ReadMe
2100 Bioanalyzer System – 2100 Expert Software B.02.12 (SR2)

Please read this information carefully.
It supersedes the documentation you received with your software.

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1 Introduction

This document provides information about the Agilent 2100 Bioanalyzer - 2100 Expert Software.

2 What's New?

2.1 2100 Expert Software B.02.12 (SR2)

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

- Fixed Export of the "Result Tables".
- Removed RIN version number.

2.2 2100 Expert Software B.02.12 (SR1)

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

- Fixed "Delete RNA fragments" from Fragment table.
- Fixed "Result Flagging" feature.
- Symbols in PDF report are properly displayed.
- Fixed "Fragment start and end point" feature in Fragment table.
- Fixed comment, chip and sample boxes.
- Fixed right click pop-up menus.
- Typos in documentation (Kit guides and Quick guides) were corrected.
- Fixed "Restriction digest" feature.
- Fixed "Scale to selected peak" feature.
- Fixed "Scroll bar" feature in opened data tree.
- Fixed full screen mode artefacts, like gel picture flickering.
- Fixed the issues connected with closing Assay files.
- Import/Export to Chip summary table is available.
- Fixed "Use for calibration" feature for protein assays.
- Other small defects fixed.

2.3 2100 Expert Software B.02.12

NOTE!

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This software version requires firmware revision C.01.069

General Enhancements

- Windows 11 operating system compatibility.
- Security improvements for Active X controls (KPR#:587910 and KPR#:153)

Security Pack Enhancements

- Fixed “Manual Integration” enabled after file finalization issue (KPR#:506418)
- Fixed an error for switching users while unsaved changes are present (KPR#:506415)
- Problems with data de-archiving fixed

2.4 2100 Expert Software B.02.11 (SR1)

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

- Fixed the “Manual Integration” feature causing duplication or shift of peak start/end points.
- Fixed launch of “DEMO Protein 80 Assay Series II” by removing forbidden characters in sample names.
- Updated “Protein 80 Assay Series II” file to reflect correct concentration value for upper marker in only the ladder well (from 60 to 100 ng/µl). This change does not impact quantitation of the assay, as the upper marker concentration was correct for samples.
- Fixed an issue that could occur during uninstallation and cause corruption of .NET Framework “machine.config” file.

Security Pack Enhancements

- Fixed situation that comments provided through the signature dialog during "Verification" were previously not recorded in the logbook (signature log).
- Fixed a specific error "Method failed with unexpected error code 87", potentially occurring during application launch related to corrupted registry keys for printers.
- Fixed a defect where comments entered during "Signature" dialog were overwritten in the logbook (signature log).
- Fixed a situation where the automatically generated PDF reports after workflow finalization did not contain final logbook information (signature log, audit trail).
- Closed a security vulnerability related to the logbook.
- Closed a security vulnerability related to the electropherogram.

2.5 2100 Expert Software B.02.11

NOTE!

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This software version requires firmware revision C.01.069

GENERAL ENHANCEMENTS

- Replaced MSXML 4 by MSXML 6.

2.6 2100 Expert Software B.02.10

NOTE!

This software version requires firmware revision C.01.069

GENERAL ENHANCEMENTS

- New assay: RNA DV200 RNA Nano and Pico assay for analysis of FFPE RNA samples.
- Removed laser stability test from the Hardware Diagnostics tests.
- Fixed a situation when the 2100 Expert application could be started before the actual setup was completed.
- Updated the Environment Checker to detect unsupported COM-port settings, USB/serial drivers or screen resolutions.
- Comparison files: PDF reports now only allow migration time as X-axis description. This is intended due to the lack of a combined calibration curve in comparison files.
- High Sensitivity DNA assay: Fixed a typo in the "mouse-over" tooltip information of peaks or gel lanes. Molarity is now correctly displayed in units of "pmol/l" instead of "nmol/l".
- Fixed a shift of column headers after export of logbooks into HTML format.
- ~~The previously classified error "Optical Signal too high" was re-classified as "Information only".~~
- Fixed issue where the file name was truncated for CDF file export.
- Fixed a situation where forbidden characters could be pasted into sample names or comment fields.
- The comma character is now forbidden for sample name and comment input fields to prevent problems during import and export.

SECURITY PACK ENHANCEMENTS

- Updated Environment Checker to detect problems during elevation process via the generic "2100System" account.
- Fixed migration of method owner information from backups of the Secured Area when migrating between two different PCs or after re-imaging of one PC. Requires the backup to be generated with B.02.09 or higher.
- Fixed situations when operators are not able to change users or the current tab due to unsaved changes.
- Enhanced elevation procedure robustness during application launch.
- Fixed export functionality for "Previous System Log Files".
- Fixed a version B.02.09 specific situation where input of decimal values for setpoint changes resulted in a corrupted logfile entry in section "New / Old value" [Run Log, System Log, Signature Log, Audit trail].

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- Fixed a minor typo in the "Select all" functionality of de-archiving.

2.7 2100 Expert Software B.02.09 (SR1)

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

- Fixed occurrence of cryptic filenames on disk and in paper and PDF reports when operating the 2100 Expert B.02.09 application.

2.8 2100 Expert Software B.02.09

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

- Windows 10 operating system compatibility.
- Support for new Bioanalyzer instrument type G2939B.
- Updated hardware diagnostics tests for Bioanalyzer instrument G2939B.
- Introduction of "2100 Environment Checker" for scanning for correct regional settings and printer setup.
- Fixed working directory issue that previous system logbooks could not be opened.
- Fixed vulnerabilities for some ActiveX components, CodeSite Dispatcher and MSXML4 by enrolling EMET.
- ~~Fixed a shift of column headers after export of logbook entries to either TXT or HTML file format.~~
- Implemented a backup strategy to avoid corruption of data files.

