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# Analyst<sup>®</sup> Device Driver 1.3

Release Notes



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# Contents

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<b>1 Analyst® Device Driver</b> .....	<b>4</b>
Introduction.....	4
Contact Us.....	5
Technical Support.....	5
Software Documentation.....	5
New Features and Changes from Version 1.2 to Version 1.3.....	7
Notes on Use.....	8
Operating System Requirements.....	9
Supported Computer Models.....	9
Install the Analyst® Device Driver.....	10
Remove the Analyst® Device Driver.....	12
Minimum Required Firmware Versions.....	12
Known Issues.....	15

## Introduction

**READ THIS IMPORTANT NOTICE:** This version of the Analyst® Device Driver replaces all previous versions of the Analyst® Device Driver and includes multiple high priority defect resolutions. Previous versions are no longer supported and customers are encouraged to update to version 1.3. For more information about the specific defect resolutions, refer to the *New Features and Changes* sections for the version of the software currently installed.

To view information about the previous software releases, refer to the *Release Notes* that came with that version of the software.

In this guide, the term Analyst® software refers to both the Analyst® and the Analyst® TF software.

The Analyst® Device Driver is an HPLC device control application for the Analyst® software. It controls SCIEX-supported Agilent LC devices and SCIEX-supported CTC PAL3 devices.

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**Note:** The Analyst® Device Driver supports SCIEX-supported Agilent LC devices and SCIEX-supported CTC PAL3 devices. For Agilent LC devices, however, it is intended for use with Agilent 1260, 1290, and future series devices. If the Agilent devices are currently controlled through the Hardware Configuration Editor, then continue doing so unless newer Agilent (Infinity II) devices are used in the same methods. Methods created previously without the Analyst® Device Driver must be updated or created again to add support for the Analyst® Device Driver-controlled devices.

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This document provides information about and procedures for installing the Analyst® Device Driver. This document also describes the known issues in the Analyst® Device Driver.

To make sure that the installation is successful, read the [Install the Analyst® Device Driver](#). For information about installing the Analyst® 1.6.3 or higher versions of the Analyst® software, refer to the Analyst® *Software Installation Guide* for that version of the software. For information about installing the Analyst® TF 1.7.1 software with Components for NanoCell, refer to the *Analyst® TF 1.7.1 Software with Components for NanoCell Release Notes*.

**Note:** The Analyst® Device Driver is designed to interface the Analyst® software with the Agilent Instrument Control Framework, a new method to control CTC PAL3 and newer Agilent devices. Most of the user interface shown within the Analyst® Device Driver, as well as user workflows, are provided by Agilent and CTC. These interfaces and workflows are described in the documentation that is provided with the Agilent and CTC devices. Familiarize yourself with these documents before using the Analyst® Device Driver to avoid confusion or configuration issues. The Agilent documentation might refer to the use of Chemstation. Analyst® Device Driver can be substituted for Chemstation within these instructions.

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## Contact Us

### SCIEX Support

- [sciex.com/contact-us](https://sciex.com/contact-us)
- [sciex.com/request-support](https://sciex.com/request-support)

### Customer Training

- In North America: [NA.CustomerTraining@sciex.com](mailto:NA.CustomerTraining@sciex.com)
- In Europe: [Europe.CustomerTraining@sciex.com](mailto:Europe.CustomerTraining@sciex.com)
- Outside the EU and North America, visit [sciex.com/education](https://sciex.com/education) for contact information.

### Online Learning Center

- [SCIEXUniversity](#)

### CyberSecurity

For the latest guidance on cybersecurity for SCIEX products, visit [sciex.com/productsecurity](https://sciex.com/productsecurity).

### Technical Support

SCIEX and its representatives maintain a staff of fully-trained service and technical specialists located throughout the world. They can answer questions about the system or any technical issues that might arise. For more information, visit the website at [sciex.com](https://sciex.com).

