

How To:

Installing Offline Versions of Mx Software for Analysis-Only

Introduction

This document details the process for installing an offline version of Mx for offline analysis. There are 3 general steps in this process:

1. **Downloading the Mx software installer executable**
2. **Running the installer**
3. **Licensing the software**

Pay close attention to the Licensing process as not performing it correctly, will result in a license that will not activate or will de-activate earlier than expected.

At the end of this document is also a section that details how the Windows' display setting should be set for Mx to be properly rendered.

System Requirements:

- Window 10, 64-bit supports Mx version 7, 8, 9, and newer
- Window 11, 64-bit supports Mx version 9.3 and newer
- Intel Multi-Core or Multi-Processor (4 Core/Processor Minimum)
- 16 GB RAM or more; 32 GB recommended
- Dedicated graphics card supporting OpenGL with 256 MB RAM (recommended)
- OpenGL 3 or later

Unsupported Operating Systems/environments

- Windows XP & earlier, 8, and 8.1, Windows Server
- Windows 11 is not yet officially supported as of Mx version 9.2.
- Any non-Windows operating systems (i.e. macOS, Linux). For systems not running Windows 7 or 10, there has been some success by setting up a dual-boot option running Windows 7 or 10.
- Virtual machines are **not** supported.

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Procedure Overview

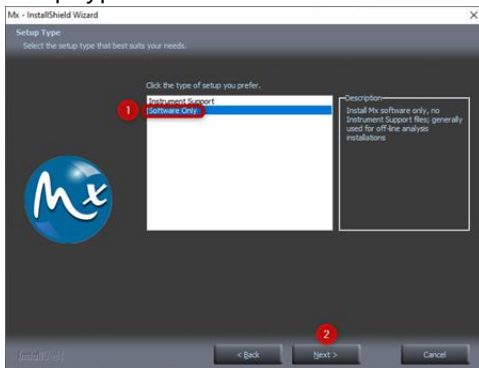
Here is a quick overview of the procedure for installing an offline (analysis-only) instance of Mx. The rest of the document goes into much more detail of the process from getting the installer through licensing if you need clarification. Pay close attention to anything marked **IMPORTANT** as making an incorrect selection can cause Mx not to function properly.

1. Get the Installer

- 1.1. Get the installer file from:
 - The Zygo website
 - Direct link emailed to you
 - From your Zygo instrument
- 1.2. Place the installer in **C:\MxInstall**.

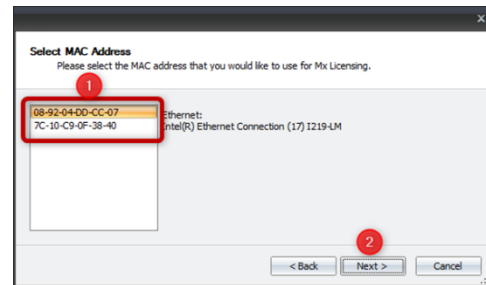
2. Run the installer

- 2.1. Accept the **End User License Agreement**.
- 2.2. **IMPORTANT:** Select **“Software Only”** as the setup type.



3. Licensing Mx

- 3.1. Open Mx and go to **Help > Licenses** to start the **Licensing Wizard**.
- 3.2. For the **Lock Type** select **Ethernet**.
- 3.3. **IMPORTANT:** Select a **static** MAC address
This is an extremely important step. If you do not know whether a given MAC address is static or dynamic, review the more detailed step in [Section 3: Licensing Mx](#) or contact your Zygo representative. Failure to select a static MAC will lead to license issues in the future.



3.4. Request a License

Send **Mx version & Hardware ID** (not the MAC address) to your Zygo contact.

Hardware ID	Option	Start Date	End Date	Key	Valid
0003378425	Mx v8.1.6	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Prism	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	SynPhase	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	QPSI	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Ritzhey-Cannon	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Flare	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Advanced Acquisition	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Precision Scan Cabinet	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Advanced Model Base	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	2D Vision Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Sphere Form Metrology	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Sphere Metrology	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Precision Scan Cabinet	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	2D Surface Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	2D Surface Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	2D Surface Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	2D Surface Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	2D Surface Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	2D Surface Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	2D Surface Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>

- 3.5. **IMPORTANT:** Enter your license information (**key, start & end dates**) exactly as they in the License document that is sent to you.

Section 1: Obtaining the Mx Software Installer

The installer for Mx software can be acquired via a few methods and each method is detailed further below:

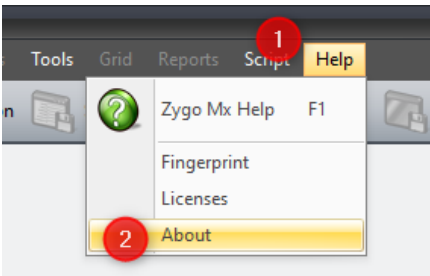
1. Downloaded from the [Zygo website](#).
2. A secure link sent directly to you by your Zygo contact typically through Amefex which is our secure file sharing platform.
3. Copy the exe from your instrument PC.

