Science with Passion



Assign IP addresses

In order to control devices via the LAN interface, each device requires its own IP address in the same IP address range. This IP address can be assigned either automatically via a DHCP server, e.g., by means of a router, or manually. KNAUER devices normally will be set to receive automatically and IP address. If you do not use a router in your system, but a simple network switch for the network connections, a fixed IP address must be assigned manually to each device. For most KNAUER devices, the Firmware Wizard can be used for this purpose. The Autosampler AS 6.1L cannot be set with the Firmware Wizard; it must be done using an installed internet browser.

Make sure your HPLC devices are switched on and connected via LAN cable with the network switch.

1. Setting up a fixed IP address for the Autosampler AS 6.1L

- 1.1 As other devices, the autosampler's LAN setting is to receive an IP address automatically. To change this, the internal setup must be accessed via an internet browser, e.g., Microsoft Edge. For accessing, the current IP address of the autosampler must be known. Same as a Windows computer, the autosampler supports APIPA. If the computer is set to obtain an IP address automatically and computer and autosampler are connected via LAN, both devices will have an APIPA address. After starting up, wait for about two minutes to allow the autosampler setting up an APIPA address. Start your CDS, enter the configuration section and browse for an Autosampler AS 6.1L. For the found device an IP address is shown, e.g., 169.254.123.201.
- 1.2 Start your internet browser and enter the found IP address for the autosampler in the address bar.





Fig. 1 Browser start window, IP address of the autosampler

- 1.3 If the IP address is confirmed, the Login page of the autosamplers internal setup is shown. If an information is shown that the connection might not be safe, please click to connect anyway.
- 1.4 On the Login page, enter as Username "root" and as a password "dbps".



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		Login							
		Welcome to the Configuration and Management interface of the Digi Connect ME4 9210.		root	0]]			
		Please specify the username and password to login to the web interface.	Login				_		
		See the User Guide and documentation for more information on logging in or retrieving a lost password.							
		Copyright © 1996-2013 Digi www	international Inc. All right w.digi.com	s reserved.					

Fig. 2 Autosampler Login page

1.5 If you logged in, select "Network" on the left-handed side of the page in the Configuration section



Fig. 3 Configuration - Network setup



1.6 In section "IPv4" select "Use the following IP address:" and enter IP address and Subnet mask.

The press the <Apply> button!

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← C ▲ Not secure	e 172.17.16.20/config/network/network_config.htm A [®] t ₀ t ∈ €		
Digji	Digi Connect ME4 9210 Configuration and Manag	emen	<u>t</u>
Home	Network Configuration	8	Help
Configuration Network Serial Ports	✓ Ethernet IP Settings Configure the network below. IPv6 settings are shown here for informational purposes.		٦
GPIO Alarms System Device Cloud	IPv6 Site Local Address: none Link Local Address: FE80::240:9DFF:FEC6:DC79		1
Users Applications RealPort	IPv4		
Management Serial Ports Connections	Obtain an IP address automatically using DHCP * Use the following IP address: * IP Address: 192.168.1.113		
Administration File Management Backup/Restore	* Subnet Mask: 255.255.255.0 Default Gateway: 0.0.0.0		
Update Firmware Factory Default Settings System Information Reboot	Enable AutoIP address assignment * Changes to DHCP, IP address, and Subnet Mask may affect your browser connection.		
Logout	Apply		-

Fig. 4 Configuration - Network setup with fixed IP address

1.7 A separate window will be shown to confirm your change by pressing <Apply> button also here.





Fig. 5 Configuration - Network setup with fixed IP address

1.8 Let the autosampler reboot for about two minutes. It is recommended, after that to switch the autosampler off and on again.

2. Setting up the IP address with the KNAUER Firmware Wizard

The KNAUER Firmware Wizard allows for changing the LAN settings of many KNAUER devices. Before you start the procedure with the Firmware Wizard, the HPLC devices should be connected (power and LAN cables) and switched on.

2.1 Install the downloaded KNAUER Firmware Wizard. We recommend not to change the suggested installation folder.



Knauer Firmware Wizard [V.1.03.000.373] - InstallShield Wizard						
Choose Destination Location Select folder where setup will install files.						
	Install Knauer Firmware Wizard [V.1.03.000.373] to: C.\\Knauer Firmware Wizard [V.1.03.000.373]	<u>C</u> hange				
InstallShield	< Back	Cancel				

Fig. 6 Firmware Wizard Installation

2.2 If installed, start the Software, either using the Firmware Wizard desktop icon or click Start > Firmware Wizard. Make sure you HPLC device is already connected and switched on!

	ß	Firmware Wizard New
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vare		arsigma Type here to search

Fig. 7 Firmware Wizard Desktop Icon / Start Menu Entry



Bootcore mode	Separate firmware	Select:	Auto All	Clear	Refresh De	evice Info	Connection:	Browse	
		beleen	<u>1000</u>	0,00	<u>I</u> ch con by	The arrive	Interface:	LAN	~
Device		SN: n/a		_	Do not update this	component	IP Address:	127.0.0.1	
	Current	/ersion: n/a	Device connection	Upcoming version: n settings	n/a X		IP Port:	10001	
			Target device se	rial number:				Connect	
			Obtain an IP	address automatically				Disconnect	
			O Use the follow	-			Reset	t LAN Settings	
			IP address:		•		Firmware Uploa	ad:	
			Subnet mask:					Do not reconne	ect
			Default gatev	vay:				Start	
			Cancel	Reset Conn	. Settings		Current Com	ponent:	0
							Overall uploa	ading progress:	- c
									1

