Application Note
Allen Bradley Micro810/830 PLCs and Connected Components Workbench (CCW)

This document guides you through the setup of proprietary vendor specific software installed on you PC. Your supervisor may provide you with additional or alternative instructions.

The document consists of standard instructions that may not fit your particular solution. Please visit our support website for latest revisions of documentation and firmware:

http://www.secomea.com

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Prerequisites for This Guide

The following guide will assist you to setup a remote and online connection to the Allen Bradley Micro830 PLC placed on the customer site using your Connected Components Workbench software installed on your PC.

Prerequisites for this guide are:

- You have an operational LinkManager installed on your PC with a GateManager certificate that allows you to connect to the SiteManager agents.

- You have the Connected Components Workbench software installed.

- You have the Allen Bradley device agent installed and configured on the SiteManager at the remote site, and there is access between the SiteManager and the PLC.

  - A USB attached Micro830 PLC must be configured with agent device type **Allen-Bradley / USB PLC** on the SiteManager. Note that this connection type requires a SiteManager model with USB support and minimum SiteManager and LinkManager version 12155.

  - A USB attached Micro810 PLC must be configured with agent device type **Allen-Bradley / USB Serial Adapter** on the SiteManager. Note that this connection type requires a SiteManager model with USB support and minimum SiteManager and LinkManager version 13094.

  - A USB to DATA converter, such as the 1784-U2DHP USB converter must be configured with a Custom / USB agent, and the parameter field must be set to 14c0:0009.

If any of these prerequisites are not met, you should contact the person / department responsible within your own company or at the company responsible hereof.
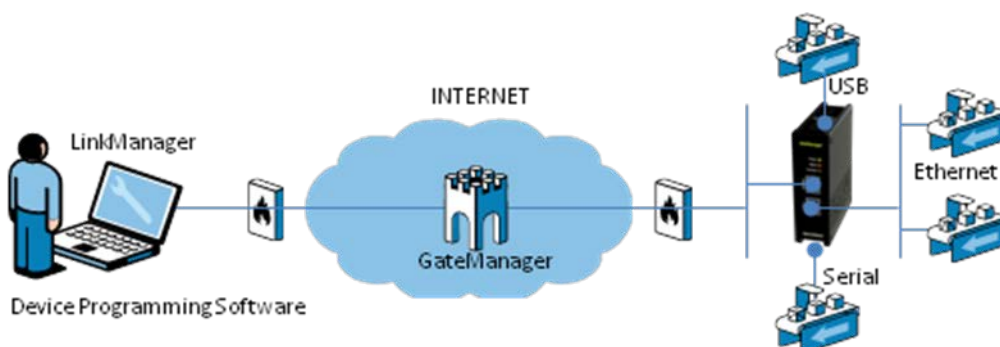
System Overview

The communication path is as follows:

CCW → LinkManager → GateManager → SiteManager → PLC.

This guide will elaborate on the components marked with **bold.**

The following system overview depicts a SiteManager 1029/3229 at the customer location:

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1. Connecting Micro830 remotely via USB

NOTE: This section applies to an agent configured in the SiteManager by the type **Allen-Bradley / USB PLC**.

The following is verified with CCW version 1.0 and LinkManager version 12155. The procedure may be further streamlined with later version of Link-Manager.
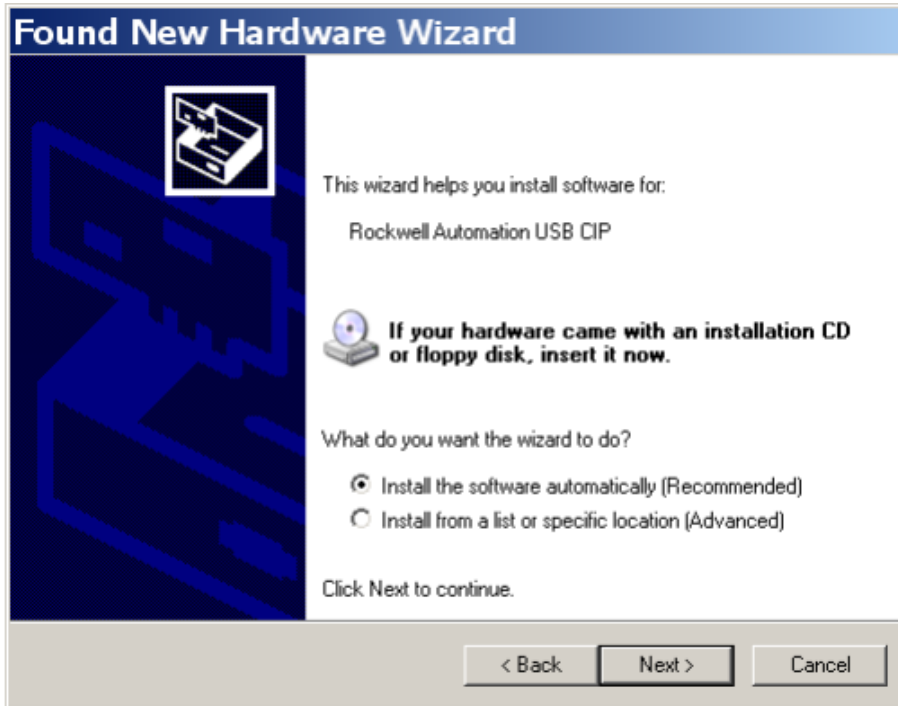
1. Locate the Allen-Bradley Micro830 PLC agent and click on it to establish a connection to it:
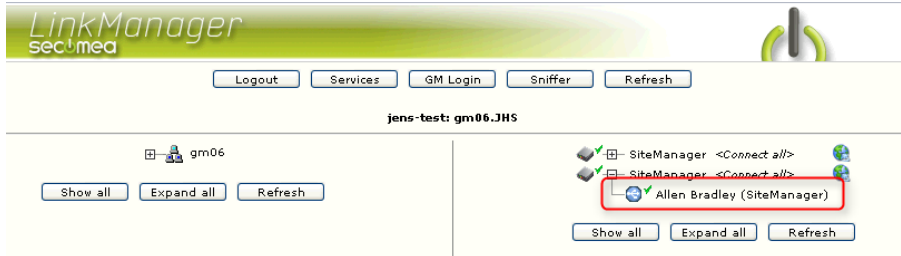
2. First time the connection is opened, a "Found New Hardware" Wizard may pop up. Select to not search for drivers on Windows Update site.

