How to Set Up a Network Connection for PTW Array Detectors with fixed (static) IP addresses

BeamAdjust

VeriSoft

MultiCheck

Detector Interface 4000

This technical note applies to the following PTW array detectors:

All OCTAVIUS detectors

All STARCHECK detectors

All STARCHECK^{maxi} detectors

NOTE
This technical note describes how to set up a network connection between PTW array detectors and a network with static IP addresses. If you want to learn how to set up a network connection for PTW array detectors in a network with DHCP or Auto-IP, please refer to technical note D252.200.01. The screenshots in this document are from VeriSoft 8.1.1, BeamAdjust 2.3.2, MultiCheck 3.7.1 and Windows 10. They may differ slightly in other versions.

1 Prerequisites

To establish a network connection to a network without DHCP, you must first assign static IP addresses to the Detector Interface 4000. For this process you require...

1. The information from your network administrator which network address you should assign to the PTW device. To integrate the PTW array detector into your network, you must ask your network administrator for an IP address for your Detector Interface 4000, as well as the subnet mask of your network and an optional gateway address. Make a note of this information:

   IP (for Detector Interface 4000):
   Subnet mask:
   Gateway (optional):

2. A PC that is in Auto-IP configuration. It may be necessary to deactivate your PC's internal firewall while you are setting up the static IP addresses.

3. The PTW-SetIP software tool. You will find it in the ***Tools*** folder on your PTW software installation disc (e.g. the BeamAdjust, MultiCheck or VeriSoft installation disc).

2 Assigning a Static Network Address to Detector Interface 4000

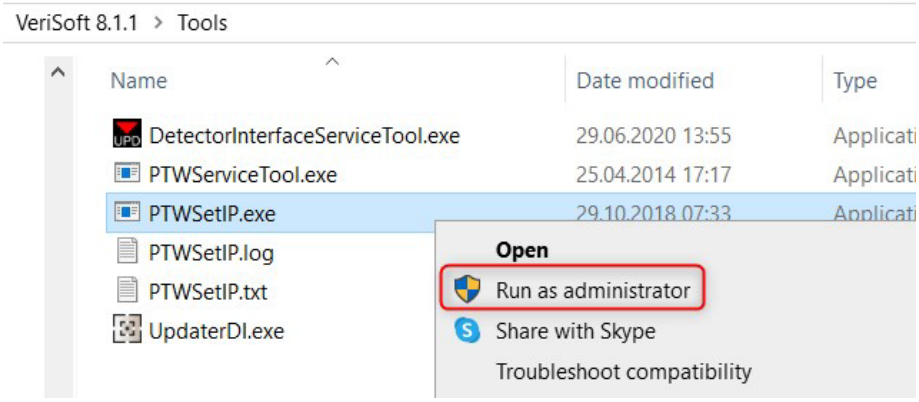
NOTE
Detector Interface 4000 is delivered in Auto-IP mode as default. Once you have set a static IP address for the Detector Interface 4000, the device is no longer configured for Auto-IP. It is therefore recommended that you make a note of the network information that you assign to the device in case you need to set up communication with another PC or network later.

1. Connect the hardware of the PTW array detector, e.g. OCTAVIUS 1500 or STARCHECK according to the manual. Do not switch on the Detector Interface 4000.

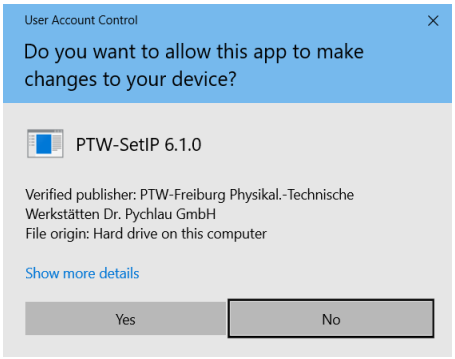
2. Establish a direct connection between your PC and the Detector Interface 4000 using a LAN cable.

