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|--|---|------------------------------|--|
|  | Tomography Software Installation Manual       | Doc Number:<br><b>106609</b> | <a href="#">Provide Field Feedback</a> |
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# Tomography Software Installation Manual

## 1 Introduction

This document describes the installation and licensing procedures for Tomography software on the Microscope PC.

For Thermo Fisher Scientific engineers, the Tomography software installers for all versions are available as an ISO file at [TEM SW Archive - Tomography](#).

## 2 Safety

No hazards identified.

## 3 Prerequisites

### 3.1 Software prerequisites for Tomography

Prerequisite software components such as *.NET Framework* and *Microsoft Runtime* libraries are included in the TEM Server Prerequisites installer. If Tomography requires an update of an already present software component, then the Tomography installer will run the involved installers automatically.

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## 3.2 System, software and configuration compatibility

The following tables show the compatible microscope software versions, the preferred Tomography software versions per microscope software version, and the system configuration compatibility.

Although the Tomography software is backward compatible with a limited range of microscope software versions, some of the new features and improvements may be available only for the most recent supported microscope software version(s).

### 3.2.1 Preferred Tomography version per microscope software version

| Titan       | Talos       | Tecnai | Tomography | Remarks |
|-------------|-------------|--------|------------|---------|
| 3.17 – 3.23 | 2.17 – 2.23 | —      | 5.21       |         |
| 3.17        | 2.17        | —      | 5.20.1     |         |
| 3.16        | 2.16        | —      | 5.19       |         |
| 3.15        | 2.15        | —      | 5.18       |         |
| 3.14        | 2.14        | —      | 5.17       |         |
| 3.13        | 2.13        | —      | 5.16       |         |
| 3.12        | 2.12        | —      | 5.15       |         |
| 3.11        | 2.11        | —      | 5.14       |         |
| 3.10        | 2.10        | —      | 5.13       |         |
| 3.9         | 2.9         | —      | 5.12       |         |
| 3.8         | 2.8         | —      | 5.11       |         |
| 3.7         | 2.7         | —      | 5.10       |         |
| 3.6         | 2.6         | —      | 5.9        |         |
| 3.5         | 2.5         | —      | 5.8        |         |
| 3.4         | 2.4         | —      | 5.7.1      |         |
| 3.3         | 2.3         | —      | 5.6        |         |
| 3.2         | 2.2         | —      | 5.5        |         |
| 3.0 – 3.1   | 2.0 – 2.1   | —      | 5.4.1      |         |
| 2.15        | 1.15        | —      | 5.7.1      |         |
| 2.14        | 1.14        | —      | 5.3        |         |
| 2.13        | 1.13        | —      | 5.2        |         |

|                                   |   |                              |  |
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| Titan      | Talos      | Tecnai | Tomography | Remarks                          |
|------------|------------|--------|------------|----------------------------------|
| 2.12       | 1.12       | —      | 5.1        |                                  |
| 2.11       | 1.11       | —      | 4.12       |                                  |
| —          | —          | 5.7    | 4.9        |                                  |
| 2.6 – 2.10 | 1.6 – 1.10 | 5.6    | 4.7        | Titan 2.6 requires patch 649671. |
| 2.5        | 1.5        | —      | 4.5.0      |                                  |
| 2.4        | 1.4        | —      | 4.4.1      |                                  |
| 2.0 – 2.3  | 1.0 – 1.3  | —      | 4.4.0      |                                  |
| 1.6        | —          | 4.6.4  | 4.1.2      | Last release for Windows XP.     |

### 3.2.2 Compatible microscope software versions per Tomography version

| Tomography | Titan             | Talos             | Remarks   |
|------------|-------------------|-------------------|---|
| 5.21       | 3.17 – 3.23       | 2.17 – 2.23       |   |
| 5.20.1     | 3.17 – 3.22       | 2.17 – 2.22       |   |
| 5.19       | 3.16 – 3.21       | 2.16 – 2.21       |   |
| 5.18       | 3.15 – 3.20       | 2.15 – 2.20       |   |
| 5.17       | 3.14 – 3.19       | 2.14 – 2.19       |   |
| 5.16       | 3.13 – 3.18       | 2.13 – 2.18       |   |
| 5.15       | 3.12 – 3.17       | 2.12 – 2.17       |   |
| 5.14       | 3.11 – 3.16       | 2.11 – 2.16       |   |
| 5.13       | 3.10 – 3.15       | 2.10 – 2.15       |   |
| 5.12       | 3.9 – 3.14        | 2.9 – 2.14        |   |
| 5.11       | 3.8 – 3.13        | 2.8 – 2.13        |   |
| 5.10       | 3.7 – 3.12        | 2.7 – 2.12        |   |
| 5.9        | 3.6 – 3.11        | 2.6 – 2.11        | For STEM / EDS experiments, Tomography 4.X is no longer required.   |
| 5.8        | 3.5 – 3.10        | 2.5 – 2.10        | Tomography 4.21 for STEM / EDS experiments is available as a <i>separate</i> software installation.   |
| 5.7.1      | 2.15<br>3.4 – 3.9 | 1.15<br>2.4 – 2.9 | <ul style="list-style-type: none"> <li>• Preferred over Tomography 5.7</li> <li>• Last release to support Windows 7 based microscope software (Titan 2.X and Talos 1.X).</li> </ul> |