3. Select "Install the software automatically".

NOTE: In the latest LinkManager firmware the text "USB Device Over IP" have changed to reflect the name of device USB driver.
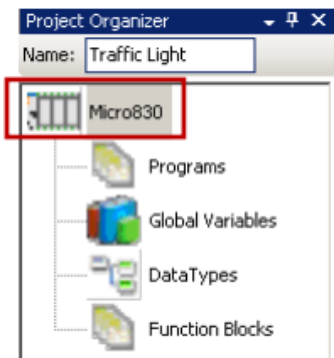
4. The wizard will now search for the driver.

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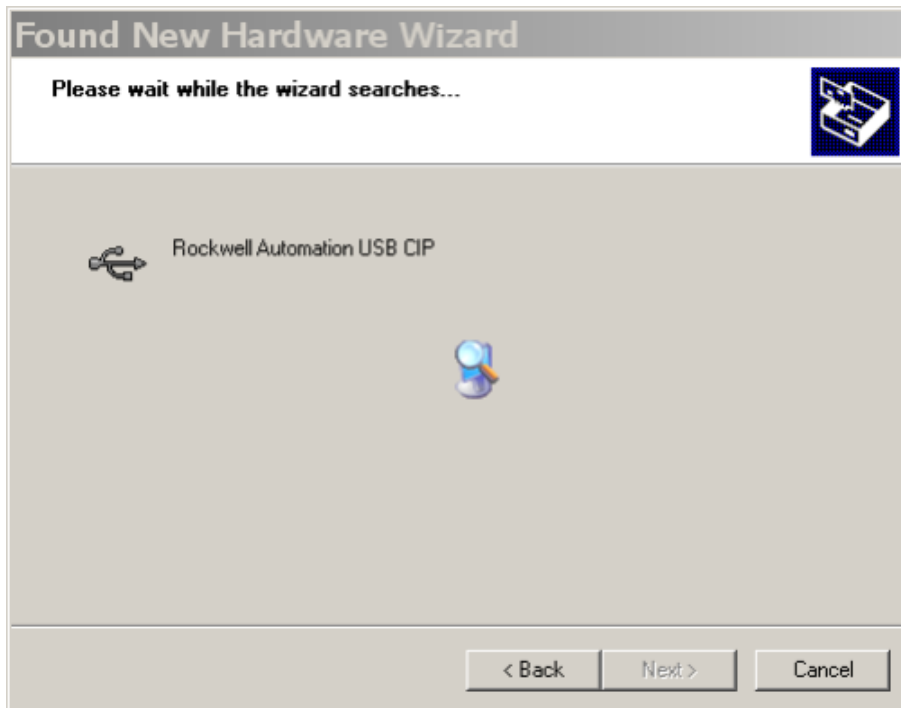
5. After the wizard is complete, the driver is installed, and you can click Finish.
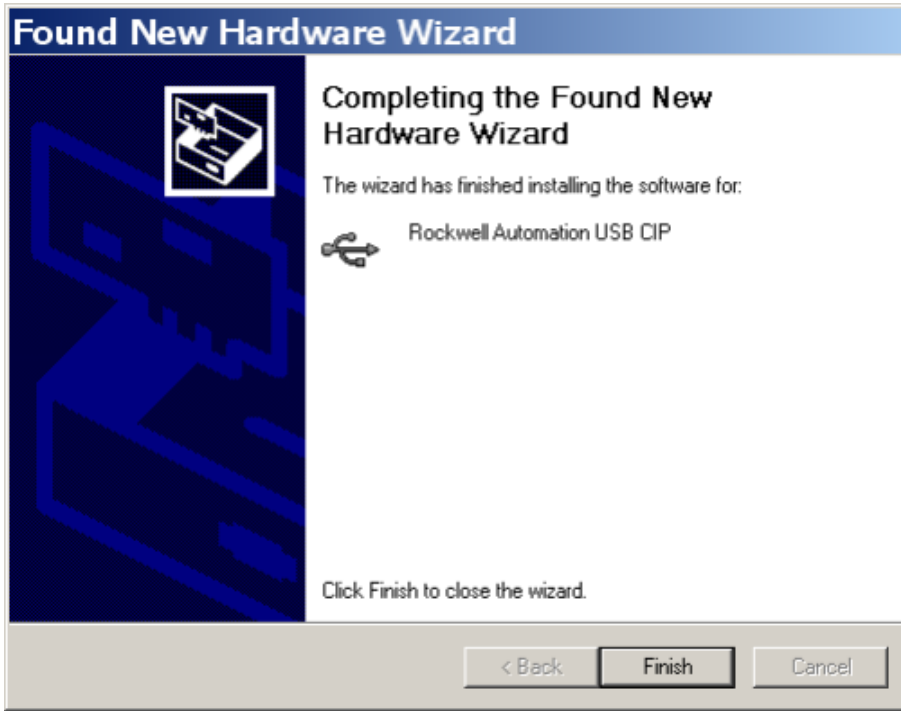
6. To establish a connection to the PLC from the Connected Components Workbench (CCW), you first need to open a project where the PLC is present. Then, double click on the **Micro830** under Project Organizer.

