

3 PRO E-IPM (IP Module)

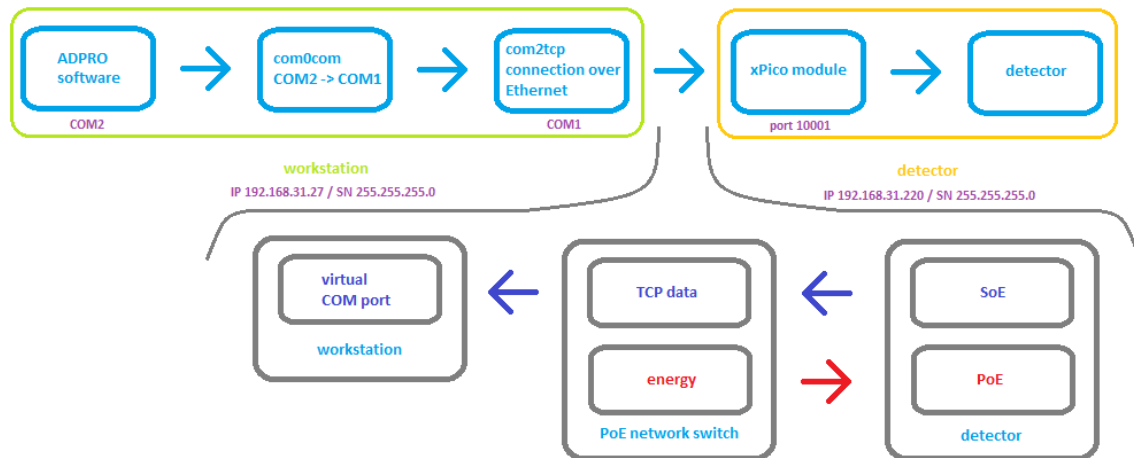


ADPRO PRO E detectors have RS-485 interfaces which allow for remote maintenance and full alarm management via up to 1000 m long field bus connection. (see the ADPRO PRO E PIR Installation Manual, document no. (27386), section "Multiple detectors at interface module IFM-485-ST").

Using the IP Module (IPM) converts this RS-485 bus to Ethernet and makes it available remotely through the IP address of the module.

The following instructions show how to set up and prepare the IP Module and how to create a Virtual COM Port (VCP) on a PC in order to access the detector connected to the IPM.

3.1 System Overview



This overview shows all three parts of the system: the workstation, the PRO E detector and the data infrastructure in-between.

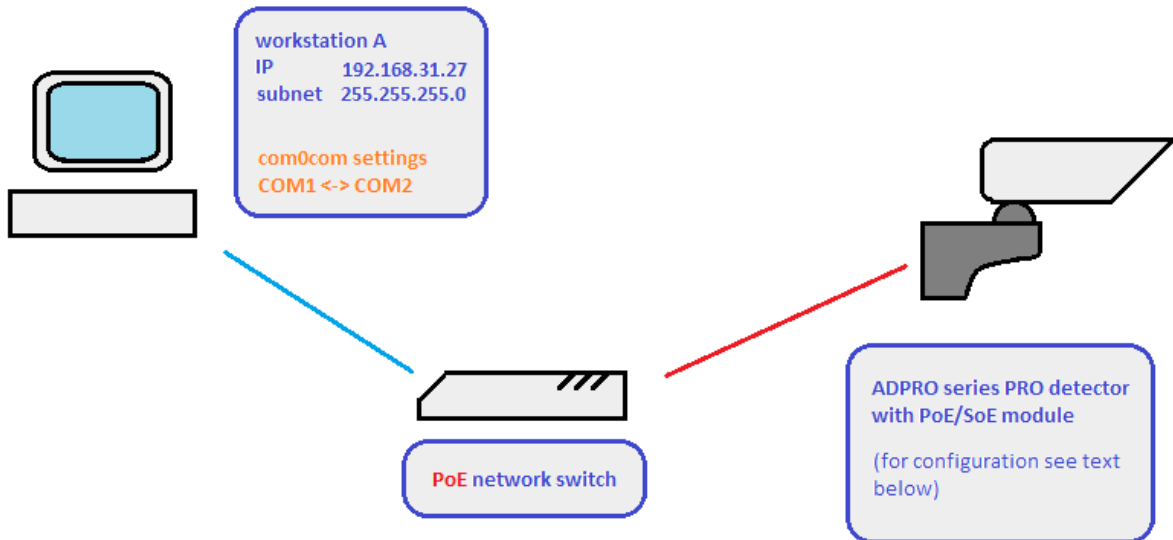
Workstation:

The ADPRO software (see "PRO E-Tool Software" on page 3) needs to connect to a serial COM port to access the detectors. Normally this is a regular RS-232 COM port, which then gets converted to RS-485 and can directly communicate to detectors on the bus. If there is a USB connected RS-485 converter, the COM port used is a Virtual COM Port (VCP) which is created by a driver (VCP driver from FTDIchip.com) to direct the data stream from the USB port to the PRO Software.

When using the IP Module, you need a driver (com2tcp) to create a VCP from the IP address. This VCP cannot be same as the one the PRO software connects to, so another VCP should be created and then connected to the other VCP through a Virtual Null Modem Cable (com0com driver).

Detector:

The IP Module should be configured to have a known IP address (using the Lantronix DeviceInstaller) and then connected to a Power over Ethernet (PoE) enabled switch.