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| Tomography | Titan             | Talos             | Remarks  |
|------------|-------------------|-------------------|--|
|            |                   |                   | <ul style="list-style-type: none"> <li>Tomography 4.20 for STEM / EDS experiments is available as a <i>separate</i> software installation.</li> </ul>                              |
| 5.7.0      | 3.4 – 3.9         | 2.4 – 2.9         | Tomography 4.20 for STEM / EDS experiments is available as a <i>separate</i> software installation.  |
| 5.6        | 2.15<br>3.3 – 3.8 | 1.15<br>2.3 – 2.8 | Tomography 4.19 for STEM / EDS experiments is available as a <i>separate</i> software installation.  |
| 5.5        | 2.15<br>3.2 – 3.7 | 1.15<br>2.2 – 2.7 | Tomography 4.18 for STEM / EDS experiments is available as a <i>separate</i> software installation.  |
| 5.4.1      | 2.15 – 3.6        | 1.15 – 2.6        | Tomography 4.17 for STEM / EDS experiments is available as a <i>separate</i> software installation.  |
| 5.4.0      | 2.15 – 3.6        | 1.15 – 2.6        | <b>Tomography 5.4 is withdrawn.<br/>Do not install Tomography 5.4.</b>   |
| 5.3        | 2.14 – 3.5        | 1.14 – 2.5        | Tomography 4.16 for STEM / EDS experiments is available as a <i>separate</i> software installation.  |
| 5.2        | 2.13 – 3.4        | 1.13 – 2.4        | Tomography 4.15 for STEM / EDS experiments is automatically installed with Tomography 5.2  |
| 5.1        | 2.12 – 3.3        | 1.12 – 2.3        | Tomography 4.14 for STEM / EDS experiments is automatically installed with Tomography 5.1  |
| 5.0.1      | 2.12 – 3.2        | 1.12 – 2.2        | Tomography 4.13.1 for STEM / EDS experiments is automatically installed with Tomography 5.0.1  |
| 5.0.0      | 2.12 – 3.2        | 1.12 – 2.2        | <ul style="list-style-type: none"> <li>First release for Windows 10</li> <li>Tomography 4.13 for STEM / EDS experiments is automatically installed with Tomography 5.0.</li> </ul> |

### 3.2.3 Compatible CryoFlow and TQM versions per Tomography version

| Tomography | CryoFlow    | TQM        | SDP             | Remarks |
|------------|-------------|------------|-----------------|---------|
| 5.21       | 1.24 – 1.27 | 1.8 – 1.11 | 2.15, 3.1 – 3.3 |         |
| 5.20.1     | 1.26        | 1.10       | 3.2             |         |
| 5.19       | 1.25        | 1.9        | 3.2             |         |
| 5.18       | 1.24        | 1.8        |                 |         |
| 5.17       | 1.23        | 1.7        |                 |         |
| 5.16       | 1.22        | 1.6        |                 |         |
| 5.15       | 1.21        | 1.5        |                 |         |

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| Tomography | CryoFlow | TQM | SDP | Remarks |
|------------|----------|-----|-----|---------|
| 5.14       | 1.20     | 1.4 |     |         |
| 5.13       | 1.19     | 1.3 |     |         |
| 5.12       | 1.18     | 1.2 |     |         |
| 5.11       | 1.17     | 1.1 |     |         |

### 3.2.4 Compatible Maps TEM versions per Tomography version

| Tomography | Maps TEM | Remarks   |
|------------|----------|---|
| 5.21       | 3.31.1   | <ul style="list-style-type: none"> <li>"Thermo Scientific Maps Data Exchange Service" needs to be installed, see Maps User Guide 3.31.1.</li> </ul>   |
| 5.20.1     | 3.30.1   | <ul style="list-style-type: none"> <li>"Thermo Scientific Maps Data Exchange Service" needs to be installed, see Maps User Guide 3.30.1.</li> </ul>   |
| 5.19       | 3.29.1   | <ul style="list-style-type: none"> <li>"Thermo Scientific Maps Data Exchange Service" needs to be installed, see Maps User Guide 3.29.1.</li> <li>Use Maps TEM 3.27.1 to install "Thermo Scientific Maps Data Exchange Service".</li> </ul> |
| 5.18       | 3.28.1   | <ul style="list-style-type: none"> <li>"Thermo Scientific Maps Data Exchange Service" needs to be installed, see Maps User Guide 3.28.1.</li> <li>Use Maps TEM 3.27.1 to install "Thermo Scientific Maps Data Exchange Service".</li> </ul> |
| 5.17       | 3.27.1   | "Thermo Scientific Maps Data Exchange Service" needs to be installed, see Maps User Guide 3.27.1.   |

### 3.2.5 Compatible cameras for Tomography

| Camera        | Supported | Remarks   |
|---------------|-----------|---|
| Ceta          | Yes       | <ul style="list-style-type: none"> <li>All Ceta Sensor Packages.</li> <li>With and without Speed Enhancement (Ceta-2).</li> </ul> |
| Falcon 4      | Yes       | Tomography  |
| Falcon 4i     | Yes       | <ul style="list-style-type: none"> <li>Tomography 5.9 and later.</li> <li>Requires Titan 3.10 / Talos 2.10 and later.</li> </ul>  |
| Falcon 3EC    | Yes       |   |
| Falcon I / II | No        | Tomography 4.13.1 and earlier.  |
| Gatan Orius   | Yes       |   |
| Gatan OneView | Yes       |   |

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| Camera            | Supported | Remarks                      |
|-------------------|-----------|------------------------------|
| Gatan US1000XP    | Yes       |                              |
| Gatan US1000/4000 | No        | Not supported in Windows 10. |

**Note** The compatible cameras may not all be supported by the compatible microscope software versions. See the TEM Server Release Notes for a definitive list of supported cameras.

### 3.2.6 Compatible energy filters for Tomography

| Energy Filter   | Supported | Remarks                                   |
|---|-----------|---|
| Selectris / Selectris X   | Yes       | Requires Titan 3.6 / Talos 2.6 and later. |
| Gatan Enfinium SE / ER  | Yes       | With US1000 camera.                       |
| Gatan Quantum<br>963 / 964 / 965 / 966  | Yes       |   |
| Gatan (Bio)Quantum 967 / 968  | Yes       | With Gatan K2 camera.                     |
| Gatan BioQuantum 1967   | Yes       | With Gatan K3 camera                      |
| Gatan Continuum<br>1065 ER / 1066 / 1066 HR /<br>1067 / 1069 / 1069 HR / 1077 S | Yes       |   |

**Note** The compatible energy filters may not all be supported by the compatible microscope software versions. See the TEM Server Release Notes for a definitive list of supported energy filters.

### 3.2.7 Compatible detectors for Tomography

| Detector                 | Supported | Remarks                      |
|--------------------------|-----------|------------------------------|
| HAADF                    | Yes       |                              |
| BF/DF Retractable        | Yes       |                              |
| BF/DF Retractable Mk2    | Yes       |                              |
| Panther STEM (BF-S/DF-S) | Yes       |                              |
| Gatan 805 / 807 BF/DF    | Yes       |                              |
| Super-X-G1 / G1 Lite     | No        | Not supported in Windows 10. |
| Super-X-G2 / G2 Lite     | Yes       |                              |
| Dual-X / Single-X        | Yes       |                              |

**Note** The compatible detectors may not all be supported by the compatible microscope software versions. See the TEM Server Release Notes for a definitive list of supported detectors.