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7. Click on the **Connect** button
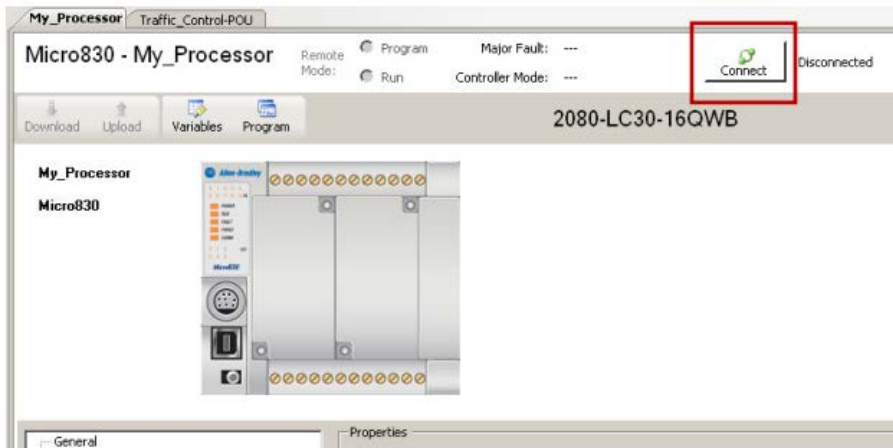
8. Browse and **Select** the controller from the Connection Browser screen
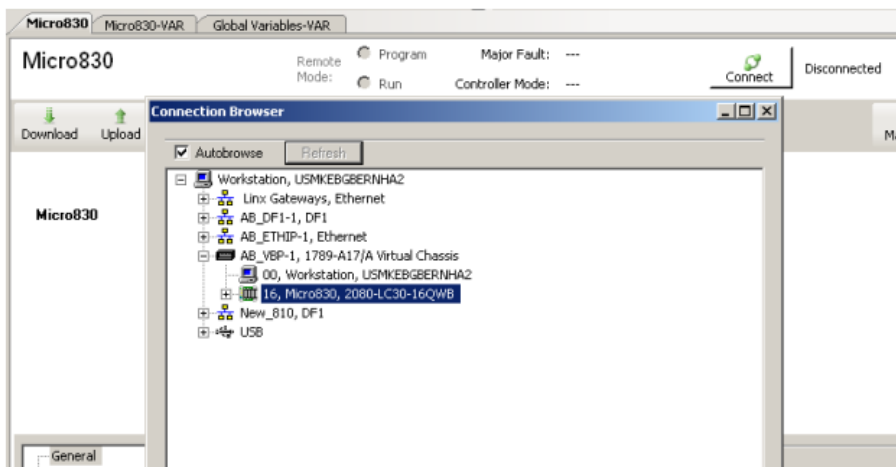
9. Click OK and the status on the device toolbar will indicate "Connected". If successfully connected, the button changes to Disconnect and the Controller Mode is displayed. Being Connected means the CCW is now connected and/or communicating via USB with the Micro830.

2. Connecting Micro810 remotely via USB

NOTE: This section applies to an agent configured in the SiteManager by the type **Allen-Bradley / USB-Serial Adapter**.

The following description refers to the CCW version 4.0. CCW version 2.0 should also work, but has not been verified in the Secomea test labs.

