
README - 2200 TapeStation Software

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1 Introduction

This document provides last minute information and installation advice corresponding to the 2200 TapeStation Software.

1.1 New features with A.02.02 (SR1)

A.02.02 (SR1) release provides the following enhancements:

- Minor bug fixes in reporting
- Minor bug fix in gDNA data evaluation

1.2 New features with A.02.02

A.02.02 release provides the following enhancements:

- Compressed Reporting
- Enhanced robustness of marker peak detection for gDNA assay
- Enhanced robustness of ladder peak detection for RNA and High Sensitivity RNA assay
- Improved RNA quantification
- Minor bug fixes

1.3 New features with A.02.01 (SR1)

A.02.01 (SR1) release provides the following enhancements:

- Bug fixes:
 - Issue where base pair values on electropherogram scale disappear when an electronic ladder is inserted has been resolved
 - Issue where an incorrect software version number was displayed in the .docx report has been resolved

1.4 1.2 New features with A.02.01

A.02.01 release provides the following enhancements:

- Support for new ScreenTape assays
 - D5000 ScreenTape assay
 - High Sensitivity D5000 ScreenTape assay
- Support for new TapeStation Test Tape

In addition, A.02.01 release includes significant updates to .csv and .xml exports:

- New .csv export options to control the data exported from peak and sample tables. It is now possible to choose whether or not data for Marker peaks is exported. By default, exports are consistent with previous software versions, and include data for marker peaks
- .csv exports no longer include dash characters ('-') for empty fields
- .csv and .xml exports no longer contain thousand separator characters for large numbers

- Two additional observations are now included depending on assay - 'Marker Edited' (for any manual change to a marker peak) and 'Ladder Sizing Edited' for any manual change to a sizing peak)
- Dates in .xml have switched from local formats to a standardized format to fit other TapeStation applications. The new format is "dd-MMM-yy hh:mm t" (i.e. 31-Aug-15 2:43 PM)
- The column 'Average Size' has been removed from the peak table and from exports. Note that the column is still available in the region table
- Changes to Observations text that include the word 'ScreenTape' - now described as 'ScreenTape device'

1.5 New features with A.01.05

A.01.05 release provides the following enhancements:

- DNA Integrity Number (DIN) for the Genomic DNA assay
- Enhanced alert and observation flagging
- Enhanced reporting
- Enhanced RIN^e algorithm
 - Improvements made to address issues seen with a small percentage of customer data
 - Customers may see small alterations in RIN^e values
- USB 3 Compatibility for instrument connection to bundle laptops
- Support for Windows 8.1
- Updated comparison context
- Faster analysis of 96-well plate files

1.6 1.4 New features with A.01.04

A.01.04 release provides the following enhancements:

- Support for new ScreenTape assays
 - D1000 ScreenTape assay
 - High Sensitivity D1000 ScreenTape assay
 - RNA ScreenTape assay
 - High Sensitivity RNA ScreenTape assay
- Improved RNA and High Sensitivity RNA ScreenTape assay features
 - Data analysis for both eukaryotic and prokaryotic samples
 - Improved resolution achieving Bioanalyzer comparable results
 - Improved quantification
- Streamlined ribbon control for ease of use
- Improved online help

1.7 1.5 New features with A.01.03

A.01.03 release provides improved software stability over the previous A.01.02 release and adds enhancements including the following:

- Support for Genomic DNA ScreenTape assay
- Saveable comparison file
- Enhancements in data export - now offers XML and improved CSV export

1.8 1.6 New features with A.01.02

A.01.02 release provides improved software stability over the previous A.01.01 release and adds enhancements to reporting and data comparison functions.

2 System configuration

2.1 System Requirements

2.1.1 PC Hardware (minimum requirements)

The Agilent 2200 TapeStation Controller Software is only supported on bundled laptops provided by Agilent Technologies with the 2200 TapeStation System.

Laptop configurations only support one connected 2200 TapeStation instrument at a time.