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## 4 Preparation

### 4.1 Prepare for a regular Tomography software update or upgrade

If the currently installed Tomography software functions properly, then follow these steps:

1. Log in with the **customerservice** account.
2. Stop the **Tomography** software.  
If any other acquisition automation software is running, then stop that too.
3. Continue with the instructions in [Install the Tomography software on page 9](#).

Tomography STEM 4.X is not compatible with TEM Server 7.11 or later. The Tomography 5.9 installer does not automatically remove Tomography STEM 4.X.

Tomography STEM 4.X must be manually removed when:

- Tomography 5.9 or later is installed on a system with TEM Server 7.11 or later.
- The microscope software is updated from TEM Server 7.10 or earlier to TEM Server 7.11 or later.

### 4.2 Prepare for the re-installation, update or upgrade of malfunctioning Tomography software

#### 4.2.1 Remove the current Tomography software version

1. Reboot the **Microscope PC**
2. Login with the **customerservice** account.  
Do *not* start the microscope software or any other application.
  - a. Select **Windows+R** and type `appwiz.cpl` to open the **Programs and Features** window.
  - b. Select the **Tomography** software.
  - c. Select **Uninstall** and confirm the uninstallation.
  - d. Wait until the uninstallation is completed.
  - e. Verify that **Tomography** is no longer present in the installed programs list.

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**Note** The license registration will remain valid.  
After installing a new Tomography version, no new license registration or activation is required.

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#### 4.2.2 Cleanup the obsolete files from the removed software version

Depending on the version of the removed Tomography software the files and folders that need to be deleted are in different locations.

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#### 4.2.2.1 Cleanup the obsolete files from Tomography 4.6.1 and earlier

1. In **Windows Explorer**, go to  
C:\Program Files(x86)\FEI\Tomography
2. Delete all files and folders, *except*:
  - The data folder
  - The Omp.config file
3. If the camera and/or filter configuration of the microscope is changed, for all user accounts, delete all files from:
  - C:\Users\\AppData\Roaming\FEI\TomographyShell
  - C:\Users\\AppData\Roaming\FEI\Modules

#### 4.2.2.2 Cleanup the obsolete files from Tomography 4.7

1. In **Windows Explorer**, go to:  
C:\Program Files(x86)\Thermo Scientific Tomography
2. Delete all files and folders, *except*:
  - The data folder
  - The Omp.config file
3. If the camera and/or filter configuration of the microscope is changed, for all user accounts, delete all files from:
  - C:\Users\\AppData\Roaming\FEI\TomographyShell
  - C:\Users\\AppData\Roaming\FEI\Modules

#### 4.2.2.3 Cleanup the obsolete files from Tomography 4.8 and later

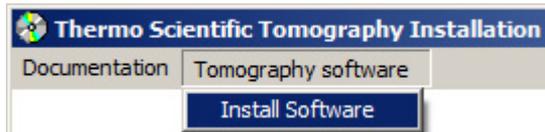
1. In **Windows Explorer**, go to  
C:\Program Files\Thermo Scientific Tomography
2. Delete all files and folders, *except*:
  - The data folder.
  - The Configuration folder.  
This folder contains the Omp.config file
3. If the camera and/or filter configuration of the microscope is changed, for all user accounts, delete all files from:  
C:\Users\\AppData\Roaming\Thermo Scientific Tomography

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## 5 Procedure

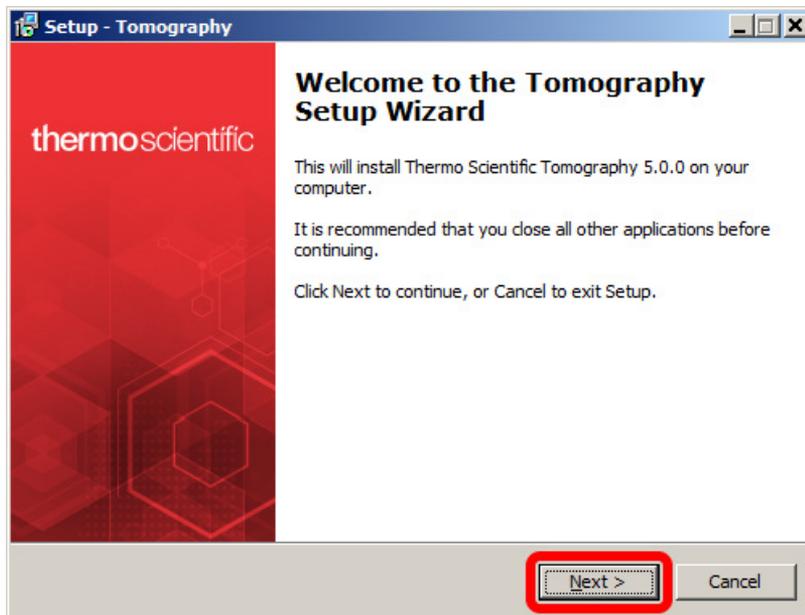
### 5.1 Install the Tomography software

1. Login with the **customerservice** account.
2. Close **all software applications**.  
It is not necessary to stop the TEM Server.
3. Copy the **ISO file** with the Tomography software installer to **Microscope PC** > D: or E: drive.
4. Mount the **ISO file**
5. Open [virtual BD-ROM drive]\:CDROM\_Master.exe  
The *Thermo Scientific Tomography installation* window appears.
6. Select **Tomography software > Install Software**



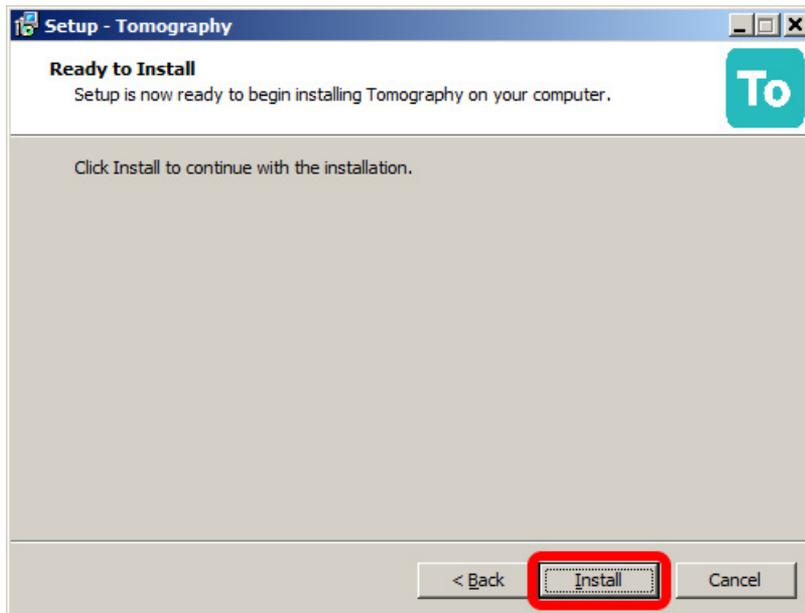
The Tomography Setup Wizard starts.