3. Turn on the Detector Interface 4000. If all involved devices (PC and Detector Interface) are set to Auto-IP, they will automatically set their IP addresses into the private IP range 169.254.uvw.xyz. This process may take a few minutes.

4. Start the PTW-SetIP program on the PC via context menu: Right click on the file and select the “run as administrator” option.

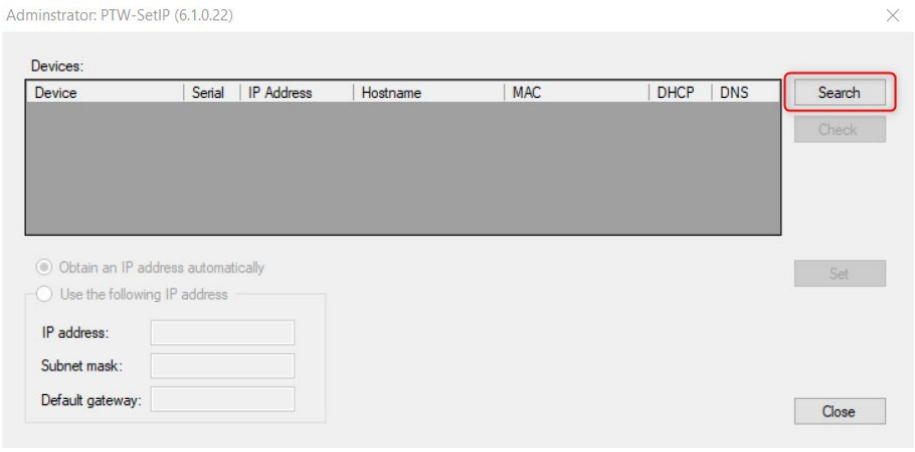


The PTW-SetIP software requires administrator rights, the operating system asks for permission.

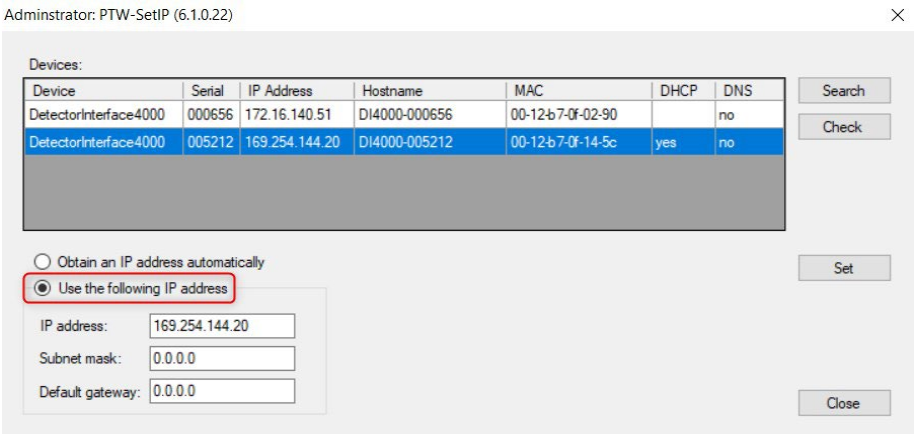


You need to continue by clicking on the ***Yes*** button. Enter the administrator password when prompted.

