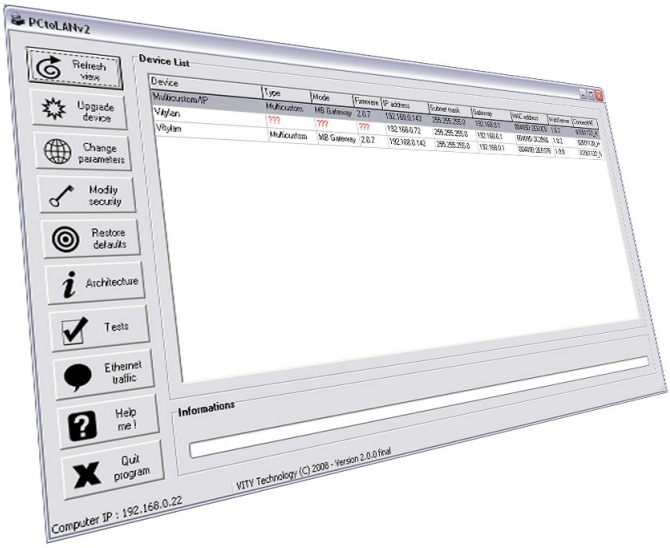
PC2LAN v2

Vity's Ethernet devices configuration



User manual

MEDIA BUS CONTROL

CE made in france

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Revision number of this manual : PCtoLAN_EN_0002

Index

1 Software Presentation

The firmware update is done by the searching and updating software called : "PCtoLAN".
This software allows you to :

- find VITY TECHNOLOGY's devices like VITYLAN, MINIMONO/IP MAXIMONO/IP and MULTICUSTOM/IP and watch all their parameters (network, firmware, connected controllers ...)
- update the firmware of these devices
- change network configuration, name and switch between Ethernet/MediaBus gateway mode and WebServer mode
- modify the password for the WebServer Connection
- restore factory settings
- watch all VITY's controllers connected to the IP devices
- test the controllers communication
- see the Ethernet traffic generated by the devices

Warning :

This software needs an other network configuration than the one used in the first version of VITYLAN/LAN option. To provide weel working, and upload all the new files (including the JAVA Webserver core), you must do a factory restoration on the olds materials, before doing a firmware update (see chapiter 1.2.5. for more information)

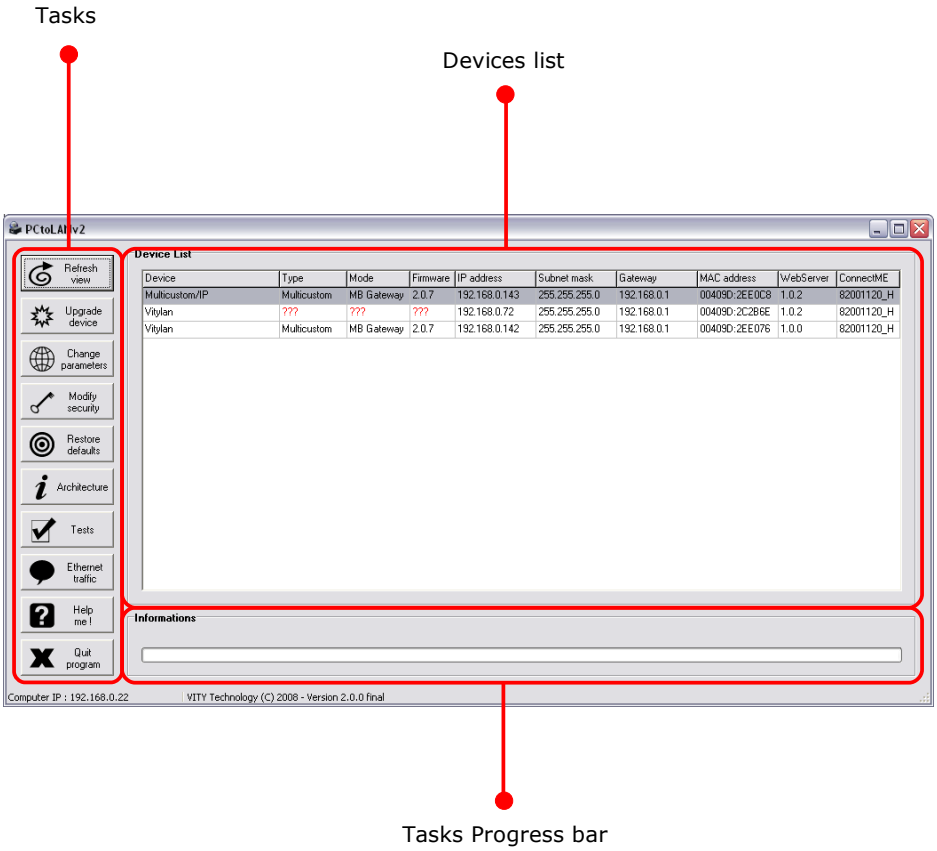
All these functions (except firmware update) are activated only with firmware 2.0.0 or greater of the VITYLAN/LAN option.