2.1. Fixing the CCW installation to use a working USB driver

The CCW 4.0 installation will install two drivers on the PC: The original and updated driver from Silicon Labs (version 6.3a) and a newer and presumably proprietary Rockwell driver (version 1.1). Only the Silicon Labs drivers works in relation to LinkManager. Unfortunately the .inf file installed with CCW 4.0 contains the ID of the proprietary Rockwell driver, which means Windows will automatically select the non-working driver.

The working Silicon Labs driver is installed as the last step of the general CCW 4.0 installation:
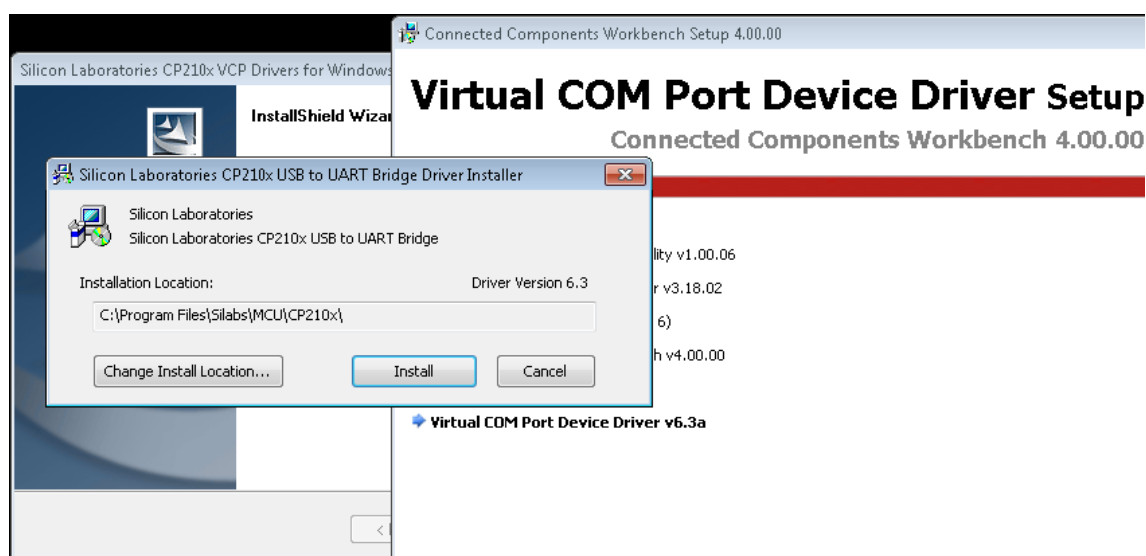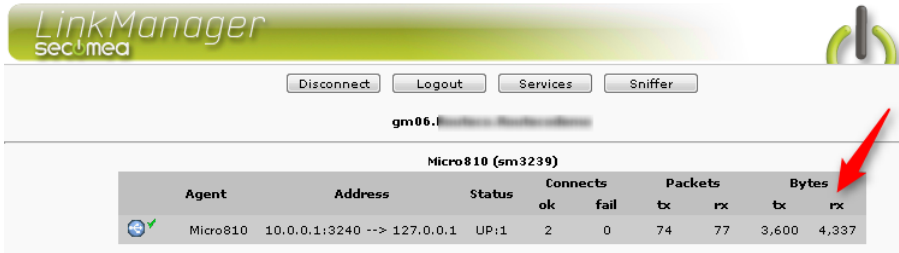
The following steps describes how to verify which driver is installed, and how to install the Silicon driver:

1. First **ensure that CCW and RSLinx are NOT active.** If these are running during the verification, you may risk Windows to hang!

