How to Set a Static IP Address on Optris EtherNet/IP Modules

INTRODUCTION

Optris EtherNet/IP modules are delivered with DHCP mode enabled by default, automatically obtaining an IP address from a network server. However, many industrial applications require a fixed, static IP address to ensure reliable communication with control systems and networks.
This technical note outlines the process for switching from DHCP to a static IP address using the Molex EtherNet/IP Tool. It also explains how to assign a temporary IP address if no DHCP server is available.

CHANGING THE IP ADDRESS SETTING ON OPTRIS ETHERNET/IP MODULES

By default, Optris EtherNet/IP modules start in DHCP mode. The EtherNet/IP modules have a fixed MAC address 9C:43:1E:7x:xx:xx. The prefix 9C:43:1E:7 is registered to Optris devices and remains constant; the suffix is a sequential number.

Caution: To change settings on an EtherNet/IP module, such as changing it to a static IP, a company server/router, or a software solution can act as a DHCP server.
As software tool the „BOOTP[1]/ DHCP EtherNet/IP Commissioning Tool" from Rockwell or the "Phoenix Contact IPAssign" can be used.
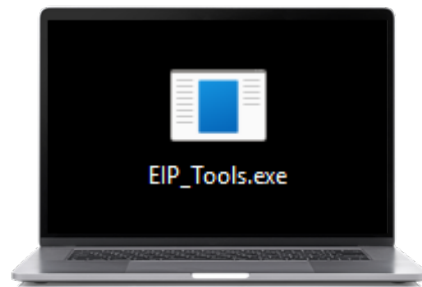
[1] *BOOTP, or Bootstrap Protocol, is a network protocol that automatically assigns IP addresses to network devices.*

STEP BY STEP

1.

Connect the CT with the EtherNet/IP interface or the CSvision / Xi with the EtherNet/IP box to a network with a DHCP server.

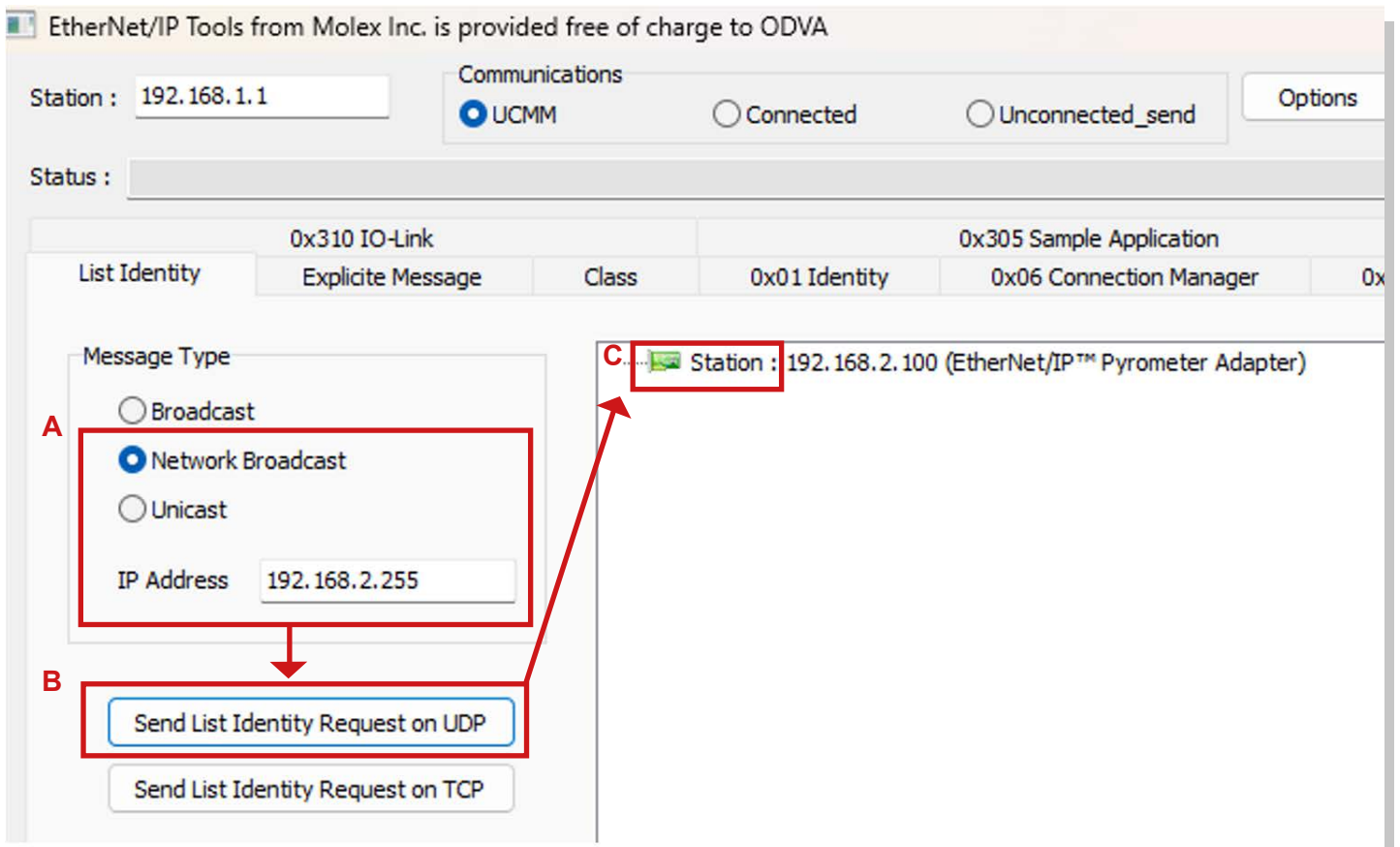**Optris EtherNet/IP modules are delivered in DHCP mode as standard.**