5. The PTW-SetIP dialog opens. Click on the ***Search*** button to find connected devices.

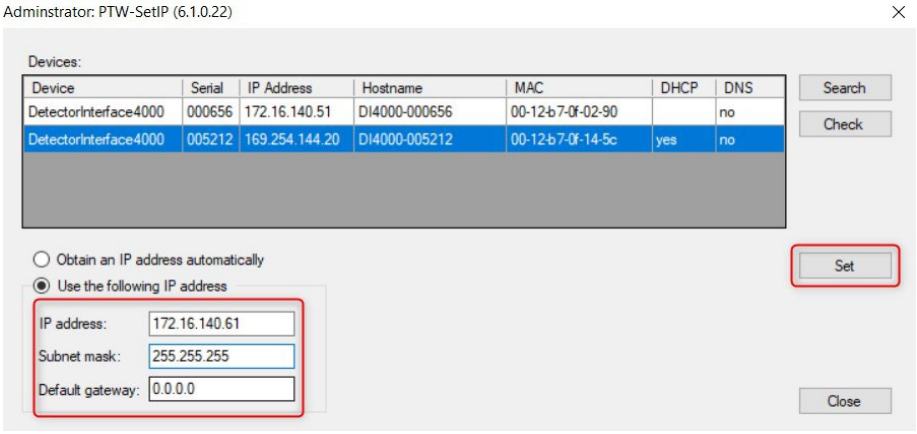


6. After a couple of seconds, the connected PTW devices will be displayed. Highlight the entry of one of the Detector Interface 4000 for which you want to set a static IP address. Click the radio button next to ***Use the following IP address***.

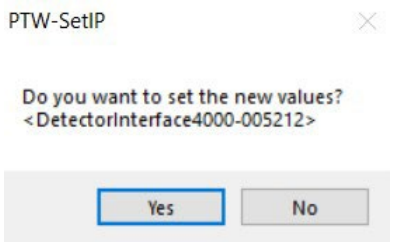


If the connected Detector Interface 4000 device is not found, make sure that it is correctly connected and switched on. Check whether the internal firewall of your PC is disabled. If you cannot disable the local firewall, contact your system administrator.

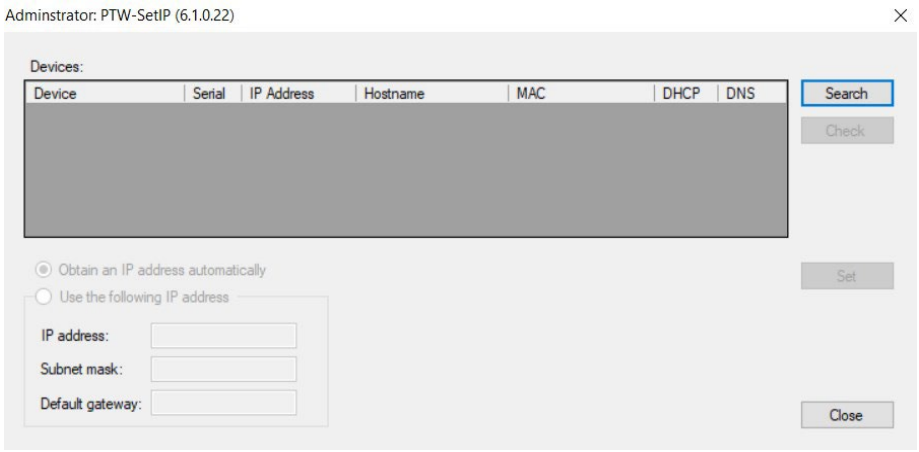
7. Now enter the IP address and the network information you received from your system administrator. Fill in the ***IP address***, ***Subnet mask*** and (optionally) the ***Default gateway*** address. Make sure that you have entered the information correctly and click on ***Set***.



8. A window appears, asking you if you really want to set the new values. Confirm by clicking on ***Yes***.



9. After a few seconds, click on ***Search.*** Depending on the local network configuration, the device that has just been configured may have disappeared, as in this example:



This is normal as your PC is still in the private IP range 169.254.x.y but you configured your device to a different IP range like 172.16……

Alternatively the new IP-address is displayed next to the entry of the device for which you have set the static IP.

10. Now that you have assigned a static IP address to your Detector Interface 4000, you can connect the PTW array detector into your network with static IP addresses.

11. Follow the steps in chapter 3 to set up the connection in the application software (BeamAdjust, MultiCheck, VeriSoft).

