

## 64-Bit Compatibility with Micromeritics Applications

Micromeritics products are designed to operate in most Microsoft® Windows® environments. However, more current versions of Microsoft Windows, specifically the 64-bit version of Windows 7, lack some of the services once offered by Microsoft. Because of this, Micromeritics applications will not operate with 64-bit operating systems. Micromeritics software applications are directly compatible with 32-bit version operating systems only.

In cases where a 64-bit operating system may be corporate-required or essential for running other software programs, Virtual PC software and a 32-bit operating system should be installed on the host computer (64 bit) as a guest operating system. This will allow proper installation and operation of the Micromeritics application.

The following steps will ensure proper installation:

1. Install and fully update the host (64-bit) operating system. This includes adding any hardware or software required, such as network cards or additional serial ports. Configuration will be performed later.
2. Verify that all updates have been applied and that additional programs such as anti-virus software have been installed and configured.

It is recommended (but not required) at this step that you use appropriate backup software to create a full backup of the host computer.

3. Install virtualization software following the vendor's instructions.

The virtualization software used may vary. We have tested Microsoft's Virtual PC with Windows XP and VMware Workstation with Windows XP. Generally, we have found that Virtual PC/XP mode works well for instruments that use an Ethernet connection and that VMWare works better for serial connections.

A virtualization service is available from Micromeritics if you experience difficulty in your setup. Due to the wide variation in hardware and software configurations, Micromeritics cannot guarantee that a given setup will function properly in all cases. Micromeritics will support the 64-bit version of Windows 7. Many of the techniques described may also work with the 64-bit version of Windows Vista®, but to reduce complexity we recommend that those requiring 64-bit functionality use Windows 7.



The virtualization software programs listed below have been tested and operate properly with Micromeritics applications in a Windows 7 environment. Access the website appropriate for your application and follow the vendor instructions. Install the software and a Windows XP 32-bit operating system before installing the Micromeritics application.



**It is essential that the processor type be verified for proper virtualization management. Many value-priced systems do not have processors that support this technology. Tools to verify processor support for virtualization are available at <http://www.microsoft.com/windows/virtual-pc/>.**

For ...	We recommend ...
<b>Ethernet-based application</b>	Virtual PC/XP Mode at <a href="http://www.microsoft.com/windows/virtual-pc/">http://www.microsoft.com/windows/virtual-pc/</a>
<b>Serial-based application</b>	VMWare workstation at <a href="http://www.vmware.com">http://www.vmware.com</a>  Download the 30-day evaluation copy before purchase.
<b>Unsupported processors</b>	Virtual PC 2007 at <a href="http://www.microsoft.com">http://www.microsoft.com</a>  USB-based peripheral equipment will not function properly with unsupported processors. If you have USB-based peripheral equipment installed, you must purchase the full version of Virtual PC 2007. If you are not using USB-based peripheral equipment, the free version will be sufficient.  Configuration should be performed in the same manner as the Ethernet-Based systems.

Other virtualization software programs are available, but have not been tested with Micromeritics products.

If you have problems with installation of the virtual PC, contact your local Micromeritics sales representative for assistance.

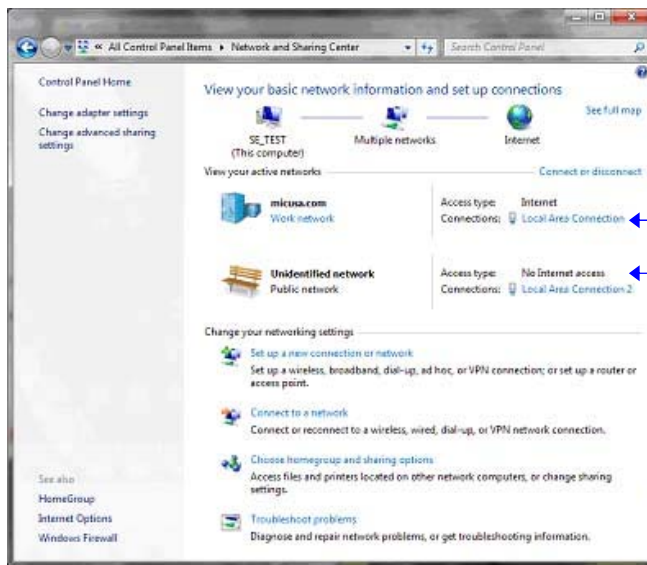
## Configuration

After the virtual computer with its 32-bit operating system has been installed, configuration is required for the host and virtual computers for proper communication with the instrument. The following examples show typical ethernet-based and serial-based configurations.

