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 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 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).
If a USB is plugged in, you will see it on the status page:

2.1. Advanced Parameters

The USB over IP feature is controlled by parameters in the com config file. On the Cosy 131’s web interface, 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.
  By setting a password, an icon will appear near the status in the list of available shared USB ports.
- **UsbIPStartPort**: an integer representing the port range for shared devices.
  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.
3. Configuration on PC

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

We are currently working on an internal integrated solution to be able to reach those shared USB ports.

But for the time being, you need to install the Eltima USB Gateway Software.

This tool is developed by Eltima. To enjoy the USB over IP feature, you just need the trial version. There is no need to purchase a license.

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.
- You are connected via eCatcher through Talk2M. To see the shared USB ports, you need to add a server in the software. The IP of the server is actually the IP of the eWON (either the VPN IP or its LAN IP).

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

You can find here beneath an image describing all interesting (eWON POV) parts of the software.

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.
4. Good to Know

- 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.

- If the “UsbIpStartPort” is X, the 10th device would be shared on port X + 9. 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.

- 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 the device plugged in that port. You should always wait the notification informing that the device is ready to be used.

- For PLC connection, you should have always connected locally at least once the computer to the PLC in a direct way (Ethernet, Serial, MPI or USB link) before using the software to connect in a remote way.

- To avoid future reconnection issues, it is recommended to click on the “Disconnect” button to terminate a remote access session instead of disconnecting it by closing the software.
Revision Information

Revision

Revision History

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<th>Revision Level</th>
<th>Date</th>
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<tr>
<td>1.0</td>
<td>03/07/2015</td>
<td>Creation of document</td>
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<tr>
<td>1.1</td>
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<td>Added Wizard Configuration</td>
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