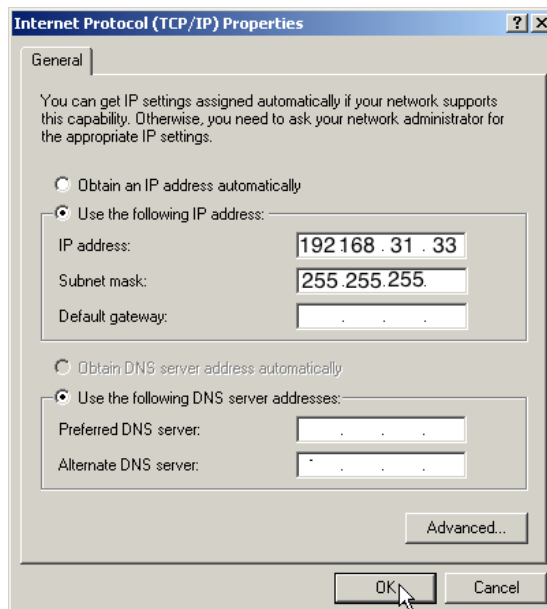


3.2 xPico Module Setup (PRO (E) Series Detector)

The main component of the IPM is an xPico module which should be configured, to do so follow these steps:

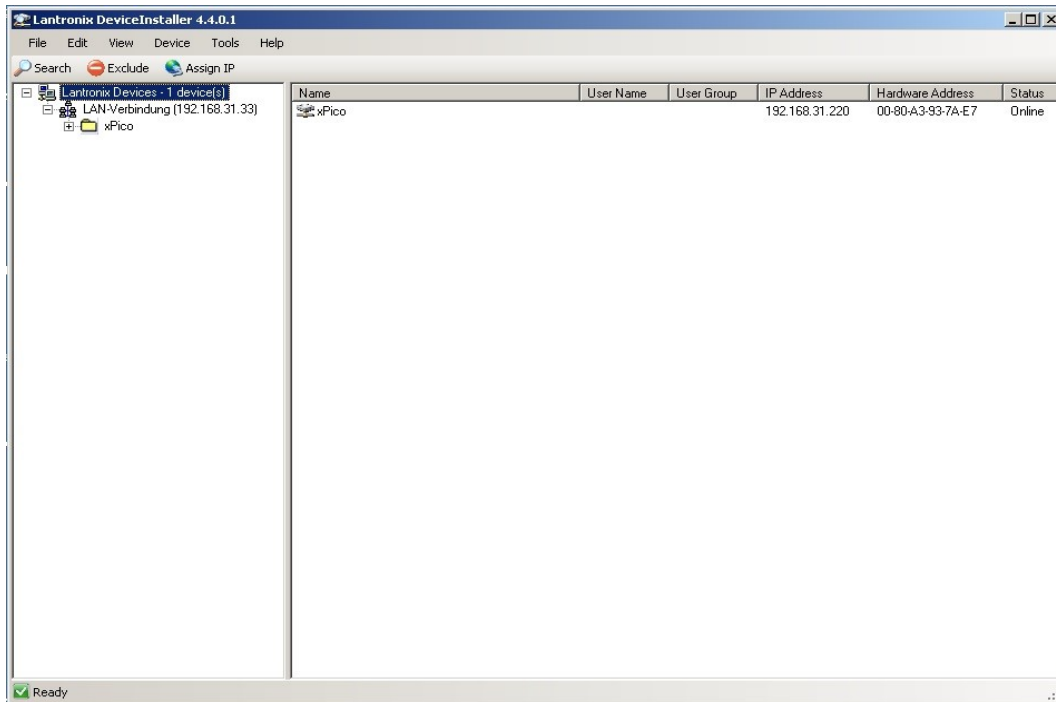
1. Install the "Lantronix DeviceInstaller" software (follow the steps available on: http://ltxfaq.custhelp.com/app/answers/detail/a_id/644 or via the Lantronix website: <http://www.lantronix.com>)
2. Switch the network card over to the network where the xPico module is located.

Note: To locate the network, start the DeviceInstaller and press <F5> to refresh the environment.

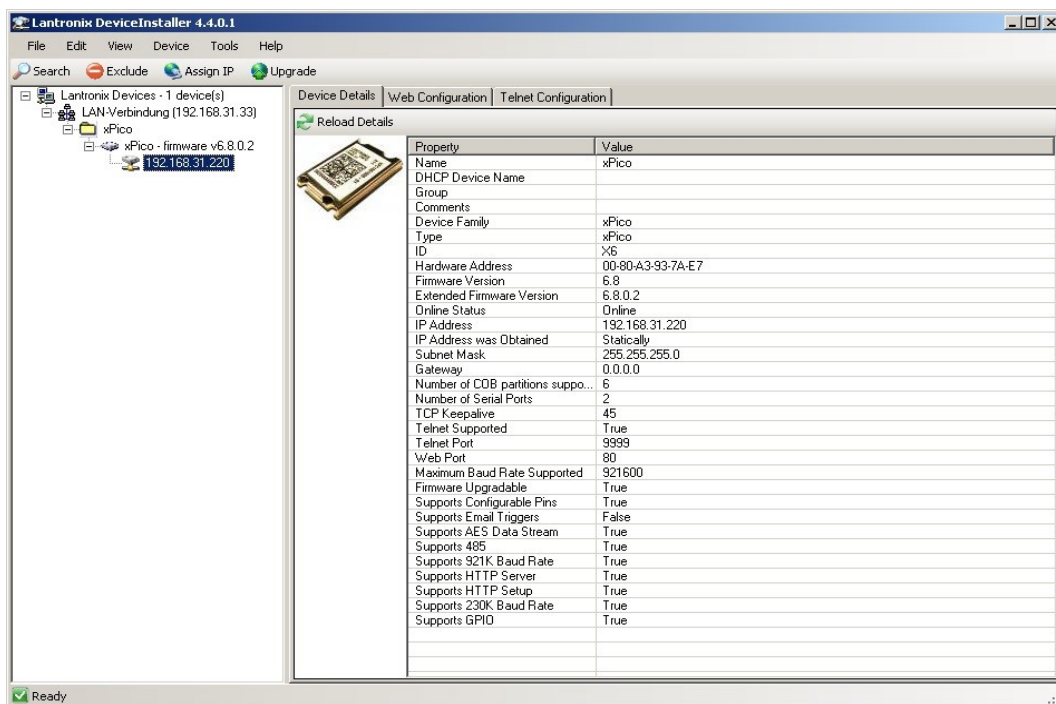


When xPico module and PC are on the same network, the device appears in black letters in the configuration screen, while if the module is on another network (e.g. if the subnet is different), it appears in red letters.