Which Mx Version to Use

Generally, it is advised that if you have an instrument at your facility and you will be moving applications/settings files between your computer and the instrument that you match software versions between the tool and offline PCs for consistency. If you are just using the offline version of Mx for analysis, then it is recommended to use a more recent version of Mx as there are new features & bug fixes to improve your experience.

Finding Mx Version

To find out what version of Mx is being used on your instrument, open the Mx software and go to the **"Help"** menu then select **"About"**. Note: in older versions of Mx, the version is listed as the Assembly number (*Example: 7.6.0.4*) within the Version Information box.



Method 1: Download Installer from the Zygo website

1. To download the installer from the Zygo website, you will first need to create an account on the [website](#). This is a one-time process and then you can use the account to download the Mx installers in the future or to download manuals, spec sheets, and other information from the website.

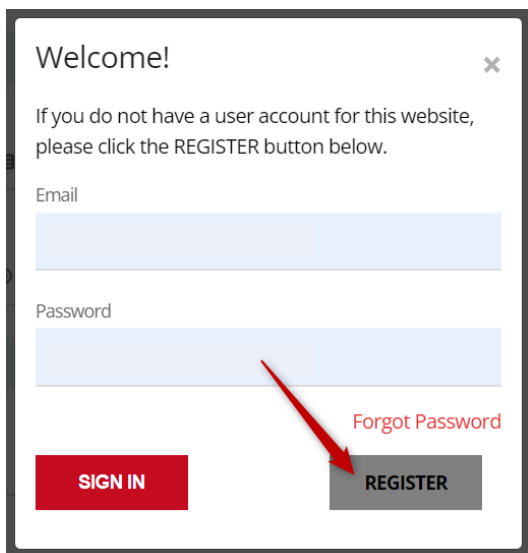
Typical turn-around time for approving accounts is about 1-2 business days so if you need to access something quickly, contact your Zygo representative or email zygo.support@ametek.com to help get you what you need quickly.

To create an account:

- 1.1. Click on the "**Login**" button in the top right corner of the website and a popup screen will be displayed



- 1.2. Click on the **Register** button



- 1.3. Fill out all required items in the Registration form then click "**Sign Up**". Accounts are typically approved within 1-2 business days but if you need the installer is urgent than contact your Zygo representative or email zygo.support@ametek.com.

IMPORTANT: When signing up for an account, use your **business email** address as accounts are not approved for email addresses with generic domains like @gmail.com or @yahoo.com.

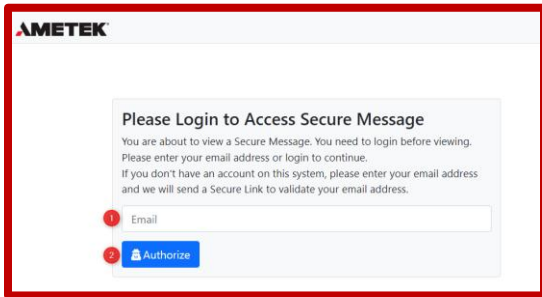
2. Once you have an account setup, click on the "**Login**" button, and provide your **username & password** to log in
3. Go to the [Mx Software download page](#) and click on the software version that you want to download. The download should then start automatically.
4. After you download the installer zip file, move the zip file to **C:\MxInstall** (note: create the folder if it does not already exist) then right-click on the zip file to unzip the file.

Method 2: Download Installer from a secure Amefex link

You might receive a link from your Zygo contact to download the Mx installer using our secure file sharing platform Amefex. If you do, there's how to download it from that link.

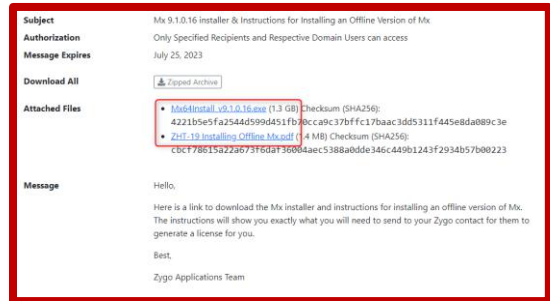
1. Click the link from their email to access the download page
2. You will be prompted to authorize your access for the file. Enter your business email address then click **Authorize**. If you have an Amefex account already, you will then enter in your password.

If you don't already have an account in this system, when you do this, it will send you an email to validate your email address.



3. Once you are logged in, you should see the secure message that looks like below with the link to download the **Mx installer** exe file and possibly another link to download a copy of these instructions. You can either click the exe link to download just the exe or you can click the Zipped Archive button to

download all files.



4. After you download the installer file, move the exe file to **C:\MxInstall** (note: create the folder if it does not already exist). If you download the Zipped Archive, then you will need to unzip that file before placing the exe in **C:\MxInstall**.

