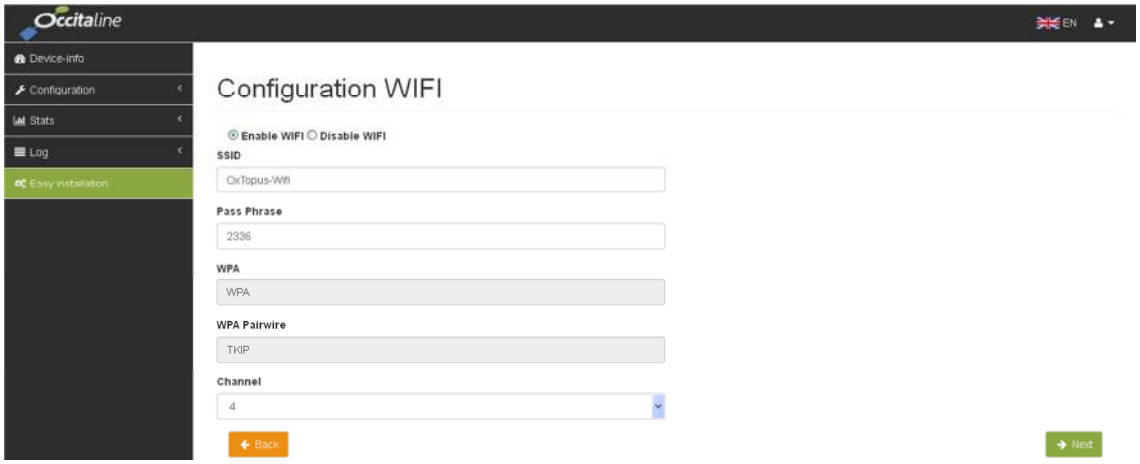


Figure 17
Wifi setting

SSID	It defines the visible name usable by your PC, tablet or smart phone.
Pass Phrase	This is the passcode to enter to validate the connection.
WPA	This is the security mode Wifi access.
WPA Pairwire	This is the encryption connection.
Channel	This is the channel frequency for wireless connection.

3.7 EIA-852 configuration

The router side IP must be a member of an IP Channel. The router can handle this task with its "Server Config".

Default routers come with the "config server" disabled.

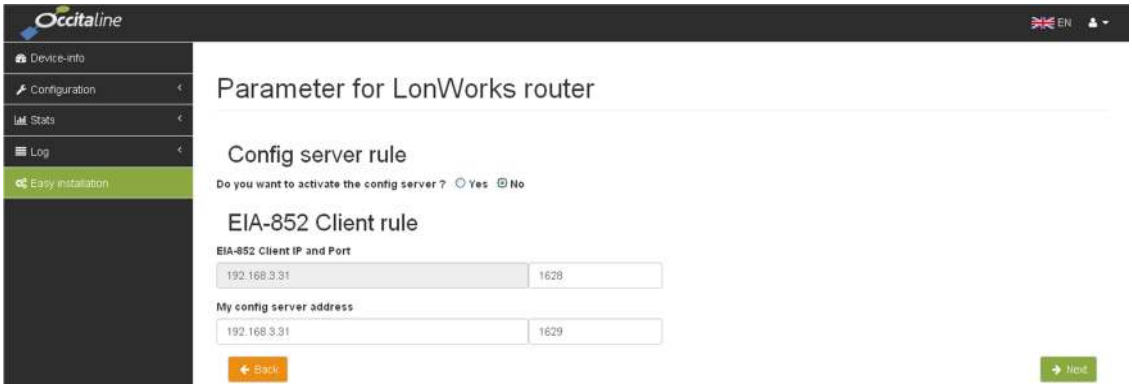


Figure 18
EIA-852 setting without Config Server

In case of the "config server" is on another device, you must define the IP address of it and the port (default 1629).

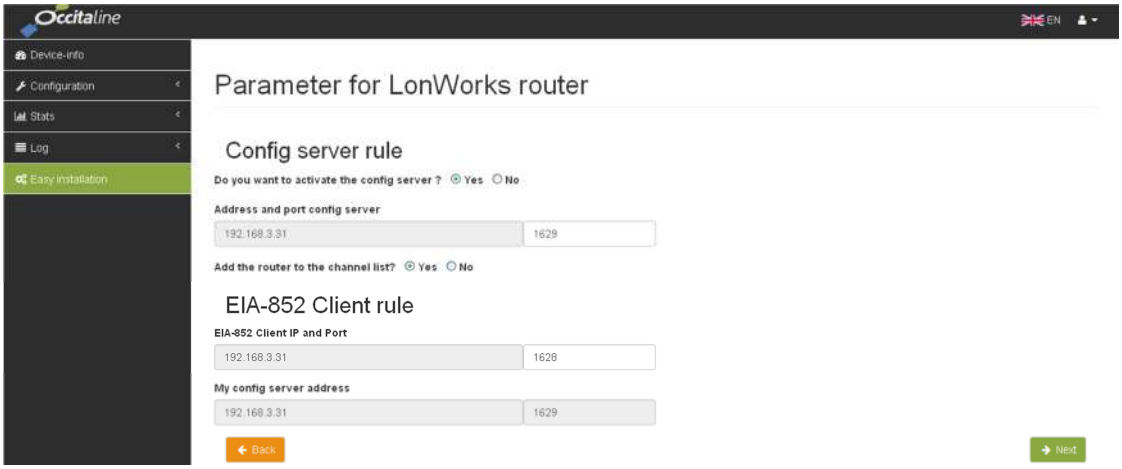


Figure 19
EIA-852 setting with Config Server and adding router to the Channel IP

In case of "Config Server" enabled, the router can automatically be added to its list of members and you can no longer enter the address of the "Config Server".

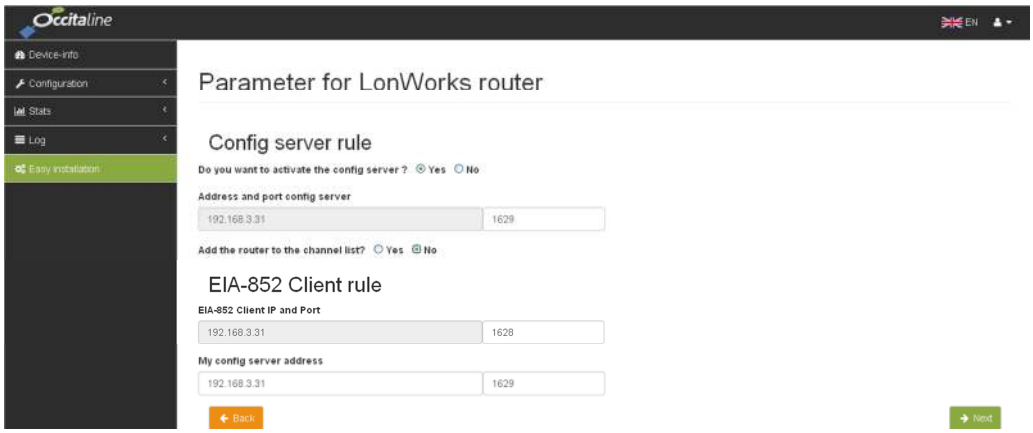


Figure 20
EIA-852 setting with Config Server WITOUT adding router to the Channel IP

If you do not want to add the router to the members of Channel IP managed by this router, you must enter the address of its "Server Config".

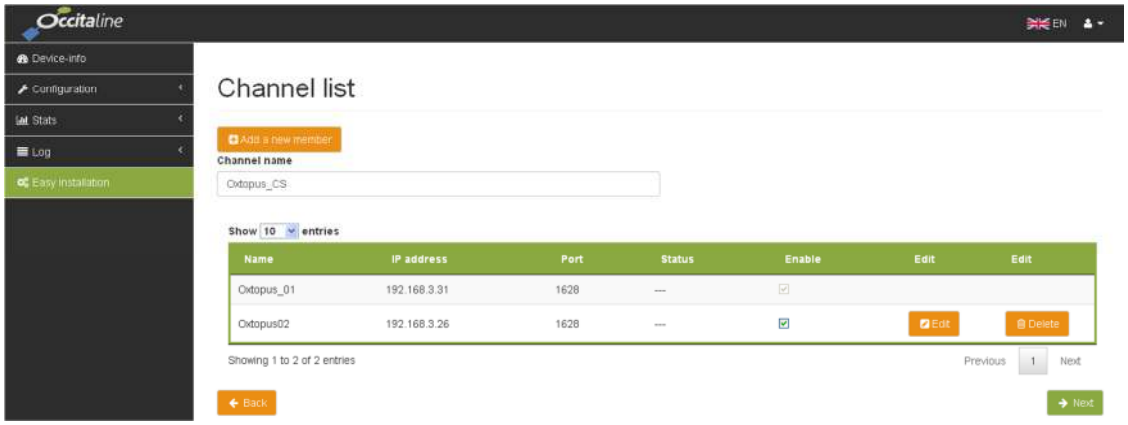


Figure 21
Member list of the Channel IP

On the first time on this page, if you have checked the checkbox "Adding the router to the members", only the router is added. In this case, the first line shows the router's name and IP address. The edit and delete buttons are not available.

3.8 Modbus configuration

This page defines the communication port used by the Modbus IP Server (default 502). The protocol is TCP / IP.

A field also sets a rerouted slave address to get Modbus ports and EIA-709.1 statistics of routers's Neuron Chip.