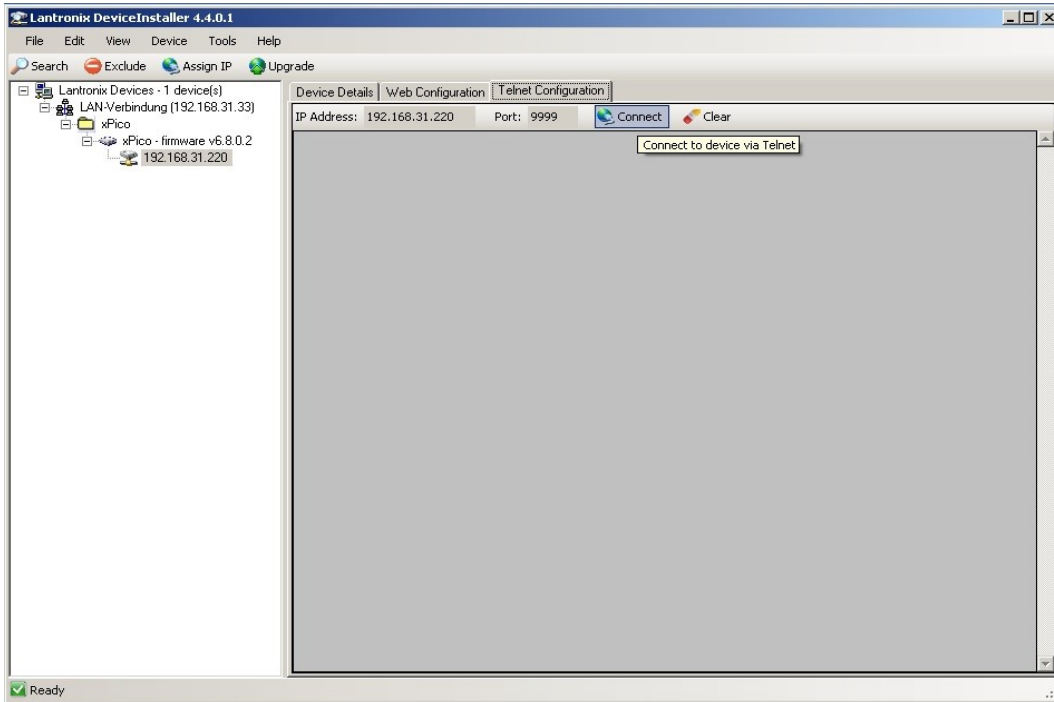
If the network on which the xPico is located cannot be accessed, you can use the **Assign IP** button to switch the xPico module to another network. In case this fails, try connecting the PC and xPico module via a standalone network switch without connection to other networks and set the PC's network settings according to the existing network configured in the xPico module.



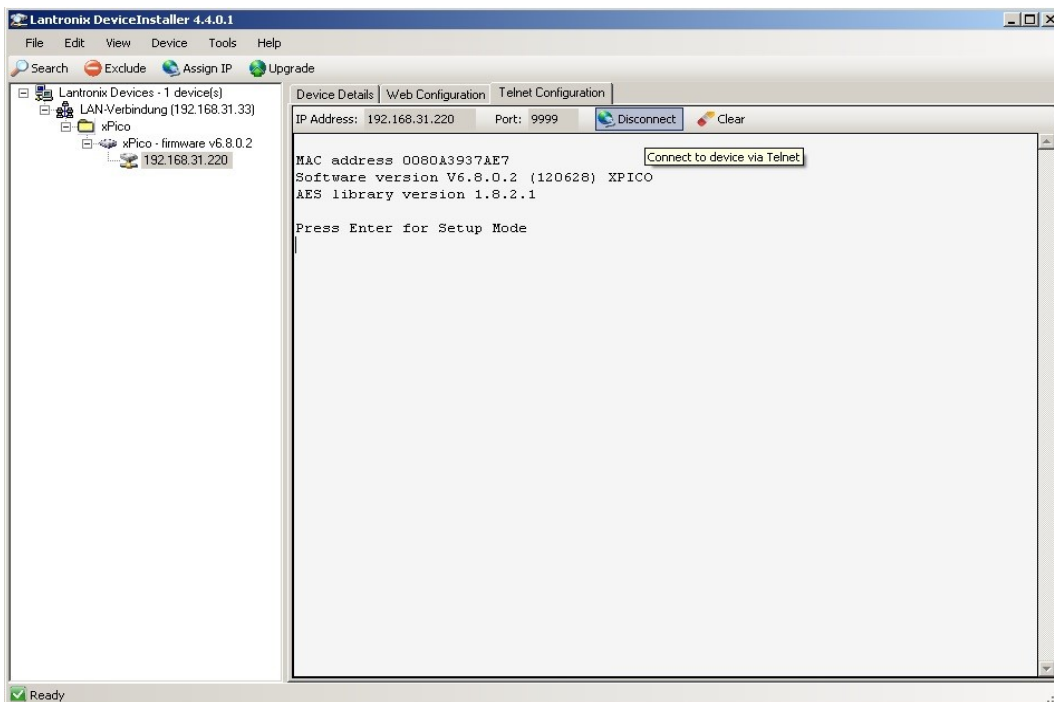
3. Double-click the xPico module, the configuration screen appears as shown below:



If you receive a new xPico module, the connection mode may not be configured correctly. To fix this, connect via the telnet interface as shown next:

