

Thank you for using BD Rhapsody™ Scanner product. These Release Notes contains the information about the BD Rhapsody™ Scanner software v2.1.1 release for the BD Rhapsody™ HT Single Cell Analysis system. Please read them carefully before upgrading your Rhapsody™ Scanner.

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| Product Name: | Rhapsody HTXpress ScanAnalyzer |
| Version: | 2.1.1 |
| Release Date: | January 28 th 2026 |
| Build Number: | 14 |

1. Overview

This is a maintenance release that follows **BD Rhapsody™ Scanner** software release 2.1.1. This release enhances the software warning handling to improve clarity and the overall user experience. Additional improvements included in this release are outlined in the following section.

This release is designed to be customer-installable to enable virtual installation with a BD Field Application Scientist (FAS) or Field Service Engineer (FSE). Installation without FAS or FSE is possible but not recommended for a streamlined experience. In the event of any issue during installation, please contact your local FAS or FSE for assistance.

This release can be applied to upgrade Rhapsody Scanners that are running release version 2.0.0 through 2.1.0. Earlier versions can't be updated without first upgrading the **BD Rhapsody™ Scanner** due hardware and software dependencies. If you are running earlier versions, please contact BD Field Application Support to schedule a system upgrade to enable compatibility with the **BD Rhapsody™ 8-Lane Cartridge** and **BD Rhapsody™ HT Xpress System** workflow.

2. New Feature Enhancements and Improvements

This section details the improvements introduced in this version of the release, including enhanced warning message handling, user experience refinement, and other error case preventions.

2.1 Enhanced Warning Message Clarity

To address customer feedback, this release enhanced the clarity of the warning messages displayed in Rhapsody Scan application. The following table lists these warning messages the user may encounter while running the experiment.

| Index | Warning Message | Possible Root Causes and Action |
|-------|---|--|
| 1 | Warning: Lane {N}: No alignment mark detected. Continue experiment without image analysis result. | If the cartridge is severely damaged and Scanner image analysis can't identify any alignment mark. This warning message will show. Users can still complete his experiment disregards the image analysis result. |

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| 2 | Warning: Lane {X}: {N} alignment mark detected. Image result may not be accurate. Continue experiment and use discretion when interpreting image analysis result. | This is the case where scanner image analysis detected 1 or 2 alignment marks. Image Analysis results may not be accurate. Use discretion when interpreting the image analysis results. |
| 3 | {N} out of {M} image tiles have poor quality due to debris or being out of focus. Image Analysis result may be inaccurate. Continue experiment and use discretion when interpreting image analysis results. | This warning message could show when the cartridge is not clean, the flow cell is not flat, or the sample fluid obscures the cartridge's imaging area. The user can continue experiments but should do the visual inspection of the cartridge flow cell. |
| 4 | All image tiles have poor quality due to debris or being out of focus. No Analysis result is generated. Contact local BD Field Application Support. | This indicates a more serious issue in the Scanner system. Either the system can't focus on the flow-cell image acquisition, or the cartridge has the issue. |
| 5 | Image tiles appear darker than normal, which likely indicates an empty lane or debris. Continue experiment and ensure flow cell is clean. | If the user scans an empty lane, this warning message may appear. It may also show if the lane is not clean, it has debris. The user shall check the cartridge visually before loading samples to the cartridge. |
| 6 | Available disk space is below 100 GB. About 25 more scans remain. Please back up experiment data and free up space. | The user should do a backup as soon as possible. |
| 7 | Available disk space is below 25 GB. Only 6 more scans remain. Please back up data and free up space before the next scan. | The user really should do a backup and free up the disk space. |
| 8 | Stage movement is obstructed. Please remove any obstacles and resume operation. | This message is self-explanatory. |
| 9 | Could not move stage to position for sensing the cartridge. | During cartridge stage retracting, if an object is blocking the stage, this message will show up. The user should inspect the stage movement path to ensure nothing is blocking. |

2.2 Analysis Application Close Prevention

It has been identified in the previous version of software that Rhapsody Analysis application could be inadvertently closed by the user without realizing it. This could cause image analysis results not to be generated.

To prevent this scenario from occurring, an explicit warning dialog has been added to Analysis application to ask the user to confirm if the user clicked X button on Analysis application's window frame. While the scanner is performing experiments and image analysis, do not close the **Rhapsody Analysis** application. Doing so will disrupt the workflow and may prevent image analysis results from being generated.

2.3 Enhanced Warning Message Panel for Extended Messages

This enhancement introduces improved support for long warning messages by providing a dedicated pop-up panel that ensures full visibility and readability of the warning messages. Initially, the message will appear truncated and appended with ellipsis (...). When the user clicks the message, a popup panel will display the complete text message.

2.4 Improved Door Open and Close Reliability

The opening and closing speed of the scanner door has been reduced to improve hardware reliability.

2.5 Customer-Installable Installer

As mentioned above, this release introduced a customer-installable solution to enable virtual installation with a BD Field Application Scientist (FAS) or Field Service Engineer (FSE). This enables a faster, more efficient **BD Rhapsody™ Scanner** update process, allowing field installations to stay current with the latest software.

3. Release Contents

This software release package is provided on a USB thumb drive. Insert the USB drive into the **BD Rhapsody™ Scanner** USB port on the right side of the panel, and the following items shall be displayed:

- *RhapsodyHTEExpressScanAnalyzer.msi*
- *RhapsodyScanAnalyzerUpgradeAssistant.exe*
- *Rhapsody Scanner Software Release Notes – v2.1.1.pdf*
- *Rhapsody Scanner Software Installation Guide -v2.1.1.pdf*

4. Software Release Installation and Upgrade

Please follow the steps outlined in the ***Rhapsody Scanner Software Installation Guide – v2.1.1.pdf*** included on the USB media to complete the software upgrade. If any issues arise during the upgrade process, customers should contact **BD Field Application Support** for assistance.

5. Contact Information

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