The Agilent TapeStation Analysis Software minimum requirements are as follows:

Processor:	Intel i5- 6300U with 2.4 GHz or higher
Memory:	8 GB
Ports:	2 USB ports (USB 3)
Display:	Resolution of 1024*768 pixels
Hard disk:	80 GByte

The Agilent TapeStation Software A.02.02 SR1 was successfully tested to run on the previous bundled laptop, namely the model HP ProBook 650 G1.

2.1.2 Operating System requirements

The Agilent 2200 TapeStation Controller and Analysis Software have been tested to run on:

- Microsoft © Windows 7 Professional 64 bit with **English (US)** language settings
- Microsoft © Windows 10 64 bit with **English (US)** language settings

The reporting function in the TapeStation Analysis Software requires Adobe Acrobat DC Reader version 11.0.06 or later to be able to view reports. All laptops supplied by Agilent Technologies will have this pre-installed.

Saving reports is supported in .pdf and .docx format. Pdf format is the default and can be accessed by previewing or saving. Docx format can only be accessed by using the dropdown menu in the 'Save' dialog box, to change the 'Save as...' type.

Reports in .pdf format can be printed directly from the reporting screen on bundle laptops. On non-bundle laptops, this requires Adobe Acrobat to be installed. To print in .docx format, the report must first be saved, then opened in either Microsoft Word or Word Viewer (not provided).

2.2 Software Configuration

Region settings must be set to English (US).
At least one LAN adapter must be present and enabled.

3 Software Installation and Setup

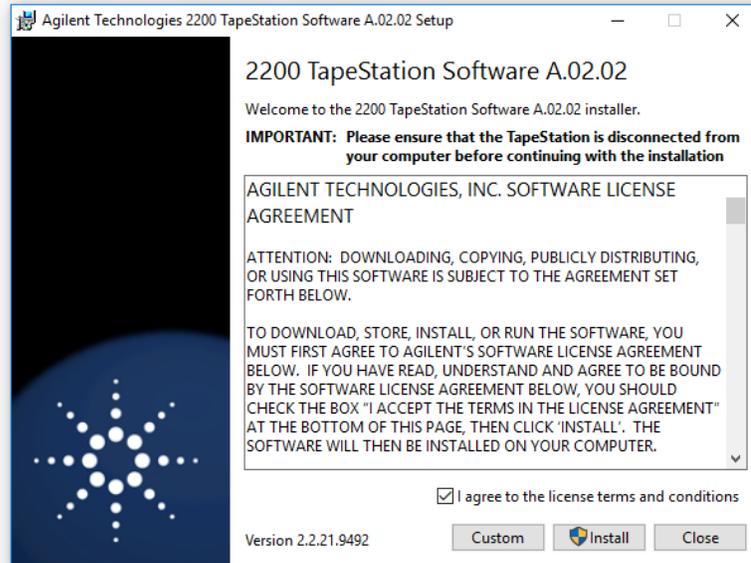
3.1 Installation Instructions

The 2200 TapeStation Software installation program 'Setup.exe' is a Microsoft Windows application. You must have Windows 7 or Windows 10 installed prior to installing 2200 TapeStation Software.

To install the 2200 TapeStation Software, perform the following steps:

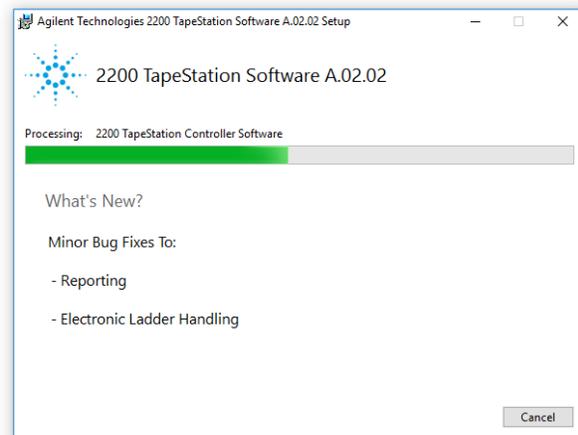
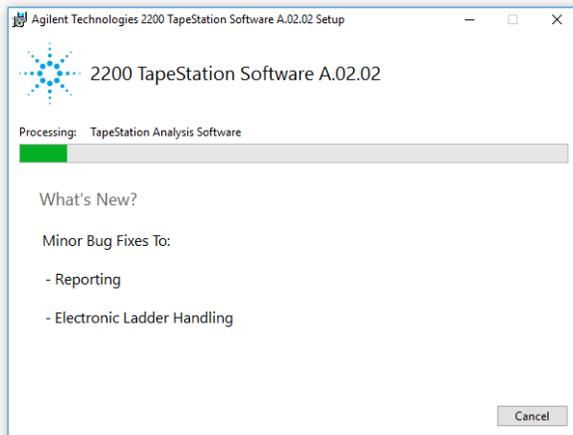
IMPORTANT: Ensure that the 2200 TapeStation instrument is not connected to the laptop for installation.

