

USB over IP

1. Introduction

The aim of the USB over IP is to share USB devices over the network using the eWON.

This means that the eWON Cosy 131 which is built with a USB port allows the use of its USB over IP sharing capabilities through Talk2M.

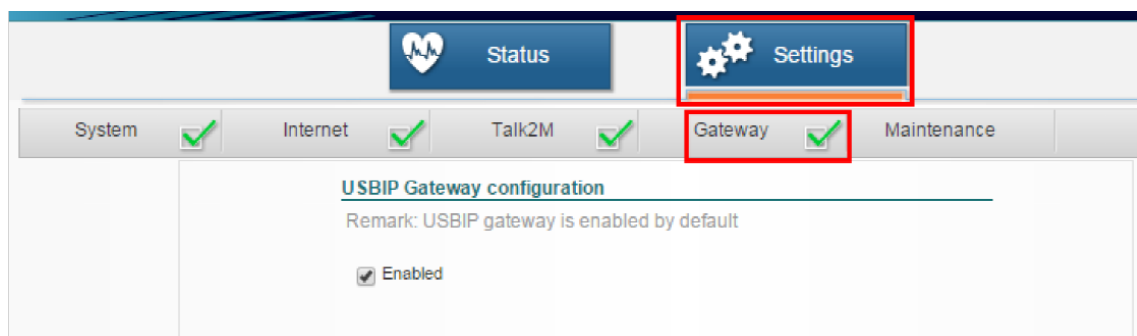
It is basically just as if you would plug the USB device directly in the PC even if this USB device connected to the eWON is located on the other side of the world.

2. eWON Configuration

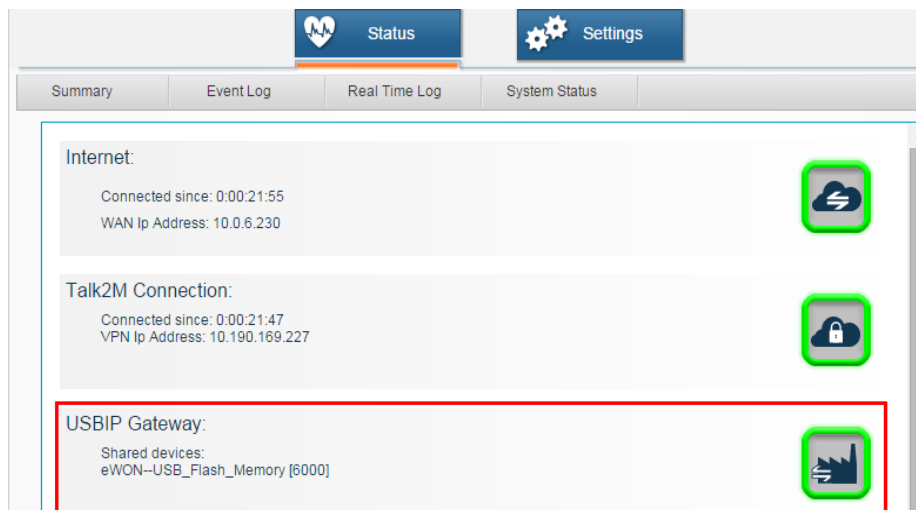
The setup on the eWON is simple: you don't have anything to do. The parameters used for this sharing feature are enabled by default.

There is only one parameter you need to check: the firmware version. The required version is 9.0s0 or higher.

During the Cosy 1-2-3 setup wizard configuration, you will have to set up the Gateway section. This is the place to disable your USB to IP if wanted (by default, it is activated).