2. Start LinkManager and locate the Micro810 PLC. Click it to establish a connection to it:

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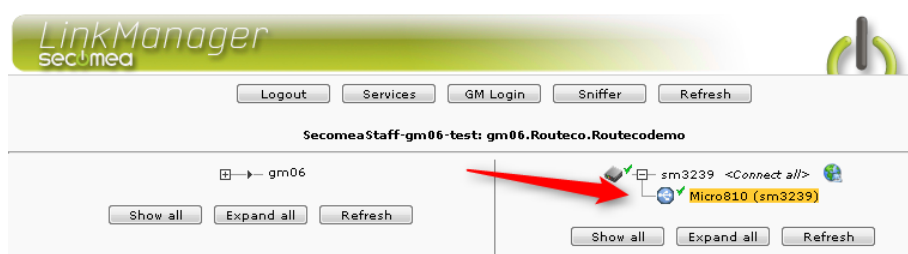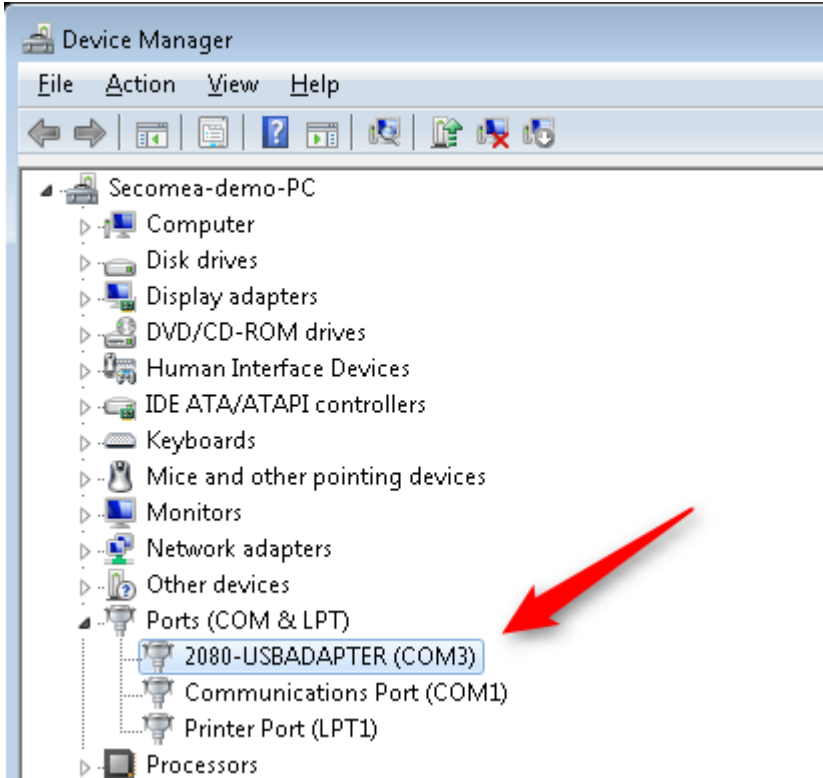
3. You should now see some traffic on the agent

4. Start Windows Device Manager, and unfold the **Ports (COM & LPT)** item. You should see a driver called "2080-USBADAPTER" that was automatically started as result of the LinkManager connection.
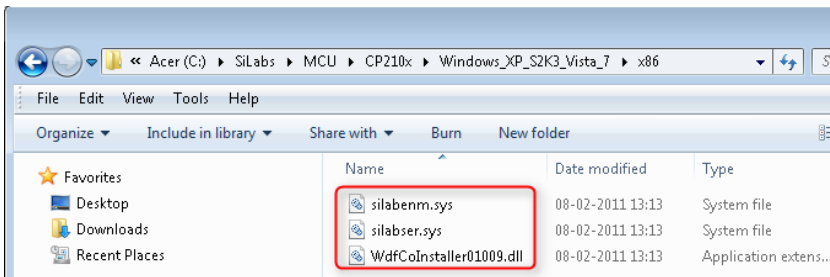
5. Right click the driver, and select **Driver > Driver Details**. If the file **sila-benm.sys** does not have a provider listed and is version 1.0, you will need to update the drivers.
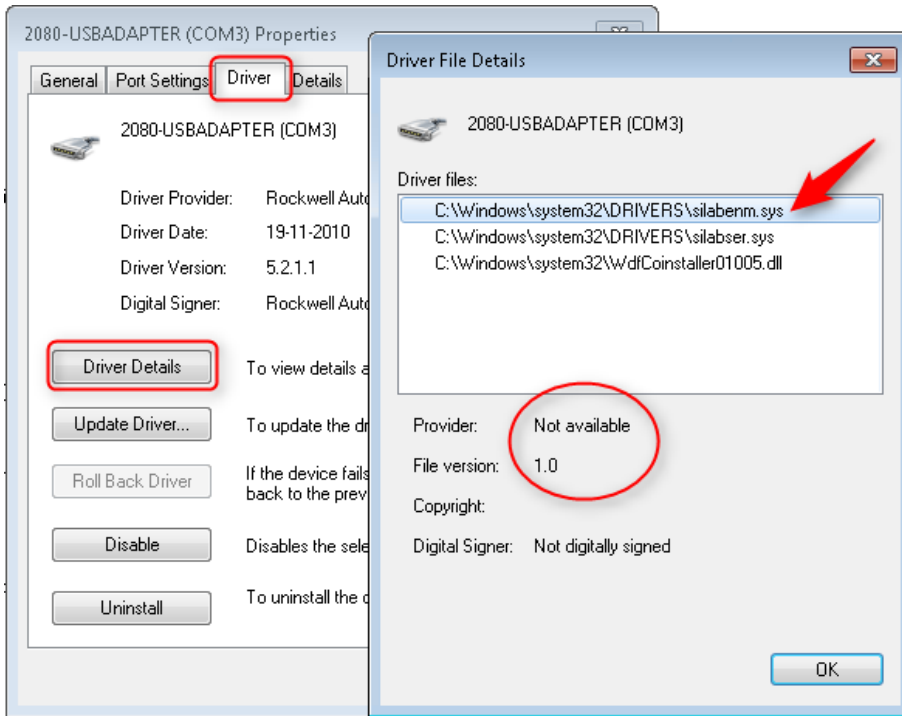
6. Disconnect the LinkManager again,