3 Establishing a Network Connection to a PTW array detector

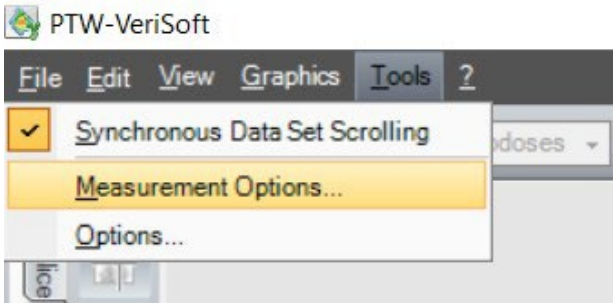
1. Once the PTW array detector hardware has been connected in accordance with the manual and the static network addresses have been assigned, you can integrate the PTW array detector into your network.

2. Connect the Detector Interface 4000 to your network using a LAN cable. Make sure that the Detector Interface 4000 is switched on.

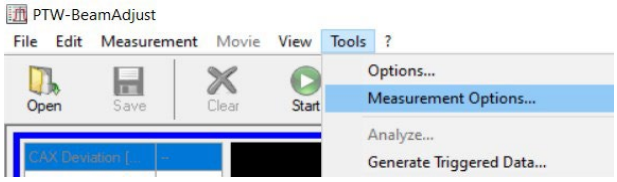
3. Install the desired application software like VeriSoft, BeamAdjust or MultiCheck on your measurement PC and start it.

4. In the application software, select ***Tools → Measurement Options*** from the menu bar.

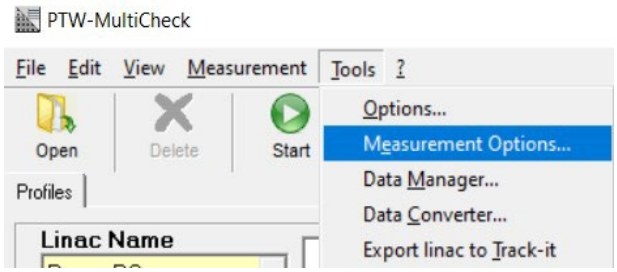
VeriSoft:



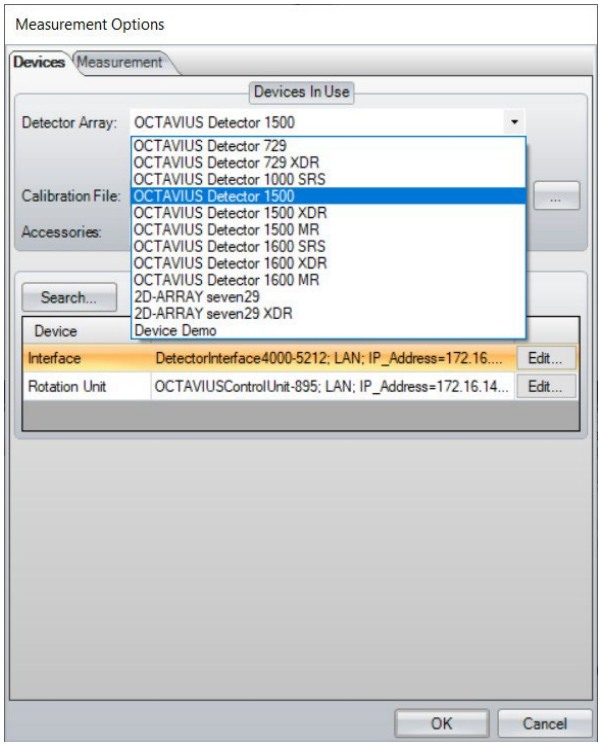
BeamAdjust:



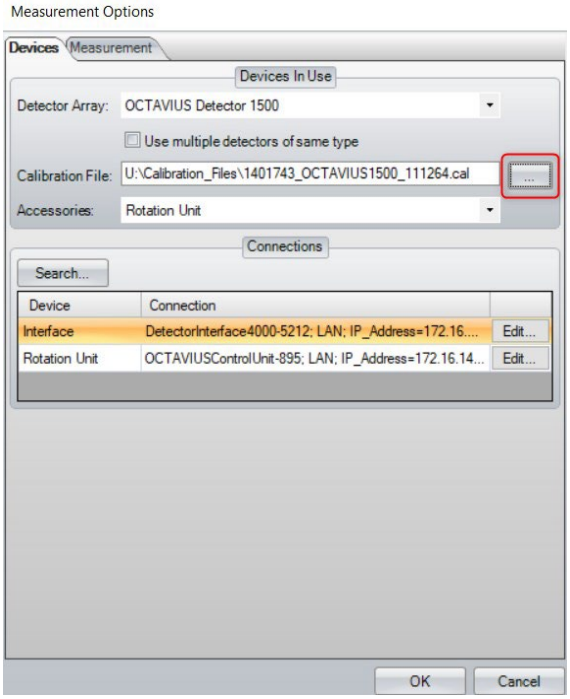
MultiCheck:



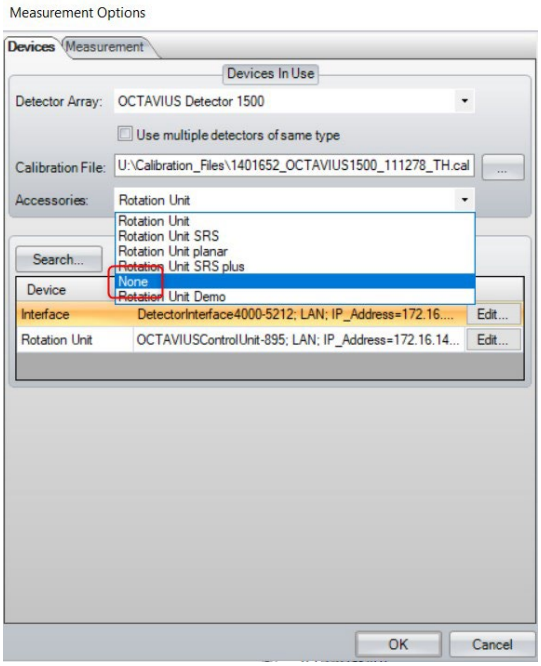
5. The ***Measurement Options*** window opens. Select the correct array detector from the drop-down menu (screenshots are taken from VeriSoft, BeamAdjust and MultiCheck are very similar):



6. Click the **…** button next to the Calibration file panel and select the calibration file corresponding to your detector.



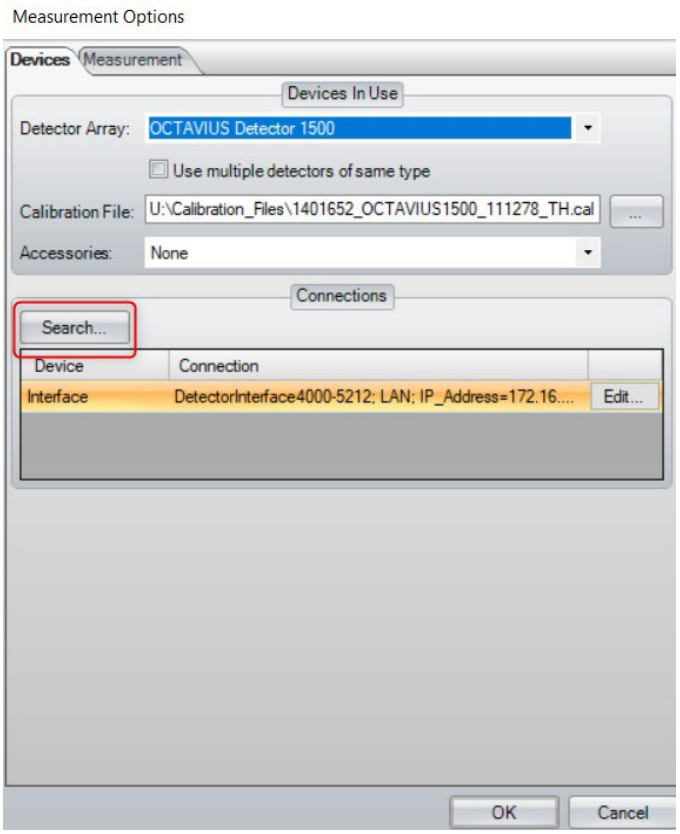
7. If applicable, select ***None*** in the ***Accessories*** panel:



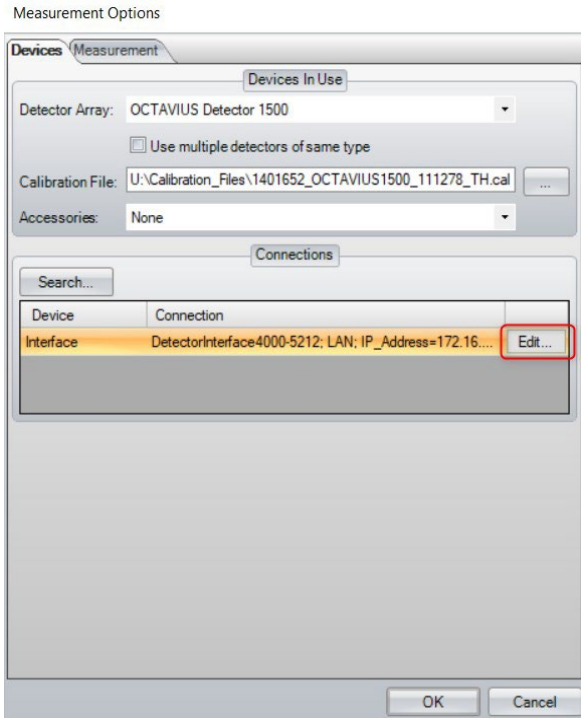
Hint: Accessories define the different options for PTW OCTAVIUS 4D systems. If you want to learn how to set up a network connection for OCTAVIUS 4D systems using fixed (static) IP addresses, please refer to technical note D913.200.05.

Hint: The stored data format in VeriSoft is mcc if no Accessory is selected. The stored data format in VeriSoft changes to xcc as soon as an accessory is selected.

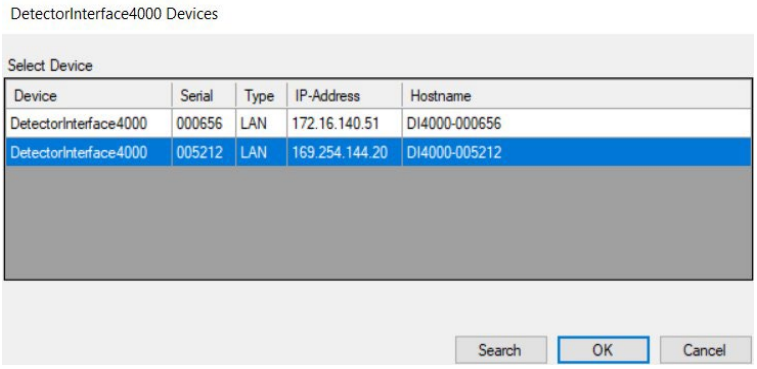
8. Click the ***Search...*** button.



Please note: It is possible that this global search will be blocked by your firewall. In this case, please enter the previously configured static IP-addresses manually using the edit buttons.

