Analyst Device Driver Software

Release Notes

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Introduction 1

The Analyst Device Driver (ADD) software lets the mass spectrometer control software control SCIEX-supported Agilent LC devices and SCIEX-supported CTC PAL3 devices. After installation, the ADD software 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.

Table 1-1 Supported CTC PAL3 and Agilent Infinity II Modules in the ADD Software Version 1.4

LC Device	Module
CTC PAL3 Autosamplers	• CTC PAL3 RSI • CTC PAL3 RTC
Agilent Infinity II Pumps	• Agilent 1260 Infinity II Isocratic Pump G7110B • Agilent 1260 Infinity II Binary Pump G7112B • Agilent 1260 Infinity II Quaternary Pump G7111B • Agilent 1260 Infinity II Bio-Inert Quaternary Pump G5654A • 1290 Infinity II High Speed Pump G7120A • 1290 Infinity II Flexible Pump G7104A
Agilent Infinity II Multisamplers and Vialsamplers	• Agilent 1260 Infinity II Vialsampler G7129A • Agilent 1260 Infinity II Multisampler G7167A • Agilent 1290 Infinity II Multisampler G7167B • Agilent 1260 Infinity II Bio-Inert Multisampler G5668A
Agilent Infinity II Column Ovens	• Agilent 1260 Infinity II Multicolumn Thermostat G7116A • Agilent 1290 Infinity II Multicolumn Thermostat G7116B

Table 1-1 Supported CTC PAL3 and Agilent Infinity II Modules in the ADD Software Version 1.4 (continued)

LC Device	Module
Agilent Infinity II Detectors	• Agilent 1290 Infinity II Diode Array Detector G7117B
	• Agilent 1260 Infinity II Diode Array Detector G7117C

Note: The ADD software supports SCIEX-supported Agilent LC and CTC PAL3 devices. For Agilent LC devices, the ADD software is intended for use with Agilent 1260 and 1290 Infinity II devices. If the Agilent 1100, 1200, 1260 Infinity, and 1290 Infinity series devices are currently controlled through the Hardware Configuration Editor, then continue to do 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 software version 1.4. This document also describes the known issues in the ADD software version 1.4.

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

The ADD software version 1.4 is supported only on Windows 10, 64-bit (in WOW64 mode), and only with the installation of Analyst software version 1.7.3, Analyst MD software version 1.7.3, Analyst TF software version 1.8.1, or a later version of the control 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 (ICF), a new method to control CTC PAL3 and Agilent devices. Most of the user interfaces shown in 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 prevent confusion or configuration issues, become familiar 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 ADD software documentation is automatically installed with the software and can be found in the following locations:

• In the **Start** menu, click **SCIEX ADD**.

- In File Explorer, browse to `C:\Program Files (x86)\AB SCIEX\AnalystDeviceDriver\Help`.

The following documents are installed with 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 1.4 2

This section describes the enhancements and fixes in the ADD software version 1.4. To view the enhancements and fixes for a previous release of the ADD software, refer to the document: *Release Notes* that came with that version of the software.

New Features and Changes in Version 1.4

- The Log Info section of the File Info window indicates if the Analyst software datafile was acquired with **Real-Time Monitoring** enabled (On or Off). (AN-1455)

- The ADD software version is included in the Log Info section of the File Info window for datafiles that are acquired with the ADD software version 1.4 or later.

- The ADD software version shows in the **Companion Software** list in the Navigation bar of the control software for ADD software version 1.4 or later.

- The software installation includes four new CTC PAL3 scripts:

  - Support for deep needle penetration

  - Support for the use of two valves with the LCMS-P tool

  - Support for all available LS tools for LC Injection

  - Support for switching valves for LC Injection

  (AN-1649, AN-1650, AN-1651)

Fixed Issues in Version 1.4

The column oven does not directly use the temperature set in the method selected for equilibration.

Instead of directly going to the temperature set in the method selected for equilibration, the column oven goes to the temperature set in the previously used method first, and then uses the temperature set for equilibration in the selected method to equilibrate. (AN-2414)

The File Info window does not contain the autosampler temperature information for Agilent Infinity II systems.

In the ADD software version 1.3 or earlier, the File Info window does not contain the autosampler temperature information if the LC system is an Agilent Infinity II series system. The issue is fixed by upgrading the Agilent ICF driver that is installed by the ADD software version 1.4. (AN-760)

When the ADD software starts to equilibrate the system again, a delay occurs.

