

# How to Set up a Network Connection for OCTAVIUS 4D without DHCP

Verisoft 5.1 or higher Detector Interface 4000 (T16039) or PTW Array Interface (T16026)

#### NOTE

This technical note describes how to set up a network connection between the OCTAVIUS 4D system and a network without DHCP / with static IP addresses via Detector Interface 4000 or PTW Array Interface.

If you want to learn how to set up a network connection for OCTAVIUS 4D in a network with DHCP, please refer to technical note D913.200.04.

## **1** Prerequisites

In order to establish a network connection to a network without DHCP, you first need to assign static IP addresses to the Detector Interface 4000 and the OCTAVIUS Control Unit. For this process, you require...

1. The information from your network administrator which network addresses you should assign to the PTW devices:

In order to integrate the OCTAVIUS 4D system into your network you need to ask your network administrator for two IP addresses (one for your Detector Interface 4000 / PTW Array Interface and one for the OCTAVIUS Control Unit), plus your network's subnet mask and gateway addresses. Note down this information:

IP1 (for Detector Interface 4000 / for PTW Array Interface): IP2 (for OCTAVIUS Control Unit): Subnet mask: Gateway:

- 2. A PC that is not part of a network. The internal firewall of your PC needs to be switched off while you are setting up the static IP addresses (see *Appendix A* to learn how to switch off the standard Windows firewall).
- 3. The PTW-SetIP program. You can find it in the *Tools* folder on your PTW Software installation disc (e.g. the VeriSoft installation disc).



## 2 Assigning Static Network Addresses to Detector Interface 4000 and OCTAVIUS Control UNIT

### NOTE

Once you have set a static IP address for the Detector Interface 4000 and the OCTAVIUS Control Unit, the devices are no longer configured for Auto IP. Therefore, it is recommended to note down the network information you assign to the devices in case you need to set up communication with a different PC or network.

 Connect the hardware of the OCTAVIUS 4D system according to the manual. Do not turn on the Detector Interface 4000 / the PTW Array Interface and the OCTAVIUS Control Unit (the graphic below shows the setup with the combination Detector Interface 4000 / OCTAVIUS Detector 729 as an example. If you are using a 2D-Array seven29, you need to combine it with the PTW Array Interface and connect the Array Interface to the OCTAVIUS Control Unit via RS 232):



- 2. Establish a direct connection between your PC and the OCTAVIUS Control Unit by using a LAN cable in combination with the crossover adapter L178090 that was part of the Detector Interface 4000 delivery (or use a crossover cable without the adapter).
- 3. Turn on the Detector Interface 4000 / the PTW Array Interface and the OCTAVIUS Control Unit. If your PC is set to Auto IP, the Detector Interface 4000 / the PTW Array Interface and the



OCTAVIUS Control Unit will automatically receive IP addresses via Auto IP. This process may take several minutes.

- 4. Start the PTW-SetIP program on your PC (**Note**: if your PC runs Windows 7 as operating system, you need to start the program as administrator).
- 5. The PTW-SetIP dialog opens. Click on the **Search** button to find connected devices.

			Advanced Search	
Device	Serial	IP address	Hostname	Search
Obtain an IP addr     Use the following	ess automatic	ally	Obtain DNS server address automatically     Use the following DNS server artifices	Set
Second recoming			DNS server:	

6. After a couple of seconds, the connected OCTAVIUS 4D devices will be displayed. Highlight the entry of one of the OCTAVIUS 4D components for which you want to set a static IP address (e.g. Detector Interface 4000), and click the radio button next to **Use the following IP address**.

Devices:			Advanced Search	1 ~
Device	Serial	IP address	Hostname	Search
OCTAVIUSControlUnit	000015	169.254.203.23		Print
Detectorinterface4000	000372	169.254.141.137		<u> </u>
Obtain an IP addres	s automatica	ally	<ul> <li>Obtain DNS server address automatically</li> </ul>	Set

If not all of your connected OCTAVIUS 4D devices were found, make sure they are properly connected and turned on. Check if the internal firewall of your PC is disabled (you can find a guide on how to disable the standard Windows firewall in *Appendix A*). If you are not able to turn off the firewall, contact your system administrator.