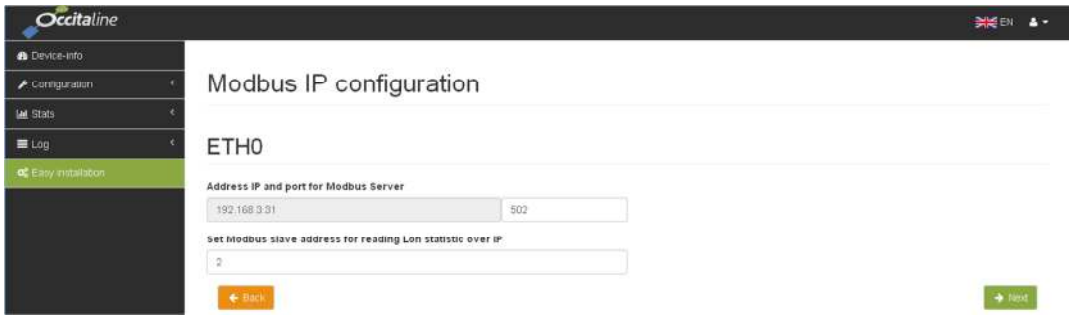


Figure 22
Server Modbus IP setting

If the router is equipped with EIA-485 port for Modbus, for each port you can configure speed, parity, stop bits and size.

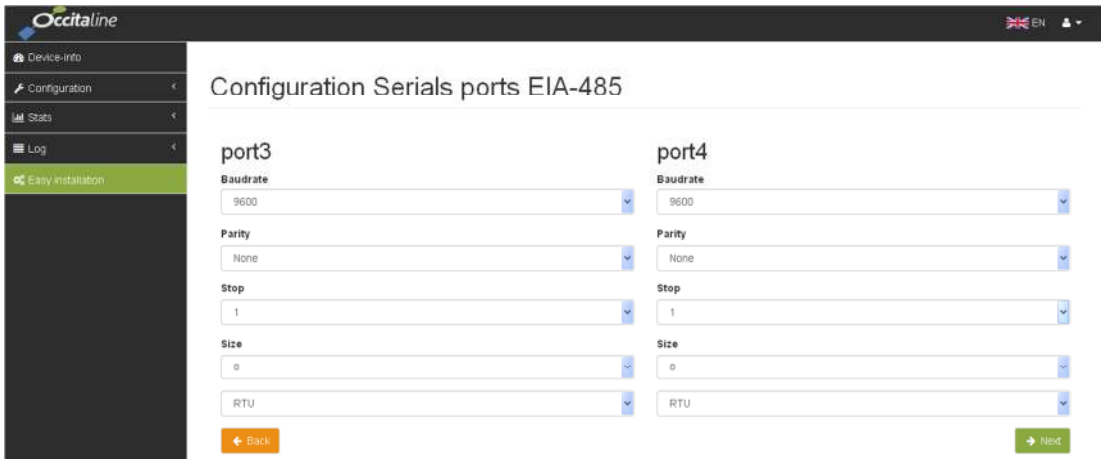


Figure 23
Serial ports EIA-485 setting

The source address is the address requested by Modbus Client on IP. The port is the line that will be sent. The request destination address is the real slave address of the device connected on line.

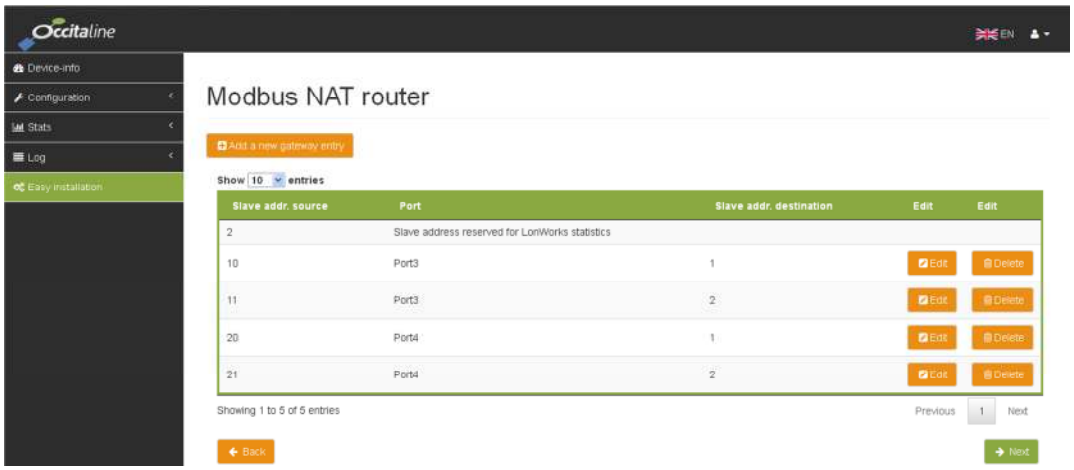


Figure 24
Translation address table for Modbus

3.9 Confirm and reboot

This page will record into the router all parameters entered by the user.

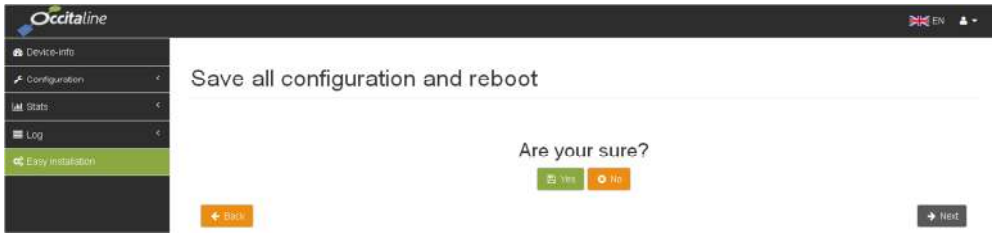


Figure 25
Validation du Wizard

The values will be used after the reboot or by turning off / on the router.

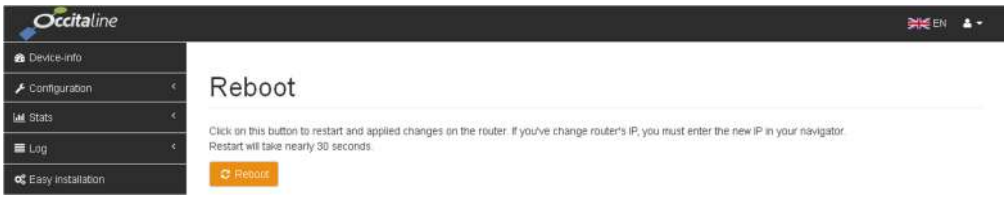


Figure 26
Router reboot

After validation, wait for 15 to 20 seconds for restart.

☞ If you changed the IP address, the browser cannot find the router. You may need to change the address of your PC to be in the same subnet and enter the new router IP address to find its home page.

4 Details settings

4.1 Resizable page to the screen device

The Web site is automatically adapted to the device that consults.

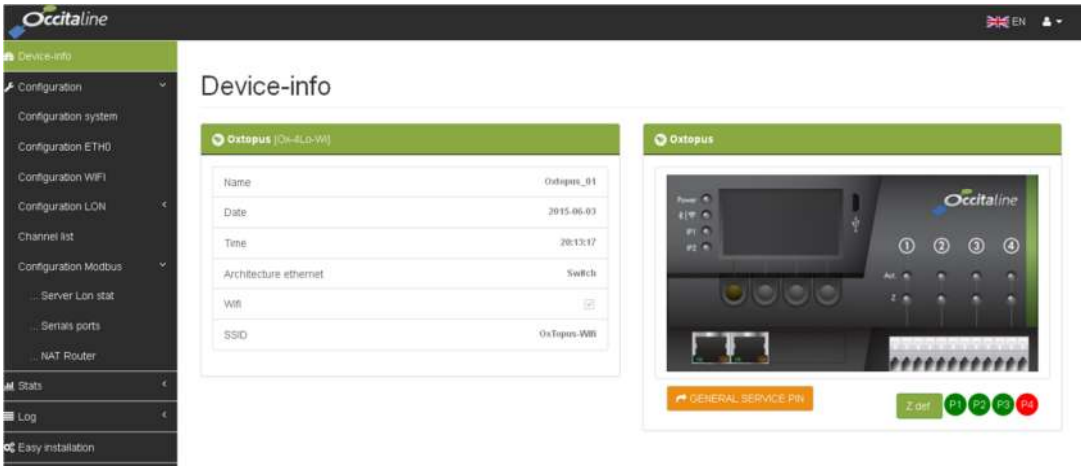


Figure 27
Home page on computer

When the device menu width no longer fits to the left, it is reduced and can be opened by the top right button.

Figure 28
Home page on tablet in portrait

4.2 Home page

The home page displays the router's condition: configuration, impedance mismatches, sending services pin of each EIA-709.1 ports.

This page is not protected by password.