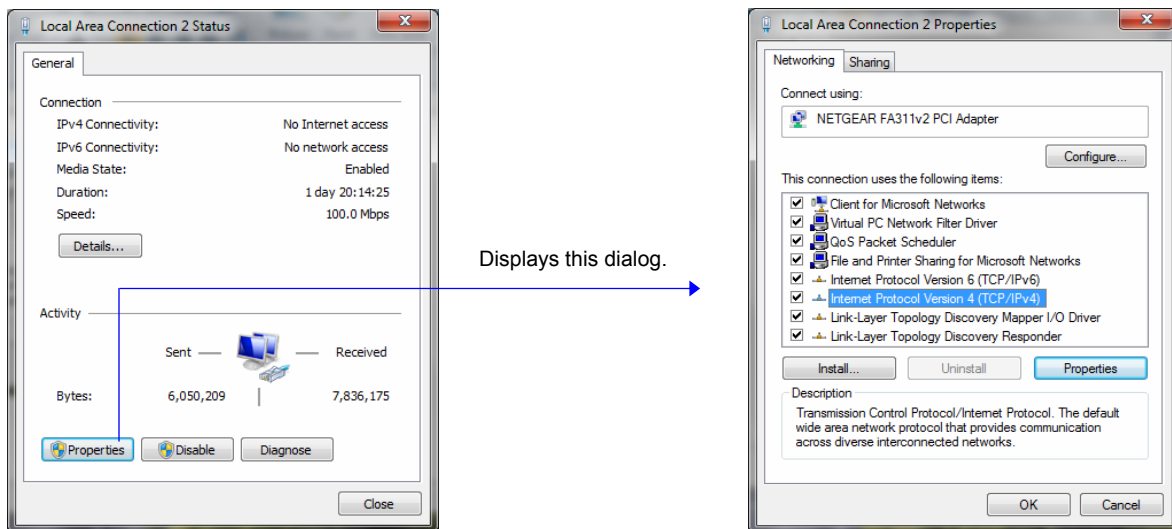
### Ethernet-Based

Ethernet-based applications require configuration of the host and virtual computers. First the host computer (64 bit) must be configured to use a second network interface card (NIC) with a different IP address. This IP address must be used when installing the Micromeritics application on the virtual computer.

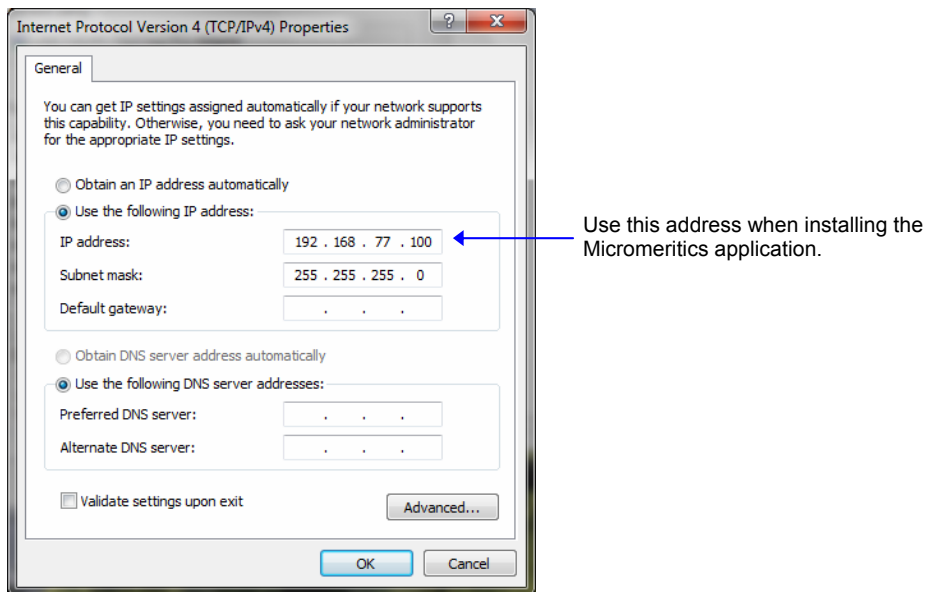
1. Access the Control Panel on the host computer; double-click **Network and Sharing Center**.



