



Installing Isodat with the Fiberline Interface under Microsoft Windows 10 (32 bit and 64 bit)

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Contacting Us

There are several ways to contact Thermo Fisher Scientific. You can use your smartphone to scan a QR code, which opens your email application or browser.

Contact	Link / Remarks	QR code
Service Contact	For technical support related to your instrument or software, visit the Services & Support tab at www.thermofisher.com or visit www.unitylabservices.com to find the customer care telephone line or e-mail address for your geographical region.	
Technical Documentation SharePoint	<p>Visit our customer SharePoint to download current revisions of user manuals and other customer-oriented documents for your product. Translations into other languages and software packages may be available there as well.</p> <p>❖ To get user manuals and software for your product</p> <ol style="list-style-type: none"> 1. With the serial number (S/N) of your instrument, request access to our customer SharePoint as a customer at www.thermoscientific.com/Technicaldocumentation 2. For the first login, you have to create an account. Follow the instructions given on screen. Accept the invitation within six days and log in with your created Microsoft™ password. 3. Download new revisions of user manuals and other customer-oriented documents for your product. Translations into other languages may be available there as well. 	
Customer Feedback	<p>❖ To suggest changes to this manual</p> <p>You are encouraged to report errors or omissions in the manual. Send an email to the Technical Documentation at documentation.bremen@thermofisher.com.</p>	

General Information and Recommended Settings

List of Supported Peripherals

Before updating to Windows 10 and the Isodat Service Pack 3.0.94.12 (or higher), check the following table for supported devices. If your devices are not listed, Thermo Fisher Scientific does not recommend migrating Isodat to Windows 10.

Instruments and devices listed in [Table 2-1](#) have been successfully tested for compatibility with Isodat 3.0.94.12 running under Windows 10 and the Fiberline PCI interface card.

Table 2-1. Successfully tested instruments and devices

Device	Comment
253 Plus IRMS	
ConFlo IV	
Delta V IRMS	
Dual Inlet System	including Reference Refill
EA IsoLink + AS/AI1310 autosampler	
Gasbench II + GC PAL autosampler	PAL configured in “A200S mode” in Isodat. Install PAL Loader version 2.1.1 for Windows 10. Backup CTC autosampler .sss file with the Windows 7 PAL Loader 1.1.1 and migrate the .sss file to Windows 10.
GC IsoLink II	
Kiel IV Carbonate preparation device	
LC IsoLink	
Trace 1310 GC	Foundation GC Device Drivers 2.4 included in SP 3.0.94.12. GC Device Drivers 2.2 are not included in SP 3.0.94.12. To install Foundation GC Device Drivers 2.2, Isodat SP 3.0.0.88 has to be installed prior to installing SP 3.0.94.12. Under Windows 10, Thermo Fisher Scientific strongly recommends using the latest Isodat Service Pack 3.0.94.12 and Foundation GC Device Drivers 2.4. ^a Isodat Service Packs higher than version 3.0.94.12 are supported to operate under Windows 10 and might contain Foundation GC Device Drivers higher than 2.4 that are compatible with Windows 10.

Table 2-1. Successfully tested instruments and devices

Device	Comment
TriPlus RSH autosampler	Foundation GC Device Drivers 2.4 are included in SP 3.0.94.12. When upgrading the GC Drivers from 2.2 to 2.4, the TriPlus RSH Firmware must be upgraded, too.

^a Isodat 3.0 can still open and operate Isodat methods and sequences created with older version of Isodat except methods containing Foundation GC or LC devices created with older versions. This means that compatibility of Isodat methods and sequences is not given when upgrading from GC devices version lower or equal than 2.2 to the newer Foundation / GC devices version 2.4 during the Isodat installation procedure. In the latter case, all methods and sequences have to be recreated from the scratch after installation of Isodat 3.0.94.12 and GC devices 2.4 under Windows 10.

The instruments and devices listed in [Table 2-2](#) are supported in Isodat 3.0.94.12 (or higher) but have not been tested under Windows 10 with the Fiberline PCI interface card. No issues related to the change from Windows 7 to Windows 10 are expected because these devices are connected directly to the mass spectrometer, i.e. no direct connection to the Windows PC.

Table 2-2. Supported but not tested instruments and devices

Device	Comment
AS/AI1310 autosampler connected to TC/EA	
ConFlo III	
Costech autosampler	
Delta plus XP	
Delta plus Advantage	
Flash series Elemental Analyzer	
GCC II-III Interface	
GC IsoLink I	
H/Device	
MAS200Plus	
MAT 253 IRMS	
Microvolume	
Multiport device	including extended Multiport
Pericon	
Precon	

The following instruments and devices have not been tested in Isodat 3.0.94.12 under Windows 10 with the Fiberline PCI interface card. Compatibility is likely, but Thermo Fisher Scientific cannot guarantee full functionality:

- AS3000 autosampler
- LC IsoLink for the Accela and Surveyor HPLC system
- Trace GC Ultra
- TriPlus autosampler

Supported PCs and Operating Systems

The PCs delivered by Thermo Fisher Scientific listed in [Table 2-3](#) are supported for running Isodat using the Fiberline PCI interface card under Windows 10.

Table 2-3. Supported PCs

Computer
DELL™ OptiPlex XE3, Intel™ Core i7-8700, 4.6 GHz, 16 GB RAM
DELL OptiPlex XE2, Intel Core i5-4570S, 2.9 GHz, 4 GB RAM
DELL OptiPlex 7040/7050, Intel Core i5-6500, 3.2 GHz, 16 GB RAM
DELL OptiPlex 9010/9020, Intel Core i3-3220, 3.3 GHz, 8 GB RAM

NOTICE

To ensure Windows 10 compatibility Thermo Fisher Scientific recommends purchasing a new PC. Contact your local sales or service organization to order a new Windows 10 computer.

Thermo Fisher Scientific cannot guarantee performance specification on a PC or Windows version other than that supplied by Thermo Fisher Scientific.

Because this document is specifically dealing with the compatibility of Isodat with Windows 10, [Table 2-4](#) lists Windows 10 Operating System versions that are supported for running Isodat with the Fiberline PCI interface card. Nevertheless, compatibility with Windows 7 (32 bit) is still given with Isodat (3.0.94.12).

Table 2-4. Supported operating systems

Operating System	Description
Microsoft Windows 10 Enterprise LTSC (32 bit and 64 bit)	<p>Recommended to run Isodat. The Windows 10 LTSC release (Long-Term Servicing Channel) ensures long term compatibility of Isodat drivers because it does not contain any of the components of Windows 10 Professional that may change over the life of the release via automated feature updates. Windows 10 LTSC will receive regular quality and security updates, but no feature updates from Microsoft.</p>
Microsoft Windows 10 Professional (32 bit and 64 bit, 10.0.18362)	<p>Compatible with Isodat, however, future feature updates on Windows 10 Professional might lead to incompatibility of Isodat drivers. Hence, for stable operation of the instruments and peripherals with Isodat, Microsoft Windows 10 Enterprise LTSC is the recommended supported operating system.</p> <p>If you already have purchased a DELL OptiPlex XE2 with your instrument, a Windows 10 license is already included with this PC and can be used to activate Windows 10 after upgrading from Windows 7 to Windows 10.</p> <p>Refer to the installation instruction document Upgrading Windows 7 to Windows 10 (P/N BRE0020683).</p>

Tip You can check the Windows version of your PC using the **System Information App** (Start --> type System Information). Under System Summary, locate the System Type entry, which is either X86-based PC for Windows 10 (32 bit) and X64-based PC for Windows 10 (64 bit).

Before starting the Isodat software installation procedure, make sure the Fiberline PCI interface card is placed in to a PCI slot in the computer. Also make sure any additional COM port or additional Ethernet cards required to connect peripheral devices are installed, in case you are changing the PC.

Tip Deny all automatically upcoming attempts to install the driver for the Fiberline card.

Preconditions – When should you update to Windows 10

Thermo Fisher Scientific strongly recommends that customers contact their local Service Organization to arrange a Service Engineer visit to perform the Isodat installation under Windows 10 and Isodat configuration of all devices.

Tip To ensure compatibility of Isodat with Windows 10, Thermo Fisher Scientific strongly recommends to update to the latest released Isodat Service Pack (3.0.94.12 or higher). Thermo Fisher Scientific cannot guarantee performance specifications of Isodat under Windows 10 for Isodat versions lower than 3.0.94.12.

Before considering migrating your system to Windows 10, make sure your instruments and peripheral devices are supported to operate with the latest Isodat Service Pack (3.0.94.12) under Windows 10, see [Table 2-1](#), [Table 2-2](#), and [Table 2-3](#). In any case, perform a complete backup of your existing PC running under Windows 7 to avoid data loss.

To make the transfer of instrument settings and methods as easy as possible during the migration of Isodat from Windows 7 to Windows 10, Thermo Fisher Scientific recommends the following procedure. The following steps represent an overview of the process and the details are described in Chapter 1 to 3 of this document.

NOTICE

The steps outlined on this page are only intended to give an overview over the procedure but are not sufficiently detailed to achieve a successful Isodat installation and configuration. It is important to follow all steps and instructions given in [Chapter 3, “Installing Isodat 3.0”](#) and [Chapter 4, “Installing the Isodat Service Pack and Thermo Foundation”](#) of this document to ensure a successful Isodat installation.

❖ Overview of installation process

1. Before beginning, make notes and backups of the current installation under Windows 7 including all data, Isodat drivers and peripheral software, for example, the currently installed Xcalibur or Foundation versions (for GC / LC devices). The latter can be seen under **Windows Control Panel > Programs and Features** and the configured instrument and devices can be seen in the **Isodat Configurator**.
2. Before making any changes to your current system, back up the Isodat configuration using the Version Handler (see [“Creating an Isodat Backup”](#) on [page 3-1](#), C:\Isodat_backups), back up the Isodat User Folder (C:\Thermo\Isodat NT\Global\User), and any other customized Isodat folders containing data and other software or data you have on your current Windows 7 PC.

3. Install the latest Isodat Service Pack (3.0.94.12 or higher) on your current Windows 7 PC and verify your system can be operated successfully, before proceeding.
4. After updating to the latest Isodat Service Pack 3.0.94.12 (or higher), create another backup of the Isodat configuration using the Version Handler (see “[Creating an Isodat Backup](#)” on [page 3-1](#)) and transfer the backup files to the new Windows 10 PC, that is, the folder *C:\Isodat_backups*, *C:\Thermo\Isodat NT\Global\User*, and any other customized folders containing data.
5. On the new Windows 10 PC, first install the Isodat Software (3.0.0.83) and the Service Pack 3.0.94.12 (or higher) as described in [Chapter 3, “Installing Isodat 3.0”](#) and [Chapter 4, “Installing the Isodat Service Pack and Thermo Foundation”](#) of this document.

NOTICE

Do not reboot Windows directly after the installation of the Isodat Software (3.0.0.83). Directly continue with the installation of the Service Pack 3.0.94.12 (or higher). Restarting Windows after installation of the Isodat Software (3.0.0.83) might cause a Windows bluescreen and might require reinstallation of the Windows 10 operating system with the risk of complete data loss.

6. Once Isodat 3 and all required Service Packs are installed, create another backup on the new Windows 10 PC using the Version Handler before proceeding with any further changes to the configuration. This offers the possibility to revert to any previous installation state in case of errors made during the installation of configuration procedure.
7. Last, the system configuration can be restored on the new Windows 10 system using the backup from the previous Windows 7 system using the Version Handler (see “[Restoring an Isodat Backup](#)” on [page 4-12](#)) and the User folder (*C:\Thermo\Isodat NT\Global\User*) can be copied to the new Windows 10 PC.

Tip Thermo Fisher Scientific recommends installing Windows 10 on a new PC. In case you keep your current PC, it is recommended to install on another bootable hard drive (or partition) in your current PC to be able to use both the previous Isodat installation under Windows 7, and the new Windows 10 system, in case any specific configuration settings need to be looked up later.

NOTICE

Thermo Fisher Scientific does not recommend to transfer Isodat settings from any Isodat version lower than 3.0.94.12 directly to a new Windows 10 system running Isodat 3.0.94.12 (or higher). Any Isodat version lower than 3.0.94.12 is not supported under Windows 10. Thermo Fisher Scientific strongly recommends contacting your local service organization to seek assistance with the migration process to Windows 10, especially if you have any GC devices or any customized instrument or peripheral configuration.

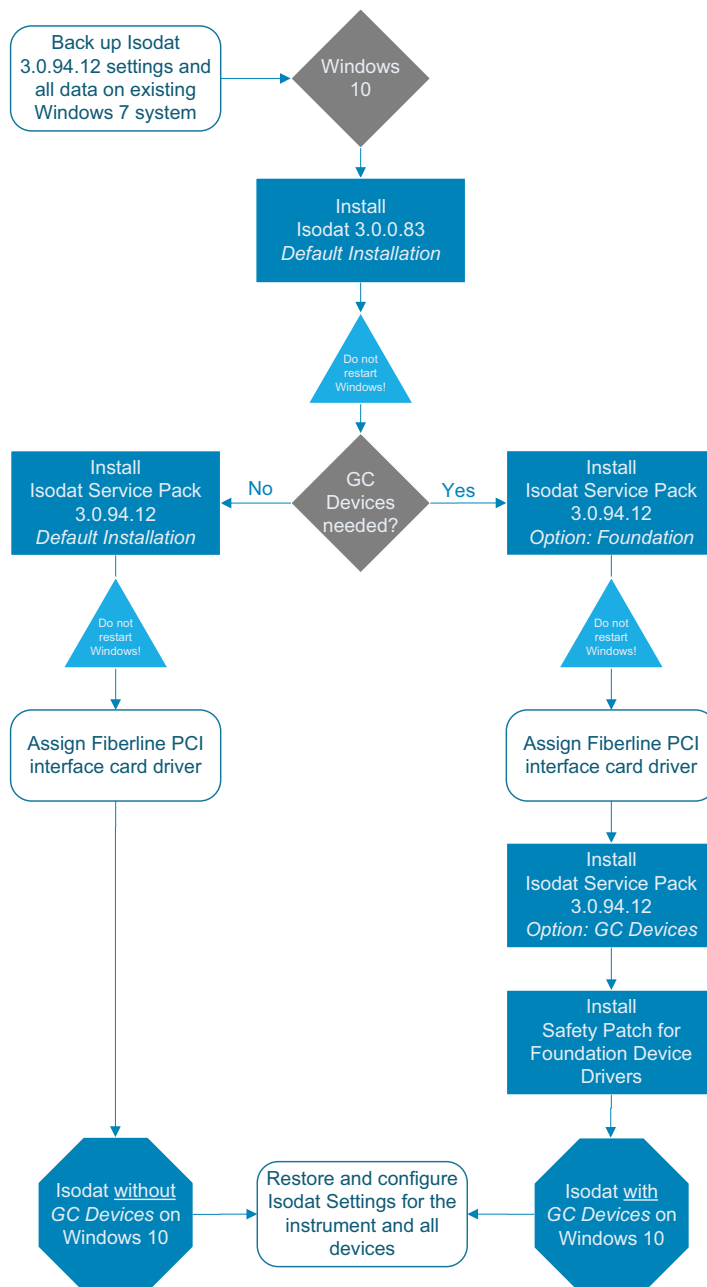


Figure 2-1. Migration pathway for Isodat 3.0.94.12, for example, from Windows 7 to Windows 10

NOTICE

The steps outlined above and in [Figure 2-1](#) are only intended to give an overview over the procedure. They are not sufficiently detailed to achieve a successful Isodat installation and configuration. It is important to follow all steps and instructions given in [Chapter 3, “Installing Isodat 3.0”](#) and [Chapter 4, “Installing the Isodat Service Pack and Thermo Foundation”](#) of this document to ensure a successful Isodat installation

Adjusting Windows 10 Settings for Isodat

Create a Windows 10 User account with administrator rights.