### Software Documentation

The Analyst® Device Driver software documentation is automatically installed with the software and can be found in the following locations:

## Analyst® Device Driver

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- **Start menu:** **All Programs > AB SCIEX > Analyst Device Driver** (Microsoft Windows 7, 32-bit operating system or Microsoft Windows 7, 64-bit operating system)
- **Start menu:** **AB SCIEX** (Microsoft Windows 10, 64-bit operating system)
- **Application folder:** C:\Program Files\AB SCIEX\AnalystDeviceDriver\Help (Microsoft Windows 7, 32-bit operating systems)
- **Application folder:** C:\Program Files (x86)\AB SCIEX\AnalystDeviceDriver\Help (Microsoft Windows 7, 64-bit operating system or Microsoft Windows 10, 64-bit operating system)

The following documents are created by the first installation of the Analyst® Device Driver:

- Analyst® Device Driver *Release Notes*
- Analyst® Device Driver *Tutorial*

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**Note:** If the existing Analyst® Device Driver software is upgraded, then the previous versions of these two documents are replaced.

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## New Features and Changes from Version 1.2 to Version 1.3

The Analyst® Device Driver (ADD) 1.3 adds support for the Analyst® 1.7 software with HotFix 2 installed, and for Analyst® TF 1.7.1 with Components for NanoCell. It also includes three updated drivers (Agilent ICF A.02.05, LC drivers A.02.18, and CTC PAL3 driver 1.1.0.11), as well as fixes to some issues.

More information has been added to the Detailed Status for the ADD. Device parameters are now available in the Detailed Status window. Additionally, error descriptions are also shown should one occur. The Detailed Status window for the ADD can be shown by double-clicking the Analyst® software status icon for Software Application Status at the right bottom corner of Analyst® software window.

More detailed error descriptions have been added to the Sample Details dialog in the case of an ADD error.

Rack and plate validation has been added for Agilent and PAL3 autosamplers.

ADD logging is now set to On by default. The log is stored at C:\ProgramData\AB SCIEX\AnalystDeviceDriver\Log.

### Fixed Issues

- **Unable to create and save a method in sub-projects**

When the active project in the Analyst® software is a sub-project, users are unable to create and save a method in the ADD. (AN-1246)
- **Long purging time might cause an ADD error**

When the purging time is long, such as when using an Agilent Infinity II Multisampler with the dual-needle option, the ADD might issue a Time Out error that will stop the queue and cause an error on the device status icon in the Analyst® software. (AN-1221)
- **ADD does not recover after losing connection with Analyst® Service**

If the Analyst® Service is stopped unexpectedly and then restarted, deactivating and then activating the hardware profile might look normal but no sample can be acquired. This is caused by the ADD losing connection with the Analyst® Service. However, restarting the ADD does not re-establish the connection with Analyst® software. (AN-1398)
- **Starting the ADD client does not always automatically start the ADD service**

Occasionally, after the ADD service is unexpectedly stopped, restarting the ADD client does not automatically start the ADD service, and there is no indication to the user what the issue is. Now a message has been added that instructs the user to manually start the ADD service or restart the computer. (AN-1384)
- **When using the ADD, the pump pressure trace might be incorrectly shown when two or more pumps are being used**

In the ADD, the pump pressure trace shown will be incorrect when using two or more pumps with different sampling rates. There is no issue when there is only one pump. (AN-1374)

- **Activating a hardware profile on a disconnected HPLC system used through the ADD might show the incorrect status**

When an HPLC system controlled through the ADD is disconnected while the hardware profile is active, then deactivating and then activating the hardware profile will incorrectly show the devices being successfully activated. (AN-1354)

- **The ADD service has a memory leak when using CTC-PAL3 methods**

When running a long batch using the ADD, a memory leak on the ADD service might be observed. The memory leak can cause batch failures or sample stall. This issue is fixed by installing the latest CTC PAL3 driver. (AN-1301)

- **ADD methods might not be saved in a network path**

In certain circumstances, when trying to save an ADD method to a network path, the method might be saved to the local Analyst Data folder instead. (AN-1401)

- **The ADD status is stuck in Run when there is no sync cable between the Agilent LC pump and the CTC-PAL3 autosampler**

When there is no connection between the Agilent HPLC pump and the CTC-PAL3 autosampler (in the event of a missing sync cable), the ADD status will be stuck in Run status during sample acquisition. The fix adds a timeout period after which the sample run will be aborted and the pump will be stopped. (AN-1387)

- **An invalid CTC-PAL3 method can be saved**

An acquisition method that includes a CTC-PAL3 method with invalid parameters or invalid script parameters can be saved. (AN-1386)

- **The batch aborted after the first sample when using a CTC-PAL3 with two or more Agilent devices**

When using a CTC-PAL3 autosampler with two or more Agilent devices such as two Agilent pumps, or an Agilent column oven along with one or two Agilent pumps, the batch will be aborted after the first sample. (AN-1381)