2. Double-click the second NIC (Local Area Connection 2) to display its Status dialog; click the **Properties** button.



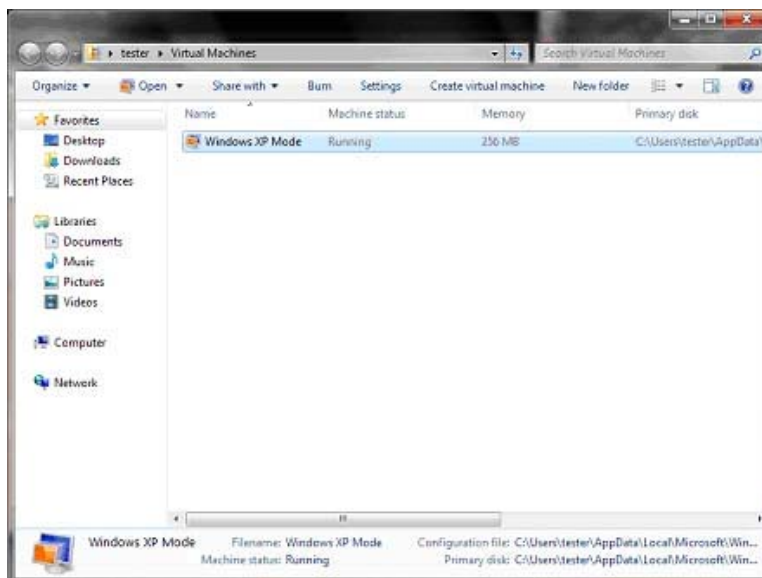
3. Select Internet Protocol Version 4 (TCP/IPv4) and click **Properties**; click **Use the following IP address** and enter the address shown here. This is the address you will use when installing the Micromeritics application. Ensure the subnet mask is as shown also, then click **OK**.



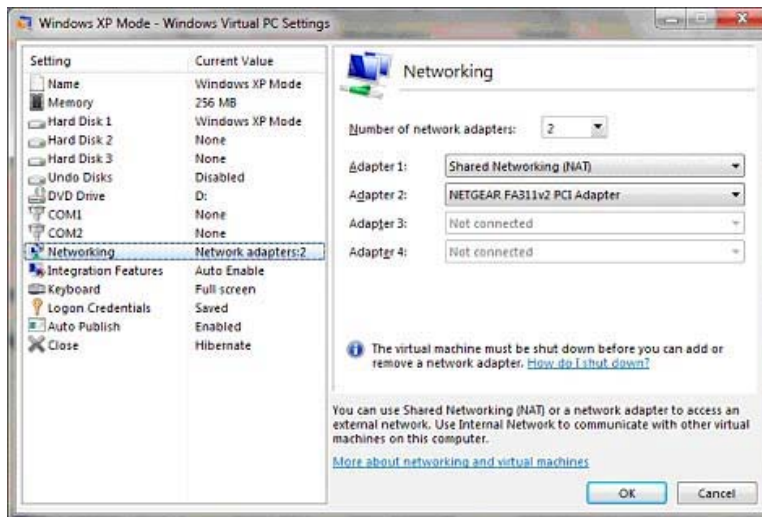
4. Continue to click **OK** or **Close** until all dialogs are closed, then close the Control Panel window.

The NIC has been configured on the host computer; now it must be added to the virtual computer.