XI

CSvision

CT Ethernet/IP interface

EIP_Tools.exe

2.

Start the „EtherNet/IP Tool" from Molex, which is an official ODVA-certified tool.

3.
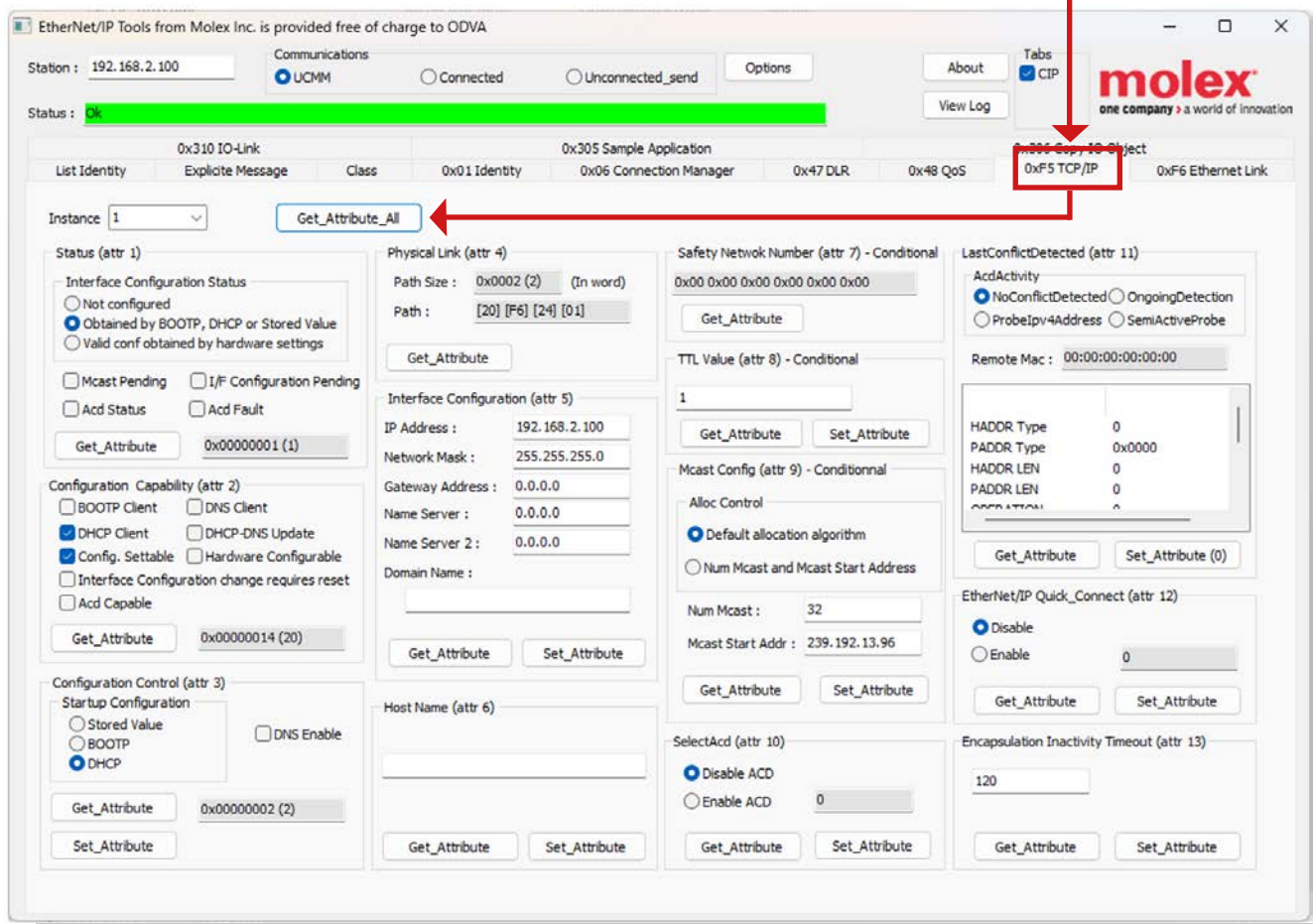**Enter the *"broadcast"* address (A) under *"IP Address"* (usually .255 at the end) and then click *"Send List Identity on UDP"* (B).**

Here, the EtherNet/IP module should show up as „*Station*" -> Please select this device (C).

4. Then go to the *"0xF5 TCP/IP" tab* and click on *"Get_Attribute_All"*.
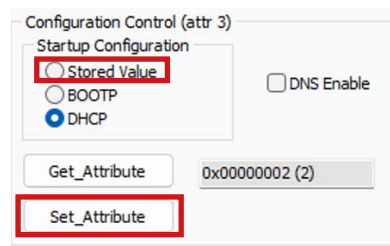

5.
A temporary IP address is assigned to the EtherNet/IP module, provided by the DHCP server.

In this <u>example</u>, the server has assigned the dynamic IP address: *192.168.2.100*
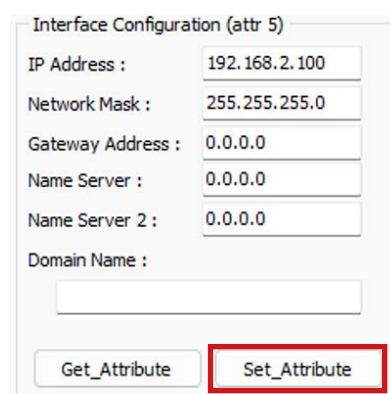

6.
At the bottom left *("Configuration Control (attr 3)")*, set the *"Startup Configuration"* to *"Stored Value"* to set to static IP addresses.

Then click on *"Set_Attribute"*.

7.
In the middle, *("Interface Configuration (attr 5)")* adjust the IP settings to the IP address wanted.

Then click on *"Set_Attribute"* in this menu.

8.
After restarting the device, the IP settings should now be set to Static IP.

Caution: After resetting the device using the reset button, it reverts to DHCP mode.