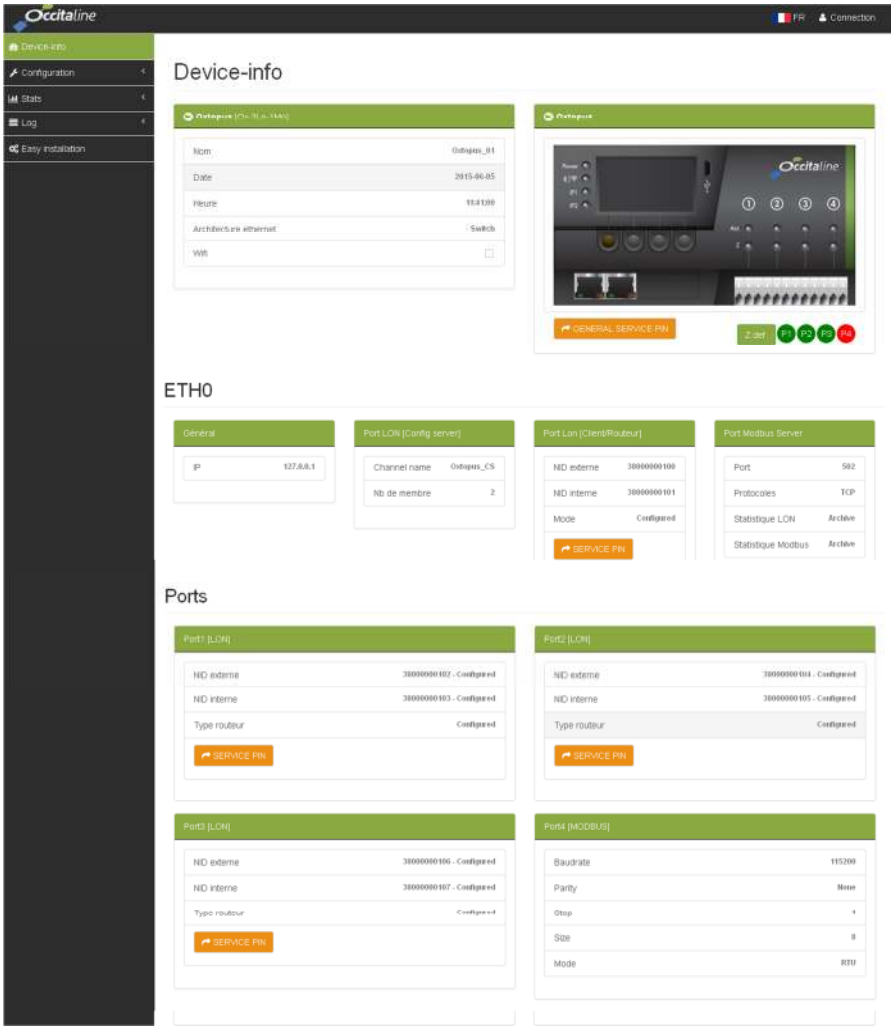


Figure 29
Complete home page

Several panels are displayed according to the reference product.

4.2.1 Device info

Figure 30
General Information

Reference of the product is shown in banner title.

Nom	This is the name of the router that is found among others on the LCD.
Date/Time	This is the current time of the router. It is used for log errors and statistics.
Architecture	It is the use of the two RJ45 connectors for Eth0 Eth1. The current mode is "Ethernet switch."
Wifi	indicates if WiFi is active or No.
SSID	When WiFi is active, this is the name of the visible WiFi access in devices used for connection.

Figure 31
Oxtopus router

Under the image, the button “GENERAL SERVICE PIN” sends the service pin of all ports simultaneously. Red or green circles at the bottom right indicates the ports fault impedance on each line.

4.2.2 Ethernet chapter

Chapter Eth0 indicates all services provided by the router via Ethernet

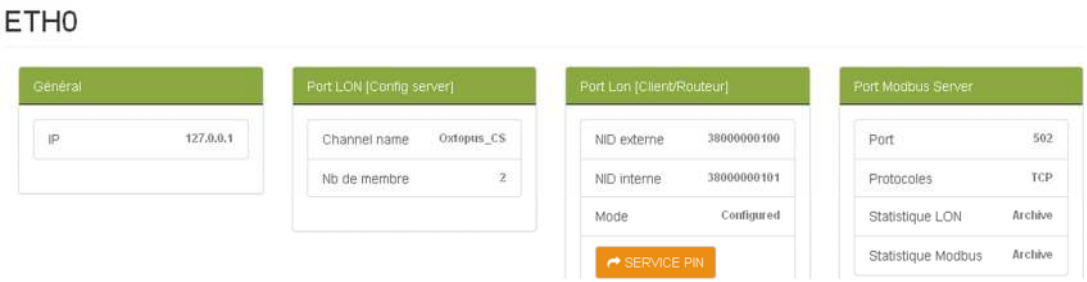


Figure 32
General services on IP

4.2.2.1 General panel

IP — IP address of router.

4.2.2.2 Config Server panel

Channel name — This is the name of channel IP for rule « Config Server ». This name is only used by the user. He has no rule in the protocol.

Nb member — Number of members declared in channel list.

4.2.2.3 Router EIA-852 Client panel

NID externe — Neuron Id on router EIA-709 IP side.

NID interne — Neuron Id on IP router internal side.

Mode — Routing mode EIA-709. (Configured, Repeater, Learning,...)

4.2.2.4 Modbus server IP panel

Port — Communication port for Modbus IP server.

Protocol — TCP: IP Protocol used for Modbus IP server.

Stat Lon — Indicates logs router EIA-709 statistics to view them graphically.

Stat Modbus — Indicates Modbus Router logs Modbus statistics to view them.

4.2.3 Ports chapter

In accordance with the reference product, the ports used are from 1 to 4. Each of them can be supplied for use in EIA-709 or Modbus.

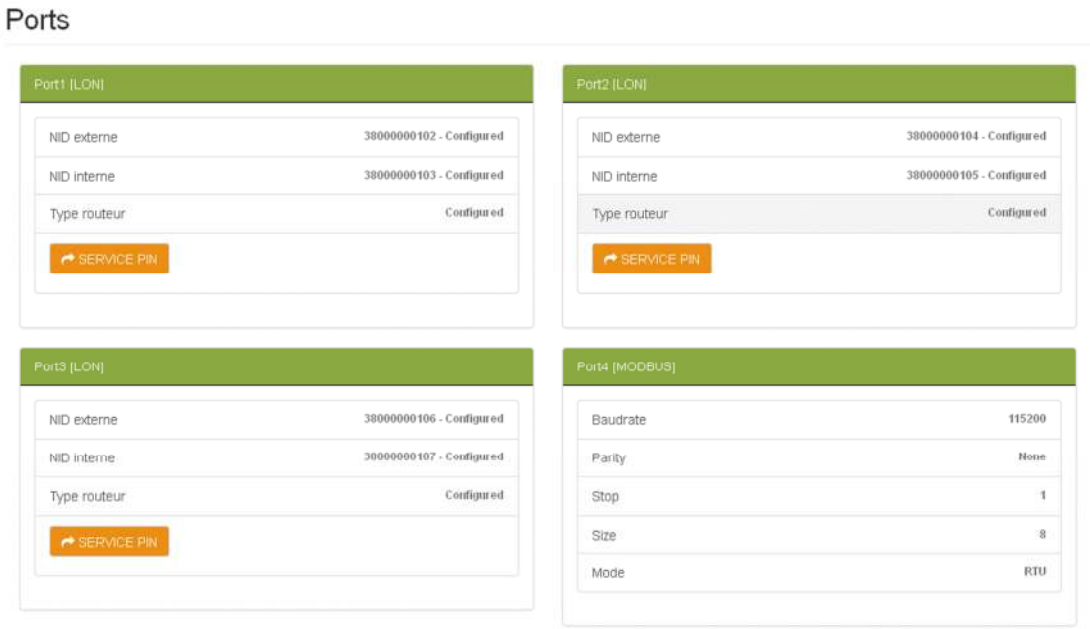


Figure 33
General on ports

4.2.3.1 EIA-709 port

NID external	External Neuron Id of router.
NID internal	Internal Neuron Id of router.
Type router	Routing mode choosen by your manager tool.

4.2.3.2 Modbus port

Baudrate	Speed of serial port.
Parity	Parity of serial port.
Stop	Number of stop bit for serial port.
Size	Size of each word for serial port (Modbus 8 bits).
Mode	Mode usage of serial port in Modbus « RTU »

4.3 Menus

Menus are displayed on the left with a sufficient width terminal. If the width does not allow it, they fold out with the top right button. We find:

Device info	Home page
Configuration	Organized in system, Ethernet, Wifi, EIA-709.1 and Modbus
Stats	Graphical statistics
Log	Logs of communication and error
Easy Installation	The wizard

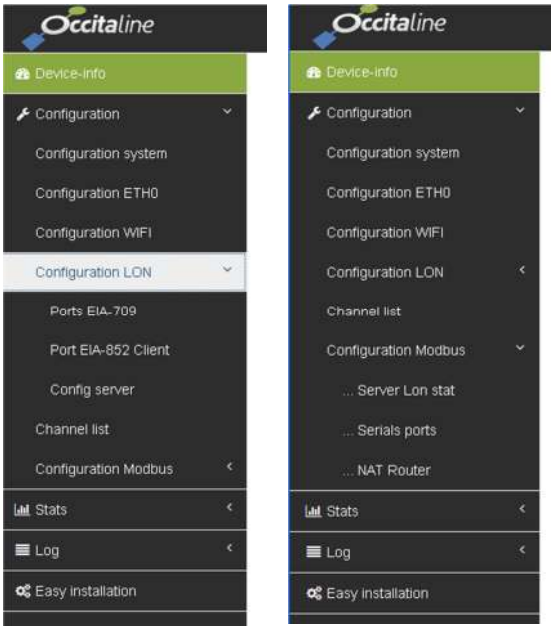


Figure 34
Menus example

4.4 Login page

When access to a configuration menu, if the user is not logged in, a login page is proposed. It is also possible to call this page from the top right menu: "Connection." The account is "**admin**" password is "**oxpass**".