Update a firmware from 1.x.x version to 2.x.x need a BIOS upgrade. If the software detect this requirement, it will do that automatically before the 2.x.x upgrade. The BIOS upgrade is a critical operation. BE CAREFUL ! If power supply is disconnected during this operation, the device will be definitely damaged.

The MINIMONO LAN upgrade by network is possible only from 1.0.6 MINIMONO firmware version. Please update first the device with this firmware by RS232 before using this feature (see MINIMONO update software documentation for more information).

All operations accessible with this software are accessible only across the local network (Ethernet).

2 Software view



3 Basics Functions

3.1 Devices upgrade

This function allows you to upgrade the firmware or the Web Server files of the device. If the device is a controller, the software upgrades the firmware of the controller and the firmware of the LAN card.

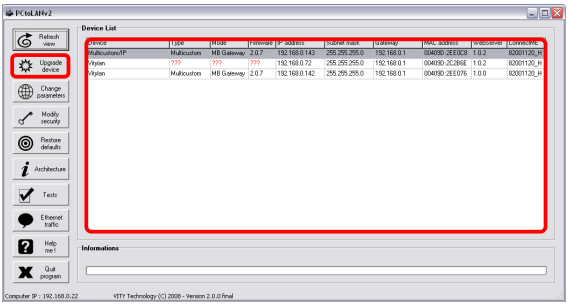
BE CAREFUL :
Update a firmware from 1.x.x version to 2.x.x need a BIOS upgrade. If the software detect this requirement, it will do that automatically before the 2.x.x upgrade. The BIOS upgrade is a critical operation. If power supply is deconnected during this operation, the device will be definitly damaged.

Note : The MINIMONO/IP upgrade by network is possible only from 1.0.6 MINIMONO firmware version. Please update first the device with this firmware by RS232 before using this feature (see MINIMONO update software documentation for more information).

1

Click on a device in the list

Click on :



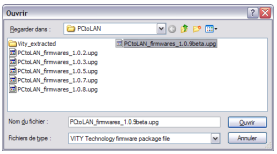
2

Choose "Device firmware".

If you have set the controller in forced upgrade mode, you need to check "Forced mode" and to choose the kind of controller you want to upgrade.

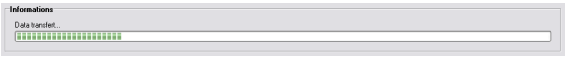
---

3 Select the file which contains the firmwares (**PCtoLAN_firmwares_x.x.x.upg** in this case) then click on "Open". If the device is a VITY TECHNOLOGY controller, it is upgraded first. Else, the software goes directly to step 9.

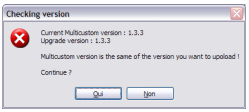


4 ***Note*** *: If the firmware of the Vitylan / MinimonoLAN / MulticustomLAN is older than 2.0.0, the BIOS of the device will be upgraded first.*

The software extract and converts the firmware file of the controller.



5 Click on "Yes" or "No" depending to the current version and the upgrade version of the controller.



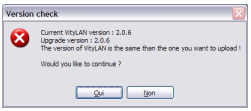
6 If you have click on "Yes", the firmware is uploaded onto the controller, else the software goes directly to step 9.

7 You are advertise when the update is finished.

8 The device reboots.

9 The software converts the VITYLAN/LAN option firmware.

10 Click on "Yes" or "No" depending to the current version and the upgrade version of the VITYLAN/LAN option.



11 If you have click on "Yes", the firmware is uploaded onto the VITYLAN/LAN option, else the software ends.

12 You are advertise when the update is finished.

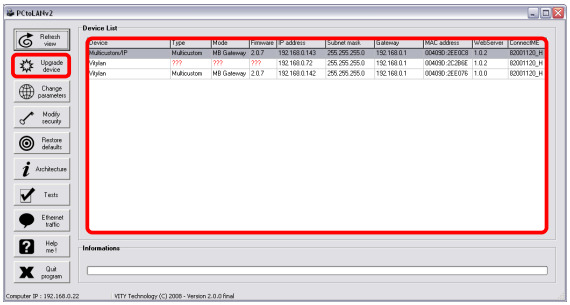
13 The device reboots.

3.2 Upgrade Web Server files

1

Click on a device in the list.