7. Select **Next**



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8. Select **Install** to start the installation.



If not present yet, the required versions of the prerequisites for Tomography will be installed or updated first:

- Microsoft Visual C++ Redistributable  
This may take about a minute.
- .Net Framework  
This will take approximately 10 minutes.
- The Bergson B'Protected licensing software.

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**Note** The .NET Framework installer displays limited progress info. Be patient!

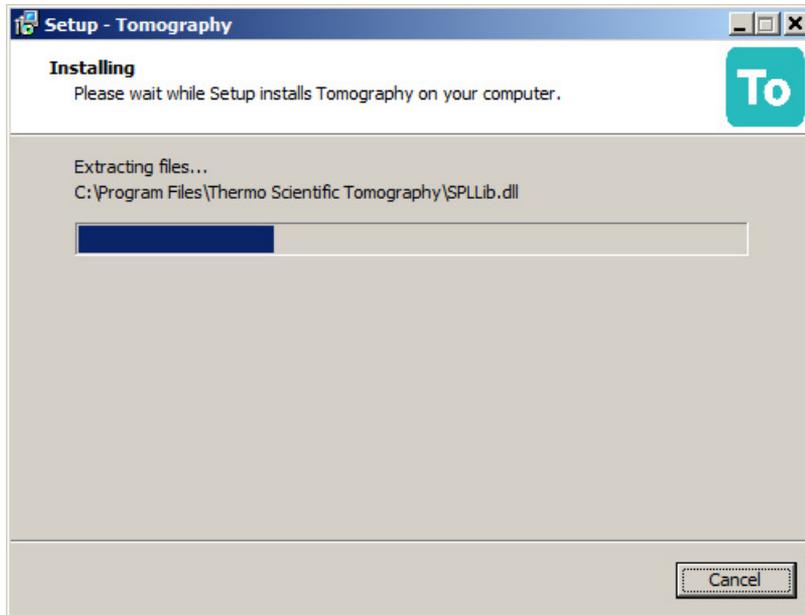
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**Note** If the Bergson B'Protected licensing software needs to be installed, then the purchased Tomography and Tomography-related product licenses must be registered and activated after the Tomography installation is completed.

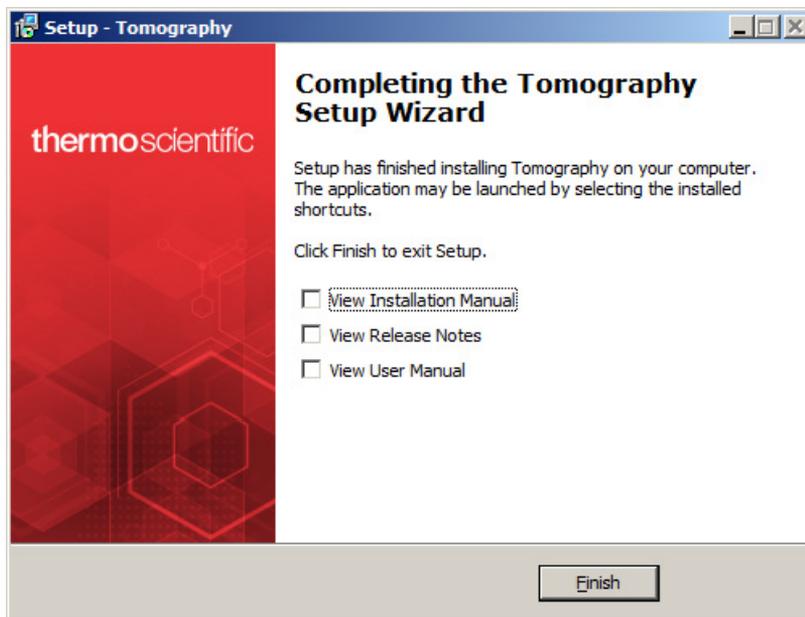
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- After all prerequisite software components are installed, the Tomography software installer will continue with the Tomography software itself.



- Wait for the Tomography installation to finish.
- If desired, select the documentation you wish to view.



- Select **Finish**

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## 5.2 Configure the RootStoragePath for a Gatan BioQuantum filter

### 5.2.1 Verify or configure the share name for the DoseFractions folder on the Gatan PC

Follow the steps below to:

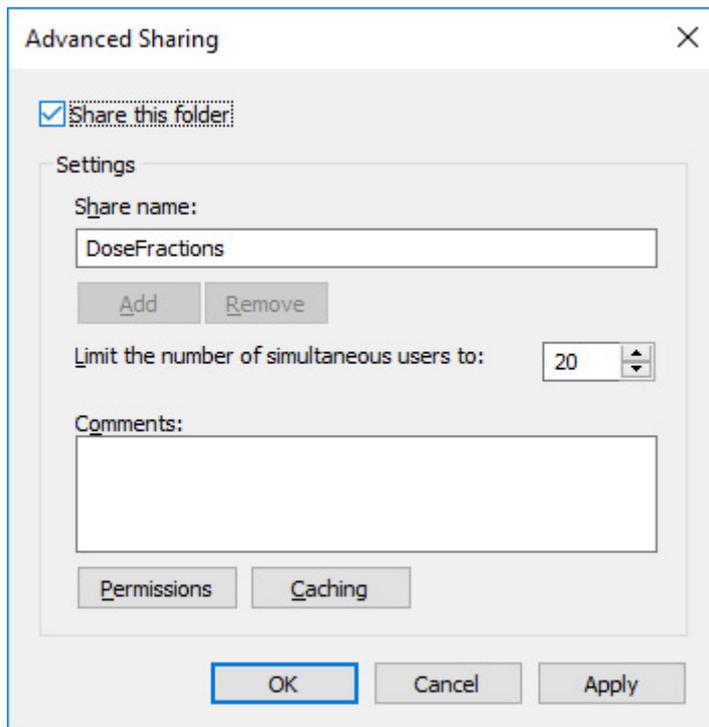
- Verify if the `DoseFractions` folder is already shared as `\\192.168.12.2\DoseFractions`
- If not, share the `DoseFractions` folder as `\\192.168.12.2\DoseFractions`