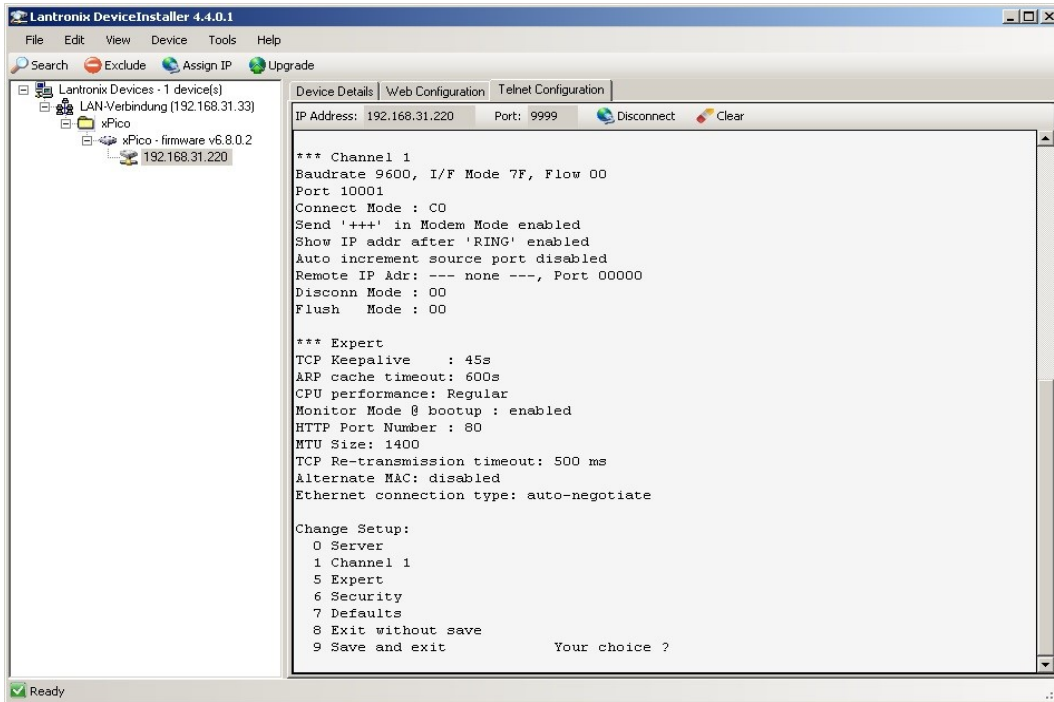


4. Press **Enter** within the first 5 seconds after connecting to enter the device setup mode as shown below, otherwise the telnet server on the xPico module will disconnect and should be connected again:

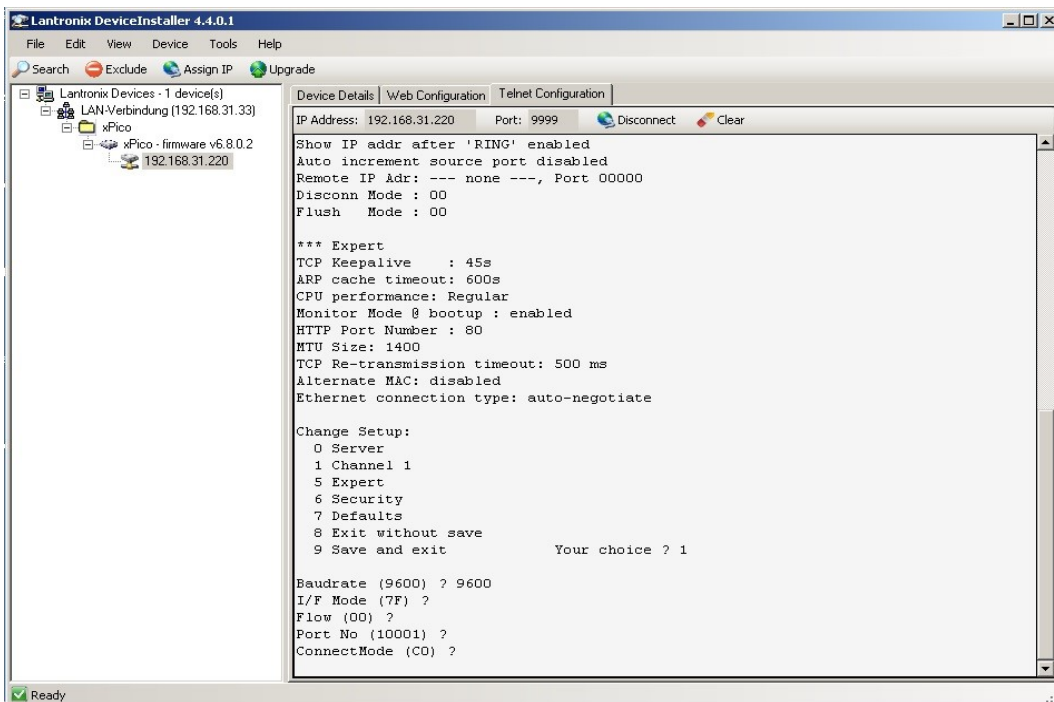


Upon successful connection to setup mode on the xPico module, an option menu appears.