Click on :



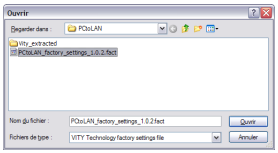
2

Choose "Web Server".

2

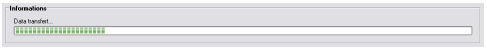
This operation needs the same files as the parameters restoration. This file is called "**PctoLAN_factory_settings_x.x.x.fact**".

Select it and click on "open".



3

The software upload the new file.



4

The software advertises you when the upload is finished.

5

The device reboots.

3.3 Change device parameters

To access to the function of changing the username and the password, the firmware of the LAN module must be up to date. To update it, go first on chapter 5.1.

On a Ethernet network, each device connected must have different IP address, and a subnet mask / gateway well defined. In these section, you can change network parameters. If you have lot of devices on the same network, this is easier to choose different names to each device.

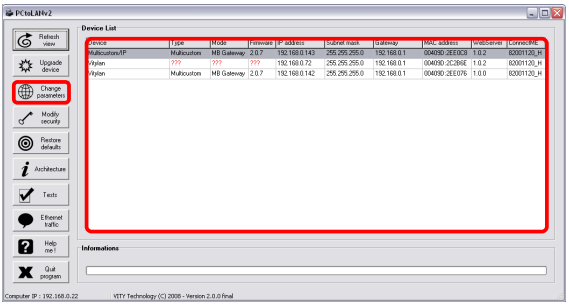
It is possible to switch from gateway MediaBus/Ethernet to WebServer. These two working mode are not accessible at the same time, so this choice must be made on the installation depending to the needs. It is possible to connect two devices on the same MBC Bus only if they are not on the same modes.

Note : The old device can have an other version of WebServer. In this case, you must do the parameters restoration to erase this one and upload the VITY Technology files.

---

1 Choose a device in the list then.

Click on :



2

Network configuration :

Change "New IP address", "New subnet mask" and "New gateway"
The SerialPort is the IP address which will be used to send VITY Technology communications. The software will automatically fill this address, but if you need you can enter manually this parameter.

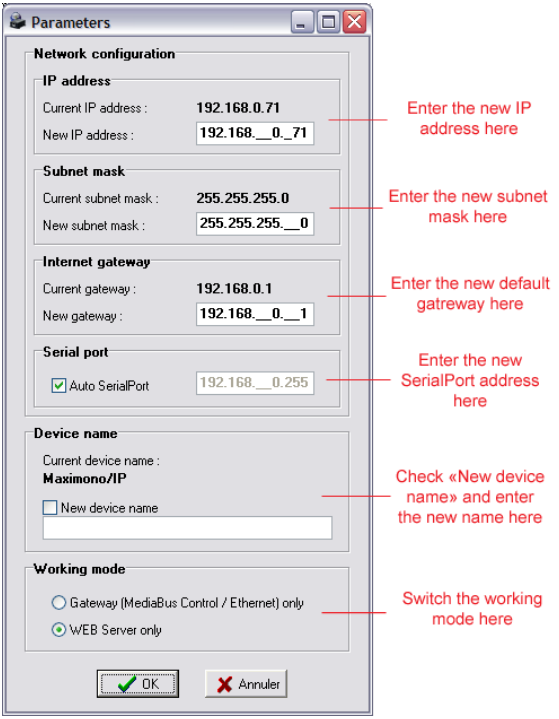
Change name :

Check "New device name"
Enter the new name.

Switch working mode :

Check the right case on "Working mode"

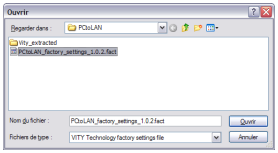
Click on "OK".



3

If you have changed the name of the device, you need to open the file which contains the configuration files ("PCtoLAN_factory_settings_x.x.x.fact" in this case).

Select it and click on "open".



4

The software upload the new file and set the new parameters on the device.

5

The software advertises you when the upload is finished.

6

The device reboots.

3.4 Change Web Server secure access

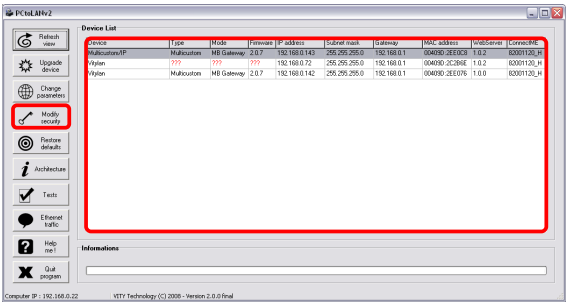
Security is very important on Internet. If you plan to use the controller as a WebServer, you need to change the username and the password associated to the Internet Web page, otherwise some people will access to your installation and may cause damages to your materials.