Figure 35
Page d'identification

4.5 User modification account

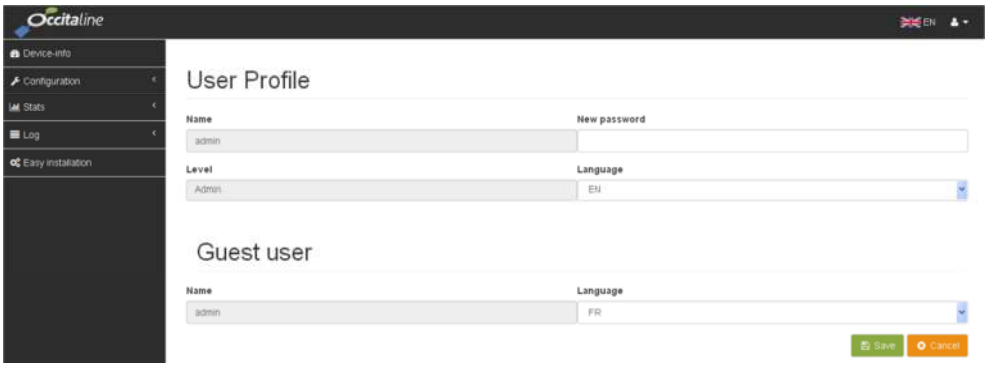


Figure 36
User modification page

With this page, the user can change his password and his language used after connection.

☞ The language for « guest user» modifies the default language for not logged users.

4.6 Reboot page

This page will log into the router all the parameters entered by the user.

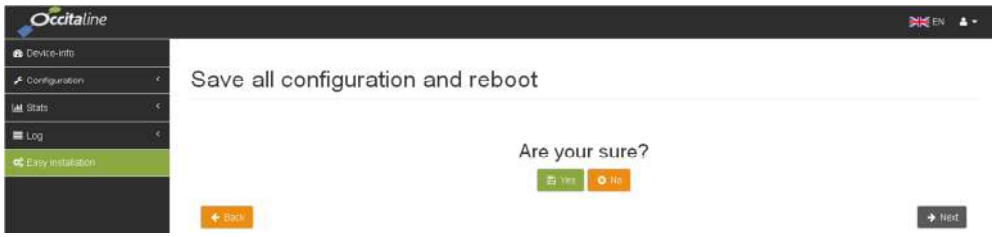


Figure 37
Wizard confirmation

The values will take effect after the reboot page or by turning off / on the router. After validating this page, you need to wait 15 to 20 seconds to reboot.

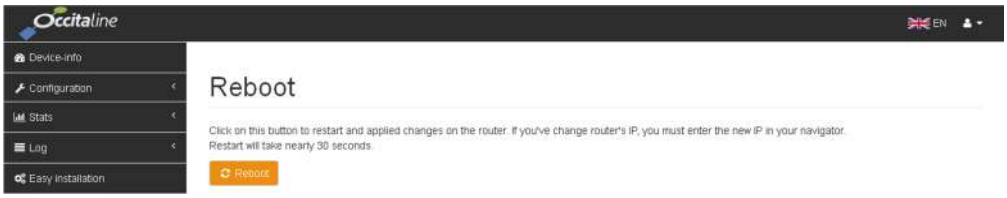


Figure 38
Router reboot

☞ If you changed the IP address, the browser cannot find the router. You may need to change the address of your computer in same subnet and enter the new router IP address to find its home page.

4.7 System configuration

This page allows you to change the router's name, date and time.

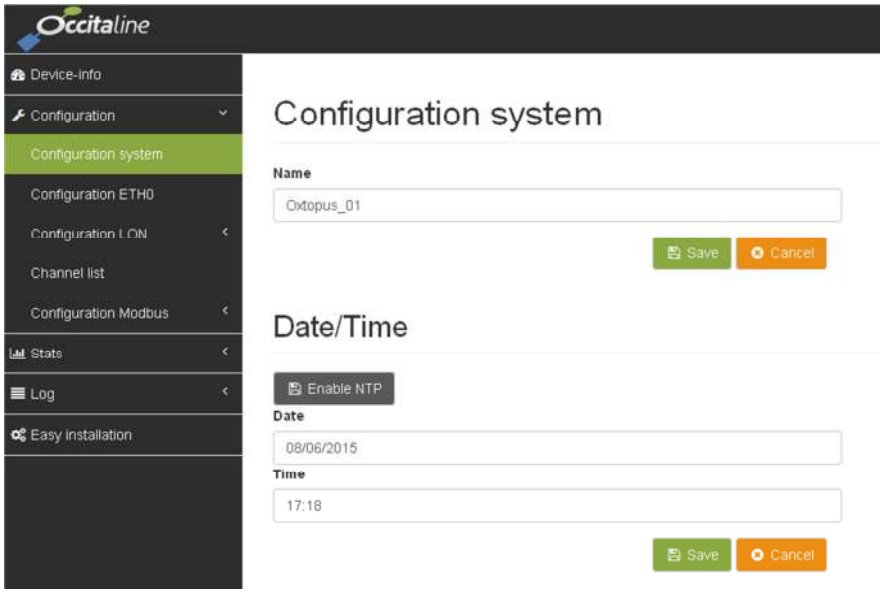


Figure 39
Configuration system

4.8 Configuration

This page allows to select the router's addressing mode. Either the IP address is dynamically assigned on the network by a DHCP server or it is manually assigned and called "static IP" address.

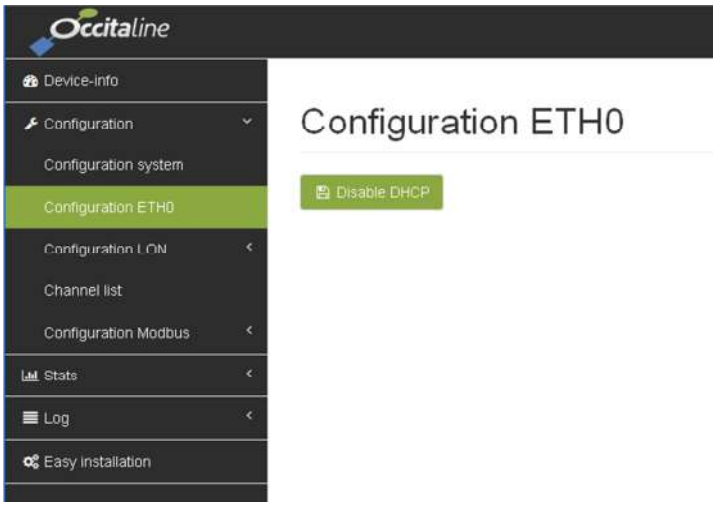


Figure 40
ETH0 configuration with DHCP

☞ All modification of IP address takes effect after reboot.

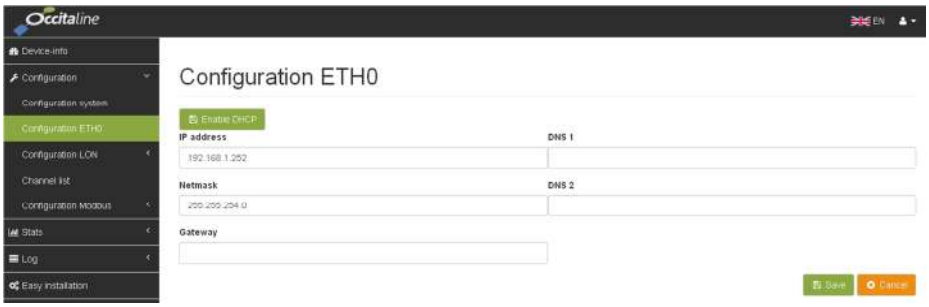


Figure 41
Configuration ETH0 with fixed IP

4.9 Port EIA-709

This page serves only to display the configuration of the EIA-709 router ports.

Figure 42
Configuration des ports EIA-709

4.10 Port EIA-852 Client

This page allows you to change the communication port for data exchange in EIA-852 Client (1628 by default) and the IP address and port (1629 by default) for the config server.

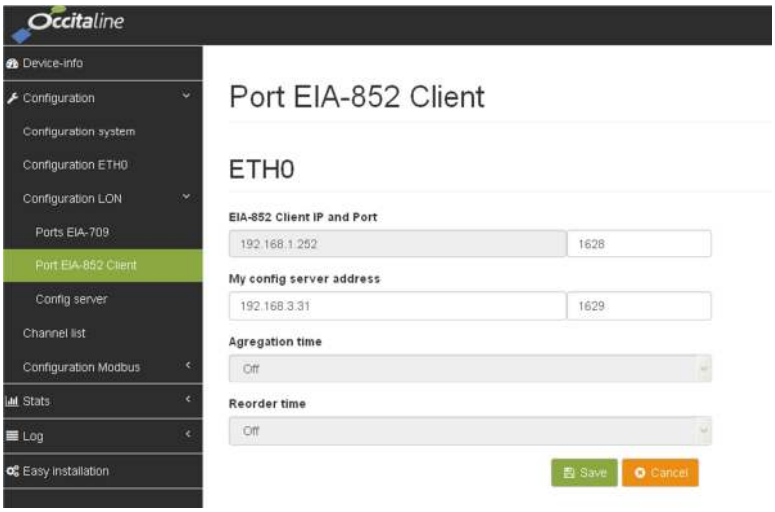


Figure 43
EIA-852 client configuration

Its config server is not necessarily the router itself. That may be another router or a computer. It will specify the IP address and port used for this function.

☞ An EIA-852 port that has no config server cannot know the member with which he must share data. The network will not work.

☞ There can be only one "config server" EIA-852 client

4.11 The config server

The router is delivered with the Config Server disabled. To enable and configure it, just click the button. "**Enable the config server**."