Method 3: Getting the Installer from your Instrument PC

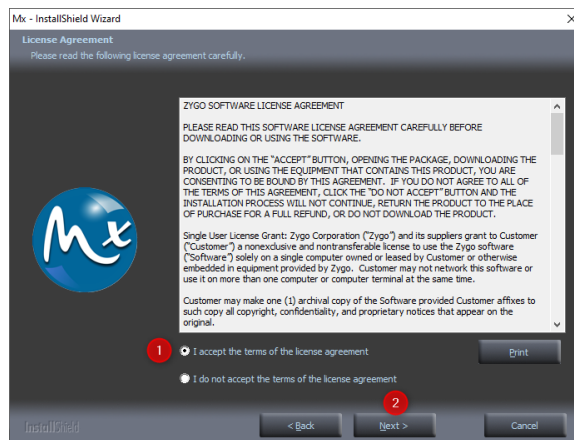
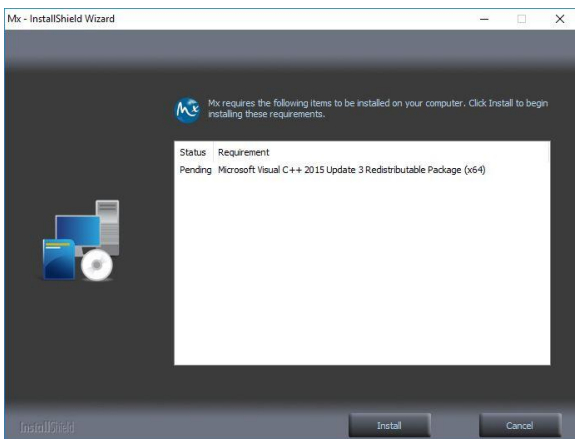
If it is easier for you to get the installer file from your instrument, you can do that as well. To get it from your instrument PC:

1. Navigate to **C:\MxInstall** on the instrument PC. Older instrument did not have this standard folder for the installer so if you do not see this folder, then obtain the installer through one of the other methods.
2. Copy the installer to USB drive or use some other transfer method.
3. Place the installer in **C:\MxInstall** on the computer that you want to install Mx on.

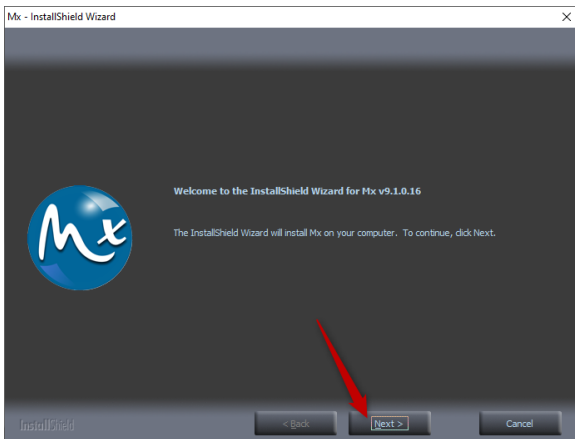
Section 2: Installing Mx for Offline Analysis

IMPORTANT NOTE: You may need to disable any active Antivirus software to install Mx.

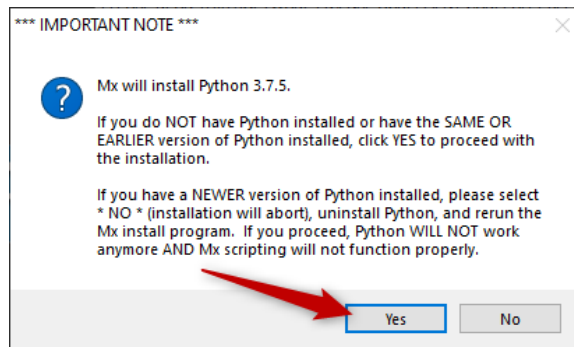
1. Double click the Mx installer exe located inside the **C:\MxInstall** (move the installer there if you have not already) file to launch the program. If there are any pending required items to be installed, click **Install**.
3. Read the End User License Agreement and select the radio button that you accept the terms of the license agreement then click **Next**.



2. Click **Next** to start the installation of Mx

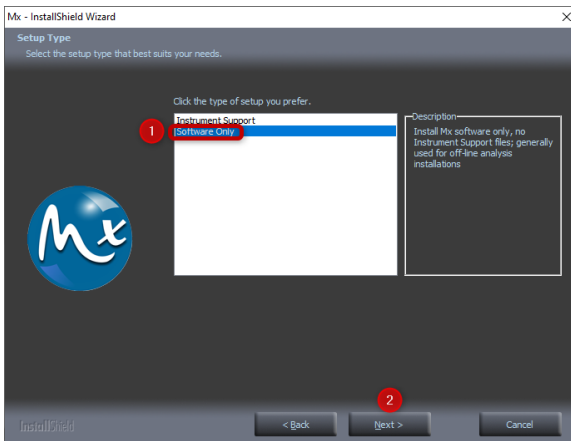


4. At this point you will be prompted to accept the installation of Python (the Python version will depend on the Mx version). Click **yes** to continue.