Note : By default, username is "admin" and password is "1234". If a factory settings restoration is done, this default username and password will be restored too.

1

Choose a device in the list then.

Click on :

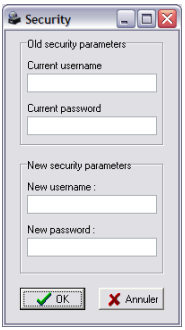


2

On the window appearing, enter the current security access codes and the new ones.

The minimal length of the username and password is 4 caracters.

Click on "OK".

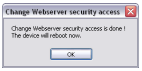


3

The software upload the new file and set the new parameters on the device.

4

The software advertises you when the upload is finished.



5

The device reboots.

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4 Advanced Functions

4.1 Restore factory settings

The restoration of the factory settings allows to download automatically in the VITYLAN/LAN option a package of files which are used to parameters the device. When done, the device has the same configuration as when it is buy :

- ➔ IP address = 192.168.0.142
- ➔ subnet mask = 255.255.255.0
- ➔ gateway = 192.168.0.1

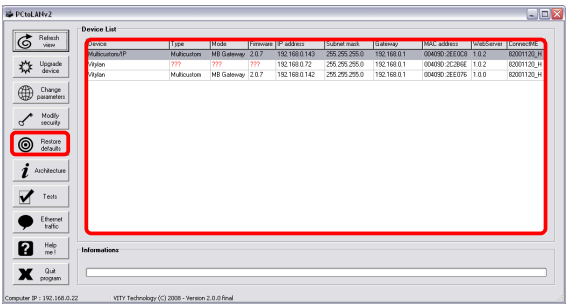
After that, you must re-parameter your device.

This manipulation activate the TCP protocol too, which allows you to use the WebServer mode and provides a better security when firmwares are updated. So it is necessary to execute this task on old device before the first firmware update, else all others tasks will not be accessible. Moreover, this task will upload the JAVA WebServer core files.

1

Choose a device on the list then.

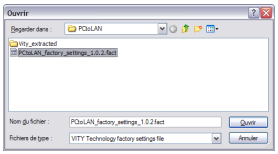
Click on :



2

This operation needs a file called "**PctoLAN_factory_settings_x.x.x.fact**".

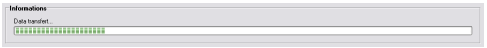
Select it and click on "open".



3

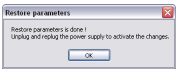
The software upload the new file.

This operation may take 10 minutes.



---

4 The software advertises you when the upload is finished.



5 The device reboots.

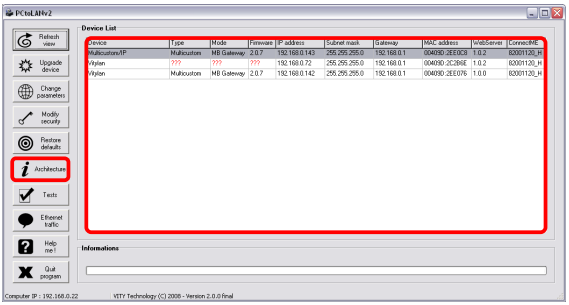
4.2 MBC Architecture

With PC2LAN, you can see all MBC Bus installation, such as Vimaty (35, 70), Minimono, Multicustom, Maximono ...

1

Choose a device on the list then.

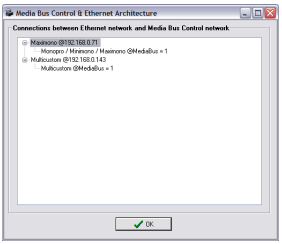
Click on :



2

A window appears.

All VITY's controllers and remotes are listed in a treeview. On each node, you can see the IP device, and all devices connected to it.



4.3 Tests of devices

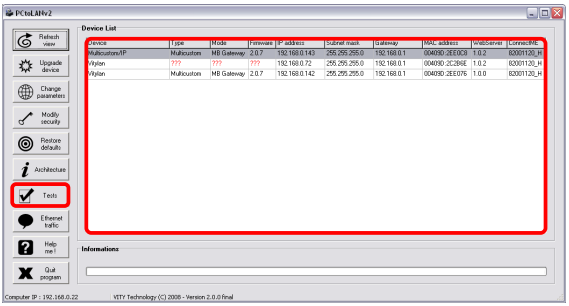
This function allows you to test the connection with your VITY controllers. You can change the relays state and see the GPI feedback.

Note : You can test only the IP devices.

1

Choose a device on the list then.