- **The ADD status in the Analyst® software status icon shows Waiting until a sample starts running**

In the Analyst® software, when changing the instrument status from Standby to Ready, the ADD status always shows Waiting, until a sample acquisition starts. (AN-1346)

## Notes on Use

- When using an Agilent autosampler for batch acquisition, the five vial positions (20001-20005) for washing are not available in the Batch Editor for any plate that is not #VialGenPlateC or #VialGenPlateR. (AN-1406)
- During sample equilibration or prerun using an acquisition method containing the Analyst® Device Driver (ADD), do not click the Abort button on the Tools bar. If the Abort button is clicked, then the Analyst® software remains in the prerun state. To fix the issue, restart the computer. (AN-1397)



- If the LC devices include a CTC PAL3 autosampler, then during configuration, make sure to add the CTC PAL3 first before adding any other device in ADD. Otherwise, an LC status error might be encountered after equilibration. (AN-1230)
- Hardware configurations that include an Agilent Infinity II Multisampler with dual-needle option require additional time for purging before the autosampler goes to Ready status. Although increasing the flow rate but keeping the same gradient for the equilibration method can reduce the purging time, this is not recommended. This could cause a high pressure at the column or an overpressure error. (AN-1042)
- For the CTC PAL3 Peltier Stack, the Standby Temperature can only be set through the hand-held device. Refer to the PAL3 User Manual for additional information.

## Operating System Requirements

The Analyst® Device Driver requires one of the following operating systems:

- Microsoft Windows 7 SP1 (32-bit)
- Microsoft Windows 7 SP1 (64-bit)
- Microsoft Windows 10 (64-bit)

## Supported Computer Models

The Analyst® Device Driver is supported on the following computers:

Analyst® software

- Dell Optiplex 9010
- Dell Optiplex XE2

Analyst® TF software

- Dell Precision T3600
- Dell Precision T5810
- Dell Optiplex 9010
- Dell Optiplex XE2

## Install the Analyst® Device Driver

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**Note:** To retain any custom plates created in previous versions of the Analyst® Device Driver, create a backup of the sample database before removing or upgrading the existing version of the Analyst® Device Driver. Refer to [Remove the Analyst® Device Driver](#). Information on how to create custom plates is described in the *Analyst® Device Driver 1.3 Tutorial*.

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The Analyst® Device Driver version 1.3 can be installed directly over versions 1.0, 1.1, or 1.2. Make sure to deactivate the hardware profile before installing version 1.3. When version 1.3 is installed over the Analyst® 1.7 with HotFix 1, it automatically installs a patch for Analyst® 1.7 with HotFix 1 to allow version 1.3 to be used. When version 1.3 is installed over the Analyst® TF 1.7.1 Software with Components for NanoCell, it automatically installs a patch for Analyst® TF 1.7.1 with Components for NanoCell to allow version 1.3 to be used.

**Make sure that the Analyst® Device Driver 1.3 is installed after the required version of the Analyst® software is installed.**

### Prerequisites

- The user has Administrator privileges on the workstation.
- The Analyst® 1.6.3 or a higher version of the software or the Analyst® TF 1.7.1 Software with Components for NanoCell must be installed on workstations where the Analyst® Device Driver is to be installed.
- The hardware profile is deactivated.
- .NET framework version 4.0 is installed.

**Note:** The ADD 1.3 cannot be installed over the Analyst® TF 1.7.1 software or the Analyst TF 1.7.1 with Components for LC Devices.

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1. Read these release notes.
2. Make sure that the Prerequisites are satisfied.
3. Make sure that the user installing the Analyst® Device Driver has the same Administrator privileges as the user who installed the Analyst® software.
4. Download the Analyst® Device Driver web download package (*AnalystDeviceDriver1-3.zip*) on the system from [sciex.com/software-support/software-downloads](http://sciex.com/software-support/software-downloads).
5. Extract the files from the compressed package to the local hard drive.
  - a. Right-click the downloaded file *AnalystDeviceDriver1-3.zip*, and then select the **Extract All** option.
  - b. Select an accessible folder on the local computer to extract the zipped files.

**Note:** This will make sure that all of the files are properly extracted.

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6. Navigate to the folder where the contents of the *AnalystDeviceDriver1-3.zip* file were extracted.
7. Double-click **setup.exe**.

The Installation Wizard opens.