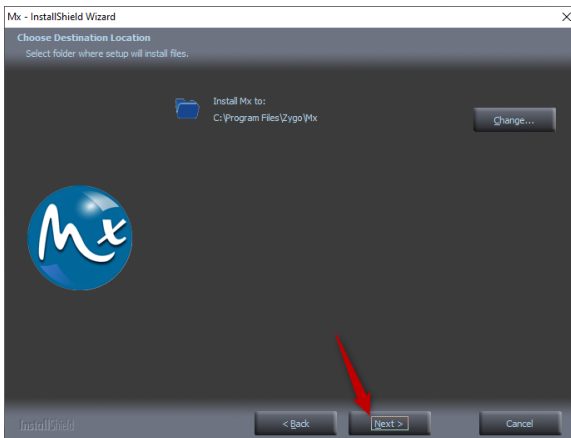


5. **IMPORTANT:** At this point you will be prompted on the type of software setup you would like to install. It is important that you select the **Software Only** option before clicking the **next** button.

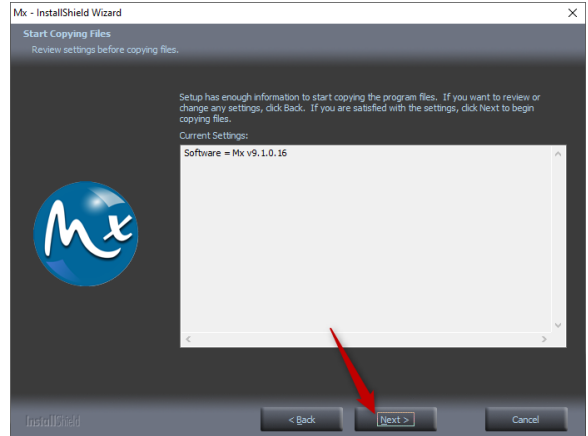
DO NOT select the Instrument Support option as it will then start asking you to select hardware configurations like motion, camera, etc that do not apply to offline Mx installations.



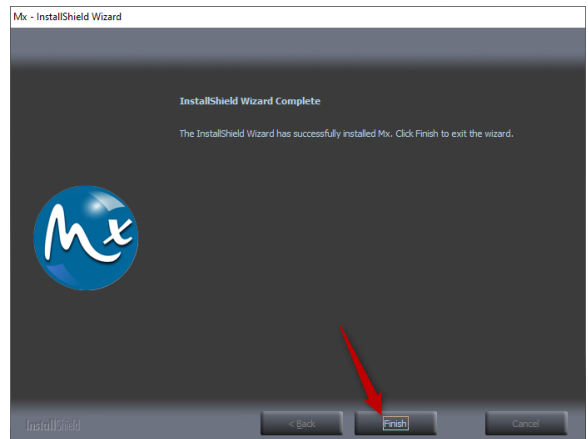
6. The next prompt pertains to the default Installation path. It is set to C:\Program Files\Zygo\Mx and should remain the default path. Click **Next**.



7. Click **Next** and the program will begin to install itself on your PC. Do not close any windows until the installation process is complete.



8. After the installation is complete, click **Finish**.



Section 3: Licensing Mx Software

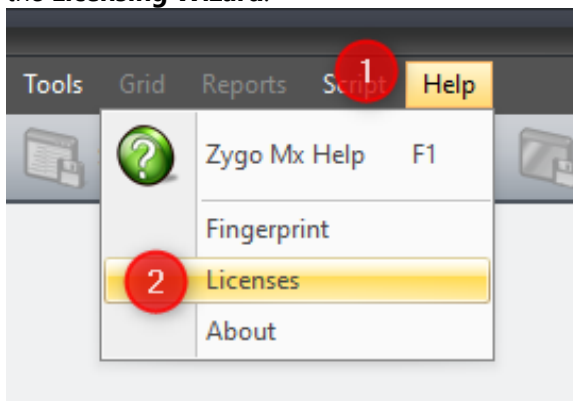
The last step before being able to use your offline version of Mx software is to license the software package. This will link your installed version of the software to a MAC address associated with your PC and generate a Hardware ID. The **Hardware ID** (not the MAC address) is what you will send to your Zygo contact for them to get you a license.

NOTE: each installation of Mx will have its own unique hardware ID and thus its own unique license so each user will need to get their own license generated.

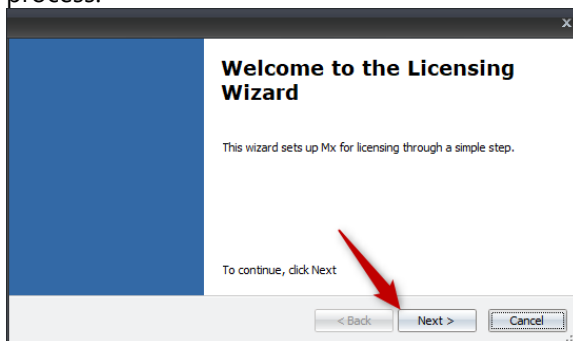
Note on Docking Stations

For the next steps, if you are installing Mx on a laptop that is in a docking station, it is recommended that you disconnect the laptop from the docking station before proceeding. If you are using a laptop that is in a docking station, then the list of MAC addresses to select from in a few steps might contain a MAC address for a device that is in the docking station and not in the laptop. If you were to remove the laptop from the docking station, then that MAC address is no longer able to be seen by Mx and the licenses would become invalid. After the Licensing Wizard is complete, it is OK to continue using the laptop in the docking station like you were.