Click on :

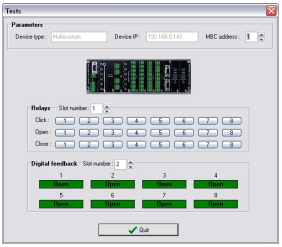


2

A window appears.

On this window, you need to indicate the MBC address.

If the device is a Multicustom/IP, you need to indicate the slot for the Relays card and the Digital feedback card too.



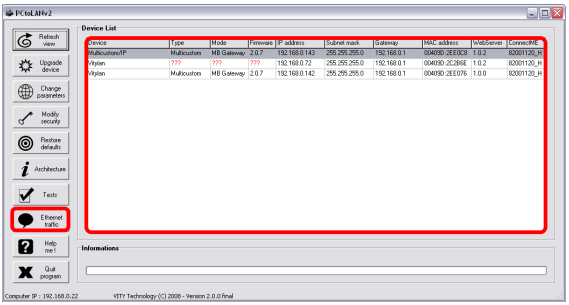
4.4 View Ethernet traffic

This function allows you to see all Ethernet communication. That can be helpful is you want to know what is transmitted to the network, or if you want to see MBC Bus Ethernet feedback.

1

Choose a device on the list then.

Click on :

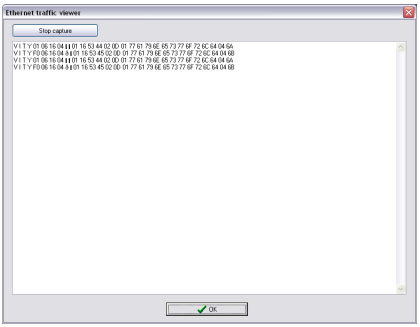


2

A window appears.

Click on "Stop capture" if you want to suspend the scan of Ethernet communications.

Click on "OK" to quit.



5 Others possibilities and functions

5.1 Watch the configuration Web site of LAN configuration

This Web site is accessible by clicking on the button "Launch config. Website". The other way to launch that is to open a web browser and to enter the ip address of the device in the address bar (in example http://192.168.0.142/home.htm). Launch the configuration Website allow you to change the parameters directly with a Web browser, in example if the device have some problems of communication. Moreover, the most important possibility of this Web site is to allow you to upgrade the firmware of the LAN connector, which is different from the LAN card :

1

Open a WEB browser.

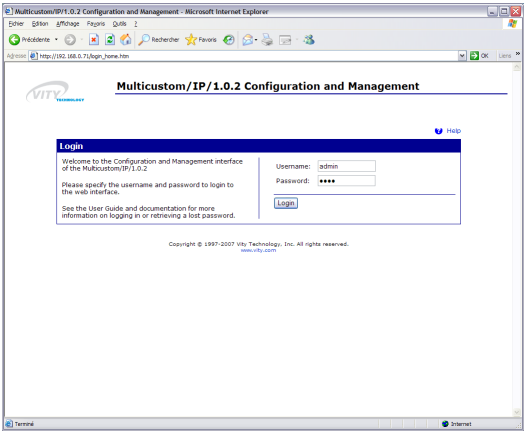
Enter the IP address of the device.

Exemple :
Http://192.168.0.142/home.htm

2

The web browser open automatically.

Enter the current username and password (by default "admin" and "1234").



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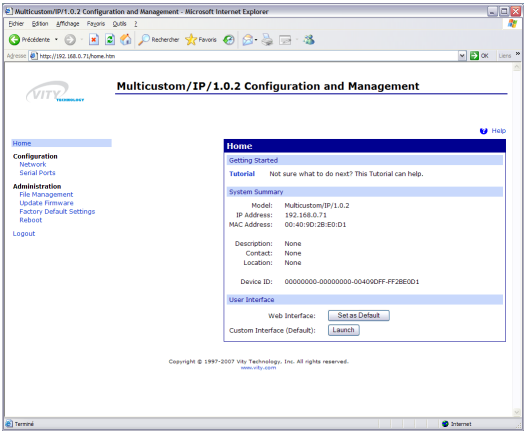
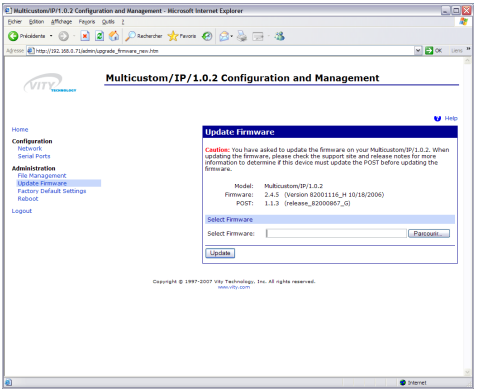
3 Click on the link "*Update Firmware*".