If you have connected a device to the OCTAVIUS Control Unit via RS232, but the OCTAVIUSControlUnit RS232 entry is not displayed, check the **Advanced Search** box and click on **Search** again.



 You are now able to enter the first IP address and the network information you got from your system administrator. Fill in the *IP address*, *Subnet mask* and *Default gateway* address. Make sure you have entered the information correctly and click on *Set*.

Devices:			Advanced Search	
Device	Serial	IP address	Hostname	Search
OCTAVIUSControlU	nit 000015	169.254.203.23		Print
DetectorInterface40	00 000372	169.254.141.137		
🔿 Obtain an IP ac	Idress automatic	ally	<ul> <li>Obtain DNS server address automatically</li> </ul>	Set
<ul> <li>Obtain an IP ac</li> <li>Use the followin</li> <li>IP address:</li> <li>Subnet mask:</li> </ul>	ddress automatic ng IP address 172.16.10.61 255.255.240.0	ally	Obtain DNS server address automatically     Use the following DNS server address     DNS server:	Set

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

W-SettP	
Do you want to set the	new values?
<detectorinterface400< th=""><th>0-000372&gt;</th></detectorinterface400<>	0-000372>

- 9. After some seconds, the new IP will be displayed next to the entry of the device for which you have set the static IP.
- 10.Now highlight the entry of the other OCTAVIUS 4D device (e.g. OCTAVIUS Control Unit). Click the radio button next to **Use the following IP address** and enter the second IP address you got from your system administrator. Fill in Subnet mask and Default gateway. Make sure that you have entered the correct information and click on **Set**.

herear executive				
Device	Serial	IP address	Hostname	Search
OCTAVIUSControl	Jnit 000015	169.254.203.23		Print
DetectorInterface4	000 000372	172.16.10.61		
<ul> <li>Obtain an IP a</li> <li>Use the following</li> </ul>	ddress automatic	ally	Obtain DNS server address automatically     Les the following DNS server address	Set
<ul> <li>Obtain an IP a</li> <li>Use the following</li> <li>IP address:</li> <li>Subnet mask:</li> </ul>	ddress automatic: ng IP address 172.16.10.5 255.255.240.0	ally	Obtain DNS server address automatically     Use the following DNS server address     DNS server:	Set



11.Confirm that you really want to set the new values for this device.

IW-Seur	
Do you want to set the	e new values?
COCTAVIOSCONIIOIOI	112 0000132

- 12.After some seconds, the new IP will be displayed next to the entry of the OCTAVIUS 4D device for which you have set the static IP.
- 13.Now that you have assigned static IP addresses to all connected OCTAVIUS 4D devices, you can integrate the OCTAVIUS 4D system into your network. Follow the steps in chapter 3 in order to set up the connection in the VeriSoft software.



# 3 Establishing a Network Connection to OCTAVIUS 4D

- 1. Once the OCTAVIUS 4D hardware is connected according to the manual and the static network addresses are assigned, you can integrate the OCTAVIUS 4D system into your network.
- 2. Connect the OCTAVIUS Control Unit to your network via LAN cable. Make sure to turn on the Detector Interface 4000 and the OCTAVIUS Control Unit.
- 3. Install the VeriSoft software on your PC and start it.
- 4. In the VeriSoft software, select **Tools → Measurement Options** in the menu bar.