1. Start Windows
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 required components
3. Insert the installation USB flash drive (original item shipped with the system) into your PC or download the installation program from the following link
www.agilent.com/genomics/tapestation-SW
4. Close all running programs, including all instances of the 2200 TapeStation Software
5. Select the installer icon 'TapeStation Software Setup'
6. If a windows security message appears, select 'Yes', to allow the program to make changes on the computer
7. When the following window appears select 'I agree to the license terms and conditions' then press 'Install'



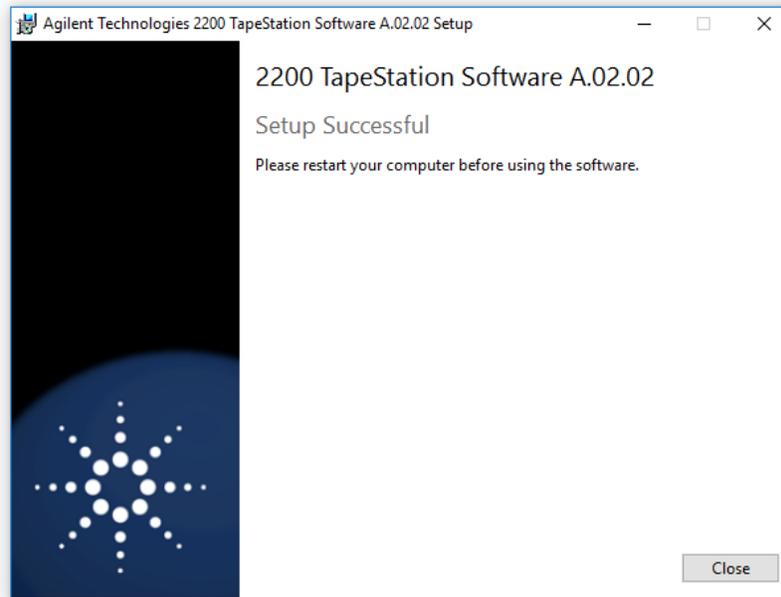
Note: Select 'Custom' in case you wish to install only the TapeStation Analysis software, i.e. without the 2200 TapeStation Controller Software, to an additional PC. The Agilent 2200 TapeStation Controller Software is only supported on bundled PC's provided by Agilent Technologies with the 2200 TapeStation System.

8. Allow the 2200 TapeStation installer to install all required components:



Note: If installing Windows components such as .Net framework for the first time, the 2200 TapeStation Software installation may take some time.

9. Once the 2200 TapeStation Software has been successfully installed, you will see the following window. Click 'Close' to finish the installation



10. Re-start the laptop to ensure successful software installation

3.2 Uninstall Instructions

If after installing the 2200 TapeStation Software, you find it necessary to remove the software from your computer, perform the following steps:

Uninstall instructions for Windows 7:

1. From the control panel, open 'Programs and Features'
2. Select '**2200 TapeStation Software**' from the list of applications that can be uninstalled by Windows
3. Click on the 'Uninstall' button to uninstall the 2200 TapeStation Software

Uninstall instructions for Windows 10:

1. From the settings panel, open 'System' and 'Apps & features'
2. Select '**2200 TapeStation Software**' from the list of apps that can be uninstalled by Windows
3. Click on the 'Uninstall' button to uninstall the 2200 TapeStation Software

If you encounter problems whilst upgrading the 2200 TapeStation Software, please remove the existing TapeStation Software installations. If this does not resolve the installation issues, please use the tool contained in the link below.