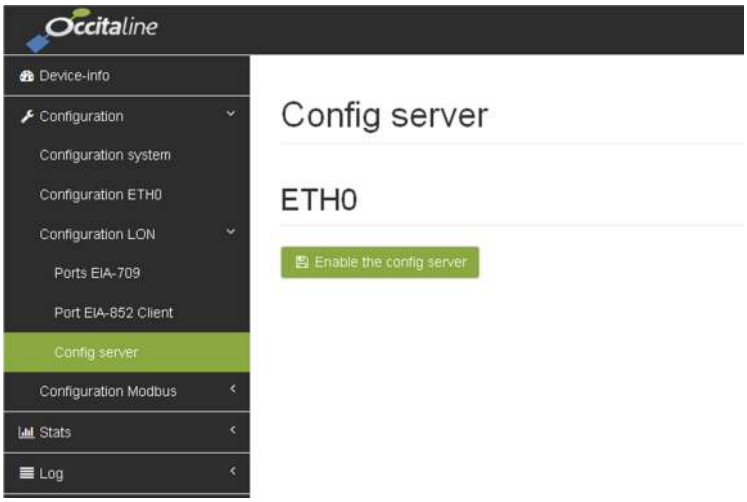


Figure 44
Config server disable

The IP address of the config server is IP address of the router itself. The port can be changed. The default value is 1629.

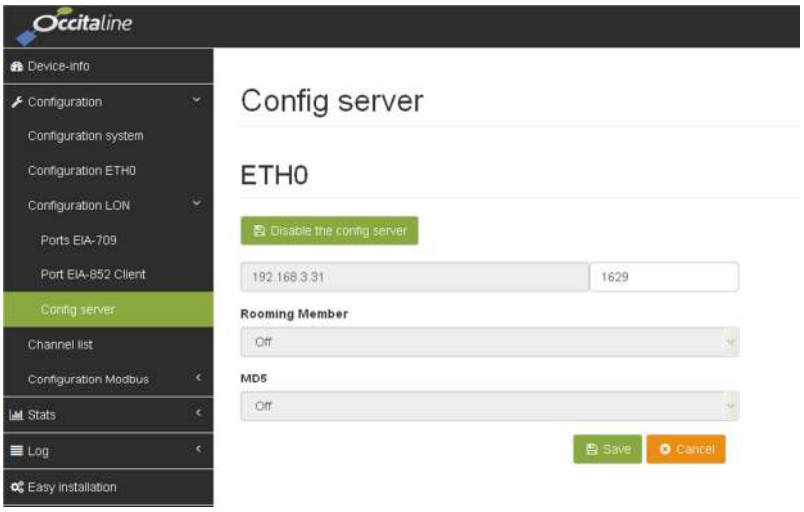


Figure 45
Config server activated

4.12 Channel list

This page allows adding, removing, enabling, exporting, importing and test members of IP channel. All members of the list are likely to share data. They will be installed in one or more LNS databases.

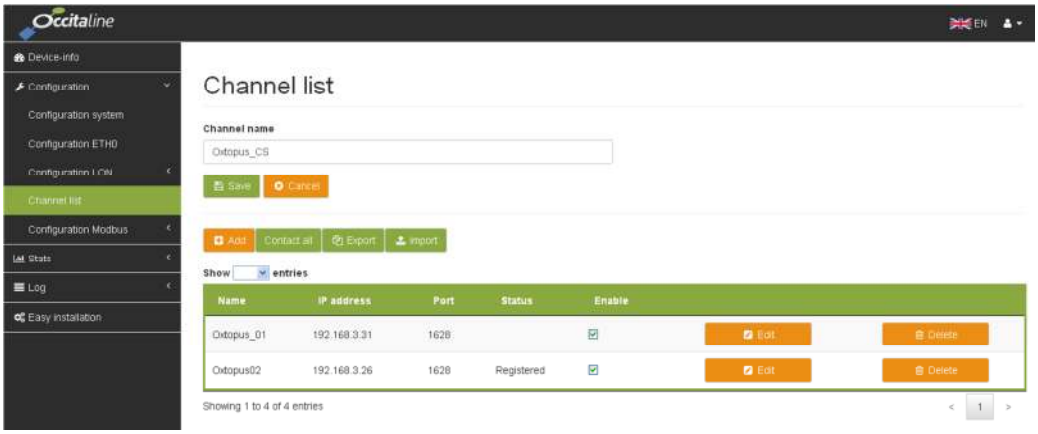


Figure 46
Liste des membres du Channel

The role of the Config Server is like a "virtual electrician" that will connect all devices on the same wired network.

4.13 Configuration of Modbus server Stat EIA-709

This page provides the Modbus slave address to query the router on the statistics of external Neuron Chip of routers, status and Modbus Serial ports as impedance.

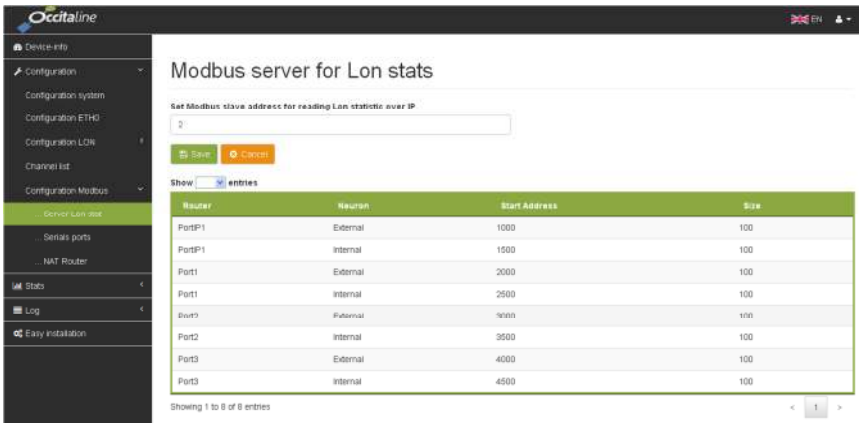


Figure 47
Configuration of slave address for statistics.

Each Neuron Chip has a base address and each counter is set to a 16-bit word.

☞ The reading is done by a read command on an "Input Register" Modbus.

4.14 Configuration Modbus serial Ports

This page allows to change all the serial parameters for Modbus serial ports

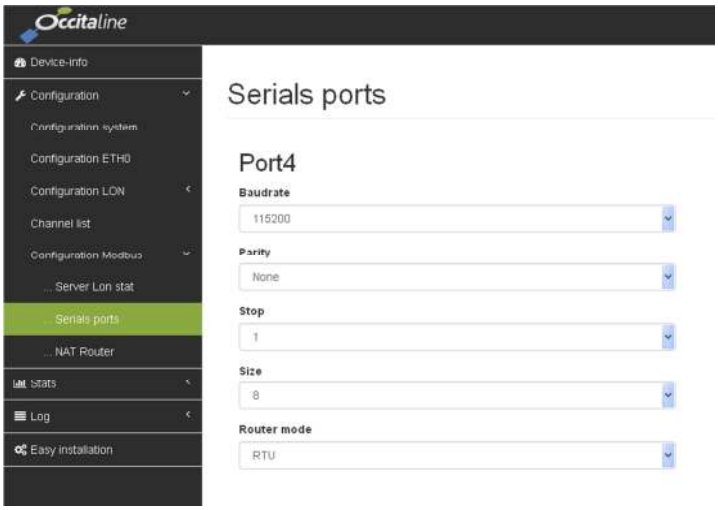


Figure 48
ModBus serial port configuration

4.15 Configuration Modbus NAT router

This page allows to add, delete, edit, export and import translations Modbus Source slave address to a destination slave address on a serial port to join device.

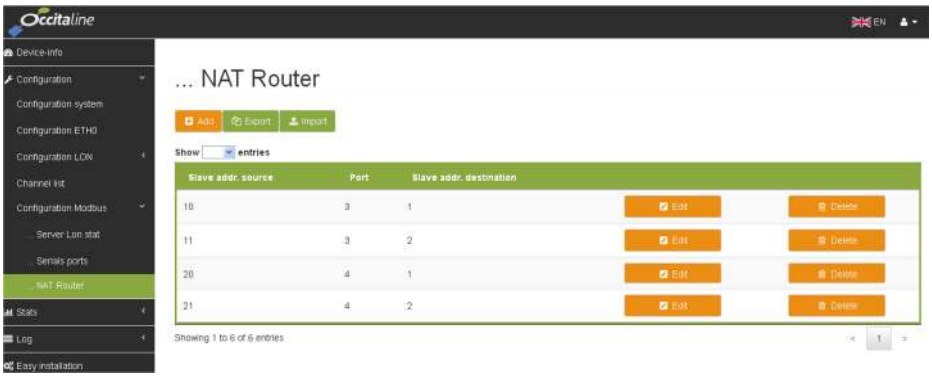


Figure 49
Router NAT Modbus configuration

To each source slave address matches a serial port and a destination slave address on that port. This table allows to use the same destination slave addresses on all serial ports.

5 Configuration via USB

5.1 General Information

For the USB driver installation and terminal, refer to the annexes 7.2 and 7.3.