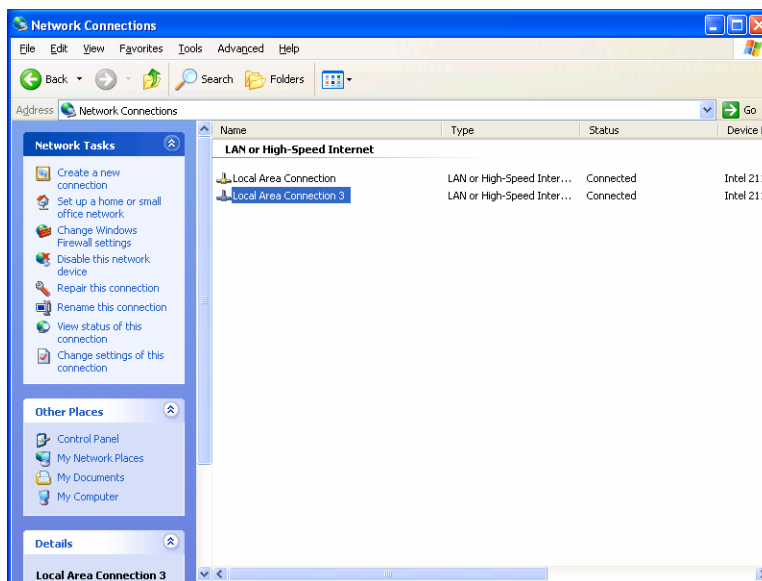
1. Access the virtual computer environment. Press **Ctrl + Alt + Delete** and shut down the virtual computer.
2. On the host computer, select **Start > Windows Virtual PC** (not Windows XP mode); the following screen is displayed.



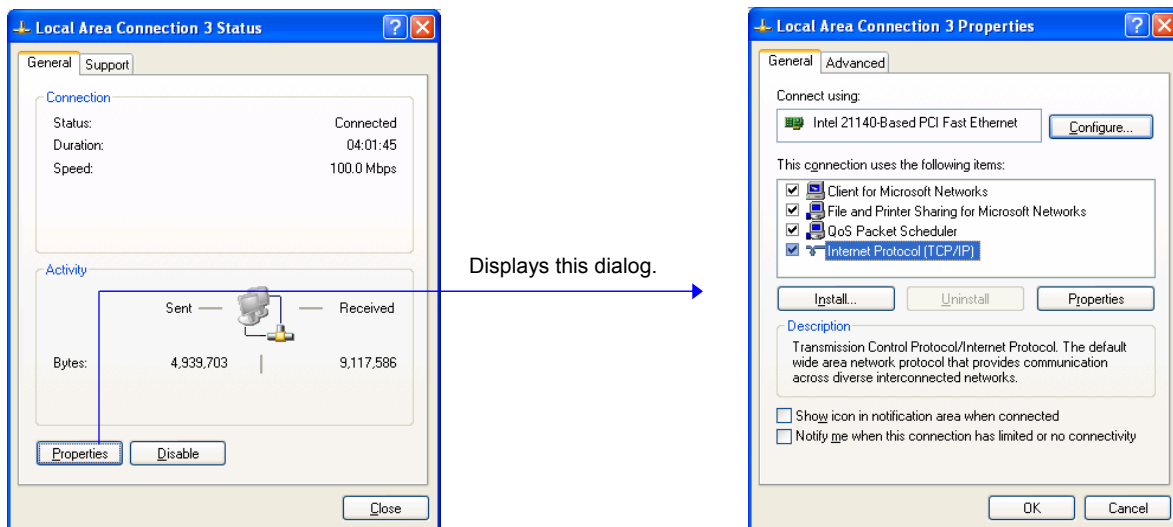
3. Right-click on Windows XP Mode and select **Settings**.
  - a. Highlight **Networking**.
  - b. Select **2** from the **Number of network adapters** list.
  - c. Click the down arrow to the right of the **Adapter 2** field and select the adapter you added, then click **OK**.



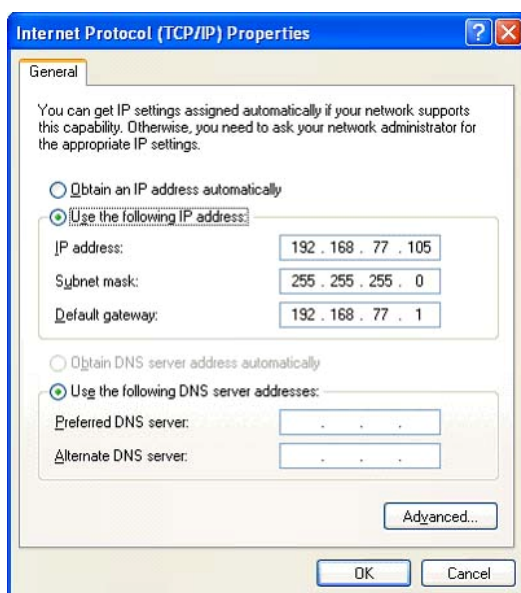
4. Restart Windows XP mode from the **Start** menu (or desktop icon).
5. Access the control panel from the Start menu; select **Network Connections**.