7. Locate the files in the following folder, which were installed with CCW:

    C:\SiLabs\MCU\CP210x\Windows_XP_S2K3_Vista_7\x86 or ..**x64**

8. Copy the above files into the this folder (Copy and Replace)

    C:\Windows\System32\drivers

9. Connect with LinkManager to the agent again

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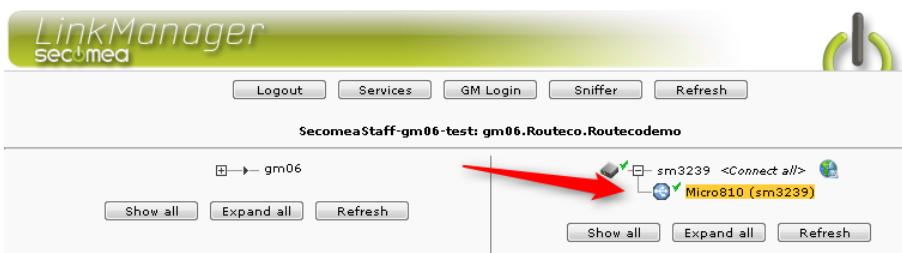
10. If checking the Driver in the device manager, you should see that the **sila-benm.sys** now shows Silicon Laboratories as Provider, and version 1.1.0.0
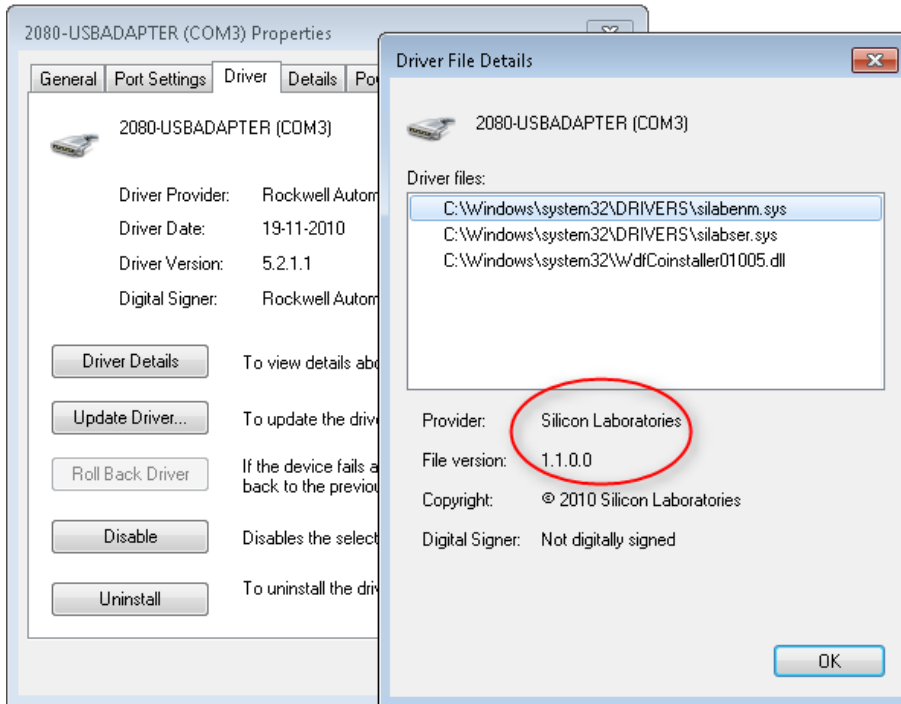
2.2. Connect to the Micro810 with CCW