Security Pack Enhancements

- A backup directory will now be generated during the uninstallation.
- Fixed issue with result flagging crashes (due to missing printer installation).
- Fixed discrepancies with time stamps after export of logbook entries including the audit trail.
- Implemented a meaningful error message in case the Security Pack was set up with an invalid user/password/domain combination for the generic "2100System" account.

2.9 2100 Expert Software B.02.08 (SR3)

NOTE!

This software version requires firmware revision C.01.069

Security Pack Enhancements

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- Files generated by "Save Selected Sample" will now be directly exported to the export directory outside the Secured Area of 2100 Expert.
- Status of the verification reports (pass/fail) is now updated properly.
- Disabled the possibility to force overwriting of existing method or verification files.

2.10 2100 Expert Software B.02.08 (SR2)

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

- Fixed audit trail inconsistency when working with "Save Selected Sample" in Security Pack
- Prior versions of Security Pack (B.02.03 to B.02.08 (SR1)) were discovered to possibly display incorrect sample names when the "Save Selected Sample" option is chosen. This does not apply to any data files where no selected samples have been saved into a new file. A fix has been implemented with B.02.08 (SR2).
- For any entries in the audit trail affecting deselected samples using "Save Selected Sample" the sample names will be displayed as 'Deselected'.

2.11 2100 Expert Software B.02.08 (SR1)

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

- Fixed instrument connection issues causing the data acquisition to abort intermittently
- Fixed a bug causing rRNA ratio result to change to 0 after modifying fragment start or end times
- Fixed IQ and OQ issues with Operating Systems languages other than US English
- Fixed instrument detection issues on systems with unusual COM port names

Please note:

This software version has been tested with the newest version of the Prolific USB to Serial Adapter driver. If you are using a USB to Serial Adapter driver to connect your computer to the 2100 Bioanalyzer, please make sure to uninstall all previous versions of this driver and install the version which is delivered with this USB drive (please see chapter 3.4 for more details).

2.12 2100 Expert Software B.02.08

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

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- Added support of Windows 7 Professional (32 bit and 64 bit)
- New export format: AIA/ANDI

2.13 2100 Expert Software B.02.07 (Patch 01)

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

- Fixed a bug when performing HV accuracy test
- Added missing help index
- Fixed a bug causing system freeze when trying to search help

2.14 2100 Expert Software B.02.07

NOTE!

This software version requires firmware revision C.01.069

General Enhancements

- Support for new Plant RNA Nano and Plant RNA Pico assay
  (run assays with standard RNA 6000 Nano or RNA 6000 Pico kits and reagents)
- Support for new High Sensitivity DNA assay
- Support of Windows Vista Business SP1

Please note:
Starting with this software version it is not possible to operate 2100 Bioanalyzer instruments with product number G2938A.
Last software version to support G2938A is Agilent 2100 Expert Software B.02.06.
G2938B, G2938C and G2939A type instruments can be used without any problems.
Existing data files acquired by G2938A can be reanalyzed without any problems.

In case you already installed B.02.07 and you still want to use your existing G2938A instrument, you have the following options:

1. Having no data acquired yet by B.02.07, downgrade software (see section 5.8).
2. Having data acquired already by B.02.07 with another instrument, downgrade software and install B.02.07 (or higher) on a separate PC.

2.15 2100 Expert Software B.02.06 (Patch 01)

NOTE!

This software version requires firmware revision C.01.069

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GENERAL ENHANCEMENTS

- Fixed a bug when opening DNA files and Protein 80 and 230 files that have been created with a version prior to B.02.06
  (DNA: corrected concentration calculation, Protein: improved upper marker detection)

2.16 2100 Expert Software B.02.06

NOTE!

This software version requires firmware revision C.01.069

GENERAL ENHANCEMENTS

- Support for new High Sensitivity Protein 250 assay
- Optional input of sample names prior to run
- Support for RS232/USB adapter (PN 8121-1013)
- Ability to preview the gel-like image in the Microsoft Windows Explorer (Thumbnails view)

2.17 2100 Expert Software B.02.05

GENERAL ENHANCEMENTS

- Updated Small RNA Series II assay kit guide
- Aligned quantitation for Small RNA Series II assay

Please note:
This software version contains only changes relevant for the Small RNA Series II assay compared to 2100 Expert B.02.04.

2.18 2100 Expert Software B.02.04

GENERAL ENHANCEMENTS

- Support for new Small RNA Series II assay
- Improved Protein Series II assays

SECURITY PACK ENHANCEMENTS

- Seamless Migration from older versions (see section 5.7)

2.19 2100 Expert Software B.02.03

NOTE!

This software version requires firmware revision C.01.055

GENERAL ENHANCEMENTS

- Reporting of result tables based on user settings

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- New Series II Assays included
- Improved Setpoint Explorer with color coding of changed set points
- Improved comparison context to support display of up to 48 samples per file
- Added Analysis Engine Checks for Series II assays in the Verification Context

Security Pack Enhancements

- Support of Domain users
- Result table layout can be defined per method for reporting
- Automated migration option from B.02.02 to B.02.03 during setup

2.20 2100 Expert Software B.02.02

General Enhancements

- Added support for the new Agilent 2100 Electrophoresis Bioanalyzer instrument (G2939A).

Software Maintenance

- Repair of a fault described in Service Note 2100-31.
  Differences were observed in data visualization and generated results between results at the end of a chip run and following reprocessing of the same data file.
- Repair of a fault which sporadically occurred when a file was closed in Data Context via context menu in files tree view during chip run.
- Repair of a fault related to Security Pack Export/Import functionality. When a file was exported or imported to the Secured Area, a new file version was generated but neither the signature log nor the audit trail was showing any entry for the new file version.

2.21 2100 Expert Software B.02.01

NOTE!

This software version requires firmware revision C.01.050

General Enhancements

- Added support for 21 CFR Part 11 requirements (Security Pack license required)
- Added RNA Integrity number (RIN) calculation for Eukaryote Total RNA assays
- Support of XML as native data format
- Improved reporting capabilities
- Enhanced Result Flagging Forms
- Various improvements in different areas

2.22 2100 Expert Software B.01.03

The Agilent 2100 Expert Software has been amended by fixes.

