# Analyst Device Driver Software Release Notes

## Introduction

**READ THIS IMPORTANT NOTICE**: **This version of the Analyst Device Driver (ADD) software replaces all previous versions of the ADD software 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.**

The ADD software allows the mass spectrometer control software to control SCIEX-supported Agilent LC devices and SCIEX-supported CTC PAL3 devices. After installation, ADD is available in the **Companion Software** list in the Navigation bar of the control software.

**Note:** In this guide, the term control software refers to the Analyst, Analyst MD, and Analyst TF software.

**Note:** The ADD software supports SCIEX-supported Agilent LC and 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 ADD software must be updated or created again to add support for the ADD-controlled devices.

This document provides information about and procedures for installing the ADD 1.3 software. This document also describes the known issues in the ADD 1.3 software.

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

To make sure that the installation is successful, read the section: Install the ADD Software. For information about installing the control software, refer to the control software document: *Software Installation Guide*.

**Note:** The ADD software is designed to interface the control software with the Agilent Instrument Control Framework, a new method to control CTC PAL3 and newer Agilent devices. Most of the user interfaces shown within the ADD software, 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. To avoid confusion or configuration issues, familiarize yourself with these documents before using the ADD software. The instructions in the Agilent documentation might refer to Chemstation. ADD software can be substituted for Chemstation in these instructions.

## Software Documentation

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

- **Start menu**

    - Windows 7, 32-bit operating system or Windows 7, 64-bit operating system: **All Programs** > **AB SCIEX** > **Analyst Device Driver**

    - Windows 10, 64-bit operating system: **AB SCIEX**

- **Application folder**

    - Windows 7, 32-bit operating systems: `C:\Program Files\AB SCIEX\AnalystDeviceDriver\Help`

    - Windows 7, 64-bit operating system or Windows 10, 64-bit operating system: `C:\Program Files (x86)\AB SCIEX\AnalystDeviceDriver\Help`

The following documents are created by the first installation of the ADD software:

- *Analyst Device Driver Software Release Notes*

- *Analyst Device Driver Software Tutorial*

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

# New in Version 1.3

This section describes the enhancements and fixes in the ADD 1.3 software. To view the enhancements and fixes for the previous releases of the ADD software, refer to the document: *Release Notes* that came with that version of the software.

## New Features and Changes in Version 1.3

- Support has been added for new software versions, including the following:

- Analyst 1.7 software with HotFix 2

- Analyst 1.7.2 software

- Analyst 1.7.3 software

- Analyst TF 1.7.1 with Components for NanoCell

- Analyst TF 1.8 software

- Analyst TF 1.8.1 software

- Analyst MD version 1.7.3

- Support has been added for these updated drivers:

  - Agilent ICF A.02.05

  - LC drivers A.02.18

  - CTC PAL3 driver 1.1.0.11

- Some issues have been fixed.

- More information is shown for the ADD software in the Detailed Status window. Device parameters are now available in the Detailed Status window. Error descriptions are also shown if an error occurs. To open the Detailed Status window for the ADD software, double-click the Application Status icon at the bottom right corner of control software window.

- When a ADD software error occurs, more detailed error descriptions are available in the Sample Details dialog.

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

- ADD software logging is now set to **On** by default. The log file is stored in `C:\ProgramData\AB SCIEX\AnalystDeviceDriver\Log`.

# Fixed Issues in Version 1.3

**Users could not create and save a method in sub-projects**

When the active project in the control software is a sub-project, users were unable to create and save a method in the ADD software. (AN-1246)

**A long purging time might cause an ADD error**

When the purging time was long, such as when an Agilent Infinity II Multisampler was being used with the dual-needle option, the ADD software might issue a Time Out error that stopped the queue and caused the device status icon in the control software to report an error. (AN-1221)

**The ADD software did not recover after losing connection with the AnalystService**

If the AnalystService stopped unexpectedly and was then restarted, deactivation and then activation of the hardware profile seemed to complete normally, but no sample could be acquired. This issue occurred when the ADD software lost its connection to the AnalystService. Restarting the ADD software did not re-establish the connection with the control software. (AN-1398)

**Starting the ADD client did not always automatically start the ADD service**

Occasionally, after the ADD service was unexpectedly stopped, restarting the ADD client did not automatically start the ADD service, and the issue was not reported to the user. Now a message has been added that instructs the user to manually start the ADD service or restart the computer. (AN-1384)

**When the ADD software was being used, the pump pressure trace might be incorrectly shown when two or more pumps were being used**

In the ADD software, the pump pressure trace shown was incorrect if two or more pumps with different sampling rates were being used. This issue did not occur when one pump was being used. (AN-1374)

**Activating a hardware profile on a disconnected LC system used with the ADD software might show the incorrect status**

If an LC system controlled with the ADD software was disconnected while the hardware profile was active, then deactivating and then activating the hardware profile incorrectly showed that the devices were successfully activated. (AN-1354)

**The ADD service had a memory leak when CTC-PAL3 methods were used**

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

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

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

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

When there was no connection between the Agilent LC pump and the CTC-PAL3 autosampler, for example, if a sync cable was missing, the ADD software status was stuck in Run state during

sample acquisition. The fix adds a timeout period after which the sample run is aborted and the pump stopped. (AN-1387)

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

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

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

If a CTC-PAL3 autosampler was used with two or more Agilent devices, such as two Agilent pumps or an Agilent column oven and one or two Agilent pumps, then the batch was aborted after the first sample. (AN-1381)

**The ADD software status in the control software status icon showed Waiting until a sample started running**

In the control software, when the instrument status changed from Standby to Ready, the ADD software status always showed Waiting until sample acquisition started. (AN-1346)

# Requirements

## Operating System Requirements

The Analyst Device Driver (ADD) requires one of the following operating systems:

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

## Computer Requirements

For a list of supported computers, refer to the control software document: *Software Installation Guide*.