NOTE: The following assumes you have activated the correct USB driver according to the procedure described above. If not, your PC may hang when starting the CCW or RSLinx programs.
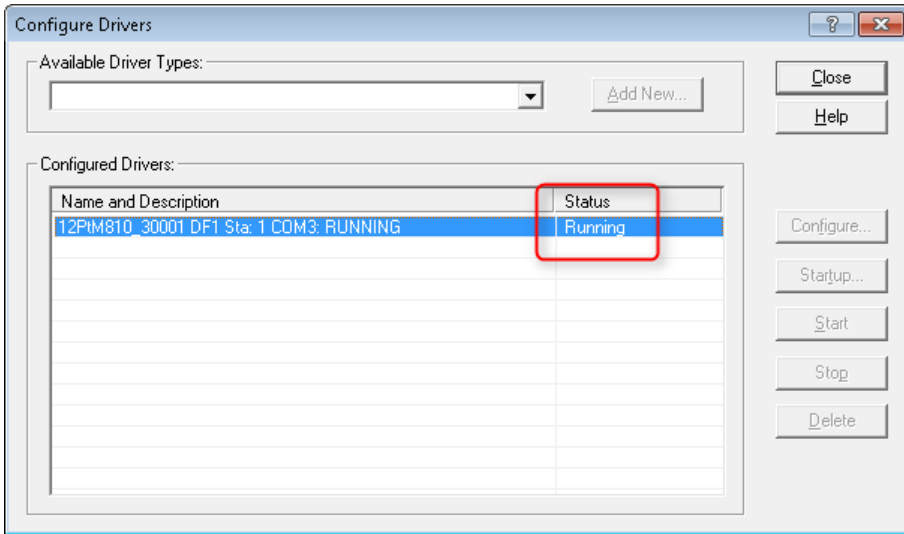
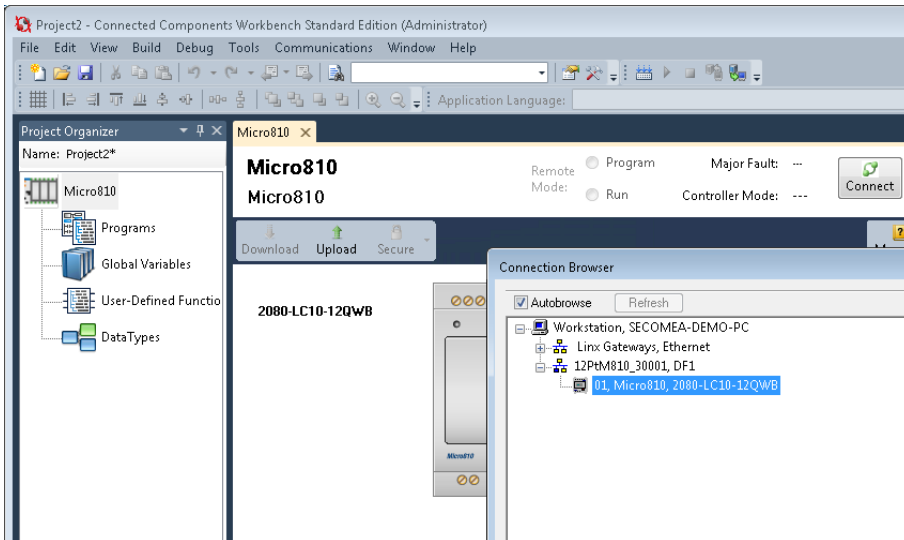1. Locate the Allen-Bradley USB PLC agent and click on it to establish a connection to it:
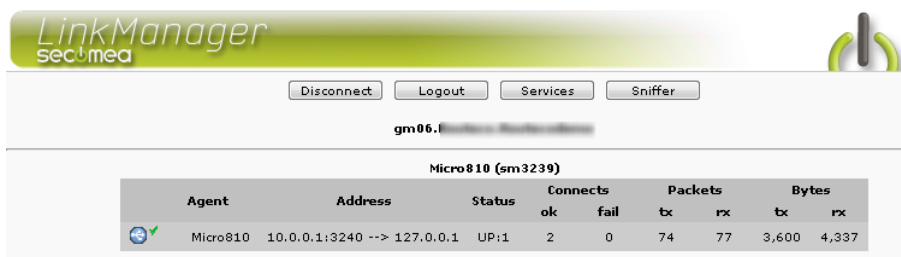
2. Start the CCW and select **Communications > Configure**.
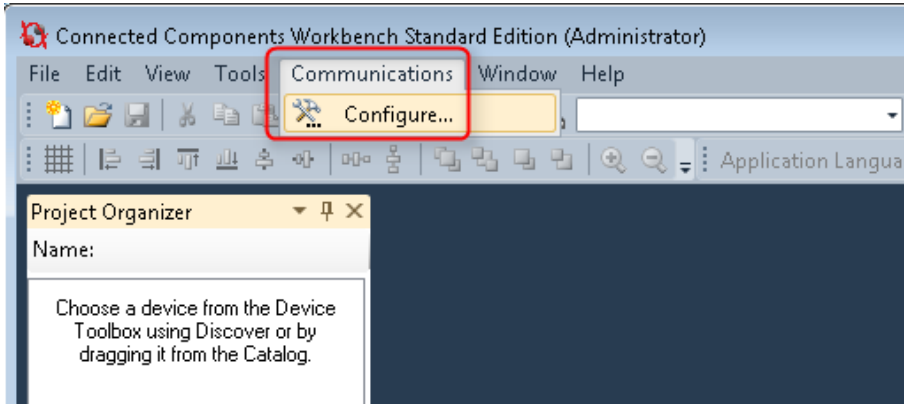
3. You should now see that the COM driver is running.

4. You should now be able to Connect to the PLC and perform the actions you would normally do when connected directly to the PLC.

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3. USB connection via Windows XP under VMWare

You can run the Connected Components Workbench (CCW) software inside a VMWare engine, to an Allen Bradley PLC that is USB attached to a SiteManager.