It includes a tool for objectively assessing RNA integrity.

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2.23 2100 Expert Software B.01.02

The Agilent 2100 Expert Software has been amended by fixes.

2.24 2100 Expert Software B.01.01

The new Agilent 2100 Expert Software is the first element of Agilent's plan to further develop the Agilent 2100 Bioanalyzer system into a compliant solution for customers in regulated environments, such as involved in the QA/QC and manufacturing of antibodies and other protein pharmaceuticals, as well as DNA- and RNA-based drugs.

As part of this introduction, Agilent is providing software support for installation qualification (IQ) and operational qualification/performance validation (OQ/PV) in a dedicated validation context. Agilent is also introducing IQ and OQ/PV services for all B-type and later instruments as well as "Declarations of Conformity" for reagents and chips. Declarations of Conformity state that during final verification, a product's functional characteristics are individually tested for conformance with the manufacturer's internal specifications.

Agilent next plans to introduce a security software pack, which will enable full 21 CFR Part 11 compliance, supporting-requirements such as electronic signatures, audit trails and user authentication.

The 2100 Expert Software also provides a consolidated platform for all Agilent 2100 Bioanalyzer assays i.e. DNA, RNA, protein and cell analysis. Previously, two dedicated software modules were required for these types of analysis (Bio Sizing and Cell Fluorescence).

Additional software enhancements include:

- improved integrator and manual integration capabilities;
- normal and advanced user modes;
- color-coded result flagging tool for electrophoresis assays;
- enhanced reporting, export and printing functions;
- customizable result tables and gel-like images;
- new and improved assays.

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3 System Configuration

3.1 System Requirements

The Agilent 2100 Expert Software is supported on specific bundle configurations (G2953CA). The Security Pack (G2949CA) is only supported with this Agilent bundle PC G2953CA. Other computers must meet the minimum requirements below.

3.1.1 PC Hardware (tested configuration)

Processor:	AMD Ryzen™ 5 PRO 7530U or higher
Memory:	8 GB
Hard disk:	20 GB free disk space
Ports:	1-2 serial ports or one free USB port
Display:	Resolution of 1280 x 1024 pixels
	Settings exceeding 1890 x 1280 pixels are not supported
	Scaling of the size of text, apps and other items should be set to 100%

Desktop as well as laptop configurations are supported with one or two (in case of bundle PC) instruments per PC.

3.1.2 Operating System requirements

This Agilent 2100 Expert Software version was tested to run on:

- Microsoft © Windows 10 and Microsoft © Windows 11 with **English (US)** as Install Language of the operating system and **English (US)** regional settings.

For a system upgrade from a Windows XP PC to a Windows 7/10/11 PC (using a USB connection), it is necessary to purchase the correct USB-to-serial adapter cable as discussed in 3.4. The previous (blue/silver) adapter cable is not compatible with Windows 7 or 10 or 11.

3.2 Instrument Requirements

- Agilent 2100 Bioanalyzer instruments running the corresponding firmware (see note below) required for proper operation of the 2100 Expert Software.

NOTE!

Software version B.02.12 requires firmware revision C.01.069

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Software version B.02.11 requires firmware revision C.01.069

Software version B.02.10 requires firmware revision C.01.069

Software version B.02.09 requires firmware revision C.01.069

Software version B.02.08 requires firmware revision C.01.069

Software version B.02.07 requires firmware revision C.01.069

Software version B.02.06 requires firmware revision C.01.069

Software version B.02.05 requires firmware revision C.01.055

Software version B.02.04 requires firmware revision C.01.055

Software version B.02.03 requires firmware revision C.01.055

Software version B.02.02 requires firmware revision C.01.050

Software version B.02.01 requires firmware revision C.01.050
Software version B.01.03 requires firmware revision C.01.048

Software version B.01.02 requires firmware revision C.01.048 (*)

*** (with upgrade to Series II Assays firmware revision C.01.053 is required and installed.)**

3.3 Software Configuration

- *Screen Savers*
  Screen savers should not be used together with Agilent 2100 Bioanalyzer - 2100 Expert Software. Screen savers can cause undue loading of the CPU that may result in the loss of data from the instrument during data collection periods.

- *Advanced Power Management (APM, ACPI)*
  Advanced power management features of the PC BIOS must be disabled for systems that are connected to the Agilent 2100 Bioanalyzer. See the Installation Manual of your PC for more details.

  Any Energy Star compliant PC should have the Energy Save features disabled to prevent the loss of data during data collection periods. Problems may also be exhibited by I/O error with the instruments. I/O errors will result in the loss of data. They can be found in the system logbook.

- *Regional Settings*
  Regional settings must be set to English (Unites States). To correctly set the regional settings,

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open the start menu and control panel to choose the category 'Region', in the 'Formats' tab, choose English (United States) from the drop-down list and click 'Apply'.

- *Microsoft Office FindFast*
  The MS Office FindFast tool has shown some negative impact on the data acquisition from the instrument if it happens to run simultaneously with a chip run. It needs to be disabled to guarantee that no data loss or interruption will occur.

- *Display Defaults on Windows*
  The default configuration for control of the display monitor is to "Show window contents while dragging". With this setting, the window is continually redrawn as a window panel is moved. For windows that have very complex graphics in them (such as a chromatogram with many peaks) the system can become so busy redrawing the window that it cannot process any other input. For example, a user might drag a graphics window to a new location with the mouse and see the window continue to move even after the mouse is no longer moving.

  If this problem occurs on your system, you can change the control to draw only the outline of the window as it is moved instead of the full window. To change the setting under Windows 10, type to the search box in bottom left corner 'sysdm.cpl' and press Enter. System Properties window will pop-up. Go to Advanced tab and click on Performance Settings. Uncheck "Show window contents while dragging" and press Apply to confirm. The windows movement will now be much quicker, and there will not be a problem with the window continuing to move after the mouse has come to a stop.