NOTICE

It is the responsibility of the customer to ensure that Windows user settings comply with the local IT rules.

Tip To see full file names for Isodat Method and Sequence files, drivers, for examples, Thermo Fisher Scientific recommends to disable Hide Extensions for Known File Types (**Control Panel > File Explorer Options > Tab View**).

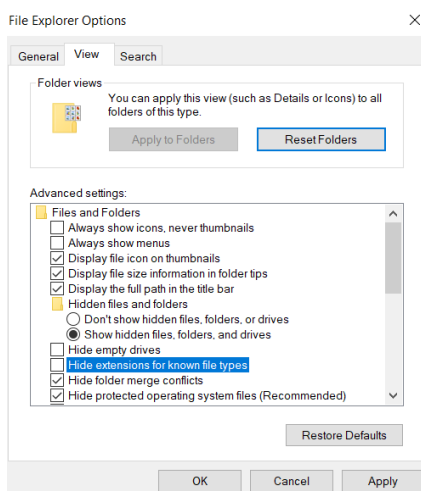


Figure 2-2. Deselect Hide extensions for known file types

Tip Thermo Fisher Scientific recommends adjusting Windows power settings so that the automated sleep mode is disabled to avoid interrupting long measurements using Isodat.

❖ To configure Windows power settings:

1. Open Windows Settings (via right mouse click on Windows **Start > Settings**).
2. Click on **System** and navigate to **Power & sleep**.
3. Set Sleep option to **Never**.
4. Click on **Additional Power Settings > Change Plan Settings > Change Advances Power Settings**. Verify that the Setting Turn Off Hard Disk After is set to **Never**.

General Information and Recommended Settings

Adjusting Windows 10 Settings for Isodat

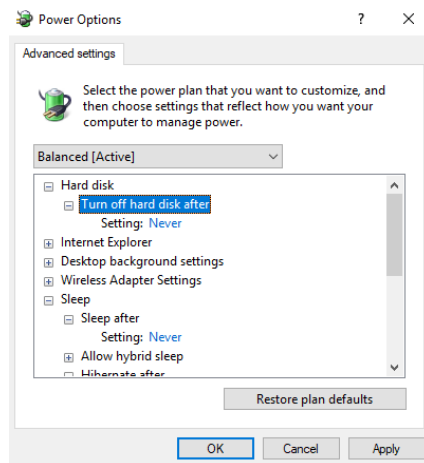


Figure 2-3. Change power options

Tip If you have an additional Antivirus software installed, exclude the following folders, including their subfolders, from being scanned:

- C:\Program Files\Thermo
- C:\Xcalibur

These are the default installation folders for Isodat. If you have defined other Isodat folder(s) during the Isodat installation procedure, those need to be excluded accordingly.

NOTICE

Changing specific computer BIOS settings is not required, i.e., Multi Core Support, Intel SpeedStep, and HyperThread Control can stay enabled. Thermo Fisher Scientific cannot guarantee performance specification on a PC or Windows version other than that supplied by Thermo Fisher Scientific.

Tip Thermo Fisher Scientific recommends adjusting Windows update settings so that automated reboots without user approval are disabled to avoid interrupting long measurements using Isodat.

❖ **To configure Windows update settings:**

1. Open Windows Settings (via right mouse click on Windows **Start** > **Settings**).
2. Navigate to **Update & Security** > **Advanced Options**. Enable **Pause Updates** before starting measurements over night or longer unattended time periods, see [Figure 2-4](#).

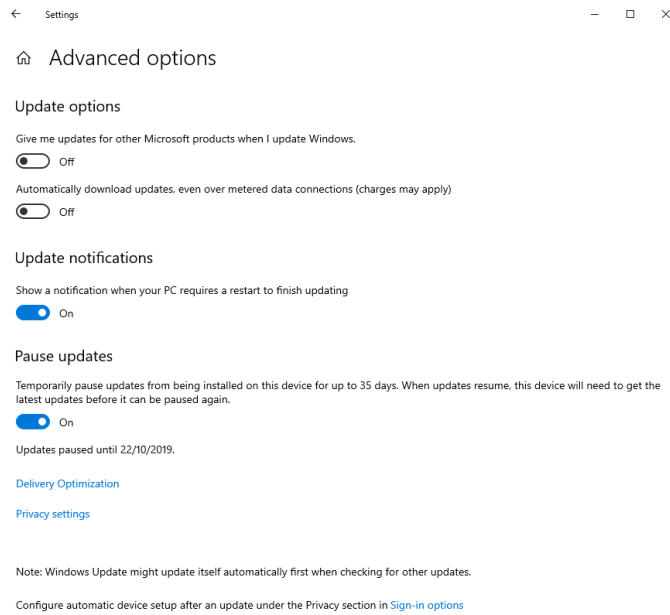


Figure 2-4. Pause Windows updates

NOTICE

Windows update settings can be controlled by your organization in case your computer is part of a network domain controller. To ensure the described settings are effective, local administrator rights are needed and the computer must not be in a domain, or in a domain where the group policy allows configuration of local Windows update settings. It is the responsibility of the customer to ensure that important Windows security updates are installed regularly, and that the system is compliant with the local IT rules.

As an alternative to the temporary Pause option described above, Windows update settings can be configured to get notified when new Windows 10 updates are available but preventing an automated Windows reboot without user confirmation:

❖ **To start the Windows group policy editor**

1. Right-click on **Start**, click on **Run**, type gpedit.msc (press **Enter** or click **Ok**) to start the Windows group policy editor, see [Figure 2-5](#).

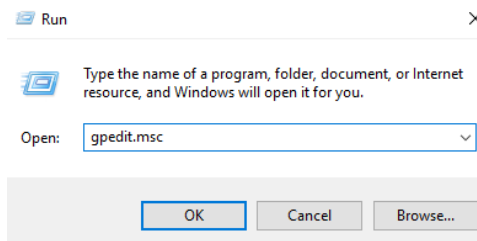


Figure 2-5. Open Windows group editor

2. Once the Local Group Policy Editor has opened, navigate to **Computer Configuration > Administrative Templates > Windows Components > Windows Update**.
3. Right-click on **Configure Automatic Updates**, choose **Edit**, and set to **Enabled**.
4. Select option **2 = Notify before downloading and installing any updates** and click **OK**.

NOTICE You have to reboot Windows for your changes to take effect

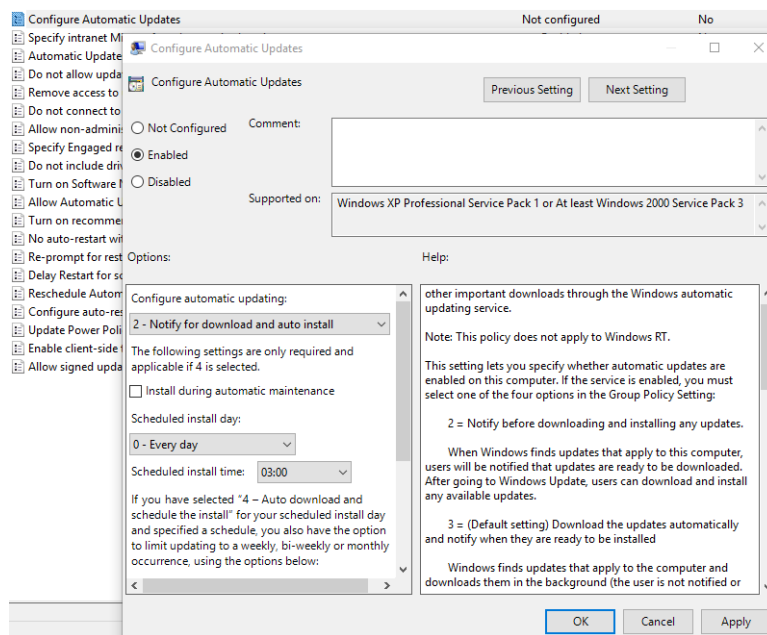


Figure 2-6. Configure automatic updates

Tip Data protection and regular backups of the system is the responsibility of the customer. It is recommended to create a Windows restore point after a new Windows 10 installation, to be able to undo unwanted system changes: Open the **Windows Control Panel > System > System Protection** > click on **Create** and then **Save**.

Installing Isodat 3.0

Basic Isodat Installation

Before beginning the Isodat software installation procedure, make sure the Fiberline PCI interface card has been placed into a PCI slot in the computer. Also make sure any additional COM ports or additional Ethernet cards are installed and any peripheral devices are connected.

Tip Deny all automatically upcoming attempts to install the driver for the Fiberline card, identified as System DMA Controller. The installation procedure for the Fiberline PCI card driver is done as part of the procedure described later in this document.

Creating an Isodat Backup

Before beginning the installation procedure, Thermo Fisher Scientific recommends to create a backup of your current Isodat version. This backup can be used to transfer instrument specific settings from the currently used computer to the new Windows 10 PC, or to restore settings when upgrading to Windows 10 on the same PC. Isodat backups can be created and restored using the Version Handler. This tool is part of Isodat. The Isodat backup files are stored in the folder C:\Isodat_Backups, see [Figure 3-1](#).

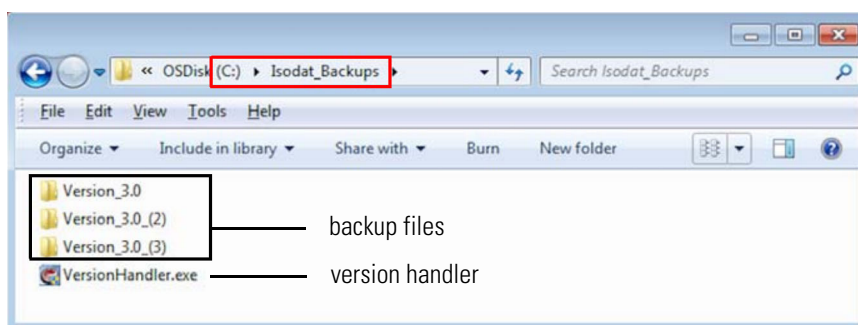


Figure 3-1. Location of Isodat backup files

A backup created using the Version Handler (located at C:\Isodat_Backups, see [Figure 3-1](#)) does not include the complete content of the Isodat User folder (C:\Thermo\Isodat NT\Global\User). This implies that all measurement data (for example, methods, sequences and result files, with the exception of ISL scripts) are not saved using the Version Handler. Therefore, manually backup the Isodat User folder. Also check any customized folder paths containing results,

methods and sequences or any other data stored on the computer. Copying the backup files to an external hard drive or USB storage device is highly recommended.

NOTICE

Isodat 3.0 can still open and operate Isodat methods and sequences created with older version of Isodat except methods containing Foundation GC or LC devices created with older versions. This means that compatibility of Isodat methods and sequences is not given when upgrading from GC devices version lower or equal than 2.2 to the newer Foundation / GC devices version 2.4 during the Isodat installation procedure. In the latter case, all methods and sequences have to be recreated from scratch after installation of Isodat 3.0.94.12 (or higher) and GC devices 2.4 under Windows 10.

❖ To create a backup before installing the new Isodat version

1. Shut down Isodat (right mouse click on the Isodat symbol in the Windows Task Bar) and restart Windows.
2. On the Windows desktop, double-click the folder **Isodat 3.0**.
3. Double-click the **Version Handler** shortcut.
4. The Version Handler appears listing prior backups, see [Figure 3-2](#).

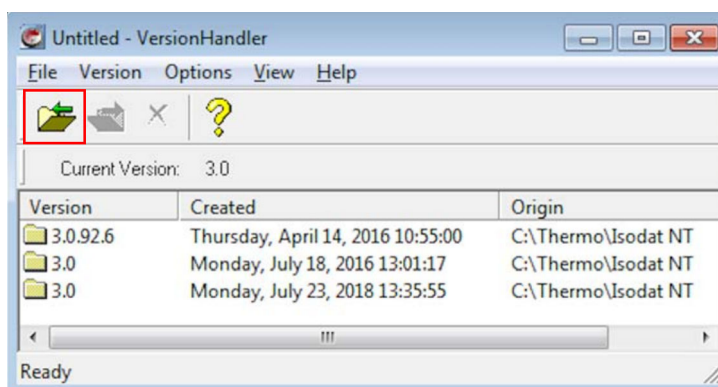


Figure 3-2. Version Handler

5. Click the **Create Backup** icon in the top left corner.

The backup starts reminding you that all measurement data (methods, sequences and result files, with the exception of ISL scripts) are not saved and a manual backup of the Isodat User folder is required (copying the Isodat User folder to an external storage device is recommended).

6. Wait until the backup is finished. The backup created is listed as a new entry in the Version Handler.
7. Close the Version Handler.

NOTICE

If you install Isodat under Windows 10 on a new PC, copy Isodat backup files stored in the folder C:\Isodat_Backups from the currently used computer to the new Windows 10 PC (in the same folder), after Isodat has been installed on the new PC.

❖ To Install Isodat 3.0 as delivered on your USB storage device

1. Open your Windows File Explorer.
2. Navigate to your USB flash drive, open the folder **Isodat Installation**.
3. Right-click the Isodat installation file (*Isodat 3.0.0.83 Installation.exe*).
4. From the context menu, select **Run as administrator**, see [Figure 3-3](#).

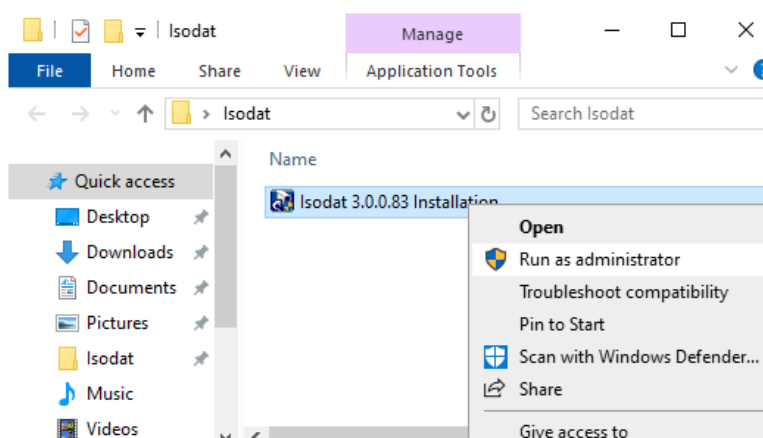


Figure 3-3. Isodat installation - select Run as Administrator

5. If the User Account Control dialog appears asking “Do you want to allow this app from an unknown publisher to make changes to your device?”, click **Yes**.
6. In the Isodat Installation Wizard, select **Proceed with installation**. Click **Next**. See [Figure 3-4](#).