With the ADD software in use, there is a delay in equilibration when equilibration is started again after it has been stopped, aborted, or just finished. (AN-2422)

When a user stops a sample during acquisition with the ADD software, the LC run does not stop.

When a user clicks the **Stop Sample** icon during batch acquisition, the LC method does not stop until the method LC run time has elapsed for the current sample. (AN-2421)

Use of the ADD software service memory increases too much during long batch acquisition.

Depending on the ADD software configuration, use of the ADD software service memory can increase too much during long batch acquisition. (AN-1580)

Requirements 3

Operating System Requirements

The ADD software requires the Microsoft Windows 10 (64-bit) operating system.

Supported Computer Models

The ADD software is supported on the following computers:

Analyst software and Analyst MD software

- SCIEX Workstation
- SCIEX Alpha Workstation 2020
- Dell Optiplex XE2

Analyst TF software

- Dell Precision T5820
- Dell Precision T5810
- Dell Optiplex XE2

Firmware Requirements

When devices are controlled by the ADD software, communication with the devices themselves is handled by the Agilent 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 and the accompanying Agilent LC driver.

The Agilent LC drivers require a minimum firmware version to control an Agilent LC module. The following documentation, which is supplied with the installation of the ADD software version 1.4, gives information about the minimum firmware required for Agilent LC devices.

- `ReleaseNotes ICF 3.2 Update 1.pdf`
- `ReleaseNotes LC and CE 3.5 SR1.pdf`

The User Manual for CTC PAL3 autosamplers is also included.

- `PAL3 User Manual Edition 9.2.pdf`

The ADD software has no minimum restrictions.

Requirements

Agilent releases LC firmware in <firmware sets> for the modules, which are tested for interoperability. These firmware sets 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.

For the modules and firmware versions that have been tested with ADD software version 1.4, refer to the following table.

Table 3-1 Tested Modules and Firmware Versions

Module	Autosampler	Pump	Oven	Detector	Controller	Valve
CTC PAL						
CTC PAL3 RTC	2.4.17310.1610	N/A	N/A	N/A	N/A	N/A
Agilent						
Agilent 1290 Infinity II Multisampler G7167B	D.07.37	N/A	N/A	N/A	N/A	N/A
Agilent 1290 Infinity Autosampler G4226A	A.07.02, A.06.37	N/A	N/A	N/A	N/A	N/A
Agilent 1290 Infinity II High-Speed Pump G7120A	N/A	B.07.37	N/A	N/A	N/A	N/A
Agilent 1290 Infinity Pump G4220A	N/A	B.07.35, B.07.37	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 Infinity II Column Oven G7116B[1]	N/A	N/A	D.07.37	N/A	N/A	N/A
Agilent 1290 Infinity Oven G1316C	N/A	N/A	A.07.02, A.06.18	N/A	N/A	N/A
Agilent 1290 Infinity DAD Detector G4212A	N/A	N/A	N/A	B.07.20, B.06.45, B.07.37	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.

Installation Instructions 4

Install the ADD Software

Note: To keep any custom plates created in previous versions of the ADD software, create a backup of the autosampler database before removing or upgrading the existing version of the ADD software. Refer to the section: Remove the ADD Software. For information about creating custom plates, refer to the document: *Analyst Device Driver Software Tutorial*.

The installation of the ADD software version 1.4 can be new or directly over version 1.3 on a Windows 10, 64-bit operating system. Before installing version 1.4, make sure to deactivate the hardware profile.

Prerequisites
• The user has Administrator privileges on the workstation.

• A supported version of the control software is installed on the computer on which the ADD software will be installed:
 	
  • Analyst software version 1.7.3 or later
 	
  • Analyst MD software version 1.7.3 or later
 	
  • Analyst TF software version 1.8.1 or later

• The hardware profile is deactivated.
• .NET Framework version 4.7.2 is installed.

1. Read these release notes.

2. Make sure that the prerequisites are satisfied.

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

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

   Note: To prevent possible installation issues, SCIEX recommends saving the file to the local computer in a location other than the computer desktop.

5. Extract the files from the compressed package to the local hard drive.

   a. Right-click the `AnalystDeviceDriver1-4.zip` file, and then click **Extract All**.

b. Select an accessible folder on the local computer to extract the files.