5. Choose "1" to change channel 1 settings as shown next:



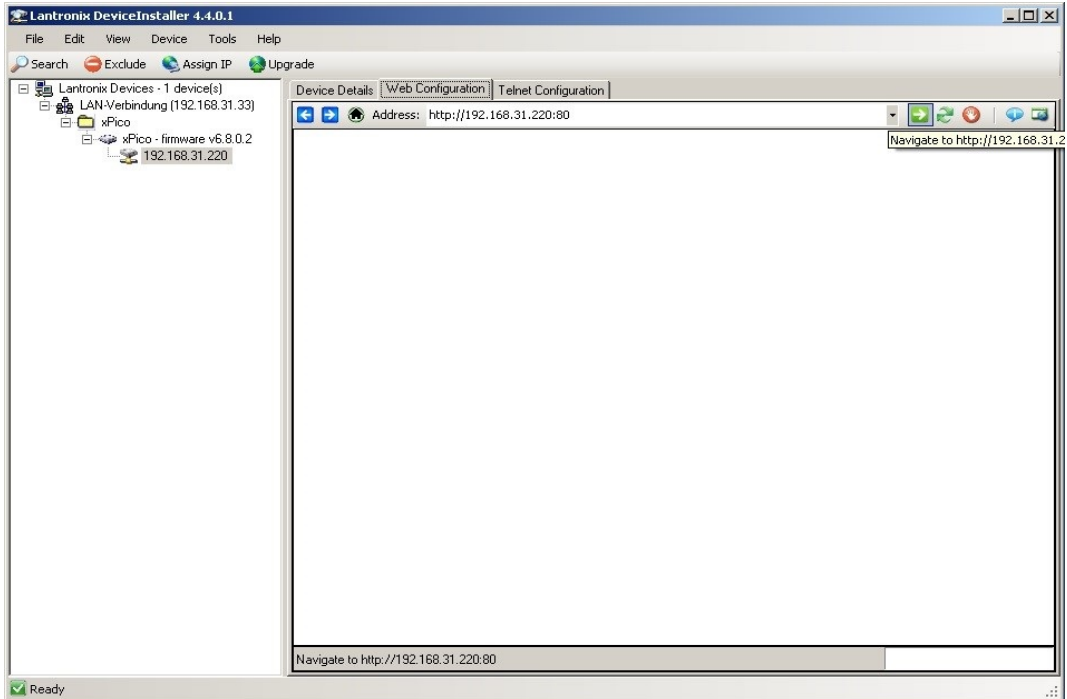
- Press **Enter** to select the default settings and enter "C0" in "ConnectMode" option as shown below: Note that most settings can be left according to default values.



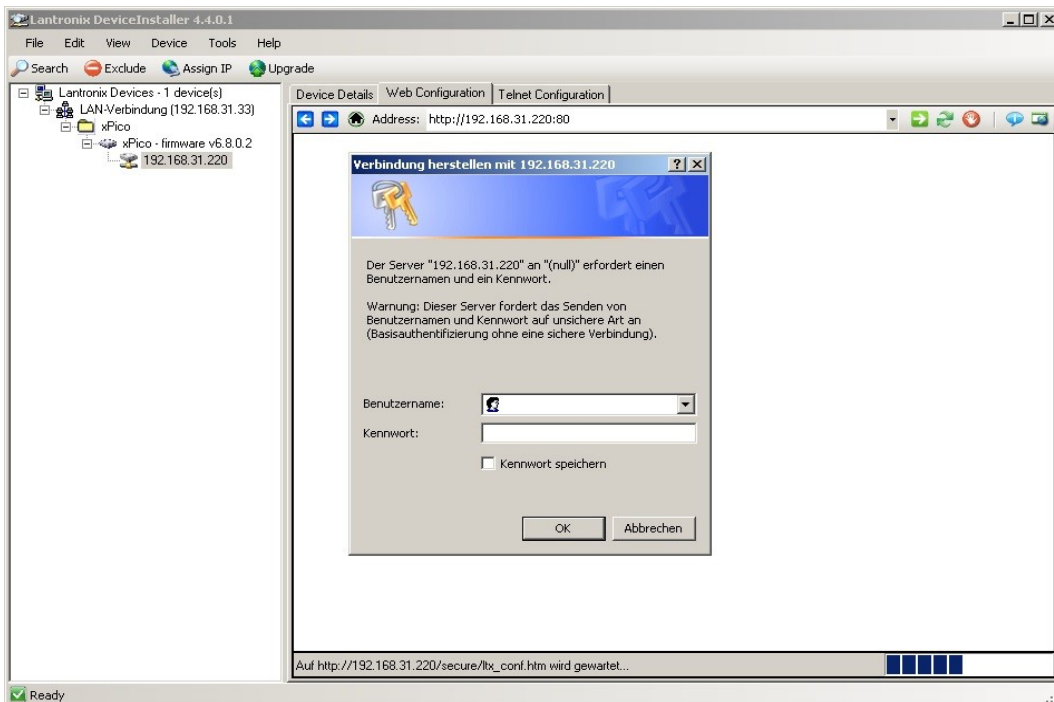
- Proceed with the settings. When done, the main menu appears,
- Select "9" to Save and exit the new settings then press **Enter**.

The Telnet configuration is now done. You can configure the other settings using the Web Configuration Tools.

To configure the settings, follow these steps:



1. Enter the username and password which are left blank then click **OK**, as shown below:

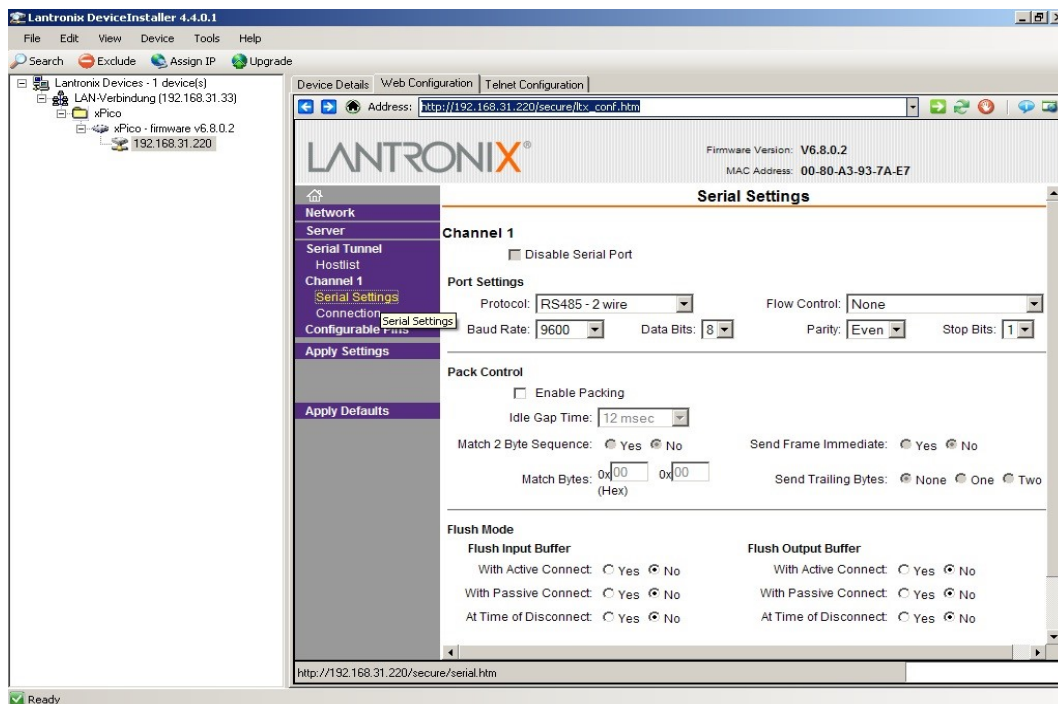


2. Press **Enter**.

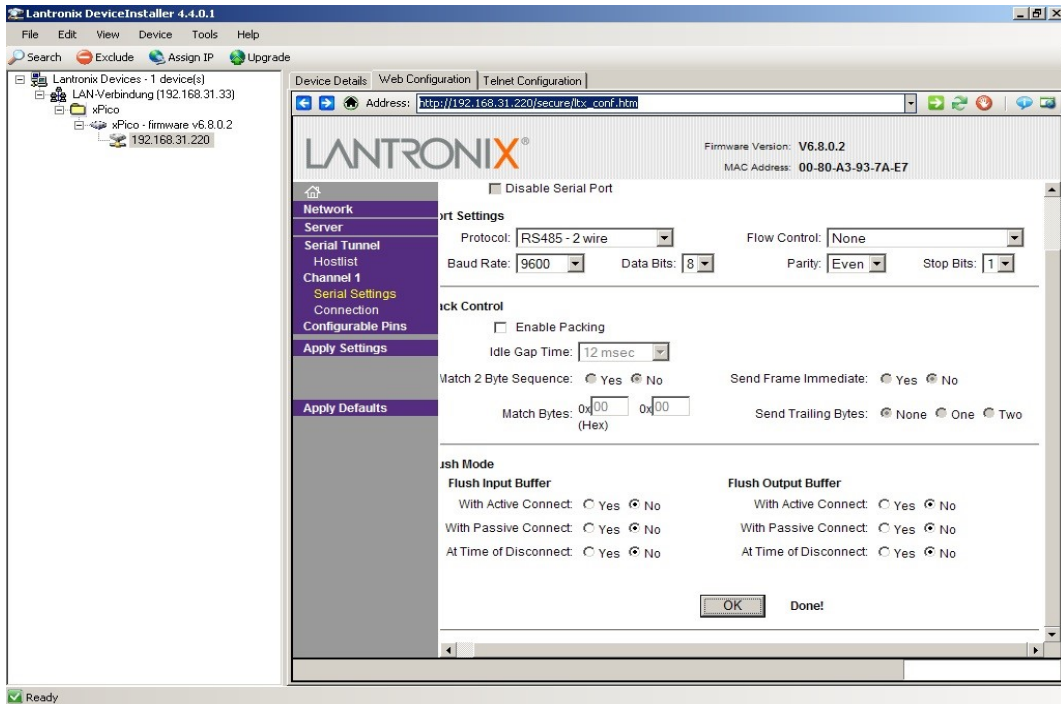
The Device Server Configuration Manager can also be accessed via regular web browser as shown next:



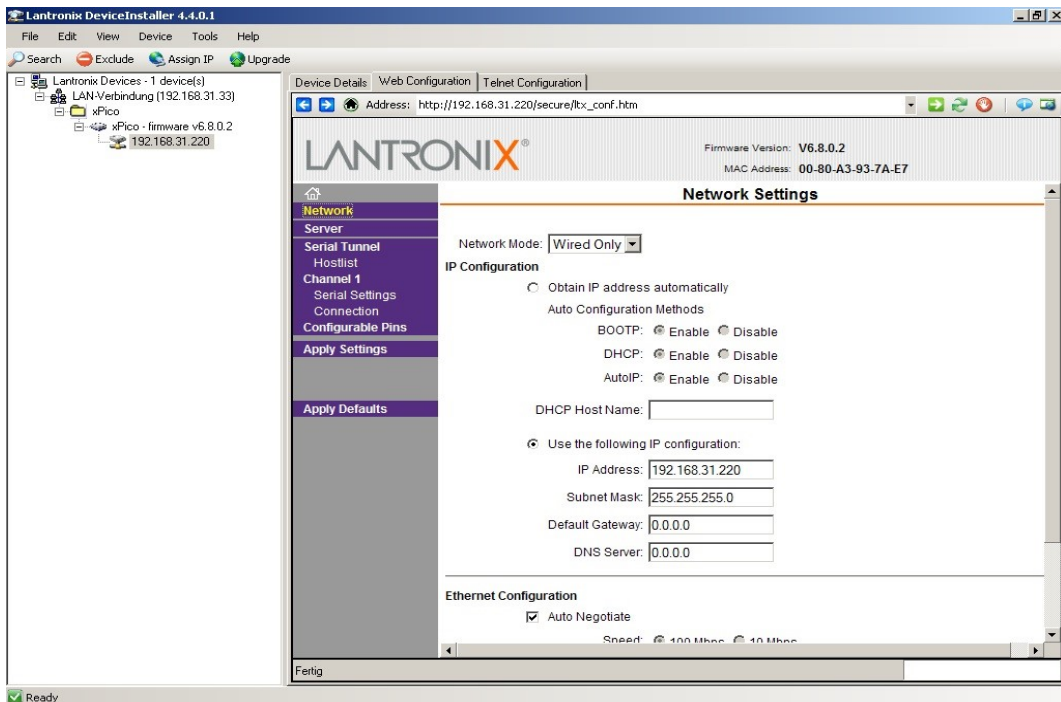
- Configure the xPico Serial Settings using the values mentioned in the below image:



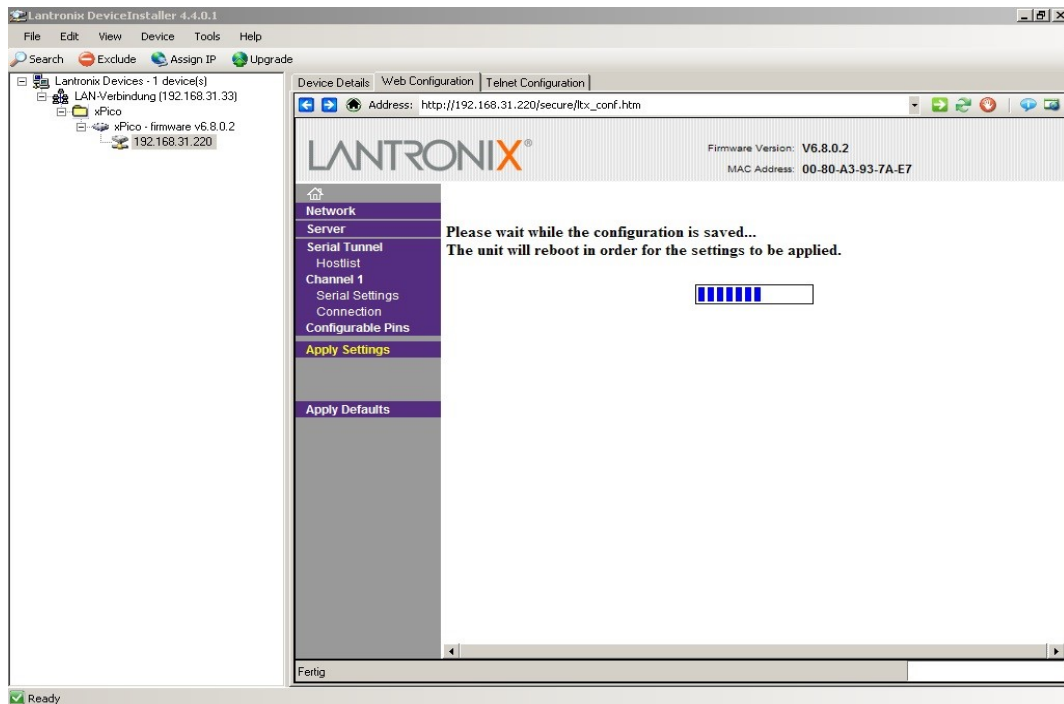
- Click **OK** to save the configurations locally. This does not transmit the settings to the xPico, this process is explained in the next step.



- Configure network settings of the xPico module. If the Detector is on the same network as the attached control system (e.g. computer running ADPRO software), enter a Gateway IP of all "0"s to disable routing as shown below:



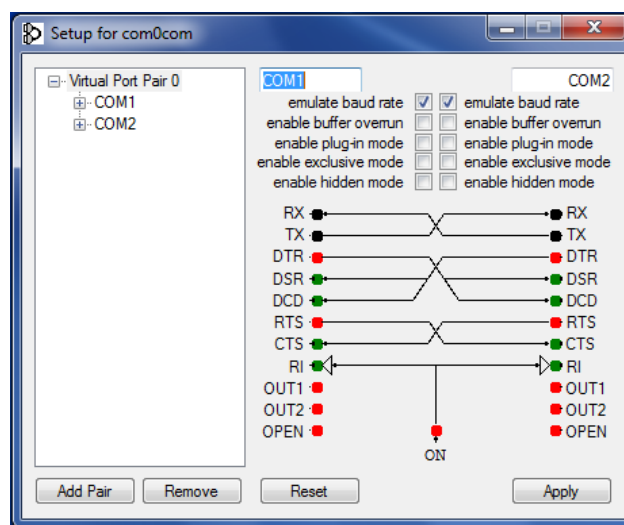
- Click **OK** at the bottom of the page to save the configuration parameters locally.
- Click "Apply Settings" from the left menu to transmit the saved settings to the xPico.



When the transmission is complete, the detector connected with the xPico module can be accessed via Serial-over-Ethernet connection as explained in the next section.

3.3 PC Setup (com0com with com2tcp)

After installing the com0com software, configure the virtual COM ports, this step and changing the com0com settings are done through the com0com Setup screen as shown below:



Notes:

- The "emulate baud rate" checkbox is optional, as the baud rate will be controlled by com2tcp.
- The only required connections are "RX" and "TX", each of them is crossed to the other on the second port. Other connections can be left as they are or configured according to the above image (should a different setting exist).

After configuration is done and the system is set up, start the batch file "PoE_SoE_startcom2tcp.bat".