Important: LinkManager must run inside the virtual machine also and must be version 12155 or later (It is highly recommend to upgrade to minimum 13094)

The following illustrates VMWare Player, which can be downloaded from http://www.vmware.com/support/product-support/player/, and for LinkManager running outside the virtual machine (i.e. on the host system)

1. Locate your Windows XP that has CCW installed, and enter **Edit virtual machine settings.**

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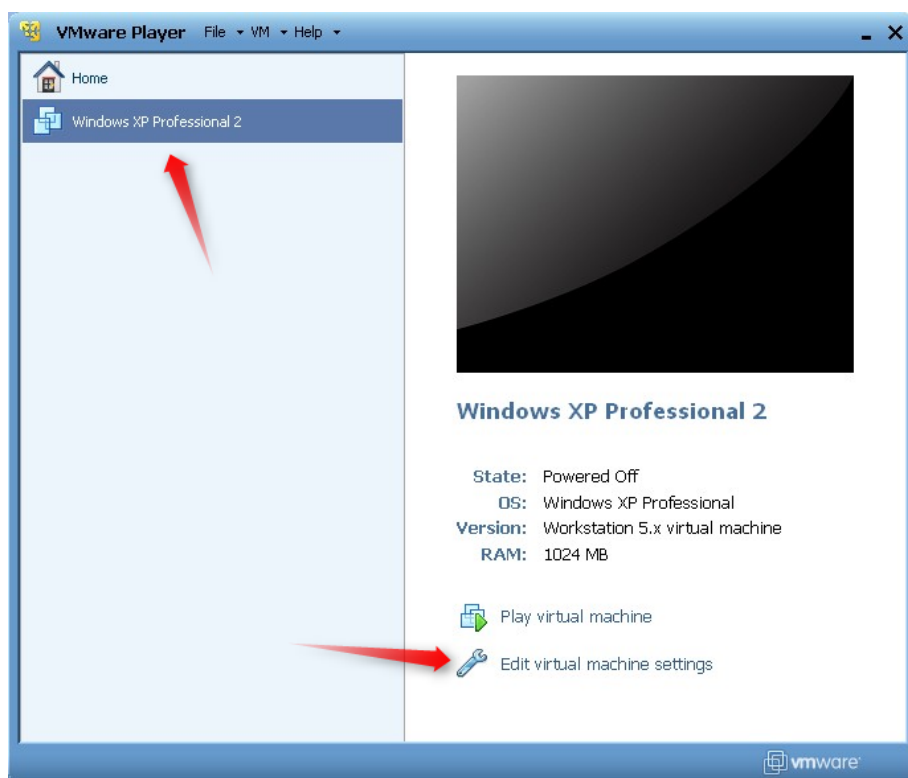
2. Make sure that **USB Controller** has been added as Hardware component**:**
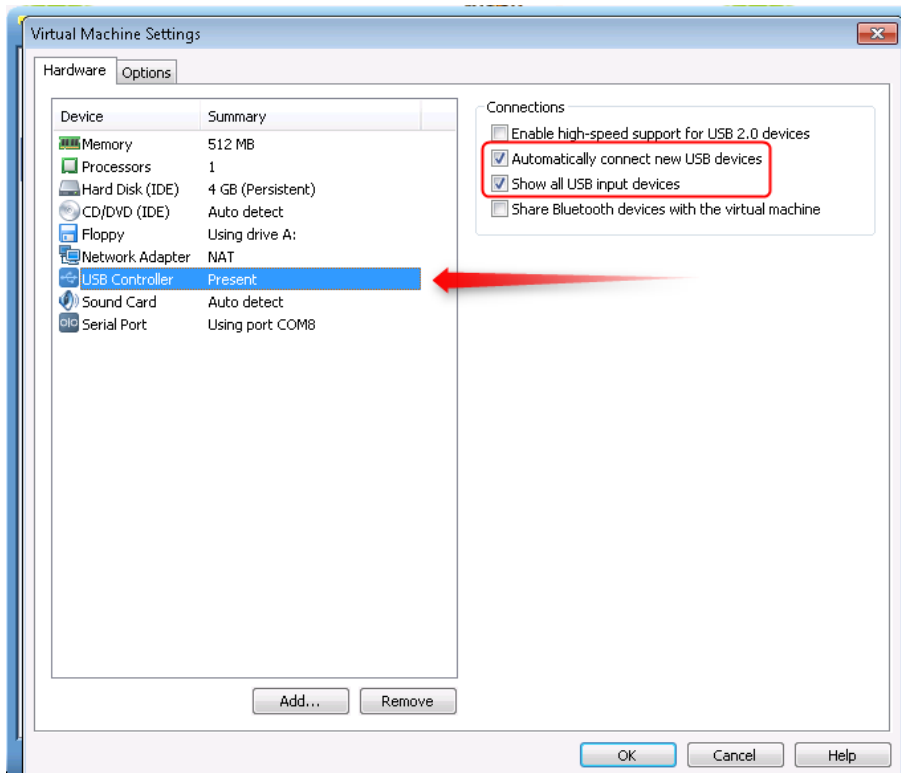
3. Start the VMWare engine and the LinkManager inside the VMWare engine.

4. Follow the procedure of the previous sections to connect to the PLC via LinkManager

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