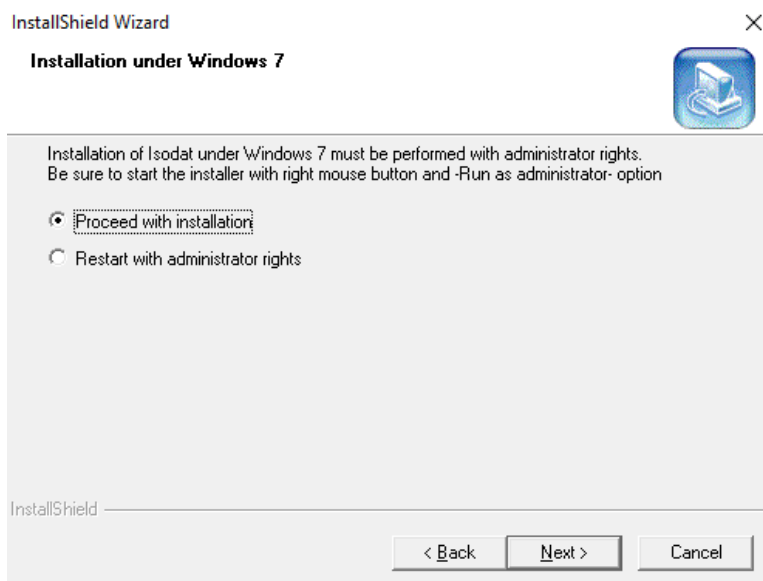


Figure 3-4. Isodat installation - Proceed with Installation

NOTICE

If the setup was started without administrator rights, select **Restart with administrator rights**. Click **Next** to stop the installation. Start again with administrator rights (see [step 3](#)).

7. In the Isodat and Xcalibur options dialog, select **Default Isodat Installation**.

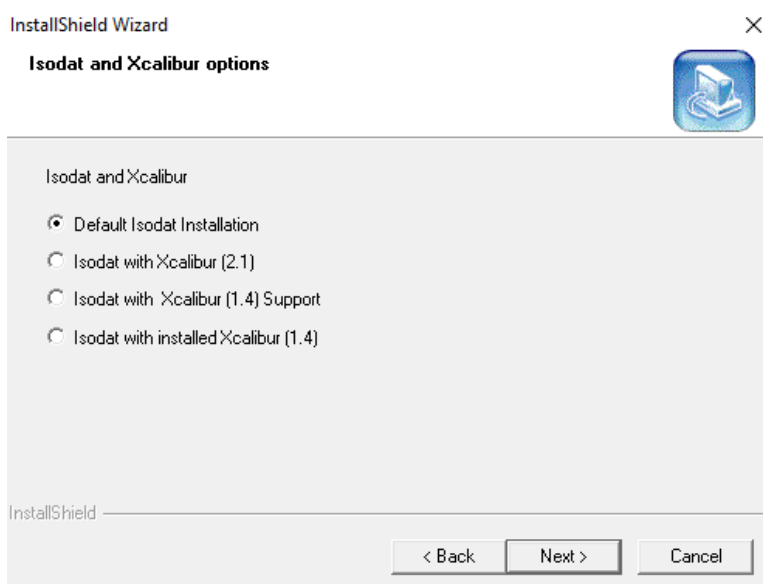


Figure 3-5. Isodat installation - Default Isodat Installation

NOTICE

Do not select any Isodat with Xcalibur options at this step, see [Figure 3-5](#). The Thermo Foundation with Excalibur options will be installed later via the Isodat Service Pack (see [Chapter 4: “Installing the Isodat Service Pack and Thermo Foundation”](#)).

8. Follow the Installation Wizard instructions:
 - a. Click **Next**.
 - b. Read and accept the **Software License Agreement**.
 - c. Enter **User Name** and **Company Name**.
9. In the **Setup Type** options dialog, select **Instrument Installation**, see [Figure 3-6](#).

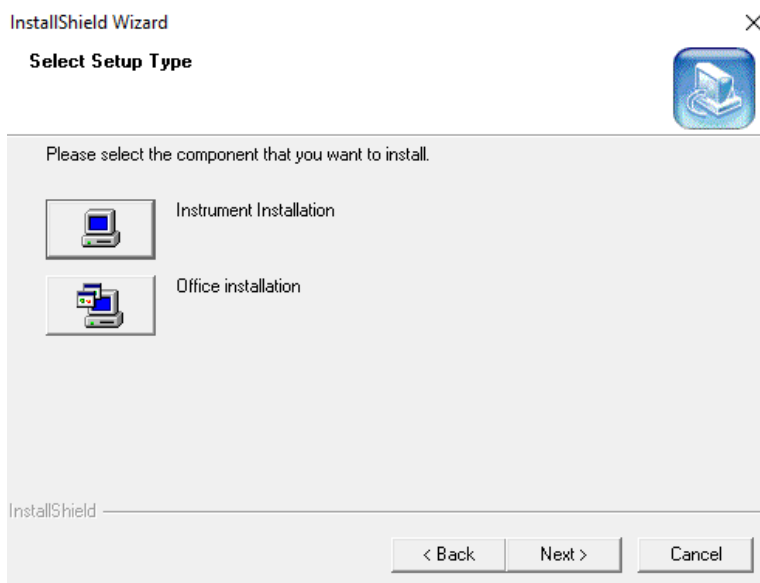


Figure 3-6. Isodat installation - Instrument Installation

10. In the Installed Interfaces dialog, select **Fiber Line Interface**. Click **Next**, see [Figure 3-7](#).

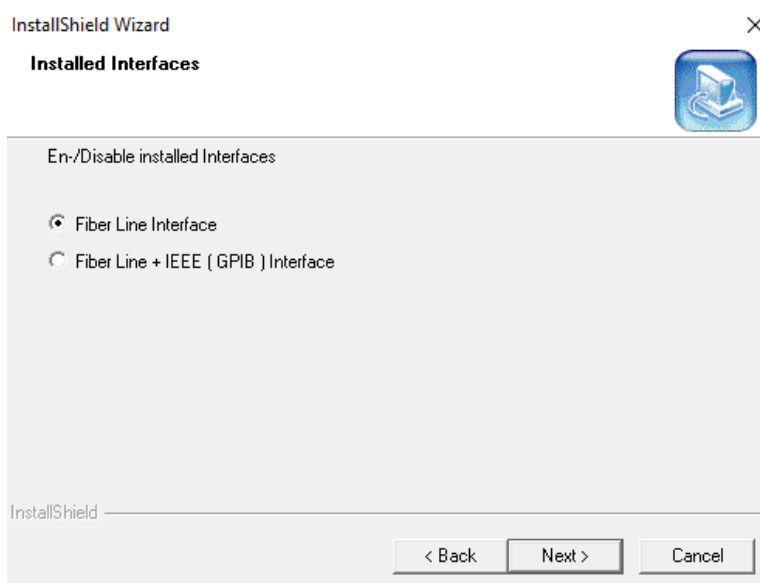


Figure 3-7. Isodat installation - Fiber Line Interface

11. Accept the Destination Folder for the Isodat installation. Click **Next**, see [Figure 3-8](#).

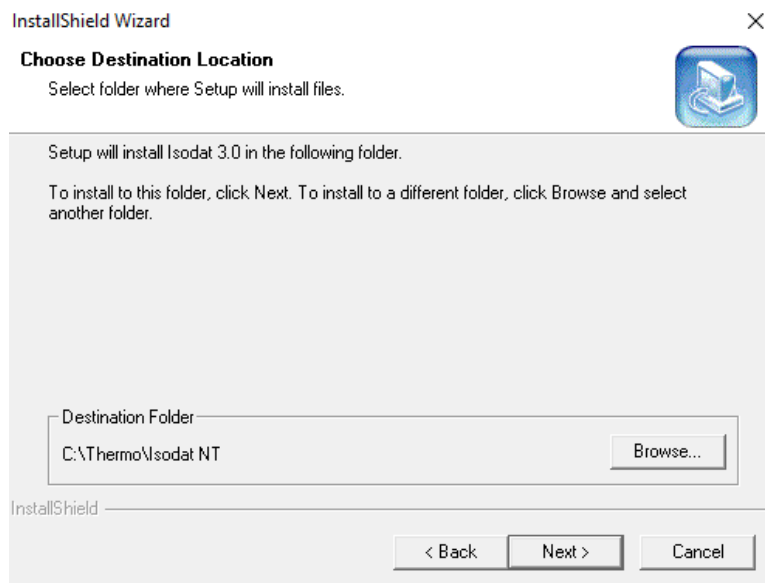


Figure 3-8. Isodat installation - Destination Location

12. You are reminded to assign administrator rights to all Isodat applications after this installation is finished, see [Figure 3-9](#). Click **OK**.

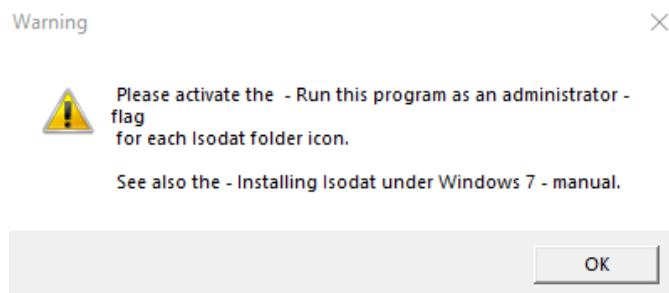


Figure 3-9. Isodat installation - Destination Location

13. In the Install Shield Wizard Complete dialog, see [Figure 3-10](#), select **No, I will restart my computer later**.

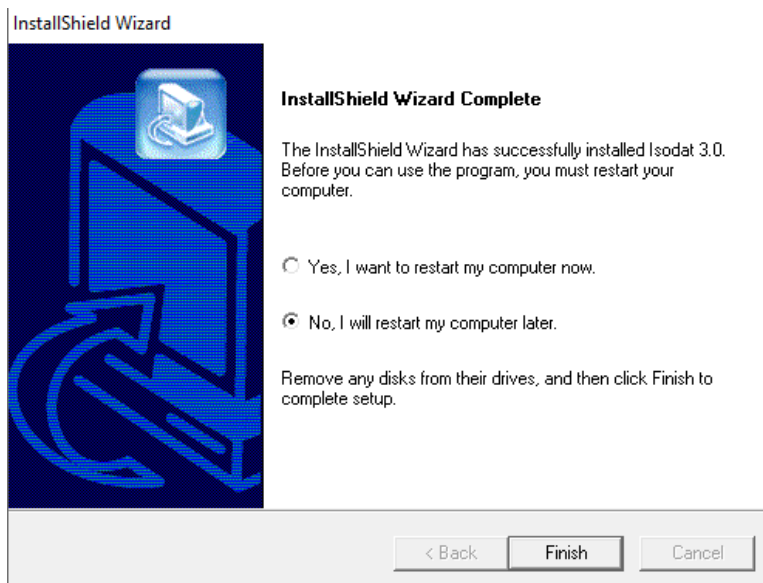


Figure 3-10. Isodat installation - Postpone restart



Do not restart the computer at this stage. Doing so without completing the next steps of this installation procedure (that is, deleting obsolete fiberline driver files: *DELTA99.inf* and *DELTA99.sys* and installation of the Service Pack) might cause a Windows bluescreen and might require a complete reinstallation of the Windows 10 operating system with the risk of complete data loss!

14. Open the Windows File Explorer.

On a Windows 10 (32 bit) operating system, navigate to the folder `C:\Windows\System32\drivers` (see [Figure 3-11](#)).

On a Windows 10 (64 bit) operating system, navigate to the folder `C:\Windows\SysWOW64\drivers`.

15. Delete the obsolete fiber line driver files *DELTA99.inf* and *DELTA99.sys*. These driver files may cause Windows bluescreens. This may happen after the computer is restarted. Therefore, they must be deleted before restarting the computer.

NOTICE

Do not delete *DeltaXP.sys*.

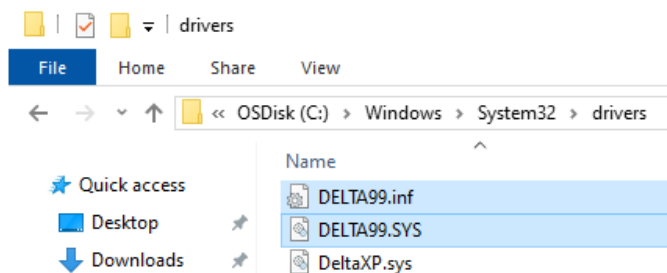


Figure 3-11. Fiberline driver files on a Windows 10 (32 bit) operating system

Fiberline driver files on a Windows 10 (32 bit) operating system are located in the folder C:\Windows\System32\drivers. On a Windows 10 (64 bit) operating system the driver files are located in the folder C:\Windows\SysWOW64\drivers.

16. Return to the InstallShield Wizard Complete dialog (see [Figure 3-10](#)). Click **Finish**.

NOTICE

Installing the Isodat Service Pack 3.0.94.12 (or higher) will automatically remove obsolete fiberline driver files (*DELTA99.inf* and *DELTA99.sys*) that were installed with previous Isodat versions.

Next, assign administrator rights as described in the following and then proceed with the installation of the Isodat Service Pack.

Assigning Administrator Rights to all Isodat Applications

NOTICE

Under Windows 10, all Isodat applications, with the exception of Isodat Help, must be run with administrator rights.

❖ **To assign administrator rights to all Isodat applications**

1. On your Windows Desktop, double-click the **Isodat 3.0** folder icon.

The folder Isodat 3.0 opens in your File Explorer showing all Isodat applications. See [Figure 3-12](#).

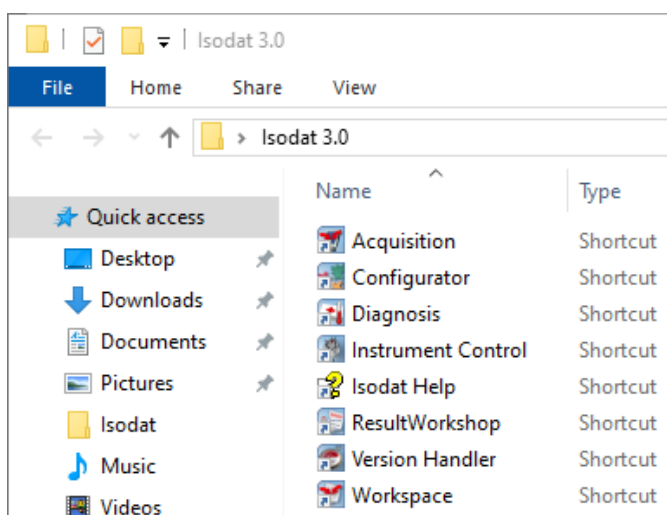


Figure 3-12. Isodat 3.0 folder

2. Right-click the first Isodat application (**Acquisition**, for example).
3. From the context menu, select **Properties**, see [Figure 3-13](#).