Once the wizard completed, if a USB is plugged in, you will see it on the status page:



2.1. Advanced Parameters

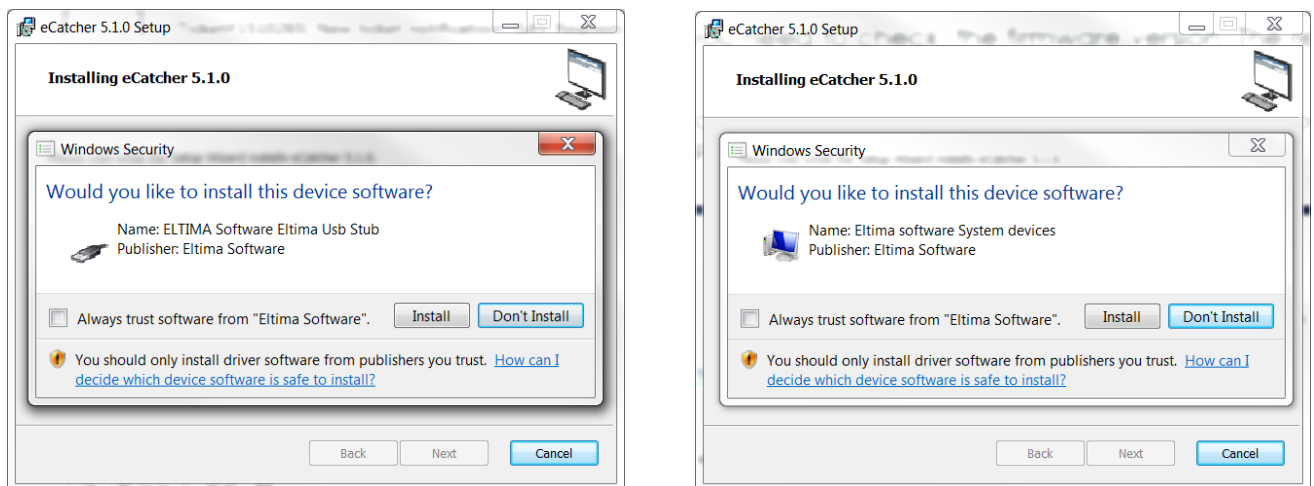
The default configuration should be enough for most of the users. But if you were to be in the situation where you need to configure extra settings for the USB connection, refer to our [Appendix A - Advanced Parameters](#)

3. Configuration on PC

3.1. Installation

Same as the eWON configuration, the setup of your PC is very simple too: the only parameter you need to check in order to use the USB connection is the version of your eCatcher: v5.1 or higher.

When installing eCatcher 5.1 or higher for the first time, you will be asked to install the Eltima software. The USB connection in eCatcher relies on the drivers provided by this software. Those drivers were specifically modified to work in an eWON environment.

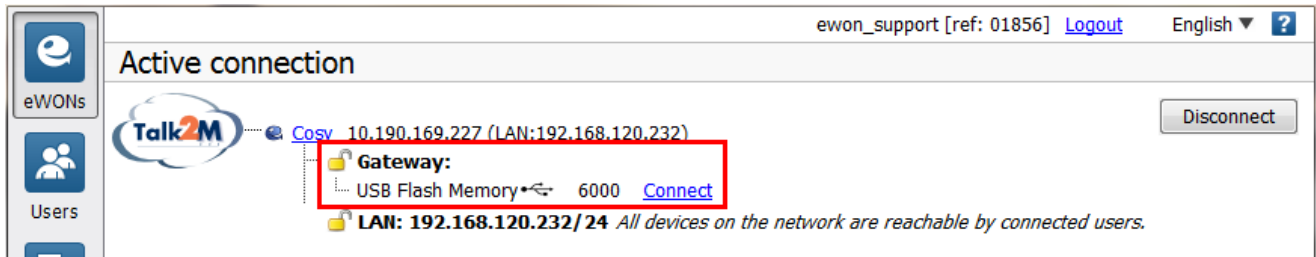


Once the Eltima certificates has been trusted, you wont be asked to install them again in future versions of eCatcher.

3.2. Connection

If a USB device is plugged in the eWON and this eWON is reachable (LAN, WAN, VPN), the USB device can now be shared on the network.

When you're logged in to your Talk2M account and connected to an eWON with a USB device plugged in, you will have the possibility to reach your USB device.



The detection of a USB device plugged in the eWON is automatic. When eCatcher detects a USB device, this one will be added under the Gateway section.

- Note -

If your USB device doesn't appear after you plugged it in the eWON, wait a few seconds (around 15 seconds for an automatic eCatcher refresh). If you still don't see it afterwards, manually hit the refresh button in eCatcher.

To access your USB device, simply click on the Connect link. Status and USB icon will change to indicate a succeeded connection.