- *Large Fonts*
  If your display is setup to display information using large fonts some of the information on the screen may be hidden or obscured. Please use small fonts to make sure all information is properly displayed.

- *Anti-virus software*
  Certain anti-virus software and anti-spy-ware software have negatively impacted the performance of the 2100 Expert Software. Communication to the 2100 Bioanalyzer instrument might be disturbed and can lead to failed hardware diagnosis or stopped data acquisition. Please consider carefully to shut down anti-virus software and anti-spy-ware software while data are acquired by the 2100 Bioanalyzer system.

  Microsoft Windows built-in anti-virus program "Windows Defender" is supposed to be compatible with this software.

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- *Cloud-based identity and access management solutions*
  Cloud-based identity and access management solutions like Microsoft Entra ID are not supported. The 2100 Expert Software cannot be launched in combination with Microsoft Entra ID.
  Please use a local account or an Active Directory domain account.

3.4 USB to Serial Adapter

On all Agilent 2100 Expert Software Laptop bundles (G2953CA) a required driver to operate the supplied USB-to-Serial adapter comes pre-installed.

Start working with your system after the following steps:

3. Physically connect the 2100 Bioanalyzer instrument and the laptop by using the USB-to-Serial adapter cable and the standard Serial RS-232 cable.
4. Turn on the 2100 Bioanalyzer instrument and the laptop.
5. The 2100 Expert Software must be opened and the correct COM port must be selected in the Instrument Context.

For third party computers without a serial port the use of the Agilent USB-to-Serial adapter (Part-No.: 5188-8031) is an option to control an Agilent 2100 Bioanalyzer instrument. Only the above specified adapter in combination with a given driver is supported. The USB-to-Serial adapter cable requires the installation of a driver. It needs to be connected via an USB port of the PC and emulates a serial port.

The driver can be found on this software USB floppy drive in the following directory:
<UFD>:\Support\Driver\5188-8031\CDM21228_Setup.exe,

or downloaded from this link:

https://www.agilent.com/cs/library/instructionsheet/public/2100%20Bioanalyzer%20Installation%20and%20Connection.zip

Install the driver **prior** to connecting the adapter and the 2100 Bioanalyzer instrument and proceed as described below.

1. Close the 2100 Expert Software.
2. Execute the installation program of the driver and follow the instructions. Reboot the operating system.
3. Physically connect the 2100 Bioanalyzer and the laptop by using the USB-to-Serial adapter cable and the standard Serial RS-232 cable.
4. Open 2100 Expert Software and select the correct, new COM port in the Instrument context.

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The serial port and the assigned COM port number are also visible from the Microsoft Windows device manager.

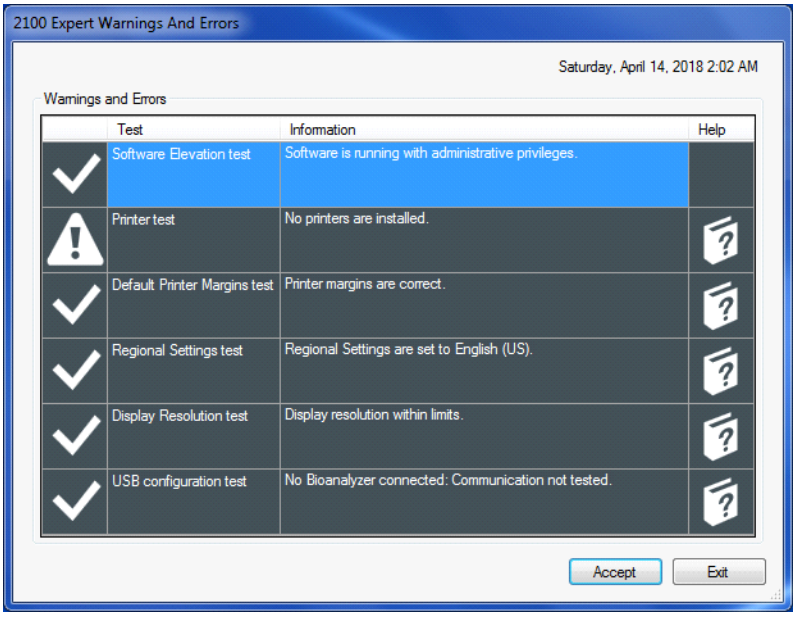
NOTE!
Please do NOT use the driver provided on a CD together with the cable delivery.
Instead use only the driver distributed on THIS 2100 Expert Software UFD!

3.5 Environment Checker

The "Environment Checker" is a tool that performs an upfront scan of important settings for the 2100 Expert Software, such as:

- Software elevation process (Security Pack only)
- Default printer settings
- Printer margin settings
- Regional settings
- Display resolution settings
- USB/Serial adapter configuration

At the launch of the 2100 Expert Software, these tests will be performed every time. If the software finds a mismatch to the required configuration, it will show a warning/error panel and provide guidance.



Click the book icon showing "?" to access the software help pages for further explanation on how to mitigate the issue that is being observed.

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Note: If the Security Pack is active on your PC, changes to settings need to be made for the generic "2100System" user account.

4 Getting Help

4.1 Using Online Help

Agilent 2100 Bioanalyzer - 2100 Expert's online Help system is compatible with the Windows Help subsystems. The Agilent 2100 Bioanalyzer - 2100 Expert Help file contains all the information you'll need to operate your 2100 Bioanalyzer system.

To access the Online Help, select Help from the Agilent 2100 Bioanalyzer - 2100 Expert menu bar, then Contents and Index from the drop-down menu.

To acquire information about your screen mode and printer type, select System Info from the About screen.

4.2 Online Help with Security Pack

To access the Online Help under Security Pack, select Help from the Agilent 2100 Bioanalyzer - 2100 Expert menu bar, then **Contents and Index** from the drop-down menu.