For Gatan K3 cameras, the `DoseFractions` folder can also be shared as `\192.168.12.2\DataRaid\DoseFractions`

1. Verify that the `DoseFractions` folder is accessible from the *Storage Server* as `\\192.168.12.2\DoseFractions`
  - a. Login on the **Storage Server** with the **DMPService** account.
  - b. Open **Windows Explorer**
  - c. In the address bar, enter `\\192.168.12.2\DoseFractions`
    - If the share name exists, then Windows Explorer opens the folder.  
If requested, enter the **username** and **password** for the **DMPService** account.
    - If the shared folder address is not accessible, then continue with the steps below.
2. Log in on the **Gatan PC** with the **valuedgatancustomer** account.
3. In **Windows Explorer**, right-click on the `E:\DataRaid\DoseFractions` folder and select **Properties**
4. Select **Sharing > Advanced Sharing**

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5. In **Advanced Sharing**:



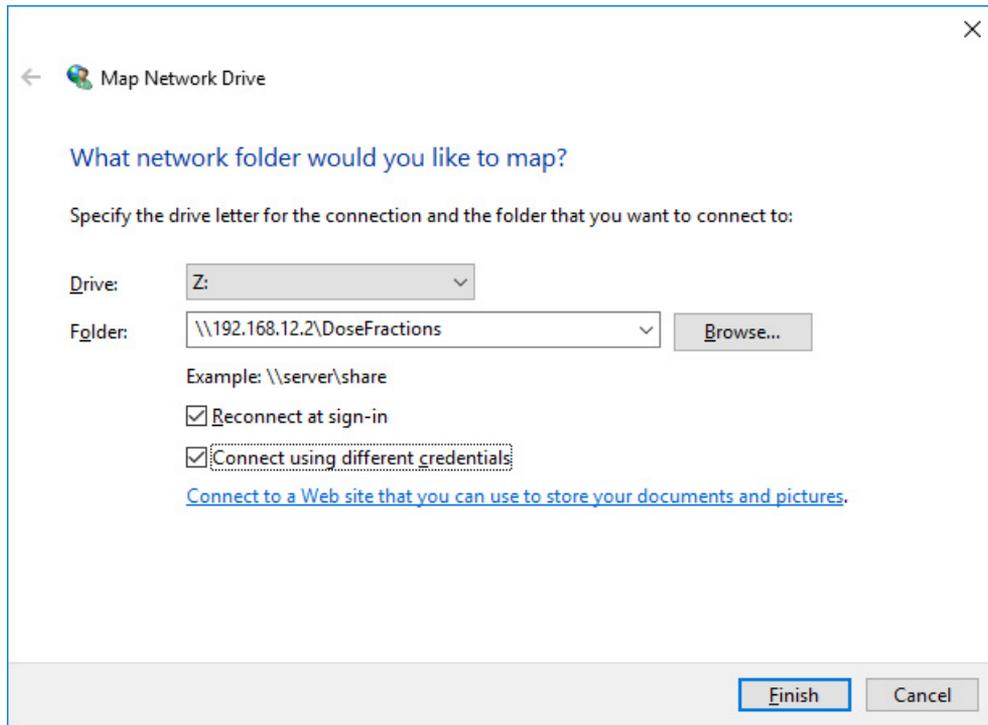
- a. Tick **Share this folder**
  - b. Verify that **Share name:** is `DoseFractions`  
(by default, Windows uses the folder name as the new share name).
  - c. Select **OK**
6. Repeat the verification that is described in *step 1* above.

## 5.2.2 Map the shared `DoseFractions` folder to a drive on the Microscope PC

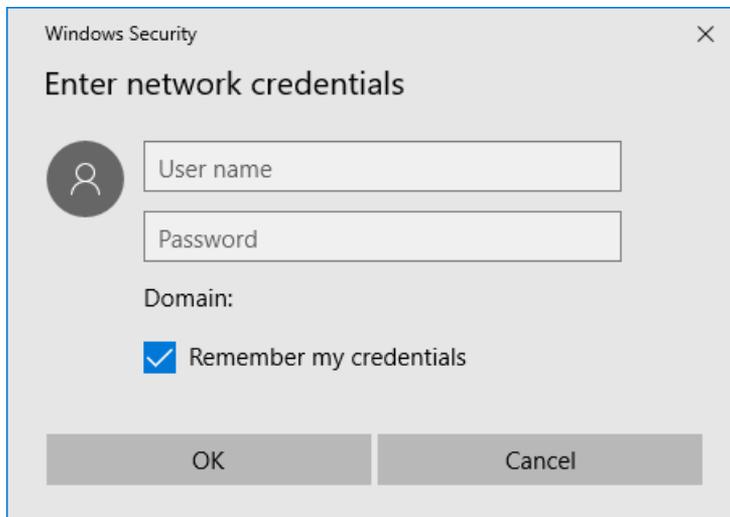
1. Login on the **Microscope PC** with the `customerservice` account.

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2. In **Windows Explorer**, right-click on **Computer** and select **Map network drive**



- a. Select **Drive: Z:**  
If drive **Z:** is not available, then select another free drive letter.
- b. Specify **Folder:** `\\192.168.12.2\DoseFractions`  
This is the IP address of the Gatan PC, followed by the share name of the folder on the Gatan PC where dose fraction images are stored.
- c. Tick **Reconnect at logon**
- d. Tick **Connect using different credentials**
- e. Select **Finish**  
A Windows Security dialog appears.