2.3 Click <Reset LAN Settings...>. A separate window will open.

Fig. 8 Firmware Wizard - Device Control Settings

- 2.4 Enter in field "Target device serial number" either the device serial number or MAC address of the mentioned device. The serial number and MAC address can be found on the rear label of the device. Normally the serial number should work; in some rare situations the serial number doesn't works and the MAC address must be used. For the Column Thermostat CT 2.1 and the Conductivity Monitor CM 2.1S always use the MAC address.
- 2.5 A list of recommended IP addresses can be found in the list above. If your computer is connected to another network, e.g., with a separate network adapter, first check the IP address range of this network. The IP address ranges of both networks must not overlap; otherwise, serious network problems will occur! Please ask your network administrator for help.

Enter the desired IP address, Subnet mask (255.255.255.0 is recommended) and Default gateway address (recommended is the first address of the selected IP address range). Some devices do not accept a fix IP address without a Default gateway address. Each device must receive an own IP address.



evice connection settings	× Device connection settings
Target device serial number:	Target device serial number:
FAD122800002	0008DC5677B0
Obtain an IP address automatically	Obtain an IP address automatically
• Use the following IP address:	• Use the following IP address:
IP address: 192 . 168 . 1 . 101	IP address: 192 . 168 . 1 . 121
Subnet mask: 255 . 255 . 255 . 0	Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 1 . 1	Default gateway: 192 . 168 . 1 . 1
Cancel Reset Conn. Settings	Cancel Reset Conn. Settings

Fig. 9 Device Control Settings for P 2.1L with Serial Number / CT2.1 with MAC address

- 2.6 Click <Reset Conn. Settings>. After some seconds, the separate Device Control Settings window will close. There is no confirmation message, e.g. if the action was successful or not.
- 2.7 It is strongly recommended to switch the device off and on again to make sure, that it uses the new fixed IP address.
- 2.8 In case the computer has already a fixed IP address, you can check whether the device has accepted the new IP address. Click on <Browse...> and the Firmware Wizard will check for attached devices (Connection: <LAN> button must be active); it will only find devices with IP addresses from the same IP address range as the computer's network adapter has.

Bootcore mode	Separate firmware Select:	Auto <u>A</u> ll	Clear	Refresh Device Info	Interface:	LAN	~
Device	Snowse for devices	n/a	Donot	indate this component.			×
	srowse for devices						
	Connection: LAN	IP Port: 10001	RS-232 USE	}		Select	
	Serial Number	Device Type	Connected at	FW Version	Hosted at	Browse	
		Pump P 2.1L	LAN: 192.168.1.101:10001	01.09		Drowse	
						Close	
	<				>		
	Looking for devices						

Fig. 10 Browse for connected devices

3. Setup a fixed IP address for the computer's LAN adapter

Also the computer's network adapter must be set to a fixed IP address.



3.1 To setup a fixed IP address for the computer's network adapter, run the Windows Control Panel > Network and Sharing Centre, open the properties of the mentioned network adapter and open "Internet protocol Version 4 (TCP/IPv4) Properties"

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Organise 🔻 Disable this r	Ethernet S	•	×	\times wiew status of this connection
Ethernet	General			
Unidentified networ Realtek PCIe GBE Fa	Connection	Networking	Internet Protocol Version 4 (TCP/I	Pv4) Properties
	IPv4 Cor	Connect using:	General	
	IPv6 Cor Media St	🚽 Realtek PC		automatically if your network supports
	Duration		this capability. Otherwise, you need for the appropriate IP settings.	ed to ask your network administrator
	Speed:	This connection u		
	Detai	Client for	Obtain an IP address automa	
		File and I	Use the following IP address	
		QoS Pag	IP address:	192.168.1.100
	Activity —	🗹 🔔 Internet f	S <u>u</u> bnet mask:	255 . 255 . 255 . 0
		Microsoft	Default gateway:	192.168.1.1
		<	Obtain DNS server address a	utamatically
	Bytes:	Install	Obtain DNS server address a Obtain DNS server	
		Description	Preferred DNS server:	
	Proper	Transmission C		· · ·
		wide area netw across diverse i	Alternative DNS server:	· · ·
			Vaļidate settings upon exit	Ad <u>v</u> anced

Fig. 11 Setting up IP address in Windows Control Panel

- 3.2 Enable the option "Use the following IP address" and enter the IP address, Subnet mask and, if no other network adapter is used for automatically obtain an IP address, the Default gateway. If several network adapters are used, only for one adapter a Gateway address must exist.
- 3.3 Click <OK> to set the desired IP address.



4. Recommended IP addresses

Device	IP address
Computer	192.168.1.100
Solvent Pump/HPG 1	192.168.1.101
HPG Pump 2	192.168.1.102
HPG Pump 3	192.168.1.103
HPG Pump 4	192.168.1.104
Assistant 1	192.168.1.105
Assistant 2	192.168.1.106
UV Detector /DAD	192.168.1.110
RID 2.1L / CM 2.1S	192.168.1.111
Fraction Collector	192.168.1.112
Autosampler	192.168.1.113
Pump P 4.1S/2.1S (if not	192.168.1.114
solvent pump)	
Valve 1	192.168.1.115
CT 2.1	192.168.1.121