4 Click on "browse" button.

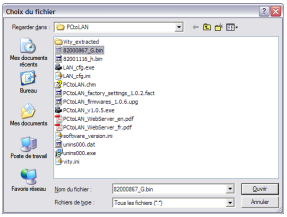


5 Go in the folder where you have installed the PctoLAN software (by default C:\program files\vity\PCtoLAN\) and select :

- if you have a LAN card with 2Mo of memory : « 82000867_G_post_2mb.bin »

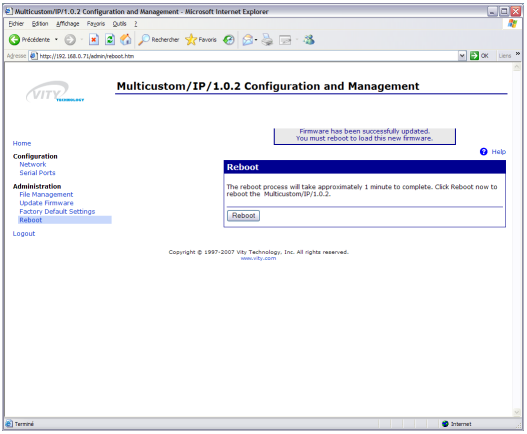
- if you have a LAN card with 4Mo of memory : « 82001229_c_post_4mb.bin »

then click on "OK".



6

Reboot the card by clicking on "Reboot".

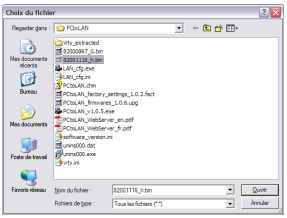


7

Do this operation a second time but :

- if you have a LAN card with 2Mo of memory select : « 82001116_h_firmware_2mb_ .bin »

- if you have a LAN card with 4Mo of memory select : « 82001120_h1_firmware_4mb .bin »

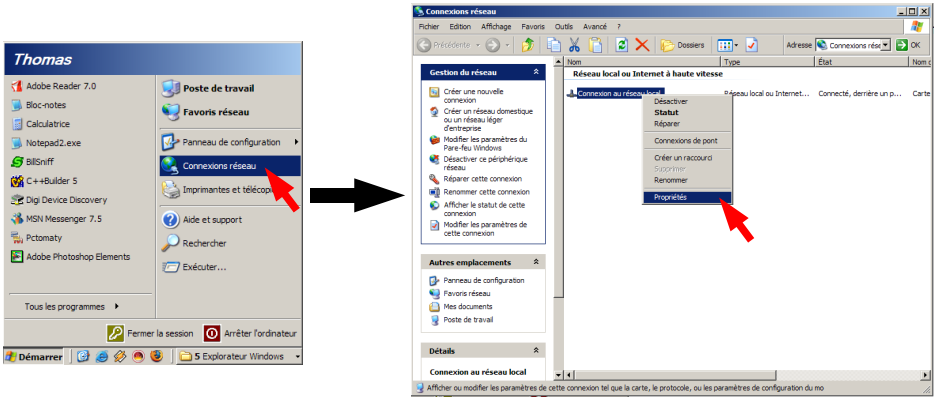


6 Open Firewall in Windows XP®

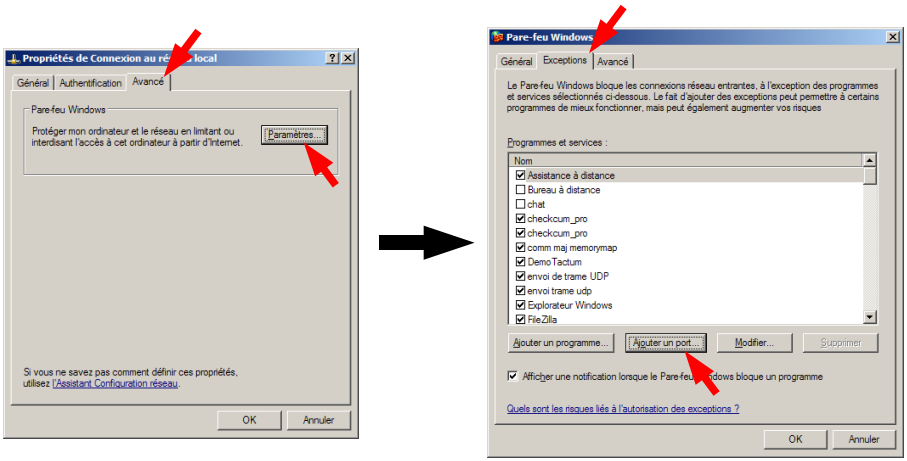
The VITYLAN functions correctly only if UDP and TCP port number 12000 is open in emission and reception in your Internet firewall.