## Firmware Requirements

When devices are controlled by the ADD software, communication with the devices themselves is handled by the Agilent Instrument Control Framework (ICF). As a result, the control software no longer communicates directly with the device and the required revision of the firmware is no longer governed by the control software, but rather by the ICF.

The Agilent LC drivers require a minimum firmware version to control an Agilent LC module. Refer to the following table. The ADD software has no minimum restrictions.

**Table 1 Recommended Firmware Version**

| Device | Recommended Firmware |
|---|---|
| Agilent 1100 series, 1200 series, and 1200 Infinity modules | A.07.01 or later |
| Agilent 1200 series, 1200 Infinity, and 1120 Compact LC modules | B.07.20 or later |
| Agilent 1200 Infinity hosted modules | C.07.20 or later |
| Agilent 1260/1290 Infinity II modules | D.07.20 or later |

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 version from the same <firmware sets> as the original firmware on the LC stack.

**Table 2 Firmware Sets**

| Module | Autosampler | Pump | Oven | Detector | Controller | Valve |
|---|---|---|---|---|---|---|
| **CTC PAL** | | | | | | |
| 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 |
| **Agilent** | | | | | | |
| 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 |

**Table 2 Firmware Sets (continued)**

| Module | Autosampler | Pump | Oven | Detector | Controller | Valve |
|---|---|---|---|---|---|---|
| Agilent 1260 Infinity Multisampler G7167A | D.07.16 | N/A | N/A | N/A | N/A | N/A |
| Agilent 1260 Infinity II Vialsampler 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 |
| Agilent 1290 Inf II Column Oven G7116B[1] | N/A | N/A | C.07.10 | N/A | N/A | N/A |

**Table 2 Firmware Sets (continued)**

| Module | Autosampler | Pump | Oven | Detector | Controller | Valve |
|---|---|---|---|---|---|---|
| Agilent 1260 Infinity II Column Oven G7116A[1] | 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[1] | N/A | N/A | N/A | N/A | N/A | D.07.22 |
| **ExionLC System** | | | | | | |
| 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 |

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[1] 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.

**Table 2 Firmware Sets (continued)**

| Module | 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 |
| **Shimadzu** | | | | | | |
| 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 |

# Installation Instructions

## Install the ADD Software

**Note:** To keep any custom plates created in previous versions of the Analyst Device Driver (ADD) software, create a backup of the sample database before removing or upgrading the existing version of the ADD software. Refer to the section: Remove the ADD Software. Information on how to create custom plates is described in the document: *Analyst Device Driver Software Tutorial*.

The ADD 1.3 software can be installed 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 or Analyst TF 1.7.1 with Components for NanoCell , it automatically installs a patch that is required to complete the installation of the ADD 1.3 software.

| Prerequisites |
| --- |
| • The user has Administrator privileges on the workstation.<br><br>• A supported version of the control software is installed on the computer on which the ADD software will be installed:<br><br>  • Analyst 1.6.3 software, or later<br><br>  • Analyst MD 1.7.3 software, or later<br><br>  • Analyst TF 1.7.1 software with Components for NanoCell, or later<br><br>• The hardware profile is deactivated.<br><br>• .NET Framework version 4.0 is installed. |

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

1. Read these release notes.

2. Make sure that the prerequisites are satisfied.

3. Make sure that the user installing the ADD has the same Administrator privileges as the user who installed the control software.

4. Download the ADD software web download package (`AnalystDeviceDriver1-3.zip`) from sciex.com/software-support/software-downloads to the computer.

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.

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 on-screen instructions.

   The ADD 1.3 software 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

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

When the ADD 1.3 software 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 the ADD 1.3 software 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 the ADD 1.3 software 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 ADD Software

1. In the control software, deactivate the hardware profile containing the Analyst Device Driver (ADD) software application.

2. In Programs and Features in Control Panel, select the ADD software and then click **Uninstall**.
   The uninstall wizard starts.

3. Follow the on-screen instructions.

The ADD software is removed.

During the installation of the ADD 1.3 software, 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.

# Notes on Use and Known Issues

**Note:** The numbers in parentheses are reference numbers for each issue or feature in the SCIEX internal tracking system.

## 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) software, 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.

## Known Issues

**The Analyst Device Driver (ADD) Software devices might need to be configured twice.**

When an error is detected during acquisition using the ADD software, deactivating and then activating the hardware profile might not clear the error. The ADD software 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 ADD software**

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

# Contact Us

## Customer Training

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*   Outside the EU and North America, visit sciex.com/education for contact information.

## Online Learning Center

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## SCIEX 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 SCIEX website at sciex.com or contact us in one of the following ways:

*   sciex.com/contact-us

- sciex.com/request-support

# CyberSecurity

For the latest guidance on cybersecurity for SCIEX products, visit sciex.com/productsecurity.

# Documentation

This version of the document supercedes all previous versions of this document.

To view this document electronically, Adobe Acrobat Reader is required. To download the latest version, go to https://get.adobe.com/reader.

To find software product documentation, refer to the release notes or software installation guide that comes with the software.

To find hardware product documentation, refer to the *Customer Reference* DVD that comes with the system or component.

The latest versions of the documentation are available on the SCIEX website, at sciex.com/customer-documents.

**Note:** To request a free, printed version of this document, contact sciex.com/contact-us.

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