- Double-click on **Local Area Connection 3** ( as shown in the above example; your connection may display differently) to display its Status dialog. Select **Internet Protocol (TCP/IP)** and click **Properties**;



- Select **Use the following IP address** and enter the address shown here. Ensure the subnet mask is as shown also, then click **OK**.

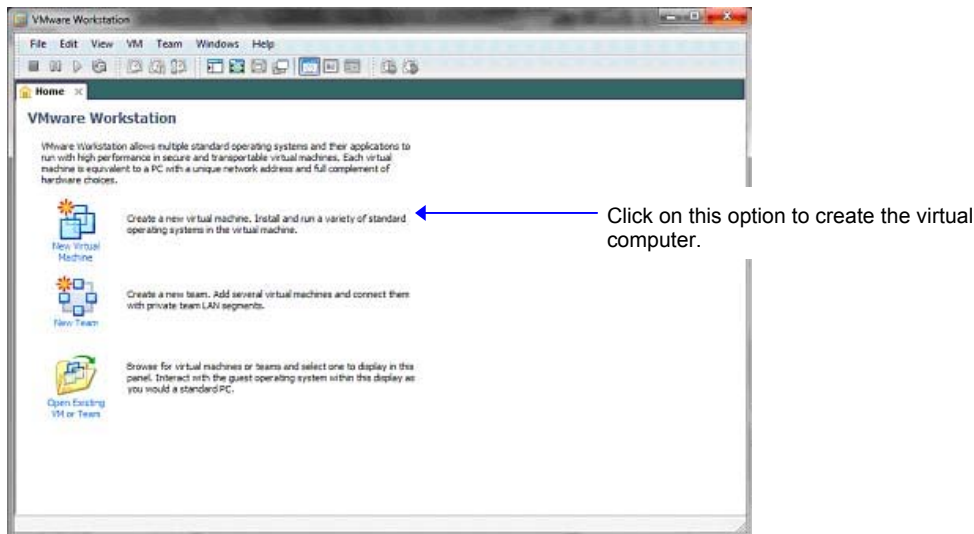


- Continue to click **OK** or **Close** until all dialogs are closed, then close the Control Panel window.
- Install the Micromeritics application.

## Serial-Based

VMWare is recommended for serial-based applications and is used in this example.

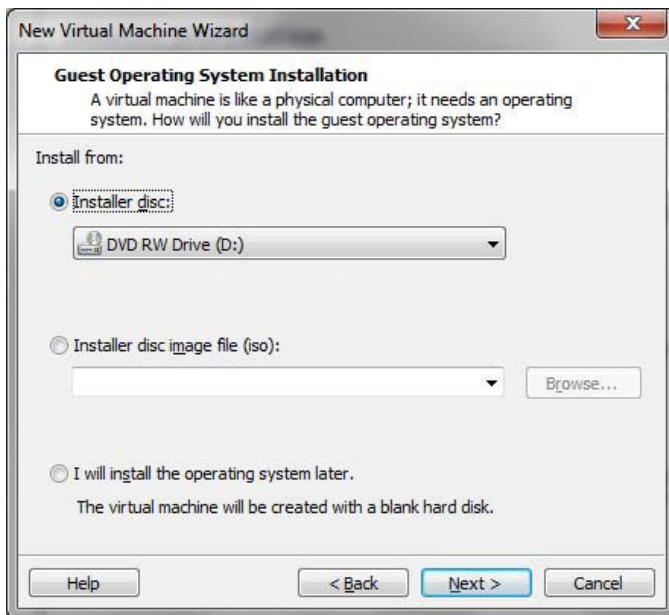
1. Double-click the VMware icon to access the VMware Workstation menu.