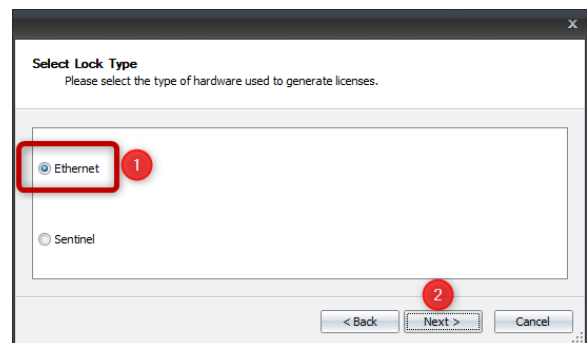
1. Launch Mx and go the **Help** menu then select the **Licenses** options. This will launch the **Licensing Wizard**.



2. Select **Next** on the home screen of the **Licensing Wizard** to start the licensing process.



3. If you are prompted to select a **Lock Type** of **Ethernet** or **Sentinel**, select **Ethernet** unless you have purchased a Sentinel USB dongle from Zygo.



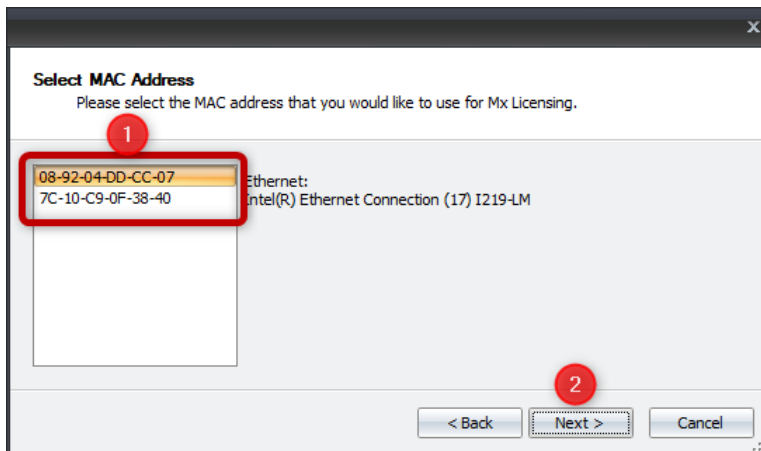
4. IMPORTANT: follow this step closely

This step is where you select the **MAC address** that will be used to create the **Hardware ID** that is used for licensing.

NOTE: the MAC address is different from the Hardware ID, the MAC address is **not** what you will send to your Zygo contact for them to generate the license, but it is used to create the Hardware ID that you will send to your Zygo contact. The Hardware ID that you will need to get a license generated will be found in a couple more steps.

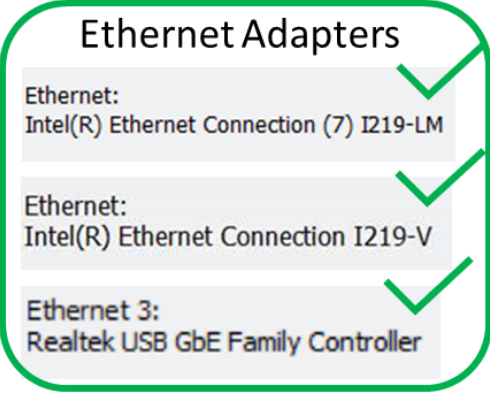
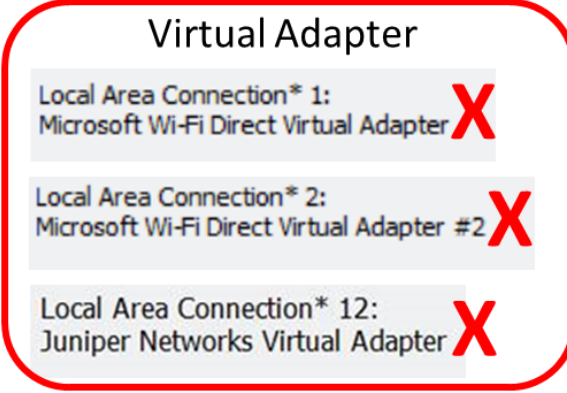
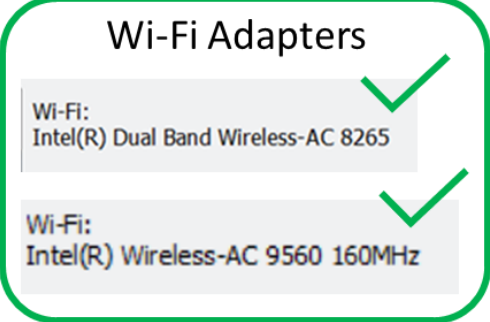

Depending on the computer that you are installing Mx on, there might be multiple MAC addresses that you can choose from, and it is important that you select the correct one as selecting an incorrect one can lead to the license information becoming invalid.