When your device is running and configured, press the "Enter" key to display the menu. There are two choices:

- Restore the default IP address **192.168.1.254**
- To restart

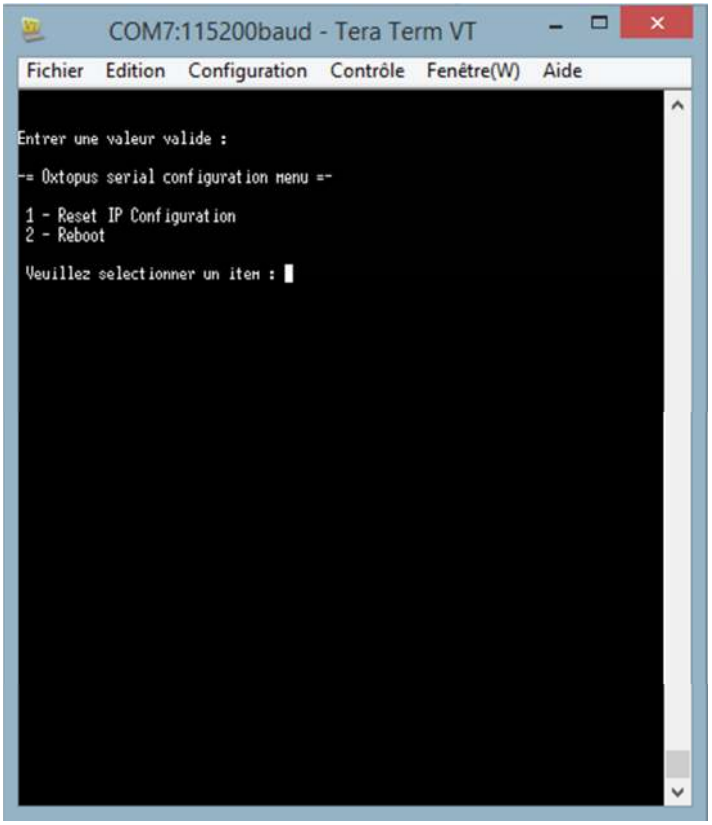


Figure 50
Screen on terminal connected to the router

5.2 Default IP address

To force the default IP address, select "1" on your keyboard, and confirm by pressing "enter"

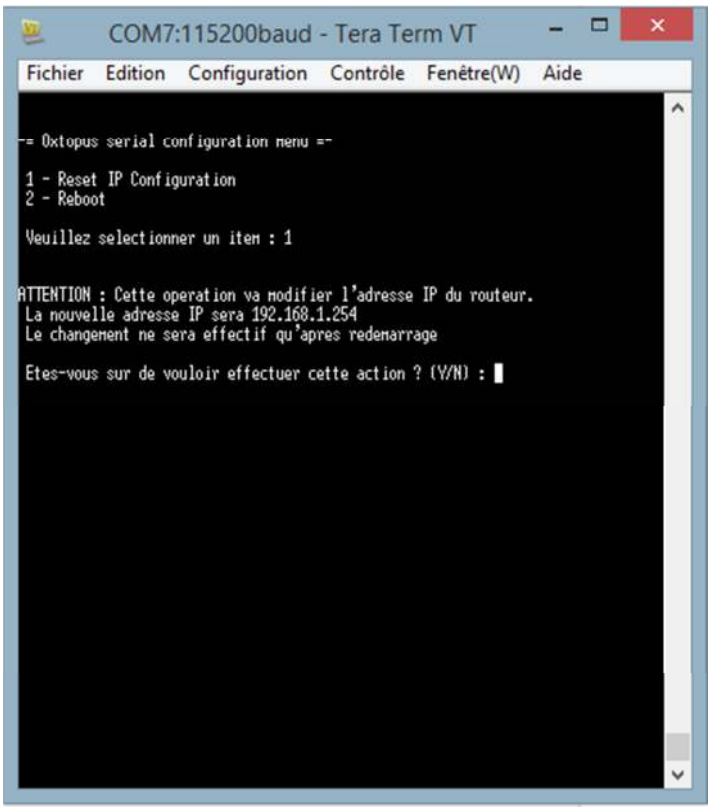


Figure 51
Confirmation load manufacturer values by "Y"

The interface asks you to confirm by pressing "Y" or "N" to return to main menu

The changing IP address will be effective after restart. Please note that restart is not done automatically after the IP address change

5.3 Restarting

To reboot, select the "2" key on your keyboard, and confirm by pressing "enter".

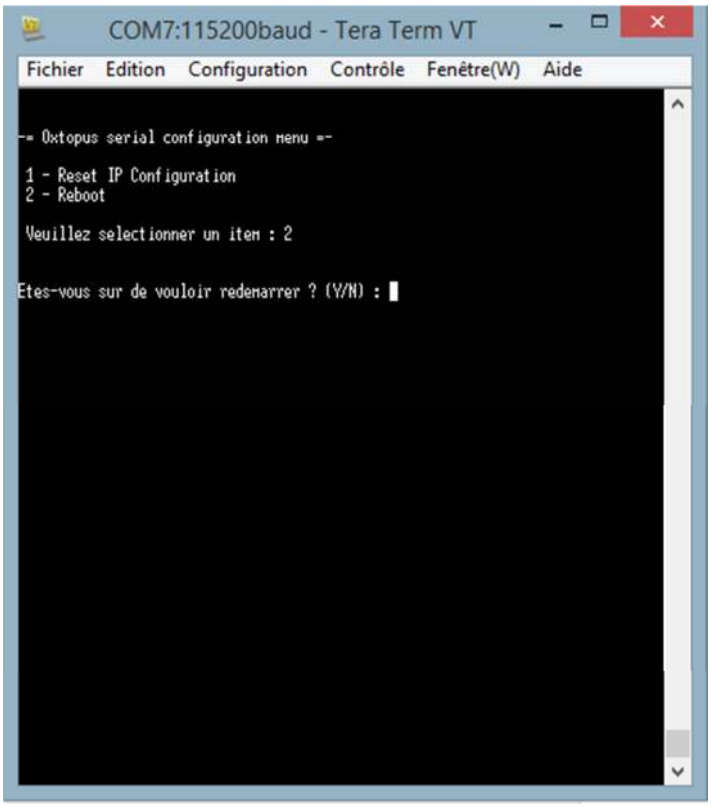


Figure 52
Confirm Reboot by "Y"

The interface asks you to confirm by pressing "Y" or "N" to return to main menu

6 Smart Channel usage

6.1 Preamble

To simply use the Oxtopus routers in NL220 or NLFacilities you must have placed specific files in the directory NLSmartChannel. See Appendix 7.1

These routers are equipped with an Ethernet port with an Ethernet switch on two RJ45 connectors and 1, 2, 3 or 4 ports TP / FT10. Some models can be equipped with 1, 2 or 3 Modbus ports. These are considered invisible in NL220.

Model to be installed in Smart Channel

	Modèle à installer dans Smart Channel			
Référence	Ox-1Lo	Ox-2Lo	Ox-3Lo	Ox-4Lo
Ox-1Lo	☑			
Ox-1Lo-Wi	☑			
Ox-1Lo-1Mo	☑			
Ox-1Lo-1Mo-Wi	☑			
Ox-2Lo		☑		
Ox-2Lo-Wi		☑		
Ox-2Lo-1Mo		☑		
Ox-2Lo-1Mo-Wi		☑		
Ox-3Lo			☑	
Ox-3Lo-Wi			☑	
Ox-3Lo-1Mo			☑	
Ox-3Lo-1Mo-Wi			☑	
Ox-4Lo				☑
Ox-4Lo-Wi				☑

6.2 Main channel modification

If the channel type on which you want to install the router is not IP10L, you can modify it by editing it.

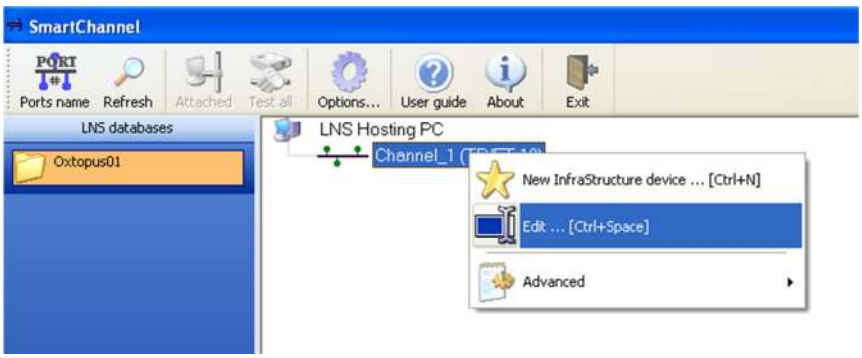


Figure 53
Editing Channel type

The name and type can be changed to fit to your project.

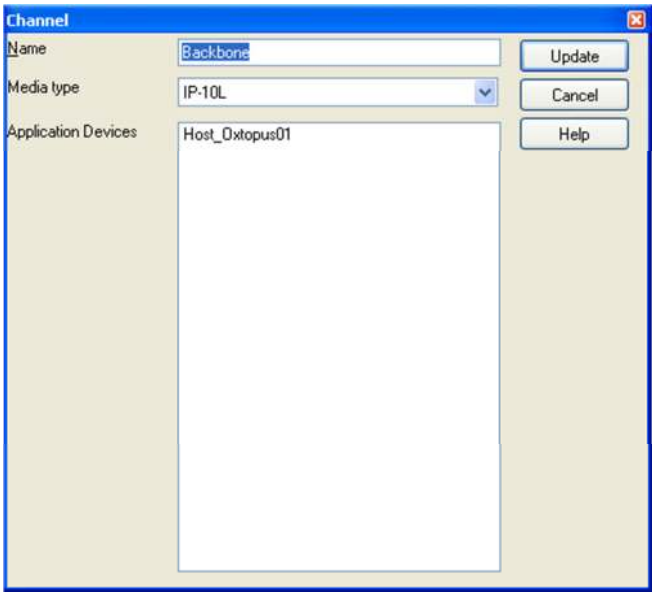


Figure 54
Name and type of channel

Once entered, you need to update by clicking the "Update" button.