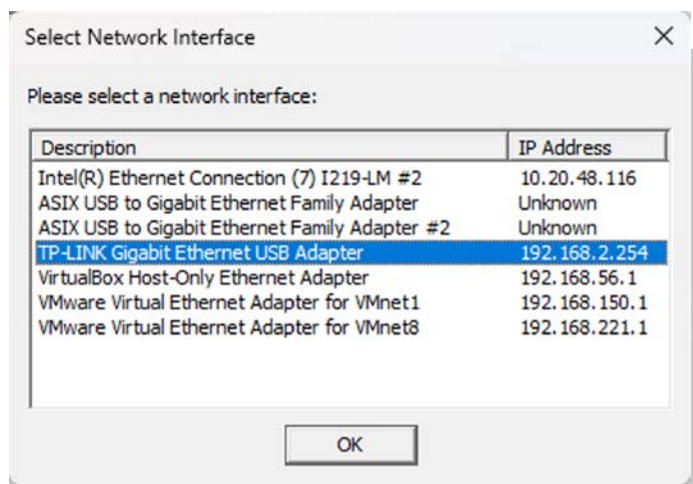# DHCP SOFTWARE SOLUTION TO ASSIGN A TEMPORARY IP ADDRESS.

In case, no DHCP server is used between the computer and the EtherNet/IP module, additional software is required that acts as DHCP server and assigns a temporary IP address once.

In this case, the software solution "BOOTP DHCP EtherNet/IP Commissioning Tool" from Rockwell or "IPAssign" from Phoenix Contact can be used.
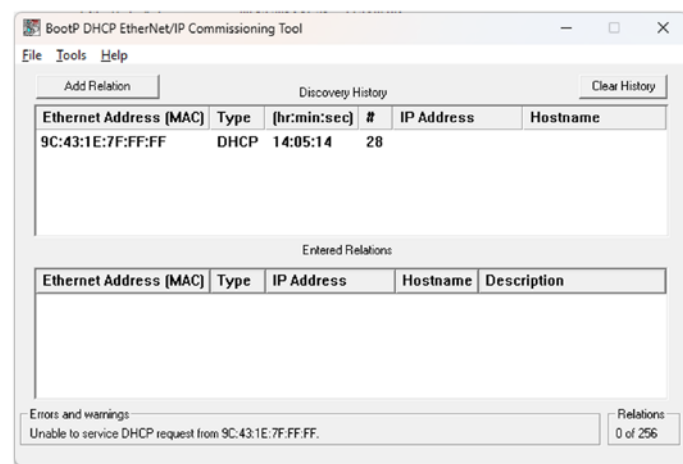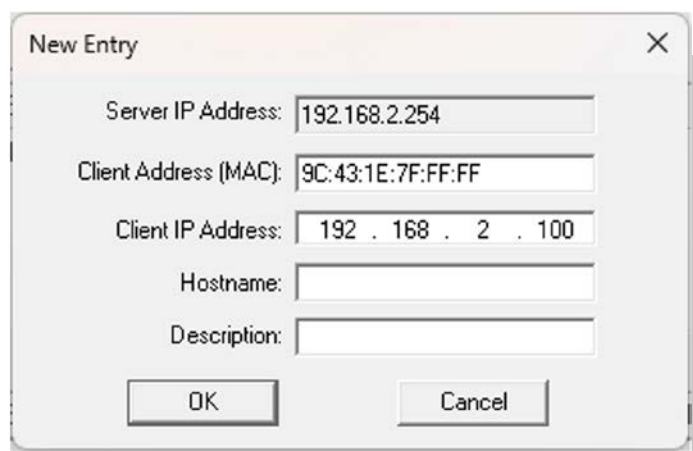
Both software solutions are **free of charge**.

Rockwell Automation **PHŒNIX CONTACT**

1. Select the Ethernet interface on the computer.

2. Select the MAC address with the prefix 9C:43:1E:7 ...

3. Assign a temporary IP address to the device.

4. Please start the Molex software tool to change the IP address setting.

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