The **correct** MAC address will be for a device that will have a **static** or **permanent** MAC address and an **incorrect** MAC address would be for a device that has a **dynamic** or **non-permanent** MAC address.

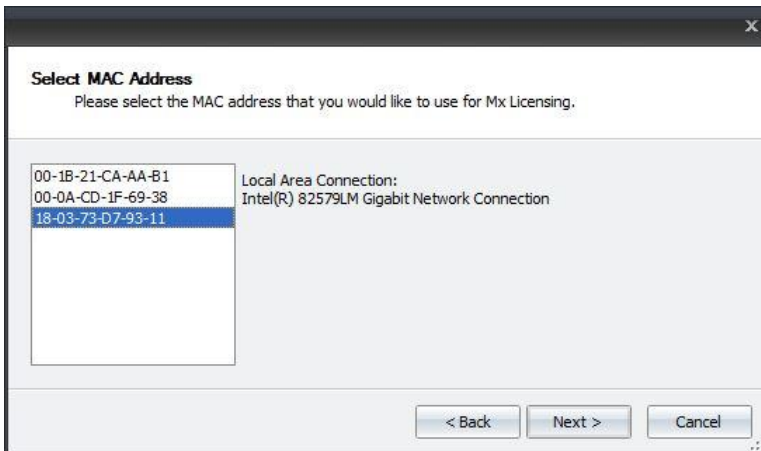


To determine the correct one to use, click on each of the MAC addresses in the white box and read the description that is displayed for each of them to the right. If the description starts with it being an Ethernet and Wi-Fi adapter, then it is most likely a static MAC address & the one that you will want to select. If anywhere in the description it says "Virtual" or "Bluetooth" then that will be a dynamic MAC address and one that you will **not** want to select.

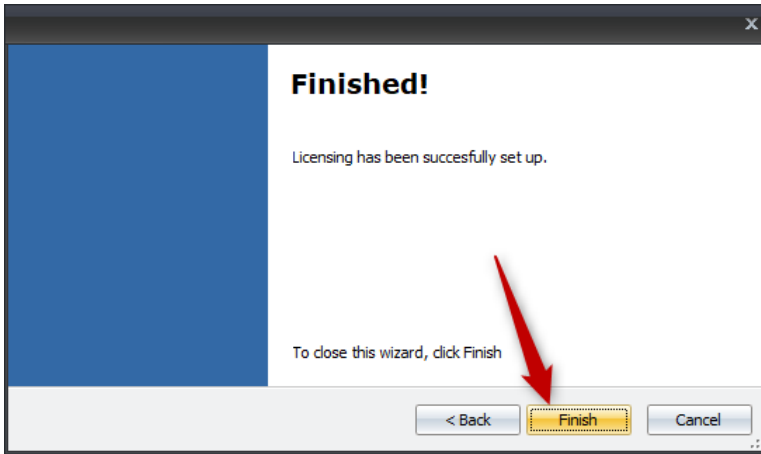
Below are some example MAC address descriptions and which are **Static/Permanent** vs **Dynamic/Non-Permanent**.

Static/Permanent MAC Addresses	Dynamic/Non-Permanent MAC Addresses
Ethernet Adapters  Ethernet: Intel(R) Ethernet Connection (7) I219-LM ✓ Ethernet: Intel(R) Ethernet Connection I219-V ✓ Ethernet 3: Realtek USB GbE Family Controller ✓	Virtual Adapter  Local Area Connection* 1: Microsoft Wi-Fi Direct Virtual Adapter X Local Area Connection* 2: Microsoft Wi-Fi Direct Virtual Adapter #2 X Local Area Connection* 12: Juniper Networks Virtual Adapter X
Wi-Fi Adapters  Wi-Fi: Intel(R) Dual Band Wireless-AC 8265 ✓ Wi-Fi: Intel(R) Wireless-AC 9560 160MHz ✓	Bluetooth Device  Bluetooth Network Connection: Bluetooth Device (Personal Area Network) X

If there are multiple MAC addresses listed and you are not sure which to select, select each MAC address & take a screenshot of the "Select MAC Address" window (like you see below) then send them to you Zygo contact (i.e. if there are 3 MAC addresses listed, then you should send 3 screenshots with the different descriptions captured). They can then provide feedback as to which is the best one to select.



- Click **Finish** to complete the Licensing Wizard. The next step is where you will see your **Hardware ID**.



6. **IMPORTANT**

At this point you should see the **License Keys** window (if you do not, go back to "Help" > "Licenses" and it should open the License Keys window if the Licensing Wizard has been successfully completed) which looks like the below image. The **License Keys** window has **Hardware ID & Mx Version** that are needed to generate a license.