<http://support.microsoft.com/mats/Program Install and Uninstall/>

3.3 Downgrade Instructions

It is recommended to operate the 2200 TapeStation System with the latest software and firmware revision. A downgrade is not recommended.

Note: Do not open files made in A.02.02 in older versions of the software. This includes acquired new data or saved data files of previous versions after modification.

In order to run the older and the newer version of the software in parallel, you may need to install them onto separate PCs.

In order to return to a previous version of 2200 TapeStation Software, perform the following steps:

1. Un-install the existing 2200 TapeStation Software revision as instructed in Section 3.2
2. Reboot the system when instructed
3. Install the older 2200 TapeStation Software revision

3.4 Reimage of Operating System

Note: If you are not re-installing from the provided bundle image CD, please ensure that Windows Updates are activated and up-to-date.

In case a reimage of the operating system is required, please use the bundle image CD provided with your laptop shipment. Follow the instructions on the command prompt for a successful re-image.

After the successful re-image you will need to perform the following actions:

1. Install the necessary Windows Security updates. It is recommended to install all security updates available. If using a HP ProBook 650 G1 and Recovery Disc G1030-61014 at least update "KB3033929 - SHA-2 signing and verification functionality" needs to be installed. The Security update can be downloaded from the Microsoft webpage <https://www.microsoft.com/en-us/download/details.aspx?id=46148>
2. Install the current version of the 2200 TapeStation Software, which can either be installed from the USB flash drive provided with the shipment (instructions see 3.1) or downloaded at <http://www.genomics.agilent.com>
3. Reboot the laptop to ensure successful installation

4 Getting Started

4.1 Connecting your 2200 TapeStation instrument

Start working with your system after the following steps:

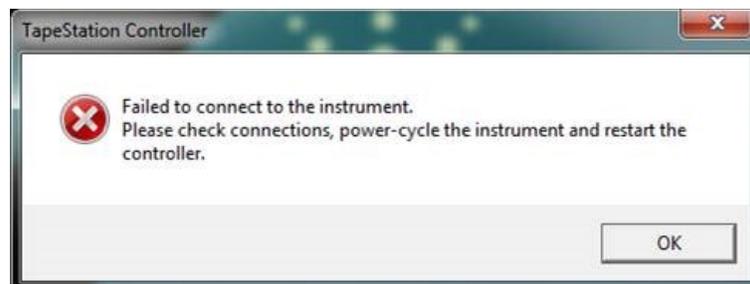
1. Turn on the laptop. Have the 2200 TapeStation Software (Controller and Analysis) installed (section 3.1) but not open
2. Physically connect the 2200 TapeStation instrument and the laptop using the supplied USB cable
3. Turn on the 2200 TapeStation instrument and allow system to initialize
4. Start the 2200 TapeStation Controller Software. A connection establishes automatically

Note: Windows may display a 'Found New Hardware wizard' once the software has loaded. In this instance, always perform the following steps:

1. Select 'No, not this time' to prevent connecting to Windows Update and initiating a search for software
2. In the next window select 'Install the Software automatically'

If a window appears, indicating the software did not pass the windows logo testing, click 'Continue Anyway'. A window will then appear, indicating that the hardware has been successfully installed

Note: The following error message can appear when the USB port used to connect the TapeStation is altered whilst the instrument is connected and powered up. If this problem occurs, please power cycle the instrument and laptop, then restart the controller.



If it is necessary to change physical port connection, please allow sufficient time between connections for the drivers to be re-installed, this can take up to a minute.

Note: Whilst connected to the instrument, please avoid making any changes to the laptop configuration or any settings available through the control or settings panel. This can interrupt the run and affect results.

5 Getting Help

5.1 Using Online Help

The Agilent TapeStation Software's online Help system is compatible with the Windows Help subsystems. The help file contains all the information you will need to operate your 2200 TapeStation Software and should be used in conjunction with the 2200 System Manual, which describes everything you need to operate your 2200 TapeStation and TapeStation Controller Software.

