

## Introduction

Laptops operating the Ampha Z32 Impedance Flow Cytometer need to fulfil minimum requirements, and the communication interfaces need to be configured correctly. This document describes the setup of a new computer. Please follow the steps carefully.

### Materials

- Laptop meeting the minimal requirements (see box to the right) and administrator rights
- Ampha Z32, ethernet cable and ethernet-to-USB adapter
- At least one available license (professional or standard)

#### Laptop minimum requirements

- i5 64 bit dual core processor or higher (recommended: i7)
- 8 GB RAM
- At least 128 GB SSD (recommended: 256 GB SSD)
- Full HD screen (screen resolution 1920x1080, recommended: 15" screen)
- Windows 7 or 10 Pro
- Computer name must be in ASCII characters, e.g. AMPHASYS-PC
- OpenGL 3.3 graphics card or higher
- At least 2 free USB 2.0 connectors
- Internet access (WLAN or Ethernet)
- USB-Mouse

## Laptop setup and configuration

1	Initial Setup	• Start the laptop, create a user account and perform all software updates <b>Note:</b> Amphasys recommends having a dedicated laptop for the operation of the Ampha Z32. This laptop should contain only one user account. If this is not possible, please get in touch with Amphasys support.
2	Recommended Setup Steps	<ul> <li>Install a software for the display and analysis of .csv measurement reports, e.g. Microsoft Office or Apache OpenOffice.</li> <li><i>TIP:</i> The .csv reports are semicolon-separated. In case the reports are not displayed well structured into columns automatically, make sure the list separator is configured as semicolon. In addition, make sure the decimal separator is set to point.</li> <li>Change the power settings of the laptop to prevent sleep mode</li> <li>Uninstall Antivirus software</li> </ul>
3	Install AmphaSoft	<ul> <li>Download the latest version of AmphaSoft 2.0 from the Amphasys website (<u>https://amphasys.com/amphasys-downloads/</u>)</li> <li>Unzip the downloaded folder and install AmphaSoft by double clicking the unzipped .msi file. If required, confirm any warnings, i.e. click on 'more info' and 'run anyway'.</li> </ul>
4	Configure the Communiction Interface	<ul> <li>Connect your instrument to the laptop using the ethernet cable and ethernet-to-USB adapter</li> <li>Switch on the Ampha Z32</li> <li>Open the Network Connections panel of your PC (Settings &gt; Network &amp; Internet &gt; Change Adapter Options)</li> <li>Right-click on the Ethernet port that will be used to connect to the instrument and select Properties. The correct port has the description 'Realtek USB FE Family Controller' (<i>Fig. A, page 2</i>).</li> <li>Note: To find the correct port, you can unplug and plug the ethernet-to-USB adapter to see which port is displayed</li> <li>From the list, select Internet Protocol Version 4 (TCP/IPv4) &gt; Properties (Fig. B, page 2).</li> <li>Change the dialogue exactly as shown in Fig. C, page 2.</li> <li>Confirm with OK, close the dialogue with Close.</li> <li>Note: The ethernet-to-USB adapters are not interchangeable</li> </ul>
5	Connect to Instrument	<ul> <li>Make sure the Ampha Z32 is connected to the laptop using the ethernet cable and the ethernet-to-USB adapter, and that the instrument is switched on</li> <li>Double-click the AmphaSoft 2.0 desktop icon</li> <li>Click on Instrument Control on the left panel and select the Admin tab</li> </ul>



		Click the <b>Connect</b> button and wait until the instrument is connected (Status "online" in instrument section)
		Perform instrument firmware and instrument software updates if requested
		<b>TIP</b> : Instructions for these updates can be found in the AmphaSoft 2.0 User Guide. The User Guides are on the AmphaSoft Menu under Help.
		Click on Activate in the License section of the Admin tab
6	Activation of a License	Select one of the available licenses from the dropdown menu and click OK
U		<b>TIP:</b> More information about license management can be found in the AmphaSoft 2.0 User Guide. Contact Amphasys support in case no more licenses are available.
7	Restart	Restart the laptop and the Ampha Z32

# Figures

<ul> <li>Network Connections</li> <li>Organize Control Panel &gt; Network and Internet &gt; Network Connections</li> <li>Organize Disable this network device</li> <li>Diagnose this connection</li> <li>Rename this connection</li> <li>View status of this connection<th></th></li></ul>	
Image: Connect using:     Internet 2 Properties     Internet 2 Properties     Internet 2 Properties     Internet Protocol Version 4 (TCP/IPv4) Properties	×
Organize •       Disable this network device       Diagnose this connection       Rename this connection       View status of this connection       *       Image: The status of this connection         orrissi       Image: The status of this connection       Image: The status of this connection       Wireless Network Connection       Ethernet 2         Image: The status of this connection       Image: The status of the status of this connection       Image: The status of the status of the status of this connection       Image: The status of this connection       Image: The status of	
fortissi       Local Area Connection       Wireless Network Connection         Vetwork cable unplugged       Wireless Network Connection       CE         B       C         Internet 2 Properties       X         Networking       Sharing         Connect using:       You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.         Obtain an IP address automatically	0
B       C         Image: Connect using:       Internet Protocol Version 4 (TCP/IPv4) Properties       X         Networking Sharing       General       General         Connect using:       You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.       Obtain an IP address automatically	
Internet 2 Properties       X         Internet Protocol Version 4 (TCP/IPv4) Properties       X         Networking       Sharing         Connect using:       General         You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.         Obtain an IP address automatically	
Networking       Sharing         Connect using:       General         You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.         Configure       Obtain an IP address automatically	
Connect using:       You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.         Configure       Obtain an IP address automatically	
OUTProduct data in Following IP address:     Outproduct and the following IP address:	
Image: Construction Microsoft Networks       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft Networks       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft Networks       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft Networks       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft LLDP Protocol Driver       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft LLDP Protocol Driver       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft LLDP Protocol Driver       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft LLDP Protocol Driver       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft LLDP Protocol Driver       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft LLDP Protocol Driver       Image: Construction Microsoft Networks       Image: Construction Microsoft Networks         Image: Construction Microsoft LLDP Protocol Driver       Image: Construction Microsoft Networks       Image: Constr	
Install     Uninstall     Properties     Description     Transmission Control Protocol/Internet Protocol. The default	
wide area network protocol that provides communication across diverse interconnected networks.       Validate settings upon exit       Advanced         OK       Cancel       OK       Cancel	