This part describes the opening of this port into the Windows XP (SP2) integrated firewall, but it should be necessary to do it into the others Internet protection softwares and into the routers too.

First of all open the control panel of the network connections.

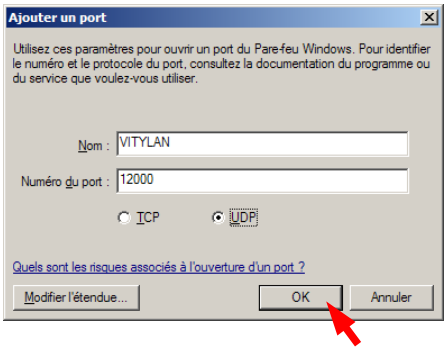


Open the "Advanced" tab and click on "Parameters", then in the new window open the "Exceptions" tab and click on "Adding a port".



In the window appearing, enter the following parameters:

- ➔ Name : VityLAN
- ➔ Number of port : 12000
- ➔ Notch UDP



Do the same but notch TCP instead of UDP. Finally click on OK.

7 Frequency Asked Questions

Errors	*Possibles solutions*
The device does not appear in the list.	- The device is configured on a subnet totally different to the computer one. The only way to know its IP address is to scan Ethernet communication (with "Ethereal" for example) during clicking on "Refresh view" button of the updating software. The device will answer, then take its IP address and configure the computer on the same subnet to make a full restoration. - The network materials (such as routers, switch and hub) blocks Multicast communications. Configure these materials to accept these communications. - The device is not correctly plug to the network or to the power supply. Check connections.
The device appears in the list but the line is red and the firmware version is "x.x.x"	- The device firmware is down to 2.0.0. Update it - The device is not well configure on its "serial port". See chapiter 1.4. - The device is on WebServer mode and a session is active. Shut it down. - The device is configured on a subnet a little different from the computer one. This blocks the communication but not the detection. Modify the network configuration of the computer or the device. - Two devices have the same IP address. Change one of these. - An other software uses the same Ethernet protocol on the computer. Shut it down (IRDump, PC2Maty ...). - The network materials (such as routers, switch and hub) blocks Multicast communications. Configure these materials and all firewalls to accept these communications.
The device appears in the list but the line is red.	- The last uploaded firmware is more recent than the one in the device. Upgrade the device.
The software print "Socket error" when a firmware upgrade.	- The device is on WebServer mode and a session is active. Shut it down. - The MediaBus is saturated by communications. Try several times to do establish the connection. If it does not work, unplug all devices except the one you want to update then try again to update.
The device does not accept a new IP address.	- The device automatically checks if the IP address is accorded to the subnet mask and the gateway. Be careful about all parameters. - If the software seems to have problem to comunicate with the device, try to do this operation by the Website of configuration. See chapter 1.3.1 for more details.

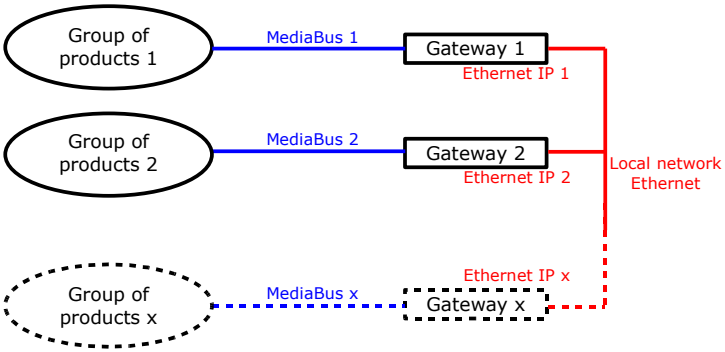
8 WebServer configuration

8.1 Wiring and installation

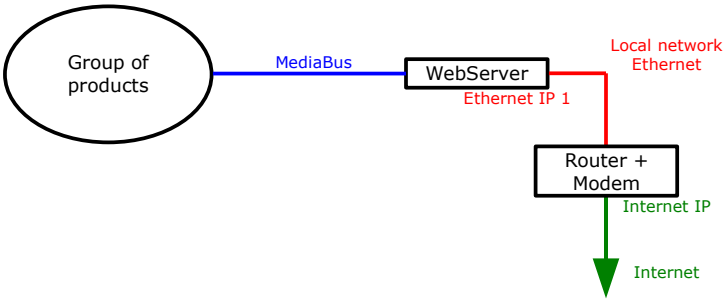
In standard mode (Ethernet/MediaBus gateway), it is not possible to connect two products (VITYLAN/MINIMONO LAN/MULTICUSTOM LAN) on the same MediaBus (VITY Technology's RS485 bus).
It is not possible to use a device in two modes at the same time. So, to ensure well work and use of all possibilities of these products, you can plug two devices on the same MediaBus only if they are in different modes (1 gateway / 1 WebServer).