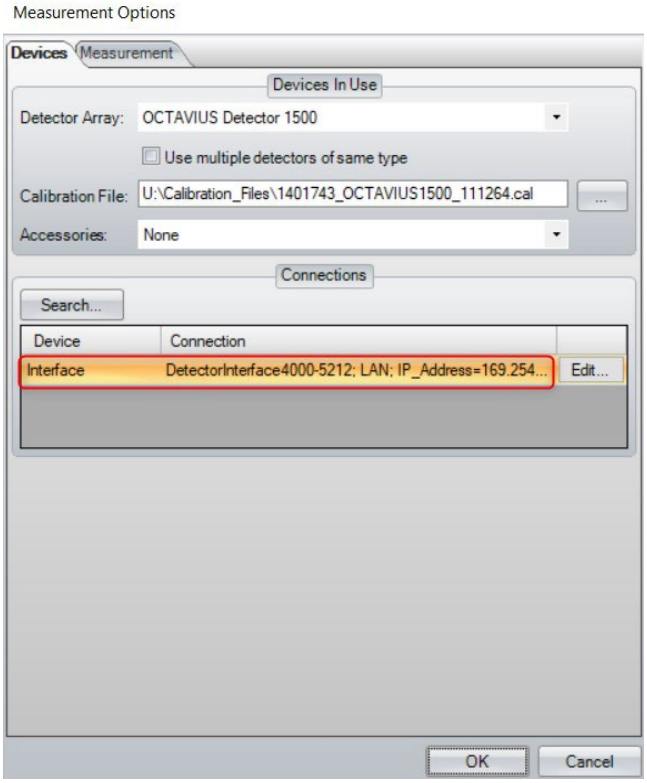


9. The ***Detector Interface 4000 Devices*** window is displayed, in which all detector interfaces found in the network are listed. Select the Detector Interface 4000 for which you want to set up the connection (you can identify it by its serial number) and click ***OK***.

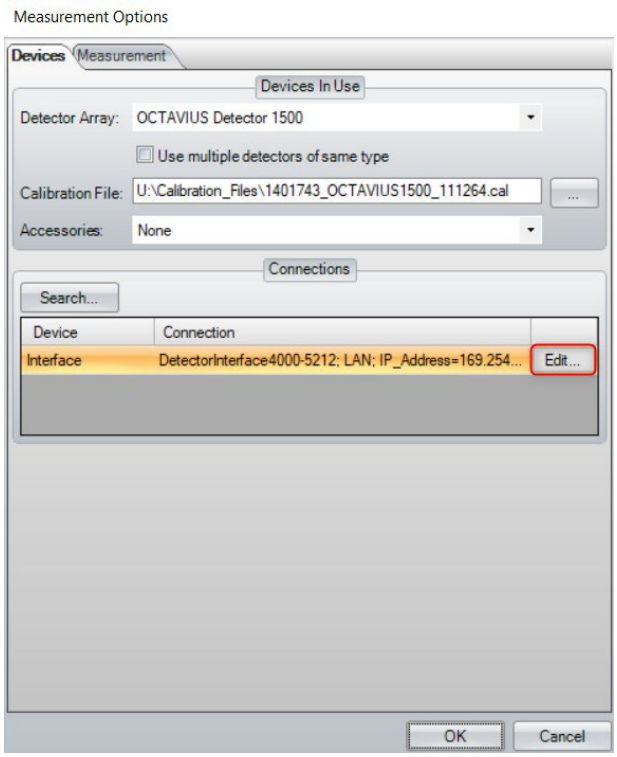


If your detector interface does not appear in the list, make sure that it is properly connected and turned on. Disable the firewall. Repeat the search.

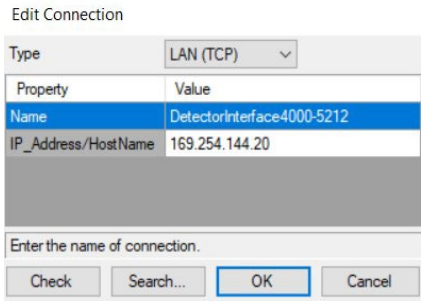
10. The established connections are now displayed in the ***Measurement Options*** window.



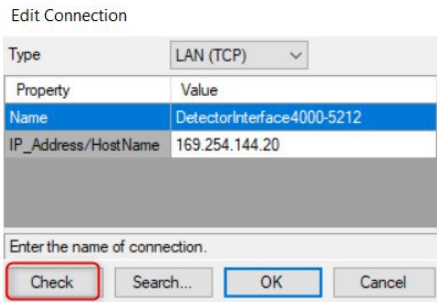
11. To check the connection of a device, click on the ***Edit…*** button next to its entry.



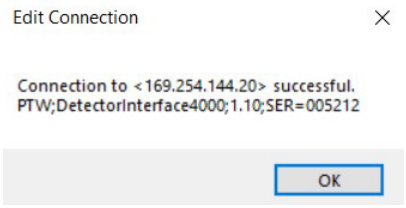
12. The ***Edit Connection*** window appears and displays the details of the respective connection.