8. Follow the instructions provided in the wizard.

The ADD 1.3 will install the following third party drivers on the computer:

- PAL3 RC.NET Driver for Sciex (v. 1.1.0.11)
- Agilent Instrument Control Framework A.02.05
- Agilent Instrument Control Framework - LC Drivers A.02.18

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**Note:** If any earlier version of above packages is installed, then that version will be silently removed by the installer and the newer versions will be installed.

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When ADD 1.3 is installed over the Analyst® 1.6.3 software, the installer also installs the Analyst® 1.6.3 Patch for ADD 1.3. The following files in the Analyst\Bin folder are replaced:

- AutosamplerDatabase.dll
- AutosamplerSelect.dll
- AutosamplerViewer.ocx
- DD\_VendorApp.dll
- RackBuilder.exe

When ADD 1.3 is installed over the Analyst® 1.7 with HotFix 1, the installer also installs the Analyst® 1.7 Patch for ADD 1.3. The following files in the Analyst\Bin folder are replaced:

- AutosamplerSelect.dll
- DD\_VendorApp.dll
- VendorAppMethodSvr.dll

When ADD 1.3 is installed over the Analyst® TF 1.7.1 with Components for NanoCell, the installer also installs the Analyst® TF 1.7.1 with Components for NanoCell Patch for ADD 1.3. The following files in the Analyst\Bin folder are replaced:

- AutosamplerSelect.dll
- DD\_VendorApp.dll
- VendorAppMethodSvr.dll

## Remove the Analyst® Device Driver

1. Deactivate the hardware profile containing the Analyst® Device Driver (ADD) software application in the Analyst® software.
2. Using the Programs and Features utility in the Control Panel, select the Analyst® Device Driver and then click **Uninstall**.

The uninstall wizard starts.

3. Follow the instructions on the screen.

The Analyst® Device Driver is removed.

During the installation of the ADD version 1.3, the database (AutosamplerDB\_Multisampler.adb) is merged with the existing autosampler databases (AutosamplerDB.adb and AutosamplerDBServer.adb). When version 1.3 is removed, the original databases are reverted to the previous version.

## Minimum Required Firmware Versions

In the previous documentation for the Analyst® software, guidance was given regarding supported firmware versions for Agilent and CTC PAL3 devices. With the release of the Analyst® Device Driver, this practice has been discontinued. When controlling devices through the Analyst® Device Driver, communication with the devices themselves is handled through the Agilent Instrument Control Framework (ICF). As a result, the Analyst® software no longer communicates directly with the device and the required revision of the firmware is no longer governed through the Analyst® software, but rather by the ICF itself.

The Agilent LC Drivers require a minimum firmware to control an Agilent LC module. The information for the minimum firmware, per LC Driver version, is described in the ICF and LC Driver release notes, distributed with the Analyst® Device Driver (Agilent Control Framework Release Information A.02.05.pdf, LC Driver Release Note A0218.pdf). The Analyst® Device Driver has no minimum restrictions on its own.

Agilent releases LC firmware in <firmware sets> for the modules, which are tested for interoperability. These firmware packages and their support statements are available on the Agilent Firmware download page: <https://www.agilent.com/en-us/firmwareDownload?whid=69761>. To upgrade the firmware for the LC stack, use a firmware from the same <firmware sets> as the original firmware on the LC stack.

	Autosampler	Pump	Oven	Detector	Controller	Valve
<b>CTC PAL</b>						
CTC PAL3 RSI	2.4.17310.1610	N/A	N/A	N/A	N/A	N/A
CTC PAL3 RTC	2.4.17310.1610	N/A	N/A	N/A	N/A	N/A
CTC PAL-xt	4.1.3	N/A	N/A	N/A	N/A	N/A
<b>Agilent</b>						