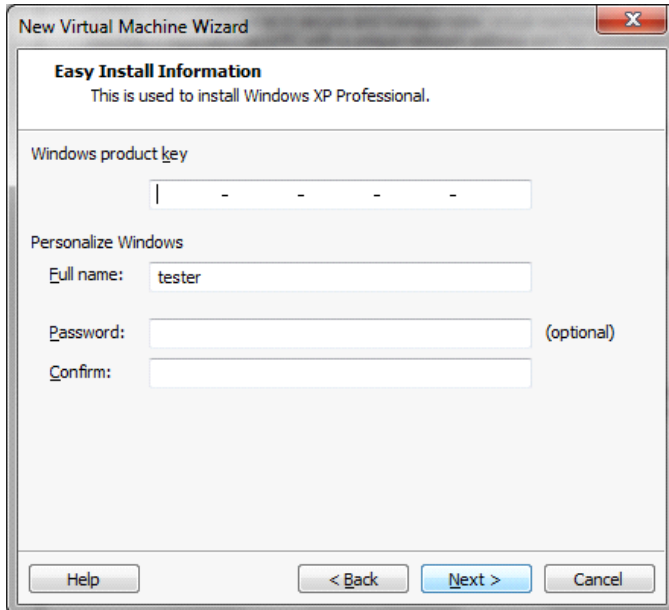
2. Click the **Create a virtual machine** option; the first screen of the installation wizard is displayed. Select **Typical**, then click **Next**.



3. Select **Installer disc**, choose the appropriate drive from the drop-down list, and click **Next**.

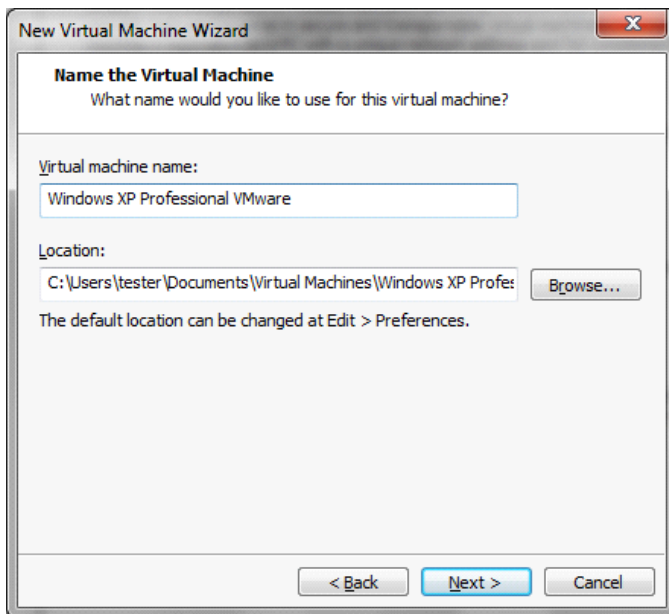


4. Enter the product key number (found on your packaging for windows XP) and any other information you wish to enter. Click **Next**.