Three types of installations are considerable :

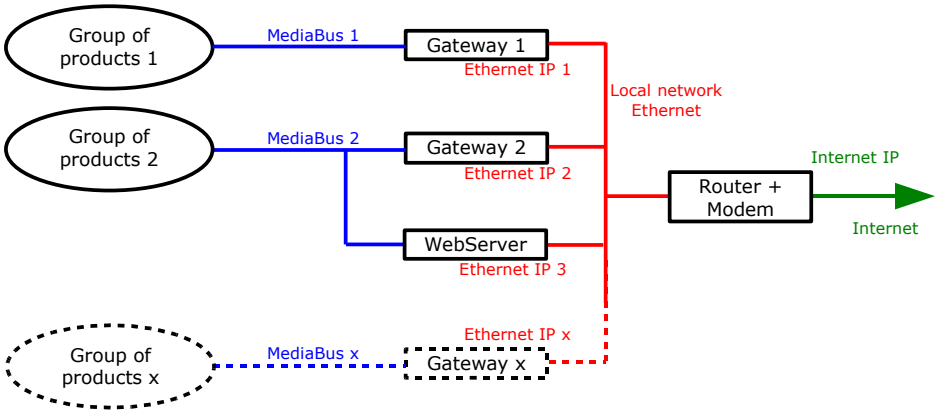
1° - Ethernet/MediaBus gateways only



2° - WebServer only



3° - WebServer + Passerelles



8.2 Configuration

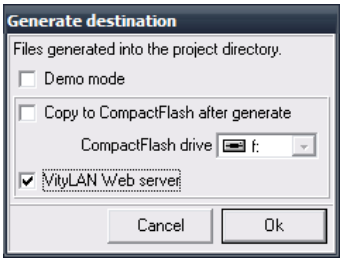
The switch of functioning mode is done by the "PCtoLAN" software. This configuration must be done when products are installing, or when you do a reorganization of existing installation. It must not be modified after that, to ensure the good feedback of the installation.
You can re-parameter old generation products to enable WebServer mode. However, the device you want to turn into WebServer mode must be unplugged from the MediaBus (RS485 bus for Vity Technology devices) before doing the switch, and then correctly re-plug.

- Launch "PCtoLAN" software, and select the device you want to switch to WebServer mode.
- For old devices, do a factory settings restoration by clicking on "Restore factory settings". This task will enable all necessary parameters (such as TCP protocol) and upload all JAVA files for the webserver. Then do the firmware upgrade if the device has older firmware than 2.0.0.
- Click on "Switch to webserver" button.

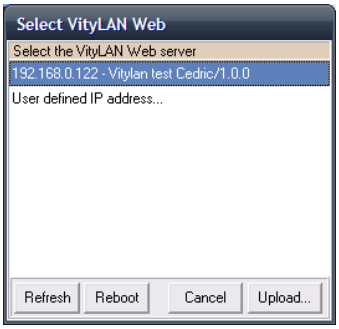
8.3 Create PCtoMATY applications and upload new files

The application upload to VityLAN Web server is a Vitmay 35 application with restrictions : special options depending of the Vimaty hardware cannot be used (JPI input, IR receiver, ect…). The file upload to VityLAN Websever cannot have a size bigger than 200ko (avois to use background for screen because picture take lot of memory space).

- Create a Vimaty 35 application and take in count the restriction...
- Compile your project as you did with Vimay's and check the VityLAN Websever options into the dialog box.



- When compilation is finished, Pctomaty ask you to select the VityLAN Webserver you want to upload... It's possible to enter a specific address if you VityLAN don't appear into the list (attention it's possible that your VityLAN is not into because of network mismatch between your computer network configuration and the VityLAN configuration. You can refresh the list with "Refresh" button or reboot a VityLAN Webserver by clicking the « reboot » button to unlock a bad situation.
- Click OK and wait during upload...



8.4 Launch the WebServer across the Internet

You can launch the Webserver when you are not connected to the local network on which the device is connected by open a web browser and enter the **Internet IP address of your Modem/ Broadband adaptator on which the device is connected.**

So to ensure full time accessibility of your WebServer, you must ask your Internet provider for a static Internet IP address.