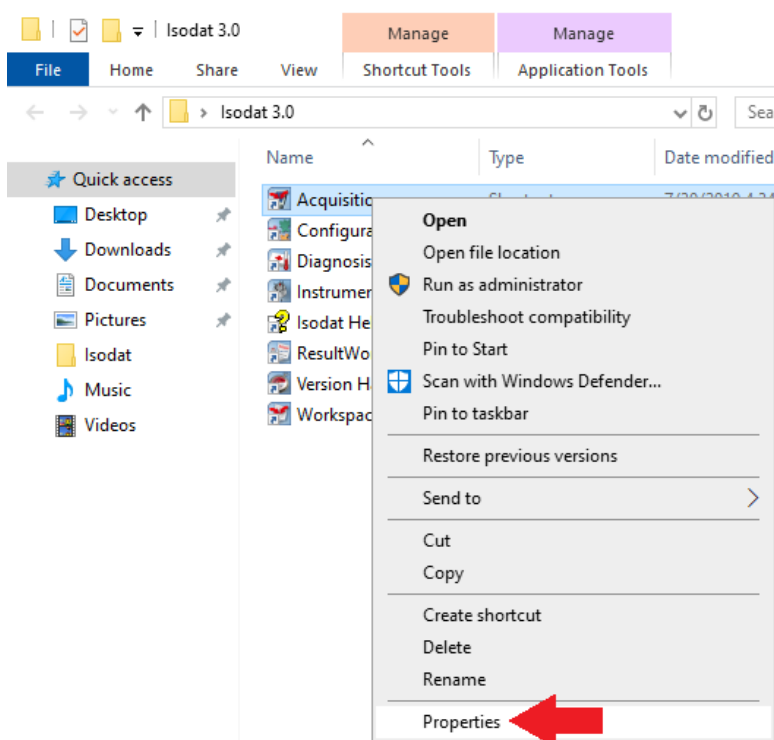


Figure 3-13. Context menu - Properties

4. In the Acquisition Properties dialog:
 - a. Click the **Compatibility** tab, see [Figure 3-14](#).
 - b. Select the tab **Compatibility**, select the check box **Run this program as an administrator**.

- c. Click **Apply** and then **OK**.

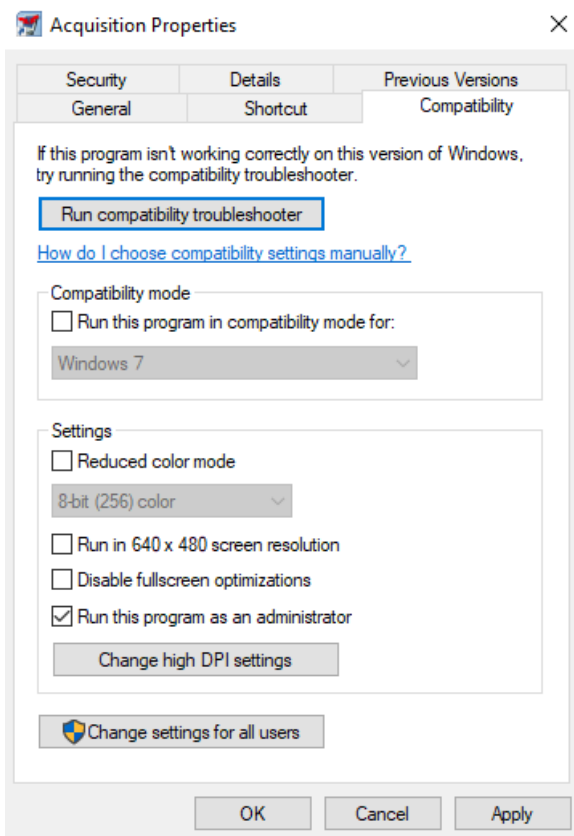


Figure 3-14. Acquisition properties - Compatibility tab

5. Repeat [step 2](#) to [step 4](#) for all remaining applications in your Isodat 3.0 folder, with the exception of Isodat Help.

NOTICE

It is not required to Run Isodat Applications in any Compatibility mode (e.g. Windows XP, nor Windows 7)



Do not reboot Windows before the installation of the Isodat Service Pack is finished.

Before rebooting the computer, it is important to assign the driver for the Fiberline Interface PCI card, see [“Assigning the Fiberline Interface PCI Card Driver”](#) on [page 4-7!](#)

To ensure Windows 10 compatibility of Isodat, proceed with the installation of the Isodat Service Pack (3.0.94.12 or higher), see [Chapter 4: “Installing the Isodat Service Pack and Thermo Foundation”](#).

NOTICE

Thermo Fisher Scientific cannot guarantee full functionality of the Isodat software under Windows 10 using an Isodat software version lower than 3.0.94.12.

Installing the Isodat Service Pack and Thermo Foundation

Installing Isodat Service Pack with optional Thermo Foundation

❖ To install the Isodat Service Pack

1. Make sure that Isodat 3.0.0.83 (basic software installation) has already been installed following the instructions in [“Installing Isodat 3.0”](#) on page 3-1.

NOTICE

Before rebooting the computer, it is important to follow all steps described in this chapter, i.e. install the Service Pack and assign the driver for the Fiberline Interface PCI card, as described in [“Assigning the Fiberline Interface PCI Card Driver”](#).

If you have GC devices that require Foundation/GC devices version 2.2, install the Isodat Service Pack 3.0.0.88 first, and then install Isodat Service Pack 3.0.94.12 (or higher) afterwards. Isodat Service Pack 3.0.94.12 only contains Foundation GC devices version 2.4. Isodat Service Packs higher than 3.0.94.12 contain Foundation GC devices version higher than 2.4. Make sure you select the correct Foundation GC devices version that is compatible with the connected instrument hardware and peripheral devices.

Any Isodat version lower than 3.0.94.12 is not supported under Windows 10. Thermo Fisher Scientific strongly recommends contacting your local service organization to seek assistance with the migration process to Windows 10 if you have any GC devices or any customized instrument or peripheral configuration.

Otherwise, if no GC devices are required, proceed directly with installation of Service Pack 3.0.94.12 (or higher).

2. Open the File Explorer:
 - a. Navigate to the folder containing the Service Pack, see [Figure 4-1](#).

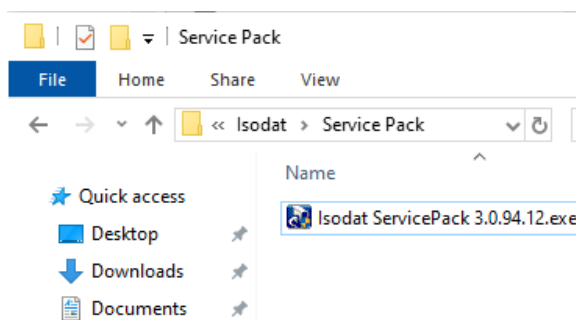


Figure 4-1. Isodat Service Pack

- b. Right-click on the installation file Isodat Service Pack 3.0.94.12.exe (or higher version number) and select **Run as administrator**.

NOTICE

Depending on the Windows Operating system (64 bit or 32 bit version), different driver files for the Fiberline PCI interface card need to be installed. The driver for Window 10 (32 bit) is included in the Isodat Service Pack 3.0.94.12 installer (*Delta XP.sys*). The driver for the Fiberline PCI interface card compatible with Windows 10 (64 bit) (*delta_pci.sys*) is not included in the Isodat Service Pack 3.0.94.12 installer but can be obtained by contacting your local service organization or at www.thermoscientific.com/Technicaldocumentation.

Isodat Service Pack versions higher than 3.0.94.12 contain both Fiberline PCI drivers for Window 10 32 bit and 64 bit. During installation of the Service Pack under Windows 10, the user is prompted to select the correct Fiberline PCI interface card driver compatible with the either Windows 10 (32 bit) or with Windows 10 (64 bit). Under Windows 7, only the 32 bit operating system is supported and only the Fiberline PCI driver for Window 10 (32 bit) is installed automatically.

You can check the Windows version of your PC using the **System Information App** (Windows Start --> type: System Information). Under System Summary, locate the System Type entry, which is either X86-based PC for Windows 10 (32 bit) and X64-based PC for Windows 10 (64 bit).

3. In the **Installation Service Pack preparation** dialog, select **Proceed with installation**. Do not reboot the computer. Click **Next**, see [Figure 4-2](#).

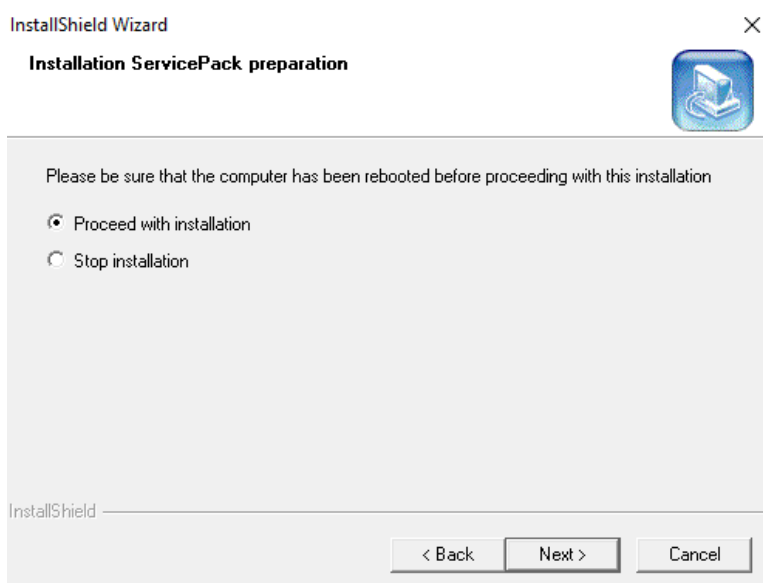


Figure 4-2. Isodat Service Pack installation - Proceed with Installation

4. In the following **Installation under Windows** dialog, select **Proceed with installation**. Click **Next**.
5. In the **Isodat and Foundation** dialog, select **Default Isodat Installation**. Click **Next**, see [Figure 4-3](#).

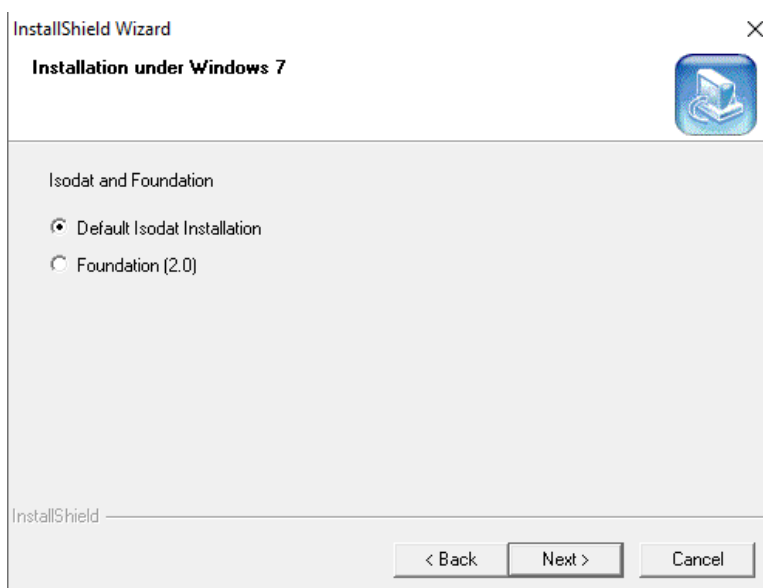


Figure 4-3. Isodat Service Pack - Default Isodat Installation

NOTICE

During the installation procedure you might get prompted to install the .NET Framework Windows feature. Confirm any following messages to download and install this feature. Then restart installation of the Service Pack beginning from [step 1](#).

Installing the Isodat Service Pack and Thermo Foundation

Installing Isodat Service Pack with optional Thermo Foundation

If you have any GC/LC devices connected to your mass spectrometer, you can install the Thermo Foundation after finishing the Default Isodat Installation by running the installation procedure for the Service Pack 3.0.94.12 (or higher) again, beginning with [step 1](#) of this chapter (but then selecting Foundation (2.0) in [step 5](#)).

6. In the **Welcome to the InstallShield Wizard for Isodat Service Pack** dialog, click **Next**.
7. After the installation procedure has finished, click **OK** in the **Information** dialog to proceed with the installation of the Foundation 2.0 platform, see [Figure 4-4](#).

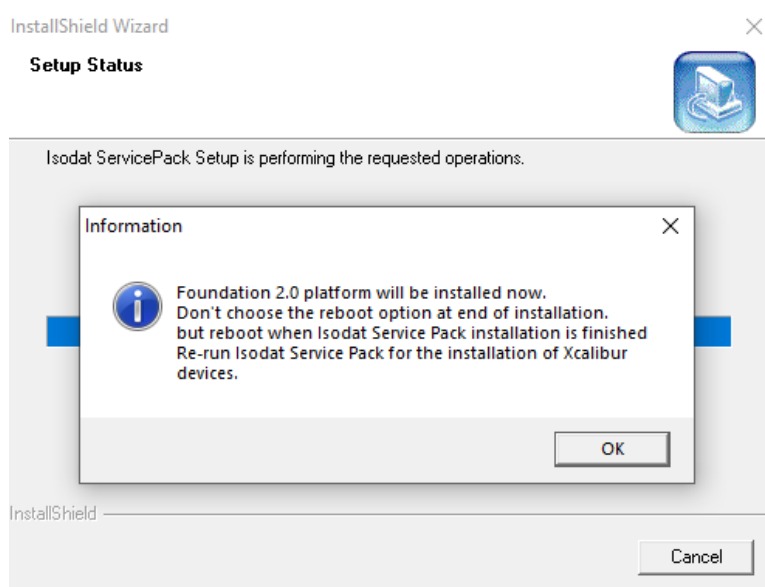


Figure 4-4. Isodat Service Pack - Installation Foundation 2.0 platform

8. In the **Welcome to the InstallShield Wizard for Thermo Foundation 2.0** dialog, click **Next**, see [Figure 4-5](#).

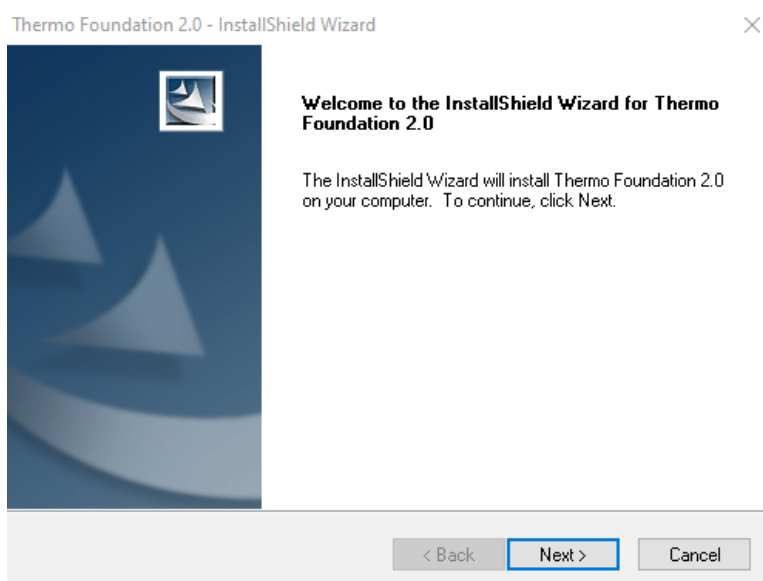


Figure 4-5. Installation Wizard Thermo Foundation 2.0

9. Follow the Installation Wizard instructions:
 - a. Read and accept the **Software License Agreement**, click **Next**.
 - b. Enter **User Name** and **Company Name**, click **Next**.
 - c. Choose the **destination folder for the Foundation 2.0 installation**, click **Next**.
 - d. Click **Install** to proceed with the installation procedure.
10. In the **Installation Qualification** dialog:
 - a. Click **Yes**, if you want to get an installation report, or
 - b. Click **No** to proceed without getting an installation report.