5. The *Measurement Options* window opens. Choose the correct detector array from the drop down menu:

Measurement Optio	ons
Devices Measurer	nent
	Devices In Use
Detector Array:	OCTAVIUS Detector 729
Calibration File:	OCTAVIUS Detector 729 XDR OCTAVIUS Detector 1000 SRS 20-48 B4X seven 29
Accessories:	20-ARRAY seven29 XDR Device Demo
	Connections
Search	
Device	Connection
Interface	DetectorInterface4000-372; LAN; HostName=D14000 Edit
	Ok



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

AICes (Measuren	ient \					
	Devices InUse					
Detector Array:	OCTAVIUS Detector 729					
Calibration File:	tion File: C:\Dokumente und Einstellungen\All Users\Dokumente\PT					
Accessories:	scessories: None					
	Connections					
Search						
Device	Connection					
Interface	DetectorInterface4000-372; RS232; CDM=1 Edit					
Reduce RS2	32 Baudrate					

7. Select *Rotation Unit* in the *Accessories* panel:

Measurement Optio	ins	
Devices Measuren	nent	
	Devices In Use	
Detector Array:	OCTAVIUS Detector 729	•
Calibration File:	C:\Dokumente und Einstellungen\All Users\Dokumente\PT	
Accessories:	None Rotation Unit	•
Search	Inclinometer None Rotation Unit Demo Inclinometer Demo	
Device	Connection	
Interface	DetectorInterface4000-372; RS232; COM=1	Edit
Reduce RS2	32 Baudrate	
	Ok	Cancel



8. Click the Search... button.

	Devices In Use	
Detector Array:	OCTAVIUS Detector 729	÷
Calibration File:	C:\Dokumente und Einstellungen\All Users\Dokumente\PT	
Accessories:	Rotation Unit	•
	Connections	
Search		
Device	Connection	
Interface	DetectorInterface4000-372; RS232; COM=1	Edit
Rotation Unit	OCTAVIUSControlUnit-15; LAN; HostName=4DCUNIT	Edit
Reduce RS23	2 Baudrate	_

**Please note**: It is possible that this search will be blocked by your firewall (you can find a guide on how to turn off the standard Windows firewall in *Appendix A*). If you are not able to unblock the calling program (VeriSoft software), contact your system administrator.

9. The *Devices* window appears, listing all Interfaces and Rotation Units that could be found in the network. Select the devices for which you want to set up the connection (you can identify them by their serial number) and click *OK*.

Devices				
Select Interface				
Device	Serial	Туре	IP-Address	Hostname
DetectorInterface4000	000372	LAN	172.16.10.114	D14000-000372
DetectorInterface4000	000015	LAN	172.16.10.29	DI4000-000015
DetectorInterface4000	000003	LAN	172.16.10.27	DI4100-000003
Select Rotation Unit				
Device	Serial	Туре	IP-Address	Hostname
OCTAVIUSControlUnit	000015	LAN	172.16.10.80	4DCUNIT_A-000015
OCTAVIUSControlUnit	000048	LAN	172.16.10.25	4DCUNIT_A-000048
OCTAVIUSControlUnit	000038	LAN	172.16.10.4	4DCUNIT_A-000038
Advanced Search (new	eds more th	an 30s)		Search OK Cancel

If your devices do not appear in the list, make sure that the devices are properly connected and turned on. Disable the firewall. Repeat the search. If you have used an RS232 connection to connect your Array Interface/Detector Interface 4000 to the OCTAVIUS Control Unit, check the box at the bottom left corner of the **Devices** window to enable the **Advanced search** and click the **Search** button.



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

Μ	easurement Optio	ns				
D	evices Measurem	ient				
		Devices In Use				
	Detector Array:	OCTAVIUS Detector 729				
	Calibration File:	ile: [C:\Dokumente und Einstellungen\All Users\Dokumente\PT]				
	Accessories:	Rotation Unit				
		Connections				
	Search					
	Device	Connection				
	Interface	DetectorInterface4000-372; LAN; HostName=DI4000 Edit				
	Rotation Unit	OCTAVIUSControlUnit-15; LAN; HostName=4DCUNIT Edit				
		Ok Cancel				

11.To check the connection of a device, click on the *Edit...* button next to its entry. You need to check the connection for the Detector Interface 4000 and the OCTAVIUS Control Unit separately.