You can now access it just as if you were locally connected to it. This means browsing your files explorer to reach the USB key, watch the USB Camera through a video software, reach the PLC via the PLC software ...

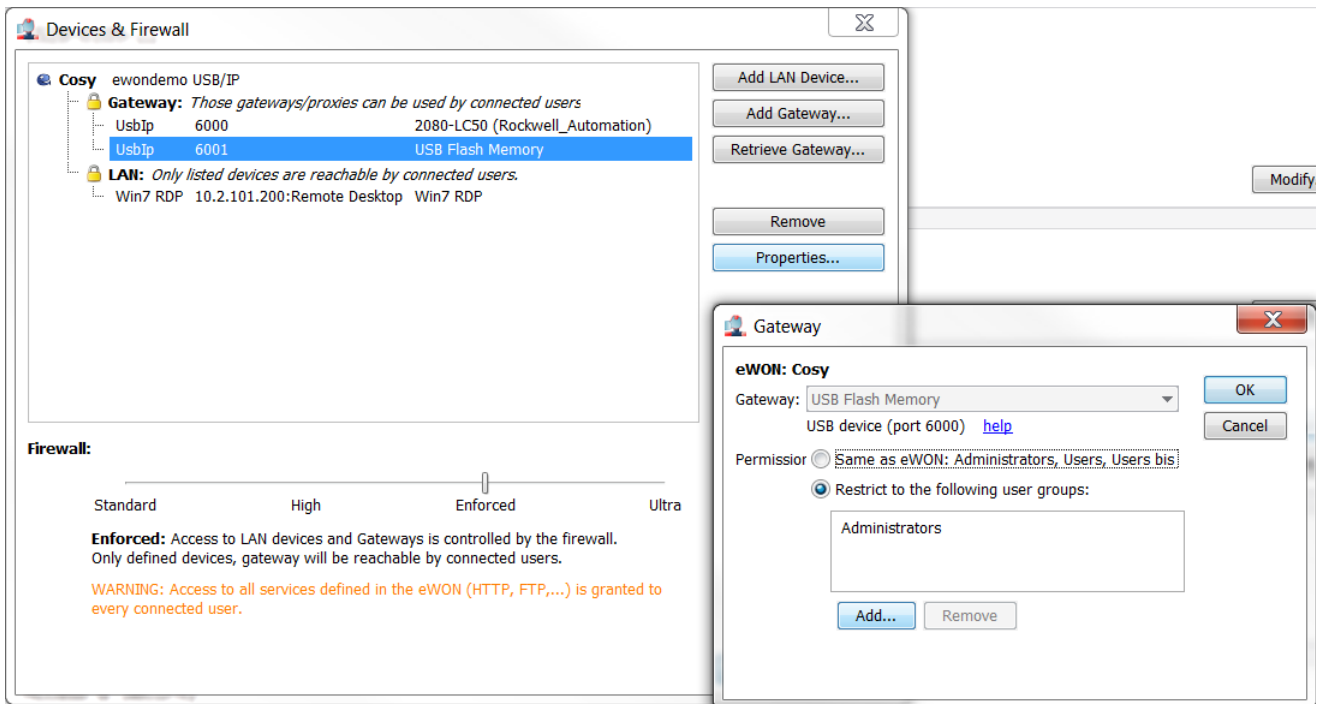
3.3. Protection

In a Talk2M Pro account, the USB connection can be configured to be accessible to only a group of users.

To do so, go in the properties of the eWON and click on the "Configure LAN Devices & Firewall" button.

First, check that the firewall level is at "Enforced" at minimum. Select the USB device that needs to be configured and click on the Properties button.

Here you will be able to set the permission either the same as the eWON either to one or several groups of users.



4. Limitations

It is possible to connect a USB HUB to eWON's USB port and therefore connect more than a single USB device. The eWON allows a connection of MAXIMUM 10 devices.

USB devices shared over IP can suffer from networking problems. If your connection is slow, the USB connection will be slow.