The online help content of the Security Pack differs from the standard 2100 Expert online help. It contains additional information about functions and features of the Security Pack.

4.3 Getting Support

Agilent Technologies is committed to providing a reliable, high-quality product that is easy to use.

4.3.1 Documentation:

In your "Installation and Safety Manual" that comes with the instrument, you will find help on system installation and 2100 Bioanalyzer instrument hardware specifications.

For more in-depth system information, refer to the user guide on the USB floppy drive. You will also find a troubleshooting chapter on the USB floppy drive, dealing with hardware as well as application related problems and how to solve them. These documents can be also found on Agilent webpages under User Manuals section:

Sample Quality Control, Electrophoresis, Bioanalyzer | Agilent

4.3.2 Customer Support Team:

However, if you have any problem installing or using the 2100 Bioanalyzer, we want to know about it and help you.

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Please contact your local Agilent Technologies Customer Care Center to get support on 2100 Bioanalyzer related questions (for details please visit the following web page: https://www.agilent.com/en/contact-us/page).
Agilent Technologies also provides electronic support through the World Wide Web.

In any communication with the support team please clearly state the following:

- The product name and version number.
- Your name, address, e-mail address and telephone number.
- Your hardware and software configuration. Go to the Help->About dialog to get your diagnostic information.
- The serial number of your instrument.
- A description of the problem, and what you were trying to do when the problem occurred.

5 Software Installation and Setup

5.1 Installation Instructions

The 2100 Expert installation program SETUP.EXE is a Microsoft Windows application. You must have Windows 10 or 11 installed prior to installing 2100 Expert Software. To install this application, perform the following steps:

1. Start Microsoft Windows, if you haven't already done so.
2. Before installing, please make sure you have the appropriate rights to install the software on your computer. You need to have an account with **administrative rights** to successfully install all needed components.
3. Insert the UFD with the 2100 Bioanalyzer - 2100 Expert Software Package into your USB port.
4. Close all running programs, including all instances of the 2100 Expert software.
5. From the Start menu, type in the search field:
   D:\setup.exe
   (you will need to change the drive letter and the path in the command line above to match your current location).
6. Click on the OK button.
7. Follow the instructions given by the setup wizard for correct installation of the product.
8. If you are prompted to restart the PC after the setup, please use the same user account you used for the installation to log on to the PC after the reboot. This is necessary to guarantee the correct installation of the 2100 Expert Software.
9. After the software installation is finished, open the 2100 Expert Software once when still logged in with an administrative account.

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5.2 Registration

To connect with an instrument, you need to add a license for that class of assays in the software and one to enable instrument control (regardless of how many instruments you want to control).

You can open the "*License Administration Tool*" via the menu item "*Help/Registration...".*

In the dialog box navigate to the *"Add License*" tab, select *"Agilent 2100 Bioanalyzer*" as product.

Then enter the instrument control license and electrophoresis license:

- Always required:

  - 2100 *Instrument Ctrl license*: **xxxxxx - xxxxxxxx - xxxxxxx**

- Enter one or both:

  - 2100 *Electrophoresis license*: **xxxxxx - xxxxxxxx - xxxxxxx**

  - 2100 *Flow Cytometry license*: **xxxxxx - xxxxxxxx – xxxxxxx (obsolete)**

After entering each certificate press "*Add*" to store it permanently.

In order to install the Security Pack, you also need to install this license, which will trigger an additional set up process afterwards. This is typically done by an Agilent engineer.

- *2100 Security Pack License*: **xxxxxx - xxxxxxxx - xxxxxxx**

5.3 Software upgrade

No new license keys are required for SW upgrade.

For 2100 Expert SW upgrade to new software revision, uninstallation of old revision is necessary. Please follow the steps below:

- Go to Control panel - Programs and Features and locate Agilent Technologies – 2100 Expert SW
- Uninstall it by pressing uninstall button and follow the uninstallation procedure of 2100 Expert SW
- After successful uninstallation process, new software revision can be installed as described in section 5.1
- There is no need to enter new license key information, license key will be automatically read from old SW revision

5.4 Setting up the Security Pack with local users

After adding the Security Pack license, the software will shut down and automatically launch another setup wizard after restart that will guide you through the setup of the Security Pack.

After the restart, please log on to the operating system using the **same** account that has been used to install the first part of the application.

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This wizard will create a new local user account used internally by the application (*2100System*). In addition, you need to specify the initial administrator account for the 2100 Expert Software with Security Pack. You can either create a new, local *2100 Administrator* (recommended) or select an existing user. All other users of the 2100 Expert Software can be defined later by the *2100 Administrator* in the application itself. Beside the users the setup wizard creates a new directory on your PC called "*SecuredArea*". This part of the file system will be locked for normal users of that system. Only *2100 Administrators* or *2100 Backup* operators can access this directory. The software will safe all created data in this directory and its sub folders.

After successful installation of the Security Pack, you need to log on to the application in order to use it. For the first time you access the software please use the account you defined as initial *2100 Administrator*. No other user beside this will be able to start the application initially. Afterwards any user set up in the *System Context* as valid user of the 2100 Expert Software will be able to start the application.

5.5 How to setup Security Pack with domain users

Step-by-Step instruction:

- Logon to the Windows operating system using an account from the domain that has administrator rights on the PC.
- Determine or create a new domain account that shall act as the "2100System" user within your installation.
  Please note: For compliance reasons, this user should not be an operator of the 2100 Expert Software at the same time.
- Enter the license keys as described in chapter 5.2
- After restart of the application, please enter the domain\2100System user into the appropriate fields of the dialog. Use the 'Browse...' button to select the account being used as the generic "2100System" account.