Measurement Options	
Devices Measuremer	it
	Devices In Use
Detector Array: 0	CTAVIUS Detector 729
Calibration File:	\Dokumente und Einstellungen\All Users\Dokumente\PT
Accessories: F	Potation Unit
	Connections
Search	
Device	Connection
Interface	DetectorInterface4000-372; LAN; HostName=D14000 Edit
Rotation Unit	OCTAVIUSControlUnit-15; LAN; HostName=4DCUNIT Edit
	Ok Cancel



12. The *Edit Connection* window appears, showing the details of the respective connection.



#### 13.Click on the Check button.

Edit Connection			
Туре	LAN (TCP)		
Property	Value		
Name	DetectorInterface4000-372		
IP_Address/HostName	D14000-000372		
Enter the name of conne	ection.		
Check Sear	ch OK Cancel		

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

Edit Connection X	J
Connection to <di4000-000372> successful. PTW;DetectorInterface4000;1.01;SER=000372</di4000-000372>	
ОК	

15.Leave the *Measurement Options* window by clicking *OK*. The network connection to OCTAVIUS 4D is now established.



## Appendix A

#### Disabling the Firewall

It is possible that the Search function of the PTW programs is blocked by your firewall. In this case, you have to disable your firewall while setting up the connection. Disabling the firewall is only recommended if you have established a direct connection between PC and PTW device, and the PC is not part of a network. Once you have set up the connection, make sure to turn on the firewall again. This appendix shows how to turn off the standard Windows firewall in Windows XP and Windows 7. You need administrator rights to do so.

If you are using a different firewall or do not have administrator rights, contact your system administrator.

#### Disabling the Firewall in Windows XP

The firewall can be disabled via **Control Panel**  $\rightarrow$  **Windows Firewall**  $\rightarrow$  **General tab**.



Click the radio button *Off (not recommended)* and confirm your choice by clicking OK. The Search function of the PTW programs should no longer be blocked. Do not forget to turn the firewall on again, once you have set up the connection.



#### Disabling the Firewall in Windows 7

The firewall can be disabled via *Control Panel* → *System and Security*. Click on the *Windows Firewall* entry. Choose *Turn Windows Firewall on or off* on the left side:

Control Panel Home Allow a program or feature through Windows Firewall Change notification settings Turn Windows Firewall on or off Restore defaults Help protect your comput Windows Firewall can help prove through the Internet or a network How does a firewall help protect What are network locations? Mome or work (provide the setting)	iter with Windows Firewall ent hackers or malicious software from gaining access to your computer k. imy computer?
Advanced settings Troubleshoot my network Networks in public places such Windows Firewall state:	orivate) networks Not Connected (*) Connected (*) as airports or coffee shops On
Incoming connections:	Block all connections to programs that are not on the list of allowed programs
Notification state:	Notify me when Windows Firewall blocks a new program

Click both radio buttons *Off (not recommended)* and confirm your choice by clicking OK. The Search function of the PTW programs should no longer be blocked. Do not forget to turn the firewall on again, once you have set up the connection.

		_ 0 _>
🔾 🗢 🕍 « System ar	nd Security + Windows Firewall + Customize Settings • 47 Search Control Panel	
Cust You ca	omize settings for each type of network an modify the firewall settings for each type of network location that you use.	
What	are network locations?	
Home	e or work (private) network location settings	
2	C Turn on Windows Firewall	
	Block all incoming connections, including those in the list of allowed programs	
	In Notify me when Windows Firewall blocks a new program	
8	Turn off Windows Firewall (not recommended)	
Public	c network location settings	
	🖉 🔘 Turn on Windows Firewall	
	Block all incoming connections, including those in the list of allowed programs	
	W Notify me when Windows Firewall blocks a new program	
R C	Turn off Windows Firewall (not recommended)	
	OK Cancel	