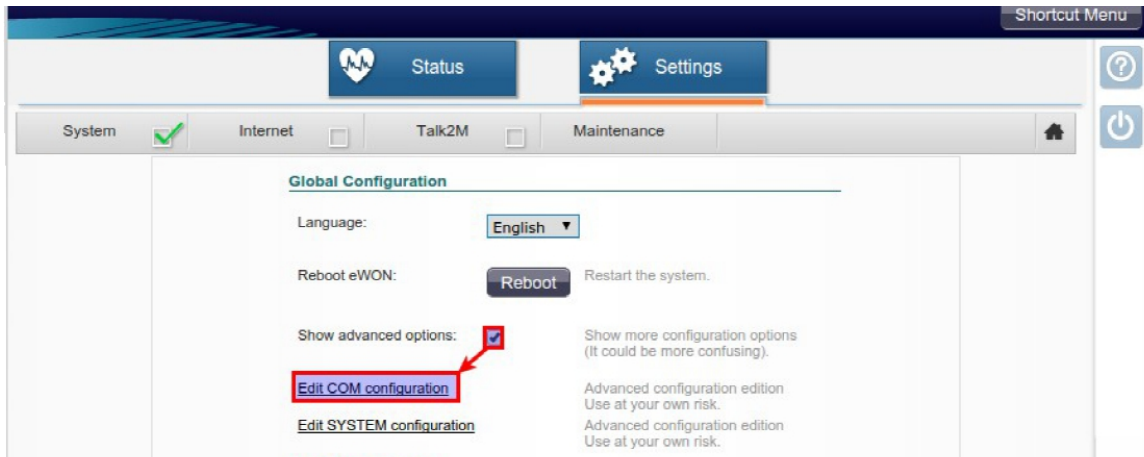
Be patient. Even if the software indicates the USB port has been connected, your computer might take time (up to a few minutes) to process and recognize it. You should always see a notification warning you the device is ready to be used.

5. Supported devices

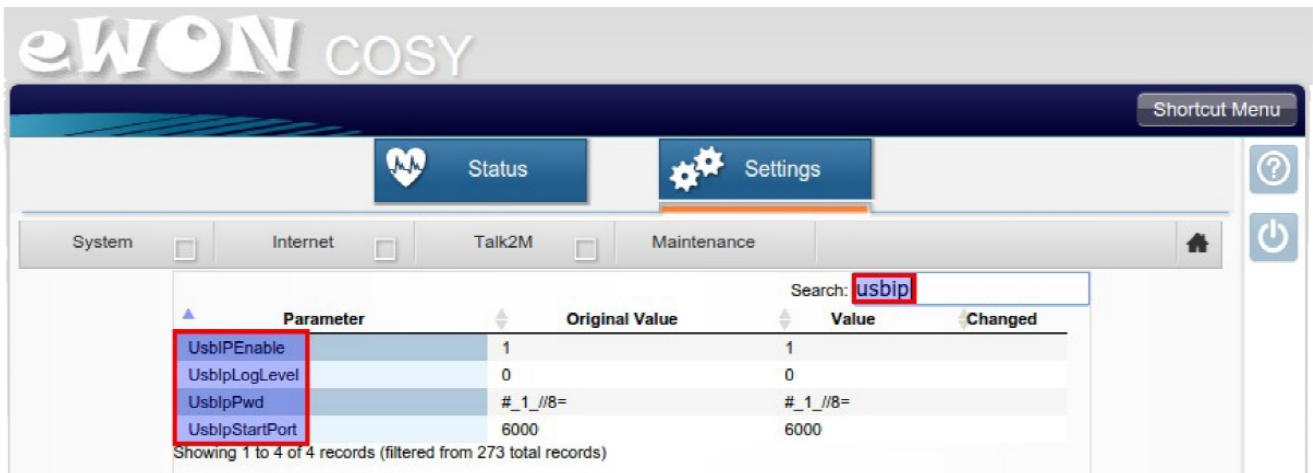
There is a **non-exhaustive list** of devices we tested and can confirm they work with the eWON on [our Support website](#).

Appendix A - Advanced Parameters

On the eWON, the USB over IP feature is controlled by few parameters in the com config file. On the Cosy 131, you can change the configuration as described in the following picture:



Once you opened the file, you can find the different parameters by typing "usbip" in the search box.