Note: This makes sure that all of the files are extracted correctly.

6. Browse to the folder where the contents of the `AnalystDeviceDriver1-4.zip` package were extracted.

7. Double-click **setup.exe**.
The Installation Wizard opens.

8. Follow the on-screen instructions.

The ADD software version 1.4 installs the following third-party drivers on the computer:

- PAL3 RC.NET Driver for SCIEX version 1.1.0.11

- Agilent Instrument Control Framework 3.2 Update 1 version 3.2.64

- Agilent Instrument Control Framework - LC Drivers 3.5 version 3.5.81.0

- Agilent Software Verification Tool B.01.01 version 5.1.013.0

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 software version 1.4 is installed over the Analyst software version 1.7.3, Analyst MD software version 1.7.3, or Analyst TF software version 1.8.1, the following files in the `Analyst\Bin` folder are updated:

- `AutosamplerDB.adb`

- `AutosamplerDBServer.adb`

If the ADD software was not installed before the ADD software version 1.4 was installed, then the following file in the `Analyst\Bin` folder is added. The file is not updated if the ADD software was upgraded from version 1.3 to 1.4.

- `AutosampleDB_Multisampler.adb`

Remove the ADD Software

1. In the control software, deactivate the hardware profile that has the ADD software application.

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

3. Follow the on-screen instructions.
The ADD software is removed.

During the installation of the ADD software version 1.4, the database (`AutosamplerDB_Multisampler.adb`) is merged with the existing autosampler databases (`AutosamplerDB.adb` and `AutosamplerDBServer.adb`). If version 1.4 is removed, then the `AutosamplerDB_Multisampler.adb` file is removed and the original databases (`AutosamplerDB.adb` and `AutosamplerDBServer.adb`) go back to the previous version of the control software.

Notes on Use and Known Issues 5

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

Notes on Use

- The ADD software does not support overlapping injections, although the Agilent ICF might provide this option. (AN-1428)

- When the ADD software encounters a missing-vial error, the LC pump flow does not stop immediately.

   If **Fail whole batch in case of missing vial** is selected in the Queue Options in the Analyst software, then the LC pump flow does not stop when the batch acquisition encounters a missing-vial error. However, the pump flow does stop when the **Max. Idle Time** set in the Queue Options has elapsed, which is when the mass spectrometer goes to the Standby state. If this is a concern, set a shorter **Max. Idle Time** in the Queue Options. (AN-3028)

- If an Agilent autosampler is used for batch acquisition, then the five vial positions for washing (20001-20005) are not available in the Batch Editor for any plate that is not #VialGenPlateC or #VialGenPlateR. (AN-1406)

- If the **Start Sample** icon is clicked before all of the devices controlled by the ADD software are ready or after equilibration has started, then do not click **Abort** on the Tools bar. If **Abort** is clicked, then the Analyst software stays 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 the ADD software. Otherwise, an LC status error might occur after equilibration. (AN-1230)

- Hardware configurations that include an Agilent Infinity II Multisampler with the dual-needle option require additional time to purge before the autosampler goes to Ready state. Increasing the flow rate but keeping the same gradient for the equilibration method can decrease the purge time, but is not recommended because a high pressure at the column or an overpressure error can occur. (AN-1042)

- For the CTC PAL3 Peltier stack, the **Standby Temperature** can only be set with the hand-held device. For additional information, refer to the document: *PAL3 User Manual*.

Known Issues

The module in the error message that is shown in the Sample Details dialog in the queue might not be the same as the module that is shown in the ADD software error message.

If an error occurs for an LC device controlled through the ADD software, then the error message in the **Sample Details** dialog in the queue might not show the actual module that has the fault. If one module has a fault, then other LC modules shut down. The detailed information for the module is still available in the ADD software **Sample Details** dialog in the Analyst software, and in the status tile in the ADD software. (AN-3032)

ADD software devices might need to be configured twice.

If an error is detected during acquisition with the ADD software, then 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. In 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**.

The AAO Sync option might not operate 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 software, then the **AAO Sync** option might not operate for acquisition. To prevent 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.

If the system is equilibrated with a method that has a CTC PAL3 device in the control software, then the ADD software might stop responding. To prevent this issue, use a method that does not include a CTC PAL3 device to equilibrate the system. (AN-1222)

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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 documentation DVD for the system or component.

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