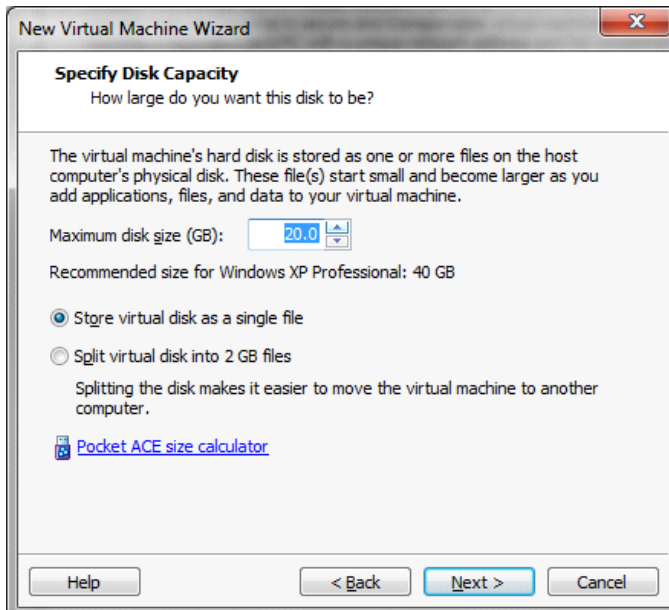




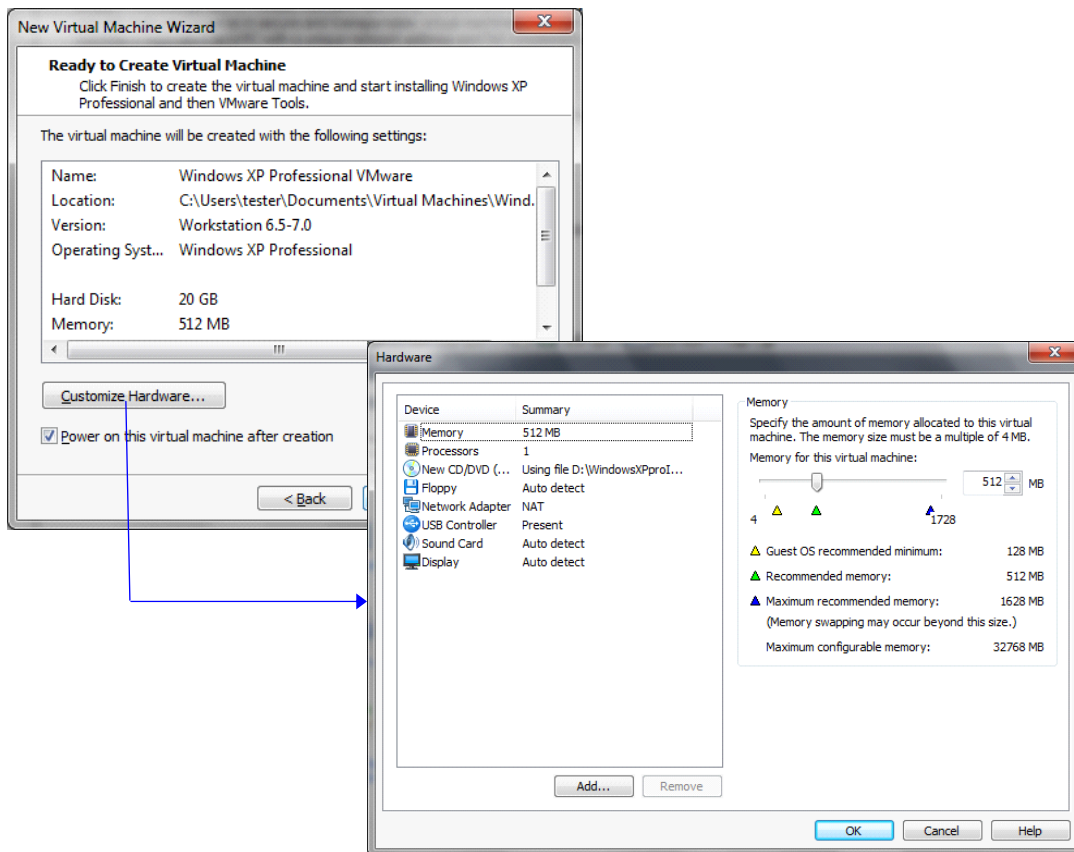
5. On this screen, a default name and directory are listed for the virtual computer. Accept the defaults or edit as desired and click **Next**.



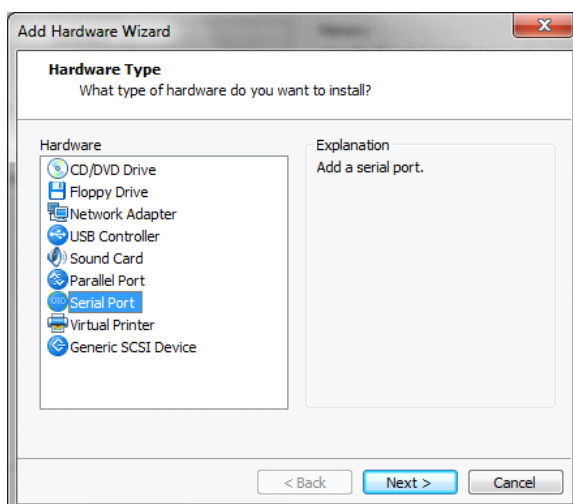
6. Change the **Maximum disk size** to **20** (ample for this application); click **Next**.



- Click the **Customize Hardware** button to add a serial port (COM 1).



- Click **Add**; the first screen of the Add Hardware Wizard is displayed.



9. Select **Serial Port** and click **Next** to advance to the next screen. Select the options as follows in the Add hardware Wizard.
  - a. **Serial port**: select **Use physical serial port on the host**, click **Next**.
  - b. **Physical serial port**: select an available serial port from the list, click **Finish**.
  - c. Click **Ok** on the Hardware screen to close the dialog.
10. Restart the host computer, start VMware, then install the Micromeritics application.