Hardware ID	Option	Start Date	End Date	Key	Valid
0003378425	Mx v9.1.0	1/1/2009	1/1/2030	0000-0000-0000-0000	<input checked="" type="checkbox"/>
0003378425	Instrument	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	DynaPhase	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	QPSI	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Ritchey-Common	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Films	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Advanced Acquisition ...	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Precision Scan Callbrat...	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Advanced Model Base...	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	2D Vision Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Asphere Form Metrology	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Asphere Relations...	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Precision Stylus	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Form Surface	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Phase Analysis	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	Phase Advanced Anal...	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>
0003378425	CGH Position	1/1/2009	1/1/2030	0000-0000-0000-0000	<input type="checkbox"/>

Change Hardware ID

7. Requesting a License

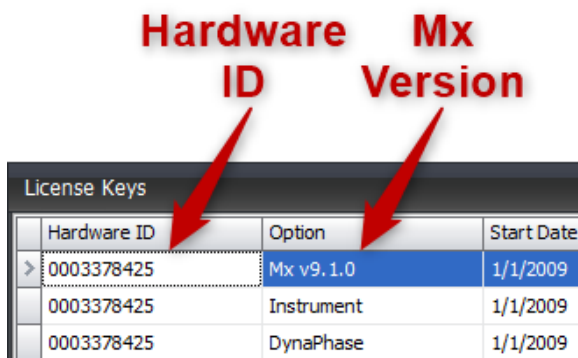
There are 2 ways that you can request an Mx license: **email** or the **License Request form** on the website

7.1. Method 1: Request Via Email

To request a license via email, take a screenshot of the **License Keys** window (it has both the Hardware ID and Mx Version) like you see above, ensuring that the text is large enough so that it is still able to be read, and email that to your Zygo contact (Account Manager, Applications Engineer, or Field Service Engineer). If none of those emails are available, please email the screenshot to the Zygo Support email: zygo.support@ametek.com.

7.2. Method 2: Request Via Website Form

To request an offline Mx license via the website, go to the [Mx License Request Form](#). Fill out all the required fields including the **Hardware ID** and the **Mx version** you have installed (both are found in the **License Keys** window). Note: the email address you use in this form is the email address that your license information will be sent to. Please use your **business email** address as licenses are not sent to email addresses with generic domains like @gmail.com or @yahoo.com.



The image shows a screenshot of a software window titled "License Keys". The window contains a table with three columns: "Hardware ID", "Option", and "Start Date". There are three rows of data. The first row is highlighted in blue. Two red arrows point from the text "Hardware ID" and "Mx Version" above the table to the corresponding columns in the first row.

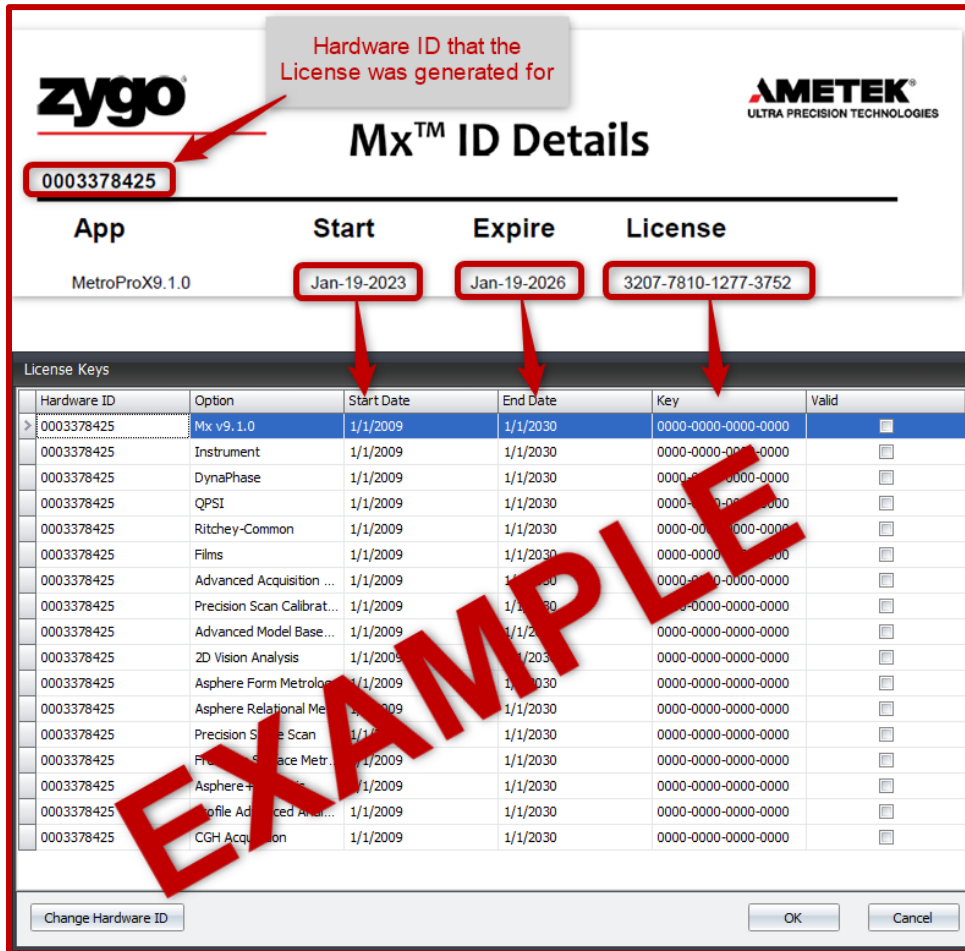
Hardware ID	Option	Start Date
> 0003378425	Mx v9.1.0	1/1/2009
0003378425	Instrument	1/1/2009
0003378425	DynaPhase	1/1/2009

After you submit the form, you should receive your license information within 1-2 business days. If you do not receive your license information by then, contact zygo.support@ametek.com or your Zygo Representative.