Figure 55
Channel modified following your needs

NLSmartChannel assists you in adding your project infrastructure products. Media types are checked. By adding an Oxtopus router, the IP port will always be connected to a channel IP-10L

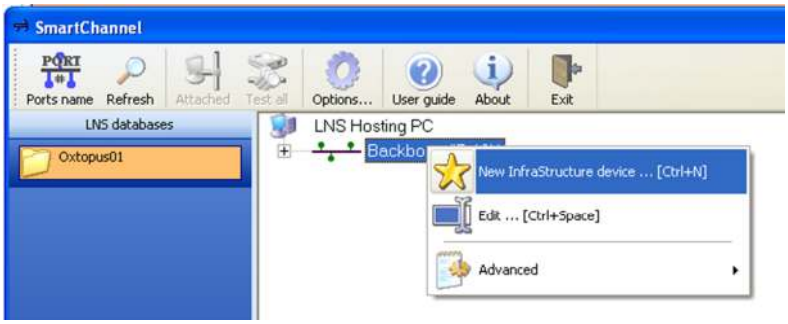


Figure 56
Adding an infrastructure device

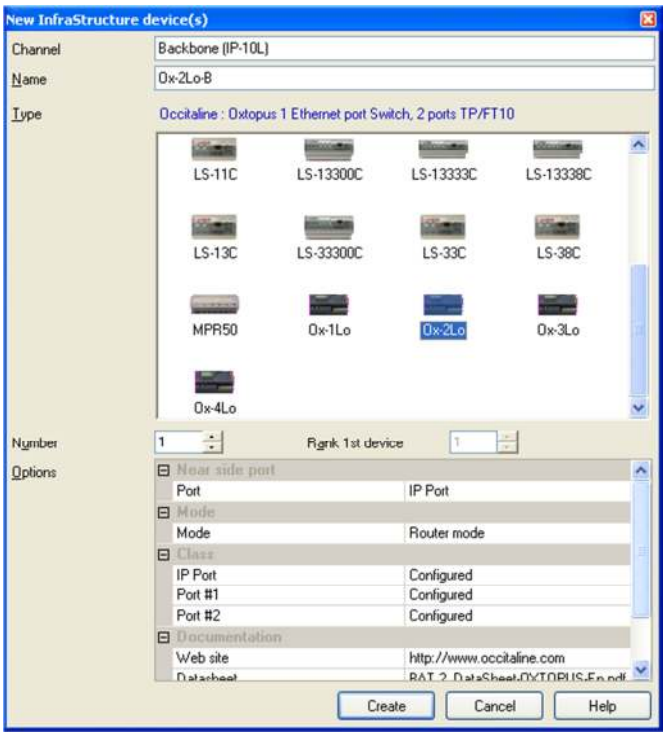


Figure 57
Oxtopus routers

You only have to choose the router version you want to install.

After validation, you can resume operations to add another router of the same type or a different one.

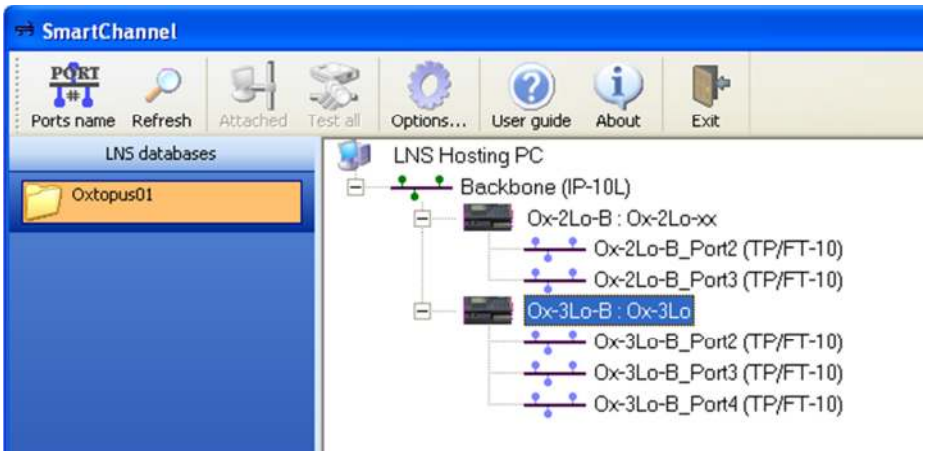


Figure 58
Plusieurs routeurs de type différents peuvent être ajoutés.

With “CTRL-”" shortcut or the installation menu, you can access the installation window below.

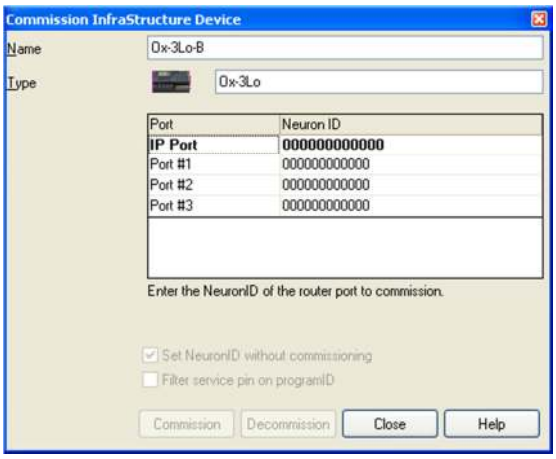


Figure 59
Entering the NEURON Id

If the router is turned on and connected to the Ethernet network, you can get its IP address by navigation with the buttons under LCD screen of router.

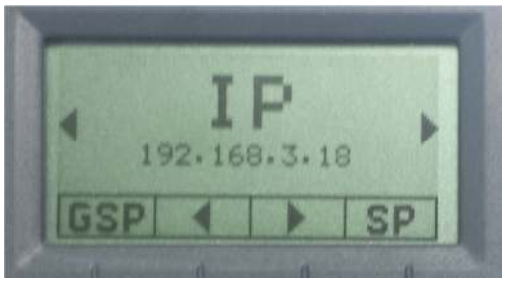


Figure 60
IP address of Oxtopus router.

This address is used in your Web browser to view the embedded Web server in the router Oxtopus.

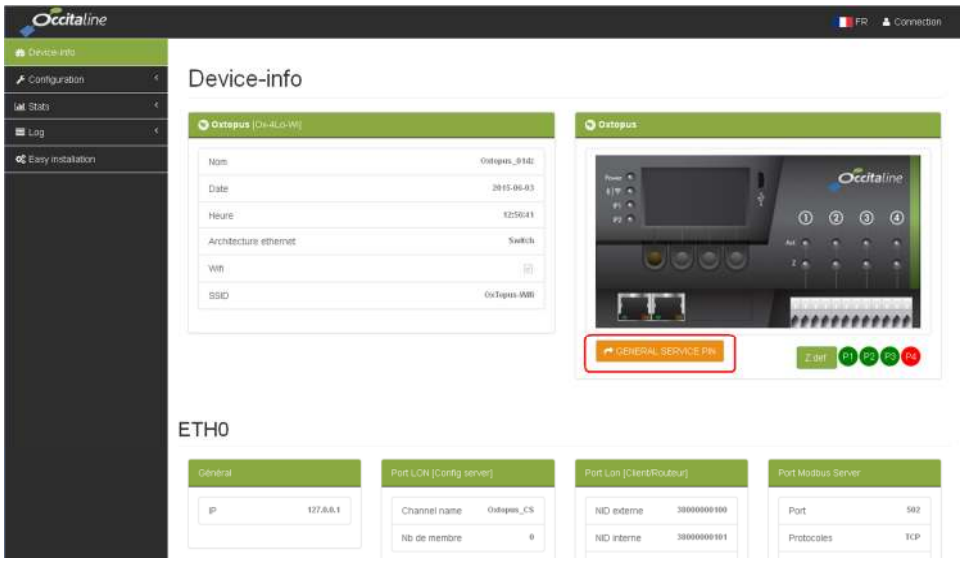


Figure 61
Home page of Oxtopus router

On the home page you have a "General Service Pin" button.

Each port sends its Neuron Id outside of the router. You will therefore be able to install the IP router in first. Then, for the other ports, you can activate the buttons on the home page or choose the port on the LCD screen and press the "[SP]."

When you have entered all the Neuron Id and closed the window, you will find that the router is green in the tree. It is now operational.

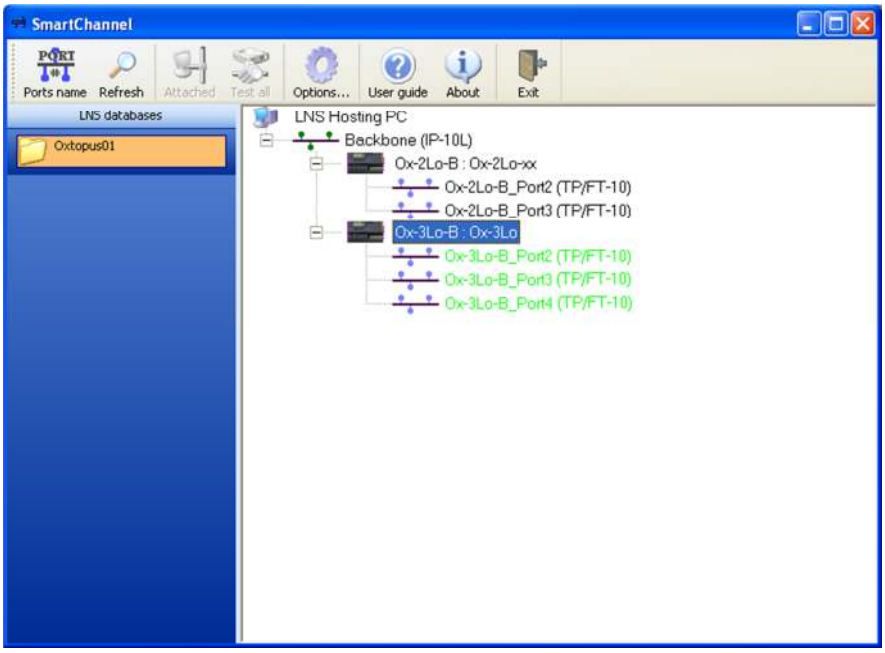


Figure 62
Router installed in LNS database

7 Appendix

7.1 Resources installation for NLSmartChannel

The compressed file "NL220_Resources.rar" allows software tools NL220 and NLFacilities to easily install the range of Oxtopus routers.