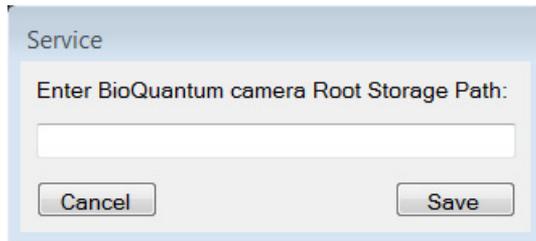


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- f. Enter **User name**: \\192.168.12.2\valuedgatancustomer  
The Gatan PC domain (\\192.168.12.2) is needed as a prefix, because the valuedgatancustomer account does not exist on the Microscope PC or on the network domain.
  - g. Enter the **password**  
If you do not have the password, contact GTS.
  - h. Select **OK**
3. Wait until the mapping action has completed.
  4. In **Windows Explorer**, verify that the **mapped drive** is present and accessible.

### 5.2.3 Specify the RootStoragePath

If the RootStoragePath is not configured yet in Tomography, then a popup dialog appears the first time that the software is started.



1. Enter \\192.168.12.2\DoseFractions
2. Select **Save**

### 5.2.4 Update the RootStoragePath

1. Close **Tomography**
2. In **Windows Explorer**, make a backup copy of the `Omp.config` file:
  - Tomography 4.6 and earlier:  
C:\Program Files (x86)\FEI\Tomography\Omp.config
  - Tomography 4.7:  
C:\Program Files (x86)\Thermo Scientific Tomography\Omp.config
  - Tomography 4.8 and later:  
C:\ProgramData\Thermo Scientific Tomography\Configuration\Omp.config

|  |   |                              |  |
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- Open `Omp.config` file in **Notepad**
- Add or update the value of the `<BioQuantumCameraDetectorRootStoragePath>` element:  
`<BioQuantumCameraDetectorRootStoragePath>\\192.168.12.2\DoseFractions  
</BioQuantumCameraDetectorRootStoragePath>`



```

Omp.config - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="utf-8"?>
<OmpConfigurationBase xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <BeamBlankerUnblankSettingTime>-1</BeamBlankerUnblankSettingTime>
  <FalconCameraFrameCorrectionFlipX>>false</FalconCameraFrameCorrectionFlipX>
  <FalconCameraFrameCorrectionFlipY>>false</FalconCameraFrameCorrectionFlipY>
  <FalconCameraFrameCorrectionRotate>0</FalconCameraFrameCorrectionRotate>
  <CameraInsertionDelay_IOM>0</CameraInsertionDelay_IOM>
  <FalconStorageServerIpAddress>192.168.10.2</FalconStorageServerIpAddress>
  <FalconStorageServerPortNumber>56789</FalconStorageServerPortNumber>
  <FalconStorageServerConnectionTimeout>120</FalconStorageServerConnectionTimeout>
  <BioQuantumCameraDetectorRootStoragePath>\\192.168.12.2\DoseFractions</BioQuantumCameraDetectorRootStoragePath>
  <BioQuantumCameraDetectorServerIpAddress>192.168.12.2</BioQuantumCameraDetectorServerIpAddress>
  <BioQuantumCameraDetectorServerPortNumberAcquisition>8801</BioQuantumCameraDetectorServerPortNumberAcquisition>
  <BioQuantumCameraDetectorServerPortNumberDiagnostics>8802</BioQuantumCameraDetectorServerPortNumberDiagnostics>
  <BioQuantumCameraDetectorServerPortNumberIntegratedImage>8803</BioQuantumCameraDetectorServerPortNumberIntegratedImage>
  <EnableAfis>>false</EnableAfis>
  <CameraOffloadServiceHostName>localhost</CameraOffloadServiceHostName>
  <CameraOffloadServicePortNumber>5000</CameraOffloadServicePortNumber>
</OmpConfigurationBase>

```

*The contents of the `Omp.config` file may be different for each Tomography release.*

- Save and close the `Omp.config` file.

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## 5.3 Register the Product Key(s) and activate the license(s)

**Note** Do *not* register or activate any license(s) before the customer accepts the software installation.

If the software is used for installation, acceptance or other service purposes:

- Always log in with the *customerservice* account.
- Always attach a Service Dongle to the Microscope PC.

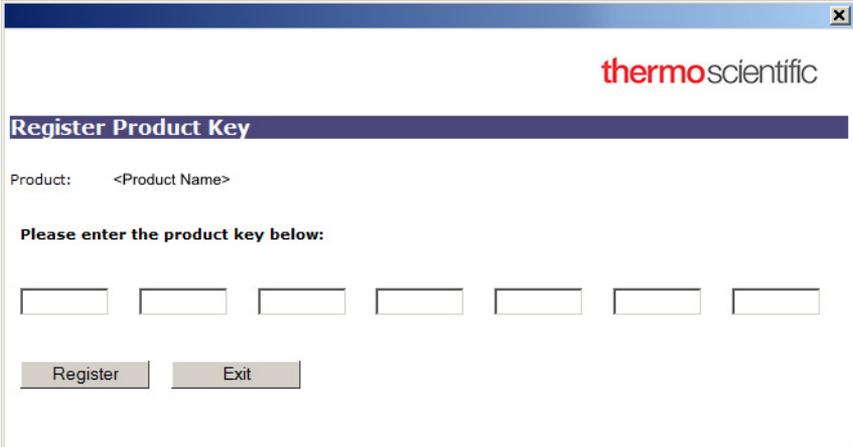
After acceptance, the customer is responsible to register and activate the licenses.

### 5.3.1 Register a Product Key

To register the Product Key for a product or option:

1. Select **Start > Thermo Scientific Tomography**
2. Select the **Registration** shortcut for the product or option.

The Register Product Key dialog appears.



3. In the Register Product Key dialog:
  - a. Enter the **Product Key**
  - b. Select **Register**
  - c. Select **Exit**

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### 5.3.2 Activate a purchased license

For each purchased license:

1. Select **Start > Thermo Scientific Tomography**
2. Select the **Activation** option for the license.

The *Manual License Activation* dialog appears.