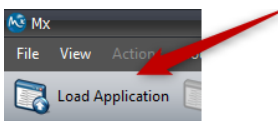
- Once you receive the PDF containing your license information, you will need to enter the license **Key** and **Start & Expiration dates** exactly as they appear in the PDF into the **License Keys** window (“Help” > “Licenses”). After all information has been entered, hit the **Enter** key and if all information has been entered correctly, the box at the end of each licensed row in the **Valid** column should be checked.

If the check box is not checked for a given item after you hit enter that should be licensed:

- Check that the Hardware ID in the License Keys window matches the Hardware ID listed in the License information PDF
- Check that all the start & end dates and key match exactly what is in the License information PDF



- Mx should now be fully licensed & ready to use. To start out, go to the **Load Application** button or **File > Load Application** to load the application you want to use to analyze your data. Typically, you would use the **Micro.appx** if you are looking at data from a Zygo **optical profiler** (Nexview, Newview, or Zegage), **Form.appx** for a standard Zygo **laser interferometer** (Verifire or Dynafiz), or the **MST.appx** application if using a Zygo **MST**.



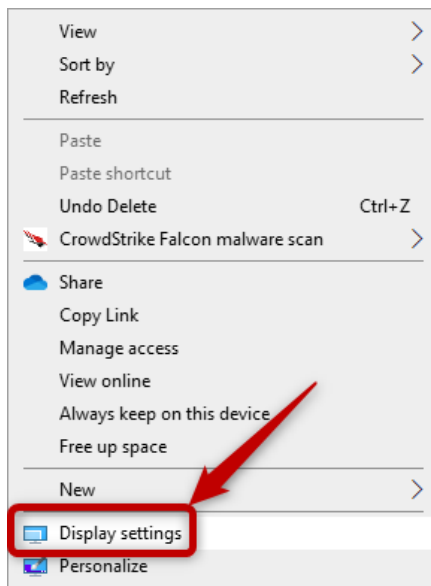
Appendix: Windows' Display Settings

It is important that you have your Windows Display Settings set in a particular way so that Mx will be displayed properly. If the settings are not set correctly then Mx can fail to display parts of the user interface. Below are the steps to set your Windows Display Settings properly for Windows 10 (Windows 7 uses the same settings though how certain things are named might be slightly different).

Note: the exact name of some of the settings below or their exact location might be slightly different between exact versions of Windows, but they should be similarly named & located.

1. Display Settings

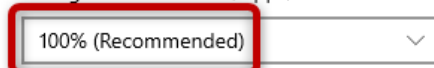
- 1.1. Go to the Display Settings window by right-clicking on the **Desktop** and going to **Display Settings**



- 1.2. Set the "Size of text, apps, and other items" to **100%**

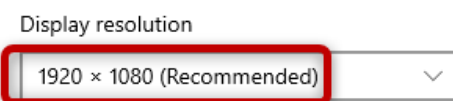
Scale and layout

Change the size of text, apps, and other items



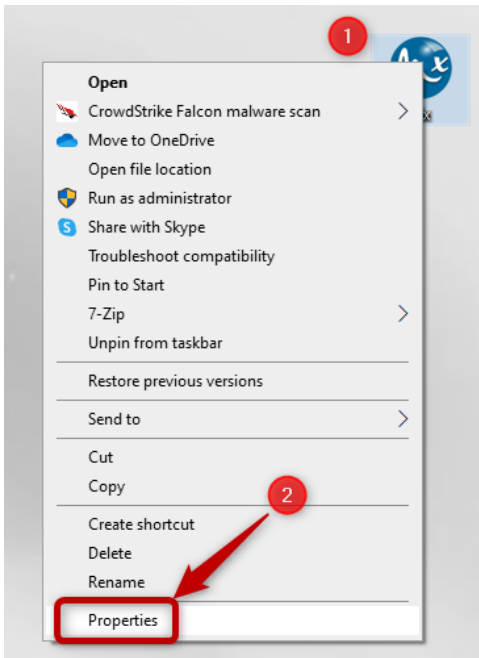
[Advanced scaling settings](#)

- 1.3. Set the "Display Resolution" to **1920x1080**
Note: this may be under "Advanced" settings



2. Mx properties

2.1. Right-click on the Mx short-cut icon and go to **Properties**



2.2. Under the **Compatibility** tab go to **Change high DPI settings** then ensure the **Override high DPI scaling behavior** checkbox is **unchecked**.