These different parameters are:

- **UsbIPEnable** : 0 to disable, 1 to enable (default value)
- **UsbIPLogLevel** : 0 to disable (default value), 1 for some logs, 2 for full logs
- **UsbIPPwd** : a string representing your password.
Pay attention that if a password is set, the USB device will not be shown anymore in eCatcher
- **UsbIPStartPort** : an integer representing the port range for shared devices.
If the "UsbIPStartPort" is X, the 10th device would be shared on port X + 9
Default is 6000, so the 1st device will be shared on port 6000. The second one will be on 6001 and so on.

Make sure that your IT allows communication on this ports if you use direct access to your eWON.

Be aware that port allocation is not deterministic. You cannot ensure that a device X got port Y assigned, this can change at any moment.

Appendix B - Eltima Software Configuration

It is possible to connect to the shared USB devices without eCatcher. To do so, you need to download and install the [Eltima USB Gateway Software](#)

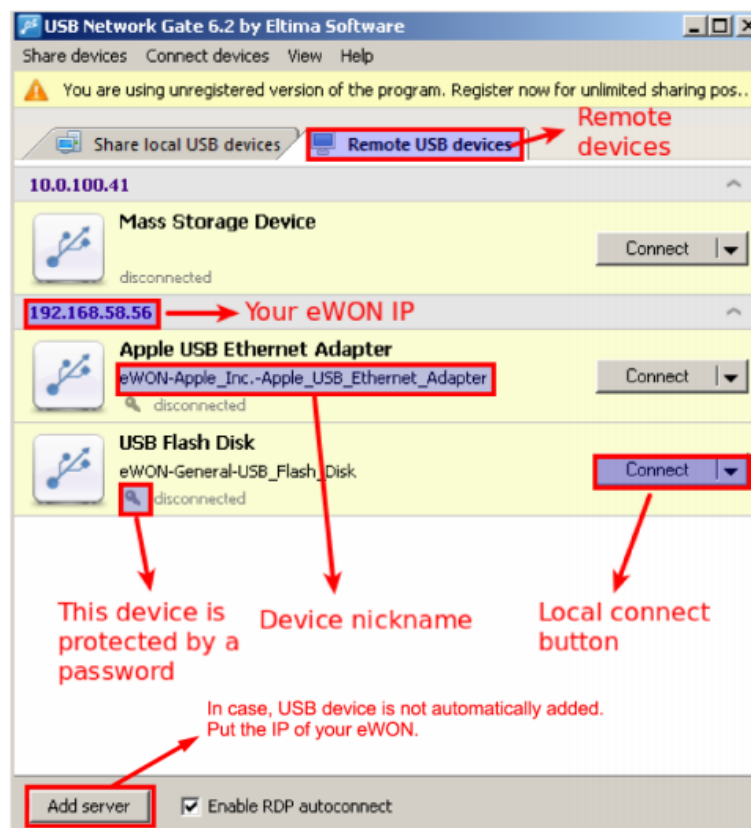
eCatcher uses the drivers of this Eltima software. Those drivers were specifically modified to work in an eWON environment. By using the Eltima software itself, you will be using the "normal" drivers.

This tool, developed by Eltima, lets you enjoy the USB over IP feature. When working with Eltima in an eWON environment, a free license is enough.

Just run "USB Network gate" on a computer with a reachable eWON. By reachable eWON, it means:

- You are locally connected to the same network the eWON is. The shared USB ports will show up automatically in the software.
- Your eWON is connected to an eFive
- You are connected directly LAN to USB

You can find here below an image describing all interesting parts of the software.





Click on the "Connect" button and the desired remote device will be available as it was plugged locally. Depending on the type of USB device (key, PLC...), you can use the corresponding tool (File explorer, PLC software...) to access it.

If you have plugged a USB device in your eWON and it doesn't show up in this software, make sure that your eWON and PC can communicate with each other.

Only eWON with USB device connected will show up on the Remote USB devices window.



Revision

Revision History

Revision Level	Date	Description
1.0	29/06/2015	Creation of document
1.1	31/08/2015	Added Wizard COnfiguration
1.2	16/10/2015	USB sharing integrated to eCatcher

Document build number: 34

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