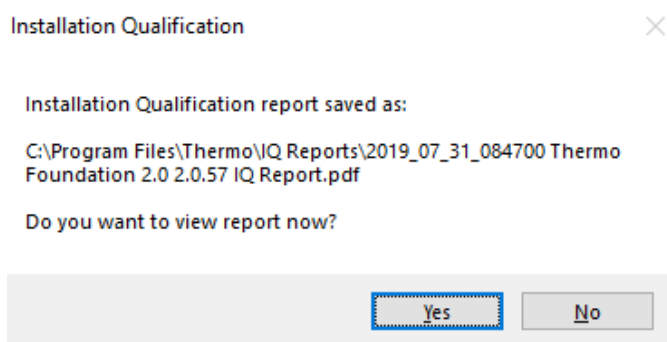


Figure 4-6. Installation Qualification dialog

11. In the InstallShield Wizard Complete dialog, select **No, I will restart my computer later** and click **Finish**, see [Figure 4-7](#).

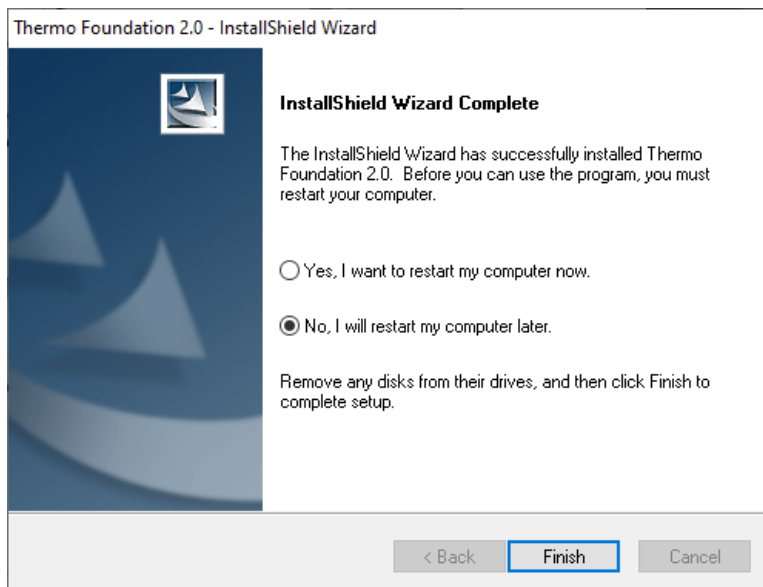


Figure 4-7. Installation complete

12. At the end of the installation procedure, you are informed that the Isodat Service Pack has been installed. Click **Finish**.
13. You are informed that the driver platform has been modified, see [Figure 4-8](#). Check your Isodat configurations and remove the devices which use unsupported drivers. Click **OK**.

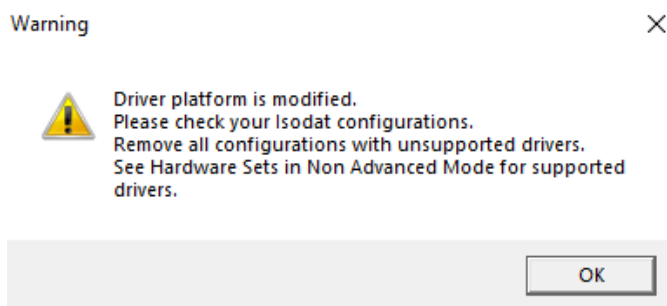


Figure 4-8. Driver platform is modified

NOTICE

Additional drivers can be found under **Windows Settings > Apps & Features**. If the instrument hardware and peripheral devices do not require some of the installed drivers, those can be removed, if necessary.



Before rebooting the computer, it is important to assign the driver for the Fiberline Interface PCI card, see as described in [“Assigning the Fiberline Interface PCI Card Driver”](#).

Assigning the Fiberline Interface PCI Card Driver

During the Isodat Service Pack installation, the Fiberline interface PCI card drivers were copied into the Windows operating system folder.

On a Windows 10 (32 bit) operating system, the driver files are located in the folder C:\Windows\System32\drivers (after installation of the Service Pack 3.0.94.12).

On a Windows 10 (64 bit) operating system, the driver files are located in the folder C:\Windows\SysWOW64\drivers (after installation of any Service Pack higher than version 3.0.94.12).

Tip In general, you can check the Windows version of your PC using the **System Information App** (Windows Start --> type System Information). Under System Summary, locate the System Type entry, which is either X86-based PC for Windows 10 (32 bit) and X64-based PC for Windows 10 (64 bit).

NOTICE

Deny all automatically upcoming attempts to install the driver for the Fiberline interface PCI card.



Before rebooting the computer, it is important to assign the driver for the Fiberline interface PCI card, see as described in the following.

❖ To assign the Fiberline interface PCI card driver

1. Click the **Start** button in the Windows task bar.
2. Enter **Device Manager**.
3. Click to open **Device Manager**.

NOTICE

Make sure your Windows user account has full local administrator rights. Alternatively, start the Device Manager using the Run as Administrator option from the context menu.

4. In the **Device Manager** (see [Figure 4-9](#)):
 - a. Locate the entry **Other devices > System DMA Controller**. This is the unrecognized Fiberline PCI interface card.
 - b. Right-click **System DMA Controller** and select **Update driver...**

Installing the Isodat Service Pack and Thermo Foundation

Assigning the Fiberline Interface PCI Card Driver

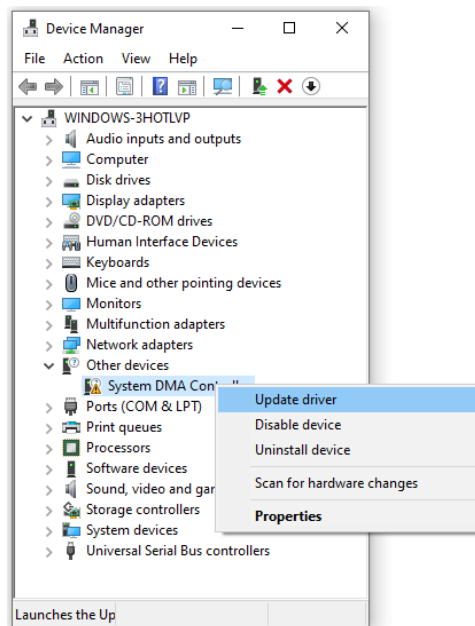


Figure 4-9. Device Manager dialog

5. Click **Browse my computer for driver software**, see [Figure 4-10](#).

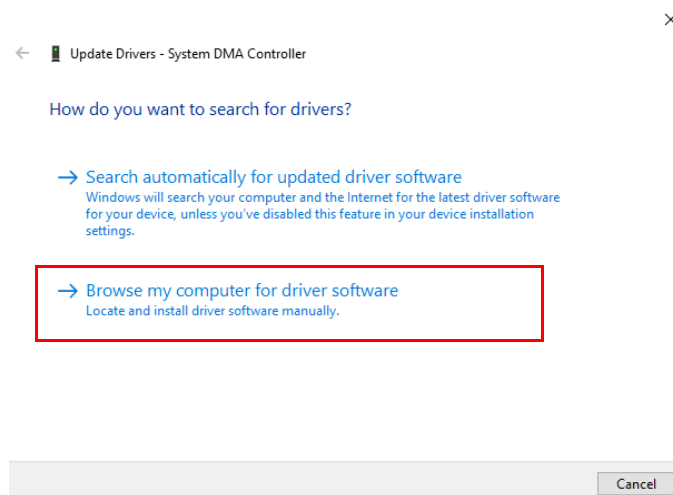


Figure 4-10. Update driver dialog

6. To specify the path of the driver (see [Figure 4-11](#)):
 - a. Browse to the folder (for example, to `C:\Windows\System32\drivers` for Windows 10 32 bit) where the 32 bit driver is located (*DeltaXP.sys*).

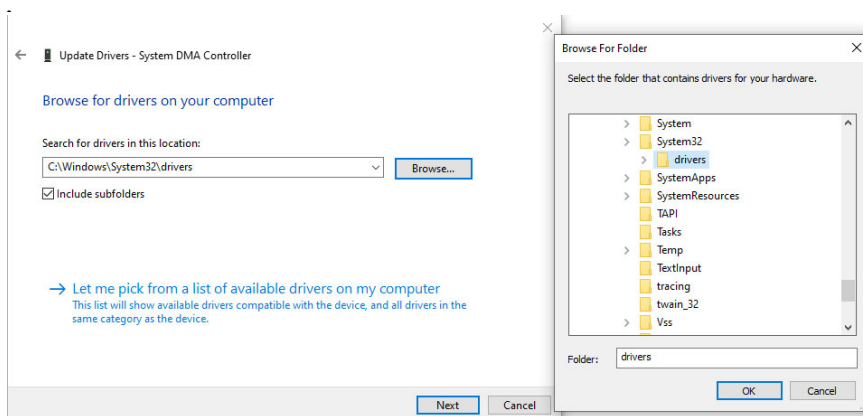


Figure 4-11. Update driver (32 bit)

- b. Navigate to the folder where the driver files are located.

Windows 10 (32 bit): During the installation of the Isodat Service Pack 3.0.94.12 under Windows 10 (32 bit), the 32bit-compatible Fiberline PCI interface card driver (*DeltaXP.sys*) is copied to the folder C:\Windows\System32\drivers of your Windows 10 (32 bit) operating system.

Windows 10 (64 bit): The 64 bit compatible driver files for the Fiberline PCI interface card for Windows 10 (64 bit) (*delta_pci.sys*, *delta_pci.cat*, *delta_pci.inf*) are not included in the Isodat Service Pack 3.0.94.12 installer but can be obtained by contacting your local service organization or at www.thermoscientific.com/Technicaldocumentation.

Browse to the folder where you have saved the driver files, e.g. on a USB drive or on the Windows Desktop. Note that in Isodat Service Pack versions higher than 3.0.94.12, the 64 bit Fiberline PCI driver is included and is located in the folder C:\Windows\SysWOW64\drivers after the Service Pack installation is finished.

Figure 4-12: Browse to the folder where the 64 bit driver is located (*delta_pci.sys*).

Installing the Isodat Service Pack and Thermo Foundation

Assigning the Fiberline Interface PCI Card Driver

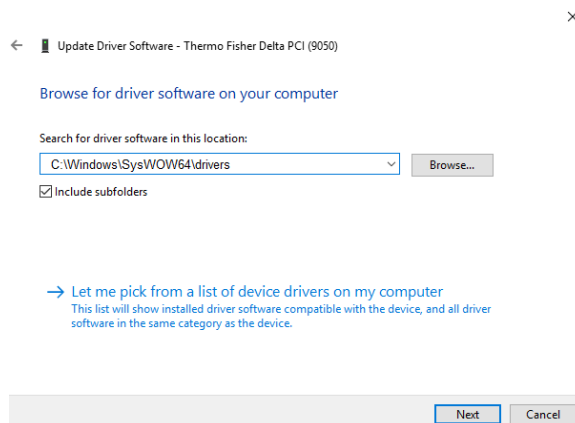


Figure 4-12. Update driver (64 bit)

- c. Select the check box **Include subfolders**.
 - d. Click **Next**.
7. In the Warning message, click **Install this driver software anyway**.
 8. The Fiberline interface PCI card driver has been correctly installed and is displayed as **Thermo Fisher Scientific Fiberline MS Series with Uranus support** (under Windows 10 32 bit, see [Figure 4-13](#)) or as **Thermo Fisher Delta PCI** (under Windows 10 64 bit).

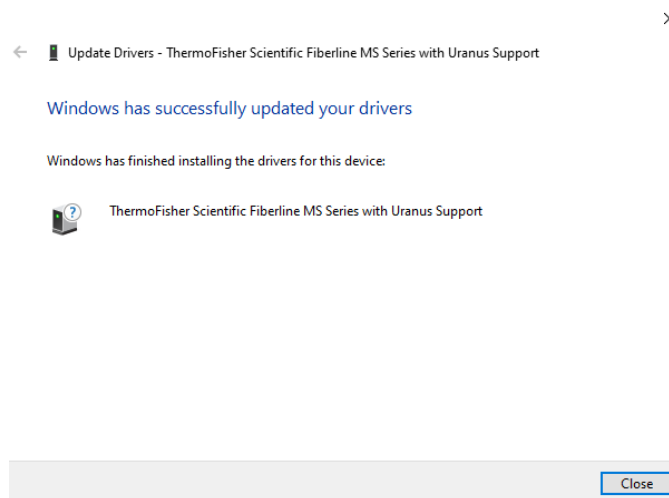


Figure 4-13. Fiberline interface PCI card driver installed (32 bit)

[Figure 4-14](#) shows the Device Manager dialog after successful installation of the Fiberline PCI Interface card driver under Windows 10 (32 bit): **ThermoFisher Scientific Fiberline MS Series with Uranus Support**.

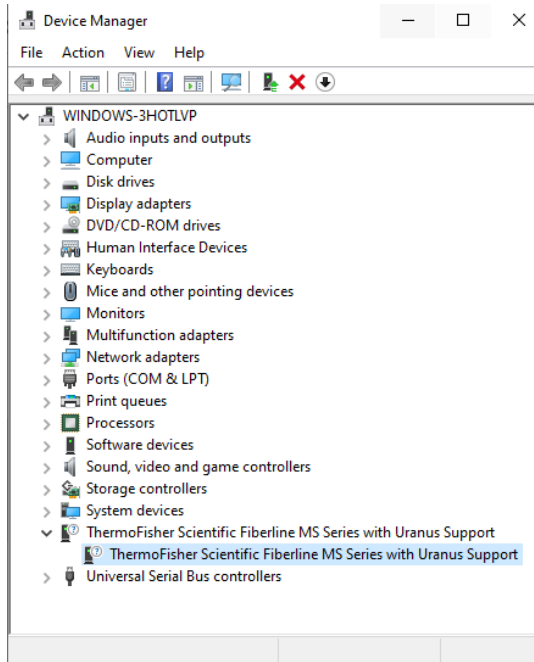


Figure 4-14. Device Manager dialog with the Fiberline PCI Interface card driver installed under Windows 10 (32 bit)

Figure 4-15 shows the Device Manager dialog after successful installation of the Fiberline PCI Interface card driver: **Thermo Fisher Delta PCI**.

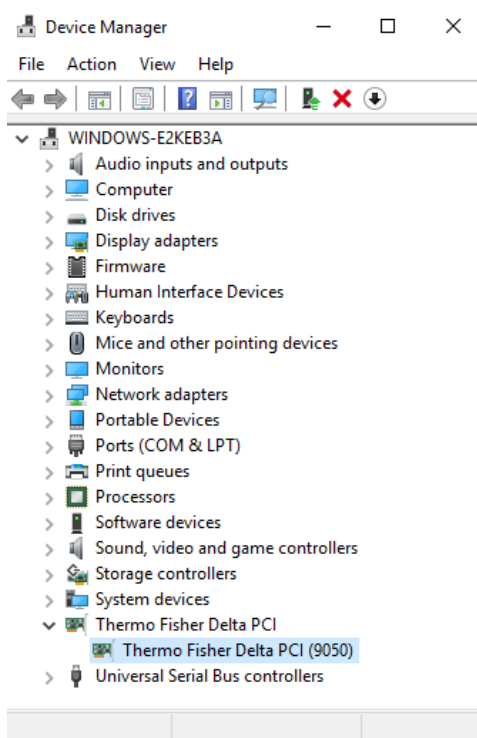


Figure 4-15. Device Manager dialog with the Fiberline PCI Interface card driver installed under Windows 10 (64 bit)

- Restart Windows for the changes to take effect.

If you have peripheral devices that require installation of the Thermo Foundation and Xcalibur drivers, proceed with the installation steps described below in the section [“Installing Thermo Foundation and Xcalibur Drivers for Peripherals”](#) on page 4-13.