3. In the Manual License Activation dialog:
  - a. Follow **steps 1–3 in the dialog** to generate an Activation code.
  - b. Enter the **Activation code**
  - c. Select **Activate**

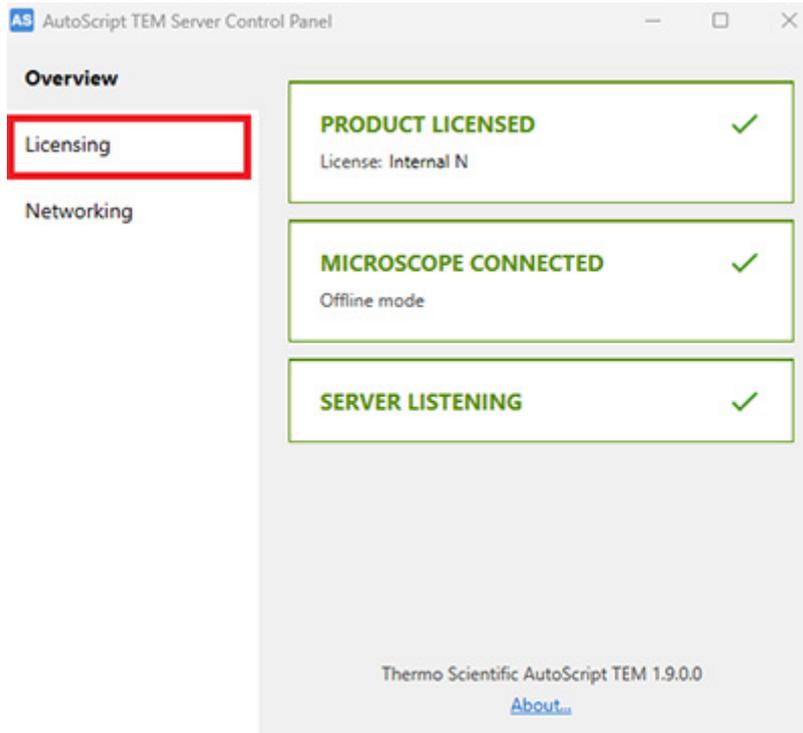
The Tomography software is now licensed and ready for use.

For additional information about Bergson B'Protected licensing, refer to [106507](#).

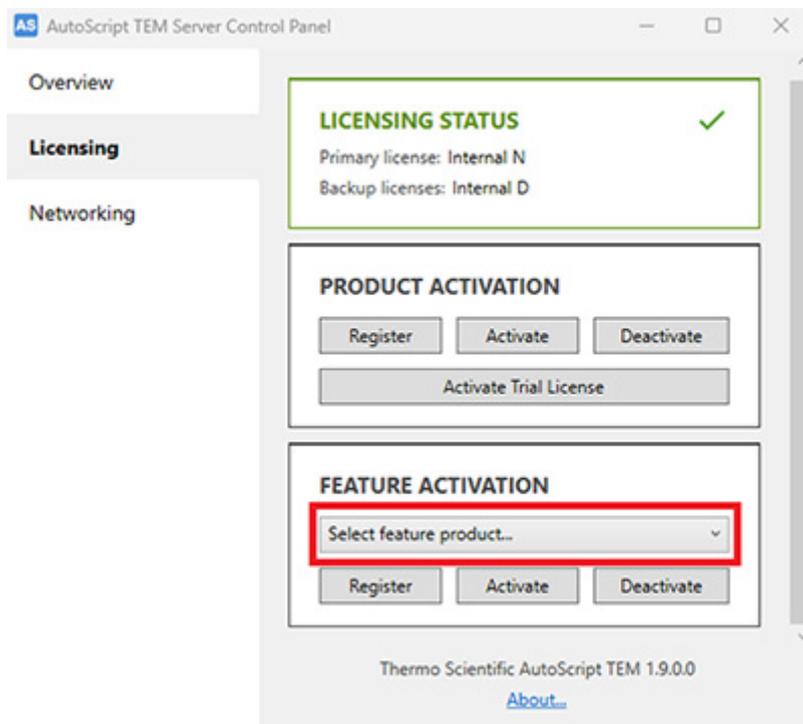
|  |   |                              |  |
|--|---|------------------------------|--|
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### 5.3.3 Register Feature License

1. Start the **Windows Start** menu > **Thermo Scientific AutoScript TEM** > **AutoScript Server** and select **Licensing**.



2. In the **FEATURE ACTIVATION** section, select the feature product from the list.



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3. Click the **Register** button.

The **Register Product Key** dialog appears, follow the instructions in the dialog.

4. Click the **Activate** button.

The **Manual License Activation** dialog appears, follow the instructions in the dialog.

### 5.3.4 Activate the trial license

At startup, Tomography verifies if a valid license is present. This can either be an activated purchased license or a service dongle. If no valid license is present, then Tomography offers a time-limited Trial License.

To activate the Trial License:

1. On the **Microscope PC**, log in with a **user account** or with the **Supervisor account**
2. Start the **Tomography** software
3. Select **Activate Trial**

The Trial License expires after 90 days.

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**Note** The Trial License option is not available for Tomography 5.0 – 5.4.1

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## 6 Troubleshooting

### 6.1 The TEM Server version is not compatible

#### Problem

The Tomography software installer checks which TEM Server software version is present on the system. If the software versions do not match the installer displays an error message.

1. In the error message pop-up, select **OK**  
The installer ends the installation procedure.
2. Select **Finish**

#### Possible Solution

There is no other solution than to upgrade the TEM Server software, or to install a Tomography version that is compatible with the currently installed TEM Server version.

### 6.2 Installation of the Tomography software fails

#### Problem

Installation of the Tomography Fails

#### Possible Solution

1. Reboot the **Microscope PC**
2. Login as **customerservice**
3. Uninstall the **Tomography software** and delete all files specified in [Prepare for the re-installation, update or upgrade of malfunctioning Tomography software on page 7](#).
4. Install the **Tomography software** as described in Procedure.

If the installation or the software fails again, please contact GTS

### 6.3 Licensing error: license not activated

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**Note** Do *not* register or activate any license(s) before the customer accepts the software installation.

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If the software is used for installation, acceptance or other service purposes:

- Always log in with the *customerservice* account.
- Always attach a Service Dongle to the Microscope PC.

After acceptance, the customer is responsible to register and activate the licenses.

#### Problem

After installation of a new software version, the software states that the license is incorrect.

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### Possible Solution

It is possible that the local license server on the Microscope PC needs a restart.

1. Stop all **microscope software** including the **TEM Server**
2. Reboot the **Microscope PC**
3. Login with the **supervisor** account.
4. Start the **TEM Server** and **TEM User Interface**
5. Prepare the microscope for starting Tomography.  
For example, make sure that the vacuum levels and High Tension are OK, and that the stage is homed and ready.
6. Start **Tomography** to verify that the license activated.