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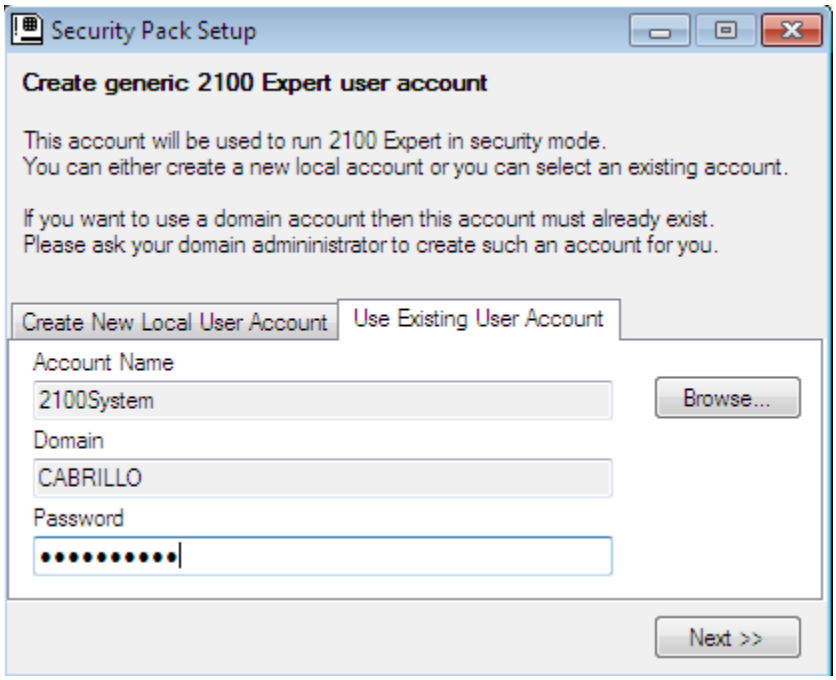
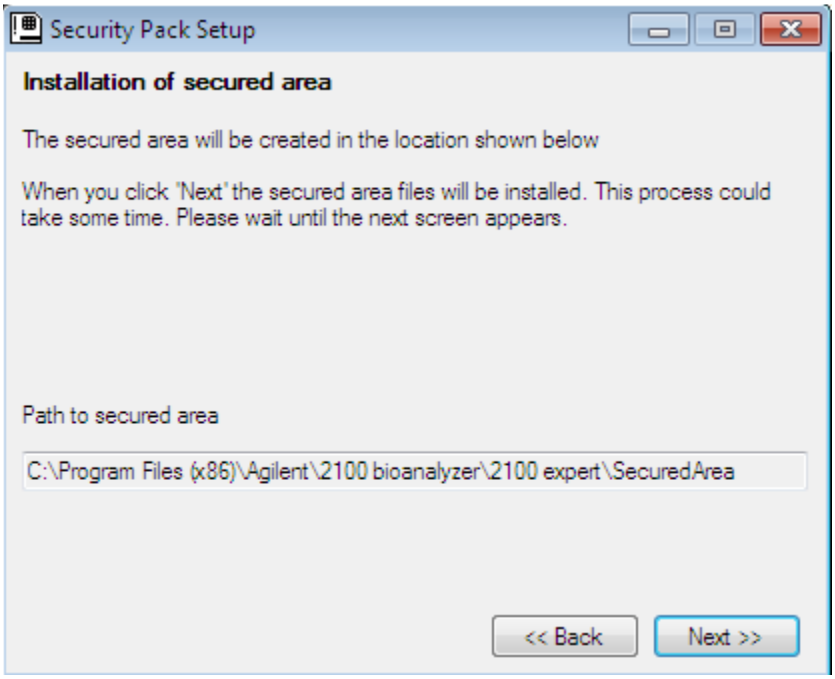


- You can use any domain user account that fulfills the prerequisites described at the end of this chapter.
  Enter the password of the selected account and press the <Next> button.
- In the next dialog you are informed where the Secured Area directory will be installed on your local PC.



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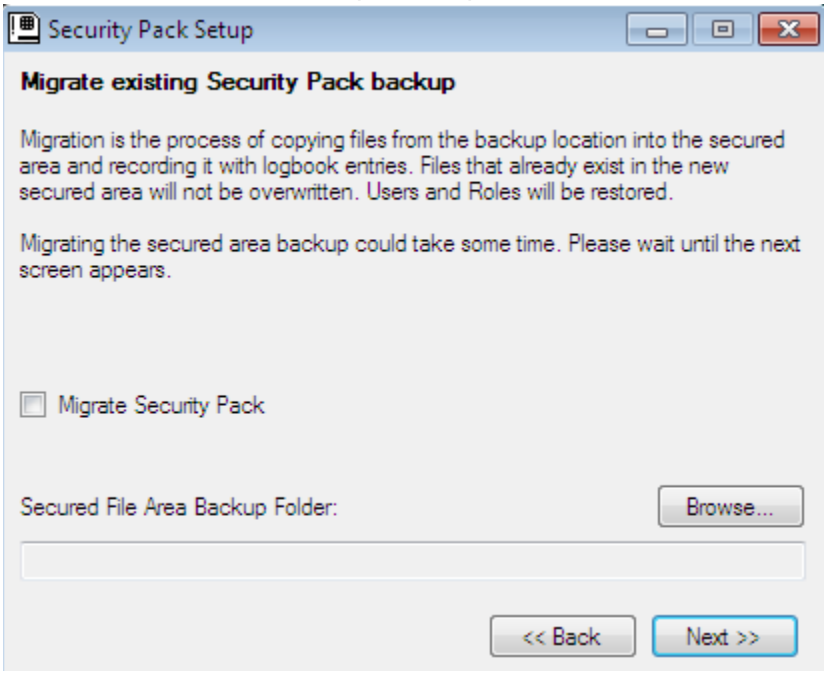
Press <Next> to continue.

- Now the migration process starts.
  If you want to migrate your current users and their roles within 2100 Expert, your system wide settings and as well your method and data files to your new 2100 Expert Software Version B.02.09, then you should check the box besides “Migrate Security Pack” and select the location of the Secured Area backup directory.