If you do not have any Thermo Foundation/Excalibur peripheral devices connected to your instrument, the Isodat Service Pack installation procedure is finished after a Windows restart. After the Windows restart, open the Isodat **Configurator** to verify correct configuration of the instrument and all peripheral devices.

Tip It is recommended to create an Isodat backup using the Version Handler (as described above in [“Creating an Isodat Backup”](#) on page 3-1)

Restoring an Isodat Backup

If you have a Version Handler backup from a previous Isodat installation on another PC, restore the Isodat backup using the Version Handler.

❖ To restore an Isodat backup

- Shut down Isodat (right-mouse click the Isodat symbol in the Windows Task Bar).
- Copy Isodat backup files stored in the folder C:\Isodat_Backups to the new PC (into the folder C:\Isodat_Backups). Also transfer the files in the folder C:\Thermo\Isodat NT\Global\User, and any other customized data folders to the new PC, if necessary.
- On the Windows Desktop, double-click the folder Isodat 3.0 and double-click the Version Handler shortcut.
- Select the previously created backup and click **Restore Backup**.
- Wait until the restore is finished.
- Close the Version Handler.
- Restart Windows.

Installing Thermo Foundation and Xcalibur Drivers for Peripherals

With Isodat Service Pack 3.0.94.12 (or higher), the software drivers for the Thermo Foundation 2.4 (or higher) are made available. To install them, run the Installer of the Service Pack 3.0.94.12 (or higher) again.

NOTICE

Xcalibur installation within Isodat is not an independent full version of Xcalibur, but only an implementation of Xcalibur device drivers. Those must be installed via the Isodat Service Pack. Never install any Xcalibur setup file. These devices are labeled by a red Xcal in their Isodat icon, for example:



❖ To install the Thermo Foundation for LC devices and/or GC devices

1. Make sure that Isodat 3.0 (basic software installation) and the latest Service Pack 3.0.94.12 (or higher) has already been installed, see “Basic Isodat Installation” on page 3-1 and “Installing Isodat Service Pack with optional Thermo Foundation” on page 4-1.
2. Open the File Explorer:
 - a. Navigate to the folder containing the Service Pack, see Figure 4-16.

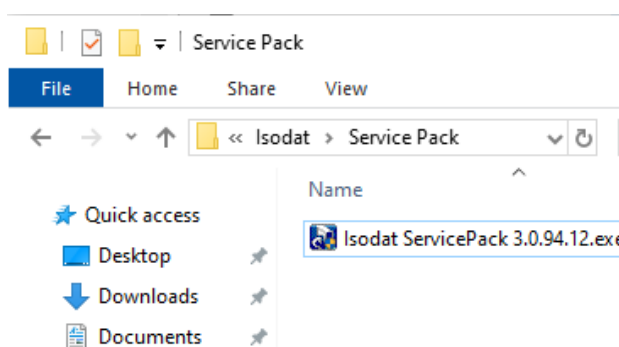


Figure 4-16. Isodat Service Pack

- b. Right-click on the installation file *Isodat Service Pack 3.0.94.12.exe* (for example) and select **Run as administrator**.
3. In the **Installation Service Pack preparation** dialog, select **Proceed with installation** and click **Next**, see Figure 4-17.

Installing the Isodat Service Pack and Thermo Foundation

Installing Thermo Foundation and Xcalibur Drivers for Peripherals

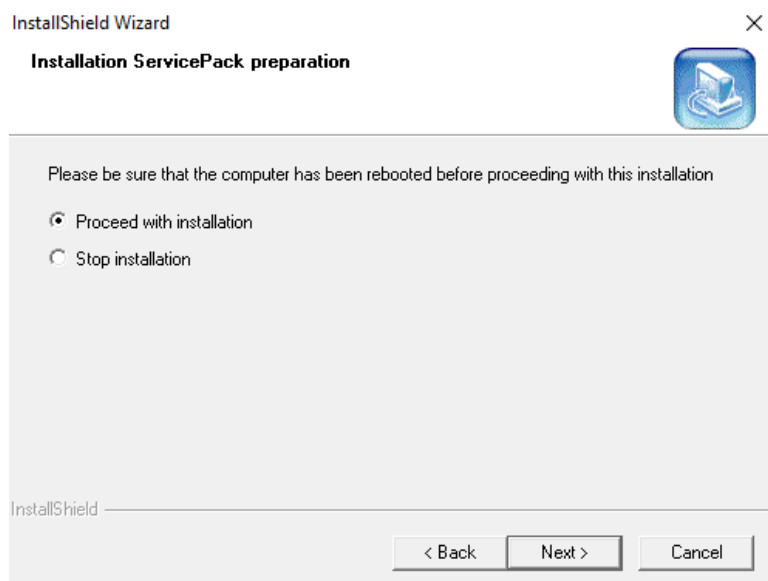


Figure 4-17. Installation Service Pack preparation dialog

4. In the following **Installation under Windows** dialog, select **Proceed with installation** and click **Next**.
5. Select **Foundation (2.0)** and click **Next**.

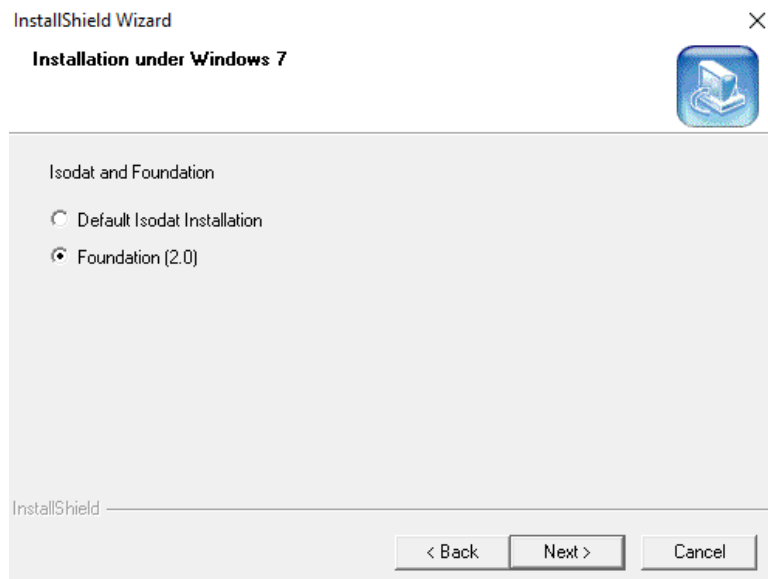


Figure 4-18. Isodat Service Pack - Foundation (2.0)

6. In the **Welcome to the InstallShield Wizard for Isodat Service Pack** dialog, click **Next**.
7. Select **Foundation GC devices (2.4) only**, see [Figure 4-19](#).

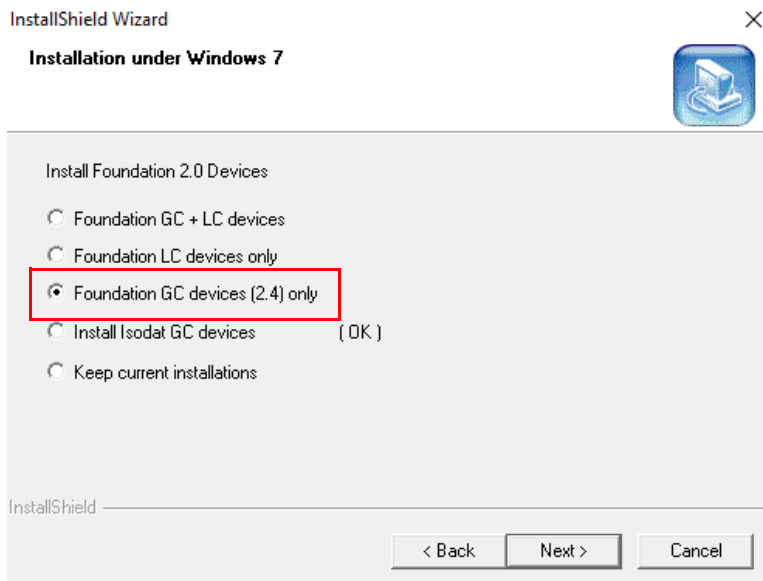


Figure 4-19. Installation Foundation 2.0 Devices 2.4

For installing the Foundation LC, refer to the Xcalibur™ manuals.

NOTICE

The *Trace.ocx* drivers of Isodat GC devices and Foundation 2.2 drivers are incompatible and must not be installed at the same time. The Isodat Service Pack 3.0.94.12 (or higher) installer handles all necessary actions in this case. Thermo Fisher Scientific strictly recommends using the Isodat Service Pack installer to install any Foundation-based device drivers. Do not install these drivers manually.

8. In the **Thermo GC Devices 2.4 Setup** dialog, click **GC Devices 2.4**, see [Figure 4-20](#).

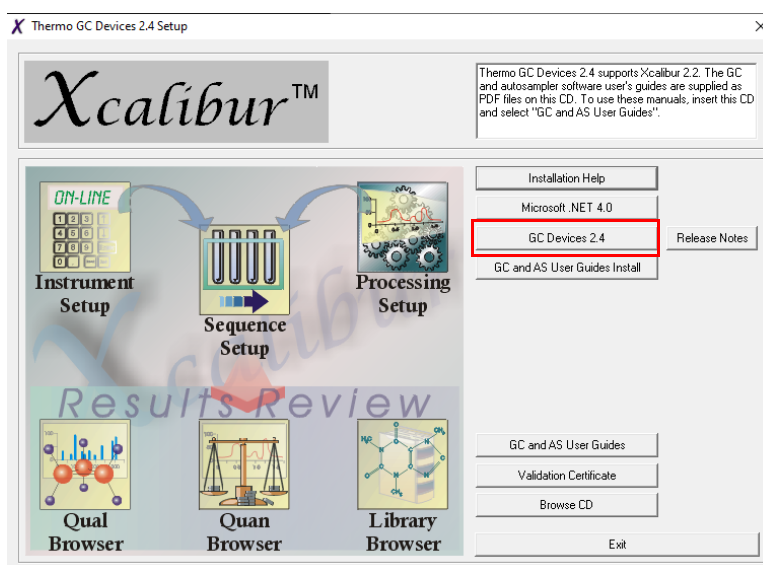


Figure 4-20. Thermo GC Devices 2.4 Setup dialog

9. In the **Welcome to the InstallShield Wizard for Thermo GC Devices 2.4** dialog, click **Next**.
10. In the **License Agreement** dialog
 - a. Read and accept the **Software License Agreement**.
 - b. Click **Next**.
11. In the next upcoming dialog called **Select Features** (see [Figure 4-21](#) - [Figure 4-23](#)), clear the check boxes for all devices listed with (2), and also clear the following devices that are not supported in Isodat anymore:

- TriPlus 100 LS Autosampler
- TriPlus 300 HS Autosampler
- Focus GC

Supported devices are:

- AS 1310 / 3000 autosampler
- TriPlus RSH autosampler
- TriPlus autosampler
- Trace 1300 Series GC
- Trace GC Ultra

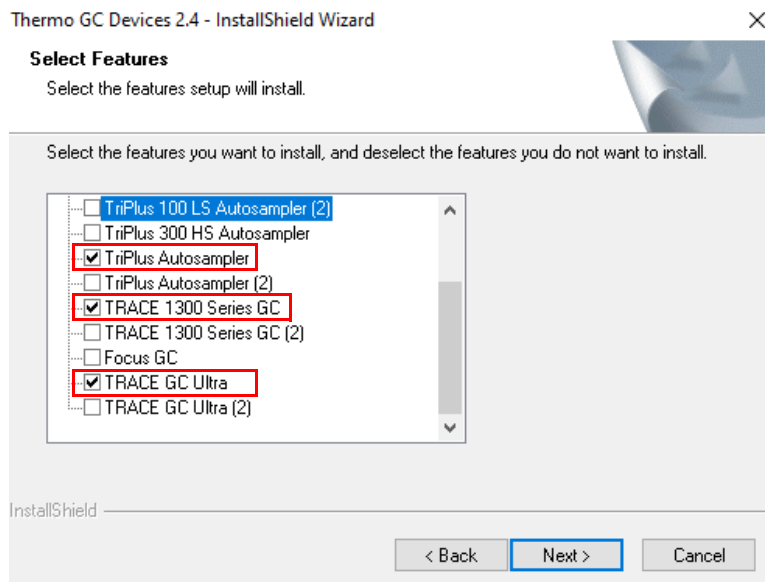


Figure 4-21. Select devices

Click **Next**.

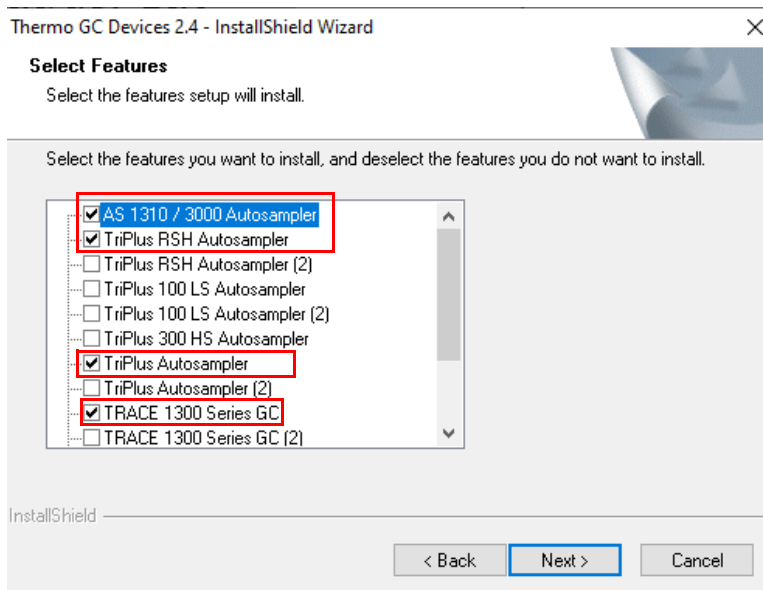


Figure 4-22. Select devices (upper part)

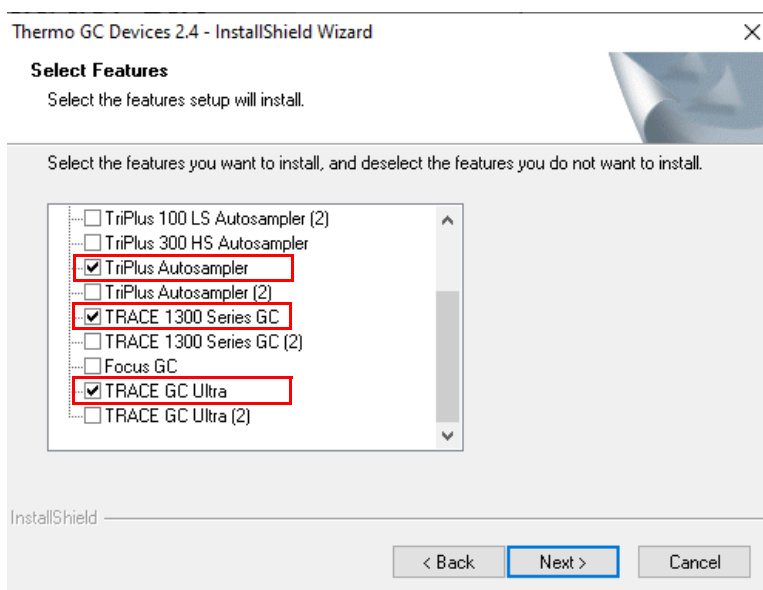


Figure 4-23. Select Features (lower part)

12. In the **Ready to Install the Program** dialog, click **Install**.
13. In the **InstallShield Wizard Complete** dialog, click **Finish**.
14. In the **Installation Qualification** dialog, click **Yes** to view an installation report, or **No** to proceed.
15. In the **Thermo GC Devices 2.4 Setup** dialog, click **Exit**.
16. In the **InstallShield Wizard Complete** dialog, click **Finish**.