To access the Online Help press 'F1', or click on the question mark on any TapeStation Analysis Software Screen. Help can also be accessed from the TapeStation Analysis Software file menu, by selecting 'Help'.

5.2 Getting Support

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

Documentation:

For in-depth Agilent 2200 TapeStation system information, refer to the 2200 System Manual supplied electronically with your 2200 TapeStation Software USB flash drive package and available online through www.agilent.com/genomics/tapestation.

Customer Support Team:

However, if you have any problem installing or using the Agilent 2200 TapeStation, we want to know about it and want to help you.

Please contact your local Agilent Technologies Customer Care Center to get support on Agilent 2200 TapeStation questions.

For details please visit the following web page: www.agilent.com/genomics/contact).

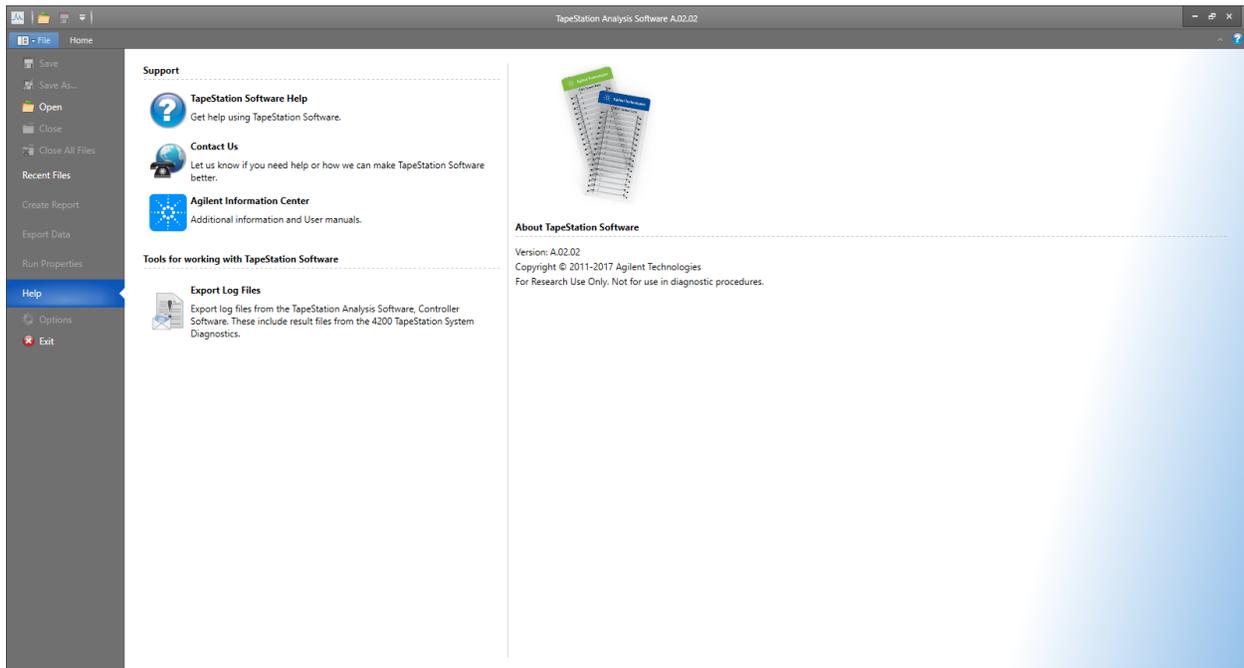
Agilent Technologies also provides electronic support through the World Wide Web:

www.agilent.com/genomics/tapestation

In any communication with the Agilent 2200 TapeStation support team regarding a problem with the Agilent 2200 TapeStation System, please clearly state the following:

1. The product name and version number

2. Your name, address, e-mail address and telephone number
3. Your hardware and software configuration. In the TapeStation Analysis software, go to 'File', 'Run properties' to get this diagnostic information while a file is opened
4. The serial number of your instrument
5. A description of the problem, and when it occurred. For samples describe source, preparation and expected result. This can be supplemented using the error file logs, which are accessible in the TapeStation Analysis Software file menu, under 'Help'. By clicking on 'Export log files' a log file can be generated and saved



Note: The collected files contain internal log files generated by your 2200 TapeStation system and diagnostic information. This set provided as a .zip file on the desktop to be sent out to Agilent technical support experts. Be aware that this package of log files package does not include data files, experimental information or sample information. To describe an application issue completely, you need to collect and compile this information in addition.