In the final dialog of the setup wizard, you should set up the initial 2100 administrator, who can initially log on the 2100 Expert application and will then be able to set up the remaining 2100 Expert users in their desired role for the application.

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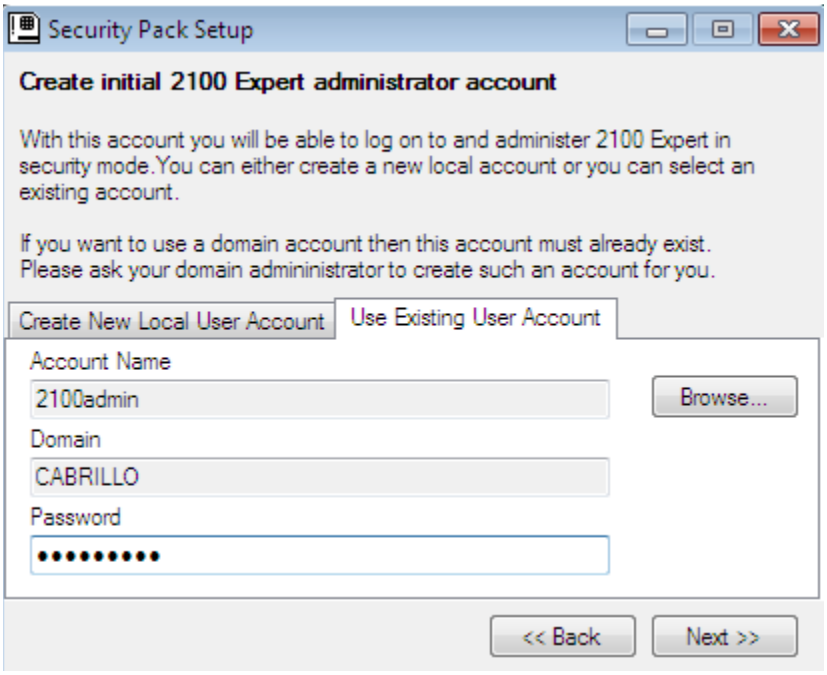

You can either create a new local account for this task or also assign it to an existing domain account. Use the 'Browse...' button to select the account being used as the 2100 Administration account.

- After the setup wizard has finished its tasks, you can log on to the 2100 Expert application using the 2100 administrator account specified in the previous step.

!!! NOTE !!! NOTE !!! NOTE !!! NOTE !!! NOTE !!! NOTE !

Prerequisites for a domain 2100System account:

In case you have multiple 2100 Bioanalyzer systems, you should consider using individual domain accounts as 2100System to prevent any issues due to user profile corruption within the domain. If a universal account must be used for all systems, implement settings that prevent a corrupted locally

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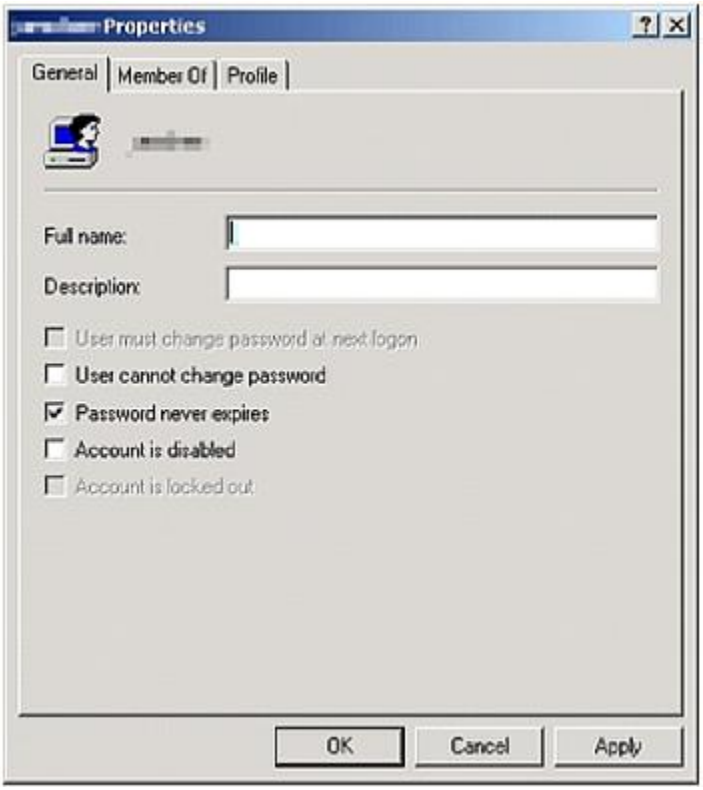
cached user profile from synchronizing back into the domain.

If you want to setup the 2100System account as a domain user, it should fulfill the following prerequisites:

- should be a default domain user, with administrative rights on the PC and the account should be a full domain account.
- "User must change password at next logon" should be disabled.
- "Password never expires" should be enabled.
- server cached user profile should be disabled for this "domain/2100System" user to prevent corruption if used on multiple systems.



Important notice:

The generic 2100System account requires a printer to be setup. If this is not the case, certain software operations, like "result flagging", will lead to a software crash.

In order to setup the printer for the 2100System account, log on to the Windows operating system as the 2100System account, then setup a default printer in the "devices and printers" menu.

Using domain network resources out of Security Pack

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If you want to use network resources from the domain (e.g. network printers) out of the 2100 Expert application with Security Pack installed, then you must set up these resources for the used 2100System domain account on this PC.

For example if you want to use a specific network printer from within 2100 Expert with Security Pack installed, then logon to Windows with the 2100System domain account specified during the setup of Security Pack. Add the network printer for this account and after successful installation of this printer, just log off from windows again.

Logon to windows again using the usual domain user account. From this point in time you should be able to print from within 2100 Expert with Security Pack to this network printer.