13. Click on the ***Check*** button.



14. A message should appear stating that the connection was successful. Confirm with the ***OK*** button.



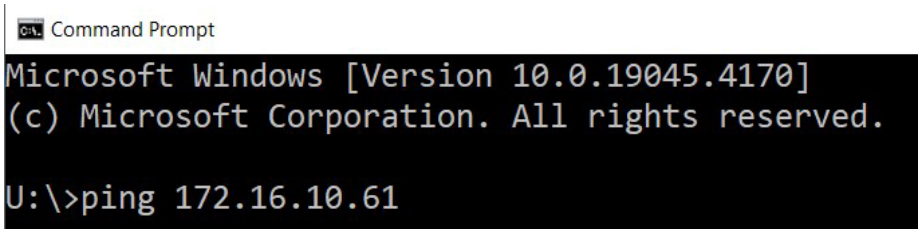
15. Exit the ***Measurement Options*** window by clicking ***OK***. The network connection to your PTW array detector is now established.

Appendix A Troubleshooting

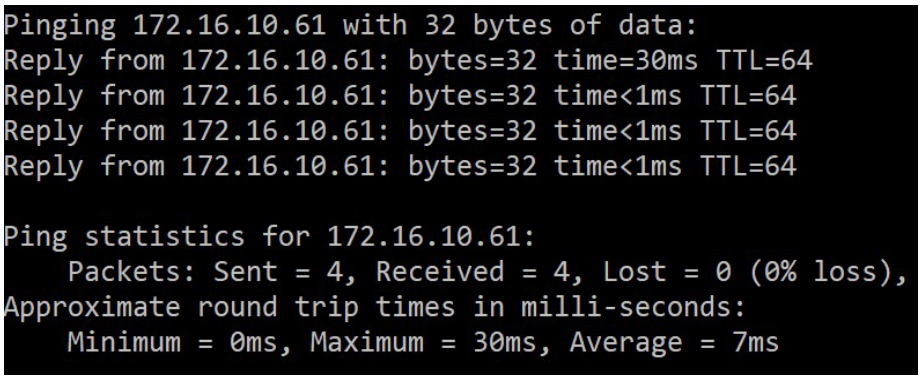
Technical communication

For any TCP/IP communication both communication partners measurement PC and PTW-device must be able to exchange data via the network. To test the connectivity within your network, ping the configured IP-addresses from your measurement PC. To do this, please launch a DOS-box by entering **cmd** in the windows search field:

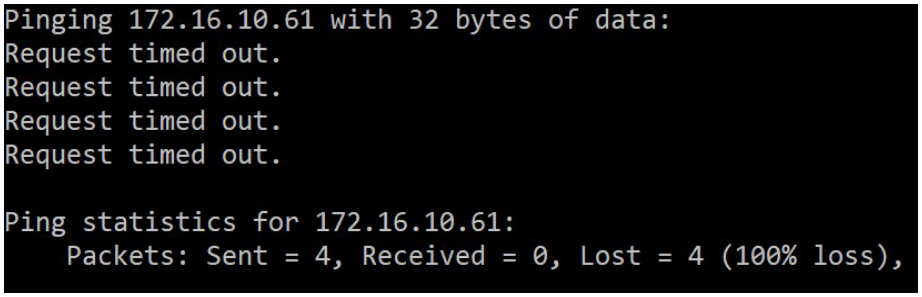
A black console window opens. Type in the command ***ping*** <ip-address one of your previously configured PTW array detector> like this example:



The technical connection is established when you receive the message "reply" and no packets are lost as in this example:



If there is no technical connection, you get something like this example:



If the technical communication works (ping works), but you do not get a connection in the software, please check the configuration of the application software (VeriSoft, BeamAdjust, MultiCheck).

If this is OK, but communication is still not established, you should consider closed ports or anti-virus software as root cause. You can find detailed information on this in our technical note D928.200.00 Antivirus software and contact your system administrator.

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