17. In the **Thermo GC Devices** dialog, you are informed that the driver platform has been modified. Click **OK**.
18. Restart Windows for the changes to take effect.
19. Create an Isodat backup using the Version Handler. If you have a backup from a previous Isodat installation on another PC, restore the backup using the Version Handler, as follows:
 - a. Shut down Isodat (right-mouse click the Isodat symbol in the Windows Task Bar).
 - b. If you have installed Isodat under Windows 10 on a different PC, copy Isodat backup files stored in the folder C:\Isodat_Backups to the new PC (into the folder C:\Isodat_Backups). Also transfer the files in the folder C:\Thermo\Isodat NT\Global\User, and any other customized data folders to the new PC, if necessary.
 - c. On the Windows desktop, double-click the folder Isodat 3.0 and double-click the Version Handler shortcut.
 - d. Select the previously created backup and click **Restore Backup**.
 - e. Wait until the restore is finished.
 - f. Close the Version Handler.
 - g. Restart Windows.

NOTICE

When upgrading the GC Driver to version 2.4, the TriPlus RSH Firmware must be upgraded, too. If required, contact your local service organization for an installation description.

20. If your peripherals are connected via Ethernet or COM port, make sure the IP address (or COM port number) is configured correctly.
 - a. Shut down Isodat (Windows Task Bar, right-click Isodat symbol)
 - b. Open the Isodat Configurator:
 - i. Activate Advanced mode
 - ii. Set Network Address (or COM port) for the connected peripherals (for example, autosampler or GC device)
21. If required for peripherals, edit **Windows Settings**, open the **Network and Sharing Center**, configure the Properties of the Ethernet IPv4 Address accordingly.
22. Reboot Windows and then open the **Isodat Configurator** to verify correct configuration of the instrument and all peripheral devices.

NOTICE

After finishing the Isodat and Foundation installation, it is important to install the Security Update for Xcalibur/Foundation. Thermo Fisher Scientific identified a vulnerability in our Thermo Scientific Xcalibur/Foundation software that may allow unauthorized access. A software patch has been developed to update the system software permissions (www.thermofisher.com/software-update). Follow the installation procedure described in the document Xcalibur™/Foundation™ Software Update Release Notes (XCALI-98050 Rev C).

Known Issues

No major issues with impact on data or routine operation are known. Minor known issues are listed below.

- Bug 108182 Info view is blank when (Instrument Control), Workspace and Acquisition are open simultaneously.

Workaround: Do not open all Isodat applications simultaneously to show content of Info View.

- Bug 106533 Drag&Drop opening of saved scan files directly from File Explorer into Isodat Workspace does not work.

Workaround: Open saved scan files using the File open function in the Isodat Workspace application.

- Bug 110087 Mass label and Intensity display incorrect when opening Acquisition for the first time after Windows reboot.

Workaround: Close and reopen the Isodat software. Alternatively, change the gas configuration.

- Bug 105455 Unexpected valve opening in Kiel IV after start of Isodat Acquisition when Win10 was rebooted before

Workaround: This Bug only occurs when you have used the Version Handler to migrate from a Windows 7 system to Windows 10 (32 bit) with Isodat containing a Kiel IV device in the configuration. This issue does not occur when installing Isodat under Windows 10 (64 bit).

- Make sure you make the following settings before starting the Isodat Acquisition or Instrument Control:
 - a. Advanced Mode under Edit in **Configurator** > **Open Devices Tab** > **Open Kiel Device**.

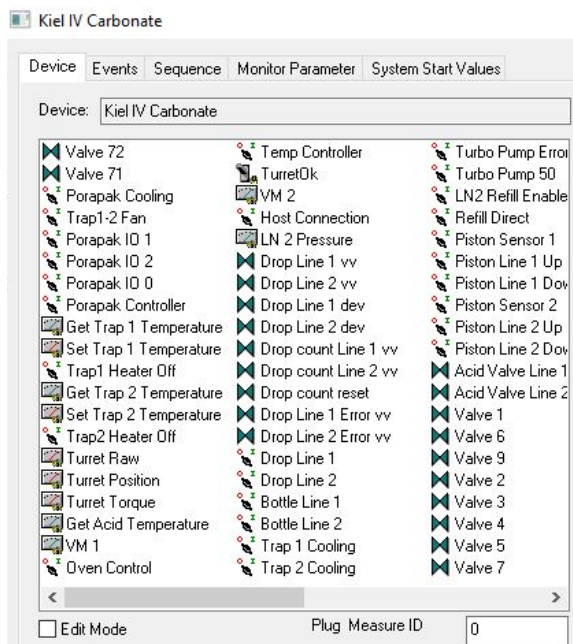


Figure 4-24. Kiel IV Carbonate dialog

- b. Enable **Edit Mode** (checkbox) and Go to **System Start Values**.

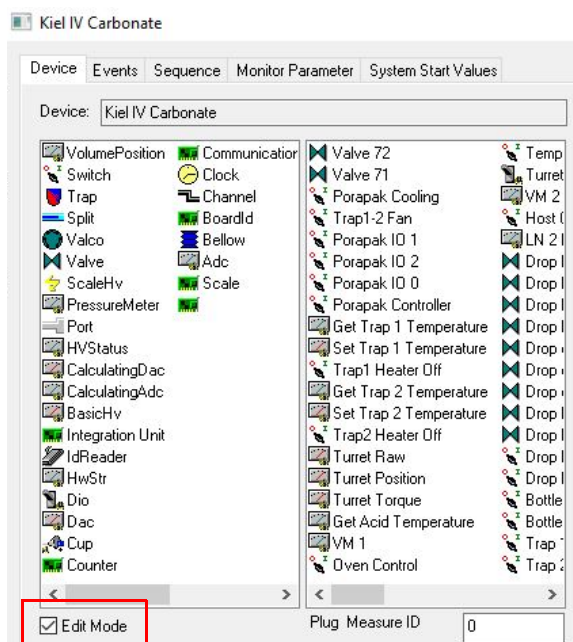


Figure 4-25. Kiel IV Carbonate dialog

- c. Start Drag and Drop **Refill Direct** mode into **System Start Setup**.

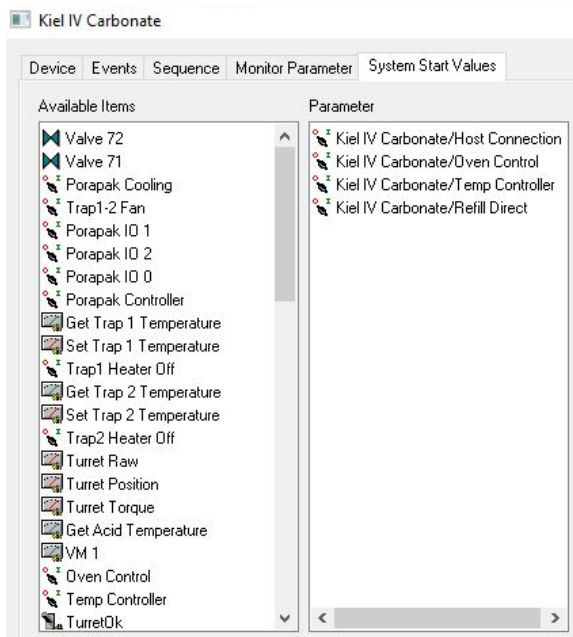


Figure 4-26. Kiel IV Carbonate dialog

d. Right-click **Refill Direct** and switch the **Drop Down** to **OFF**.

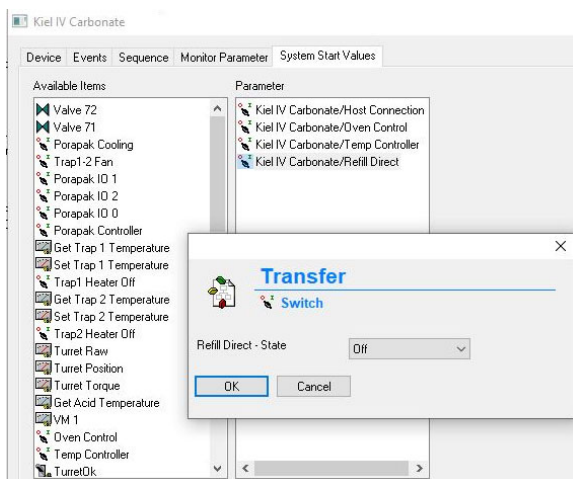


Figure 4-27. Kiel IV Carbonate dialog

Installing the Isodat Service Pack and Thermo Foundation

Known Issues

Configuration of Serial COM Ports for Thermo Fisher Scientific IRMS Devices

For peripheral devices controlled by Isodat that are connected to the computer, the configuration of the communication settings for the Windows 10 operating system Device Manager and the Isodat Configurator are described in this chapter.

Serial communication ports are used for Isodat software control of the following devices:

- LC IsoLink™
- EA IsoLink™
- CTC Pal 80 Autosampler for GasBench II™
- AI 1310 autosampler for GC and EA
- Purification Trap Controller for the Kiel IV Carbonate Device.

Table 5-1 shows the supported COM port settings for Isodat device operation. The table shows the setup for a system having the maximum number of devices connected via Serial COM port connections.

Tip If more than one extra COM port connection is needed on the PC running Isodat for communication with peripheral devices, Thermo Fisher Scientific offers serial COM Port USB converters. Contact your local sales or service organization for ordering information.

The following Serial COM to USB adapters are recommended when operating Isodat under the Windows 10 (64 bit) operating system.

- 4-Port COM Serial to USB converter (PN 1228460, Prolific) for Isodat LC IsoLink communication.
- Single COM Serial to USB converter (PN 2159100, Exsys, EX-1301-2 - Converter USB – 1x RS232 male) for EA IsoLink, GasBench, LC IsoLink Ultimate AS, AI 1310 autosampler for EA or GC, Purification Trap Controller for the Kiel IV Carbonate Device.

Table 5-1 lists the COM port settings for Isodat™ 3 devices and Chromeleon™ software for the Ultimate™ autosampler. The default Isodat COM port settings need to be changed to the correct COM port settings and the same COM port connection settings configured in Isodat need to be set in the Windows Device Manager.

Table 5-1. COM port settings for Isodat devices and Chromeleon Software for the Ultimate autosampler

Item ^a	Default Isodat COM port settings after software installation	Correct Isodat COM port settings for Windows (64 bit) (Isodat) set if all devices are connected
LC IsoLink	COM3 & COM4	COM5 & COM6
Ultimate	COM7	COM7
CTC Pal 80	COM1	COM8
EA IsoLink	COM1	COM1
AI 1310	COM3	COM3
Purification Trap for Kiel IV	COM1	COM4

^a Predecessor devices (Flash Series, Flash autosamplers, etc.) are not supported, but can be edited as well.

NOTICE

When changing the computer from a Windows 7 system to a Windows 10 system (32 bit and 64 bit), it is required to install a new 4-Port COM Serial to USB converter (PN 1228460) in the LC IsoLink (as described later in this chapter). Thermo Fisher Scientific cannot guarantee performance specification for COM port to USB adapters other than those supplied by Thermo Fisher Scientific.

NOTICE

A new 4-Port COM Serial to USB converter (PN 1228460) installation does require to change the COM port designation from COM 3 & COM 4 to COM 5 & COM 6 in the Windows 10 Device Manager and the Isodat Configurator.

Follow the installation instructions for the LC IsoLink as described later in this chapter.

NOTICE

Any change of the COM port settings in the Windows 10 Device Manager requires a Windows restart before the changes take effect and are applied to the Isodat communication with the connected devices. An error message will appear under Isodat LC IsoLink (“Invalid”), if Windows has not been restarted after changes have been made to the COM port settings.

Changing COM Port Settings in the Windows 10 Device Manager

The IRMS devices need a specific COM port configuration to be able to operate under Isodat in Windows 10 as described in the following.


NOTICE

Make sure all required COM port to USB adapters are connected to the PC before making changes in the Device Manager.

NOTICE

Make sure your Windows User Account has full local administrator rights to allow changes in Device Manager.

❖ To change COM port settings

1. To open the Device Manager:
 - a. Click  in the Windows task bar and enter Device Manager. Click to open the **Device Manager**.
2. Expand the **Ports (COM & LPT)** section, see [Figure 5-2](#) to show all available COM ports. COM 1 is the internal COM port of the PC. [Figure 5-1](#) shows the Prolific 4-port Serial COM to USB adapter (here: COM 3, 4, 5, 6) and three Single COM Serial to USB adapters (here: COM 7, 8, 9). This will be the numbering if COM Serial to USB converters are connected to the computer for the first time.

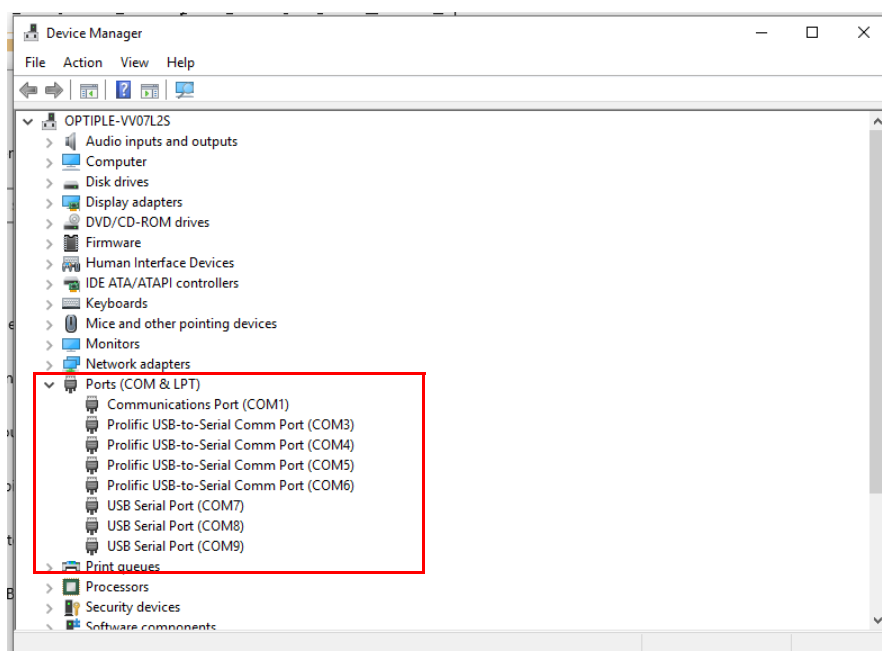


Figure 5-1. Device Manager with COM ports connected to the PC

3. A right mouse click on one COM port (-> **Properties**) opens the configuration window of this port, see [Figure 5-2](#).

Configuration of Serial COM Ports for Thermo Fisher Scientific IRMS Devices

Changing COM Port Settings in the Windows 10 Device Manager

- In the **General** tab, the port location is shown, for example for LC IsoLink. **Figure 5-2**, left figure, shows the COM Port Properties of Serial COM port 4 showing the location of the COM port on 4-port Serial COM to USB converter.
- In the **Port Settings** tab, the **Advanced..** view will show the drop-down menu for the port number. The change of the port number will affect the order of the hub location (see changes for LC IsoLink later in this chapter). **Figure 5-2**, right figure, shows the **Port Settings > Advanced Settings** with the COM Port Number.