5.6 Uninstall Instructions

If after installing Agilent 2100 Bioanalyzer - 2100 Expert Software, you find it necessary to remove the software from your computer, perform the following steps:

Note: You must be logged on to the operating system with an administrative account and the 2100 Expert Software must be closed. All other users of the operating system must be logged off (reboot the PC if you are not sure).

1. Run the Windows Control Panel
2. Open the Programs and Features applet from Control Panel.
3. Select **Agilent Technologies 2100 Bioanalyzer - 2100 Expert** from the list of applications that can be uninstalled by Windows.
4. Click on the Add/Remove button to uninstall Agilent 2100 Bioanalyzer - 2100 Expert Software.
   Note!
   With 2100 Expert Security Pack B.02.09 or higher an automatic backup is created in the root directory of your installation once the 2100 Expert software is being uninstalled. If the default installation directory was used, the backup will be created in C:\SecuredArea.bak
5. For complete Security Pack uninstallation: After the uninstallation of the 2100 Expert Software, click on the Add/Remove button to uninstall **Agilent 2100 Bioanalyzer - 2100 Expert Secured Area**.

5.7 Secured Area Migration

5.7.1 Secured Area Migration from B.02.08(SR3) to B.02.09 or higher

Note!

As for all updates, it's a good idea to have an actual backup of your system and your data PRIOR to the migration.

Please contact your local Agilent representative if you if you need assistance with migration of the Secured Area to 2100 Expert B.02.11. Previously, the external tool “ExtractUsersAndRoles.exe” was

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required for a successful migration to version B.02.10. The tool needs to be run while the 2100 Expert Secured Area is still installed. The migration process is described in detail in the Migration Note (G2938-90161).

Make sure to follow the details in the Migration Note (G2938-90161):

1. Archive existing method and data files from your current installation
2. Copy the "ExtractUsersAndRoles.exe" tool into the \Secured Area\System directory
3. Uninstall the 2100 Expert B.02.08 Software using the control panel
4. Execute the "ExtractUsersAndRoles.exe" from the \Secured Area\System directory
5. Uninstall the 2100 Expert Secured Area using the control panel
6. Create a backup of the Secured Area directory
7. Install the new 2100 Expert Software Version and migrate from your backup directory, created in the previous step.
8. De-archive your previous files

Note!

After launching the 2100 Expert Software, de-archive your method and data files from your archive directory.

It is recommended to choose the Agilent IQ-service or alternatively to run the build in Software-IQ from the verification context, if this fulfills your internal software update policy.

5.7.2 Secured Area Migration between PCs

Note!

As for all updates, it's a good idea to have an actual backup of your system and your data PRIOR to the migration.

At this stage, it needs to be distinguished between a migration with previous uninstallation of the current Secured Area or an additional installation on a second PC from an existing backup.

For 2100 Expert Software migration from an existing backup:

If you want to migrate from an existing backup, it needs to be clarified upfront this migration process, if the users & roles information is included in your previous backup. In the past the external tool "ExtractUsersAndRoles.exe" was used to create a file "UsersAndRoles.xml" that contains this information.

If you have the information included in your backup, you can procced with the on-screen instructions during the installation as described above.

In case you have any doubts about the process, please contact your Agilent Support Team.

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For 2100 Expert B.02.09 or higher with uninstallation on the current PC:

1. Archive existing method and data files from your current installation.
2. Uninstall the current 2100 Expert Software using the control panel.
3. A backup will be automatically created upon uninstallation in the root directory of your installation. Per default this should be "C:\SecuredArea.bak". This could be copied on an external hard drive.
4. Uninstall the 2100 Expert Secured Area using the control panel.
5. Install the new 2100 Expert Software version and migrate from your backup directory, created in the previous step.
6. De-archive your previous files and methods.

Note!

After launching the 2100 Expert Software, de-archive your method and data files from your archive directory.

For 2100 Expert B.02.08:

If you need to migrate a Secured Area from the original PC to another one, the external tool "ExtractUsersAndRoles.exe" is required with and without previous uninstallation. The tool needs to be run while the 2100 Expert Software is still installed. Please contact your Agilent Support for advice.

Please follow the minimal instructions in section 5.7.1.

The migration process is described in detail in the Migration Note (G2938-90161). Please contact your local Agilent representative if you need assistance to migrate the Secured Area between PCs.

5.8 Downgrade Instructions

Note!

In case you already created data files with the newer version of the software (acquired new data or saved data files of previous versions after modification) you must consider that those files cannot be opened with older versions of the software. To run the older and the newer version of the software in parallel, you need to install them onto separate PCs.

To return to a previous version of 2100 Expert Software, perform the following steps:

1. Make sure you have your license keys at hand (found at Help->About 2100 Expert...).
2. Uninstall the existing 2100 Expert Software revision.
3. On demand reboot the system.
4. Install the older 2100 Expert Software revision.

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6 Known Problems or Limitations

6.1 Software Status Bulletin (SSB)

The known defects are listed in the Software Status Bulletin (SSB). Please refer to our webpage:

https://www.agilent.com/cs/library/support/Patches/SSBs/G2946CA-G2949CA.html or search on www.agilent.com for the 2100 Expert Software SSB page.

Vulnerabilities of the 2100 Expert Software are discussed in the Software Status Bulletin found at above webpages.

All computers with the 2100 Expert Software installed are potentially affected (instrument control and/or data analysis only). We recommend operating the software on a PC that is part of a closed, physically separated network. Alternatively, the PC shall be removed from the network connection. Please contact your IT department to implement any mitigation steps.

- Active X risks
- VB6 OLE risks
- Software design risks

6.2 Other known issues

1. Automatically generated hyperlink in the Signature Log section does not display actual versions of the printout. When opening the hyperlink, the version number and number of entries in the Signature Logbook do not correspond to the actual state. When finalized and printed to pdf, correct version number and all entries are present.
2. Incorrect "date modified" timestamps shown in "Chip summary" tab and in "Signature Log" hyperlinks for intermediate data file versions. Finalized and printed to pdf versions show correct timestamps.

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