Note: If different parameters are used in the xPico Module setup (e.g. IP address or port number), make sure to change those parameters in the batch file too.

```

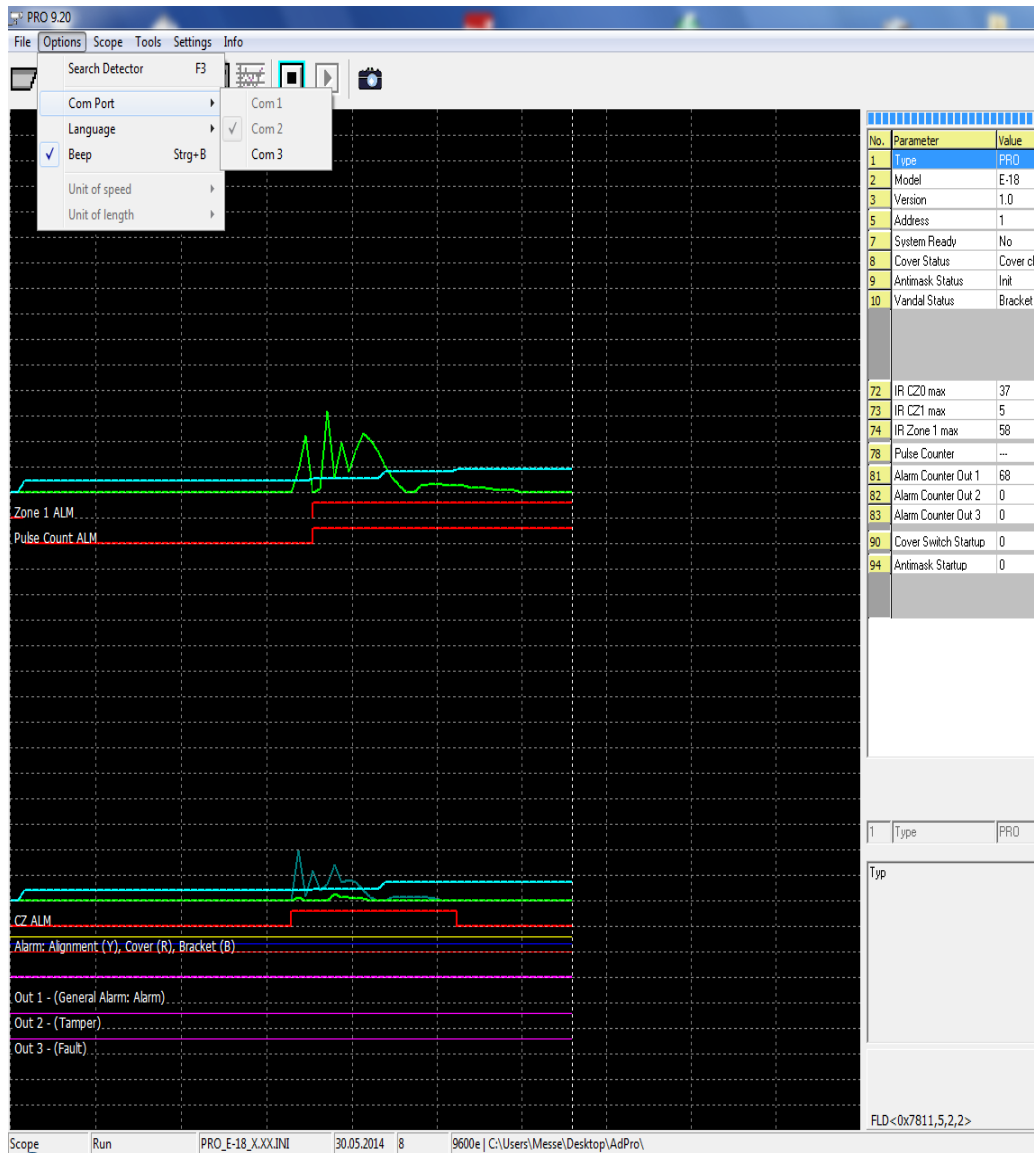
C:\Users\Messe\Desktop\com2tcp-1.3.0.0\com2tcp-1.3.0.0\com2tcp.exe
OpenCOMC(\\.\COM1, baud=9600, data=8, parity=no, stop=1) - OK
Connect(192.168.31.220, 10001) - OK
InOut() START
DSR is ON

```

This connects the workstation virtual COM1 port to the xPico module, so that the ADPRO software (or any other control software) can access the detector via COM2.

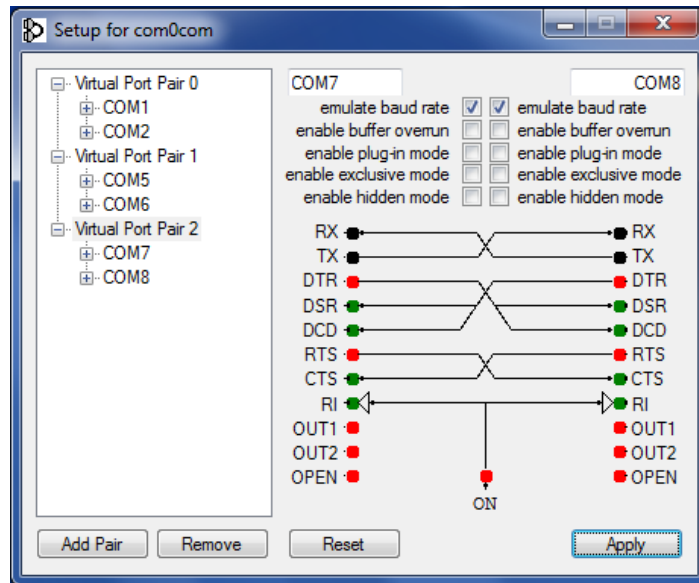
Alternatively, you can use any other TCP serial tunnel software in raw data mode (not telnet mode). If telnet connection mode is desired, change the xPico settings accordingly.

When the setup is finished successfully, you can access the detector for example via the ADPRO software:



3.3.1 Connecting Multiple Detectors

When connecting more than one detector, the number of virtual serial ports in the workstation should be adjusted since every detector needs two virtual serial ports, one network-sided and another one linked to the application. For example, if you have 3 detectors connected via Ethernet, you will need 3 pairs of linked virtual ports in com0com as shown below:



To configure com2tcp (network-) connection details, modify the corresponding parameters in the "PoE_SoE_start_com2tcp.vbs" file:

```
PoE_SoE_start_com2tcp.vbs
Dim WinScriptHost
Set WinScriptHost = CreateObject("WScript.Shell")
WinScriptHost.Run "com2tcp --ignore-dsr --baud 9600 \\.\COM1 192.168.31.220 10001", 0
WinScriptHost.Run "com2tcp --ignore-dsr --baud 9600 \\.\COM5 192.168.31.221 10001", 0
WinScriptHost.Run "com2tcp --ignore-dsr --baud 9600 \\.\COM7 192.168.31.222 10001", 0
If Err <> 0 Then
    MsgBox "Error! At least one connection could not be started!",48,"PoE / SoE Starter"
Else
    MsgBox "Alle com2tcp Verbindungen gestartet!",0,"PoE / SoE Starter"
End If
Set WinScriptHost = Nothing
```

Once the configuration is done, start the "PoE_SoE_start_com2tcp.vbs" file. When the connections are successfully established, start the ADPRO Software and select the corresponding COMx port for the detector you want to access.