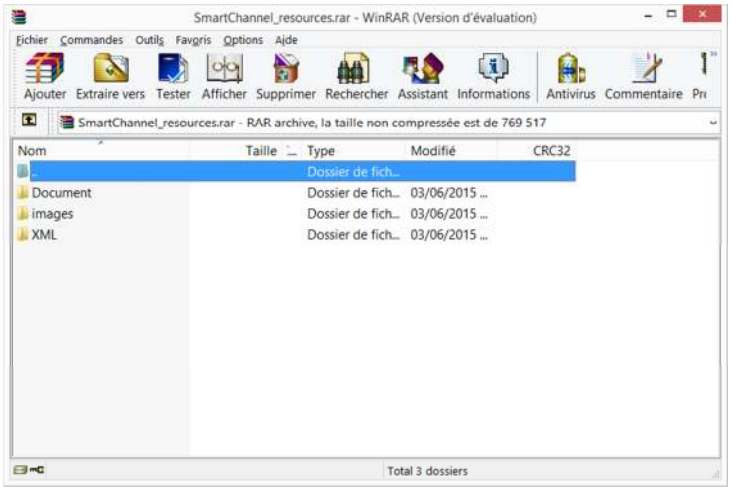


Figure 63
Contain compressed file for NLSmartChannel

Each directory in the compressed file contains files for defining Oxtopus routers.

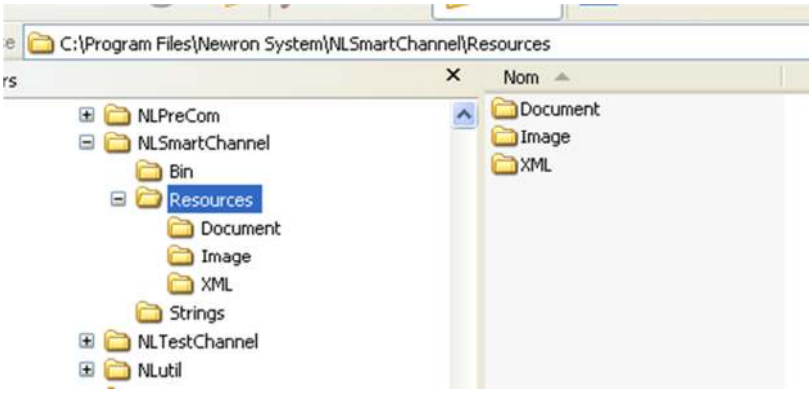


Figure 64
Directory where the files must be installed

When the files are installed you will find the following directories:

Figure 65
Directory XML

Figure 66
Directory Image

Figure 67
Directory Document

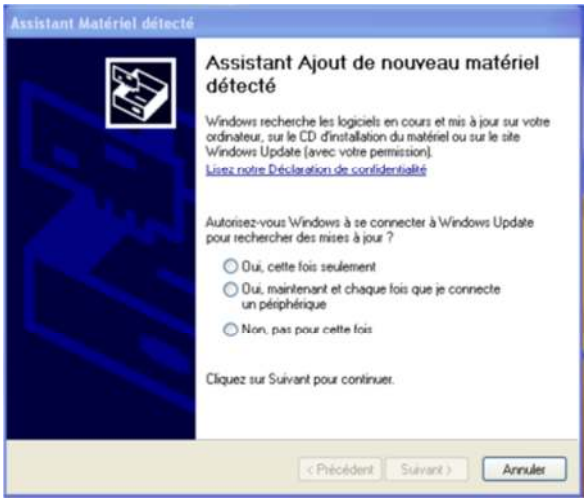
7.2 USB driver installation

7.2.1 On Windows 8

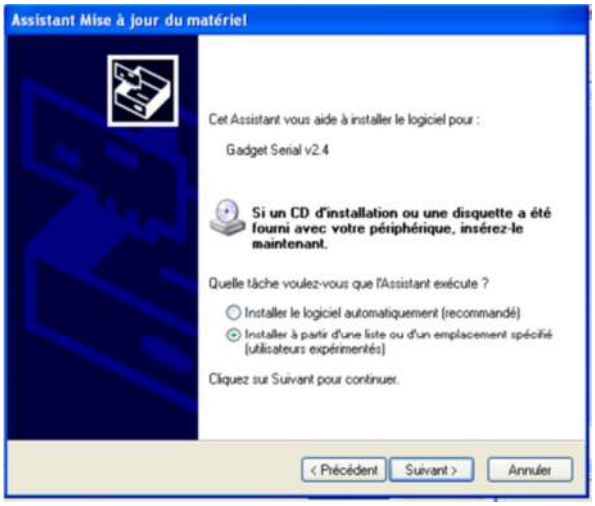
Under Windows 8 when you plug the USB cable, the device is recognized automatically.

7.2.2 On Windows XP / 7

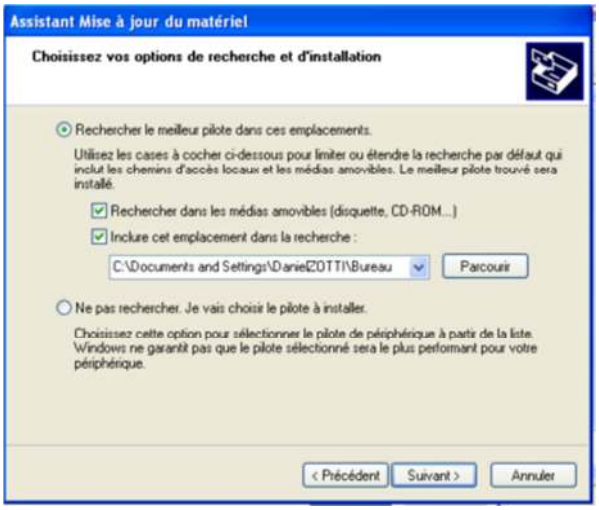
Under Windows XP, it is necessary to install the USB driver manually. To do this, connect the USB cable to the router and on the computer. When the "Wizard Add Hardware" appears, select "No, not this time" then click "Next".



On new windows, check “Install from a list or a specific location” then click on “Next”.



To finish, check « search the best pilotes in location » and specify the location of the file « Linux_acm_inf ». This file is available with the documentation of router. Click on « Next ».



7.3 Terminal installation (Tera Term)

To view information from the USB communication, a terminal must be used. If you do not have a terminal, you can use TeraTerm available on www.occitaline.com web site. Start Tera Term. A window appears, click on "File" then "New Connection".

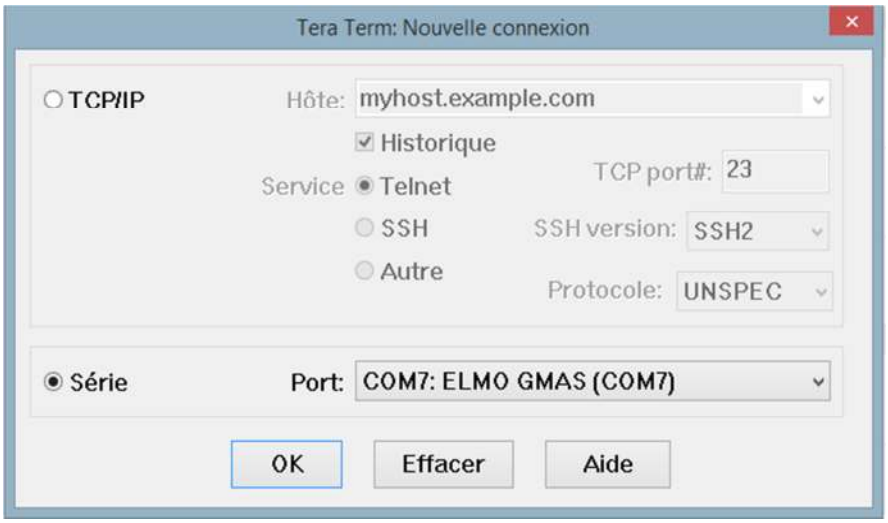


Figure 68
Start Tera Term configuration

Select « Serial » and in port the nom of device connected.

☞ Under Windows 8, the device will be appear with name « ELMO GMAS »

☞ Under Windows 7/XP, the device will be appear with name « g_serial »

The terminal configuration is made by clicking on "Settings" then "Serial Port", below the values to be set. Confirm by clicking "OK"

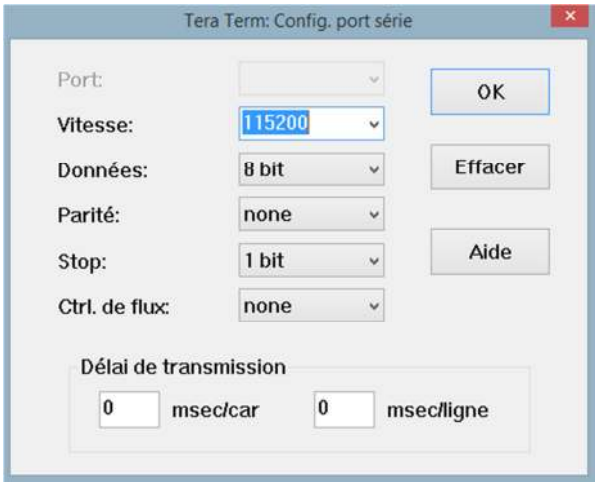


Figure 69
Configuration of serial port USB

END OF DOCUMENT

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