## 6.4 Licensing error: invalid hardware

### Problem

If the licensing software recognizes that the computer hardware configuration has changed, then the software will automatically deactivate all licenses and show an *Invalid hardware* message for each licensed product.

This will typically happen:

- After the computer or the motherboard is replaced.
- After a hard disk or network card is added, removed or replaced.

### Possible Solution

To recover from the *Invalid hardware* state, re-activate the licenses:

1. Stop **all software products** that use Bergson B'Protected licenses.
2. Find and start the **PKLicensing tool**.

The location of the PKLicensing tool depends on the operating system and the installed software version.

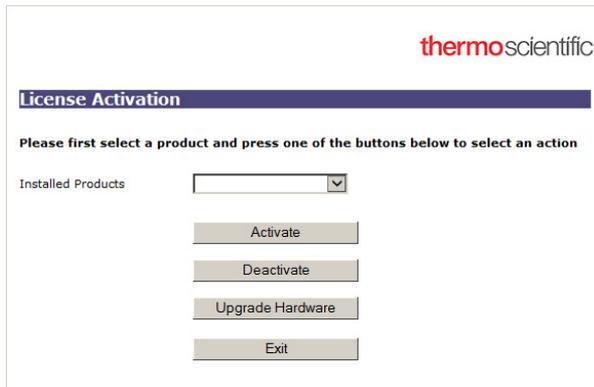
- a. Go to C:\Program Files and search for PKLicensing.exe  
If not found, then go to C:\Program Files(x86) and search for PKLicensing.exe
- b. Start PKLicensing.exe

The PKLicensing tool may try to connect to the Bergson B'Protected Online Licensing Database:

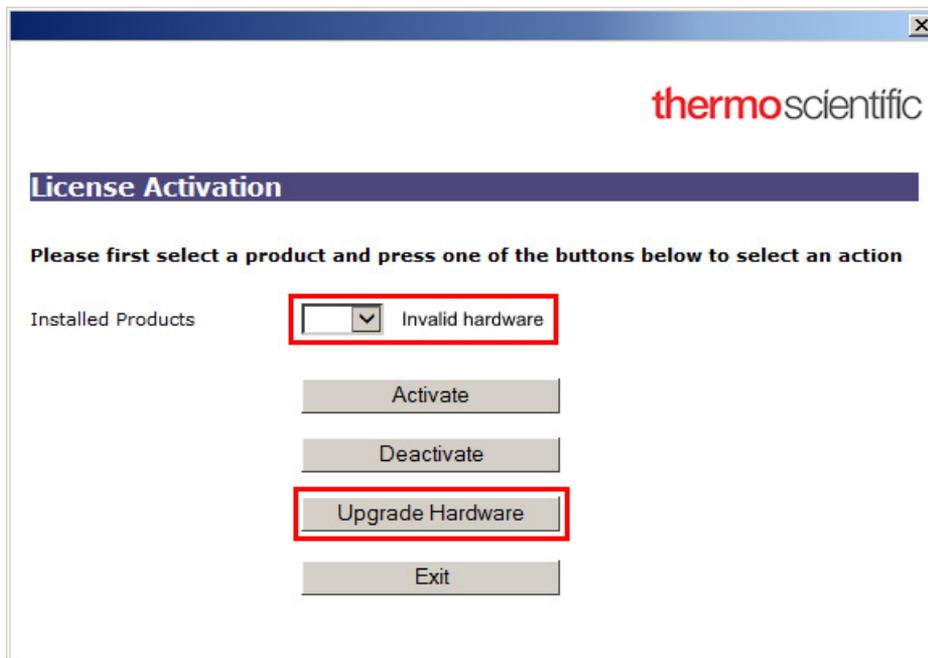


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After the connectivity check is completed, the License Activation dialog appears:



The License Activation dialog displays *Invalid hardware* for all installed products.



3. For *each product* in Installed Products:
  - a. Select the **Installed Product**
  - b. Select **Upgrade Hardware**
  - c. Follow the instructions on screen to update the license, so that it is coupled to the new computer hardware.

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## Revision Table

| Revision | Date     | Description of Changes   |
|----------|----------|--|
| 5.0      | OCT-2019 | Tomography 5.0<br>(incl. Tomography 4.13)  |
| 5.0.1    | NOV-2019 | Update for Tomography 5.0.1<br>(incl. Tomography 4.13.1)                                   |
| 5.1      | FEB-2020 | Update for Tomography 5.1<br>(incl. Tomography 4.14 for STEM / EDS)                        |
| 5.2      | APR-2020 | Update for Tomography 5.2<br>(incl. Tomography 4.15 for STEM / EDS)                        |
| 5.3      | JUL-2020 | Update for Tomography 5.3  |
| 5.4      | OCT-2020 | Update for Tomography 5.4  |
| 5.4.1    | NOV-2020 | Update for Tomography 5.4.1  |
| 5.5      | JAN-2021 | Update for Tomography 5.5  |
| 5.6      | APR-2021 | Update for Tomography 5.6  |
| 5.7      | JUL-2021 | Update for Tomography 5.7  |
| 5.7.1    | AUG-2021 | Update for Tomography 5.7.1  |
| 5.8      | OCT-2021 | Update for Tomography 5.8  |
| 5.9      | JAN-2022 | Update for Tomography 5.9  |
| 5.9.A    | MAR-2022 | SDR34662: Minor clarification in <a href="#">Install the Tomography software on page 9</a> |
| 5.10     | APR-2022 | Update for Tomography 5.10   |
| 5.11     | JUL-2022 | Update for Tomography 5.11   |
| 5.12     | OCT-2022 | Update for Tomography 5.12   |
| 5.13     | JAN-2023 | Update for Tomography 5.13   |
| 5.14     | MAR-2023 | Update for Tomography 5.14   |
| 5.15     | JUL-2023 | Update for Tomography 5.15   |
| 5.16     | OCT-2023 | Update for Tomography 5.16   |
| 5.17     | JAN-2024 | Update for Tomography 5.17   |
| 5.18     | APR-2024 | Update for Tomography 5.18   |

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| Revision | Date     | Description of Changes     |
|----------|----------|----------------------------|
| 5.19     | JUL-2024 | Update for Tomography 5.19 |
| 5.20     | OCT-2024 | Update for Tomography 5.20 |
| 5.21     | JAN-2025 | Update for Tomography 5.21 |

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