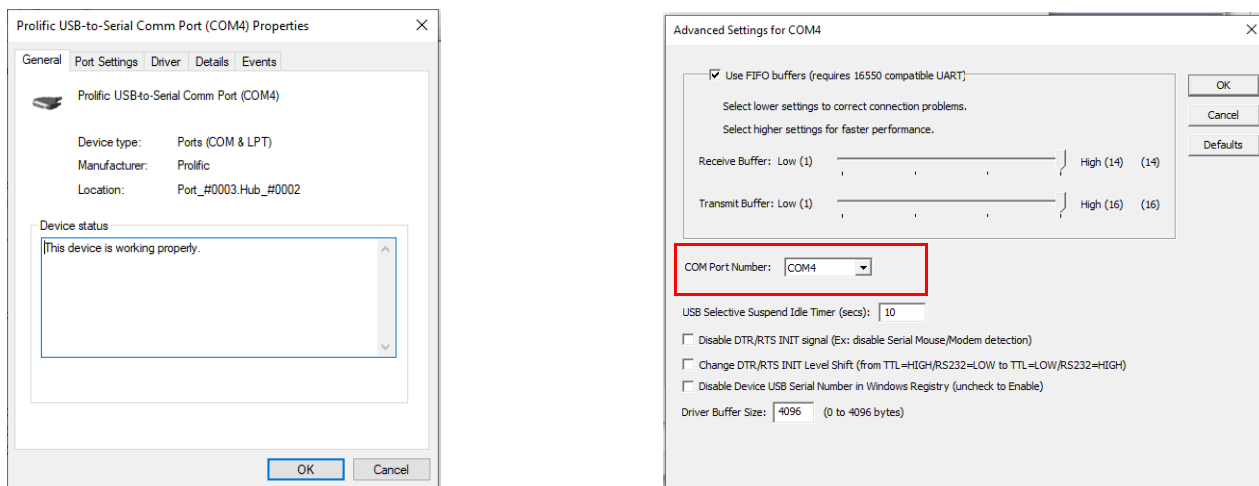


Figure 5-2. Example of COM Port Properties

4. To change the COM Port Number, click in the COM Port Number field and select the new number from the drop-down list.
5. Click **OK** to apply the changes.

COM Port Configuration for LC IsoLink

The following describes the configuration for an LC IsoLink with the 4-port Serial COM port to USB converter and Single Serial COM port to USB converter using the Device Manager.

When updating from a Windows 7 system to Windows 10 (32 bit and 64 bit), the LC IsoLink COM ports settings must be changed using the Device Manager. [Table 5-2](#) shows the COM port settings that need to be changed using the Device Manager, see “[To change COM port settings](#)” on [page 5-3](#).

Table 5-2. COM Port Properties for a new system set up using one 4-port Serial COM to USB converter and one Single Serial COM to USB converter

	Default COM port settings automatically assigned during first installation of Serial COM port to USB converters	Needed changes of COM port settings to be able to operate devices with Isodat^a
4-port Serial COM to USB adapter	COM3	COM12
4-port Serial COM to USB adapter	COM4	COM5
4-port Serial COM to USB adapter	COM5	COM6
4-port Serial COM to USB adapter	COM6	COM16
Communications Port 1 (Internal COM port of the PC)	COM1	COM1
Single Serial COM to USB converter	automatically assigned by Device Manager	COM7

^a the right column shows needed changes with LC IsoLink Ultimate with one single COM port device, for example EA IsoLink or CTC Pal 80 for GasBenchII

Configuration for the LC IsoLink

❖ To configure an LC IsoLink

1. Plug in all Serial COM to USB converters into USB 2.0 or USB 3.0 ports in the computer.

NOTICE

Any USB 2.0 or USB 3.0 connection on the computer can be used with the COM to USB port adapters supplied by Thermo Fisher Scientific (P/N 1228460 and P/N 2159100) under Windows 10.

2. Open the LC IsoLink cover and install the recommended Prolific 4-port Serial COM to USB converter.
3. Connect the LC IsoLink cables to this adapter and connect the USB plug to the computer.



Thermo Fisher Scientific strongly recommends that customers contact their local Service Organization to arrange a certified Thermo Fisher Scientific service representative visit to perform the installation and configuration of all devices.

NOTICE

4. Open the **Device Manager**:

If the PC is not connected to the Internet, an error will appear.

- a. If the PC is connected to the Internet, the Device Manager will automatically detect the Serial COM to USB adapters (see [Figure 5-1](#)):
 - The 4-port Serial COM to USB converter is identified in the Device Manager as **Prolific USB-to-Serial Comm Port** (COM 3,4,5,6).
 - The Single port COM to USB converter is identified in the Device Manager as **USB Serial Port** (COM 7)

Use the Device Manager, as described above in this chapter, to make the following changes (see [Table 5-2](#) and [Table 5-3](#)):

- a. Change COM3 to COM12 (Port_#0001.Hub_#0002)
- b. Change COM6 to COM16 (Port_#0004.Hub_#0002)
- c. Change COM4 to COM5 (Port_#0002.Hub_#0002)

Tip Ignore the message that two ports have now the same port number. This will be fixed in the next steps.

- d. Change COM 5 to COM 6 (Port_#0003.Hub_#0002).

Tip Because only the two central ports can be physically used by the LC IsoLink and controlled by the Isodat software, those need to be configured as shown in [Table 5-3](#) (Port 2 and Port 3).

Table 5-3. COM port settings for LC IsoLink

Default COM ports and hubs		Correctly set COM ports after changes were made
COM3	Port_#0001.Hub_#0002	COM12
COM4	Port_#0002.Hub_#0002	COM5
COM5	Port_#0003.Hub_#0002	COM6
COM6	Port_#0004.Hub_#0002	COM16

5. Restart Windows for changes to take effect.

All COM port changes made in the Device Manager require a Windows restart to ensure correct display of current settings in the Device Manager and correct communication with Isodat devices.

6. After the Windows restart, open the **Device Manager** again. To verify a correct configuration, the Device Manager must show the COM port assignments as shown in [Figure 5-3](#) for the 4-port Serial Com to USB adapter. The Single Serial COM to USB adapter must be set to COM 7.
 - a. For each COM port, open **Properties** > **General** to check the correct location numbers as given in [Table 5-3](#).
 - b. For each COM port, open **Properties** > **Port Settings** to check the correct COM number as given in [Table 5-3](#).

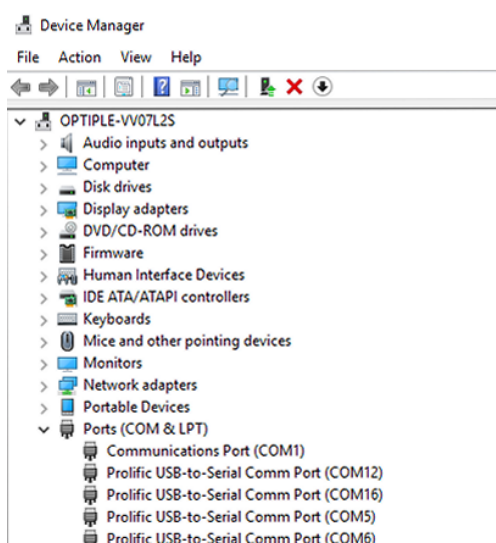


Figure 5-3. New COM port assignment for 4-port serial COM to USB converter

7. Restart Windows for changes to take effect.

All COM port changes made in the Device Manager require a Windows restart to ensure correct display of current settings in the Device Manager and correct communication with Isodat devices.

Isodat Configuration of the COM Port Connections

In Isodat, the same COM port assignments must be used as set in the Windows Device Manager.

❖ **To specify correct COM port settings for LC IsoLink**

1. Open Isodat **Configurator**.
2. Open **Advanced mode**.
3. Go to **Devices**.
4. Open the Isodat Device object, here: **LC IsoLink Dionex Interface**.

NOTICE

LC IsoLink Dionex Interface is supported under Windows 10 (32 bit and 64 bit). In general, it is also possible to change the other Device objects (i.e. LC Interface, LC interface Node) using the same procedure as described here for the LC IsoLink.

5. Right mouse click on the device.
6. Enable **Edit Mode**. On the right hand side a window will open, where all device objects will be visible.
7. Change all acid pump objects from COM3 to COM5, see [Figure 5-5](#):
 - a. Right mouse click on each object (here: Acid Flow, ChangeAcidFlowRate, AcidPump, AcidPump blocked, and GetDeviceSoftwareVersion).
 - b. Open the Comport Extended drop down and change the port.

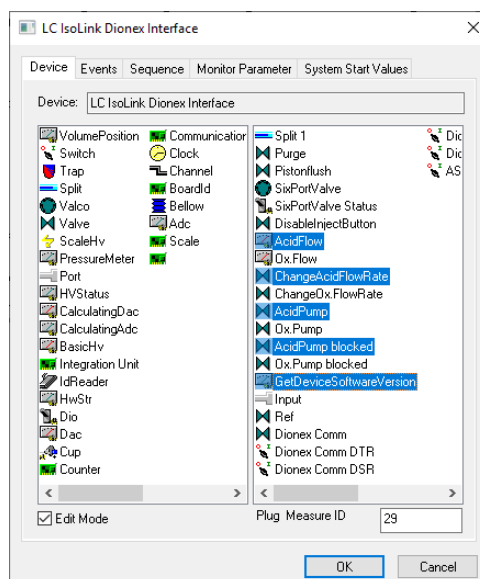


Figure 5-4. LC IsoLink Dionex Interface dialog: change acid pump COM ports

- c. Change the COM port for the Acid Pump and the device software version read out control. All device objects highlighted in blue color in Figure 5-4 must be set to COM5.
8. Change the oxidation pump related objects from COM4 to COM6, see Figure 5-5.
 - a. Right mouse click individually on each object (here Ox. Flow, ChangeOx.Flow, Ox.Pump, Ox. Pump blocked).
 - b. Open the Comport Extended drop down and change the port.

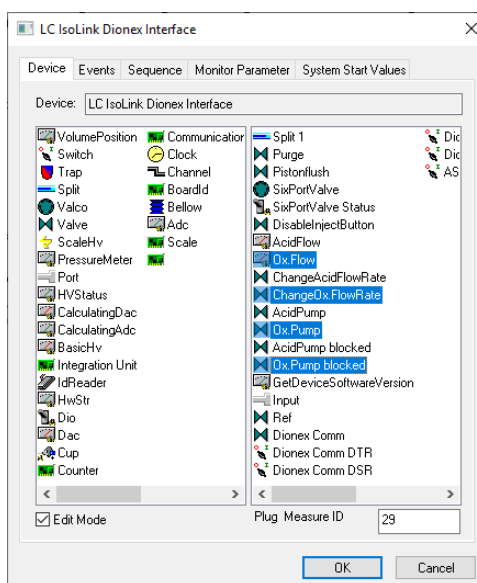


Figure 5-5. LC IsoLink Dionex Interface dialog: change oxidation pump COM ports

- c. Change the COM port for the Oxidation Pump. All device objects highlighted in blue color Figure 5-5 must be set to COM6.

NOTICE

Restart Windows for changes to take effect. All changes made in the Device Manager require a Windows restart to ensure correct communication with Isodat devices.

NOTICE

If you have an LC device connected, the respective COM ports must be changed to COM 5 and COM 6 (LC IsoLink Interface, LC IsoLink Node, LC IsoLink Dionex Interface).

9. Open Isodat **Acquisition**. The application needs some time to start.

If an invalid object appears on the pumps, this indicates that the COM port settings are incorrect. Check that all COM port settings in the Windows Device Manager and in Isodat are configured correctly. Do not forget to restart Windows again and double check the settings are applied correctly.

Isodat Configuration of other COM Port Devices

For any additional peripheral devices (e.g., EA IsoLink™, AI 1310™ EA autosampler, AI 1310™ GC Autosampler, GasBench II™ CTC Pal 80, Purification Trap for Kiel IV), the COM Ports have to be configured as listed in [Table 5-1](#).

- EA IsoLink™
- CTC Pal 80 Autosampler for GasBench II™,
- AI 1310 autosampler for GC and EA
- Purification Trap Controller for the Kiel IV Carbonate Device.

The changes of the specific COM port settings for any peripheral device can be done following the same general procedure as described for the LC IsoLink, see “[Changing COM Port Settings in the Windows 10 Device Manager](#)” on [page 5-3](#). In the following only the general steps are listed with references to the detailed steps outlined in the above example for the LC IsoLink.

❖ **General procedure for the configuration of a Single Serial COM port to USB converter and for the Serial COM Port built into the PC**

1. Change the COM port in the device manager, see “[To change COM port settings](#)” on [page 5-3](#).
2. Change the COM port in the Isodat **Configurator** of the specific device. Use the same procedure as in “[To specify correct COM port settings for LC IsoLink](#)” on [page 5-8](#).
 - a. CTC Pal 80 (AS200s Mode). In the Isodat **Configurator**, change the AS200S device to the connected COM port number.
 - b. EA IsoLink. In the Isodat **Configurator**, change the EA IsoLink device to the connected COM port. If the EA is connected, you can simply check using the **GET device** button if the EA is communication works properly. Implement [step 1](#) first.
 - c. AI 1310 for EA IsoLink. In the Isodat **Configurator**, change the EA IsoLink device with the AI 1310 to the specific COM port. If the AI 1310 is connected, you can simply check with a **GET device** button if the EA and the AI 1310 communications are working properly. Implement [step 1](#) first. If the AI 1310 is not connected properly an error message will appear, even though the EA is connected correctly.
 - d. Purification Trap Controller for the Kiel IV Carbonate Device. In the Isodat **Configurator**, change the Purification Trap device to the specific COM port number.

NOTICE

For the Purification Trap Controller for the Kiel IV Carbonate Device it is important to change the COM port specific <**Stop bits setting**> for the used COM port. This can be accessed using the Device Manager in the Properties of the COM Port.

Change stop bits from '1' to '2', see [Figure 5-6](#). Change the COM port number of the controller communication using the Controller Software.

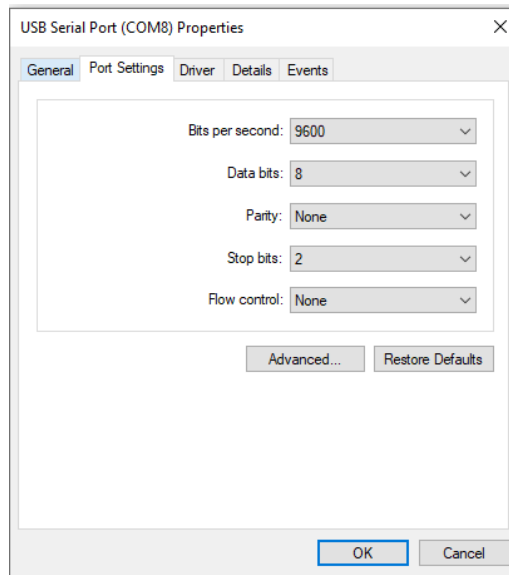


Figure 5-6. Port settings Purification Trap Controller

Configuration of Serial COM Ports for Thermo Fisher Scientific IRMS Devices

Isodat Configuration of the COM Port Connections