6. Known Problems or Limitations

- Agilent Technologies recommend users not to install additional software applications onto laptops containing the 2200 TapeStation Controller Software. The 2100 Expert Software is supported for co-existence on the same PC for data analysis but not supported for co-execution of data acquisition
- The use of other USB devices whilst using the 2200 TapeStation instrument is limited to devices of the class 03h (Human interface device (HID)), such as printers, keyboards or mouse. Any other USB devices should not be plugged into the laptop while the 2200 TapeStation instrument is running. The imaging module in the TapeStation is a high-resolution device that can utilize the entire bandwidth of the USB link whilst imaging. Use of other USB devices at the same time can cause timing issues with the imaging module that will lead to failed data acquisition
- Ensure that all data files are stored to a local folder. Network connection can be lost during file export resulting in data loss
- Matrix42 package management tool is not supported. It creates compatibility issues with the 2200 TapeStation Software when deploying shared components, namely Adobe Acrobat
- Software package management tools can cause compatibility issues. They are supported on best efforts base only
- Do leave at least one LAN adapter enabled on the Laptop otherwise the 2200 TapeStation Controller Software stops runs prematurely. LAN associated MAC values are required for internal references
- Certain Antivirus Software (e.g. Avast Antivirus) can be triggered by the 2200 TapeStation Controller Software. The TapeStation Analysis Software is then unable to launch the data file and all run data is lost
- On laptops with Windows 8.1 installed only: running the TapeStation Analysis Software in elevated mode ('Run As Administrator') or launching the TapeStation Analysis Software directly from the 2200 TapeStation Controller Software shows a compatibility problem with Adobe Reader version 11. If you receive an Adobe Reader error message (message 103:103) or see an empty grey square when previewing PDFs, please follow one of the workarounds below:
 - Use the TapeStation Analysis Software without elevation. This workaround is only applicable for laptops not used for instrument control, where elevation mode is mandatory. This workaround is not suitable for files launched directly from the 2200 TapeStation Controller Software.
 - Turn off 'Protected Mode' in Adobe Reader 11. To do this, launch Adobe Reader from the Windows start menu. From the Edit menu select 'Preferences', then 'Security (Enhanced)'. Within the box labelled 'Sandbox Protections', disable the "Enable Protected mode at start up" checkbox.

- Please note: Users must consider local security requirements before using this workaround.
 - Downgrade Adobe Reader to version 10, which does not display this issue.
- To ensure full functionality of the 2200 TapeStation Controller Software, all users should be given local admin rights to the 2200 TapeStation laptop
- Operating system regional settings must be set to English (US)
- Avoid switching users under Windows. Instead either use a single account for the analysis or always log off after running the 2200 TapeStation instrument
- If you encounter problems whilst installing or upgrading the 2200 Software package, please remove existing TapeStation Software installations. If this does not resolve the installation issues, please use the tool contained in the link below:
<http://support.microsoft.com/mats/Program Install and Uninstall/>
- The 2200 TapeStation Software only supports a screen DPI of 100%. If the screen DPI is set any higher, problems with images can arise. To see your settings; open your control or settings panel, and select display
- Running the 2200 TapeStation Software while power saving settings are enabled can cause the slow running of the connected laptop. Upgrading to a higher performance mode resolves the issue, ensuring the laptop and software respond in a timely fashion
- Problems can arise when multiple TapeStation software products are installed. Users of both the 2200 TapeStation and 2200 TapeStation instruments must ensure that separate laptops are used for instrument control
- Avoid logging off the user account in Windows or switching off the bundled laptop during an analysis as this will terminate the application and cause potential data loss.

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End of Readme