	<b>Autosampler</b>	<b>Pump</b>	<b>Oven</b>	<b>Detector</b>	<b>Controller</b>	<b>Valve</b>
Agilent 1260 Infinity II Bio-Inert Multisampler G5668A	D.07.21	N/A	N/A	N/A	N/A	N/A
Agilent 1260 Infinity II Bio-Inert Quaternary G5654A	D.07.22	N/A	N/A	N/A	N/A	N/A
Agilent 1260 Infinity Multisampler G7167A	D.07.16	N/A	N/A	N/A	N/A	N/A
Agilent 1260 Infinity II Viialsampler G7129A	D.07.12	N/A	N/A	N/A	N/A	N/A
Agilent 1290 Infinity II Multisampler G7167B	D.07.20	N/A	N/A	N/A	N/A	N/A
Agilent 1290 Infinity II High Speed pump G7120A	N/A	B.07.10	N/A	N/A	N/A	N/A
Agilent 1290 Infinity II Flexible pump G7104A	N/A	B.07.20	N/A	N/A	N/A	N/A
Agilent 1260 Inf II Quaternary Pump G7111B	N/A	D.07.14	N/A	N/A	N/A	N/A
Agilent 1200 Pump G1312B	N/A	A.07.01	N/A	N/A	N/A	N/A

## Analyst® Device Driver

	Autosampler	Pump	Oven	Detector	Controller	Valve
Agilent 1290 Inf II Column Oven G7116B <sup>1</sup>	N/A	N/A	C.07.10	N/A	N/A	N/A
Agilent 1260 Infinity II Column Oven G7116A <sup>1</sup>	N/A	N/A	C.07.10	N/A	N/A	N/A
Agilent Oven G1316C	N/A	N/A	A.07.01	N/A	N/A	N/A
Agilent 1290 Infinity II DAD Detector G7117B	N/A	N/A	N/A	D.07.20	N/A	N/A
Agilent 1260 Infinty II DAD Detector G7117C	N/A	N/A	N/A	D.07.20	N/A	N/A
Agilent DAD Detector G4212A	N/A	N/A	N/A	B.07.10	N/A	N/A
Agilent DAD Detector G1315B	N/A	N/A	N/A	A.07.02	N/A	N/A
Agilent 1290 Infinity Valve G1170A <sup>1</sup>	N/A	N/A	N/A	N/A	N/A	D.07.22
<b>ExionLC™ System</b>						
ExionLC™ AC Pump	N/A	2.04/3.11	N/A	N/A	N/A	N/A
ExionLC™ AD Pump	N/A	3.11	N/A	N/A	N/A	N/A
ExionLC™ AC Autosampler	1.28	N/A	N/A	N/A	N/A	N/A

<sup>1</sup> The InfinityLAB Quick Change Valves (G4239C, G4231A, G4237A, G4231C, G4232D) equipped with the new RFID tag have been tested by Agilent in conjunction with these devices. These tests are representative for all Agilent InfinityLAB Quick Change Valves.

	Autosampler	Pump	Oven	Detector	Controller	Valve
ExionLC™ AC Oven	N/A	N/A	2.03/3.11	N/A	N/A	N/A
ExionLC™ PDA	N/A	N/A	N/A	3.11	N/A	N/A
ExionLC™ Controller	N/A	N/A	N/A	N/A	3.30/3.20	N/A
<b>Shimadzu</b>						
Shimadzu LC30AD	3.11	N/A	N/A	N/A	N/A	N/A
Shimadzu LC20ADXR	2.04	N/A	N/A	N/A	N/A	N/A
Shimadzu Controller CBM-20A	N/A	N/A	N/A	N/A	3.11	N/A

## Known Issues

### The Analyst® Device Drivers (ADD) devices might need to be configured twice

When an error is detected during acquisition using the ADD, deactivating and then activating the hardware profile might not clear the error. The ADD might need to be configured again. However, clearing the devices and then auto-configuring the devices in the ADD Configure dialog might not list any of the devices. Use the following procedure to clear the error: (AN-1400)

1. On the LC Device Configuration dialog, click **Clear**.
2. Click **Auto Configure**.
3. Click **OK**.
4. Click **Configure** to open the LC Device Configuration dialog and then select the appropriate device category.
5. Click **Auto Configure**.
6. Click **OK**.

### AAO Sync might not function when the hardware profile is configured with two AAO drivers

If the hardware profile is configured with two AAO drivers, such as a Shimadzu AAO driver and the ADD, then the AAO Sync might not work for acquisition. To avoid any issues, connect an LC Sync cable from the autosampler to the mass spectrometer and then use the LC Sync option in the software. (AN-1243)

### The CTC PAL3 driver is not compatible with the equilibration function in the Analyst® software

## **Analyst® Device Driver**

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When equilibrating the system using a method containing a CTC PAL3 device in the Analyst® software, the ADD might stop responding. To avoid this issue, equilibrate the system using a method that does not include a CTC PAL3 device. (AN-1222)